

## Glass Passivated Bridge Rectifiers

### FEATURES

- Ideal for automated placement
- Reliable low cost construction utilizing molded plastic technique
- High surge current capability
- Moisture sensitivity level: level 1, per J-STD-020
- UL Recognized File # E-326854
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition
- AEC-Q101 qualified



**DBLS**



### MECHANICAL DATA

**Case:** Molded plastic body

Molding compound, UL flammability classification rating 94V-0

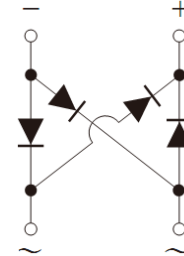
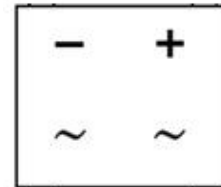
Packing code with suffix "G" means green compound (halogen-free)

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

Meet JESD 201 class 2 whisker test

**Polarity:** Polarity as marked on the body

**Weight:** 0.36 g (approximately)



| MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted) |                                      |           |           |           |           |              |           |           |                  |
|--|--------------------------------------|-----------|-----------|-----------|-----------|--------------|-----------|-----------|------------------|
| PARAMETER  | SYMBOL                               | DBLS 101G | DBLS 102G | DBLS 103G | DBLS 104G | DBLS 105G    | DBLS 106G | DBLS 107G | 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>                   | 1         |           |           |           |              |           |           | A                |
| Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load          | I <sub>FSM</sub>                     | 40        |           |           |           |              | 30        |           | A                |
| Rating for fusing (t<8.3ms)  | I <sup>2</sup> t                     | 6.6       |           |           |           |              | 3.7       |           | A <sup>2</sup> s |
| Maximum instantaneous forward voltage (Note 1)<br>I <sub>F</sub> = 1 A                       | V <sub>F</sub>                       | 1.1       |           |           |           |              | V         |           |                  |
| Maximum DC reverse current<br>at rated DC blocking voltage                                   | I <sub>R</sub>                       |           |           |           |           | 2<br>100     | μA        |           |                  |
| Typical junction capacitance per leg (Note 2)  | C <sub>j</sub>                       |           |           |           |           | 25           | pF        |           |                  |
| Typical thermal resistance   | R <sub>θjL</sub><br>R <sub>θjA</sub> |           |           |           |           | 15<br>40     | °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=300μs, 1% Duty Cycle

Note 2: Measure at 1.0MHz and Applied Reverse Voltage of 4.0 Volts D.C.

| ORDERING INFORMATION |              |                     |         |                        |
|----------------------|--------------|---------------------|---------|------------------------|
| PART NO.             | PACKING CODE | PACKING CODE SUFFIX | PACKAGE | PACKING                |
| DBLS10xG<br>(Note 1) | C1           | G                   | DBLS    | 50 / TUBE              |
|                      | RD           |                     |         | 1,500 / 13" Paper reel |

Note 1: "x" defines voltage from 50V (DBLS101G) to 1000V (DBLS107G)

| EXAMPLE       |          |              |                     |                                      |
|---------------|----------|--------------|---------------------|--------------------------------------|
| PREFERRED P/N | PART NO. | PACKING CODE | PACKING CODE SUFFIX | DESCRIPTION                          |
| DBLS107G RD   | DBLS107G | RD           |                     | AEC-Q101 qualified                   |
| DBLS107G RDG  | DBLS107G | RD           | G                   | AEC-Q101 qualified<br>Green compound |

**RATINGS AND CHARACTERISTICS CURVES**

(T<sub>A</sub>=25°C unless otherwise noted)

FIG. 1 FORWARD CURRENT DERATING CURVE

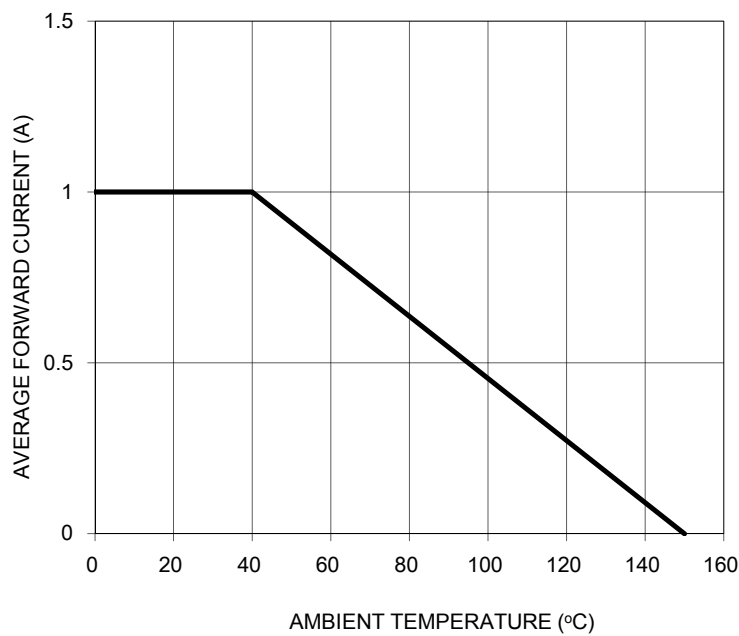


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

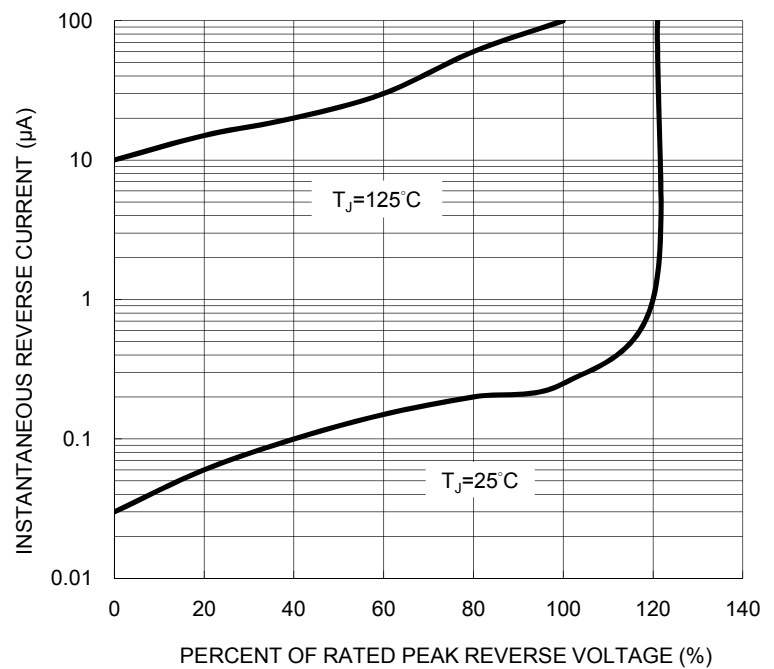


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

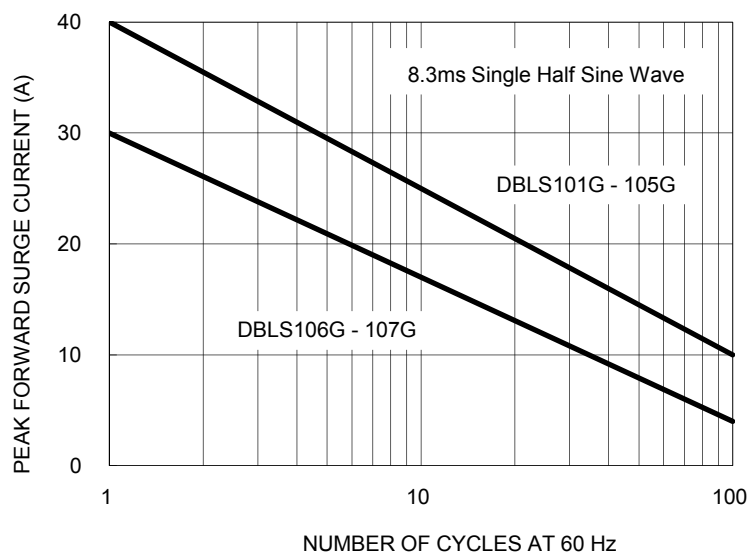


FIG. 4 TYPICAL FORWARD CHARACTERISTICS

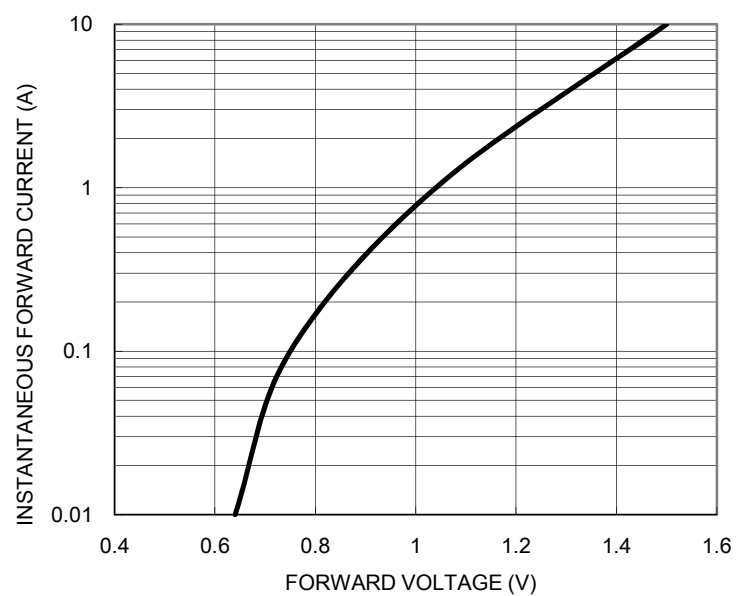
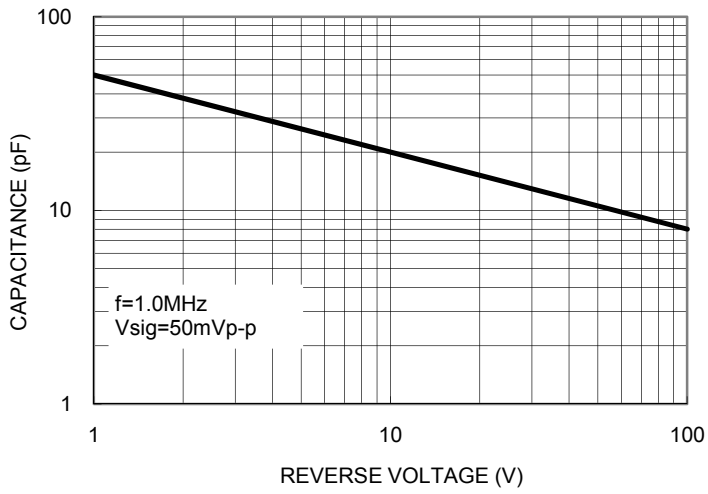
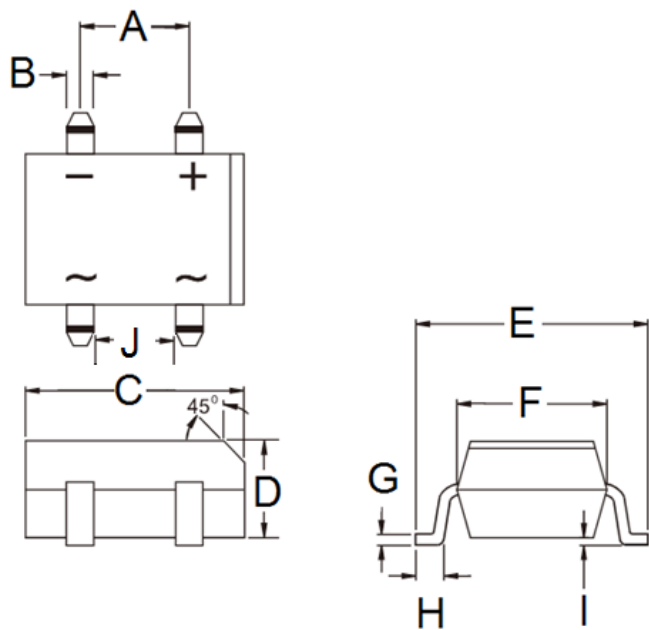


FIG. 5 TYPICAL JUNCTION CAPACITANCE



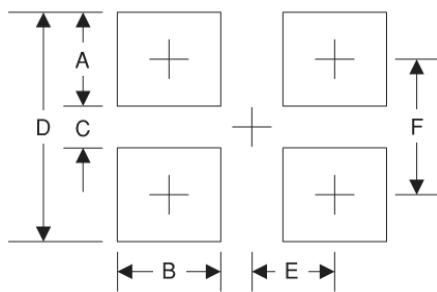
PACKAGE OUTLINE DIMENSIONS

**DBLS**



| DIM. | Unit (mm) |       | Unit (inch) |       |
|------|-----------|-------|-------------|-------|
|      | Min       | Max   | Min         | Max   |
| A    | 5.00      | 5.20  | 0.197       | 0.205 |
| B    | 1.02      | 1.20  | 0.040       | 0.047 |
| C    | 8.13      | 8.51  | 0.320       | 0.335 |
| D    | 2.40      | 2.60  | 0.094       | 0.102 |
| E    | 9.80      | 10.30 | 0.386       | 0.406 |
| F    | 6.20      | 6.50  | 0.244       | 0.256 |
| G    | 0.22      | 0.33  | 0.009       | 0.013 |
| H    | 1.02      | 1.53  | 0.040       | 0.060 |
| I    | 0.076     | 0.33  | 0.003       | 0.013 |
| J    | 3.90      | 4.10  | 0.154       | 0.161 |

SUGGESTED PAD LAYOUT



| Symbol | Unit (mm) | Unit (inch) |
|--------|-----------|-------------|
| A      | 2.3       | 0.091       |
| B      | 1.3       | 0.051       |
| C      | 6.9       | 0.272       |
| D      | 11.5      | 0.453       |
| E      | 2.6       | 0.102       |
| F      | 9.2       | 0.362       |

MARKING DIAGRAM



- P/N = Specific Device Code
- G = Green Compound
- YW = Date Code
- F = Factory Code

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