



# KBP301 – KBP307

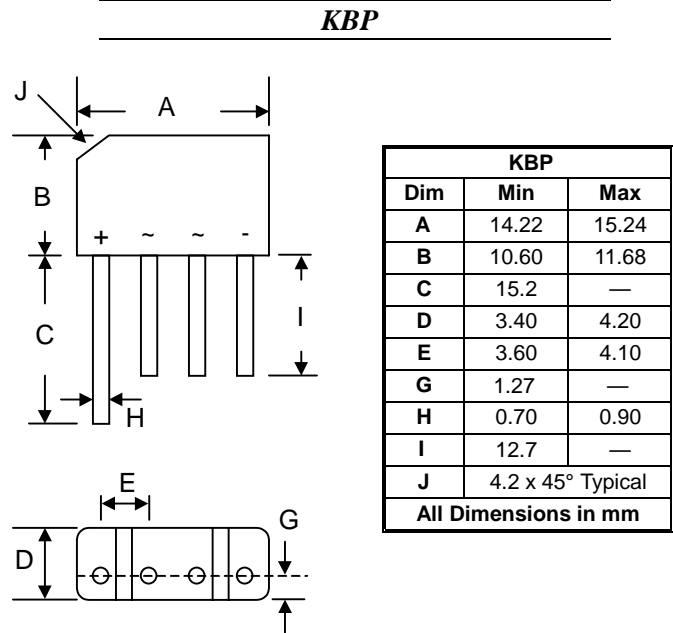
## BRIDGE RECTIFIERS

### FEATURES

- UL Recognized File # E469616
- 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
- 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,**



### 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 301	KBP 302	KBP 303	KBP 304	KBP 305	KBP 306	KBP 307	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$								
Working Peak Reverse Voltage	$V_{RWM}$	50	100	200	400	600	800	1000	V
DC Blocking Voltage	$V_R$								
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average Rectified Output Current (Note 1)	$I_O$	3.0							A
		@ $T_A = 50^\circ\text{C}$							
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	80							A
Forward Voltage (per element)	$V_{FM}$	1.1							V
		@ $I_F = 3.0\text{A}$							
Peak Reverse Current	$I_{RM}$	10							$\mu\text{A}$
		@ $T_A = 25^\circ\text{C}$							
At Rated DC Blocking Voltage		500							
		@ $T_A = 100^\circ\text{C}$							
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.



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### Characteristic Curves ( $T_A=25^\circ\text{C}$ unless otherwise noted)

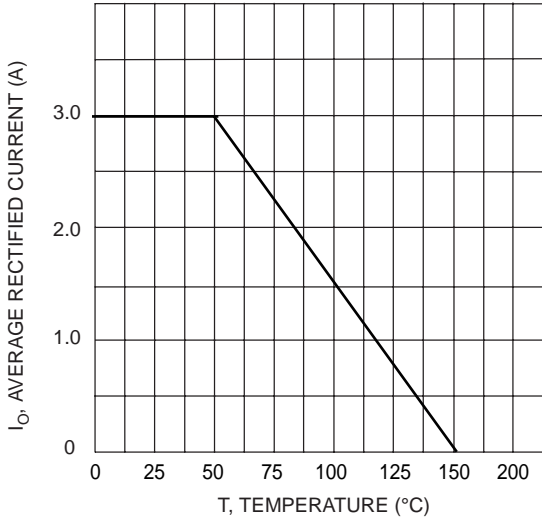


Fig. 1 Forward Current Derating Curve

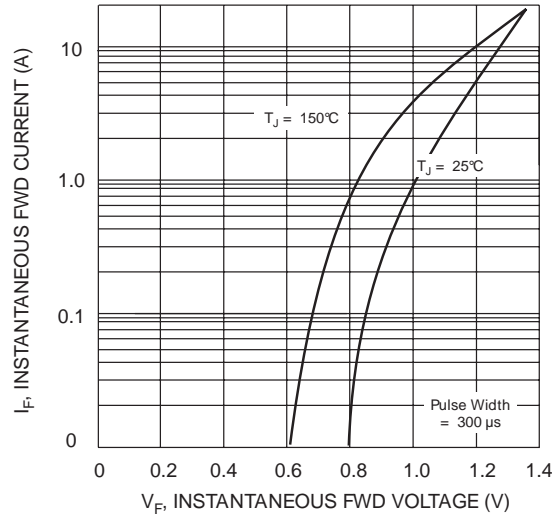


Fig. 2 Typical Fwd Characteristics

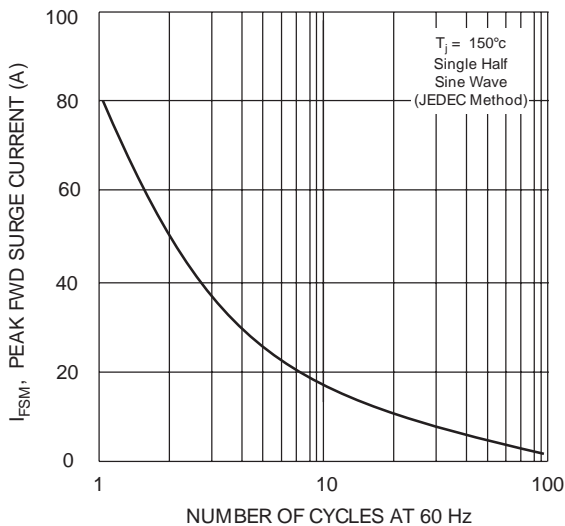


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

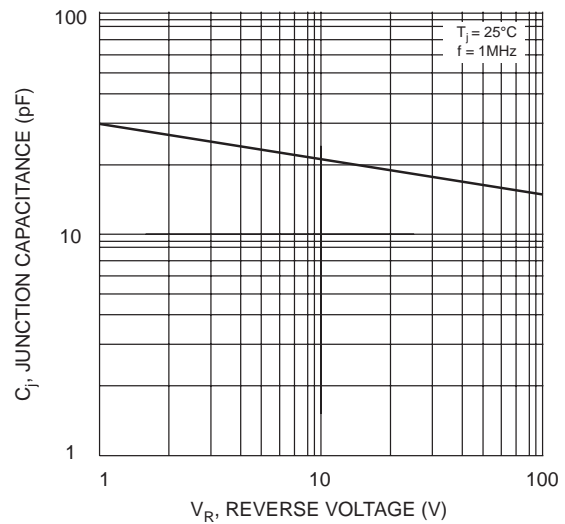


Fig. 4 Typical Junction Capacitance

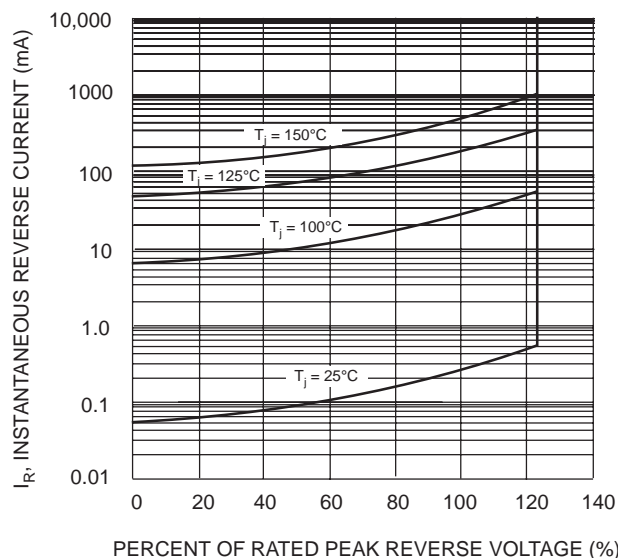


Fig. 5 Typical Reverse Characteristics