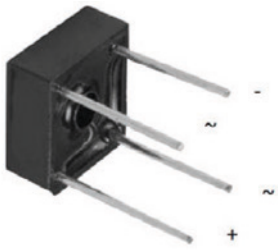
KBPC8005 thru KBPC810

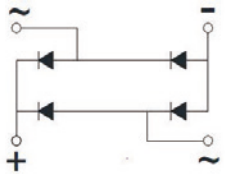
Single-Phase Bridge Rectifiers
Voltage Range 50V to 1000V Forward Current 8A

Features

- Glass passivated chip junction
- Suitable for printed circuit board or chassis mounting
- Compact construction
- High surge current capability
- Solder dip 275°C max. 7s, per JESD 22-B106



KBPC8



Schematic Diagram

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.

Mechanical Data

- Package: KBPC8
- 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°C Unless otherwise specified)

Parameter	Symbol	KBPC 8005	KBPC 801	KBPC 802	KBPC 804	KBPC 806	KBPC 808	KBPC 810	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS 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
Average Rectified Output Current @ 60Hz Sine Wave, R-load, T_C=115°C	I_O	8.0							A
Forward Surge Current (Non-Repetitive) @ 60Hz Half-Sine Wave, 1 cycle, T_J=25°C	I_{FSM}	150							A
Current Squared Time @ 1ms ≤t ≤8.3ms T_J=25°C, Rating of Per Diode	I^2t	93.4							A^2S
Dielectric Strength @ Terminals to Case, AC 1 Minute	V_{dis}	2.5							KV
Mounting Torque @ Recommend Torque: 5kg·cm	T_{or}	8							kg·cm
Thermal Resistance Between Junction and Case, With Heatsink[1]	$R_{\theta JC}$	2.2							°C/W
Storage Temperature	T_{stg}	-55 to +150							°C
Junction Temperature	T_J	-55 to +150							°C

Note:
1. Device mounted on 75mm x 45mm x 5.5mm aluminum plate heatsink.

GOOD-ARK SEMICONDUCTOR

KBPC8005 thru KBPC810

Single-Phase Bridge Rectifiers
Voltage Range 50V to 1000V Forward Current 8A

Electrical Characteristics (T_A=25°C Unless otherwise specified)

Parameter	Symbol	Test Conditions	KBPC 8005	KBPC 801	KBPC 802	KBPC 804	KBPC 806	KBPC 808	KBPC 810	Unit
Maximum Instantaneous Forward Voltage Drop Per Diode	V_F	I_{FM}=4.0A	1							V
Maximum DC Reverse Current at Rated DC Blocking Voltage Per Diode	I_R	T_J=25°C	5							μA
		T_J=125°C	100							
Typical Junction Capacitance	C_J	Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	42							pF

Typical Characteristics Curves

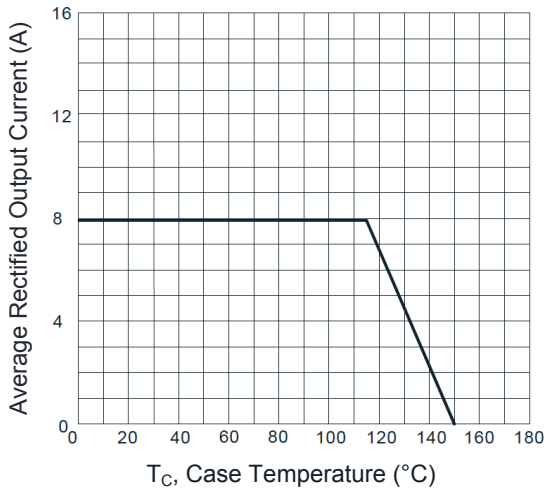


Figure 1. I_O-T_C Curve

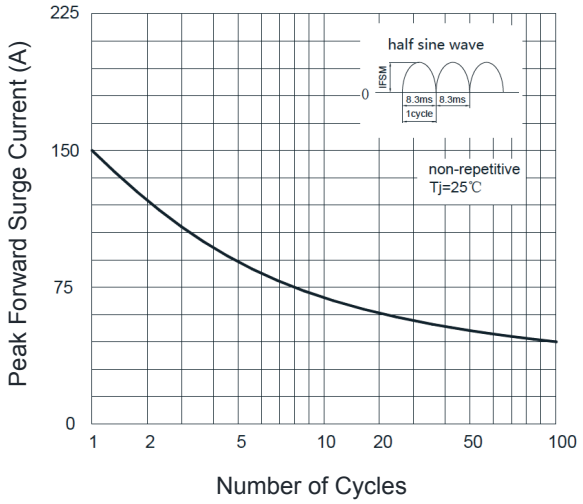


Figure 2. Surge Forward Current Capability

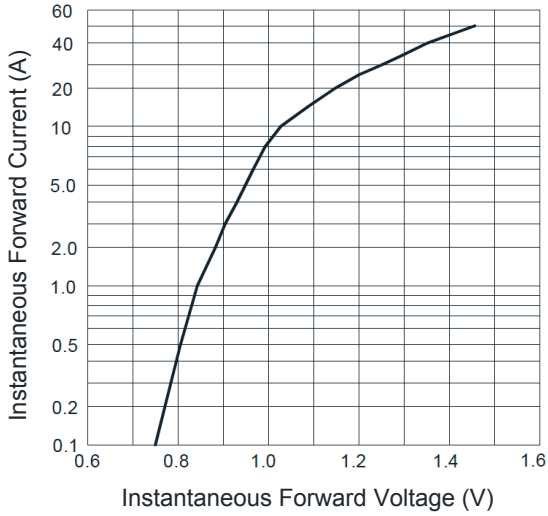


Figure 3. Typical Forward Voltage

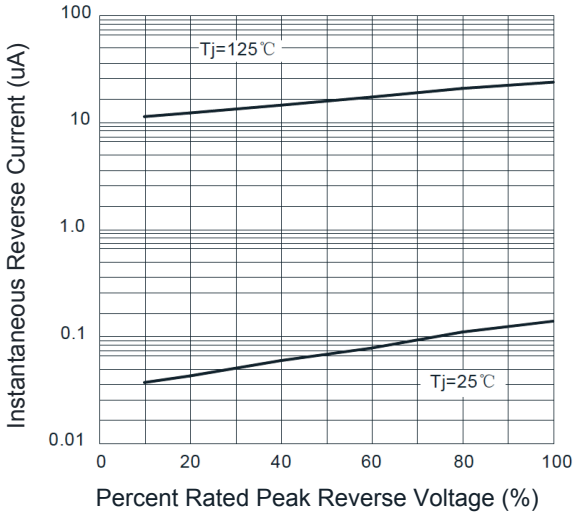
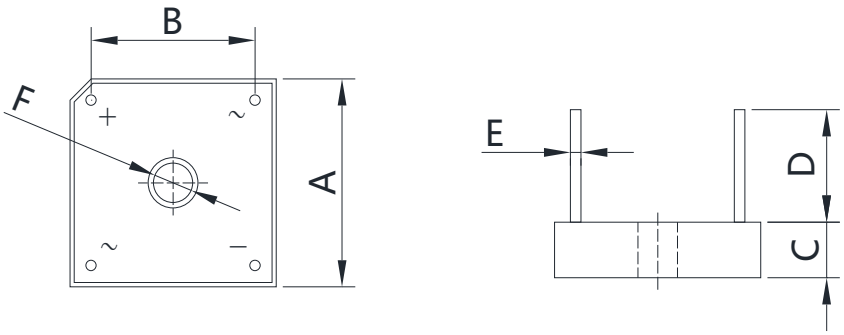


Figure 4. Typical Reverse Characteristics

KBPC8005 thru KBPC810

Single-Phase Bridge Rectifiers
Voltage Range 50V to 1000V Forward Current 8A

Package Outline Dimensions (KBPC8)



Symbol	Dimensions in Millimeters		Dimensions in Inches	
	Min	Max	Min	Max
A	18.540	19.580	0.730	0.771
B	12.200	13.200	0.480	0.520
C	6.350	7.600	0.250	0.300
D	15.000	-	0.590	-
E	1.200	1.300	0.047	0.051
F	3.800	4.200	0.150	0.165

Order Information

Device	Package	Marking	Carrier	Quantity
KBPC8005	KBPC8	KBPC8005	Box	200pcs / Box
KBPC801	KBPC8	KBPC801	Box	200pcs / Box
KBPC802	KBPC8	KBPC802	Box	200pcs / Box
KBPC804	KBPC8	KBPC804	Box	200pcs / Box
KBPC806	KBPC8	KBPC806	Box	200pcs / Box
KBPC808	KBPC8	KBPC808	Box	200pcs / Box
KBPC810	KBPC8	KBPC810	Box	200pcs / Box