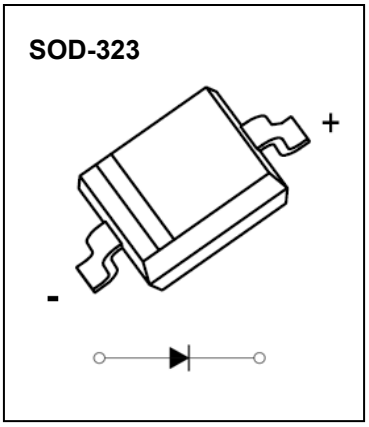
SZCJ

Shenzhen Changji Semiconductor Co., LTD.

SOD-323 Plastic-Encapsulate Diodes

B0520WS

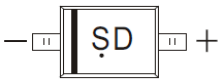
SCHOTTKY BARRIER DIODE



FEATURES

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

MARKING:SD



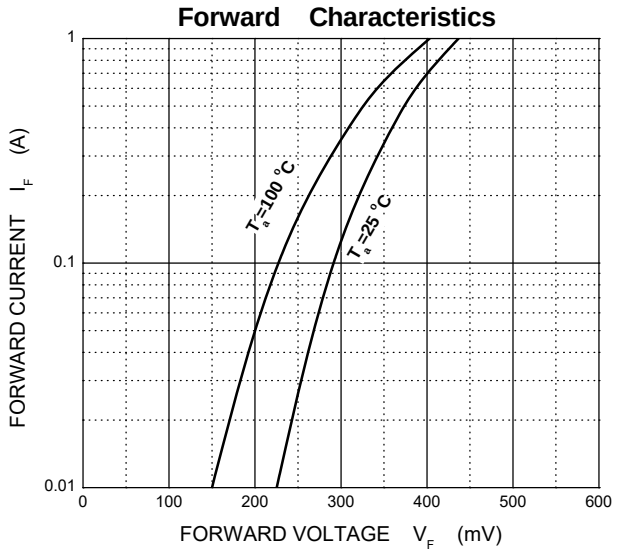
The marking bar indicates the cathode
Solid dot = Green molding compound device.

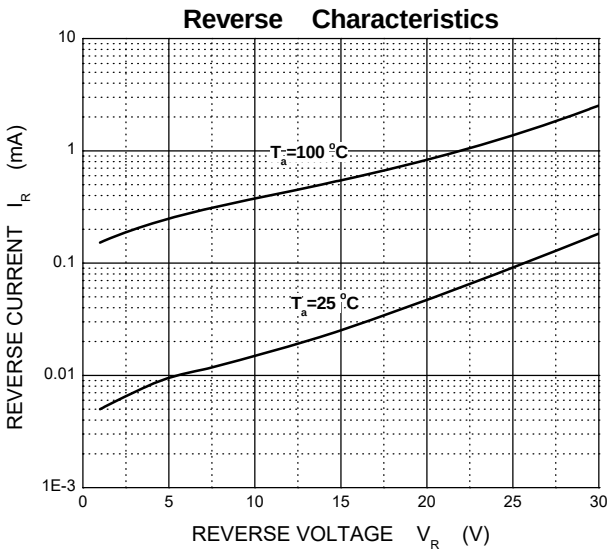
Maximum Ratings @Ta=25℃

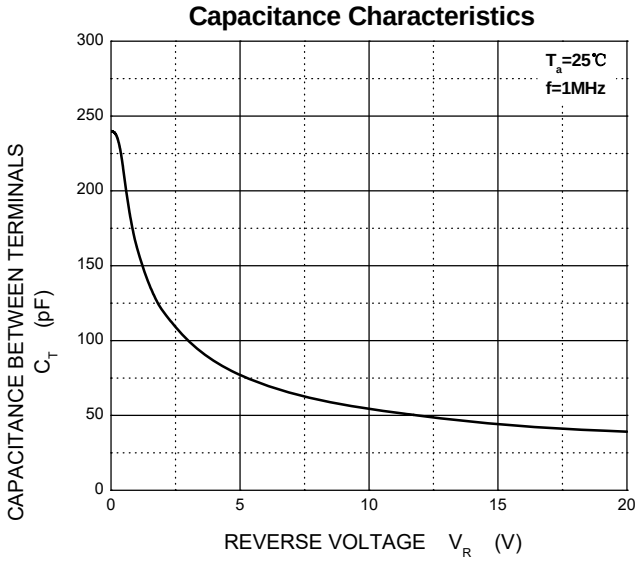
Parameter	Symbo	Value	Unit
Peak repetitive peak reverse voltage **Working peak reverse voltage** **DC blocking voltage**	V_{RRM} V_{RWM} V_R	20	V
RMS reverse voltage reverse voltage (DC)	$V_{R(RMS)}$	14	V
Average rectified output current	I_o	0.5	A
Non-repetitive Peak Forward Surge Current @t=8.3ms	I_{FSM}	5.5	A
Power dissipation	P_D	200	mW
Thermal resistance junction to ambient	$R_{\theta JA}$	500	℃/W
Operating Junction Temperature Range	T_j	-40 ~ +125	℃
Storage Temperature Range	T_{STG}	-55 ~ +150	℃
Voltage rate of change	dv/dt	1000	V/μs

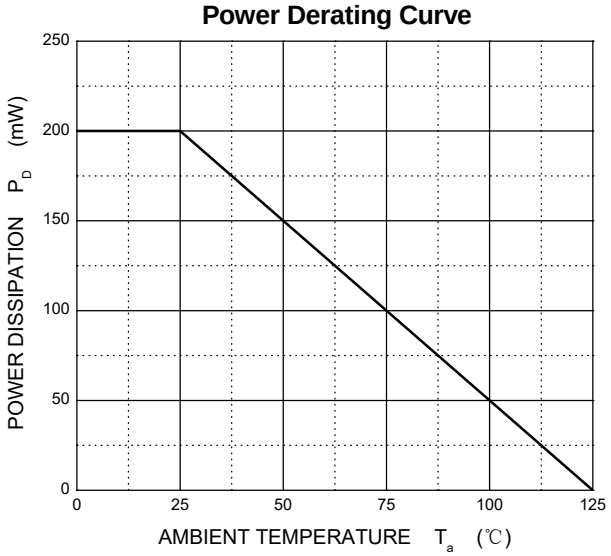
Electrical Characteristics @Ta=25℃

	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse breakdown voltage	$V_{(BR)}$	I_R=250uA	20			V
Reverse current	I_R	V_R=10V			75	uA
		V_R=20V			250	
Forward voltage	V_F	I_F=0.1A			0.33	V
		I_F=0.5A			0.39	
Capacitance between terminals	C_T	V_R=1,f=1MHz		170		pF


Forward Characteristics
FORWARD CURRENT I_F (A)
1
0.1
0.01
0
100
200
300
400
500
600
FORWARD VOLTAGE V_F (mV)
T_a=100 °C
T_a=25 °C

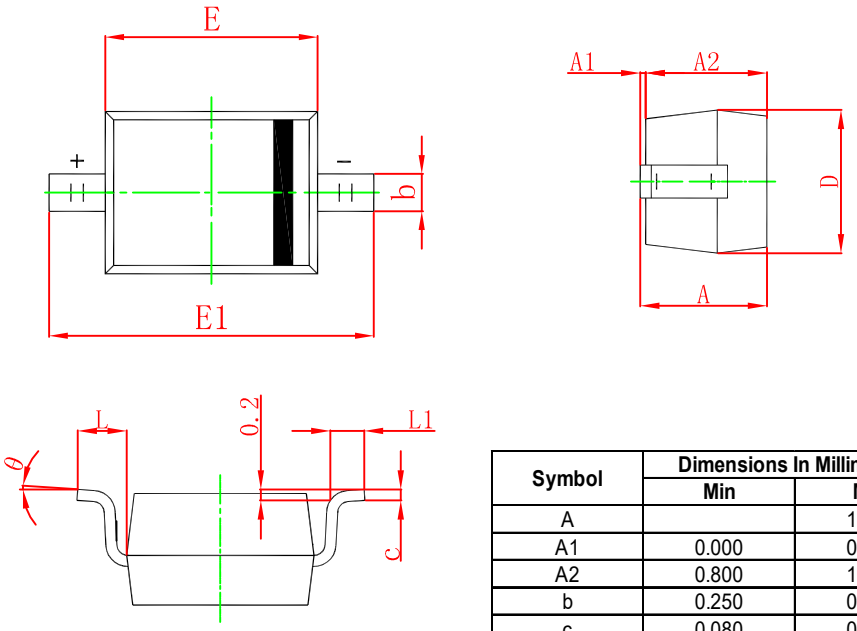

Reverse Characteristics
REVERSE CURRENT I_R (mA)
10
1
0.1
0.01
1E-3
0
5
10
15
20
25
30
REVERSE VOLTAGE V_R (V)
T_a=100 °C
T_a=25 °C


Capacitance Characteristics
CAPACITANCE BETWEEN TERMINALS C_T (pF)
300
250
200
150
100
50
0
0
5
10
15
20
REVERSE VOLTAGE V_R (V)
T_a=25℃
f=1MHz


Power Derating Curve
POWER DISSIPATION P_D (mW)
250
200
150
100
50
0
0
25
50
75
100
125
AMBIENT TEMPERATURE T_a (℃)

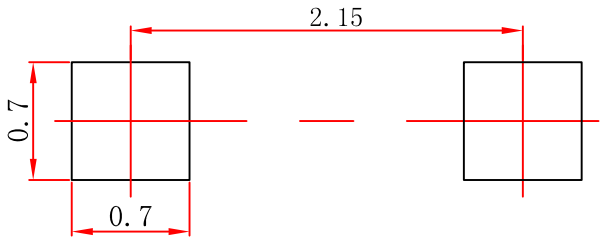
PACKAGE OUTLINE AND PAD LAYOUT INFORMATION

SOD-323 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A		1.100		0.043
A1	0.000	0.100	0.000	0.004
A2	0.800	1.000	0.031	0.039
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	1.200	1.400	0.047	0.055
E	1.600	1.800	0.063	0.071
E1	2.500	2.750	0.098	0.108
L	0.475 REF		0.019 REF	
L1	0.250	0.400	0.010	0.016
θ	0°	8°	0°	8°

SOD-323 Suggested Pad Layout



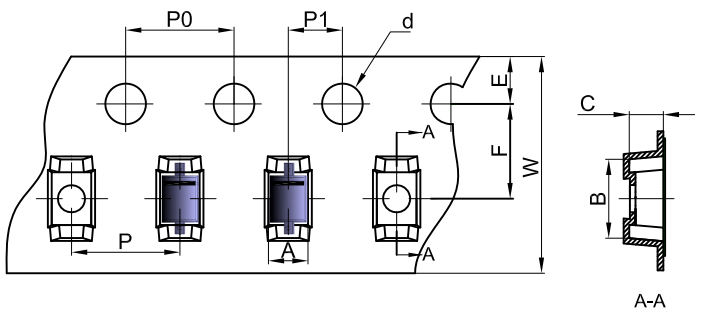
Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.

NOTICE

SZCJ reserves the right to make modifications,enhan nts,improvements,corrections or other es without further notice to any product herein. SZCJ does not assume any liability arising out of the application or use of any product described h

SOD-323 Tape and Reel

SOD-323 Embossed Carrier Tape

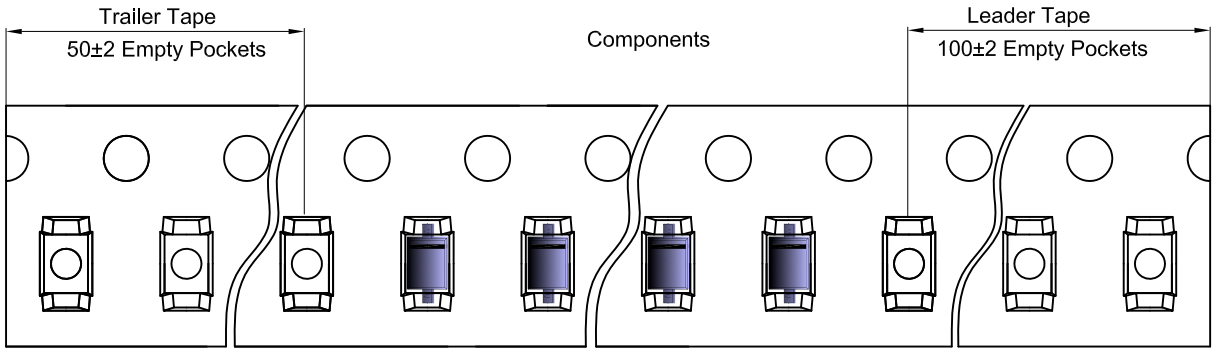


Packaging Description:

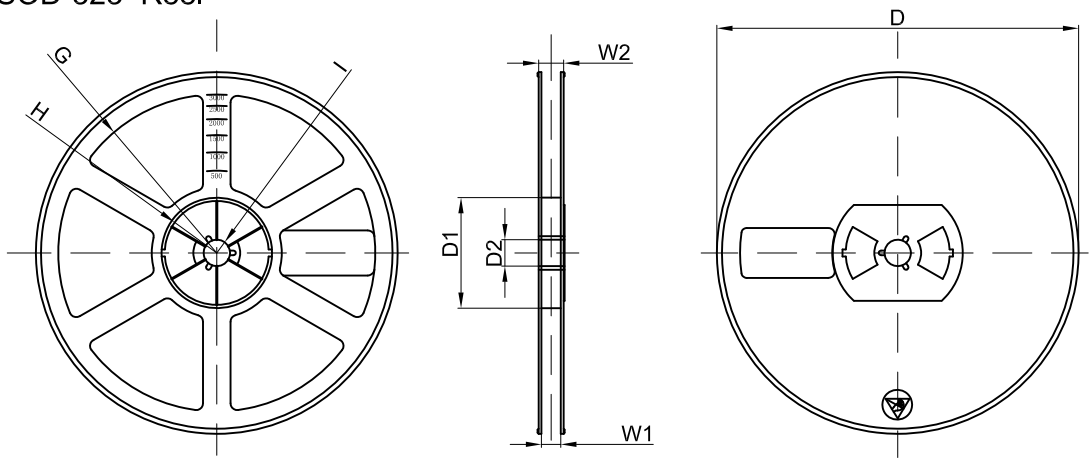
SOD-323 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000 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-323	1.48	3.3	1.25	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

SOD-323 Tape Leader and Trailer



SOD-323 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	45,000 pcs	203×203×195	180,000 pcs	438×438×220	