KBU8A, KBU8B, KBU8D, KBU8G, KBU8J, KBU8K, KBU8M

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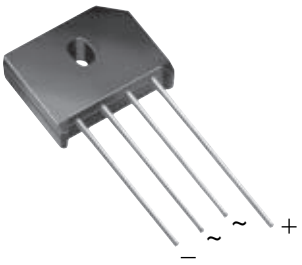
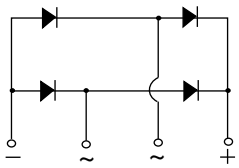
Vishay General Semiconductor

Single-Phase Bridge Rectifier





Case Style KBU

FEATURES

- UL recognition, file number E54214
- Ideal for printed circuit boards
- High surge current capability
- Plastic-passivated junction
- High case dielectric strength of 1500 V_{RMS}
- Solder dip 275 °C max. 10 s, per JESD 22-B106
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

RoHS COMPLIANT

LINKS TO ADDITIONAL RESOURCES

3D Models

TYPICAL APPLICATIONS

General purpose use in AC/DC bridge full wave rectification for monitor, TV, printer, SMPS, adapter, audio equipment, and home appliances applications.

PRIMARY CHARACTERISTICS	
Package	KBU
$I_{F(AV)}$	8 A
V_{RRM}	50 V, 100 V, 200 V, 400 V, 600 V, 800 V, 1000 V
I_{FSM}	300 A
I_R	10 µA
V_F at I_F = 8 A	1.0 V
T_J max.	150 °C
Circuit configuration	In-line

MECHANICAL DATA

Case: KBU

Molding compound meets UL 94 V-0 flammability rating Base P/N-E4 - RoHS-compliant, commercial grade

Terminals: silver plated leads, solderable per J-STD-002 and JESD22-B102

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 (T_A = 25 °C unless otherwise noted)

PARAMETER		SYMBOL	KBU8A	KBU8B	KBU8D	KBU8G	KBU8J	KBU8K	KBU8M	UNIT
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 rectified output current at	T_C = 100 °C (1)(3)	$I_{F(AV)}$	8.0							A
	T_A = 40 °C (2)		6.0							
Peak forward surge current single sine-wave superimposed on rated load		I_{FSM}	300							A
Operating junction and storage temperature range		T_J, T_{STG}	-50 to +150							°C

Notes

(1) Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screw
(2) Units mounted in free air, no heatsink, PCB at 0.375" (9.5 mm) lead length with 0.5" x 0.5" (12 mm x 12 mm) copper pads
(3) Units mounted on a 3.0" x 3.0" x 0.11" thick (7.5 cm x 7.5 cm x 0.3 cm) aluminum plate heatsink

ELECTRICAL CHARACTERISTICS (T_A = 25 °C unless otherwise noted)

PARAMETER	TEST CONDITIONS	SYMBOL	KBU8A	KBU8B	KBU8D	KBU8G	KBU8J	KBU8K	KBU8M	UNIT
Maximum instantaneous forward drop per diode	I_F = 8.0 A	V_F	1.0							V
Maximum DC reverse current at rated DC blocking voltage per diode	T_A = 25 °C	I_R	10							µA
	T_A = 125 °C		1.0							mA

THERMAL CHARACTERISTICS (T_A = 25 °C unless otherwise noted)									
PARAMETER	SYMBOL	KBU8A	KBU8B	KBU8D	KBU8G	KBU8J	KBU8K	KBU8M	UNIT
Typical thermal resistance	$R_{\theta JA}$ (1)	18							°C/W
	$R_{\theta JC}$ (2)	3.0							

Notes

(1) Units mounted in free air, no heatsink, PCB at 0.375" (9.5 mm) lead length with 0.5" x 0.5" (12 mm x 12 mm) copper pads

(2) Units mounted on a 3.0" x 3.0" x 0.11" thick (7.5 cm x 7.5 cm x 0.3 cm) aluminum plate heatsink

ORDERING INFORMATION (Example)				
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
KBU8J-E4/51	8.0	51	250	Anti-static PVC tray

RATINGS AND CHARACTERISTICS CURVES (T_A = 25 °C unless otherwise noted)

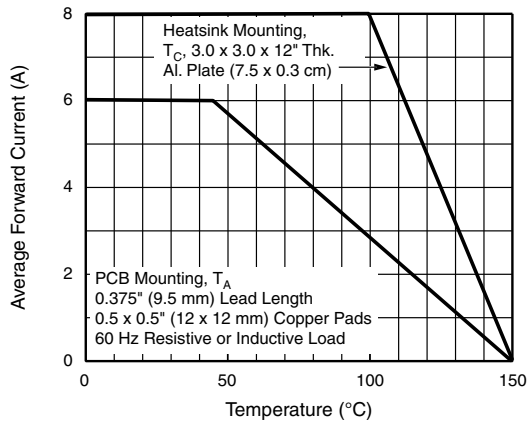


Fig. 1 - Derating Curve Output Rectified Current

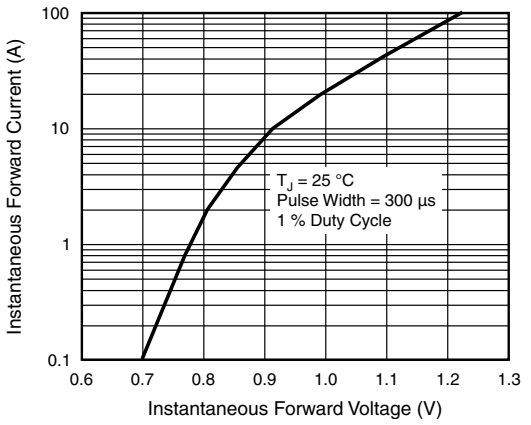


Fig. 3 - Typical Instantaneous Forward Characteristics Per Diode

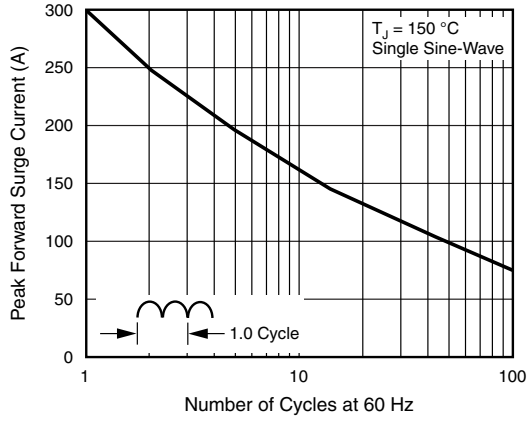


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

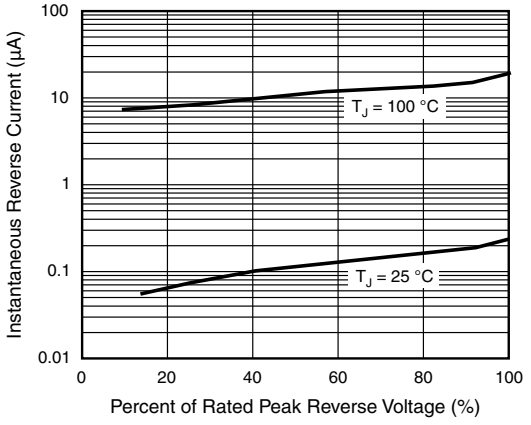


Fig. 4 - Typical Reverse Leakage Characteristics Per Diode

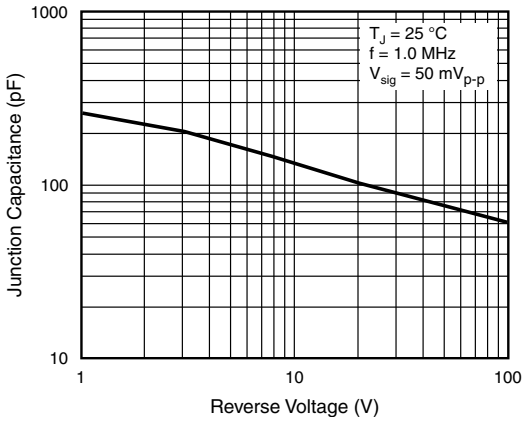
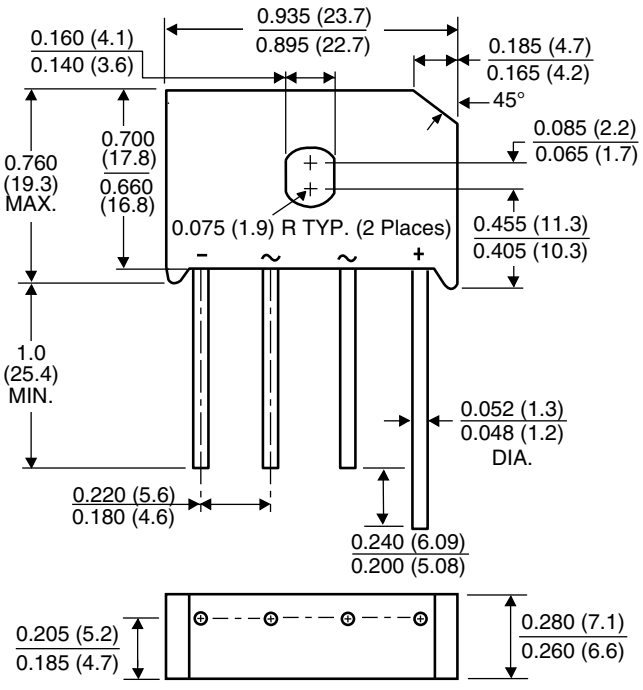


Fig. 5 - Typical Junction Capacitance Per Diode

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

Case Style KBU



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