



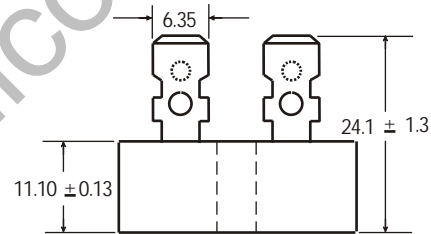
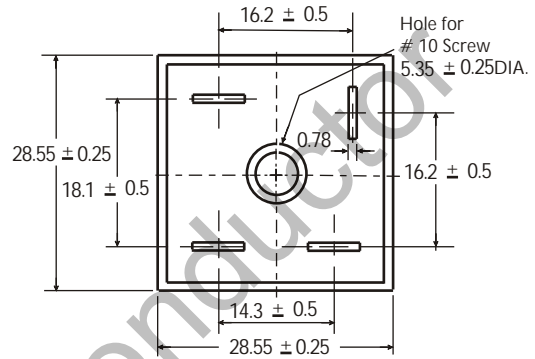
# KBPC25005 thru KBPC2510

## 25.0 A Single-Phase Silicon Bridge Rectifier Rectifier Reverse Voltage 50 to 1000V



### Features

- Surge overload ratings to 300 amperes
- 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
- High temperature soldering guaranteed 265°C/10 seconds at 5 lbs (2.3kg) tension



Dimensions in millimeters (1mm = 0.0394")

### Mechanical Data

- Case: Metal case
- Terminals: Plated .25" (6.53mm) Faston
- Mounting Position: Bolt down on heat-sink with silicone thermal compound between bridges and mounting surface for maximum heat transfer efficiency
- Mounting Position: Any
- Weight: 1.024 ounce, 29 grams (approx)

### 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	KBPC 25005	KBPC 2501	KBPC 2502	KBPC 2504	KBPC 2506	KBPC 2508	KBPC 2510	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)	25							A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method)	IFSM	300							A
Rating for fusing ( t<8.3ms)	I <sup>2</sup> t	374							A <sup>2</sup> sec
Typical thermal resistance per element (1)	ReJA	2.1							°C / W
Isolation voltage from case to leads	VIS	2500							Vac
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 %.

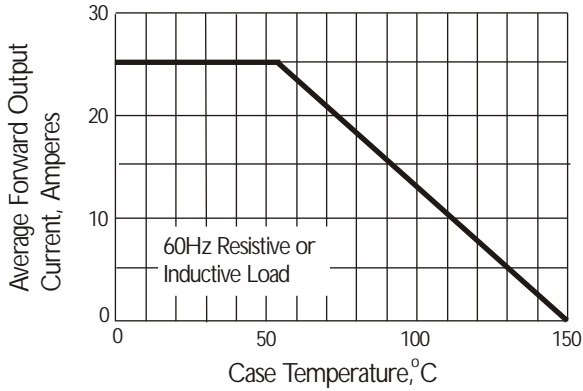
Parameter	Symbol	KBPC 25005	KBPC 2501	KBPC 2502	KBPC 2504	KBPC 2506	KBPC 2508	KBPC 2510	Unit
Maximum instantaneous forward voltage drop per leg at 12.5A	VF	1.0							V
Maximum DC reverse current at rated DC blocking voltage per element TA =25°C TA =125°C	IR	10 500							μA

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

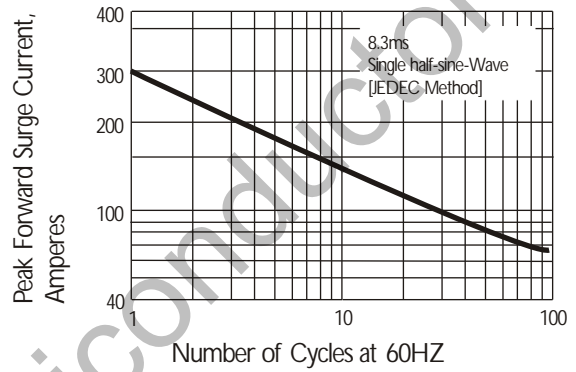


**Rating and Characteristic Curves** (  $T_A=25^{\circ}\text{C}$  Unless otherwise noted )  
**KBPC25005 thru KBPC2510**

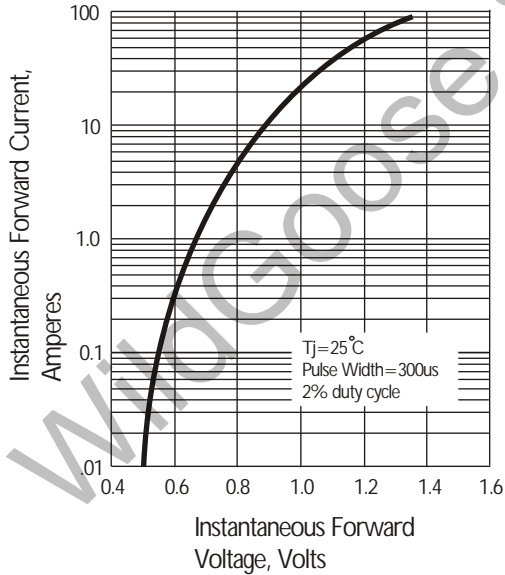
**Fig. 1 Derating Curve for Output Rectified Current**



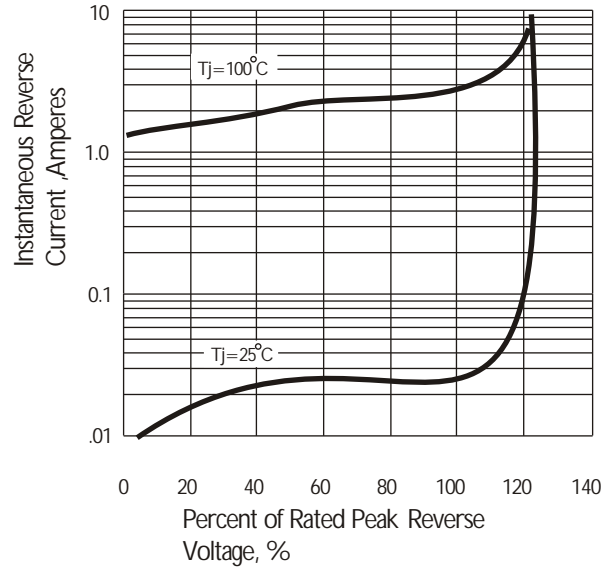
**Fig. 2 Maximum Non-repetitive Peak Forward Surge Current**



**Fig. 3 Typical Instantaneous Forward Characteristics**



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



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