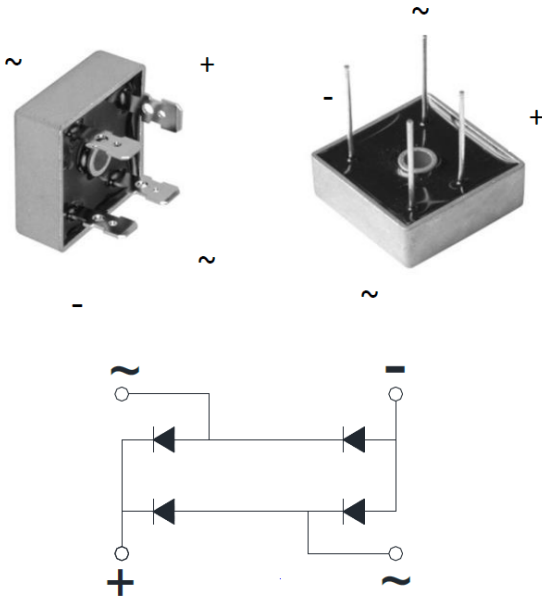


## Bridge Rectifiers



### Features

- UL recognition, file #E230084
- Universal 3-way terminals: snap-on, wire wrap-around, or PCB mounting
- Glass passivated chip junction
- High surge current capability
- Low thermal resistance
- Solder dip 275 °C max. 7 s, per JESD 22-B106

### Typical Applications

General purpose use in AC/DC bridge full wave rectification for power supply, home appliances, office equipment, industrial automation applications.

### Mechanical Data

- **Package:** KBPC, KBPC-W  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Suffix letter "W" added to indicate wire leads (e.g. KBPC5010W).

### ■ Maximum Ratings (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	KBPC50005	KBPC5001	KBPC5002	KBPC5004	KBPC5006	KBPC5008	KBPC5010
Device marking code			KBPC50005	KBPC5001	KBPC5002	KBPC5004	KBPC5006	KBPC5008	KBPC5010
Maximum Repetitive Peak Reverse Voltage	VRRM	V	50	100	200	400	600	800	1000
Maximum RMS Voltage	VRMS	V	35	70	140	280	420	560	700
Maximum DC blocking Voltage	VDC	V	50	100	200	400	600	800	1000
Average rectified output current @60Hz sine wave, R-load, T <sub>C</sub> =55°C	I <sub>O</sub>	A	50						
Forward Surge Current (Non-repetitive) @8.3ms, Half-sine wave, 1 cycle, T <sub>J</sub> =25°C	IFSM	A	500						
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, T <sub>J</sub> =25°C			1000						
Current squared time @1ms≤t≤8.3ms T <sub>J</sub> =25°C, Rating of per diode	I <sup>2</sup> t	A <sup>2</sup> S	1038						
Storage temperature	T <sub>stg</sub>	°C	-55 ~ +150						
Junction temperature	T <sub>J</sub>	°C	-55 ~ +150						
Dielectric strength @ Terminals to case, AC 1 minute	V <sub>dis</sub>	KV	2.5						
Mounting torque @Recommend torque: 5kg·cm	Tor	kg·cm	8						



# KBPC50005(W) THRU KBPC5010(W)

## ■ Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	KBPC50005	KBPC5001	KBPC5002	KBPC5004	KBPC5006	KBPC5008	KBPC5010
Maximum instantaneous forward voltage drop per diode	V <sub>F</sub>	V	I <sub>FM</sub> =25A							1.1
Maximum DC reverse current at rated DC blocking voltage per diode	I <sub>R</sub>	μA	T <sub>j</sub> =25°C							5
			T <sub>j</sub> =125°C							
Typical junction capacitance	C <sub>j</sub>	pF	Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C							152

## ■ Thermal Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

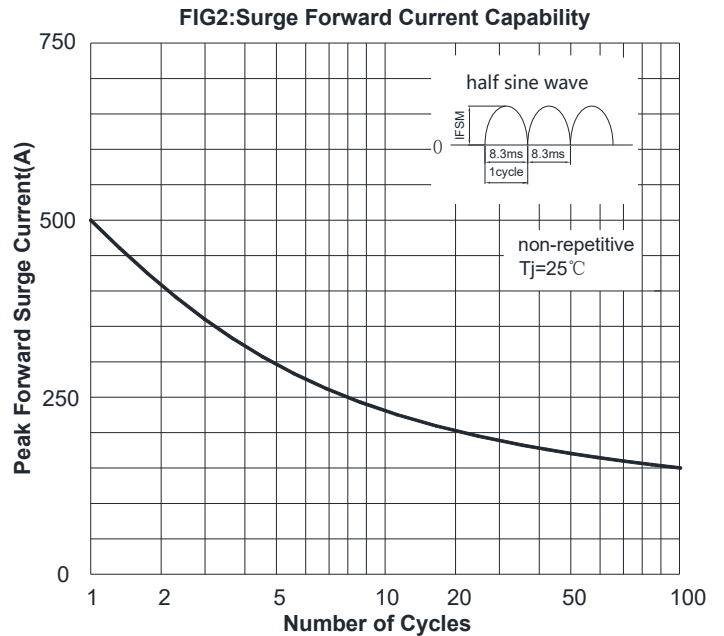
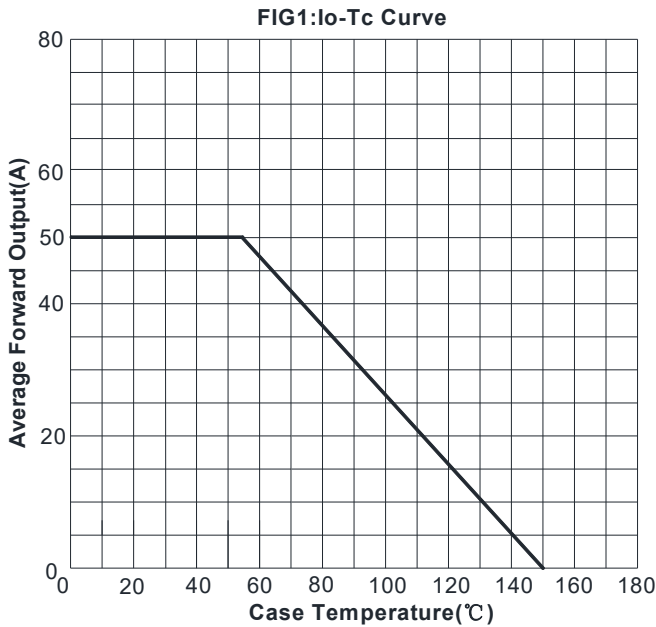
PARAMETER	SYMBOL	UNIT	KBPC50005	KBPC5001	KBPC5002	KBPC5004	KBPC5006	KBPC5008	KBPC5010	
Thermal Resistance Between junction and case, With heatsink	R <sub>θJ-C</sub>	°C/W								1.3

Note: Device mounted on 75mm x 45mm x 5.5mm Aluminum Plate Heatsink.

## ■ Ordering Information (Example)

PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT (g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
KBPC50005~KBPC5010	A1	Approximate 24.5	50	50	500	Paper Box
KBPC50005W~KBPC5010W	A1	Approximate 22.5	50	50	500	Paper Box

## ■ Characteristics (Typical)





# KBPC50005(W) THRU KBPC5010(W)

FIG3: Typical Forward Voltage

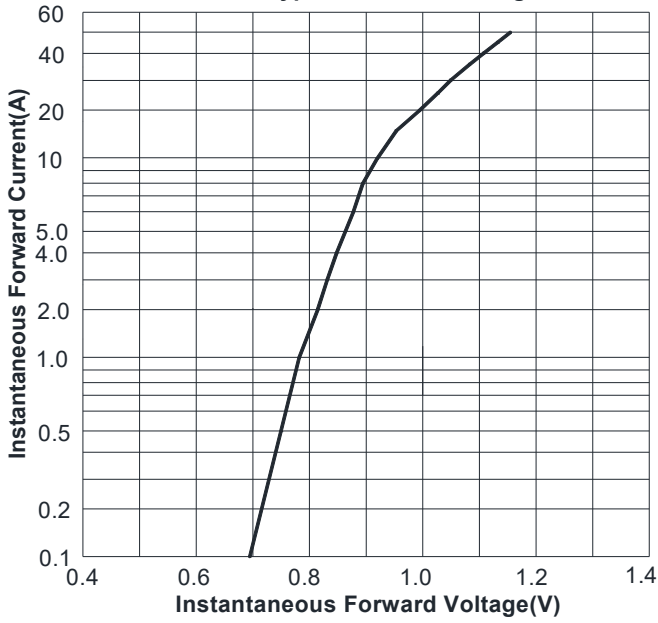
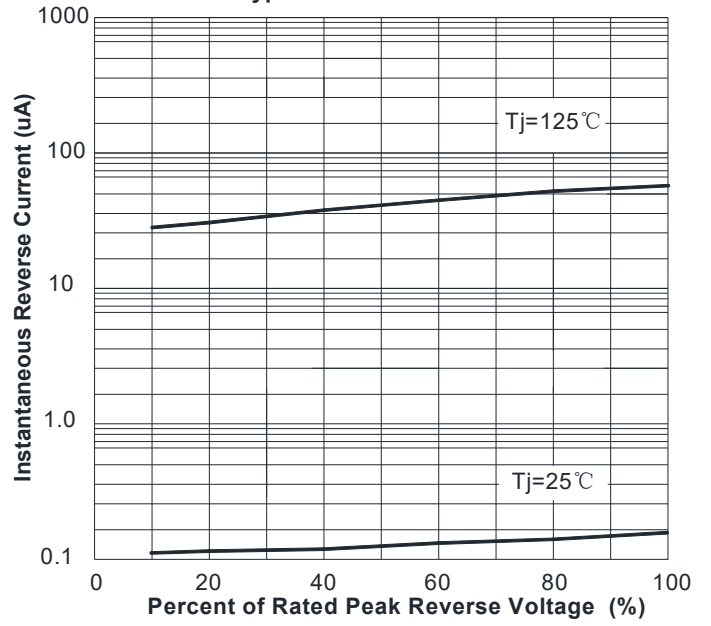
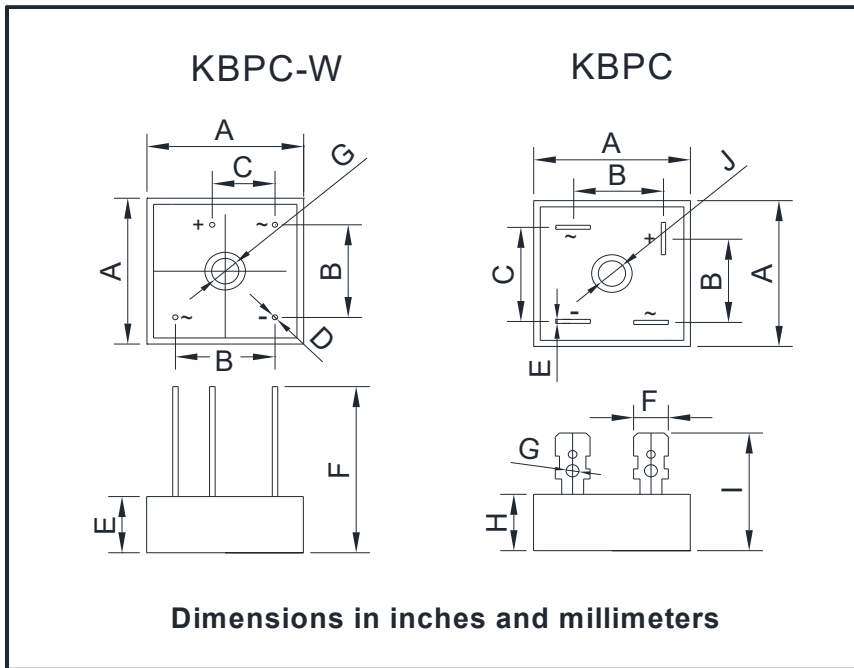


FIG4: Typical Reverse Characteristics



## ■ Outline Dimensions



KBPC-W		
Dim	Min	Max
A	28.2	28.8
B	17.1	19.1
C	10.4	12.4
D	0.95	1.05
E	10.8	11.2
F	30	/
G	5.0	5.5

KBPC		
Dim	Min	Max
A	28.2	28.8
B	15.3	17.3
C	17.1	19.1
D	13.2	15.2
E	0.75	0.85
F	6.2	6.4
G	2.3	2.5
H	10.8	11.2
I	19	/
J	5.0	5.5



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