

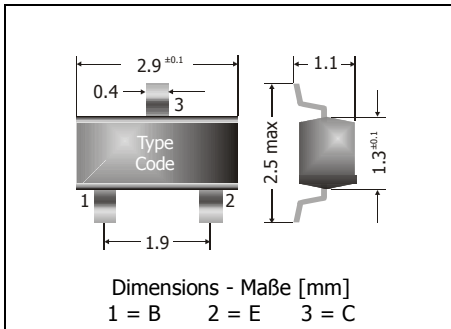
BC817 / BC818

NPN

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

NPN

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)

			BC817	BC818
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

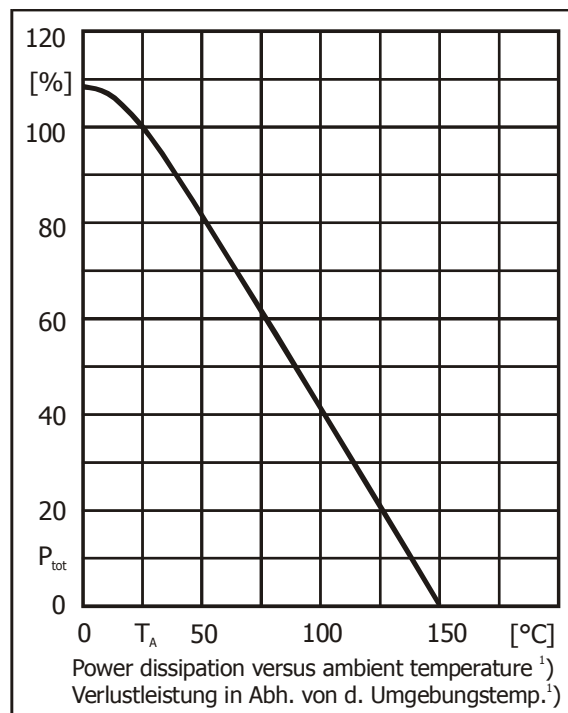
1 Valid, if leads are kept at ambient temperature at a distance of 2 mm from case

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°C)
Kennwerte (T_j = 25°C)

		Min.	Typ.	Max.
Base-Emitter-voltage – Basis-Emitter-Spannung ²⁾ V _{CE} = 1 V, I _C = 500 mA	V _{BE}	–	–	1.2 V
Collector-Base cutoff current – Kollektor-Basis-Reststrom V _{CB} = 20 V, (E open) V _{CB} = 20 V, T _j = 125°C, (E open)	I _{CB0} I _{CB0}	– –	– –	100 nA 5 µA
Emitter-Base cutoff current – Emitter-Basis-Reststrom V _{EB} = 4 V, (C open)	I _{EB0}	–	–	100 nA
Gain-Bandwidth Product – Transitfrequenz V _{CE} = 5 V, I _C = 10 mA, f = 50 MHz	f _T	–	100 MHz	–
Collector-Base Capacitance – Kollektor-Basis-Kapazität V _{CB} = 10 V, I _E = i _e = 0, f = 1 MHz	C _{CB0}	–	12 pF	–
Thermal resistance junction to ambient air Wärmewiderstand Sperrschicht – umgebende Luft	R _{thA}	< 420 K/W ¹⁾		
Recommended complementary PNP transistors Empfohlene komplementäre PNP-Transistoren		BC807 / BC808		
Marking of available current gain groups per type Stempelung der lieferbaren Stromverstärkungsgruppen pro Typ		BC817-16 = 6A or 6CR BC817-25 = 6B or 6CS BC817-40 = 6C or 6CT	BC818-16 = 6E or 6CR BC818-25 = 6F or 6CS BC818-40 = 6G or 6CT	



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

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