

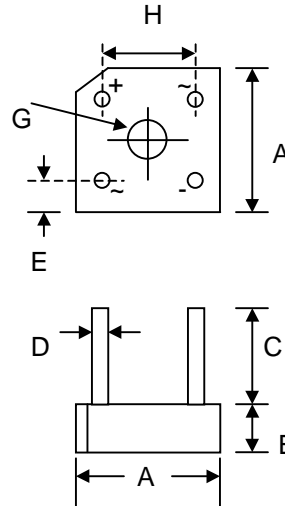


# KBPC600 – KBPC610

## 6.0A BRIDGE RECTIFIER

### Features

- Diffused Junction
- High Current Capability
- High Case Dielectric Strength
- High Surge Current Capability
- Ideal for Printed Circuit Board Application
- Plastic Material has Underwriters Laboratory Flammability Classification 94V-O
- UL Recognized File # E157705



KBPC-6		
Dim	Min	Max
A	14.73	15.75
B	5.80	6.90
C	19.00	—
D	1.00 Ø Typical	
E	1.70	2.72
G	Hole for #6 screw	
	3.60	4.00
H	10.30	11.30
All Dimensions in mm		

### Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Marked on Body
- Weight: 3.8 grams (approx.)
- Mounting Position: Through Hole for #6 Screw
- Mounting Torque: 5.0 Inch-pounds Maximum
- Marking: Type Number

### 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	KBPC 600	KBPC 601	KBPC 602	KBPC 604	KBPC 606	KBPC 608	KBPC 610	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) @ $T_C = 50^\circ\text{C}$	$I_O$	6.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	125							A
Forward Voltage (per element) @ $I_F = 3.0\text{A}$	$V_{FM}$	1.1							V
Peak Reverse Current @ $T_C = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_C = 100^\circ\text{C}$	$I_R$	10 1.0							$\mu\text{A}$ mA
$I^2t$ Rating for Fusing ( $t < 8.3\text{ms}$ ) (Note 2)	$I^2t$	64							$\text{A}^2\text{s}$
Typical Junction Capacitance (Note 3)	$C_j$	55							pF
Typical Thermal Resistance (Note 4)	$R_{\theta JC}$	12.5							K/W
Operating and Storage Temperature Range	$T_j, T_{STG}$	-65 to +125							$^\circ\text{C}$

- Note: 1. Mounted on metal chassis.  
2. Non-repetitive, for  $t > 1\text{ms}$  and  $< 8.3\text{ms}$ .  
3. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.  
4. Thermal resistance junction to case per element.

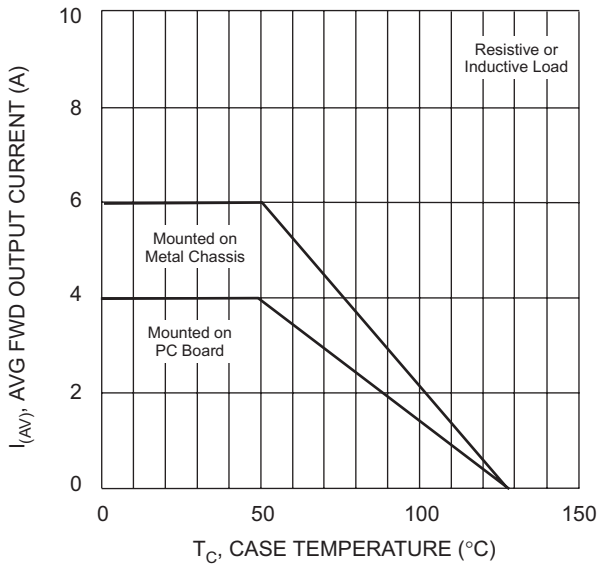


Fig. 1 Forward Current Derating Curve

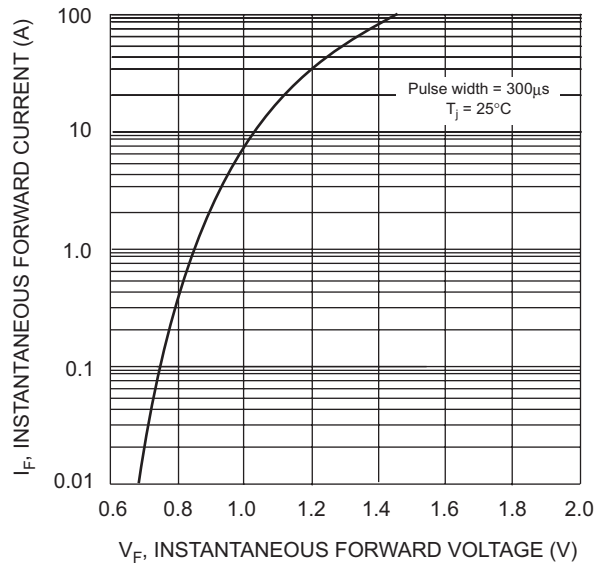


Fig. 2 Typical Forward Characteristics, per element

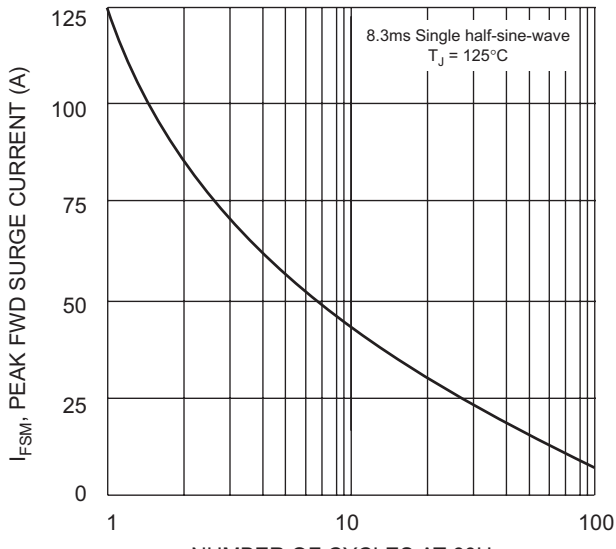


Fig. 3 Peak Forward Surge Current

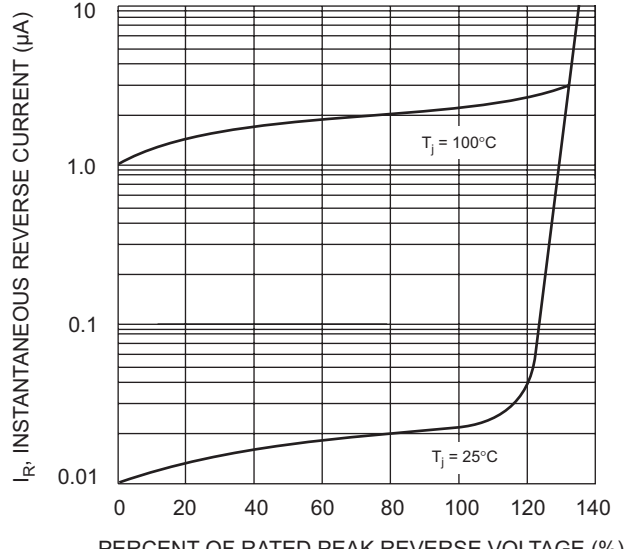


Fig. 4 Typical Reverse Characteristics