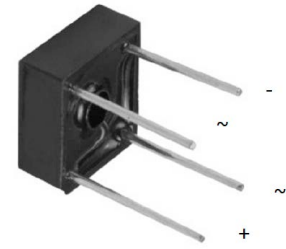


**Features**

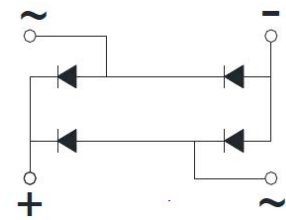
- Suitable for printed circuit board or chassis mounting
- Compact construction
- High surge current capability



**KBPC6**

**Typical Applications**

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



**Schematic Diagram**

**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

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

Parameter	Symbol	BR6005	BR601	BR602	BR604	BR606	BR608	BR610	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							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 @ $1\text{ms} \leq t \leq 8.3\text{ms}$ , $T_J=25^{\circ}\text{C}$ , Rating per Diode	$I^2t$	93							$\text{A}^2\text{S}$
Thermal Resistance, Between Junction and Ambient	$R_{\theta JA}$	9							$^{\circ}\text{C}/\text{W}$
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	BR6005	BR601	BR602	BR604	BR606	BR608	BR610	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							$\mu\text{A}$

**Ratings and Characteristics Curves**

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

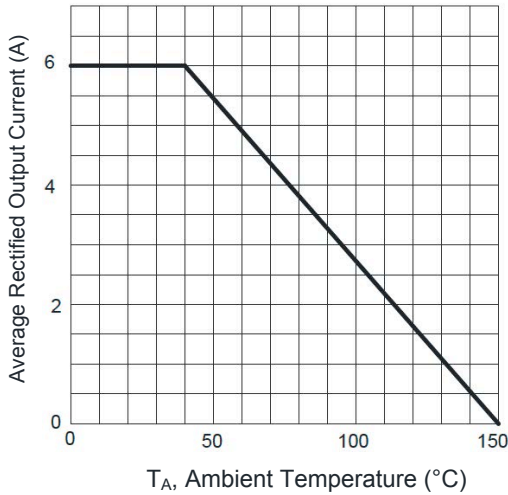


Figure 1.  $I_o$ - $T_A$  Curve

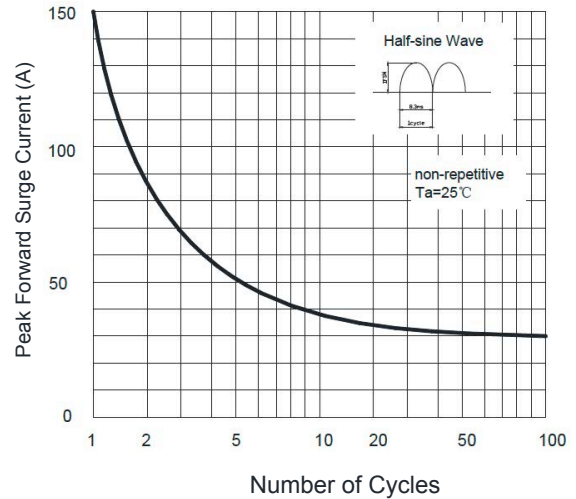


Figure 2. Surge Forward Current Capability

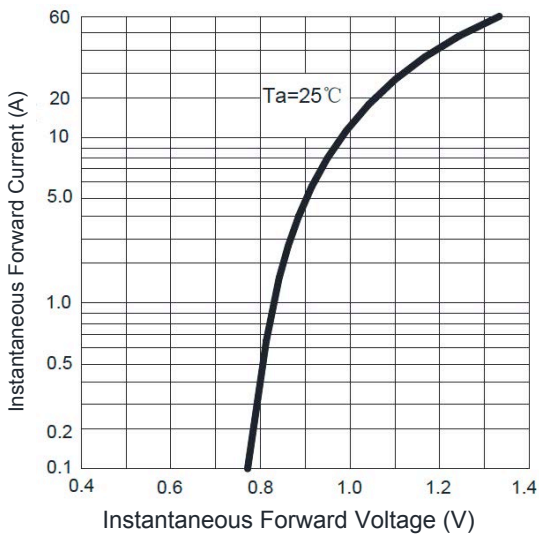


Figure 3. Instantaneous Forward Voltage

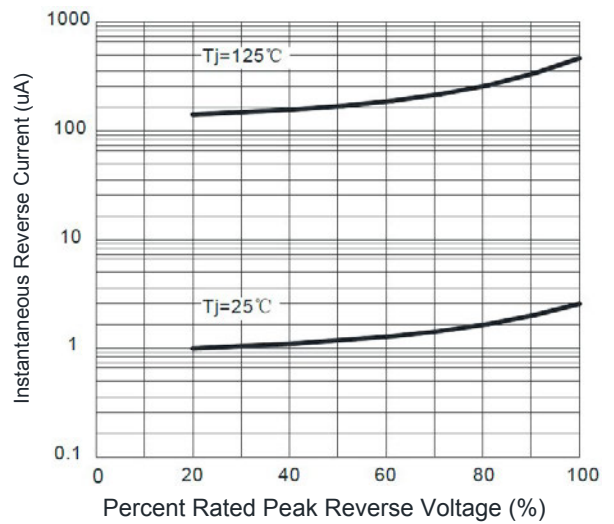
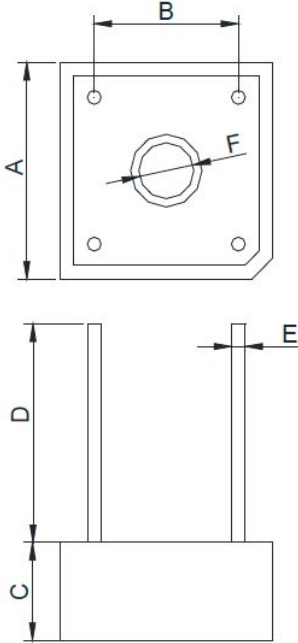


Figure 4. Typical Reverse Characteristics

**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