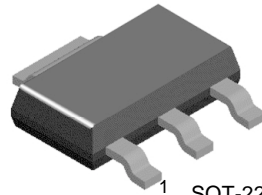


SB29003

High Voltage Transistor



1 SOT-223
Marking: 5463003
1.Base 2.Collector 3.Emitter

Absolute Maximum Ratings T_a = 25°C unless otherwise noted

| Symbol | Parameter | Value | Units |
|------------------|---|-----------|-------|
| V _{CB0} | Collector-Base Voltage | 500 | V |
| V _{CEO} | Collector-Emitter Voltage | 400 | V |
| V _{EBO} | Emitter-Base Voltage | 6 | V |
| I _C | Collector Current | 300 | mA |
| P _C | Collector Dissipation (T _C = 25°C) | 2 | W |
| T _J | Junction Temperature | 150 | °C |
| T _{STG} | Storage Temperature | -55 ~ 150 | °C |

Electrical Characteristics T_C = 25°C unless otherwise noted

| Symbol | Parameter | Conditions | Min. | Max | Units |
|----------------------|--|--|----------------------|--------------------|-------|
| BV _{CB0} | Collector-Base Breakdown Voltage | I _C = 100μA, I _B = 0 | 500 | | V |
| BV _{CER} | Collector-Emitter Breakdown Voltage * | I _C = 1mA, I _B = 0 | 400 | | V |
| BV _{EBO} | Emitter-Base Breakdown Voltage | I _E = 100μA, I _C = 0 | 6 | | V |
| I _{CB0} | Collector Cut-off Current | V _{CB} = 400V, I _E = 0 | | 0.1 | μA |
| I _{CES} | Collector Cut-off Current | V _{CE} = 400V, I _B = 0 | | 0.5 | μA |
| I _{EBO} | Emitter Cut-off Current | V _{EB} = 4V, I _C = 0 | | 0.1 | μA |
| h _{FE} | DC Current Gain * | V _{CE} = 10V, I _C = 1mA V _{CE} = 10V, I _C = 10mA V _{CE} = 10V, I _C = 50mA V _{CE} = 10V, I _C = 100mA | 40 50 45 40 | 200 | |
| V _{CE(sat)} | Collector-Emitter Saturation Voltage * | I _C = 1mA, I _B = 0.1mA I _C = 10mA, I _B = 1mA I _C = 50mA, I _B = 5mA | | 0.4 0.5 0.75 | V |
| V _{BE(sat)} | Base-Emitter Saturation Voltage * | I _C = 10mA, I _B = 1mA | | 0.75 | V |
| C _{ob} | Output Capacitance | V _{CB} = 20V, I _E = 0, f = 1MHz | | 7 | pF |

* Pulse Test: PW ≤ 300μs, Duty Cycle ≤ 2%

Typical Performance Characteristics

Figure 1. DC Current Gain

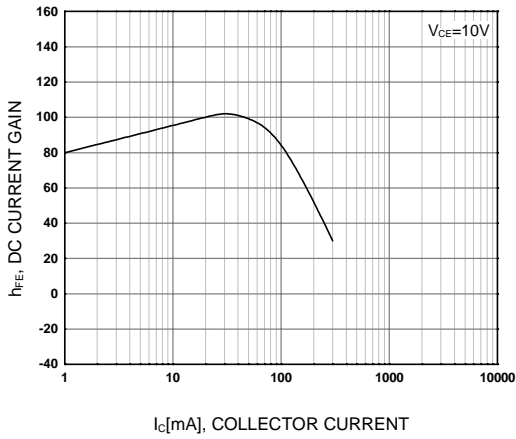


Figure 2. Capacitance

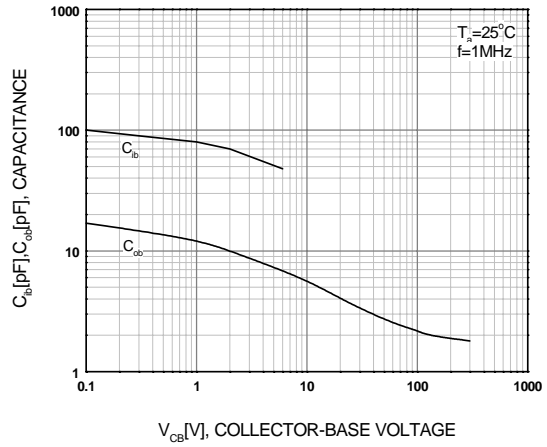


Figure 3. On Voltage

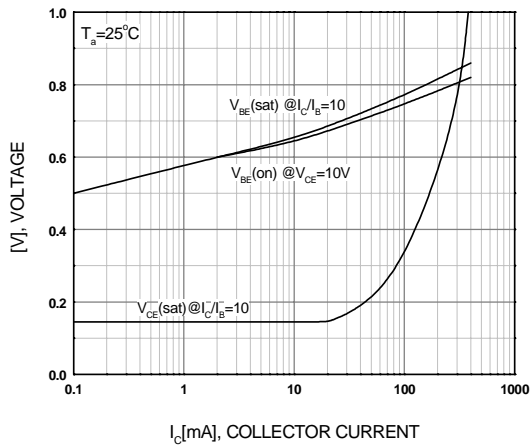


Figure 4. Collector Saturation Region

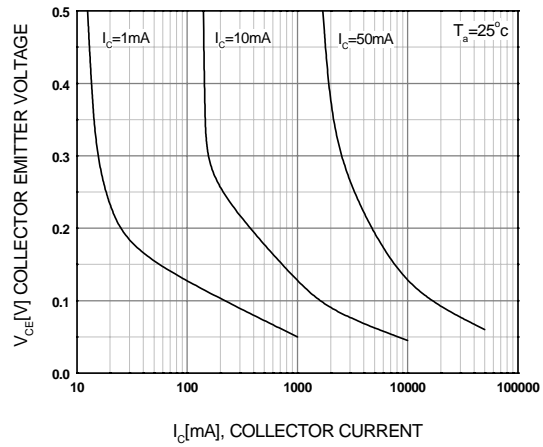
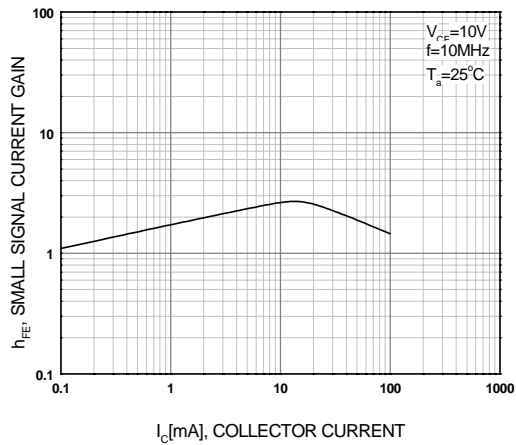
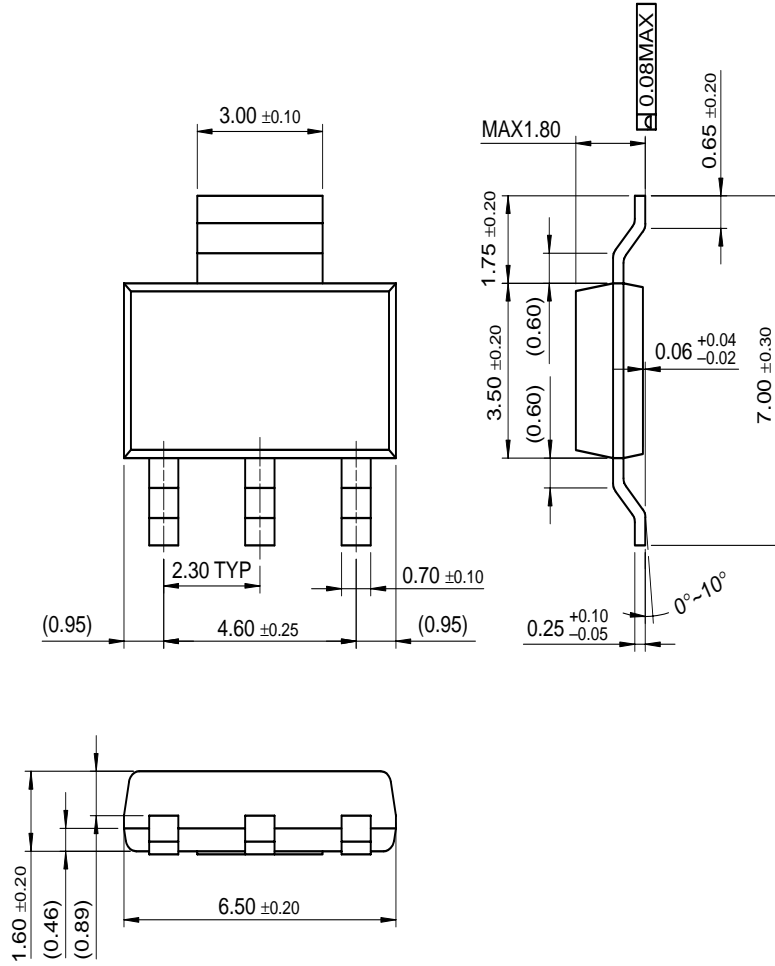


Figure 5. High Frequency Current Gain



Mechanical Dimensions

SOT-223



Dimensions in Millimeters

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