

**SINGLE-PHASE GLASS PASSIVATED
SILICON BRIDGE RECTIFIER**
VOLTAGE RANGE 50 to 1000 Volts CURRENT 25 Amperes

FEATURES

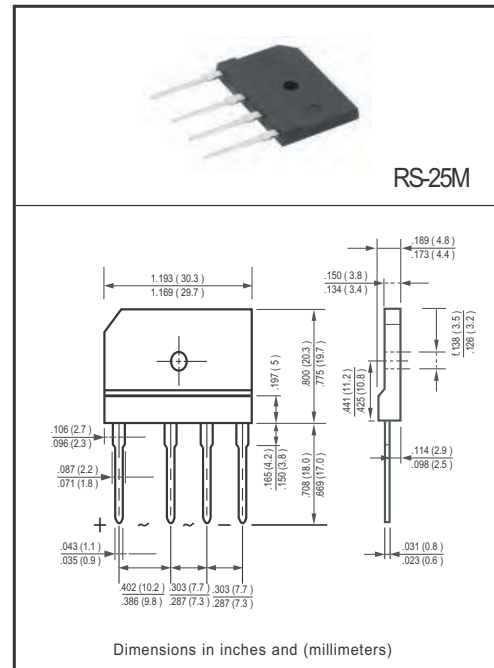
- * Low leakage
- * Low forward voltage
- * Mounting position: Any
- * Surge overload rating: 300 amperes peak
- * Ideal for printed circuit boards
- * High forward surge current capability

MECHANICAL DATA

- * Epoxy: Device has UL flammability classification 94V-O
- * UL list the recognized component directory, file #E94233

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.



MAXIMUM RATINGS: (at TA=25 °C unless otherwise noted)

| RATINGS | SYMBOL | RS2501M | RS2502M | RS2503M | RS2504M | RS2505M | RS2506M | RS2507M | UNITS |
|---|-----------------|--------------|---------|---------|---------|---------|---------|---------|------------------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum RMS Voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | Volts |
| Maximum DC Blocking Voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum Average Forward Rectified Current at $T_C=55^{\circ}\text{C}$ | I_O | 25 4.3 | | | | | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | I_{FSM} | 300 | | | | | | | Amps |
| Typical Current Squared Time | I^2t | 373.3 | | | | | | | A ² S |
| Typical Thermal Resistance (Note 1) | $R_{\theta JC}$ | 1.0 | | | | | | | °C/W |
| Typical Thermal Resistance (Note 1) | $R_{\theta JA}$ | 22 | | | | | | | °C/W |
| Operating Temperature Range | T_J | 150 | | | | | | | °C |
| Storage Temperature Range | T_{STG} | -55 to + 150 | | | | | | | °C |

ELECTRICAL CHARACTERISTICS (at TA=25 °C unless otherwise noted)

| CHARACTERISTICS | SYMBOL | RS2501M | RS2502M | RS2503M | RS2504M | RS2505M | RS2506M | RS2507M | UNITS |
|--|--------|---------|---------|---------|---------|---------|---------|---------|-------|
| Maximum Forward Voltage at 12.5A DC | V_F | 1.1 | | | | | | | Volts |
| Maximum DC Average Reverse Current at $T_A = 25^{\circ}\text{C}$ | I_R | 5.0 | | | | | | | uAmps |
| Rated DC Blocking Voltage | | 200 | | | | | | | uAmps |

NOTES : 1. Thermal resistance : Heat-sink case mounted.
2. "Fully ROHS compliant", "100% Sn plating (Pb-free)".

2014-03
REV:B

RATING AND CHARACTERISTICS CURVES (RS2501M THRU RS2507M)

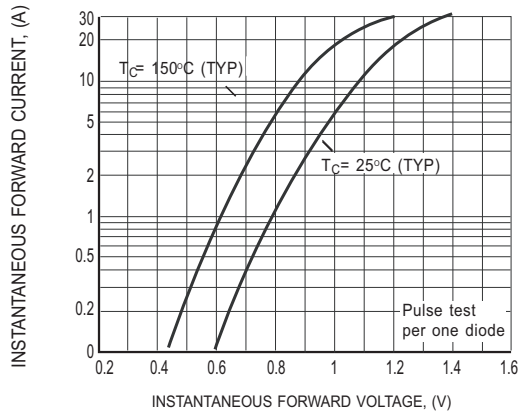


FIG.1 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

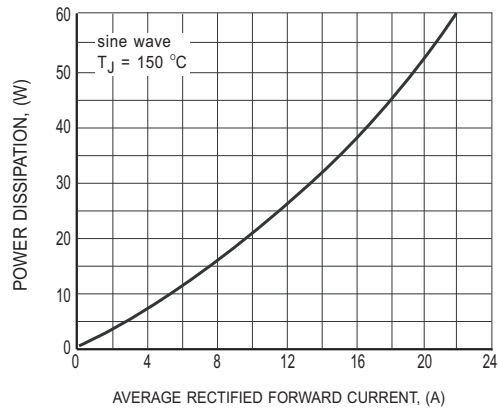


FIG.2 POWER DISSIPATION

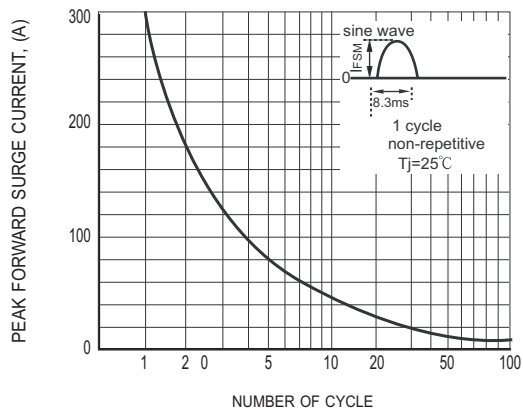


FIG.3 SURGE FORWARD CURRENT CAPABILITY

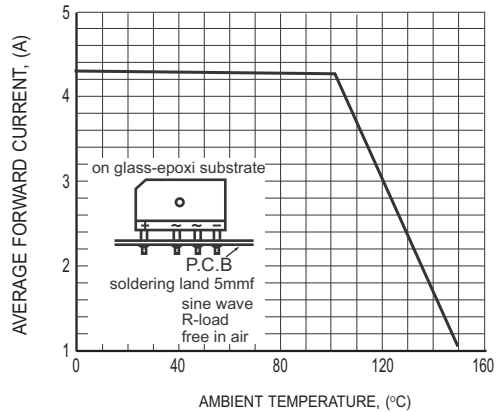


FIG.4 TYPICAL FORWARD CURRENT DERATING CURVE

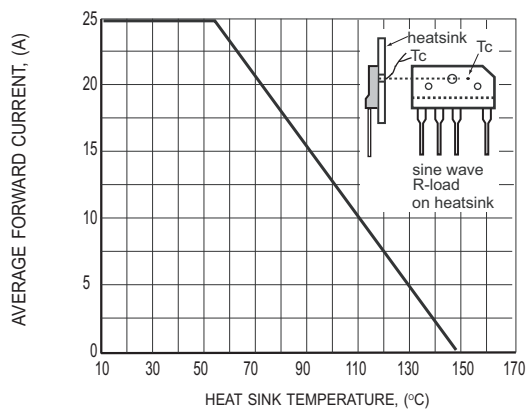


FIG.5 TYPICAL FORWARD CURRENT DERATING CURVE

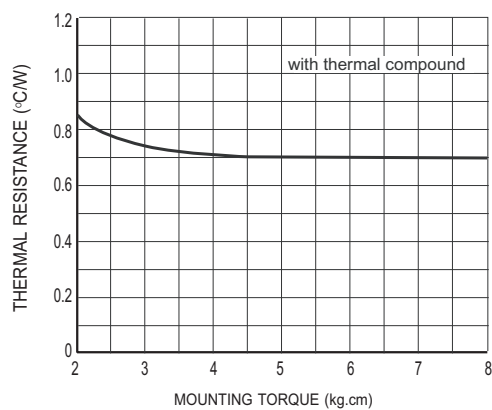
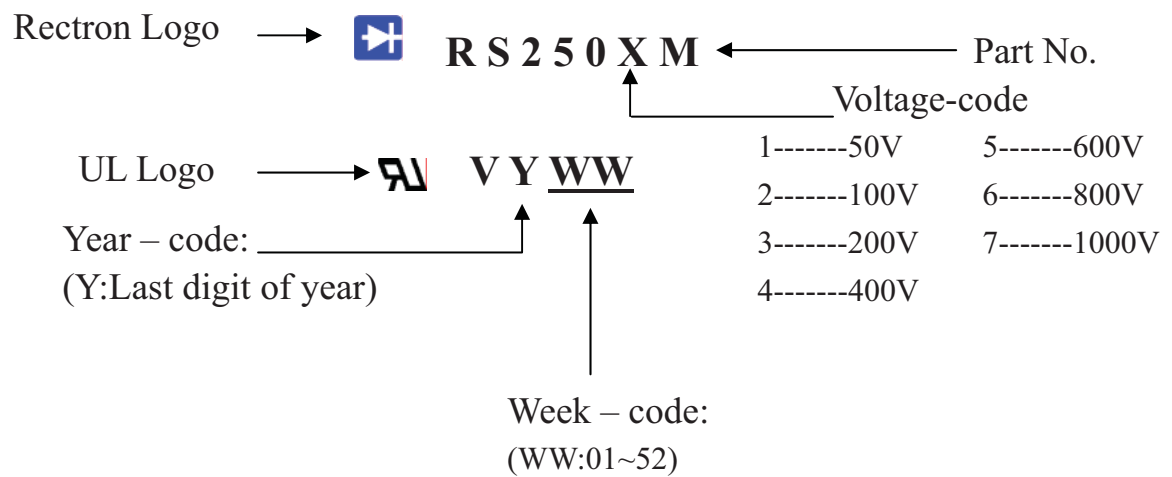


FIG.6 CONTACT THERMAL RESISTANCE fcf

Marking Description



PACKAGING OF DIODE AND BRIDGE RECTIFIERS

BULK PACK

| PACKAGE | PACKING CODE | EA PER BOX | INNER BOX SIZE (mm) | CARTON SIZE (mm) | EA PER CARTON | GROSS WEIGHT(Kg) |
|---------|--------------|------------|------------------------|---------------------|---------------|---------------------|
| RS-25M | -B | 300 | 230*190*46 | 410*243*157 | 1,800 | 13.37 |

TUBE PACK

| PACKAGE | PACKING CODE | EA PER BOX | INNER BOX SIZE (mm) | CARTON SIZE (mm) | EA PER CARTON | WEIGHT(Kg) |
|---------|--------------|------------|------------------------|---------------------|---------------|------------|
| RS-25M | -C | 600 | 490*135*110 | 510*293*131 | 1,200 | 13.12 |

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