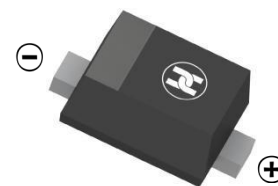
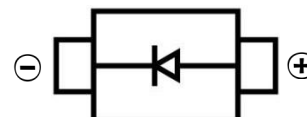


**FAST SWITCHING DIODE**
**FEATURES**

- Small Package
- Low Reverse Current
- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion


**SOD-523**

**MECHANICAL DATA**

- Case: SOD-523
- Case Material: Molded Plastic. UL flammability
- Classification Rating: 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Weight: 0.008 grams (approximate)

**MARKING:T4**
**MAXIMUM RATINGS (T<sub>A</sub> = 25°C unless otherwise noted)**

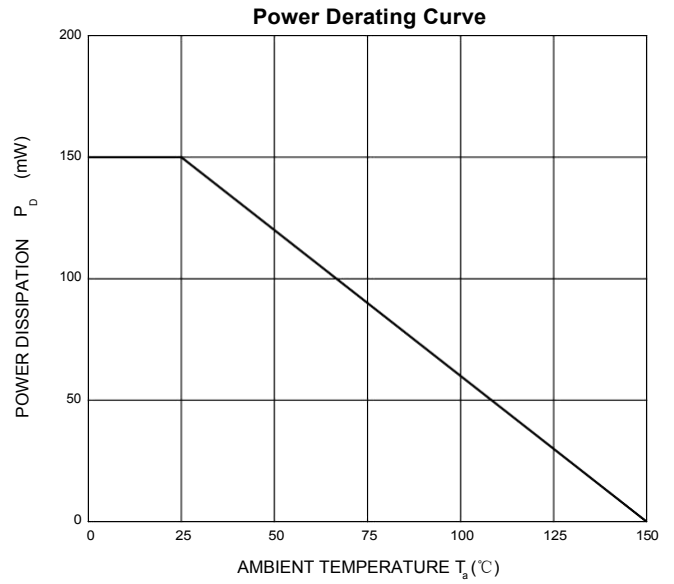
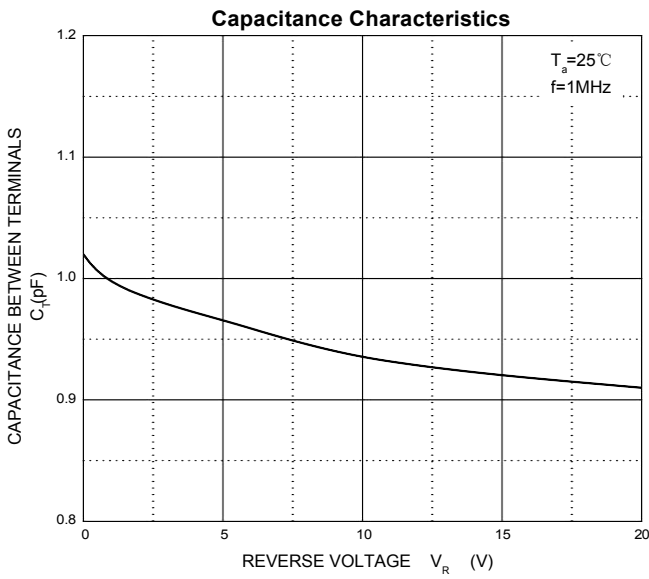
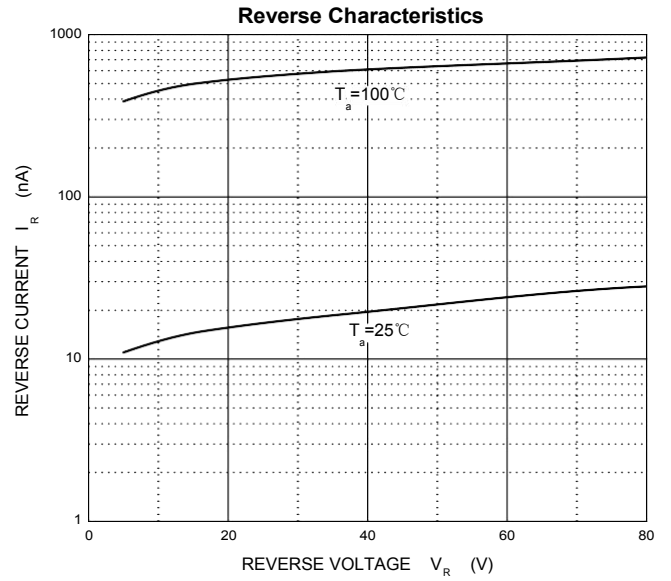
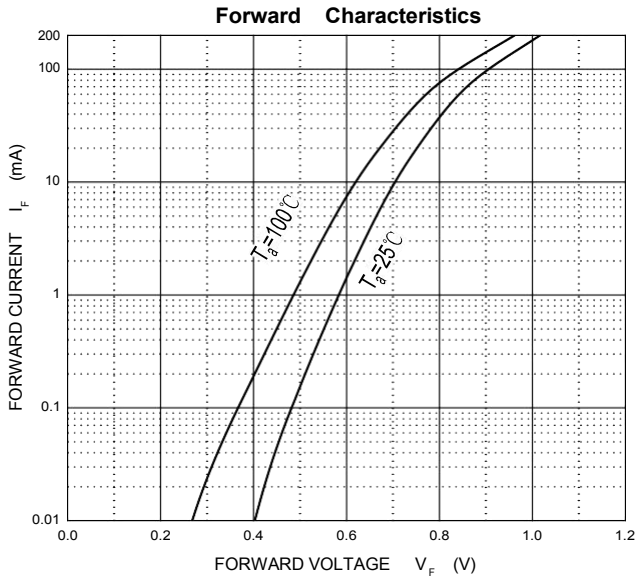
Symbol	Parameter	Value	Unit
V <sub>RM</sub>	Non-Repetitive Peak Reverse Voltage	100	V
V <sub>R</sub>	Reverse Voltage	75	V
V <sub>RRM</sub>	Peak Repetitive Reverse Voltage		
V <sub>RWM</sub>	Working Peak Reverse Voltage		
V <sub>R(RMS)</sub>	RMS Reverse Voltage	53	V
I <sub>o</sub>	Average Rectified Output Current	150	mA
I <sub>FM</sub>	Forward Continuous Current	300	mA
I <sub>FSM</sub>	Non-repetitive Peak Forward Surge Current@t= 8.3ms	2	A
P <sub>D</sub>	Power Dissipation	150	mW
R <sub>θJA</sub>	Thermal Resistance from Junction to Ambient	833	°C/W
T <sub>j</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature	-55~+150	°C

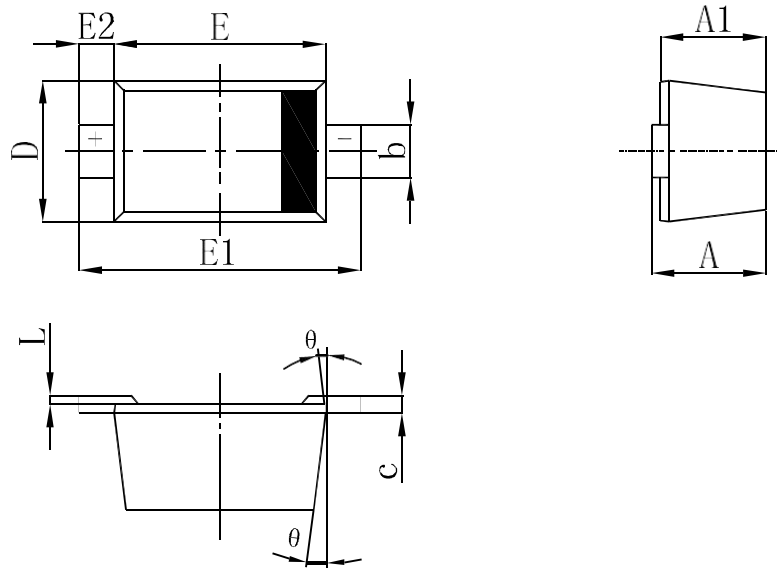
**ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25°C unless otherwise specified)**

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse voltage	V <sub>(BR)</sub>	I <sub>R</sub> =1μA	75			V
Reverse current	I <sub>R</sub>	V <sub>R</sub> =75V			1	μA
		V <sub>R</sub> =20V			25	nA
Forward voltage	V <sub>F</sub>	I <sub>F</sub> =1mA			0.715	V
		I <sub>F</sub> =10mA			0.855	V
		I <sub>F</sub> =50mA			1	V
		I <sub>F</sub> =150mA			1.25	V
Total capacitance	C <sub>tot</sub>	V <sub>R</sub> =0V, f=1MHz			2	pF
Reverse recovery time	t <sub>rr</sub>	I <sub>F</sub> = I <sub>R</sub> =10mA, I <sub>rr</sub> =0.1*I <sub>R</sub> , R <sub>L</sub> =100 Ω			4	ns

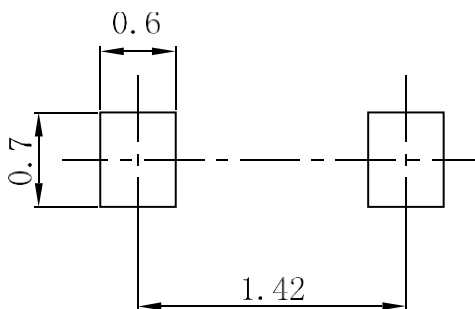
**FAST SWITCHING DIODE**

**Typical Characteristics**



**FAST SWITCHING DIODE**
**SOD-523 Package Outline Dimensions**


Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.510	0.770	0.020	0.031
A1	0.500	0.700	0.020	0.028
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	0.750	0.850	0.030	0.033
E	1.100	1.300	0.043	0.051
E1	2.250	2.750	0.100	0.108
E2	0.200 REF		0.008 REF	
L	0.010	0.070	0.001	0.003
$\theta$	7°REF		7°REF	

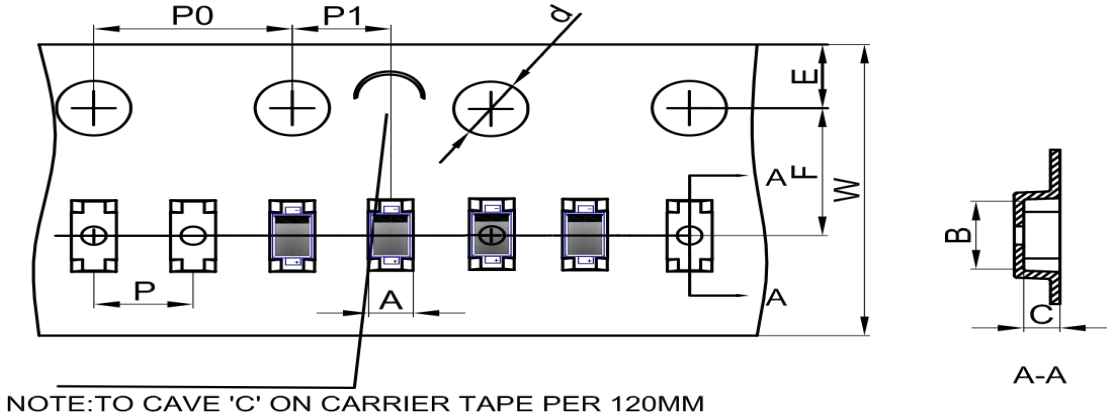
**SOD-523 Suggested Pad Layout**

**Note:**

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

FAST SWITCHING DIODE

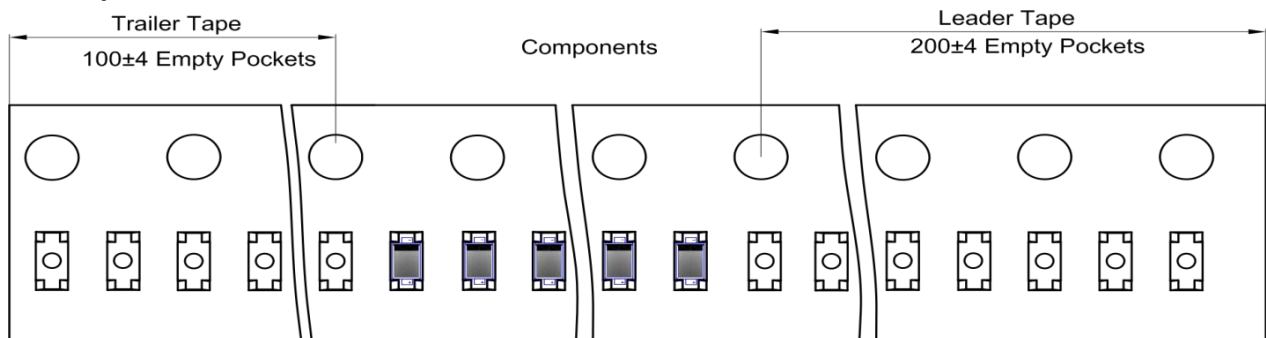
**SOD-523 Tape and Reel**

**SOD-523 Embossed Carrier Tape**

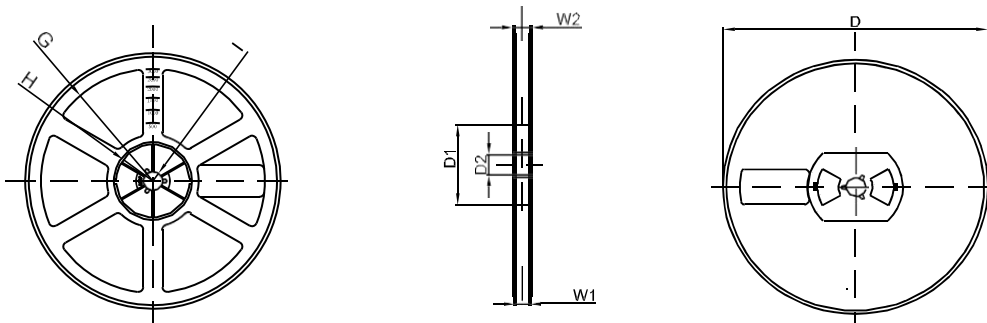


DIMENSIONS ARE IN MILLIMETER										
TYPE	A	B	C	d	E	F	P0	P	P1	W
SOD-523	0.90	1.94	0.73	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00
TOLERANCE	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1

**SOD-523 Tape Leader and Trailer**



**SOD-523 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