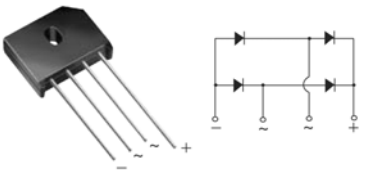
KBU6A thru KBU6M

Single-Phase Bridge Rectifiers
Reverse Voltage 50 to 1000 Volts Forward Current 6.0 Amperes

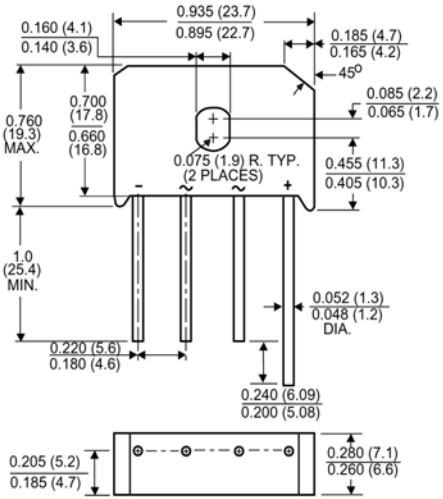
Features

- 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: KBU
  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)



Package outline dimensions in inches (millimeters)

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

Ratings at 25 °C ambient temperature unless otherwise specified.

Parameter	Symbols	KBU6A	KBU6B	KBU6D	KBU6G	KBU6J	KBU6K	KBU6M	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 rectified output current at T_C=100°C (1, 2) / T_A=40°C (3)	$I_{F(AV)}$	6.0 6.0							Amps
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	250.0							Amps
Maximum instantaneous forward voltage drop per leg at 3.0A	V_F	1.0							Volt
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 (2)	$R_{\theta JA}$ $R_{\theta JC}$	8.6 3.1							°C/W
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150							°C

Notes: 1. Recommended mounted position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screw
2. Thermal resistance from junction to ambient with units in free air, P.C.B. mounted on 0.5 x 0.5" (13 x 13 mm) copper pads, 0.375" (9.5 mm) lead length
3. Thermal resistance from junction to case with units mounted on a 2.6 x 1.4 x 0.06" thick (6.5 x 3.5 x.15 cm) Al. Plate

RATINGS AND CHARACTERISTIC CURVES

(T_A = 25°C unless otherwise noted)

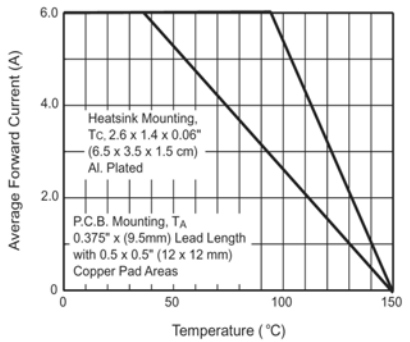


Figure 1. Derating Curve Output Rectified Current

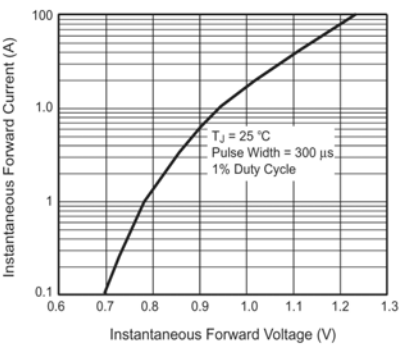


Figure 3. Typical Instantaneous Forward Characteristics Per Leg

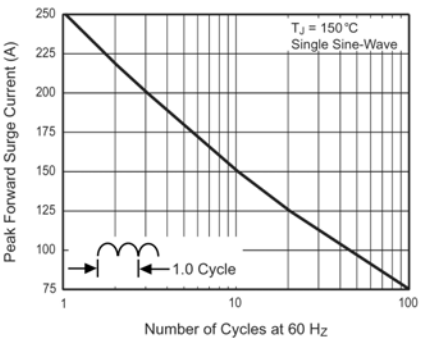


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Leg

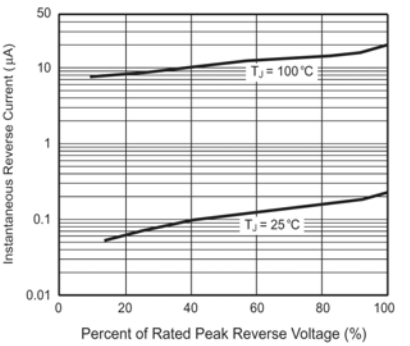


Figure 4. Typical Reverse Leakage Characteristics Per Leg

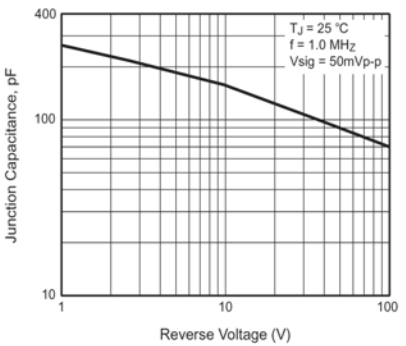


Figure 5. Typical Junction Capacitance Per Leg