

## Glass Passivated Bridge Rectifiers

### FEATURES

- Glass passivated junction
- Ideal for printed circuit board
- High case dielectric strength
- Typical IR less than 0.1 $\mu$ A
- High surge current capability
- UL Recognized File # E-326243
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition


**KBU**


### MECHANICAL DATA

**Case:** KBU

Molding compound, UL flammability classification rating 94V-0

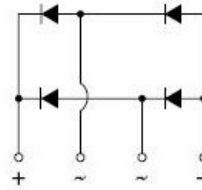
Base P/N with suffix "G" on packing code - green compound (halogen-free)

**Terminal:** Matte tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 1A whisker test

**Mounting torque:** 0.56 Nm max.

**Weight:** 7.2 g (approximately)



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS ( $T_A=25^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	KBU 401G	KBU 402G	KBU 403G	KBU 404G	KBU 405G	KBU 406G	KBU 407G	Unit
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 current	$I_{F(AV)}$	4							A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	$I_{FSM}$	150							A
Rating for fusing ( $t < 8.3\text{ms}$ )	$I^2t$	93							$\text{A}^2\text{s}$
Maximum instantaneous forward voltage (Note 1) $I_F = 2\text{A}$ $I_F = 4\text{A}$	$V_F$				1.0 1.1				V
Maximum DC reverse current at rated DC blocking voltage	$I_R$				5 500				$\mu\text{A}$
$T_J = 25^{\circ}\text{C}$ $T_J = 125^{\circ}\text{C}$									
Typical junction capacitance per leg	$C_j$				240				pF
Typical thermal resistance	$R_{\theta JC}$ $R_{\theta JA}$				4 19				$^{\circ}\text{C/W}$
Operating junction temperature range	$T_J$				- 55 to +150			$^{\circ}\text{C}$	
Storage temperature range	$T_{STG}$				- 55 to +150			$^{\circ}\text{C}$	

Note 1: Pulse Test with  $PW=300\mu\text{s}$ , 1% Duty Cycle

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

ORDERING INFORMATION				
PART NO.	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
KBU40xG (Note 1)	T0	G	KBU	500 / Tray

Note 1: "x" defines voltage from 50V (KBU401G) to 1000V (KBU407G)

EXAMPLE				
PREFERRED P/N	PART NO.	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
KBU407G T0	KBU407G	T0		
KBU407G T0G	KBU407G	T0	G	Green compound

**RATINGS AND CHARACTERISTICS CURVES**

(TA=25°C unless otherwise noted)

FIG. 1 MAXIMUM DERATING CURVE FOR OUTPUT CURRENT

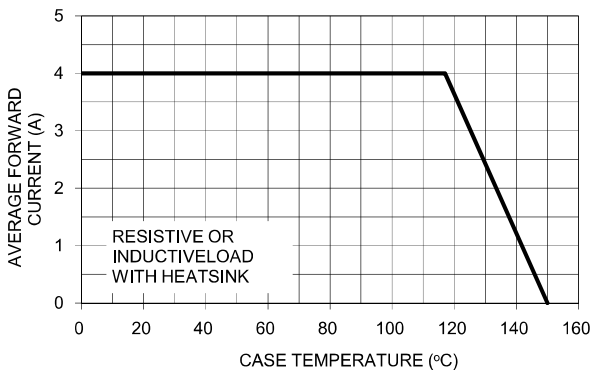


FIG. 2 MAXIMUM FORWARD SURGE CURRENT PER LEG

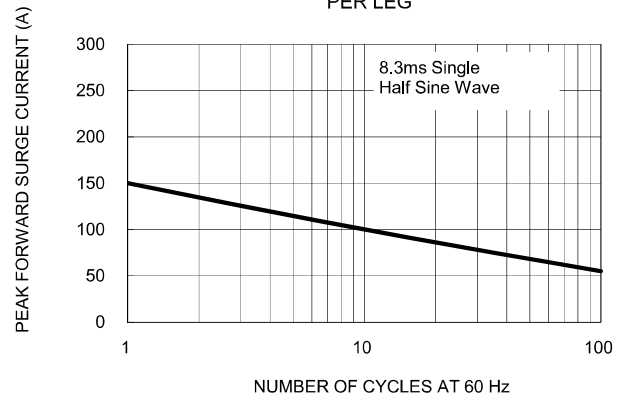


FIG. 3 TYPICAL REVERSE CHARACTERISTICS PER LEG

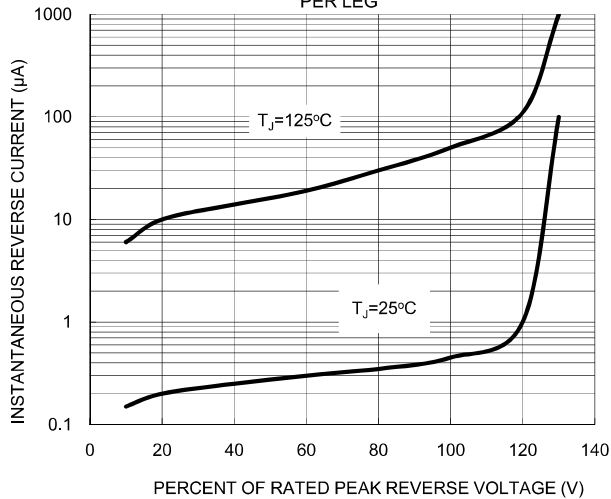


FIG. 4 TYPICAL FORWARD CHARACTERISTICS PER LEG

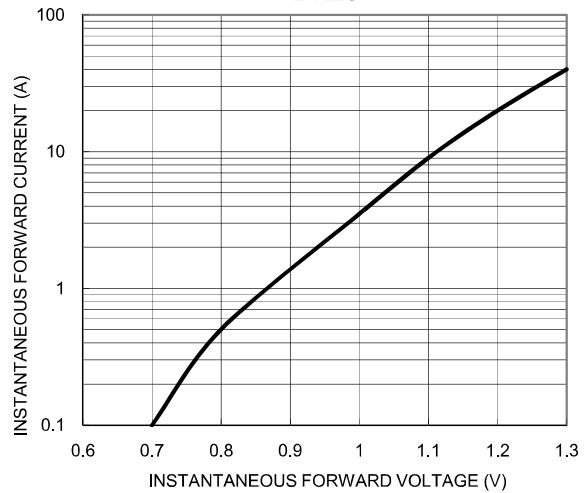
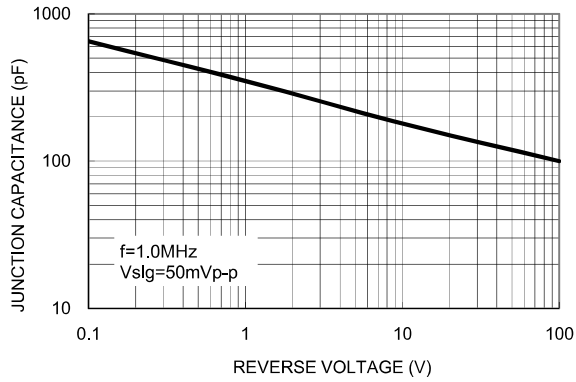
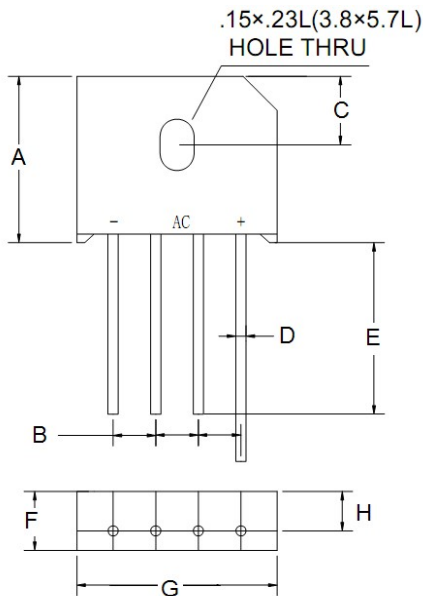


FIG. 5 TYPICAL JUNCTION CAPACITANCE



**PACKAGE OUTLINE DIMENSIONS**

**KBU**



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	18.8	19.8	0.740	0.780
B	4.6	5.6	0.181	0.220
C	8.2 (TYP.)		0.322 (TYP.)	
D	1.2	1.3	0.047	0.051
E	20.0	-	0.787	-
F	6.8	7.1	0.268	0.280
G	22.7	23.7	0.894	0.933
H	4.6	5.0	0.181	0.197

**MARKING DIAGRAM**



- P/N = Specific Device Code
- G = Green Compound
- YWW = Date Code
- F = Factory Code

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