
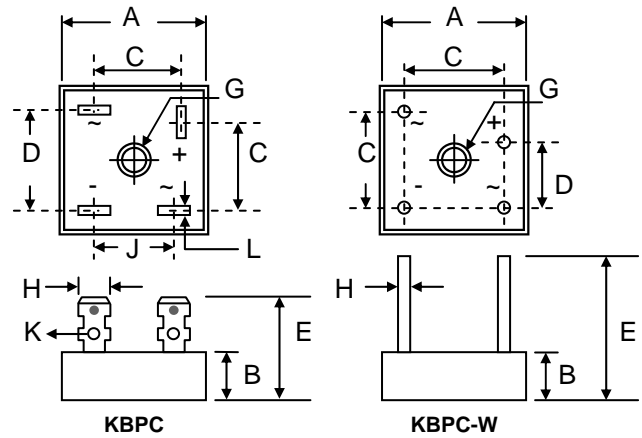


### Features

- Diffused Junction
- Low Reverse Leakage Current
- Low Power Loss, High Efficiency
- Electrically Isolated Metal Case for Maximum Heat Dissipation
- Low Thermal Resistance
- High Surge Current Capability
-  Recognized File # E157705

### Mechanical Data

- Case: KBPC (Metal Case with Faston Lugs) or KBPC-W (Metal Case with Wire Leads)
- Terminals: Plated Faston Lugs or Wire Leads, Add "W" Suffix to Indicate Wire Leads
- Polarity: As Marked on Case
- Mounting: Through Hole with #10 Screw
- Mounting Torque: 2.0 N.m Max.
- Weight: 30 grams (KBPC); 28 grams (KBPC-W)
- Marking: Type Number
- **Lead Free: For RoHS / Lead Free Version, Add "-LF" Suffix to Part Number, See Page 4**



Dim	KBPC		KBPC-W	
	Min	Max	Min	Max
A	27.94	28.96	27.94	28.96
B	10.77	11.23	10.77	11.23
C	15.30	17.60	17.10	19.10
D	17.10	19.10	10.40	12.40
E	21.50	—	30.50	—
G	Hole for #10 screw, 5.08Ø Nominal			
H	6.35 Typical		0.97Ø	1.07Ø
J	13.20	15.20		
K	2.5Ø Typical			
L	0.71	0.91		
All Dimension in mm				

### Maximum Ratings and Electrical Characteristics @<sub>T<sub>A</sub></sub>=25°C unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	KBPC40								Unit
		00	01	02	04	06	08	10	12	
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>									
Working Peak Reverse Voltage	V <sub>RWM</sub>	50	100	200	400	600	800	1000	1200	V
DC Blocking Voltage	V <sub>R</sub>									
RMS Reverse Voltage	V <sub>R(RMS)</sub>	35	70	140	280	420	560	700	840	V
Average Rectified Output Current @ <sub>T<sub>C</sub></sub> = 55°C	I <sub>O</sub>	40								A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I <sub>FSM</sub>	500								A
Forward Voltage per leg @ <sub>I<sub>F</sub></sub> = 20A	V <sub>FM</sub>	1.1								V
Peak Reverse Current @ <sub>T<sub>C</sub></sub> = 25°C At Rated DC Blocking Voltage @ <sub>T<sub>C</sub></sub> = 125°C	I <sub>RM</sub>	10 500								µA
I <sup>2</sup> t Rating for Fusing (t < 8.3ms)	I <sup>2</sup> t	800								A <sup>2</sup> s
Typical Junction Capacitance (Note 1)	C <sub>J</sub>	300								pF
Typical Thermal Resistance (Note 2)	R <sub>JC</sub>	1.2								°C/W
RMS Isolation Voltage, t = 1min	V <sub>ISO</sub>	2500								V
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150								°C

Note: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

2. Thermal resistance junction to case, mounted on 394 x 114 x 114mm Al. heatsink.

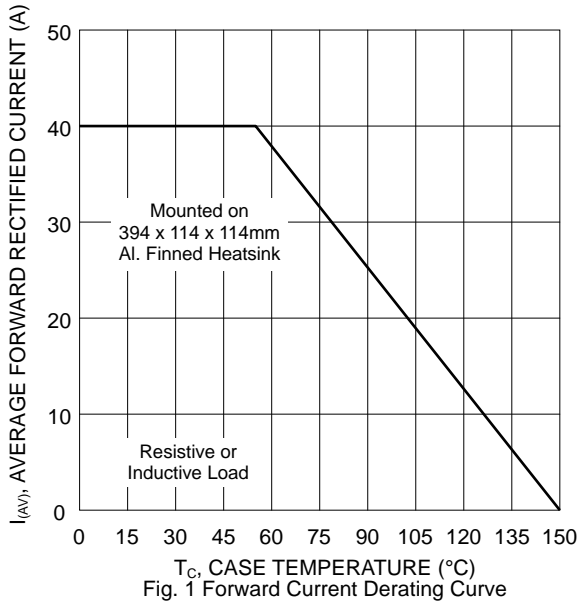


Fig. 1 Forward Current Derating Curve

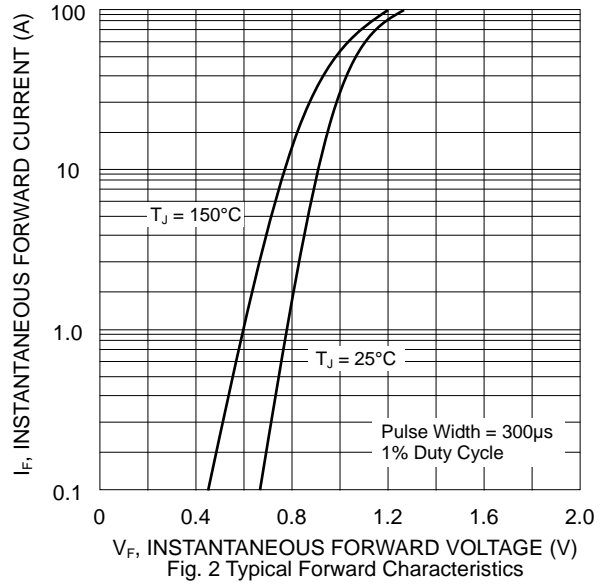


Fig. 2 Typical Forward Characteristics

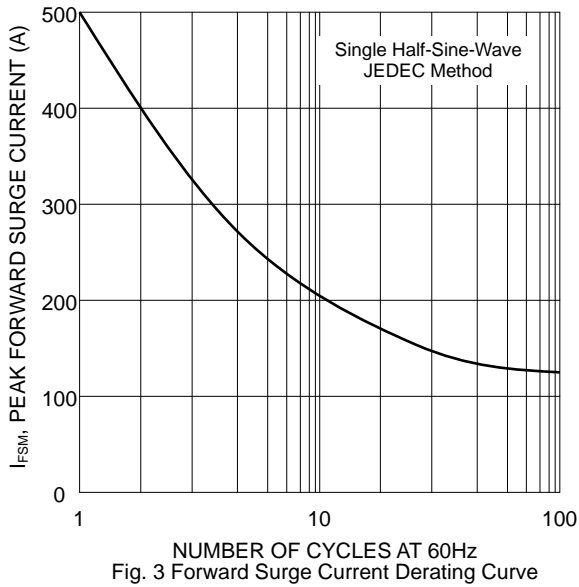


Fig. 3 Forward Surge Current Derating Curve

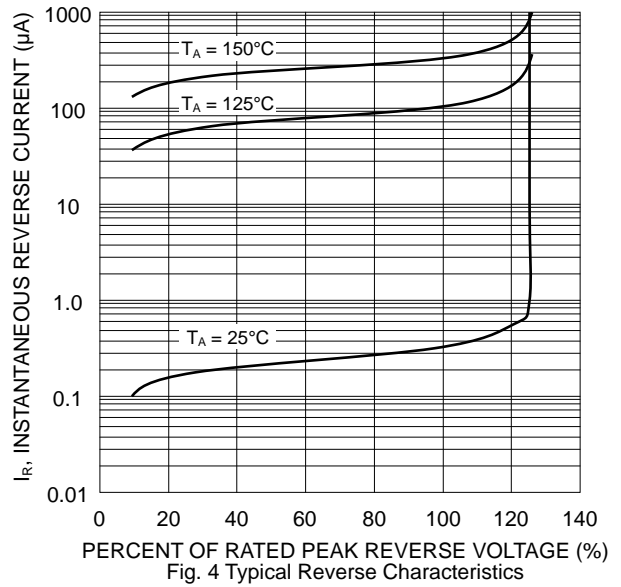


Fig. 4 Typical Reverse Characteristics

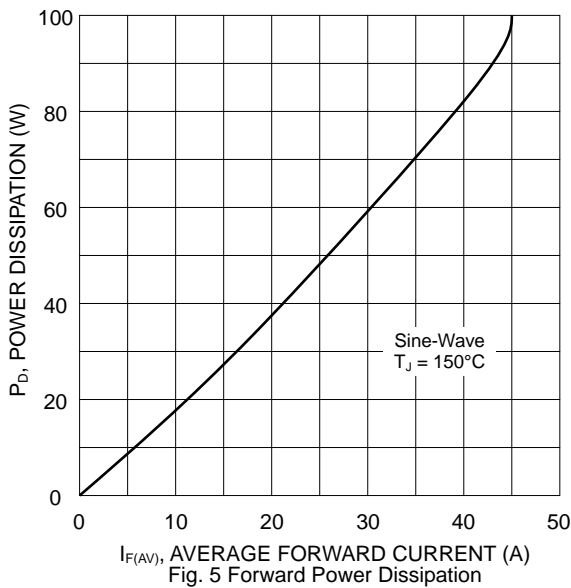


Fig. 5 Forward Power Dissipation

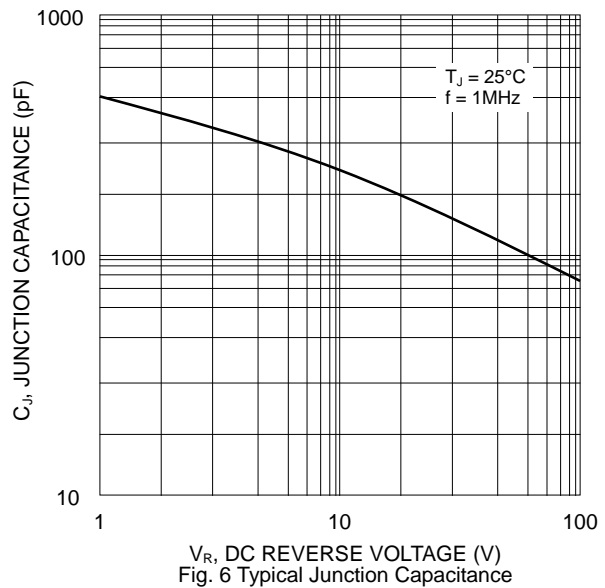
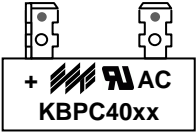
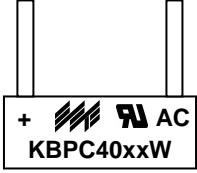


Fig. 6 Typical Junction Capacitance

## MARKING INFORMATION

KBPC	KBPC-W
 <p>KBPC40xx = Device Number            xx = 00, 01, 02, 04, 06, 08, 10 or 12            Polarity = As Marked on Body</p>	 <p>KBPC40xxW = Device Number            xx = 00, 01, 02, 04, 06, 08, 10 or 12            Polarity = As Marked on Body</p>

## PACKAGING INFORMATION

BULK					
Case Style	Inner Box Size L x W x H (mm)	Quantity (PCS)	Carton Size L x W x H (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
<b>KBPC</b>	195 x 195 x 40	50	405 x 205 x 240	500	17.0
<b>KBPC-W</b>	195 x 195 x 40	50	405 x 205 x 240	500	16.0

**Note:** 1. Paper box, white or brown color.

## ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
KBPC40xx	Square Bridge	50 Units/Box
KBPC40xxW	Square Bridge	50 Units/Box

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order RoHS / Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, KBPC4000-LF.**

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**WARNING: DO NOT USE IN LIFE SUPPORT EQUIPMENT.** WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

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