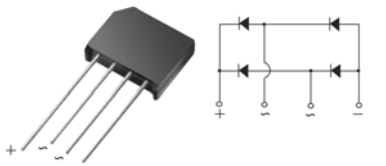
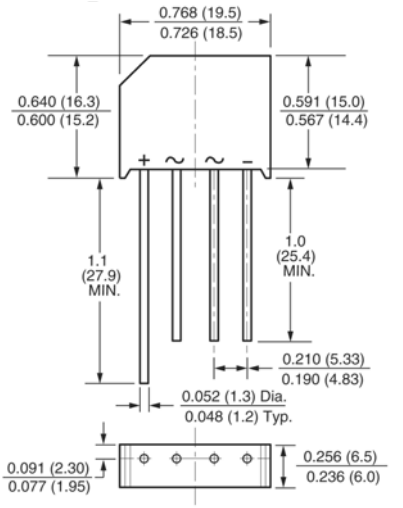
KBL005 thru KBL10

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





Package outline dimensions in inches (millimeters)

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°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°C / T_A=125°C	I_R	5.0 1.0							uA mA
Typical thermal resistance per leg	$R_{\theta JA}$ $R_{\theta JL}$	19 (1) 2.4 (2)							°C/W
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150							°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°C unless otherwise noted)

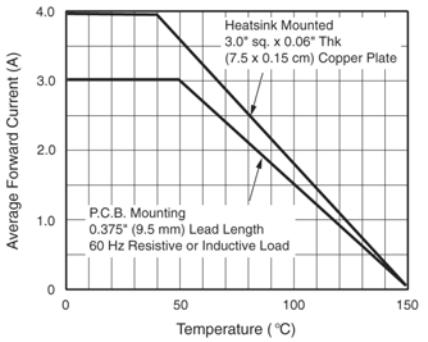


Figure 1. Derating Curve Output Rectified Current

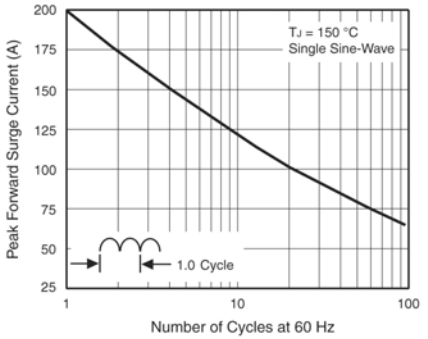


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Leg

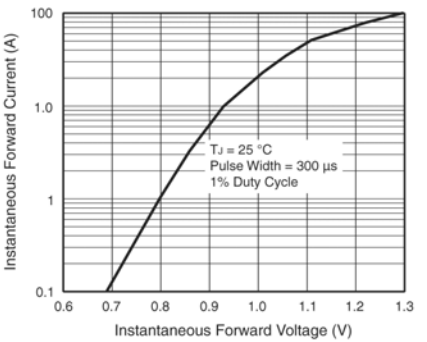


Figure 3. Typical Instantaneous Forward Characteristics Per Leg

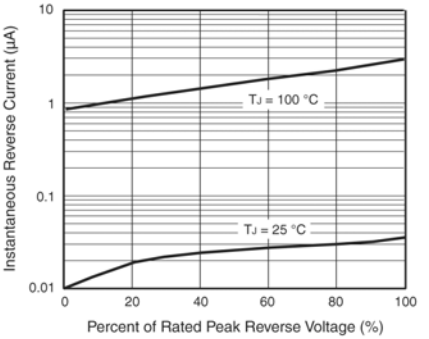


Figure 4. Typical Reverse Leakage Characteristics Per Leg

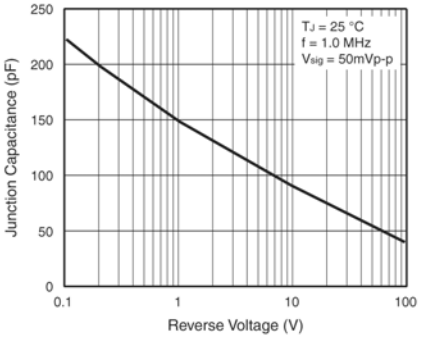


Figure 5. Typical Junction Capacitance Per Leg