



DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

KBL / RS
005 / 401
THRU
KBL / RS
10 / 407

TECHNICAL SPECIFICATIONS OF SINGLE-PHASE SILICON BRIDGE RECTIFIER

VOLTAGE RANGE - 50 to 1000 Volts

CURRENT - 4.0 Amperes

FEATURES

- * Ideal for printed circuit board
- * Surge overload rating: 200 Amperes peak
- * Molded structure

MECHANICAL DATA

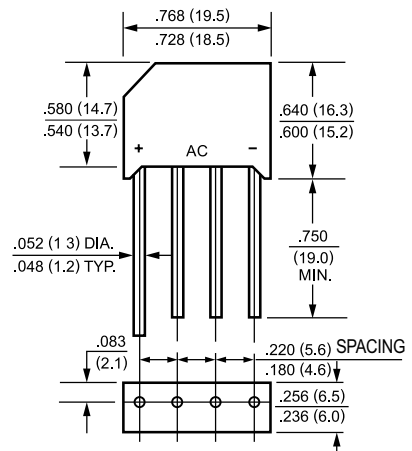
- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Lead: MIL-STD-202E, Method 208 guaranteed
- * Polarity: Symbols molded or marked on body
- * Mounting position: Any
- * Weight: 4.8 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.



KBL



Dimensions in inches and (millimeters)

| | | SYMBOL | KBL005 | KBL01 | KBL02 | KBL04 | KBL06 | KBL08 | KBL10 | |
|---|-------------|------------------|--------------|-------|-------|-------|-------|-------|-------|-------|
| | | SYMBOL | RS401 | RS402 | RS403 | RS404 | RS405 | RS406 | RS407 | UNITS |
| Maximum Recurrent Peak Reverse Voltage | | V _{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum RMS Bridge Input 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 Current TA = 75°C | | Io | 4.0 | | | | | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) | | IFSM | 200 | | | | | | | Amps |
| Maximum Forward Voltage Drop per element at 3.0A DC | | VF | 1.0 | | | | | | | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage per element | @TA = 25°C | IR | 10 | | | | | | | uAmps |
| | @TA = 100°C | | 500 | | | | | | | |
| I²t Rating for Fusing (t<8.3ms) | | I²t | 93 | | | | | | | A²Sec |
| Typical Junction Capacitance (Note1) | | CJ | 40 | | | | | | | pF |
| Typical Thermal Resistance (Note 2) | | RθJA | 19 | | | | | | | °C/W |
| Operating Temperature Range | | TJ | -55 to + 150 | | | | | | | °C |
| Storage Temperature Range | | TSTG | -55 to + 150 | | | | | | | °C |

NOTES : 1. Measured at 1 MHz and applied reverse voltage of 4.0 volts

2. Thermal Resistance from Junction to Ambient with units mounted on 3.0x3.0x0.11" (7.5x7.5x0.3cm) AL plate.

RATING AND CHARACTERISTIC CURVES

(KBL005 THRU KBL10
RS401 RS407)

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

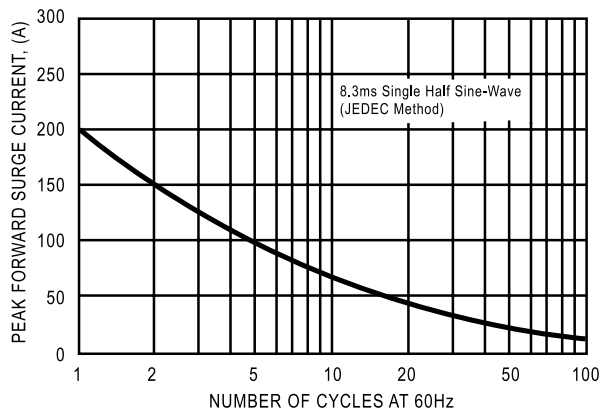


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

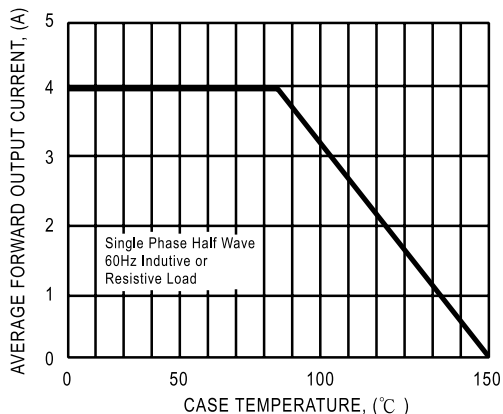


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

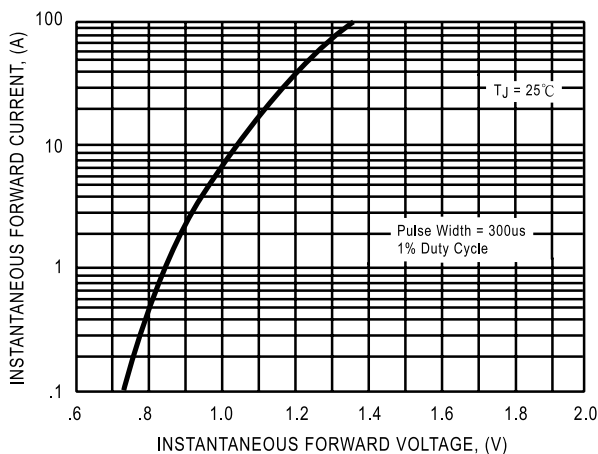
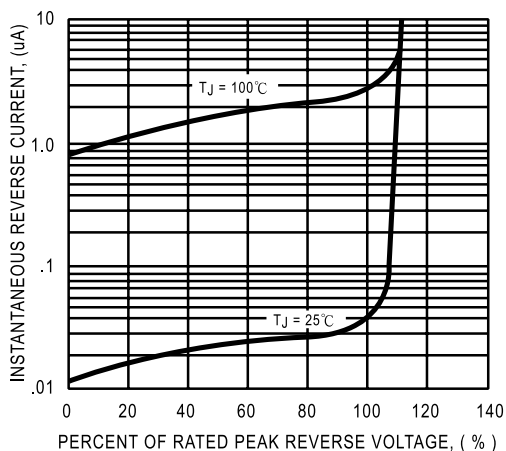


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS



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