

Features

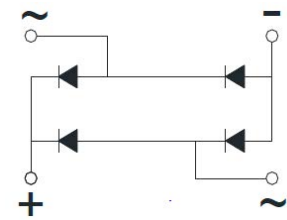
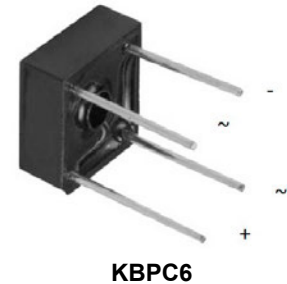
- Suitable for printed circuit board or chassis mounting
- Compact construction
- High surge current capability

Typical Applications

The KBPC series of single phase rectifier bridge consists of four silicon junctions connected as a full bridge. These devices are intended for general use in industrial and consumer equipment.

Mechanical Data

- Package: KBPC6
- Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Polarity: As marked on body



Schematic Diagram

Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$ Unless otherwise specified)

Parameter	Symbol	KBPC 6005	KBPC 601	KBPC 602	KBPC 604	KBPC 606	KBPC 608	KBPC 610	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Average Rectified Output Current @ 60Hz Sine Wave, R-load, $T_A=40^{\circ}\text{C}$	I_O	6.0							A
Surge (Non-Repetitive) Forward Current @ 60Hz Half Sine Wave, 1 Cycle, $T_A=25^{\circ}\text{C}$	I_{FSM}	150							A
Current Squared Time @ $\text{ms} \leq t \leq 8.3\text{ms}$, $T_J=25^{\circ}\text{C}$, Rating per Diode	I^2t	93							A^2S
Thermal Resistance, Between Junction and Ambient	$R_{\theta JA}$	25							$^{\circ}\text{C}/\text{W}$
Junction Temperature	T_J	-55 to +150							$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55 to +150							$^{\circ}\text{C}$

Electrical Characteristics ($T_A=25^{\circ}\text{C}$ Unless otherwise specified)

Parameter	Symbol	Test Conditions	KBPC 6005	KBPC 601	KBPC 602	KBPC 604	KBPC 606	KBPC 608	KBPC 610	Unit
Maximum Instantaneous Forward Voltage Drop Per Diode	V_{FM}	$I_{FM}=3\text{A}$	1.1							V
Maximum DC Reverse Current at Rated DC Blocking Voltage Per Diode	I_{RRM}	$V_{RM}=V_{RRM}$	10							μA

Ratings and Characteristics Curves

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

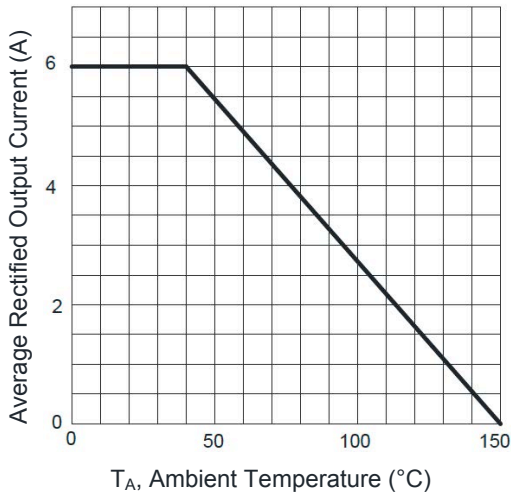


Figure 1. I_O - T_A Curve

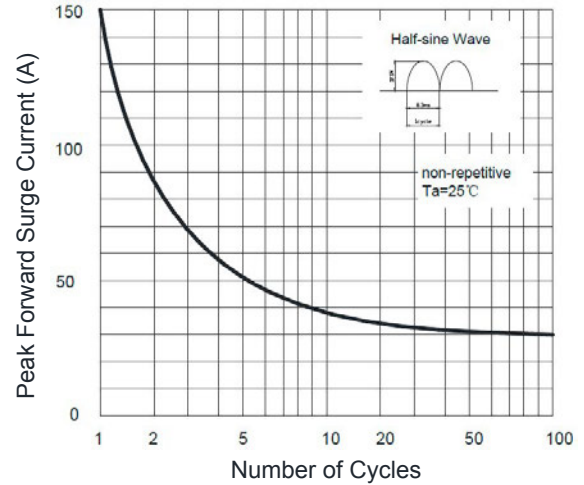


Figure 2. Surge Forward Current Capability

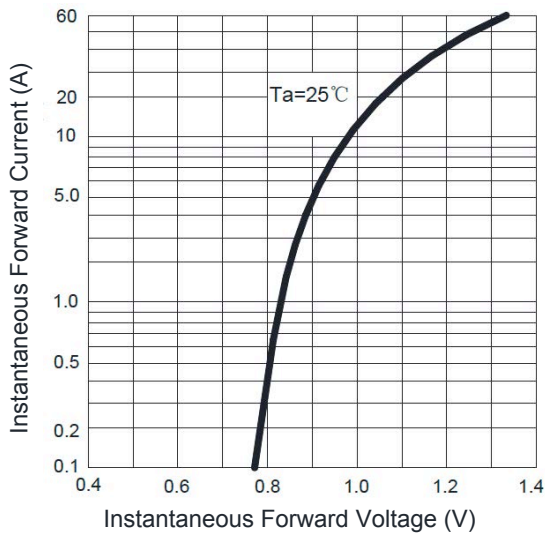


Figure 3. Instantaneous Forward Voltage

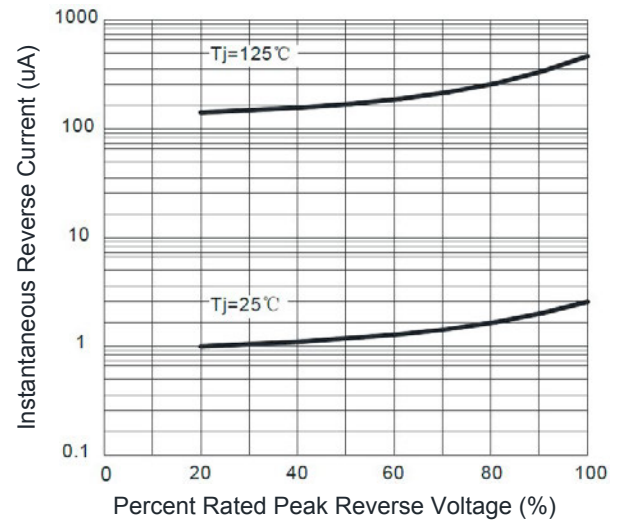
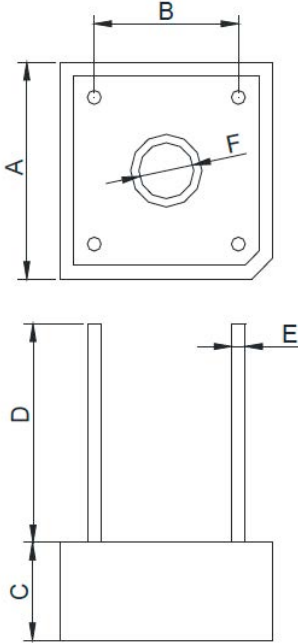


Figure 4. Typical Reverse Characteristics

Package Outline Dimensions (KBPC6)



Symbol	Dimensions in Millimeters		Dimensions in Inches	
	Min	Max	Min	Max
A	14.700	15.700	0.579	0.618
B	10.300	11.300	0.406	0.445
C	6.350	7.600	0.250	0.300
D	15.000	-	0.590	-
E	0.950	1.050	0.037	0.041
F	3.800	4.200	0.150	0.165