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

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

Characteristic	Symbol	KBP2005G	KBP201G	KBP202G	KBP204G	KBP206G	KBP208G	KBP210G	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_{RM}	50	100	200	400	600	800	1,000	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average Rectified Output Current @T_C = +105°C	I_O	2.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	65							A
I^2t Rating for Fusing (3ms≦t ≦8.3ms)	I^2t	17.5							A^2s

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance, Junction to Case (Note 4)	$R_{\theta JC}$	14	°C/W
Typical Thermal Resistance, Junction to Lead	$R_{\theta JL}$	18	°C/W
Typical Thermal Resistance, Junction to Ambient	$R_{\theta JL}$	40	°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150	°C

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

Characteristic	Symbol	Min		Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 5)	$V_{(BR)R}$	KBP210G KBP208G KBP206G KBP204G KBP202G KBP201G KBP2005G	1,000 800 600 400 200 100 50	—	—	V	I_R = 5μA
Forward Voltage Drop per Element	V_F	—		—	1.1	V	I_F = 2A, T_J = +25°C
Leakage Current (Note 5)	I_R	—		—	5 500	μA	$V_R = V_{RRM}$, T_C = +25°C $V_R = V_{RRM}$, T_C = +125°C
Total Capacitance per Element	C_T	—		25	—	pF	$V_R = 4.0V_{DC}$, f = 1MHz

Notes: 4. Thermal resistance from junction to case per element. Device mounted on 75mm x 75mm x 1.6mm Cu Plate Heatsink.
5. Short duration pulse test used to minimize self-heating effect.

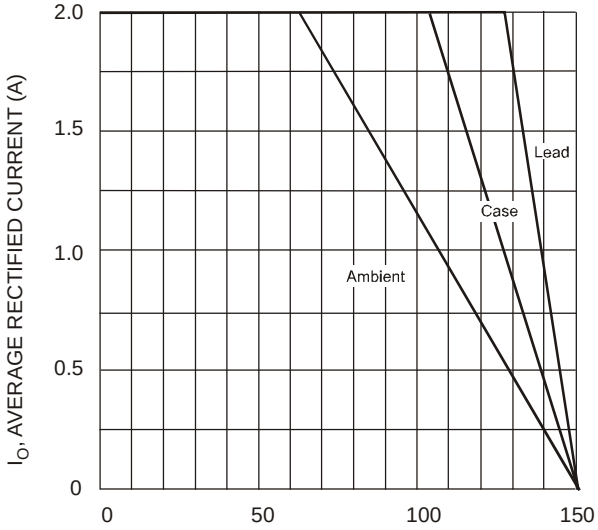


Fig. 1 Forward Current Derating Curve

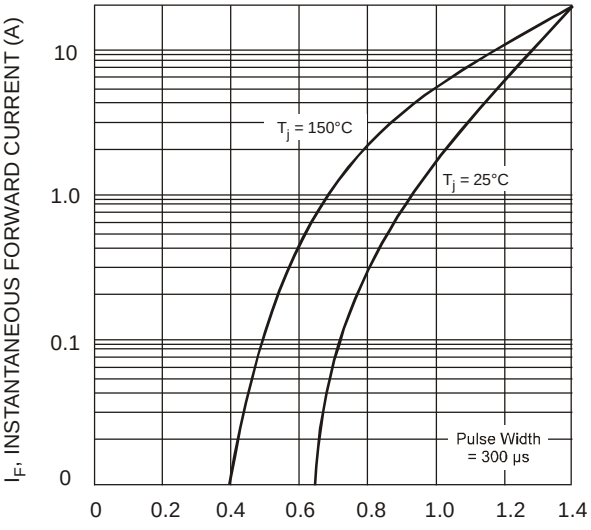


Fig. 2 Typical Forward Characteristics

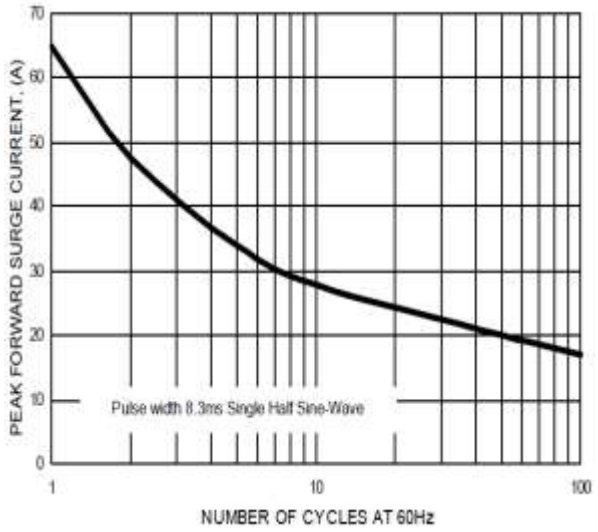


Fig. 3 Maximum Non-Repetitive Surge Current

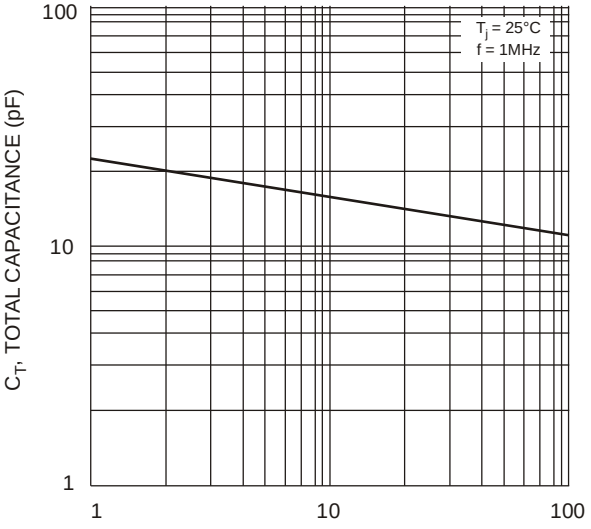


Fig. 4 Typical Total Capacitance, Per Element

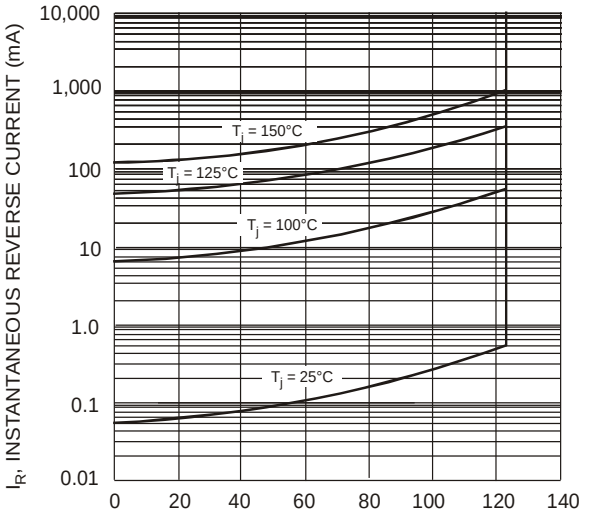


Fig. 5 Typical Reverse Characteristics

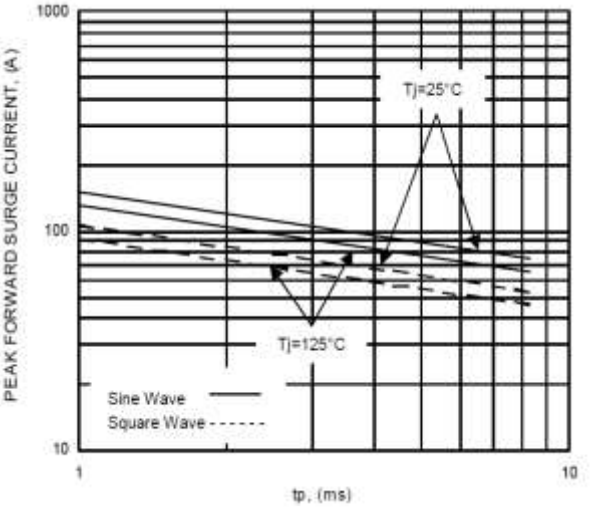
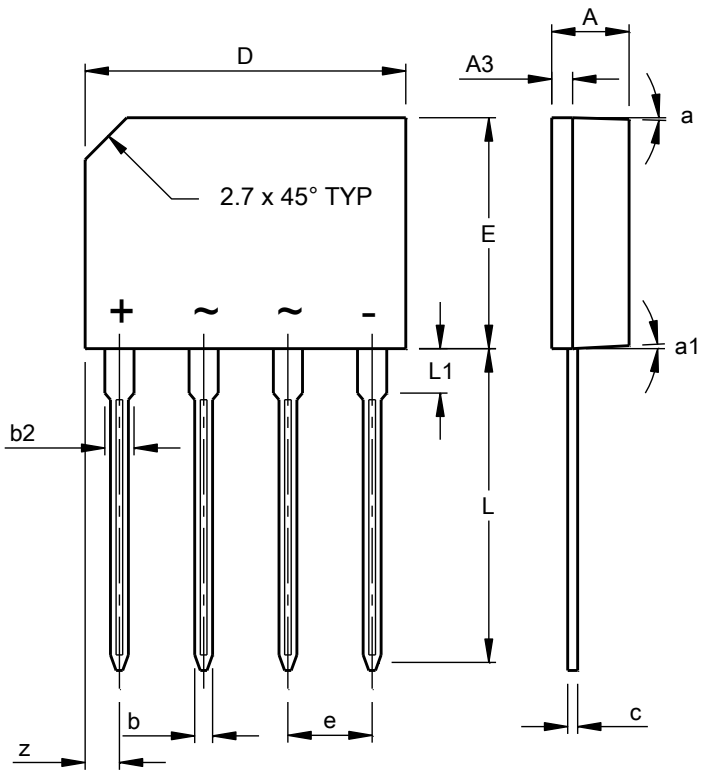


Fig. 6 Non-Repetitive Surge Current

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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