

# KBPC40, 50P/W SERIES

## 40, 50A HIGH CURRENT BRIDGE RECTIFIER

### Features

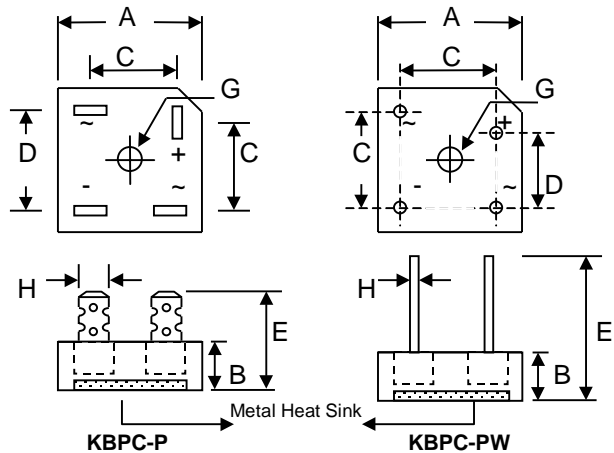
- Diffused Junction
- Low Reverse Leakage Current
- Low Power Loss, High Efficiency
- Electrically Isolated Epoxy Case for Maximum Heat Dissipation
- Case to Terminal Isolation Voltage 2500V
- UL Recognized File # E157705

### Mechanical Data

- Case: Epoxy Case with Heat Sink Internally Mounted in the Bridge Encapsulation
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Symbols Marked on Case
- Mounting: Through Hole for #10 Screw
- Weight: KBPC-P 24 grams (approx.)  
KBPC-PW 21 grams (approx.)
- Marking: Type Number

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

\*All Models are Available on B(Height)=7.9mm Max. Epoxy Case



Dim	KBPC-P		KBPC-PW	
	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	

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%.

Characteristics	Symbol	-00P/W	-01P/W	-02P/W	-04P/W	-06P/W	-08P/W	-10P/W	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Working Peak Reverse Voltage	$V_{RWM}$								
DC Blocking Voltage	$V_R$								
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average Rectifier Output Current @ $T_C = 55^\circ\text{C}$	KBPC40 KBPC50 $I_O$				40 50				A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave Superimposed on rated load (JEDEC Method)	KBPC40 KBPC50 $I_{FSM}$				400 400				A
Forward Voltage Drop (per element)	KBPC40 @ $I_F = 20\text{A}$ KBPC50 @ $I_F = 25\text{A}$ $V_{FM}$				1.2				V
Peak Reverse Current At Rated DC Blocking Voltage	@ $T_C = 25^\circ\text{C}$ @ $T_C = 125^\circ\text{C}$ $I_{RM}$				10 1.0				$\mu\text{A}$ 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)	$R_{\theta JC}$	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 +125	$^{\circ}\text{C}$

Note: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.  
2. Thermal resistance junction to case mounted on heatsink.

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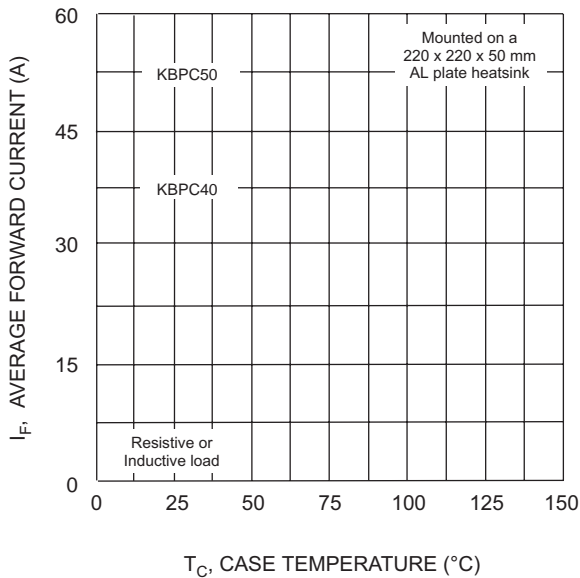


Fig. 1 Forward Current Derating Curve

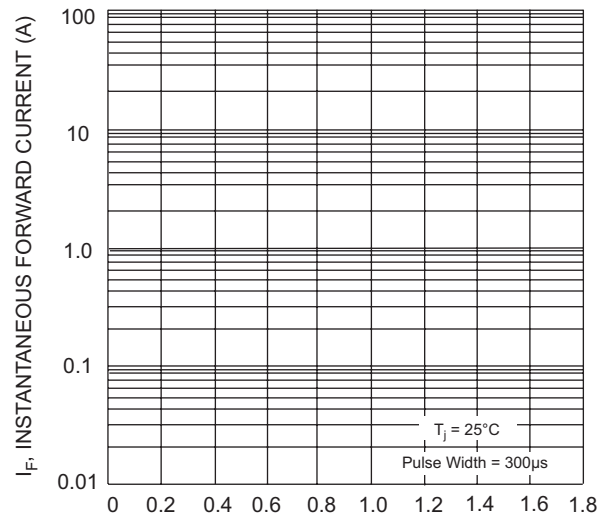


Fig. 2 Typical Forward Characteristics (per element)

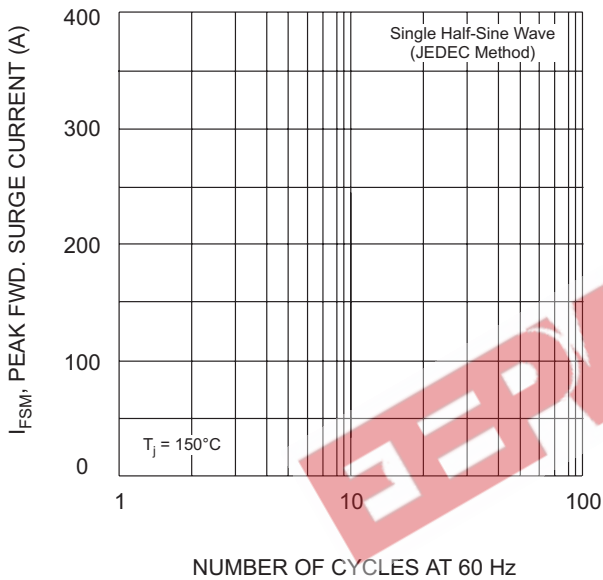


Fig. 3 Max Non-Repetitive Surge Current

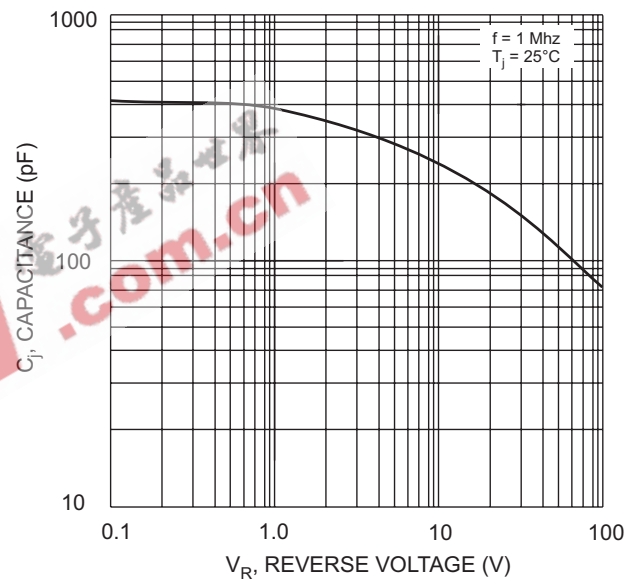


Fig. 4 Typical Junction Capacitance (per element)



Fig. 5 Typical Reverse Characteristics (per element)

## ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
KBPCxx00P	Square Bridge	50 Units/Box
KBPCxx00PW	Square Bridge	50 Units/Box
KBPCxx01P	Square Bridge	50 Units/Box
KBPCxx01PW	Square Bridge	50 Units/Box
KBPCxx02P	Square Bridge	50 Units/Box
KBPCxx02PW	Square Bridge	50 Units/Box
KBPCxx04P	Square Bridge	50 Units/Box
KBPCxx04PW	Square Bridge	50 Units/Box
KBPCxx06P	Square Bridge	50 Units/Box
KBPCxx06PW	Square Bridge	50 Units/Box
KBPCxx08P	Square Bridge	50 Units/Box
KBPCxx08PW	Square Bridge	50 Units/Box
KBPCxx10P	Square Bridge	50 Units/Box
KBPCxx10PW	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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**Won-Top Electronics Co., Ltd.**

No. 44 Yu Kang North 3rd Road, Chine Chen Dist., Kaohsiung, Taiwan

**Phone:** 886-7-822-5408 or 886-7-822-5410

**Fax:** 886-7-822-5417

**Email:** sales@wontop.com

**Internet:** <http://www.wontop.com>

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