

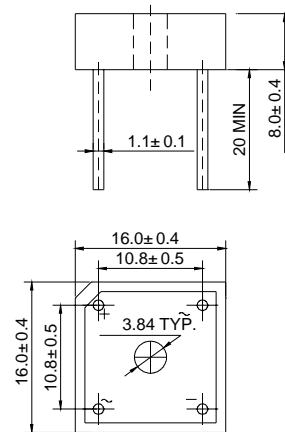
SILICON BRIDGE RECTIFIERS

VOLTAGE RANGE: 50 --- 1000 V
CURRENT: 3.0 A

FEATURES

- ◇ Rating to 1000V PRV
- ◇ Surge overload rating to 50 Amperes peak
- ◇ Ideal for printed circuit board
- ◇ Reliable low cost construction utilizing molded plastic technique results in inexpensive product
- ◇ Lead solderable per MIL-STD-202 method 208

BR3



Dimensions in 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 by 20%.

Ratings at 25°C ambient temperature unless otherwise specified.
 Single phase half-wave 60Hz, resistive or inductive load, for current capacitive load derate by 20%.

	SYMBOLS	KPBC 1005 BR305	KPBC 101 BR31	KPBC 102 BR32	KPBC 104 BR34	KPBC 106 BR36	KPBC 108 BR38	KPBC 110 BR310	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 2)	$I_{(AV)}$							3.0	Amps
at $T_A=25^\circ\text{C}$ (Note 3)								2.0	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}							60	Amps
Rating for Fusing($t<8.3\text{ms}$)	I^2t							15	A ² s
Maximum instantaneous forward voltage drop per bridge element at 1.5A	V_F							1.0	Volts
Maximum DC reverse current at rated DC blocking voltage	I_R							10	μA
								0.5	mA
Typical Junction Capacitance (Note 1)	C_J							20	pF
Typical Thermal Resistance (Note 2)	R_{qJA}							12	$^\circ\text{C}/\text{W}$
Operating junction temperature range	T_J							-55 to +125	$^\circ\text{C}$
storage temperature range	T_{Stg}							-55 to +150	$^\circ\text{C}$

NOTES:

1. Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts.
2. Unit mounted on 4.0" x 4.0" x 0.11" thick (10.5x10.5x0.3cm) Al. plate.
3. Unit mounted on P.C. board with 0.5" x 0.5" (12x12mm) copper pads, 0.375" (9.5mm) lead length.

FIG.1 – PEAK FORWARD SURGE CURRENT

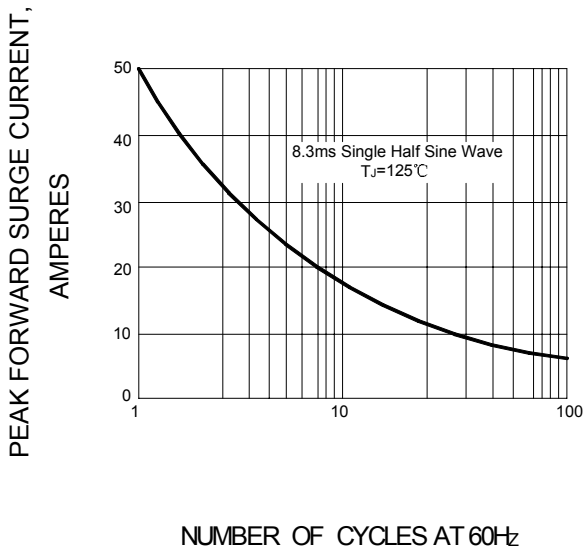


FIG.2 – FORWARD DERATING CURVE

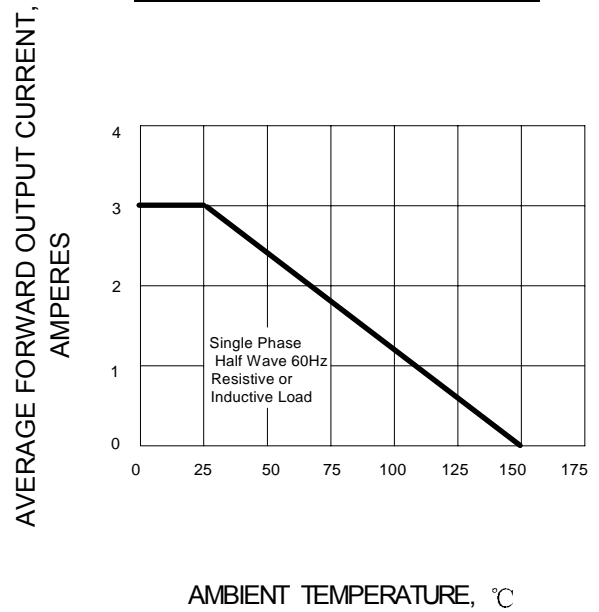


FIG.3 – TYPICAL FORWARD CHARACTERISTIC

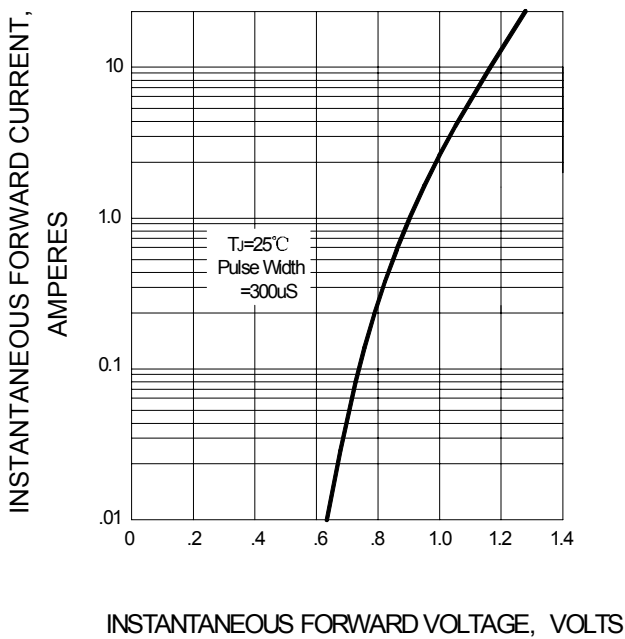


FIG.4 – TYPICAL REVERSE CHARACTERISTIC

