

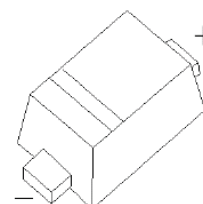
FEATURES

- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- High Conductance
- Also Available in Lead Free Version

MARKING:


SD=Device code

The marking bar indicates the cathode

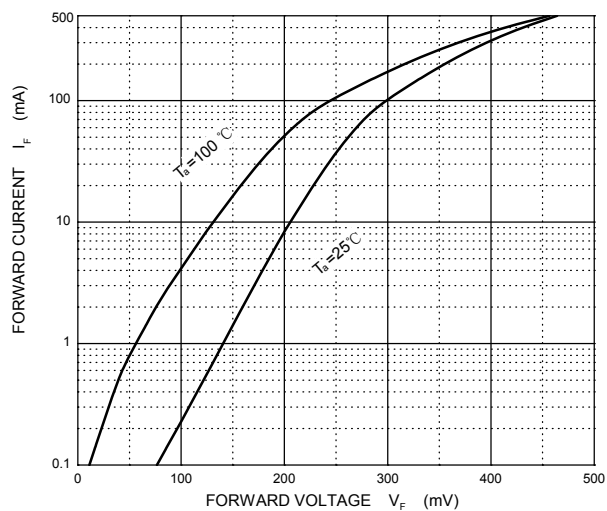
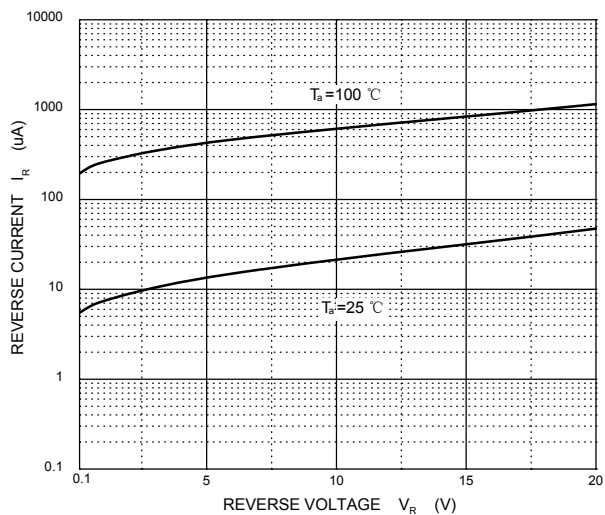
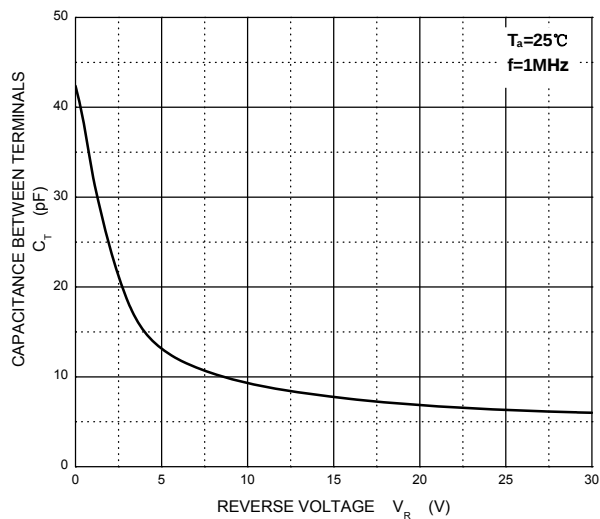
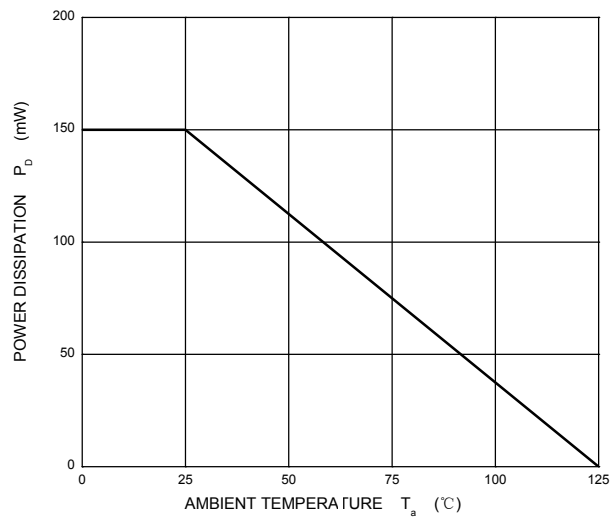
SOD-523 Plastic-Encapsulate Diodes
SOD-523

Maximum Ratings @Ta=25°C

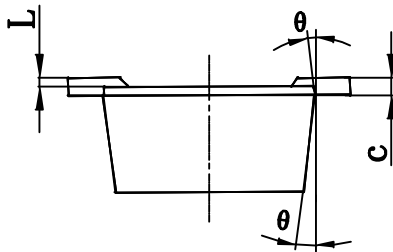
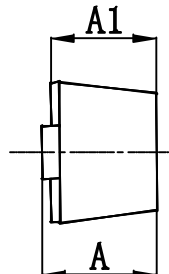
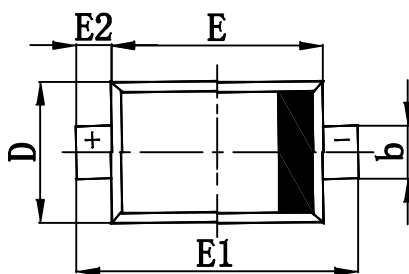
Parameter	Symbol	Value	Unit
Peak repetitive peak reverse voltage	V_{RRM}	20	V
Working peak reverse voltage	V_{RWM}		
DC blocking voltage	V_R		
RMS reverse voltage reverse voltage (DC)	$V_{R(RMS)}$	14	V
Average rectified output current	I_o	0.5	A
Non-repetitive Peak Forward Surge Current @t=8.3ms	I_{FSM}	5.5	A
Power dissipation	P_D	150	mW
Thermal resistance junction to ambient	$R_{\theta JA}$	667	°C/W
Operating Junction Temperature Range	T_j	-40 ~ +125	°C
Storage Temperature Range	T_{STG}	-55 ~ +150	°C

Electrical Characteristics @Ta=25°C

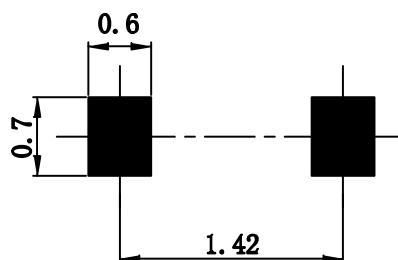
Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Minimum reverse breakdown voltage	$V_{(BR)}$	20			V	$I_R=250\mu A$
Forward voltage	V_{F1}			180	mV	$I_F=0.1mA$
	V_{F2}			240		$I_F=1mA$
	V_{F3}			290		$I_F=10mA$
	V_{F4}			380	mV	$I_F=100mA$
	V_{F5}			600		$I_F=500mA$
Reverse current	I_R			50	μA	$V_R=10V$
Capacitance between terminals	C_T			30	pF	$V_R=1V, f=1MHz$

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	0.770	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	

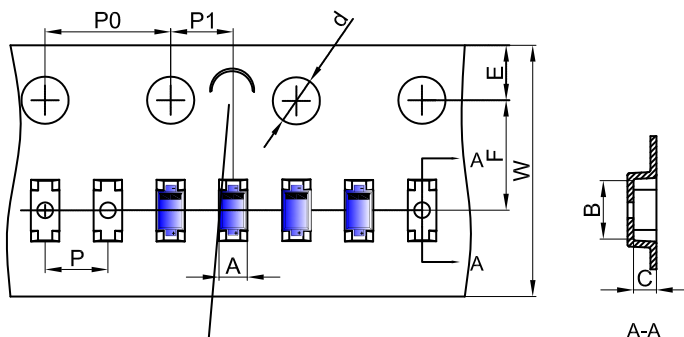
SOD-523 Suggested Pad Layout


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



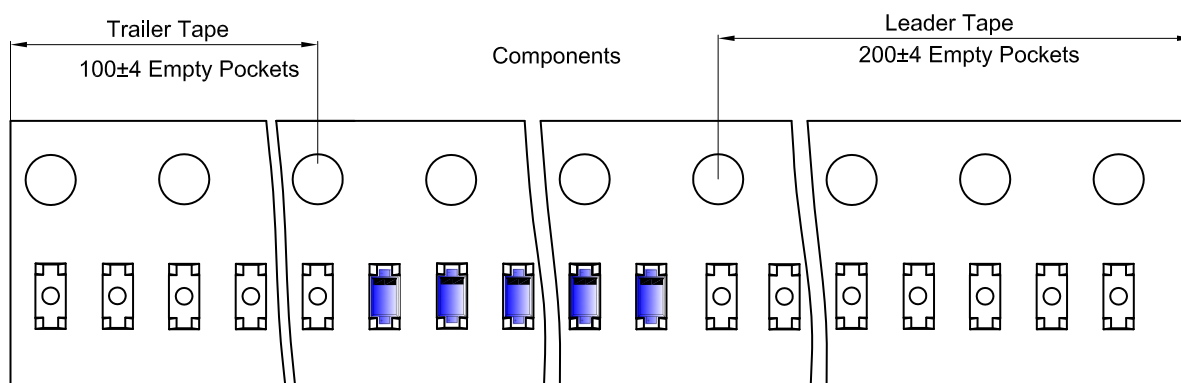
NOTE: TO CAVE 'C' ON CARRIER TAPE PER 120MM

Packaging Description:

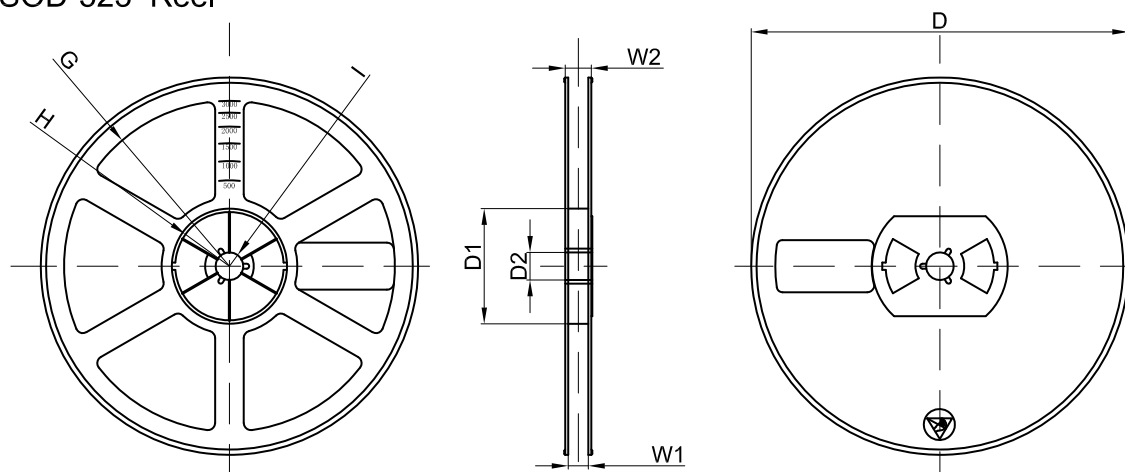
SOD-523 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts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