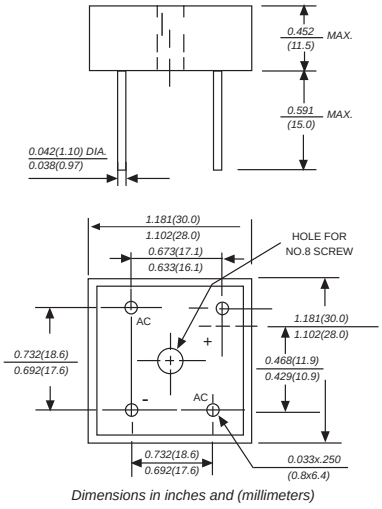
KBPC25005W THRU KBPC2510W

SILICON BRIDGE RECTIFIERS

Reverse Voltage - 50 to 1000 Volts Forward Current - 25.0 Amperes

KBPC-25W



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: Metal case
Terminals: Lead 0.040 ” (1.02mm) diameter.
Polarity: Polarity symbols marked on case
Mounting:Thru hole for #8 screw,20in.-lbs. torque max.
Weight:0.93 ounce, 26.4 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%.

TWGMC Catalog Number	*SYMBOLS*	KBPC 25005W	KBPC 2501W	KBPC 2502W	KBPC 2504W	KBPC 2506W	KBPC 2508W	KBPC 2510W	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 Tc=50°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<8.3ms)	I^2t	373							A^2s
Maximum instantaneous forward voltage dorp per bridge element at 12.5A	V_F	1.1							Volts
Maximum DC reverse current T_A=25°C	I_R	10							μA
at rated DC blocking voltage T_A=100°C		1.0							mA
Isolation voltage from case to leads	V_{ISO}	2500							V_{AC}
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	2.0							°C/W
Operating junction temperature range	T_J	-65 to +150							°C
storage temperature range	T_{STG}	-65 to +150							°C

NOTES:
1.Unit mounted on 5 ” x 6 ” x4.9 ” thick(12.8cmx15.2cmx12.4cmcm)Al.plate.
2.Bolt dowm on heat-sink with silicone thermal compound between bridge and mounting surface for maximum heat transfer efficiency with #8 screw.

RATINGS AND CHARACTERISTIC CURVES KBPC25005W THRU KBPC2510W

FIG. 1- FORWARD CURRENT DERATING CURVE

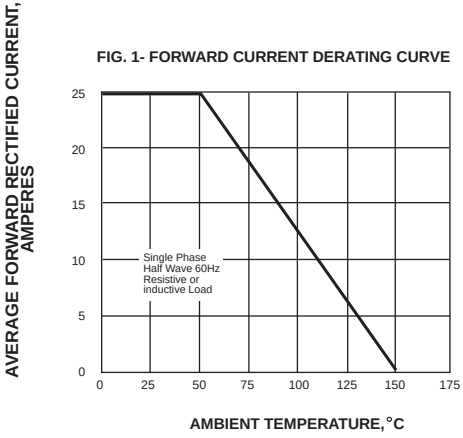


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

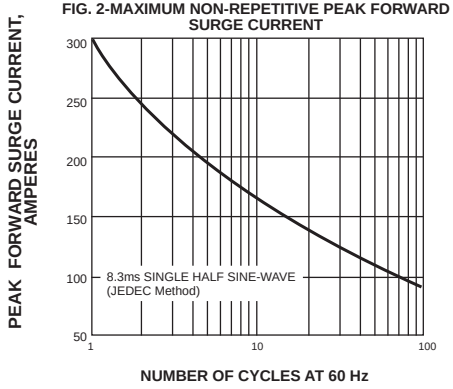


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

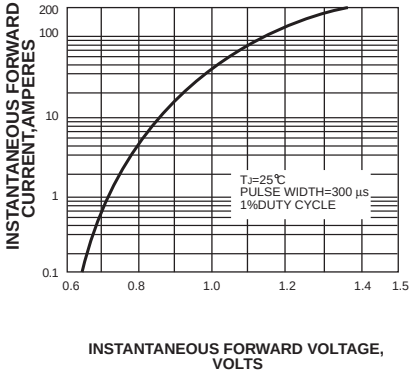


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

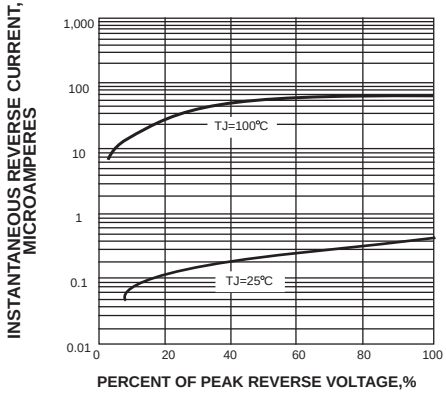


FIG. 5-TYPICAL JUNCTION CAPACITANCE

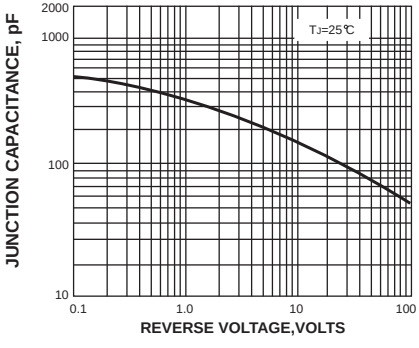


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE