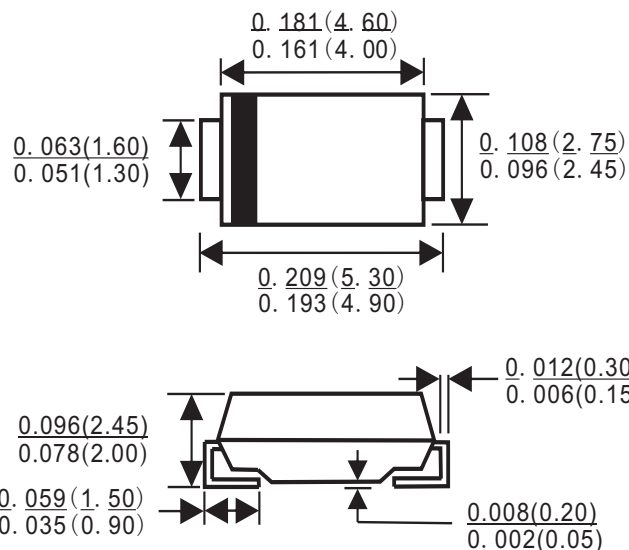




V_Z : 3.3 - 240 Volts

P_D : 1.5 Watts

SMA/DO-214AC



Features

- ✧ Complete Voltage Range 3.3 to 240 Volts
- ✧ High peak reverse power dissipation
- ✧ High reliability
- ✧ Low leakage current

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 : 0.093 gram

Dimensions in inches and(millimeters)

MAXIMUM RATINGS

Rating at 25 °C ambient temperature unless otherwise specified

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	T _s	- 65 to + 150	°C
Thermal Resistance, Junction-to-Lead (Note2)	R _{θ JL}	50	°C/W
Thermal Resistance, Junction-to-Ambient(Note3)	R _{θ JA}	250	°C/W

Note :

- (1) T_L = Lead temperature at 5.0 mm² (0.013 mm thick) copper land areas.
- (2) 1 in square copper pad,FR-4 board.
- (3) FR-4 Board,using recommended footprint.



ELECTRICAL CHARACTERISTICS

Rating at = 25 °C ambient temperature unless otherwise specified

Type	Marking	Nominal Zener Voltage		Maximum Zener Impedance			Maximum Reverse Leakage Current		Maximum DC Zener Current
		VZ @ IZT	IZT	ZZT @ IZT	ZZK @ IZK	IZK	IR @ VR		IZM
		(V)	(mA)	(Ω)	(Ω)	(mA)	(μ A)	(V)	(mA)
1SMA5913A	913A	3.3	113.6	10	500	1.0	100	1.0	454
1SMA5914A	914A	3.6	104.2	9.0	500	1.0	75	1.0	416
1SMA5915A	915A	3.9	96.1	7.5	500	1.0	25	1.0	384
1SMA5916A	916A	4.3	87.2	6.0	500	1.0	5.0	1.0	348
1SMA5917A	917A	4.7	79.8	5.0	500	1.0	5.0	1.5	319
1SMA5918A	918A	5.1	73.5	4.0	500	1.0	5.0	2.0	294
1SMA5919A	919A	5.6	66.9	2.0	250	1.0	5.0	3.0	267
1SMA5920A	920A	6.2	60.5	2.0	200	1.0	5.0	4.0	241
1SMA5921A	921A	6.8	55.1	2.5	200	1.0	5.0	5.2	220
1SMA5922A	922A	7.5	50.0	3.0	400	0.5	5.0	6.0	200
1SMA5923A	923A	8.2	45.7	3.5	400	0.5	5.0	6.5	182
1SMA5924A	924A	9.1	41.2	4.0	500	0.5	5.0	7.0	164
1SMA5925A	925A	10	37.5	4.5	500	0.25	5.0	8.0	150
1SMA5926A	926A	11	34.1	5.5	550	0.25	5.0	8.4	136
1SMA5927A	927A	12	31.2	6.5	550	0.25	0.0	9.1	125
1SMA5928A	928A	13	28.8	7.0	550	0.25	1.0	9.9	115
1SMA5929A	929A	15	25.0	9.0	600	0.25	1.0	11.4	100
1SMA5930A	930A	16	23.4	10	600	0.25	1.0	12.2	93
1SMA5931A	931A	18	20.8	12	650	0.25	1.0	13.7	83
1SMA5932A	932A	20	18.7	14	650	0.25	1.0	15.2	75
1SMA5933A	933A	22	17.0	17.5	650	0.25	1.0	16.7	68
1SMA5934A	934A	24	15.6	19	700	0.25	1.0	18.2	62
1SMA5935A	935A	27	13.9	23	700	0.25	1.0	20.6	55
1SMA5936A	936A	30	12.5	26	750	0.25	1.0	22.8	50
1SMA5937A	937A	33	11.4	33	800	0.25	1.0	25.1	45
1SMA5938A	938A	36	10.4	38	850	0.25	1.0	27.4	41
1SMA5939A	939A	39	9.6	45	900	0.25	1.0	29.7	38
1SMA5940A	940A	43	8.7	53	950	0.25	1.0	32.7	34
1SMA5941A	941A	47	8.0	67	1000	0.25	1.0	35.8	31
1SMA5942A	942A	51	7.3	70	1100	0.25	1.0	38.8	29
1SMA5943A	943A	56	6.7	86	1300	0.25	1.0	42.6	26
1SMA5944A	944A	62	6.0	100	1500	0.25	1.0	47.1	24
1SMA5945A	945A	68	5.5	120	1700	0.25	1.0	51.7	22
1SMA5946A	946A	75	5.0	140	2000	0.25	1.0	56.0	20
1SMA5947A	947A	82	4.6	160	2500	0.25	1.0	62.2	18
1SMA5948A	948A	91	4.1	200	3000	0.25	1.0	69.2	16
1SMA5949A	949A	100	3.7	250	3100	0.25	1.0	76.0	15
1SMA5950A	950A	110	3.4	300	4000	0.25	1.0	83.6	13
1SMA5951A	951A	120	3.1	380	4500	0.25	1.0	91.2	12
1SMA5952A	952A	130	2.9	450	5000	0.25	1.0	98.8	11
1SMA5953A	953A	150	2.5	600	6000	0.25	1.0	114.0	10
1SMA5954A	954A	160	2.3	700	6500	0.25	1.0	121.6	9.0
1SMA5955A	955A	180	2.1	900	7000	0.25	1.0	136.8	8.0
1SMA5956A	956A	200	1.9	1200	8000	0.25	1.0	152.0	7.0
1SMA5957A	957A	240	1.5	1600	9000	0.25	1.0	182.4	6.0

Note :

(1) Suffix " A " indicates $\pm 10\%$ tolerance, suffix " B " indicates $\pm 5.0\%$ tolerance.

RATING AND TYPICAL CHARACTERISTIC CURVES ($T_A = 25^\circ\text{C}$)

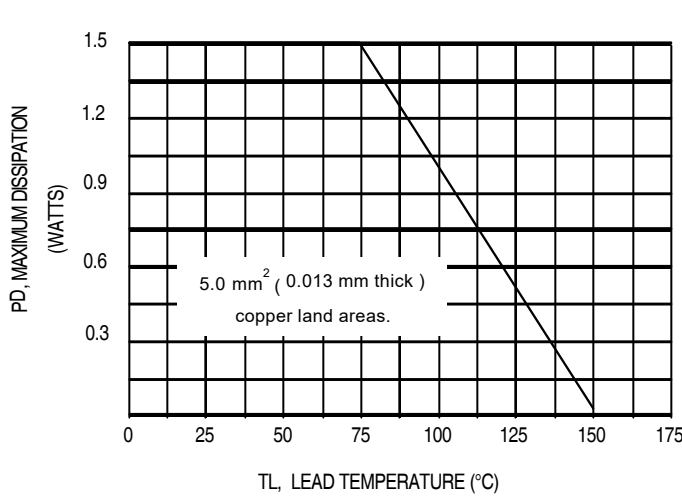


Figure 1. POWER TEMPERATURE DERATING CURVE

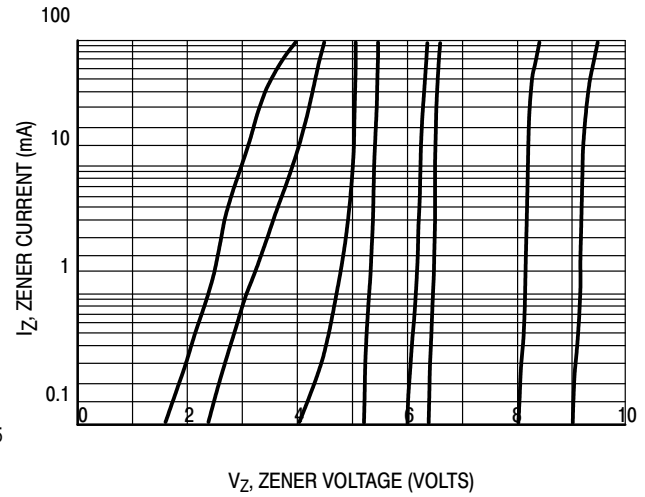


Figure 2. V_Z - 3.3 thru 10 Volts

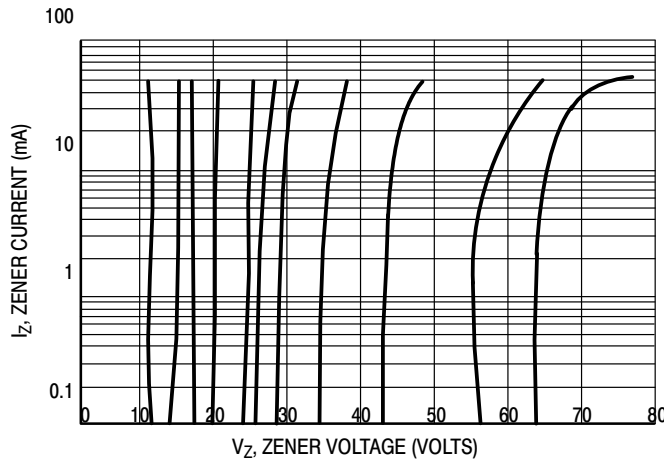


Figure 3. $V_Z = 12$ thru 68 Volts

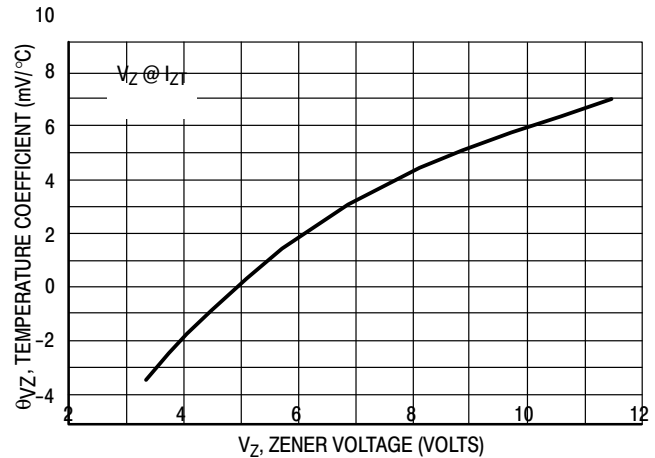


Figure 4. Zener Voltage - 3.3 to 12 Volts

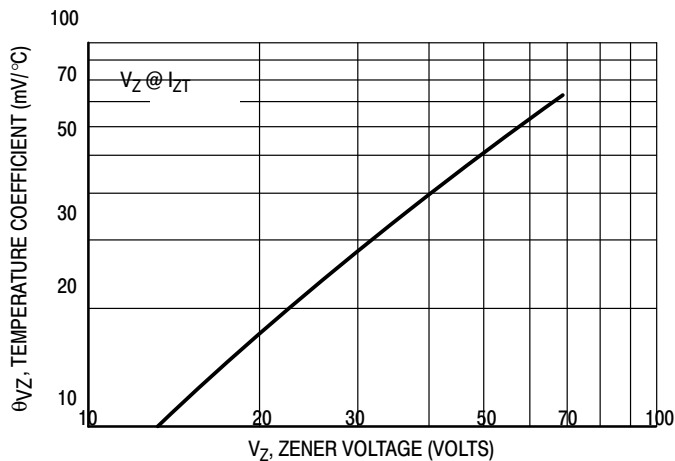


Figure 5. Zener Voltage - 12 to 68 Volts

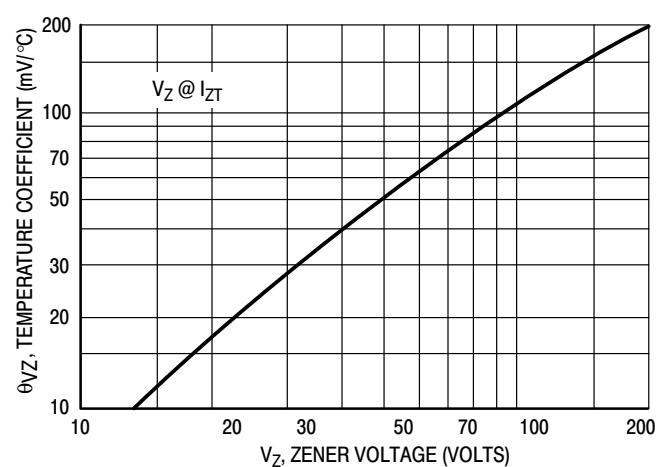


Figure 6. Zener Voltage - 14 To 200 Volts

RATING AND TYPICAL CHARACTERISTIC CURVES ($T_A = 25^\circ\text{C}$)

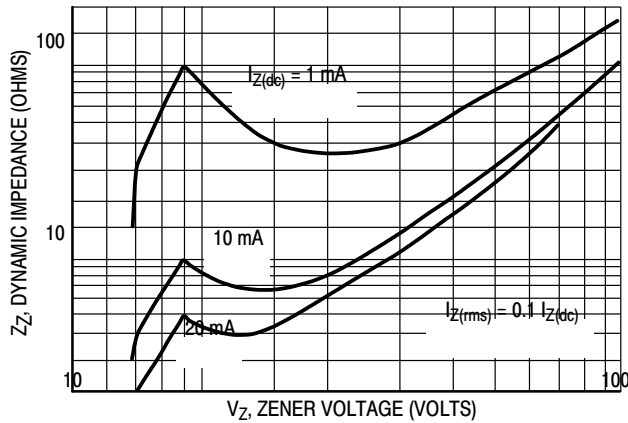


Figure 7. Effect of Zener Voltage

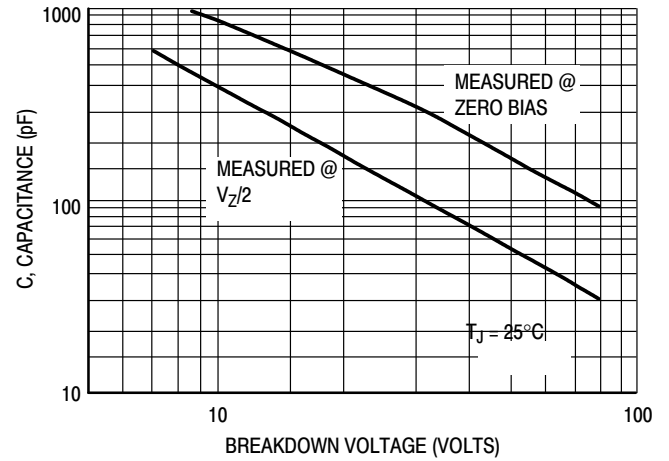


Figure 8. Capacitance Curve

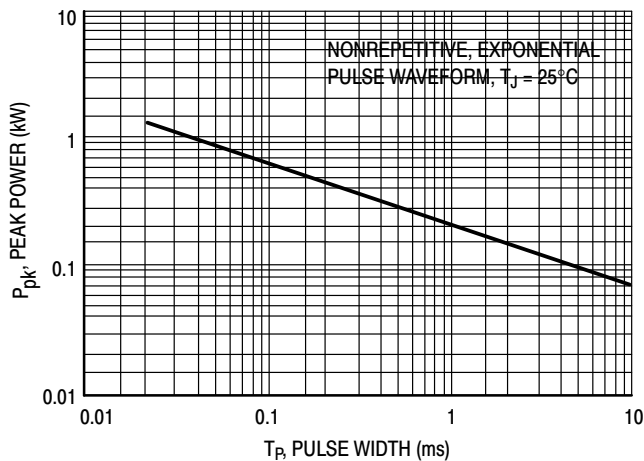


Figure 9. Typical Pulse Rating Curve

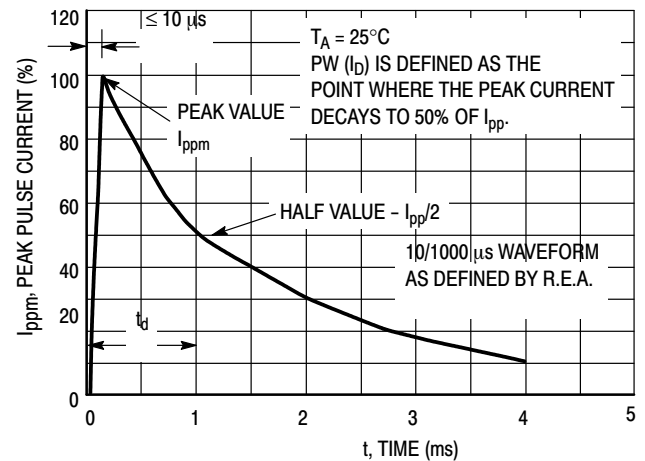


Figure 10. Pulse Waveform

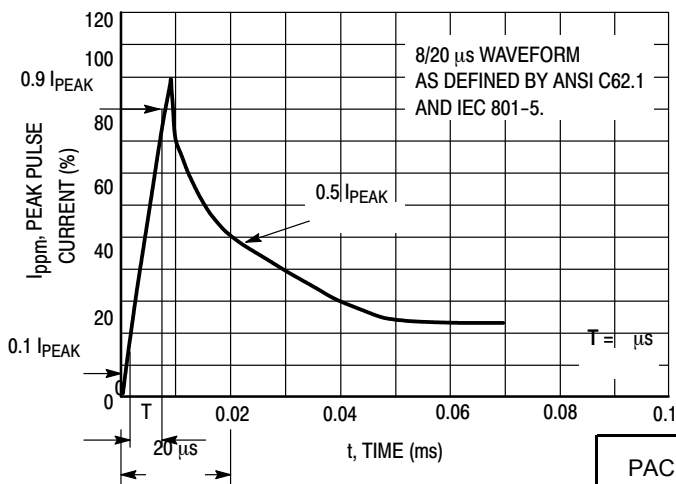


Figure 11. Pulse Waveform

PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG	CARTON NW/KG
SMA	5000/REEL	80000	36X30.6X31	12.00	11.00