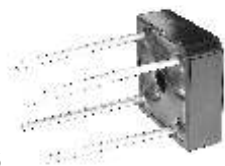




# KBPC10005 thru KBPC1010

## 10.0 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
- High temperature metallurgically bonded internal rectifiers
- Typical  $I_R$  less than  $.1\mu A$
- The plastic material used carries Underwriters Laboratory flammability recognition 94V-0
- High temperature soldering guaranteed  $265^\circ C / 10$  seconds at 5 lbs (2.3kg) tension

### Mechanical Data

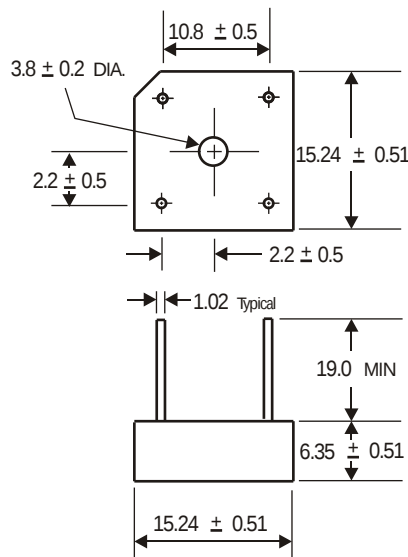
Case: Voil-free plastic package

Terminals: Plated leads solderable per MIL-STD-202, Method 208

Mounting: Thru hole for #6 screw

Mounting position: Any

Weight: 3.8 grams (approx)



Dimensions in millimeters = 0.0394"

### Maximum Ratings & Thermal Characteristics

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

| Parameter                                                                             | Symbol   | KBPC 10005   | KBPC 1001 | KBPC 1002 | KBPC 1004 | KBPC 1006 | KBPC 1008 | KBPC 1010 | 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<br>$T_c = 75^\circ C$ (1)            | IF(AV)   | 10.0         |           |           |           |           |           |           | A                  |
| Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method) | IFSM     | 125          |           |           |           |           |           |           | A                  |
| Rating for fusing ( $t < 8.3ms$ )                                                     | $I^2 t$  | 10           |           |           |           |           |           |           | A <sup>2</sup> sec |
| Typical thermal resistance per element(2)                                             | ReJA     | 9.4          |           |           |           |           |           |           | $^\circ C / W$     |
| Typical junction capacitance per element(3)                                           | Cj       | 55           |           |           |           |           |           |           | pF                 |
| Operating junction and storage temperature range                                      | TJ, TSTG | -55 to + 150 |           |           |           |           |           |           | $^\circ C$         |

### Electrical Characteristics

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

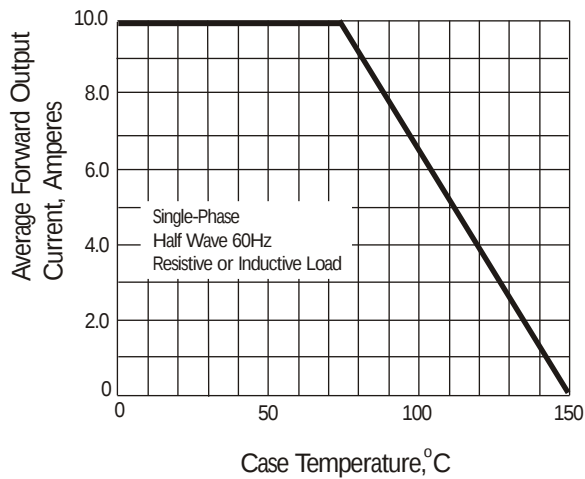
| Parameter                                                                                                     | Symbol | KBPC 10005 | KBPC 1001 | KBPC 1002 | KBPC 1004 | KBPC 1006 | KBPC 1008 | KBPC 1010 | Unit    |
|---------------------------------------------------------------------------------------------------------------|--------|------------|-----------|-----------|-----------|-----------|-----------|-----------|---------|
| Maximum instantaneous forward voltage drop per leg at 3.0A                                                    | VF     | 1.1        |           |           |           |           |           |           | V       |
| Maximum DC reverse current at rated $T_A = 25^\circ C$<br>DC blocking voltage per element $T_A = 100^\circ C$ | IR     | 10<br>1000 |           |           |           |           |           |           | $\mu A$ |

- Notes:** (1) Mounted on metal chassis.  
(2) Non-repetitive, for  $t > 1ms$  and  $< 8.3ms$ .  
(3) Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

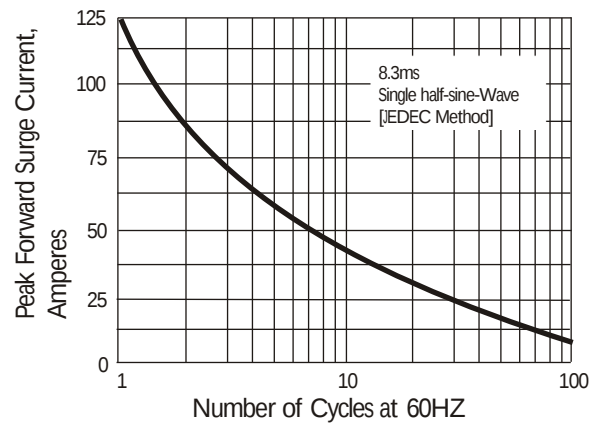
## Rating and Characteristic Curves ( $T_A = 25^{\circ}\text{C}$ Unless otherwise noted )

### KBPC10005 thru KBPC1010

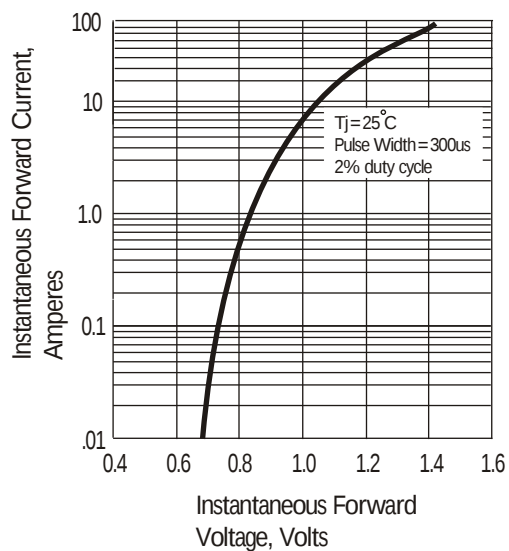
**Fig. 1 Derating Curve for Output Rectified Current**



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



**Fig. 3 Typical Instantaneous Forward Characteristics**



**Fig. 4 Typical Reverse Characteristics**

