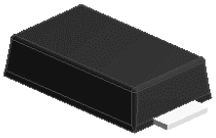
3W,9.1 - 200V Zener Diodes

Features

- Low leakage current
- Available in unidirectional
- Glass passivated junction
- Zener voltage tolerance is ±5%
- Total power dissipation: Max 3W
- Moisture sensitivity: level 1, per J-STD-020
- Halogen-free according to IEC 61249-2-21 definition



RoHS COMPLIANT

eSGB (DO-221AC)

Applications

Protection from high voltage, high energy transients, voltage stabilization.

Absolute Maximum Ratings (T_A=25°C unless otherwise noted)			
Parameter	**Symbol**	**Ratings**	**Unit**
Zener voltage	V_Z	See Next Table	V
Power dissipation at T_L=75℃	P_{tot}	3	W
Maximum instantaneous forward voltage at 200mA	V_F	1.2	V
Typical Thermal Resistance , Junction to Ambient	$R_{\theta JA}$	85	℃/W
Typical Thermal Resistance , Junction to Case	$R_{\theta JC}$	15	℃/W
Typical Thermal Resistance , Junction to Lead	$R_{\theta JL}$	18	℃/W
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150	℃

Note：

1. The thermal resistance from junction to ambient, case or lead, mounted on P.C.B with 5×5mm copper pads

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

Part Number	Marking	V_Z at I_{ZT} (V)			I_{ZT} (mA)	Maximum zener impedance		I_{ZK} (mA)	Maximum reverse leakage at V_R (μA)	Test voltage V_R (V)	Maximum Zener Current
		Min	Typ	Max		Z_{ZT} at I_{ZT} (Ω)	Z_{ZK} at I_{ZK} (Ω)				IZM (mA)
L3N5924B	5924B	8.65	9.1	9.56	82.4	4	500	0.5	5	7.0	308
L3N5925B	5925B	9.50	10	10.50	75.0	4.5	500	0.25	5	8.0	280
L3N5926B	5926B	10.45	11	11.55	68.2	5.5	550	0.25	1	8.4	255
L3N5927B	5927B	11.40	12	12.60	62.5	6.5	550	0.25	1	9.1	233
L3N5928B	5928B	12.35	13	13.65	57.7	7	550	0.25	1	9.9	215
L3N5929B	5929B	14.25	15	15.75	53.6	9	600	0.25	1	11.4	200
L3N5930B	5930B	15.20	16	16.80	46.9	10	600	0.25	1	12.2	175
L3N5931B	5931B	17.10	18	18.90	41.7	12	650	0.25	1	13.7	156
L3N5932B	5932B	19.00	20	21.00	37.5	14	650	0.25	1	15.2	140
L3N5933B	5933B	20.90	22	23.10	34.1	17.5	650	0.25	1	16.7	127
L3N5934B	5934B	22.80	24	25.20	31.3	19	700	0.25	1	18.2	117
L3N5935B	5935B	25.65	27	28.35	27.8	23	700	0.25	1	20.6	104
L3N5936B	5936B	28.50	30	31.50	25.0	28	750	0.25	1	22.8	93
L3N5937B	5937B	31.35	33	34.65	22.7	33	800	0.25	1	25.1	85
L3N5938B	5938B	34.20	36	37.80	20.8	38	850	0.25	1	27.4	78
L3N5939B	5939B	37.05	39	40.95	19.2	45	900	0.25	1	29.7	72
L3N5940B	5940B	40.85	43	45.15	17.4	53	950	0.25	1	32.7	65
L3N5941B	5941B	44.65	47	49.35	16.0	67	1000	0.25	1	35.8	60
L3N5942B	5942B	48.45	51	53.55	14.7	70	1100	0.25	1	38.8	55
L3N5943B	5943B	53.20	56	58.80	13.4	86	1300	0.25	1	42.6	50
L3N5944B	5944B	58.90	62	65.10	12.1	100	1500	0.25	1	47.1	45
L3N5945B	5945B	64.60	68	71.40	11.0	120	1700	0.25	1	51.7	41
L3N5946B	5946B	71.25	75	78.75	10.0	140	2000	0.25	1	56.0	37
L3N5947B	5947B	77.90	82	86.10	9.1	160	2500	0.25	1	62.2	34
L3N5948B	5948B	86.45	91	95.55	8.2	200	3000	0.25	1	69.2	31
L3N5949B	5949B	95.0	100	105.0	7.5	250	3100	0.25	1	76.0	28
L3N5950B	5950B	104.5	110	115.5	6.8	300	4000	0.25	1	83.6	25
L3N5951B	5951B	114.0	120	126.0	6.3	380	4500	0.25	1	91.2	23
L3N5952B	5952B	123.5	130	136.5	5.8	450	5000	0.25	1	98.8	22
L3N5953B	5953B	142.5	150	157.5	5.0	600	6000	0.25	1	114.0	19
L3N5954B	5954B	152.0	160	168.0	4.7	700	6500	0.25	1	121.6	18
L3N5955B	5955B	171.0	180	189.0	4.2	900	7000	0.25	1	136.8	16
L3N5956B	5956B	190.0	200	210.0	3.8	1200	8000	0.25	1	152.0	14

Ratings and Characteristics Curves

(T_A = 25℃ unless otherwise noted)

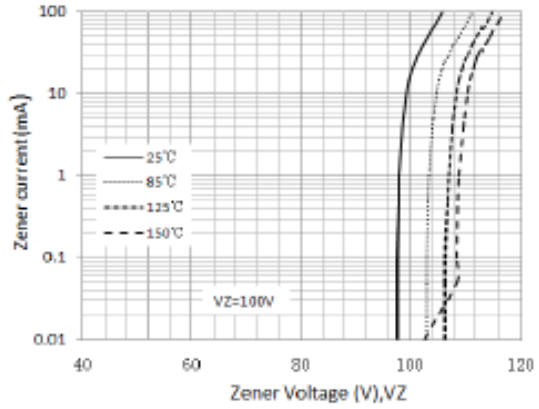


Figure 1. Typical Zener Voltage,VZ=100V

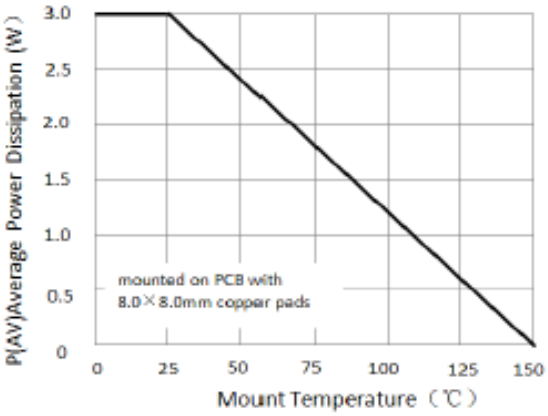


Figure 2. Steady State POWER Derating

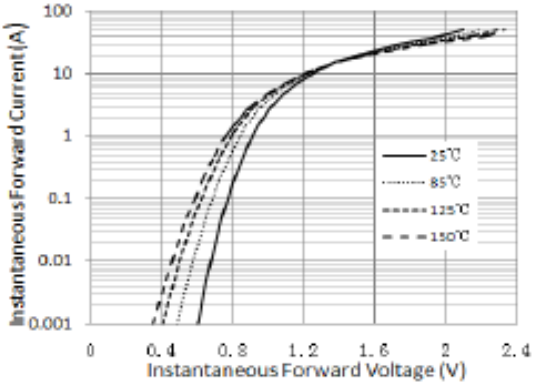


Figure 3. Typical Instantaneous Forward Characteristics

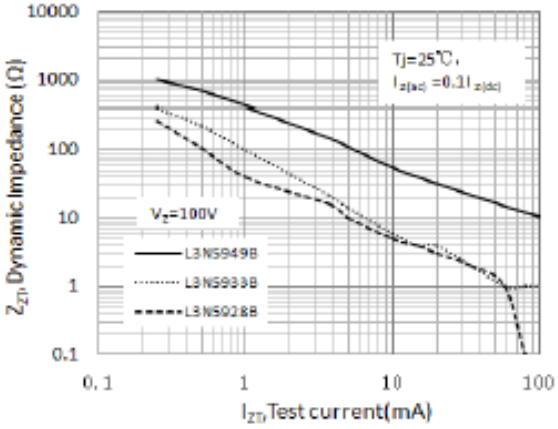


Figure 4. Typical Zener Impedance

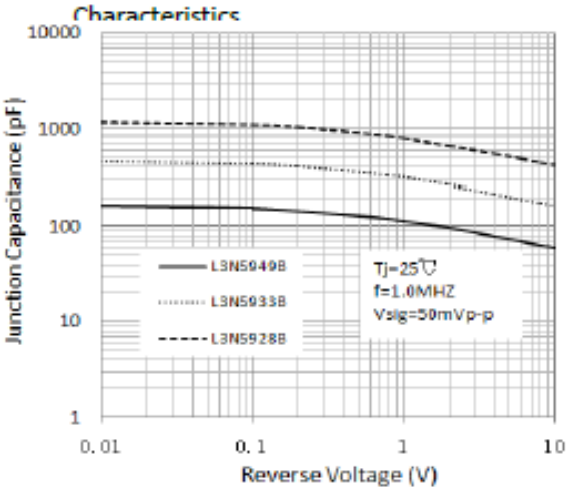


Figure 5. Typical Junction Capacitance

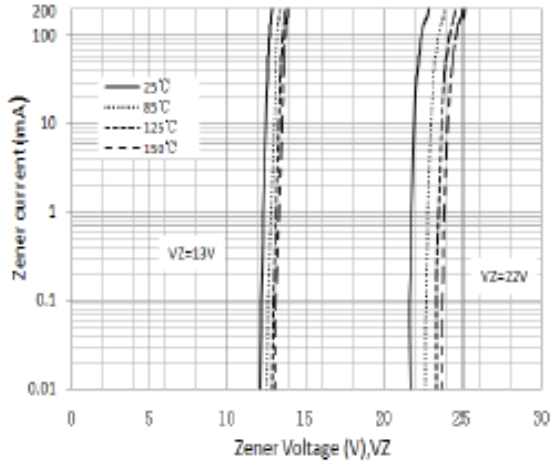


Figure 6. Typical Zener Voltage,VZ=13V /22V

Package Outline Dimensions

in inches (millimeters)

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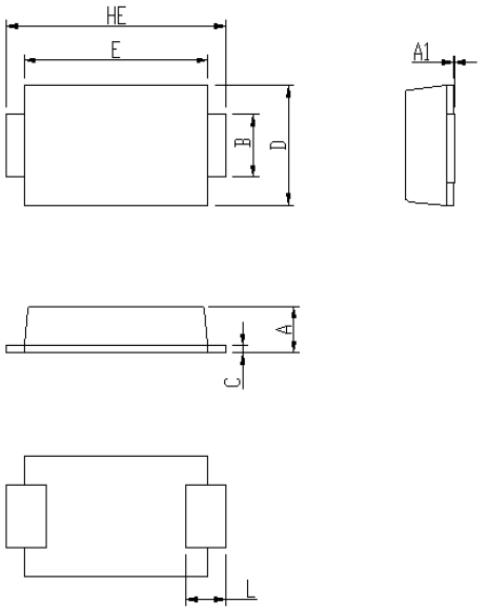
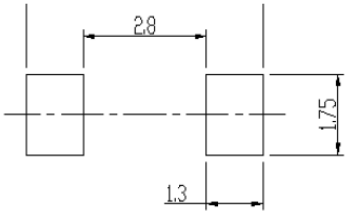


DIM	Unit: mm		Unit: inch	
	MIN	MAX	MIN	MAX
A	0.92	1.08	0.036	0.043
A1	0	0.1	0.000	0.004
B	1.25	1.45	0.049	0.057
C	0.1	0.25	0.004	0.010
D	2.6	2.8	0.102	0.110
E	4.1	4.3	0.161	0.169
L	0.7	1.1	0.028	0.043
HE	4.8	5.2	0.189	0.205

Soldering footprint



Revision History

Document Version	Date of release	Description of changes
Rev.A	2021.06.15	Released Datasheet
Rev.B	2023.10.12	Modify document format
Rev.C	2023.12.18	Update product range
Rev.D	2023.12.29	Modify package name

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