



# KBPC35005 THRU KBPC3510

Reverse Voltage - 50 to 1000 Volts Forward Current -35.0 Amperes

## SILICON BRIDGE RECTIFIERS

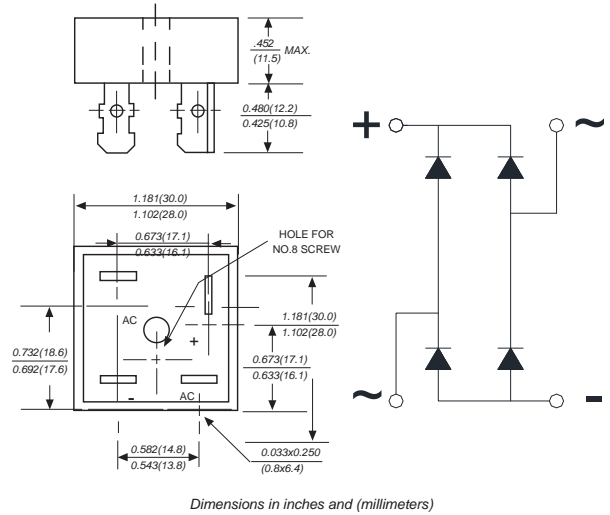
### Features

- ◆ 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-25** **RoHS**  
COMPLIANT

### 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 otherwise specified.

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

Parameter	SYMBOLS	MDD	MDD	MDD	MDD	MDD	MDD	MDD	UNITS
		KBPC35005	KBPC3501	KBPC3502	KBPC3504	KBPC3506	KBPC3508	KBPC3510	
Marking Code									
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V <sub>RMS</sub>	30	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 output rectified current at T <sub>c</sub> =55°C (Note 1)	I <sub>(AV)</sub>	35.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	400							A
Rating for Fusing (t<8.3ms)	I <sup>2</sup> t	664							A <sup>2</sup> s
Maximum instantaneous forward voltage drop per bridge element at 17.5A	V <sub>F</sub>	1.1							V
Maximum DC reverse current at rated DC blocking voltage	I <sub>R</sub>	10							μA
		1.0							mA
Isolation voltage from case to leads	V <sub>IOS</sub>	2500							V <sub>AC</sub>
Typical Thermal Resistance (Note 2)	R <sub>θJA</sub>	2.0							°C/W
Operating junction temperature range	T <sub>J</sub>	-65 to +150							°C
storage temperature range	T <sub>STG</sub>	-65 to +150							°C

**NOTES:**

1. Unit mounted on 9" x 3.5" x 4.6" thick (23cm x 9cm x 11.8cm) Al. plate.
2. Bolt down on heat-sink with silicone thermal compound between bridge and mounting surface for maximum heat transfer efficiency with #8 screw.



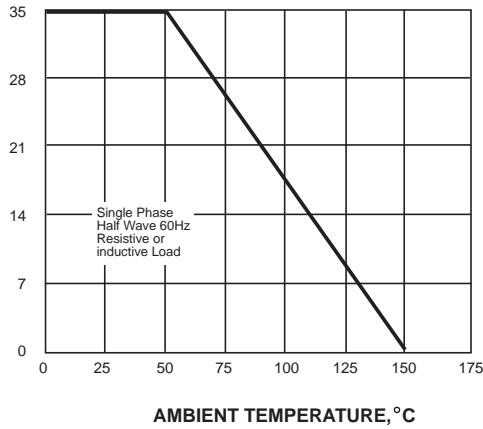
# KBPC35005 THRU KBPC3510

Reverse Voltage - 50 to 1000 Volts Forward Current -35.0 Amperes

## Ratings And Characteristic Curves

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

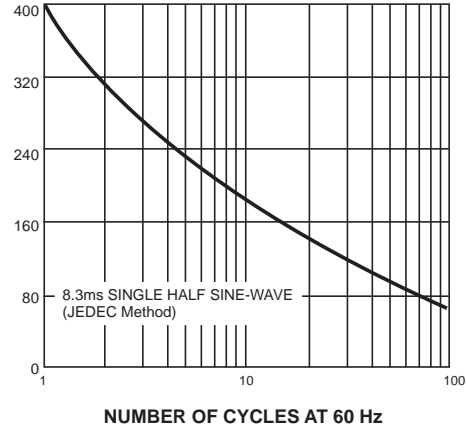
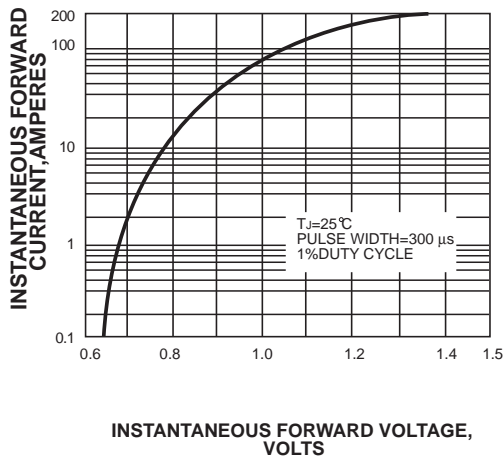


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS REVERSE CURRENT, MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

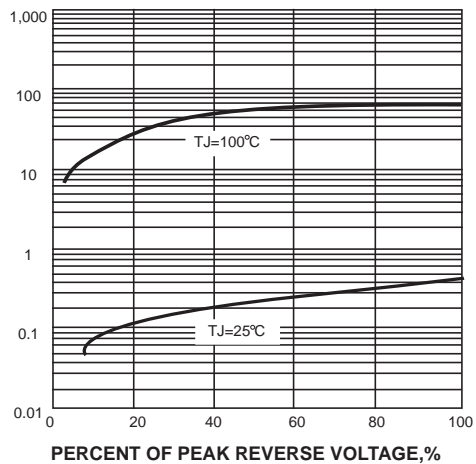
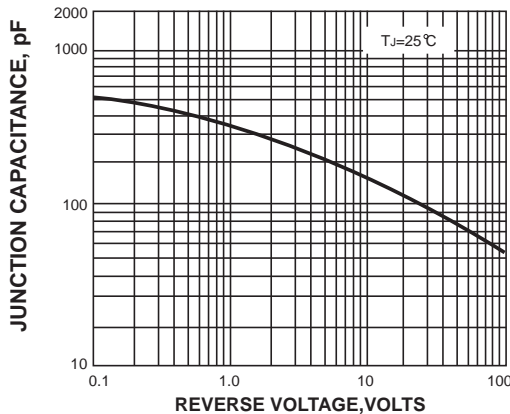
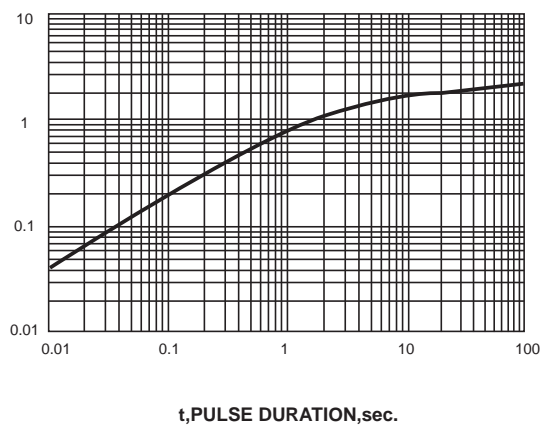


FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



The curve above is for reference only.