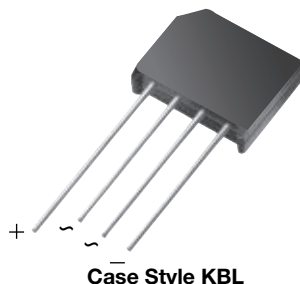
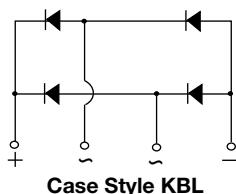




Glass Passivated Single-Phase Bridge Rectifier



Case Style KBL



Case Style KBL

RoHS
COMPLIANT
HALOGEN
FREE

FEATURES

- UL recognition, file number E54214
- Ideal for printed circuit boards
- High surge current capability
- Glass passivated pellet chip 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



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
V _F at I _F = 4 A	0.89 V
T _J max.	150 °C
Package	KBL
Circuit configuration	In-line

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-M3 - halogen-free, RoHS-compliant, commercial grade

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

M3 suffix meets JESD 201 class 1A whisker test

Polarity: as marked on body

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	$\frac{T_C = 141\text{ }^{\circ}\text{C}^{(1)}}{T_A = 86\text{ }^{\circ}\text{C}^{(2)}}$	I _{F(AV)}	4.0						A
			4.0						
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

Notes

(1) Units mounted on infinite heatsink

(2) Units mounted on PCB with 0.5" x 0.5" (12 mm x 12 mm) copper pads and 0.375" (9.5 mm) lead length

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 = 2.0 A	V _F	0.85 (typ.)							V
	I _F = 4.0 A		0.95							
Maximum DC reverse current at rated DC blocking voltage per diode	T _J = 25 °C	I _R	5.0							μA
	T _J = 125 °C		0.5							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 _{θJA} ⁽¹⁾	19							°C/W
	R _{θJC} ⁽²⁾	2.6							

Notes

- (1) 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
- (2) Thermal resistance junction-to-case to follow JEDEC[®] 51-14 transient dual interface test method (TDIM)

ORDERING INFORMATION (Example)

PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
KBL06-M3/P	5.2	P	25	Tube
KBL06-M3/A	5.2	A	300	Ant-static plastic tray

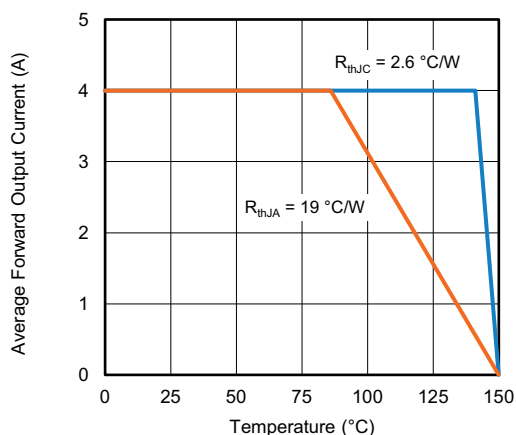
RATINGS AND CHARACTERISTICS CURVES ($T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise noted)

Fig. 1 - Derating Curve Output Rectified Current

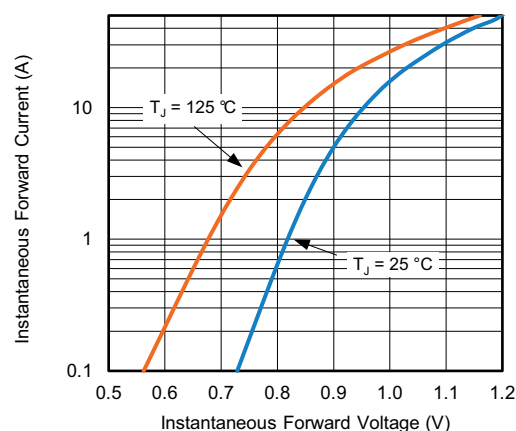


Fig. 3 - Typical Instantaneous Forward Characteristics Per Diode

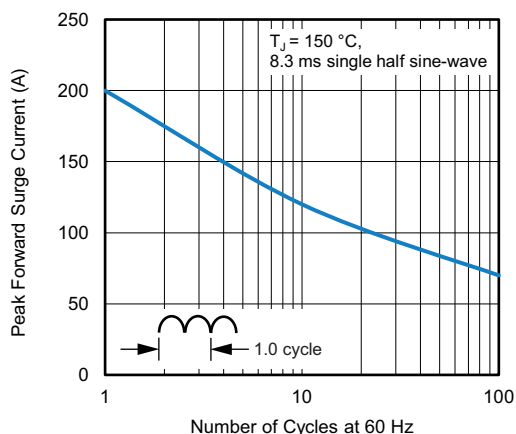


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

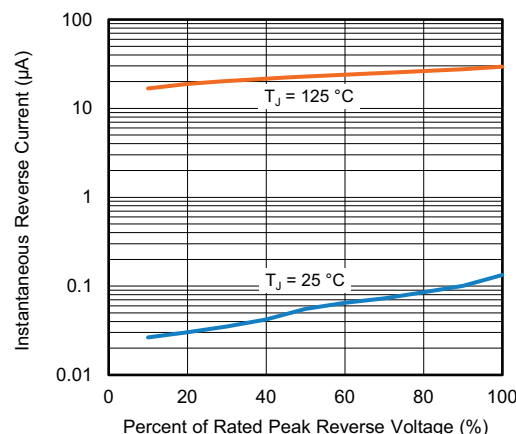


Fig. 4 - Typical Reverse Leakage Characteristics Per Diode

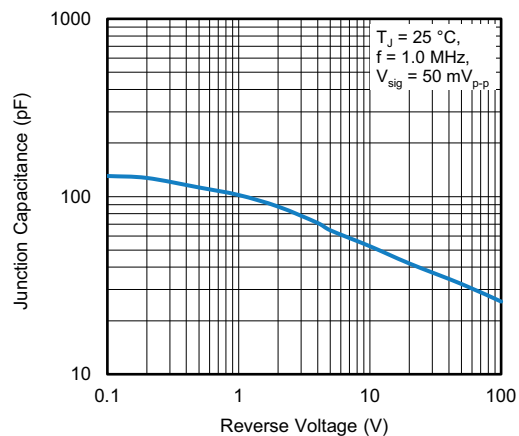
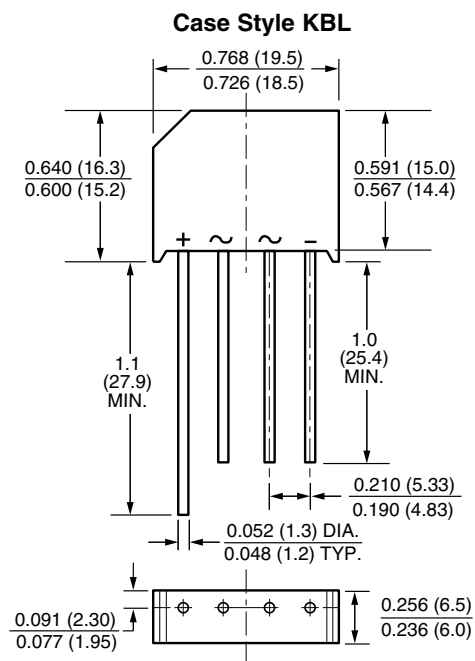


Fig. 5 - Typical Junction Capacitance Per Diode

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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