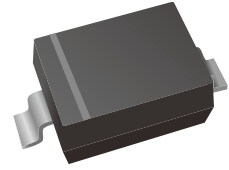


Silicon Planar Zener Diodes

Features

- Total power dissipation: Max. 300mW
- Wide zener reverse voltage range 2.0V to 75V
- Small plastic package suitable for surface mounted design
- Tolerance approximately $\pm 5\%$
- Lead free in comply with EU RoHS 2011/65/EU directives



Mechanical Data

- Case: SOD-323
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Approx. Weight: 4.6mg

Ordering Information

Part Number	Shipping	Reel
LT3Z2V0STHRULT3Z75S-TR3	3000PCS Tape&Reel	7 inches
LT3Z2V0STHRULT3Z75S-TR12	12000PCS Tape&Reel	13 inches

Absolute Maximum Ratings And Characteristics at 25 °C

Parameter	Symbol	Value	Unit
Power Dissipation	P_{tot}	300	mW
Forward Voltage at $I_F = 10$ mA	V_F	0.9	V
Typical thermal resistance junction to ambient ⁽¹⁾	$R_{\theta JA}$	417	$^{\circ}C/W$
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150	$^{\circ}C$

(1) Thermal resistance from junction to ambient at PCB mounted with 2.0" X 2.0" (54 cm X 5 cm) copper areas pads.

Characteristics Curves

Fig.1 Maximum Continuous Power Derating

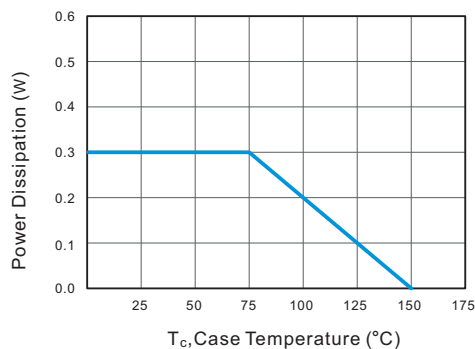
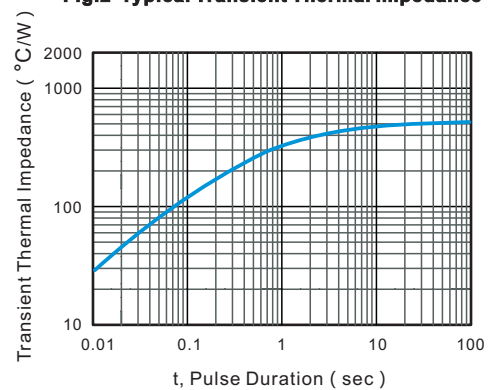


Fig.2 Typical Transient Thermal Impedance



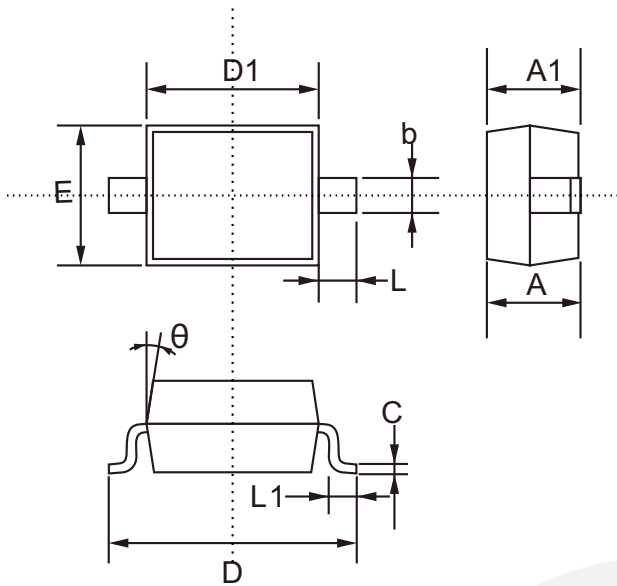
Characteristics at (Ta=25°C)

Type	Marking	Zener Voltage Range ⁽¹⁾			I _{ZT} (mA)	Dynamic Impedance Z _{ZT} (at I _{ZT}) Max (Ω)	Reverse Current	
		V _{ZT} (at I _{ZT})					I _r Max (μA)	at V _r (V)
		Min (V)	Nom (V)	Max (V)				
LT3Z2V0S	B0	1.8	2.0	2.15	5	100	120	0.5
LT3Z2V2S	C0	2.08	2.2	2.33	5	100	120	0.7
LT3Z2V4S	1C	2.28	2.4	2.56	5	100	120	1
LT3Z2V7S	1D	2.5	2.7	2.9	5	110	120	1
LT3Z3V0S	1E	2.8	3.0	3.2	5	120	50	1
LT3Z3V3S	1F	3.1	3.3	3.5	5	130	20	1
LT3Z3V6S	1H	3.4	3.6	3.8	5	130	10	1
LT3Z3V9S	1J	3.7	3.9	4.1	5	130	5	1
LT3Z4V3S	1K	4	4.3	4.6	5	130	5	1
LT3Z4V7S	1M	4.4	4.7	5	5	130	2	1
LT3Z5V1S	1N	4.8	5.1	5.4	5	130	2	1.5
LT3Z5V6S	1P	5.2	5.6	6	5	80	1	2.5
LT3Z6V2S	1R	5.8	6.2	6.6	5	50	1	3
LT3Z6V8S	1X	6.4	6.8	7.2	5	30	0.5	3.5
LT3Z7V5S	1Y	7	7.5	7.9	5	30	0.5	4
LT3Z8V2S	1Z	7.7	8.2	8.7	5	30	0.5	5
LT3Z9V1S	2A	8.5	9.1	9.6	5	30	0.5	6
LT3Z10S	2B	9.4	10	10.6	5	30	0.1	7
LT3Z11S	2C	10.4	11	11.6	5	30	0.1	8
LT3Z12S	2D	11.4	12	12.7	5	35	0.1	9
LT3Z13S	2E	12.4	13	14.1	5	35	0.1	10
LT3Z15S	2F	13.8	15	15.6	5	40	0.1	11
LT3Z16S	2H	15.3	16	17.1	5	40	0.1	12
LT3Z18S	WL	16.8	18	19.1	5	45	0.1	13
LT3Z20S	2K	18.8	20	21.2	5	50	0.1	15
LT3Z22S	2M	20.8	22	23.3	5	55	0.1	17
LT3Z24S	2N	22.8	24	25.6	5	60	0.1	19
LT3Z27S	2P	25.1	27	28.9	2	70	0.1	21
LT3Z30S	2R	28	30	32	2	80	0.1	23
LT3Z33S	2X	31	33	35	2	80	0.1	25
LT3Z36S	2Y	34	36	38	2	90	0.1	27
LT3Z39S	2Z	37	39	41	2	100	0.1	30
LT3Z43S	3A	40	43	46	2	130	0.1	33
LT3Z47S	3B	44	47	50	2	150	0.1	36
LT3Z51S	3C	48	51	54	2	180	0.1	39
LT3Z56S	3D	52	56	60	2	200	0.1	43
LT3Z62S	3E	58	62	66	2	215	0.1	47
LT3Z68S	3F	64	68	72	2	240	0.1	52
LT3Z75S	3H	70	75	79	2	265	0.1	56

(1) V_{ZT} is tested with pulses (20 ms)

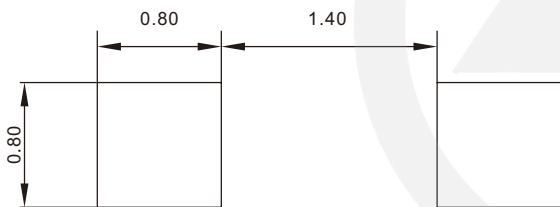
SOD-323 Package Outline

Unit: mm



SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.800	1.100
A1	0.800	0.900
b	0.250	0.400
C	0.080	0.177
D	2.300	2.800
D1	1.400	1.800
E	1.150	1.400
L	0.475 TYP.	
θ	8°	

SOD-323 Suggested Pad Layout

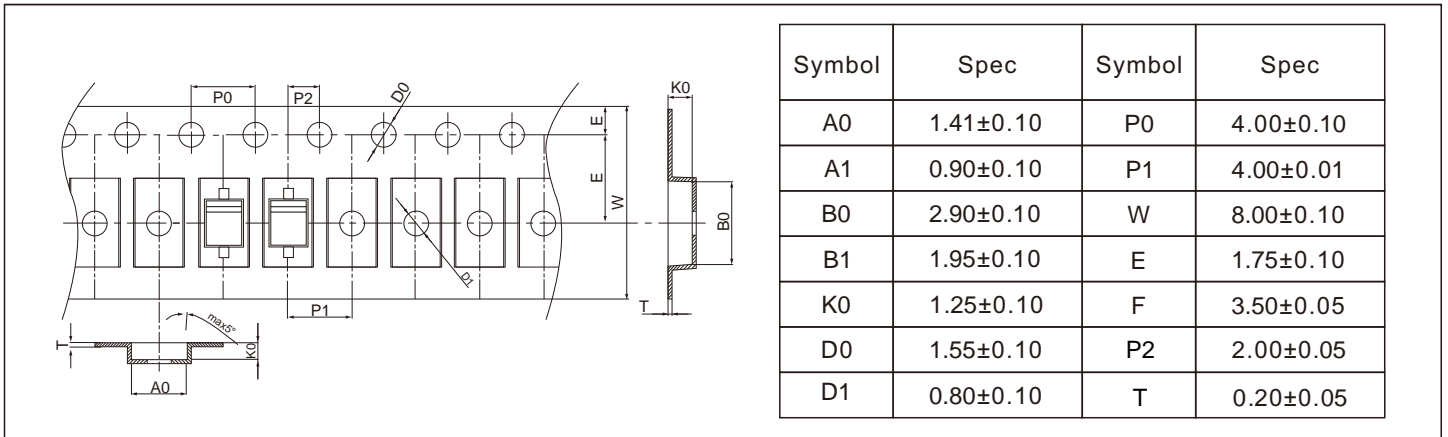


Note:

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

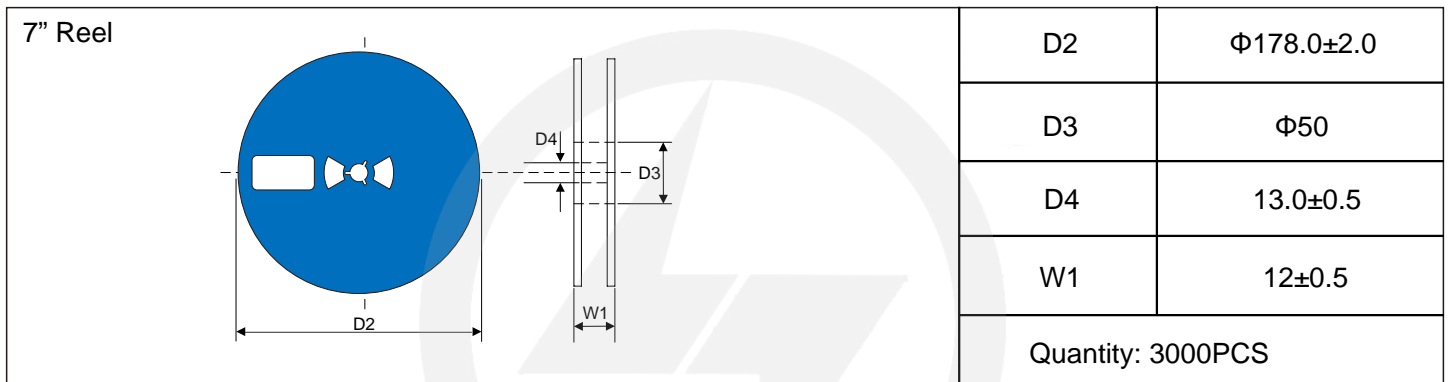
Carrier Tape Dimensions

Unit : mm



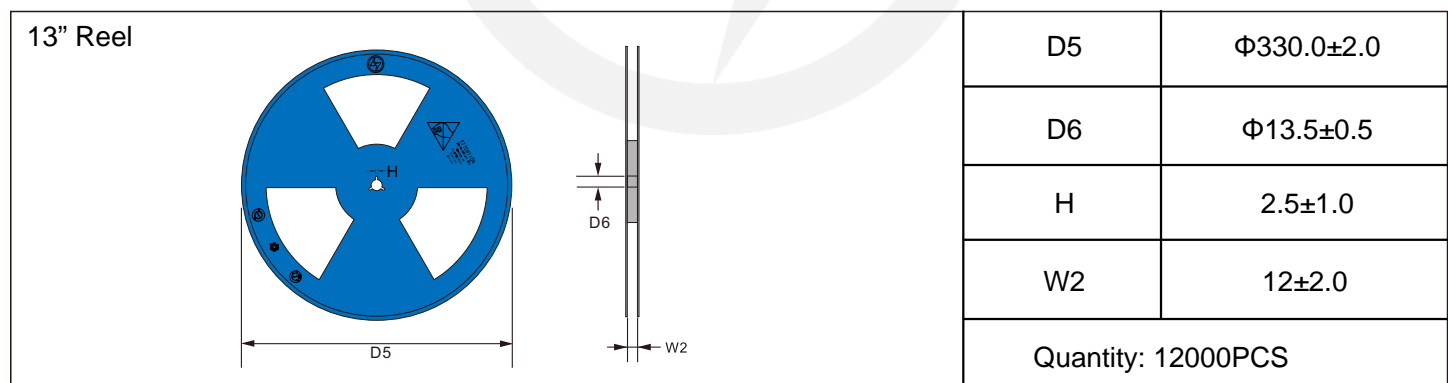
Reel Dimensions

Unit : mm

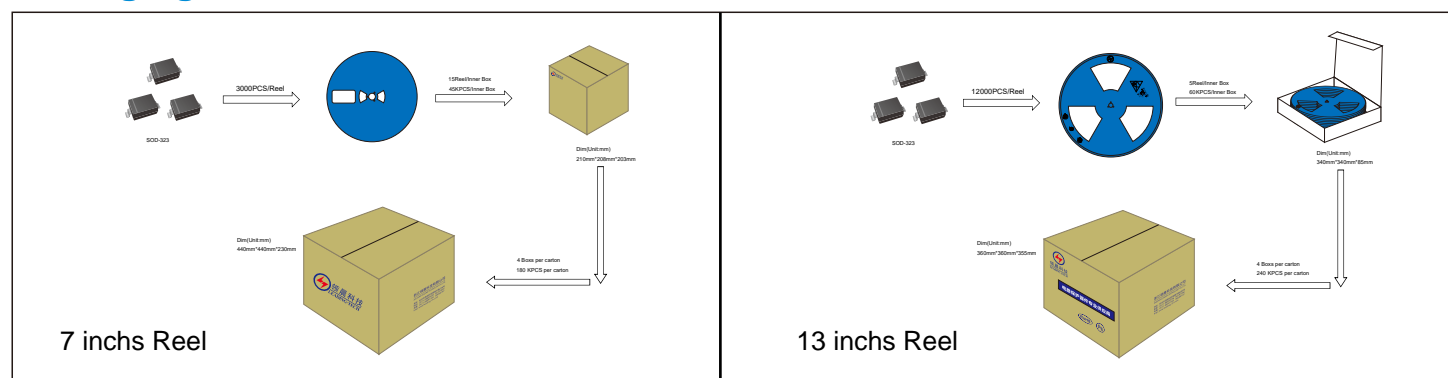


Reel Dimensions

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	2024.05.16	2024.05.16	3.0	New file	/	Ding	