

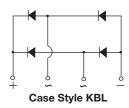
KBL005, KBL01B, KBL02, KBL04, KBL06, KBL08, KBL10

www.vishay.com

Vishay General Semiconductor

Single-Phase Bridge Rectifier





PRIMARY CHARACTERISTICS						
Package	KBL					
I _{F(AV)}	4 A					
V _{RRM}	50 V, 100 V, 200 V, 400 V, 600 V, 800 V, 1000 V					
I _{FSM}	200 A					
I _R	5 μΑ					
V_F at $I_F = 4$ A	1.1 V					
T _J max.	150 °C					
Diode variations	In-line					

FEATURES





- Ideal for printed circuit boards
- High surge current capability
- High surge current capability
- High case dielectric strength of 1500 V_{RMS}
- Solder dip 275 °C max. 10 s, per JESD 22-B106

ROHS

 Material categorization: for definitions of compliance please see <u>www.vishay.com/doc?99912</u>

TYPICAL APPLICATIONS

General purpose use in AC/DC bridge full wave rectification for monitor, TV, printer, SMPS, adapter, audio equipment, and home appliances applications.

MECHANICAL DATA

Case: KBL

Molding compound meets UL 94 V-0 flammability rating Base P/N-E4 - RoHS-compliant, commercial grade

Terminals: Silver plated leads, solderable per J-STD-002 and JESD22-B102

Polarity: As marked on body

Mounting Torque: 10 cm-kg (8.8 inches-lbs) max. **Recommended Torque:** 5.7 cm-kg (5 inches-lbs)

MAXIMUM RATINGS (T _A = 25 °C unless otherwise noted)									
PARAMETER	SYMBOL	KBL005	KBL01	KBL02	KBL04	KBL06	KBL08	KBL10	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS 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 at $T_A = 50 ^{\circ}\text{C}$ $I_{F(AV)}$ 4.0							Α		
Peak forward surge current single sine-wave superimposed on rated load	I _{FSM}	200					А		
Operating junction and storage temperature range	T _J , T _{STG}	J, T _{STG} -50 to +150							°C

ELECTRICAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)										
PARAMETER	TEST CONDITIONS	SYMBOL	KBL005	KBL01	KBL02	KBL04	KBL06	KBL08	KBL10	UNIT
Maximum instantaneous forward drop per diode	I _F = 4.0 A	V _F	1.1						V	
Maximum DC reverse current at rated DC blocking	.A 20 0					5.0				μΑ
voltage per diode	T _A = 125 °C	I I _R	1.0						mA	



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THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)								
PARAMETER	SYMBOL	KBL005 KBL01 KBL02 KBL04 KBL06 KBL08 KBL10 UNIT						UNIT
Typical thermal resistance	19							°C/W
Typical thermal resistance	R _{0JL} (1)	4.0					C/ VV	

Notes

⁽²⁾ Thermal resistance from junction to lead with units mounted on PCB at 0.375" (9.5 mm) lead length and 0.5" x 0.5" (12 mm x 12 mm) copper pads

ORDERING INFORMATION (Example)							
PREFERRED P/N	UNIT WEIGHT (g) PREFERRED PACKAGE CODE BASE QUANTITY DELIVERY MODE						
KBL06-E4/51	6.0	51	300	Anti-static PVC tray			

RATINGS AND CHARACTERISTICS CURVES (T_A = 25 °C unless otherwise noted)

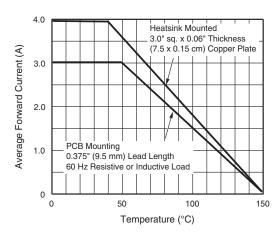


Fig. 1 - Derating Curve Output Rectified Current

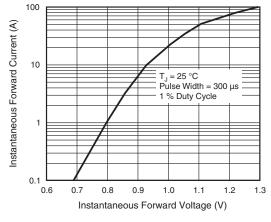


Fig. 3 - Typical Instantaneous Forward Characteristics Per Diode

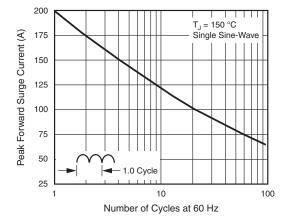


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

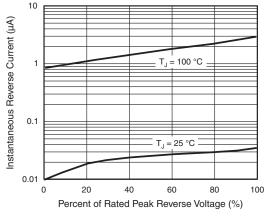


Fig. 4 - Typical Reverse Leakage Characteristics Per Diode

⁽¹⁾ Thermal resistance from junction to ambient with units mounted on 3.0" x 3.0" x 0.11" thick (7.5 cm x 7.5 cm x 0.3 cm) aluminum plate

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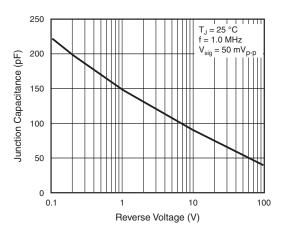
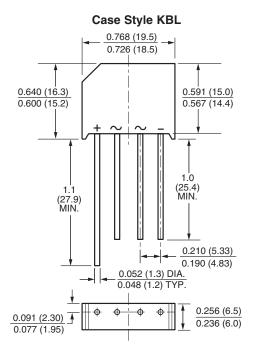


Fig. 5 - Typical Junction Capacitance Per Diode

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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