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GBU8A - GBU8M Bridge Rectifiers

Features

- Glass-Passivated Junction
- Surge Overload Rating: 200 A Peak
- Reliable Low-Cost Construction Utilizing Molded Plastic Technique
- Ideal for Printed Circuit Board
- UL Certified: UL #E258596



Ordering Informations

| Part Number | Marking | Package | Packing Method |
|-------------|---------|---------|----------------|
| GBU8A | GBU8A | GBU 4L | Rail |
| GBU8B | GBU8B | GBU 4L | Rail |
| GBU8D | GBU8D | GBU 4L | Rail |
| GBU8G | GBU8G | GBU 4L | Rail |
| GBU8J | GBU8J | GBU 4L | Rail |
| GBU8K | GBU8K | GBU 4L | Rail |
| GBU8M | GBU8M | GBU 4L | Rail |

Absolute Maximum Ratings

Stresses exceeding the absolute maximum ratings may damage the device. The device may not function or be operable above the recommended operating conditions and stressing the parts to these levels is not recommended. In addition, extended exposure to stresses above the recommended operating conditions may affect device reliability. The absolute maximum ratings are stress ratings only. Values are at $T_A = 25^\circ\text{C}$ unless otherwise noted.

| Symbol | Parameter | Value | | | | | | | Units |
|-------------|---|---------------------------|-----|-----|-----|-----|-----|------|------------------|
| | | 8A | 8B | 8D | 8G | 8J | 8K | 8M | |
| V_{RRM} | Maximum Repetitive Reverse Voltage | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| V_{RMS} | Maximum RMS Bridge Input Voltage | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| V_R | DC Reverse Voltage (Rated V_R) | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| $I_{F(AV)}$ | Average Rectified Forward Current | $T_C = 100^\circ\text{C}$ | | | | | | | A |
| | | $T_A = 45^\circ\text{C}$ | | | | | | | A |
| I_{FSM} | Non-Repetitive Peak Forward Surge Current 8.3 ms Single Half-Sine-Wave | 200 | | | | | | | A |
| T_{STG} | Storage Temperature Range | -55 to +150 | | | | | | | $^\circ\text{C}$ |
| T_J | Operating Junction Temperature | -55 to +150 | | | | | | | $^\circ\text{C}$ |

Thermal Characteristics

Values are at $T_A = 25^\circ\text{C}$ unless otherwise noted.

| Symbol | Parameter | Value | Units |
|-----------------|--|-------|---------------------------|
| P_D | Power Dissipation | 16 | W |
| $R_{\theta JA}$ | Thermal Resistance per Leg, Junction to Ambient ⁽¹⁾ | 18 | $^\circ\text{C}/\text{W}$ |
| $R_{\theta JC}$ | Thermal Resistance per Leg, Junction to Case ⁽²⁾ | 3 | $^\circ\text{C}/\text{W}$ |

Notes:

1. Device mounted on PCB with 0.5×0.5 inch (12×12 mm).
2. Heat-sink mounting, $4 \times 4 \times 0.15$ inch copper plate.

Electrical Characteristics

Values are at $T_A = 25^\circ\text{C}$ unless otherwise noted.

| Symbol | Parameter | Value | Units |
|--------|---|---------------------------|--------------------------|
| V_F | Forward Voltage, per Element | 8.0 A | 1.0 V |
| I_R | Reverse Current, per Element at Rated V_R | $T_A = 25^\circ\text{C}$ | 5.0 μA |
| | | $T_A = 100^\circ\text{C}$ | 500 μA |
| I^2t | I^2t Rating for Fusing | $t < 8.35$ ms | 166 A^2s |

Typical Performance Characteristics

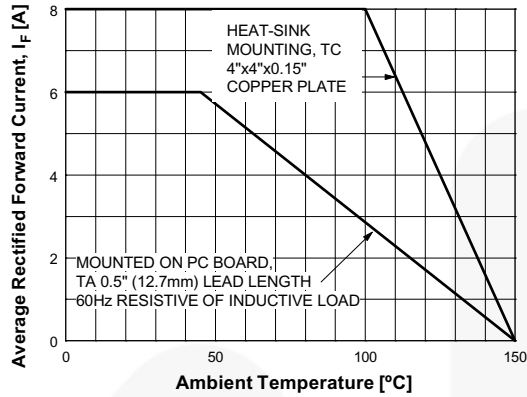


Figure 1. Forward Current Derating Curve

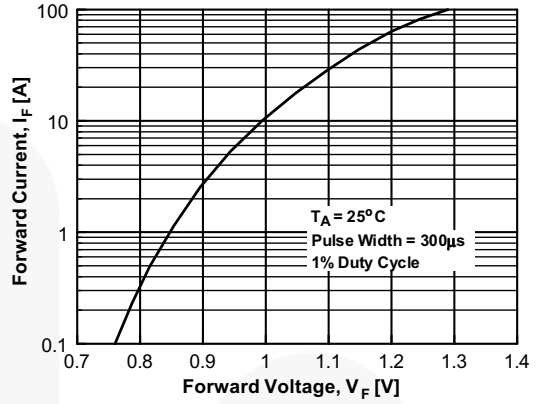


Figure 2. Forward Voltage Characteristics

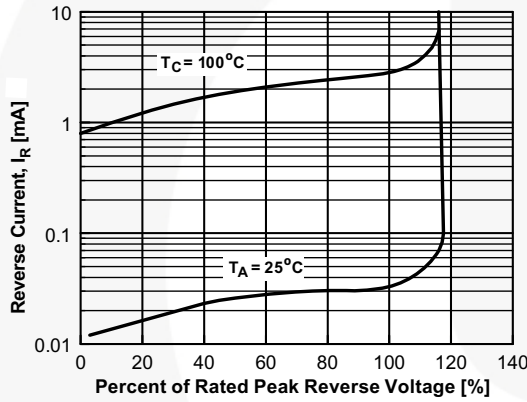


Figure 3. Reverse Current vs. Reverse Voltage

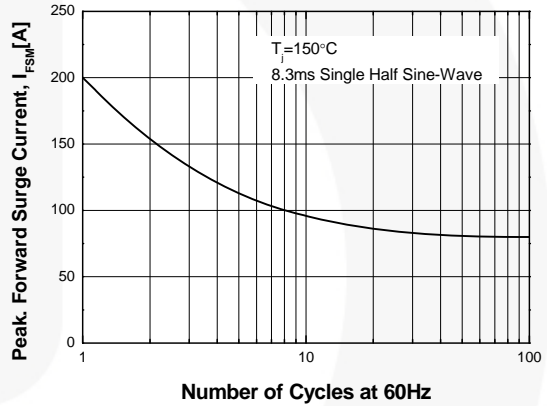


Figure 4. Non-Repetitive Surge Current

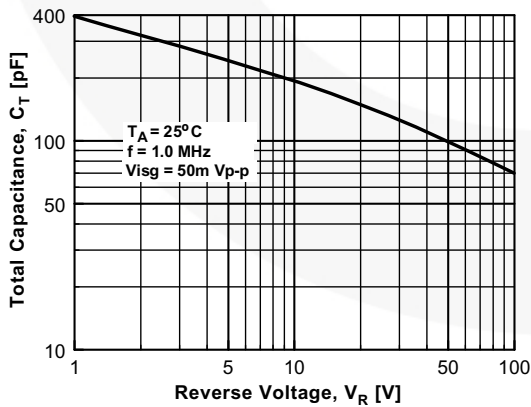
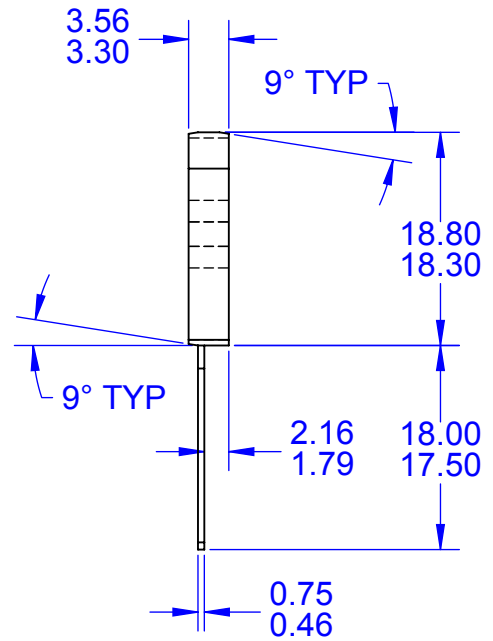


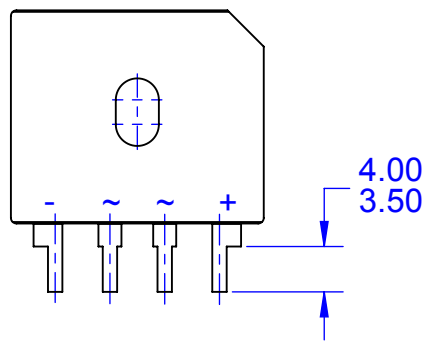
Figure 5. Total Capacitance



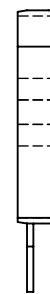
TOP VIEW



SIDE VIEW



TOP VIEW - SHORT LEAD OPTION



SIDE VIEW

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