

## 4A, 50V - 1000V Standard Bridge Rectifier

### FEATURES

- Glass passivated chip 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
- RoHS Compliant

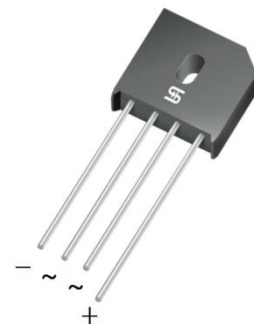
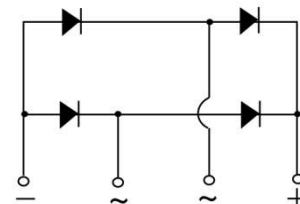
### APPLICATIONS

- Switching mode power supply (SMPS)
- Adapters
- Lighting application

### MECHANICAL DATA

- Case: KBU
- Molding compound meets UL 94V-0 flammability rating
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 1A whisker test
- Mounting torque: 0.56 N·m maximum
- Polarity: As marked
- Weight: 7.20g (approximately)

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
$I_F$	4	A
$V_{RRM}$	50 - 1000	V
$I_{FSM}$	150	A
$T_{J\ MAX}$	150	$^{\circ}$ C
Package	KBU	
Configuration	Quad	


**KBU**


### ABSOLUTE MAXIMUM RATINGS ( $T_A = 25^{\circ}$ C unless otherwise noted)

PARAMETER	SYMBOL	KBU 401G	KBU 402G	KBU 403G	KBU 404G	KBU 405G	KBU 406G	KBU 407G	UNIT
Marking code on the device		KBU 401G	KBU 402G	KBU 403G	KBU 404G	KBU 405G	KBU 406G	KBU 407G	
Repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Reverse voltage, total rms value	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Forward current	$I_F$	4							A
Surge peak forward current, 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	150							A
Rating for fusing ( $t < 8.3ms$ )	$I^2t$	93							$A^2s$
Junction temperature	$T_J$	- 55 to +150							$^{\circ}$ C
Storage temperature	$T_{STG}$	- 55 to +150							$^{\circ}$ C

<b>THERMAL PERFORMANCE</b>			
<b>PARAMETER</b>	<b>SYMBOL</b>	<b>TYP</b>	<b>UNIT</b>
Junction-to-ambient thermal resistance	$R_{\theta JA}$	19	°C/W
Junction-to-case thermal resistance	$R_{\theta JC}$	4	°C/W

<b>ELECTRICAL SPECIFICATIONS</b> ( $T_A = 25^\circ\text{C}$ unless otherwise noted)					
<b>PARAMETER</b>	<b>CONDITIONS</b>	<b>SYMBOL</b>	<b>TYP</b>	<b>MAX</b>	<b>UNIT</b>
Forward voltage per diode <sup>(1)</sup>	$I_F = 2\text{A}, T_J = 25^\circ\text{C}$	$V_F$	-	1.0	V
	$I_F = 4\text{A}, T_J = 25^\circ\text{C}$		-	1.1	V
Reverse current @ rated $V_R$ per diode <sup>(2)</sup>	$T_J = 25^\circ\text{C}$	$I_R$	-	5	$\mu\text{A}$
	$T_J = 125^\circ\text{C}$		-	500	$\mu\text{A}$
Junction capacitance per diode	1MHz, $V_R = 4.0\text{V}$	$C_J$	240	-	pF

**Notes:**

1. Pulse test with  $PW = 0.3\text{ms}$
2. Pulse test with  $PW = 30\text{ms}$

<b>ORDERING INFORMATION</b>		
<b>ORDERING CODE<sup>(1)</sup></b>	<b>PACKAGE</b>	<b>PACKING</b>
KBU4xG	KBU	100 / Tray

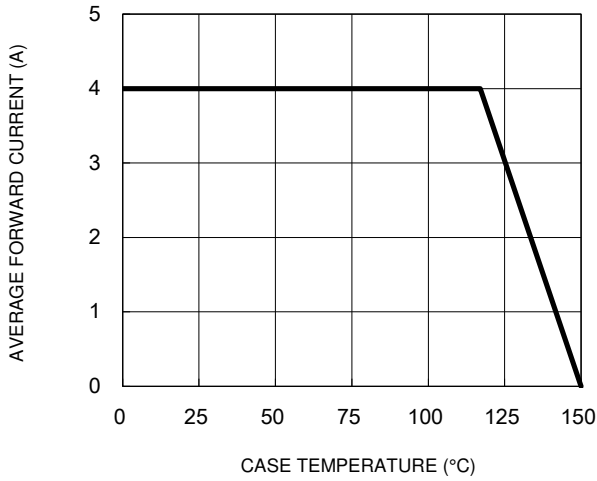
**Notes:**

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

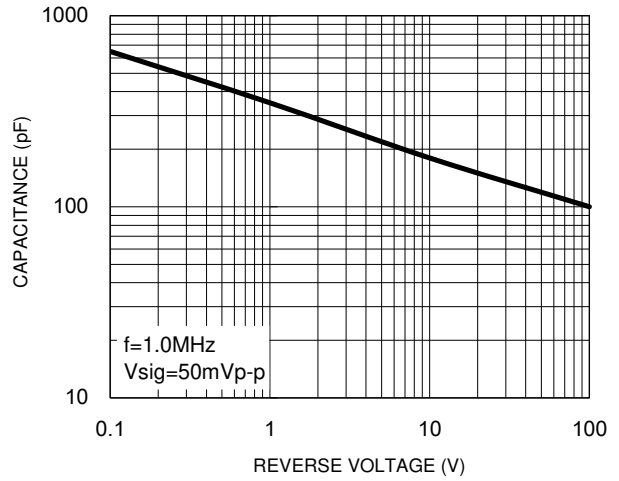
**CHARACTERISTICS CURVES**

( $T_A = 25^\circ\text{C}$  unless otherwise noted)

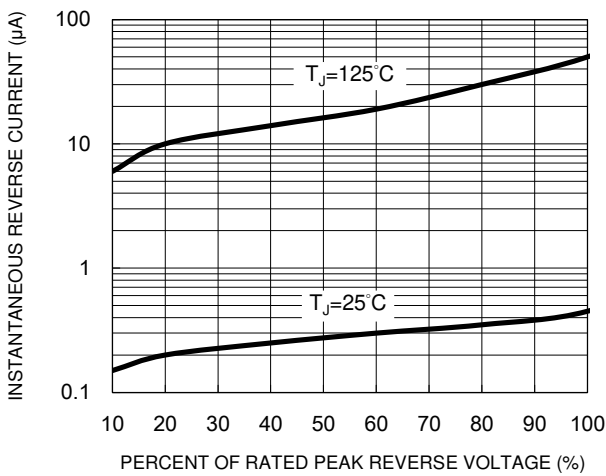
**Fig.1 Forward Current Derating Curve**



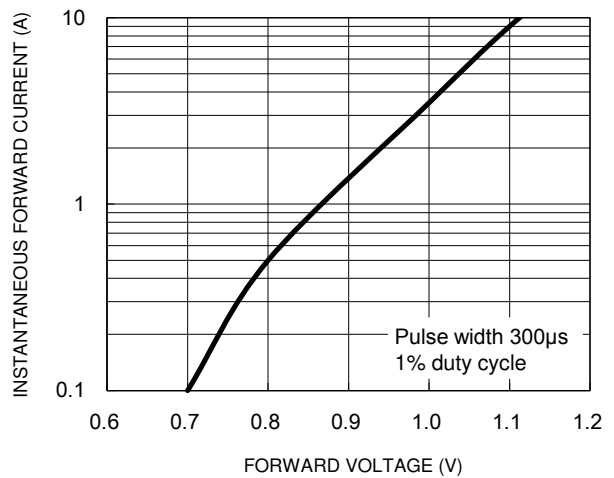
**Fig.2 Typical Junction Capacitance**



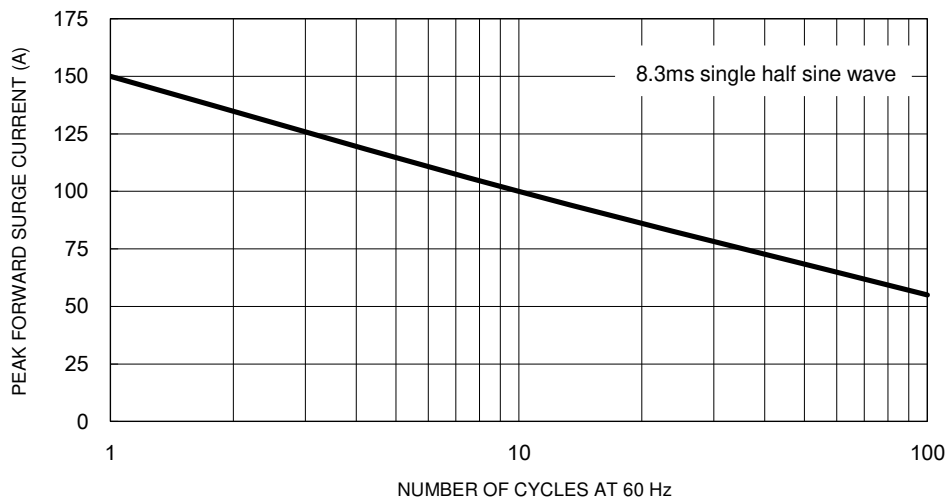
**Fig.3 Typical Reverse Characteristics**



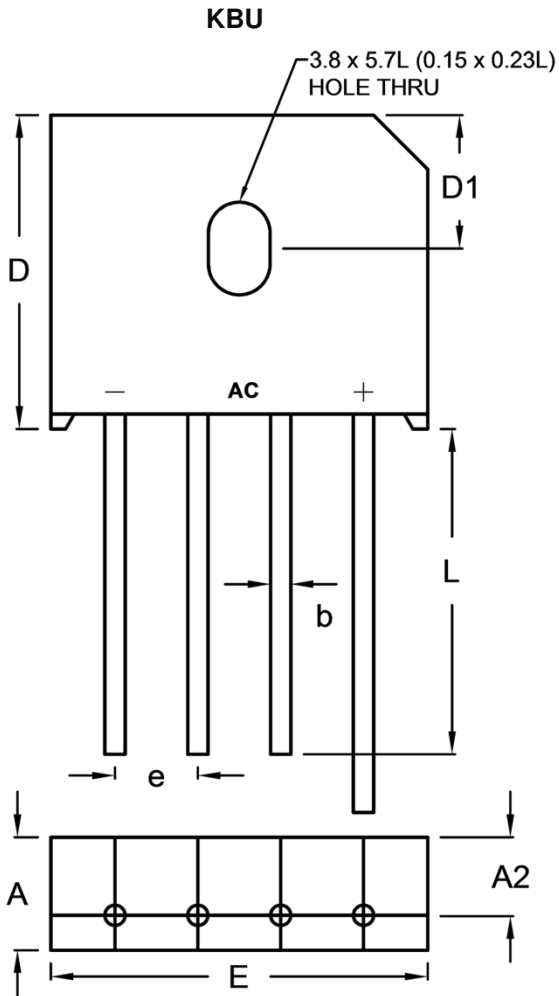
**Fig.4 Typical Forward Characteristics**



**Fig.5 Maximum Non-Repetitive Forward Surge Current**



**PACKAGE OUTLINE DIMENSIONS**



DIM.	Unit (mm)		Unit (inch)	
	Min.	Max.	Min.	Max.
A	6.8	7.1	0.268	0.280
A2	4.6	5.0	0.181	0.197
b	1.2	1.3	0.047	0.051
D	18.8	19.8	0.740	0.780
D1	8.2 (TYP)		0.322 (TYP)	
E	22.7	23.7	0.894	0.933
e	4.6	5.6	0.181	0.220
L	20.0	-	0.787	-

**MARKING DIAGRAM**



P/N = Marking Code  
 YWW = Date Code  
 F = Factory Code

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