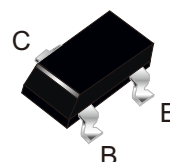


### FEATURES

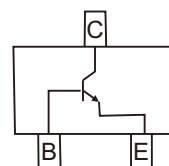
- Epoxy meets UL-94 V-0 flammability rating
- Complementary to BC807
- Power Dissipation of 300mW
- High Stability and High Reliability

#### SOT-23



### MECHANICAL DATA

- Case: SOT-23 (TO-236)
- Terminals: Plated solderable per MIL-STD-750, method 2026
- Mounting Position: Any



### MAXIMUM RATINGS ( $T_A=25^{\circ}\text{C}$ Unless otherwise specified)

Parameter	Symbol	Unit	Value
Collector-Emitter Voltage	$V_{CEO}$	V	45
Collector-Base Voltage	$V_{CBO}$	V	50
Emitter-Base Voltage	$V_{EBO}$	V	5
Collector Current, Continuous	$I_C$	mA	500
Collector Power Dissipation	$P_D$	mW	300
Operation Junction Temperature	$T_J$	$^{\circ}\text{C}$	-55 to +150
Storage Temperature	$T_{STG}$	$^{\circ}\text{C}$	-55 to +150
Thermal resistance From junction to ambient	$R_{\theta JA}$	$^{\circ}\text{C}/\text{W}$	417

# BC817

## ELECTRICAL CHARACTERISTICS( $T_A=25^{\circ}\text{C}$ Unless otherwise specified)

Parameter	Symbol	Unit	Conditions	Min	Max
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	V	$I_C = 10\text{mA}, I_B = 0$	45	---
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	V	$I_C = 10\mu\text{A}, I_E = 0$	50	---
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	V	$I_E = 1\mu\text{A}, I_C = 0$	5	---
Collector cut-off Current	$I_{CBO}$	nA	$V_{CB} = 45\text{V}, I_E = 0$	---	100
Collector cut-off Current	$I_{CEO}$	nA	$V_{CE} = 12\text{V}, I_B = 0$	---	---
Emitter cut-off Current	$I_{EBO}$	nA	$V_{EB} = 4\text{V}, I_C = 0$	---	100
DC Current Gain	$h_{FE(1)}$		$I_C = 100\text{mA}, V_{CE} = 1\text{V}$	100	600
			$I_C = 50\text{mA}, V_{CE} = 1\text{V}$	---	---
	$h_{FE(2)}$		$I_C = 500\text{mA}, V_{CE} = 1\text{V}$	40	---
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	V	$I_C = 500\text{mA}, I_B = 50\text{mA}$	---	0.7
			$I_C = 50\text{mA}, I_B = 5\text{mA}$	---	---
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	V	$I_C = 500\text{mA}, I_B = 50\text{mA}$	---	1.2
			$I_C = 50\text{mA}, I_B = 5\text{mA}$	---	---
Output Capacitance	$C_{ob}$	pF	$V_{CB} = 10\text{V}, f = 1.0\text{MHz}, I_E = 0$	10(Typ)	
Input Capacitance	$C_{ib}$	pF	$V_{EB} = 0.5\text{V}, f = 1.0\text{MHz}, I_C = 0$	---	---
Current Gain-Bandwidth Product	$f_T$	MHz	$I_C = 10\text{mA}, V_{CE} = 5\text{V}$ $f = 100\text{MHz}$	100	---
Noise Figure	NF	dB	$V_{CE} = 5.0\text{V}, f = 1.0\text{kHz}$ , $I_C = 100\mu\text{A}, R_S = 1.0\text{K}$	---	---

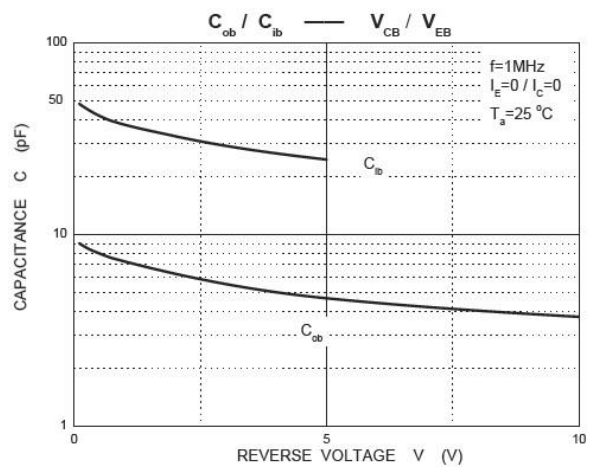
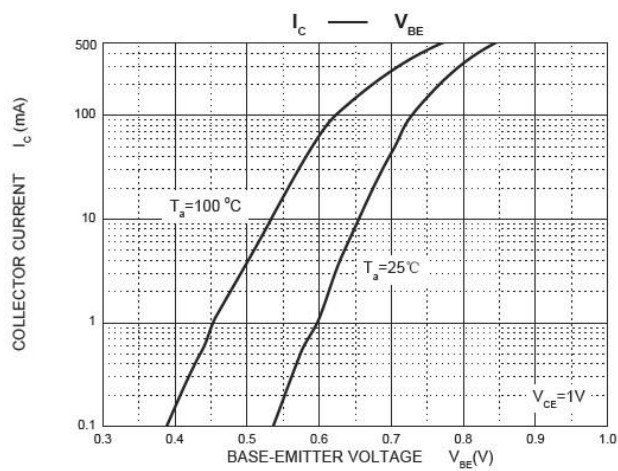
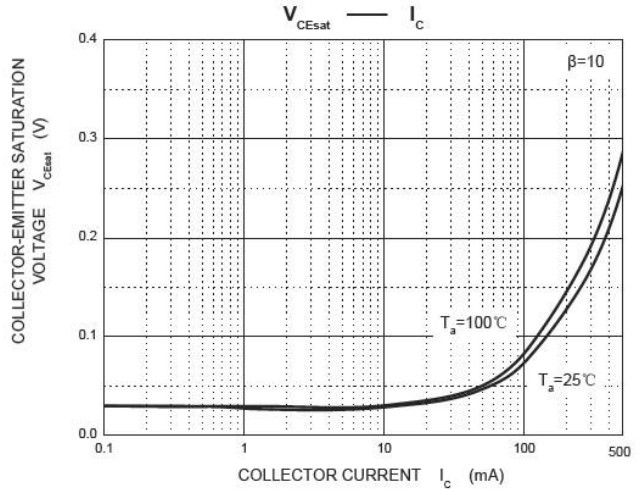
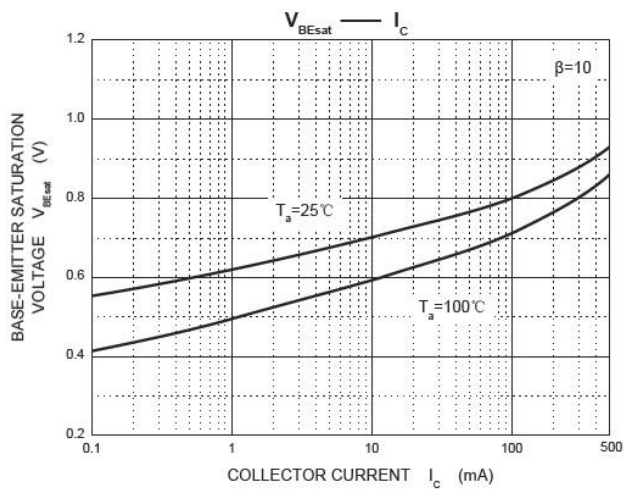
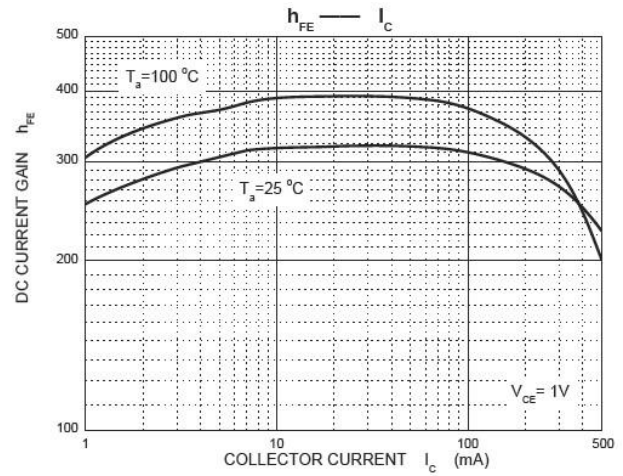
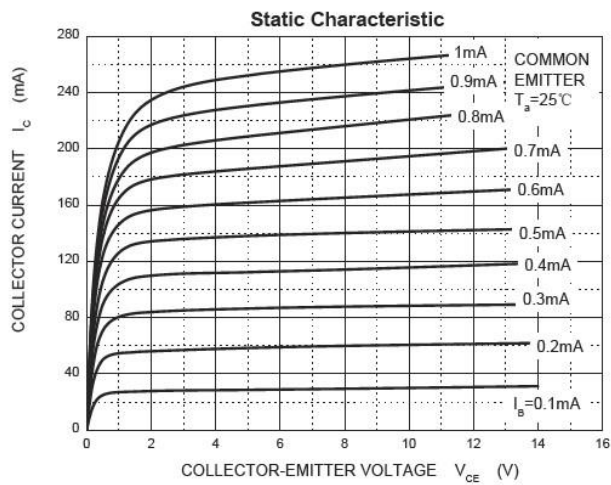
## CLASSIFICATION OF $h_{FE(1)}$

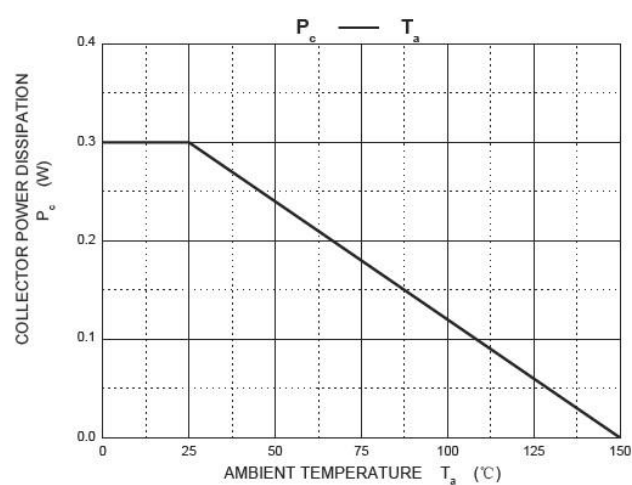
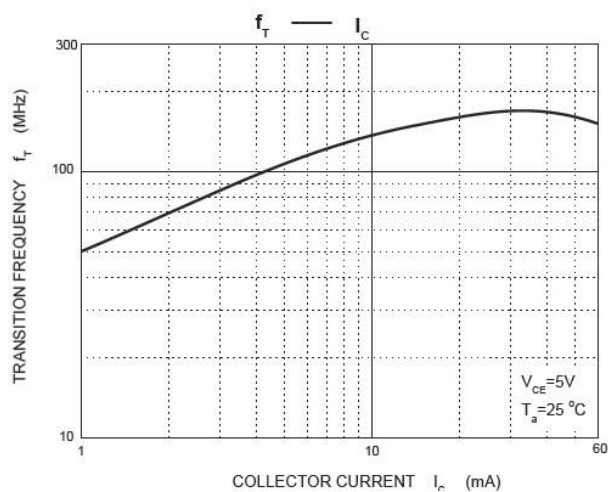
Rank	BC817-16	BC817-25	BC817-40
Range	100-250	160-400	250-600
Marking	6A	6B	6C

## AVAILABLE PACK INFORMATION

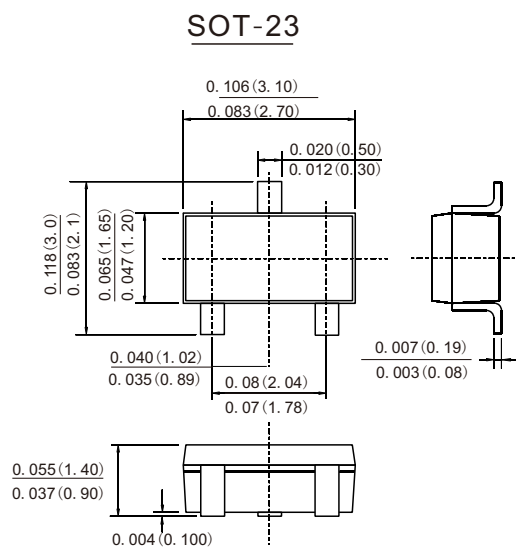
Product code	Pack	Reel Size (mm)	Quantity (Pcs/reel)	Quantity (pcs/box)	Quantity (pcs/carton)
BC817	T/R	$\Phi 180$	3K	30K	120K

## Characteristics(Typical)



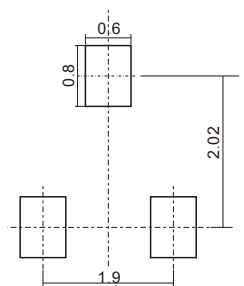


Outline Dimensions



Dimensions in inches and (millimeters)

Suggested pad layout



Dimensions in millimeters

## Friendship Reminder

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