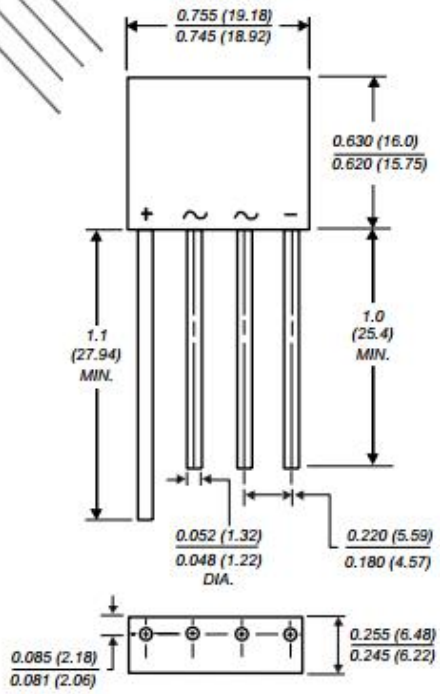
Single-Phase Bridge Rectifier

Reverse Voltage 50 and 1000 V
Forward Current 4.0 A

Case Style KBL



Dimensions in inches and (millimeters)

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- This series is UL listed under the Recognized Component Index, file number E54214
- High case dielectric strength of 1500 V_{RMS}
- Ideal for printed circuit boards
- High forward surge current capability
- High surge current capability
- High temperature soldering guaranteed: 260°C/10 seconds, 0.375 (9.5mm) lead length, 5lbs. (2.3kg) tension

Mechanical Data

Case: Molded plastic body

Terminals: Plated leads solderable per MIL-STD-750, Method 2026

Mounting Position: Any

Weight: 0.2 oz., 5.6 g

Packaging codes/options:
1/300 EA. per Bulk Tray Stack

Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

	Symbols	KBL 005	KBL 01	KBL 02	KBL 04	KBL 06	KBL 08	KBL 10	Units
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 output current at T_A=50°C	$I_{F(AV)}$	4.0							A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method) T_J=150°C	I_{FSM}	200							A
Typical thermal resistance per leg (NOTE 1) (NOTE 2)	$R_{\Theta JA}$ $R_{\Theta JL}$	19 2.4							°C/W
Operating junction storage and temperature range	T_J, T_{STG}	-50 to +150							°C

Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Maximum instantaneous forward drop per leg at 4.0 A	V_F	1.1	V
Maximum DC reverse current at rated T_A= 25°C DC blocking voltage per leg T_A=125°C	I_R	5.0 1.0	µA mA

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 0.3cm) Al. plate

(2) Thermal resistance from junction to lead with units mounted on P.C.B. at 0.375" (9.5mm) lead length and 0.5 x 0.5" (12 x 12mm) copper pads

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

Fig. 1 – Derating Curve Output Rectified Current

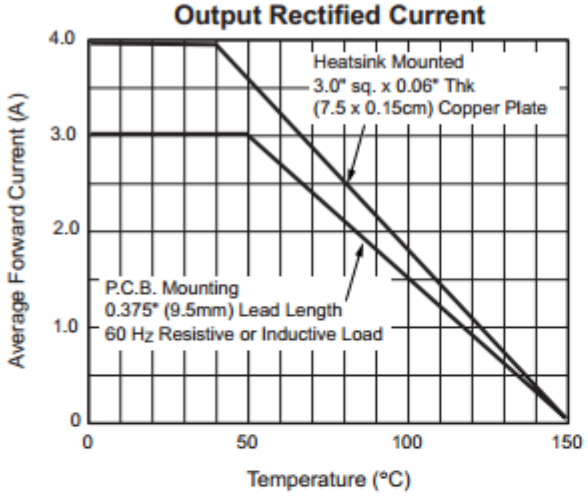


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current Per Leg

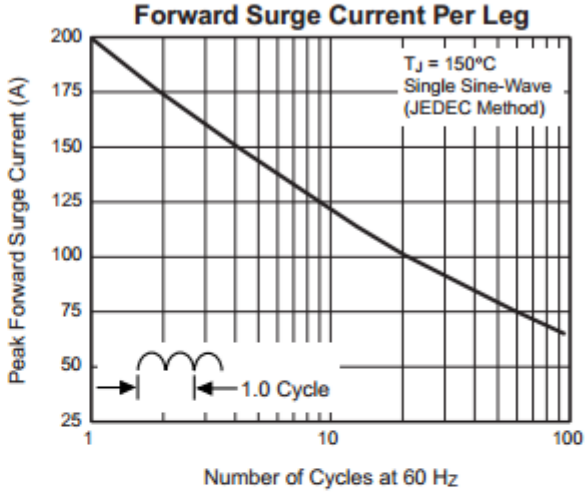


Fig. 3 – Typical Instantaneous Forward Characteristics Per Leg

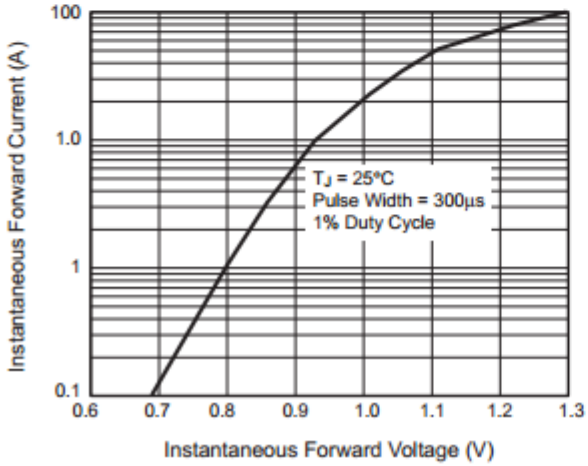


Fig. 4 – Typical Reverse Leakage Characteristics Per Leg

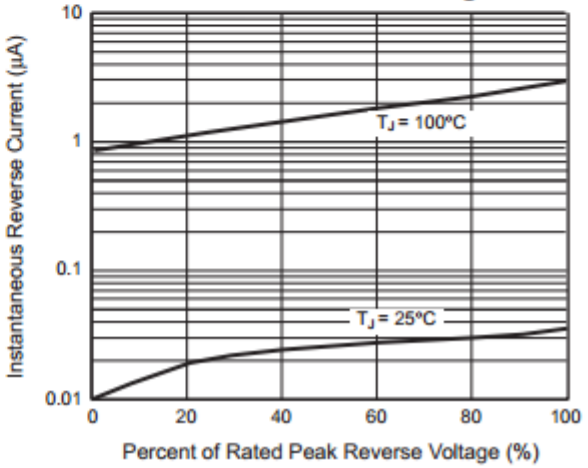


Fig. 5 – Typical Junction Capacitance Per Leg