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02166766957 - 02166766927



info@atrinelec.com



تهران پاساژ امجد طبقه 1 واحد 16



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# KBPC40, 50/W SERIES

## 40, 50A HIGH CURRENT BRIDGE RECTIFIER

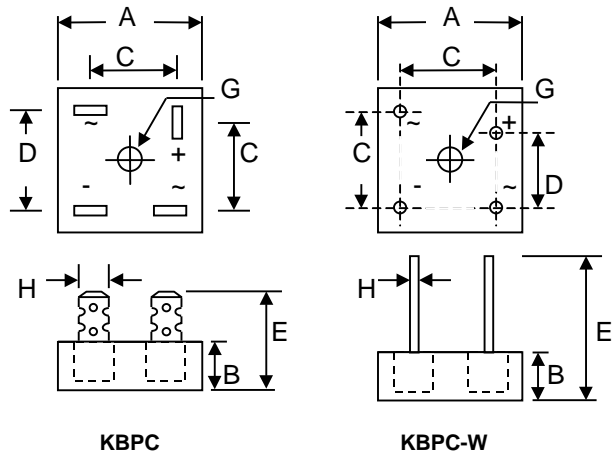
### Features

- 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 @<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%.

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 @ <sub>T<sub>C</sub></sub> = 55°C	I <sub>O</sub>					40			A
						50			
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave Superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>					400			A
						400			
Forward Voltage Drop (per element) KBPC40 @ <sub>I<sub>F</sub></sub> = 20A KBPC50 @ <sub>I<sub>F</sub></sub> = 25A	V <sub>FM</sub>					1.2			V
Peak Reverse Current At Rated DC Blocking Voltage	I <sub>RM</sub>					10			µA mA
						1.0			

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

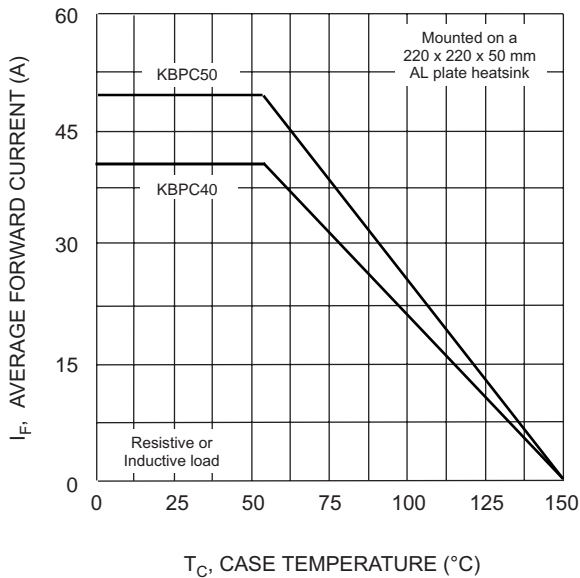
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Typical Junction Capacitance (per element) (Note 1)	$C_j$	300	pF
Typical Thermal Resistance Junction to Case (per element) (Note 2)	$R_{\theta JC}$	1.5	K/W
RMS Isolation Voltage from Case to Lead	V <sub>ISO</sub>	2500	V
Operating and Storage Temperature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

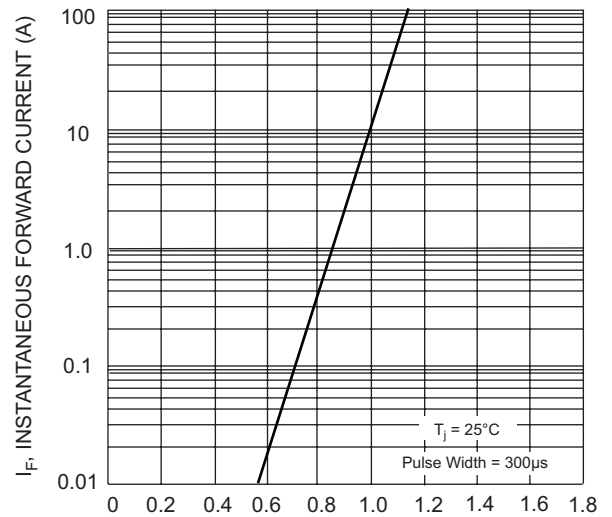
\* **Glass passivated forms are available upon request.**

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

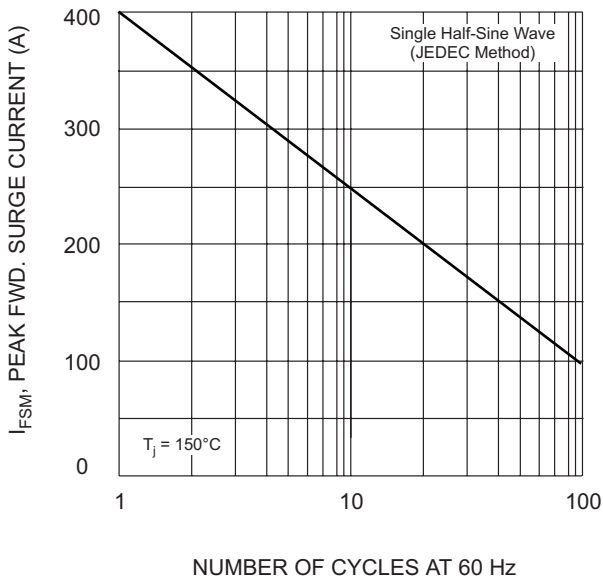
2. Thermal resistance junction to case mounted on heatsink.



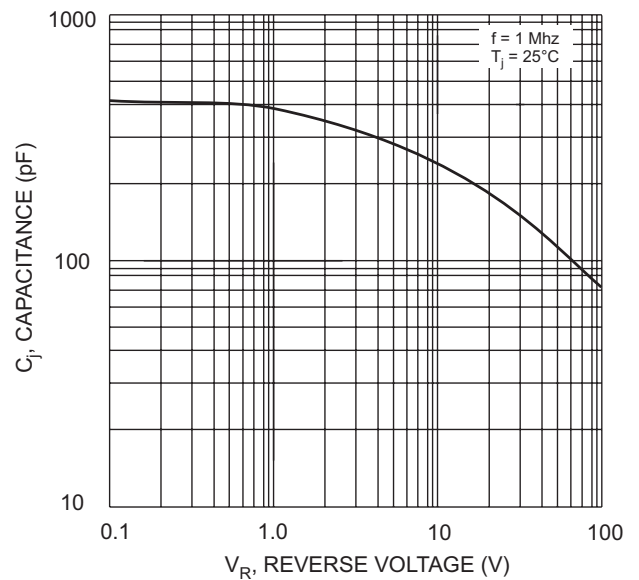
$T_C$ , CASE TEMPERATURE ( $^{\circ}C$ )  
Fig. 1 Forward Current Derating Curve



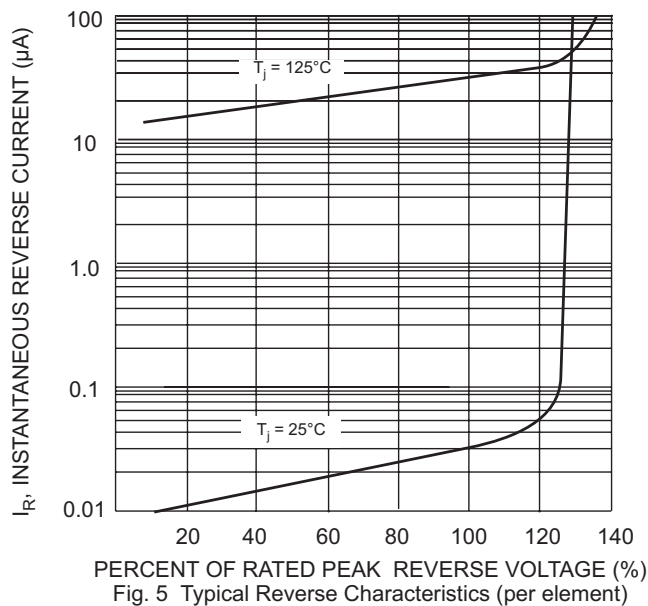
$V_F$ , INSTANTANEOUS FORWARD VOLTAGE (V)  
Fig. 2 Typical Forward Characteristics (per element)



NUMBER OF CYCLES AT 60 Hz  
Fig. 3 Max Non-Repetitive Surge Current



$V_R$ , REVERSE VOLTAGE (V)  
Fig. 4 Typical Junction Capacitance (per element)



PERCENT OF RATED PEAK REVERSE VOLTAGE (%)  
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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**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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