



# KBL400 ~ KBL4010

## IN-LINE MINIATURE SINGLE PHASE SILICON BRIDGE RECTIFIER

**VOLTAGE** 50 to 1000 Volts **CURRENT** 4.0 Amperes

**KBL** Unit: inch (mm)

### FEATURES

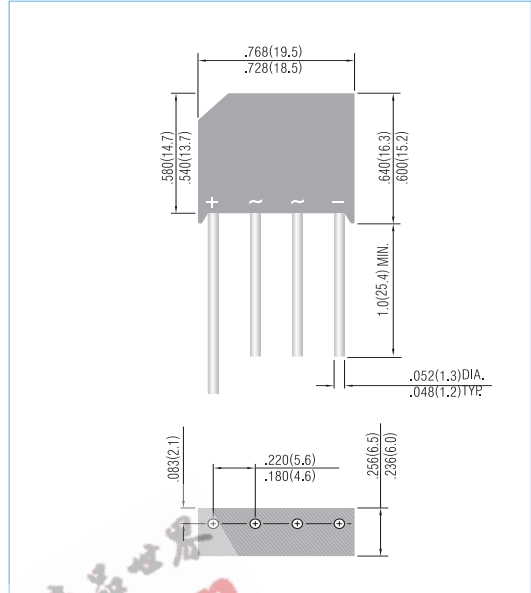
- Plastic material has Underwriters Laboratory Flammability Classification 94V-O
- Ideal for printed circuit board
- Reliable low cost construction utilizing molded plastic technique
- Surge overload rating: 200 Amperes peak
- Pb free product are available : 99% Sn above can meet RoHS environment substance directive request

### MECHANICAL DATA

Terminals: Leads solderable per MIL-STD-750, Method 2026

Mounting position: Any

Weight: 0.2 ounce, 5.6 grams



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified. Resistive or inductive load, 60Hz.

For Capacitive load derate current by 20%.

PARAMETER	SYMBOL	KBL400	KBL401	KBL402	KBL404	KBL406	KBL408	KBL4010	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS Bridge Input 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 Current For Resistive Load at $T_A=50^\circ\text{C}$	$I_{F(AV)}$	4.0							A
Peak One Cycle Surge Overload Current	$I_{FSM}$	200							A
Maximum Forward Voltage per Bridge Element at 4.0A	$V_F$	1.1							V
Maximum Reverse Leakage Current at Rated @ $T_A=25^\circ\text{C}$ Dc Blocking Voltage @ $T_A=100^\circ\text{C}$	$I_R$	10 1000							$\mu\text{A}$
$I^2t$ Rating for fusing ( $t < 8.35\text{ms}$ )	$I^2t$	93							$\text{A}^2\text{t}$
Typical Thermal Resistance per leg (Note 1) (Note 2)	$R_{\theta JA}$ $R_{\theta JL}$	19 2.4							$^\circ\text{C}/\text{W}$
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	-55 to + 150							$^\circ\text{C}$

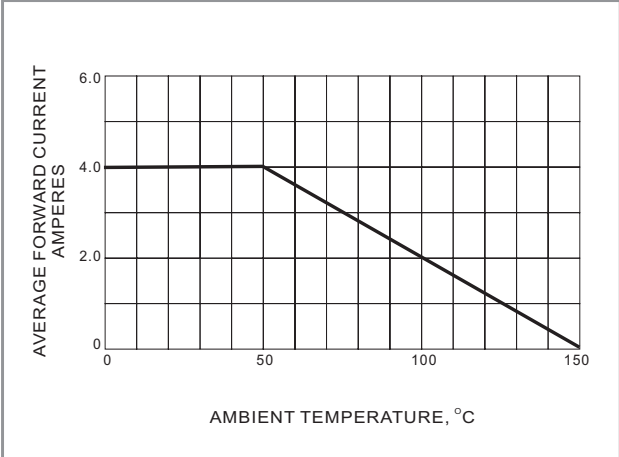
#### NOTES:

1. Thermal resistance from junction to ambient with units mounted on 0.3 x 0.3 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 with 0.375" ( 9.5mm) lead length and 0.5 x 0.5" ( 12 x 12 mm) copper pads.

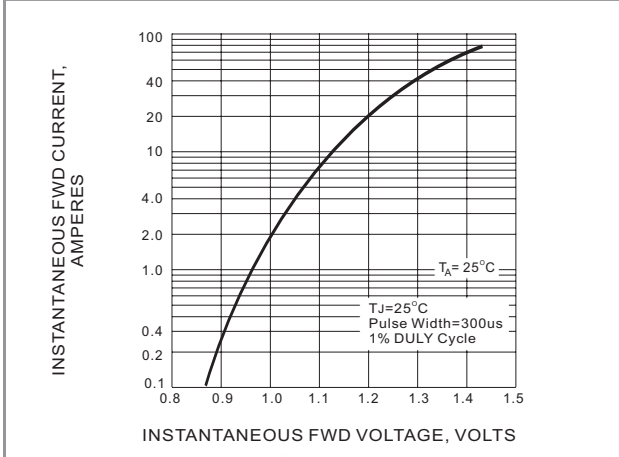


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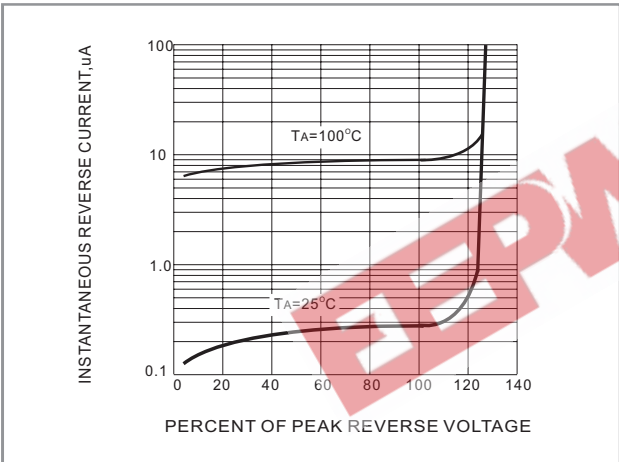
## RATING AND CHARACTERISTIC CURVES



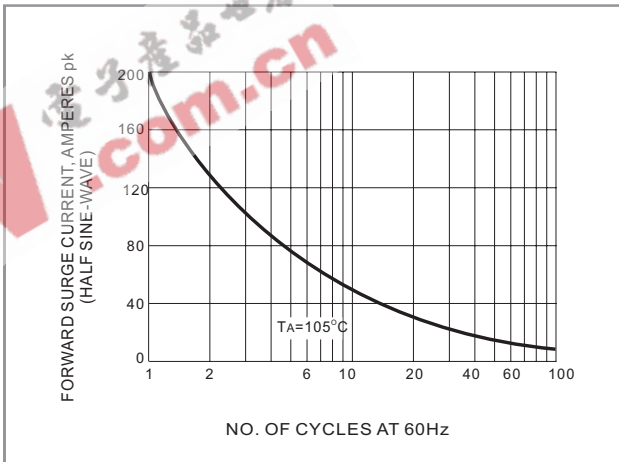
**FIG. 1 DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



**FIG. 2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG. 3 TYPICAL REVERSE CHARACTERISTICS**



**FIG. 4 MAX NON-REPETITIVE SURGE CURRENT**

### LEGAL STATEMENT

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