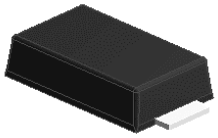
1W,9.1 - 100V Zener Diodes

Features

- Low leakage current
- Available in unidirectional
- Glass passivated junction
- Zener voltage tolerance is ±5%
- Total power dissipation: Max 1W
- Moisture sensitivity: level 1, per J-STD-020
- Halogen-free according to IEC 61249-2-21 definition
- AEC-Q101 qualified

RoHS COMPLIANT



eSGB (DO-221AC)

Applications

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

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}	1	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	℃

Thermal-Mechanical Specifications (T_A=25℃ unless otherwise noted)

Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Ambient	R_{thJA}	85	°C /W
Thermal Resistance, Junction to Case	R_{thJC}	15	°C /W
Thermal Resistance, Junction to Lead	R_{thJL}	18	°C /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)				IZM (mA)
AL1N4739	A4739	8.65	9.1	9.56	28	5	700	0.5	10	7.0	100
AL1N4740	A4740	9.50	10	10.50	25	7	700	0.25	10	8.0	91
AL1N4741	A4741	10.45	11	11.55	23	8	700	0.25	5	8.4	83
AL1N4742	A4742	11.40	12	12.60	21	9	700	0.25	5	9.1	76
AL1N4743	A4743	12.35	13	13.65	19	10	700	0.25	5	9.9	69
AL1N4744	A4744	14.25	15	15.75	17	14	700	0.25	5	11.4	61
AL1N4745	A4745	15.20	16	16.80	15.5	16	700	0.25	5	12.2	57
AL1N4746	A4746	17.10	18	18.90	14	20	750	0.25	5	13.7	50
AL1N4747	A4747	19.00	20	21.00	12.5	22	750	0.25	5	15.2	45
AL1N4748	A4748	20.90	22	23.10	11.5	23	750	0.25	5	16.7	41
AL1N4749	A4749	22.80	24	25.20	10.5	25	750	0.25	5	18.2	38
AL1N4750	A4750	25.65	27	28.35	9.5	35	750	0.25	5	20.6	34
AL1N4751	A4751	28.50	30	31.50	8.5	40	1000	0.25	5	22.8	30
AL1N4752	A4752	31.35	33	34.65	7.5	45	1000	0.25	5	25.1	27
AL1N4753	A4753	34.20	36	37.80	7	50	1000	0.25	5	27.4	25
AL1N4754	A4754	37.05	39	40.95	6.5	60	1000	0.25	5	29.7	23
AL1N4755	A4755	40.85	43	45.15	6	70	1500	0.25	5	32.7	22
AL1N4756	A4756	44.65	47	49.35	5.5	80	1500	0.25	5	35.8	19
AL1N4757	A4757	48.45	51	53.55	5	95	1500	0.25	5	38.8	18
AL1N4758	A4758	53.20	56	58.80	4.5	110	2000	0.25	5	42.6	16
AL1N4759	A4759	58.90	62	65.10	4	125	2000	0.25	5	47.1	14
AL1N4760	A4760	64.60	68	71.40	3.7	150	2000	0.25	5	51.7	13
AL1N4761	A4761	71.25	75	78.75	3.3	175	2000	0.25	5	56.0	12
AL1N4762	A4762	77.90	82	86.10	3	200	3000	0.25	5	62.2	11
AL1N4763	A4763	86.45	91	95.55	2.8	250	3000	0.25	5	69.2	10
AL1N4764	A4764	95.0	100	105.0	2.5	350	3000	0.25	5	76.0	9

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

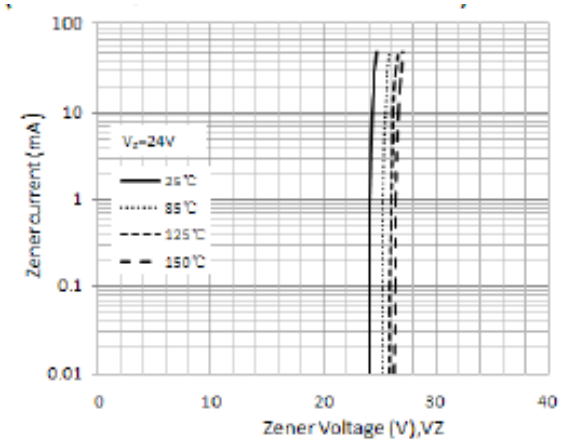


Figure 1. Typical Zener Voltage

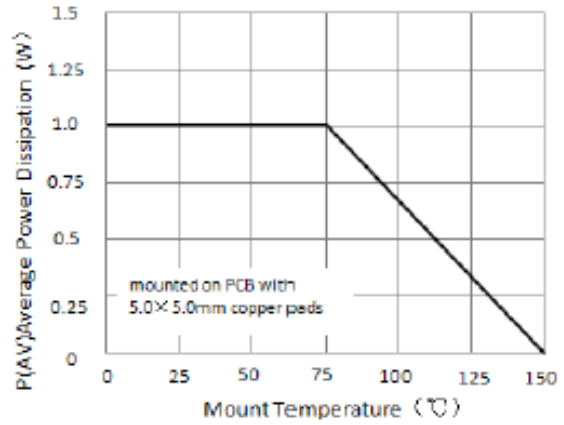


Figure 2. Steady State POWER Derating

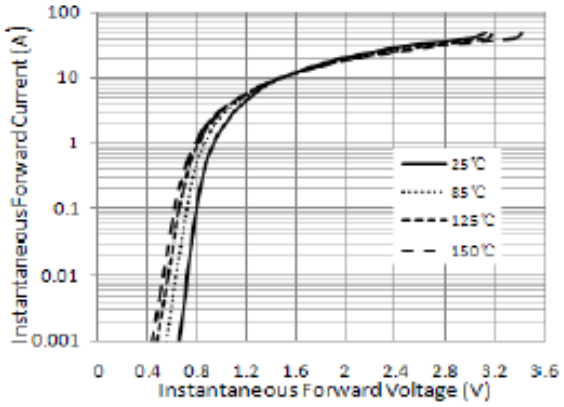


Figure 3. Typical Instantaneous Forward Characteristics

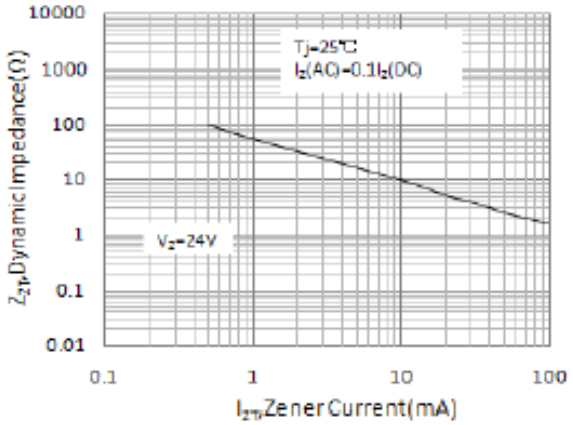


Figure 4. Typical Zener Impedance

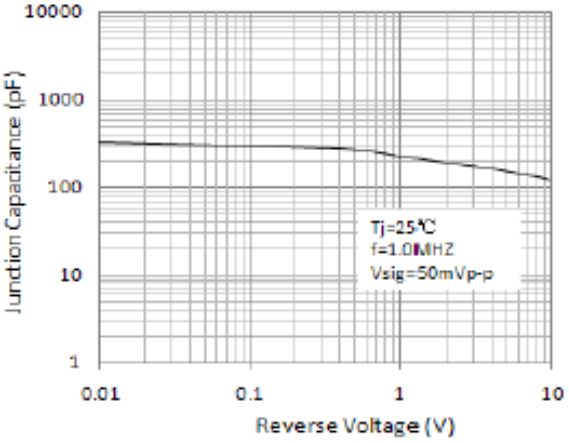


Figure 5. Typical Junction Capacitance

Package Outline Dimensions

in inches (millimeters)

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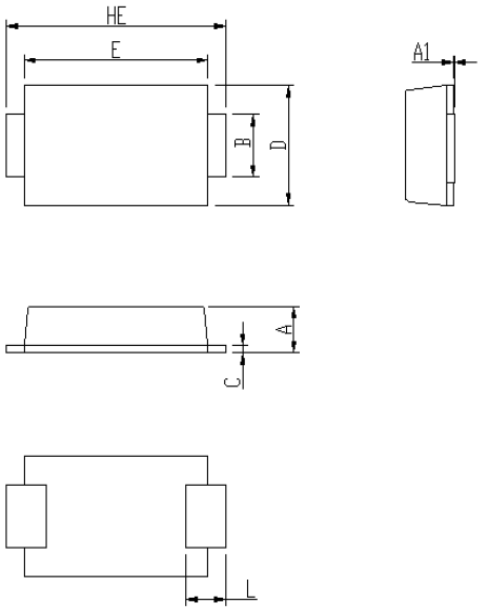
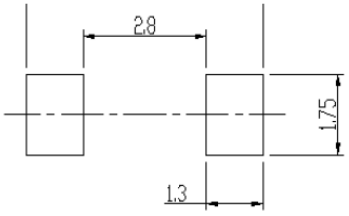


DIM	Unit: mm		Unit: inch	
	MIN	MAX	MIN	MAX
A	0.92	1.08	0.036	0.043
A1	0	0.1	0.000	0.004
B	1.25	1.45	0.049	0.057
C	0.1	0.25	0.004	0.010
D	2.6	2.8	0.102	0.110
E	4.1	4.3	0.161	0.169
L	0.7	1.1	0.028	0.043
HE	4.8	5.2	0.189	0.205

Soldering footprint



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