

# 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**

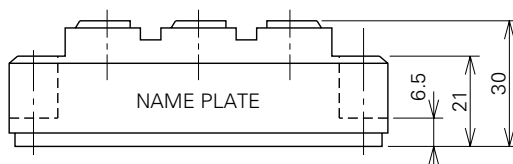
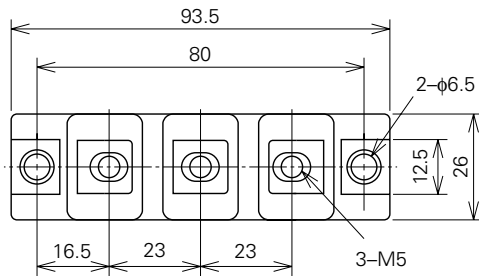
Yellow Card No. E80276 (N)  
File No. E80271

## APPLICATION

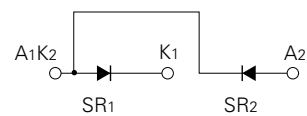
DC motor control inverters, DC motor controllers, battery DC power supplies,  
DC power supplies for control panels, and other general DC power equipment

## OUTLINE DRAWING & CIRCUIT DIAGRAM

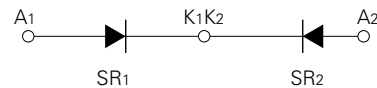
Dimensions in mm



(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 <sup>2</sup> t | I <sup>2</sup> t for fusing            | Value for one cycle of surge current              | 6.0 × 10 <sup>3</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              |
|                  |                                        |                                                   | 15~110                | kg·cm            |
|                  |                                        | Mounting screw M6                                 | 1.96~2.94             | N·m              |
|                  |                                        |                                                   | 20~30                 | kg·cm            |
| —                | Weight                                 | Typical value                                     | 160                   | g                |

## ELECTRICAL CHARACTERISTICS

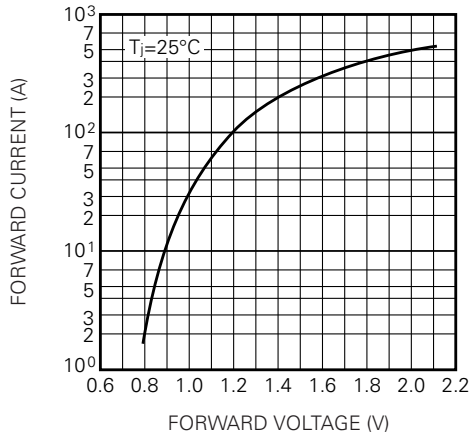
| Symbol                | Parameter                  | Test conditions                                                 | Limits |      |      | Unit |
|-----------------------|----------------------------|-----------------------------------------------------------------|--------|------|------|------|
|                       |                            |                                                                 | Min.   | Typ. | Max. |      |
| I <sub>RRM</sub>      | Repetitive reverse current | Tj=150°C, VRRM applied                                          | —      | —    | 20   | mA   |
| V <sub>FM</sub>       | Forward voltage            | Tj=25°C, IFM=180A, instantaneous meas.                          | —      | —    | 1.35 | V    |
| R <sub>th (j-c)</sub> | Thermal resistance         | Junction to case, per 1/2 module                                | —      | —    | 0.5  | °C/W |
| R <sub>th (c-f)</sub> | 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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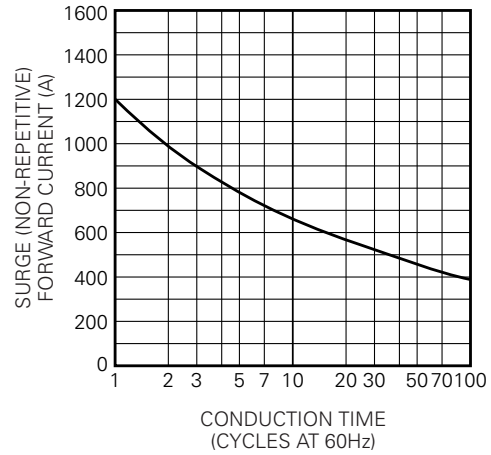
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## PERFORMANCE CURVES

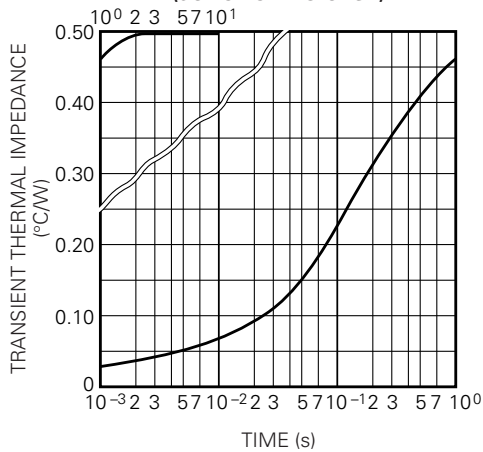
MAXIMUM FORWARD CHARACTERISTICS



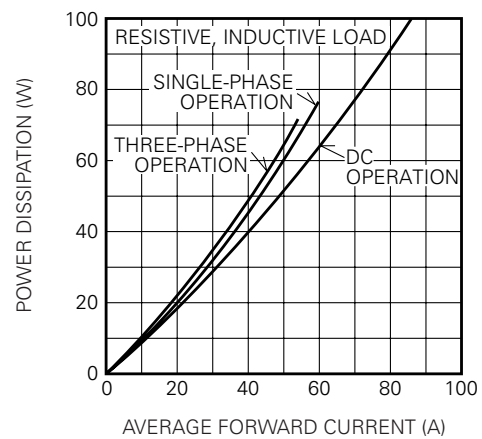
ALLOWABLE SURGE (NON-REPETITIVE)  
FORWARD CURRENT



MAXIMUM TRANSIENT THERMAL IMPEDANCE  
(JUNCTION TO CASE)



MAXIMUM POWER DISSIPATION



ALLOWABLE CASE TEMPERATURE  
VS. AVERAGE FORWARD CURRENT

