Technical Data
Data Sheet N2789, Rev. -

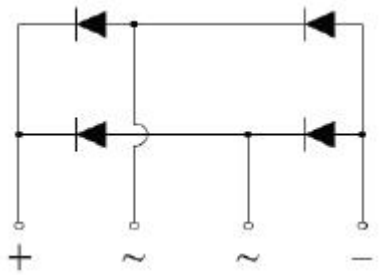
KBJL4J THRU KBJL4M
Glass Passivated Single-Phase Bridge Rectifiers

KBJL

Features

- Thin Single In-Line package;
- Ideal for printed circuit boards;
- Glass Passivated chip junction;
- Low profile package;
- High Surge current capability;
- High case dielectric strength of 2000 VRMS;
- Plastic package has Underwrites Laboratory Flammability Classification 94V-0;
- This is a Pb − Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Circuit Diagram



Mechanical Data

- Case: KBJL;
- Epoxy meets UL-94V-0 Flammability rating;
- Terminals: Matte tin plated leads, solderable per J-STD-002 and JESD22-B102;
- High temperature soldering guaranteed: Solder Dip 275℃, 40seconds;
- Polarity: As marked on body;
- Mounting Torgue: 5.7cm-kg (5.0 inches-lbs) max;
- Recommend Torgue: Mounting Torgue: 5.7cm-kg (5inches-lbs);
- Weight: 2.6 g (approximately)

Maximum Ratings @T_A=25°C unless otherwise specified

Type Number	Symbol	KBJL4J	KBJL4K	KBJL4M	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_{DC}	600	800	1000	V
RMS Reverse Voltage	V_{RMS}	420	560	700	V
Maximum average forward rectified output current at T_C=110℃ T_A=25℃	$I_{F(AV)}$	4 2			A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave	I_{FSM}	90			A
Rating of fusing (t<8.3ms)	I^2t	34			A^2s

KBJL4J
THRU
KBJL4M

Technical Data
Data Sheet N2789, Rev. -

Electrical Characteristics@T_A=25°C unless otherwise specified

Type Number	Symbol	KBJL4J	KBJL4K	KBJL4M	Units
Maximum Forward Voltage @I_F =2A, T_A = 25°C	V_F	0.96			V
Peak Reverse Current @T_A = 25°C At Rated DC Blocking Voltage @T_A = 125°C	I_{RM}	5 150			μA

* Pulse width < 300 μs, duty cycle < 2%

Thermal-Mechanical Specifications:

Type Number	Symbol	KBJL4J	KBJL4K	KBJL4M	Units
Typical Thermal Resistance	$R_{\theta JC}$(1, 3) $R_{\theta JA}$(2)	2.5 20			°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150			°C

(1). Unit case mounted on Al plate heatsink;
(2). Units mounted on PCB without heatsink;
(3). Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with M3 screw.

Ratings and Characteristics Curves

FIG.1-DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

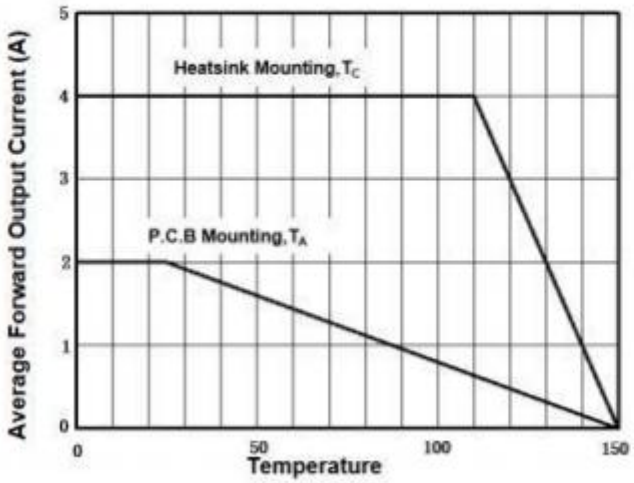
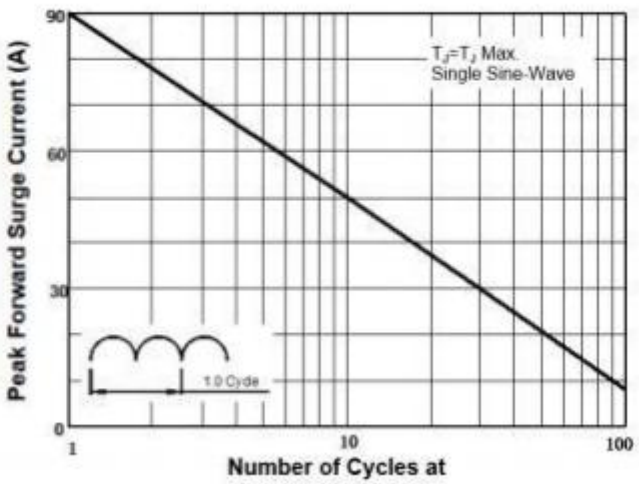


FIG.2-MAXIMUM NON-REPETITEVE PEAK FORWARD SUGER CURRENT



Technical Data
Data Sheet N2789, Rev. -

FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISITCS

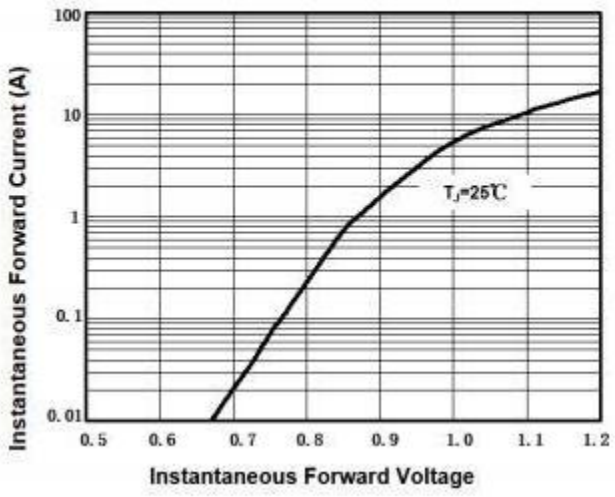
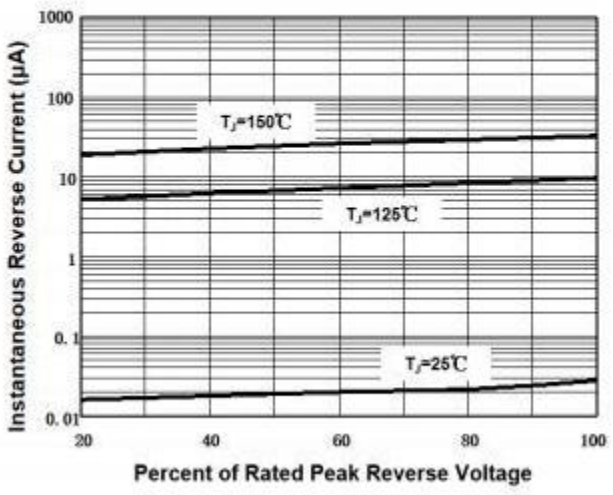


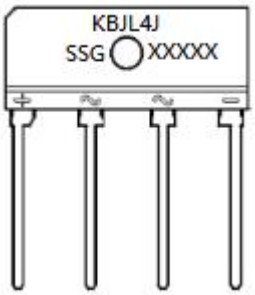
FIG.4-TYPICAL REAK REVERSE VOLTAGE CHARACTERISTICS



Ordering Information

Device	Package	Plating	Shipping
KBJL4J THRU KBJL4M	KBJL	Pure Sn	20pcs / tube

Marking Diagram



Where XXXXX is YYWWL

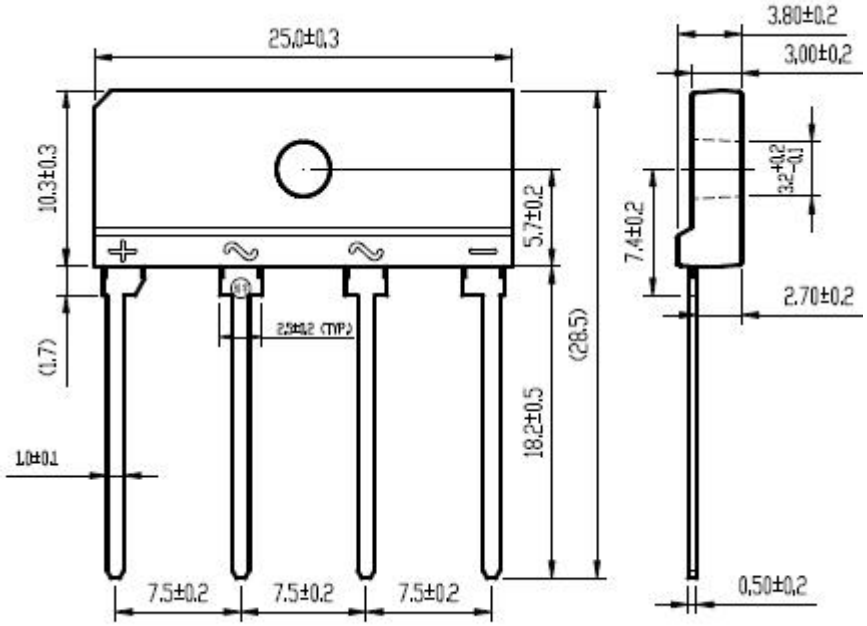
KBJL4J = Type Number
SSG = SSG
YY = Year
WW = Week
L = Lot Number

Cautions: Molding resin
Epoxy resin UL:94V-0

Technical Data
Data Sheet N2789, Rev. -

RoHS

Mechanical Dimensions KBJL (MM)



KBJL4J
THRU
KBJL4M

Technical Data
Data Sheet N2789, Rev. -

DISCLAIMER:
1- The information given herein, including the specifications and dimensions, is subject to change without prior notice to improve product characteristics. Before ordering, purchasers are advised to contact the SMC Diode Solutions 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 SMC Diode Solutions 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). SMC Diode Solution 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 SMC Diode Solutions 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 SMC Diode Solutions.
6- The datasheet(s) may not be reproduced or duplicated, in any form, in whole or part, without the expressed written permission of SMC Diode Solutions.
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.