



# KBP3005 thru KBP310

## 3 A Single-Phase Bridge Rectifier

Rectifier Reverse Voltage 50 to 1000V

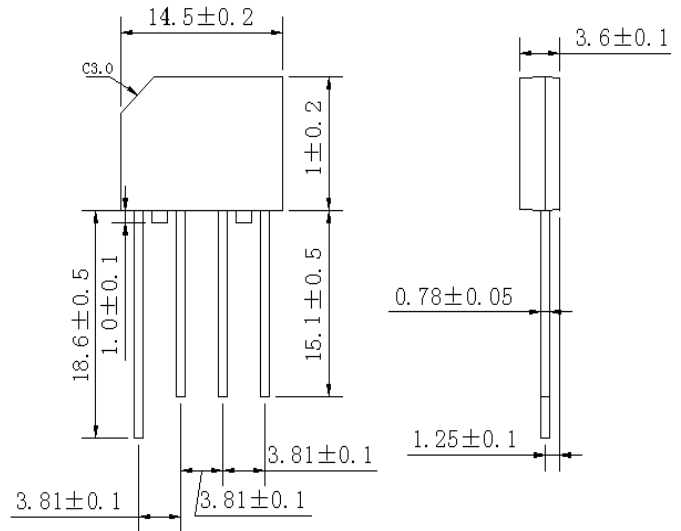
### KBP

#### Features

- This series is UL listed under the Recognized Component Index, file number E484648
- Ideal for printed circuit board mounting
- 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 265°C /10 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



Dimensions in millimeters (1mm =0.0394")

#### 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	KBP3005	KBP301	KBP302	KBP304	KBP306	KBP308	KBP310	unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS bridge input voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum average forward rectified output current at $T_A=40^\circ\text{C}$	$I_{F(AV)}$	3.0							A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	80							A
Operating junction and storage temperature range	$T_J, T_{STG}$	-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 %.

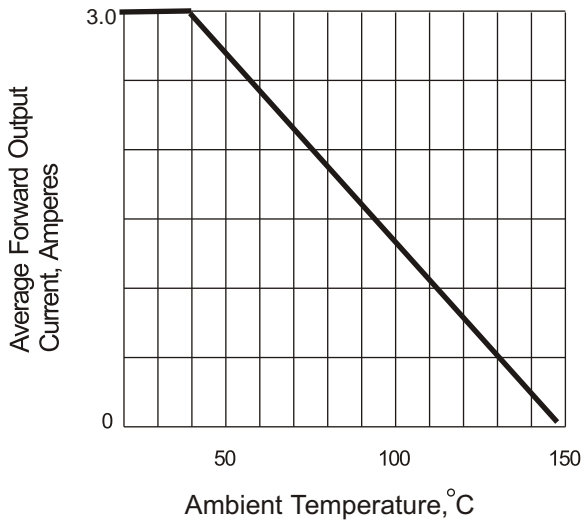
Parameter	Symbol	KBP3005	KBP301	KBP302	KBP304	KBP306	KBP308	KBP310	Unit	
Maximum instantaneous forward voltage drop per leg at 3.0 A	$V_F$	1.1								V
Maximum DC reverse current at rated $T_A=25^\circ\text{C}$ DC blocking voltage per element $T_A=125^\circ\text{C}$	$I_R$	10				500				$\mu\text{A}$

Notes: (1) Thermal resistance from Junction to Ambient on P.C. board mounting.  
 (2) Measured at 2.0MHz and applied reverse voltage of 4.0 volts.

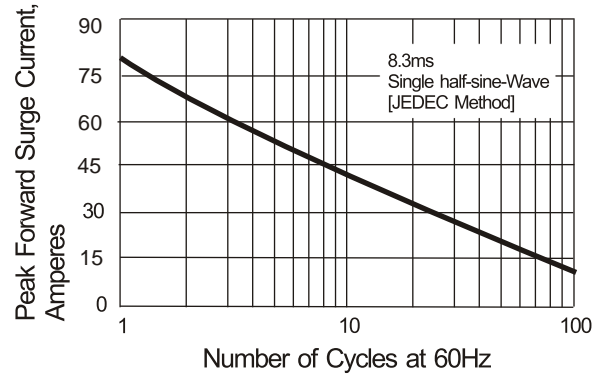
# Rating and Characteristic Curves ( $T_A=25\text{ }^\circ\text{C}$ Unless otherwise noted )

## KBP3005 thru KBP310

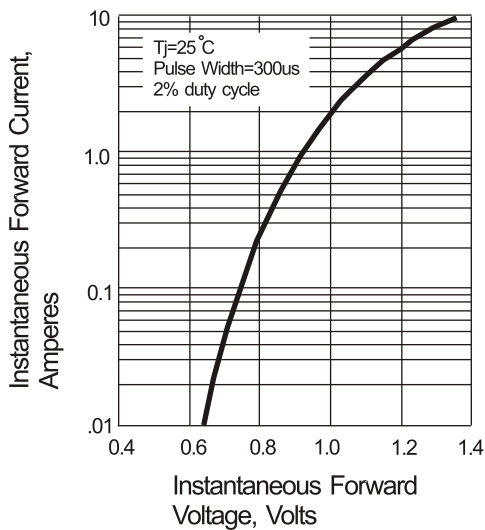
**Fig. 1 Derating Curve for Output Rectified Current**



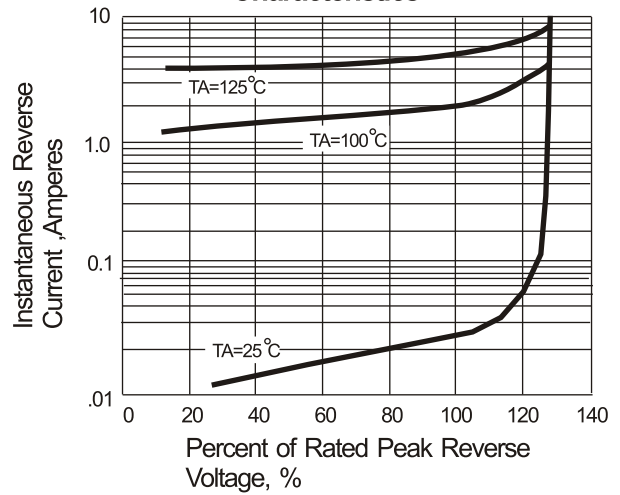
**Fig. 2 Maximum Non-repetitive Peak Forward Surge Current**



**Fig. 3 Typical Instantaneous Forward Characteristics**



**Fig. 4 Typical Reverse Characteristics**



**Fig. 5 Typical Junction Capacitance**

