

MITSUBISHI DIODE MODULES

RM30DZ/CZ-M,-H

MEDIUM POWER GENERAL USE
INSULATED TYPE

RM30DZ/CZ-M,-H



- **IF(AV)** Average forward current **30A**
- **VRRM** Repetitive peak reverse voltage
..... **400/800V**

- **DOUBLE ARMS**
- **Insulated Type**
- **UL Recognized**

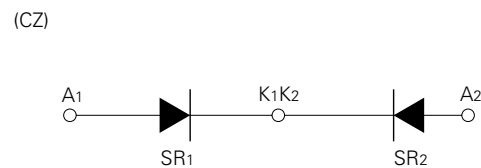
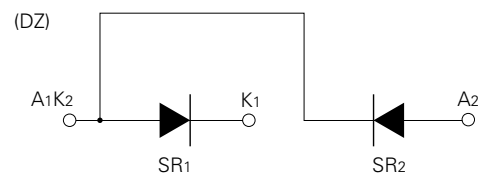
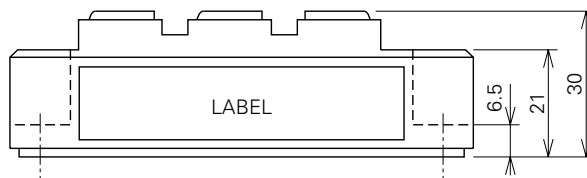
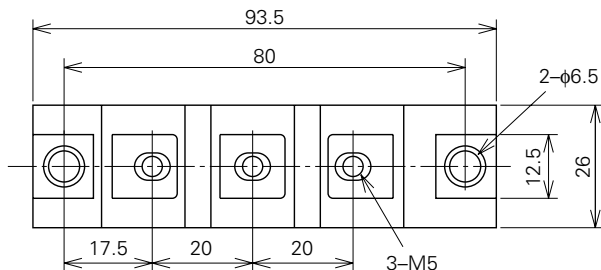
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APPLICATION

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	
VRRM	Repetitive peak reverse voltage	400	800	V
VRSM	Non-repetitive peak reverse voltage	480	960	V
VR (DC)	Reverse DC voltage	320	640	V

Symbol	Parameter	Conditions	Ratings	Unit
IF (RMS)	RMS forward current		47	A
IF (AV)	Average forward current	Single-phase, half-wave 180° conduction, Tc=117°C	30	A
IFSM	Surge (non-repetitive) forward current	One half cycle at 60Hz, peak value	600	A
I ² t	I ² t for fusing	Value for one cycle of surge current	1.5 × 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 M6	1.96~2.94	N·m
			20~30	kg·cm
—	Weight	Typical value	160	g

ELECTRICAL CHARACTERISTICS

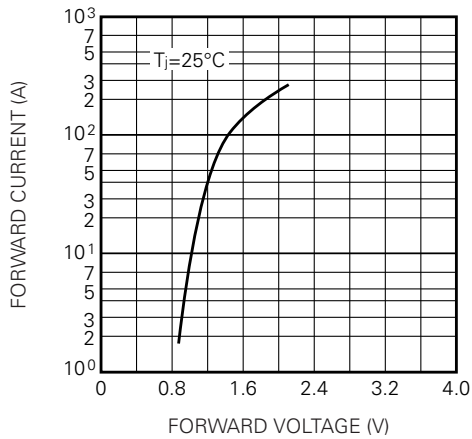
Symbol	Parameter	Test conditions	Limits			Unit
			Min.	Typ.	Max.	
I _{RRM}	Repetitive reverse current	T _j =150°C, V _{RRM} applied	—	—	10	mA
V _{FM}	Forward voltage	T _j =25°C, I _{FM} =90A, instantaneous meas.	—	—	1.4	V
R _{th (j-c)}	Thermal resistance	Junction to case (per 1/2 module)	—	—	0.8	°C/W
R _{th (c-f)}	Contact thermal resistance	Case to fin, conductive grease applied (per 1/2 module)	—	—	0.2	°C/W
—	Insulation resistance	Measured with a 500V megohmmeter between main terminal and case	10	—	—	MΩ

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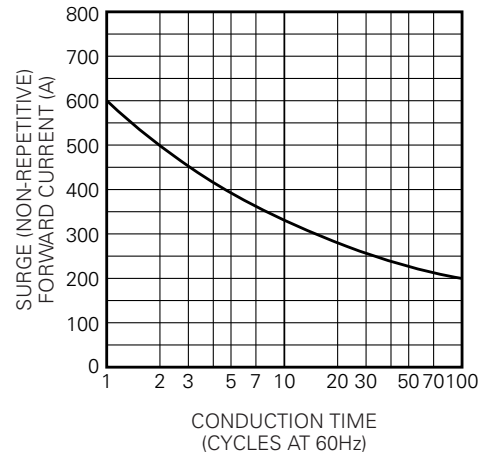
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PERFORMANCE CURVES

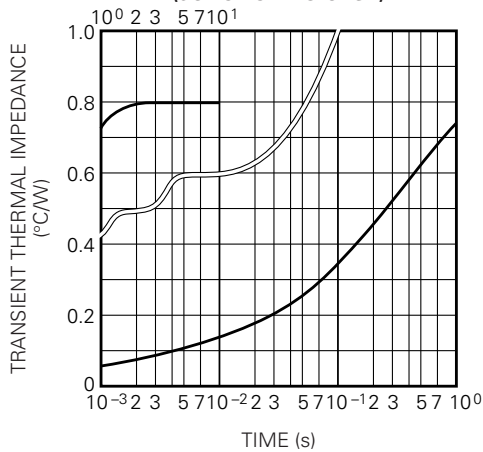
MAXIMUM FORWARD CHARACTERISTIC



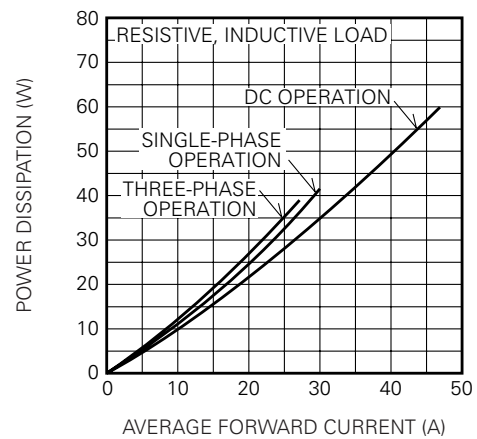
ALLOWABLE SURGE (NON-REPETITIVE)
FORWARD CURRENT



MAXIMUM TRANSIENT THERMAL IMPEDANCE
(JUNCTION TO CASE)



MAXIMUM POWER DISSIPATION



ALLOWABLE CASE TEMPERATURE
VS. AVERAGE FORWARD CURRENT

