

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

### 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 :** JEDEC TO-277 Molded plastic body

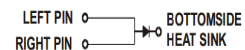
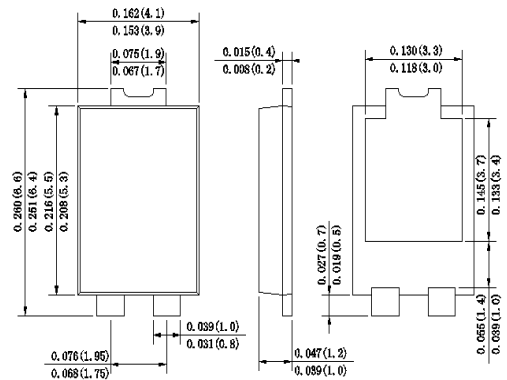
**Terminals :** Plated Leads Solderable per MIL-STD-202, Method 208

**Polarity :** Polarity symbol marking on body

**Mounting Position :** Any

**Weight :** 0.003 ounce, 0.092 grams

### TO-277



Dimensions in inches and (millimeters)

### Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

Parameter	SYMBOLS	SB1045L	SB1050L	SB1060L	SB1080L	SB10100L	SB10150L	SB10200L	UNIT
		SB1045L	SB1050L	SB1060L	SB1080L	SB10100L	SB10150L	SB10200L	
Marking Code		SB1045L	SB1050L	SB1060L	SB1080L	SB10100L	SB10150L	SB10200L	
Maximum repetitive peak reverse voltage	$V_{RRM}$	45	50	60	80	100	150	200	V
Maximum working peak reverse voltage	$V_{RWM}$								
Maximum DC blocking voltage	$V_{DC}$								
RMS Reverse voltage	$V_{RMS}$	32	35	42	56	70	105	140	V
Average Rectified Output Current	$I_{(O)}$	10							A
Non-Repetitive Peak Forward Surge 8.3ms Single Half Sine-Wave Superimposed on rated load (JEDEC Method)	$I_{FSM}$	150							A
Forward Voltage Drop at 10.0A $T_A=25^\circ C$	$V_F$	0.55	0.70	0.85		0.90	0.92		V
Peak reverse current $T_A=25^\circ C$ at rated DC blocking voltage $T_A=125^\circ C$	$I_R$	0.3							mA
		15							
Typical thermal resistance Junction to Ambient	$R_{\theta JA}$ $R_{\theta JL}$	80							$^\circ C/W$
		15							
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +150							$^\circ C$

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.

Fig.1 - Forward Current Derating Curve

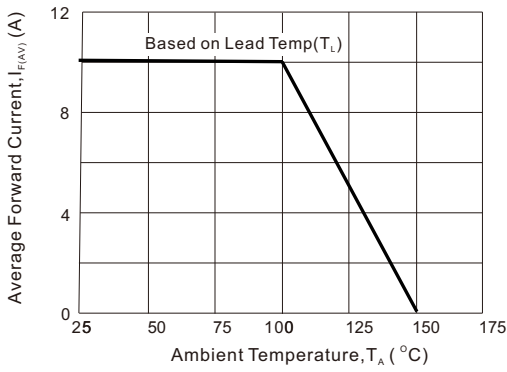


Fig2 : Instantaneous Forward Voltage

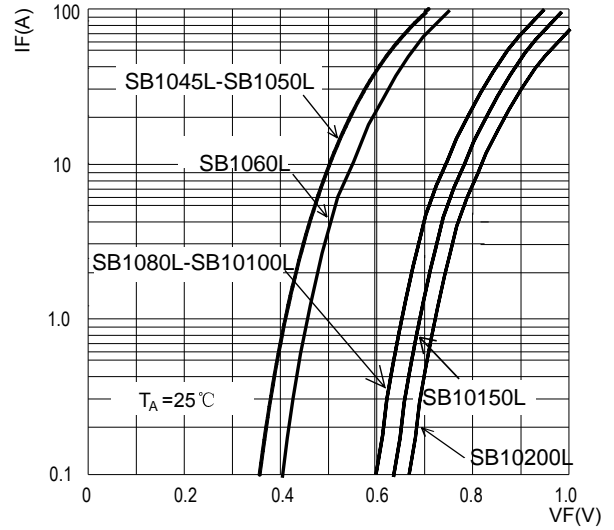


Fig3: Surge Forward Current Capability

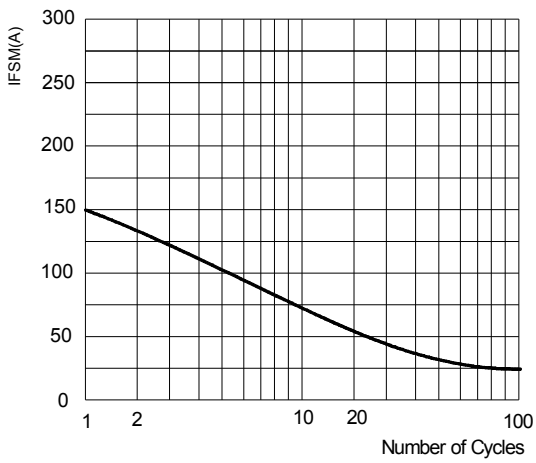
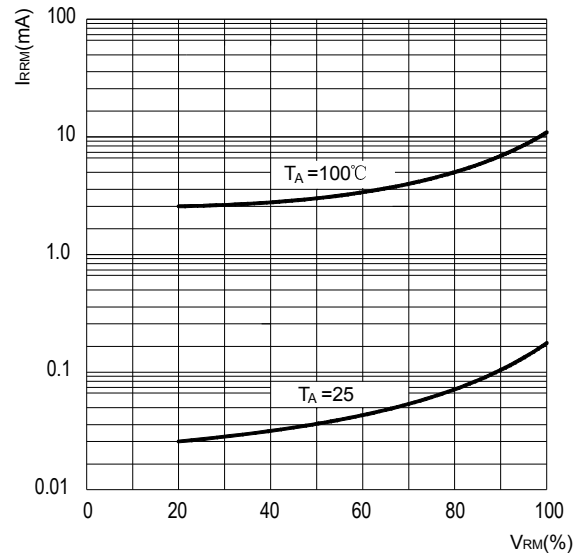
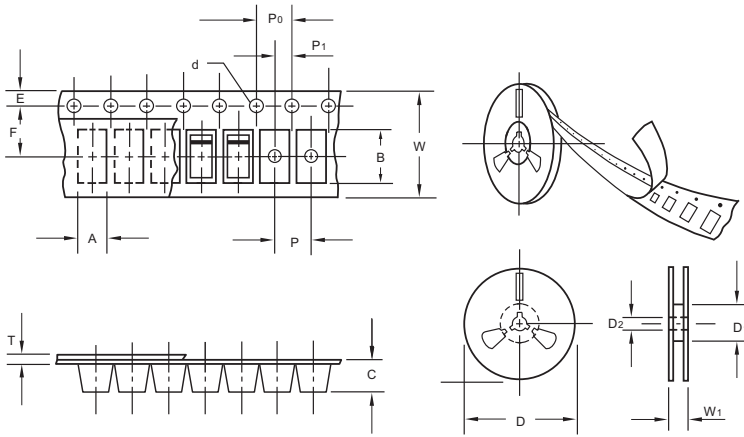


Fig4: Typical Reverse Characteristics



## Packing information



unit:mm

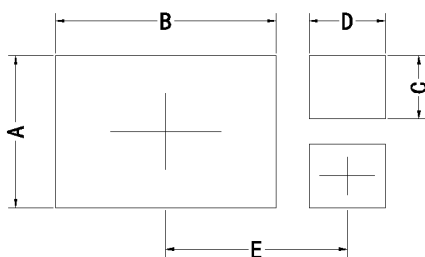
Item	Symbol	Tolerance	TO-277
Carrier width	A	0.1	4.45
Carrier length	B	0.1	7.0
Carrier depth	C	0.1	1.60
Sprocket hole	d	0.05	1.55
11" Reel outside diameter	D	2.0	280.00
11" Reel inner diameter	D <sub>1</sub>	min	50.0
Feed hole diameter	D <sub>2</sub>	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	7.50
Punch hole pitch	P	0.1	8.00
Sprocket hole pitch	P <sub>0</sub>	0.1	4.00
Embossment center	P <sub>1</sub>	0.1	2.00
Overall tape thickness	T	0.1	0.25
Tape width	W	0.3	12.00
Reel width	W <sub>1</sub>	1.0	12.30

Note: Devices are packed in accordance with EIA standard RS-481-A and specifications listed above.

## Reel packing

PACKAGE	REEL SIZE	REEL (pcs)	COMPONENT SPACING (m/m)	BOX (pcs)	INNER BOX (m/m)	REEL DIA, (m/m)	CARTON SIZE (m/m)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
TO-277	11"	3,000	5.0	6,000	340*340*43	280	380*380*380	48,000	9.0

## Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	3.60	0.142
B	5.35	0.211
C	1.50	0.059
D	1.85	0.073
E	4.30	0.169