

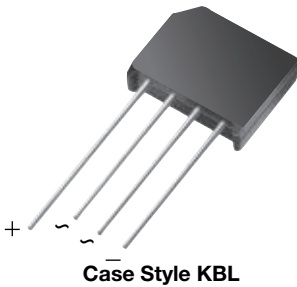


**THE DATASHEET OF
KBL01-E4/51**

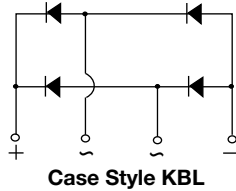




Single-Phase Bridge Rectifier



Case Style KBL



Case Style KBL

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



LINKS TO ADDITIONAL RESOURCES



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)

PRIMARY CHARACTERISTICS	
$I_{F(AV)}$	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 μ A
V_F at $I_F = 4$ A	1.1 V
T_J max.	150 °C
Package	KBL
Circuit configuration	In-line

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 $T_A = 50$ °C	$I_{F(AV)}$	4.0							A
Peak forward surge current single sine-wave superimposed on rated load	I_{FSM}	200							A
Operating junction and storage temperature range	T_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 voltage per diode	$T_A = 25$ °C	I_R	5.0							μ A
	$T_A = 125$ °C		1.0							mA



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

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)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
KBL06-E4/51	6.0	51	300	Anti-static PVC tray

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

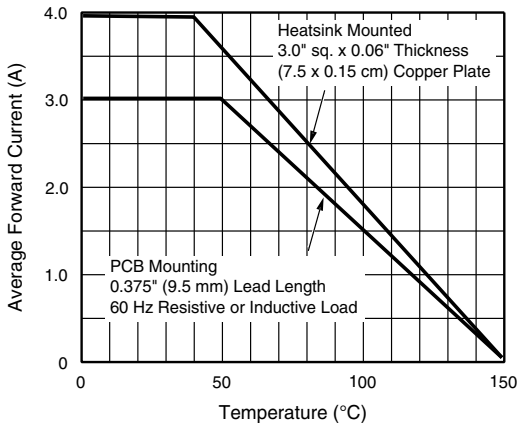


Fig. 1 - Derating Curve Output Rectified Current

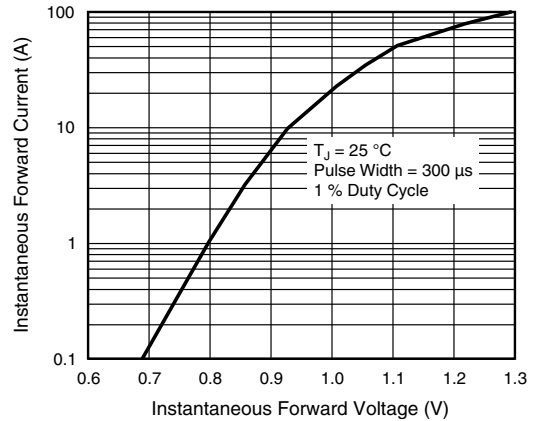


Fig. 3 - Typical Instantaneous Forward Characteristics Per Diode

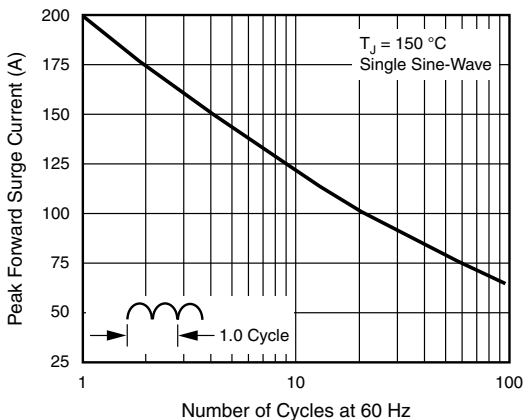


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

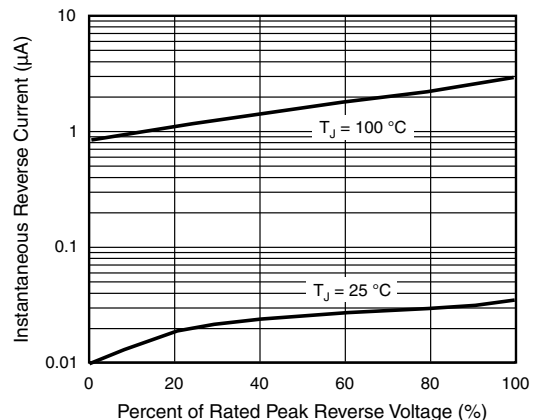
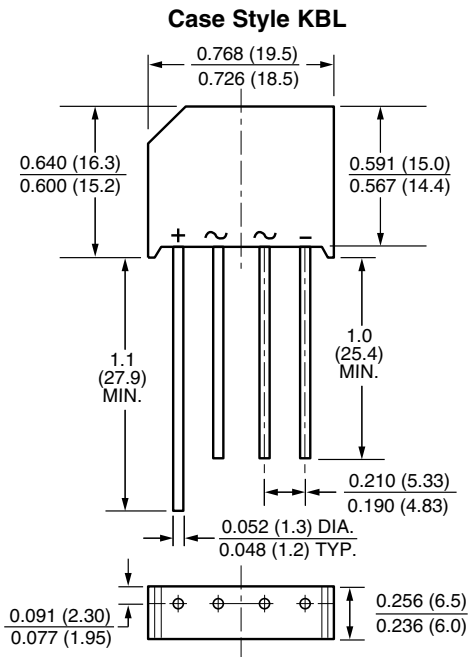


Fig. 4 - Typical Reverse Leakage Characteristics Per Diode



Fig. 5 - Typical Junction Capacitance Per Diode

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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