

# MMBTA55

Rev.F Apr.-2017

## 描述 / Descriptions

SOT-23 塑封封装 PNP 半导体三极管。Silicon PNP transistor in a SOT-23 Plastic Package.

## 特征 / Features

与 MMBTA05 互补。

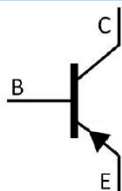
Complementary to MMBTA05.

## 用途 / Applications

用于中功率放大和开关。

Ideal for medium power amplification and switching.

## 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

|                |         |
|----------------|---------|
| $h_{FE}$ Range | 100~300 |
| Marking        | H2H     |

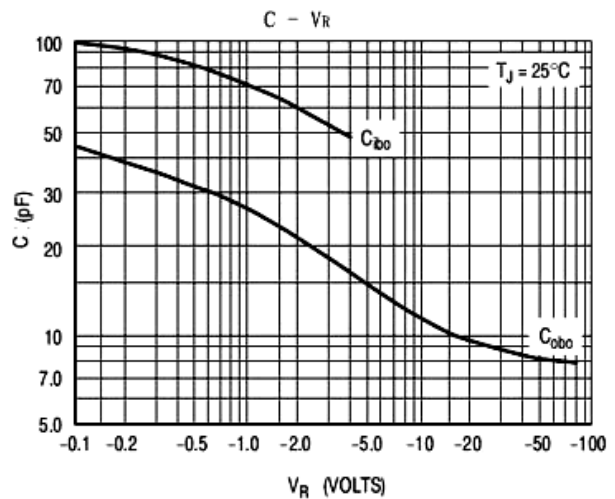
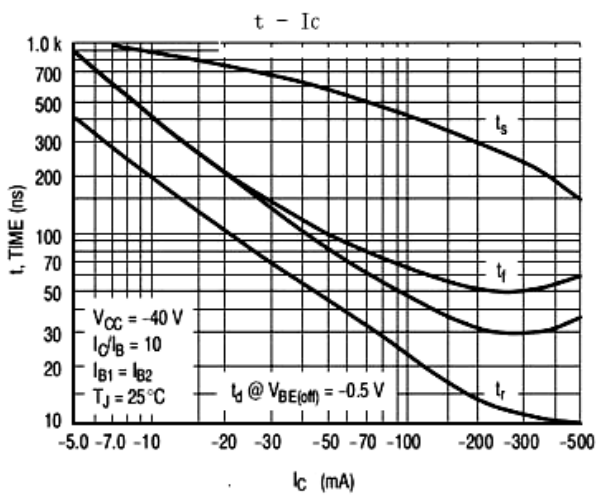
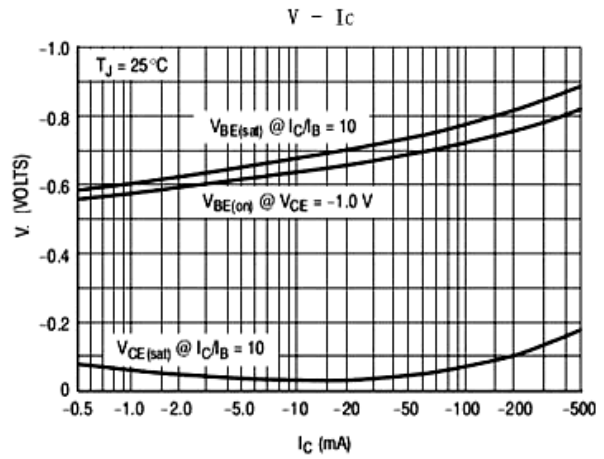
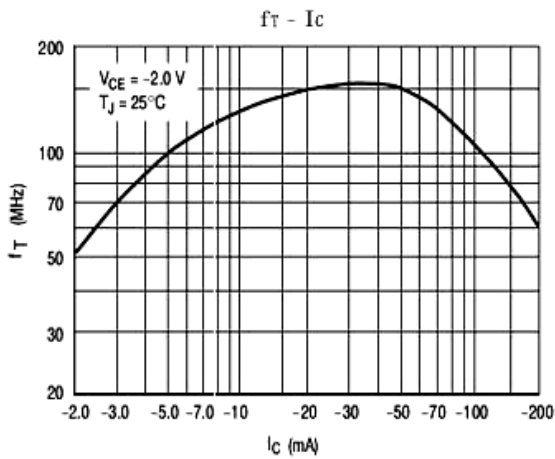
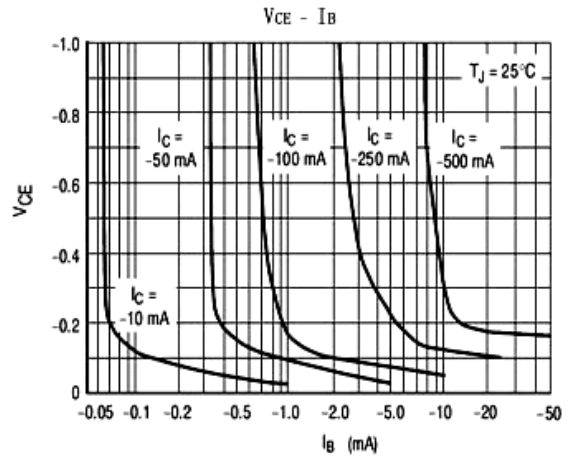
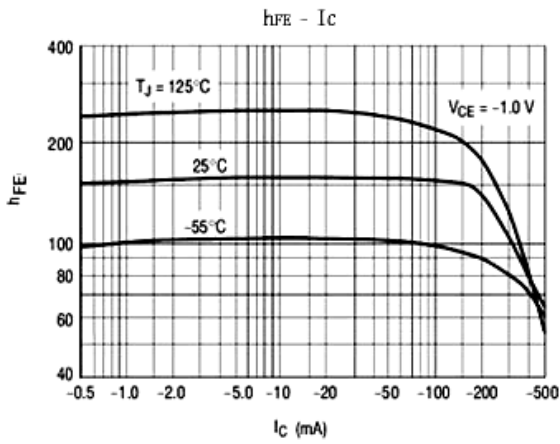
**极限参数 / Absolute Maximum Ratings(Ta=25°C)**

| 参数<br>Parameter              | 符号<br>Symbol | 数值<br>Rating | 单位<br>Unit |
|------------------------------|--------------|--------------|------------|
| Collector to Base Voltage    | $V_{CBO}$    | -60          | V          |
| Collector to Emitter Voltage | $V_{CEO}$    | -60          | V          |
| Emitter to Base Voltage      | $V_{EBO}$    | -4.0         | V          |
| Collector Current            | $I_C$        | -500         | mA         |
| Collector Power Dissipation  | $P_D$        | 300          | 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<br>Parameter                        | 符号<br>Symbol  | 测试条件<br>Test Conditions                      | 最小值<br>Min | 典型值<br>Typ | 最大值<br>Max | 单位<br>Unit |
|--|---------------|--|------------|------------|------------|------------|
| Collector to Base Breakdown Voltage    | $V_{CBO}$     | $I_C = -100\mu A$ $I_E = 0$                  | -60        |            |            | V          |
| Collector to Emitter Breakdown Voltage | $V_{CEO}$     | $I_C = -1.0mA$ $I_B = 0$                     | -60        |            |            | V          |
| Emitter to Base Breakdown Voltage      | $V_{EBO}$     | $I_E = -100\mu A$ $I_C = 0$                  | -4.0       |            |            | V          |
| Collector Cut-Off Current              | $I_{CBO}$     | $V_{CB} = -60V$ $I_E = 0$                    |            |            | -0.1       | $\mu A$    |
| Collector-Emitter Cutoff Current       | $I_{CES}$     | $V_{CE} = -60V$ $I_B = 0$                    |            |            | -0.1       | $\mu A$    |
| DC Current Gain                        | $h_{FE(1)}$   | $V_{CE} = -1.0V$ $I_C = -100mA$              | 100        |            | 300        |            |
|  | $h_{FE(2)}$   | $V_{CE} = -1.0V$ $I_C = -10mA$               | 100        |            | 300        |            |
| Collector -Emitter Saturation Voltage  | $V_{CE(sat)}$ | $I_C = -100mA$ $I_B = -10mA$                 |            |            | -0.25      | V          |
| Base-Emitter Saturation Voltage        | $V_{BE(sat)}$ | $I_C = -100mA$ $V_{CE} = -1.0V$              |            |            | -1.2       | V          |
| Transition Frequency                   | $f_T$         | $V_{CE} = -1.0V$ $I_C = -100mA$ $f = 100MHz$ | 50         |            |            | MHz        |

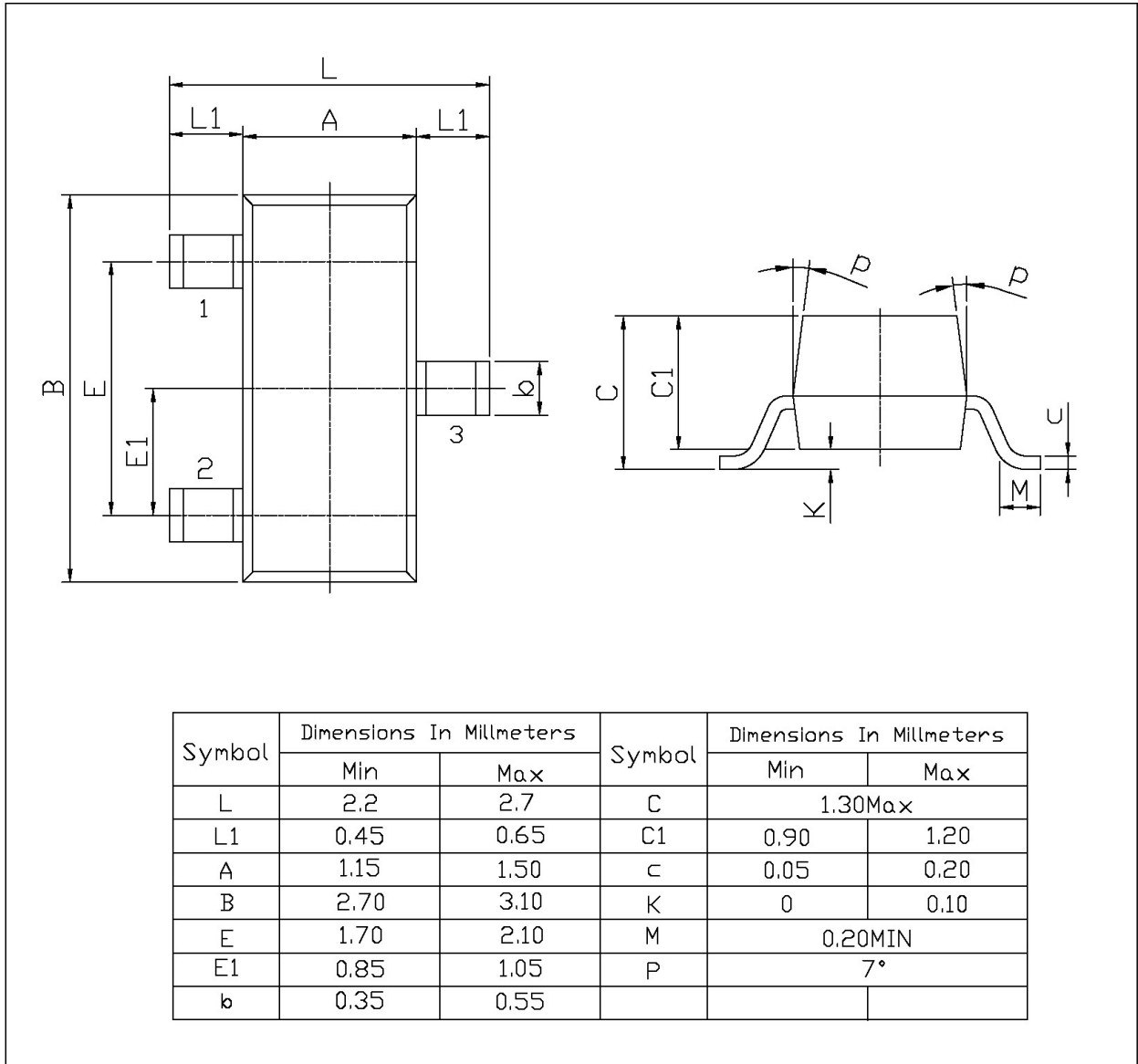
电参数曲线图 / Electrical Characteristic Curve



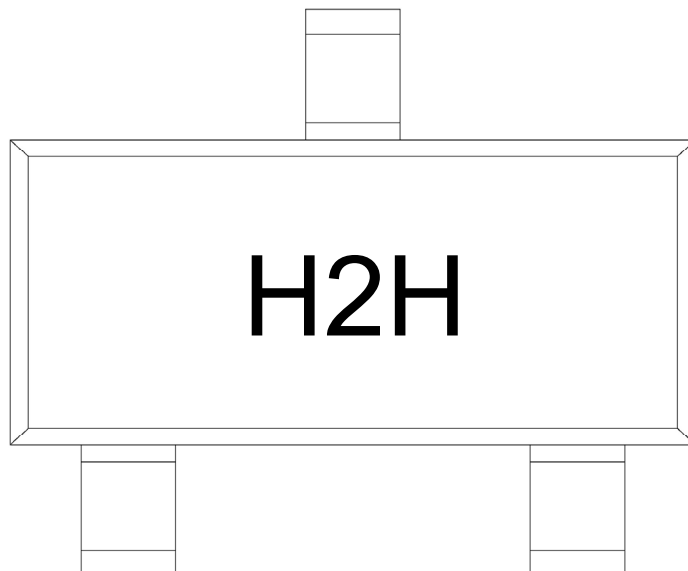
外形尺寸图 / Package Dimensions

SOT-23

单位: mm



印章说明 / Marking Instructions



说明：

H： 为公司代码

2H： 为型号代码

Note:

H： Company Code

2H： Product Type

**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<br>封装形式 | Units 包装数量         |                         |                        |                              |                        | Dimension 包装尺寸 (unit: mm <sup>3</sup> ) |             |             |
|----------------------|--------------------|-------------------------|------------------------|------------------------------|------------------------|---|-------------|-------------|
|                      | Units/Reel<br>只/卷盘 | Reels/Inner Box<br>卷盘/盒 | Units/Inner Box<br>只/盒 | Inner Boxes/Outer Box<br>盒/箱 | Units/Outer Box<br>只/箱 | Reel                                    | Inner Box 盒 | Outer Box 箱 |
| SOT-23               | 3,000              | 10                      | 30,000                 | 6                            | 180,000                | 7" x8                                   | 180×120×180 | 390×385×205 |

**使用说明 / Notices**