



RKBP3005 thru RKBP310

3.0A, Fast Recovery Glass Passivated Bridge Rectifier

Rectifier Reverse Voltage 50 to 1000V

KBP

Features

- Ideal for printed circuit board mounting
- This series is UL listed under the Recognized Component Index, file number E142814
- The plastic material used carries Underwriters Laboratory flammability recognition 94V-0
- Built-in printed circuit board stand-offs
- High case dielectric strength
- High temperature soldering guaranteed 260°C / 5 seconds at 5 lbs (2.3kg) tension

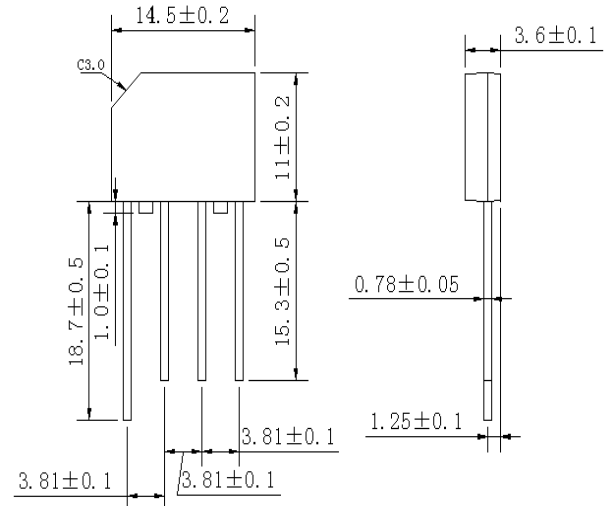
Mechanical Data

Case: Reliable low cost construction utilizing molded plastic technique

Terminals: Plated leads solderable per MIL-STD-202, Method 208

Mounting Position: Any

Weight: 1.35 grams (approx)



Dimensions in inches and (millimeters)

Maximum Ratings & Thermal Characteristics

Rating at 25°C ambient temperature unless otherwise specified, Resistive or Inductive load, 60 Hz.
For Capacitive load derate current by 20%.

Parameter	Symbol	RKBP 3005	RKBP 301	RKBP 302	RKBP 304	RKBP 306	RKBP 308	RKBP 310	unit
Maximum repetitive peak reverse voltage	VRRM	50	100	200	400	600	800	1000	V
Maximum RMS bridge input voltage	VRMS	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	VDC	50	100	200	400	600	800	1000	V
Maximum average forward rectified output current at TA=100°C (with heatsink)	IF(AV)	3.0							A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method)	IFSM	60							A
Rating for fusing (t<8.3ms)	I ² t	14.91							A ² sec
Maximum reverse recovery time (Note 2)	t _{rr}	150				250	500		ns
Typical thermal resistance per element (with heatsik) (1)	ReJA	55							°C / W
Operating junction and storage temperature range	TJ, TSTG	-55 to + 150							°C

Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified. Resistive or Inductive load, 60Hz.
For Capacitive load derate by 20 %.

Parameter	Symbol	RKBP 3005	RKBP 301	RKBP 302	RKBP 304	RKBP 306	RKBP 308	RKBP 310	Unit
Maximum instantaneous forward voltage drop per leg at 3.0A	V _F	1.3							V
Maximum DC reverse current at rated TA =25°C DC blocking voltage per element TA =125°C	I _R	10 1000							μA

Notes: (1) Thermal resistance from Junction to Ambient on P.C. board mounting.

(2): Reverse recovery time test conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A

Rating and Characteristic Curves ($T_A = 25^{\circ}\text{C}$ Unless otherwise noted)

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Fig. 1 Derating Curve for Output Rectified Current

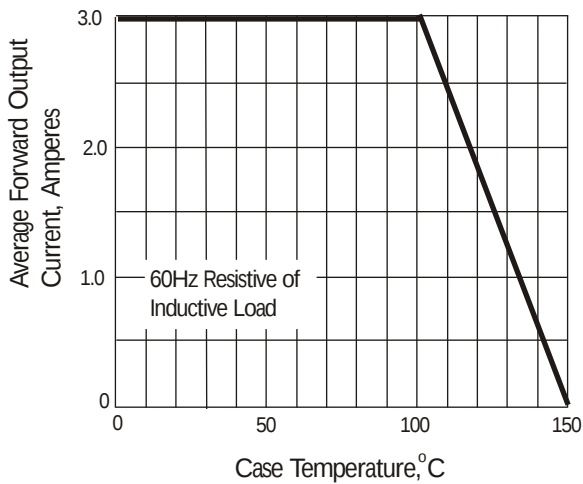


Fig. 2 Maximum Non-repetitive Peak Forward Surge Current

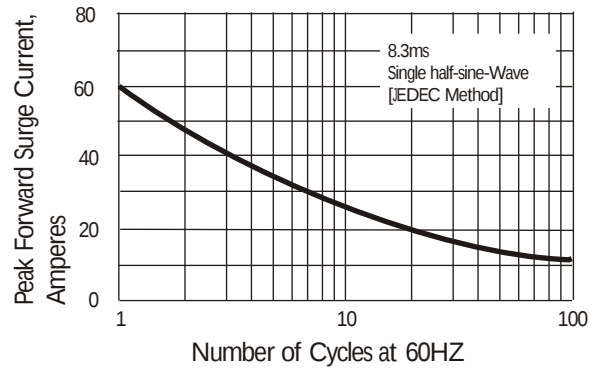


Fig. 3 Typical Instantaneous Forward Characteristics

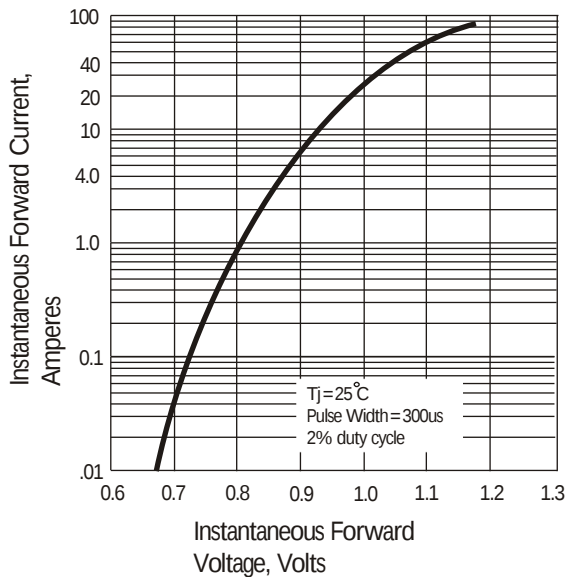


Fig. 4 Typical Reverse Characteristics

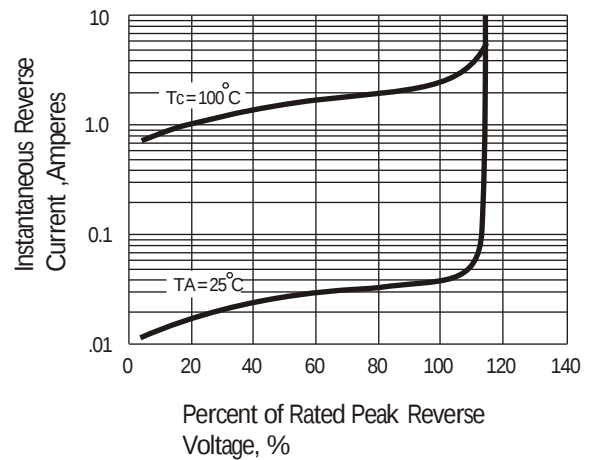


Fig. 5 Typical Junction Capacitance

