

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

**FEATURES**

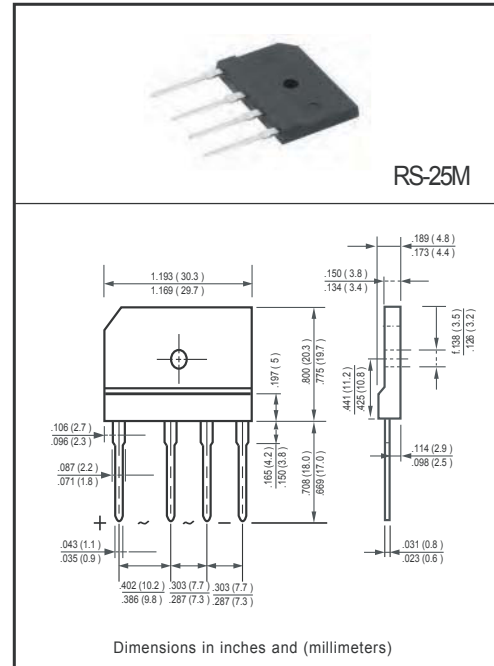
- \* Low leakage
- \* Low forward voltage
- \* Mounting position: Any
- \* Surge overload rating: 300 amperes peak
- \* Ideal for printed circuit boards
- \* High forward surge current capability

**MECHANICAL DATA**

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

**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	$\text{A}^2\text{S}$
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	$^\circ\text{C}$

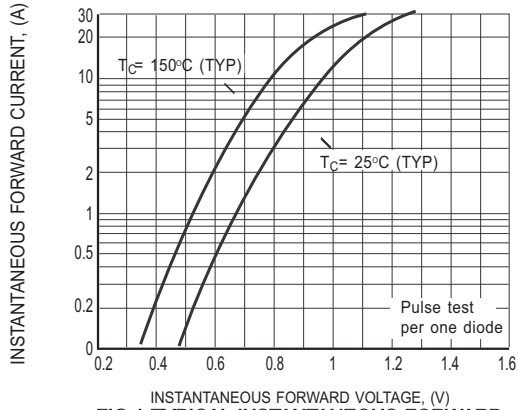
**ELECTRICAL CHARACTERISTICS (@ TA=25 °C unless otherwise noted)**

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	@ $T_A = 25^\circ\text{C}$	$I_R$	5.0	$\mu\text{Amps}$
	@ $T_A = 125^\circ\text{C}$		200	

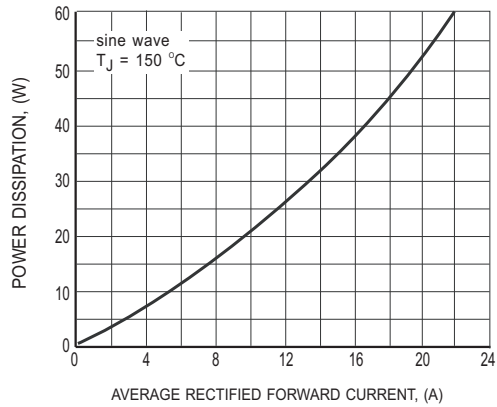
NOTES : 1. Thermal resistance : Heat-sink case mounted.  
2. "Fully ROHS compliant", "100% Sn plating (Pb-free)".

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REV:0

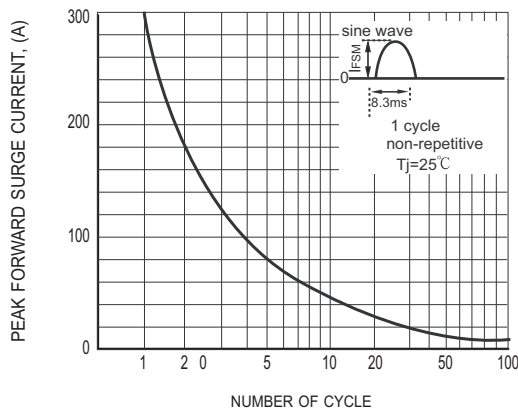
## RATING AND CHARACTERISTICS CURVES ( RS2505M-C-LV)



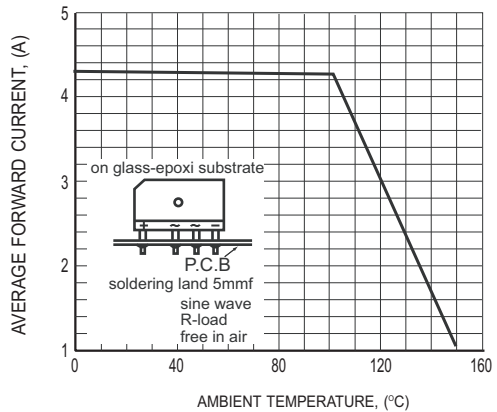
**FIG.1 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



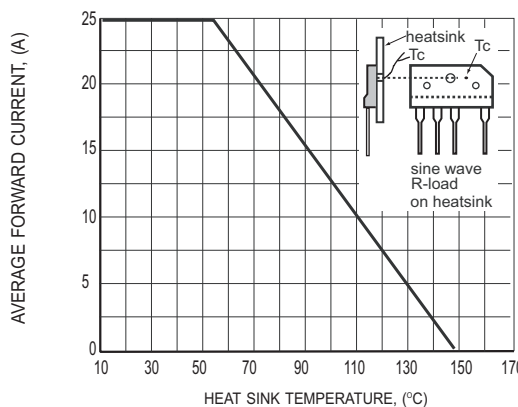
**FIG.2 POWER DISSIPATION**



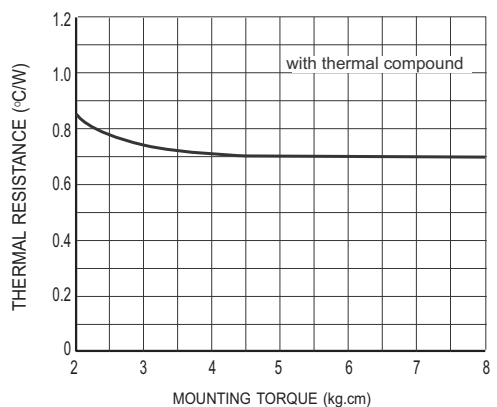
**FIG.3 SURGE FORWARD CURRENT CAPABILITY**



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

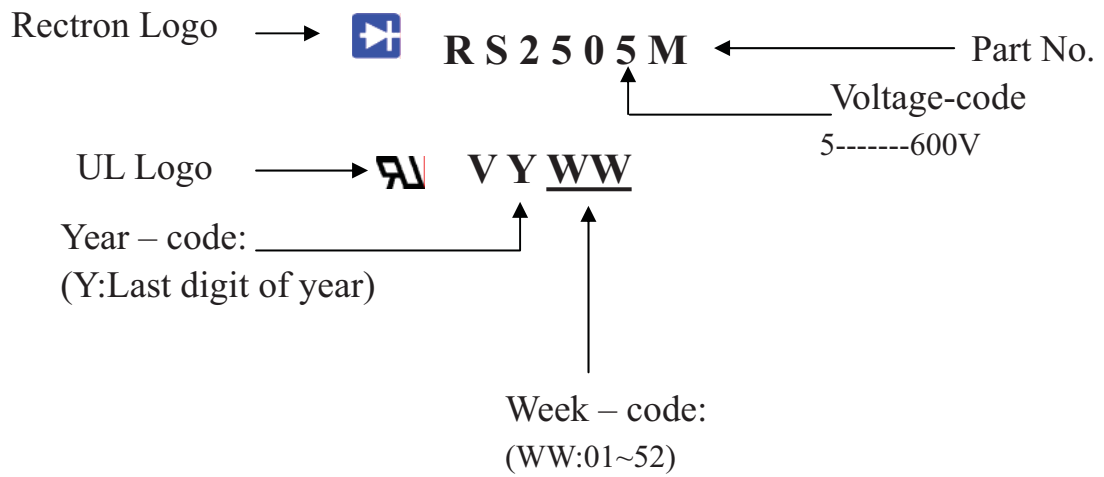


**FIG.5 TYPICAL FORWARD CURRENT DERATING CURVE**



**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