

1.5A, 50V - 1400V Glass Passivated Bridge Rectifiers

FEATURES

- Ideal for automated placement
- Reliable low cost construction utilizing molded plastic technique
- High surge current capability
- 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



DBLS



MECHANICAL DATA

Case: Molded plastic body

Molding compound, UL flammability classification rating 94V-0

Moisture sensitivity level: level 1, per J-STD-020

Part no. with suffix "H" means AEC-Q101 qualified

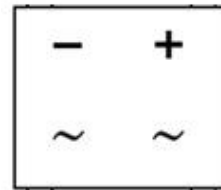
Packing code with suffix "G" means green compound (halogen-free)

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_A=25°C unless otherwise noted)

| PARAMETER | SYMBOL | DBLS | DBLS | DBLS | DBLS | DBLS | DBLS | DBLS | DBLS | DBLS | UNIT | |
|---|--------------------|--------------|------|------|------|------|------|------|------|------|------------------|----|
| | | 151G | 152G | 153G | 154G | 155G | 156G | 157G | 158G | 159G | | |
| Maximum repetitive peak reverse voltage | V _{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | 1200 | 1400 | V | |
| Maximum RMS voltage | V _{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | 840 | 980 | V | |
| Maximum DC blocking voltage | V _{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | 1200 | 1400 | V | |
| Maximum average forward rectified current | I _{F(AV)} | 1.5 | | | | | | | | | A | |
| Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load | I _{FSM} | 50 | | | | | | | | | A | |
| Rating for fusing (t<8.3ms) | i ² t | 10.3 | | | | | | | | | A ² s | |
| Maximum instantaneous forward voltage (Note 1) I _F = 1.5 A | V _F | 1.1 | | | | | | 1.25 | | | V | |
| Maximum reverse current @ rated V _R T _J =25°C T _J =125°C | I _R | 2 | | | | | 500 | | | | | μA |
| Typical thermal resistance | R _{θJL} | 15 | | | | | | | | | °C/W | |
| | R _{θJA} | 40 | | | | | | | | | | |
| Operating junction temperature range | T _J | - 55 to +150 | | | | | | | | | °C | |
| Storage temperature range | T _{STG} | - 55 to +150 | | | | | | | | | °C | |

Note 1: Pulse Test with PW=300μs, 1% Duty Cycle

| ORDERING INFORMATION | | | | | |
|----------------------|-----------------|--------------|-------------------------|---------|------------------------|
| PART NO. | PART NO. SUFFIX | PACKING CODE | PACKING CODE SUFFIX (*) | PACKAGE | PACKING |
| DBLS15xG (Note 1) | H | C1 | G | DBLS | 50 / TUBE |
| | | RD | | | 1,500 / 13" Paper reel |

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

*: Optional available

| EXAMPLE | | | | | |
|---------------|----------|-----------------|--------------|---------------------|-----------------------------------|
| PREFERRED P/N | PART NO. | PART NO. SUFFIX | PACKING CODE | PACKING CODE SUFFIX | DESCRIPTION |
| DBLS157GHRDG | DBLS157G | H | RD | G | AEC-Q101 qualified Green compound |

RATINGS AND CHARACTERISTICS CURVES

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

FIG. 1 FORWARD CURRENT DERATING CURVE



FIG. 2 TYPICAL REVERSE CHARACTERISTICS

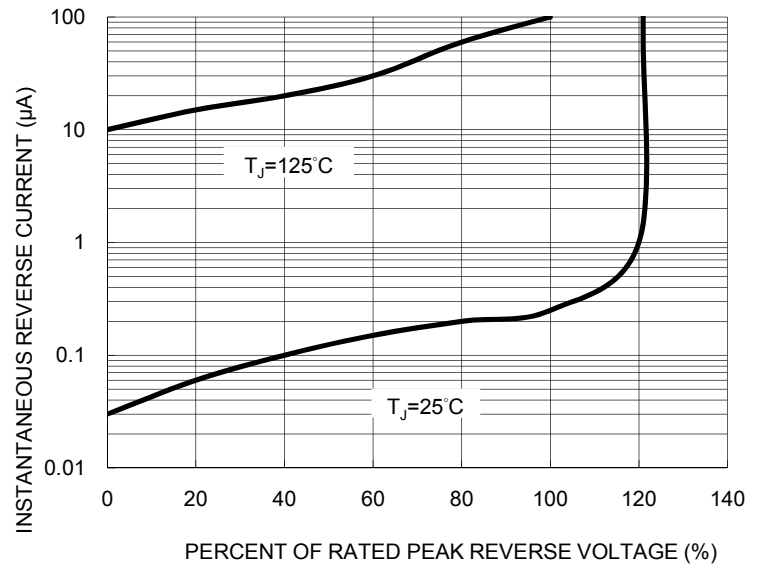


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



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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