



KBL4005 thru KBL410

4.0 A Single-Phase Silicon Bridge Rectifier

Rectifier Reverse Voltage 50 to 1000V

Features

- Ideal for printed circuit board mounting
- This series is UL listed under the Recognized Component Index, file number E142814
- The plastic material used carries Underwriters Laboratory flammability recognition 94V-0
- Built-in printed circuit board stand-offs
- High case dielectric strength
- High temperature soldering guaranteed 265°C/10 seconds at 5 lbs (2.3kg) tension

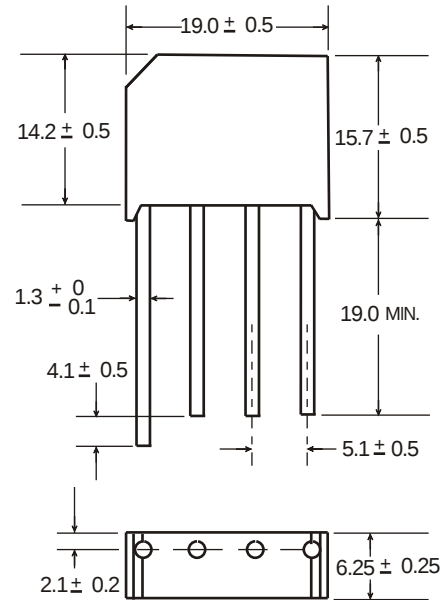
Mechanical Data

Case: Reliable low cost construction utilizing molded plastic technique

Terminals: Plated leads solderable per MIL-STD-202, Method 208

Mounting Position: Any

Weight: 0.2 ounce, 5.6 grams (approx)



Dimensions in millimeters(1mm=0.0394")

Maximum Ratings & Thermal Characteristics

Rating at 25°C ambient temperature unless otherwise specified, Resistive or Inductive load, 60 Hz.
For Capacitive load derate current by 20%.

Parameter	Symbol	KBL 4005	KBL 401	KBL 402	KBL 404	KBL 406	KBL 408	KBL 410	unit
Maximum repetitive peak reverse voltage	VRRM	50	100	200	400	600	800	1000	V
Maximum RMS bridge input voltage	VRMS	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	VDC	50	100	200	400	600	800	1000	V
Maximum average forward rectified output current at TA=50°C	IF(AV)	4.0							A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method)	IFSM	200							A
Rating for fusing (t<8.3ms)	I ² t	166							A ² sec
Typical thermal resistance per element(1)	ReJA	10.0							°C / W
Operating junction and storage temperature range	TJ, TSTG	-55 to + 150							°C

Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified. Resistive or Inductive load, 60Hz.
For Capacitive load derate by 20 %.

Parameter	Symbol	KBL 4005	KBL 401	KBL 402	KBL 404	KBL 406	KBL 408	KBL 410	Unit
Maximum instantaneous forward voltage drop per leg at 4.0A	VF	1.1							V
Maximum DC reverse current at rated TA =25°C DC blocking voltage per element TA =125°C	IR	10 1000							μA

Notes: (1) Thermal resistance from Junction to Ambient on P.C.board mounting.



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Rating and Characteristic Curves ($T_A = 25^{\circ}\text{C}$ Unless otherwise noted) KBL4005 thru KBL410

Fig. 1 Derating Curve for Output Rectified Current

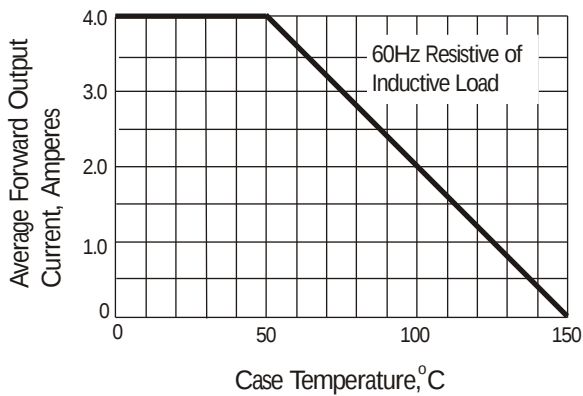


Fig. 2 Maximum Non-repetitive Peak Forward Surge Current

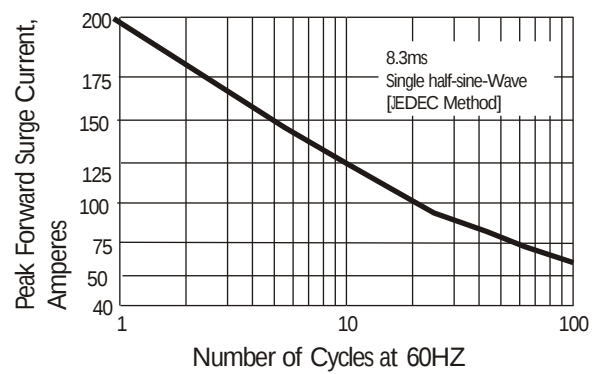


Fig. 3 Typical Instantaneous Forward Characteristics

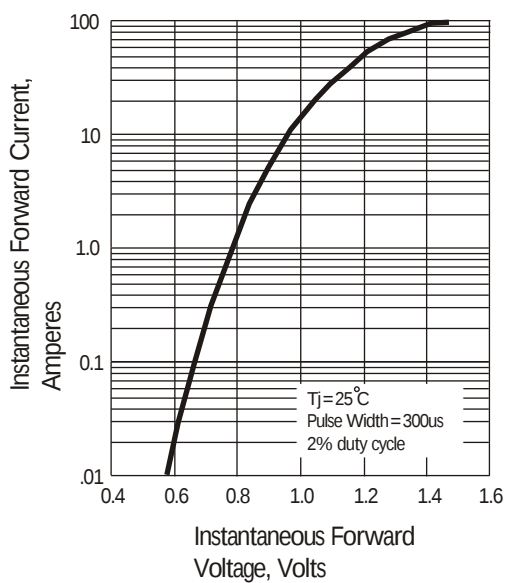


Fig. 4 Typical Reverse Characteristics at T_J = 25°C

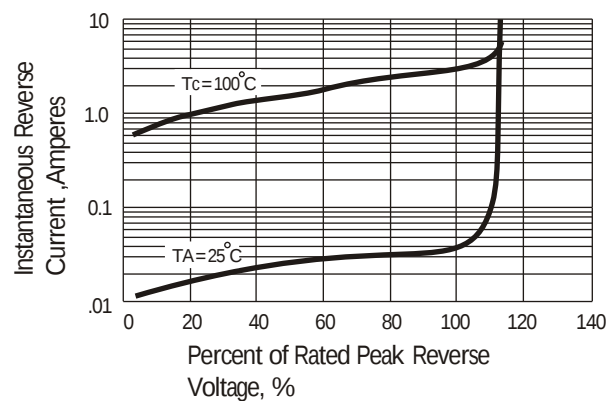


Fig. 5 Typical Junction Capacitance

