

## / Descriptions

Silicon NPN transistor in a TO-220F Plastic Package.

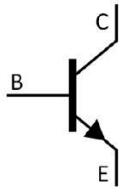
## / Features

High  $V_{CEO}$ , small  $I_{CBO}$  and  $V_{CE(sat)}$ .

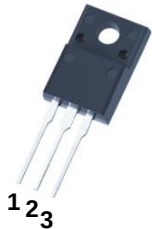
## / Applications

Color TV deflection speed modulating and high-frequency general purpose amplifiers.

## / Equivalent Circuit



## / Pinning



PIN1 Base      PIN 2 Collector      PIN 3 Emitter

## / $h_{FE}$ Classifications & Marking

|                                    |        |         |
|------------------------------------|--------|---------|
| $h_{FE}$ Classifications<br>Symbol | R      | O       |
| $h_{FE}$ Range                     | 60 140 | 100 240 |

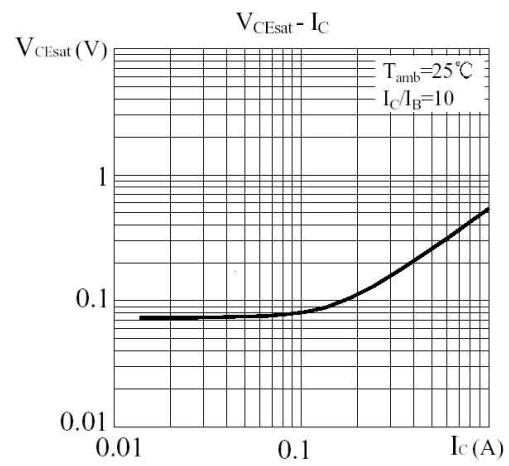
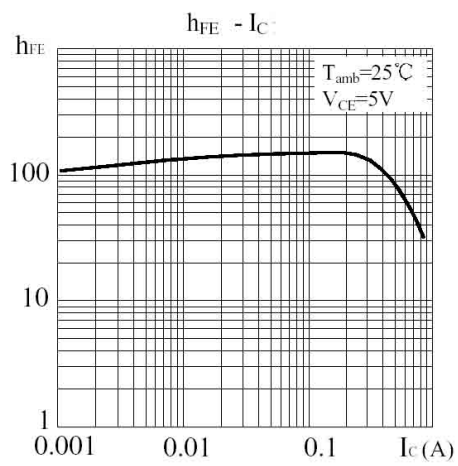
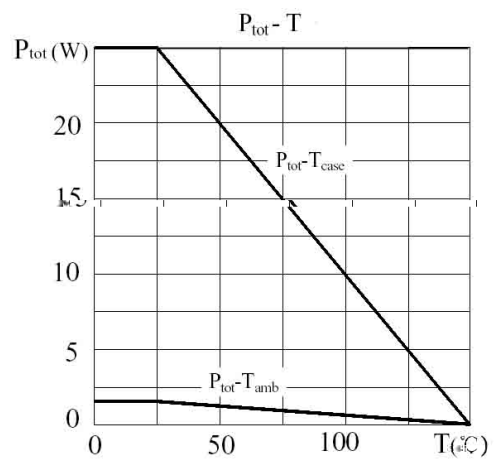
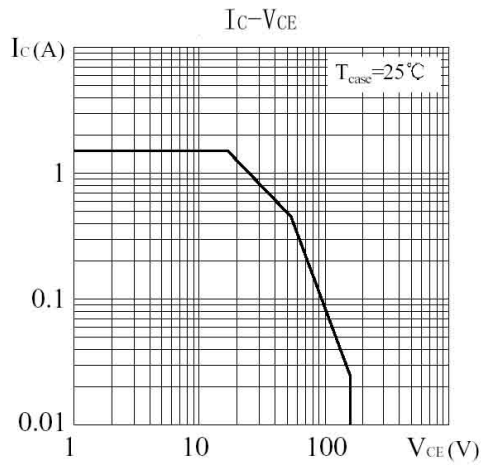
**/ Absolute Maximum Ratings(Ta=25 )**

| Parameter                      | Symbol        | Rating  | 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 - Continuous | $I_C$         | 1.5     | A    |
| Collector Power Dissipation    | $P_C$         | 1.5     | W    |
| Collector Power Dissipation    | $P_C(T_c=25)$ | 25      | W    |
| Junction Temperature           | $T_J$         | 150     |      |
| Storage Temperature Range      | $T_{stg}$     | -55 150 |      |

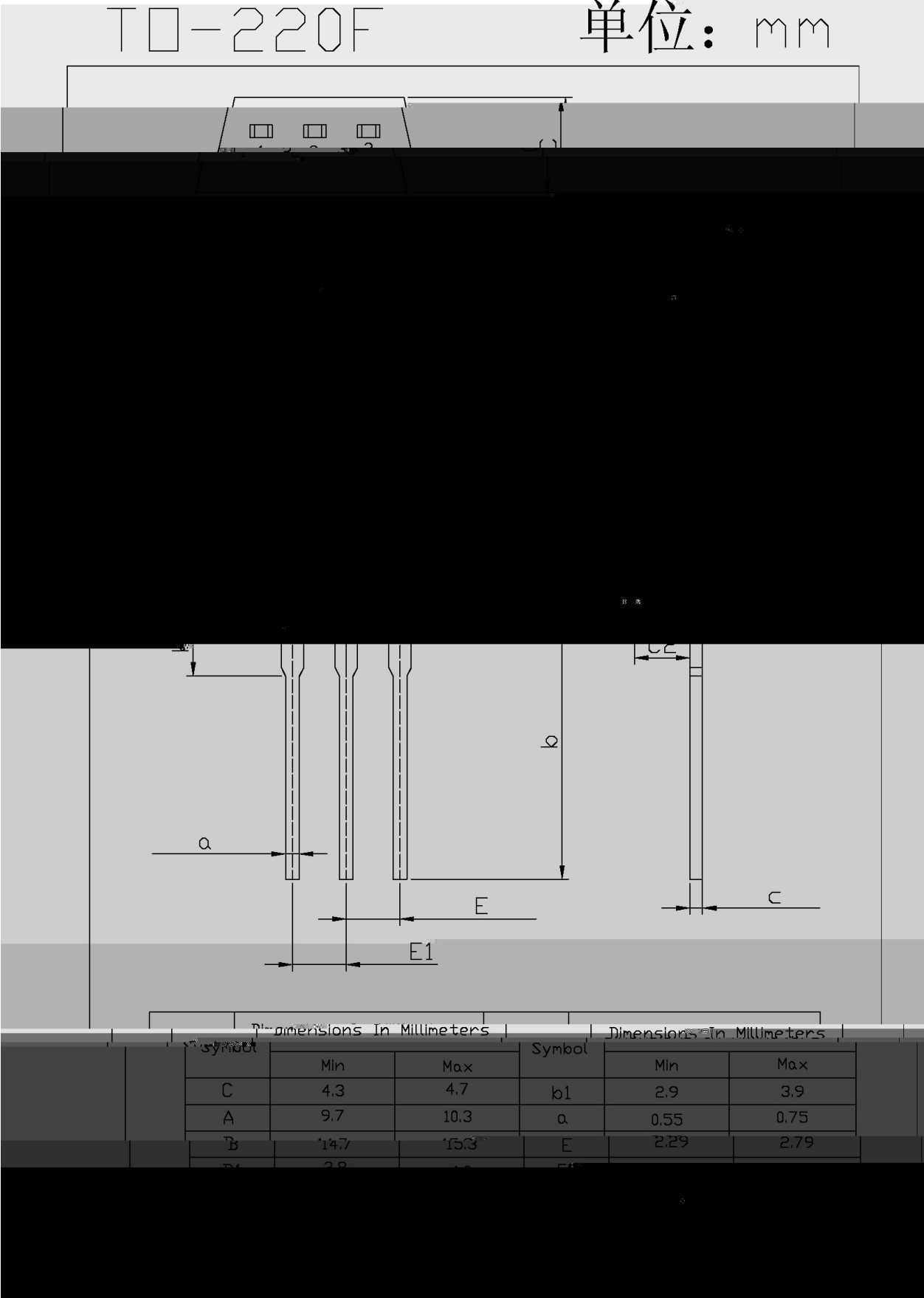
**/ Electrical Characteristics(Ta=25 )**

| Parameter                               | Symbol        | Test Conditions           | Min | Typ | Max | Unit |
|-----------------------------------------|---------------|---------------------------|-----|-----|-----|------|
| Collector Cut-Off Current               | $I_{CBO}$     | $V_{CB}=180V$ $I_E=0$     |     |     | 10  | A    |
| Emitter Cut-Off Current                 | $I_{EBO}$     | $V_{EB}=6.0V$ $I_C=0$     |     |     | 10  | A    |
| DC Current Gain                         | $h_{FE}$      | $V_{CE}=5.0V$ $I_C=200mA$ | 60  |     | 240 |      |
| Collector to Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=500mA$ $I_B=50mA$    |     |     | 1.0 | V    |
| Transition Frequency                    | $f_T$         | $V_{CE}=10V$ $I_C=50mA$   | 50  |     |     | MHz  |

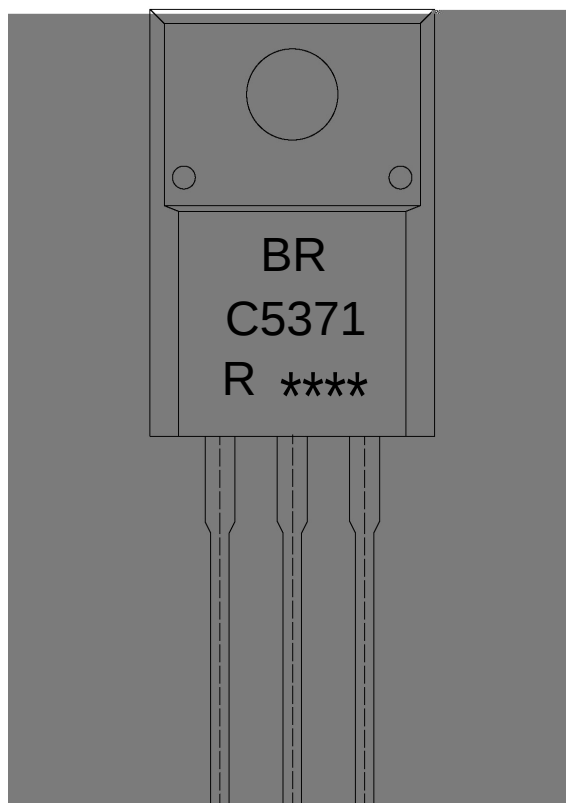
**/ Electrical Characteristic Curve**



/ Package Dimensions



**/ Marking Instructions**



Note:

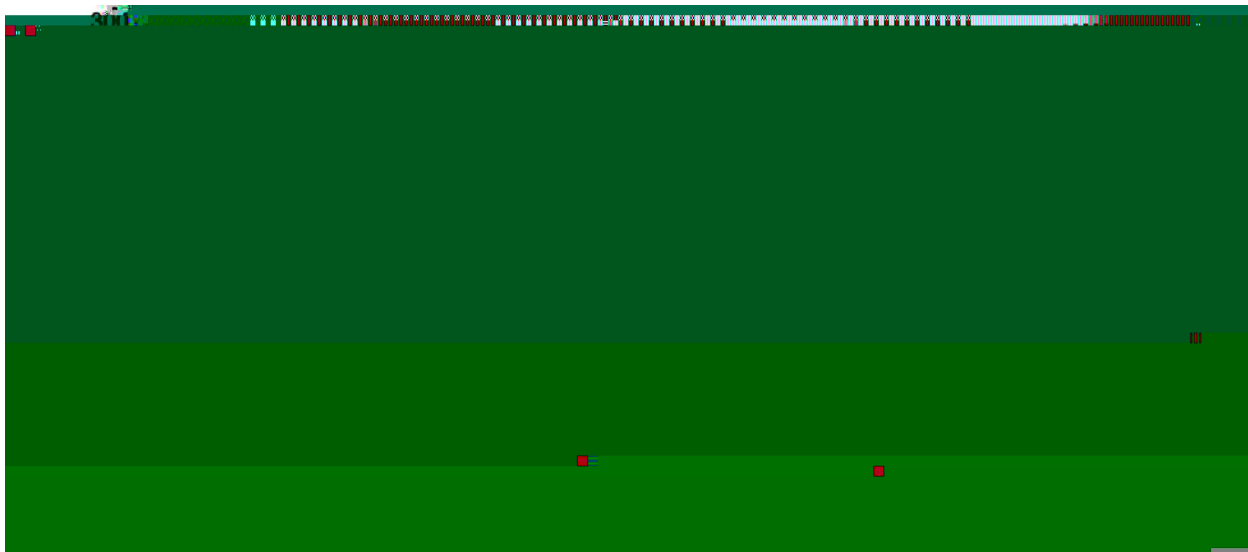
BR: Company Code.

C5371: Product Type.

R:  $h_{FE}$  Classifications Symbol.

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

( ) / Temperature Profile for Dip Soldering(Pb-Free)



Note:

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

/ Resistance to Soldering Heat Test Conditions

270 5                      10 1 sec.                      Temp.:270±5                      Time:10±1 sec

/ Packaging SPEC.

/ 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 |

/ 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 |

/ Notices