



**DC COMPONENTS CO., LTD.**

RECTIFIER SPECIALISTS

**BR805  
THRU  
BR810**

# TECHNICAL SPECIFICATIONS OF SINGLE-PHASE SILICON BRIDGE RECTIFIER

VOLTAGE RANGE - 50 to 1000 Volts

CURRENT - 8.0 Amperes

## FEATURES

- \* Surge overload rating: 125 Amperes peak
- \* Low forward voltage drop

## MECHANICAL DATA

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: MIL-STD-202, Method 208 guaranteed
- \* Polarity: Symbols molded or marked on body
- \* Mounting position: Any
- \* Weight: 6.9 grams

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

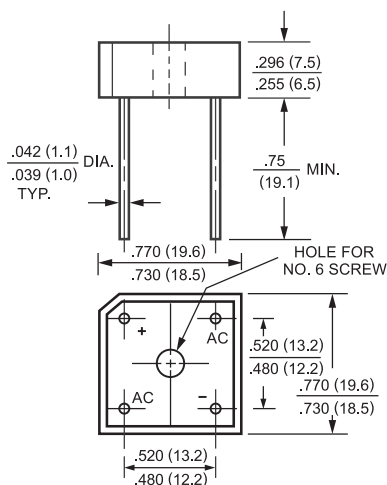
Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%.



BR-8/10



Dimensions in inches and (millimeters)

		SYMBOL	BR805	BR81	BR82	BR84	BR86	BR88	BR810	UNITS
Maximum Recurrent Peak Reverse Voltage		V <sub>RRM</sub>	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage		V <sub>RMS</sub>	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage		V <sub>DC</sub>	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Output Current at T <sub>c</sub> = 50°C		I <sub>O</sub>	8.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)		I <sub>FSM</sub>	125							Amps
Maximum Forward Voltage Drop per element at 4.0A DC		V <sub>F</sub>	1.1							Volts
Maximum DC Reverse Current at Rated	@ T <sub>A</sub> = 25°C	I <sub>R</sub>	10							uAmps
DC Blocking Voltage per element	@ T <sub>c</sub> = 100°C		500							
I <sup>2</sup> t Rating for Fusing (t<8.3ms)		I <sup>2</sup> t	166							A <sup>2</sup> Sec
Typical Junction Capacitance ( Note1)		C <sub>J</sub>	200							pF
Typical Thermal Resistance (Note 2)		R <sub>θJA</sub>	21							°C/W
Operating Temperature Range		T <sub>J</sub>	-55 to + 125							°C
Storage Temperature Range		T <sub>STG</sub>	-55 to + 150							°C

NOTES : 1. Measured at 1 MHz and applied reverse voltage of 4.0 volts

2. Thermal Resistance from Junction to Ambient and from junction to lead mounted on P.C.B. with 0.5 x 0.5" (13x13mm) copper pads.

# RATING AND CHARACTERISTIC CURVES (BR805 THRU BR810)

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

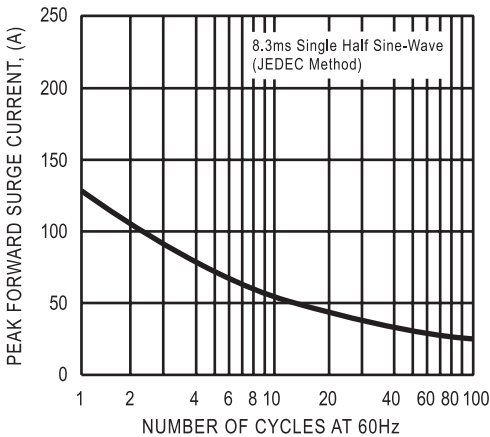


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

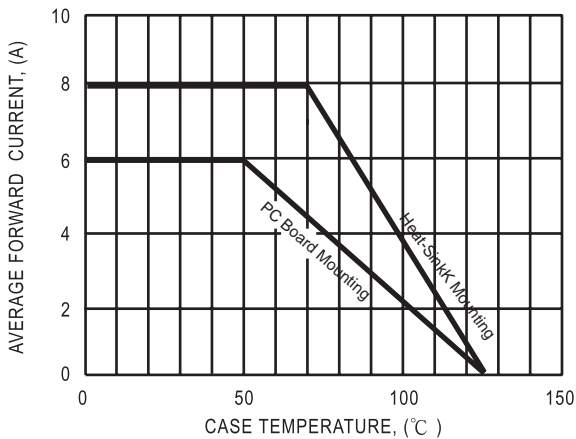


FIG. 3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

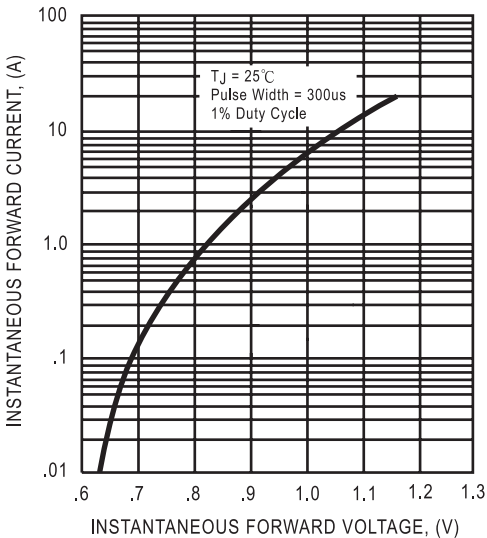
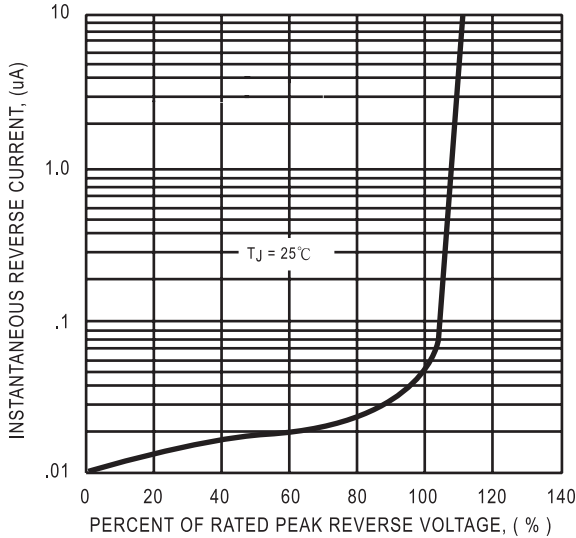


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS



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