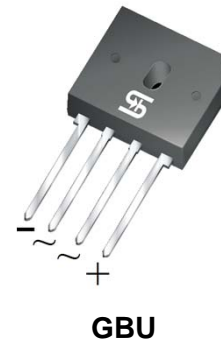


Glass Passivated Single-Phase Bridge Rectifier

FEATURES

- Ideal for printed circuit board
- High case dielectric strength of 1500 VRMS
- High surge current capability
- Typical IR less than 0.1 μ A
- UL Recognized File # E-326243
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition



MECHANICAL DATA

Case: GBU

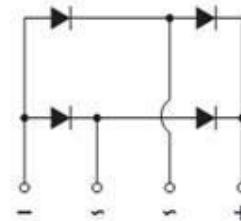
Molding compound, UL flammability classification rating 94V-0

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

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

Polarity: As marked

Weight: 4 g (approximately)



| MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25°C unless otherwise noted) | | | | | | | | | |
|---|--|--------------|----------|----------|----------|----------|----------|----------|------------------|
| PARAMETER | SYMBOL | GBU 1001 | GBU 1002 | GBU 1003 | GBU 1004 | GBU 1005 | GBU 1006 | GBU 1007 | 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)} | 10 | | | | | | | A |
| Peak forward surge current, 8.3 ms single half sine-wave | I _{FSM} | 220 | | | | | | | A |
| Rating of fusing (t<8.3ms) | I ² t | 200 | | | | | | | A ² s |
| Maximum instantaneous forward voltage (Note 1) I _F = 5 A I _F = 10 A | V _F | 1.0 1.1 | | | | | | | V |
| Maximum reverse current @ rated VR T _J =25 °C T _J =125 °C | I _R | 5 500 | | | | | | | μ A |
| Typical junction capacitance per leg (Note 2) | C _j | 211 | | | | 94 | | | pF |
| Typical thermal resistance | R _{θJC} R _{θJA} | 2 21 | | | | | | | °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=300 μ s, 1% duty cycle

Note 2: Measured at 1MHz and applied Reverse bias of 4.0V DC

| ORDERING INFORMATION | | | | |
|----------------------|--------------|---------------------|---------|-----------|
| PART NO. | PACKING CODE | GREEN COMPOUND CODE | PACKAGE | PACKING |
| GBU100x (Note 1) | C2 | G | GBU | 20 / Tube |
| | D2 | | | 20 / Tube |
| | X0 | | | Forming |

Note 1: "x" defines voltage from 50V (GBU1001) to 1000V (GBU1007)

| EXAMPLE | | | | |
|---------------|----------|--------------|---------------------|----------------|
| PREFERRED P/N | PART NO. | PACKING CODE | GREEN COMPOUND CODE | DESCRIPTION |
| GBU1006 C2 | GBU1006 | C2 | | |
| GBU1006 C2G | GBU1006 | C2 | G | Green compound |

RATINGS AND CHARACTERISTICS CURVES

(T_A=25°C unless otherwise noted)

FIG. 1 MAXIMUM DERATING CURVE OUTPUT CURRENT

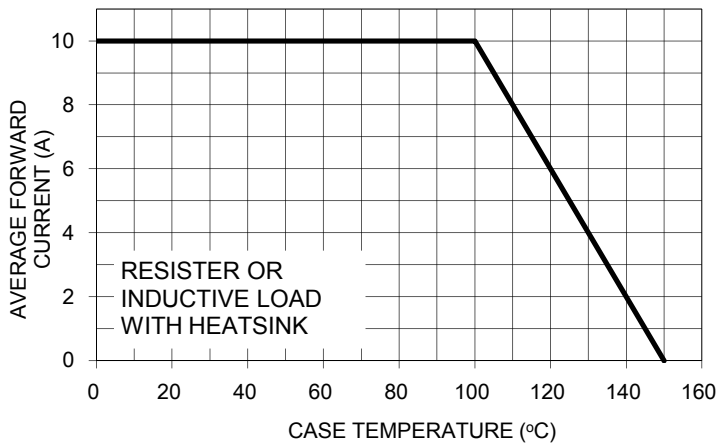


FIG. 2 MAXIMUM FORWARD SURGE CURRENT PER LEG

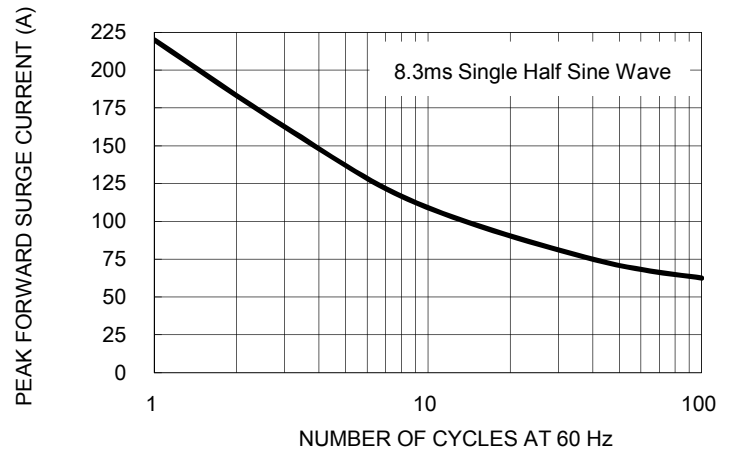


FIG. 3 TYPICAL REVERSE CHARACTERISTICS PER LEG

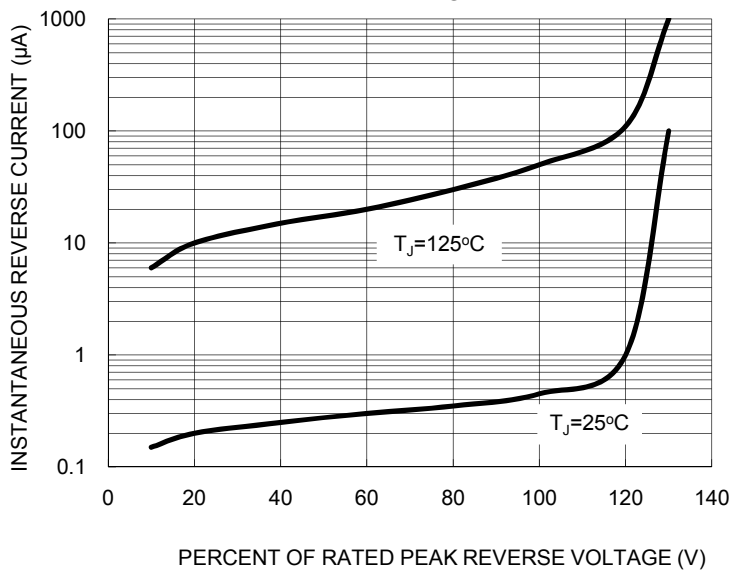


FIG. 4 TYPICAL FORWARD CHARACTERISTICS PER LEG

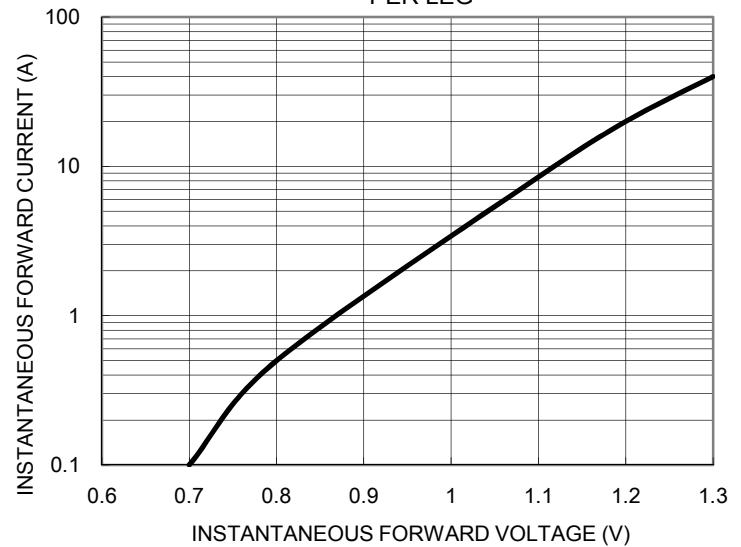
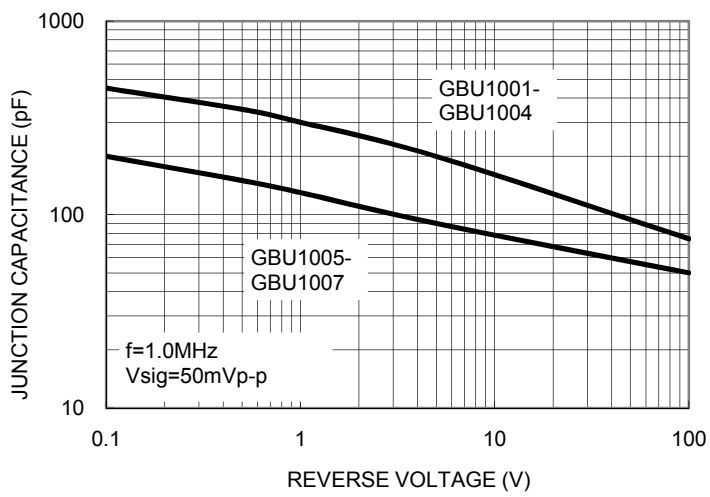
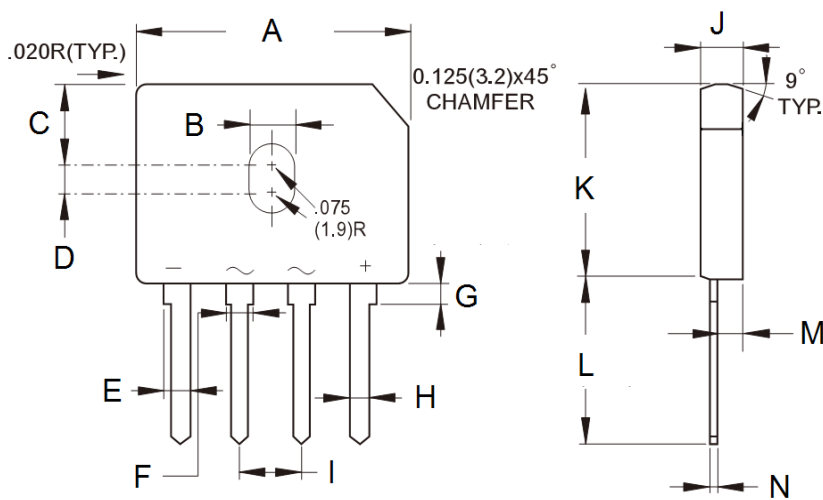


FIG. 5 TYPICAL JUNCTION CAPACITANCE PER LEG



PACKAGE OUTLINE DIMENSIONS

GBU



| DIM. | Unit (mm) | | Unit (inch) | |
|------|-----------|-------|-------------|-------|
| | Min | Max | Min | Max |
| A | 21.80 | 22.30 | 0.858 | 0.878 |
| B | 3.50 | 4.10 | 0.138 | 0.161 |
| C | 7.40 | 7.90 | 0.291 | 0.311 |
| D | 1.65 | 2.16 | 0.065 | 0.085 |
| E | 2.16 | 2.54 | 0.085 | 0.100 |
| F | 1.65 | 2.03 | 0.065 | 0.080 |
| G | 1.52 | 2.03 | 0.060 | 0.080 |
| H | 1.02 | 1.27 | 0.040 | 0.050 |
| I | 4.83 | 5.33 | 0.190 | 0.210 |
| J | 3.30 | 3.56 | 0.130 | 0.140 |
| K | 18.30 | 18.80 | 0.720 | 0.740 |
| L | 17.50 | 18.00 | 0.689 | 0.709 |
| M | 1.90 | 2.16 | 0.075 | 0.085 |
| N | 0.46 | 0.56 | 0.018 | 0.022 |

MARKING DIAGRAM



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

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