TAIWAN SEMICONDUCTOR

KBU601 - KBU607

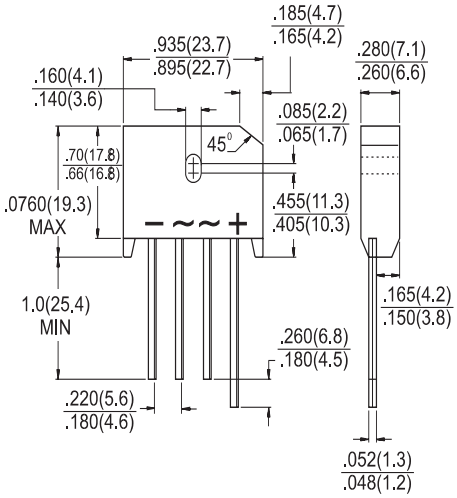
Single Phase 6.0 AMPS. Silicon Bridge Rectifiers

KBU

RoHS COMPLIANCE

Features

- ✧ UL Recognized File # E-96005
- ✧ High surge current capability
- ✧ Ideal for printed circuit board
- ✧ Reliable low cost construction technique results in inexpensive product
- ✧ High temperature soldering guaranteed: 260 °C / 10 seconds / 0.375" (9.5mm) lead length at 5 lbs., (2.3 kg) tension
- ✧ Weight: 8 grams



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%

Type Number	Symbol	KBU 601	KBU 602	KBU 603	KBU 604	KBU 605	KBU 606	KBU 607	Units
Maximum Recurrent 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 Current @T_A = 65°C	$I_{(AV)}$	6.0							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	200							A
Maximum Instantaneous Forward Voltage @ 3.0A @ 6.0A	V_F	1.0 1.1							V
Maximum DC Reverse Current @ T_A=25°C at Rated DC Blocking Voltage @ T_A=125°C	I_R	10 500							uA uA
Typical Thermal resistance (Note 1) (Note 2)	$R_{\theta JA}$ $R_{\theta JL}$	8.6 3.1							°C/W
Operating Temperature Range	T_J	-55 to +125							°C
Storage Temperature Range	T_{STG}	-55 to +150							°C

Notes:
1. Thermal resistance from Junction to Ambient with units in Free Air, P.C.B. Mounted on 0.5" x 0.5" (12mm x 12mm) Copper Pads, 0.375" (9.5mm) Lead Length.
2. Thermal resistance from Junction to Case with units Mounted on 2" x 3.0" x 0.25" Al. Plate

Version: A06

RATINGS AND CHARACTERISTIC CURVES (KBU601 THRU KBU607)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

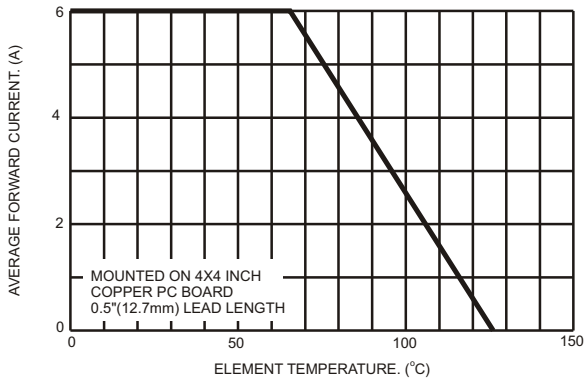


FIG.2- TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

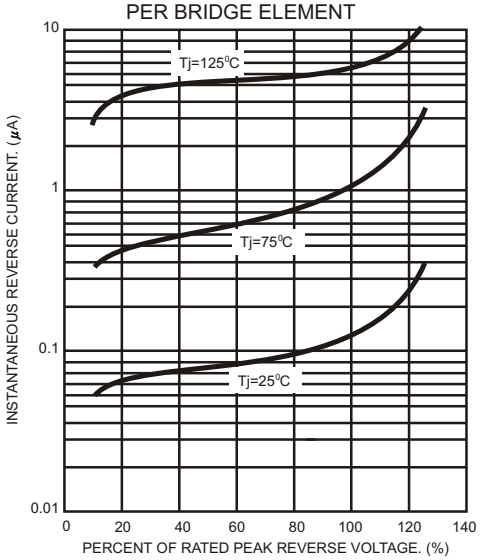


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER BRIDGE ELEMENT

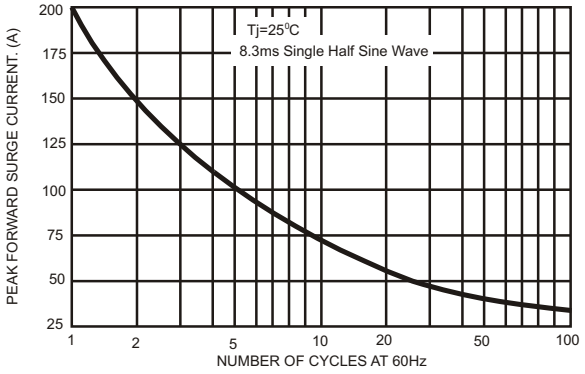


FIG.4- TYPICAL JUNCTION CAPACITANCE

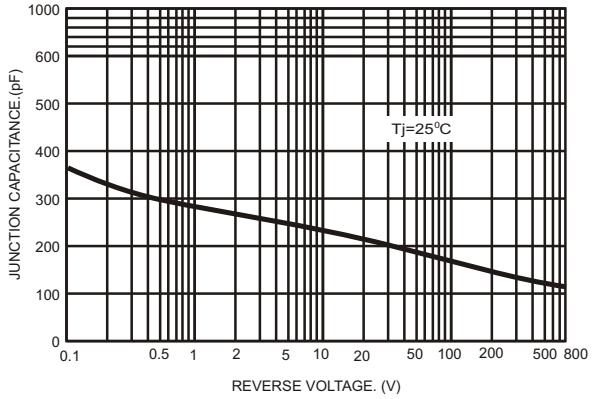


FIG.5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER BRIDGE ELEMENT