# 800V With High Tj Ultra Low VF Bridge Rectifier

| Voltage | 800 V | Current | 35A |
|---|---|---|---|

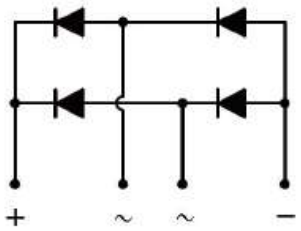
## GBJ-2


### Features

- Oxide planar chip junction
- Low forward voltage drop (VF@0.72V)
- Low leakage current (IR@20uA)
- 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

- Power: Server / AI / IND
- PC Power: 80+Platinum Titanium
- Power: Redundant / Telecom
- Gaming Power: NB / PC
- PD > 100W

| Key Parameters | |
|---|---|
| **Parameter** | **Value** |
| $V_{RRM}$ | 800V |
| $I_F(AV)$ | 35A |
| $I_{FSM}$ | 400A |
| $V_F$@175°C | 0.72V |
| $I_R$ | 1uA |
| $T_J$ max. | 175°C |
| Package | GBJ-2 |

## Maximum Ratings and Thermal Characteristics ($T_A$ = 25 °C unless otherwise noted)

| PARAMETER | | SYMBOL | LIMIT | UNITS |
|---|---|---|---|---|
| Maximum Repetitive Peak Reverse Voltage | | $V_{RRM}$ | 800 | V |
| Maximum RMS Voltage | | $V_{RMS}$ | 560 | V |
| Maximum DC Blocking Voltage | | $V_{DC}$ | 800 | V |
| Maximum Average Forward Current | With heatsink | $I_{F(AV)}$ | 35 | A |
| | Without heatsink | | 6 | |
| Peak Forward Surge Current : 8.3 ms Single Half Sine-Wave Superimposed On Rated Load | @ $T_A$ = 25 °C | $I_{FSM}$ | 400 | A |
| | @ $T_A$ = 125 °C | | 320 | |
| Peak Forward Surge Current : 1.0 ms Single Half Sine-Wave Superimposed On Rated Load | @ $T_A$ = 25 °C | $I_{FSM}$ | 800 | A |
| | @ $T_A$ = 125 °C | | 640 | |
| $I^2t$ rating for fusing ( t = 8.3ms) | | $I^2t$ | 664 | $A^2S$ |
| Typical Junction Capacitance Measured at 1 MHZ And Applied $V_R$ = 4 V | | $C_J$ | 250 | pF |
| Typical Thermal Resistance (Note 1) (with heatsink) | | $R_{\theta JA}$ | 6 | °C/W |
| | | $R_{\theta JL}$ | 3 | |
| | | $R_{\theta JC}$ | 1 | |
| Operating junction and storage temperature range | | $T_J$, $T_{STG}$ | -55~175 | °C |
| Mounting torque @ Recommend torque:5Kg.cm | | Tor | 8 | Kg.cm |

## Electrical Characteristics ($T_A$ = 25 °C unless otherwise noted)

| PARAMETER | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNITS |
|---|---|---|---|---|---|---|
| Forward Voltage | $V_F$ | $I_F$ = 17.5 A, $T_J$ = 25 °C | - | 0.88 | 0.92 | V |
| | | $I_F$ = 17.5 A, $T_J$ = 125 °C | - | 0.75 | - | |
| Reverse Current | $I_R$ | $V_R$ = 800 V, $T_J$ = 25 °C | - | 0.2 | 1 | uA |
| | | $V_R$ = 800 V, $T_J$ = 125 °C | - | 20 | - | |

NOTES :

1. Device mounted on 100 mm * 94 mm * 26 mm Fin type heat sink.

## TYPICAL CHARACTERISTIC CURVES

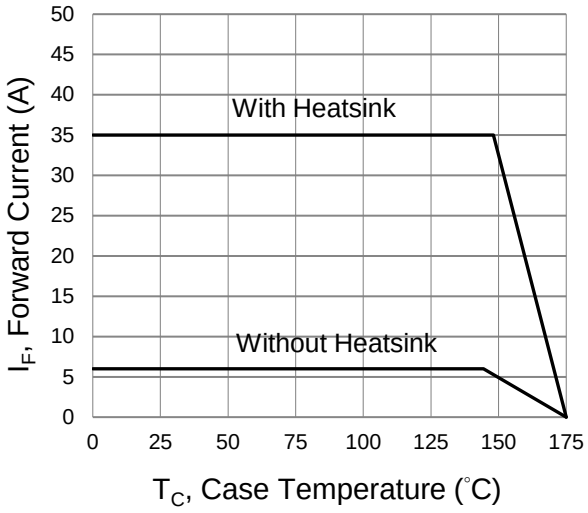



Fig.1 Forward Current Derating Curve

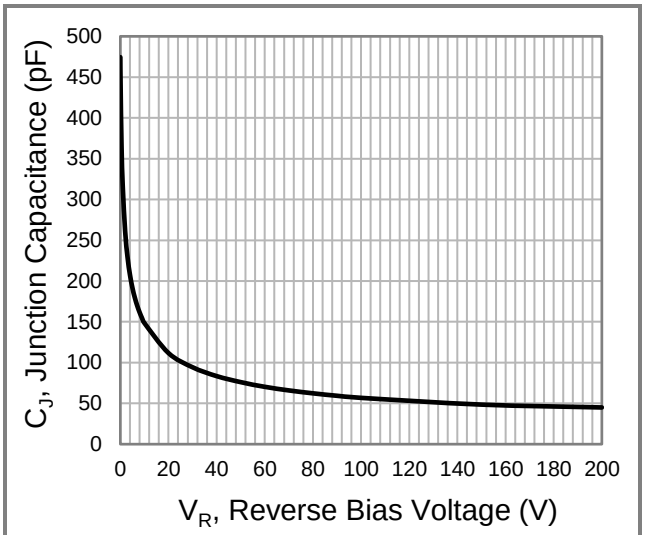



Fig.2 Typical Junction Capacitance

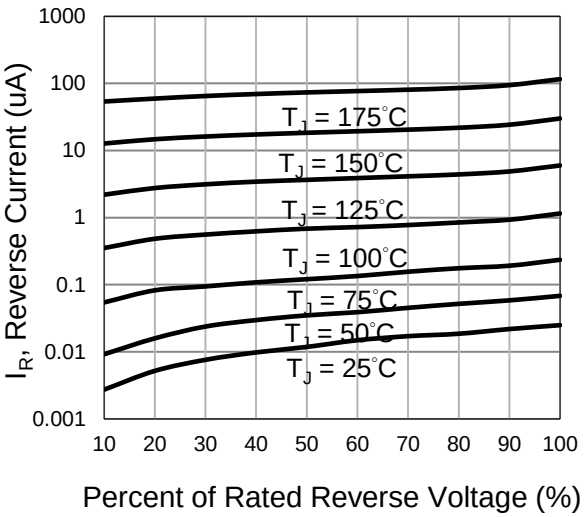



Fig.3 Typical Reverse Characteristics

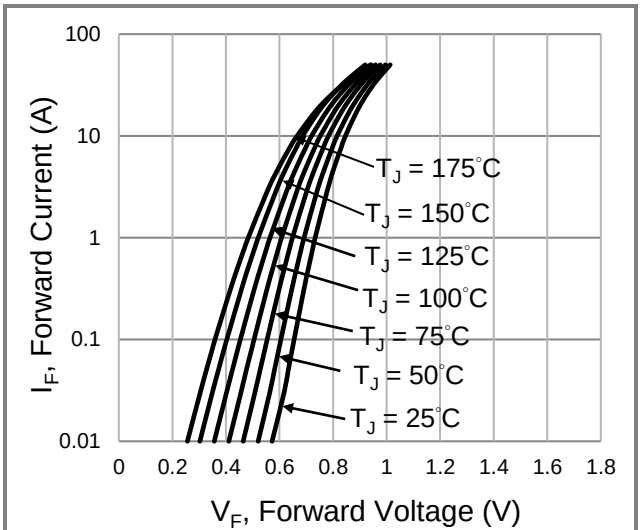


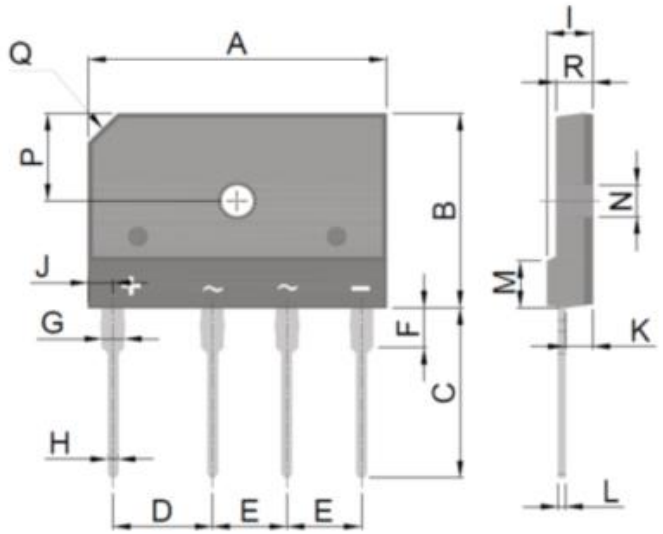

Fig.4 Typical Forward Characteristics

## Product and Packing Information

| Part No. | Package Type | Packing Type | Marking |
|---|---|---|---|
| GBJ3508HULV | GBJ-2 | 15 pcs / tube | GBJ3508HULV |

## Packaging Information

GBJ-2 Dimension — Unit: inch(mm)




| GBJ-2 Dimension.Unit:Inch (mm) | | | | |
|---|---|---|---|---|
| Dim | Unit (Inch) | | Unit (mm) | |
| | Min | Max | Min | Max |
| A | 1.169 | 1.193 | 29.70 | 30.30 |
| B | 0.776 | 0.799 | 19.70 | 20.30 |
| C | 0.669 | 0.709 | 17.00 | 18.00 |
| D | 0.386 | 0.402 | 9.80 | 10.20 |
| E | 0.287 | 0.303 | 7.30 | 7.70 |
| F | 0.154 | 0.169 | 3.90 | 4.30 |
| G | 0.079 | 0.094 | 2.00 | 2.40 |
| H | 0.035 | 0.043 | 0.90 | 1.10 |
| I | 0.173 | 0.189 | 4.40 | 4.80 |
| J | 0.091 | 0.106 | 2.30 | 2.70 |
| K | 0.102 | 0.114 | 2.60 | 2.90 |
| L | 0.022 | 0.031 | 0.55 | 0.80 |
| M | 0.181 | 0.189 | 4.60 | 4.80 |
| N | Ø0.122 | Ø0.134 | Ø3.10 | Ø3.40 |
| P | 0.346 | 0.362 | 8.80 | 9.20 |
| Q | C0.118 | | C3.00 | |
| R | 0.138 | 0.150 | 3.50 | 3.80 |

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