4A, 50V - 1000V Standard Bridge Rectifier

FEATURES

- Glass passivated chip junction
- Ideal for printed circuit board
- High case dielectric strength
- Typical IR less than 0.1μA
- High surge current capability
- UL Recognized File # E-326243
- RoHS Compliant

APPLICATIONS

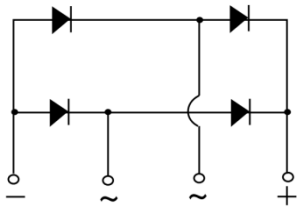
- Switching mode power supply (SMPS)
- Adapters
- Lighting application

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	°C
Package	KBU	
Configuration	Quad	

Pb-Free RoHS COMPLIANT



ABSOLUTE MAXIMUM RATINGS (T_A = 25°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							°C
Storage temperature	T_{STG}	- 55 to +150							°C

THERMAL PERFORMANCE

PARAMETER	SYMBOL	TYP	UNIT
Junction-to-ambient thermal resistance	$R_{\Theta JA}$	19	°C/W
Junction-to-case thermal resistance	$R_{\Theta JC}$	4	°C/W

ELECTRICAL SPECIFICATIONS (T_A = 25°C unless otherwise noted)

PARAMETER	CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage per diode(1)	I_F = 2A, T_J = 25°C	V_F	-	1.0	V
	I_F = 4A, T_J = 25°C		-	1.1	V
Reverse current @ rated V_R per diode(2)	T_J = 25°C	I_R	-	5	μA
	T_J = 125°C		-	500	μA
Junction capacitance per diode	1MHz, V_R = 4.0V	C_J	240	-	pF

Notes:

1. Pulse test with PW = 0.3ms
2. Pulse test with PW = 30ms

ORDERING INFORMATION

ORDERING CODE(1)	PACKAGE	PACKING
KBU4xG	KBU	100 / Tray

Notes:

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

CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig.1 Forward Current Derating Curve

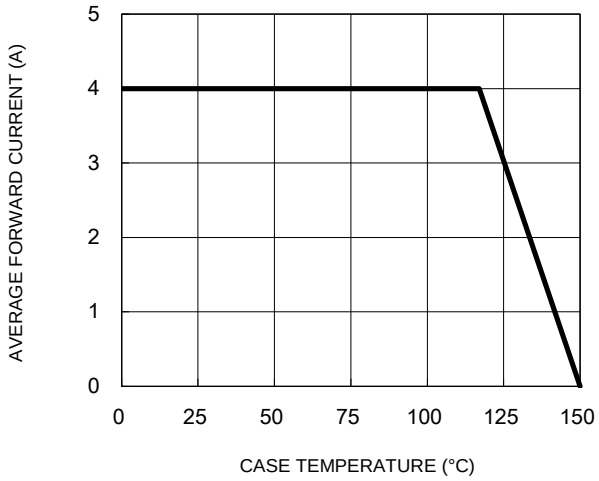


Fig.2 Typical Junction Capacitance

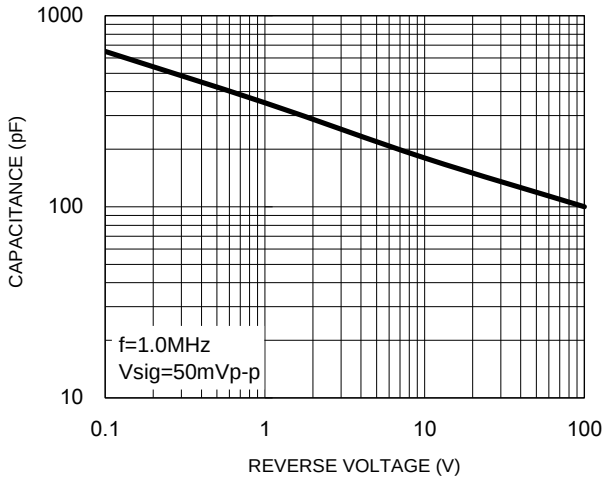


Fig.3 Typical Reverse Characteristics

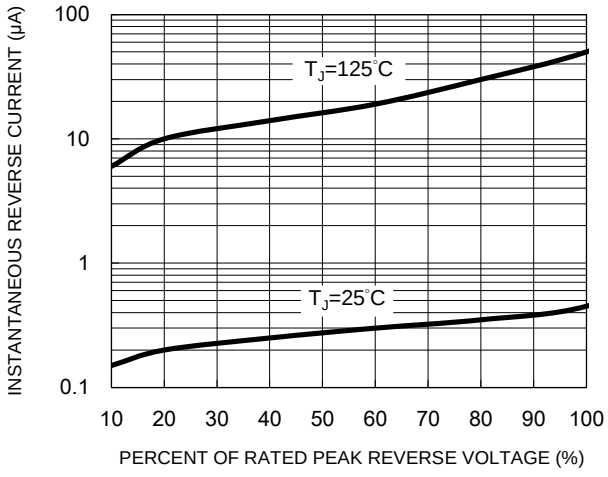


Fig.4 Typical Forward Characteristics

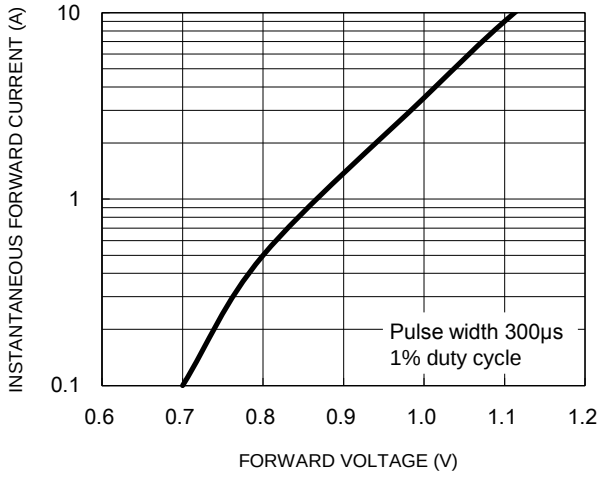
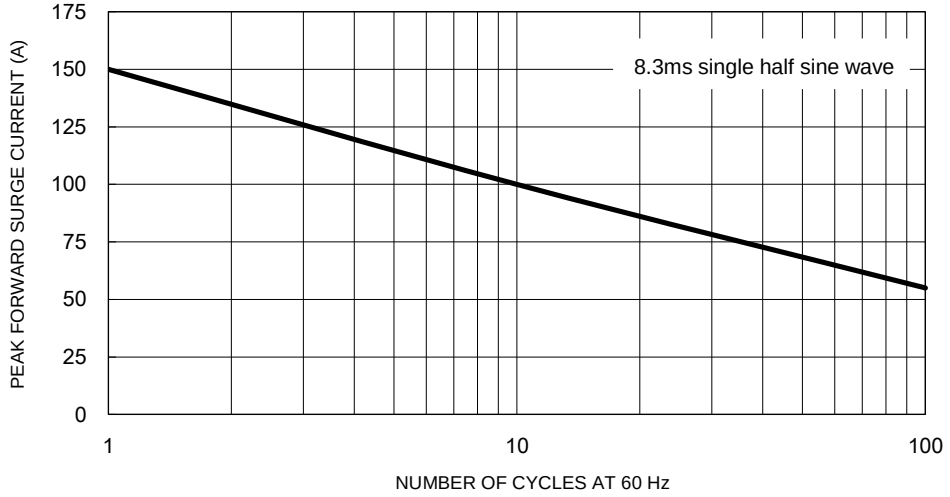
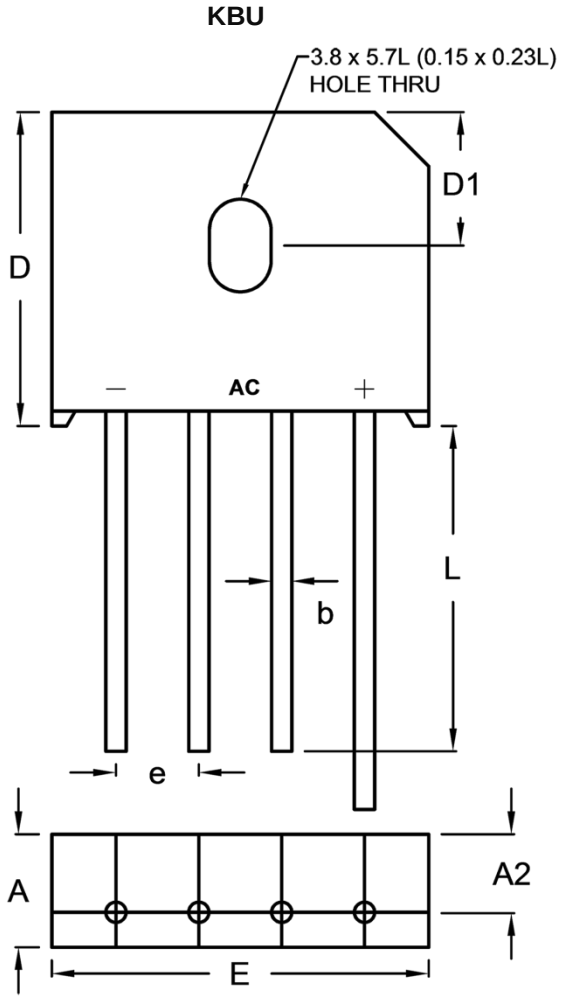


Fig.5 Maximum Non-Repetitive Forward Surge Current



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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