

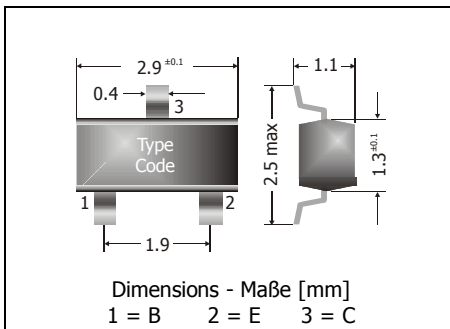
BC807 / BC808

PNP

Surface Mount General Purpose Si-Epi-Planar Transistors
Si-Epi-Planar Universaltransistoren für die Oberflächenmontage

PNP

Version 2007-04-13



Power dissipation – Verlustleistung

310 mW

Plastic case
KunststoffgehäuseSOT-23
(TO-236)

Weight approx. – Gewicht ca.

0.01 g

Plastic material has UL classification 94V-0
Gehäusematerial UL94V-0 klassifiziertStandard packaging taped and reeled
Standard Lieferform getupet auf Rolle

Maximum ratings (T_A = 25°C)

Grenzwerte (T_A = 25°C)

| | | | BC807 | BC808 |
|--|-----------|--------------------|----------------------|-------|
| Collector-Emitter-volt. – Kollektor-Emitter-Spannung | E-B short | - V _{CES} | 50 V | 30 V |
| Collector-Emitter-volt. – Kollektor-Emitter-Spannung | B open | - V _{CEO} | 45 V | 25 V |
| Emitter-Base-voltage – Emitter-Basis-Spannung | C open | - V _{EBO} | 5 V | |
| Power dissipation – Verlustleistung | | P _{tot} | 310 mW ¹⁾ | |
| Collector current – Kollektorstrom (dc) | | - I _C | 800 mA | |
| Peak Collector current – Kollektor-Spitzenstrom | | - I _{CM} | 1 A | |
| Peak Emitter current – Emitter-Spitzenstrom | | I _{EM} | 1 A | |
| Peak Base current – Basis-Spitzenstrom | | - I _{BM} | 200 mA | |
| Junction temperature – Sperrschichttemperatur | | T _j | -55...+150°C | |
| Storage temperature – Lagerungstemperatur | | T _s | -55...+150°C | |

Characteristics (T_j = 25°C)

Kennwerte (T_j = 25°C)

| | | | Min. | Typ. | Max. |
|---|------------|----------------------|------|------|-------|
| DC current gain – Kollektor-Basis-Stromverhältnis ²⁾ | | | | | |
| - V _{CE} = 1 V, - I _C = 100 mA | Group -16 | h _{FE} | 100 | – | 250 |
| | Group -25 | h _{FE} | 160 | – | 400 |
| | Group -40 | h _{FE} | 250 | – | 630 |
| - V _{CE} = 1 V, - I _C = 500 mA | all groups | h _{FE} | 40 | – | – |
| Collector-Emitter saturation voltage – Kollektor-Emitter-Sättigungsspg. ²⁾ | | | | | |
| - I _C = 500 mA, - I _B = 50 mA | | - V _{CEsat} | – | – | 0.7 V |
| Base-Emitter saturation voltage – Basis-Emitter-Sättigungsspannung ²⁾ | | | | | |
| - I _C = 500 mA, - I _B = 50 mA | | - V _{BEsat} | – | – | 1.3 V |

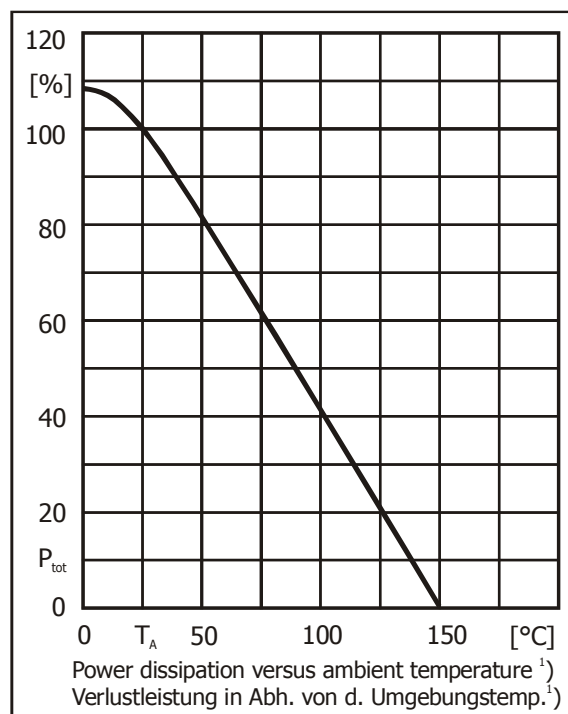
1 Valid, if leads are kept at ambient temperature at a distance of 2 mm from case

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

2 Tested with pulses t_p = 300 μs, duty cycle ≤ 2% – Gemessen mit Impulsen t_p = 300 μs, Schaltverhältnis ≤ 2%

Characteristics ($T_j = 25^\circ\text{C}$)
Kennwerte ($T_j = 25^\circ\text{C}$)

| | | Min. | Typ. | Max. |
|---|----------------------------|--|--|---------------------------|
| Base-Emitter-voltage – Basis-Emitter-Spannung ²⁾ - $V_{CE} = 1\text{ V}$, - $I_C = 500\text{ mA}$ | - V_{BE} | – | – | 1.2 V |
| Collector-Base cutoff current – Kollektor-Basis-Reststrom - $V_{CB} = 20\text{ V}$, (E open) - $V_{CB} = 20\text{ V}$, $T_j = 125^\circ\text{C}$, (E open) | - I_{CB0} - I_{CB0} | – – | – – | 100 nA 5 μA |
| Emitter-Base cutoff current – Emitter-Basis-Reststrom - $V_{EB} = 4\text{ V}$, (C open) | - I_{EB0} | – | – | 100 nA |
| Gain-Bandwidth Product – Transitfrequenz - $V_{CE} = 5\text{ V}$, - $I_C = 10\text{ mA}$, $f = 50\text{ MHz}$ | f_T | – | 100 MHz | – |
| Collector-Base Capacitance – Kollektor-Basis-Kapazität - $V_{CB} = 10\text{ V}$, $I_E = i_e = 0$, $f = 1\text{ MHz}$ | C_{CB0} | – | 12 pF | – |
| Thermal resistance junction to ambient air Wärmewiderstand Sperrschicht – umgebende Luft | R_{thA} | < 420 K/W ¹⁾ | | |
| Recommended complementary NPN transistors Empfohlene komplementäre NPN-Transistoren | | BC817 / BC818 | | |
| Marking of available current gain groups per type Stempelung der lieferbaren Stromverstärkungsgruppen pro Typ | | BC807-16 = 5A or 5CR BC807-25 = 5B or 5CS BC807-40 = 5C or 5CT | BC808-16 = 5E or 5CR BC808-25 = 5F or 5CS BC808-40 = 5G or 5CT | |



²⁾ Tested with pulses $t_p = 300\ \mu\text{s}$, duty cycle $\leq 2\%$ – Gemessen mit Impulsen $t_p = 300\ \mu\text{s}$, Schaltverhältnis $\leq 2\%$

¹⁾ Mounted on P.C. board with 3 mm² copper pad at each terminal
Montage auf Leiterplatte mit 3 mm² Kupferbelag (Löt-pad) an jedem Anschluss