

BC817 / BC818

NPN Silicon Epitaxial Planar Transistors

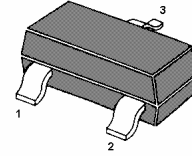
for switching, AF driver and amplifier application,

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.



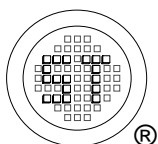
1. Base 2. Emitter 3. Collector
SOT-23 Plastic Package

Absolute Maximum Ratings ($T_a = 25\text{ }^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Collector Base Voltage	BC817	50	V
	BC818	30	
Collector Emitter Voltage	BC817	45	V
	BC818	25	
Emitter Base Voltage	V_{EBO}	5	V
Collector Current	I_C	500	mA
Power Dissipation	P_{tot}	200	mW
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	500	K/W
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_s	- 55 to + 150	$^\circ\text{C}$

Electrical Characteristics at $T_a = 25\text{ }^\circ\text{C}$

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



SEMTECH ELECTRONICS LTD.

(Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



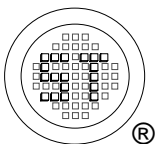
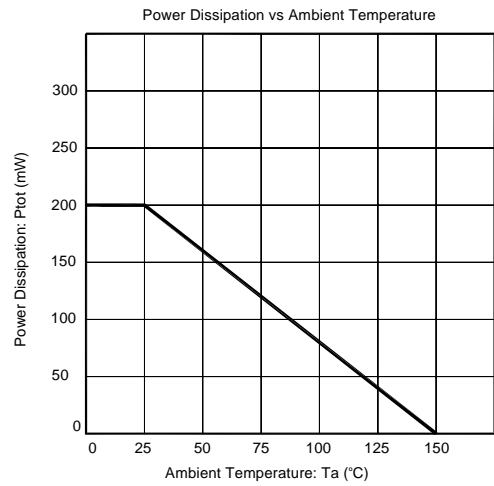
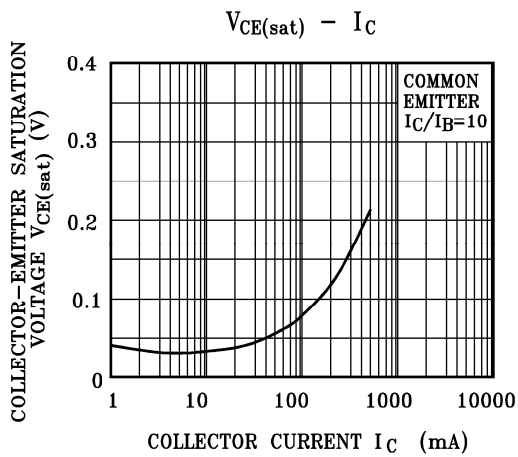
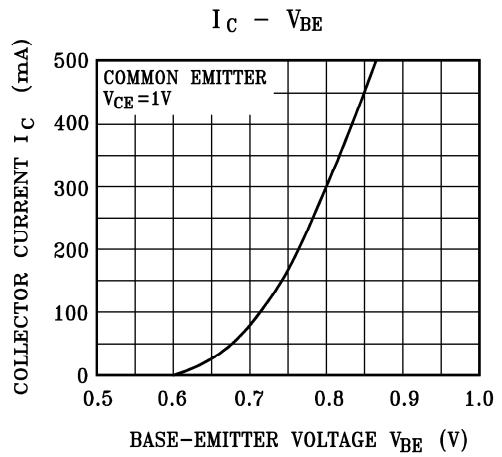
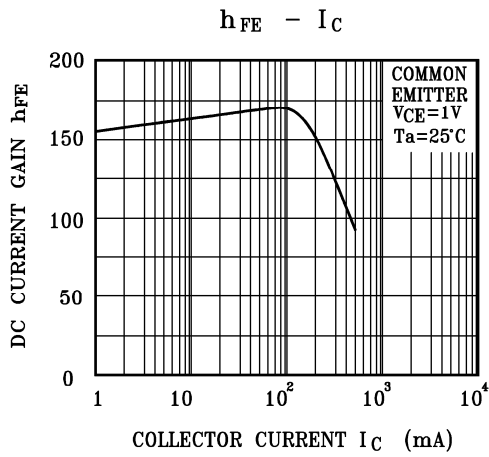
ISO/TS 16949 : 2002
Certificate No. 05103



ISO 14001:2004
Certificate No. 7116



ISO 9001:2000
Certificate No. 0506098



SEMTECH ELECTRONICS LTD.
 (Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)

