GREEGOO Минск +375447584780 Viber telegram whatsapp Skype email minsk17@tut.by

www.fotorele.net www.tiristor.by радиодетали, электронные компоненты

в Беларуси

каталог, описание, технические, характеристики, datasheet, параметры, маркировка,габариты, фото,

КАТАЛОГ GREEGOO

купить, продажа

электронные компоненты

где и как купить в Минске?

Твердотельные реле

- Трехфазные твердотельные реле
- Однофазные твердотельные реле
- Твердотельное реле постоянного тока в постоянное SSR
- Твердотельные реле управления
- Реле SSR для монтажа на DIN-рейку
- Твердотельные реле перекидного типа SSR
- Твердотельные реле с несколькими выходами
- Твердотельные реле реверса двигателя
- Радиатор для твердотельных реле

Твердотельные реле (ТТР) представляют собой серию *однополюсных, нормально разомкнутых, полупроводниковых коммутационных устройств без движущихся частей, способных выполнять десятки миллионов циклов срабатывания* . Он предназначен для управления переменным током 120 В, 240 В или 480 В (до 660 В) и обеспечивает коммутацию при нулевом напряжении и изоляцию 2500 В переменного тока между клеммами нагрузки и управляющим сигналом.

Управляющий сигнал заставляет твердотельное реле (SSR) включать или выключать нагрузку переменного тока так же, как это делает обычный механический контактный переключатель, но без проблем, связанных с реле с подвижным контактом, таких как коррозия, точечная коррозия, искрение, радиочастотные помехи. (RFI) и отказов. ***Результат: значительно более длительный срок службы твердотельного реле (ТТР)*** . Преимущества твердотельного реле перед механическими реле из Википедии.

Твердотельные реле / реле / роли / переключатели / модули Greegoo, покрывающие панель, DIN-рейку и печатную плату твердотельных реле, реле управления, силовые модули и сборки SSR. *Переключение через ноль для резистивных нагрузок или случайное возгорание для индуктивных нагрузок. Твердотельные реле Greegoo являются хорошей заменой твердотельным реле omron, celduc, fotek или crydom и т. д.*

Трехфазные твердотельные реле

GTK33 3A/6A SSR 3Phase DIN-рейка с радиатором

Трехфазные твердотельные реле 3A и 6A, монтаж на DIN-рейку, 6A с радиатором.

10-40A 3-х фазное твердотельное реле

10A, 15A, 25A, 40A TTP, 3 фазы, трикс выход, экономичный тип.

40A-120A 3-х фазные твердотельные реле

Полупроводниковый переключающий контактор, выход SCR, 40A, 60A, 80A, 100A, 120A SSR, 3-фазные реле SSR.

Трехфазное твердотельное реле 160A/200A

160A и 200A 3-х фазное твердотельное реле.

Трехфазные твердотельные реле 200-400A

Трехфазное твердотельное реле от 200 до 400 А, выходное напряжение 40–660 В переменного тока, переход через ноль.

400-500A 3-х фазные твердотельные реле

Твердотельные реле 400A, 500A, трехфазные, панельного монтажа.

Твердотельные контакторы

Полупроводниковое реле, полупроводниковый контактор, 3-фазные полупроводниковые контакторы, комбинированные сборки твердотельных реле с радиатором и вентилятором, от 40 до 1800 А, готовые к использованию.

Однофазные твердотельные реле

Твердотельное реле 1-5A

Твердотельные реле постоянного тока 1A, 2A, 3A и 5A, монтаж на печатной плате.

Твердотельные реле постоянного тока в переменный

Твердотельные модули постоянного тока в переменный SSR-10DA, SSR-25DA, SSR-40DA, симисторы SSR, экономичного типа.

1-фазные твердотельные реле

Винтового типа с зажимным креплением 1 фаза ssr.

Выход симистора 10-40A твердотельный стержень

Твердотельные реле от 10 до 40 А, однофазные, симисторный выход, экономичного типа.

Однофазное твердотельное реле 40-120A

Однофазное твердотельное реле от 40 до 120 А, твердотельное реле 12 В / 24 В, твердотельное реле 25 А / 40 А / 60 А / 80 А / 100 А / 120 А. Твердотельные реле с пересечением нуля и реле произвольного управления.

Твердотельные реле 60-150A SSR

Твердотельные реле от 60 до 150 А, однофазные, модульного типа.

Твердотельные реле 200-400A

Твердотельные реле модульного типа от 200 до 400 А.

Твердотельные реле 500-1600A ccp

Твердотельные реле 500–1600 А

Твердотельное реле для конденсаторов

Твердотельные реле серии 60A и 80A GDF в основном используются для включения и выключения силовых конденсаторов.

Конденсаторные твердотельные реле

Твердотельные реле серии GDF на 120A и 250A в основном используются для включения и выключения силовых конденсаторов.

Твердотельное реле постоянного тока в постоянное SSR

1/2/3/5A постоянного тока Твердотельное реле

1A, 2A, 3A и 5A DC SSR, 100B DC, 200B DC и 400B DC.

10–200 А постоянного тока в постоянное твердотельное реле

Твердотельные реле от 10 до 200 А, от 100 до 1200 В пост. тока, монтаж на панели.

Твердотельные реле постоянного тока GDR08 120–2000 А при 1200 В постоянного тока

Постоянный ток: 120–2000 А, твердотельные реле от 100 до 1200 В постоянного тока.

Твердотельное реле постоянного тока с защитой от перегрузки по току и перенапряжению

Твердотельное реле постоянного тока, 120–2000 А, 100–1200 В постоянного тока, тип защиты от перегрузки по току и перенапряжению.

Твердотельные регуляторы постоянного тока

Твердотельные регуляторы постоянного тока от 10 до 2000 А, от 24 до 1200 В постоянного тока, внешний сигнал напряжения 0–10 В постоянного тока или потенциометр 10K.

100A DC SSR для преобразователей частоты

Конструкция модуля шириной 25 мм.

200A DC SSR для преобразователей частоты

200A, конструкция модуля шириной 34мм.

300A/400A DC SSR для преобразователей частоты

300A и 400A, модульная конструкция, ширина 53мм.

Контакторы постоянного тока для преобразователей частоты

Контактор постоянного тока серии GFDC используется для цепей постоянного тока с номинальным рабочим напряжением постоянного тока до 48 В постоянного тока и рабочим током до 800 А.

Твердотельные реле управления

4-20 мА или 0-5 В или 10K реле управления входом потенциометра SSR

3 в 1, вход потенциометра 4-20 мА или 0-5 В или 10K, реле управления SSR от 10 до 120 А.

Однофазные полупроводниковые регуляторы переменного тока от 10 до 180 А

Однофазные полупроводниковые регуляторы переменного тока от 10 до 180 А

Однофазные полупроводниковые регуляторы переменного тока от 60 до 300 А

Однофазный полупроводниковый регулятор переменного тока от 60 до 300 А

Однофазные полупроводниковые регуляторы переменного тока от 350 до 500 А

Однофазный полупроводниковый регулятор от 350 до 500 А

Реле SSR для монтажа на DIN-рейку

G3DA4810 SSR 1 КАНАЛ 10А

G3DA4810, SSR 1 КАНАЛ, 10A@48-600VAC, 4-32VDC,

Реле G3DA4825 SSR

25A SSR, встроенный радиатор, монтаж на DIN-рейку

Реле G3DA4840 SSR

40A SSR, встроенный радиатор, монтаж на DIN-рейку

Твердотельные реле G3DA4860 SSR

60A SSR, встроенный радиатор, монтаж на DIN-рейку

Твердотельные реле с воздушным охлаждением

Однофазный, от 10 до 80 А, 440 В переменного тока

Твердотельные реле с воздушным охлаждением

3 фазы, от 10 до 80 А, 440 В переменного тока

Твердотельные реле перекидного типа SSR

Твердотельные реле

Твердотельные реле от 10 до 100 А, однофазные, трехфазные, от постоянного тока к переменному, от постоянного к постоянному, от переменного к переменному.

Твердотельные реле перекидного типа

Сильные изоляционные характеристики, полный патч-процесс с двойной панелью SMT, сильная помехоустойчивость

Твердотельные реле с несколькими выходами

Двойные твердотельные реле

Двойной выход SSR, выход SCR, от 10 до 80 А, одна фаза.

Твердотельное реле с двумя выходами до 120A

60A, 80A, 100A и 120A твердотельные реле с двойным выходом.

Твердотельные реле реверса двигателя

Твердотельные реле реверса двигателя постоянного тока 1A-100A 12V-200VDC

Твердотельное реле переключения двигателя постоянного тока вперед и назад, постоянный ток: от 1 до 100 А, 12–200 В постоянного тока

Реверсивный твердотельный контактор постоянного тока 10A-500A 100V-1200V

Твердотельное реле переключения двигателя постоянного тока вперед и назад, 10–500 А, 100–1200 В постоянного тока.

Твердотельные реле реверса трехфазного двигателя

от 10A до 150A, 3 фазы 3 управления

Твердотельное реле реверса однофазного двигателя

Реверсивные контакторы однофазного двигателя от 10 до 400 А, 110 В/220 В переменного тока.

Радиатор для твердотельных реле

Радиатор CCP-1

Для однофазных твердотельных реле от 10 до 80 А.

Радиатор CCP-3

Радиатор/радиатор для TTP от 10 до 40 А, трехфазные твердотельные реле.

Радиатор SSR-3F для SSR

Радиатор с осевым вентилятором для трехфазных твердотельных реле, от 10 до 60 А.

Зажимы крепления TS35P (переходник на DIN-рейку)

Зажимы крепления GREEGOO TS35P на DIN-рейку 35 мм, переходник на DIN-рейку

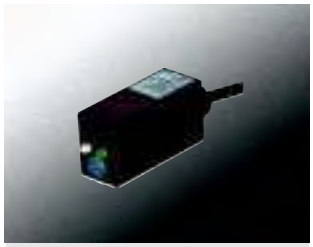
Type and meaning

G	18	-	3	A	10	N	A	□
1	2		3	4	5	6	7	8

1: G: Photoelectric sensor
2: Sub code No.
18, 50, 76……
3: Operating voltage:
2: 90-250VAC 3: 10-30VDC
4:12-240VDC/24-240VAC
5: Special voltage
4: Detection method
A: Diffuse type
B: Mirror reflex type
C: Through beam type
5: Detection distance
05: 5cm 10: 10cm
30: 30cm 101: 10m
6: Output method
N: NPN transistor output
P: PNP transistor output
J: Relay output
L: AC two-line output
S:NPN+PNP
7: Output status
A: NO
B: NC
C: NO+NC
8: Auxi function code
T1: Front delay
T2: Rear delay
Y: Oil proof
T: With connector
I: Special requirement


G12 P7-3

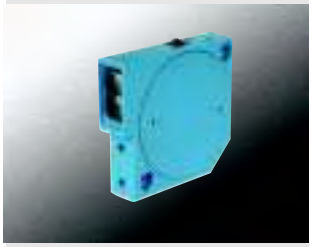

G14 P7-3

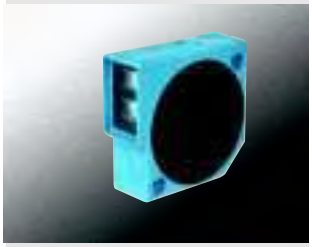

G15 P7-3


G16 P7-3


G17 P7-4


G18 P7-4


G23 P7-4


G24 P7-5


G25 P7-5


G26 P7-5


G30 P7-6


G33 P7-6


G35 P7-6

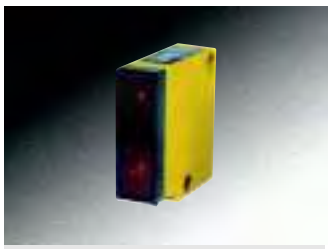

G36 P7-7


G40 P7-7


G44 P7-7

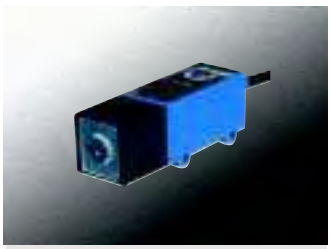

G50 P7-7


G54 P7-8


G55 P7-8


G64 P7-8

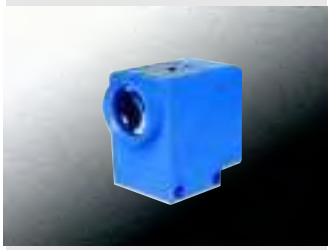

G68 P7-8


G70 P7-9


G71 P7-9


G180 P7-9


G75 P7-10

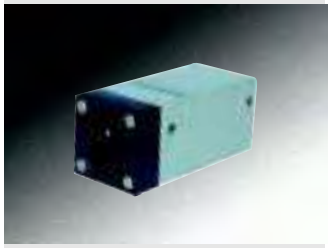

G76 P7-10


G77 P7-10


G78 P7-12


G80 P7-12


G85 P7-12


G90 P7-12

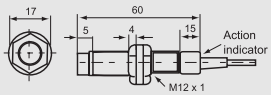

G100 P7-13


G110 P7-13

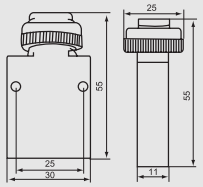

G139 P7-13

Sensors

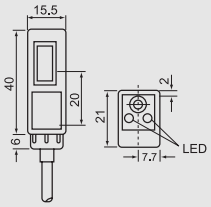
Photoelectric sensor



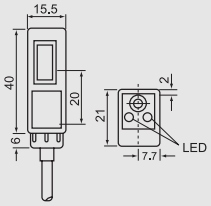
Model No.	Detection distance	Operating voltage	Output		Response time	Detection method
			Method	Status		
G12-3A07NA	7cm	DC10-30V	NPN	NO	<2ms	Diffusetype
G12-3A07NB	7cm	DC10-30V	NPN	NC	<2ms	Diffusetype
G12-3A07PA	7cm	DC10-30V	PNP	NO	<2ms	Diffusetype
G12-3A07PB	7cm	DC10-30V	PNP	NC	<2ms	Diffusetype
G12-3B1NA	1m	DC10-30V	NPN	NO	<2ms	Mirrorreflextype
G12-3B1NB	1m	DC10-30V	NPN	NC	<2ms	Mirrorreflextype
G12-3B1PA	1m	DC10-30V	PNP	NO	<2ms	Mirrorreflextype
G12-3B1PB	1m	DC10-30V	PNP	NC	<2ms	Mirrorreflextype
G12-3C3NA	3m	DC10-30V	NPN	NO	<2ms	Throughbeam
G12-3C3NB	3m	DC10-30V	NPN	NC	<2ms	Throughbeam
G12-3C3PA	3m	DC10-30V	PNP	NO	<2ms	Throughbeam
G12-3C3PB	3m	DC10-30V	PNP	NC	<2ms	Throughbeam



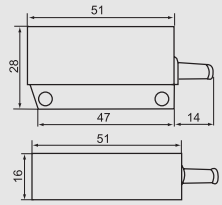
G14-3A10NA	10cm	DC10-30V	NPN	NO	<2ms	Diffusetype
G14-3A10NB	10cm	DC10-30V	NPN	NC	<2ms	Diffusetype
G14-3A10PA	10cm	DC10-30V	PNP	NO	<2ms	Diffusetype
G14-3A10PB	10cm	DC10-30V	PNP	NC	<2ms	Diffusetype
G14-3B1NA	1m	DC10-30V	NPN	NO	<2ms	Mirrorreflextype
G14-3B1NB	1m	DC10-30V	NPN	NC	<2ms	Mirrorreflextype
G14-3B1PA	1m	DC10-30V	PNP	NO	<2ms	Mirrorreflextype
G14-3B1PB	1m	DC10-30V	PNP	NC	<2ms	Mirrorreflextype
G14-3C3NA	3m	DC10-30V	NPN	NO	<2ms	Throughbeam
G14-3C3NB	3m	DC10-30V	NPN	NC	<2ms	Throughbeam
G14-3C3PA	3m	DC10-30V	PNP	NO	<2ms	Throughbeam
G14-3C3PB	3m	DC10-30V	PNP	NC	<2ms	Throughbeam

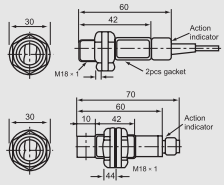


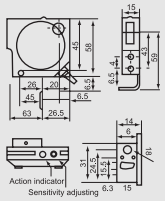
G15-3A10NA	10cm	DC10-30V	NPN	NO	<2ms	Diffusetype
G15-3A10NB	10cm	DC10-30V	NPN	NC	<2ms	Diffusetype
G15-3A10PA	10cm	DC10-30V	PNP	NO	<2ms	Diffusetype
G15-3A10PB	10cm	DC10-30V	PNP	NC	<2ms	Diffusetype
G15-3B1NA	1m	DC10-30V	NPN	NO	<2ms	Mirrorreflextype
G15-3B1NB	1m	DC10-30V	NPN	NC	<2ms	Mirrorreflextype
G15-3B1PA	1m	DC10-30V	PNP	NO	<2ms	Mirrorreflextype
G15-3B1PB	1m	DC10-30V	PNP	NC	<2ms	Mirrorreflextype
G15-3C3NA	3m	DC10-30V	NPN	NO	<2ms	Throughbeam
G15-3C3NB	3m	DC10-30V	NPN	NC	<2ms	Throughbeam
G15-3C3PA	3m	DC10-30V	PNP	NO	<2ms	Throughbeam
G15-3C3PB	3m	DC10-30V	PNP	NC	<2ms	Throughbeam



G16-3A10NA	10cm	DC10-30V	NPN	NO	<2mS	Diffusetype
G16-3A10NB	10cm	DC10-30V	NPN	NC	<2mS	Diffusetype
G16-3A10PA	10cm	DC10-30V	PNP	NO	<2mS	Diffusetype
G16-3A10PB	10cm	DC10-30V	PNP	NC	<2mS	Diffusetype
G16-3B1NA	1m	DC10-30V	NPN	NO	<2mS	Mirrorreflextype
G16-3B1NB	1m	DC10-30V	NPN	NC	<2mS	Mirrorreflextype
G16-3B1PA	1m	DC10-30V	PNP	NO	<2mS	Mirrorreflextype
G16-3B1PB	1m	DC10-30V	PNP	NC	<2mS	Mirrorreflextype



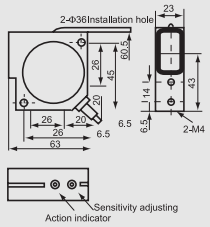




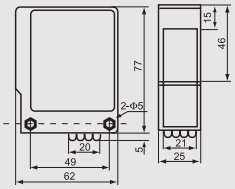
Model No.	Detection distance	Operating voltage	Output		Response time	Detection method
			Method	Status		
G17-3A30NA	30cm	DC10-30V	NPN	NO	<2mS	Diffusetype
G17-3A30NB	30cm	DC10-30V	NPN	NC	<2mS	Diffusetype
G17-3A30PA	30cm	DC10-30V	PNP	NO	<2mS	Diffusetype
G17-3A30PB	30cm	DC10-30V	PNP	NC	<2mS	Diffusetype
G17-3B2NA	2m	DC10-30V	NPN	NO	<2mS	Mirrorreflextype
G17-3B2NB	2m	DC10-30V	NPN	NC	<2mS	Mirrorreflextype
G17-3B2PA	2m	DC10-30V	PNP	NO	<2mS	Mirrorreflextype
G17-3B2PB	2m	DC10-30V	PNP	NC	<2mS	Mirrorreflextype
G17-3C3NA	3m	DC10-30V	NPN	NO	<2mS	Throughbeam
G17-3C3NB	3m	DC10-30V	NPN	NC	<2mS	Throughbeam
G17-3C3PA	3m	DC10-30V	PNP	NO	<2mS	Throughbeam
G17-3C3PB	3m	DC10-30V	PNP	NC	<2mS	Throughbeam
G18-3A10NA	10cm	DC10-30V	NPN	NO	<2mS	Diffusetype
G18-3A10NB	10cm	DC10-30V	NPN	NC	<2mS	Diffusetype
G18-3A10NC	10cm	DC10-30V	NPN	NO+NC	<2mS	Diffusetype
G18-3A10PA	10cm	DC10-30V	PNP	NO	<2mS	Diffusetype
G18-3A10PB	10cm	DC10-30V	PNP	NO	<2mS	Diffusetype
G18-3A10PC	10cm	DC10-30V	PNP	NO+NC	<2mS	Diffusetype
G18-2A10LA	10cm	AC90-250V	SCR	NO	<20mS	Diffusetype
G18-2A10LB	10cm	AC90-250V	SCR	NC	<20mS	Diffusetype
G18-3B2NA	2m	DC10-30V	NPN	NO	<2mS	Mirrorreflextype
G18-3B2NB	2m	DC10-30V	NPN	NC	<2mS	Mirrorreflextype
G18-3B2NC	2m	DC10-30V	NPN	NO+NC	<2mS	Mirrorreflextype
G18-3B2PA	2m	DC10-30V	PNP	NO	<2mS	Mirrorreflextype
G18-3B2PB	2m	DC10-30V	PNP	NC	<2mS	Mirrorreflextype
G18-3B2PC	2m	DC10-30V	PNP	NO+NC	<2mS	Mirrorreflextype
G18-2B2LA	2m	AC90-250V	SCR	NO	<20mS	Mirrorreflextype
G18-2B2LB	2m	AC90-250V	SCR	NC	<20mS	Mirrorreflextype
G18-3C5NA	5m	DC10-30V	NPN	NO	<2mS	Throughbeam
G18-3C5NB	5m	DC10-30V	NPN	NC	<2mS	Throughbeam
G18-3C5NC	5m	DC10-30V	NPN	NO+NC	<2mS	Throughbeam
G18-3C5PA	5m	DC10-30V	PNP	NO	<2mS	Throughbeam
G18-3C5PB	5m	DC10-30V	PNP	NC	<2mS	Throughbeam
G18-3C5PC	5m	DC10-30V	PNP	NO+NC	<2mS	Throughbeam
G18-2C5LA	5m	AC90-250V	SCR	NO	<20mS	Throughbeam
G18-2C5LB	5m	AC90-250V	SCR	NC	<20mS	Throughbeam
G23-3A10NA	10cm-50cm	DC10-30V	NPN	NO	<2mS	Diffusetype
G23-3A10NB	10cm-50cm	DC10-30V	NPN	NC	<2mS	Diffusetype
G23-3A10PA	10cm-50cm	DC10-30V	PNP	NO	<2mS	Diffusetype
G23-3A10PB	10cm-50cm	DC10-30V	PNP	NC	<2mS	Diffusetype
G23-3B2NA	2m	DC10-30V	NPN	NO	<2mS	Mirrorreflextype
G23-3B2NB	2m	DC10-30V	NPN	NC	<2mS	Mirrorreflextype
G23-3B2PA	2m	DC10-30V	PNP	NO	<2mS	Mirrorreflextype
G23-3B2PB	2m	DC10-30V	PNP	NC	<2mS	Mirrorreflextype
G23-3C5NA	5m	DC10-30V	NPN	NO	<2mS	Throughbeam
G23-3C5NB	5m	DC10-30V	NPN	NC	<2mS	Throughbeam
G23-3C5PA	5m	DC10-30V	PNP	NO	<2mS	Throughbeam
G23-3C5PB	5m	DC10-30V	PNP	NC	<2mS	Throughbeam

Sensors

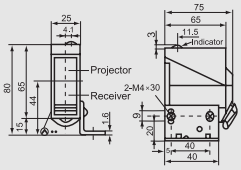
Photoelectric sensor



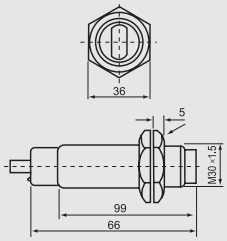
Model No.	Detection distance	Operating voltage	Output		Response time	Detection method
			Method	Status		
G24-3A50NA	50cm	DC10-30V	NPN	NO	<2mS	Diffusetype
G24-3A50NB	50cm	DC10-30V	NPN	NC	<2mS	Diffusetype
G24-3A50PA	50cm	DC10-30V	PNP	NO	<2mS	Diffusetype
G24-3A50PB	50cm	DC10-30V	PNP	NC	<2mS	Diffusetype
G24-3B4NA	4m	DC10-30V	NPN	NO	<2mS	Mirrorreflextype
G24-3B4NB	4m	DC10-30V	NPN	NC	<2mS	Mirrorreflextype
G24-3B4PA	4m	DC10-30V	PNP	NO	<2mS	Mirrorreflextype
G24-3B4PB	4m	DC10-30V	PNP	NC	<2mS	Mirrorreflextype
G24-3C5NA	5m	DC10-30V	NPN	NO	<2mS	Throughbeam
G24-3C5NB	5m	DC10-30V	NPN	NC	<2mS	Throughbeam
G24-3C5PA	5m	DC10-30V	PNP	NO	<2mS	Throughbeam
G24-3C5PB	5m	DC10-30V	PNP	NC	<2mS	Throughbeam

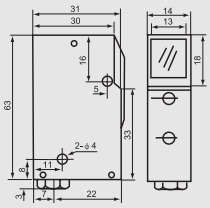


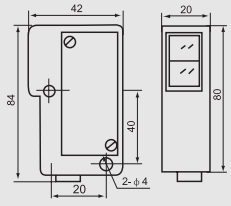
G25-3A70NA	70cm	DC10-30V	NPN	NO	<2mS	Diffusetype
G25-3A70NB	70cm	DC10-30V	NPN	NC	<2mS	Diffusetype
G25-3A70NC	70cm	DC10-30V	NPN	NO+NC	<2mS	Diffusetype
G25-3A70PA	70cm	DC10-30V	PNP	NO	<2mS	Diffusetype
G25-3A70PB	70cm	DC10-30V	PNP	NC	<2mS	Diffusetype
G25-3A70PC	70cm	DC10-30V	PNP	NO+NC	<2mS	Diffusetype
G25-3B4NA	4m	DC10-30V	NPN	NO	<2mS	Mirrorreflextype
G25-3B4NB	4m	DC10-30V	NPN	NC	<2mS	Mirrorreflextype
G25-3B4NC	4m	DC10-30V	NPN	NO+NC	<2mS	Mirrorreflextype
G25-3B4PA	4m	DC10-30V	PNP	NO	<2mS	Mirrorreflextype
G25-3B4PB	4m	DC10-30V	PNP	NC	<2mS	Mirrorreflextype
G25-3B4PC	4m	DC10-30V	PNP	NO+NC	<2mS	Mirrorreflextype
G25-3C7NA	7m	DC10-30V	NPN	NO	<2mS	Throughbeam
G25-3C7NB	7m	DC10-30V	NPN	NC	<2mS	Throughbeam
G25-3C7NC	7m	DC10-30V	NPN	NO+NC	<2mS	Throughbeam
G25-3C7PA	7m	DC10-30V	PNP	NO	<2mS	Throughbeam
G25-3C7PB	7m	DC10-30V	PNP	NC	<2mS	Throughbeam
G25-3C7PC	7m	DC10-30V	PNP	NO+NC	<2mS	Throughbeam



G26-3A70NA	70cm	DC10-30V	NPN	NO	<2mS	Diffusetype
G26-3A70NB	70cm	DC10-30V	NPN	NC	<2mS	Diffusetype
G26-3A70PA	7Ocm	DC10-30V	PNP	NO	<2mS	Diffusetype
G26-3A70PB	70cm	DC10-30V	PNP	NC	<2mS	Diffusetype
G26-3B3NA	3m	DC10-30V	NPN	NO	<2mS	Mirrorreflextype
G26-3B3NB	3m	DC10-30V	NPN	NC	<2mS	Mirrorreflextype
G26-3B3PA	3m	DC10-30V	PNP	NO	<2mS	Mirrorreflextype
G26-3B3PB	3m	DC10-30V	PNP	NC	<2mS	Mirrorreflextype
G26-3C5NA	5m	DC10-30V	NPN	NO	<2mS	Throughbeam
G26-3C5NB	5m	DC10-30V	NPN	NC	<2mS	Throughbeam
G26-3C5PA	5m	DC10-30V	PNP	NO	<2mS	Throughbeam
G26-3C5PB	5m	DC10-30V	PNP	NC	<2mS	Throughbeam



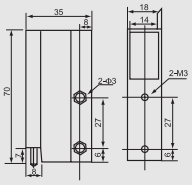


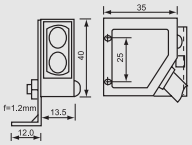


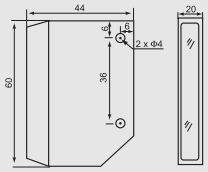
Model No.	Detection distance	Operating voltage	Output		Response time	Detection method
			Method	Status		
G30-3A70NA	20-100cm	DC10-30V	NPN	NO	<2mS	Diffusetype
G30-3A70NB	20-100cm	DC10-30V	NPN	NC	<2mS	Diffusetype
G30-3A70NC	20-100cm	DC10-30V	NPN	NO+NC	<2mS	Diffusetype
G30-3A70PA	20-100cm	DC10-30V	PNP	NO	<2mS	Diffusetype
G30-3A70PB	20-100cm	DC10-30V	PNP	NO	<2mS	Diffusetype
G30-3A70PC	20-100cm	DC10-30V	PNP	NO+NC	<2mS	Diffusetype
G30-2A70LA	20-100cm	AC90-250V	SCR	NO	<20mS	Diffusetype
G30-2A70LB	20-100cm	AC90-250V	SCR	NC	<20mS	Diffusetype
G30-3B3NA	3-5cm	DC10-30V	NPN	NO	<2mS	Mirrorreflextype
G30-3B3NB	3-5cm	DC10-30V	NPN	NC	<2mS	Mirrorreflextype
G30-3B3NC	3-5cm	DC10-30V	NPN	NO+NC	<2mS	Mirrorreflextype
G30-3B3PA	3-5cm	DC10-30V	PNP	NO	<2mS	Mirrorreflextype
G30-3B3PB	3-5cm	DC10-30V	PNP	NC	<2mS	Mirrorreflextype
G30-3B3PC	3-5cm	DC10-30V	PNP	NO+NC	<2mS	Mirrorreflextype
G30-2B3LA	3-5cm	AC90-250V	SCR	NO	AC<20mS	Mirrorreflextype
G30-2B3LB	3-5cm	AC90-250V	SCR	NC	AC<20mS	Mirrorreflextype
G30-3C101NA	10m	DC10-30V	NPN	NO	<2mS	Throughbeam
G30-3C101NB	10m	DC10-30V	NPN	NC	<2mS	Throughbeam
G30-3C101NC	10m	DC10-30V	NPN	NO+NC	<2mS	Throughbeam
G30-3C101PA	10m	DC10-30V	PNP	NO	<2mS	Throughbeam
G30-3C101PB	10m	DC10-30V	PNP	NC	<2mS	Throughbeam
G30-3C101PC	10m	DC10-30V	PNP	NO+NC	<2mS	Throughbeam
G30-2C101LA	10m	AC90-250V	SCR	NO	<20mS	Throughbeam
G33-3A10NA	10cm	DC10-30V	NPN	NO	<2mS	Diffusetype
G33-3A10NB	10cm	DC10-30V	NPN	NC	DC<20mS	Diffusetype
G33-3A10NC	10cm	DC10-30V	NPN	NO+NC	DC<20mS	Diffusetype
G33-3A10PA	10cm	DC10-30V	PNP	NO	DC<20mS	Diffusetype
G33-3A10PB	10cm	DC10-30V	PNP	NC	DC<20mS	Diffusetype
G33-3A10PC	10cm	DC10-30V	PNP	NO+NC	DC<20mS	Diffusetype
G33-3B1NA	1m	DC10-30V	NPN	NO	DC<20mS	Mirrorreflextype
G33-3B1NB	1m	DC10-30V	NPN	NC	DC<20mS	Mirrorreflextype
G33-3B1NC	1m	DC10-30V	NPN	NO+NC	DC<20mS	Mirrorreflextype
G33-3B1PA	1m	DC10-30V	PNP	NO	DC<20mS	Mirrorreflextype
G33-3B1PC	1m	DC10-30V	PNP	NO+NC	DC<20mS	Mirrorreflextype
G33-3C3NA	3m	DC10-30V	NPN	NO	DC<20mS	Throughbeam
G33-3C3NB	3m	DC10-30V	NPN	NC	DC<20mS	Throughbeam
G33-3C3NC	3m	DC10-30V	NPN	NO+NC	DC<20mS	Throughbeam
G33-3C3PA	3m	DC10-30V	PNP	NO	DC<20mS	Throughbeam
G33-3C3PB	3m	DC10-30V	PNP	NC	DC<20mS	Throughbeam
G33-3C3PC	3m	DC10-30V	PNP	NO+NC	DC<20mS	Throughbeam
G35-3A50NA	50cm	DC10-30V	NPN	NO	<2mS	Diffusetype
G35-3A50NB	50cm	DC10-30V	NPN	NC	<2mS	Diffusetype
G35-3A50NC	50cm	DC10-30V	NPN	NO+NC	<2mS	Diffusetype
G35-3A5OPA	50cm	DC10-30V	PNP	NO	<2mS	Diffusetype
G35-3A50PB	50cm	DC10-30V	PNP	NC	<2mS	Diffusetype
G35-3A50PC	50cm	DC10-30V	PNP	NO+NC	<2mS	Diffusetype
G35-2A50LA	50cm	AC90-250V	SCR	NO	AC<20mS	Diffusetype
G35-2A5OLB	50cm	AC90-250V	SCR	NC	AC<20mS	Diffusetype
G35-3B3NA	3m	DC10-30V	NPN	NO	<2mS	Mirrorreflextype
G35-3B3NB	3m	DC10-30V	NPN	NC	<2mS	Mirrorreflextype
G35-3B3NC	3m	DC10-30V	NPN	NO+NC	<2mS	Mirrorreflextype
G35-3B3PA	3m	DC10-30V	PNP	NO	<2mS	Mirrorreflextype
G35-3B3PB	3m	DC10-30V	PNP	NC	<2mS	Mirrorreflextype
G35-3B3PC	3m	DC10-30V	PNP	NO+NC	<2mS	Mirrorreflextype
G35-2B3LA	3m	AC90-250V	SCR	NO	AC<20mS	Mirrorreflextype
G35-2B3LB	3m	AC90-250V	SCR	NC	AC<20mS	Mirrorreflextype
G35-3C5NA	5m	DC10-30V	NPN	NO	<2mS	Throughbeam
G35-3C5NB	5m	DC10-30V	NPN	NC	<2mS	Throughbeam
G35-3C5NC	5m	DC10-30V	NPN	NO+NC	<2mS	Throughbeam
G35-3C5PA	5m	DC10-30V	PNP	NO	<2mS	Throughbeam
G35-3C5PB	5m	DC10-30V	PNP	NC	<2mS	Throughbeam
G35-3C5PC	5m	DC10-30V	PNP	NO+NC	<2mS	Throughbeam
G35-2C5LA	5m	AC90-250V	SCR	NO	AC<20mS	Throughbeam
G35-2C5LB	5m	AC90-250V	SCR	NC	AC<20mS	Throughbeam

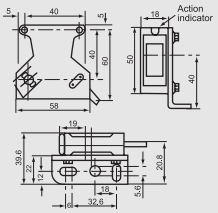
Sensors

Photoelectric sensor

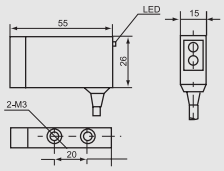


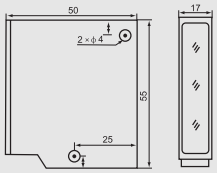


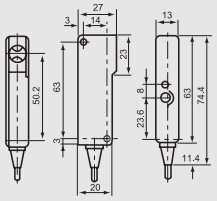


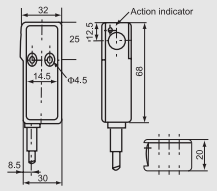


Model No.	Detection distance	Operating voltage	Output		Response time	Detection method
			Method	Status		
G36-3A20NA	20cm	DC10-30V	NPN	NO	<20mS	Diffusetype
G36-3A20NB	20cm	DC10-30V	NPN	NC	<20mS	Diffusetype
G36-3A20NC	20cm	DC10-30V	NPN	NO+NC	<20mS	Diffusetype
G36-3A20PA	20cm	DC10-30V	PNP	NO	<20mS	Diffusetype
G36-3A20PB	20cm	DC10-30V	PNP	NC	<20mS	Diffusetype
G36-3A20PC	20cm	DC10-30V	PNP	NO+NC	<20mS	Diffusetype
G36-3B2NA	2m	DC10-30V	NPN	NO	<20mS	Mirrorreflextype
G36-3B2NB	2m	DC10-30V	NPN	NC	<20mS	Mirrorreflextype
G36-3B2NC	2m	DC10-30V	NPN	NO+NC	<20mS	Mirrorreflextype
G36-3B2PA	2m	DC10-30V	PNP	NO	<20mS	Mirrorreflextype
G36-3B2PB	2m	DC10-30V	PNP	NC	<20mS	Mirrorreflextype
G36-3B2PC	2m	DC10-30V	PNP	NO+NC	<20mS	Mirrorreflextype
G36-3C5NA	5m	DC10-30V	NPN	NO	<20mS	Throughbeam
G36-3C5NB	5m	DC10-30V	NPN	NC	<20mS	Throughbeam
G36-3C5NC	5m	DC10-30V	NPN	NO+NC	<20mS	Throughbeam
G36-3C5PA	5m	DC10-30V	PNP	NO	<20mS	Throughbeam
G36-3C5PB	5m	DC10-30V	PNP	NC	<20mS	Throughbeam
G36-3C5PC	5m	DC10-30V	PNP	NO+NC	<20mS	Throughbeam
G40-3A10NA	G40-3A10NA	DC10-30V	NPN	NO	<2mS	Diffusetype
G40-3A10NB	G40-3A10NB	DC10-30V	NPN	NC	<2mS	Diffusetype
G40-3A10PA	G40-3A10PA	DC10-30V	PNP	NO	<2mS	Diffusetype
G40-3A10PB	G40-3A10PB	DC10-30V	PNP	NC	<2mS	Diffusetype
G44-3A30NA	30cm	DC10-30V	NPN	NO	<2mS	Diffusetype
G44-3A30NB	30cm	DC10-30V	NPN	NC	<2mS	Diffusetype
G44-3A30PA	30cm	DC10-30V	PNP	NO	<2mS	Diffusetype
G44-3A30PB	30cm	DC10-30V	PNP	NC	<2mS	Diffusetype
G44-3B3NA	3m	DC10-30V	NPN	NO	<2mS	Mirrorreflextype
G44-3B3NB	3m	DC10-30V	NPN	NC	<2mS	Mirrorreflextype
G44-3B3PA	3m	DC10-30V	PNP	NO	<2mS	Mirrorreflextype
G44-3B3PB	3m	DC10-30V	PNP	NC	<2mS	Mirrorreflextype
G44-3C5NA	5m	DC10-30V	NPN	NO	<2mS	Throughbeam
G44-3C5NB	5m	DC10-30V	NPN	NC	<2mS	Throughbeam
G44-3C5PA	5m	DC10-30V	PNP	NO	<2mS	Throughbeam
G44-3C5PB	5m	DC10-30V	PNP	NC	<2mS	Throughbeam
G50-3A30NA	30cm50cm	DC10-30V	NPN	NO	<2mS	Diffusetype
G50-3A30NB	30cm50cm	DC10-30V	NPN	NC	<2mS	Diffusetype
G50-3A30NC	30cm50cm	DC10-30V	NPN	NO+NC	<2mS	Diffusetype
G50-3A30PA	30cm50cm	DC10-30V	PNP	NO	<2mS	Diffusetype
G50-3A30PB	30cm50cm	DC10-30V	PNP	NC	<2mS	Diffusetype
G50-3A30PC	30cm50cm	DC10-30V	PNP	NO+NC	<2mS	Diffusetype
G50-3B4NA	4m	DC10-30V	NPN	NO	<2mS	Mirrorreflextype
G50-3B4NB	4m	DC10-30V	NPN	NC	<2mS	Mirrorreflextype
G50-3B4NC	4m	DC10-30V	NPN	NO+NC	<2mS	Mirrorreflextype
G50-3B4PA	4m	DC10-30V	PNP	NO	<2mS	Mirrorreflextype
G50-3B4PB	4m	DC10-30V	PNP	NC	<2mS	Mirrorreflextype
G50-3B4PC	4m	DC10-30V	PNP	NO+NC	<2mS	Mirrorreflextype
G50-3C5NA	5m	DC10-30V	NPN	NO	<2mS	Throughbeam
G50-3C5NB	5m	DC10-30V	NPN	NC	<2mS	Throughbeam
G50-3C5NC	5m	DC10-30V	NPN	NO+NC	<2mS	Throughbeam
G50-3C5PA	5m	DC10-30V	PNP	NO	<2mS	Throughbeam
G50-3C5PB	5m	DC10-30V	PNP	NC	<2mS	Throughbeam
G50-3C5PC	5m	DC10-30V	PNP	NO+NC	<2mS	Throughbeam
G50-2C5LA	5m	AC90-250V	SCR	NO	<2mS	Throughbeam

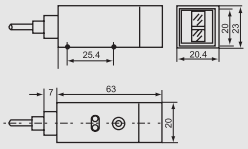


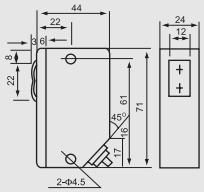


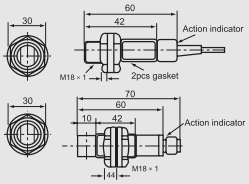




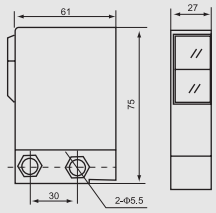
Model No.	Detection distance	Operating voltage	Output		Response time	Detection method
			Method	Status		
G54-3A20NA	20cm	DC10-30V	NPN	NO	<2mS	Diffusetype
G54-3A20NB	20cm	DC10-30V	NPN	NC	<2mS	Diffusetype
G54-3A20NC	20cm	DC10-30V	NPN	NO+NC	<2mS	Diffusetype
G54-3A20PA	20cm	DC10-30V	PNP	NO	<2mS	Diffusetype
G54-3A20PB	20cm	DC10-30V	PNP	NC	<2mS	Diffusetype
G54-3A20PC	20cm	DC10-30V	PNP	NO+NC	<2mS	Diffusetype
G54-3B2NA	2m	DC10-30V	NPN	NO	<2mS	Mirrorreflextype
G54-3B2NB	2m	DC10-30V	NPN	NC	<2mS	Mirrorreflextype
G54-3B2NC	2m	DC10-30V	NPN	NO+NC	<2mS	Mirrorreflextype
G54-3B2PA	2m	DC10-30V	PNP	NO	<2mS	Mirrorreflextype
G54-3B2PB	2m	DC10-30V	PNP	NC	<2mS	Mirrorreflextype
G54-3B2PC	2m	DC10-30V	PNP	NO+NC	<2mS	Mirrorreflextype
G54-3C5NA	5m	DC10-30V	NPN	NO	<2mS	Throughbeam
G54-3C5NB	5m	DC10-30V	NPN	NC	<2mS	Throughbeam
G54-3C5NC	5m	DC10-30V	NPN	NO+NC	<2mS	Throughbeam
G54-3C5PA	5m	DC10-30V	PNP	NO	<2mS	Throughbeam
G54-3C5PB	5m	DC10-30V	PNP	NC	<2mS	Throughbeam
G54-3C5PC	5m	DC10-30V	PNP	NO+NC	<2mS	Throughbeam
G55-3A20NA	20cm	DC10-30V	NPN	NO	<2mS	Diffusetype
G55-3A20NB	20cm	DC10-30V	NPN	NC	<2mS	Diffusetype
G55-3A20PA	20cm	DC10-30V	PNP	NO	<2mS	Diffusetype
G55-3A20PB	20cm	DC10-30V	PNP	NC	<2mS	Diffusetype
G55-3B2NA	20cm	DC10-30V	NPN	NO	<2mS	Mirrorreflextype
G55-3B2NB	2m	DC10-30V	NPN	NC	<2mS	Mirrorreflextype
G55-3B2PA	2m	DC10-30V	PNP	NO	<2mS	Mirrorreflextype
G55-3B2PB	2m	DC10-30V	PNP	NC	<2mS	Mirrorreflextype
G55-3C4NA	4m	DC10-30V	NPN	NO	<2mS	Throughbeam
G55-3C4NB	4m	DC10-30V	NPN	NC	<2mS	Throughbeam
G55-3C4PA	4m	DC10-30V	PNP	NO	<2mS	Throughbeam
G55-3C4PB	4m	DC10-30V	PNP	NC	<2mS	Throughbeam
G64-3A10NA	10cm	DC10-30V	NPN	NO	<2mS	Diffusetype
G64-3A10NB	10cm	DC10-30V	NPN	NC	<2mS	Diffusetype
G64-3A10NC	10cm	DC10-30V	NPN	NO+NC	<2mS	Diffusetype
G64-3A10PA	10cm	DC10-30V	PNP	NO	<2mS	Diffusetype
G64-3A10PB	10cm	DC10-30V	PNP	NC	<2mS	Diffusetype
G64-3A10PC	10cm	Diffusetype	PNP	NO+NC	<2mS	Diffusetype
G64-3B2NA	1.5m	DC10-30V	NPN	NO	<2mS	Mirrorreflextype
G64-3B2NB	1.5m	DC10-30V	NPN	NC	<2mS	Mirrorreflextype
G64-3B2NC	1.5m	DC10-30V	NPN	NO+NC	<2mS	Mirrorreflextype
G64-3B2PA	1.5m	DC10-30V	PNP	NO	<2mS	Mirrorreflextype
G64-3B2PB	1.5m	DC10-30V	PNP	NC	<2mS	Mirrorreflextype
G64-3B2PC	1.5m	DC10-30V	PNP	NO+NC	<2mS	Mirrorreflextype
G64-3C3NA	3m	DC10-30V	NPN	NO	<2mS	Throughbeam
G64-3C3NB	3m	DC10-30V	NPN	NC	<2mS	Throughbeam
G64-3C3NC	3m	DC10-30V	NPN	NO+NC	<2mS	Throughbeam
G64-3C3PA	3m	DC10-30V	PNP	NO	<2mS	Throughbeam
G64-3C3PB	3m	DC10-30V	PNP	NC	<2mS	Throughbeam
G64-3C3PC	3m	DC10-30V	PNP	NO+NC	<2mS	Throughbeam
G68-3C5NA	5m	DC10-30V	NPN	NO	<2mS	Throughbeam
G68-3C5NB	5m	DC10-30V	NPN	NC	<2mS	Throughbeam
G68-3C5NC	5m	DC10-30V	NPN	NO+NC	<2mS	Throughbeam
G68-3C5PA	5m	DC10-30V	PNP	NO	<2mS	Throughbeam
G68-3C5PB	5m	DC10-30V	PNP	NC	<2mS	Throughbeam
G68-3C5PC	5m	DC10-30V	PNP	NO+NC	<2mS	Throughbeam

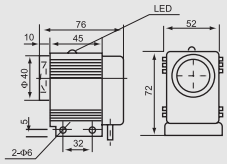


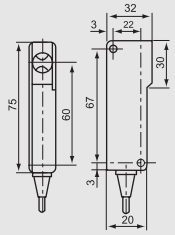




Model No.	Detection distance	Operating voltage	Output		Response time	Detection method
			Method	Status		
G70-3A20NA	20-100cm	DC10-30V	NPN	NO	<2mS	Diffusetype
G70-3A20NB	20-100cm	DC10-30V	NPN	NC	<2mS	Diffusetype
G70-3A20NC	20-100cm	DC10-30V	NPN	NO+NC	<2mS	Diffusetype
G70-3A20PA	20-100cm	DC10-30V	PNP	NO	<2mS	Diffusetype
G70-3A20PB	20-100cm	DC10-30V	PNP	NC	<2mS	Diffusetype
G70-3A20PC	20-100cm	DC10-30V	PNP	NO+NC	<2mS	Diffusetype
G70-3B2NA	2m	DC10-30V	NPN	NO	<2mS	Mirrorreflextype
G70-3B2NB	2m	DC10-30V	NPN	NC	<2mS	Mirrorreflextype
G70-3B2NC	2m	DC10-30V	NPN	NO+NC	<2mS	Mirrorreflextype
G70-3B2PA	2m	DC10-30V	PNP	NO	<2mS	Mirrorreflextype
G70-3B2PB	2m	DC10-30V	PNP	NC	<2mS	Mirrorreflextype
G70-3B2PC	2m	DC10-30V	PNP	NO+NC	<2mS	Mirrorreflextype
G70-3C5NA	5m	DC10-30V	NPN	NO	<2mS	Throughbeam
G70-3C5NB	5m	DC10-30V	NPN	NC	<2mS	Throughbeam
G70-3C5NC	5m	DC10-30V	NPN	NO+NC	<2mS	Throughbeam
G70-3C5PA	5m	DC10-30V	PNP	NO	<2mS	Throughbeam
G70-3C5PB	5m	DC10-30V	PNP	NC	<2mS	Throughbeam
G70-3C5PC	5m	DC10-30V	PNP	NO+NC	<2mS	Throughbeam
G71-3A50NA	50cm	DC10-30V	NPN	NO	<2mS	Diffusetype
G71-3A50NB	50cm	DC10-30V	NPN	NC	<2mS	Diffusetype
G71-3A50NC	50cm	DC10-30V	NPN	NO+NC	<2mS	Diffusetype
G71-3A50PA	50cm	DC10-30V	PNP	NO	<2mS	Diffusetype
G71-3A50PB	50cm	DC10-30V	PNP	NC	<2mS	Diffusetype
G71-3A50PC	50cm	DC10-30V	PNP	NO+NC	<2mS	Diffusetype
G71-3B2NA	2m	DC10-30V	NPN	NO	<2mS	Mirrorreflextype
G71-3B2NB	2m	DC10-30V	NPN	NC	<2mS	Mirrorreflextype
G71-3B2NC	2m	DC10-30V	NPN	NO+NC	<2mS	Mirrorreflextype
G71-3B2PA	2m	DC10-30V	PNP	NO	<2mS	Mirrorreflextype
G71-3B2PB	2m	DC10-30V	PNP	NC	<2mS	Mirrorreflextype
G71-3B2PC	2m	DC10-30V	PNP	NO+NC	<2mS	Mirrorreflextype
G71-3C5NA	5m	DC10-30V	NPN	NO	<2mS	Throughbeam
G71-3C5NB	5m	DC10-30V	NPN	NC	<2mS	Throughbeam
G71-3C5NC	5m	DC10-30V	NPN	NO+NC	<2mS	Throughbeam
G71-3C5PA	5m	DC10-30V	PNP	NO	<2mS	Throughbeam
G71-3C5PB	5m	DC10-30V	PNP	NO	<2mS	Throughbeam
G71-3C5PC	5m	DC10-30V	PNP	NO+NC	<2mS	Throughbeam
G180-3A10NA	10cm	DC10-30V	NPN	NO	<2mS	Diffusetype
G180-3A10NB	10cm	DC10-30V	NPN	NC	<2mS	Diffusetype
G180-3A10NC	10cm	DC10-30V	NPN	NO+NC	<2mS	Diffusetype
G180-3A10PA	10cm	DC10-30V	PNP	NO	<2mS	Diffusetype
G180-3A10PB	10cm	DC10-30V	PNP	NC	<2mS	Diffusetype
G180-3A10PC	10cm	DC10-30V	PNP	NO+NC	<2mS	Diffusetype
G180-2A10LA	10cm	AC90-250V	SCR	NO	<2mS	Diffusetype
G180-2A10LB	10cm	AC90-250V	SCR	NC	<2mS	Diffusetype
G180-3B2NA	2m	DC10-30V	NPN	NO	<2mS	Mirrorreflextype
G180-3B2NB	2m	DC10-30V	NPN	NC	<2mS	Mirrorreflextype
G180-3B2NC	2m	DC10-30V	NPN	NO+NC	<2mS	Mirrorreflextype
G180-3B2PA	2m	DC10-30V	PNP	NO	<2mS	Mirrorreflextype
G180-3B2PB	2m	DC10-30V	PNP	NC	<2mS	Mirrorreflextype
G180-3B2PC	2m	DC10-30V	PNP	NO+NC	<2mS	Mirrorreflextype
G180-2B2LA	2m	AC90-250V	SCR	NO	<2mS	Mirrorreflextype
G180-2B2LB	2m	AC90-250V	SCR	NC	<2mS	Mirrorreflextype
G180-3C5NA	5m	DC10-30V	NPN	NO	<2mS	Throughbeam
G180-3C5NB	5m	DC10-30V	NPN	NC	<2mS	Throughbeam
G180-3C5NC	5m	DC10-30V	NPN	NO+NC	<2mS	Throughbeam
G180-3C5PA	5m	DC10-30V	PNP	NO	<2mS	Throughbeam
G180-3C5PB	5m	DC10-30V	PNP	NC	<2mS	Throughbeam
G180-3C5PC	5m	DC10-30V	PNP	NO+NC	<2mS	Throughbeam
G180-2C5LA	5m	AC90-250V	SCR	NO	<2mS	Throughbeam
G180-2C5LB	5m	AC90-250V	SCR	NC	<2mS	Throughbeam



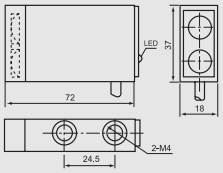




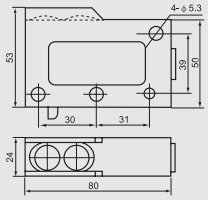
Model No.	Detection distance	Operating voltage	Output		Response time	Detection method
			Method	Status		
G75-3A80NA	80cm	DC10-30V	NPN	NO	<2mS	Diffusetype
G75-3A80NB	80cm	DC10-30V	NPN	NC	<2mS	Diffusetype
G75-3A80NC	80cm	DC10-30V	NPN	NO+NC	<2mS	Diffusetype
G75-3A80PA	80cm	DC10-30V	PNP	NO	<2mS	Diffusetype
G75-3A80PB	80cm	DC10-30V	PNP	NC	<2mS	Diffusetype
G75-3A80PC	80cm	DC10-30V	PNP	NO+NC	<2mS	Diffusetype
G75-2A80LA	80cm	AC90-250V	SCR	NO	<2mS	Diffusetype
G75-3B3NA	3m	DC10-30V	NPN	NO	<2mS	Mirrorreflextype
G75-3B3NB	3m	DC10-30V	NPN	NC	<2mS	Mirrorreflextype
G75-3B3NC	3m	DC10-30V	NPN	NO+NC	<2mS	Mirrorreflextype
G75-3B3PA	3m	DC10-30V	PNP	NO	<2mS	Mirrorreflextype
G75-3B3PB	3m	DC10-30V	PNP	NC	<2mS	Mirrorreflextype
G75-3B3PC	3m	DC10-30V	PNP	NO+NC	<2mS	Mirrorreflextype
G75-2B3LA	3m	AC90-250V	SCR	NO	<2mS	Mirrorreflextype
G75-3C8NA	8m	DC10-30V	NPN	NO	<2mS	Throughbeam
G75-3C8NB	8m	DC10-30V	NPN	NC	<2mS	Throughbeam
G75-3C8NC	8m	DC10-30V	NPN	NO+NC	<2mS	Throughbeam
G75-3C8PA	8m	DC10-30V	PNP	NO	<2mS	Throughbeam
G75-3C8PB	8m	DC10-30V	PNP	NC	<2mS	Throughbeam
G75-3C8PC	8m	DC10-30V	PNP	NO+NC	<2mS	Throughbeam
G75-2C8LA	8m	AC90-250V	SCR	NO	<2mS	Throughbeam
G76-3C101NA	10-50m	DC10-30V	NPN	NO	<2mS	Throughbeam
G76-3C101NB	10-50m	DC10-30V	NPN	NC	<2mS	Throughbeam
G76-3C101NC	10-50m	DC10-30V	NPN	NO+NC	<2mS	Throughbeam
G76-3C101PA	10-50m	DC10-30V	PNP	NO	<2mS	Throughbeam
G76-3C101PB	10-50m	DC10-30V	PNP	NC	<2mS	Throughbeam
G76-3C101PC	10-50m	DC10-30V	PNP	NO+NC	<2mS	Throughbeam
G76-2C101LA	10-50m	AC90-250V	SCR	NO	<20mS	Throughbeam
G77-3A30NA	30cm	DC10-30V	NPN	NO	<2mS	Diffusetype
G77-3A30NB	30cm	DC10-30V	NO+NC	NC	<2mS	Diffusetype
G77-3A30NC	30cm	DC10-30V	NPN	NO+NC	<2mS	Diffusetype
G77-3A30PA	30cm	DC10-30V	PNP	NO	<2mS	Diffusetype
G77-3A30PB	30cm	DC10-30V	PNP	NC	<2mS	Diffusetype
G77-3A30PC	30cm	DC10-30V	PNP	NO+NC	<2mS	Diffusetype
G77-2A30LA	30cm	AC90-250V	SCR	NO	<2mS	Diffusetype
G77-3B3NA	3m	DC10-30V	NPN	NO	<2mS	Mirrorreflextype
G77-3B3NB	3m	DC10-30V	NPN	NC	<2mS	Mirrorreflextype
G77-3B3NC	3m	DC10-30V	NPN	NO+NC	<2mS	Mirrorreflextype
G77-3B3PA	3m	DC10-30V	PNP	NO	<2mS	Mirrorreflextype
G77-3B3PB	3m	DC10-30V	PNP	NC	<2mS	Mirrorreflextype
G77-3B3PC	3m	DC10-30V	PNP	NO+NC	<2mS	Mirrorreflextype
G77-2B3LA	3m	AC90-250V	SCR	NO	<2mS	Mirrorreflextype
G77-3C5NA	5m	DC10-30V	NPN	NO	<2mS	Throughbeam
G77-3C5NB	5m	DC10-30V	NPN	NC	<2mS	Throughbeam
G77-3C5NC	5m	DC10-30V	NPN	NO+NC	<2mS	Throughbeam
G77-3C5PA	5m	DC10-30V	PNP	NO	<2mS	Throughbeam
G77-3C5PB	5m	DC10-30V	PNP	NC	<2mS	Throughbeam
G77-3C5PC	5m	DC10-30V	PNP	NO+NC	<2mS	Throughbeam
G77-2C5LA	5m	AC90-250V	SCR	NO	<2mS	Throughbeam

Sensors

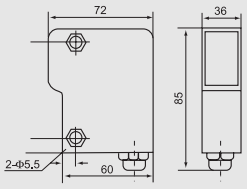
Photoelectric sensor



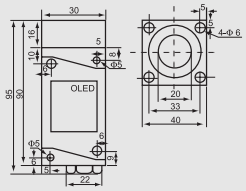
Model No.	Detection distance	Operating voltage	Output		Response time	Detection method
			Method	Status		
G78-3A40NA	40cm	DC10-30V	NPN	NO	<2mS	Diffusetype
G78-3A40NB	40cm	DC10-30V	NPN	NC	<2mS	Diffusetype
G78-3A40NC	40cm	DC10-30V	NPN	NO+NC	<2mS	Diffusetype
G78-3A40PA	40cm	DC10-30V	PNP	NO	<2mS	Diffusetype
G78-3A40PB	40cm	DC10-30V	PNP	NO	<2mS	Diffusetype
G78-3A40PC	40cm	DC10-30V	PNP	NO+NC	<2mS	Diffusetype
G78-2A40LA	40cm	AC90-250V	SCR	NO	<2mS	Diffusetype
G78-3B2NA	2m	DC10-30V	NPN	NO	<2mS	Mirrorreflextype
G78-3B2NB	2m	DC10-30V	NPN	NC	<2mS	Mirrorreflextype
G78-3B2NC	2m	DC10-30V	NPN	NO+NC	<2mS	Mirrorreflextype
G78-3B2PA	2m	DC10-30V	PNP	NO	<2mS	Mirrorreflextype
G78-3B2PB	2m	DC10-30V	PNP	NC	<2mS	Mirrorreflextype
G78-3B2PC	2m	DC10-30V	PNP	NO+NC	<2mS	Mirrorreflextype
G78-2B2LA	2m	AC90-250V	SCR	NO	<2mS	Mirrorreflextype
G78-3C5NA	5m	DC10-30V	NPN	NO	<2mS	Throughbeam
G78-3C5NB	5m	DC10-30V	NPN	NC	<2mS	Throughbeam
G78-3C5NC	5m	DC10-30V	NPN	NO+NC	<2mS	Throughbeam
G78-3C5PA	5m	DC10-30V	PNP	NO	<2mS	Throughbeam
G78-3C5PB	5m	DC10-30V	PNP	NC	<2mS	Throughbeam
G78-3C5PC	5m	DC10-30V	PNP	NO+NC	<2mS	Throughbeam
G78-2C5LA	5m	AC90-250V	SCR	NO	<2mS	Throughbeam



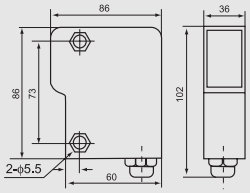
G80-3A80NA	80cm	DC10-30V	NPN	NO	<2mS	Diffusetype
G80-3A80NB	80cm	DC10-30V	NPN	NC	<2mS	Diffusetype
G80-3A80NC	80cm	DC10-30V	NPN	NO+NC	<2mS	Diffusetype
G80-3A80PA	80cm	DC10-30V	PNP	NO	<2mS	Diffusetype
G80-3A80PB	80cm	DC10-30V	PNP	NC	<2mS	Diffusetype
G80-3A80PC	80cm	DC10-30V	PNP	NO+NC	<2mS	Diffusetype
G80-2A80LA	80cm	AC90-250V	SCR	NO	<2mS	Diffusetype
G80-3B3NA	3m	DC10-30V	NPN	NO	<2mS	Mirrorreflextype
G80-3B3NB	3m	DC10-30V	NPN	NC	<2mS	Mirrorreflextype
G80-3B3NC	3m	DC10-30V	NPN	NO+NC	<2mS	Mirrorreflextype
G80-3B3PA	3m	DC10-30V	PNP	NO	<2mS	Mirrorreflextype
G80-3B3PB	3m	DC10-30V	PNP	NC	<2mS	Mirrorreflextype
G80-3B3PC	3m	DC10-30V	PNP	NO+NC	<2mS	Mirrorreflextype
G80-2B3LA	3m	AC90-250V	SCR	NO	<2mS	Mirrorreflextype
G80-3C5NA	5m	DC10-30V	NPN	NO	<2mS	Throughbeam
G80-3C5NB	5m	DC10-30V	NPN	NC	<2mS	Throughbeam
G80-3C5NC	5m	DC10-30V	NPN	NO+NC	<2mS	Throughbeam
G80-3C5PA	5m	DC10-30V	PNP	NO	<2mS	Throughbeam
G80-3C5PB	5m	DC10-30V	PNP	NC	<2mS	Throughbeam
G80-3C5PC	5m	DC10-30V	PNP	NO+NC	<2mS	Throughbeam
G80-2C5LA	5m	AC90-250V	SCR	NO	<2mS	Throughbeam



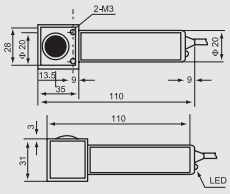
Model No.	Detection distance	Operating voltage	Output		Response time	Detection method
			Method	Status		
G85-3A1NA	1m	DC10-30V	NPN	NO	<2mS	Diffusetype
G85-3A1NB	1m	DC10-30V	NPN	NC	<2mS	Diffusetype
G85-3A1NC	1m	DC10-30V	NPN	NO+NC	<2mS	Diffusetype
G85-3A1PA	1m	DC10-30V	PNP	NO	<2mS	Diffusetype
G85-3A1PB	1m	DC10-30V	PNP	NC	<2mS	Diffusetype
G85-3A1PC	1m	DC10-30V	PNP	NO+NC	<2mS	Diffusetype
G85-2A1LA	1m	AC90-250V	SCR	NO	<2mS	Diffusetype
G85-3B5NA	5m	DC10-30V	NPN	NO	<2mS	Mirrorreflextype
G85-3B5NB	5m	DC10-30V	NPN	NC	<2mS	Mirrorreflextype
G85-3B5NC	5m	DC10-30V	NPN	NO+NC	<2mS	Mirrorreflextype
G85-3B5PA	5m	DC10-30V	PNP	NO	<2mS	Mirrorreflextype
G85-3B5PB	5m	DC10-30V	PNP	NC	<2mS	Mirrorreflextype
G85-3B5PC	5m	DC10-30V	PNP	NO+NC	<2mS	Mirrorreflextype
G85-2B5LA	5m	AC90-250V	SCR	NO	<2mS	Mirrorreflextype
G85-3C101NA	10m	DC10-30V	NPN	NO	<2mS	Throughbeam
G85-3C101NB	10m	DC10-30V	NPN	NC	<2mS	Throughbeam
G85-3C101NC	10m	DC10-30V	NPN	NO+NC	<2mS	Throughbeam
G85-3C101PA	10m	DC10-30V	PNP	NO	<2mS	Throughbeam
G85-3C101PB	10m	DC10-30V	PNP	NC	<2mS	Throughbeam
G85-3C101PC	10m	DC10-30V	PNP	NO+NC	<2mS	Throughbeam
G85-2C101LA	10m	AC90-250V	SCR	NO	<2mS	Throughbeam



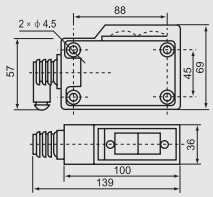
G90-3A70NA	70cm	DC10-30V	NPN	NO	<2mS	Diffusetype
G90-3A70NB	70cm	DC10-30V	NPN	NC	<2mS	Diffusetype
G90-3A70NC	70cm	DC10-30V	NPN	NO+NC	<2mS	Diffusetype
G90-3A70PA	70cm	DC10-30V	PNP	NO	<2mS	Diffusetype
G90-3A70PB	70cm	DC10-30V	PNP	NC	<2mS	Diffusetype
G90-3A70PC	70cm	DC10-30V	PNP	NC	<2mS	Diffusetype
G90-2A70LA	70cm	AC90-250V	SCR	NO	<2mS	Diffusetype
G90-3B5NA	5m	DC10-30V	NPN	NO	<2mS	Mirrorreflextype
G90-3B5NB	5m	DC10-30V	NPN	NC	<2mS	Mirrorreflextype
G90-3B5NC	5m	DC10-30V	NPN	NO+NC	<2mS	Mirrorreflextype
G90-3B5PA	5m	DC10-30V	PNP	NO	<2mS	Mirrorreflextype
G90-3B5PB	5m	DC10-30V	PNP	NC	<2mS	Mirrorreflextype
G90-3B5PC	5m	DC10-30V	PNP	NO+NC	<2mS	Mirrorreflextype
G90-2B5LA	5m	AC90-250V	SCR	NO	<2mS	Mirrorreflextype
G90-3C101NA	10m	DC10-30V	NPN	NO	<2mS	Throughbeam
G90-3C101NB	10m	DC10-30V	NPN	NC	<2mS	Throughbeam
G90-3C101NC	10m	DC10-30V	NPN	NO+NC	<2mS	Throughbeam
G90-3C101PA	10m	DC10-30V	PNP	NO	<2mS	Throughbeam
G90-3C101PB	10m	DC10-30V	PNP	NC	<2mS	Throughbeam
G90-3C101PC	10m	DC10-30V	PNP	NC	<2mS	Throughbeam
G90-2C101LA	10m	AC90-250V	SCR	NO	<2mS	Throughbeam



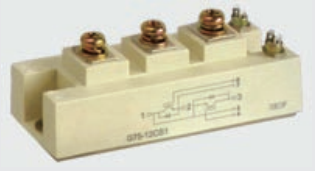
Model No.	Detection distance	Operating voltage	Output		Response time	Detection method
			Method	Status		
G100-3A1NA	1m	DC10-30V	NPN	NO	<2mS	Diffusetype
G100-3A1NB	1m	DC10-30V	NPN	NC	<2mS	Diffusetype
G100-3A1NC	1m	DC10-30V	NPN	NO+NC	<2mS	Diffusetype
G100-3A1PA	1m	DC10-30V	PNP	NO	<2mS	Diffusetype
G100-3A1PB	1m	DC10-30V	PNP	NC	<2mS	Diffusetype
G100-3A1PC	1m	DC10-30V	PNP	NO+NC	<2mS	Diffusetype
G100-2A1LA	1m	AC90-250V	SCR	NO	<2mS	Diffusetype
G100-3B5NA	5m	DC10-30V	NPN	NO	<2mS	Mirrorreflextype
G100-3B5NB	5m	DC10-30V	NPN	NC	<2mS	Mirrorreflextype
G100-3B5NC	5m	DC10-30V	NPN	NO+NC	<2mS	Mirrorreflextype
G100-3B5PA	5m	DC10-30V	NPN	NO	<2mS	Mirrorreflextype
G100-3B5PB	5m	DC10-30V	PNP	NC	<2mS	Mirrorreflextype
G100-3B5PC	5m	DC10-30V	PNP	NO+NC	<2mS	Mirrorreflextype
G100-2B5LA	5m	AC90-250V	SCR	NO	<2mS	Mirrorreflextype
G100-3C101NA	10m	DC10-30V	NPN	NO	<2mS	Throughbeam
G100-3C101NB	10m	DC10-30V	NPN	NC	<2mS	Throughbeam
G100-3C101NC	10m	DC10-30V	NPN	NO+NC	<2mS	Throughbeam
G100-3C101PA	10m	DC10-30V	PNP	NO	<2mS	Throughbeam
G100-3C101PB	10m	DC10-30V	PNP	NC	<2mS	Throughbeam
G100-3C101PC	10m	DC10-30V	PNP	NO+NC	<2mS	Throughbeam
G100-2C101LA	10m	AC90-250V	SCR	NO	<2mS	Throughbeam

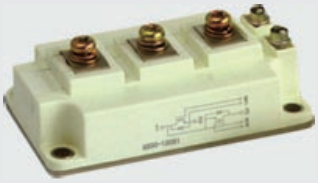


G110-3C5NA	5m	DC10-30V	NPN	NO	<2mS	Throughbeam
G110-3C5NB	5m	DC10-30V	NPN	NC	<2mS	Throughbeam
G110-3C5NC	5m	DC10-30V	NPN	NO+NC	<2mS	Throughbeam
G110-3C5PA	5m	DC10-30V	PNP	NO	<2mS	Throughbeam
G110-3C5PB	5m	DC10-30V	PNP	NC	<2mS	Throughbeam
G110-3C5PC	5m	DC10-30V	PNP	NO+NC	<2mS	Throughbeam
G110-2C5LA	5m	AC90-250V	SCR	NO	<2mS	Throughbeam



G139-3A1NA	1m	DC10-30V	NPN	NO	<2mS	Diffusetype
G139-3A1NB	1m	DC10-30V	NPN	NC	<2mS	Diffusetype
G139-3A1NC	1m	DC10-30V	NPN	NO+NC	<2mS	Diffusetype
G139-3A1PA	1m	DC10-30V	PNP	NO	<2mS	Diffusetype
G139-3A1PB	1m	DC10-30V	PNP	NC	<2mS	Diffusetype
G139-3A1PC	1m	DC10-30V	PNP	NO+NC	<2mS	Diffusetype
G139-2A1LA	1m	AC90-250V	SCR	NO	<2mS	Diffusetype
G139-3B5NA	5m	DC10-30V	NPN	NO	<2mS	Mirrorreflextype
G139-3B5NB	5m	DC10-30V	NPN	NC	<2mS	Mirrorreflextype
G139-3B5NC	5m	DC10-30V	NPN	NO+NC	<2mS	Mirrorreflextype
G139-3B5PA	5m	DC10-30V	PNP	NO	<2mS	Mirrorreflextype
G139-3B5PB	5m	DC10-30V	PNP	NC	<2mS	Mirrorreflextype
G139-3B5PC	5m	DC10-30V	PNP	NO+NC	<2mS	Mirrorreflextype
G139-2B5LA	5m	AC90-250V	SCR	NO	<2mS	Mirrorreflextype
G139-3C101NA	10m	DC10-30V	NPN	NO	<2mS	Throughbeam
G139-3C101NB	10m	DC10-30V	NPN	NC	<2mS	Throughbeam
G139-3C101PA	10m	DC10-30V	PNP	NO	<2mS	Throughbeam
G139-3C1O1PB	10m	DC10-30V	PNP	NC	<2mS	Throughbeam
G139-3C101PC	10m	DC10-30V	PNP	NO+NC	<2mS	Throughbeam
G139-2C101LA	10m	AC90-250V	SCR	NO	<2mS	Throughbeam





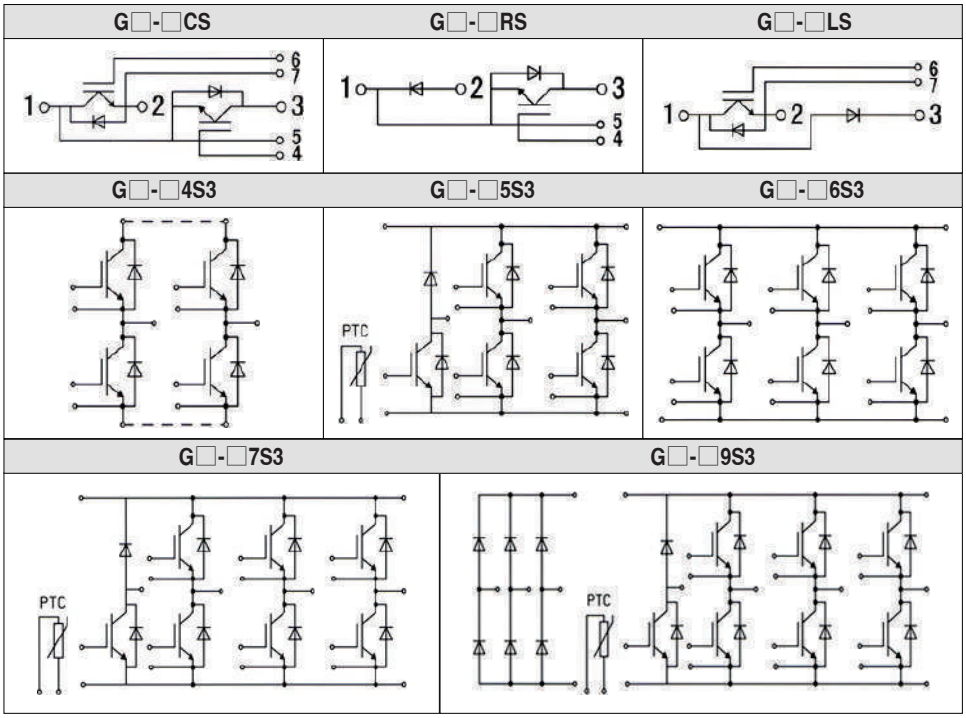
Characteristics

- SPT chip (soft-punch-through)
- MOS input control
- Ultrathin IGBT chip, great current low loss, low tail current
- Low VCE (sat) saturated voltage, positive temperature coefficient at high temperature
- High switch frequency, low switch loss
- High SC resistive ability
- Module creepage long distance design
- DBC insulated voltage above 2500VRMS

Typical Applications

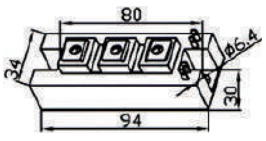
- AC and DC electric motor control
- Frequency transformer
- UPS
- Industry calefaction power supply
- Electric welding machine

Internal structure



Major parameters

Parameters	Collector current Ic (A)					Vces(v) Collector-Emitter Voltage
Model	50,75,100,145	150,200,300,400	10,15,25,40	25,50	50,75	600,1200,1700
	G□-□CS	G□-□CS	G□-□4S3	G□-□4S3	G□-□4S3	
	G□-□RS	G□-□RS	G□-□5S3	G□-□5S3	G□-□6S3	
	G□-□LS	G□-□LS	G□-□6S3	G□-□6S3		
			G□-□7S3	G□-□7S3		
			G□-□9S3			
Exterior	Figure 1	Figure 2	Figure 3			



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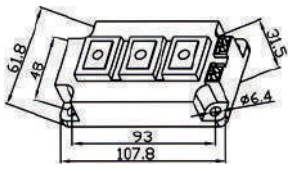

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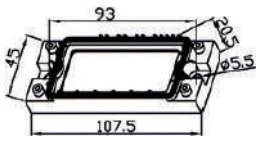

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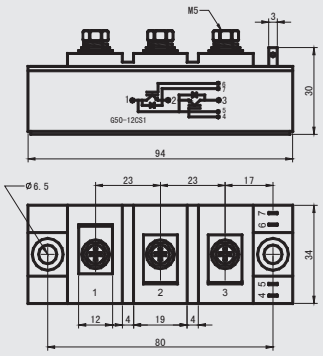
Characteristic

- SPT:Soft-punch-through technologe
- VCE(sat)with positivetemperature coefficient
- Lower on-state and switching loss
- Hight short circuit capability
- “vacuum+H2+H” process gasatmosphere,Nearly voidlesssoldering results1234567

Dimensions



G50-12CS1 Technical details

Characteristic values

	Symbol	Conditions	values			Unit
IGBT						
Collector-emitter voltage	VCES		1200			V
DC-collector current	IC	Tc=25(85)℃		75(50)		A
repetitive peak voltage	ICRM	Tc=25(80)℃, tp=1ms		150(100)		A
gate-emitter peak voltage	VGES		±20			V
operation temperature	Tvj		-40~+125			℃
storage temperature	Tstg		-40~+150			℃
insulation test voltage	VISOL	RMS, 1min, 50Hz	2500			V
Inverse diode						
DC-forward current	IF	Tc=25(80)℃	75 (50)			A
repetitive peak forward voltage	IFRM	Tc=25(80)℃, tp=1ms	150 (100)			A
forward surge current	IFSM	tp=10ms, sin, Tj=150℃	500			A

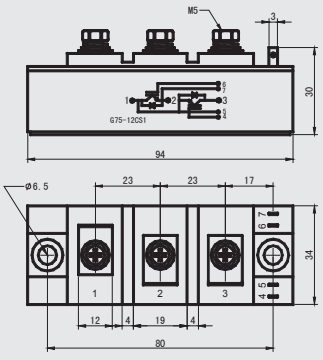
Characteristic values

Paramiter	Symbol	Conditions	values			IGBT
			typ.	typ.	max.	
IGBT						
gate threshold voltage	VGE(th)	VGE=VCE, Ic=2mA,Tj=25℃	4.5	5.5	6.5	V
collector-emitter cut-off current	ICES	VGe=0V, Vce=VCES, Tj=25(125)℃		0.1	0.3	mA
gate-leakage current	IGES	VGE=0V, VGE=20V, Tj=25℃	-200		200	nA
collector-emitter threshold voltage	VCE (TO)	Tj=25 (125)℃		1(0.9)	1.15(1.05)	V
collector-emitter threshold voltage	rCE	VGE=15V, Tj=25 (125)℃		18(24)	24(30)	mΩ
collector-emitter saturation votage	VCE(SAT)	Ic=50A, VGE=15V, chip level		1.9 (2.1)	2.35 (2.55)	V
input capacitance	Cies	VGE=0, VCE=25V, f=1MHZ		4.5		nF
output capacitance	Coes			0.6		nF
Reverse transfer capacitance	Cres			0.55		nF
stray inductance module	LCE				25	nH
module lead resistance	RCC'+EE'	terminals-chip, Tc=25 (125)℃	0.75 (1)			mΩ
Short circuit current	Isc	tpsc≤1s, VGE=15V, TVj=125℃, VCC=900V, VCEM≤1200V	280			A
turen on delay time	td (on)	Vcc=600V, Ic=50A Rgon=Rgoff=15 Tj=125℃, VGE=±15V	90			ns
rise time	tr		55			ns
turn off delay time	td (off)		440			ns
fall time	tf		40			ns
turn-on energy loss per pules	Eon		5.7			mj
turn-off energy loss per pulse	Eoff		4.7			mj
Inverse diode						
forward voltage	VF	IF=50A, VGE=0V; Tj=25(125)℃		2(1.8)	2.5(1.9)	V
threshold voltage of diode	V(TO)	Tj=25(125)=		1.1	1.2	V
peak reverse recovery current	IRRM	IF=50A, VGE=0, diF/dt=900A/us, Tj=125, VR=600V	40			A
Reverse recovered time	trr		400			nS
Thermal properties						
Thermal resistance, junction to case	Rth(j-c)	per IGBT	0.3			K/W
	Rth(j-c)D	per inverse diode	0.65			K/W
Thermal resistance, case to heat sink	Rth(c-s)	per module	0.05			K/W
Mechanical properties						
mounting torque	M1	M6	3		5	NM
terminal connection tord	M2	M5	2.5		5	NM
weight	MAX	176				g
Case color		white				K/W
Dimensions	MAX	94x3430.5				mm

Characteristic

- SPT:Soft-punch-through technologe
- VCE(sat)with positivetemperature coefficient
- Lower on-state and switching loss
- Hight short circuit capability
- “vacuum+H2+H” process gasatmosphere,Nearly voidlesssoldering results1234567

Dimensions



G75-12CS1 Technical Details

Maximum rated values

	Symbol	Conditions	values		Unit
IGBT					
Collector-emitter voltage	VCES		1200		V
DC-collector current	IC	T_C=25(85)℃		75(50)	A
repetitive peak voltage	ICRM	T_C=25(80)℃, tp=1ms	200(150)		A
gate-emitter peak voltage	VGES		±20		V
operation temperature	Tvj		-40~+125		℃
storage temperature	Tstg		-40~+150		℃
insulation test voltage	VISOL	RMS, 1min, 50Hz	2500		V
Inverse diode					
DC-forward current	IF	T_C=25(80)℃	100 (75)		A
repetitive peak forward voltage	IFRM	T_C=25(80)℃, tp=1ms	200 (150)		A
forward surge current	IFSM	tp=10ms, sin, Tj=150℃	700		A

Characteristic values

Paramiter	Symbol	Conditions	values			IGBT
			typ.	typ.	max.	
IGBT						
gate threshold voltage	VGE(th)	V_{GE}=V_{CE}, I_C=3mA,Tj=25℃	4.5	5.5	6.5	V
collector-emitter cut-off current	ICES	V_{GE}=0V, V_{ce}=V_{CES}, T_j=25(125)℃		0.1	0.3	mA
gate-leakage current	IGES	V_{GE}=0V, VGE=20V, T_j=25℃	-200		200	nA
collector-emitter threshold voltage	VCE (TO)	T_j=25 (125)℃		1(0.9)	1.15(1.05)	V
collector-emitter threshold voltage	rCE	V_{GE}=15V, T_j=25 (125)℃	13(16)		16(20)	mΩ
collector-emitter saturation votage	VCE(SAT)	I_C=75 A, V_{GE}=15V, chip level	1.9 (2.1)		2.35 (2.55)	V
input capacitance	Cies	V_{GE}=0, V_{CE}=25V, f=1MHZ		6.2		nF
output capacitance	Coes			0.74		nF
Reverse transfer capacitance	Cres			0.71		nF
stray inductance module	LCE				25	nH
module lead resistance	RCC'+EE'	terminals-chip, Tc=25 (125)℃	0.75 (1)			mΩ
Short circuit current	I_{SC}	tpsc≤10s, VGE=15V, TVj=125℃, VCC=900V, VCEM≤1200V	420			A
turen on delay time	td (on)	V_{CC}=600V, Ic=70A Rgon=Rgoff=12 T_j=125℃, V_{GE}=±15V	150			ns
rise time	tr		45			ns
turn off delay time	td (off)		560			ns
fall time	tf		50			ns
turn-on energy loss per pules	Eon		8.5			mj
turn-off energy loss per pulse	Eoff		7.5			mj
Inverse diode						
forward voltage	VF	I_F=75A, V_{GE}=0V; Tj=25(125)℃		2(1.8)	2.5(1.9)	V
threshold voltage of diode	V(TO)	Tj=25(125)≡		1.1	1.2	V
peak reverse recovery current	I_{RRM}	I_F=75A, V_{GE}=0, diF/dt=600A/us, T_j=125, V_R=600V	62			A
Reverse recovered time	trr		200			nS
Thermal properties						
Thermal resistance, junction to case	Rth(j-c)	per IGBT	0.2			K/W
	Rth(j-c)D	per inverse diode	0.5			K/W
Thermal resistance, case to heat sink	Rth(c-s)	per module	0.05			K/W
Mechanical properties						
mounting torque	M1	M6	3		5	NM
terminal connection tord	M2	M5	2.5		5	NM
weight	MAX	176				g
Case color		white				K/W
Dimensions	MAX	94x3430.5				mm

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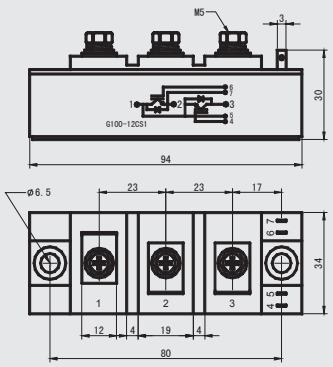
Characteristic

- SPT:Soft-punch-through technologe
- VCE(sat)with positivetemperature coefficient
- Lower on-state and switching loss
- Hight short circuit capability
- “vacuum+H2+H” process

Dimensions



G100-12CS1 Technical Details

Maximum rated values

	Symbol	Conditions	values	Unit
IGBT				
Collector-emitter voltage	VCES		1200	V
DC-collector current	IC	Tc=25(85)℃	150(100)	A
repetitive peak voltage	ICRM	Tc=25(80)℃, tp=1ms	300(200)	A
gate-emitter peak voltage	VGES		±20	V
operation temperature	Tvj		-40~+125	℃
storage temperature	Tstg		-40~+150	℃
insulation test voltage	VISOL	RMS, 1min, 50Hz	2500	V
Inverse diode				
DC-forward current	IF	Tc=25(80)℃	150 (95)	A
repetitive peak forward voltage	IFRM	Tc=25(80)℃, tp=1ms	300 (190)	A
forward surge current	IFSM	tp=10ms, sin, Tj=150℃	1000	A

Characteristic values

Paramiter	Symbol	Conditions	values			IGBT
			typ.	typ.	max.	
IGBT						
gate threshold voltage	VGE(th)	VGE=VCE, IC=4mA,Tj=25℃	4.5	5.5	6.5	V
collector-emitter cut-off current	ICES	VGe=0V, Vce=VCES, Tj=25(125)℃		0.1	0.3	mA
gate-leakage current	IGES	VGE=0V, VGE=20V, Tj=25℃	-200		200	nA
collector-emitter threshold voltage	VCE (TO)	Tj=25 (125)℃	1(0.9)		1.15(1.05)	V
collector-emitter threshold voltage	rCE	VGE=15V, Tj=25 (125)℃	9(12)		12(15)	mΩ
collector-emitter saturation votage	VCE(SAT)	IC=75 A, VGE=15V, chip level	1.9 (2.1)		2.35 (2.55)	V
input capacitance	Cies	VGE=0, VCE=25V, f=1MHZ		9		nF
output capacitance	Coes			1		nF
Reverse transfer capacitance	Cres			1		nF
stray inductance module	LCE				25	nH
module lead resistance	RCC'+EE'	terminals-chip, Tc=25 (125)℃	0.75 (1)			mΩ
Short circuit current	Isc	tpsc≤10s, VGE=15V, TVj=125℃, VCC=900V, VCEM≤1200V	470			A
turen on delay time	td (on)	VCC=600V, Ic=100A Rgon=Rgoff=12 Tj=125℃, VGE=±15V	190			ns
rise time	tr		50			ns
turn off delay time	td (off)		590			ns
fall time	tf		50			ns
turn-on energy loss per pules	Eon		11.5			mj
turn-off energy loss per pulse	Eoff		9.5			mj
Inverse diode						
forward voltage	VF	IF=100A, VGE=0V; Tj=25(125)℃		2.3(1.9)	2.55(2.0)	V
threshold voltage of diode	V(TO)	Tj=25(125)≡		1.1	1.2	V
peak reverse recovery current	IRRM	IF=100A, VGE=0, diF/dt=600A/us, Tj=125, VR=600V	62			A
Reverse recovered time	trr		200			nS
Thermal properties						
Thermal resistance, junction to case	Rth(j-c)	per IGBT	0.17			K/W
	Rth(j-c)D	per inverse diode	0.45			K/W
Thermal resistance, case to heat sink	Rth(c-s)	per module	0.05			K/W
Mechanical properties						
mounting torque	M1	M6	3		5	NM
terminal connection tord	M2	M5	2.5		5	NM
weight	MAX	176				g
Case color		white				K/W
Dimensions	MAX	94x3430.5				mm

Typical applications

- AC and DC electric motor control;
- Frequency transformer;
- UPS;
- Industry power supply;
- Electric welding machine.

Characteristics

- SPT chip (soft-punch-through);
- MOS input control;
- Ultra thin IGBT chip, great current, low loss, low tail current;
- Low VCE (sat) saturated voltage, positive temperature coefficient at high temperature;
- High switch frequency, low switch loss;
- High SC resistive ability;
- Module creepage long distance design;
- DBC insulated voltage above 2,500V RMS.

G200-12CS2 Technical Details

Maximum rated values

Absolute Max. Ratings			**Tc=25°C, unless specified**	
Name	Symbol	Condition	value	unit
IGBT				
Collector-emitter voltage	VCES		1200	V
Collector current	IC	Tc=25(80)°C	300(200)	A
Collector repetitive peak current	ICRM	Tc=25(80)°C, tp=1ms	600(400)	A
Gate-emitter peak voltage	VGES		±20	V
Junction temperature	Tvj		-40~+150	°C
Storage temperature	Tstg		-40~+125	°C
Isolation voltage	VISOL	RMS, 1min, 50Hz	2500	V
Reverse diode				
Forward DC current	IF	Tc=25(80)°C	300(200)	A
Forward repetitive peak current	IFRM	Tc=25(80)°C, tp=1ms	600(400)	A
Forward inrush current	IFSM	tp=10ms, sin, Tj=125°C	1800	A

Characteristic values

Absolute Max. Ratings			**Tc=25°C, unless specified**			
Name	symbol	condition	value			unit
			Min	Typical	Max.	
IGBT						
Gate-emitter threshold voltage	VGE(th)	VGE=VCE, Ic=4mA, Tj=25°C	5		7	V
Collector-emitter cut-off current	ICES	VGE=0V, VCE=VCES		0.2	0.6	mA
Gate-emitter leakage current	IGES	VGE=0V, VGE=±20V, Tj=25°C	-400		400	nA
On-state slope resistance	rCE	VGE=15V, Tj=25(125)°C		4.5(6)	6(7.5)	mΩ
Collector-emitter saturation voltage	VCE (SAT)	IC=200A, VGE=15V, chip parameters		1.9 (2.1)	2.35 (2.55)	V
Input capacitance	Cies			17		nF
Output capacitance	Coes	VGE=0, VCE=25V, f=1MHZ		2		nF
Reverse transfer capacitance	Cres			2		nF
Parasitic collector-emitter inductance	LCE				20	nH
Turn-on delay time	td(on)	VCC=600V, IC=200A Rgon=Rgoff=5Ω, Tj=125°C, VGE=±15V		170		ns
Rise time	tr			55		ns
Turn-off delay time	td (off)			660		ns
Fall time	tf			60		ns
Energy dissipation during turn-on time	Eon			18		mj
Energy dissipation during turn-off time	Eoff					
Reverse diode						
Forward voltage	VF	IF=180A, VGE=0, -diF/dt=1800A/μs, Tj=125°C, VR=600V		2 (1.8)		V
Peak reverse recovery current	IRRM			180		A
Reverse recovery time	trr			200		nS
Thermal characteristics						
IGBT thermal resistance junction to case	Rth(j-c)	per IGBT		0.09		K/W
	Rth(j-c)D	per reverse diode		0.15		K/W
Module thermal resistance case to heatsink	Rth(c-s)	per module		0.03		K/W
Mechanical characteristics						
Mounting torque	M1	M6	3		6	NM
Ends juncture torque	M2	M5	2.5		5	NM
Weight	MAX		324			g
Color			White			
Dimensions	MAX		107.5x62x31			mm

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Typical applications

- AC and DC electric motor control;
- Frequency transformer;
- UPS;
- Industry power supply;
- Electric welding machine.

Characteristics

- SPT chip (soft-punch-through);
- MOS input control;
- Ultra thin IGBT chip, great current, low loss, low tail current;
- Low VCE (sat) saturated voltage, positive temperature coefficient at high temperature;
- High switch frequency, low switch loss;
- High SC resistive ability;
- Module creepage long distance design;
- DBC insulated voltage above 2,500V RMS.

G300-12CS2 Technical Details

Maximum rated values

Absolute Max. Ratings			Tc=25°C, unless specified	
Name	Symbol	Condition	value	unit
IGBT				
Collector-emitter voltage	VCES		1200	V
Collector current	IC	Tc=25(80)°C	450(300)	A
Collector repetitive peak current	ICRM	Tc=25(80)°C, tp=1ms	900(600)	A
Gate-emitter peak voltage	VGES		±20	V
Junction temperature	Tvj		-40~+150	°C
Storage temperature	Tstg		-40~+125	°C
Isolation voltage	VISOL	RMS, 1min, 50Hz	2500	V
Reverse diode				
Forward DC current	IF	Tc=25(80)°C	450(300)	A
Forward repetitive peak current	IFRM	Tc=25(80)°C, tp=1ms	900(600)	A
Forward inrush current	IFSM	tp=10ms, sin, Tj=125°C	2200	A

Characteristic values

Absolute Max. Ratings			Tc=25°C, unless specified			
Name	symbol	condition	value			unit
			Min	Typical	Max.	
IGBT						
Gate-emitter threshold voltage	VGE(th)	VGE=VCE, Ic=5mA, Tj=25°C	5		7	V
Collector-emitter cut-off current	ICES	VGE=0V, VCE=VCES		0.2	0.6	mA
Gate-emitter leakage current	IGES	VGE=0V, VGE=±20V, Tj=25°C	-400		400	nA
On-state slope resistance	rCE	VGE=15V, Tj=25(125)°C		3(4)	4(5)	mΩ
Collector-emitter saturation voltage	VCE (SAT)	IC=300A, VGE=15V, chip parameters		1.9 (2.1)	2.35 (2.55)	V
Input capacitance	Cies			26		nF
Output capacitance	Coes	VGE=0, VCE=25V, f=1MHZ		3		nF
Reverse transfer capacitance	Cres			3		nF
Parasitic collector-emitter inductance	LCE				20	nH
Turn-on delay time	td(on)	VCC=600V, IC=300A Rgon=Rgoff=4.7Ω, Tj=125°C, VGE=±15V		110		ns
Rise time	tr			60		ns
Turn-off delay time	td (off)			800		ns
Fall time	tf			60		ns
Energy dissipation during turn-on time	Eon			22		mj
Energy dissipation during turn-off time	Eoff			22		
Reverse diode						
Forward voltage	VF	IF=300A;VGE=0V; Tj=25(125)°C		2 (1.8)		V
Peak reverse recovery current	IRRM	IF=225A, VGE=0, -diF/dt=2000A/μs, Tj=125°C, VR=600V		200		A
Reverse recovery time	trr			220		nS
Thermal characteristics						
IGBT thermal resistance junction to case	Rth(j-c)	per IGBT		0.06		K/W
	Rth(j-c)D	per reverse diode		0.12		K/W
Module thermal resistance case to heatsink	Rth(c-s)	per module		0.03		K/W
Mechanical characteristics						
Mounting torque	M1	M6	3		6	NM
Ends juncture torque	M2	M5	2.5		5	NM
Weight	MAX		324			g
Color			White			
Dimensions	MAX		107.5x62x31			mm

Features:

- Isolated mounting base 2500V~
- Pressure contact technology with
- Incrtased power cycling capability
- Space and weight savings

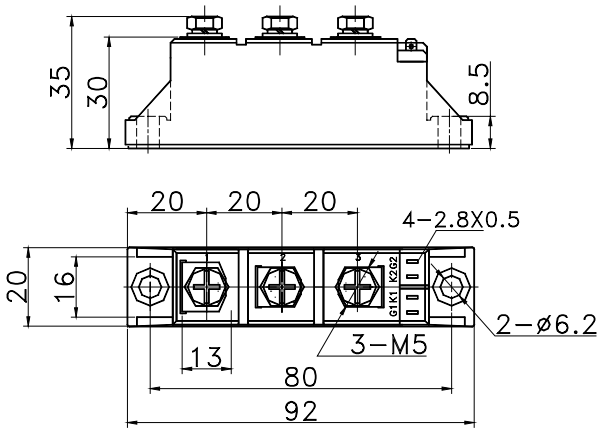
Typical Applications:

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{T(AV)}$	26A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	0.55KA
I^2t	$1.5A^2 S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			26	A
$I_{T(RMS)}$	RMS on-state current		125			41	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DSM}&V_{RSM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			8	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			0.55	KA
I^2t	I^2T for fusing coordination					1.50	A^2s*10^3
V_{TO}	Threshold voltage		125			0.85	V
r_T	On-state slop resistance					9.68	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=80A	25			1.69	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			50	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		100	mA
V_{GT}	Gate trigger voltage			0.8		2.5	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125	0.2		0.2	V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.950	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.2	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				2.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				115		g

Outline:



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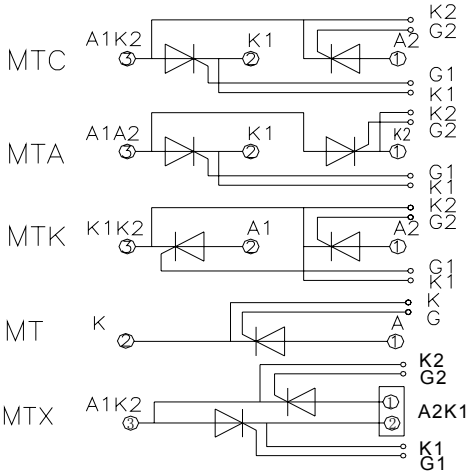


Features:

- Isolated mounting base 2500V~
- Pressure contact technology with
- Incrtased power cycling capability
- Space and weight savings

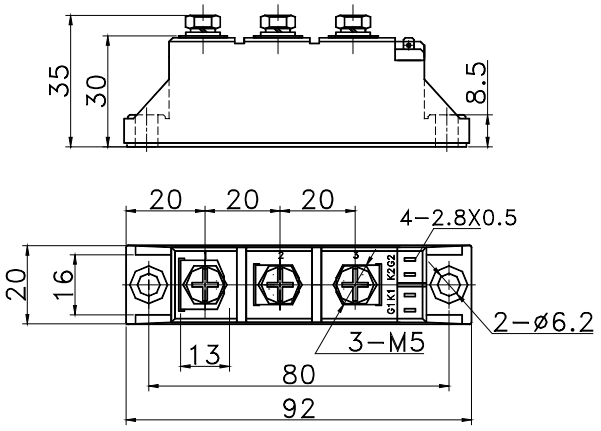
Typical Applications:

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{T(AV)}$	40A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	1.0KA
I^2t	$5.0A^2 S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			40	A
$I_{T(RMS)}$	RMS on-state current		125			63	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			8	mA
I_{TSM}	Surge on-state current	10ms half sine wave	125			1.00	KA
I^2t	I^2T for fusing coordination	V_R=60%V_{RRM}				5.0	A^2s*10^3
V_{TO}	Threshold voltage		125			0.85	V
r_T	On-state slop resistance					5.57	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=120A	25			1.60	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			50	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		100	mA
V_{GT}	Gate trigger voltage			0.8		2.5	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125			0.2	V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.650	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.2	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				4		N·m
	Mounting torque(M6)				6		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				160		g

Outline:



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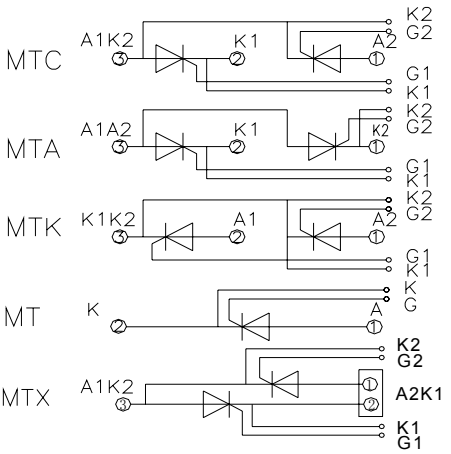


Features:

- Isolated mounting base 2500V~
- Pressure contact technology with
- Incrtased power cycling capability
- Space and weight savings

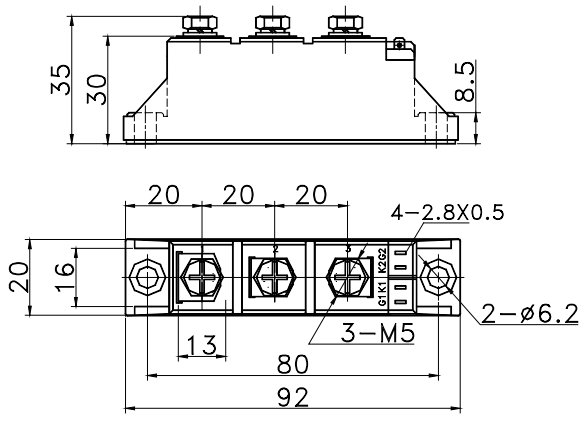
Typical Applications:

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{T(AV)}$	55A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	1.25KA
I^2t	7.8A^2 S*10^3

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			55	A
$I_{T(RMS)}$	RMS on-state current		125			86	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DSM}&V_{RSM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			8	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			1.25	KA
I^2t	I^2T for fusing coordination					7.80	A^2s*10^3
V_{TO}	Threshold voltage		125			0.85	V
r_T	On-state slop resistance					3.47	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=170A	25			1.50	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			50	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		100	mA
V_{GT}	Gate trigger voltage			0.8		2.5	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125				V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.530	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.2	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				2.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				100		g

Outline:



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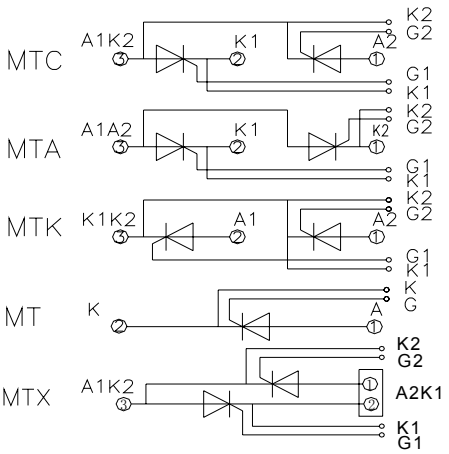


Features:

- Isolated mounting base 2500V~
- Pressure contact technology with
- Incrtased power cycling capability
- Space and weight savings

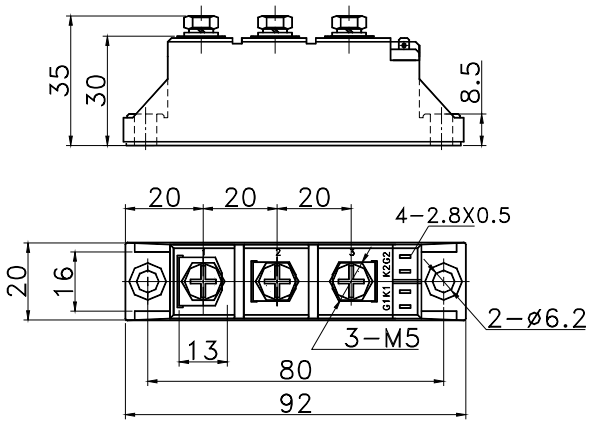
Typical Applications:

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{T(AV)}$	55A
V_{DRM}/V_{RRM}	1900~3000V
I_{TSM}	1.15KA
I^2t	6.6A^2 S*10^3

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			55	A
$I_{T(RMS)}$	RMS on-state current		125			86	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	1900		3000	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			10	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			1.15	KA
I^2t	I^2T for fusing coordination					6.60	A^{2}s*10^3
V_{TO}	Threshold voltage		125			0.90	V
r_T	On-state slop resistance					5.85	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=120A	25			1.96	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			50	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		150	mA
V_{GT}	Gate trigger voltage			0.8		3.0	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125				V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.640	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.2	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		3600			V
F_m	Thermal connection torque(M5)				2.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				115		g

Outline:



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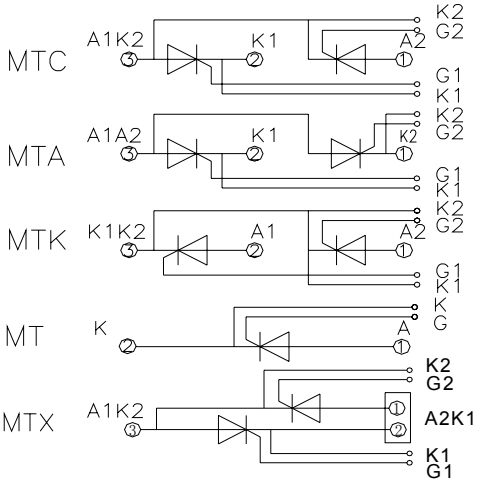


Features:

- Isolated mounting base 2500V~
- Pressure contact technology with
- Incrtased power cycling capability
- Space and weight savings

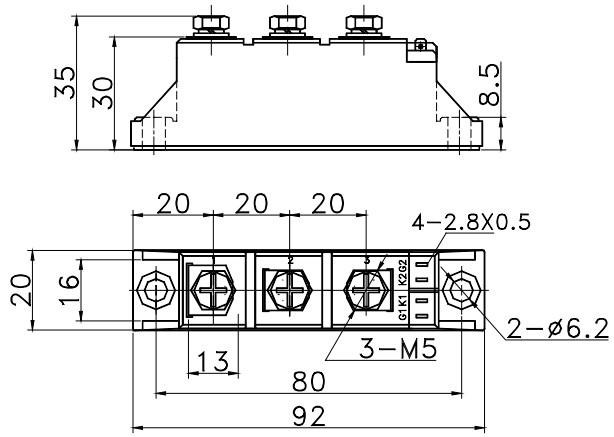
Typical Applications:

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{T(AV)}$	70A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	1.60KA
I^2t	$13A^2 S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			70	A
$I_{T(RMS)}$	RMS on-state current		125			110	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			10	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			1.60	KA
I^2t	I^2T for fusing coordination					13.0	A^2s*10^3
V_{TO}	Threshold voltage		125			0.8	V
r_T	On-state slop resistance					2.64	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=210A	25			1.48	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			50	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		100	mA
V_{GT}	Gate trigger voltage			0.8		2.5	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125			0.2	V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.410	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.2	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				2.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				115		g

Outline:



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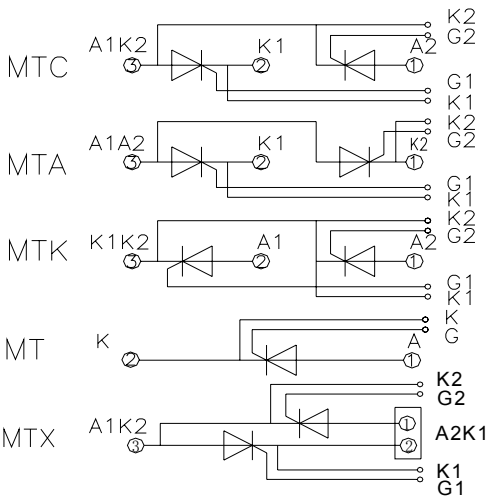


Features:

- Isolated mounting base 2500V~
- Pressure contact technology with
- Incrtased power cycling capability
- Space and weight savings

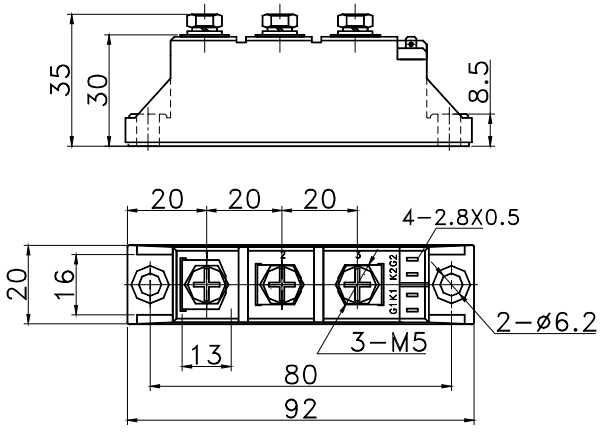
Typical Applications:

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{T(AV)}$	70A
V_{DRM}/V_{RRM}	1900~3000V
I_{TSM}	1.60KA
I^2t	13

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			70	A
$I_{T(RMS)}$	RMS on-state current		125			110	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	1900		3000	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			12	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			1.60	KA
I^2t	I^2T for fusing coordination					13.0	A^2s*10^3
V_{TO}	Threshold voltage		125			0.90	V
r_T	On-state slop resistance					4.64	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=210A	25			1.93	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			50	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		150	mA
V_{GT}	Gate trigger voltage			0.8		3.0	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125			0.2	V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.450	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.2	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		3600			V
F_m	Thermal connection torque(M5)				2.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				115		g

Outline:



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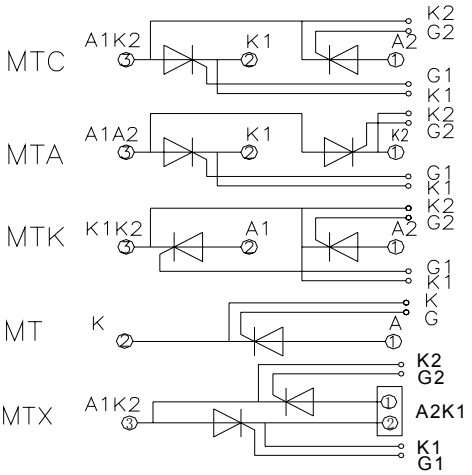

Features:

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Typical Applications:

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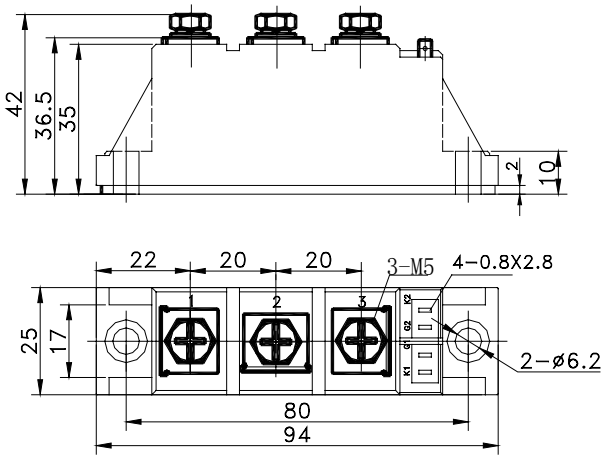
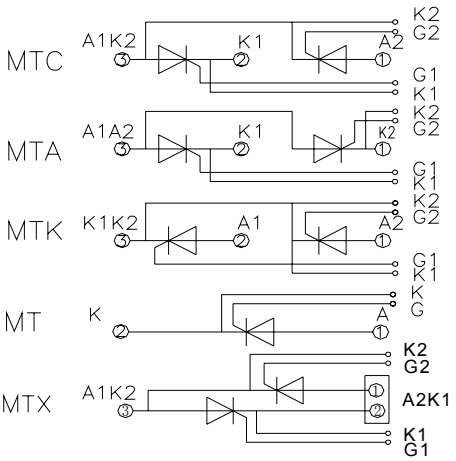
$I_{T(AV)}$	90A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	$2.0A\times10^3$
I^2t	$20.4A^2S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			90	A
$I_{T(RMS)}$	RMS on-state current		125			141	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DSM}&V_{RSM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1600	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			10	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			2	KA
I^2t	I^2T for fusing coordination					20.4	A^2s*10^3
V_{TO}	Threshold voltage		125			0.8	V
r_T	On-state slop resistance					3.01	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=270A	25			1.7	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		100	mA
V_{GT}	Gate trigger voltage			1		2.5	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125	0.2			V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.28	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.15	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				4		N·m
	Mounting torque(M6)				6		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				160		g

Outline:





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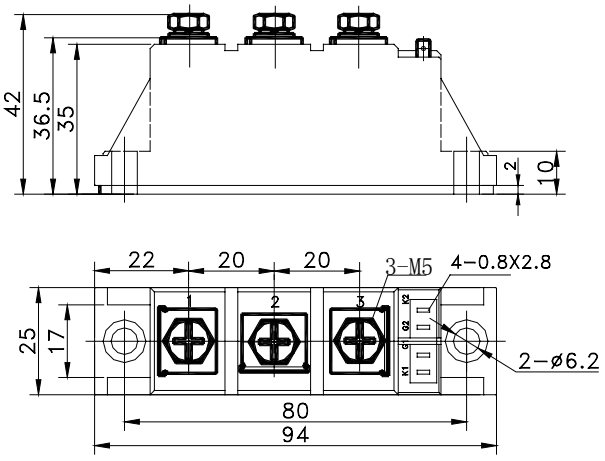
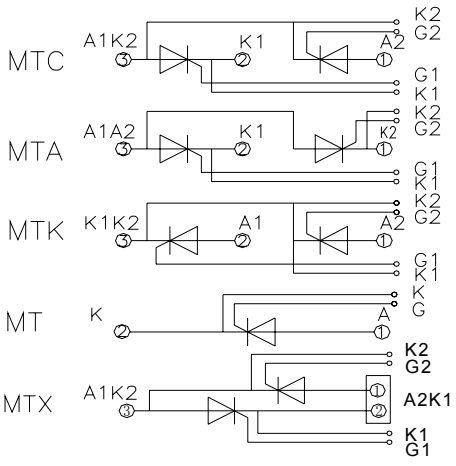
$I_{T(AV)}$	90A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	$2.0A\times10^3$
I^2t	$20.4A^2S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			90	A
$I_{T(RMS)}$	RMS on-state current		125			141	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1600	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			10	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			2	KA
I^2t	I^2T for fusing coordination					20.4	A^2s*10^3
V_{TO}	Threshold voltage		125			0.8	V
r_T	On-state slop resistance					3.01	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=270A	25			1.7	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		100	mA
V_{GT}	Gate trigger voltage			1		2.5	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125	0.2			V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.28	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.15	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				4		N·m
	Mounting torque(M6)				6		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				160		g

Outline:





Features:

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Typical Applications:

- AC/DC Motor drives
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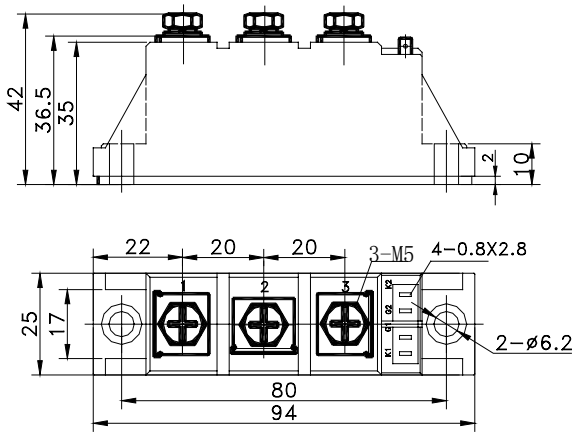
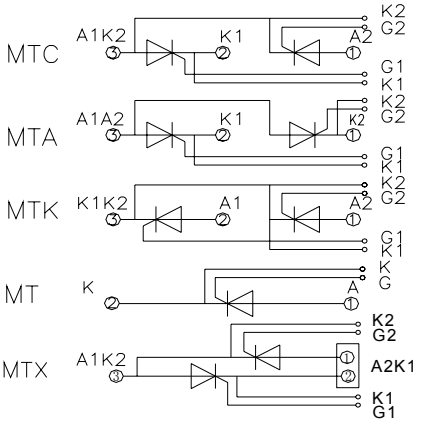
$I_{T(AV)}$	110A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	$2.4A\times10^3$
I^2t	$29A^2S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			110	A
$I_{T(RMS)}$	RMS on-state current		125			173	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			12	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			2.40	KA
I^2t	I^2T for fusing coordination					29	A^2s*10^3
V_{TO}	Threshold voltage		125			0.8	V
r_T	On-state slop resistance					2.29	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=330A	25			1.69	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		100	mA
V_{GT}	Gate trigger voltage			1		2.5	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125	0.2			V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.25	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.15	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				4		N·m
	Mounting torque(M6)				6		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				160		g

Outline:





Features:

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Typical Applications:

- AC/DC Motor drives
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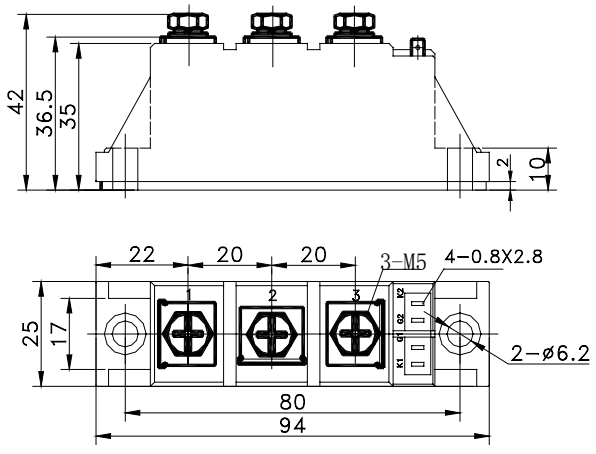
- DC supply for PWM inverter

$I_{T(AV)}$	110A
V_{DRM}/V_{RRM}	1900~3000V
I_{TSM}	2.4KA
I^2t	29A^2 S*10^3

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			110	A
$I_{T(RMS)}$	RMS on-state current		125			173	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	1900		3000	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			20	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			2.4	KA
I^2t	I^2T for fusing coordination					29	A^2s*10^3
V_{TO}	Threshold voltage		125			0.90	V
r_T	On-state slop resistance					2.61	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=330A	25			1.90	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		150	mA
V_{GT}	Gate trigger voltage			1.0		3.0	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125				V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.250	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.15	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		3600			V
F_m	Thermal connection torque(M5)				2.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				160		g

Outline:



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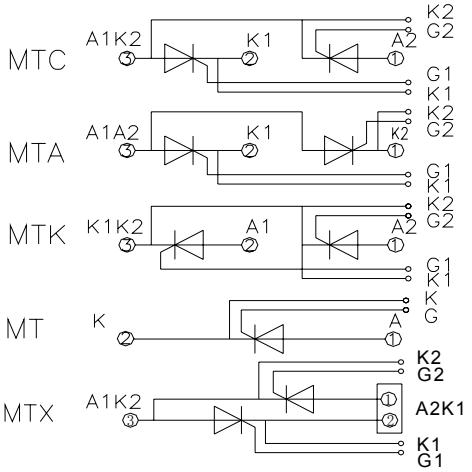

Features:

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Typical Applications:

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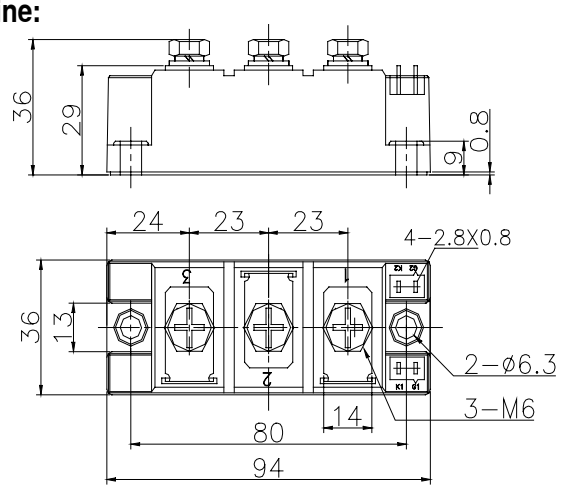
$I_{T(AV)}$	135A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	3.8KA
I^2t	$72A^2 S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			135	A
$I_{T(RMS)}$	RMS on-state current		125			212	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DSM}&V_{RSM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			15	mA
I_{TSM}	Surge on-state current	10ms half sine wave	125			3.80	KA
I^2t	I^2T for fusing coordination	V_R=60%V_{RRM}				72	A^2s*10^3
V_{TO}	Threshold voltage		125			0.8	V
r_T	On-state slop resistance					2.85	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=410A	25			1.75	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		100	mA
V_{GT}	Gate trigger voltage			1		2.5	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125			0.2	V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.200	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.08	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				3.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				320		g

Outline:



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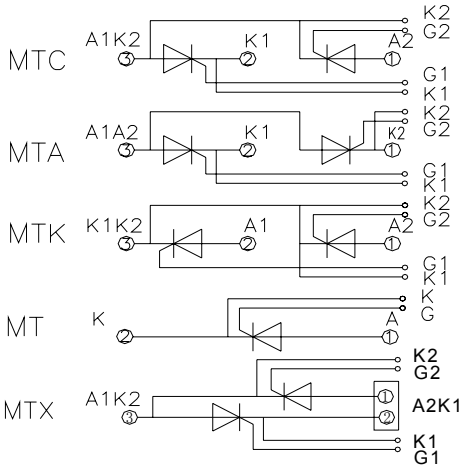

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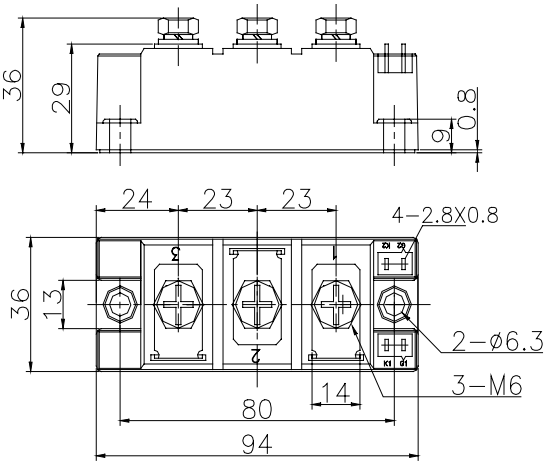
$I_{T(AV)}$	135A
V_{DRM}/V_{RRM}	1900~3000V
I_{TSM}	3.8KA
I^2t	$72A^2 S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			135	A
$I_{T(RMS)}$	RMS on-state current		125			212	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DSM}&V_{RSM}= V_{DRM}&V_{RRM}+200V respectively	125	1900		3000	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			22	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			3.80	KA
I^2t	I^2T for fusing coordination					72	A^2s*10^3
V_{TO}	Threshold voltage		125			0.90	V
r_T	On-state slop resistance					2.26	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=405A	25			1.96	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		150	mA
V_{GT}	Gate trigger voltage			1.0		3.0	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125				V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.200	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.08	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		3600			V
F_m	Thermal connection torque(M5)				4		N·m
	Mounting torque(M6)				6		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				160		g

Outline:



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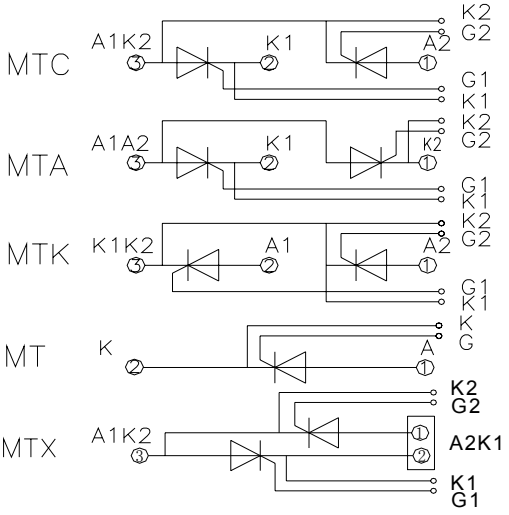


Features:

- Isolated mounting base 2500V~
- Pressure contact technology with
- Incrtased power cycling capability
- Space and weight savings

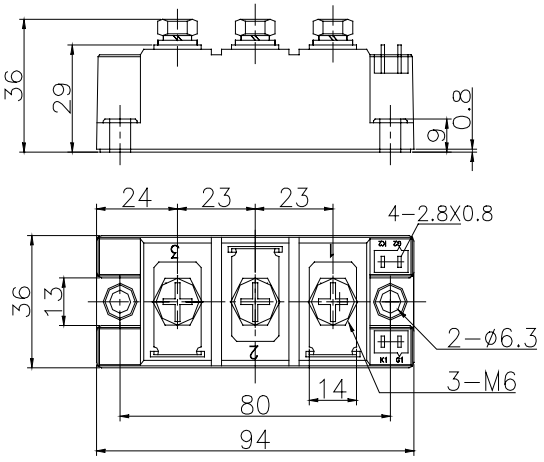
Typical Applications:

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{T(AV)}$	160A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	5.4KA
I^2t	$146A^2 S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			160	A
$I_{T(RMS)}$	RMS on-state current		125			251	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			20	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			5.40	KA
I^2t	I^2T for fusing coordination					146	A^2s*10^3
V_{TO}	Threshold voltage		125			0.8	V
r_T	On-state slop resistance					1.69	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=480A	25			1.7	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		150	mA
V_{GT}	Gate trigger voltage			1		2.5	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125			0.2	V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.170	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.08	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				3.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				320		g

Outline:



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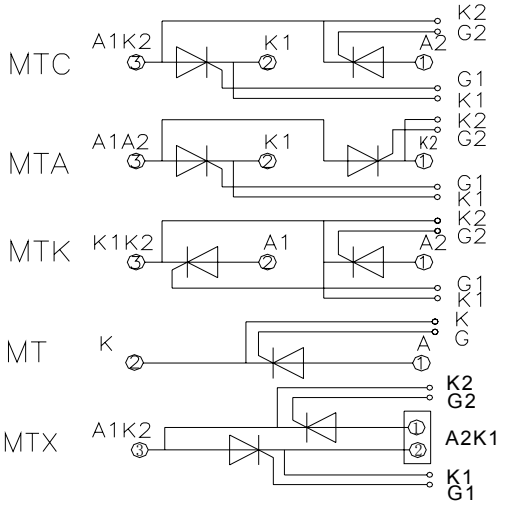

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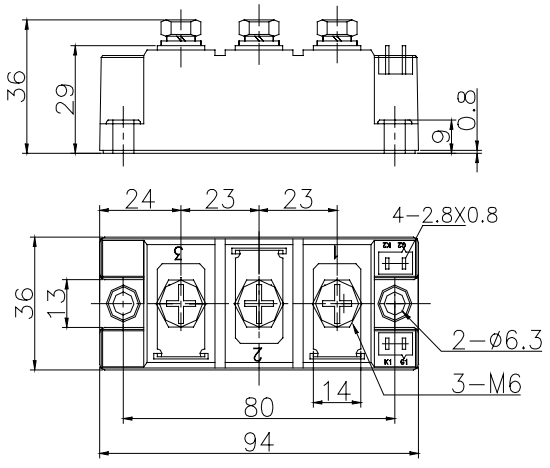
$I_{T(AV)}$	160A
V_{DRM}/V_{RRM}	1900~3000V
I_{TSM}	5.4KA
I^2t	146A^2 S*10^3

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			160	A
$I_{T(RMS)}$	RMS on-state current		125			251	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	1900		3000	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			25	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			5.40	KA
I^2t	I^2T for fusing coordination					146	A^2s*10^3
V_{TO}	Threshold voltage		125			0.90	V
r_T	On-state slop resistance					1.79	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=480A	25			1.90	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		150	mA
V_{GT}	Gate trigger voltage			1.0		3.0	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125				V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.170	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.08	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		3600			V
F_m	Thermal connection torque(M5)				3.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				320		g

Outline:



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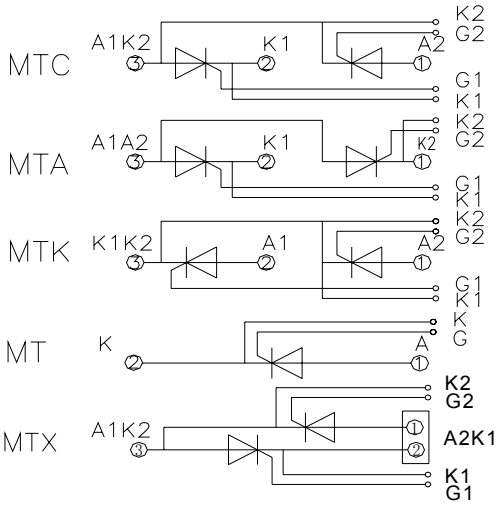

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Typical Applications:

- AC/DC Motor drives
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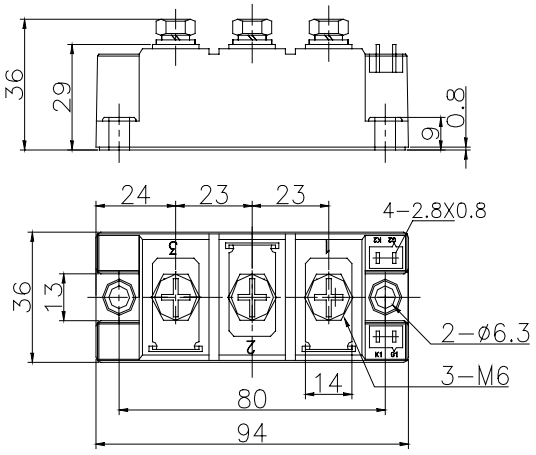
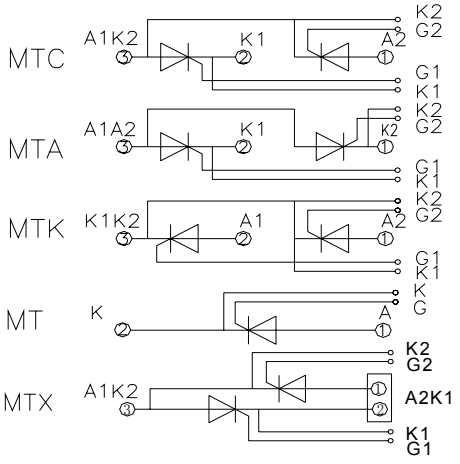
$I_{T(AV)}$	182A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	$5.8A\times10^3$
I^2t	$168A^2 S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			182	A
$I_{T(RMS)}$	RMS on-state current		125			286	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DSM}&V_{RSM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			25	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			5.8	KA
I^2t	I^2T for fusing coordination					168	A^2s*10^3
V_{TO}	Threshold voltage		125			0.8	V
r_T	On-state slop resistance					1.26	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=550A	25			1.62	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		150	mA
V_{GT}	Gate trigger voltage			1		2.5	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125	0.2			V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.16	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.08	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				4		N·m
	Mounting torque(M6)				6		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				320		g

Outline:





Features:

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Typical Applications:

- AC/DC Motor drives
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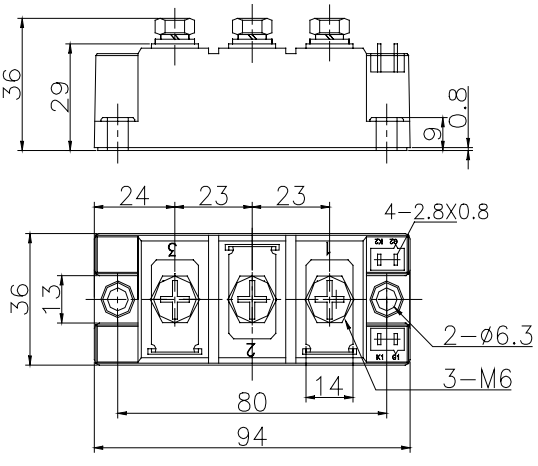
$I_{T(AV)}$	182A
V_{DRM}/V_{RRM}	1900~3000V
I_{TSM}	5.8KA
I^2t	168A^2 S*10^3

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			182	A
$I_{T(RMS)}$	RMS on-state current		125			286	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	1900		3000	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			30	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			5.80	KA
I^2t	I^2T for fusing coordination					168	A^2s*10^3
V_{TO}	Threshold voltage		125			0.90	V
r_T	On-state slop resistance					1.40	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=270A	25			1.80	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		150	mA
V_{GT}	Gate trigger voltage			1.0		3.0	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125				V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.160	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.08	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		3600			V
F_m	Thermal connection torque(M5)				3.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				320		g

Outline:



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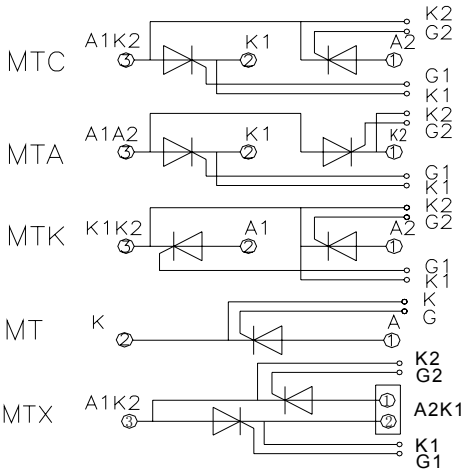

Features:

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Typical Applications:

- AC/DC Motor drives
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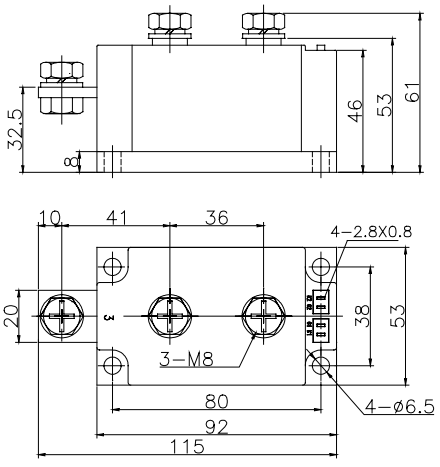
$I_{T(AV)}$	200A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	7.2KA
I^2t	$259A^2 S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			200	A
$I_{T(RMS)}$	RMS on-state current		125			314	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			30	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			7.20	KA
I^2t	I^2T for fusing coordination					259	A^2s*10^3
V_{TO}	Threshold voltage		125			0.80	V
r_T	On-state slop resistance					1.27	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=600A	25			1.65	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		180	mA
V_{GT}	Gate trigger voltage			1.0		2.5	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125	0.2		0.2	V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.140	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.04	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				4.5		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				930		g

Outline:



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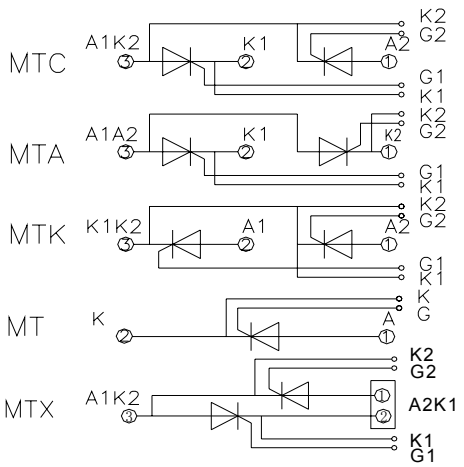

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Typical Applications:

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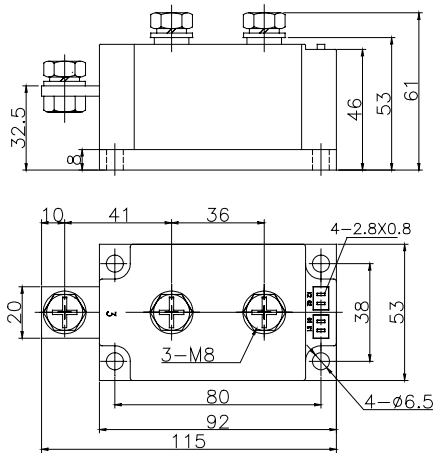
$I_{T(AV)}$	200A
V_{DRM}/V_{RRM}	1900~3000V
I_{TSM}	7.2KA
I^2t	$259A^2 S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			200	A
$I_{T(RMS)}$	RMS on-state current		125			314	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	1900		3000	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			35	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			7.20	KA
I^2t	I^2T for fusing coordination					259	A^2s*10^3
V_{TO}	Threshold voltage		125			0.90	V
r_T	On-state slop resistance					1.43	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=600A	25			1.90	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		180	mA
V_{GT}	Gate trigger voltage			1.0		3.0	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125				V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.140	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.04	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		3600			V
F_m	Thermal connection torque(M5)				4.5		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				930		g

Outline:



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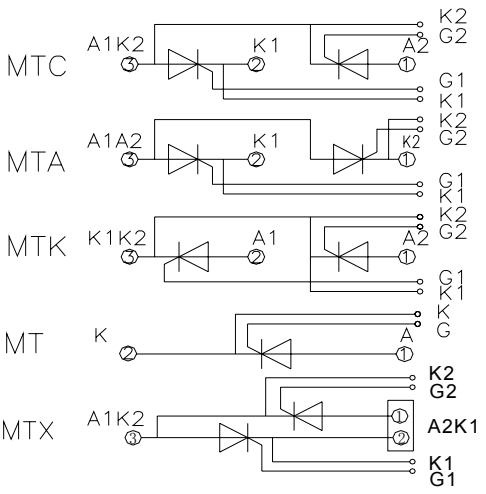

Features:

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- Incrtased power cycling capability
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Typical Applications:

- AC/DC Motor drives
- Various rectifiers
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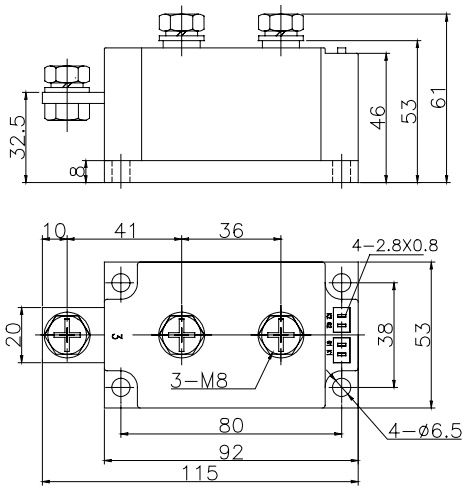
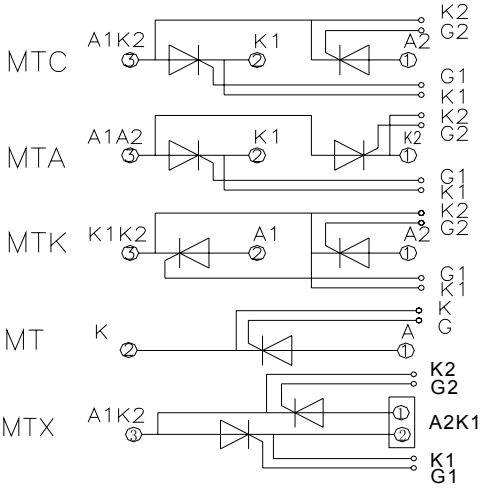
$I_{T(AV)}$	250A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	$8.5A\times10^3$
I^2t	$360A^2\ S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			250	A
$I_{T(RMS)}$	RMS on-state current		125			390	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			40	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			8.5	KA
I^2t	I^2T for fusing coordination					360	A^2s*10^3
V_{TO}	Threshold voltage		125			0.80	V
r_T	On-state slop resistance					0.85	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=750A	25			1.57	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		180	mA
V_{GT}	Gate trigger voltage			1		2.5	V
I_H	Holding current			20		150	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125	0.2			V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.12	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.04	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				12		N·m
	Mounting torque(M6)				6		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				860		g

Outline:





Features:

- Isolated mounting base 2500V~
- Pressure contact technology with
- Incrtased power cycling capability
- Space and weight savings

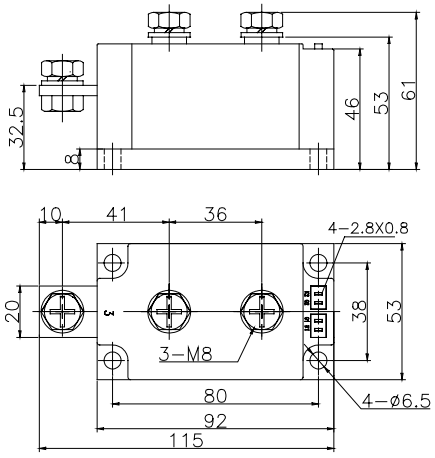
Typical Applications:

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{T(AV)}$	250A
V_{DRM}/V_{RRM}	1900~3000V
I_{TSM}	$8.5A\times10^3$
I^2t	$361A^2 S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			250	A
$I_{T(RMS)}$	RMS on-state current		125			393	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	1900		3000	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			40	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			8.50	KA
I^2t	I^2T for fusing coordination					361	A^2s*10^3
V_{TO}	Threshold voltage		125			0.90	V
r_T	On-state slop resistance					0.93	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=750A	25			1.73	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		180	mA
V_{GT}	Gate trigger voltage			1		3.0	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125				V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.120	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.04	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		3600			V
F_m	Thermal connection torque(M5)				4.5		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				930		g

Outline:



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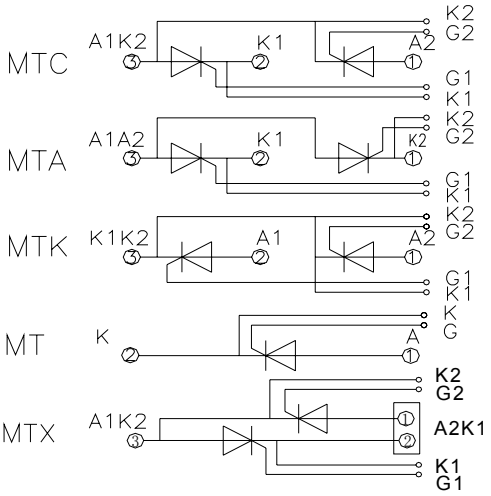

Features:

- Isolated mounting base 2500V~
- Pressure contact technology with
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- Space and weight savings

Typical Applications:

- AC/DC Motor drives
- Various rectifiers
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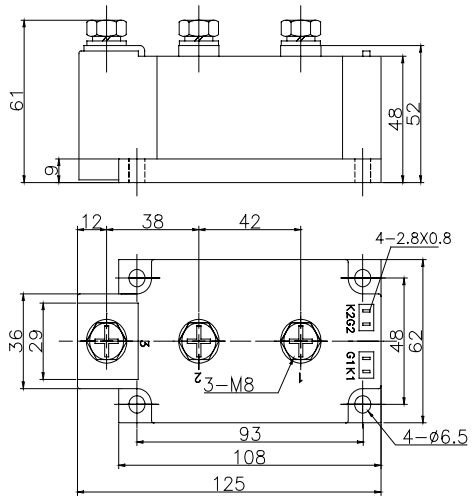
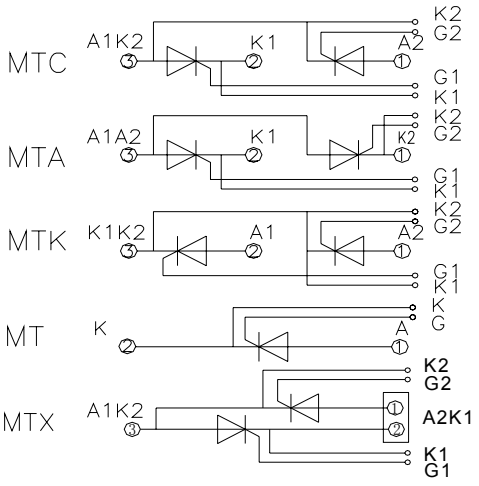
$I_{T(AV)}$	300A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	$9.3A\times10^3$
I^2t	$432A^2 S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			300	A
$I_{T(RMS)}$	RMS on-state current		125			471	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DSM}&V_{RSM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			40	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			9.3	KA
I^2t	I^2T for fusing coordination					432	A^2s*10^3
V_{TO}	Threshold voltage		125			0.80	V
r_T	On-state slop resistance					0.72	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=900A	25			1.58	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		180	mA
V_{GT}	Gate trigger voltage			1		2.5	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125	0.2			V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.1	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.04	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				12		N·m
	Mounting torque(M6)				6		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				1350		g

Outline:





Features:

- Isolated mounting base 2500V~
- Pressure contact technology with
- Incrtased power cycling capability
- Space and weight savings

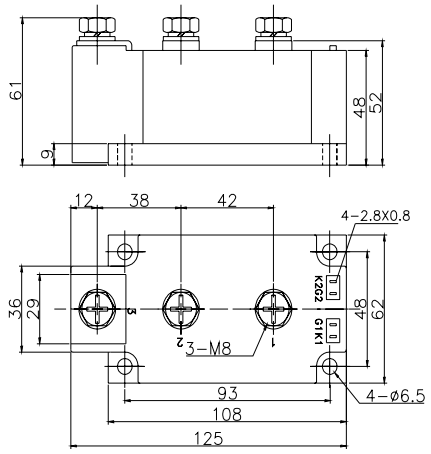
Typical Applications:

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{T(AV)}$	300A
V_{DRM}/V_{RRM}	1900~3000V
I_{TSM}	9.3KA
I^2t	$432A^2 S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			300	A
$I_{T(RMS)}$	RMS on-state current		125			471	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	1900		3000	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			50	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			9.30	KA
I^2t	I^2T for fusing coordination					432	A^2s*10^3
V_{TO}	Threshold voltage		125			0.85	V
r_T	On-state slop resistance					0.75	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=900A	25			1.68	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		180	mA
V_{GT}	Gate trigger voltage			1.0		3.0	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125			0.2	V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.091	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.04	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		3600			V
F_m	Thermal connection torque(M5)				4.5		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				125		g

Outline:



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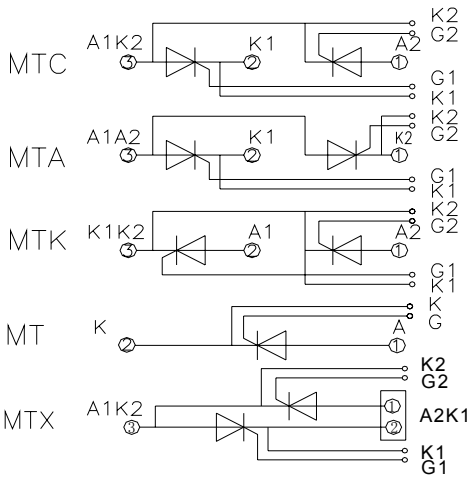


Features:

- Isolated mounting base 2500V~
- Pressure contact technology with
- Incrtased power cycling capability
- Space and weight savings

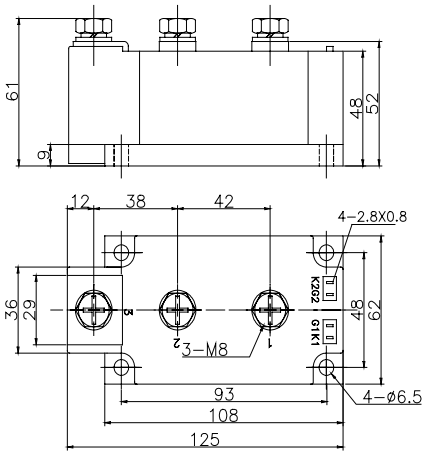
Typical Applications:

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{T(AV)}$	350A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	11KA
I^2t	605A^2 S*10^3

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			350	A
$I_{T(RMS)}$	RMS on-state current		125			550	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			40	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			11.0	KA
I^2t	I^2T for fusing coordination					605	A^2s*10^3
V_{TO}	Threshold voltage		125			0.95	V
r_T	On-state slop resistance					0.36	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=1050A	25			1.45	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		180	mA
V_{GT}	Gate trigger voltage			1		2.5	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125			0.2	V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.090	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.04	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		3600			V
F_m	Thermal connection torque(M5)				4.5		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				1340		g

Outline:



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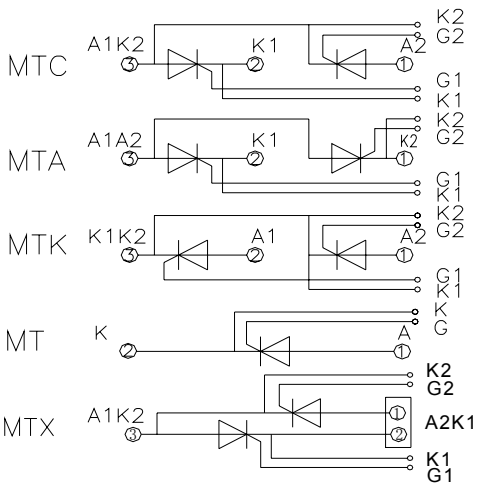


Features:

- Isolated mounting base 2500V~
- Pressure contact technology with
- Incrtased power cycling capability
- Space and weight savings

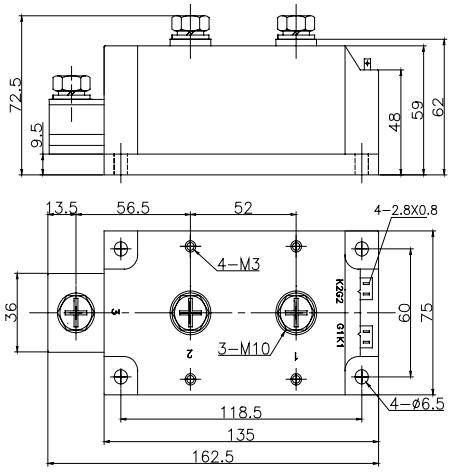
Typical Applications:

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{T(AV)}$	400A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	12KA
I^2t	$720A^2 S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			400	A
$I_{T(RMS)}$	RMS on-state current		125			628	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			40	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			12.0	KA
I^2t	I^2T for fusing coordination					720	A^2s*10^3
V_{TO}	Threshold voltage		125			0.80	V
r_T	On-state slop resistance					0.49	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=1200A	25			1.52	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		200	mA
V_{GT}	Gate trigger voltage			1		3.0	V
I_H	Holding current			20		150	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125			0.2	V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.080	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.024	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				6.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				2300		g

Outline:



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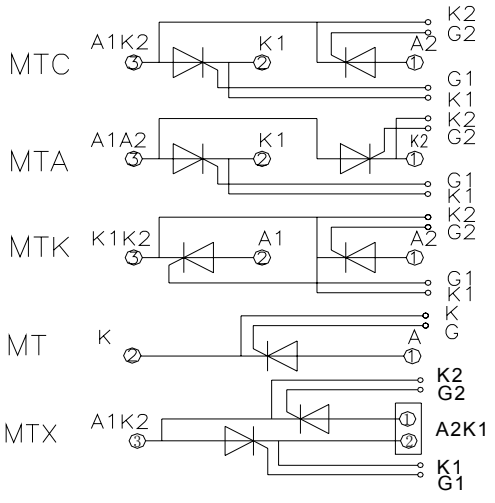

Features:

- Isolated mounting base 2500V~
- Pressure contact technology with
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- Space and weight savings

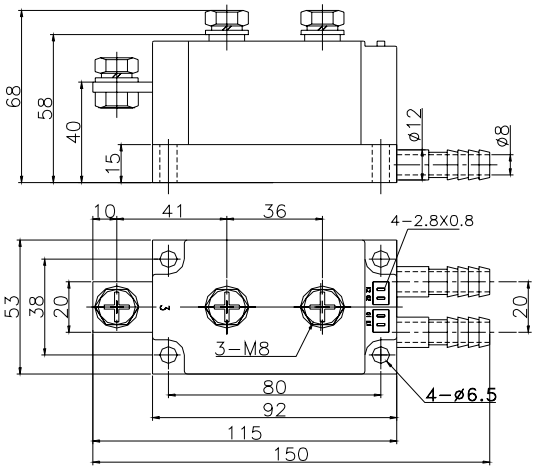
Typical Applications:

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{T(AV)}$	400A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	8.5KA
I^2t	$361A^2 S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			400	A
$I_{T(RMS)}$	RMS on-state current		125			628	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			40	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			8.50	KA
I^2t	I^2T for fusing coordination					361	A^2s*10^3
V_{TO}	Threshold voltage		125			0.80	V
r_T	On-state slop resistance					0.80	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=1200A	25			1.90	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		200	mA
V_{GT}	Gate trigger voltage			1		3.0	V
I_H	Holding current			20		150	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125				V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.110	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled					°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				4.5		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				1300		g

Outline:



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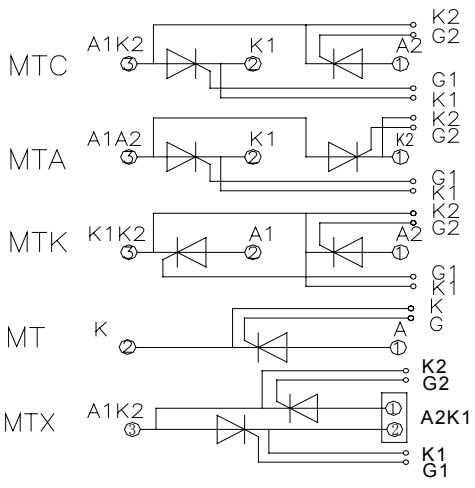

Features:

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Typical Applications:

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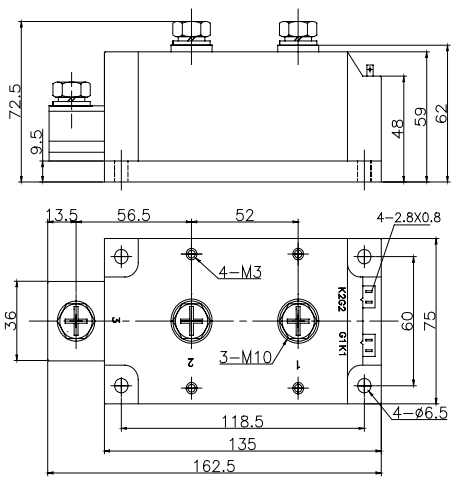
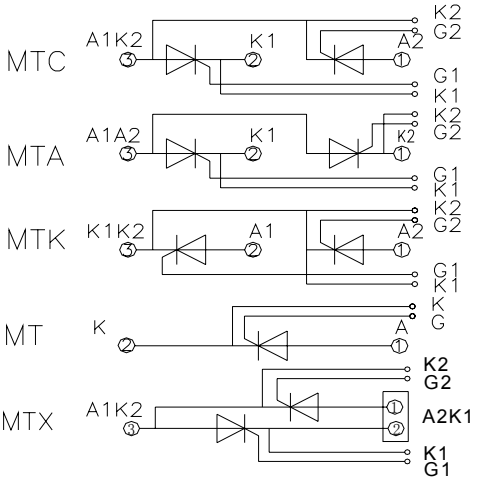
- Various rectifiers
- DC supply for PWM inverter

$I_{T(AV)}$	500A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	16A×10^3
I^2t	1280A^2 S*10^3

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			500	A
$I_{T(RMS)}$	RMS on-state current		125			785	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			40	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			16	KA
I^2t	I^2T for fusing coordination					1280	A^2s*10^3
V_{TO}	Threshold voltage		125			0.80	V
r_T	On-state slop resistance					0.34	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=1500A	25			1.44	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		200	mA
V_{GT}	Gate trigger voltage			1		3	V
I_H	Holding current			20		150	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125	0.2			V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.065	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.024	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				12		N·m
	Mounting torque(M6)				6		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				2300		g

Outline:





Features:

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- Space and weight savings

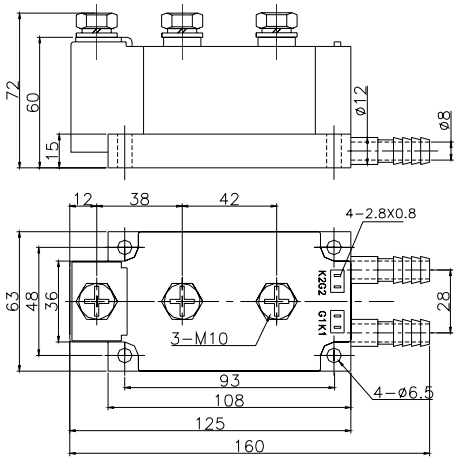
Typical Applications:

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{T(AV)}$	500A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	11KA
I^2t	$605A^2 S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			500	A
$I_{T(RMS)}$	RMS on-state current		125			785	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			40	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			11.0	KA
I^2t	I^2T for fusing coordination					605	A^2s*10^3
V_{TO}	Threshold voltage		125			0.80	V
r_T	On-state slop resistance					0.64	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=1500A	25			1.90	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		200	mA
V_{GT}	Gate trigger voltage			1.0		3.0	V
I_H	Holding current			20		150	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125				V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.087	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled					°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				4.5		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				1300		g

Outline:



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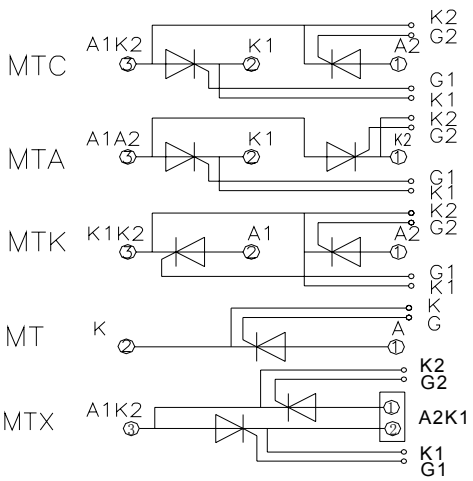


Features:

- Isolated mounting base 2500V~
- Pressure contact technology with
- Incrtased power cycling capability
- Space and weight savings

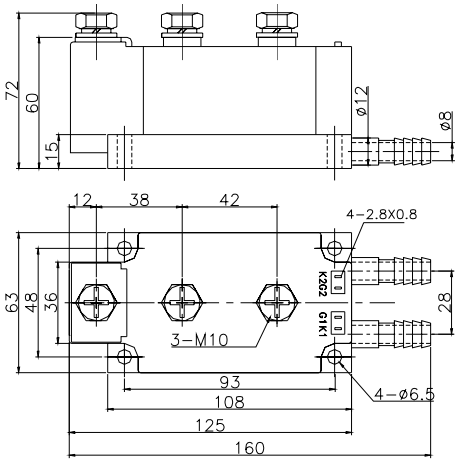
Typical Applications:

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{T(AV)}$	600A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	13KA
I^2t	$845A^2 S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			600	A
$I_{T(RMS)}$	RMS on-state current		125			942	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			40	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			13.0	KA
I^2t	I^2T for fusing coordination					845	A^2s*10^3
V_{TO}	Threshold voltage		125			0.80	V
r_T	On-state slop resistance					0.53	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=1800A	25			1.90	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		200	mA
V_{GT}	Gate trigger voltage			1		3.0	V
I_H	Holding current			20		150	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125				V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.073	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled					°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				6.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				1820		g

Outline:



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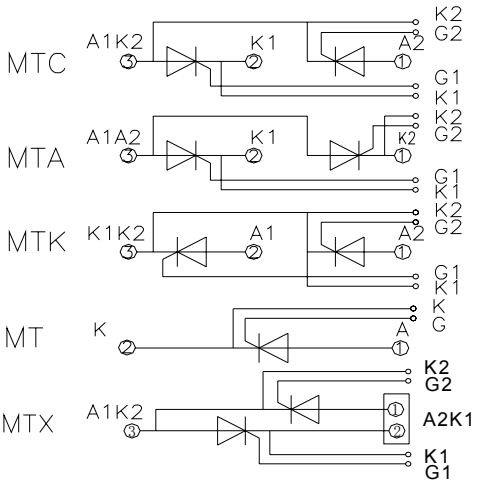

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Typical Applications:

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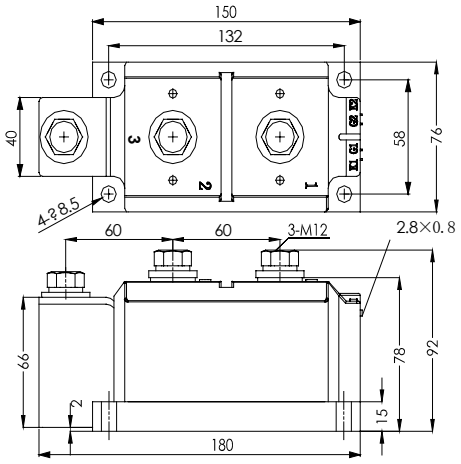
$I_{T(AV)}$	800A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	16KA
I^2t	$1280A^2 S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			800	A
$I_{T(RMS)}$	RMS on-state current		125			1256	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DSM}&V_{RSM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			40	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			16.0	KA
I^2t	I^2T for fusing coordination					1280	A^2s*10^3
V_{TO}	Threshold voltage		125			0.80	V
r_T	On-state slop resistance					0.42	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=2400A	25			1.95	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		200	mA
V_{GT}	Gate trigger voltage			1		3.0	V
I_H	Holding current			20		150	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125				V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.054	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled					°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				7.5		N·m
	Mounting torque(M6)				4.5		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				3500		g

Outline:



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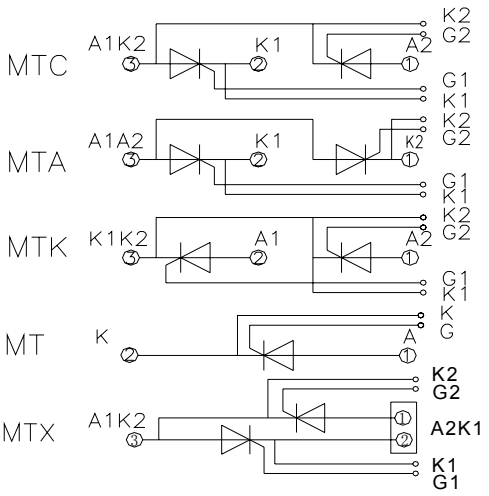

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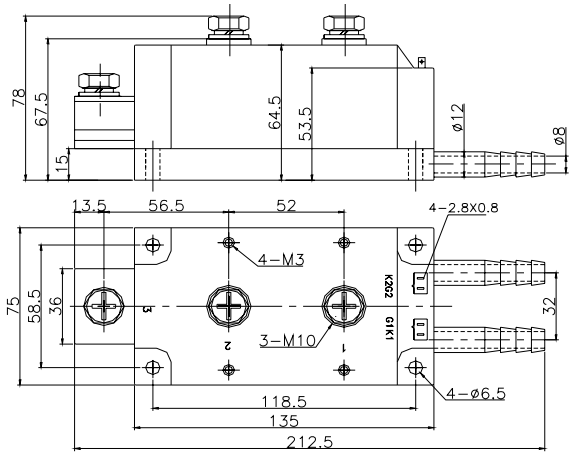
$I_{T(AV)}$	800A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	16KA
I^2t	1280A^2 S*10^3

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			800	A
$I_{T(RMS)}$	RMS on-state current		125			1256	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			40	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			16.0	KA
I^2t	I^2T for fusing coordination					1280	A^2s*10^3
V_{TO}	Threshold voltage		125			0.80	V
r_T	On-state slop resistance					0.42	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=2400A	25			1.95	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		200	mA
V_{GT}	Gate trigger voltage			1		3.0	V
I_H	Holding current			20		150	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125			0.2	V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.054	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled					°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				6.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				2600		g

Outline:



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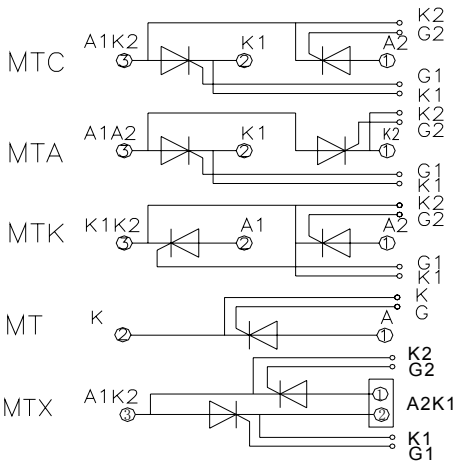

Features:

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Typical Applications:

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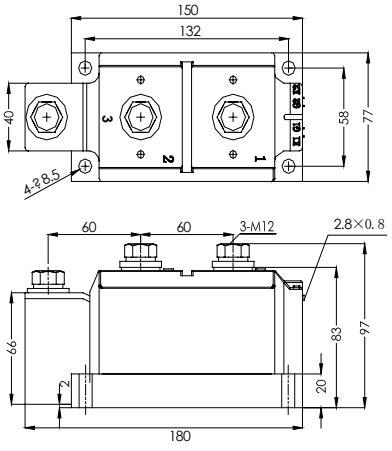
$I_{T(AV)}$	1000A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	20KA
I^2t	$2000A^2 S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			1000	A
$I_{T(RMS)}$	RMS on-state current		125			1570	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DSM}&V_{RSM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			60	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			20.0	KA
I^2t	I^2T for fusing coordination					2000	A^2s*10^3
V_{TO}	Threshold voltage		125			0.80	V
r_T	On-state slop resistance					0.34	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=3000A	25			1.96	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		200	mA
V_{GT}	Gate trigger voltage			1		3.0	V
I_H	Holding current			20		150	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125				V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.530	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled					°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				7.5		N·m
	Mounting torque(M6)				4.5		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				3800		g

Outline:



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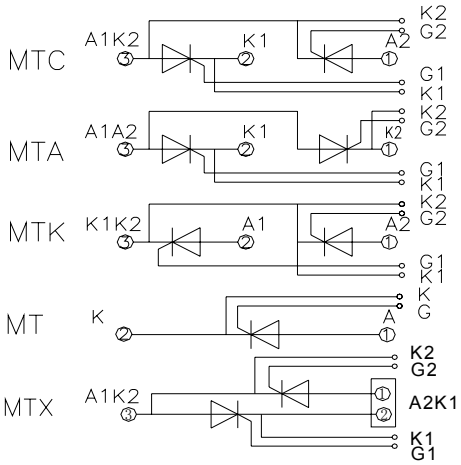

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Typical Applications:

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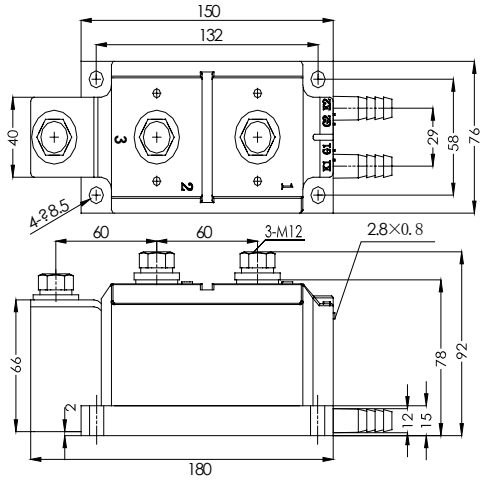
$I_{T(AV)}$	1000A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	20KA
I^2t	2000A^2 S*10^3

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			1000	A
$I_{T(RMS)}$	RMS on-state current		125			1570	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DSM}&V_{RSM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			50	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			20.0	KA
I^2t	I^2T for fusing coordination					2000	A^{2}s*10^3
V_{TO}	Threshold voltage		125			0.80	V
r_T	On-state slop resistance					0.33	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=3000A	25			1.95	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		200	mA
V_{GT}	Gate trigger voltage			1		3.0	V
I_H	Holding current			20		150	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125				V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.052	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled					°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				7.5		N·m
	Mounting torque(M6)				4.5		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				3600		g

Outline:



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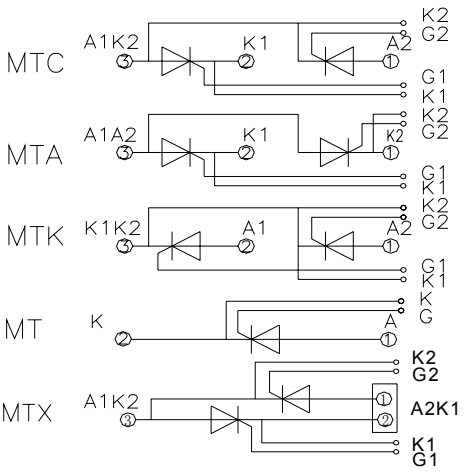

Features:

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Typical Applications:

- AC/DC Motor drives
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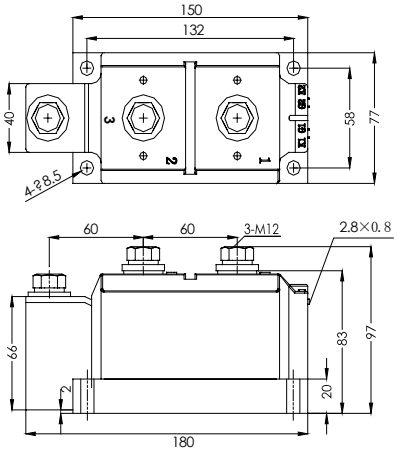
$I_{T(AV)}$	1200A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	24KA
I^2t	2800A^2 S*10^3

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			1200	A
$I_{T(RMS)}$	RMS on-state current		125			1884	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			70	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			24.0	KA
I^2t	I^2T for fusing coordination					2800	A^2s*10^3
V_{TO}	Threshold voltage		125			0.80	V
r_T	On-state slop resistance					0.29	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=3000A	25			1.98	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		200	mA
V_{GT}	Gate trigger voltage			1		3.0	V
I_H	Holding current			20		150	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125			0.2	V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.051	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled					°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				7.5		N·m
	Mounting torque(M6)				4.5		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				3800		g

Outline:



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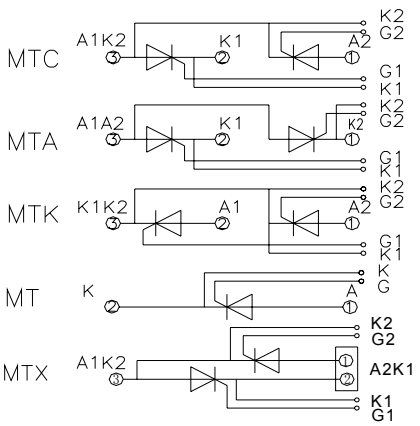

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Typical Applications:

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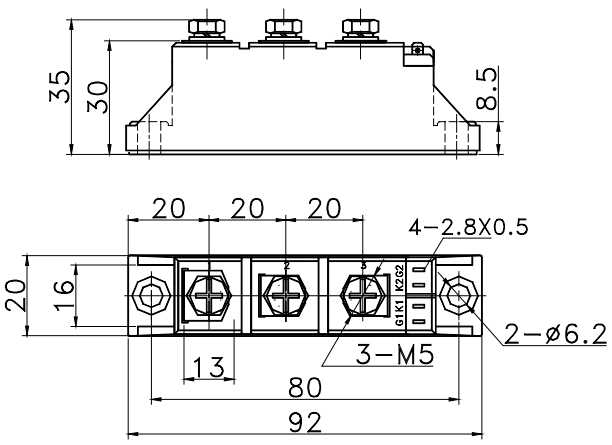
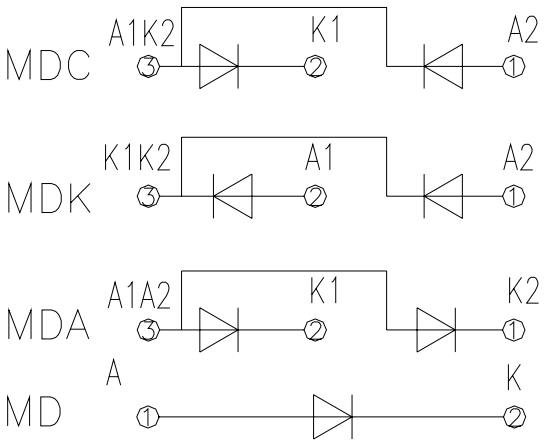
$I_{F(AV)}$ **26A**
V_{RRM} **600~1800V**
I_{FSM} **0.65KA**
I^2t **$2.1A^2 S*10^3$**

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T_j(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{F(AV)}$	Mean forward current	180° half sine wave 50Hz Single side cooled,T_C=100°C	150			26	A
$I_{F\ (RMS)}$	RMS forward current		150			41	A
V_{RRM}	Repetitive peak reverse voltage	V_{RRM} tp=10ms V_{RsM}= V_{RRM}+200V	150	600		1800	V
I_{RRM}	Repetitive peak current	at V_{RRM}	150			8	mA
I_{FSM}	Surge forward current	10ms half sine wave	150			0.65	KA
I^2t	I^2T for fusing coordination	V_R=0.6V_{RRM}				2.1	A^2s*10^3
V_{FO}	Threshold voltage		150			0.80	V
R_F	Forward slop resistance					9.80	mΩ
V_{FM}	Peak forward voltage	I_{FM}=80A	25			1.65	V
$R_{th(j-c)}$	Thermal resistance Junction to case	At 180° sine, Single side cooled				1.300	°C /W
$R_{th(c-h)}$	Thermal resistance case to heatsink	At 180° sine, Single side cooled				0.2	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(max)		2500			V
F_m	Terminal connection torque(M5)				2.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				115		g

Outline:





Features:

- Isolated mounting base 2500V~
- Pressure contact technology with
- Incrtased power cycling capability
- Space and weight savings

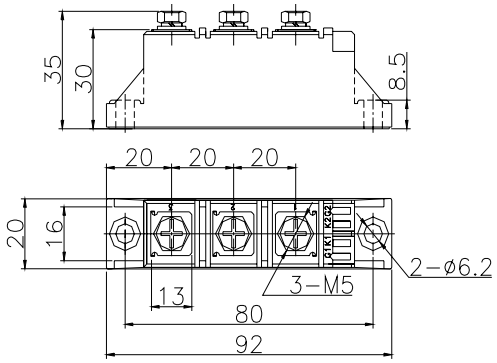
Typical Applications:

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{F(AV)}$ **40A**
V_{RRM} **600~1800V**
I_{FSM} **1.0KA**
I^2t **5.1A^2 S*10^3**

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T_j(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{F(AV)}$	Mean forward current	180° half sine wave 50Hz Single side cooled,T_C=100°C	150			40	A
$I_{F\ (RMS)}$	RMS forward current		150			63	A
V_{RRM}	Repetitive peak reverse voltage	V_{RRM} tp=10ms V_{RSM}= V_{RRM}+200V	150	600		1800	V
I_{RRM}	Repetitive peak current	at V_{RRM}	150			8	mA
I_{FSM}	Surge forward current	10ms half sine wave	150			1.0	KA
I^2t	I^2T for fusing coordination	V_R=0.6V_{RRM}				5.1	A^{2}s*10^3
V_{FO}	Threshold voltage		150			0.80	V
R_F	Forward slop resistance					5.57	mΩ
V_{FM}	Peak forward voltage	I_{FM}=120A	25			1.55	V
$R_{th(j-c)}$	Thermal resistance Junction to case	At 180° sine, Single side cooled				0.900	°C /W
$R_{th(c-h)}$	Thermal resistance case to heatsink	At 180° sine, Single side cooled				0.2	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(max)		2500			V
F_m	Terminal connection torque(M5)				2.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				115		g

Outline:



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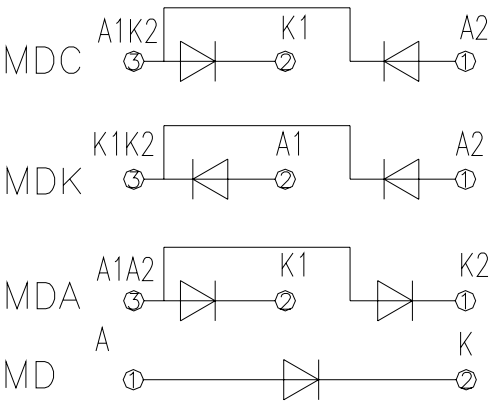


Features:

- Isolated mounting base 2500V~
- Pressure contact technology with
- Incrtased power cycling capability
- Space and weight savings

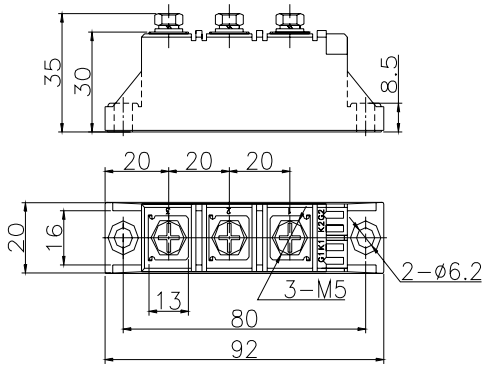
Typical Applications:

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{F(AV)}$	55A
V_{RRM}	600~1800V
I_{FSM}	1.3KA
I^2t	$8.6A^2 S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T_j(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{F(AV)}$	Mean forward current	180° half sine wave 50Hz Single side cooled,T_C=100°C	150			55	A
$I_{F\ (RMS)}$	RMS forward current		150			86	A
V_{RRM}	Repetitive peak reverse voltage	V_{RRM} tp=10ms V_{RsM}= V_{RRM}+200V	150	600		1800	V
I_{RRM}	Repetitive peak current	at V_{RRM}	150			8	mA
I_{FSM}	Surge forward current	10ms half sine wave	150			1.30	KA
I^2t	I^2T for fusing coordination	V_R=0.6V_{RRM}				8.6	A^2s*10^3
V_{FO}	Threshold voltage		150			0.80	V
R_F	Forward slop resistance					3.47	mΩ
V_{FM}	Peak forward voltage	I_{FM}=170A	25			1.45	V
$R_{th(j-c)}$	Thermal resistance Junction to case	At 180° sine, Single side cooled				0.700	°C /W
$R_{th(c-h)}$	Thermal resistance case to heatsink	At 180° sine, Single side cooled				0.2	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(max)		2500			V
F_m	Terminal connection torque(M5)				2.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				115		g

Outline:



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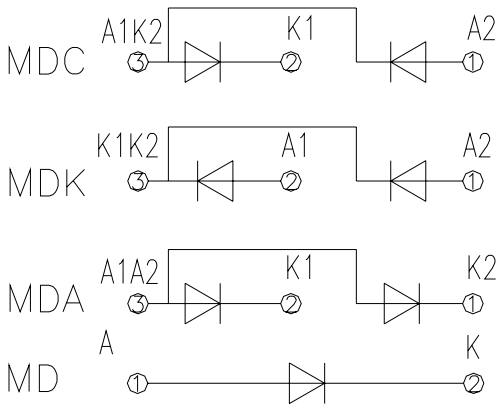


Features:

- Isolated mounting base 2500V~
- Pressure contact technology with
- Incrtased power cycling capability
- Space and weight savings

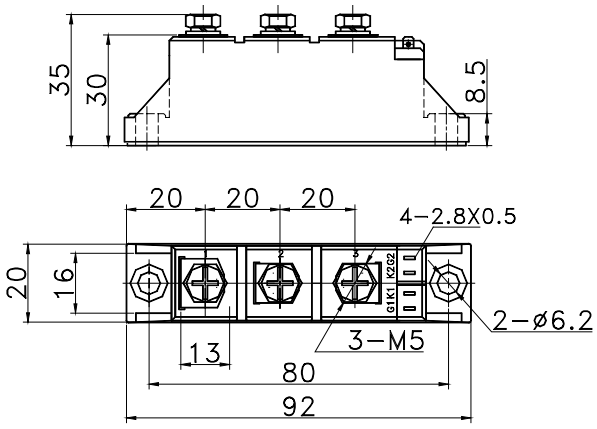
Typical Applications:

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{F(AV)}$ **70A**
V_{RRM} **600~1800V**
I_{FSM} **1.8KA**
I^2t **16.5A^2 S*10^3**

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T_j(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{F(AV)}$	Mean forward current	180° half sine wave 50Hz Single side cooled,T_C=100°C	150			70	A
$I_{F\ (RMS)}$	RMS forward current		150			110	A
V_{RRM}	Repetitive peak reverse voltage	V_{RRM} tp=10ms V_{RsM}= V_{RRM}+200V	150	600		1800	V
I_{RRM}	Repetitive peak current	at V_{RRM}	150			8	mA
I_{FSM}	Surge forward current	10ms half sine wave	150			1.80	KA
I^2t	I^2T for fusing coordination	V_R=0.6V_{RRM}				16.5	A^{2}s*10^3
V_{FO}	Threshold voltage		150			0.80	V
R_F	Forward slop resistance					2.50	mΩ
V_{FM}	Peak forward voltage	I_{FM}=210A	25			1.40	V
$R_{th(j-c)}$	Thermal resistance Junction to case	At 180° sine, Single side cooled				0.570	°C /W
$R_{th(c-h)}$	Thermal resistance case to heatsink	At 180° sine, Single side cooled				0.2	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(max)		2500			V
F_m	Terminal connection torque(M5)				2.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				115		g

Outline:



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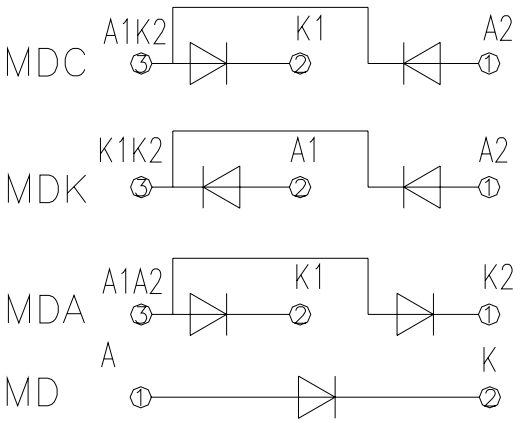


Features:

- Isolated mounting base 2500V~
- Pressure contact technology with
- Incrtased power cycling capability
- Space and weight savings

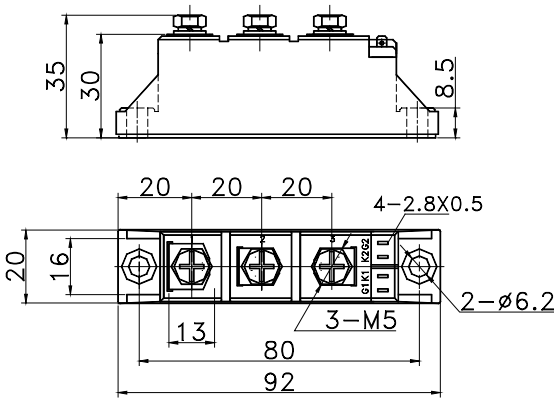
Typical Applications:

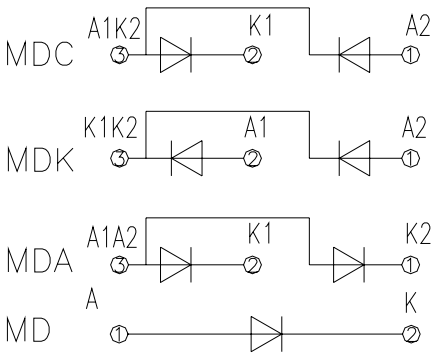
- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{F(AV)}$ **90A**
V_{RRM} **600~1800V**
I_{FSM} **$2.3A\times10^3$**
I^2t **$26.9A^2 S*10^3$**

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T_j(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{F(AV)}$	Mean forward current	180° half sine wave 50Hz Single side cooled,T_C=100°C	150			90	A
$I_{F\ (RMS)}$	RMS forward current		150			141	A
V_{RRM}	Repetitive peak reverse voltage	V_{RRM} tp=10ms V_{RSM}= V_{RRM}+200V	150	600		1800	V
I_{RRM}	Repetitive peak current	at V_{RRM}	150			8	mA
I_{FSM}	Surge forward current	10ms half sine wave	150			2.30	KA
I^2t	I^2T for fusing coordination	V_R=0.6V_{RRM}				26.9	A^2s*10^3
V_{FO}	Threshold voltage		150			0.80	V
R_F	Forward slop resistance					1.70	mΩ
V_{FM}	Peak forward voltage	I_{FM}=270A	25			1.33	V
$R_{th(j-c)}$	Thermal resistance Junction to case	At 180° sine, Single side cooled				0.470	°C /W
$R_{th(c-h)}$	Thermal resistance case to heatsink	At 180° sine, Single side cooled				0.2	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(max)		2500			V
F_m	Terminal connection torque(M5)				4		N·m
	Mounting torque(M6)				6		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				115		g

Outline:





Features:

- Isolated mounting base 2500V~
- Pressure contact technology with
- Incrtased power cycling capability
- Space and weight savings

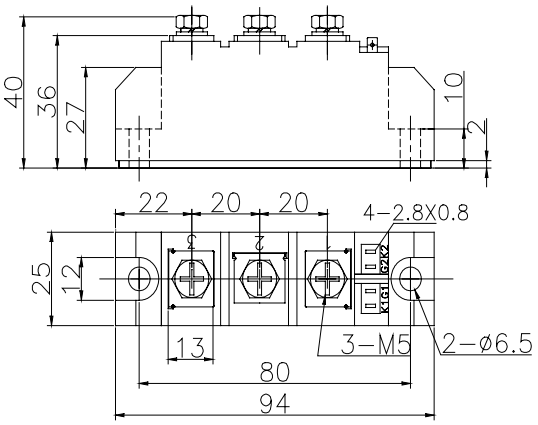
Typical Applications:

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{F(AV)}$	110A
V_{RRM}	600~1800V
I_{FSM}	2.6KA
I^2t	34.4A^2 S*10^3

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T_j(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{F(AV)}$	Mean forward current	180° half sine wave 50Hz Single side cooled,T_C=100°C	150			110	A
$I_{F\ (RMS)}$	RMS forward current		150			173	A
V_{RRM}	Repetitive peak reverse voltage	V_{RRM} tp=10ms V_{RsM}= V_{RRM}+200V	150	600		1800	V
I_{RRM}	Repetitive peak current	at V_{RRM}	150			8	mA
I_{FSM}	Surge forward current	10ms half sine wave	150			2.60	KA
I^2t	I^2T for fusing coordination	V_R=0.6V_{RRM}				34.4	A^{2}s*10^3
V_{FO}	Threshold voltage		150			0.80	V
R_F	Forward slop resistance					1.74	mΩ
V_{FM}	Peak forward voltage	I_{FM}=330A	25			1.45	V
$R_{th(j-c)}$	Thermal resistance Junction to case	At 180° sine, Single side cooled				0.350	°C /W
$R_{th(c-h)}$	Thermal resistance case to heatsink	At 180° sine, Single side cooled				0.15	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(max)		2500			V
F_m	Terminal connection torque(M5)				2.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				160		g

Outline:



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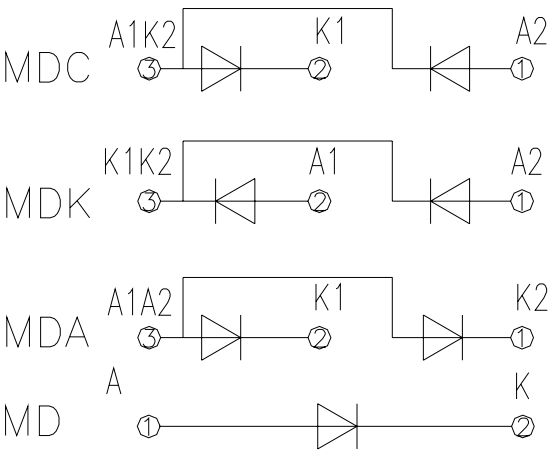


Features:

- Isolated mounting base 2500V~
- Pressure contact technology with
- Incrtased power cycling capability
- Space and weight savings

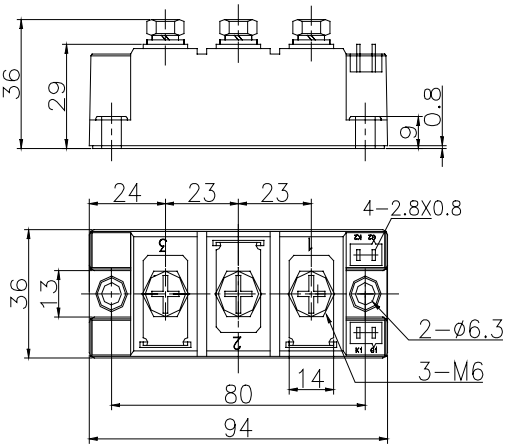
Typical Applications:

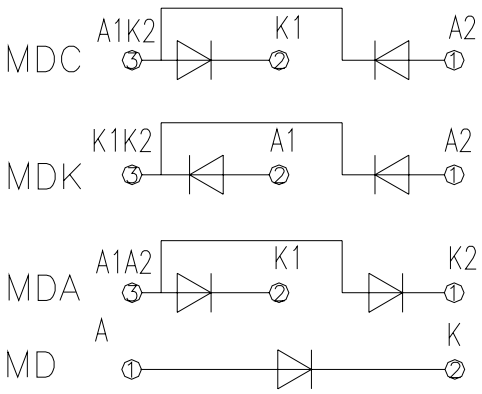
- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{F(AV)}$ **135A**
V_{RRM} **600~1800V**
I_{FSM} **$3.90A\times10^3$**
I^2t **$77.5A^2\ S*10^3$**

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T_j(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{F(AV)}$	Mean forward current	180° half sine wave 50Hz Single side cooled,T_C=100°C	150			135	A
$I_{F\ (RMS)}$	RMS forward current		150			212	A
V_{RRM}	Repetitive peak reverse voltage	V_{RRM} tp=10ms V_{RsM}= V_{RRM}+200V	150	600		1800	V
I_{RRM}	Repetitive peak current	at V_{RRM}	150			12	mA
I_{FSM}	Surge forward current	10ms half sine wave	150			3.90	KA
I^2t	I^2T for fusing coordination	V_R=0.6V_{RRM}				77.5	A^2s*10^3
V_{FO}	Threshold voltage		150			0.80	V
R_F	Forward slop resistance					1.18	mΩ
V_{FM}	Peak forward voltage	I_{FM}=410A	25			1.38	V
$R_{th(j-c)}$	Thermal resistance Junction to case	At 180° sine, Single side cooled				0.310	°C /W
$R_{th(c-h)}$	Thermal resistance case to heatsink	At 180° sine, Single side cooled				0.08	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(max)		2500			V
F_m	Terminal connection torque(M5)				6		N·m
	Mounting torque(M6)				6		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				320		g

Outline:





Features:

- Isolated mounting base 2500V~
- Pressure contact technology with
- Incrtased power cycling capability
- Space and weight savings

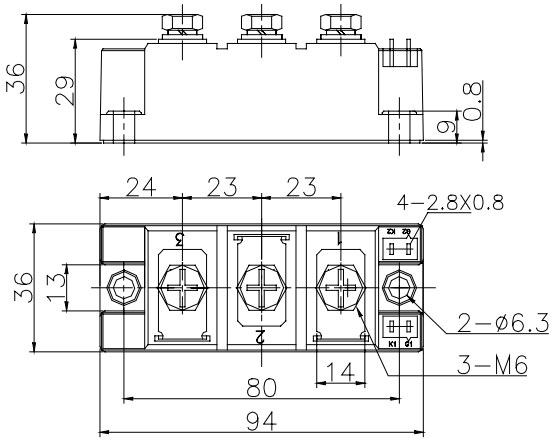
Typical Applications:

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{F(AV)}$ **160A**
V_{RRM} **600~1800V**
I_{FSM} **6KA**
I^2t **184A^2 S*10^3**

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T_j(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{F(AV)}$	Mean forward current	180° half sine wave 50Hz Single side cooled,T_C=100°C	150			160	A
$I_{F\ (RMS)}$	RMS forward current		150			251	A
V_{RRM}	Repetitive peak reverse voltage	V_{RRM} tp=10ms V_{RsM}= V_{RRM}+200V	150	600		1800	V
I_{RRM}	Repetitive peak current	at V_{RRM}	150			12	mA
I_{FSM}	Surge forward current	10ms half sine wave	150			6.00	KA
I^2t	I^2T for fusing coordination	V_R=0.6V_{RRM}				184	A^{2}s*10^3
V_{FO}	Threshold voltage		150			0.80	V
R_F	Forward slop resistance					1.35	mΩ
V_{FM}	Peak forward voltage	I_{FM}=480A	25			1.56	V
$R_{th(j-c)}$	Thermal resistance Junction to case	At 180° sine, Single side cooled				0.230	°C /W
$R_{th(c-h)}$	Thermal resistance case to heatsink	At 180° sine, Single side cooled				0.08	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(max)		2500			V
F_m	Terminal connection torque(M5)				3.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				320		g

Outline:



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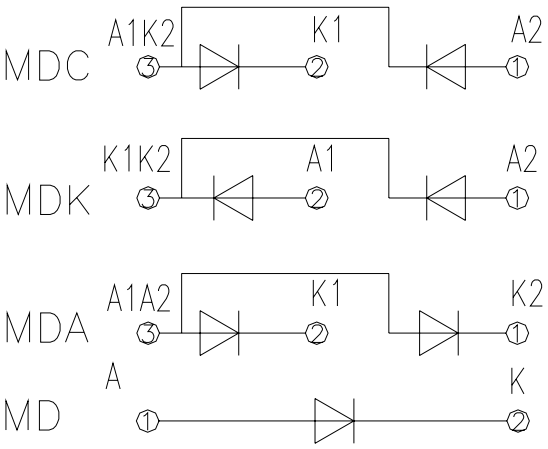


Features:

- Isolated mounting base 2500V~
- Pressure contact technology with
- Incrtased power cycling capability
- Space and weight savings

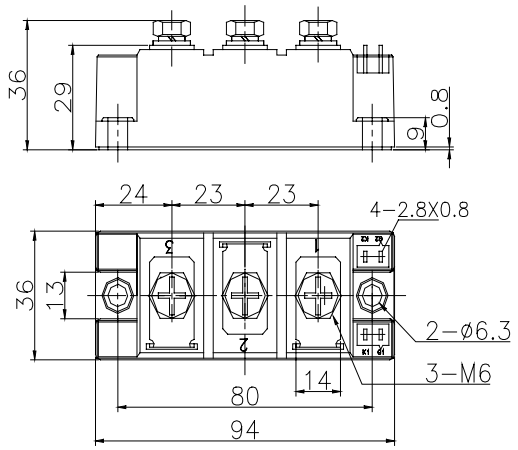
Typical Applications:

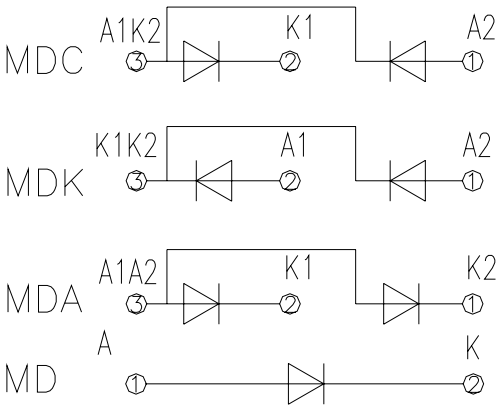
- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{F(AV)}$ **182A**
V_{RRM} **600~1800V**
I_{FSM} **$6.4A\times10^3$**
I^2t **$209A^2\ S*10^3$**

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T_j(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{F(AV)}$	Mean forward current	180° half sine wave 50Hz Single side cooled,T_C=100°C	150			182	A
$I_{F\ (RMS)}$	RMS forward current		150			286	A
V_{RRM}	Repetitive peak reverse voltage	V_{RRM} tp=10ms V_{RsM}= V_{RRM}+200V	150	600		1800	V
I_{RRM}	Repetitive peak current	at V_{RRM}	150			12	mA
I_{FSM}	Surge forward current	10ms half sine wave	150			6.40	KA
I^2t	I^2T for fusing coordination	V_R=0.6V_{RRM}				209	A^2s*10^3
V_{FO}	Threshold voltage		150			0.80	V
R_F	Forward slop resistance					0.96	mΩ
V_{FM}	Peak forward voltage	I_{FM}=550A	25			1.43	V
$R_{th(j-c)}$	Thermal resistance Junction to case	At 180° sine, Single side cooled				0.220	°C /W
$R_{th(c-h)}$	Thermal resistance case to heatsink	At 180° sine, Single side cooled				0.08	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(max)		2500			V
F_m	Terminal connection torque(M5)				6		N·m
	Mounting torque(M6)				6		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				320		g

Outline:





Features:

- Isolated mounting base 2500V~
- Pressure contact technology with
- Incrtased power cycling capability
- Space and weight savings

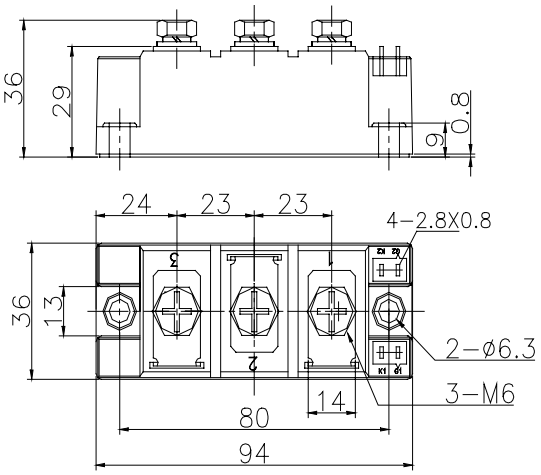
Typical Applications:

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{F(AV)}$ **200A**
V_{RRM} **600~1800V**
I_{FSM} **8KA**
I^2t **326A^2 S*10^3**

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T_j(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{F(AV)}$	Mean forward current	180° half sine wave 50Hz Single side cooled,T_C=100°C	150			200	A
$I_{F\ (RMS)}$	RMS forward current		150			314	A
V_{RRM}	Repetitive peak reverse voltage	V_{RRM} tp=10ms V_{RsM}= V_{RRM}+200V	150	600		1800	V
I_{RRM}	Repetitive peak current	at V_{RRM}	150			12	mA
I_{FSM}	Surge forward current	10ms half sine wave	150			8.00	KA
I^2t	I^2T for fusing coordination	V_R=0.6V_{RRM}				326	A^2s*10^3
V_{FO}	Threshold voltage		150			0.75	V
R_F	Forward slop resistance					0.88	mΩ
V_{FM}	Peak forward voltage	I_{FM}=600A	25			1.38	V
$R_{th(j-c)}$	Thermal resistance Junction to case	At 180° sine, Single side cooled				0.210	°C /W
$R_{th(c-h)}$	Thermal resistance case to heatsink	At 180° sine, Single side cooled				0.08	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(max)		2500			V
F_m	Terminal connection torque(M5)				3.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				320		g

Outline:



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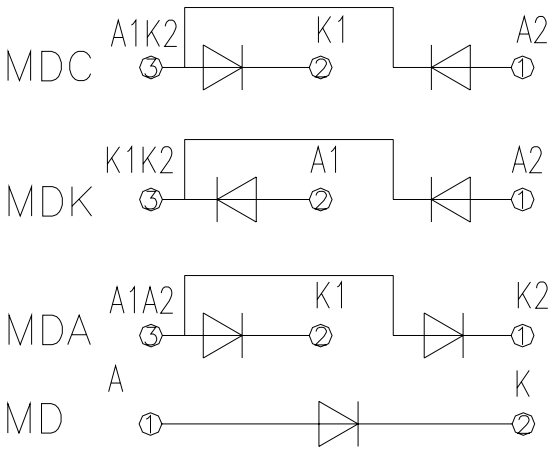


Features:

- Isolated mounting base 2500V~
- Pressure contact technology with
- Incrtased power cycling capability
- Space and weight savings

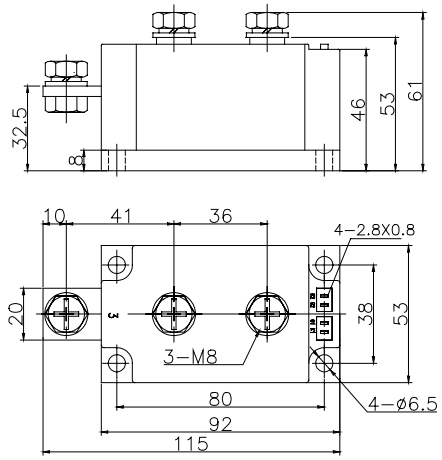
Typical Applications:

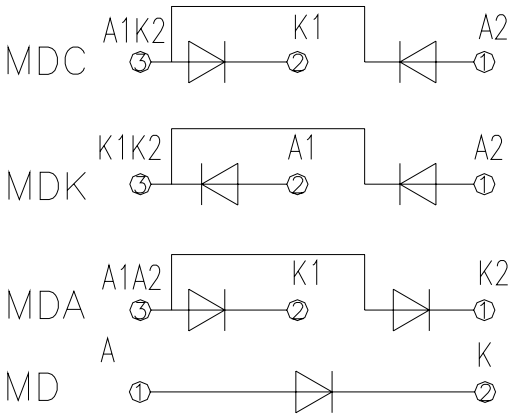
- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{F(AV)}$ **250A**
V_{RRM} **600~1800V**
I_{FSM} **11A×10³**
I^2t **617A² S*10³**

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T_j(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{F(AV)}$	Mean forward current	180° half sine wave 50Hz Single side cooled,T_C=100°C	150			250	A
$I_{F(RMS)}$	RMS forward current		150			393	A
V_{RRM}	Repetitive peak reverse voltage	V_{RRM} tp=10ms V_{RSM}= V_{RRM}+200V	150	600		1800	V
I_{RRM}	Repetitive peak current	at V_{RRM}	150			20	mA
I_{FSM}	Surge forward current	10ms half sine wave	150			11.0	KA
I^2t	I^2T for fusing coordination	V_R=0.6V_{RRM}				617	A^2s*10^3
V_{FO}	Threshold voltage		150			0.75	V
R_F	Forward slop resistance					0.76	mΩ
V_{FM}	Peak forward voltage	I_{FM}=750A	25			1.43	V
$R_{th(j-c)}$	Thermal resistance Junction to case	At 180° sine, Single side cooled				0.14	°C /W
$R_{th(c-h)}$	Thermal resistance case to heatsink	At 180° sine, Single side cooled				0.04	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(max)		2500			V
F_m	Terminal connection torque(M5)				12		N·m
	Mounting torque(M6)				6		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				860		g

Outline:





Features:

- Isolated mounting base 2500V~
- Pressure contact technology with
- Incrtased power cycling capability
- Space and weight savings

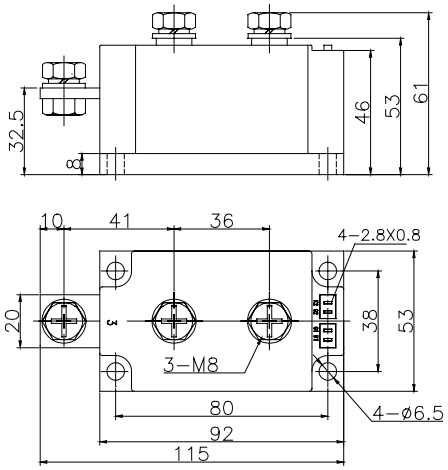
Typical Applications:

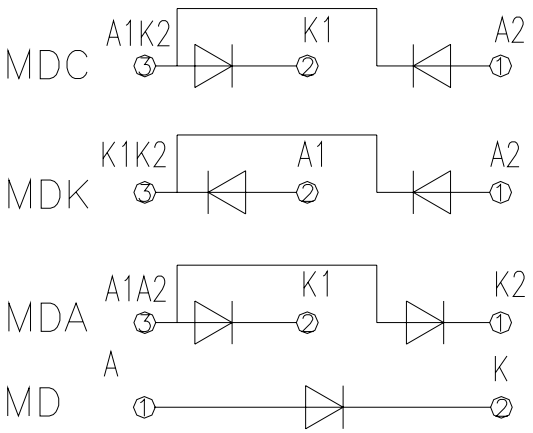
- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{F(AV)}$ **300A**
V_{RRM} **600~1800V**
I_{FSM} **12.5A×10³**
I^2t **797A² S*10³**

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T_j(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{F(AV)}$	Mean forward current	180° half sine wave 50Hz Single side cooled,T_C=100°C	150			300	A
$I_{F\ (RMS)}$	RMS forward current		150			471	A
V_{RRM}	Repetitive peak reverse voltage	V_{RRM} tp=10ms V_{RsM}= V_{RRM}+200V	150	600		1800	V
I_{RRM}	Repetitive peak current	at V_{RRM}	150			20	mA
I_{FSM}	Surge forward current	10ms half sine wave	150			12.5	KA
I^2t	I^2T for fusing coordination	V_R=0.6V_{RRM}				797	A^2s*10^3
V_{FO}	Threshold voltage		150			0.75	V
R_F	Forward slop resistance					0.55	mΩ
V_{FM}	Peak forward voltage	I_{FM}=900A	25			1.35	V
$R_{th(j-c)}$	Thermal resistance Junction to case	At 180° sine, Single side cooled				0.130	°C /W
$R_{th(c-h)}$	Thermal resistance case to heatsink	At 180° sine, Single side cooled				0.04	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(max)		2500			V
F_m	Terminal connection torque(M5)				12		N·m
	Mounting torque(M6)				6		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				860		g

Outline:





Features:

- Isolated mounting base 2500V~
- Pressure contact technology with
- Incrtased power cycling capability
- Space and weight savings

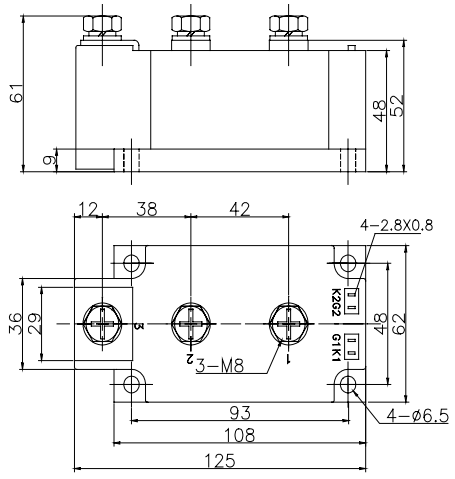
Typical Applications:

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{F(AV)}$ **350A**
V_{RRM} **600~1800V**
I_{FSM} **15KA**
I^2t **1150A^2 S*10^3**

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T_j(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{F(AV)}$	Mean forward current	180° half sine wave 50Hz Single side cooled,T_C=100°C	150			350	A
$I_{F\ (RMS)}$	RMS forward current		150			550	A
V_{RRM}	Repetitive peak reverse voltage	V_{RRM} tp=10ms V_{RsM}= V_{RRM}+200V	150	600		1800	V
I_{RRM}	Repetitive peak current	at V_{RRM}	150			30	mA
I_{FSM}	Surge forward current	10ms half sine wave	150			15.0	KA
I^2t	I^2T for fusing coordination	V_R=0.6V_{RRM}				1150	A^{2}s*10^3
V_{FO}	Threshold voltage		150			0.75	V
R_F	Forward slop resistance					0.61	mΩ
V_{FM}	Peak forward voltage	I_{FM}=1050A	25			1.50	V
$R_{th(j-c)}$	Thermal resistance Junction to case	At 180° sine, Single side cooled				0.110	°C /W
$R_{th(c-h)}$	Thermal resistance case to heatsink	At 180° sine, Single side cooled				0.04	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(max)		2500			V
F_m	Terminal connection torque(M5)				4.5		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				1340		g

Outline:



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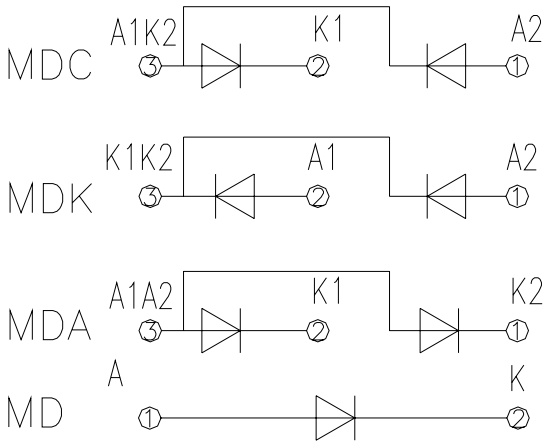


Features:

- Isolated mounting base 2500V~
- Pressure contact technology with
- Incrtased power cycling capability
- Space and weight savings

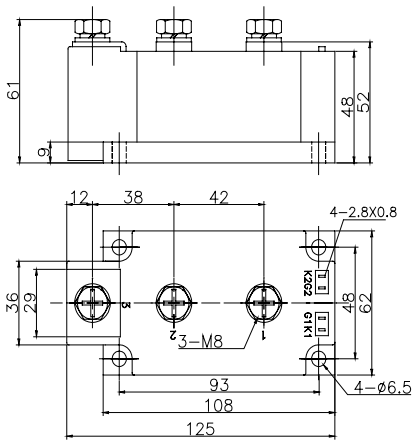
Typical Applications:

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{F(AV)}$ **400A**
V_{RRM} **600~1800V**
I_{FSM} **17KA**
I^2t **1470A^2 S*10^3**

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T_j(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{F(AV)}$	Mean forward current	180° half sine wave 50Hz Single side cooled,T_C=100°C	150			400	A
$I_{F\ (RMS)}$	RMS forward current		150			628	A
V_{RRM}	Repetitive peak reverse voltage	V_{RRM} tp=10ms V_{RsM}= V_{RRM}+200V	150	600		1800	V
I_{RRM}	Repetitive peak current	at V_{RRM}	150			30	mA
I_{FSM}	Surge forward current	10ms half sine wave	150			17.0	KA
I^2t	I^2T for fusing coordination	V_R=0.6V_{RRM}				1470	A^{2}s*10^3
V_{FO}	Threshold voltage		150			0.75	V
R_F	Forward slop resistance					0.50	mΩ
V_{FM}	Peak forward voltage	I_{FM}=1200A	25			1.48	V
$R_{th(j-c)}$	Thermal resistance Junction to case	At 180° sine, Single side cooled				0.100	°C /W
$R_{th(c-h)}$	Thermal resistance case to heatsink	At 180° sine, Single side cooled				0.04	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(max)		2500			V
F_m	Terminal connection torque(M5)				4.5		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				1340		g

Outline:



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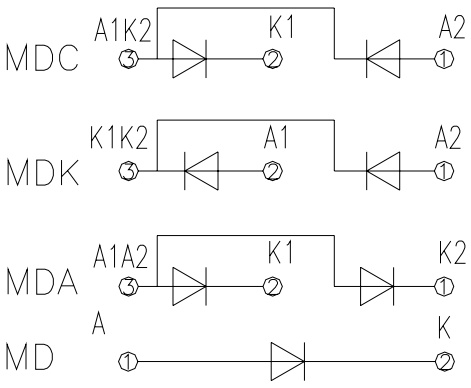


Features:

- Isolated mounting base 2500V~
- Pressure contact technology with
- Incrtased power cycling capability
- Space and weight savings

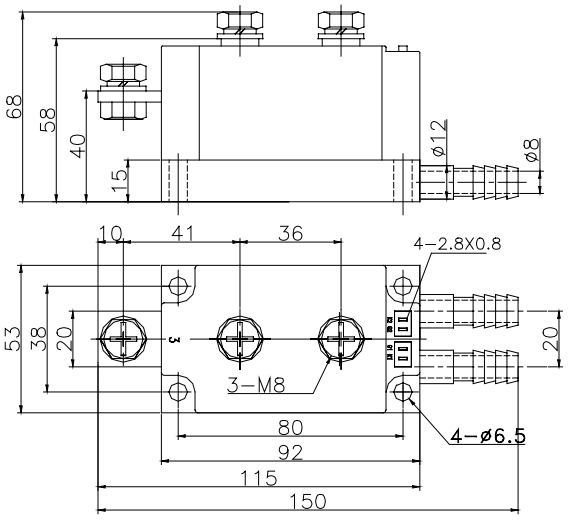
Typical Applications:

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{F(AV)}$	400A
V_{RRM}	600~1800V
I_{FSM}	10KA
I^2t	$510A^2 S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T_j(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{F(AV)}$	Mean forward current	180° half sine wave 50Hz Single side cooled,T_C=100°C	150			400	A
$I_{F(RMS)}$	RMS forward current		150			628	A
V_{RRM}	Repetitive peak reverse voltage	V_{RRM} tp=10ms V_{RSM}= V_{RRM}+200V	150	600		1800	V
I_{RRM}	Repetitive peak current	at V_{RRM}	150			30	mA
I_{FSM}	Surge forward current	10ms half sine wave	150			10.0	KA
I^2t	I^2T for fusing coordination	V_R=0.6V_{RRM}				510	A^2s*10^3
V_{FO}	Threshold voltage		150			0.75	V
R_F	Forward slop resistance					0.64	mΩ
V_{FM}	Peak forward voltage	I_{FM}=1200A	25			1.65	V
$R_{th(j-c)}$	Thermal resistance Junction to case	At 180° sine, Single side cooled				0.160	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(max)		2500			V
F_m	Terminal connection torque(M5)				4.5		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				1300		g

Outline:



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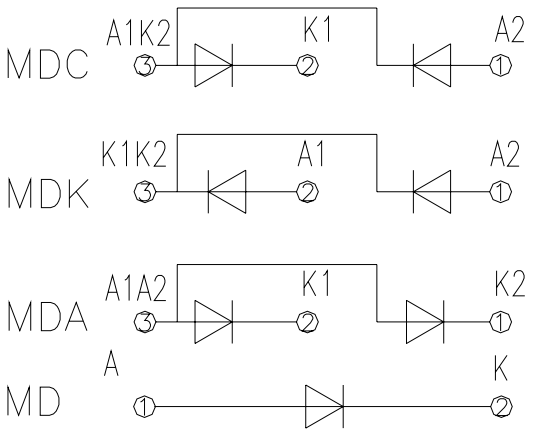


Features:

- Isolated mounting base 2500V~
- Pressure contact technology with
- Incrtased power cycling capability
- Space and weight savings

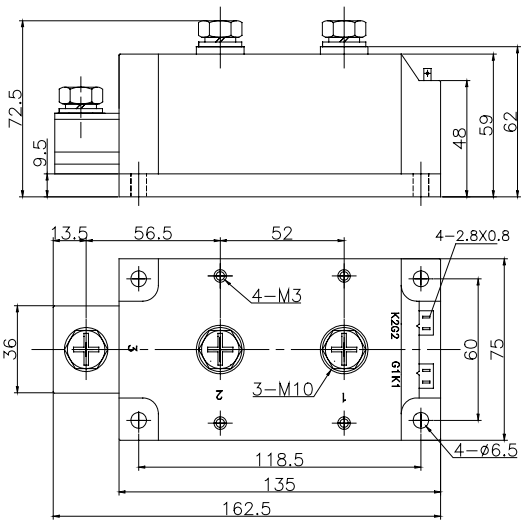
Typical Applications:

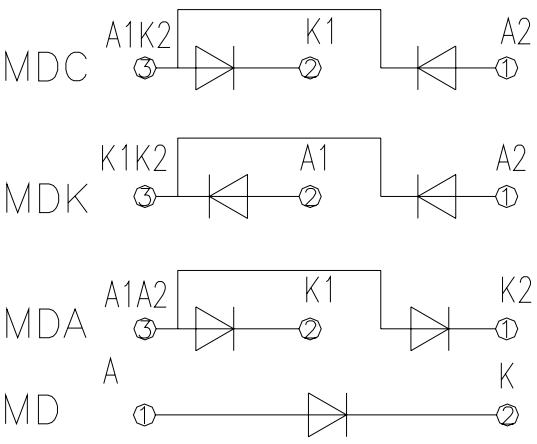
- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{F(AV)}$	500A
V_{RRM}	600~1800V
I_{FSM}	$21A\times10^3$
I^2t	$2250A^2 S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T_j(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{F(AV)}$	Mean forward current	180° half sine wave 50Hz Single side cooled,T_C=100°C	150			500	A
$I_{F\ (RMS)}$	RMS forward current		150			785	A
V_{RRM}	Repetitive peak reverse voltage	V_{RRM} tp=10ms V_{RSM}= V_{RRM}+200V	150	600		1800	V
I_{RRM}	Repetitive peak current	at V_{RRM}	150			40	mA
I_{FSM}	Surge forward current	10ms half sine wave	150			21.0	KA
I^2t	I^2T for fusing coordination	V_R=0.6V_{RRM}				2250	A^2s*10^3
V_{FO}	Threshold voltage		150			0.75	V
R_F	Forward slop resistance					0.32	mΩ
V_{FM}	Peak forward voltage	I_{FM}=1500A	25			1.35	V
$R_{th(j-c)}$	Thermal resistance Junction to case	At 180° sine, Single side cooled				0.090	°C /W
$R_{th(c-h)}$	Thermal resistance case to heatsink	At 180° sine, Single side cooled				0.024	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(max)		2500			V
F_m	Terminal connection torque(M5)				12		N·m
	Mounting torque(M6)				6		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				2300		g

Outline:





Features:

- Isolated mounting base 2500V~
- Pressure contact technology with
- Incrtased power cycling capability
- Space and weight savings

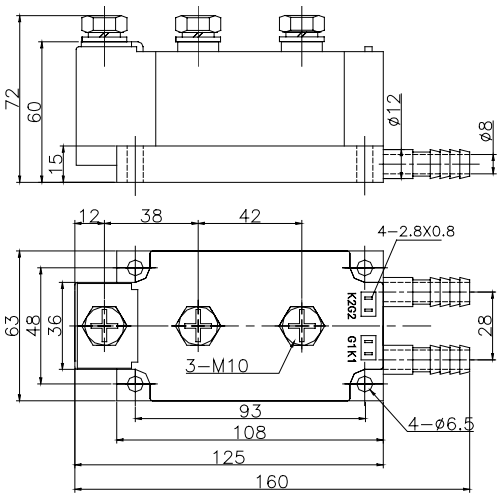
Typical Applications:

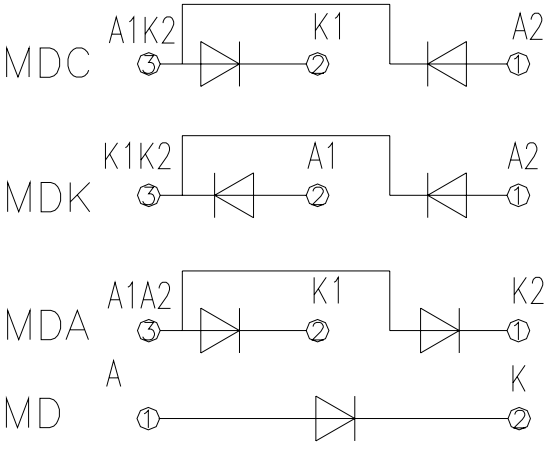
- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{F(AV)}$	500A
V_{RRM}	600~1800V
I_{FSM}	12KA
I^2t	$734A^2 S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T_j(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{F(AV)}$	Mean forward current	180° half sine wave 50Hz Single side cooled,T_C=100°C	150			500	A
$I_{F\ (RMS)}$	RMS forward current		150			785	A
V_{RRM}	Repetitive peak reverse voltage	V_{RRM} tp=10ms V_{RsM}= V_{RRM}+200V	150	600		1800	V
I_{RRM}	Repetitive peak current	at V_{RRM}	150			40	mA
I_{FSM}	Surge forward current	10ms half sine wave	150			12.0	KA
I^2t	I^2T for fusing coordination	V_R=0.6V_{RRM}				734	A^2s*10^3
V_{FO}	Threshold voltage		150			0.75	V
R_F	Forward slop resistance					0.51	mΩ
V_{FM}	Peak forward voltage	I_{FM}=1500A	25			1.65	V
$R_{th(j-c)}$	Thermal resistance Junction to case	At 180° sine, Single side cooled				0.130	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(max)		2500			V
F_m	Terminal connection torque(M5)				6.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				1820		g

Outline:





Features:

- Isolated mounting base 2500V~
- Pressure contact technology with
- Incrtased power cycling capability
- Space and weight savings

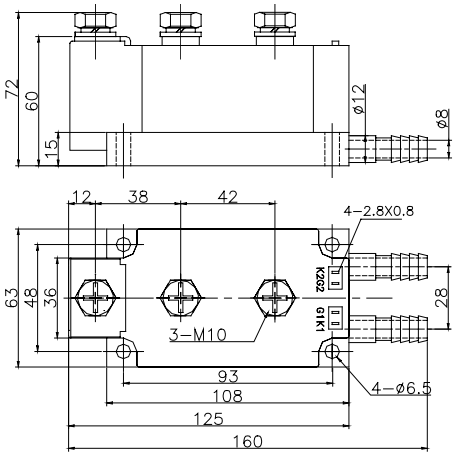
Typical Applications:

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{F(AV)}$	600A
V_{RRM}	600~1800V
I_{FSM}	15KA
I^2t	1150A^2 S*10^3

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T_j(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{F(AV)}$	Mean forward current	180° half sine wave 50Hz Single side cooled,T_C=100°C	150			600	A
$I_{F\ (RMS)}$	RMS forward current		150			942	A
V_{RRM}	Repetitive peak reverse voltage	V_{RRM} tp=10ms V_{RsM}= V_{RRM}+200V	150	600		1800	V
I_{RRM}	Repetitive peak current	at V_{RRM}	150			40	mA
I_{FSM}	Surge forward current	10ms half sine wave	150			15.0	KA
I^2t	I^2T for fusing coordination	V_R=0.6V_{RRM}				1150	A^{2}s*10^3
V_{FO}	Threshold voltage		150			0.75	V
R_F	Forward slop resistance					0.42	mΩ
V_{FM}	Peak forward voltage	I_{FM}=1800A	25			1.65	V
$R_{th(j-c)}$	Thermal resistance Junction to case	At 180° sine, Single side cooled				0.110	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(max)		2500			V
F_m	Terminal connection torque(M5)				6.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				1820		g

Outline:



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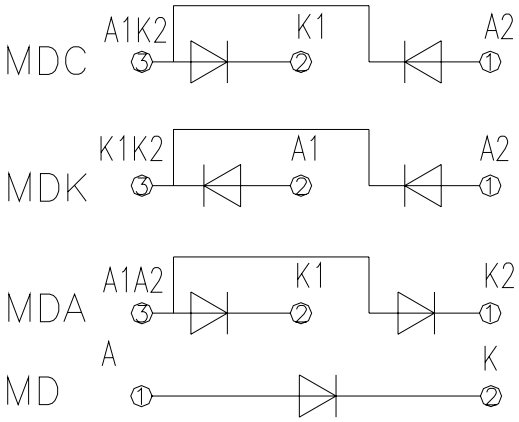


Features:

- Isolated mounting base 2500V~
- Pressure contact technology with
- Incrtased power cycling capability
- Space and weight savings

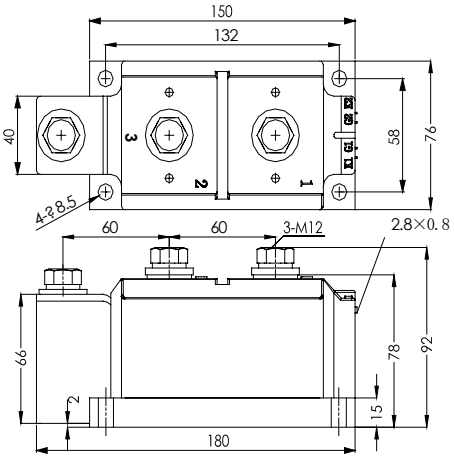
Typical Applications:

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{F(AV)}$	800A
V_{RRM}	600~1800V
I_{FSM}	18KA
I^2t	1650A^2 S*10^3

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T_j(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{F(AV)}$	Mean forward current	180° half sine wave 50Hz Single side cooled,T_C=100°C	150			800	A
$I_{F\ (RMS)}$	RMS forward current		150			1256	A
V_{RRM}	Repetitive peak reverse voltage	V_{RRM} tp=10ms V_{RsM}= V_{RRM}+200V	150	600		1800	V
I_{RRM}	Repetitive peak current	at V_{RRM}	150			40	mA
I_{FSM}	Surge forward current	10ms half sine wave	150			18.0	KA
I^2t	I^2T for fusing coordination	V_R=0.6V_{RRM}				1650	A^2s*10^3
V_{FO}	Threshold voltage		150			0.75	V
R_F	Forward slop resistance					0.34	mΩ
V_{FM}	Peak forward voltage	I_{FM}=2400A	25			1.70	V
$R_{th(j-c)}$	Thermal resistance Junction to case	At 180° sine, Single side cooled				0.080	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(max)		2500			V
F_m	Terminal connection torque(M5)				6.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				2600		g

Outline:



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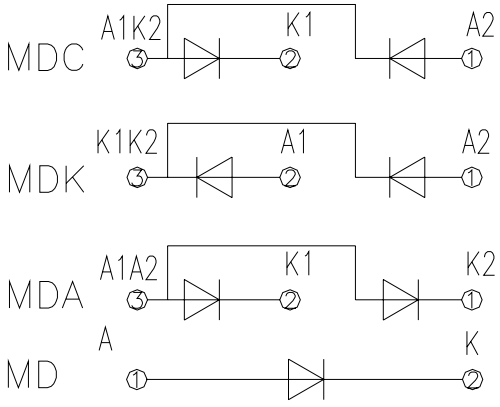


Features:

- Isolated mounting base 2500V~
- Pressure contact technology with
- Incrtased power cycling capability
- Space and weight savings

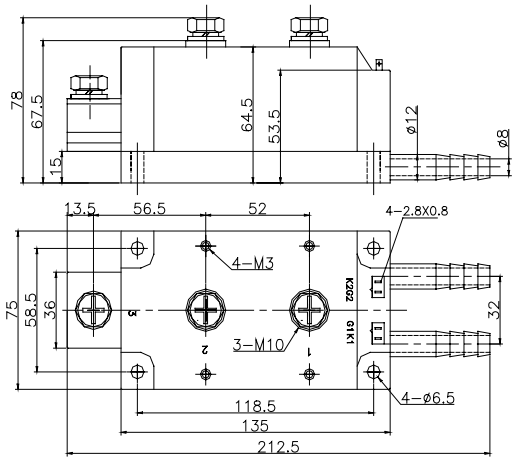
Typical Applications:

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{F(AV)}$ **800A**
V_{RRM} **600~1800V**
I_{FSM} **18KA**
I^2t **1650A^2 S*10^3**

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T_j(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{F(AV)}$	Mean forward current	180° half sine wave 50Hz Single side cooled,T_C=100°C	150			800	A
$I_{F\ (RMS)}$	RMS forward current		150			1256	A
V_{RRM}	Repetitive peak reverse voltage	V_{RRM} tp=10ms V_{RsM}= V_{RRM}+200V	150	600		1800	V
I_{RRM}	Repetitive peak current	at V_{RRM}	150			40	mA
I_{FSM}	Surge forward current	10ms half sine wave	150			18.0	KA
I^2t	I^2T for fusing coordination	V_R=0.6V_{RRM}				1650	A^{2}s*10^3
V_{FO}	Threshold voltage		150			0.75	V
R_F	Forward slop resistance					0.34	mΩ
V_{FM}	Peak forward voltage	I_{FM}=2400A	25			1.70	V
$R_{th(j-c)}$	Thermal resistance Junction to case	At 180° sine, Single side cooled				0.080	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(max)		2500			V
F_m	Terminal connection torque(M5)				6.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				2600		g

Outline:



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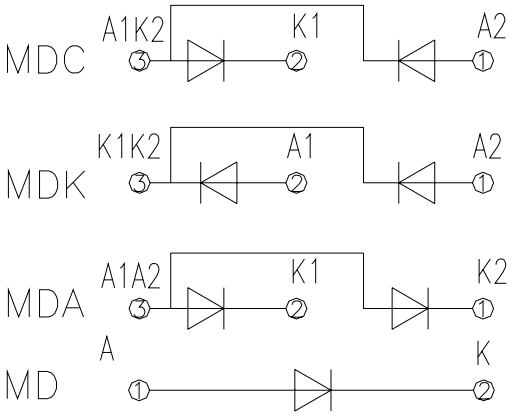


Features:

- Isolated mounting base 2500V~
- Pressure contact technology with
- Incrtased power cycling capability
- Space and weight savings

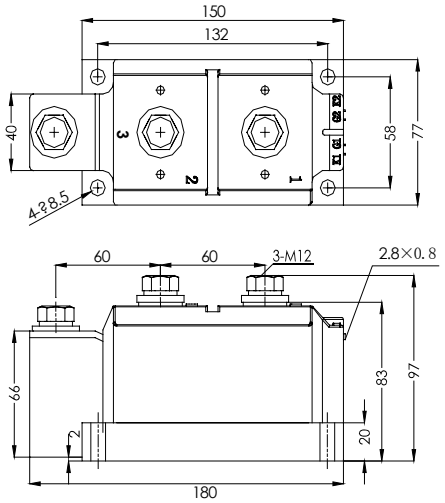
Typical Applications:

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{F(AV)}$	1000A
V_{RRM}	600~1800V
I_{FSM}	18KA
I^2t	1650A^2 S*10^3

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T_j(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{F(AV)}$	Mean forward current	180° half sine wave 50Hz Single side cooled,T_C=100°C	150			1000	A
$I_{F\ (RMS)}$	RMS forward current		150			1570	A
V_{RRM}	Repetitive peak reverse voltage	V_{RRM} tp=10ms V_{RsM}= V_{RRM}+200V	150	600		1800	V
I_{RRM}	Repetitive peak current	at V_{RRM}	150			40	mA
I_{FSM}	Surge forward current	10ms half sine wave	150			18.0	KA
I^2t	I^2T for fusing coordination	V_R=0.6V_{RRM}				1650	A^2s*10^3
V_{FO}	Threshold voltage		150			0.75	V
R_F	Forward slop resistance					0.31	mΩ
V_{FM}	Peak forward voltage	I_{FM}=3000A	25			1.82	V
$R_{th(j-c)}$	Thermal resistance Junction to case	At 180° sine, Single side cooled				0.080	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(max)		2500			V
F_m	Terminal connection torque(M5)				6.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				2600		g

Outline:



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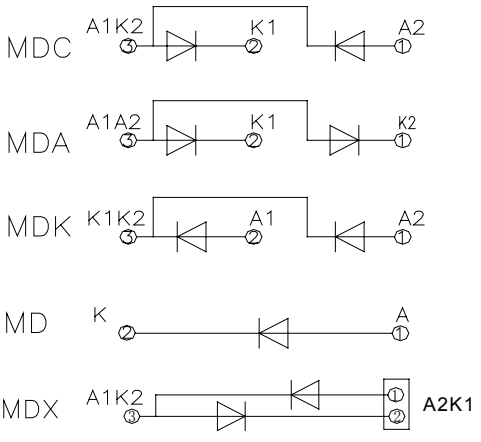

Features:

- Isolated mounting base 2500V~
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- Incrtased power cycling capability
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Typical Applications:

- AC/DC Motor drives
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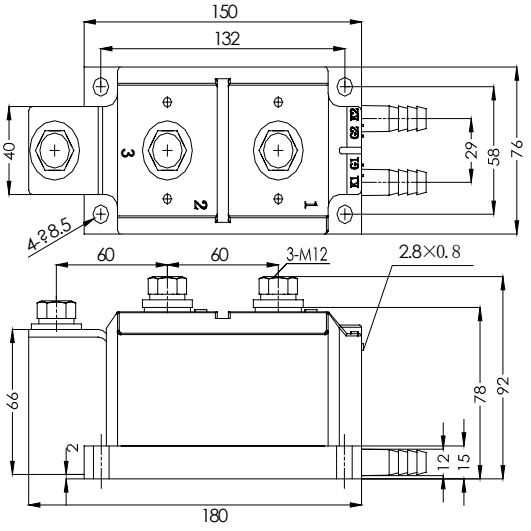
$I_{F(AV)}$ **1000A**
V_{RRM} **600~1800V**
I_{FSM} **18KA**
I^2t **1650A^2 S*10^3**

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T_j(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{F(AV)}$	Mean forward current	180° half sine wave 50Hz Single side cooled,T_C=100°C	150			1000	A
$I_{F\ (RMS)}$	RMS forward current		150			1570	A
V_{RRM}	Repetitive peak reverse voltage	V_{RRM} tp=10ms V_{RsM}= V_{RRM}+200V	150	600		1800	V
I_{RRM}	Repetitive peak current	at V_{RRM}	150			40	mA
I_{FSM}	Surge forward current	10ms half sine wave	150			18.0	KA
I^2t	I^2T for fusing coordination	V_R=0.6V_{RRM}				1650	A^{2}s*10^3
V_{FO}	Threshold voltage		150			0.75	V
R_F	Forward slop resistance					0.31	mΩ
V_{FM}	Peak forward voltage	I_{FM}=3000A	25			1.82	V
$R_{th(j-c)}$	Thermal resistance Junction to case	At 180° sine, Single side cooled				0.080	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(max)		2500			V
F_m	Terminal connection torque(M5)				6.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				2600		g

Outline:



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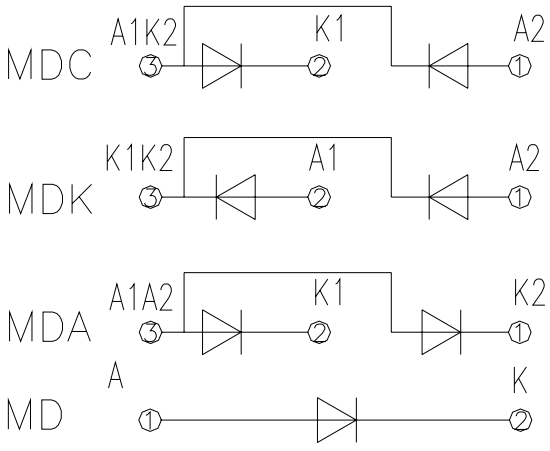

Features:

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Typical Applications:

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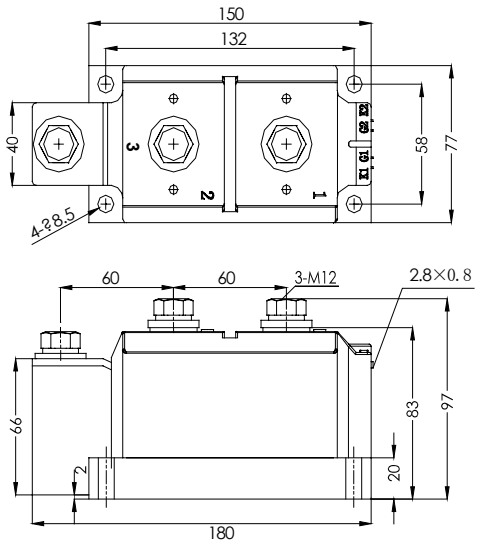
$I_{F(AV)}$ **1200A**
V_{RRM} **600~1800V**
I_{FSM} **20KA**
I^2t **2040A^2 S*10^3**

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T_j(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{F(AV)}$	Mean forward current	180° half sine wave 50Hz Single side cooled,T_C=100°C	150			1200	A
$I_{F\ (RMS)}$	RMS forward current		150			1884	A
V_{RRM}	Repetitive peak reverse voltage	V_{RRM} tp=10ms V_{RsM}= V_{RRM}+200V	150	600		1800	V
I_{RRM}	Repetitive peak current	at V_{RRM}	150			50	mA
I_{FSM}	Surge forward current	10ms half sine wave	150			20	KA
I^2t	I^2T for fusing coordination	V_R=0.6V_{RRM}				2040	A^{2}s*10^3
V_{FO}	Threshold voltage		150			0.75	V
R_F	Forward slop resistance					0.25	mΩ
V_{FM}	Peak forward voltage	I_{FM}=3000A	25			1.86	V
$R_{th(j-c)}$	Thermal resistance Junction to case	At 180° sine, Single side cooled				0.080	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(max)		2500			V
F_m	Terminal connection torque(M5)				6.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				2600		g

Outline:



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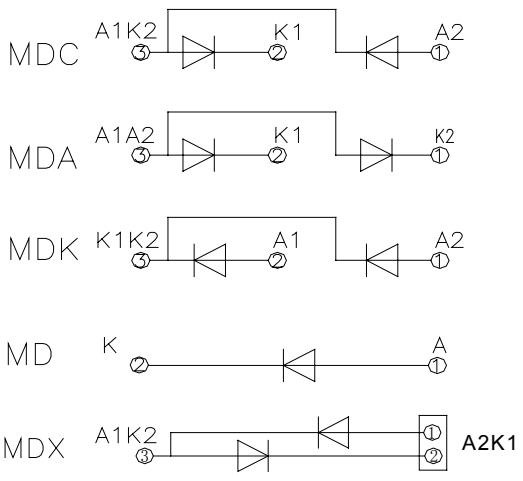

Features:

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- Space and weight savings

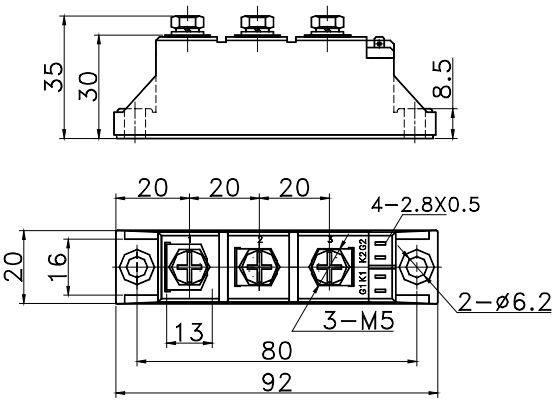
Typical Applications:

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{T(AV)}$	26A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	0.55KA
I^2t	$1.5A^2 S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			26	A
$I_{T(RMS)}$	RMS on-state current		125			41	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			8	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			0.55	KA
I^2t	I^2T for fusing coordination					1.50	A^2s*10^3
V_{TO}	Threshold voltage		125			0.85	V
r_T	On-state slop resistance					9.68	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=80A	25			1.69	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			50	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		100	mA
V_{GT}	Gate trigger voltage			0.8		2.5	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125	0.2		0.2	V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.950	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.2	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				2.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				115		g

Outline:



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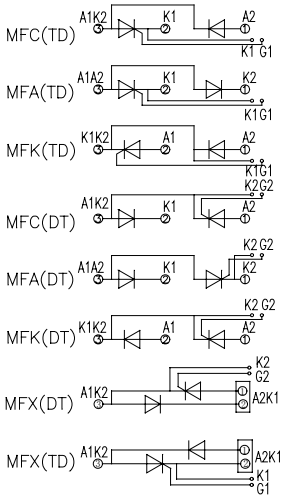

Features:

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Typical Applications:

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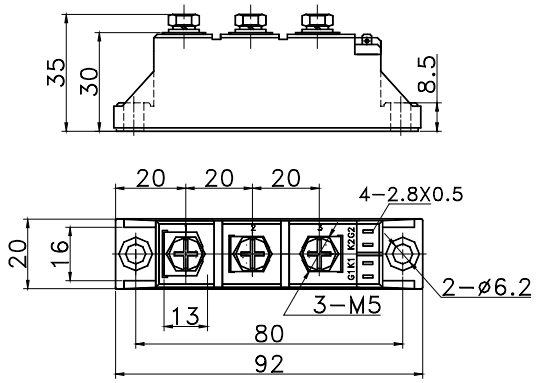
$I_{T(AV)}$	40A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	1.0KA
I^2t	$5.0A^2 S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			40	A
$I_{T(RMS)}$	RMS on-state current		125			63	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			8	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			1.00	KA
I^2t	I^2T for fusing coordination					5.0	A^2s*10^3
V_{TO}	Threshold voltage		125			0.85	V
r_T	On-state slop resistance					5.57	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=120A	25			1.60	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			50	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		100	mA
V_{GT}	Gate trigger voltage			0.8		2.5	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125			0.2	V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.650	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.2	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				2.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				115		g

Outline:



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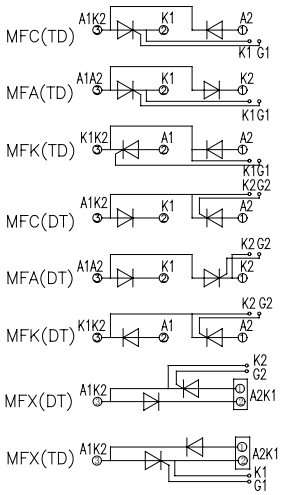

Features:

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Typical Applications:

- AC/DC Motor drives
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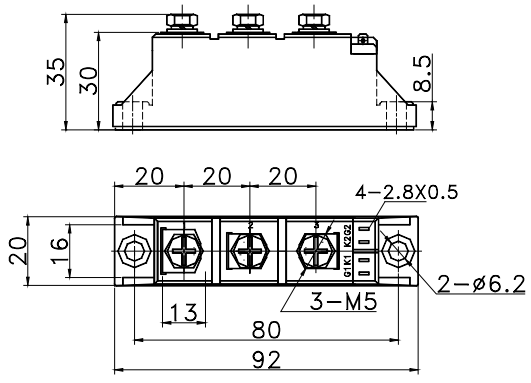
$I_{T(AV)}$	55A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	1.25KA
I^2t	7.8A^2 S*10^3

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			55	A
$I_{T(RMS)}$	RMS on-state current		125			86	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DSM}&V_{RSM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			8	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			1.25	KA
I^2t	I^2T for fusing coordination					7.80	A^2s*10^3
V_{TO}	Threshold voltage		125			0.85	V
r_T	On-state slop resistance					3.47	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=170A	25			1.50	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			50	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		100	mA
V_{GT}	Gate trigger voltage			0.8		2.5	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125				V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.530	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.2	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				2.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				100		g

Outline:



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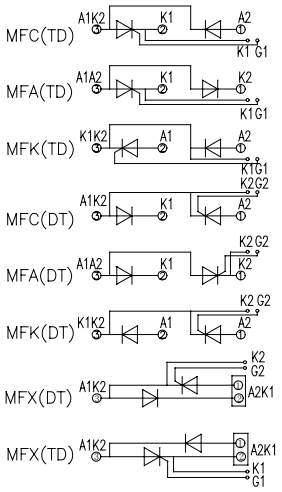

Features:

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Typical Applications:

- AC/DC Motor drives
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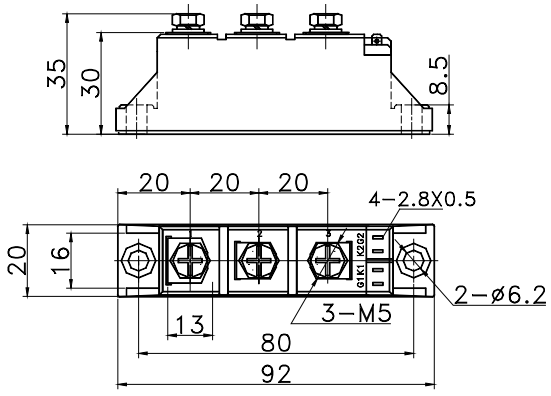
$I_{T(AV)}$	55A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	1.25KA
I^2t	$7.8A^2 S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			55	A
$I_{T(RMS)}$	RMS on-state current		125			86	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			8	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			1.25	KA
I^2t	I^2T for fusing coordination					7.8	A^2s*10^3
V_{TO}	Threshold voltage		125			0.85	V
r_T	On-state slop resistance					3.47	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=170A	25			1.50	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			50	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		100	mA
V_{GT}	Gate trigger voltage			0.8		2.5	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125				V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.530	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.2	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				2.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				100		g

Outline:



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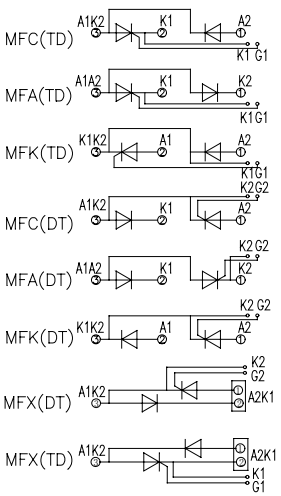

Features:

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Typical Applications:

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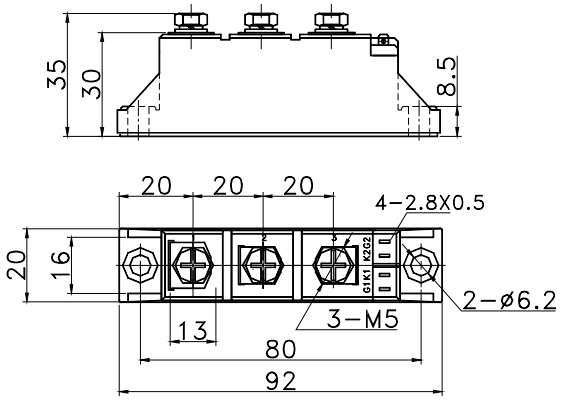
$I_{T(AV)}$	55A
V_{DRM}/V_{RRM}	1900~3000V
I_{TSM}	1.15KA
I^2t	6.6A^2 S*10^3

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			55	A
$I_{T(RMS)}$	RMS on-state current		125			86	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DSM}&V_{RSM}= V_{DRM}&V_{RRM}+200V respectively	125	1900		3000	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			10	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			1.15	KA
I^2t	I^2T for fusing coordination					6.60	A^{2}s*10^3
V_{TO}	Threshold voltage		125			0.90	V
r_T	On-state slop resistance					5.85	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=120A	25			1.96	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			50	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		150	mA
V_{GT}	Gate trigger voltage			0.8		3.0	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125				V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.640	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.2	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		3600			V
F_m	Thermal connection torque(M5)				2.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				115		g

Outline:



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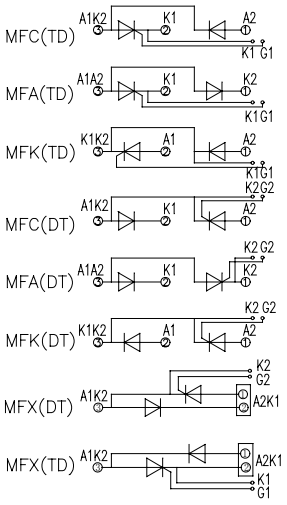


Features:

- Isolated mounting base 2500V~
- Pressure contact technology with
- Incrtased power cycling capability
- Space and weight savings

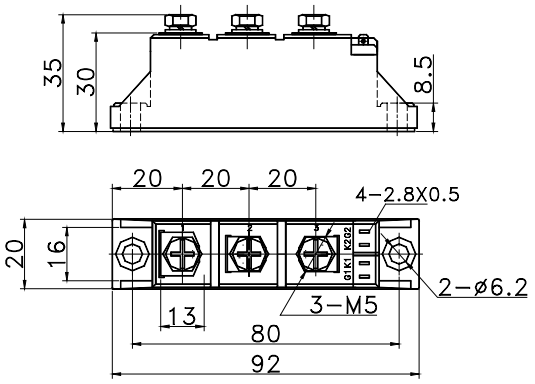
Typical Applications:

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{T(AV)}$	70A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	1.60KA
I^2t	$13A^2 S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			70	A
$I_{T(RMS)}$	RMS on-state current		125			110	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			10	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			1.60	KA
I^2t	I^2T for fusing coordination					13.0	A^2s*10^3
V_{TO}	Threshold voltage		125			0.80	V
r_T	On-state slop resistance					2.64	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=210A	25			1.48	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			50	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		100	mA
V_{GT}	Gate trigger voltage			0.8		2.5	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125			0.2	V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.410	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.2	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				2.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				115		g

Outline:



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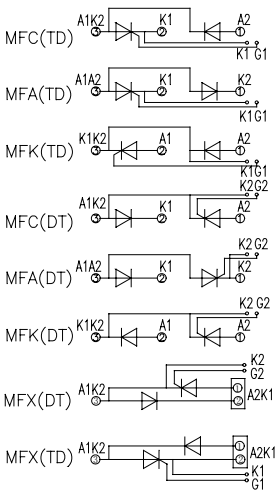

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Typical Applications:

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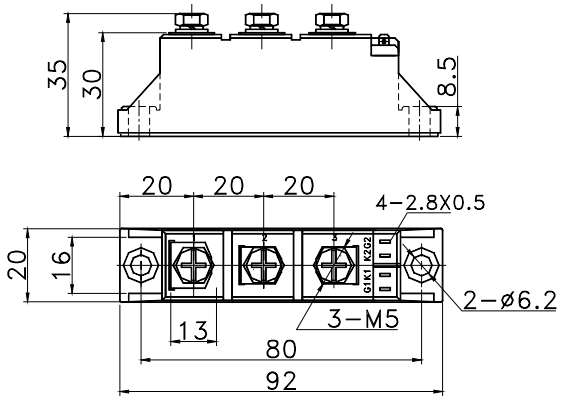
$I_{T(AV)}$	70A
V_{DRM}/V_{RRM}	1900~3000V
I_{TSM}	1.60KA
I^2t	$13A^2 S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			70	A
$I_{T(RMS)}$	RMS on-state current		125			110	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	1900		3000	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			12	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			1.60	KA
I^2t	I^2T for fusing coordination					13.0	A^2s*10^3
V_{TO}	Threshold voltage		125			0.90	V
r_T	On-state slop resistance					4.64	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=210A	25			1.93	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			50	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		150	mA
V_{GT}	Gate trigger voltage			0.8		3.0	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125			0.2	V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.450	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.2	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		3600			V
F_m	Thermal connection torque(M5)				2.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				115		g

Outline:



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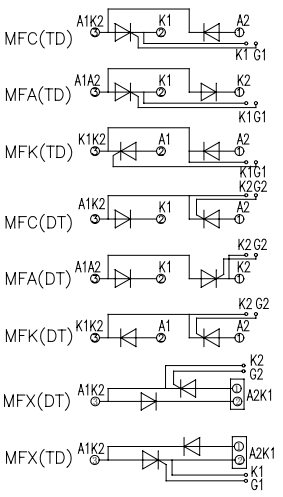

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Typical Applications:

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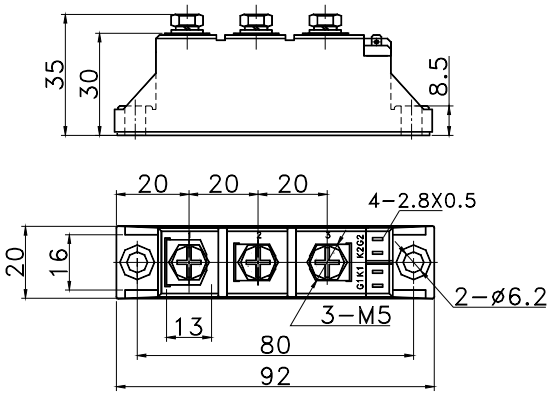
$I_{T(AV)}$	70A
V_{DRM}/V_{RRM}	1900~3000V
I_{TSM}	1.60KA
I^2t	13A^2 S*10^3

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			70	A
$I_{T(RMS)}$	RMS on-state current		125			110	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	1900		3000	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			12	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			1.60	KA
I^2t	I^2T for fusing coordination					13.0	A^{2}s*10^3
V_{TO}	Threshold voltage		125			0.90	V
r_T	On-state slop resistance					4.64	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=210A	25			1.93	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			50	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		150	mA
V_{GT}	Gate trigger voltage			0.8		3.0	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125			0.2	V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.450	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.2	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		3600			V
F_m	Thermal connection torque(M5)				2.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				115		g

Outline:



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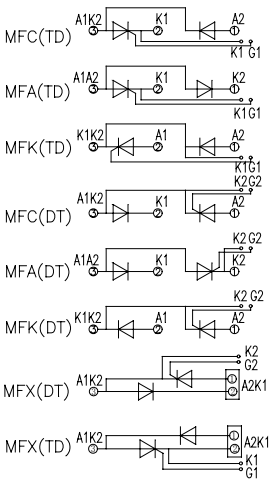

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Typical Applications:

- AC/DC Motor drives
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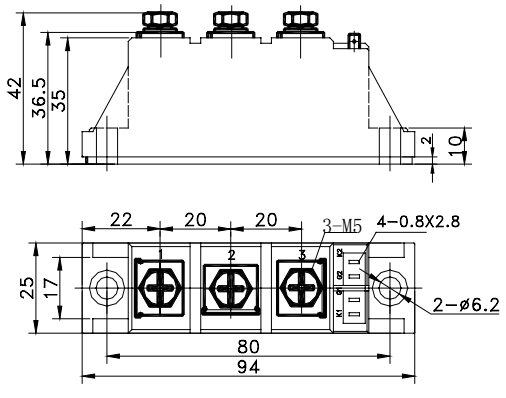
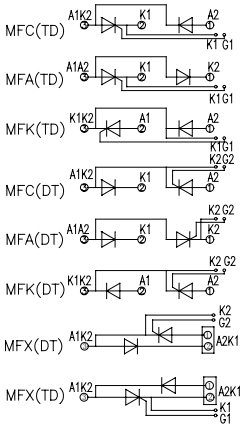
$I_{T(AV)}$	90A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	$2.0A\times10^3$
I^2t	$20.4A^2S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			90	A
$I_{T(RMS)}$	RMS on-state current		125			141	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1600	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			10	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			2	KA
I^2t	I^2T for fusing coordination					20.4	A^2s*10^3
V_{TO}	Threshold voltage		125			0.8	V
r_T	On-state slop resistance					3.01	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=270A	25			1.7	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		100	mA
V_{GT}	Gate trigger voltage			1		2.5	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125	0.2			V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.28	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.15	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				4		N·m
	Mounting torque(M6)				6		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				160		g

Outline:





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Typical Applications:

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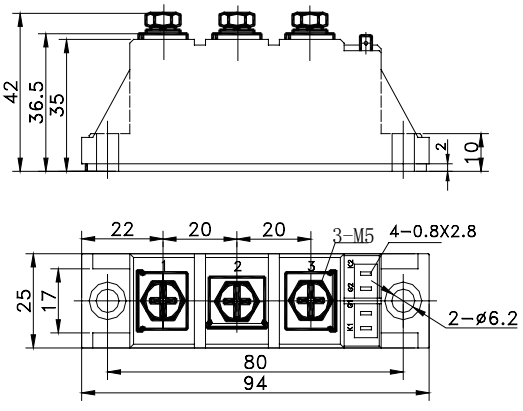
$I_{T(AV)}$	90A
V_{DRM}/V_{RRM}	1900~3000V
I_{TSM}	2.0KA
I^2t	$20A^2 S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			90	A
$I_{T(RMS)}$	RMS on-state current		125			141	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	1900		3000	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			15	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			2.0	KA
I^2t	I^2T for fusing coordination					20	A^2s*10^3
V_{TO}	Threshold voltage		125			0.90	V
r_T	On-state slop resistance					3.26	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=270A	25			1.92	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		150	mA
V_{GT}	Gate trigger voltage			1.0		3.0	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125				V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.280	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.15	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		3600			V
F_m	Thermal connection torque(M5)				2.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				115		g

Outline:



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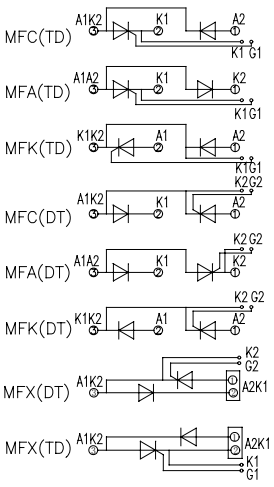

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Typical Applications:

- AC/DC Motor drives
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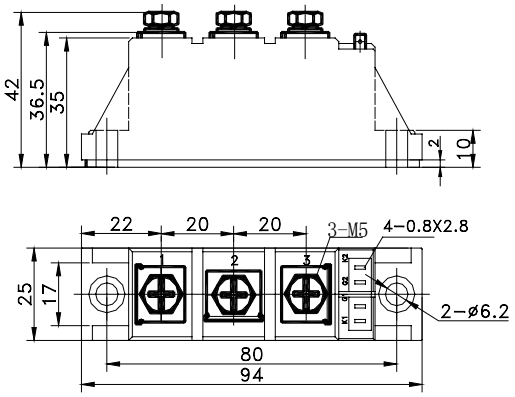
$I_{T(AV)}$	90A
V_{DRM}/V_{RRM}	1900~3000V
I_{TSM}	2.0KA
I^2t	$20A^2 S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			90	A
$I_{T(RMS)}$	RMS on-state current		125			141	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DSM}&V_{RSM}= V_{DRM}&V_{RRM}+200V respectively	125	1900		3000	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			15	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			2.0	KA
I^2t	I^2T for fusing coordination					20	A^2s*10^3
V_{TO}	Threshold voltage		125			0.90	V
r_T	On-state slop resistance					3.26	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=270A	25			1.92	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		150	mA
V_{GT}	Gate trigger voltage			1.0		3.0	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125				V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.280	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.15	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		3600			V
F_m	Thermal connection torque(M5)				2.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				160		g

Outline:



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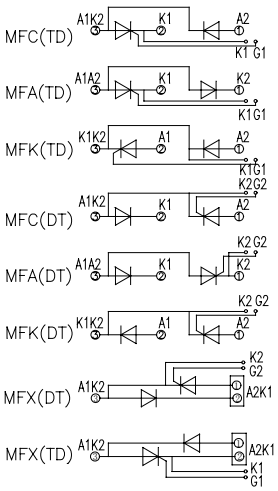

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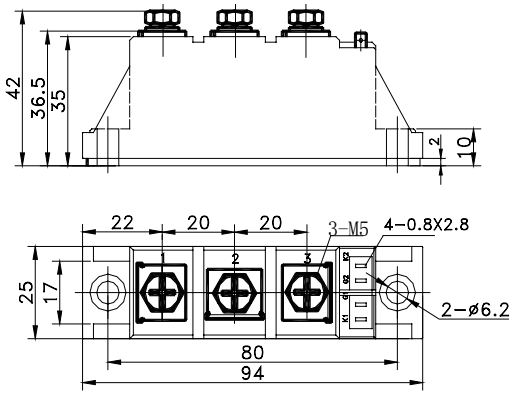
$I_{T(AV)}$	110A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	2.44KA
I^2t	29A^2 S*10^3

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			110	A
$I_{T(RMS)}$	RMS on-state current		125			173	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			12	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			2.40	KA
I^2t	I^2T for fusing coordination					29	A^{2}s*10^3
V_{TO}	Threshold voltage		125			0.8	V
r_T	On-state slop resistance					2.29	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=330A	25			1.69	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		100	mA
V_{GT}	Gate trigger voltage			1.0		2.5	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125			0.2	V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.250	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.15	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				2.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				160		g

Outline:



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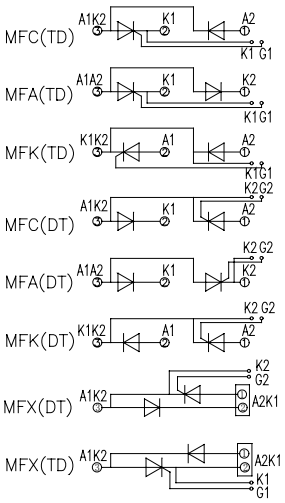


Features:

- Isolated mounting base 2500V~
- Pressure contact technology with
- Incrtased power cycling capability
- Space and weight savings

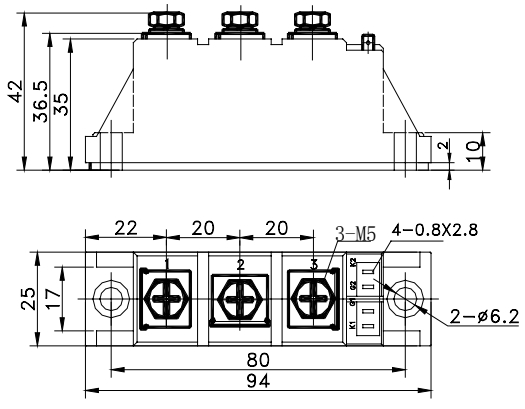
Typical Applications:

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{T(AV)}$	110A
V_{DRM}/V_{RRM}	1900~3000V
I_{TSM}	2.4KA
I^2t	29A^2 S*10^3

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			110	A
$I_{T(RMS)}$	RMS on-state current		125			173	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DSM}&V_{RSM}= V_{DRM}&V_{RRM}+200V respectively	125	1900		3000	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			20	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			2.4	KA
I^2t	I^2T for fusing coordination					29	A^{2}s*10^3
V_{TO}	Threshold voltage		125			0.90	V
r_T	On-state slop resistance					2.61	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=330A	25			1.90	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		150	mA
V_{GT}	Gate trigger voltage			1.0		3.0	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125				V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.250	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.15	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		3600			V
F_m	Thermal connection torque(M5)				2.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				160		g

Outline:



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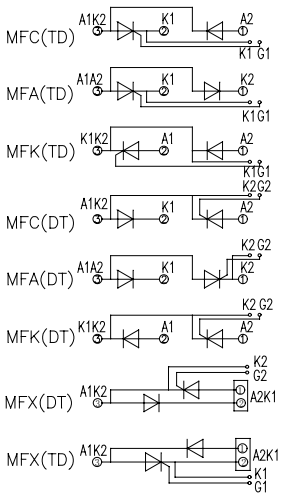

Features:

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Typical Applications:

- AC/DC Motor drives
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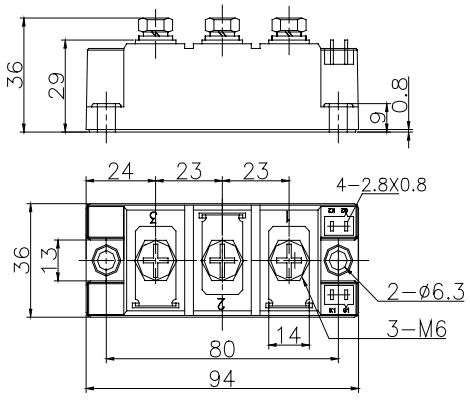
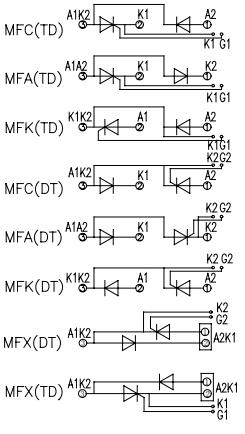
$I_{T(AV)}$	135A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	$2.0A\times10^3$
I^2t	$20.4A^2S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			135	A
$I_{T(RMS)}$	RMS on-state current		125			212	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			15	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			3.8	KA
I^2t	I^2T for fusing coordination					72	A^2s*10^3
V_{TO}	Threshold voltage		125			0.8	V
r_T	On-state slop resistance					2.85	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=410A	25			1.75	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		100	mA
V_{GT}	Gate trigger voltage			1		2.5	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125	0.2			V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.2	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.08	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				4		N·m
	Mounting torque(M6)				6		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				320		g

Outline:





Features:

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Typical Applications:

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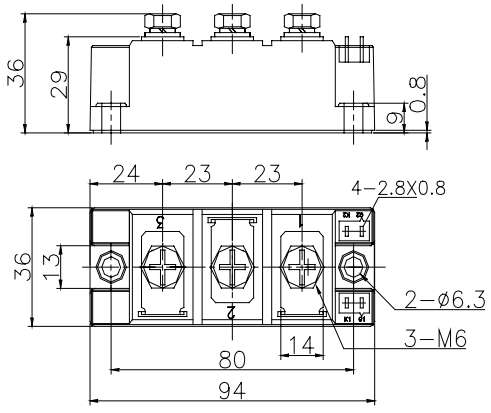
$I_{T(AV)}$	135A
V_{DRM}/V_{RRM}	1900~3000V
I_{TSM}	3.8KA
I^2t	72A^2 S*10^3

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			135	A
$I_{T(RMS)}$	RMS on-state current		125			212	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	1900		3000	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			22	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			3.8	KA
I^2t	I^2T for fusing coordination					72	A^{2}s*10^3
V_{TO}	Threshold voltage		125			0.90	V
r_T	On-state slop resistance					2.26	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=405A	25			1.96	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		150	mA
V_{GT}	Gate trigger voltage			1.0		3.0	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125				V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.200	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.08	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		3600			V
F_m	Thermal connection torque(M5)				2.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				320		g

Outline:



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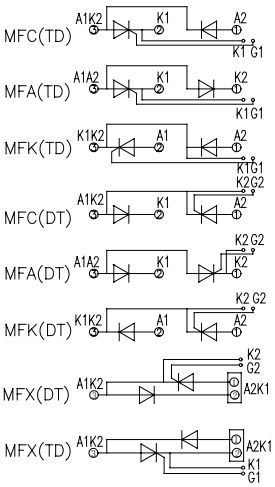

Features:

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Typical Applications:

- AC/DC Motor drives
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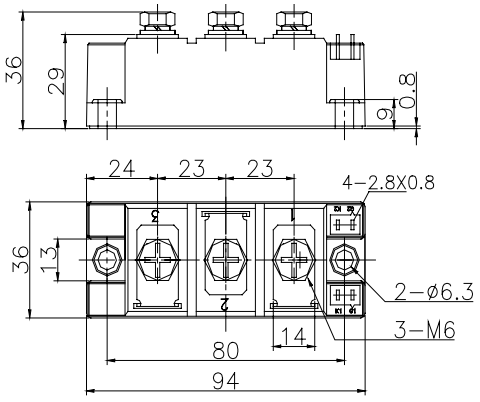
$I_{T(AV)}$	160A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	5.4KA
I^2t	$146A^2 S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			160	A
$I_{T(RMS)}$	RMS on-state current		125			251	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			20	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			5.40	KA
I^2t	I^2T for fusing coordination					146	A^2s*10^3
V_{TO}	Threshold voltage		125			0.8	V
r_T	On-state slop resistance					1.69	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=480A	25			1.70	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		150	mA
V_{GT}	Gate trigger voltage			1.0		2.5	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125			0.2	V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.170	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.08	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				3.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				320		g

Outline:



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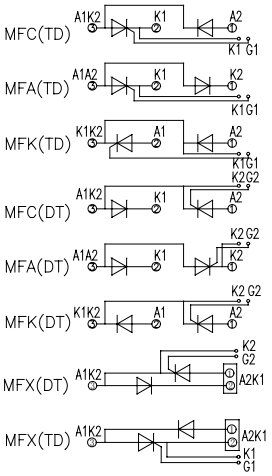

Features:

- Isolated mounting base 2500V~
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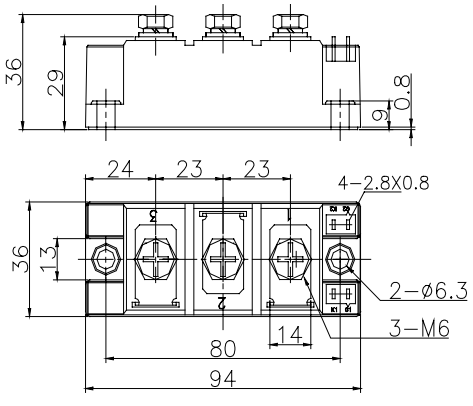
Typical Applications:

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{T(AV)}$	160A
V_{DRM}/V_{RRM}	1900~3000V
I_{TSM}	5.4KA
I^2t	146A^2 S*10^3

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			160	A
$I_{T(RMS)}$	RMS on-state current		125			251	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	1900		3000	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			25	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			5.40	KA
I^2t	I^2T for fusing coordination					146	A^2s*10^3
V_{TO}	Threshold voltage		125			0.90	V
r_T	On-state slop resistance					1.79	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=480A	25			1.90	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		150	mA
V_{GT}	Gate trigger voltage			1.0		3.0	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125				V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.170	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.2	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		3600			V
F_m	Thermal connection torque(M5)				3.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				320		g

Outline:



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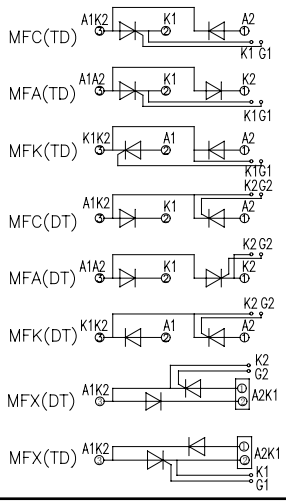

Features:

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Typical Applications:

- AC/DC Motor drives
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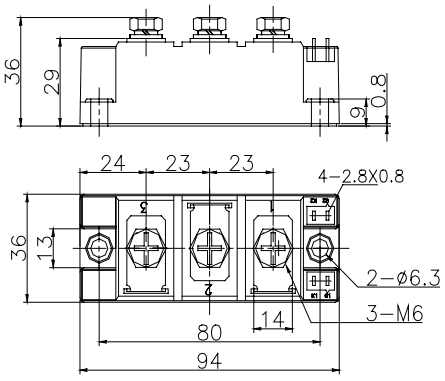
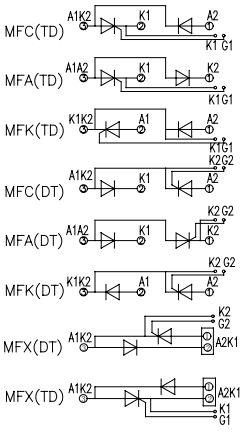
$I_{T(AV)}$	182A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	$5.8A\times10^3$
I^2t	$168A^2S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			182	A
$I_{T(RMS)}$	RMS on-state current		125			286	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			25	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			5.8	KA
I^2t	I^2T for fusing coordination					168	A^2s*10^3
V_{TO}	Threshold voltage		125			0.8	V
r_T	On-state slop resistance					1.26	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=550A	25			1.62	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		150	mA
V_{GT}	Gate trigger voltage			1		2.5	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125	0.2			V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.16	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.08	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				4		N·m
	Mounting torque(M6)				6		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				320		g

Outline:





Features:

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Typical Applications:

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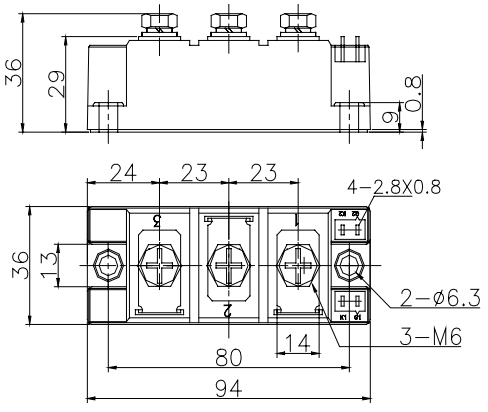
$I_{T(AV)}$	182A
V_{DRM}/V_{RRM}	1900~3000V
I_{TSM}	5.8KA
I^2t	$168A^2 S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			182	A
$I_{T(RMS)}$	RMS on-state current		125			286	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DSM}&V_{RSM}= V_{DRM}&V_{RRM}+200V respectively	125	1900		3000	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			30	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			5.80	KA
I^2t	I^2T for fusing coordination					168	A^2s*10^3
V_{TO}	Threshold voltage		125			0.90	V
r_T	On-state slop resistance					1.40	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=550A	25			1.80	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		150	mA
V_{GT}	Gate trigger voltage			1.0		3.0	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125				V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.160	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.08	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		3600			V
F_m	Thermal connection torque(M5)				3.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				320		g

Outline:



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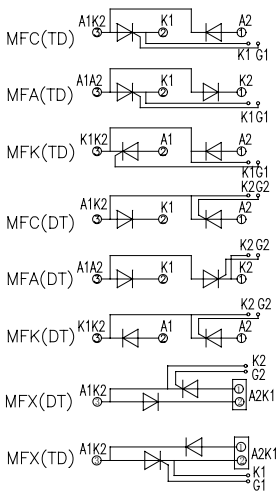

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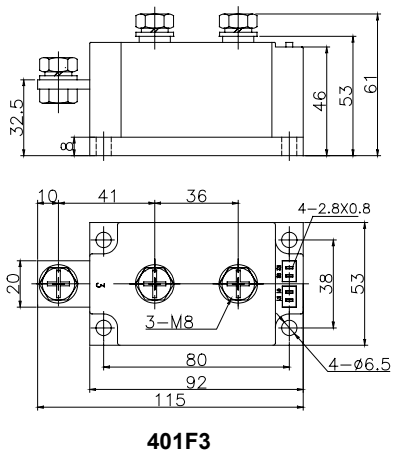
Typical Applications:

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{T(AV)}$	200A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	7.2KA
I^2t	$259A^2 S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			200	A
$I_{T(RMS)}$	RMS on-state current		125			314	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			30	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			7.2	KA
I^2t	I^2T for fusing coordination					259	A^2s*10^3
V_{TO}	Threshold voltage		125			0.80	V
r_T	On-state slop resistance					1.27	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=600A	25			1.65	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		180	mA
V_{GT}	Gate trigger voltage			1.0		2.5	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125			0.2	V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.140	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.04	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				4.5		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				930		g

Outline:



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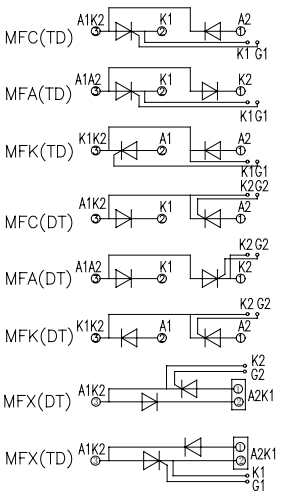


Features:

- Isolated mounting base 2500V~
- Pressure contact technology with
- Incrtased power cycling capability
- Space and weight savings

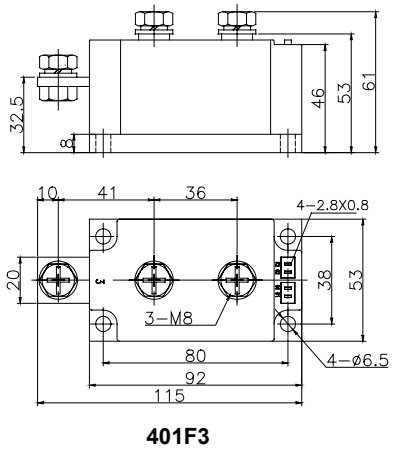
Typical Applications:

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{T(AV)}$	200A
V_{DRM}/V_{RRM}	1900~3000V
I_{TSM}	7.2KA
I^2t	$259A^2 S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			200	A
$I_{T(RMS)}$	RMS on-state current		125			314	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DSM}&V_{RSM}= V_{DRM}&V_{RRM}+200V respectively	125	1900		3000	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			35	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			7.20	KA
I^2t	I^2T for fusing coordination					259	A^2s*10^3
V_{TO}	Threshold voltage		125			0.90	V
r_T	On-state slop resistance					1.43	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=600A	25			1.90	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		180	mA
V_{GT}	Gate trigger voltage			1.0		3.0	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125				V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.140	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.04	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		3600			V
F_m	Thermal connection torque(M5)				4.5		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				930		g

Outline:



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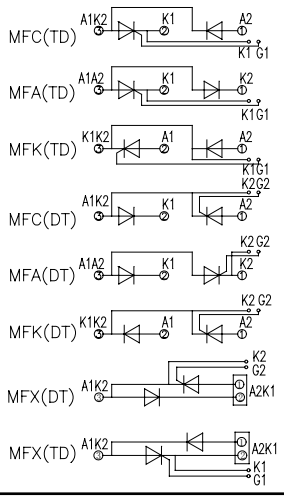

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Typical Applications:

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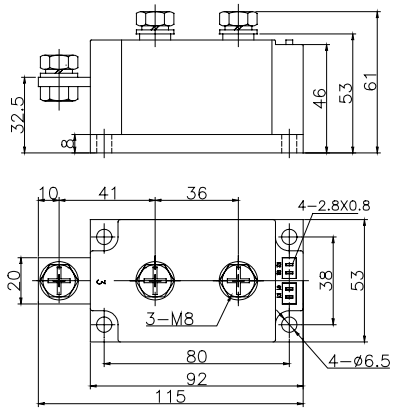
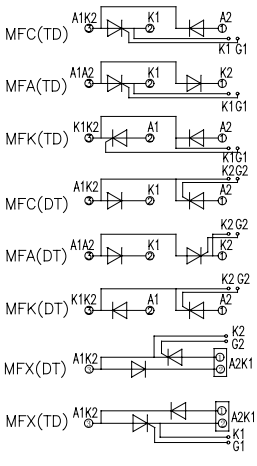
$I_{T(AV)}$	250A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	$8.5A\times10^3$
I^2t	$360A^2\ S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			250	A
$I_{T(RMS)}$	RMS on-state current		125			390	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			40	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			8.5	KA
I^2t	I^2T for fusing coordination					360	A^2s*10^3
V_{TO}	Threshold voltage		125			0.8	V
r_T	On-state slop resistance					0.85	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=750A	25			1.57	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		180	mA
V_{GT}	Gate trigger voltage			1		2.5	V
I_H	Holding current			20		150	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125	0.2			V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.12	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.04	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				4		N·m
	Mounting torque(M6)				6		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				860		g

Outline:





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Typical Applications:

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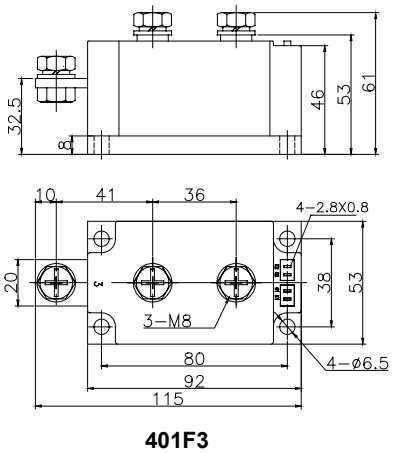
$I_{T(AV)}$	250A
V_{DRM}/V_{RRM}	1900~3000V
I_{TSM}	8.5KA
I^2t	361A^2 S*10^3

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			250	A
$I_{T(RMS)}$	RMS on-state current		125			393	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DSM}&V_{RSM}= V_{DRM}&V_{RRM}+200V respectively	125	1900		3000	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			40	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			8.50	KA
I^2t	I^2T for fusing coordination					361	A^2s*10^3
V_{TO}	Threshold voltage		125			0.90	V
r_T	On-state slop resistance					0.93	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=750A	25			1.73	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		180	mA
V_{GT}	Gate trigger voltage			1.0		3.0	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125				V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.120	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.04	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		3600			V
F_m	Thermal connection torque(M5)				4.5		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				930		g

Outline:



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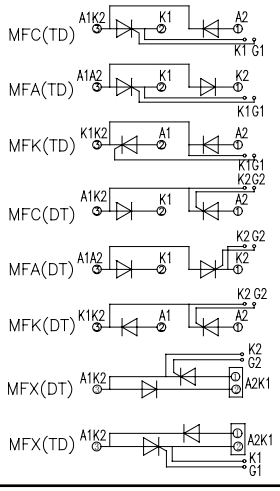

Features:

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Typical Applications:

- AC/DC Motor drives
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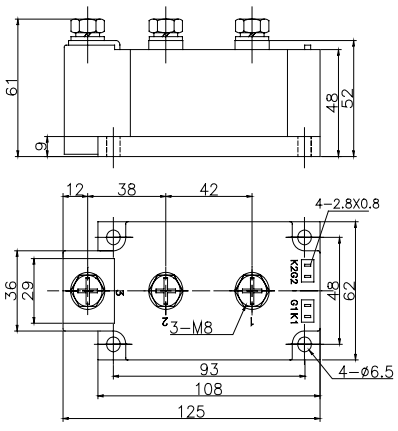
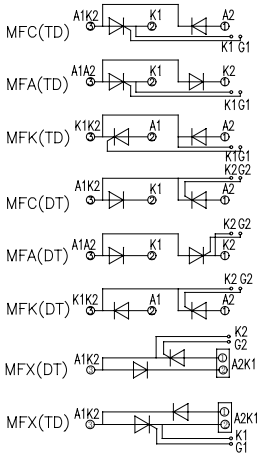
$I_{T(AV)}$	300A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	$9.3A\times10^3$
I^2t	$432A^2 S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			300	A
$I_{T(RMS)}$	RMS on-state current		125			471	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			40	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			9.3	KA
I^2t	I^2T for fusing coordination					432	A^2s*10^3
V_{TO}	Threshold voltage		125			0.8	V
r_T	On-state slop resistance					0.72	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=900A	25			1.58	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		180	mA
V_{GT}	Gate trigger voltage			1		2.5	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125	0.2			V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.1	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.04	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				12		N·m
	Mounting torque(M6)				6		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				1350		g

Outline:





Features:

- Isolated mounting base 2500V~
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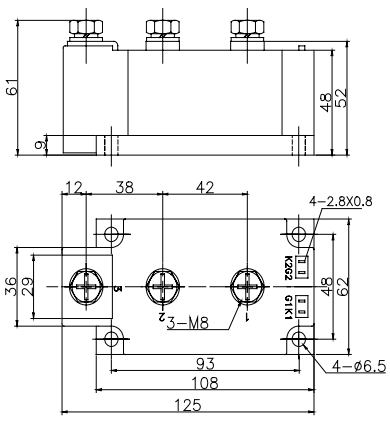
Typical Applications:

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{T(AV)}$	300A
V_{DRM}/V_{RRM}	1900~3000V
I_{TSM}	9.3KA
I^2t	432tA^2 S*10^3

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			300	A
$I_{T(RMS)}$	RMS on-state current		125			471	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	1900		3000	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			50	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			9.3	KA
I^2t	I^2T for fusing coordination					432	A^2s*10^3
V_{TO}	Threshold voltage		125			0.85	V
r_T	On-state slop resistance					0.75	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=900A	25			1.68	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		180	mA
V_{GT}	Gate trigger voltage			1.0		3.0	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125			0.2	V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.091	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.04	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		3600			V
F_m	Thermal connection torque(M5)				4.5		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				1340		g

Outline:



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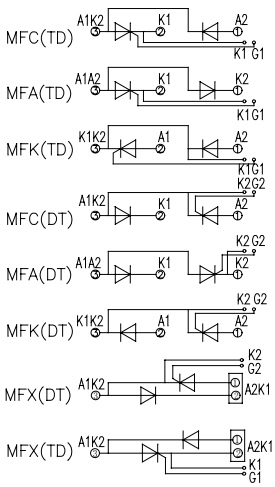

Features:

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Typical Applications:

- AC/DC Motor drives
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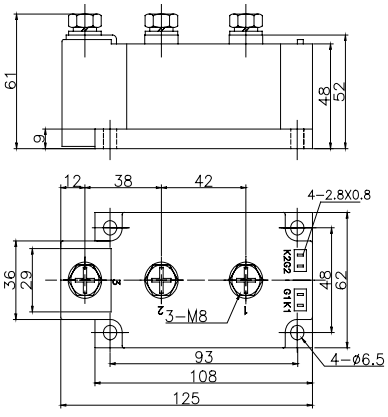
$I_{T(AV)}$	350A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	11KA
I^2t	605A^2 S*10^3

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			350	A
$I_{T(RMS)}$	RMS on-state current		125			550	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			40	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			11.0	KA
I^2t	I^2T for fusing coordination					605	A^2s*10^3
V_{TO}	Threshold voltage		125			0.95	V
r_T	On-state slop resistance					0.36	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=1050A	25			1.45	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		180	mA
V_{GT}	Gate trigger voltage			1.0		2.5	V
I_H	Holding current			20		100	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125			0.2	V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.090	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.04	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		3600			V
F_m	Thermal connection torque(M5)				4.5		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				1340		g

Outline:



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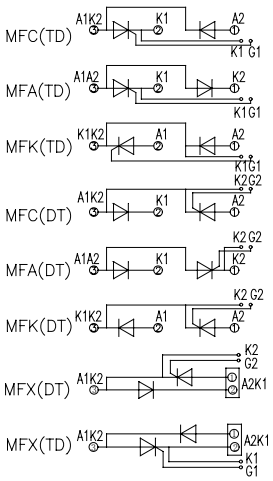

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Typical Applications:

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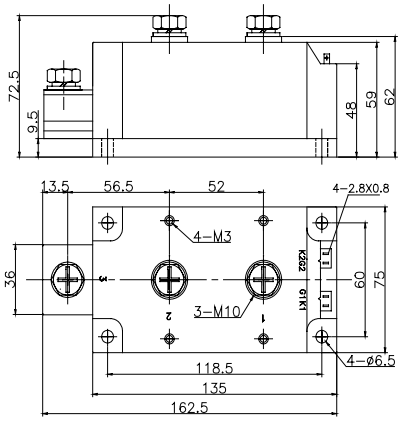
$I_{T(AV)}$	400A
V_{DRM}/V_{RRM}	600~18t00V
I_{TSM}	12KA
I^2t	$720A^2$ $S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			400	A
$I_{T(RMS)}$	RMS on-state current		125			628	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			40	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			12.0	KA
I^2t	I^2T for fusing coordination					720	A^2s*10^3
V_{TO}	Threshold voltage		125			0.80	V
r_T	On-state slop resistance					0.49	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=1200A	25			1.52	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		200	mA
V_{GT}	Gate trigger voltage			1.0		3.0	V
I_H	Holding current			20		150	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125			0.2	V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.080	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.024	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				6.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				2300		g

Outline:



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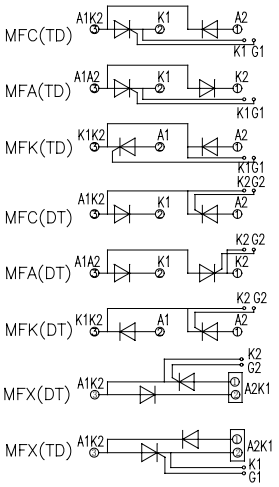


Features:

- Isolated mounting base 2500V~
- Pressure contact technology with
- Incrtased power cycling capability
- Space and weight savings

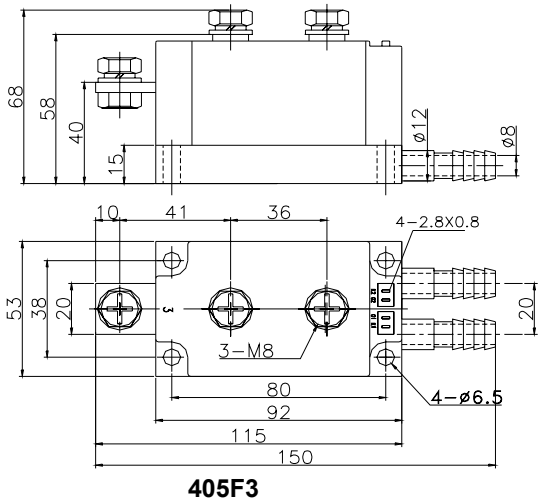
Typical Applications:

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{T(AV)}$	400A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	8.5KA
I^2t	$361A^2 S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			400	A
$I_{T(RMS)}$	RMS on-state current		125			628	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			40	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			8.50	KA
I^2t	I^2T for fusing coordination					361	A^2s*10^3
V_{TO}	Threshold voltage		125			0.80	V
r_T	On-state slop resistance					0.80	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=1200A	25			1.90	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		200	mA
V_{GT}	Gate trigger voltage			1.0		3.0	V
I_H	Holding current			20		150	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125				V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.110	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				4.5		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				1300		g

Outline:



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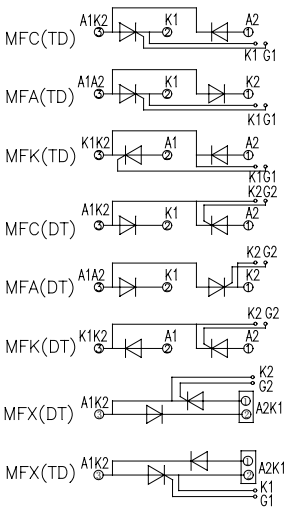

Features:

- Isolated mounting base 2500V~
- Pressure contact technology with
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- Space and weight savings

Typical Applications:

- AC/DC Motor drives
- Various rectifiers
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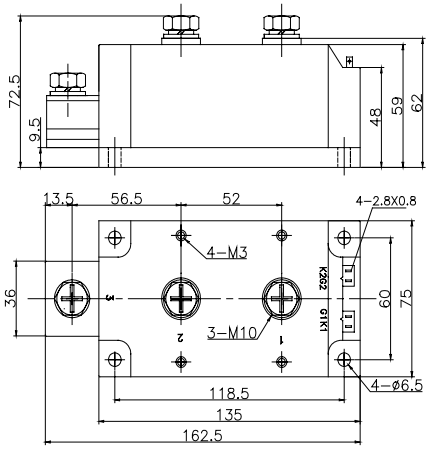
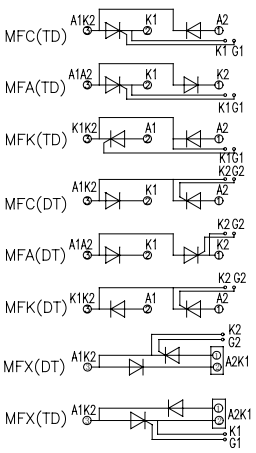
$I_{T(AV)}$	500A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	$16A\times10^3$
I^2t	$1280A^2S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			500	A
$I_{T(RMS)}$	RMS on-state current		125			785	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DSM}&V_{RSM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			40	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			16	KA
I^2t	I^2T for fusing coordination					1280	A^2s*10^3
V_{TO}	Threshold voltage		125			0.8	V
r_T	On-state slop resistance					0.34	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=1500A	25			1.44	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		200	mA
V_{GT}	Gate trigger voltage			1		3	V
I_H	Holding current			20		150	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125	0.2			V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.065	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled				0.024	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				12		N·m
	Mounting torque(M6)				6		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				2300		g

Outline:





Features:

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Typical Applications:

- AC/DC Motor drives
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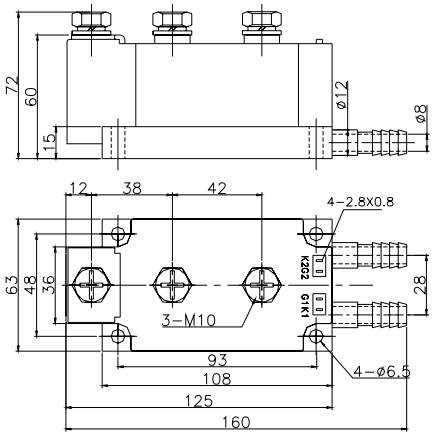
$I_{T(AV)}$	500A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	11KA
I^2t	$605A^2 S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			500	A
$I_{T(RMS)}$	RMS on-state current		125			785	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			40	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			11.0	KA
I^2t	I^2T for fusing coordination					605	A^2s*10^3
V_{TO}	Threshold voltage		125			0.80	V
r_T	On-state slop resistance					0.64	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=1500A	25			1.90	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		200	mA
V_{GT}	Gate trigger voltage			1.0		3.0	V
I_H	Holding current			20		150	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125				V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.087	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled					°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				4.5		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				1300		g

Outline:



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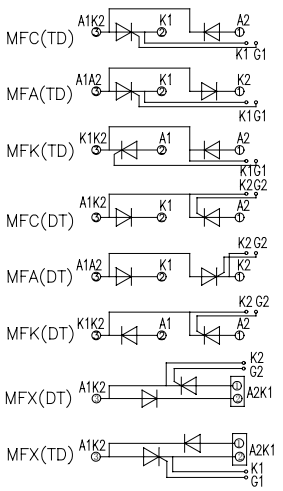

Features:

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Typical Applications:

- AC/DC Motor drives
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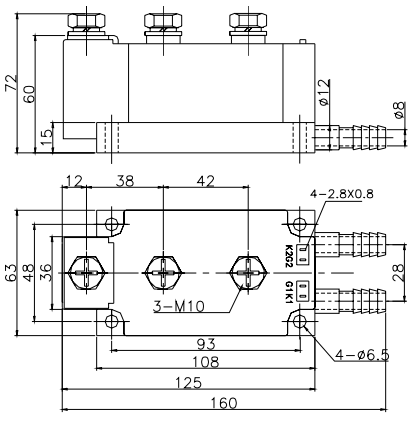
$I_{T(AV)}$	600A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	13KA
I^2t	845A^2 S*10^3

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			600	A
$I_{T(RMS)}$	RMS on-state current		125			942	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DSM}&V_{RSM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			40	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			13.0	KA
I^2t	I^2T for fusing coordination					845	A^2s*10^3
V_{TO}	Threshold voltage		125			0.80	V
r_T	On-state slop resistance					0.53	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=1800A	25			1.90	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		200	mA
V_{GT}	Gate trigger voltage			1.0		3.0	V
I_H	Holding current			20		150	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125				V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.073	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled					°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				6.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				1820		g

Outline:



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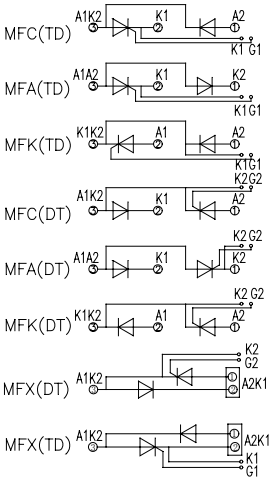

Features:

- Isolated mounting base 2500V~
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- Space and weight savings

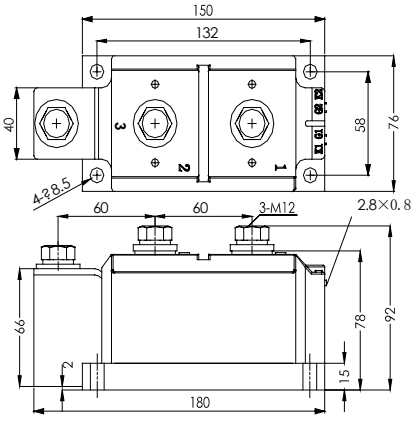
Typical Applications:

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{T(AV)}$	800A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	16KA
I^2t	1280A^2 S*10^3

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			800	A
$I_{T(RMS)}$	RMS on-state current		125			1256	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DSM}&V_{RSM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			40	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			16.0	KA
I^2t	I^2T for fusing coordination					1280	A^2s*10^3
V_{TO}	Threshold voltage		125			0.80	V
r_T	On-state slop resistance					0.42	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=2400A	25			1.95	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		200	mA
V_{GT}	Gate trigger voltage			1.0		3.0	V
I_H	Holding current			20		150	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125				V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.015	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled					°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				7.5		N·m
	Mounting torque(M6)				4.5		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				3500		g

Outline:



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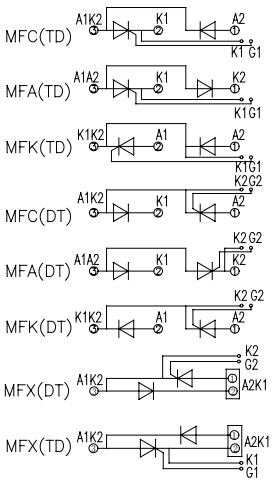

Features:

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Typical Applications:

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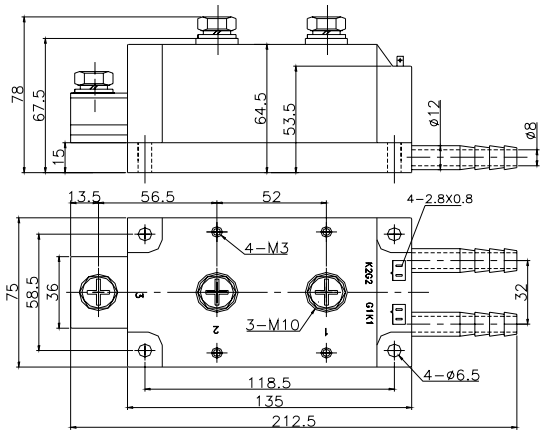
$I_{T(AV)}$	800A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	16KA
I^2t	1280A^2 S*10^3

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			800	A
$I_{T(RMS)}$	RMS on-state current		125			1256	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			40	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			16.0	KA
I^2t	I^2T for fusing coordination					1280	A^2s*10^3
V_{TO}	Threshold voltage		125			0.80	V
r_T	On-state slop resistance					0.42	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=2400A	25			1.95	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		200	mA
V_{GT}	Gate trigger voltage			1.0		3.0	V
I_H	Holding current			20		150	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125			0.2	V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.054	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled					°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				6.0		N·m
	Mounting torque(M6)				3.0		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				2600		g

Outline:



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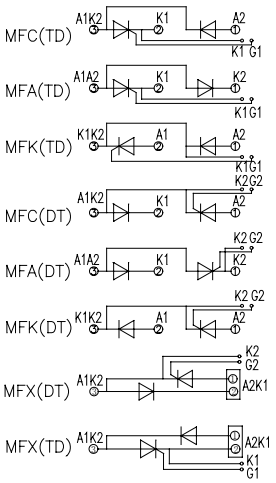

Features:

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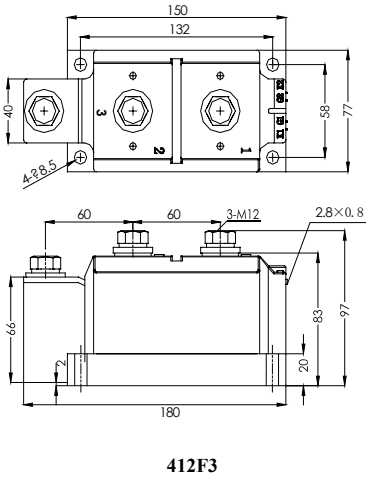
$I_{T(AV)}$	1000A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	20KA
I^2t	2000A^2 S*10^3

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			1000	A
$I_{T(RMS)}$	RMS on-state current		125			1570	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			60	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			20.0	KA
I^2t	I^2T for fusing coordination					2000	A^{2}s*10^3
V_{TO}	Threshold voltage		125			0.80	V
r_T	On-state slop resistance					0.34	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=3000A	25			1.96	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		200	mA
V_{GT}	Gate trigger voltage			1.0		3.0	V
I_H	Holding current			20		150	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125				V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.053	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled					°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				7.5		N·m
	Mounting torque(M6)				4.5		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				3800		g

Outline:



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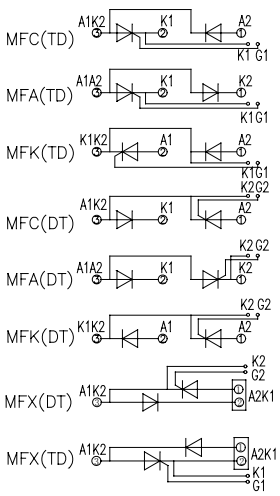


Features:

- Isolated mounting base 2500V~
- Pressure contact technology with
- Incrtased power cycling capability
- Space and weight savings

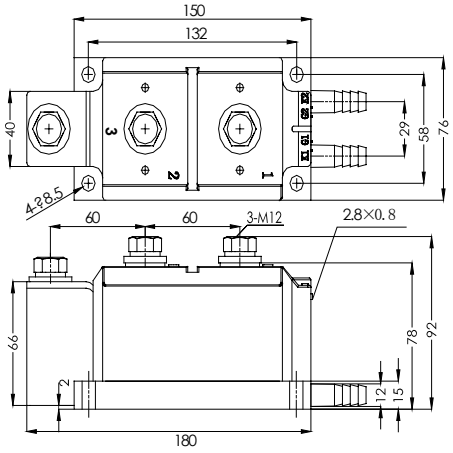
Typical Applications:

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{T(AV)}$	1000A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	20KA
I^2t	$2000A^2 S*10^3$

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			1000	A
$I_{T(RMS)}$	RMS on-state current		125			1570	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			50	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			20.0	KA
I^2t	I^2T for fusing coordination					2000	A^2s*10^3
V_{TO}	Threshold voltage		125			0.80	V
r_T	On-state slop resistance					0.33	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=3000A	25			1.95	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		200	mA
V_{GT}	Gate trigger voltage			1.0		3.0	V
I_H	Holding current			20		150	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125				V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.052	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled					°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				7.5		N·m
	Mounting torque(M6)				4.5		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				3600		g

Outline:



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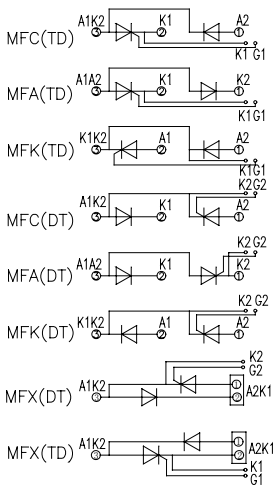


Features:

- Isolated mounting base 2500V~
- Pressure contact technology with
- Incrtased power cycling capability
- Space and weight savings

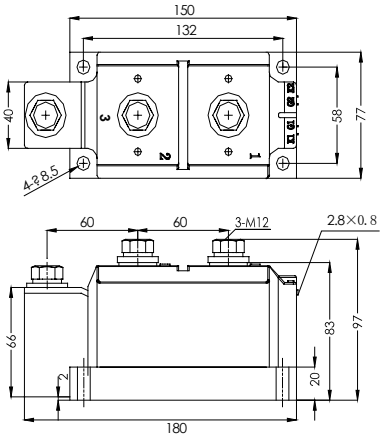
Typical Applications:

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{T(AV)}$	1200A
V_{DRM}/V_{RRM}	600~1800V
I_{TSM}	24KA
I^2t	2800A^2 S*10^3

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	Tj(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled,Tc=85°C	125			1200	A
$I_{T(RMS)}$	RMS on-state current		125			1884	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DsM}&V_{RsM}= V_{DRM}&V_{RRM}+200V respectively	125	600		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	at V_{DRM} at V_{RRM}	125			70	mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=60%V_{RRM}	125			24.0	KA
I^2t	I^2T for fusing coordination					2800	A^2s*10^3
V_{TO}	Threshold voltage		125			0.80	V
r_T	On-state slop resistance					0.29	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=3000A	25			1.98	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			800	V/μs
di/dt	Critical rate of rise of on-state current	Gate source 1.5A tr 0.5μs Repetitive	125			100	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		200	mA
V_{GT}	Gate trigger voltage			1.0		3.0	V
I_H	Holding current			20		150	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125			0.2	V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.051	°C /W
Rth(c-h)	Thermal resistance case to heatsink	Single side cooled					°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M5)				7.5		N·m
	Mounting torque(M6)				4.5		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				3800		g

Outline:



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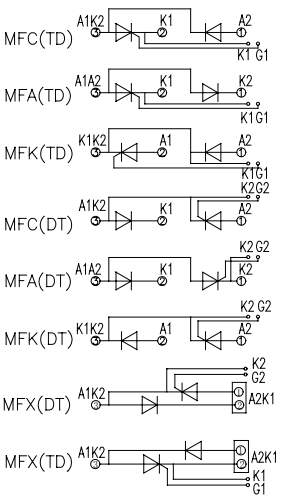

GREEGOO

Dual thyristor modules

MTC2000 MTA2000 MTK2000 MTX2000 MT2000

Features:

- Isolated mounting base 2500V~
- Pressure contact technology with
- Incrtased power cycling capability
- Space and weight savings

Typical Applications:

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

$I_{T(AV)}$	2000A
V_{DRM}/V_{RRM}	1100~1800V
I_{TSM}	30 KA
I^2t	4500 10^3A^2S

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T_j(°C)	VALUE			UNIT
				Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Single side cooled, T_c=55°C	125			2000	A
$I_{T(RMS)}$	RMS on-state current		125			3140	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} tp=10ms V_{DSM}&V_{RSM}= V_{DRM}&V_{RRM}+100V	125	1100		1800	V
I_{DRM} I_{RRM}	Repetitive peak current	V_{DM}= V_{DRM} V_{RM}= V_{RRM}	125			40	mA
I_{TSM}	Surge on-state current	10ms half sine wave, V_R=0.6V_{RRM}	125			30.0	KA
I^2t	I^2T for fusing coordination					4500	A^2s*10^3
V_{TO}	Threshold voltage		125			0.80	V
r_T	On-state slop resistance					0.53	mΩ
V_{TM}	Peak on-state voltage	I_{TM}=3000A	25			2.10	V
dv/dt	Critical rate of rise of off-state voltage	V_{DM}=67%V_{DRM}	125			1000	V/μs
di/dt	Critical rate of rise of on-state current	I_{TM} =2000A, Gate source 1.5A t_r≤0.5μs Repetitive	125			200	A/μs
I_{GT}	Gate trigger current	V_A=12V, I_A=1A	25	30		200	mA
V_{GT}	Gate trigger voltage			1.0		3.0	V
I_H	Holding current			20		200	mA
V_{GD}	Non-trigger gate voltage	V_{DM}=67%V_{DRM}	125	0.2			V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.016	°C /W
$R_{th(c-h)}$	Thermal resistance case to heat sink	Single side cooled				0.018	°C /W
V_{iso}	Isolation voltage	50Hz,R.M.S,t=1min,I_{iso}:1mA(MAX)		2500			V
F_m	Thermal connection torque(M16)				20		N·m
	Mounting torque(M12)				14		N·m
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				9000		g
Outline	W100						

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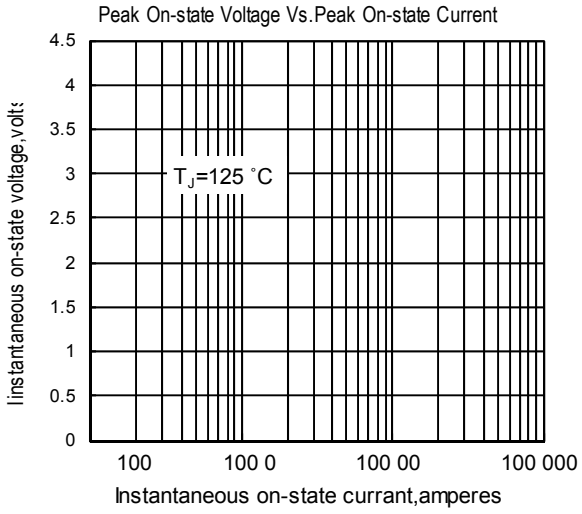

Fig.1

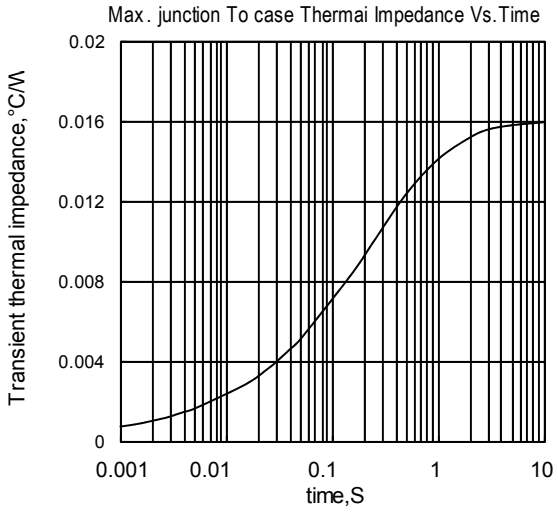

Fig.2

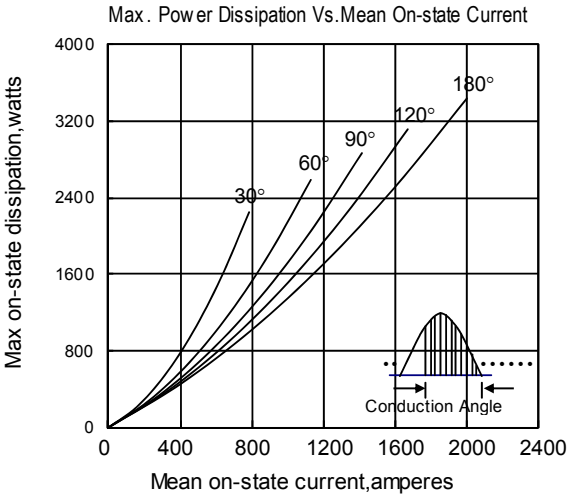

Fig.3

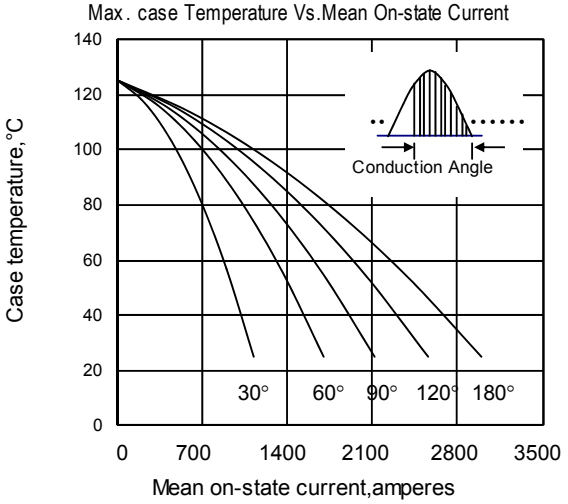

Fig.4

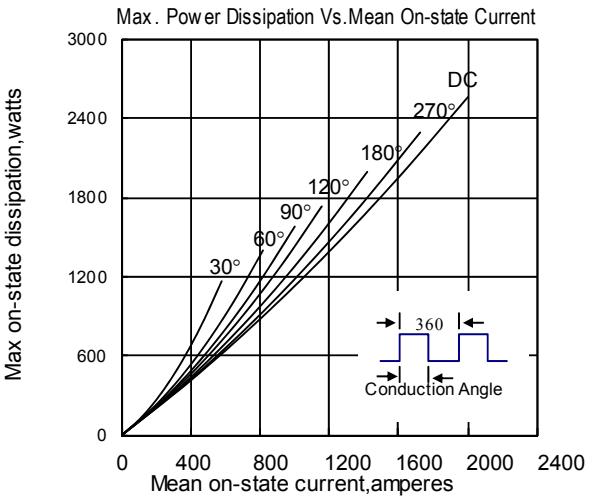

Fig.5

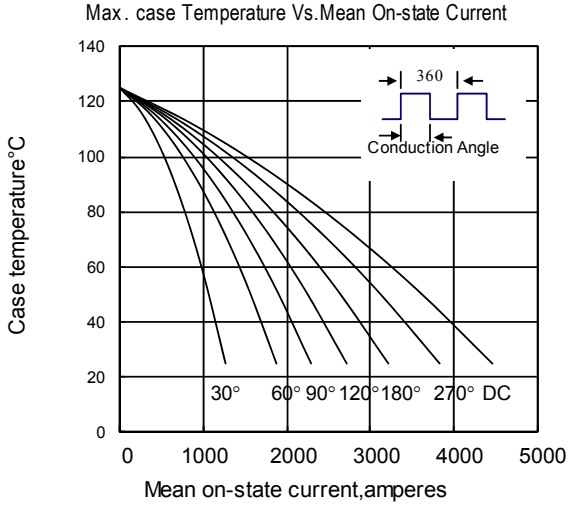

Fig.6

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Surge Current Vs.Cycles

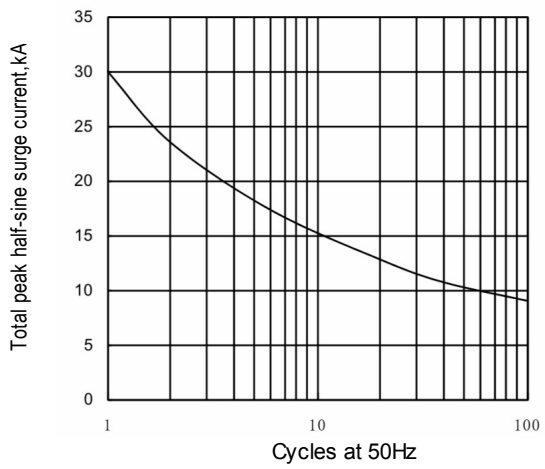


Fig.7

I²t Vs.Time

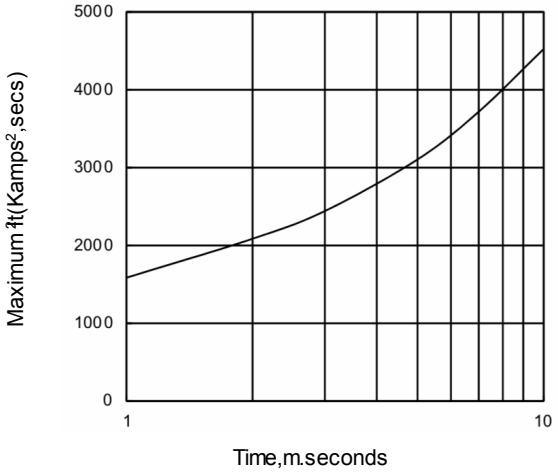


Fig.8

Gate characteristic at 25°C junction temperature

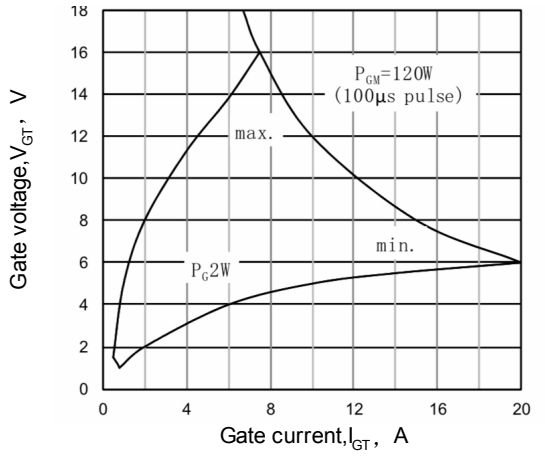


Fig.9

Gate Trigger Zone at varies temperature

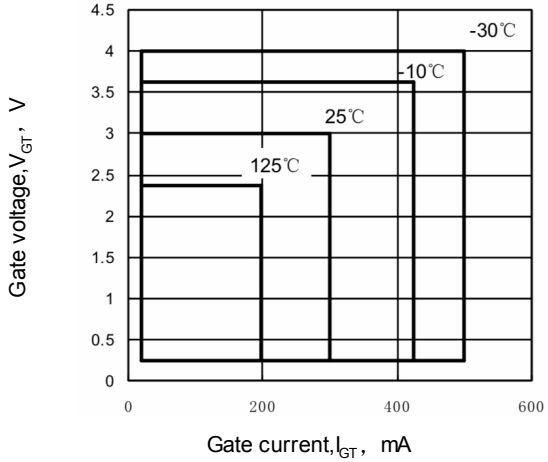
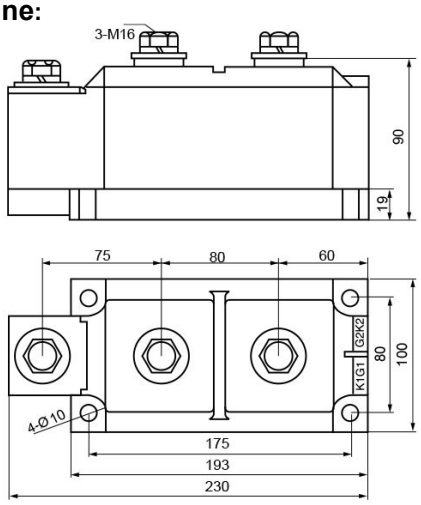


Fig.10

Outline:



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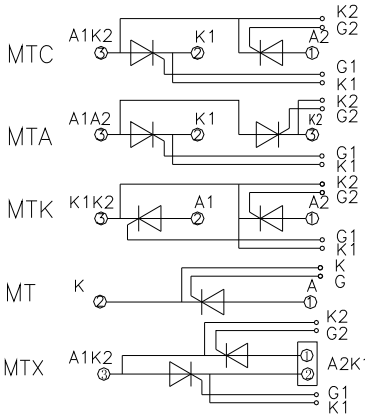

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GREEGOO™

GREEGOO ELECTRIC

The Power Management Leader

Rectifier Diode & Thyristor
Introduction






Company Profile

GREEGOO Electric Co., Ltd, located in Wenzhou, the electric capital of China, is specialized in developing, manufacturing and distributing phase control thyristors, rectifier diodes, high frequency thyristors, fast recovery diode and fast switching thyristors along with about 300 components.

Owning skilled workers, advanced equipment and strict quality control process, GREEGOO has passed ISO9001:2000 and obtained CE and KEMA certificates. Our products are enjoying high popularity in Russia, France, Italy, Spain,Australia, India, Korea, Iran, Saudi, South Africa and Brazil etc. Especially, our phase control thyristor SCR and rectifier diodes have been cooperating well with Sansung, Hyundai in Korea, ABB in Belgium, also I&R in india and win good reputation from the buying public.

GREEGOO in Chinese means "Honest, Prosperous and Fortunate". While retrospecting to its origin, GREEGOO pronounces similar to the Chinese name of SILICON VALLEY in USA and is a symbol of high technology & excellent quality. Based on it, GREEGOO will march forward steadily in international market with customers all over the world hand by hand!

RECTIFIER DIODE & THYRISTOR

GREEGOO

Avalanche thyristors

Features

- Hermetic metal case with ceramic insulator.
- Precise internal pressure contacts for high resistance to power cycling.
- Guaranteed maximum avalanche power dissipation in reverse direction.

Typical applications

- Controlled and half-controlled rectifiers.
- AC controllers.
- High power drives for industrial and traction applications.

Type designations thyristors

T □ □ □ □ □ □ □ □ □ □

1 2 3 4 5 6 7 8 9 10

1: Letter code T, for “thyristor”

2: Letter code for subtype of thyristor: B-fast, BH-fast switching, TC-triac, L-avalanche

3: Serial number of construction modification

4: Designation of modification according to hexahedron size for stud thyristors or according to case diameter for press-pack thyristors

5: Designation of constructive design of case

6: Max. Mean on-state current, max. RMS forward current for triacs, max. Turn-off current for GTO (A)

7: Class according to VDRM, VRRM

8: Group according to (dVD/dt) crit

9: Group according to tq

10: Group according to tgt (for TB and TBH)

Avalanche thyristors

Type	V_{DRM} V_{RRM} V	I_{DRM} I_{RRM} mA	$I_{T(AV)}$ (TC, ℃) A	I_{TRMS} (TC, ℃) A	I_{TSM} 10ms kA	i^2t A^2S10^3	V_{TM}/I_{TM} V/A	$V_{T(TO)}$ V	r_T mΩ	$(di_T/dt)_{crit}$ A/μs	$(du_D/dt)_{crit}$ V/μs	V_{GT} V	I_{GT} mA	P_{RSM} kM	T_{jmax} ℃	$R_{th(j-c)}$ ℃/W	t_q (typ.) μs	M_d Nm	w kg	Fig
TL371-250	600-1200	35	250(100)	393	6.0	180	1.90/785	1.00	0.95	125	20-1000	3.5	250	16	140	0.100	250	25-35	0.44	23
TL371-320	600-1200	35	320(100)	500	8.5	360	1.62/1005	1.05	0.53	320	20-1000	3.5	250	16	140	0.085	250	25-35	0.44	23

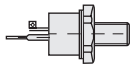
Phase control thyristors

Features

- Hermetic metal cases with glass insulators.
- Threaded studs M5, M6, M8, M10, M12, M20 and M24.
- International standard cases.
- High values V_{DRM}, V_{RRM}.
- Low losses on-state(especially T271-320).

Typical applications

- Controlled and half-controlled rectifiers.
- DC motor control.
- AC controllers (e.g. for temperature control).



Metal case with glass insulator (small-sized series)

Type	V_{DRM} V_{RRM} V	I_{DRM} I_{RRM} mA	$I_{T(AV)}$ (T_C, ℃) A	I_{TRMS} A	I_{TSM} 10ms kA	i^2t A^2S10^3	V_{TM}/I_{TM} V/A	$V_{T(TO)}$ V	r_T mΩ	$(di_T/dt)_{crit}$ A/μs	$(du_D/dt)_{crit}$ V/μs	V_{GT} V	I_{GT} mA	T_{jmax} ℃	$R_{th(j-c)}$ ℃/W	t_q (typ.) μs	M_d Nm	w kg	Fig
T212-10	100-1300	3	10(85)	15.7	0.15	0.11	1.83/31	1.25	29.3	125	50-1000	3.0	40	125	1.80	63	0.9-1.1	0.006	1
T212-16	100-1300	3	16(85)	25.2	0.25	0.31	1.80/50	1.20	11.9	125	50-1000	3.0	40	125	1.50	63	0.9-1.1	0.006	1
T222-20	100-1300	3.5	20(85)	31.4	0.30	0.45	1.75/63	1.15	17.2	125	50-1000	3.0	60	125	0.90	63	1.4-1.8	0.011	2
T222-25	100-1300	3.5	25(85)	39.2	0.35	0.61	1.75/78	1.10	10.9	125	50-1000	3.0	60	125	0.80	63	1.4-1.8	0.011	2
T232-20	1200-1600	9	20(85)	31.4	0.22	0.24	2.20/63	1.10	17.5	125	50-1000	3.5	100	125	1.00	160	5.0-6.2	0.023	3
T232-25	1200-1600	9	25(85)	39.2	0.33	0.48	2.20/78	1.10	14.0	125	50-1000	3.5	100	125	0.80	160	5.0-6.2	0.023	3
T232-40	100-1300	5	40(85)	62.8	0.75	2.81	1.75/125	1.05	5.6	125	50-1000	4.0	100	125	0.62	63	5.0-6.2	0.023	3
T232-50	100-1300	5	50(85)	78.5	0.80	3.20	1.75/157	1.03	4.6	125	50-1000	4.0	100	125	0.50	63	5.0-6.2	0.023	3
T242-40	1200-1600	15	40(85)	62.8	0.70	2.45	2.10/125	1.25	6.8	125	50-1000	3.5	120	125	0.50	160	9.0-11	0.050	4
T242-50	1200-1600	15	50(85)	78.5	0.85	3.50	2.10/157	1.20	5.7	125	50-1000	3.5	120	125	0.40	160	9.0-11	0.050	4
T242-63	100-1300	7	63(85)	98.9	1.30	8.45	1.65/198	0.95	4.1	125	50-1000	4.0	150	125	0.40	63	9.0-11	0.050	4
T242-80	100-1300	7	80(85)	125.6	1.50	11.25	1.63/250	0.93	3.3	125	50-1000	4.0	150	125	0.30	63	9.0-11	0.050	4

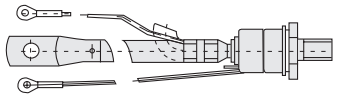
Phase control thyristors

Features

- Hermetic metal cases with glass insulators.
- Threaded studs M5, M6, M8, M10, M12, M20 and M24.
- International standard cases.
- High values V_{DRM}, V_{RRM}.
- Low losses on-state(especially T271-320).

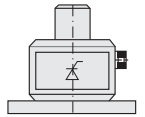
Typical applications

- Controlled and half-controlled rectifiers.
- DC motor control.
- AC controllers (e.g. for temperature control).



Metal case with ceramic insulator

Type	V_{DRM} V_{RRM} V	I_{DRM} I_{RRM} mA	$I_{T(AV)}$ (Tc, ℃) A	I_{TRMS} A	I_{TSM} 10ms kA	i^2t A^2S10^3	V_{TM}/I_{TM} V/A	$V_{T(TO)}$ V	r_T mΩ	$(di_T/dt)_{crit}$ A/μs	$(du_D/dt)_{crit}$ V/μs	V_{GT} V	I_{GT} mA	T_{jmax} ℃	$R_{th(j-c)}$ ℃/W	t_q (typ.) μs	M_d Nm	w kg	Fig
T151-100	300-1800	15	100(90)	160	2.0	20	1.80/314	1.15	2.40	160	200-1000	3.5	200	140	0.30	160	10-20	0.150	7
T161-125	300-1800	15	125(90)	200	2.5	31	1.75/392	1.15	1.80	125	200-1000	3.5	200	125	0.15	160	20-30	0.240	8
T161-160	300-1800	15	160(87)	260	4.0	80	1.70/502	1.05	1.36	125	200-1000	3.5	200	125	0.15	160	20-30	0.240	8
T161-200	300-1600	15	200(87)	315	5.0	125	1.60/628	1.00	1.05	160	200-1000	3.5	200	125	0.13	250	20-30	0.240	8
T261-160	300-1600	20	160(85)	260	3.0	45	2.00/502	1.00	2.20	125	200-1000	3.5	200	125	0.13	100	20-30	0.240	8
T171-200	300-1800	30	200(90)	300	5.0	125	1.75/628	1.00	1.12	125	200-1000	3.5	200	125	0.10	160	25-35	0.240	9
T171-250	300-1800	30	250(85)	393	6.0	180	1.75/785	1.00	0.95	125	200-1000	3.5	200	125	0.10	160	25-35	0.440	9
T171-320	300-1800	30	320(87)	500	8.5	360	1.60/1005	1.05	0.53	320	200-1000	3.5	200	125	0.085	160	25-35	0.440	9
T271-250	100-800	50	250(115)	393	10.0	500	1.50/785	0.95	0.76	320	200-1000	3.5	150	150	0.09	250	25-35	0.440	9
T271-320	100-800	50	320(117)	550	11.5	660	1.25/1005	0.80	0.45	320	200-1000	3.5	150	150	0.09	160	25-35	0.440	9



Flanged design

Type	V_{DRM} V_{RRM} V	I_{DRM} I_{RRM} mA	$I_{T(AV)}$ (Tc, ℃) A	I_{TRMS} A	I_{TSM} 10ms kA	i^2t A^2S10^3	V_{TM}/I_{TM} V/A	$V_{T(TO)}$ V	r_T mΩ	$(di_T/dt)_{crit}$ A/μs	$(du_D/dt)_{crit}$ V/μs	V_{GT} V	I_{GT} mA	T_{jmax} ℃	$R_{th(j-c)}$ ℃/W	t_q (typ.) μs	M_d Nm	w kg	Fig
T2-160	400-1000	20	160(85)	250	3.5	61	1.60/502	1.13	0.94	100	20-1000	5.0	250	125	0.16	160	16	0.290	22

Phase control thyristors

Features

- Hermetic metal cases with ceramic insulator.
- Capsule packages for double-sided cooling.
- Amplifying gates.
- Optimized for low on-state losses.
- Suitable for series and parallel connections, narrow Q_{rr} and V_{TM} deflection.

Typical applications

- DC motor control.
- Controlled rectifiers.
- AC controllers.
- "Soft" starters for AC motors.
- High voltage SM-drives up to 30 MW.

Phase control thyristors 24MM

Type	V_{DRM} V_{RRM} V	I_{DRM} I_{RRM} mA	$I_{T(AV)}$ (T_C, ℃) A	I_{TRMS} (T_C=70℃) A	I_{TSM} 10ms kA	i^2t A^2S10^3	V_{TM}/I_{TM} V/A	$V_{T(TO)}$ V	r_T mΩ	$(di_T/dt)_{crit}$ A/μs	$(du_D/dt)_{crit}$ V/μs	V_{GT} V	I_{GT} mA	T_{jmax} ℃	$R_{th(j-c)}$ ℃/W	t_q (typ.) μs	F kN	w kg	Fig
T123-160*	3400-4200	40	160(80)	295	2.8	39	2.70/502	1.20	4.50	200	500-1600	2.5	250	120	0.08	320-450	6	0.09	11
T223-200*	2600-3200	30	200(85)	390	3.5	61	2.40/628	1.15	2.60	200	500-1600	2.5	250	125	0.08	200-400	6	0.09	11
T223-250*	1800-2400	20	250(85)	530	4.0	80	2.10/785	1.05	1.50	200	500-1600	2.5	250	125	0.08	160-320	6	0.09	11
T123-320	400-1600	20	330(85)	750	5.0	125	1.65/1005	0.90	0.75	200	500-1600	2.5	250	125	0.08	100-200	6	0.07	10
T123-400*	900-1200	25	400(85)	765	5.5	151	1.65/1256	0.83	0.58	200	500-1600	2.5	250	130	0.08	80-160	6	0.07	10
T123-500	400-800	30	500(100)	1090	6.0	180	1.50/1570	0.80	0.499	200	500-1600	2.5	250	150	0.07	63-125	6	0.07	10
T123-200	400-1600	15	200(95)	480	4.0	80	1.90/628	1.10	1.50	200	200-1600	3.5	200	125	0.08	250	6	0.07	10
T123-250	400-1600	15	250(92)	550	4.5	100	1.75/785	1.00	1.08	200	200-1600	3.5	200	125	0.08	250	6	0.07	10

Phase control thyristors

Features

- Hermetic metal cases with ceramic insulator.
- Capsule packages for double-sided cooling.
- Amplifying gates.
- Optimized for low on-state losses.
- Suitable for series and parallel connections, narrow Q_{rr} and V_{TM} deflection.

Typical applications

- DC motor control.
- Controlled rectifiers.
- AC controllers.
- "Soft" starters for AC motors.
- High voltage SM-drives up to 30 MW.

Phase control thyristors 32MM

Type	V_{DRM} V_{RRM} V	I_{DRM} I_{RRM} mA	$I_{T(AV)}$ (T_C, ℃) A	I_{TRMS} (T_C=70℃) A	I_{TSM} 10ms kA	i^2t A^2S10^3	V_{TM}/I_{TM} V / A	$V_{T(TO)}$ V	r_T mΩ	$(di_T/dt)_{crit}$ A/μs	$(du_D/dt)_{crit}$ V/μs	V_{GT} V	I_{GT} mA	T_{jmax} ℃	$R_{th(j-c)}$ ℃/W	t_q (typ.) μs	F kN	w kg	Fig
T133-250*	3400-4200	50	300(80)	550	4.0	80	2.70/785	1.20	2.70	200	500-1600	2.5	250	120	0.04	320-450	10	0.18	14
T233-320*	2600-3200	40	380(85)	740	5.0	125	2.00/1005	1.15	1.50	200	500-1600	2.5	250	125	0.04	200-400	10	0.18	14
T233-400*	2000-2400	30	480(85)	937	7.0	245	2.00/1254	1.05	0.85	200	500-1600	2.5	250	125	0.04	160-320	10	0.18	14
T233-500	400-1800	30	590(85)	1160	9.0	405	1.80/1570	0.95	0.50	200	500-1600	2.5	250	125	0.04	100-200	10	0.18	14
T133-630	100-1200	40	750(85)	1430	12	720	1.65/1978	0.85	0.35	200	500-1600	2.5	250	130	0.04	80-160	10	0.10	12
T133-800	100-800	50	900(85)	2085	12	720	1.60/2512	0.80	0.28	200	500-1600	2.5	250	150	0.035	63-125	10	0.10	12
T133-320	900-2400	30	320(98)	820	7.0	245	2.00/1005	1.20	1.10	200	200-1600	3.5	300	125	0.04	250	10	0.18	14
T133-400	400-1600	30	400(93)	935	8.0	320	1.75/1256	1.05	0.68	200	200-1600	3.5	200	125	0.045	160	10	0.18	14
T133-500	100-800	50	500(120)	1720	10	500	1.50/1570	0.95	0.42	320	500-1600	3.5	150	150	0.035	160	10	0.10	12

Phase control thyristors

Features

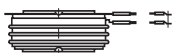
- Hermetic metal cases with ceramic insulator.
- Capsule packages for double-sided cooling.
- Amplifying gates.
- Optimized for low on-state losses.
- Suitable for series and parallel connections, narrow Q_{rr} and V_{TM} deflection.

Typical applications

- DC motor control.
- Controlled rectifiers.
- AC controllers.
- "Soft" starters for AC motors.
- High voltage SM-drives up to 30 MW.

Phase control thyristors 40MM

Type	V_{DRM} V_{RRM} V	I_{DRM} I_{RRM} mA	$I_{T(AV)}$ (Tc, ℃) A	I_{TRMS} (Tc=70℃) A	I_{TSM} 10ms kA	i^2t A^2S10^3	V_{TM}/I_{TM} V/A	$V_{T(TO)}$ V	r_T mΩ	$(di_T/dt)_{crit}$ A/μs	$(du_D/dt)_{crit}$ V/μs	V_{GT} V	I_{GT} mA	T_{jmax} ℃	$R_{th(j-c)}$ ℃/W	t_q (typ.) μs	F kN	w kg	Fig
T243-400*	3400-4200	70	440(80)	810	6.0	180	2.30/1256	1.20	1.300	200	500-1600	2.5	250	120	0.034	320-450	15	0.240	15
T243-500	1800-3200	50	550(85)	1110	10	500	2.00/1570	1.00	0.735	200	500-1600	2.5	250	125	0.034	200-400	15	0.240	15
T243-630*	2000-2400	40	640(85)	1250	9.0	405	1.95/1978	1.05	0.500	200	500-1600	2.5	250	125	0.034	160-320	15	0.240	15
T143-800	900-1800	40	800(85)	1585	14	980	1.70/2512	0.95	0.300	200	500-1600	2.5	250	125	0.032	100-200	15	0.240	15
T143-1000	100-1200	50	1045(80)	1860	19	1800	1.60/3140	0.85	0.250	200	500-1600	2.5	250	130	0.032	80-160	15	0.160	13
T143-1250	100-800	70	1250(100)	2730	21	2205	1.50/3925	0.80	0.170	200	500-1600	2.5	250	150	0.030	63-125	15	0.160	13
T143-400	1800-2400	50	400(96)	960	9.0	405	2.15/1256	1.20	0.950	200	200-1600	3.5	300	125	0.034	160	15	0.240	15
T143-500	400-1600	30	500(94)	1175	11	605	1.80/1570	1.10	0.570	200	200-1600	3.5	300	125	0.034	250	15	0.240	15
T143-630	400-1600	30	630(93)	1470	13	845	1.65/1978	1.10	0.370	200	200-1600	3.5	250	125	0.030	160	15	0.240	15



Phase control thyristors 53MM

Type	V_{DRM} V_{RRM} V	I_{DRM} I_{RRM} mA	$I_{T(AV)}$ (Tc, ℃) A	I_{TRMS} (Tc=70℃) A	I_{TSM} 10ms kA	i^2t A^2S10^3	V_{TM}/I_{TM} V/A	$V_{T(TO)}$ V	r_T mΩ	$(di_T/dt)_{crit}$ A/μs	$(du_D/dt)_{crit}$ V/μs	V_{GT} V	I_{GT} mA	T_{jmax} ℃	$R_{th(j-c)}$ ℃/W	t_q (typ.) μs	F kN	w kg	Fig
T153-630	2000-2600	50	890(85)	1740	15	1120	1.80/1978	1.05	0.370	200	500-1600	2.5	250	125	0.024	160-320	24	0.50	16
T153-800	1000-2000	50	1030(85)	2020	20	2000	1.55/2512	0.95	0.260	200	500-1600	2.5	250	125	0.024	100-200	24	0.50	16

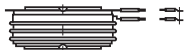
Phase control thyristors

Features

- Hermetic metal cases with ceramic insulator.
- Capsule packages for double-sided cooling.
- Amplifying gates.
- Optimized for low on-state losses.
- Suitable for series and parallel connections, narrow Q_{rr} and V_{TM} deflection.

Typical applications

- DC motor control.
- Controlled rectifiers.
- AC controllers.
- "Soft" starters for AC motors.
- High voltage SM-drives up to 30 MW.



Phase control thyristors 56MM

Type	V_{DRM} V_{RRM} V	I_{DRM} I_{RRM} mA	$I_{T(AV)}$ (T_C, ℃) A	I_{TRMS} (T_C=70℃) A	I_{TSM} 10ms kA	i^2t A^2S10^3	V_{TM}/I_{TM} V/A	$V_{T(TO)}$ V	r_T mΩ	$(di_T/dt)_{crit}$ A/μs	$(du_D/dt)_{crit}$ V/μs	V_{GT} V	I_{GT} mA	T_{jmax} ℃	$R_{th(j-c)}$ ℃/W	t_q (typ.) μs	F kN	w kg	Fig
T253-500	5000-6000	100	620(80)	1130	10	500	2.40/1570	1.30	0.900	200	500-1600	2.5	250	120	0.024	400-600	24	0.55	18
T353-630	3600-4200	70	810(80)	1470	15	1120	2.30/1978	1.20	0.630	200	500-1600	2.5	250	120	0.020	320-450	24	0.55	18
T753-800*	3600-4000	70	820(80)	1490	15	1120	2.25/2512	1.18	0.620	200	500-1600	2.5	250	120	0.020	320-450	24	0.55	18
T353-800	2400-3400	70	920(85)	1780	17	1440	2.00/2512	1.10	0.470	200	500-2500	2.5	250	125	0.020	200-400	24	0.55	18
T353-1000	2000-3200	70	1000(85)	2420	19	1800	2.00/3140	1.05	0.380	200	500-1600	2.5	250	125	0.020	2600-400	24	0.55	16
T253-1000	1000-2400	70	1090(85)	2130	22	2420	1.75/3140	1.02	0.300	200	500-1600	2.5	250	125	0.020	160-320	24	0.55	16
T253-1250	400-1800	50	1270(85)	2490	28	3920	1.60/3925	0.95	0.200	200	500-1600	2.5	250	125	0.020	100-200	24	0.55	16
T153-1600	400-1200	100	1680(80)	3010	30	4500	1.50/5024	0.90	0.140	200	500-1600	2.5	250	130	0.020	80-160	24	0.33	17
T153-2000	400-800	100	2300(90)	4445	36	6480	1.45/6280	0.80	0.110	200	500-1600	2.5	250	150	0.018	63-125	24	0.33	17
T253-800	2000-2400	70	800(91)	1770	17	1440	2.10/2500	1.20	0.440	200	200-1600	3.5	300	125	0.020	250	26	0.55	16
T453-1000	1000-1800	70	1000(94)	2360	24	2880	1.80/3140	1.10	0.250	200	200-1600	3.5	300	125	0.018	160	26	0.55	16
T553-500	3600-4200	100	500(85)	1135	12	720	2.60/1570	1.85	0.900	500	500,1000	5.0	400	125	0.022	320	24	0.50	18
T453-630	2400-3200	100	630(85)	1595	13	845	2.40/1980	1.50	0.480	630	1600	5.0	400	125	0.020	160	26	0.50	18
T553-630	3600-4200	100	630(85)	1230	12.5	781	2.50/1980	1.45	0.900	500	500,1000	5.0	400	125	0.022	320	24	0.50	18
T453-800	2400-2800	100	800(85)	1650	15	1120	2.30/2500	1.45	0.450	630	1600	5.0	400	125	0.020	160	26	0.50	18
T553-800	3600-4200	100	800(85)	1530	12	720	2.60/2500	1.45	0.700	100	500,1000	5.0	400	125	0.018	320	24	0.50	18
T653-800*	2800-3600	100	800(85)	1600	13	845	2.80/2500	1.70	0.400	500	1000	5.0	400	125	0.020	250	24	0.50	18

Phase control thyristors

Features

- Hermetic metal cases with ceramic insulator.
- Capsule packages for double-sided cooling.
- Amplifying gates.
- Optimized for low on-state losses.
- Suitable for series and parallel connections, narrow Q_{rr} and V_{TM} deflection.

Typical applications

- DC motor control.
- Controlled rectifiers.
- AC controllers.
- "Soft" starters for AC motors.
- High voltage SM-drives up to 30 MW.

Phase control thyristors 63MM

Type	V_{DRM} V_{RRM} V	I_{DRM} I_{RRM} mA	$I_{T(AV)}$ (Tc, ℃) A	I_{TRMS} (Tc=70℃) A	I_{TSM} 10ms kA	i^2t A^2S10^3	V_{TM}/I_{TM} V/A	$V_{T(TO)}$ V	r_T mΩ	$(di_T/dt)_{crit}$ A/μs	$(du_D/dt)_{crit}$ V/μs	V_{GT} V	I_{GT} mA	T_{jmax} ℃	$R_{th(j-c)}$ ℃/W	t_q (typ.) μs	F kN	w kg	Fig
T163-800*	5200-6000	120	810(80)	1485	12	720	2.30/2512	1.30	0.700	200	500-1600	2.5	250	120	0.018	400-600	33	0.71	19
T263-800*	4400-5000	120	900(80)	1645	15	1125	2.20/2512	1.25	0.60	200	500-1600	2.5	250	120	0.017	350-500	33	0.71	19
T163-1000*	3400-4200	100	1000(80)	1845	18	1630	2.20/3140	1.20	0.500	200	500-1600	2.5	250	120	0.016	320-450	33	0.71	19
T263-1000*	2800-3200	100	1150(85)	2230	20	2000	2.10/3140	1.15	0.360	200	500-1600	2.5	250	125	0.016	200-400	33	0.71	19
T163-1250*	2000-2600	100	1300(85)	2535	25	3125	2.00/3925	1.05	0.270	200	500-1600	2.5	250	125	0.016	160-320	33	0.71	19
T163-1600*	1400-1800	100	1615(85)	3175	35	6125	1.65/5.24	0.95	0.150	200	500-1600	2.5	250	125	0.016	100-200	33	0.71	19
T163-2000*	400-1200	100	2050(85)	3950	40	8000	1.45/6280	0.85	0.103	200	500-1600	2.5	250	130	0.016	80-160	33	0.71	19
T163-2500*	200-800	120	2620(100)	5760	50	12500	1.35/7850	0.82	0.070	200	500-1600	2.5	250	150	0.015	63-125	33	0.71	19

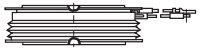
Phase control thyristors

Features

- Hermetic metal cases with ceramic insulator.
- Capsule packages for double-sided cooling.
- Amplifying gates.
- Optimized for low on-state losses.
- Suitable for series and parallel connections, narrow Q_{rr} and V_{TM} deflection.

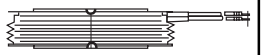
Typical applications

- DC motor control.
- Controlled rectifiers.
- AC controllers.
- "Soft" starters for AC motors.
- High voltage SM-drives up to 30 MW.



Phase control thyristors 76MM

Type	V_{DRM} V_{RRM} V	I_{DRM} I_{RRM} mA	$I_{T(AV)}$ (T_C, ℃) A	I_{TRMS} (T_C=70℃) A	I_{TSM} 10ms kA	i^2t A^2S10^3	V_{TM}/I_{TM} V/A	$V_{T(TO)}$ V	r_T mΩ	$(di_T/dt)_{crit}$ A/μs	$(du_D/dt)_{crit}$ V/μs	V_{GT} V	I_{GT} mA	T_{jmax} ℃	$R_{th(j-c)}$ ℃/W	t_q (typ.) μs	F kN	w kg	Fig
T173-1000*	5000-6000	200	1240(80)	2255	24	2880	2.30/3140	1.30	0.450	200	500-1600	2.5	250	120	0.012	400-600	45	1.20	20
T273-1250	2800-4400	200	1580(80)	2725	32	5120	2.10/3925	1.20	0.330	200	500-1600	2.5	250	120	0.011	320-450	45	1.20	20
T173-1600	2400-3400	180	1705(85)	3300	34	5780	2.10/5024	1.08	0.250	200	500-1600	2.5	250	125	0.011	200-400	45	1.20	20
T273-2000	1800-2600	180	2100(85)	4095	42	8820	1.75/6280	0.95	0.150	200	500-1600	2.5	250	125	0.011	160-320	45	1.20	20
T173-2000	1600-2000	180	2220(85)	4350	49	12000	1.65/6280	0.95	0.125	200	500-1600	2.5	250	125	0.011	100-200	45	1.20	20
T173-2500	1000-1600	180	2700(85)	5060	52	13520	1.70/7850	0.95	0.095	200	500-1600	2.5	250	125	0.010	100-200	45	1.20	20
T173-3200	200-1200	200	3350(85)	6450	60	18000	1.50/10050	0.83	0.062	200	500-1600	2.5	250	130	0.010	80-160	45	1.20	20
T173-4000	200-1000	200	4000(85)	7500	62	19220	1.50/12560	0.84	0.053	200	500-1600	2.5	250	140	0.010	63-125	45	1.20	20
T173-5000*	200-800	200	5000(80)	8780	66	21780	1.50/15700	0.85	0.042	200	500-1600	2.5	250	150	0.010	63-125	45	1.20	20



Phase control thyristors 101MM

Type	V_{DRM} V_{RRM} V	I_{DRM} I_{RRM} mA	$I_{T(AV)}$ (T_C, ℃) A	I_{TRMS} (T_C=70℃) A	I_{TSM} 10ms kA	i^2t A^2S10^3	V_{TM}/I_{TM} V/A	$V_{T(TO)}$ V	r_T mΩ	$(di_T/dt)_{crit}$ A/μs	$(du_D/dt)_{crit}$ V/μs	V_{GT} V	I_{GT} mA	T_{jmax} ℃	$R_{th(j-c)}$ ℃/W	t_q (type) μs	F kN	w kg	Fig
T193-2000	4000-6000	300	2300(80)	4220	54	14580	2.20/6280	1.30	0.235	200	500-2000	3.5	250	120	0.0065	400-600	80	3.00	21
T193-2500	2600-3800	300	2900(85)	5660	70	24500	1.90/7850	1.10	0.140	200	500-1000	3.5	250	125	0.0065	320-450	80	3.00	21
T193-3200	1600-2400	300	3700(85)	7340	85	36125	1.65/10500	1.00	0.070	200	500-1000	3.5	250	125	0.0065	160-320	80	3.00	21

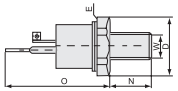
Triacs

Features

- Wide line of designs.
- Hermetic metal cases with glass and ceramic insulators, threaded stud and capsule designs.
- Single and double polar drive.

Typical applications

- Illuminating engineering products (regulation of light sources in industry and home applications).
- Electrothermal equipment (temperature regulation).
- Motors (regulation of rotation speed and of the reversing gear) textile and sewing industry, passenger and freight lifts, washing machines.



Small-sized series

Type	V_{DRM} V_{RRM} V	I_{DRM} I_{RRM} mA	$I_{T(AV)}$ (T_C, ℃) A	I_{TSM} 20ms kA	i^2t A^2S10^3	V_{TM}/I_{TM} V/A	$V_{T(TO)}$ V	r_T mΩ	$(di_T/dt)_{crit}$ A/μs	V_{GT} V	$(du_D/dt)_{crit}$ V/μs	I_{GT} mA	T_{jmax} ℃	$R_{th(j-c)}$ ℃/W	F kN	M_d Nm	w kg	Q	Fig
TC212-10	100-1200	3.0	10(85)	0.07	49	1.85/14	1.20	46	50	100	2.2-25	3.0	125	2.50	-	0.9-1.1	0.006	1,3,4	1
TC212-16	100-1200	3.0	16(85)	0.10	100	1.85/22	1.20	29	50	100	2.5-25	3.0	125	1.55	-	0.9-1.1	0.006	1,3,4	1
TC222-20	100-1200	3.5	20(85)	0.12	144	1.85/28	1.10	27	50	150	2.5-50	3.5	125	1.30	-	1.5-1.7	0.011	1,3,4	2
TC222-25	100-1200	3.5	25(85)	0.20	400	1.80/35	1.10	21	50	150	2.5-50	3.5	125	0.90	-	1.5-1.7	0.011	1,3,4	2
TC232-40	100-1200	5.0	40(85)	0.25	625	1.85/56	1.00	15	63	200	2.5-50	4.0	125	0.65	-	5.0-6.2	0.023	1,3,4	3
TC232--50	100-1200	5.0	50(85)	0.45	2025	1.80/70	1.00	12	63	200	2.5-50	4.0	125	0.52	-	5.0-6.2	0.023	1,3,4	3
TC242-63	100-1200	7.0	63(85)	0.48	2300	1.80/89	0.90	10	63	200	2.5-50	5.0	125	0.44	-	9.0-11	0.050	1,3,4	4
TC242-80	100-1200	7.0	80(85)	0.58	3360	1.80/113	0.90	8	63	200	2.5-50	5.0	125	0.34	-	9.0-11	0.050	1,3,4	4

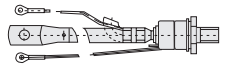
Triacs

Features

- Wide line of designs.
- Hermetic metal cases with glass and ceramic insulators, threaded stud and capsule designs.
- Single and double polar drive.

Typical applications

- Illuminating engineering products (regulation of light sources in industry and home applications).
- Electrothermal equipment (temperature regulation).
- Motors (regulation of rotation speed and of the reversing gear) textile and sewing industry, passenger and freight lifts, washing machines.



Stud design

Type	V_{DRM} V_{RRM} V	I_{DRM} I_{RRM} mA	$I_{T(AV)}$ (Tc, ℃) A	I_{TSM} 20ms kA	i^2t A^2S10^3	V_{TM}/I_{TM} V/A	$V_{T(TO)}$ V	r_T mΩ	$(di_T/dt)_{crit}$ A/μs	V_{GT} V	$(du_D/dt)_{crit}$ V/μs	I_{GT} mA	T_{jmax} ℃	$R_{th(j-c)}$ ℃/W	F kN	M_d Nm	w kg	Q	Fig
TC151-100	300-1300	10	100(85)	1.0	10.0	1.85/140	1.50	3.50	63	3	6.3-100	300	125	0.22	-	10-20	0.110	1,2	7
TC151-125	300-1300	10	125(85)	1.2	14.4	1.74/180	1.15	3.50	6.3	3	6.3-100	300	125	0.22	-	10-20	0.110	1,2	7
TC151-160	300-1300	10	160(85)	1.4	19.6	1.55/225	1.10	2.00	6.3	3	6.3-100	300	125	0.19	-	10-20	0.110	1,2	7
TC251-100	300-1400	10	100(85)	1.0	10.0	1.85/140	1.50	3.50	25	3	6.3-100	300	125	0.22	-	10-20	0.110	1,3,4	7
TC251-125	300-1400	10	125(85)	1.2	14.4	1.74/180	1.15	3.50	25	3	6.3-100	300	125	0.22	-	10-20	0.110	1,3,4	7
TC251-160	300-1300	10	160(85)	1.4	19.6	1.55/225	1.10	2.00	25	3	6.3-100	300	125	0.19	-	10-20	0.110	1,3,4	7
TC161-160	200-1300	15	160(85)	1.8	32.4	1.75/225	1.20	2.60	6.3	3	6.3-100	300	125	0.14	-	20-30	0.175	1,2	8
TC161-200	200-1300	15	200(85)	2.0	40.0	1.60/280	1.00	2.25	6.3	4	6.3-100	300	125	0.14	-	20-30	0.175	1,2	8
TC261-160	300-1400	15	160(85)	2.0	32.4	1.70/225	1.15	2.74	25	4	6.3-100	300	125	0.14	-	20-30	0.175	1,3,4	8
TC261-200	300-1400	15	200(85)	2.0	40.0	1.60/280	1.00	2.25	25	4	6.3-100	300	125	0.14	-	20-30	0.175	1,3,4	8
TC171-250	200-1300	25	250(85)	3.0	90.0	1.70/350	1.00	2.00	6.3	4	6.3-100	300	125	0.10	-	25-35	0.325	1,2	9
TC171-320	200-1300	25	320(85)	3.3	99.0	1.50/450	0.86	1.50	6.3	4	6.3-100	300	125	0.10	-	25-35	0.325	1,2	9
TC271-250	300-1400	25	250(85)	3.0	90.0	1.65/350	1.00	1.98	25	4	6.3-100	300	125	0.10	-	25-35	0.325	1,3,4	9
TC271-320	300-1400	25	320(85)	3.3	99.0	1.50/450	0.86	1.50	25	4	6.3-100	300	125	0.10	-	25-35	0.325	1,3,4	9

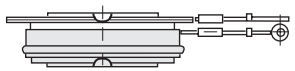
Triacs

Features

- Wide line of designs.
- Hermetic metal cases with glass and ceramic insulators, threaded stud and capsule designs.
- Single and double polar drive.

Typical applications

- Illuminating engineering products (regulation of light sources in industry and home applications).
- Electrothermal equipment (temperature regulation).
- Motors (regulation of rotation speed and of the reversing gear) textile and sewing industry, passenger and freight lifts, washing machines.



Capsule design

Type	V_{DRM} V_{RRM} V	I_{DRM} I_{RRM} mA	$I_{T(AV)}$ (T_C, ℃) A	I_{TSM} 20ms kA	i^2t A^2S10^3	V_{TM}/I_{TM} V/A	$V_{T(TO)}$ V	r_T mΩ	$(di_T/dt)_{crit}$ A/μs	V_{GT} V	$(du_D/dt)_{crit}$ V/μs	I_{GT} mA	T_{jmax} ℃	$R_{th(j-c)}$ ℃/W	F kN	M_d Nm	w kg	Q	Fig
TC133-500*	300-1300	25	500(85)	3.0	90.0	2.50/700	1.20	1.80	25	3.0	6.3-100	300	125	0.04	10	-	0.100	1,2	12
TC133-630*	300-1300	25	630(85)	3.3	109.0	2.20/890	1.10	1.30	6.3	3.0	6.3-100	300	125	0.37	10	-	0.100	1,2	12
TC233-500*	300-1400	25	500(85)	3.0	90.0	2.50/700	1.20	1.80	25	3.0	6.3-100	300	125	0.037	10	-	0.100	1,3,4	12
TC233-630*	300-1400	25	630(85)	3.3	109.0	2.20/890	1.10	1.30	25	3.0	6.3-100	300	125	0.037	10	-	0.100	1,3,4	12
TC143-800*	300-1400	25	800(85)	4.5	250.0	1.95/1120	0.92	0.90	25	3.0	6.3-100	300	125	0.03	10	-	0.100	1,3,4	13
TC143-1000*	300-1200	25	1000(85)	5.0	302.5	1.75/1400	0.90	0.61	25	3.0	6.3-100	300	125	0.028	10	-	0.100	1,3,4	13

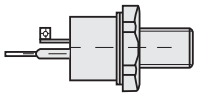
Fast thyristors

Features

- Hermetic metal cases with glass and ceramic insulators.
- International standard cases.
- Low turn-off.
- High dv/dt endurance.
- Amplifying gate.
- Low turn-off.

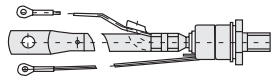
Typical applications

- Small power drives.
- Control of single-phase motor in home appliances.
- Inductive heating.
- Electronic welders.
- High power drives for industrial and traction applications.
- Electronic welders.
- Uninterruptable power supplies.



Stud design (small-sized series)

Type	V_{DRM} V_{RRM} V	I_{DRM} I_{RRM} mA	$I_{T(AV)}$ (T_C, ℃) A	I_{TRMS} A	I_{TSM} 10ms kA	i^2t A^2S10^3	V_{TM}/I_{TM} V/A	$V_{T(TO)}$ V	r_T mΩ	$(di/dt)_{crit}$ A/μs	$(du_D/dt)_{crit}$ V/μs	V_{GT} V	I_{GT} mA	T_{jmax} ℃	$R_{th(j-c)}$ ℃/W	F kN	t_q (typ.) μs	w kg	Fig
TB212-10	400-1400	10	10(85)	16	0.15	0.11	2.2/31	1.40	32	200	100-1000	2.0	100	125	1.500	0.9-1.1	12.5,20,2532,40	0.006	1
TB222-16	400-1400	12	16(85)	25	0.30	0.45	2.2/50	1.40	20	200	100-1000	2.0	120	125	0.900	1.5-1.7	12.5,20,2532,40	0.011	2
TB222-20	400-1400	12	20(85)	31	0.35	0.61	2.2/62	1.40	18	200	100-1000	2.0	120	125	0.800	1.5-1.7	12.5,20,2532,40	0.011	2
TB232-25	400-1400	15	25(85)	39	0.50	1.25	2.2/78	1.40	10	200	100-1000	2.5	170	125	0.820	5.0-6.2	12.5,20,2532,40	0.023	3
TB232-32	400-1400	15	32(85)	50	0.60	1.80	2.2/98	1.40	8	200	100-1000	2.5	170	125	0.620	5.0-6.2	12.5,20,2532,40	0.023	3
TB232-40	400-1400	15	40(85)	62	0.75	2.80	2.2/125	1.40	6	200	100-1000	2.5	170	125	0.500	5.0-6.2	12.5,20,2532,40	0.023	3
TB242-50	400-1400	20	50(85)	78	1.00	5.00	2.2/157	1.40	5	200	100-1000	3.0	200	125	0.400	9.0-1.1	12.5,20,2532,40	0.050	4
TB242-63	400-1400	20	63(85)	98	1.10	6.05	2.2/198	1.40	4	200	100-1000	3.0	200	125	0.300	9.0-1.1	12.5,20,2532,40	0.050	4



Stud design

TB351-80	500-1400	20	80(90)	126	1.6	12.8	2.2/250	1.45	30	500	500,1000	3.0	250	125	0.250	10-20	20,25,32	0.110	7
TB351-100	500-1400	20	100(90)	157	2.0	20.0	1.8/314	1.30	1.5	500	500,1000	2.5	250	125	0.250	10-20	25,32,40	0.110	7
TB361-125	500-1400	25	125(88)	196	3.5	61.0	2.2/390	1.45	2.5	500	500,1000	2.5	250	125	0.150	20-30	20,25,32	0.175	8
TB361-160	500-1400	25	160(88)	250	4.0	80.0	1.8/500	1.20	1.8	500	500,1000	2.5	250	125	0.150	20-30	25,32,40	0.175	8
TB371-200	300-1400	35	200(90)	314	6.0	180.0	2.2/630	1.38	1.5	500	500,1000	3.5	250	125	0.100	25-35	12.5,16,20,25	0.325	9
TB371-250	300-1400	35	250(90)	392	7.0	245.0	1.8/785	1.20	0.97	500	500,1000	3.5	250	125	0.100	25-35	16,20,25,32,40,50,63	0.325	9

Fast thyristors

Features

- Hermetic metal cases with glass and ceramic insulators.
- International standard cases.
- Low turn-off.
- High dv/dt endurance.
- Amplifying gate.
- Low turn-off.

Typical applications

- Small power drives.
- Control of single-phase motor in home appliances.
- Inductive heating.
- Electronic welders.
- High power drives for industrial and traction applications.
- Electronic welders.
- Uninterruptable power supplies.

Capsule design

Type	V_{DRM} V_{RRM} V	I_{DRM} I_{RRM} mA	$I_{T(AV)}$ (T_C, ℃) A	I_{TRMS} A	I_{TSM} 10ms kA	i^2t A^2S10^3	V_{TM}/I_{TM} V/A	$V_{T(TO)}$ V	r_T mΩ	$(di/dt)_{crit}$ A/μs	$(du_D/dt)_{crit}$ V/μs	V_{GT} V	I_{GT} mA	T_{jmax} ℃	$R_{th(j-c)}$ ℃/W	F kN	t_q μs	w kg	Fig
TB333-400	300-1400	40	400(90)	628	6.5	211	2.7/1250	1.50	0.92	500	500,1000	3.5	300	125	0.035	10	12.5,16,32,40	0.100	12
TB333-500	300-1400	40	500(95)	785	7.5	281	2.2/1570	1.00	0.50	500	500,1000	3.5	300	125	0.035	10	16,20,25,32,40,50	0.100	12
TB343-500	500-1000	50	500(90)	785	9.0	405	2.6/1570	1.25	1.00	500	500,1000	3.5	300	125	0.028	15	25,32,40	0.160	13
TB443-500*	1400-2400	70	500(85)	800	9.0	405	2.5/1570	1.30	0.75	500	500,1000	2.5	300	125	0.035	15	25,32,40,50,63	0.240	15
TB343-630	500-1400	50	630(90)	990	10.5	551	2.1/2000	1.42	0.34	500	500,1000	3.5	300	125	0.028	15	25*,32,40,50	0.160	13
TB453-630	600-1400	100	630(94)	990	13.5	911	2.4/2000	1.45	0.55	630	1000,1600	3.5	400	125	0.021	24	20*,25*,32,40,50	0.500	18
TB453-800	600-1400	100	800(87)	1250	15.0	1125	2.3/2500	1.35	0.55	630	1000,1600	3.5	400	125	0.021	24	25*,32,40,50,63	0.500	18
TB553-800*	1400-2400	120	800(83)	1250	17.0	1445	2.8/2500	1.40	0.40	630	500,1000	2.5	400	125	0.021	24	25*,32,40,50,63	0.500	18
TB453-1000*	600-1400	100	1000(82)	1600	16.0	1280	2.5/3140	1.20	0.34	630	1000,1600	3.5	400	125	0.021	24	40,50,63	0.500	18
TB273-2000*	1400-2400	120	2000(83)	3200	40.0	8000	1.85/6280	0.95	0.15	1000	500,1000	5.0	400	125	0.011	45	40,50,63	1.200	20

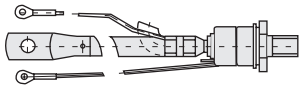
Fast switching thyristors

Features

- Hermetic metal cases with ceramic insulators, threaded stud and capsule designs.
- Low switching losses.
- Short turn-off time.
- Interdigitated amplifying gate for fast turn-on and high di/dt.

Typical applications

- High power drives for industrial and traction applications.
- Inductive heating.
- Electronic welders.
- Uninterruptable power supplies



Stud design

Type	V_{DRM} V_{RRM} V	I_{DRM} I_{RRM} mA	$I_{T(AV)}$ (T_C, ℃) A	I_{TRMS} A	I_{TSM} kA	i^2t A^2S10^3	V_{TM}/I_{TM} V/A	$V_{T(TO)}$ V	r_T mΩ	$(di/dt)_{crit}$ A/μs	$(dv_D/dt)_{crit}$ V/μs	V_{GT} V	I_{GT} mA	T_{jmax} ℃	$R_{th(j-c)}$ ℃/W	M_d Nm	t_q μs	w kg	Fig
TBH361-100	600-1200	50	100/85	157	2.5	31	2.40/314	1.40	2.40	800	1000	2.5	250	125	0.160	20-30	12.5,16,20	0.24	8
TBH371-160	600-1200	50	160/85	250	4.0	80	2.70/502	1.40	1.20	1000	1000	2.5	300	125	0.090	25-35	10,12.5,16	0.44	9
TBH371-200	600-1800	40	200/80	314	6.0	180	2.60/628	1.35	1.20	1000	1000	2.5	300	125	0.090	25-35	25,32,40,50	0.44	9

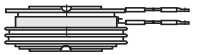
Fast switching thyristors

Features

- Hermetic metal cases with ceramic insulators, threaded stud and capsule designs.
- Low switching losses.
- Short turn-off time.
- Interdigitated amplifying gate for fast turn-on and high di/dt.

Typical applications

- High power drives for industrial and traction applications.
- Inductive heating.
- Electronic welders.
- Uninterruptable power supplies



Capsule design

Type	V_{DRM} V_{RRM} V	I_{DRM} I_{RRM} mA	$I_{T(AV)}$ (T_C, ℃) A	I_{TRMS} A	I_{TSM} 10ms kA	i^2t A^2S10^3	V_{TM}/I_{TM} V/A	$V_{T(TO)}$ V	r_T mΩ	$(di/dt)_{crit}$ A/μs	$(du_D/dt)_{crit}$ V/μs	V_{GT} V	I_{GT} mA	T_{jmax} ℃	$R_{th(j-c)}$ ℃/W	F kN	t_q (typ.) μs	w kg	Fig
TBH323-250	600-1200	50	250/80	393	3.0	45	2.60/785	1.10	1.05	800	1000	3.5	250	125	0.070	5.5	20,25	0.07	10
TBH333-320	1200-2200	60	320/85	500	6.0	480	2.70/1005	1.70	1.10	1000	1000	25	250	125	0.045	10	25,32,40,50,63	0.18	14
TBH333-400	600-1400	40	400/80	628	7.0	245	2.30/1250	1.40	0.80	1000	1000	25	300	125	0.045	10	20,25,32,40,50	0.18	14
TBH433-400	300-900	50	400/85	617	7.0	245	2.00/1250	1.20	0.80	1000	1000	25	300	125	0.035	10	12.5,16,20	0.10	12
TBH343-400	1200-2000	80	400/85	628	7.5	281	1.30/1250	1.25	0.80	1000	1000	25	300	125	0.035	15	40,50,63	0.24	15
TBH543-400*	2000-2400	80	400/80	628	6.0	180	2.40/1250	1.25	0.70	1000	1000	25	300	125	0.035	15	40,50,63	0.24	15
TBH343-500	1200-2000	60	500/85	785	7.5	281	2.30/1570	1.25	0.70	1000	1000	25	300	125	0.035	15	40,50,63	0.24	15
TBH534-500*	2000-2400	70	400/80	628	6.0	180	2.40/1250	1.25	0.70	1000	1000	25	250	125	0.035	15	32,40,50,63	0.24	15
TBH343-630	600-1400	50	630/80	990	9.0	405	2.20/2000	1.23	0.54	1000	1000	25	300	125	0.035	15	25,32,40,50	0.24	15
TBH443-630	300-900	80	630/80	990	6.3	198	2.00/2000	1.20	0.45	1000	1000	25	300	125	0.028	15	12.5,16,20	0.16	13
TBH353-800*	2000-2400	120	800/80	1256	18	1620	2.60/2512	1.40	0.56	1000	1000	25	250	125	0.020	21	32,40,50,63	0.55	16
TBH353-1000	1200-2000	150	1000/80	1570	18	1620	2.50/3140	1.34	0.34	1000	1000	40	400	125	0.020	21	40,50,63	0.55	16
TBH453-1000	300-900	150	1000/85	1570	16	1280	2.00/3140	1.20	0.34	1000	1000	25	250	125	0.016	21	12,16,20	0.33	17
TBH353-1250	600-1500	100	1250/80	1900	21	2205	2.10/3925	1.15	0.21	1000	1000	25	250	125	0.020	21	50,63	0.55	16
TBH163-1500*	12001600	150	1500/80	2350	35	6161	2.20/4710	1.20	0.19	1000	1000	25	250	125	0.015	30	32,40,50,63	0.90	19
TBH163-1600*	600-1000	150	1600/80	2510	35	6161	2.20/5026	1.20	0.16	1000	1000	25	250	125	0.015	30	25,32,40,50,63	0.90	19
TBH173-1600*	1500-2000	200	1600/85	2510	36	6480	2.20/5026	1.40	0.30	1000	1000	25	350	125	0.011	45	32,40,50,63	1.20	20
TBH273-1600*	2000-2400	200	1600/80	2510	32	5120	2.50/5026	1.40	0.28	1000	1000	25	400	125	0.010	45	32,40,50,63	1.20	20
TBH173-2000*	1200-1600	200	2000/80	3140	45	10184	2.20/6280	1.25	0.15	1000	1000	25	250	125	0.011	45	25,32,40,50,63	1.20	20
TBH273-2000*	2000-2400	200	2000/85	3200	40	8000	1.85/6280	1.00	0.21	1000	1000	25	300	125	0.010	45	40,5,063	1.20	20

Outline

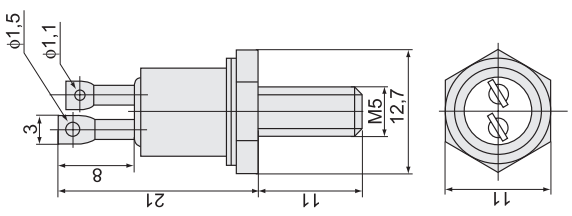


Fig 1

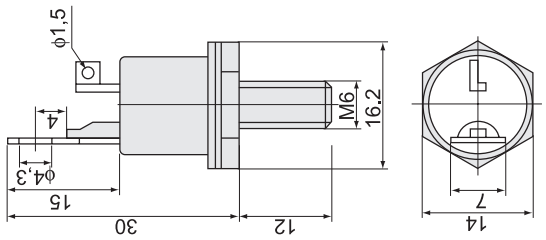


Fig 2

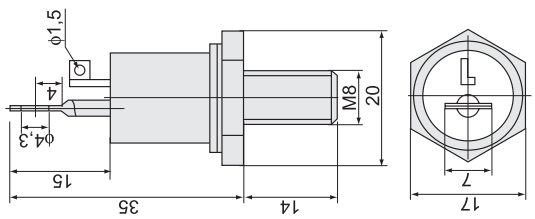


Fig 3

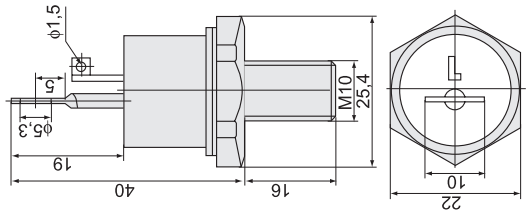


Fig 4

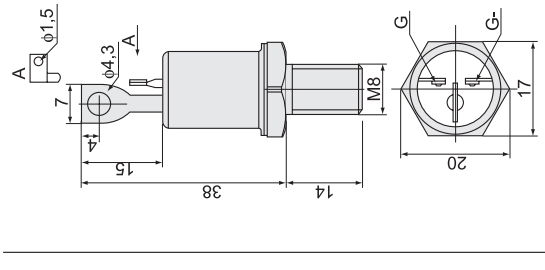


Fig 5

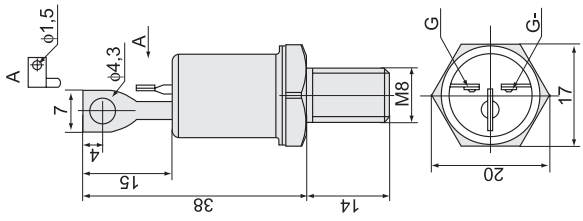


Fig 6

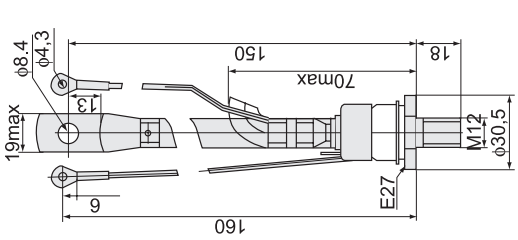


Fig 7

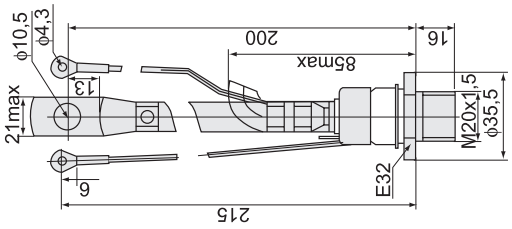


Fig 8

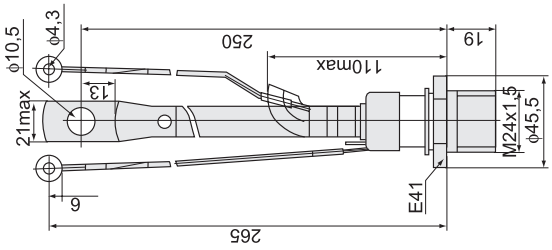


Fig 9

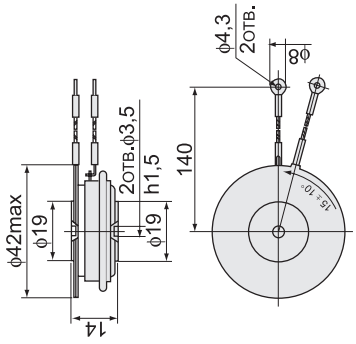


Fig 10

Outline

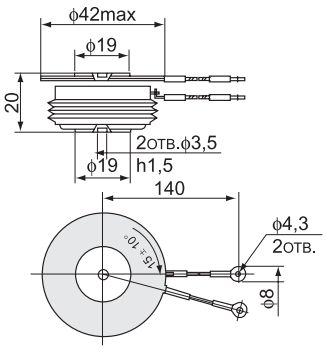


Fig 11

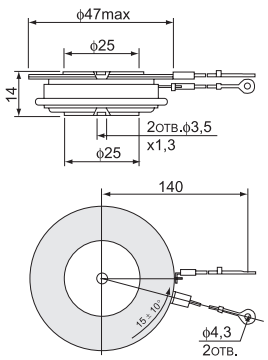


Fig 12

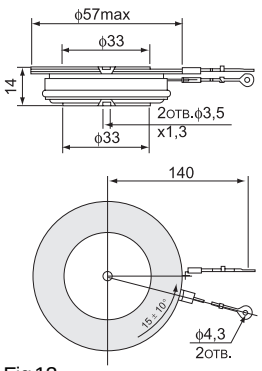


Fig 13

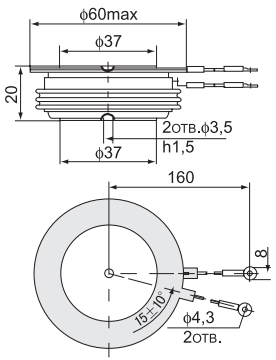


Fig 14

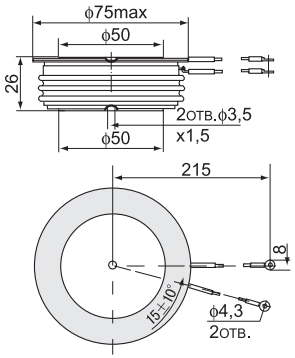


Fig 15

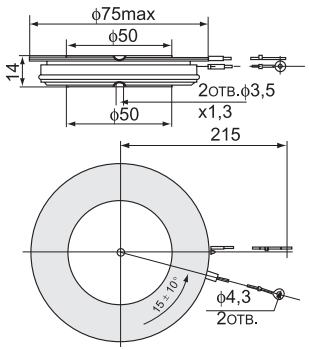


Fig 16

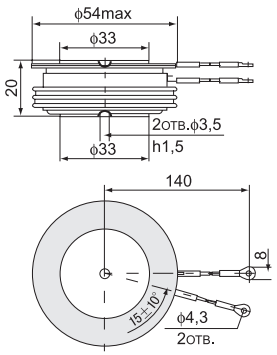


Fig 17

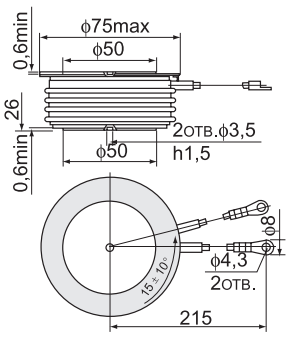


Fig 18

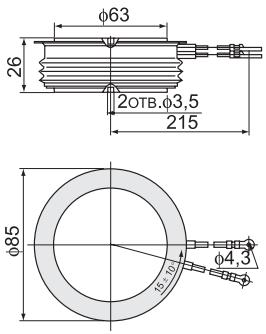


Fig 19

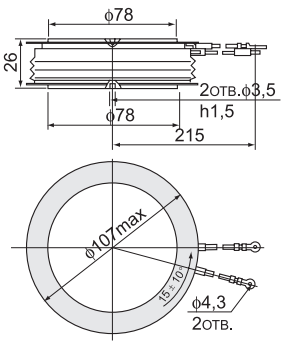


Fig 20

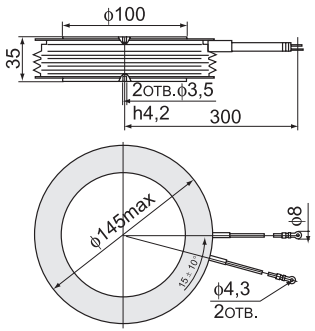


Fig 21

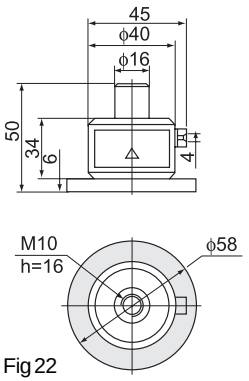


Fig 22

Rectifier diodes

Features

- Hermetic metal cases with glass and ceramic insulators.
- With letter "X"-cathode to stud.
- Without letter "X"-anode to stud.
- Reverse voltages up to 1800V.

Typical applications

- All-purpose small, mean and high power rectifier diodes.
- Non-controllable and half-controllable rectifiers.

Type designations thyristors

D	□	□	□	□	□	X	□	□
1	2	3	4	5	6	7	8	9

1: Letter code D, for "diode"
2: Letter codes for subtype of diodes:
L- Avalanche (avalanche diode)
F- Fast recovery diode
3: Serial number of construction modification
4: Designation of modification according to hexahedron size for stud diodes or according to case diameter for press pack diodes
5: Designation of constructive design of case
6: Max. Average forward current (A)
7: X- Reverse polarity
8: Class according to repetitive voltage (VRRM)
9: Group according to trr (for AU)

Rectifier diodes

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- Reverse voltages up to 1800V.

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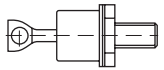


Metal case with glass insulator (small-sized series)

Type	V_{RRM} V	I_{RRM} mA	$I_{F(AV)}$ (T_C, ℃) A	I_{FRMS} A	I_{FSM} 10ms kA	i^2t A^2S10^3	V_{FM}/I_{FM} V/A	V_{TO} V	r_T mΩ	T_{JMAX} ℃	$R_{th(j-c)}$ ℃/W	M_d Nm	w kg	Fig.
D212-10	100-1600	3	10(150)	15	0.25	0.31	1.35/31	0.90	17.500	190	2.700	0.9-1.1	0.006	1
D212-10X	100-1600	3	10(150)	15	0.25	0.31	1.35/31	0.90	17.500	190	2.700	0.9-1.1	0.006	1
D212-16	100-1600	3	16(150)	25	0.27	0.36	1.35/50	0.90	10.500	190	2.000	0.9-1.1	0.006	1
D212-16X	100-1600	3	16(150)	25	0.27	0.36	1.35/50	0.90	10.500	190	2.000	0.9-1.1	0.006	1
D212-25	100-1600	3	25(150)	39	0.34	0.58	1.35/78	0.90	6.100	190	1.250	0.9-1.1	0.006	1
D212-25X	100-1600	3	25(150)	39	0.34	0.58	1.35/78	0.90	6.100	190	1.250	0.9-1.1	0.006	1
D222-32	100-1600	5	32(150)	50	0.46	1.06	1.35/100	0.85	5.000	190	1.000	1.4-1.8	0.012	2
D222-32X	100-1600	5	32(150)	50	0.46	1.06	1.35/100	0.85	5.000	190	1.000	1.4-1.8	0.012	2
D222-40	100-1600	5	40(150)	62	0.55	1.51	1.35/125	0.85	4.000	190	0.800	1.4-1.8	0.012	2
D222-40X	100-1600	5	40(150)	62	0.55	1.51	1.35/125	0.85	4.000	190	0.800	1.4-1.8	0.012	2
D232-50	100-1600	6	50(150)	78	1.20	7.20	1.35/157	0.83	3.100	190	0.600	5.0-6.2	0.027	3
D232-50X	100-1600	6	50(150)	78	1.20	7.20	1.35/157	0.83	3.100	190	0.600	5.0-6.2	0.027	3
D232-63	100-1600	6	63(150)	98	1.40	9.80	1.35/198	0.83	2.800	190	0.500	5.0-6.2	0.027	3
D232-63X	100-1600	6	63(150)	98	1.40	9.80	1.35/198	0.83	2.800	190	0.500	5.0-6.2	0.027	3
D232-80	100-1600	6	80(150)	125	1.50	11.25	1.35/250	0.83	2.100	190	0.400	5.0-6.2	0.027	3
D232-80X	100-1600	6	80(150)	125	1.50	11.25	1.35/250	0.83	2.100	190	0.400	5.0-6.2	0.027	3

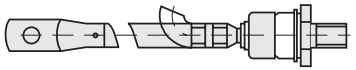
Rectifier diodes

Features

- Hermetic metal cases with glass and ceramic insulators.
- With letter "X"-cathode to stud.
- Without letter "X"-anode to stud.
- Reverse voltages up to 1800V.

Typical applications

- All-purpose small, mean and high power rectifier diodes.
- Non-controllable and half-controllable rectifiers.



Metal case with ceramic insulator

Type	V_{RRM} V	I_{RRM} mA	$I_{F(AV)}$ (T_C, ℃) A	I_{FRMS} A	I_{FSM} 10ms kA	i^2t A^2S10^3	V_{FM}/I_{FM} V/A	V_{TO} V	r_T mΩ	T_{JMAX} ℃	$R_{th(j-c)}$ ℃/W	M_d Nm	w kg	Fig.
D141-100	300-1600	20	100(135)	180	2.20	24	1.35/314	0.95	1.600	190	0.400	6-10	0.090	4
D141-100X	300-1600	20	100(135)	180	2.00	20	1.45/314	0.95	1.600	190	0.400	6-10	0.090	4
D151-125	300-1600	20	125(140)	196	3.00	45	1.35/392	0.90	1.300	190	0.300	10-20	0.165	5
D151-160	300-1600	20	160(140)	300	4.50	100	1.35/502	0.90	1.000	190	0.240	10-20	0.165	5
D161-200	300-1800	40	200(145)	400	5.50	150	1.35/602	0.90	0.850	190	0.150	20-30	0.265	6
D161-200X	300-1600	40	200(125)	400	5.50	150	1.35/628	0.90	0.850	190	0.150	20-30	0.265	6
D161-250	300-1800	40	250(140)	480	6.40	200	1.35/785	0.90	0.640	190	0.150	20-30	0.265	6
D161-250X	300-1600	40	250(140)	480	6.40	200	1.45/785	0.90	0.765	190	0.140	20-30	0.265	6
D161-320	300-1600	40	320(130)	520	7.50	280	1.35/1005	0.90	0.500	190	0.150	20-30	0.265	6
D161-32X	300-1600	40	320(130)	540	7.50	280	1.50/1005	0.90	0.650	190	0.130	20-30	0.265	6
D161-400	300-1600	40	400(124)	625	8.25	340	1.40/1256	0.90	0.350	190	0.130	20-30	0.265	6
D171-400	300-1800	50	400(124)	760	14.00	980	1.45/1256	0.90	0.560	190	0.085	25-35	0.465	7

Rectifier diodes

Features

- Capsule type metal-ceramic packages with pressure contacts.
- Reverse voltage up to 6000V.
- Lowon-statevoltage,narrowVF-deflectionforparalleloperation.
- Contact diameters 19, 33,37,50,63 and 78mm

Typical applications

- All-purpose high power rectifier diodes.
- High power drives for industrial and traction applications.
- Welding.
- Electroplating.

Press-pack Rectifier Diodes Capsule Type

Type	V_{RRM} V	I_{RRM} mA	$I_{F(AV)}$ (T_C, ℃) A	I_{FRMS} (T_C=70℃) A	I_{FSM} 10ms kA	i^2t A^2S10^3	V_{FM}/I_{FM} V/A	V_{TO} V	r_T mΩ	T_{JMAX} ℃	$R_{th(j-c)}$ ℃/W	F kN	w kg	Fig.
B7-200	300	50	200(150)	1240	2.9	40	1.70/628	1.18	0.800	200	0.060	4	0.034	15

Press-pack rectifier diodes capsule type 24MM

Type	V_{RRM} V	I_{RRM} mA	$I_{F(AV)}$ (T_C, ℃) A	I_{FRMS} (T_C=70℃) A	I_{FSM} 10ms kA	i^2t A^2S10^3	V_{FM}/I_{FM} V/A	V_{TO} V	r_T mΩ	T_{JMAX} ℃	$R_{th(j-c)}$ ℃/W	F kN	w kg	Fig.
D123-200*	5200-6000	35	225(90)	435	3.0	45	2.60/628	1.00	3.10	140	0.08	6	0.091	9
D123-250*	4400-5000	35	260(100)	550	3.5	61	2.45/785	0.92	2.20	150	0.08	6	0.091	9
D123-320*	3400-4200	35	330(95)	650	4.2	88	2.25/1005	0.90	1.45	150	0.08	6	0.091	9
D123-400*	2400-3200	35	425(115)	960	5.5	150	1.90/1256	0.85	0.85	175	0.08	6	0.091	9
D123-500	400-2200	35	540(115)	1200	7.5	280	1.80/1570	0.77	0.54	180	0.08	6	0.070	8
D123-630*	200-1000	35	670(120)	1512	9.0	405	1.30/1978	0.72	0.35	190	0.08	6	0.070	8

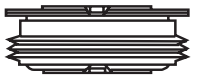
Rectifier diodes

Features

- Capsule type metal-ceramic packages with pressure contacts.
- Reverse voltage up to 6000V.
- Lowon-state voltage, narrow VF-deflection for parallel operation.
- Contact diameters 19, 33, 37, 50, 63 and 78mm

Typical applications

- All-purpose high power rectifier diodes.
- High power drives for industrial and traction applications.
- Welding.
- Electroplating.



Press-pack rectifier diodes capsule type 32MM

Type	V_{RRM} V	I_{RRM} mA	$I_{F(AV)}$ (T_C, ℃) A	I_{FRMS} (T_C=70℃) A	I_{FSM} 10ms kA	i^2t A^2S10^3	V_{FM}/I_{FM} V/A	V_{TO} V	r_T mΩ	T_{JMAX} ℃	$R_{th(j-c)}$ ℃/W	F kN	w kg	Fig.
D333-500*	5200-6000	50	500(90)	965	5.0	125	2.90/1570	1.00	1.420	140	0.036	10	0.180	10
D233-630*	4400-5000	50	630(95)	1245	6.0	180	2.60/1978	0.92	0.960	150	0.036	10	0.180	10
D233-800*	3400-4200	50	800(110)	1500	7.2	259	2.30/2512	0.90	0.599	150	0.036	10	0.180	10
D233-1000*	2400-3200	50	1000(110)	2145	9.0	405	2.05/3140	0.85	0.380	175	0.036	10	0.180	10
D133-1250*	1200-2200	50	1250(110)	2645	11	605	1.80/3925	0.77	0.250	180	0.036	10	0.180	10
D133-1600*	200-1000	50	1620(115)	3485	15	1125	1.55/5024	0.72	0.150	190	0.035	10	0.180	10
D233-500	1000-4400	35	500(108)	1160	7	245	2.00/1570	1.05	0.900	150	0.040	10	0.180	10
D133-400	1000-4000	50	400(117)	1200	7	245	2.10/1256	1.10	0.950	150	0.036	10	0.180	10
D133-500	1000-2800	50	500(140)	1770	11	605	1.70/1570	1.00	0.570	175	0.036	10	0.180	10
D133-630	1000-3200	35	630(129)	1970	11	605	1.60/1978	1.00	0.350	175	0.040	10	0.180	10
D133-800	400-2000	40	800(145)	2520	12	720	1.60/2512	1.00	0.270	190	0.036	10	0.180	10
D133-1000	400-2000	40	1000(133)	2630	16	1280	1.55/3140	0.95	0.250	190	0.036	10	0.180	10

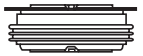
Rectifier diodes

Features

- Capsule type metal-ceramic packages with pressure contacts.
- Reverse voltage up to 6000V.
- Lowon-statevoltage,narrowVF-deflectionforparalleloperation.
- Contact diameters 19, 33,37,50,63 and 78mm

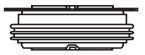
Typical applications

- All-purpose high power rectifier diodes.
- High power drives for industrial and traction applications.
- Welding.
- Electroplating.



Press-pack rectifier diodes capsule type 40MM

Type	V_{RRM} V	I_{RRM} mA	$I_{F(AV)}$ (T_C, ℃) A	I_{FRMS} (T_C=70℃) A	I_{FSM} 10ms kA	i^2t A^2S10^3	V_{FM}/I_{FM} V/A	V_{TO} V	r_T mΩ	T_{JMAX} ℃	$R_{th(j-c)}$ ℃/W	F kN	w kg	Fig.
D243-630*	5200-6000	70	715(90)	1380	8.0	320	2.50/1978	1.00	0.90	140	0.027	15	0.24	11
D343-800*	4400-5000	70	850(95)	1680	9.5	451	2.45/2512	0.92	0.70	150	0.027	15	0.24	11
D343-1000*	3400-3200	70	1050(90)	1990	12.0	720	2.20/3145	0.90	0.460	150	0.027	15	0.24	11
D243-1250*	2400-3200	70	1330(110)	2840	15.0	1125	2.00/3925	0.85	0.290	175	0.027	15	0.24	11
D143-1600*	1200-2000	70	1695(110)	3580	19.0	1780	1.70/5024	0.77	0.180	180	0.027	15	0.24	11
D143-2000*	200-1000	70	2120(115)	4580	24.0	2880	1.55/6280	0.73	0.110	190	0.027	15	0.24	11



Press-pack rectifier diodes capsule type 40MM

Type	V_{RRM} V	I_{RRM} mA	$I_{F(AV)}$ (T_C, ℃) A	I_{FRMS} (T_C=70℃) A	I_{FSM} 10ms kA	i^2t A^2S10^3	V_{FM}/I_{FM} V/A	V_{TO} V	r_T mΩ	T_{JMAX} ℃	$R_{th(j-c)}$ ℃/W	F kN	w kg	Fig.
D143-630	2400-4000	50	630(112)	1695	10.5	550	2.10/1978	1.00	0.65	150	0.027	15	0.24	11
D143-800	1800-2800	50	800(136)	2625	18	1620	1.55/2512	1.00	0.32	175	0.027	15	0.24	11
D143-1000	400-1800	65	1000(148)	3170	19	1780	1.55/3140	0.90	0.26	190	0.027	15	0.24	11
D143-1250	400-2000	70	1250(135)	3265	20	2000	1.65/3925	0.85	0.25	190	0.027	15	0.24	11
D243-800	2400-4400	45	800(102)	1755	12.5	780	1.95/2512	1.00	0.50	150	0.030	15	0.24	11
D243-1000	1800-3200	50	1000(127)	2610	18	1620	1.65/3140	0.95	0.28	175	0.030	15	0.24	11

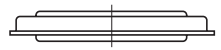
Rectifier diodes

Features

- Capsule type metal-ceramic packages with pressure contacts.
- Reverse voltage up to 6000V.
- Lowon-statevoltage,narrowVF-deflectionforparalleloperation.
- Contact diameters 19, 33,37,50,63 and 78mm

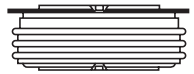
Typical applications

- All-purpose high power rectifier diodes.
- High power drives for industrial and traction applications.
- Welding.
- Electroplating.



Press-pack rectifier diodes capsule type 50MM

Type	V_{RRM} V	I_{RRM} mA	$I_{F(AV)}$ (T_C, ℃) A	I_{FRMS} (T_C=70℃) A	I_{FSM} 10ms kA	i^2t A^2S10^3	V_{FM}/I_{FM} V/A	V_{TO} V	r_T mΩ	T_{JMAX} ℃	$R_{th(j-c)}$ ℃/W	F kN	w kg	Fig.
D153-4000*	200-600	90	4230(105)	7900	50	12500	1.60/12560	0.7	0.04	190	0.018	26	0.15	18



Press-pack rectifier diodes capsule type 56MM

Type	V_{RRM} V	I_{RRM} mA	$I_{F(AV)}$ (T_C, ℃) A	I_{FRMS} (T_C=70℃) A	I_{FSM} 10ms kA	i^2t A^2S10^3	V_{FM}/I_{FM} V/A	V_{TO} V	r_T mΩ	T_{JMAX} ℃	$R_{th(j-c)}$ ℃/W	F kN	w kg	Fig.
D153-1000*	5200-6000	100	1240(90)	2420	16	1280	2.00/3140	1.00	0.400	140	0.018	26	0.550	12
D153-1250*	4400-5000	100	1480(95)	2950	18	1620	1.95/3925	0.92	0.310	150	0.018	26	0.550	12
D153-1600*	3400-4200	100	1820(90)	3455	22	2420	1.80/5024	0.90	0.206	150	0.018	26	0.550	12
D153-2000*	2400-3200	100	2280(110)	4930	28	3920	1.65/6280	0.85	0.130	175	0.018	26	0.550	12
D153-2500*	1200-2200	100	2890(110)	6190	35	6120	1.50/7850	0.77	0.080	180	0.018	26	0.550	12
D253-3200*	200-1000	100	3710(115)	9105	45	10125	1.35/10048	0.73	0.050	190	0.017	26	0.550	12
D253-1600	400-2200	90	1600(150)	5250	35	6120	1.50/5020	1.00	0.120	190	0.018	26	0.550	12
D253-2000	400-2400	55	2000(138)	5890	35	6120	1.55/6280	0.85	0.100	190	0.018	26	0.550	12

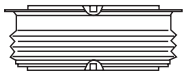
Rectifier diodes

Features

- Capsule type metal-ceramic packages with pressure contacts.
- Reverse voltage up to 6000V.
- Lowon-statevoltage,narrowVF-deflectionforparalleloperation.
- Contact diameters 19, 33,37,50,63 and 78mm

Typical applications

- All-purpose high power rectifier diodes.
- High power drives for industrial and traction applications.
- Welding.
- Electroplating.



Press-pack rectifier diodes capsule type 63MM

Type	V_{RRM} V	I_{RRM} mA	$I_{F(AV)}$ (T_C, ℃) A	I_{FRMS} (T_C=70℃) A	I_{FSM} 10ms kA	i^2t A^2S10^3	V_{FM}/I_{FM} V/A	V_{TO} V	r_T mΩ	T_{JMAX} ℃	$R_{th(j-c)}$ ℃/W	F kN	w kg	Fig.
D163-1250*	5200-6000	130	1480(90)	2900	20	2000	1.95/3925	1.00	0.300	140	0.016	33	0.71	13
D163-1600*	4400-5000	130	1670(100)	3555	23	2645	1.90/5024	0.92	0.230	150	0.016	33	0.71	13
D163-2000*	3400-4200	130	2050(95)	4130	28	3920	1.77/6280	0.90	0.154	150	0.016	33	0.71	13
D163-2500*	2400-3200	130	2560(115)	5890	35	6120	1.60/7850	0.85	0.097	175	0.016	33	0.71	13
D163-3200*	1200-2200	130	3425(110)	7365	45	10125	1.35/10048	0.77	0.060	180	0.016	33	0.71	13
D163-4000*	200-1000	130	4320(115)	8910	55	15125	1.30/12560	0.73	0.040	190	0.015	33	0.71	13

Press-pack rectifier diodes capsule type 76MM

Type	V_{RRM} V	I_{RRM} mA	$I_{F(AV)}$ (T_C, ℃) A	I_{FRMS} (T_C=70℃) A	I_{FSM} 10ms kA	i^2t A^2S10^3	V_{FM}/I_{FM} V/A	V_{TO} V	r_T mΩ	T_{JMAX} ℃	$R_{th(j-c)}$ ℃/W	F kN	w kg	Fig.
D173-2000*	5200-6000	150	2180(90)	4265	28	3920	2.00/6280	1.00	0.200	140	0.011	45	1.200	14
D173-2500*	4400-5000	150	2600(100)	5485	32	5120	1.95/7850	0.95	0.155	150	0.010	45	1.200	14
D173-3200*	3400-4200	150	3200(95)	6455	40	8000	1.80/10048	0.90	0.103	150	0.010	45	1.200	14
D173-4000*	2400-3200	150	4680(100)	9200	50	12500	1.65/12560	0.85	0.065	175	0.010	45	1.200	14
D173-5000*	1200-2200	150	5640(105)	11544	65	21125	1.45/15700	0.77	0.040	180	0.010	45	1.200	14
D173-6300*	200-1000	150	6590(115)	14495	75	28125	1.30/19782	0.73	0.025	190	0.010	45	1.200	14

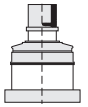
Rectifier diodes

Features

- Capsule type metal-ceramic packages with pressure contacts.
- Reverse voltage up to 6000V.
- Lowon-statevoltage,narrowVF-deflectionforparalleloperation.
- Contact diameters 19, 33,37,50,63 and 78mm

Typical applications

- All-purpose high power rectifier diodes.
- High power drives for industrial and traction applications.
- Welding.
- Electroplating.



Flanged case

Type	V_{RRM} V	I_{RRM} mA	$I_{F(AV)}$ (T_C, ℃) A	I_{FRMS} (T_C=70℃) A	I_{FSM} 10ms kA	i^2t A^2S10^3	V_{FM}/I_{FM} V/A	V_{TO} V	r_T mΩ	T_{JMAX} ℃	$R_{th(j-c)}$ ℃/W	Md Nm	w kg	Fig.
D105-630	2000-2800	50	630(100)	1440	15.00	1120	1.60/1978	1.00	0.400	175	0.060	16	0.580	16
D105-630X	2000-2800	50	630(100)	1440	15.00	1120	1.60/1978	1.00	0.400	175	0.060	16	0.580	16
B6-200	400-1600	8	200(100)	500	6.00	180	1.35/628	0.92	0.95	140	0.13	16	0.290	17
B6-200X	400-1600	8	200(100)	500	6.00	180	1.35/628	0.92	0.95	140	0.13	16	0.290	17

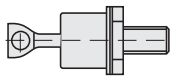
Avalanche rectifier diodes

Features

- Hermetic metal cases with glass and ceramic insulators, threaded stud and capsuledesigns.
- Guaranteed maximum avalanche power dissipation.

Typical applications

- DC supply for magnets and solenoids (brakes, valves, etc.).
- Non-controllable and half-controllable rectifiers.
- High power drives for industrial and traction applications.



Small-sized series

Type	V_{RRM} V	I_{RRM} mA	$I_{F(AV)}$ (T_C, ℃) A	I_{FRMS} A	I_{FSM} 10ms kA	i^2t A^2S10^3	V_{FM}/I_{FM} V/A	V_{TO} V	PRSM 100mks kW	T_{jmax} ℃	$R_{th(j-c)}$ ℃/W	F kN	Md Nm	w kg	Fig	r_T m Ω
DL212-10	400-1600	6	10(120)	15	0.25	0.31	1.35/31	0.90	2.5	160	2.700	-	0.9-1.1	0.006	1	17.5
DL212-10X	400-1600	6	10(1200	15	0.25	0.31	1.35/31	0.90	25	160	2.700	-	0.9-1.1	0.006	1	17.5
DL212-16	400-1600	6	16(120)	25	0.27	0.36	1.35/50	0.90	25	160	1.750	-	0.9-1.1	0.006	1	10.5
DL212-16X	400-1600	6	16(120)	25	0.27	0.36	1.35/50	0.90	25	160	1.750	-	0.9-1.1	0.006	1	10.5
DL212-25	400-1600	6	25(120)	39	0.34	0.58	1.35/78	0.90	25	160	1.100	-	0.9-1.1	0.006	1	6.1
DL212-25X	400-1600	6	25(120)	39	0.34	0.58	1.35/78	0.90	25	160	1.100	-	0.9-1.1	0.006	1	6.1
DL222-32	400-1600	8	32(120)	50	0.46	1.06	1.35/100	0.85	30	160	0.950	-	1.4-1.8	0.012	2	5.0
DL222-32X	400-1600	8	32(120)	50	0.46	1.06	1.35/100	0.85	30	160	0.950	-	1.4-1.8	0.012	2	5.0
DL222-40	400-1600	8	40(120)	62	0.55	1.51	1.35/125	0.85	30	160	0.800	-	1.4-1.8	0.012	1	4.0
DL222-40X	400-1600	10	40(120)	62	0.55	1.51	1.35/125	0.85	30	160	0.800	-	1.4-1.8	0.012	2	4.0
DL232-50	400-1600	10	50(120)	78	1.2	7.2	1.35/157	0.83	50	160	0.600	-	5.0-6.2	0.027	2	3.1
DL232-50X	400-1600	10	50(120)	78	1.2	7.2	1.37/157	0.83	50	160	0.600	-	5.0-6.2	0.027	3	3.1
DL232-63	400-1600	10	63(120)	98	1.4	9.8	1.35/198	0.83	50	160	0.500	-	5.0-6.2	0.027	3	2.8
DL232-63X	400-1600	10	63(120)	98	1.4	9.8	1.35/198	0.83	50	160	0.500	-	5.0-6.2	0.027	3	2.8
DL232-80	400-1600	10	80(120)	125	1.5	11.25	1.35/250	0.83	50	160	0.400	-	5.0-6.2	0.027	3	2.1
DL232-80X	400-1600	10	80(120)	125	1.5	11.25	1.35/250	0.83	50	160	0.400	-	5.0-6.2	0.027	3	2.1

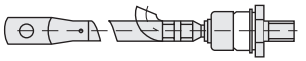
Avalanche rectifier diodes

Features

- Hermetic metal cases with glass and ceramic insulators, threaded stud and capsule designs.
- Guaranteed maximum avalanche power dissipation.

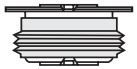
Typical applications

- DC supply for magnets and solenoids (brakes, valves, etc.).
- Non-controllable and half-controllable rectifiers.
- High power drives for industrial and traction applications.



Stud design

Type	V_{RRM} V	I_{RRM} mA	$I_{F(AV)}$ (T_C, ℃) A	I_{FRMS} A	I_{FSM} 10ms kA	i^2t A^2S10^3	V_{FM}/I_{FM} V/A	V_{TO} V	PRSM 100mks kW	T_{jmax} ℃	$R_{th(j-c)}$ ℃/W	F kN	Md Nm	w kg	Fig	r_T m Ω
DL161-200	400-1800	25	200(115)	280	7.5	280	1.40/628	0.92	16	150	0.130	-	20-30	0.265	6	0.680
DL171-320	400-1800	25	320(115)	600	10	500	1.40/1000	1.00	16	150	0.085	-	25-35	0.465	7	0.500



Capsule design

Type	V_{RRM} V	I_{RRM} mA	$I_{F(AV)}$ (T_C, ℃) A	I_{FRMS} A	I_{FSM} 10ms kA	i^2t A^2S10^3	V_{FM}/I_{FM} V/A	V_{TO} V	PRSM 100mks kW	T_{jmax} ℃	$R_{th(j-c)}$ ℃/W	F kN	Md Nm	w kg	Fig	r_T m Ω
DL123-320	400-1600	25	320(113)	770	5.5	151	1.65/1000	0.90	16	150	0.075	6	-	0.070	8	0.830
DL133-500	400-1600	25	500(123)	1430	12	720	1.50/1570	0.85	16	150	0.040	10	-	0.180	10	0.410
DL153-800*	4400-6000	100	800(90)		12	720	2.50/1500		16	140	0.020	24	-	0.550	12	
DL153-1000	3800-5000	50	1250(100)	2240	18	1620	3.00/3140	1.30	16	175	0.020	22	-	0.550	12	0.540
DL153-1250	2200-3200	50	1250(115)	1740	26	3380	2.00/4000	1.10	16	175	0.020	24	-	0.550	12	0.350
DL153-1600	2200-3200	50	1600(100)	2980	26	3380	2.00/5024	1.00	16	175	0.020	24	-	0.550	12	0.300
DL153-2000	1600-2000	50	2000(100)	2650	30	4500	1.80/6280	0.90	16	175	0.020	24	-	0.550	12	0.185
DL173-3200*	2400-3200	100	3250(100)	5760	45	10125	2.2/10053	1.10	16	175	0.011	45	-	1.300	14	0.124
DL173-4000*	1600-2400	100	3860(100)	6870	50	12500	2.2/12560	1.00	16	175	0.011	45	-	1.300	14	0.080

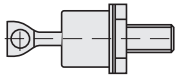
Fast recovery diodes

Features

- Hermetic metal cases with glass and ceramic insulators.
- Small recovered charge.
- "Soft" recovery.
- High di/dt capability at turn-off.

Typical applications

- Inverse diodes for transistors, GTO and asymmetric thyristors.
- Inverters, choppers. A.C. motor control.
- Uninterruptable power supplies.



Small-sized series

Type	V_{RRM} V	I_{RRM} mA	$I_{F(AV)}$ A	I_{FRMS} A	I_{FSM} 10ms kA	i^2t A^2S10^3	V_{FM}/I_{FM} V/A	V_{TO} V	r_T mΩ	T_{JMAX} ℃	$R_{th(j-c)}$ ℃/W	Md Nm	w kg	Fig.
DF212-10	400-1400	10	10(100)	16	0.18	0.16	2.30/31	1.20	32	150	2.50	0.9-1.1	0.006	1
DF212-10X	400-1400	10	10(100)	16	0.18	0.16	2.30/31	1.20	32	150	2.50	0.9-1.1	0.006	1
DF212-16	400-1400	10	16(100)	25	0.25	0.31	2.30/50	1.20	20	150	1.60	0.9-1.1	0.006	1
DF212-16X	400-1400	10	16(100)	25	0.25	0.31	2.30/50	1.20	20	150	1.60	0.9-1.1	0.006	1
DF212-20	400-1400	10	20(100)	31	0.31	0.48	2.30/62	1.20	16	150	1.20	0.9-1.1	0.006	1
DF212-20X	400-1400	10	20(100)	31	0.31	0.48	2.30/62	1.20	16	150	1.20	0.9-1.1	0.006	1
DF222-25	400-1400	15	25(100)	39	0.40	0.80	2.30/78	1.20	13	150	1.00	1.4-1.8	0.012	2
DF222-25X	400-1400	15	25(100)	39	0.40	0.80	2.30/78	1.20	13	150	1.00	1.4-1.8	0.012	2
DF222-32	400-1400	15	32(100)	50	0.50	1.25	2.30/98	1.20	10	150	0.80	1.4-1.8	0.012	2
DF222-32X	400-1400	15	32(100)	50	0.50	1.25	2.30/98	1.20	10	150	0.80	1.4-1.8	0.012	2
DF232-40	400-1400	20	40(100)	62	0.60	1.80	2.30/125	1.20	8	150	0.60	5.0-6.2	0.027	3
DF232-40X	400-1400	20	40(100)	62	0.60	1.80	2.30/125	1.20	8	150	0.60	5.0-6.2	0.027	3
DF232-50	400-1400	20	50(100)	78	0.75	2.80	2.30/157	1.20	6	150	0.50	5.0-6.2	0.027	3
DF232-50X	400-1400	20	50(100)	78	0.75	2.80	2.30/157	1.20	6	150	0.50	5.0-6.2	0.027	3
DF232-63	400-1400	20	63(100)	98	0.95	4.50	2.30/198	1.20	5	150	0.40	5.0-6.2	0.027	3
DF232-63X	400-1400	20	63(100)	98	0.95	4.50	2.30/198	1.20	5	150	0.40	5.0-6.2	0.027	3

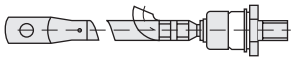
Fast recovery diodes

Features

- Hermetic metal cases with glass and ceramic insulators.
- Small recovered charge.
- "Soft" recovery.
- High di/dt capability at turn-off.

Typical applications

- Inverse diodes for transistors, GTO and asymmetric thyristors.
- Inverters, choppers. A.C. motor control.
- Uninterruptable power supplies.



Stud design

Type	V_{RRM} V	I_{RRM} mA	$I_{F(AV)}$ (T_C, ℃) A	I_{FRMS} A	I_{FSM} 10ms kA	i^2t A^2S10^3	V_{FM}/I_{FM} V/A	V	trr μs	T_{jmax} ℃	$R_{th(j-c)}$ ℃/W	Md Nm	F kN	w kg	Fig	r_T mΩ
DF141-63	1600-2600	50	63(100)	100	2.0	20	2.23/198	1.20	1.0,2.0	150	0.45	6-10	-	0.090	4	5.0
DF141-63XL	1600-2500	50	56(100)	100	2.2	20	2.20/198	1.20	80[1],80[2]	150	0.45	6-10	-	0.090	4	5.0
DF141-80	400-1600	30	80(100)	125	2.5	31	1.98/250	1.10	1.6	150	0.45	6-10	-	0.090	4	4.4
DF141-80XL	400-1600	30	80(95)	125	2.2	31	2.20/250	1.10	50[1],65[2]	150	0.45	6-10	-	0.090	4	4.4
DF151-125	400-1600	30	125(100)	200	4.0	80	2.04/390	1.15	2.0	150	0.25	10-20	-	0165	5	2.2
DF151-125XL	400-1600	30	125(90)	200	3.5	80	2.20/392	1.15	80[1],80[2]	150	0.25	10-20	-	0.165	5	2.2
DF351-160	600-1400	20	160(103)	250	3.5	61	2.45/500	1.40	3.2,4.0	170	0.25	10-20	-	0.165	5	1.56
DF351-160X	600-1400	20	160(103)	250	3.5	61	2.45/500	1.40	3.2,4.0	170	0.25	10-20	-	0.165	5	1.56
DF354-200	600-1400	20	200(103)	300	4.3	92	1.85/628	1.05	3.2,4.0	170	0.25	10-30	-	0.165	5	1.1
DF351-200X	600-1400	20	200(103)	300	4.3	92	1.85/628	1.05	3.2,4.0	170	0.25	10-30	-	0.165	5	1.1
DF361-250	600-1400	30	250(103)	390	4.5	101	2.71/785	1.20	3.2,4.0,5.0	170	0.15	20-30	-	0.265	6	1.6
DF361-250X	600-1400	30	250(103)	390	4.5	101	2.71/785	1.20	3.2,4.0,5.0	170	0.15	20-30	-	0.265	6	1.6
DF361-320	600-1400	30	320(103)	500	5.3	140	2.13/1000	0.80	3.2,4.0,5.0	170	0.15	20-30	-	0.265	6	1.20
DF361-320X	600-1400	30	320(103)	500	5.3	140	2.13/1000	0.80	3.2,4.0,5.0	170	0.15	20-30	-	0.265	6	1.20

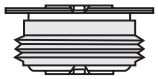
Fast recovery diodes

Features

- Hermetic metal cases with glass and ceramic insulators.
- Small recovered charge.
- "Soft" recovery.
- High di/dt capability at turn-off.

Typical applications

- Inverse diodes for transistors, GTO and asymmetric thyristors.
- Inverters, choppers. A.C. motor control.
- Uninterruptable power supplies.



Capsule design

Type	V_{RRM} V	I_{RRM} mA	$I_{F(AV)}$ (T_C, ℃) A	I_{FRMS} A	I_{FSM} 10ms kA	i^2t A^2S10^3	V_{FM}/I_{FM} V/A	V_{TO} V	trr μs	T_{jmax} ℃	$R_{th(j-c)}$ ℃/W	Md Nm	F kN	w kg	Fig	r_T mΩ
DF323-200	3000-4600	50	200(93)	400	3.0	45	3.20/628	1.40	5.0	140	0.08	-	4.5	0.091	9	2.70
DF423-200L	3000-4600	50	200(85)	314	2.7	36	3.50/628	1.40	300[1],160[2]	140	0.08	-	4.5	0.091	9	2.70
DF523-200	600-1600	30	200(100)		3.0	45	2.00/328		1.0,1.6,2.0	150	0.08	-	4.5	0.067	8	
DF323-250	1600-2400	50	250(100)	500	4.5	101	1.85/785	1.10	450[1],250[2]	150	0.08	-	4.5	0.067	8	0.96
DF423-250L	1600-2400	50	250(95)	393	4.0	80	2.10/785	1.10	4.0	150	0.08	-	4.5	0.067	8	0.096
DF523-250*	600-1600	30	250(100)		3.5	61	2.10/785		1.6,2,2.5	150	0.08	-	4.5	0.067	8	
DF333-400	1600-2400	50	400(100)	800	6.5	211	2.30/1250	1.20	450[1],160[2]	150	0.04	-	10	0.180	10	0.88
DF433-400	1600-2600	40	400(95)	628	6.5	211	2.50/1256	1.20	4.0	150	0.04	-	10	0.180	10	0.88
DF533-400*	600-1600	40	400(100)		6.5	211	2.10/1256		2.0,2.5	150	0.04	-	10	0.180	10	
DF343-500	3000-3600	50	500(100)	785	10.5	551	3.00/1570	1.55	5.0	150	0.035	-	15	0.240	11	0.90
DF343-800	600-1800	40	800(100)	1600	12.5	781	2.80/2500	1.30	4.0,5.0,6.3,8.0	175	0.035	-	15	0.240	11	0.60
DF343-1000	600-1800	40	1000(100)	2000	14.5	1051	2.30/3140	1.20	5.0,6.3,8.0	175	0.035	-	15	0.240	11	0.35
DF453-630*	1600-2200	85	630(100)		11.0	605	2.80/1980		1.6,2,2.5,3.2	150	0.020	-	24	0.550	12	
DF353-800	3000-4600	50	800(93)	1600	9.5	451	3.50/2500	1.40	6.3	140	0.020	-	24	0.550	12	0.84
DF453-800L	3000-4600	100	800(90)	1250	16.0	1280	3.20/2512	1.40	1000[1],700[2]	140	0.020	-	24	0.550	12	0.84
DF453-1000*	1600-2200	85	1000(100)		16.0	1280	2.10/3140		3.2.4.0.5.0	150	0.02	-	24	0.550	12	
DF273-2000*	1400-2200	150	2000(100)		32.0	2120	2.10/6280		5.0.6.3.8.0	140	0.011	-	45	1.300	14	

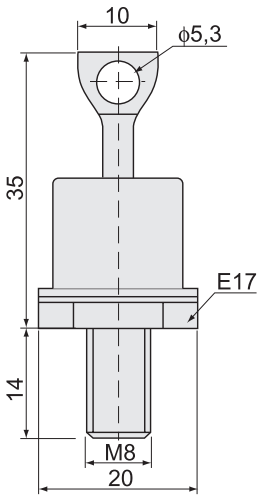


Fig3

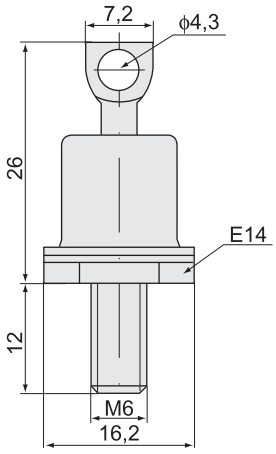


Fig2

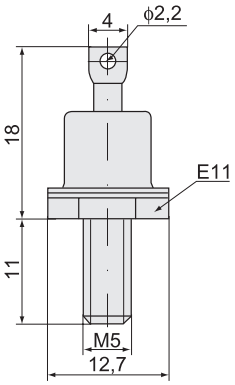


Fig1

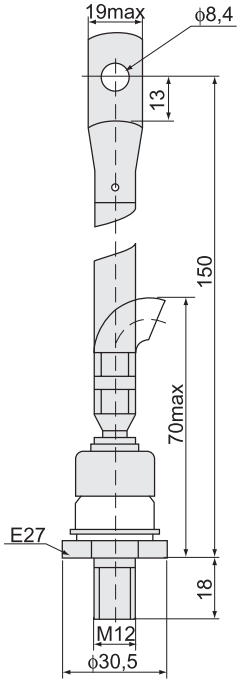


Fig5

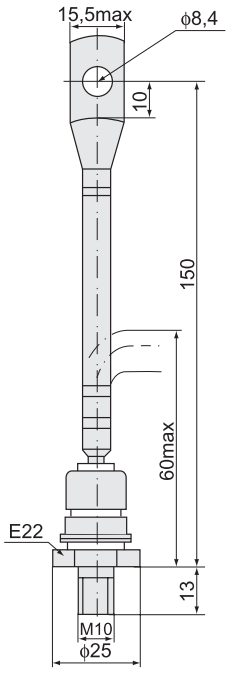


Fig4

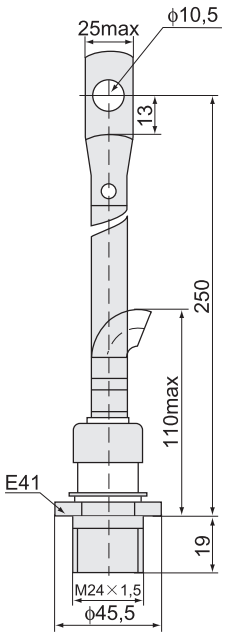


Fig7

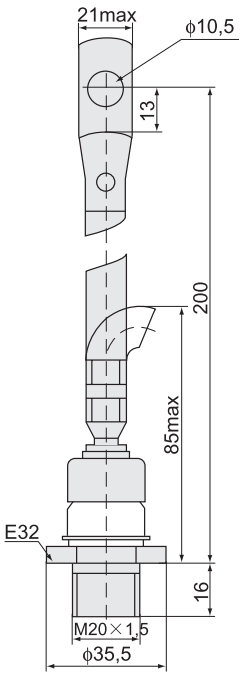


Fig6

Outlines

Outlines

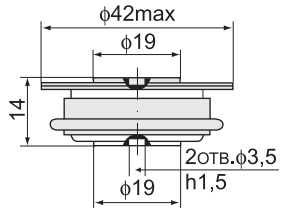


Fig 8

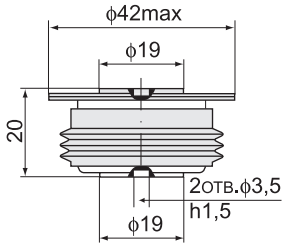


Fig 9

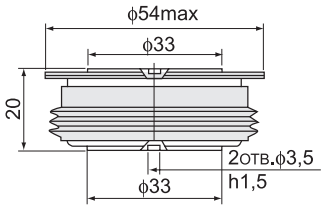


Fig 10

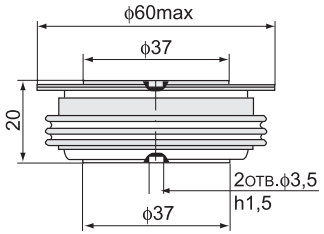


Fig 11

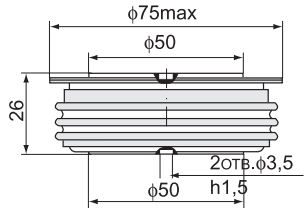


Fig 12

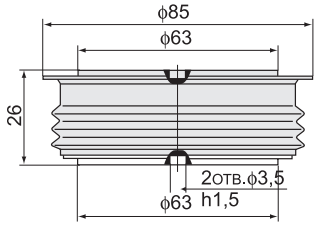


Fig 13

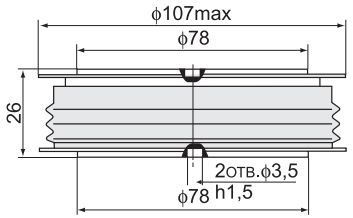


Fig 14

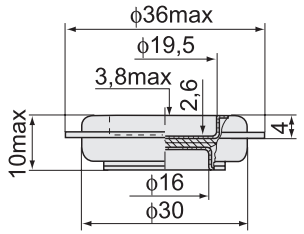


Fig 15

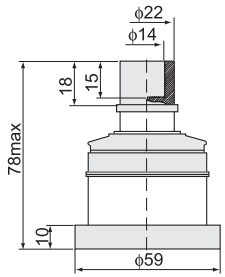


Fig 16

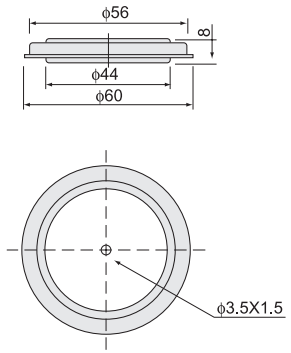


Fig 17

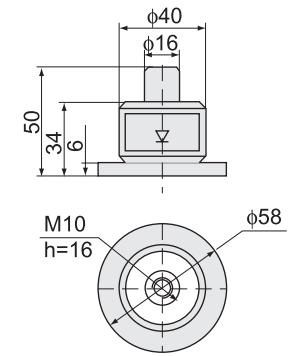


Fig 18

Semiconductor Device

Rectifier diode & thyristor (General purpose)

Standard recovery diode

Features

- High surge current capability
- Avalanche types available
- Stud cathode and stud anode version
- Wide current range
- Types up to 1200V VRRM
- RoHSCOmpliant

Applications

- Battery charges
- Converters
- Power supplies
- Machine tool controls

Technical parameter

Part Number	$I_{F(VA)}$ (A)	V_{RRM} (V)	@T_C (℃)	V_{FM} (V)	I_{FSM}		$R_{\theta JC}$ (℃/W)	Outline
					50Hz(A)	60Hz(A)		Fig
ZP6A	6	100~1200	158	1.1@pieXIfav	134	141	2.5	1(DO-4)
ZP12A	12	100~1200	144	1.26@pieXIfav	225	235	2	1(DO-4)
ZP16A	16	100~1200	140	1.23@IFM=50	295	310	1.6	1(DO-4)
ZP25A	25	100~1200	120	1.3@IFM=78	300	314	1.5	1(DO-4)
ZP40A	40	100~1600	140	1.3@pieXIfav	480	500	1	2(DO-5)
ZP50A	50	400~1200	150	1.45@IFM=157	600	628	0.6	2(DO-5)
ZP70A	70	100~1600	140	1.35@IFM=220	1000	1050	0.45	2(DO-5)
ZP80A	80	400~1200	140	1.4@IFM=220	1500	1570	0.3	2(DO-5)
ZP85A	85	100~1600	140	1.2@IFM=267	1450	1500	0.35	2(DO-5)
ZP95A	95	400~1200	140	1.4@IFM=267	2000	2090	0.27	2(DO-5)
ZP150A	150	100~1200	150	1.33@IFM=470	3000	3140	0.25	3(DO-8)
ZP200A	200	2000~2400	110	1.4@IFM=630	3950	4140	0.23	5(DO-30)
ZP300A	300	100~2500	130	1.4@IFM=942	5500	5750	0.18	4(DO-9)
ZP320A	320	600~1200	100	1.33@IFM=750	4500	4700	0.18	4(DO-9)
ZP380A	380	2000~3200	100	1.83@IFM=1180	5090	5330	0.11	4(DO-9)
ZP400A	400	1200~2400	1200	1.62@IFM=1500	8250	8640	0.15	4(DO-9)

Phase control thyristor SCR

Features

- Improved glass passivation for high reliability
- and exceptional stability at high temperature
- High di/dt and dv/dt capabilities
- Standard package
- Low thermal resistance
- Metric threads version available
- Types up to 1200V V_{DRM}/V_{RRM}
- RoHS Compliant

Applications

- Medium power switching
- Phase control applications
- Can be supplied to meet stringent military, aerospace and other high-reliability requirements

Technical parameter

Part Number	$I_{T(VA)}$ (A)	V_{RRM} V_{DRM} (V)	I_{RMS} (A)	@T_C (℃)	I_{TSM}		V_{GT} (V)	I_{GT} (A)	V_{TM} (V)	@I_{TM} (A)	dv/dt (V/μs)	$R_{\theta JC(DC)}$ (℃/W)	Outline
					50Hz (A)	60Hz (A)							Fig
KP10A	10	100~1200	25	85	190	200	2	60	1.75	32	300	1.85	6(TO-48)
KP16A	16	25~1200	25	65	145	150	2	40	2		250	1.5	6(TO-48)
KP25A	25	100~1200	40	85	350	370	2	60	1.7	79	300	0.75	6(TO-48)
KP50A	50	100~1200	80	94	1200	1255	2.5	100	1.6	157	500	0.35	7(TO-65)
KP70A	70	1200~1600	75	82	1400	1200	1.5	100	1.4	100	500	0.27	
KP80A	80	400~1200	125	85	1600	1675	2.5	120	1.4	250	500	0.3	9(TO-94)
KP110A	110	400~1600	172	90	1750	1830	2	100	1.5	350	500	0.27	9(TO-94C)
KP180A	180	400~1000	285	80	3500	3660	2.5	150	1.35	570	500	0.15	8(TO-93)
KP200A	200	400~2000	314	85	4200	4400	3	150	1.75	570	500	0.105	8(TO-93)
KP230A	230	400~1600	361	85	4800	5000	3	150	1.55	720	500	0.1	8(TO-93)
KP280A	280	400~600	440	85	6600	6900	3	150	1.28	880	500	0.105	8(TO-93)
KP330A	330	400~1600	520	75	7570	7920	3	200	1.51	1040	500	0.1	10(TO-118)

Semiconductor Device

Rectifier diode & thyristor (General purpose)

Outlines

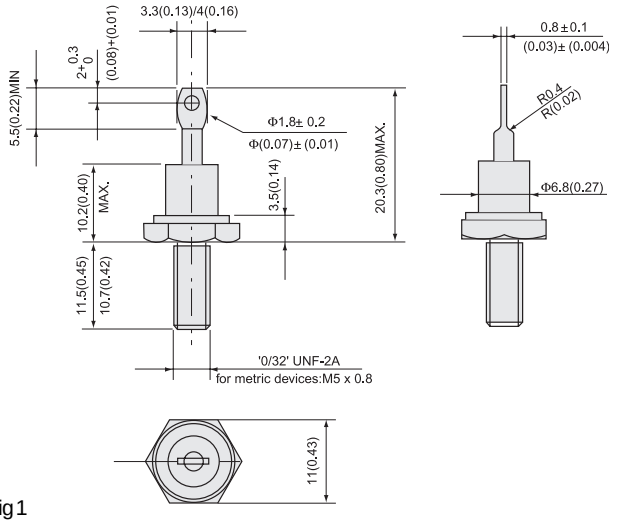


Fig 1

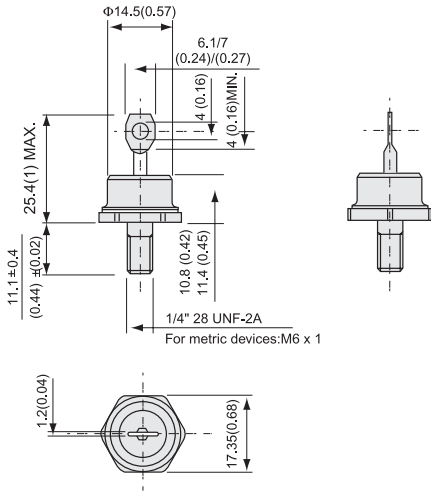


Fig 2

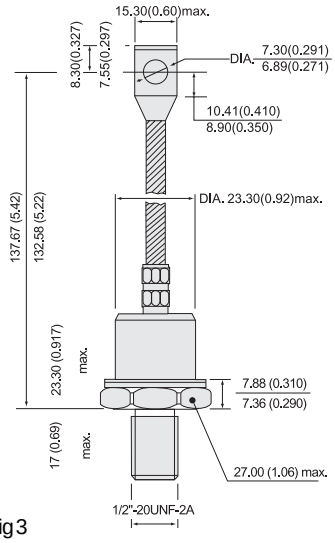


Fig 3

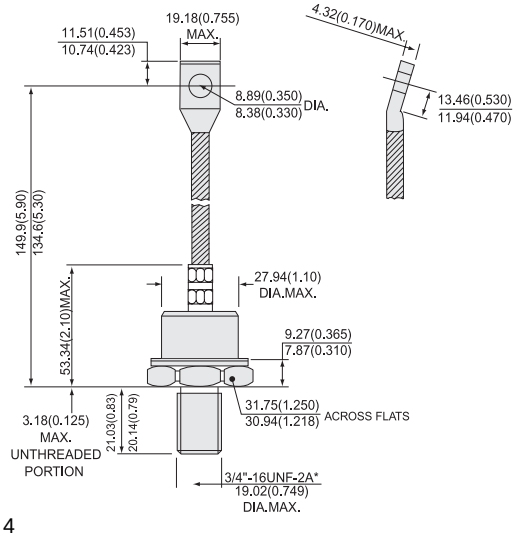


Fig 4

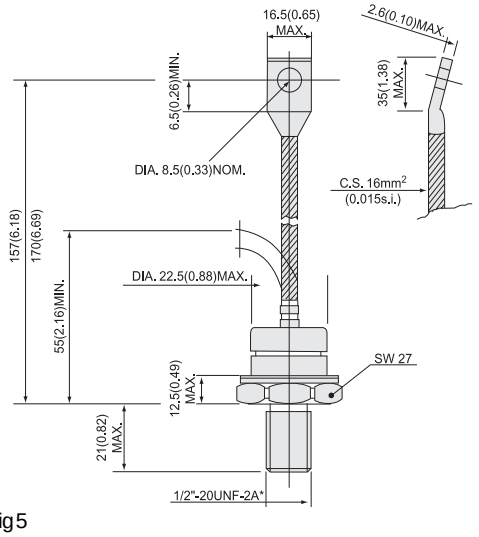


Fig 5

Outlines

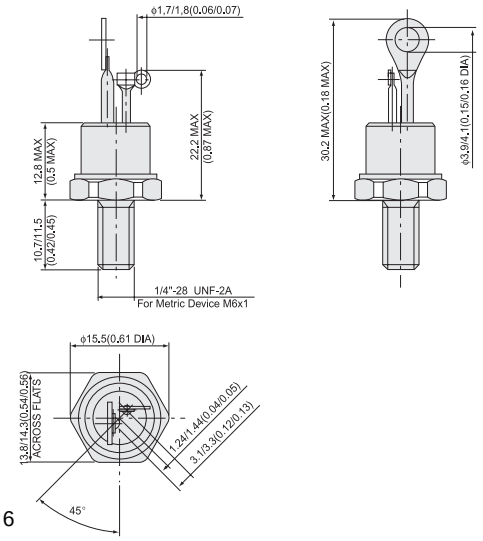


Fig 6

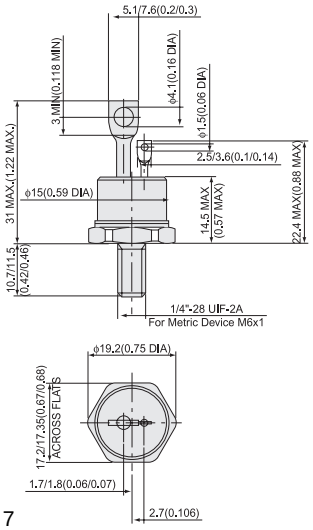


Fig 7

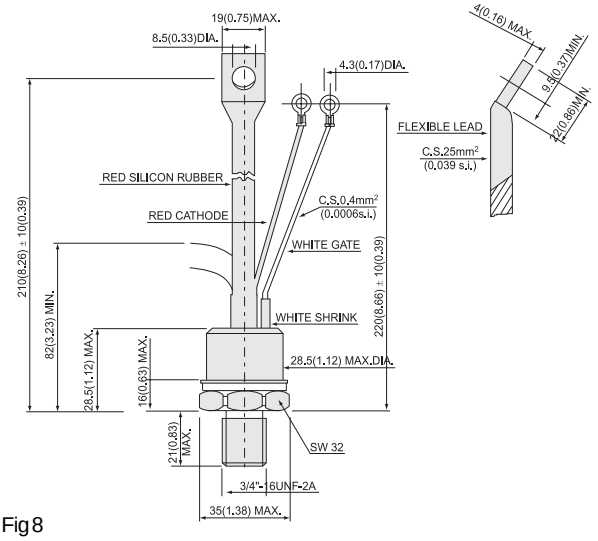


Fig 8

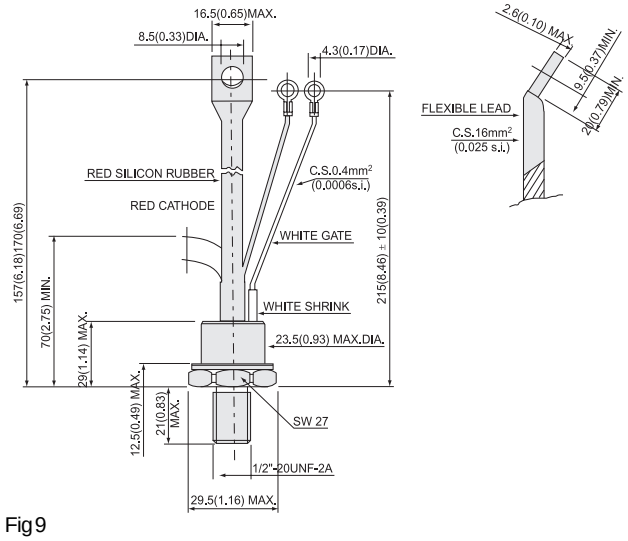


Fig 9

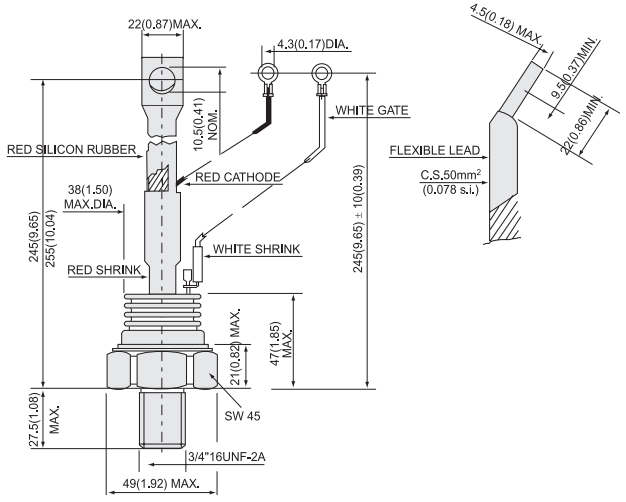


Fig 10

Semiconductor Device

Rectifier diode & thyristor (General purpose)

GREEGOO

2

Type and meanings

G 50 KK E
1 2 3 4

1:Greegoo
2: Diameter of chips
3: Model no:
KP: phase control thyristor
KK: fast turn-off thyristor
KA: high-frequency thyristor
KS: bi-directional thyristor
ZP: rectifier diode
ZK: fast recovery diode
DS: super high speed semiconductor switch
4: Class according to V_{DRM}, V_{RRM}
C:400~1000V
E:1100~1800V
H:1900~3000V
J:3100~4500V

Phase control thyristor

Features

- Full diffusibility
- Disc type hermetic ceramic seal
- Center-amplifying gate structure
- Double side cooling
- Big current

Applications

- Hi power convertor
- AC/DC motor control
- AC/DC switch
- Phase control rectifying
- Active and negative inverter

Technical parameter

Type	V_{DRM} V_{RRM}	$I_{T(AV)}$ @T_{hs}		I_{TSM} 10ms	dv/dt	di/dt	I_{DRM}/ I_{RRM}	I_{GT}	V_{GT}	I_H	V_{TM}/I_{TM}	V_{TO}	r_T	$R_{TH(j-hs)}$	T_{jm}	F	Outline
								25℃				125℃					
	V	A	℃	KA	V/μs	A/μs	mA	mA	V	mA	V/A	V	mΩ	℃/W	℃	KN	Fig
G24KPE	1100-1800	200	97	2.5	300	100	16	30~200	0.8~2.0	20~150	2.2/600	0.85	1.20	0.095	125	3.3-5.5	1
G30KPEA	1100-1800	200	106	2.5	300	100	30	35~250	0.8~2.0	20~150	2.4/600	0.89	1.10	0.065	125	5.3-12	28
G24KPC	400-1000	300	82	2.5	300	100	16	30~200	0.8~2.0	20~150	202/900	0.75	1.00	0.095	125	3.3-5.5	1
G30KPE	1100-1800	300	98	3.8	300	100	30	35~250	0.8~2.5	20~200	2.2/900	0.877	1.02	0.055	125	5.3-10	2
G30KPC	400-1000	400	91	3.8	300	100	30	35~250	0.8~2.5	20~200	2.2/1200	0.70	0.85	0.055	125	5.3-10	2
G35KPEA*	1100-1800	400	98	5	300	100	40	35~250	0.8~2.5	20~200	2.4/1200	0.92	0.75	0.040	125	10-20	29
G38KPJ	3100-4500	400	88	6.4	300	100	50	35~300	0.8~2.5	20~250	3.2/1200	1.18	1.49	0.035	125	10-20	3
G35KPC*	400-1000	500	95	5	300	100	40	35~250	0.8~2.5	20~200	1.8/1500	0.89	0.65	0.035	125	10-20	3
G38KPE	1100-1800	500	101	6.4	300	100	40	35~300	0.8~2.5	20~250	2.2/1500	0.85	0.42	0.035	125	10-20	3
G40KPEA	1100-1800	500	104	6.4	300	100	50	35~250	0.8~2.5	20~250	2.4/1500	0.90	0.23	0.035	125	15-20	30
G40KPH	1900-3000	500	88	6.8	500	100	50	40~300	0.8~2.5	20~250	2.4/1500	1.2	0.78	0.032	125	15-20	4
G38KPC	400-1000	300	97	6.4	300	100	40	35~300	0.8~2.5	20~250	1.8/1800	0.80	0.35	0.035	125	15-20	3
G40KPC	400-1000	800	88	10	300	100	50	35~300	0.8~2.5	20~250	1.8/2400	0.85	0.30	0.032	125	15-20	4
G40KPE	1100-1800	800	84	10	300	100	50	40~300	0.8~3.0	20~250	2.2/2400	0.91	0.35	0.032	125	15-20	4
G50KPJ	3100-4500	800	70	11.5	500	100	100	40~300	0.8~3.0	20~250	2.8/1500	1.24	0.77	0.024	125	19-26	6
G45KPC	400-1000	1000	80	13	300	150	60	40~300	0.8~3.0	20~250	1.8/3000	0.88	0.25	0.030	125	18-25	5
G45KPE	1100-1800	1000	75	13	300	150	60	40~300	0.8~3.0	20~250	2.2/3000	0.93	0.29	0.030	125	18-25	5
G50KPH	1900-3000	1000	77	13	500	150	80	40~300	0.8~3.0	20~250	2.4/2400	1.11	0.36	0.024	125	19-26	6
G50KPE	1100-1800	1200	79	15	300	150	80	40~300	0.8~3.0	20~300	2.2/3000	0.91	0.23	0.024	125	19-26	6
G55KPH*	1900-3000	1200	78	15	500	150	100	40~300	0.8~3.0	20~300	2.4/3000	0.97	0.27	0.022	125	21-30	7
G65KPJ	3100-4500	1250	70	16	500	200	120	40~300	0.8~3.0	20~300	2.8/3000	1.17	0.35	0.017	125	27-34	9
G50KPC	400-1000	1600	68	20	300	200	80	40~300	0.8~3.0	20~300	1.8/3000	0.89	0.15	0.024	125	19-26	6
G55KPE*	1100-1800	1600	61	20	300	200	100	40~300	0.8~3.0	20~300	2.2/3000	1.10	0.18	0.022	125	21-30	7

Remark

- I_{GT}, V_{GT}, Ih are the tested values under 25℃ and other parameters in the table are under Tjm unless there are extra explanations
- $I^2t=I^2_{TSM} \times t_w/2$; t_w=Sine and half wave current full-bottomed
- When working at 60Hz: I_{TSM}(8.3ms)=I_{TSM}(10MS)x1.066, $T_j=T_{jm}$
  I^2t(8.3ms)=I^2t(10ms)x0.943, $T_j=T_{jm}$
- V_{TO}: threshold voltage; r_T: slope resistance
- Gate lead: white or colorless; Cathode lead (when needed): red

Type and meanings

G 50 KK E
1 2 3 4

1:Greegoo
2: Diameter of chips
3: Model no:
KP: phase control thyristor
KK: fast turn-off thyristor
KA: high-frequency thyristor
KS: bi-directional thyristor
ZP: rectifier diode
ZK: fast recovery diode
DS: super high speed semiconductor switch
4: Class according to V_{DRM}, V_{RRM}
C:400~1000V
E:1100~1800V
H:1900~3000V
J:3100~4500V

Phase control thyristor

Technical parameter(continue)

Type	V_{DRM} V_{RRM}	$I_{T(AV)}$ @T_{hs}		I_{TSM} 10ms	dv/dt	di/dt	I_{DRM}/ I_{RRM}	I_{GT}	V_{GT}	I_H	V_{TM} I_{TM}	V_{TO}	r_T	$R_{TH(j-hs)}$	T_{jm}	F	Outline
								25℃				125℃					
	V	A	℃	KA	V/μs	A/μs	mA	mA	V	mA	V/A	V	mΩ	℃/W	℃	KN	Fig
G60KPH	1900-3000	1600	60	20	500	200	120	40-300	0.8-3.0	20-300	2.4/3000	1.20	0.21	0.020	125	21-30	8
G76KPJ	3100-4500	1650	70	20	500	250	200	40-300	0.8-3.0	20-300	2.6/3000	1.15	0.32	0.011	125	35-47	11
G55KPC*	400-1000	1800	60	22.5	300	200	100	40-300	0.8-3.0	20-300	1.8/4000	0.88	0.17	0.022	125	21-30	7
G60KPE	1100-1800	1800	66	22.5	300	200	120	40-300	0.8-3.0	20-300	2.2/4000	0.98	0.15	0.020	125	21-30	8
G65KPH	1900-3000	1800	69	22.5	500	200	120	40-300	0.8-3.0	20-300	2.4/4000	0.99	0.19	0.017	125	27-34	9
G60KPC	400-1000	2000	63	25	300	200	120	40-300	0.8-3.0	20-300	1.8/4000	0.95	0.12	0.020	125	21-30	8
G65KPE	1100-1800	2000	72	25	300	200	120	40-300	0.8-3.0	20-300	2.2/4000	0.87	0.14	0.017	125	27-34	9
G70KPH*	1900-3000	2000	63	25	500	250	160	40-300	0.8-3.0	20-300	2.4/4000	1.07	0.19	0.016	125	30-40	10
G65KPC	400-1000	2500	64	31	300	250	120	40-300	0.8-3.0	20-300	1.8/5000	0.75	0.11	0.017	125	27-34	9
G70KPE*	1100-1800	2500	70	31	300	250	160	40-300	0.8-3.0	20-300	2.2/5000	0.85	0.14	0.016	125	30-40	10
G76KPH	1900-3000	2500	72	31	500	250	200	40-300	0.8-3.0	20-300	2.4/5000	1.00	0.15	0.011	125	35-47	11
G89KPJ	3100-4500	2500	70	40	500	250	250	40-300	0.8-3.0	20-300	2.6/5000	1.00	0.18	0.009	125	70-85	12
G70KPC*	400-1000	3000	64	38	300	250	160	40-300	0.8-3.0	20-300	1.8/5000	0.90	0.10	0.016	125	30-40	10
G76KPE	1100-1800	3000	75	38	300	250	200	40-300	0.8-3.0	20-300	2.2/5000	0.84	0.09	0.011	125	35-47	11
G76KPC	400-1000	3500	70	44	300	250	200	40-300	0.8-3.0	20-300	1.8/5000	0.82	0.07	0.011	125	35-47	11
G89KPH	1900-3000	3500	64	44	500	250	250	40-300	0.8-3.0	20-300	2.4/5000	0.99	0.11	0.009	125	70-85	12
G89KPC	400-1000	4000	72	55	300	250	250	40-300	0.8-3.0	20-300	1.8/5000	0.88	0.06	0.009	125	70-85	12

Note: * is old model and subject to our confirmation when ordering

Semiconductor Device

Rectifier diode & thyristor (General purpose)

Type and meanings

G 50 KK E
1 2 3 4

1:Greegoo
2: Diameter of chips
3: Model no:
KP: phase control thyristor
KK: fast turn-off thyristor
KA: high-frequency thyristor
KS: bi-directional thyristor
ZP: rectifier diode
ZK: fast recovery diode
DS: super high speed semiconductor switch
4: Class according to V_{DRM}, V_{RRM}
C:400~1000V
E:1100~1800V
H:1900~3000V
J:3100~4500V

Fast turn-off thyristor

Features

- Full diffusibility
- Center-amplifying gate structure
- Excellent dynamic characteristics
- Fast-switching performance
- Low-switching consumption
- Disc type hermetic ceramic seal
- Double side cooling

Applications

- Inverter
- Wavechopper
- Induction heating
- Different kinds of forced current convertor

Technical parameter

Type	V_{DRM} V_{RRM}	$I_{T(AV)}$		I_{TSM}	dv/dt	di/dt	I_{DRM}/ I_{RRM}	I_{GT}	v_{GT}	I_H	V_{TM} I_{TM}	V_{TO}	r_T	$R_{TH(j-hs)}$	T_{jm}	F	Outline
		T_{hs} 55℃	100℃	10ms				25℃				115℃					
	V	A	μs	KA	V/μs	A/μs	mA	mA	V	mA	V/A	V	mΩ	℃/W	℃	KN	Fig
G30KKEA	800-1600	200	16-35	2.5	500	200	30	40-250	0.9-2.5	20~400	3.1/600	1.60	1.32	0.065	115	5.3-12	28
G30KKE	800-1600	300	16-35	3.8	500	200	30	40-250	0.9-2.5	20~400	3.0/900	1.60	1.32	0.055	115	5.3-10	2
G35KKEA*	800-1600	400	16-35	5.0	500	300	40	40-250	0.9-2.5	20~400	3.2/1200	1.32	0.66	0.040	115	10-20	29
G35KKE*	800-1600	400	16-35	5.0	500	300	40	40-250	0.9-2.5	20~400	3.0/1200	1.32	0.66	0.035	115	10-20	3
G38KKE	800-1800	500	16-35	6.3	500	300	40	40-250	0.9-2.5	20~400	3.15/1500	1.36	0.53	0.035	115	10-20	3
G40KKEA	800-1800	500	16-35	6.3	500	300	50	40-250	0.9-2.5	20~400	3.15/1500	1.42	0.50	0.035	115	15-20	30
G40KKE	800-1800	600	16-35	7.5	500	300	50	40-300	0.9-3.0	20~400	3.15/1800	1.42	0.50	0.032	115	15-20	4
G45KKE	800-1800	800	16-35	10	500	300	60	40-300	0.9-3.0	20~500	3.15/2400	1.50	0.45	0.030	115	18-25	5
G50KKE	800-1800	1000	16-35	12	500	500	80	40-300	0.9-3.0	20~500	3.15/3000	1.56	0.33	0.024	115	19-26	6
G55KKE	800-1800	1200	16-35	14	500	500	100	40-300	0.9-3.0	20~500	3.15/3000	1.51	0.32	0.022	115	21-30	7
G60KKE	800-1800	1500	16-35	16	500	500	120	40-300	0.9-3.5	20~500	3.15/3000	1.48	0.28	0.020	115	21-30	8
G65KKE	800-1800	1800	16-35	19	500	500	120	40-400	0.9-4.0	20~800	3.15/4000	1.41	0.23	0.017	115	27-34	9
G70KKE*	800-1800	2000	25-40	21	500	600	160	40-450	0.9-4.5	20~1000	3.15/4000	1.45	0.21	0.016	115	30-40	10
G70KKG	1900-2500	2000	35-70	21	500	600	160	40-450	0.9-4.5	20~1000	3.15/4000	1.48	0.23	0.016	115	30-40	10
G76KKE	800-1800	2500	25-40	27	500	600	200	40-450	0.9-4.5	20~1000	3.15/5000	1.30	0.14	0.011	115	35-47	11
G76KKG	1900-2500	2500	35-70	27	500	600	200	40-450	0.9-4.5	20~1000	3.15/5000	1.48	0.18	0.011	115	35-47	11
G89KKG	1900-2500	3000	40-80	31	500	600	250	40-450	0.9-4.5	20~1000	3.15/5000	1.10	0.14	0.009	115	70-85	12
G100KKG	1900-3000	4000	50-90	45	500	600	250	40-450	0.9-4.5	20~1000	2.90/5000	0.90	0.09	0.0075	115	89-113	13

Note: * is old model and subject to our confirmation when ordering

Remark

- I_{GT}, V_{GT}, Ih are the tested values under 25℃ and other parameters in the table are under Tjm unless there are extra explanations
- $I^2t=I^2_{TSM} \times t_w/2$; t_w=Sine and half wave current full-bottomed
- When working at 60Hz: I_{TSM}(8.3ms)=I_{TSM}(10MS)x1.066, $T_j=T_{jm}$
  I^2t(8.3ms)=I^2t(10ms)x0.943, $T_j=T_{jm}$
- V_{TO}: threshold voltage; r_T: slope resistance
- Gate lead: white or colorless; Cathode lead (when needed): red

Type and meanings

G 50 KK E
1 2 3 4

1:Greegoo
2: Diameter of chips
3: Model no:
KP: phase control thyristor
KK: fast turn-off thyristor
KA: high-frequency thyristor
KS: bi-directional thyristor
ZP: rectifier diode
ZK: fast recovery diode
DS: super high speed semiconductor switch
4: Class according to V_{DRM}, V_{RRM}
C:400~1000V
E:1100~1800V
H:1900~3000V
J:3100~4500V

High frequency thyristor

Features

- Full diffusibility
- Distributed and expansive amplifying gate structure
- Low-switching consumption
- Excellent dynamic characteristics
- Excellent high-frequency performance, suitable for 2.5KHz-10KHz
- Disc type hermetic ceramic seal
- Double side cooling

Applications

- Inverter
- Welding machine
- Wave chopper

Technical parameter

Type	V_{DRM} V_{RRM}	$I_{T(AV)}$@T_{hs}		I_{TSM}	dv/dt	di/dt	I_{DRM}/ I_{RRM}	I_{GT}	V_{GT}	I_H	V_{TM}/I_{TM}	V_{TO}	r_T	$R_{TH(j-hs)}$	T_{jm}	F	Outline
				10ms				25℃				115℃					
	V	A	A/KH$_z$	KA	V/μs	A/μs	mA	mA	V	mA	V/A	V	mΩ	℃/W	℃	KN	Fig
G30KAC	800-1100	200	8-10	2.4	200	200	30	30-200	0.8-2.5	20-250	3.2/600	1.45	1.12	0.055	115	5.3-10	2
G30KAD	1200-1400	200	10-14	2.4	200	200	30	30-200	0.8-2.5	20-250	3.2/600	1.67	1.32	0.055	115	5.3-10	2
G38KAB*	600-1000	600	6-8	6.0	200	200	40	30-250	0.8-3.0	20-400	3.2/1200	1.40	0.48	0.035	115	10-20	3
G38KAC	800-1100	600	8-10	4.8	200	200	40	30-250	0.8-3.0	20-400	3.2/1200	1.48	0.67	0.035	115	10-20	3
G38KAD	1200-1400	500	10-14	3.6	200	200	40	30-250	0.8-3.0	20-400	3.2/900	1.50	0.88	0.035	115	10-20	3
G40KAD*	1200-1400	500	10-14	6.0	200	200	50	30-250	0.8-3.0	20-400	3.2/1500	1.70	0.48	0.032	115	15-20	4
G40KAC*	800-1100	600	8-10	7.2	200	250	50	30-250	0.8-3.0	20-400	3.2/1800	1.43	0.50	0.032	115	15-20	4
G45KAD	1200-1400	600	12-16	7.2	200	250	60	30-250	0.8-3.0	20-400	3.2/1800	1.61	0.45	0.030	115	18-25	5
G45KAC	800-1100	800	8-15	9.6	200	250	60	30-250	0.8-3.0	20-400	3.2/2400	1.41	0.45	0.030	115	18-25	5
G50KAD	1200-1400	800	12-16	9.6	200	250	80	30-250	0.8-3.0	20-400	3.2/2400	1.65	0.36	0.024	115	19-26	6
G50KAC	800-1100	1000	8-15	12	200	250	80	30-300	0.8-3.0	20-400	3.2/3000	1.32	0.32	0.024	115	19-26	6
G55KAD*	1200-1400	1000	12-16	12	200	250	100	30-300	0.8-3.0	20-400	3.2/3000	1.63	0.25	0.022	115	21-30	7
G55KAC*	800-1100	1200	8-15	14	200	250	100	30-300	0.8-3.0	20-400	3.2/3000	1.27	0.23	0.022	115	21-30	7

Note: * is old model and subject to our confirmation when ordering

Remark

- I_{GT}, V_{GT}, Ih are the tested values under 25℃ and other parameters in the table are under Tjm unless there are extra explanations
- $I^2t=I^2_{TSM} \times t_w/2$; t_w=Sine and half wave current full-bottomed
- When working at 60Hz: I_{TSM}(8.3ms)=I_{TSM}(10MS)x1.066, $T_j=T_{jm}$
  I^2t(8.3ms)=I^2t(10ms)x0.943, $T_j=T_{jm}$
- V_{TO}: threshold voltage; r_T: slope resistance
- Gate lead: white or colorless; Cathode lead (when needed): red

Bi-directional thyristor(triacs)

Features

- Full diffusibility
- Center gate
- Disc type hermetic ceramic seal
- Double side cooling
- Virtual to two phase control thyristors
- Anti-parallel
- To give a suitable gate current, both normal side and reverse side can work.

Applications

- No-contact AC switch
- AC power adjustment and control

Type and meanings

G 50 KK E
1 2 3 4

1:Greegoo
2: Diameter of chips
3: Model no:
KP: phase control thyristor
KK: fast turn-off thyristor
KA: high-frequency thyristor
KS: bi-directional thyristor
ZP: rectifier diode
ZK: fast recovery diode
DS: super high speed semiconductor switch
4: Class according to V_{DRM}, V_{RRM}
C:400~1000V
E:1100~1800V
H:1900~3000V
J:3100~4500V

Technical parameter

Type	V_{DRM} V_{RRM}	$I_{T(AV)}$@T_{hs}		I_{TSM}	dv/dt	di/dt	I_{DRM}	I_{GT}	V_{GT}	I_H	V_{TM} I_{TM}	V_{TO}	r_T	$R_{TH(hs)}$	T_{jm}	Weight	F	Outline
				10ms				25℃										
	V	A	℃	KA	V/μs	A/μs	mA	mA	V	mA	V/A	V	mΩ	℃/W	℃	g	KN	Fig
G30KSEA	500-1800	300	97	2.5	50	50	30	20-200	0.8-2.5	20-200	2.7/450	0.99	1.80	0.065	125	85	5.3-12	28
G30KSE	500-1800	300	101	2.5	50	50	30	20-200	0.8-2.5	20-200	2.7/450	0.99	1.80	0.055	125	80	5.3-10	2
G35KSEA	500-1800	500	99	4	50	50	40	20-300	0.8-3.0	20-300	2.7/750	0.90	1.02	0.040	125	110	10-20	29
G35KSE	500-1800	600	95	4.2	50	50	40	20-300	0.8-3.0	20-300	2.7/900	0.90	1.02	0.035	125	270	10-20	3
G40KSEA	500-1800	800	81	6.8	50	50	50	20-350	0.8-3.5	20-400	2.7/1200	1.00	0.85	0.035	125	200	15-20	30
G40KSE	500-1800	800	85	6.8	50	50	50	20-350	0.8-3.5	20-400	2.7/1200	1.00	0.85	0.032	125	360	15-20	4

Remark

- I_{GT}, V_{GT}, Ih are the tested values under 25℃ and other parameters in the table are under Tjm unless there are extra explanations
- $I^2t=I^2_{TSM} \times t_W/2$; t_W=Sine and half wave current full-bottomed
- When working at 60Hz: I_{TSM}(8.3ms)=I_{TSM}(10MS)x1.066, $T_j=T_{jm}$
  I^2t(8.3ms)=I^2t(10ms)x0.943, $T_j=T_{jm}$
- V_{TO}: threshold voltage; r_T: slope resistance
- Gate triggering method(datum mark is T1 terminal): I_{GT}, V_{GT} value in the table are only suitable for I+, I-, III- three triggering methods. I_H value is suitable for both directions.
- Gate lead: white or colorless

Features

- Diffusibility
- Disc type hermetic ceramic seal
- Double side cooling

Applications

- Hi-power current convertor
- Welding machine
- Motor control and dirve
- Charging equipment

Rectifier diode

Technical parameter

Type	V_{RRM}	$I_{T(AV)}$	@T_{hs}	I_{TSM}	I^2t	I_{RRM}	V_{FM}/I_{FM}	$V_{FO)}$	r_F	$R_{th(j-hs)}$	T_{jm}	F	Outline
				10ms			25℃	125℃					
	V	A	℃	KA	KA^2s	mA	V/A	V	mΩ	℃/W	℃	KN	Fig
G24ZPB	200-1000	200	130	2.8	40	16	1.8/600	0.73	0.68	0.090	150	3.3-5.5	14
G24ZPC	1100-2000	200	129	2.8	40	16	1.8/600	0.70	0.86	0.090	150	3.3-5.5	14
G30ZPB	200-1000	400	123	5.6	160	30	1.8/1200	0.95	0.31	0.055	150	5.3-10	28
G30ZPBA	200-1000	300	126	4.2	90	30	1.8/900	0.98	0.31	0.065	150	5.3-12	15
G30ZPC	1100-2000	400	119	5.6	160	30	1.8/1200	1.06	0.35	0.055	150	5.3-10	28
G30ZPCA	1100-2000	300	122	4.2	90	30	1.8/900	1.08	0.35	0.065	150	5.3-10	15
G35ZPB*	200-1000	600	122	8.4	350	40	1.8/1500	0.97	0.27	0.033	150	10-20	16
G35ZPBA*	200-1000	500	120	7	250	40	1.8/1500	1.06	0.31	0.040	150	10-20	29
G35ZPC*	1100-2000	600	120	8.4	350	40	1.8/1800	1.05	0.30	0.033	150	10-20	29
G35ZPCA*	1100-2000	400	127	5.6	160	40	1.8/1200	1.1	0.32	0.040	150	10-20	16
G38ZPB	200-1000	800	116	11	600	40	2.0/2400	0.81	0.23	0.033	150	10-20	16
G38ZPC	1100-1800	800	112	11	600	40	2.0/2400	0.85	0.29	0.033	150	10-20	16
G40ZPB	200-1000	1000	112	14	980	50	2.0/3000	0.86	0.165	0.030	150	15-20	30
G40ZPBA	200-1000	800	116	11	600	50	2.0/2400	0.88	0.17	0.035	150	15-20	30
G40ZPC	1100-2000	1000	108	14	980	50	2.0/3000	0.90	0.204	0.030	150	15-20	17
G40ZPCA	1100-2000	600	124	8.4	350	50	1.8/1800	0.93	0.21	0.035	150	15-20	17
G45ZPB*	200-1000	1200	106	17	1500	60	2.0/3000	0.82	0.132	0.030	150	18-25	18
G50ZPA	200-400	6300	56	55	15100	50	1.25/5000	0.69	0.042	0.0135	170	19-26	19
G50ZPB	200-1000	1600	102	23	2600	80	2.0/3000	0.80	0.14	0.022	150	19-26	19
G50ZPC	1100-2000	1200	114	17	1500	80	2.0/3000	0.89	0.15	0.022	150	19-26	19
G50ZPD	2100-3000	1000	120	14	980	80	2.0/3000	0.82	0.22	0.022	150	19-26	19
G50ZPE	3100-3800	800	123	11	600	80	2.0/2400	0.98	0.26	0.022	150	19-26	21
G60ZPC	1100-2000	2000	101	28	3900	120	2.0/4000	0.73	0.10	0.020	150	21-30	22
G65ZPB	200-1000	5000	63	58	16800	100	1.2/5000	0.63	0.058	0.016	170	27-34	24
G65ZPC	1100-2000	2500	90	35	6100	120	2.0/5000	0.725	0.11	0.016	150	27-34	24
G76ZPB	200-1000	6400	88	60	18000	100	1.25/5000	0.70	0.03	0.011	170	35-47	26
G76ZPC	1100-2000	3500	87	44	9700	200	2.0/5000	0.93	0.08	0.011	150	35-47	25
G76ZPE	3100-3800	2500	100	35	6100	200	2.0/5000	0.95	0.138	0.011	150	35-47	22
G89ZPC	1100-2000	4000	94	50	12500	200	2.0/5000	0.76	0.08	0.009	150	70-85	24

Note: * is old model and subject to our confirmation when ordering

Remark

- Other parameters in the table are the tested value at T_{jm} unless there are extra explanations
- $I^2t=I^2_{TSM} \times t_w/2$; t_w=Sine and half wave current full-bottomed
- When working at 60Hz: I_{FSM}(8.3ms)=I_{FSM}(10MS)x1.066, $T_j=T_{jm}$
  I^2t(8.3ms)=I^2t(10ms)x0.943, $T_j=T_{jm}$
- V_{FO}: threshold voltage; R_F: slope resistance

Semiconductor Device

Rectifier diode & thyristor (General purpose)

GREEGOO

Fast recovery diode

Features

- Diffusibility
- Short recovery time
- Small reverse recovery charge
- Fast and soft recovery characteristics
- Disc type hermetic ceramic seal
- Double side cooling

Applications

- Motor control and dirve
- Induction heating
- UPS
- Wavechopper
- Welding equipment

Technical parameter

Type	V_{RRM}	$I_{T(AV)}$	@T_{hs}	t_{rr}	Q_{rr}	I_{TSM}	I^2t	I_{RRM}	V_{FM}/I_{FM}	$V_{FO)}$	r_F	$R_{th(j-hs)}$	T_{jm}	F	Outline
				100℃		10ms			25℃	125℃					
	V	A	℃	μs	μc	KA	KA^2s	mA	V/A	V	mΩ	℃/W	℃	KN	Fig
G24ZKB	200-1000	200	124	2	50	2.7	40	16	2.4/600	1.10	0.72	0.090	150	3.3-5.5	14
G24ZKC	1100-2000	200	118	2	70	2.7	40	16	2.4/600	1.48	0.65	0.090	150	3.3-5.5	14
G30ZKCA	1100-2000	300	117	3	100	4.1	90	30	2.6/900	1.30	0.55	0.065	150	5.3-10	28
G30ZKB	200-1000	400	116	3	90	5.4	145	30	2.6/1200	1.17	0.36	0.055	150	5.3-10	15
G30ZKC	1100-2000	400	112	3	90	5.4	145	30	2.6/1200	1.30	0.42	0.055	150	5.3-10	15
G38ZKB	200-1000	800	102	3	90	10	500	40	2.8/2400	1.15	0.34	0.033	150	10-20	16
G38ZKC	1100-2000	800	86	3	130	10	500	40	2.8/2400	1.31	0.37	0.033	150	10-20	16
G50ZKC	1100-2000	1200	92	4	250	15	1100	80	2.8/3000	1.42	0.26	0.022	150	19-26	19
G50ZKB	200-1000	1600	82	4	150	20	2000	80	2.8/3000	1.15	0.20	0.022	150	19-26	19
G65ZKC	1100-2000	2500	71	6	700	31	4800	120	3.0/5000	1.12	0.14	0.016	150	27-34	22
G76ZKC	1100-2000	3500	64	6	1300	44	9700	200	3.0/5000	1.19	0.12	0.011	150	35-47	24

Type and meanings

G 50 KK E
1 2 3 4

1:Greegoo
2: Diameter of chips
3: Model no:
KP: phase control thyristor
KK: fast turn-off thyristor
KA: high-frequency thyristor
KS: bi-directional thyristor
ZP: rectifier diode
ZK: fast recovery diode
DS: super high speed semiconductor switch

Remark

- I_{GT}, V_{GT}, Ih are the tested values under 25℃ and other parameters in the table are under Tjm unless there are extra explanations
- $I^2t=I^2_{TSM}$ x tw/2; tw=Sine and half wave current full-bottomed
- When working at 60Hz: I_{TSM}(8.3ms)=I_{TSM}(10MS)x1.066, $T_j=T_{jm}$
  I^2t(8.3ms)=I^2t(10ms)x0.943, $T_j=T_{jm}$
- V_{FO}: threshold voltage; r_F: slope resistance
- The measurement of reverse recovery electric charge: $Qrr=\frac{I_{RR}xt_{RR}}{2}$

Outlines

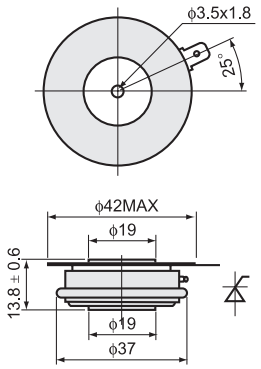


Fig 1

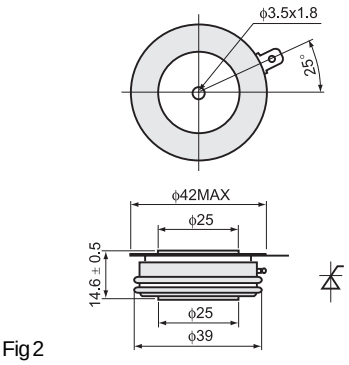


Fig 2

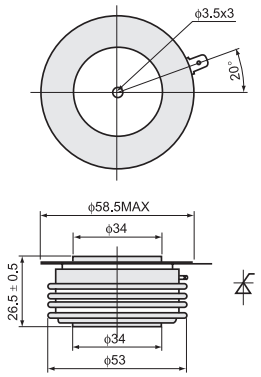


Fig 3

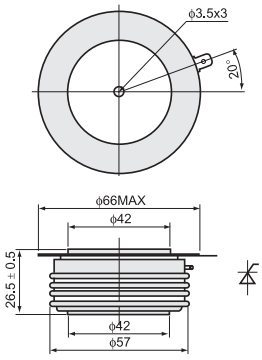


Fig 4

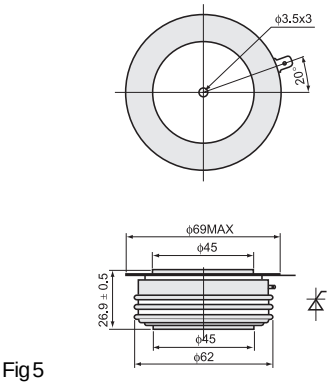


Fig 5

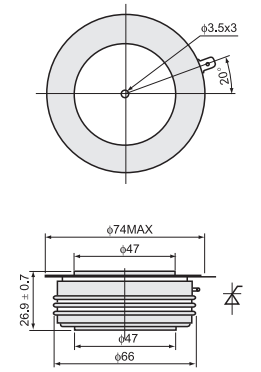


Fig 6

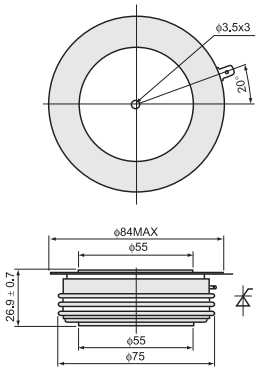


Fig 7

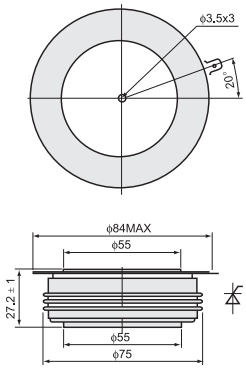


Fig 8

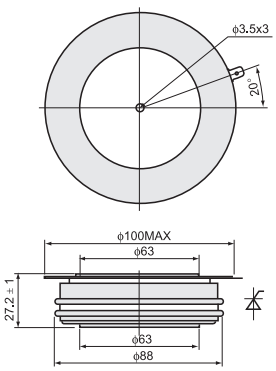


Fig 9

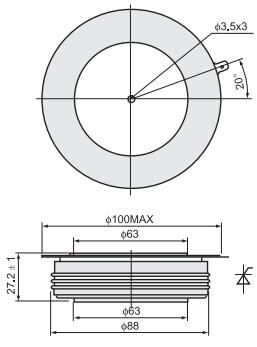


Fig 10

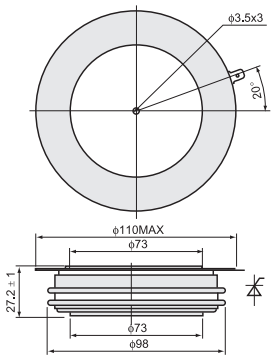


Fig 11

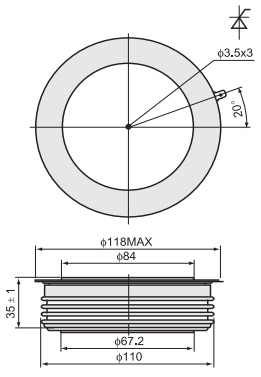


Fig 12

Outlines

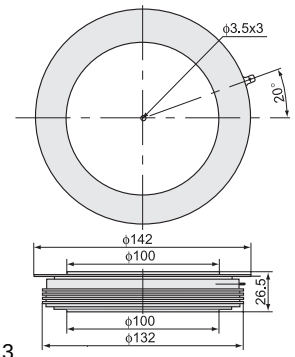


Fig 13

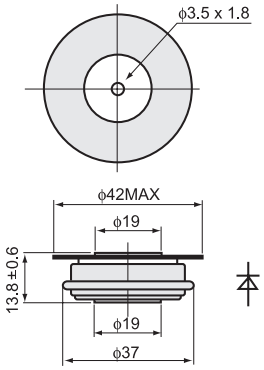


Fig 14

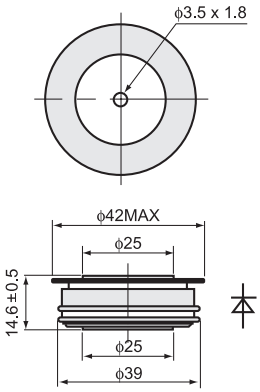


Fig 15

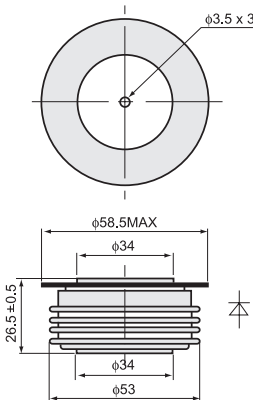


Fig 16

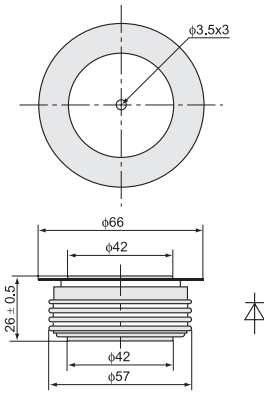


Fig 17

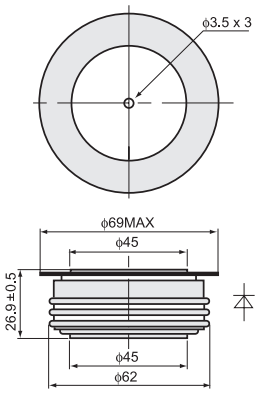


Fig 18

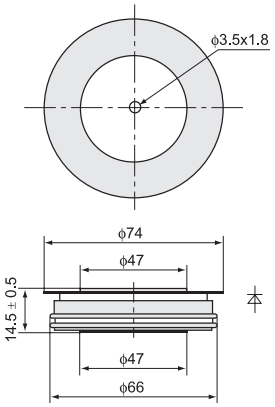


Fig 19

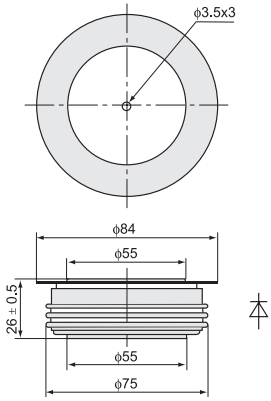


Fig 20

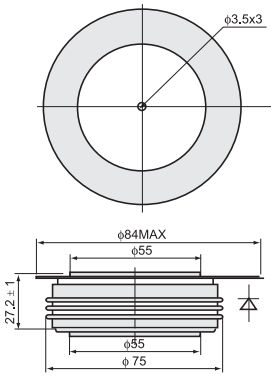


Fig 21

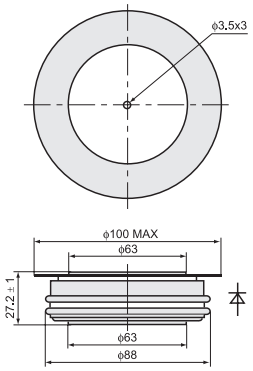


Fig 22

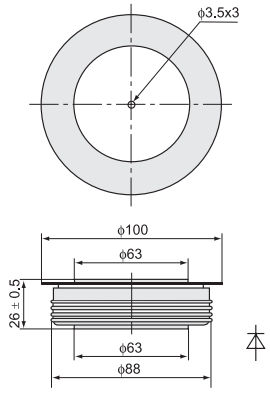


Fig 23

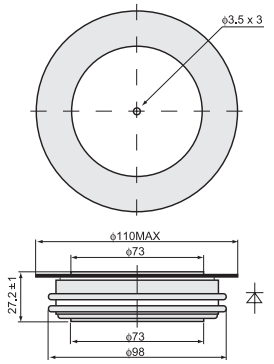


Fig 24

Outlines

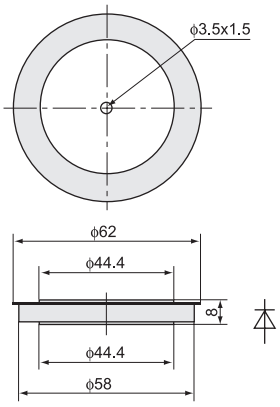


Fig 25

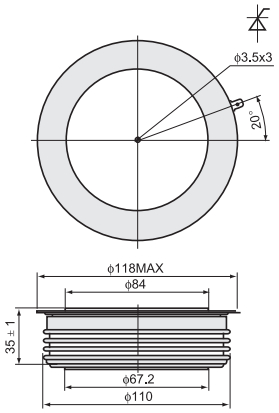


Fig 26

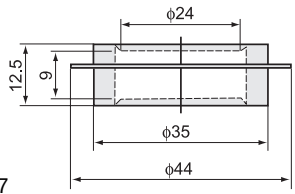


Fig 27

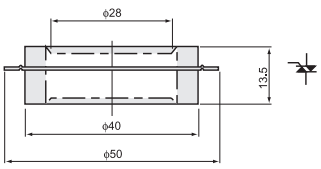


Fig 28

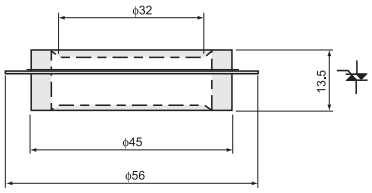


Fig 29

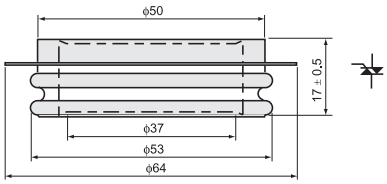


Fig 30

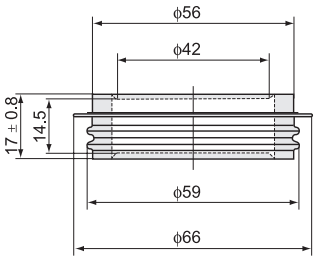


Fig 31

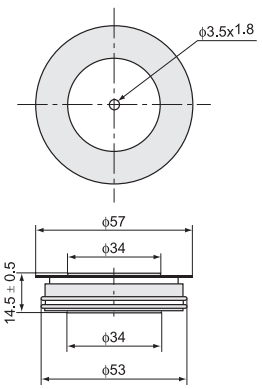


Fig 32

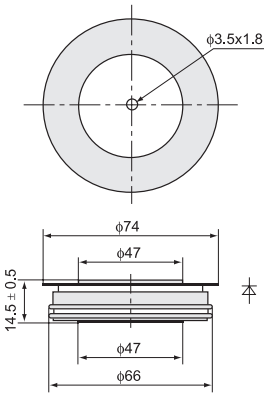


Fig 33

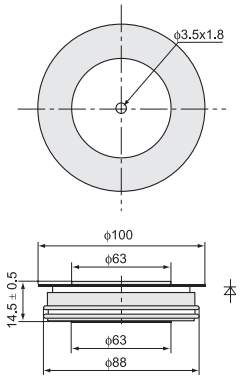


Fig 34

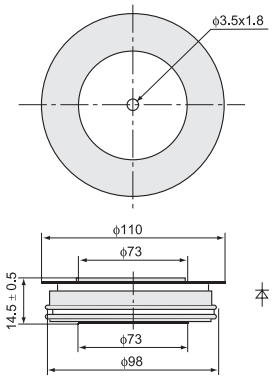


Fig 35

Semiconductor Device

High power semicenductors

General purpose rectifiers

Features

- Double-sidecooling
- High mean current
- High surge current

Applications

- High power drive
- High voltage supplies
- Motor control

Technical parameter

Type -**=V_{RRM}/100	$I_{F(AV)}$ @T_C=100℃	V_{RRM}	I_{FSM} @T_{VJM} &10ms	V_{FM} @T_{FM} &T_C=T_{VJM}		V_{FO} @T_{VJM}	r_{FO} @T_{VJM}	T_{VJM}	R_{thJC}	R_{thCH}	F ±10%	Outline
	A	V	kA	A	V	V	mΩ	℃	K/W	K/W	kN	Fig
ZP_{6}500-**	500	600-1400	6.9	800	1.33	0.80	0.657	190	0.090	0.01	5	1
ZP_{6}300-**	300	1600-2200	5.3	800	1.71	0.82	1.110	175	0.090	0.01	5	1
ZP_{7}1300-**	1300	600-1400	16.3	1500	1.17	0.78	0.257	190	0.035	0.01	10	2
ZP_{7}900-**	900	1600-2200	12.6	1500	1.47	0.82	0.433	175	0.035	0.01	10	2
ZP_{7}800-**	800	2400-3400	10.6	1500	1.80	0.88	0.613	175	0.035	0.01	15	2
ZP_{8}1500-**	1500	600-1400	21	1500	1.06	0.78	0.188	190	0.035	0.008	15	3
ZP_{8}1100-**	1100	1600-2200	16.5	1500	1.30	0.82	0.318	175	0.035	0.008	15	3
ZP_{8}900-**	900	2400-3400	13.8	1500	1.56	0.88	0.450	175	0.035	0.008	15	3
ZP_{8}600-**	600	3600-4400	12	1500	1.87	0.96	0.604	150	0.035	0.008	15	3
ZP_{9}2700-**	2700	600-1400	33.9	1500	0.92	0.78	0.092	190	0.020	0.005	22	4
ZP_{9}2000-**	2000	1600-2200	26.1	1500	1.05	0.82	0.156	175	0.020	0.005	22	4
ZP_{9}1800-**	1800	2400-3400	23	1500	1.18	0.88	0.200	175	0.020	0.005	22	4
ZP_{9}1200-**	1200	3600-4400	18.9	1500	1.40	0.96	0.296	150	0.020	0.005	22	4
ZP_{A}4500-**	4500	600-1400	53.3	3000	0.91	0.76	0.051	190	0.013	0.004	45	5
ZP_{A}3300-**	3300	1600-2200	41.1	3000	1.05	0.79	0.086	175	0.013	0.004	45	5
ZP_{A}2900-**	2900	2400-3400	34.6	3000	1.21	0.85	0.121	175	0.013	0.004	45	5
ZP_{A}1900-**	1900	3600-4400	29.9	3000	1.45	0.96	0.162	150	0.013	0.004	45	5
ZP_{X}6000-**	6000	600-1400	74.1	3000	0.87	0.76	0.035	190	0.010	0.003	56	6
ZP_{X}4400-**	4400	1600-2200	57	3000	0.99	0.81	0.059	175	0.010	0.003	56	6
ZP_{X}3900-**	3900	2400-3400	47.8	3000	1.10	0.85	0.084	175	0.010	0.003	56	6
ZP_{X}2600-**	2600	3600-4400	41.4	3000	1.28	0.94	0.112	150	0.010	0.003	56	6

General purpose rectifiers

Features

- Double-sidecooling
- High mean current
- High surge current

Applications

- High power drive
- High voltage supplies
- Motor control

Technical parameter

Type -**=V_{RRM}/100	$I_{F(AV)}$ @T_C=100℃	V_{RRM}	I_{FSM} @T_{VJM} &10ms	V_{FM} @T_{FM} &T_C=T_{VJM}		V_{FO} @T_{VJM}	r_{FO} @T_{VJM}	T_{VJM}	R_{thJC}	R_{thCH}	F ±10%	Outline
	A	V	kA	A	V	V	mΩ	℃	K/W	K/W	kN	Fig
ZP$_8$700-**	700	4600-5200	10	1000	1.38	0.89	0.487	150	0.035	0.008	15	7
ZP$_8$500-**	500	5600-6500	7.9	1000	1.84	0.92	0.920	150	0.035	0.008	15	7
ZP$_9$1200-**	1200	4600-5200	17.1	1500	1.37	0.94	0.284	150	0.020	0.005	22	8
ZP$_9$1000-**	1000	5600-6500	14.5	1500	1.73	1.05	0.450	150	0.020	0.005	22	8
ZP$_A$1700-**	1700	4600-5200	27	3000	1.62	0.96	0.220	150	0.013	0.004	45	9
ZP$_A$1500-**	1500	5600-6500	23	3000	1.87	1.00	0.290	150	0.013	0.004	45	9
ZP$_X$2100-**	2100	4600-5200	30	3000	1.59	1.00	0.195	150	0.010	0.003	56	10
ZP$_X$2000-**	2000	5600-6500	28.6	3000	1.69	1.00	0.230	150	0.010	0.003	56	10
ZP$_B$6100-**	6100	1600-2200	71	6000	1.09	0.82	0.045	175	0.007	0.002	70	11
ZP$_B$5000-**	5000	2400-3400	53	6000	1.29	0.80	0.082	175	0.007	0.002	70	11
ZP$_B$3500-**	3500	3600-4400	51.7	6000	1.50	0.98	0.086	150	0.007	0.002	70	11
ZP$_B$3100-**	3100	4600-5200	44	6000	1.78	1.00	0.130	150	0.007	0.002	70	12
ZP$_B$2800-**	2800	5400-6500	39.8	6000	2.02	1.15	0.145	150	0.007	0.002	70	12
ZP$_C$7400-**	7400	1600-2200	83.7	6000	1.03	0.82	0.035	175	0.006	0.002	90	13
ZP$_C$6600-**	6600	2400-3400	75	6000	1.10	0.80	0.050	175	0.006	0.002	90	13
ZP$_C$4200-**	4200	3600-4400	60	6000	1.32	0.80	0.086	150	0.006	0.002	90	13
ZP$_C$3900-**	3900	4600-5200	55	6000	1.44	0.80	0.107	150	0.006	0.002	90	13
ZP$_C$3400-**	3400	5400-6500	46	6000	1.84	1.15	0.115	150	0.006	0.002	90	13
ZP$_D$10000-**	10000	1600-2200	110	6000	0.98	0.77	0.035	175	0.004	0.008	120	14
ZP$_D$9400-**	9400	2400-3400	100	6000	1.04	0.80	0.040	175	0.004	0.0008	120	14
ZP$_D$6100-**	6100	3600-4400	67	6000	1.19	0.80	0.065	150	0.004	0.0008	120	14
ZP$_D$5700-**	5700	4600-5200	63	6000	1.26	0.80	0.076	150	0.004	0.0008	120	14
ZP$_D$5000-**	5000	5400-6500	5	6000	1.65	1.15	0.083	150	0.004	0.0008	120	14
ZP$_D$4800-**	4800	6600-7200	53	6000	1.71	1.15	0.094	150	0.004	0.0008	120	14
ZP$_D$4500-**	4500	7400-8500	50	6000	1.81	1.15	0.110	150	0.004	0.0008	120	14

Semiconductor Device

High power semicenductors

General purpose thyristors

Features

- Double-sidecooling
- High mean current
- High surge current

Applications

- High power drive
- High voltage supplies
- Motor control

Technical parameter

Type -**=V_{DRM}/100 &V_{RRM}/100	$I_{F(AV)}$ @T_C=70℃	V_{DRM} V_{RRM}	I_{FSM} @T_{VJM} &10ms	V_{FM} @I_{TM} &T_C=T_{VJM}		V_{TO} @T_{VJM}	r_T @T_{VJM}	T_{VJM}	R_{thJC}	R_{thCH}	F +10%	Outline
	A	V	kA	A	V	V	mΩ	℃	K/W	K/W	kN	Fig
KP_{6}400-**	400	600-1200	6.4	600	.23	0.85	0.640	125	0.080	0.02	5	15
KP_{6}300-**	300	1200-1600	4.3	600	1.62	0.93	1.150	125	0.080	0.02	5	15
KP_{5}700-**	700	600-1200	9.5	1500	1.56	0.87	0.459	125	0.041	0.01	5	16
KP_{5}600-**	600	1200-1600	8.3	1500	1.77	0.87	0.601	125	0.041	0.01	5	16
KP_{5}1700-**	500	1800-2200	6.3	1500	2.49	0.94	1.036	125	0.041	0.01	5	16
KP_{5}1500-**	400	2400-3400	4.9	1500	3.63	1.04	1.725	125	0.041	0.01	10	16
KP_{7}800-**	800	600-1200	9.8	1500	1.44	0.87	0.382	125	0.035	0.01	10	17
KP_{7}700-**	700	1200-1600	8.5	1500	1.65	0.90	0.500	125	0.035	0.01	10	17
KP_{7}600-**	600	1800-2200	7.1	1500	2.00	0.92	0.720	125	0.035	0.01	10	17
KP_{7}500-**	500	2400-3400	5.	1500	2.78	0.98	1.200	125	0.035	0.01	10	17
KP_{8}900-**	900	600-1200	16.9	1500	1.18	0.86	0.215	125	0.037	0.008	10	18
KP_{8}800-**	800	1200-1600	13.5	1500	1.41	0.90	0.338	125	0.037	0.008	15	18
KP_{8}700-**	700	1800-2200	11.2	1500	1.66	0.93	0.486	125	0.037	0.008	15	18
KP_{8}500-**	500	2400-3400	8	1500	2.49	1.03	0.970	125	0.037	0.008	15	18
KP_{8}400-**	400	3600-4200	6.5	1500	3.36	1.15	1.470	125	0.037	0.008	15	18
KP_{9}1500-**	1500	600-1200	27.1	1500	1.07	0.86	0.140	125	0.023	0.005	22	19
KP_{9}1300-**	1300	1200-1600	23.6	1500	1.20	0.92	0.184	125	0.023	0.005	22	19
KP_{9}1200-**	1200	1800-2200	19.9	1500	1.35	0.96	0.260	125	0.023	0.005	22	19
KP_{9}900-**	900	2400-3400	13.9	1500	1.92	1.08	0.560	125	0.023	0.005	22	19
KP_{9}700-**	700	3600-4200	11.3	1500	2.35	1.15	0.799	125	0.023	0.005	22	19
KP_{A}2000-**	2000	1200-1600	36.9	3000	1.30	0.92	0.125	125	0.015	0.004	45	20
KP_{A}1800-**	1800	1800-2200	30.8	3000	1.50	0.96	0.179	125	0.015	0.004	45	20
KP_{A}1400-**	1400	2400-3400	23.9	3000	1.94	1.05	0.298	125	0.015	0.004	45	20
KP_{A}1200-**	1200	3600-4200	19.4	3000	2.51	1.15	0.452	125	0.015	0.004	45	20
KP_{X}2600-**	2600	1200-1600	51.0	3000	1.21	0.95	0.088	125	0.012	0.003	56	21
KP_{X}2300-**	2300	1800-2200	42.6	3000	1.34	0.96	0.127	125	0.012	0.003	56	21
KP_{X}1900-**	1900	2400-3400	33.0	3000	1.71	1.00	0.235	125	0.012	0.003	56	21
KP_{X}1600-**	1600	3600-4200	26.8	3000	2.11	1.15	0.320	125	0.012	0.003	56	21

General purpose thyristors

Features

- Double-sidecooling
- High mean current
- High surge current

Applications

- High power drive
- High voltage supplies
- Motor control

Technical parameter

Type -**=V_{DRM}/100 &V_{RRM}/100	$I_{F(AV)}$ @T_C=70℃	V_{DRM} V_{RRM}	I_{FSM} @T_{VJM} &10ms	V_{TM} @I_{TM} &T_C=T_{VJM}		V_{TO} @T_{VJM}	r_T @T_{VJM}	T_{VJM}	R_{thJC}	R_{thCH}	F ±10%	Outline
	A	V	kA	A	V	V	mΩ	℃	KW	KW	kN	Fig
ZP_{8}300-**	300	4400-5200	5.5	500	2.00	1.20	1.600	125	0.045	0.008	15	22
ZP_{8}300-**	300	4800-6500	4.8	500	2.35	1.20	2.300	125	0.045	0.008	15	22
ZP_{9}800-**	800	4400-5200	11	1000	1.90	1.12	0.780	125	0.022	0.004	22	23
ZP_{9}700-**	700	5400-6500	10	1000	2.19	1.22	0.970	125	0.022	0.004	22	23
ZP_{A}1300-**	1300	4400-5200	18	1500	1.73	1.10	0.420	125	0.015	0.003	40	24
ZP_{A}1000-**	1000	5400-6500	14	1500	2.37	1.20	0.780	125	0.015	0.003	40	24
ZP_{X}1700-**	1700	4400-5200	24	1500	1.52	1.02	0.330	125	0.011	0.002	50	25
ZP_{X}1300-**	1300	5400-6500	18	6000	2.13	1.18	0.632	125	0.011	0.002	50	25
ZP_{B}3600-**	3600	1800-2200	66	6000	1.43	0.96	0.079	125	0.008	0.002	70	26
ZP_{B}3000-**	3000	2400-3400	53	6000	1.78	1.05	0.121	125	0.008	0.002	70	26
ZP_{B}2500-**	2500	3600-4200	41	6000	2.35	1.15	0.200	125	0.008	0.002	70	26
ZP_{B}2100-**	2100	4400-5200	36	6000	2.88	1.30	0.264	125	0.008	0.002	70	27
ZP_{B}1900-**	1900	5400-6500	31	6000	3.62	1.40	0.370	125	0.008	0.002	70	27
ZP_{C}4500-**	4500	1800-2200	84	6000	1.31	0.96	0.059	125	0.0065	0.002	90	28
ZP_{C}3700-**	3700	2400-3400	65	6000	1.63	1.04	0.098	125	0.0065	0.002	90	28
ZP_{C}3100-**	3100	3600-4200	53	6000	2.04	1.15	0.149	125	0.0065	0.002	90	28
ZP_{C}2700-**	2700	4400-5200	46	6000	2.53	1.35	0.197	125	0.0065	0.002	90	28
ZP_{C}2200-**	2200	5400-6500	39	6000	3.50	1.40	0.350	125	0.0065	0.002	90	28
ZP_{D}6800-**	6800	2200-2800	95	6000	1.19	0.88	0.052	125	0.004	0.0008	120	29
ZP_{D}5200-**	5200	3000-4200	85	6000	1.58	0.98	0.100	125	0.004	0.0008	120	29
ZP_{D}4800-**	4800	4400-5200	75	3000	1.40	1.05	0.116	125	0.004	0.0008	120	29
ZP_{D}3900-**	3900	5400-6500	65	3000	1.75	1.18	0.190	125	0.004	0.0008	120	29
ZP_{D}1900-**	1900	6600-7200	38	3000	1.85	1.26	0.197	90	0.004	0.0008	120	29
ZP_{D}1500-**	1500	7800-8500	40	3000	1.90	1.30	0.400	90	0.004	0.0008	120	29

Fast switching thyristors

Features

- Double-sidecooling
- Low switching loss
- Shorter turn-off time

Applications

- M.F. Inductive heating systems
- DC choppers
- Pulse electrical power supplies

Technical parameter

Type -**=V_{DRM}/100 &V_{RRM}/100	$I_{F(AV)}$@T_C=55℃	V_{DRM} V_{RRM}	I_{FSM} @T_{VJM} &10ms	V_{TM} @I_{TM} &T_C=T_{VJM}		T_{VJM}	R_{thJC}	R_{thCH}	tq @T_{VJM}	F ±10%	Outline
	A	V	kA	A	V	℃	K/W	K/W	μs	kN	Fig
KK6300-**	300	800-1200	4.1	600	2.35	125	0.08	0.02	20	5	30
KK6300-**	300	1200-1400	4	600	2.45	125	0.08	0.02	30	5	30
KK6300-**	300	1600-2000	3.8	600	2.60	125	0.08	0.02	40	5	30
KK8800-**	800	800-1200	10	1500	2.08	125	0.037	0.008	25	15	31
KK8700-**	700	1200-1400	9	1500	2.45	125	0.037	0.008	30	15	31
KK8600-**	600	1600-2000	8	1500	2.80	125	0.037	0.008	40	15	31
KK91300-**	1300	800-1200	17	2000	1.85	125	0.023	0.005	25	22	32
KK91200-**	1200	1200-1400	16	2000	2.00	125	0.023	0.005	35	22	32
KK91200-**	1200	1600-2000	15	2000	2.15	125	0.023	0.005	50	22	32
KKA1900-**	1900	800-1200	24	3000	2.00	125	0.015	0.004	25	45	33
KKA1800-**	1800	1200-1400	23	3000	2.15	125	0.015	0.004	35	45	33
KKA1700-**	1700	1600-2000	21	3000	2.35	125	0.015	0.004	50	45	33
KKA1600-**	1600	2200-2500	21	3000	2.50	125	0.015	0.004	60	45	33
KKX2800-**	2600	800-1200	33	4000	1.80	125	0.012	0.003	25	56	34
KKX2700-**	2500	1200-1400	32	4000	1.90	125	0.012	0.003	35	56	34
KKX2700-**	2400	1600-2000	31	4000	2.00	125	0.012	0.003	50	56	34
KKX2600-**	2100	2200-2500	27	4000	2.40	125	0.012	0.003	65	56	34
KKX2400-**	2000	2600-2800	26	4000	2.65	125	0.012	0.003	100	56	34
KKB3000-**	2700	2600-3000	35	6000	2.95	125	0.008	0.003	120	70	35
KKC3000-**	3500	2600-3000	45	6000	2.80	125	0.006	0.002	120	90	36
KKC3200-**	3200	3500-4500	41	4000	2.65	125	0.006	0.002	200	90	36

Freewheeling diodes & snubber diodes

Features

- Double-sidecooling
- High mean current
- High surge current

Applications

- High power drive
- High voltage supplies
- Motor control

Technical parameter

Type	$I_{F(AV)}$ @T_C=70℃	V_{RRM}	I_{FSM} @T_{VJM} &10ms	V_{FM} @I_{FM} &T_C=T_{VJM}		T_{VJM}	R_{thJC}	R_{thCH}	I_{rr}	Q_{rr}	F ±10%	Outline
	A	V	kA	A	V	℃	K/W	K/W	A	μC	kN	Fig
ZK8500-25	500	2500	8	1500	2.63	125	0.035	0.008	470	840	15	37
ZK91000-25	1000	2500	8	1500	1.77	125	0.020	0.005	550	1200	22	38
ZK9700-45	700	4500	13	1500	2.90	125	0.020	0.005	600	1900	22	38
ZKA1300-45	1300	4500	22	3000	2.74	125	0.013	0.004	800	3000	45	39
ZKA1500-45	1500	4500	25	3000	2.16	125	0.013	0.004	1000	3700	45	39
ZKA1100-60	1100	6000	18	3000	3.30	125	0.013	0.004	1000	4700	45	40

Type	$I_{F(AV)}$ @T_C=70℃	V_{RRM}	I_{FSM} @T_{VJM} &10ms	V_{FM} @I_{FM} &T_C=T_{VJM}		T_{VJM}	R_{thJC}	R_{thCH}	I_{rr}	Q_{rr}	F ±10%	Outline
	A	V	kA	A	V	℃	K/W	K/W	A	μC	kN	Fig
ZR8600-25	600	2500	8.5	1500	2.18	125	0.035	0.008	175	500	15	37
ZR8400-45	400	4500	5	1000	3.50	125	0.035	0.008	200	1000	15	37
ZR8300-60	300	6000	3.5	1000	5.00	125	0.035	0.008	260	2000	15	37
ZRA900-45	900	4500	15	3000	4.50	125	0.013	03.004	260	1700	45	39

Gate turn-off thyristors

Technical parameter

Type	I_{TGQ} @T_{VJM}	$I_{T(AV)}$@ T_C=85℃	V_{DRM} V_{RRM} @T_{VJM}	I_{DRM} I_{RRM} @T_{VJM}	I_{TSM} @T_{VJM} &10ms	V_{TM} @I_{TM} &T_{VJM}		ϕ	T_{VJM}	R_{thJC} DC	R_{thCS} DC	V_{TO} @T_{VJM}	r_T	F min. max.	Outline
	A	A	V	mA	kA	V	A	mm	℃	K/kW		V	mΩ	kN	Fig
KGA2000-25	2000	830	2500 17	30 50	16.0	2.8	2000	67	125	17	5	1.66	0.57	17 24	41
KGA2000-45	2000	710	4500 17	100 50	13.0	3.5	2000	67	125	17	5	1.80	0.85	17 24	41
KGA3000-25	3000	1300	2500 17	100 50	30.0	2.5	3000	85	125	12	3	1.50	0.33	36 44	42
KGA3000-45	3000	930	4500 17	60 20	24.0	4.0	3000	85	125	12	3	2.20	0.60	36 44	42
KGA4000-45	4000	1180	4500 17	100 50	25.0	3.8	4000	91	125	11	3	1.20	0.65	36 44	43

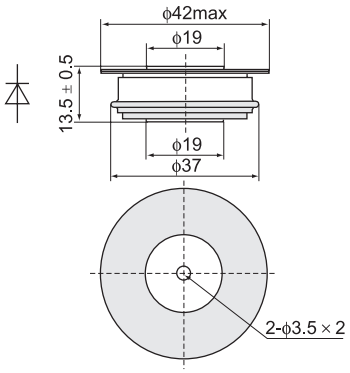


Fig 1

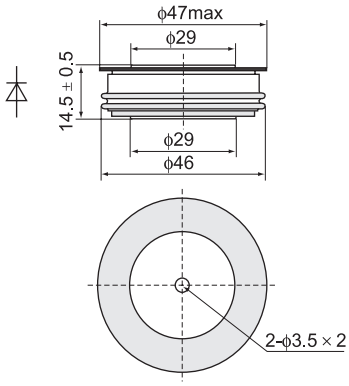


Fig 2

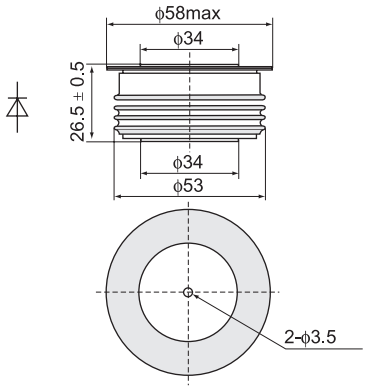
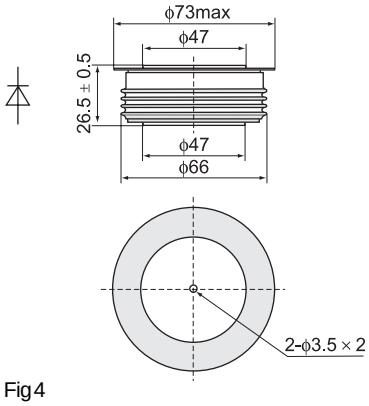


Fig 3



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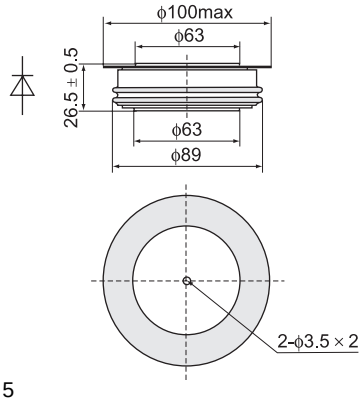


Fig 5

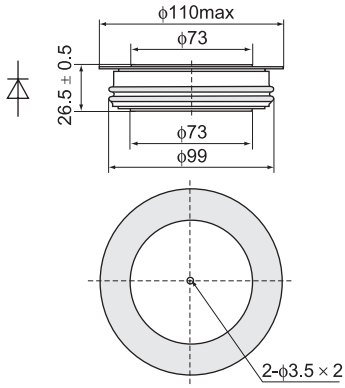


Fig 6

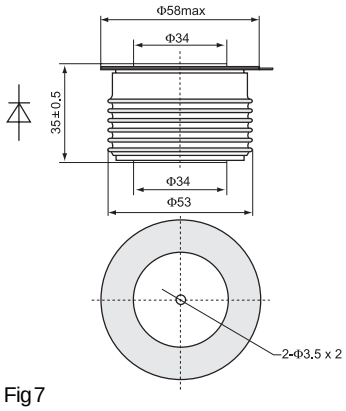


Fig 7

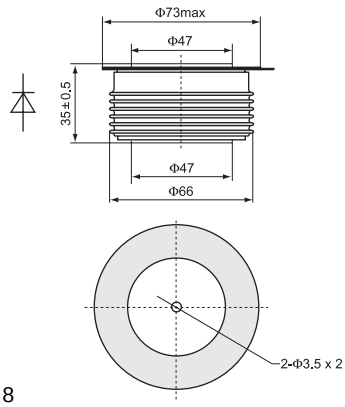


Fig 8

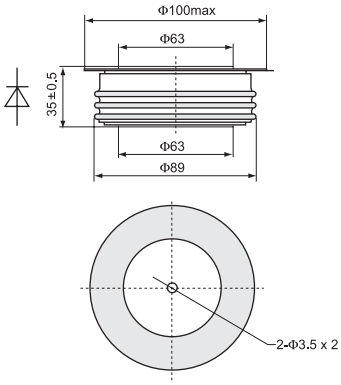


Fig 9

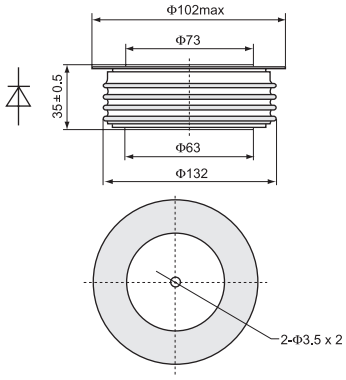


Fig 10

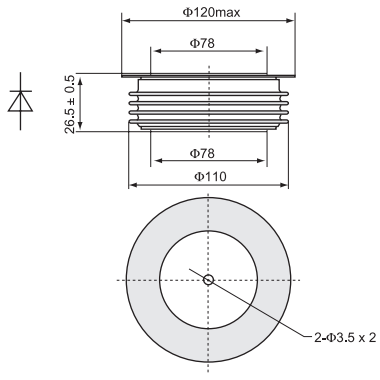


Fig 11

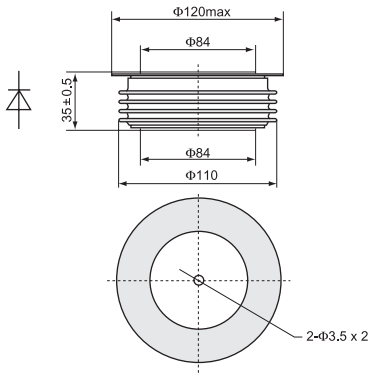


Fig 12

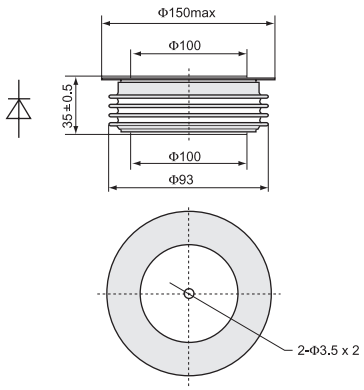


Fig 13

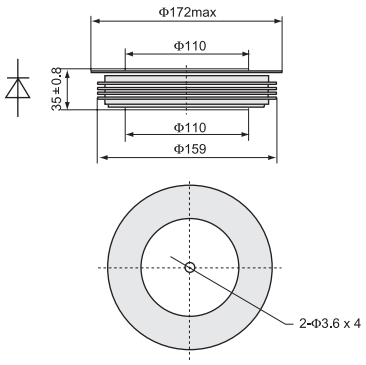


Fig 14

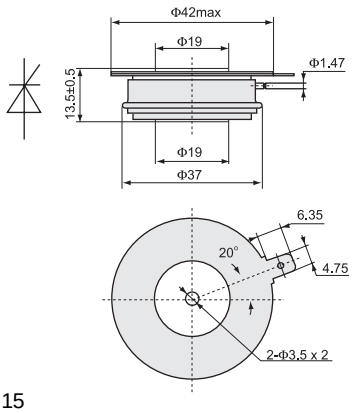


Fig 15

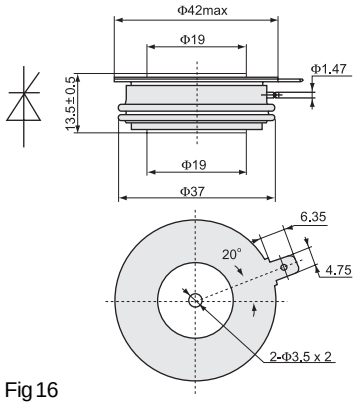


Fig 16

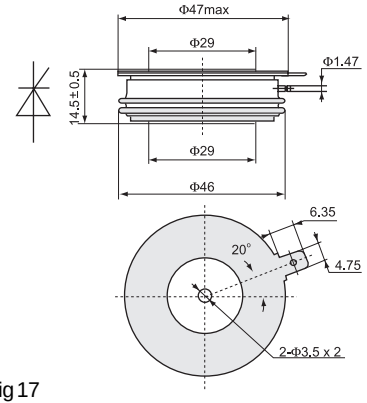


Fig 17

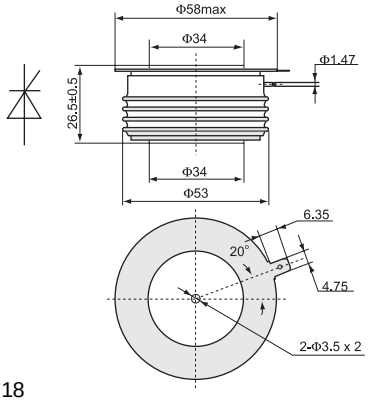


Fig 18

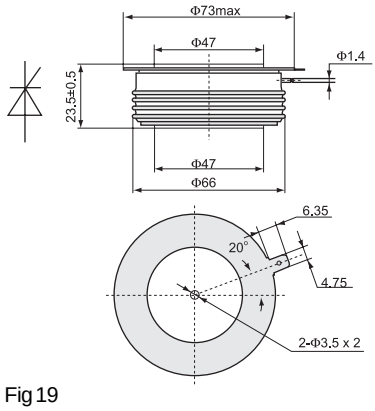


Fig 19

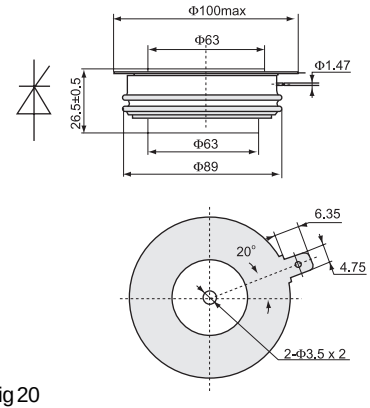


Fig 20

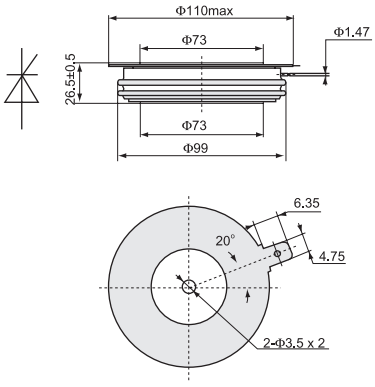


Fig 21

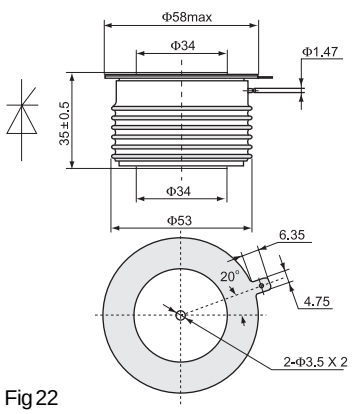


Fig 22

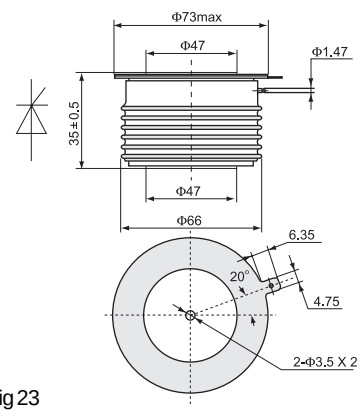


Fig 23

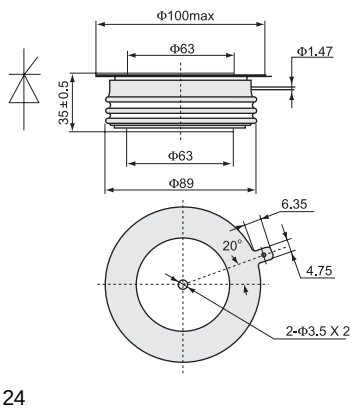


Fig 24

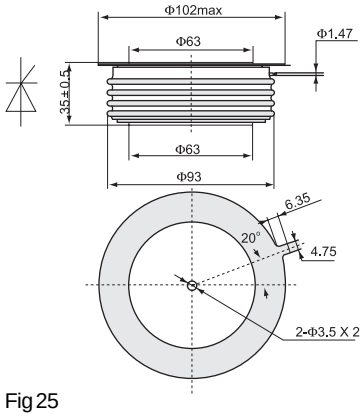


Fig 25

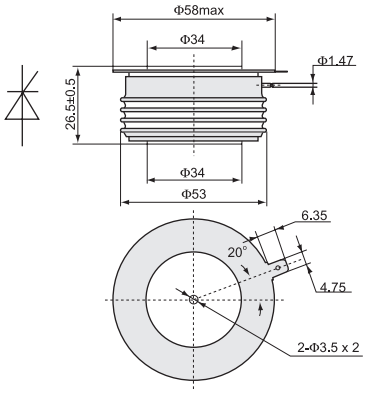


Fig 26

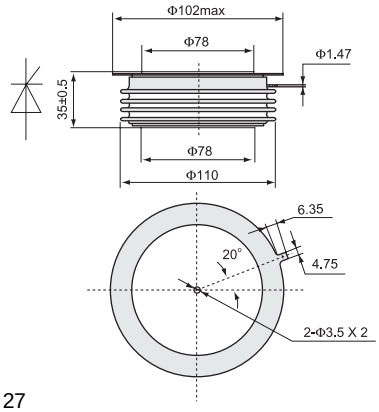


Fig 27

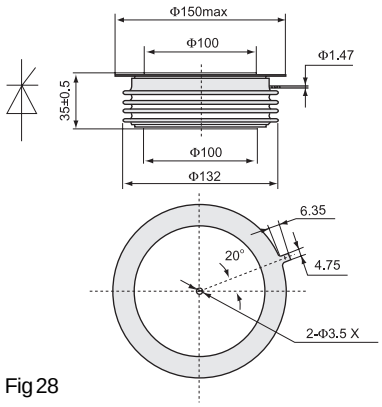


Fig 28

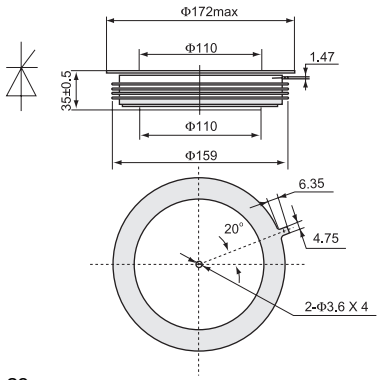


Fig 29

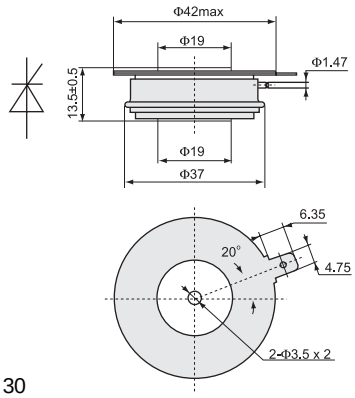


Fig 30

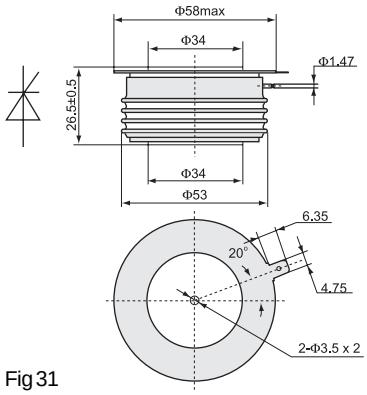


Fig 31

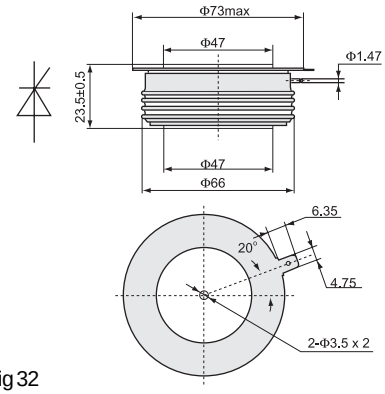


Fig 32

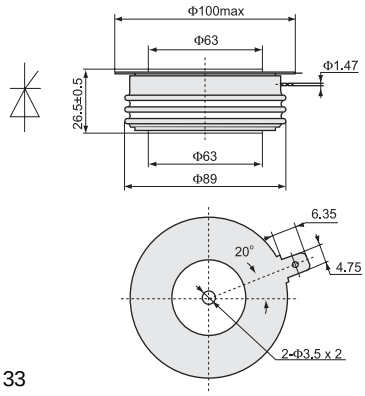


Fig 33

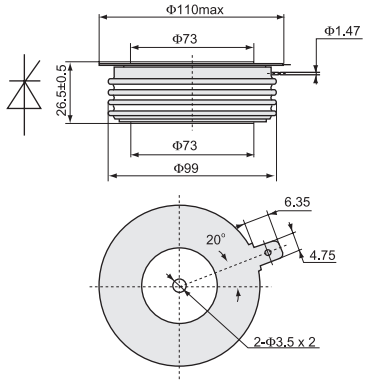


Fig 34

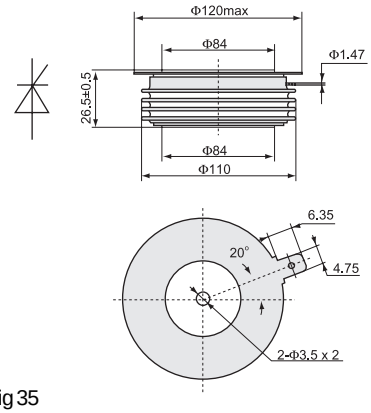


Fig 35

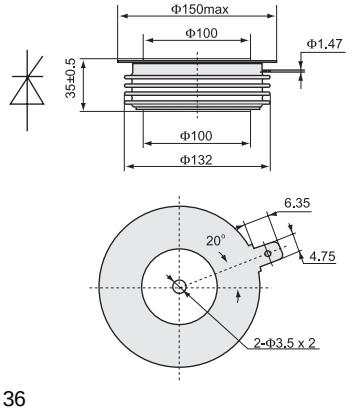
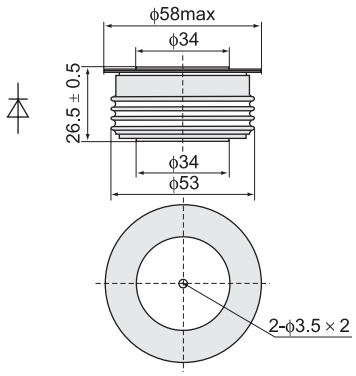


Fig 36



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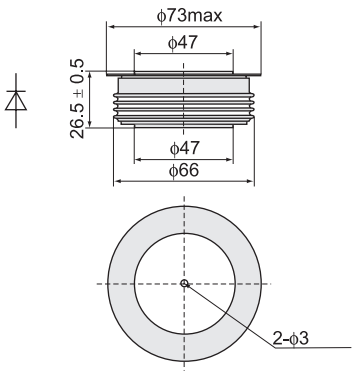


Fig 38

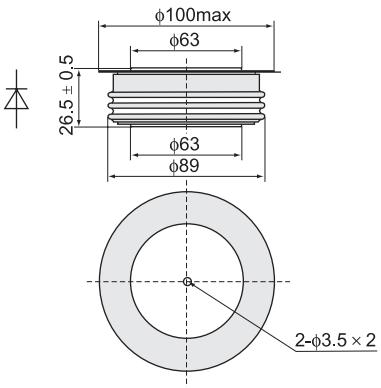


Fig 39

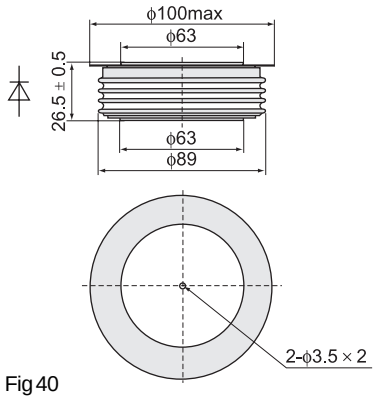


Fig 40

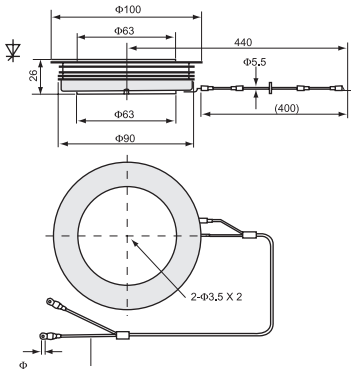


Fig 41

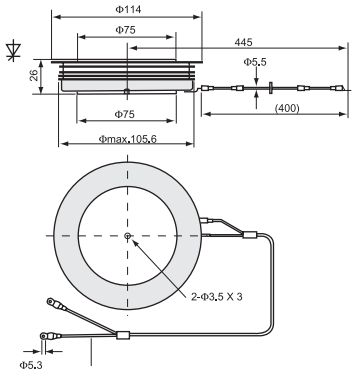


Fig 42

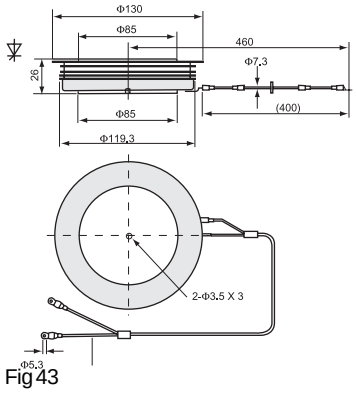
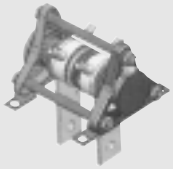


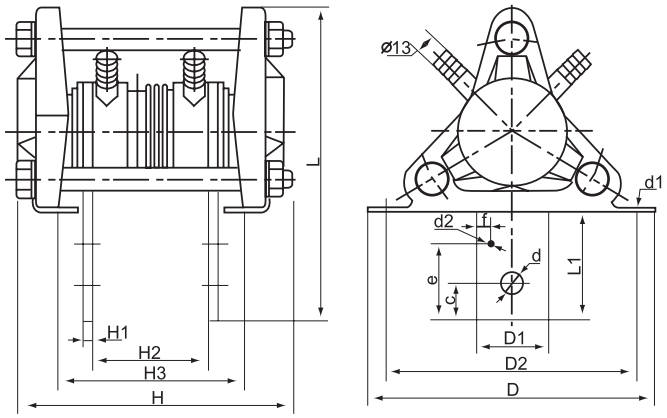
Fig 43

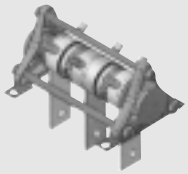
SS Series Water Cooling Heatsink



SS11, SS12 Monopipe Water Cooling Heatsink (Fig.1)

Type	Outline size			Arcpower lead size			Mounting size								
	L	D	H	L1	H1	D1	D2	H2	H3	d	d1	d2	c	e	f
SS11	140	135	145	53	4	30	112	64	105	2-φ9	9x14	M3	20	35	6
SS12	190	160	152	78	5	40	140	64	105	2-φ13	11x14	M3	20	65	8

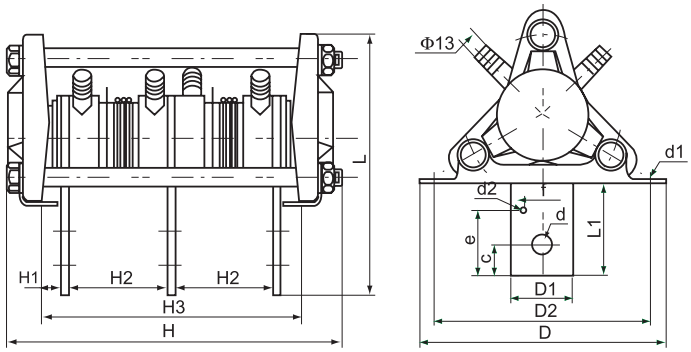




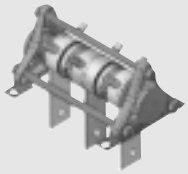
SS11BL, SS12BL Doublepipe Water Cooling Heatsink (Fig.2)

Type	Outline Size			Arcpower lead size			Mounting size								
	L	D	H	L1	H1	D1	D2	H2	H3	d	d1	d2	c	e	f
SS11BL	140	135	215	53	4	30	112	64	173	3-φ9	9x14	M3	20	35	6
SS12BL	190	160	220	78	5	40	140	64	174	3-φ13	11x14	M3	20	65	8

The tolerance of L, L1, D2, H2, H3 are ± 2, ± 2, ± 0.5, $^{+3}_{-1}$, ± 3 respectively.

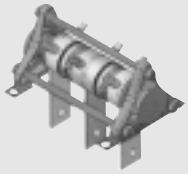


SS Series Water Cooling Heatsink



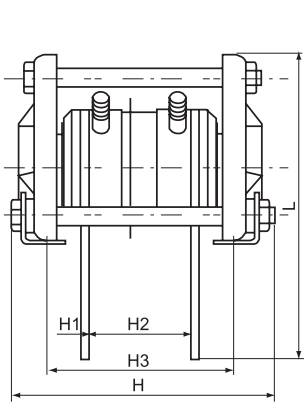
SS11BL, SS12BL Doublepipe Water Cooling Heatsink (Fig.2)

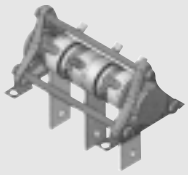
Type		SS11,SS11BL			SS12,SS12BL			
SurfaceDiameter		Plate Surface	RaisedSurface		PlateSurface	RaisedSurface		
		ϕ45	ϕ23	ϕ27	ϕ55	ϕ32	ϕ37	ϕ41
Applicable casesurface	RaisedSurface	ϕ19~ϕ40			ϕ34~ϕ40			
	PlateSurface	ϕ24~ϕ28			ϕ32	ϕ37	ϕ41	
MountingForceP(KN)		3.3~20			5.5~25			
ThermalResistance		0.026			0.018			
APPlication		Thisproductappliesto200~800Aelementassemblings,waterflow≥4L/Min						



SS13, SS14 Monopipe Water Cooling Heatsink (Fig.3)

Type	Outline size			Arcpowerlead size			Mounting size											
	L	D	H	L1	H1	D1	D2	H2	H3	d	d1	d2	a	b	c	e	f	g
SS13	190	160	152	78	6	50	140	64	105	4-ϕ13	11x13	M3	15	20	15	65	8	20
SS14	220	195	188	85	6	55	165	74	130	4-ϕ13	11x13	M3	17.5	20	20	65	10	20

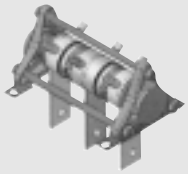




SS13BL, SS14BL Doublepipe Water Cooling Heatsink (Fig.4)

Type	Outline size			Arcpower lead size			Mounting size											
	L	D	H	L1	H1	D1	D2	H2	H3	d	d1	d2	a	b	c	e	f	g
SS13BL	190	160	220	78	6	50	140	64	172	6-ϕ13	11x13	M3	15	20	15	65	8	20
SS14BL	220	195	268	85	6	55	165	74	210	6-ϕ13	11x13	M3	17.5	20	20	65	10	20

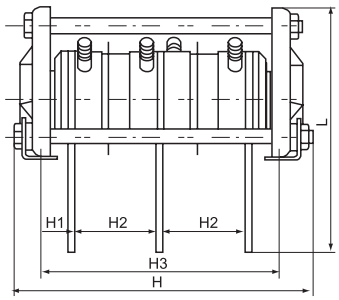
The tolerance of L, L1, D2, H2, H3 are ±2, ±2, $\pm 0.5^{+3}_{+1}$, ±3 respectively.

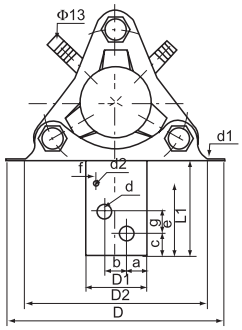


SS Series Water Cooling Heatsink

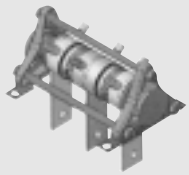
SS13BL, SS14BL Doublepipe Water Cooling Heatsink (Fig.4)

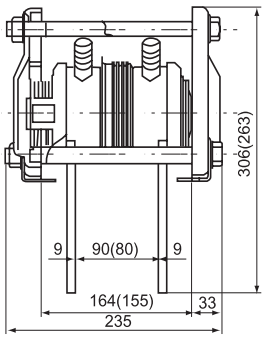
Type	Surface diameter	Applicable case surface	Mounting force P (KN)	Weight of heatsink (kg)	Thermalresistance (℃ /W)
SS13,SS13BL	ϕ68	ϕ40~ ϕ65	15~34	⩾1.7	0.015
SS14,SS14BL	ϕ84	ϕ50~ ϕ73	18~47	⩾2.2	0.013
Application	Thisproductappliesto500~2000Aelementassemblings, waterflow⩾6L/Min1500~2000Aelementswaterflow⩾7L/Min				

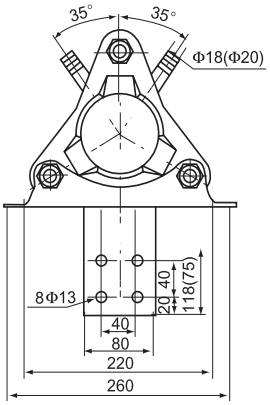




SS15 Monopipe Water Cooling Heatsink (Fig.5)



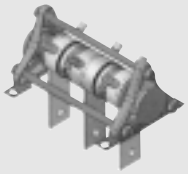




SS15BL Doublepipe Water Cooling Heatsink (Fig.6)

Types	Surface diameter	Applicablecase surface	Mountingforce P(KN)	Thermalresistance (℃ /W)
SS15,SS15BL	ϕ100	ϕ73~ ϕ100	60~70	0.011
Application	Thisproductappliesto2000~3000Aelementassemblings,waterflow⩾8L/Min			

SS Series Water Cooling Heatsink



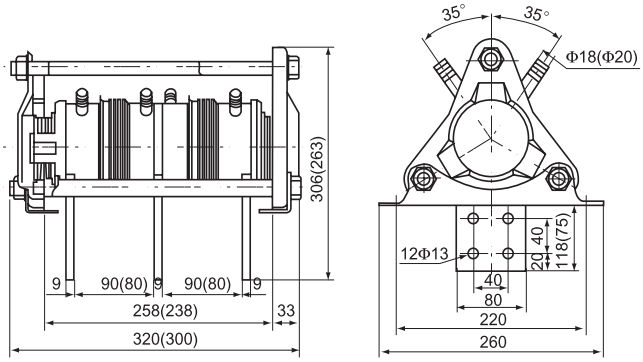
Features

- Compatible with SS14, SS15 Series
- Water Cooling Heatsinks respectively
- High efficiency heat transfer water-cooling design inside the heatsink
- Ultra low low thermal resistance, high heat-sinking capability
  Manifold mounting structures

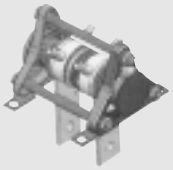
Typical Application

- UHP capsule devices
- High-power eliminator supply
- High-power induction heating supply

SS15BL Doublepipe Water Cooling Heatsink (Fig.6)



SS2x Series Water Cooling Heatsink

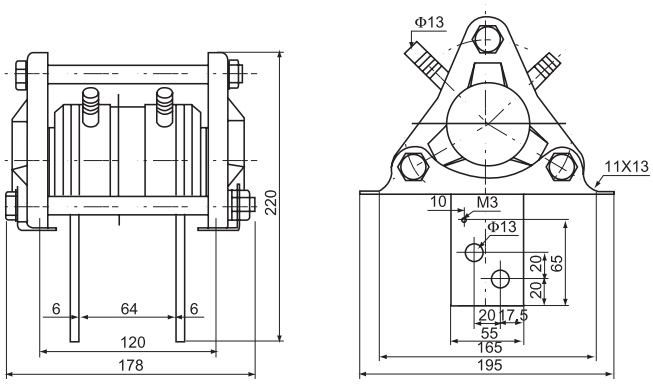


SS24, SS25: improved types of SS14, SS15 Series Water Cooling Heatsink

Type	Surface diameter	Applicable devices	Mounting force P(KN)	Waterflow (L/Min)	Thermal resistance(℃/W)
SS24Series	ϕ 84	Capsule rectifiers and thyristors of 50~84 in surface diameter	18~70	⩾ 6	0.010
SS25Series	ϕ 100	Capsule rectifiers and thyristors of 70~100 in surface diameter	60~100	⩾ 8	0.008

SS2X Series Heatsinks are compatible with SS14, SS15 Series completely, please refer to Fig.7~Fig.10

SS24(Fig.7)

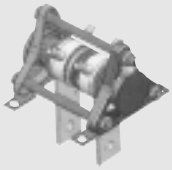


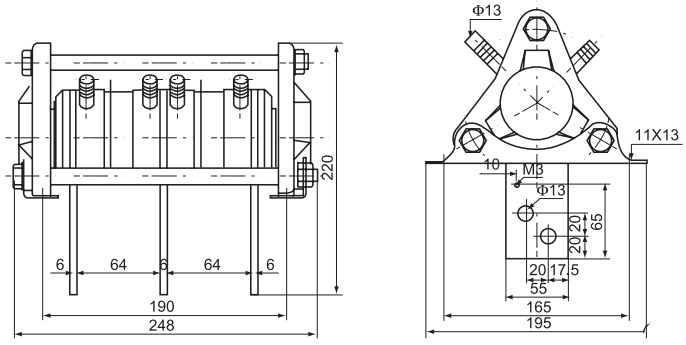
Semiconductor Device

Heatsink for thyristor & rectifier diode

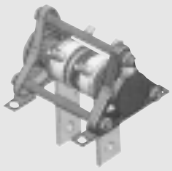
SS2x Series Water Cooling Heatsink

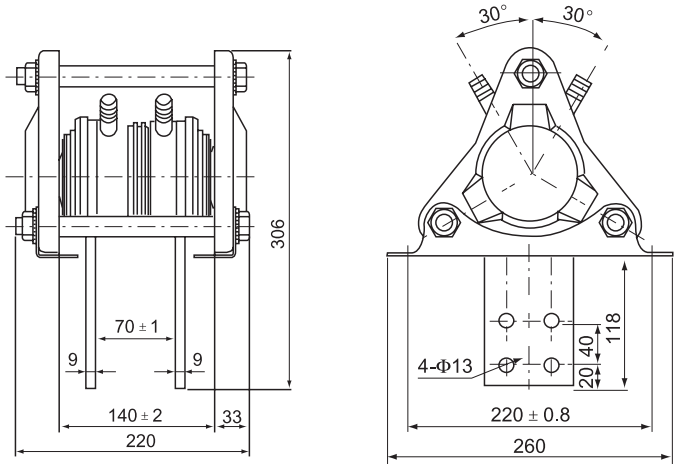
SS24BL(Fig.8)



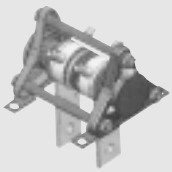


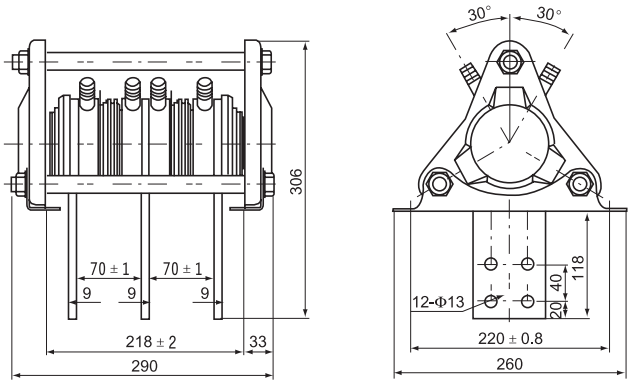
SS25(Fig.9)

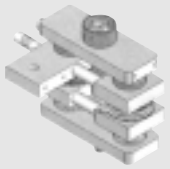




SS25BL(Fig.10)





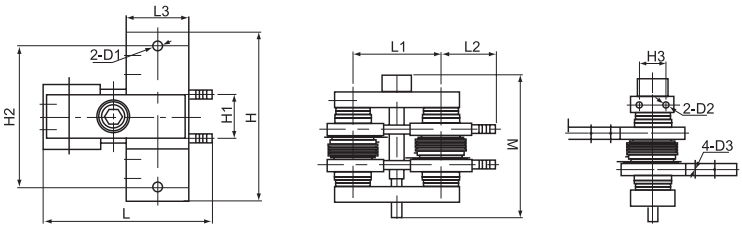


D-Type Water Cooling Heatsink

DSS3, DSS5, DSS6, DSS8 Water Cooling Heatsink (Fig.11)

Type	Outline size						Mountingsize					
	L	L1	L2	L3	H	H1	H2	H3	D1	D2	D3	Wmax
DSS3	140	70	50	40	118	25	88	25	ϕ8.2	M5x7	M3x6	135
DSS5	170	88	57	50	130	30	100	30	ϕ11	M6x15	M3x6	155
DSS6	180	93	59.5	55	151	35	121	30	ϕ11	M6x15	M3x6	155
DSS8	193	100	62	60	190	50	160	30	ϕ11	M6x10	M3x6	160

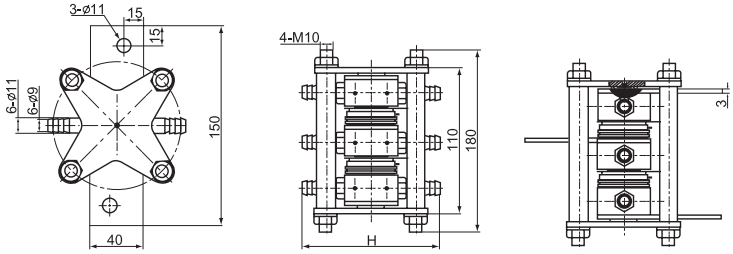
Type	Maximum surface dimension	Applicable case surface	Thermalresistance (℃/W)	Application
DSS3	40X40	ϕ19~ϕ34	0.030	This product applies to 300~800Aelement assmblings,and inverse parallel connection power sets,waterflow ⩾ 4L/Min
DSS5	50X50	ϕ34~ϕ40	0.026	
DSS6	55X55	ϕ34~ϕ45	0.022	
DSS8	60X60	ϕ34~ϕ47	0.018	

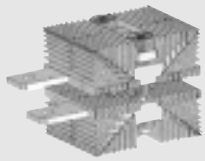


HSS3-type Water Cooling Heatsink

HSS3 Water Cooling Heatsink (Fig.12)

Type	Maximum surface dimension	Applicable case surface	Thermal resistance (℃/W)	Weight (kg)	Application
HSS3	40x40	ϕ19~ϕ34	0.030	2.2	This product applies to 200~400Aelement assmblings, and inverse parallel connection power sets, waterflow ⩾ 4L/Min





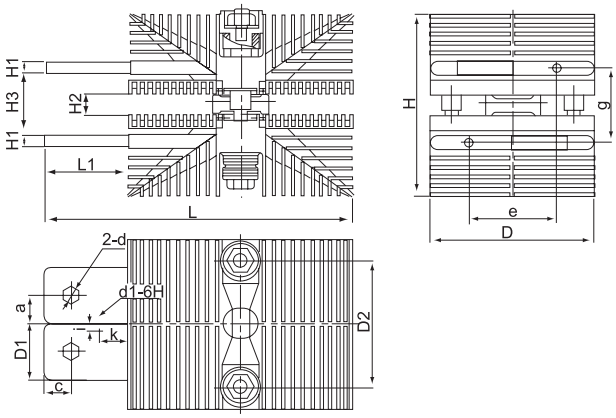
SF Series Air Cooling Heatsink

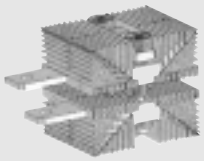
SF12, SF13 Monopipe Air Cooling Heatsink (Fig.13)

Type	Outline size			Arc power lead size				Mounting size									
	L	D	H	L1	D1	H1	D2	H2	H3	d	d1	a	c	e	g	i	k
SF12	200	110	125	60	40	8	80	15	22	ϕ13	M8	20	20	55	30	6	20
SF13	220	120	130	60	40	8	90	15	45	ϕ13	M8	20	20	64	53	6	20

The tolerance of D, H, H2, H3, g are $^{+2}_{-1}$, $^{+5}_{0}$, $^{+3}_{-1}$, $^{+4}_{-1}$, $^{+5}_{-2}$ respectively.

Type		SF12			SF13		
Surface diameter		Plate Surface	Raised Surface		Plate Surface	Raised Surface	
		ϕ65	ϕ23	ϕ27	ϕ65	ϕ27	ϕ27	ϕ31
Applicable case surface	Raised Surface	ϕ19~ϕ40			ϕ34~ϕ40		
	Plate Surface	ϕ24~ϕ28			ϕ28~ϕ32		
Mounting force P (KN)		3.3~20			5.5~25		
Thermal resistance (℃/W)		0.090			0.071		
Flow resistance (Pa)		45			55		
Application		This product applies to 200~800A element assemblings, wind speed ⩾4m/sec					





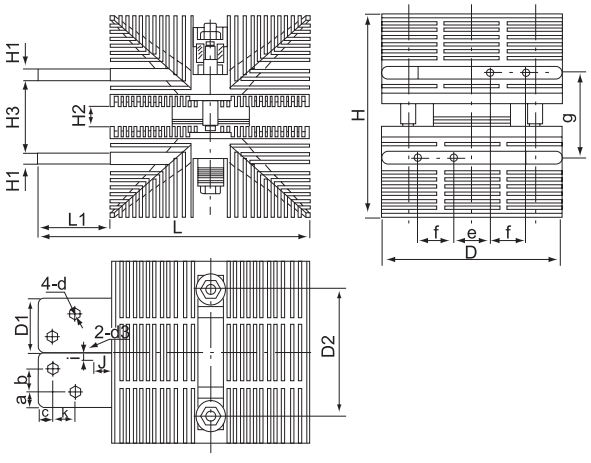
SF Series Air Cooling Heatsink

SF14, SF15, SF16, SF17 Monopipe Air Cooling Heatsink (Fig.14)

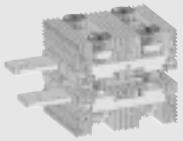
Type	Outline size			Arcpower lead Size			Mounting size											
	L	D	H	L1	D1	H1	D2	H2	H3	d	d1	a	b	c	e	g	i	j	k
SF14	250	140	145	80	50	10	105	15	45	ϕ11	M6	12.5	25	12.5	40	55	8	20	25
SF15	280	140	165	80	60	12	105	15	50	ϕ13	M8	17.5	25	15	40	62	8	20	25
SF16	280	180	200	80	60	12	130	15	66	ϕ13	M8	17.5	25	15	40	78	8	20	25
SF17	300	200	215	80	60	12	130	15	73	ϕ13	M8	17.5	25	15	40	85	8	24	25

The tolerance of D, H, H2, H3, g are $^{+2}_{-1}$, $^{+5}_{0}$, $^{+3}_{-1}$, $^{+4}_{-1}$, $^{+5}_{-2}$ respectively

Type		SF14			SF15				SF16	SF17
Surface Diameter		Plate Surface	Raised Surface		Plate Surface	Raised Surface			Plate Surface	Plate Surface
		ϕ82	ϕ32	ϕ37	ϕ82	ϕ32	ϕ37	ϕ42	ϕ82	ϕ120
Applicable casesurface	Raised Surface	ϕ34~ϕ45			ϕ40~ϕ47				ϕ45~ϕ65	ϕ40~ϕ73
	PlateSurface	ϕ32 ϕ37			ϕ32 ϕ37 ϕ42				-	-
Mounting Force P (KN)		5.5~30			10~34				15~40	15~47
ThermalResistance(℃/W)		0.056			0.048				0.037	0.030
FlowResistance(Pa)		60			65				70	75
Application		Thisproductappliesto600~2000Aelementassemblings,windspeed ⩾4m/sec,1500Aaboveelementassemblings,windspeed⩾6m/sec								

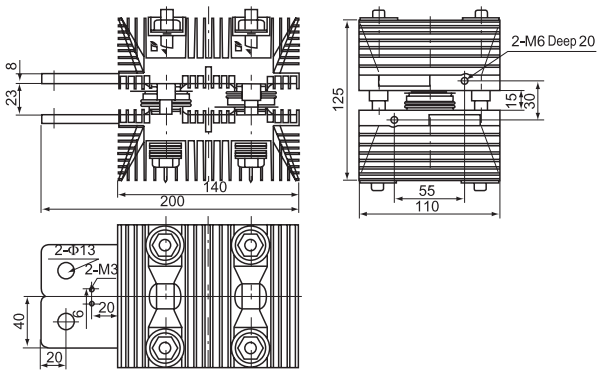


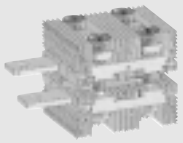
SF Series Air Cooling Heatsink



SF12BL Doublepipe Air Cooling Heatsink (Fig.15)

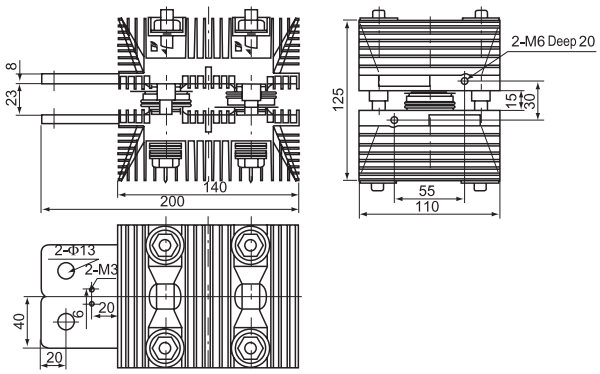
Surface dimension	Applicable case surface	Mounting force P(KN)	Thermal resistance (℃/W)	Flow resistance (Pa)	Application
ϕ27	ϕ19~ϕ25	3.3~20	0.050	45	Thisproductapplies to200Aelement assemblings,and inverseparallel connectionpower sets,windspeed ⩾4m/sec



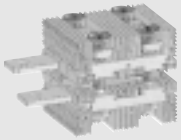


SF13BL Doublepipe Air Cooling Heatsink(Fig.16)

Surface dimension	Applicable case surface	Mountingforce P(KN)	Thermal resistance (℃/W)	Flow resistance(Pa)	Application
ϕ66	ϕ34	5.5~25	0.130	45	This product appliesto 200~300Aelement assemblings,and inverseparallel connectionpower sets,windspeed ⩾4m/sec

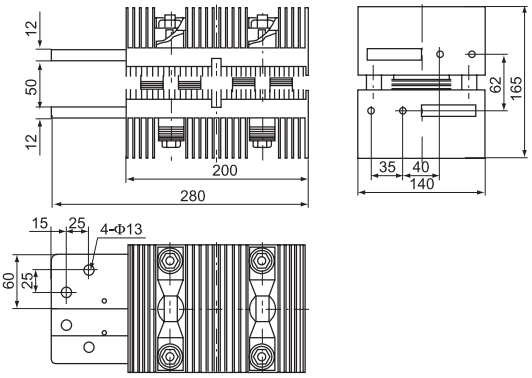


SF Series Air Cooling Heatsink

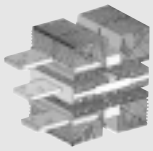


SF15BL Doublepipe Air Cooling Heatsink(Fig.17)

Surface dimension	Applicable case surface	Mountingforce P(KN)	Thermal resistance (℃/W)	Flow resistance (Pa)	Application
ϕ 82	ϕ 34~ ϕ 45	10~34	0.090	45	Thisproductapplies to300~500Aelement assemblings,and inverseparallel connectionpowersets, windspeed ⩾4m/sec



SF15CL Doublepipe Air Cooling Heatsink(Fig.18)



Surface dimension	Applicable case surface	Mountingforce P(KN)	Thermal resistance (℃/W)	Flow resistance (Pa)	Application
ϕ 82	ϕ 34~ ϕ 45	10~34	0.090	45	Thisproductapplies to300~500Aelement assemblings,and inverseparallel connectionpower sets,windspeed ⩾6m/sec