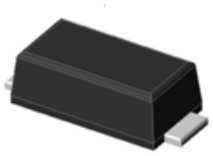
1W,10 - 39V Zener Diodes

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



eSGA (SOD-123FL)

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}	1	W
Maximum instantaneous forward voltage at 200mA	V_F	1.2	V
Typical Thermal Resistance , Junction to Ambient	$R_{\theta JA}$	100	℃/W
Typical Thermal Resistance , Junction to Case	$R_{\theta JC}$	20	℃/W
Typical Thermal Resistance , Junction to Lead	$R_{\theta JL}$	20	℃/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)
AF1N4740	A740	9.50	10	10.50	25	7	700	0.25	10	8.0	91
AF1N4741	A741	10.45	11	11.55	23	8	700	0.25	5	8.4	83
AF1N4742	A742	11.40	12	12.60	21	9	700	0.25	5	9.1	76
AF1N4743	A743	12.35	13	13.65	19	10	700	0.25	5	9.9	69
AF1N4744	A744	14.25	15	15.75	17	14	700	0.25	5	11.4	61
AF1N4745	A745	15.20	16	16.80	15.5	16	700	0.25	5	12.2	57
AF1N4746	A746	17.10	18	18.90	14	20	750	0.25	5	13.7	50
AF1N4747	A747	19.00	20	21.00	12.5	22	750	0.25	5	15.2	45
AF1N4748	A748	20.90	22	23.10	11.5	23	750	0.25	5	16.7	41
AF1N4749	A749	22.80	24	25.20	10.5	25	750	0.25	5	18.2	38
AF1N4750	A750	25.65	27	28.35	9.5	35	750	0.25	5	20.6	34
AF1N4751	A751	28.50	30	31.50	8.5	40	1000	0.25	5	22.8	30
AF1N4752	A752	31.35	33	34.65	7.5	45	1000	0.25	5	25.1	27
AF1N4753	A753	34.20	36	37.80	7	50	1000	0.25	5	27.4	25
AF1N4754	A754	37.05	39	40.95	6.5	60	1000	0.25	5	29.7	23

Ratings and Characteristics Curves

(T_A = 25℃ unless otherwise noted)

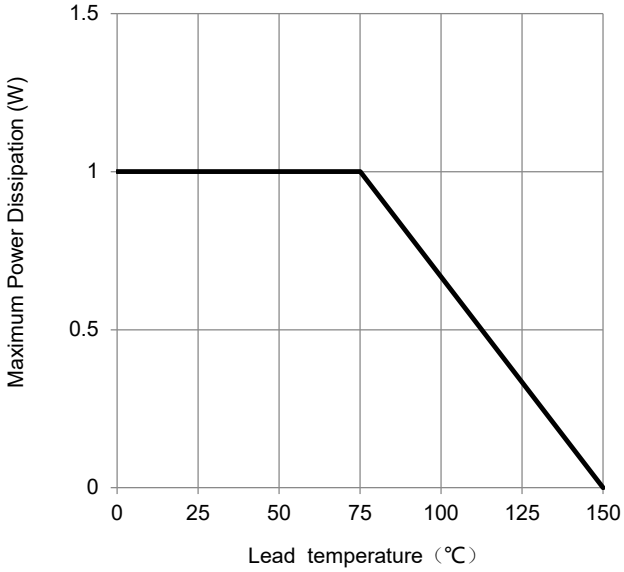


Fig.1 – Power Derating Curve

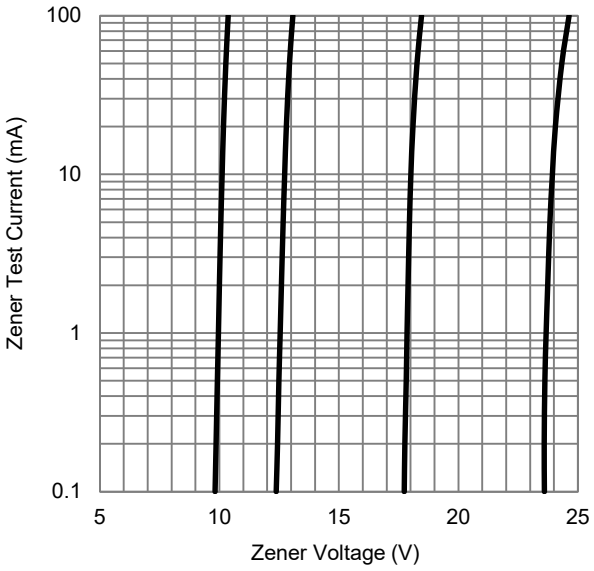


Fig.2 – Typical Zener Voltage

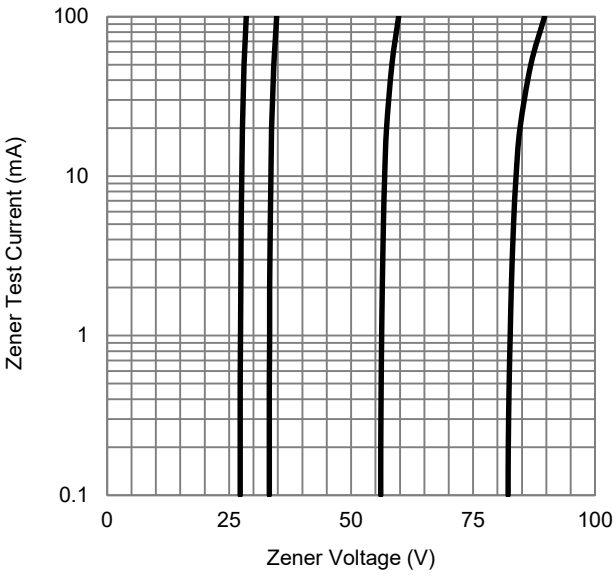
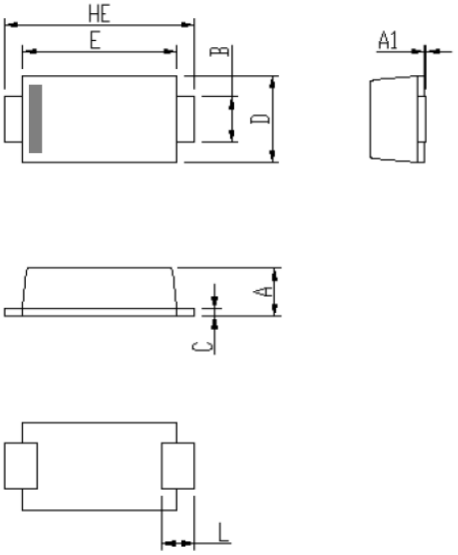


Fig.3 – Typical Zener Voltage

Package Outline Dimensions

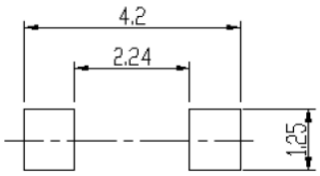
in inches (millimeters)

eSGA (SOD-123FL)



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	0.85	1.05	0.033	0.041
C	0.1	0.25	0.004	0.010
D	1.7	2	0.067	0.079
E	2.9	3.1	0.114	0.122
L	0.43	0.83	0.017	0.033
HE	3.5	3.9	0.138	0.154

Soldering footprint



Revision History

Document Version	Date of release	Description of changes
Rev.A	2021.06.15	Released Datasheet
Rev.B	2023.10.23	Modify document format

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