



DATA SHEET

SEMICONDUCTOR

KBL005 THRU KBL10

TECHNICAL SPECIFICATIONS OF SINGLE-PHASE SILICON BRIDGE RECTIFIER



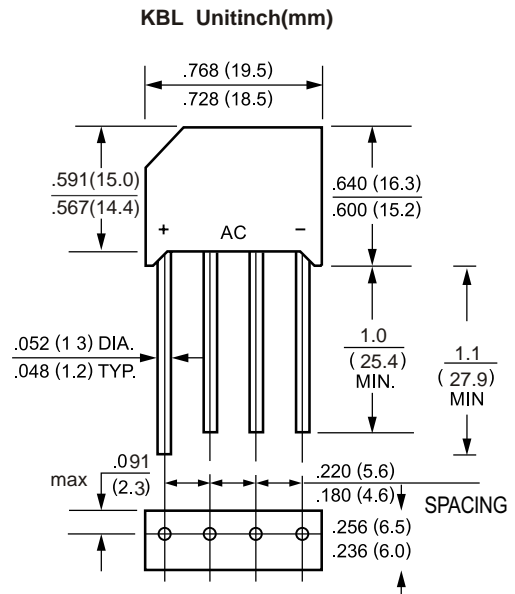
VOLTAGE RANGE-50 to 1000 Volts CURRENT-4.0 Amperes

FEATURES

- Ideal for printed circuit board
- Surge overload rating: 200 Amperes peak
- Molded structure
- This series is UL recognized under component index, file number E315292
- High temperature soldering : 260°C / 10 seconds at terminals
- Pb free product at available : 99% Sn above meet RoHS environment substance directive request

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

| PARAMETER | 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 TA = 50 | IO | 4.0 | | | | | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | IFSM | 150 | | | | | | | A |
| Maximum Forward Voltage Drop per element at 4.0A DC | VF | 1.0 | | | | | | | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage per element | @TA = 25 | 5 | | | | | | | μAmp |
| | @TA = 100 | 500 | | | | | | | |
| I2t Rating for Fusing(t<8.3ms) | I2t | 93 | | | | | | | A2Sec |
| Typical Junction Capacitance(Note1) | CJ | 40 | | | | | | | pF |
| Typical Junction Resistance(Note2) | R JA | 19 | | | | | | | /W |
| Operating Temperature Range | TJ | -55 to + 150 | | | | | | | |
| Storage Temperature Range | TSTG | -55 to + 150 | | | | | | | |

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.

DEVICE CHARACTERISTICS

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FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

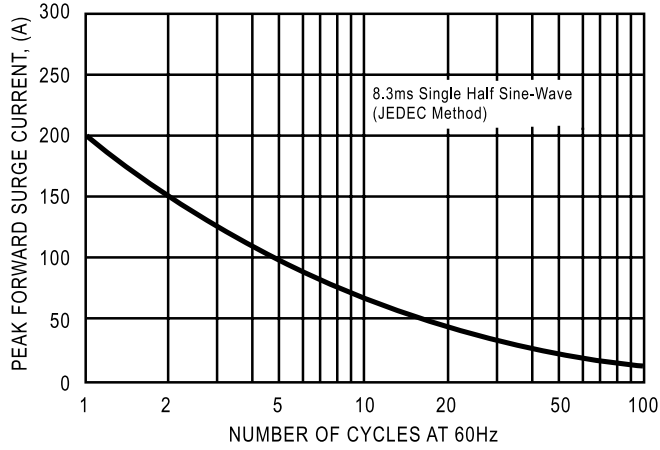


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

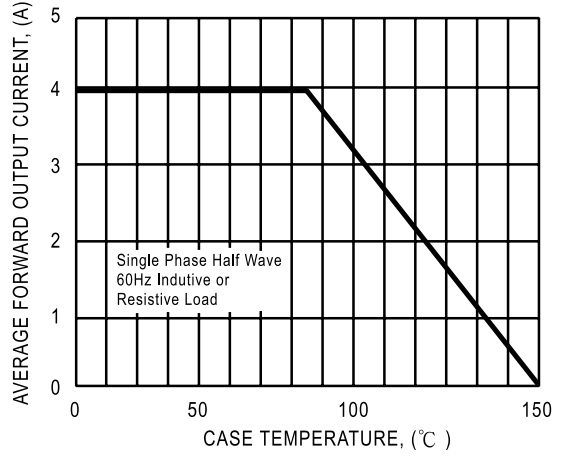


FIG. 3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

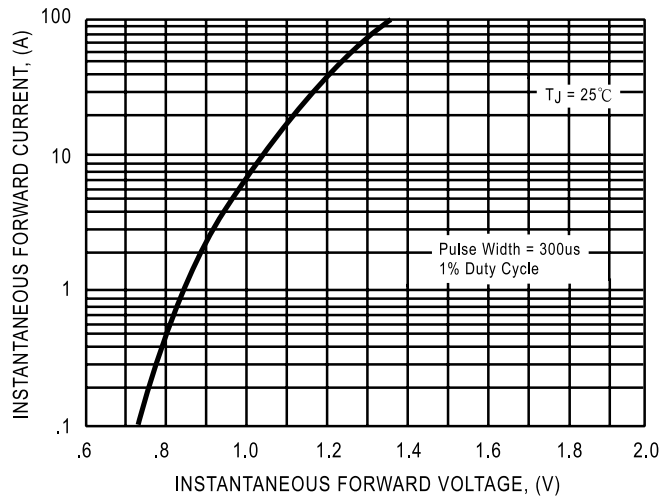


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

