RECTRON
SEMICONDUCTOR
TECHNICAL SPECIFICATION

BR305 THRU BR310

SINGLE-PHASE SILICON BRIDGE RECTIFIER

VOLTAGE RANGE 50 to 1000 Volts CURRENT 3.0 Amperes

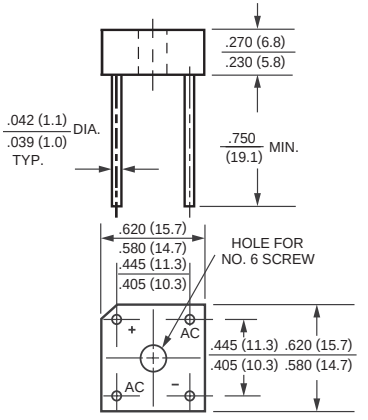
FEATURES

* Surge overloab rating: 50 amperes peak
* Low forward voltage drop
* Small size: simple installation
* Silver-plated copper leads
* Mounting position: Any
* Mounting: Hole thru for # 6 screw
* Weight: 3.36 grams

MECHANICAL DATA

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

BR-3



Dimensions in inches and (millimeters)

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	BR305	BR31	BR32	BR34	BR36	BR38	BR310	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 = 50°C	I_O	3.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	50							Amps
Typical Thermal Resistance from junction to case	$R\theta_{JC}$	11							°C/W
Typical Thermal Resistance from junction to ambient	$R\theta_{JA}$	30							°C/W
Operating Temperature Range	T_J	-55 to + 150							°C
Storage Temperature Range	T_{STG}	-55 to + 150							°C

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

CHARACTERISTICS		SYMBOL	BR305	BR31	BR32	BR34	BR36	BR38	BR310	UNITS
Maximum Forward Voltage Drop per element at 1.5A DC		V_F	1.0							Volts
Maximum Reverse Current at Rated	@T_A = 25°C	I_R	5.0							uAmps
DC Blocking Voltage per element	@T_C = 100°C		0.1							mAmps

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

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RATING AND CHARACTERISTIC CURVES (BR305 THRU BR310)

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

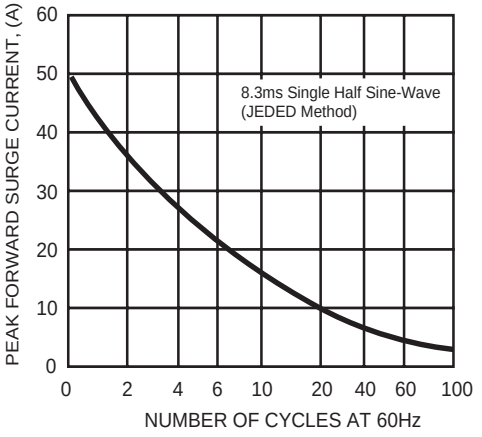

FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

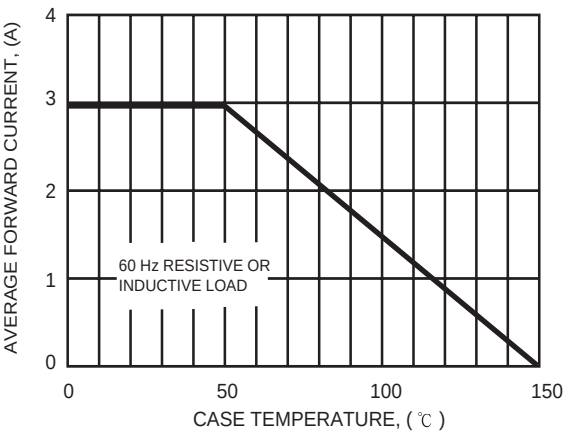

FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

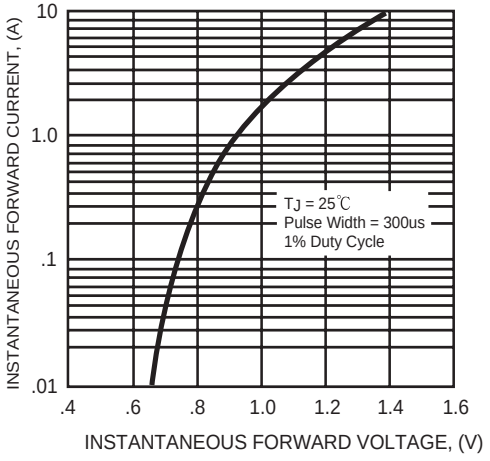

FIG. 4 - TYPICAL REVERSE CHARACTERISTICS