

### 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

$P_C$  大,  $h_{FE}$  高且特性好, 与 9014M 互补。

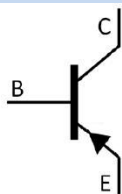
High  $P_C$  and  $I_C$ , excellent  $h_{FE}$  linearity, complementary pair with 9014M.

### 用途 / Applications

用于低电平、低噪声的前置放大器。

low frequency, low noise pre-amplifier.

### 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

$h_{FE}$ Classifications Symbol	A	B	C	D
$h_{FE}$ Range	60~150	100~300	200~600	400~1000
Marking	HM6A	HM6B	HM6C	HM6D

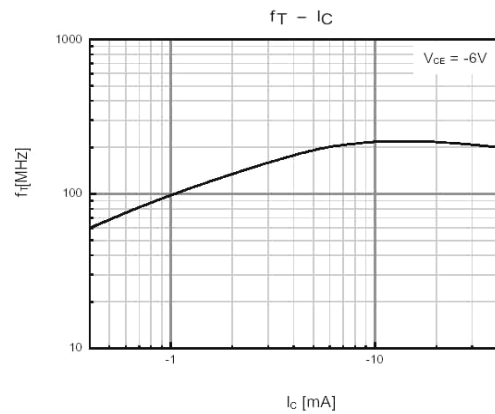
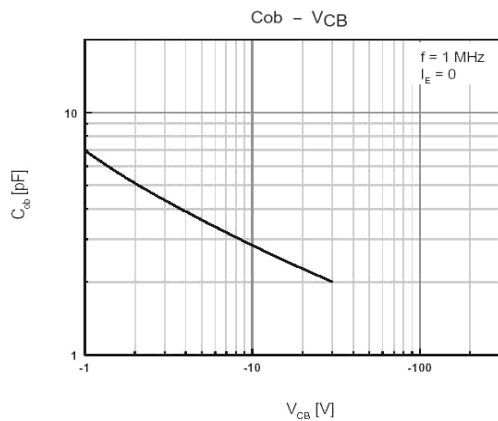
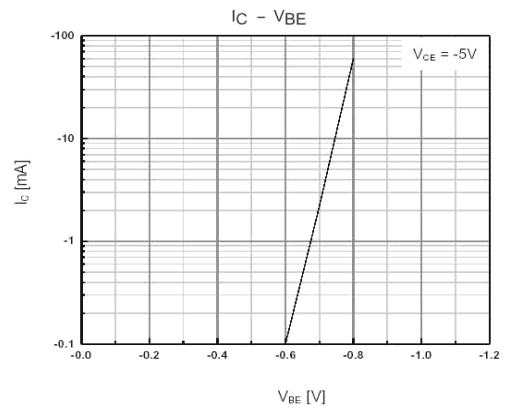
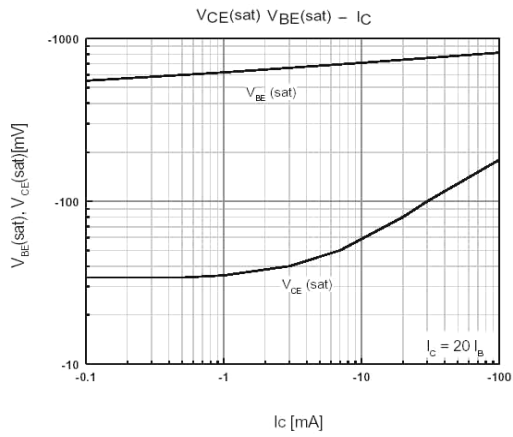
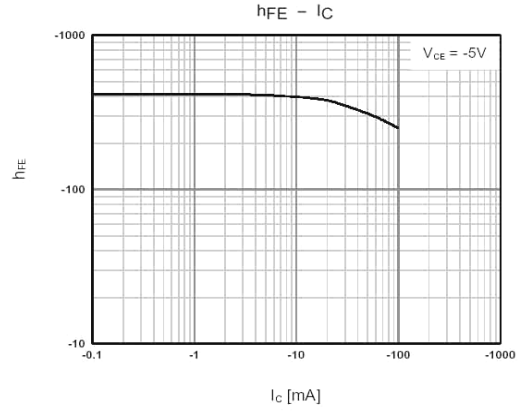
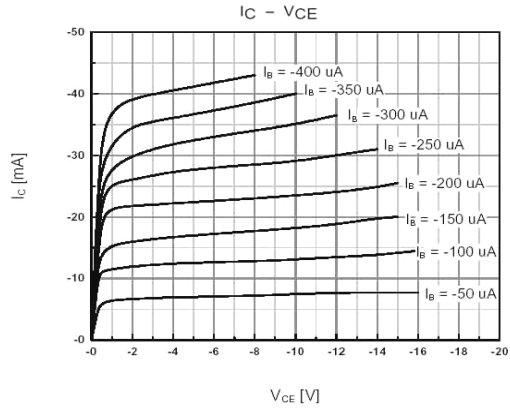
**极限参数 / Absolute Maximum Ratings(Ta=25°C)**

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Collector to Base Voltage	$V_{CBO}$	-50	V
Collector to Emitter Voltage	$V_{CEO}$	-45	V
Emitter to Base Voltage	$V_{EBO}$	-5.0	V
Collector Current	$I_C$	-100	mA
Collector Power Dissipation	$P_C$	400	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 to Base Breakdown Voltage	$V_{CBO}$	$I_C=-0.1mA$ $I_E=0$	-50			V
Collector to Emitter Breakdown Voltage	$V_{CEO}$	$I_C=-1.0mA$ $I_B=0$	-45			V
Emitter to Base Breakdown Voltage	$V_{EBO}$	$I_E=-0.1mA$ $I_C=0$	-5.0			V
Collector Cut-Off Current	$I_{CBO}$	$V_{CB}=-50V$ $I_E=0$			-0.05	$\mu A$
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB}=-5.0V$ $I_C=0$			-0.05	$\mu A$
DC Current Gain	$h_{FE}$	$V_{CE}=-5.0V$ $I_C=-1.0mA$	60		600	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-100mA$ $I_B=-5.0mA$		-0.2	-0.7	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-100mA$ $I_B=-5.0mA$		-0.82	-1.0	V
Base-Emitter Voltage	$V_{BE}$	$V_{CE}=-5.0V$ $I_C=-2.0mA$		-0.65	-0.75	V
Transition Frequency	$f_T$	$V_{CE}=-5.0V$ $I_C=-10mA$	100	190		MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB}=-10V$ $I_E=0$ $f=1.0MHz$		4.5	7.0	pF
Noise Figure	NF	$V_{CE}=-5.0V$ $I_C=-0.2mA$ $R_g=2.0K\Omega$ $f=1.0KHz$ $\Delta f=200Hz$		0.7	10	dB

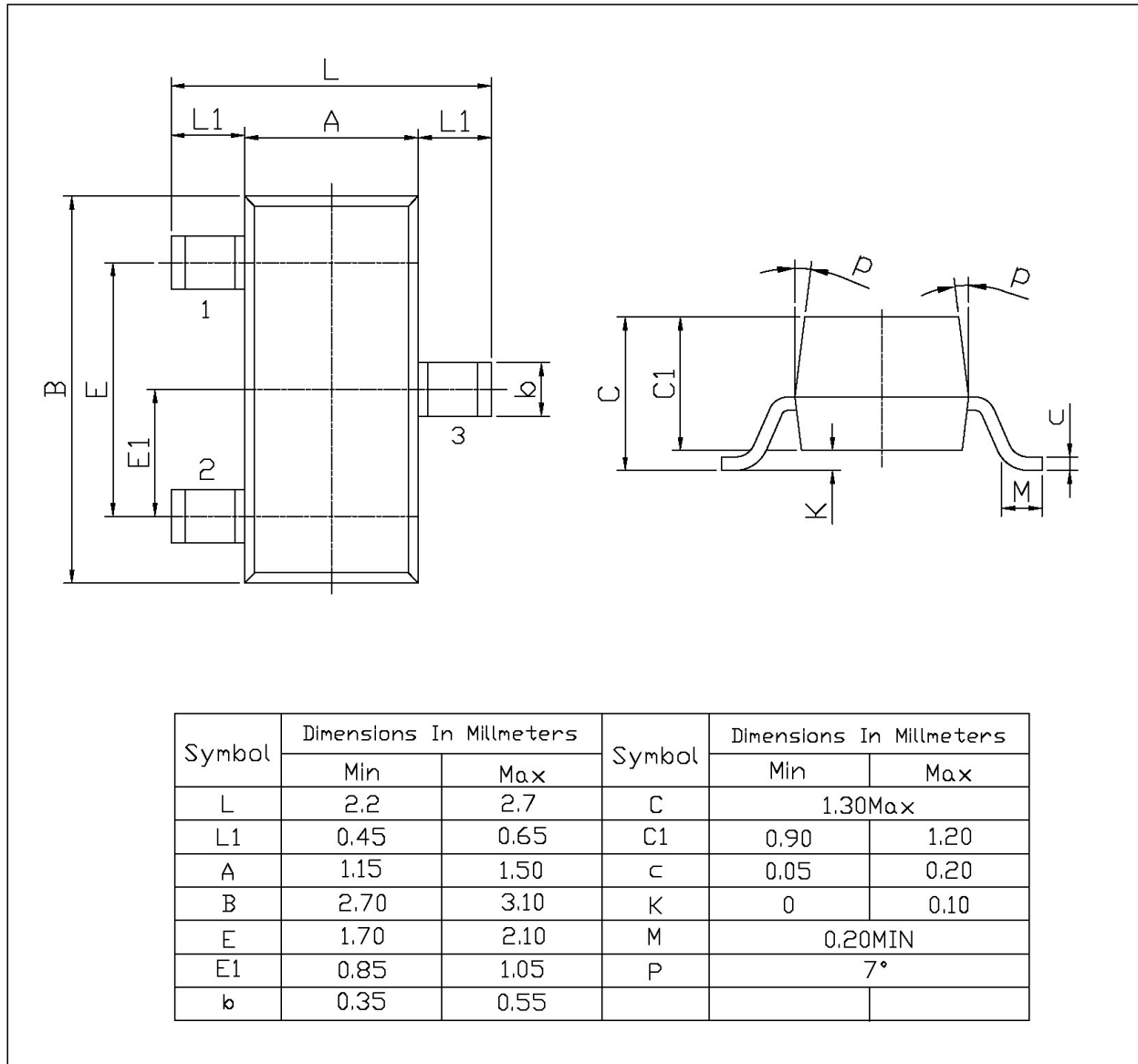
电参数曲线图 / Electrical Characteristic Curve



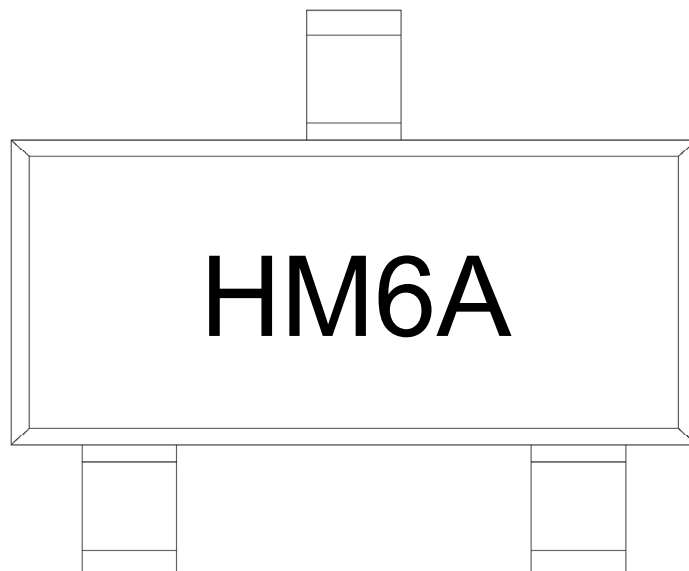
外形尺寸图 / Package Dimensions

SOT-23

单位: mm



印章说明 / Marking Instructions



说明：

H： 为公司代码

M6： 为型号代码

A： 为  $h_{FE}$  档次代码

Note:

H： Company Code

M6： 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 <sup>3</sup> )		
	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**