

描述 / Descriptions

SOT-89 塑封封装 PNP 半导体三极管。Silicon PNP transistor in a SOT-89 Plastic Package.

特征 / Features

饱和压降低，与 2SD2185 互补。

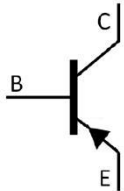
Low $V_{CE(sat)}$, complementary to 2SD2185.

用途 / Applications

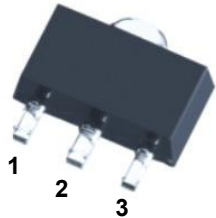
用于低频输出放大

For low frequency output amplification.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



PIN1 : Base PIN 2 : Collector PIN 3 : Emitter

印章代码 / Marking

h_{FE} Classifications Symbol	R	S
h_{FE} Range	120 ~ 240	170 ~ 340
Marking	H1IR *	H1IS *

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}	-5.0	V
Collector Current-Continuous	I _C	-2.0	A
Collector Current -Continuous(Pulse)	I _{CP}	-3.0	A
Collector Power Dissipation*	*P _C	1.0	W
Junction Temperature	T _j	150	°C
Storage Temperature Range	T _{stg}	-55~150	°C

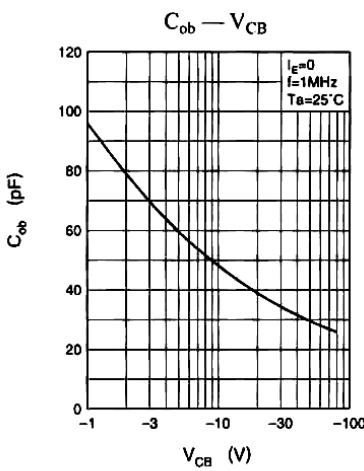
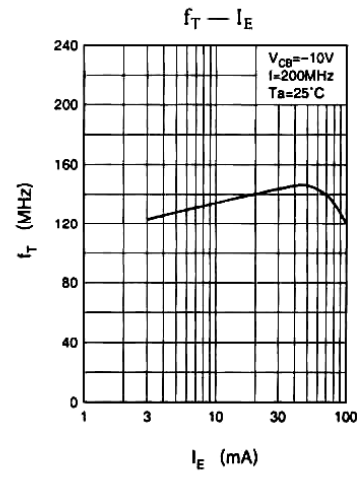
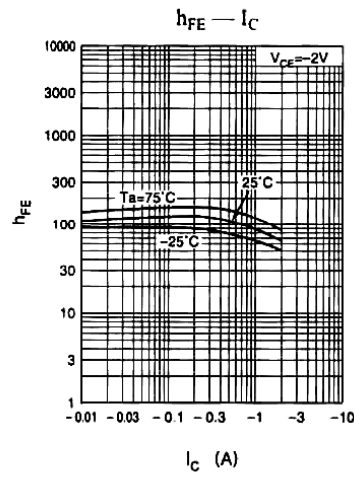
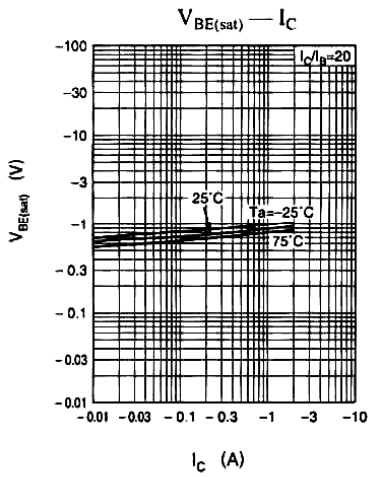
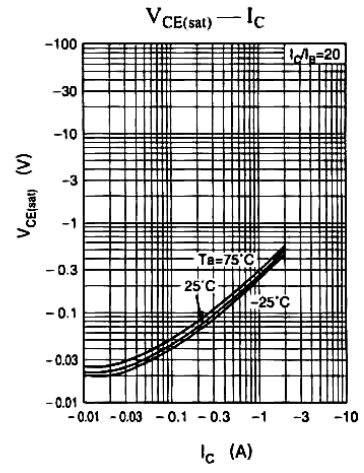
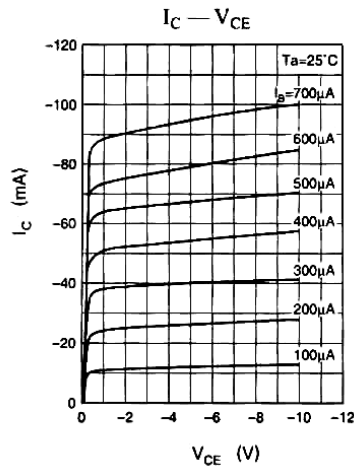
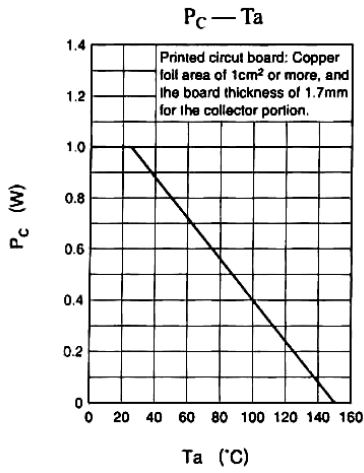
*printed circuit board: copper foil area of 1cm² or more, and the board thickness of 1.7mm for C portion.

*印制线路板要求：与C脚接触的铜箔面积为1cm²或更大、厚度为1.7mm。

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 =-10μA I _E =0	-50			V
Collector to Emitter Breakdown Voltage	V _{CEO}	I _C =-1.0mA I _B =0	-50			V
Emitter to Base Breakdown Voltage	V _{EBO}	I _E =-10μA I _C =0	-5.0			V
DC Current Gain	h _{FE(1)}	V _{CE} =-2.0V I _C =-200mA	120		340	
	h _{FE(2)}	V _{CE} =-2.0V I _C =-1.0A	60			
Collector to Emitter Saturation Voltage	V _{CE(sat)}	I _C =-1.0A I _B =-50mA		-0.2	-0.3	V
Collector to Base Saturation Voltage	V _{BE(sat)}	I _C =-1.0A I _B =-50mA		-0.85	-1.2	V
Transition Frequency	f _T	V _{CB} =-10V f=200MHz I _C =-50mA		80		MHz
Collector Output Capacitance	C _{ob}	V _{CB} =-10V f=1.0MHz I _E =0		45	60	pF

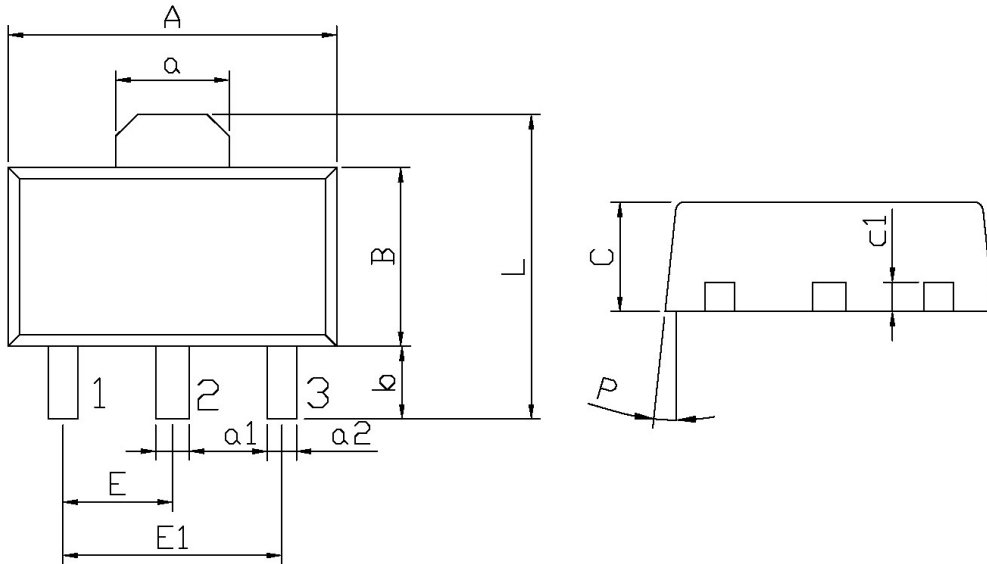
电参数曲线图 / Electrical Characteristic Curve



外形尺寸图 / Package Dimensions

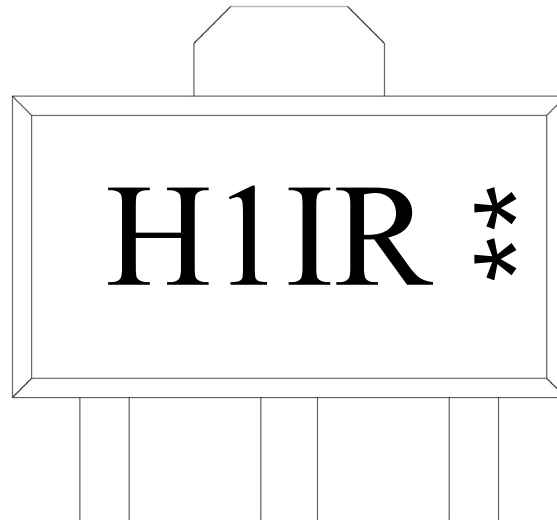
SOT-89

单位: mm



Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
A	4.4	4.7	a1	0.36	0.56
B	2.35	2.65	a2	0.30	0.50
L	3.878	4.478	C	1.40	1.70
a	1.45	1.65	c1	0.35	0.50
E	1.40	1.60	P	6°	
E1	2.80	3.20			
b	0.80	1.20			

印章说明 / Marking Instructions



说明：

H： 为公司代码

1I： 为型号代码

R： 为 h_{FE} 分档代码

**： 为生产批号代码，随生产批号变化。

Note:

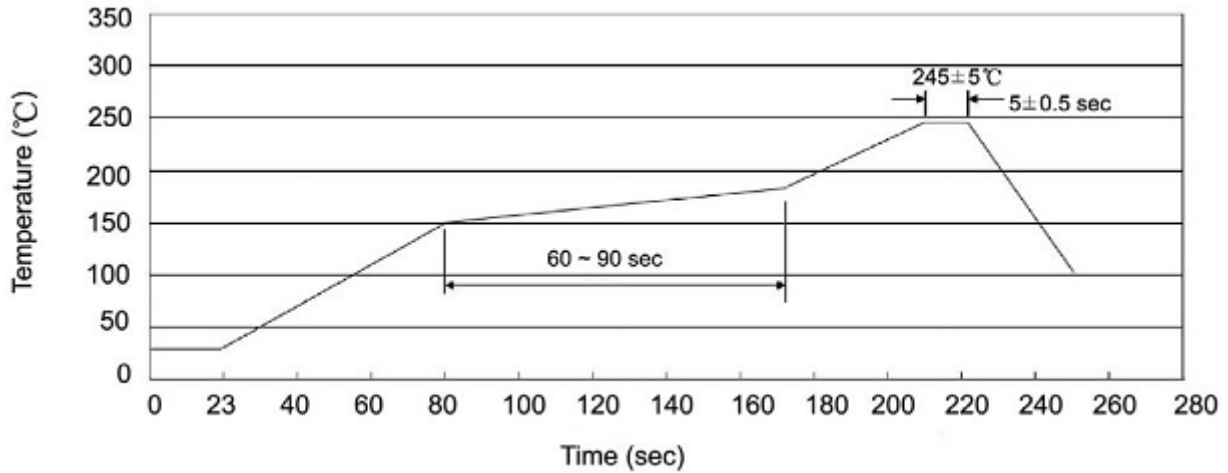
H: Company Code.

1I: Product Type.

R: h_{FE} Classifications Symbol

** : Lot No. Code, code change with Lot No.

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-89	1,000	7	7,000	8	56,000	7" ×12	180×120×180	385×257×392

使用说明 / Notices