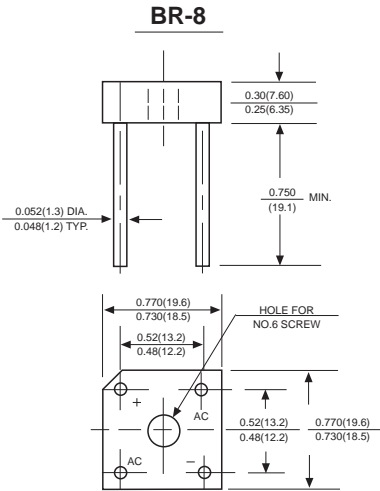




# BR8005 THRU BR810

## SILICON BRIDGE RECTIFIERS

Reverse Voltage - 50 to 1000 Volts Forward Current - 8.0 Amperes



Dimensions in inches and (millimeters)

### FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Ideal for printed circuit boards
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 260°C/10 seconds, at 5 lbs. (2.3kg) tension

### MECHANICAL DATA

**Case:** Molded plastic body  
**Terminals:** Plated leads solderable per MIL-STD-750, Method 2026  
**Polarity:** Polarity symbols marked on case  
**Mounting:** Thru hole for #6 serew, 5in.-lbs. torque max.  
**Weight:** 0.200 ounce, 5.62 grams

### 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%.

MDD Catalog Number	SYMBOLS	BR8005	BR801	BR802	BR804	BR806	BR808	BR810	UNITS	
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	VOLTS	
Maximum RMS 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 output current at	$I_{(AV)}$	$T_C=50^\circ C$ (Note 1)							8.0	Amps
		$T_C=100^\circ C$ (Note 1)							6.0	
		$T_A=50^\circ C$ (Note 2)							6.0	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	125.0							Amps	
Rating for Fusing ( $t < 8.3ms$ )	$I^2 t$	64							A <sup>2</sup> s	
Maximum instantaneous forward voltage drop per bridge element at 4.0A	$V_F$	1.1							Volts	
Maximum DC reverse current at rated DC blocking voltage	$I_R$	$T_A=25^\circ C$							10	$\mu A$
		$T_A=100^\circ C$							1.0	mA
Isolation voltage from case to leads	$V_{ISO}$	2500							$V_{AC}$	
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	6.0							$^\circ C/W$	
Operating junction temperature range	$T_J$	-55 to +125							$^\circ C$	
storage temperature range	$T_{STG}$	-55 to +150							$^\circ C$	

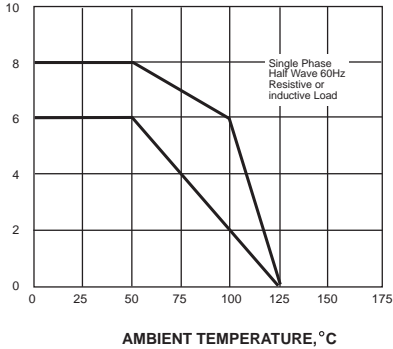
**NOTES:**

1. Unit mounted on 8.7" x 8.7" x 0.24" thick (22x22x0.6cm) Al. plate.
2. Unit mounted on P.C. board with 0.47" x 0.47" (12x12mm) copper pads, 0.375"

# RATINGS AND CHARACTERISTIC CURVES BR8005 THRU BR810

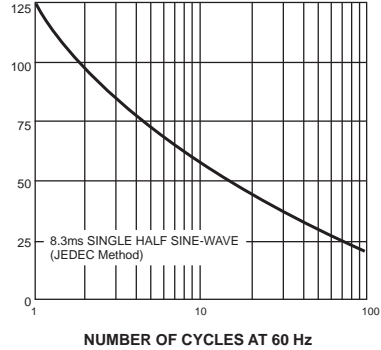
AVERAGE FORWARD RECTIFIED CURRENT,  
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



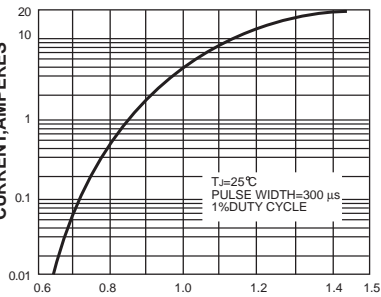
PEAK FORWARD SURGE CURRENT,  
AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



INSTANTANEOUS FORWARD CURRENT, AMPERES

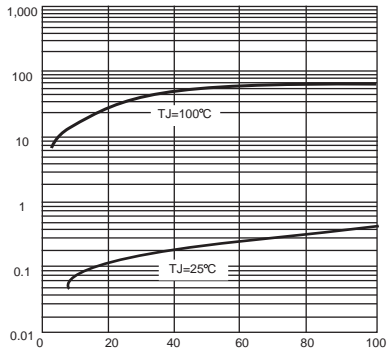
FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS FORWARD VOLTAGE,  
VOLTS

INSTANTANEOUS REVERSE CURRENT,  
MICROAMPERES

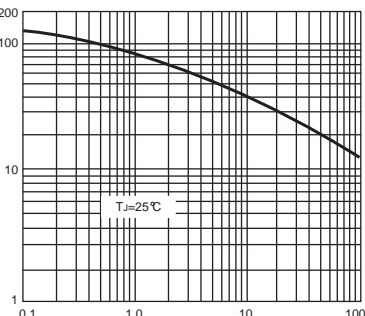
FIG. 4-TYPICAL REVERSE CHARACTERISTICS



PERCENT OF PEAK REVERSE VOLTAGE, %

JUNCTION CAPACITANCE, pF

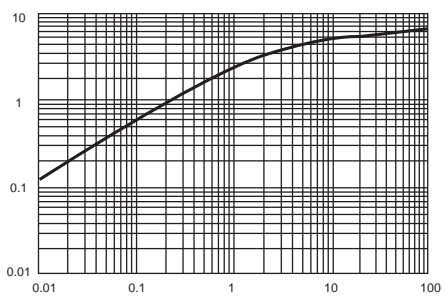
FIG. 5-TYPICAL JUNCTION CAPACITANCE



REVERSE VOLTAGE, VOLTS

TRANSIENT THERMAL IMPEDANCE,  
 $^{\circ}\text{C}/\text{W}$

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



$t$ , PULSE DURATION, sec.