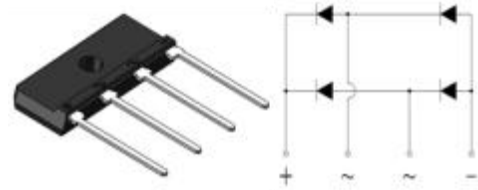


Reverse Voltage 600~1000V Output Current 4.0A

Features

- Thin Single In-Line package;
- Ideal for printed circuit boards;
- Glass Passivated chip junction;
- Low profile package;
- High Surge current capability;
- High case dielectric strength of 2000 VRMS ;
- Plastic package has Underwrites Laboratory Flammability Classification 94V-0;
- Same footprint V.S KBJ (3S) package;



KBJL

Typical Applications

- General purpose use in AC-to-DC bridge full wave rectification for Switching Power Supply, Home Appliances, Office Equipment, Industrial Automation applications.

Mechanical Data

- Case: KBJL; Epoxy meets UL-94V-0 Flammability rating; Base P/N with suffix"E" on packing code-halogen free;
- Terminals: Matte tin plated leads, solderable per J-STD-002 and JESD22-B102; E3 suffix for customer grade, meet JESD 201 class 1A whisker test;
- High temperature soldering guaranteed: Solder Dip 270°C, 10seconds;
- Polarity: As marked on body;
- Mounting Torque: 5.7cm-kg (5.0 inches-lbs) max;
- Recommend Torque: Mounting Torque: 5.7cm-kg (5inches-lbs);

Maximum Ratings (TA = 25 °C unless otherwise noted)

| Maximum Ratings (TA = 25 °C unless otherwise noted) | | | | | |
|--|--------------------|---------------|--------|--------|--------------------|
| Parameter | Symbol | KBJL4J | KBJL4K | KBJL4M | Unit |
| Maximum repetitive peak reverse voltage | V_{RRM} | 600 | 800 | 1000 | V |
| Maximum RMS voltage | V_{RMS} | 420 | 560 | 700 | V |
| Maximum DC blocking voltage | V_{DC} | 600 | 800 | 1000 | V |
| Maximum average forward rectified output current at | $T_C=110^{\circ}C$ | $4.0^{(1)}$ | | | A |
| | $T_A=25^{\circ}C$ | $2.0^{(2)}$ | | | |
| Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load | I_{FSM} | 90 | | | A |
| Rating for fusing(t<8.3ms) | I^2t | 34 | | | A ² sec |
| Operating junction and storage temperature range | T_J, T_{STG} | - 55 to + 150 | | | °C |

Electrical Characteristics (TA = 25 °C unless otherwise noted)

| Parameter | Symbol | KBJL4J | KBJL4K | KBJL4M | Unit |
|---|-------------------------|--------|--------|--------|-------|
| Maximum instantaneous forward voltage drop per leg at 2.0A | V_F | 0.96 | | | Volts |
| Maximum DC reverse current at rated DC blocking voltage per leg | TA=25°C | 5.0 | | | µA |
| | TA=125°C | 150 | | | |
| Typical thermal resistance per leg | $R_{\theta JA}^{(2)}$ | 20 | | | °C/W |
| | $R_{\theta JC}^{(1,3)}$ | 2.5 | | | |

- 1). Unit case mounted on Al plate heatsink;
- 2). Units mounted on PCB without heatsink;
- 3). Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with M3 screw.

Ratings and Characteristics Curves

(TA = 25°C unless otherwise noted)

FIG.1-DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

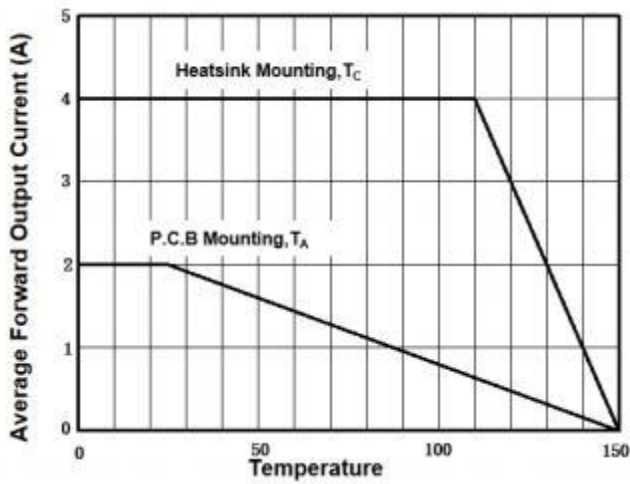


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

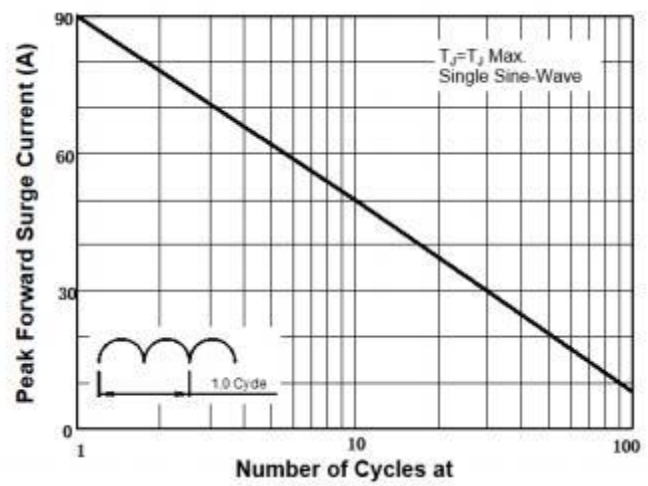


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

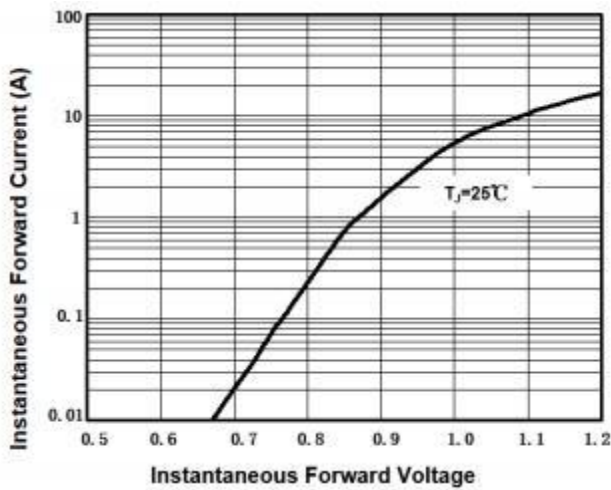
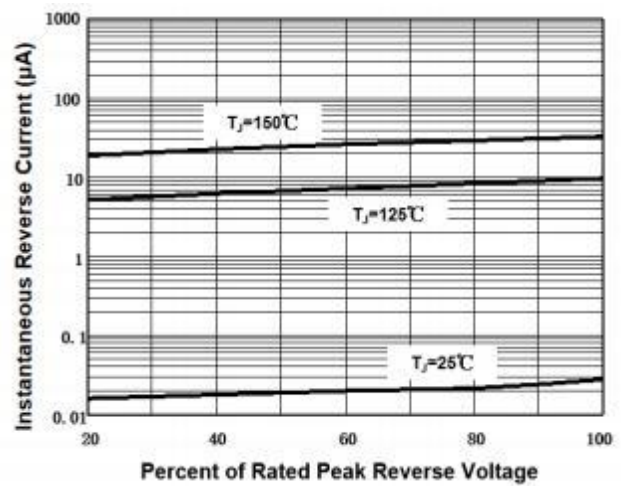


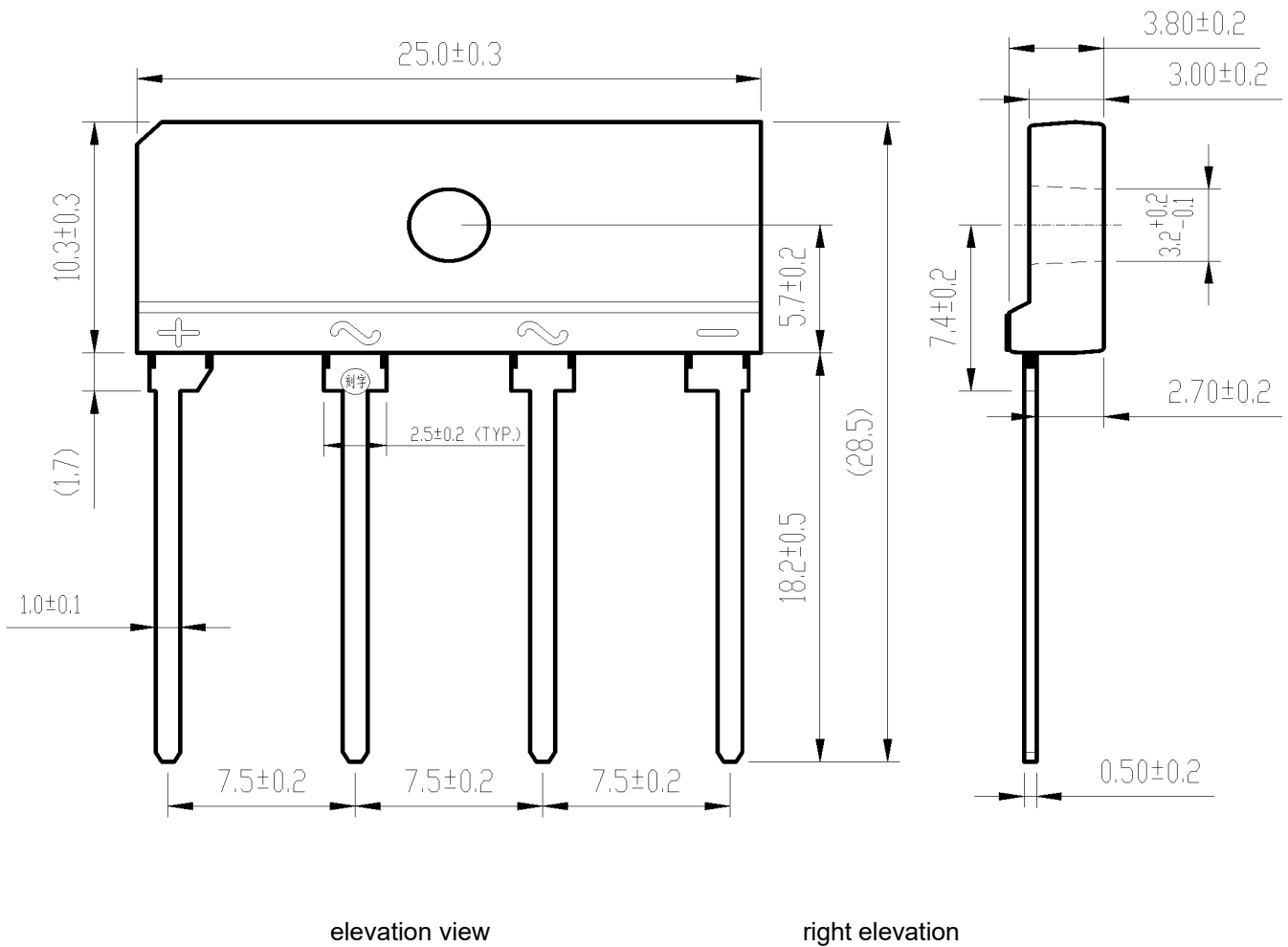
FIG.4-TYPICAL PEAK REVERSE VOLTAGE CHARACTERISTICS



Package Outline Dimensions

Package Dimensions in mm

First angle projection



elevation view

right elevation

Revision History

| Document Version | Date of release | Discription of changes |
|------------------|-----------------|------------------------|
| Rev.A | 2021/3/1 | Released Datasheet |
| Rev.B | 2023/12/8 | Modify document format |

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