



## 6A, 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

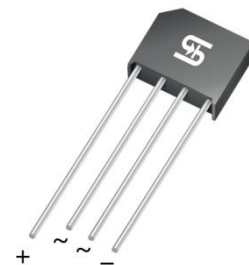
### APPLICATIONS

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

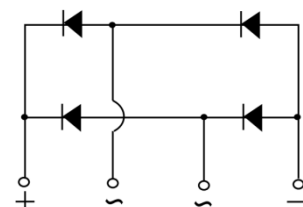
### MECHANICAL DATA

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



KBL



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

PARAMETER	SYMBOL	KBL 601G	KBL 602G	KBL 603G	KBL 604G	KBL 605G	KBL 606G	KBL 607G	UNIT
Marking code on the device		KBL 601G	KBL 602G	KBL 603G	KBL 604G	KBL 605G	KBL 606G	KBL 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
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	175							A
Rating for fusing ( $t < 8.3\text{ms}$ )	$I^2t$	127							A <sup>2</sup> s
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	$R_{\theta JL}$	7.5	°C/W
Junction-to-ambient thermal resistance	$R_{\theta JA}$	13	°C/W

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

PARAMETER	CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage per diode <sup>(1)</sup>	$I_F = 3\text{A}, T_J = 25^\circ\text{C}$	$V_F$	-	1.0	V
	$I_F = 6\text{A}, T_J = 25^\circ\text{C}$		-	1.1	V
Reverse current @ rated $V_R$ per diode <sup>(2)</sup>	$T_J = 25^\circ\text{C}$	$I_R$	-	10	$\mu\text{A}$
	$T_J = 125^\circ\text{C}$		-	500	$\mu\text{A}$

**Notes:**

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

**ORDERING INFORMATION**

ORDERING CODE <sup>(1)</sup>	PACKAGE	PACKING
KBL60xG	KBL	100 / Tray

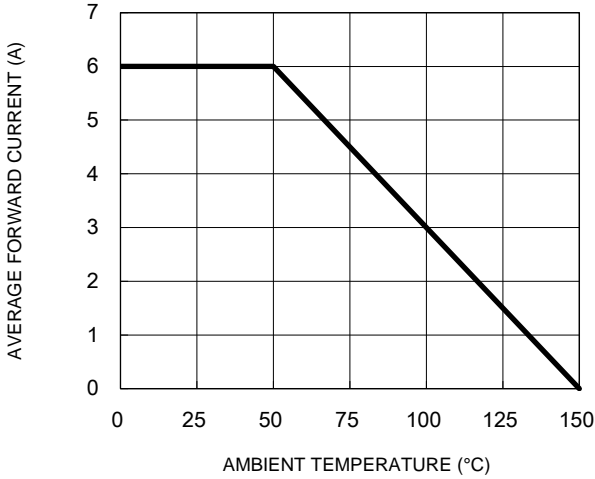
**Notes:**

1. "x" defines voltage from 50V(KBL601G) to 1000V(KBL607G)

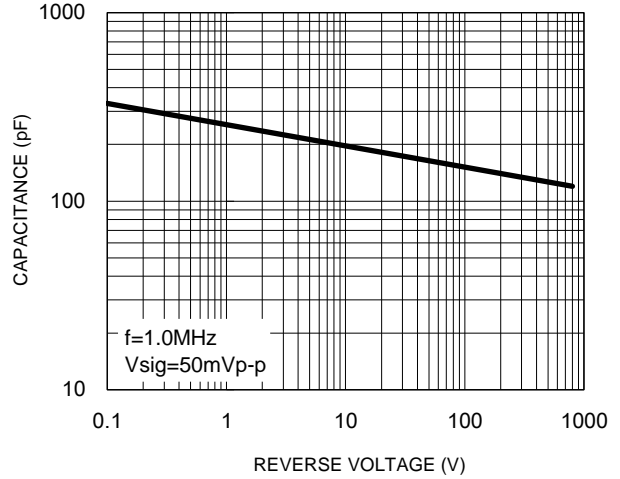
**CHARACTERISTICS CURVES**

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

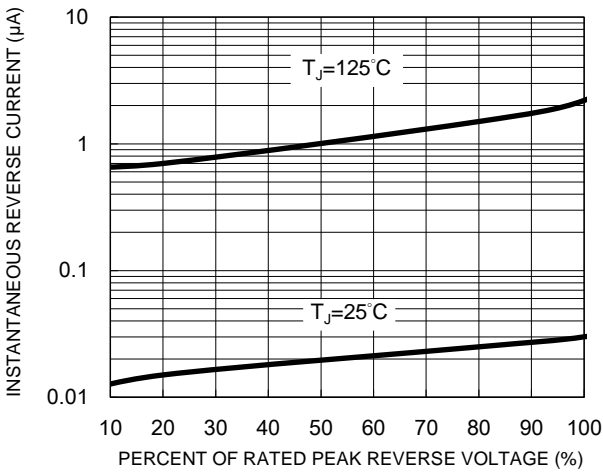
**Fig.1 Forward Current Derating Curve**



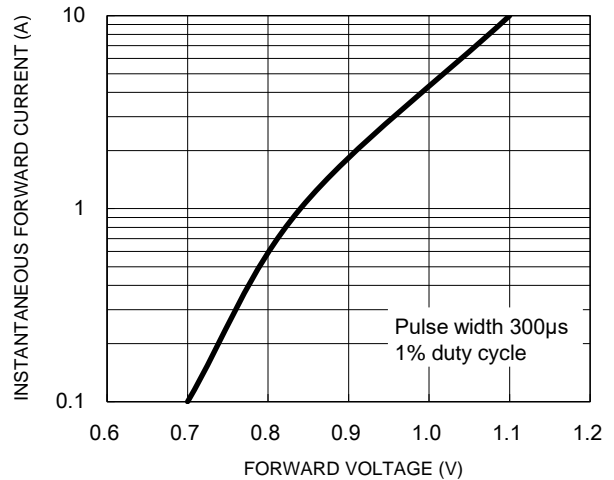
**Fig.2 Typical Junction Capacitance**



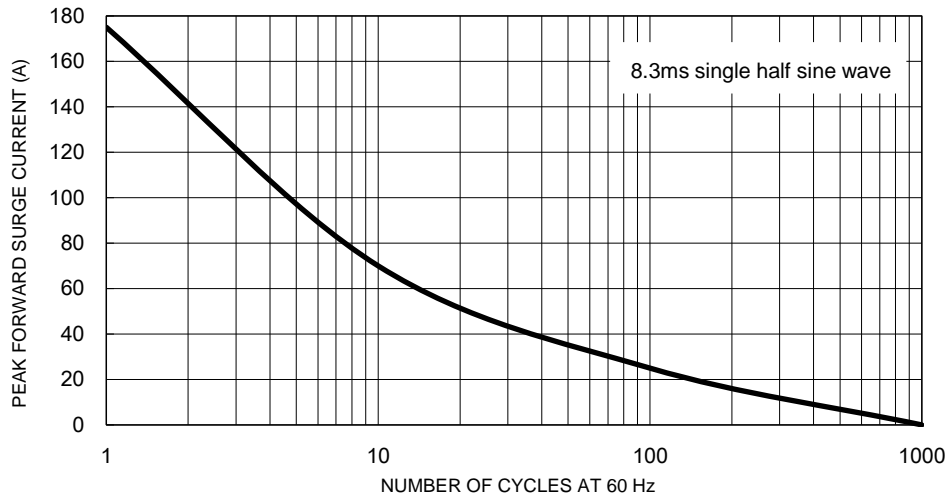
**Fig.3 Typical Reverse Characteristics**



**Fig.4 Typical Forward Characteristics**

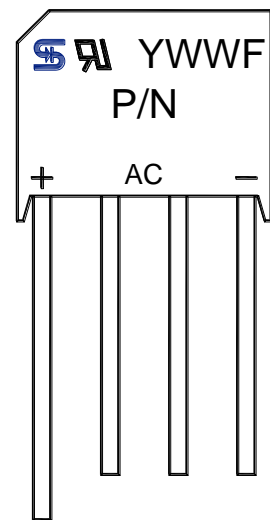
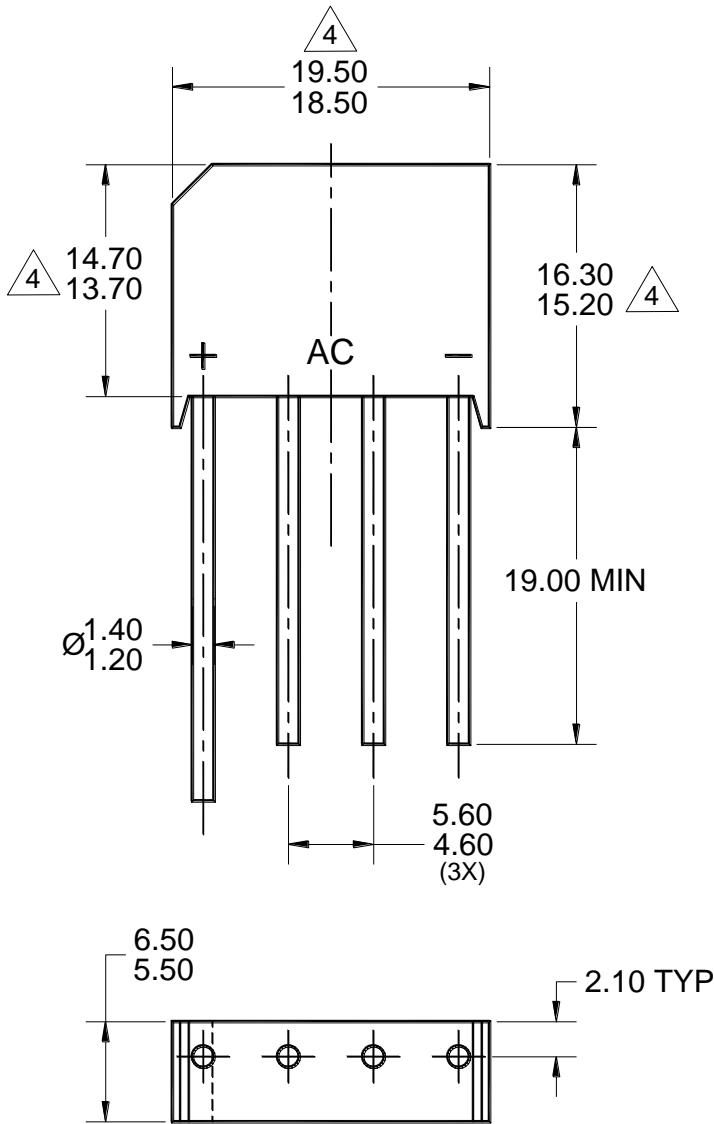


**Fig.5 Maximum Non-Repetitive Forward Surge Current**



**PACKAGE OUTLINE DIMENSIONS**

**KBL**



**NOTES: UNLESS OTHERWISE SPECIFIED**

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.
3. THERE IS NO EXISTING PACKAGE OUTLINE INDUSTRY STANDARD FOR THIS PACKAGE.
4. MOLDED PLASTIC BODY DIMENSIONS DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.
5. DWG NO. REF: HQ2SD07-KBL-094 REV A.

**MARKING DIAGRAM**

P/N = MARKING CODE  
 YWW = DATE CODE  
 F = FACTORY CODE

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