

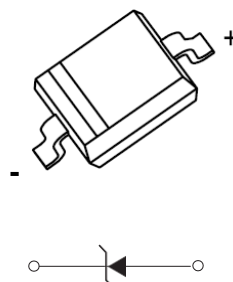
SOD-323 Plastic-Encapsulate Diodes

ZENER DIODE

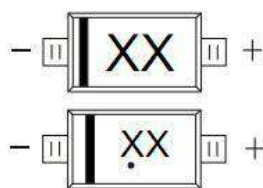
Features:

- Planar die construction
- 200mW power dissipation on ceramic PBC
- General purpose, medium current
- Ideally suited for automated assembly processes
- Available in lead free version

SOD-323



Marking:



XX= Device code, see table on page2 the marking code

The marking bar indicates the cathode

Solid dot = Green molding compound device, if none, the normal device .

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

Characteristic	Symbol	Value	Unit
Forward Voltage (Note 2) @ $I_F = 10\text{mA}$	V_F	0.9	V
Power Dissipation (Note 1)	P_D	300	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	417	$^{\circ}\text{C/W}$
Junction Temperature	T_j	150	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	-55~+150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS

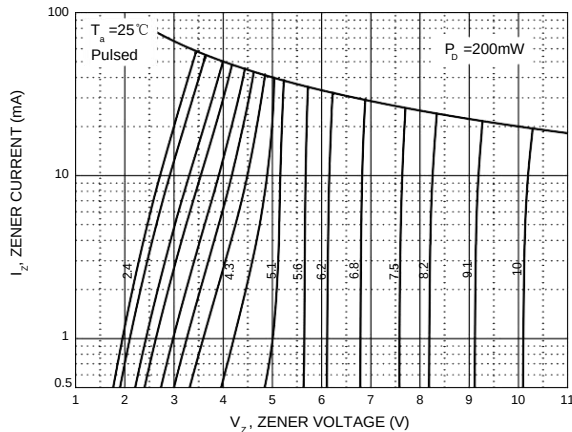
T_a=25°C unless otherwise specified

TYPE	Marking	Zener Voltage Range (Note 2)				Maximum Zener Impedance (Note 3)			Maximum Reverse Current (Note 2)		Typical Temperature Coefficient @I _{ZTC} mV/°C		Test Current I _{ZTC}
		V _Z @I _{ZT}			I _{ZT}	Z _{ZT} @I _{ZT}	Z _{ZK} @I _{ZK}	I _{ZK}	I _R	V _R			
		Nom(V)	Min(V)	Max(V)	(mA)	Ω		(mA)	μA	V	Min	Max	mA
MM3Z2V4	1C/WX/00	2.4	2.20	2.60	5	100	600	1.0	50	1.0	-3.5	0	5
MM3Z2V7	1D/W1/01	2.7	2.5	2.9	5	100	600	1.0	20	1.0	-3.5	0	5
MM3Z3V0	1E/W2/02	3.0	2.8	3.2	5	95	600	1.0	10	1.0	-3.5	0	5
MM3Z3V3	1F/W3/05	3.3	3.1	3.5	5	95	600	1.0	5	1.0	-3.5	0	5
MM3Z3V6	1H/W4/06	3.6	3.4	3.8	5	90	600	1.0	5	1.0	-3.5	0	5
MM3Z3V9	1J/W5/07	3.9	3.7	4.1	5	90	600	1.0	3	1.0	-3.5	0	5
MM3Z4V3	1K/W6/08	4.3	4.0	4.6	5	90	600	1.0	3	1.0	-3.5	0	5
MM3Z4V7	1M/W7/09	4.7	4.4	5.0	5	80	500	1.0	3	2.0	-3.5	0.2	5
MM3Z5V1	1N/W8/0A	5.1	4.8	5.4	5	60	480	1.0	2	2.0	-2.7	1.2	5
MM3Z5V6	1P/W9/0C	5.6	5.2	6.0	5	40	400	1.0	1	2.0	-2	2.5	5
MM3Z6V2	1R/WA/0E	6.2	5.8	6.6	5	10	150	1.0	3	4.0	0.4	3.7	5
MM3Z6V8	1X/WB/0F	6.8	6.4	7.2	5	15	80	1.0	2	4.0	1.2	4.5	5
MM3Z7V5	1Y/WC/0G	7.5	7.0	7.9	5	15	80	1.0	1	5.0	2.5	5.3	5
MM3Z8V2	1Z/WD/0H	8.2	7.7	8.7	5	15	80	1.0	0.7	5.0	3.2	6.2	5
MM3Z9V1	2A/WE/0K	9.1	8.5	9.6	5	15	100	1.0	0.5	6.0	3.8	7.0	5
MM3Z10V	2B/WF/0L	10	9.4	10.6	5	20	150	1.0	0.2	7.0	4.5	8.0	5
MM3Z11V	2C/WG/0M	11	10.4	11.6	5	20	150	1.0	0.1	8.0	5.4	9.0	5
MM3Z12V	2D/WH/0N	12	11.4	12.7	5	25	150	1.0	0.1	8.0	6.0	10.0	5
MM3Z13V	2E/WI/0P	13	12.4	14.1	5	30	170	1.0	0.1	8.0	7.0	11.0	5
MM3Z15V	2F/WJ/0T	15	13.8	15.6	5	30	200	1.0	0.1	10.5	9.2	13	5
MM3Z16V	2H/WK/0U	16	15.3	17.1	5	40	200	1.0	0.1	11.2	10.4	14	5
MM3Z18V	2J/WL/0W	18	16.8	19.1	5	45	225	1.0	0.1	12.6	12.4	16	5
MM3Z20V	2K/WM/0Z	20	18.8	21.2	5	55	225	1.0	0.1	14.0	14.4	18.0	5
MM3Z22V	2M/WN/10	22	20.8	23.3	5	55	250	1.0	0.1	15.4	16.4	20.0	5
MM3Z24V	2N/WO/11	24	22.8	25.6	5	70	250	1.0	0.1	16.8	18.4	22.0	5
MM3Z27V	2P/WP/12	27	25.1	28.9	2	80	300	0.5	0.1	18.9	21.4	25.3	2
MM3Z30V	2R/WQ/14	30	28.0	32.0	2	80	300	0.5	0.1	21.0	24.4	29.4	2
MM3Z33V	2X/WR/18	33	31.0	35.0	2	80	325	0.5	0.1	23.1	27.4	33.4	2
MM3Z36V	2Y/WS/19	36	34.0	38.0	2	90	350	0.5	0.1	25.2	30.4	37.4	2
MM3Z39V	2Z/WT/20	39	37.0	41.0	2	130	350	0.5	0.1	27.3	33.4	41.2	2
MM3Z43V	3A/WU/21	43	40.0	46.0	2	100	700	1	0.1	32	10	12	5

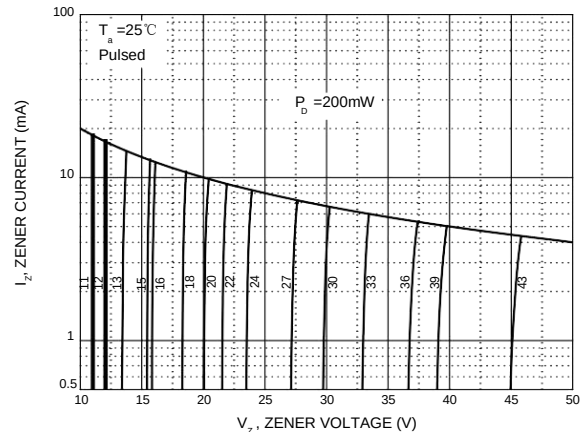
Notes: 1. Device mounted on ceramic PCB: 7.6mm x 9.4mm x 0.87mm with pad areas 25mm².
2. Short duration test pulse used to minimize self-heating effect.
3. f = 1kHz.

Typical Characteristics

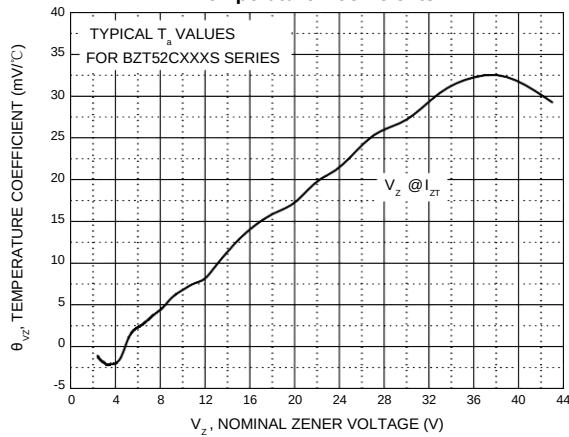
Zener Characteristics (V_Z Up to 10 V)



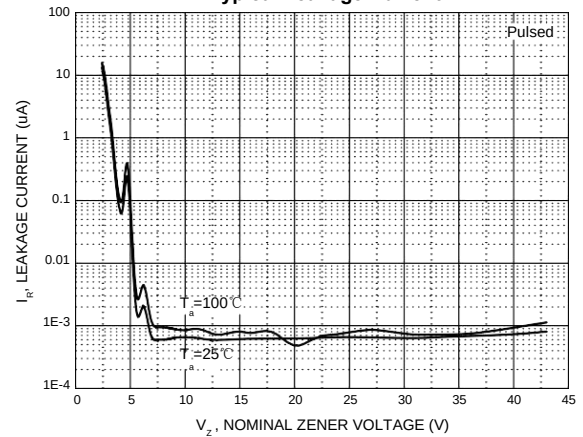
Zener Characteristics (11 V to 43 V)



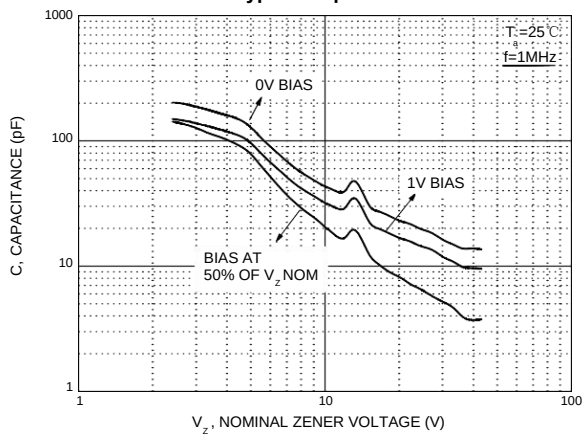
Temperature Coefficients



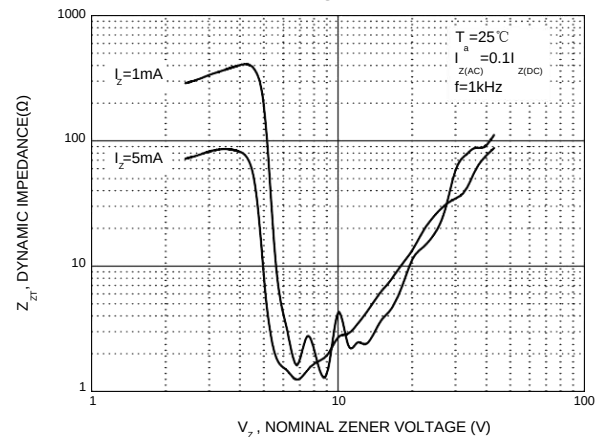
Typical Leakage Current



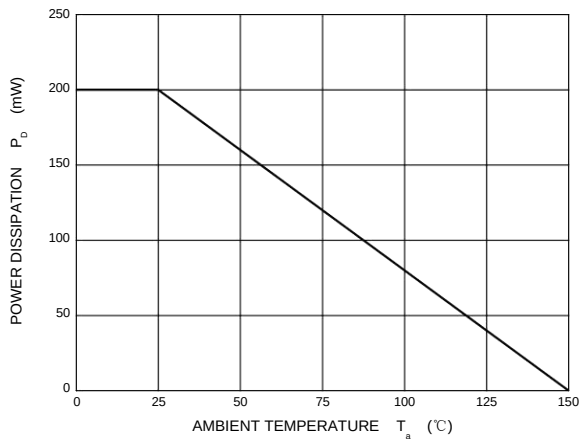
Typical Capacitance



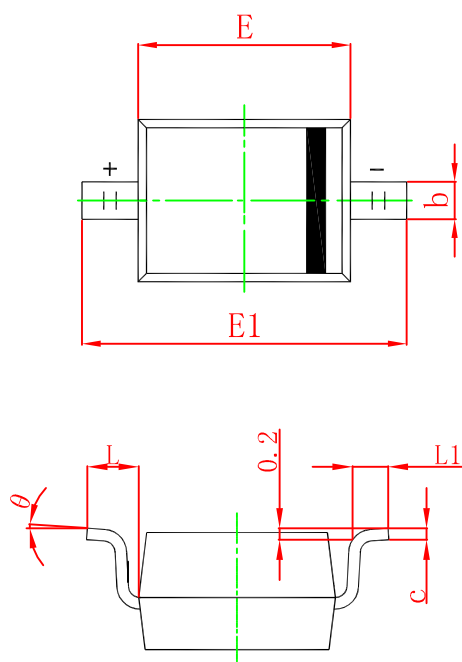
Effect of Zener Voltage on Zener Impedance



Power Derating Curve

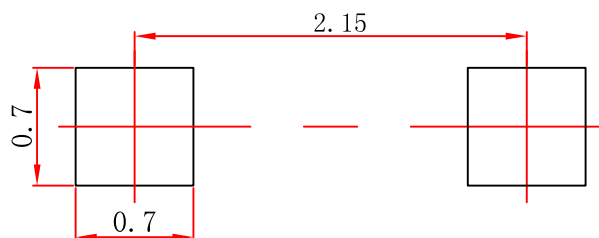


SOD-323 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A		1.000		0.039
A1	0.000	0.100	0.000	0.004
A2	0.800	0.900	0.031	0.035
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	2.550	2.750	0.100	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

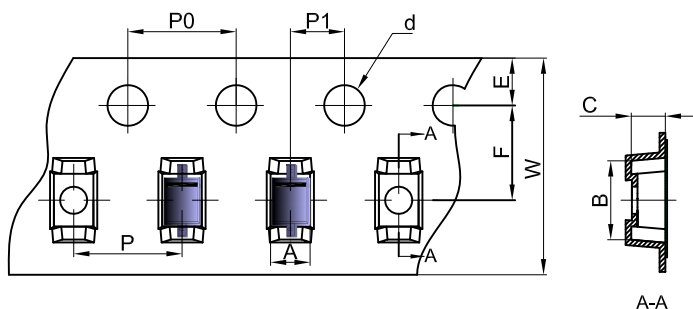


Note:

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

SOD-323 Tape and Reel

SOD-323 Embossed Carrier Tape

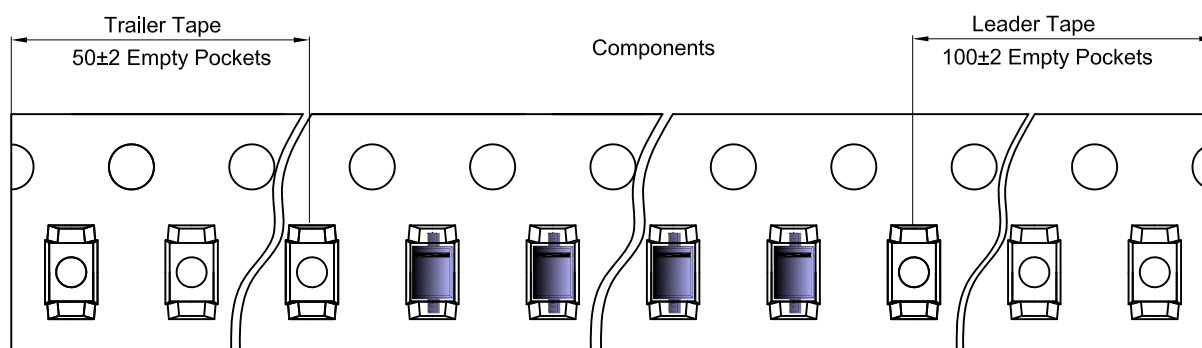


Packaging Description:

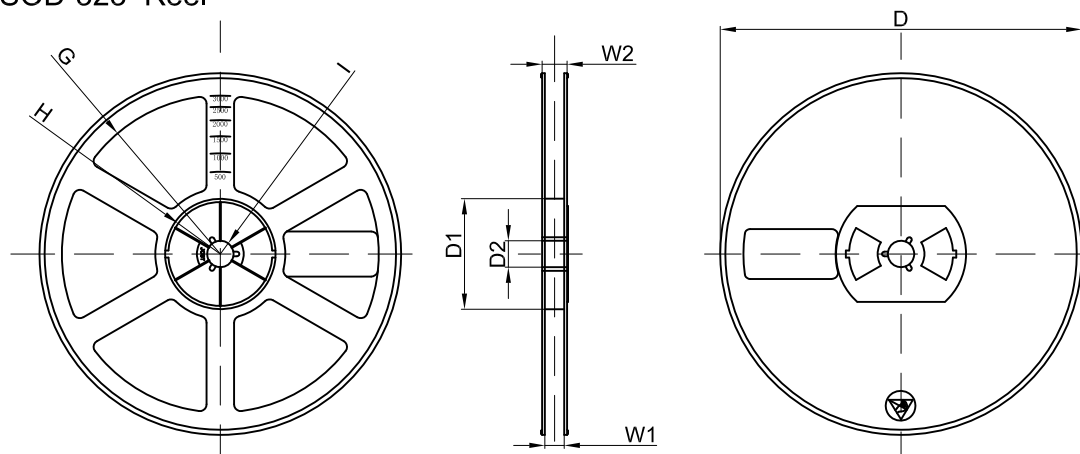
SOD-323 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts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