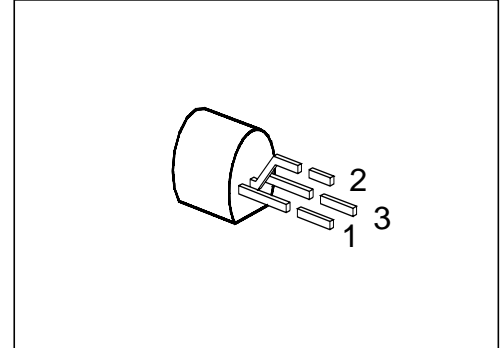


## PNP Silicon RF Transistor

**BF 506**

- For VHF mixer and oscillator stages



| Type   | Marking | Ordering Code | Pin Configuration |   |   | Package <sup>1)</sup> |
|--------|---------|---------------|-------------------|---|---|-----------------------|
|        |         |               | 1                 | 2 | 3 |                       |
| BF 506 | –       | Q62702-F534   | C                 | B | E | TO-92                 |

### Maximum Ratings

| Parameter   | Symbol    | Values         | Unit             |
|---|-----------|----------------|------------------|
| Collector-emitter voltage                                     | $V_{CE0}$ | 35             | V                |
| Collector-base voltage  | $V_{CB0}$ | 40             |                  |
| Emitter-base voltage  | $V_{EB0}$ | 4              |                  |
| Collector current   | $I_C$     | 30             | mA               |
| Base current  | $I_B$     | 5              |                  |
| Total power dissipation, $T_A \leq 45 \text{ }^\circ\text{C}$ | $P_{tot}$ | 300            | mW               |
| Junction temperature  | $T_j$     | 150            | $^\circ\text{C}$ |
| Storage temperature range                                     | $T_{stg}$ | – 55 ... + 150 |                  |

### Thermal Resistance

|                    |                     |            |     |
|--------------------|---------------------|------------|-----|
| Junction - ambient | $R_{th \text{ JA}}$ | $\leq 350$ | K/W |
|--------------------|---------------------|------------|-----|

<sup>1)</sup> For detailed information see chapter Package Outlines.

## Electrical Characteristics

at  $T_A = 25\text{ }^\circ\text{C}$ , unless otherwise specified.

| Parameter | Symbol | Values |      |      | Unit |
|-----------|--------|--------|------|------|------|
|           |        | min.   | typ. | max. |      |

### DC Characteristics

|   |                |    |   |     |    |
|---|----------------|----|---|-----|----|
| Collector-emitter breakdown voltage<br>$I_C = 2\text{ mA}$        | $V_{(BR) CE0}$ | 35 | – | –   | V  |
| Collector-base breakdown voltage<br>$I_C = 10\text{ }\mu\text{A}$ | $V_{(BR) CB0}$ | 40 | – | –   |    |
| Emitter-base breakdown voltage<br>$I_E = 10\text{ }\mu\text{A}$   | $V_{(BR) EB0}$ | 4  | – | –   |    |
| Collector cutoff current<br>$V_{CB} = 20\text{ V}$                | $I_{CB0}$      | –  | – | 100 | nA |
| DC current gain<br>$I_C = 3\text{ mA}$ , $V_{CE} = 10\text{ V}$   | $h_{FE}$       | 25 | – | –   | –  |

### AC Characteristics

|   |          |   |      |   |     |
|---|----------|---|------|---|-----|
| Transition frequency<br>$I_C = 2\text{ mA}$ , $V_{CE} = 10\text{ V}$ , $f = 100\text{ MHz}$                     | $f_t$    | – | 550  | – | MHz |
| Collector-emitter capacitance<br>$V_{CB} = 10\text{ V}$ , $V_{BE} = 0\text{ V}$ , $f = 1\text{ MHz}$            | $C_{ce}$ | – | 0.12 | – | V   |
| Noise figure<br>$I_C = 2\text{ mA}$ , $V_{CB} = 10\text{ V}$ , $f = 200\text{ MHz}$<br>$R_S = 60\text{ }\Omega$ | $F$      | – | 3    | – | dB  |

This datasheet has been download from:

[www.datasheetcatalog.com](http://www.datasheetcatalog.com)

Datasheets for electronics components.