SENSITRON
SEMICONDUCTOR

KBPC15, 25, 35/W -G SERIES

15, 25, 35A HIGH CURRENT BRIDGE RECTIFIER

Data sheet 1431, Rev.A

Green Products

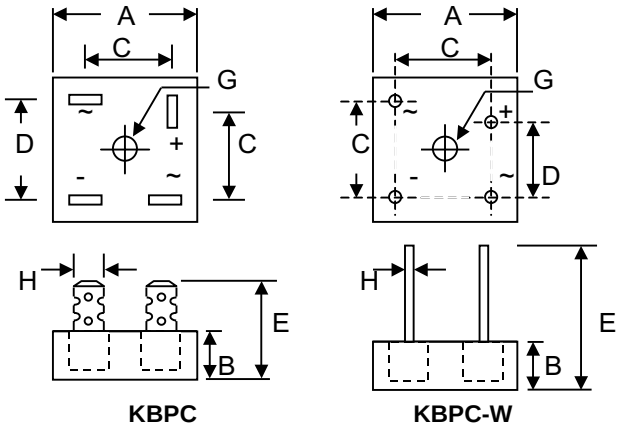
Features

- 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 # E223064
- Green Products in Compliance with the RoHS Directive

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 #8 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



KBPC **KBPC-W**

	KBPC				KBPC-W			
Dim	**Min**	**Max**	**Min**	**Max**	**Min**	**Max**	**Min**	**Max**
A	28.40	28.7	1.118	1.130	28.40	28.7	1.118	1.130
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)ØNormina							
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 = 60°C KBPC15 KBPC25 KBPC35	I_O	15 25 35							A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave Superimposed on rated load (JEDEC Method) KBPC15 KBPC25 KBPC35	I_{FSM}	300 400 400							A
Forward Voltage Drop (per element) KBPC15 @I_F = 7.5A KBPC25 @I_F = 12.5A KBPC35 @I_F = 17.5A	V_{FM}	1.2							V
Peark Reverse Current @T_C = 25°C At Rated DC Blocking Voltage @T_C = 125°C	I_{RM}	10 1.0							µA mA
I^2t Rating for Fusing (t < 8.3ms) (Note 1) KBPC15 KBPC25 KBPC35	I^2t	373 373 664							A^2s

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

Typical Junction Capacitance (per element) (Note 2)	C_j	300	pF
Typical Thermal Resistance Junction to Case (per element) (Note 3) KBPC15 KBPC25 KBPC35	$R_{\theta JC}$	6.3 3.8 2.7	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	°C

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

Note: 1. Measured at non-repetitive, for t > 1ms and < 8.3ms.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.
3. Thermal resistance junction to case mounted on heatsink.

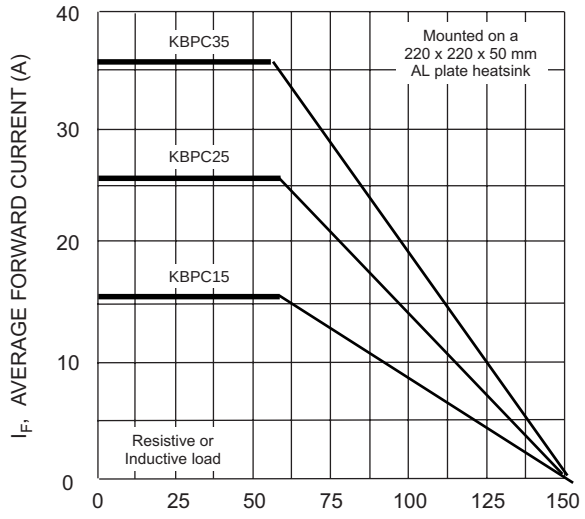


Fig. 1 Forward. Current Derating Curve

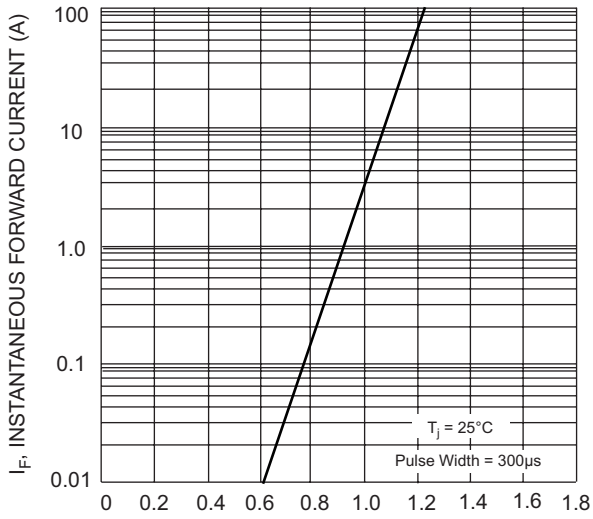


Fig. 2 Typical Forward Characteristics (per element)

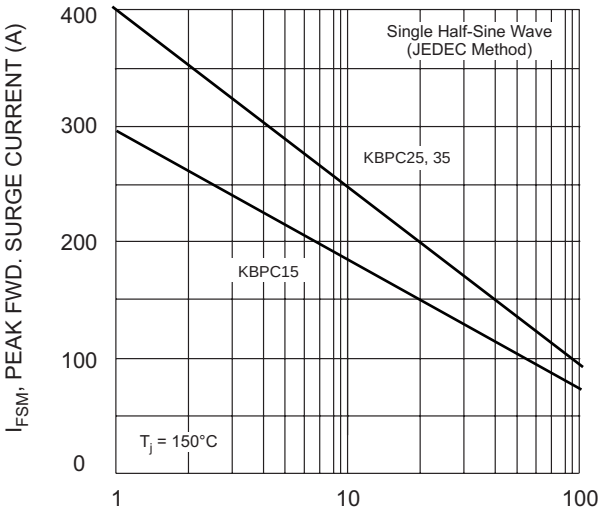


Fig. 3 Max Non-Repetitive Surge Current

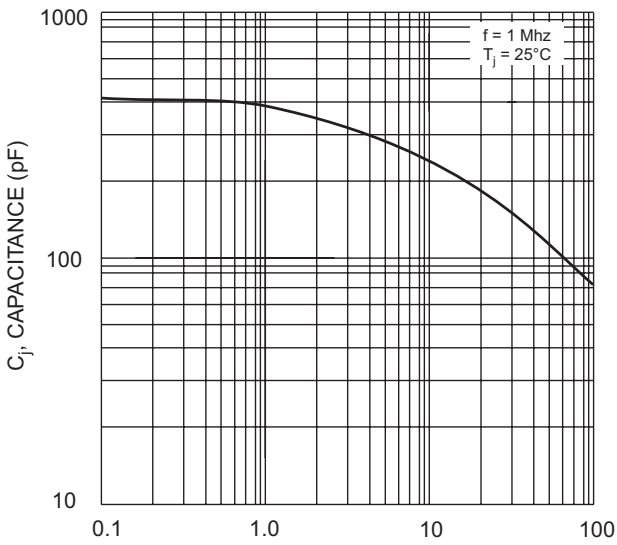


Fig. 4 Typical Junction Capacitance (per element)

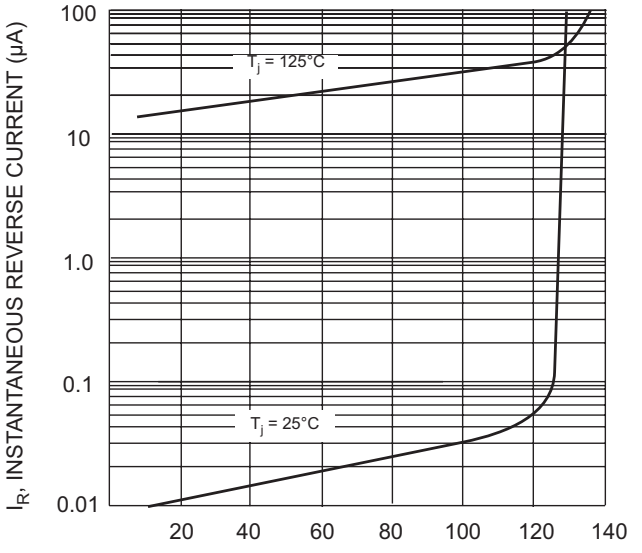


Fig. 5 Typical Reverse Characteristics (per element)

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