KBPC25005 THRU KBPC2510

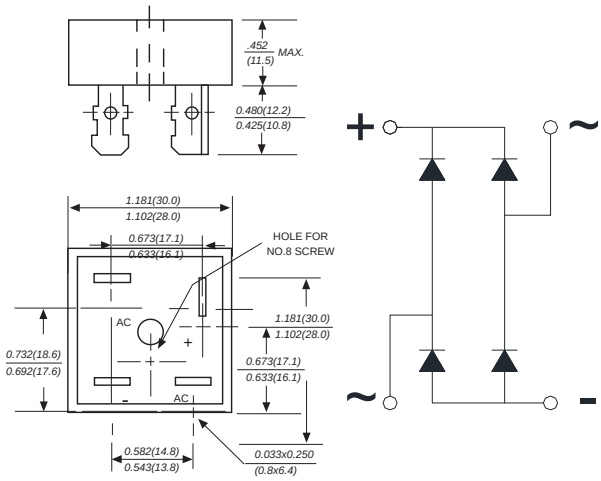
Reverse Voltage - 50 to 1000 Volts Forward Current -25.0 Amperes

SILICON BRIDGE RECTIFIERS

Features

KBPC-25 RoHS COMPLIANT

- 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



Dimensions in inches and (millimeters)

Mechanical Data

Case : JEDEC KBPC-25 Molded plastic body
Terminals : Solder plated, solderable per MIL-STD-750,Method 2026
Polarity : Polarity symbol marking on body
Mounting Position : Any
Weight : 1.02 ounce, 29 grams

Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwisespecified.

Single phase half-wave 60Hz,resistive or inductive load,for capacitive load current derate by 20%.

Parameter / Marking Code	SYMBOLS	KBPC25005	KBPC2501	KBPC2502	KBPC2504	KBPC2506	KBPC2508	KBPC2510	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	30	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward output rectified current at Tc=55°C (N o t e 1)	$I_{(AV)}$	25.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	300							A
Rating for Fusing(t<8.3ms)	I^2t	373							A^2s
Maximum instantaneous forward voltage drop per birdge element at 12.5A	V_F	1.1							V
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_{IOS}	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 4 ” x3 ” thick(12.8cmx10.2cmx7.3cmcm)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

FIG. 1- FORWARD CURRENT DERATING CURVE

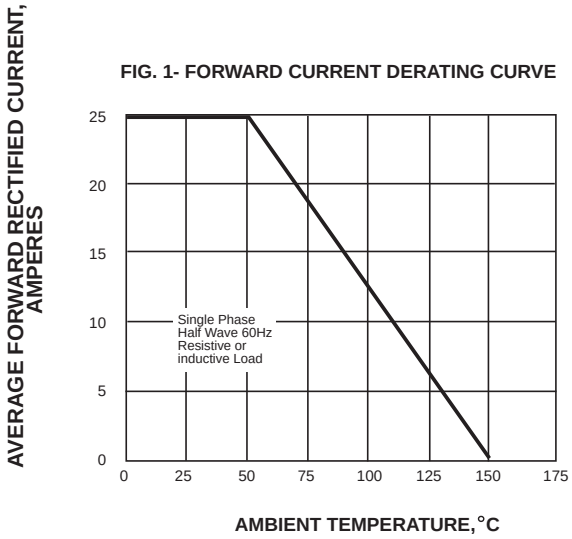


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

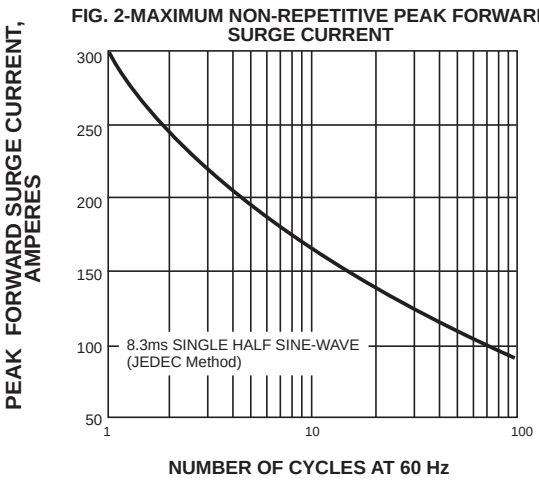


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

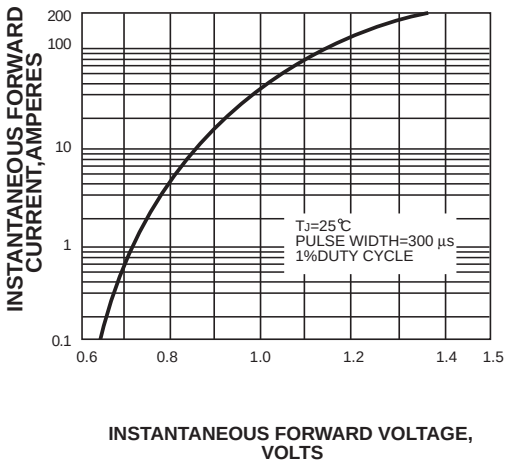


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

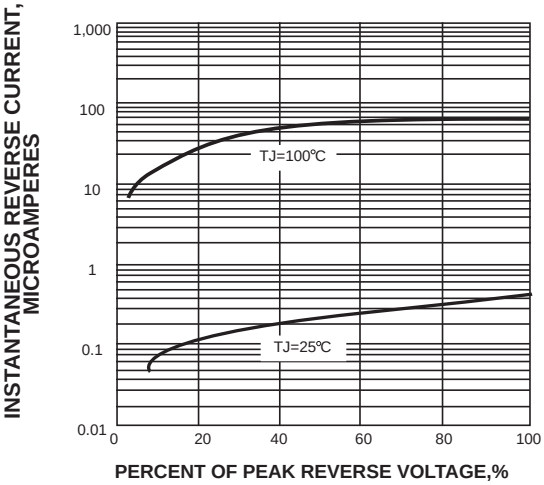


FIG. 5-TYPICAL JUNCTION CAPACITANCE

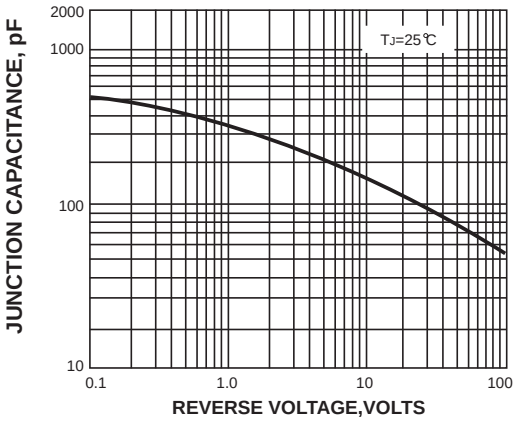
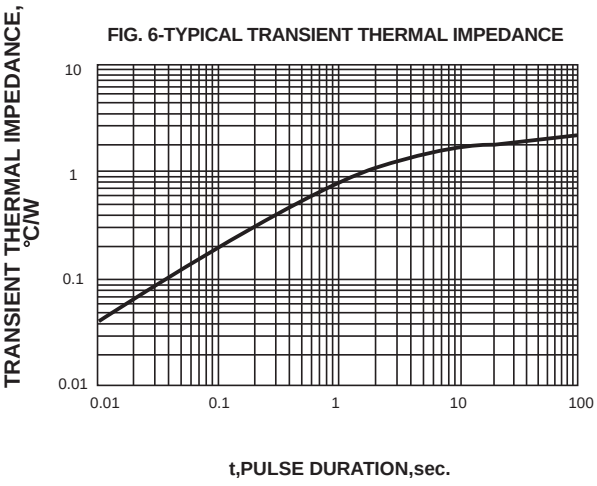


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



The curve above is for reference only.