

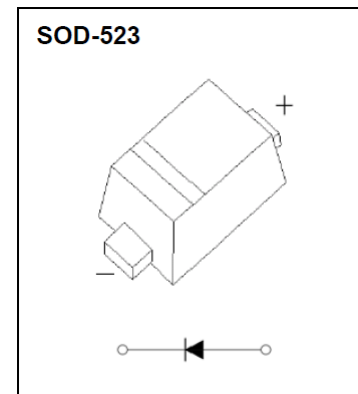


AD-1N4148WT Plastic-Encapsulated Diode

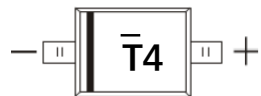
AD-1N4148WT Fast switching diode

FEATURES

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



MARKING



T4 = Device code

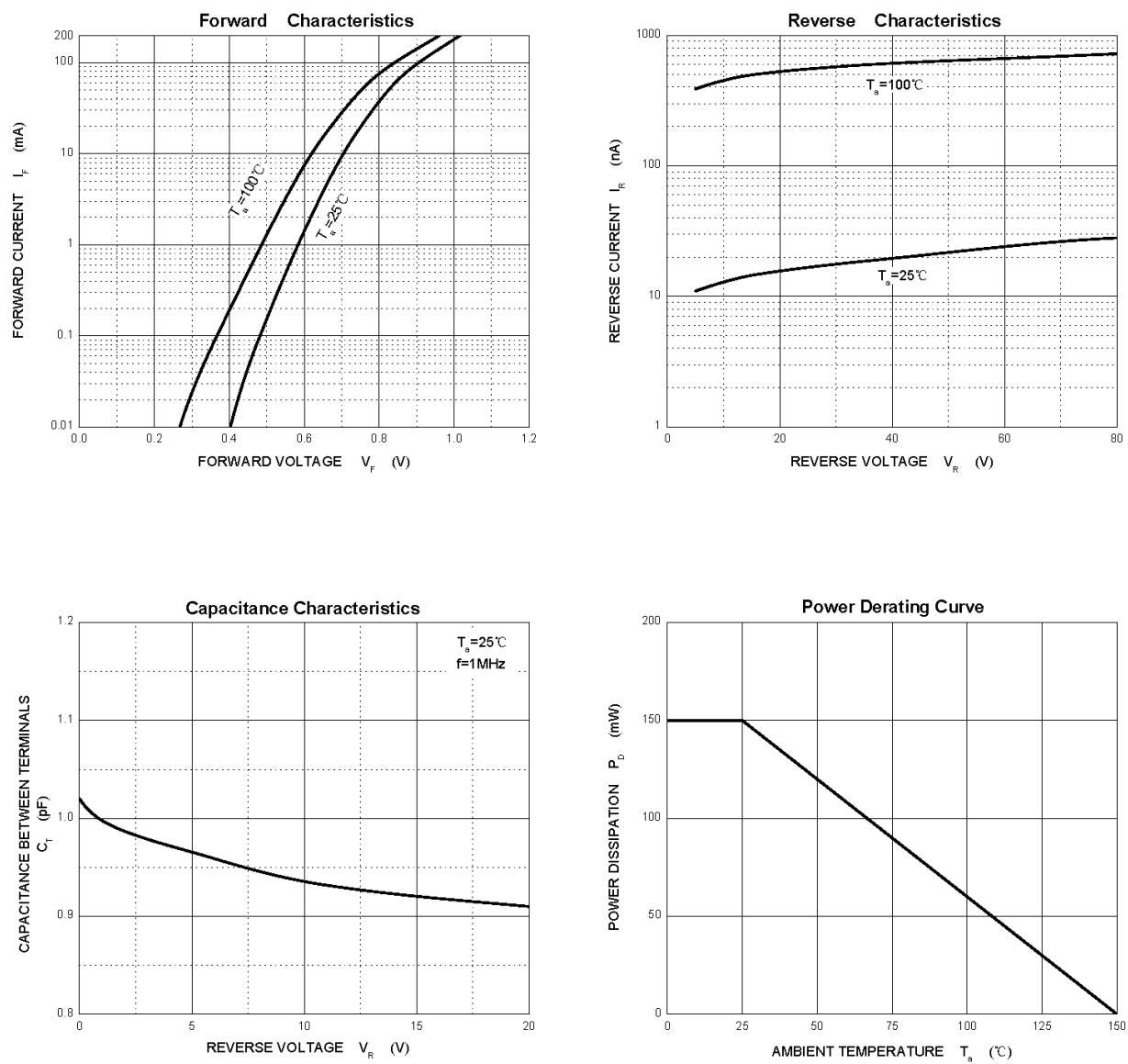
The marking bar indicates the cathode

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

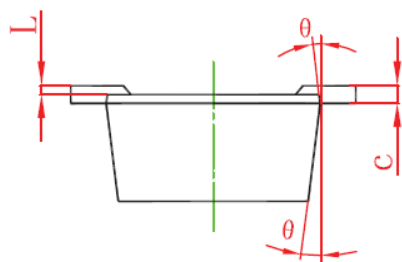
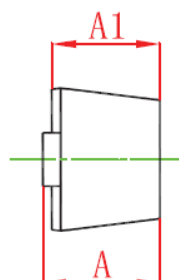
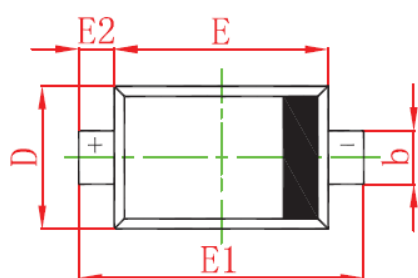
Parameter	Symbol	Value	Unit
Non-repetitive peak reverse voltage	V_{RM}	100	V
Reverse voltage	V_R	75	V
Peak repetitive reverse voltage	V_{RRM}	75	V
Working peak reverse voltage	V_{RWM}	75	V
RMS reverse voltage	$V_{R(RMS)}$	53	V
Average rectified output current	I_O	150	mA
Forward continuous current	I_{FM}	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	μA
		$V_R = 20\text{V}$	-	-	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

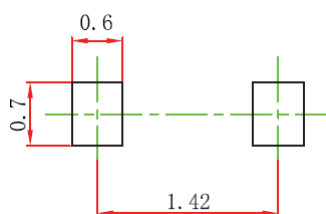


SOD-523 PACKAGE OUTLINE DIMENSIONS



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

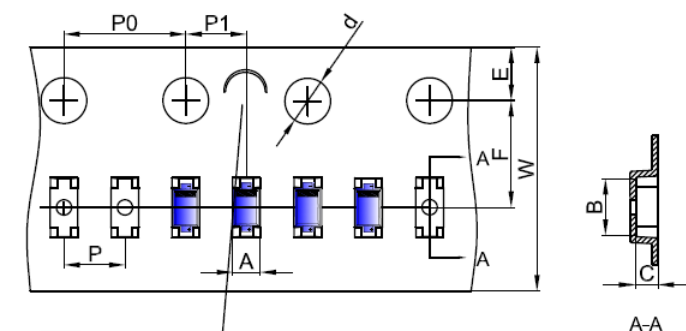


Note:

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



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

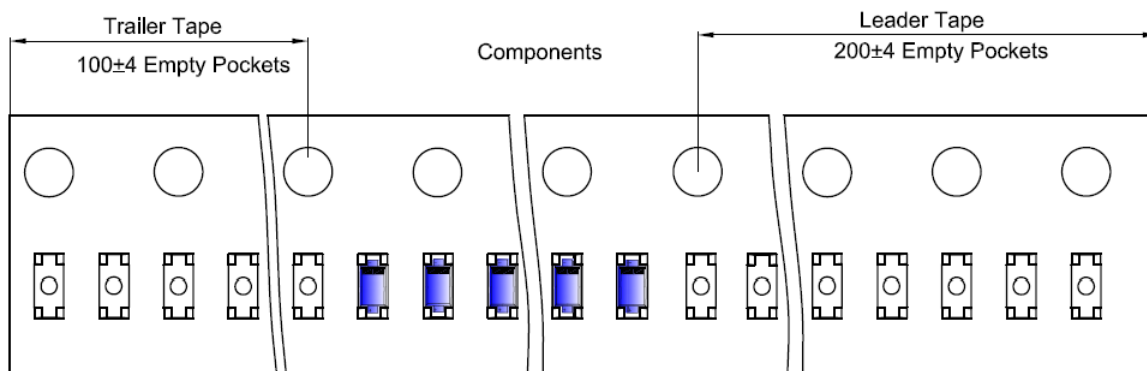
Packaging Description:

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).

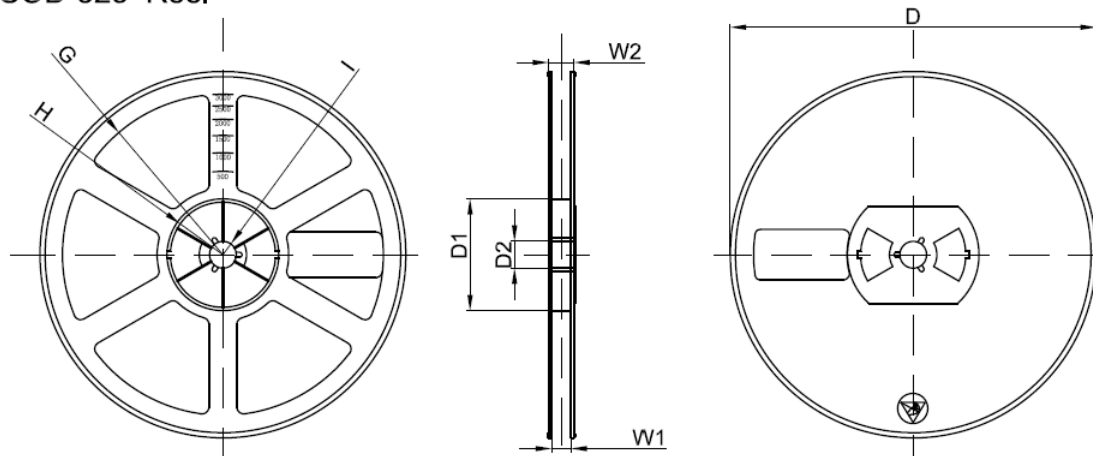
Dimensions are in millimeter

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	

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