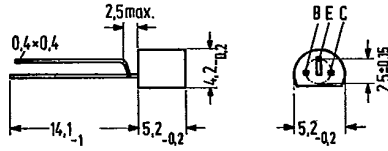


SIEMENS AKTIENGESELLSCHAFT

BF 503 is an NPN silicon planar RF transistor in TO 92 plastic package (10 A 3 DIN 41868). The transistor is particularly intended for use in VHF amplifiers, VHF mixers, and VHF oscillators.

| Type | Ordering code |
|--------|---------------|
| BF 503 | Q62702-F574 |



Approx. weight 0.25 g

Dimensions in mm

Maximum ratings ($T_{amb} = 25^\circ\text{C}$)

| | | | |
|---------------------------|-----------|-------------|------------------|
| Collector-emitter voltage | V_{CEO} | 30 | V |
| Collector-base voltage | V_{CBO} | 40 | V |
| Emitter-base voltage | V_{EBO} | 4 | V |
| Collector current | I_C | 20 | mA |
| Collector peak current | I_{CM} | 50 | mA |
| Base current | I_B | 5 | mA |
| Junction temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage temperature range | T_{stg} | -55 to +150 | $^\circ\text{C}$ |
| Total power dissipation | P_{tot} | 500 | mW |

Thermal resistance

| | | | |
|-------------------------|------------|------------|-----|
| Junction to ambient air | R_{thJA} | ≤ 250 | K/W |
|-------------------------|------------|------------|-----|

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Static characteristics ($T_{amb} = 25^{\circ}\text{C}$)

Collector cutoff current

 $(V_{CBO} = 25\text{ V})$ $I_{CBO} \leq 100$ nA

Collector-emitter breakdown voltage

 $(I_C = 1\text{ mA})$ $V_{(BR)CEO} \geq 30$ V

Collector-base breakdown voltage

 $(I_C = 10\text{ }\mu\text{A})$ $V_{(BR)CBO} \geq 40$ V

Emitter-base breakdown voltage

 $(I_E = 10\text{ }\mu\text{A})$ $V_{(BR)EBO} \geq 4$ V

DC current gain

 $(I_C = 1\text{ mA}; V_{CE} = 10\text{ V})$ $h_{FE} \geq 30$ - $(I_C = 5\text{ mA}; V_{CE} = 10\text{ V})$ $h_{FE} \geq 40$ -

Collector-emitter saturation voltage

 $(I_C = 5\text{ mA}; I_B = 0,5\text{ mA})$ $V_{CEsat} \leq 0,6$ VDynamic characteristics ($T_{amb} = 25^{\circ}\text{C}$)

Transition frequency

 $(I_C = 5\text{ mA}; V_{CE} = 10\text{ V}; f = 100\text{ MHz})$ $f_T \geq 750$ (≥400) MHz

Noise figure

 $(I_C = 3\text{ mA}; V_{CE} = 10\text{ V}; f = 200\text{ MHz}; R_g = 60\text{ }\Omega)$ $NF \leq 3$ (<5) dB

Collector-base capacitance

 $(f = 1\text{ MHz}; V_{CB} = 10\text{ V}; V_{BE} = 0\text{ V})^1)$ $C_{CB} \leq 0,55$ (<0.7) pF

Collector-emitter capacitance

 $(f = 1\text{ MHz}; V_{CE} = 10\text{ V}; V_{BE} = 0\text{ V})^1)$ $C_{CE} \leq 0,65$ pF

Output admittance

 $(I_C = 1\text{ mA}; V_{CE} = 10\text{ V}; f = 10,7\text{ MHz})$ $g_{22e} \leq 10,5$ μS

1) Third terminal at creening potential.

This datasheet has been download from:

www.datasheetcatalog.com

Datasheets for electronics components.