



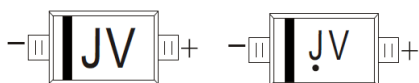
## SOD-523 Plastic-Encapsulate Diodes

### BAT54X Schottky Barrier Diode

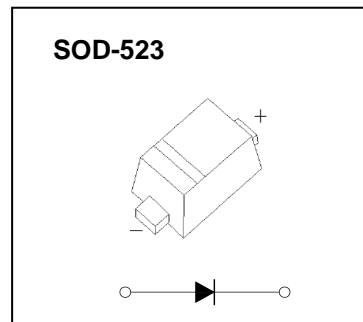
#### FEATURES

- Extremely Fast Switching Speed
- Low Forward Voltage

#### MARKING: JV



The marking bar indicates the cathode  
 Solid dot = Green molding compound device, if none,  
 the normal device.



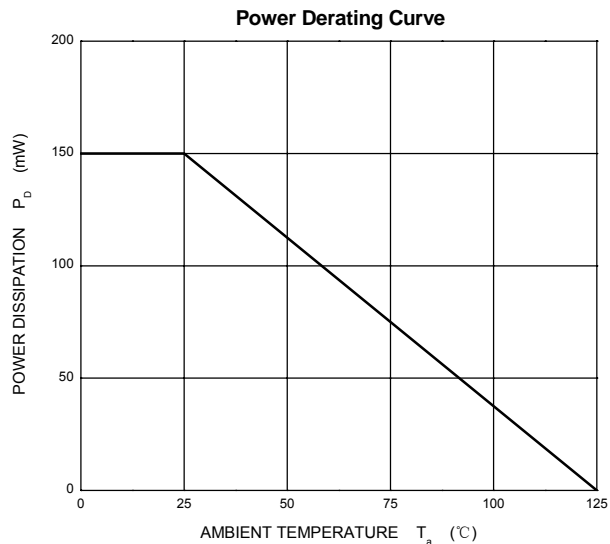
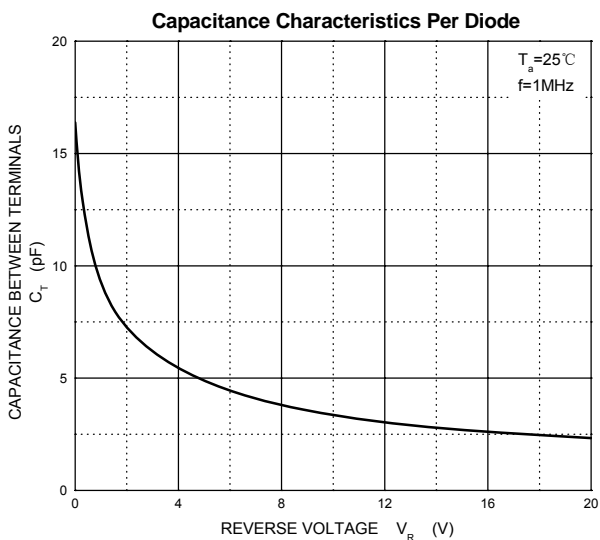
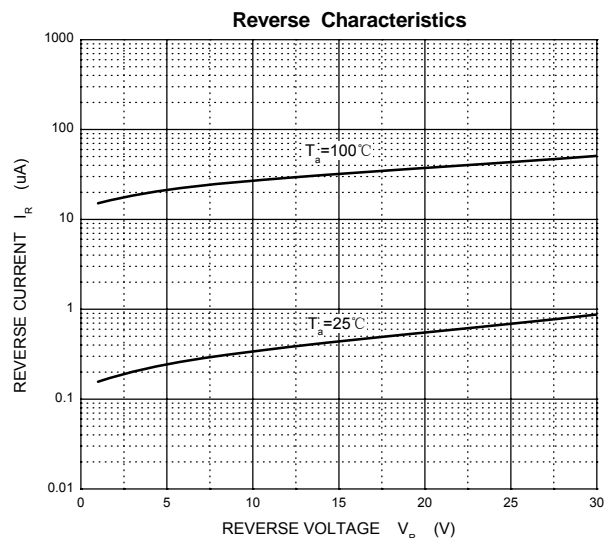
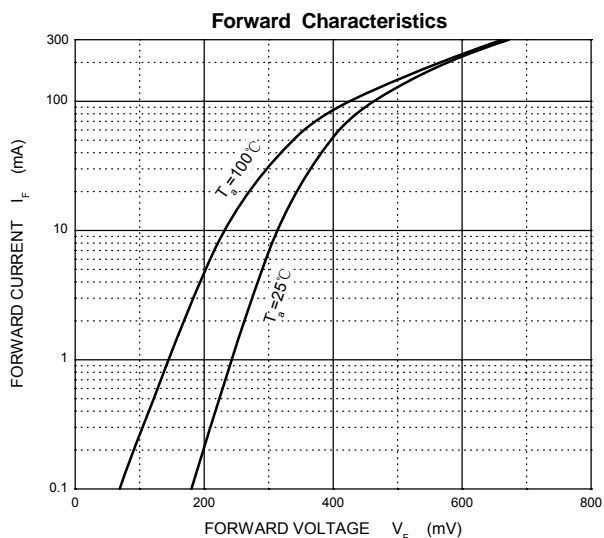
#### Maximum Ratings @Ta=25°C

Parameter	Symbol	Limit	Unit
Non-repetitive peak reverse voltage	$V_{RM}$	30	V
DC blocking voltage	$V_R$	21	V
Average rectified output current	$I_O$	100	mA
Forward continuous current	$I_F$	200	mA
Repetitive peak forward current	$I_{FRM}$	300	mA
Forward surge current	$I_{FSM}$	600	mA
Power dissipation	$P_d$	150	mW
Thermal resistance junction to ambient	$R_{\theta JA}$	667	°C/W
Junction temperature	$T_J$	125	°C
Storage temperature range	$T_{STG}$	-55~+150	°C

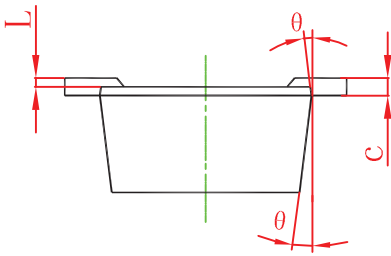
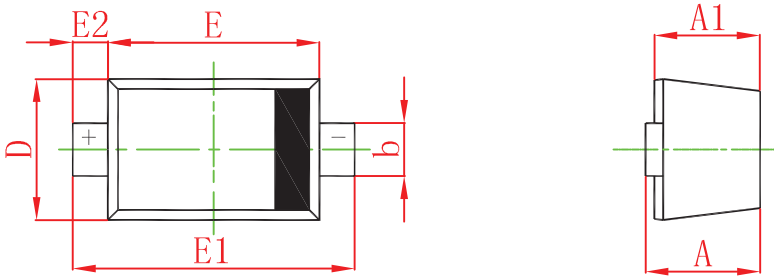
#### Electrical Characteristics @Ta=25°C

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse breakdown voltage	$V_{(BR)}$	$I_R=100\mu A$	30			V
Forward voltage	$V_{F1}$	$I_F=0.1mA$			240	mV
	$V_{F2}$	$I_F=1.0mA$			320	mV
	$V_{F3}$	$I_F=10mA$			400	mV
	$V_{F4}$	$I_F=30mA$			500	mV
	$V_{F5}$	$I_F=100mA$			1000	mV
Reverse current	$I_R$	$V_R=25V$			2.0	$\mu A$
Reverse recovery time	$t_{rr}$	$I_F=10mA, I_R=10mA \text{ to } 1mA, R_L=100\Omega$			5.0	ns
Capacitance between terminals	$C_T$	$V_R=1V, f=1MHz$			10	pF

# Typical Characteristics

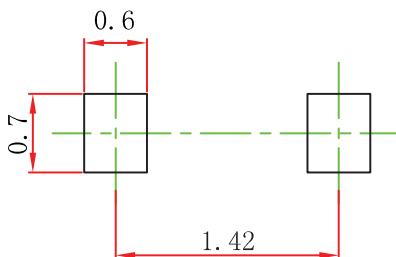


## SOD-523 Package Outline Dimensions



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:**

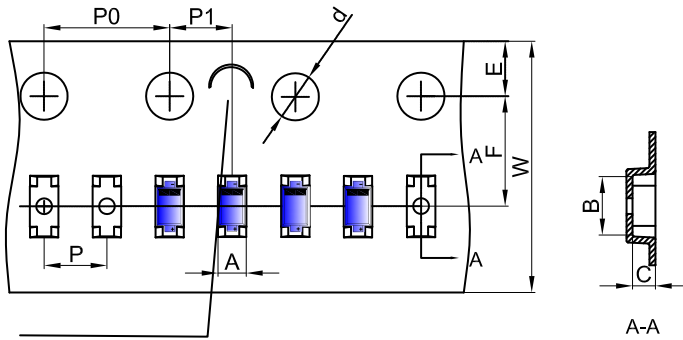
1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05\text{mm}$ .
3. The pad layout is for reference purposes only.

### NOTICE

JCET reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. JCET does not assume any liability arising out of the application or use of any product described herein.

# SOD-523 Tape and Reel

## SOD-523 Embossed Carrier Tape



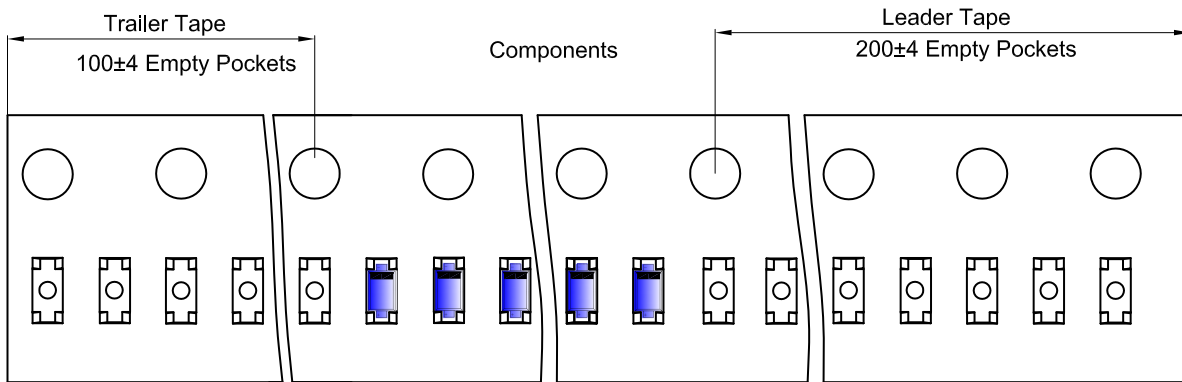
### Packaging Description:

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).

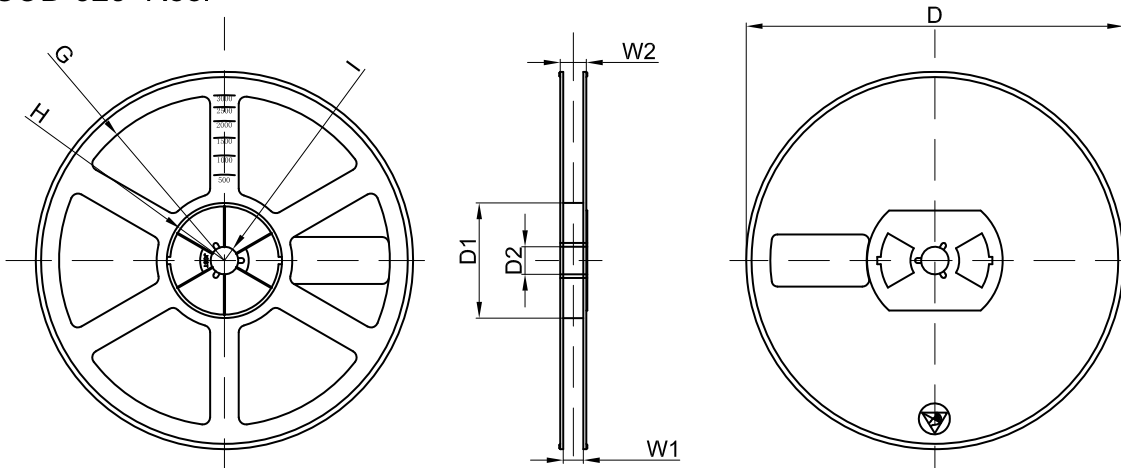
NOTE: TO CAVE 'C' ON CARRIER TAPE PER 120MM

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	