

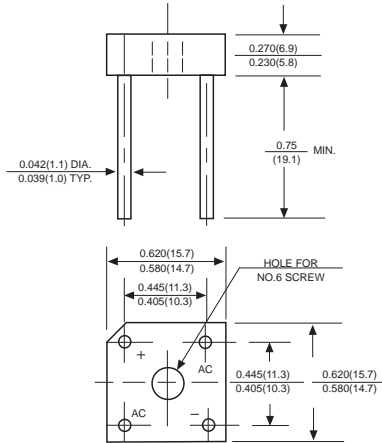


BR6005 THRU BR610

SILICON BRIDGE RECTIFIERS

Reverse Voltage - 50 to 1000 Volts Forward Current - 6.0 Amperes

BR-6



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, 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: 0.13 ounce, 3.66 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	BR6005	BR601	BR602	BR604	BR606	BR608	BR610	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 rectified current at $T_A=50^\circ\text{C}$ (Note 1) $T_A=25^\circ\text{C}$ (Note 2)	$I_{(AV)}$	6.0 3.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	125							Amps
Rating for Fusing($t<8.3\text{ms}$)	I^2t	64							A ² s
Maximum instantaneous forward voltage drop per bridge element at 3.0A	V_F	1.0							Volts
Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$	I_R	10 1.0							μA mA
Typical Junction Capacitance (Note 1)	C_J	60							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	8.0							$^\circ\text{C}/\text{W}$
Operating junction temperature range	T_J	-55 to +125							$^\circ\text{C}$
storage temperature range	T_{STG}	-55 to +150							$^\circ\text{C}$

NOTES:

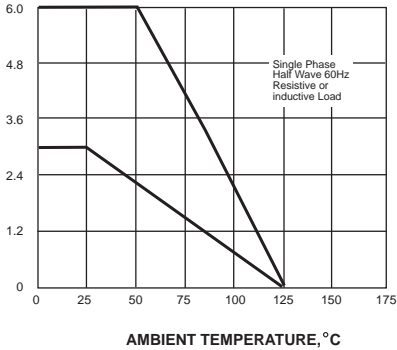
- Unit mounted on 6.0" x 5.5" x 0.11" thick (15x14x0.3cm) Al. plate.
- Unit mounted on P.C. board with 0.47" x 0.47" (12x12mm) copper pads, 0.375" (9.5mm) lead length.

MDD ELECTRONIC

RATINGS AND CHARACTERISTIC CURVES BR6005 THRU BR610

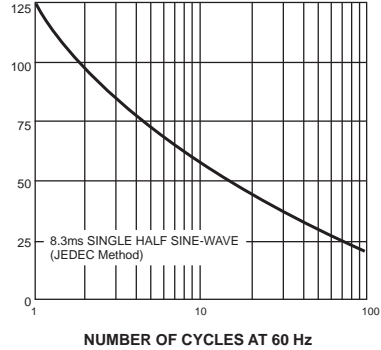
AVERAGE FORWARD RECTIFIED CURRENT,
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



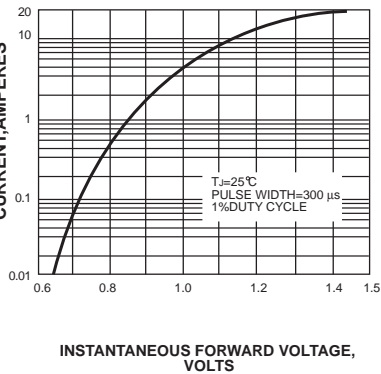
PEAK FORWARD SURGE CURRENT,
AMPERES

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



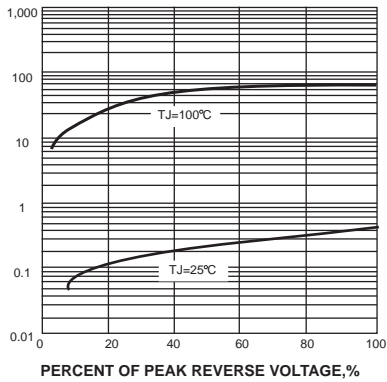
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



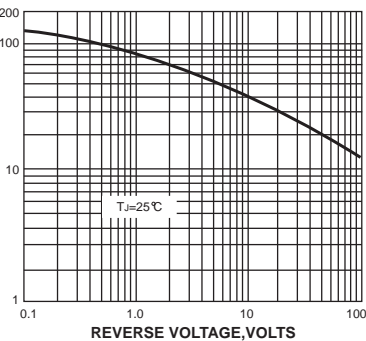
INSTANTANEOUS REVERSE CURRENT,
MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



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

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

