



SMA5913B THRU SMA5956B

Surface Mount Zener Diode

Features

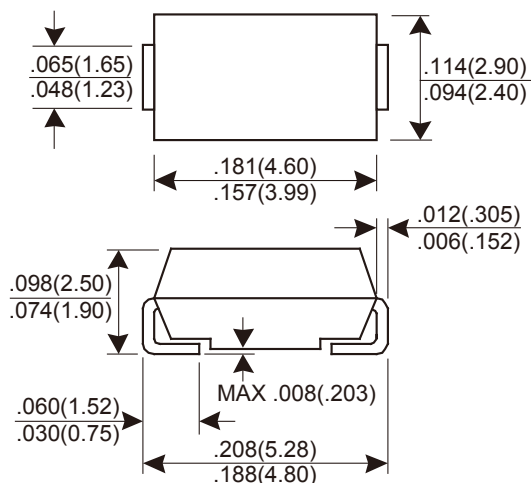
- ★ Ideally suited for automated assembly processes
- ★ Low leakage
- ★ Built-in strain relief
- ★ Low inductance
- ★ High peak reverse power dissipation
- ★ Zener voltage tolerance is $\pm 5\%$

Mechanical Data

- ★ Case: Molded plastic, SMA/DO-214AC
- ★ Epoxy: UL 94V-0 rate flame retardant
- ★ Terminals: Solderable per MIL-STD-750, method 2026
- ★ Polarity: Color band denotes cathode end
- ★ Mounting position: Any

Zener Voltage 3.3 to 200 V
Power Dissipation 1.5 Watts

SMA/DO-214AC



Dimensions in inches and (millimeters)

MAXIMUM RATINGS

$T_A = 25^\circ\text{C}$ unless otherwise noted

PARAMETER	SYMBOL	VALUE	UNIT
DC power dissipation at $T_L=75^\circ\text{C}$	P_D	1.5	W
Maximum forward voltage at $I_F=200\text{mA}$	V_F	1.2	V
Junction temperature range	T_J	-55 to +150	$^\circ\text{C}$
Storage temperature range	T_{STG}	-55 to +150	$^\circ\text{C}$

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Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted)

Part Number	Device Marking Code	Zener Voltage $V_Z@I_{ZT}$			Maximum Zener Impedance			Maximum Reverse Leakage Current $I_R@V_R$		Maximum DC Zener Current I_{ZM}
		Min (V)	Max (V)	I_{ZT} (mA)	$Z_{ZT}@I_{ZT}$ (Ω)	$Z_{ZK}@I_{ZK}$ (Ω)	I_{ZK} (mA)	I_R (μA)	V_R (V)	
SMA5913B	A5913B	3.14	3.47	113.6	10	500	1	100	1.0	274
SMA5914B	A5914B	3.42	3.78	104.2	9	500	1	100	1.0	251
SMA5915B	A5915B	3.71	4.10	96.1	7.5	500	1	50	1.0	232
SMA5916B	A5916B	4.09	4.52	87.2	6	500	1	10	1.0	210
SMA5917B	A5917B	4.47	4.94	79.8	5	500	1	10	1.5	192
SMA5918B	A5918B	4.85	5.36	73.5	4	350	1	10	2.0	177
SMA5919B	A5919B	5.32	5.88	66.9	2	250	1	10	3.0	161
SMA5920B	A5920B	5.89	6.51	60.5	2	200	1	10	4.0	146
SMA5921B	A5921B	6.46	7.14	55.1	2.5	200	1	10	5.2	133
SMA5922B	A5922B	7.13	7.88	50.0	3	400	0.5	10	6.0	121
SMA5923B	A5923B	7.79	8.61	45.7	3.5	400	0.5	10	6.5	110
SMA5924B	A5924B	8.65	9.56	41.2	4	500	0.5	10	7.0	100
SMA5925B	A5925B	9.50	10.50	37.5	4.5	500	0.25	10	8.0	91
SMA5926B	A5926B	10.45	11.55	34.1	5.5	550	0.25	0.5	8.4	83
SMA5927B	A5927B	11.40	12.60	31.2	6.5	550	0.25	0.5	9.1	76
SMA5928B	A5928B	12.35	13.65	28.8	7	550	0.25	0.5	9.9	69
SMA5929B	A5929B	14.25	15.75	25.0	9	600	0.25	0.5	11.4	61
SMA5930B	A5930B	15.20	16.80	23.4	10	600	0.25	0.5	12.2	57
SMA5931B	A5931B	17.10	18.90	20.8	12	650	0.25	0.5	13.7	50
SMA5932B	A5932B	19.00	21.00	18.7	14	650	0.25	0.5	15.2	45
SMA5933B	A5933B	20.90	23.10	17.0	17.5	650	0.25	0.5	16.7	41
SMA5934B	A5934B	22.80	25.20	15.6	19	700	0.25	0.5	18.2	38
SMA5935B	A5935B	25.65	28.35	13.9	23	700	0.25	0.5	20.6	34
SMA5936B	A5936B	28.50	31.50	12.5	26	750	0.25	0.5	22.8	30
SMA5937B	A5937B	31.35	34.65	11.4	33	800	0.25	0.5	25.1	27
SMA5938B	A5938B	34.20	37.80	10.4	38	850	0.25	0.5	27.4	25
SMA5939B	A5939B	37.05	40.95	9.6	45	900	0.25	0.5	29.7	23
SMA5940B	A5940B	40.85	45.15	8.7	53	950	0.25	0.5	32.7	22
SMA5941B	A5941B	44.65	49.35	8.0	67	1000	0.25	0.5	35.8	19
SMA5942B	A5942B	48.45	53.55	7.3	70	1100	0.25	0.5	38.8	18
SMA5943B	A5943B	53.20	58.80	6.7	86	1300	0.25	0.5	42.6	16
SMA5944B	A5944B	58.90	65.10	6.0	100	1500	0.25	0.5	47.1	14
SMA5945B	A5945B	64.60	71.40	5.5	120	1700	0.25	0.5	51.7	13
SMA5946B	A5946B	71.25	78.75	5.0	140	2000	0.25	0.5	56.0	12
SMA5947B	A5947B	77.90	86.10	4.6	160	2500	0.25	0.5	62.2	11
SMA5948B	A5948B	86.45	95.55	4.1	200	3000	0.25	0.5	69.2	10
SMA5949B	A5949B	95.00	105.0	3.7	250	3100	0.25	0.5	76.0	9
SMA5950B	A5950B	104.5	115.5	3.4	300	4000	0.25	0.5	83.6	8.6
SMA5951B	A5951B	114.0	126.0	3.1	380	4500	0.25	0.5	91.2	7.8
SMA5952B	A5952B	123.5	136.5	2.9	450	5000	0.25	0.5	98.8	7
SMA5953B	A5953B	142.5	157.5	2.5	600	6000	0.25	0.5	114.0	6.4
SMA5954B	A5954B	152.0	168.0	2.3	700	6500	0.25	0.5	121.6	5.8
SMA5955B	A5955B	171.0	189.0	2.1	900	7000	0.25	0.5	136.8	5.2
SMA5956B	A5956B	190.0	210.0	1.9	1200	8000	0.25	0.5	152.0	4.7

The reverse surge current is a non-repetitive, 8.3ms pulse width square wave or equivalent sine-wave superimposed on I_{ZT} per JEDEC method.

RATINGS AND CHARACTERISTIC CURVES SMA5913B THRU SMA5956B

Fig.1 - Power Derating Curve

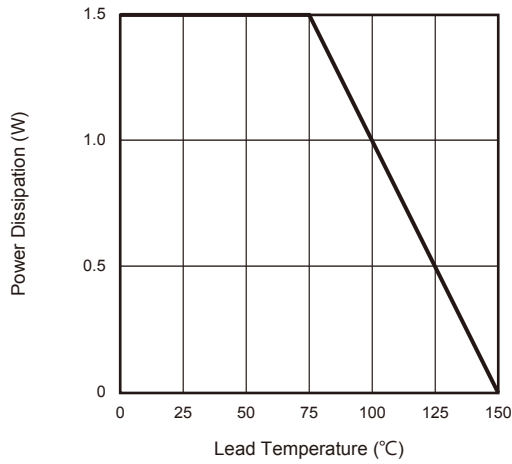


Fig.2 - Temperature Coefficients

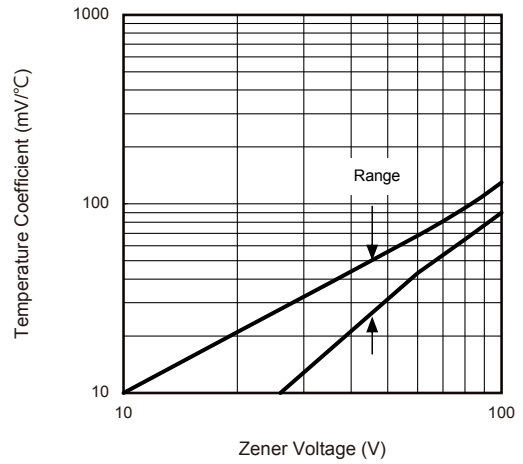


Fig.3 - Pulse Waveform

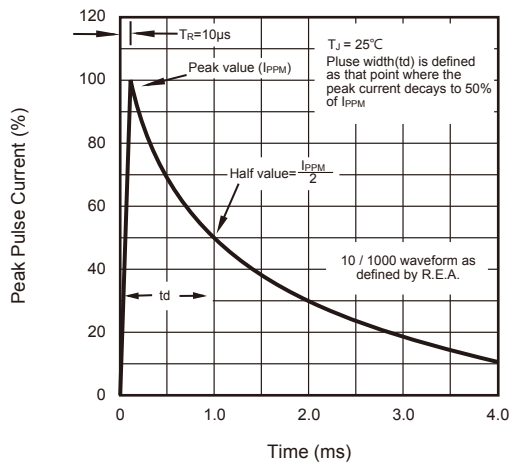


Fig.4 - Maximum Surge Power

