

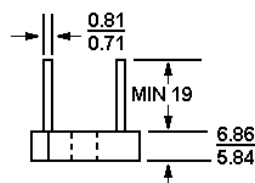
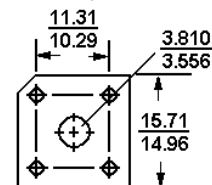
# KBPC1005 THRU KBPC110

## 3A SINGLE-PHASE SILICON BRIDGE RECTIFIERS

### Features

- Surge overload rating-50 amperes peak
- Low forward voltage drop
- Small size: simple installation
- Tinned copper leads
- Mounting Position: Any

VOLTAGE RANGE  
50 to 1000 Volts PRV  
CURRENT  
3.0 Amperes



Dimensions in mm

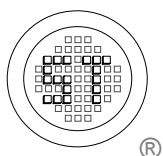
### Absolute Maximum Ratings and Characteristics

Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load, For capacitive load, derate current by 20%.

|                                                                                                                                                      | KBPC<br>1005 | KBPC<br>101 | KBPC<br>102 | KBPC<br>104 | KBPC<br>106 | KBPC<br>108 | KBPC<br>110 | Units               |
|------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------------|
| Maximum Recurrent Peak Reverse Voltage                                                                                                               | 50           | 100         | 200         | 400         | 600         | 800         | 1000        | V                   |
| Maximum RMS Bridge Input Voltage                                                                                                                     | 35           | 70          | 140         | 280         | 420         | 560         | 700         | V                   |
| Maximum Average Forward Rectified Output Current<br>$T_C = 50^{\circ}\text{C}^*$<br>$T_C = 100^{\circ}\text{C}^*$<br>$T_A = 50^{\circ}\text{C}^{**}$ | 3<br>2<br>2  |             |             |             |             |             |             | A<br>A<br>A         |
| Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load                                                                   | 50           |             |             |             |             |             |             | A                   |
| Maximum Forward Voltage Drop per Bridge Element at 1.5A Peak                                                                                         | 1.1          |             |             |             |             |             |             | V                   |
| Maximum Reverse Current at Rated DC Blocking Voltage per Element<br>$T_A = 25^{\circ}\text{C}$<br>$T_A = 100^{\circ}\text{C}$                        | 10<br>1      |             |             |             |             |             |             | $\mu\text{A}$<br>mA |
| Operating Temperature Range $T_C$                                                                                                                    | -55 to +125  |             |             |             |             |             |             | $^{\circ}\text{C}$  |
| Storage Temperature Range $T_A$                                                                                                                      | -55 to +150  |             |             |             |             |             |             | $^{\circ}\text{C}$  |

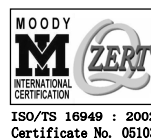
Notes: \* Unit mounted on metal chassis

\*\* Unit mounted on P.C. board



**SEMTECH ELECTRONICS LTD.**

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Dated : 03/10/2003

## RATINGS AND CHARACTERISTIC CURVES (KBPC1 SERIES)

FIG.1-MAXIMUM FORWARD SURGE CURRENT

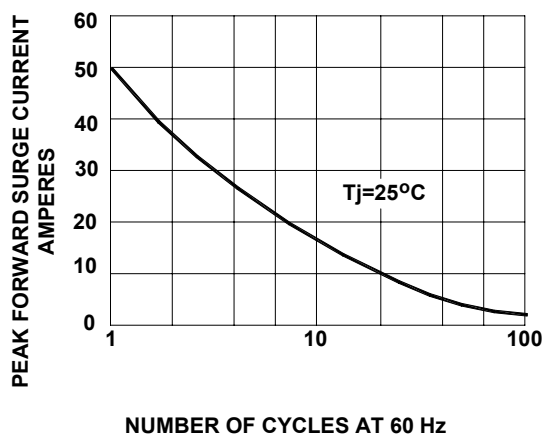


FIG.2-DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

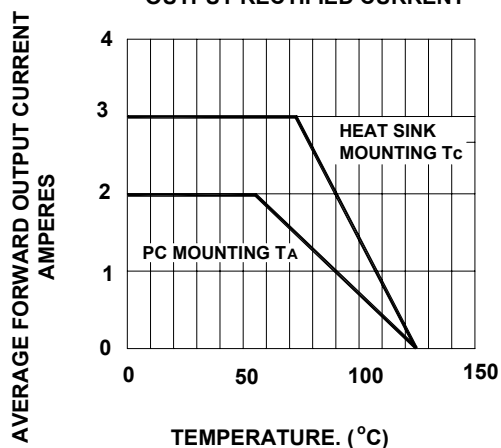


FIG.3-TYPICAL FORWARD CHARACTERISTICS

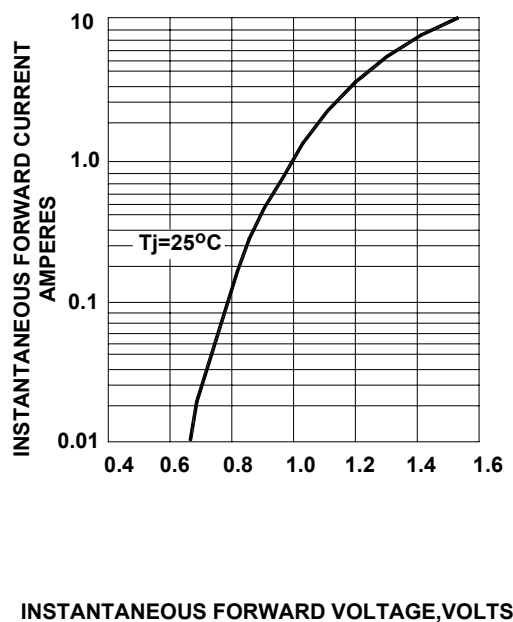
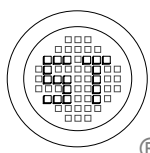
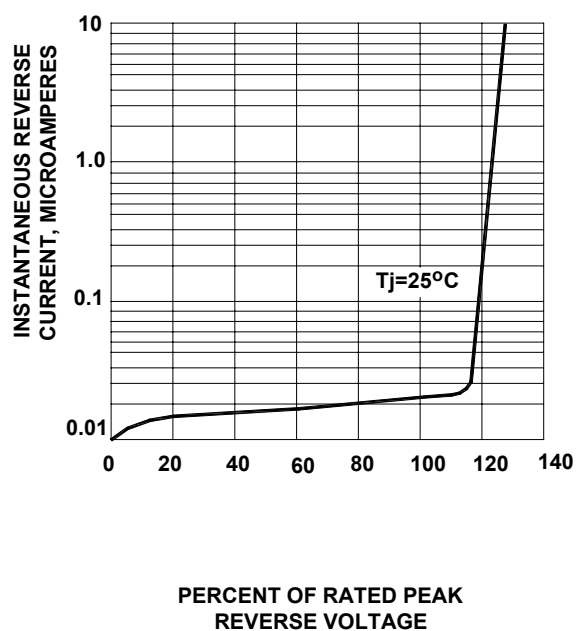
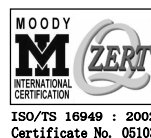


FIG.4-TYPICAL REVERSE CHARACTERISTICS



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