



# SB1045L THRU SB10100L

## Surface Mount Schottky Rectifiers

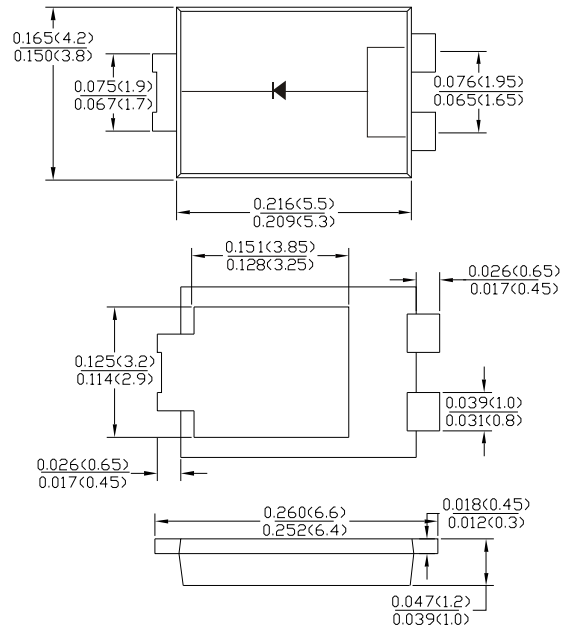
### Features

- 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

### Mechanical Data

- Case: TO-277B, molded plastic
- Terminals:Plated Leads Solderable per MIL-STD-202,Method 208
- Polarity:Cathode Band
- Mounting Position:Any
- Marking:Type Number
- Lead Free:For RoHS/Lead Free Version

### TO-277B



### Maximum Ratings and Electrical Characteristics @ $T_A = 25^\circ\text{C}$ 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	$V_{RRM}$							
Working Peak Reverse Voltage	$V_{RWM}$	45	50	60	80	100	V	
DC blocking voltage	$V_{DC}$							
RMS Rectified Voltage	$V_{R(RMS)}$	32	35	42	56	70	V	
Average Rectified Output Current (Note1)	$I_F(AV)$	10						A
Non-Repetitive Peak Forward Surge 8.3ms Single Half Sine-Wave Superimposed on rated load(JEDEC Method) (Note2)	$I_{FSM}$	150						A
$I^2t$ Rating for Fusing ( $t < 8.3\text{ms}$ )	$I^2t$	93.375						$A^2s$
Forward Voltage Drop $T_A = 25^\circ\text{C}$ @ $I_F = 10\text{A}$	$V_{FM}$	0.47	0.50	0.55	0.8		V	
Peak Reverse Current $T_A = 25^\circ\text{C}$ At Rated DC Blocking Voltage $T_A = 100^\circ\text{C}$	$I_R$	0.3 15						mA
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$ $R_{\theta JL}$	80 10						$^\circ\text{C/W}$
Operating junction temperature range	$T_J$	-55 to +150						$^\circ\text{C}$
storage temperature range	$T_{STG}$	-55 to +150						$^\circ\text{C}$

Note: 1. Valid Provided that are kept at ambient temperature at a distance of 9.5mm from the case.

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



### Characteristic Curves ( $T_A=25^\circ\text{C}$ unless otherwise noted)

Fig.1 - Forward Current Derating Curve

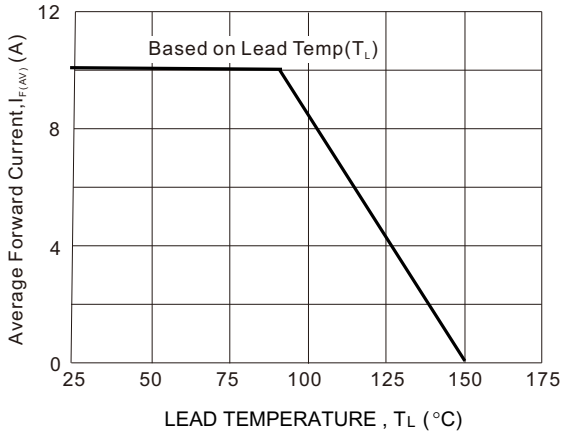


Fig2 : Instantaneous Forward Voltage

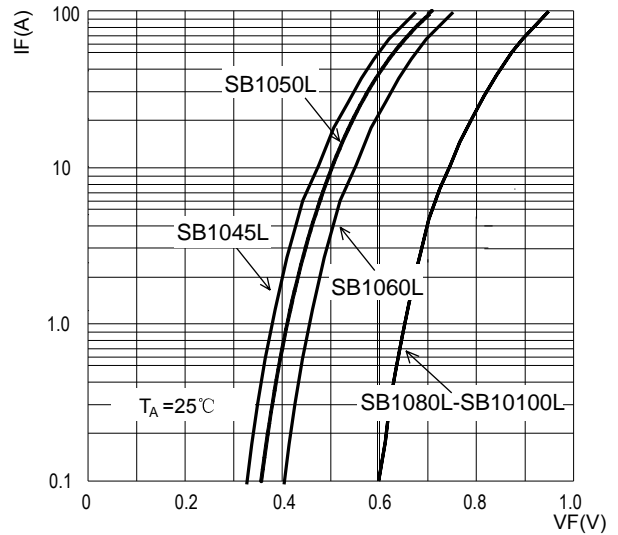


Fig3: Surge Forward Current Capability

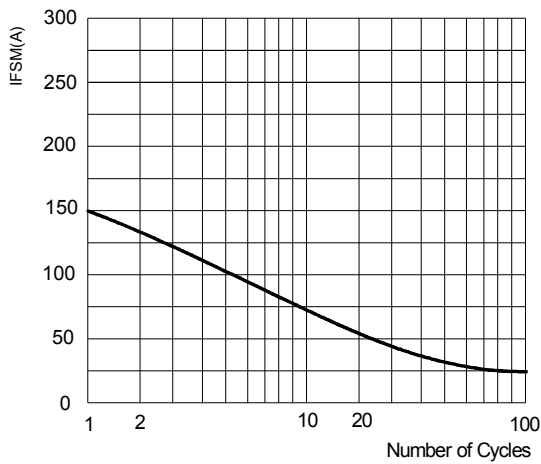


Fig4: Typical Reverse Characteristics

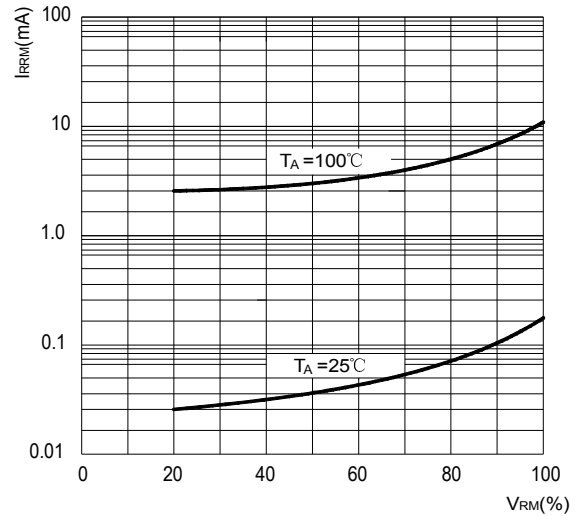
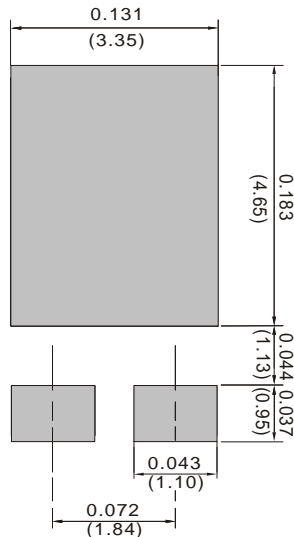


FIG.5 MOUNTING PAD LAYOUT



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