

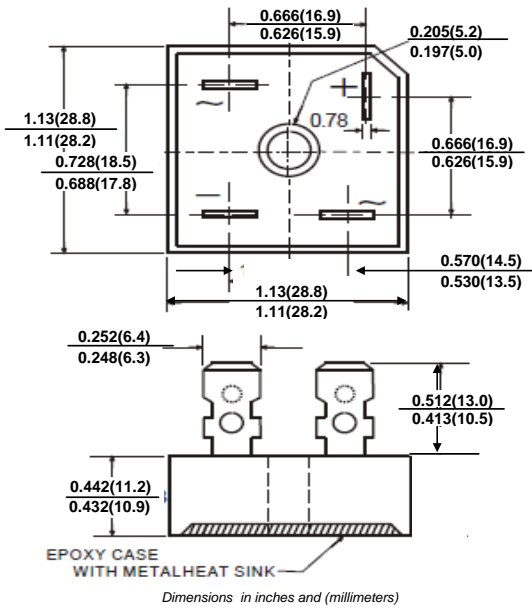


# BR2505 THRU BR2510

## Single Phase 25.0 AMPS. Silicon Bridge Rectifiers

Reverse Voltage - 50 to 1000 Volts Forward Current - 25.0 Ampere

### BR-35



### FEATURES

- ◆ UL Recognized File#230084
- ◆ High surge forward current capability
- ◆ Plastic material has underwriters laboratory flammability classification 94V-0
- ◆ Mounting position:Any

### MECHANICAL DATA

**Case:** Molded plastic  
**Lead:** solder plated  
**Polarity:** As marked

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

PARAMETER	SYMBOLS	BR 2505	BR 251	BR 252	BR 254	BR 256	BR 258	BR 2510	UNITS
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Minimum DC Breakdown Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current With heatsink $T_c = 55^\circ\text{C}$	$I_{F(AV)}$	25							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	400							A
Maximum Instantaneous Forward Voltage @ 12.5A	$V_F$	1.1							V
Maximum DC Reverse Current @ $T_A = 25^\circ\text{C}$ rated DC blocking voltage per leg $T_A = 125^\circ\text{C}$	$I_R$	10.0 500							$\mu\text{A}$
Typical Thermal Resistance (Note1)	$R_{\theta JC}$	1.4							$^\circ\text{C/W}$
$I^2t$ Rating for fusing $1\text{ms} \leq t < 8.3\text{ms}$ $T_j = 25^\circ\text{C}$ · Rating of per diode	$I^2t$	660							$\text{A}^2\text{S}$
Mounting Torque (Note 2)	$T_{OR}$	20							kg·cm
Dielectric Strength at Terminals to case · AC 1 minute	$V_{dis}$	2.5							KV
Operating Temperature Range	$T_J$	-55 to +125							$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150							$^\circ\text{C}$

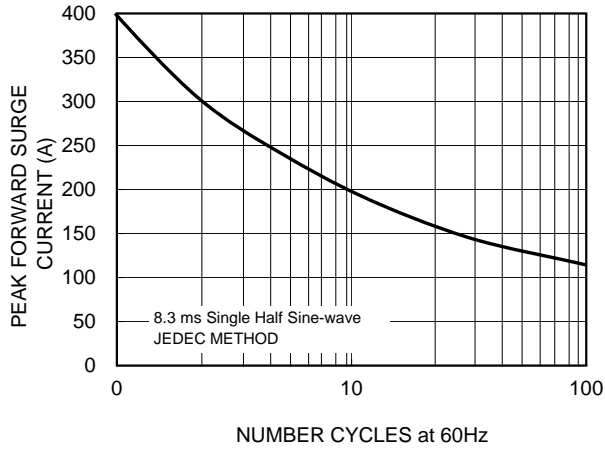
**Note:** 1. Between junction and case, With heatsink  
 2. Recommend torque : 10kg·cm



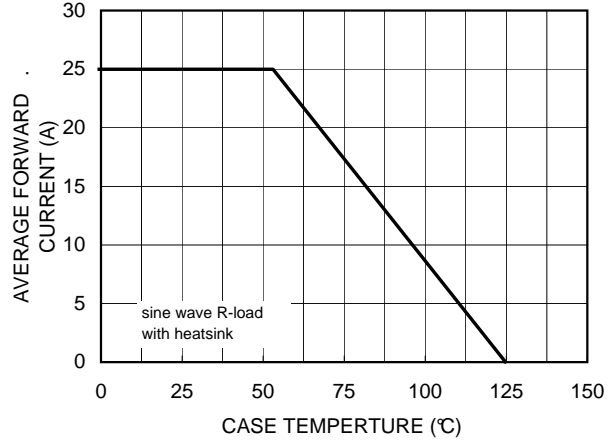
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## RATINGS AND CHARACTERISTIC CURVES

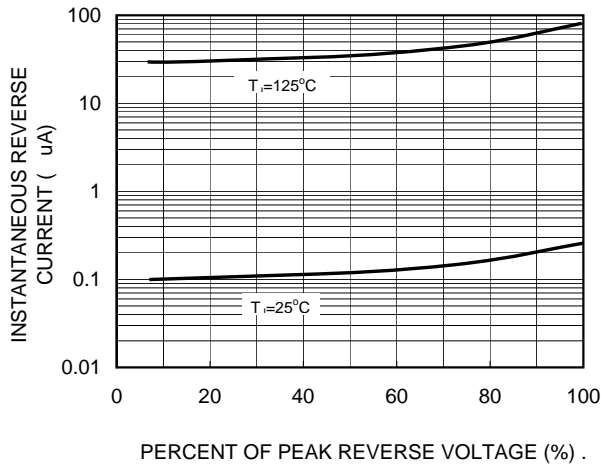
**FIG. 1-MAXIMUM NONO-REPETITIVE FORWARD SURGE CURRENT PER BRIDGE ELEMENT**



**FIG. 2 MAXIMUM FORWARD CURRENT DERATING CURVE**



**FIG. 3-TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT**



**FIG. 4-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER BRIDGE ELEMENT**

