



# KBL6005 THRU KBL612

Reverse Voltage - 50 to 1200 V olts Forward Current - 6.0 Amperes

## SILICON BRIDGE RECTIFIERS

### Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Ideal for printed circuit boards
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 260°C/10 seconds, 0.375"(9.5mm) lead length, 5 lbs. (2.3kg) tension

### Mechanical Data

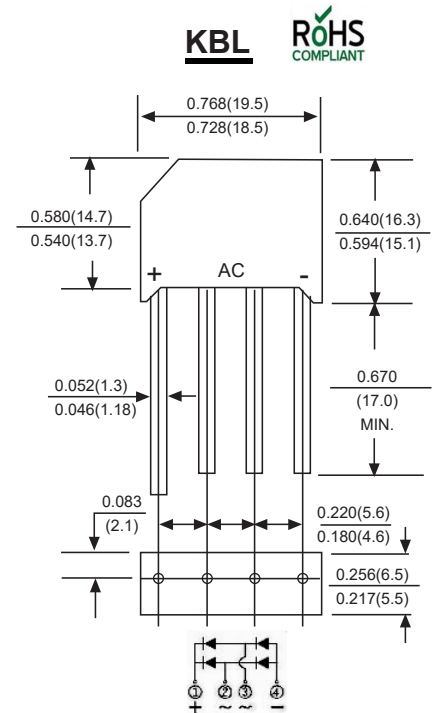
**Case :** JEDEC KBL Molded plastic body

**Terminals :** Solder plated, solderable per MIL-STD-750, Method 2026

**Polarity :** Polarity symbol marking on body

**Mounting Position :** Any

**Weight :** 0.20ounce , 5.6 grams



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 current derate by 20%.

Parameter	SYMBOLS	MDD KBL6005	MDD KBL601	MDD KBL602	MDD KBL604	MDD KBL606	MDD KBL608	MDD KBL610	MDD KBL612	UNITS
Marking Code										
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	1200	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	840	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	1200	V
Maximum average forward output rectified current at $T_A=50^\circ\text{C}$	$I_{(AV)}$	6.0								A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	200								A
Rating for fusing ( $t < 8.3\text{ms}$ )	$I^2t$	166								$\text{A}^2\text{sec}$
Maximum instantaneous forward voltage drop per bridge element at 6.0A	$V_F$	1.1								V
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=125^\circ\text{C}$	$I_R$	10								$\mu\text{A}$
		1.0								$\text{mA}$
Typical Junction Capacitance	$C_J$	105								$\text{pF}$
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	10								$^\circ\text{C/W}$
Operating junction temperature range	$T_J$	-55 to +150								$^\circ\text{C}$
storage temperature range	$T_{STG}$	-55 to +150								$^\circ\text{C}$

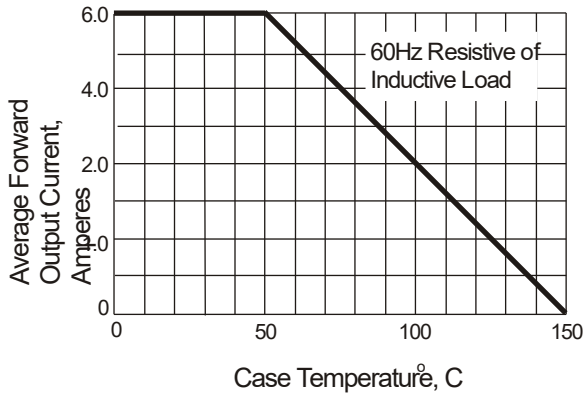
NOTES:

1. Thermal resistance from Junction to Ambient on P.C. board mounting.

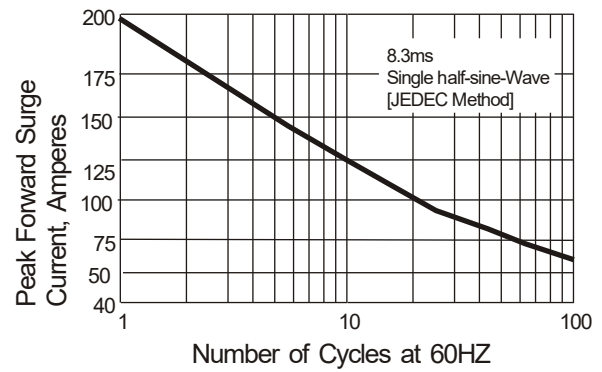


## Ratings And Characteristic Curves

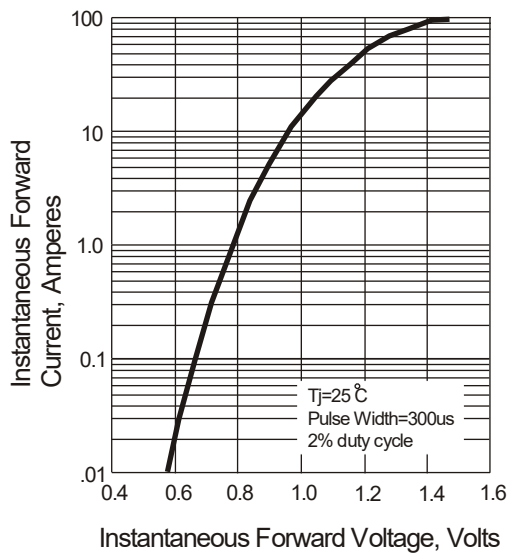
**Fig. 1 Derating Curve for Output Rectified Current**



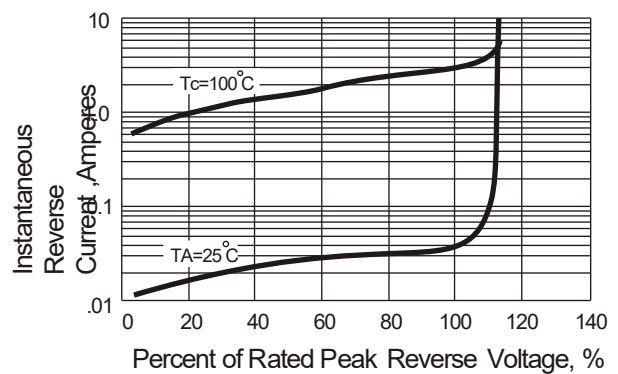
**Fig. 2 Maximum Non-repetitive Peak Forward Surge Current**



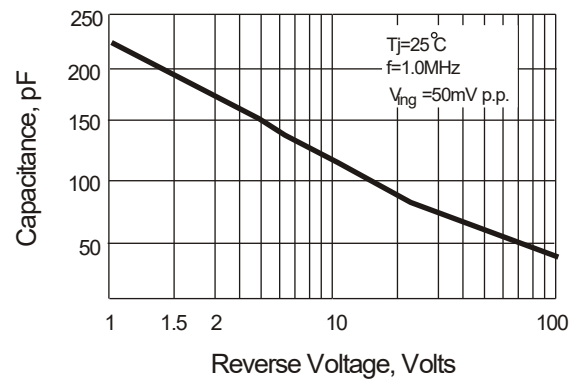
**Fig. 3 Typical Instantaneous Forward Characteristics**



**Fig. 4 Typical Reverse Characteristics at  $T_J = 25^\circ\text{C}$**



**Fig. 5 Typical Junction Capacitance**



The curve above is for reference only.