



DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

KBPC10005

THRU

KBPC1010

TECHNICAL SPECIFICATIONS OF SINGLE-PHASE SILICON BRIDGE RECTIFIER

VOLTAGE RANGE - 50 to 1000 Volts

CURRENT - 10 Amperes

FEATURES

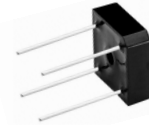
- * Surge overload rating: 200 Amperes peak
- * Low forward voltage drop

MECHANICAL DATA

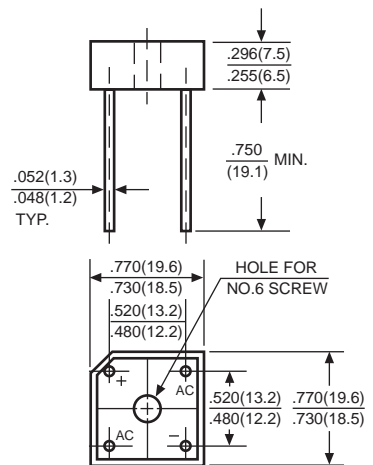
- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Lead: MIL-STD-202E, Method 208 guaranteed
- * Polarity: Symbols molded or marked on body
- * Mounting position: Any
- * Weight: 6.9 grams

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%.



KBPC-8/10



| | SYMBOL | KBPC 10005 | KBPC 1001 | KBPC 1002 | KBPC 1004 | KBPC 1006 | KBPC 1008 | KBPC 1010 | UNITS |
|---|--------------------------|--------------|-----------|-----------|-----------|-----------|-----------|-----------|--------------------|
| Maximum Recurrent Peak Reverse Voltage | V _{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum RMS Bridge Input Voltage | V _{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | Volts |
| Maximum DC Blocking Voltage | V _{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum Average Forward Rectified Output Current at T _c = 50°C | I _O | 10 | | | | | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | I _{FSM} | 240 | | | | | | | Amps |
| Maximum Forward Voltage Drop per element at 3.0A DC | V _F | 1.1 | | | | | | | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage per element | @ T _A = 25°C | 10 | | | | | | | uAmps |
| | @ T _c = 100°C | 500 | | | | | | | |
| I ² t Rating for Fusing (t<8.3ms) | I ² t | 166 | | | | | | | A ² Sec |
| Typical Junction Capacitance (Note1) | C _J | 200 | | | | | | | pF |
| Typical Thermal Resistance (Note 2) | R _{θJA} | 21 | | | | | | | °C/W |
| Operating Temperature Range | T _J | -55 to + 125 | | | | | | | °C |
| Storage Temperature Range | T _{STG} | -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 0.5 x 0.5" (13x13mm) copper pads.

RATING AND CHARACTERISTIC CURVES (KBPC10005 THRU KBPC1010)

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

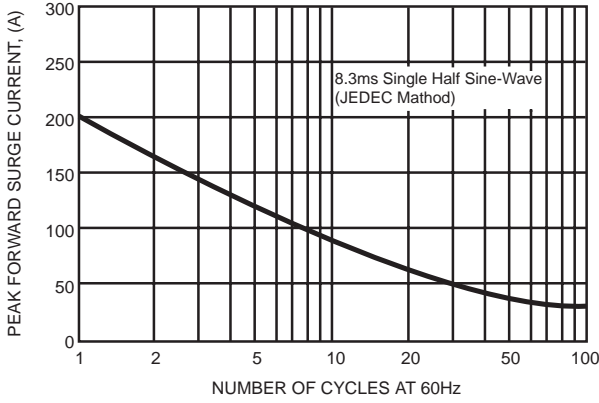


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

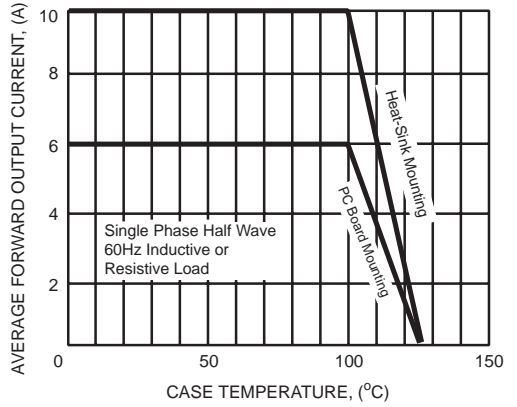


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

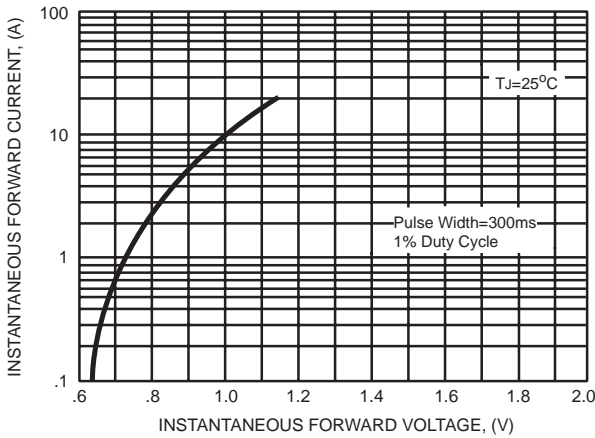
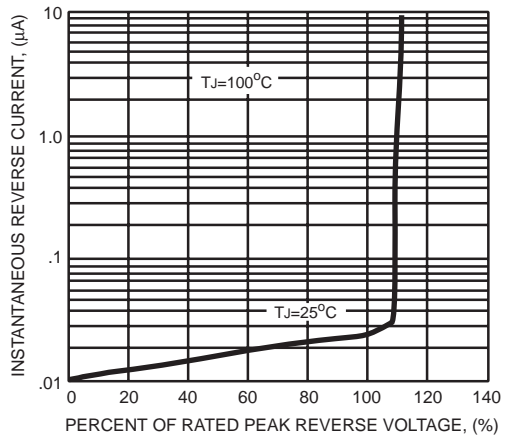


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS



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