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Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Characteristic	Symbol	KBP404G	KBP406G	KBP408G	KBP410G	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_{RM}	400	600	800	1000	V
RMS Reverse Voltage	$V_{R(RMS)}$	280	420	560	700	V
Average Rectified Output Current @T_C = +105°C (With Heatsink) (Without Heatsink)	I_O	4.0 2.0				A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	130				A
Non-Repetitive Peak Forward Surge Current 1.0ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	260				A
I^2t Rating for Fusing (3ms≦ t ≦8.3ms)	I^2t	50				A^2s

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance, Junction to Case (Note 4)	$R_{\theta JC}$	6	°C/W
Typical Thermal Resistance, Junction to Lead (Note 4)	$R_{\theta JL}$	8	°C/W
Typical Thermal Resistance, Junction to Ambient (Note 4)	$R_{\theta JA}$	15	°C/W
Typical Thermal Resistance, Junction to Case (Note 5)	$R_{\theta JC}$	14	°C/W
Typical Thermal Resistance, Junction to Lead (Note 5)	$R_{\theta JL}$	20	°C/W
Typical Thermal Resistance, Junction to Ambient (Note 5)	$R_{\theta JA}$	40	°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	°C

Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Min		Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 6)	$V_{(BR)R}$	1,000	KBP410G	—	—	V	I_R = 5μA
		800	KBP408G				
		600	KBP406G				
		400	KBP404G				
Forward Voltage Drop per Element	V_F	—		0.94	1.1	V	I_F = 4.0A, T_J = +25°C
Leakage Current (Note 6)	I_R	—		— —	5 500	μA	V_R = 1000V, T_J = +25°C V_R = 1000V, T_J = +125°C
Total Capacitance per Element	C_T	—		40	—	pF	V_R = 4.0V_{DC}, f = 1MHz

Notes: 4. Thermal resistance per element. Device mounted on 75mm x 75mm x 1.6mm Cu Plate Heatsink.
5. Thermal resistance per element without heatsink.
6. Short duration pulse test used to minimize self-heating effect.

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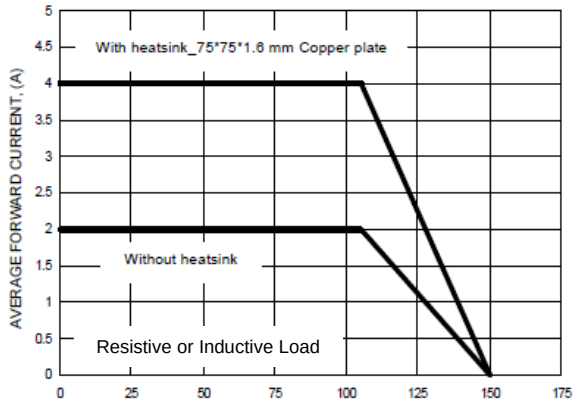

Figure 1. Forward Current Derating Curve

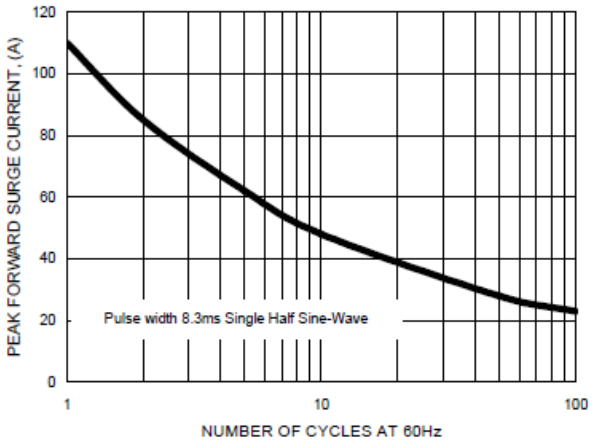

Figure 2. Maximum Non-repetitive Surge Current

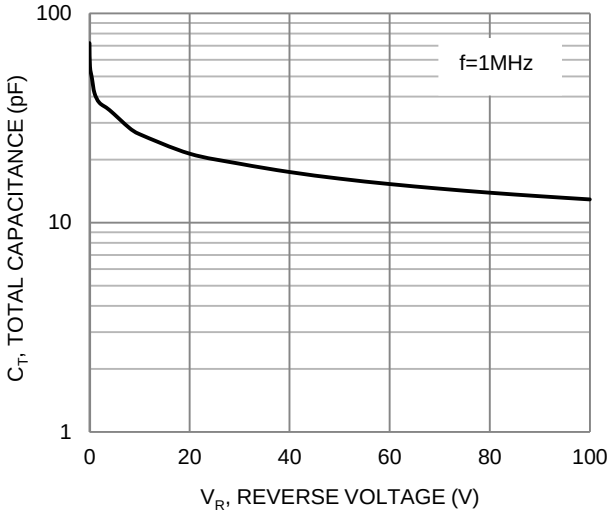

Figure 3. Typical Total Capacitance (Per Element)

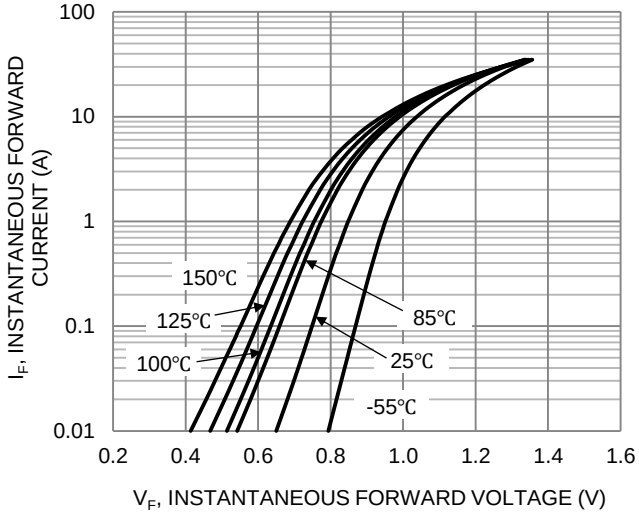

Figure 4. Typical Forward Characteristics

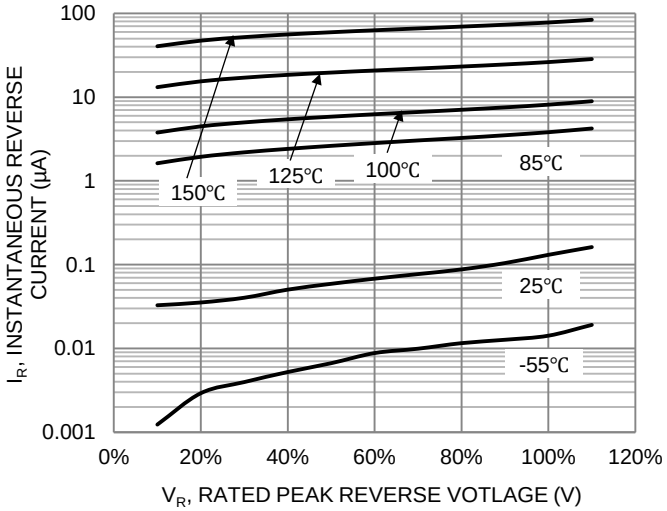

Figure 5. Typical Reverse Characteristics

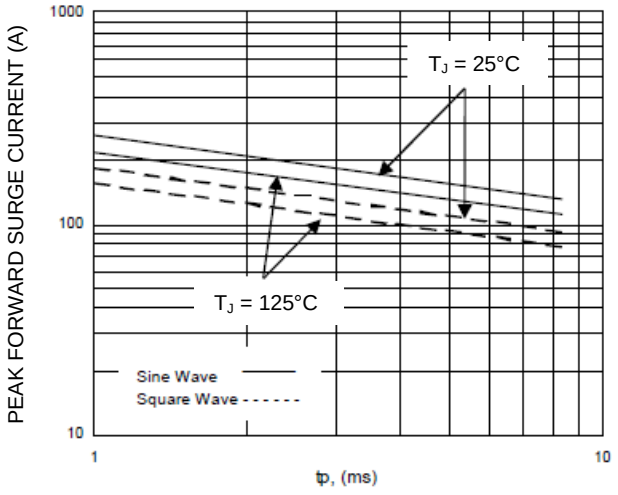

Figure 6. Non-repetitive Surge Current

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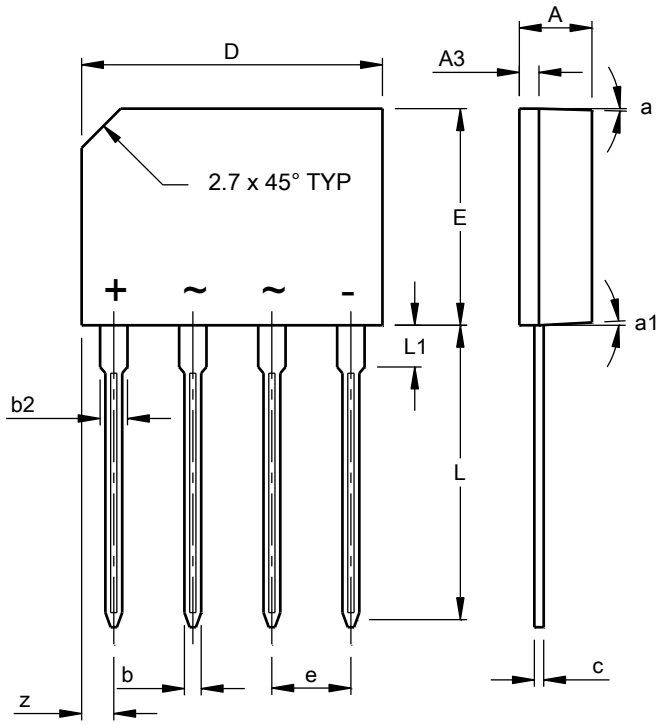
Package Outline Dimensions

Please see http://www.diodes.com/package-outlines.html for the latest version.

KBP



KBP			
Dim	**Min**	**Max**	**Typ**
A	3.35	3.65	-
A3	0.80	1.10	-
b	0.76	0.86	-
b2	1.22	1.42	-
c	0.35	0.55	-
D	14.25	14.75	-
E	10.20	10.60	-
e	3.56	4.06	-
L	14.25	14.73	-
L1	1.80	2.20	-
z	1.40	1.70	-
a	-	-	3°
a1	-	-	2°
All Dimensions in mm			

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