Glass Passivated Rectifier Diode Modules

VRRM 800 to 1800V
IFAV 240 Amp

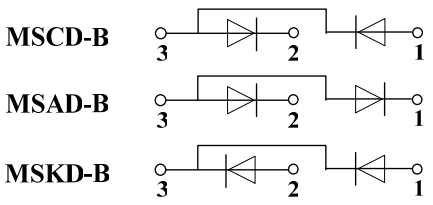
Applications

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

Features

- Blocking voltage:800 to 1800V
- Heat transfer through aluminum oxide DBC ceramic isolated metal baseplate
- Glass passivated chip

Circuit



Module Type

TYPE			VRRM	VRSM
MSCD240B-08	MSAD240B-08	MSKD240B-08	800V	900V
MSCD240B-12	MSAD240B-16	MSKD240B-12	1200V	1300V
MSCD240B-16	MSAD240B-16	MSKD240B-16	1600V	1700V
MSCD240B-18	MSAD240B-18	MSKD240B-18	1800V	1900V

Maximum Ratings

Symbol	Conditions	Values	Units
I_{FAV}	Single phase ,half wave 180°conduction Tc=97℃	240	A
$I_{F(RMS)}$	Single phase ,half wave 180°conduction Tc=87℃	360	A
I_{FSM}	t=10mS Tvj =45℃	7500	A
i^2t	t=10mS Tvj =45℃	281250	A^2s
V_{isol}	a.c.50HZ;r.m.s.;1min	3000	V
T_{vj}		-40 to +150	℃
T_{stg}		-40 to +125	℃
Mt	To terminals(M6)	5±15%	Nm
Ms	To heatsink(M6)	5±15%	Nm
Weight	Module	240	g

Thermal Characteristics

Symbol	Conditions	Values	Units
$R_{th(j-c)}$	Per diode	0.16	℃/W
$R_{th(c-s)}$	Module	0.05	℃/W

Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
V_{FM}	T=25℃ I_F =300A	—	1.15	1.40	V
I_{RD}	T_{vj}=150℃ V_{RD}=V_{RRM}	—	—	9	mA

Performance Curves

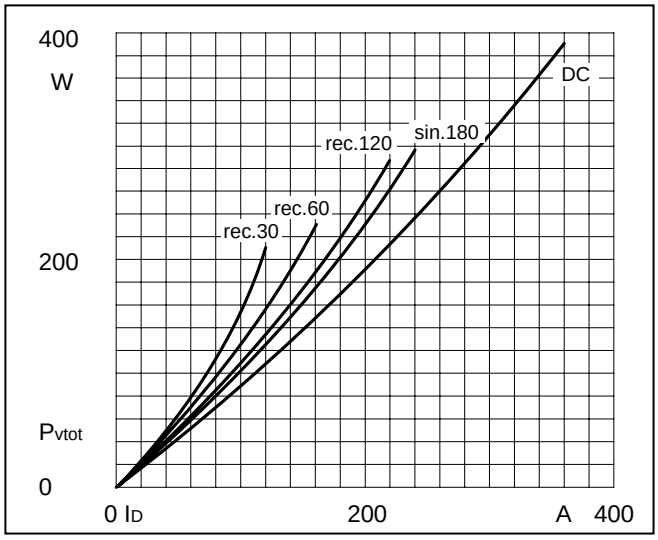


Fig1. Power dissipation

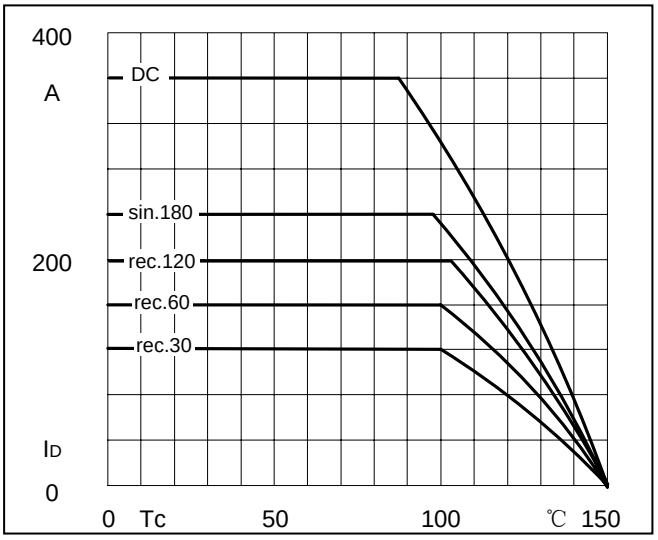


Fig2.Forward Current Derating Curve

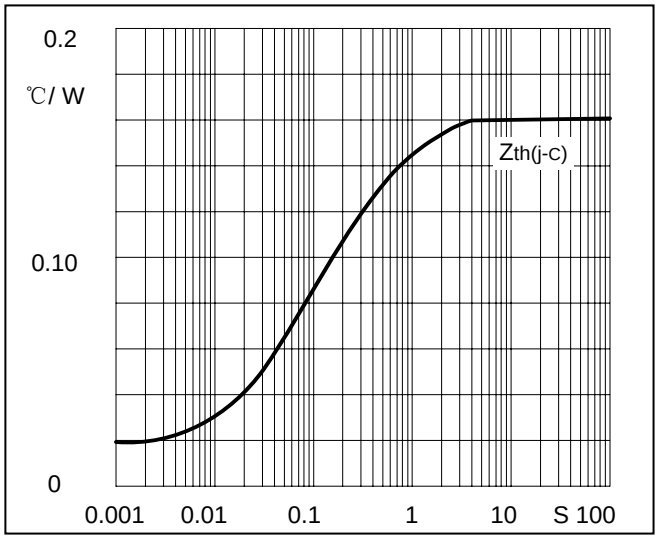


Fig3. Transient thermal impedance

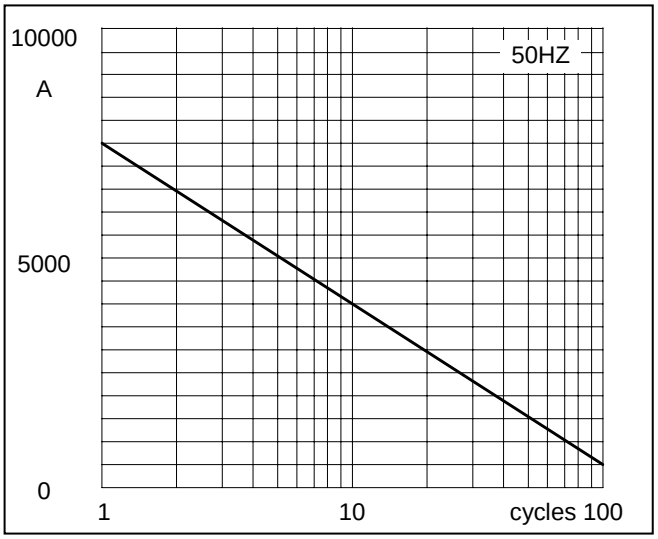


Fig4. Max Non-Repetitive Forward Surge Current

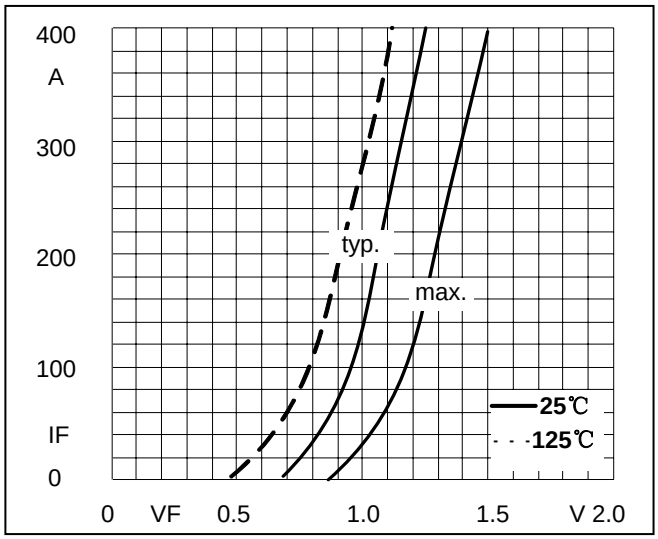
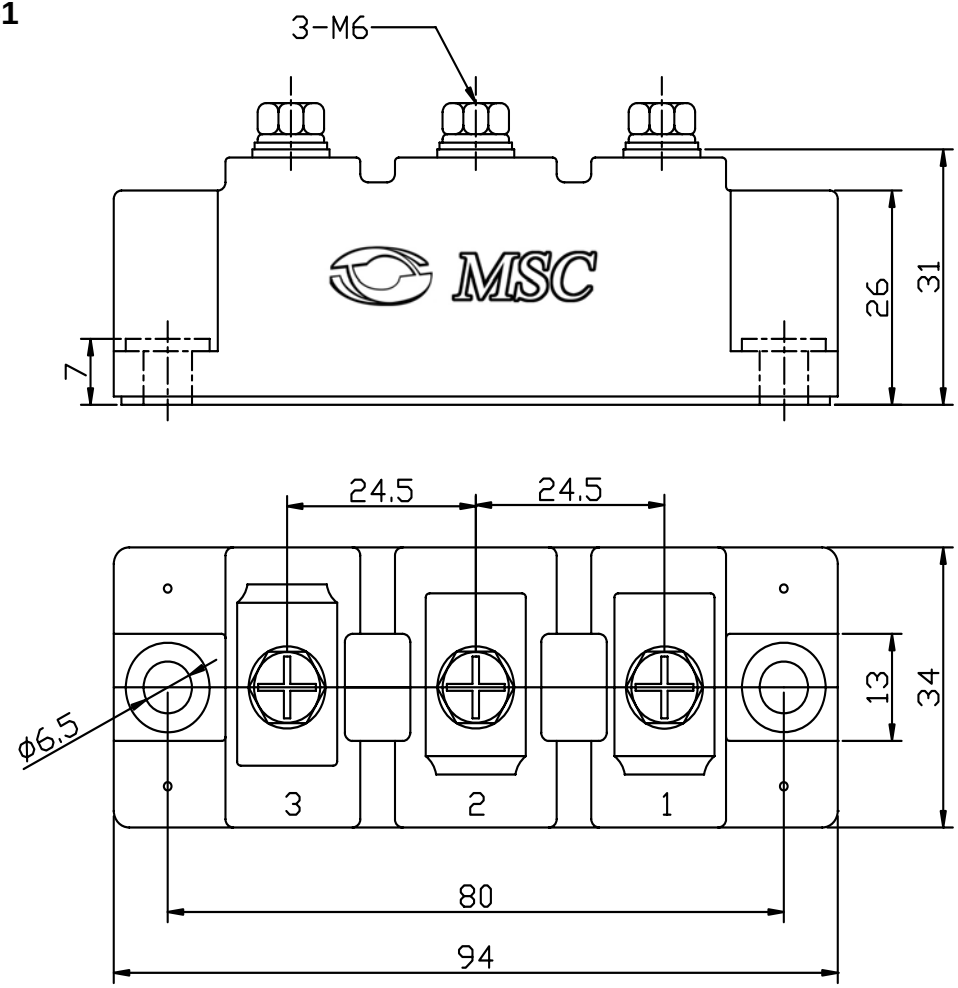


Fig5. Forward Characteristics

Package Outline Information

CASE: D2-1



Dimensions in mm