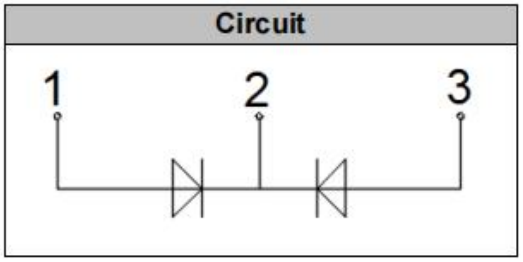


Glass Passivated Rectifier Diode Modules

VRRM 800 to 2000V
IFAV 240 A

Circuit



Applications

- Non-controllable rectifiers for AC/AC converters
- Line rectifiers for transistorized AC motor controllers
- Field supply for DC motors

Features

- Blocking voltage:800 to 2000V
- Heat transfer through aluminum oxide DBC ceramic isolated metal baseplate
- Glass passivated chip

Module Type

TYPE	VRRM	VRSM
MD240K08D2GE	800V	900V
MD240K12D2GE	1200V	1300V
MD240K16D2GE	1600V	1700V
MD240K18D2GE	1800V	1900V
MD240K20D2GE	2000V	2100V

Maximum Ratings

Symbol	Conditions	Values	Units
I_{FAV}	Single phase ,half wave 180°conduction Tc=95℃	240	A
I_{FSM}	t=10ms T_J =25℃	10000	A
I^2t	t=10ms T_J=25℃	500000	A^2s
V_{ISO}	AC 50Hz/60Hz; R.M.S; 1min	3000	V
T_J		-40 to +150	℃
Tstg		-40 to +125	℃
Mt	To Terminals(M6)	5±15%	N·m
Ms	To Heatsink(M6)	5±15%	N·m
Weight		165	g

Thermal Characteristics

Symbol	Conditions	Values	Units
Rth(j-c)	Junction to Case(Per Diode)	0.15	℃/W
Rth(c-s)	Case to Heat Sink	0.05	℃/W

Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
V_{FM}	T_J=25℃ I_F =300A	—	1.05	1.25	V
I_{RD}	T_J=150℃ V_R=V_{RRM}	—	—	5	mA
r_F	T_J=125℃		1.1		mΩ
VF0			0.8		V

Performance Curves

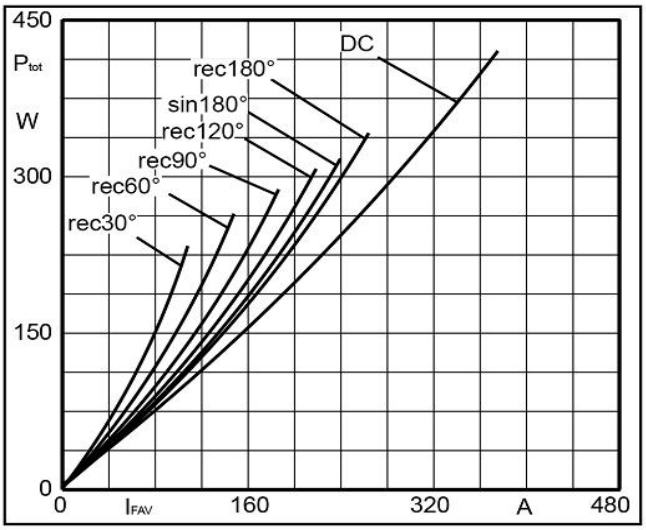


Fig1. Power dissipation

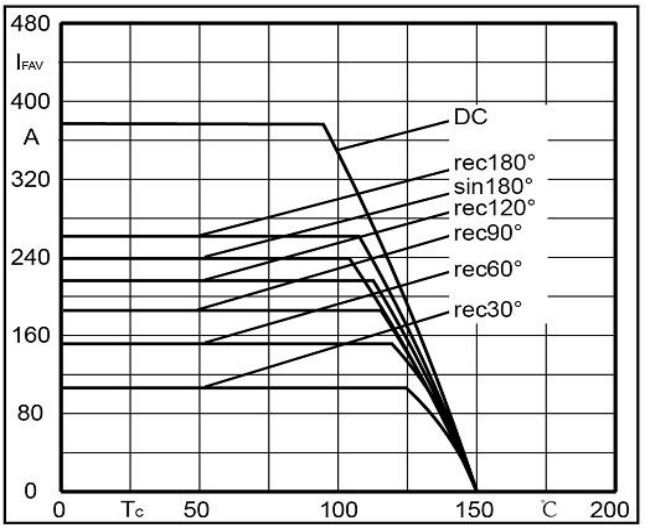


Fig2.Forward Current Derating Curve

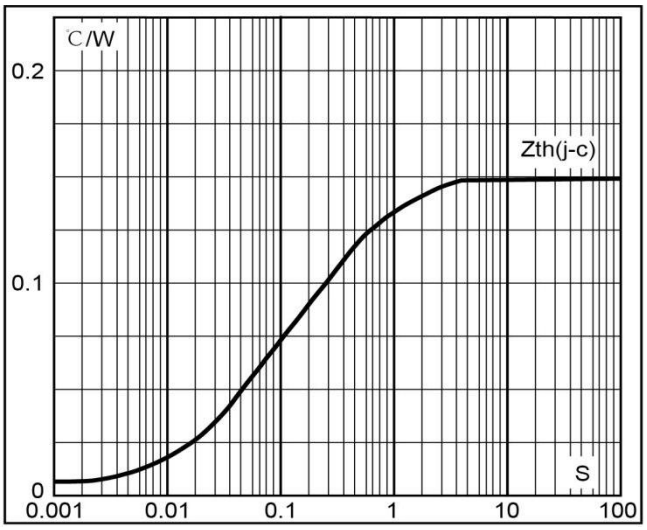


Fig3. Transient thermal impedance

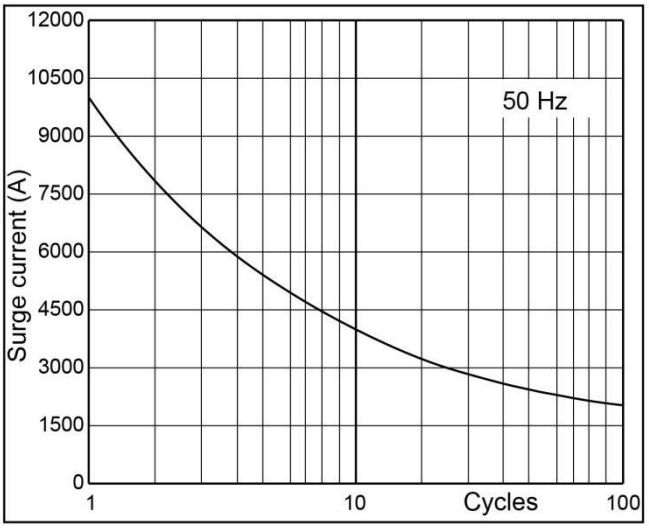


Fig4. Max Non-Repetitive Forward Surge Current

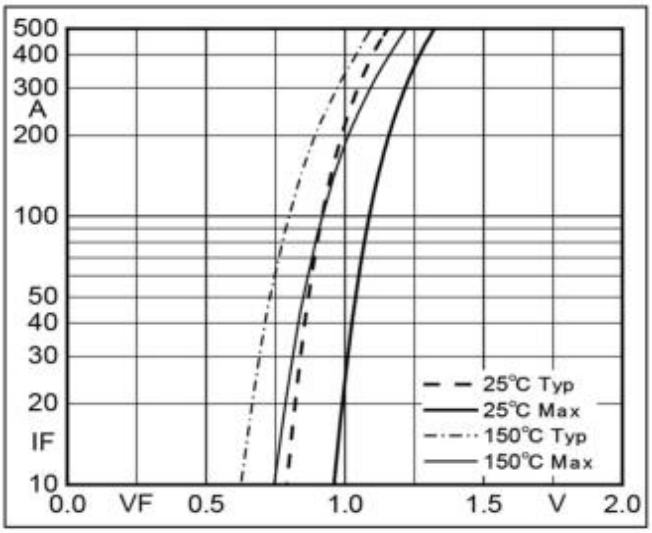
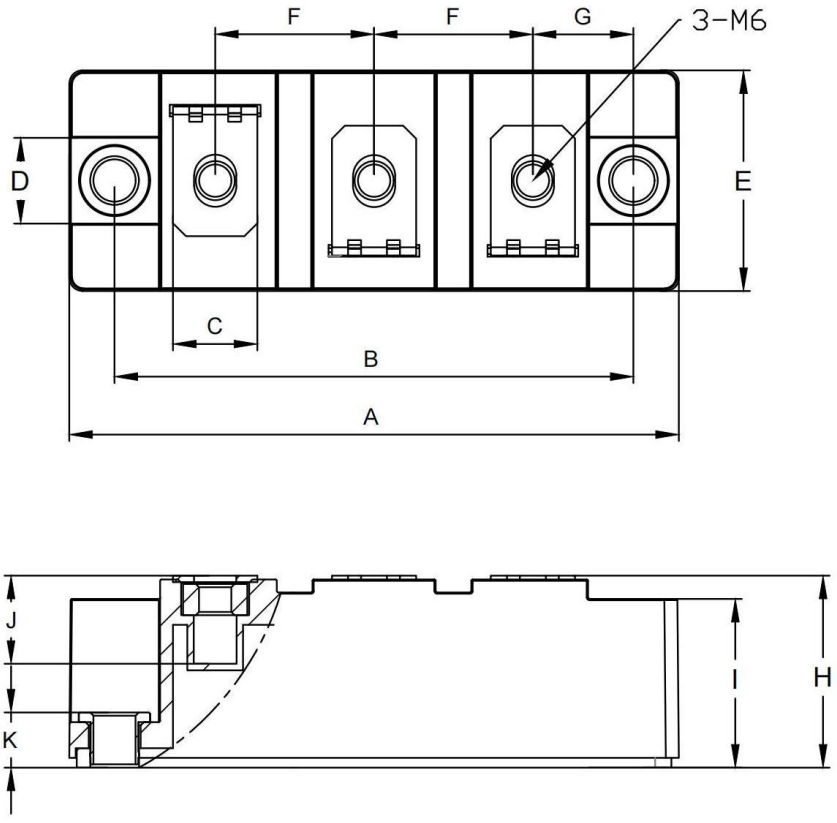


Fig5. Forward Characteristics

Package Outline Information

CASE: D2G



DIM	Min (mm)	Max (mm)	Note
A	93.5	94.5	
B	79.7	80.3	
C	12.7	13.3	
D	13.0	13.4	Ø
E	33.5	34.5	
F	24.2	24.8	
G	15.0	16.0	
H	29.5	30.5	
I	25.5	26.5	
J	12.5	13.5	
K	8.0	9.0	

Packing Standard

Item	Length: A(mm)	Width: B(mm)	Height: C (mm)	Quantity (PCS)
Inner Box	276	258	48	8
Outer Carton	545	295	240	80

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