



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

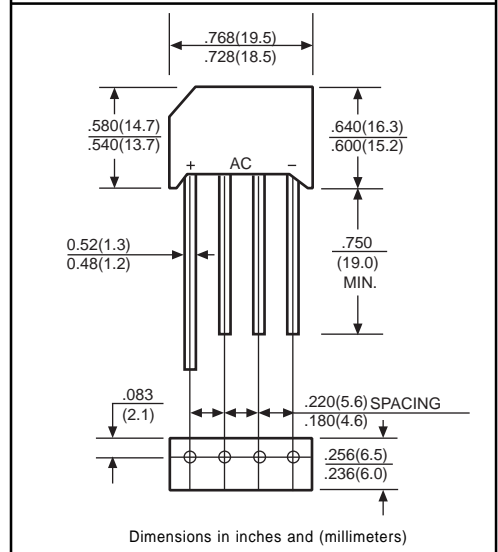
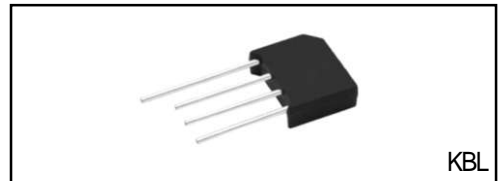
- * Ideal for printed circuitboard
- * Surge overload rating:200 Amperes peak
- * Molded structure

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%.



| | SYMBOL | KBL005 | KBL01 | KBL02 | KBL04 | KBL06 | KBL08 | KBL10 | UNITS |
|---|------------------|-------------------------|-------|-------|-------|-------|-------|-------|--------------------|
| Maximum Recurrent Peak Reverse Voltage | VRRM | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum RMS Bridge Input Voltage | VRMS | 35 | 70 | 140 | 280 | 420 | 560 | 700 | Volts |
| Maximum DC Blocking Voltage | VDC | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum Average Forward Output Current at T _A = 100°C | I _O | 4.0 | | | | | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) | I _{FSM} | 150 | | | | | | | Amps |
| Maximum Forward Voltage Drop per element at 4.0 A DC | V _F | 1.1 | | | | | | | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage per element | I _R | @T _J = 25°C | | | | | | | uAmps |
| | | @T _J = 100°C | | | | | | | |
| I ² t Rating for Fusing (t<8.3ms) | I ² t | 93 | | | | | | | A ² Sec |
| Typical Junction Capacitance (Note1) | C _J | 15 | | | | | | | pF |
| Typical Thermal Resistance (Note 2) | RθJA | 40 | | | | | | | °C/W |
| Operating Temperature Range | T _J | -55 to + 150 | | | | | | | °C |
| Storage Temperature Range | T _{STG} | -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"(7.5x7.3x0.3cm)AL plate .

RATING AND CHARACTERISTIC CURVES (KBL005 THRU KBL10 RS401 THRU RS407)

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

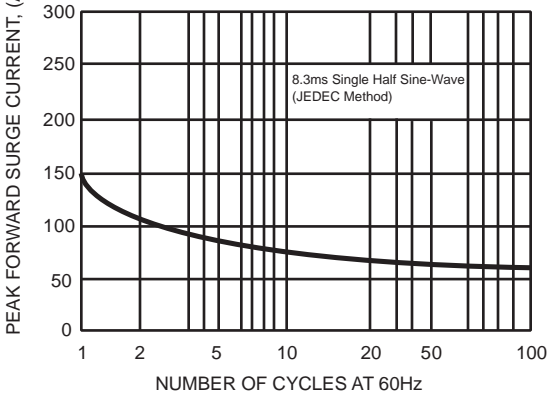


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

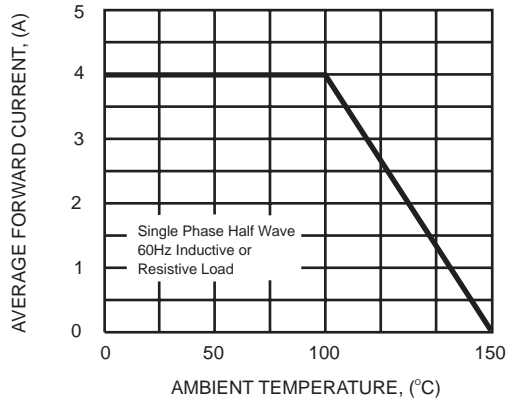


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

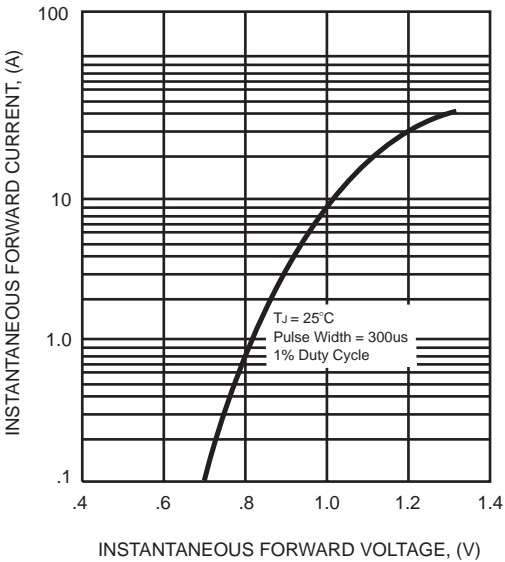


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

