

Silicon Planar Zener Diodes

Features

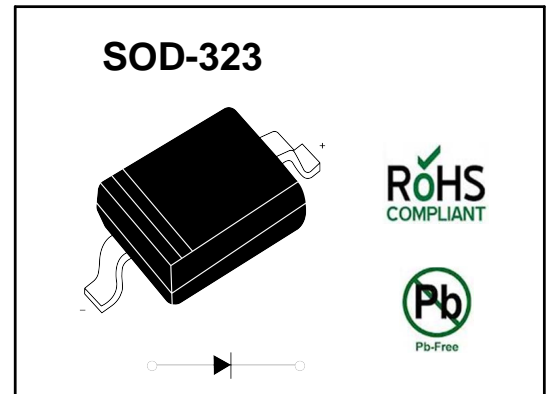
- Total power dissipation : max. 300 mW
- Small plastic package suitable for surface mounted design
- High reliability

Description

Silicon planar Zener diode in a small plastic SMD SOD-323 package

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Absolute Maximum Ratings (T_a = 25 °C)

Parameter	Symbol	Value	Unit
Power Dissipation	P _{tot}	300	mW
Junction Temperature	T _j	150	°C
Storage Temperature Range	T _{stg}	- 55 to + 150	°C

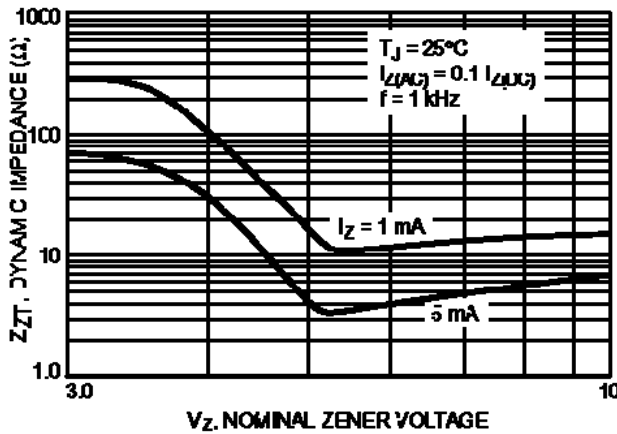
Characteristics at T_a = 25 °C

Parameter	Symbol	Max.	Unit
Thermal Resistance Junction to Ambient Air	R _{thA}	417	°C/W
Forward Voltage at I _F = 10 mA	V _F	0.9	V

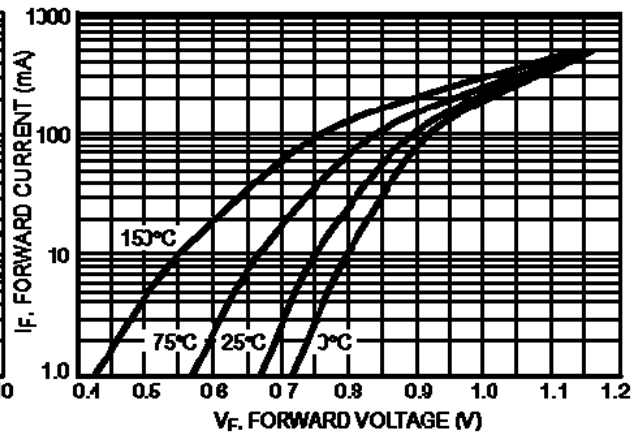
Characteristics at $T_a = 25\text{ °C}$

Type	Marking Code	Zener Voltage Range ¹⁾			Dynamic Impedance		Reverse Leakage Current	
		V_{znom} V	I_{zT} for V_{zT}		Z_{zT} (Max.) Ω	at I_{zT} mA	I_R (Max.) μA	at V_R V
			mA	V				
MM3Z2V2B	MF	2.2	5	2.1...2.4	100	5	120	0.7
MM3Z2V4B	7C	2.4	5	2.3...2.65	100	5	120	1
MM3Z2V7B	7D	2.7	5	2.65...2.95	110	5	120	1
MM3Z3V0B	7E	3.0	5	2.95...3.25	120	5	50	1
MM3Z3V3B	7F	3.3	5	3.25...3.55	120	5	20	1
MM3Z3V6B	7H	3.6	5	3.6...3.845	100	5	10	1
MM3Z3V9B	7J	3.9	5	3.89...4.16	100	5	5	1
MM3Z4V3B	7K	4.3	5	4.17...4.43	100	5	5	1
MM3Z4V7B	7M	4.7	5	4.55...4.75	100	5	2	1
MM3Z5V1B	7N	5.1	5	4.98...5.2	80	5	2	1.5
MM3Z5V6B	7P	5.6	5	5.49...5.73	60	5	1	2.5
MM3Z6V2B	7R	6.2	5	6.06...6.33	60	5	1	3
MM3Z6V8B	7X	6.8	5	6.65...6.93	40	5	0.5	3.5
MM3Z7V5B	7Y	7.5	5	7.28...7.6	30	5	0.5	4
MM3Z8V2B	7Z	8.2	5	8.02...8.36	30	5	0.5	5
MM3Z9V1B	8A	9.1	5	8.85...9.23	30	5	0.5	6
MM3Z10B	8B	10	5	9.77...10.21	30	5	0.1	7
MM3Z11B	8C	11	5	10.76...11.22	30	5	0.1	8
MM3Z12B	8D	12	5	11.74...12.24	30	5	0.1	9
MM3Z13B	8E	13	5	12.91...13.49	37	5	0.1	10
MM3Z15B	8F	15	5	14.34...14.98	42	5	0.1	11
MM3Z16B	8H	16	5	15.85...16.51	50	5	0.1	12
MM3Z18B	8J	18	5	17.56...18.35	65	5	0.1	13
MM3Z20B	8K	20	5	19.52...20.39	85	5	0.1	15
MM3Z22B	8M	22	5	21.54...22.47	100	5	0.1	17
MM3Z24B	8N	24	5	23.72...24.78	120	5	0.1	19
MM3Z27B	8P	27	5	26.19...27.53	150	5	0.1	21
MM3Z30B	8R	30	5	29.19...30.69	200	5	0.1	23
MM3Z33B	8X	33	5	32.15...33.79	250	5	0.1	25
MM3Z36B	8Y	36	5	35.07...36.87	300	5	0.1	27
MM3Z39B	8Z	39	5	37...41	100	5	2	30

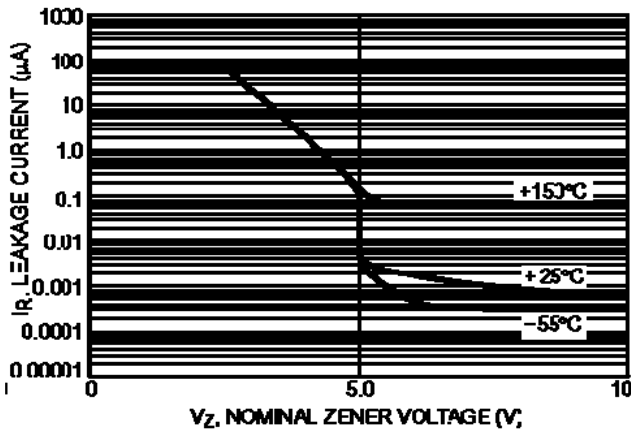
¹⁾ V_z is tested with pulses (20 ms).



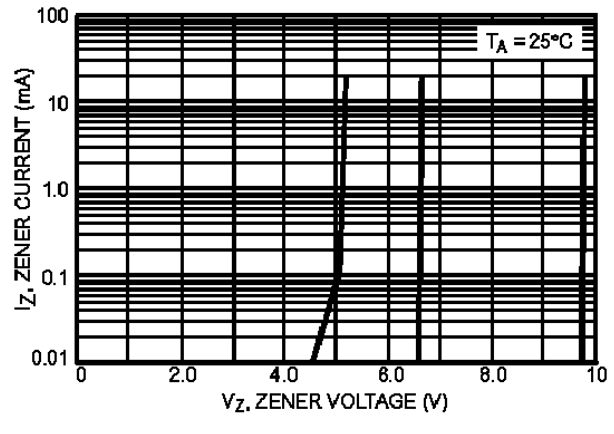
Effect of Zener Voltage on Zener Impedance



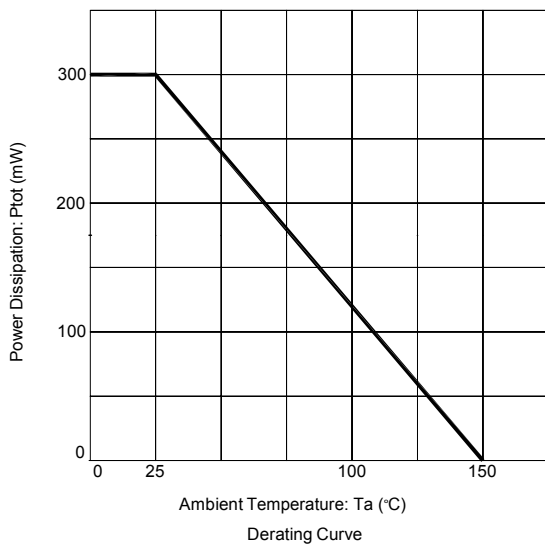
Typical Forward Voltage



Typical Leakage Current

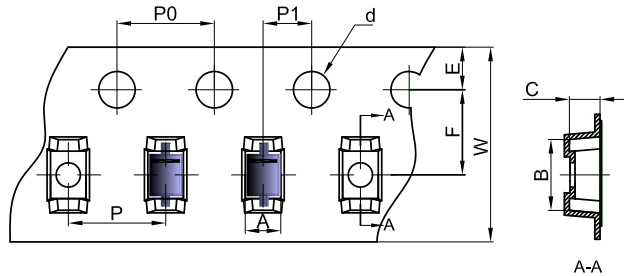


Zener Voltage versus Zener Current (V_Z Up to 9 V)



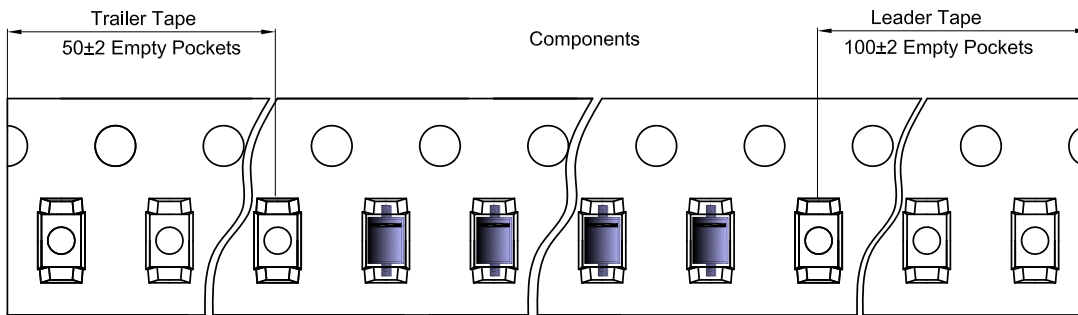
SOD-323 Tape and Reel

SOD-323 Embossed Carrier Tape

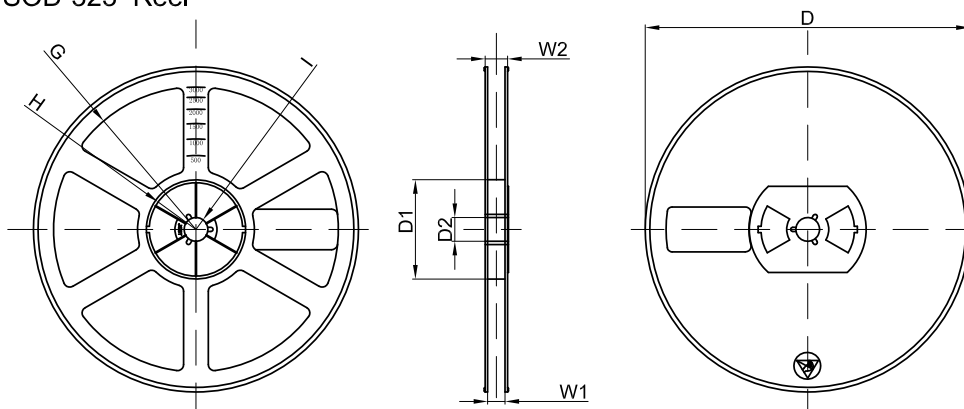


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOD-323	1.48	3.3	1.25	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

SOD-323 Tape Leader and Trailer



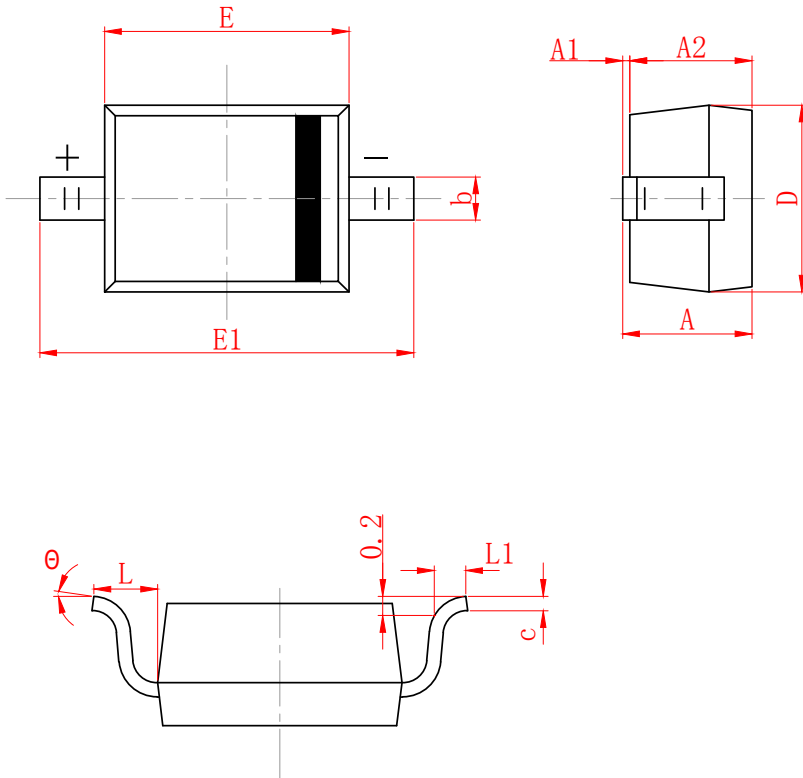
SOD-323 Reel



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	

SOD-323 Package Outline Dimensions



SYMBOL	MILLIMETER	
	MIN	MAX
A		1.000
A1	0.000	0.100
A2	0.800	0.900
b	0.250	0.350
c	0.008	0.150
D	1.200	1.400
E	1.600	1.800
E1	2.500	2.700
L	0.475 (REF)	
L1	0.250	0.400
θ	0°	8°

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