



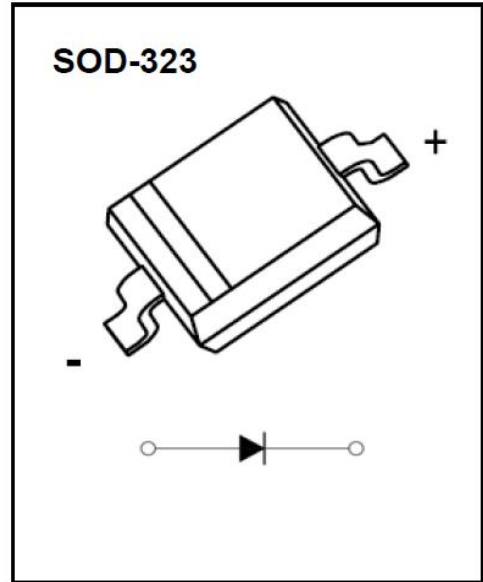
SOD-323 Plastic-Encapsulate Diodes

B0520WS SCHOTTKY BARRIER DIODE

Features

- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- High Conductance
- Also Available in Lead Free Version
- AEC Q101 Qualified

Marking:



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

Maximum Ratings @ T_a=25°C

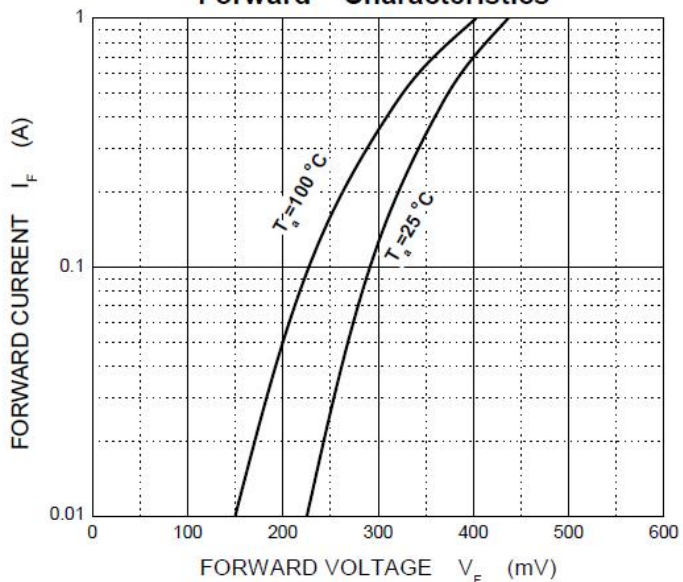
Parameter	Symbo	Value	Unit
Peak repetitive peak reverse voltage	V _{RRM}	20	V
Working peak reverse voltage	V _{RWM}		
DC blocking voltage	V _R		
RMS reverse voltage reverse voltage (DC)	V _{R(RMS)}	14	V
Average rectified output current	I _o	0.5	A
Non-repetitive Peak Forward Surge Current @t=8.3ms	I _{FSM}	5.5	A
Power dissipation	P _D	200	mW
Thermal resistance junction to ambient	R _{θJA}	500	°C/W
Operating Junction Temperature Range	T _j	-40 ~ +125	°C
Storage Temperature Range	T _{STG}	-55 ~ +150	°C
Voltage rate of change	dv/dt	1000	V/μs

Electrical Ratings@T_a=25°C

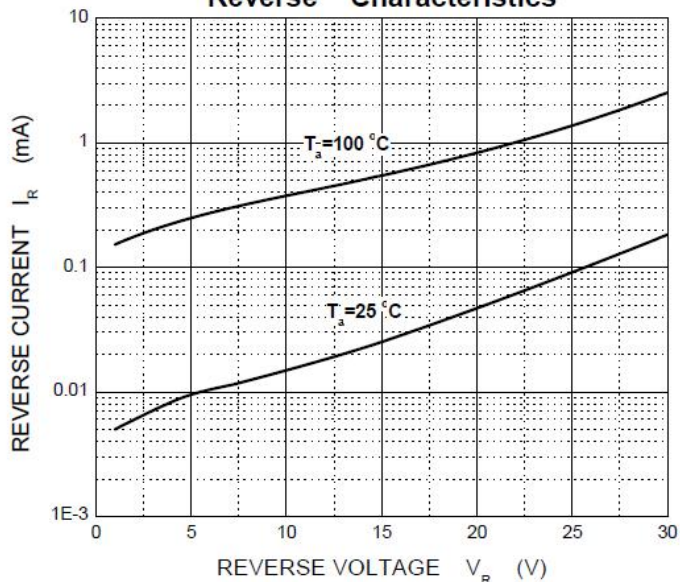
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse breakdown voltage	V _(BR)	I _R =250uA	20			V
Reverse current	I _R	V _R =10V			75	uA
		V _R =20V			250	
Forward voltage	V _F	I _F =0.1A			0.33	V
		I _F =0.5A			0.39	
Capacitance between terminals	C _T	V _R =1, f=1MHz		170		pF

Typical Characteristics

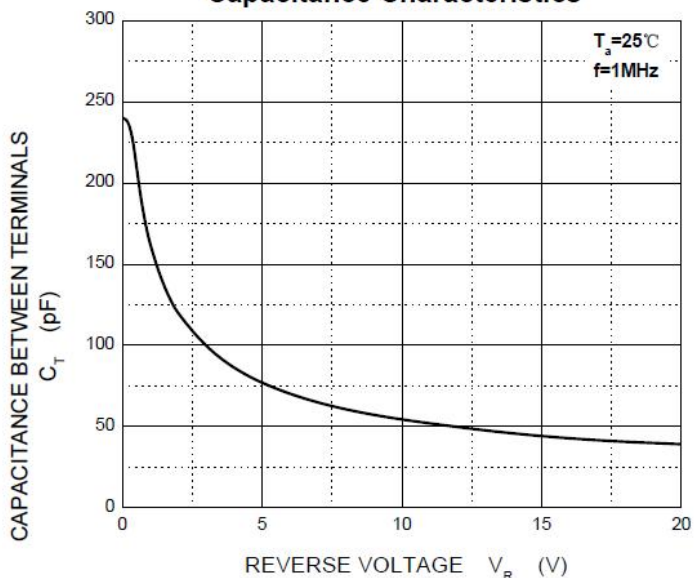
Forward Characteristics



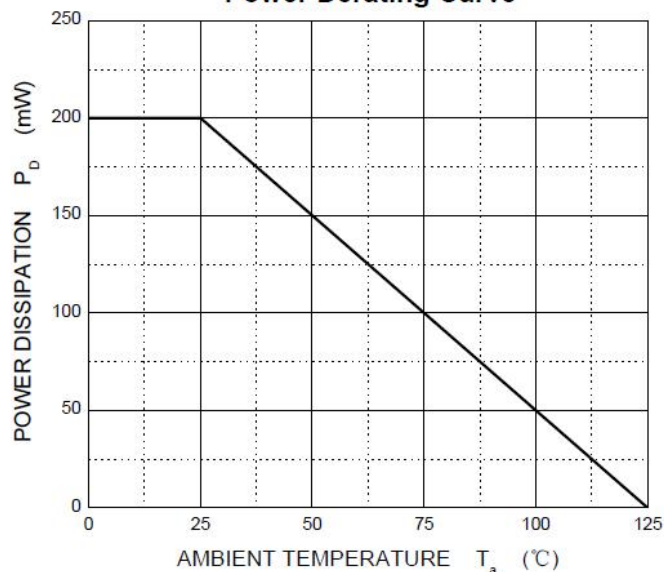
Reverse Characteristics



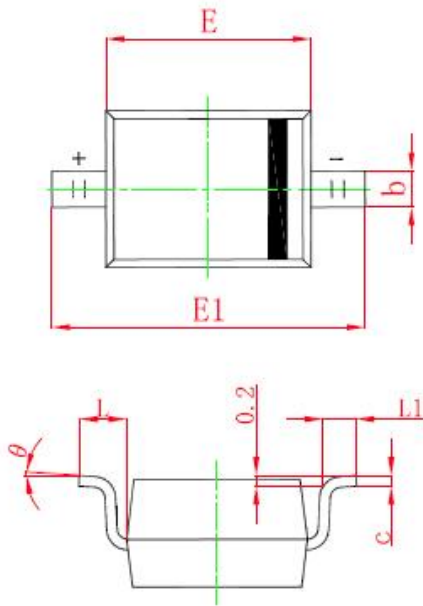
Capacitance Characteristics



Power Derating Curve

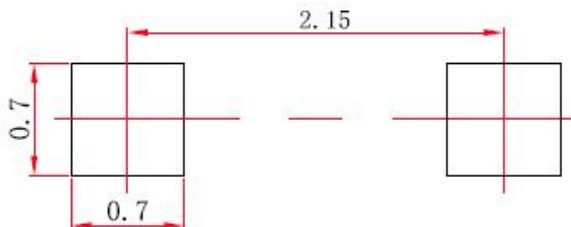


SOD-323 Package Outline Dimensions



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: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.

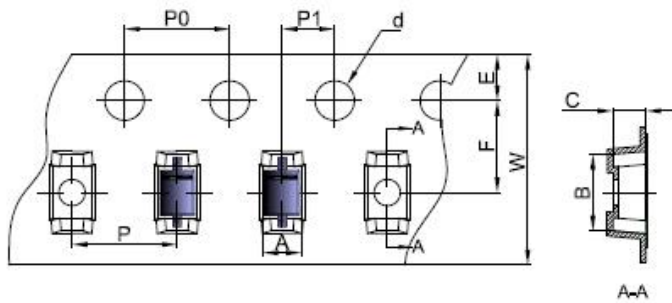
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SOD-323 Tape and Reel

SOD-323 Embossed Carrier Tape

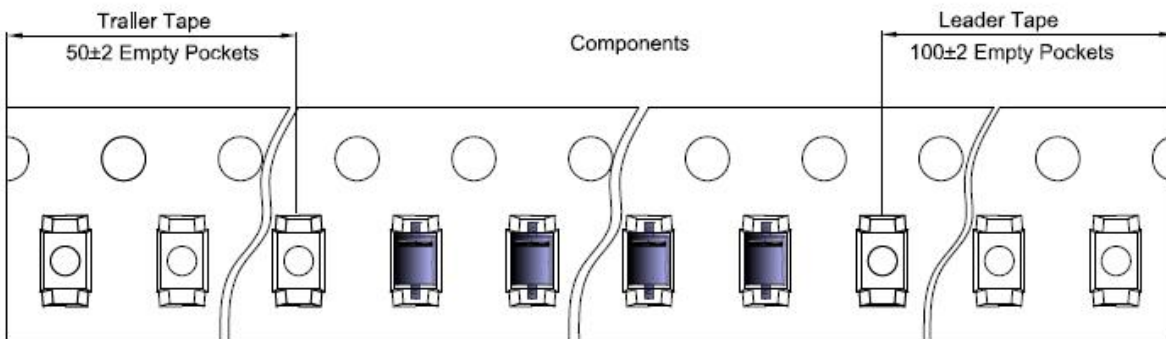


Packaging Description:

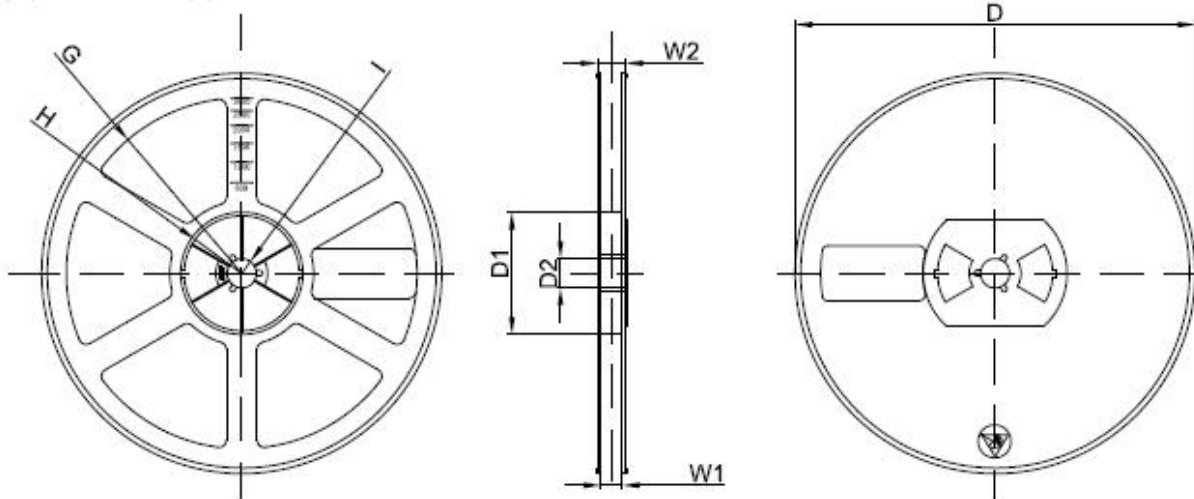
SOD-323 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts 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	∅1.50	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	∅178.00	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	

Date of change	Rev #	revise content
2023/08/08	A/0	/