MITSUBISHI DIODE MODULES

RM30DZ/CZ-M,-H

MEDIUM POWER GENERAL USE
INSULATED TYPE

RM30DZ/CZ-M,-H



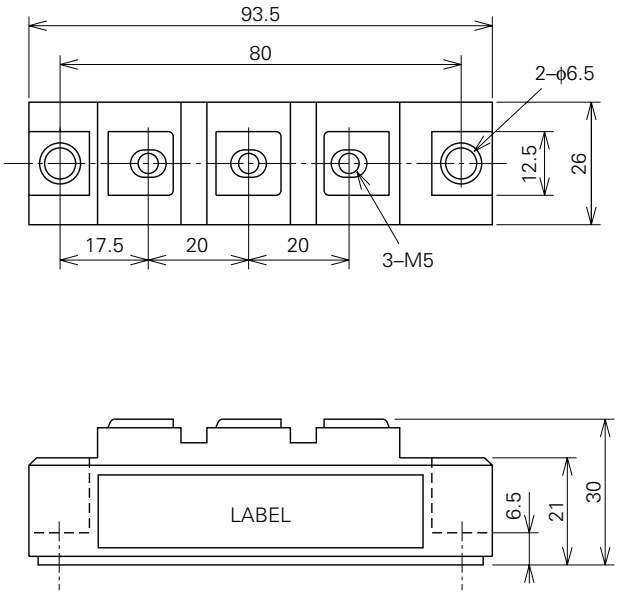
- **$I_{F(AV)}$** Average forward current **30A**
- **V_{RRM}** Repetitive peak reverse voltage **400/800V**
- **DOUBLE ARMS**
- **Insulated Type**
- **UL Recognized**
  Yellow Card No. E80276 (N)
  File No. E80271

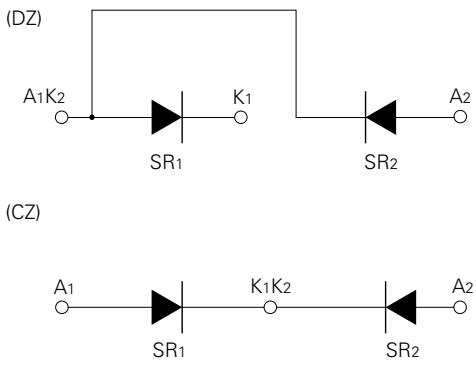
APPLICATION

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

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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	480	960	V
$V_{R\ (DC)}$	Reverse DC voltage	320	640	V

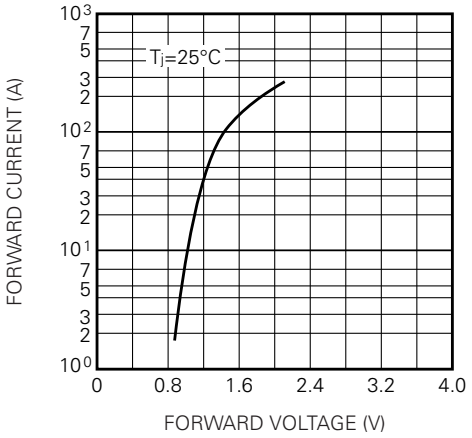
Symbol	Parameter	Conditions	Ratings	Unit
$I_{F\ (RMS)}$	RMS forward current		47	A
$I_{F\ (AV)}$	Average forward current	Single-phase, half-wave 180° conduction, T_C=117°C	30	A
I_{FSM}	Surge (non-repetitive) forward current	One half chcle at 60Hz, peak value	600	A
I^2t	I^2t for fusing	Value for one cycle of surge current	1.5×10^3	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 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

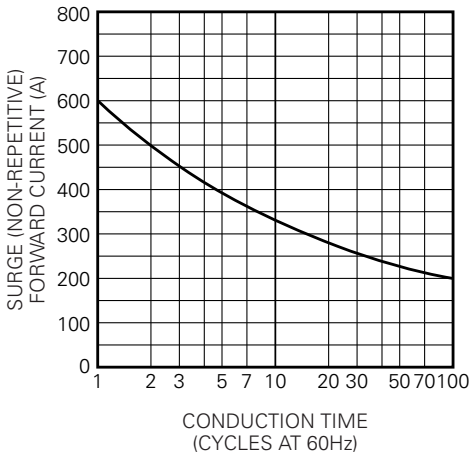
Symbol	Parameter	Test conditions	Limits			Unit
			Min.	Typ.	Max.	
I_{RRM}	Repetitive reverse current	T_j=150°C, V_{RRM} applied	—	—	10	mA
V_{FM}	Forward voltage	T_j=25°C, I_{FM}=90A, instantaneous meas.	—	—	1.4	V
$R_{th\ (j-c)}$	Thermal resistance	Junction to case (per 1/2 module)	—	—	0.8	°C/W
$R_{th\ (c-f)}$	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

PERFORMANCE CURVES

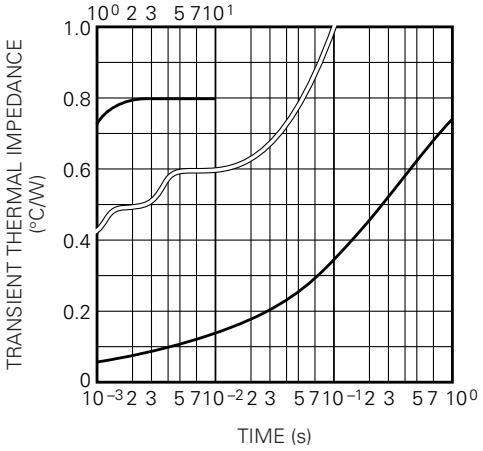
MAXIMUM FORWARD CHARACTERISTIC



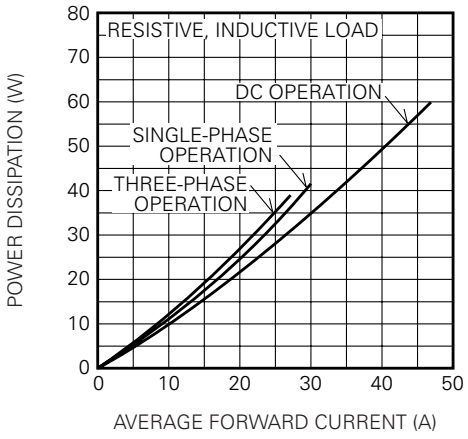
ALLOWABLE SURGE (NON-REPETITIVE) FORWARD CURRENT



MAXIMUM TRANSIENT THERMAL IMPEDANCE (JUNCTION TO CASE)



MAXIMUM POWER DISSIPATION



ALLOWABLE CASE TEMPERATURE VS. AVERAGE FORWARD CURRENT

