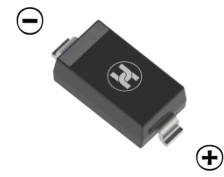
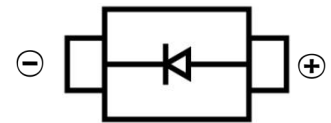


**SCHOTTKY BARRIER DIODE**
**FEATURES**

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


**SOD-123**

**MECHANICAL DATA**

- Case: SOD-123
- Case Material: Molded Plastic. UL flammability
- Classification Rating: 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Weight: 0.005 grams (approximate)

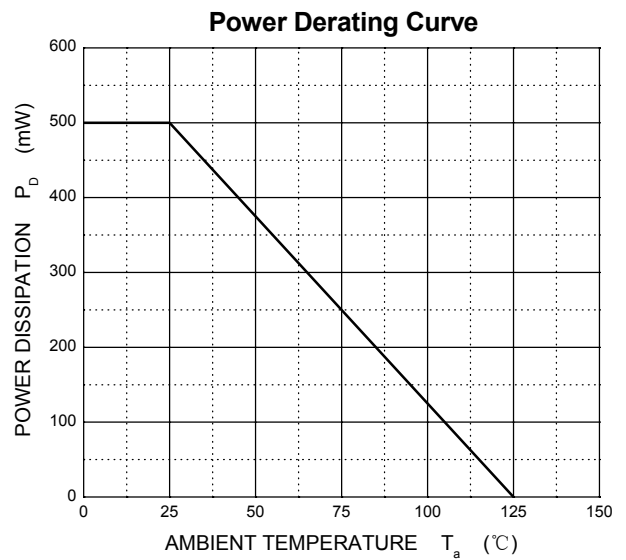
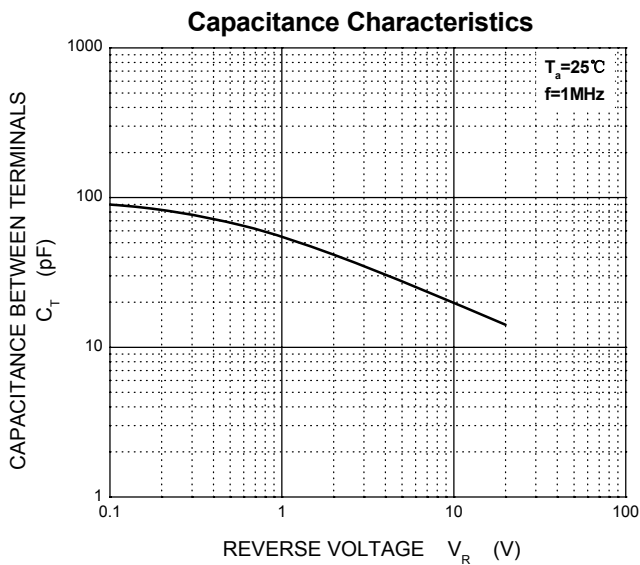
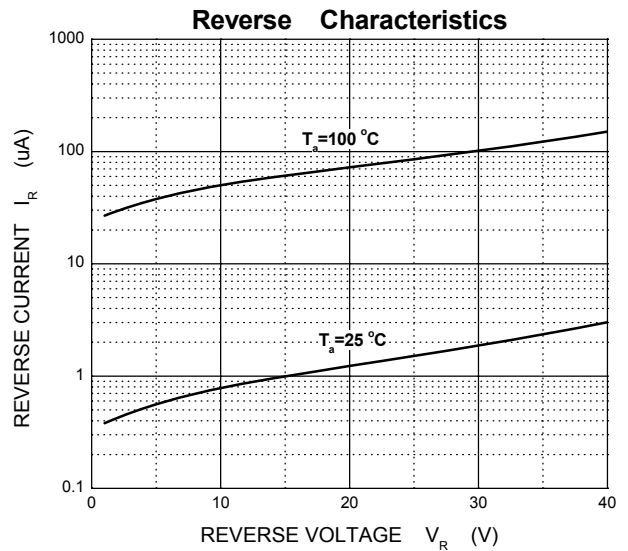
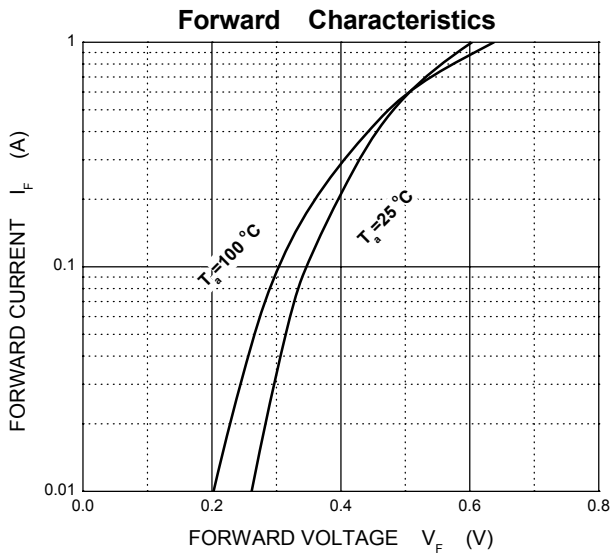
**Maximum Ratings and Electrical characteristics**

Ratings at 25 °C ambient temperature unless otherwise specified.

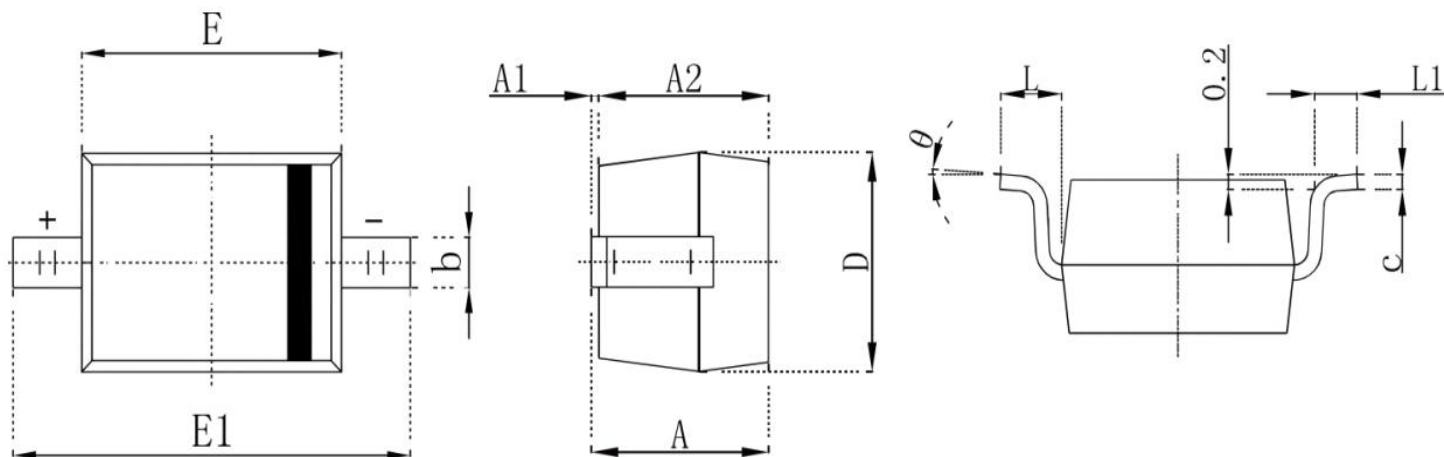
Parameter	Symbols	B0520W	B0530W	B0540W	Units
Peak Repetitive Reverse Voltage	$V_{RRM}$	20	30	40	V
RMS reverse voltage reverse voltage (DC)	$V_{RMS}$	14	21	28	V
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	V
Maximum Average Forward Current at Ta=25°C	$I_o$	0.5			A
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	25			A
Maximum Instantaneous Forward Voltage	$I_F=0.1A$	0.330	0.375	–	V
	$I_F=0.5A$	0.390	0.430	0.510	
	$I_F=1A$	–	–	0.620	
Reverse current	$V_R=10V$	75	–	–	uA
	$V_R=15V$	–	20	–	
	$V_R=20V$	250	–	10	
	$V_R=30V$	–	130	–	
	$V_R=40V$	–	–	20	
Thermal Resistance, Junction to Ambient Air	$R_{\theta JA}$	200			°C/W
Junction temperature	$T_j$	-55 ~ +125			°C
Storage temperature	$T_{stg}$	-55 ~ +150			°C

SCHOTTKY BARRIER DIODE

Typical Characteristics

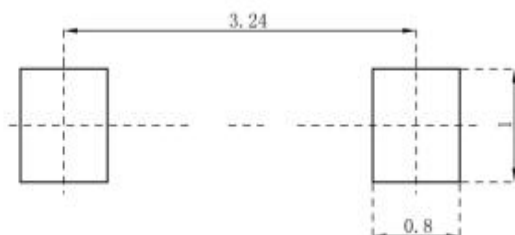


### SOD-123 Package Outline Dimensions



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

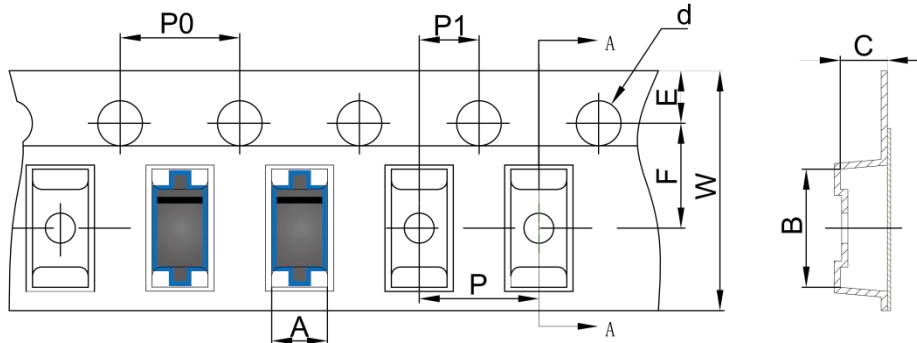


Note:

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

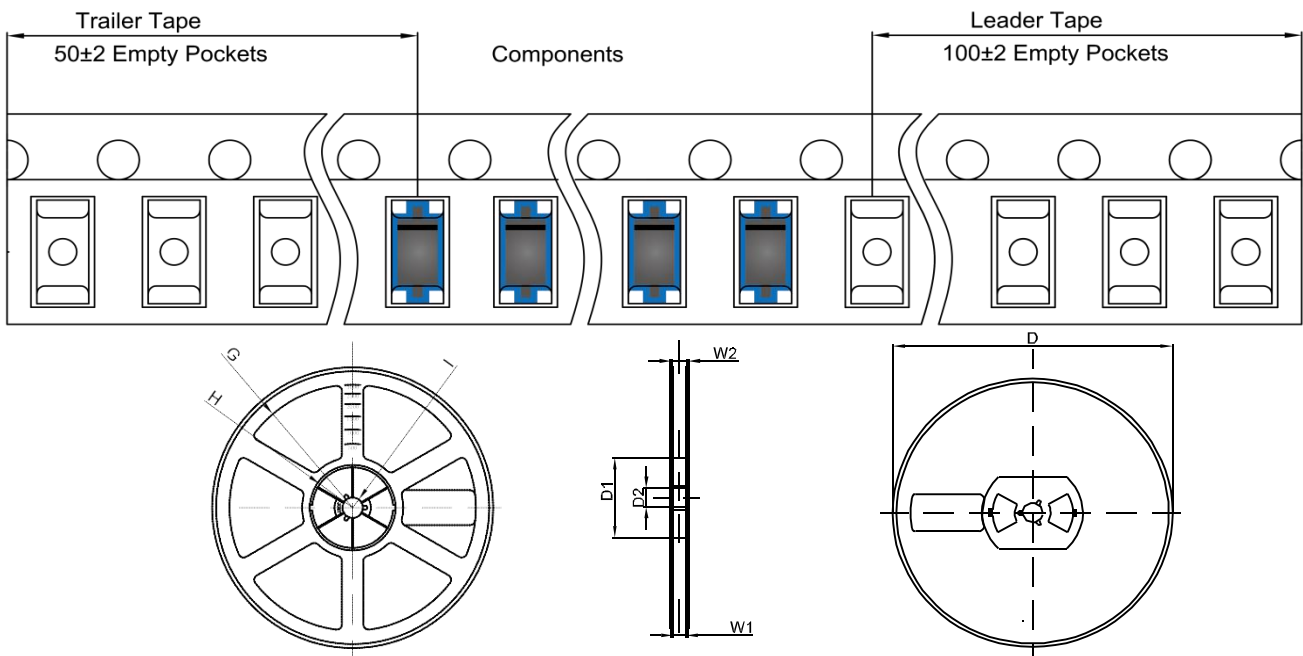
### SOD-123 Embossed Carrier Tape



### 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