

# 1SMA5913B~1SMA5957B

Rev. B Mar.-2021

## 描述 / Descriptions

SMA 塑封封装，稳压二极管

Zener Diode in a SMA Plastic Package.

## 特征 / Features

总功耗：最大不超过 1.5W，齐纳反向电压宽：3.3~240V，小型塑料包装适合表面安装设计。无卤产品。

Total power dissipation: Max. 1.5W, Wide zener reverse voltage range 3.3V to 240V, Small plastic package suitable for surface mounted design. HF Product.

## 用途 / Applications

一般用途.

General purpose.

## 内部等效电路 / Equivalent Circuit

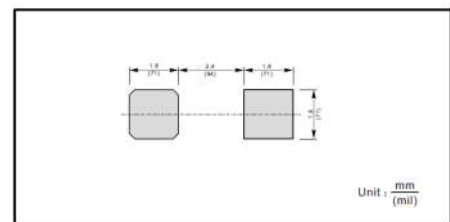


## 引脚排列 / Pinning



PIN	DESCRIPTION
1	Cathode
2	Anode

The recommended mounting pad size



## 印章代码 / Marking

见印章说明。See Marking Instructions.

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DATA SHEET

## 极限参数 / Absolute Maximum Ratings(Ta=25°C)

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
power dissipation at TL=75°C	P <sub>D</sub>	1.5	W
Forward Voltage at IF = 200 mA	V <sub>F</sub>	1.5	V
Junction to lead thermal resistance	R <sub>thJL</sub>	25	° C/W
Junction Temperature Range	T <sub>J</sub>	- 55 to + 150	° C
Storage Temperature Range	T <sub>STG</sub>	- 55 to + 150	° C

## 电性能参数 / Electrical Characteristics(Ta=25°C)

Type7 (note1)	Marking (note1)	Zener Voltage Range (note2)				Dynamic Impedance	Reverse Current		Admissible Zener Current I <sub>ZM</sub> (mA)
		V <sub>ZT</sub> (at I <sub>ZT</sub> )			at I <sub>ZT</sub>	Z <sub>ZT</sub> (at I <sub>ZT</sub> )	I <sub>R</sub>	at V <sub>R</sub>	
		Min (V)	Nom (V)	Max (V)	(mA)	Max (Ω)	Max(μA)	(V)	
1SMA5913B	913B	3.13	3.3	3.47	113.6	10	100	1	454
1SMA5914B	914B	3.42	3.6	3.78	104.2	9.0	75	1	416
1SMA5915B	915B	3.70	3.9	4.10	96.1	7.5	25	1	384
1SMA5916B	916B	4.08	4.3	4.52	87.2	6.0	5	1	348
1SMA5917B	917B	4.46	4.7	4.94	79.8	5.0	5	1.5	319
1SMA5918B	918B	4.84	5.1	5.36	73.5	4.0	5	2	294
1SMA5919B	919B	5.32	5.6	5.88	66.9	2.0	5	3	267
1SMA5920B	920B	5.89	6.2	6.51	60.5	2.0	5	4	241
1SMA5921B	921B	6.46	6.8	7.14	55	2.5	5	5.2	220
1SMA5922B	922B	7.12	7.5	7.88	50	3.0	5	6	200
1SMA5923B	923B	7.79	8.2	8.61	45.7	3.5	5	6.5	182
1SMA5924B	924B	8.60	9.1	9.56	41.2	4.0	5	7	164
1SMA5925B	925B	9.50	10	10.5	37.5	4.5	5	8	150
1SMA5926B	926B	10.4	11	11.6	34	5.5	1	8.4	136
1SMA5927B	927B	11.4	12	12.6	31.2	6.5	1	9	125
1SMA5928B	928B	12.35	13	14.1	28.8	7.0	1	9.9	115
1SMA5929B	929B	13.8	15	15.8	25	9.0	1	11.4	100
1SMA5930B	930B	15.2	16	16.8	23.4	10	1	12.2	93

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## 电性能参数 / Electrical Characteristics(Ta=25°C)

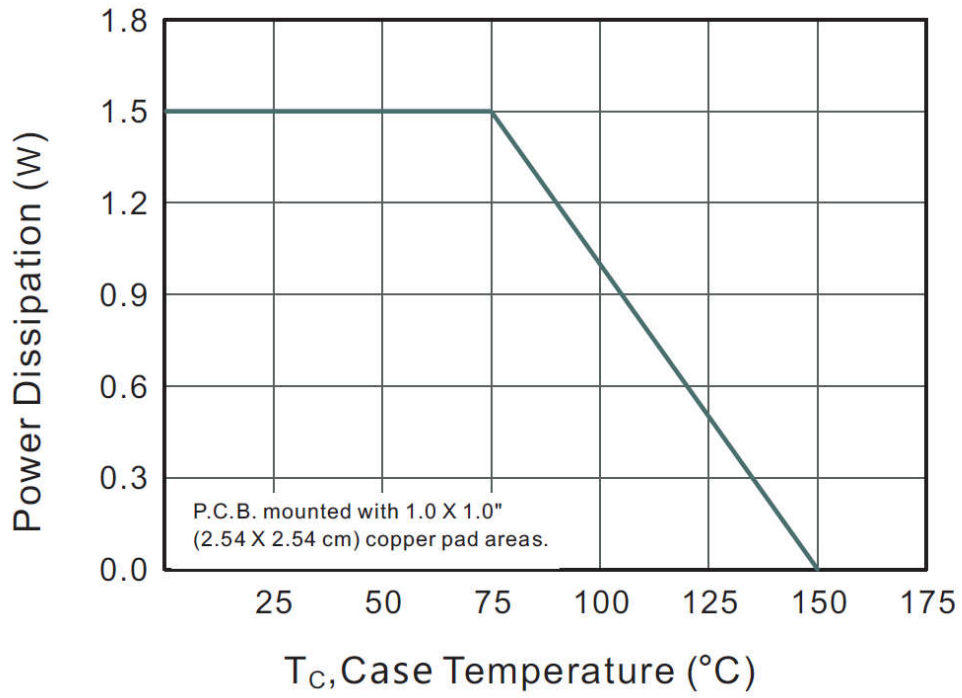
Type (note1)	Marking (note1)	Zener Voltage Range (note2)				Dynamic Impedance Z <sub>ZT</sub> (at I <sub>ZT</sub> )	Reverse Current		Admissible Zener Current I <sub>ZM</sub> (mA)
		V <sub>ZT</sub> (at I <sub>ZT</sub> )			at I <sub>ZT</sub>		I <sub>R</sub>	at V <sub>R</sub>	
		Min (V)	Nom (V)	Max (V)	(mA)	Max (Ω)	Max(μa)	(V)	
1SMA5931B	931B	16.8	18	19.2	21	12	1	13.7	83
1SMA5932B	932B	19.0	20	21.2	19	14	1	15.2	75
1SMA5933B	933B	20.8	22	23.3	17	18	1	16.7	68
1SMA5934B	934B	22.8	24	25.2	16	19	1	18.2	62
1SMA5935B	935B	25.3	27	28.9	14	23	1	20.6	55
1SMA5936B	936B	28.2	30	32.0	12.5	26	1	23	50
1SMA5937B	937B	31.3	33	34.9	11.4	33	1	25	45
1SMA5938B	938B	34.2	36	37.9	10.4	38	1	27	41
1SMA5939B	939B	37.2	39	41.5	9.6	45	1	30	38
1SMA5940B	940B	40.9	43	45.6	8.7	53	1	33	34
1SMA5941B	941B	44.9	47	49.8	8.0	67	1	36	31
1SMA5942B	942B	48.6	51	54.0	7.3	70	1	39	29
1SMA5943B	943B	53.6	56	58.8	6.7	86	1	42	26
1SMA5944B	944B	58.9	62	65.6	6.0	100	1	47	24
1SMA5945B	945B	64.6	68	71.7	5.5	120	1	52	22
1SMA5946B	946B	71.2	75	78.8	5.0	140	1	57	20
1SMA5947B	947B	77.9	82	87.0	4.6	160	1	62	18
1SMA5948B	948B	86.0	91	96.0	4.1	200	1	69	16
1SMA5949B	949B	95.0	100	105	3.7	250	1	76	15
1SMA5950B	950B	104	110	116	3.4	300	1	84	13
1SMA5951B	951B	114	120	127	3.1	380	1	91	12
1SMA5952B	952B	125	130	142	2.9	450	1	100	11
1SMA5953B	953B	140	150	157	2.5	600	1	114	10
1SMA5954B	954B	152	160	168	2.3	700	1	121.6	9
1SMA5955B	955B	168	180	189	2.1	900	1	136.8	8.0
1SMA5956B	956B	189	200	211	1.9	1200	1	152	7.0
1SMA5957B	957B	228	240	252	1.5	1600	1	182.4	6.0

1) Suffix "A" indicates ±10% tolerance, Suffix "B" indicates ±5% tolerance

2) V<sub>ZT</sub> is tested with pulses (20 ms)

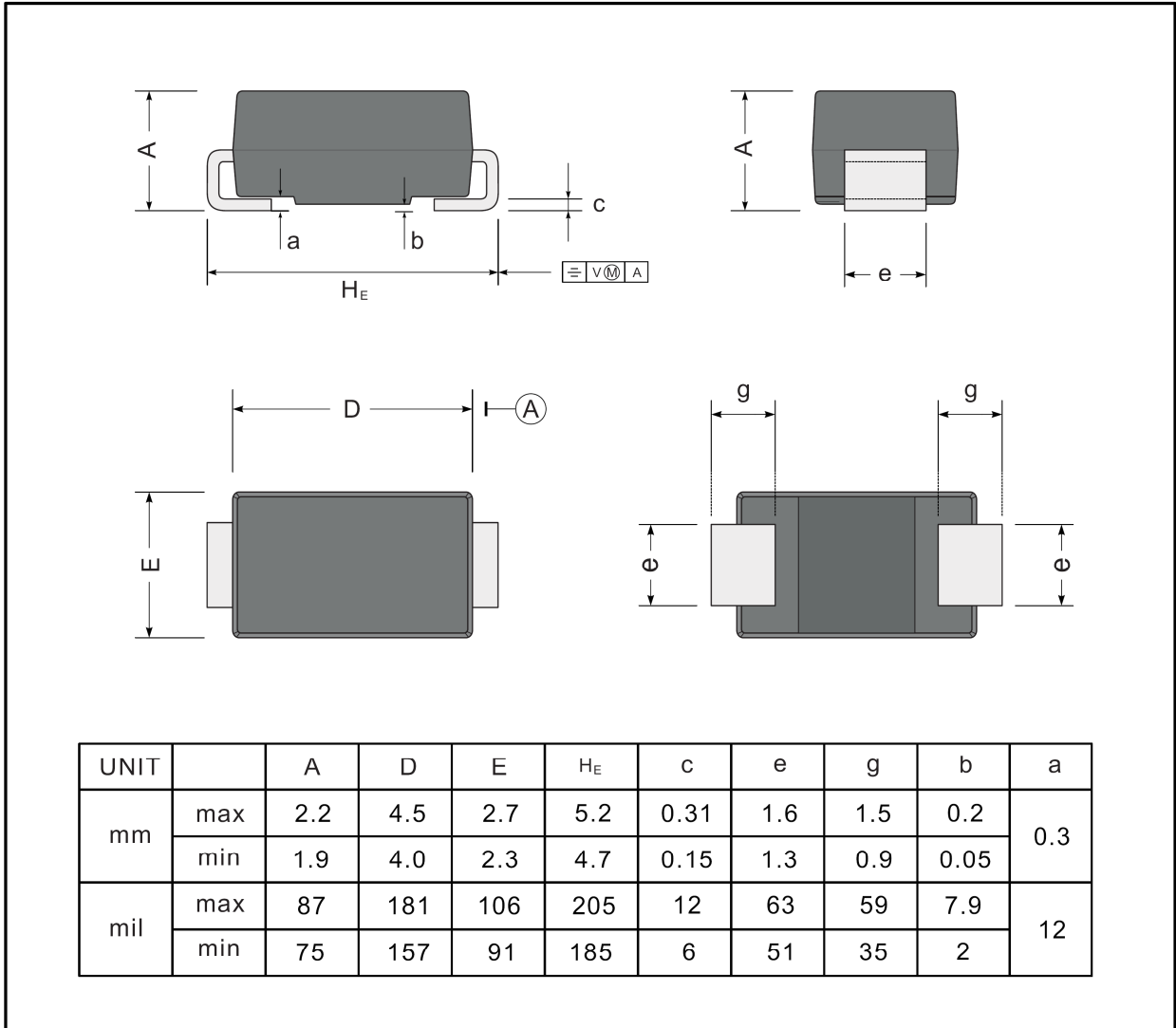
电参数曲线图 / Electrical Characteristic Curve

Fig.1 Maximum Continuous Power Derating



外形尺寸图 / Package Dimensions

SMA



印章说明 / Marking Instructions



说明：

913B : 为型号代码

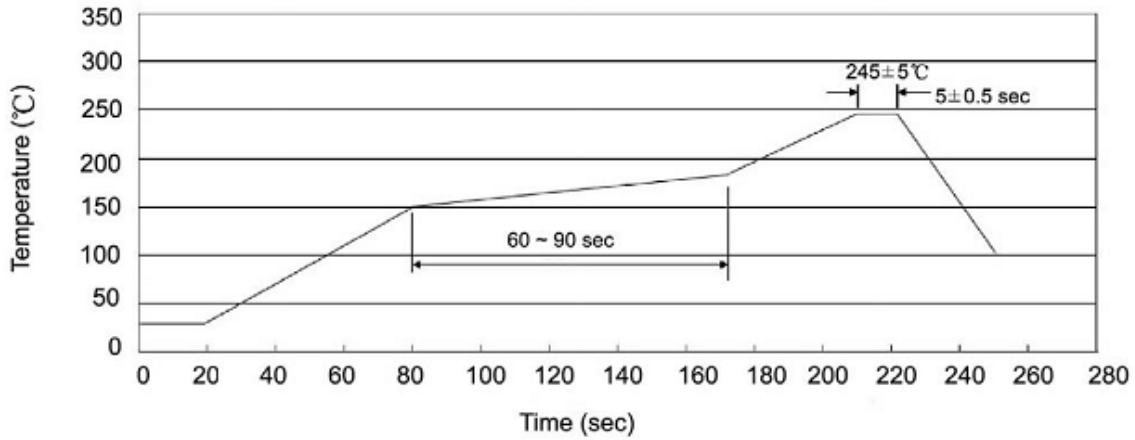
\*\*\*\*\* : 为生产批号追溯码，第 1 个\*为年月代码，后面 3 个\*为当月小批号代码

Note:

913B : Product Type Code

\*\*\*\*\* : Lot No. Code , The 1st \* means:YM Code , The last 3 \* means:little Lot  
No Code

回流焊温度曲线图(无铅) / Temperature Profile for IR Reflow Soldering(Pb-Free)



说明：

- 1、预热温度 150 ~ 180°C，时间 60 ~ 90sec;
- 2、峰值温度 245±5°C，时间持续为 5±0.5sec;
- 3、焊接制程冷却速度为 2 ~ 10°C/sec.

Note:

- 1.Preheating:150~180°C, Time:60~90sec.
- 2.Peak Temp.:245±5°C, Duration:5±0.5sec.
3. Cooling Speed: 2~10°C/sec.

耐焊接热试验条件 / Resistance to Soldering Heat Test Conditions

温度：260±5°C

时间：10±1 sec.

Temp.:260±5°C

Time:10±1 sec

包装规格 / Packaging SPEC.

卷盘包装 / REEL

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm <sup>3</sup> )		
	Units/Reel 只/卷盘	Reels/Inner Box 卷盘/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Reel	Inner Box 盒	Outer Box 箱
SMA	5000	2	10000	7	70000	13" ×12	336X336X40	380X335X366

使用说明 / Notices