

■ 描述 DESCRIPTIONS

SOT-23 塑封封装 NPN 三极管。NPN transistor in SOT-23 Plastic Package.

与 FHT807 互补。Complementary to FHT807

■ 应用 APPLICATIONS

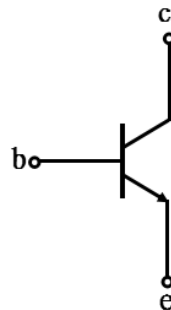
常规应用、开关电路。General purpose application,switching.

■ 引脚说明 PIN ASSIGNMENT



- 1 BASE
- 2 EMITTER
- 3 COLLECTOR

■ 内部等效电路 EQUIVALENT CIRCUIT



■ 型号构成 NAME RULE

| 基本名称 Name | | | 辅助识别代码 Additional code | | | |
|----------------|----------------|----------------|---------------------------|-------------------|-----------------|------------------------|
| 第一部分 Part 1 | 第二部分 Part 2 | 第三部分 Part 3 | 第四部分 Part 4 | 第五部分 Part 5 | 第六部分 Part 6 | 第七部分 Part 7 |
| 品牌 Brand | 产品类别 Type | 产品型号 Model | 分档 Value | 分隔号 Separatrix | 封装代码 Package | 附加码 (备用) Extra-code |
| FH | T: 三极管 | 817 | 16 25 40 | "—" | M: SOT-23 | E: ROHS |

■ 额定值 ABSOLUTE MAXIMUM RATINGS (TC=25°C unless otherwise noted)

| 特性参数 CHARACTERISTIC | 符号 SYMBOL | 额定值 RATING | 单位 UNIT |
|--|--------------|---------------|------------|
| 集电极-基极电压 Collector-Base Voltage | V_{CBO} | 50 | V |
| 集电极-发射极电压 Collector-Emitter Voltage | V_{CEO} | 45 | V |
| 发射极-基极电压 Emitter-Base Voltage | V_{EBO} | 5 | V |
| 集电极电流 Collector Current | I_C | 500 | mA |
| 集电极耗散功率 Collector Power Dissipation | P_C | 300 | mW |
| 结温 Junction Temperature | T_j | 150 | °C |
| 储存温度 Storage Temperature | T_{stg} | - 55~150 | °C |

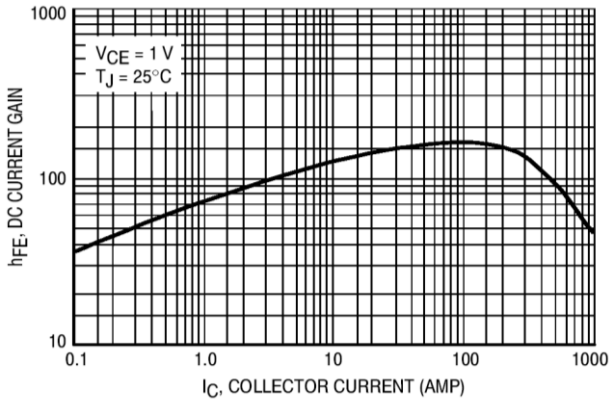
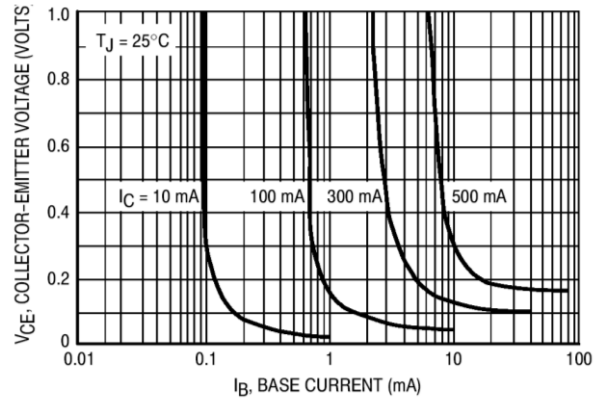
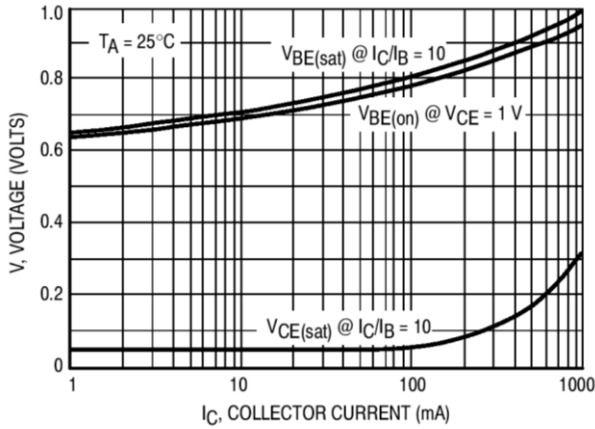
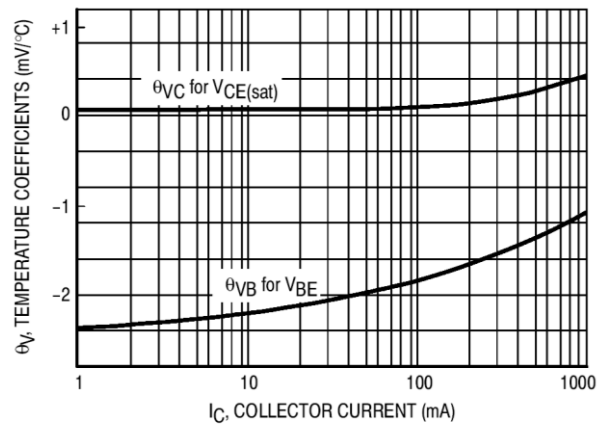
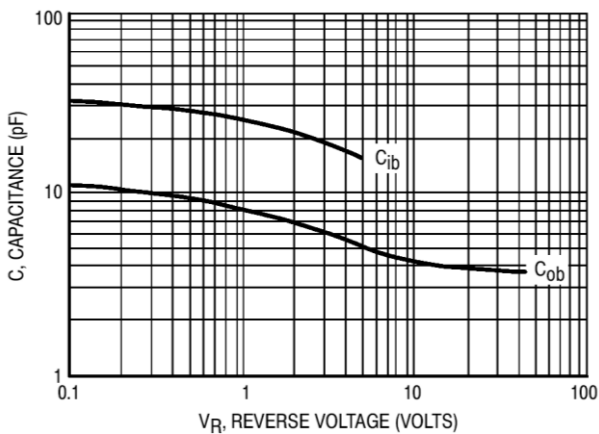
■ 电特性 ELECTRICAL CHARACTERISTICS

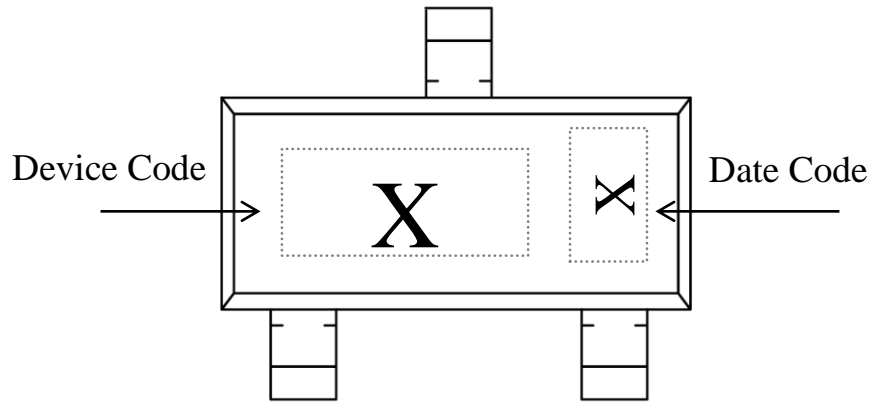
(TA=25°C unless otherwise noted 如无特殊说明, 温度为 25°C)

| 特性参数 CHARACTERISTIC | 符号 SYMBOL | 测试条件 TEST CONDITIONS | 最小值 MIN. | 典型值 TYP. | 最大值 MAX. | 单位 UNIT |
|--|---------------|---|-------------|-------------|-------------|------------|
| 集电极-基极截止电流 Collector Cut-off Current | I_{CBO} | $V_{CB} = 45V, I_E = 0$ | | | 0.1 | μA |
| 发射极-基极截止电流 Emitter Cut-off Current | I_{EBO} | $V_{EB} = 4V, I_C = 0$ | | | 0.1 | μA |
| 集电极-基极击穿电压 Collector-Base Breakdown Voltage | $V_{(BR)CBO}$ | $I_C = 0.1mA, I_E = 0$ | 50 | | | V |
| 集电极-发射极击穿电压 Collector-Emitter Breakdown Voltage | $V_{(BR)CEO}$ | $I_C = 10mA, I_B = 0$ | 45 | | | V |
| 发射极-基极击穿电压 Emitter-Base Breakdown Voltage | $V_{(BR)EBO}$ | $I_E = 0.1mA, I_C = 0$ | 5 | | | V |
| 直流电流增益 DC Current Gain | h_{FE1} | $V_{CE} = 1V, I_C = 100mA$ | 100 | | 600 | |
| | h_{FE2} | $V_{CE} = 1V, I_C = 500mA$ | 40 | | | |
| 集电极-发射极饱和压降 Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C = 500mA, I_B = 50mA$ | | | 0.7 | V |
| 特征频率 Transition Frequency | f_T | $I_C = 10mA, V_{CE} = 5V,$ $f = 50MHz$ | | 100 | | MHz |
| 共基极输出电容 Collector Output Capacitance | C_{ob} | $V_{CB} = 10V, I_E = 0,$ $f = 1MHz$ | | | 12 | PF |

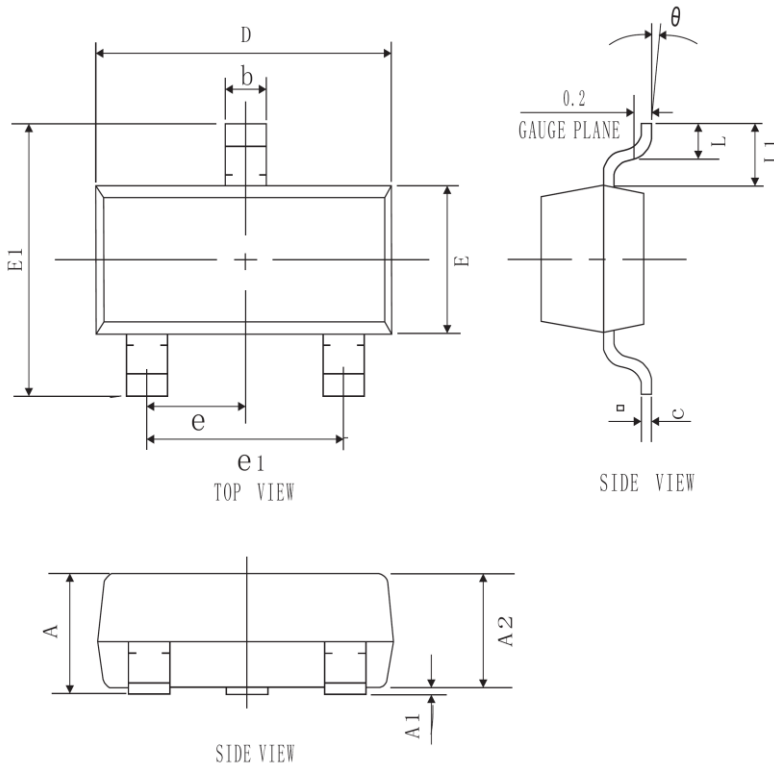
■ 放大倍数分档 h_{FE} CLASSIFICATION

| Rank | -16 | -25 | -40 |
|----------------|---------|---------|---------|
| h_{FE} Range | 100~250 | 160~400 | 250~600 |

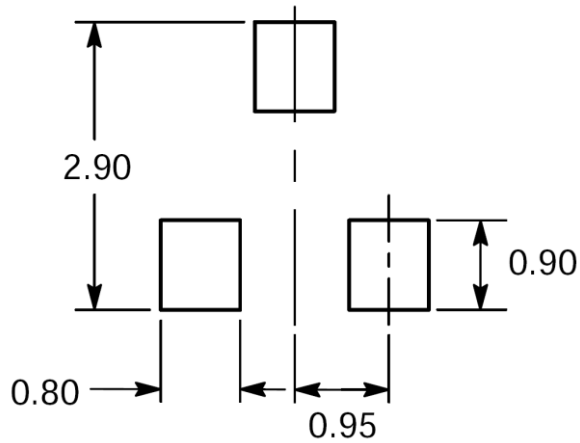
■ 典型特性 TYPICAL CHARACTERISTICS

Figure 1. DC Current Gain

Figure 2. Saturation Region

Figure 3. "On" Voltages

Figure 4. Temperature Coefficients

Figure 5. Capacitances

■ 打标 DEVICE MARKING


| Device | FHT817-16-ME | FHT817-25-ME | FHT817-40-ME |
|--------|--------------|--------------|--------------|
| Rank | -16 | -25 | -40 |
| Code | 6A | 6B | 6C |

■ 外形尺寸 PACKAGE OUTLINE DIMENSIONS
SOT-23 Package


| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|----------|---------------------------|------|----------------------|-------|
| | Min | Max | Min | Max |
| A | 0.90 | 1.20 | 0.035 | 0.047 |
| A1 | 0.00 | 0.10 | 0.000 | 0.004 |
| A2 | 0.90 | 1.10 | 0.035 | 0.043 |
| b | 0.30 | 0.50 | 0.012 | 0.020 |
| c | 0.08 | 0.15 | 0.003 | 0.006 |
| D | 2.80 | 3.00 | 0.110 | 0.118 |
| E | 1.20 | 1.40 | 0.047 | 0.055 |
| E1 | 2.30 | 2.50 | 0.091 | 0.098 |
| L | 0.30 | 0.50 | 0.012 | 0.020 |
| θ | 0° | 10° | 0° | 10° |
| L1 | 0.55 REF | | 0.022 REF | |
| e | 0.95 REF | | 0.037 REF | |
| e1 | 1.90 REF | | 0.075 REF | |

■ 推荐焊盘布局 RECOMMENDED SOLDERING FOOTPRINT


Note:

- 1、Dimensions: Millimeters
- 2、Tolerance: $\pm 0.05\text{mm}$

■ 包装信息 PACKING INFORMATION

| 材料名称 Material Name | 颜色 Color | 尺寸 Size | 数量 Quantity | 备注 Note |
|-----------------------|--------------|---------------|--|---|
| 卷盘 Reel | 蓝色 Blue | 7 " *8mm | 3K/盘 3K/Reel | |
| 内盒 Inner Case | 黄色 Yellow | 185*185*140mm | 30K/盒 (10 盘/盒) 30K/Case (10 Reel/ Case) | OHO2 |
| 外箱 Outer Box | 黄色 Yellow | 460*400*210mm | 180K/箱 (6 盒/箱) 180K/Box (6 Case/Box) | OXO2 |
| 标签 Label | 白色 White | 68*40mm | — | 贴卷盘、内盒、外箱 Label on reel、inner case、 outer box |