



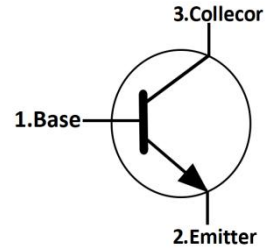
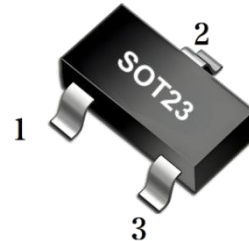
# BC817

## NPN SILICON TRANSISTOR

### DESCRIPTION

The BC817 is designed for general purpose medium power amplifiers and switches requiring collector currents to 500mA.

The BC817 meet the ROHS and Green Product requirement with full function reliability approved.

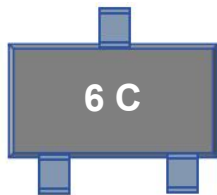


### FEATURES

- \*For general AF applications.
- \*High collector current.
- \*High current gain.
- \*Low collector-emitter saturation voltage.

### MARKING

Type Code: Marking: 6C



### ABSOLUTE MAXIMUM RATINGS (Tc=25°C, unless otherwise specified)

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>CB0</sub>	Collector-base voltage	50	V
V <sub>CEO</sub>	Collector-emitter voltage	45	V
V <sub>EB0</sub>	Emitter-base voltage	5	V
I <sub>c</sub>	Collector current	0.5	A
P <sub>c</sub>	Collector Power Dissipation	300	mW
T <sub>j</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature	-55~150	°C
R <sub>θJA</sub>	Thermal Resistance From Junction To Ambient	417	°C/W

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.



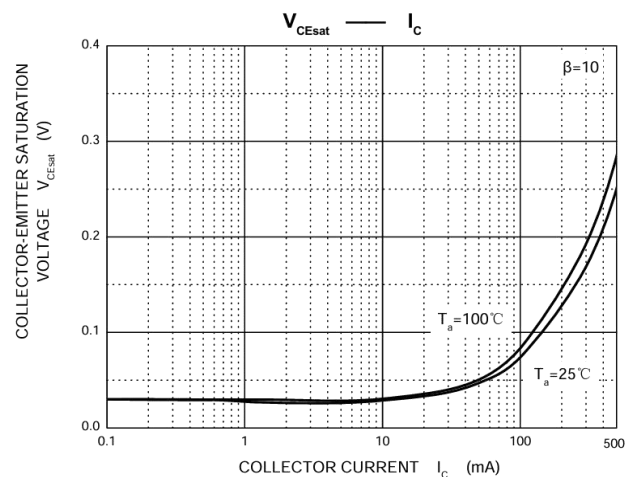
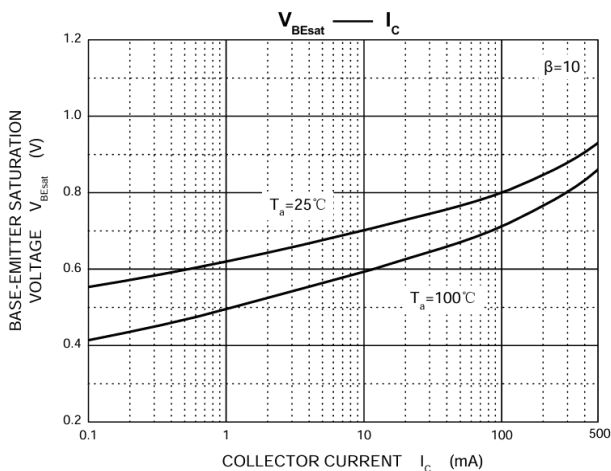
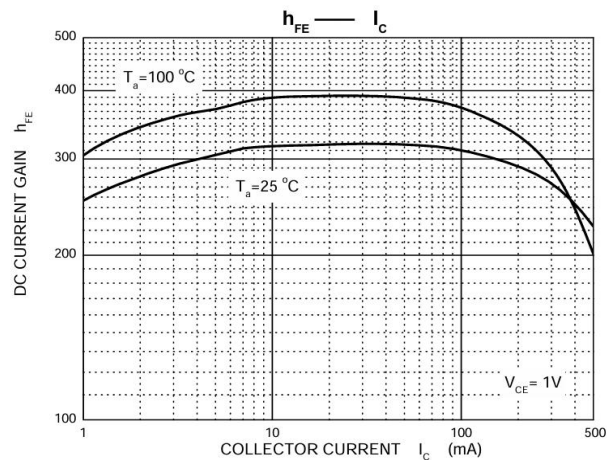
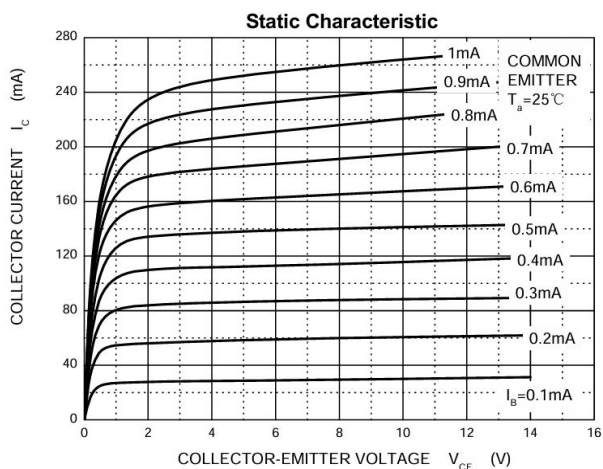
# BC817

## NPN SILICON TRANSISTOR

### ELECTRICAL CHARACTERISTICS (Tc=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10mA, I_B=0$	45			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=1\mu A, I_C=0$	5			V
Collector cutoff current	$I_{CBO}$	$V_{CB}=45V, I_E=0$			0.1	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=4V, I_C=0$			0.1	$\mu A$
DC Current Gain (CLASSIFICATION OF $h_{FE1}$ )	$h_{FE1}$	$V_{CE}=1V, I_C=100mA$	6A	100	250	
			6B	160	400	
			6C	250	600	
	$h_{FE2}$	$V_{CE}=1V, I_C=500mA$	40			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=500mA, I_B=50mA$			0.7	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=500mA, I_B=50mA$			1.2	V
Base-emitter Voltage	$V_{BE}$	$V_{CE}=1V, I_C=500mA$			1.2	V
Collector capacitance	$C_{ob}$	$V_{CB}=10V, f=1MHz$		10		pF
Transition frequency	$f_T$	$V_{CE}=5V, I_C=10mA, f=100MHz$	100			MHz

### TYPICAL CHARACTERISTICS

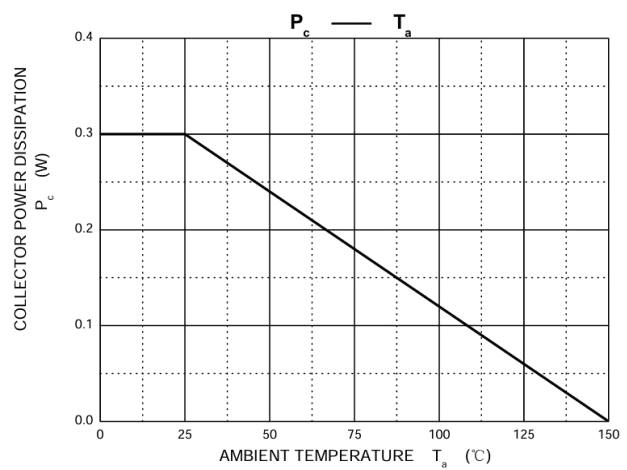
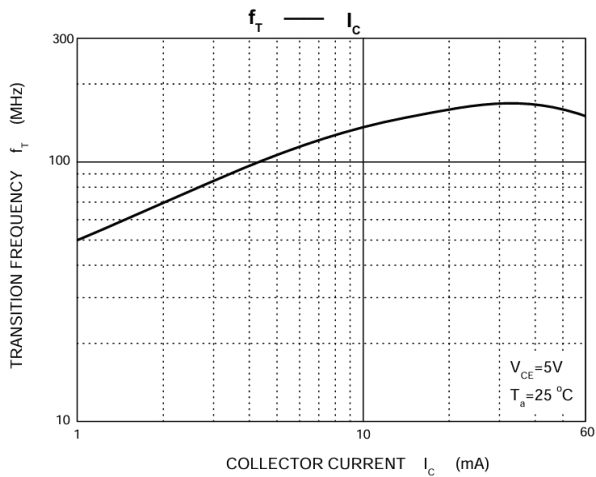
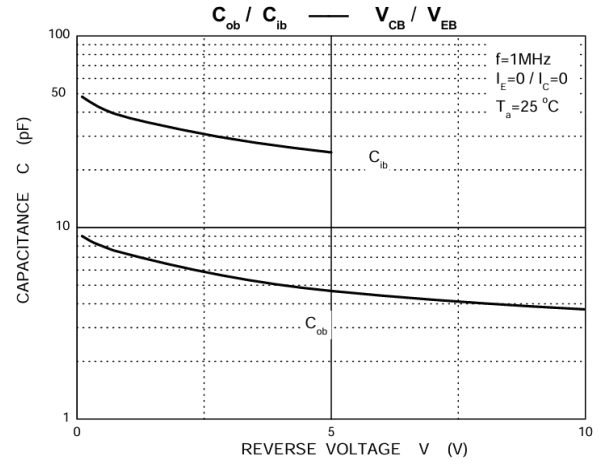
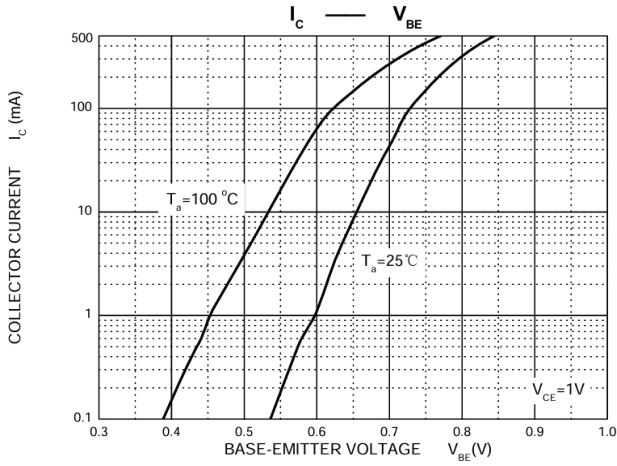




# BC817

## NPN SILICON TRANSISTOR

### ■ TYPICAL CHARACTERISTICS(Con.t)





# BC817

# NPN SILICON TRANSISTOR

## SOT23 PACKAGE OUTLINE DIMENSIONS

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

Note:  
1. Controlling dimension: in millimeters.  
2. General tolerance: ±0.05mm.  
3. The pad layout is for reference purposes only.

## REEL PACKING

Top cover tape thickness 0.10 mm (0.004") max. thick

Embossed carrier tape

Trailer Tape 50±2 Empty Pockets

Components

Leader Tape 100±2 Empty Pockets

Dimensions are in millimeter										
PKG TYPE	A	B	C	d	E	F	Po	P	P1	W
SOT-23	3.15	2.77	1.22	Φ1.50	1.75	3.50	4.00	4.00	2.00	8.00
Reel Optiom	D	D1	D2	G	H	I	W1	W2	Q.TY PER REEL	
7" Dia	Φ178.0	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30	3000PCS	
13" Dia	φ330.0	/	13.00	/	/	R6.50	9.50	12.30	10000PCS	