

2W,9.1 - 200V Zener Diodes

Features

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



Applications

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

Absolute Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise noted)			
Parameter	Symbol	Ratings	Unit
Zener voltage	V_Z	See Next Table	V
Power dissipation at $T_L=75^\circ\text{C}$	P_{tot}	2	W
Maximum instantaneous forward voltage at 200mA	V_F	1.2	V
Typical Thermal Resistance , Junction to Ambient	$R_{\theta JA}$	85	$^\circ\text{C/W}$
Typical Thermal Resistance , Junction to Case	$R_{\theta JC}$	15	$^\circ\text{C/W}$
Typical Thermal Resistance , Junction to Lead	$R_{\theta JL}$	18	$^\circ\text{C/W}$
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

Note:

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



L2N5924B thru L2N5956B

GOOD-ARK Electronics

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 I _{ZM} (mA)
		Min	Typ	Max		Z _{ZT} at I _{ZT} (Ω)	Z _{ZK} at I _{ZK} (Ω)				
L2N5924B	25924B	8.65	9.1	9.56	54.9	4	500	0.5	5	7.0	220
L2N5925B	25925B	9.50	10	10.50	50.0	4.5	500	0.25	5	8.0	200
L2N5926B	25926B	10.45	11	11.55	45.5	5.5	550	0.25	1	8.4	182
L2N5927B	25927B	11.40	12	12.60	41.7	6.5	550	0.25	1	9.1	167
L2N5928B	25928B	12.35	13	13.65	38.5	7	550	0.25	1	9.9	154
L2N5929B	25929B	14.25	15	15.75	35.7	9	600	0.25	1	11.4	143
L2N5930B	25930B	15.20	16	16.80	31.3	10	600	0.25	1	12.2	125
L2N5931B	25931B	17.10	18	18.90	27.8	12	650	0.25	1	13.7	111
L2N5932B	25932B	19.00	20	21.00	25.0	14	650	0.25	1	15.2	100
L2N5933B	25933B	20.90	22	23.10	22.7	17.5	650	0.25	1	16.7	91
L2N5934B	25934B	22.80	24	25.20	20.8	19	700	0.25	1	18.2	83
L2N5935B	25935B	25.65	27	28.35	18.5	23	700	0.25	1	20.6	74
L2N5936B	25936B	28.50	30	31.50	16.7	28	750	0.25	1	22.8	67
L2N5937B	25937B	31.35	33	34.65	15.2	33	800	0.25	1	25.1	61
L2N5938B	25938B	34.20	36	37.80	13.9	38	850	0.25	1	27.4	56
L2N5939B	25939B	37.05	39	40.95	12.8	45	900	0.25	1	29.7	51
L2N5940B	25940B	40.85	43	45.15	11.6	53	950	0.25	1	32.7	47
L2N5941B	25941B	44.65	47	49.35	10.6	67	1000	0.25	1	35.8	43
L2N5942B	25942B	48.45	51	53.55	9.8	70	1100	0.25	1	38.8	39
L2N5943B	25943B	53.20	56	58.80	8.9	86	1300	0.25	1	42.6	36
L2N5944B	25944B	58.90	62	65.10	8.1	100	1500	0.25	1	47.1	32
L2N5945B	25945B	64.60	68	71.40	7.4	120	1700	0.25	1	51.7	29
L2N5946B	25946B	71.25	75	78.75	6.7	140	2000	0.25	1	56.0	27
L2N5947B	25947B	77.90	82	86.10	6.1	160	2500	0.25	1	62.2	24
L2N5948B	25948B	86.45	91	95.55	5.5	200	3000	0.25	1	69.2	22
L2N5949B	25949B	95.0	100	105.0	5.0	250	3100	0.25	1	76.0	20
L2N5950B	25950B	104.5	110	115.5	4.5	300	4000	0.25	1	83.6	18
L2N5951B	25951B	114.0	120	126.0	4.2	380	4500	0.25	1	91.2	17
L2N5952B	25952B	123.5	130	136.5	3.8	450	5000	0.25	1	98.8	15
L2N5953B	25953B	142.5	150	157.5	3.3	600	6000	0.25	1	114.0	13
L2N5954B	25954B	152.0	160	168.0	3.1	700	6500	0.25	1	121.6	13
L2N5955B	25955B	171.0	180	189.0	2.8	900	7000	0.25	1	136.8	11
L2N5956B	25956B	190.0	200	210.0	2.5	1200	8000	0.25	1	152.0	10

Ratings and Characteristics Curves

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

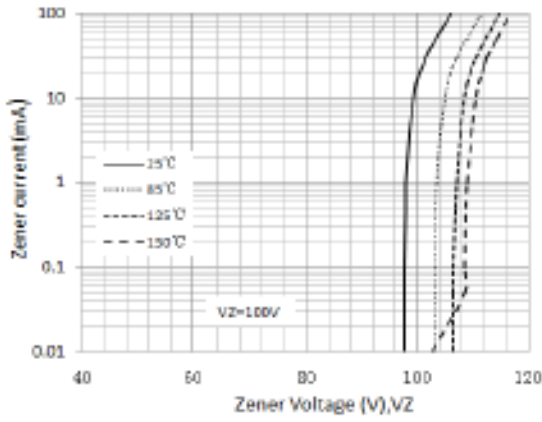


Figure 1. Typical Zener Voltage, $V_Z=100\text{V}$

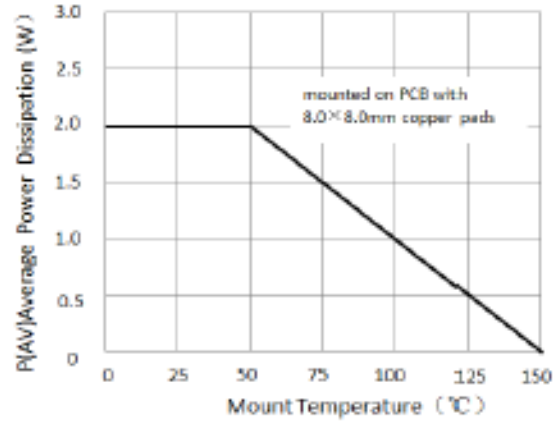


Figure 2. Steady State POWER Derating

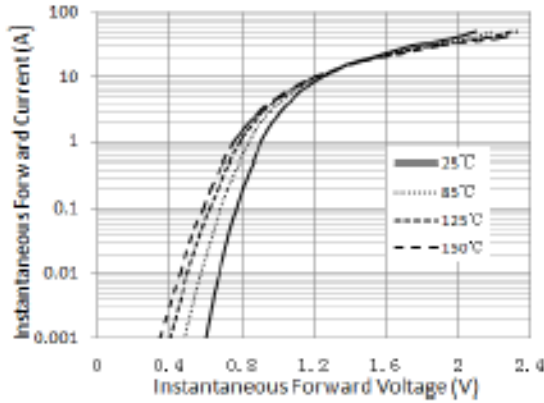


Figure 3. Typical Instantaneous Forward Characteristics

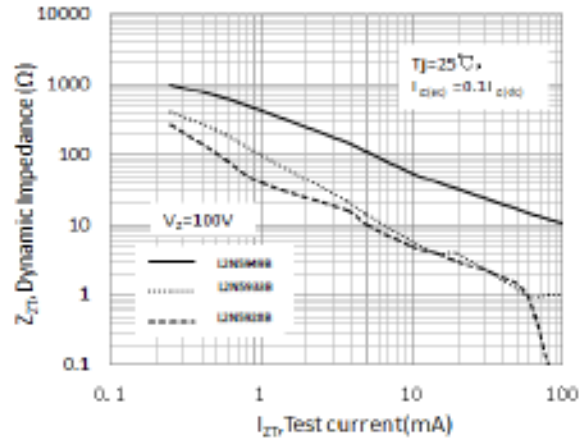


Figure 4. Typical Zener Impedance

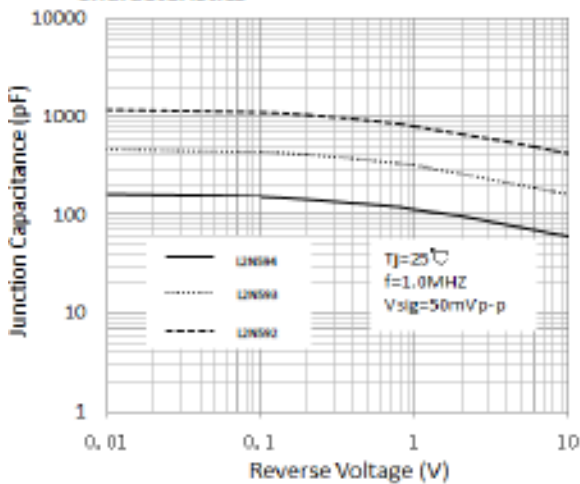


Figure 5. Typical Junction Capacitance

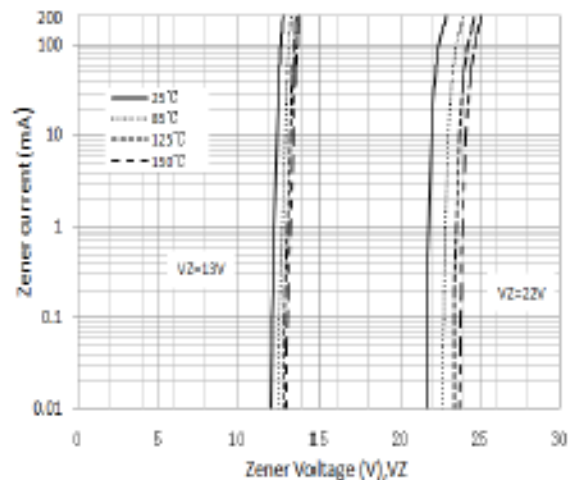
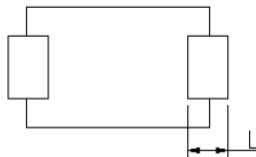
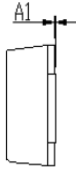
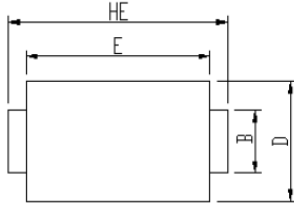


Figure 6. Typical Zener Voltage, $V_Z=13\text{V} /22\text{V}$

Package Outline Dimensions

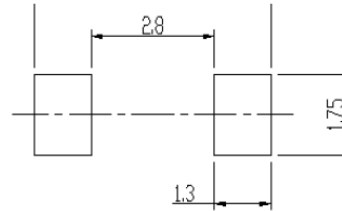
in inches (millimeters)

eSGB (DO-221AC)



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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