
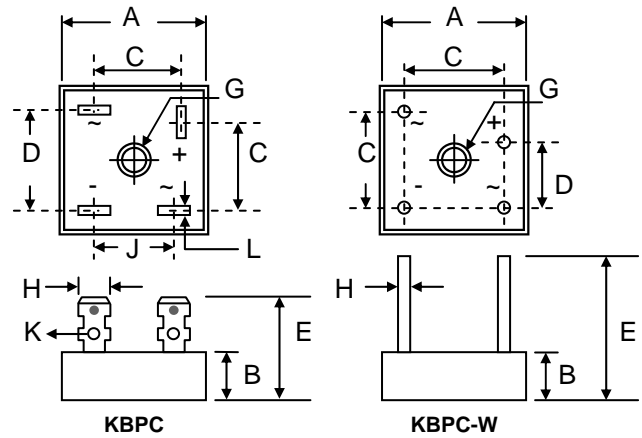


Features

- 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 @ $T_A=25^\circ\text{C}$ unless otherwise specified

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

Characteristic	Symbol	KBPC50								Unit
		00	01	02	04	06	08	10	12	
Peak Repetitive Reverse Voltage	V_{RRM}									V
Working Peak Reverse Voltage	V_{RWM}	50	100	200	400	600	800	1000	1200	
DC Blocking Voltage	V_R									
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	840	V
Average Rectified Output Current @ $T_C = 55^\circ\text{C}$	I_O	50								A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	500								A
Forward Voltage per leg @ $I_F = 25\text{A}$	V_{FM}	1.1								V
Peak Reverse Current @ $T_C = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_C = 125^\circ\text{C}$	I_{RM}	10 500								μA
I^2t Rating for Fusing ($t < 8.3\text{ms}$)	I^2t	800								A^2s
Typical Junction Capacitance (Note 1)	C_J	300								pF
Typical Thermal Resistance (Note 2)	R_{JC}	1.2								$^\circ\text{C}/\text{W}$
RMS Isolation Voltage, $t = 1\text{min}$	V_{ISO}	2500								V
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150								$^\circ\text{C}$

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.

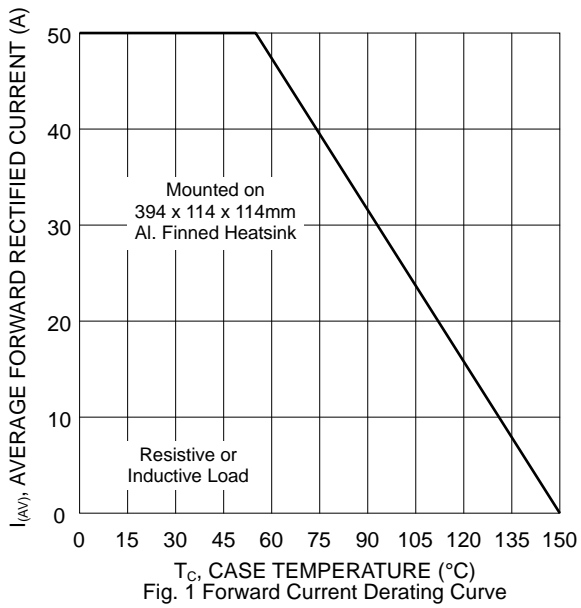


Fig. 1 Forward Current Derating Curve

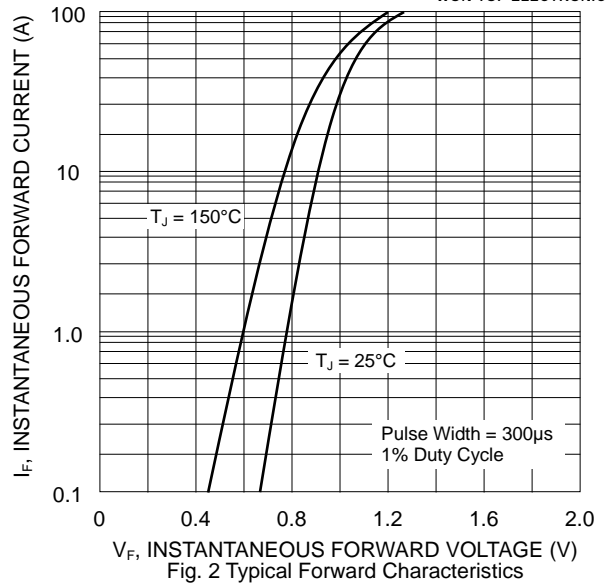


Fig. 2 Typical Forward Characteristics

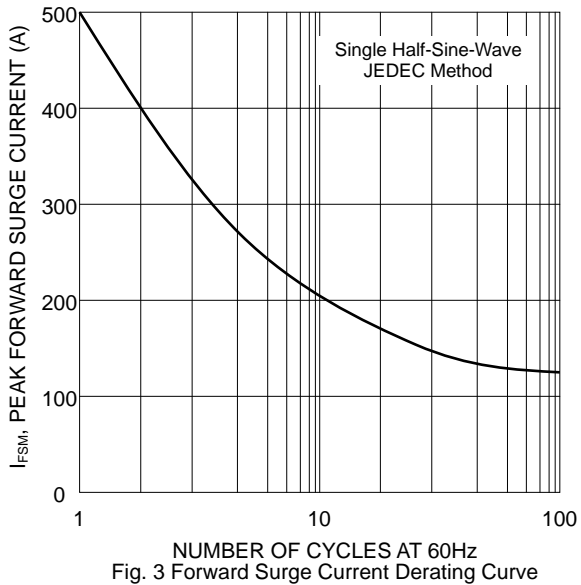


Fig. 3 Forward Surge Current Derating Curve

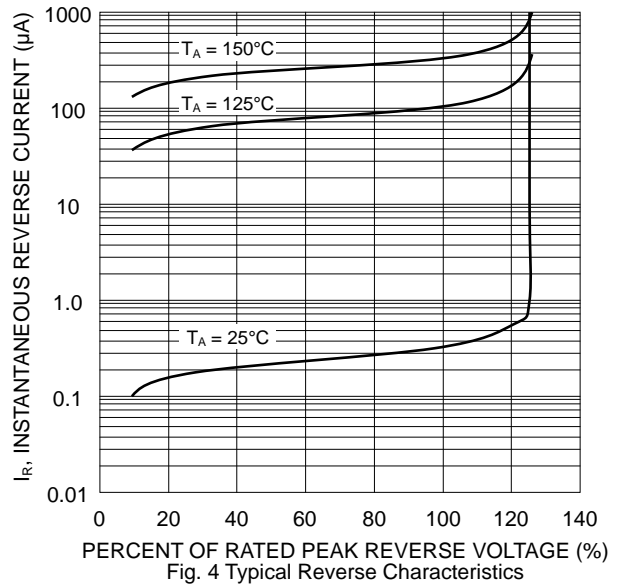


Fig. 4 Typical Reverse Characteristics

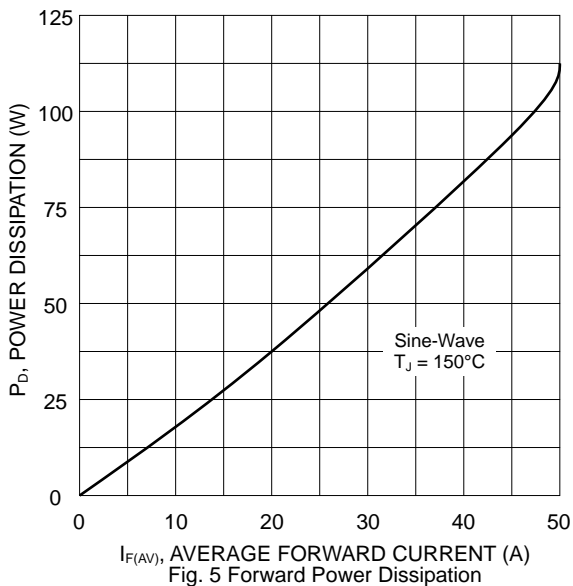


Fig. 5 Forward Power Dissipation

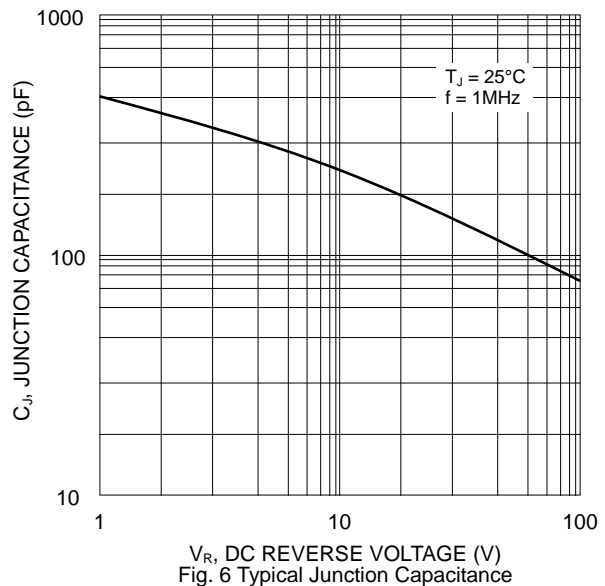
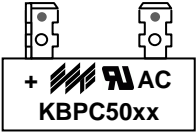
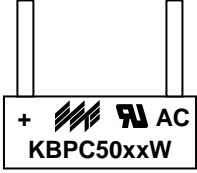


Fig. 6 Typical Junction Capacitance

MARKING INFORMATION

KBPC	KBPC-W
 <p>KBPC50xx = Device Number xx = 00, 01, 02, 04, 06, 08, 10 or 12 Polarity = As Marked on Body</p>	 <p>KBPC50xxW = 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)
KBPC	195 x 195 x 40	50	405 x 205 x 240	500	17.0
KBPC-W	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
KBPC50xx	Square Bridge	50 Units/Box
KBPC50xxW	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, KBPC5000-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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