RECTRON
SEMICONDUCTOR
TECHNICAL SPECIFICATION

BR2505 THRU BR2510

SINGLE-PHASE SILICON BRIDGE RECTIFIER

VOLTAGE RANGE 50 to 1000 Volts CURRENT 25 Amperes

FEATURES

* Superior thermal desing
* 300 amperes surge rating
* 1/4" universal faston terminal
* Hole thru for # 8 screw

MECHANICAL DATA

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

BR-25

BR-25W

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 RATINGS (At T_A = 25°C unless otherwise noted)

RATINGS	SYMBOL	BR2505	BR251	BR152	BR254	BR256	BR258	BR2510	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 at Tc = 55°C	I_O	25							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	300							Amps
Typical Thermal Resistance from junction to case	$R\theta_{JC}$	4							°C/W
Typical Thermal Resistance from junction to ambient	$R\theta_{JA}$	22							°C/W
Operating and Storage Temperature Range	T_J,T_{STG}	-55 to + 150							°C

ELECTRICAL CHARACTERISTICS (At T_A = 25°C unless otherwise noted)

CHARACTERISTICS		SYMBOL	BR2505	BR251	BR252	BR254	BR256	BR258	BR2510	UNITS
Maximum Forward Voltage Drop per element at 12.5A DC		V_F	1.1							Volts
Maximum Reverse Current at Rated	@T_A = 25°C	I_R	5.0							uAmps
DC Blocking Voltage per element	@T_C = 100°C		0.5							mAmps

NOTE:1. Suffix "W" for wire type
2. "Fully ROHS compliant", "100% Sn plating (Pb-free)".

RATING AND CHARACTERISTIC CURVES (BR2505 THRU BR2510)

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

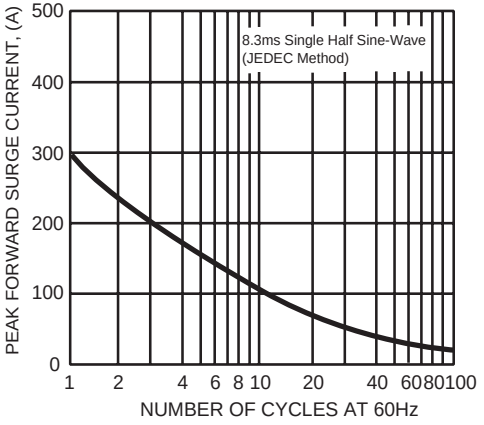


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

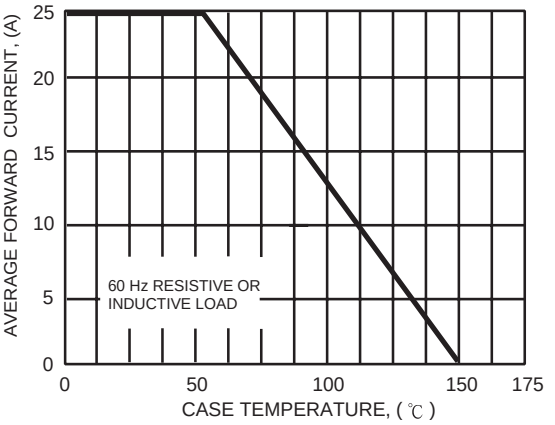


FIG. 3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

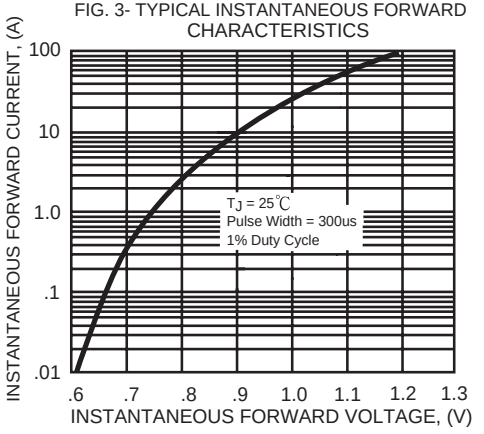
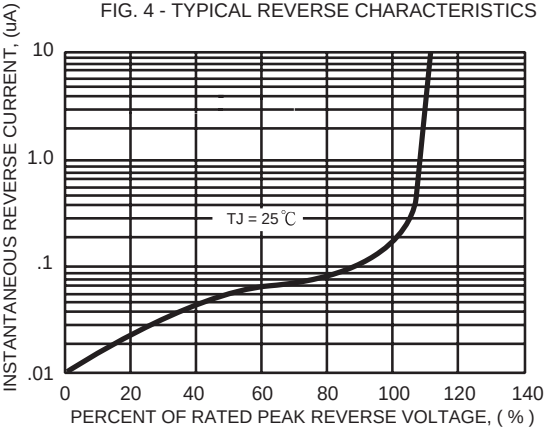
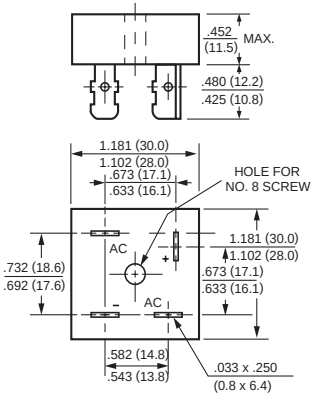
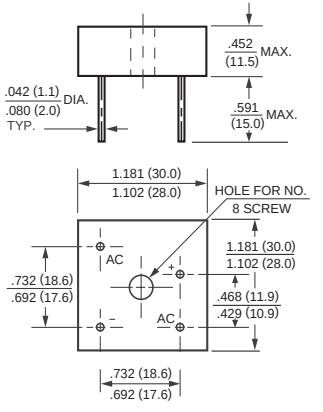


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS





BR-25



BR-25W