

**SINGLE-PHASE GLASS PASSIVATED
SILICON BRIDGE RECTIFIER**

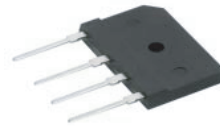
VOLTAGE RANGE 50 to 1000 Volts CURRENT 20 Amperes

FEATURES

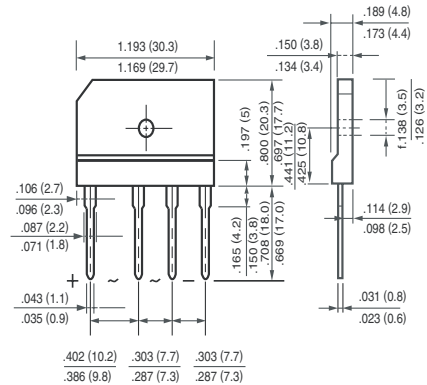
- * Low leakage
- * Low forward voltage
- * Mounting position : Any
- * Surge overload rating: 300 Amperes peak
- * Ideal for printed circuit boards
- * High forward surge current capability

MECHANICAL DATA

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



RS-20M



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60 HZ, resistive or inductive load.
For capacitive load, derate current by 20%

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

| CHARACTERISTICS | SYMBOL | RS2001M | RS2002M | RS2003M | RS2004M | RS2005M | RS2006M | RS2007M | UNITS | |
|--|----------------------------------|--------------|---------|---------|---------|---------|---------|---------|-------|------|
| Maximum Recurrent Peak Reverse Voltage | V _{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts | |
| Maximum RMS Bridge Input 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 Output Current (with heatsink) (without heatsink) | I _O | 20 | | | | | 3.5 | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load | I _{FSM} | 300 | | | | | | | | Amps |
| Typical Thermal Resistance from junction to ambient | R _{θJA} | 22 | | | | | | | | °C/W |
| Typical Thermal Resistance from junction to case | R _{θJC} | 1.5 | | | | | | | | |
| Operating and Storage Temperature Range | T _J ,T _{STG} | -55 to + 150 | | | | | | | | °C |

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

| CHARACTERISTICS | SYMBOL | RS2001M | RS2002M | RS2003M | RS2004M | RS2005M | RS2006M | RS2007M | UNITS | |
|--|----------------|---------|---------|---------|---------|---------|---------|---------|-------|-------|
| Maximum Forward Voltage Drop per element at 10A DC | V _F | 1.1 | | | | | | | | Volts |
| Maximum Reverse Current at Rated DC Blocking Voltage per element | @TA=25 °C | 5.0 | | | | | | | | uAmps |
| | @TC=100 °C | 0.2 | | | | | | | | mAmps |

Note: "Fully ROHS compliant", "100% Sn plating (Pb-free)".

RATING AND CHARACTERISTICS CURVES (RS2001M THRU RS2007M)

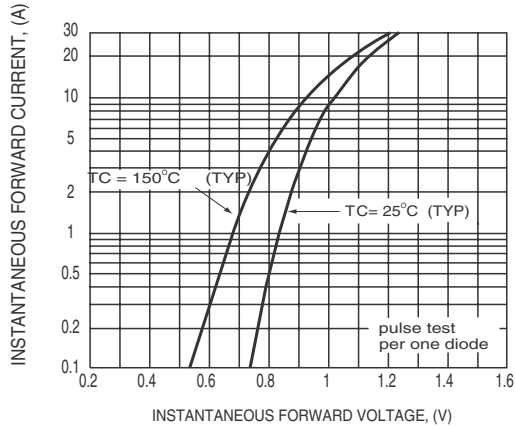


FIG.1 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

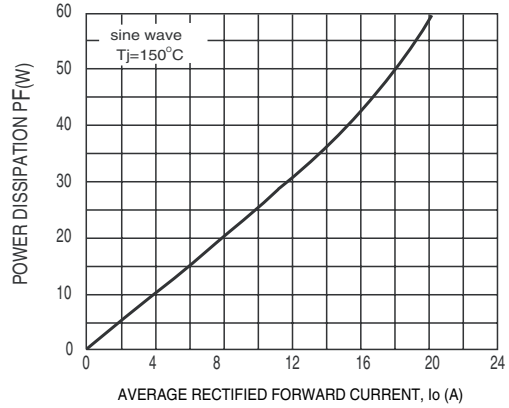


FIG.2 POWER DISSIPATION

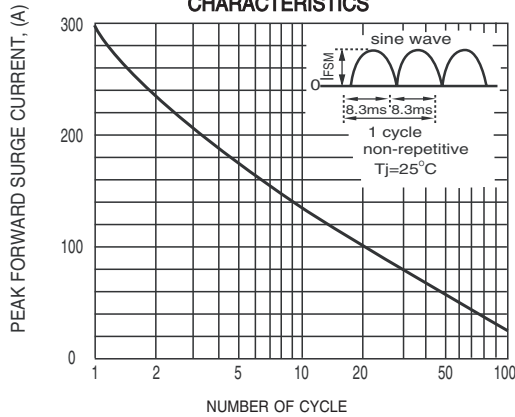


FIG.3 SURGE FORWARD CURRENT CAPABILITY

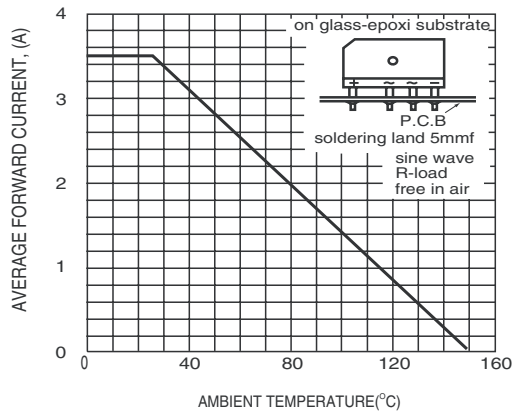


FIG.4 TYPICAL FORWARD CURRENT DERATING CURVE

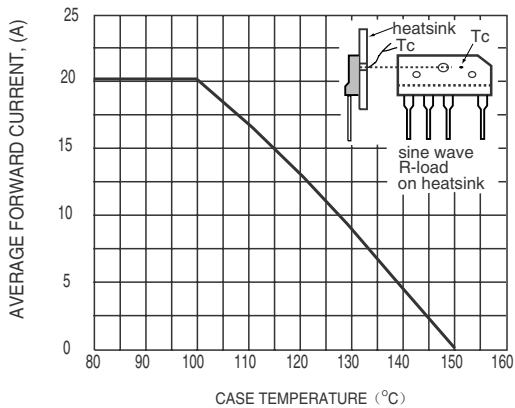


FIG.5 TYPICAL FORWARD CURRENT DERATING CURVE

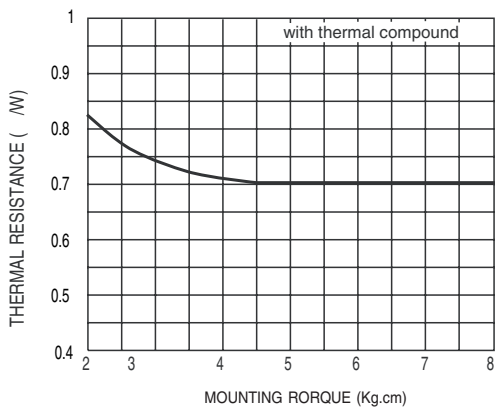


FIG.6 CONTACT THERMAL RESISTANCE

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