



KBL005 thru KBL10

Single-Phase Bridge Rectifiers
Reverse Voltage 50 to 1000 Volts Forward Current 4.0 Amperes

Features

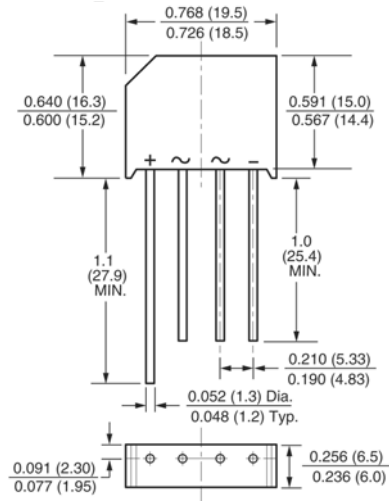
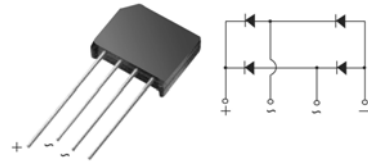
- ◆ Ideal for printed circuit boards
- ◆ High surge current capability
- ◆ High case dielectric strength of 1500 V_{RMS}
- ◆ Solder Dip 260 °C, 40 seconds

Mechanical Data

- ◆ Case: KBL
Epoxy meets UL-94V-0 Flammability rating
- ◆ Terminals: Silver plated (E4 Suffix) leads, solderable per J-STD-002B and JESD22-B102D
- ◆ Polarity: As marked on body
- ◆ Mounting Torque: 10 cm·kg (8.8 inches·lbs) max.
- ◆ Recommended Torque: 5.7 cm·kg (5 inches·lbs)

Typical Applications

General purpose use in ac-to-dc bridge full wave rectification for Monitor, TV, Printer, SMPS, Adapter, Audio equipment, and Home Appliances applications



Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Parameter	Symbols	KBL005	KBL01	KBL02	KBL04	KBL06	KBL08	KBL10	Units
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum average forward output current at $T_A=50^\circ\text{C}$	$I_{F(AV)}$	4.0							Amps
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	200.0							Amps
Maximum instantaneous forward voltage drop per leg at 2.0A	V_F	1.1							Volts
Maximum DC reverse current at rated DC blocking voltage per leg $T_A=25^\circ\text{C}$ $T_A=125^\circ\text{C}$	I_R	5.0 1.0							μA mA
Typical thermal resistance per leg	$R_{\theta JA}$ $R_{\theta JL}$	19 ⁽¹⁾ 2.4 ⁽²⁾							$^\circ\text{C/W}$
Operating junction and storage temperature range	T_{J1} , T_{STG}	-55 to +150							$^\circ\text{C}$

- Notes:**
1. Thermal resistance from junction to ambient with units mounted on 3.0 x 3.0 x 0.11" thick (7.5 x 7.5 x 0.3 cm) Al. plate
 2. Thermal resistance from junction to lead with units mounted on P.C.B. at 0.375" (9.5 mm) lead length and 0.5 x 0.5" (13 x 13 mm) copper pads

RATINGS AND CHARACTERISTIC CURVES

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

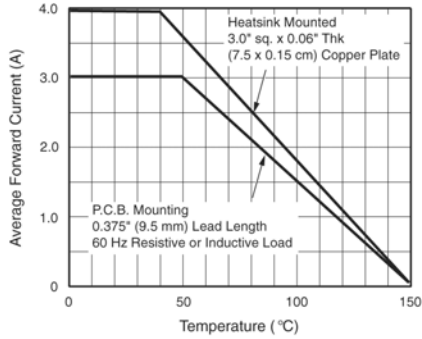


Figure 1. Derating Curve Output Rectified Current

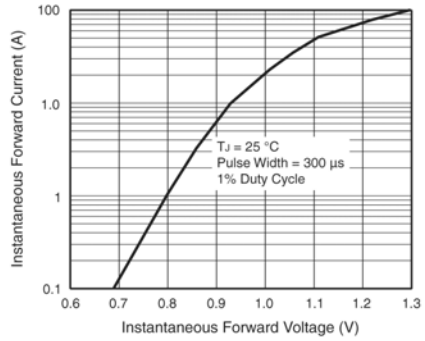


Figure 3. Typical Instantaneous Forward Characteristics Per Leg

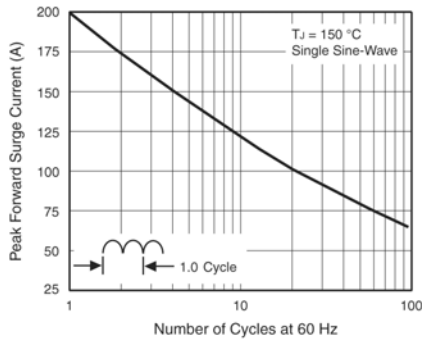


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Leg

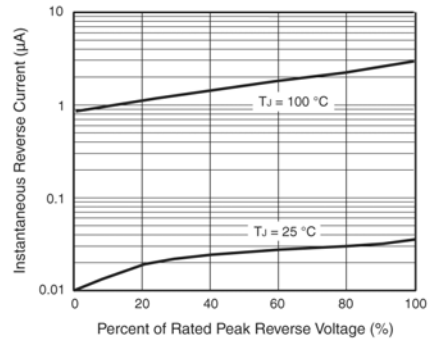


Figure 4. Typical Reverse Leakage Characteristics Per Leg

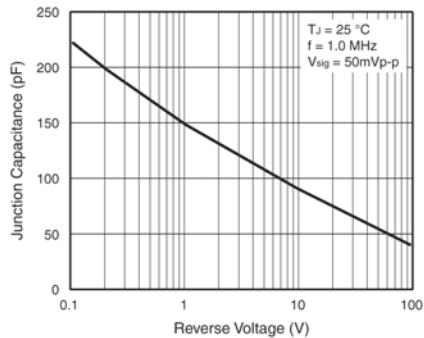


Figure 5. Typical Junction Capacitance Per Leg