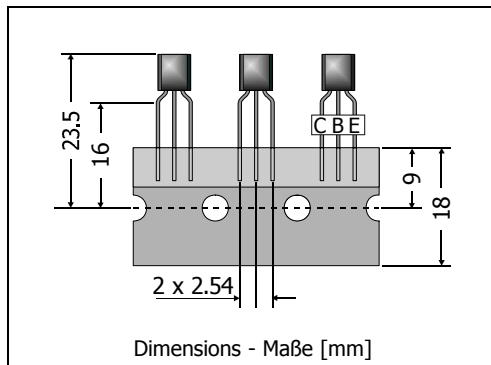


**BC327 / BC328****PNP**

**General Purpose Si-Epitaxial Planar Transistors**  
**Si-Epitaxial Planar-Transistoren für universellen Einsatz**

**PNP**

Version 2006-05-30



Power dissipation  
Verlustleistung

625 mW

Plastic case  
Kunststoffgehäuse

TO-92  
(10D3)

Weight approx. – Gewicht ca.

0.18 g

Plastic material has UL classification 94V-0  
Gehäusematerial UL94V-0 klassifiziert

Standard packaging taped in ammo pack  
Standard Lieferform getupet in Ammo-Pack

**Maximum ratings (T<sub>A</sub> = 25°C)****Grenzwerte (T<sub>A</sub> = 25°C)**

|                                                      |           |                    | <b>BC327</b>         | <b>BC328</b> |
|------------------------------------------------------|-----------|--------------------|----------------------|--------------|
| Collector-Emitter-volt. – Kollektor-Emitter-Spannung | E-B short | - V <sub>CES</sub> | 50 V                 | 30 V         |
| Collector-Emitter-volt. – Kollektor-Emitter-Spannung | B open    | - V <sub>CEO</sub> | 45 V                 | 25 V         |
| Emitter-Base-voltage – Emitter-Basis-Spannung        | C open    | - V <sub>EBO</sub> | 5 V                  |              |
| Power dissipation – Verlustleistung                  |           | P <sub>tot</sub>   | 625 mW <sup>1)</sup> |              |
| Collector current – Kollektorstrom (dc)              |           | - I <sub>C</sub>   | 800 mA               |              |
| Peak Collector current – Kollektor-Spitzenstrom      |           | - I <sub>CM</sub>  | 1 A                  |              |
| Base current – Basisstrom                            |           | - I <sub>B</sub>   | 100 mA               |              |
| Junction temperature – Sperrschichttemperatur        |           | T <sub>j</sub>     | -55...+150°C         |              |
| Storage temperature – Lagerungstemperatur            |           | T <sub>s</sub>     | -55...+150°C         |              |

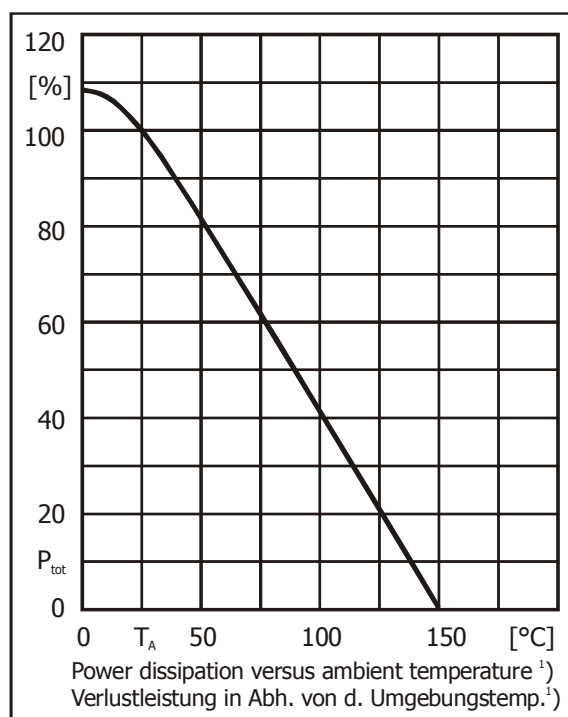
**Characteristics (T<sub>j</sub> = 25°C)****Kennwerte (T<sub>j</sub> = 25°C)**

|                                                                                       |           |                      | <b>Min.</b> | <b>Typ.</b> | <b>Max.</b> |
|---------------------------------------------------------------------------------------|-----------|----------------------|-------------|-------------|-------------|
| DC current gain – Kollektor-Basis-Stromverhältnis <sup>2)</sup>                       |           |                      |             |             |             |
| - V <sub>CE</sub> = 1 V, - I <sub>C</sub> = 100 mA                                    | Group -16 | h <sub>FE</sub>      | 100         | 160         | 250         |
|                                                                                       | Group -25 | h <sub>FE</sub>      | 160         | 250         | 400         |
|                                                                                       | Group -40 | h <sub>FE</sub>      | 250         | 400         | 630         |
| - V <sub>CE</sub> = 1 V, - I <sub>C</sub> = 300 mA                                    | Group -16 | h <sub>FE</sub>      | 60          | 130         | –           |
|                                                                                       | Group -25 | h <sub>FE</sub>      | 100         | 200         | –           |
|                                                                                       | Group -40 | h <sub>FE</sub>      | 170         | 320         | –           |
| Collector-Emitter saturation voltage – Kollektor-Emitter-Sättigungsspg. <sup>2)</sup> |           |                      |             |             |             |
| - I <sub>C</sub> = 500 mA, - I <sub>B</sub> = 50 mA                                   |           | - V <sub>CEsat</sub> | –           | –           | 0.7 V       |

- 1 Valid, if leads are kept at ambient temperature at a distance of 2 mm from case  
 Gültig wenn die Anschlussdrähte in 2 mm Abstand vom Gehäuse auf Umgebungstemperatur gehalten werden
- 2 Tested with pulses t<sub>p</sub> = 300 μs, duty cycle ≤ 2% – Gemessen mit Impulsen t<sub>p</sub> = 300 μs, Schaltverhältnis ≤ 2%

**Characteristics (T<sub>j</sub> = 25°C)**
**Kennwerte (T<sub>j</sub> = 25°C)**

|                                                                                             |                          | Min.                                     | Typ.    | Max.                             |
|---------------------------------------------------------------------------------------------|--------------------------|------------------------------------------|---------|----------------------------------|
| Base-Emitter-voltage – Basis-Emitter-Spannung <sup>2)</sup>                                 |                          |                                          |         |                                  |
| - V <sub>CE</sub> = 1 V, - I <sub>C</sub> = 300 mA,                                         | - V <sub>BE</sub>        | –                                        | –       | 1.2 V                            |
| Collector-Emitter cutoff current – Kollektor-Emitter-Reststrom                              |                          |                                          |         |                                  |
| - V <sub>CE</sub> = 45 V, (B-E short)                                                       | BC327 - I <sub>CES</sub> | –                                        | 2 nA    | 100 nA                           |
| - V <sub>CE</sub> = 25 V, (B-E short)                                                       | BC328 - I <sub>CES</sub> | –                                        | 2 nA    | 100 nA                           |
| - V <sub>CE</sub> = 45 V, T <sub>j</sub> = 125°C, (B-E short)                               | BC327 - I <sub>CES</sub> | –                                        | –       | 10 µA                            |
| - V <sub>CE</sub> = 25 V, T <sub>j</sub> = 125°C, (B-E short)                               | BC328 - I <sub>CES</sub> | –                                        | –       | 10 µA                            |
| Gain-Bandwidth Product – Transitfrequenz                                                    |                          |                                          |         |                                  |
| - V <sub>CE</sub> = 5 V, - I <sub>C</sub> = 10 mA, f = 50 MHz                               | f <sub>T</sub>           | –                                        | 100 MHz | –                                |
| Collector-Base Capacitance – Kollektor-Basis-Kapazität                                      |                          |                                          |         |                                  |
| - V <sub>CB</sub> = 10 V, I <sub>E</sub> = i <sub>e</sub> = 0, f = 1 MHz                    | C <sub>CBO</sub>         | –                                        | 12 pF   | –                                |
| Thermal resistance junction to ambient air<br>Wärmewiderstand Sperrschicht – umgebende Luft |                          | R <sub>thA</sub> < 200 K/W <sup>1)</sup> |         |                                  |
| Recommended complementary NPN transistors<br>Empfohlene komplementäre NPN-Transistoren      |                          | BC337 / BC338                            |         |                                  |
| Available current gain groups per type<br>Lieferbare Stromverstärkungsgruppen pro Typ       |                          | BC327-16<br>BC327-25<br>BC327-40         |         | BC328-16<br>BC328-25<br>BC328-40 |



<sup>2)</sup> Tested with pulses t<sub>p</sub> = 300 µs, duty cycle ≤ 2% – Gemessen mit Impulsen t<sub>p</sub> = 300 µs, Schaltverhältnis ≤ 2%

<sup>1)</sup> Valid, if leads are kept at ambient temperature at a distance of 2 mm from case

Gültig wenn die Anschlussdrähte in 2 mm Abstand vom Gehäuse auf Umgebungstemperatur gehalten werden