

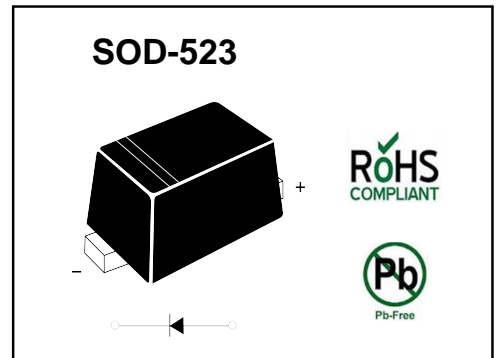
### Silicon Epitaxial Planar Switching Diode

#### Features

- Fast switching speed
- Ultra-small surface mount package
- For general purpose switching applications
- High conductance

#### PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



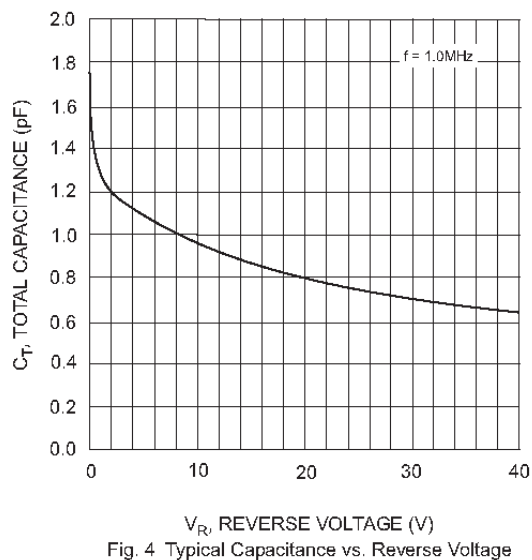
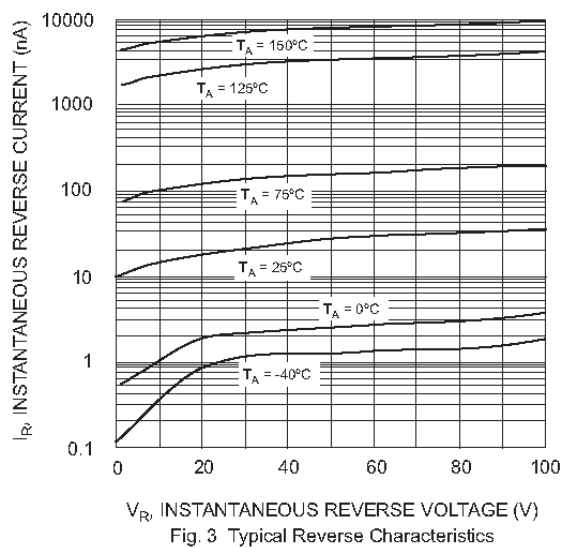
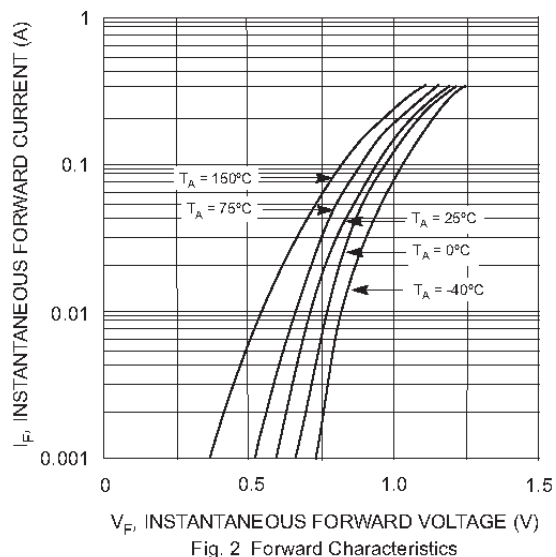
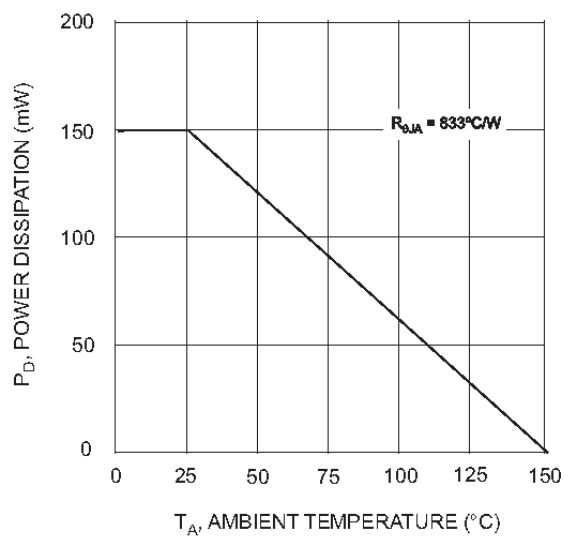
#### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Non-Repetitive Peak Reverse Voltage	$V_{RM}$	100	V
Reverse Voltage	$V_R$	75	V
Average Rectified Forward Current	$I_{F(AV)}$	125	mA
Forward Continuous Current	$I_{FM}$	250	mA
Non-repetitive Peak Forward Surge Current at $t = 1\ \mu\text{s}$ at $t = 100\ \text{ms}$	$I_{FSM}$	2 1	A
Power Dissipation	$P_{tot}$	150	mW
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	833	$^\circ\text{C/W}$
Operating Temperature Range	$T_j$	- 65 to + 150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 65 to + 150	$^\circ\text{C}$

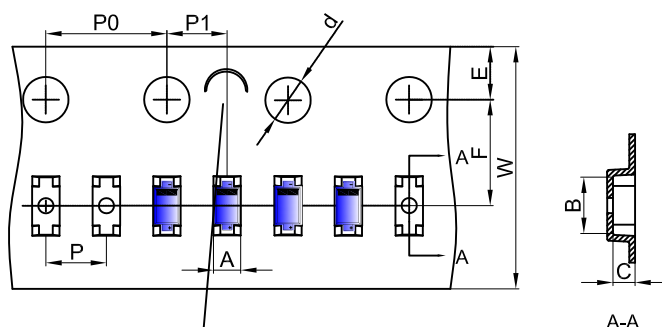
#### Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 1\ \mu\text{A}$	$V_{(BR)R}$	75	-	V
Forward Voltage at $I_F = 1\ \text{mA}$ at $I_F = 10\ \text{mA}$ at $I_F = 50\ \text{mA}$ at $I_F = 150\ \text{mA}$	$V_F$	- - - -	0.715 0.855 1 1.25	V
Peak Reverse Current at $V_R = 75\ \text{V}$ at $V_R = 20\ \text{V}$ at $V_R = 75\ \text{V}$ , $T_J = 150^\circ\text{C}$ at $V_R = 25\ \text{V}$ , $T_J = 150^\circ\text{C}$	$I_R$	- - - -	1 25 50 30	$\mu\text{A}$ nA $\mu\text{A}$ $\mu\text{A}$
Total Capacitance at $V_R = 0\ \text{V}$ , $f = 1\ \text{MHz}$	$C_T$	-	2	pF
Reverse Recovery Time at $I_{rr} = 0.1 \times I_R$ , $I_F = I_R = 10\ \text{mA}$ , $R_L = 100\ \Omega$	$t_{rr}$	-	4	ns

## Typical Characteristics



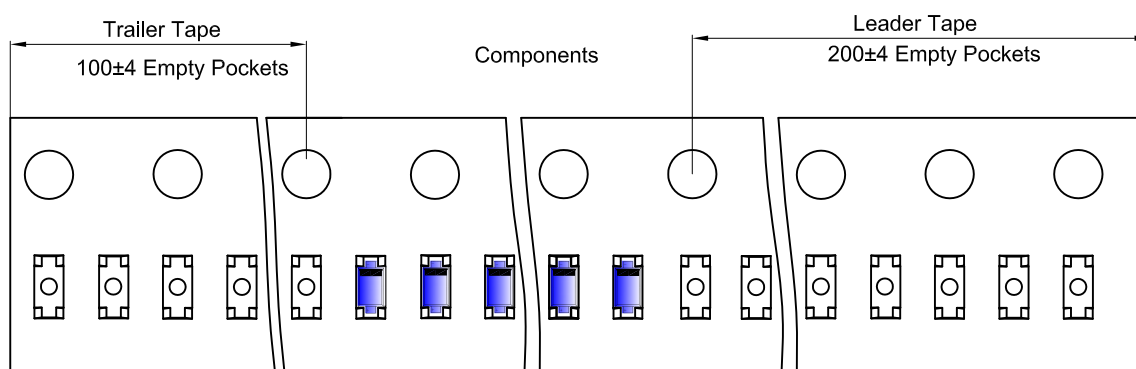
### SOD-523 Embossed Carrier Tape



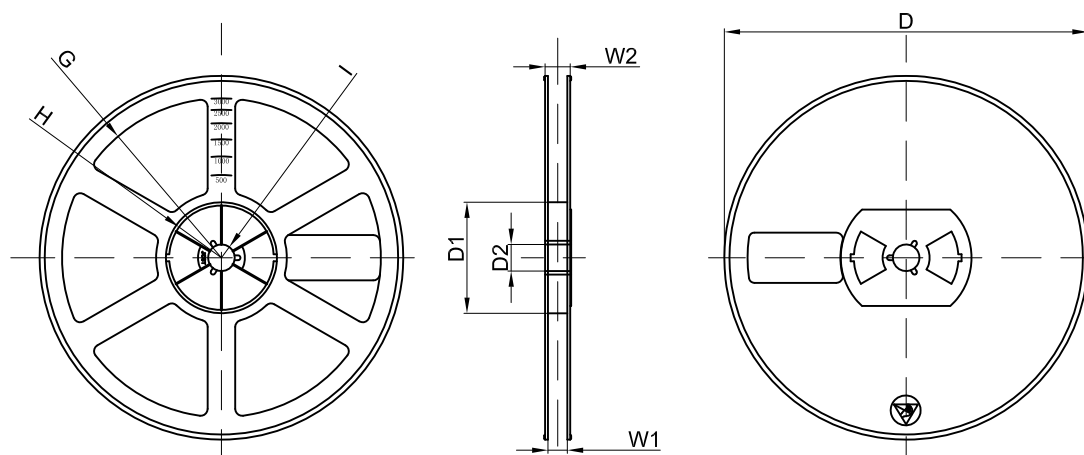
NOTE: TO CAVE 'C' ON CARRIER TAPE PER 120MM

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	2.00	2.00	8.00

### SOD-523 Tape Leader and Trailer



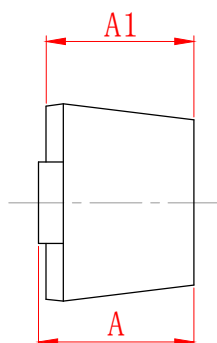
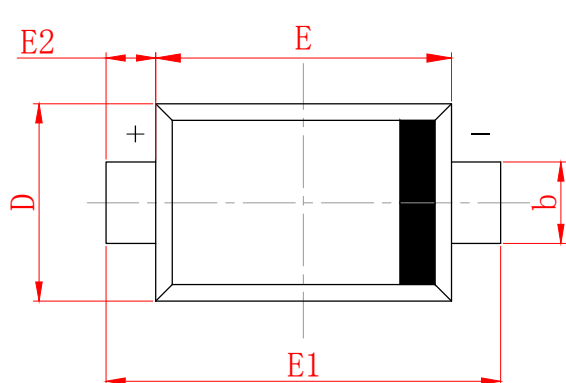
### SOD-523 Reel



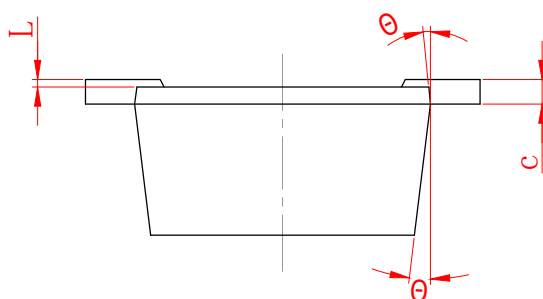
Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7" Dia	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30

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	

### SOD-523 Package Outline Dimensions



SYMBOL	MILLIMETER	
	MIN	MAX
A	0.530	0.730
A1	0.500	0.700
b	0.280	0.380
c	0.080	0.150
D	0.750	0.850
E	1.100	1.300
E1	1.500	1.700
E2	0.200 REF	
L	0.010	0.070
$\theta$	7° REF	



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