

**Characteristics**
**Kennwerte**

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