

描述 / Descriptions

SOT-23 塑封封装 NPN 数字三极管。Silicon NPN Digital transistor in a SOT-23 Plastic Package.

特征 / Features

内装偏置电阻，简化线路设计，减少元件和制造流程。

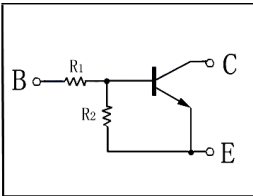
With built-in bias resistors, simplify circuit design, reduce a quantity of parts and manufacturing process.

用途 / Applications

用于开关、反相电路、界面电路以及驱动电路中。

Switching, inverter circuit, interface circuit and driver circuit applications.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



PIN 1 : Base PIN 2 : Emitter PIN 3 : Collector

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

Marking	H25
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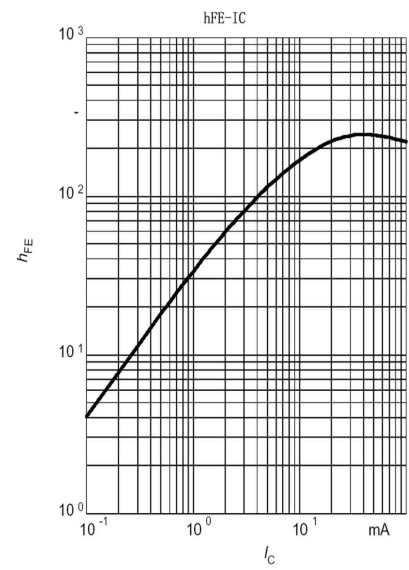
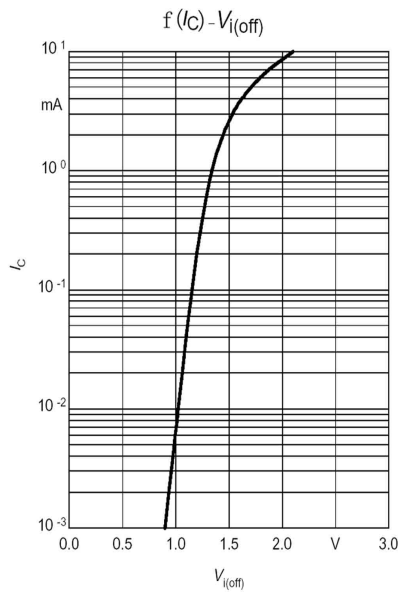
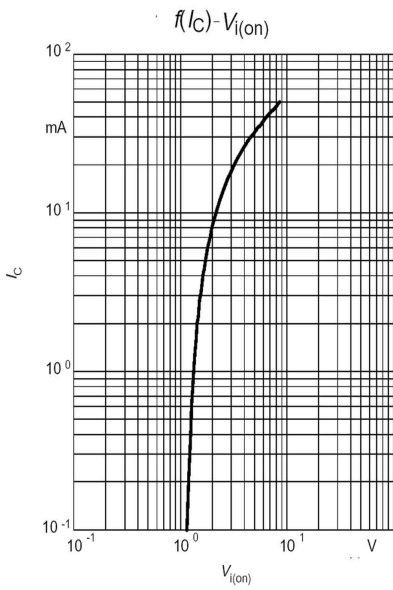
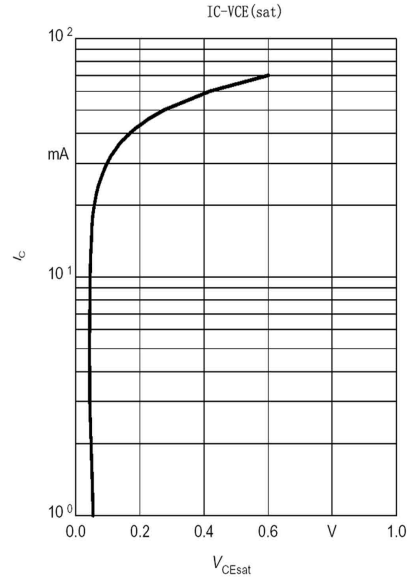
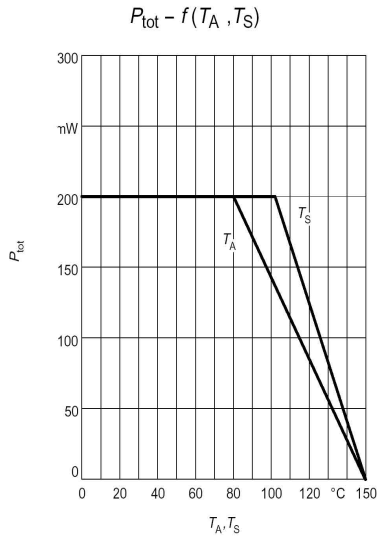
极限参数 / Absolute Maximum Ratings(Ta=25°C)

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Collector-Base voltage	V_{CEO}	50	V
Collector-Emitter voltage	V_{CBO}	50	V
Emitter-Base voltage	V_{EBO}	10	V
Input on Voltage	$V_{i(on)}$	30	V
Collector Current	I_C	100	mA
Collector Power Dissipation	P_C	200	mW
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 Cut-off Current	I_{CBO}	$V_{CB}=40V$ $I_E=0$			0.1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=10V$ $I_C=0$			350	μA
DC Current Gain	h_{FE}	$V_{CE}=5.0V$ $I_C=5.0mA$	50			
Collector- Emitter Saturation voltage	$V_{CE(sat)}$	$I_C=10mA$ $I_B=0.5mA$			0.3	V
Input off voltage	$V_{i(off)}$	$V_{CE}=5.0V$ $I_C=100\mu A$	0.8		1.5	V
Input on Voltage	$V_{i(on)}$	$V_{CE}=0.3V$ $I_C=2.0mA$	1.0		2.5	V
Transition Frequency	f_T	$V_{CE}=5.0V$ $I_C=10mA$ $f=100MHz$		130		MHz
Collector-base capacitance	C_{cb}	$V_{CB}=10V$ $f=1.0MHz$		3.0		pF
Resistance1	R_1		15	22	29	K Ω
Resistance ratio	R_1/R_2		0.9	1.0	1.1	

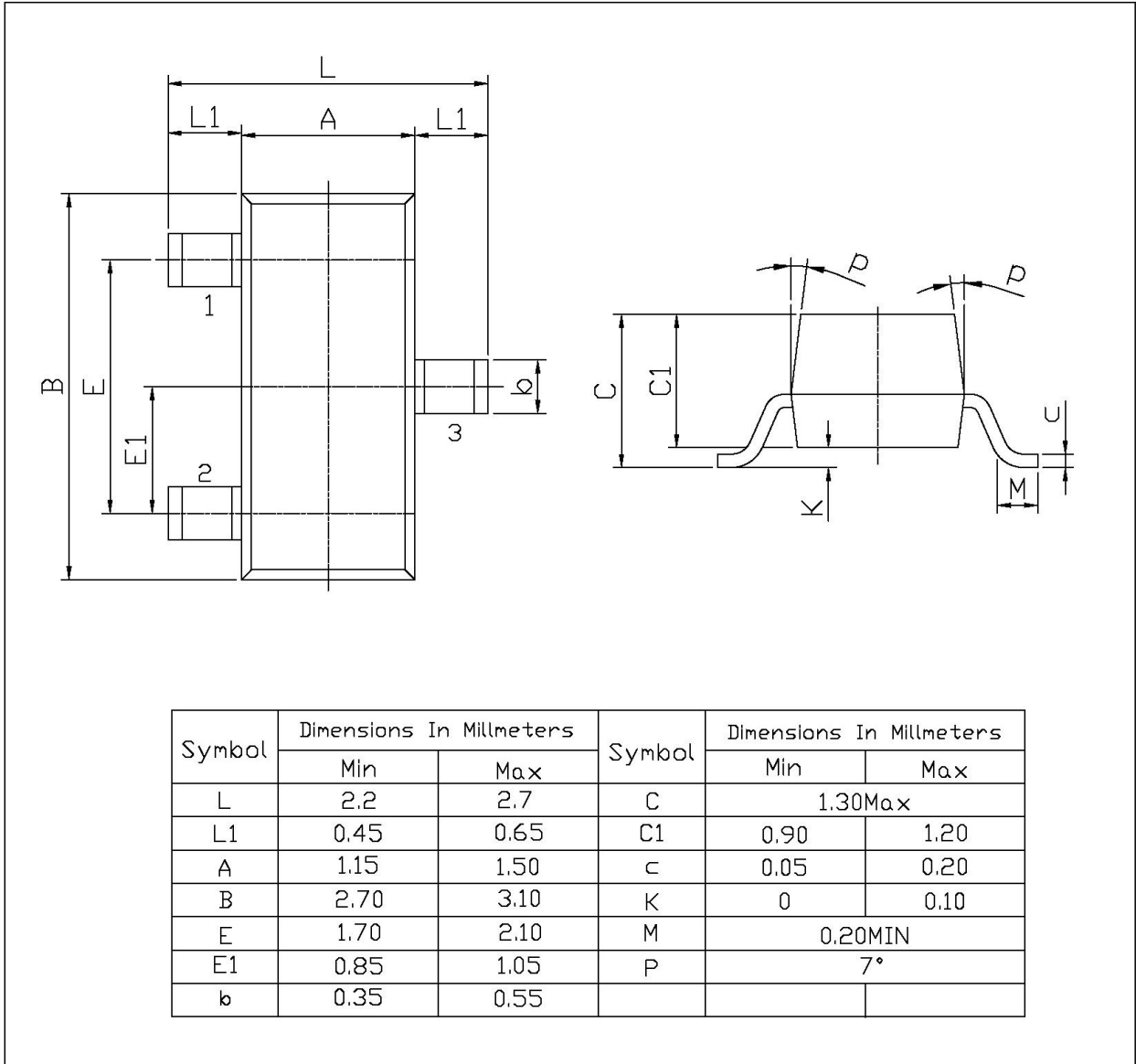
电参数曲线图 / Electrical Characteristic Curve



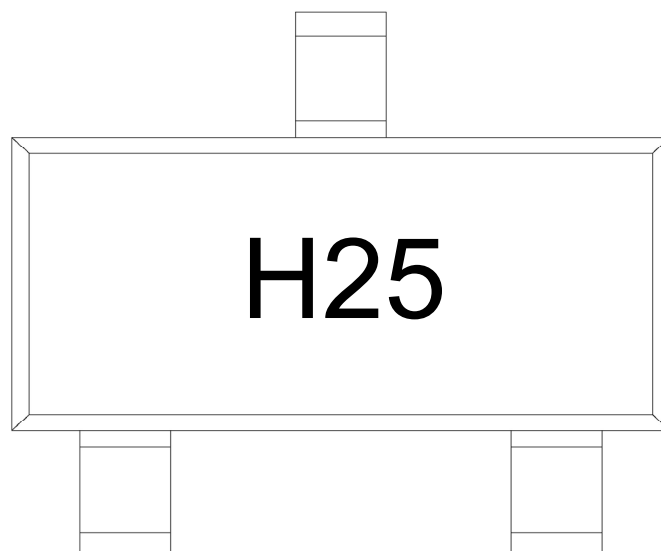
外形尺寸图 / Package Dimensions

SOT-23

单位: mm



印章说明 / Marking Instructions



说明：

H： 为公司代码

25： 为型号代码

Note:

H： Company Code

25： 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 ~ 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-23	3,000	10	30,000	6	180,000	7" ×8	180×120×180	390×385×205

使用说明 / Notices