Беларусь г.Минск тел./факс 8(017)200-56-46 электронные компоненты радиодетали www.fotorele.net e:mail minsk17@tut.by

MITSUBISHI DIODE MODULES

RM500DZ/UZ-M,-H,-24,-2H

HIGH POWER GENERAL USE
INSULATED TYPE

RM500DZ/UZ-M,-H,-24,-2H

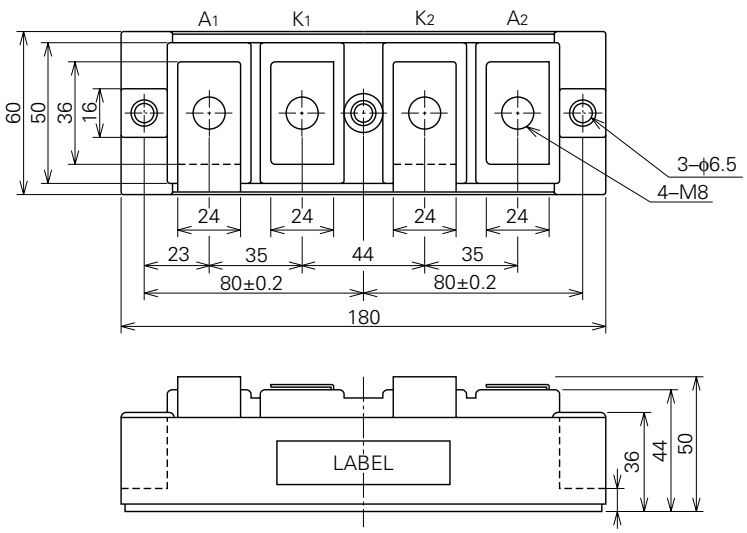
(DZ Type)

- **$I_{F(AV)}$** Average forward current **800A**
- **V_{RRM}** Repetitive peak reverse voltage **400/800/1200/1600V**
- **DOUBLE ARMS**
- **Insulated Type**

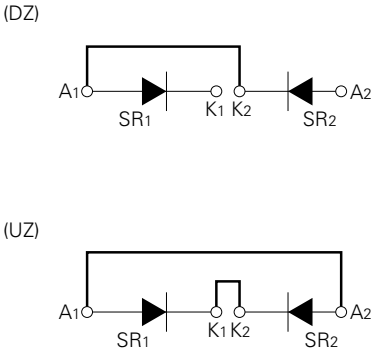
APPLICATION

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



(DZ Type)



(Bold line is connective bar.)

Feb.1999

MITSUBISHI ELECTRIC

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ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Voltage class				Unit
		M	H	24	2H	
V_{RRM}	Repetitive peak reverse voltage	400	800	1200	1600	V
V_{RSM}	Non-repetitive peak reverse voltage	480	960	1350	1700	V
$V_{R\ (DC)}$	Reverse DC voltage	320	640	960	1280	V

Symbol	Parameter	Conditions	Ratings	Unit
$I_{F\ (RMS)}$	RMS forward current		785	A
$I_{F\ (AV)}$	Average forward current	Single-phase, half-wave 180° conduction, T_C=90°C	500	A
I_{FSM}	Surge (non-repetitive) forward current	One half chcle at 60Hz, peak value	10000	A
I^2t	I^2t for fusing	Value for one cycle of surge current	4.2×10^5	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 M8	8.83~10.8	N·m
			90~110	kg·cm
		Mounting screw M6	1.97~3.92	N·m
			20~40	kg·cm
—	Weight	Typical value	1100	g

ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Test conditions	Limits			Unit
			Min.	Typ.	Max.	
I_{RRM}	Repetitive reverse current	T_j=150°C, V_{RRM} applied	—	—	40	mA
V_{FM}	Forward voltage	T_j=25°C, I_{FM}=1500A, instantaneous meas.	—	—	1.25	V
$R_{th\ (j-c)}$	Thermal resistance	Junction to case (per 1/2 module)	—	—	0.1	°C/W
$R_{th\ (c-f)}$	Contact thermal resistance	Case to fin, conductive grease applied (per 1/2 module)	—	—	0.08	°C/W
—	Insulation resistance	Measured with a 500V megohmmeter between main terminal and case	10	—	—	MΩ

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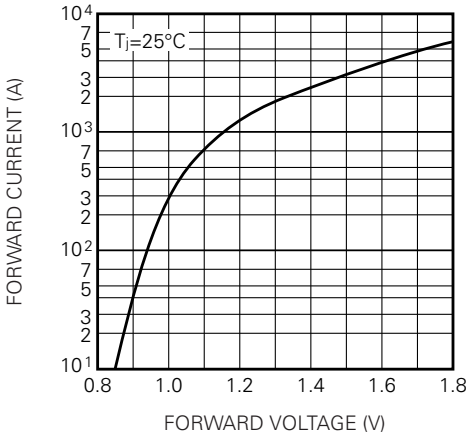
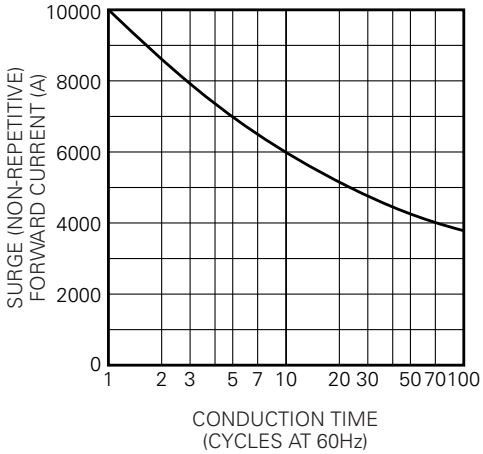
PERFORMANCE CURVES

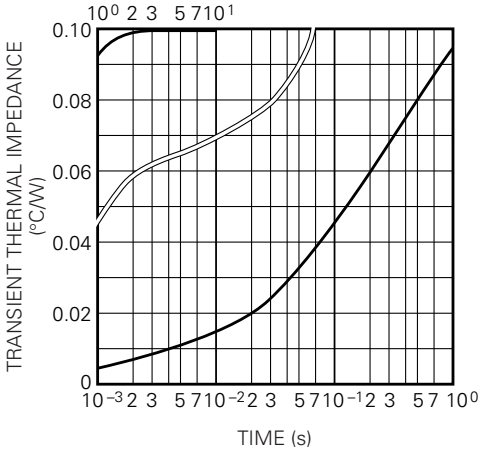
MAXIMUM FORWARD CHARACTERISTIC



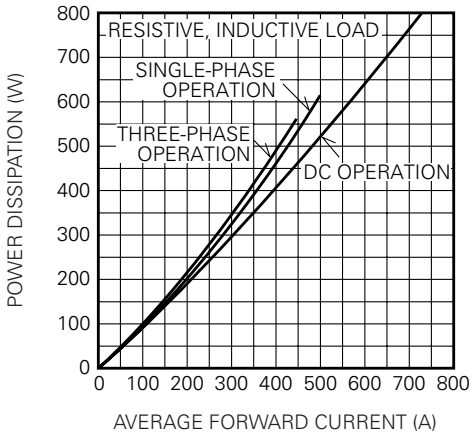
ALLOWABLE SURGE (NON-REPETITIVE) FORWARD CURRENT



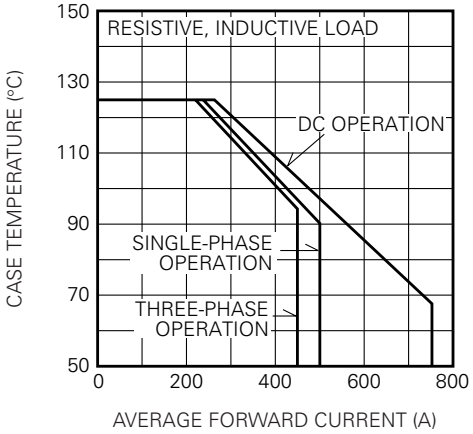
MAXIMUM TRANSIENT THERMAL IMPEDANCE (JUNCTION TO CASE)



MAXIMUM POWER DISSIPATION



ALLOWABLE CASE TEMPERATURE VS. AVERAGE FORWARD CURRENT



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