TAIWAN SEMICONDUCTOR

KBU1001 - KBU1007

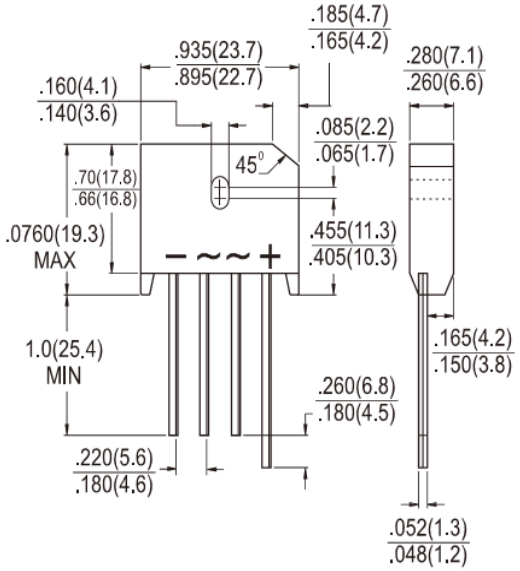
Single Phase 10.0AMPS. Bridge Rectifiers

KBU

RoHS COMPLIANCE

Features

- ✧ UL Recoganized File # E-326243
- ✧ Ideal for printed circuit board
- ✧ High case dielectric strength
- ✧ Plastic material has Underwriters laboratory flammability Classification 94V-0
- ✧ Typical IR less than 0.1uA
- ✧ High surge current capability
- ✧ High temperature soldering guaranteed: 260℃ / 10 seconds at 5 lbs., (2.3kg) tension
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode.



Mechanical Data

- ✧ Case: Molded plastic body
- ✧ Terminals: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208
- ✧ Weight: 8.0 grams
- ✧ Mounting Torque: 5 in lbs max.

Dimensions in inches and (millimeters)

Marking Diagram

KBU100X	= Specific Device Code
G	= Green Compound
Y	= Year
WW	= Work Week

Maximum Ratings and Electrical Characteristics

Rating at 25 ℃ 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 1001	KBU 1002	KBU 1003	KBU 1004	KBU 1005	KBU 1006	KBU 1007	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℃	$I_{F(AV)}$	10							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	300							A
Rating of fusing (t<8.3mS)	I^2t	373							A^2S
Maximum Instantaneous Forward Voltage (Note 1) @ 5 A @ 10 A	V_F	1.0 1.1							V
Maximum DC Reverse Current @ T_A=25 ℃ at Rated DC Blocking Voltage @ T_A=125 ℃	I_R	10 500							uA
Typical Junction Capacitance per leg (Note 2)	Cj	400							pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$ $R_{\theta JC}$	25 2.2							$^OC/W$
Operating Temperature Range	T_J	- 55 to + 125							^OC
Storage Temperature Range	T_{STG}	- 55 to + 150							^OC

Note 1 : Pulse Test with PW=300 usec, 1% Duty Cycle

Note 2 : Measured at 1MHz and applied Reverse bias of 4.0V D.C.

Note 3 : Unit case mounted on 4" x 6" x 0.25" Al plate heat sink.

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RATINGS AND CHARACTERISTIC CURVES (KBU1001 THRU KBU1007)

FIG.1 MAXIMUM DERATING CURVE FOR OUTPUT CURRENT

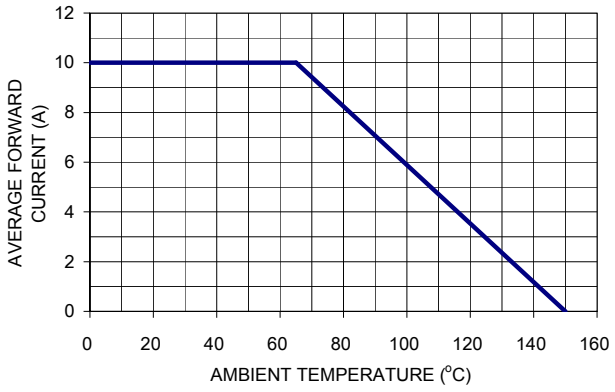


FIG. 2 MAXIMUM FORWARD SURGE CURRENT PER LEG

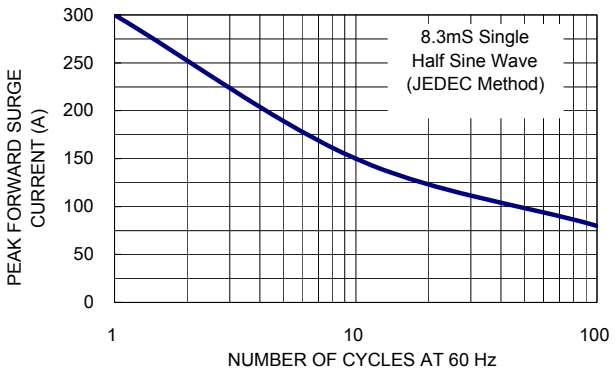


FIG. 3 TYPICAL REVERSE LEAKAGE CHARACTERISTICS PER LEG

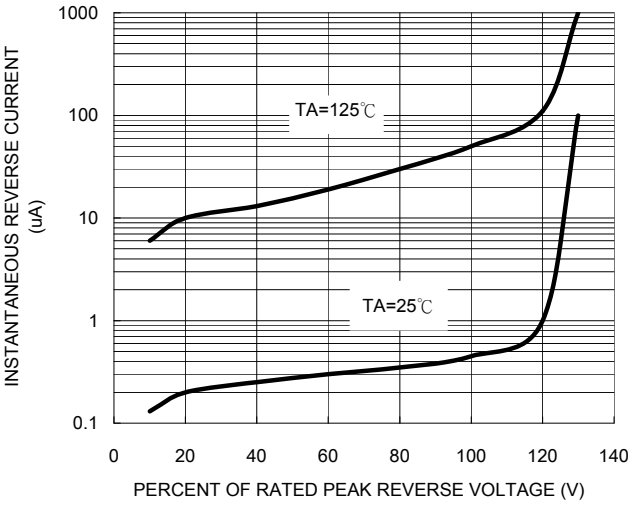


FIG. 4 TYPICAL FORWARD CHARACTERISRICS PER LEG

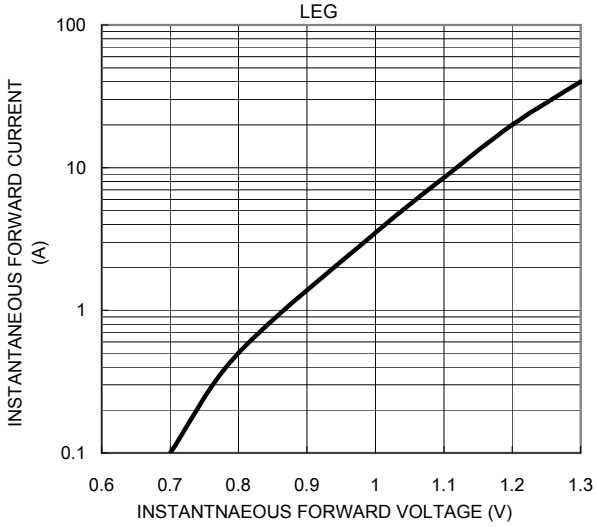
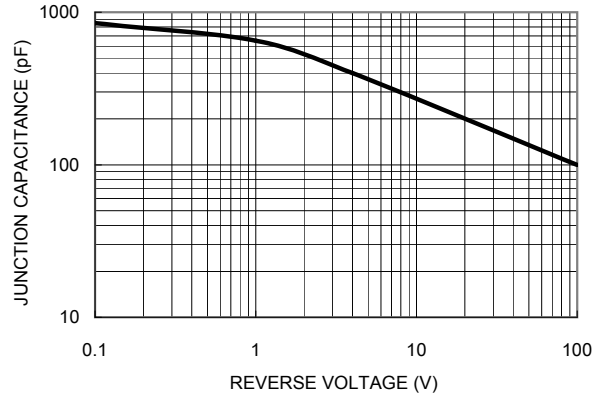


FIG. 5 TYPICAL JUNCTION CAPACITANCE



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