



Glass Passivated Rectifier Diode Modules

V_{RRM} 800 to 1800V

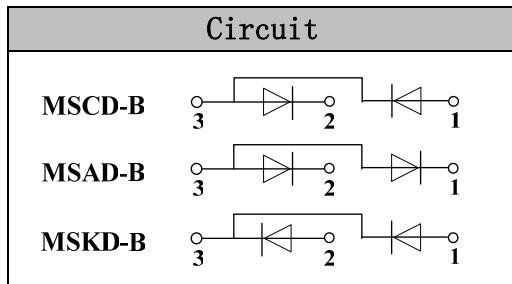
I_{FAV} 120 Amp

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



Module Type

TYPE			V _{RRM}	V _{RSM}
MSCD120B-08	MSAD120B-08	MSKD120B-08	800V	900V
MSCD120B-12	MSAD120B-12	MSKD120B-12	1200V	1300V
MSCD120B-16	MSAD120B-16	MSKD120B-16	1600V	1700V
MSCD120B-18	MSAD120B-18	MSKD120B-18	1800V	1900V

Maximum Ratings

Symbol	Conditions	Values	Units
I _{FAV}	Single phase ,half wave 180° conduction T _c =106°C	120	A
I _{F(RMS)}	Single phase ,half wave 180° conduction T _c =97°C	180	A
I _{FSM}	t=10mS T _{vj} =45°C	2800	A
i ² t	t=10mS T _{vj} =45°C	39200	A ² s
V _{isol}	a.c.50HZ;r.m.s.;1min	3000	V
T _{vj}		-40 to +150	°C
T _{stg}		-40 to +125	°C
M _t	To terminals(M5)	3±15%	Nm
M _s	To heatsink(M6)	5±15%	Nm
Weight	Module	140	g

Thermal Characteristics

Symbol	Conditions	Values	Units
R _{th(j-c)}	Per diode	0.26	°C/W
R _{th(c-s)}	Module	0.1	°C/W

Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
V _{FM}	T=25°C I _F =300A	—	1.28	1.52	V
I _{RD}	T _{vj} =150°C V _{RD} =V _{RRM}	—	—	6	mA

Performance Curves

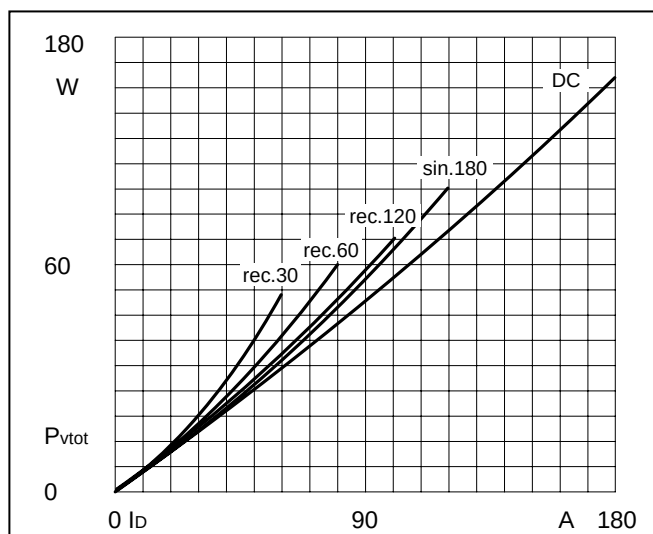


Fig1. Power dissipation

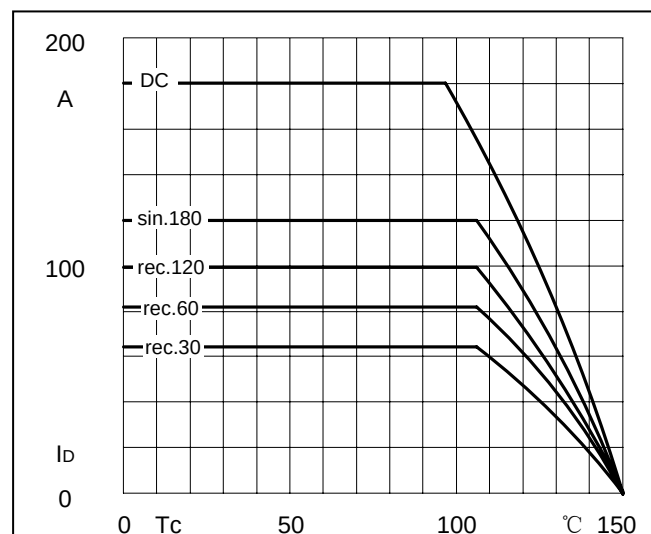


Fig2. Forward Current Derating Curve

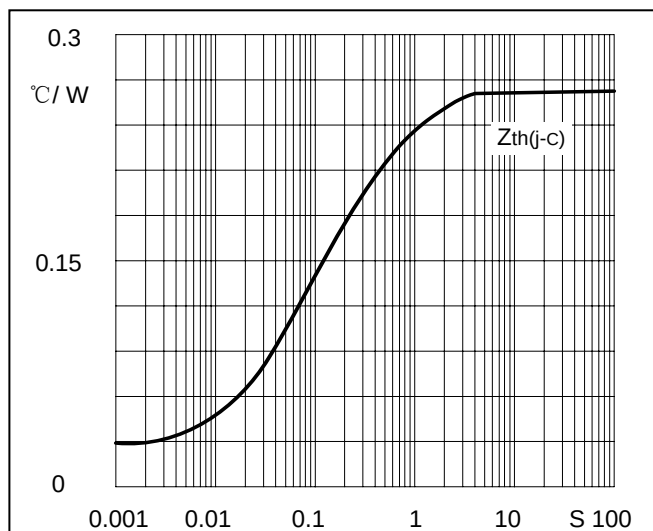


Fig3. Transient thermal impedance

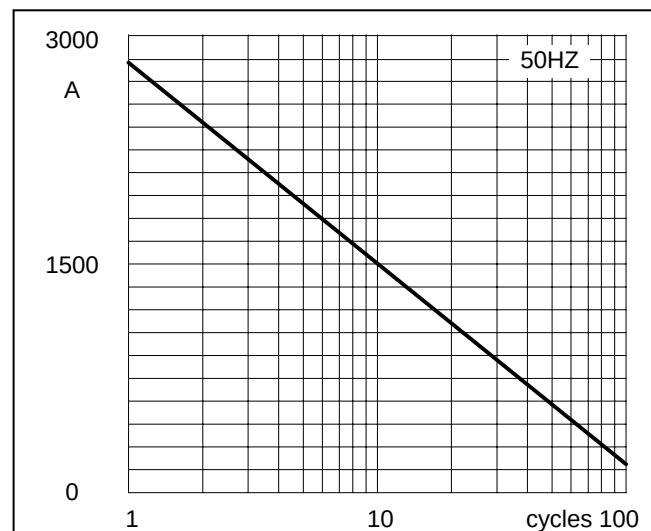


Fig4. Max Non-Repetitive Forward Surge Current

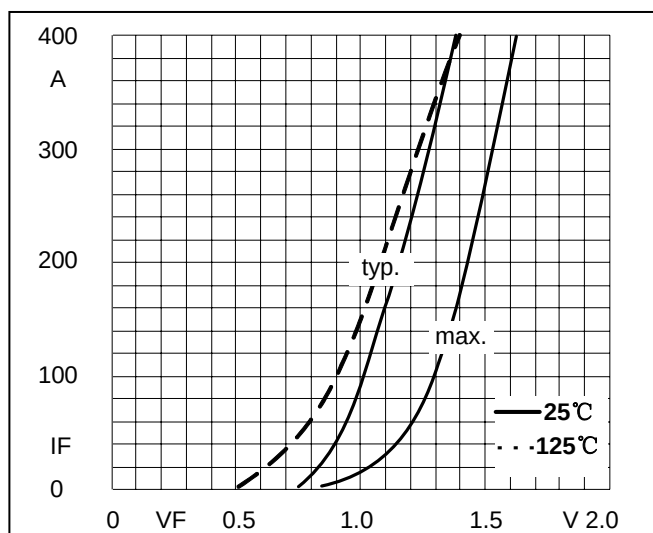


Fig5. Forward Characteristics

Package Outline Information

