

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

**VOLTAGE RANGE 50 to 1000 Volts CURRENT 25 Amperes**

**FEATURES**

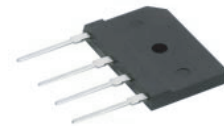
- \* Low leakage
- \* Low forward voltage
- \* Mounting position : Any
- \* Surge overload rating: 300 Amperes peak
- \* Ideal for printed circuit boards
- \* High forward surge current capability

**MECHANICAL DATA**

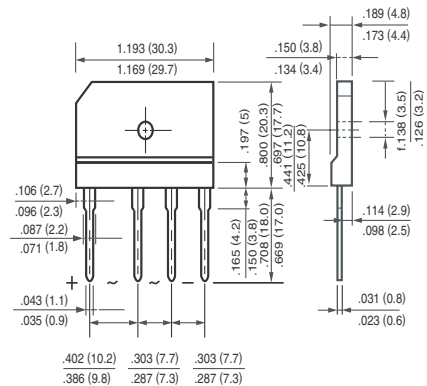
- \* UL listed the recognized component directory, file #E94233
- \* Epoxy: Device has UL flammability classification 94V-O

**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%



**RS-25M**



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

CHARACTERISTICS	SYMBOL	RS2501M	RS2502M	RS2503M	RS2504M	RS2505M	RS2506M	RS2507M	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	Volts
Maximum RMS Bridge Input Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Output Current (with heatsink) (without heatsink)	I <sub>O</sub>	25 4.3							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	300							Amps
Typical Thermal Resistance from junction to ambient	R <sub>θJA</sub>	22							°C/W
Typical Thermal Resistance from junction to case	R <sub>θJC</sub>	1.0							
Operating and Storage Temperature Range	T <sub>J</sub> ,T <sub>STG</sub>	-55 to + 150							°C

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

CHARACTERISTICS	SYMBOL	RS2501M	RS2502M	RS2503M	RS2504M	RS2505M	RS2506M	RS2507M	UNITS
Maximum Forward Voltage Drop per element at 12.5A DC	V <sub>F</sub>	1.1							Volts
Maximum Reverse Current at Rated DC Blocking Voltage per element	@ TA=25 °C	5.0							μAmps
	@ TC=100 °C	0.2							mAmps

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

2006-10

## RATING AND CHARACTERISTICS CURVES ( RS2501M THRU RS2507M )

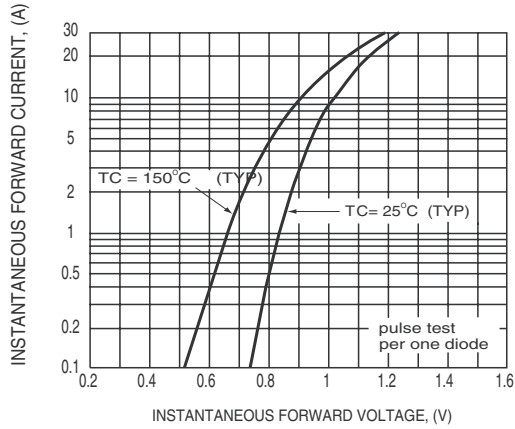


FIG.1 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

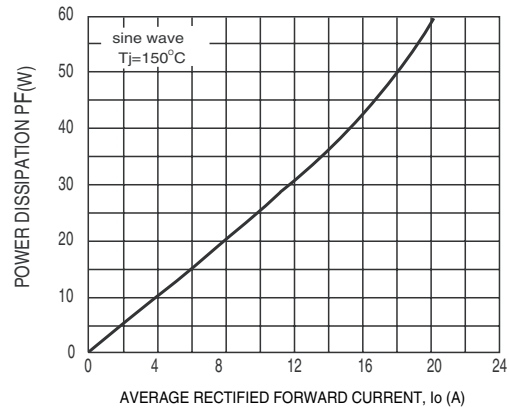


FIG.2 POWER DISSIPATION

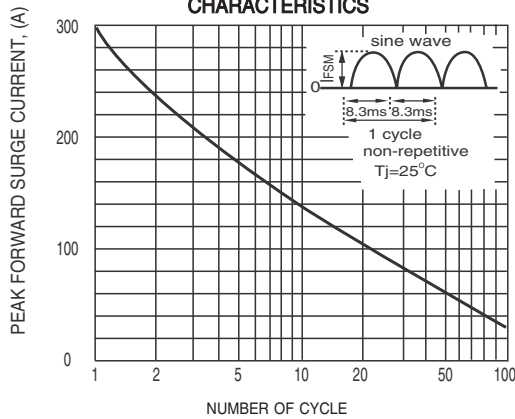


FIG.3 SURGE FORWARD CURRENT CAPABILITY

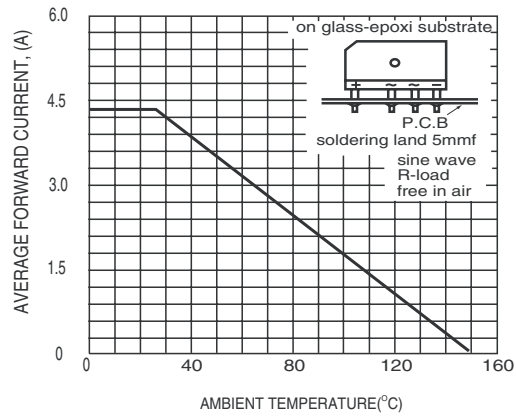


FIG.4 TYPICAL FORWARD CURRENT DERATING CURVE

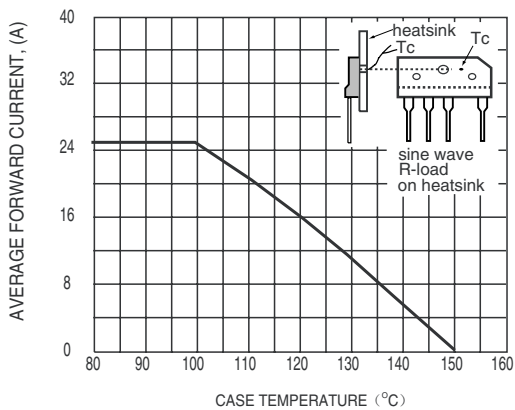


FIG.5 TYPICAL FORWARD CURRENT DERATING CURVE

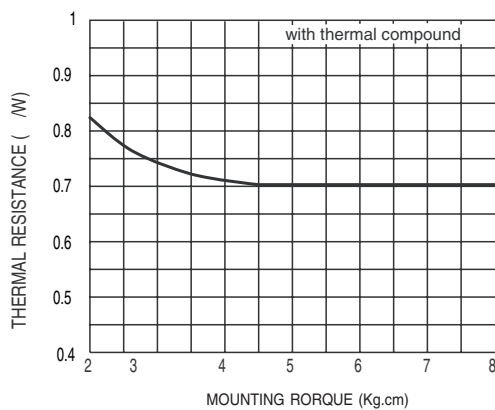


FIG.6 CONTACT THERMAL RESISTANCE

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