

MMBTA94T

Rev.F Apr.-2019

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

耐压高。

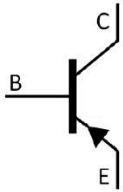
High voltage.

用途 / Applications

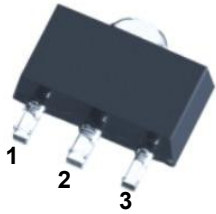
高电压控制电路。

High voltage control circuit.

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

Marking	H4D [*]
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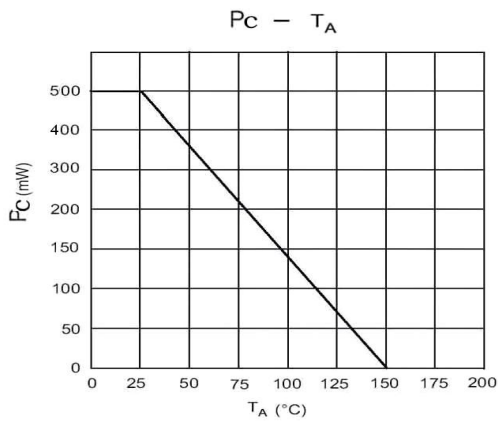
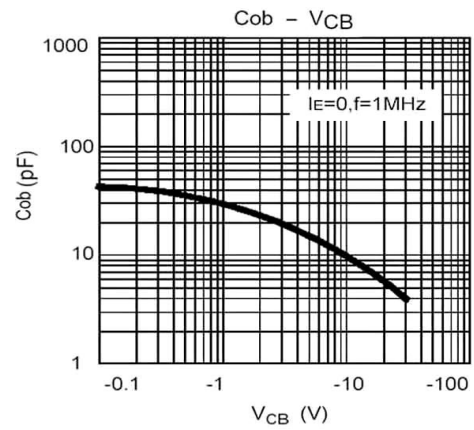
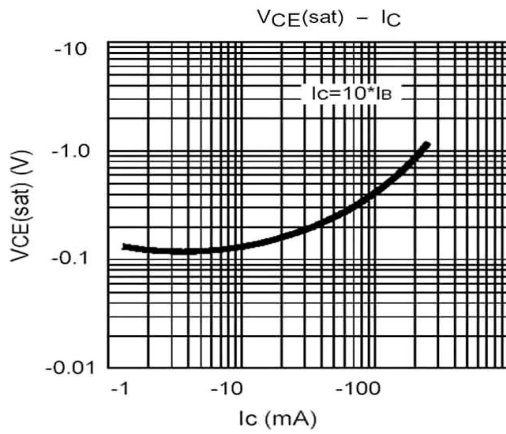
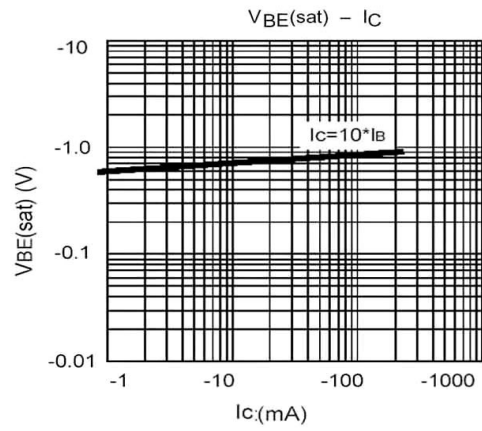
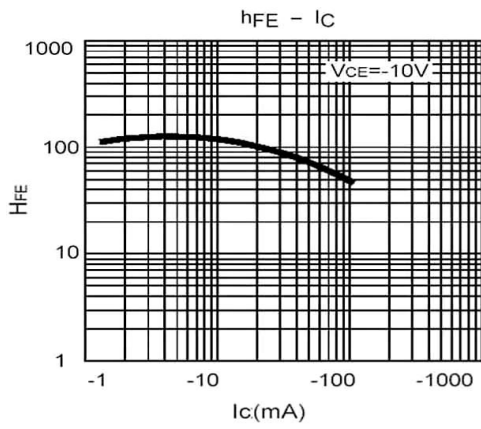
极限参数 / Absolute Maximum Ratings(Ta=25°C)

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Collector to Base Voltage	V_{CBO}	-400	V
Collector to Emitter Voltage	V_{CEO}	-400	V
Emitter to Base Voltage	V_{EBO}	-5.0	V
Collector Current - Continuous	I_C	-300	mA
Collector Power Dissipation	P_C	500	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}	$I_C=-100\mu A$ $I_E=0$	-400			V
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=-1.0mA$ $I_B=0$	-400			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_E=-100\mu A$ $I_C=0$	-5.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=-300V$ $I_E=0$			-0.1	μA
Emitter Cut-Off Current	I_{CES}	$V_{CE}=-400V$ $V_{BE}=0$			-1	μA
Emitter Base Cut-Off Current	I_{EBO}	$V_{EB}=-4.0V$ $I_C=0$			-0.1	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=-10V$ $I_C=-10mA$	80		300	
	$h_{FE(2)}$	$V_{CE}=-10V$ $I_C=-1.0mA$	70			
	$h_{FE(3)}$	$V_{CE}=-10V$ $I_C=-100mA$	40			
Collector to Emitter Saturation Voltage	$V_{CE(sat)(1)}$	$I_C=-10mA$ $I_B=-1.0mA$			-0.2	V
	$V_{CE(sat)(2)}$	$I_C=-50mA$ $I_B=-5.0mA$			-0.3	V
Emitter to Base Saturation Voltage	$V_{BE(sat)}$	$I_C=-10mA$ $I_B=-1.0mA$			-0.75	V
Transition Frequency	f_T	$V_{CE}=-5.0V$ $I_C=-10mA$ $f=30MHz$	50			MHz

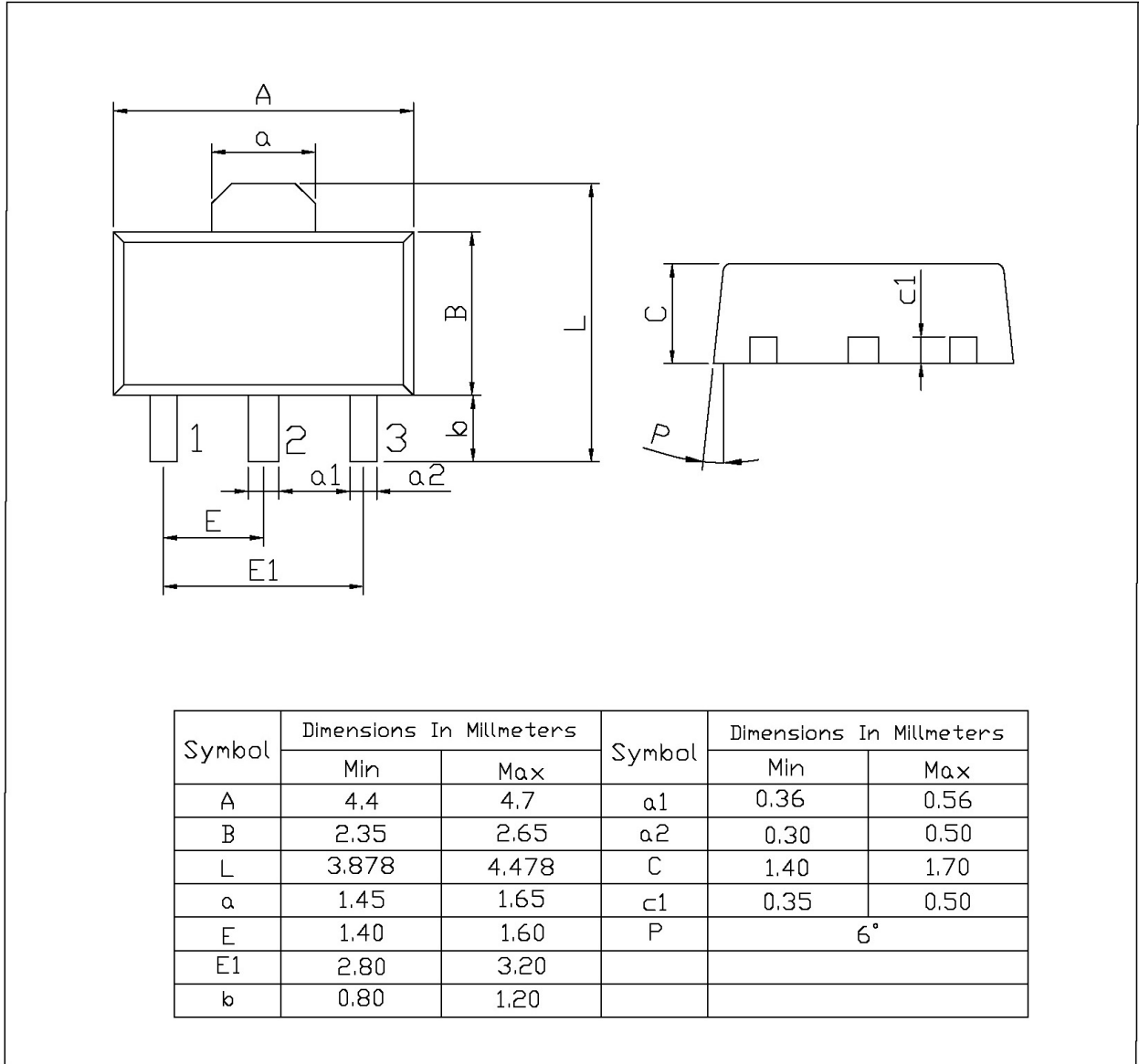
电参数曲线图 / Electrical Characteristic Curve



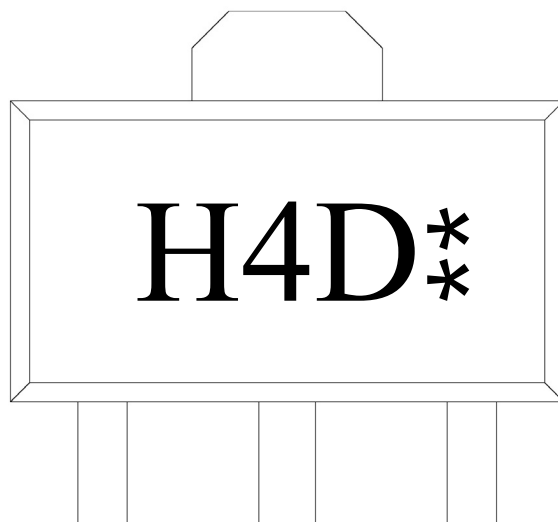
外形尺寸图 / Package Dimensions

SOT-89

单位: mm



印章说明 / Marking Instructions



说明：

H： 为公司代码

4D： 为型号代码

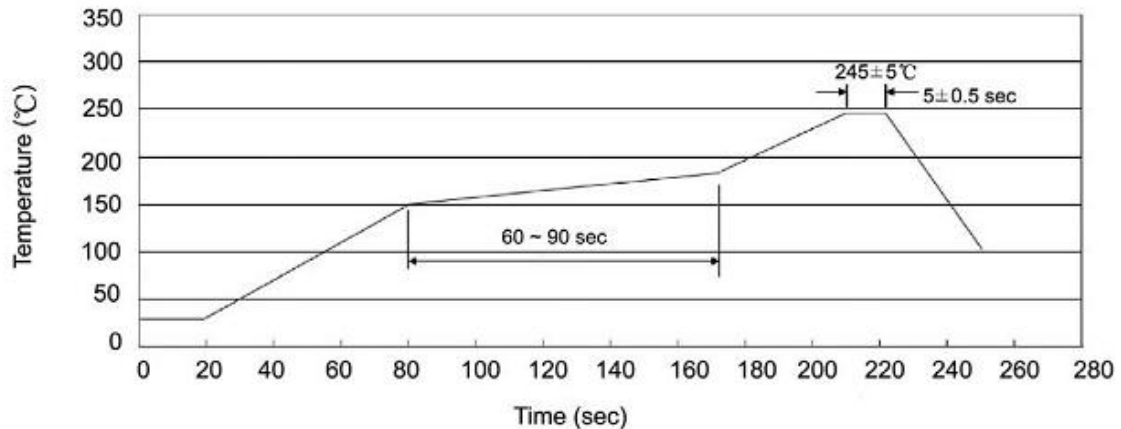
**： 为生产批号代码，随生产批号变化。

Note:

H: Company Code.

4D: Product Type.

** : 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 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 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" x12	180×120×180	385×257×392

使用说明 / Notices