



## SINGLE PHASE GLASS PASSIVATED BRIDGE RECTIFIER

**KBJ4005G THRU KBJ410G**

**VOLTAGE RANGE**

**50 to 1000 Volts**

**CURRENT**

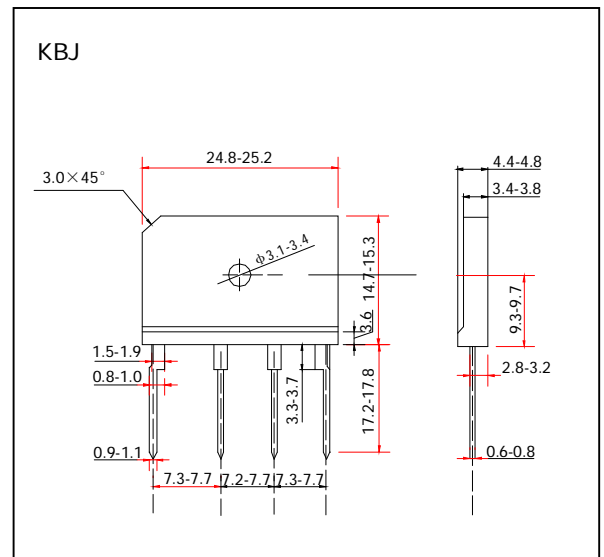
**4.0 Amperes**

### FEATURES

- Plastic package has UL Flammability Classification 94V-0
- Glass passivated chip junctions
- High case dielectric strength of 1500 V<sub>RMS</sub>
- High surge current capability
- High temperature soldering guaranteed  
260°C/10 seconds, 0.375”(9.5mm) lead length

### MECHANICAL DATA

- Case: molded plastic body
- Terminal: Plated leads solderable per MIL-STD-750 Method 2026
- Mounting position: Any (Note 4)
- Mounting Torque: 6 in – 1bs max.
- Weight: 0.15 ounce, 4.0 gram



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25°C ambient temperature unless otherwise specified
- Single Phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%

|  | SYMBOLS               | KBJ<br>4005G  | KBJ<br>401G | KBJ<br>402G | KBJ<br>404G | KBJ<br>406G | KBJ<br>408G | KBJ<br>410G      | UNIT  |
|--|-----------------------|---------------|-------------|-------------|-------------|-------------|-------------|------------------|-------|
| Maximum Reverse Peak Repetitive Voltage  | V <sub>RRM</sub>      | 50            | 100         | 200         | 400         | 600         | 800         | 1000             | Volts |
| Maximum RMS 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         | 100              | Volts |
| Maximum Average Forward Rectified Current, At<br>T <sub>C</sub> =100°C (Note 1)<br>T <sub>A</sub> =40°C (Note 2) | I <sub>(AV)</sub>     | 4.0<br>3.0    |             |             |             |             |             | Amps             |       |
| Peak Forward Surge Current<br>8.3ms single half sine wave superimposed on<br>rated load (JEDEC Method)           | I <sub>FSM</sub>      | 120           |             |             |             |             |             | Amps             |       |
| Rating for Fusing (t < 8.3ms)  | I <sup>2</sup> t      | 60            |             |             |             |             |             | A <sup>2</sup> s |       |
| Maximum Instantaneous Forward Voltage drop<br>Per leg at 2.0A  | V <sub>F</sub>        | 1.0           |             |             |             |             |             | Volts            |       |
| Maximum DC Reverse Current at<br>rated DC blocking voltage per element   | T <sub>A</sub> =25°C  | 5.0           |             |             |             |             |             | μ A              |       |
|  | T <sub>A</sub> =125°C | 500           |             |             |             |             |             |                  |       |
| Typical Junction Capacitance, per let (Note 3)   | C <sub>J</sub>        | 100.0         |             |             | 45.0        |             |             | pF               |       |
| Typical Thermal Resistance (Note 1)  | R <sub>JA</sub>       | 22.0          |             |             |             |             |             | °C/W             |       |
| Operating Junction Temperature Range   | T <sub>J</sub>        | (-55 to +150) |             |             |             |             |             | °C/W             |       |
| Storage Temperature Range  | T <sub>STG</sub>      | (-55 to +150) |             |             |             |             |             | °C               |       |

- Notes:**
1. Unit mounted on 1.6×1.6×0.06” thick (4.0×4.0×0.15cm) AL. plate
  2. Unit mounted on P.C.B. With 0.5×0.5”(1.2×1.2mm) copper pads and 0.375”(9.5mm) lead length
  3. Measured at 1.0 MHz and applied reverse voltage of 4.0 V
  4. Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum Heat transfer with #6 screws



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## RATINGS AND CHARACTERISTIC CURVES KBJ4005G THRU KBJ410G

FIG. 1- DERATING CURVE  
OUTPUT RECTIFIED CURRENT

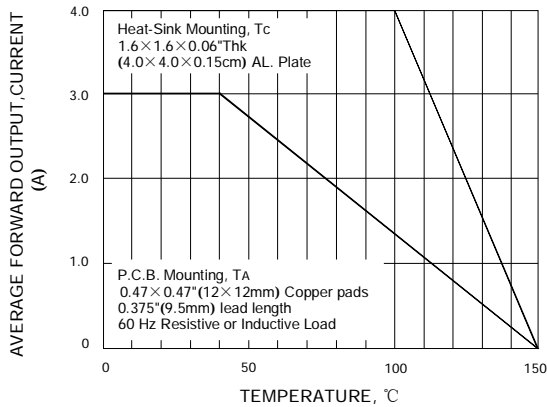


FIG. 2- MAXIMUM NON-REPETITIVE PEAK  
FORWARD SURGE CURRENT PER LEG

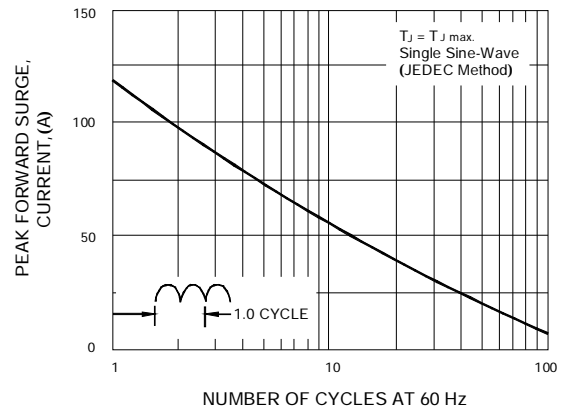


FIG. 3- TYPICAL FORWARD CHARACTERISTICS  
PER LEG

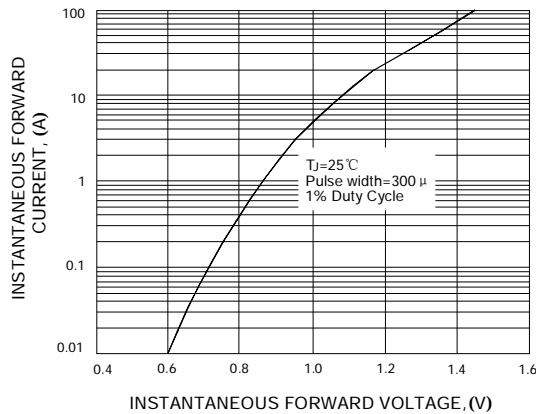


FIG. 4- TYPICAL REVERSE LEAKAGE  
CHARACTERISTICS PER LEG

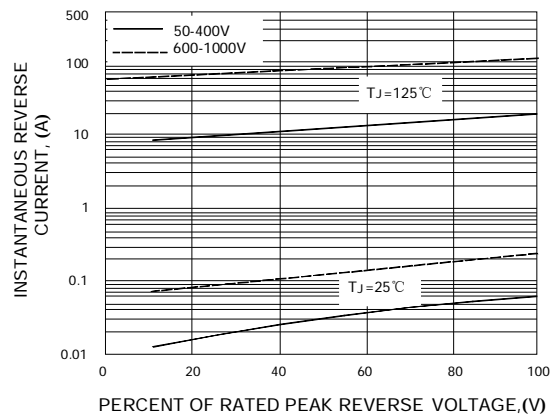


FIG. 5- TYPICAL JUNCTION CAPACITANCE  
PER LEG

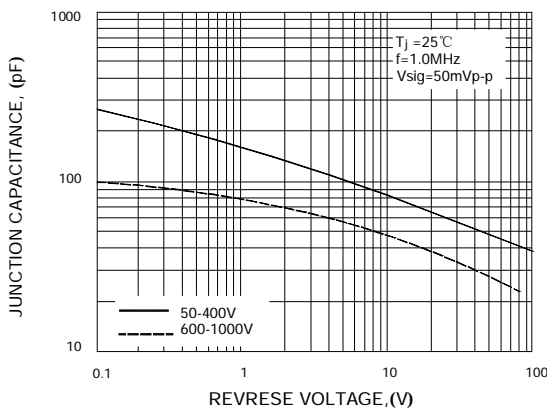


FIG. 6- TYPICAL TRANSIENT THERMAL  
IMPEDANCE

