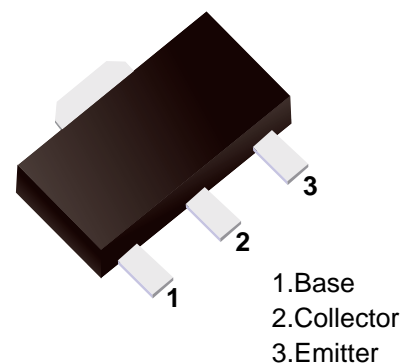


## NPN Transistors

### ■ Features

- Small Flat Package
- High Transition Frequency
- High Voltage
- Complementary to 2SA1201



■ Simplified outline(SOT-89)

### ■ Absolute Maximum Ratings Ta = 25°C

| Parameter                                   | Symbol           | Rating     | Unit |
|---|------------------|------------|------|
| Collector - Base Voltage                    | V <sub>CB0</sub> | 120        | V    |
| Collector - Emitter Voltage                 | V <sub>CEO</sub> | 120        |      |
| Emitter - Base Voltage                      | V <sub>EBO</sub> | 5          |      |
| Collector Current - Continuous              | I <sub>C</sub>   | 800        | mA   |
| Base Current                                | I <sub>B</sub>   | 160        |      |
| Collector Power Dissipation                 | P <sub>C</sub>   | 500        | mW   |
| Thermal Resistance From Junction To Ambient | R <sub>θJA</sub> | 250        | °C/W |
| Junction Temperature                        | T <sub>J</sub>   | 150        | °C   |
| Storage Temperature Range                   | T <sub>stg</sub> | -55 to 150 |      |

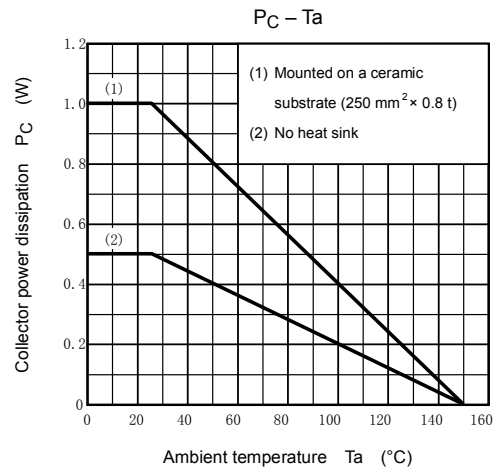
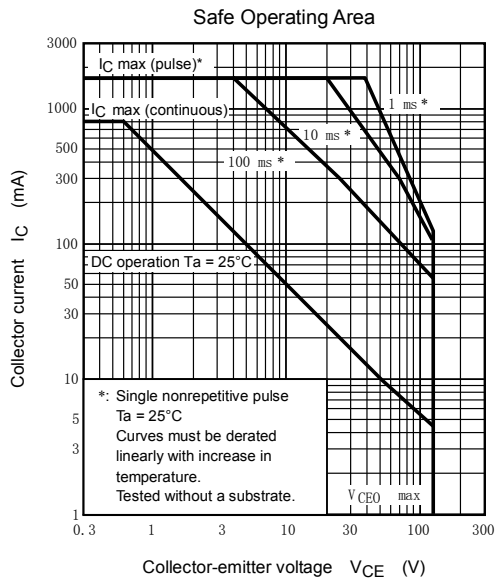
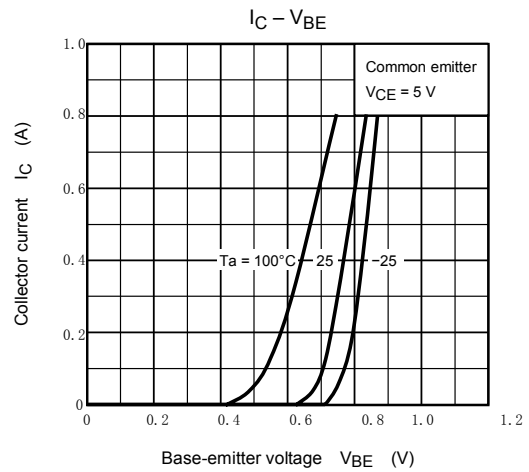
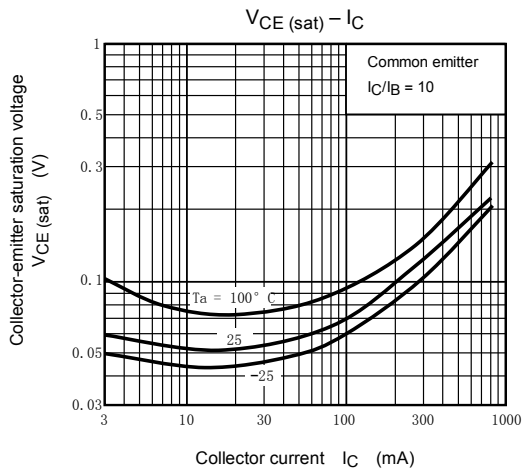
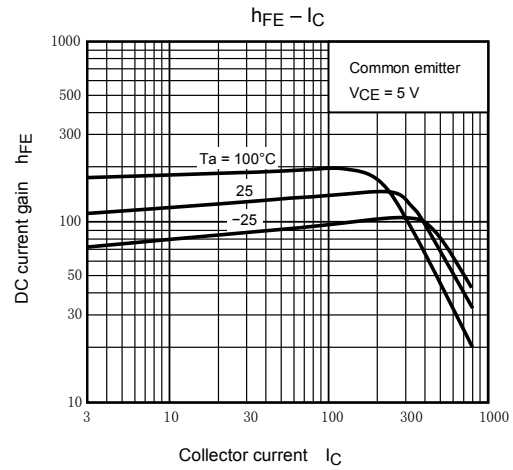
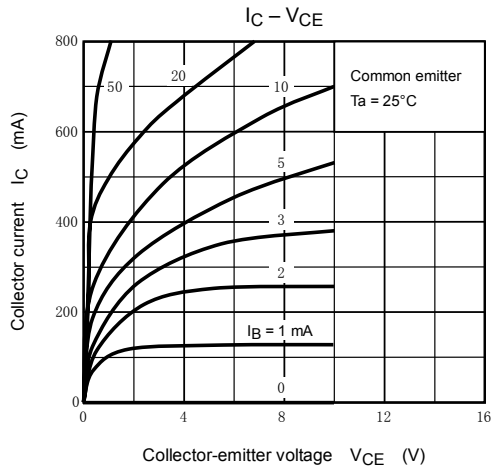
### ■ Electrical Characteristics Ta = 25°C

| Parameter                            | Symbol               | Test Conditions                                   | Min | Typ | Max | Unit |
|--------------------------------------|----------------------|---|-----|-----|-----|------|
| Collector- base breakdown voltage    | V <sub>CB0</sub>     | I <sub>C</sub> = 100uA, I <sub>E</sub> = 0        | 120 |     |     | V    |
| Collector- emitter breakdown voltage | V <sub>CEO</sub>     | I <sub>C</sub> = 10mA, I <sub>B</sub> = 0         | 120 |     |     |      |
| Emitter - base breakdown voltage     | V <sub>EBO</sub>     | I <sub>E</sub> = 100uA, I <sub>C</sub> = 0        | 5   |     |     |      |
| Collector-base cut-off current       | I <sub>CBO</sub>     | V <sub>CB</sub> = 120V, I <sub>E</sub> = 0        |     |     | 0.1 | uA   |
| Emitter cut-off current              | I <sub>EBO</sub>     | V <sub>EB</sub> = 5V, I <sub>C</sub> =0           |     |     | 0.1 |      |
| Collector-emitter saturation voltage | V <sub>CE(sat)</sub> | I <sub>C</sub> =500 mA, I <sub>B</sub> =50mA      |     |     | 1   | V    |
| Base - emitter saturation voltage    | V <sub>BE(sat)</sub> | I <sub>C</sub> =500 mA, I <sub>B</sub> =50mA      |     |     | 1.2 |      |
| Base - emitter voltage               | V <sub>BE</sub>      | V <sub>CE</sub> = 5V, I <sub>C</sub> = 0.5A       |     |     | 1   |      |
| DC current gain                      | h <sub>FE</sub>      | V <sub>CE</sub> = 5V, I <sub>C</sub> = 100mA      | 80  |     | 240 |      |
| Collector output capacitance         | C <sub>ob</sub>      | V <sub>CB</sub> = 10V, I <sub>E</sub> = 0, f=1MHz |     |     | 30  | pF   |
| Transition frequency                 | f <sub>t</sub>       | V <sub>CE</sub> = 5V, I <sub>C</sub> = 100mA      |     | 120 |     | MHz  |

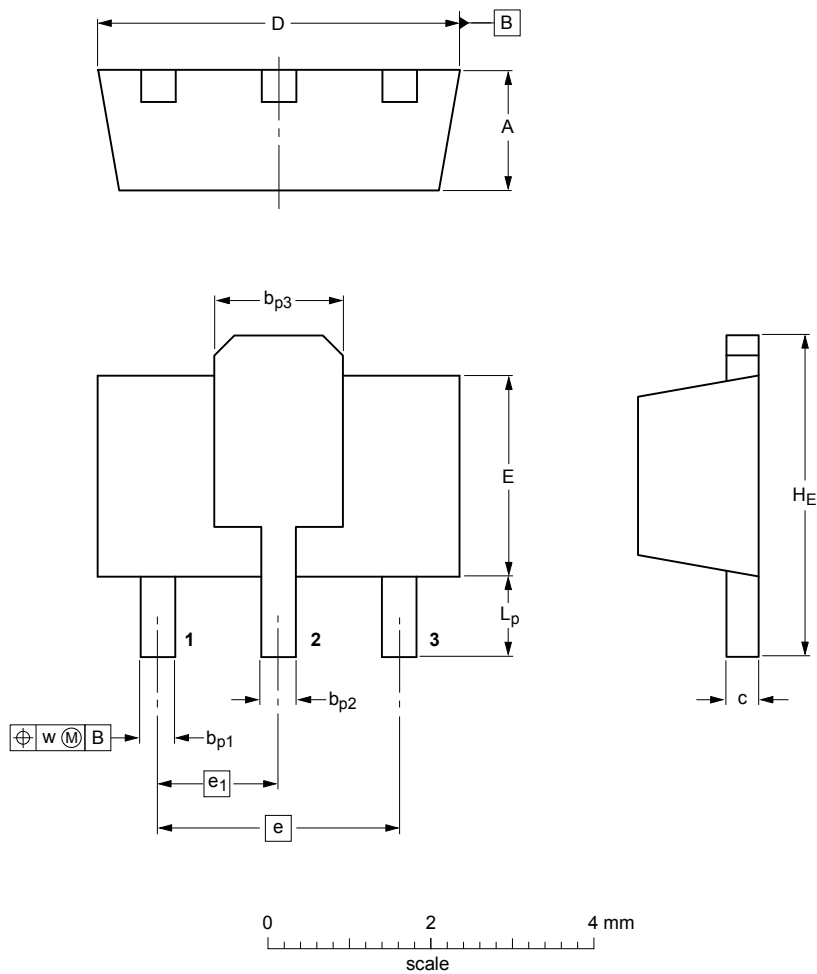
### ■ Classification of h<sub>FE</sub>

| Type    | 2SC2881-O | 2SC2881-Y |
|---------|-----------|-----------|
| Range   | 80-160    | 120-240   |
| Marking | CO*       | CY*       |

■ Typical Characteristics



■ SOT-89



**DIMENSIONS (mm are the original dimensions)**

| UNIT | A   | $b_{p1}$ | $b_{p2}$ | $b_{p3}$ | c    | D   | E   | e   | $e_1$ | $H_E$ | $L_p$ | w    |
|------|-----|----------|----------|----------|------|-----|-----|-----|-------|-------|-------|------|
| mm   | 1.6 | 0.48     | 0.53     | 1.8      | 0.44 | 4.6 | 2.6 | 3.0 | 1.5   | 4.25  | 1.2   | 0.13 |
|      | 1.4 | 0.35     | 0.40     | 1.4      | 0.23 | 4.4 | 2.4 |     |       |       |       |      |

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