

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.

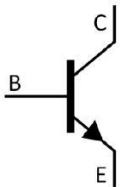
特征 / Features

大电流容量，低饱和压降，宽阔的安全工作区
Large current capacity ,low $V_{CE(sat)}$,wide ASO.

用途 / Applications

用于音频放大，中速开关，小型驱动电动机。
Audio frequency amplifier, medium-speed switching, small-sized motor drivers.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



PIN1 : Emitter PIN 2 : Base PIN 3 : Collector

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

h_{FE} Classifications Symbol	S	T	U	V
h_{FE} Range	140~280	200~400	280~560	400~800
Marking	H36S	H36T	H36U	H36V

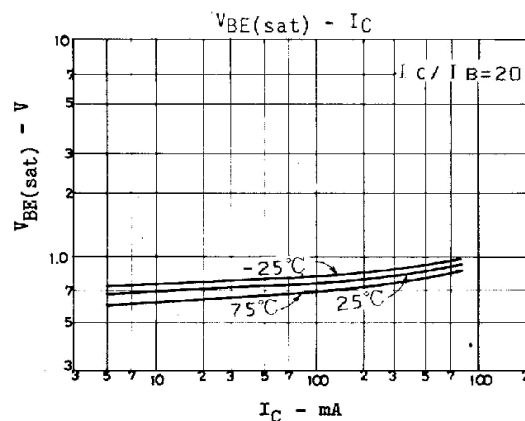
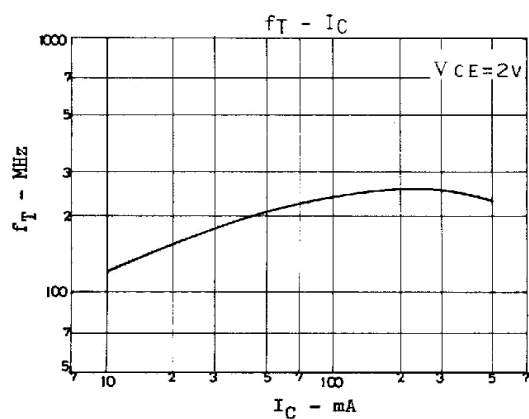
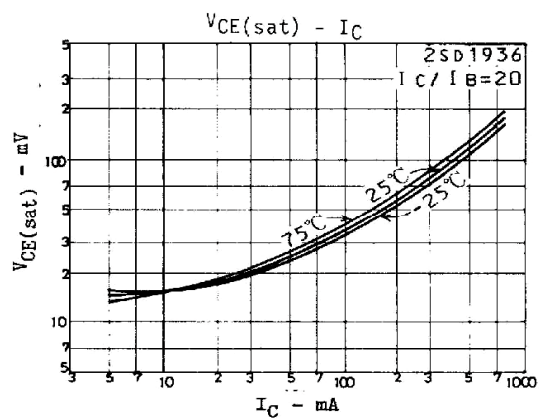
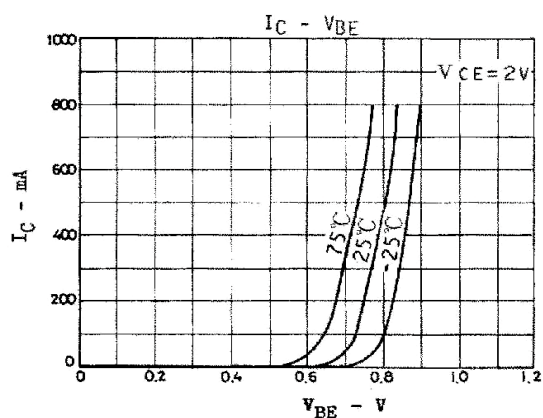
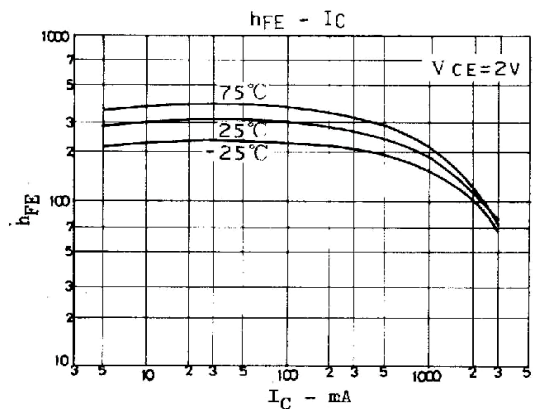
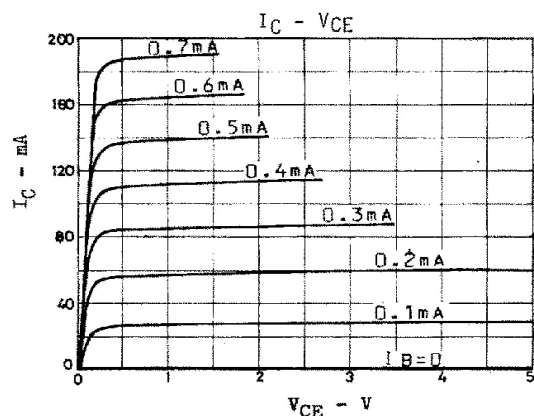
极限参数 / Absolute Maximum Ratings(Ta=25°C)

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}	15	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current	I_C	0.8	A
Collector Current(Pulse)	I_{CP}	3.0	A
Collector Power Dissipation	P_C	250	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-Base Breakdown Voltage	V_{CBO}	$I_C=10\mu A$ $I_E=0$	15			V
Collector-Emitter Breakdown Voltage	V_{CEO}	$I_C=1.0mA$ $R_{BE}=\infty$	15			V
Emitter-Base Breakdown Voltage	V_{EBO}	$I_E=10\mu A$ $I_C=0$	5.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=12V$ $I_E=0$			0.1	μA
Emitter Base Cut-Off Current	I_{EBO}	$V_{EB}=4.0V$ $I_C=0$			0.1	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=2.0V$ $I_C=50mA$	140		800	
	$h_{FE(2)}$	$V_{CE}=2.0V$ $I_C=800mA$	80			
Collector to Emitter Saturation Voltage	$V_{CE(sat)(1)}$	$I_C=5.0mA$ $I_B=0.5mA$		0.01	0.025	V
	$V_{CE(sat)(2)}$	$I_C=400mA$ $I_B=20mA$		0.1	0.2	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=400mA$ $I_B=20mA$		0.9	1.2	V
Transition Frequency	f_T	$V_{CE}=2.0V$ $I_C=50mA$		200		MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=10V$ $f=1.0MHz$ $I_E=0$		10		pF

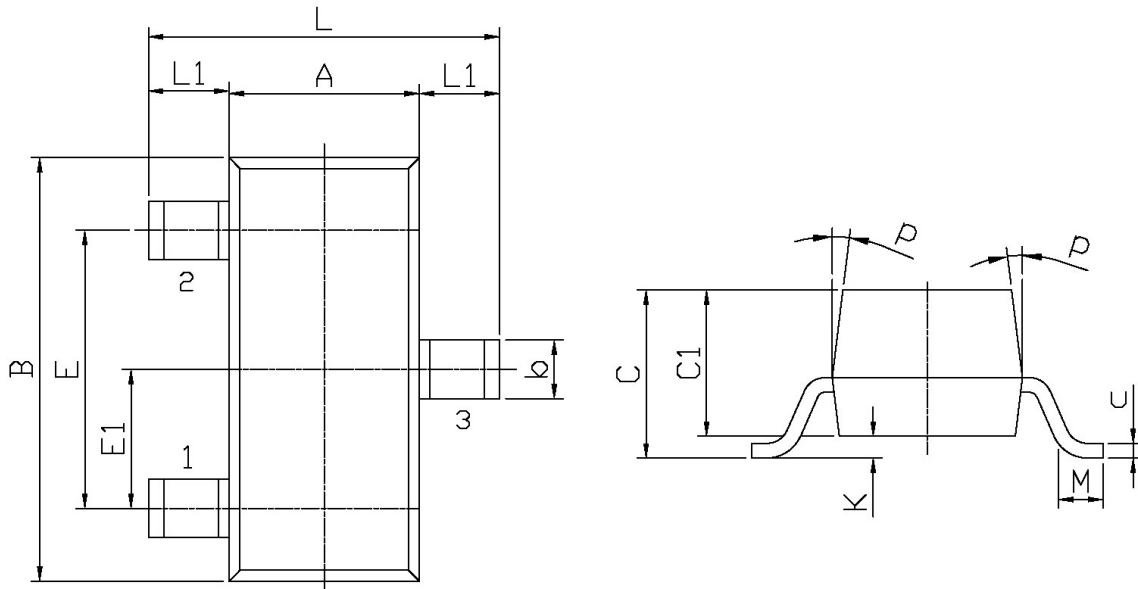
电参数曲线图 / Electrical Characteristic Curve



外形尺寸图 / Package Dimensions

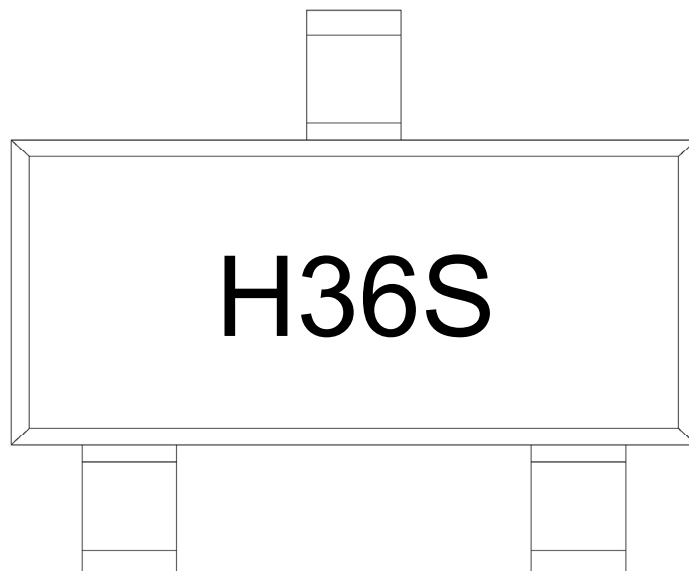
SOT-23

单位: mm



Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
L	2.2	2.7	C	1.30Max	
L1	0.45	0.65	C1	0.90	1.20
A	1.15	1.50	c	0.05	0.20
B	2.70	3.10	K	0	0.10
E	1.70	2.10	M	0.20MIN	
E1	0.85	1.05	P	7°	
b	0.35	0.55			

印章说明 / Marking Instructions



说明：

H： 为公司代码

36： 为型号代码

S： 为 h_{FE} 档次代码

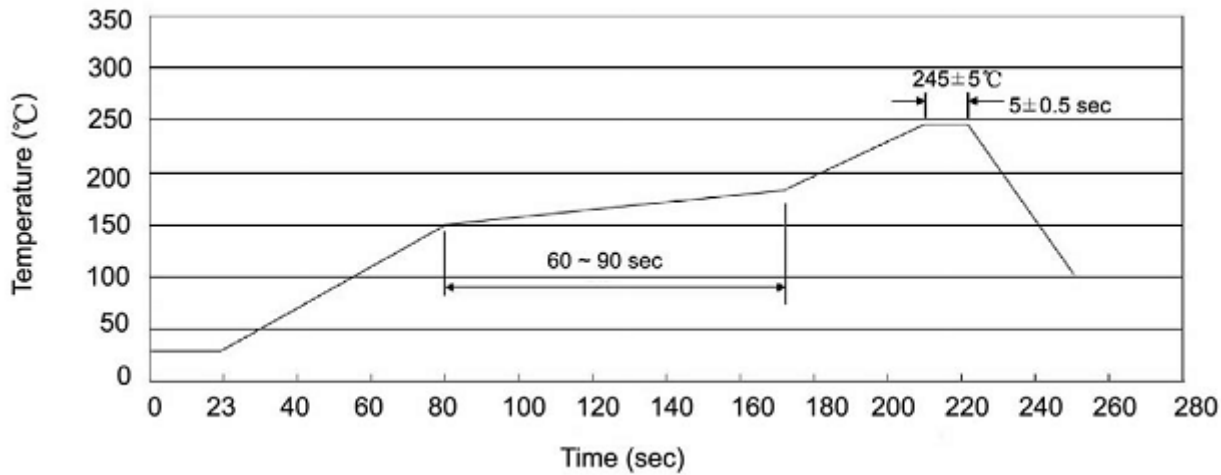
Note:

H: Company Code

36: Product Type Code

S: 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℃，时间 60 ~ 90sec;
 - 2、峰值温度 245±5℃，时间持续为 5±0.5sec;
 - 3、焊接制程冷却速度为 2 ~ 10℃/sec.
- Note:

 - 1.Preheating:25~150℃, Time:60~90sec.
 - 2.Peak Temp.:245±5℃, Duration:5±0.5sec.
 3. Cooling Speed: 2~10℃/sec.

耐焊接热试验条件 / Resistance to Soldering Heat Test Conditions

温度：260±5℃ 时间：10±1 sec. Temp.:260±5℃ 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	8	240,000	7" ×8	180×120×180	385×257×392

使用说明 / Notices