



KBPC1005/BR305 THRU KBPC110/BR310

SINGLE-PHASE SILICON BRIDGE RECTIFIER

VOLTAGE: 50-1000V

CURRENT: 3.0A

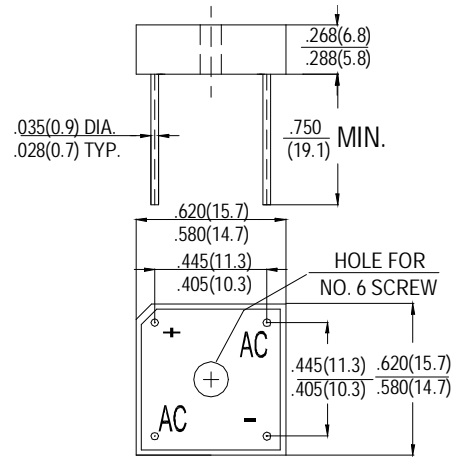
FEATURES

- Surge overload ratings-50 Amperes
- Low forward voltage drop
- Small size: simple installation

MECHANICAL DATA

- **Case:** Metal or plastic shell with plastic encapsulation
- **Epoxy:** UL 94V-0 rate flame retardant
- **Lead:** MIL-STD- 202E, Method 208 guaranteed
- **Polarity:** Symbols molded or marked on body
- **Mounting:** Thru hole for 6# screw
- **Weight:** 3.36 grams

BR-3



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

| | SYMBOL | KBPC | KBPC | KBPC | KBPC | KBPC | KBPC | KBPC | units | |
|---|-----------|---------------------|------|------|------|------|------|------|--------|---------|
| | | 1005 | 101 | 102 | 104 | 106 | 108 | 110 | | |
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V | |
| Maximum RMS Bridge Input 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 rectified Output Current at $T_C=50^\circ C$ | I_o | 3.0 | | | | | | | A | |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rate load (JEDEC method) | I_{FSM} | 50 | | | | | | | A | |
| Maximum Forward Voltage Drop per element at 1.5A DC | V_F | 1.0 | | | | | | | V | |
| Maximum DC Reverse Current at Rated DC Blocking Voltage per element | I_R | @ $T_A=25^\circ C$ | 10 | | | | | | | μA |
| | | @ $T_A=100^\circ C$ | 500 | | | | | | | |
| I^2t Rating for Fusing ($t<8.3ms$) | I^2t | 10 | | | | | | | A^2S | |
| Typical Junction Capacitance (Note 1) | C_J | 21 | | | | | | | pF | |

Notes: 1. Measured at 1MHz and applied reverse voltage of 4.0 volts

2. Thermal Resistance from Junction to Ambient and from junction to lead mounted on P.C.B. with 0.47×0.47”(12×12mm) copper pads.