

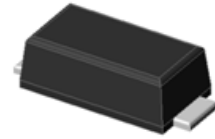
1W,10 - 200V Zener Diodes

Features

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



RoHS
COMPLIANT



eSGA (SOD-123FL)

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}	1	W
Maximum instantaneous forward voltage at 200mA	V_F	1.2	V
Typical Thermal Resistance , Junction to Ambient	$R_{\theta JA}$	100	$^\circ\text{C/W}$
Typical Thermal Resistance , Junction to Case	$R_{\theta JC}$	20	$^\circ\text{C/W}$
Typical Thermal Resistance , Junction to Lead	$R_{\theta JL}$	20	$^\circ\text{C/W}$
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 5x5mm 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)
F1N4740	4740	9.50	10	10.50	25	7	700	0.25	10	8.0	91
F1N4741	4741	10.45	11	11.55	23	8	700	0.25	5	8.4	83
F1N4742	4742	11.40	12	12.60	21	9	700	0.25	5	9.1	76
F1N4743	4743	12.35	13	13.65	19	10	700	0.25	5	9.9	69
F1N4744	4744	14.25	15	15.75	17	14	700	0.25	5	11.4	61
F1N4745	4745	15.20	16	16.80	15.5	16	700	0.25	5	12.2	57
F1N4746	4746	17.10	18	18.90	14	20	750	0.25	5	13.7	50
F1N4747	4747	19.00	20	21.00	12.5	22	750	0.25	5	15.2	45
F1N4748	4748	20.90	22	23.10	11.5	23	750	0.25	5	16.7	41
F1N4749	4749	22.80	24	25.20	10.5	25	750	0.25	5	18.2	38
F1N4750	4750	25.65	27	28.35	9.5	35	750	0.25	5	20.6	34
F1N4751	4751	28.50	30	31.50	8.5	40	1000	0.25	5	22.8	30
F1N4752	4752	31.35	33	34.65	7.5	45	1000	0.25	5	25.1	27
F1N4753	4753	34.20	36	37.80	7	50	1000	0.25	5	27.4	25
F1N4754	4754	37.05	39	40.95	6.5	60	1000	0.25	5	29.7	23
F1N4755	4755	40.85	43	45.15	6	70	1500	0.25	5	32.7	22
F1N4756	4756	44.65	47	49.35	5.5	80	1500	0.25	5	35.8	19
F1N4757	4757	48.45	51	53.55	5	95	1500	0.25	5	38.8	18
F1N4758	4758	53.20	56	58.80	4.5	110	2000	0.25	5	42.6	16
F1N4759	4759	58.90	62	65.10	4	125	2000	0.25	5	47.1	14
F1N4760	4760	64.60	68	71.40	3.7	150	2000	0.25	5	51.7	13
F1N4761	4761	71.25	75	78.75	3.3	175	2000	0.25	5	56.0	12
F1N4762	4762	77.90	82	86.10	3	200	3000	0.25	5	62.2	11
F1N4763	4763	86.45	91	95.55	2.8	250	3000	0.25	5	69.2	10
F1N4764	4764	95.0	100	105.0	2.5	350	3000	0.25	5	76.0	9
FZ1110	1110	104.5	110	115.5	2.3	450	4000	0.25	5	83.6	8.6
FZ1120	1120	114.0	120	126.0	2	550	4500	0.25	5	91.2	7.8
FZ1130	1130	123.5	130	136.5	1.9	700	5000	0.25	5	98.8	7
FZ1150	1150	142.5	150	157.5	1.7	1000	6000	0.25	5	114.0	6.4
FZ1160	1160	152.0	160	168.0	1.6	1100	6500	0.25	5	121.6	5.8
FZ1180	1180	171.0	180	189.0	1.4	1200	7000	0.25	5	136.8	5.2
FZ1200	1200	190.0	200	210.0	1.2	1900	9990	0.25	5	152.0	4.7

Ratings and Characteristics Curves

(TA = 25°C unless otherwise noted)

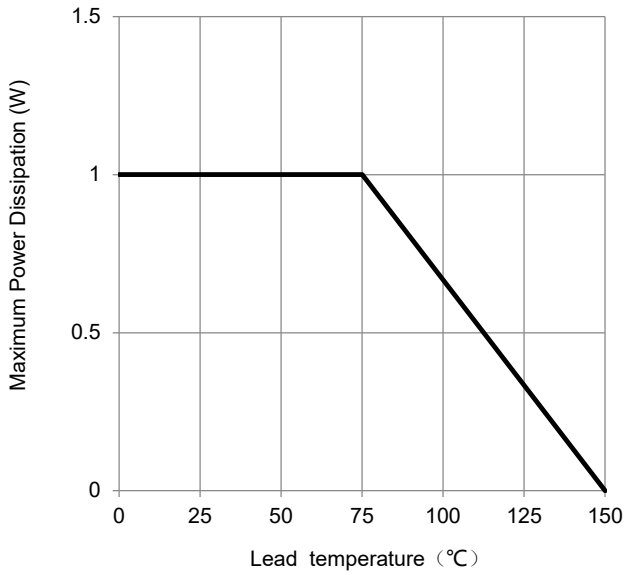


Fig.1 – Power Derating Curve

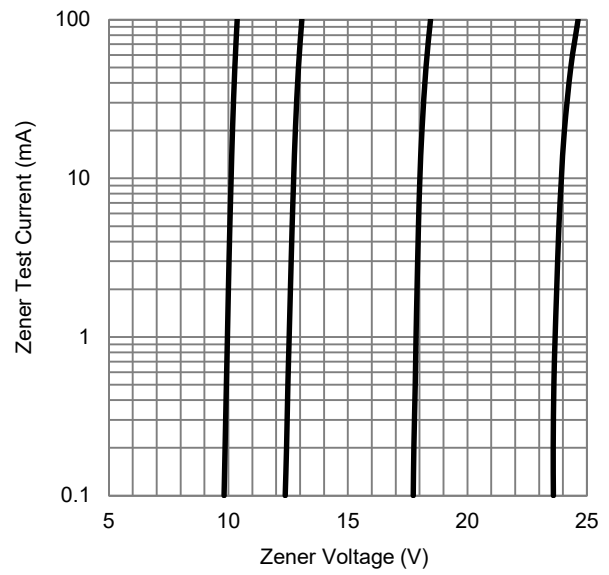


Fig.2 – Typical Zener Voltage

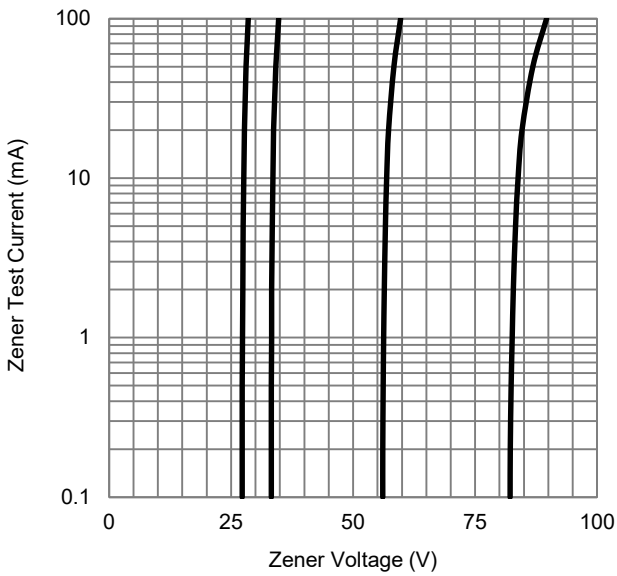
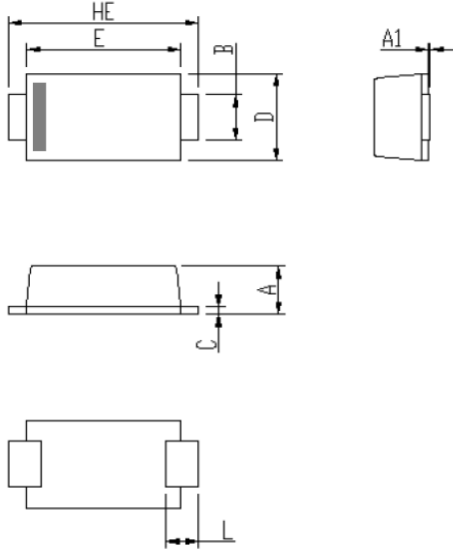


Fig.3 – Typical Zener Voltage

Package Outline Dimensions

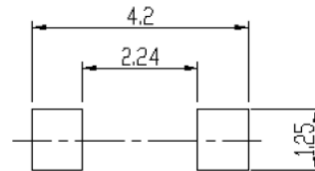
in inches (millimeters)

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	2023.10.11	Modify document format

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