

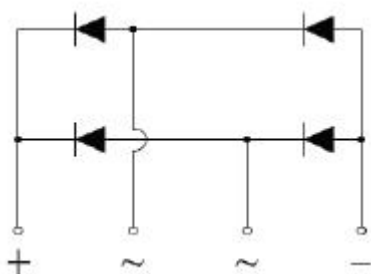
## KBJL15J THRU KBJL15M Glass Passivated Single-Phase Bridge Rectifiers



### 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°C, 40seconds;
- Polarity: As marked on body;
- Mounting Torque: 5.7cm·kg (5.0 inches·lbs) max;
- Recommend Torque: Mounting Torque:  
5.7cm·kg (5inches·lbs);
- Weight: 2.6 g (approximately)

### Maximum Ratings @T<sub>A</sub>=25°C unless otherwise specified

Type Number	Symbol	KBJL15J	KBJL15K	KBJL15M	Units
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>				
Working Peak Reverse Voltage	V <sub>RWM</sub>	600	800	1000	V
DC Blocking Voltage	V <sub>DC</sub>				
RMS Reverse Voltage	V <sub>RMS</sub>	420	560	700	V
Maximum average forward rectified output current at T <sub>C</sub> =134°C T <sub>A</sub> =25°C	I <sub>F(AV)</sub>		15 <sup>(1)</sup> 3.2 <sup>(2)</sup>		A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave	I <sub>FSM</sub>		240		A
Rating of fusing ( t<8.3ms)	I <sup>2</sup> t		240		A <sup>2</sup> s

**Electrical Characteristics @ $T_A=25^{\circ}\text{C}$  unless otherwise specified**

Type Number	Symbol	KBJL15J	KBJL15K	KBJL15M	Units
Maximum Forward Voltage @ $I_F=7.5\text{A}$	$V_F$	1.0			V
Peak Reverse Current @ $T_A=25^{\circ}\text{C}$ At Rated DC Blocking Voltage @ $T_A=125^{\circ}\text{C}$	$I_{RM}$	5.0 150			$\mu\text{A}$

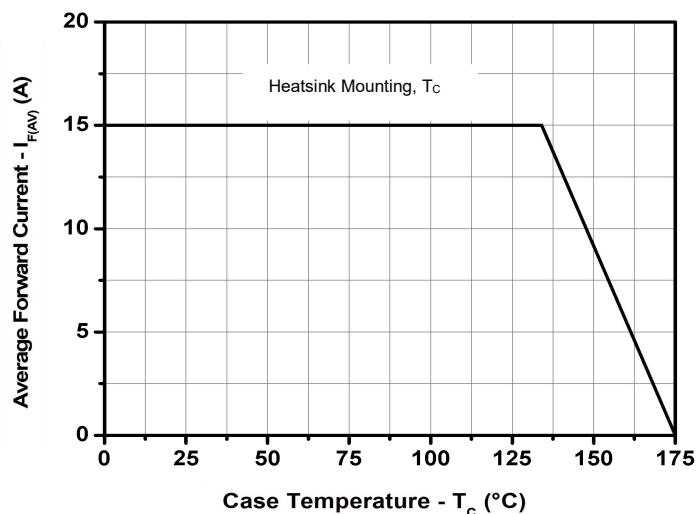
\* Pulse width < 300  $\mu\text{s}$ , duty cycle < 2%

**Thermal-Mechanical Specifications:**

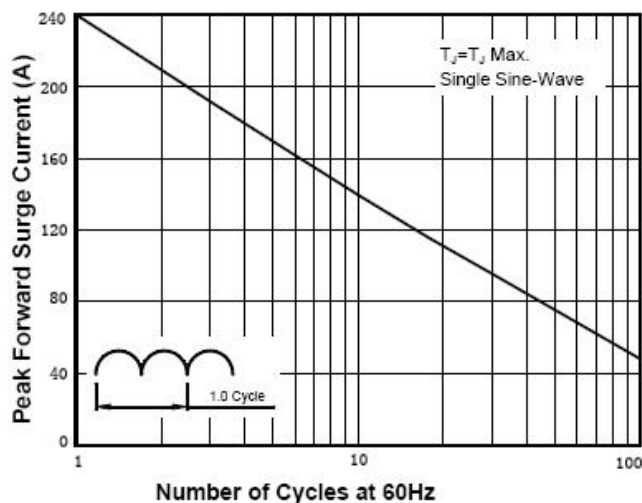
Type Number	Symbol	KBJL15J	KBJL15K	KBJL15M	Units
Typical Thermal Resistance	$R_{\theta JC}$ $R_{\theta JA}$	2.5 <sup>(1,3)</sup> 25 <sup>(2)</sup>			$^{\circ}\text{C/W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 to +175			$^{\circ}\text{C}$

- (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

**Ratings and Characteristics Curves**



**Figure 1. Derating Curve Output Rectified Current**



**Figure 2. Maximum Non-Repetitive Peak Forward Surge Current per Diode**

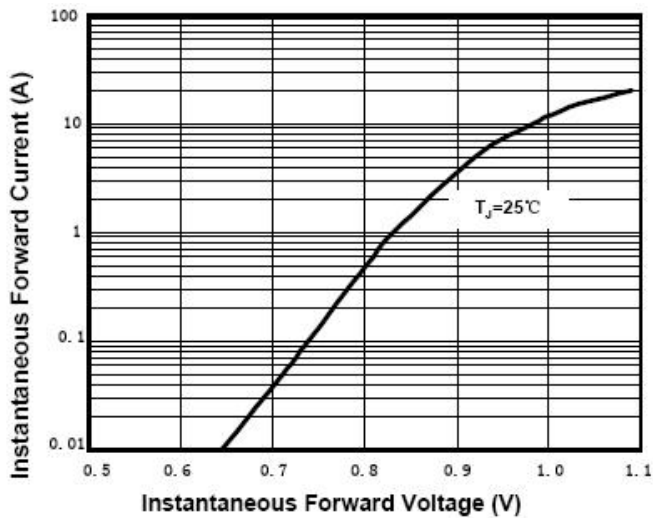


Figure 3. Typical Forward Characteristics Per Diode

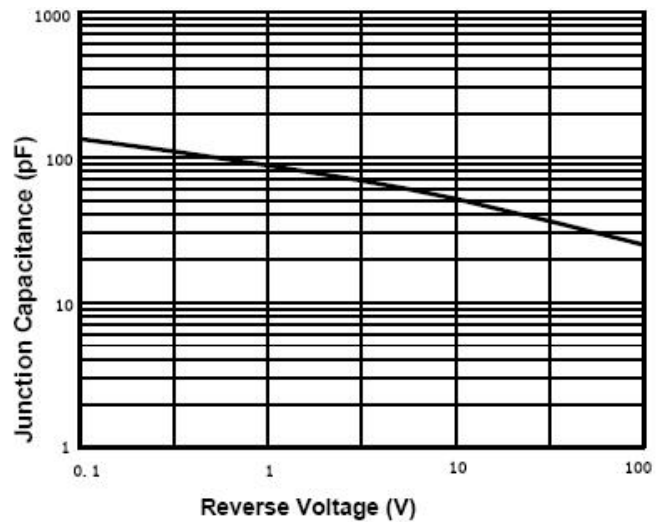


Figure 4. Typical Junction Capacitance Per Diode

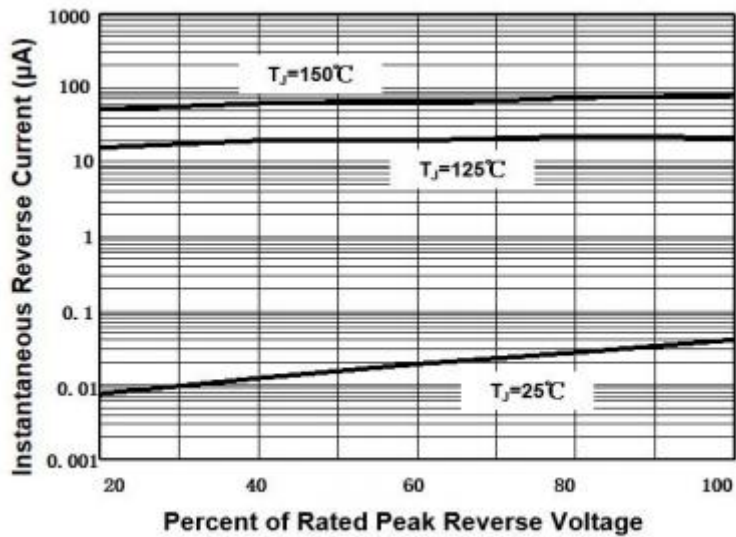
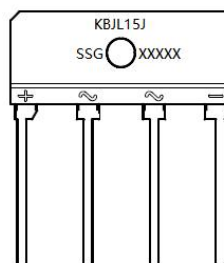


Figure 5. Typical Reverse Characteristics Per Diode

### Ordering Information

Device	Package	Plating	Shipping
KBJL15J THRU KBJL15M	KBJL	Pure Sn	20pcs / tube

### Marking Diagram

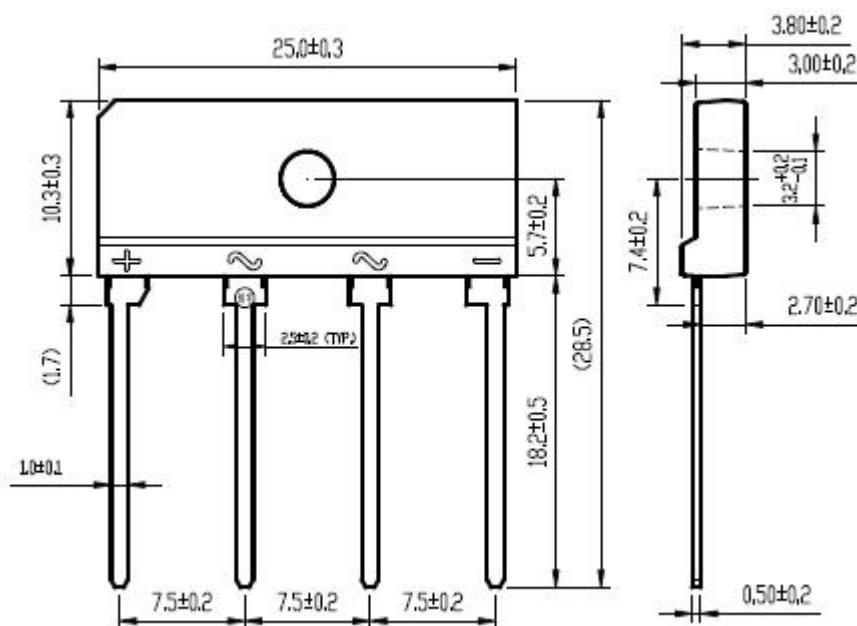


Where XXXXX is YYWWL

KBJL15J = Type Number  
SSG = SSG  
YY = Year  
WW = Week  
L = Lot Number

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

### Mechanical Dimensions KBJL (MM)





**KBJL15J  
THRU  
KBJL15M**

**Technical Data  
Data Sheet N2390, Rev. A**



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