

## SOD-523 Plastic-Encapsulate Diodes

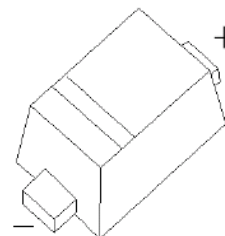
### Features:

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

### MARKING: T5



### SOD-523



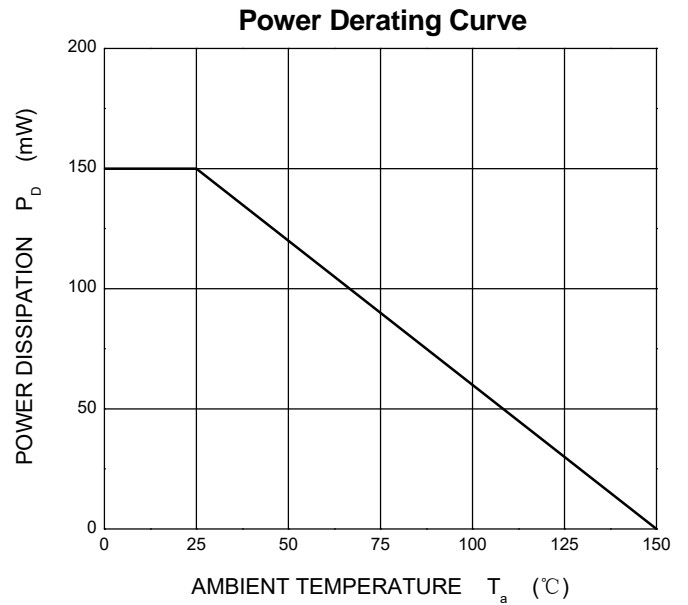
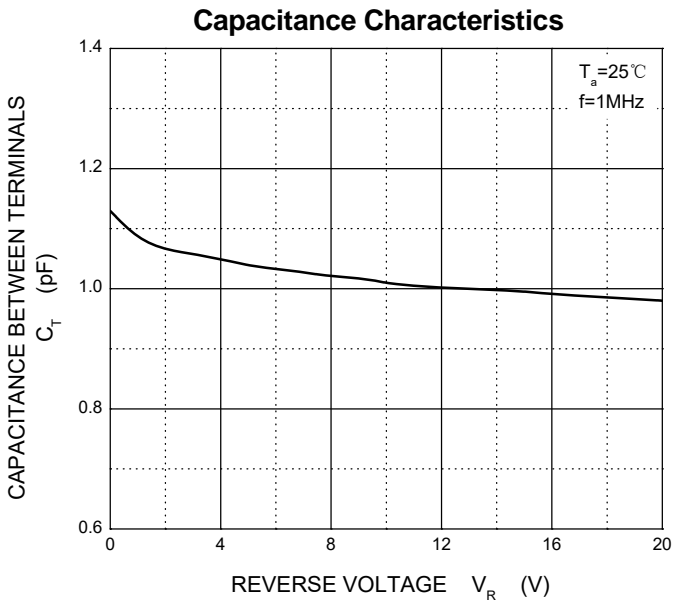
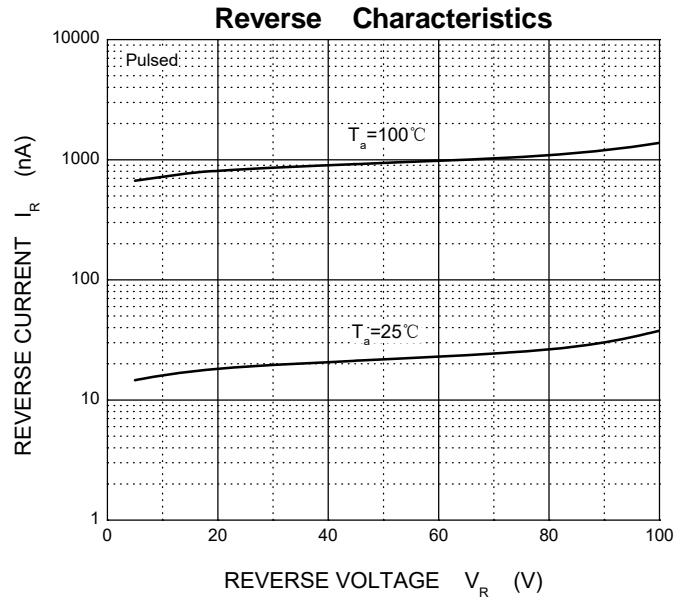
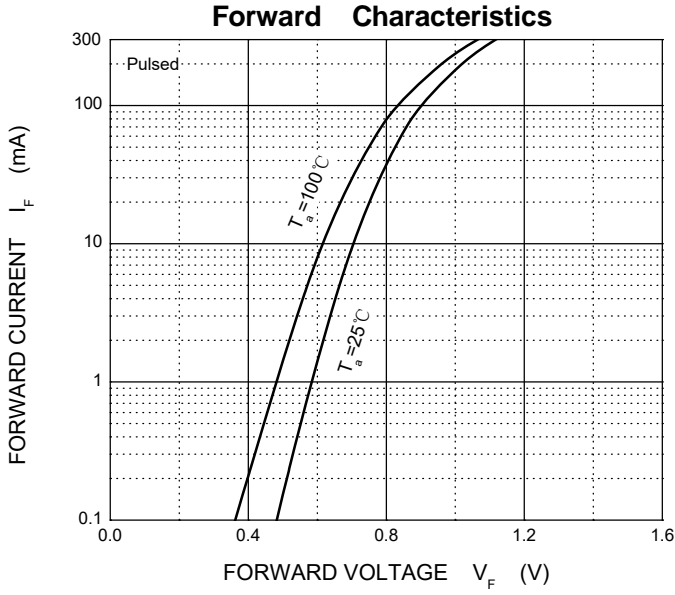
### Maximum Ratings and Electrical Characteristics, Single Diode @Ta=25°C

Parameter	Symbol	Limit	Unit
Non-Repetitive Peak Reverse Voltage	$V_{RM}$	100	V
Peak Repetitive Peak Reverse Voltage	$V_{RRM}$	75	V
Working Peak Reverse Voltage	$V_{RWM}$		
DC Blocking Voltage	$V_R$		
RMS Reverse Voltage	$V_{R(RMS)}$	53	V
Forward Continuous Current	$I_{FM}$	500	mA
Average Rectified Output Current	$I_O$	250	mA
Non-Repetitive Peak Forward Surge Current @t=8.3ms	$I_{FSM}$	2.0	A
Power Dissipation	$P_d$	150	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	833	°C/W
Operation Junction and Storage Temperature Range	$T_J, T_{STG}$	-55~+150	°C

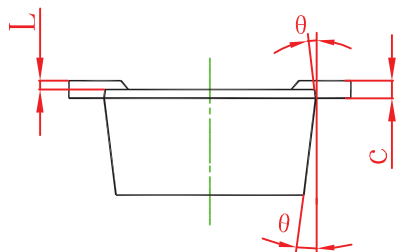
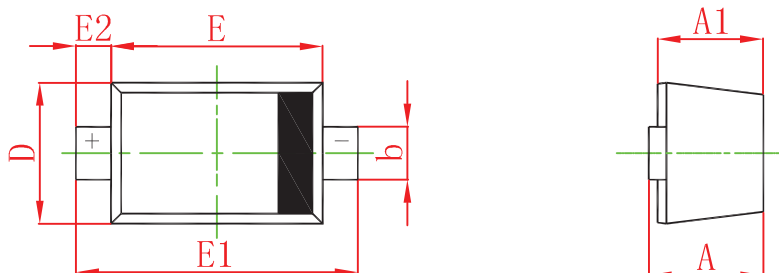
### ELECTRICAL CHARACTERISTICS(T<sub>a</sub>=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse voltage	$V_{(BR)1}$	$I_R=5\mu A$	75			V
Reverse voltage	$V_{(BR)2}$	$I_R=100\mu A$	100			V
Reverse current	$I_R$	$V_R=75V$			1	$\mu A$
		$V_R=20V$			25	nA
Forward voltage	$V_F$	$I_F=5mA$			0.715	V
		$I_F=10mA$			0.855	V
		$I_F=100mA$			1	V
		$I_F=150mA$			1.25	V
Total capacitance	$C_{tot}$	$V_R=0V, f=1MHz$			4	pF
Reverse recovery time	$t_{rr}$	$I_F=I_R=10mA, I_{rr}=0.1*I_R, R_L=100\Omega$			4	ns

**Typical Characteristics**

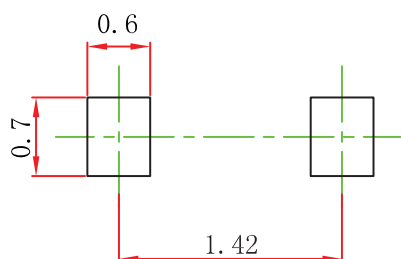


### SOD-523 Package Outline Dimensions



Sym ol	imensions In Millimeters		imensions 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	1.500	1.700	0.059	0.067
E2	0.200 REF		0.008 REF	
L	0.010	0.070	0.001	0.003
θ	7° REF		7° REF	

### SOD-523 Suggested Pad Layout

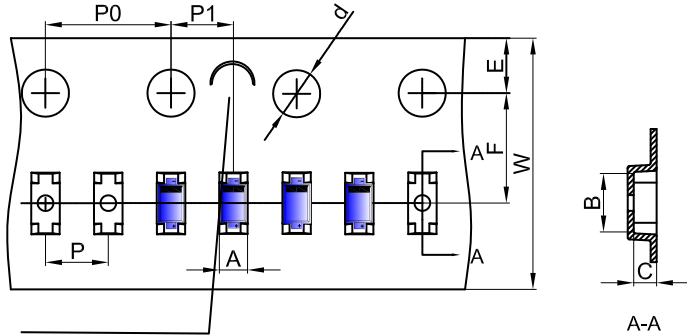


**Note:**

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

**SOD-523 Tape and Reel**

**SOD-523 Embossed Carrier Tape**



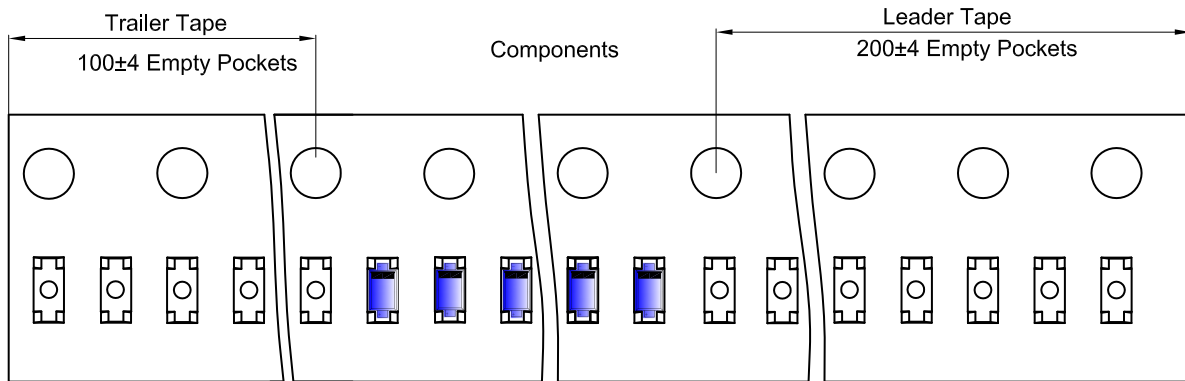
NOTE: TO CAVE 'C' ON CARRIER TAPE PER 120MM

**Packaging Description:**

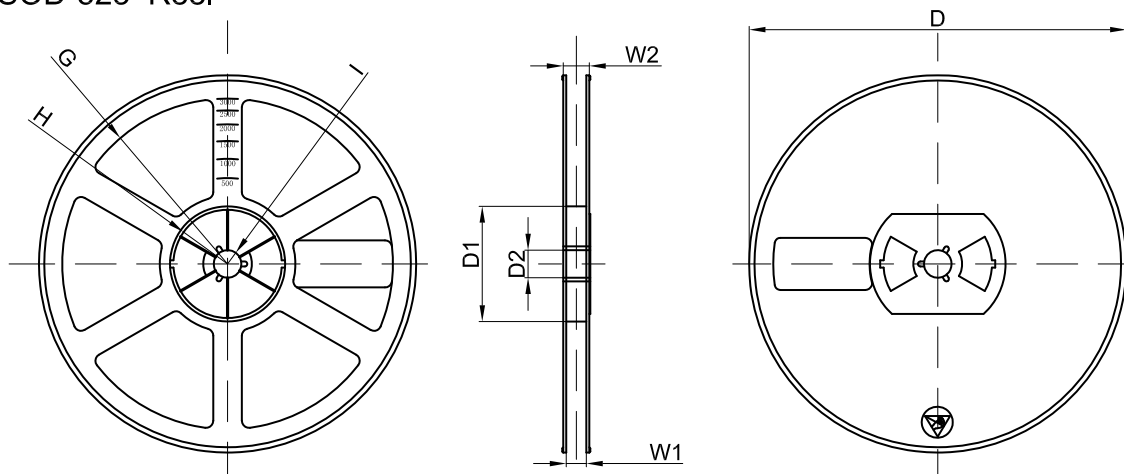
SOD-523 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 8,000 units per 7" or 17.8cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOD-523	0.9	1.94	0.73	Ø1.50	1.75	3.50	4.00	2.00	2.00	8.00

**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	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
8000 pcs	7 inch	120,000 pcs	203×203×195	480,000 pcs	438×438×220	