

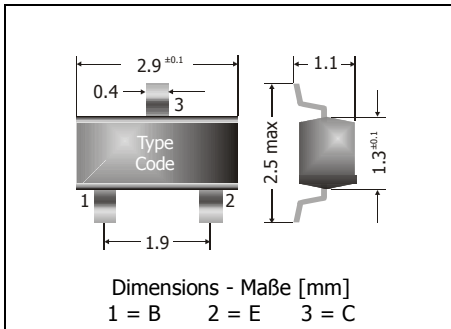
## BC807 / BC808

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

			BC807	BC808
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>	310 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	
Peak Emitter current – Emitter-Spitzenstrom		I <sub>EM</sub>	1 A	
Peak Base current – Basis-Spitzenstrom		- I <sub>BM</sub>	200 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)**

			Min.	Typ.	Max.
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	–	250
	Group -25	h <sub>FE</sub>	160	–	400
	Group -40	h <sub>FE</sub>	250	–	630
- V <sub>CE</sub> = 1 V, - I <sub>C</sub> = 500 mA	all groups	h <sub>FE</sub>	40	–	–
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
Base-Emitter saturation voltage – Basis-Emitter-Sättigungsspannung <sup>2)</sup>					
- I <sub>C</sub> = 500 mA, - I <sub>B</sub> = 50 mA		- V <sub>BEsat</sub>	–	–	1.3 V

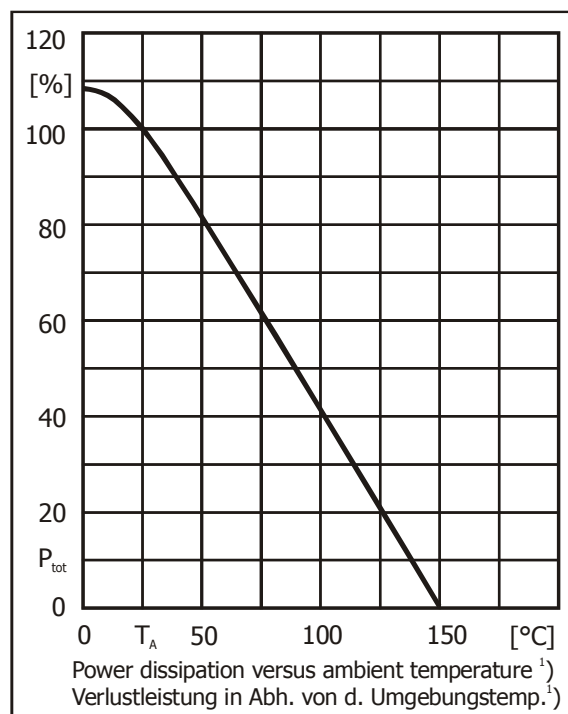
1 Valid, if leads are kept at ambient temperature at a distance of 2 mm from case

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

2 Tested with pulses t<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> = 500 mA	- V <sub>BE</sub>	–	–	1.2 V
Collector-Base cutoff current – Kollektor-Basis-Reststrom - V <sub>CB</sub> = 20 V, (E open) - V <sub>CB</sub> = 20 V, T <sub>j</sub> = 125°C, (E open)	- I <sub>CB0</sub> - I <sub>CB0</sub>	–	–	100 nA 5 µA
Emitter-Base cutoff current – Emitter-Basis-Reststrom - V <sub>EB</sub> = 4 V, (C open)	- I <sub>EB0</sub>	–	–	100 nA
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>CB0</sub>	–	12 pF	–
Thermal resistance junction to ambient air Wärmewiderstand Sperrschicht – umgebende Luft	R <sub>thA</sub>	< 420 K/W <sup>1)</sup>		
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		



<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> 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 (Löt-pad) an jedem Anschluss