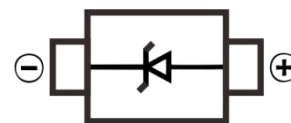


ZENER DIODE**FEATURES**

- Medium Current
- 500mW Power Dissipation
- Planar Die Construction
- Surface Mount device

**SOD-123****MECHANICAL DATA**

- Case: SOD-123
- Case Material: Molded Plastic. UL flammability
- Classification Rating: 94V-0
- Weight: 0.005 grams (approximate)

**MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)**

Parameter	Symbol	Value	Unit
Forward Voltage(Note 2) @ I _F =10mA	V _F	0.9	V
Power Dissipation(Note 1)	P _D	500	mW
Thermal Resistance From Junction To Ambient	R _{θJA}	357	°C/W
Junction Temperature	T _J	150	°C
Storage Temperature	T _{STG}	-65 ~+150	°C

ZENER DIODE
ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise specified)

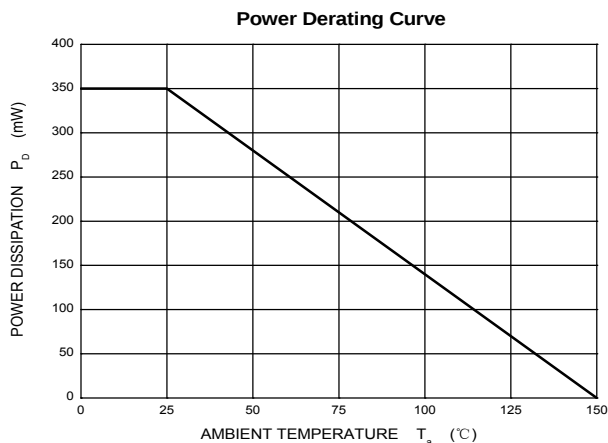
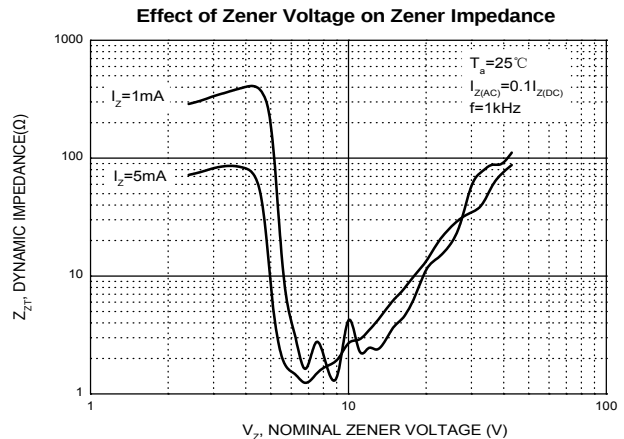
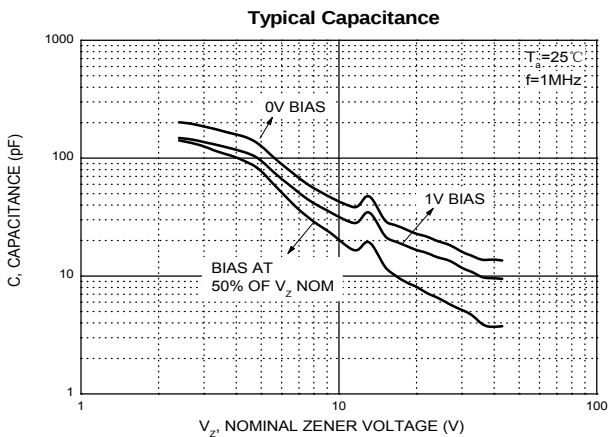
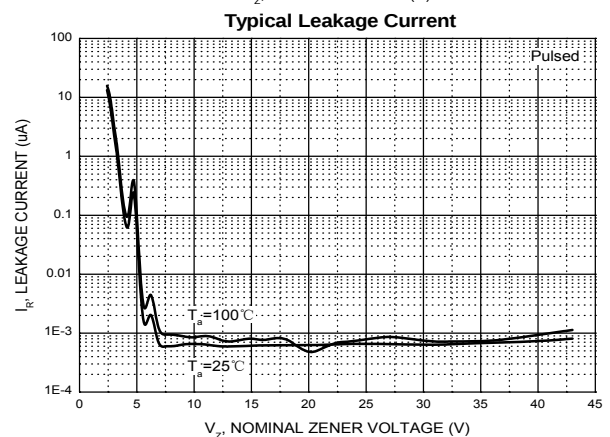
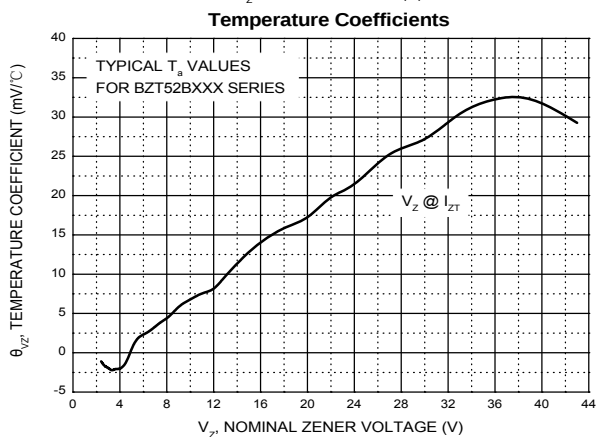
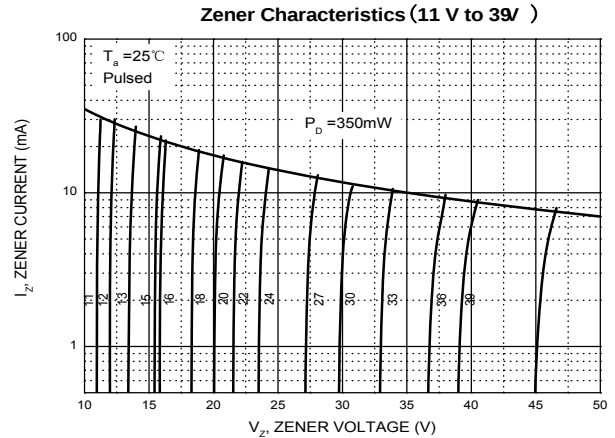
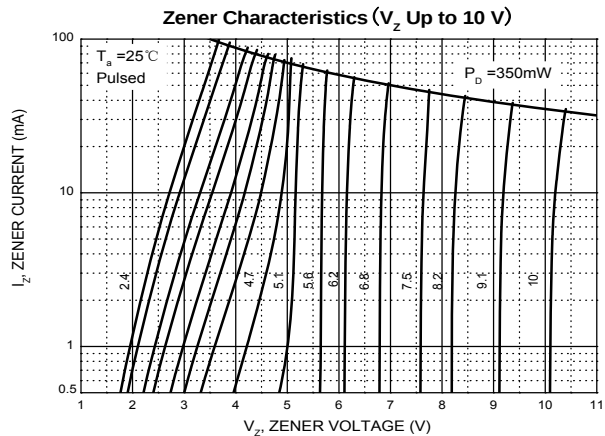
Part Number	Marking Code	Zener Voltage ²				Maximum Zener Impedance ³			Maximum Reverse Current		Typical Temperature Coefficient		Test Current
		V _Z @I _{ZT}			I _{ZT}	Z _{ZT} @I _{ZT}	Z _{ZK} @ I _{ZK}	I _{ZK}	I _R	V _R	I _{ZTC}		
		Nom	Min	Max							Min	Max	
		V	V	V		mA	Ω		mA	μA	V	mV/ °C	
BZT52B2V4	2WX	2.4	2.35	2.45	5	100	600	1	50	1	-3.5	0	5
BZT52B2V7	2W1	2.7	2.65	2.75	5	100	600	1	20	1	-3.5	0	5
BZT52B3V0	2W2	3	2.94	3.06	5	95	600	1	10	1	-3.5	0	5
BZT52B3V3	2W3	3.3	3.23	3.37	5	95	600	1	5	1	-3.5	0	5
BZT52B3V6	2W4	3.6	3.53	3.67	5	90	600	1	5	1	-3.5	0	5
BZT52B3V9	2W5	3.9	3.82	3.98	5	90	600	1	3	1	-3.5	0	5
BZT52B4V3	2W6	4.3	4.21	4.39	5	90	600	1	3	1	-3.5	0	5
BZT52B4V7	2W7	4.7	4.61	4.79	5	80	500	1	3	2	-3.5	0.2	5
BZT52B5V1	2W8	5.1	5	5.2	5	60	480	1	2	2	-2.7	1.2	5
BZT52B5V6	2W9	5.6	5.49	5.71	5	40	400	1	1	2	-2	2.5	5
BZT52B6V2	2WA	6.2	6.08	6.32	5	10	150	1	3	4	0.4	3.7	5
BZT52B6V8	2WB	6.8	6.66	6.94	5	15	80	1	2	4	1.2	4.5	5
BZT52B7V5	2WC	7.5	7.35	7.65	5	15	80	1	1	5	2.5	5.3	5
BZT52B8V2	2WD	8.2	8.04	8.36	5	15	80	1	0.7	5	3.2	6.2	5
BZT52B9V1	2WE	9.1	8.92	9.28	5	15	100	1	0.5	6	3.8	7	5
BZT52B10	2WF	10	9.8	10.2	5	20	150	1	0.2	7	4.5	8	5
BZT52B11	2WG	11	10.78	11.22	5	20	150	1	0.1	8	5.4	9	5
BZT52B12	2WH	12	11.76	12.24	5	25	150	1	0.1	8	6	10	5
BZT52B13	2WI	13	12.74	13.26	5	30	170	1	0.1	8	7	11	5
BZT52B15	2WJ	15	14.7	15.3	5	30	200	1	0.1	10.5	9.2	13	5
BZT52B16	2WK	16	15.68	16.32	5	40	200	1	0.1	11.2	10.4	14	5
BZT52B18	2WL	18	17.64	18.36	5	45	225	1	0.1	12.6	12.4	16	5
BZT52B20	2WM	20	19.6	20.4	5	55	225	1	0.1	14	14.4	18	5
BZT52B22	2WN	22	21.56	22.44	5	55	250	1	0.1	15.4	16.4	20	5
BZT52B24	2WO	24	23.52	24.48	5	70	250	1	0.1	16.8	18.4	22	5
BZT52B27	2WP	27	26.46	27.54	2	80	300	0.5	0.1	18.9	21.4	25.3	2
BZT52B30	2WQ	30	29.4	30.6	2	80	300	0.5	0.1	21	24.4	29.4	2
BZT52B33	2WR	33	32.34	33.66	2	80	325	0.5	0.1	23.1	27.4	33.4	2
BZT52B36	2WS	36	35.28	36.72	2	90	350	0.5	0.1	25.2	30.4	37.4	2
BZT52B39	2WT	39	38.22	39.78	2	130	350	0.5	0.1	27.3	33.4	41.2	2

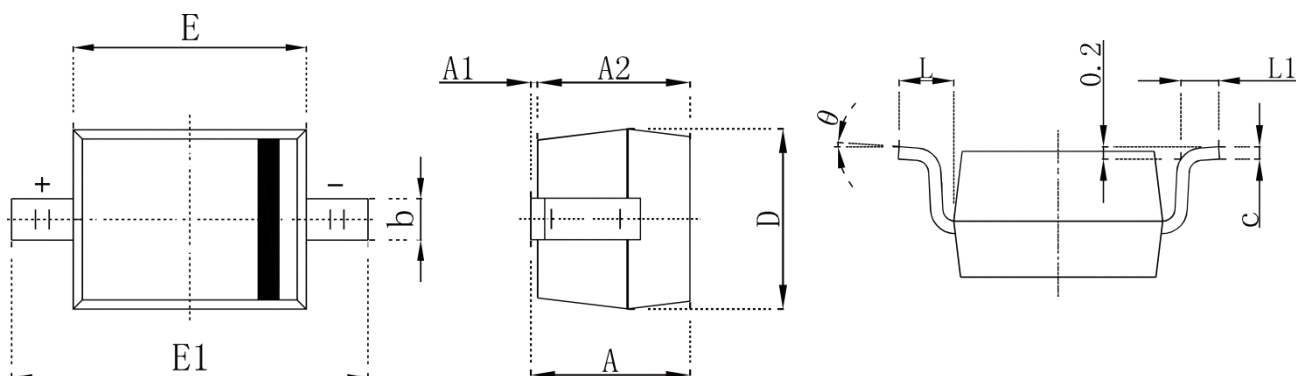
Notes:

1. The device is mounted on a ceramic PCB: 7.6mm × 9.4 mm × 0.87mm with 25mm² pad areas.
2. Short duration test pulse is used to minimize self-heating effect.
3. f=1KHz.

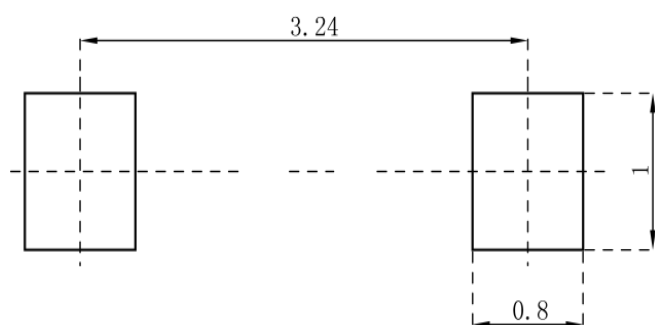
ZENER DIODE

Typical Characteristics

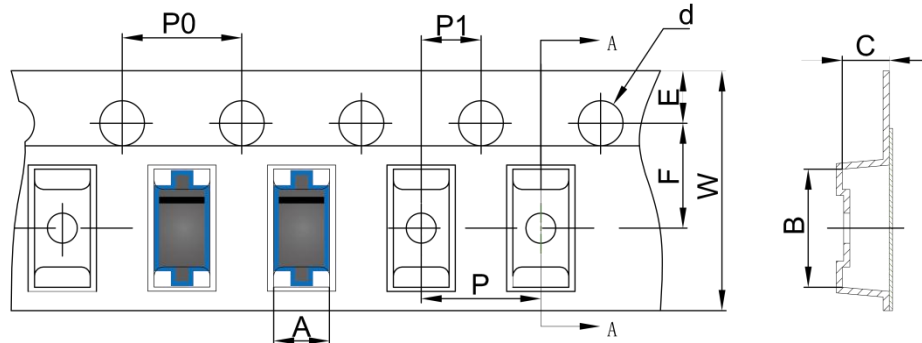


ZENER DIODE
SOD-123 Package Outline Dimensions


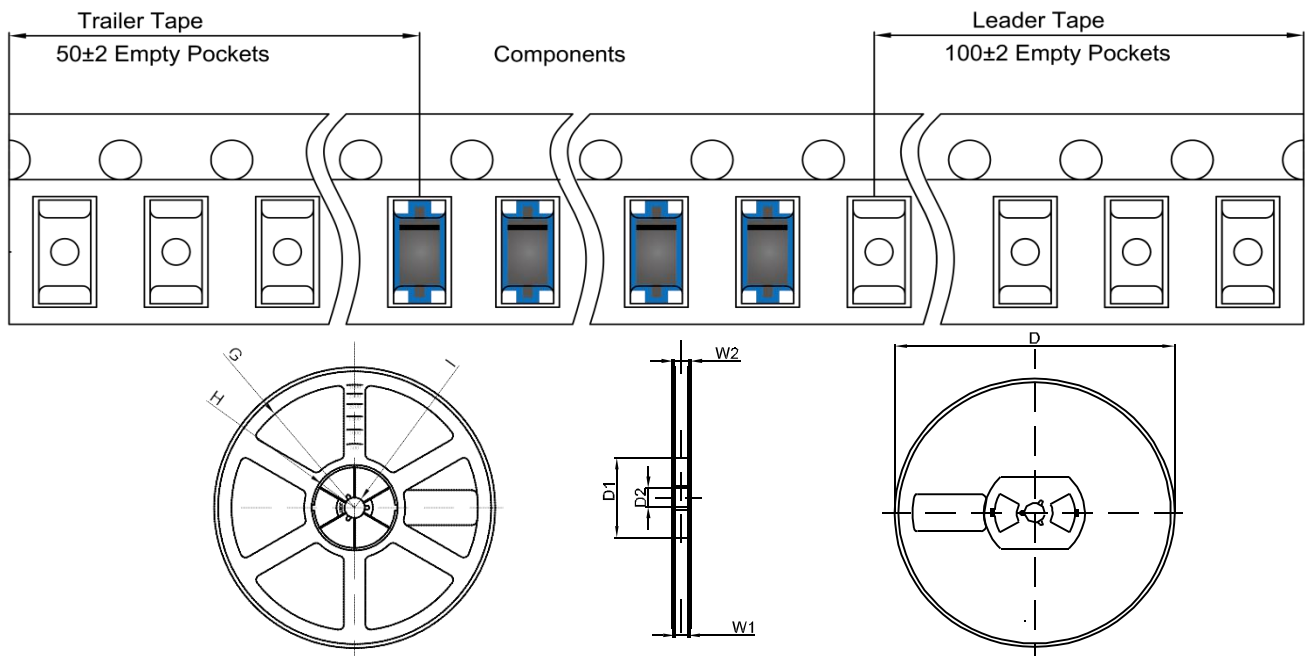
Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.450	0.650	0.018	0.026
c	0.080	0.150	0.003	0.006
D	1.500	1.700	0.059	0.067
E	2.600	2.800	0.102	0.110
E1	3.550	3.850	0.140	0.152
L	0.500REF		0.020 REF	
L1	0.250	0.450	0.010	0.018
θ	0°	8°	0°	8°

SOD-123 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

ZENER DIODE
SOD-123 Tape and Reel
SOD-123 Embossed Carrier Tape

SOD-123 Tape Leader and Trailer

DIMENSIONS ARE IN MILLIMETER										
TYPE	A	B	C	d	E	F	P0	P	P1	W
SOD-123	1.85	3.95	1.57	Ø1.55	1.75	3.50	4.00	4.00	2.00	8.00
TOLERANCE	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1

SOD-123 Reel


DIMENSIONS ARE IN MILLIMETER								
REEL OPTION	D	D1	D2	G	H	I	W1	W2
7" DIA	Ø178	54.40	13.00	R78	R25.60	R6.50	9.50	12.30
TOLERANCE	±2	±1	±1	±1	±1	±1	±1	±1