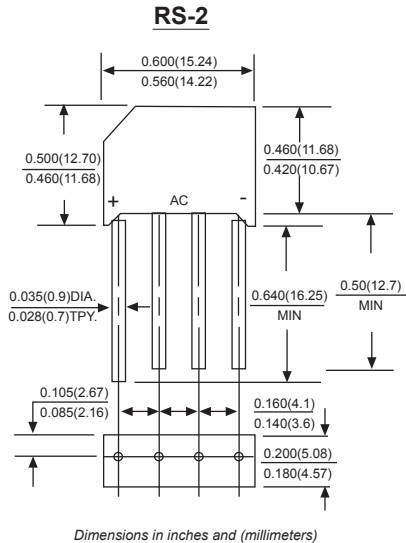


KBP005 THRU KBP10 AND RS201 THRU RS207

SILICON BRIDGE RECTIFIERS

Reverse Voltage - 50 to 1000 Volts Forward Current - 2.0 Amperes



FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Ideal for printed circuit boards
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed:
260°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

MECHANICAL DATA

Case: Molded plastic body

Terminals: Plated leads solderable per MIL-STD-750, Method 2026

Polarity: Polarity symbols marked on case

Mounting Position: Any

Weight: 0.069 ounce, 1.95 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

| | SYMBOLS | KBP005 RS201 | KBP01 RS202 | KBP02 RS203 | KBP04 RS204 | KBP06 RS205 | KBP08 RS206 | KBP10 RS207 | UNITS |
|---|-----------------|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|---------------------------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | VOLTS |
| Maximum RMS voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | VOLTS |
| Maximum DC blocking voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | VOLTS |
| Maximum average forward output rectified current at $T_A=50^\circ\text{C}$ (Note 2) | $I_{(AV)}$ | 2.0 | | | | | | | Amps |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 50.0 | | | | | | | Amps |
| Rating for Fusing ($t < 8.3\text{ms}$) | I^2t | 10 | | | | | | | A^2s |
| Maximum instantaneous forward voltage drop per bridge element at 1.0A | V_F | 1.0 | | | | | | | Volts |
| Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$ | I_R | 10 | | | | | | | μA |
| | | 0.5 | | | | | | | mA |
| Typical Junction Capacitance (Note 1) | C_J | 20 | | | | | | | pF |
| Typical Thermal Resistance (Note 2) | $R_{\theta JA}$ | 28 | | | | | | | $^\circ\text{C}/\text{W}$ |
| Operating junction temperature range | T_J | -60 to +150 | | | | | | | $^\circ\text{C}$ |
| storage temperature range | T_{STG} | -60 to +150 | | | | | | | $^\circ\text{C}$ |

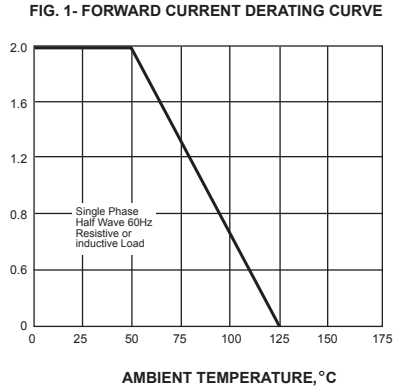
NOTES:

1. Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts.

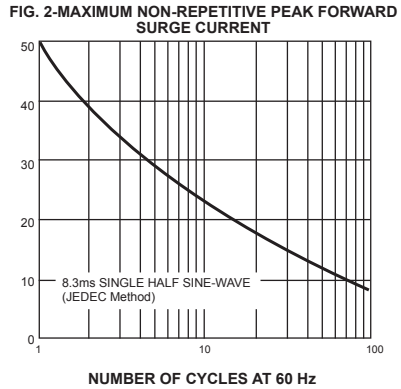
2. Unit mounted on P.C. board with 0.47" x 0.47" (12x12mm) copper pads, 0.375" (9.5mm) lead length.

RATINGS AND CHARACTERISTIC CURVES KBP005 THRU KBP10 AND RS201 THUR RS207

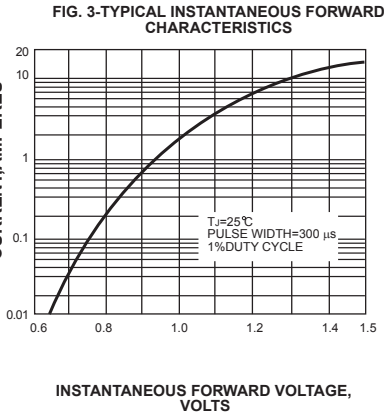
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES



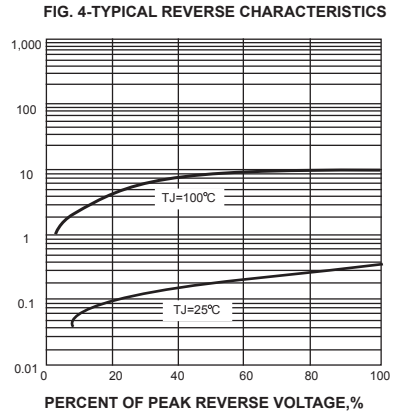
PEAK FORWARD SURGE CURRENT, AMPERES



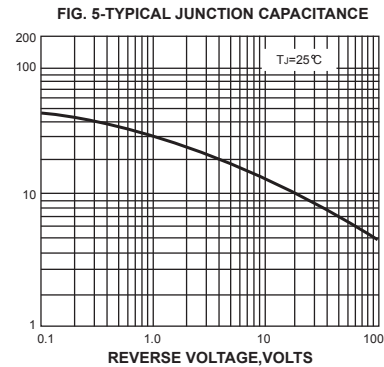
INSTANTANEOUS FORWARD CURRENT, AMPERES



INSTANTANEOUS REVERSE CURRENT, MICROAMPERES



JUNCTION CAPACITANCE, pF



TRANSIENT THERMAL IMPEDANCE, $^{\circ}\text{C/W}$

