



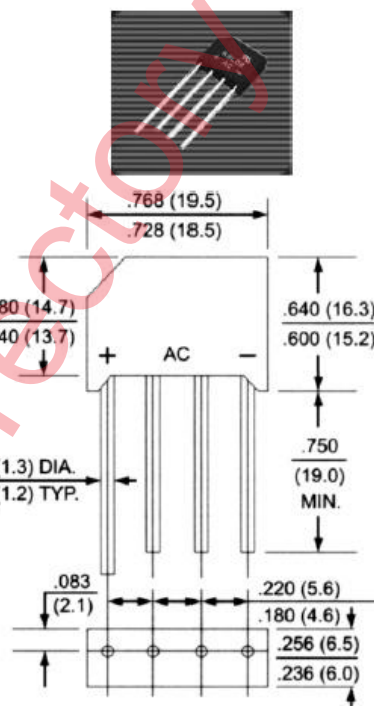
# KBL / RS4L / KBL6 Series

SYNSEMI SEMICONDUCTOR

Glass Passivated Single-Phase Bridge Rectifiers  
Voltage Range 50 to 1000 Volts Forward Current 4.0/6.0 Amperes

## Features

- ◆ Surge overload rating - 200 Amperes peak
- ◆ Ideal for printed circuit boards
- ◆ Plastic material has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Mounting Position: Any



Dimensions in inches and (millimeter)

## 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%

Parameter	Symbols	RS401L	RS402L	RS403L	RS404L	RS405L	RS406L	RS407L	Units
		KBL005	KBL01	KBL02	KBL04	KBL06	KBL08	KBL10	
		KBL6005	KBL601	KBL602	KBL604	KBL606	KBL608	KBL610	
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 output current at $T_A=50^\circ\text{C}$ (Note 1)	$I_{F(AV)}$	4.0 (RS4XXL, KBL0XX) 6.0 (KBL60XX)							Amps
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	200.0 (RS4XXL, KBL0XX) 250.0 (KBL60XX)							Amps
Max. instantaneous forward voltage drop per element at 1.0A	$V_F$	1.0 (RS4XXL, KBL0XX) 1.05 (KBL60XX)							Volts
Maximum DC reverse current at rated DC blocking voltage per element $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$	$I_R$	10.0 1.0							$\mu\text{A}$ mA
Operating and storage temperature range	$T_J, T_{STG}$	-55 to +150							$^\circ\text{C}$

Notes: 1. Mounting conditions, 0.5" lead length maximum.

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## RATINGS AND CHARACTERISTIC CURVES

( $T_A = 25^\circ\text{C}$  unless otherwise noted)

FIG. 1 - MAXIMUM FORWARD SURGE CURRENT

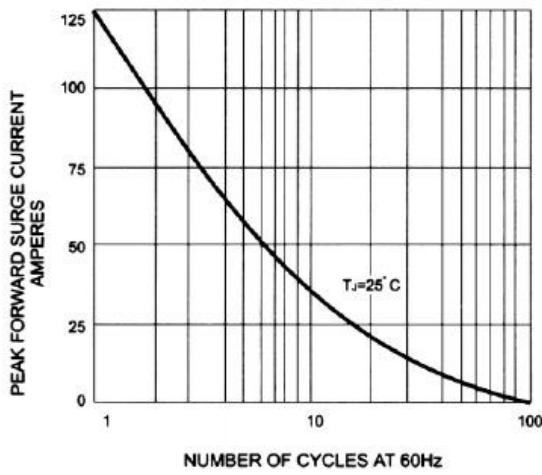


FIG. 2 - DERATING CURVE  
OUTPUT RECTIFIED CURRENT

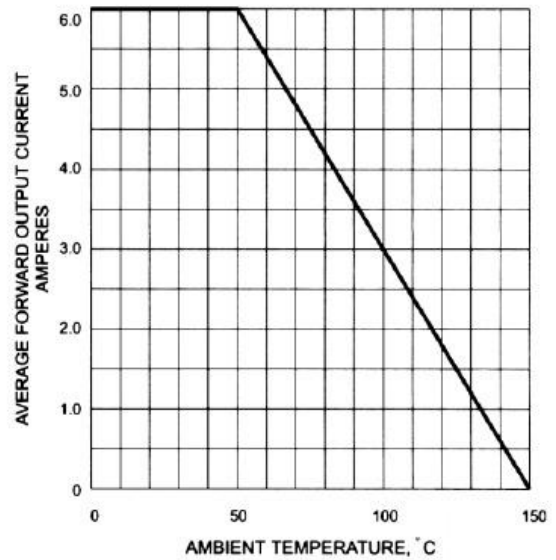


FIG. 3 - TYPICAL FORWARD  
CHARACTERISTICS

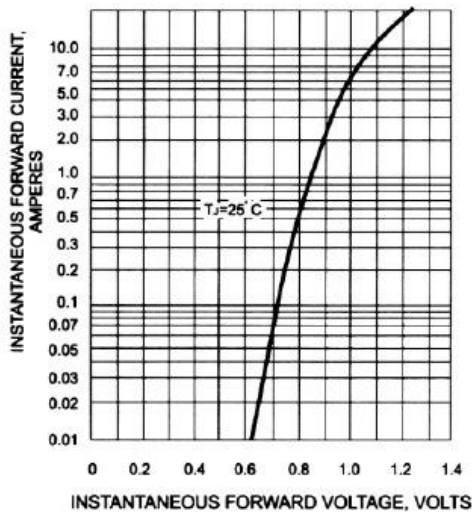


FIG. 4 - TYPICAL REVERSE  
CHARACTERISTICS

