

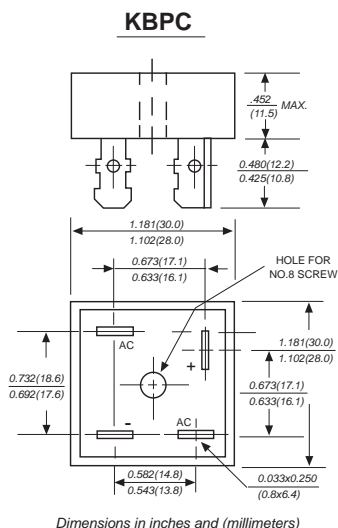
KBPC25005 THRU KBPC2510

RoHS
COMPLIANT



SILICON BRIDGE RECTIFIERS

Reverse Voltage - 50 to 1000 Volts Forward Current - 25 Ampere



FEATURES

- ◆ This series is UL recognized component
- ◆ 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
- ◆ Available in both OJ open junction and GPP glass passivated chip junction

MECHANICAL DATA

Case: Metal case
Terminals: Plated 0.25" (6.35mm) lug.
Polarity: Polarity symbols marked on case
Mounting: Thru hole for #8 screw, 20in.-lbs. torque max.
Weight: 1.02 ounce, 29 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 current capacitive load, derate by 20%.

	SYMBOLS	KBPC 25005	KBPC 2501	KBPC 2502	KBPC 2504	KBPC 2506	KBPC 2508	KBPC 2510	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 $T_c=50^\circ\text{C}$ (Note 1,2)	$I_{(AV)}$	25							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	300.0							Amps
Rating for Fusing ($t < 8.3\text{ms}$)	I_t^2	373							A ² s
Maximum instantaneous forward voltage drop per bridge element at 12.5A	V_F	1.1							Volts
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	I_R	10							μA
		1.0							mA
Isolation voltage from case to leads	V_{ISO}	2500							V_{AC}
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	2.0							$^\circ\text{C/W}$
Operating junction temperature range	T_J	-65 to +150							$^\circ\text{C}$
storage temperature range	T_{STG}	-65 to +150							$^\circ\text{C}$

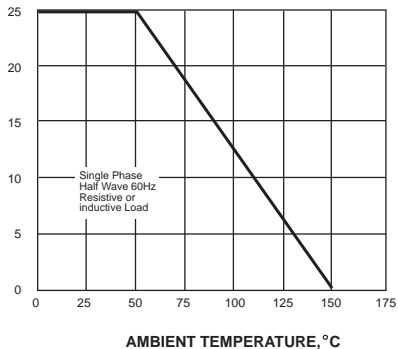
NOTES:

1. Unit mounted on 5" x 6" x 4.9" thick (12.8cm x 15.2cm x 12.4cm) Al. plate.
2. Bolt down on heat-sink with silicone thermal compound between bridge and mounting surface for maximum heat transfer efficiency with #8 screw.

RATINGS AND CHARACTERISTIC CURVES KBPC25005 THRU KBPC2510

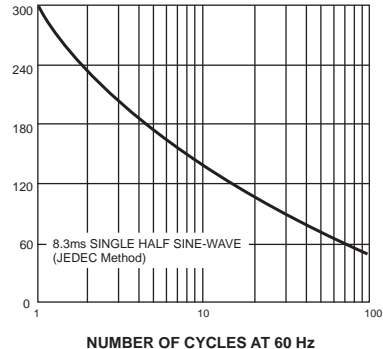
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



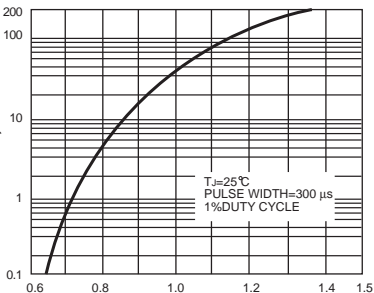
PEAK FORWARD SURGE CURRENT, AMPERES

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



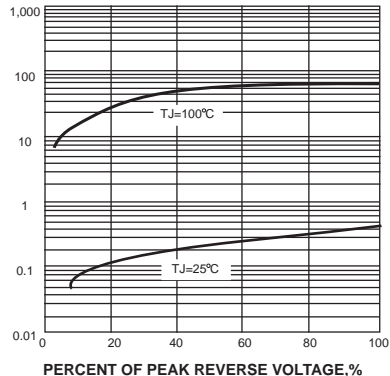
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



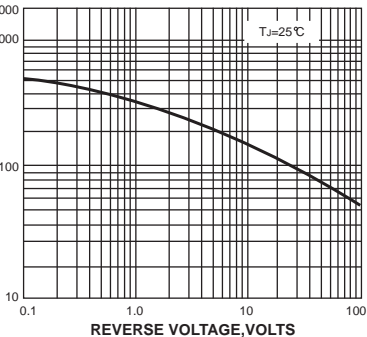
INSTANTANEOUS REVERSE CURRENT, MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

