



KBL401 THRU KBL407

Single Phase 4.0 AMPS. Silicon Bridge Rectifiers

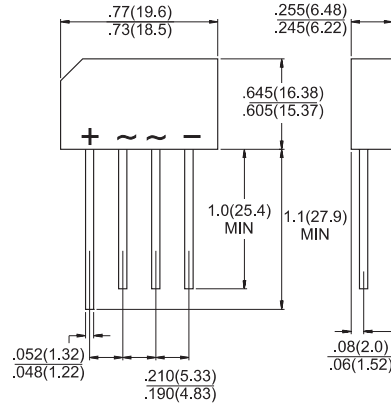


Voltage Range
50 to 1000 Volts
Current
4.0 Amperes

Features

- ✧ UL Recognized File # E-96005
- ✧ Ideal for printed circuit board
- ✧ Reliable low cost construction
- ✧ High surge current capability
- ✧ High temperature soldering guaranteed:
260°C / 10 seconds / 0.375" (9.5mm)
lead length at 5 lbs., (2.3 kg) tension
- ✧ Leads solderable per MIL-STD-202,
Method 208

KBL



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Rating 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%

| Type Number | Symbol | KBL 401 | KBL 402 | KBL 403 | KBL 404 | KBL 405 | KBL 406 | KBL 407 | Units |
|---|------------------------------------|-------------|------------|------------|------------|------------|------------|------------|--------------------------------|
| Maximum Recurrent 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 @ $T_A = 50^\circ\text{C}$ | $I_{(AV)}$ | 4.0 | | | | | | | A |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) | I_{FSM} | 200 | | | | | | | A |
| Maximum Instantaneous Forward Voltage @ 4.0A | V_F | 1.1 | | | | | | | V |
| Maximum DC Reverse Current @ $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=100^\circ\text{C}$ | I_R | 10 500 | | | | | | | μA μA |
| Typical thermal Resistance (Note 2) | $R_{\theta JA}$ $R_{\theta JL}$ | 19 2.4 | | | | | | | $^\circ\text{C}/\text{W}$ |
| Operating Temperature Range | T_J | -55 to +125 | | | | | | | $^\circ\text{C}$ |
| Storage Temperature Range | T_{STG} | -55 to +150 | | | | | | | $^\circ\text{C}$ |

Note: 1. Thermal Resistance from Junction to Ambient with units Mounted on 3.0 x 3.0 x 0.11 Thick (7.5 x 7.5 x 0.3cm) Al. Plate.

2. Thermal resistance from Junction to Lead with units Mounted on P.C.B. at 0.375" (9.5mm) Lead Length and 0.5 x 0.5" (12 x 12mm) Copper Pads.

RATINGS AND CHARACTERISTIC CURVES (KBL401 THRU KBL407)

FIG.1- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER BRIDGE ELEMENT

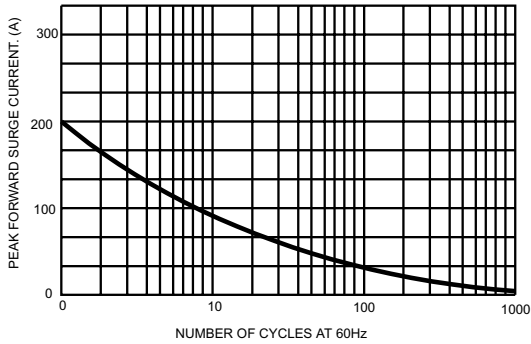


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

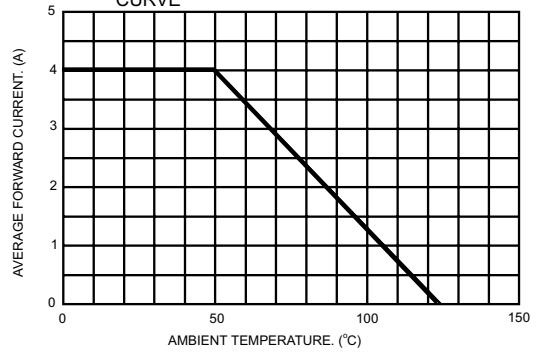


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER BRIDGE ELEMENT

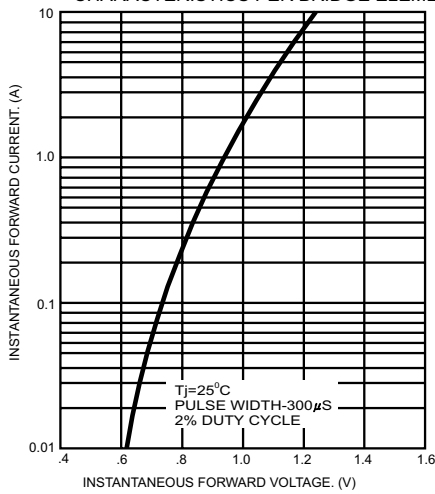


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

