

MITSUBISHI DIODE MODULES  
**RM30TA-M,-H**  
 MEDIUM POWER GENERAL USE  
 INSULATED TYPE

RM30TA-M,-H



- **Io** DC output current ..... **75A**
- **VRRM** Repetitive peak reverse voltage  
 ..... **400/800V**

- **3 phase bridge**
- **Insulated Type**
- **UL Recognized**

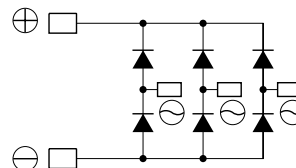
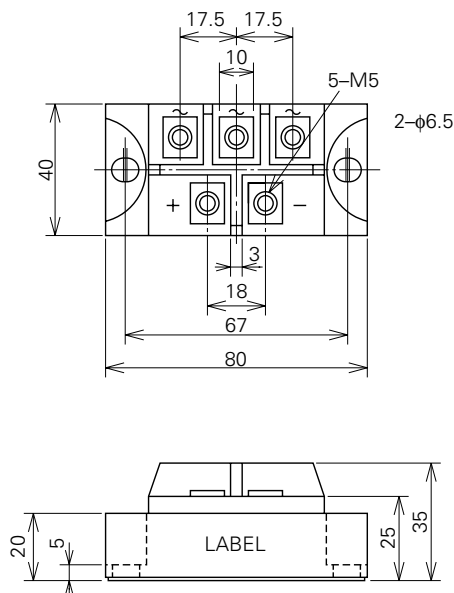
Yellow Card No. E80276 (N)  
 File No. E80271

**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



## MITSUBISHI DIODE MODULES

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## INSULATED TYPE

## ABSOLUTE MAXIMUM RATINGS

| Symbol | Parameter                           | Voltage class |     | Unit |
|--------|-------------------------------------|---------------|-----|------|
|        |                                     | M             | H   |      |
| VRRM   | Repetitive peak reverse voltage     | 400           | 800 | V    |
| VRSM   | Non-repetitive peak reverse voltage | 500           | 900 | V    |
| Ea     | Recommended AC input voltage        | 110           | 220 | V    |

| Symbol           | Parameter                              | Conditions   | Ratings               | Unit             |
|------------------|--|--|-----------------------|------------------|
| Io               | DC output current                      | Three-phase full wave rectifying circuit, Tc=105°C | 75                    | A                |
| IFSM             | Surge (non-repetitive) forward current | One half cycle at 60Hz, peak value                 | 1000                  | A                |
| I <sup>2</sup> t | I <sup>2</sup> t for fusing            | Value for one cycle of surge current               | 4.2 × 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              |
|                  |  |  | 15~20                 | kg·cm            |
|                  |  | Mounting screw M6                                  | 1.96~2.94             | N·m              |
|                  |  |  | 20~30                 | 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.                          | —      | —    | 1.3  | V    |
| Rth (j-c) | Thermal resistance         | Junction to case  | —      | —    | 0.24 | °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   |

Feb.1999



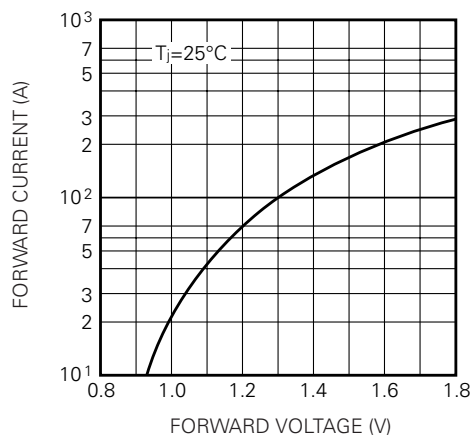
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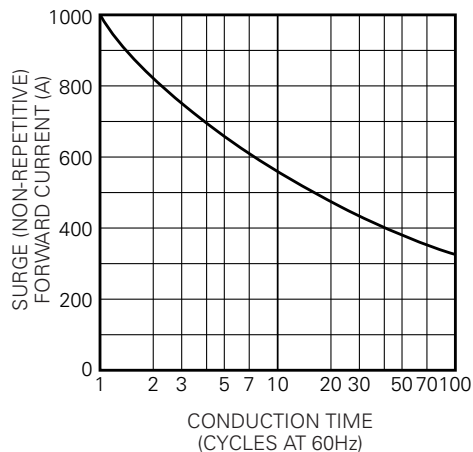
MEDIUM POWER GENERAL USE  
INSULATED TYPE

**PERFORMANCE CURVES**

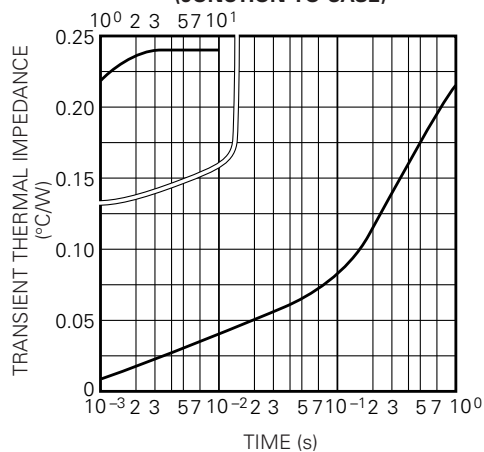
**MAXIMUM FORWARD CHARACTERISTIC**



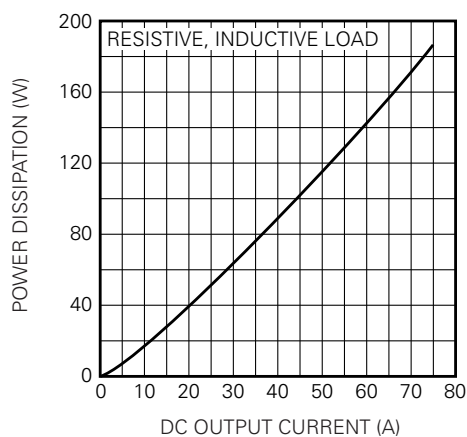
**ALLOWABLE SURGE (NON-REPETITIVE) FORWARD CURRENT**



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



**MAXIMUM POWER DISSIPATION**



**ALLOWABLE CASE TEMPERATURE VS. DC OUTPUT CURRENT**

