

KBPC5000 - KBPC5010

PRV : 50 - 1000 Volts

Io : 50 Amperes

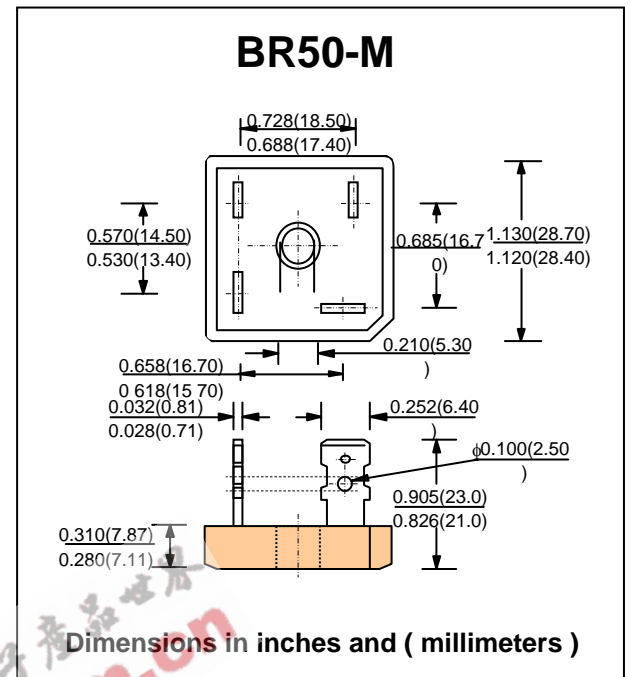
FEATURES :

- * High case dielectric strength
- * High surge current capability
- * High reliability
- * High efficiency
- * Low reverse current
- * Low forward voltage drop
- * **Pb / RoHS Free**

MECHANICAL DATA :

- * Case : Metal Case
- * Epoxy : UL94V-O 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 specific.
 Single phase, half wave, 60 Hz, resistive or inductive load
 For capacitive load, derate current by 20%

| RATING | SYMBOL | KBPC 5000 | KBPC 5001 | KBPC 5002 | KBPC 5004 | KBPC 5006 | KBPC 5008 | KBPC 5010 | UNIT |
|-------------------------------------------------------------------------------------------------|-----------------|---------------|-----------|-----------|-----------|-----------|-----------|-----------|---------------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS Voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Current $T_c=55^{\circ}C$ | $I_{F(AV)}$ | 50 | | | | | | | A |
| Peak Forward Surge Current Single half sine wave Superimposed on rated load (JEDEC Method) | I_{FSM} | 400 | | | | | | | A |
| Current Squared Time at $t < 8.3$ ms. | I^2t | 660 | | | | | | | A^2S |
| Maximum Forward Voltage per Diode at $I_F=25A$ | V_F | 1.1 | | | | | | | V |
| Maximum DC Reverse Current $T_a=25^{\circ}C$ at Rated DC Blocking Voltage $T_a=100^{\circ}C$ | I_R | 10 | | | | | | | μA |
| | $I_{R(H)}$ | 500 | | | | | | | μA |
| Typical Thermal Resistance (Note 1) | $R_{\theta JC}$ | 2.0 | | | | | | | $^{\circ}C/W$ |
| Operating Junction Temperature Range | T_J | - 40 to + 150 | | | | | | | $^{\circ}C$ |
| Storage Temperature Range | T_{STG} | - 40 to + 150 | | | | | | | $^{\circ}C$ |

Note :
 (1) Thermal resistance from Junction to Case with units mounted on a 9"x5"x4.6" (22.9x12.7x11.7 cm) Al-Finned Heatsink.

RATING AND CHARACTERISTIC CURVES (KBPC50005 - KBPC5010)

FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

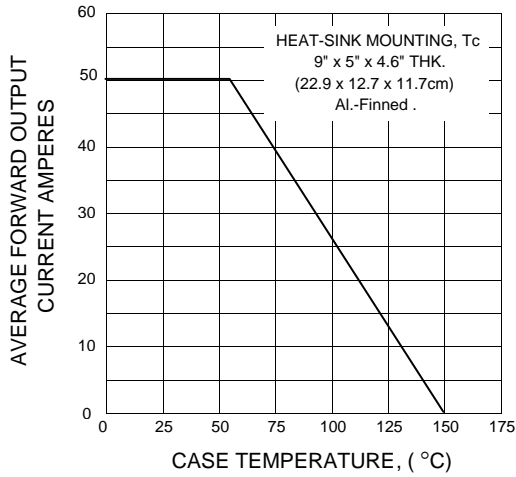


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

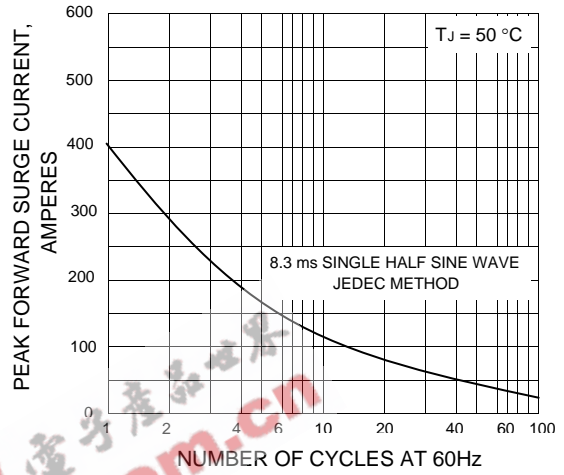


FIG.3 - TYPICAL FORWARD CHARACTERISTICS PER DIODE

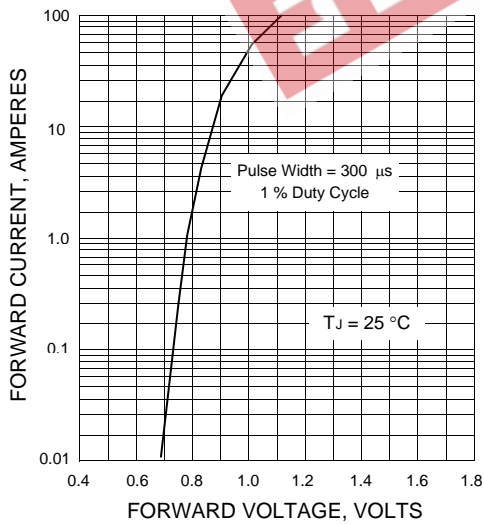


FIG.4 - TYPICAL REVERSE CHARACTERISTICS PER DIODE

