

### 描述 / Descriptions

TO-3PH 塑封封装 PNP 半导体三极管。Silicon PNP transistor in a TO-3PH Plastic Package.

### 特征 / Features

用于 45-50W 音频功率输出，与 BR2SD718PH 互补。

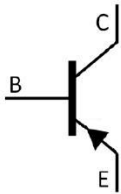
For 45-50W audio frequency amplifier output stage, Complementary to BR2SD718PH.

### 用途 / Applications

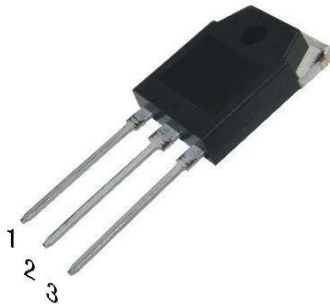
用于音频放大电路。

Designed for use in audio frequency amplifier.

### 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<br>Symbol | R      | O      |
| $h_{FE}$ Range                     | 55~110 | 80~160 |

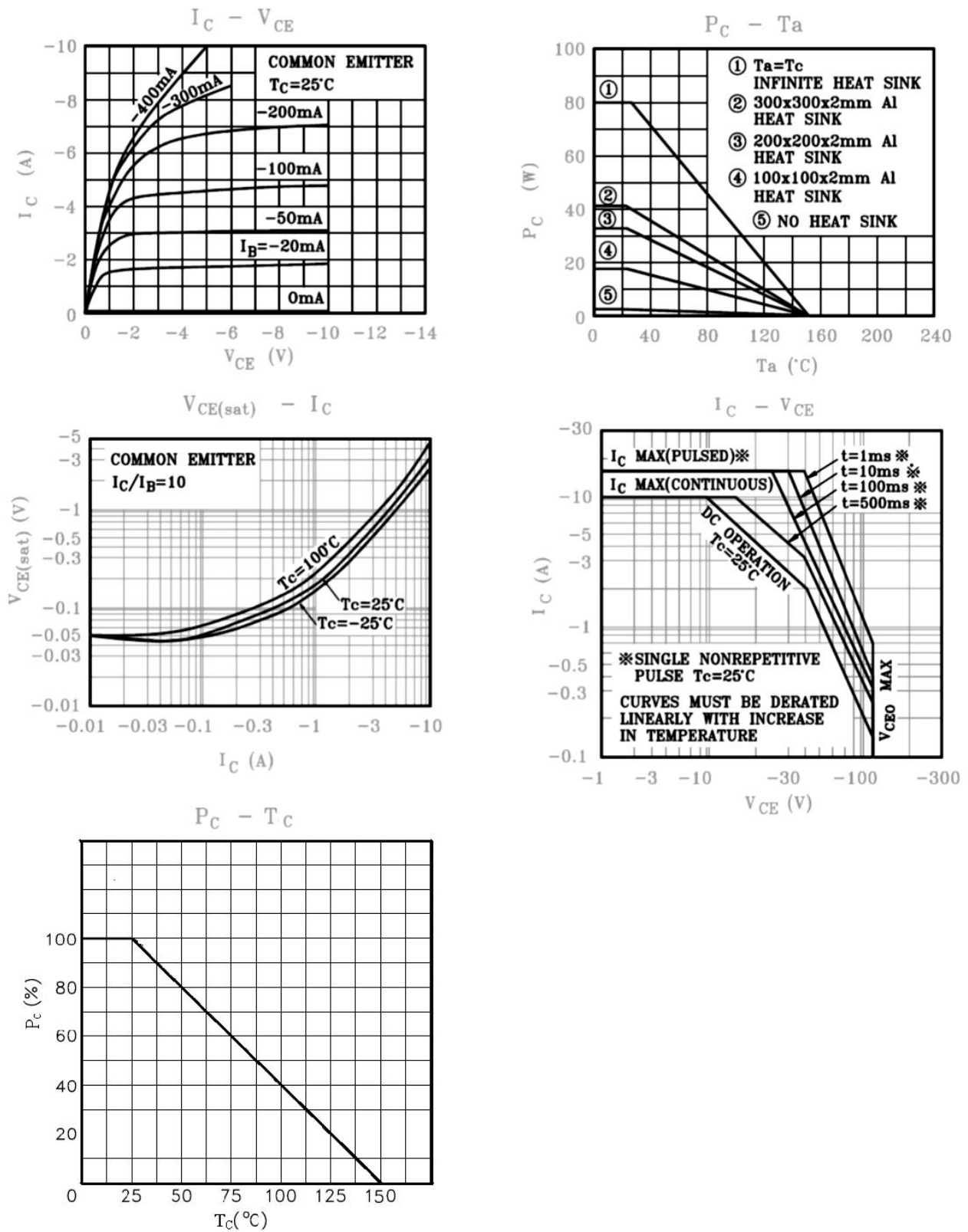
**极限参数 / Absolute Maximum Ratings(Ta=25°C)**

| 参数<br>Parameter                | 符号<br>Symbol          | 数值<br>Rating | 单位<br>Unit |
|--------------------------------|-----------------------|--------------|------------|
| Collector to Base Voltage      | $V_{CBO}$             | -120         | V          |
| Collector to Emitter Voltage   | $V_{CEO}$             | -120         | V          |
| Emitter to Base Voltage        | $V_{EBO}$             | -5           | V          |
| Collector Current - Continuous | $I_C$                 | -10          | A          |
| Base Current                   | $I_B$                 | -1           | A          |
| Collector Power Dissipation    | $P_C(TC=25^{\circ}C)$ | 80           | 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)**

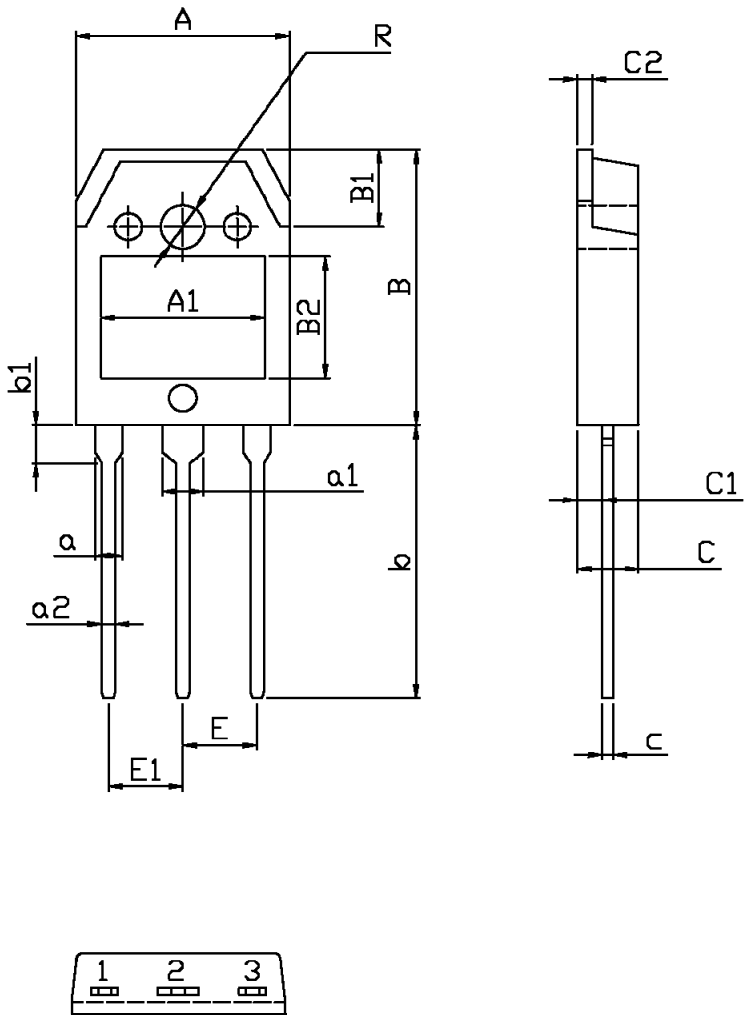
| 参数<br>Parameter                         | 符号<br>Symbol  | 测试条件<br>Test Conditions               | 最小值<br>Min | 典型值<br>Typ | 最大值<br>Max | 单位<br>Unit |
|-----------------------------------------|---------------|---------------------------------------|------------|------------|------------|------------|
| Collector to Emitter Breakdown Voltage  | $V_{CEO}$     | $I_C=-50mA$ $I_B=0$                   | -120       |            |            | V          |
| Collector Cut-Off Current               | $I_{CBO}$     | $V_{CB}=-120V$ $I_E=0$                |            |            | -10        | μA         |
| Emitter Cut-Off Current                 | $I_{EBO}$     | $V_{EB}=-5.0V$ $I_C=0$                |            |            | -10        | μA         |
| DC Current Gain                         | $h_{FE}$      | $V_{CE}=-5.0V$ $I_C=-1.0A$            | 55         |            | 160        |            |
| Collector to Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=-5.0A$ $I_B=-0.5A$               |            |            | -2.5       | V          |
| Base to Emitter Voltage                 | $V_{BE}$      | $V_{CE}=-5.0V$ $I_C=-5.0A$            |            |            | -1.5       | V          |
| Transition Frequency                    | $f_T$         | $V_{CE}=-5.0V$ $I_C=-1.0A$ $f=1.0MHz$ |            | 10         |            | MHz        |
| Collector Output Capacitance            | $C_{ob}$      | $V_{CB}=-10V$ $I_E=0$ $f=1.0MHz$      |            | 280        |            | pF         |

## 电参数曲线图 / Electrical Characteristic Curve



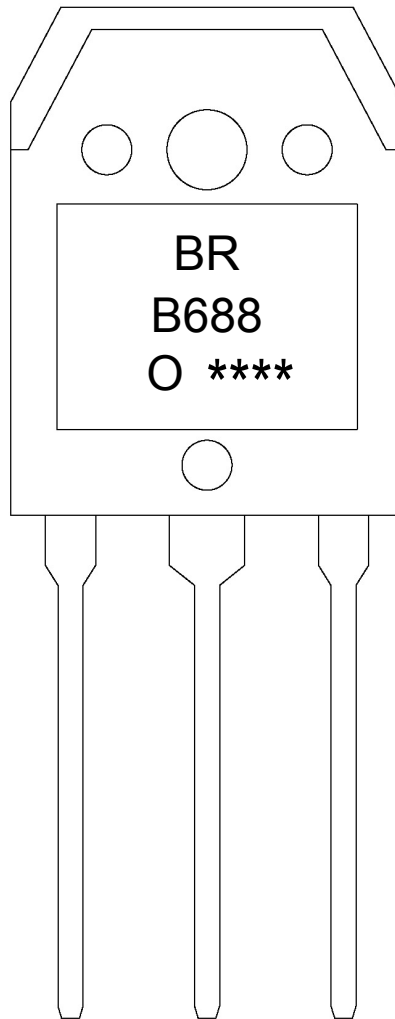
外形尺寸图 / Package Dimensions

T□-3PH Unit:mm



| Symbol | Dimensions In Millimeters |      | Symbol | Dimensions In Millimeters |     |
|--------|---------------------------|------|--------|---------------------------|-----|
|        | Min                       | Max  |        | Min                       | Max |
| A      | 15.4                      | 16.0 | a2     | 0.8                       | 1.2 |
| R      | 3.1                       | 3.5  | E      | 5.45                      |     |
| B      | 19.8                      | 20.8 | E1     | 5.45                      |     |
| B1     | 5.5                       | 5.9  | C      | 4.6                       | 5.0 |
| B2     | 8.5                       |      | C1     | 2.2                       | 2.6 |
| A1     | 12.0                      |      | C2     | 1.4                       | 1.6 |
| b      | 19.6                      | 20.6 | c      | 0.5                       | 0.7 |
| b1     | 2.6                       | 3.0  |        |                           |     |
| a      | 1.8                       | 2.2  |        |                           |     |
| a1     | 2.8                       | 3.2  |        |                           |     |

**印章说明 / Marking Instructions**



说明：

BR： 为公司代码

B688： 为型号代码

O： 为  $h_{FE}$  分档代码

\*\*\*\*： 为生产批号代码，随生产批号变化。

Note:

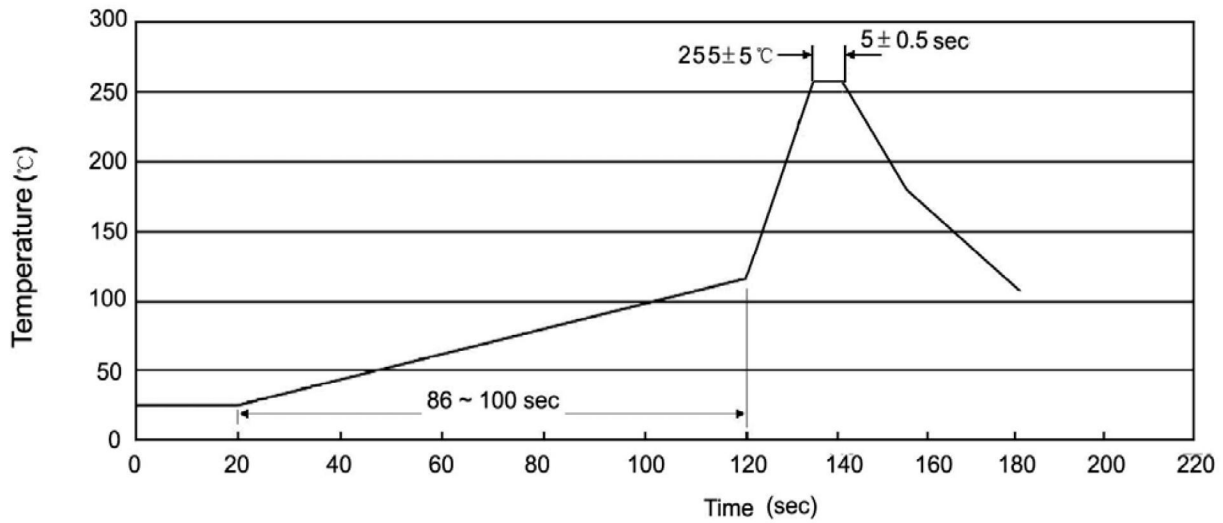
BR: Company Code.

B688: Product Type.

O:  $h_{FE}$  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℃，时间 60~90sec;
- 2、峰值温度 255±5℃，时间持续为 5±0.5sec;
- 3、焊接制程冷却速度为 2~10℃/sec.

Note:

- 1.Preheating:25~150℃, Time:60~90sec.
- 2.Peak Temp.:255±5℃, Duration:5±0.5sec.
3. Cooling Speed: 2~10℃/sec.

耐焊接热试验条件 / Resistance to Soldering Heat Test Conditions

温度：270±5℃

时间：10±1 sec.

Temp.:270±5℃

Time:10±1 sec

包装规格 / Packaging SPEC.

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-3PH               | 30                 | 15                      | 450                    | 5                            | 2250                   | 497.5×46×8                              | 555×164×50  | 575×290×180 |

使用说明 / Notices