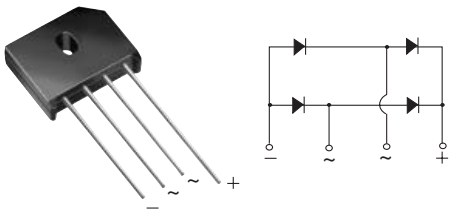
Single-Phase Bridge Rectifier

Major Ratings and Characteristics

$I_{F(AV)}$	6 A
V_{RRM}	50 V to 1000 V
I_{FSM}	200 A
I_R	5 µA
V_F	1.0 V
T_j max.	150 °C

Case Style KBU



Features

- UL Recognition file number E54214
- Ideal for printed circuit boards
- High surge current capability
- High case dielectric strength of 1500 V_{RMS}
- Meets MSL level 1, per J-STD-020C

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

Mechanical Data

Case: KBU

Epoxy meets UL-94V-0 Flammability rating

Terminals: Silver plated (E4 Suffix) leads, solderable per J-STD-002B and MIL-STD-750, Method 2026

Polarity: As marked on body

Mounting Torque: 10 cm-kg (8.8 inches-lbs) max.

Recommended Torque: 5.7 cm-kg (5 inches-lbs)

Maximum Ratings

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	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 T_C = 100 °C (1)(2) rectified output current at T_A = 40 °C (3)	$I_{F(AV)}$	6.0 6.0							A
Peak forward surge current single sine-wave superimposed on rated load	I_{FSM}	250							A
Operating junction and storage temperature range	T_J, T_{STG}	- 50 to + 150							°C

Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Parameter	Test condition	Symbols	KBU6A	KBU6B	KBU6D	KBU6G	KBU6J	KBU6K	KBU6M	Units
Maximum instantaneous forward drop per leg	at 6.0 A	V_F	1.0							V
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							µA mA

Thermal Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Parameter	Symbols	KBU6A	KBU6B	KBU6D	KBU6G	KBU6J	KBU6K	KBU6M	Units
Typical thermal resistance per leg(2)	$R_{\theta JA}$ $R_{\theta JC}$	8.6 3.1							°C/W

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" (12 x 12 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 Characteristics Curves

(T_A = 25 °C unless otherwise noted)

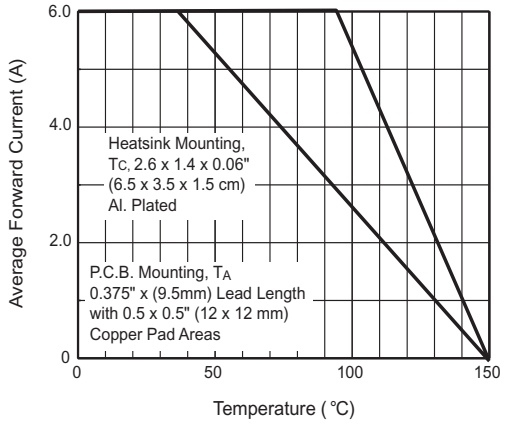


Figure 1. Derating Curve Output Rectified Current

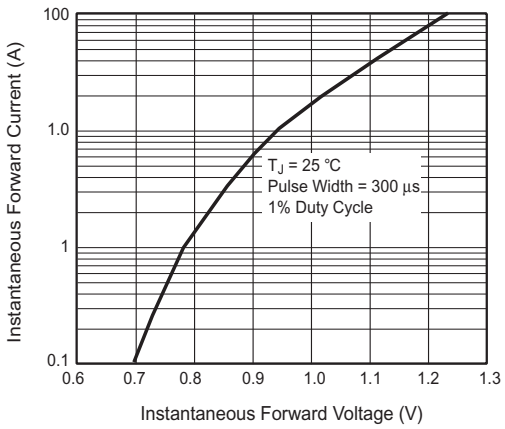


Figure 3. Typical Instantaneous Forward Characteristics Per Leg

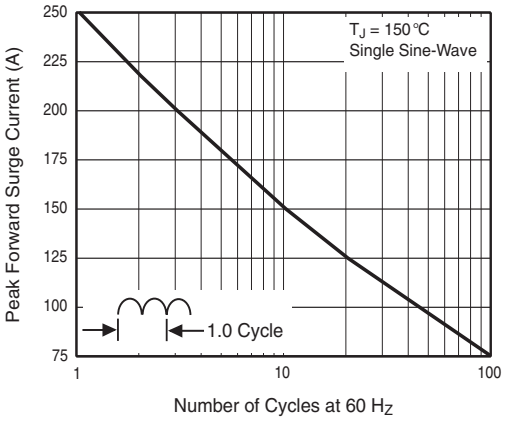


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Leg

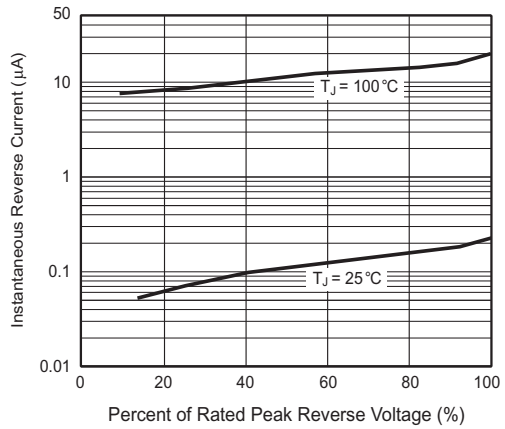


Figure 4. Typical Reverse Leakage Characteristics Per Leg

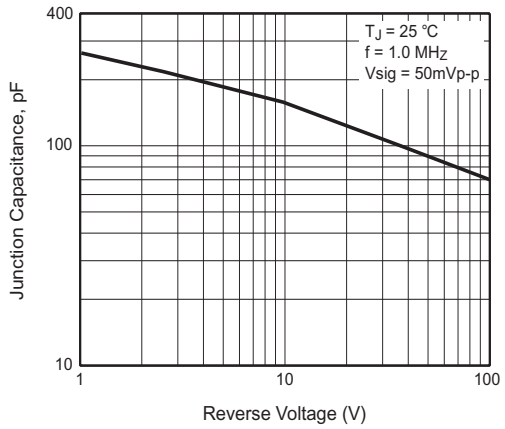


Figure 5. Typical Junction Capacitance Per Leg

Package outline dimensions in inches (millimeters)