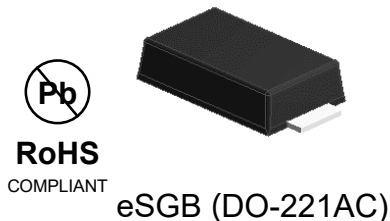


2W,9.1 - 100V Zener Diodes

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
- AEC-Q101 qualified



Applications

Protection from high voltage, high energy transients, voltage stabilization and automotive applications.

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
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

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

Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Ambient	R_{thJA}	85	$^\circ\text{C} / \text{W}$
Thermal Resistance, Junction to Case	R_{thJC}	15	$^\circ\text{C} / \text{W}$
Thermal Resistance, Junction to Lead	R_{thJL}	18	$^\circ\text{C} / \text{W}$

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)				I _{ZM} (mA)
AL2N5924B	A25924B	8.65	9.1	9.56	54.9	4	500	0.5	5	7.0	220
AL2N5925B	A25925B	9.50	10	10.50	50.0	4.5	500	0.25	5	8.0	200
AL2N5926B	A25926B	10.45	11	11.55	45.5	5.5	550	0.25	1	8.4	182
AL2N5927B	A25927B	11.40	12	12.60	41.7	6.5	550	0.25	1	9.1	167
AL2N5928B	A25928B	12.35	13	13.65	38.5	7	550	0.25	1	9.9	154
AL2N5929B	A25929B	14.25	15	15.75	35.7	9	600	0.25	1	11.4	143
AL2N5930B	A25930B	15.20	16	16.80	31.3	10	600	0.25	1	12.2	125
AL2N5931B	A25931B	17.10	18	18.90	27.8	12	650	0.25	1	13.7	111
AL2N5932B	A25932B	19.00	20	21.00	25.0	14	650	0.25	1	15.2	100
AL2N5933B	A25933B	20.90	22	23.10	22.7	17.5	650	0.25	1	16.7	91
AL2N5934B	A25934B	22.80	24	25.20	20.8	19	700	0.25	1	18.2	83
AL2N5935B	A25935B	25.65	27	28.35	18.5	23	700	0.25	1	20.6	74
AL2N5936B	A25936B	28.50	30	31.50	16.7	28	750	0.25	1	22.8	67
AL2N5937B	A25937B	31.35	33	34.65	15.2	33	800	0.25	1	25.1	61
AL2N5938B	A25938B	34.20	36	37.80	13.9	38	850	0.25	1	27.4	56
AL2N5939B	A25939B	37.05	39	40.95	12.8	45	900	0.25	1	29.7	51
AL2N5940B	A25940B	40.85	43	45.15	11.6	53	950	0.25	1	32.7	47
AL2N5941B	A25941B	44.65	47	49.35	10.6	67	1000	0.25	1	35.8	43
AL2N5942B	A25942B	48.45	51	53.55	9.8	70	1100	0.25	1	38.8	39
AL2N5943B	A25943B	53.20	56	58.80	8.9	86	1300	0.25	1	42.6	36
AL2N5944B	A25944B	58.90	62	65.10	8.1	100	1500	0.25	1	47.1	32
AL2N5945B	A25945B	64.60	68	71.40	7.4	120	1700	0.25	1	51.7	29
AL2N5946B	A25946B	71.25	75	78.75	6.7	140	2000	0.25	1	56.0	27
AL2N5947B	A25947B	77.90	82	86.10	6.1	160	2500	0.25	1	62.2	24
AL2N5948B	A25948B	86.45	91	95.55	5.5	200	3000	0.25	1	69.2	22
AL2N5949B	A25949B	95.0	100	105.0	5.0	250	3100	0.25	1	76.0	20

Ratings and Characteristics Curves (TA = 25°C unless otherwise note)

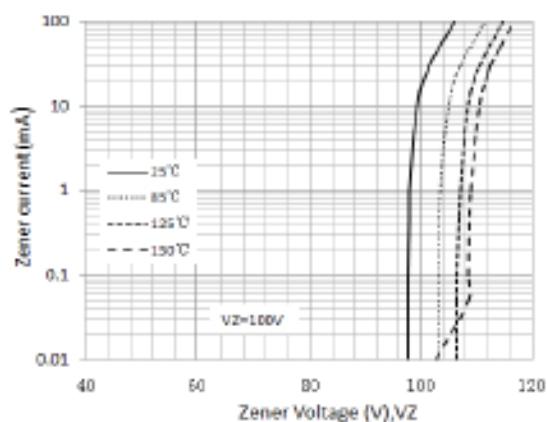


Figure 1. Typical Zener Voltage, $V_Z=100V$

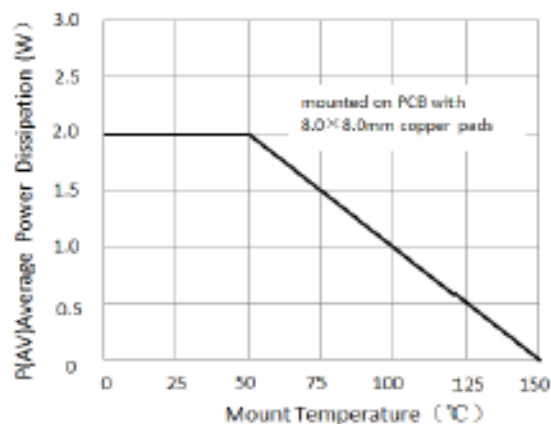


Figure 2. Steady State POWER Derating

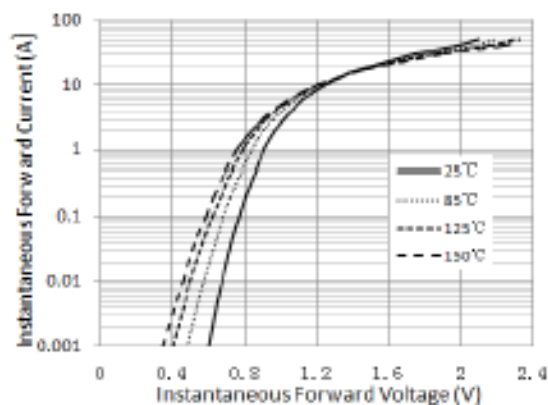


Figure 3. Typical Instantaneous Forward Characteristics

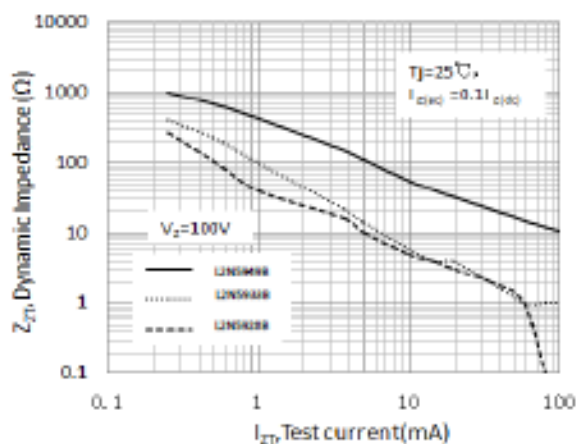


Figure 4. Typical Zener Impedance

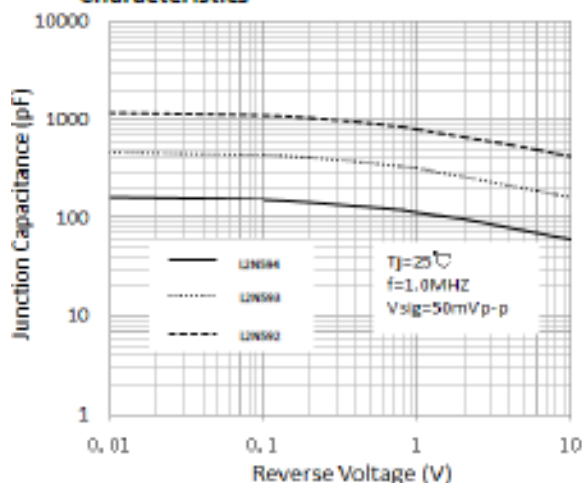


Figure 5. Typical Junction Capacitance

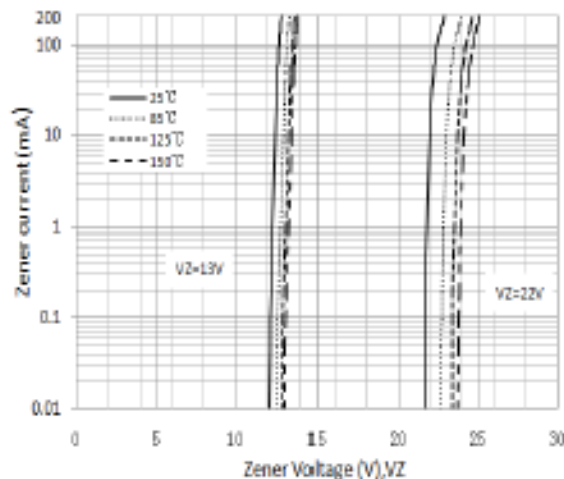
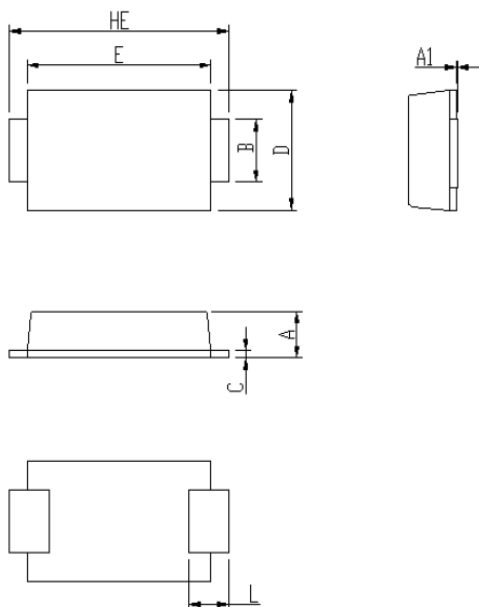


Figure 6. Typical Zener Voltage, $V_Z=13V / 22V$

Package Outline Dimensions

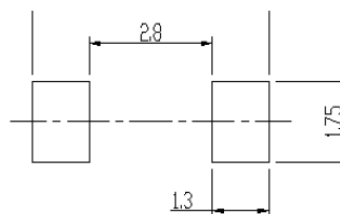
in inches (millimeters)

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



Disclaimers

These materials are intended as a reference to assist our customers in the selection of the Suzhou Good-Ark product best suited to the customer's application; they do not convey any license under any intellectual property rights, or any other rights, belonging to Suzhou Good-Ark Electronics Co., Ltd. or a third party.

Suzhou Good-Ark Electronics Co., Ltd. assumes no responsibility for any damage, or infringement of any third-party's rights, originating in the use of any product data, diagrams, charts, programs, algorithms, or circuit application examples contained in these materials.

All information contained in these materials, including product data, diagrams, charts, programs and algorithms represents information on products at the time of publication of these materials, and are subject to change by Suzhou Good-Ark Electronics Co., Ltd. without notice due to product improvements or other reasons. It is therefore recommended that customers contact Suzhou Good-Ark Electronics Co., Ltd. or an authorized Suzhou Good-Ark Electronics Co., Ltd. for the latest product information before purchasing a product listed herein. The information described here may contain technical inaccuracies or typographical errors. Suzhou Good-Ark Electronics Co., Ltd. assumes no responsibility for any damage, liability, or other loss rising from these inaccuracies or errors. Please also pay attention to information published by Suzhou Good-Ark Electronics Co., Ltd. by various means, including our website home page.

(<http://www.goodark.com>)

When using any or all of the information contained in these materials, including product data, diagrams, charts, programs, and algorithms, Please be sure to evaluate all information as a total system before making a final decision on the applicability of the information and products. Suzhou Good-Ark Electronics Co., Ltd. assumes no responsibility for any damage, liability or other loss resulting from the information contained herein.

The prior written approval of Suzhou Good-Ark Electronics Co., Ltd. is necessary to reprint or reproduce in whole or in part these materials.

Please contact Suzhou Good-Ark Electronics Co., Ltd. or an authorized distributor for further details on these materials or the products contained herein.