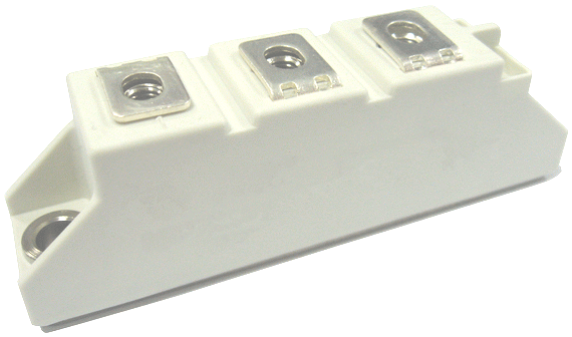
MSKD120 ; MSAD120 ; MSCD120



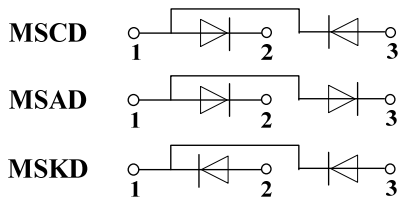
Glass Passivated Rectifier Diode Modules

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

Circuit



Features

- Blocking voltage:800 to 1800V
- Heat transfer through aluminum oxide DBC ceramic isolated metal baseplate
- Glass passivated chip
- UL E243882 approved

Module Type

TYPE			V_{RRM}	V_{RSM}
MSCD120-08	MSAD120-08	MSKD120-08	800V	900V
MSCD120-12	MSAD120-12	MSKD120-12	1200V	1300V
MSCD120-16	MSAD120-16	MSKD120-16	1600V	1700V
MSCD120-18	MSAD120-18	MSKD120-18	1800V	1900V

Maximum Ratings

Symbol	Conditions	Values	Units
I_{FAV}	Single phase ,half wave 180° conduction Tc=106℃	120	A
$I_{F(RMS)}$	Single phase ,half wave 180° conduction Tc=97℃	180	A
I_{FSM}	t=10mS Tvj =45℃	2800	A
i^2t	t=10mS Tvj =45℃	39200	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(M5)	3±15%	Nm
Ms	To heatsink(M6)	5±15%	Nm
Weight	Module (Approximately)	100	g

Thermal Characteristics

Symbol	Conditions	Values	Units
$R_{th(j-c)}$	Per diode	0.26	℃/W
$R_{th(c-s)}$	Module	0.1	℃/W

Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
V_{FM}	T=25℃ I_F =300A	—	1.22	1.43	V
I_{RD}	T_{vj}=150℃ V_{RD}=V_{RRM}	—	—	6	mA

Performance Curves

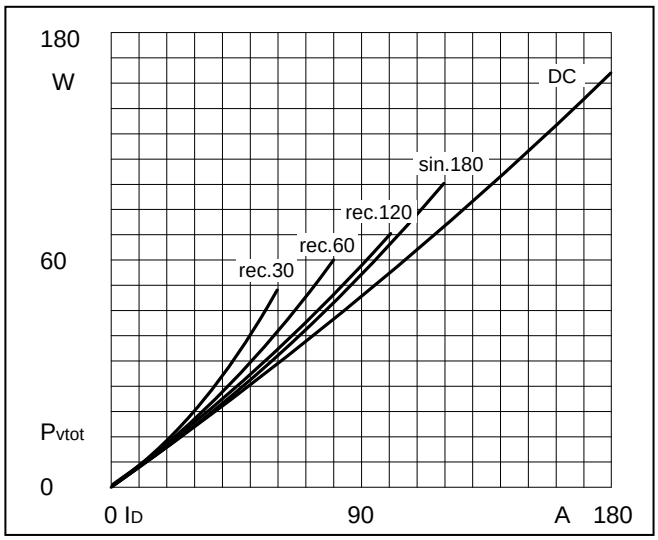


Fig1. Power dissipation

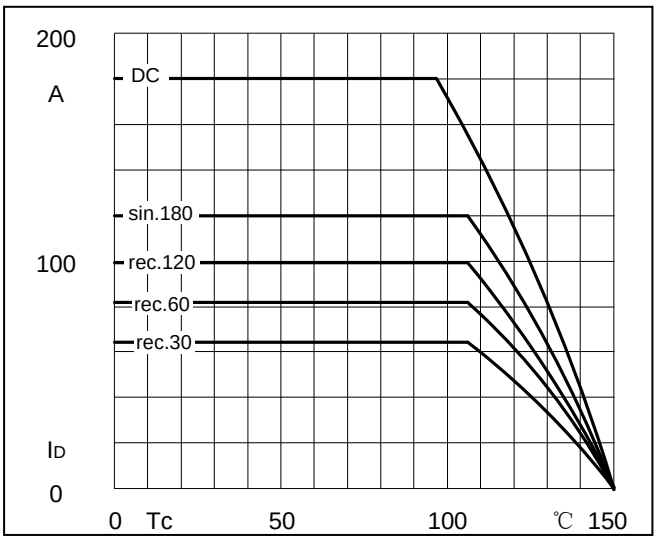


Fig2.Forward Current Derating Curve

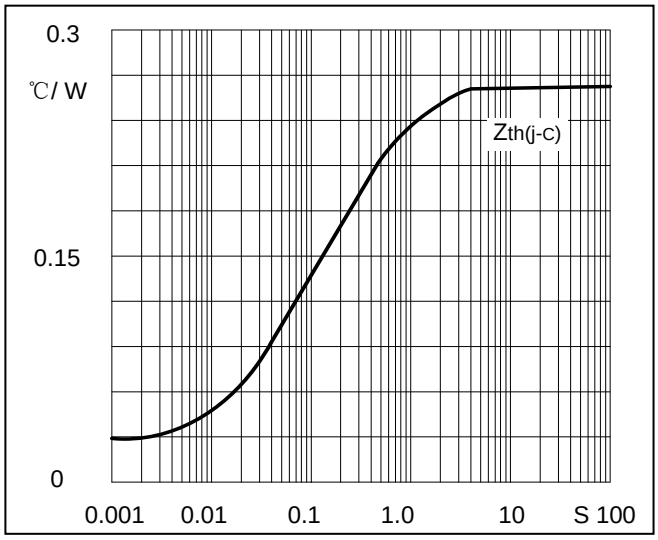


Fig3. Transient thermal impedance

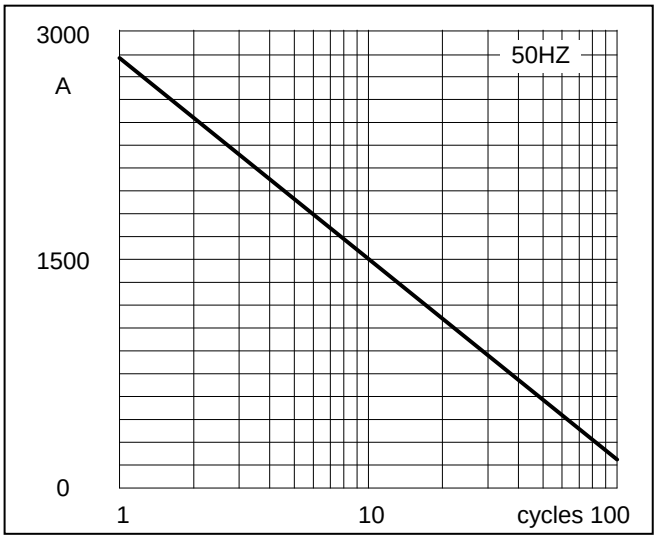


Fig4. Max Non-Repetitive Forward Surge Current

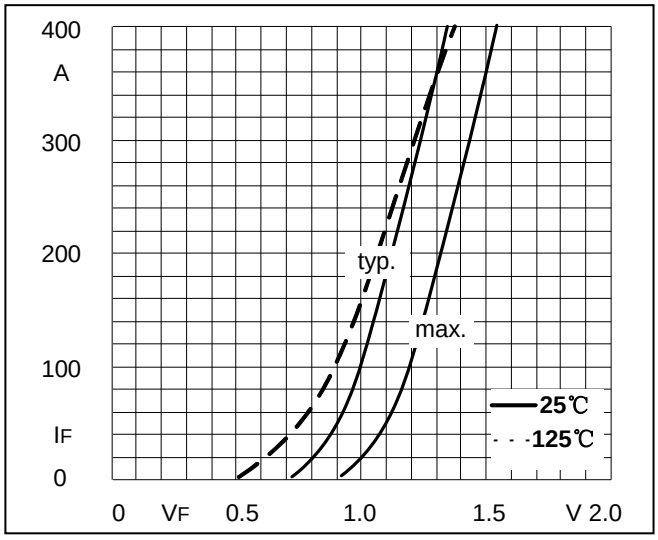
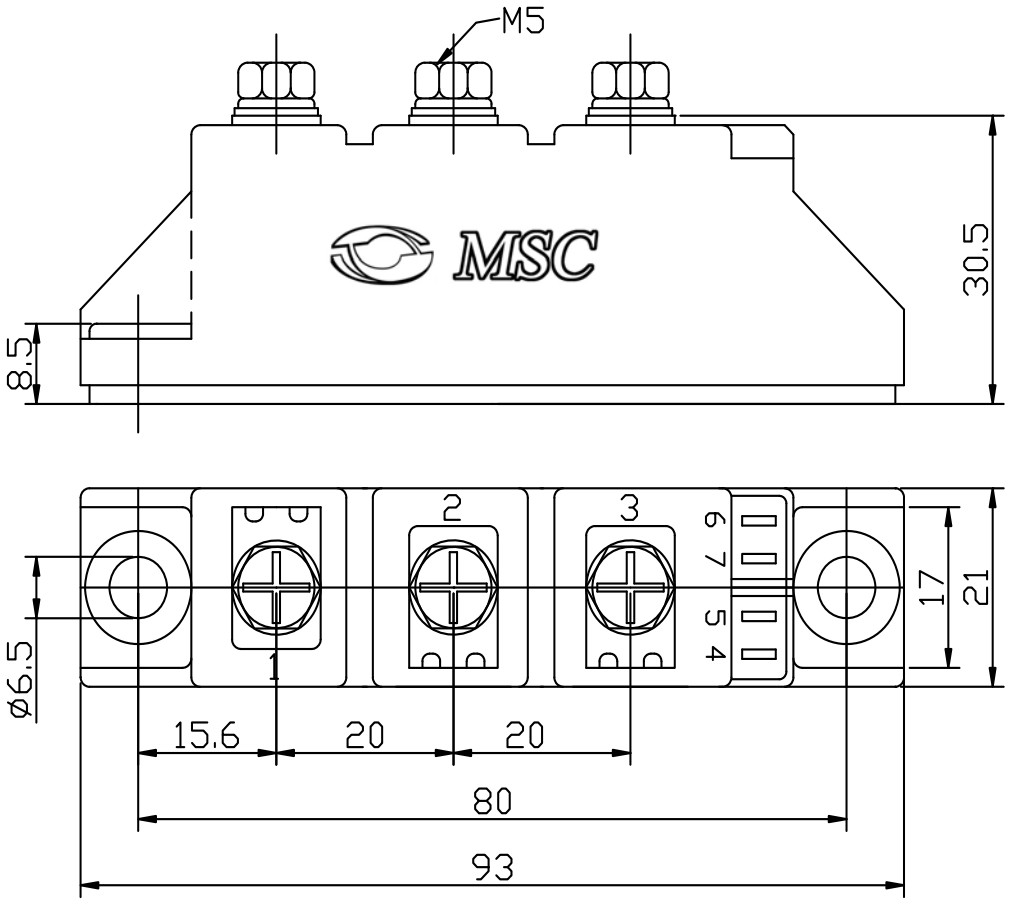


Fig5. Forward Characteristics

Package Outline Information

CASE: D1



Dimensions in mm

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