

描述 / Descriptions

SOT-23 塑封封装 双稳压二极管。
Dual Zener Diodes in a SOT-23 Plastic Package.

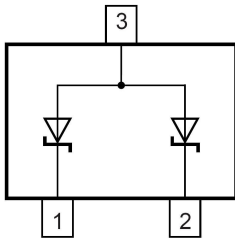
特征 / Features

$P_{ZSM} \leq 40W$ ，适合表面安装设计，总功耗： $\leq 300mW$ 。无卤产品。
 $P_{ZSM} \leq 40W$, suitable for surface-mounted design, Total power dissipation: $\leq 300mW$. HF Product.

用途 / Applications

适用于 2.4V-75V 的宽范围稳压电路，一般调节功能。
2.4V to 75V wide zener voltage range applications, General regulation functions.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



PIN: See Equivalent Circuit.

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
Forward Voltage(I _F =10mA) (note1)	V _F	0.9	V
Non-repetitive peak reverse power dissipation(note2)	P _{ZSM}	40	W
Total power dissipation(T _{amb} ≤25°C)(note3)	P _{tot}	300	mW
Forward Current	I _F	200	mA
Junction temperature	T _j	150	°C
Ambient temperature	T _{amb}	-55~150	°C
Storage temperature	T _{stg}	-65~150	°C
Thermal resistance from junction to Ambient(note4)	R _{θJA}	417	K/W

Notes:

1. Pulse test: t_p≤300 ms; δ≤0.02.
2. t_p=100μs; square wave; T_j=25°C prior to surge
3. Device mounted on an FR4 Printed-Circuit Board (PCB), single-sided copper, tin-plated and standard footprint.
4. Device mounted on an FR4 PCB, single-sided copper, tin-plated and standard footprint.

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

Type Number	Marking Code	Working voltage V _Z (V)		Differential Resistance rdif (Ω)		Reverse current I _R (μA)		Temperature coefficient S _Z (mV/K)		Diode Capacitance C _d (pF) ⁽¹⁾	Non-repetitive peak reverse current I _{ZSM} (A) ⁽²⁾
		I _Z =5mA		I _Z =1mA	I _Z =5mA	I _Z =5mA		I _Z =5mA			
		Min	Max	Max	Max	Max	V _R (V)	Min	Max	Max	Max
BZB84C2V4	HU9	2.2	2.6	600	100	50	1.0	-3.5	0	450	6.0
BZB84C2V7	HUA	2.5	2.9	600	100	20	1.0	-3.5	0	450	6.0
BZB84C3V0	HBG	2.8	3.2	600	95	10	1.0	-3.5	0	450	6.0
BZB84C3V3	HCG	3.1	3.5	600	95	5.0	1.0	-3.5	0	450	6.0
BZB84C3V6	HDG	3.4	3.8	600	90	5.0	1.0	-3.5	0	450	6.0
BZB84C3V9	HUE	3.7	4.1	600	90	3.0	1.0	-3.5	0	450	6.0
BZB84C4V3	HUF	4.0	4.6	600	90	3.0	1.0	-3.5	0	450	6.0
BZB84C4V7	HUG	4.4	5.0	500	80	3.0	2.0	-3.5	0.2	300	6.0
BZB84C5V1	HUH	4.8	5.4	480	60	2.0	2.0	-2.7	1.2	300	6.0
BZB84C5V6	HUK	5.2	6.0	400	40	1.0	2.0	-2.0	2.5	300	6.0
BZB84C6V2	HUL	5.8	6.6	150	10	3.0	4.0	0.4	3.7	200	6.0
BZB84C6V8	HUM	6.4	7.2	80	15	2.0	4.0	1.2	4.5	200	6.0
BZB84C7V5	HUN	7.0	7.9	80	15	1.0	5.0	2.5	5.3	150	4.0
BZB84C8V2	HUP	7.7	8.7	80	15	0.70	5.0	3.2	6.2	150	4.0
BZB84C9V1	HUR	8.5	9.6	100	15	0.50	6.0	3.8	7.0	150	3.0
BZB84C10	HUS	9.4	10.6	150	20	0.20	7.0	4.5	8.0	90	3.0
BZB84C11	HUT	10.4	11.6	150	20	0.10	8.0	5.4	9.0	85	2.5
BZB84C12	HUU	11.4	12.7	150	25	0.10	8.0	6.0	10.0	85	2.5
BZB84C13	HUV	12.4	14.1	170	30	0.10	8.0	7.0	11.0	80	2.5
BZB84C15	HUW	13.8	15.6	200	30	0.05	10.5	9.2	13.0	75	2.0
BZB84C16	HBG	15.3	17.1	200	40	0.05	11.2	10.4	14.0	75	1.5
BZB84C18	HPC	16.8	19.1	225	45	0.05	12.6	12.4	16.0	70	1.5
BZB84C20	HRQ	18.8	21.2	225	55	0.05	14.0	14.4	18.0	60	1.5
BZB84C22	HPD	20.8	23.3	250	55	0.05	15.4	16.4	20.0	60	1.25
BZB84C24	HPE	22.8	25.6	250	70	0.05	16.8	18.4	22.0	55	1.25

Notes:

[1] f=1MHz; V_R=0V

[2] t_p = 100 μs; square wave; T_j = 25°C prior to surge

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

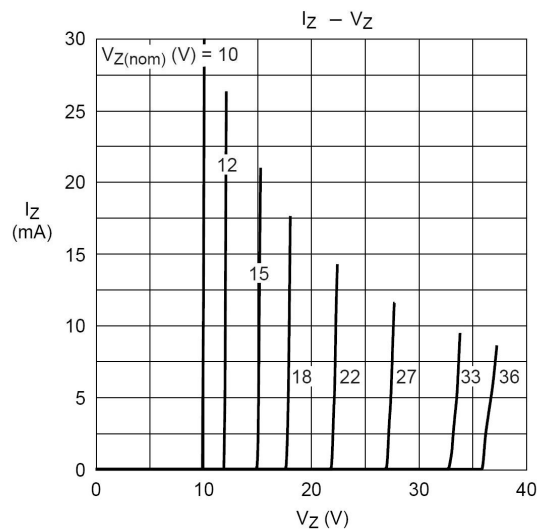
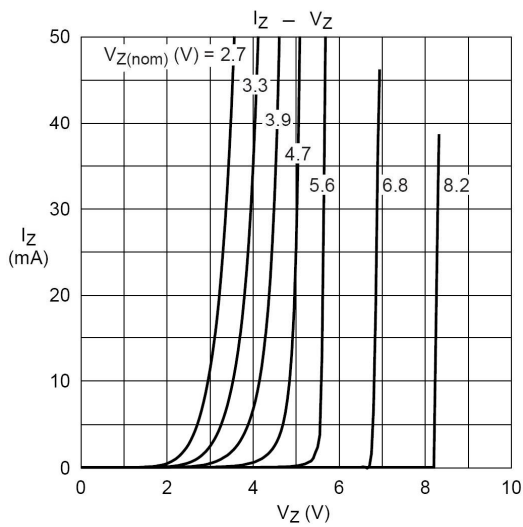
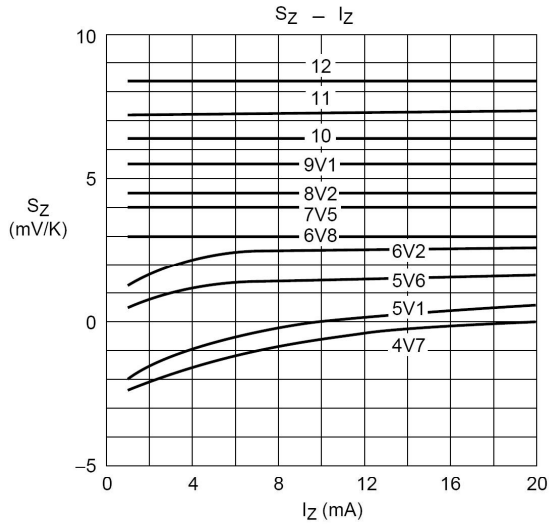
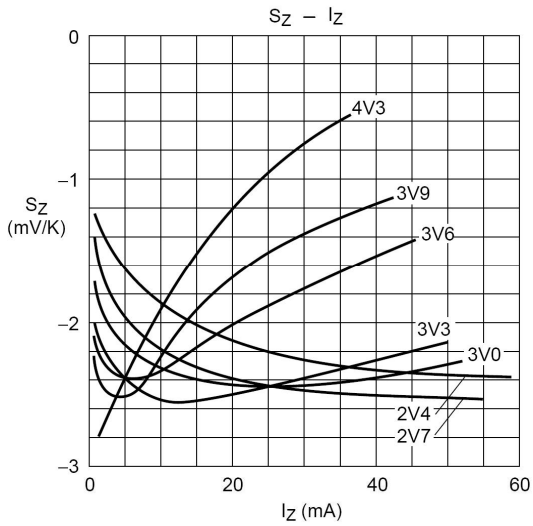
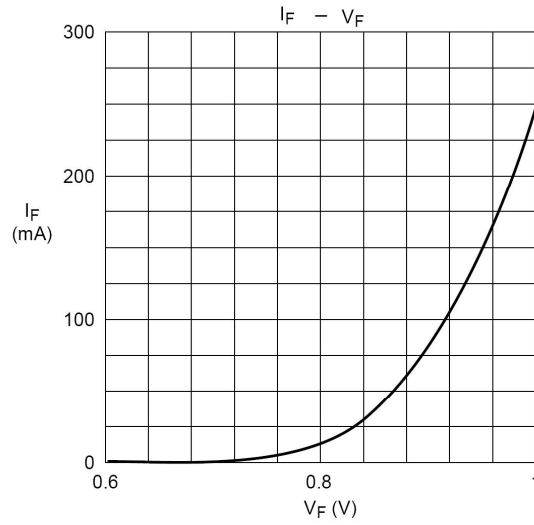
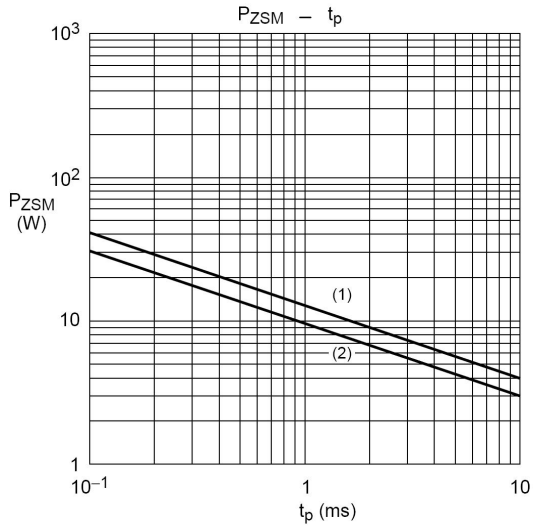
Type Number	Marking Code	Working voltage V _Z (V)		Differential Resistance rdif (W)		Reverse current I _R (μA)		Temperature coefficient S _Z (mV/K)		Diode Capacitance C _d (pF) ⁽¹⁾	Non-repetitive peak reverse current I _{ZSM} (A) ⁽²⁾
		I _Z =2mA		I _Z =0.5mA	I _Z =2mA	V _R (V)	I _Z =2mA				
		Min	Max	Max	Max		Max	Min	Max	Max	Max
BZB84C27	HPF	25.1	28.9	300	80	0.05	18.9	21.4	25.3	50	1.00
BZB84C30	HPG	28.0	32.0	300	80	0.05	21.0	24.4	29.4	50	1.00
BZB84C33	HPH	31.0	35.0	325	80	0.05	23.1	27.4	33.4	45	0.90
BZB84C36	HPJ	34.0	38.0	350	90	0.05	25.2	30.4	37.4	45	0.80
BZB84C39	HPK	37.0	41.0	350	130	0.05	27.3	33.4	41.2	45	0.70
BZB84C43	HPL	40.0	46.0	375	150	0.05	30.1	37.6	46.6	40	0.60
BZB84C47	HPM	44.0	50.0	375	170	0.05	32.9	42.0	51.8	40	0.50
BZB84C51	HPN	48.0	54.0	400	180	0.05	35.7	46.6	57.2	40	0.40
BZB84C56	HPP	52.0	60.0	425	200	0.05	39.2	52.2	63.8	40	0.30
BZB84C62	HPQ	58.0	66.0	450	215	0.05	43.4	58.8	71.6	35	0.30
BZB84C68	HPR	64.0	72.0	475	240	0.05	47.6	65.6	79.8	35	0.25
BZB84C75	HPS	70.0	79.0	500	255	0.05	52.5	73.4	88.6	35	0.20

Notes:

[1] f=1MHz; V_R=0V

[2] t_p = 100 μs; square wave; T_j = 25°C prior to surge

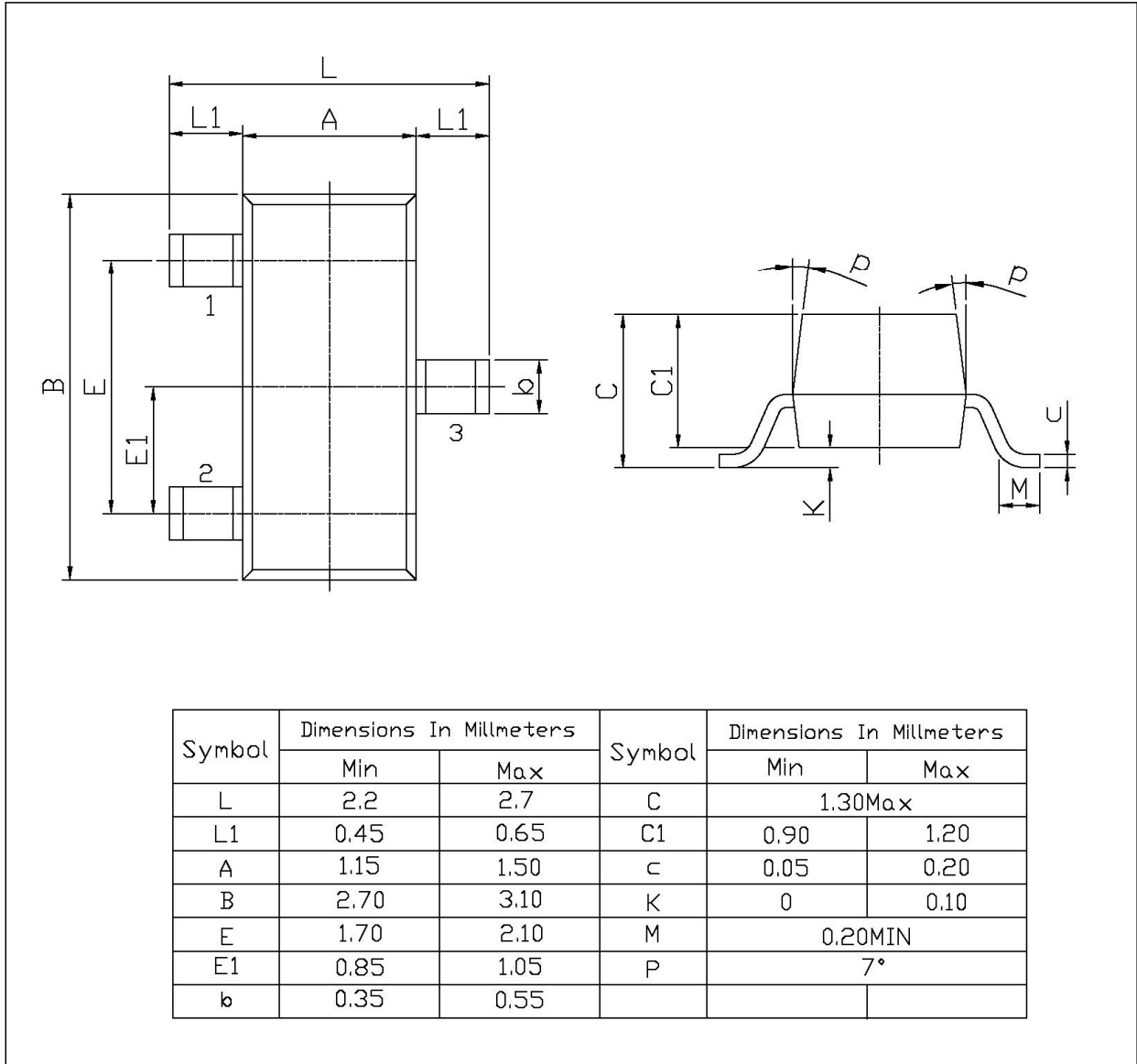
电参数曲线图 / Electrical Characteristic Curve



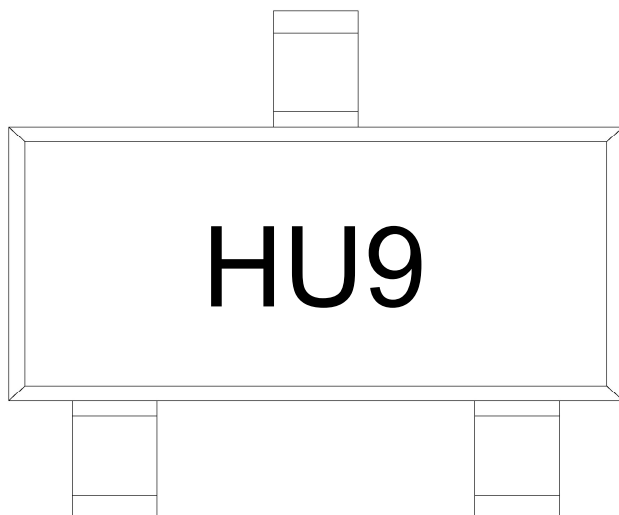
外形尺寸图 / Package Dimensions

SOT-23

单位: mm



印章说明 / Marking Instructions



说明：

H： 为公司代码

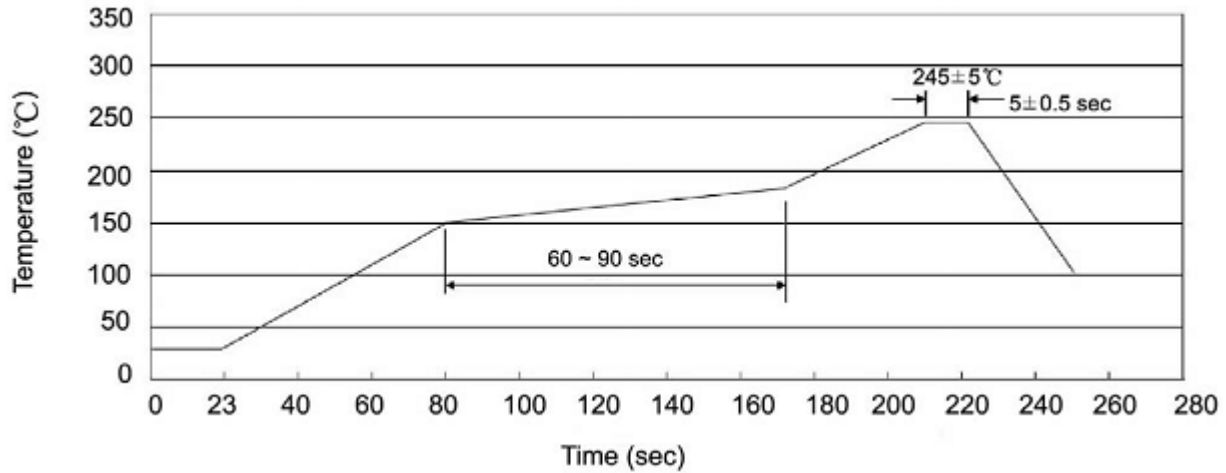
U9： 为产品型号

Note:

H: Company Code.

U9: 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 $25 \sim 150^\circ\text{C}$ ，时间 $60 \sim 90\text{sec}$ ；
- 2、峰值温度 $245 \pm 5^\circ\text{C}$ ，时间持续为 $5 \pm 0.5\text{sec}$ ；
- 3、焊接制程冷却速度为 $2 \sim 10^\circ\text{C}/\text{sec}$ 。

Note:

- 1.Preheating: $25 \sim 150^\circ\text{C}$ ，Time: $60 \sim 90\text{sec}$ 。
- 2.Peak Temp.: $245 \pm 5^\circ\text{C}$ ，Duration: $5 \pm 0.5\text{sec}$ 。
3. Cooling Speed: $2 \sim 10^\circ\text{C}/\text{sec}$ 。

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

温度： $260 \pm 5^\circ\text{C}$

时间： 10 ± 1 sec.

Temp.: $260 \pm 5^\circ\text{C}$

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 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" x8	180×120×180	390×385×205

使用说明 / Notices