

# Kingtronics®

## BC817

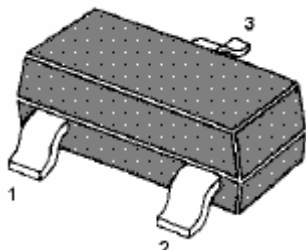
### NPN Silicon Epitaxial Planar Transistors

#### 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 ( $T_a = 25^\circ\text{C}$ )

PARAMETER	SYMBOL	VALUE	UNIT
Collector Base Voltage	$V_{CB0}$	50	V
Collector Emitter Voltage	$V_{CE0}$	45	V
Emitter Base Voltage	$V_{EB0}$	5	V
Collector Current	$I_c$	500	mA
Power Dissipation	$P_{tot}$	200	mW
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature Range	$T_s$	- 55 to + 150	$^\circ\text{C}$

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

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT
DC Current Gain					
at $V_{CE} = 1\text{ V}$ , $I_c = 100\text{ mA}$	Current Gain Group	-16	100	250	
		-25	160	400	-
		-40	250	600	-
at $V_{CE} = 1\text{ V}$ , $I_c = 500\text{ mA}$		40		-	
Collector Base Cutoff Current	$I_{CB0}$	-	-	100	nA
at $V_{CB} = 20\text{ V}$					
Emitter-Base Cutoff Current	$I_{EB0}$	-	-	100	nA
at $V_{EB} = 5\text{ V}$					
Collector Emitter Voltage	$V_{CEsat}$	-	-	0.7	V
at $I_c = 500\text{ mA}$ , $I_B = 50\text{ mA}$					
Base-Emitter Voltage	$V_{BE(on)}$	-	-	1.2	V
at $I_c = 500\text{ mA}$ , $V_{CE} = 1\text{ V}$					
Transition Frequency	$f_t$	100	-	-	MHz
at $V_{CE} = 5\text{ V}$ , $I_c = 10\text{ mA}$ , $f = 50\text{ MHz}$					
Collector-Base Capacitance	$C_{ob}$	-	5	-	pF
at $V_{CB} = 10\text{ V}$ , $f = 1\text{ MHz}$					

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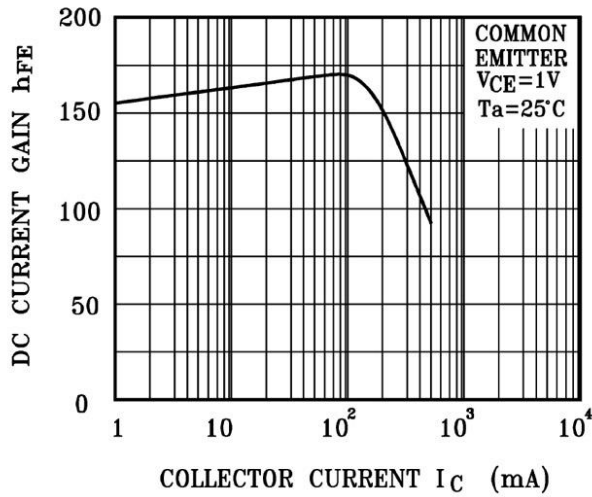
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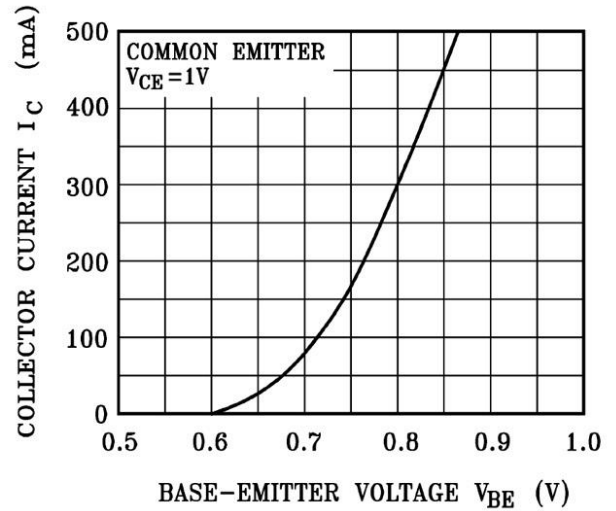
NPN Silicon Epitaxial Planar Transistors

## RATINGS AND CHARACTERISTIC CURVES BC817

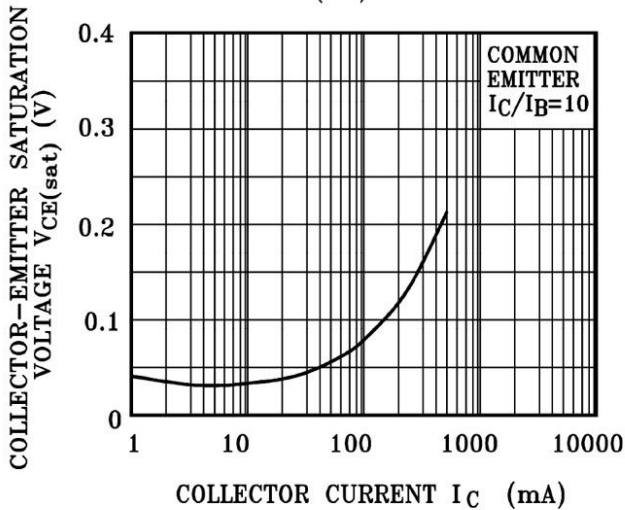
$h_{FE} - I_C$



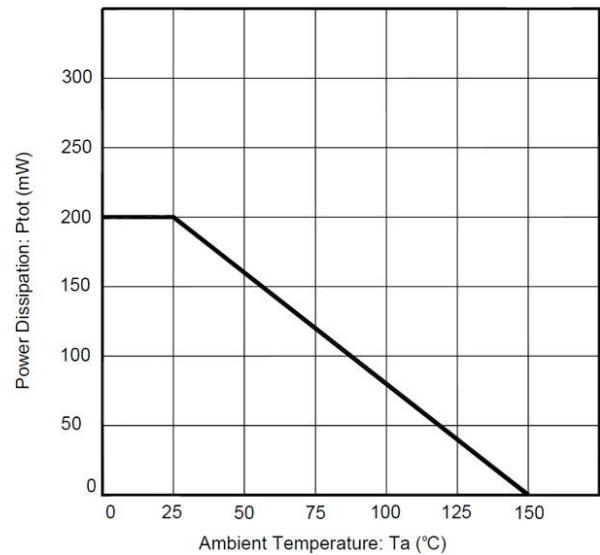
$I_C - V_{BE}$



$V_{CE(sat)} - I_C$



Power Dissipation vs Ambient Temperature



Note: Specifications are subject to change without notice.

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