

KBPC2500 - KBPC2510

SILICON BRIDGE RECTIFIERS

PRV : 50 - 1000 Volts

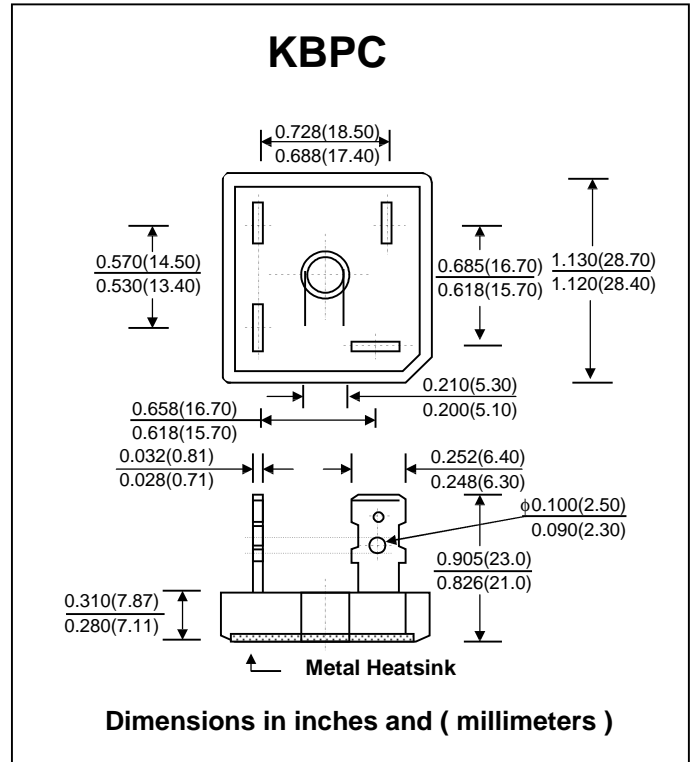
Io : 25 Amperes

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-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



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 2500 | KBPC 2501 | KBPC 2502 | KBPC 2504 | KBPC 2506 | KBPC 2508 | KBPC 2510 | 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°C | I _{F(AV)} | 25 | | | | | | | A |
| Peak Forward Surge Current Single half sine wave Superimposed on rated load (JEDEC Method) | I _{FSM} | 300 | | | | | | | A |
| Current Squared Time at t < 8.3 ms. | I ² _t | 375 | | | | | | | A ² S |
| Maximum Forward Voltage per Diode at I _F = 12.5 A | V _F | 1.1 | | | | | | | V |
| Maximum DC Reverse Current Ta = 25 °C at Rated DC Blocking Voltage Ta = 100 °C | I _R | 10 | | | | | | | µA |
| | I _{R(H)} | 200 | | | | | | | µA |
| Typical Thermal Resistance (Note 1) | RθJC | 1.45 | | | | | | | °C/W |
| Operating Junction Temperature Range | T _J | - 40 to + 150 | | | | | | | °C |
| Storage Temperature Range | T _{STG} | - 40 to + 150 | | | | | | | °C |

Note :

1. Thermal Resistance from junction to case with units mounted on a 5" x 6" x 4.9" (12.8cm.x 15.2cm.x 12.4cm.) Al.-Finned Plate

RATING AND CHARACTERISTIC CURVES (KBPC2500 - KBPC2510)

FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

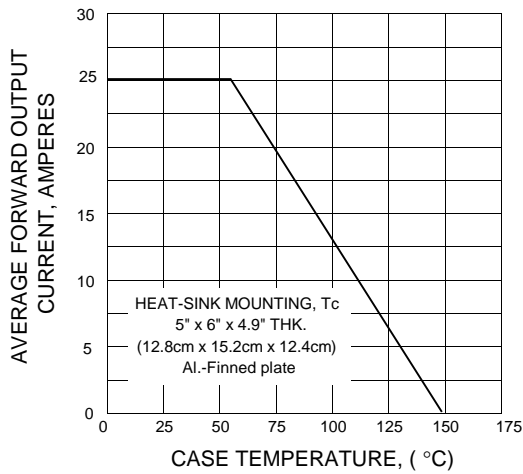


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

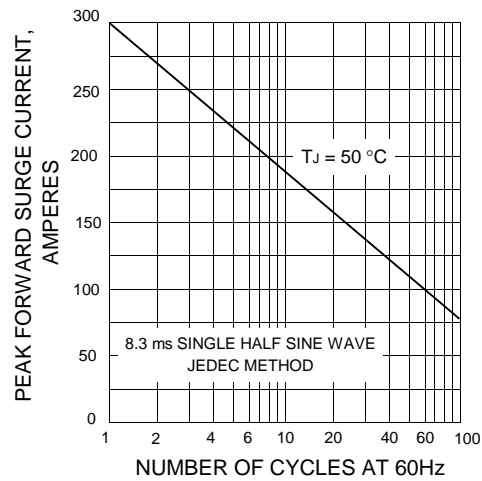


FIG.3 - TYPICAL FORWARD CHARACTERISTICS PER DIODE

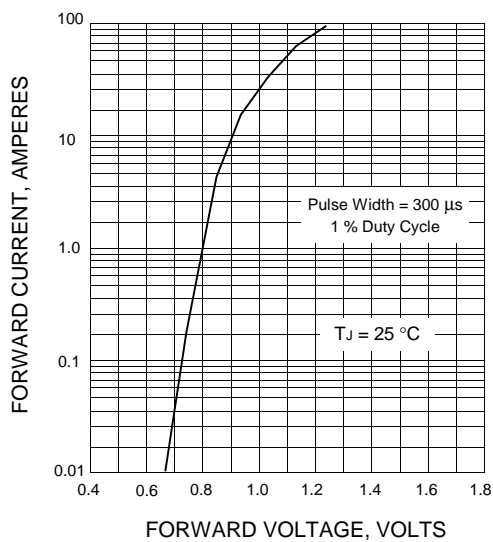


FIG.4 - TYPICAL REVERSE CHARACTERISTICS PER DIODE

