

## KBPC3500 - KBPC3510

**PRV : 50 - 1000 Volts**

**Io : 35 Amperes**

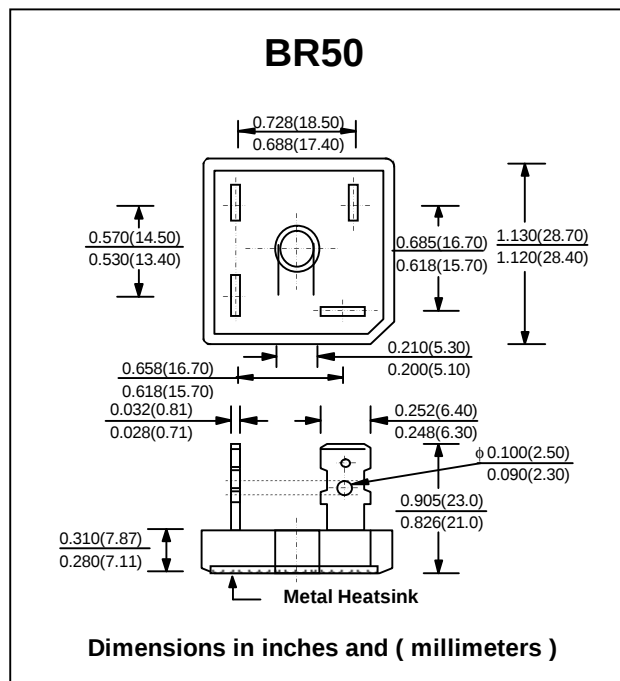
### FEATURES :

- \* High current capability
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* **Pb / RoHS Free**

### MECHANICAL DATA :

- \* Case : Metal Case
- \* Epoxy : UL94V-0 rate flame retardant
- \* Terminals : plated .25" (6.35 mm). Faston
- \* Polarity : Polarity symbols marked on case
- \* Mounting position : Bolt down on heat-sink with silicone thermal compound between bridge and mounting surface for maximum heat transfer efficiency.
- \* Weight : 17.1 grams

## SILICON BRIDGE RECTIFIERS



## MAXIMUM RATINGS AND ELECTRICAL 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%.

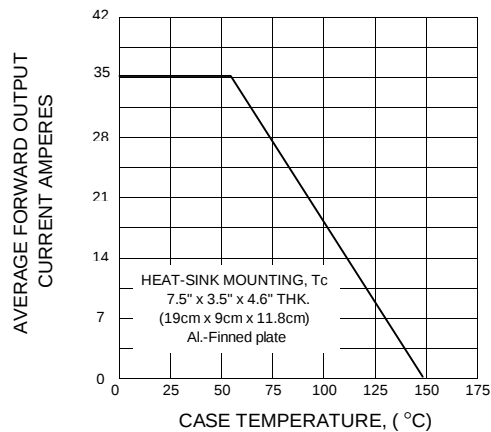
| RATING                                                                                     | SYMBOL             | KBPC 3500     | KBPC 3501 | KBPC 3502 | KBPC 3504 | KBPC 3506 | KBPC 3508 | KBPC 3510 | UNIT             |
|--------------------------------------------------------------------------------------------|--------------------|---------------|-----------|-----------|-----------|-----------|-----------|-----------|------------------|
| Maximum Recurrent Peak Reverse Voltage                                                     | V <sub>RRM</sub>   | 50            | 100       | 200       | 400       | 600       | 800       | 1000      | V                |
| Maximum RMS Voltage                                                                        | V <sub>RMS</sub>   | 35            | 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 Current T <sub>c</sub> = 55°C                                      | I <sub>F(AV)</sub> | 35            |           |           |           |           |           |           | A                |
| Peak Forward Surge Current Single half sine wave Superimposed on rated load (JEDEC Method) | I <sub>FSM</sub>   | 400           |           |           |           |           |           |           | A                |
| Current Squared Time at t < 8.3 ms.                                                        | I <sup>2</sup> t   | 660           |           |           |           |           |           |           | A <sup>2</sup> S |
| Maximum Forward Voltage per Diode at I <sub>F</sub> = 17.5 A                               | V <sub>F</sub>     | 1.1           |           |           |           |           |           |           | V                |
| Maximum DC Reverse Current Ta = 25 °C                                                      | I <sub>R</sub>     | 10            |           |           |           |           |           |           | μA               |
| at Rated DC Blocking Voltage Ta = 100 °C                                                   | I <sub>R(H)</sub>  | 200           |           |           |           |           |           |           | μA               |
| Typical Thermal Resistance (Note 1)                                                        | R <sub>θJC</sub>   | 1.5           |           |           |           |           |           |           | °C/W             |
| Typical Thermal Resistance at Junction to Ambient                                          | R <sub>θJA</sub>   | 10            |           |           |           |           |           |           | °C               |
| Operating Junction Temperature Range                                                       | T <sub>J</sub>     | - 40 to + 150 |           |           |           |           |           |           | °C               |
| Storage Temperature Range                                                                  | T <sub>STG</sub>   | - 40 to + 150 |           |           |           |           |           |           | °C               |

### Note :

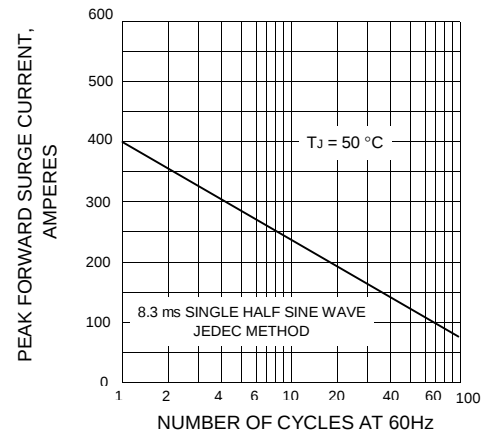
1. Thermal Resistance from junction to case with units mounted on a 7.5" x 3.5" x 4.6" (19cm.x 9cm.x 11.8cm.) Al.-Finned Plate

## RATING AND CHARACTERISTIC CURVES ( KBPC3500 - KBPC3510 )

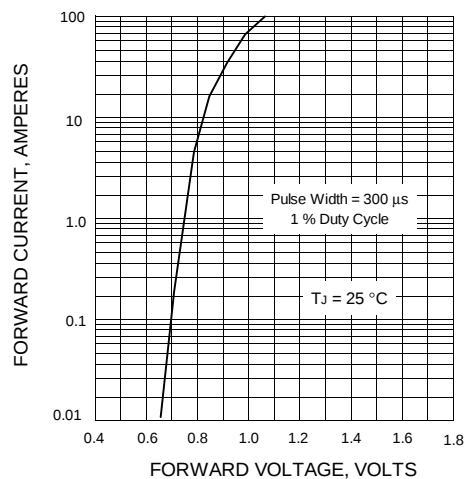
**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



**FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG.3 - TYPICAL FORWARD CHARACTERISTICS PER DIODE**



**FIG.4 - TYPICAL REVERSE CHARACTERISTICS PER DIODE**

