GOOD-ARK SEMICONDUCTOR

KBL005 thru KBL10

Single-Phase Bridge Rectifiers
Reverse Voltage 50 to 1000V Forward Current 4.0A

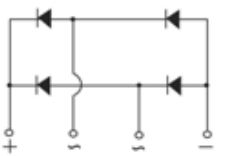
Features

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

Package: KBL

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)



Schematic Diagram

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

(T_A=25°C unless otherwise noted)

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

GOOD-ARK SEMICONDUCTOR

KBL005 thru KBL10

Single-Phase Bridge Rectifiers
Reverse Voltage 50 to 1000V Forward Current 4.0A

Ratings and Characteristics Curves (T_A = 25°C unless otherwise noted)

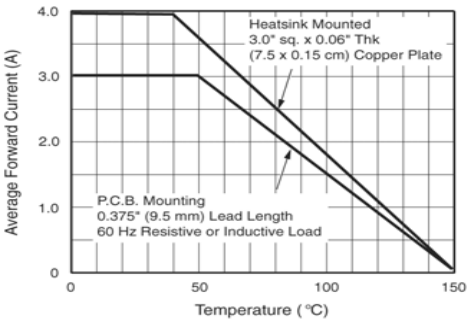


Figure 1. Derating Curve Output Rectified Current

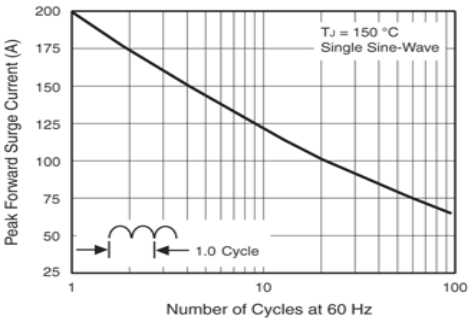


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Leg

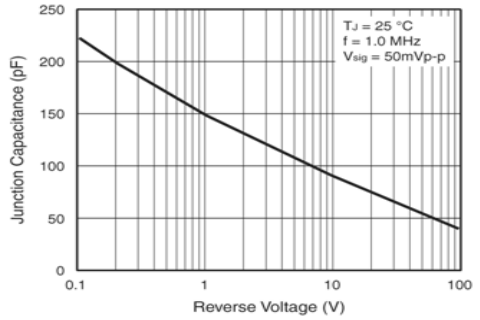


Figure 5. Typical Junction Capacitance Per Leg

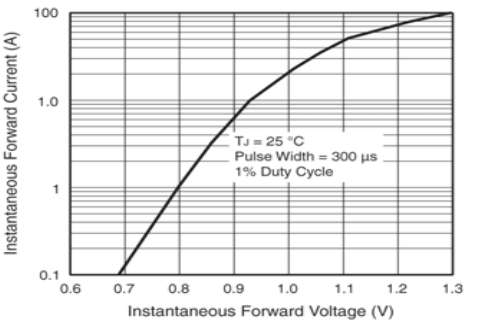


Figure 3. Typical Instantaneous Forward Characteristics Per Leg

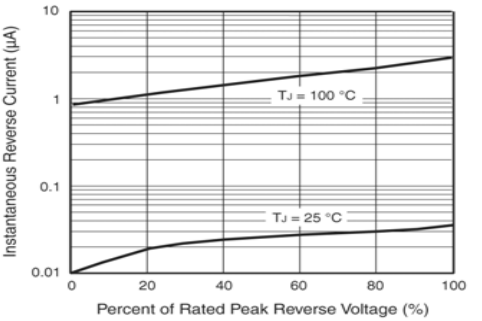


Figure 4. Typical Reverse Leakage Characteristics Per Leg

Package Outline Dimensions

in inches (millimeters)