SENSITRON

SEMICONDUCTOR

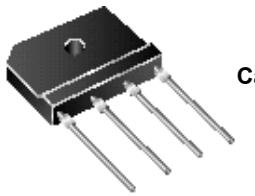
KBJ4AV – KBJ4MV

4.0A BRIDGE RECTIFIER

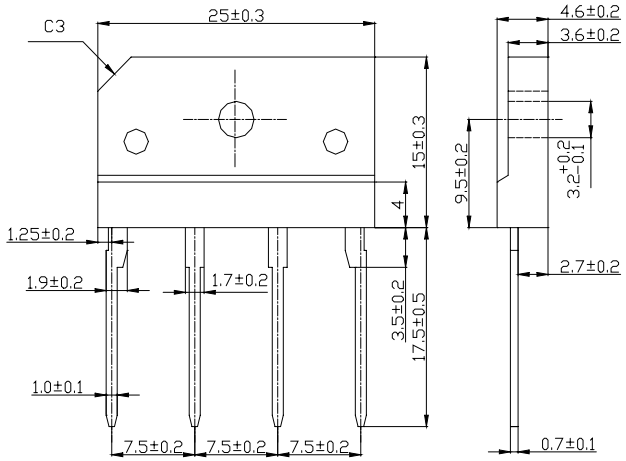
Data Sheet 1383, Rev. —

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High case dielectric strength of 2000 V_{RMS}
- Ideal for printed circuit boards
- Glass passivated chip junction
- Ultra surge current capability
- UL Recognized File # E223064



Case Style: KBJ (3S)



Mechanical Data

- Case: KBJ(3S) Molded plastic body
- Mounting Position: Any(3)
- Mounting Torque: 5 in. – lb. Max.
- Weight: 0.15oz., 4.3g
- Terminals: Plated Leads Solderable per MIL-STD-750, Method 2026
  High temperature soldering guaranteed: 260°C/10 seconds,0.375(9.5mm) lead length, 5lbs.(2.3kg) tension

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	KBJ4AV	KBJ4BV	KBJ4DV	KBJ4GV	KBJ4JV	KBJ4KV	KBJ4MV	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	4.0(1) 2.3(2)							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	150							A
I^2t Rating for Fusing (t < 8.3ms)	I^2t	93							A^2s
Forward Voltage (per diode) @I_F = 2.0A	V_{FM}	1.00							V
Peak Reverse Current @T_A = 25°C At Rated DC Blocking Voltage @T_C = 125°C	I_R	5.0 250							μA
Typical Thermal Resistance (per leg) (Note 1)	$R_{\theta JA}$	26(2)							K/W
Typical Thermal Resistance (per leg) (Note 2)	$R_{\theta JC}$	5(1)							K/W
Dielectric strength(Terminals to case, AC 1 minute)	V_{dis}	2000							V
Operating and Storage Temperature Range	T_j, T_{STG}	-55 to +150							°C

• 221 West Industry Court ▯ Deer Park, NY 11729-4681 ▯ (631) 586-7600 FAX (631) 242-9798 •
• World Wide Web Site - http://www.sensitron.com • E-Mail Address - sales@sensitron.com •

KBJ4AV – KBJ4MV

4.0A BRIDGE RECTIFIER

Data Sheet 1383, Rev. —

Note: (1) Unit case mounted on AL plate heatsink
(2) Unit mounted on P.C.B.with 0.5x0.5"(12x12mm) copper pads and 0.375"(9.5mm) lead length without heatsink.
(3) Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screw

Fig. 1 – Derating Curve Output Rectified Current

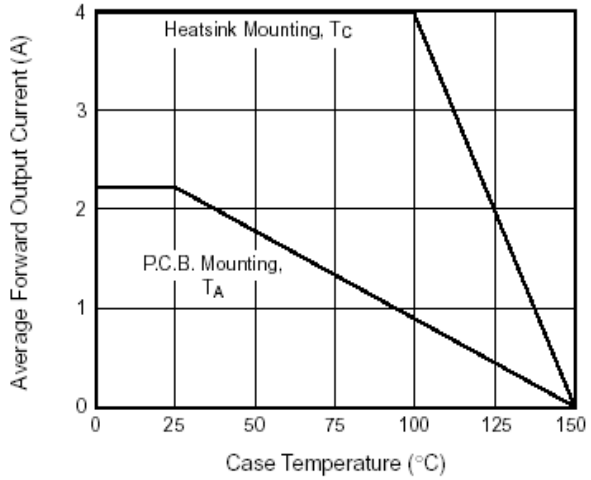


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current Per Leg

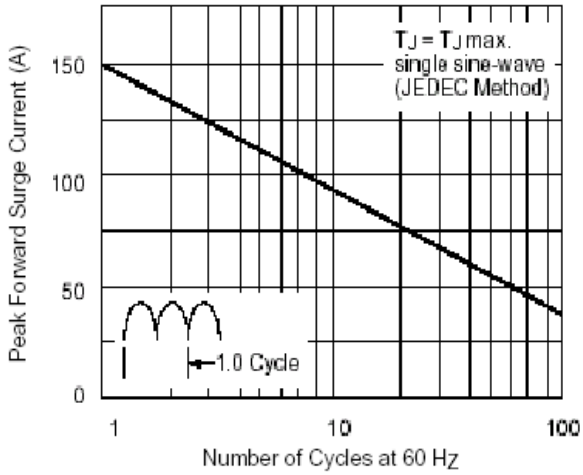


Fig. 3 – Typical Instantaneous Forward Characteristics Per Leg

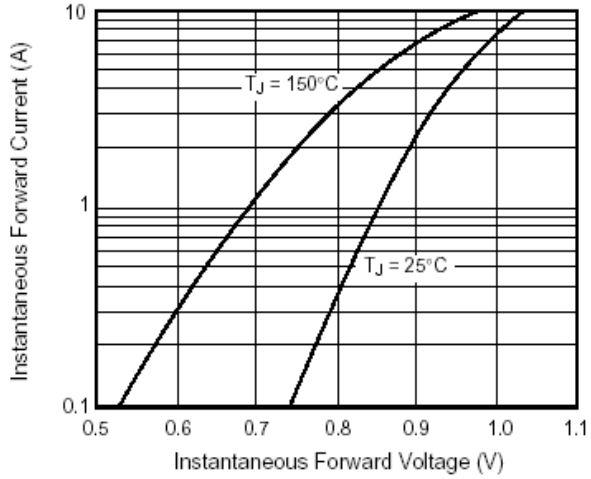


Fig. 4 – Typical Reverse Characteristics Per Leg

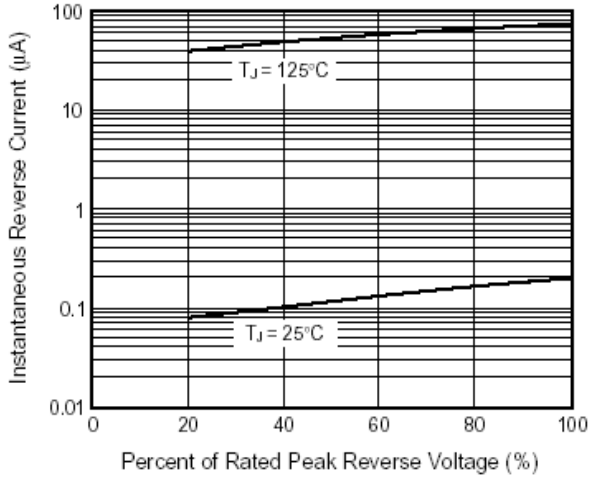


Fig. 5 – Typical Junction Capacitance Per Leg

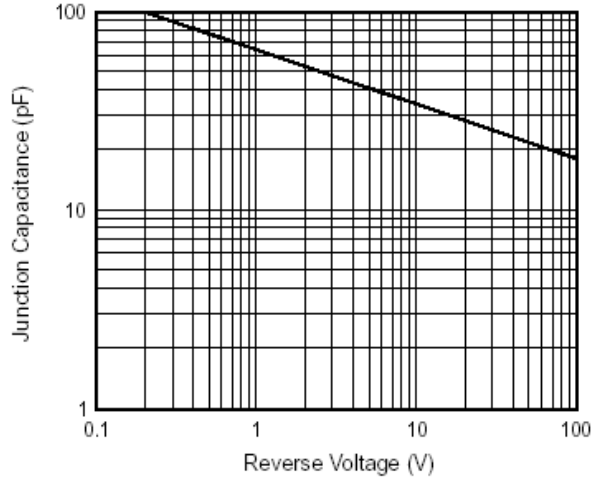
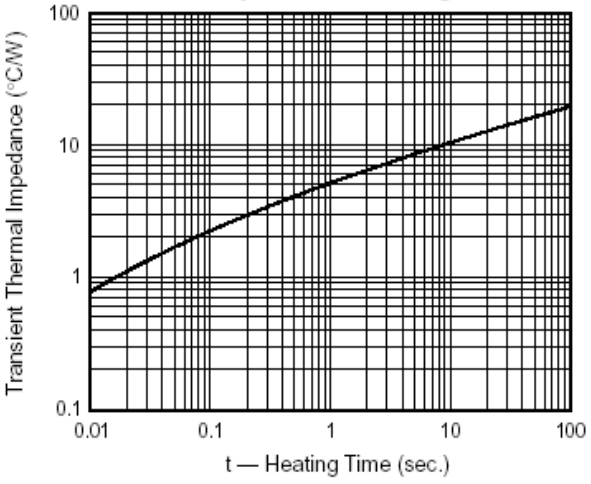


Fig. 6 – Typical Transient Thermal Impedance Per Leg



KBJ4AV – KBJ4MV

4.0A BRIDGE RECTIFIER

Data Sheet 1383, Rev.-

DISCLAIMER:
1- The information given herein, including the specifications and dimensions, is subject to change without prior not ice to improve product characteristics. Before ordering, purchasers are advised to contact the Sensitron Semiconductor sales department for the latest version of the datasheet(s).
2- In cases where extremely high reliability is required (such as use in nuclear power control, aerospace and aviation, traffic equipment, medical equipment , and safety equipment) , safety should be ensured by using semiconductor devices that feature assured safety or by means of users' fail-safe precautions or other arrangement .
3- In no event shall Sensitron Semiconductor be liable for any damages that may result from an accident or any other cause during operation of the user's units according to the datasheet(s). Sensitron Semiconductor assumes no responsibility for any intellectual property claims or any other problems that may result from applications of information, products or circuits described in the datasheets.
4- In no event shall Sensitron Semiconductor be liable for any failure in a semiconductor device or any secondary damage resulting from use at a value exceeding the absolute maximum rating.
5- No license is granted by the datasheet(s) under any patents or other rights of any third party or Sensitron Semiconductor.
6- The datasheet(s) may not be reproduced or duplicated, in any form, in whole or part, without the expressed writ ten permission of Sensitron Semiconductor.
7- The products (technologies) described in the datasheet(s) are not to be provided to any party whose purpose in their application will hinder maintenance of international peace and safety nor are they to be applied to that purpose by their direct purchasers or any third party. When exporting these products (technologies), the necessary procedures are to be taken in accordance with related laws and regulations.