

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

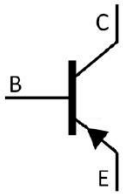
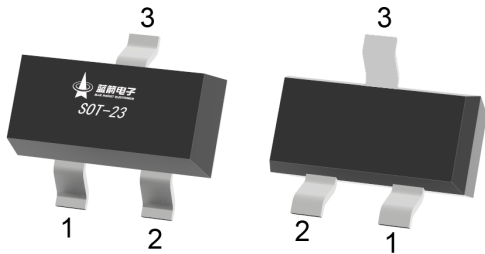
集电极电流可达 600mA，符合 AEC-Q101 标准高可靠性要求，无卤产品。

Collector currents to 600mA. Halogen free product, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

用途 / Applications

用于普通放大，满足汽车应用的严格要求。

General purpose amplifier, Meet the stringent requirements of automotive 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

h _{FE} Range	100~300
Marking	Q2F

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

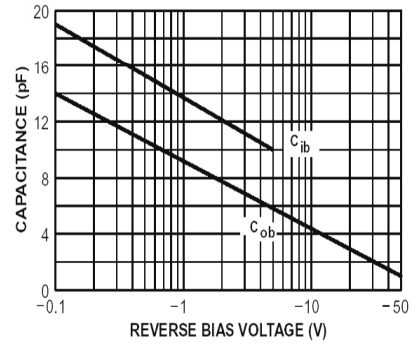
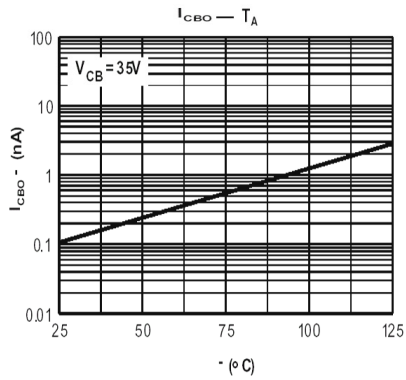
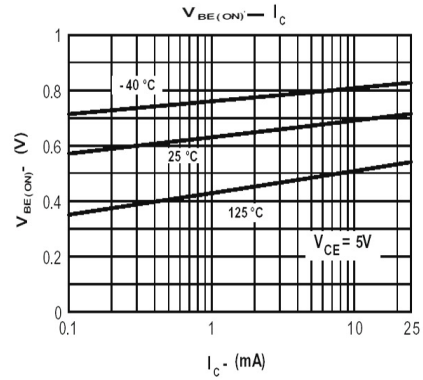
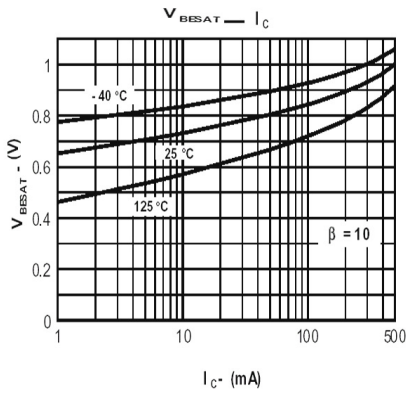
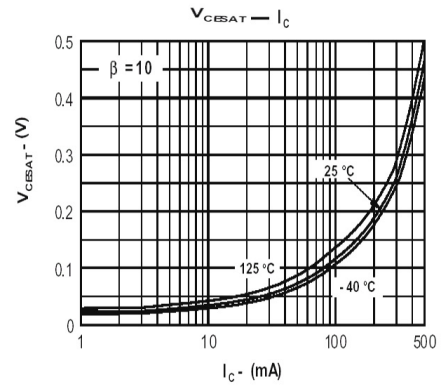
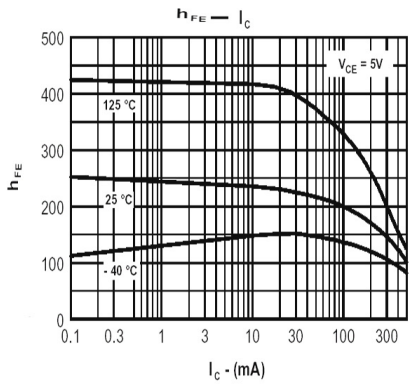
参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Collector to Base Voltage	V _{CBO}	-60	V
Collector to Emitter Voltage	V _{CEO}	-60	V
Emitter to Base Voltage	V _{EBO}	-5.0	V
Collector Current	I _C	-600	mA
Collector Power Dissipation	P _C	350	mW
Junction Temperature	T _J	150	°C
Storage Temperature Range	T _{stg}	-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 =-10μA I _E =0	-60			V
Collector to Emitter Breakdown Voltage	V _{CEO}	I _C =-10mA I _B =0	-60			V
Emitter to Base Breakdown Voltage	V _{EBO}	I _E =-10μA I _C =0	-5.0			V
Collector Cut-Off Current	I _{CBO}	V _{CB} =-50V I _E =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	100			
	h _{FE(4)}	V _{CE} =-10V I _C =-1.0mA	100			
	h _{FE(5)}	V _{CE} =-10V I _C =-0.1mA	75			
Collector-Emitter Saturation Voltage	V _{CE(sat) (1)}	I _C =-150mA I _B =-15 mA			-0.4	V
	V _{CE(sat) (2)}	I _C =-500mA I _B =-50mA			-1.6	V
Base-Emitter Saturation Voltage	V _{BE(sat) (1)}	I _C =-150mA I _B =-15 mA			-1.3	V
	V _{BE(sat) (2)}	I _C =-500mA I _B =-50mA			-2.6	V
Transition Frequency	f _T	V _{CE} =-20V I _C =-50mA f=100MHz	200			MHz
Output Capacitance	C _{ob}	V _{CB} =-10V I _E =0 f=1.0MHz			8.0	pF
Turn-On Time	t _{on}	V _{CC} =-30V I _C =-150mA I _{B1} =-15mA			50	ns
Turn-Off Time	t _{off}	V _{CC} =-30V I _C =-150mA I _{B1} =I _{B2} =-15mA			100	ns

*Pulse Test: Pulse Width ≤ 300 μs, Duty Cycle ≤ 2.0%

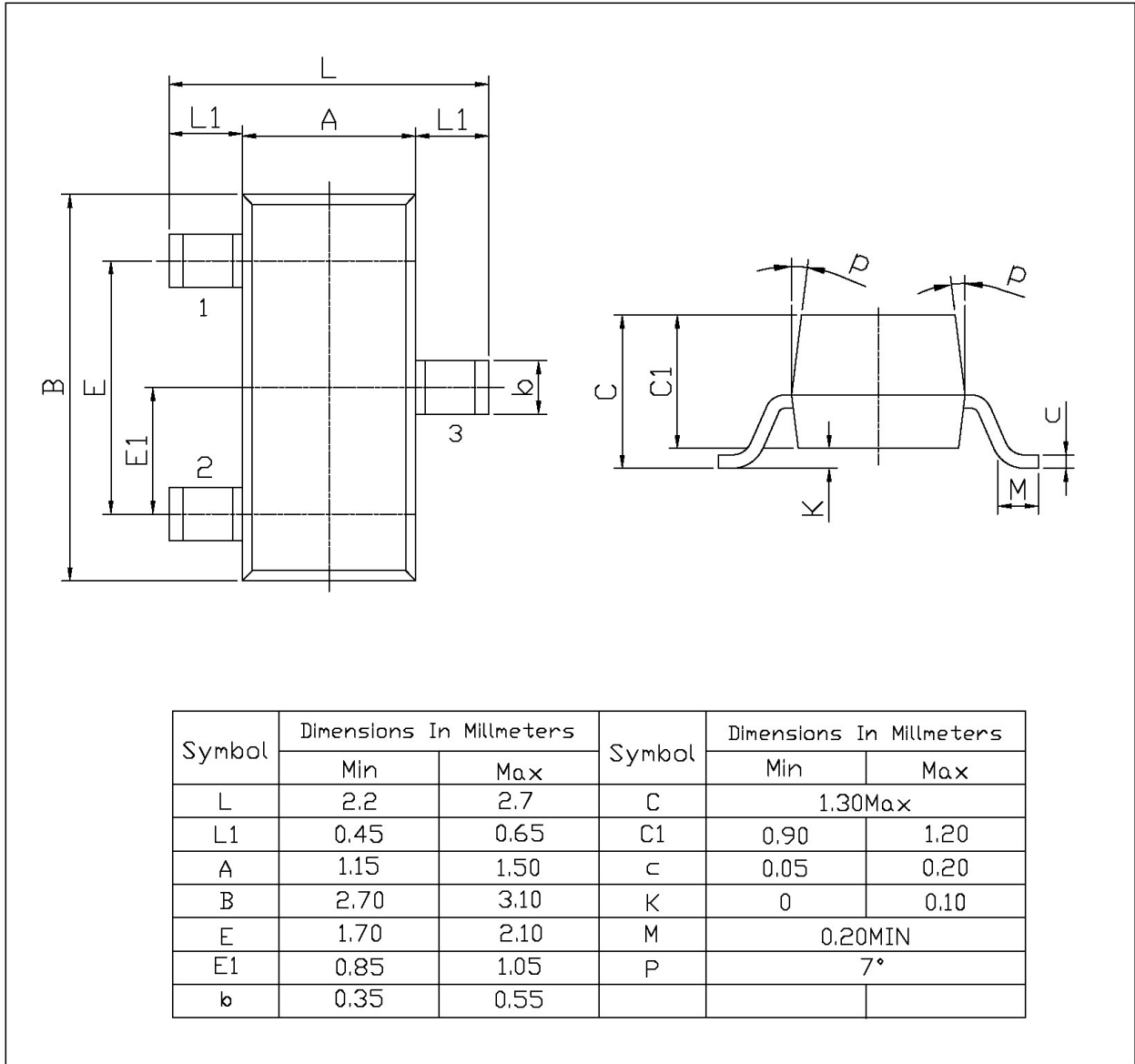
电参数曲线图 / Electrical Characteristic Curve



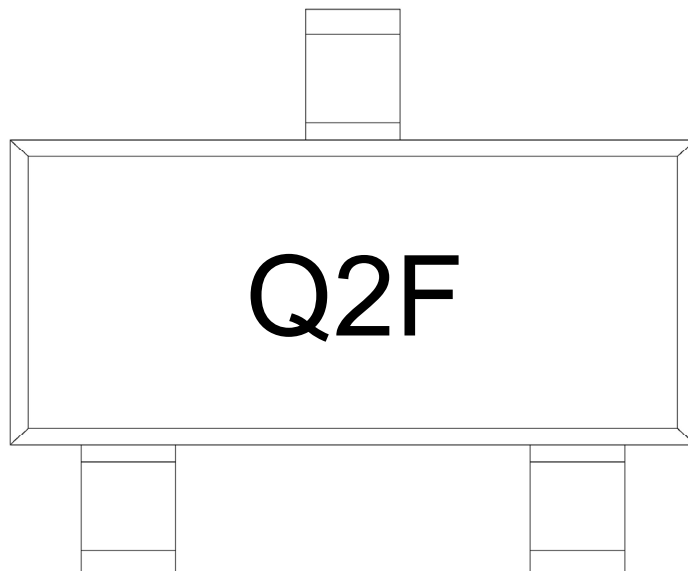
外形尺寸图 / Package Dimensions

SOT-23

单位: mm



印章说明 / Marking Instructions



说明：

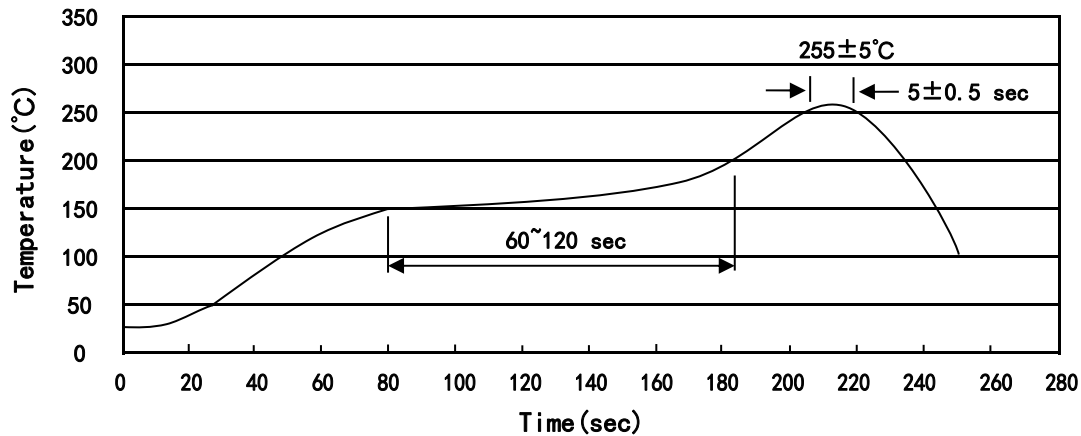
Q： 为汽车无卤产品标识

2F： 为型号代码

Note:

Q: Automobile halogen-free product Code

2F: 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 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	180000	7" ×8	180×120×180	390×385×205

使用说明 / Notices