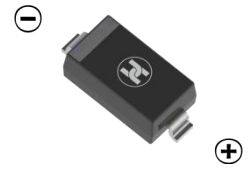
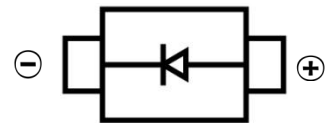


**FEATURES**

- Low Forward Voltage
- Fast Switching
- 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 (T<sub>A</sub> = 25°C unless otherwise noted)**

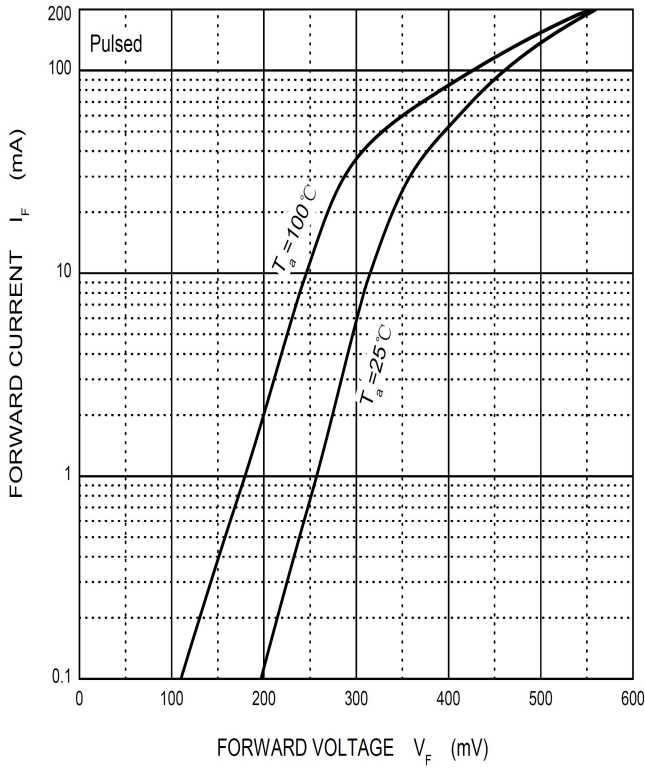
Parameter	Symbol	Value	Unit
Peak Reverse Voltage	V <sub>R</sub>	30	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	21	V
Forward Current	I <sub>F</sub>	200	mA
Average rectified output current	I <sub>O</sub>	100	mA
Non-Repetitive Peak Forward Surge Current @ t = 8.3 ms	I <sub>FSM</sub>	600	mA
Power Dissipation	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)**

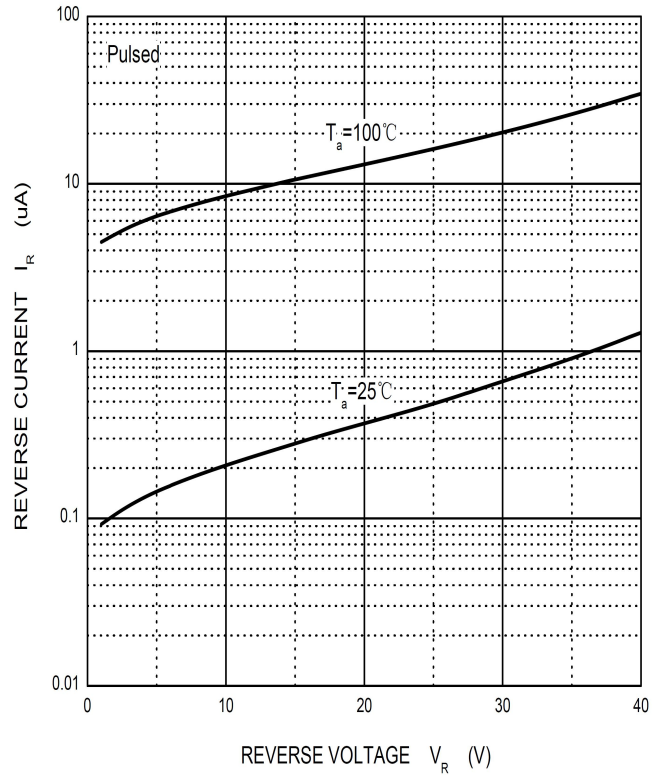
Parameter	Symbol	Min	Max	Unit	Conditions
Forward voltage	V <sub>F</sub>		0.24	V	I <sub>F</sub> =0.10mA
			0.32		I <sub>F</sub> =1mA
			0.40		I <sub>F</sub> =10mA
			0.50		I <sub>F</sub> =30mA
			1.00		I <sub>F</sub> =100mA
Reverse voltage	V <sub>R</sub>	30		V	I <sub>R</sub> =100uA
Reverse voltage leakage current	I <sub>R</sub>		2	uA	V <sub>R</sub> =25V
Diode capacitance	C <sub>D</sub>		10	pF	V <sub>R</sub> =1V,f=1MHz
Reverse recovery time	T <sub>RR</sub>		5	nS	I <sub>F</sub> =10mA,I <sub>R</sub> =10mA to 1mA ,R <sub>L</sub> =100Ω

**Typical Characteristics**

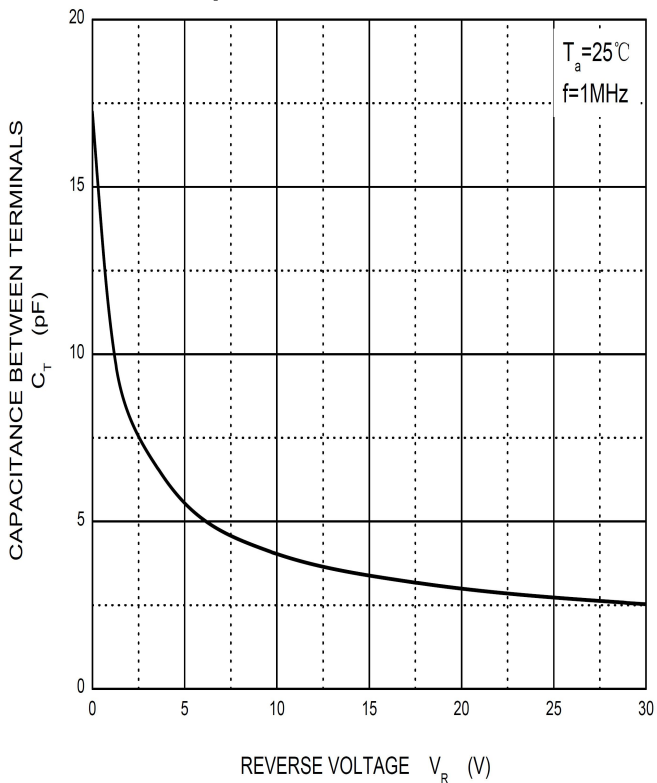
**Forward Characteristics**



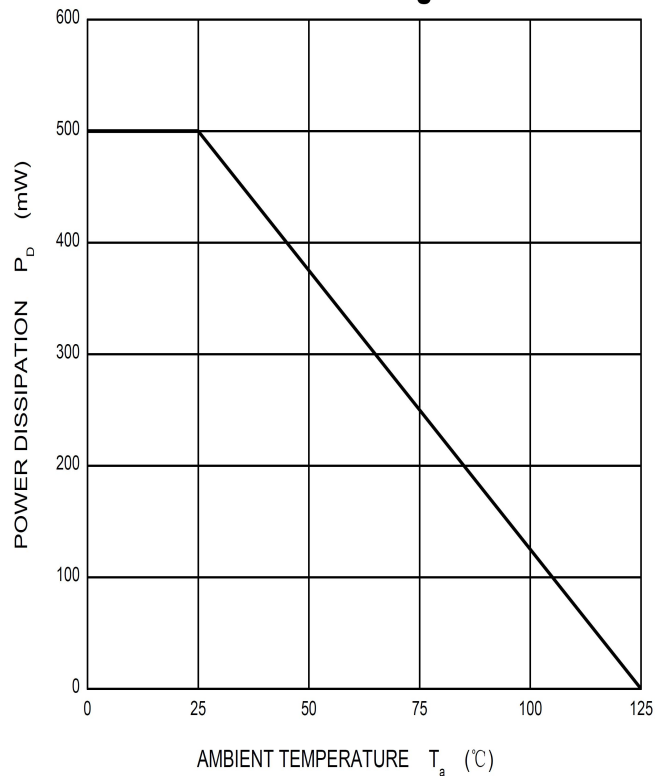
**Reverse Characteristics**

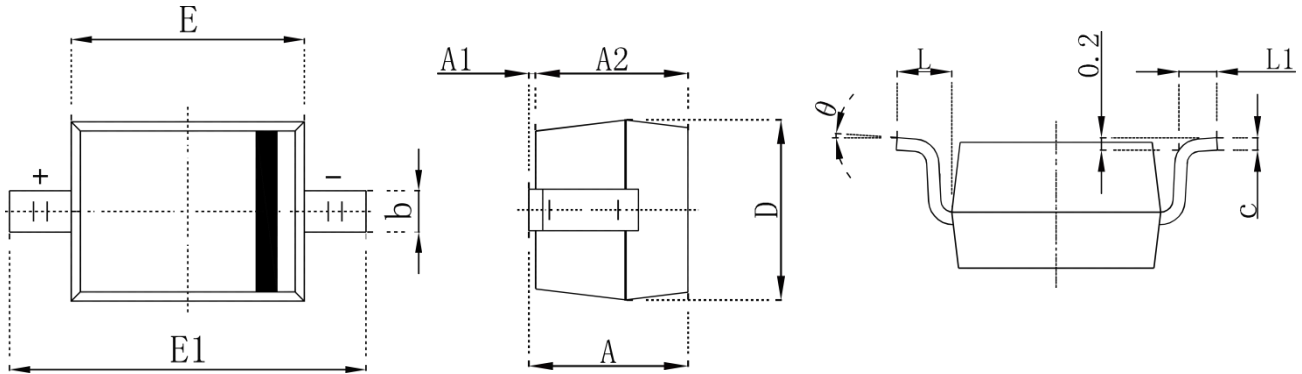


**Capacitance Characteristics**

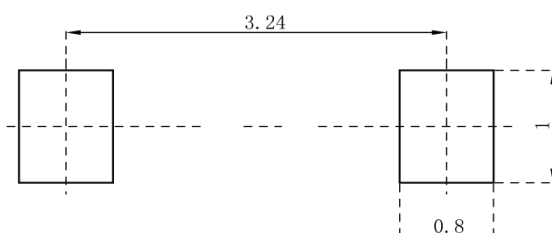


**Power Derating Curve**



**SOD-123 Package Outline Dimensions**


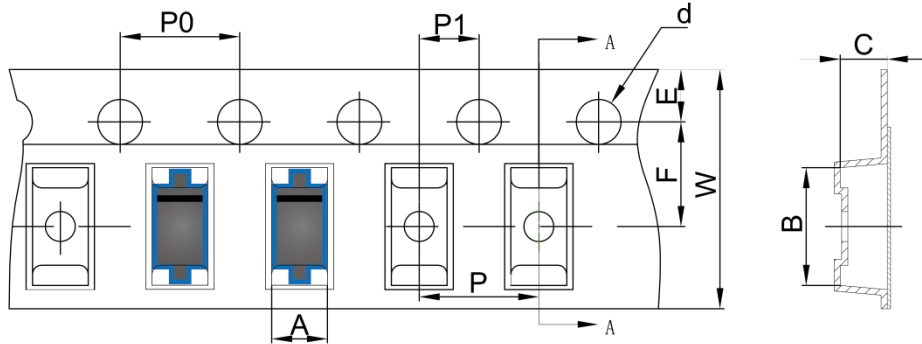
Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.450	0.650	0.018	0.026
c	0.080	0.150	0.003	0.006
D	1.500	1.700	0.059	0.067
E	2.600	2.800	0.102	0.110
E1	3.550	3.850	0.140	0.152
L	0.500 REF		0.020 REF	
L1	0.250	0.450	0.010	0.018
$\theta$	0°	8°	0°	8°

**SOD-123 Suggested Pad Layout**

**Note:**

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

**SOD-123 Tape and Reel**

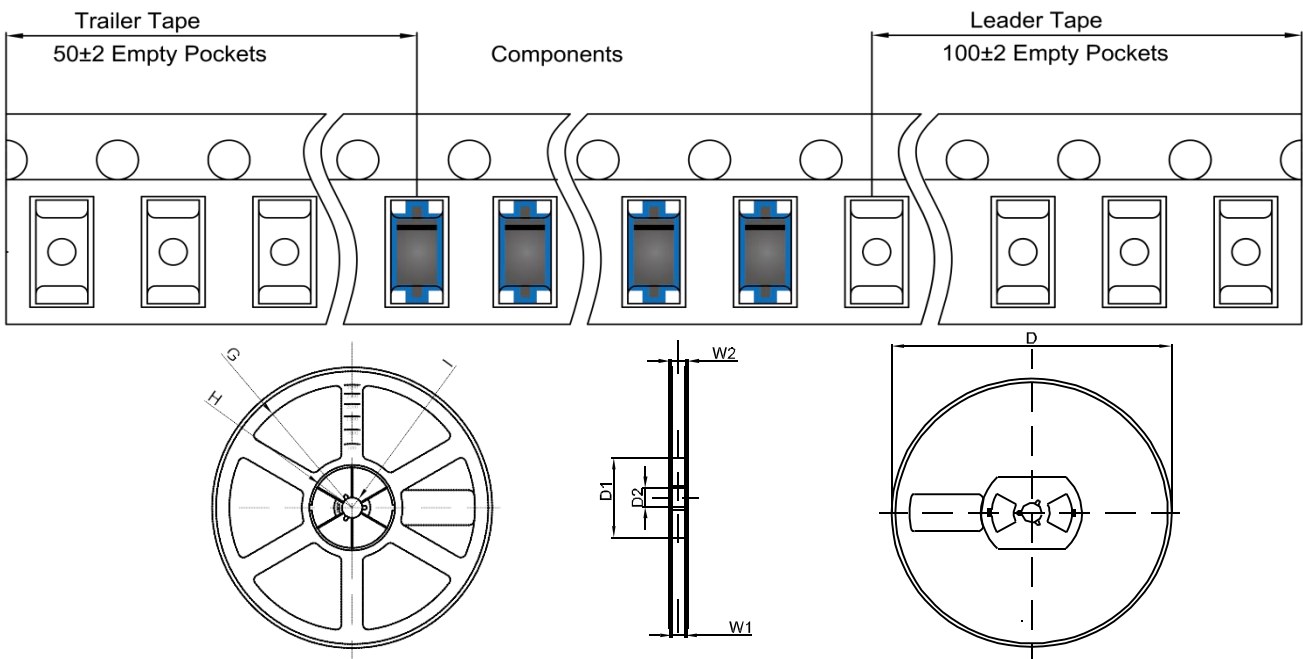
**SOD-123 Embossed Carrier Tape**



**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