

KBP406G-KBP410G(LS)

GLASS PASSIVATED BRIDGE RECTIFIERS

**REVERSE VOLTAGE – 600 to 1000 Volts
FORWARD CURRENT – 4.0 Ampere**

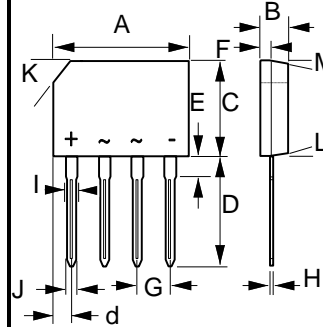
FEATURES

- Rating to 1000V PRV
- Ideal for printed circuit board
- Reliable construction utilizing molded plastic technique
- The plastic material has UL flammability classification 94V-0
- UL recognized file #95060
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

MECHANICAL DATA

- Polarity: As marked on body
- Weight: 1.52 grams
- Mounting position: Any

KBP



KBP		
DIM.	MIN.	MAX.
A	14.25	14.75
B	3.35	3.65
C	10.20	10.60
D	14.25	14.73
d	1.40	1.70
E	1.80	2.20
F	0.80	1.10
G	3.56	4.06
H	0.35	0.55
I	1.22	1.42
J	0.76	0.86
K	2.7 x 45°(Typ.)	
L	-	3°
M	-	2°
All Dimensions in millimeter		

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

CHARACTERISTICS	SYMBOL	KBP406G	KBP408G	KBP410G	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	600	800	1000	V
Maximum Average Forward Rectified Current @ $T_C=105^\circ\text{C}$	$I_{(AV)}$	(With heatsink) (Without heatsink)	4.0 2.0		A
Peak Forward Surge Current @ $T_J = 25^\circ\text{C}$	I_{FSM}		130		A
8.3ms single half sine-wave @ $T_J = 125^\circ\text{C}$			110		
Peak Forward Surge Current @ $T_J = 25^\circ\text{C}$	I_{FSM}		260		A
1.0ms single half sine-wave @ $T_J = 125^\circ\text{C}$			220		
Maximum Forward Voltage at 4.0A DC	V_F		1.1		V
Maximum DC Reverse Current at rated Blocking Voltage @ $T_J=25^\circ\text{C}$ @ $T_J=125^\circ\text{C}$	I_R		5.0 500		μA
I^2t Rating for fusing (t = 8.3ms)	I^2t		50		A^2S
Typical Junction Capacitance per element (Note 4)	C_T		40		pF
Typical thermal resistance (Unit mounted on 75mmx75mmx1.6mm Copper plate heatsink)	$R_{\theta JC}$ $R_{\theta JL}$ $R_{\theta JA}$		6 8 15		$^\circ\text{C/W}$
Typical thermal resistance (without heatsink)	$R_{\theta JC}$ $R_{\theta JL}$ $R_{\theta JA}$		14 20 40		$^\circ\text{C/W}$
Operation and Storage Temperature Range	T_J, T_{STG}		-55 to 150		$^\circ\text{C}$

Note:

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1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compound
4. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

RATING AND CHARACTERISTIC CURVES
KBP406G-KBP410G(LS)

FIG.1- FORWARD CURRENT DERATING CURVE

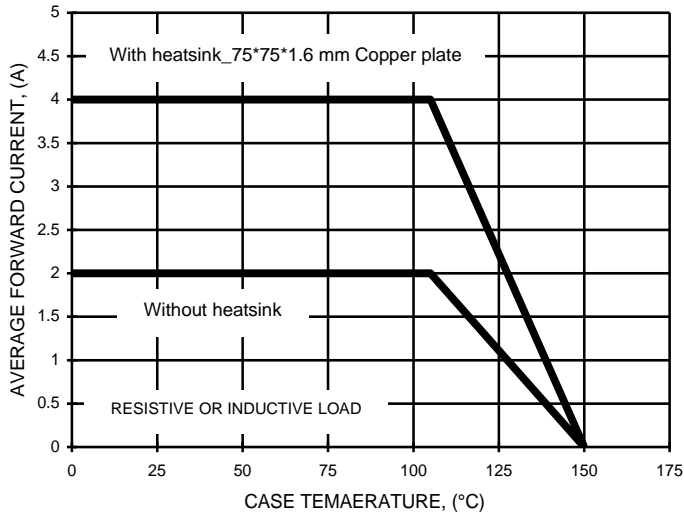


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

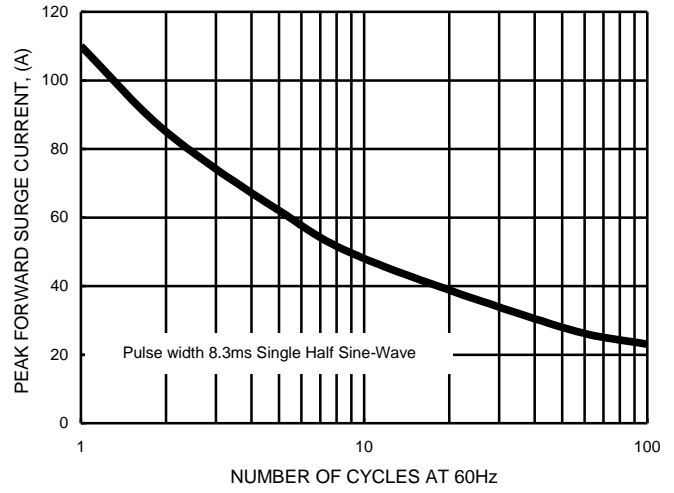


FIG.3- TYPICAL JUNCTION CAPACITANCE

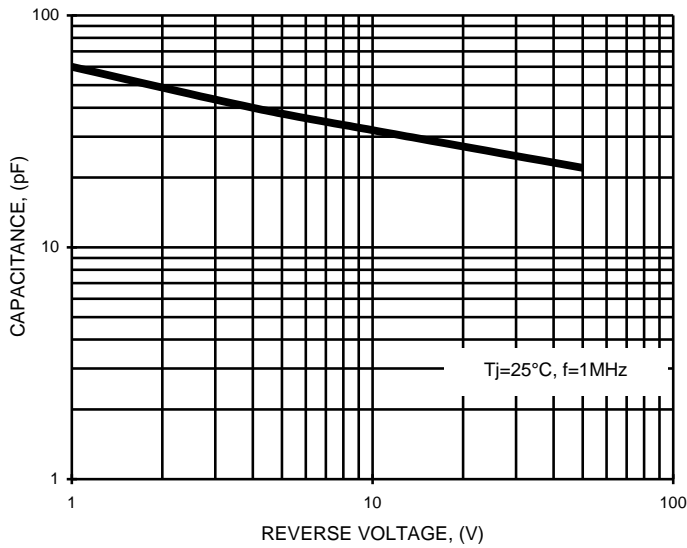


FIG.4- TYPICAL FORWARD CHARACTERISTICS

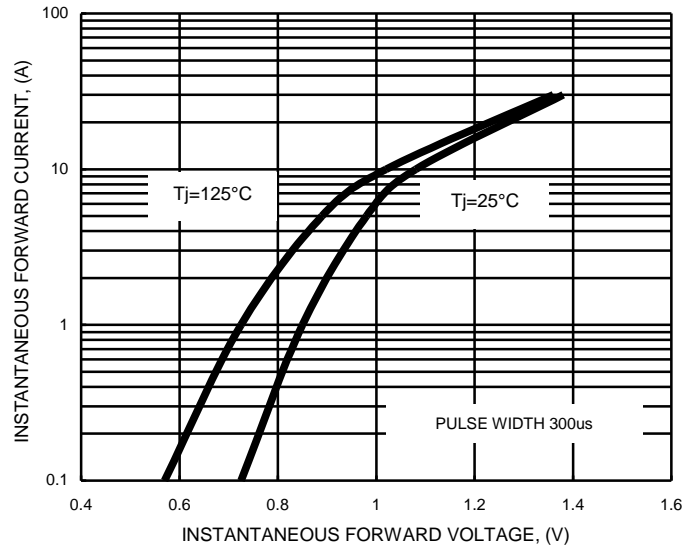


FIG.5- TYPICAL REVERSE CHARACTERISTICS

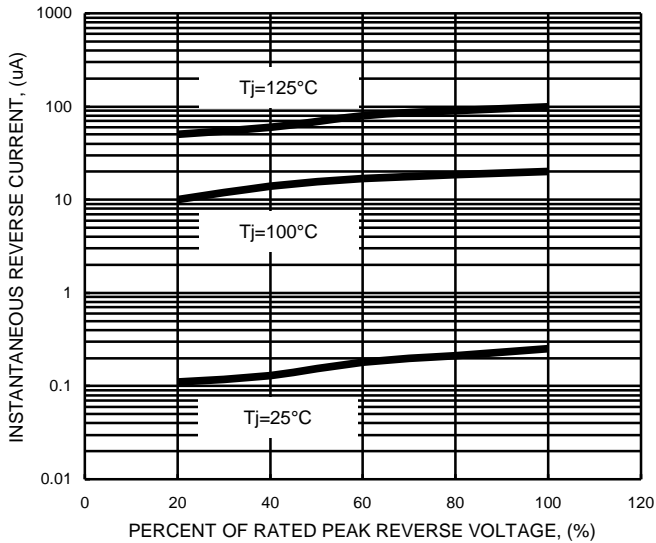
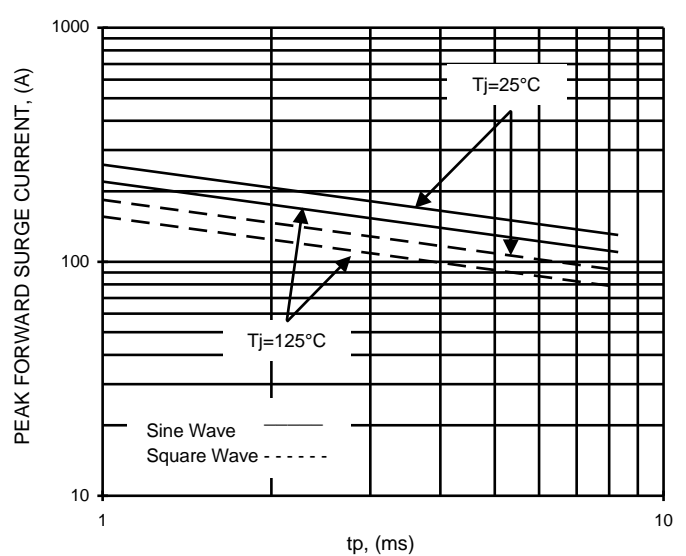


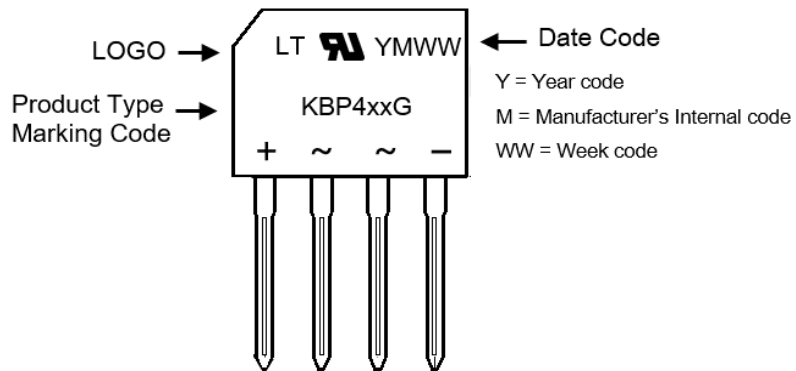
FIG.6- NON-REPETITIVE SURGE CURRENT



Ordering Information :

Part Number	Package	Packing	
		Qty.	Carrier
KBP406G_HF	KBP	35	Tube
KBP408G_HF	KBP	35	Tube
KBP410G_HF	KBP	35	Tube

Marking Information:



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