

## BC817 / BC818

### NPN Silicon Epitaxial Planar Transistors

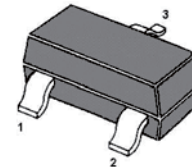
for switching, AF driver and amplifier application,

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 BC818	50 30	V
Collector Emitter Voltage	BC817 BC818	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	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 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	-
at $V_{CE} = 1\text{ V}$ , $I_C = 500\text{ mA}$	$h_{FE}$	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 Emitter Saturation Voltage at $I_C = 500\text{ mA}$ , $I_B = 50\text{ mA}$	$V_{CE(sat)}$	-	-	0.7	V
Base Emitter Voltage at $I_C = 500\text{ mA}$ , $V_{CE} = 1\text{ V}$	$V_{BE(on)}$	-	-	1.2	V
Transition Frequency at $V_{CE} = 5\text{ V}$ , $I_C = 10\text{ mA}$ , $f = 50\text{ MHz}$	$f_T$	100	-	-	MHz
Collector Base Capacitance at $V_{CB} = 10\text{ V}$ , $f = 1\text{ MHz}$	$C_{ob}$	-	5	-	pF

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