

描述 / Descriptions

SOT-323 塑封封装 NPN 半导体三极管。Silicon NPN transistor in a SOT-323 Plastic Package.

特征 / Features

集电-发射极饱和压降小 $V_{ce(sat)}=0.3V_{max}$ 、直流增益线性好。

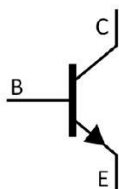
Collectoe to emitter saturation voltage $V_{ce(sat)}=0.3V_{max}$ Excellent lineality of DC forward current gain, Supper mini package for easy mounting.

用途 / Applications

用于集成电路输出信号的低频电压放大。

For hybrid IC, small type machine low frequency voltage amplify application.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



PIN1 : Emitter

PIN 2 : Base

PIN 3 : Collector

印章代码 / Marking

h_{FE} Classifications Symbol	Q	R	S	T
h_{FE} Range	120~270	180~390	270~560	390~820
Marking	HQH	HRH	HHS	HHT

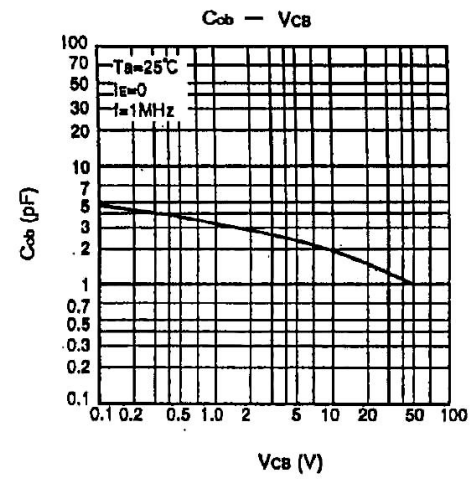
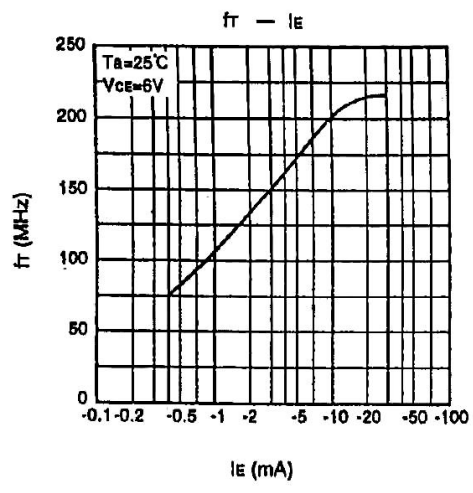
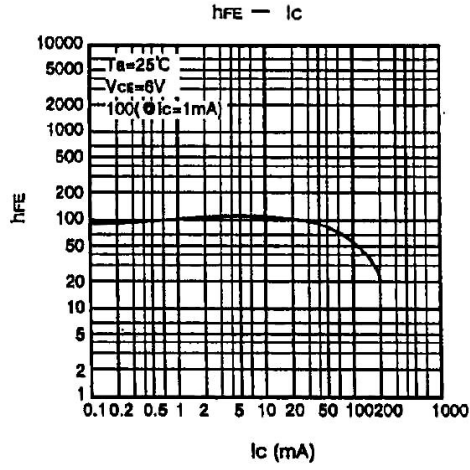
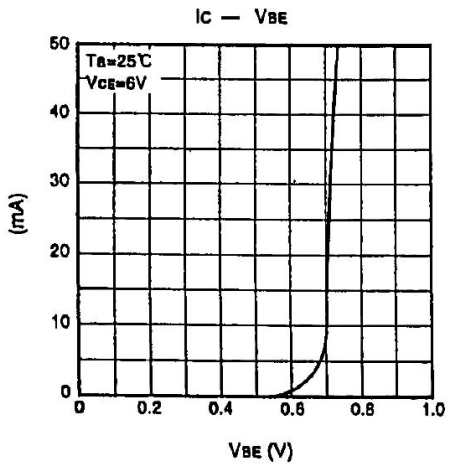
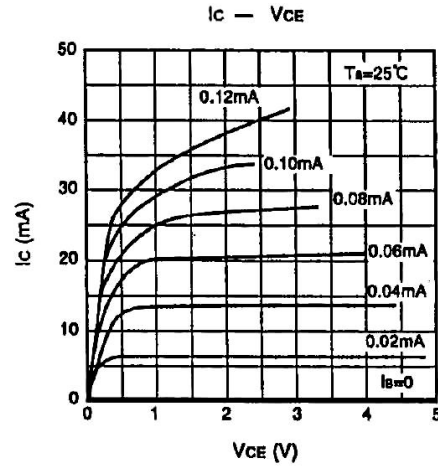
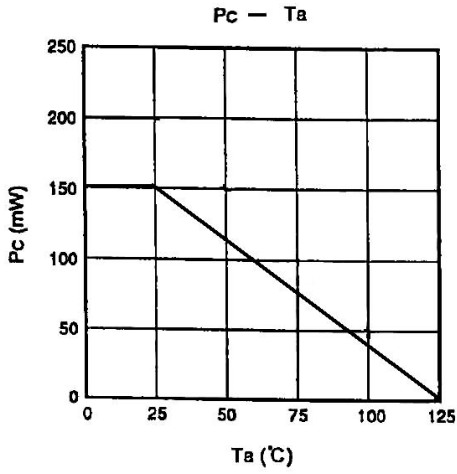
极限参数 / Absolute Maximum Ratings(Ta=25°C)

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}	50	V
Emitter to Base Voltage	V_{EBO}	6	V
Collector Current - Continuous	I_C	2SC4155	0.1
		2SC4155A	0.2
Collector Power Dissipation	P_C	150	mW
Junction Temperature	T_j	125	°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}	$I_C=0.1mA$ $R_{BE}=\infty$	50			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=50V$ $I_E=0$			0.5	μA
					0.1	
Emitter Base Cut-Off Current	I_{EBO}	$V_{EB}=4V$ $I_C=0$			0.1	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=6.0V$ $I_C=1.0mA$	120		820	
	$h_{FE(2)}$	$V_{CE}=6.0V$ $I_C=0.1mA$	70			
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	2SC4155 $I_C=30mA$ $I_B=1.5mA$			0.3	V
		2SC4155A $I_C=300mA$ $I_B=10mA$				
Transition Frequency	f_T	$V_{CE}=6.0V$ $I_C=10mA$		200		MHz
Output Capacitance	C_{ob}	$V_{CB}=6.0V$ $I_E=0$ $f=1.0MHz$		4		pF
Noise Figure	NF	$V_{CE}=6.0V$ $I_C=0.1mA$ $f=1.0KHz$ $R_G=2K\Omega$			15	dB

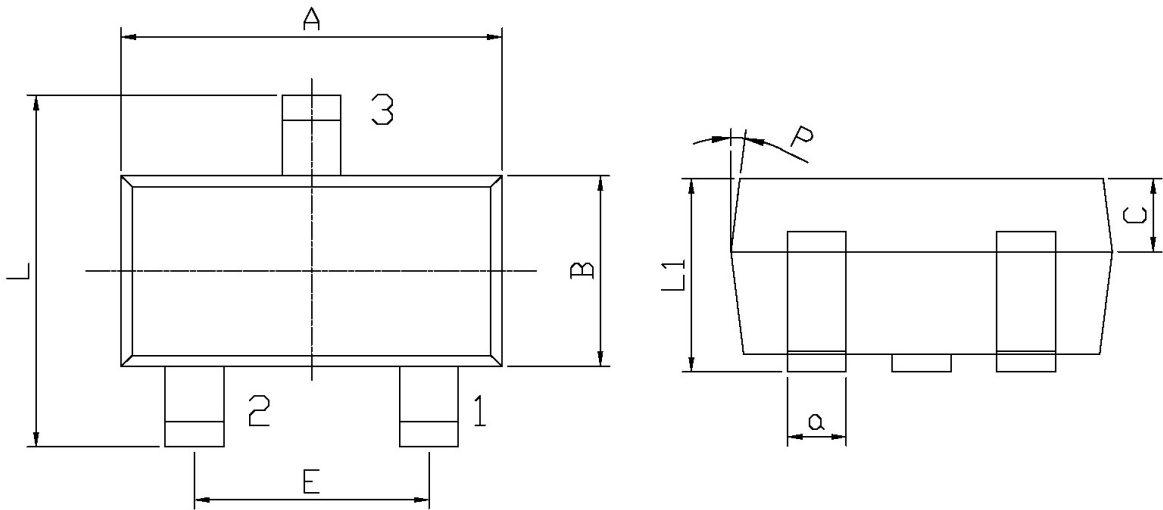
电参数曲线图 / Electrical Characteristic Curve



外形尺寸图 / Package Dimensions

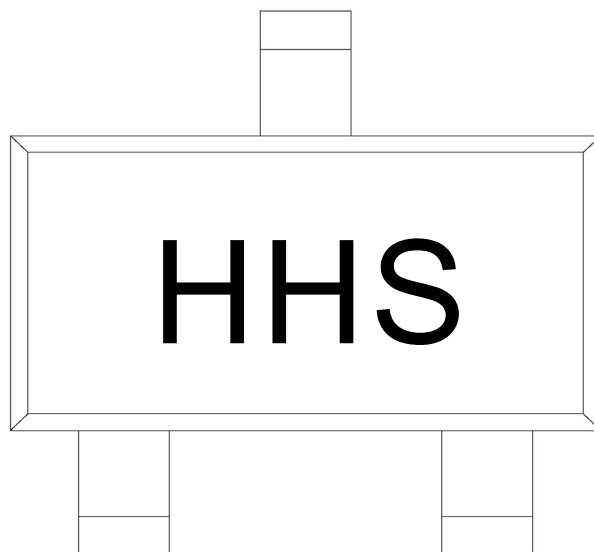
SOT-323

单位: mm



Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
A	1.95	2.35	C	0.30	0.50
L	2.00	2.2	L1	0.85	1.15
E	1.20	1.40	a	0.20	0.40
B	1.15	1.35	P	7°	

印章说明 / Marking Instructions



说明：

- H： 为公司代码
- H： 为型号代码
- S： 为 h_{FE} 分档代码

Note:

- H: Company Code.
- H: Product Type.
- S: h_{FE} Classifications Symbol

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-323	3,000	10	30,000	8	240,000	7" ×8	180×120×180	385×257×392

使用说明 / Notices