

# KBP3005G-E THRU KBP310G-E

## SINGLE PHASE GLASS PASSIVATED BRIDGE RECTIFIER

Voltage: 50 to 1000V

Current: 3.0A



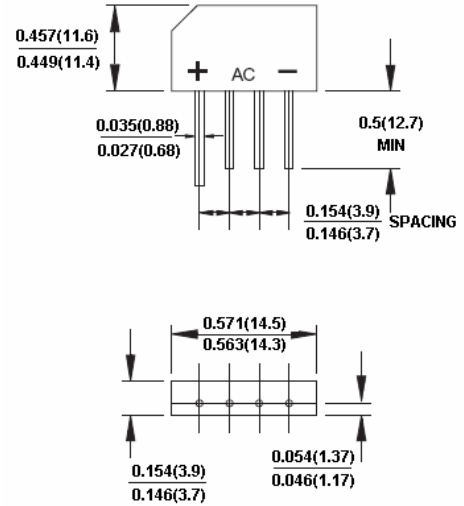
### Features

Glass passivated chip junction  
High case dielectric strength  
High surge current capability  
Ideal for printed circuit board  
Halogen Free

### Mechanical Data

Terminal: Plated leads solderable per J-STD-002  
Case: UL-94 Class V-0 recognized Halogen Free Epoxy  
Polarity: Polarity symbol marked on body  
Mounting position: any

### KBP



Dimensions in millimeters

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(single-phase, half -wave, 60HZ, resistive or inductive load rating at 25°C, unless otherwise stated)

	Symbol	KBP3 005G- E	KBP3 01G-E	KBP3 02G-E	KBP3 04G-E	KBP3 06G-E	KBP3 08G-E	KBP3 10G-E	units
Maximum repetitive peak reverse voltage	V <sub>rrm</sub>	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V <sub>rms</sub>	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V <sub>dc</sub>	50	100	200	400	600	800	1000	V
Maximum average forward rectified output current Ta = 55°C	I <sub>f(av)</sub>	3.0							A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method)	I <sub>fsm</sub>	80							A
Maximum instantaneous forward voltage drop per leg at 3.0A	V <sub>f</sub>	1.05							V
Rating for fusing (t < 8.3ms)	I <sup>2</sup> t	32							A <sup>2</sup> Sec
Maximum DC reverse current at rated DC blocking voltage per leg Ta = 25°C Ta = 125°C	I <sub>r</sub>	5.0 500							μA
Maximum thermal resistance per leg (Note1)	R <sub>th(ja)</sub> R <sub>th(jc)</sub>	30 11							°C/W
Typical junction capacitance per leg at 4.0V, 1MHz	C <sub>j</sub>	25							pF
Operating junction and storage temperature range	T <sub>j</sub> , T <sub>stg</sub>	-55 to +150							°C

Note:

1. Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.47 x 0.47" (12 x 12mm) copper pads

## RATINGS AND CHARACTERISTIC CURVES KBP3005G-E THRU KBP310G-E

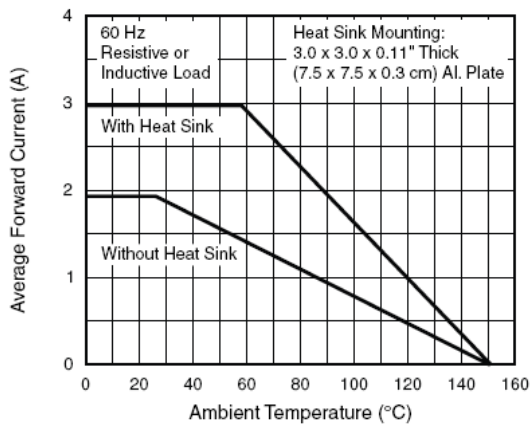


Figure 1. Forward Current Derating Curve

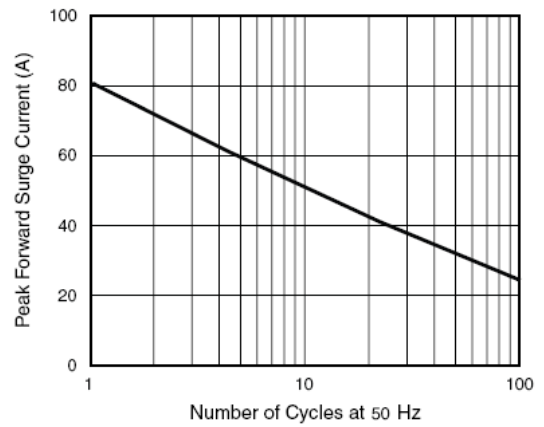


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Diode

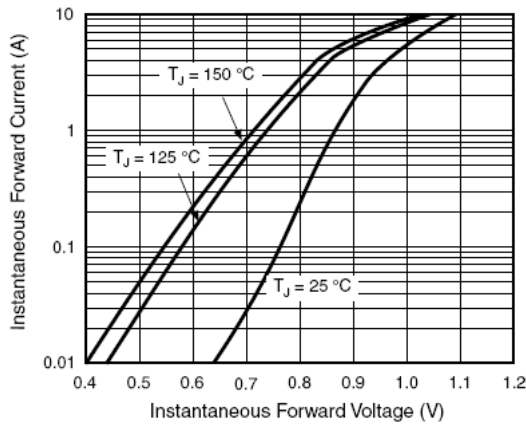


Figure 3. Typical Forward Characteristics Per Diode

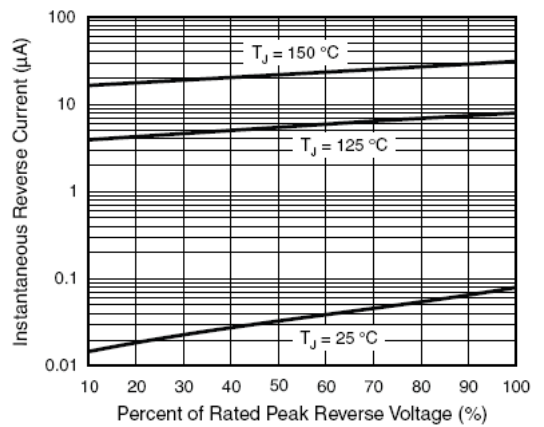


Figure 4. Typical Reverse Leakage Characteristics Per Diode

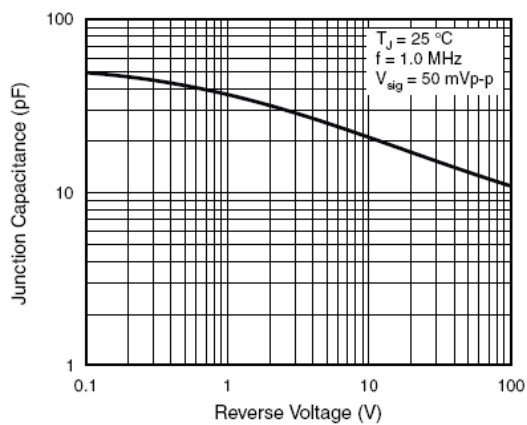


Figure 5. Typical Junction Capacitance Per Diode