

Features

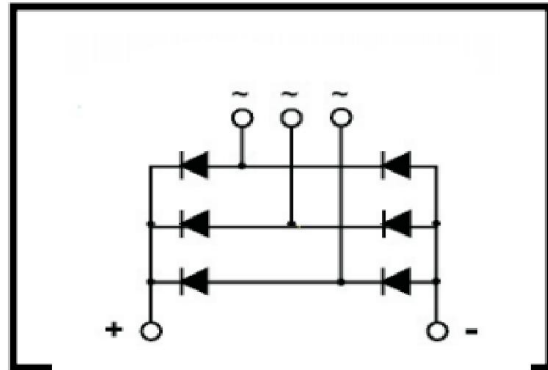
- 3 phase bridge rectifier
- Package with screw terminals
- Isolation voltage 2500 V
- Planar passivated chips
- Blocking voltage up to 1600 V
- Low forward voltage drop: 1.3V

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 screws
- Glass inactivation techniques
- Improved temperature and power cycling



Absolute Maximum Ratings T_C=25°C unless otherwise specified

Symbol	Test Condition		Value	Unit
V _{RRM}			1600	V
I _{D(MAX)}	T _C =100°C, Per module		60	A
I _{FSM}	T _J =45°C; V _R =0	t=10ms (50Hz),sine	500	A
		t=8.3ms(60Hz),sine	550	A
	T _J =150°C; V _R =0	t=10ms (50Hz),sine	440	A
		t=8.3ms(60Hz),sine	480	A
I ² t	T _J =45°C; V _R =0	t=10ms (50Hz),sine	1950	A ² s
		t=8.3ms(60Hz),sine	2100	A ² s
	T _J =150°C; V _R =0	t=10ms (50Hz),sine	1380	A ² s
		t=8.3ms(60Hz),sine	1520	A ² s
T _{STG}			-40 to +150	°C
T _{JMAX}			150	°C
V _{ISOL}	50/60Hz; R.M.S. t=1min		2500	V~
Md	Mounting torque(M5)		4±15%	N.m
	Terminal connection torque(M4)		3±15%	N.m
Weight	Typical		120	g



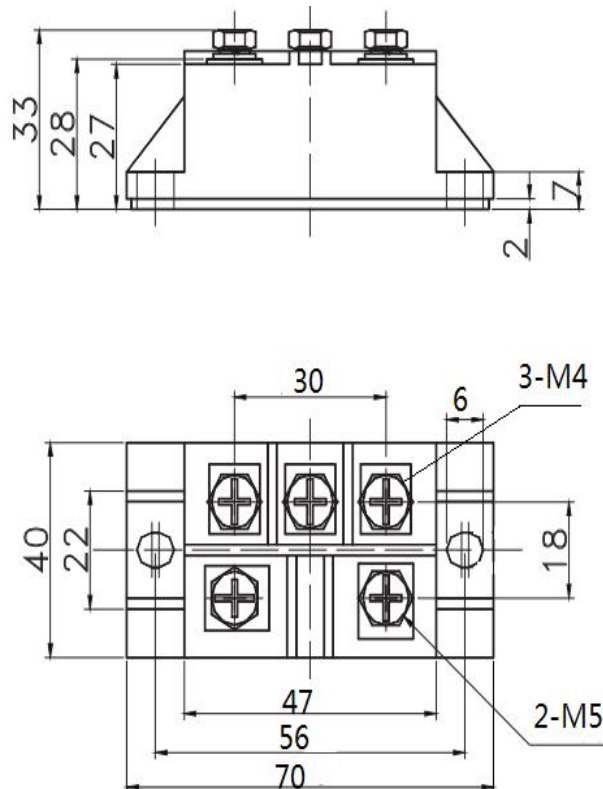
Electrical and Thermal Characteristics

T_C=25°C unless otherwise specified

Symbol	Test Condition	Value	Unit
I _R	V _R = V _{RRM} ; T _J = 25°C	<0.5	mA
	V _R = V _{RRM} ; T _J =T _{JMAX}	<3	mA
V _F	I _F =50A; T _J =125°C	1.2	V
V _{TO}	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	Creepage distance on surface	10	mm
d _A	Creepage 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)



Ordering Information

MDS	50	16	(None)/H
①	②	③	④

①----- Device Type MDS = Three Phase Bridge Rectifier Module; MDQ = Single Phase Bridge Rectifier Module;

②-----Current Rating = I_D, Average or Maximum Output Direct Current

③-----Voltage Code X 100 = V_{RRM}, Maximum Repetitive Peak Reverse Voltage

④-----Package Case Option: None = Normal Standard Package

H = Heavy Package Case