

描述 / Descriptions

SOT-223 塑封封装 NPN 半导体三极管。Silicon NPN transistor in a SOT-223 Plastic Package.

特征 / Features

耐压高。

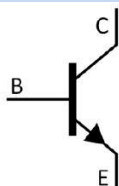
High voltage.

用途 / Applications

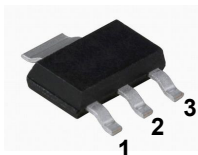
高电压控制电路。

High voltage control circuit .

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



PIN1 : Base

PIN 2 : Collector

PIN 3 : Emitter

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

见印章说明。See Marking Instructions.

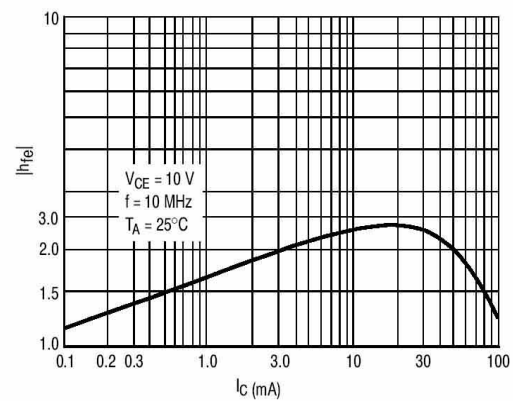
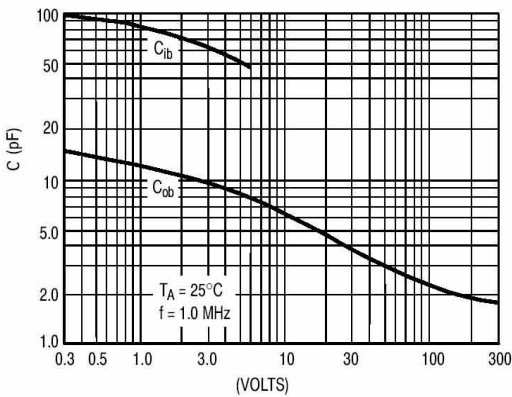
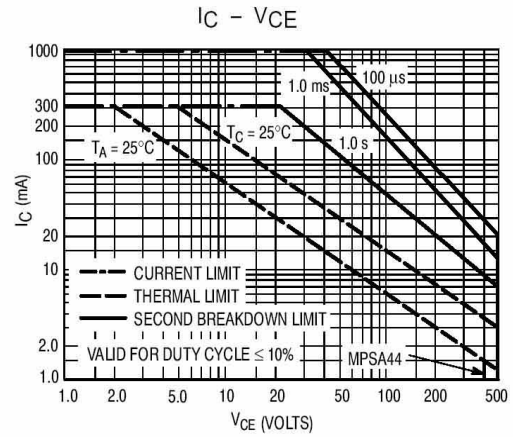
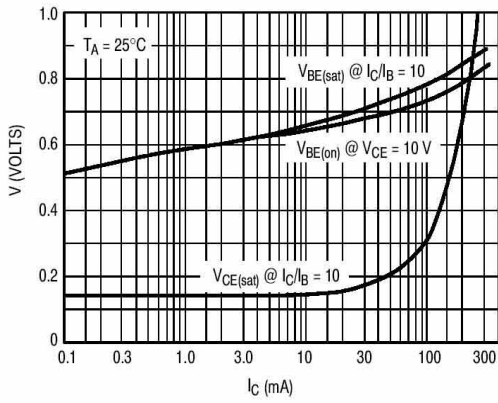
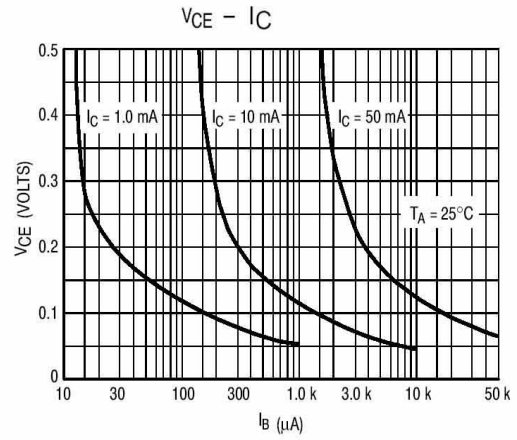
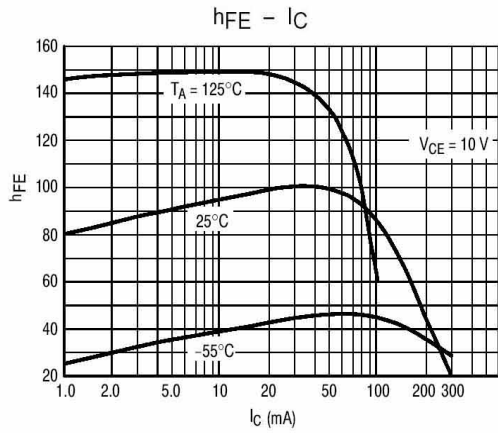
极限参数 / Absolute Maximum Ratings(Ta=25°C)

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Collector to Base Voltage	V_{CBO}	400	V
Collector to Emitter Voltage	V_{CEO}	400	V
Emitter to Base Voltage	V_{EBO}	6.0	V
Collector Current - Continuous	I_C	500	mA
Collector Power Dissipation	P_C	1.0	W
	$P_C(T_C=25^\circ\text{C})$	10	W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55~150	°C

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

参数 Parameter	符号 Symbol	测试条件 Test Conditions	最小值 Min	典型值 Typ	最大值 Max	单位 Unit
Collector to Base Breakdown Voltage	V_{CBO}	$I_C=100\mu\text{A}$ $I_E=0$	400			V
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=1.0\text{mA}$ $I_B=0$	400			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_E=10\mu\text{A}$ $I_C=0$	6.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=400\text{V}$ $I_E=0$			0.1	μA
Collector Cutoff Current	I_{CES}	$V_{CE}=400\text{V}$ $V_{BE}=0$			0.5	μA
Emitter Base Cut-Off Current	I_{EBO}	$V_{BE}=4.0\text{V}$ $I_C=0$			0.1	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=10\text{V}$ $I_C=10\text{mA}$	50		200	
	$h_{FE(2)}$	$V_{CE}=10\text{V}$ $I_C=100\text{mA}$	40			
	$h_{FE(3)}$	$V_{CE}=10\text{V}$ $I_C=50\text{mA}$	45			
	$h_{FE(4)}$	$V_{CE}=10\text{V}$ $I_C=1.0\text{mA}$	40			
Collector to Emitter Saturation Voltage	$V_{CE(sat)(1)}$	$I_C=1.0\text{mA}$ $I_B=0.1\text{mA}$			0.4	V
	$V_{CE(sat)(2)}$	$I_C=10\text{mA}$ $I_B=1.0\text{mA}$			0.5	V
	$V_{CE(sat)(3)}$	$I_C=50\text{mA}$ $I_B=5.0\text{mA}$			0.75	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=10\text{mA}$ $I_B=1.0\text{mA}$			0.75	V
Collector output capacitance	C_{ob}	$V_{CB}=20\text{V}$ $I_E=0$ $f=1.0\text{MHz}$			7.0	pF

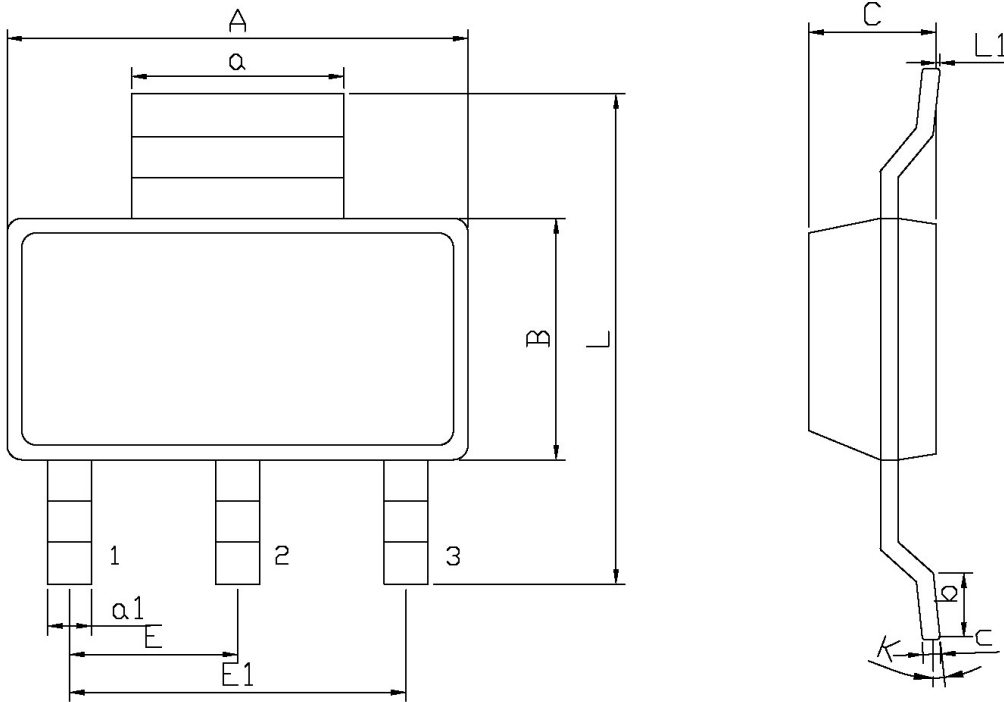
电参数曲线图 / Electrical Characteristic Curve



外形尺寸图 / Package Dimensions

SOT-223

单位: mm



Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
A	6.30	6.70	C	1.80Max	
a	2.90	3.10	b	0.91	-
B	3.30	3.70	c	0.24	0.32
L	6.70	7.30	K	0°	10°
a1	0.60	0.80	L1	0.02	0.10
E1	4.60				
E	2.30				

印章说明 / Marking Instructions



说明：

BR： 为公司代码

A44N： 为型号代码

****： 为生产批号代码，随生产批号变化。

Note:

BR: Company Code.

A44N: Product Type.

****: Lot No. Code, code change with Lot No.

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 25~150°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:25~150°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 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-223	2,500	2	5000	5	25,000	13" ×12	340×340×50	385×257×392

使用说明 / Notices