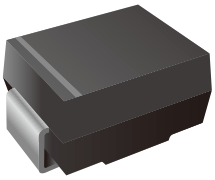
LT5914B3B THRU LT5956B3B

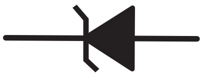
Silicon Planar Zener Diodes

Features



- Total power dissipation: Max. 3 W
- Wide zener reverse voltage range 3.6V to 200V
- Small plastic package suitable for surface mounted design
- Lead free in comply with EU RoHS 2011/65/EU directives

Mechanical Data



- Case: SMB
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Flammability rating: UL94 V-0

Ordering Information

Part Number	Shipping	Reel
LT5914B3B THRU LT5956B3B-TR3	3000PCS Tape&Reel	13 inchs

Absolute Maximum Ratingsand Characteristics (Ta = 25°C)

Parameter	Symbol	Value	Unit
Power Dissipation at T_A=25°C	P_D	3	W
Forward Voltage at I_F = 200 mA	V_F	1.5	V
Junction Temperature Range	T_J	- 55 ~ + 150	°C
Storage Temperature Range	T_S	- 55 ~ + 150	°C
Typical Thermal Resistance (Note1)	$R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JL}$	43 9 18	°C/W

Note: (1) P.C.B. mounted with 1.5" X 1.5" (3.81cm X 3.81cm) copper pad areas.

Electrical Characteristics (Ta=25℃)

(TL = 30°C unless otherwise noted, VF = 1.5 V Max. @ IF = 200 mA(DC) for all types)

Type	Marking	Nominal Zener Voltage (3)				Zener (4) Impedance			Leakage Current		Maximum DC Zener Current
		V_z			I_{ZT}	Z_{ZT}@ I_{ZT}	Z_{ZK}@ I_{ZK}		I_R @ V_R		
		Min (V)	Nom (V) (2)	Max (V)	(mA)	(Ω)	(Ω)	(mA)	(µA)	(V)	I_{ZM}(mA)(DC)
LT5914B3B	914B	3.42	3.6	3.78	104.2	9	500	1	75	1	416
LT5915B3B	915B	3.70	3.9	4.10	96.1	7.5	500	1	25	1	384
LT5916B3B	916B	4.08	4.3	4.52	87.2	6	500	1	5	1	348
LT5917B3B	917B	4.46	4.7	4.94	79.8	5	500	1	5	1.5	319
LT5918B3B	918B	4.84	5.1	5.36	73.5	4	350	1	5	2	294
LT5919B3B	919B	5.32	5.6	5.88	66.9	2	250	1	5	3	267
LT5920B3B	920B	5.89	6.2	6.51	60.5	2	200	1	5	4	241
LT5921B3B	921B	6.46	6.8	7.14	55.1	2.5	200	1	5	5.2	220
LT5922B3B	922B	7.12	7.5	7.88	50	3	400	0.5	5	6	200
LT5923B3B	923B	7.79	8.2	8.61	45.7	3.5	400	0.5	5	6.5	182
LT5924B3B	924B	8.64	9.1	9.56	41.2	4	500	0.5	5	7	164
LT5925B3B	925B	9.5	10	10.5	37.5	4.5	500	0.25	5	8	150
LT5926B3B	926B	10.45	11	11.55	34.1	5.5	550	0.25	1	8.4	136
LT5927B3B	927B	11.4	12	12.6	31.2	6.5	550	0.25	1	9.1	125
LT5928B3B	928B	12.35	13	13.65	28.8	7	550	0.25	1	9.9	115
LT5929B3B	929B	14.25	15	15.75	25	9	600	0.25	1	11.4	100
LT5930B3B	930B	15.2	16	16.8	23.4	10	600	0.25	1	12.2	93
LT5931B3B	931B	17.1	18	18.9	20.8	12	650	0.25	1	13.7	83
LT5932B3B	932B	19	20	21	18.7	14	650	0.25	1	15.2	75
LT5933B3B	933B	20.9	22	23.1	17	17.5	650	0.25	1	16.7	68
LT5934B3B	934B	22.8	24	25.2	15.6	19	700	0.25	1	18.2	62
LT5935B3B	935B	25.65	27	28.35	13.9	23	700	0.25	1	20.6	55
LT5936B3B	936B	28.5	30	31.5	12.5	28	750	0.25	1	22.8	50
LT5937B3B	937B	31.35	33	34.65	11.4	33	800	0.25	1	25.1	45
LT5938B3B	938B	34.2	36	37.8	10.4	38	850	0.25	1	27.4	41
LT5939B3B	939B	37.05	39	40.95	9.6	45	900	0.25	1	29.7	38
LT5940B3B	940B	40.85	43	45.15	8.7	53	950	0.25	1	32.7	34
LT5941B3B	941B	44.65	47	49.35	8	67	1000	0.25	1	35.8	31
LT5942B3B	942B	48.45	51	53.55	7.3	70	1100	0.25	1	38.8	29
LT5943B3B	943B	53.2	56	58.8	6.7	86	1300	0.25	1	42.6	26
LT5944B3B	944B	58.9	62	65.1	6	100	1500	0.25	1	47.1	24
LT5945B3B	945B	64.6	68	71.4	5.5	120	1700	0.25	1	51.7	22
LT5946B3B	946B	71.25	75	78.75	5	140	2000	0.25	1	56	20
LT5947B3B	947B	77.9	82	86.1	4.6	160	2500	0.25	1	62.2	18
LT5948B3B	948B	86.45	91	95.55	4.1	200	3000	0.25	1	69.2	16
LT5949B3B	949B	95	100	105	3.7	250	3100	0.25	1	76	15
LT5950B3B	950B	104.5	110	115.5	3.4	300	4000	0.25	1	83.6	13
LT5951B3B	951B	114	120	126	3.1	380	4500	0.25	1	91.2	12
LT5952B3B	952B	123.5	130	136.5	2.9	450	5000	0.25	1	98.8	11
LT5953B3B	953B	142.5	150	157.5	2.5	600	6000	0.25	1	114	10
LT5954B3B	954B	152	160	168	2.3	700	6500	0.25	1	121.6	9
LT5955B3B	955B	171	180	189	2.1	900	7000	0.25	1	136.8	8
LT5956B3B	956B	190	200	210	1.9	1200	8000	0.25	1	152	7

Characteristics Curves

Fig.1 Maximum Continuous Power Derating

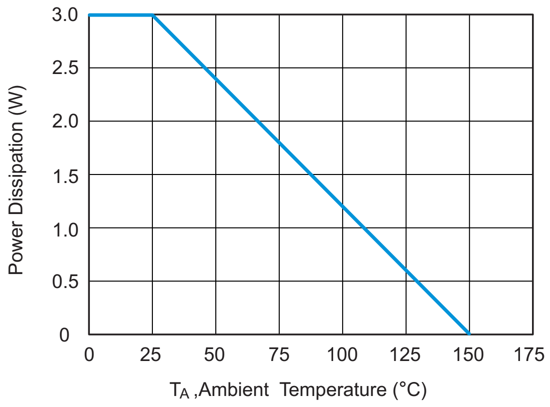


Fig.2 Pulse Derating Curve

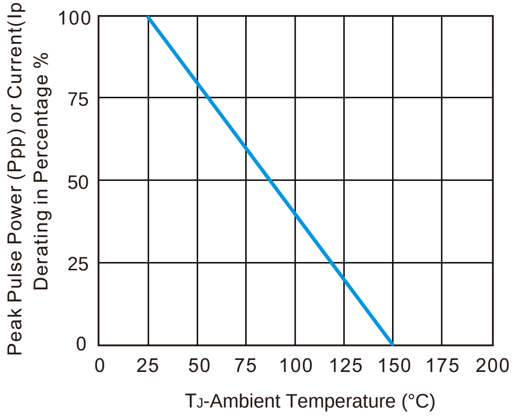


Fig.3 Typical Pulse Rating Curve

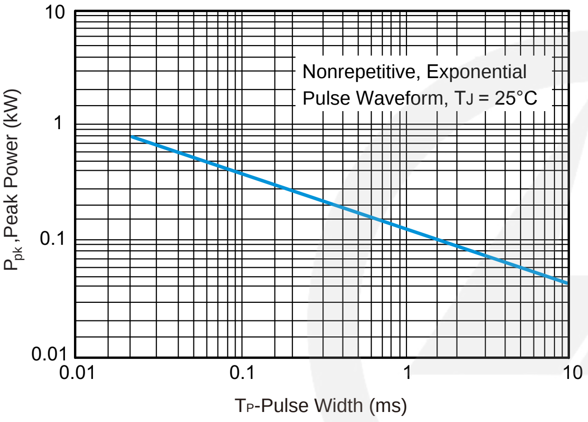


Fig.4 Zener Voltage - To 12V

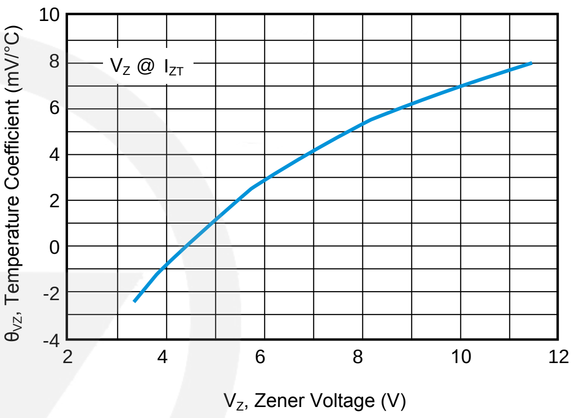


Fig.5 V_Z=3.3V thru 10V

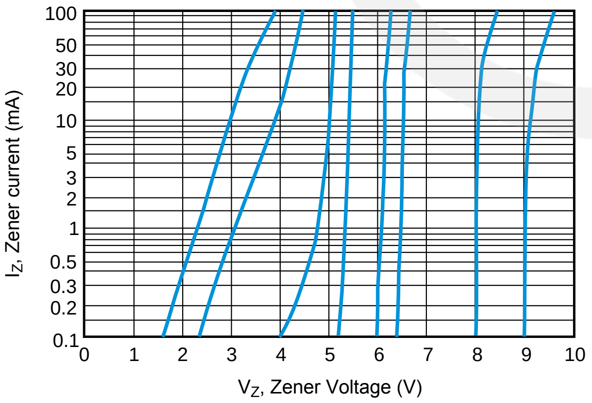


Fig.6 V_Z=12V thru 82V

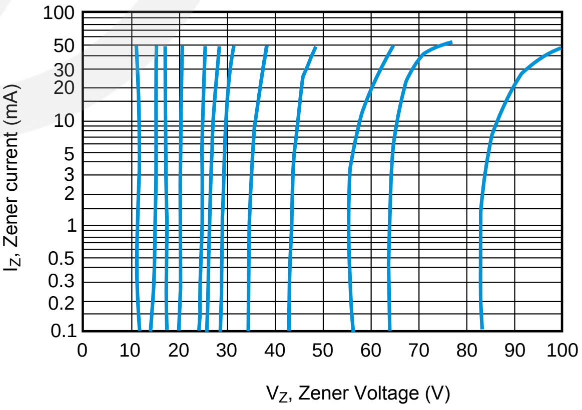


Fig.7 Zener Voltage - 14V To 200V

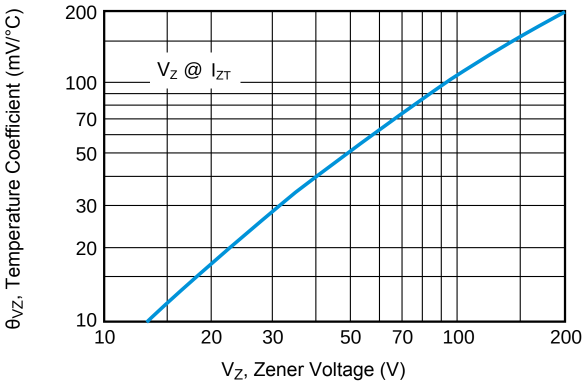


Fig.8 Pulse Waveform

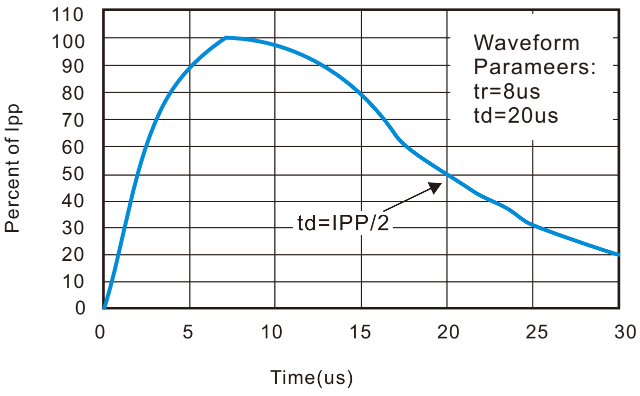
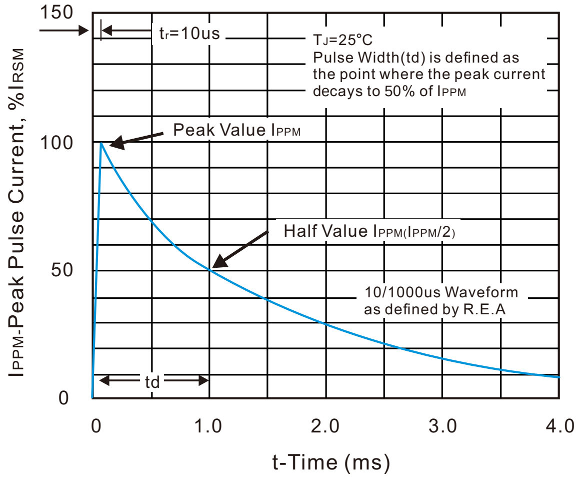
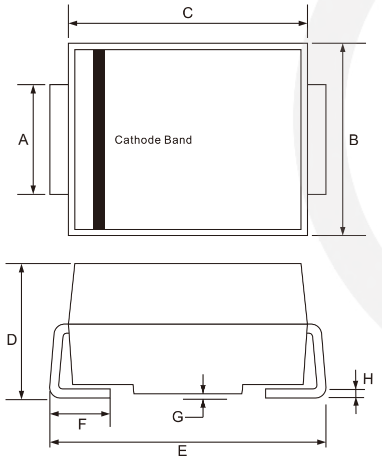


Fig.9 Pulse Waveform



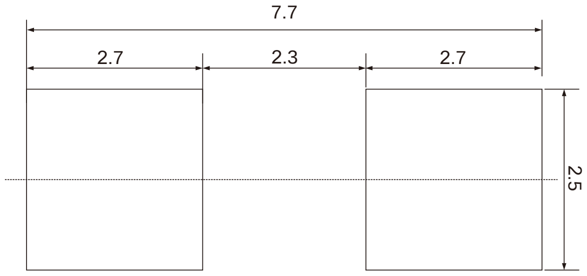
SMB Package Outline



Unit : mm

SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	1.90	2.20
B	3.30	3.94
C	4.05	4.75
D	2.13	2.65
E	5.08	5.59
F	0.76	1.52
G	0.203 TYP.	
H	0.15	0.31

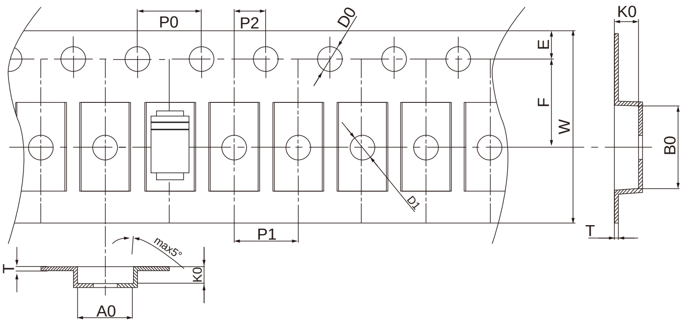
SMB Suggested Pad Layout



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

Carrier Tape Dimensions

Unit：mm

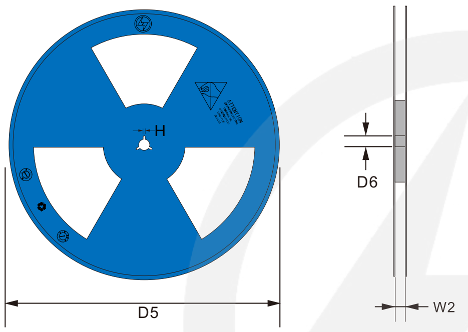


Symbol	Spec	Symbol	Spec
A0	3.80±0.10	D0	1.55±0.05
B0	5.45±0.10	D1	1.55±0.05
K0	2.50±0.10	T	0.25±0.05
P0	4.00±0.10	E	1.75±0.10
P1	8.00±0.10	F	5.50±0.05
P2	2.00±0.10	W	$12.0^{+0.3}_{-0.1}$

Reel Dimensions

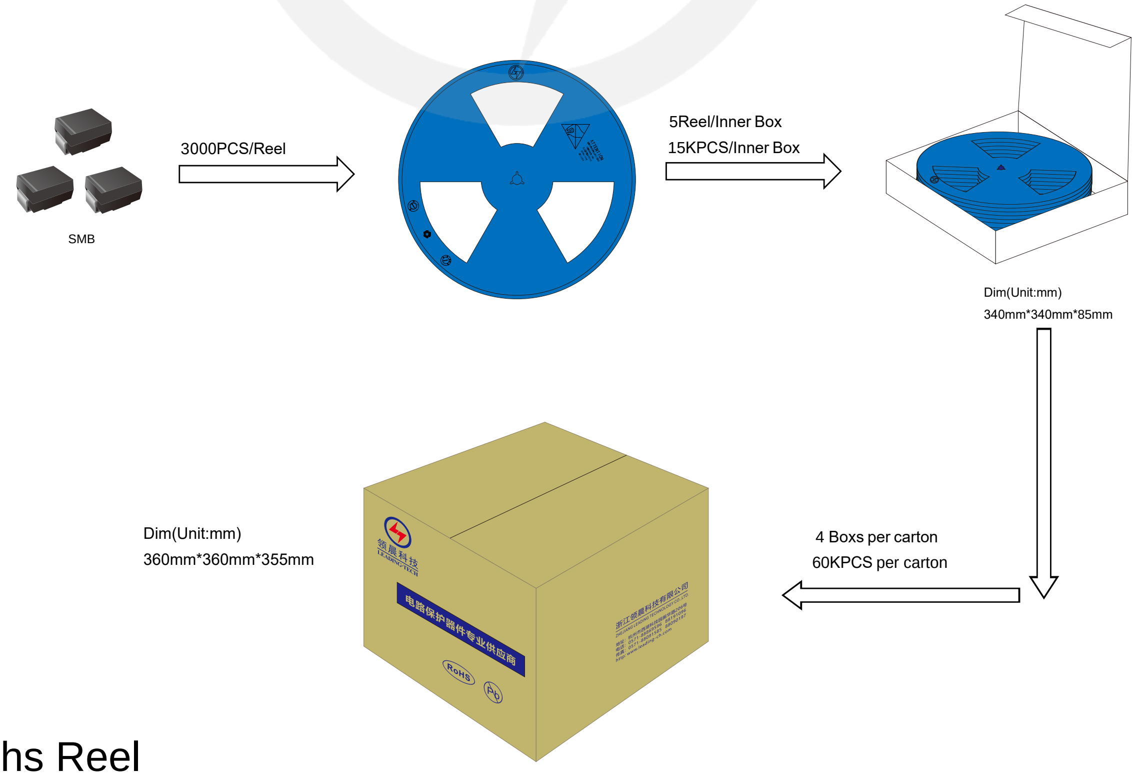
Unit：mm

13” Reel



D5	Φ330.0±2.0
D6	Φ13.5±0.5
H	2.5±1.0
W2	12±2.0
Quantity: 3000PCS	

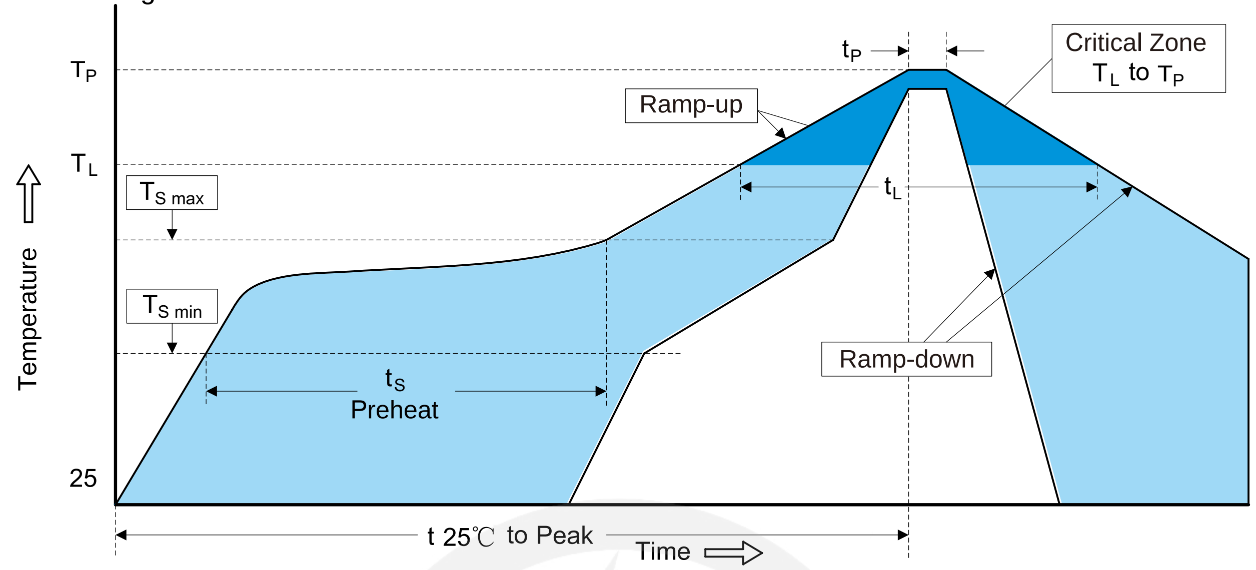
Packaging



13 inchs Reel

Recommended Soldering Conditions

Reflow Soldering



Recommended Conditions

Profile Feature	Pb-Free Assembly
Average ramp-up rate (T_L to T_P)	3℃/second max.
Preheat -Temperature Min ($T_{S\ min}$) -Temperature Max ($T_{S\ max}$) -Time (min to max) (t_S)	150℃ 200℃ 60-180 seconds
$T_{S\ max}$ to T_L -Ramp-up Rate	3℃/second max.
Time maintained above: -Temperature (T_L) -Time (t_L)	217℃ 60-150 seconds
Peak Temperature (T_P)	260℃
Time within 5℃ of actual Peak Temperature (t_P)	20-40 seconds
Ramp-down Rate	6℃/second max.
Time 25℃ 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	2024.5.18	2024.5.18	3.0	New File	/	Ding	
02	2024.11.25	2024.11.25	3.1	Add Characteristic Curves	/	Ding	
03	2025.06.12	2025.06.12	3.2	Update packaging information	/	Ding	