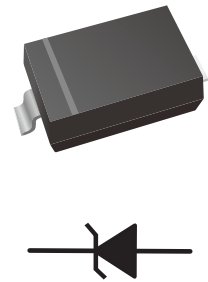


Zener Diodes

Features

- Planar Die Construction
- 500mW Power Dissipation on Ceramic PCB
- General Purpose, Medium Current
- Ideally Suited for Automated Assembly Processes
- Available in Lead Free Version
- Lead free in comply with EU RoHS 2011/65/EU directives



Mechanical Data

- Case: SOD-123
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end

Ordering information

Part Number	Shipping	Reel
LT52CxxW-TR3	3000PCS Tape&Reel	7inchs
LT52CxxW-TR12	12000PCS Tape&Reel	13inchs

Maximum Ratings ($T_a=25$ 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	500	mW
Thermal Resistance from Junction to Ambient(Note 1)	$R_{\theta JA}$	250	$^{\circ}\text{C/W}$
Operation Junction and Storage Temperature Range	T_J, T_{STG}	-55~+150	$^{\circ}\text{C}$

Electrical Characteristics (Ta=25 unless otherwise Specified)

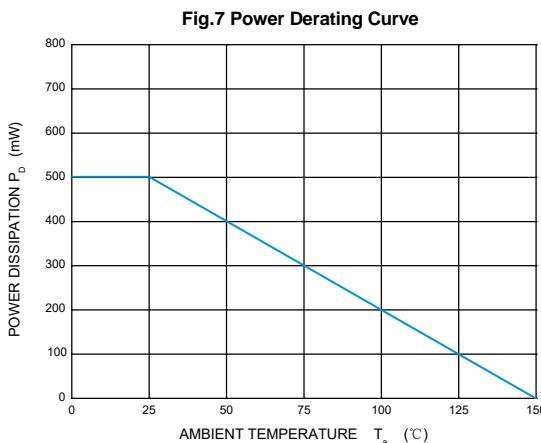
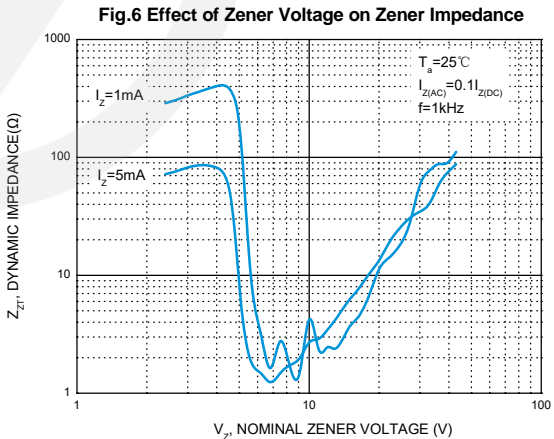
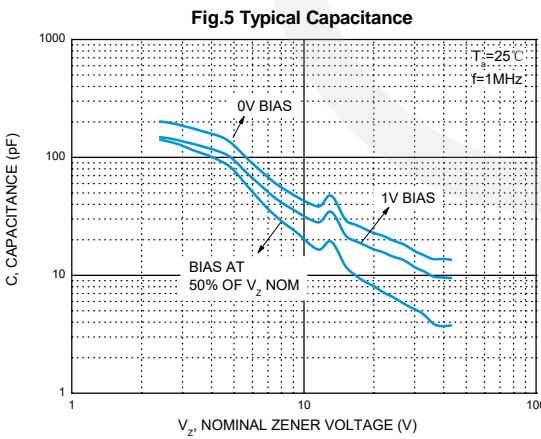
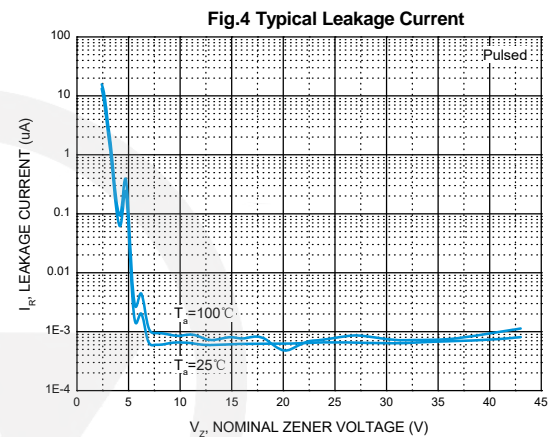
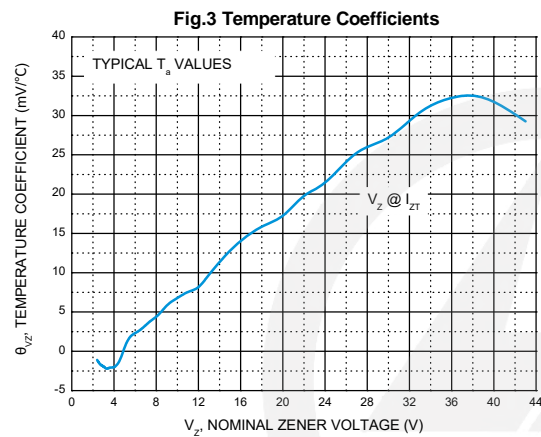
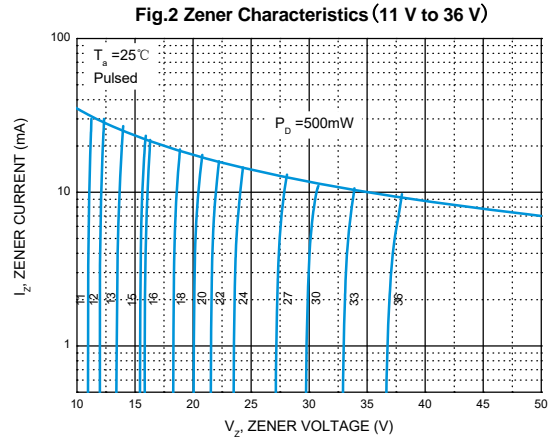
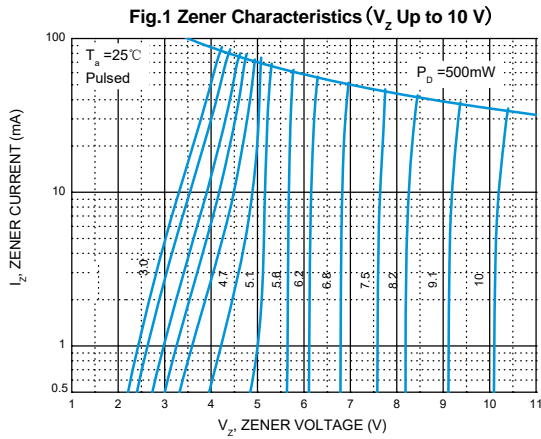
Type Number	Marking	Zener Voltage Range (Note 2)				Maximum Zener Impedance (Note 3)			Maximum Reverse Current (Note 2)		Typical Temperature Coefficient @I _{ZTC} mV/°C		Test Current I _{ZTC} mA
		V _Z @I _{ZT}			I _{ZT}	Z _{ZT} @I _{ZT}	Z _{ZK} @I _{ZK}	I _{ZK}	I _R	V _R	Min	Max	
		Nom(V)	Min(V)	Max(V)	mA	Ω		mA	uA	V			
LT52C2V7W	W1	2.7	2.5	2.9	5	100	600	1.0	20	1.0	-3.5	0	5
LT52C3V0W	W2	3.0	2.8	3.2	5	95	600	1.0	10	1.0	-3.5	0	5
LT52C3V3W	W3	3.3	3.1	3.5	5	95	600	1.0	5	1.0	-3.5	0	5
LT52C3V6W	W4	3.6	3.4	3.8	5	90	600	1.0	5	1.0	-3.5	0	5
LT52C3V9W	W5	3.9	3.7	4.1	5	90	600	1.0	3	1.0	-3.5	0	5
LT52C4V3W	W6	4.3	4.0	4.6	5	90	600	1.0	3	1.0	-3.5	0	5
LT52C4V7W	W7	4.7	4.4	5.0	5	80	500	1.0	3	2.0	-3.5	0.2	5
LT52C5V1W	W8	5.1	4.8	5.4	5	60	480	1.0	2	2.0	-2.7	1.2	5
LT52C5V6W	W9	5.6	5.2	6.0	5	40	400	1.0	1	2.0	-2.0	2.5	5
LT52C6V2W	WA	6.2	5.8	6.6	5	10	150	1.0	3	4.0	0.4	3.7	5
LT52C6V8W	WB	6.8	6.4	7.2	5	15	80	1.0	2	4.0	1.2	4.5	5
LT52C7V5W	WC	7.5	7.0	7.9	5	15	80	1.0	1	5.0	2.5	5.3	5
LT52C8V2W	WD	8.2	7.7	8.7	5	15	80	1.0	0.7	5.0	3.2	6.2	5
LT52C9V1W	WE	9.1	8.5	9.6	5	15	100	1.0	0.5	6.0	3.8	7.0	5
LT52C10W	WF	10	9.4	10.6	5	20	150	1.0	0.2	7.0	4.5	8.0	5
LT52C11W	WG	11	10.4	11.6	5	20	150	1.0	0.1	8.0	5.4	9.0	5
LT52C12W	WH	12	11.4	12.7	5	25	150	1.0	0.1	8.0	6.0	10.0	5
LT52C13W	WI	13	12.4	14.1	5	30	170	1.0	0.1	8.0	7.0	11.0	5
LT52C15W	WJ	15	13.8	15.6	5	30	200	1.0	0.1	10.5	9.2	13.0	5
LT52C16W	WK	16	15.3	17.1	5	40	200	1.0	0.1	11.2	10.4	14.0	5
LT52C18W	WL	18	16.8	19.1	5	45	225	1.0	0.1	12.6	12.4	16.0	5
LT52C20W	WM	20	18.8	21.2	5	55	225	1.0	0.1	14.0	14.4	18.0	5
LT52C22W	WN	22	20.8	23.3	5	55	250	1.0	0.1	15.4	16.4	20.0	5
LT52C24W	WO	24	22.8	25.6	5	70	250	1.0	0.1	16.8	18.4	22.0	5
LT52C27W	WP	27	25.1	28.9	2	80	300	0.5	0.1	18.9	21.4	25.3	2
LT52C30W	WQ	30	28.0	32.0	2	80	300	0.5	0.1	21.0	24.4	29.4	2
LT52C33W	WR	33	31.0	35.0	2	80	325	0.5	0.1	23.1	27.4	33.4	2
LT52C36W	WS	36	34.0	38.0	2	90	350	0.5	0.1	25.2	30.4	37.4	2

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

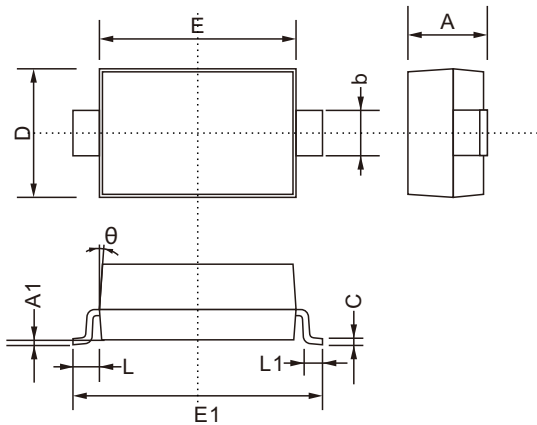
3. f=1kHz

Electrical Characteristics (Ta=25 unless otherwise Specified)



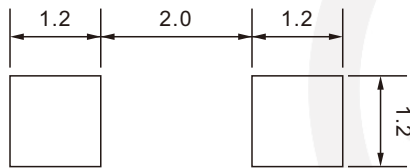
SOD-123 Package Outline

Unit: mm



SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.900	1.300
A1	0.000	0.200
b	0.450	0.750
C	0.080	0.230
D	1.500	1.800
E	2.500	2.800
E1	3.550	3.900
L1	0.250	0.450
L	0.5REF	
θ	8°	

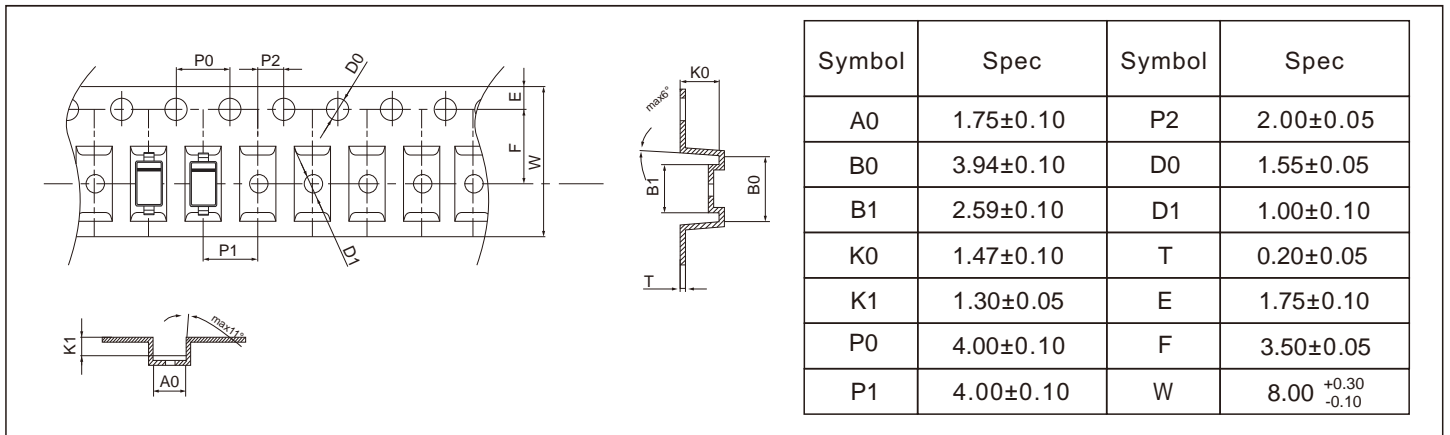
SOD-123 Suggested Pad Layout



Note:

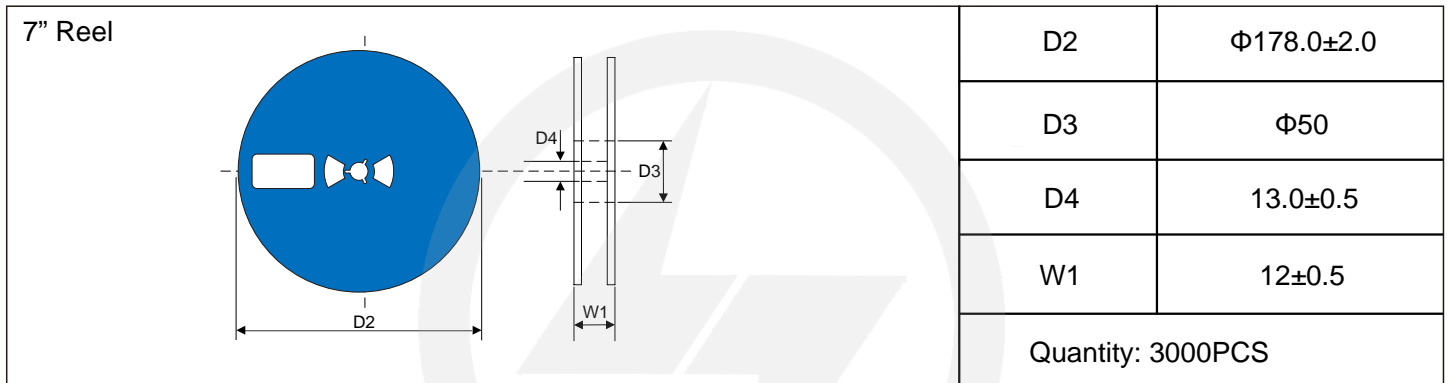
1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$
3. The pad layout is for reference purpose only.

Carrier Tape Dimensions



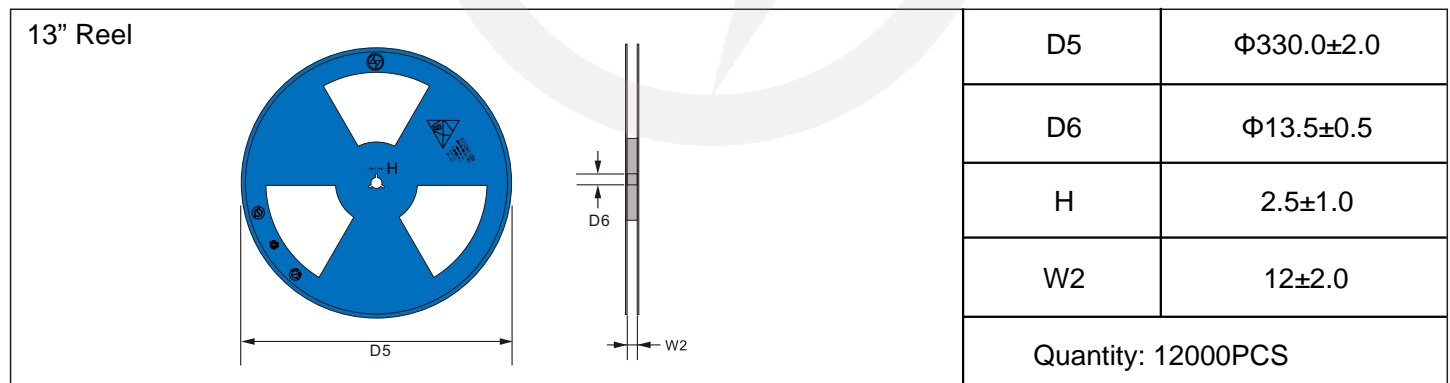
Reel Dimensions

Unit : mm

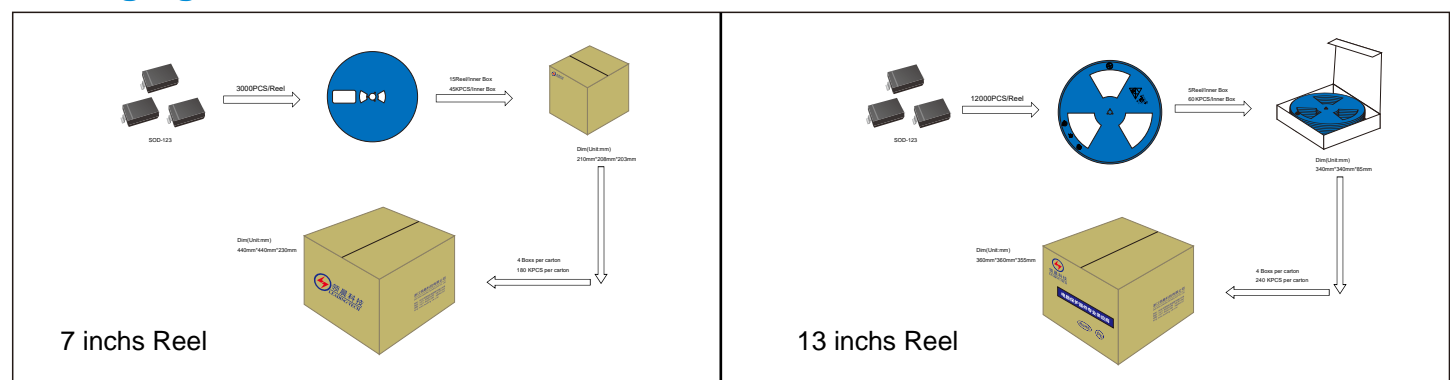


Reel Dimensions

Unit : mm

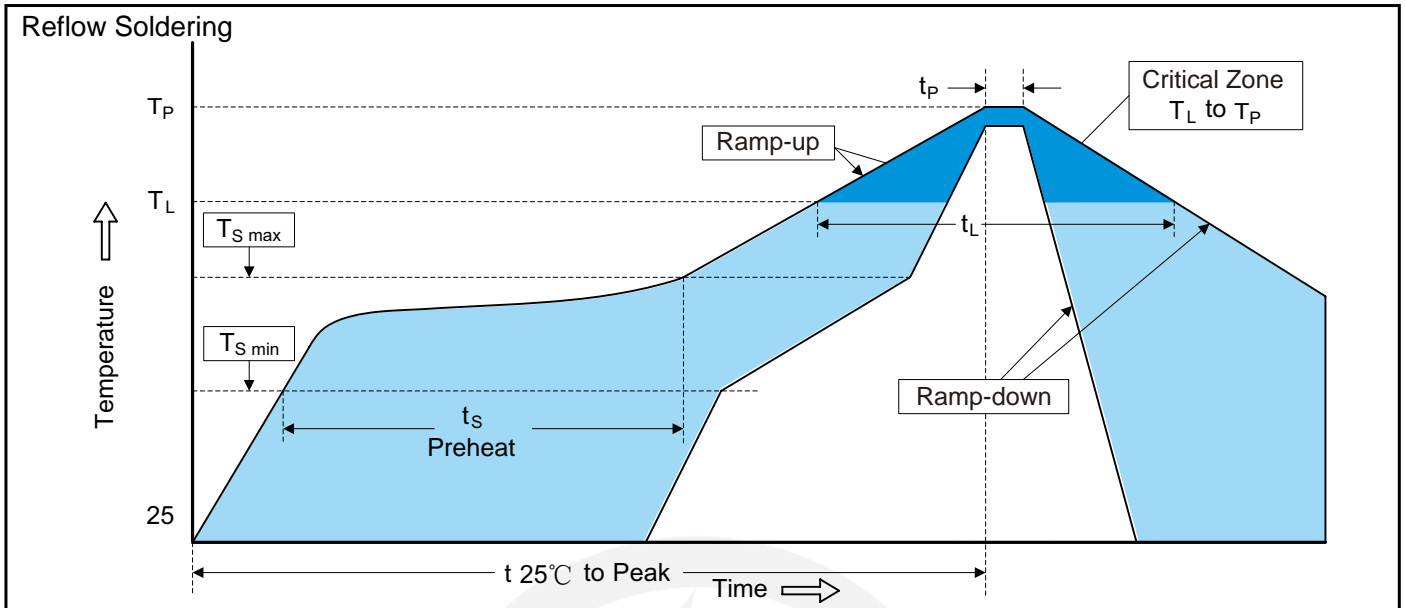


Packaging





Recommended Soldering Conditions



Recommended Conditions

Profile Feature	Pb-Free Assembly
Average ramp-up rate (T _L to T _P)	3°C/second max.
Preheat	
-Temperature Min (T _{S min})	150°C
-Temperature Max (T _{S max})	200°C
-Time (min to max) (t _s)	60-180 seconds
T _{S max} to T _L	
-Ramp-up Rate	3°C/second max.
Time maintained above:	
-Temperature (T _L)	217°C
-Time (t _L)	60-150 seconds
Peak Temperature (T _P)	260°C
Time within 5°C of actual Peak Temperature (t _p)	20-40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.

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Version Update Information

Series NO.	Enactment/Revision Date	Effective Date	Version	Revision content	Revision Reason	Revision Person	Note
01	2024.4.17	2024.4.17	3.0	New File	/	Ding	
02	2025.06.18	2025.06.18	3.1	Update packaging information	/	Ding	