

### 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  $h_{FE}$ , 与 2SB624 互补。

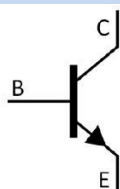
High  $h_{FE}$ , complementary pair with 2SB624.

### 用途 / Applications

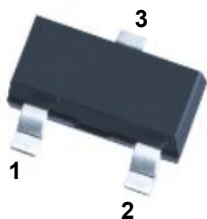
用于音频放大。

Audio frequency amplifier application.

### 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	1	2	3	4	5
$h_{FE}$ Range	110~180	135~220	170~270	200~320	250~400
Marking	HDV1	HDV2	HDV3	HDV4	HDV5

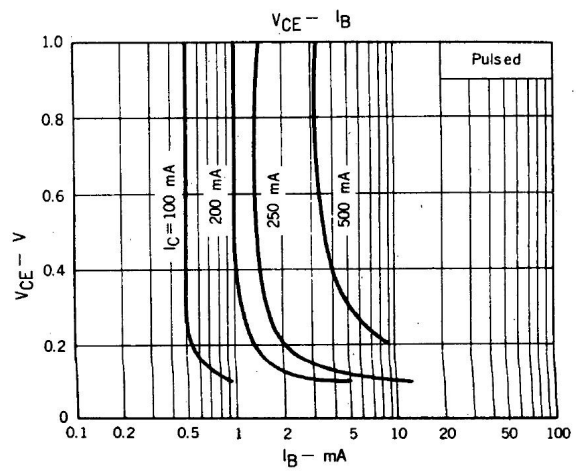
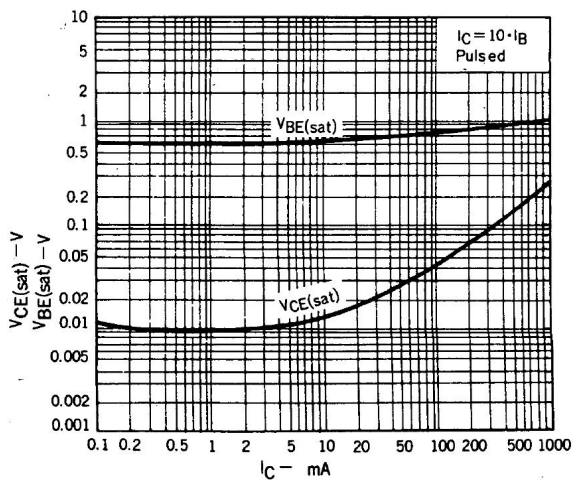
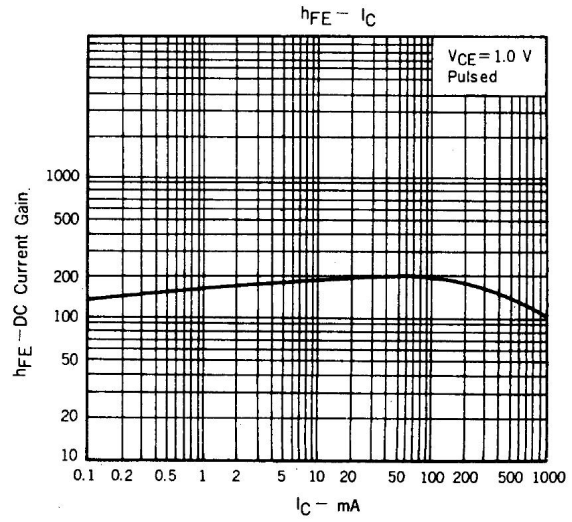
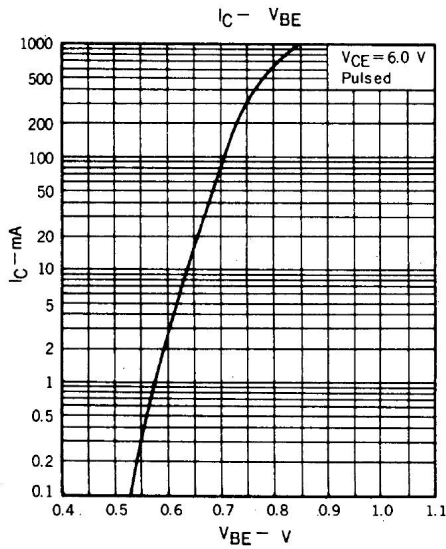
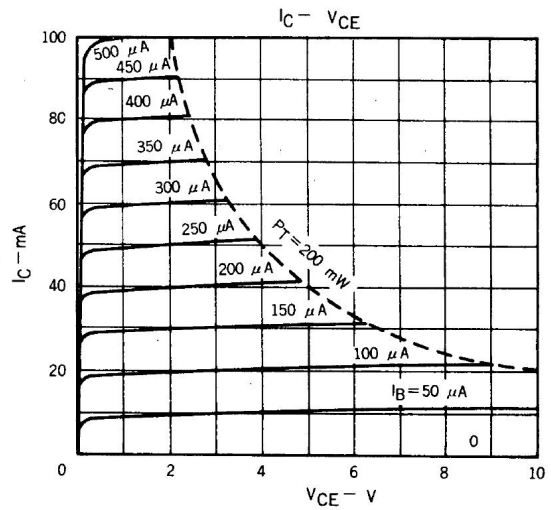
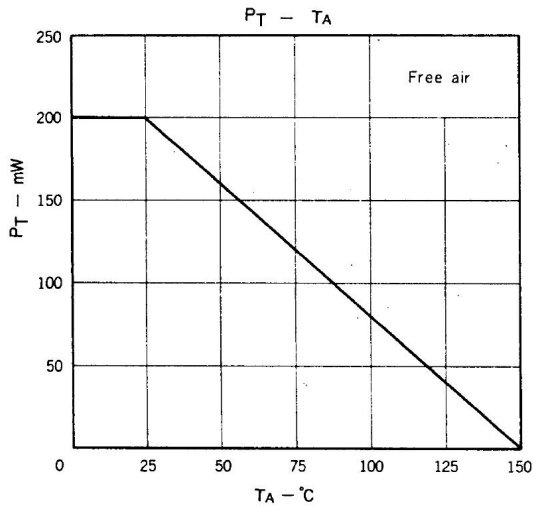
**极限参数 / Absolute Maximum Ratings(Ta=25°C)**

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Collector to Base Voltage	$V_{CBO}$	30	V
Collector to Emitter Voltage	$V_{CEO}$	25	V
Emitter to Base Voltage	$V_{EBO}$	5.0	V
Collector Current	$I_C$	700	mA
Collector Power Dissipation	$P_C$	200	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	$I_{CBO}$	$V_{CB}=30V$ $I_E=0$			0.1	$\mu A$
Emitter Base Cut-Off Current	$I_{EBO}$	$V_{EB}=5.0V$ $I_C=0$			0.1	$\mu A$
DC Current Gain	$h_{FE(1)}$	$V_{CE}=1.0V$ $I_C=100mA$	110	200	400	
	$h_{FE(2)}$	$V_{CE}=1.0V$ $I_C=700mA$	50			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=700mA$ $I_B=70mA$		0.22	0.60	V
Base to Emitter Saturation Voltage	$V_{BE}$	$V_{CE}=6.0V$ $I_C=10mA$	0.60	0.64	0.70	V
Transition Frequency	$f_T$	$V_{CE}=6.0V$ $I_C=10mA$		170		MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB}=6.0V$ $I_E=0$ $f=10MHz$		12		pF

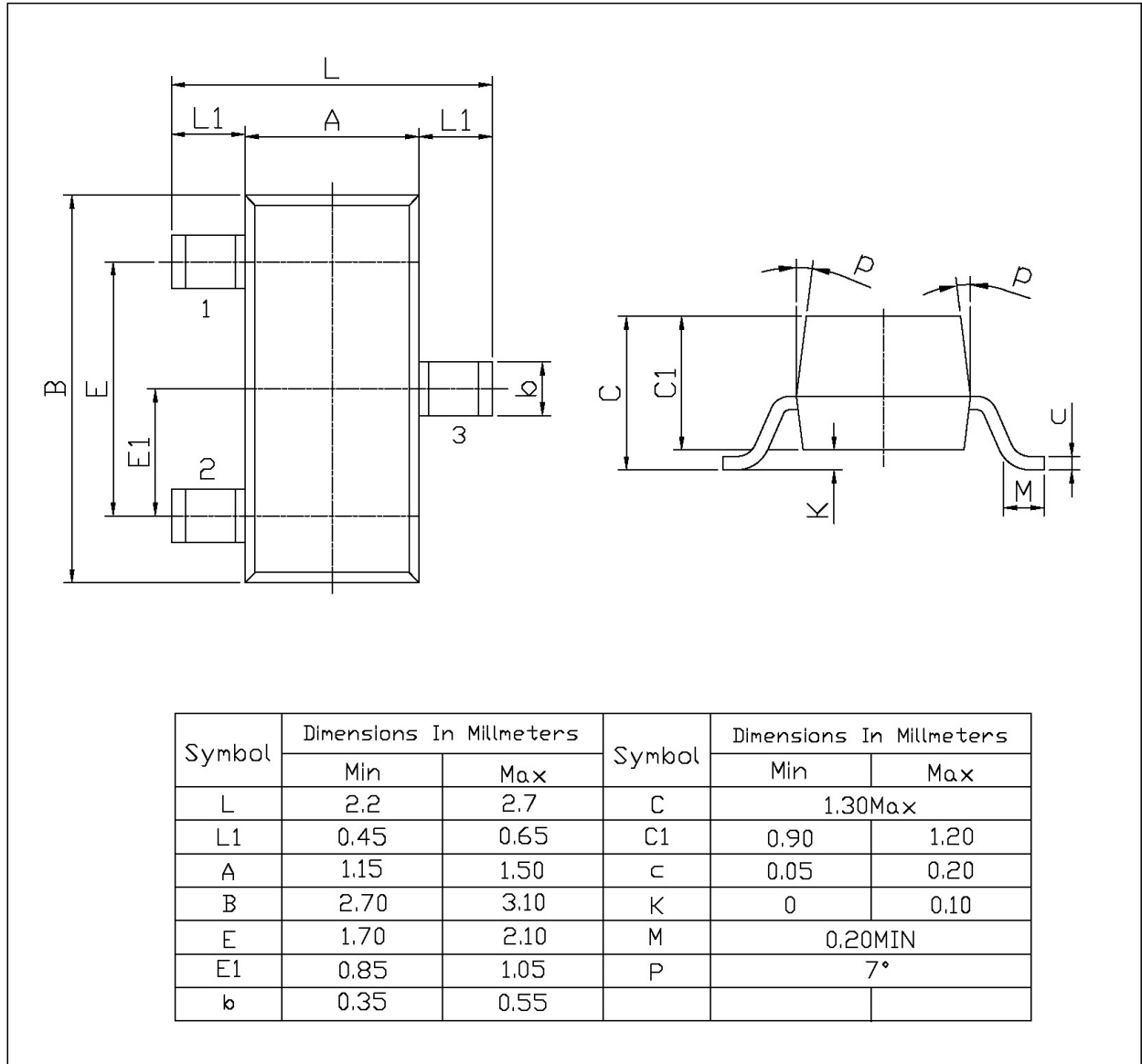
电参数曲线图 / Electrical Characteristic Curve



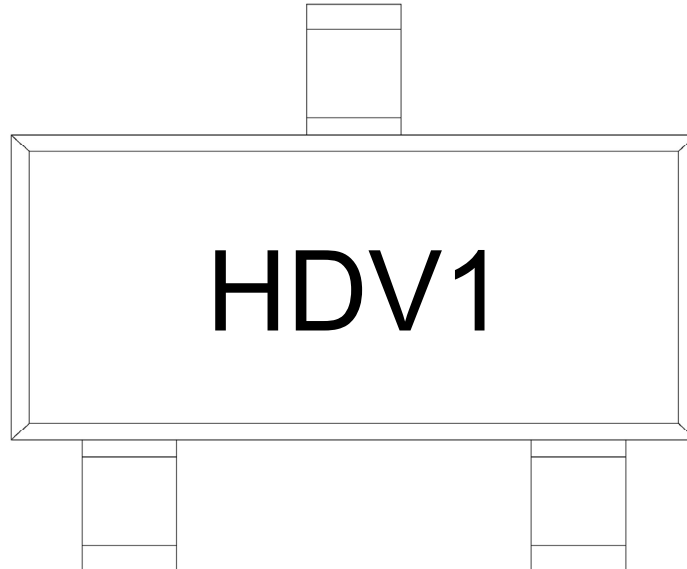
外形尺寸图 / Package Dimensions

SOT-23

单位: mm



印章说明 / Marking Instructions



说明：

H： 为公司代码

DV： 为型号代码

1： 为  $h_{FE}$  档次代码

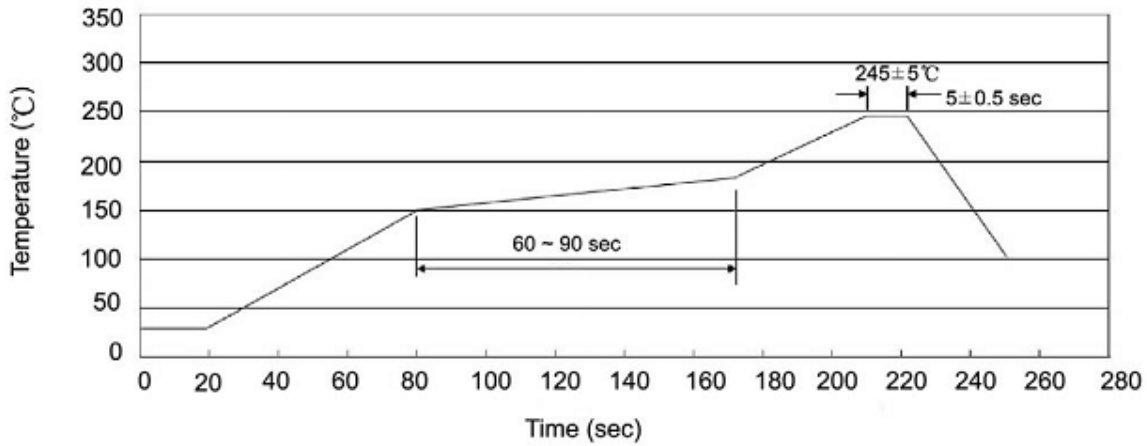
Note:

H: Company Code

DV: Product Type Code

1:  $h_{FE}$  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 150~180°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:150~180°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-23	3,000	10	30,000	6	180,000	7" x8	180×120×180	39×385×205

**使用说明 / Notices**