SENSITRON

SEMICONDUCTOR

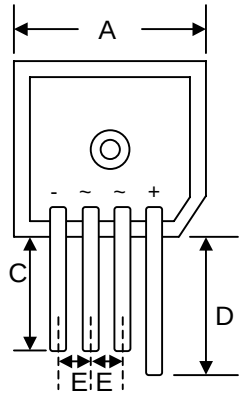
KBPC40, 50S SERIES

40, 50A IN-LINE BRIDGE RECTIFIER

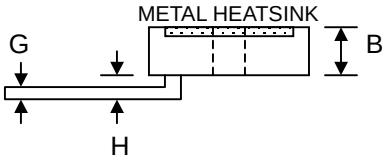
Data sheet 1303, Rev. A

Features

- Diffused Junction
- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability
- Ideal for Printed Circuit Boards
- Designed for Saving Mounting Space
- UL Recognized File # E223064



KBPC-S				
Dim	**Min**	**Max**	**Min**	**Max**
A	28.40	28.70	1.12	1.13
B	10.97	11.23	0.432	0.442
C	13.90	—	0.547	—
D	19.10	—	0.752	—
E	5.10	—	0.201	—
G	1.20 Ø Typical		0.047 ØTypical	
H	3.05	0.120	3.60	0.142
	In mm		**In inch**	



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: As Marked on Body
- Weight: 30 grams (approx.)
- Mounting Position: Any
- Marking: Type Number

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	-00S	-01S	-02S	-04S	-06S	-08S	-10S	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 Rectified Output Current KBPC40 @T_C = 55°C KBPC50	I_O	40 50							A
Non-Repetitive Peak Forward Surge Current, KBPC40 8.3ms Single Half-sine-wave Superimposed KBPC50 on Rated Load (JEDEC Method)	I_{FSM}	400 400							A
Forward Voltage Drop KBPC40 @I_F = 20A (per element) KBPC50 @I_F = 25A	V_{FM}	1.2							V
Peak Reverse Current at @T_A = 25°C Rated DC Blocking Voltage (per element) @T_A = 100°C	I_R	10 1.0							µA mA
Typical Thermal Resistance (per element) (Note 1)	$R_{\theta JC}$	1.5							K/W
RMS Isolation Voltage from Case to Lead	V_{ISO}	2500							V
Operating and Storage Temperature Range	T_j, T_{STG}	-55 to +150							°C

Note: 1. Thermal resistance junction to case per element mounted on 8" x 8" x 25" thick AL plate.

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Data sheet 1303, Rev.A

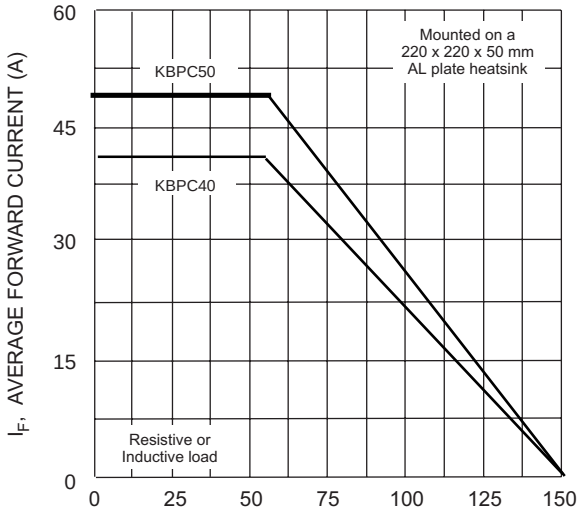

Fig. 1 Forward. Current Derating Curve

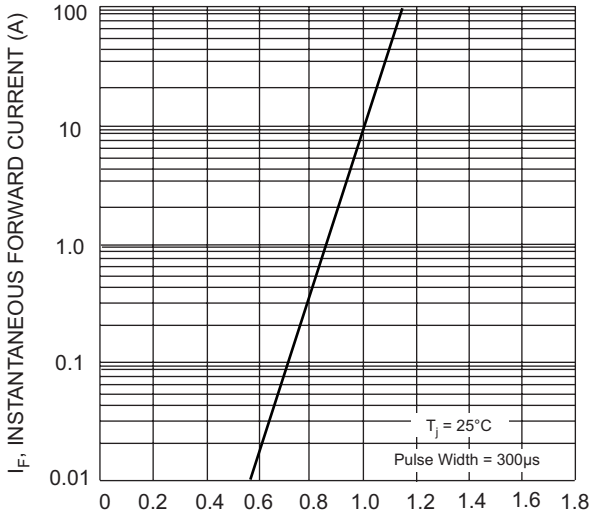

Fig. 2 Typical Forward Characteristics (per element)

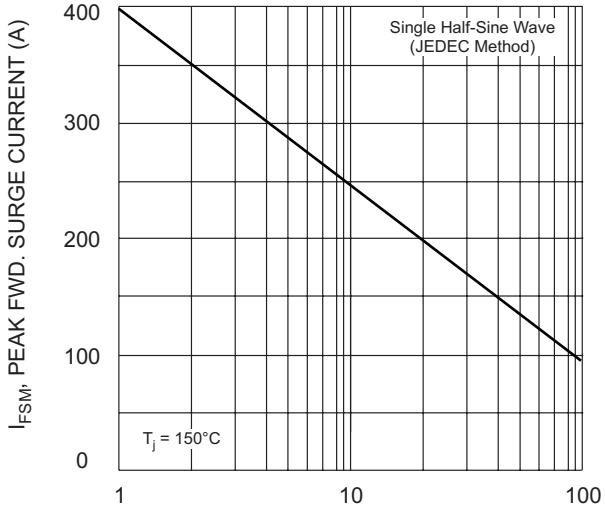

Fig. 3 Max Non-Repetitive Surge Current

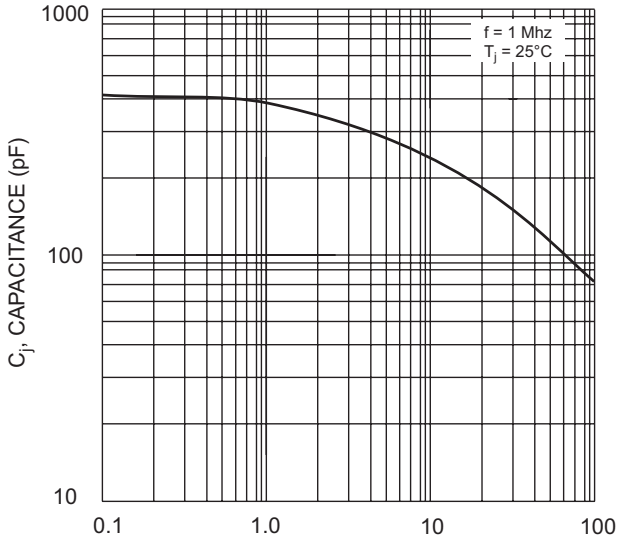

Fig. 4 Typical Junction Capacitance (per element)

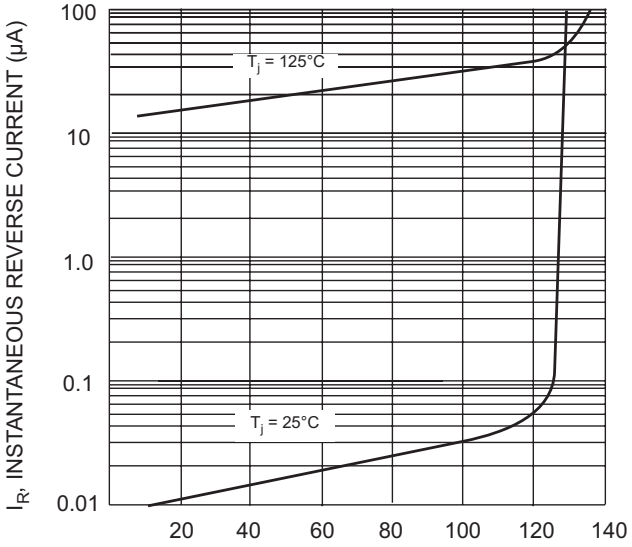

Fig. 5 Typical Reverse Characteristics (per element)