

10 A Single-Phase Silicon Bridge Rectifier
Rectifier Reverse Voltage 50 to 1000V

FEATURES

- Suitable for printed circuit board or chassis mounting
- Compact construction
- High surge current capability
- Solder dip 275 °C max. 7s, per JESD 22-B106

MECHANICAL DATA

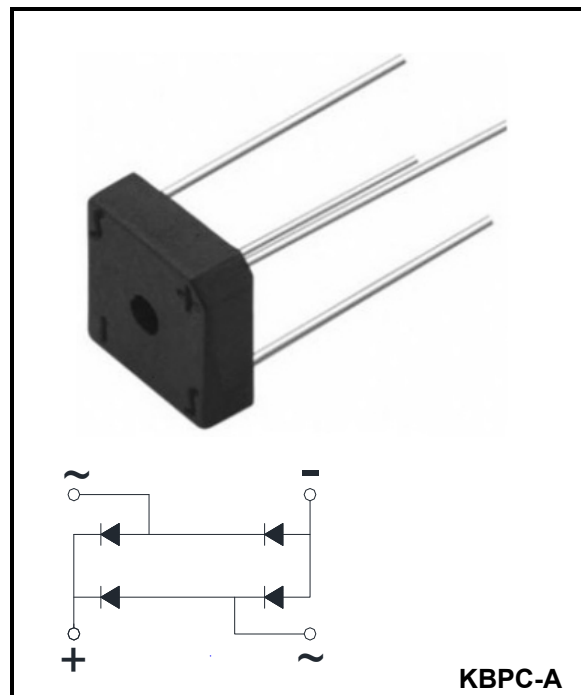
- Package: **KBPC-A**

Molding compound meets UL 94 V-0

flammability rating, RoHS-compliant

- Terminals: Tin plated leads, solderable
per J-STD-002 and JESD22-B102

- Polarity: As marked on body



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 | KBPC 10005 | KBPC 1001 | KBPC 1002 | KBPC 1004 | KBPC 1006 | KBPC 1008 | KBPC 1010 | Units |
|--|-----------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|--------------------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS 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 Current at $T_C=50^{\circ}C$ (1) | $I_{(AV)}$ | 10 | | | | | | | A |
| Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 150 | | | | | | | A |
| Rating for fusing ($t < 8.3ms$) | I_{2t} | 10 | | | | | | | A ² sec |
| Typical thermal resistance per element (2) | $R_{\theta JA}$ | 9.4 | | | | | | | C / W |
| Typical junction capacitance per element (3) | C_j | 55 | | | | | | | pF |
| Maximum instantaneous forward voltage drop per leg at 5.0A | V_F | 1.1 | | | | | | | V |
| Maximum DC reverse current at rated $T_A=25^{\circ}C$ DC blocking voltage per element $T_A=100^{\circ}C$ | I_R | 10 1000 | | | | | | | μA |
| 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.

Ratings And Characteristic Curves

Fig. 1 Derating Curve for Output Rectified Current

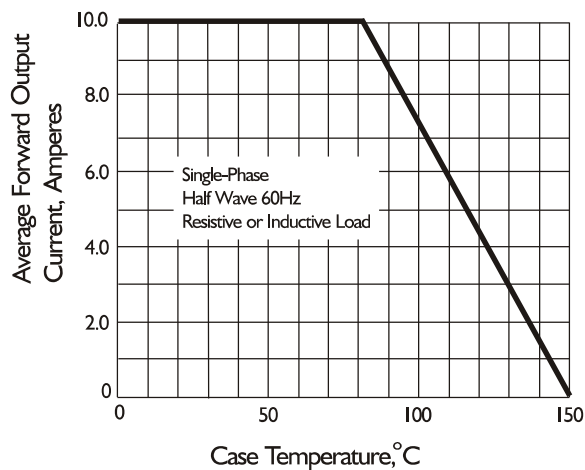


Fig. 2 Maximum Non-repetitive Peak Forward Surge Current

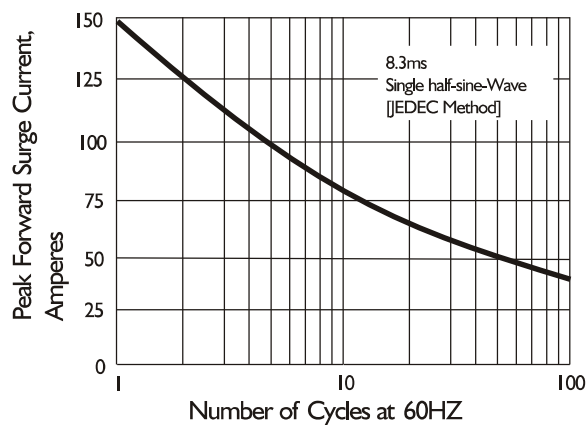


Fig. 3 Typical Instantaneous Forward Characteristics

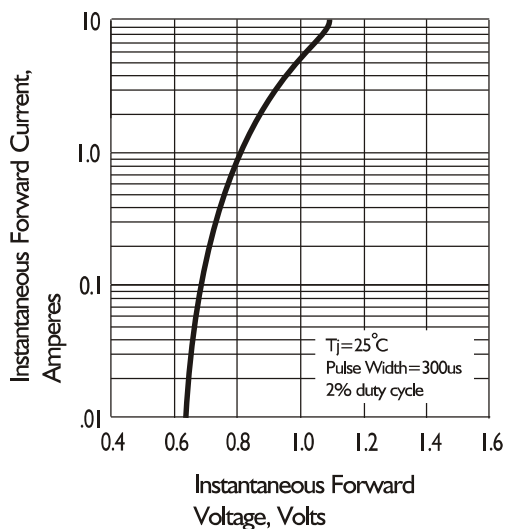
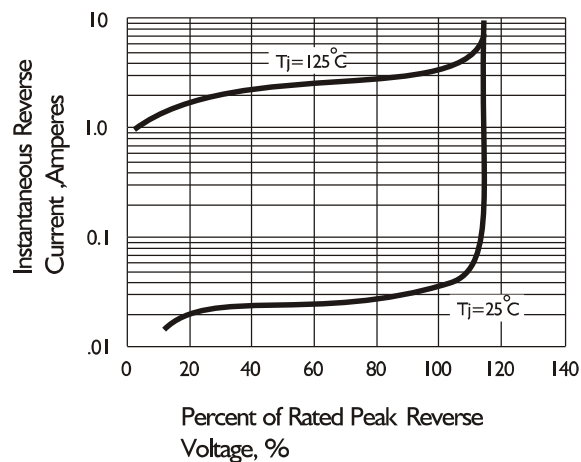
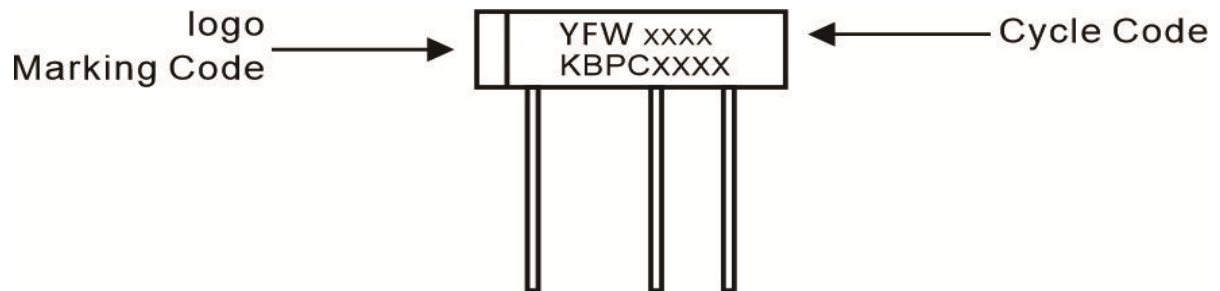


Fig. 4 Typical Reverse Characteristics



Marking Diagram



Ordering information

| Package | Packing Description | Packing Quantity |
|---------|---------------------|---------------------------|
| KBPC-A | bulk | 200PCS/Box 2000PCS/Carton |

Package Dimensions

KBPC-A

| Dim. | Millimeter(mm) | | Dimensions inInch | |
|------|----------------|-------|-------------------|------|
| | Min. | Max. | Min. | Max. |
| A | 18.50 | 19.50 | 0.73 | 0.77 |
| B | 12.30 | 13.30 | 0.48 | 0.52 |
| C | 0.99 | 1.59 | 0.04 | 0.06 |
| D | 3.50 | 4.10 | 0.14 | 0.16 |
| E | 9.00 | / | 0.35 | / |
| F | 6.50 | 7.50 | 0.26 | 0.30 |

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