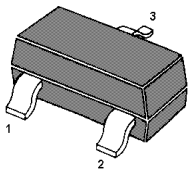
BC817 / BC818

NPN Silicon Epitaxial Planar Transistors

for switching, AF driver and amplifier application,

These transistors are subdivided into three groups -16, -25, -40 according to their current gain.

As complementary types, the PNP transistors BC807 and BC808 are recommended.



1. Base 2. Emitter 3. Collector
SOT-23 Plastic Package

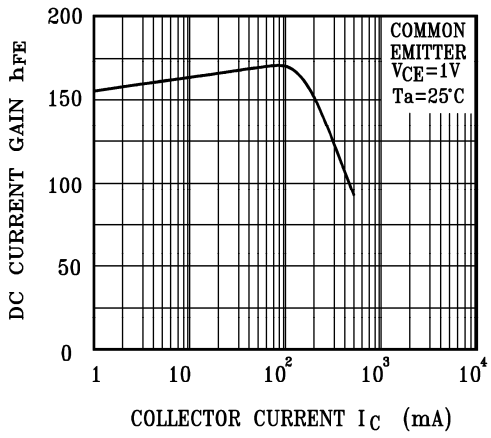
Absolute Maximum Ratings (T_a = 25 °C)

Parameter		Symbol	Value	Unit
Collector Base Voltage	BC817 BC818	V_{CBO}	50 30	V
Collector Emitter Voltage	BC817 BC818	V_{CEO}	45 25	V
Emitter Base Voltage		V_{EBO}	5	V
Collector Current		I_C	500	mA
Power Dissipation		P_{tot}	300	mW
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	- 55 to + 150	°C

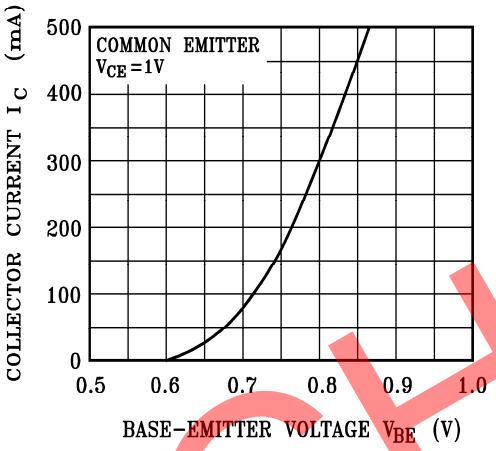
Electrical Characteristics at T_a = 25 °C

Parameter		Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at V_{CE} = 1 V, I_C = 100 mA Current Gain Group	-16 -25 -40	h_{FE} h_{FE} h_{FE}	100 160 250	- - -	250 400 600	- - -
at V_{CE} = 1 V, I_C = 500 mA		h_{FE}	40	-	-	-
Collector Base Cutoff Current at V_{CB} = 20 V		I_{CBO}	-	-	100	nA
Emitter Base Cutoff Current at V_{EB} = 5 V		I_{EBO}	-	-	100	nA
Collector Emitter Saturation Voltage at I_C = 500 mA, I_B = 50 mA		$V_{CE(sat)}$	-	-	0.7	V
Base Emitter Voltage at I_C = 500 mA, V_{CE} = 1 V		$V_{BE(on)}$	-	-	1.2	V
Transition Frequency at V_{CE} = 5 V, I_C = 10 mA, f = 50 MHz		f_T	100	-	-	MHz
Collector Base Capacitance at V_{CB} = 10 V, f = 1 MHz		C_{ob}	-	5	-	pF

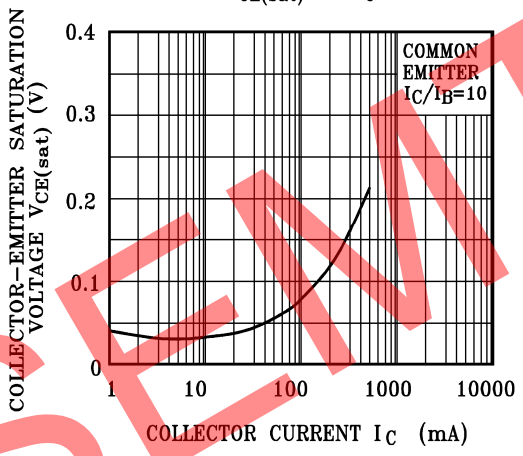
h_{FE} – I_C

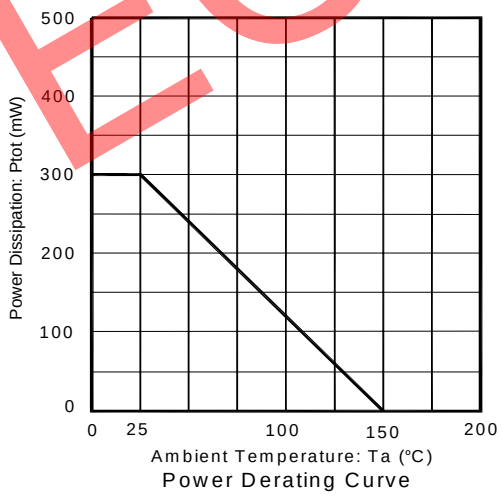


I_C – V_{BE}



$V_{CE(sat)}$ – I_C





Power Derating Curve