

# MMSZ52XXBS

Rev. I Jul.-2018

## 描述 / Descriptions

SOD-323 塑封封装 稳压二极管。

Zener Diode in a SOD-323 Plastic Package.

## 特征 / Features

2.4V-110V 宽稳压范围，耗散功率最大可达 200mW。无卤产品。

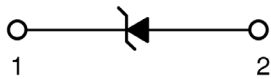
Wide zener reverse voltage range 2.4V-110V, Maximum  $P_D$  to 200mW. HF Product.

## 用途 / Applications

用于 200mW 的 SOD-323 表面贴装稳压电路。

Design for 200mW SOD-323 surface mount.

## 内部等效电路 / Equivalent Circuit



## 引脚排列 / Pinning



PIN1:Cathode

PIN2:Anode

## 放大及印章代码 / $h_{FE}$ Classifications & Marking

见电性能参数。 See Electrical Characteristics.

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

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Power Dissipation	$P_D$	200	mW
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	625	°C/W
Typical Thermal Resistance Junction to Lead	$R_{\theta JL}$	150	°C/W
Junction and Storage Temperature Range	$T_j, T_{stg}$	-55~150	°C

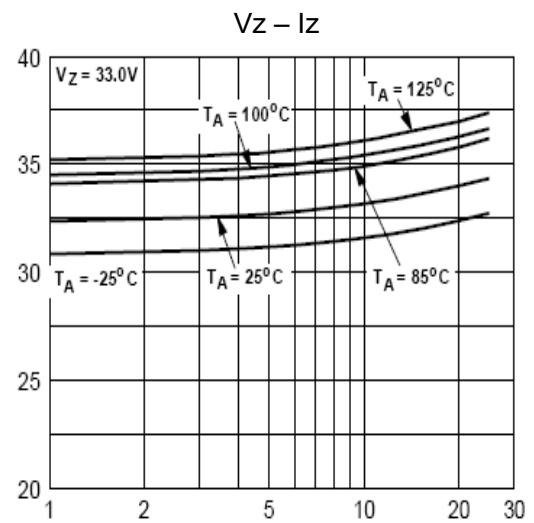
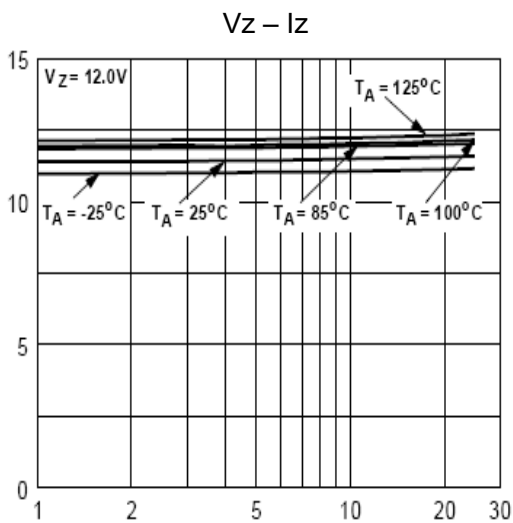
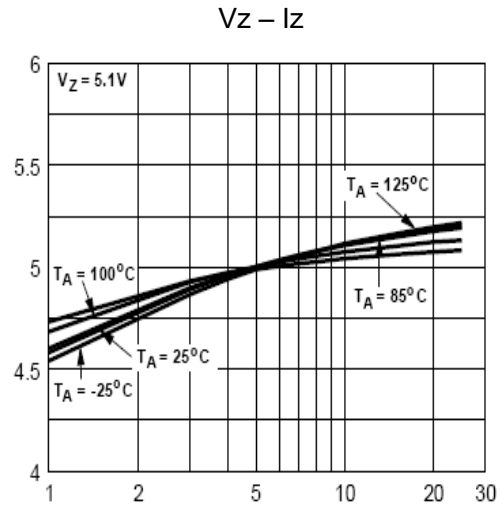
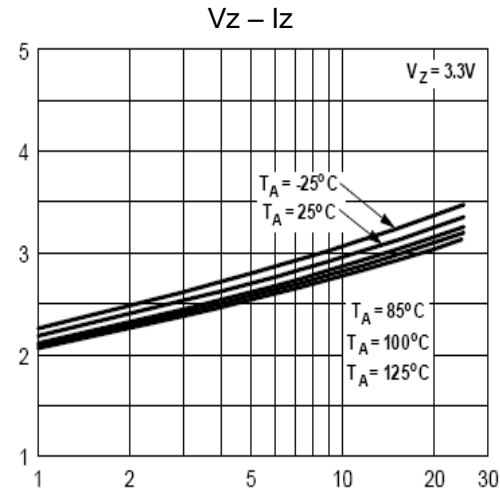
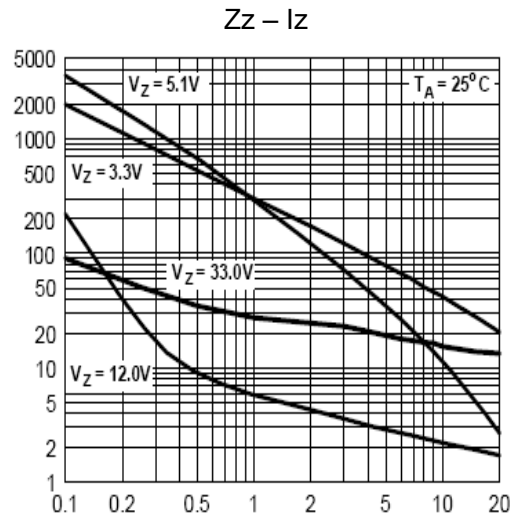
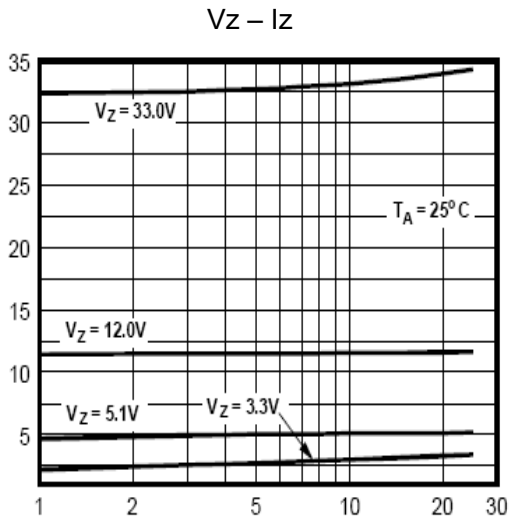
**电性能参数 / Electrical Characteristics(Ta=25°C)**

Device	Device Marking	Zener Voltage				Zener Impedance			Leakage Current	
		$V_z$ (Volts)			@ $I_{zT}$	$Z_{zT}$ @ $I_{zT}$	$Z_{zk}@I_{zk}$		$I_R@V_R$	
		Min	Nom	Max	mA	$\Omega$	$\Omega$	mA	$\mu A$	Volts
MMSZ5221BS	HC1	2.28	2.4	2.52	20	30	1200	0.25	100	1
MMSZ5222BS	HC2	2.38	2.5	2.63	20	30	1250	0.25	100	1
MMSZ5223BS	HC3	2.57	2.7	2.84	20	30	1300	0.25	75	1
MMSZ5224BS	HC4	2.66	2.8	2.94	20	30	1400	0.25	75	1
MMSZ5225BS	HC5	2.85	3.0	3.15	20	29	1600	0.25	50	1
MMSZ5226BS	HD1	3.13	3.3	3.47	20	28	1600	0.25	25	1
MMSZ5227BS	HD2	3.42	3.6	3.78	20	24	1700	0.25	15	1
MMSZ5228BS	HD3	3.71	3.9	4.10	20	23	1900	0.25	10	1
MMSZ5229BS	HD4	4.09	4.3	4.52	20	22	2000	0.25	5	1
MMSZ5230BS	HD5	4.47	4.7	4.94	20	19	1900	0.25	5	2
MMSZ5231BS	HE1	4.85	5.1	5.36	20	17	1600	0.25	5	2
MMSZ5232BS	HE2	5.32	5.6	5.88	20	11	1600	0.25	5	3
MMSZ5233BS	HE3	5.70	6.0	6.30	20	7	1600	0.25	5	3.5
MMSZ5234BS	HE4	5.89	6.2	6.51	20	7	1000	0.25	5	4
MMSZ5235BS	HE5	6.46	6.8	7.14	20	5	750	0.25	3	5
MMSZ5236BS	HF1	7.13	7.5	7.88	20	6	500	0.25	3	6
MMSZ5237BS	HF2	7.79	8.2	8.61	20	8	500	0.25	3	6.5
MMSZ5238BS	HF3	8.27	8.7	9.14	20	8	600	0.25	3	6.5
MMSZ5239BS	HF4	8.65	9.1	9.56	20	10	600	0.25	3	7
MMSZ5240BS	HF5	9.50	10	10.50	20	17	600	0.25	3	8

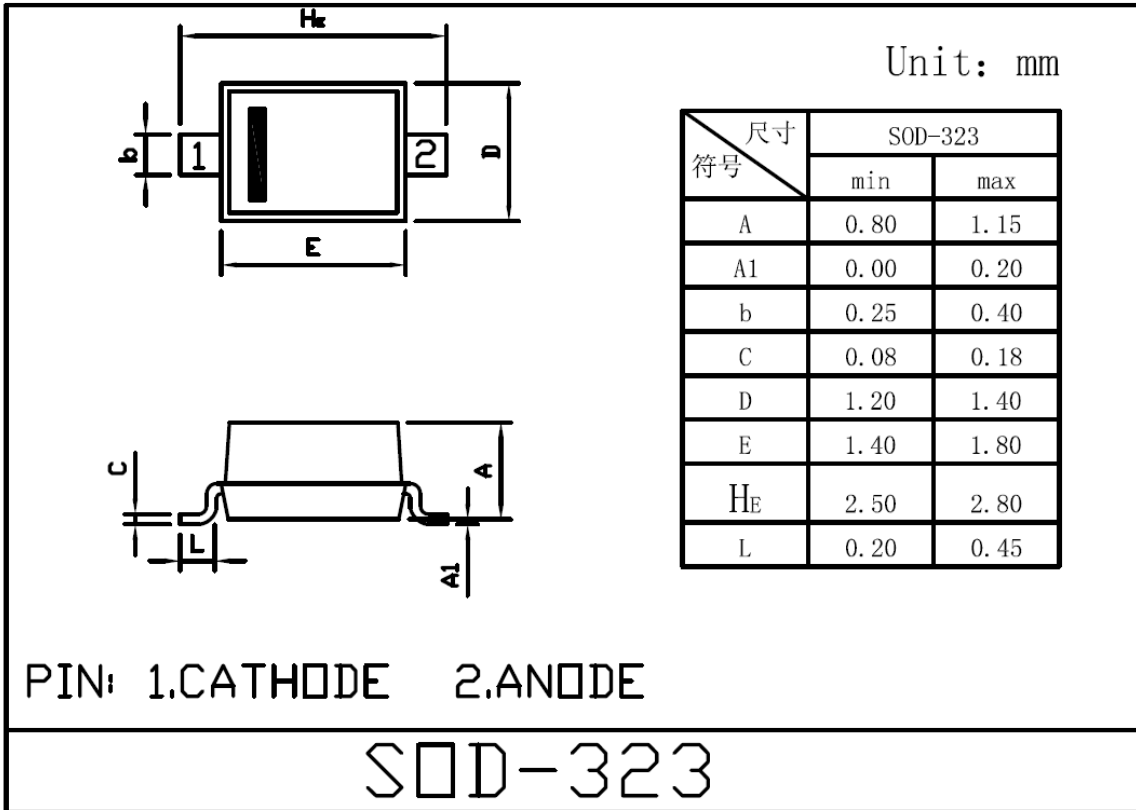
电性能参数 / Electrical Characteristics(Ta=25°C)

Device	Device Marking	Zener Voltage				Zener Impedance			Leakage Current	
		V <sub>Z</sub> (Volts)			@ I <sub>ZT</sub>	Z <sub>ZT</sub> @ I <sub>ZT</sub>	Z <sub>zk</sub> @I <sub>zk</sub>		I <sub>R</sub> @V <sub>R</sub>	
		Min	Nom	Max	mA	Ω	Ω	mA	uA	Volts
MMSZ5241BS	HH1	10.45	11	11.55	20	22	600	0.25	2	8.4
MMSZ5242BS	HH2	11.40	12	12.60	20	30	600	0.25	1	9.1
MMSZ5243BS	HH3	12.35	13	13.65	9.5	13	600	0.25	0.5	9.9
MMSZ5244BS	HH4	13.30	14	14.70	9.0	15	600	0.25	0.1	10
MMSZ5245BS	HH5	14.25	15	15.75	8.5	16	600	0.25	0.1	11
MMSZ5246BS	HJ1	15.20	16	16.80	7.8	17	600	0.25	0.1	12
MMSZ5247BS	HJ2	16.15	17	17.85	7.4	19	600	0.25	0.1	13
MMSZ5248BS	HJ3	17.10	18	18.90	7.0	21	600	0.25	0.1	14
MMSZ5249BS	HJ4	18.05	19	19.05	6.6	23	600	0.25	0.1	14
MMSZ5250BS	HJ5	19.00	20	21.00	6.2	25	600	0.25	0.1	15
MMSZ5251BS	HK1	20.90	22	23.10	5.6	29	600	0.25	0.1	17
MMSZ5252BS	HK2	22.80	24	25.20	5.2	33	600	0.25	0.1	18
MMSZ5253BS	HK3	23.75	25	26.25	5.0	35	600	0.25	0.1	19
MMSZ5254BS	HK4	25.65	27	28.35	4.6	41	600	0.25	0.1	21
MMSZ5255BS	HK5	26.60	28	29.40	4.5	44	600	0.25	0.1	21
MMSZ5256BS	HM1	28.50	30	31.50	4.2	49	600	0.25	0.1	23
MMSZ5257BS	HM2	31.35	33	34.65	3.8	58	700	0.25	0.1	25
MMSZ5258BS	HM3	34.20	36	37.80	3.4	70	700	0.25	0.1	27
MMSZ5259BS	HM4	37.05	39	40.95	3.2	80	800	0.25	0.1	30
MMSZ5260BS	HM5	40.85	43	45.15	3.0	93	900	0.25	0.1	33
MMSZ5261BS	HN1	44.65	47	49.35	2.7	105	1000	0.25	0.1	36
MMSZ5262BS	HN2	48.45	51	53.55	2.5	125	1100	0.25	0.1	39
MMSZ5263BS	HN3	53.20	56	58.80	2.2	150	1300	0.25	0.1	43
MMSZ5264BS	HN4	57.00	60	63.00	2.1	170	1400	0.25	0.1	46
MMSZ5265BS	HN5	58.90	62	65.10	2.0	185	1400	0.25	0.1	47
MMSZ5266BS	HP1	64.60	68	71.40	1.8	230	1600	0.25	0.1	52
MMSZ5267BS	HP2	71.25	75	78.75	1.7	270	1700	0.25	0.1	56
MMSZ5268BS	HP3	77.90	82	86.10	1.5	330	2000	0.25	0.1	62
MMSZ5269BS	HP4	82.65	87	91.35	1.4	370	2200	0.25	0.1	68
MMSZ5270BS	HP5	86.45	91	95.55	1.4	400	2300	0.25	0.1	69
MMSZ5272BS	HR2	104.5	110	115.5	1.1	750	3000	0.25	0.1	84

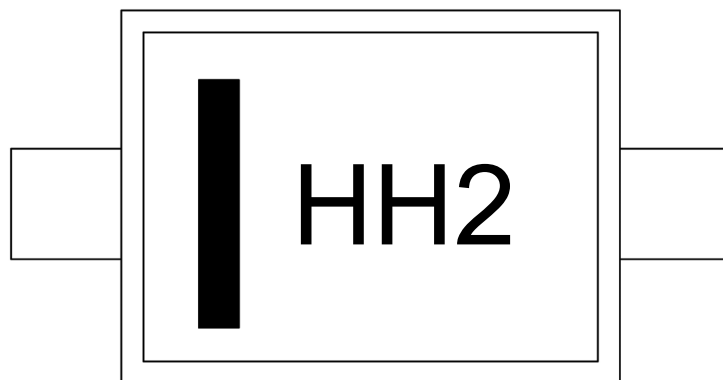
电参数曲线图 / Electrical Characteristic Curve



外形尺寸图 / Package Dimensions



印章说明 / Marking Instructions



说明：

H： 为公司代码

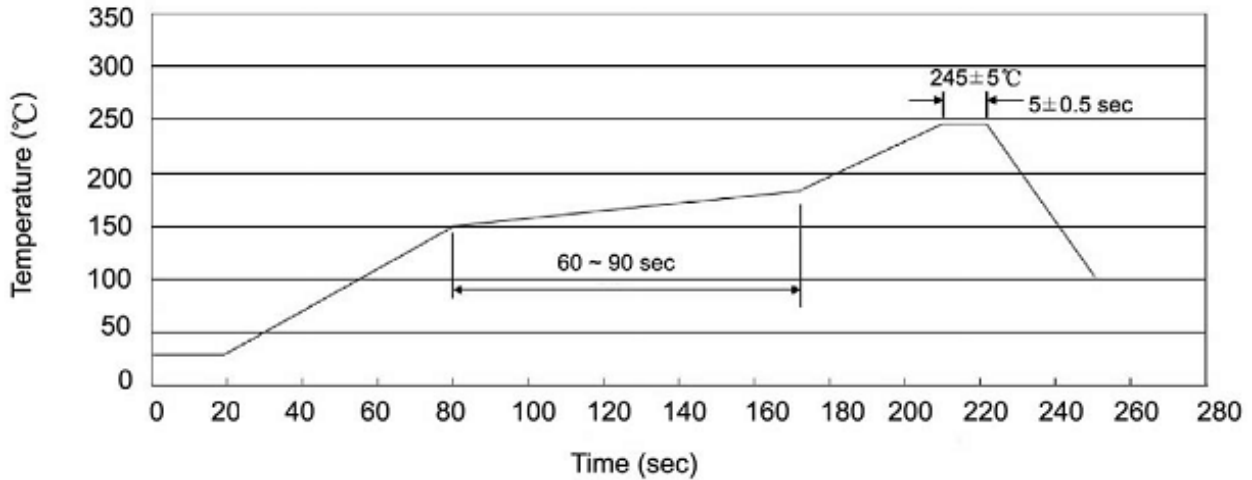
H2： 为型号代码

Note:

H: Company Code.

H2: Product Type.

**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
SOD-323	3,000	10	30,000	6	180,000	7" ×8	180×120×180	390×385×205

**使用说明 / Notices**