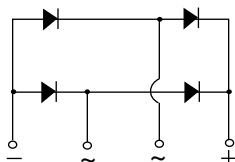
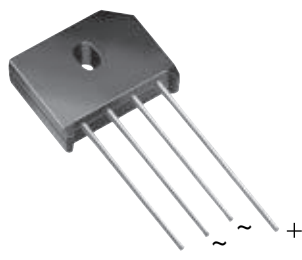




Single-Phase Bridge Rectifier



Case Style KBU

FEATURES

- UL recognition, file number E54214
- Ideal for printed circuit boards
- High surge current capability
- High case dielectric strength of 1500 V_{RMS}
- Solder dip 275 °C max. 10 s, per JESD 22-B106
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912


RoHS
COMPLIANT

PRIMARY CHARACTERISTICS

| | |
|--|---|
| Package | KBU |
| I _{F(AV)} | 4 A |
| V _{RRM} | 50 V, 100 V, 200 V, 400 V, 600 V, 800 V, 1000 V |
| I _{FSM} | 200 A |
| I _R | 5 µA |
| V _F at I _F = 4 A | 1.0 V |
| T _J max. | 150 °C |
| Diode variations | In-Line |

TYPICAL APPLICATIONS

General purpose use in AC/DC bridge full wave rectification for monitor, TV, printer, SMPS, adapter, audio equipment, and home appliances applications.

MECHANICAL DATA

Case: KBU

Molding compound meets UL 94 V-0 flammability rating
Base P/N-E4 - RoHS-compliant, commercial grade

Terminals: Silver plated leads, solderable per J-STD-002 and JESD22-B102

Polarity: As marked on body

Mounting Torque: 10 cm·kg (8.8 inches·lbs) max.

Recommended Torque: 5.7 cm·kg (5 inches·lbs)

MAXIMUM RATINGS (T_A = 25 °C unless otherwise noted)

| PARAMETER | SYMBOL | KBU4A | KBU4B | KBU4D | KBU4G | KBU4J | KBU4K | KBU4M | 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 output current at T _C = 100 °C ⁽¹⁾ T _A = 30 °C ⁽²⁾ | I _{F(AV)} | 4.0 | | | | | | | A |
| Peak forward surge current single sine-wave superimposed on rated load | I _{FSM} | 200 | | | | | | | A |
| Operating junction and storage temperature range | T _J , T _{STG} | - 50 to + 150 | | | | | | | °C |

Notes

- (1) Units mounted on a 2.0" x 1.6" x 0.3" thick (5 cm x 4 cm x 0.8 cm) aluminum plate
- (2) Units mounted on PCB with 0.5" x 0.5" (12 mm x 12 mm) copper pads and 0.375" (9.5 mm) lead length

ELECTRICAL CHARACTERISTICS (T_A = 25 °C unless otherwise noted)

| PARAMETER | TEST CONDITIONS | SYMBOL | KBU4A | KBU4B | KBU4D | KBU4G | KBU4J | KBU4K | KBU4M | UNIT |
|---|-------------------------|----------------|-------|-------|-------|-------|-------|-------|-------|------|
| Maximum instantaneous forward drop per diode | I _F = 4.0 A | V _F | 1.0 | | | | | | | V |
| Maximum DC reverse current at rated DC blocking voltage per diode | T _A = 25 °C | I _R | 5.0 | | | | | | | µA |
| | T _A = 125 °C | | 1.0 | | | | | | | mA |



| THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted) | | | | | | | | | |
|---|------------------|--------------------|-------|-------|-------|-------|-------|-------|------|
| PARAMETER | SYMBOL | KBU4A | KBU4B | KBU4D | KBU4G | KBU4J | KBU4K | KBU4M | UNIT |
| Typical thermal resistance | R _{θJA} | 19 ⁽²⁾ | | | | | | | °C/W |
| | R _{θJL} | 4.0 ⁽¹⁾ | | | | | | | |

Notes

- (1) Units mounted on a 2.0" x 1.6" x 0.3" thick (5 cm x 4 cm x 0.8 cm) aluminum plate
(2) Units mounted on PCB with 0.5" x 0.5" (12 mm x 12 mm) copper pads and 0.375" (9.5 mm) lead length

| ORDERING INFORMATION (Example) | | | | |
|--------------------------------|-----------------|------------------------|---------------|----------------------|
| PREFERRED P/N | UNIT WEIGHT (g) | PREFERRED PACKAGE CODE | BASE QUANTITY | DELIVERY MODE |
| KBU4J-E4/51 | 8.0 | 51 | 250 | Anti-static PVC tray |

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

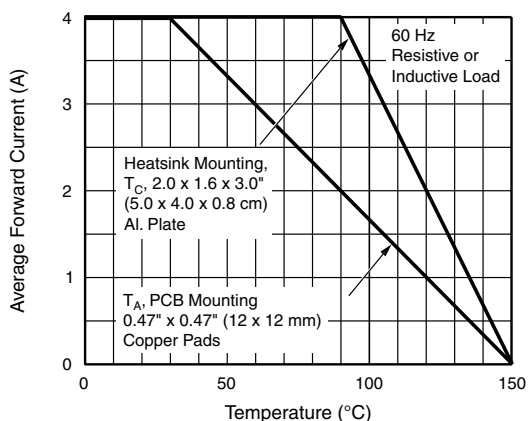


Fig. 1 - Derating Curve Output Rectified Current

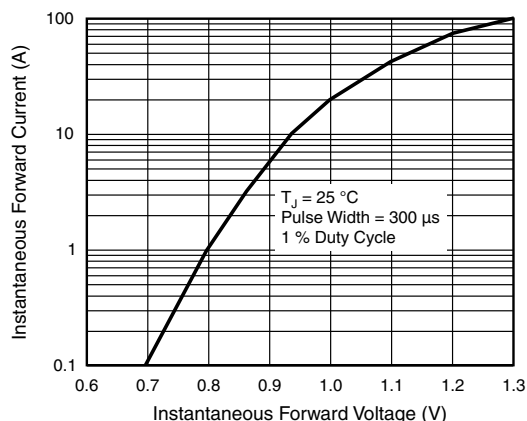


Fig. 3 - Typical Forward Characteristics Per Diode

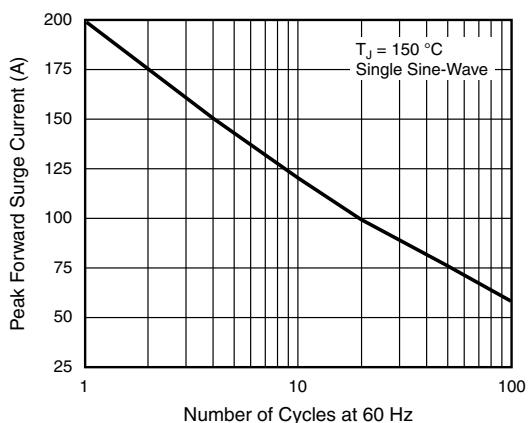


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

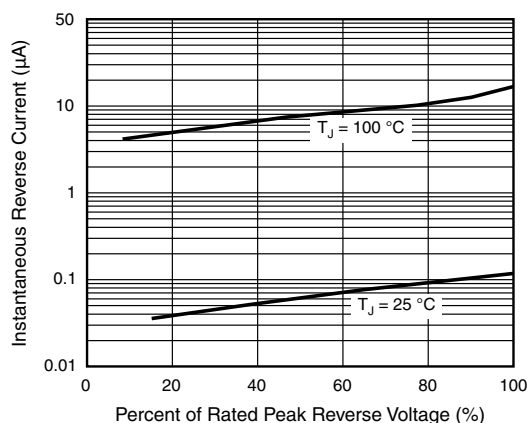


Fig. 4 - Typical Reverse Leakage Characteristics Per Diode

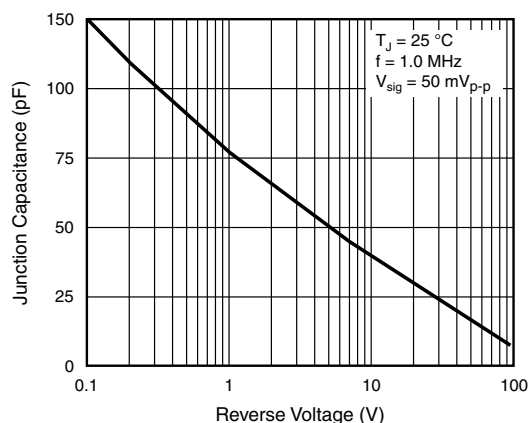
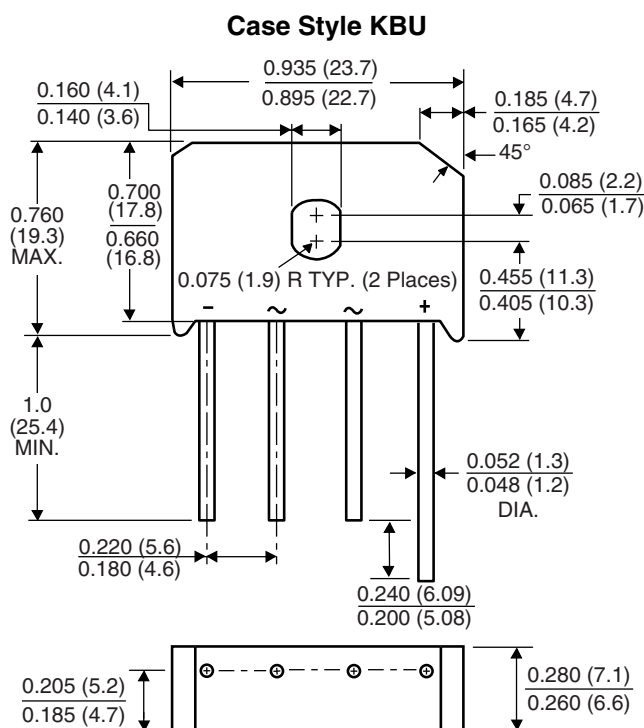


Fig. 5 - Typical Junction Capacitance Per Diode

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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