

2A, 50V - 1000V Standard Bridge Rectifier

FEATURES

- AEC-Q101 qualified available
- Glass passivated chip junction
- Ideal for printed circuit board
- High case dielectric strength
- Typical IR less than 0.1 μ A
- UL Recognized File # E-326243
- RoHS Compliant
- Halogen-free according to IEC 61249-2-21

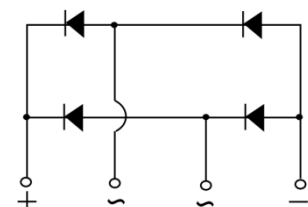
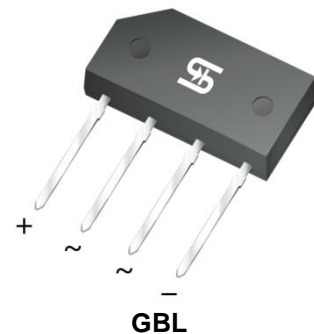
APPLICATIONS

- Switching mode power supply (SMPS)
- Adapters
- Lighting application

MECHANICAL DATA

- Case: GBL
- Molding compound meets UL 94V-0 flammability rating
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 2 whisker test
- Polarity: As marked
- Weight: 2.00g (approximately)

| KEY PARAMETERS | | |
|----------------|-----------|--------------|
| PARAMETER | VALUE | UNIT |
| I_F | 2 | A |
| V_{RRM} | 50 - 1000 | V |
| I_{FSM} | 60 | A |
| $T_{J\ MAX}$ | 150 | $^{\circ}$ C |
| Package | GBL | |
| Configuration | Quad | |



| ABSOLUTE MAXIMUM RATINGS ($T_A = 25^{\circ}$ C unless otherwise noted) | | | | | | | | | |
|--|--------------|--------------|---------|---------|---------|---------|---------|---------|------------------|
| PARAMETER | SYMBOL | GBL 201 | GBL 202 | GBL 203 | GBL 204 | GBL 205 | GBL 206 | GBL 207 | UNIT |
| Marking code on the device | | GBL 201 | GBL 202 | GBL 203 | GBL 204 | GBL 205 | GBL 206 | GBL 207 | |
| Repetitive peak reverse voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Reverse voltage, total rms value | $V_{R(RMS)}$ | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Forward current | I_F | 2 | | | | | | | A |
| Surge peak forward current, 8.3ms single half sine-wave superimposed on rated load | I_{FSM} | 60 | | | | | | | A |
| Rating for fusing ($t < 8.3ms$) | I^2t | 14.9 | | | | | | | A ² s |
| Junction temperature | T_J | - 55 to +150 | | | | | | | $^{\circ}$ C |
| Storage temperature | T_{STG} | - 55 to +150 | | | | | | | $^{\circ}$ C |

THERMAL PERFORMANCE

| PARAMETER | SYMBOL | TYP | UNIT |
|--|-----------------|-----|------|
| Junction-to-lead thermal resistance | $R_{\theta JL}$ | 13 | °C/W |
| Junction-to-ambient thermal resistance | $R_{\theta JA}$ | 32 | °C/W |

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

| PARAMETER | CONDITIONS | SYMBOL | TYP | MAX | UNIT |
|--|---|--------|-----|-----|---------------|
| Forward voltage per diode ⁽¹⁾ | $I_F = 2\text{A}, T_J = 25^\circ\text{C}$ | V_F | - | 1 | V |
| Reverse current @ rated V_R per diode ⁽²⁾ | $T_J = 25^\circ\text{C}$ | I_R | - | 5 | μA |
| | $T_J = 125^\circ\text{C}$ | | - | 500 | μA |
| Junction capacitance per diode | 1MHz, $V_R = 4.0\text{V}$ | C_J | 25 | - | pF |

Notes:

1. Pulse test with $PW = 0.3\text{ms}$
2. Pulse test with $PW = 30\text{ms}$

ORDERING INFORMATION

| ORDERING CODE ⁽¹⁾⁽²⁾ | PACKAGE | PACKING |
|---------------------------------|---------|-----------|
| GBL2x | GBL | 25 / Tube |
| GBL2xH | GBL | 25 / Tube |

Notes:

1. "x" defines voltage from 50V(GBL201) to 1000V(GBL207)
2. "H" means AEC-Q101 qualified

CHARACTERISTICS CURVES

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

Fig.1 Forward Current Derating Curve

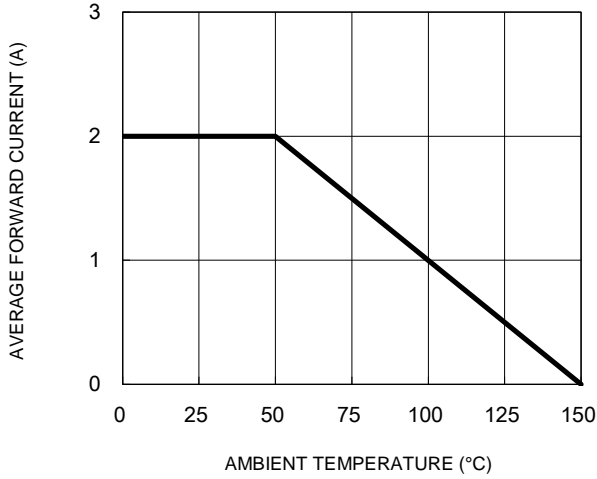


Fig.2 Typical Junction Capacitance

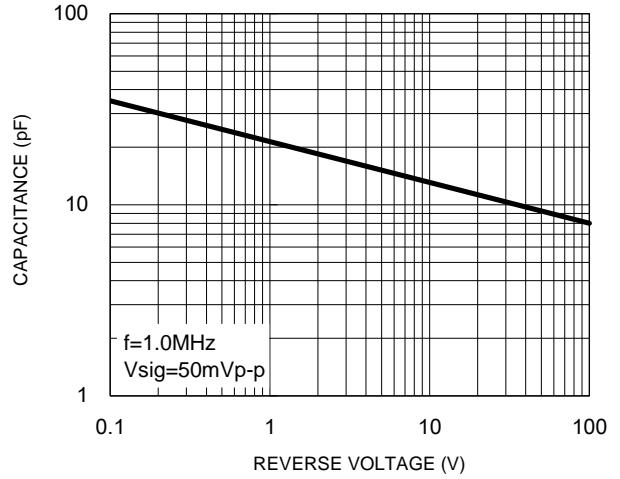


Fig.3 Typical Reverse Characteristics

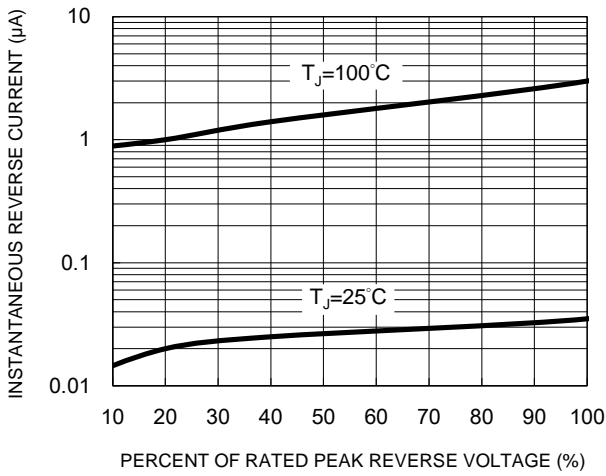


Fig.4 Typical Forward Characteristics

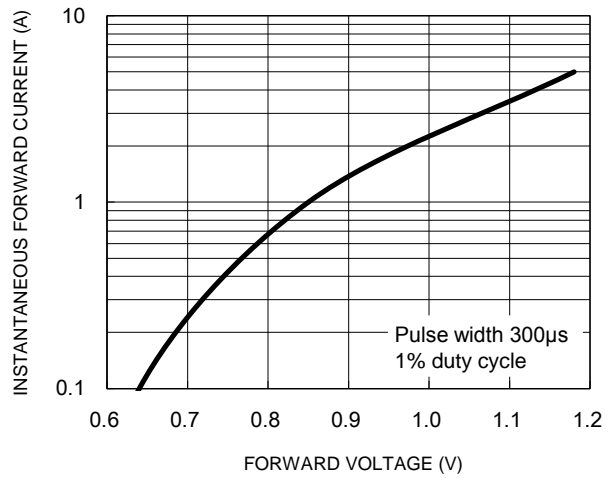
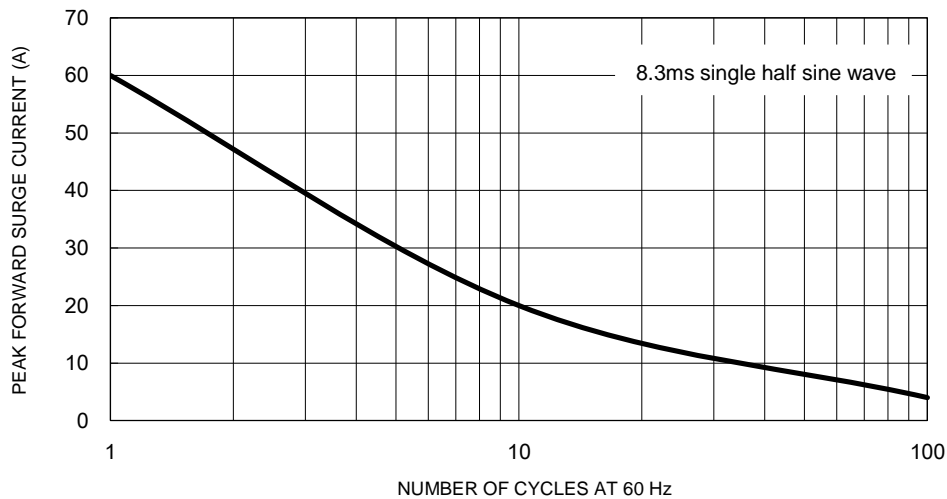
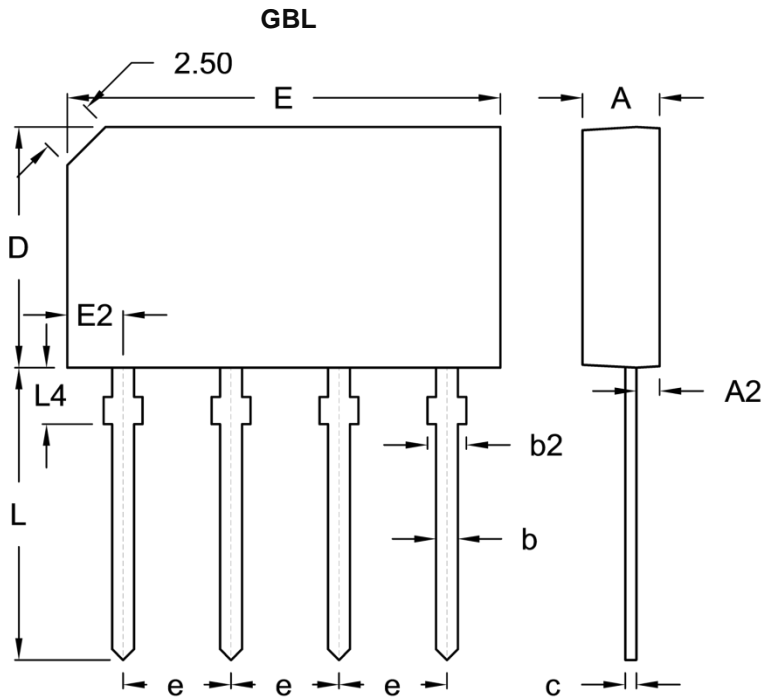


Fig.5 Maximum Non-Repetitive Forward Surge Current



PACKAGE OUTLINE DIMENSIONS



| DIM. | Unit (mm) | | Unit (inch) | |
|------|-----------|-------|-------------|-------|
| | Min. | Max. | Min. | Max. |
| A | 3.30 | 3.70 | 0.130 | 0.146 |
| A2 | 0.80 | 1.20 | 0.031 | 0.047 |
| b | 0.90 | 1.10 | 0.035 | 0.043 |
| b2 | 1.30 | 2.00 | 0.051 | 0.079 |
| c | 0.40 | 0.60 | 0.016 | 0.024 |
| D | 10.70 | 11.30 | 0.421 | 0.445 |
| E | 19.70 | 20.30 | 0.776 | 0.799 |
| E2 | 2.30 | 2.70 | 0.091 | 0.106 |
| e | 4.80 | 5.20 | 0.189 | 0.205 |
| L | 13.00 | 14.00 | 0.512 | 0.551 |
| L4 | 2.30 | 2.70 | 0.091 | 0.106 |

MARKING DIAGRAM



- P/N = Marking Code
- G = Green Compound
- YWW = Date Code
- F = Factory Code