



SOD-523 Plastic-Encapsulate Diodes

BAS16X

Switching Diode

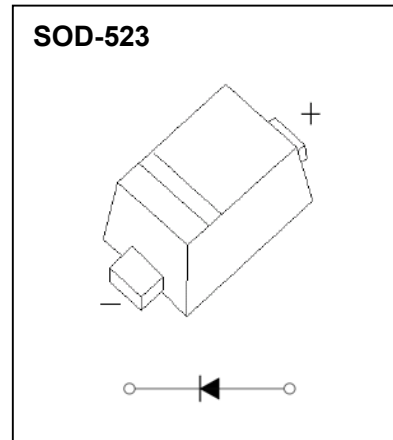
FEATURES

- High-Speed Switching Applications
- Lead Finish: 100% Matte Sn (Tin)
- Qualified Reflow Temperature: 260 °C
- Extremely Small SOD-523 Package

MARKING: A6



The marking bar indicates the cathode



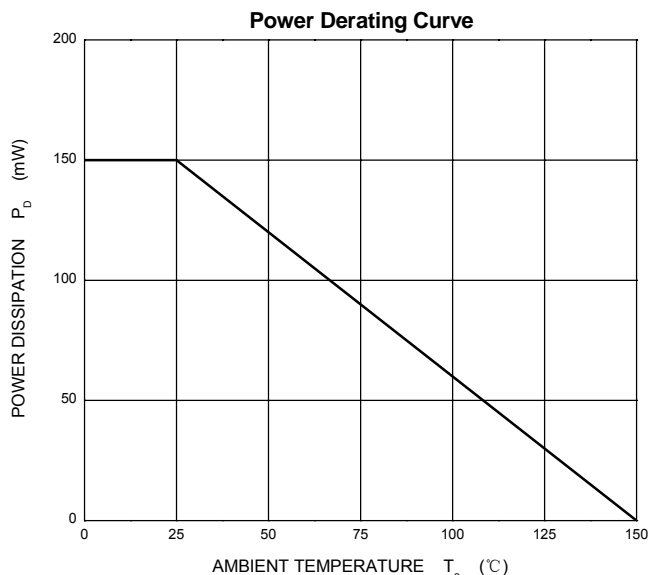
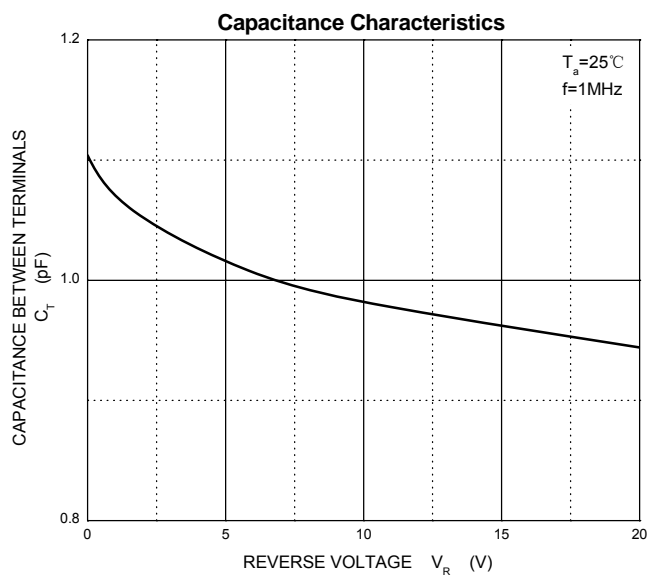
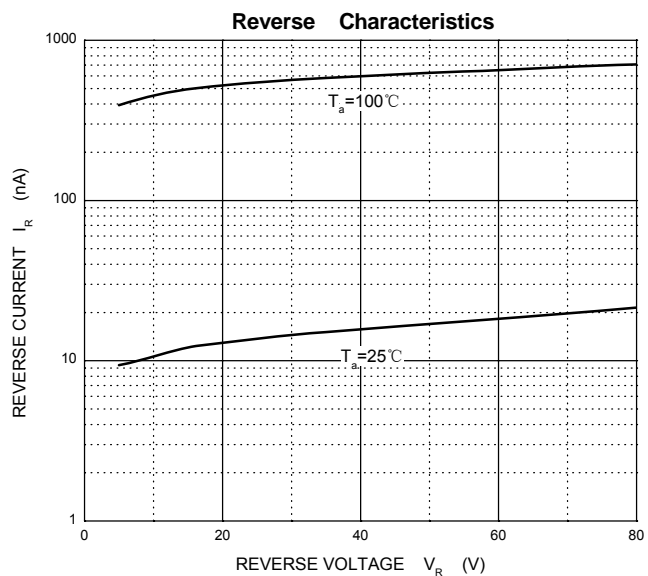
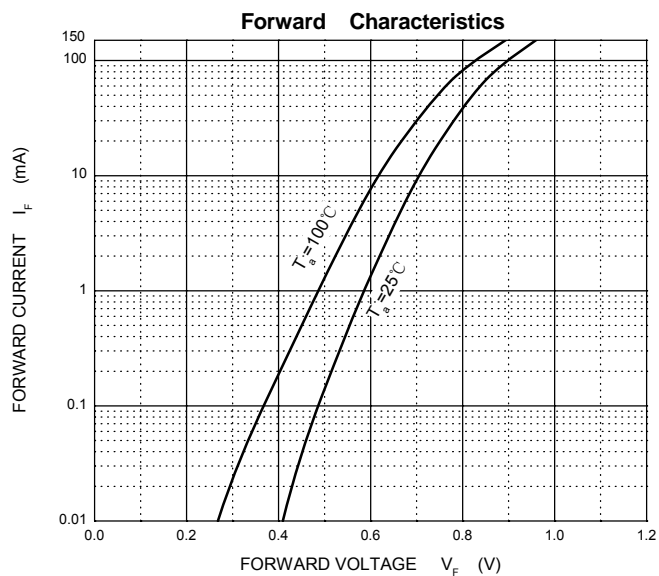
MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_R	Reverse Voltage	75	V
I_F	Forward Continuous Current	200	mA
I_{FSM}	Non-repetitive Peak Forward Surge Current@t= 8.3ms	2	A
P_D	Power Dissipation	150	mW
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	833	$^{\circ}\text{C}/\text{W}$
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	$^{\circ}\text{C}$

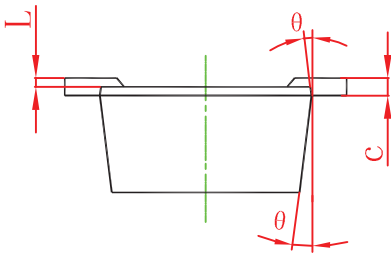
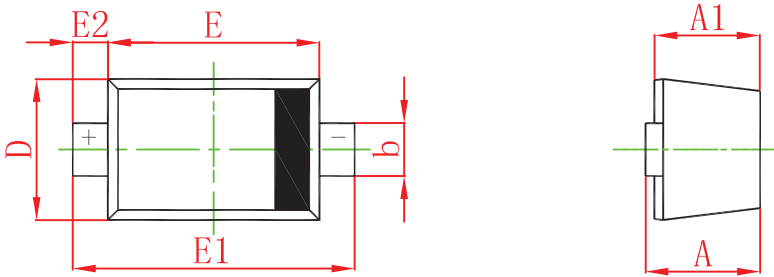
Electrical Ratings @ $T_a=25^{\circ}\text{C}$

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Reverse breakdown voltage	$V_{(BR)}$	75				$I_R=100\mu\text{A}$
Forward voltage	V_{F1}			715	mV	$I_F=1\text{mA}$
	V_{F2}			855		$I_F=10\text{mA}$
	V_{F3}			1000		$I_F=50\text{mA}$
	V_{F4}			1250		$I_F=150\text{mA}$
Reverse recovery Time	t_{rr}			6.0	ns	$I_F=I_R=10\text{mA dc}, R_L=50\Omega$
Reverse current	I_R			1.0	μA	$V_R=75\text{V}$
Forward recovery voltage	V_{FR}			1.75	V	$I_F=10\text{mA}, t_r=20\text{ns}$
Diode capacitance	C_D			2.0	pF	$V_R=0\text{V}, f=1\text{MHz}$
Stored charge	Q_S			45	pC	$I_F=10\text{mA}, V_R=5.0\text{V}, R_L=500\Omega$

Typical Characteristics

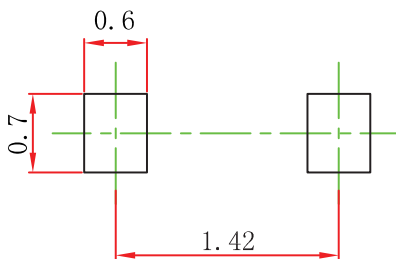


SOD-523 Package Outline Dimensions



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

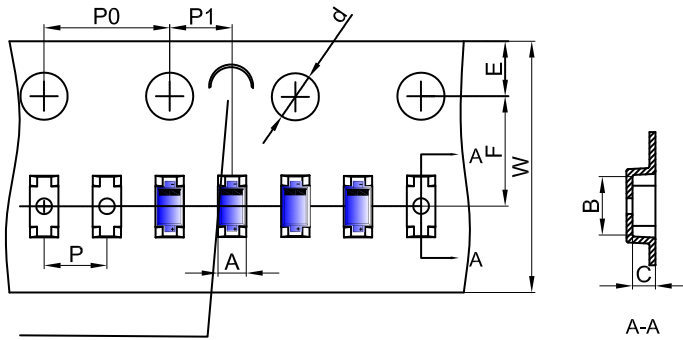


Note:

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

SOD-523 Tape and Reel

SOD-523 Embossed Carrier Tape



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

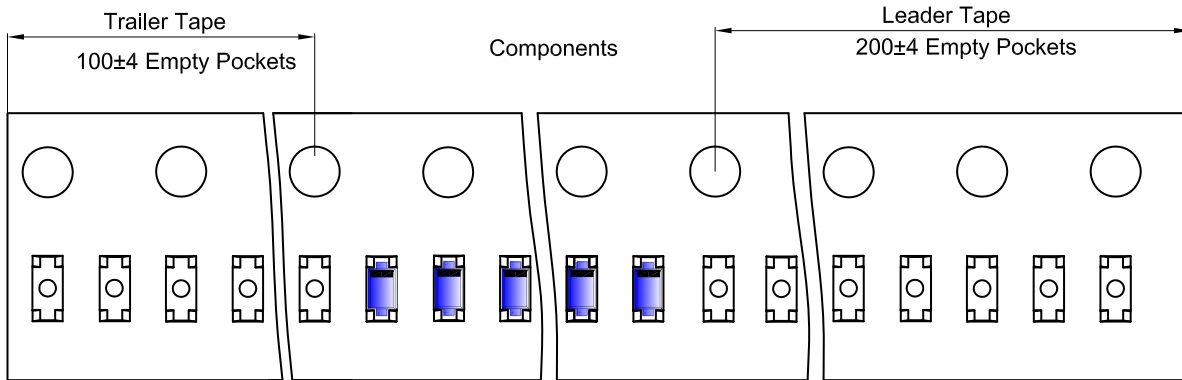
Packaging Description:

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).

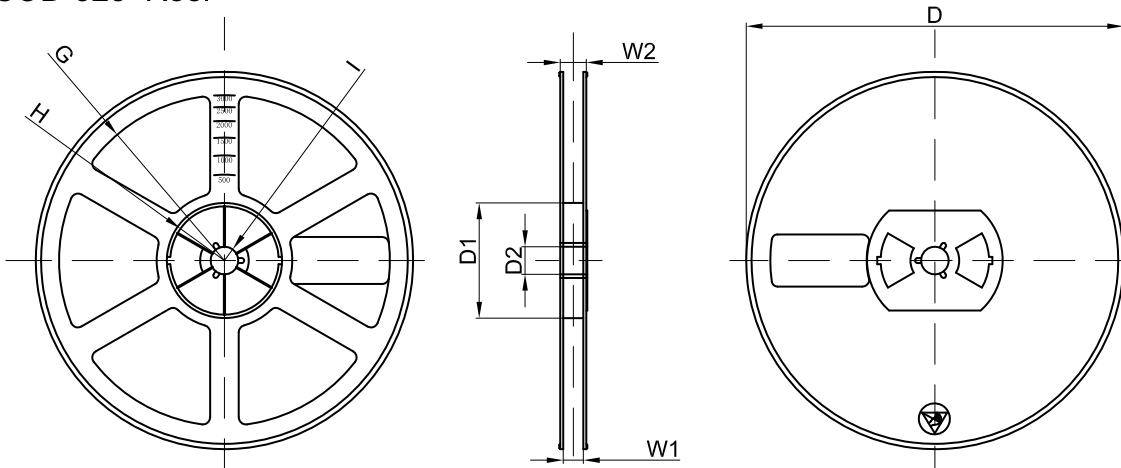
Dimensions are in millimeter

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	