PRELIMINARY
Notice: This is not a final specification.
Some parametric limits are subject to change.

MITSUBISHI DIODE MODULES

RM20TPM-M,-H

MEDIUM POWER GENERAL USE
INSULATED TYPE

RM20TPM-M,-H

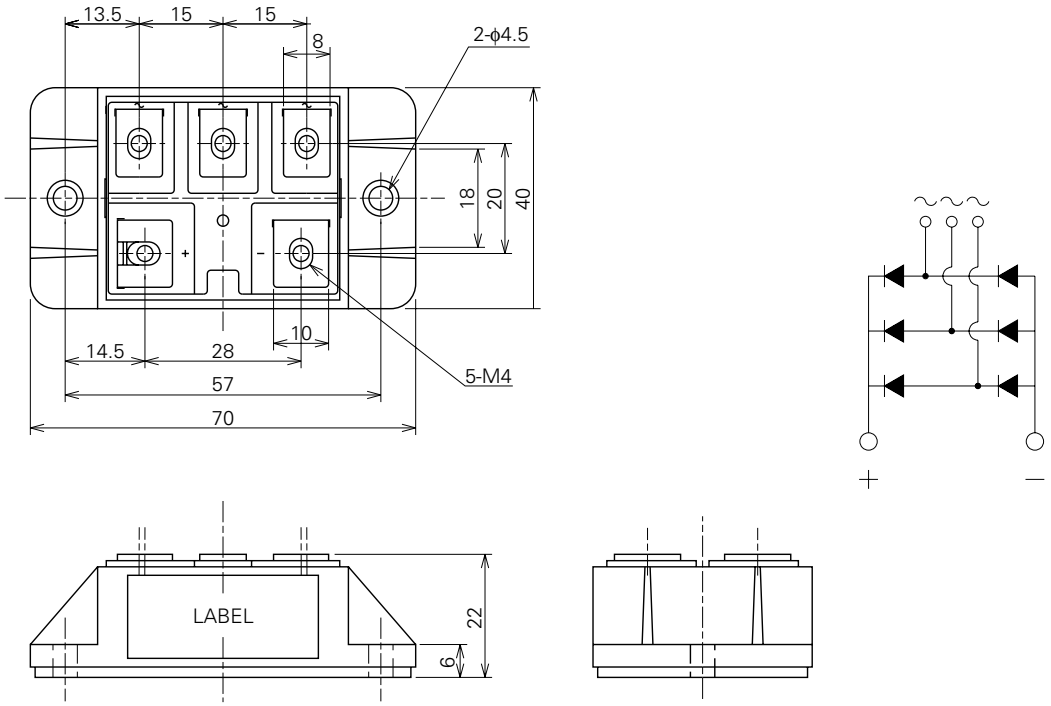
- **Io** DC output current **40A**
- **VRRM** Repetitive peak reverse voltage **400/800V**
- **3 phase bridge**
- **Insulated Type**

APPLICATION

AC motor controllers, DC motor controllers, Battery DC power supplies,
DC power supplies for control panels, and other general DC power equipment

OUTLINE DRAWING & CIRCUIT DIAGRAM

Dimensions in mm



MITSUBISHI ELECTRIC

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Voltage class		Unit
		M	H	
V_{RRM}	Repetitive peak reverse voltage	400	800	V
V_{RSM}	Non-repetitive peak reverse voltage	500	900	V
E_a	Recommended AC input voltage	110	220	V

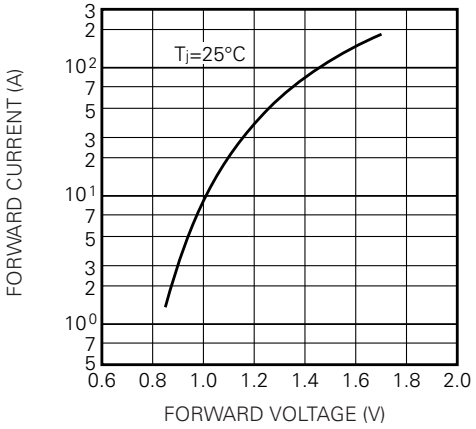
Symbol	Parameter	Conditions	Ratings	Unit
I_O	DC output current	Three-phase full wave rectifying circuit, T_C=125°C	40	A
I_{FSM}	Surge (non-repetitive) forward current	One half cycle at 60Hz, peak value	400	A
I^2t	I^2t for fusing	Value for one cycle of surge current	4.2×10^3	A^2s
f	Maximum operating frequency		1000	Hz
T_j	Junction temperature		–40~+150	°C
T_{stg}	Storage temperature		–40~+125	°C
V_{iso}	Isolation voltage	Charged part to case	2500	V
—	Mounting torque	Main terminal screw M4	0.98~1.47	N·m
			10~15	kg·cm
		Mounting screw M4	0.98~1.47	N·m
			10~15	kg·cm
—	Weight	Typical value	100	g

ELECTRICAL CHARACTERISTICS

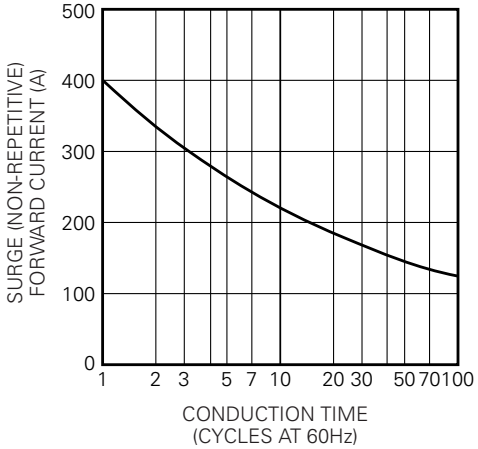
Symbol	Parameter	Test conditions	Limits			Unit
			Min.	Typ.	Max.	
I_{RRM}	Repetitive reverse current	T_j=150°C, V_{RRM} applied	—	—	10	mA
V_{FM}	Forward voltage	T_j=25°C, I_{FM}=40A, instantaneous meas.	—	—	1.2	V
$R_{th\ (j-c)}$	Thermal resistance	Junction to case	—	—	0.33	°C/W
$R_{th\ (c-f)}$	Contact thermal resistance	Case to fin, conductive grease applied	—	—	0.09	°C/W
—	Insulation resistance	Measured with a 500V megohmmeter between main terminal and case	10	—	—	MΩ

PERFORMANCE CURVES

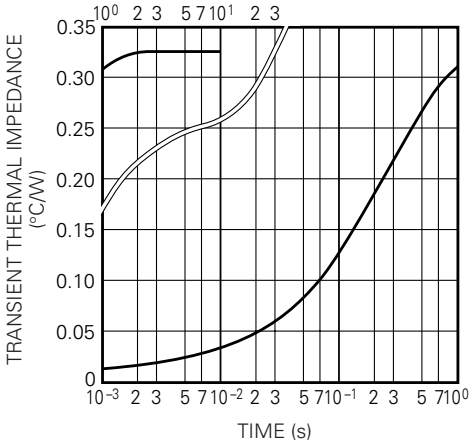
MAXIMUM FORWARD CHARACTERISTIC



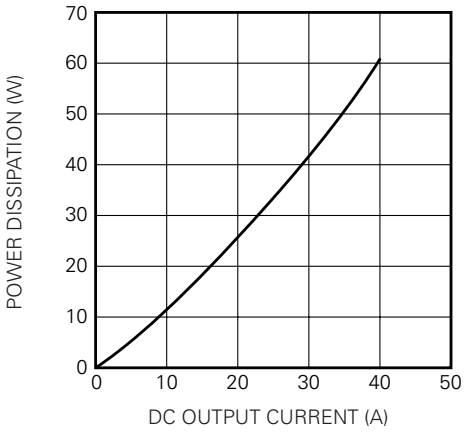
ALLOWABLE SURGE (NON-REPETITIVE) FORWARD CURRENT



MAXIMUM TRANSIENT THERMAL IMPEDANCE (JUNCTION TO CASE)



MAXIMUM POWER DISSIPATION



ALLOWABLE CASE TEMPERATURE VS. DC OUTPUT CURRENT