



E502650

Features

- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Glass Passivated Chip Junction
- High Surge Forward Current Capability
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant (Note 1)("P" Suffix Designates RoHS Compliant. See Ordering Information)

6 Amp Bridge Rectifier 1000 Volts

Maximum Ratings @ 25°C (Unless Otherwise Specified)

| Parameter | Symbol | Value | Unit |
|--|-------------|-------|----------------------|
| Peak Repetitive Reverse Voltage | V_{RRM} | 1000 | V |
| Working Peak Reverse Voltage | V_{RWM} | | |
| DC Blocking Voltage | V_R | | |
| RMS Reverse Voltage | V_{RMS} | 700 | V |
| Average Rectified Forward Current @ $T_C=115^\circ\text{C}$ | $I_{F(AV)}$ | 6 | A |
| Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave | I_{FSM} | 150 | A |
| Non-Repetitive Peak Surge Current @ 1ms Square Wave | | 280 | |
| I^2t Rating for Fusing @ $1\text{ms} \leq t \leq 8.3\text{ms}$ | I^2t | 93 | A^2s |
| Dielectric strength @ Terminals to Case, AC 1 Minute | V_{dis} | 2 | KV |

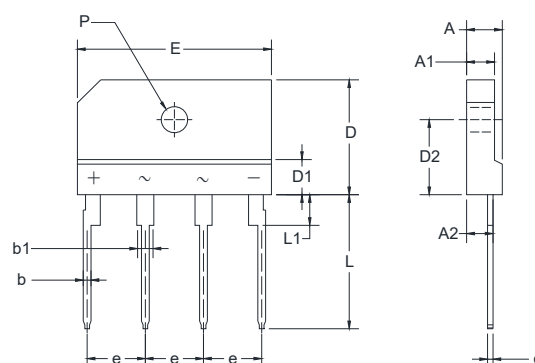
Internal Structure

| Simplified Outline | Graphic Symbol |
|--------------------|----------------|
| | |

Note:

1.High temperature solder exemption applied, see EU directive annex 7a.

KBJ



| DIMENSIONS | | | | | |
|------------|--------|-------|-------|-------|------|
| DIM | INCHES | | MM | | NOTE |
| | MIN | MAX | MIN | MAX | |
| A | 0.173 | 0.189 | 4.40 | 4.80 | |
| A1 | 0.134 | 0.150 | 3.40 | 3.80 | |
| A2 | 0.126 | 0.134 | 3.20 | 3.40 | |
| b | 0.035 | 0.043 | 0.90 | 1.10 | |
| b1 | 0.059 | 0.075 | 1.50 | 1.90 | |
| c | 0.024 | 0.031 | 0.60 | 0.80 | |
| D | 0.579 | 0.602 | 14.70 | 15.30 | |
| D1 | 0.150 | 0.165 | 3.80 | 4.20 | |
| D2 | 0.374 | 0.413 | 9.50 | 10.50 | |
| E | 0.976 | 0.992 | 24.80 | 25.20 | |
| e | 0.287 | 0.303 | 7.30 | 7.70 | |
| L | 0.669 | 0.709 | 17.00 | 18.00 | |
| L1 | 0.130 | 0.146 | 3.30 | 3.70 | |
| P | 0.122 | 0.134 | 3.10 | 3.40 | Ø |

Thermal characteristics

| Symbol | Parameter | Conditions | Min | Typ | Max | Unit |
|---------------|---|------------------|-----|-----|-----|------|
| T_J | Operating Junction Temperature Range | | -55 | | 150 | °C |
| T_{stg} | Storage Temperature Range | | -55 | | 150 | °C |
| $R_{th(J-C)}$ | Thermal Resistance from Junction to Case | Note 1 | | 3 | | °C/W |
| $R_{th(J-A)}$ | Thermal Resistance from Junction to Ambient | Without Heatsink | | 20 | | °C/W |

Note:

1.Device mounted on 75mm x 45mm x 5.5mm Aluminum Plate Heatsink.

Mechanical Data

Recommended Mounting Torque: 0.5 N•m

Electrical Characteristics @ 25°C Unless Otherwise Specified(Per Diode)

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|----------------------|--------|---|-----|-----|----------|---------|
| Forward Voltage | V_F | $I_F=3A; T_J=25^{\circ}C$ | | | 1.0 | V |
| Reverse Current | I_R | at Rated $V_R; T_J=25^{\circ}C$ at Rated $V_R; T_J=125^{\circ}C$ | | | 5 100 | μA |
| Junction Capacitance | C_J | $V_R=4V; f=1MHz; T_J=25^{\circ}C$ | | 45 | | pF |

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

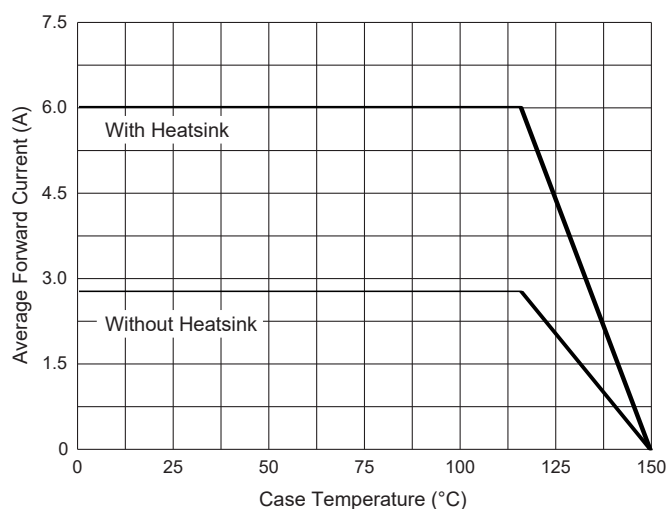


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

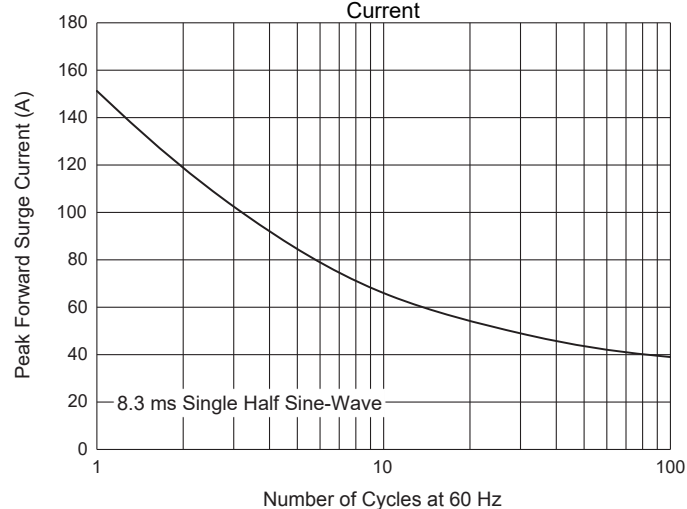


Fig. 3 - Typical Forward Characteristics

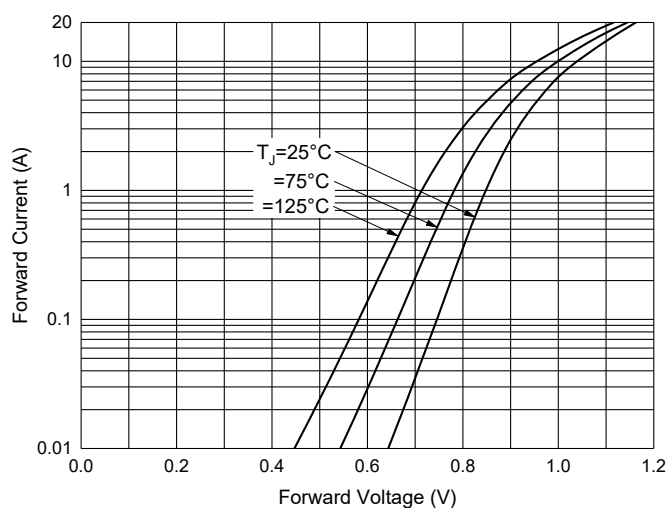


Fig. 4 - Typical Reverse Leakage Characteristics

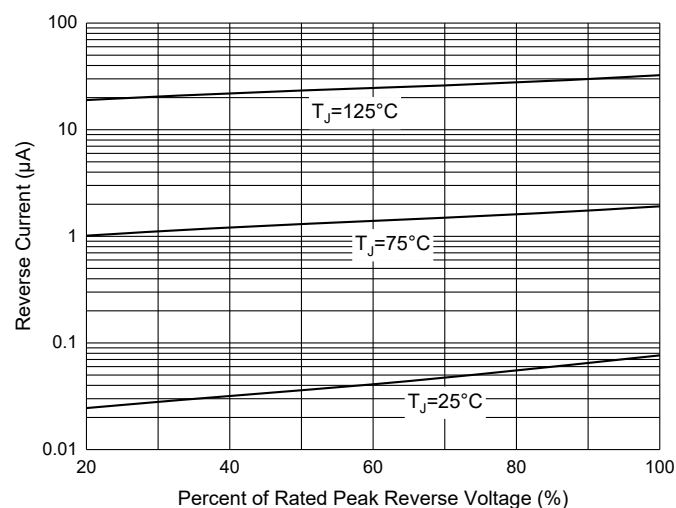
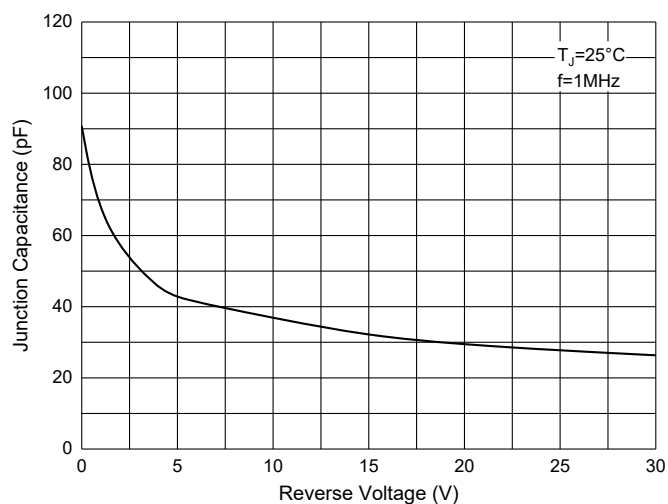


Fig. 5 - Typical Capacitance Characteristics



Ordering Information

| Device | Packing |
|-------------|--|
| KBJ610GS-BP | Bulk:20pcs/Tube,1Kpcs/Box,2Kpcs/Carton |

Note : Adding "-HF" Suffix For Halogen Free, eg. KBJ610GS-BP-HF

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