



### **Small Signal Product**

#### **Features**

- ♦ Ideally suited for automatic insertion
- ♦ For switching, AF driver and amplifer applications
- ♦ Complementary NPN type available (BC817)

### **Mechanical Data**

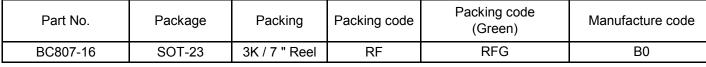
Case material : Molded plastic, UL flammability classification rating 94V-0

♦ Moisture sensitivity : Level 1 per J-STD-020C

♦ Lead free plating

◇ Marking : -16: 5A, -25: 5B, -40: 5C
◇ Weight : 0.008grams (approximately)

## **Ordering Information (example)**



Note: Detail please see "Ordering Information(detail, example)" below.

### **Maximum Ratings and Electrical Characteristics**

Rating at 25  $^{\circ}\text{C}$  ambient temperature unless otherwise specified.

Parameter			Symbol	BC807-16	BC807-25	BC807-40	Units
Collector-Base Breakdown Voltage	I <sub>C</sub> = -10 μA	I <sub>E</sub> = 0	$V_{CBO}$		-50		V
Collector-Emitter Breakdown Voltage	$I_C = -10 \text{ mA}$	I <sub>B</sub> = 0	$V_{CEO}$		-45		V
Collector Current - Continuous			I <sub>C</sub>		-0.5		Α
Power Dissipation			$P_{D}$		0.3		W
Emitter-Base Breakdown Voltage	I <sub>E</sub> = -1 μA	I <sub>C</sub> = 0	$V_{EBO}$		-5		V
Collector Cut-Off Current	V <sub>CB</sub> = -45 V	I <sub>E</sub> = 0	I <sub>CBO</sub>		-0.1		μA
Collector Cut-Off Current	$V_{CB}$ = -40 $V$	I <sub>B</sub> = 0	I <sub>CEO</sub>		-0.2		μA
Emitter Cut-Off Current	V <sub>EB</sub> = -4 V	I <sub>C</sub> = 0	I <sub>EBO</sub>		-0.1		μA
Collector-Emitter Saturation Voltage	I <sub>C</sub> = -500 mA	$I_B = 50 \text{ mA}$	$V_{CE(sat)}$		-0.7		V
Base-Emitter Saturation Voltage	I <sub>C</sub> = -500 mA	$I_B = 50 \text{ mA}$	$V_{BE(sat)}$		-1.2		V
Transition Frequency V <sub>CE</sub> = -5 V	$I_C = -10 \text{ mA}$	f = 100 MHz	f <sub>T</sub>		100		MHz
Junction Temperature			$T_J$		150		°C
Storage Temperature Range		_	T <sub>STG</sub>		-55 to +150		°C

Parameter		Symbol	Min	Max	Units		
	807-16				100	250	
DC Current Gain	807-25	$V_{CE} = -1 V$	$I_C$ = -100 mA	$h_{FE(1)}$	160	400	
	807-40				250	600	

**SOT-23** 

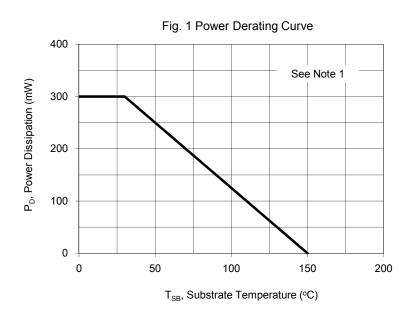


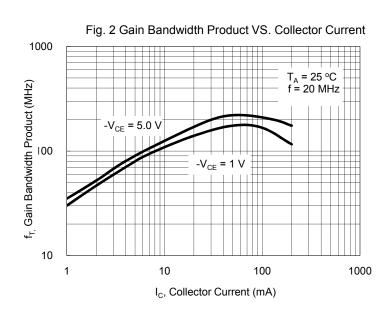


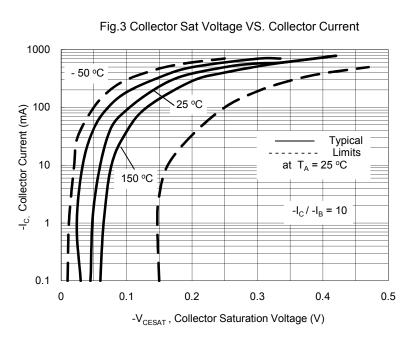


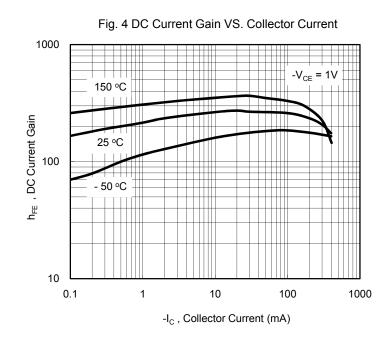


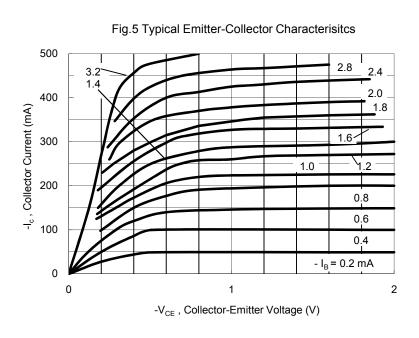
### RATINGS AND CHARACTERISTIC CURVES

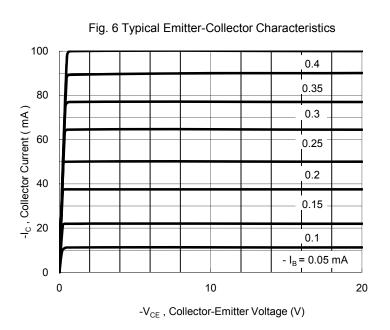














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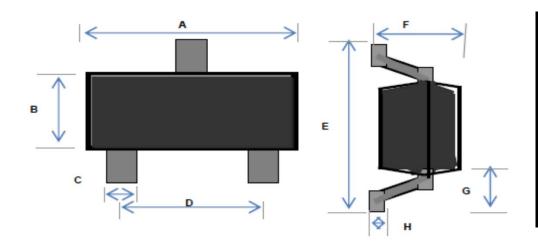
# Ordering information (Detail, example)

Part No.	Package	Packing	Packing code	Packing code (Green)	Manufacture code
BC807-xx (Note 1)	SOT-23	3K / 7 " Reel	RF	RFG	(Note 2)
BC807-16	SOT-23	3K / 7 " Reel	RF	RFG	
BC807-16	SOT-23	3K / 7 " Reel	RF	RFG	В0
BC807-16	SOT-23	3K / 7 " Reel	RF	RFG	D0

Note 1: "xx" is Device Code from "16" thru "40".

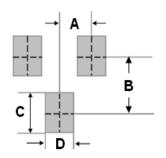
Note 2 : Manufacture special control, if empty means no special control requirement.

### **Dimensions**



DIM.	Unit(	(mm)	Unit(inch)		
DIIVI.	Min	Max	Min	Max	
Α	2.70	3.10	0.106	0.122	
В	1.10	1.50	0.043	0.059	
С	0.30	0.51	0.012	0.020	
D	1.78	2.04	0.070	0.080	
E	2.10	2.64	0.083	0.104	
F	0.89	1.30	0.035	0.051	
G	0.550	REF	0.022	REF	
Н	0.1	REF	0.004	REF	

# **Suggested PAD Layout**



DIM.	Unit(mm)	Unit(inch)		
DIIVI.	Тур.	Тур.		
А	0.95	0.037		
В	2.0	0.079		
С	0.9	0.035		
D	0.8	0.031		

## Marking

Part No.	Marking
BC807-16	5A
BC807-25	5B
BC807-40	5C

Version : E13