

**SINGLE-PHASE GLASS PASSIVATED
SILICON BRIDGE RECTIFIER**
VOLTAGE RANGE 600 Volts CURRENT 25 Amperes

FEATURES

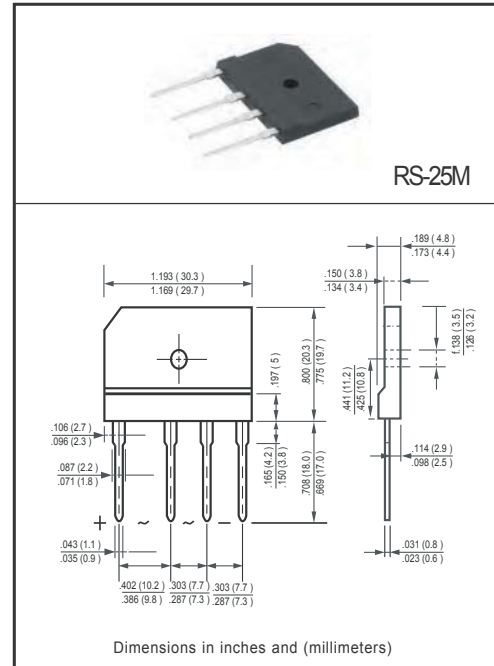
- * Low leakage
- * Low forward voltage
- * Mounting position: Any
- * Surge overload rating: 300 amperes peak
- * Ideal for printed circuit boards
- * High forward surge current capability

MECHANICAL DATA

- * Epoxy: Device has UL flammability classification 94V-0
- * UL list the recognized component directory, file #E94233
- * Halogen-free

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 (@ TA=25 °C unless otherwise noted)

| RATINGS | | SYMBOL | RS2505M-C-LV | UNITS |
|---|------------------|-----------------|--------------|---------------------------|
| Maximum Recurrent Peak Reverse Voltage | | V_{RRM} | 600 | Volts |
| Maximum RMS Voltage | | V_{RMS} | 420 | Volts |
| Maximum DC Blocking Voltage | | V_{DC} | 600 | Volts |
| Maximum Average Forward Rectified Current at $T_C=55^\circ\text{C}$ | with heatsink | I_O | 25 | Amps |
| | without heatsink | | 4.3 | |
| 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_t^2 | 373.3 | A^2S |
| Insulation voltage | | Viso | 3000 | Volts |
| Typical Thermal Resistance (Note 1) | | $R_{\theta JC}$ | 1.0 | $^\circ\text{C}/\text{W}$ |
| Typical Thermal Resistance (Note 1) | | $R_{\theta JA}$ | 22 | $^\circ\text{C}/\text{W}$ |
| Operating Temperature Range | | T_J | 150 | $^\circ\text{C}$ |
| Storage Temperature Range | | T_{STG} | -55 to + 150 | $^\circ\text{C}$ |

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

| CHARACTERISTICS | | SYMBOL | RS2505M-C-LV | UNITS |
|---|-------------|--------|--------------|-------|
| Maximum Forward Voltage at 12.5A DC | | V_F | 0.92 | Volts |
| Maximum DC Average Reverse Current at Rated DC Blocking Voltage | @TA = 25°C | I_R | 5.0 | uAmps |
| | @TA = 125°C | | 200 | |

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

RATING AND CHARACTERISTICS CURVES (RS2505M-C-LV)

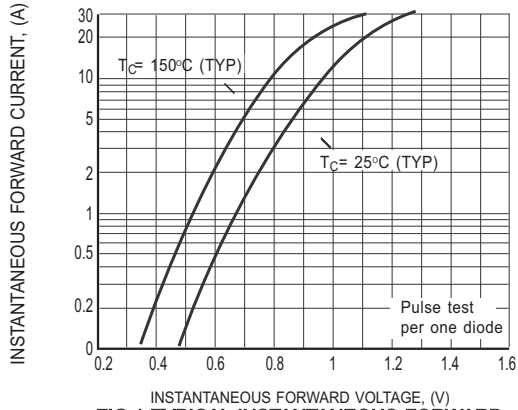


FIG.1 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

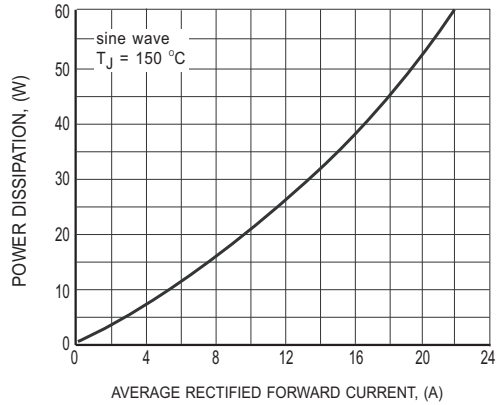


FIG.2 POWER DISSIPATION

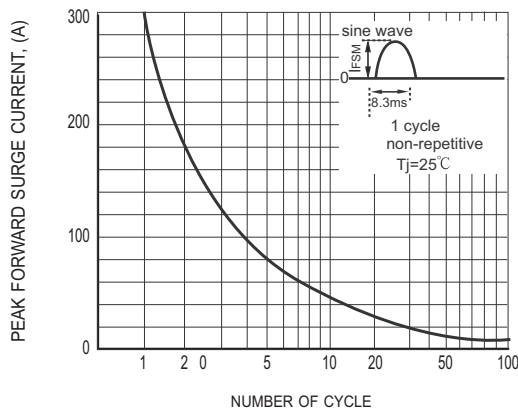


FIG.3 SURGE FORWARD CURRENT CAPABILITY

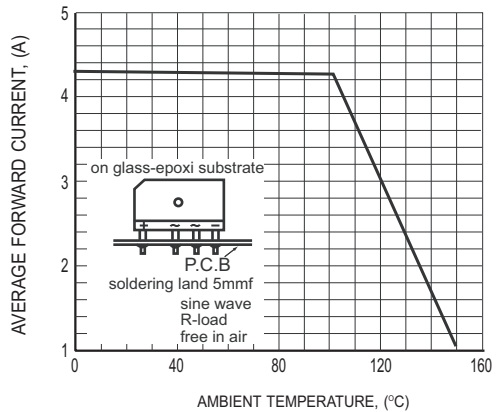


FIG.4 TYPICAL FORWARD CURRENT DERATING CURVE

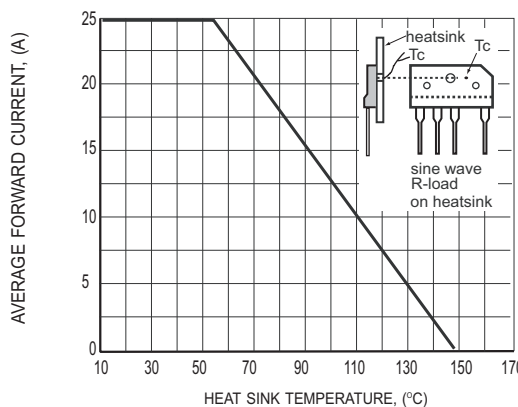


FIG.5 TYPICAL FORWARD CURRENT DERATING CURVE

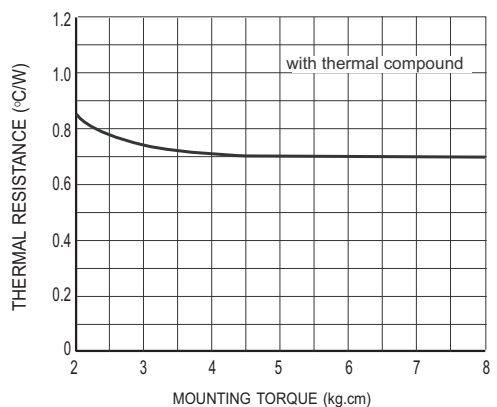
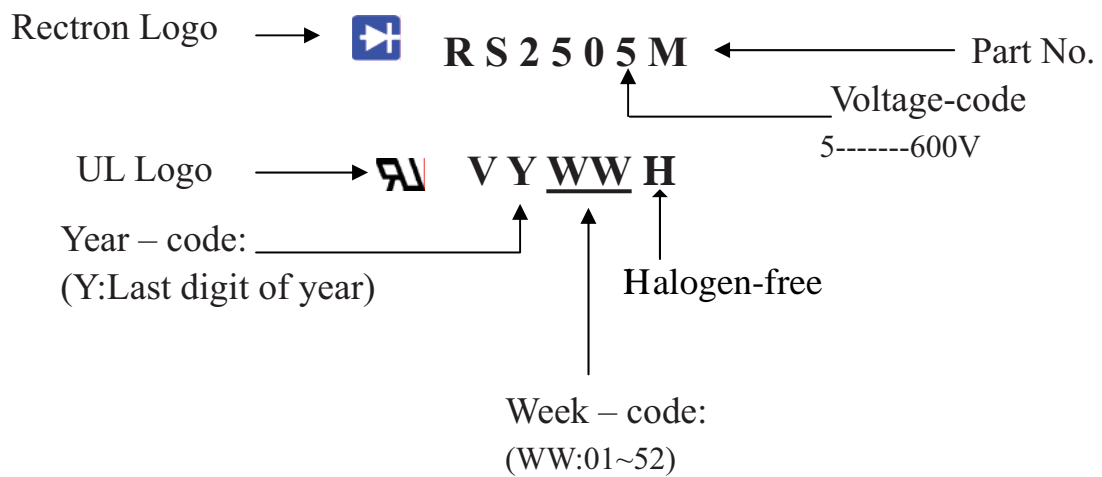


FIG.6 CONTACT THERMAL RESISTANCE fcf

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 |

DISCLAIMER NOTICE

Rectron Inc reserves the right to make changes without notice to any product specification herein, to make corrections, modifications, enhancements or other changes. Rectron Inc or anyone on its behalf assumes no responsibility or liability for any errors or inaccuracies. Data sheet specifications and its information contained are intended to provide a product description only. "Typical" parameters which may be included on RECTRON data sheets and/ or specifications can and do vary in different applications and actual performance may vary over time. Rectron Inc does not assume any liability arising out of the application or use of any product or circuit.

Rectron products are not designed, intended or authorized for use in medical, life-saving implant or other applications intended for life-sustaining or other related applications where a failure or malfunction of component or circuitry may directly or indirectly cause injury or threaten a life without expressed written approval of Rectron Inc. Customers using or selling Rectron components for use in such applications do so at their own risk and shall agree to fully indemnify Rectron Inc and its subsidiaries harmless against all claims, damages and expenditures.