

SMA5913A THRU SMA5956A

PLASTIC-ENCAPSULATE ZENER DIODE



VOLTAGE 3.3~200 Volts

POWER 1.5 W

DO-214AC(SMA)

FEATURES

- Glass passivated chip
- Built-in strain relief
- Low inductance
- High peak reverse power dissipation
- Low reverse leakage
- For use in stabilizing and clipping with high power rating
- RoHS compliant

MECHANICAL DATA

- **Case:** DO214AC Molded plastic
- **Lead:** Solderable per MIL-STD-750, method 2026
- **Epoxy:** UL 94V-0 rate flame retardant
- **Polarity:** Color band denotes cathode end
- **Mounting position:** Any

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Maximum Ratings & Thermal Characteristics (Ratings at 25°C ambient temperature unless otherwise specified.)

Parameter	Symbol	Value	Unit
DC Power dissipation at TL = 75 °C(1)	P_d	1.5	W
Maximum forward voltage at $I_f=200\text{mA}$	V_f	1.2	V
Junction temperature range	T_J, T_{STG}	-55 to +175	°C
Storage temperature range	T_J, T_{STG}	-55 to +175	°C

Notes: (1) TL=Lead temperature at 3/8" (9.5mm) from body



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Electrical Characteristics (Ratings at 25°C ambient temperature unless otherwise specified).

Device	Device Marking Code	Zener Voltage Range				Maximum Zener Impedance			Maximum Reverse Current		Test Current IZTC
		V _Z @I _{ZT}			I _{ZT}	Z _{zt} @I _{ZT}	Z _{zk} @I _{ZK}	I _{ZK}	IR	VR	
		Nom(V)	Min(V)	Max(V)	mA	Ω		mA	uA	V	
SMA5913A	913A	3.3	3.14	3.47	113.6	10.0	500.0	1.0	100.0	1.0	274.0
SMA5914A	914A	3.6	3.42	3.78	104.2	9.0	500.0	1.0	100.0	1.0	251.0
SMA5915A	915A	3.9	3.71	4.10	96.1	7.5	500.0	1.0	50.0	1.0	232.0
SMA5916A	916A	4.3	4.09	4.52	87.2	6.0	500.0	1.0	10.0	1.0	210.0
SMA5917A	917A	4.7	4.47	4.94	79.8	5.0	500.0	1.0	10.0	1.5	192.0
SMA5918A	918A	5.1	4.85	5.36	73.5	4.0	350.0	1.0	10.0	2.0	177.0
SMA5919A	919A	5.6	5.32	5.88	66.9	2.0	250.0	1.0	10.0	3.0	161.0
SMA5920A	920A	6.2	5.89	6.51	60.5	2.0	200.0	1.0	10.0	4.0	146.0
SMA5921A	921A	6.8	6.46	7.14	55.1	2.5	200.0	1.0	10.0	5.2	133.0
SMA5922A	922A	7.5	7.13	7.88	50.0	3.0	400.0	0.5	10.0	6.0	121.0
SMA5923A	923A	8.2	7.79	8.61	45.7	3.5	400.0	0.5	10.0	6.5	110.0
SMA5924A	924A	9.1	8.65	9.56	41.2	4.0	500.0	0.5	10.0	7.0	100.0
SMA5925A	925A	10.0	9.50	10.50	37.5	4.5	500.0	0.25	10.0	8.0	91.0
SMA5926A	926A	11.0	10.45	11.55	34.1	5.5	550.0	0.25	0.5	8.4	83.0
SMA5927A	927A	12.0	11.40	12.60	31.2	6.5	550.0	0.25	0.5	9.1	76.0
SMA5928A	928A	13.0	12.35	13.65	28.8	7.0	550.0	0.25	0.5	9.9	69.0
SMA5929A	929A	15.0	14.25	15.75	25.0	9.0	600.0	0.25	0.5	11.4	6.1
SMA5930A	930A	16.0	15.20	16.80	23.4	10.0	600.0	0.25	0.5	12.2	57.0
SMA5931A	931A	18.0	17.10	18.90	20.8	12.0	650.0	0.25	0.5	13.7	50.0
SMA5932A	932A	20.0	19.00	21.00	18.7	14.0	650.0	0.25	0.5	15.2	45.0
SMA5933A	933A	22.0	20.90	23.10	17.0	17.5	650.0	0.25	0.5	16.7	41.0
SMA5934A	934A	24.0	22.80	25.20	15.6	19.0	700.0	0.25	0.5	18.2	38.0
SMA5935A	935A	27.0	25.65	28.35	13.9	23.0	700.0	0.25	0.5	20.6	34.0
SMA5936A	936A	30.0	28.50	31.50	12.5	26.0	750.0	0.25	0.5	22.8	30.0
SMA5937A	937A	33.0	31.35	34.65	11.4	33.0	800.0	0.25	0.5	25.1	27.0
SMA5938A	938A	36.0	34.20	37.80	10.4	38.0	850.0	0.25	0.5	27.4	25.0
SMA5939A	939A	39.0	37.05	40.95	9.6	45.0	900.0	0.25	0.5	29.7	23.0
SMA5940A	940A	43.0	40.85	45.15	8.7	53.0	950.0	0.25	0.5	32.7	22.0
SMA5941A	941A	47.0	44.65	49.35	8.0	67.0	1000.0	0.25	0.5	35.8	19.0
SMA5942A	942A	51.0	48.45	53.55	7.3	70.0	1100.0	0.25	0.5	38.8	18.0
SMA5943A	943A	56.0	53.20	58.80	6.7	86.0	1300.0	0.25	0.5	42.6	16.0
SMA5944A	944A	62.0	58.90	65.10	6.0	100.0	1500.0	0.25	0.5	47.1	14.0
SMA5945A	945A	68.0	64.60	71.40	5.5	120.0	1700.0	0.25	0.5	51.7	13.0
SMA5946A	946A	75.0	71.25	78.75	5.0	140.0	2000.0	0.25	0.5	56.0	12.0
SMA5947A	947A	82.0	77.90	86.10	4.6	160.0	2500.0	0.25	0.5	62.2	11.0
SMA5948A	948A	91.0	86.45	95.55	4.1	200.0	3000.0	0.25	0.5	69.2	10.0
SMA5949A	949A	100.0	95.00	105.00	3.7	250.0	3100.0	0.25	0.5	76.0	9.0
SMA5950A	950A	110.0	104.50	115.50	3.4	300.0	4000.0	0.25	0.5	83.6	8.6
SMA5951A	951A	120.0	114.00	126.00	3.1	380.0	4500.0	0.25	0.5	91.2	7.8
SMA5952A	952A	130.0	123.50	136.50	2.9	450.0	5000.0	0.25	0.5	98.8	7.0
SMA5953A	953A	150.0	142.50	157.50	2.5	600.0	6000.0	0.25	0.5	114.0	6.4
SMA5954A	954A	160.0	152.00	168.00	2.3	700.0	6500.0	0.25	0.5	121.6	5.8
SMA5955A	955A	180.0	171.00	189.00	2.1	900.0	7000.0	0.25	0.5	136.8	5.2
SMA5956A	956A	200.0	190.00	210.00	1.9	1200.0	8000.0	0.25	0.5	152.0	4.7

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Ratings and Characteristics Curves (TA=25°C unless otherwise noted)

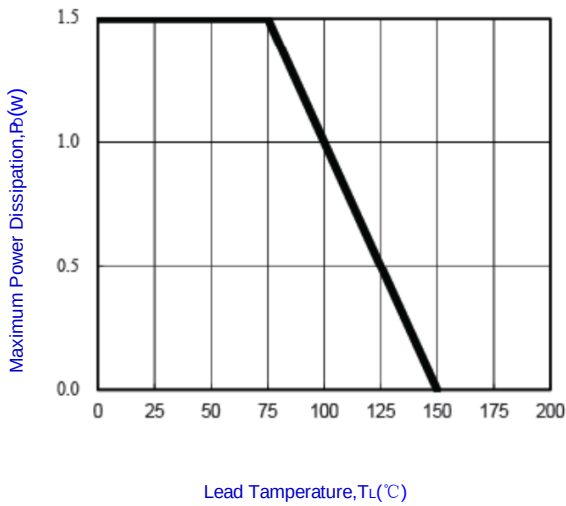


Fig.1-Power Temperature Derating Curve

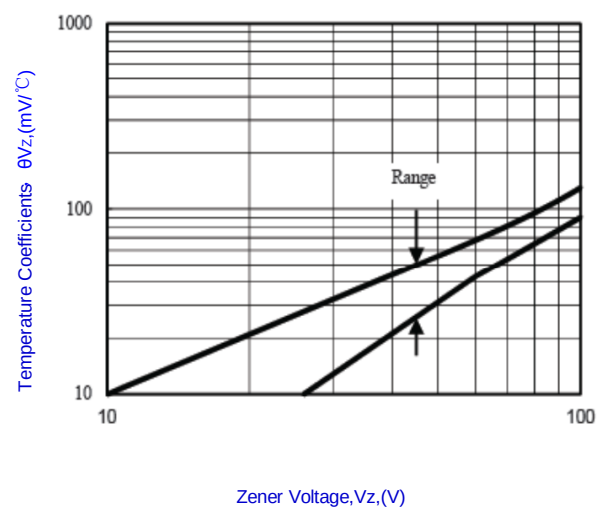


Fig.2- Temperature Coefficients v.s. Zener Voltage



Fig.3- Typical Thermal Resistance V.S. Lead Length

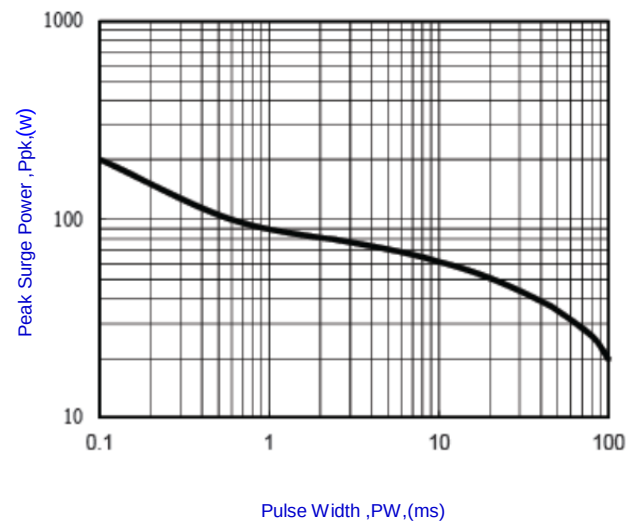


Fig.4- Maximum Surge Power

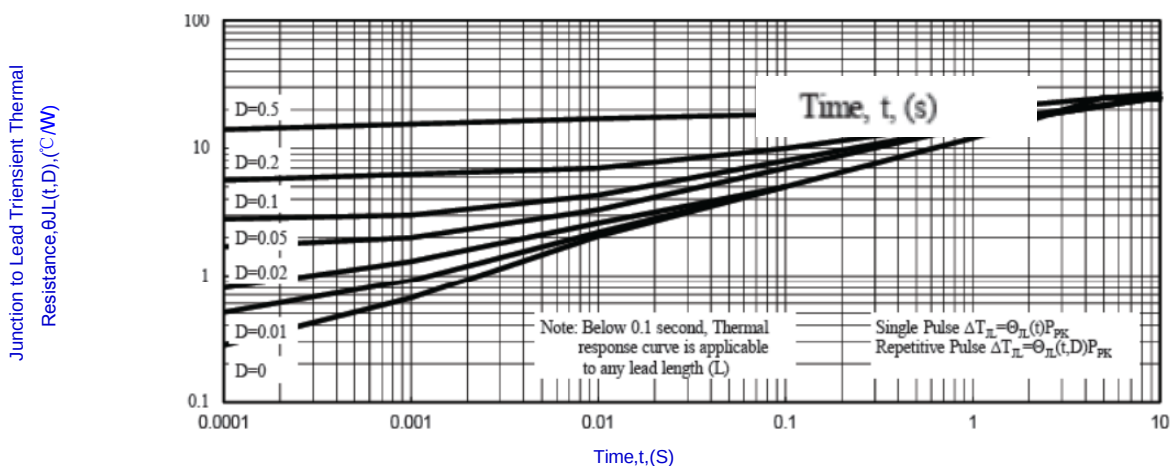


Fig.5-Typical Thermal Response L, Lead Length=3/8inch