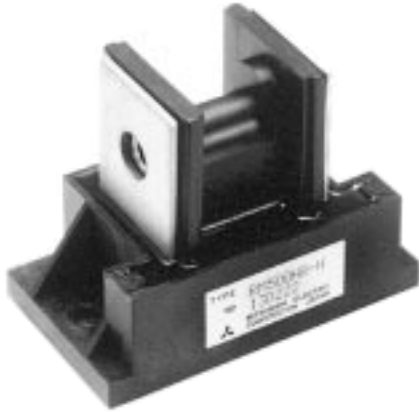


MITSUBISHI DIODE MODULES
RM500HA-M,-H,-24,-2H

HIGH POWER GENERAL USE
 INSULATED TYPE

RM500HA-M,-H,-24,-2H



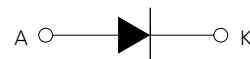
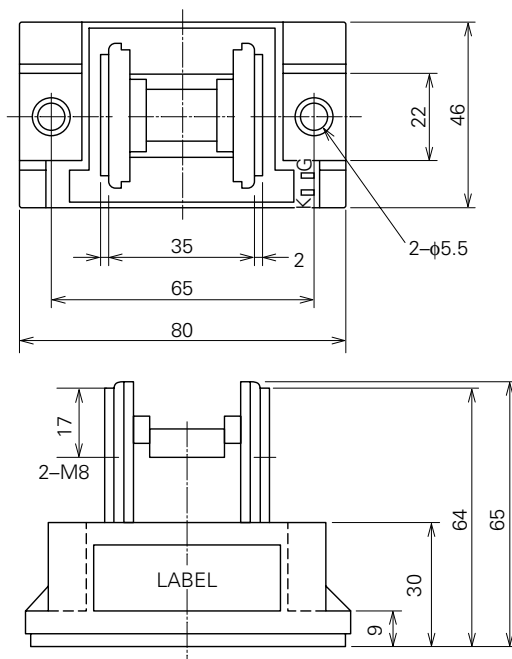
- **IF(AV)** Average forward current **500A**
- **VRRM** Repetitive peak reverse voltage
 **400/800/1200/1600V**
- **ONE ARM**
- **Insulated Type**

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



RM500HA-M,-H,-24,-2H

HIGH 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 |
| VRRM | Non-repetitive peak reverse voltage | 480 | 960 | 1350 | 1700 | V |
| VR (DC) | Reverse DC voltage | 320 | 640 | 960 | 1280 | V |

| Symbol | Parameter | Conditions | Ratings | Unit |
|------------------|--|--|-----------------------|------------------|
| IF (RMS) | RMS forward current | | 785 | A |
| IF (AV) | Average forward current | Single-phase, half-wave 180° conduction, Tc=90°C | 500 | A |
| IFSM | Surge (non-repetitive) forward current | One half cycle at 60Hz, peak value | 10000 | A |
| I ² t | I ² t for fusing | Value for one cycle of surge current | 4.2 × 10 ⁵ | 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 M8 | 8.83~10.8 | N·m |
| | | | 90~110 | kg·cm |
| | | Mounting screw M6 | 1.47~1.96 | N·m |
| — | Weight | Typical value | 15~20 | kg·cm |
| | | | 450 | g |

ELECTRICAL CHARACTERISTICS

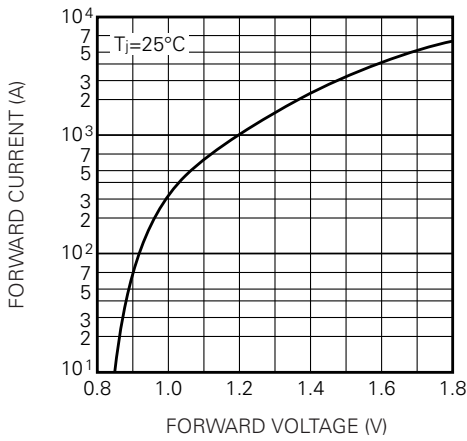
| Symbol | Parameter | Test conditions | Limits | | | Unit |
|----------------------|----------------------------|---|--------|------|------|------|
| | | | Min. | Typ. | Max. | |
| I _{RRM} | Repetitive reverse current | T _j =150°C, V _{RRM} applied | — | — | 40 | mA |
| V _{FM} | Forward voltage | T _j =25°C, I _{FM} =1500A, instantaneous meas. | — | — | 1.25 | V |
| R _{th(j-c)} | Thermal resistance | Junction to case (per 1/2 module) | — | — | 0.1 | °C/W |
| R _{th(c-f)} | Contact thermal resistance | Case to fin, conductive grease applied (per 1/2 module) | — | — | 0.08 | °C/W |
| — | Insulation resistance | Measured with a 500V megohmmeter between main terminal and case | 10 | — | — | MΩ |

RM500HA-M,-H,-24.-2H

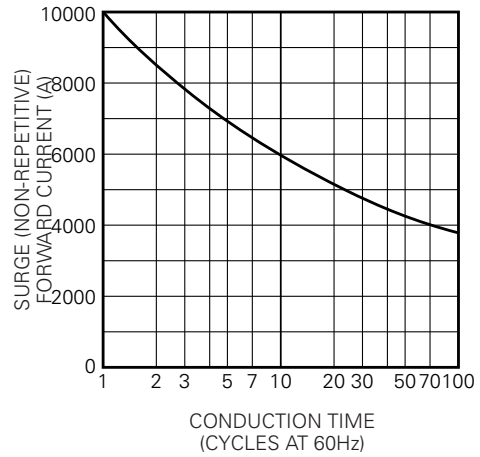
HIGH POWER GENERAL USE
INSULATED TYPE

PERFORMANCE CURVES

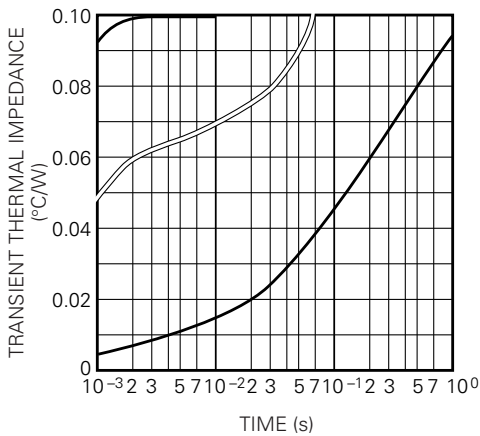
MAXIMUM FORWARD CHARACTERISTIC



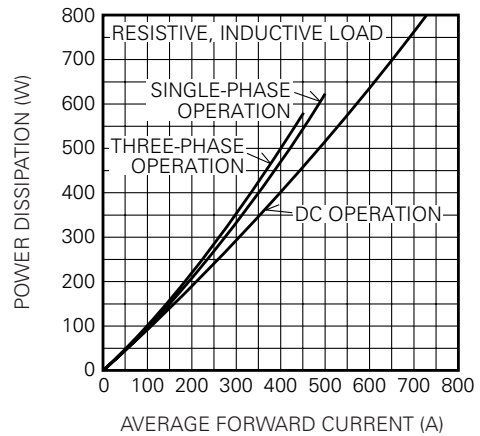
ALLOWABLE SURGE (NON-REPETITIVE) FORWARD CURRENT



MAXIMUM TRANSIENT THERMAL IMPEDANCE (JUNCTION TO CASE)



MAXIMUM POWER DISSIPATION



ALLOWABLE CASE TEMPERATURE VS. AVERAGE FORWARD CURRENT

