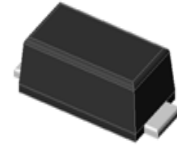


## Features

- Total power dissipation: max, 1.0W
- Low leakage current
- Moisture sensitivity: level 1, per J-STD-020
- Solder dip 260 °C, 10 s
- Low profile, typical thickness 1.0mm
- For use in stabilizing and clipping circuits with high power rating



**RoHS**  
COMPLIANT



eSGA  
(SOD-123FL)

## Maximum Ratings and Thermal Characteristics

(TA = 25 °C unless otherwise noted)

Parameter	Symbol	Value	Unit
Zener current		See Next Table	
Power dissipation at Tamb=75°C	Ptot	1	W
Maximum instantaneous forward voltage at 200mA	V <sub>F</sub>	1.2	V
Thermal resistance junction to ambient air	Rthja	100	°C/W
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150	°C

Note:1),The thermal resistance from junction to ambient,case or mount,mounted on P.C.B with 5x5mm copper pads,2 OZ,FR4 PCB

## Electrical Characteristics (TA = 25 °C unless otherwise noted)

Part Number	Zener voltage		Test current	Dynamic impedance	Knee current	Knee impedance	Reverse current	Reverse voltage	Max.DC current
	V <sub>Z</sub> /V		I <sub>ZT</sub>	Z <sub>ZT</sub>	I <sub>ZK</sub>	Z <sub>ZK</sub>	I <sub>R</sub> (Max)	V <sub>R</sub>	I <sub>ZM</sub>
	V <sub>Z</sub> (MIN)	V <sub>Z</sub> (MAX)	m A	Ω	m A	Ω	μA <sub>dc</sub>	V	m A
F1N4738	7.79	8.61	31	4.5	0.5	700	10	6.5	110
F1N4739	8.65	9.56	28	5	0.5	700	10	7	100
F1N4740	9.5	10.5	25	7	0.25	700	10	8	91
F1N4741	10.45	11.55	23	8	0.25	700	5	8.4	83
F1N4742	11.4	12.6	21	9	0.25	700	5	9.1	76
F1N4743	12.35	13.65	19	10	0.25	700	5	9.9	69
F1N4744	14.25	15.75	17	14	0.25	700	5	11.4	61



# F1N4738 thru FZ1200

Surface Mount Zener Diodes

Vz Range:8.2 to 200V Power Dissipation:1W

Electrical Characteristics (TA = 25 °C unless otherwise noted)									
Part Number	Zener voltage		Test current	Dynamic impedance	Knee current	Knee impedance	Reverse current	Reverse voltage	Max.DC current
	VZ /V		IZT	ZZT	IZK	ZZK	IR(Max)	VR	IZM
	Vz(MIN)	Vz(MAX)	m A	Ω	m A	Ω	μAdc	V	m A
F1N4745	15.2	16.8	15.5	16	0.25	700	5	12.2	57
F1N4746	17.1	18.9	14	20	0.25	750	5	13.7	50
F1N4747	19	21	12.5	22	0.25	750	5	15.2	45
F1N4748	20.9	23.1	11.5	23	0.25	750	5	16.7	41
F1N4749	22.8	25.2	10.5	25	0.25	750	5	18.2	38
F1N4750	25.65	28.35	9.5	35	0.25	750	5	20.6	34
F1N4751	28.5	31.5	8.5	40	0.25	1000	5	22.8	30
F1N4752	31.35	34.65	7.5	45	0.25	1000	5	25.1	27
F1N4753	34.2	37.8	7	50	0.25	1000	5	27.4	25
F1N4754	37.05	40.95	6.5	60	0.25	1000	5	29.7	23
F1N4755	40.85	45.15	6	70	0.25	1500	5	32.7	22
F1N4756	44.65	49.35	5.5	80	0.25	1500	5	35.8	19
F1N4757	48.45	53.55	5	95	0.25	1500	5	38.8	18
F1N4758	53.2	58.8	4.5	110	0.25	2000	5	42.6	16
F1N4759	58.9	65.1	4	125	0.25	2000	5	47.1	14
F1N4760	64.6	71.4	3.7	150	0.25	2000	5	51.7	13
F1N4761	71.25	78.8	3.3	175	0.25	2000	5	56	12
F1N4762	77.9	86.1	3	200	0.25	3000	5	62.2	11
F1N4763	86.45	95.6	2.8	250	0.25	3000	5	69.2	10
F1N4764	95	105	2.5	350	0.25	3000	5	76	9
FZ1110	104.5	115.5	2.3	450	0.25	4000	5	83.6	8.6
FZ1120	114	126	2	550	0.25	4500	5	91.2	7.8
FZ1130	123.5	136.5	1.9	700	0.25	5000	5	98.8	7
FZ1150	142.5	157.5	1.7	1000	0.25	6000	5	114	6.4
FZ1160	152	168	1.6	1100	0.25	6500	5	121.6	5.8
FZ1180	171	189	1.4	1200	0.25	7000	5	136.8	5.2
FZ1200	190	210	1.2	1900	0.25	9990	5	152	4.7



# F1N4738 thru FZ1200

Surface Mount Zener Diodes

V<sub>z</sub> Range:8.2 to 200V Power Dissipation:1W

## Ratings and Characteristics Curves

(T<sub>A</sub> = 25°C unless otherwise noted)

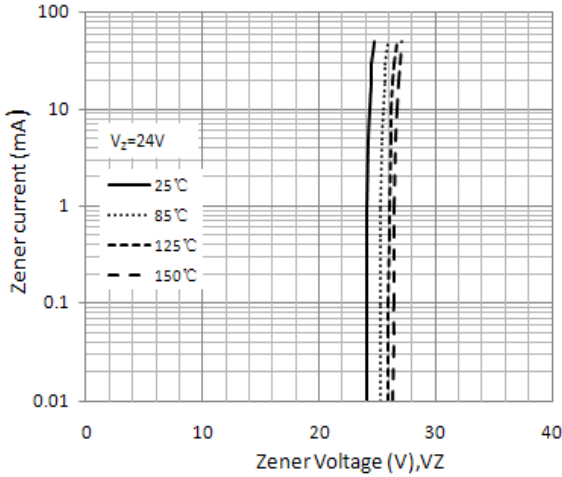


Figure 1. Typical Zener Voltage

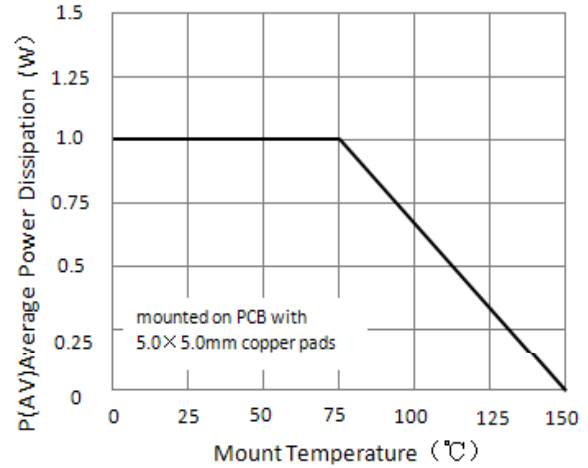


Figure 2. Steady State POWER Derating

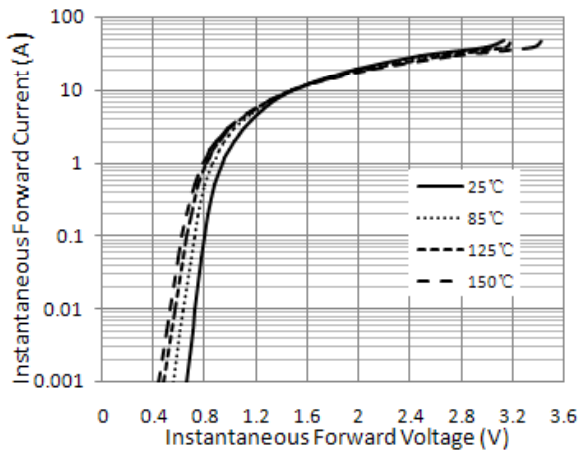


Figure 3. Typical Instantaneous Forward Characteristics

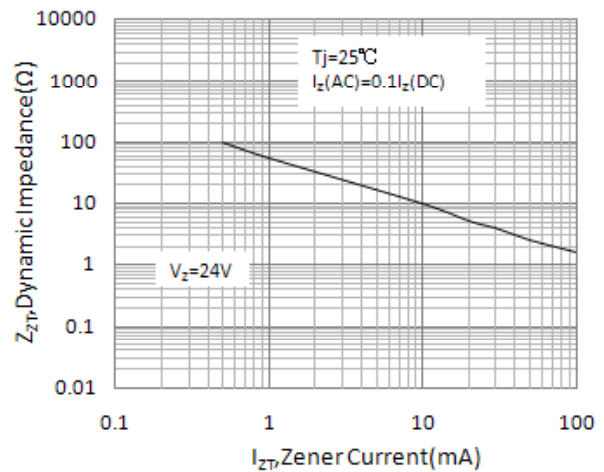


Figure 4. Typical Zener Impedance

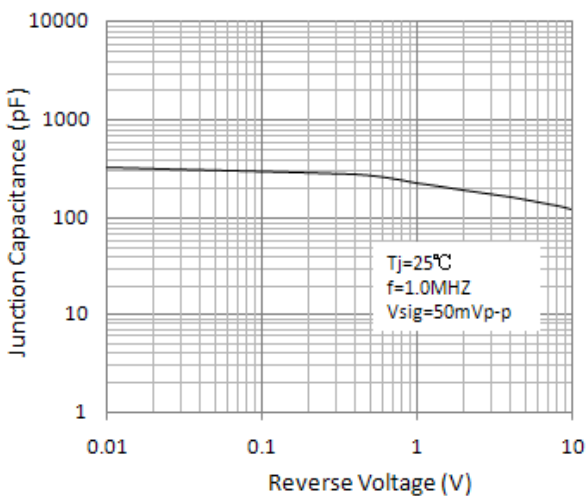
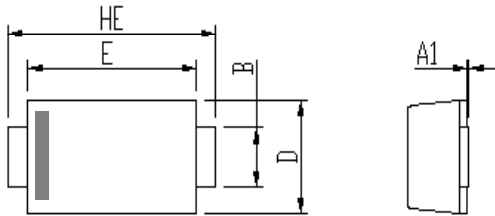


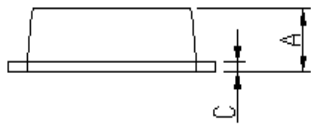
Figure 5. Typical Junction Capacitance

## Package Outline Dimensions

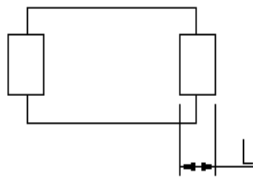
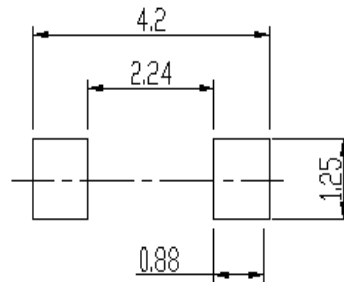
in inches (millimeters)



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

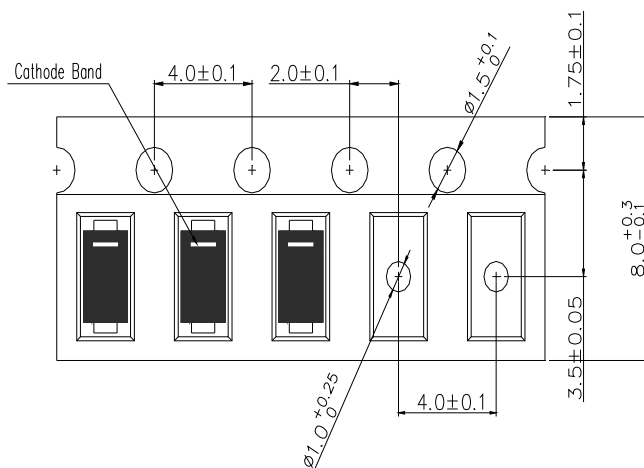


## Packing Information

### Packing quantities:

3000 pcs/Reel, 40 Reels/Box; 8mm Tape, 7" Reel

### Tape & Reel Specification





# F1N4738 thru FZ1200

Surface Mount Zener Diodes

Vz Range:8.2 to 200V Power Dissipation:1W

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