

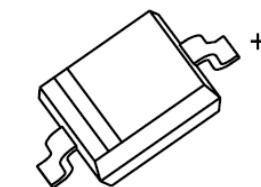
## SOD-323 Plastic-Encapsulate Diodes

SCHOTTKY BARRIER DIODE

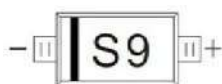
### Features:

- High breakdown voltage
- Low turn-on voltage
- Guard ring construction for transient protection

SOD-323



MARKING: S9



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

Parameter	Symbol	Limit	Unit
Peak repetitive peak reverse voltage	$V_{RRM}$	100	V
Working peak reverse voltage	$V_{RWM}$		
Forward continuous current	$I_F$	250	mA
Repetitive peak forward current (Note 1) @ $t_p < 1.0\text{s}$ , Duty Cycle < 50%	$I_{FRM}$	500	mA
Non-repetitive Peak Forward surge current @ $t = 10\text{ms}$	$I_{FSM}$	2500	mA
Power dissipation	$P_D$	400	mW
Thermal resistance junction to ambient air	$R_{\theta JA}$	500	$^{\circ}\text{C}/\text{W}$
Operating Junction Temperature Range	$T_j$	-40 ~ +150	$^{\circ}\text{C}$
Storage Temperature Range	$T_{STG}$	-55 ~ +150	$^{\circ}\text{C}$

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

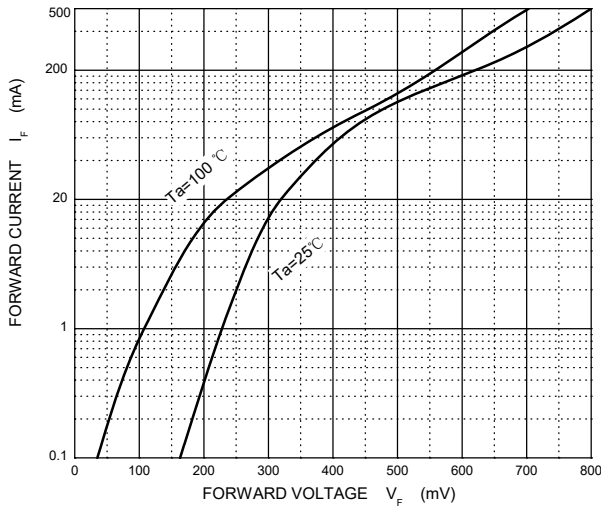
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse breakdown voltage(Note 2)	$V_R$	$I_R=100\mu\text{A}$	100			V
Reverse voltage leakage current	$I_R$	$V_{R1}=1.5\text{V}$			0.3	$\mu\text{A}$
		$V_{R2}=10\text{V}$			0.5	
		$V_{R3}=50\text{V}$			1	
		$V_{R4}=75\text{V}$			2	
Forward voltage(Note 2)	$V_F$	$I_{F1}=0.1\text{mA}$			0.25	V
		$I_{F2}=10\text{mA}$			0.45	
		$I_{F3}=250\text{mA}$			0.85	
Diode capacitance	$C_T$	$V_R=0, f=1\text{MHz}$		20		pF
		$V_R=1\text{V}, f=1\text{MHz}$		12		

Notes: 1. Part mounted on FR-4 board with recommended pad layout.

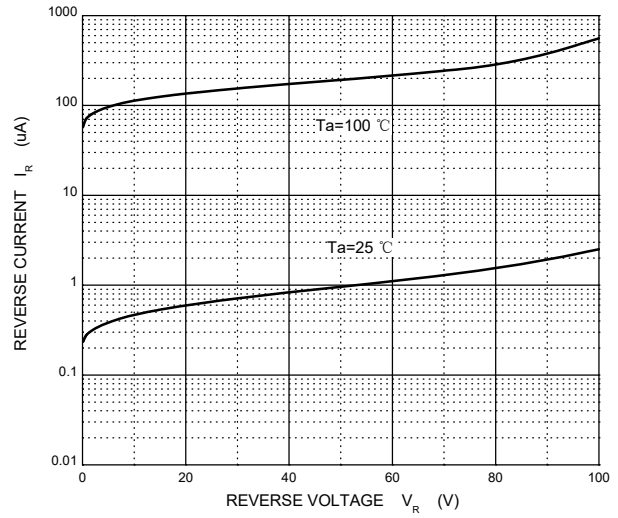
2. Short duration pulse test used to minimize self-heating effect.

**Typical Characteristics**

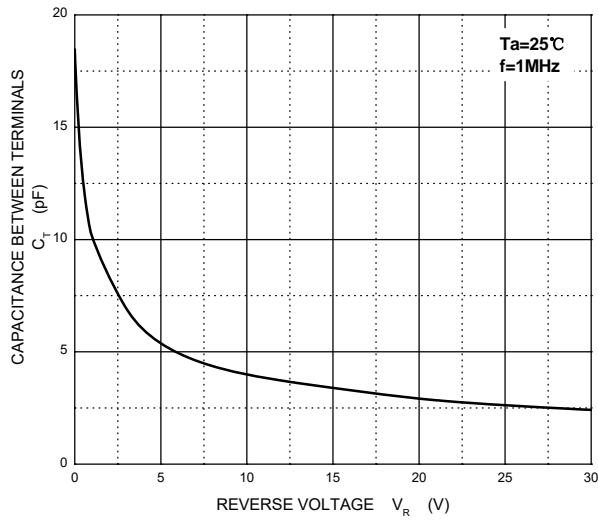
**Forward Characteristics**



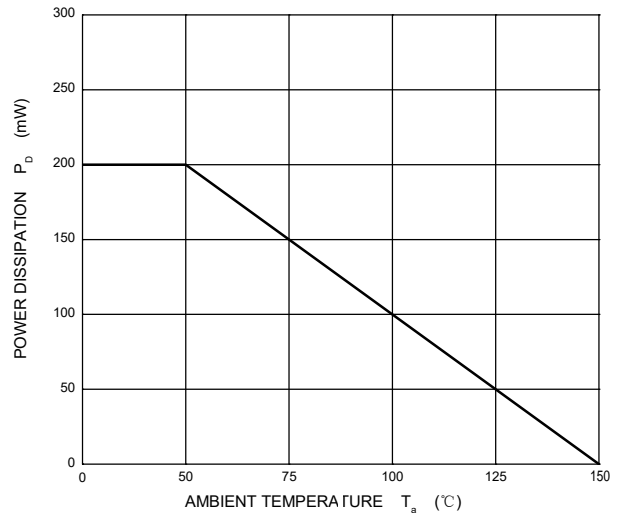
**Reverse Characteristics**



**Capacitance Characteristics**

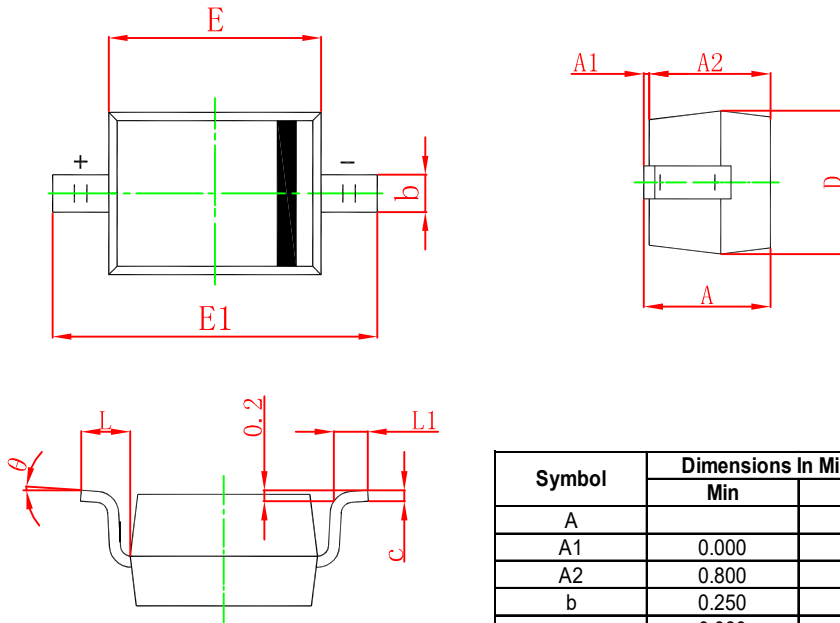


**Power Derating Curve**



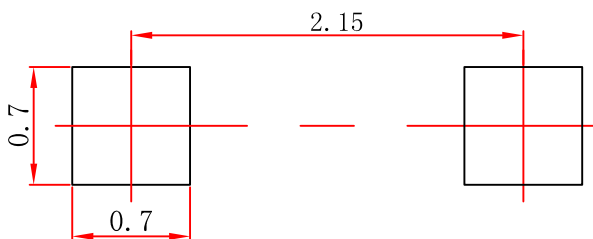
PACKAGE OUTLINE AND PAD LAYOUT INFORMATION

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°

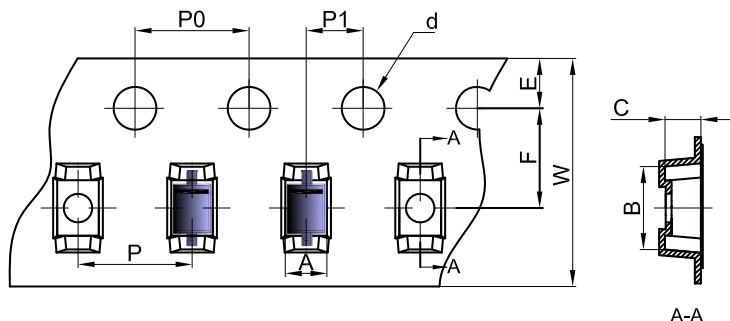
SOD-323 Suggested Pad Layout



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

**SOD-323 Tape and Reel**

**SOD-323 Embossed Carrier Tape**

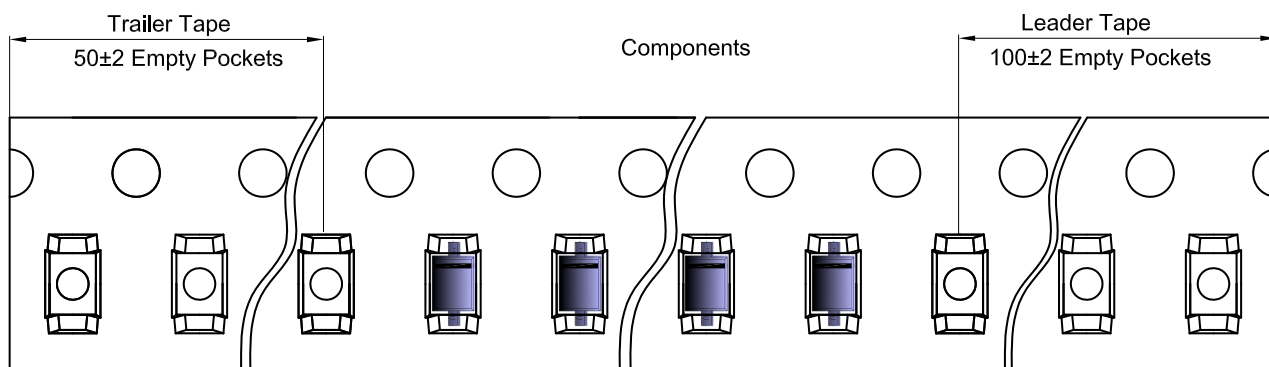


**Packaging Description:**

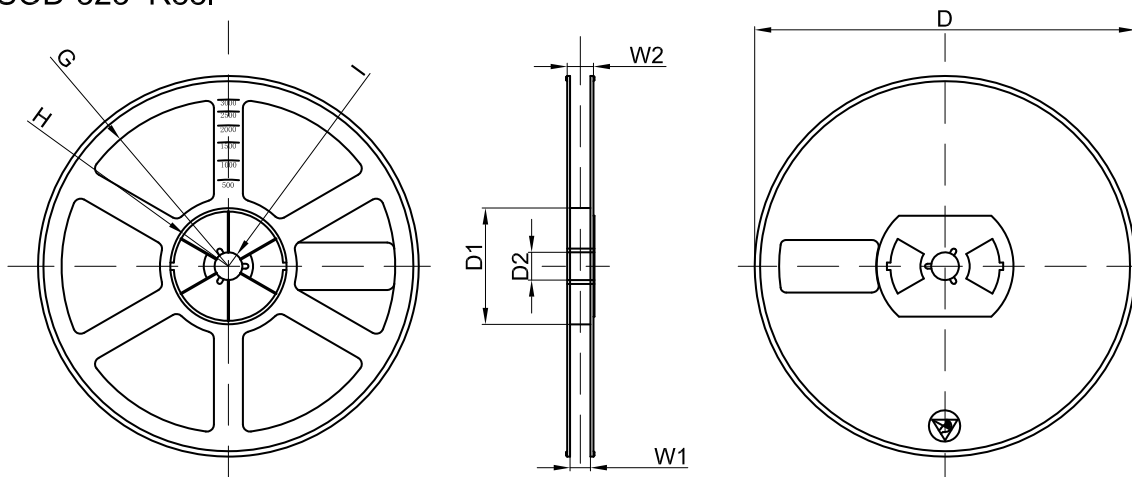
SOD-323 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts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