

**描述 / Descriptions**

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

**特征 / Features**

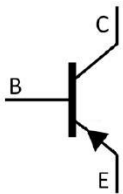
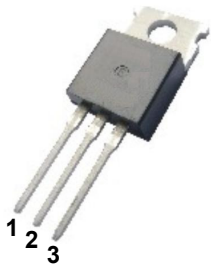
与 2N6121 互补。

Complement to 2N6121.

**用途 / Applications**

用于中功率线性开关。

Medium power linear switching applications.

**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**

见印章说明。See Marking Instructions.

**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      | $V_{CBO}$                     | -45          | V                  |
| Collector to Emitter Voltage   | $V_{CEO}$                     | -45          | V                  |
| Emitter to Base Voltage        | $V_{EBO}$                     | -5.0         | V                  |
| Collector Current - Continuous | $I_C$                         | -4.0         | A                  |
| Peak Collector Current         | $I_{CM}$                      | -7.0         | A                  |
| Base Current - Continuous      | $I_B$                         | -1.0         | A                  |
| Collector Power Dissipation    | $P_C(T_C=25^{\circ}\text{C})$ | 40           | W                  |
| Junction Temperature           | $T_j$                         | 150          | $^{\circ}\text{C}$ |
| Storage Temperature Range      | $T_{stg}$                     | -55~150      | $^{\circ}\text{C}$ |

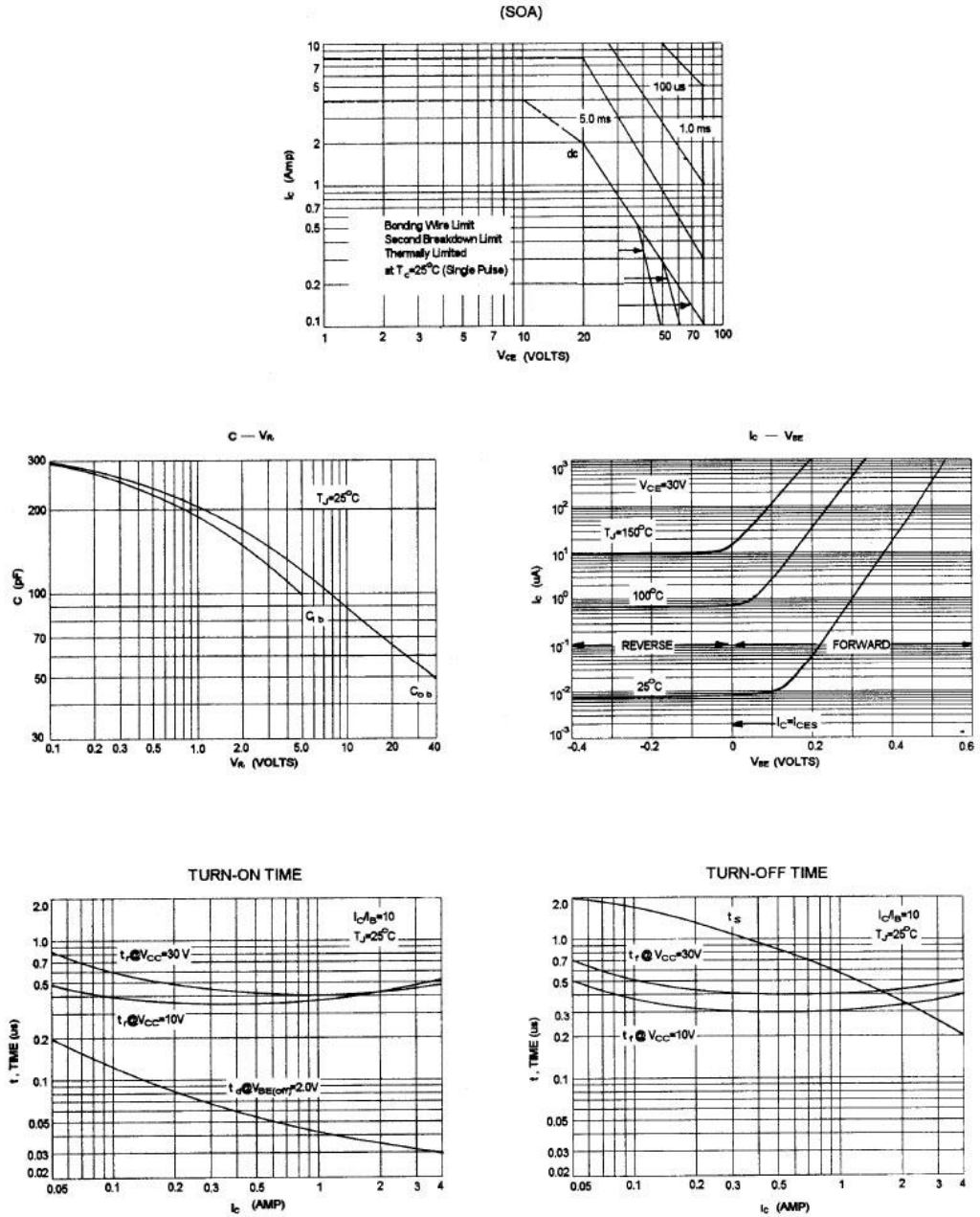
**电性能参数 / Electrical Characteristics(Ta=25°C)**

| 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*     | $*V_{CEO}$     | $I_C=-100\text{mA}$ $I_B=0$                                   | -45        |            |            | V          |
| Collector to Emitter Breakdown Voltage   | $V_{CBO}$      | $I_C=-1\text{mA}$ $I_E=0$                                     | -45        |            |            | V          |
| Emitter to Base Breakdown Voltage        | $V_{EBO}$      | $I_E=-1\text{mA}$ $I_C=0$                                     | -5.0       |            |            | mV         |
| Collector Cut-Off Current                | $I_{CBO}$      | $V_{CB}=-45\text{V}$ $I_E=0$                                  |            |            | -0.1       | mA         |
| Collector Cut-Off Current                | $I_{CEO}$      | $V_{CE}=-45\text{V}$ $I_B=0$                                  |            |            | -1.0       | mA         |
| Emitter Cut-Off Current                  | $I_{EBO}$      | $V_{EB}=-5.0\text{V}$ $I_C=0$                                 |            |            | -1.0       | mA         |
| DC Current Gain                          | $*h_{FE(1)}$   | $V_{CE}=-2.0\text{V}$ $I_C=-1.5\text{A}$                      | 25         |            | 100        |            |
|                                          | $*h_{FE(2)}$   | $V_{CE}=-2.0\text{V}$ $I_C=-4.0\text{A}$                      | 10         |            |            |            |
| Collector to Emitter Saturation Voltage* | $*V_{CE(sat)}$ | $I_C=-1.5\text{A}$ $I_B=0.15\text{A}$                         |            |            | -0.6       | V          |
| Collector to Emitter Saturation Voltage* | $*V_{CE(sat)}$ | $I_C=-4.0\text{A}$ $I_B=-1.0\text{A}$                         |            |            | -1.4       | V          |
| Base to Emitter On Voltage*              | $*V_{BE(on)}$  | $I_C=-1.5\text{A}$ $V_{CE}=-2.0\text{V}$                      |            |            | -1.2       | V          |
| Transition Frequency                     | $f_T$          | $I_C=-1.0\text{A}$ $V_{CE}=-4.0\text{V}$<br>$f=1.0\text{MHz}$ | 2.5        |            |            | MHz        |

\*Pulse test: pulse width  $\leq 300\mu\text{s}$ ; duty cycle  $\leq 2\%$ .

\*脉冲测试：脉宽 $\leq 300\mu\text{s}$ ；占空比 $\leq 2\%$ 。

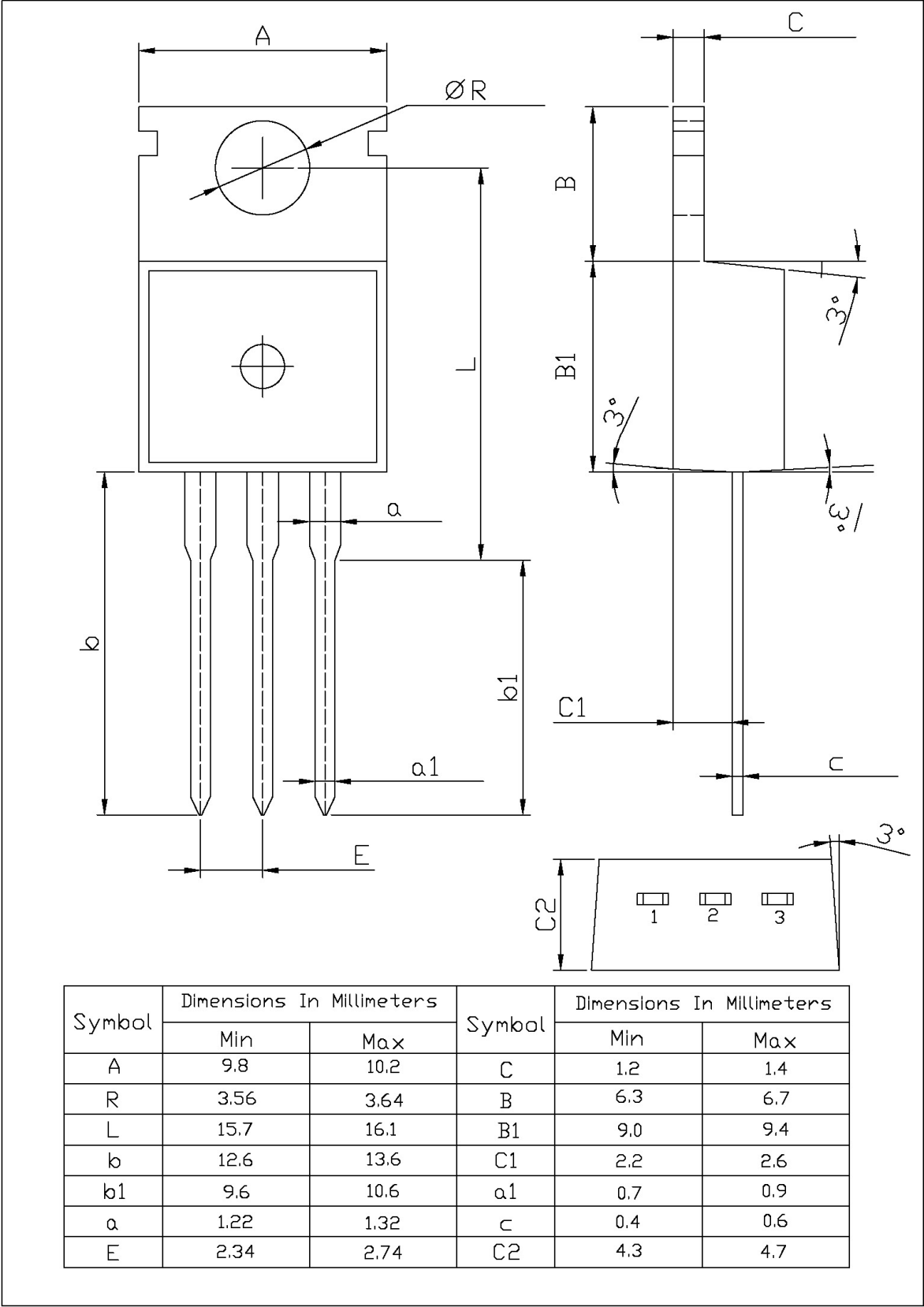
电参数曲线图 / Electrical Characteristic Curve



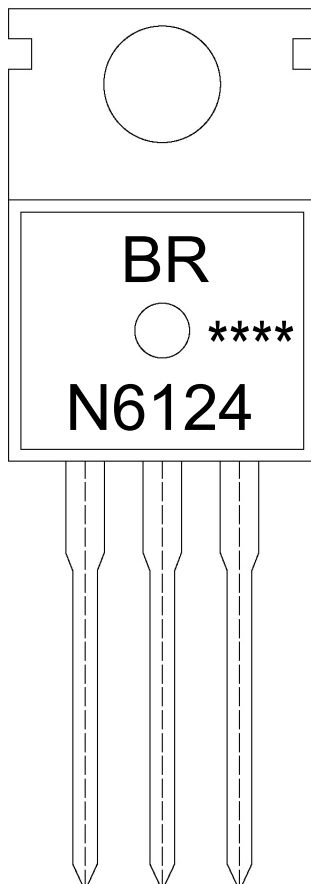
外形尺寸图 / Package Dimensions

T□-220

单位：mm



**印章说明 / Marking Instructions**



说明：

BR： 为公司代码

N6124： 为型号代码

\*\*\*\*： 为生产批号代码，随生产批号变化。

Note:

BR: Company Code

N6124: Product Type.

\*\*\*\*: 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<br>封装形式 | Units 包装数量       |                       |                        |                              |                        | Dimension 包装尺寸 (unit: mm <sup>3</sup> ) |             |             |
|----------------------|------------------|-----------------------|------------------------|------------------------------|------------------------|-----------------------------------------|-------------|-------------|
|                      | Units/Bag<br>只/袋 | Bags/Inner Box<br>袋/盒 | Units/Inner Box<br>只/盒 | Inner Boxes/Outer Box<br>盒/箱 | Units/Outer Box<br>只/箱 | Bag 袋                                   | Inner Box 盒 | Outer Box 箱 |
| TO-220/F             | 200              | 10                    | 2,000                  | 5                            | 10,000                 | 135×190                                 | 237×172×102 | 560×245×195 |

套管包装 / TUBE

| Package Type<br>封装形式 | Units 包装数量         |                         |                        |                              |                        | Dimension 包装尺寸 (unit: mm <sup>3</sup> ) |             |             |
|----------------------|--------------------|-------------------------|------------------------|------------------------------|------------------------|-----------------------------------------|-------------|-------------|
|                      | Units/Tube<br>只/套管 | Tubes/Inner Box<br>套管/盒 | Units/Inner Box<br>只/盒 | Inner Boxes/Outer Box<br>盒/箱 | Units/Outer Box<br>只/箱 | Tube 套管                                 | Inner Box 盒 | Outer Box 箱 |
| TO-220/F             | 50                 | 20                      | 1,000                  | 5                            | 5,000                  | 532×31.4×5.5                            | 555×164×50  | 575×290×180 |

### 使用说明 / Notices