

KBL4005 THRU KBL410

SINGLE-PHASE SILICON BRIDGE RECTIFIER



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HORNBY ELECTRONIC

REVERSE VOLTAGE: 50 to 1000 VOLTS

FORWARD CURRENT: 4.0 AMPERE

FEATURES

- Surge overload rating: 200 amperes peak
- Ideal for printed circuit board
- Plastic material has Underwriters Laboratory Flammability Classification 94V-0
- Reliable low cost construction utilizing molded plastic technique

MECHANICAL DATA

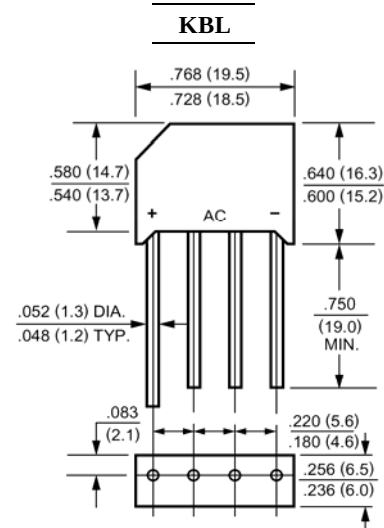
Case: Molded plastic, KBL

Epoxy: UL 94V-O rate flame retardant

Terminals: Leads solderable per MIL-STD-202, method 208 guaranteed

Mounting position: Any

Weight: 0.2ounce, 5.6gram



Dimensions in inches and (millimeters)

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, derate current by 20%.

	Symbols	KBL4005	KBL401	KBL402	KBL404	KBL406	KBL408	KBL410	Units
Maximum Recurrent 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 Rectified Current .375" (9.5mm) Lead Length at $T_A=50^\circ\text{C}$	$I_{(AV)}$	4.0							Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	200							Amp
Maximum Forward Voltage at 4.0A DC and 25°C	V_F	1.1							Volts
Maximum Reverse Current at $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_A=100^\circ\text{C}$	I_R	10.0 500							uAmp
Typical Junction Capacitance (Note 1)	C_J	40							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	19							°C/W
Typical Thermal Resistance (Note 3)	$R_{\theta JL}$	2.4							°C/W
Operating and Storage Temperature Range	T_J, T_{stg}	-55 to +125							°C

NOTES:

1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

2- 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

3- 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

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RATINGS AND CHARACTERISTIC CURVES

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

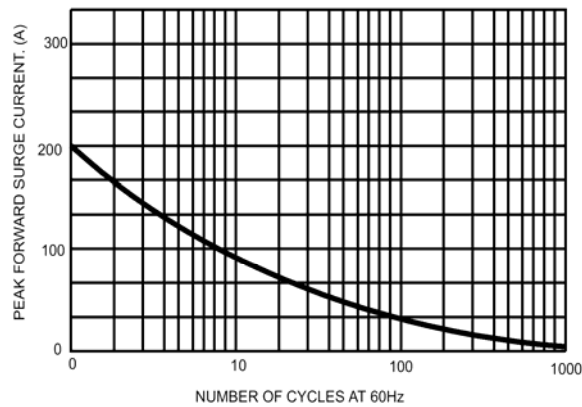


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

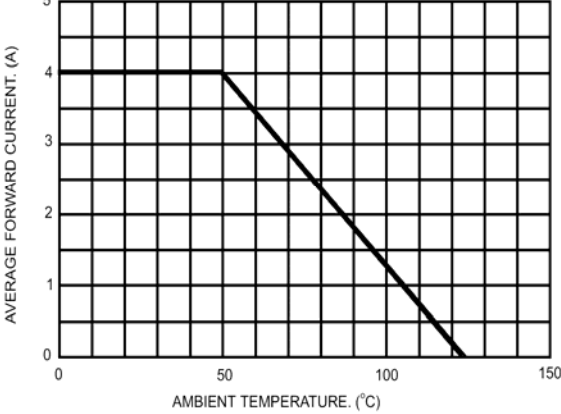


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER BRIDGE ELEMENT

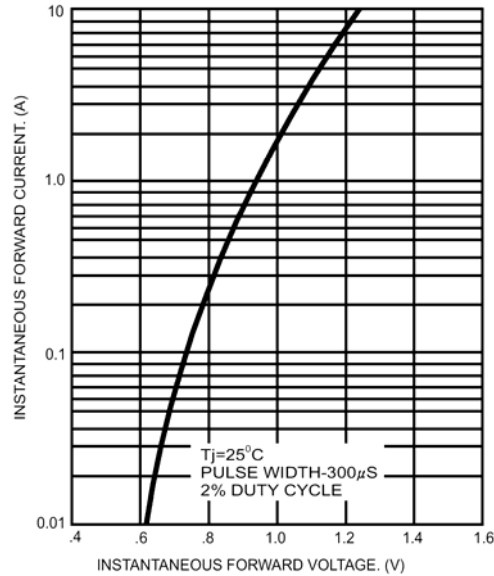


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

