

8.0 A Single-Phase Silicon Bridge Rectifier

Rectifier Reverse Voltage 50 to 1000V

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High case dielectric strength of 1500VRMS Ideal for printed circuit boards
- High surge current capability

Mechanical Data

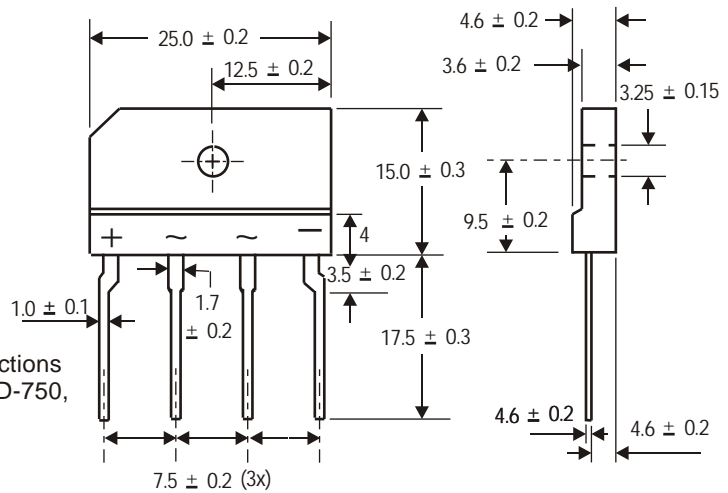
Case : Molded plastic body over passivated junctions
 Terminals : Plated leads solderable per MIL-STD-750, Method 2026

Polarity : Polarity symbols molded on body

Mounting Position : Any(3)

Mounting Torque : 5 in-lbs max.

Weight : 0.15 ounce, 4.0 grams (approx)



Dimensions in millimeters(1mm = 0.0394")

Maximum Ratings & Thermal Characteristics

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

| Parameter | Symbol | KBJ 8005 | KBJ 801 | KBJ 802 | KBJ 804 | KBJ 806 | KBJ 808 | KBJ 810 | Unit |
|---|--------------------------------------|----------|---------|---------|------------------|---------|---------|---------|--------------------|
| Maximum repetitive peak reverse voltage | VRRM | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS voltage | VRMS | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC blocking voltage | VDC | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum average forward rectified output current T _C = 100°C T _A = 25°C | I _{F(AV)} | | | | 8.0(1) 2.3(2) | | | | A |
| Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method) | I _{FSM} | | | | 120 | | | | A |
| Rating for fusing (t < 8.3ms) | I ² t | | | | 60 | | | | A ² sec |
| Maximum thermal resistance per leg | RejA RejC | | | | 2.6(2) 5 (1) | | | | °C / W |
| Operating junction and storage temperature range | T _J , T _{STG} | | | | -55 to + 150 | | | | °C |

Electrical Characteristics

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

| Parameter | Symbol | KBJ 8005 | KBJ 801 | KBJ 802 | KBJ 804 | KBJ 806 | KBJ 808 | KBJ 810 | Unit |
|--|----------------|----------|---------|---------|-----------|---------|---------|---------|------|
| Maximum instantaneous forward voltage drop per leg at 4.0A | V _F | | | | 1.1 | | | | V |
| Maximum DC reverse current at rated DC blocking voltage per leg T _A = 25°C T _A = 125°C | I _R | | | | 10 250 | | | | μA |

- Notes:** (1)Unit case mounted on Al plate heatsink.
 (2)Units mounted on P.C.B. with 0.5x0.5"(12x12mm) copper pads and 0.375"(9.5) lead length.
 (3)Recommended mounting position is to bolt down on heat sink with silicone thermal compound for maximum heat transfer with #6 screw.

Rating and Characteristic Curves ($T_A=25^{\circ}\text{C}$ Unless otherwise noted) KBJ8005 thru KJ810

Fig. 1 Derating Curve for Output Rectified Current

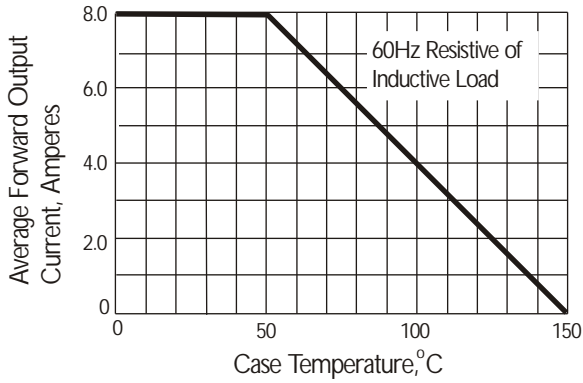


Fig. 2 Maximum Non-repetitive Peak Forward Surge Current

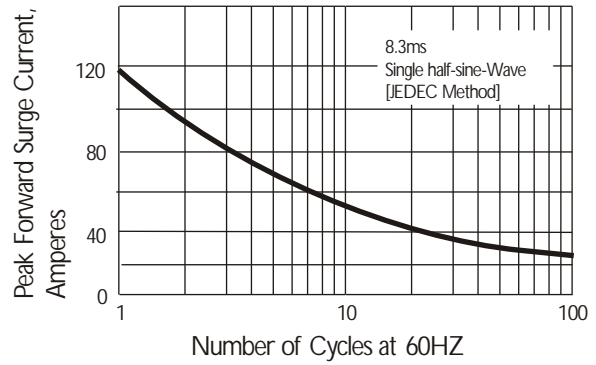


Fig. 3 Typical Instantaneous Forward Characteristics

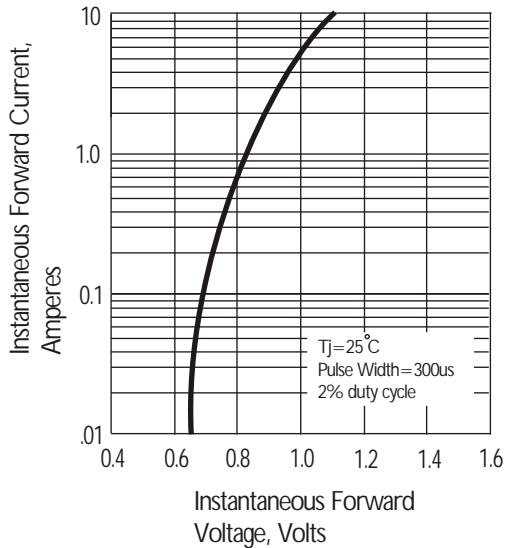


Fig. 4 Typical Reverse Characteristics at $T_J=25^{\circ}\text{C}$

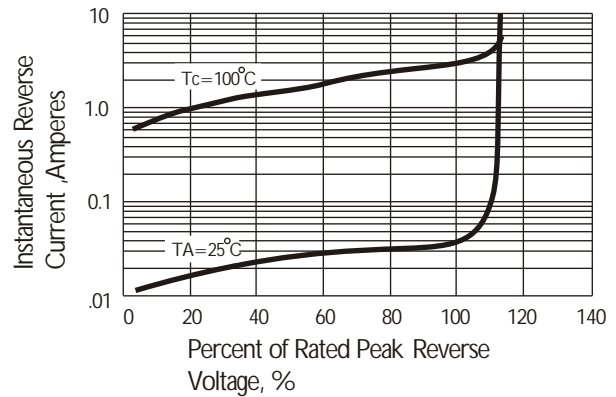


Fig. 5 Typical Junction Capacitance

