



DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

KBPC / BR
1005 / 305
THRU
KBPC / BR
110 / 310

TECHNICAL SPECIFICATIONS OF SINGLE-PHASE SILICON BRIDGE RECTIFIER

VOLTAGE RANGE - 50 to 1000 Volts

CURRENT - 3.0 Amperes

FEATURES

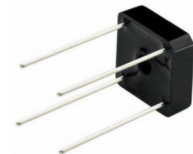
- * Surge overloa rating: 50 Amperes peak
- * Low forward voltage drop
- * Small size: simple installation

MECHANICAL DATA

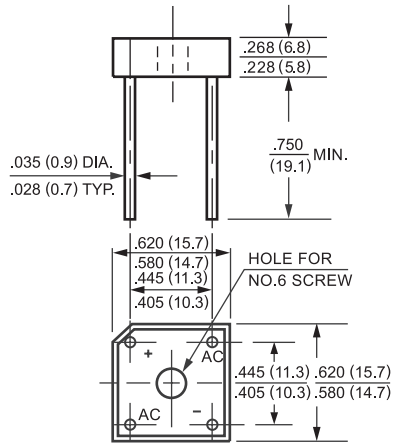
- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Lead: MIL-STD-202E, Method 208 guaranteed
Symbols molded or marked on body
- * Mounting position: Any
- * Weight: 3.36 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings 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%.



BR-3



Dimensions in inches and (millimeters)

| | | | | | | |
|-----------|----------|----------|----------|----------|----------|----------|
| KBPC 1005 | KBPC 101 | KBPC 102 | KBPC 104 | KBPC 106 | KBPC 108 | KBPC 110 |
|-----------|----------|----------|----------|----------|----------|----------|

| | SYMBOL | BR305 | BR31 | BR32 | BR34 | BR36 | BR38 | BR310 | UNITS |
|---|------------------|--------------|------|------|------|------|------|-------|--------------------|
| Maximum Recurrent Peak Reverse Voltage | VRRM | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum RMS Bridge Input Voltage | VRMS | 35 | 70 | 140 | 280 | 420 | 560 | 700 | Volts |
| Maximum DC Blocking Voltage | Vdc | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum Average Forward Rectified Output Current at Tc = 50°C | Io | 3.0 | | | | | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | IFSM | 50 | | | | | | | Amps |
| Maximum Forward Voltage Drop per element at 1.5A DC | VF | 1.0 | | | | | | | Volts |
| Maximum CD Reverse Current at Rated | IR | @ TA = 25°C | | | | | | | uAmps |
| DC Blocking Voltage per element | | @ Tc = 100°C | | | | | | 500 | |
| I ² t Rating for Fusing (t<8.3ms) | I ² t | 10 | | | | | | | A ² Sec |
| Typical Junction Capacitance (Note1) | CJ | 21 | | | | | | | pF |
| Operating Temperature Range | TJ | -55 to + 125 | | | | | | | °C |
| Storage Temperature Range | TSTG | -55 to + 150 | | | | | | | °C |

NOTES : 1.Measured at 1 MHz 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 x 0.47" (12x12mm) copper pads.

RATING AND CHARACTERISTIC CURVES (KBPC1005 BR305 THRU KBPC110 BR310)

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

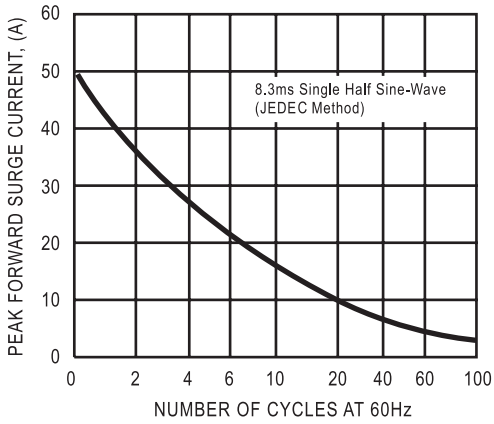


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

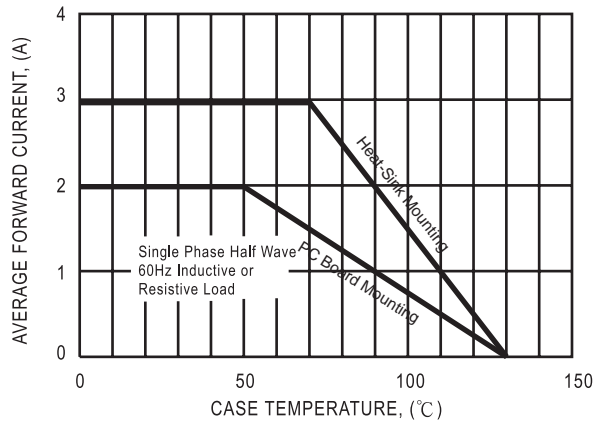


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

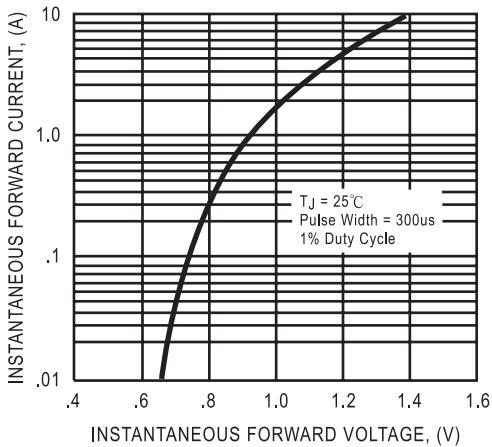
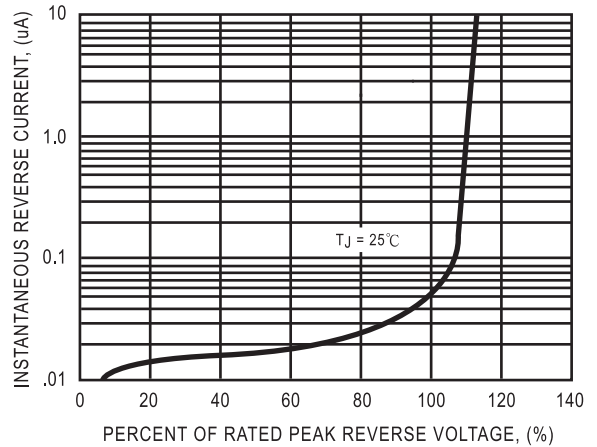


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS



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