SENSITRON
SEMICONDUCTO

RKBPC10, 15, 25, 35/W -G

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

Data Sheet 1428, Rev. A

Green Products

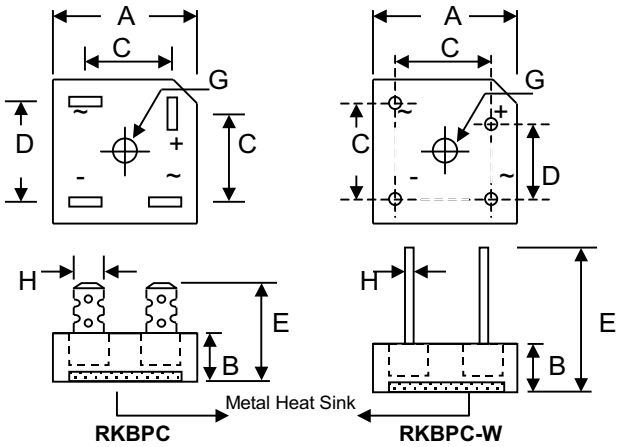
Features

- Diffused Junction
- Low Reverse Leakage Current
- Fast Switching, High Efficiency
- Electrically Isolated Epoxy Case for Maximum Heat Dissipation
- Case to Terminal Isolation Voltage 2500V
- UL Recognized File # E223064
- Green Products in Compliance with the RoHS Directive

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 #8 Screw
- Weight: RKBPC 24 grams (approx.)
  RBPC-W 21 grams (approx.)
- Marking: Type Number

"W" Suffix Designates Wire Leads
No Suffix Designates Faston Terminals
*All Models are Available on B(Height)=7.62mm Max. Epoxy Case



	RKBPC				RKBPC-W			
Dim	**Min**	**Max**	**Min**	**Max**	**Min**	**Max**	**Min**	**Max**
A	28.40	27.40	1.118	1.079	28.40	27.40	1.118	1.079
B	10.97	11.23	0.432	0.442	10.97	11.23	0.432	0.442
C	15.70	16.70	0.618	0.657	17.10	19.10	0.673	0.752
D	17.50	18.50	0.689	0.728	10.90	11.90	0.429	0.469
E	22.86	25.40	0.90	1.00	30.50	—	1.201	—
G	Hole for #8 screw, 4.90mm(0.193inch)Ø Nominal							
H	6.35 Typical		0.25 Typical		0.97Ø	1.07Ø	0.038Ø	0.042Ø
	In mm		**In inch**		**In mm**		**In inch**	

Maximum Ratings and Electrical Characteristics @T_A=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-G	-01/W-G	-02/W-G	-04/W-G	-06/W-G	-08/W-G	-10/W-G	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average Rectifier Output Current @T_C = 55°C RKBPC10/W -G RKBPC15/W -G RKBPC25/W -G RKBPC35/W -G	I_O	10 15 25 35							A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave Superimposed on rated load (JEDEC Method) RKPBC10/W -G RKBPC15/W -G RKBPC25/W -G RKBPC35/W -G	I_{FSM}	200 300 300 400							A
Forward Voltage Drop (per element) RKBPC10/W -G @I_F = 5.0A RKBPC15/W -G @I_F = 7.5A RKBPC25/W -G @I_F = 12.5A RKBPC35/W -G @I_F = 17.5A	V_{FM}	1.3							V
Peak Reverse Current @T_C = 25°C At Rated DC Blocking Voltage @T_C = 125°C	I_{RM}	10 500							μA
Reverse Recovery Time (Note 1)	t_{rr}	150				250	500		nS

Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

Typical Junction Capacitance (per element) (Note 2)	RKBPC10/W -G RKBPC15/W -G RKBPC25/W -G RKBPC35/W -G	C_j	200 200 300 400	pF
Typical Thermal Resistance Junction to Case (per element) (Note 3)	RKBPC10/W -G RKBPC15/W -G RKBPC25/W -G RKBPC35/W -G	$R_{\theta JC}$	6.3 6.3 3.8 3.8	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	°C

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

Note: 1. Measured at I_F = 0.5A, I_R = 1.0A, I_{RR} = 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.

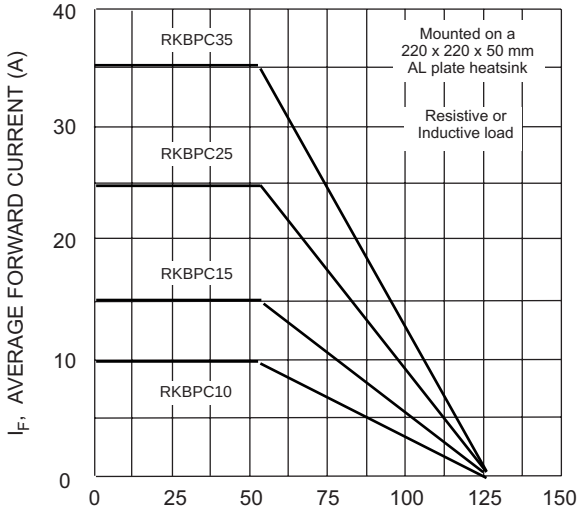


Fig. 1 Forward. Current Derating Curve

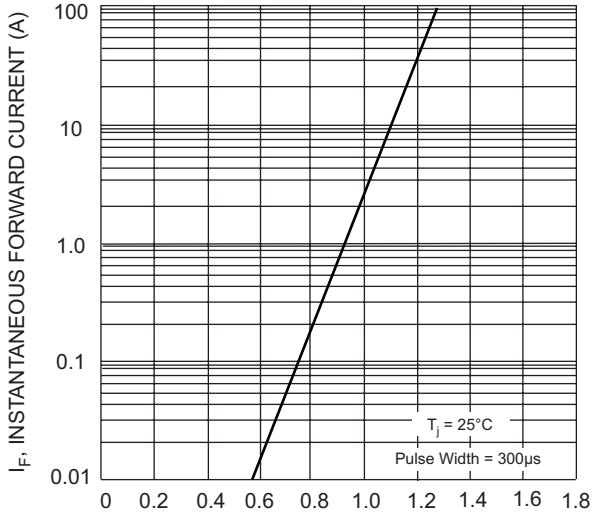


Fig. 2 Typical Forward Characteristics (per element)

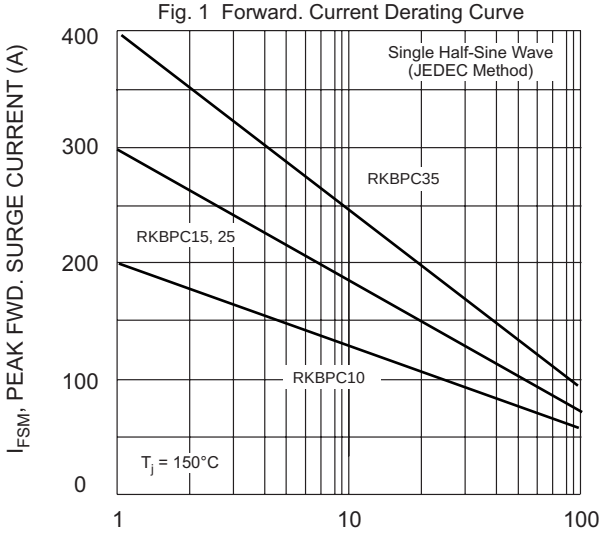


Fig. 3 Max Non-Repetitive Surge Current

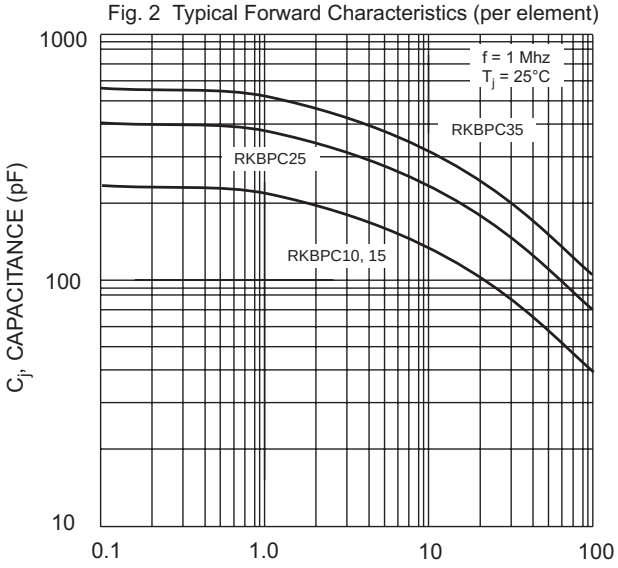


Fig. 4 Typical Junction Capacitance (per element)

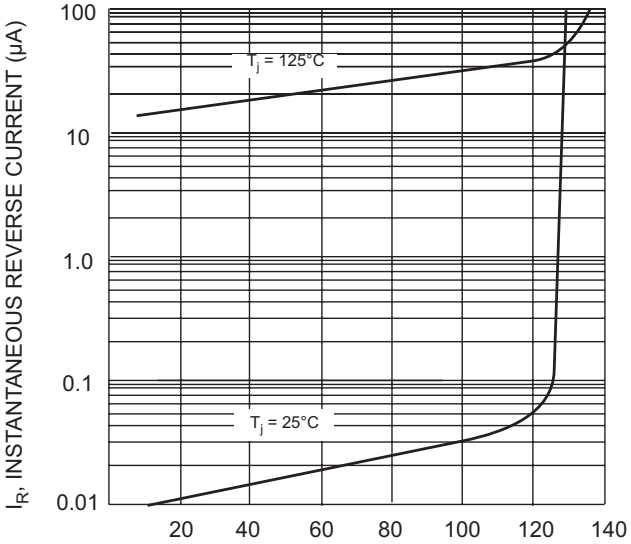


Fig. 5 Typical Reverse Characteristics (per element)

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