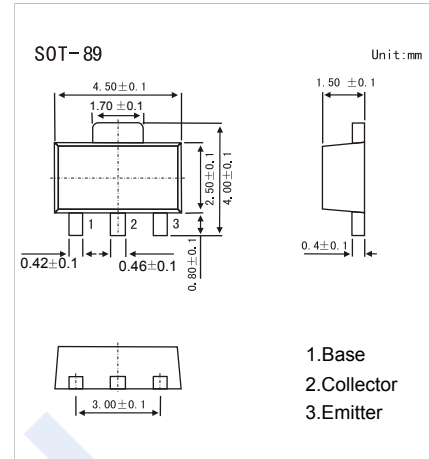


## NPN Transistors

### 2SC4080-HF

#### ■ Features

- High fr.
- High breakdown voltage.
- Complementary to 2SA1575-HF
- Pb-Free Package May be Available. The G-Suffix Denotes a Pb-Free Lead Finish



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

| Parameter                      | Symbol           | Rating     | Unit |
|--------------------------------|------------------|------------|------|
| Collector - Base Voltage       | V <sub>CB0</sub> | 200        | V    |
| Collector - Emitter Voltage    | V <sub>CEO</sub> | 200        |      |
| Emitter - Base Voltage         | V <sub>EBO</sub> | 4          |      |
| Collector Current - Continuous | I <sub>C</sub>   | 100        | mA   |
| Collector Current - Pulse      | I <sub>CP</sub>  | 200        |      |
| Collector Power Dissipation    | P <sub>C</sub>   | 500        | mW   |
| 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> = 100 μA, I <sub>E</sub> = 0  | 200 |     |     | V    |
| Collector- emitter breakdown voltage | V <sub>CEO</sub>     | I <sub>C</sub> = 1 mA, R <sub>BE</sub> = ∞   | 200 |     |     |      |
| Emitter - base breakdown voltage     | V <sub>EBO</sub>     | I <sub>E</sub> = 100 μA, I <sub>C</sub> = 0  | 4   |     |     |      |
| Collector-base cut-off current       | I <sub>CB0</sub>     | V <sub>CB</sub> = 150V, I <sub>E</sub> = 0   |     |     | 0.1 | μA   |
| Emitter cut-off current              | I <sub>EBO</sub>     | V <sub>EB</sub> = 4V, I <sub>C</sub> =0      |     |     | 1   |      |
| Collector-emitter saturation voltage | V <sub>CE(sat)</sub> | I <sub>C</sub> =20 mA, I <sub>B</sub> =2mA   |     |     | 1   | V    |
| Base - emitter saturation voltage    | V <sub>BE(sat)</sub> | I <sub>C</sub> =20 mA, I <sub>B</sub> =2mA   |     |     | 1   |      |
| DC current gain                      | h <sub>FE</sub>      | V <sub>CE</sub> = 10V, I <sub>C</sub> = 10mA | 40  |     | 320 |      |
|                                      |                      | V <sub>CE</sub> = 10V, I <sub>C</sub> = 60mA | 20  |     |     |      |
| Reverse transfer capacitance         | C <sub>re</sub>      | V <sub>CB</sub> = 30V, f=1MHz                |     | 1.4 |     | pF   |
| Collector output capacitance         | C <sub>ob</sub>      | V <sub>CB</sub> = 30V, f=1MHz                |     | 1.8 |     |      |
| Transition frequency                 | f <sub>T</sub>       | V <sub>CE</sub> = 30V, I <sub>C</sub> = 30mA |     | 400 |     | MHz  |

#### ■ Classification of h<sub>FE</sub>(1)

| Type    | 2SC4080-C-HF     | 2SC4080-D-HF     | 2SC4080-E-HF     | 2SC4080-F-HF     |
|---------|------------------|------------------|------------------|------------------|
| Range   | 40-80            | 60-120           | 100-200          | 160-320          |
| Marking | CIC <sub>F</sub> | CID <sub>F</sub> | CIE <sub>F</sub> | CIF <sub>F</sub> |