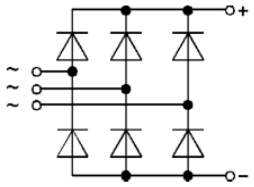
Three Phase Bridge Rectifier, 100 Amps

Features

- Easy connections
- Excellent power volume ratio
- Insulated type



MDS

Voltage Ratings (T_J = 25°C unless otherwise noted)				
Type number	**Voltage code**	**V_{RRM}, Max. repetitive peak reverse voltage (V)**	**V_{RSM}, Max. non-repetitive peak reverse voltage (V)**	**I_{RRM} max @ T_J max (mA)**
MDS100	80	800	900	10
	100	1000	1100	
	120	1200	1300	
	140	1400	1500	
	160	1600	1700	

Electrical Specifications (T_J = 25°C unless otherwise noted)				
Parameters	**Conditions**	**Symbol**	**Values**	**Units**
Maximum DC output current	T_C = 85°C	I_{DC}	100	A
Forward surge current (non-repetitive), one cycle	f = 50 Hz	I_{FSM}	1150	A
Fusing current		I^2t	6600	A^2s
Maximum forward voltage drop	I_{FM} = 100A, T_J = 25 °C	V_{FM}	1.3	V
RMS isolation voltage		V_{ISO}	3000	V

Thermal and Mechanical Specifications (T_J = 25°C unless otherwise noted)				
Parameters		**Symbol**	**Values**	**Units**
Maximum operating junction temperature range		T_J	- 40 to + 150	°C
Maximum storage temperature range		T_{STG}	- 40 to + 150	°C
Maximum thermal resistance, junction to case		$R_{th(J-C)}$	0.16	°C/W
Mounting torque	to heatsink	F	4 ± 15%	Nm
	to terminal		4 ± 15%	
Approximate weight		W	180	g

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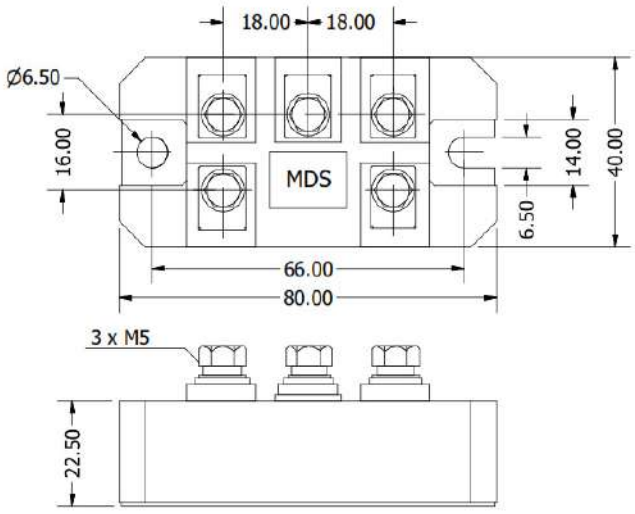
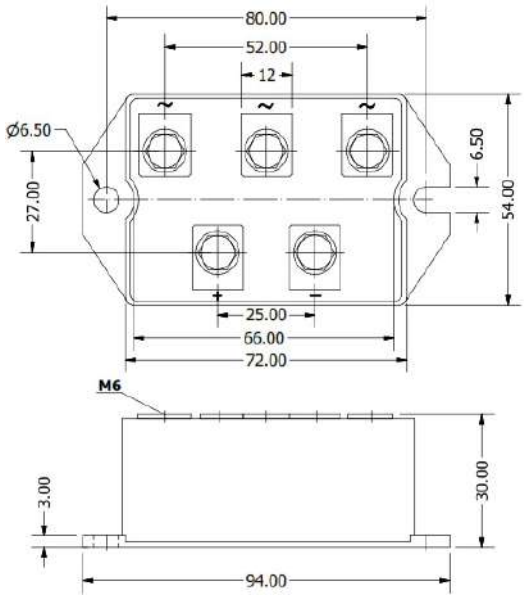
Package Outline

(All dimensions in mm)



Package Type	D



Package Type	S

Ordering Table

MDS	*100*	*/*	*120*
1	2		3

1 – Three-Phase Bridge
2 – Current = I_D
3 – Voltage Code x 10 = V_{RRM} (See Voltage Ratings Table)

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Three Phase Silicon Bridge Rectifier

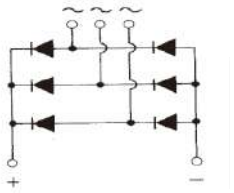
V_{RRM} = 800 V - 1600 V

$I_{F(AV)}$ = 100 A

Features

- High Surge Capability
- Types from 800 V to 1600 V V_{RRM}
- Not ESD Sensitive

Three Phase Package



Maximum ratings, at T_j = 25 °C, unless otherwise specified

Parameter	Symbol	Conditions	MDS100-08	MDS100-12	MDS100-16	Unit
Repetitive peak reverse voltage	V_{RRM}		800	1200	1600	V
Reverse unrepeated voltage	V_{RSM}		960	1320	1760	V
Operating temperature	T_j		-40 to 150	-40 to 150	-40 to 150	°C
Storage temperature	T_{stg}		-40 to 125	-40 to 125	-40 to 125	°C

Electrical characteristics, at Tj = 25 °C, unless otherwise specified

Single phase, half sine wave, 50 Hz, resistive or inductive load.
For capacitive load derate current by 20%.

Parameter	Symbol	Conditions	MDS100-08	MDS100-12	MDS100-16	Unit
Average forward current	$I_{F(AV)}$	3-phase, ful-wave, T_C = 90 °C	100	100	100	A
Peak forward surge current	I_{FSM}	1 pulse, 50/60 Hz, unrepeated	1000	1000	1000	A
Maximum forward voltage (per leg)	V_F	I_{FM} = 100 A, T_j = 25 °C	1.3	1.3	1.3	V
Maximum repeated reverse current at rated DC blocking voltage (per leg)	I_R	T_A = 25 °C	6	6	6	µA
		T_A = 125 °C	540	540	540	µA
Thermal characteristics						
Maximum thermal resistance, junction - case (per leg)	$R_{\Theta jc}$		0.22	0.22	0.22	°C/W

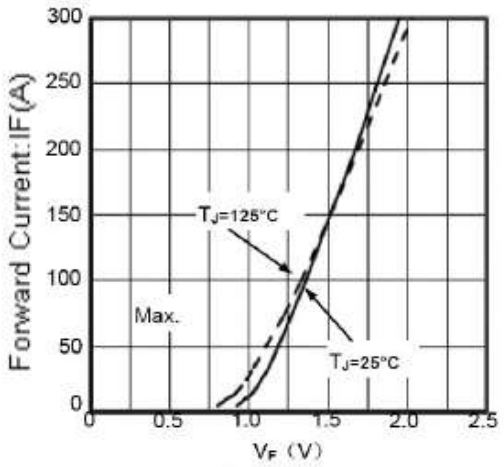


Figure1. Forward Voltage Drop vs Output Current

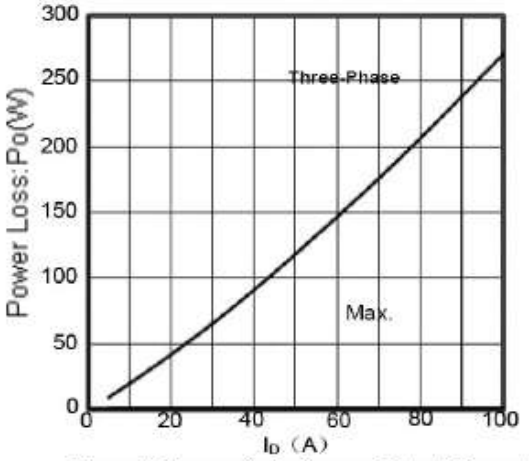


Figure2. Power dissipation vs. Output Current

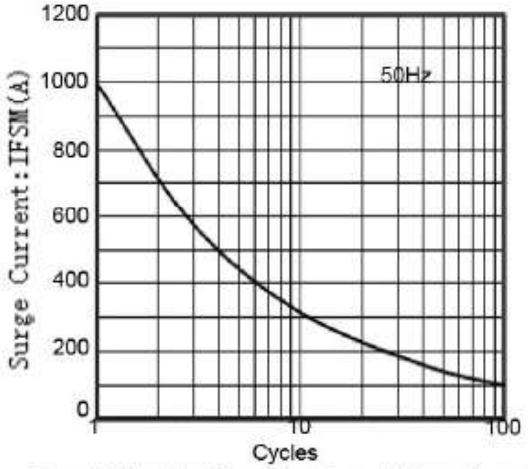


Figure3. Max Non-Repetitive Forward Surge Current

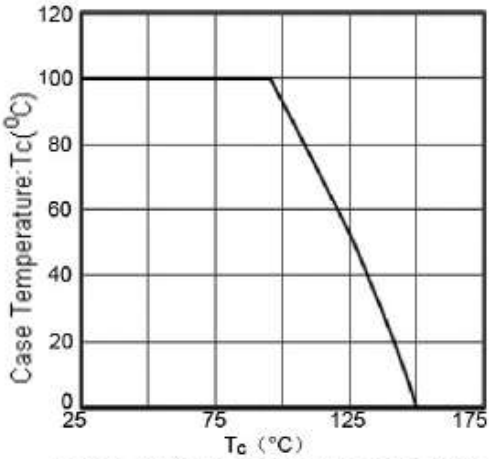


Figure4. Output Current vs.Case temperature

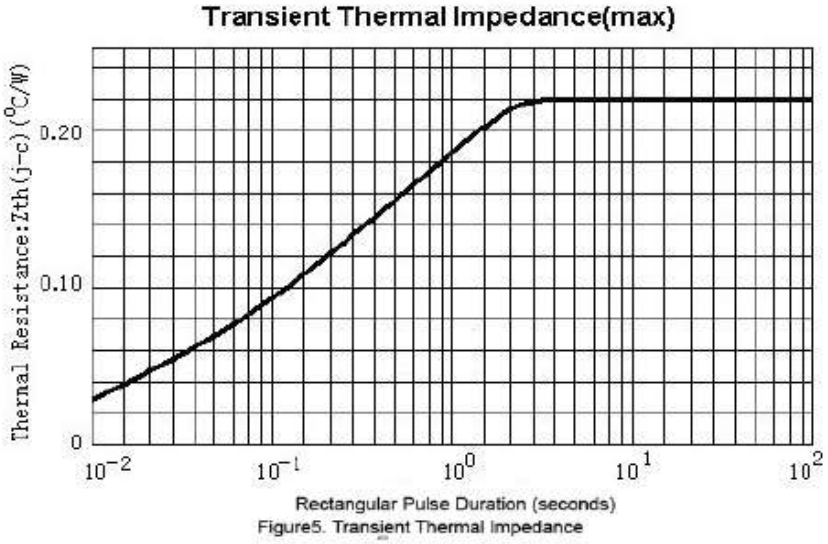
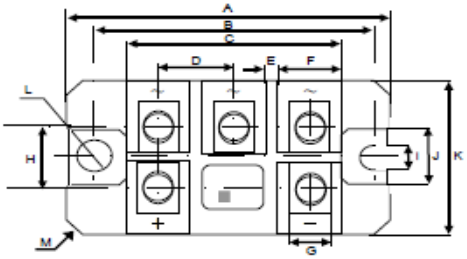
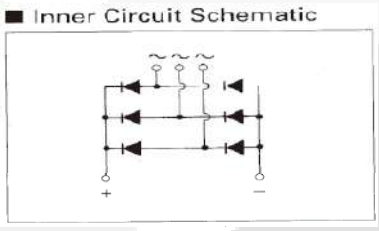


Figure5. Transient Thermal Impedance

Package dimensions and terminal configuration

Product is marked with part number and terminal configuration.





DIM	Inches		Millimeters	
	Min	Max	Min	Max
A	3.15	---	80	---
B	2.60	---	66	---
C	2.01	---	51	---
D	0.71	---	18	---
E	0.16	---	4	---
F	0.57	---	14.5	---
G	0.40	---	10.2	---
H	0.63	---	16	---
I	0.26	---	6.7	---
J	0.55	---	14	---
K	1.57	---	40	---
L	φ0.26	---	φ6.7	---
M	4-C5			
N	---	0.90 MAX	---	23 MAX
O	---	1.06 MAX	---	27 MAX
P	---	1.14 MAX	---	29 MAX

TECHSEM

MDS100

Three Phases Rectification Bridge Modules

Features:

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

Typical Applications

- Inverter
- Inductive heating
- Chopper

V_{RSM}	V_{RRM}	Type & Outline
900 V	800 V	MDS100-08-219H5
1300 V	1200 V	MDS100-12-219H5
1500 V	1400 V	MDS100-14-219H5
1700 V	1600 V	MDS100-16-219H5

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	T_j(°C)	VALUE			UNIT
				Min	Type	Max	
I_O	DC output current	Three-phase full wave rectifying circuit, T_C=100°C	150			100	A
I_{RRM}	Repetitive peak current	at V_{RRM}	150			8	mA
I_{FSM}	Surge forward current	10ms half sine wave V_R=0	100			0.80	KA
I^2t	I^2T for fusing coordination					3.2	A^2s*10^3
V_{FO}	Threshold voltage		150			0.7	V
r_F	Forward slop resistance					4.5	mΩ
V_{FM}	Peak forward voltage	I_{FM}=100A	25			1.30	V
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.20	°C /W
$R_{th(c-h)}$	Thermal resistance case to heatsink	Single side cooled				0.07	°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
Tvj	junction temperature			-40		150	°C
T_{stg}	Stored temperature			-40		125	°C
W_t	Weight				210		g
Outline	219H5						

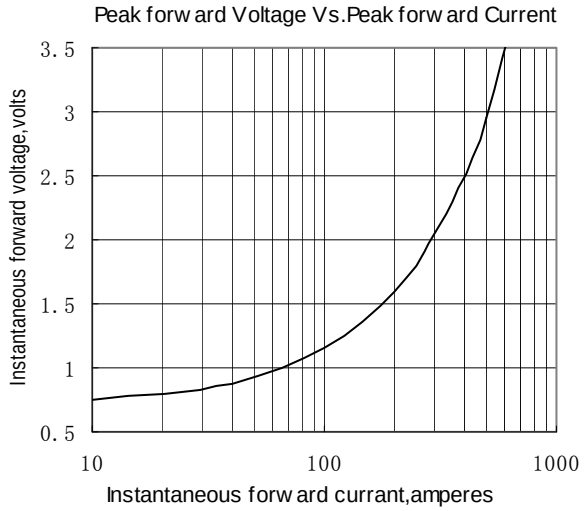


Fig.1

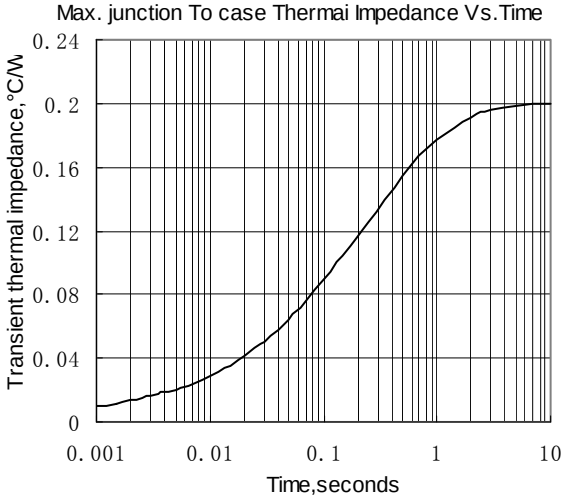


Fig.2

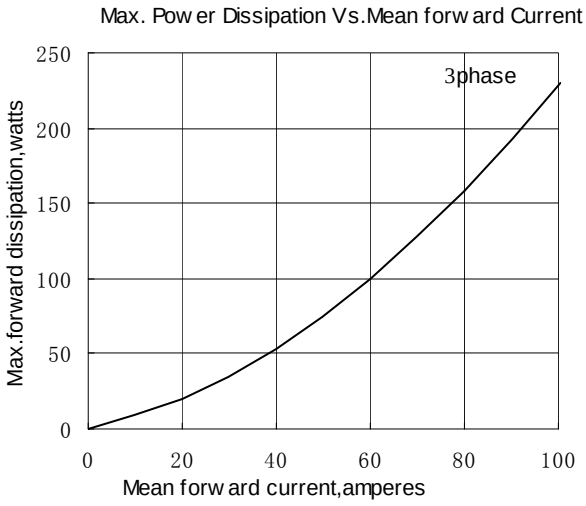


Fig.3

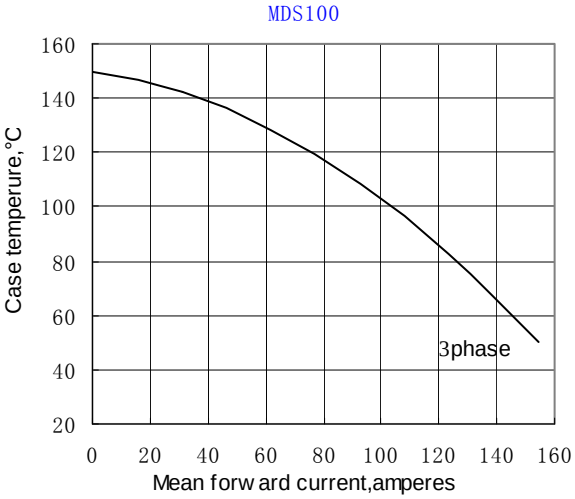


Fig.4

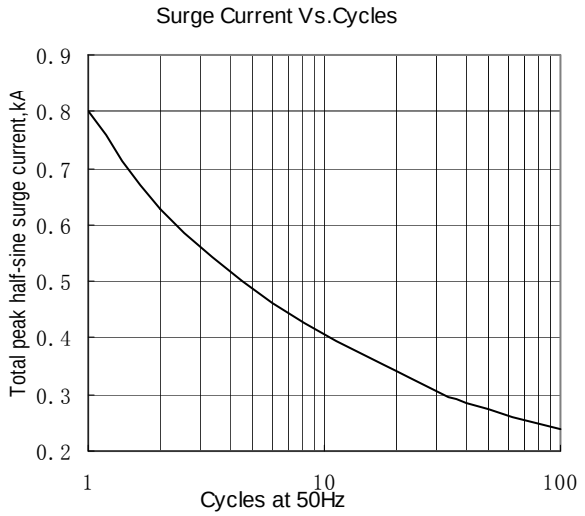


Fig.5

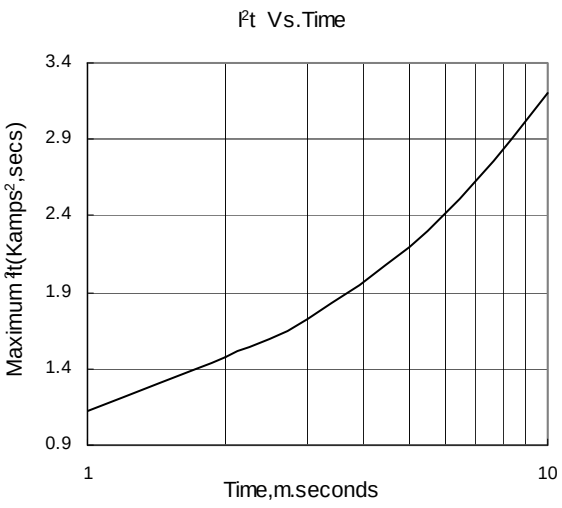
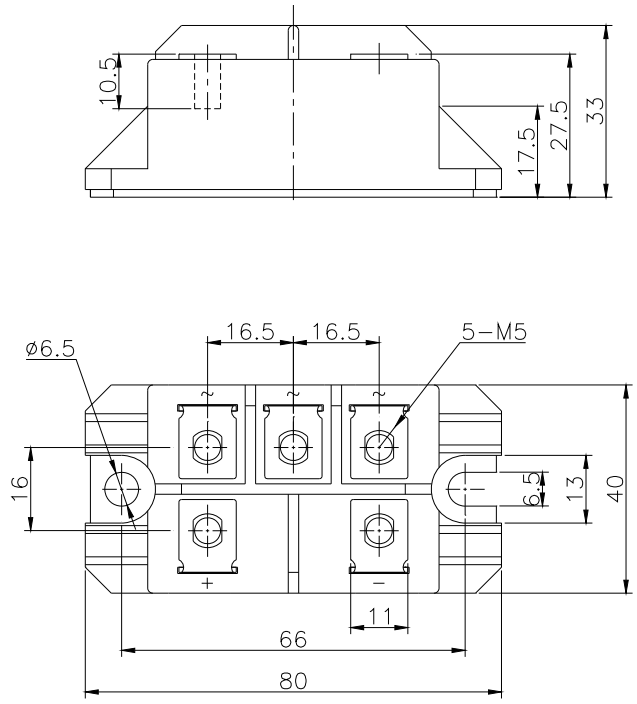


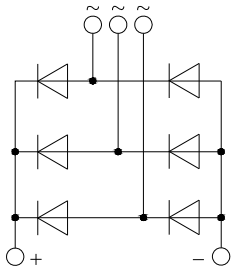
Fig.6

Outline:



219H5

MDS



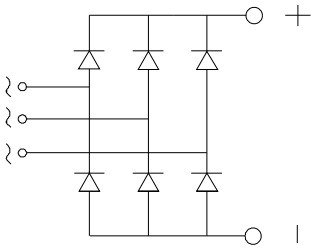
MDS100

Three Phase Rectifier Bridge

VRRM 800 to 1800V
ID 100Amp

Applications

Three phase rectifiers for power supplies
Rectifiers for DC motor field supplies
Battery charger rectifiers
Input rectifiers for variable frequency drives



Features

Three phase bridge rectifier
Blocking voltage:800 to 1800V

Module Type

TYPE	VRRM	VRSM
MDS100-08	800V	900V
MDS100-12	1200V	1300V
MDS100-16	1600V	1700V
MDS100-18	1800V	1900V

Maximum Ratings

Symbol	Conditions	Values	Units
I_D	Tc=100℃	100	A
I_{FSM}	Tvj=45℃ t=10ms (50HZ), sine	920	A
i^2t	Tvj=45℃ t=10ms (50HZ), sine	4200	A^2S
Viso	a.c.50HZ;r.m.s.;1min	2500	V
Tvj		-40 to 150	℃
Tstg		-40 to 125	℃
Weight	Module (Approximately)	220	g

Thermal Characteristics

Symbol	Conditions	Values	Units
Rth(j-c)	Per module	0.32	℃/W

Electrical Characteristics

Symbol	Conditions		Values	Units
V_{FM}	T=25℃	I_{FM}=300A	1.90	V
I_{RD}	Tvj=25℃	V_{RD}=V_{RRM}	≤0.5	mA
	Tvj=150℃	V_{RD}=V_{RRM}	≤5	mA

Performance Curves

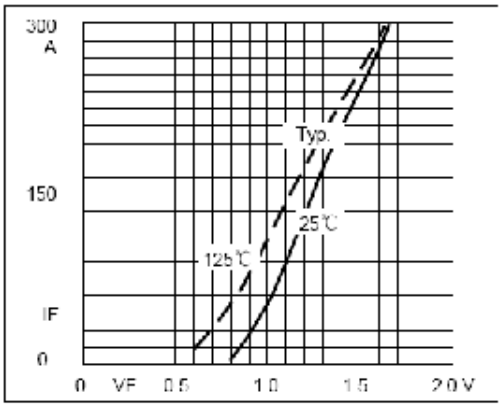


Fig1. Forward Characteristics

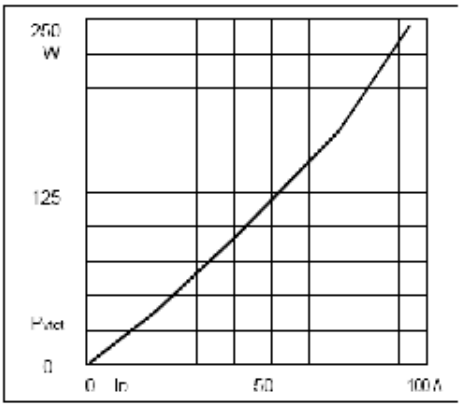


Fig2. Power dissipation

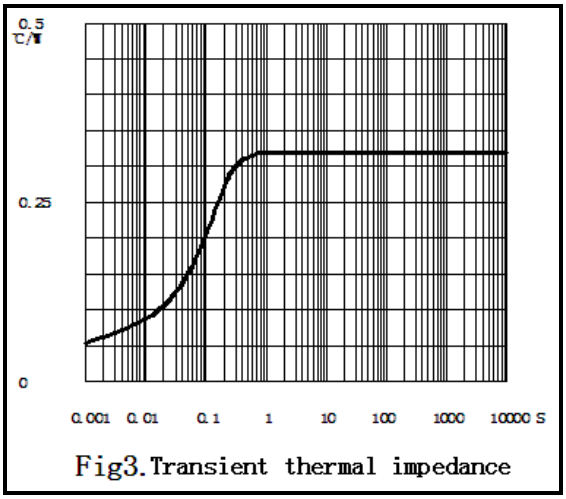


Fig3.Transient thermal impedance

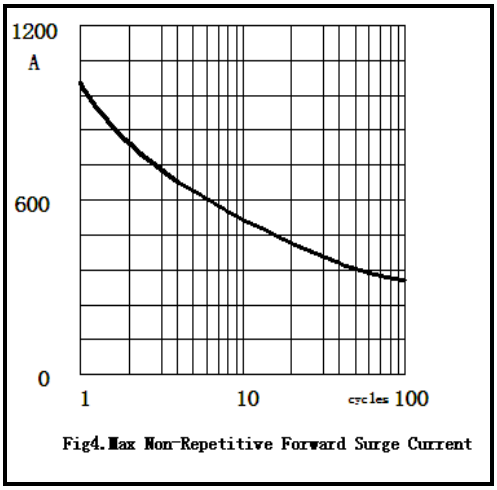


Fig4.Max Non-Repetitive Forward Surge Current

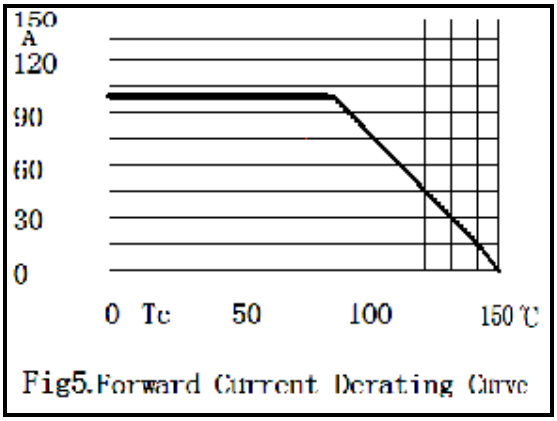
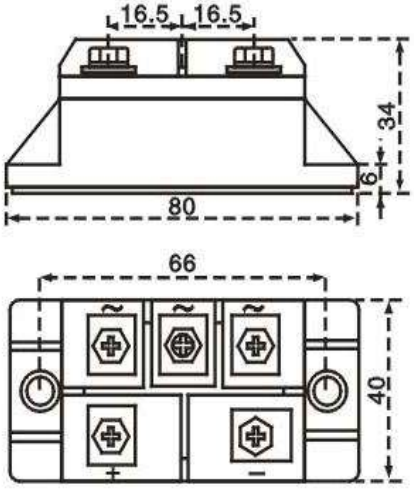


Fig5.Forward Current Derating Curve



Dimensions in mm

Three Phase Silicon Bridge Rectifier

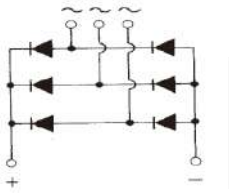
V_{RRM} = 800 V - 1600 V

$I_{F(AV)}$ = 150 A

Features

- High Surge Capability
- Types from 800 V to 1600 V V_{RRM}
- Not ESD Sensitive

Three Phase Package



Maximum ratings, at T_j = 25 °C, unless otherwise specified

Parameter	Symbol	Conditions	MDS150-08	MDS150-12	MDS150-16	Unit
Repetitive peak reverse voltage	V_{RRM}		800	1200	1600	V
Reverse unrepeated voltage	V_{RSM}		960	1320	1760	V
Operating temperature	T_j		-40 to 150	-40 to 150	-40 to 150	°C
Storage temperature	T_{stg}		-40 to 125	-40 to 125	-40 to 125	°C

Electrical characteristics, at Tj = 25 °C, unless otherwise specified

Single phase, half sine wave, 50 Hz, resistive or inductive load.
For capacitive load derate current by 20%.

Parameter	Symbol	Conditions	MDS150-08	MDS150-12	MDS150-16	Unit
Average forward current	$I_{F(AV)}$	3-phase, ful-wave, T_C = 90 °C	150	150	150	A
Peak forward surge current	I_{FSM}	1 pulse, 50/60 Hz, unrepeated	1500	1500	1500	A
Maximum forward voltage (per leg)	V_F	I_{FM} = 150 A, T_j = 25 °C	1.45	1.45	1.45	V
Maximum repeated reverse current at rated DC blocking voltage (per leg)	I_R	T_A = 25 °C	10	10	10	µA
		T_A = 125 °C	620	620	620	µA
Thermal characteristics						
Maximum thermal resistance, junction - case (per leg)	$R_{\Theta jc}$		0.18	0.18	0.18	°C/W

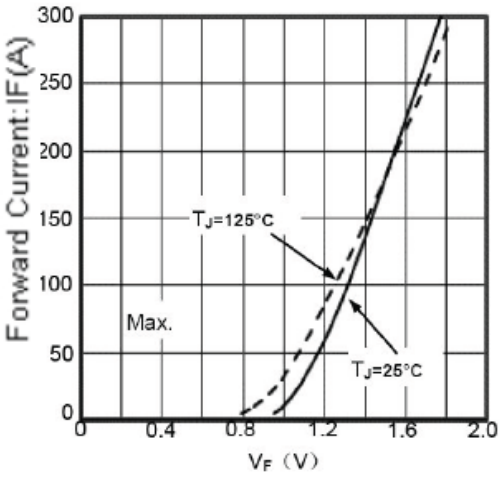


Figure1. Forward Voltage Drop vs Output Current

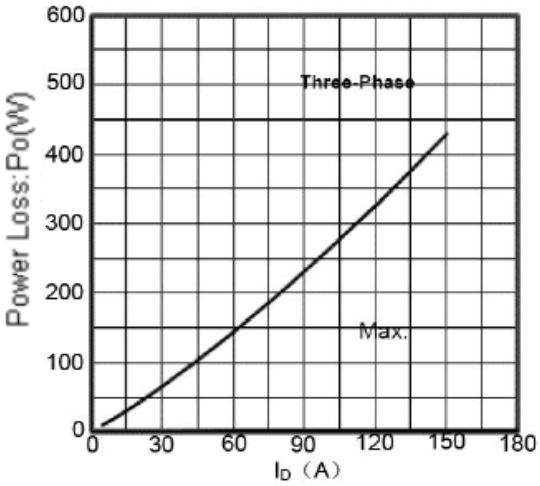


Figure2. Power dissipation vs. Output Current

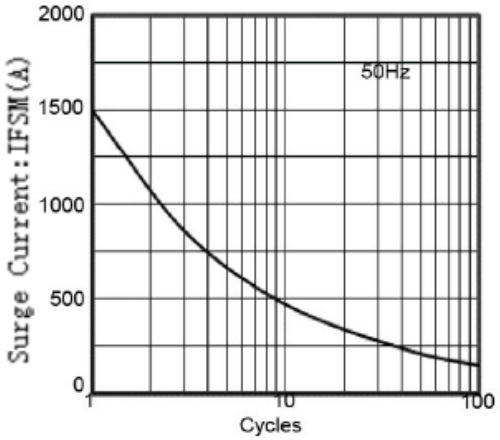


Figure3. Max Non-Repetitive Forward Surge Current

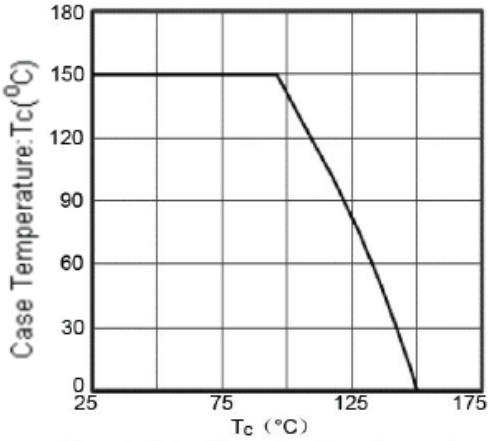


Figure4. Output Current vs.Case temperature

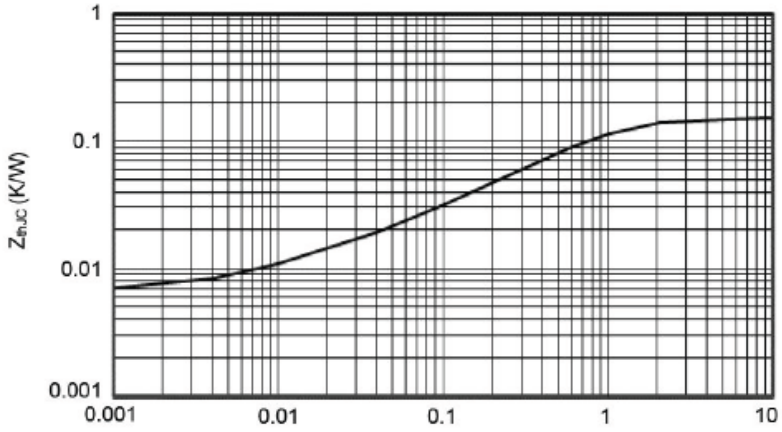
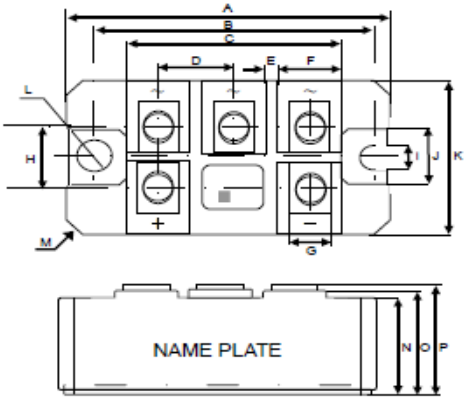
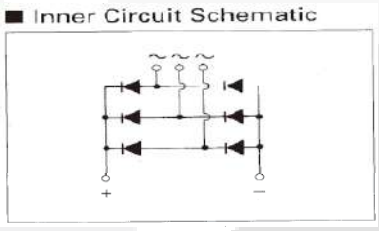


Figure5. Transient Thermal Impedance

Package dimensions and terminal configuration

Product is marked with part number and terminal configuration.





DIM	Inches		Millimeters	
	Min	Max	Min	Max
A	3.15	---	80	---
B	2.60	---	66	---
C	2.01	---	51	---
D	0.71	---	18	---
E	0.16	---	4	---
F	0.57	---	14.5	---
G	0.40	---	10.2	---
H	0.63	---	16	---
I	0.26	---	6.7	---
J	0.55	---	14	---
K	1.57	---	40	---
L	φ0.26	---	φ6.7	---
M	4-C5			
N	---	0.90 MAX	---	23 MAX
O	---	1.06 MAX	---	27 MAX
P	---	1.14 MAX	---	29 MAX

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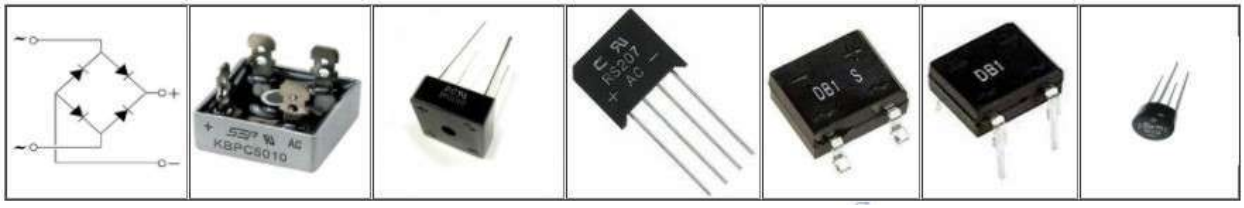
каталог, описание, технические, характеристики, datasheet, параметры, маркировка, габариты, фото, мост, диодный,



Диодные мосты
однофазные KBPC

Диодные мосты
однофазные QL

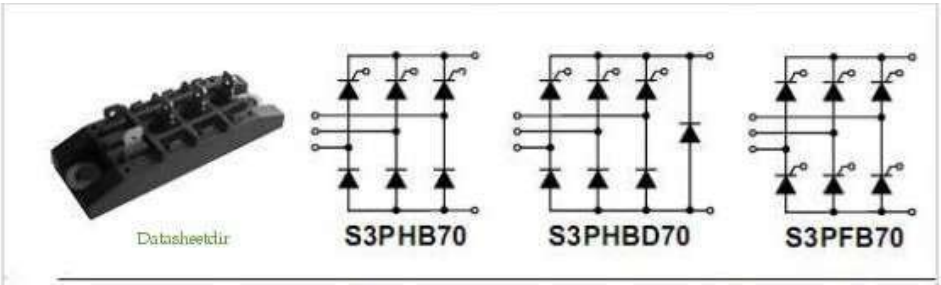
Диодные мосты
трёхфазные SQL

Диодные мосты
однофазные MDQ

Диодные мосты
трёхфазные MDS

Диодные мосты
однофазные DF10M

Минск www.fotorele.net www.tiristor.by
email minsk17@tut.by тел.+375447584780
и другие, радиодетали, электронные компоненты
каталог, описание, технические, характеристики,
datasheet,
параметры, маркировка, габариты, фото, аналог,
замена
смотрите ниже



Трехфазные полностью управляемые мосты

Трехфазные полууправляемые мосты

Трехфазные полууправляемые мосты с разрядным

Трехфазные тиристорные модули с общим анодом

Однофазные выпрямительные мосты