

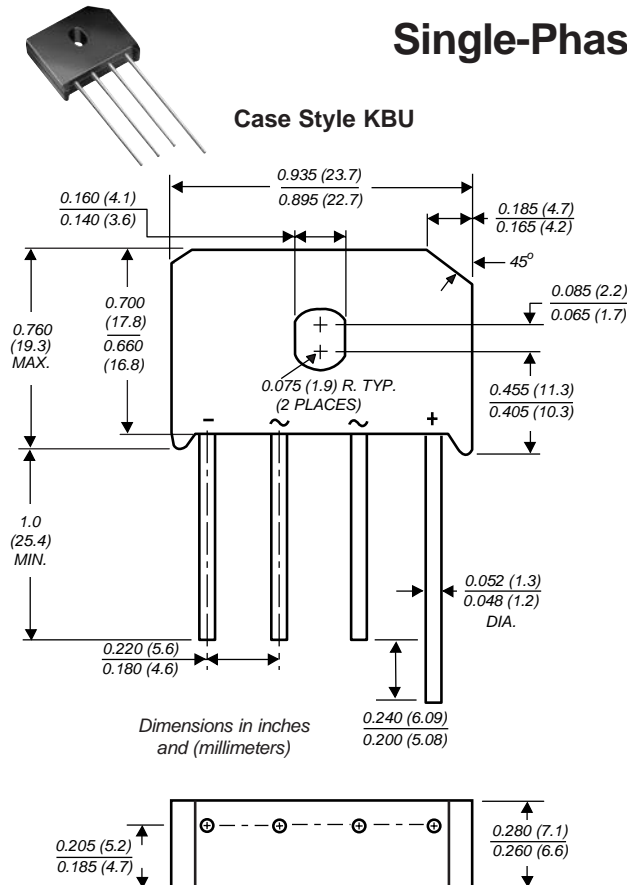


# KBU6A thru KBU6M

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 $T_C=100^\circ\text{C}$ <sup>(1)</sup> <sup>(2)</sup> $T_A=40^\circ\text{C}$ <sup>(3)</sup>	$I_{F(AV)}$	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 <sup>(2)</sup>	$R_{\theta JA}$ $R_{\theta JC}$	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.

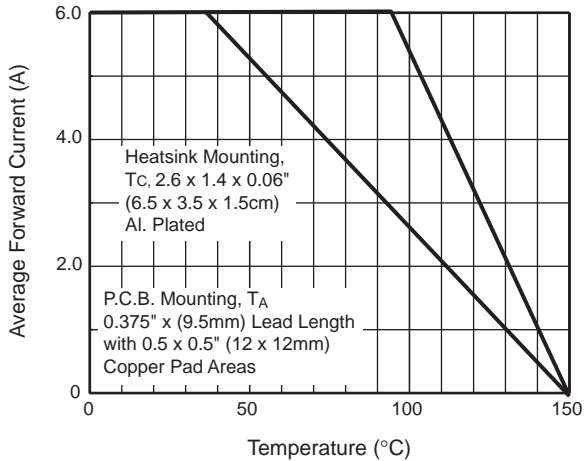
Maximum instantaneous forward drop per leg at 6.0 A	$V_F$	1.0						V	
Maximum DC reverse current at rated DC blocking voltage per leg $T_A=25^\circ\text{C}$ $T_A=125^\circ\text{C}$	$I_R$	5.0 1.0						$\mu\text{A}$ mA	

#### Notes:

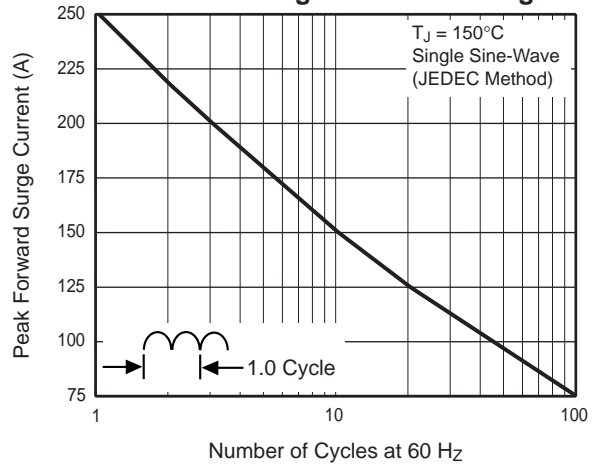
- (1) Recommended mounted position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screw
- (2) Thermal resistance from junction to ambient with units in free air, P.C.B. mounted on 0.5 x 0.5" (12 x 12mm) copper pads, 0.375" (9.5mm) lead length
- (3) Thermal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

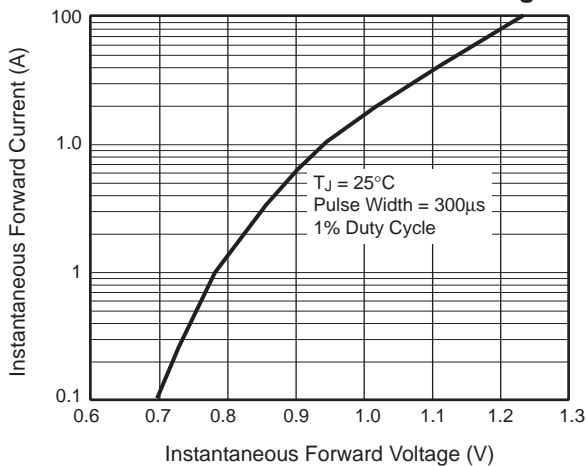
**Fig. 1 – Derating Curve  
Output Rectified Current**



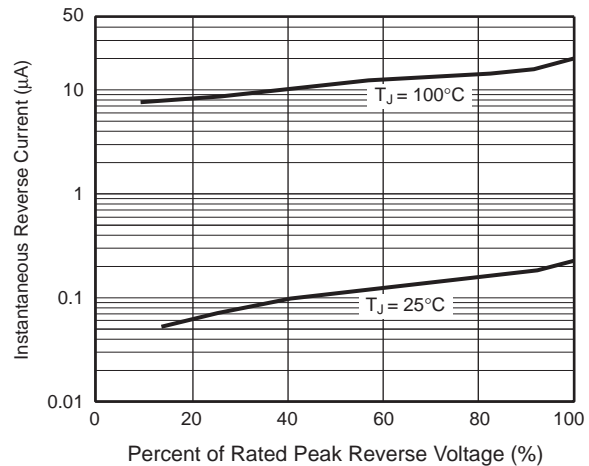
**Fig. 2 – Maximum Non-Repetitive Peak  
Forward Surge Current Per Leg**



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



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



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

