



KBPC50005 THRU KBPC5010

Silicon Bridge Rectifiers

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

Features

- Low forward voltage drop
- Electrically isolated base -2000 Volts
- High surge forward current capability
- Materials used carries U/L recognition

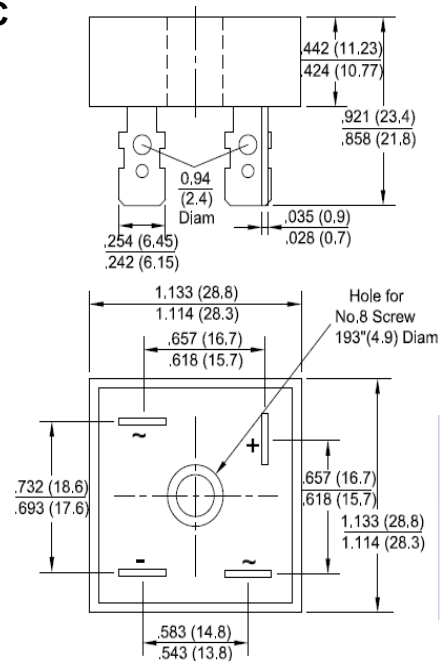
Mechanical Data

- Polarity: Symbol marked on body
- Mounting position: Any

Applications

- General purpose use in AC/DC bridge full wave rectification, for power supply, industrial automation applications, etc.

KBPC



RoHS
COMPLIANT



Package Outline Dimensions in Inches (Millimeters)

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Characteristics	Symbol	KBPC	KBPC	KBPC	KBPC	KBPC	KBPC	KBPC	Unit
		50005	5001	5002	5004	5006	5008	5010	
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 Average Forward Rectified Current @ $T_c=55^\circ\text{C}$	$I_{(AV)}$	50							A
Peak Forward Surge Current, 8.3mS Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method)	I_{FSM}	500							A
I^2t Rating for Fusing ($t < 8.3\text{mS}$)	I^2t	1037.5							A^2s
Peak Forward Voltage per Diode at 25A DC	V_F	1.1							V
Maximum DC Reverse Current at Rated	I_R	10							μA
DC Blocking Voltage per Diode @ $T_J=25^\circ\text{C}$									
Operating Junction Temperature Range	T_J	-55 to +150							$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150							$^\circ\text{C}$

Fig. 1 - Forward Current Derating Curve

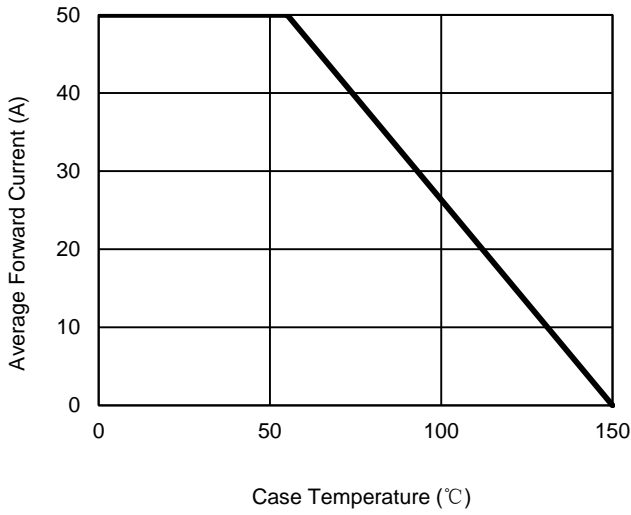


Fig. 2 - Maximum Non-Repetitive Surge Current

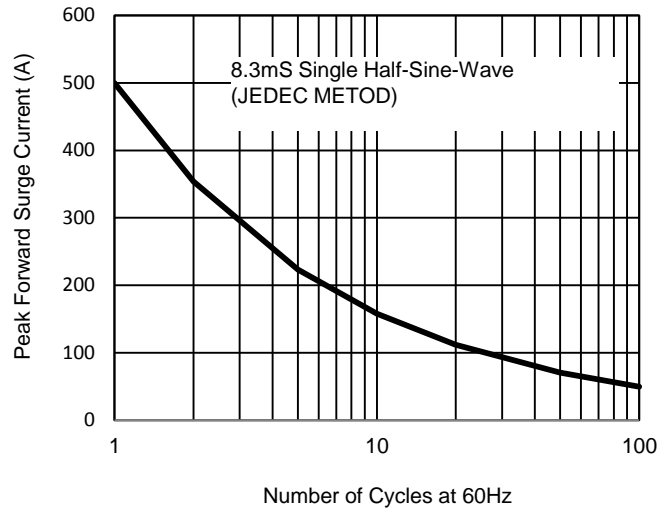


Fig. 3 - Typical Reverse Characteristics

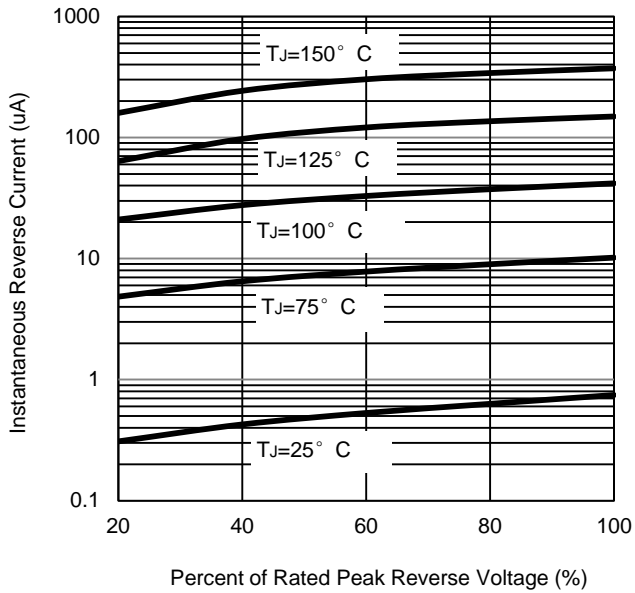
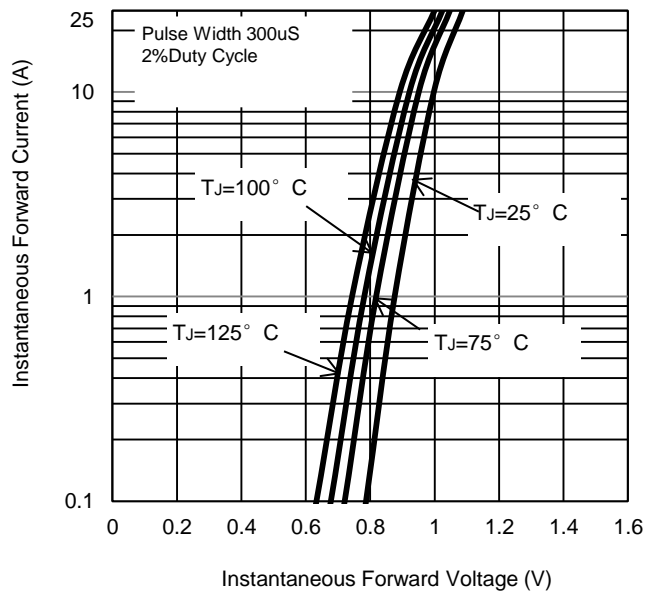


Fig. 4 - Typical Forward Characteristics





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