

CMPT3019

Rev.F Apr.-2017

描述 / Descriptions

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

特征 / Features

大电流。

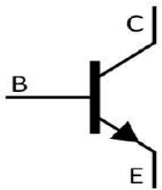
High current.

用途 / Applications

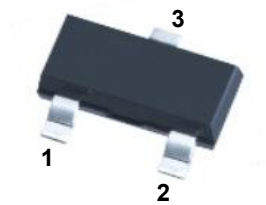
用于一般放大。

General power amplifier.

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} Range	100~300
Marking	HC3A

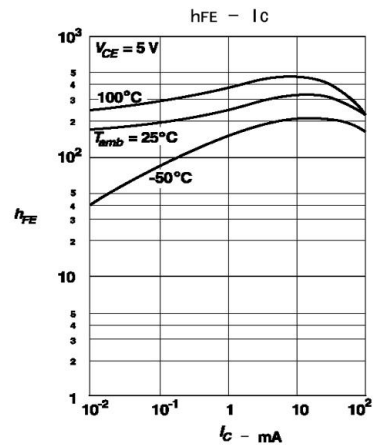
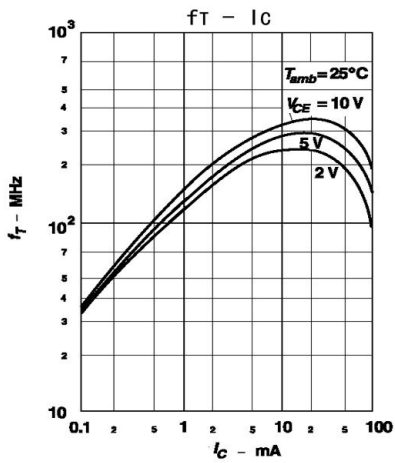
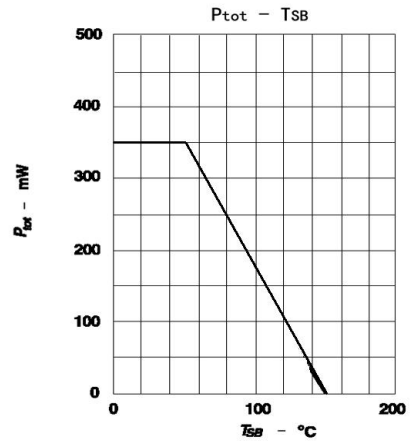
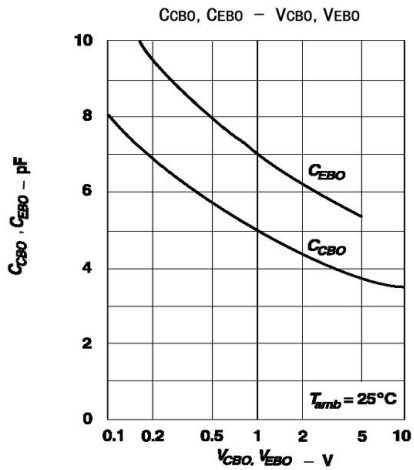
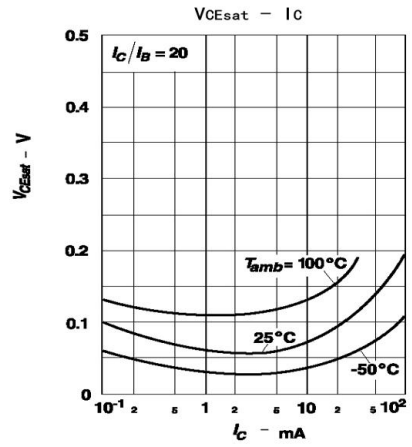
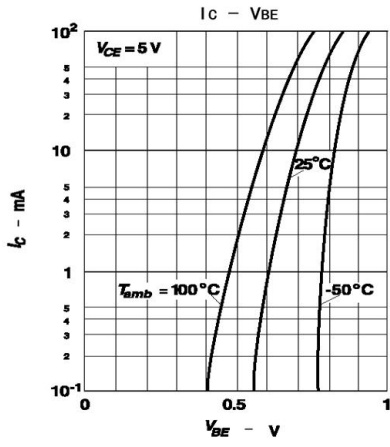
极限参数 / Absolute Maximum Ratings(Ta=25°C)

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Collector to Base Voltage	V _{CBO}	120	V
Collector to Emitter Voltage	V _{CEO}	80	V
Emitter to Base Voltage	V _{EBO}	7.0	V
Collector Current - Continuous	I _C	500	mA
Peak Collector Current - Continuous	I _{CM}	1.0	A
Collector Power Dissipation	P _C	350	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 =100μA I _E =0	120			V
Collector to Emitter Breakdown Voltage	V _{CEO}	I _C =30mA I _B =0	80			V
Emitter to Base Breakdown Voltage	V _{EBO}	I _E =100μA I _C =0	7.0			V
Collector Cut-Off Current	I _{CBO}	V _{CB} =90V I _E =0			0.01	μA
Emitter Cut-Off Current	I _{EBO}	V _{EB} =5.0V I _C =0			0.01	μA
DC Current Gain	h _{FE(1)}	V _{CE} =10V I _C =150mA	100		300	
	h _{FE(2)}	V _{CE} =10V I _C =500mA	50			
	h _{FE(3)}	V _{CE} =10V I _C =10mA	90			
	h _{FE(4)}	V _{CE} =10V I _C =0.1mA	50			
Collector to Emitter Saturation Voltage	V _{CE(sat)(1)}	I _C =150mA I _B =15mA			0.2	V
	V _{CE(sat)(2)}	I _C =500mA I _B =50mA			0.5	V
Base to Emitter Saturation Voltage	V _{BE(sat)}	I _C =150mA I _B =15mA			1.1	V
Transition Frequency	f _T	V _{CE} =10V f=1.0MHz I _C =50mA	100			MHz
Collector Output Capacitance	C _{ob}	V _{CB} =10V f=1.0MHz I _E =0			12	pF
Collector Input Capacitance	C _{ib}	V _{EB} =0.5V f=1.0MHz I _C =0,			60	pF
Noise Figure	NF	V _{CB} =10V I _C =100mA Rs=1KΩ f=1.0KHz			4.0	dB

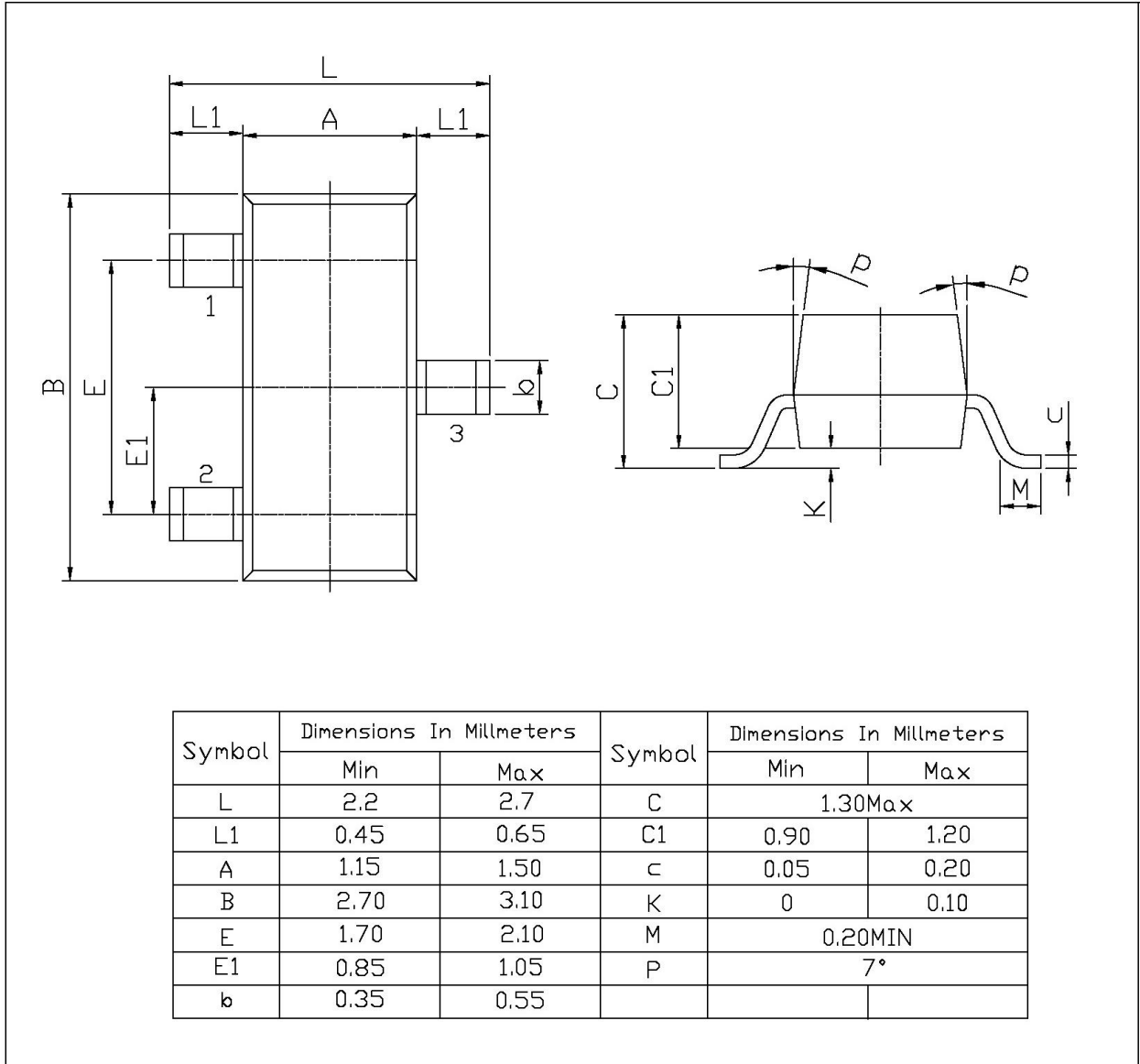
电参数曲线图 / Electrical Characteristic Curve



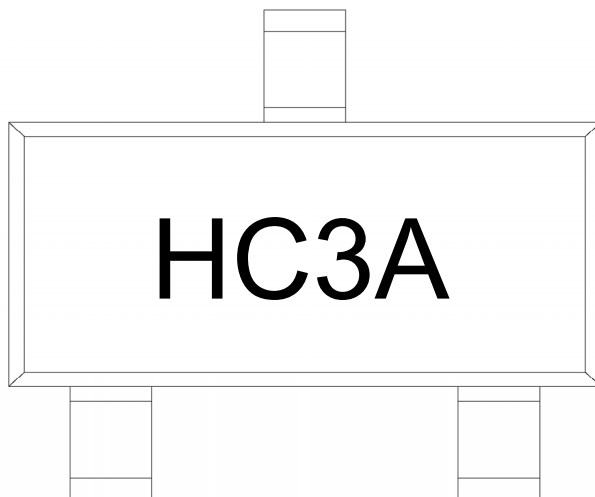
外形尺寸图 / Package Dimensions

SOT-23

单位: mm



印章说明 / Marking Instructions



说明：

H： 为公司代码

C3A： 为型号代码

Note:

H: Company Code.

C3A: Product Type 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