KBPC6005 THRU KBPC610

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

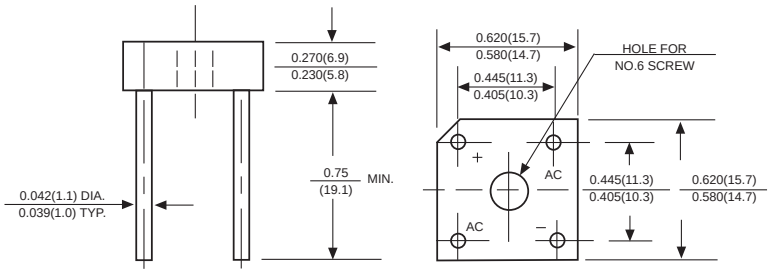
SILICON BRIDGE RECTIFIERS

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

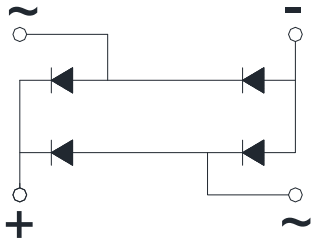
KBPC-6/BR-6

RoHS COMPLIANT



Mechanical Data

Case : JEDEC BR-6 Molded plastic body
Terminals : Solder plated, solderable per MIL-STD-750,Method 2026
Polarity : Polarity symbol marking on body
Mounting Position : Any
Weight : 0.13 ounce, 3.66 grams



Dimensions in inches and (millimeters)

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	MDD KBPC6005	MDD KBPC601	MDD KBPC602	MDD KBPC604	MDD KBPC606	MDD KBPC608	MDD KBPC610	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 T_A=50°C(Note 1) / T_A=25°C(Note 2)	$I_{(AV)}$	6.0 / 3.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	125							A
Rating for Fusing(t<8.3ms)	I^2t	64							A^2s
Maximum instantaneous forward voltage drop per birdge element at 3.0A	V_F	1.0							V
Maximum DC reverse current at rated DC blocking voltage T_A=25°C	I_R	10							μA
T_A=100°C		1.0							mA
Typical Junction Capacitance (Note 1)	C_J	60							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	8.0							°C/W
Operating junction temperature range	T_J	-55 to +125							°C
storage temperature range	T_{STG}	-55 to +150							°C

NOTES:

1.Unit mounted on 6.0" x 5.5" x0.11" thick(15x14x0.3cm)Al.plate.

2.Unit mounted on P.C. board with 0.47" x 0.47" (12x12mm) copper pads,0.375" (9.5mm) lead length.

Ratings And Characteristic Curves

FIG. 1- FORWARD CURRENT DERATING CURVE

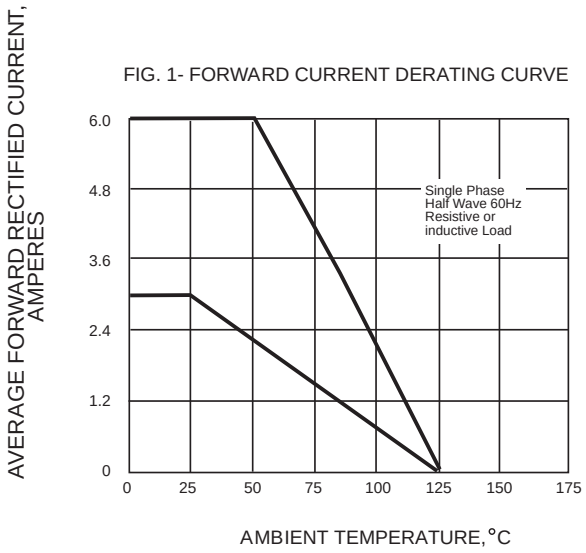


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

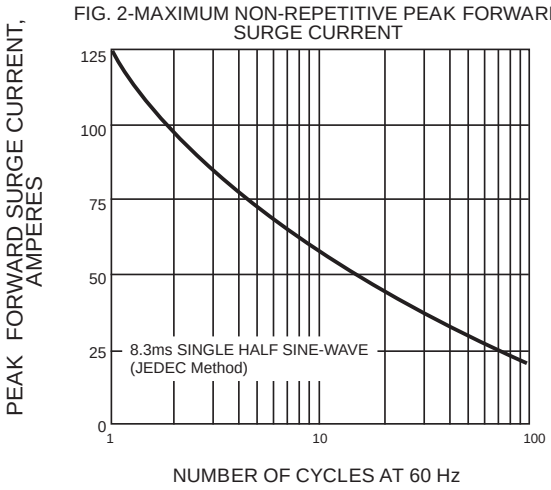


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

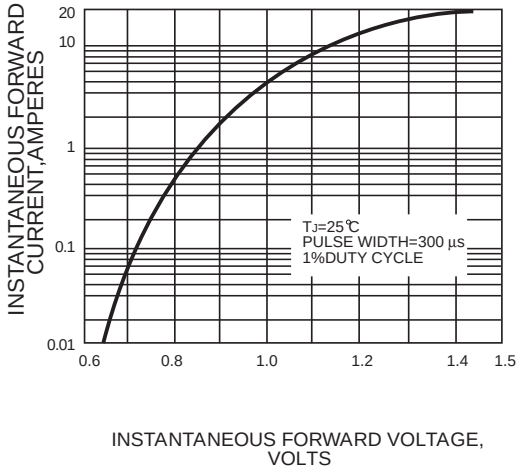


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

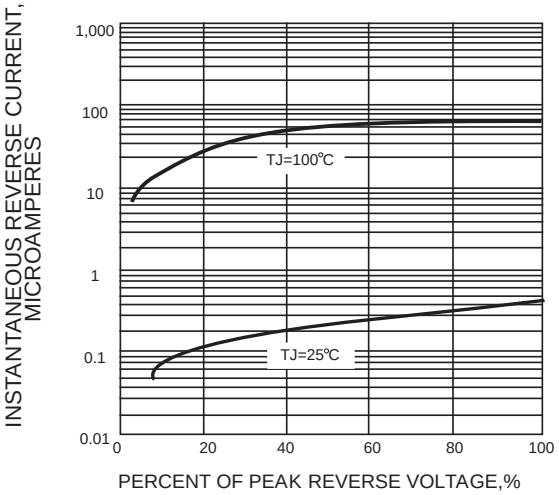


FIG. 5-TYPICAL JUNCTION CAPACITANCE

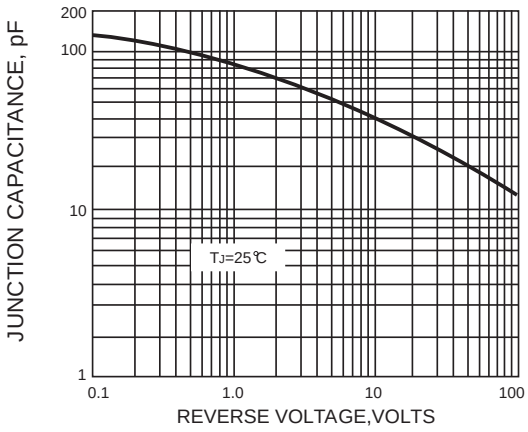
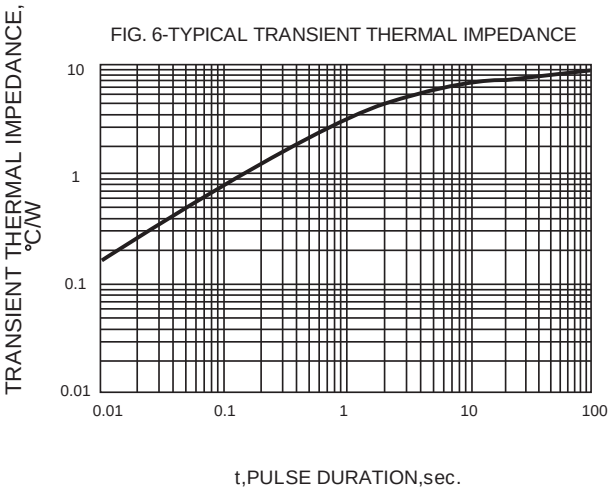


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



The curve above is for reference only.