

描述 / Descriptions

TO-220F 塑封封装 PNP 半导体三极管。Silicon PNP transistor in a TO-220F Plastic Package.

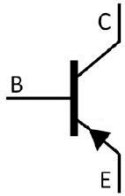
特征 / Features

h_{FE} 线性好,与 KTD2060 互补。
Good Linearity of h_{FE} , complementary pair with KTD2060.

用途 / Applications

用于一般放大。
General Purpose Application.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



PIN1 : Base PIN 2 : Collector PIN 3 : Emitter

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

| | | | |
|------------------------------------|-------|--------|---------|
| h_{FE} Classifications Symbol | R | O | Y |
| h_{FE} Range | 40~80 | 70~140 | 120~240 |

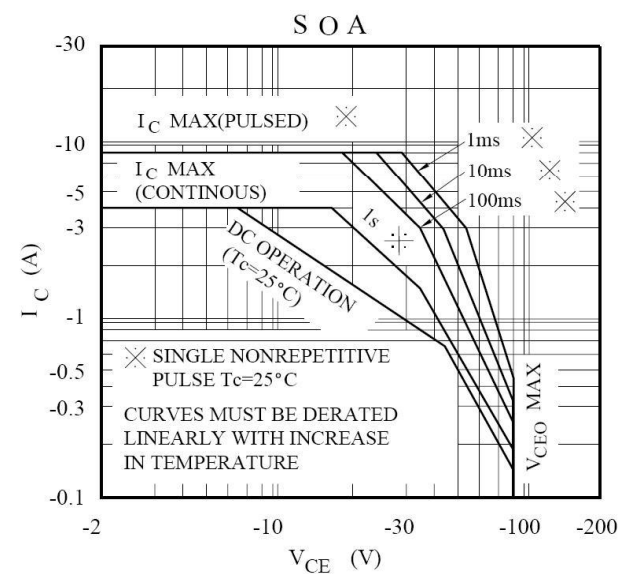
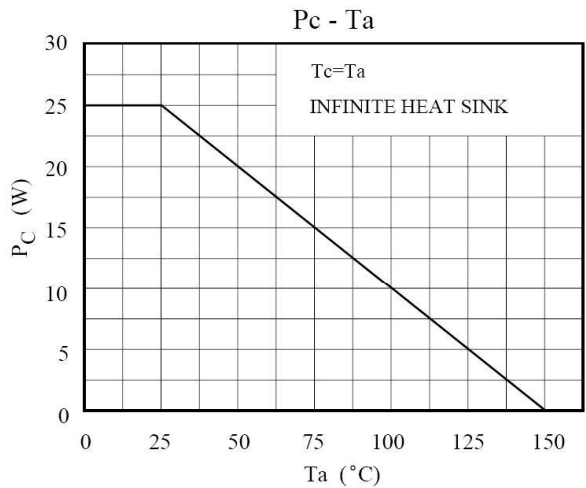
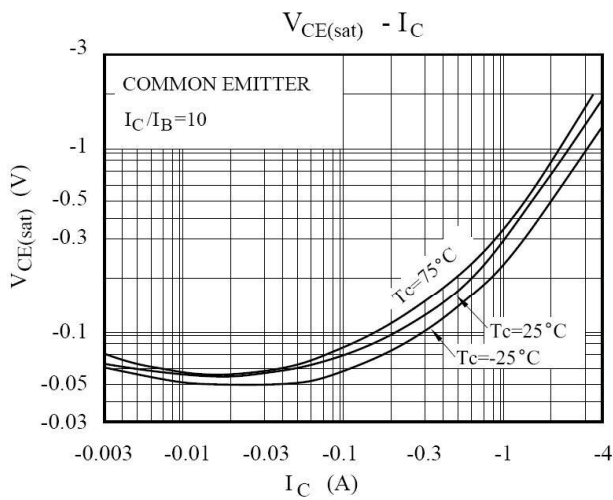
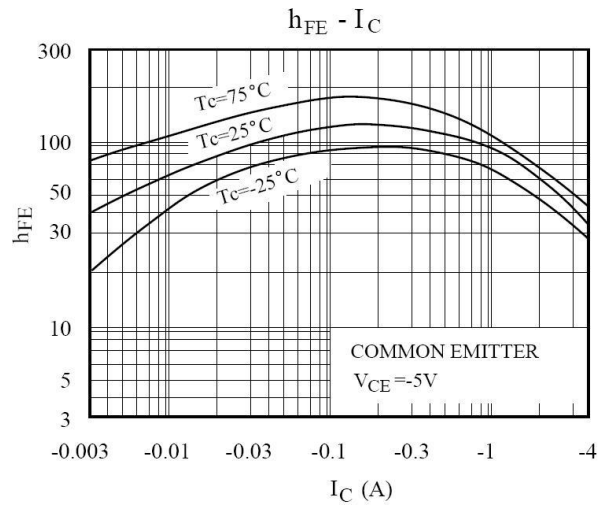
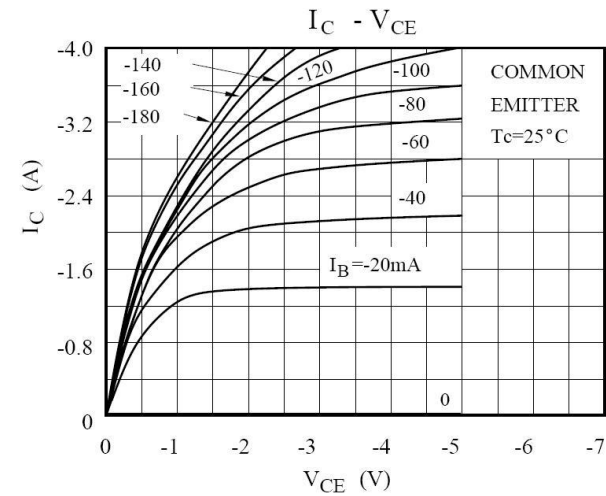
极限参数 / Absolute Maximum Ratings(Ta=25°C)

| 参数 Parameter | 符号 Symbol | 数值 Rating | 单位 Unit |
|--------------------------------|-----------------------|--------------|------------|
| Collector to Base Voltage | V_{CBO} | -80 | V |
| Collector to Emitter Voltage | V_{CEO} | -80 | V |
| Emitter to Base Voltage | V_{EBO} | -5 | V |
| Collector Current - Continuous | I_C | -4 | A |
| Base Current | I_B | -0.4 | A |
| Collector Power Dissipation | $P_C(T_c=25^\circ C)$ | 25 | W |
| 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-Emitter Breakdown Voltage | V_{CEO} | $I_C=-50mA$ $I_B=0$ | -80 | | | V |
| Collector Cut-Off Current | I_{CBO} | $V_{CB}=-80V$ $I_E=0$ | | | -30 | μA |
| Emitter Cut-Off Current | I_{EBO} | $V_{EB}=-5.0V$ $I_C=0$ | | | -100 | μA |
| DC Current Gain | $h_{FE(1)}$ | $V_{CE}=-5.0V$ $I_C=-0.5A$ | 40 | | 240 | |
| | $h_{FE(2)}$ | $V_{CE}=-5.0V$ $I_C=-3.0A$ | 15 | | | |
| Collector to Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=-3.0A$ $I_B=-0.3A$ | | -1.0 | -1.7 | V |
| Base-Emitter Voltage | V_{BE} | $V_{CE}=-5.0V$ $I_C=-3.0A$ | | -1.0 | -1.5 | V |
| Transition Frequency | f_T | $I_C=-0.5A$ $V_{CE}=-5.0V$ | | 9.0 | | MHz |
| Collector output capacitance | C_{ob} | $V_{CB}=-10V$ $I_E=0$ $f=1.0MHz$ | | 130 | | pF |

电参数曲线图 / Electrical Characteristic Curve



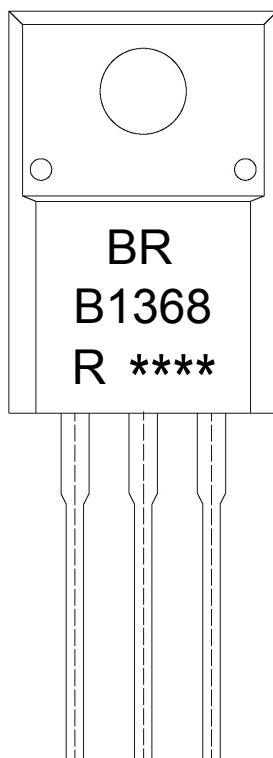
外形尺寸图 / Package Dimensions

T0-220F

单位: mm



印章说明 / Marking Instructions



说明：

BR： 为公司代码

B1368： 为型号代码

R： 为档次代码

****： 为生产批号代码，随生产批号变化。

Note:

BR: Company Code.

B1368: Product Type.

R: h_{FE} Classifications Symbol.

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

波峰焊温度曲线图(无铅) / Temperature Profile for Dip Soldering(Pb-Free)



说明：

- 1、预热温度 25 ~ 150°C，时间 60 ~ 90sec；
- 2、峰值温度 255±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.:255±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：270±5°C 时间：10±1 sec. Temp:270±5°C Time:10±1 sec

包装规格 / Packaging SPEC.

散件包装 / BULK

| Package Type 封装形式 | Units 包装数量 | | | | | Dimension 包装尺寸 (unit: mm3) | | |
|----------------------|------------------|-----------------------|------------------------|------------------------------|------------------------|----------------------------|-------------|-------------|
| | Units/Bag 只/袋 | Bags/Inner Box 袋/盒 | Units/Inner Box 只/盒 | Inner Boxes/Outer Box 盒/箱 | Units/Outer Box 只/箱 | Bag 袋 | Inner Box 盒 | Outer Box 箱 |
| TO-220F | 200 | 10 | 2,000 | 5 | 10,000 | 135×190 | 237×172×102 | 560×245×195 |

套管包装 / TUBE

| Package Type 封装形式 | Units 包装数量 | | | | | Dimension 包装尺寸 (unit: mm3) | | |
|----------------------|--------------------|-------------------------|------------------------|------------------------------|------------------------|----------------------------|-------------|-------------|
| | Units/Tube 只/套管 | Tubes/Inner Box 套管/盒 | Units/Inner Box 只/盒 | Inner Boxes/Outer Box 盒/箱 | Units/Outer Box 只/箱 | Tube 套管 | Inner Box 盒 | Outer Box 箱 |
| TO-220F | 50 | 20 | 1,000 | 5 | 5,000 | 532×31.4×5.5 | 555×164×50 | 575×290×180 |

使用说明 / Notices