Zibo Seno Electronic Engineering Co., Ltd.

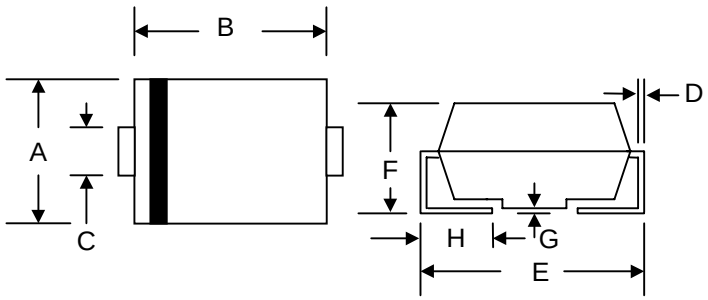
淄博圣诺

1SMB5913A - 1SMB5957A

3W SURFACE MOUNT ZENER DIODE

Features

- Complete Voltage Range 3.3 to 200 Volts
- High peak reverse power dissipation
- High reliability
- Low leakage current



SMB/DO-214AA		
Dim	**Min**	**Max**
A	3.30	3.94
B	4.06	4.70
C	1.91	2.21
D	0.15	0.31
E	5.00	5.59
F	2.00	2.62
G	0.051	0.203
H	0.76	1.52
All Dimensions in mm		

Mechanical Data

- Case:SMB/DO-214AA
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Approx. Weight: 0.093 grams
- Epoxy : UL94V-O rate flame retardant
- **Lead Free: For RoHS / Lead Free Version**

Maximum Ratings @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 2)	P_d	3	W
Forward Voltage @ I_F = 200mA	V_F	1.5	V
Thermal Resistance, Junction to Ambient Air (Note 2)	$R_{\theta JA}$	100	K/W
Operating and Storage Temperature Range	T_j, T_{STG}	-55 to +150	°C

Notes: 1. Tested with Pulses, tp = 20ms.
2. Valid provided that Electrodes are kept at Ambient Temperature.

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Electrical Characteristics @ T_A = 25°C unless otherwise specified

Part Number	Zener voltage		Test current	Dynamic impedance	Knee current	Knee impedance	Reverse current	Reverse voltage	Max. DC current
	VZ /V		IZT	ZZT	IZK	ZZK	IR(Max.)	VR	IZM
	Vz(MIN)	Vz(MAX)	m A	Ω	m A	Ω	μAdc	V	m A
1SMB5913A	3.135	3.465	113.6	10.0	1	500	100	1.0	454
1SMB5914 A	3.420	3.780	104.2	9.0	1	500	75	1.0	416
1SMB5915 A	3.705	4.095	96.1	7.5	1	500	25	1.0	384
1SMB5916 A	4.085	4.515	87.2	6.0	1	500	5	1.0	348
1SMB5917 A	4.465	4.935	79.8	5.0	1	500	5	1.5	319
1SMB5918 A	4.845	5.355	73.5	4.0	1	350	5	2.0	294
1SMB5919 A	5.320	5.880	66.9	2.0	1	250	5	3.0	267
1SMB5920 A	5.890	6.510	60.5	2.0	1	200	5	4.0	241
1SMB5921 A	6.460	7.140	55.1	2.5	1	200	5	5.2	220
1SMB5922 A	7.125	7.875	50.0	3.0	0.5	400	5	6.0	200
1SMB5923 A	7.790	8.610	45.7	3.5	0.5	400	5	6.5	182
1SMB5924 A	8.645	9.555	41.2	4.0	0.5	500	5	7.0	164
1SMB5925 A	9.500	10.500	37.5	4.5	0.25	500	5	8.0	150
1SMB5926 A	10.450	11.550	34.1	5.5	0.25	550	1	8.4	136
1SMB5927 A	11.400	12.600	31.2	6.5	0.25	550	1	9.1	125
1SMB5928 A	12.350	13.650	28.8	7.0	0.25	550	1	9.9	115
1SMB5929 A	14.250	15.750	25.0	9.0	0.25	600	1	11.4	100
1SMB5930 A	15.200	16.800	23.4	10.0	0.25	600	1	12.2	93
1SMB5931 A	17.100	18.900	20.8	12.0	0.25	650	1	13.7	83
1SMB5932 A	19.000	21.000	18.7	14.0	0.25	650	1	15.2	75
1SMB5933 A	20.900	23.100	17.0	17.5	0.25	650	1	16.7	68
1SMB5934 A	22.800	25.200	15.6	19.0	0.25	700	1	18.2	62
1SMB5935 A	25.650	28.350	13.9	23.0	0.25	700	1	20.6	55
1SMB5936 A	28.500	31.500	12.5	28.0	0.25	750	1	22.8	50
1SMB5937 A	31.350	34.650	11.4	33.0	0.25	800	1	25.1	45

Notes: 1. Tested with pulses t_p = 20 ms.
2. Valid provided that electrodes are kept at ambient temperature.

Electrical Characteristics @ T_A = 25°C unless otherwise specified

Part Number	Zener voltage		Test current	Dynamic impedance	Knee current	Knee impedance	Reverse current	Reverse voltage	Max. DC current
	VZ /V		IZT	ZZT	IZK	ZZK	IR(Max.)	VR	IZM
	Vz(MIN)	Vz(MAX)	m A	Ω	m A	Ω	μAdc	V	m A
1SMB5938 A	34.200	37.800	10.4	38.0	0.25	850	1	27.4	41
1SMB5939 A	37.050	40.950	9.6	45.0	0.25	900	1	29.7	38
1SMB5940 A	40.850	45.150	8.7	53.0	0.25	950	1	32.7	34
1SMB5941 A	44.650	49.350	8.0	67.0	0.25	1000	1	35.8	31
1SMB5942 A	48.450	53.550	7.3	70.0	0.25	1100	1	38.8	29
1SMB5943 A	53.200	58.800	6.7	86.0	0.25	1300	1	42.6	26
1SMB5944 A	58.900	65.100	6.0	100.0	0.25	1500	1	47.1	24
1SMB5945 A	64.600	71.400	5.5	120.0	0.25	1700	1	51.7	22
1SMB5946 A	71.250	78.8	5.0	140.0	0.25	2000	1	56.0	20
1SMB5947 A	77.900	86.1	4.6	160.0	0.25	2500	1	62.2	18
1SMB5948 A	86.450	95.6	4.1	200.0	0.25	3000	1	69.2	16
1SMB5949 A	95.000	105.0	3.7	250.0	0.25	3100	1	76.0	15
1SMB5950 A	104.500	115.5	3.4	300.0	0.25	4000	1	83.6	13
1SMB5951 A	114.000	126.0	3.1	380.0	0.25	4500	1	91.2	12
1SMB5952 A	123.500	136.5	2.9	450.0	0.25	5000	1	98.8	11
1SMB5953 A	142.500	157.5	2.5	600.0	0.25	6000	1	114.0	10
1SMB5954 A	152.000	168.0	2.3	700.0	0.25	6500	1	121.6	9
1SMB5955 A	171.000	189.0	2.1	900.0	0.25	7000	1	136.8	8
1SMB5956 A	190.000	210.0	1.9	1200.0	0.25	8000	1	152.0	7

Notes: 1. Tested with pulses t_p = 20 ms.
2. Valid provided that electrodes are kept at ambient temperature.

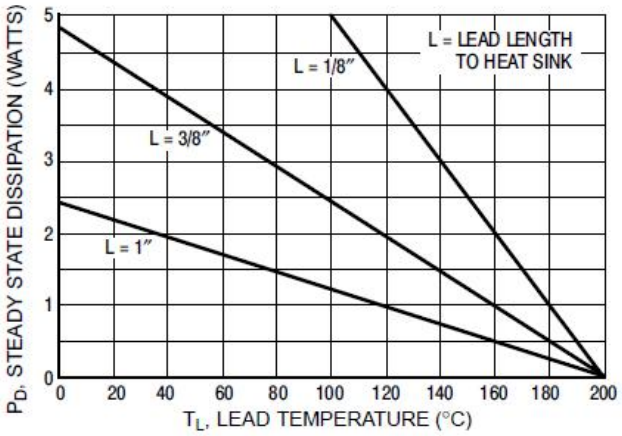

Figure 1. Power Temperature Derating Curve

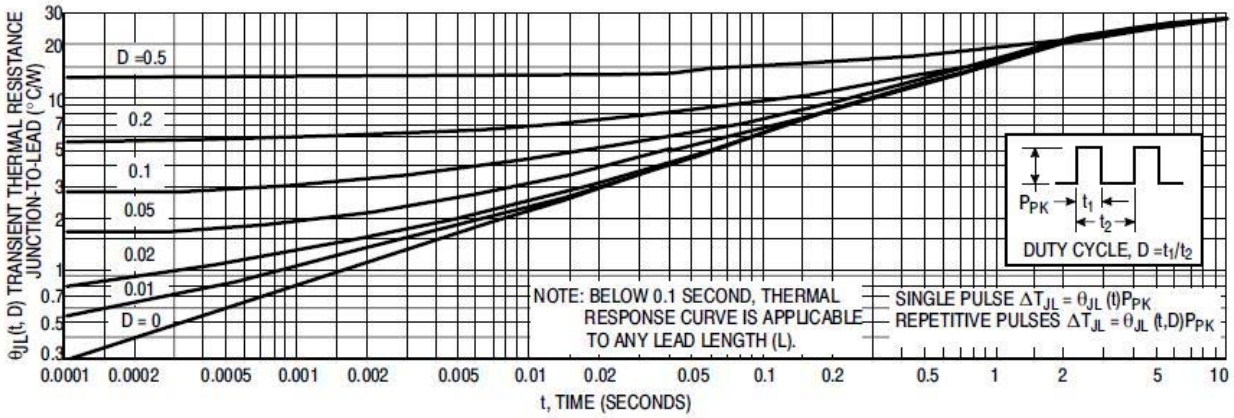

Figure 2. Typical Thermal Response L, Lead Length = 3/8 Inch

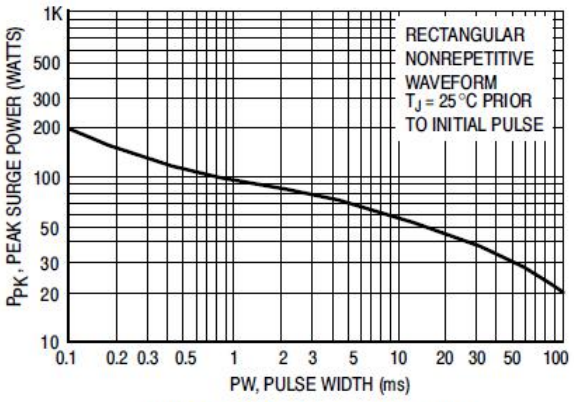

Figure 3. Maximum Surge Power

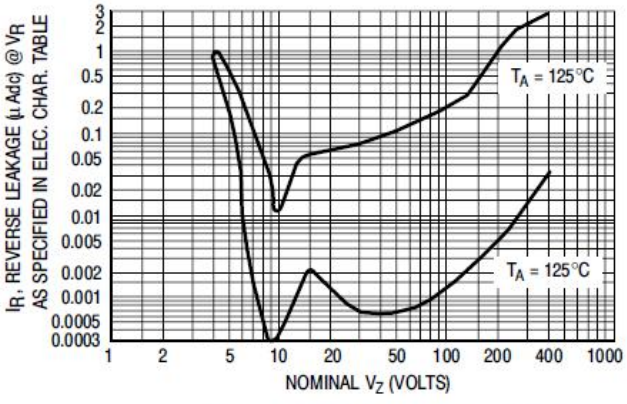

Figure 4. Typical Reverse Leakage