

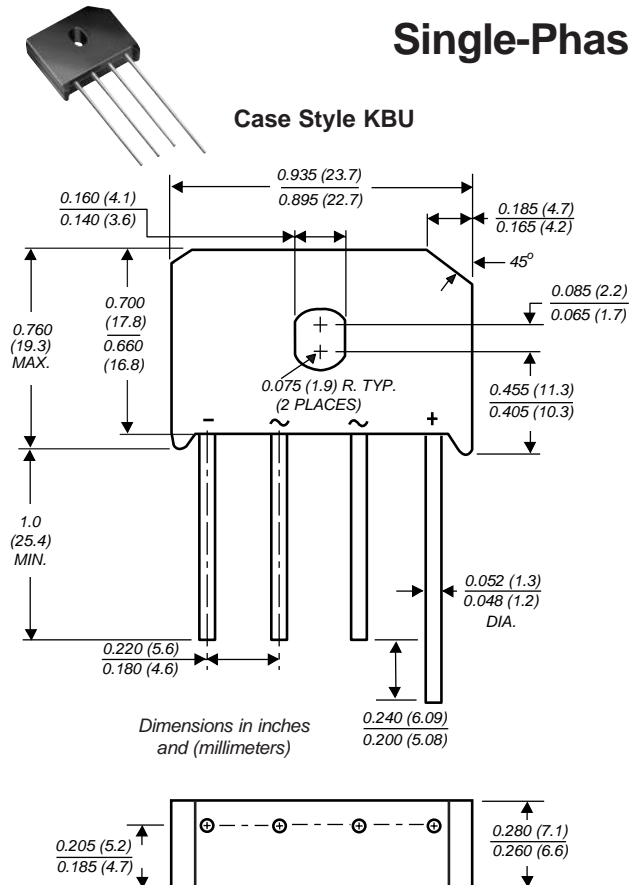


KBU6A thru KBU6M

Vishay Semiconductors
formerly General Semiconductor

Single-Phase Bridge Rectifier

Reverse Voltage 50 and 1000 V
Forward Current 6.0 A



Features

- Plastic material used carries 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 VRMS
- Ideal for printed circuit boards
- High surge current capability
- High temperature soldering guaranteed: 250°C/10 seconds, 0.375 (9.5mm) lead length, 5 lbs. (2.3kg) tension

Mechanical Data

Case: Molded plastic body

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

Mounting Position: Any (NOTE 1)

Weight: 0.3 oz., 8.0 g

Packaging codes/options:
1/250 EA. per Bulk Tray Stack

Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

	Symbols	KBU 6A	KBU 6B	KBU 6D	KBU 6G	KBU 6J	KBU 6K	KBU 6M	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 rectified output current at $T_C=100^\circ\text{C}$ ⁽¹⁾ ⁽²⁾ $T_A=40^\circ\text{C}$ ⁽³⁾	$I_{F(AV)}$	6.0						6.0	A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method) $T_J=150^\circ\text{C}$	I_{FSM}	250							A
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}	-50 to +150							°C

Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

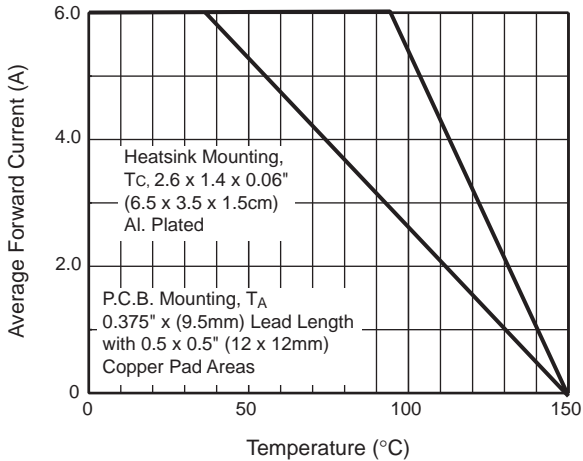
Maximum instantaneous forward drop per leg at 6.0 A	V_F				1.0				V
Maximum DC reverse current at rated DC blocking voltage per leg $T_A=25^\circ\text{C}$ $T_A=125^\circ\text{C}$	I_R				5.0	1.0			μA mA

Notes:

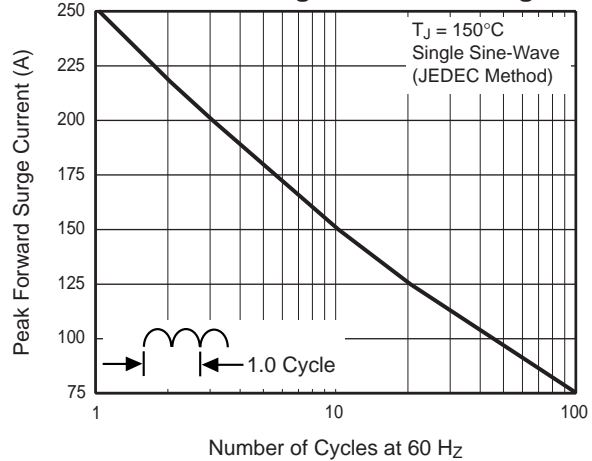
- (1) Recommended mounted position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screw
- (2) Thermal resistance from junction to ambient with units in free air, P.C.B. mounted on 0.5 x 0.5" (12 x 12mm) copper pads, 0.375" (9.5mm) lead length
- (3) Thermal 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 1.5cm) Al. Plate

Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

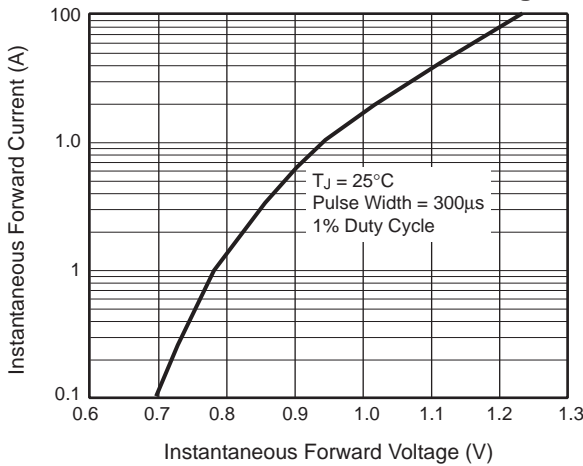
**Fig. 1 – Derating Curve
Output Rectified Current**



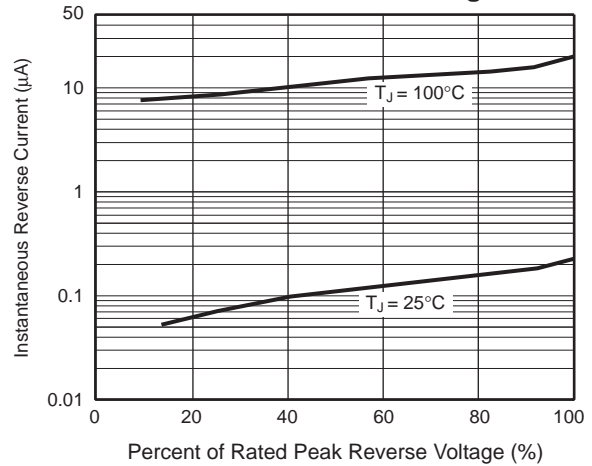
**Fig. 2 – Maximum Non-Repetitive Peak
Forward Surge Current Per Leg**



**Fig. 3 – Typical Instantaneous
Forward Characteristics Per Leg**



**Fig. 4 – Typical Reverse Leakage
Characteristics Per Leg**



**Fig. 5 – Typical Junction
Capacitance Per Leg**

