

MITSUBISHI DIODE MODULES

# RM100SZ-6S,-6R

MEDIUM POWER GENERAL USE  
NON-INSULATED TYPE

RM100SZ-6S,6R



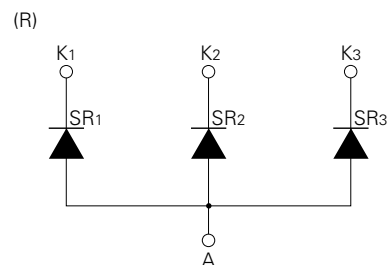
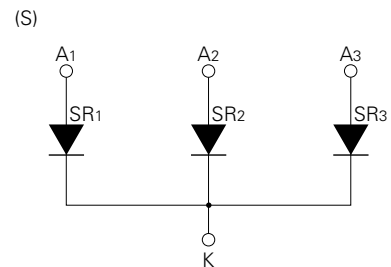
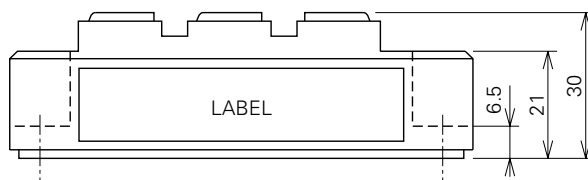
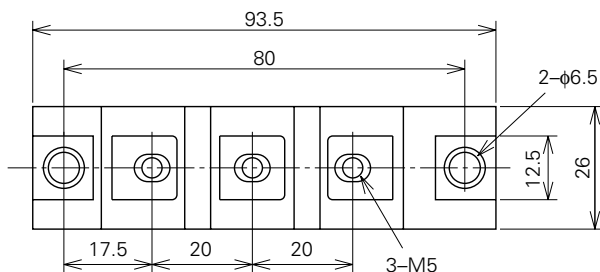
- **IF(AV)** Average forward current ..... **100A**
- **VRRM** Repetitive peak reverse voltage ..... **300V**
- **TRIPLE ARMS**
- **Non-Insulated Type**

## APPLICATION

Welders

## OUTLINE DRAWING & CIRCUIT DIAGRAM

Dimensions in mm



**RM100SZ-6S,-6R**

**MEDIUM POWER GENERAL USE  
INSULATED TYPE**

**ABSOLUTE MAXIMUM RATINGS**

| Symbol  | Parameter                           | Voltage class | Unit |
|---------|-------------------------------------|---------------|------|
|         |                                     | 6             |      |
| VRRM    | Repetitive peak reverse voltage     | 300           | V    |
| VRSM    | Non-repetitive peak reverse voltage | 400           | V    |
| VR (DC) | Reverse DC voltage                  | 240           | V    |

| Symbol           | Parameter                              | Conditions                                       | Ratings               | Unit             |
|------------------|----------------------------------------|--------------------------------------------------|-----------------------|------------------|
| IF (RMS)         | RMS forward current                    |                                                  | 157                   | A                |
| IF (AV)          | Average forward current                | Three-phase, half wave average current, Tc=125°C | 100                   | A                |
| IFSM             | Surge (non-repetitive) forward current | One half cycle at 60Hz, peak value               | 2000                  | A                |
| I <sup>2</sup> t | I <sup>2</sup> t for fusing            | Value for one cycle of surge current             | 1.7 × 10 <sup>4</sup> | A <sup>2</sup> s |
| f                | Maximum operating frequency            |                                                  | 1000                  | Hz               |
| Tj               | Junction temperature                   |                                                  | −40~150               | °C               |
| Tstg             | 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**

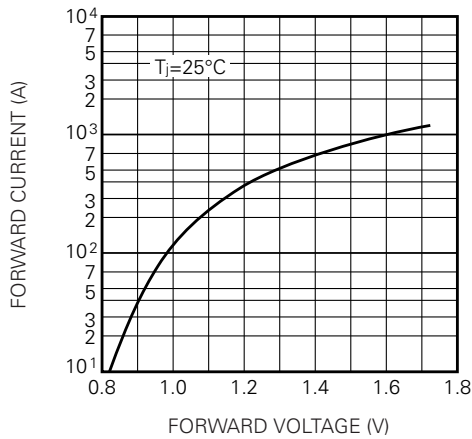
| Symbol    | Parameter                  | Test conditions                                         | Limits |      |      | Unit |
|-----------|----------------------------|---------------------------------------------------------|--------|------|------|------|
|           |                            |                                                         | Min.   | Typ. | Max. |      |
| IRRM      | Repetitive reverse current | Tj=150°C, VRRM applied                                  | —      | —    | 1.5  | mA   |
| VFM       | Forward voltage            | Tj=25°C, IFM=300A, instantaneous meas.                  | —      | —    | 1.15 | V    |
| Rth (j-c) | Thermal resistance         | Junction to case (per 1/3 module)                       | —      | —    | 0.2  | °C/W |
| Rth (c-f) | Contact thermal resistance | Case to fin, conductive grease applied (per 1/3 module) | —      | —    | 0.25 | °C/W |

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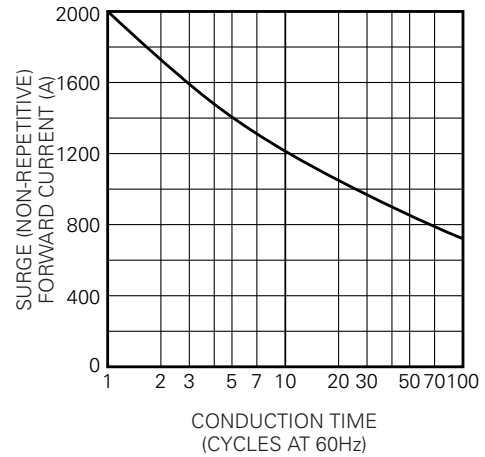
MEDIUM POWER GENERAL USE  
NON-INSULATED TYPE

## PERFORMANCE CURVES

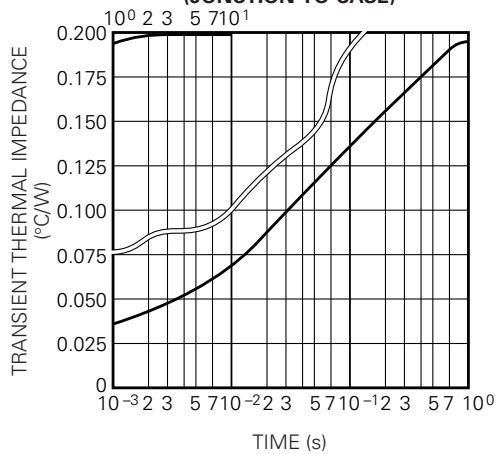
MAXIMUM FORWARD CHARACTERISTIC



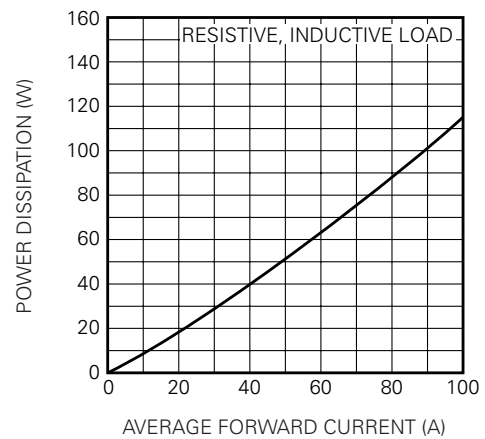
ALLOWABLE SURGE  
(NON-REPETITIVE) FORWARD CURRENT



MAXIMUM TRANSIENT THERMAL IMPEDANCE  
(JUNCTION TO CASE)



MAXIMUM POWER DISSIPATION



ALLOWABLE CASE TEMPERATURE  
VS. AVERAGE FORWARD CURRENT

