

VOLTAGE RANGE: 50 - 1000V

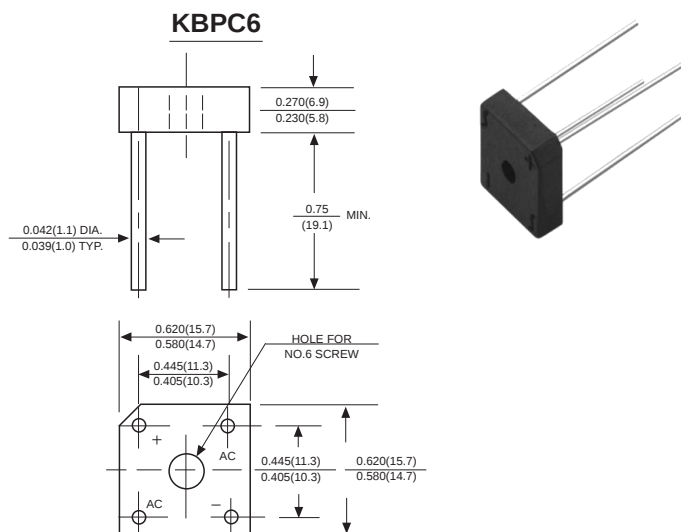
CURRENT: 6.0 A

Features

- Diffused Junction
- High Current Capability
- High Case Dielectric Strength
- High Surge Current Capability
- Ideal for Printed Circuit Board Application
- Plastic Material has Underwriters Laboratory Flammability Classification 94V-O

Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Marked on Body
- Weight: 3.8 grams (approx.)
- Mounting Position: Through Hole for #6 Screw
- Mounting Torque: 5.0 Inch-pounds Maximum
- Marking: Type Number



Dimensions in inches and (millimeters)



Maximum Ratings and Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise specified

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

Characteristic	Symbol	KBPC6005	KBPC601	KBPC602	KBPC604	KBPC606	KBPC608	KBPC 610	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	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 $T_A=50^\circ\text{C}$ (Note 1) $T_A=25^\circ\text{C}$ (Note 2)	$I_{(AV)}$	6.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	125							A
Rating for Fusing($t<8.3\text{ms}$)	I^2t	64							A^2s
Maximum instantaneous forward voltage drop per bridge element at 3.0A	V_F	1.0							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
Typical Junction Capacitance (Note 1)	C_J	60							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	8.0							$^\circ\text{C/W}$
Operating junction temperature range	T_J	-55 to +125							$^\circ\text{C}$
storage temperature range	T_{STG}	-55 to +150							$^\circ\text{C}$

NOTES:

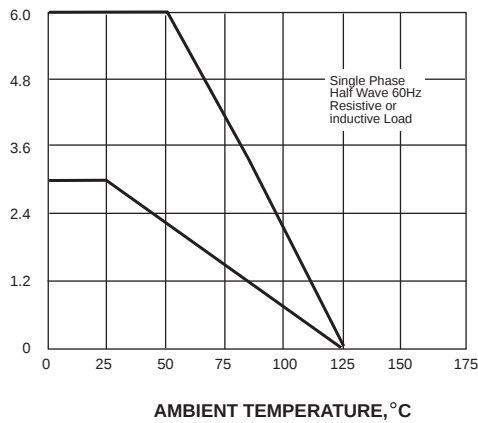
1. Unit mounted on 6.0x 8.5 x0.11 thick(15x14x0.3cm)Al.plate.

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 KBPC6005 THRU KBPC610

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

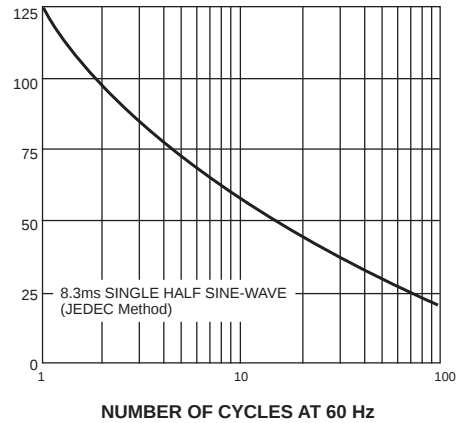


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

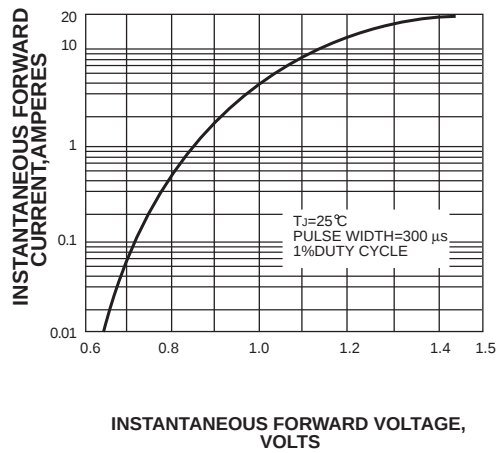


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

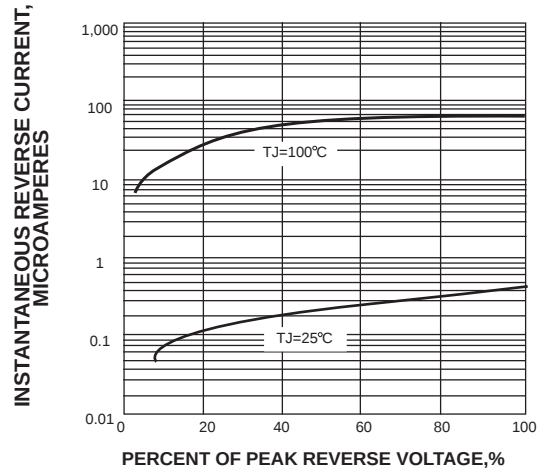
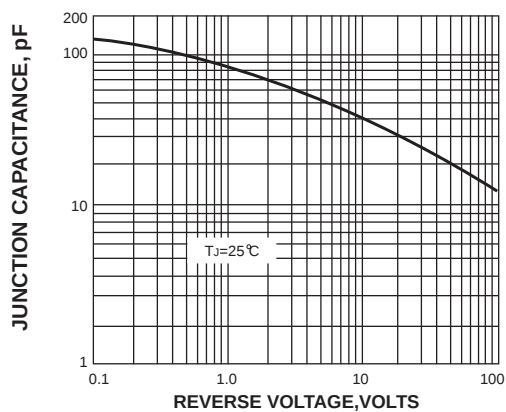


FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

