

## Glass Passivated Bridge Rectifiers

### FEATURES

- Glass passivated junction
- Ideal for printed circuit board
- High case dielectric strength
- Typical IR less than 0.1 $\mu$ A
- High surge current capability
- UL Recognized File # E-326243
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC


**KBU**


### MECHANICAL DATA

**Case:** KBU

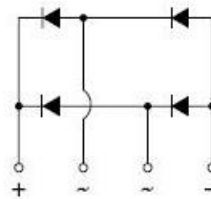
Molding compound, UL flammability classification rating 94V-0

**Terminal:** Matte tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 1A whisker test

**Mounting torque:** 0.56 N·m max.

**Weight:** 7.2 g (approximately)



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C unless otherwise noted)

| PARAMETER   | SYMBOL   | KBU<br>1001G | KBU<br>1002G | KBU<br>1003G | KBU<br>1004G | KBU<br>1005G | KBU<br>1006G | KBU<br>1007G | Unit             |
|---|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|------------------|
| Maximum repetitive peak reverse voltage   | V <sub>RRM</sub>   | 50           | 100          | 200          | 400          | 600          | 800          | 1000         | V                |
| Maximum RMS voltage   | V <sub>RMS</sub>   | 35           | 70           | 140          | 280          | 420          | 560          | 700          | V                |
| Maximum DC blocking voltage   | V <sub>DC</sub>  | 50           | 100          | 200          | 400          | 600          | 800          | 1000         | V                |
| Maximum average forward rectified current   | I <sub>F(AV)</sub>   | 10           |              |              |              |              |              |              | A                |
| Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load             | I <sub>FSM</sub>   | 200          |              |              |              |              |              |              | A                |
| Rating for fusing (t<8.3ms)   | I <sup>2</sup> t   | 166          |              |              |              |              |              |              | A <sup>2</sup> s |
| Maximum instantaneous forward voltage (Note 1)<br>I <sub>F</sub> = 5 A<br>I <sub>F</sub> = 10 A | V <sub>F</sub>   | 1.0<br>1.1   |              |              |              |              |              |              | V                |
| Maximum DC reverse current<br>at rated DC blocking voltage                                      | I <sub>R</sub>   | 5<br>500     |              |              |              |              |              |              | $\mu$ A          |
| Typical junction capacitance per leg  | C <sub>j</sub>   | 400          |              |              |              |              |              |              | pF               |
| Typical thermal resistance  | R <sub><math>\theta</math>JC</sub><br>R <sub><math>\theta</math>JA</sub> | 2.2<br>25    |              |              |              |              |              |              | $^{\circ}$ C/W   |
| Operating junction temperature range  | T <sub>J</sub>   | - 55 to +150 |              |              |              |              |              |              | $^{\circ}$ C     |
| Storage temperature range   | T <sub>STG</sub>   | - 55 to +150 |              |              |              |              |              |              | $^{\circ}$ C     |

Note 1: Pulse Test with PW=300 $\mu$ s, 1% Duty Cycle

Note 2: Measured at 1MHz and applied Reverse Voltage of 4.0V D.C.

| ORDERING INFORMATION |         |             |
|----------------------|---------|-------------|
| ORDERING CODE        | PACKAGE | PACKING     |
| KBU1001G T0          | KBU     | 500 / Trays |
| KBU1002G T0          | KBU     | 500 / Trays |
| KBU1003G T0          | KBU     | 500 / Trays |
| KBU1004G T0          | KBU     | 500 / Trays |
| KBU1005G T0          | KBU     | 500 / Trays |
| KBU1006G T0          | KBU     | 500 / Trays |
| KBU1007G T0          | KBU     | 500 / Trays |

**RATINGS AND CHARACTERISTICS CURVES**

( $T_A=25^{\circ}\text{C}$  unless otherwise noted)

FIG. 1 MAXIMUM DERATING CURVE FOR OUTPUT CURRENT

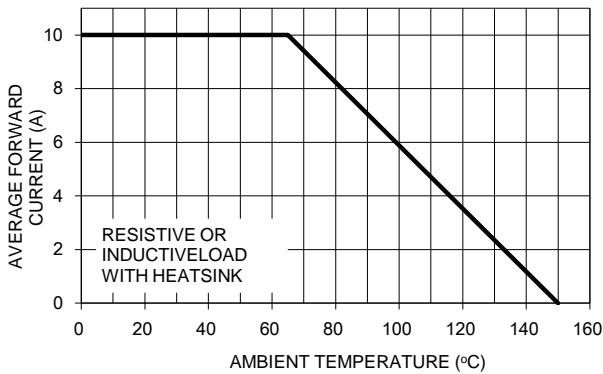


FIG. 2 MAXIMUM FORWARD SURGE CURRENT PER LEG

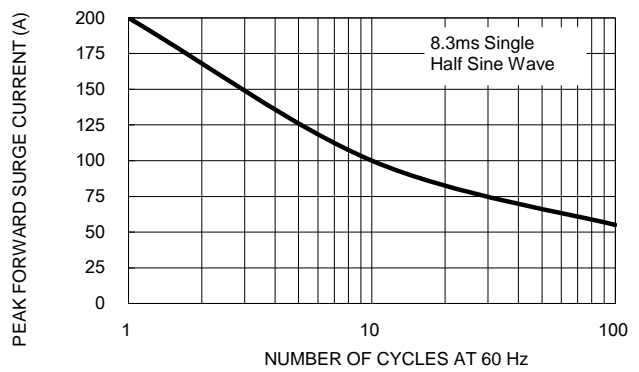


FIG. 3 TYPICAL REVERSE CHARACTERISTICS PER LEG

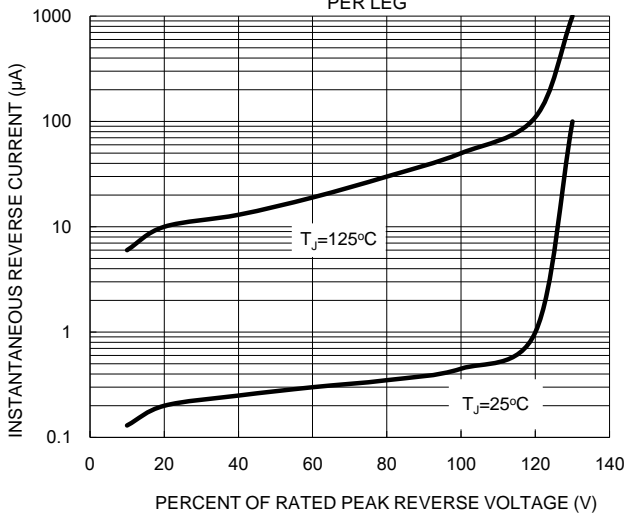


FIG. 4 TYPICAL FORWARD CHARACTERISTICS PER LEG

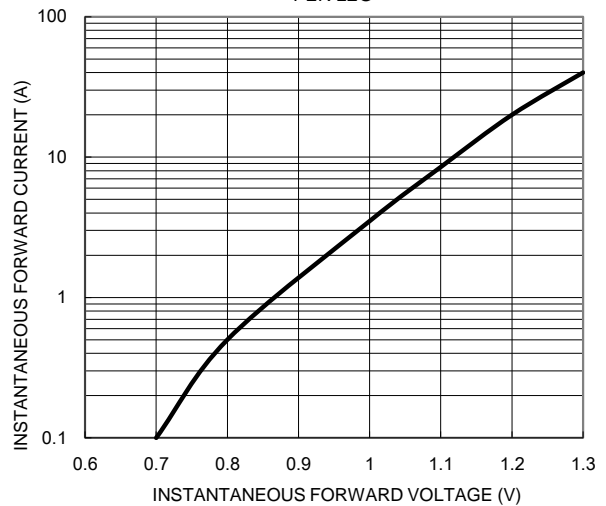
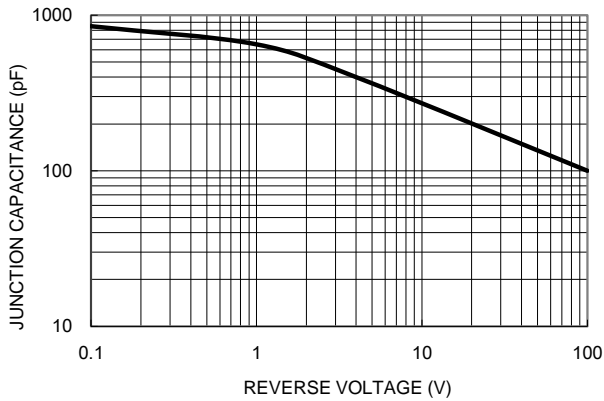
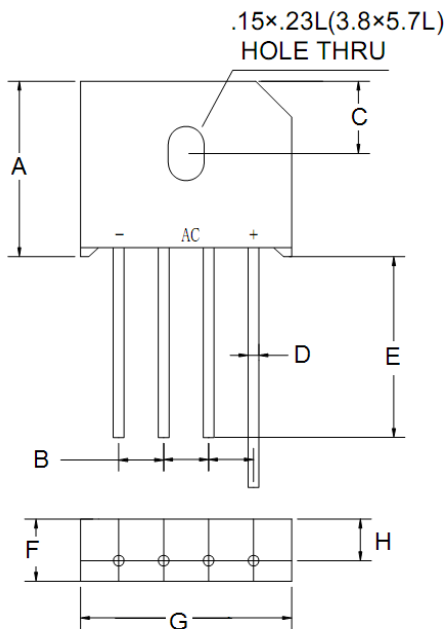


FIG. 5 TYPICAL JUNCTION CAPACITANCE



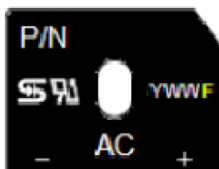
**PACKAGE OUTLINE DIMENSIONS**

**KBU**



| DIM. | Unit (mm)  |      | Unit (inch)  |       |
|------|------------|------|--------------|-------|
|      | Min        | Max  | Min          | Max   |
| A    | 18.8       | 19.8 | 0.740        | 0.780 |
| B    | 4.6        | 5.6  | 0.181        | 0.220 |
| C    | 8.2 (TYP.) |      | 0.322 (TYP.) |       |
| D    | 1.2        | 1.3  | 0.047        | 0.051 |
| E    | 20.0       | -    | 0.787        | -     |
| F    | 6.8        | 7.1  | 0.268        | 0.280 |
| G    | 22.7       | 23.7 | 0.894        | 0.933 |
| H    | 4.6        | 5.0  | 0.181        | 0.197 |

**MARKING DIAGRAM**



P/N = Specific Device Code  
 YWWF = Date Code  
 F = Factory Code

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