

Glass Passivated Bridge Rectifiers

FEATURES

- Glass passivated junction
- Ideal for printed circuit board
- High case dielectric strength
- Typical IR less than 0.1μA
- High surge current capability
- UL Recognized File # E-326243
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition



KBU



MECHANICAL DATA

Case: KBU

Molding compound, UL flammability classification rating 94V-0

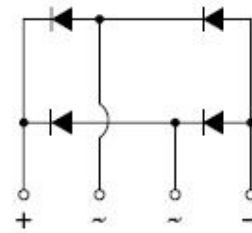
Base P/N with suffix "G" on packing code - green compound (halogen-free)

Terminal: Matte tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 1A whisker test

Mounting torque: 0.56 Nm max.

Weight: 7.2 g (approximately)



| MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25°C unless otherwise noted) | | | | | | | | | |
|--|--------------------------------------|--------------|----------|----------|----------|----------|----------|----------|------------------|
| PARAMETER | SYMBOL | KBU 601G | KBU 602G | KBU 603G | KBU 604G | KBU 605G | KBU 606G | KBU 607G | Unit |
| Maximum repetitive peak reverse voltage | V _{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS voltage | V _{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC blocking voltage | V _{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum average forward rectified current | I _{F(AV)} | 6 | | | | | | | A |
| Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load | I _{FSM} | 175 | | | | | | | A |
| Rating for fusing (t<8.3ms) | I ² t | 127 | | | | | | | A ² s |
| Maximum instantaneous forward voltage (Note 1) I _F = 3 A I _F = 6 A | V _F | 1.0 1.1 | | | | | | | V |
| Maximum DC reverse current at rated DC blocking voltage T _J =25 °C T _J =125°C | I _R | 5 500 | | | | | | | μA |
| Typical junction capacitance per leg | C _j | 400 | | | | | | | pF |
| Typical thermal resistance | R _{θJC} R _{θJA} | 3.1 8.6 | | | | | | | °C/W |
| Operating junction temperature range | T _J | - 55 to +150 | | | | | | | °C |
| Storage temperature range | T _{STG} | - 55 to +150 | | | | | | | °C |

Note 1: Pulse Test with PW=300μs, 1% Duty Cycle

Note 2: Measured at 1MHz and applied Reverse Voltage of 4.0V D.C.

ORDERING INFORMATION

| PART NO. | PACKING CODE | PACKING CODE SUFFIX | PACKAGE | PACKING |
|---------------------|--------------|---------------------|---------|------------|
| KBU60xG (Note 1) | T0 | G | KBU | 500 / Tray |

Note 1: "x" defines voltage from 50V (KBU601G) to 1000V (KBU607G)

EXAMPLE

| PREFERRED P/N | PART NO. | PACKING CODE | PACKING CODE SUFFIX | DESCRIPTION |
|---------------|----------|--------------|---------------------|----------------|
| KBU607G T0 | KBU607G | T0 | | |
| KBU607G T0G | KBU607G | T0 | G | Green compound |

RATINGS AND CHARACTERISTICS CURVES

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

FIG. 1 MAXIMUM DERATING CURVE FOR OUTPUT CURRENT

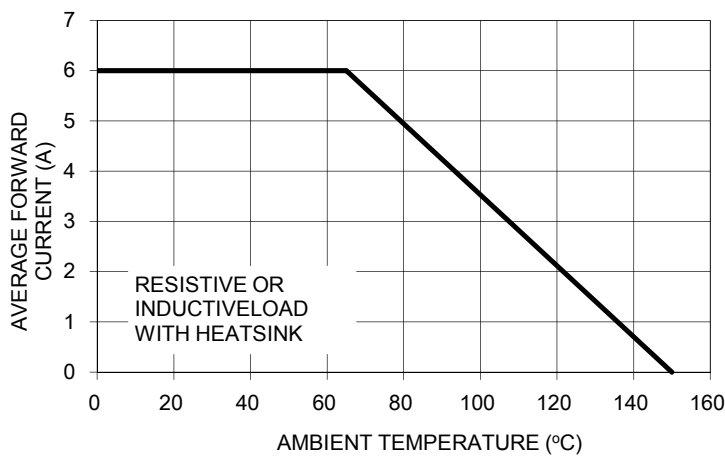


FIG. 2 MAXIMUM FORWARD SURGE CURRENT PER LEG

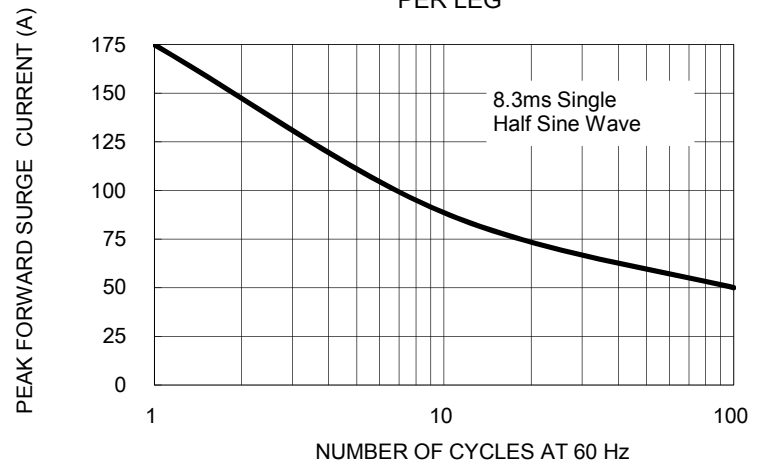


FIG. 3 TYPICAL REVERSE CHARACTERISTICS PER LEG

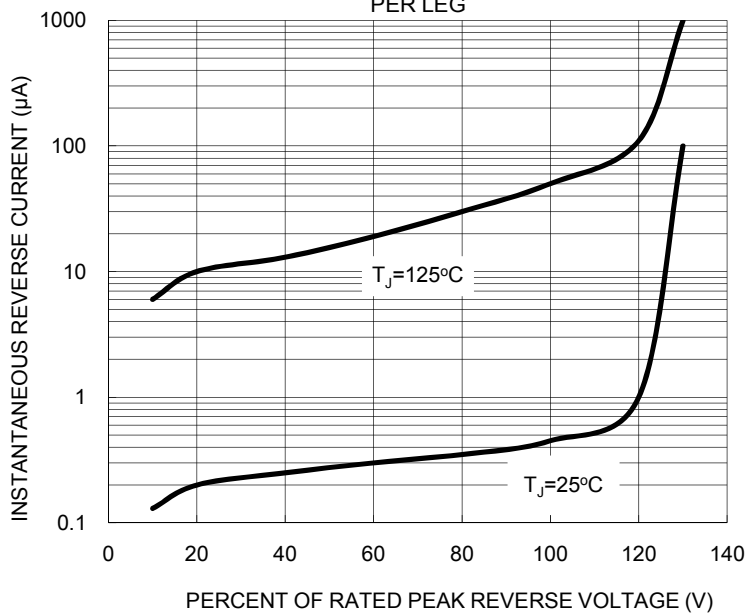


FIG. 4 TYPICAL FORWARD CHARACTERISTICS PER LEG

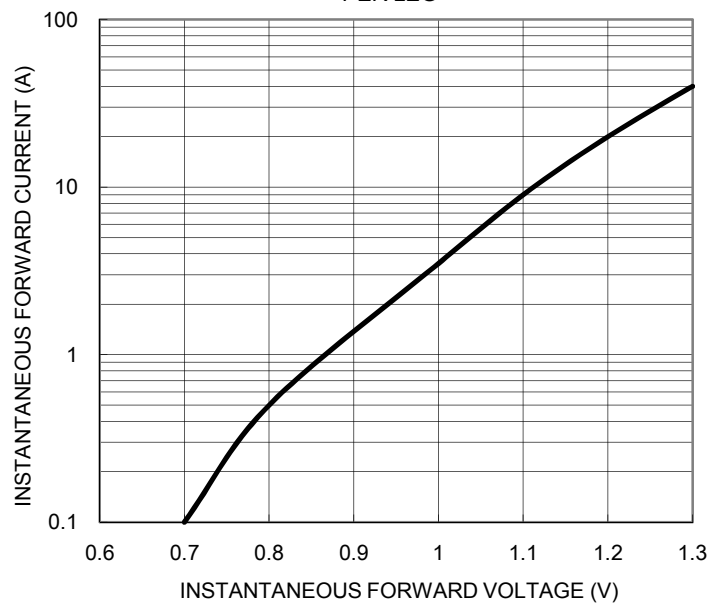
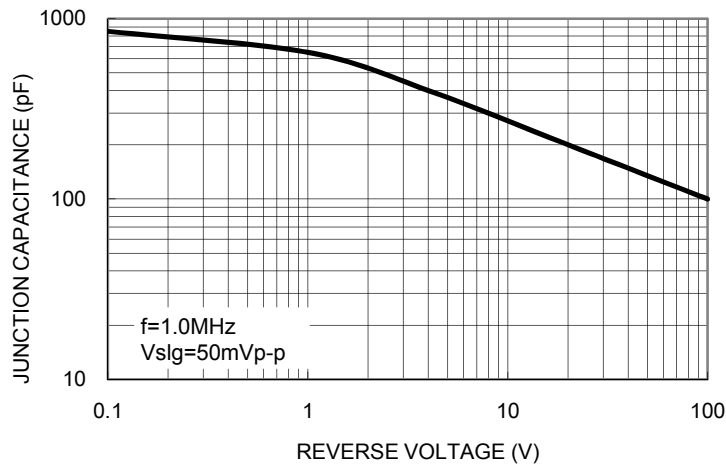
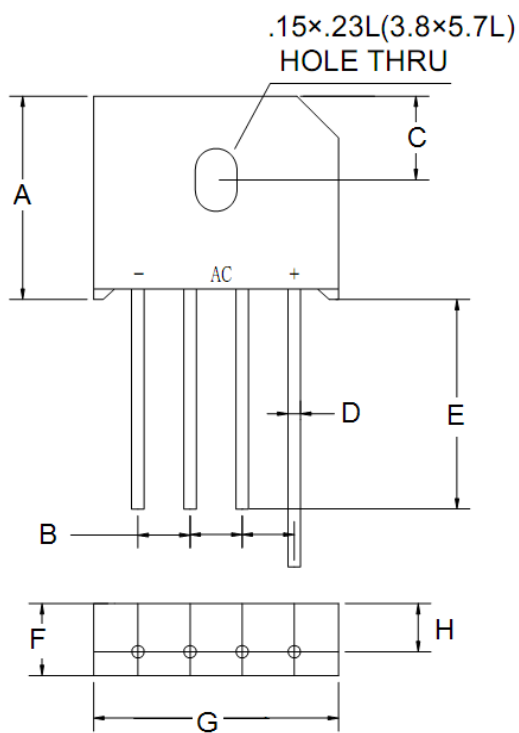


FIG. 5 TYPICAL JUNCTION CAPACITANCE



PACKAGE OUTLINE DIMENSIONS

KBU



| DIM. | Unit (mm) | | Unit (inch) | |
|------|------------|------|--------------|-------|
| | Min | Max | Min | Max |
| A | 18.8 | 19.8 | 0.740 | 0.780 |
| B | 4.6 | 5.6 | 0.181 | 0.220 |
| C | 8.2 (TYP.) | | 0.322 (TYP.) | |
| D | 1.2 | 1.3 | 0.047 | 0.051 |
| E | 20.0 | - | 0.787 | - |
| F | 6.8 | 7.1 | 0.268 | 0.280 |
| G | 22.7 | 23.7 | 0.894 | 0.933 |
| H | 4.6 | 5.0 | 0.181 | 0.197 |

MARKING DIAGRAM



- P/N = Specific Device Code
- G = Green Compound
- YWW = Date Code
- F = Factory Code

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