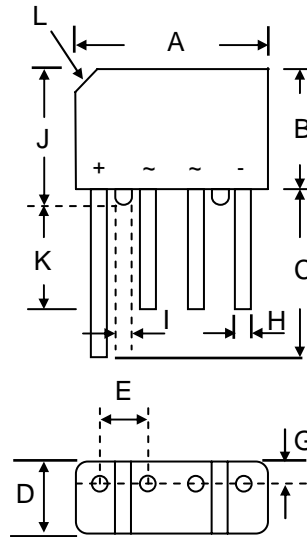


#### Features

- Diffused Junction
- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability
- Ideal for Printed Circuit Boards

#### Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Body
- Weight: 1.7 grams (approx.)
- Mounting Position: Any
- Marking: Type Number
- **Lead Free: For RoHS / Lead Free Version**



KBP		
Dim	Min	Max
A	14.22	15.24
B	10.60	11.68
C	15.20	—
D	3.40	4.20
E	3.60	4.10
G	1.27	—
H	0.70	0.9
I	1.52	—
J	11.68	12.70
K	12.7	—
L	3.2 x 45° Typical	
All Dimensions in mm		

#### Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

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

Characteristic	Symbol	KBP 3005	KBP 301	KBP 302	KBP 304	KBP 306	KBP 308	KBP 310	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 (Note 1) @ $T_A = 50^\circ\text{C}$	$I_O$	3.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	60							A
Forward Voltage (per element) @ $I_F = 2.0\text{A}$	$V_{FM}$	1.1							V
Peak Reverse Current @ $T_A = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_A = 100^\circ\text{C}$	$I_{RM}$	5 500							$\mu\text{A}$
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	30							K/W
Operating and Storage Temperature Range	$T_j, T_{STG}$	-55 to +150							$^\circ\text{C}$

- Note: 1. Leads maintained at ambient temperature at a distance of 9.5mm from the case.  
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.  
3. Thermal resistance junction to ambient mounted on PC board with 12mm<sup>2</sup> copper pad.

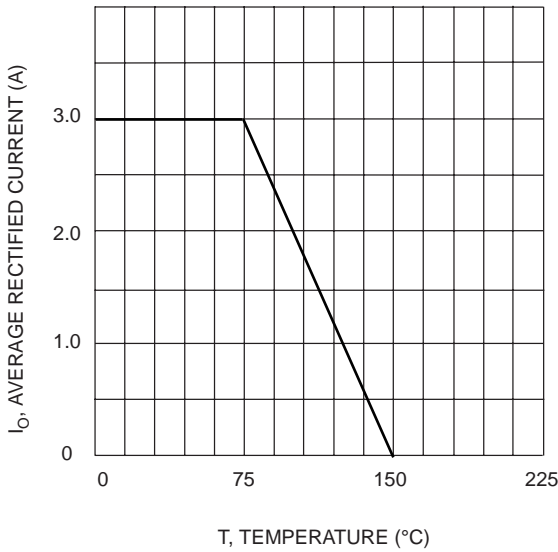


Fig. 1 Forward Current Derating Curve

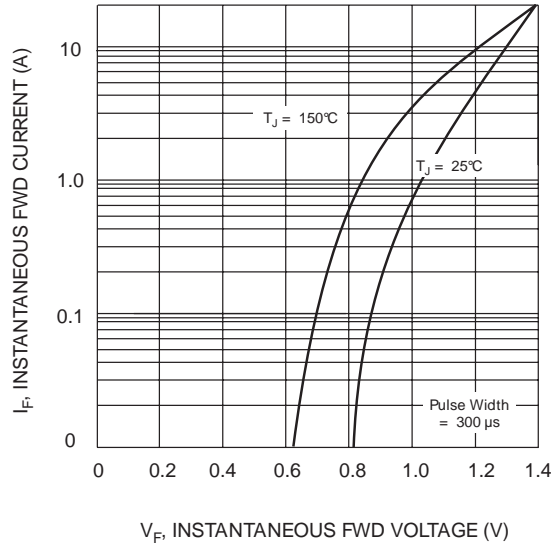


Fig. 2 Typical Fwd Characteristics

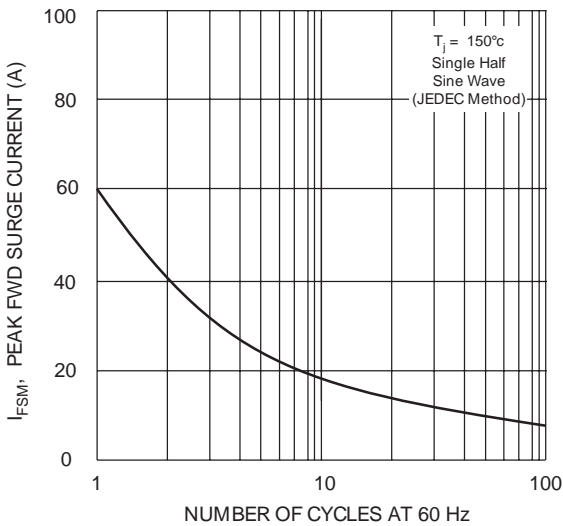


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

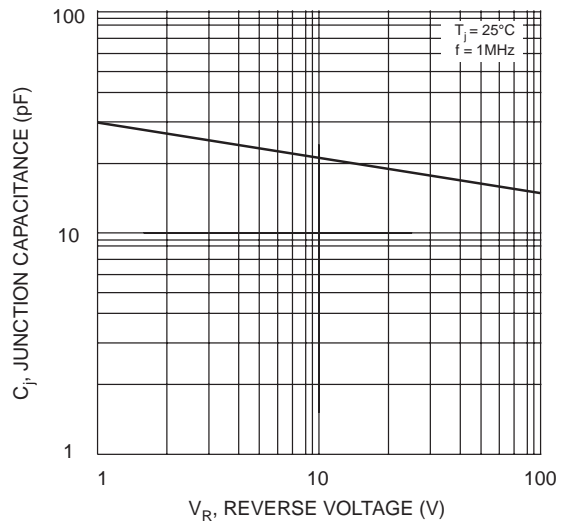


Fig. 4 Typical Junction Capacitance

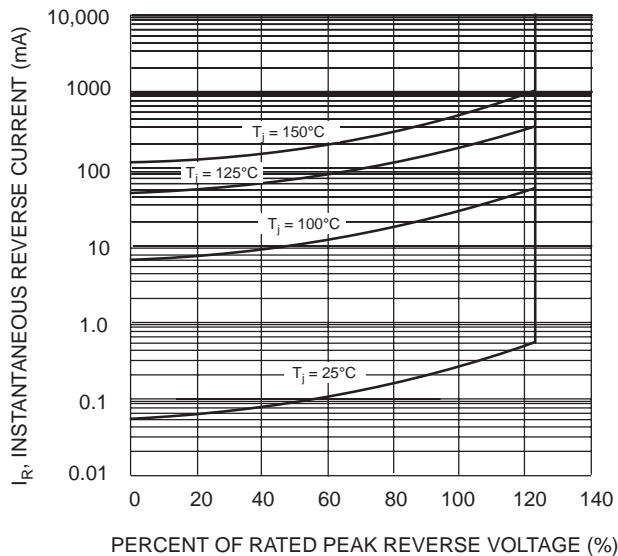


Fig. 5 Typical Reverse Characteristics