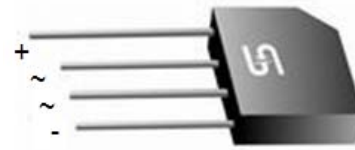


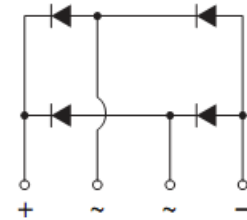
Glass Passivated Single-Phase Bridge Rectifier

FEATURES

- Ideal for printed circuit board
- High case dielectric strength
- High surge current capability
- Typical IR less than 0.1uA
- 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



KBP



MECHANICAL DATA

Case: Molded plastic body

Molding compound, UL flammability classification rating 94V-0

Base P/N with suffix "G" on packing code - halogen-free

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

Meet JESD 201 class 1A whisker test

Polarity: Polarity as marked on the body

Weight: 1.54 g (approximately)

| MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25°C unless otherwise noted) | | | | | | | | | |
|--|---|--------------|----------|----------|----------|----------|----------|----------|------------------|
| PARAMETER | SYMBOL | KBP 301G | KBP 302G | KBP 303G | KBP 304G | KBP 305G | KBP 306G | KBP 307G | 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)} | 3 | | | | | | | A |
| Peak forward surge current, 8.3 ms single half sine-wave | T _J = 25°C | 80 | | | | | | | A |
| | T _J = 125°C | 50 | | | | | | | |
| Peak forward surge current, 1.0 ms single half sine-wave | T _J = 25°C | 160 | | | | | | | A |
| | T _J = 125°C | 100 | | | | | | | |
| Rating of fusing (t<8.3ms) | I ² t | 26.5 | | | | | | | A ² s |
| Maximum instantaneous forward voltage (Note 1) I _F = 3 A | V _F | 1.1 | | | | | | | V |
| Maximum reverse current @ rated VR | T _J =25 °C T _J =125 °C | 10 | | | | | | | μA |
| | | 500 | | | | | | | |
| Typical junction capacitance per leg (Note 2) | C _j | 215 | | | | | | | pF |
| Typical thermal resistance | R _{θjL} | 11 | | | | | | | °C/W |
| | R _{θjA} | 30 | | | | | | | |
| 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 bias of 4.0V DC

ORDERING INFORMATION

| PART NO. | PACKING CODE | GREEN COMPOUND CODE | PACKAGE | PACKING |
|---------------------|--------------|---------------------|---------|-----------|
| KBP30xG (Note 1) | C2 | Suffix "G" | KBP | 25 / Tube |

Note 1: "x" defines voltage from 50V (KBP301G) to 1000V (KBP307G)

EXAMPLE

| PREFERRED P/N | PART NO. | PACKING CODE | GREEN COMPOUND CODE | DESCRIPTION |
|---------------|----------|--------------|---------------------|----------------|
| KBP306G C2 | KBP306G | C2 | | |
| KBP306G C2G | KBP306G | C2 | G | Green compound |

RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

FIG.1 FORWARD CURRENT DERATING CURVE

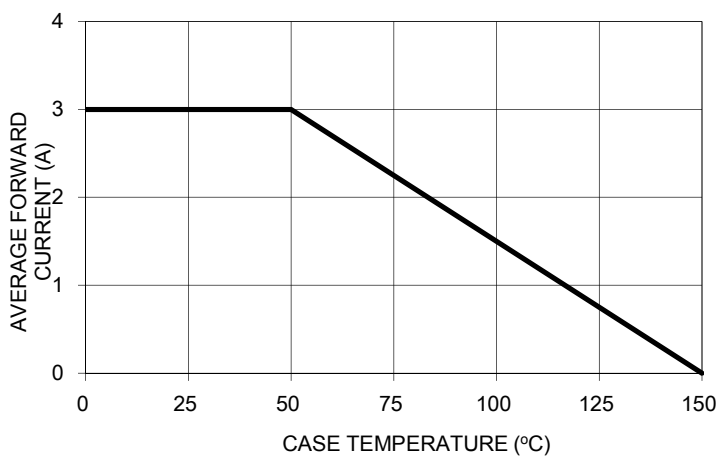


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

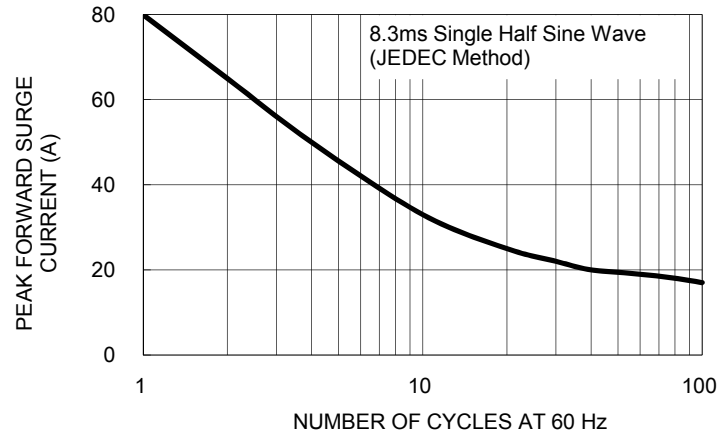


FIG. 3 TYPICAL REVERSE CHARACTERISTICS

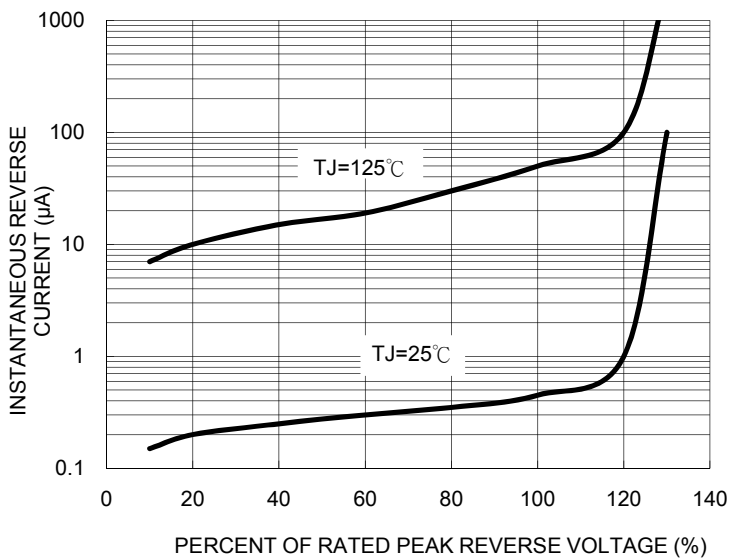


FIG. 4 TYPICAL FORWARD CHARACTERISTICS

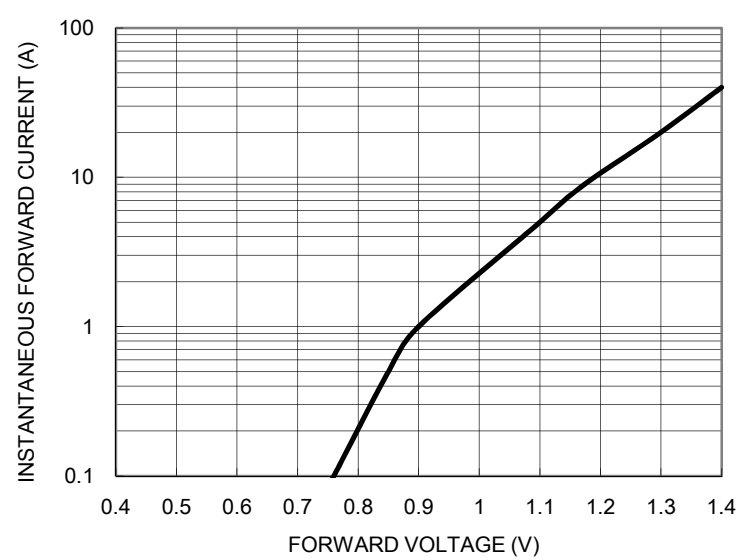
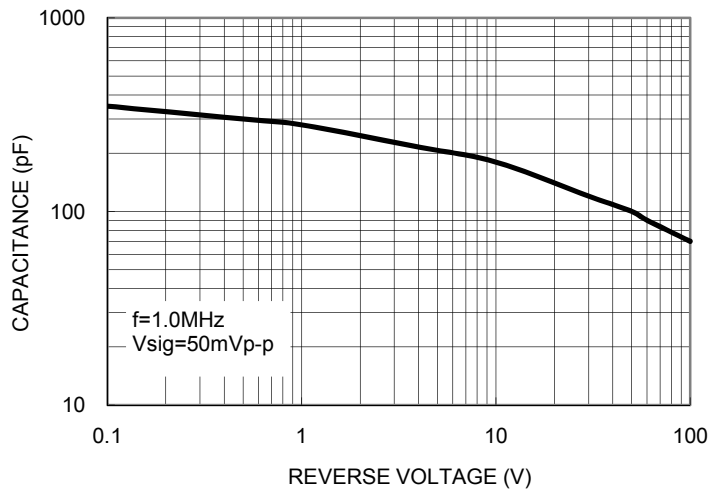
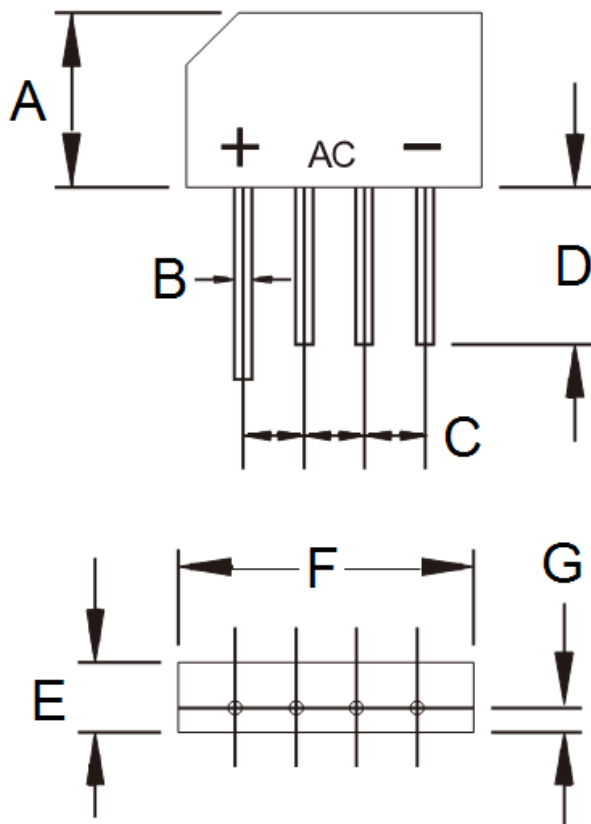


FIG. 5 TYPICAL JUNCTION CAPACITANCE



PACKAGE OUTLINE DIMENSIONS



| DIM. | Unit (mm) | | Unit (inch) | |
|------|-----------|-------|-------------|-------|
| | Min | Max | Min | Max |
| A | 10.60 | 11.68 | 0.417 | 0.460 |
| B | 0.70 | 0.90 | 0.028 | 0.035 |
| C | 3.60 | 4.10 | 0.142 | 0.161 |
| D | 12.70 | - | 0.500 | - |
| E | 3.70 | 3.90 | 0.146 | 0.154 |
| F | 14.22 | 15.24 | 0.560 | 0.600 |
| G | 1.27 | - | 0.050 | - |

MARKING DIAGRAM



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

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