

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	V _{RRM}								
Working Peak Reverse Voltage	V _{RWM}	50	100	200	400	600	800	1,000	V
DC Blocking Voltage	V _{RM}								
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 ² t Rating for Fusing (3ms ≤ t ≤ 8.3ms)	I ² t	17.5							A ² s

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance, Junction to Case (Note 4)	R _{θJC}	14	°C/W
Typical Thermal Resistance, Junction to Lead	R _{θJL}	18	°C/W
Typical Thermal Resistance, Junction to Ambient	R _{θJA}	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 1,000 KBP208G 800 KBP206G 600 KBP204G 400 KBP202G 200 KBP201G 100 KBP2005G 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.

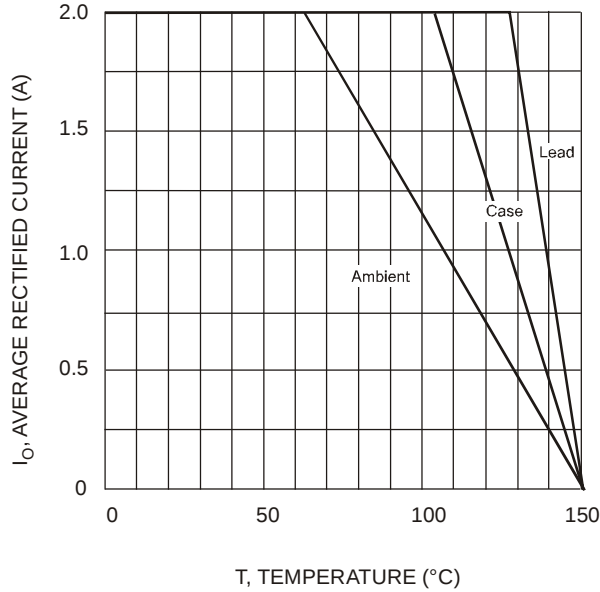


Fig. 1 Forward Current Derating Curve

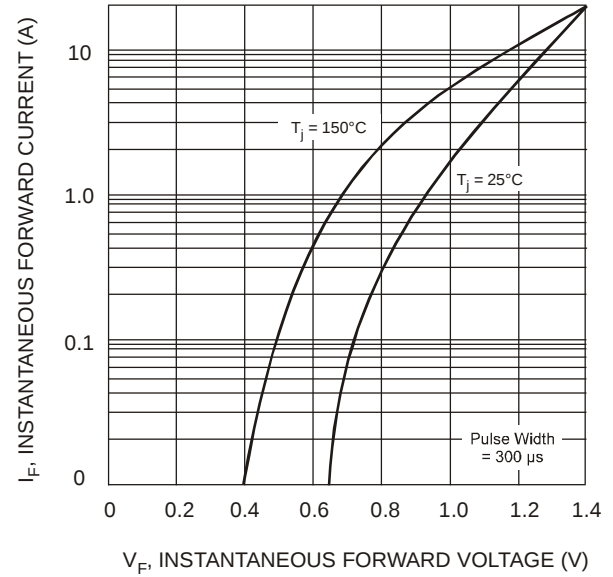


Fig. 2 Typical Forward Characteristics

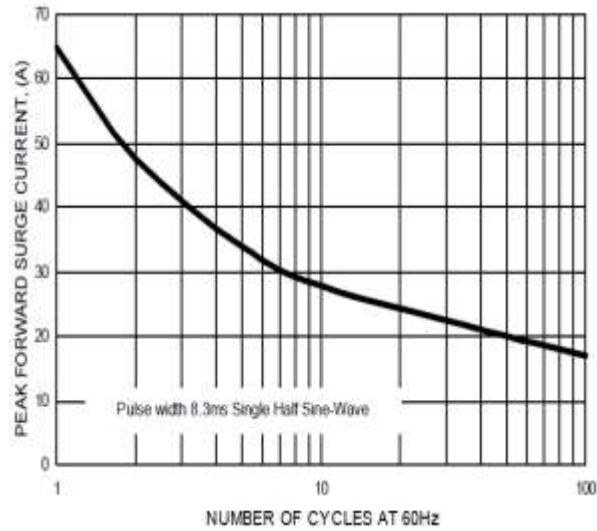


Fig. 3 Maximum Non-Repetitive Surge Current

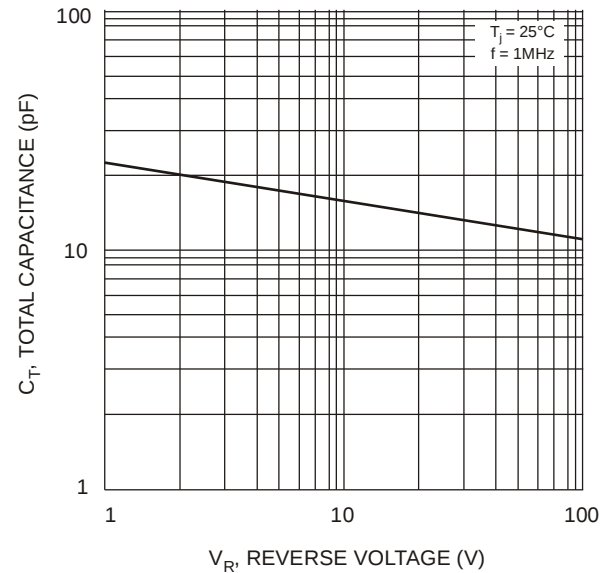


Fig. 4 Typical Total Capacitance, Per Element

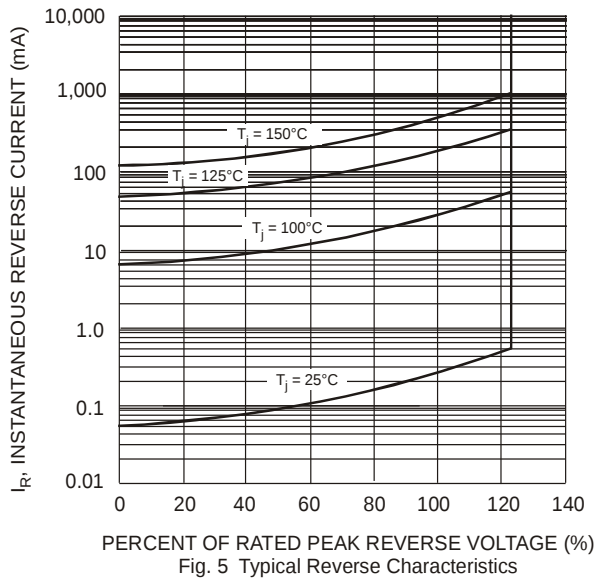


Fig. 5 Typical Reverse Characteristics

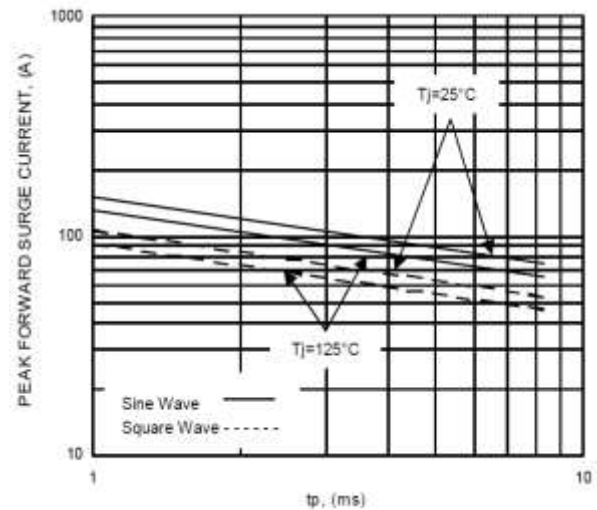
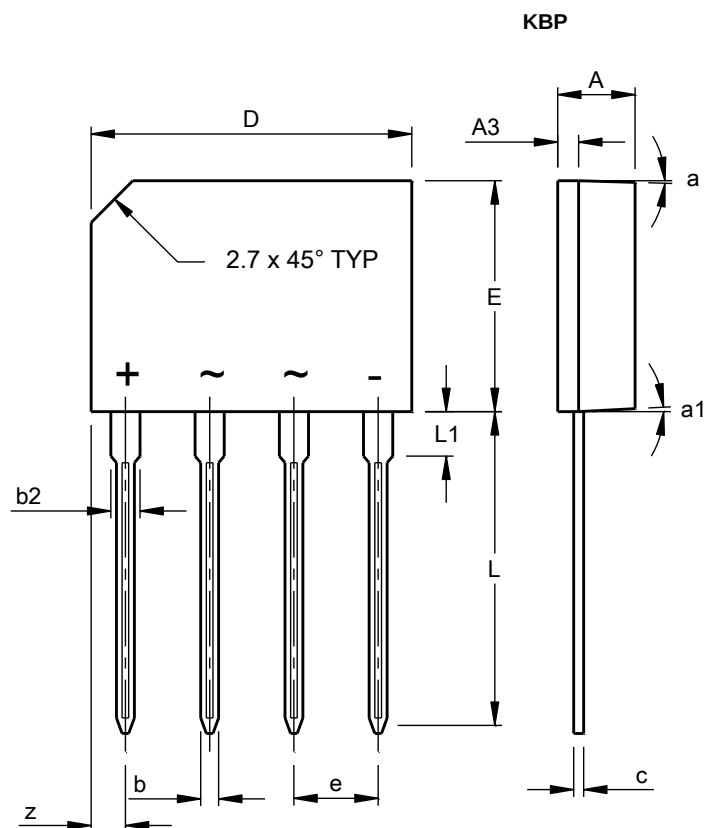


Fig. 6 Non-Repetitive Surge Current

Package Outline Dimensions

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



KBP			
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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