

描述 / Descriptions

SOT-23 塑封封装 PNP 半导体三极管。Silicon PNP transistor in a SOT-23 Plastic Package.

特征 / Features

低饱和,大电流。

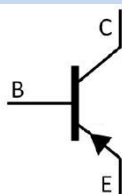
Low saturation voltage, large collector current.

用途 / Applications

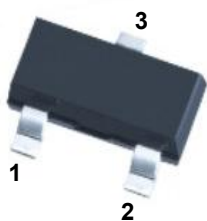
一般放大和静音开关。

General purpose amplifier and muting switch application.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



PIN1 : Base PIN 2 : Emitter PIN 3 : Collector

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

h_{FE} Classifications Symbol	A	B
h_{FE} Range	300~600	500~1000
Marking	HGAA	HGAB

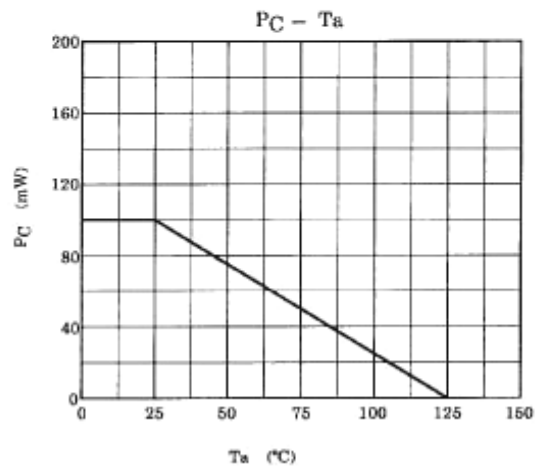
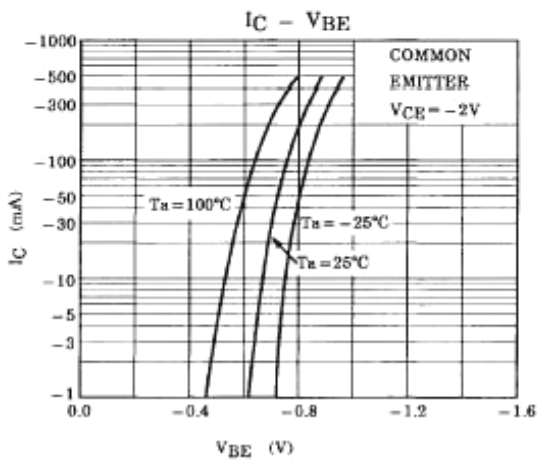
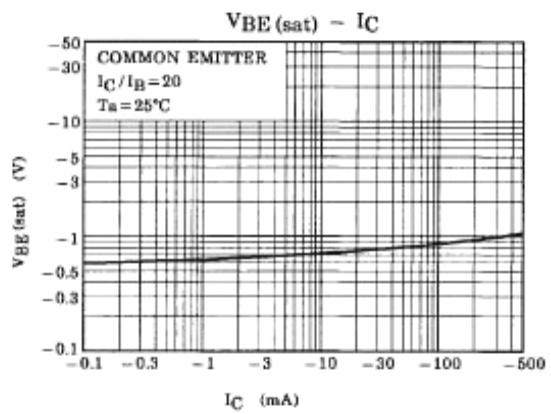
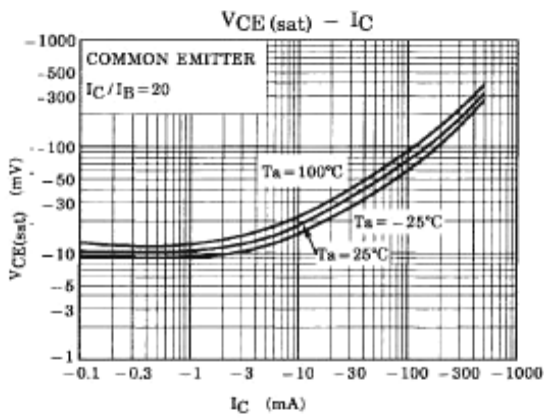
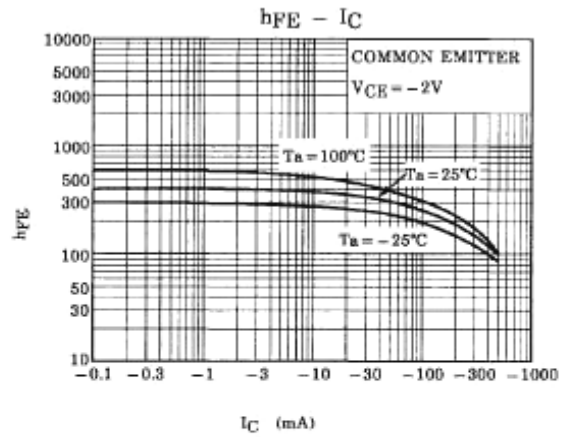
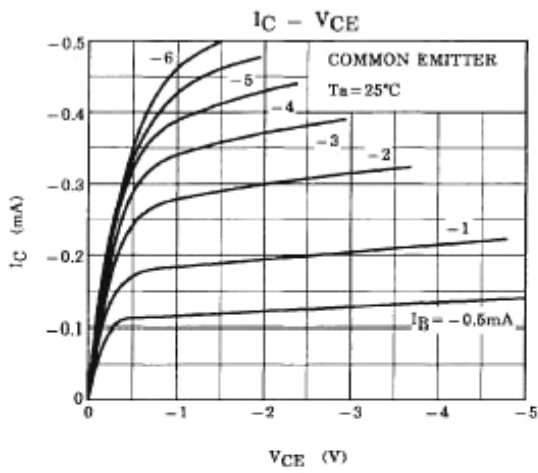
极限参数 / Absolute Maximum Ratings(Ta=25°C)

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Collector to Base Voltage	V_{CBO}	-15	V
Collector to Emitter Voltage	V_{CEO}	-12	V
Emitter to Base Voltage	V_{EBO}	-5.0	V
Collector Current	I_C	-400	mA
Base Current	I_B	-50	mA
Collector Power Dissipation	P_C	100	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}	$V_{CB}=-15V$ $I_E=0$			-0.1	μA
Emitter Base Cut-Off Current	I_{EBO}	$V_{EB}=-5.0V$ $I_C=0$			-0.1	μA
DC Current Gain	h_{FE}	$V_{CE}=-2.0V$ $I_C=-10mA$	300		1000	
Collector to Emitter Saturation Voltage	$V_{CE(sat)(1)}$	$I_C=-10mA$ $I_B=-0.5mA$		-0.015	-0.03	V
	$V_{CE(sat)(2)}$	$I_C=-200mA$ $I_B=-10mA$		-0.11	-0.25	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-200mA$ $I_B=-10mA$		-0.87	-1.2	V
Transition Frequency	f_T	$V_{CE}=-2.0V$ $I_E=-10mA$	80	130		MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=-10V$ $I_E=0$ $f=1.0MHz$		4.2		pF
Collector-Emitter On Resistance	R_{on}	$I_B=-1.0mA$ $V_{in}=-1.0V$ $V_{rms}f=1KHz$		0.9		Ω
Switching time	Turn-On Time	t_{on}	$I_{B1}=-I_{B2}=5.0mA$	40		ns
	Storage Time	T_{stg}		280		
	Fall Time	t_f		45		

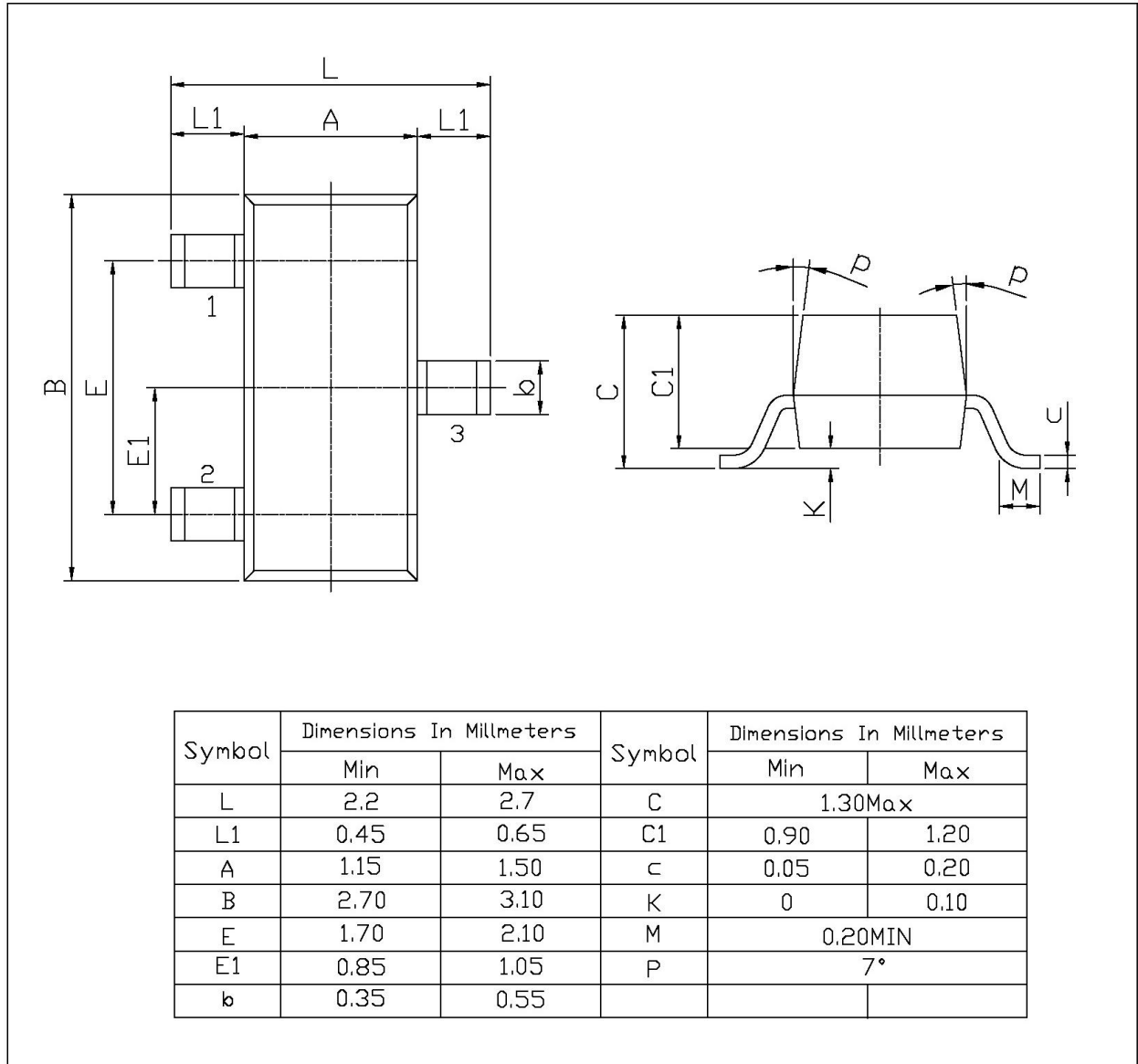
电参数曲线图 / Electrical Characteristic Curve



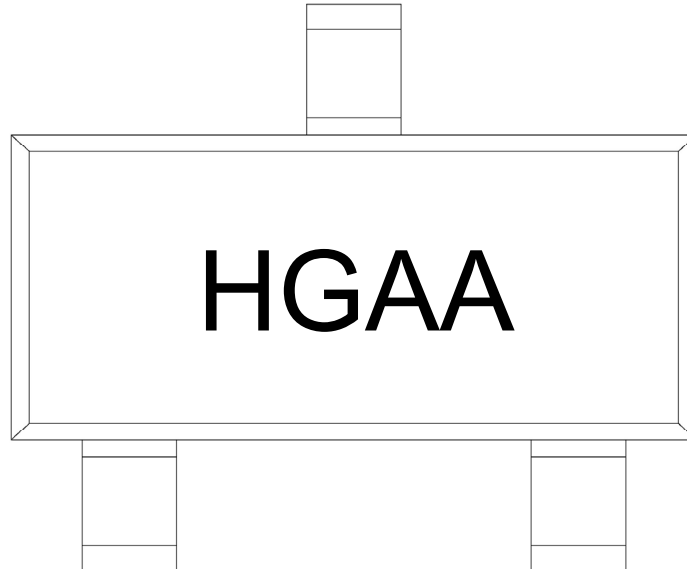
外形尺寸图 / Package Dimensions

SOT-23

单位: mm



印章说明 / Marking Instructions



说明：

H： 为公司代码

GA： 为型号代码

A： 为 h_{FE} 档次代码

Note:

H: Company Code.

GA: Product Type Code

A: h_{FE} Classifications Symbol Code

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" x8	180×120×180	390×385×205

使用说明 / Notices