

Ultra Low VF Bridge Rectifier with Super Low Leakage Current

Voltage

600 V

Current

15A

GBJ-2

Features

- Oxide planar chip junction
- Low forward voltage drop ($V_F@0.75V$)
- Low leakage current ($I_R@20\mu A$)
- Lead free in compliance with EU RoHS 2.0
- Halogen-free according to IEC 61249 standard

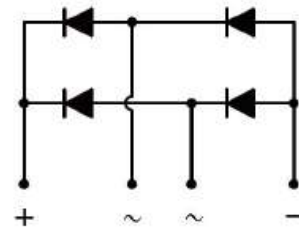


Mechanical Data

- Case : GBJ-2 Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 6.6972 grams

Application

- Computing Power / Desktop Power
- Game Console Power
- Server Power
- Air Conditioner out door power board
- High Power/High Efficiency Power
- Home Appliances Power Board



| Key Parameters | |
|--------------------|--------------|
| Parameter | Value |
| V_{RRM} | 600V |
| $I_F(AV)$ | 15A |
| I_{FSM} | 220A |
| $V_F@125^{\circ}C$ | 0.75V |
| I_R | 1uA |
| Package | GBJ-2 |

Maximum Ratings and Thermal Characteristics ($T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise noted)

| PARAMETER | | SYMBOL | LIMIT | UNITS |
|--|---------------------------------------|-----------------|---------|----------------------|
| Maximum Repetitive Peak Reverse Voltage | | V_{RRM} | 600 | V |
| Maximum RMS Voltage | | V_{RMS} | 420 | V |
| Maximum DC Blocking Voltage | | V_{DC} | 600 | V |
| Maximum Average Forward Current | With heatsink | $I_{F(AV)}$ | 15 | A |
| | Without heatsink | | 4.2 | |
| Peak Forward Surge Current : 8.3 ms Single Half Sine-Wave Superimposed On Rated Load | @ $T_A = 25\text{ }^{\circ}\text{C}$ | I_{FSM} | 220 | A |
| | @ $T_A = 125\text{ }^{\circ}\text{C}$ | | 176 | |
| Peak Forward Surge Current : 1.0 ms Single Half Sine-Wave Superimposed On Rated Load | @ $T_A = 25\text{ }^{\circ}\text{C}$ | I_{FSM} | 440 | A |
| | @ $T_A = 125\text{ }^{\circ}\text{C}$ | | 352 | |
| $I^2 t$ rating for fusing ($t = 8.3\text{ms}$) | | $I^2 t$ | 200 | A^2S |
| Typical Junction Capacitance Measured at 1 MHZ And Applied $V_R = 4\text{ V}$ | | C_J | 130 | pF |
| Typical Thermal Resistance (Note 1) (with heatsink) | | $R_{\theta JA}$ | 8 | $^{\circ}\text{C/W}$ |
| | | $R_{\theta JL}$ | 3 | |
| | | $R_{\theta JC}$ | 1.2 | |
| Operating junction and storage temperature range | | T_J, T_{STG} | -55~150 | $^{\circ}\text{C}$ |
| Mounting torque @ Recommend torque:5Kg.cm | | Tor | 8 | Kg.cm |

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

| PARAMETER | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNITS |
|-----------------|--------|---|------|------|------|---------------|
| Forward Voltage | V_F | $I_F = 7.5\text{ A}, T_J = 25\text{ }^{\circ}\text{C}$ | - | 0.88 | 0.92 | V |
| | | $I_F = 7.5\text{ A}, T_J = 125\text{ }^{\circ}\text{C}$ | - | 0.75 | - | |
| Reverse Current | I_R | $V_R = 600\text{ V}, T_J = 25\text{ }^{\circ}\text{C}$ | - | 0.2 | 1 | μA |
| | | $V_R = 600\text{ V}, T_J = 125\text{ }^{\circ}\text{C}$ | - | 20 | - | |

NOTES :

1. Device mounted on 200 mm * 200 mm * 10 mm Cu Plate heat sink.

TYPICAL CHARACTERISTIC CURVES

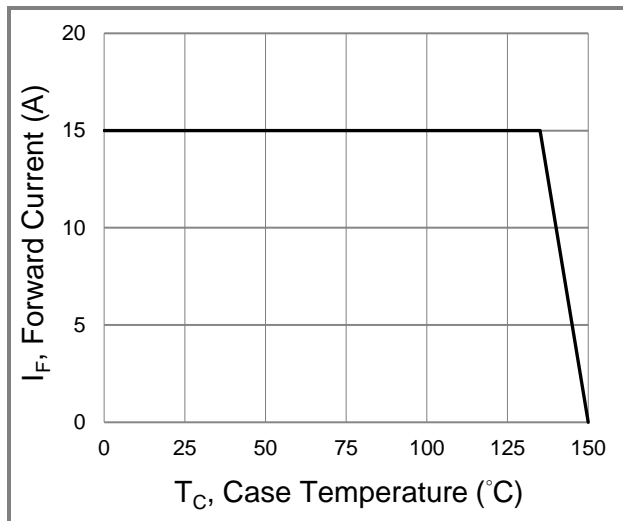


Fig.1 Forward Current Derating Curve

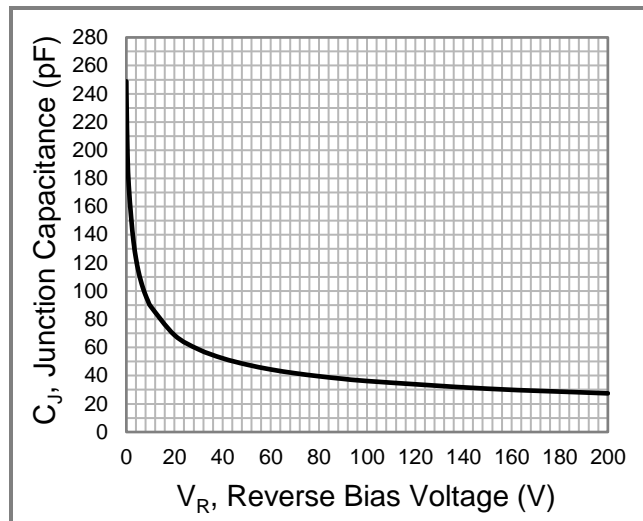


Fig.2 Typical Junction Capacitance

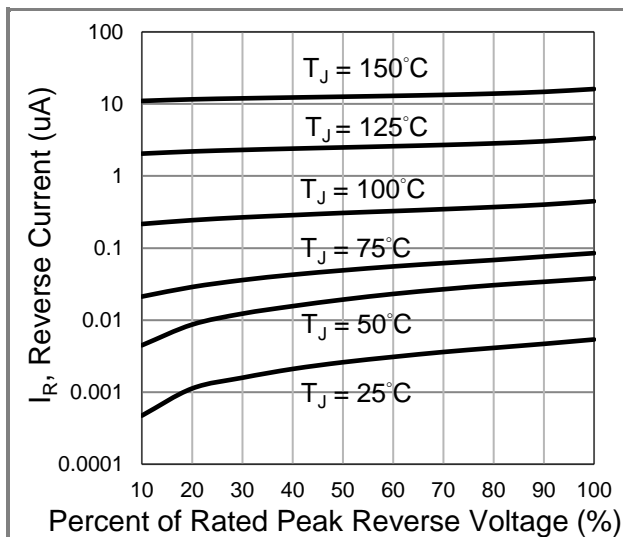


Fig.3 Typical Reverse Characteristics

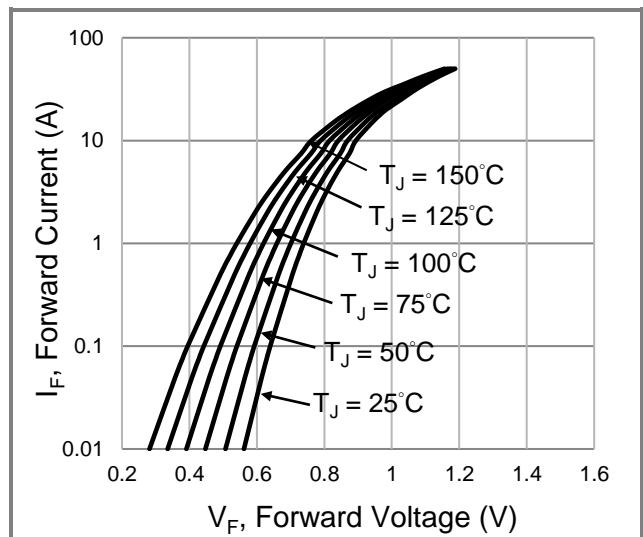
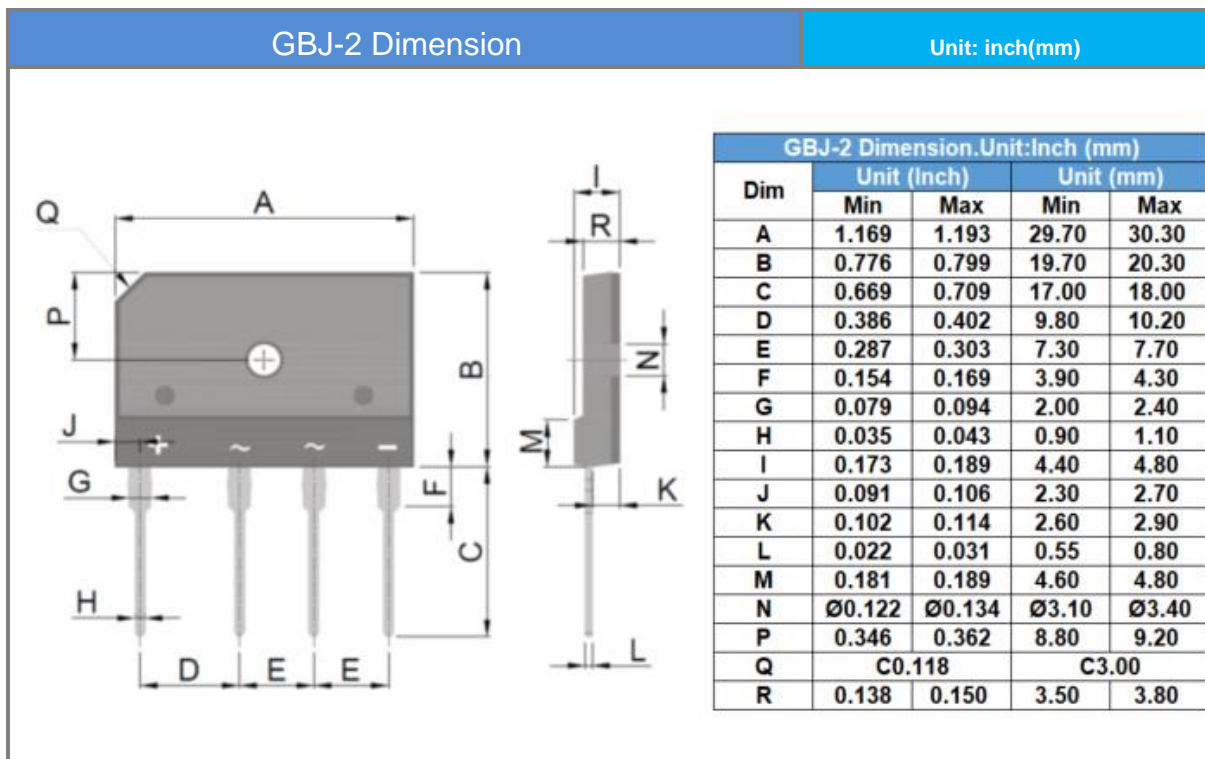


Fig.4 Typical Forward Characteristics

Product and Packing Information

| Part No. | Package Type | Packing Type | Marking |
|------------|--------------|---------------|------------|
| GBJ1506ULV | GBJ-2 | 15 pcs / tube | GBJ1506ULV |

Packaging Information



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