



# KBPC10005 - KBPC1010

# SILICON BRIDGE RECTIFIERS

**PRV : 50 - 1000 Volts**

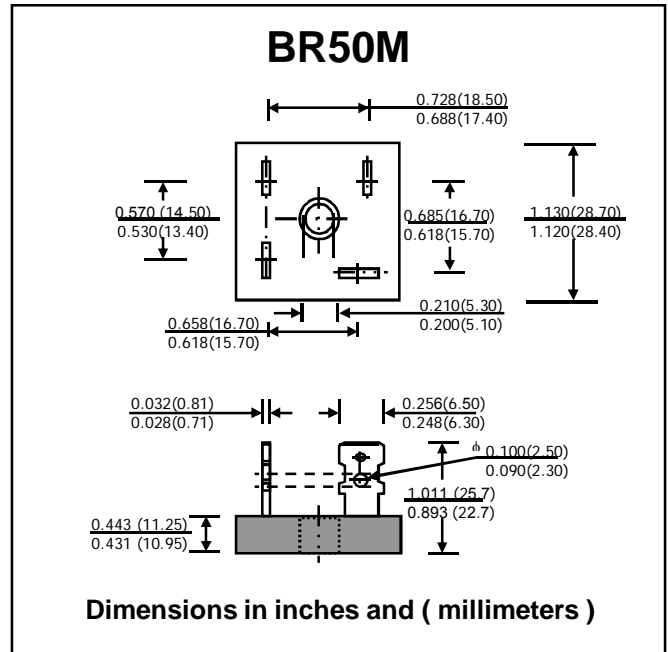
**Io : 10 Amperes**

**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



**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

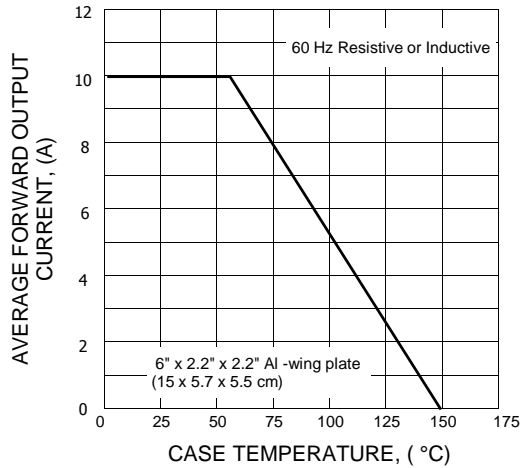
Rating at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%.

| RATING                                                                                     | SYMBOL                            | KBPC          | KBPC | KBPC | KBPC | KBPC | KBPC | KBPC | UNIT             |
|--------------------------------------------------------------------------------------------|-----------------------------------|---------------|------|------|------|------|------|------|------------------|
|                                                                                            |                                   | 10005         | 1001 | 1002 | 1004 | 1006 | 1008 | 1010 |                  |
| 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 Tc = 55 °C                                                 | I <sub>F(AV)</sub>                | 10            |      |      |      |      |      |      | A                |
| Peak Forward Surge Current Single half sine wave Superimposed on rated load (JEDEC Method) | I <sub>FSM</sub>                  | 200           |      |      |      |      |      |      | A                |
| Current Squared Time at t < 8.3 ms.                                                        | I <sup>2</sup> t                  | 160           |      |      |      |      |      |      | A <sup>2</sup> S |
| Maximum Forward Voltage per Diode at I <sub>F</sub> = 5.0 A                                | V <sub>F</sub>                    | 1.2           |      |      |      |      |      |      | V                |
| Maximum DC Reverse Current at Rated DC Blocking Voltage                                    | I <sub>R</sub>                    | 10            |      |      |      |      |      |      | µA               |
| Typical Thermal Resistance (Note 1)                                                        | R <sub>θJC</sub>                  | 2.0           |      |      |      |      |      |      | °C/W             |
| Operating and Storage Temperature Range                                                    | T <sub>J</sub> , T <sub>STG</sub> | - 50 to + 150 |      |      |      |      |      |      | °C               |

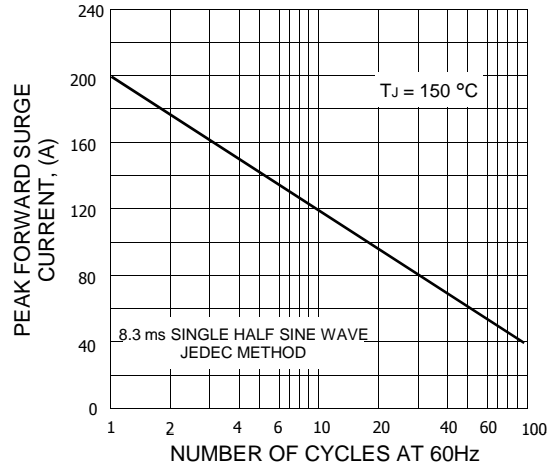
Note : (1) Thermal Resistance from junction to case with units mounted on a 6" x 2.2" x2.2" (15 x 5.7 x 5.5 cm) Al - wing Plate

**RATING AND CHARACTERISTIC CURVES (KBPC10005 - KBPC1010)**

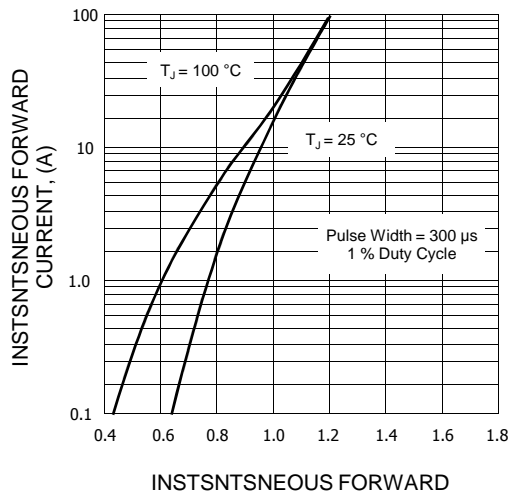
**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



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



**FIG.3 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.4 - TYPICAL REVERSE CHARACTERISTICS**

