SENSITRON
SEMICONDUCTOR

KBJ6A-G – KBJ6M-G

6.0A BRIDGE RECTIFIER

Data sheet 1413, Rev.A

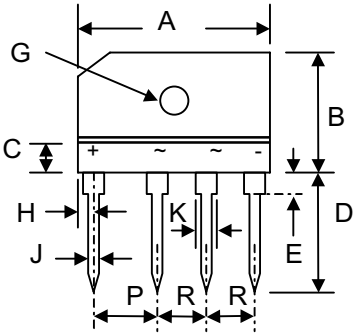
Green Products

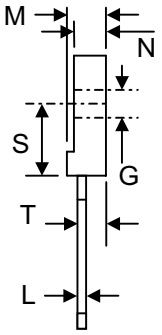
Features

- Diffused Junction
- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability
- Ideal for Printed Circuit Boards
- UL Recognized File # E223064
- Green Products in Compliance with the RoHS Directive

Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Body
- Weight: 4.0 grams (approx.)
- Mounting Position: Any
- Marking: Type Number





KBJ-6				
Dim	**Min**	**Max**	**Min**	**Max**
A	29.7	30.3	1.169	1.193
B	19.7	20.3	0.776	0.799
C	4.7	4.9	0.185	0.193
D	17.0	18.0	0.669	0.709
E	3.8	4.2	0.150	0.165
G	3.1Ø	3.4Ø	0.12Ø	0.13Ø
H	2.3	2.7	0.091	0.106
J	0.9	1.1	0.035	0.043
K	2.0	2.4	0.079	0.094
L	0.6	0.7	0.024	0.028
M	4.4	4.8	0.173	0.189
N	3.4	—	0.134	—
P	9.8	10.2	0.386	0.402
R	7.3	7.7	0.287	0.303
S	10.8	11.2	0.425	0.441
T	2.6	—	0.102	—
	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%.

Characteristic	Symbol	KBJ6A-G	KBJ6B-G	KBJ6D-G	KBJ6G-G	KBJ6J-G	KBJ6K-G	KBJ6M-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 Rectified Output Current @T_C = 100°C @T_A = 25°C	I_O	6.0 2.8							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	170							A
I^2t Rating for Fusing (t < 8.35ms)	I^2t	100							A^2s
Forward Voltage (per diode) @I_F = 3.0A	V_{FM}	1.05							V
Peak Reverse Current @T_A = 25°C At Rated DC Blocking Voltage @T_C = 100°C	I_R	5.0 500							µA
Typical Thermal Resistance (per leg) (Note 1)	$R_{\theta JA}$	26							K/W
Typical Thermal Resistance (per leg) (Note 2)	$R_{\theta JC}$	3.4							K/W
Operating and Storage Temperature Range	T_j, T_{STG}	-55 to +150							°C

Note: 1. Thermal resistance junction to ambient, mounted on PCB at 9.5mm lead length.
2. Thermal resistance junction to case, mounted on 7.5 x 7.5 x 0.8cm thick AL plate heatsink.

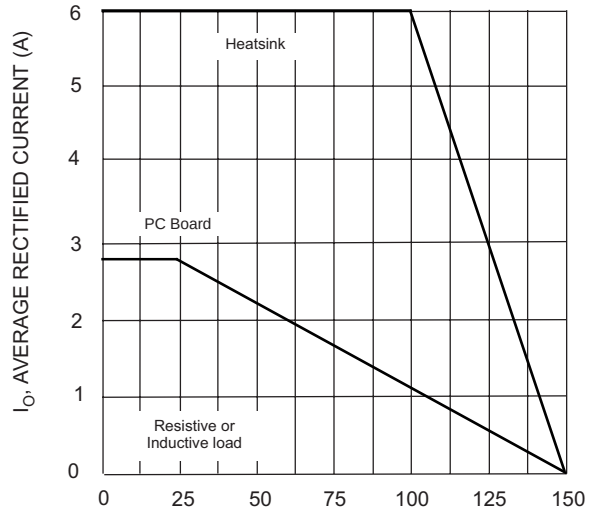


Fig. 1 Forward Current Derating Curve

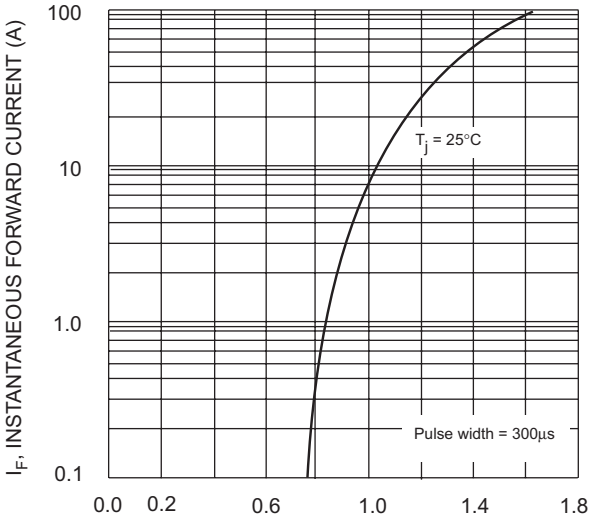


Fig. 2 Typical Fwd Characteristics, per element

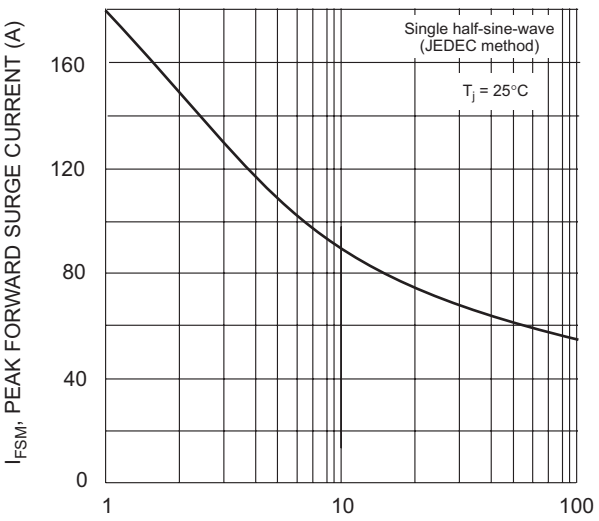


Fig. 3 Maximum Non-Repetitive Surge Current

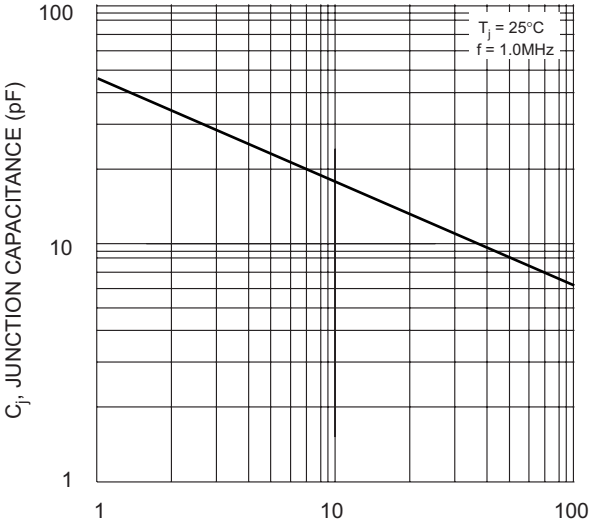


Fig. 4 Typical Junction Capacitance

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