

MITSUBISHI DIODE MODULES

RM60DZ/CZ-24,-2H

HIGH VOLTAGE MEDIUM POWER GENERAL USE
INSULATED TYPE

RM60DZ/CZ-24,-2H



- **IF(AV)** Average forward current **500A**
- **VRRM** Repetitive peak reverse voltage
..... **400/800/1200/1600V**

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

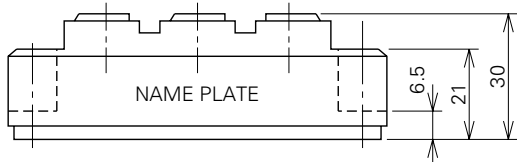
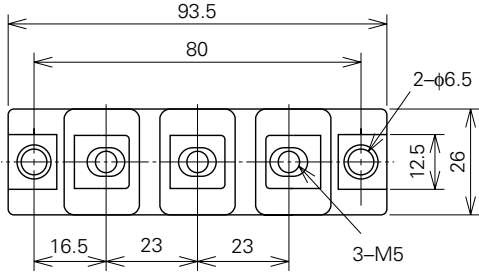
Yellow Card No. E80276 (N)
File No. E80271

APPLICATION

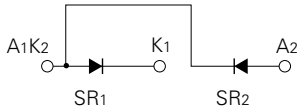
DC motor control inverters, DC motor controllers, battery DC power supplies,
DC power supplies for control panels, and other general DC power equipment

OUTLINE DRAWING & CIRCUIT DIAGRAM

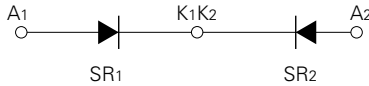
Dimensions in mm



(DZ)



(CZ)



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ABSOLUTE MAXIMUM RATINGS

| Symbol | Parameter | Voltage class | | Unit |
|---------|-------------------------------------|---------------|------|------|
| | | 24 | 2H | |
| VRRM | Repetitive peak reverse voltage | 1200 | 1600 | V |
| VRSM | Non-repetitive peak reverse voltage | 1350 | 1700 | V |
| VR (DC) | Reverse DC voltage | 960 | 1280 | V |

| Symbol | Parameter | Conditions | Ratings | Unit |
|------------------|--|---|-----------------------|------------------|
| IF (RMS) | RMS forward current | | 95 | A |
| IF (AV) | Average forward current | Single-phase, half-wave 180° conduction, Tc=112°C | 60 | A |
| IFSM | Surge (non-repetitive) forward current | One half cycle at 60Hz, peak value | 1200 | A |
| I ² t | I ² t for fusing | Value for one cycle of surge current | 6.0 × 10 ³ | A ² 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 |
| | | | 15~110 | kg·cm |
| | | Mounting screw M6 | 1.96~2.94 | N·m |
| — | Weight | Typical value | 20~30 | kg·cm |
| | | | 160 | g |

ELECTRICAL CHARACTERISTICS

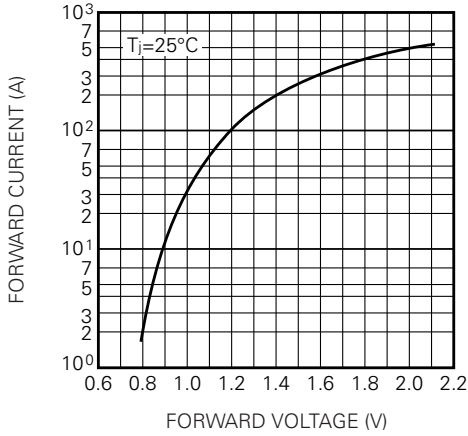
| Symbol | Parameter | Test conditions | Limits | | | Unit |
|-----------------------|----------------------------|--|--------|------|------|------|
| | | | Min. | Typ. | Max. | |
| I _{RRM} | Repetitive reverse current | T _j =150°C, V _{RRM} applied | — | — | 20 | mA |
| V _{FM} | Forward voltage | T _j =25°C, I _{FM} =180A, instantaneous meas. | — | — | 1.35 | V |
| R _{th (j-c)} | Thermal resistance | Junction to case, per 1/2 module | — | — | 0.5 | °C/W |
| R _{th (c-f)} | Contact thermal resistance | Case to fin, with thermal compound, 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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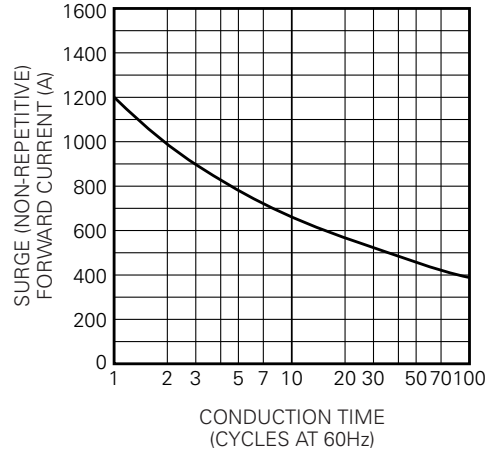
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INSULATED TYPE

PERFORMANCE CURVES

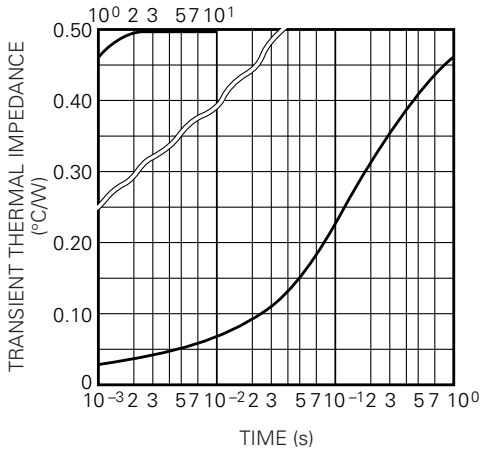
MAXIMUM FORWARD CHARACTERISTICS



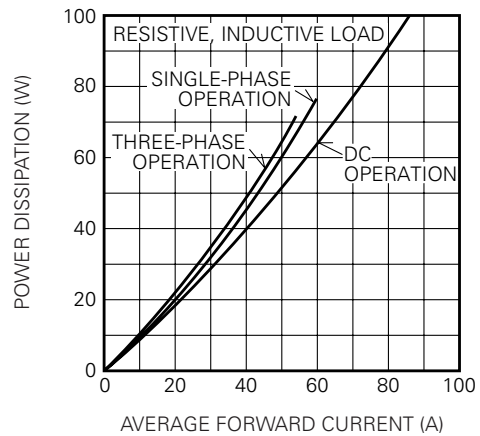
ALLOWABLE SURGE (NON-REPETITIVE) FORWARD CURRENT



MAXIMUM TRANSIENT THERMAL IMPEDANCE (JUNCTION TO CASE)



MAXIMUM POWER DISSIPATION



ALLOWABLE CASE TEMPERATURE VS. AVERAGE FORWARD CURRENT

