

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

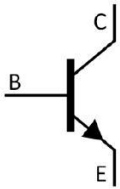
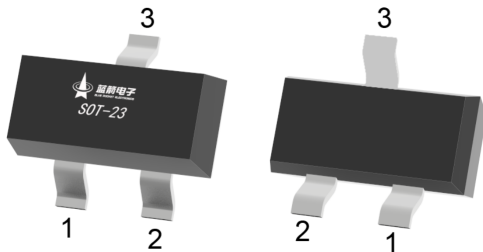
耐压高,电流大,有极好的 h_{FE} 特性,低噪声系数,符合 AEC-Q101 标准高可靠性要求,无卤产品。

High voltage and high current, excellent h_{FE} linearity, low noise, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

用途 / Applications

用于普通低频放大,激励级放大,满足汽车应用的严格要求。

Audio frequency general purpose, driver stage amplifier applications, Meet the stringent requirements of automotive applications.

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	O	Y	GR	BL
h_{FE} Range	70~140	120~240	200~400	350~700
Marking	QHFO	QHFY	QHFG	QHFB

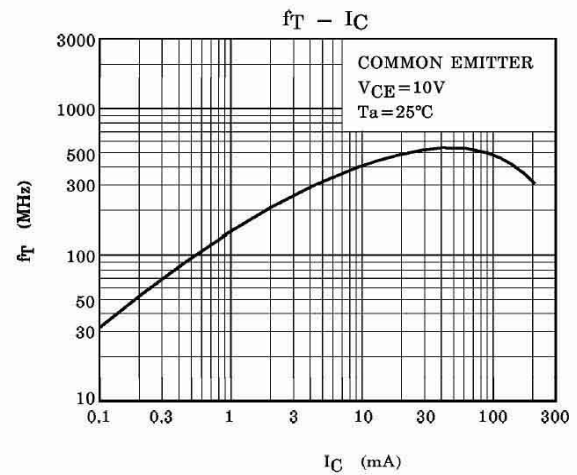
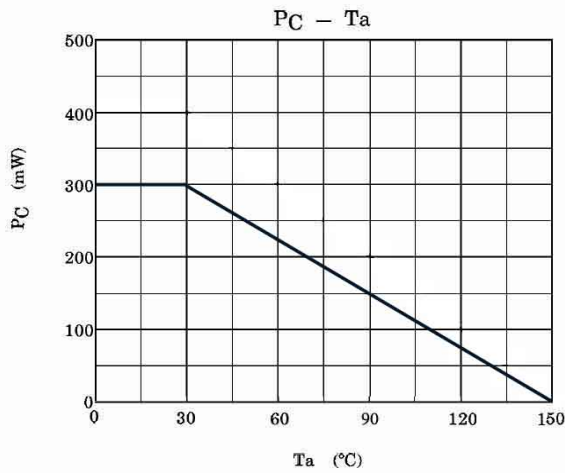
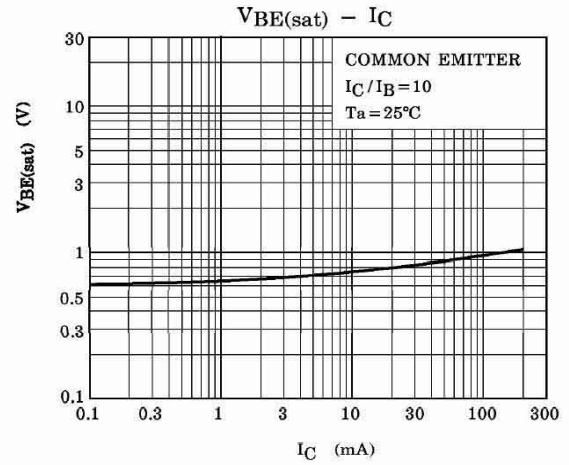
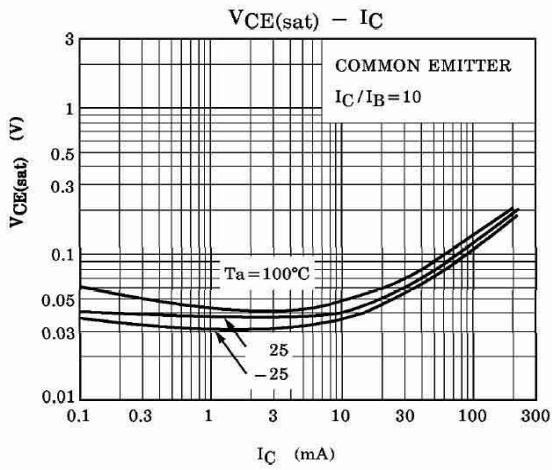
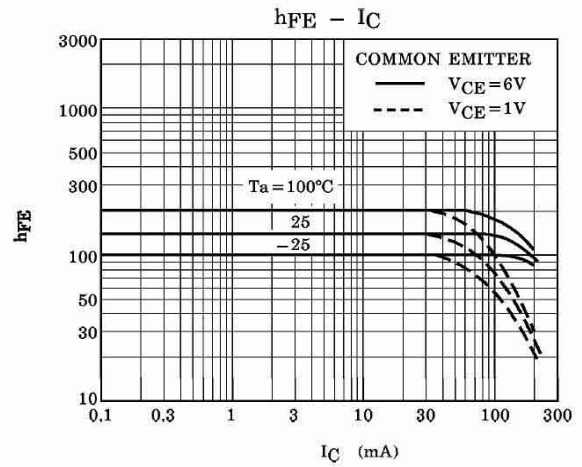
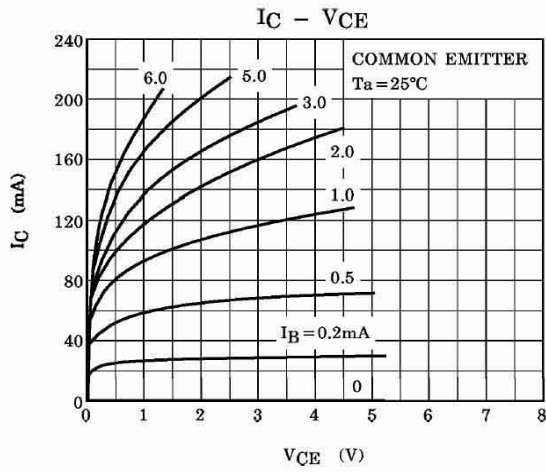
极限参数 / Absolute Maximum Ratings(Ta=25°C)

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Collector to Base Voltage	V _{CB0}	60	V
Collector to Emitter Voltage	V _{CEO}	50	V
Emitter to Base Voltage	V _{EBO}	5.0	V
Collector Current	I _C	150	mA
Base Current	I _B	50	mA
Collector Power Dissipation	P _C	300	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} =60V 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(1)}	V _{CE} =6.0V I _C =2.0mA	70		700	
	h _{FE(2)}	V _{CE} =6.0V I _C =150mA	25	100		
Collector to Emitter Saturation Voltage	V _{CE(sat)}	I _C =100mA I _B =10mA		0.1	0.25	V
Base to Emitter Saturation Voltage	V _{BE(sat)}	I _C =100mA I _B =10mA			1.0	V
Transition Frequency	f _T	V _{CE} =10V I _C =1.0mA	80			MHz
Collector Output Capacitance	C _{ob}	V _{CB} =10V I _E =0 f=1.0MHz		2.0	3.5	pF
Base Intrinsic Resistance	r _{bb'}	V _{CB} =10V I _C =1.0mA f=30MHz		50		Ω
Noise Figure	NF	V _{CE} =6.0V I _C =0.1mA R _g =10KΩ f=1.0KHz		1.0	10	dB

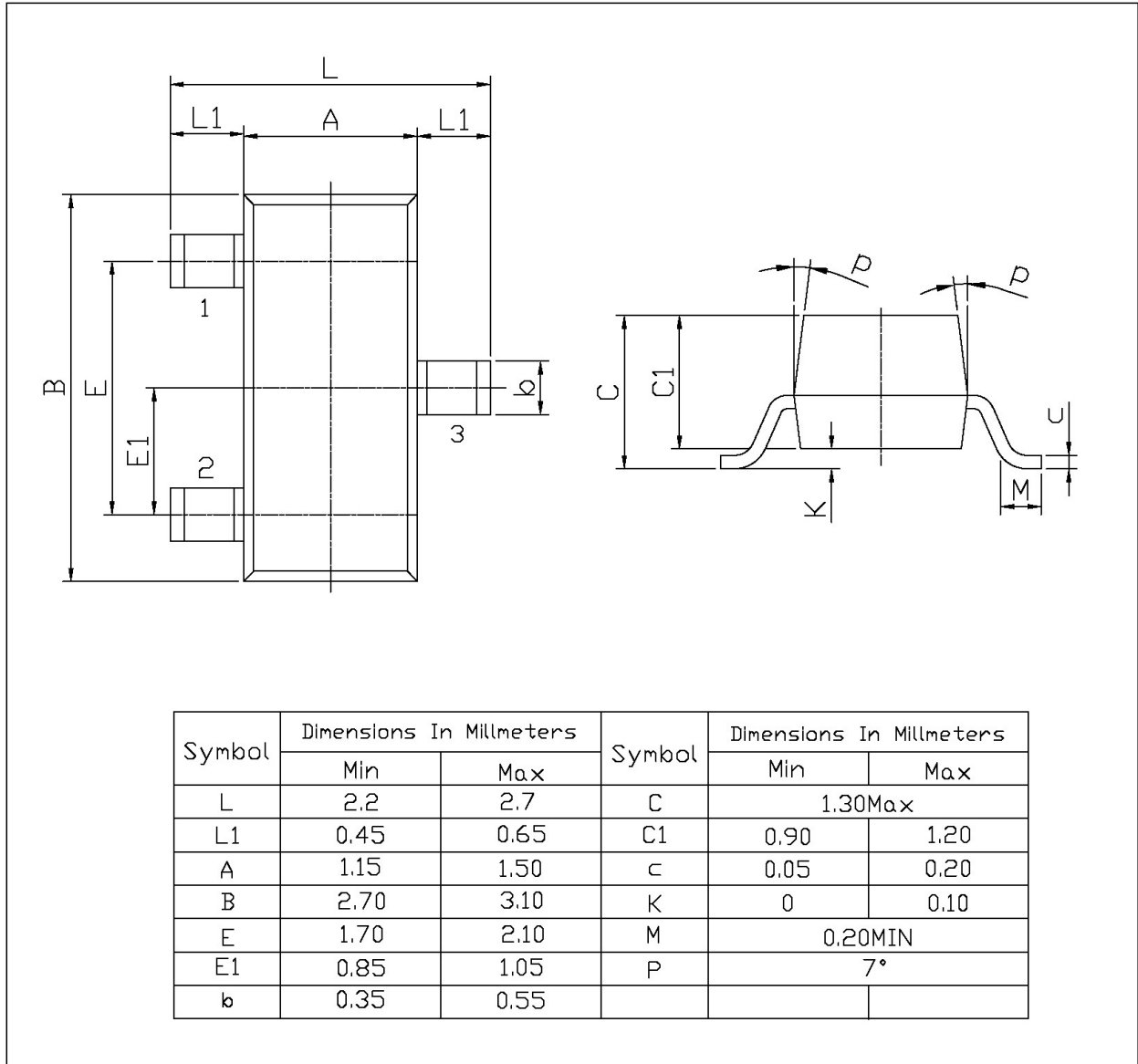
电参数曲线图 / Electrical Characteristic Curve



外形尺寸图 / Package Dimensions

SOT-23

单位: mm



印章说明 / Marking Instructions



说明：

Q： 为汽车无卤产品标识

HF： 为型号代码

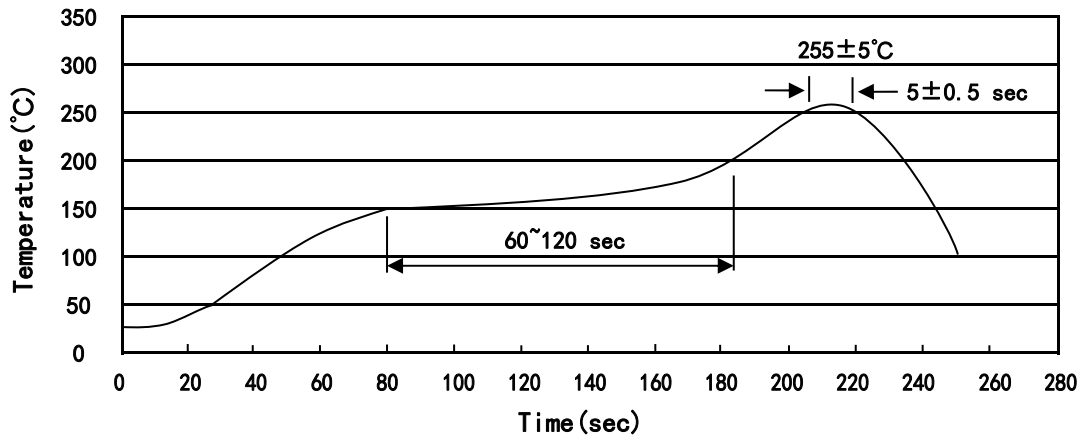
O： 为 h_{FE} 档次代码

Note:

Q: Automobile halogen-free product Code

HF: Product Type Code

O: 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 150~200°C，时间 60~120sec;
- 2、峰值温度 255±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:150~200°C, Time:60~120sec.
- 2.Peak Temp.:255±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