

## Glass Passivated Single-Phase Bridge Rectifiers

### FEATURES

- Thin Single in-line low profile package ideal for compact required circuit
- Glass passivated junction
- High surge current capability
- UL Recognized File # E-326243
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC



### MECHANICAL DATA

**Case:** KBJL

Molding compound, UL flammability classification rating 94V-0

Packing code with suffix "G" means green compound (halogen-free)

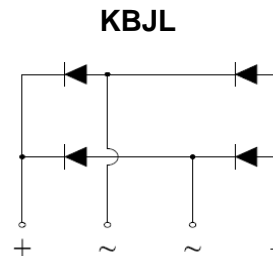
**Terminal:** Matte tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 1A whisker test

**Polarity:** As marked

**Mounting torque:** 0.56 Nm max. (5 in-lbs. max.)

**Weight:** 2.5g (approximately)



| MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>J</sub> =25°C unless otherwise noted) |                    |              |          |           |                  |
|--|--------------------|--------------|----------|-----------|------------------|
| PARAMETER  | SYMBOL             | TS10KL60     | TS10KL80 | TS10KL100 | UNIT             |
| Maximum repetitive peak reverse voltage  | V <sub>RRM</sub>   | 600          | 800      | 1000      | V                |
| Maximum RMS voltage  | V <sub>RMS</sub>   | 420          | 560      | 700       | V                |
| Maximum DC blocking voltage  | V <sub>DC</sub>    | 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>   | 180          |          |           | A                |
| Rating of fusing ( t<8.3ms)  | I <sup>2</sup> t   | 134          |          |           | A <sup>2</sup> s |
| Maximum instantaneous forward voltage (Note 1)<br>I <sub>F</sub> = 5 A                       | V <sub>F</sub>     | 1.0          |          |           | V                |
| Maximum reverse current @ rated VR<br>T <sub>J</sub> =25 °C<br>T <sub>J</sub> =100 °C        | I <sub>R</sub>     | 5<br>150     |          |           | μA               |
| Typical thermal resistance (Note 2)  | R <sub>θJC</sub>   | 1.5          |          |           | °C/W             |
| Operating junction temperature range   | T <sub>J</sub>     | - 55 to +150 |          |           | °C               |
| Storage temperature range  | T <sub>STG</sub>   | - 55 to +150 |          |           | °C               |

Note 1: Pulse test with PW=300 μs, 1% duty cycle

Note 2: Mount on Heatsink size of 4" x 6" x 0.25" Al-Plate

**ORDERING INFORMATION**

| PART NO.             | PACKING CODE | PACKING CODE SUFFIX | PACKAGE | PACKING   |
|----------------------|--------------|---------------------|---------|-----------|
| TS10KLXX<br>(Note 1) | D3           | G                   | KBJL    | 20 / TUBE |

Note 1: "xx" defines voltage from 600V (TS10KL60) to 1000V (TS10KL100)

**EXAMPLE**

| PREFERRED P/N | PART NO. | PACKING CODE | PACKING CODE SUFFIX | DESCRIPTION    |
|---------------|----------|--------------|---------------------|----------------|
| TS10KL80 D3   | TS10KL80 | D3           |                     |                |
| TS10KL80 D3G  | TS10KL80 | D3           | G                   | Green compound |

**RATINGS AND CHARACTERISTICS CURVES**

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

FIG.1 FORWARD CURRENT DERATING CURVE

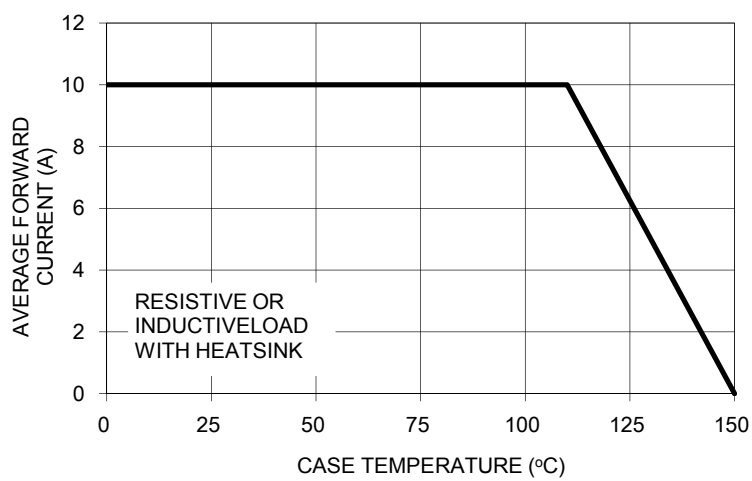


FIG. 2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

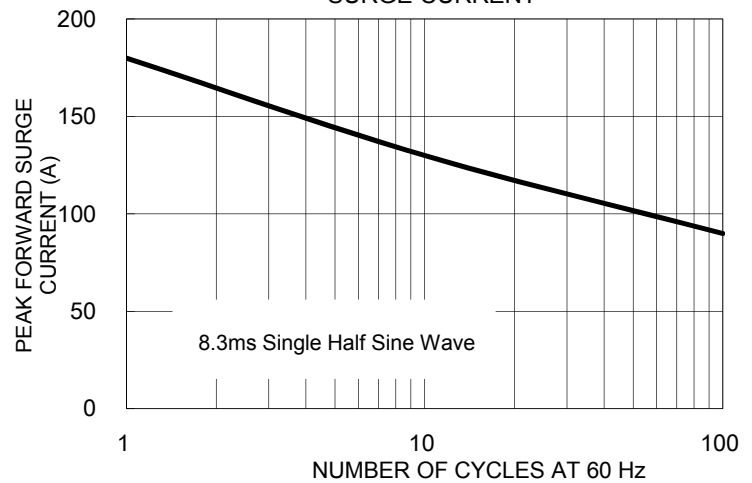


FIG. 3- TYPICAL FORWARD CHARACTERISTICS

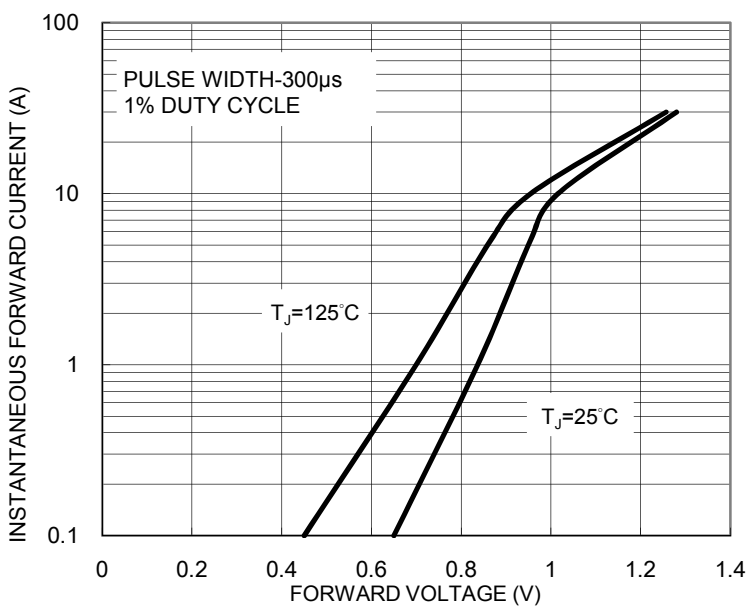


FIG. 4- TYPICAL REVERSE CHARACTERISTICS

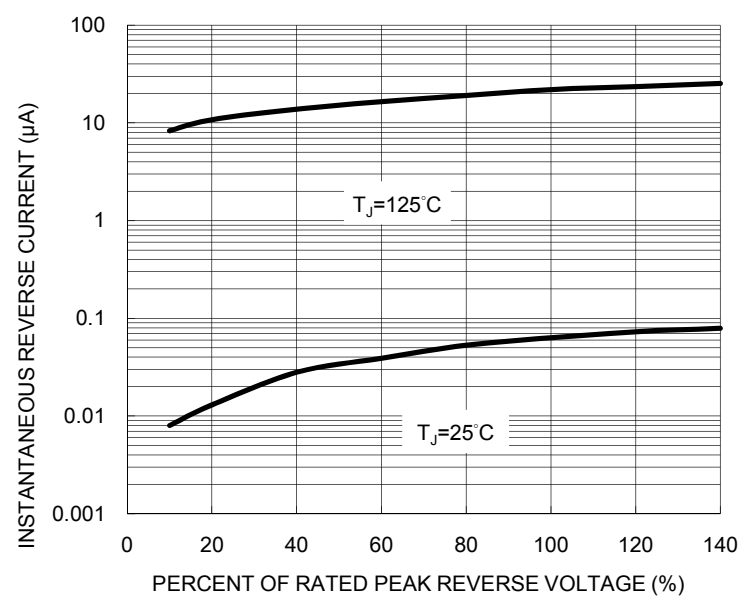
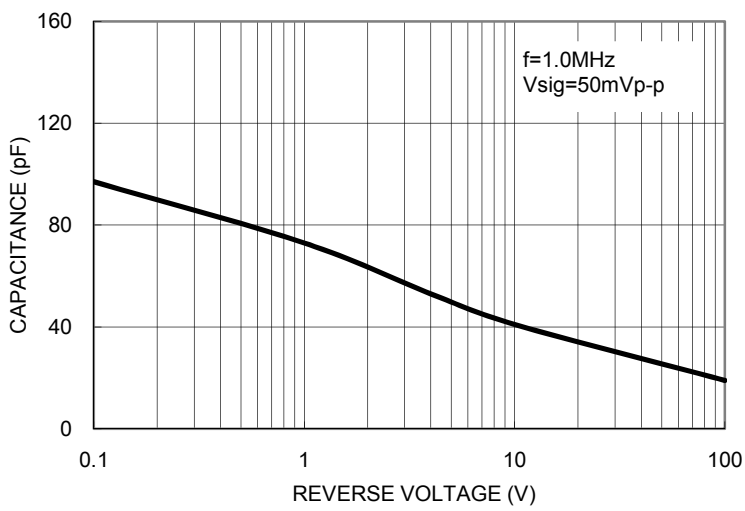
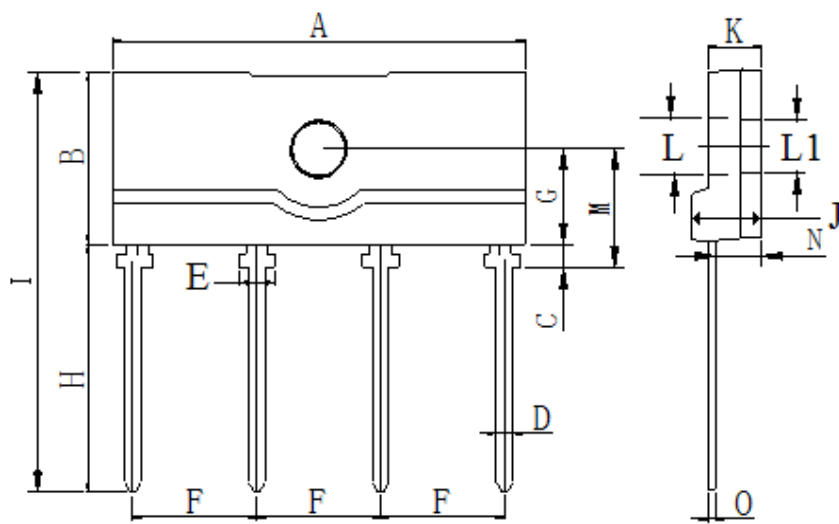


FIG. 5- TYPICAL JUNCTION CAPACITANCE



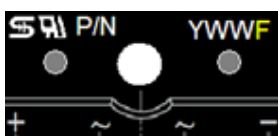
PACKAGE OUTLINE DIMENSIONS

**KBJL**



| DIM. | Unit (mm) |       | Unit (inch) |       |
|------|-----------|-------|-------------|-------|
|      | Min       | Max   | Min         | Max   |
| A    | 24.70     | 25.30 | 0.972       | 0.996 |
| B    | 10.00     | 10.60 | 0.394       | 0.417 |
| C    | 1.20      | 1.60  | 0.047       | 0.063 |
| D    | 0.90      | 1.10  | 0.035       | 0.043 |
| E    | 2.10      | 2.30  | 0.083       | 0.091 |
| F    | 7.30      | 7.70  | 0.287       | 0.303 |
| G    | 5.50      | 5.90  | 0.217       | 0.232 |
| H    | 14.40     | 15.40 | 0.567       | 0.606 |
| I    | 24.90     | 25.50 | 0.980       | 1.004 |
| J    | 4.00      | 4.40  | 0.157       | 0.173 |
| K    | 3.00      | 3.40  | 0.118       | 0.134 |
| L    | 3.30      | 3.50  | 0.130       | 0.138 |
| L1   | 3.10      | 3.30  | 0.122       | 0.130 |
| M    | 6.90      | 7.30  | 0.272       | 0.287 |
| N    | 2.50      | 2.90  | 0.098       | 0.114 |
| O    | 0.30      | 0.70  | 0.012       | 0.028 |

MARKING DIAGRAM



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

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