

**Glass Passivated Bridge Rectifiers**

**FEATURES**

- UL Recognized File # E-326854
- 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
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition



**DBLS**



**MECHANICAL DATA**

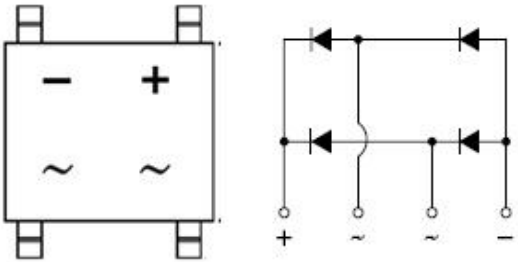
**Case** : Molded plastic body

Molding compound, UL flammability classification rating 94V-0  
Base P/N with suffix "G" on packing code - halogen-free, RoHS compliant

**Terminal** : Matte tin plated leads, solderable per JESD22-B102  
Meet JESD 201 class 1A whisker test

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

**Weight** : 0.36 gram (approximately)



| MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted) |                                                                  |               |              |              |              |              |              |              |              |              |                  |
|----------------------------------------------------------------------------------------------|------------------------------------------------------------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|------------------|
| PARAMETER                                                                                    | SYMBOL                                                           | DBLS<br>151G  | DBLS<br>152G | DBLS<br>153G | DBLS<br>154G | DBLS<br>155G | DBLS<br>156G | DBLS<br>157G | DBLS<br>158G | DBLS<br>159G | UNIT             |
| Maximum repetitive peak reverse voltage                                                      | V <sub>RRM</sub>                                                 | 50            | 100          | 200          | 400          | 600          | 800          | 1000         | 1200         | 1400         | V                |
| Maximum RMS voltage                                                                          | V <sub>RMS</sub>                                                 | 35            | 70           | 140          | 280          | 420          | 560          | 700          | 840          | 980          | V                |
| Maximum DC blocking voltage                                                                  | V <sub>DC</sub>                                                  | 50            | 100          | 200          | 400          | 600          | 800          | 1000         | 1200         | 1400         | V                |
| Maximum average forward rectified current                                                    | I <sub>F(AV)</sub>                                               | 1.5           |              |              |              |              |              |              |              |              | A                |
| Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load          | I <sub>FSM</sub>                                                 | 50            |              |              |              |              |              |              |              |              | A                |
| Rating for fusing (t<8.3ms)                                                                  | I <sup>2</sup> T                                                 | 10.3          |              |              |              |              |              |              |              |              | A <sup>2</sup> S |
| Maximum instantaneous forward voltage (Note 1)<br>IF= 1.5 A                                  | V <sub>F</sub>                                                   | 1.1           |              |              |              |              |              |              | 1.25         |              | V                |
| Maximum DC reverse current<br>at rated DC blocking voltage                                   | T <sub>J</sub> =25 °C<br>T <sub>J</sub> =125°C<br>I <sub>R</sub> | 2<br>500      |              |              |              |              |              |              |              |              | uA               |
| 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=300 usec,1% Duty Cycle

| ORDERING INFORMATION |              |                     |         |                       |
|----------------------|--------------|---------------------|---------|-----------------------|
| PART NO.             | PACKING CODE | GREEN COMPOUND CODE | PACKAGE | PACKING               |
| DBLS15xG<br>(Note 1) | C1           | Suffix "G"          | DBLS    | 50 / TUBE             |
|                      | RD           |                     |         | 1500 / 13" Paper reel |

Note 1: "x" defines voltage from 50V (DBLS151G) to 1400V (DBLS159G)

| EXAMPLE       |          |              |                     |                |
|---------------|----------|--------------|---------------------|----------------|
| PREFERRED P/N | PART NO. | PACKING CODE | GREEN COMPOUND CODE | DESCRIPTION    |
| DBLS157G RD   | DBLS157G | RD           |                     |                |
| DBLS157G RDG  | DBLS157G | RD           | G                   | Green compound |

## RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

FIG.1 FORWARD CURRENT DERATING CURVE

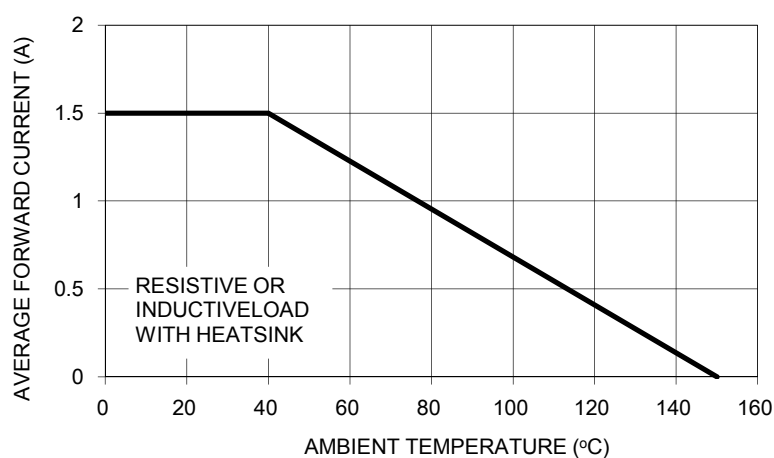


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

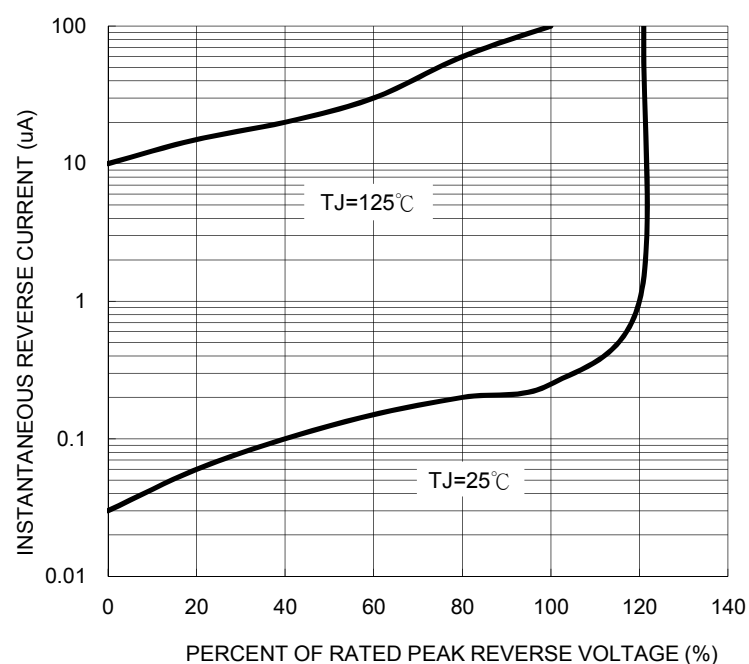


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

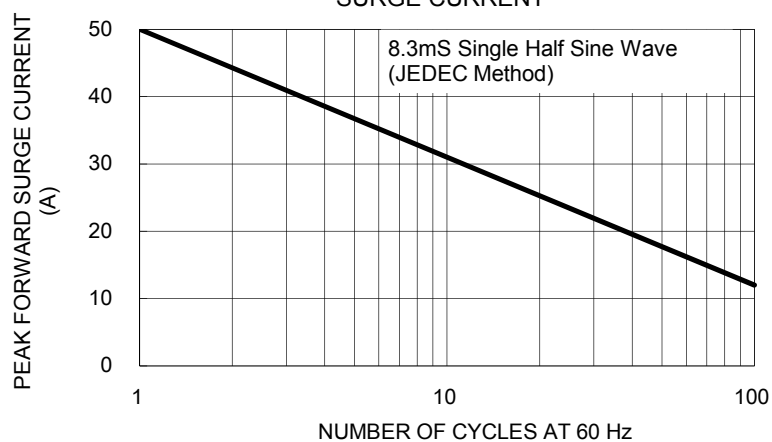


FIG. 4 TYPICAL FORWARD CHARACTERISTICS

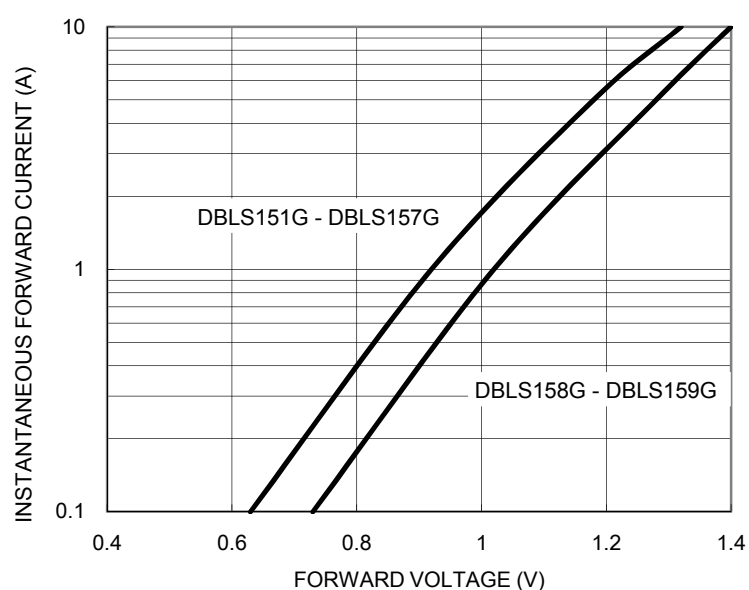
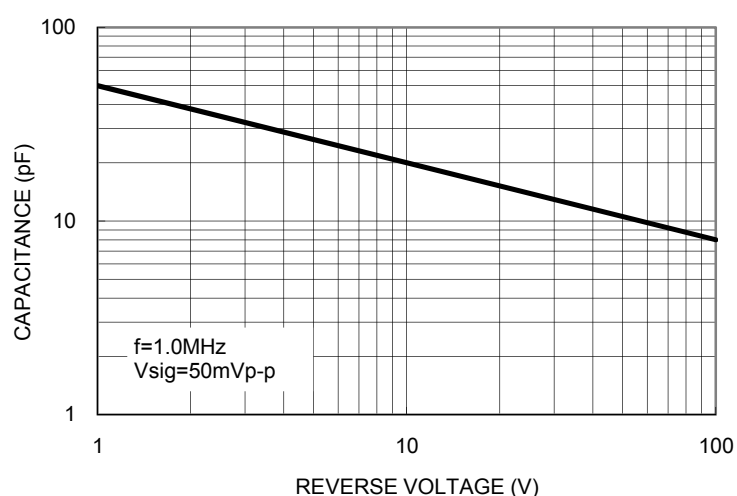
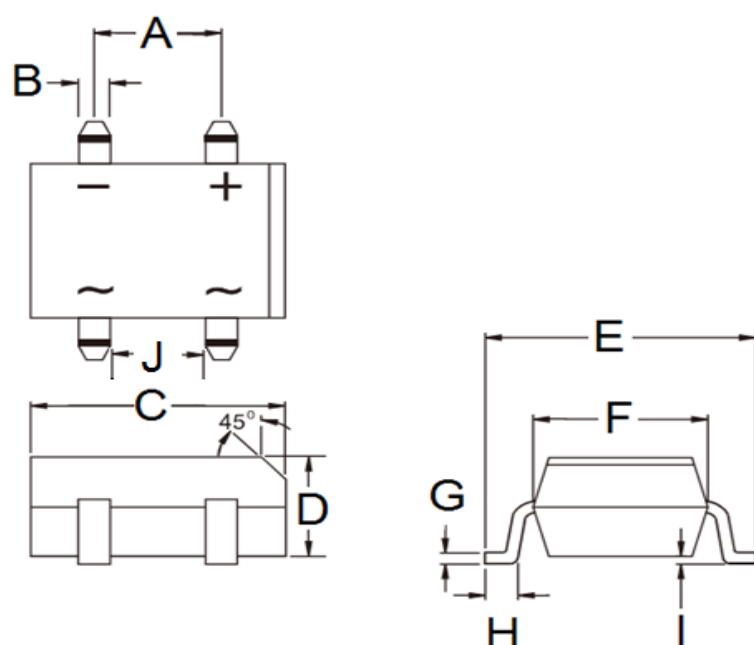


FIG. 5 TYPICAL JUNCTION CAPACITANCE

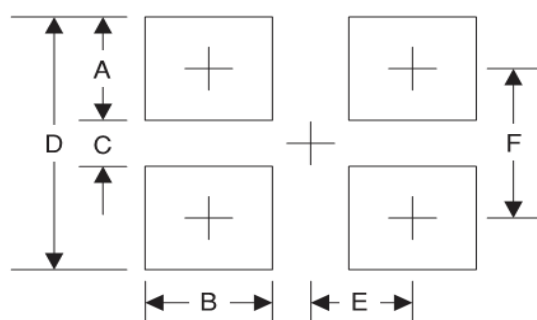


## PACKAGE OUTLINE DIMENSIONS



| 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) |
|--------|----------|
| A      | 2.3      |
| B      | 1.3      |
| C      | 6.9      |
| D      | 11.5     |
| E      | 2.6      |
| F      | 9.2      |

## MARKING DIAGRAM



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