

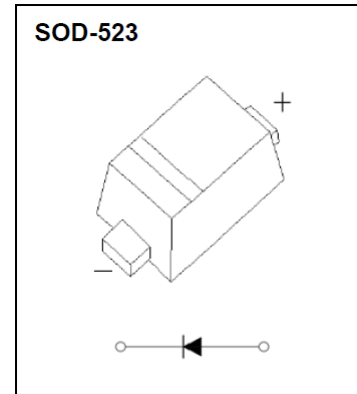


## AD-1N4148WT Plastic-Encapsulated Diode

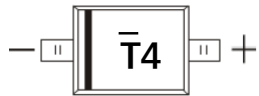
AD-1N4148WT      Fast switching diode

### FEATURES

- Small package
- Low  $I_R$
- High switching speed
- AEC-Q101 qualified



### MARKING



T4 = Device code

The marking bar indicates the cathode

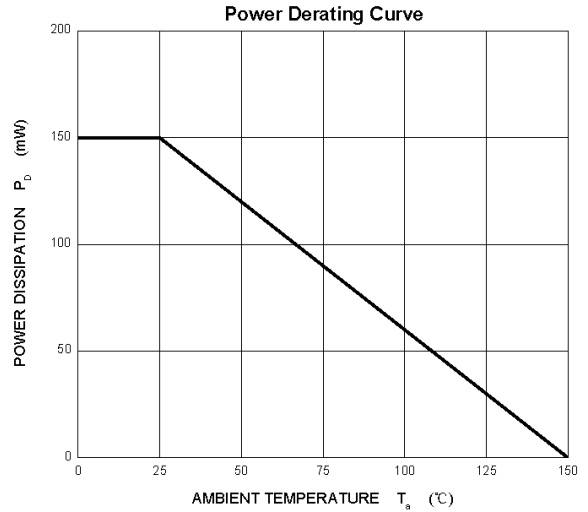
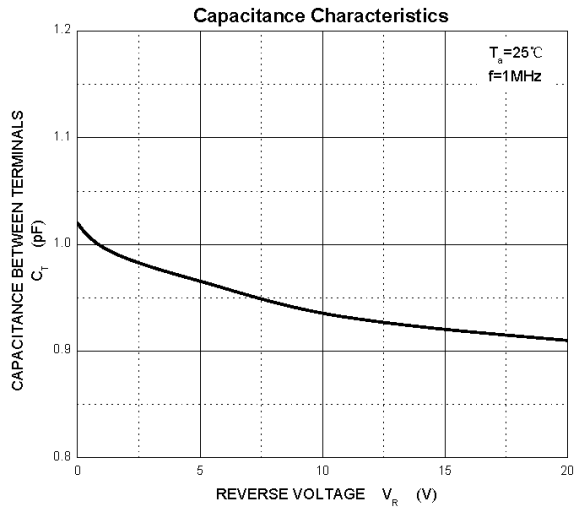
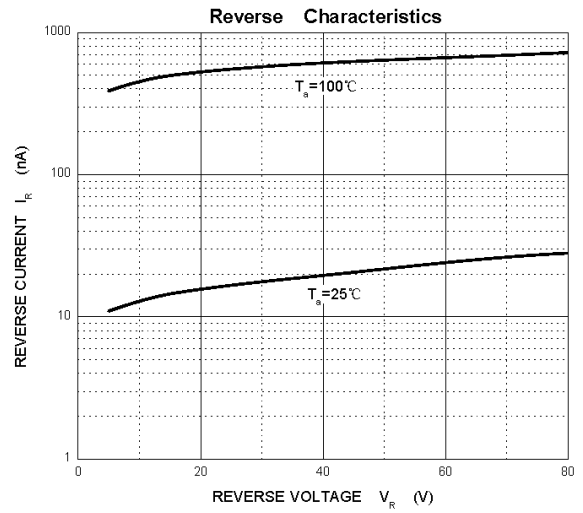
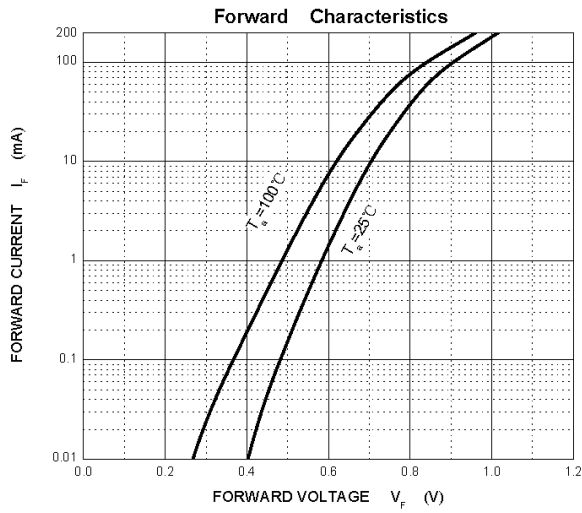
**MAXIMUM RATINGS ( $T_j = 25^\circ\text{C}$  unless otherwise specified)**

Parameter	Symbol	Value	Unit
Non-repetitive peak reverse voltage	$V_{RM}$	100	V
Reverse voltage	$V_R$	75	V
Peak repetitive reverse voltage	$V_{RRM}$	75	V
Working peak reverse voltage	$V_{RWM}$	75	V
RMS reverse voltage	$V_{R(RMS)}$	53	V
Average rectified output current	$I_O$	150	mA
Forward continuous current	$I_{FM}$	300	mA
Non-repetitive peak forward surge current @ $t = 8.3\text{ms}$	$I_{FSM}$	2	A
Power dissipation	$P_D$	150	mW
Thermal resistance from junction to ambient	$R_{\theta JA}$	833	$^\circ\text{C/W}$
Operating junction and storage temperature range	$T_j, T_{stg}$	-55 ~ 150	$^\circ\text{C}$

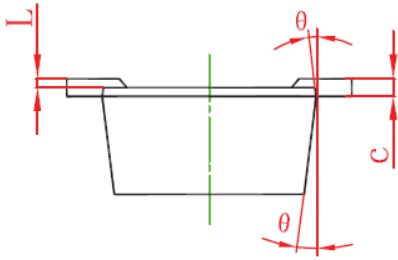
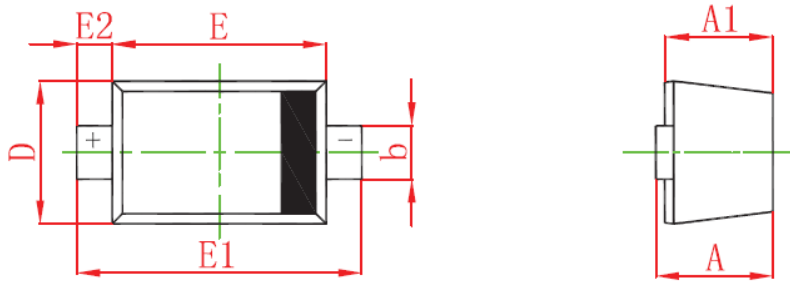
**ELECTRICAL CHARACTERISTICS ( $T_j = 25^\circ\text{C}$  unless otherwise specified)**

Parameter	Symbol	Test condition	Min	Typ	Max	Unit
Reverse voltage	$V_{(BR)}$	$I_R = 1\mu\text{A}$	75	-	-	V
Reverse current	$I_R$	$V_R = 75\text{V}$	-	-	1	$\mu\text{A}$
		$V_R = 20\text{V}$	-	-	25	nA
Forward voltage	$V_{F1}$	$I_F = 1\text{mA}$	-	-	0.715	V
	$V_{F2}$	$I_F = 10\text{mA}$	-	-	0.855	V
	$V_{F3}$	$I_F = 50\text{mA}$	-	-	1	V
	$V_{F4}$	$I_F = 150\text{mA}$	-	-	1.25	V
Total capacitance	$I_{tot}$	$V_R = 0\text{V}, f = 1\text{MHz}$	-	-	2	pF
Reverse recovery time	$t_{rr}$	$I_F = I_R = 10\text{mA}, I_{rr} = 1\text{mA}, R_L = 100\Omega$	-	-	4	ns

# TYPICAL CHARACTERISTICS

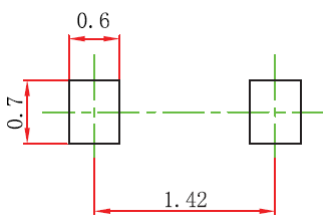


## SOD-523 PACKAGE OUTLINE DIMENSIONS



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

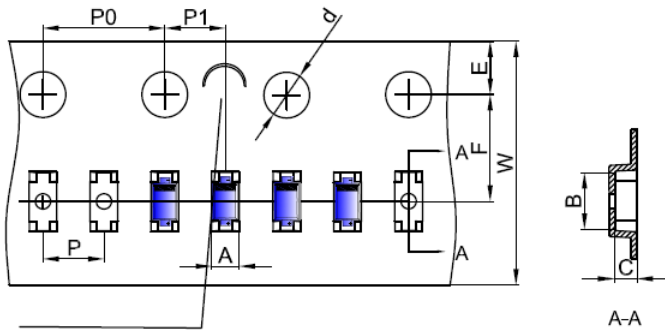


Note:

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

### SOD-523 TAPE AND REEL

#### SOD-523 Embossed Carrier Tape

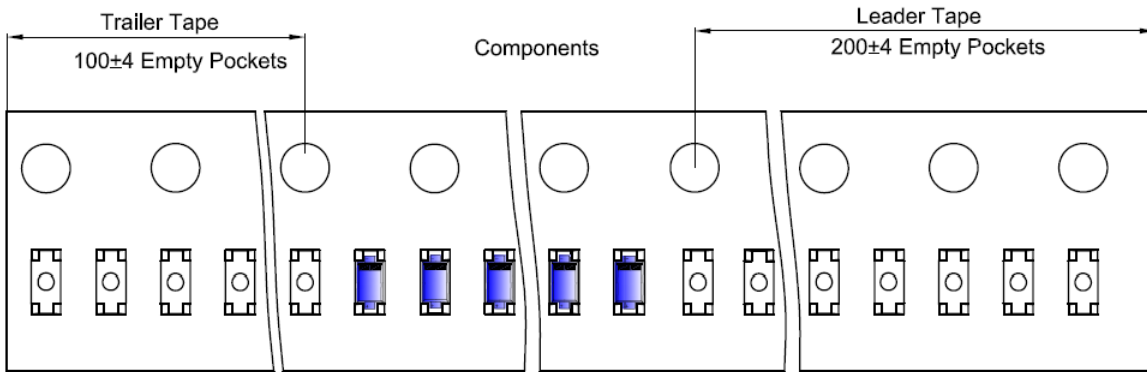


**Packaging Description:**  
 SOD-523 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed 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).

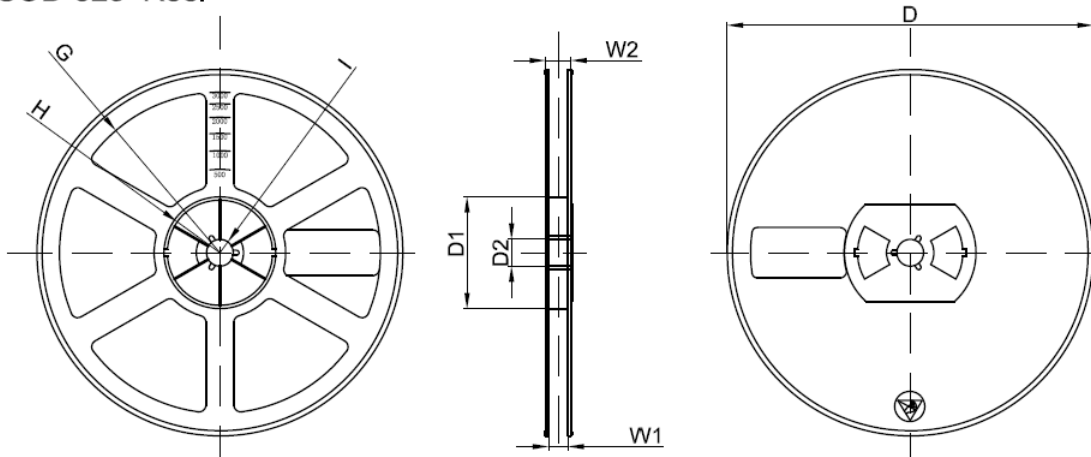
NOTE: TO CAVE 'C' ON CARRIER TAPE PER 120MM

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	

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