



**E502650**

## Features

- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Lead Free Finish/RoHS Compliant (Note1) ("P" Suffix Designates Compliant. See Ordering Information)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- High Surge Overload Rating

## Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance 2.2°C/W Junction To Case

## Mechanical Data

- Mounting Torque: 5in-lbs

| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|----------------------------------------|---------------------|-----------------------------|
| GBU6A           | GBU6A          | 50V                                    | 35V                 | 50V                         |
| GBU6B           | GBU6B          | 100V                                   | 70V                 | 100V                        |
| GBU6D           | GBU6D          | 200V                                   | 140V                | 200V                        |
| GBU6G           | GBU6G          | 400V                                   | 280V                | 400V                        |
| GBU6J           | GBU6J          | 600V                                   | 420V                | 600V                        |
| GBU6K           | GBU6K          | 800V                                   | 560V                | 800V                        |
| GBU6M           | GBU6M          | 1000V                                  | 700V                | 1000V                       |

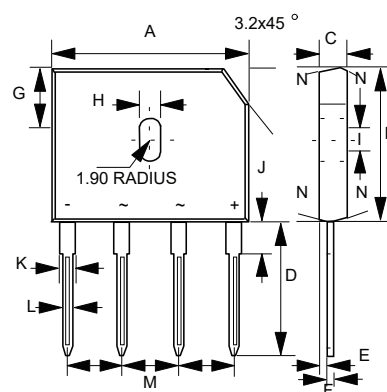
## Electrical Characteristics @ 25°C Unless Otherwise Specified

| Average Forward Current <sup>(NOTE 2)</sup>             | $I_{F(AV)}$ | 6.0A                                        | $T_C = 100^\circ\text{C}$                                                                                                                        |
|---------------------------------------------------------|-------------|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| Peak Forward Surge Current                              | $I_{FSM}$   | 175A<br>160A<br>350A<br>320A                | $T_J = 25^\circ\text{C}$ 8.3ms, Half Sine<br>$T_J = 125^\circ\text{C}$<br>$T_J = 25^\circ\text{C}$ 1.0ms, Half Sine<br>$T_J = 125^\circ\text{C}$ |
| Maximum Instantaneous Forward Voltage                   | $V_F$       | 1.0V                                        | $I_{FM} = 3.0\text{A};$<br>$T_J = 25^\circ\text{C}$                                                                                              |
| Rating for Fusing                                       | $I^2t$      | 127A <sup>2</sup> s<br>61.3A <sup>2</sup> s | $t < 8.3\text{ms}$<br>$t < 1.0\text{ms}$                                                                                                         |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | $I_R$       | 5μA<br>500μA                                | $T_J = 25^\circ\text{C}$<br>$T_J = 125^\circ\text{C}$                                                                                            |
| Typical Junction Capacitance                            | $C_J$       | 50pF                                        | Measured at 1.0MHz, $V_R = 4.0\text{V}$                                                                                                          |

Note: 1. High Temperature Solder Exemption Applied, See EU Directive Annex Notes 7a  
2. Unit Mounted on 50 x 50 x 1.6mm copper Plate Heatsink.

# 6 Amp Single Phase Glass Passivated Bridge Rectifier 50 to 1000 Volts

## GBU



| DIMENSIONS |              |       |       |       |      |
|------------|--------------|-------|-------|-------|------|
| DIM        | INCHES       |       | MM    |       | NOTE |
|            | MIN          | MAX   | MIN   | MAX   |      |
| A          | 0.860        | 0.880 | 21.80 | 22.30 |      |
| B          | 0.720        | 0.740 | 18.30 | 18.80 |      |
| C          | 0.130        | 0.142 | 3.30  | 3.60  |      |
| D          | 0.690        | 0.717 | 17.50 | 18.20 |      |
| E          | 0.030        | 0.039 | 0.76  | 1.00  |      |
| F          | 0.018        | 0.024 | 0.46  | 0.60  |      |
| G          | 0.290        | 0.310 | 7.40  | 7.90  |      |
| H          | 0.140        | 0.160 | 3.50  | 4.10  |      |
| I          | 0.065        | 0.085 | 1.65  | 2.16  |      |
| J          | 0.060        | 0.096 | 1.52  | 2.45  |      |
| K          | 0.077        | 0.098 | 1.95  | 2.50  |      |
| L          | 0.040        | 0.050 | 1.02  | 1.27  |      |
| M          | 0.190        | 0.210 | 4.83  | 5.33  |      |
| N          | 7.0° TYPICAL |       |       |       |      |

## Curve Characteristics

Fig. 1 - Forward Current Derating Curve

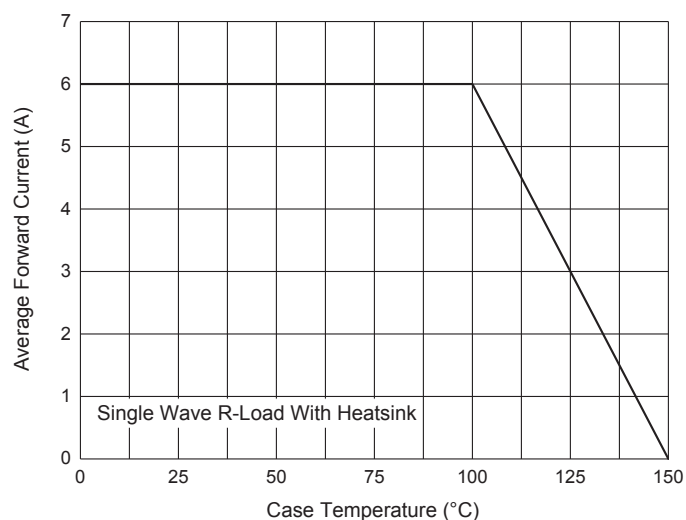


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

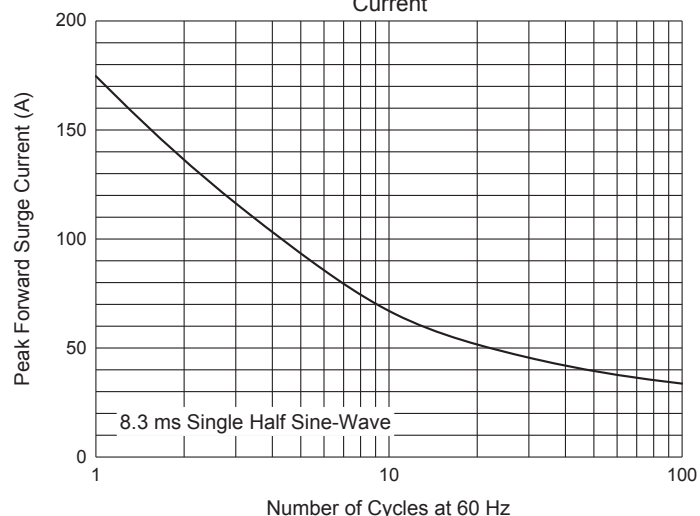


Fig. 3 - Typical Instantaneous Forward Characteristics

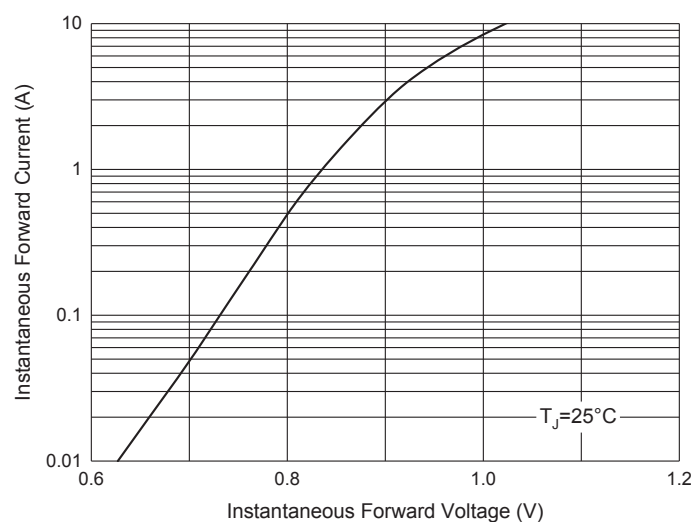
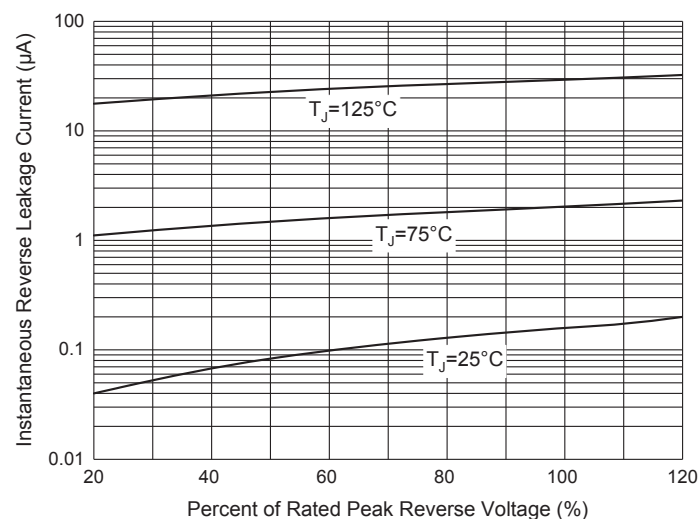


Fig. 4 - Typical Reverse Leakage Characteristics



## Ordering Information

| Device         | Packing         |
|----------------|-----------------|
| Part Number-BP | Bulk: 1Kpcs/Box |

Note : Adding "-HF" Suffix For Halogen Free, eg. Part Number-BP-HF

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