

# BC807

## BC807 SOT-23 Plastic-Encapsulate Transistors (PNP)

### General description

SOT-23 Plastic-Encapsulate Transistors (PNP)

### FEATURES

- Complementary to BC817
- Power Dissipation of 300mW
- High Stability and High Reliability
- SOT-23 Small Outline Plastic Package
- Epoxy UL: 94V-0
- Mounting Position: Any



DEVICE MARKING CODE:

### Maximum Ratings & Thermal Characteristics (Ratings at 25°C ambient temperature unless otherwise specified.)

Parameters	Symbol	Value	Unit
Collector-Base Voltage	V <sub>CB0</sub>	-50	V
Collector-Emitter Voltage	V <sub>CE0</sub>	-45	V
Emitter -Base Voltage	V <sub>EB0</sub>	-5	V
Collector Current-Continuous	I <sub>c</sub>	-500	mA
Collector Power Dissipation	P <sub>c</sub>	300	mW
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-55-+150	°C
Thermal resistance From junction to ambient	R <sub>θJA</sub>	417	°C/W

### Electrical Characteristics (Ratings at 25°C ambient temperature unless otherwise specified.)

Parameter	Symbols	Test Condition	Limits		Unit
			Min	Max	
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =-10μA, I <sub>E</sub> =0	-50		V
Collector-emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> =-10mA, I <sub>B</sub> =0	-45		V
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =-1μA, I <sub>C</sub> =0	-5		V
Collector cut-off current	I <sub>CB0</sub>	V <sub>CB</sub> =-45V, I <sub>E</sub> =0		-100	nA
Emitter cut-off current	I <sub>EB0</sub>	V <sub>EB</sub> =-4V, I <sub>C</sub> =0		-100	nA
DC current gain	h <sub>FE(1)</sub>	V <sub>CE</sub> =-1V, I <sub>C</sub> =-100mA	100	600	
	h <sub>FE(2)</sub>	V <sub>CE</sub> =-1V, I <sub>C</sub> =-500mA	40		
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =-500mA, I <sub>B</sub> =-50mA		-0.70	V
Base -emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =-500mA, I <sub>B</sub> =-50mA		-1.20	V
Transition frequency	f <sub>t</sub>	V <sub>CE</sub> =-5V, I <sub>C</sub> =-10mA, f=100MHz	100		MHz

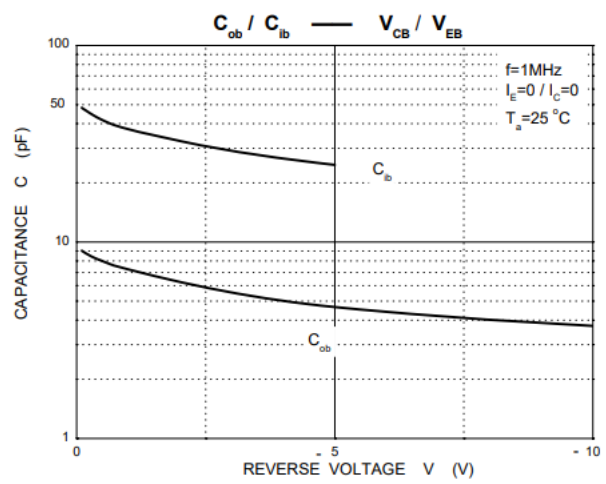
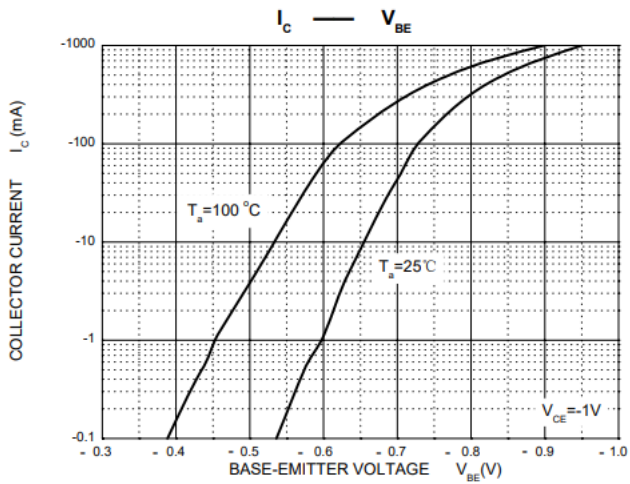
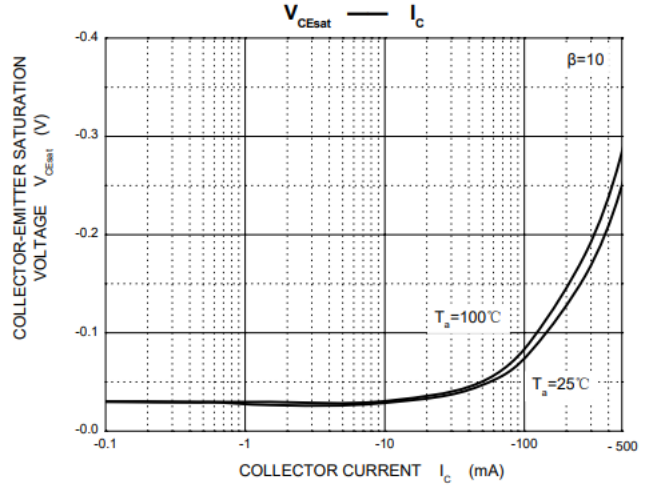
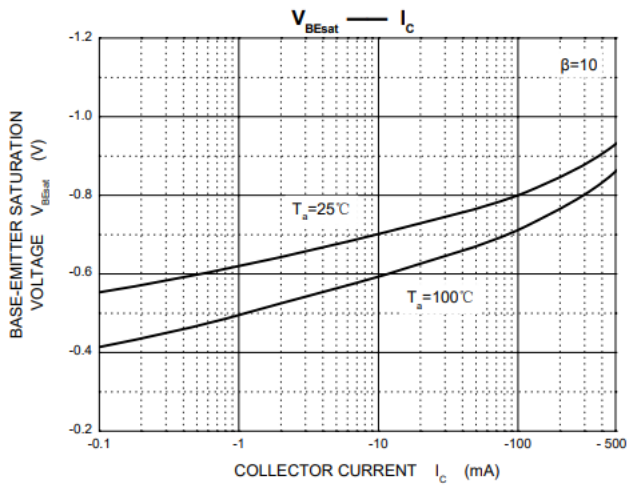
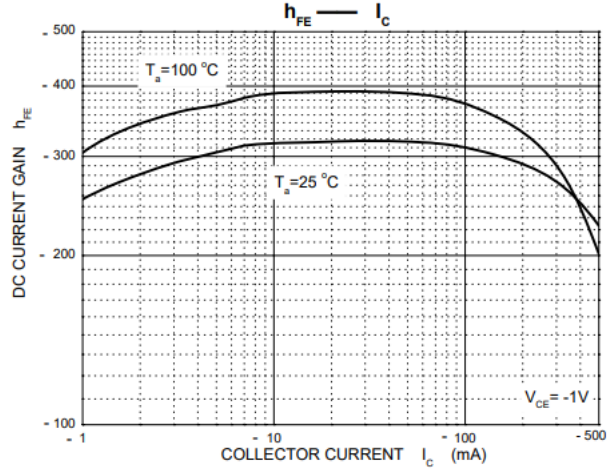
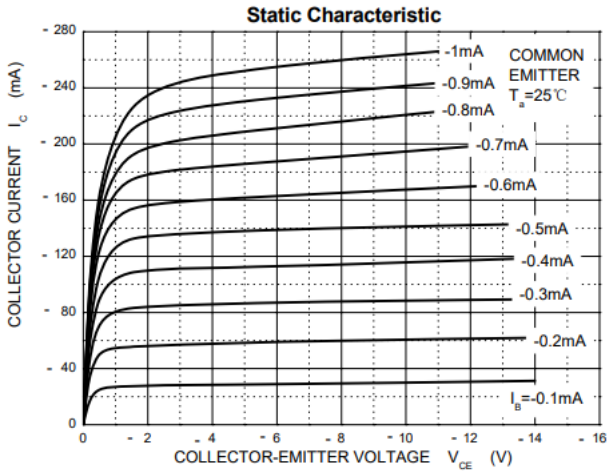
### CLASSIFICATION OF h<sub>FE</sub>(1)

RANK	BC807-16	BC807-25	BC807-40
RANGE	100-250	160-400	250-600
Marking	5A	5B	5C



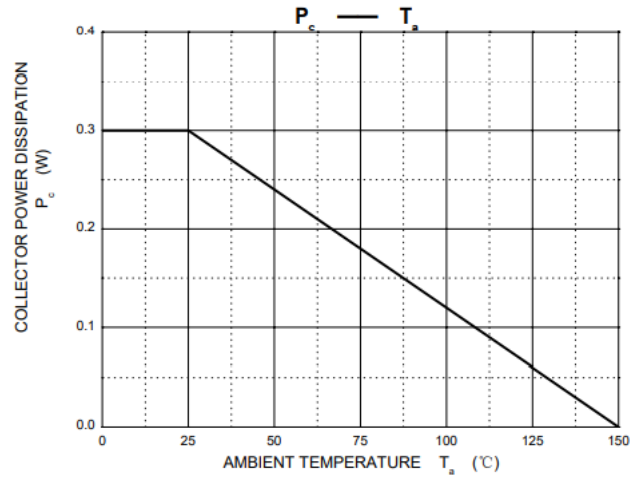
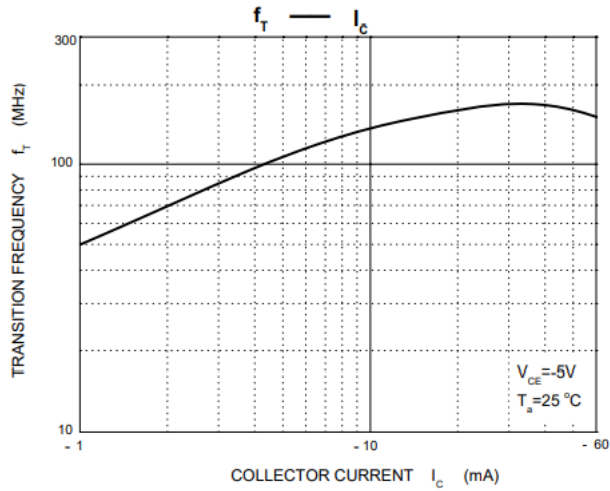
# BC807

## RATING AND CHARACTERISTIC CURVES

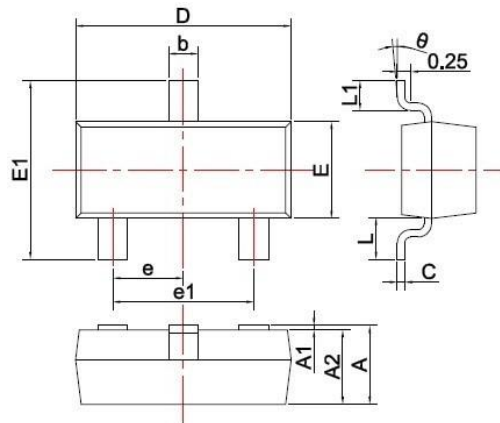




# BC807



## SOT-23 PACKAGE OUTLINE Plastic surface mounted package

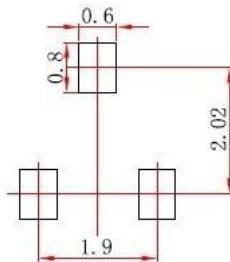


SYMBOL	DIMENSIONS	
	MIN	MAX
A	0.900	1.150
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.150
D	2.800	3.000
E	1.200	1.400
E1	2.250	2.550
e	0.950TYP	
e1	1.800	2.000
L	0.550REF	
L1	0.300	0.500
H	0°	8°

Unit: mm

### Precautions: PCB Design

Recommended land dimensions for SOT-23 diode. Electrode patterns for PCBs



#### Note:

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

## **Important Notice and Disclaimer**

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