

L3N5923B thru L3N5941B

Surface Mount Zener Diodes
Vz Range: 8.2 to 47V Power Dissipation: 3W

Features

- Total power dissipation: max 3W
- Low leakage current
- Moisture sensitivity: level1, per J-STD-020
- Solder dip 260 °C, 10 s
- Low profile, typical thickness 1.0mm
- For use in stabilizing and clipping circuits with high power rating
- Zener voltage tolerance is $\pm 5\%$



Package: eSGB(SMAF)



RoHS
COMPLIANT

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

Parameter	Symbol	Value	Unit
Zener Current		See Next Table	
Power Dissipation	P_{tot}	3.0	W
Maximum Instantaneous Forward Voltage at 200mA	V_F	1.2	V
Thermal Resistance Junction to Ambient	R_{thja}	85	$^{\circ}\text{C/W}$
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^{\circ}\text{C}$

Note1: Thermal resistance from junction to mount, mounted on PCB with 8.0×8.0mm copper pads

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Electrical Characteristics (T_A = 25 °C unless otherwise noted)

Part Number	Zener Voltage			Test Current	Dynamic Impedance	Knee Current	Knee Impedance	Reverse Current	Reverse Voltage	Max.DC Current
	V _Z /V			I _{ZT}	Z _{ZT}	I _{ZK}	Z _{ZK}	I _R (Max)	V _R	I _{ZM}
	V _Z (Min)	V _Z (Nominal)	V _Z (Max)	mA	Ω	mA	Ω	μA _{dc}	V	mA
L3N5923B	7.79	8.2	8.61	91.5	3.5	0.5	400	5	6.5	341
L3N5924B	8.65	9.1	9.56	82.4	4	0.5	500	5	7	308
L3N5925B	9.5	10	10.5	75.0	4.5	0.25	500	5	8	280
L3N5926B	10.45	11	11.55	68.2	5.5	0.25	550	1	8.4	255
L3N5927B	11.4	12	12.6	62.5	6.5	0.25	550	1	9.1	233
L3N5928B	12.35	13	13.65	57.7	7	0.25	550	1	9.9	215
L3N5929B	14.25	15	15.75	53.6	9	0.25	600	1	11.4	200
L3N5930B	15.2	16	16.8	46.9	10	0.25	600	1	12.2	175
L3N5931B	17.1	18	18.9	41.7	12	0.25	650	1	13.7	156
L3N5932B	19	20	21	37.5	14	0.25	650	1	15.2	140
L3N5933B	20.9	22	23.1	34.1	17.5	0.25	650	1	16.7	127
L3N5934B	22.8	24	25.2	31.3	19	0.25	700	1	18.2	117
L3N5935B	25.65	27	28.35	27.8	23	0.25	700	1	20.6	104
L3N5936B	28.5	30	31.5	25.0	28	0.25	750	1	22.8	93
L3N5937B	31.35	33	34.65	22.7	33	0.25	800	1	25.1	85
L3N5938B	34.2	36	37.8	20.8	38	0.25	850	1	27.4	78
L3N5939B	37.05	39	40.95	19.2	45	0.25	900	1	29.7	72
L3N5940B	40.85	43	45.15	17.4	53	0.25	950	1	32.7	65
L3N5941B	44.65	47	49.35	16.0	67	0.25	1000	1	35.8	60

Ratings and Characteristics Curves

($T_A = 25^\circ\text{C}$ unless otherwise noted)

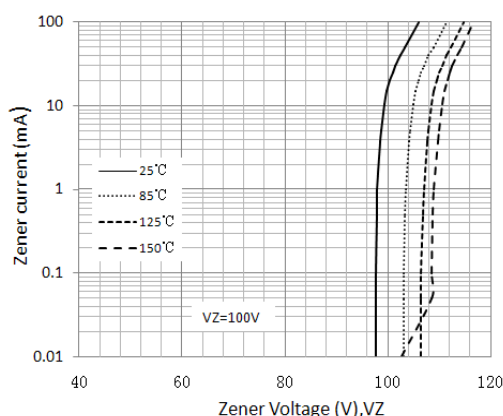


Figure 1. Typical Zener Voltage, $V_Z=100\text{V}$

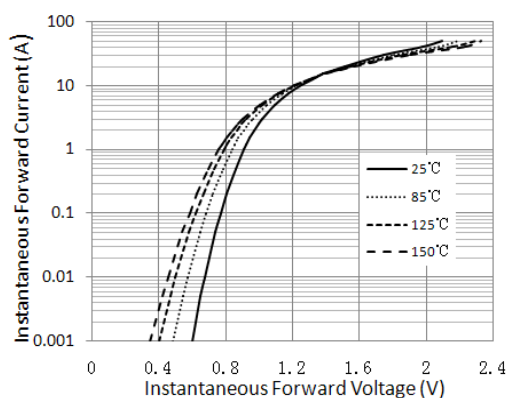


Figure 3. Typical Instantaneous Forward Characteristics

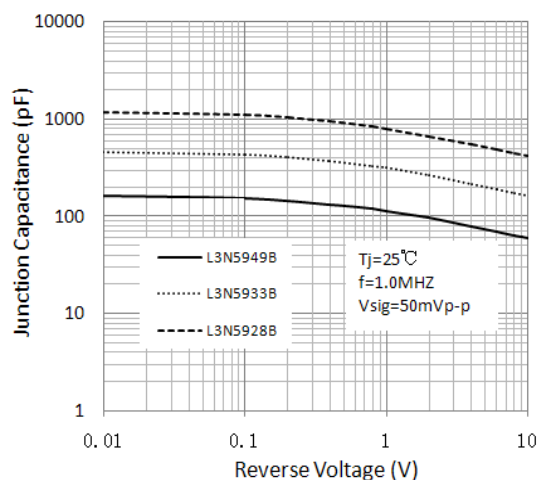


Figure 5. Typical Junction Capacitance

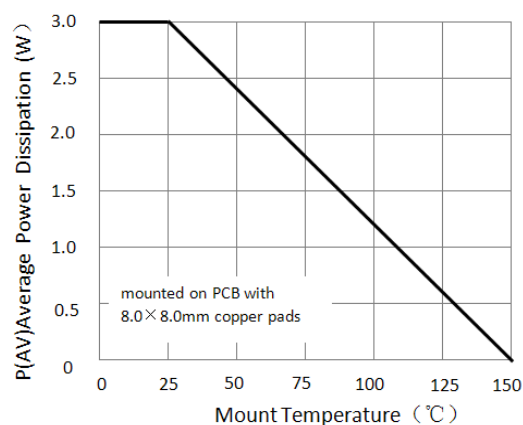


Figure 2. Steady State POWER Derating

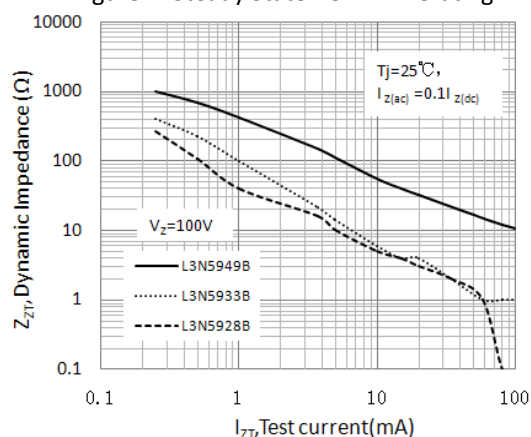


Figure 4. Typical Zener Impedance

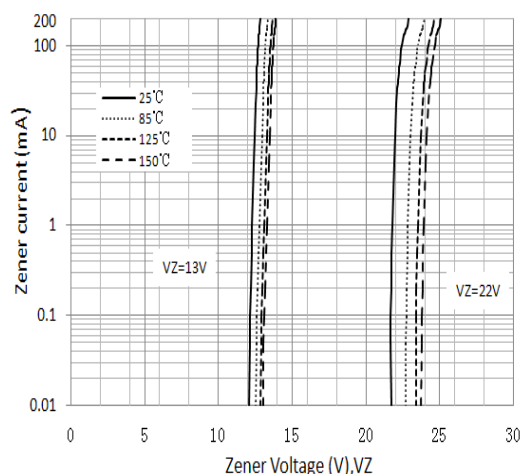


Figure 6. Typical Zener Voltage, $V_Z=13\text{V} /22\text{V}$

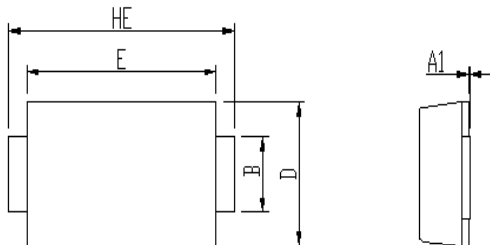
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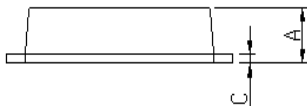
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Package Outline Dimensions

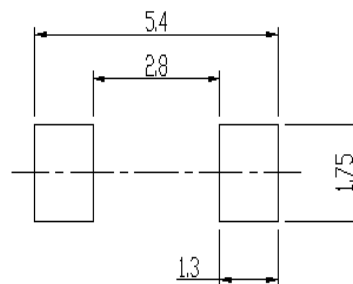
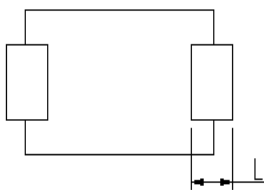
eSGB(SMAF)



DIM	Unit: mm		Unit: inch	
	MIN	MAX	MIN	MAX
A	0.9	1.08	0.035	0.043
A1	0	0.1	0.000	0.004
B	1.25	1.45	0.049	0.057
C	0.1	0.25	0.004	0.010
D	2.6	2.8	0.102	0.110
E	4.1	4.3	0.161	0.169
L	0.7	1.1	0.028	0.043
HE	4.8	5.2	0.189	0.205



Soldering footprint



Packing Information

Packing Quantities

Reel size	Quantity/reel	Quantity/inner Box	Quantity/Carton
7"	3K	21K	84K
13"	10K	20K	180K

Tape & Reel Specification

