

### 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

$P_C$  大,  $h_{FE}$  高且特性好, 与 9012W 互补。

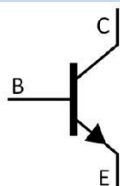
High  $P_C$  and  $h_{FE}$ , excellent  $h_{FE}$  linearity, complementary pair with 9012W.

### 用途 / Applications

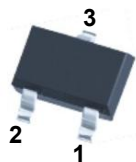
用于收音机推挽功放。

Amplifier of portable radios in class B push-pull operation.

### 内部等效电路 / Equivalent Circuit



### 引脚排列 / Pinning



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

### 放大及印章代码 / $h_{FE}$ Classifications & Marking

$h_{FE}$ Classifications Symbol	D	E	F	G	H	I
$h_{FE}$ Range	64~91	78~112	96~135	112~166	144~202	188~276
Marking	HJ3D	HJ3E	HJ3F	HJ3G	HJ3H	HJ3I

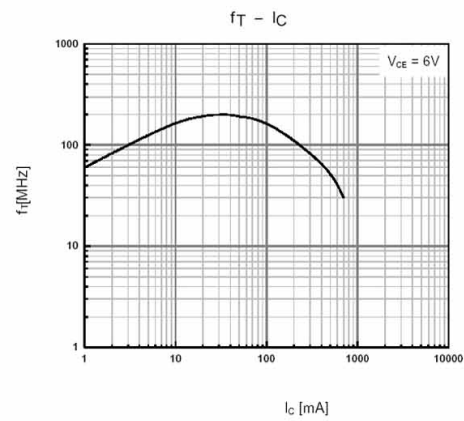
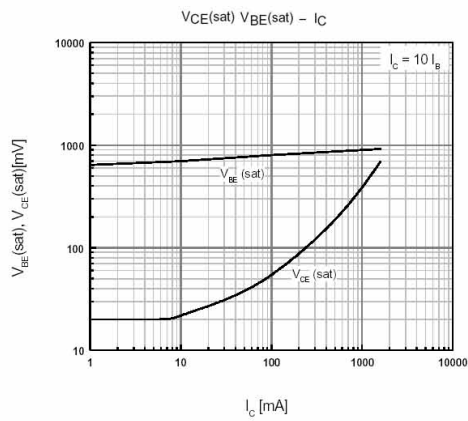
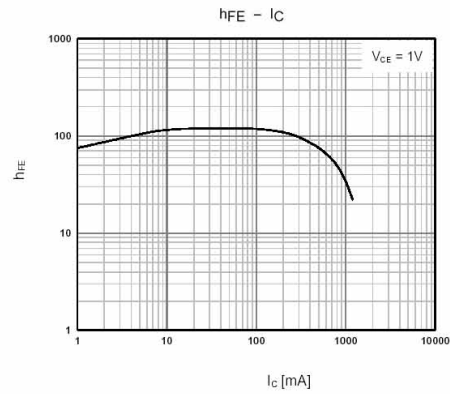
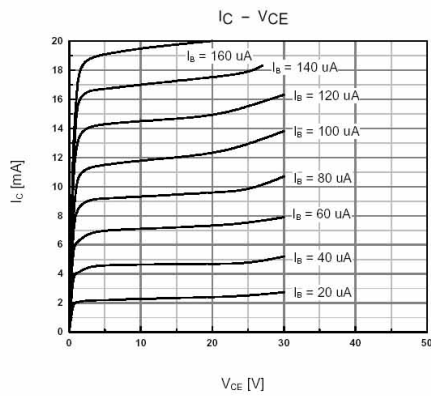
**极限参数 / Absolute Maximum Ratings(Ta=25°C)**

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Collector to Base Voltage	$V_{CBO}$	40	V
Collector to Emitter Voltage	$V_{CEO}$	20	V
Emitter to Base Voltage	$V_{EBO}$	5.0	V
Collector Current	$I_C$	500	mA
Base Current	$I_B$	100	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	$V_{CBO}$	$I_C=0.1mA$ $I_E=0$	40			V
Collector to Emitter Breakdown Voltage	$V_{CEO}$	$I_C=1.0mA$ $I_B=0$	20			V
Emitter to Base Breakdown Voltage	$V_{EBO}$	$I_E=0.1mA$ $I_C=0$	5.0			V
Collector Cut-Off Current	$I_{CBO}$	$V_{CB}=25V$ $I_E=0$			0.1	$\mu A$
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB}=3.0V$ $I_C=0$			0.1	$\mu A$
DC Current Gain	$h_{FE(1)}$	$V_{CE}=1.0V$ $I_C=50mA$	64		276	
	$h_{FE(2)}$	$V_{CE}=1.0V$ $I_C=500mA$	40			
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=500mA$ $I_B=50mA$		0.16	0.6	V
Base-Emitter saturation Voltage	$V_{BE(sat)}$	$I_C=500mA$ $I_B=50mA$		0.91	1.2	V
Base-Emitter Voltage	$V_{BE}$	$V_{CE}=1.0V$ $I_C=10mA$		0.67	0.7	V

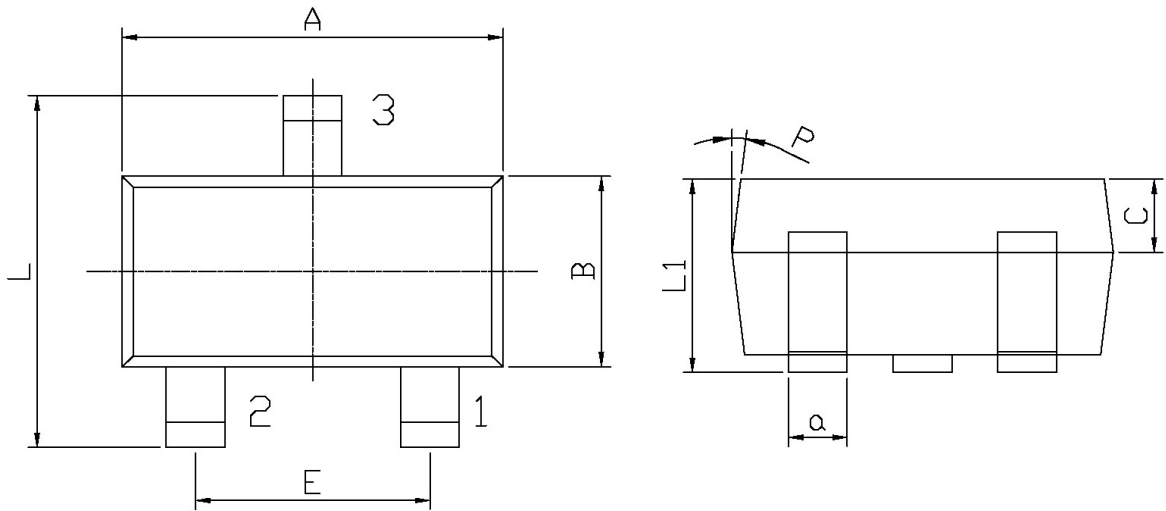
电参数曲线图 / Electrical Characteristic Curve



外形尺寸图 / Package Dimensions

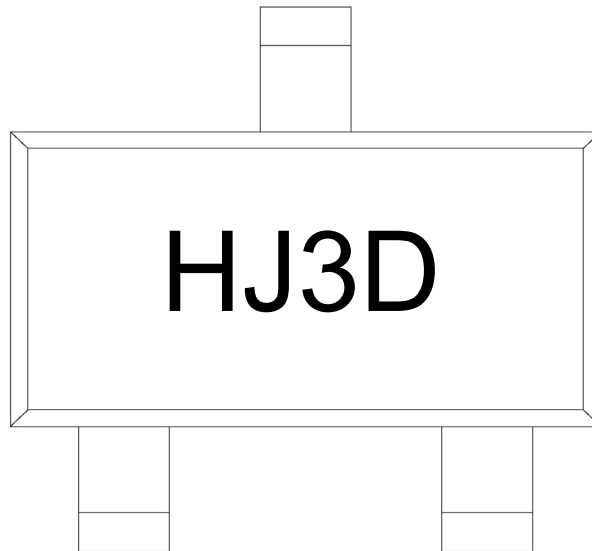
SOT-323

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

J3： 为型号代码

D： 为  $h_{FE}$  档次代码

Note:

H： Company Code

J3： Product Type Code

D：  $h_{FE}$  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 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 <sup>3</sup> )		
	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**