



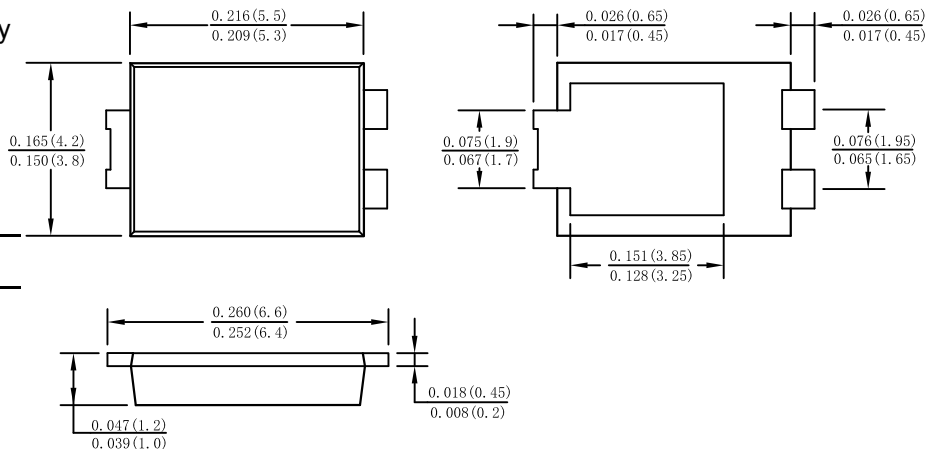
# SB1045L THRU SB10100L

10.0A Surface Mount Schottky Barrier Rectifiers

## Features

- Schottky Barrier Chip
- High Thermal Reliability
- Patented Super Barrier Rectifier Technology
- High Forward Surge Capability
- Ultra Low Power Loss, High Efficiency
- Excellent High Temperature Stability
- Plastic material-UL flammability 94V-0

Case: TO-277B



## Mechanical Data

- Case: TO-277B, molded plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Meet MSL level 1, per J-STD-020, LF Maximum peak of 260 °C
- Polarity: Cathode Band
- Mounting Position: Any
- Marking: Type Number
- Lead Free: For RoHS/Lead Free Version

dimensions in inches and (millimeters)

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

Single Phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Symbol	SB1045L	SB1050L	SB1060L	SB1080L	SB10100L	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>						
Working Peak Reverse Voltage	V <sub>RWM</sub>	45	50	60	80	100	V
DC blocking voltage	V <sub>DC</sub>						
RMS Rectified Voltage	V <sub>R(RMS)</sub>	32	35	42	56	70	V
Average Rectified Output Current	I <sub>F(AV)</sub>	10					A
Non-Repetitive Peak Forward Surge 8.3ms Single Half Sine-Wave Superimposed on rated load (JEDEC Method)	I <sub>F(SM)</sub>	150					A
I <sup>2</sup> t Rating for Fusing (t < 8.3ms)	I <sup>2</sup> t	93.375					A <sup>2</sup> s
Forward Voltage Drop T <sub>A</sub> =25 °C @I <sub>F</sub> =10A	V <sub>FM</sub>	0.50		0.55		0.75	V
Typical Junction Capacitance (Note1)	C <sub>j</sub>	650		420		280	pF
Peak Reverse Current T <sub>A</sub> =25°C At Rated DC Blocking Voltage T <sub>A</sub> =100°C	I <sub>R</sub>	0.3 15					mA
Typical Thermal Resistance Junction to Ambient (Note2)	R <sub>θJA</sub> R <sub>θJL</sub>	80 10					°C/W
Operating junction temperature range	T <sub>J</sub>	-55 to +150					°C
storage temperature range	T <sub>STG</sub>	-55 to +150					°C

Note:1. Measured at 1.0 MHz and Applied reverse Voltage of 4.0V D.C

2. Fr-4pcb. 2oz. Copper, minimum recommend pad layout .18.8mm×14.4. Anode pad dimensions 5.6mm×14.4mm.



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Fig. 1 - Forward Current Derating Curve

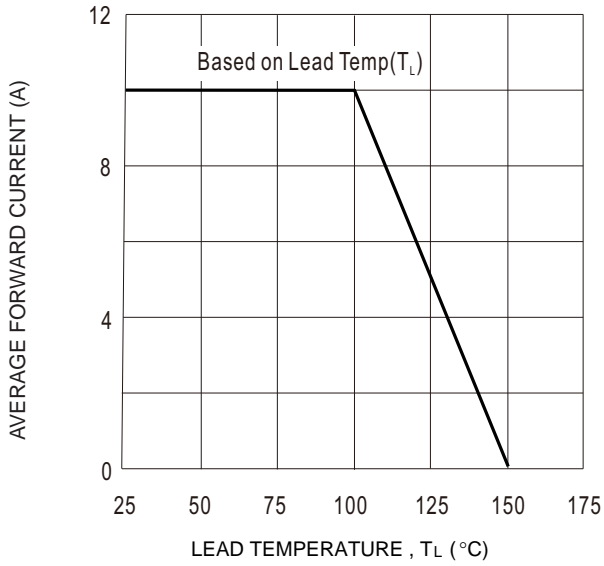


Fig. 2 Typical Forward Characteristics (per leg)

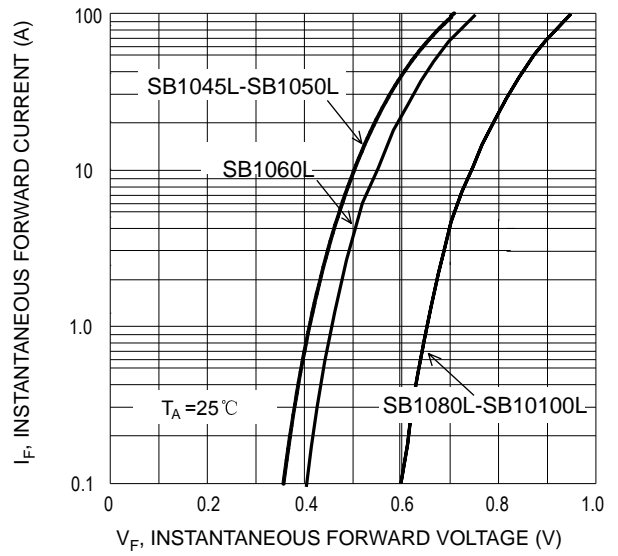


Fig. 3 Maximum Peak Forward Surge Current (per leg)

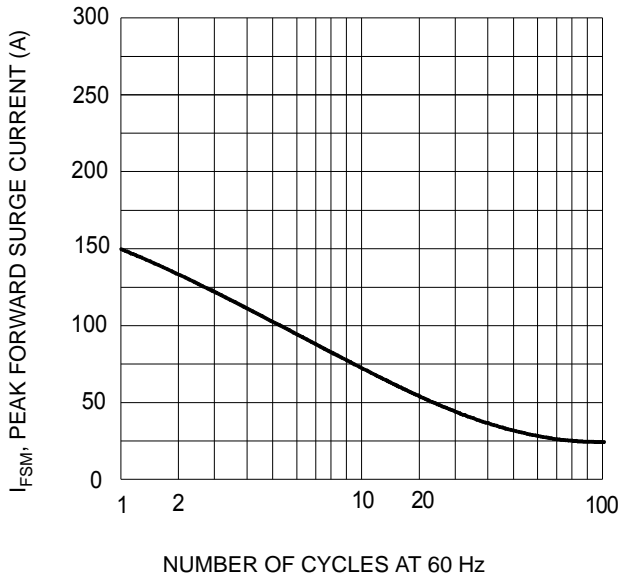


Fig. 4: Typical Reverse Characteristics

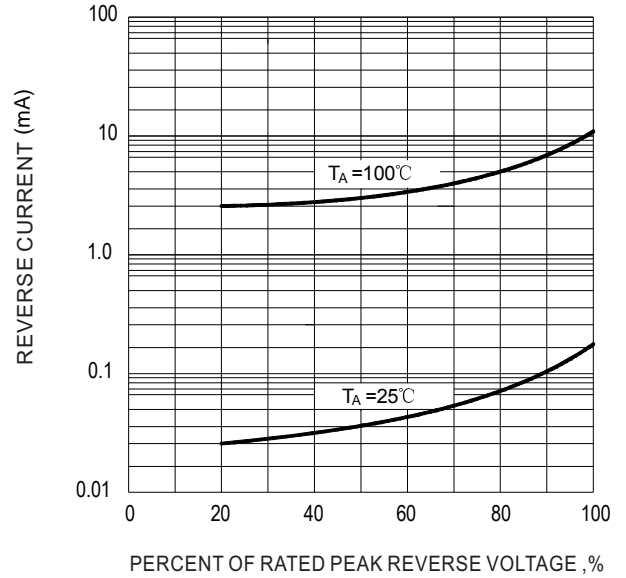


Fig. 5 Typical Junction Capacitance

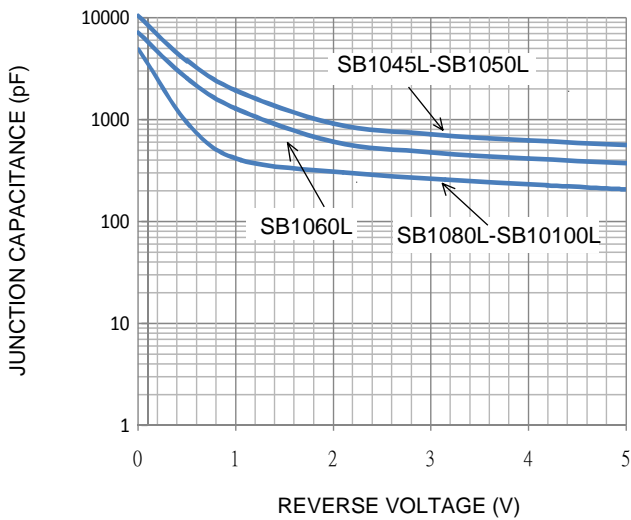
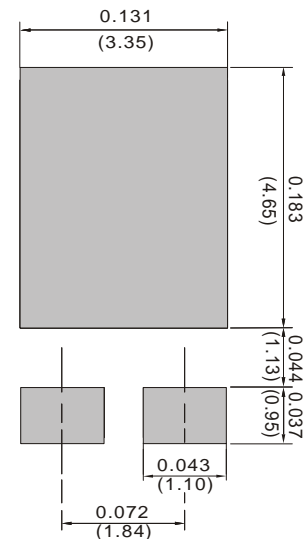


Fig. 6 Mounting PAD Layout





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