

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

高功率增益,低噪声输出,非常低的互调失真。

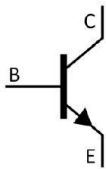
High power gain, low noise figure, very low intermodulation distortion.

用途 / Applications

用于射频宽频放大和振荡。

RF wideband amplifiers and oscillators.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



PIN 1 : Base PIN 2 : Emitter PIN 3 : Collector

印章代码 / Marking

h_{FE} Range	>40
Marking	HR2P

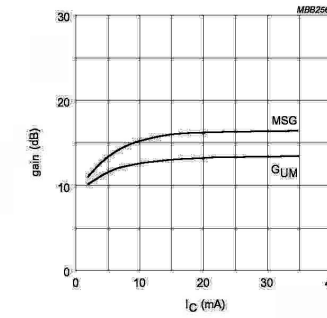
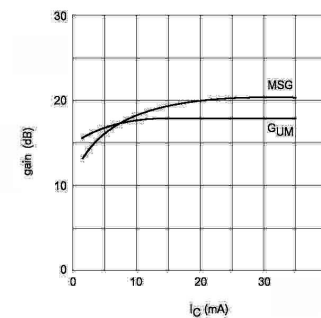
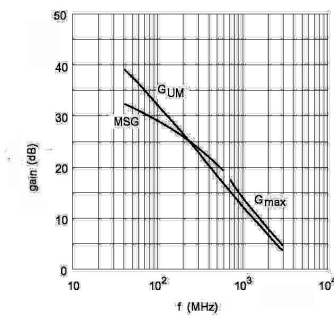
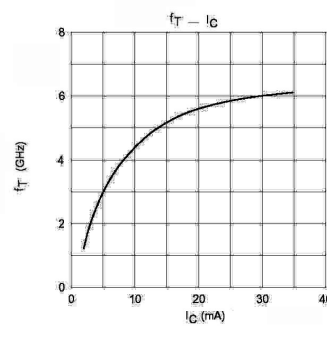
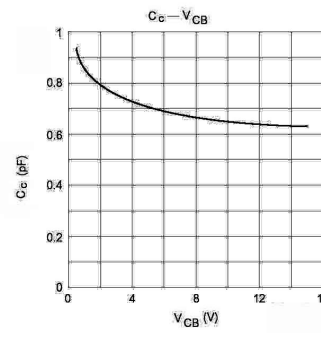
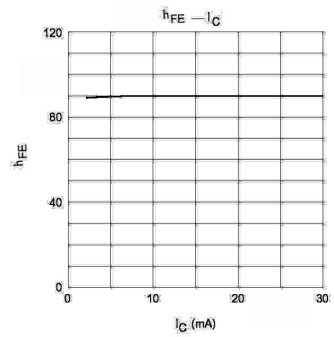
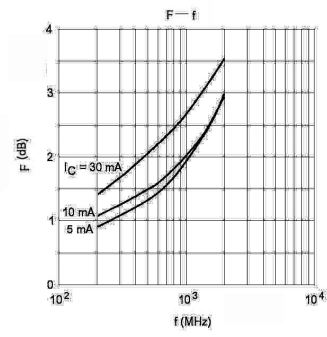
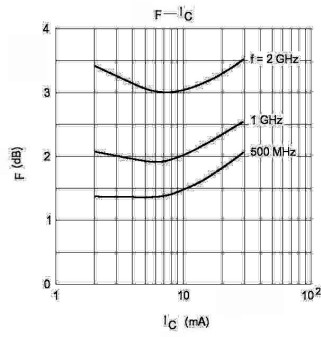
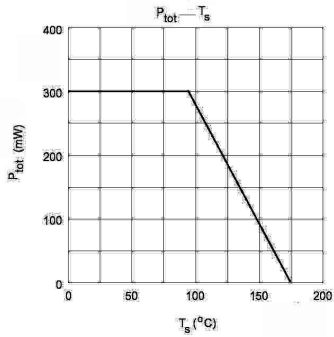
极限参数 / Absolute Maximum Ratings(Ta=25°C)

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}	2.0	V
Collector Current - Continuous	I_C	35	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 to Base Breakdown Voltage	V_{CBO}	$I_C=100\mu A$ $I_E=0$	15			V
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=500\mu A$ $I_B=0$	12			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_E=100\mu A$ $I_C=0$	2.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=5.0V$ $I_E=0$			0.05	μA
DC Current Gain	h_{FE}	$V_{CE}=5.0V$ $I_C=30mA$	40	90		
Collector Capacitance	C_c	$I_E=0$ $V_{CB}=5.0V$ $f=1.0MHz$		0.7		pF
Emitter Capacitance	C_e	$V_{EB}=0.5V$ $I_C=0$ $f=1.0MHz$		1.9		pF
Feedback Capacitance	C_{re}	$V_{CE}=5.0V$ $I_C=0$ $T_{amb}=25^\circ C$ $f=1.0MHz$		0.6		pF
Transition Frequency	f_T	$I_C=30mA$ $V_{CE}=5.0V$ $f=500MHz$	4.5	6.0		GHz
Maximum Unilateral Power Gain	G_{UM}	$I_C=30mA$ $V_{CE}=8.0V$ $f=1.0GHz$ $T_{amb}=25^\circ C$		13		dB
		$I_C=30mA$ $V_{CE}=8.0V$ $f=2.0GHz$ $T_{amb}=25^\circ C$		7.0		dB

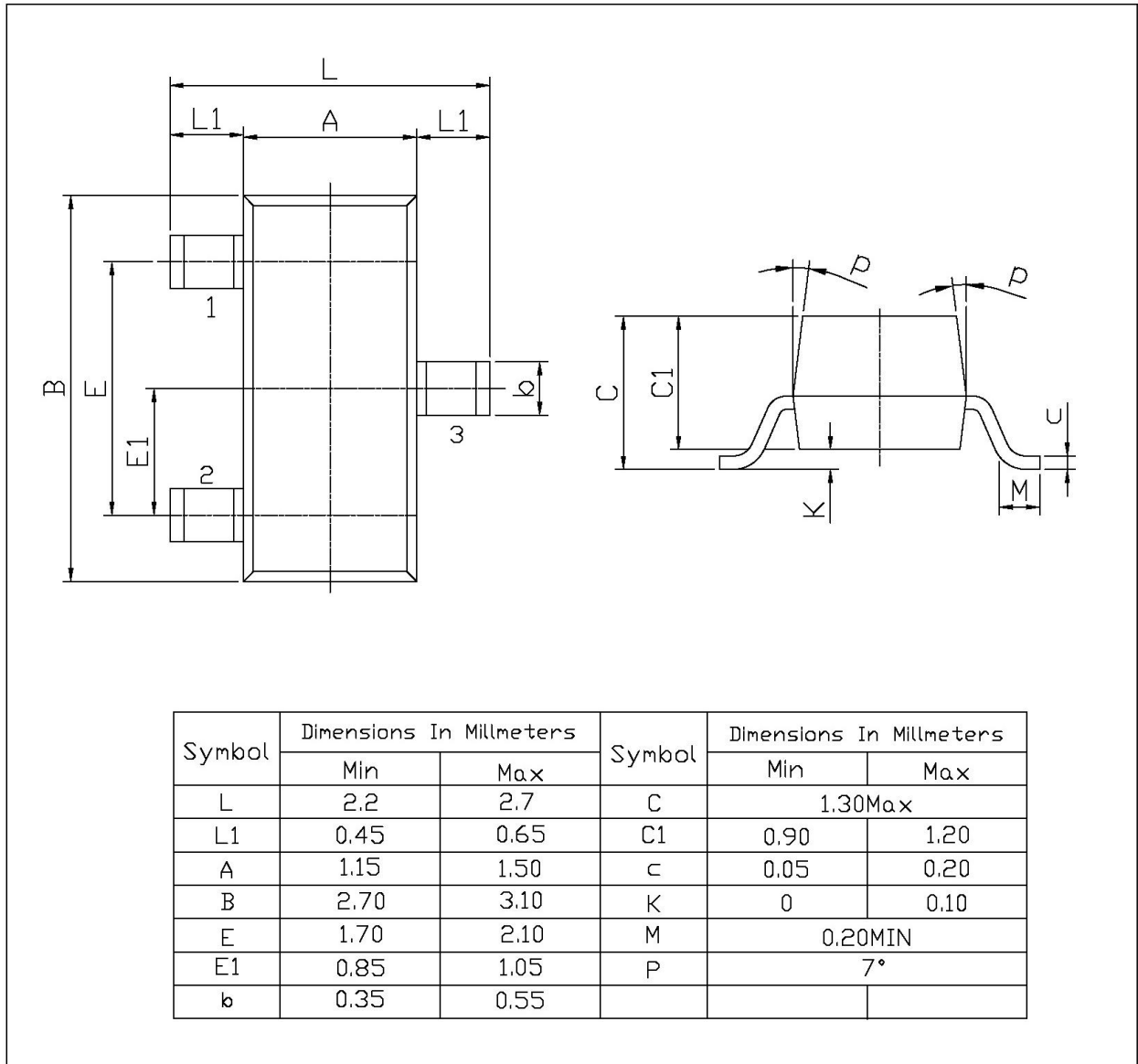
电参数曲线图 / Electrical Characteristic Curve



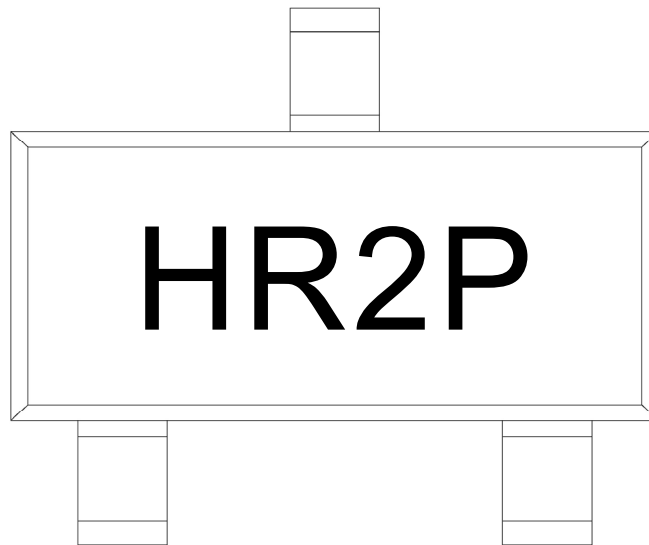
外形尺寸图 / Package Dimensions

SOT-23

单位: mm



印章说明 / Marking Instructions



说明：

H： 为公司代码

2RP： 为型号代码

Note:

H: Company Code.

2RP: 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