MITSUBISHI DIODE MODULES

RM100SZ-6S,-6R

MEDIUM POWER GENERAL USE

NON-INSULATED TYPE

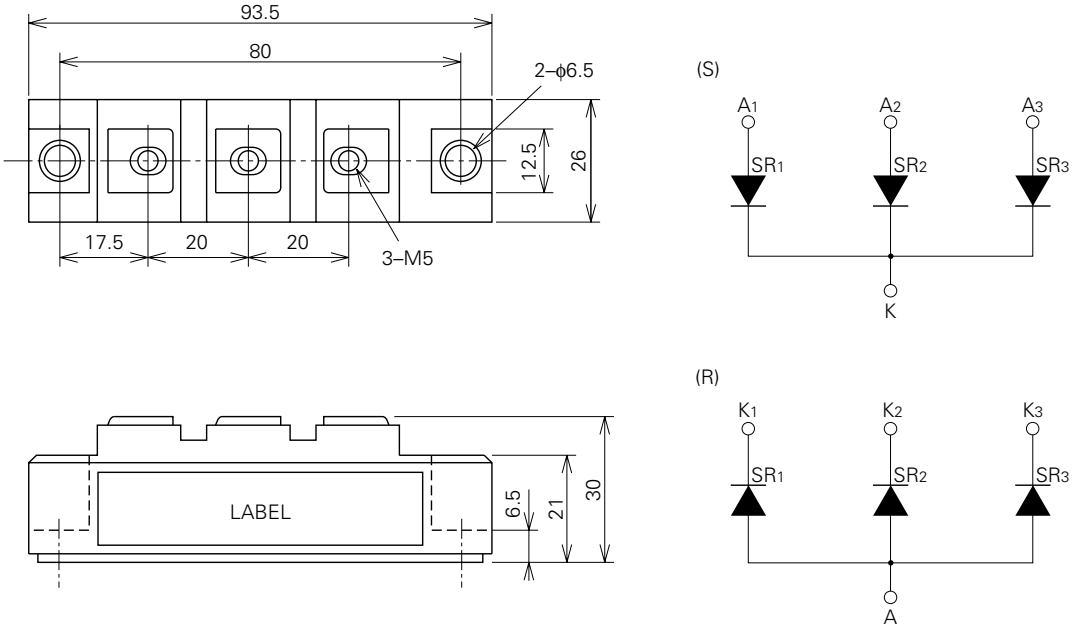
RM100SZ-6S,6R

- $I_{F(AV)}$ Average forward current **100A**
- V_{RRM} Repetitive peak reverse voltage **300V**
- **TRIPLE ARMS**
- **Non-Insulated Type**

APPLICATION

Welders

OUTLINE DRAWING & CIRCUIT DIAGRAM Dimensions in mm



Feb.1999

MITSUBISHI ELECTRIC

RM100SZ-6S,-6R

MEDIUM POWER GENERAL USE
INSULATED TYPE

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Voltage class	Unit
		6	
V_{RRM}	Repetitive peak reverse voltage	300	V
V_{RSM}	Non-repetitive peak reverse voltage	400	V
$V_{R\ (DC)}$	Reverse DC voltage	240	V

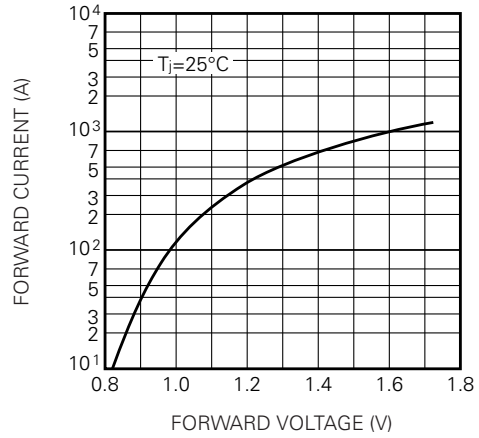
Symbol	Parameter	Conditions	Ratings	Unit
$I_{F\ (RMS)}$	RMS forward current		157	A
$I_{F\ (AV)}$	Average forward current	Three-phase, half wave average current, T_C=125°C	100	A
I_{FSM}	Surge (non-repetitive) forward current	One half cycle at 60Hz, peak value	2000	A
I^2t	I^2t for fusing	Value for one cycle of surge current	1.7×10^4	A^2s
f	Maximum operating frequency		1000	Hz
T_j	Junction temperature		–40~150	°C
T_{stg}	Storage temperature		–40~125	°C
—	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	130	g

ELECTRICAL CHARACTERISTICS

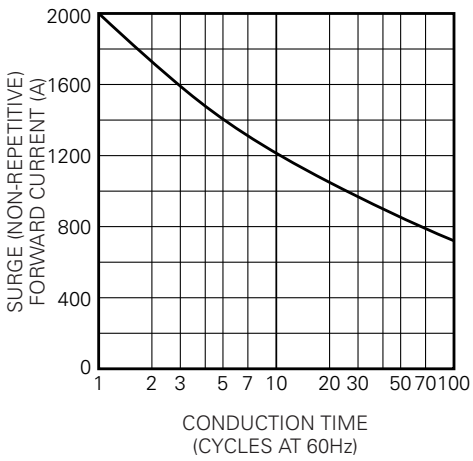
Symbol	Parameter	Test conditions	Limits			Unit
			Min.	Typ.	Max.	
I_{RRM}	Repetitive reverse current	T_j=150°C, V_{RRM} applied	—	—	1.5	mA
V_{FM}	Forward voltage	T_j=25°C, I_{FM}=300A, instantaneous meas.	—	—	1.15	V
$R_{th\ (j-c)}$	Thermal resistance	Junction to case (per 1/3 module)	—	—	0.2	°C/W
$R_{th\ (c-f)}$	Contact thermal resistance	Case to fin, conductive grease applied (per 1/3 module)	—	—	0.25	°C/W

PERFORMANCE CURVES

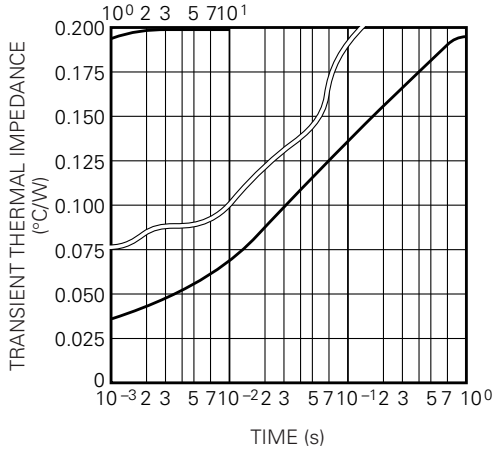
MAXIMUM FORWARD CHARACTERISTIC



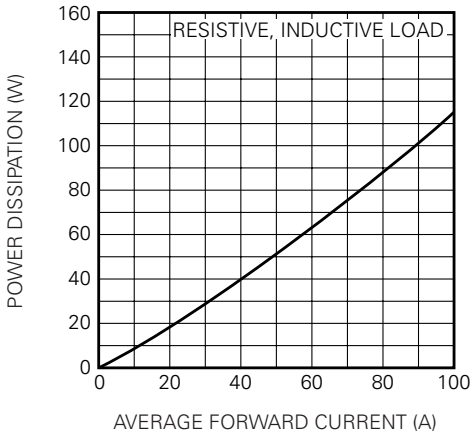
ALLOWABLE SURGE (NON-REPETITIVE) FORWARD CURRENT



MAXIMUM TRANSIENT THERMAL IMPEDANCE (JUNCTION TO CASE)



MAXIMUM POWER DISSIPATION



ALLOWABLE CASE TEMPERATURE VS. AVERAGE FORWARD CURRENT