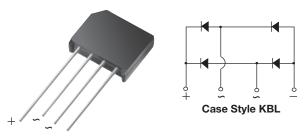
KBL005, KBL01, KBL02, KBL04, KBL06, KBL08, KBL10

Vishay General Semiconductor

RoHS

COMPLIANT

Single-Phase Bridge Rectifier



www.vishay.com

Case Style KBL

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 µA						
V_F at $I_F = 4 A$	1.1 V						
T _J max.	150 °C						
Circuit configuration	In-line						

FEATURES

- UL recognition, file number E54214
- · Ideal for printed circuit boards
- High surge current capability
- Plastic-passivated junction
- High case dielectric strength of 1500 V_{RMS}
- Solder dip 275 °C max. 10 s, per JESD 22-B106
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

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 $T_A = 50 \ ^{\circ}C$	I _{F(AV)}	I _{F(AV)} 4.0					А		
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}	Γ _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	T _A = 25 °C		5.0							μA
current at rated DC blocking voltage per diode	T _A = 125 °C	I _R	1.0						mA	





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THERMAL CHARACTERISTICS ($T_A = 25 \text{ °C}$ unless otherwise noted)									
PARAMETER	SYMBOL	KBL005 KBL01 KBL02 KBL04 KBL06 KBL08 KBL10 UNIT							UNIT
Typical thermal resistance	R _{0JA} ⁽²⁾		19						
Typical thermal resistance	R _{0JL} ⁽¹⁾	4.0						°C/W	

Notes

(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

⁽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)	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)

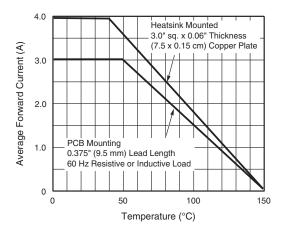


Fig. 1 - Derating Curve Output Rectified Current

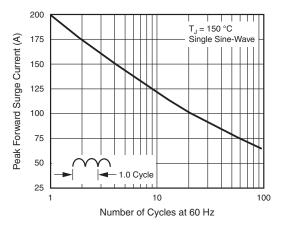


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

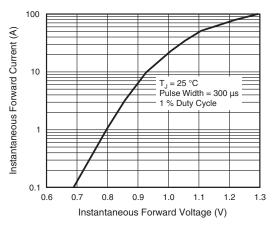


Fig. 3 - Typical Instantaneous Forward Characteristics Per Diode

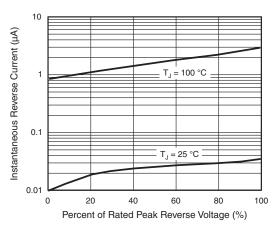


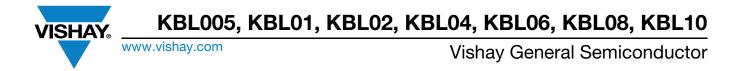
Fig. 4 - Typical Reverse Leakage Characteristics Per Diode

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2

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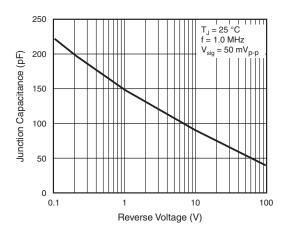
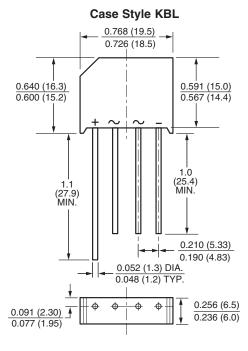


Fig. 5 - Typical Junction Capacitance Per Diode

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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