4A, 50V - 1000V Standard Bridge Rectifier

FEATURES

- Glass passivated chip junction
- Ideal for printed circuit board
- Reliable low cost construction
- UL Recognized File # E-326243
- RoHS Compliant

APPLICATIONS

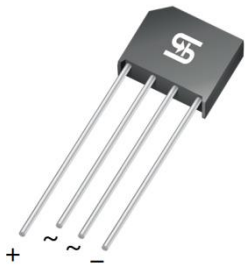
- Switching mode power supply (SMPS)
- Adapters
- Lighting application

MECHANICAL DATA

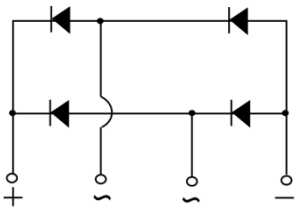
- Case: KBL
- Molding compound meets UL 94V-0 flammability rating
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 1A whisker test
- Polarity: As marked
- Weight: 5.60g (approximately)

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

Pb-Free RoHS COMPLIANT



KBL



ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)									
PARAMETER	**SYMBOL**	**KBL 401G**	**KBL 402G**	**KBL 403G**	**KBL 404G**	**KBL 405G**	**KBL 406G**	**KBL 407G**	**UNIT**
Marking code on the device		KBL 401G	KBL 402G	KBL 403G	KBL 404G	KBL 405G	KBL 406G	KBL 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
Peak forward surge 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-lead thermal resistance	$R_{\Theta JL}$	2.4	°C/W
Junction-to-ambient thermal resistance	$R_{\Theta JA}$	19	°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	-	10	μA
	T_J = 125°C		-	500	μA

Notes:

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

ORDERING INFORMATION

ORDERING CODE(1)	PACKAGE	PACKING
KBL40xG	KBL	100 / Tray

Notes:

1. “x” defines voltage from 50V(KBL401G) to 1000V(KBL407G)

CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig.1 Forward Current Derating Curve

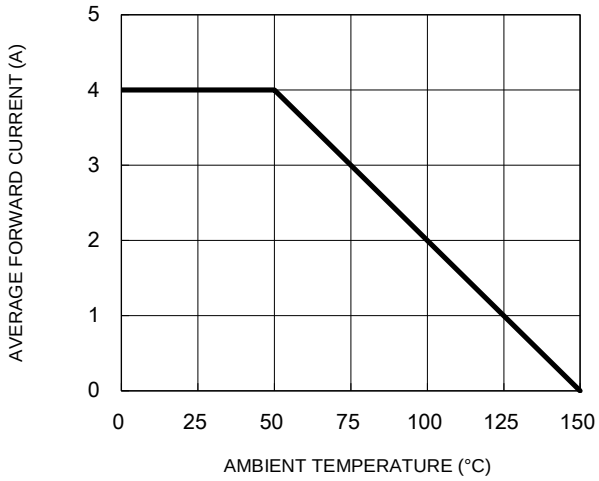


Fig.2 Typical Junction Capacitance

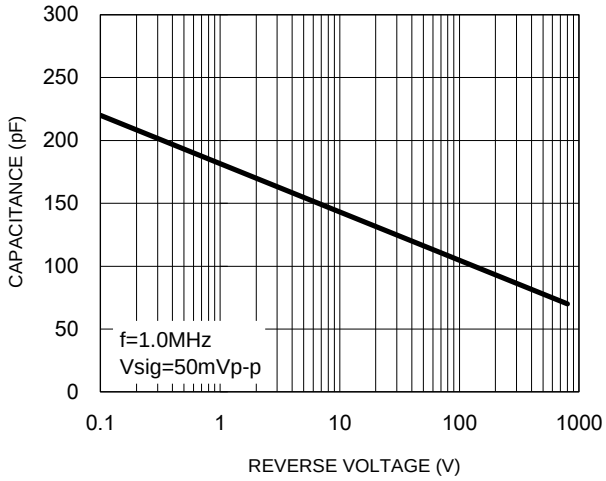


Fig.3 Typical Reverse Characteristics

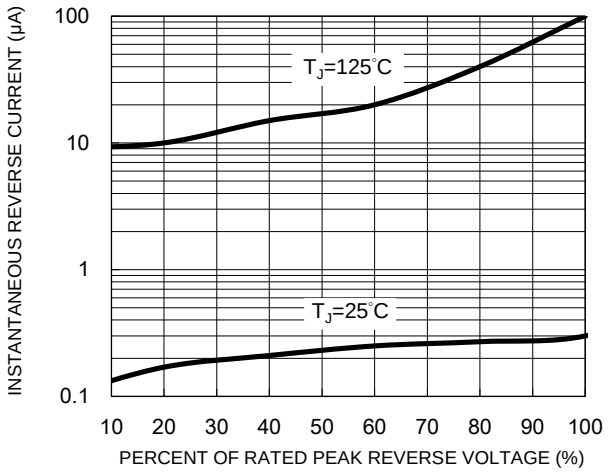


Fig.4 Typical Forward Characteristics

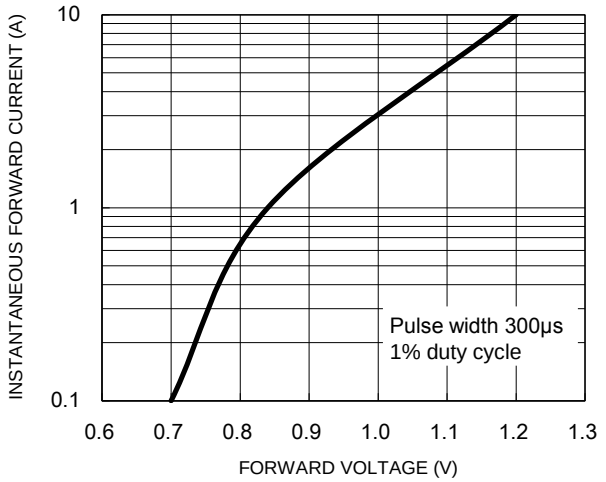
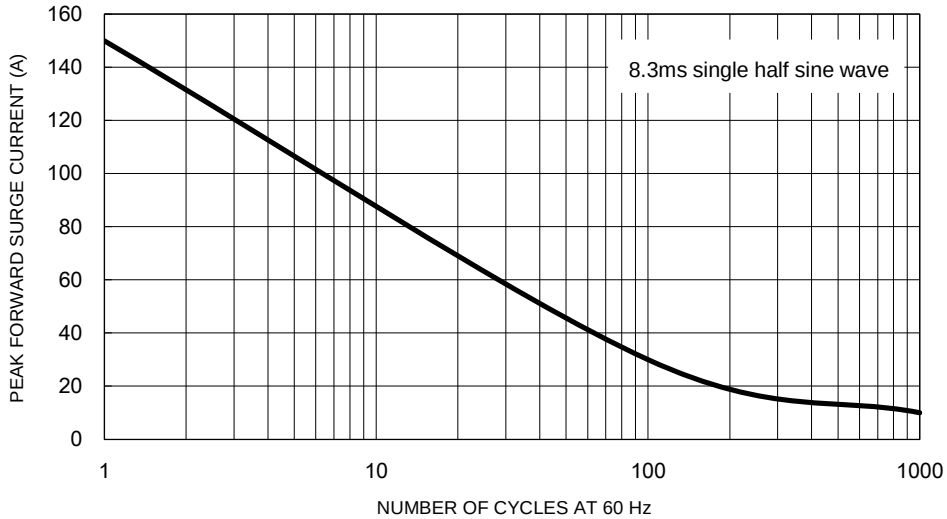
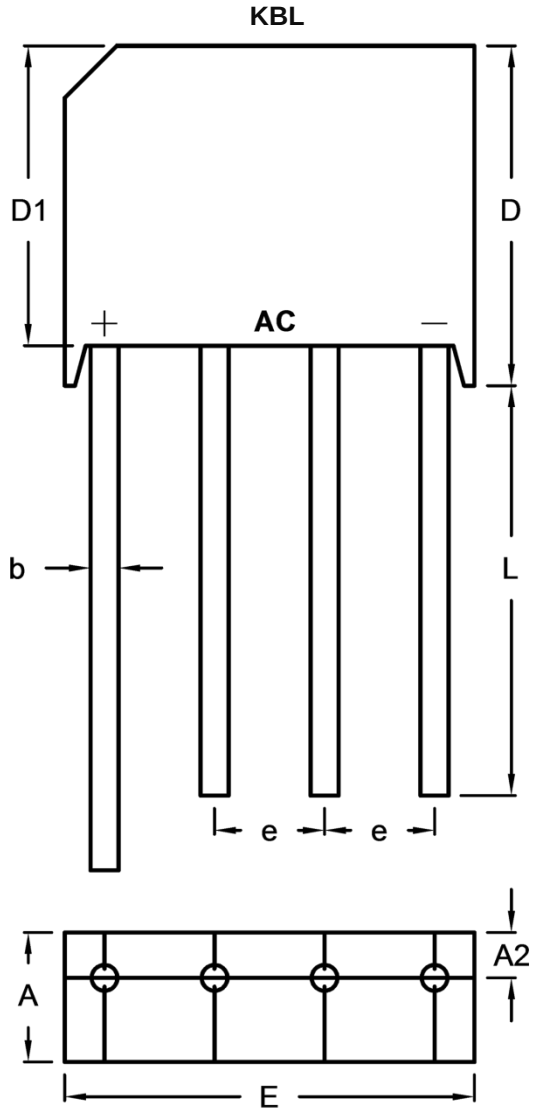


Fig.5 Maximum Non-Repetitive Forward Surge Current



PACKAGE OUTLINE DIMENSIONS



DIM.	Unit (mm)		Unit (inch)	
	Min.	Max.	Min.	Max.
A	5.50	6.50	0.217	0.256
A2	2.10 (TYP)		0.083 (TYP)	
b	1.20	1.40	0.047	0.055
D	15.20	16.30	0.598	0.642
D1	13.70	14.10	0.539	0.555
E	18.50	19.50	0.728	0.768
e	4.60	5.60	0.181	0.220
L	19.00	-	0.748	-

MARKING DIAGRAM

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

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