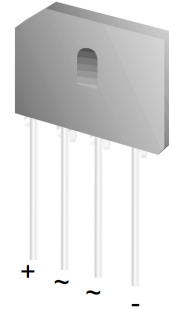


Bridge Rectifiers

GBU4A - GBU4M

Features

- Glass–Passivated Junction
- Surge Overload Rating: 150 A Peak
- Reliable Low–Cost Construction Utilizing Molded Plastic Technique
- Ideal for Printed Circuit Board
- UL Certified: UL #E258596



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PACKAGE MARKING AND ORDERING INFORMATION

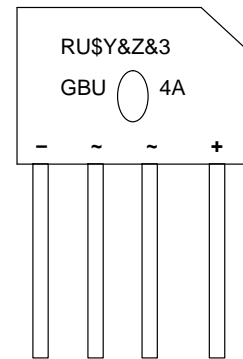
| Part Number | Marking | Package | Packing Method |
|-------------|---------|---------|----------------|
| GBU4A | GBU4A | GBU 4L | Rail |
| GBU4B | GBU4B | | |
| GBU4G | GBU4G | | |
| GBU4J | GBU4J | | |
| GBU4K | GBU4K | | |
| GBU4M | GBU4M | | |

DISCONTINUED (Note 1)

| | | | |
|-------|-------|--------|------|
| GBU4D | GBU4D | GBU 4L | Rail |
|-------|-------|--------|------|

1. **DISCONTINUED:** This device is not recommended for new design. Please contact your **onsemi** representative for information. The most current information on this device may be available on www.onsemi.com.

MARKING DIAGRAM



- | | |
|-------|------------------------|
| RU | = UL Marking |
| \$Y | = onsemi Logo |
| &Z | = Assembly Plant Code |
| &3 | = Numeric Date Code |
| GBU4A | = Specific Device Code |

GBU4A – GBU4M

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted) (Note 2)

| Symbol | Parameter | Value | | | | | | | Units | |
|-------------|---|---------------------------|-----|-----|-----|-----|-----|------|------------------|---|
| | | 4A | 4B | 4D | 4G | 4J | 4K | 4M | | |
| 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 | $T_A = 100^\circ\text{C}$ | | | | | | | 4.0 | A |
| | | $T_A = 40^\circ\text{C}$ | | | | | | | 3.0 | A |
| I_{FSM} | Non-Repetitive Peak Forward Surge Current 8.3 ms Single Half-Sine-Wave | 150 | | | | | | | A | |
| T_{STG} | Storage Temperature Range | -55 to +150 | | | | | | | $^\circ\text{C}$ | |
| T_J | Operating Junction Temperature | -55 to +150 | | | | | | | $^\circ\text{C}$ | |

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

2. These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

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

| Symbol | Parameter | Value | Units |
|-----------------|--|-------|---------------------------|
| P_D | Power Dissipation | 8 | W |
| $R_{\theta JA}$ | Thermal Resistance per Leg, Junction to Ambient (Note 3) | 19 | $^\circ\text{C}/\text{W}$ |

3. Device mounted on PCB with 0.5×0.5 inch (12×12 mm)

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

| Symbol | Parameter | Value | Units |
|--------|---|---------------------------|----------------------|
| V_F | Forward Voltage, per Element at 4.0 A | 1.0 | V |
| I_R | Reverse Current, per Element at Rated V_R | $T_A = 25^\circ\text{C}$ | 5.0 μA |
| | | $T_A = 125^\circ\text{C}$ | 500 μA |
| I^2t | I^2t Rating for Fusing | 93 | A^2s |

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

GBU4A – GBU4M

TYPICAL PERFORMANCE CHARACTERISTICS

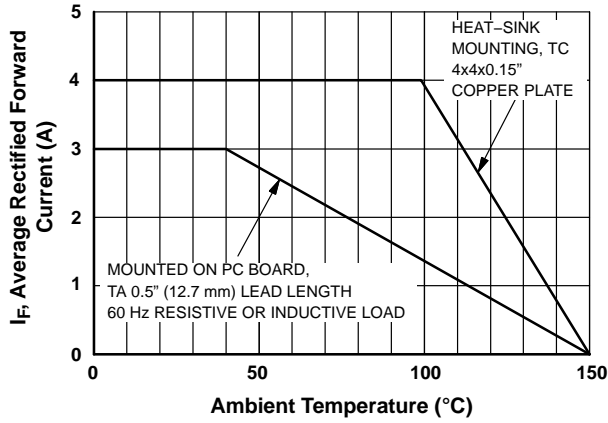


Figure 1. Forward Current Derating Curve

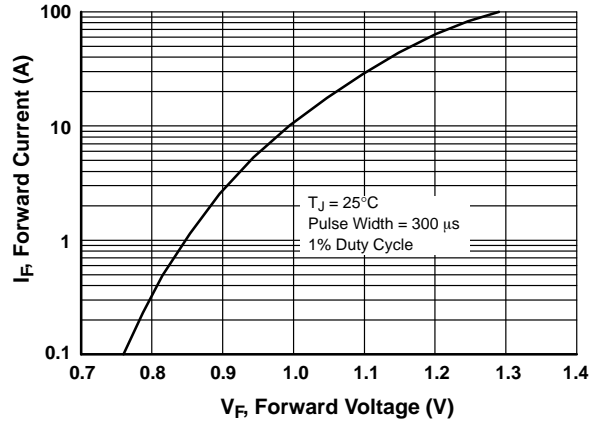


Figure 2. Forward Voltage Characteristics

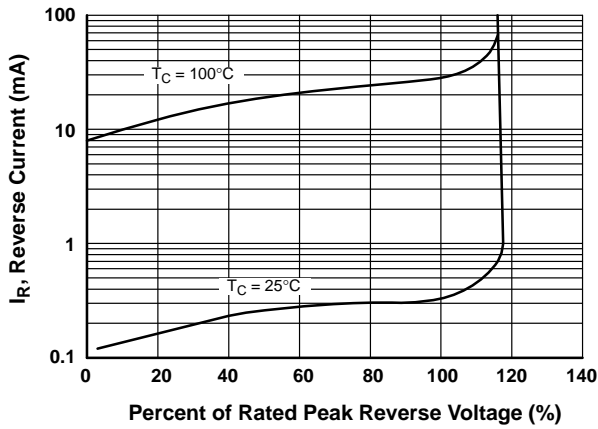


Figure 3. Reverse Current vs. Reverse Voltage

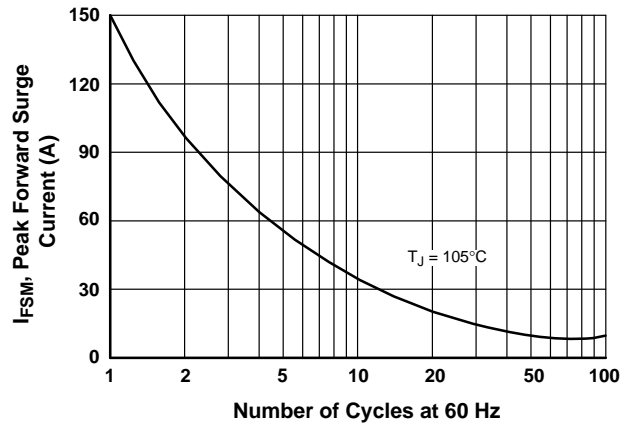


Figure 4. Non-Repetitive Surge Current

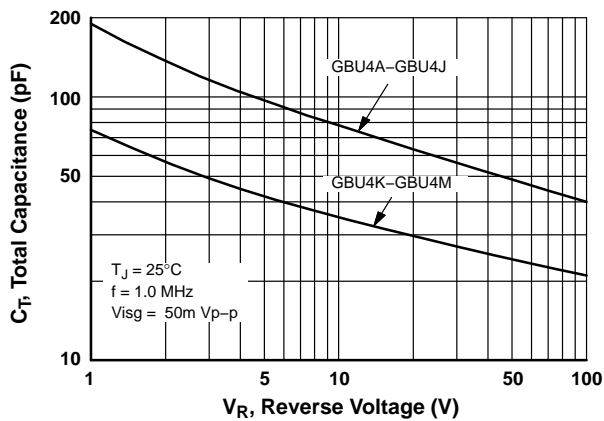
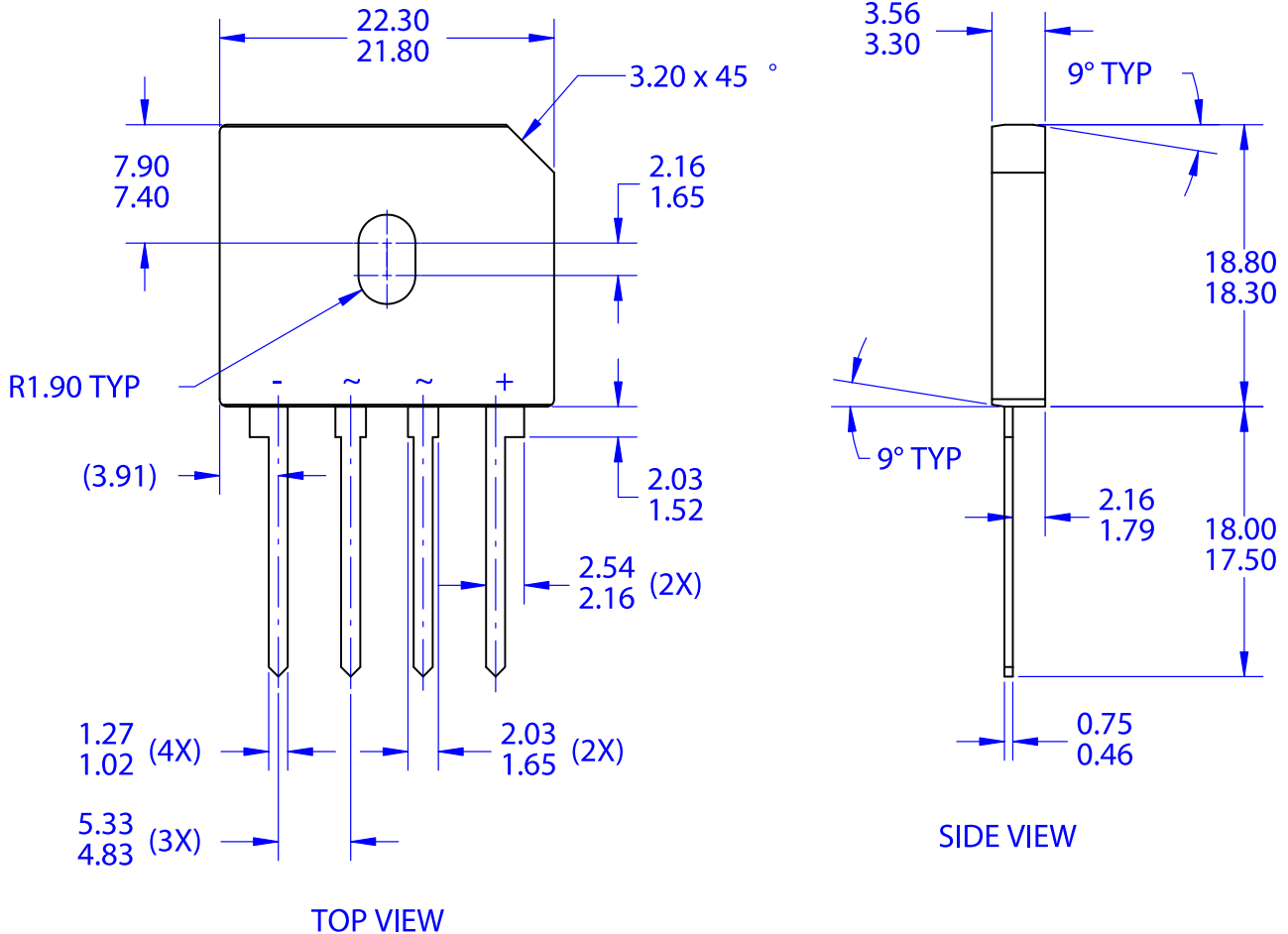


Figure 5. Total Capacitance

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