MMD70EB180X

1800V 70A Rectifier Module

RoHS Compliant

Dec 2008 **PRELIMINARY**

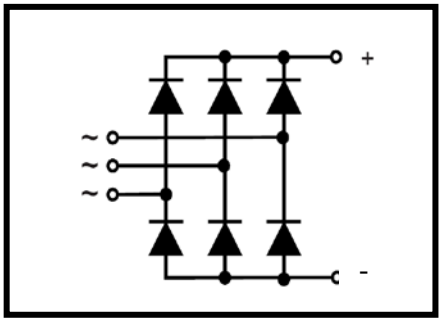
Features

- Package with screw terminals
- Isolation voltage 3500 V~
- Planar passivated chips
- Blocking voltage up to 1800 V
- Low forward voltage drop



Applications

- Supplies for DC power equipment
- Input rectifiers for PWM inverter
- Battery DC power supplies
- Field supply for DC motors



Advantages

- Easy to mount with two screws
- Space and weight savings
- Improved temperature and power cycling

ABSOLUTE MAXIMUM RATINGS

T_C=25°C unless otherwise specified

Symbol	Test Condition	Value	Unit
V_{RRM}		1800	V
$I_{d(AV)}$	T_C=100℃, module	70	A
I_{FSM}	T_J=45℃; t=10ms (50Hz),sine	700	A
	V_R=0 t=8.3ms(60Hz),sine	750	A
	T_J=150℃; t=10ms (50Hz),sine	590	A
	V_R=0 t=8.3ms(60Hz),sine	620	A
I^2t	T_J=45℃; t=10ms (50Hz),sine	2450	A^2s
	V_R=0 t=8.3ms(60Hz),sine	2812	A^2s
	T_J=150℃; t=10ms (50Hz),sine	1740	A^2s
	V_R=0 t=8.3ms(60Hz),sine	1920	A^2s
T_J,T_{STG}		-40 ~150	℃
T_{JM}		150	℃
V_{ISOL}	50/60Hz RMS t=1 min	2500	V~
	I_{ISOL}≤1mA t=5 s	3500	V~
Md	Mounting torque(M5)	5±15%	N·m
	Terminal connection torque(M5)	5±15%	N·m
Weight	typical	130	g

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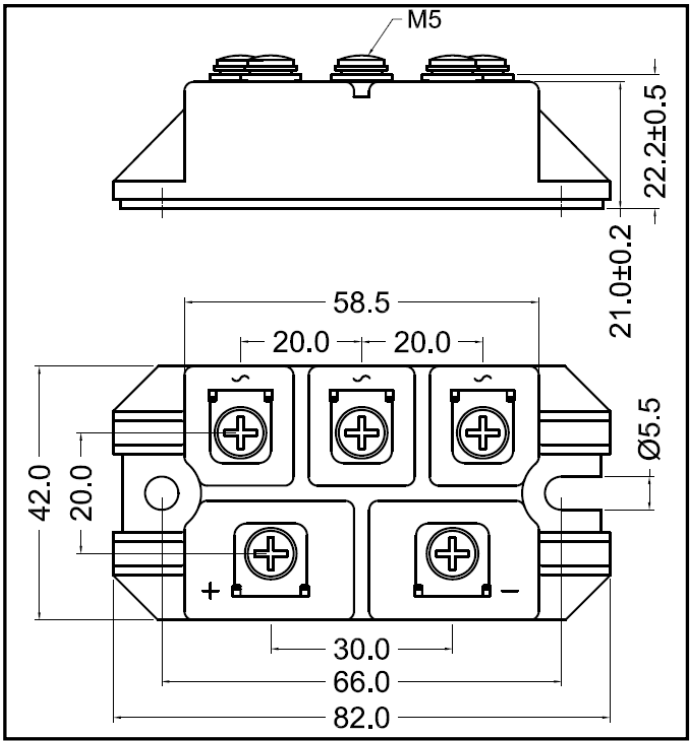
ELECTRICAL AND THERMAL CHARACTERISTICS

T_C=25°C unless otherwise specified

Symbol	Test Condition	Value	Unit
I_R	V_R= V_{RRM}; T_J = 25℃	≤0.5	mA
	V_R= V_{RRM}; T_J =T_{JM}	≤5	mA
V_F	I_F=150A	≤2.25	V
V_{T0}	For power-loss calculations only	0.8	V
R_{thJC}	per diode; DC current	1.1	K/W
	Per module	0.18	K/W
R_{thCS}	per diode; DC current	0.42	K/W
	per module	0.07	K/W
d_S	Creeping distance on surface	10	mm
d_A	Cree page distance in air	9.4	mm
a	Max. allowable acceleration	50	m/s^2

NOTE: Data according to IEC 60747 and refer to a single diode unless otherwise stated.

Package Outline (Dimensions in mm)



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