

# SB1045L THRU SB10100L

10.0A Surface Mount Schottky Barrier Rectifiers

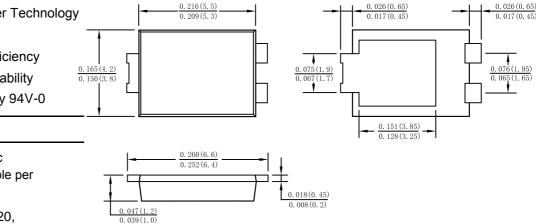
#### Features

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

#### **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

#### Case: TO-277B



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 Working Peak Reverse Voltage DC blocking voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>DC</sub>	45	50	60	80	100	v
RMS Rectified Voltage	V <sub>R(RMS)</sub>	32	35	42	56	70	V
Average Rectified Output Current	IF(AV)	10					А
Non-Repetitive Peak Forward Surge8.3ms Single Half Sine-Wave Superimposed on rated load(JEDEC Method)	I <sub>F</sub> SM	150					A
I <sup>2</sup> t Rating for Fusing (t < 8.3ms)	²t	93.375					A <sup>2</sup> s
Forward Voltage Drop T <sub>A</sub> =25 °C @IF=10A	Vгм	0.50 0.55 0.75			75	V	
Typical Junction Capacitance (Note1)	Cj	650 420 280		0	pF		
Peak Reverse Curent $T_A = 25^{\circ}C$ At Rated DC Blocking Voltage $T_A = 100^{\circ}C$	lr	0.3 15					mA
Typical Thermal Resistance Junctionto Ambient (Note2)	Røja Røjl	80 10					°C/W
Operating junction temperature range	TJ	-55 to +150					°C
storage temperature range	Тѕтс	-55 to +150					°C

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

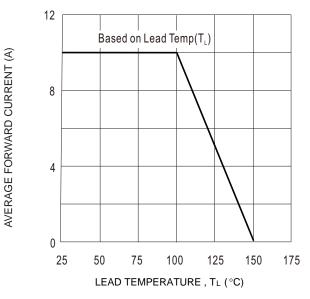
2.Fr-4pcb.2oz.Copper, minimum recommend pad layout .18.8mm×14.4.Anode pad dimensions 5.6mm×14.4mm.

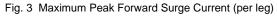


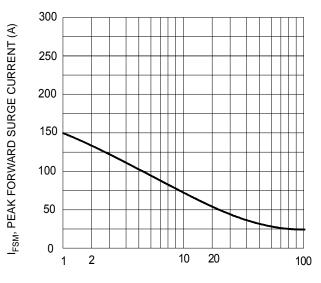
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#### Fig.1 - Forward Current Derating Curve

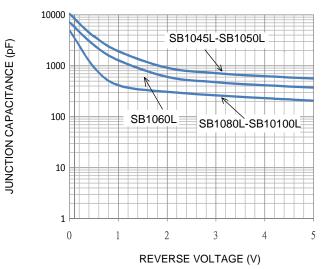


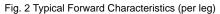


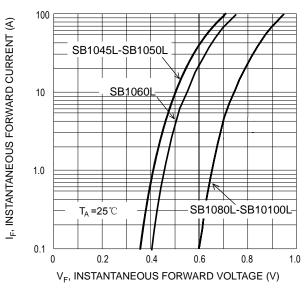


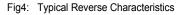
NUMBER OF CYCLES AT 60 Hz

Fig. 5 Typical Junction Capacitance









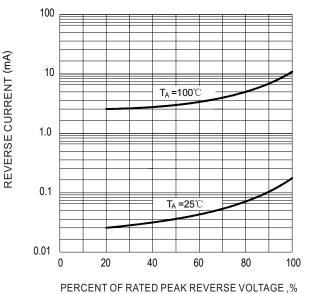
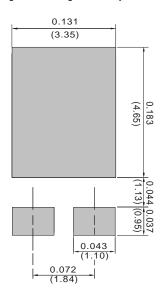


Fig. 6 Mounting PAD Layout





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