

# KBPC40, 50/W SERIES

## 40, 50A HIGH CURRENT BRIDGE RECTIFIER

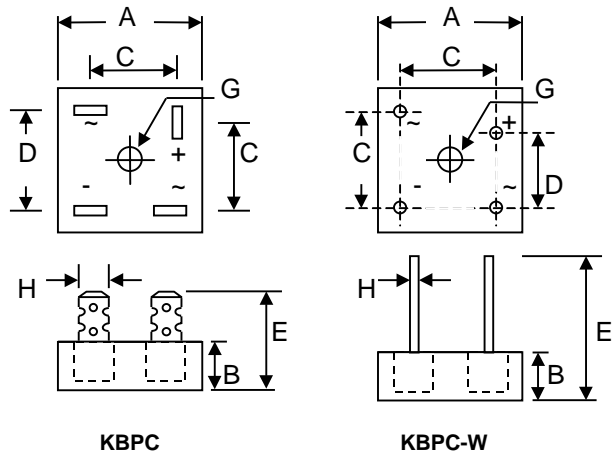
### Features

- Diffused Junction
- Low Reverse Leakage Current
- Low Power Loss, High Efficiency
- Electrically Isolated Metal Case for Maximum Heat Dissipation
- Case to Terminal Isolation Voltage 2500V
- UL Recognized File # E157705

### Mechanical Data

- Case: Metal Case with Electrically Isolated Epoxy
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Symbols Marked on Case
- Mounting: Through Hole for #10 Screw
- Weight: KBPC 31.6 grams (approx.)  
KBPC-W 28.5 grams (approx.)
- Marking: Type Number

"W" Suffix Designates Wire Leads  
 No Suffix Designates Faston Terminals



Dim	KBPC		KBPC-W	
	Min	Max	Min	Max
A	28.40	28.70	28.40	28.70
B	10.97	11.23	10.97	11.23
C	15.70	16.70	17.10	19.10
D	17.50	18.50	10.90	11.90
E	22.86	25.40	30.50	—
G	Hole for #10 screw, 5.08Ø Nominal			
H	6.35 Typical		0.97Ø 1.07Ø	
<b>All Dimension in mm</b>				

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

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

Characteristics	Symbol	-00/W	-01/W	-02/W	-04/W	-06/W	-08/W	-10/W	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>								V
Working Peak Reverse Voltage	V <sub>RWM</sub>	50	100	200	400	600	800	1000	
DC Blocking Voltage	V <sub>R</sub>								
RMS Reverse Voltage	V <sub>R(RMS)</sub>	35	70	140	280	420	560	700	V
Average Rectifier Output Current @T <sub>C</sub> = 55°C	I <sub>O</sub>				40 50				A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave Superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>				400 400				A
Forward Voltage Drop (per element) KBPC40 @I <sub>F</sub> = 20A KBPC50 @I <sub>F</sub> = 25A	V <sub>FM</sub>				1.2				V
Peak Reverse Current At Rated DC Blocking Voltage	I <sub>RM</sub>				10 1.0				µA mA

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**Maximum Ratings and Electrical Characteristics** @ $T_A=25^{\circ}\text{C}$  unless otherwise specified

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Typical Junction Capacitance (per element) (Note 1)	$C_j$	300	pF
Typical Thermal Resistance Junction to Case (per element) (Note 2) KBPC40 KBPC50	$R_{\theta JC}$	1.5	K/W
RMS Isolation Voltage from Case to Lead	$V_{iso}$	2500	V
Operating and Storage Temperature Range	$T_j, T_{stg}$	-65 to +150	$^{\circ}\text{C}$

\* Glass passivated forms are available upon request.

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

2. Thermal resistance junction to case mounted on heatsink.

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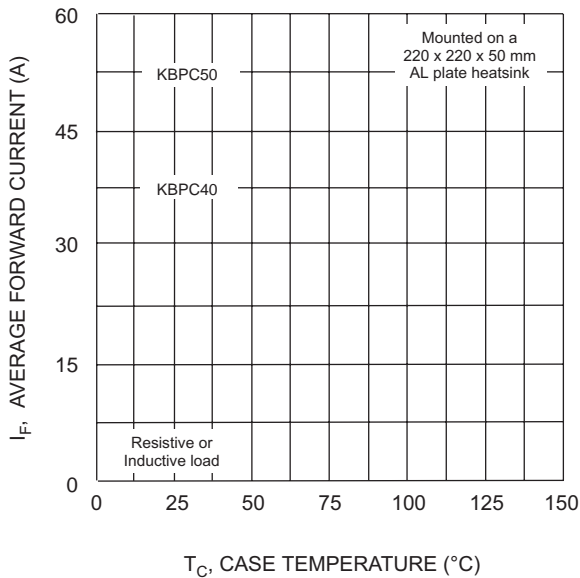


Fig. 1 Forward Current Derating Curve



Fig. 2 Typical Forward Characteristics (per element)

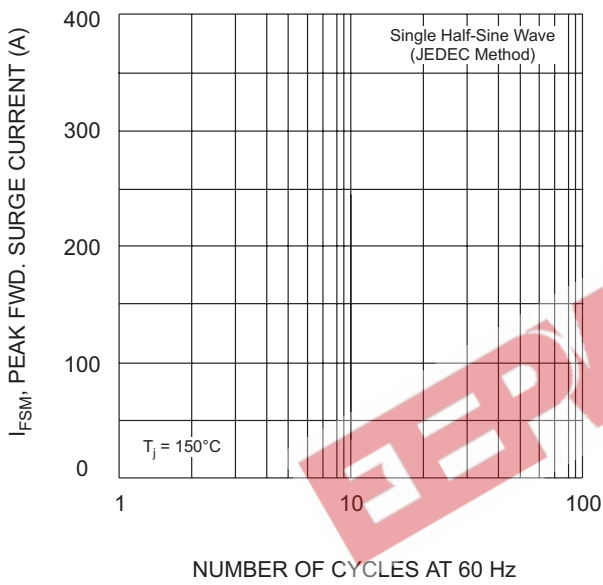


Fig. 3 Max Non-Repetitive Surge Current

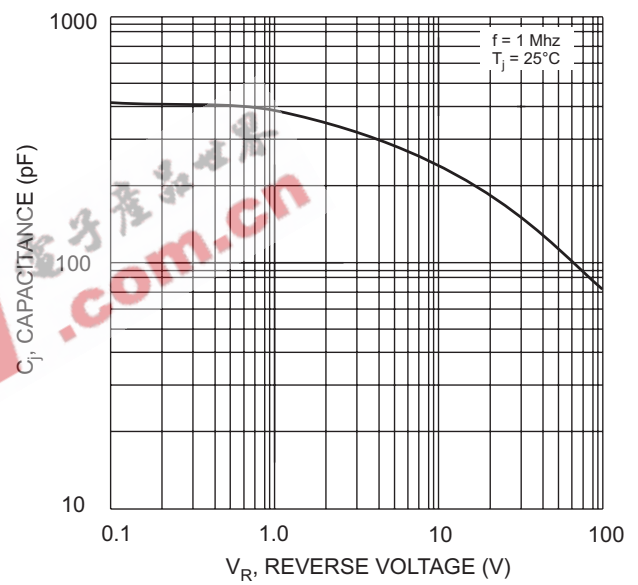


Fig. 4 Typical Junction Capacitance (per element)

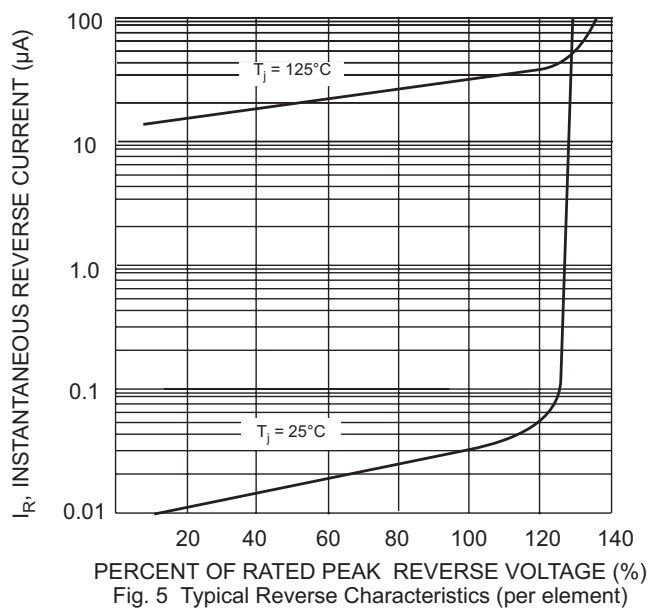


Fig. 5 Typical Reverse Characteristics (per element)

## ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
KBPCxx00	Square Bridge	50 Units/Box
KBPCxx00W	Square Bridge	50 Units/Box
KBPCxx01	Square Bridge	50 Units/Box
KBPCxx01W	Square Bridge	50 Units/Box
KBPCxx02	Square Bridge	50 Units/Box
KBPCxx02W	Square Bridge	50 Units/Box
KBPCxx04	Square Bridge	50 Units/Box
KBPCxx04W	Square Bridge	50 Units/Box
KBPCxx06	Square Bridge	50 Units/Box
KBPCxx06W	Square Bridge	50 Units/Box
KBPCxx08	Square Bridge	50 Units/Box
KBPCxx08W	Square Bridge	50 Units/Box
KBPCxx10	Square Bridge	50 Units/Box
KBPCxx10W	Square Bridge	50 Units/Box

Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.

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