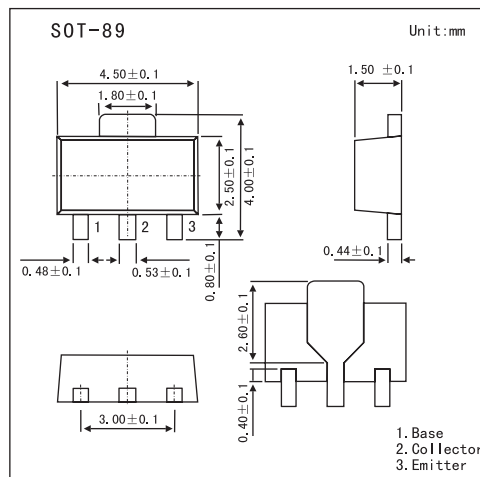


2SC3803

■ Features

- High Transition Frequency: $f_T = 200\text{MHz}(\text{typ.})$
- Low Collector Output Capacitance: $C_{ob} = 3.5\text{pF}(\text{typ.})$
- Complementary to 2SA1483



■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

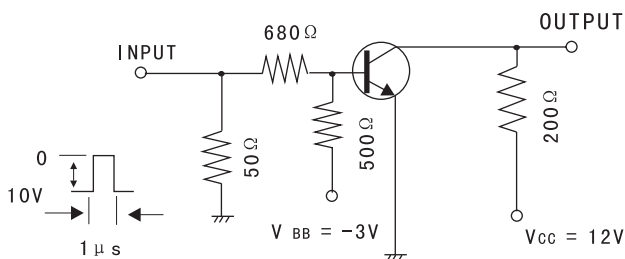
| Parameter | Symbol | Rating | Unit |
|-----------------------------|-----------|-------------|------------------|
| Collector-Base Voltage | V_{CBO} | 60 | V |
| Collector-Emitter Voltage | V_{CEO} | 45 | V |
| Emitter-Base Voltage | V_{EBO} | 5 | V |
| Collector Current | I_C | 200 | mA |
| Base Current | I_B | 50 | mA |
| Collector Power Dissipation | P_C | 500 | mW |
| | P_{C^*} | 1.0 | W |
| Junction temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage temperature Range | T_{stg} | -55 to +150 | $^\circ\text{C}$ |

* Mounted on a ceramic substrate (250 mm² x 0.8t)

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

| Parameter | Symbol | Testconditons | Min | Typ | Max | Unit |
|--------------------------------------|---------------|--|-----|-----|-----|---------------|
| Collector Cut-off Current | I_{CBO} | $V_{CB} = 45\text{V}, I_E = 0$ | | | 0.1 | μA |
| Emitter Cut-off Current | I_{EBO} | $V_{EB} = 5\text{V}, I_C = 0$ | | | 0.1 | μA |
| DC Current Gain | h_{FE} | $V_{CE} = 1\text{V}, I_C = 10\text{mA}$ | 40 | | 240 | |
| | | $V_{CE} = 3\text{V}, I_C = 200\text{mA}$ | 20 | | | |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C = 100\text{mA}, I_B = 10\text{mA}$ | | | 0.3 | V |
| Base-Emitter Saturation Voltage | $V_{BE(sat)}$ | $I_C = 100\text{mA}, I_B = 10\text{mA}$ | | | 1 | V |
| Transition Frequency | f_T | $V_{CE} = 10\text{V}, I_C = 10\text{mA}$ | 100 | 200 | | MHz |
| Input Impedance (real part) | $R_{e(hie)}$ | $V_{CB} = 10\text{V}, I_E = -10\text{mA}, f = 200\text{MHz}$ | | | 120 | Ω |
| Collector Output Capacitance | C_{ob} | $V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$ | | 3.5 | 5 | pF |
| Turn-On Time | t_{on} | See Test Circuit. | | 40 | | ns |
| Storage Time | t_{stg} | | | 250 | | ns |
| Fall Time | t_f | | | 30 | | ns |

■ Test Circuit

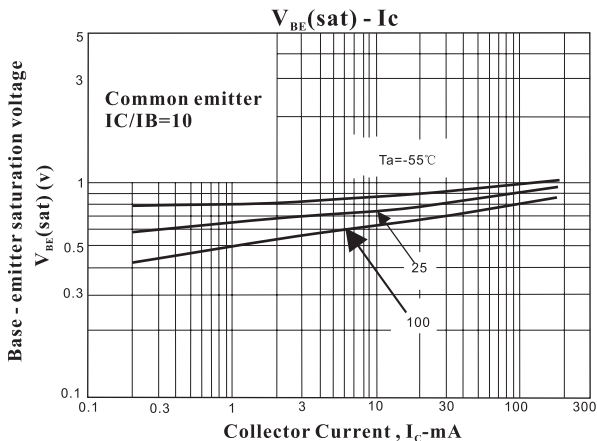
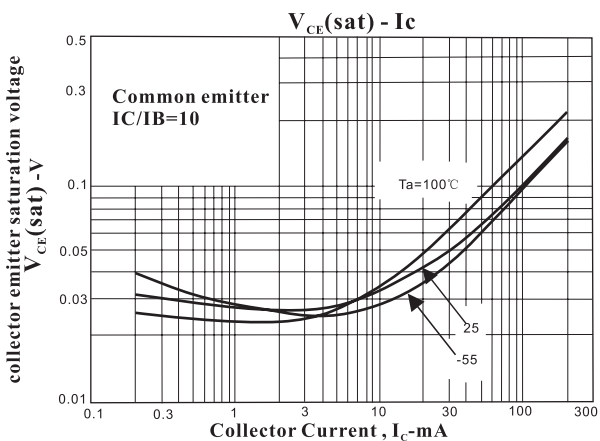
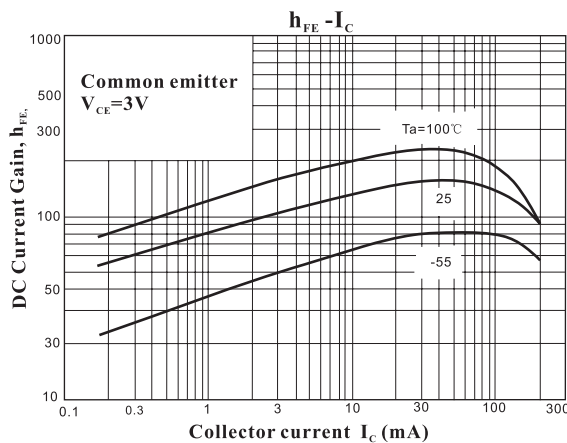
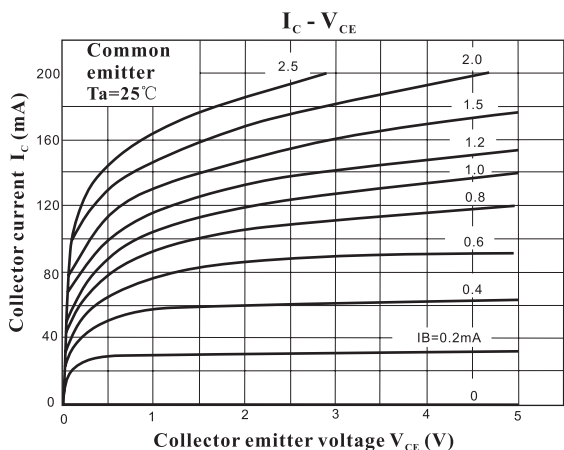


D. C. \leq 2%

■ hFE Classification

| Marking | V | | |
|---------|---------|----------|-----------|
| Rank | R | O | Y |
| hFE | 40 ~ 80 | 70 ~ 140 | 120 ~ 240 |

■ Electrical Characteristics Curves





2SC3803

