

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

**FEATURES**

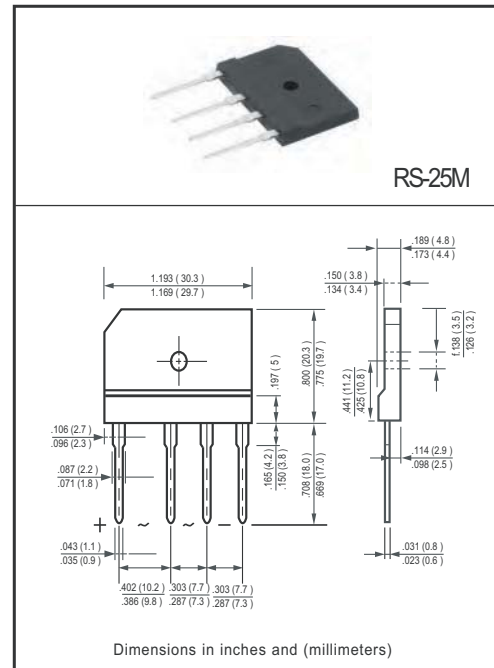
- \* Low leakage
- \* Low forward voltage
- \* Mounting position: Any
- \* Surge overload rating: 300 amperes peak
- \* Ideal for printed circuit boards
- \* High forward surge current capability

**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							$\text{A}^2\text{S}$
Typical Thermal Resistance (Note 1)	$R_{\theta JC}$	1.0							$^{\circ}\text{C/W}$
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	22							$^{\circ}\text{C/W}$
Operating Temperature Range	$T_J$	150							$^{\circ}\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to + 150							$^{\circ}\text{C}$

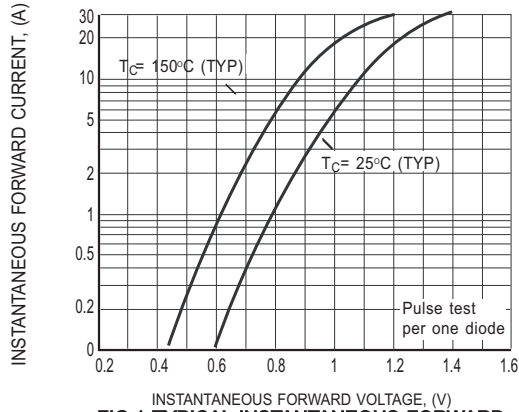
ELECTRICAL CHARACTERISTICS (at TA=25 °C unless otherwise noted)

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							$\mu\text{Amps}$
Rated DC Blocking Voltage		200							$\mu\text{Amps}$

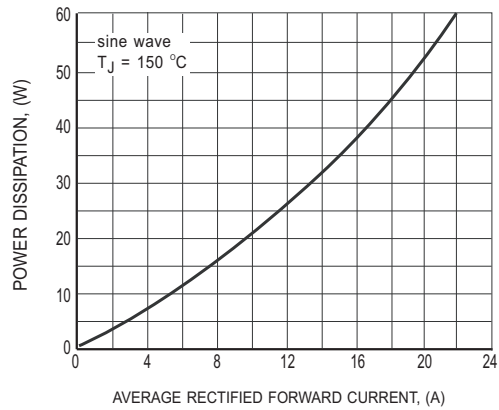
NOTES : 1. Thermal resistance : Heat-sink case mounted.  
2. "Fully ROHS compliant", "100% Sn plating (Pb-free)".

2014-03  
REV:B

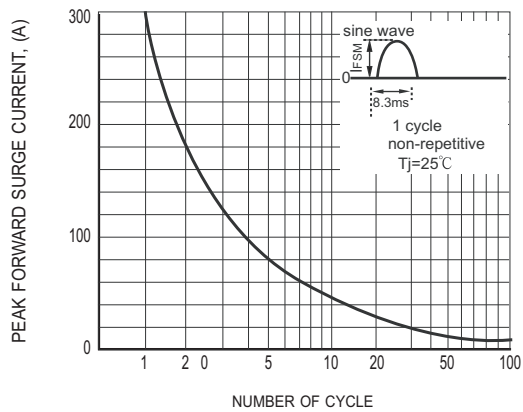
## RATING AND CHARACTERISTICS CURVES ( RS2501M THRU RS2507M )



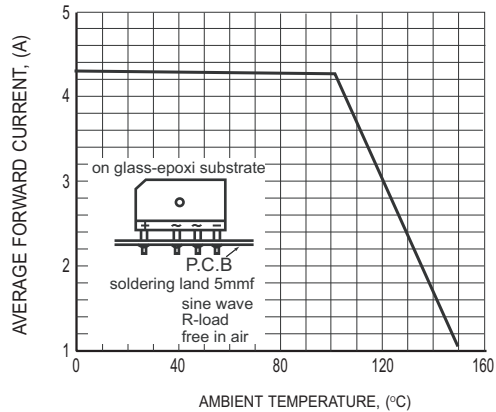
**FIG.1 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



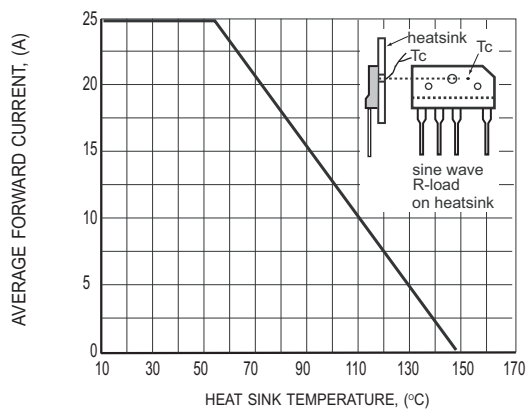
**FIG.2 POWER DISSIPATION**



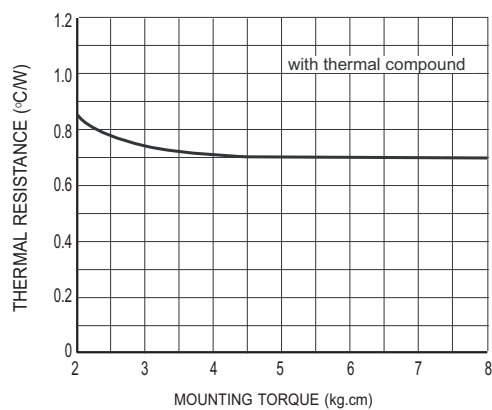
**FIG.3 SURGE FORWARD CURRENT CAPABILITY**



**FIG.4 TYPICAL FORWARD CURRENT DERATING CURVE**

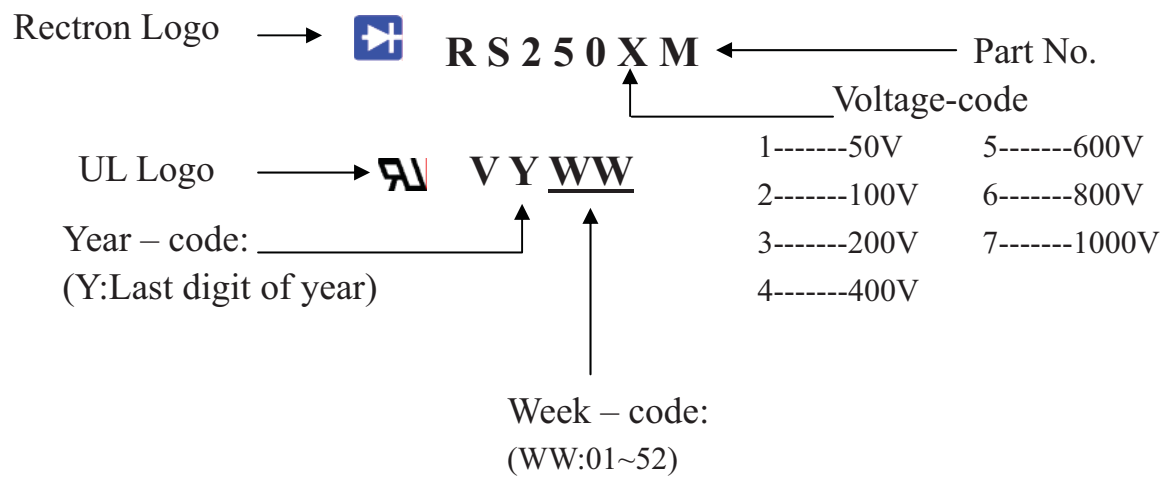


**FIG.5 TYPICAL FORWARD CURRENT DERATING CURVE**



**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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