



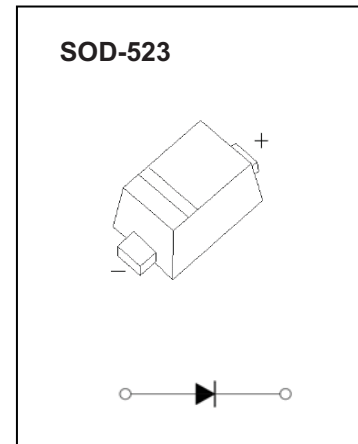
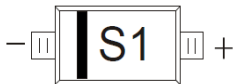
# DONGGUAN NANJING ELECTRONICS LTD., SOD-523 Plastic-Encapsulate Diodes

## BAT41SB FAST SWITCHING DIODE

### FEATURES

- Small Package
- Low Reverse Current
- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insetion

### MARKING



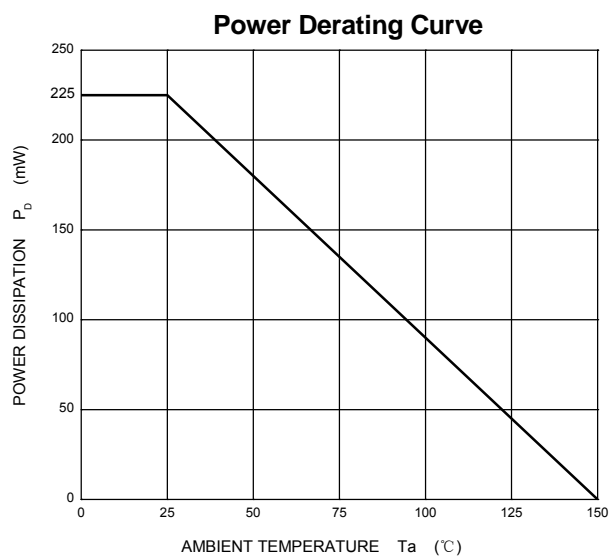
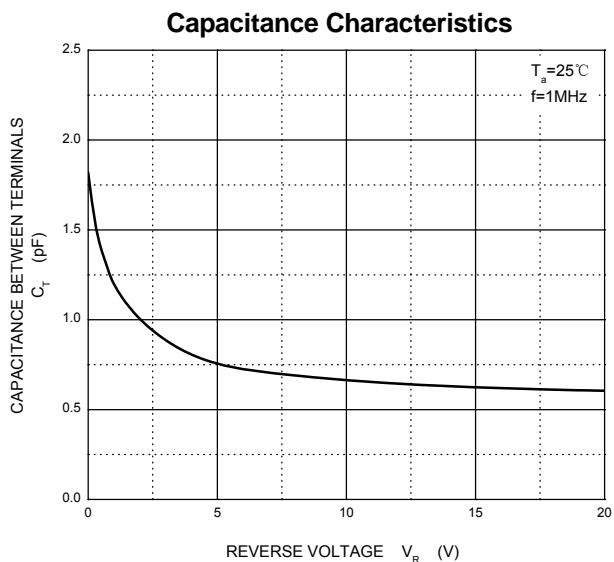
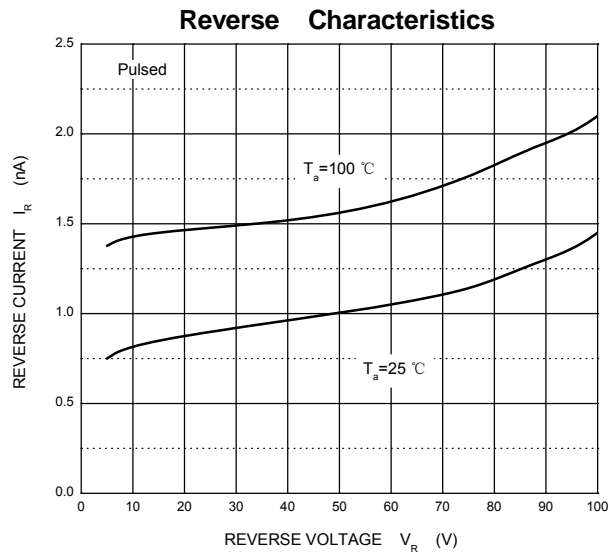
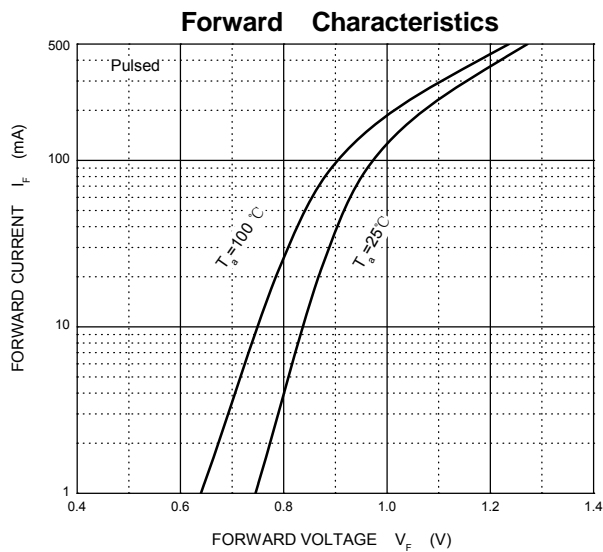
### MAXIMUM RATINGS ( $T_a=25^{\circ}\text{C}$ unless otherwise noted )

Symbol	Paramete	Value	Unit
$V_{RM}$	Non-Repetitive Peak Reverse Voltage	100	V
$V_{RRM}$	Peak Repetitive Reverse Voltage		
$V_{RWM}$	Working Peak Reverse Voltage		
$V_{R(RMS)}$	RMS Reverse Voltage	85	V
$I_O$	Average Rectified Output Current	200	mA
$I_{FSM}$	Non-Rpetitive Peak Forward Surge Current @ $t=8.3\text{ms}$	1	A
$P_D$	Power Dissipation	225	mW
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	556	$^{\circ}\text{C}/\text{W}$
$T_J, T_{stg}$	Operation Junction and Storage Temperature Range	-55~+150	$^{\circ}\text{C}$

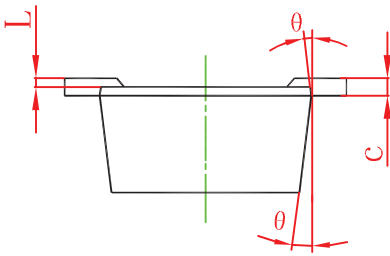
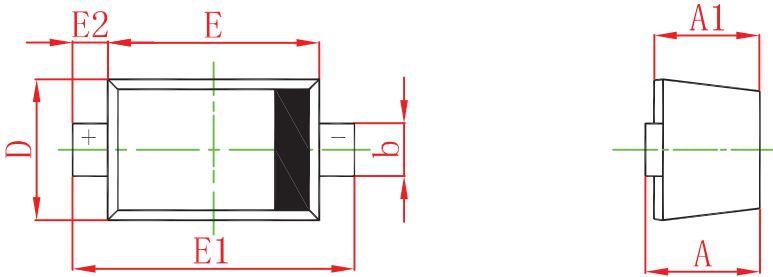
### ELECTRICAL CHARACTERISTICS( $T_a=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse voltage	$V_{(BR)}$	$I_R=1\mu\text{A}$	100			V
Reverse current	$I_R$	$V_R=75\text{V}$			5	nA
		$V_R=100\text{V}$			80	nA
Forward voltage	$V_F$	$I = 1\text{mA}$			0.75	V
		$I_F=10\text{mA}$			0.85	V
		$I_F=50\text{mA}$			1.0	V
		$I = 150\text{mA}$			1.15	V
Total capacitance	$C_{tot}$	$V_R=0\text{V}, f=1\text{MHz}$		2		pF
Reverse recovery time	$t_{rr}$	$I_F= I_R = 10\text{mA}, I_{rr}=0.1 \cdot I_R$			3	$\mu\text{s}$

# Typical Characteristics

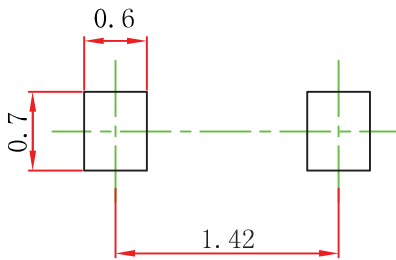


## SOD-523 Package Outline Dimensions



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

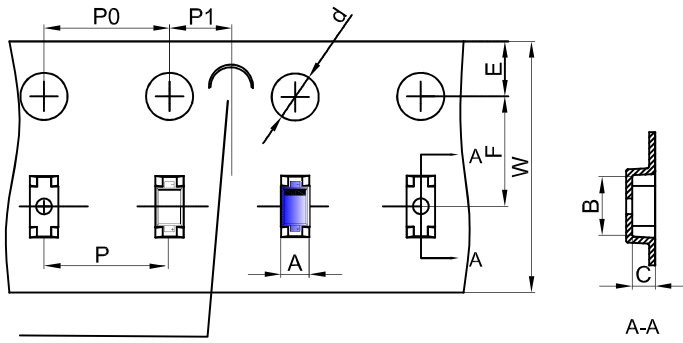


**Note:**

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

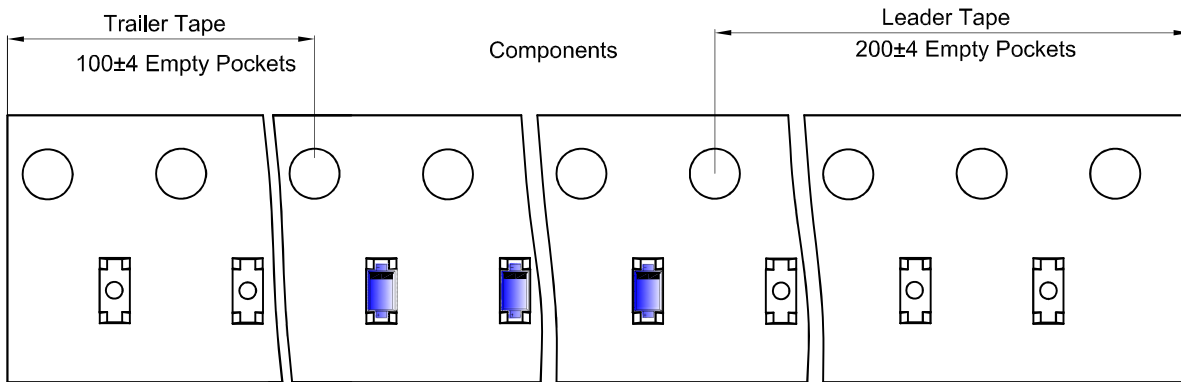
## SOD-523 Embossed Carrier Tape



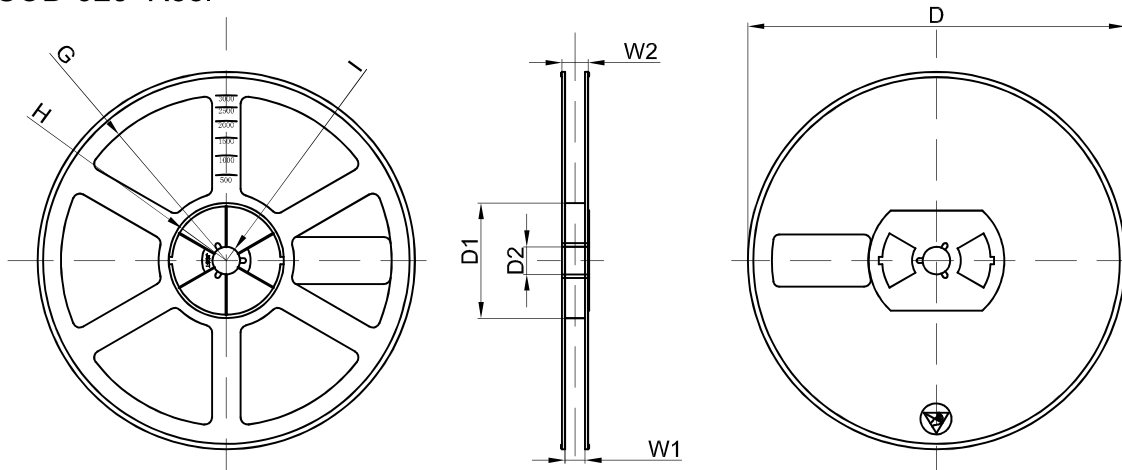
NOTE: TO CAVE 'C' ON CARRIER TAPE PER 120MM

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	