

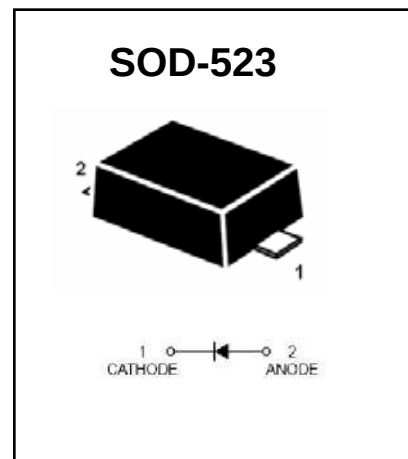
SOD-523 Plastic-Encapsulate Diodes High Speed Switching Diode

FEATURES

- Fast switching speed.
- Ultra-small surface mount package.
- For general purpose switching application.
- High conductance.
- Lead free product.

APPLICATIONS

- High-speed switching in surface mounted circuits.



ORDERING INFORMATION

Type No.	Marking	Package Code
1N4148WT	T4	SOD-523

MAXIMUM RATING @ Ta=25°C unless otherwise specified

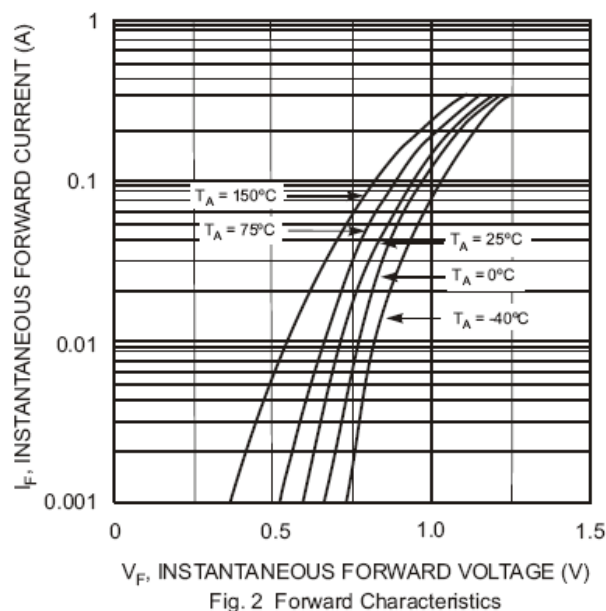
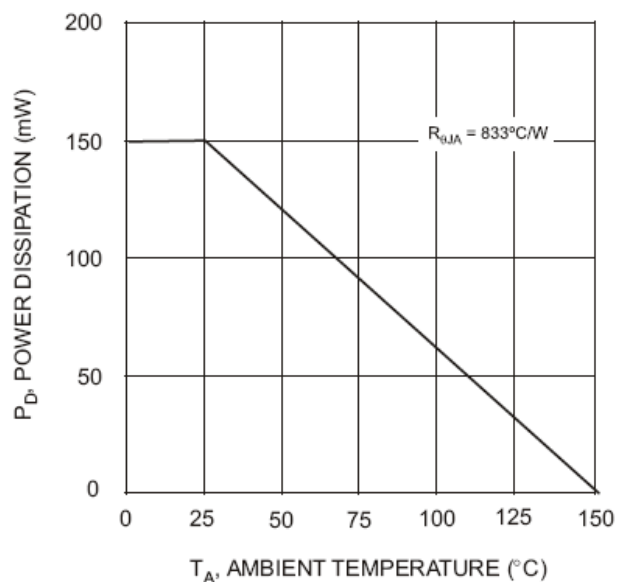
Parameter	Symbol	Limits	Unit
Non-Repetitive peak reverse voltage	V_{RM}	100	V
Reverse voltage	V_R	80	V
RMS Reverse voltage	$V_{R(RMS)}$	80	V
Average rectified output current	I_O	125	mA
Non-Repetitive peak forward surge current t=1.0μs t=100ms	I_{FSM}	2.0 1.0	A
Total power dissipation	P_{tot}	150	mW
Thermal resistance junction to ambient air	$R_{\theta JA}$	833	°C/W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-65 to +150	°C

Typical Characteristics

ELECTRICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified

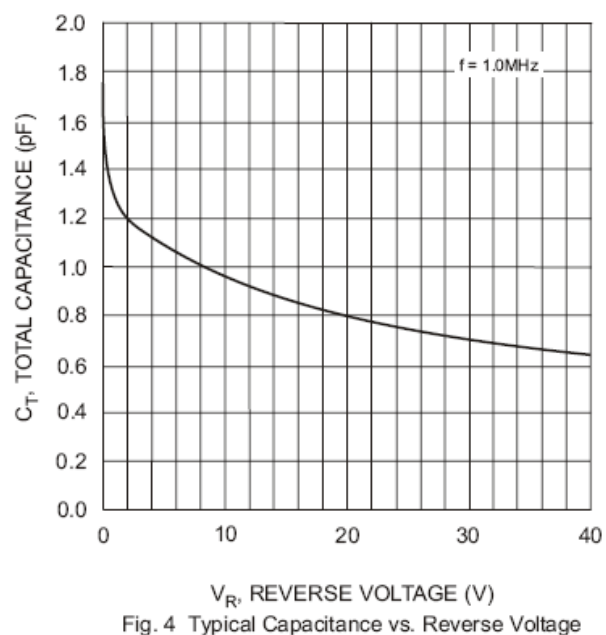
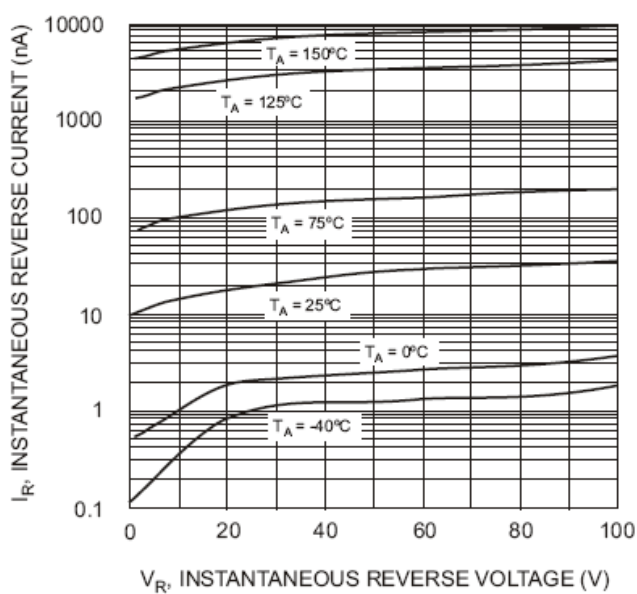
Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Reverse breakdown voltage	$V_{(BR)R}$	75				$I_R=1.0\mu\text{A}$
Forward voltage	V_F			0.715	V	$I_F=1\text{mA}$
				0.855	V	$I_F=10\text{mA}$
				1.0	V	$I_F=50\text{mA}$
				1.25	V	$I_F=150\text{mA}$
Reverse current	I_R			1.0	μA	$V_R=75\text{V}$
				25	nA	$V_R=20\text{V}$
Diode capacitance	C_d			2.0	pF	$V_R=0, f=1.0\text{MHz}$
Reverse recovery time	t_{rr}			4.0	ns	$I_F=I_R=10\text{mA}, I_{rr}=0.1 \cdot I_R, R_L=100\Omega$

TYPICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified

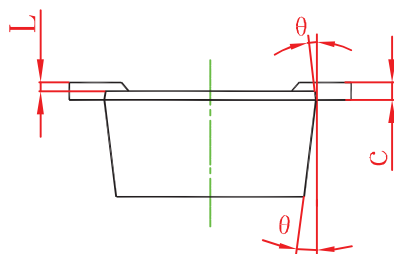
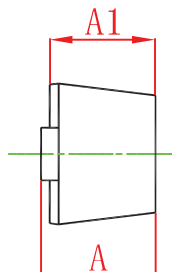
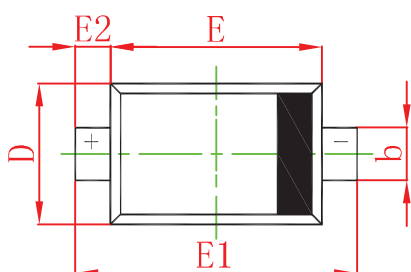


Typical Characteristics

High Speed Switching Diode

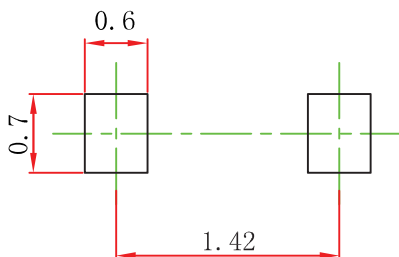


SOD-523 Package Outline Dimensions



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	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

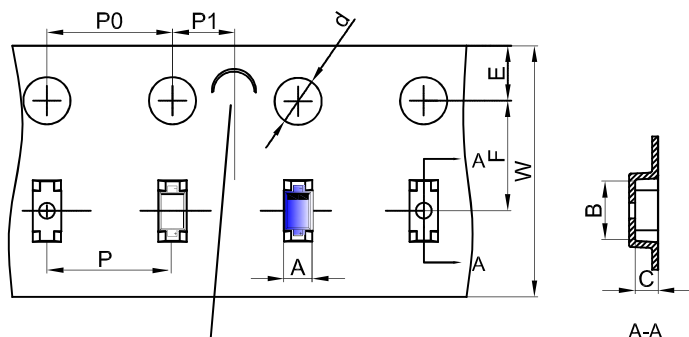


Note:

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

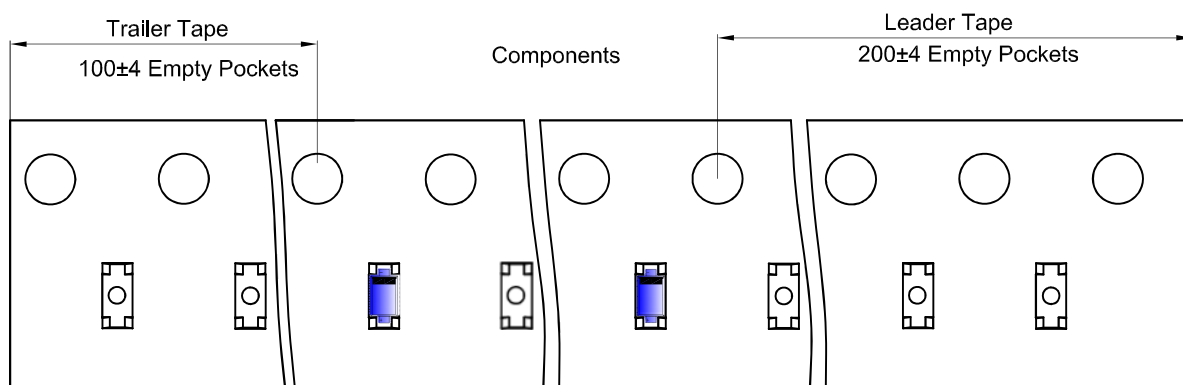
SOD-523 Embossed Carrier Tape



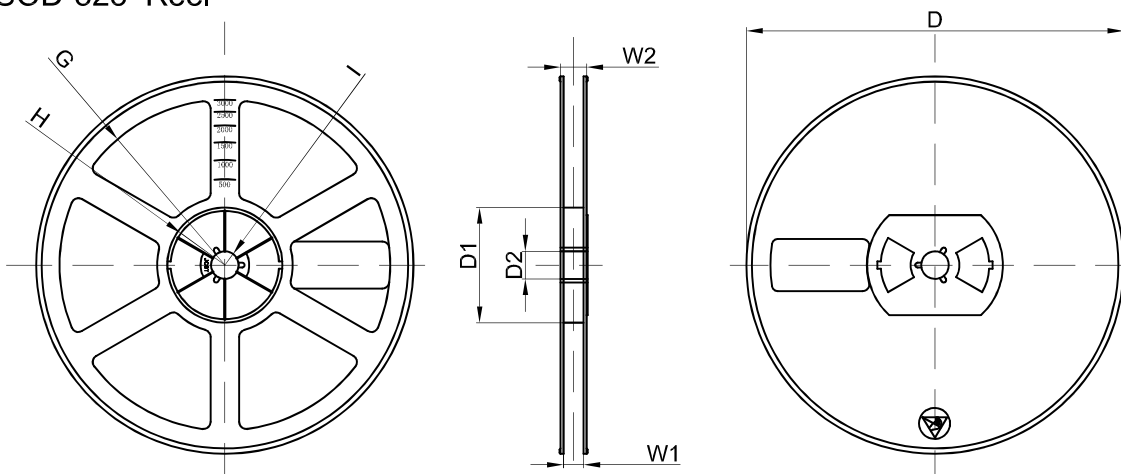
NOTE: TO CAVE 'C' ON CARRIER TAPE PER 120MM

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	4.00	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)
3000 pcs	7 inch	30,000 pcs	203×203×195	240,000 pcs	438×438×220	