KBU601G THRU KBU607G

Single Phase 6.0 AMPS. Glass Passivated Bridge Rectifiers

TSC

Voltage Range
50 to 1000 Volts
Current
6.0 Amperes

KBU

Features

♢ UL Recognized File # E-96005
♢ Glass passivated junction
♢ Ideal for printed circuit board
♢ Reliable low cost construction
♢ Plastic material has Underwriters Laboratory Flammability Classification 94V-0
♢ Surge overload rating to 175 amperes peak
♢ High temperature soldering guaranteed: 260°C / 10 seconds / .375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
♢ Weight: 0. 3 ounce, 8.0 grams
♢ Mounting torque: 5 in. lb. max.
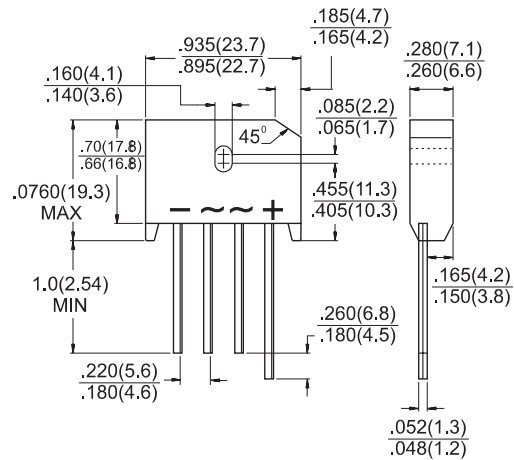
Dimensions in inches and (millimeters)

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 601G	KBU 602G	KBU 603G	KBU 604G	KBU 605G	KBU 606G	KBU 607G	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℃	$I_{(AV)}$	6.0							A
Peak Forward Surge Current, 8.3 ms Single Half Sne-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	175							A
Maximum Instantaneous Forward Voltage @ 6.0A	V_F	1.0							V
Maximum DC Reverse Current @ T_A=25℃ at Rated DC Blocking Voltage @ T_A=125℃	I_R	5.0 500							uA uA
Typical Thermal Resistance (Note 1) (Note 2)	$R\theta_{JA}$ $R\theta_{JC}$	8.6 3.1							℃/W
Operating Temperature Range	T_J	-55 to +150							℃
Storage Temperature Range	T_{STG}	-55 to + 150							℃

Note: 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" x 0.25" Al. Plate.

RATINGS AND CHARACTERISTIC CURVES (KBU601G THRU KBU607G)

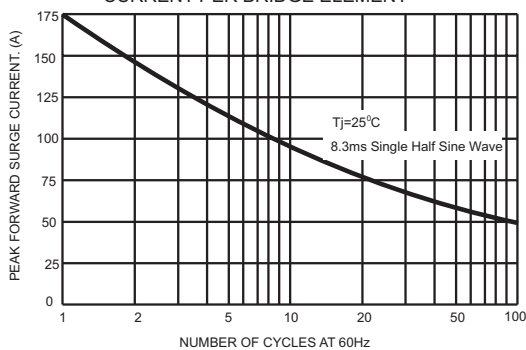### FIG.1- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER BRIDGE ELEMENT

Tj=25°C
8.3ms Single Half Sine Wave

PEAK FORWARD SURGE CURRENT. (A)
NUMBER OF CYCLES AT 60Hz

FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

MOUNTED ON 4X4 INCH
COPPER PC BOARD
0.5"(12.7mm) LEAD LENGTH

AVERAGE FORWARD CURRENT. (A)
AMBIENT TEMPERATURE. (°C)
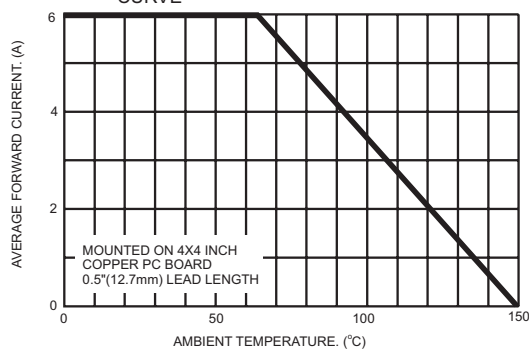
FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER BRIDGE ELEMENT

TJ=125°C
8.3ms Single Half Sine Wave

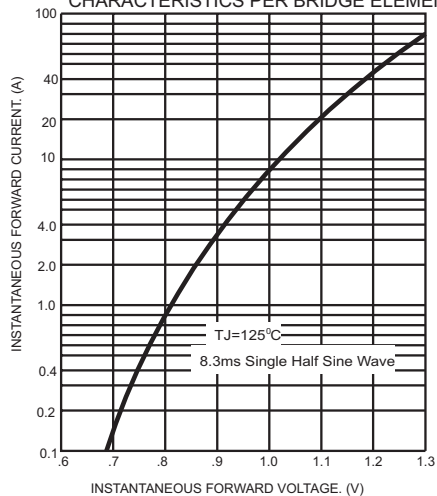INSTANTANEOUS FORWARD CURRENT. (A)
INSTANTANEOUS FORWARD VOLTAGE. (V)

FIG.4- TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

TJ=125°C

TJ=25°C

INSTANTANEOUS REVERSE CURRENT. (μA)
PERCENT OF RATED PEAK REVERSE VOLTAGE. (%)