

# BC846/BC847/BC848

TRANSISTOR(NPN) SOT-23 Plastic-Encapsulate Transistors



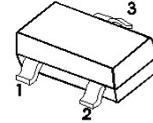
## 特征 Features

- Complementary to BC856/BC857/BC858
- Power Dissipation of 200mW
- Ideally suited for automatic insertion
- For switching and AF amplifier applications

## 机械数据 Mechanical Data

- Small Outline Plastic Package
- Epoxy UL: 94V-0
- Mounting Position: Any

SOT-23



1. BASE
2. EMITTER
3. COLLECTOR

Marking:

BC846A=1A	BC846B=1B	
BC847A=1E	BC847B=1F	BC847C=1G
BC848A=1J	BC848B=1K	BC848C=1L

极限值和温度特性(TA = 25°C 除非另有规定)

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

参数 Parameters	符号 Symbol		数值 Value	单位 Unit
Collector-Base Voltage	V <sub>CBO</sub>	BC846 BC847 BC848	80 50 30	V
Collector-Emitter Voltage	V <sub>CEO</sub>	BC846 BC847 BC848	65 45 30	V
Emitter -Base Voltage	V <sub>EBO</sub>		6	V
Collector Current-Continuous	I <sub>C</sub>		100	mA
Collector Power Dissipation	P <sub>C</sub>		200	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>		625	°C/W

电特性 (TA = 25°C 除非另有规定)

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

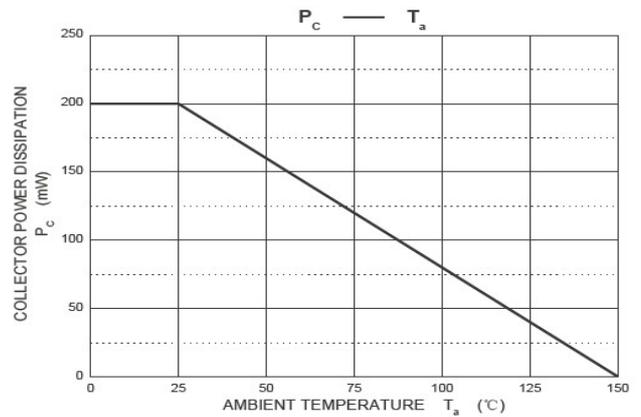
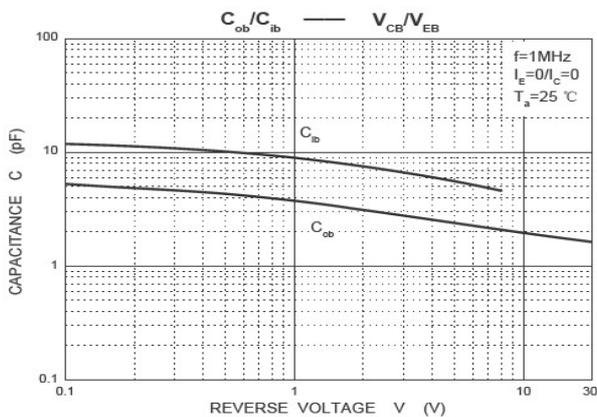
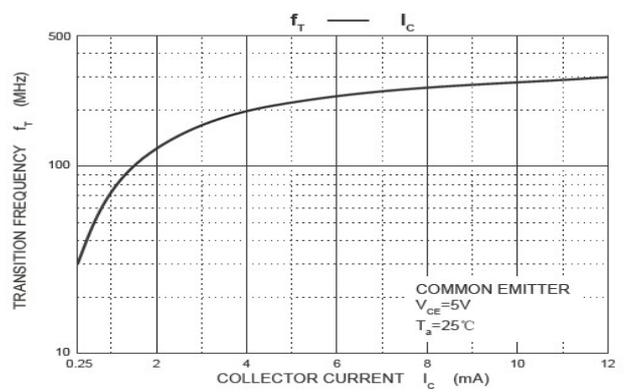
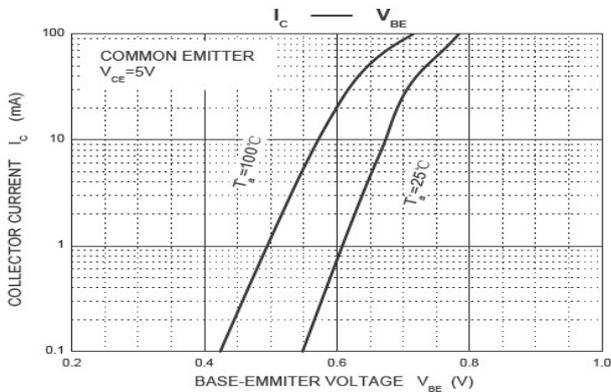
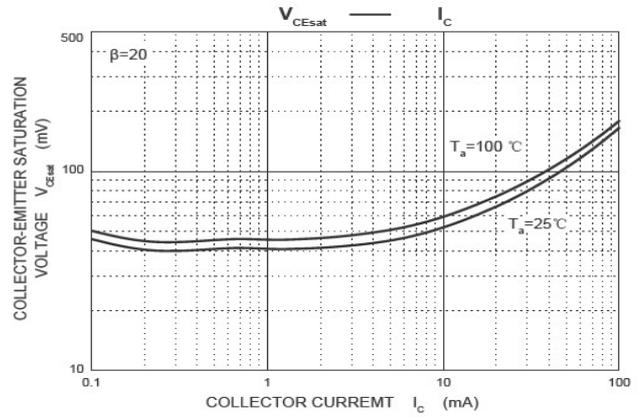
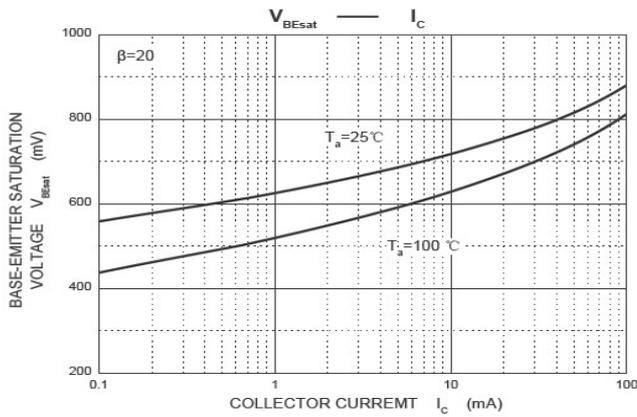
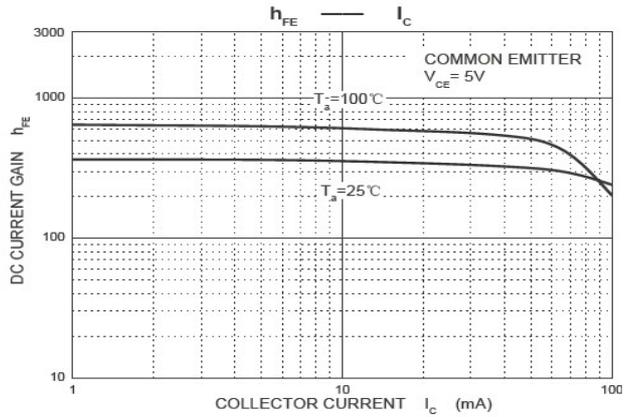
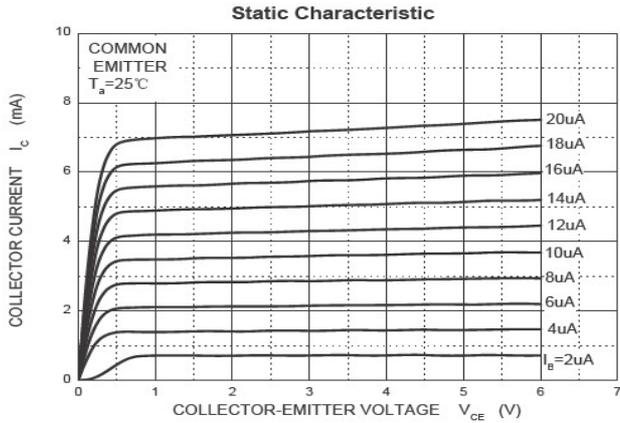
参数 Parameter	符号 Symbols	测试条件 Test Condition	界限 Limits		单位 Unit
			Min	Max	
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =10uA, I <sub>E</sub> =0 BC846 BC847 BC848	80 50 30		V
Collector-emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> =10mA, I <sub>B</sub> =0 BC846 BC847 BC848	65 45 30		V
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =10uA, I <sub>C</sub> =0	6		V
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> =70V, I <sub>E</sub> =0 V <sub>CB</sub> =50V, I <sub>E</sub> =0 V <sub>CB</sub> =30V, I <sub>E</sub> =0 BC846 BC847 BC848		100	nA
Collector cut-off current	I <sub>CEO</sub>	V <sub>CE</sub> =60V, I <sub>B</sub> =0 V <sub>CE</sub> =45V, I <sub>B</sub> =0 V <sub>CE</sub> =30V, I <sub>B</sub> =0 BC846 BC847 BC848		100	nA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> =5V, I <sub>C</sub> =0		100	nA
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> =5V, I <sub>C</sub> =2mA BC846A;BC847A;BC848A BC846B;BC847B;BC848B BC847C;BC848C	110 200 420	220 450 800	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =100mA, I <sub>B</sub> =5mA		0.50	V
Base -emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =100mA, I <sub>B</sub> =5mA		1.10	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> =5V, I <sub>C</sub> =10mA, f=100MHz	100		MHz
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> =10V, f=1MHz		4.5	pF

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## Typical characteristics

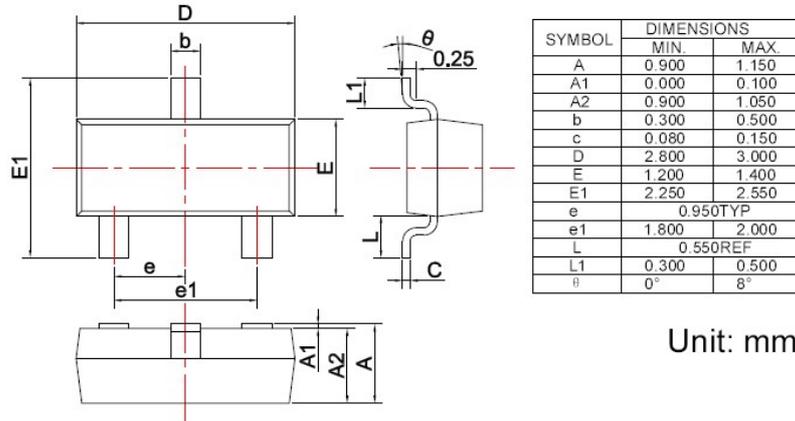


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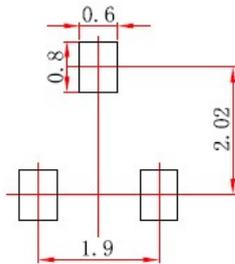


## SOT-23 PACKAGE OUTLINE Plastic surface mounted package



### 焊盘设计参考 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.