

6A HIGH CURRENT SINGLE-PHASE SILICON BRIDGE RECTIFIER

Voltage - 100 to 1000 V

Forward Current – 6 A

FEATURES

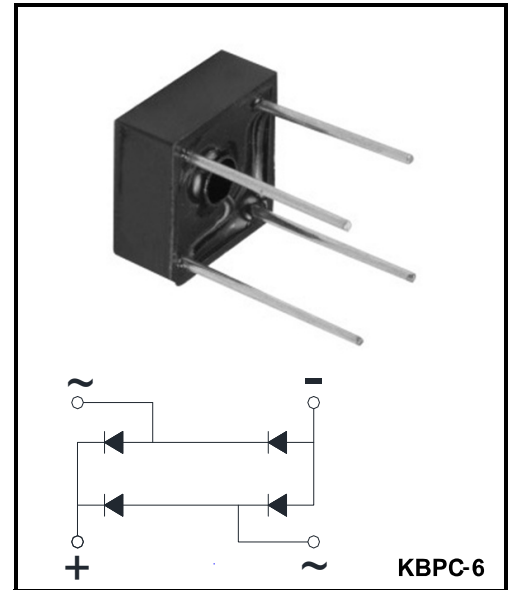
- ◆High temperature metallurgically bonded internal rectifiers
- ◆Typical IR less than .1 uA
- ◆The plastic material used carries Underwriters Laboratory flammability recognition 94V-0
- ◆High temperature soldering guaranteed 265 /10 seconds at 5 lbs (2.3kg) tension
- ◆Lead free in comply with EU RoHS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

MECHANICAL DATA

- ◆Case: **KBPC-6**
- ◆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 ² 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.

Ratings And Characteristic Curves

Fig. 1 Derating Curve for Output Rectified Current

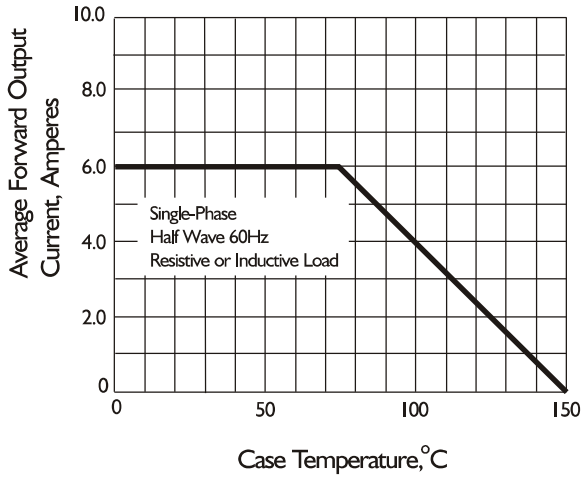


Fig. 2 Maximum Non-repetitive Peak Forward Surge Current

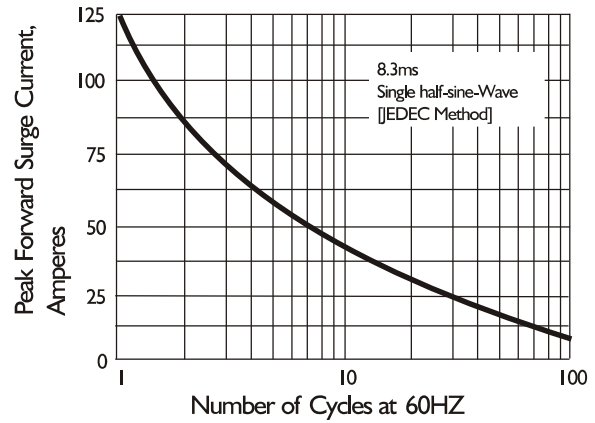


Fig. 3 Typical Instantaneous Forward Characteristics

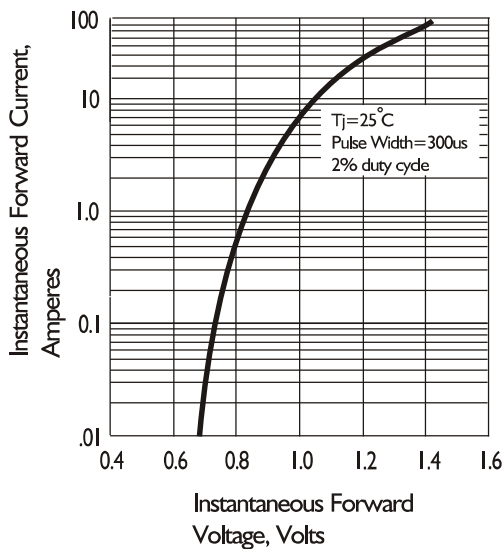
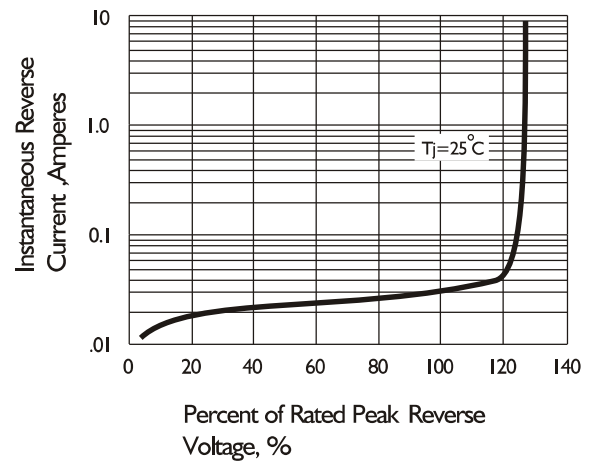
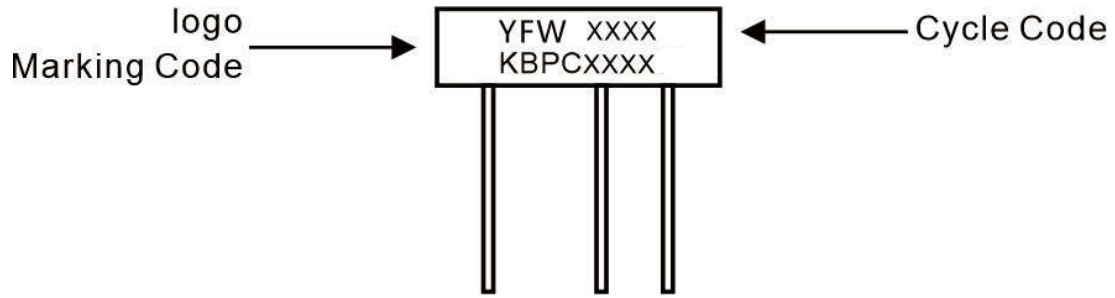


Fig. 4 Typical Reverse Characteristics



Marking Diagram



Ordering information

| Package | Packing Description | Packing Quantity |
|---------|---------------------|---------------------------|
| KBPC-6 | bulk | 200PCS/Box 2000PCS/Carton |

Package Dimensions

KBPC-6

| Dim. | Millimeter(mm) | | Dimensions inInch | |
|------|----------------|------|-------------------|-------|
| | Min. | Max. | Min. | Max. |
| A | 14.7 | 15.7 | 0.579 | 0.618 |
| B | 10.3 | 11.3 | 0.406 | 0.445 |
| C | 6.35 | 7.6 | 0.250 | 0.299 |
| D | 15.0 | - | 0.591 | - |
| E | 0.95 | 1.05 | 0.037 | 0.041 |
| F | 3.8 | 4.2 | 0.150 | 0.165 |

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