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MITSUBISHI DIODE MODULES

RM50TC-M,-H,-24,-2H

MEDIUM POWER GENERAL USE
INSULATED TYPE

RM50TC-M,-H,-24,-2H



- **I_o** DC output current **100A**
- **V_{RRM}** Repetitive peak reverse voltage
..... **400/800/1200/1600V**
- **3 phase bridge**
- **Insulated Type**
- **UL Recognized**

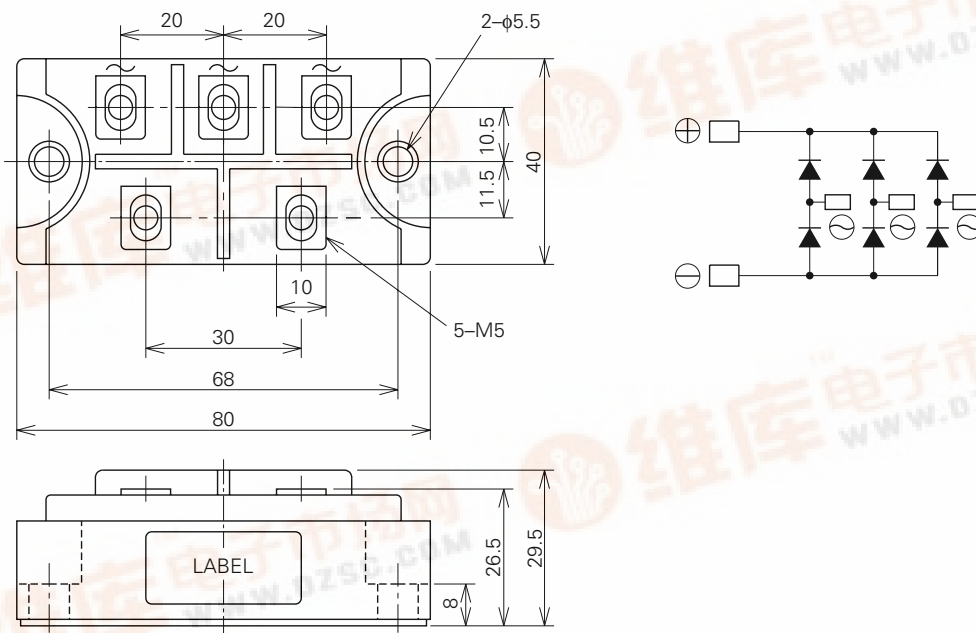
Yellow Card No. E80276 (N)
File No. E80271

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



RM50TC-M,-H,-24,-2H

MEDIUM POWER GENERAL USE
INSULATED TYPE

ABSOLUTE MAXIMUM RATINGS

| Symbol | Parameter | Voltage class | | | | Unit |
|--------|-------------------------------------|---------------|-----|------|------|------|
| | | M | H | 24 | 2H | |
| VRRM | Repetitive peak reverse voltage | 400 | 800 | 1200 | 1600 | V |
| VRSM | Non-repetitive peak reverse voltage | 480 | 960 | 1350 | 1700 | V |
| Ea | Recommended AC input voltage | 110 | 220 | 370 | 440 | V |

| Symbol | Parameter | Conditions | Ratings | Unit |
|------------------|--|--|-----------------------|------------------|
| Io | DC output current | Three-phase full wave rectifying circuit, Tc=102°C | 100 | A |
| IFSM | Surge (non-repetitive) forward current | One half cycle at 60Hz, peak value | 1000 | A |
| I ² t | I ² t for fusing | Value for one cycle of surge current | 4.2 × 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 |
| | | | 15~20 | kg·cm |
| | | Mounting screw M5 | 1.47~1.96 | N·m |
| | | | 15~20 | kg·cm |
| — | Weight | Typical value | 220 | g |

ELECTRICAL CHARACTERISTICS

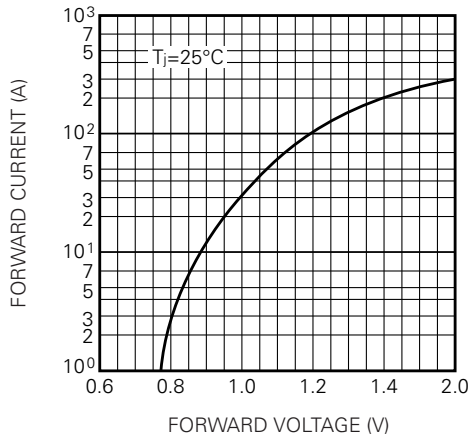
| Symbol | Parameter | Test conditions | Limits | | | Unit |
|-----------|----------------------------|---|--------|------|------|------|
| | | | Min. | Typ. | Max. | |
| IRRM | Repetitive reverse current | Tj=150°C, VRRM applied | — | — | 10 | mA |
| VFM | Forward voltage | Tj=25°C, IFM=100A, instantaneous meas. | — | — | 1.2 | V |
| Rth (j-c) | Thermal resistance | Junction to case | — | — | 0.2 | °C/W |
| Rth (c-f) | Contact thermal resistance | Case to fin, conductive grease applied | — | — | 0.06 | °C/W |
| — | Insulation resistance | Measured with a 500V megohmmeter between main terminal and case | 10 | — | — | MΩ |

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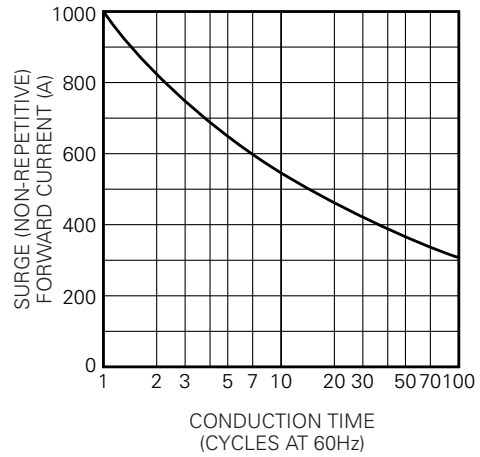
MEDIUM POWER GENERAL USE
INSULATED TYPE

PERFORMANCE CURVE

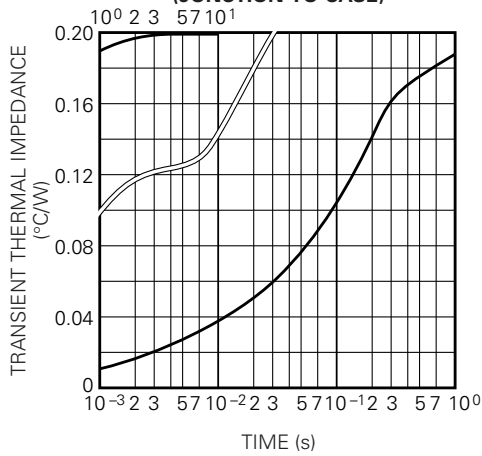
MAXIMUM FORWARD CHARACTERISTIC



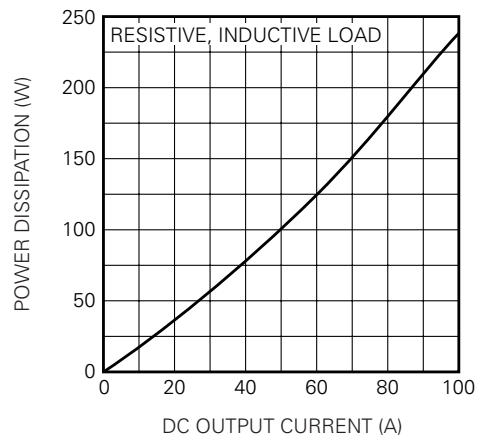
ALLOWABLE SURGE (NON-REPETITIVE) FORWARD CURRENT



MAXIMUM TRANSIENT THERMAL IMPEDANCE (JUNCTION TO CASE)



MAXIMUM POWER DISSIPATION



ALLOWABLE CASE TEMPERATURE VS. DC OUTPUT CURRENT

