DIODES INCORPORATED

KBP2005G - KBP210G

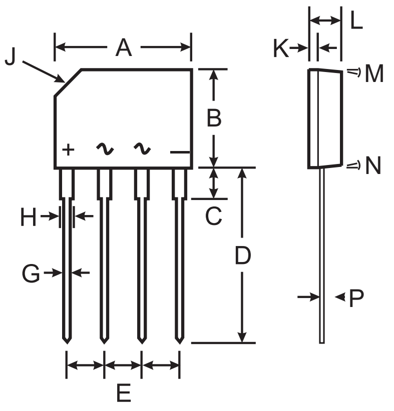
2.0A GLASS PASSIVATED BRIDGE RECTIFIER

Features

- Glass Passivated Die Construction
- High Case Dielectric Strength of 1500V$_{RMS}$
- Low Reverse Leakage Current
- Surge Overload Rating to 65A Peak
- Ideal for Printed Circuit Board Applications
- UL Listed Under Recognized Component Index, File Number E94661
- **Lead Free Finish, RoHS Compliant (Note 3)**

Mechanical Data

- Case: KBP
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Finish - Tin. Plated Leads, Solderable per MIL-STD-202, Method 208 ⓔ3
- Polarity: Marked on Body
- Ordering Information: See Last Page
- Marking: Type Number
- Weight: 1.52 grams (approximate)



KBP		
Dim	**Min**	**Max**
A	14.25	14.75
B	10.20	10.60
C	2.29 Typical	
D	14.25	14.73
E	3.56	4.06
G	0.76	0.86
H	1.17	1.42
J	2.8 X 45° Chamfer	
K	0.80	1.10
L	3.35	3.65
M	3° Nominal	
N	2° Nominal	
P	0.30	0.64
All Dimensions in mm		

Maximum Ratings and Electrical Characteristics

@ $T_A = 25°C$ unless otherwise specified

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

Characteristic	Symbol	KBP 2005G	KBP 201G	KBP 202G	KBP 204G	KBP 206G	KBP 208G	KBP 210G	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	200	400	600	800	1000	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, 8.3 ms single half-sine-wave superimposed on rated load	I_{FSM}	65							A
Forward Voltage per element @ $I_F = 2.0A$	V_{FM}	1.1							V
Peak Reverse Current @ $T_C = 25°C$ at Rated DC Blocking Voltage @ $T_C = 125°C$	I_{RM}	5.0 500							µA
Typical Total Capacitance per Element (Note 2)	C_T	25							pF
Typical Thermal Resistance (Note 1)	$R_{\theta JC}$	14							°C/W
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150							°C

Notes:
1. Thermal resistance from junction to case per element. Unit mounted on 75 x 75 x 1.6mm aluminum plate heat sink.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.
3. RoHS revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see *EU Directive Annex Notes 5 and 7.*

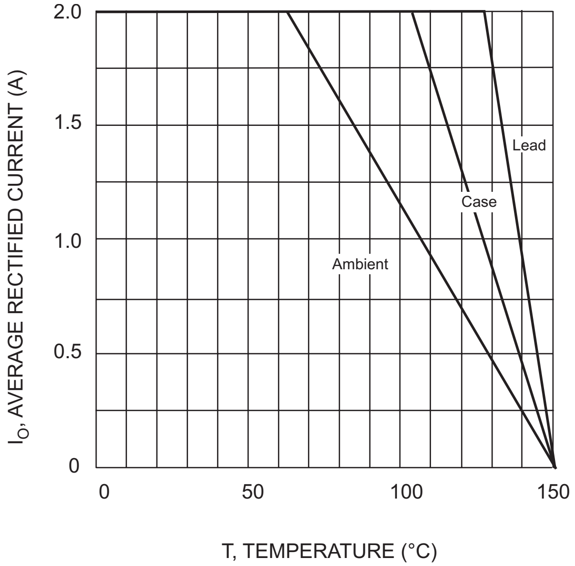


Fig. 1 Forward Current Derating Curve

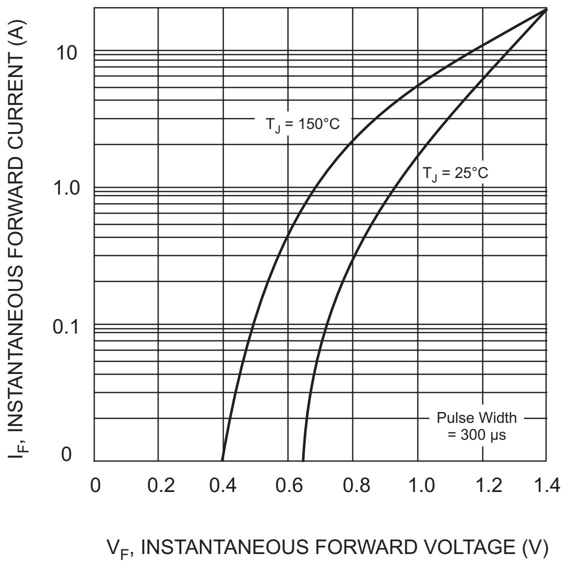


Fig. 2 Typical Forward Characteristics

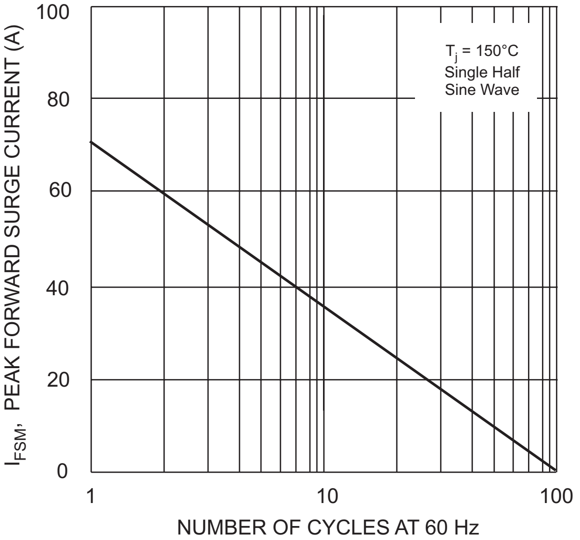


Fig. 3 Max Non-Repetitive Peak Forward Surge Current

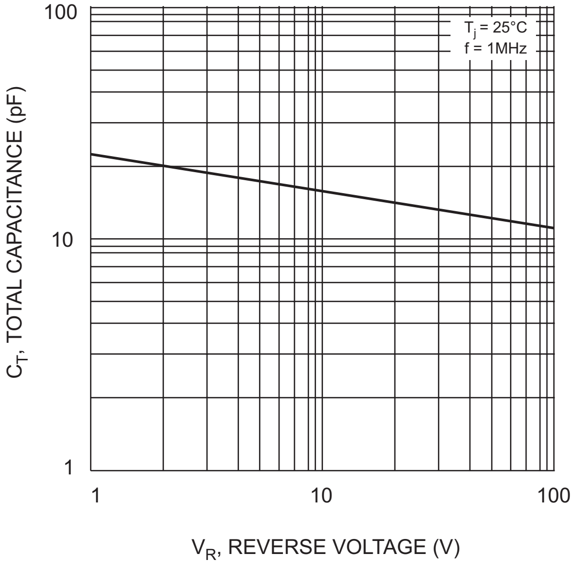


Fig. 4 Typical Total Capacitance, Per Element

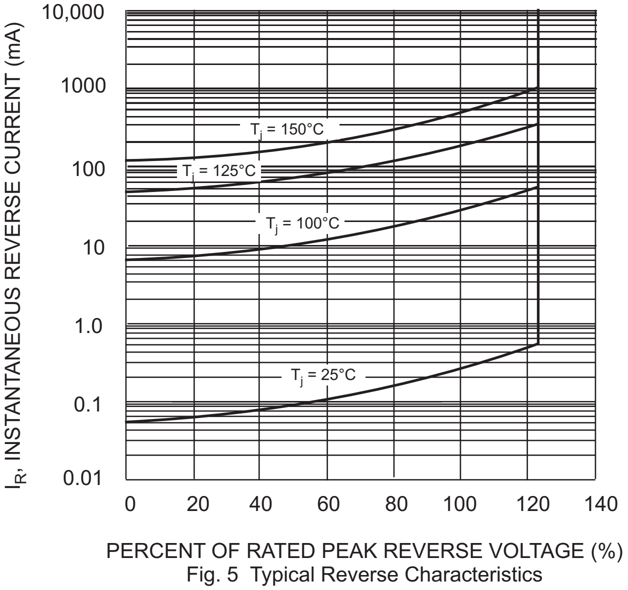


Fig. 5 Typical Reverse Characteristics

Ordering Information (Note 4)

Device	Packaging	Shipping
KBP2005G	KBP	35 pieces per Tube
KBP201G	KBP	35 pieces per Tube
KBP202G	KBP	35 pieces per Tube
KBP204G	KBP	35 pieces per Tube
KBP206G	KBP	35 pieces per Tube
KBP208G	KBP	35 pieces per Tube
KBP210G	KBP	35 pieces per Tube

Notes: 4. For Packaging Details, go to our website at http://www.diodes.com/datasheets/ap02008.pdf.

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