

# RKBPC10, 15, 25, 35/W

## 10, 15, 25, 35A FAST RECOVERY BRIDGE RECTIFIER

### Features

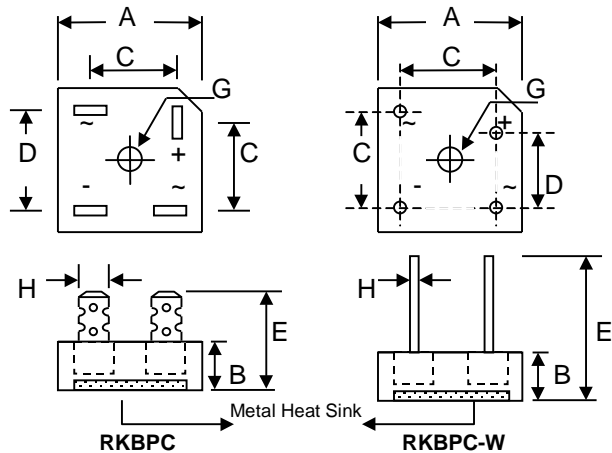
- Diffused Junction
- Low Reverse Leakage Current
- Fast Switching, High Efficiency
- Electrically Isolated Epoxy Case for Maximum Heat Dissipation
- Case to Terminal Isolation Voltage 2500V

### 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: RKBPC 24 grams (approx.)  
RKBPC-W 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



	RKBPC		RKBPC-W	
Dim	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<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 Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>VRM</sub> V <sub>R</sub>	50	100	200	400	600	800	1000	V
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	RKBPC10/W RKBPC15/W RKBPC25/W RKBPC35/W I <sub>O</sub>	10 15 25 35							A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave Superimposed on rated load (JEDEC Method)	RKBPC10/W RKBPC15/W RKBPC25/W RKBPC35/W I <sub>FSM</sub>	200 300 300 400							A
Forward Voltage Drop (per element) RKBPC10/W @I <sub>F</sub> = 5.0A RKBPC15/W @I <sub>F</sub> = 7.5A RKBPC25/W @I <sub>F</sub> = 12.5A RKBPC35/W @I <sub>F</sub> = 17.5A	V <sub>FM</sub>	1.3							V
Peak Reverse Current At Rated DC Blocking Voltage @T <sub>C</sub> = 25°C @T <sub>C</sub> = 125°C	I <sub>RM</sub>	10 500							µA
Reverse Recovery Time (Note 1)	t <sub>rr</sub>	150		250		500			nS

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

Typical Junction Capacitance (per element) (Note 2)	RKBPC10/W RKBPC15/W RKBPC25/W RKBPC35/W	C <sub>j</sub>	200 200 300 400	pF
Typical Thermal Resistance Junction to Case (per element) (Note 3)	RKBPC10/W RKBPC15/W RKBPC25/W RKBPC35/W	R <sub>θJC</sub>	6.3 6.3 3.8 3.8	K/W
RMS Isolation Voltage from Case to Lead		V <sub>ISO</sub>	2500	V
Operating and Storage Temperature Range		T <sub>j</sub> , T <sub>STG</sub>	-65 to +125	°C

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

Note: 1. Measured at I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1.0A, I<sub>RR</sub> = 0.25A.  
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.  
3. Thermal resistance junction to case mounted on heatsink.

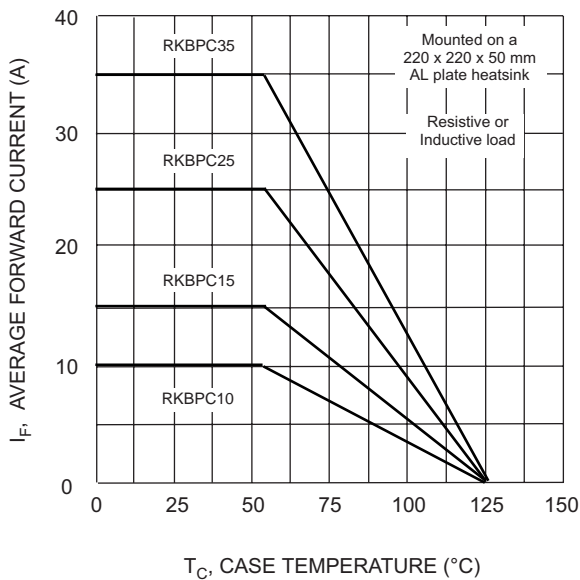


Fig. 1 Forward Current Derating Curve

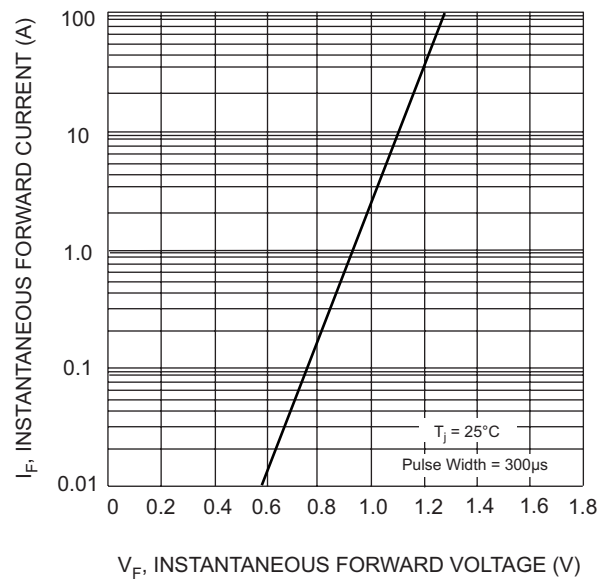


Fig. 2 Typical Forward Characteristics (per element)

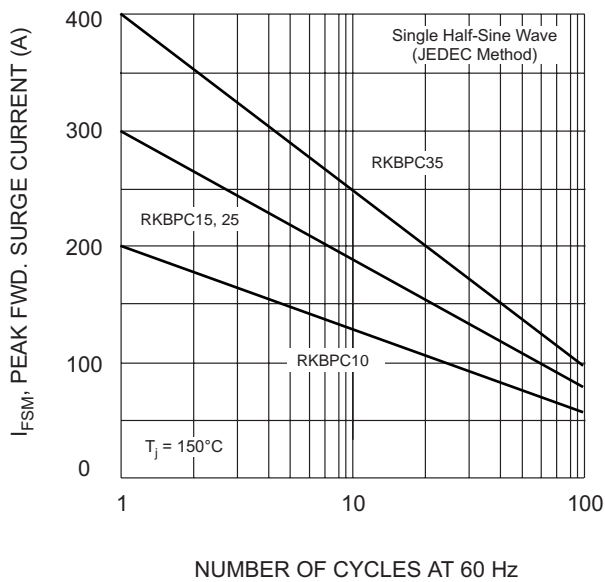


Fig. 3 Max Non-Repetitive Surge Current

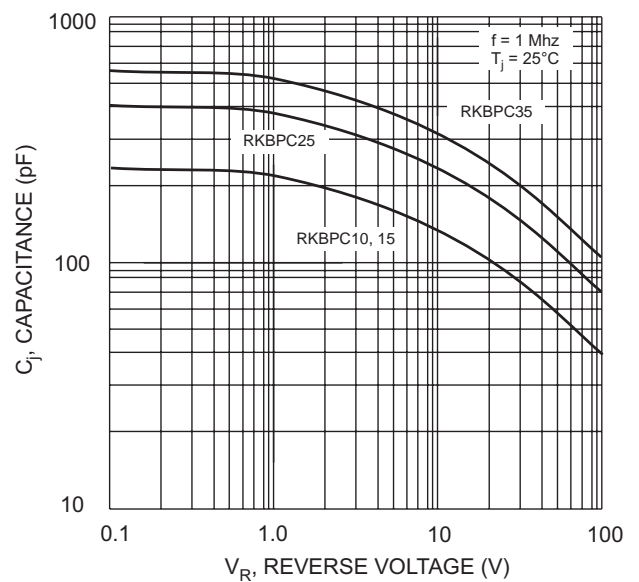


Fig. 4 Typical Junction Capacitance (per element)

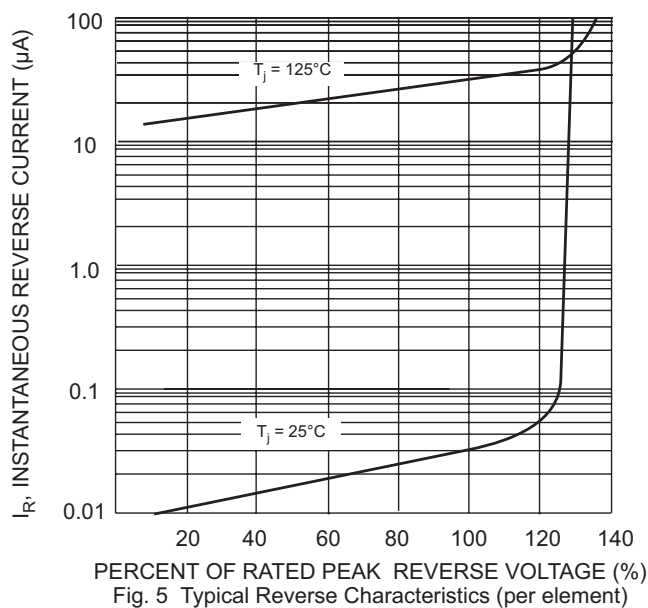


Fig. 5 Typical Reverse Characteristics (per element)

## ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
RKBPCxx00	Square Bridge	50 Units/Box
RKBPCxx00W	Square Bridge	50 Units/Box
RKBPCxx01	Square Bridge	50 Units/Box
RKBPCxx01W	Square Bridge	50 Units/Box
RKBPCxx02	Square Bridge	50 Units/Box
RKBPCxx02W	Square Bridge	50 Units/Box
RKBPCxx04	Square Bridge	50 Units/Box
RKBPCxx04W	Square Bridge	50 Units/Box
RKBPCxx06	Square Bridge	50 Units/Box
RKBPCxx06W	Square Bridge	50 Units/Box
RKBPCxx08	Square Bridge	50 Units/Box
RKBPCxx08W	Square Bridge	50 Units/Box
RKBPCxx10	Square Bridge	50 Units/Box
RKBPCxx10W	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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