

Single Phase Glass Passivated Fast Recovery Bridge Rectifiers

**Reverse Voltage: 50V to 1000V
Forward Current: 4 Amp**

Features

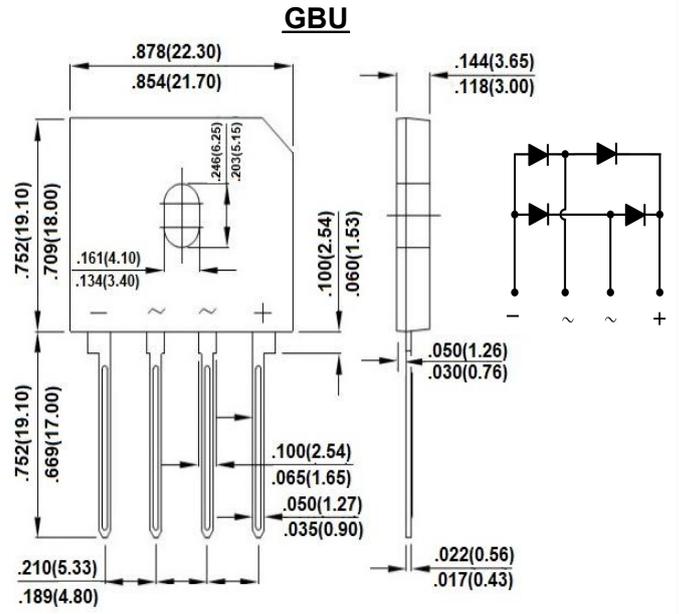
- Glass passivated chip junction
- Low forward voltage drop
- Low leakage current
- High forward surge capability
- Solder dip 260°C max. 10 s, per JESD 22-B106

Mechanical Data

- **Package:** GBU
- Molding compound meets UL 94 V-0 flammability rating
- **Terminals:** Matte tin plated leads, solderable per MIL-STD-750, Method 2026
- **Polarity:** Symbol marking on body

Typical Applications

General purpose use in AC/DC bridge full wave rectification for monitor, TV, printer, switching mode power supply, adapter, audio equipment, and home appliances applications.



Package Outline Dimensions in Inches (Millimeters)

Maximum Ratings and Electrical Characteristics (Ta=25°C Unless otherwise specified)

| Parameter&Test Conditions | | SYM. | RGBU 4005 | RGBU 401 | RGBU 402 | RGBU 404 | RGBU 406 | RGBU 408 | RGBU 410 | Unit |
|---|---------------------------------------|--------|------------|----------|----------|----------|----------|----------|----------|------|
| Device marking code | | | RGBU 4005 | RGBU 401 | RGBU 402 | RGBU 404 | RGBU 406 | RGBU 408 | RGBU 410 | |
| Maximum Recurrent Peak Reverse Voltage | | VRRM | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS Voltage | | VRMS | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | | VDC | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Output Rectified Current (FIG. 1) | With heatsink Tc =100°C (Note 1) | Io(AV) | 4.0 | | | | | | A | |
| | Without heatsink Ta =40°C (Note 2) | | 2.3 | | | | | | | |
| Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed On Rated Load | | IFSM | 110 | | | | | | A | |
| Operating junction range | | Tj | -55 to+150 | | | | | | °C | |
| Storage temperature range | | TSTG | -55 to+150 | | | | | | °C | |

Thermal Characteristics (Ta=25°C Unless otherwise specified)

| Parameter&Test Conditions | | SYM. | RGBU 4005 | RGBU 401 | RGBU 402 | RGBU 404 | RGBU 406 | RGBU 408 | RGBU 410 | Unit |
|--|--|------|-----------|----------|----------|----------|----------|----------|----------|------|
| Maximum Thermal Resistance per Leg, Junction To Ambient (Note 2) | | RθJA | 22 | | | | | | °C/W | |
| Maximum Thermal Resistance per Leg, Junction To Case (Note 1) | | RθJC | 4.2 | | | | | | °C/W | |

Electrical Characteristics (Ta=25°C Unless otherwise specified)

| Parameter&Test Conditions | | SYM. | RGBU 4005 | RGBU 401 | RGBU 402 | RGBU 404 | RGBU 406 | RGBU 408 | RGBU 410 | Unit |
|---|-------------------------------|------|-----------|----------|----------|----------|----------|----------|----------|------|
| Maximum reverse recovery time | IF=0.5A, IR=-1.0A, IRR=-0.25A | Trr | 150 | | | | 250 | 500 | | ns |
| Maximum Instantaneous Forward Voltage per diode | IF=2A | VFM | 1.3 | | | | | | V | |
| Maximum DC reverse current at rated DC blocking voltage per diode | TA = 25°C | IR | 5 | | | | | | µA | |
| | TA = 125°C | | 200 | | | | | | | |

Notes:

1. Units case mounted on 1.6" x 1.6" x 0.06" thick (4.0 cm x 4.0 cm x 0.15 cm) aluminum plate heatsink.
2. Units mounted in free air, no heatsink on PCB, 0.5" x 0.5" (12 mm x 12 mm) copper pads, 0.375" (9.5 mm) lead length.

Rating and Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED

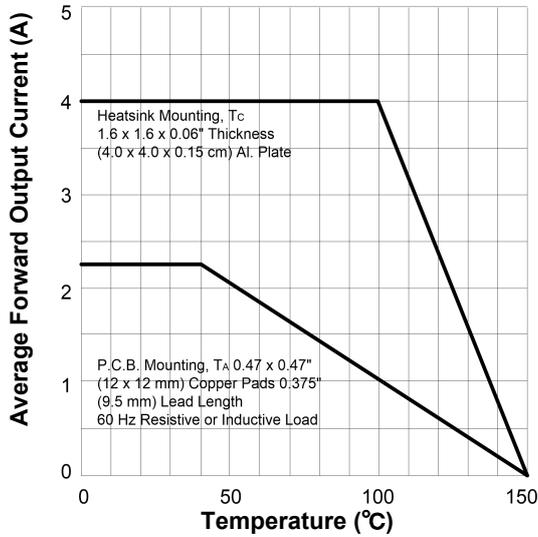


FIG. 2- -MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT Per Diode

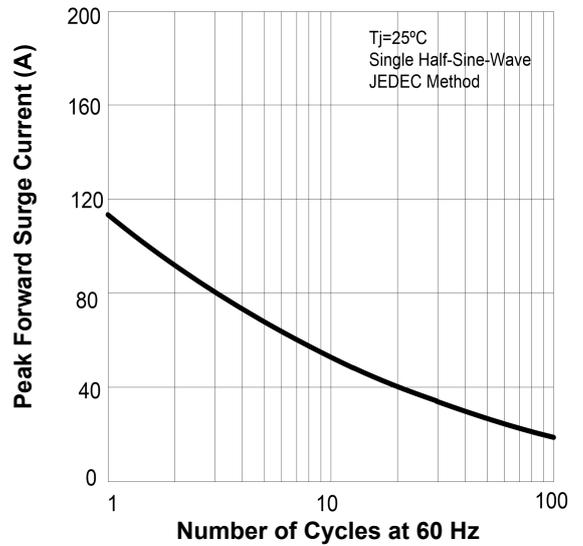


FIG. 3- TYPICAL FORWARD VOLTAGE

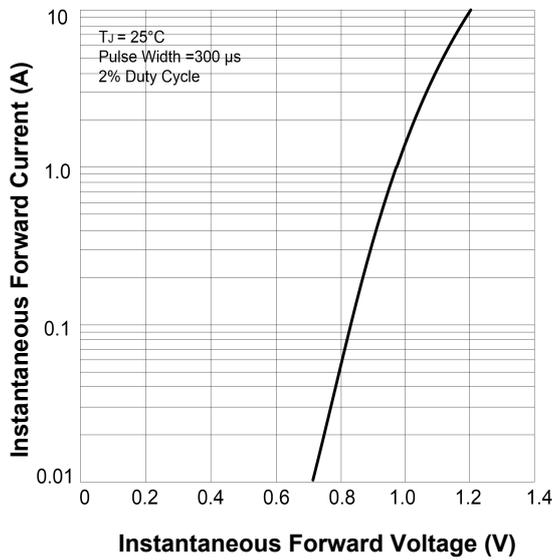
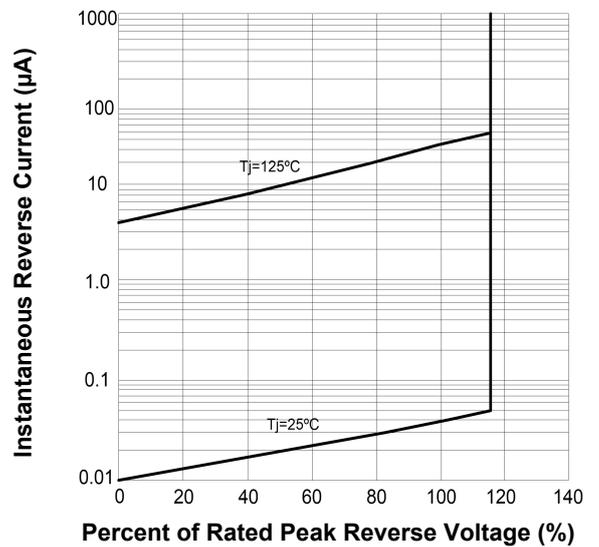


FIG. 4- TYPICAL REVERSE LEAKAGE



The curve above is for reference only.



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