



**DC COMPONENTS CO., LTD.**

**RECTIFIER SPECIALISTS**

KBPC / MB  
15005 / 1505

THRU

KBPC / MB  
1510 / 1510

**TECHNICAL SPECIFICATIONS OF SINGLE-PHASE SILICON BRIDGE RECTIFIER**

**VOLTAGE RANGE - 50 to 1000 Volts**

**CURRENT - 15 Amperes**

**FEATURES**

- \* Metal case for Maximum Heat Dissipation
- \* Surge overload ratings-300 Amperes
- \* Low forward voltage drop

**MECHANICAL DATA**

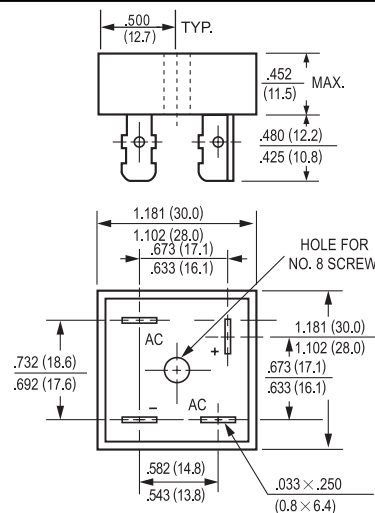
- \* Case: Metal case, electrically isolated
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: Plated .25"(6.35mm) Faston lugs, Solderable per MIL-STD-202E, Method 208 guaranteed
- \* Polarity: As marked
- \* Mounting position: Any
- \* Weight: 30 grams

**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%.



**MB-25**



|   | SYMBOL                           | KBPC 15005              | KBPC 1501 | KBPC 1502 | KBPC 1504 | KBPC 1506 | KBPC 1508 | KBPC 1510 | UNITS              |
|---|----------------------------------|-------------------------|-----------|-----------|-----------|-----------|-----------|-----------|--------------------|
| Maximum Recurrent Peak Reverse Voltage  | V <sub>RRM</sub>                 | 50                      | 100       | 200       | 400       | 600       | 800       | 1000      | Volts              |
| Maximum RMS Bridge Input Voltage  | V <sub>RMS</sub>                 | 35                      | 70        | 140       | 280       | 420       | 560       | 700       | Volts              |
| Maximum DC Blocking Voltage   | V <sub>DC</sub>                  | 50                      | 100       | 200       | 400       | 600       | 800       | 1000      | Volts              |
| Maximum Average Forward Rectified Output Current at T <sub>c</sub> = 55°C                         | I <sub>O</sub>                   | 15.0                    |           |           |           |           |           |           | Amps               |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | I <sub>FSM</sub>                 | 300                     |           |           |           |           |           |           | Amps               |
| Maximum Forward Voltage Drop per element at 7.5A DC   | V <sub>F</sub>                   | 1.1                     |           |           |           |           |           |           | Volts              |
| Maximum DC Reverse Current at Rated DC Blocking Voltage per element                               | I <sub>R</sub>                   | @T <sub>A</sub> = 25°C  |           |           |           |           |           |           | uAmps              |
|   |                                  | @T <sub>C</sub> = 100°C |           |           |           |           |           |           |                    |
| I <sup>2</sup> t Rating for Fusing (t<8.3ms)  | I <sup>2</sup> t                 | 374                     |           |           |           |           |           |           | A <sup>2</sup> Sec |
| Typical Junction Capacitance ( Note1)   | C <sub>J</sub>                   | 40                      |           |           |           |           |           |           | pF                 |
| Typical Thermal Resistance (Note 2)   | R <sub>θJA</sub>                 | 19                      |           |           |           |           |           |           | °C/W               |
| Operating and Storage Temperature Range   | T <sub>J</sub> ,T <sub>STG</sub> | -55 to + 175            |           |           |           |           |           |           | °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 ( KBPC15005 MB1505 THRU KBPC1510 MB1510 )

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

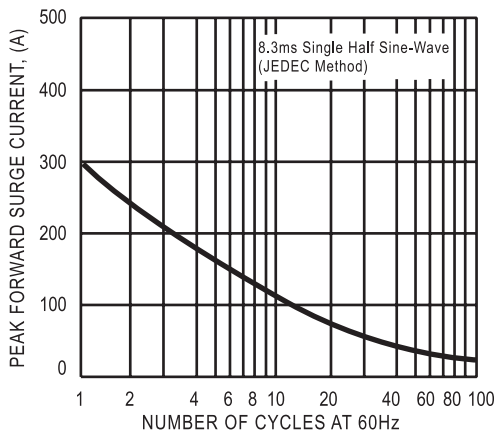


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

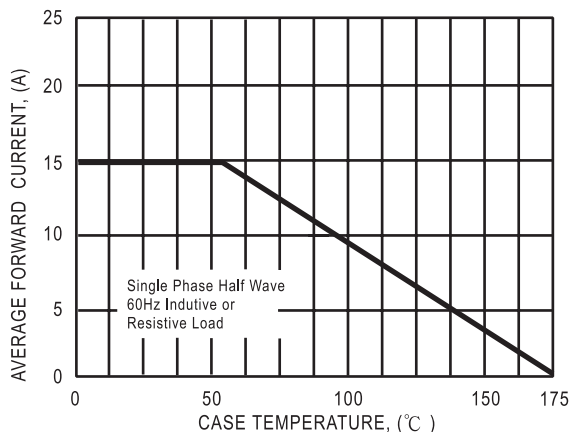


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

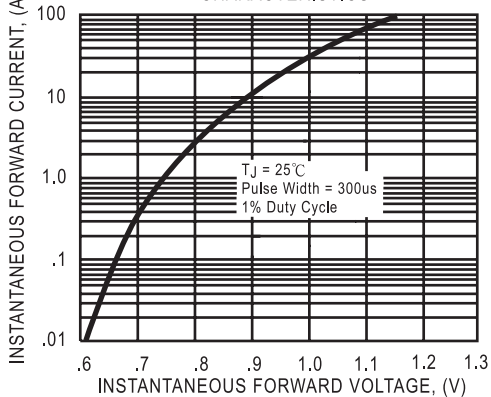
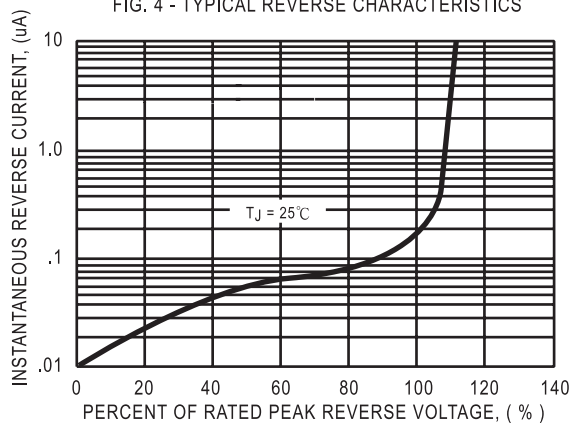


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS



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