

# Kingtronics®

## BC817

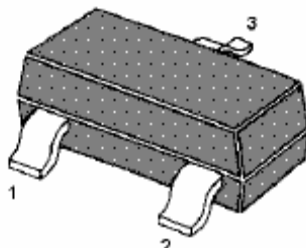
### NPN Silicon Epitaxial Planar Transistors

#### For switching, AF driver and amplifier applications

These transistors are subdivided into three groups

-16, -25 and -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 (Ta = 25°C)

PARAMETER	SYMBOL	VALUE	UNIT
Collector Base Voltage	V <sub>CB0</sub>	50	V
Collector Emitter Voltage	V <sub>CEO</sub>	45	V
Emitter Base Voltage	V <sub>EBO</sub>	5	V
Collector Current	I <sub>c</sub>	500	mA
Power Dissipation	P <sub>tot</sub>	200	mW
Thermal Resistance, Junction to Ambient	R <sub>θJA</sub>	500	K/W
Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature Range	T <sub>s</sub>	- 55 to + 150	°C

#### Electrical Characteristics at Ta = 25°C

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT
DC Current Gain					
at V <sub>CE</sub> = 1 V, I <sub>c</sub> = 100 mA	h <sub>FE</sub>	-16	100	250	
Current Gain Group		-25	160	400	-
		-40	250	600	
at V <sub>CE</sub> = 1 V, I <sub>c</sub> = 500 mA		40		-	
Collector Base Cutoff Current	I <sub>CB0</sub>	-	-	100	nA
at V <sub>CB</sub> = 20 V					
Emitter-Base Cutoff Current	I <sub>EBO</sub>	-	-	100	nA
at V <sub>EB</sub> = 5 V					
Collector Saturation Voltage	V <sub>CEsat</sub>	-	-	0.7	V
at I <sub>c</sub> = 500 mA, I <sub>B</sub> = 50 mA					
Base-Emitter Voltage	V <sub>BE(on)</sub>	-	-	1.2	V
at I <sub>c</sub> = 500 mA, V <sub>CE</sub> = 1 V					
Gain-Bandwidth Product	f <sub>t</sub>	100	-	-	MHz
at V <sub>CE</sub> = 5 V, I <sub>c</sub> = 10 mA, f = 50 MHz					
Collector-Base Capacitance	C <sub>CB0</sub>	-	5	-	pF
at V <sub>CB</sub> = 10 V, f = 1 MHz					

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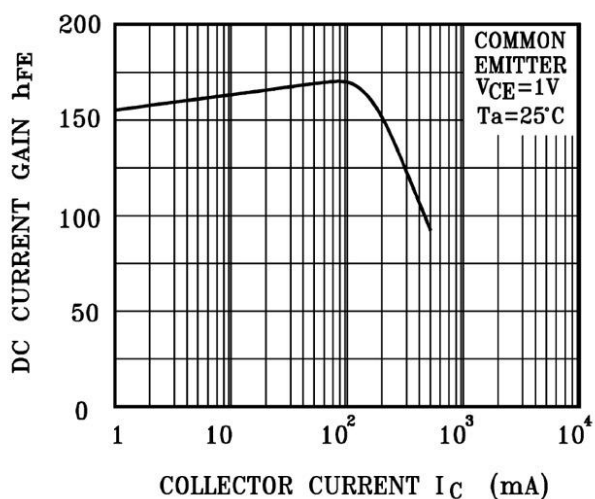
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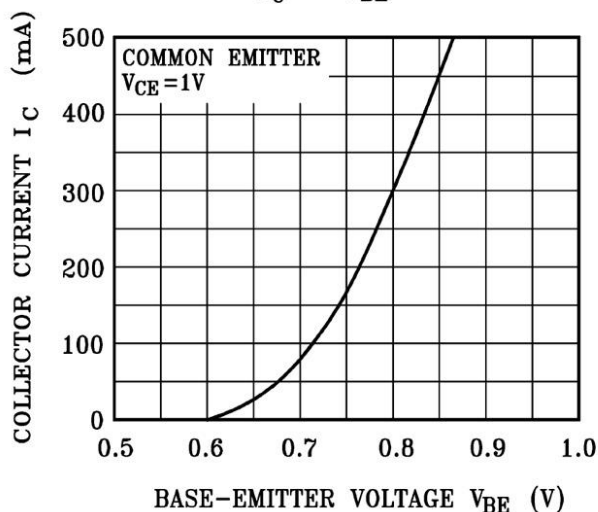
NPN Silicon Epitaxial Planar Transistors

### RATINGS AND CHARACTERISTIC CURVES BC817

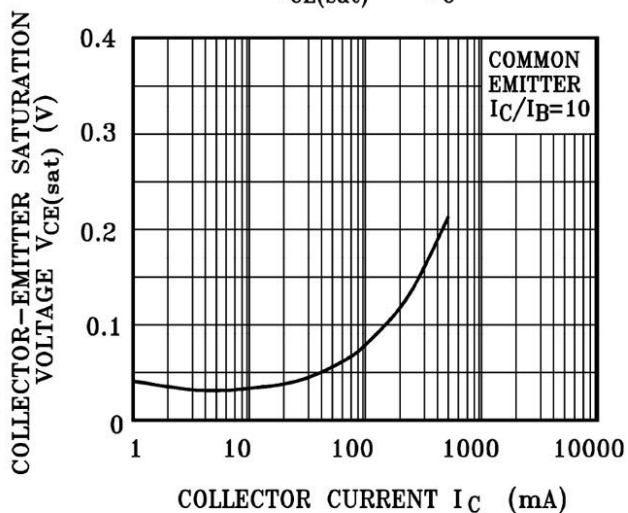
$h_{FE} - I_C$



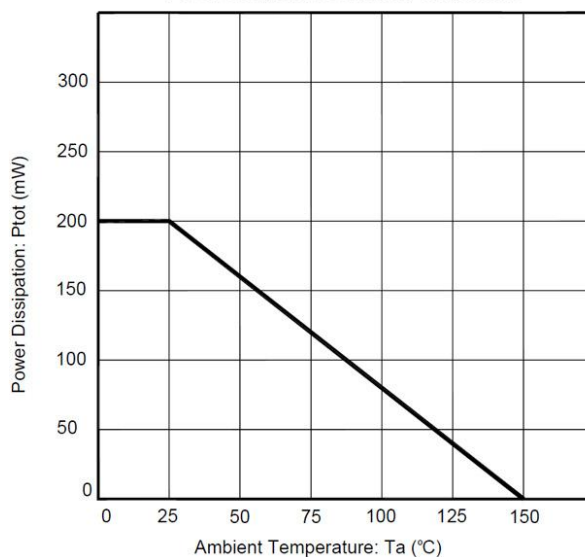
$I_C - V_{BE}$



$V_{CE(sat)} - I_C$



Power Dissipation vs Ambient Temperature



Note: Specifications are subject to change without notice.

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