



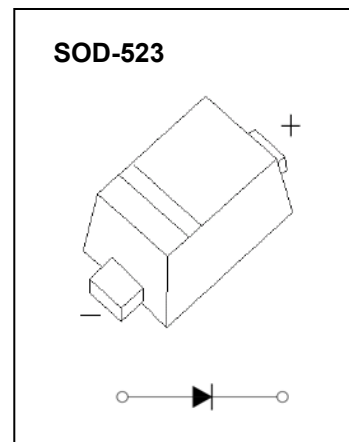
SOD-523 Plastic-Encapsulate Diodes

1N4448WT FAST SWITCHING DIODE

FEATURES

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

MARKING: T5



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

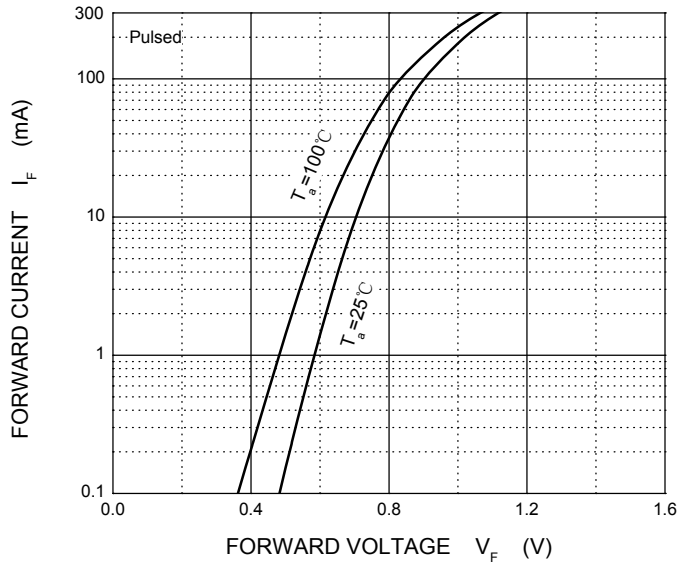
Parameter	Symbol	Limit	Unit
Non-Repetitive Peak Reverse Voltage	V_{RM}	100	V
Peak Repetitive Peak Reverse Voltage	V_{RRM}	75	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
RMS Reverse Voltage	$V_{R(RMS)}$	53	V
Forward Continuous Current	I_{FM}	500	mA
Average Rectified Output Current	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_a=25°C unless otherwise specified)

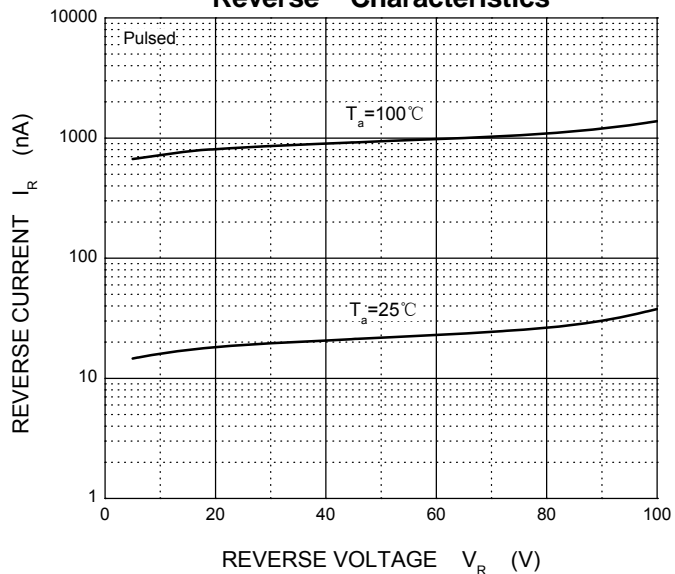
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse voltage	$V_{(BR)1}$	$I_R=5\mu A$	75			V
Reverse voltage	$V_{(BR)2}$	$I_R=100\mu A$	100			V
Reverse current	I_R	$V_R=75V$			1	μA
		$V_R=20V$			25	nA
Forward voltage	V_F	$I_F=5mA$			0.715	V
		$I_F=10mA$			0.855	V
		$I_F=100mA$			1	V
		$I_F=150mA$			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

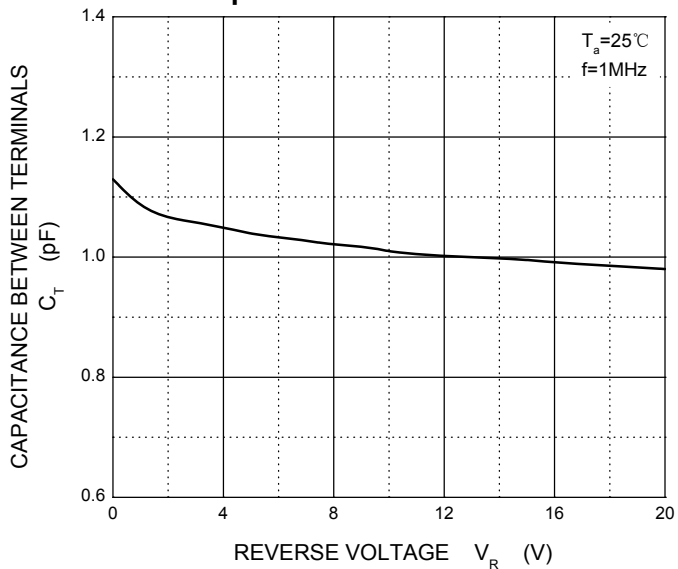
Forward Characteristics



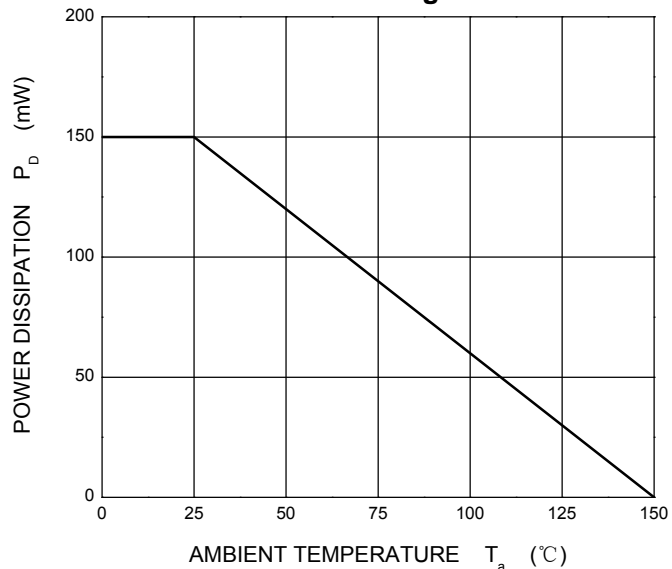
Reverse Characteristics



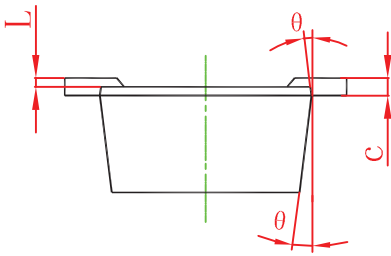
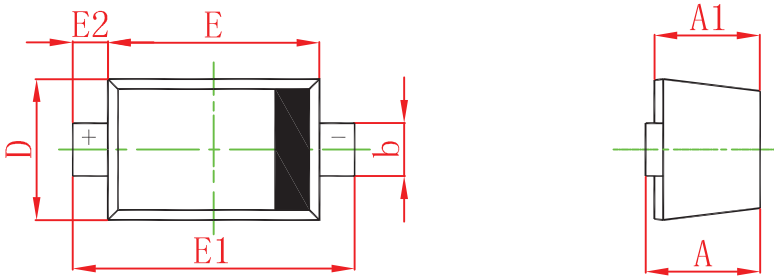
Capacitance Characteristics



Power Derating Curve

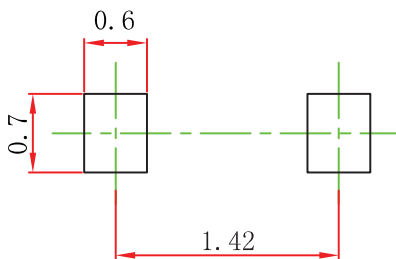


SOD-523 Package Outline Dimensions



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	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

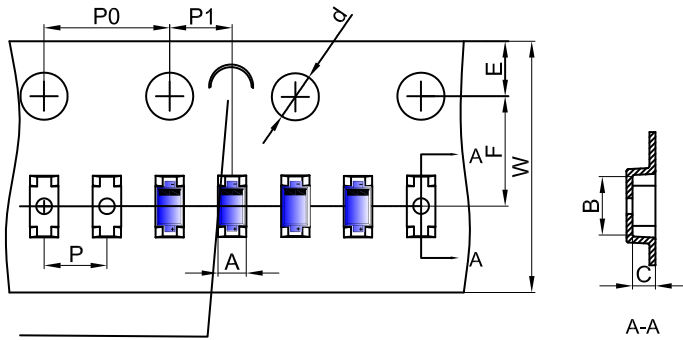


Note:

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



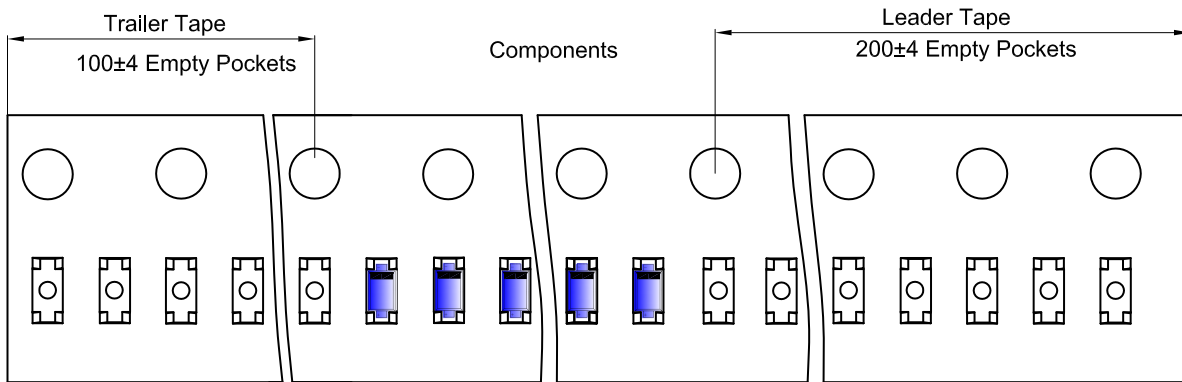
Packaging Description:

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).

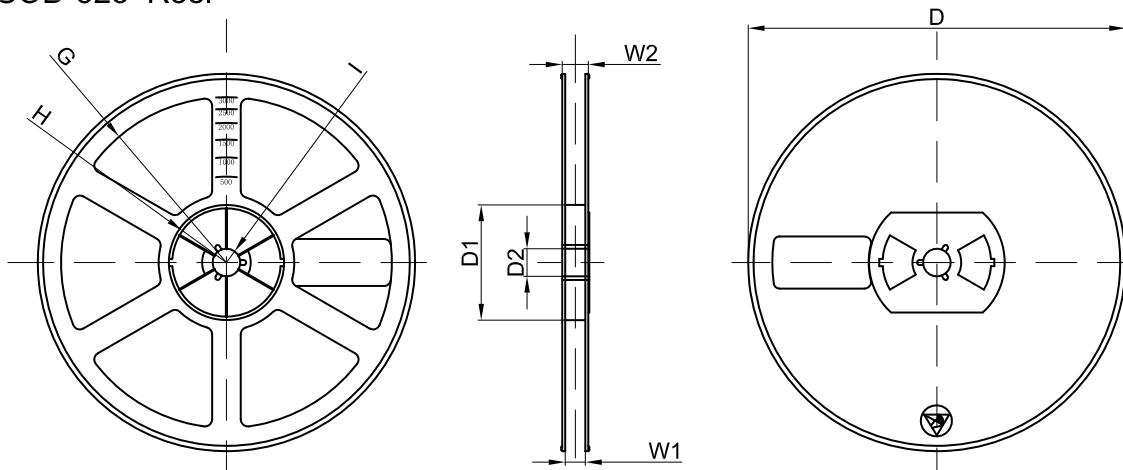
NOTE: TO CAVE 'C' ON CARRIER TAPE PER 120MM

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	