

MMDT5401

Rev.A May.-2016

描述 / Descriptions

SOT-363 塑封封装双 PNP 半导体三极管。Double silicon PNP transistor in a SOT-363 Plastic Package.

特征 / Features

击穿电压高,可与 MMDT5551 互补。

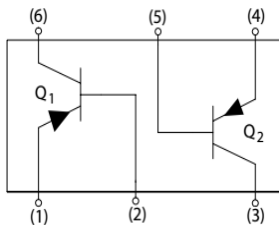
High voltage, complementary Pair with MMDT5551.

用途 / Applications

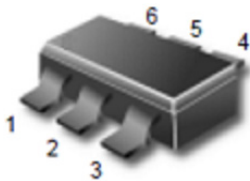
用于普通高压放大。

General purpose high voltage amplifier.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



PIN 1、4 : Emitter

PIN 2、5 : Base

PIN 3、6 : Collector

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

See Marking Instructions.

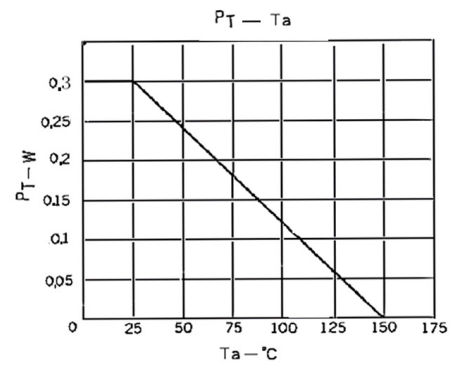
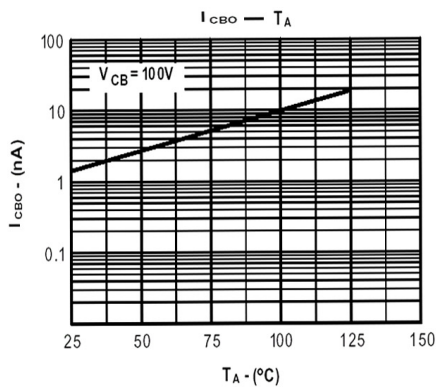
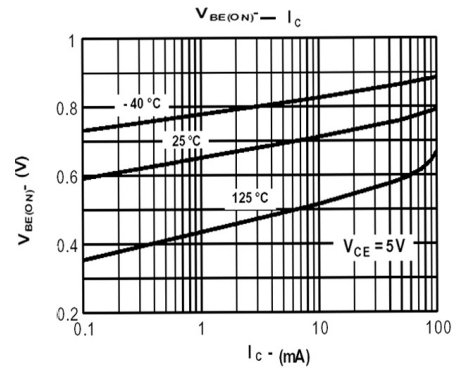
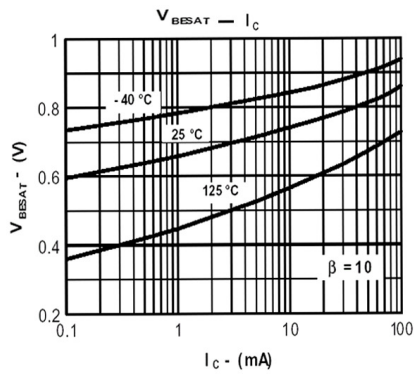
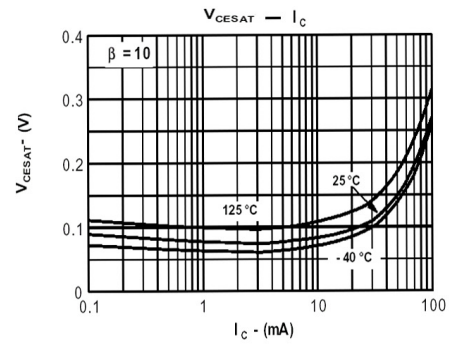
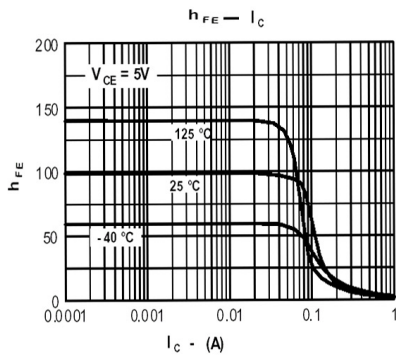
极限参数 / Absolute Maximum Ratings(Ta=25°C)

| 参数 Parameter | 符号 Symbol | 数值 Rating | 单位 Unit |
|------------------------------|--------------|--------------|------------|
| Collector to Base Voltage | V_{CBO} | -180 | V |
| Collector to Emitter Voltage | V_{CEO} | -160 | V |
| Emitter to Base Voltage | V_{EBO} | -6.0 | V |
| Collector Current | I_C | -600 | mA |
| Base Current | I_B | -300 | mA |
| Collector Power Dissipation | P_C | 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)

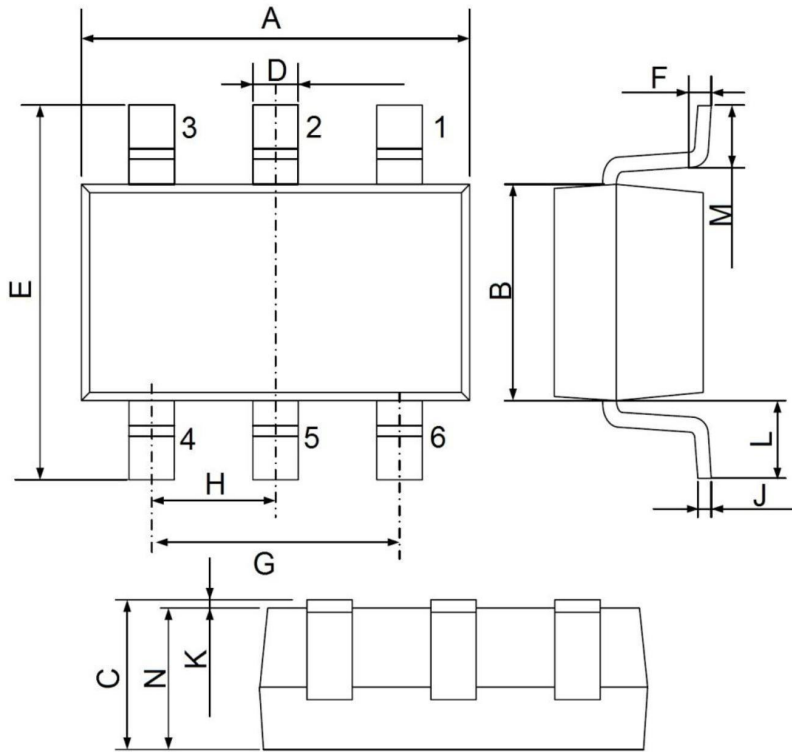
| 参数 Parameter | 符号 Symbol | 测试条件 Test Conditions | 最小值 Min | 典型值 Typ | 最大值 Max | 单位 Unit |
|--------------------------------------|------------------|--|------------|------------|------------|------------|
| Collector Cut-Off Current | I_{CBO} | $V_{CB}=-180V$ $I_E=0$ | | | -0.1 | μA |
| Emitter Cut-Off Current | I_{EBO} | $V_{EB}=-6.0V$ $I_C=0$ | | | -0.1 | μA |
| DC Current Gain | $h_{FE(1)}$ | $V_{CE}=-5.0V$ $I_C=-10mA$ | 100 | | 300 | |
| | $h_{FE(2)}$ | $V_{CE}=-5.0V$ $I_C=-50mA$ | 20 | 70 | | |
| | $h_{FE(3)}$ | $V_{CE}=-5.0V$ $I_C=-1.0mA$ | 40 | 180 | | |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)(1)}$ | $I_C=-10mA$ $I_B=-1.0mA$ | | -0.12 | -0.4 | V |
| | $V_{CE(sat)(2)}$ | $I_C=-50mA$ $I_B=-5.0mA$ | | -0.5 | -0.8 | V |
| Base-Emitter Saturation Voltage | $V_{BE(sat)(1)}$ | $I_C=-10mA$ $I_B=-1.0mA$ | | -0.75 | -1.0 | V |
| | $V_{BE(sat)(2)}$ | $I_C=-50mA$ $I_B=-5.0mA$ | | -0.8 | -1.0 | V |
| Base-Emitter Voltage | V_{BE} | $V_{CE}=-5.0V$ $I_C=-10mA$ | | -0.7 | -0.75 | V |
| Transition Frequency | f_T | $V_{CE}=-10V$ $I_C=-10mA$ | 50 | 80 | | MHz |
| Collector Output Capacitance | C_{ob} | $V_{CB}=-10V$ $I_E=0$ $f=10MHz$ | | 2.5 | 5.0 | pF |
| Turn-on Time | t_{on} | $I_C=-100mA$ $-I_{B1}=I_{B2}=-10mA$ | | 0.1 | | μs |
| Storage Time | t_{off} | | | 0.2 | | μs |
| Fall Time | t_{stg} | | | 0.1 | | μs |

电参数曲线图 / Electrical Characteristic Curve



外形尺寸图 / Package Dimensions

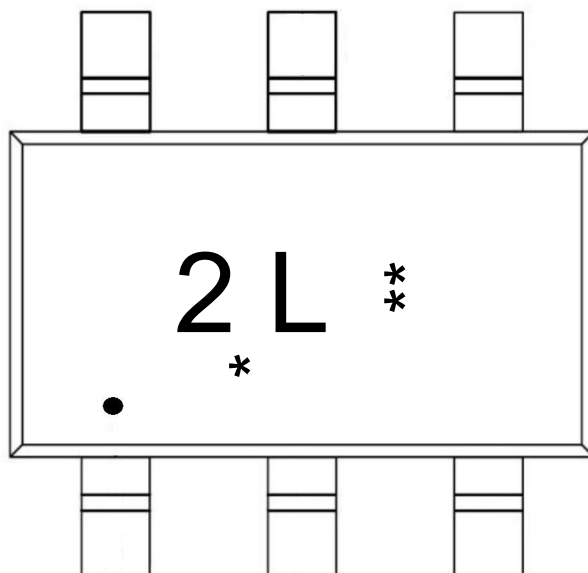
SOT-363-6L



UNIT: mm

| DIM | MIN | MAX |
|-----|------------|------|
| A | 2.00 | 2.20 |
| B | 1.15 | 1.35 |
| C | 0.90 | 1.10 |
| D | 0.15 | 0.35 |
| E | 2.15 | 2.45 |
| F | 0.20 Typ. | |
| G | 1.20 | 1.40 |
| H | 0.65 Typ. | |
| J | 0.08 | 0.15 |
| K | 0.00 | 0.10 |
| L | 0.525 Ref. | |
| M | 0.26 | 0.46 |
| N | 0.90 | 1.00 |

印章说明 / Marking Instructions



说明：

●： 为“1”脚

2L： 为型号代码

***： 为生产批号代码，随生产批号变化

Note:

●： “1” Pin

2L： Product Type Code

***： 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-363 | 3,000 | 10 | 30,000 | 8 | 240,000 | 7" x8 | 180×120×180 | 385×257×392 |

使用说明 / Notices