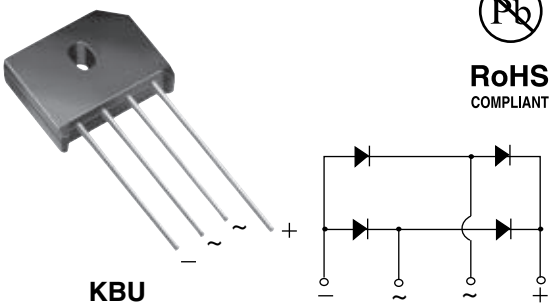
TRR®

KBU6005 thru KBU610

6.0A Single-Phase Silicon Bridge Rectifier

Features

- Ideal for P.C. Board mounting
- This series is UL listed under the Recognized Component Index, file number E142814
- High temperature soldering: 260℃/10 seconds at terminals
- High surge current capability
- Component in accordance to RoHS 2011/65/EU and WEEE 2002/96/EC



RoHS COMPLIANT

Mechanical Date

- Case:KBU Molding compound meets UL 94 V-0 flammability rating
- MIL-STD-750, Method 2026
- **Polarity:**Polarity symbols molded on body

Major Ratings and Characteristics

$I_{F(AV)}$	6.0A
V_{RRM}	50 V to 1000 V
I_{FSM}	250A
V_F	1.1V
T_J max.	150 °C

Maximum Ratings & Thermal Characteristics

T_A = 25 °C unless otherwise noted

Parameter	Symbol	KBU 6005	KBU 601	KBU 602	KBU 604	KBU 606	KBU 608	KBU 610	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS bridge input 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(see Fig.1)	$IF_{(AV)}$	6							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							℃
Thermal resistance from junction to ambient	$R_{\theta JA}$(1)	8.6							℃/W
Thermal resistance from junction to case	$R_{\theta JC}$(2)	3.1							

Electrical Characteristics

T_A = 25 °C unless otherwise noted

Parameter		Symbol	KBU 6005	KBU 601	KBU 602	KBU 604	KBU 606	KBU 608	KBU 610	Unit
Maximum instantaneous forward drop per diode at I_F=6.0A		V_F	1.1							V
Maximum DC reverse current at rated DC blocking voltage per diode	T_A=25℃	I_R	10							μA
	T_A=125℃		500							

Notes: (1) PCB mounted on 0.5" x 0.5" (12 mm x 12 mm) copper pads, 0.375"(9.5 mm) lead length

(2) Mounted on a 2.6" x 1.4"x 0.06" thick (6.5 cm x 3.5 cm x 0.15 cm) Al. plate

Characteristic Curves (T_A=25 ℃ unless otherwise noted)

Fig. 1 - Derating Curve Output Rectified Current

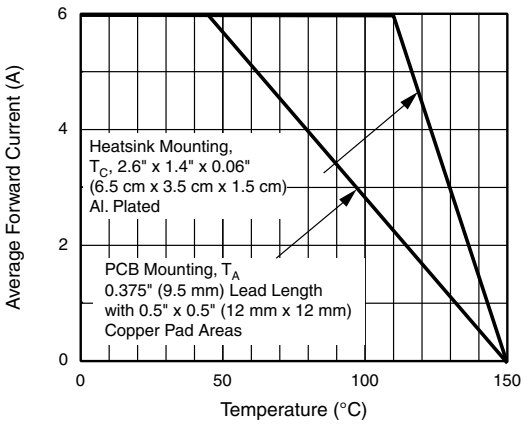


Fig. 2 - Typical Instantaneous Forward Characteristics Per Diode

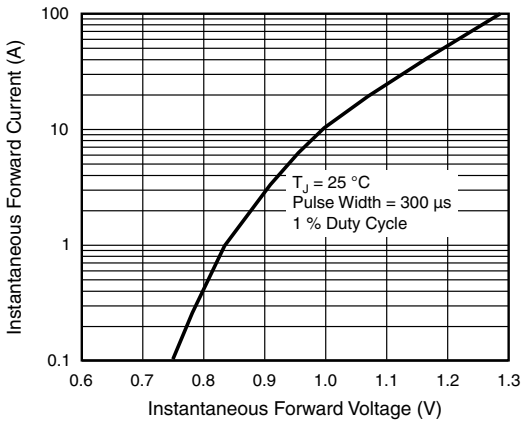


Fig. 3 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

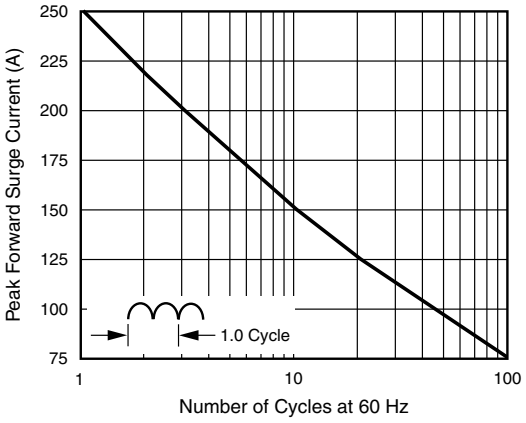
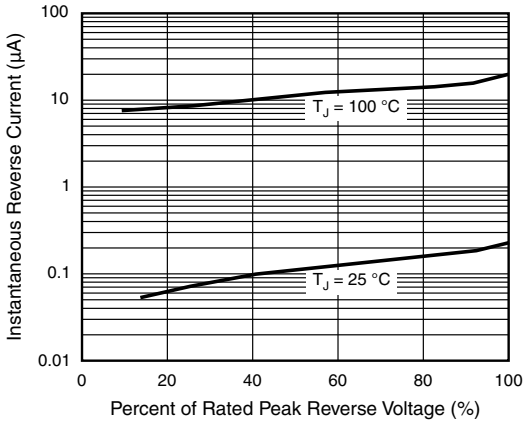
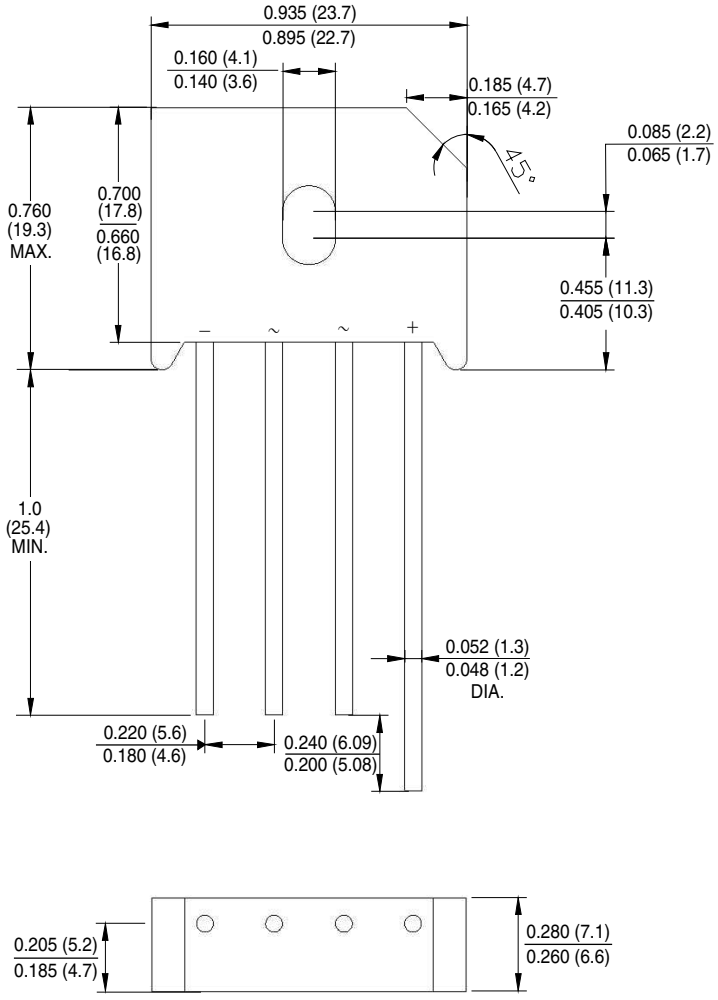


Fig. 4 - Typical Reverse Leakage Characteristics Per Diode



Package Outline

KBU



Dimensions in inches and (millimeters)