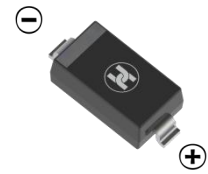
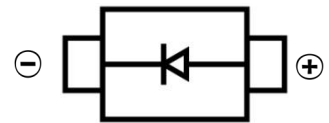


**SCHOTTKY BARRIER DIODE**
**FEATURES**

- Low Forward Voltage
- High frequency inverters
- Small Surface Mount device
- PN Junction Guard Ring for Transient and ESD Protection
- Low Capacitance


**SOD-123**
**MECHANICAL DATA**

- Case: SOD-123
- Case Material: Molded Plastic. UL flammability
- Classification Rating: 94V-0
- Weight: 0.005 grams (approximate)


**MAXIMUM RATINGS (T<sub>A</sub> = 25°C unless otherwise noted)**

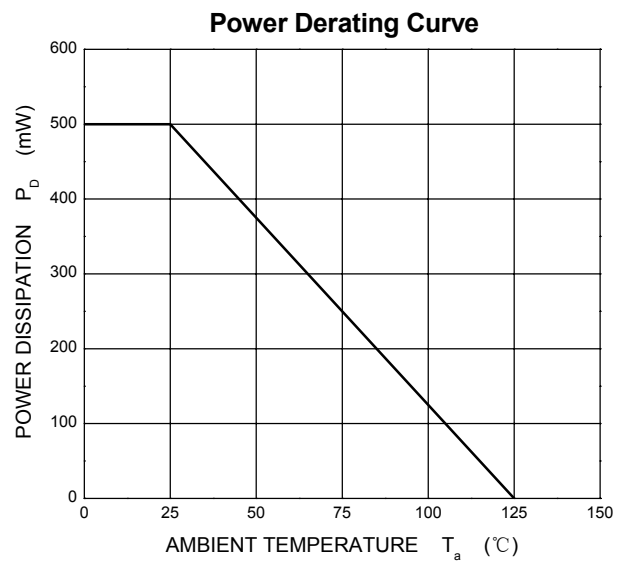
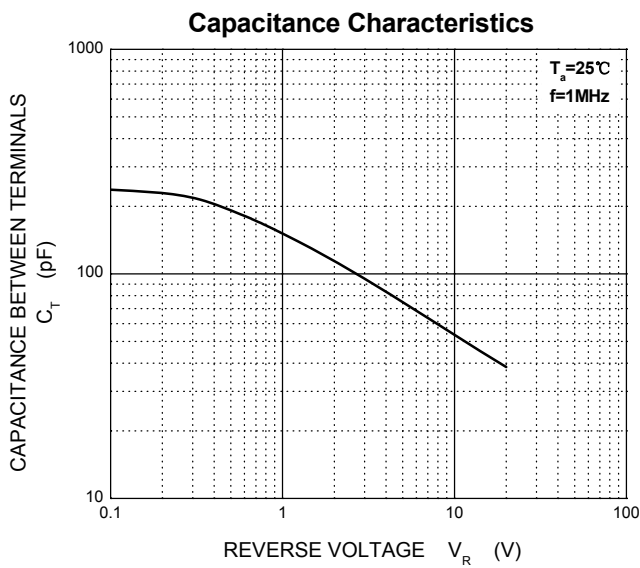
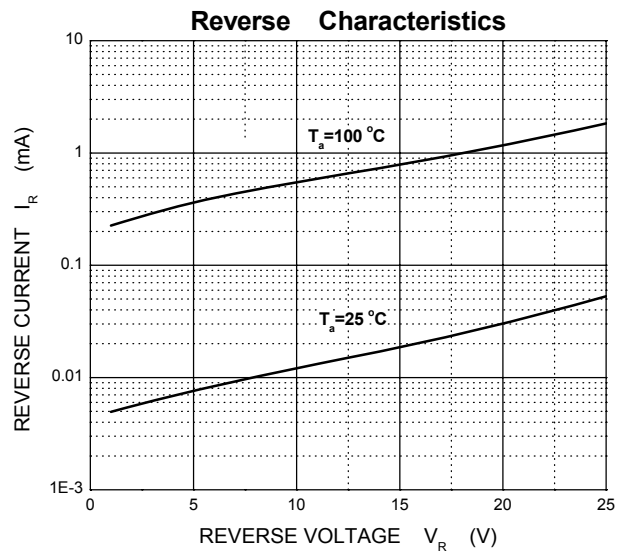
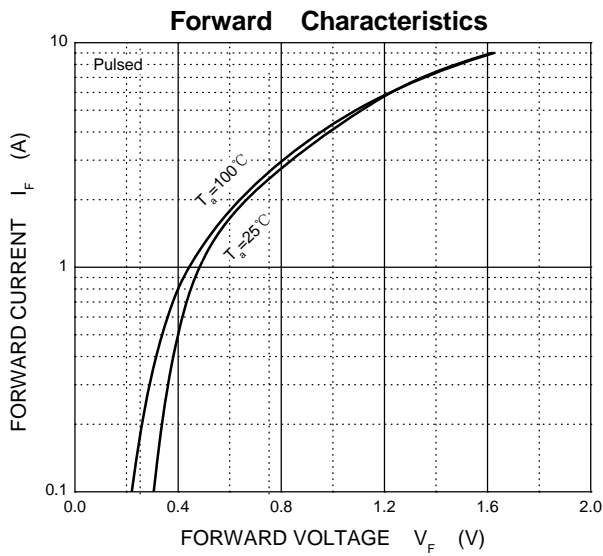
Parameter	Symbol	B5817W	B5818W	B5819W	Unit
Peak Reverse Voltage	V <sub>R</sub>	20	30	40	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	14	21	28	V
Forward Current	I <sub>F</sub>	1			A
Non-Repetitive Peak Forward Surge Current@ t = 8.3 ms	I <sub>FSM</sub>	9			A
Power Dissipation	P <sub>D</sub>	500			mW
Thermal Resistance From Junction To Ambient	R <sub>θJA</sub>	200			°C/W
Junction Temperature	T <sub>J</sub>	125			°C
Storage Temperature	T <sub>STG</sub>	-55 ~+150			°C

**ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25°C unless otherwise specified)**

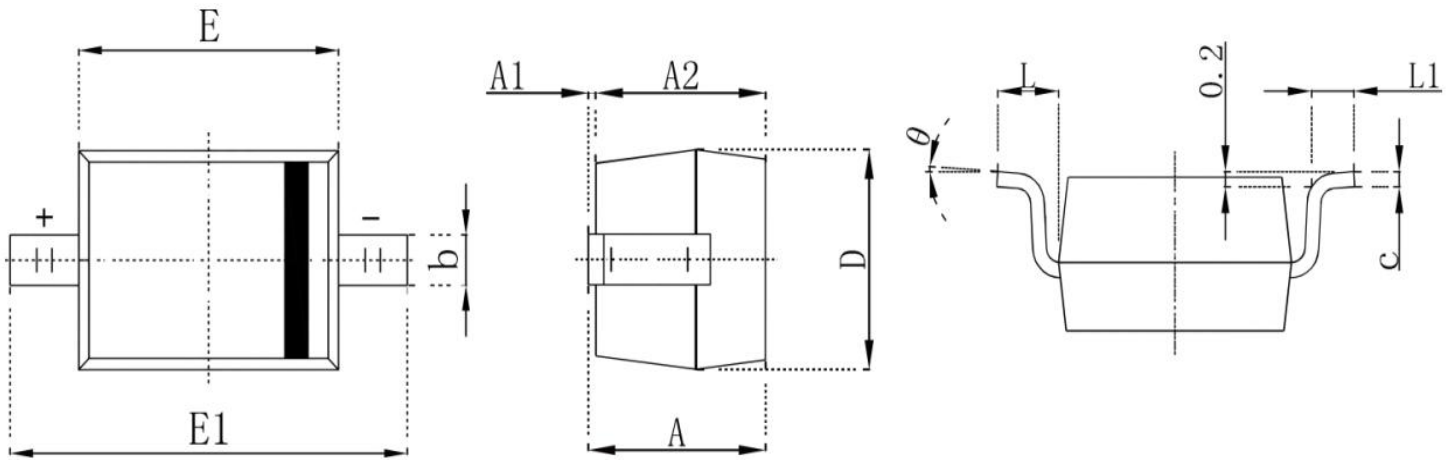
Parameter	Symbol	Test conditions	B5817W	B5818W	B5819W	Unit
Maximum forward voltage	V <sub>F</sub>	I <sub>F</sub> = 1.0A I <sub>F</sub> = 3.0A	0.450 0.750	0.550 0.875	0.600 0.900	V
Maximum reverse breakdown voltage	V <sub>R</sub>	I <sub>R</sub> =1mA	20	30	40	V
Maximum reverse current	I <sub>R</sub>	V <sub>R</sub> =20V B5817W V <sub>R</sub> =30V B5818W V <sub>R</sub> =40V B5819W	1.0			mA
Type junction capacitance	C <sub>D</sub>	V <sub>R</sub> = 4.0V, f = 1MHz	120			pF

SCHOTTKY BARRIER DIODE

Typical Characteristics

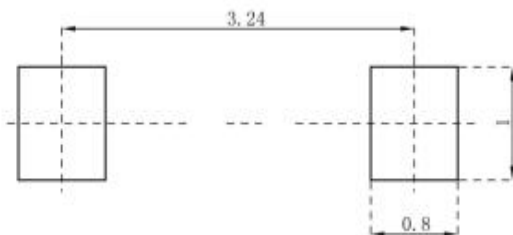


### SOD-123 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.413	0.492
A1	0.000	0.100	0.000	0.039
A2	1.050	1.150	0.413	0.453
b	0.450	0.650	0.177	0.256
c	0.050	0.150	0.020	0.059
D	1.500	1.700	0.591	0.669
E	2.500	2.700	0.984	1.063
E1	3.600	3.900	1.417	1.535
L	0.500REF		0.200REF	
L1	0.250	0.450	0.098	0.177

### SOD-123 Suggested Pad Layout

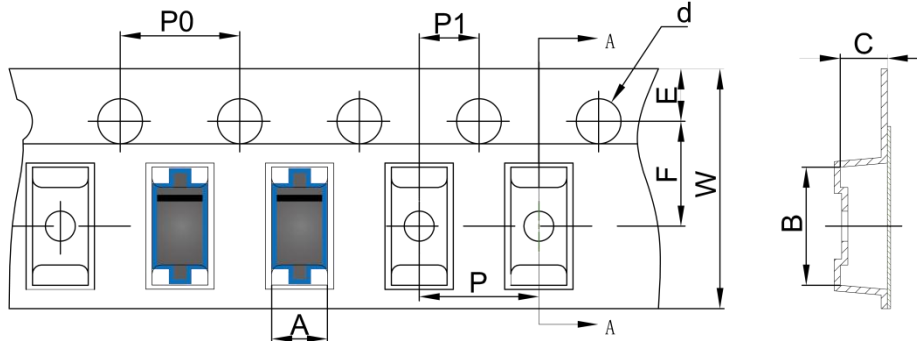


Note:

1. Controlling dimension: in millimeters
2. General tolerance:  $\pm 0.05$
3. The pad layout is for reference purposes only

## SOD-123 Tape and Reel

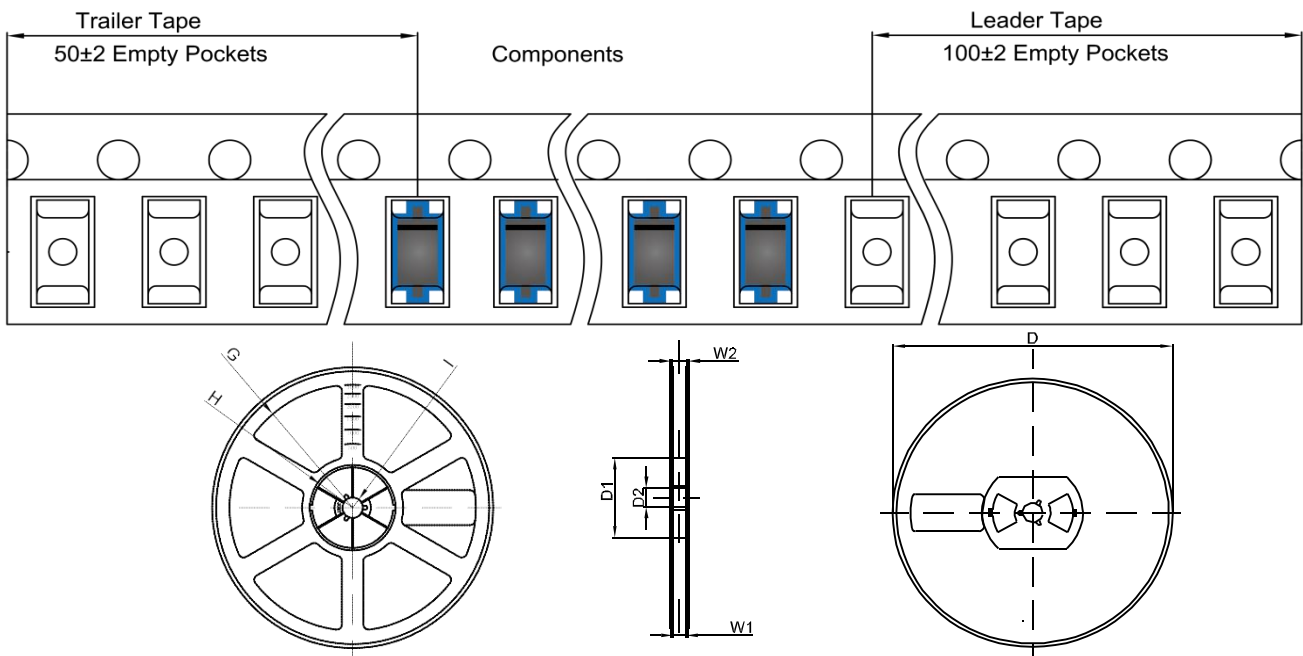
### SOD-123 Embossed Carrier Tape



### SOD-123 Tape Leader and Trailer

DIMENSIONS ARE IN MILLIMETER										
TYPE	A	B	C	d	E	F	P0	P	P1	W
SOD-123	1.85	3.95	1.57	Ø1.55	1.75	3.50	4.00	4.00	2.00	8.00
TOLERANCE	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1

### SOD-123 Reel



DIMENSIONS ARE IN MILLIMETER								
REEL OPTION	D	D1	D2	G	H	I	W1	W2
7" DIA	Ø178	54.40	13.00	R78	R25.60	R6.50	9.50	12.30
TOLERANCE	±2	±1	±1	±1	±1	±1	±1	±1