

MITSUBISHI DIODE MODULES  
**RM100DZ/CZ-M,-H**

HIGH POWER GENERAL USE  
 INSULATED TYPE

RM100DZ/CZ-M,-H



- **IF(AV)** Average forward current ..... **100A**
- **VRRM** Repetitive peak reverse voltage  
 ..... **400/800V**

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

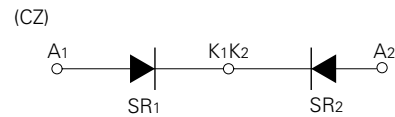
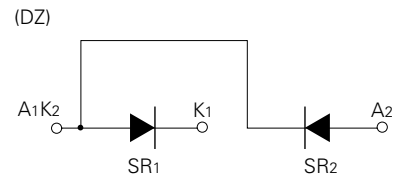
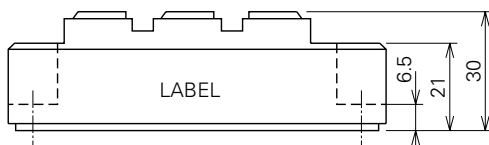
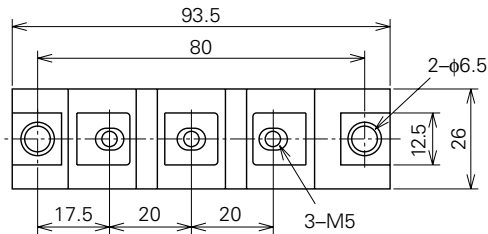
Yellow Card No. E80276 (N)  
 File No. E80271

**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



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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                    |   | 157                   | A                |
| IF (AV)          | Average forward current                | Single-phase, half-wave 180° conduction, Tc=115°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               |
| 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

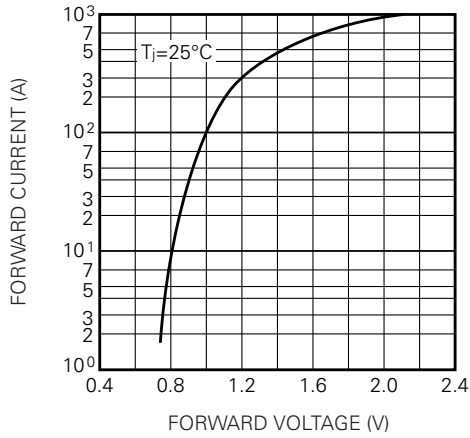
| Symbol                | Parameter                  | Test conditions  | Limits |      |      | Unit |
|-----------------------|----------------------------|--|--------|------|------|------|
|                       |                            |  | Min.   | Typ. | Max. |      |
| I <sub>RRM</sub>      | Repetitive reverse current | T <sub>j</sub> =150°C, V <sub>RRM</sub> applied                  | —      | —    | 20   | mA   |
| V <sub>FM</sub>       | Forward voltage            | T <sub>j</sub> =25°C, I <sub>FM</sub> =320A, instantaneous meas. | —      | —    | 1.25 | V    |
| R <sub>th (j-c)</sub> | Thermal resistance         | Junction to case (per 1/2 module)                                | —      | —    | 0.3  | °C/W |
| R <sub>th (c-f)</sub> | 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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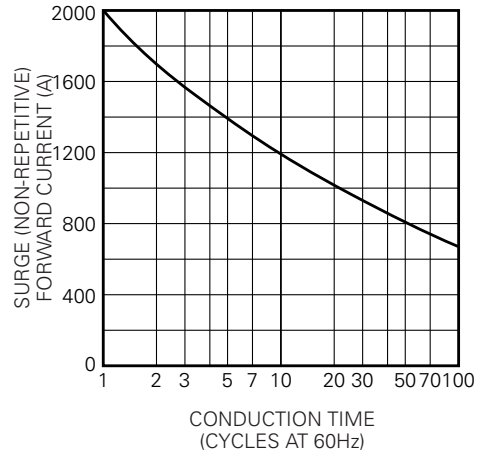
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## PERFORMANCE CURVES

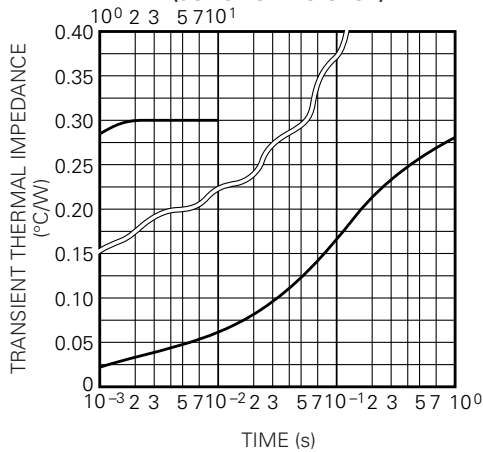
**MAXIMUM FORWARD CHARACTERISTIC**



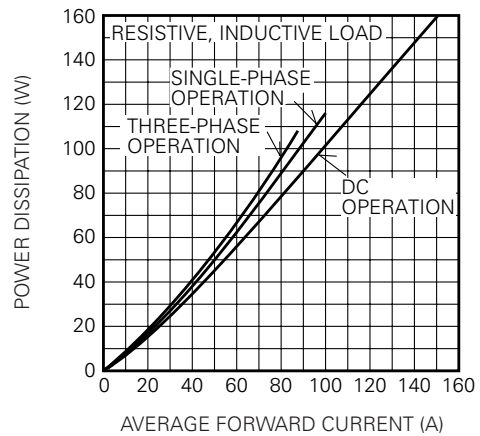
**ALLOWABLE SURGE (NON-REPETITIVE) FORWARD CURRENT**



**MAXIMUM TRANSIENT THERMAL IMPEDANCE (JUNCTION TO CASE)**



**MAXIMUM POWER DISSIPATION**



**ALLOWABLE CASE TEMPERATURE VS. AVERAGE FORWARD CURRENT**

