

**Characteristics**
**Kennwerte**

| $T_j = 25^{\circ}\text{C}$                                                                                    |             |                         | Min.    | Typ.            | Max. |
|---------------------------------------------------------------------------------------------------------------|-------------|-------------------------|---------|-----------------|------|
| DC current gain – Kollektor-Basis-Stromverhältnis                                                             |             |                         |         |                 |      |
| $V_{CE} = 5\text{ V}, I_C = 10\text{ }\mu\text{A}$                                                            | Group A     | $h_{FE}$                | –       | 90              | –    |
|                                                                                                               | Group B     |                         | –       | 150             | –    |
|                                                                                                               | Group C     |                         | –       | 270             | –    |
| $V_{CE} = 5\text{ V}, I_C = 2\text{ mA}$                                                                      | Group A     | $h_{FE}$                | 110     | 180             | 220  |
|                                                                                                               | Group B     |                         | 200     | 290             | 450  |
|                                                                                                               | Group C     |                         | 420     | 520             | 800  |
| Collector-Emitter saturation voltage – Kollektor-Sättigungsspannung <sup>1)</sup>                             |             |                         |         |                 |      |
| $I_C = 10\text{ mA}, I_B = 0.5\text{ mA}$<br>$I_C = 100\text{ mA}, I_B = 5\text{ mA}$                         | $V_{CEsat}$ | –                       | 90 mV   | 250 mV          |      |
|                                                                                                               |             | –                       | 200 mV  | 600 mV          |      |
| Base-Emitter saturation voltage – Basis-Sättigungsspannung <sup>2)</sup>                                      |             |                         |         |                 |      |
| $I_C = 10\text{ mA}, I_B = 0.5\text{ mA}$<br>$I_C = 100\text{ mA}, I_B = 5\text{ mA}$                         | $V_{BEsat}$ | –                       | 700 mV  | –               |      |
|                                                                                                               |             | –                       | 900 mV  | –               |      |
| Base-Emitter-voltage – Basis-Emitter-Spannung <sup>2)</sup>                                                   |             |                         |         |                 |      |
| $V_{CE} = 5\text{ V}, I_C = 2\text{ mA}$<br>$V_{CE} = 5\text{ V}, I_C = 10\text{ mA}$                         | $V_{BE}$    | 580 mV                  | 660 mV  | 700 mV          |      |
|                                                                                                               |             | –                       | –       | 720 mV          |      |
| Collector-Base cutoff current – Kollektor-Basis-Reststrom                                                     |             |                         |         |                 |      |
| $V_{CB} = 30\text{ V}, (E\text{ open})$<br>$V_{CE} = 30\text{ V}, T_j = 125^{\circ}\text{C}, (E\text{ open})$ | $I_{CBO}$   | –                       | –       | 15 nA           |      |
|                                                                                                               |             | –                       | –       | 5 $\mu\text{A}$ |      |
| Emitter-Base cutoff current                                                                                   |             |                         |         |                 |      |
| $V_{EB} = 5\text{ V}, (C\text{ open})$                                                                        | $I_{EBO}$   | –                       | –       | 100 nA          |      |
| Gain-Bandwidth Product – Transitfrequenz                                                                      |             |                         |         |                 |      |
| $V_{CE} = 5\text{ V}, I_C = 10\text{ mA}, f = 100\text{ MHz}$                                                 | $f_T$       | –                       | 300 MHz | –               |      |
| Collector-Base Capacitance – Kollektor-Basis-Kapazität                                                        |             |                         |         |                 |      |
| $V_{CB} = 10\text{ V}, I_E = i_e = 0, f = 1\text{ MHz}$                                                       | $C_{CBO}$   | –                       | 3.5 pF  | 6 pF            |      |
| Emitter-Base Capacitance – Emitter-Basis-Kapazität                                                            |             |                         |         |                 |      |
| $V_{EB} = 0.5\text{ V}, I_C = i_c = 0, f = 1\text{ MHz}$                                                      | $C_{EBO}$   | –                       | 9 pF    | –               |      |
| Thermal resistance junction to ambient<br>Wärmewiderstand Sperrschicht – Umgebung                             | $R_{thA}$   | < 420 K/W <sup>2)</sup> |         |                 |      |

**Disclaimer:** See data book page 2 or [website](#)  
**Haftungssauschluss:** Siehe Datenbuch Seite 2 oder [Internet](#)

- 1 Tested with pulses  $t_p = 300\text{ }\mu\text{s}$ , duty cycle  $\leq 2\%$   
Gemessen mit Impulsen  $t_p = 300\text{ }\mu\text{s}$ , Schaltverhältnis  $\leq 2\%$
- 2 Mounted on P.C. board with 3 mm<sup>2</sup> copper pad at each terminal  
Montage auf Leiterplatte mit 3 mm<sup>2</sup> Kupferbelag (Lötpad) an jedem Anschluss