

1A, 50V - 1000V Glass Passivated Bridge Rectifiers

FEATURES

- Ideal for printed circuit board
- 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



MECHANICAL DATA

Case: Molded plastic body

Molding compound, UL flammability classification rating 94V-0

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 | DBL 101G | DBL 102G | DBL 103G | DBL 104G | DBL 105G | DBL 106G | DBL 107G | UNIT |
| Maximum repetitive peak reverse voltage | V _{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS voltage | V _{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC blocking voltage | V _{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum average forward rectified current | I _{F(AV)} | 1 | | | | | | | A |
| Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load | I _{FSM} | 40 | | | | | 30 | | A |
| Rating for fusing (t<8.3ms) | I ² t | 6.64 | | | | | 3.73 | | A ² s |
| Maximum instantaneous forward voltage (Note 1) I _F = 1 A | V _F | 1.1 | | | | | | | V |
| Maximum reverse current @ rated V _R T _J =25°C T _J =125°C | I _R | 2 | | | | | 500 | | μA |
| Typical junction capacitance Per Leg (Note 2) | C _J | 25 | | | | | | | pF |
| Typical thermal resistance | R _{θJL} R _{θJA} | 15 | | | | | 40 | | °C/W |
| 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

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

ORDERING INFORMATION

| PART NO. | PACKING CODE | PACKING CODE | PACKING CODE SUFFIX (*) | PACKAGE | PACKING |
|------------------|--------------|--------------|-------------------------|---------|-----------|
| DBL10xG (Note 1) | H | C1 | G | DBL | 50 / TUBE |

Note 1: "x" defines voltage from 50V (DBL101G) to 1000V (DBL107G)

*: Optional available

EXAMPLE

| PREFERRED P/N | PART NO. | PART NO. SUFFIX | PACKING CODE | PACKING CODE SUFFIX | DESCRIPTION |
|---------------|----------|-----------------|--------------|---------------------|-----------------------------------|
| DBL107GHC1G | DBL107G | H | C1 | G | AEC-Q101 qualified Green compound |

RATINGS AND CHARACTERISTICS CURVES

(T_A=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 | 6.20 | 6.50 | 0.244 | 0.256 |
| B | 7.24 | 8.00 | 0.285 | 0.315 |
| C | 8.12 | 8.51 | 0.320 | 0.335 |
| D | 2.40 | 2.60 | 0.094 | 0.102 |
| E | 0.89 | 1.14 | 0.035 | 0.045 |
| F | 0.46 | 0.58 | 0.018 | 0.023 |
| G | 5.00 | 5.20 | 0.197 | 0.205 |
| H | 1.39 | 1.90 | 0.055 | 0.075 |
| I | 1.27 | 2.03 | 0.050 | 0.080 |
| J | 3.81 | 4.69 | 0.150 | 0.185 |
| K | 0.22 | 0.33 | 0.009 | 0.013 |
| L | 7.60 | 8.90 | 0.299 | 0.350 |

MARKING DIAGRAM



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

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