

修订记录 / Revised record

F	2016-3				
G	2018-9-12	1			
H	2019-1-21	2	增加 P_D $R_{\theta JA}$, $P -T$		
I	2020-5-16	1			

描述 / Descriptions

SOT-23

Zener Diode in a SOT-23 Plastic Package.

特征 / F

300mW

300mW power dissipation, Ideally Suited for Automated Assembly. HF Product.

2.4V-51V

2.4V to 51V wide zener voltage range applications.



PIN: See Equivalent Circuit.

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

See Electrical Characteristics.

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

Parameter	Symbol	Rating	Unit
Forward Voltage($I_F=10mA$)	V_F	0.9	V
Power Dissipation(Note 1)	P_D	300	mW
Power Dissipation(Note 4)	P_D	350	mW
Thermal Resistance, Junction to Ambient(Note 1)	$R_{\theta JA}$	417	°C/W
Thermal Resistance, Junction to Ambient(Note 4)	$R_{\theta JA}$	357	°C/W
Junction and Storage Temperature Range	T_j, T_{stg}	-65~150	°C

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

Type Number	Marking Code	Zener Voltage Range (Note 2)				Maximum Zener Impedance (Note 3)			Maximum Reverse Current (Note 2)		Typical Temperature Coefficient @ I_{ZT} mV/°C	
		$V_Z @ I_{ZT}$			I_{ZT}	$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK}$		I_R	V_R	Min	Max
		Nom (V)	Min (V)	Max (V)	mA	Ω	Ω	mA	μA	V		
BZX84C2V4	HZB	2.4	2.2	2.6	5.0	100	600	1.0	50	1.0	-3.5	0
BZX84C2V7	HZC	2.7	2.5	2.9	5.0	100	600	1.0	20	1.0	-3.5	0
BZX84C3V0	HZD	3.0	2.8	3.2	5.0	95	600	1.0	10	1.0	-3.5	0
BZX84C3V3	HZE	3.3	3.1	3.5	5.0	95	600	1.0	5.0	1.0	-3.5	0
BZX84C3V6	HZF	3.6	3.4	3.8	5.0	90	600	1.0	5.0	1.0	-3.5	0
BZX84C3V9	HZG	3.9	3.7	4.1	5.0	90	600	1.0	3.0	1.0	-3.5	0
BZX84C4V3	ZHH	4.3	4.0	4.6	5.0	90	600	1.0	3.0	1.0	-3.5	0
BZX84C4V7	HZ1	4.7	4.4	5.0	5.0	80	500	1.0	3.0	2.0	-3.5	0.2
BZX84C5V1	HZ2	5.1	4.8	5.4	5.0	60	480	1.0	2.0	2.0	-2.7	1.2
BZX84C5V6	HZ3	5.6	5.2	6.0	5.0	40	400	1.0	1.0	2.0	-2.0	2.5
BZX84C6V2	HZ4	6.2	5.8	6.6	5.0	10	150	1.0	3.0	4.0	0.4	3.7
BZX84C6V8	HZ5	6.8	6.4	7.2	5.0	15	80	1.0	2.0	4.0	1.2	4.5
BZX84C7V5	HZ6	7.5	7.0	7.9	5.0	15	80	1.0	1.0	5.0	2.5	5.3
BZX84C8V2	HZ7	8.2	7.7	8.7	5.0	15	80	1.0	0.7	5.0	3.2	6.2
BZX84C9V1	HZ8	9.1	8.5	9.6	5.0	15	100	1.0	0.5	6.0	3.8	7.0
BZX84C10	HZ9	10	9.4	10.6	5.0	20	150	1.0	0.2	7.0	4.5	8.0
BZX84C11	HY1	11	10.4	11.6	5.0	20	150	1.0	0.1	8.0	5.4	9.0
BZX84C12	HY2	12	11.4	12.7	5.0	25	150	1.0	0.1	8.0	6.0	10.0
BZX84C13	HY3	13	12.4	14.1	5.0	30	170	1.0	0.1	8.0	7.0	11.0
BZX84C15	HY4	15	13.8	15.6	5.0	30	200	1.0	0.1	10.5	9.2	13.0
BZX84C16	HY5	16	15.3	17.1	5.0	40	200	1.0	0.1	11.2	10.4	14.0

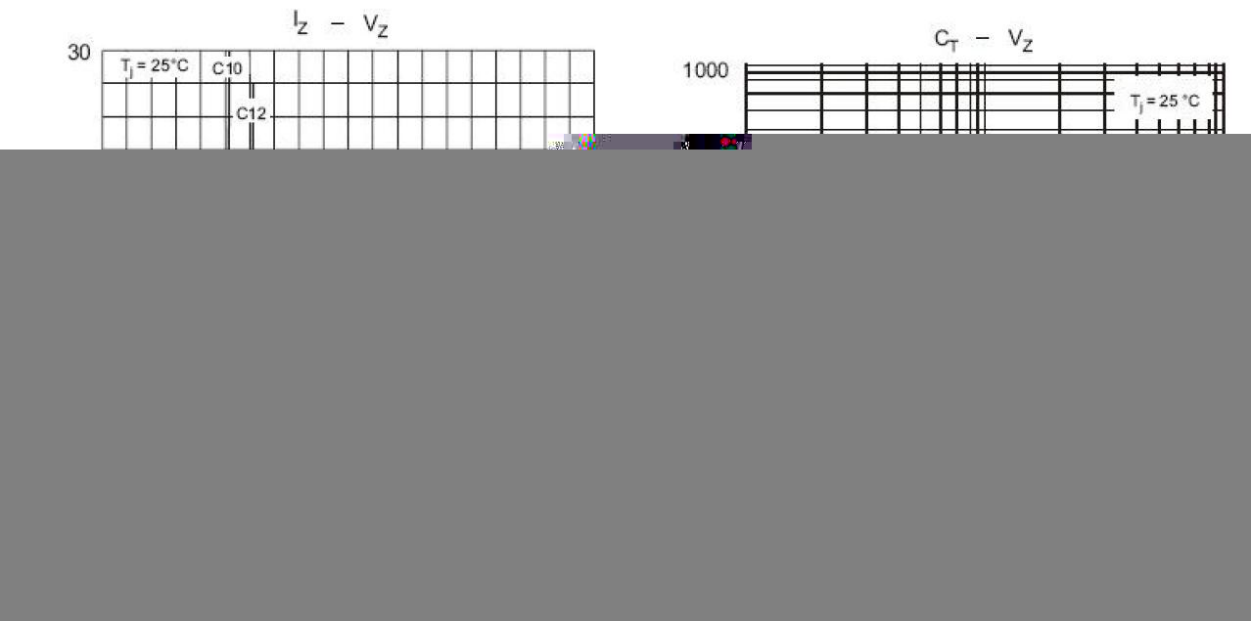
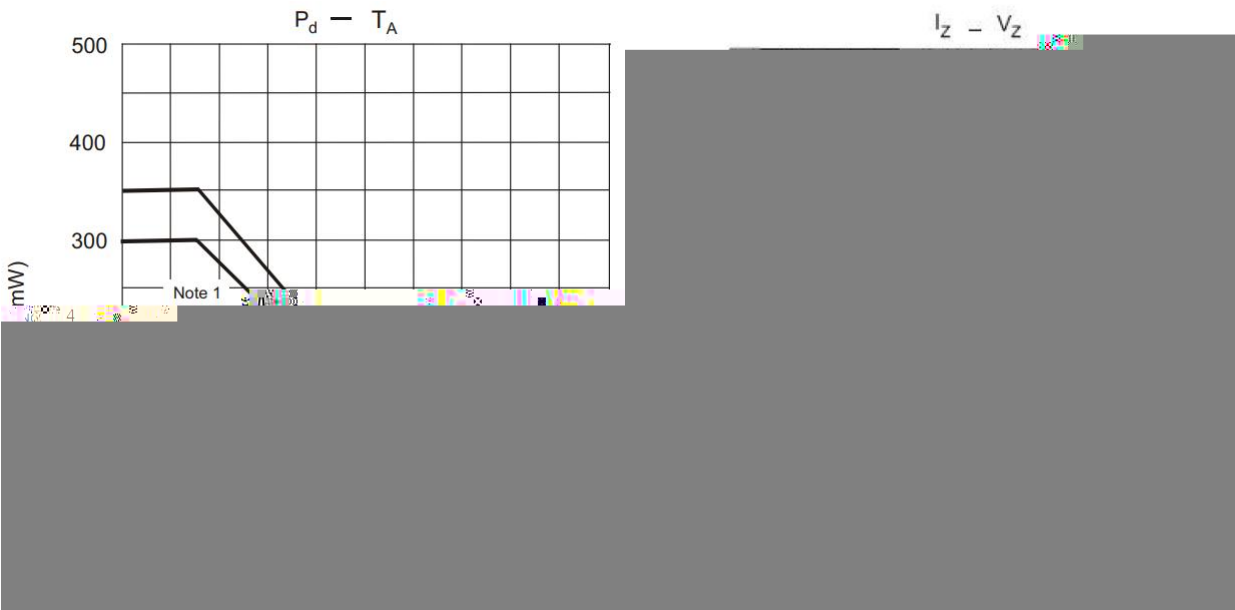
电性能参数 / Electrical Characteristics(Ta=25°C)

Type Number	Marking Code	Zener Voltage Range (Note 2)				Maximum Zener Impedance (Note 3)			Maximum Reverse Current (Note 2)		Typical Temperature Coefficient @I _{ZT} mV/°C	
		V _Z @I _{ZT}			I _{ZT}	Z _{YT} @I _{ZT}	Z _{ZK} @I _{ZK}		I _R	V _R		
		Nom (V)	Min (V)	Max (V)	mA	Ω	Ω	mA	uA	V	Min	Max
BZX84C18	HY6	18	16.8	19.1	5.0	45	225	1.0	0.1	12.6	12.4	16.0
BZX84C20	HY7	20	18.8	21.2	5.0	55	225	1.0	0.1	14.0	14.4	18.0
BZX84C22	HY8	22	20.8	23.3	5.0	55	250	1.0	0.1	15.4	16.4	20.0
BZX84C24	HY9	24	22.8	25.6	5.0	70	250	1.0	0.1	16.8	18.4	22.0
BZX84C27	HYA	27	25.1	28.9	2.0	80	300	0.5	0.1	18.9	21.4	25.3
BZX84C30	HYB	30	28.0	32.0	2.0	80	300	0.5	0.1	21.0	24.4	29.4
BZX84C33	HYC	33	31.0	35.0	2.0	80	325	0.5	0.1	23.1	27.4	33.4
BZX84C36	HYD	36	34.0	38.0	2.0	90	350	0.5	0.1	25.2	30.4	37.4
BZX84C39	HYE	39	37.0	41.0	2.0	130	350	0.5	0.1	27.3	33.4	41.2
BZX84C43	HYF	43	40.0	46.0	2.0	150	375	0.5	0.1	30.1	10.0	12.0
BZX84C47	HYG	47	44.0	50.0	2.0	170	375	0.5	0.1	32.9	10.0	12.0
BZX84C51	HYH	51	48.0	54.0	2.0	180	400	0.5	0.1	35.7	10.0	12.0

Notes:

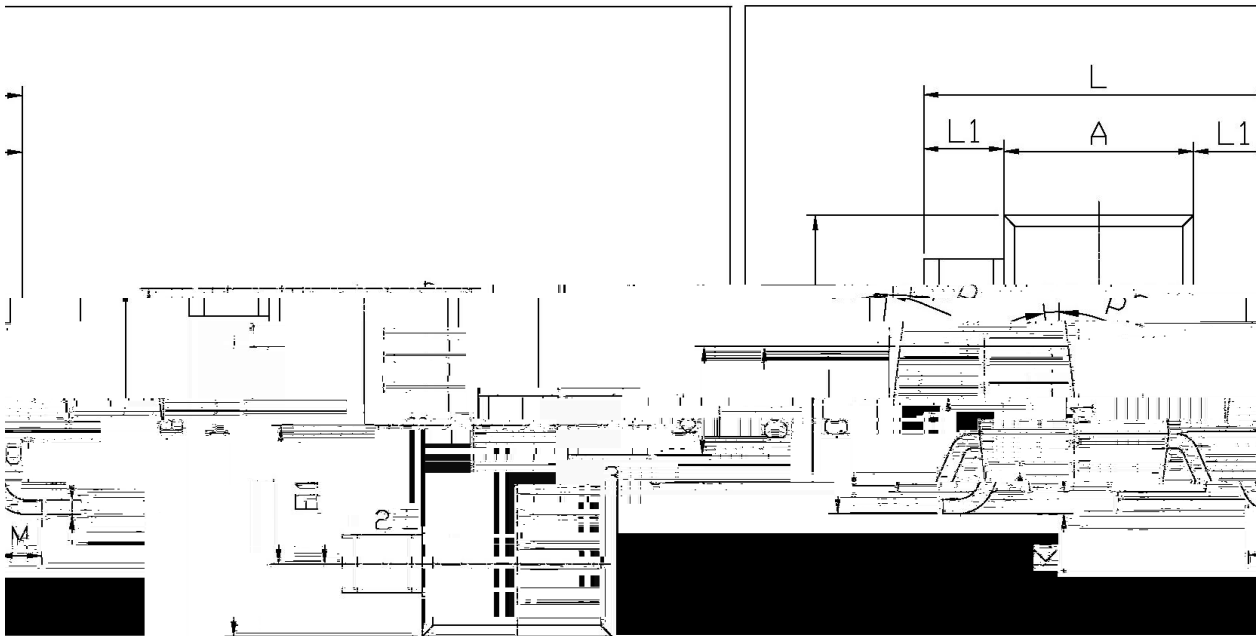
- 1.Device mounted on FR-4 PC board with recommended pad layout.
- 2.Short duration test pulse used to minimize self-heating effect.
- 3.f = 1KHz.
- 4.Valid provided the terminals are kept at ambient temperature.

电参数曲线图 / Electrical Characteristic Curve



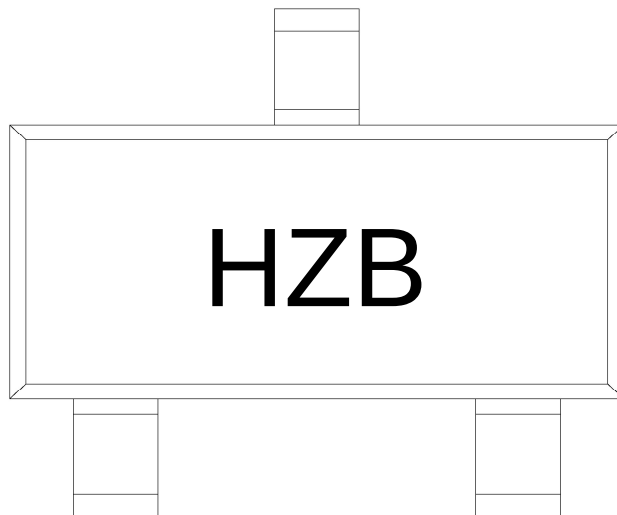
外形尺寸图 / Package Dimensions

单位: mm



Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
L	2.2	2.7	C	1.30	Max
A	1.15	1.50	B	0.45	0.65
B	2.70	3.10	D	0.35	0.55

印章说明 / Marking Instructions



说明：

H： 为公司代码

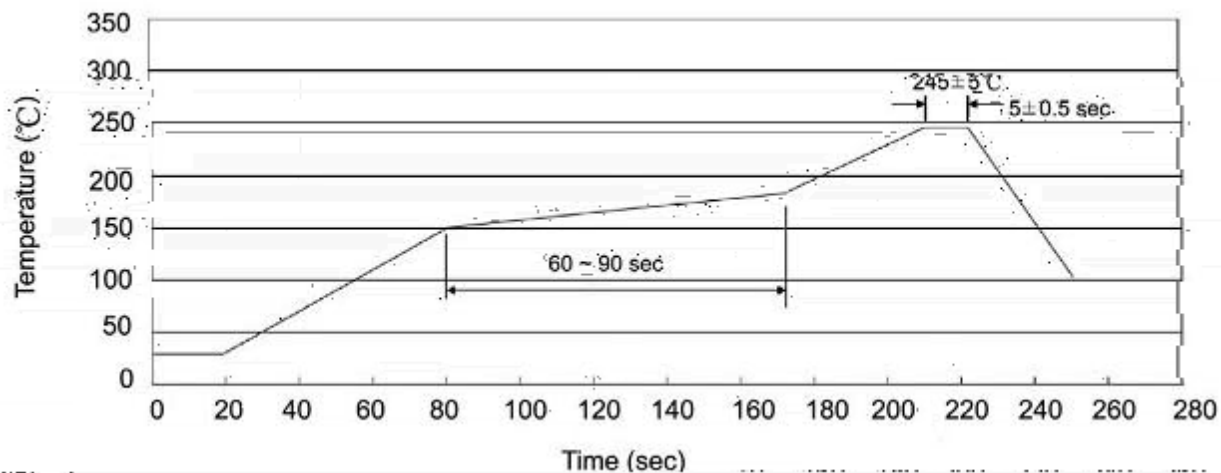
ZB： 为型号代码

Note:

H: Company Code.

ZB: Product Type.

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



Note:

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

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

260±5 10±1 sec. Temp.:260±5℃ Time:10±1 sec

包装规格 / Packaging SPEC.

/ REEL

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	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
SOT-23	3,000	10	30,000	6	180,000	7" ×8	180×120×180	390×385×205

使用说明 / Notices