

MITSUBISHI DIODE MODULES

RM50TC-M,-H,-24,-2H

MEDIUM POWER GENERAL USE
INSULATED TYPE

RM50TC-M,-H,-24,-2H



- **I_o** DC output current **100A**
- **V_{RRM}** Repetitive peak reverse voltage
..... **400/800/1200/1600V**

- **3 phase bridge**
- **Insulated Type**
- **UL Recognized**

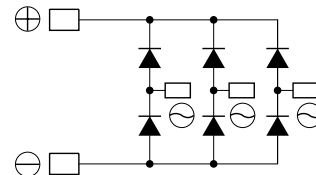
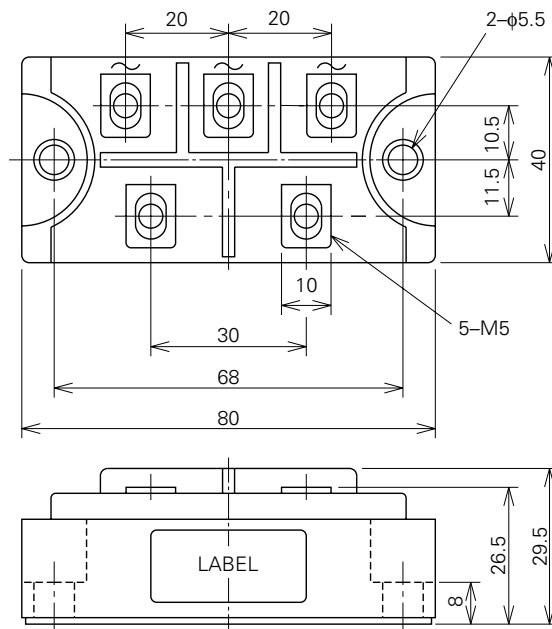
Yellow Card No. E80276 (N)
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APPLICATION

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



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ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Voltage class				Unit
		M	H	24	2H	
VRRM	Repetitive peak reverse voltage	400	800	1200	1600	V
VRSM	Non-repetitive peak reverse voltage	480	960	1350	1700	V
Ea	Recommended AC input voltage	110	220	370	440	V

Symbol	Parameter	Conditions	Ratings	Unit
Io	DC output current	Three-phase full wave rectifying circuit, Tc=102°C	100	A
IFSM	Surge (non-repetitive) forward current	One half cycle at 60Hz, peak value	1000	A
I ² t	I ² t for fusing	Value for one cycle of surge current	4.2 × 10 ³	A ² s
f	Maximum operating frequency		1000	Hz
Tj	Junction temperature		−40~+150	°C
Tstg	Storage temperature		−40~+125	°C
Viso	Isolation voltage	Charged part to case	2500	V
—	Mounting torque	Main terminal screw M5	1.47~1.96	N·m
			15~20	kg·cm
		Mounting screw M5	1.47~1.96	N·m
			15~20	kg·cm
—	Weight	Typical value	220	g

ELECTRICAL CHARACTERISTICS

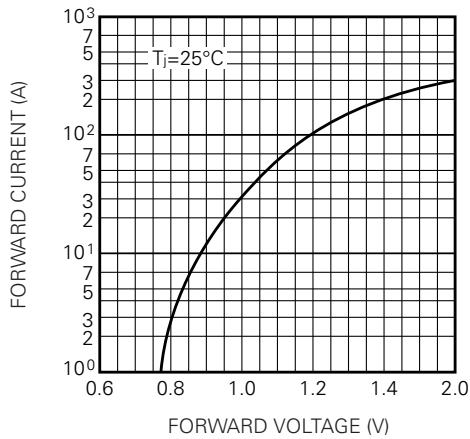
Symbol	Parameter	Test conditions	Limits			Unit
			Min.	Typ.	Max.	
IRRM	Repetitive reverse current	Tj=150°C, VRRM applied	—	—	10	mA
VFM	Forward voltage	Tj=25°C, IFM=100A, instantaneous meas.	—	—	1.2	V
Rth (j-c)	Thermal resistance	Junction to case	—	—	0.2	°C/W
Rth (c-f)	Contact thermal resistance	Case to fin, conductive grease applied	—	—	0.06	°C/W
—	Insulation resistance	Measured with a 500V megohmmeter between main terminal and case	10	—	—	MΩ

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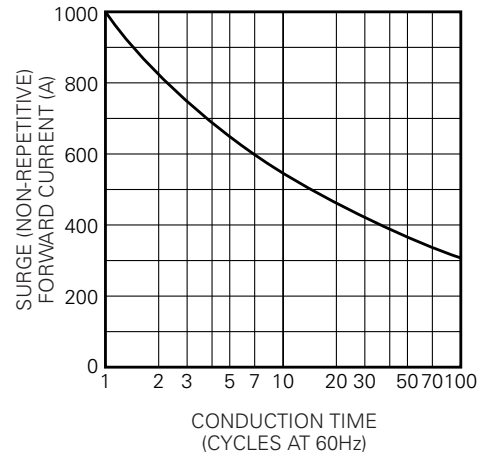
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PERFORMANCE CURVE

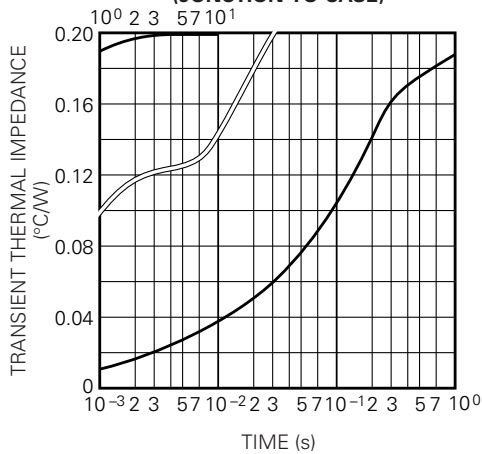
MAXIMUM FORWARD CHARACTERISTIC



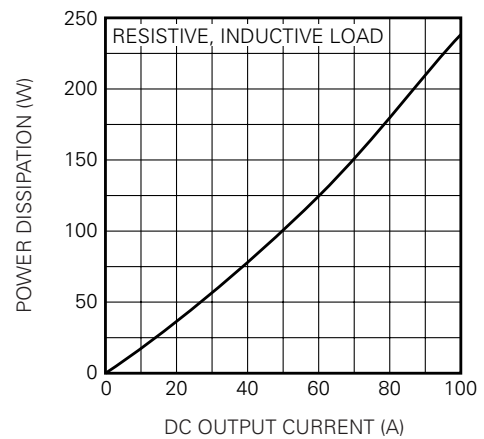
ALLOWABLE SURGE (NON-REPETITIVE)
FORWARD CURRENT



MAXIMUM TRANSIENT THERMAL IMPEDANCE
(JUNCTION TO CASE)



MAXIMUM POWER DISSIPATION



ALLOWABLE CASE TEMPERATURE
VS. DC OUTPUT CURRENT

