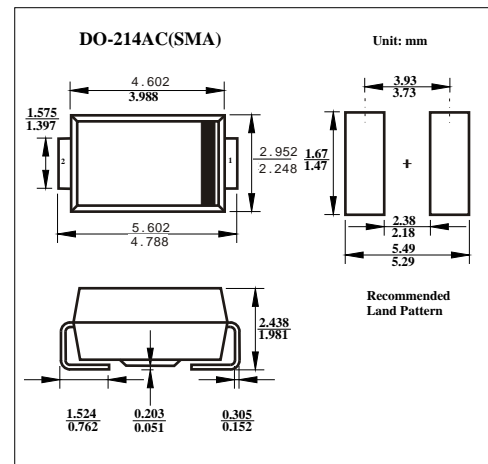


1.5 Watt Plastic Surface Mount Zener Voltage Regulators 1SMA5913B Series

Features

- Standard Zener Breakdown Voltage Range- 3.3 V to 68 V
- ESD Rating of Class 3 (> 16 kV) per Human Body Model
- Flat Handling Surface for Accurate Placement
- Low Profile Package



Absolute Maximum Ratings $T_a = 25$

Parameter	Symbol	Rating	Unit
DC Power Dissipation @ $T_A = 25$	P_D	0.5	W
Derate above 25		4.0	mW/
Thermal Resistance, Junction-to-Ambient	R_{JA}	250	/W
Operating and Storage Temperature Range	T_J, T_{stg}	-65 to +150	

1SMA5913B Series

Electrical Characteristics (TA = 25 unless otherwise noted, VF = 1.5 V Max. @ IF = 200 mA for all types)

Device *1	Zener Voltage *2			Zener Impedance			Leakage Current		IZM	
	Vz (Volts)			@ IZT	ZZT @ IZT	Zzk @ Izk	IR @ VR			
	Min	Nom	Max	mA		mA	μA	Volts		mA(dc)
1SMA5913B	3.13	3.3	3.47	113.6	10	500	1.0	50	1.0	455
1SMA5914B	3.42	3.6	3.78	104.2	9.0	500	1.0	35.5	1.0	417
1SMA5915B	3.70	3.9	4.10	96.1	7.5	500	1.0	12.5	1.0	385
1SMA5916B	4.08	4.3	4.52	87.2	6.0	500	1.0	2.5	1.0	349
1SMA5917B	4.46	4.7	4.94	79.8	5.0	500	1.0	2.5	1.5	319
1SMA5918B	4.84	5.1	5.36	73.5	4.0	350	1.0	2.5	2.0	294
1SMA5919B	5.32	5.6	5.88	66.9	2.0	250	1.0	2.5	3.0	268
1SMA5920B	5.89	6.2	6.51	60.5	2.0	200	1.0	2.5	4.0	242
1SMA5921B	6.46	6.8	7.14	55.1	2.5	200	1.0	2.5	5.2	221
1SMA5922B	7.12	7.5	7.88	50	3.0	400	0.5	2.5	6.0	200
1SMA5923B	7.79	8.2	8.61	45.7	3.5	400	0.5	2.5	6.5	183
1SMA5924B	8.64	9.1	9.56	41.2	4.0	500	0.5	2.5	7.0	165
1SMA5925B	9.5	10	10.5	37.5	4.5	500	0.25	2.5	8.0	150
1SMA5926B	10.45	11	11.55	34.1	5.5	550	0.25	0.5	8.4	136
1SMA5927B	11.4	12	12.6	31.2	6.5	550	0.25	0.5	9.1	125
1SMA5928B	12.35	13	13.65	28.8	7.0	550	0.25	0.5	9.9	115
1SMA5929B	14.25	15	15.75	25	9.0	600	0.25	0.5	11.4	100
1SMA5930B	15.2	16	16.8	23.4	10	600	0.25	0.5	12.2	94
1SMA5931B	17.1	18	18.9	20.8	12	650	0.25	0.5	13.7	83
1SMA5932B	19	20	21	18.7	14	650	0.25	0.5	15.2	75
1SMA5933B	20.9	22	23.1	17	17.5	650	0.25	0.5	16.7	68
1SMA5934B	22.8	24	25.2	15.6	19	700	0.25	0.5	18.2	63
1SMA5935B	25.65	27	28.35	13.9	23	700	0.25	0.5	20.6	56
1SMA5936B	28.5	30	31.5	12.5	26	750	0.25	0.5	22.8	50
1SMA5937B	31.35	33	34.65	11.4	33	800	0.25	0.5	25.1	45
1SMA5938B	34.2	36	37.8	10.4	38	850	0.25	0.5	27.4	42
1SMA5939B	37.05	39	40.95	9.6	45	900	0.25	0.5	29.7	38
1SMA5940B	40.85	43	45.15	8.7	53	950	0.25	0.5	32.7	35
1SMA5941B	44.65	47	49.35	8.0	67	1000	0.25	0.5	35.8	32
1SMA5942B	48.45	51	53.55	7.3	70	1100	0.25	0.5	38.8	29
1SMA5943B	53.2	56	58.8	6.7	86	1300	0.25	0.5	42.6	27
1SMA5944B	58.9	62	65.1	6.0	100	1500	0.25	0.5	47.1	24
1SMA5945B	64.6	68	71.4	5.5	120	1700	0.25	0.5	51.7	22

*1 Tolerance and Voltage Regulation Designation ? The type number listed indicates a tolerance of $\pm 5\%$.

*2 Vz limits are to be guaranteed at thermal equilibrium.

1SMA5913B Series

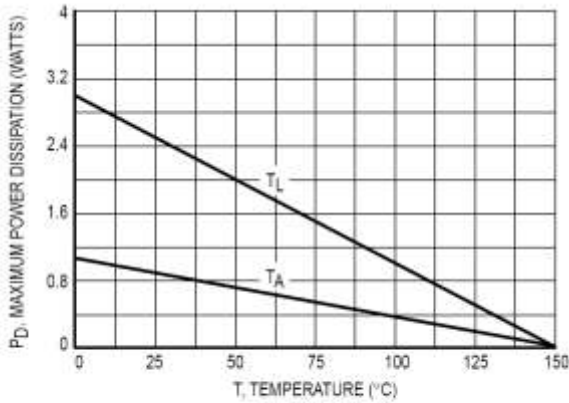


Figure 1. Steady State Power Derating

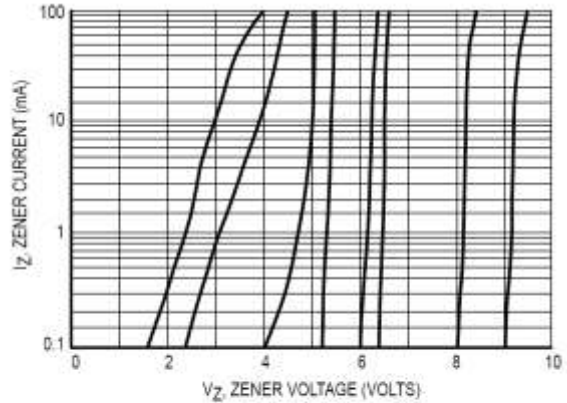


Figure 2. V_Z – 3.3 thru 10 Volts

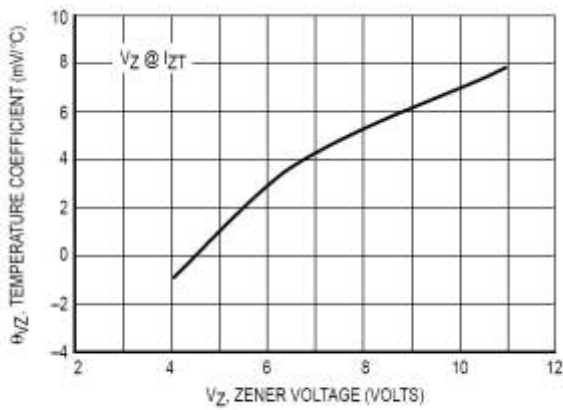


Figure 3. Zener Voltage – 3.3 to 12 Volts

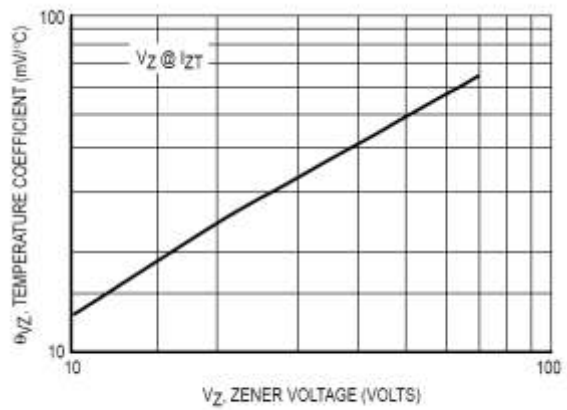


Figure 4. Zener Voltage – 14 to 68 Volts

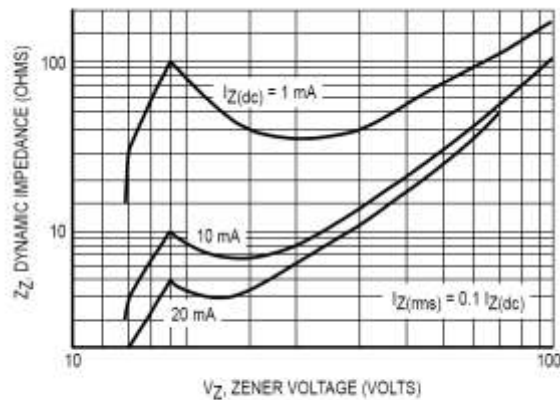


Figure 5. Effect of Zener Voltage

1SMA5913B Series

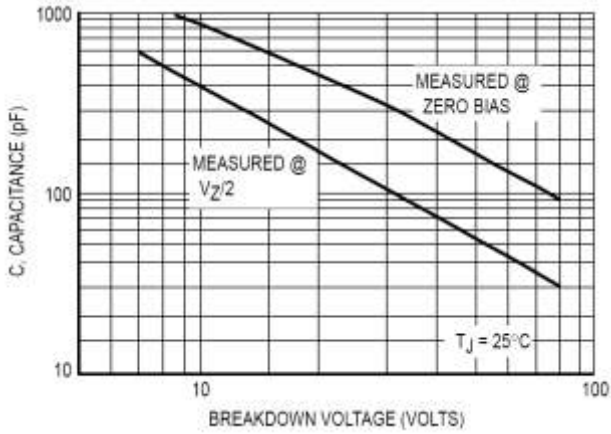


Figure 6. Capacitance Curve

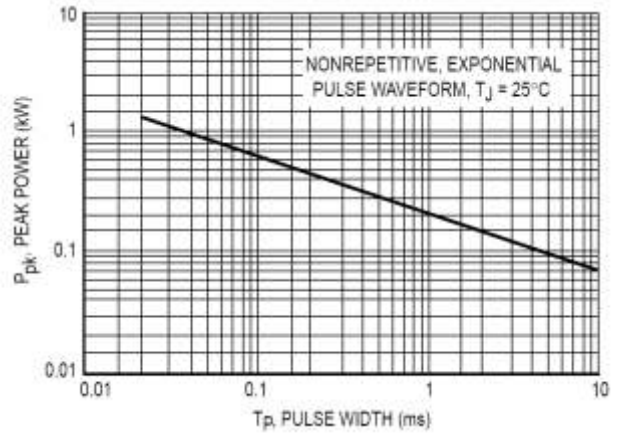


Figure 7. Typical Pulse Rating Curve

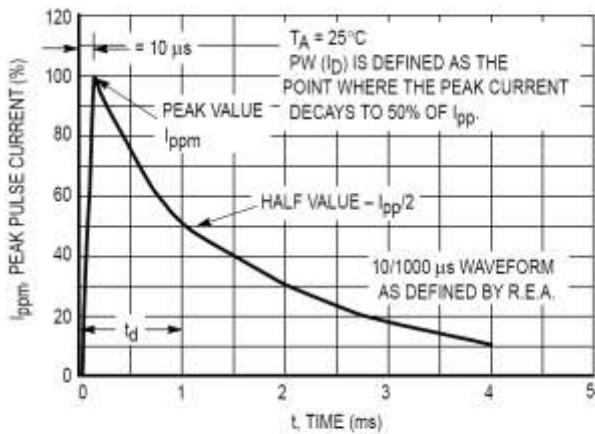


Figure 8. Pulse Waveform

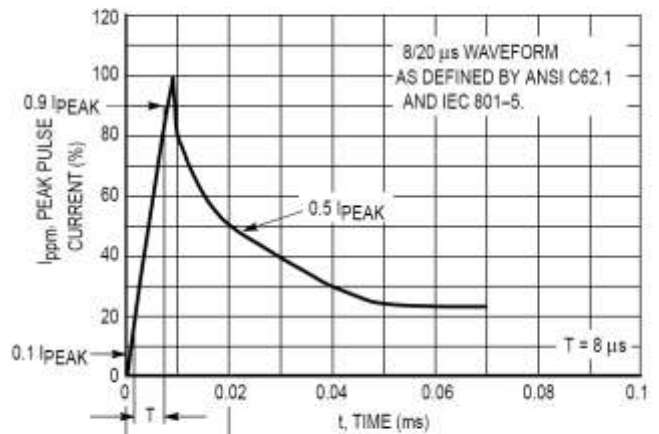


Figure 9. Pulse Waveform