1SMA5913C-1SMA5957C

Silicon Zener Diodes

RoHS COMPLIANT

V_Z : 3.3 - 240 Volts
P_D : 1.5Watts

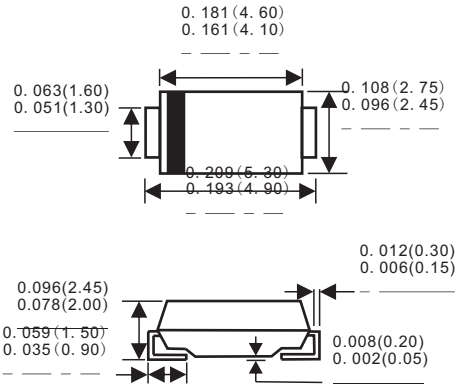
Features

* Complete Voltage Range 3.3 to 240 Volts
* High peak reverse power dissipation
* High reliability
* Low leakage current
• ESD Rating of Class 3 (> 16 kV) per Human Body Model

Mechanical Data

* Case : SMA (DO-214AC) Molded plastic
* Epoxy : UL94V-O rate flame retardant
* Lead : Lead formed for Surface mount
* Polarity : Color band denotes cathode end
* Mounting position : Any
* Weight : 0.064gram

SMA/DO-214AC



Dimensions in inches and(millimeters)

Rating	Symbol	Value	Unit
DC Power Dissipation at T_L = 75 °C (Note1)	P_D	1.5	Watts
Maximum Forward Voltage at I_F = 200 mA	V_F	1.5	Volts
Junction Temperature Range	T_J	- 65 to + 150	°C
Storage Temperature Range	Ts	- 65 to + 150	°C

Note :

(1) T_L = Lead temperature at 5.0 mm^2 (0.013 mm thick) copper land areas.

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ELECTRICALCHARACTERISTICS

Ratingat=25Cambienttemperatureunlessotherwisespecified

TYPE	Nominal Zener Voltage				Maximum Zener Impedance			Maximum Reverse Leakage Current		Maximum DC Zener Current
	VZ @ I ZT			IZT	ZZT @ I ZT	ZZK @ IZK	IZK	IR @ V R		IZM
	(V)			(mA)	(Ω)	(Ω)	(mA)	(μ A)	(V)	(mA)
1SMA5913C	3.23	3.3	3.37	113.6	10	500	1	50	1	455
1SMA5914C	3.53	3.6	3.67	104.2	9	500	1	37.5	1	417
1SMA5915C	3.82	3.9	3.98	96. 1	7.5	500	1	12.5	1	385
1SMA5916C	4.21	4.3	4.39	87.2	6	500	1	2.5	1	349
1SMA5917C	4.61	4.7	4.79	79.8	5	500	1	2.5	1.5	319
1SMA5918C	5.00	5.1	5.20	73.5	2	300	1	1.0	2	294
1SMA5919C	5.49	5.6	5.71	66.9	2	250	1	2.5	3	268
1SMA5920C	6.08	6.2	6.32	60.5	2	200	1	2.5	4	242
1SMA5921C	6.66	6.8	6.94	55. 1	2.5	200	1	2.5	5.2	221
1SMA5922C	7.35	7.5	7.65	50	3	400	0.5	2.5	6	200
1SMA5923C	8.04	8.2	8.36	45.7	3.5	400	0.5	2.5	6.5	183
1SMA5924C	8.92	9.1	9.28	41.2	4	500	0.5	2.5	7	165
1SMA5925C	9.80	10	10.20	37.5	4.5	500	0.25	2.5	8	150
1SMA5926C	10.78	11	11.22	34. 1	5.5	550	0.25	0.5	8.4	136
1SMA5927C	11.76	12	12.24	31.2	6.5	550	0.25	0.5	9.1	125
1SMA5928C	12.74	13	13.26	28.8	7	550	0.25	0.5	9.9	115
1SMA5929C	14.70	15	15.30	25	9	600	0.25	0.5	11.4	100
1SMA5930C	15.68	16	16.32	23.4	10	600	0.25	0.5	12.2	93
1SMA5931C	17.64	18	18.36	20.8	12	650	0.25	0.5	13.7	83
1SMA5932C	19.60	20	20.40	18.7	14	650	0.25	0.5	15.2	75
1SMA5933C	21.56	22	22.44	17	17.5	650	0.25	0.5	16.7	68
1SMA5934C	23.52	24	24.48	15.6	19	700	0.25	0.5	18.2	63
1SMA5935C	26.46	27	27.54	13.9	23	700	0.25	0.5	20.6	56
1SMA5936C	29.40	30	30.60	12.5	28	750	0.25	0.5	22.8	50
1SMA5937C	32.34	33	33.66	11.4	33	800	0.25	0.5	25. 1	45
1SMA5938C	35.28	36	36.72	10.4	38	850	0.25	0.5	27.4	42
1SMA5939C	38.22	39	39.78	9.6	45	900	0.25	0.5	29.7	38
1SMA5940C	42.14	43	43.86	8.7	53	950	0.25	0.5	32.7	35
1SMA5941C	46.06	47	47.94	8	67	1000	0.25	0.5	35.8	32
1SMA5942C	49.98	51	52.02	7.3	70	1100	0.25	0.5	38.8	29
1SMA5943C	54.88	56	57.12	6.7	86	1300	0.25	0.5	42.6	27
1SMA5944C	60.76	62	63.24	6	100	1500	0.25	0.5	47. 1	22
1SMA5945C	66.64	68	69.36	5.5	80	1700	0.25	0.5	51.7	21
1SMA5946C	73.50	75	76.50	5	140	2000	0.25	0.5	56	20
1SMA5947C	80.36	82	83.64	4.6	160	2500	0.25	0.5	62.2	18
1SMA5948C	89.18	91	92.82	4.1	200	3000	0.25	0.5	69.2	16
1SMA5949C	98.00	100	102.00	3.7	250	3100	0.25	0.5	76	15
1SMA5950C	107.80	110	112.20	3.4	300	4000	0.25	0.5	83.6	13
1SMA5951C	117.60	120	122.40	3.1	380	4500	0.25	0.5	91.2	12
1SMA5952C	127.40	130	132.60	2.9	450	5000	0.25	0.5	98.8	11
1SMA5953C	147.00	150	153.00	2.5	600	6000	0.25	0.5	114	10
1SMA5954C	156.80	160	163.20	2.3	700	6500	0.25	0.5	121.6	9
1SMA5955C	176.40	180	183.60	2.1	900	7000	0.25	0.5	136.8	8
1SMA5956C	196.00	200	204.00	1.9	1200	8000	0.25	0.5	152	7
1SMA5957C	235.20	240	244.80	1.5	1600	9000	0.25	0.5	182.4	6

Note: (1)Suffix"C"indicates2%tolerance.

RATING AND TYPICAL CHARACTERISTIC CURVES (T_A = 25°C)

RoHS COMPLIANT

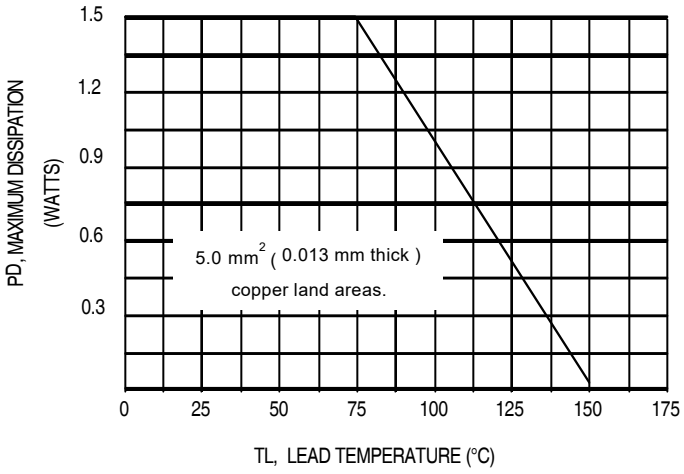

Figure 1. POWER TEMPERATURE DERATING CURVE

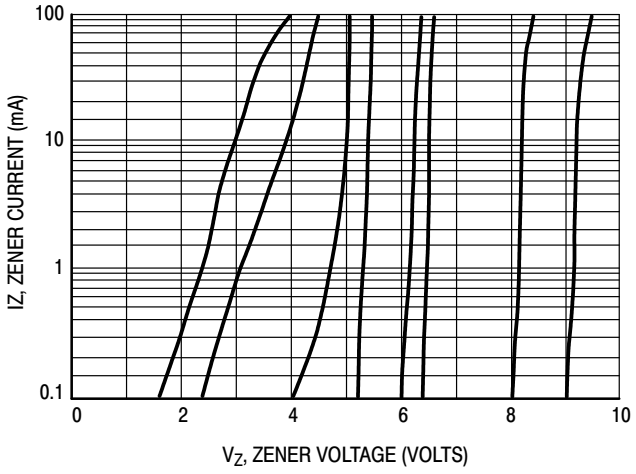

Figure 2. V_Z – 3.3 thru 10 Volts

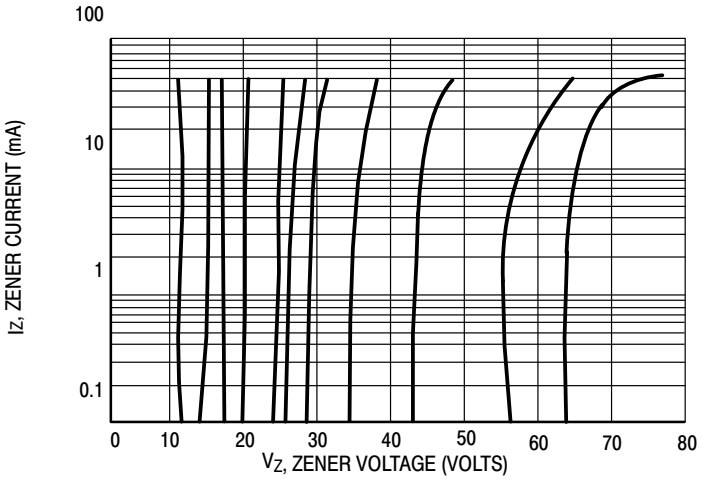

Figure 3. V_Z = 12 thru 68 Volts

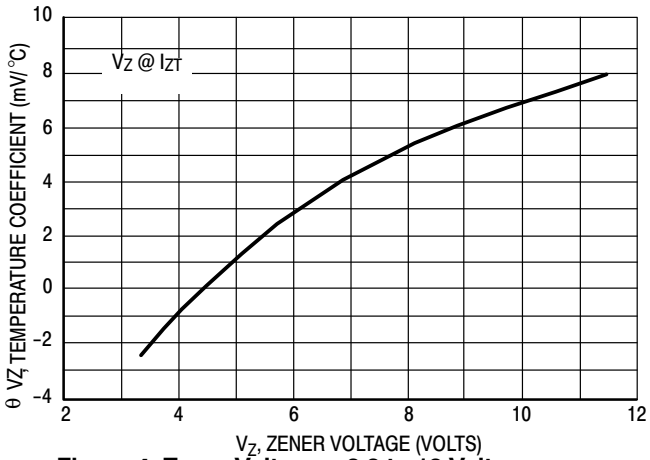

Figure 4. Zener Voltage – 3.3 to 12 Volts

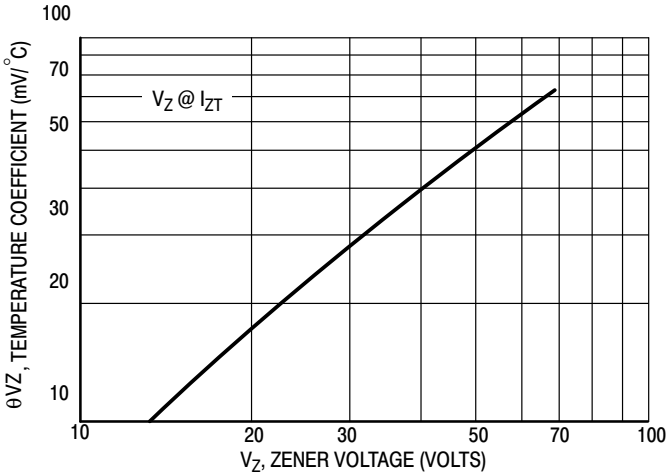

Figure 5. Zener Voltage – 12 to 68 Volts

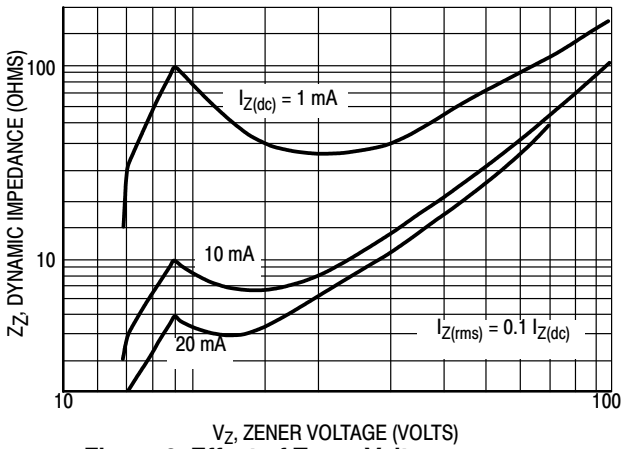

Figure 6. Effect of Zener Voltage

RATING AND TYPICAL CHARACTERISTIC CURVES (T_A = 25°C)

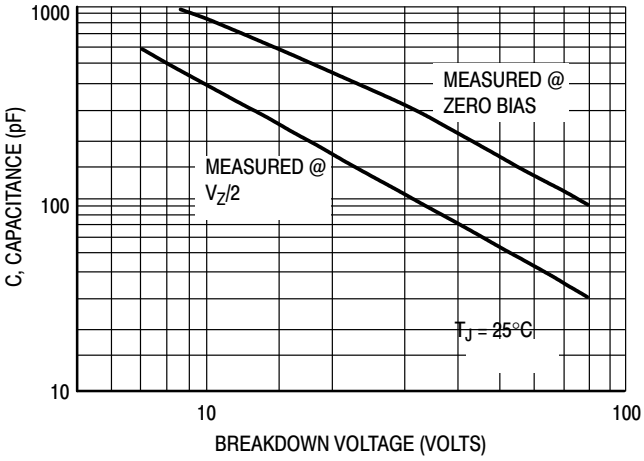

Figure 7. Capacitance Curve

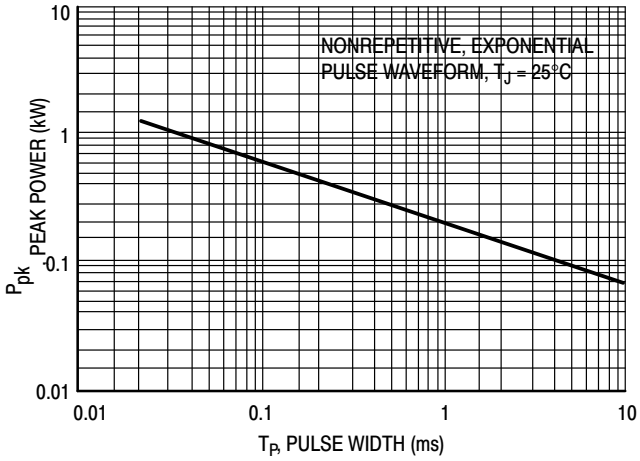

Figure 8. Typical Pulse Rating Curve

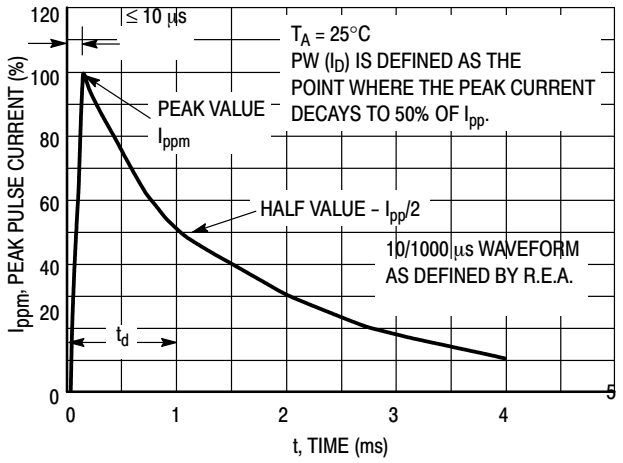

Figure 9. Pulse Waveform

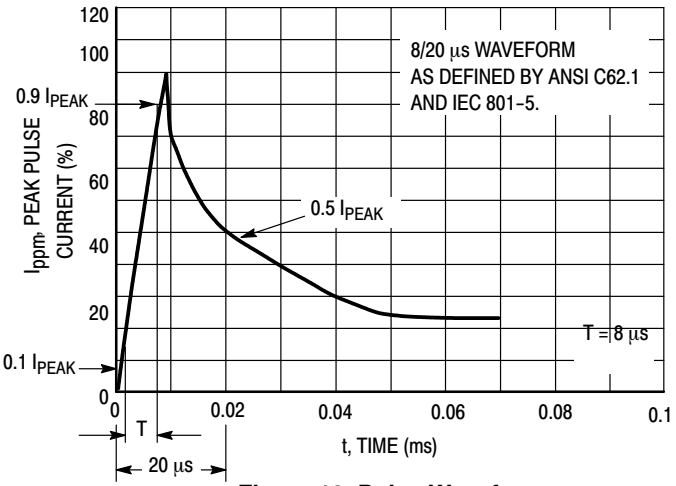

Figure 10. Pulse Waveform