KBL4005/RS401 THRU KBL410/RS407

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

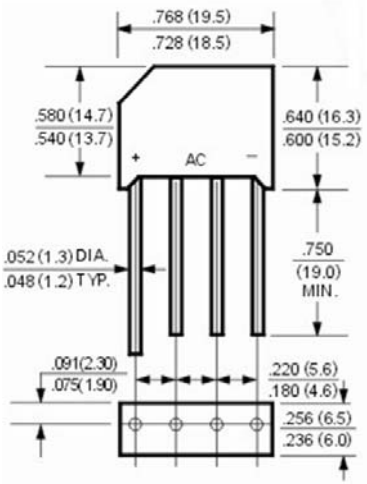
Epoxy: UL 94V-O rate flame retardant

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

Mounting position: Any

Weight: 0.2ounce, 5.6gram

KBL



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified.

Single phase, half wave, 60H_Z, resistive or inductive load.

For capacitive load, derate current by 20%.

	Symbols	*KBL4005/ RS401*	*KBL401/ RS402*	*KBL402/ RS403*	*KBL404/ RS404*	*KBL406/ RS405*	*KBL408/ RS406*	*KBL410/ RS407*	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℃	$I_{(AV)}$	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℃	V_F	1.1							**Volts**
Maximum Reverse Current at T_A=25℃	I_R	10.0							**uAmp**
at Rated DC Blocking Voltage T_A=100℃		500							
Typical Junction Capacitance (Note 1)	C_J	40							**pF**
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	19							**℃/W**
Typical Thermal Resistance (Note 3)	$R_{\theta JL}$	2.4							**℃/W**
Operating and Storage Temperature Range	T_J, Tstg	-55 to +125							**℃**

NOTES:

1- Measured at 1 MH_Z 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

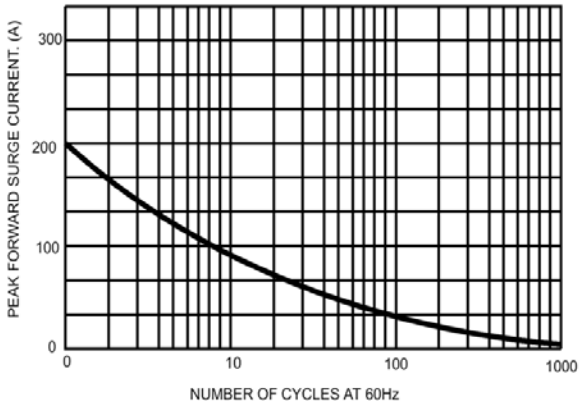

FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

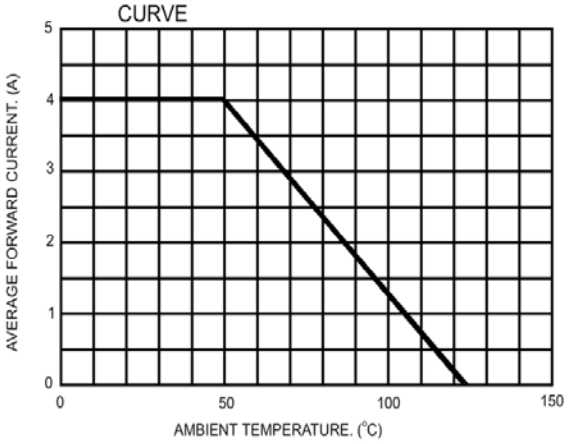

FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER BRIDGE ELEMENT

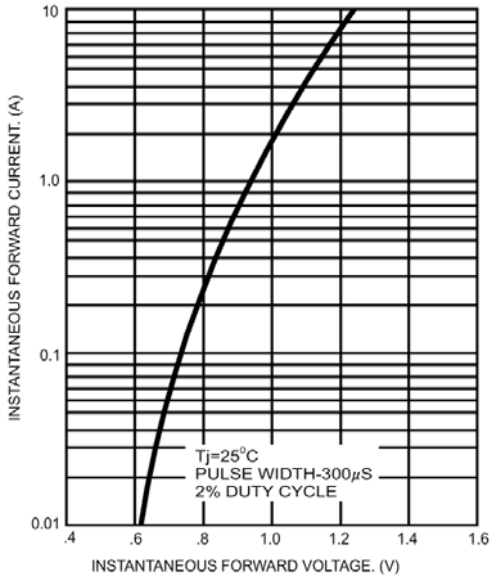

FIG.4- TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT