6A, 50V - 1000V Standard Bridge Rectifier

FEATURES

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

APPLICATIONS

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

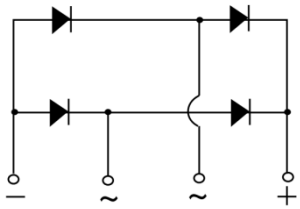
MECHANICAL DATA

- 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	6	A
V_{RRM}	50 - 1000	V
I_{FSM}	175	A
$T_{J\ MAX}$	150	°C
Package	KBU	
Configuration	Quad	

Pb-Free RoHS COMPLIANT

KBU



ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)

PARAMETER	SYMBOL	KBU 601G	KBU 602G	KBU 603G	KBU 604G	KBU 605G	KBU 606G	KBU 607G	UNIT
Marking code on the device		KBU 601G	KBU 602G	KBU 603G	KBU 604G	KBU 605G	KBU 606G	KBU 607G	
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	6							A
Surge peak forward current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	175							A
Rating for fusing (t<8.3ms)	I^2t	127							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	$R_{\Theta JA}$	8.6	°C/W
Junction-to-case thermal resistance	$R_{\Theta JC}$	3.1	°C/W

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

PARAMETER	CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage per diode[1]	I_F = 3A, T_J = 25°C	V_F	-	1.0	V
	I_F = 6A, 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	400	-	pF

Notes:

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

ORDERING INFORMATION

ORDERING CODE[1]	PACKAGE	PACKING
KBU6xG	KBU	100 / Tray

Notes:

1. “x” defines voltage from 50V(KBU601G) to 1000V(KBU607G)

CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig.1 Forward Current Derating Curve

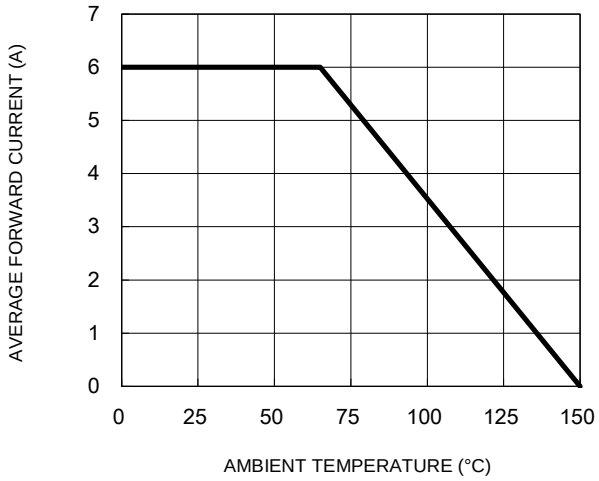


Fig.2 Typical Junction Capacitance

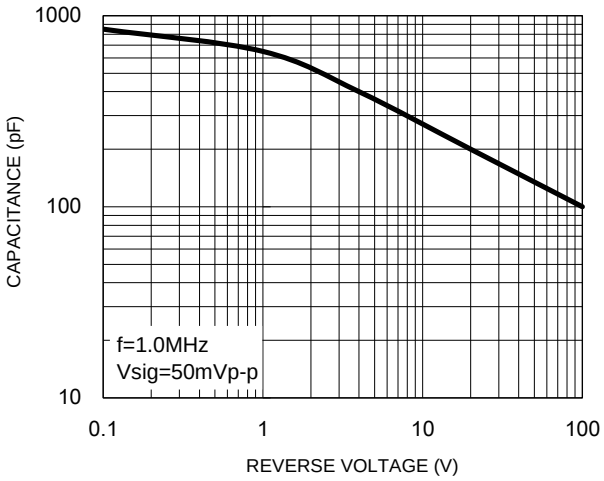


Fig.3 Typical Reverse Characteristics

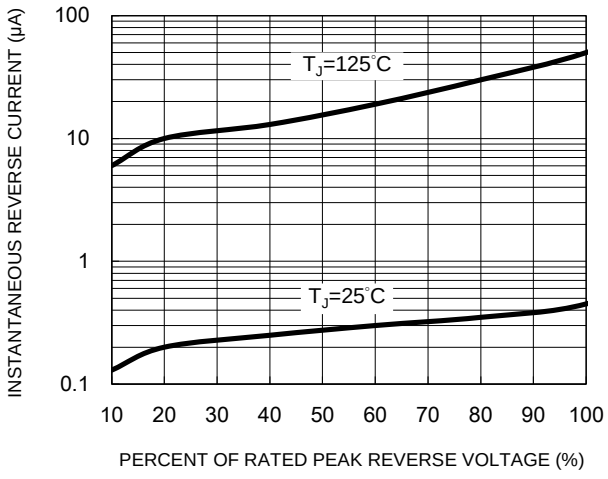


Fig.4 Typical Forward Characteristics

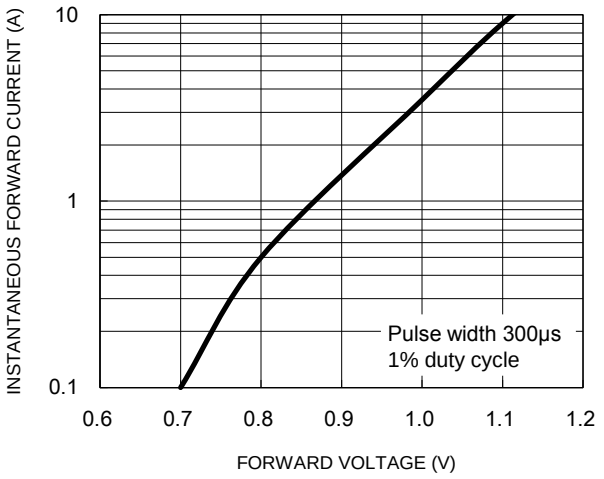
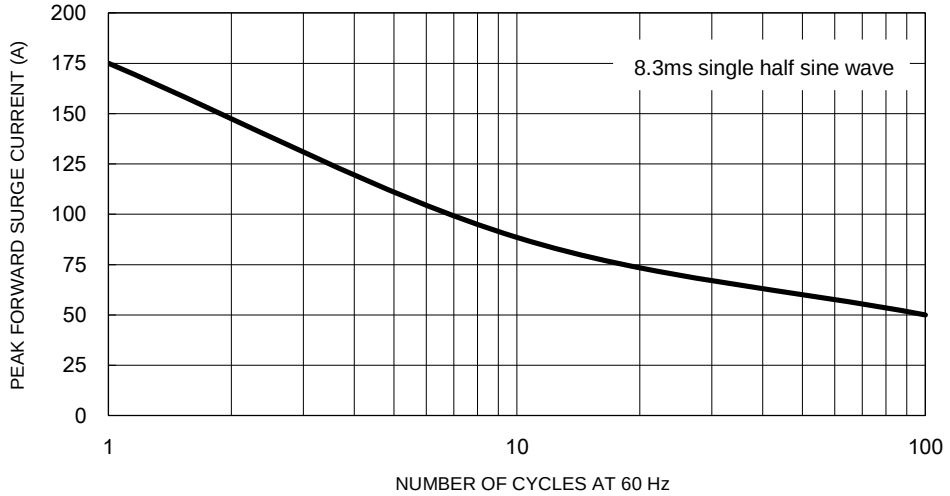
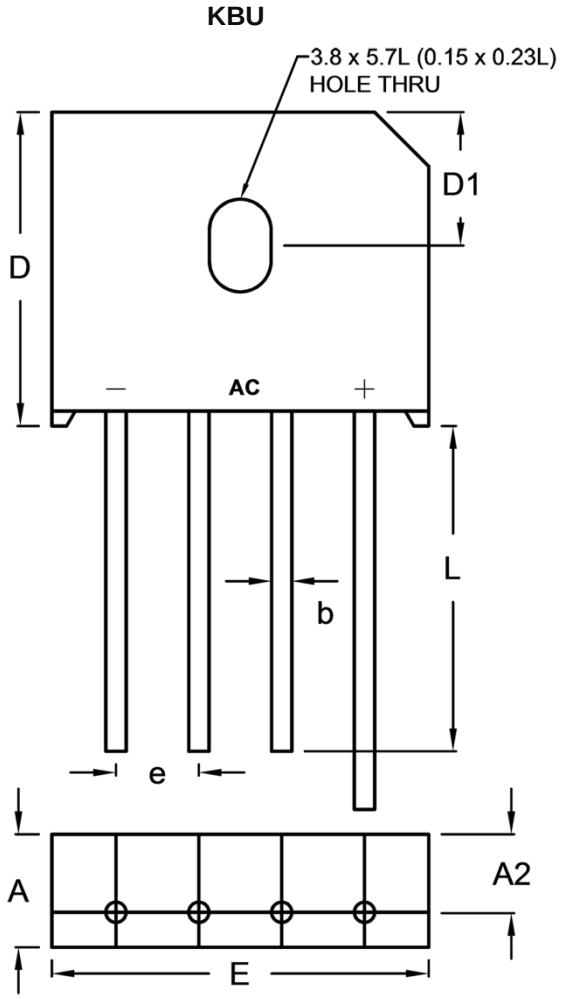


Fig.5 Maximum Non-Repetitive Forward Surge Current



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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