



**50.0 A Single-Phase Silicon Bridge Rectifier**  
Rectifier Reverse Voltage 50 to 1000V

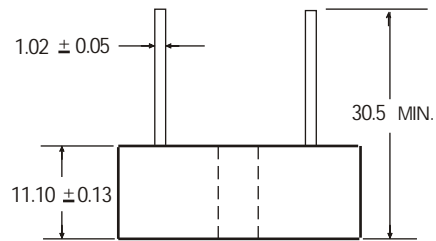
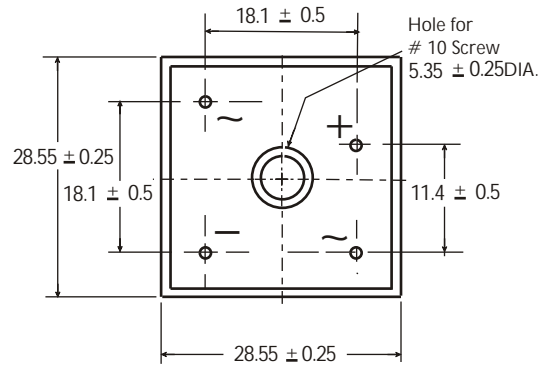


**Features**

- This series is UL listed under the Recognized Component Index, file number E142814
- The plastic material used carries Underwriters Laboratory flammability recognition 94V-0
- Universal 4-way terminals, snap-on, wrap-around, solder or P.C. Board mounting
- Surge overload ratings to 400 amperes
- Electrically isolated metal case for maximum heat dissipation
- Case to terminal isolation voltage 2500V

**Mechanical Data**

Case: Metal case  
 Terminals: Plated copper leads .04" (1.02 mm) diameter  
 Weight: 1.007 ounce, 28.5 grams (approx)  
 Mounting Position: Bolt down with silicone thermal compound between bridge and mounting surface for maximum heat transfer efficiency  
 Mounting Torque: 20 in-lb max.



Dimensions in millimeters (1mm=0.0394")

**Maximum Ratings & Thermal Characteristics**

Rating at 25°C ambient temperature unless otherwise specified, Resistive or Inductive load, 60 Hz.  
 For Capacitive load derate current by 20%.

Parameter	Symbol	KBPC50005W	KBPC5001W	KBPC5002W	KBPC5004W	KBPC5006W	KBPC5008W	KBPC5010W	unit
Maximum repetitive peak reverse voltage	VRRM	50	100	200	400	600	800	1000	V
Maximum RMS bridge input voltage	VRMS	35	70	140	280	420	560	700	v
Maximum DC blocking voltage	VDC	50	100	200	400	600	800	1000	v
Maximum average forward rectified output current at TA=55°C	IF(AV)	50							A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method)	IFSM	400							A
Rating for fusing ( t<8.3ms)	I <sup>2</sup> t	664							A <sup>2</sup> sec
Typical thermal resistance per element(1)	ReJA	2.5							°C / W
Operating junction and storage temperature range	TJ, TSTG	-55 to + 150							°C

**Electrical Characteristics**

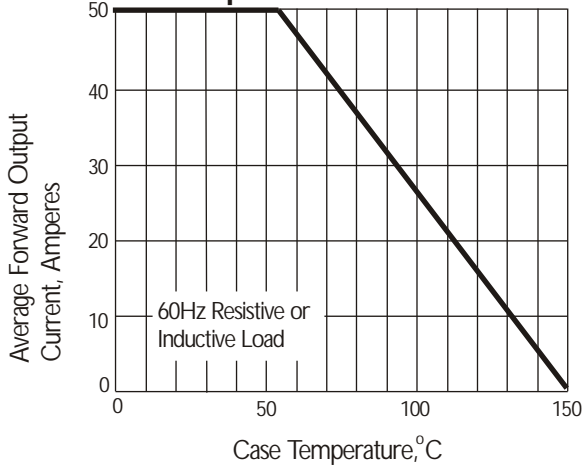
Rating at 25°C ambient temperature unless otherwise specified. Resistive or Inductive load, 60Hz.  
 For Capacitive load derate by 20 %.

Parameter	Symbol	KBPC50005W	KBPC5001W	KBPC5002W	KBPC5004W	KBPC5006W	KBPC5008W	KBPC5010W	Unit
Maximum instantaneous forward voltage drop per leg at 25.0A	VF	1.0							V
Maximum DC reverse current at rated DC blocking voltage per element	IR	10 500							μA

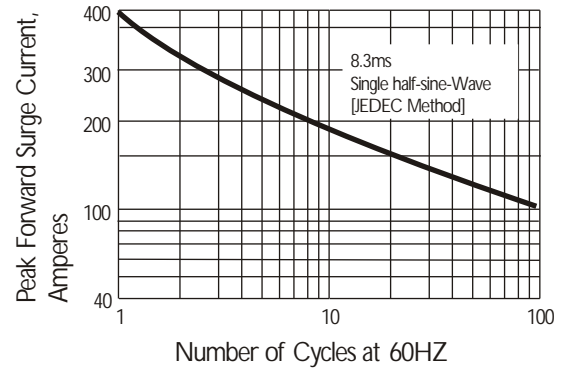
**Notes:** (1)Thermal resistance from Junction to Ambient on P.C.board mounting.

**Rating and Characteristic Curves** (  $T_A=25^{\circ}\text{C}$  Unless otherwise noted )  
**KBPC50005W thru KBPC5010W**

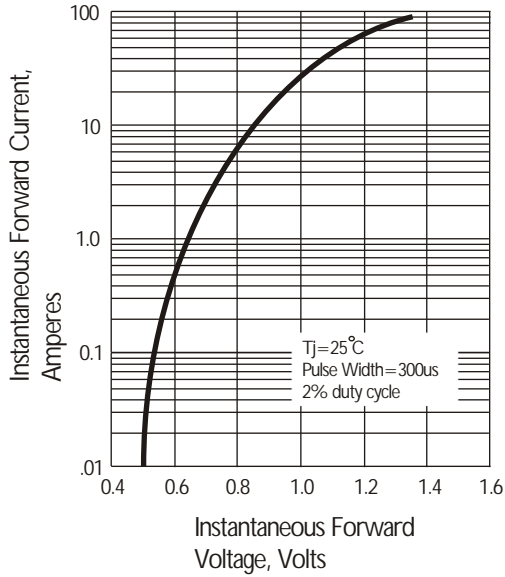
**Fig. 1 Derating Curve for Output Rectified Current**



**Fig. 2 Maximum Non-repetitive Peak Forward Surge Current**



**Fig. 3 Typical Instantaneous Forward Characteristics**



**Fig. 4 Typical Reverse Characteristics at  $T_J=25^{\circ}\text{C}$**

