

**6A HIGH CURRENT SINGLE-PHASE SILICON BRIDGE RECTIFIER**

**Voltage - 100 to 1000 V**

**Forward Current – 6 A**

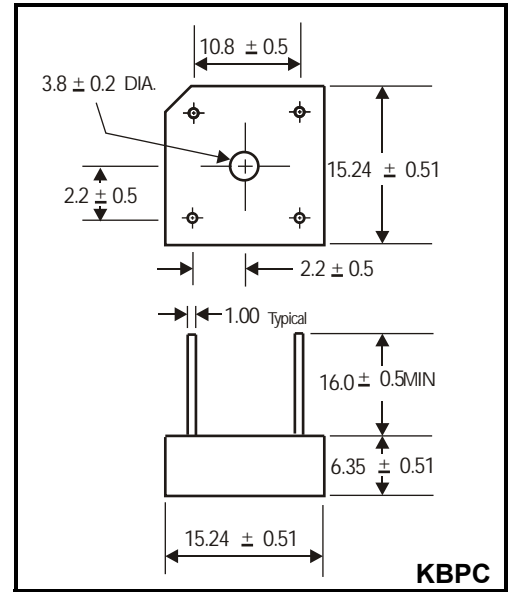


**FEATURES**

- ◆ High temperature metallurgically bonded internal rectifiers
- ◆ Typical IR less than .1 uA
- ◆ The plastic material used carries Underwriters Laboratory flammability recognition 94V-0
- ◆ High temperature soldering guaranteed 265 /10 seconds at 5 lbs (2.3kg) tension
- ◆ Lead free in comply with EU RoHS 2011/65/EU directives

**MECHANICAL DATA**

- ◆ Case: KBPC
- ◆ Terminals: Solderable per MIL-STD-202, Method 208
- ◆ Weight: 3.8 grams (approx)



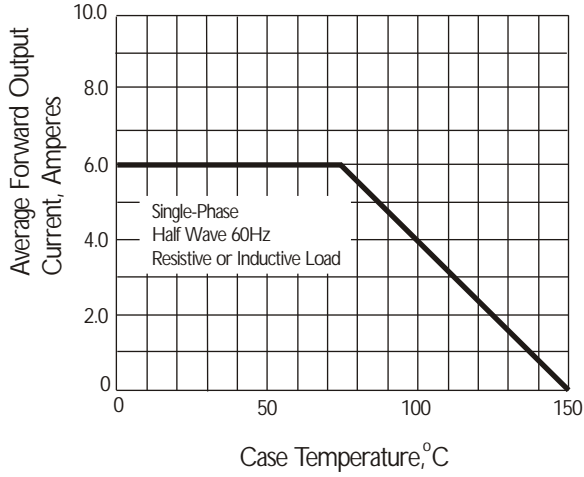
**Maximum Ratings And Electrical Characteristics**

Rating at 25 c ambient temperature unless otherwise specified, Resistive or Inductive load, 60 Hz. For Capacitive load derate current by 20%.

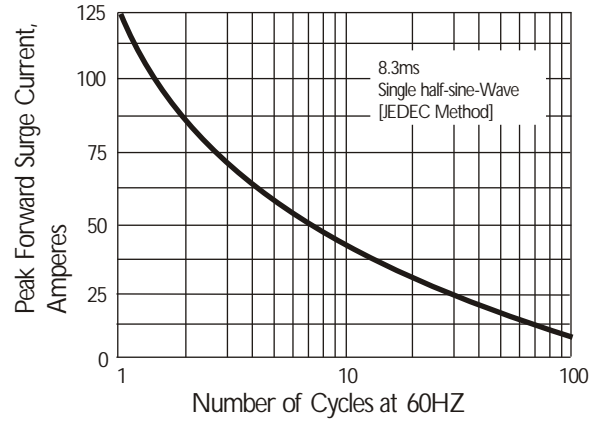
| Parameter   | Symbols        | KBPC601    | KBPC602 | KBPC604 | KBPC606 | KBPC608 | KBPC610 | Units              |
|---|----------------|------------|---------|---------|---------|---------|---------|--------------------|
| Maximum Repetitive Peak Reverse Voltage   | $V_{RRM}$      | 100        | 200     | 400     | 600     | 800     | 1000    | V                  |
| Maximum RMS voltage   | $V_{RMS}$      | 70         | 140     | 280     | 420     | 560     | 700     | V                  |
| Maximum DC Blocking Voltage   | $V_{DC}$       | 100        | 200     | 400     | 600     | 800     | 1000    | V                  |
| Maximum Average Forward Rectified Current at TC=75°C(1)                               | $I_{(AV)}$     | 6.0        |         |         |         |         |         | A                  |
| Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$      | 125        |         |         |         |         |         | A                  |
| Rating for fusing ( t<8.3ms)  | $I_{2t}$       | 10         |         |         |         |         |         | A <sup>2</sup> sec |
| Typical thermal resistance per element (2)  | ReJA           | 9.4        |         |         |         |         |         | C / W              |
| Typical junction capacitance per element(3)   | Cj             | 55         |         |         |         |         |         | pF                 |
| Maximum instantaneous forward voltage drop per leg at 3.0A                            | $V_F$          | 1.1        |         |         |         |         |         | V                  |
| Maximum DC reverse current at rated TA=25°C   | $I_R$          | 10         |         |         |         |         |         | μA                 |
| DC blocking voltage per element TA=100°C  |                | 1000       |         |         |         |         |         |                    |
| Operating and Storage Temperature Range   | $T_j, T_{stg}$ | -55 ~ +150 |         |         |         |         |         | °C                 |

- (1) Mounted on metal chassis.
- (2) Non-repetitive, for t>1ms and < 8.3ms.
- (3) Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

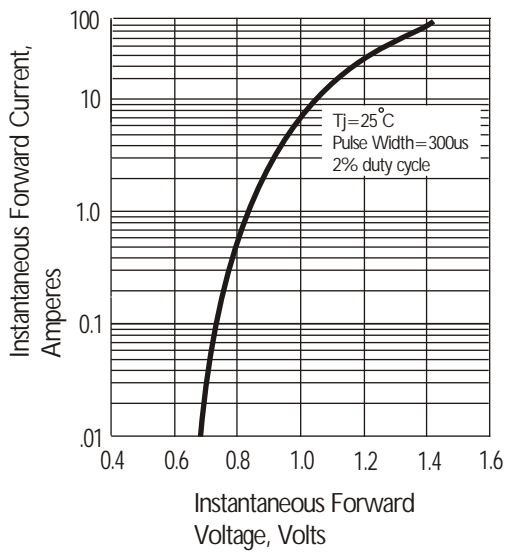
**Fig. 1 Derating Curve for Output Rectified Current**



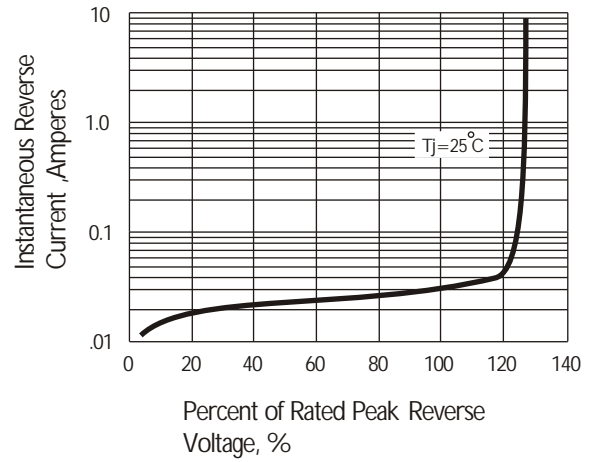
**Fig. 2 Maximum Non-repetitive Peak Forward Surge Current**



**Fig. 3 Typical Instantaneous Forward Characteristics**

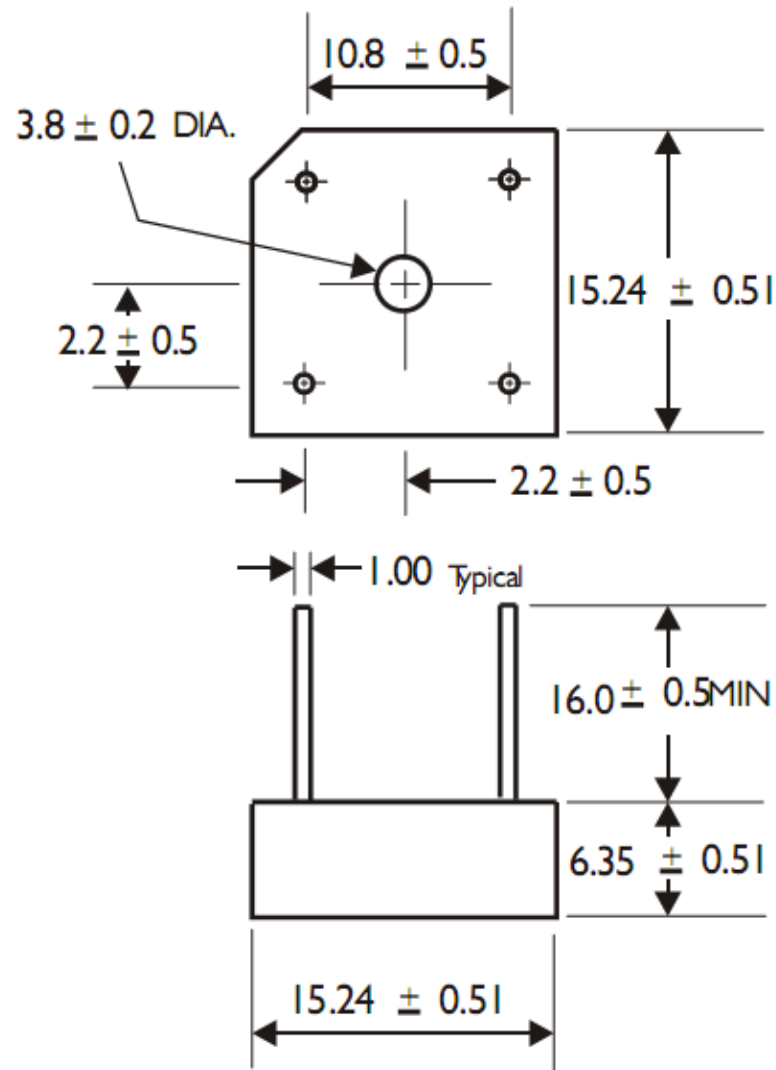


**Fig. 4 Typical Reverse Characteristics**



Package Outline

KBPC



Dimensions in millimeters(1mm =0.0394")

Summary of Packing Options

| Package | Package Description | Packing Quantity | Industry Standard |
|---------|---------------------|------------------|-------------------|
| KBPC    | BOX                 | 200              | EIA-481-1         |

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