

# RM400HV-34S

HIGH SPEED SWITCHING USE  
INSULATED TYPE

RM400HV-34S



- **Idc** DC current ..... **400A**
- **VRRM** Repetitive peak reverse voltage  
..... **1700V**
- **trr** Reverse recovery time ..... **0.4μs**
- **Insulated Type**
- **UL Recognized**

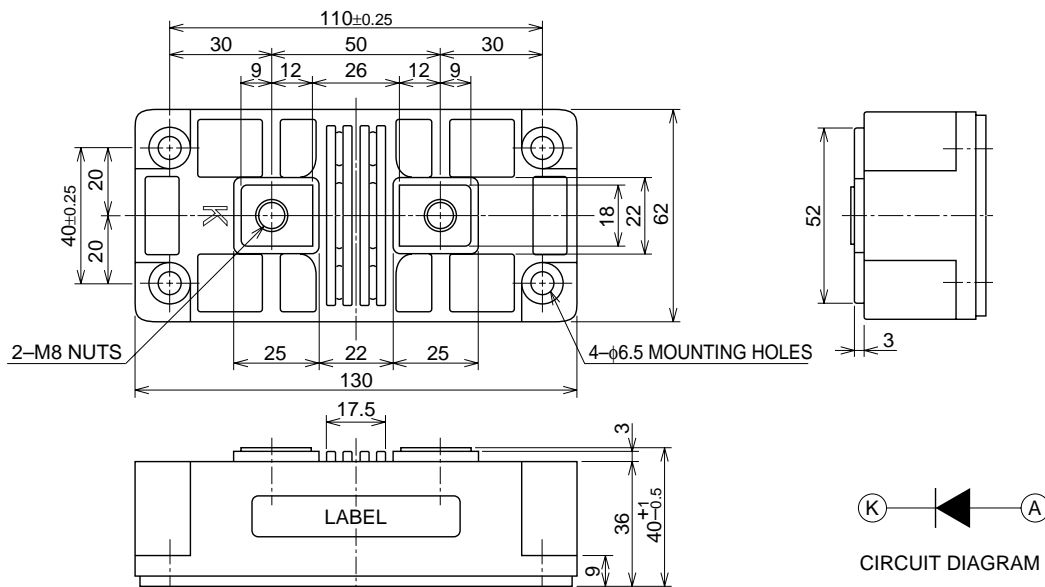
Yellow Card No. E80276 (N)  
File No. E80271

## APPLICATION

Free wheel use, Welders

## OUTLINE DRAWING & CIRCUIT DIAGRAM

Dimensions in mm



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## ABSOLUTE MAXIMUM RATINGS (T<sub>j</sub>=25°C)

| Symbol  | Parameter                           | Voltage class |  | Unit |
|---------|-------------------------------------|---------------|--|------|
|         |                                     | 34            |  |      |
| VRRM    | Repetitive peak reverse voltage     | 1700          |  | V    |
| VDRM    | Non-repetitive peak reverse voltage | 1700          |  | V    |
| VR (DC) | Reverse DC voltage                  | 1360          |  | V    |

| Symbol                      | Parameter                              | Conditions                           | Ratings               | Unit             |
|-----------------------------|--|--------------------------------------|-----------------------|------------------|
| I <sub>DC</sub>             | DC current                             | Resistive load, T <sub>c</sub> =90°C | 400                   | A                |
| I <sub>FSM</sub>            | Surge (non-repetitive) forward current | One half cycle at 60Hz, peak value   | 8000                  | A                |
| I <sup>2</sup> <sub>t</sub> | I <sup>2</sup> <sub>t</sub> for fusing | Value for one cycle surge current    | 2.6 × 10 <sup>5</sup> | A <sup>2</sup> s |
| T <sub>j</sub>              | Junction temperature                   |                                      | -40~+150              | °C               |
| T <sub>stg</sub>            | Storage temperature                    |                                      | -40~+125              | °C               |
| V <sub>iso</sub>            | Isolation voltage                      | Charged part to case                 | 5750                  | V                |
| —                           | Mounting torque                        | Main terminal screw M8               | 8.83~10.8             | N·m              |
|                             |  | Mounting screw M6                    | 1.96~2.94             | N·m              |
| —                           | Weight                                 | Typical value                        | 740                   | g                |

## ELECTRICAL CHARACTERISTICS

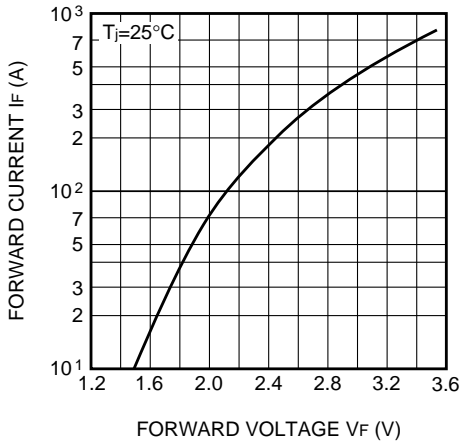
| Symbol                | Parameter                  | Test conditions   | Limits |      |       | Unit |
|-----------------------|----------------------------|---|--------|------|-------|------|
|                       |                            |   | Min.   | Typ. | Max.  |      |
| I <sub>RRM</sub>      | Repetitive reverse current | T <sub>j</sub> =150°C, VRRM applied   | —      | —    | 50    | mA   |
| V <sub>FM</sub>       | Forward voltage            | T <sub>j</sub> =25°C, I <sub>FM</sub> =400A, Instantaneous meas.                  | —      | —    | 3.0   | V    |
| t <sub>rr</sub>       | Reverse recovery time      | I <sub>FM</sub> =400A, T <sub>j</sub> =25°C. di/dt=-800A/μs, V <sub>R</sub> =600V | —      | —    | 0.5   | μs   |
| Q <sub>rr</sub>       | Reverse recovery charge    |   | —      | —    | 50    | μC   |
| R <sub>th (j-c)</sub> | Thermal resistance         | Junction to case  | —      | —    | 0.09  | °C/W |
| R <sub>th (c-f)</sub> | Contact thermal resistance | Case to fin, conductive grease applied  | —      | —    | 0.033 | °C/W |

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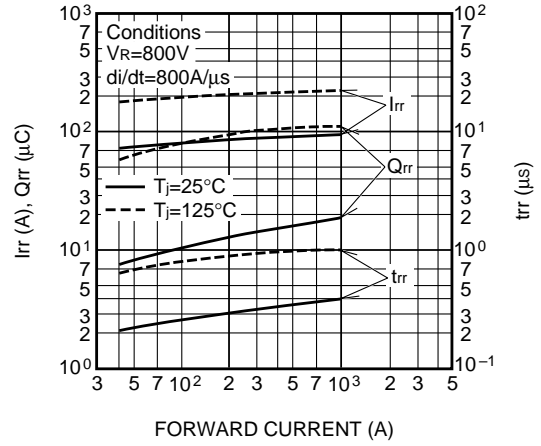
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## PERFORMANCE CURVES

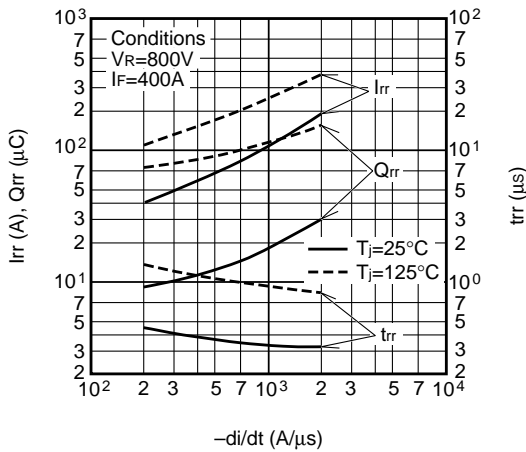
MAXIMUM FORWARD CHARACTERISTIC



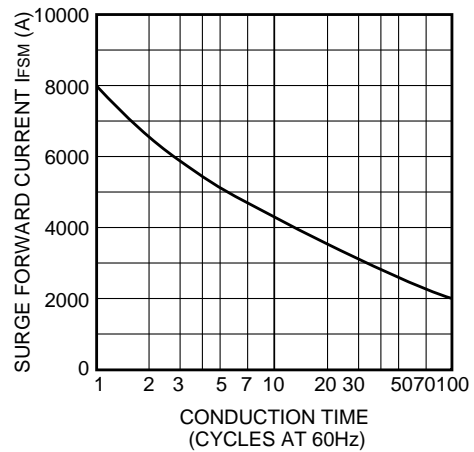
REVERSE RECOVERY CHARACTERISTICS (FORWARD CURRENT DEPENDENCY) (TYPICAL)



REVERSE RECOVERY CHARACTERISTICS (di/dt DEPENDENCY) (TYPICAL)



MAXIMUM SURGE CURRENT (NON-REPETITIVE)



MAXIMUM TRANSIENT THERMAL IMPEDANCE

