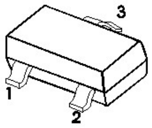
BC846/BC847/BC848
SOT-23 Plastic-Encapsulate Transistors

SOT-23

TRANSISTOR(NPN) **SOT-23** 贴片塑封三极管



1. BASE
2. EMITTER
3. COLLECTOR

Marking:

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

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

极限值和温度特性(T_A = 25℃ 除非另有规定)

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

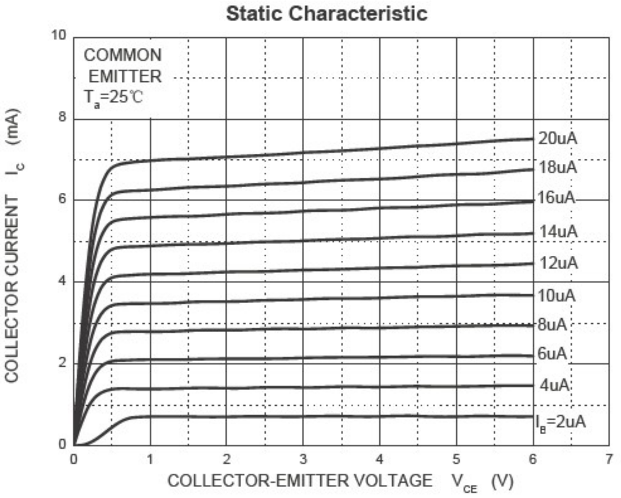
参数 Parameters	符号 Symbol		数值 Value	单位 Unit
Collector-Base Voltage	V_{CBO}	BC846	80	V
		BC847	50	
		BC848	30	
Collector-Emitter Voltage	V_{CEO}	BC846	65	V
		BC847	45	
		BC848	30	
Emitter -Base Voltage	V_{EBO}		6	V
Collector Current-Continuous	I_C		100	mA
Collector Power Dissipation	P_C		200	mW
Junction Temperature	T_j		150	℃
Storage Temperature	Tstg		-55-+150	℃
Thermal resistance From junction to ambient	$R_{\theta JA}$		625	℃/W

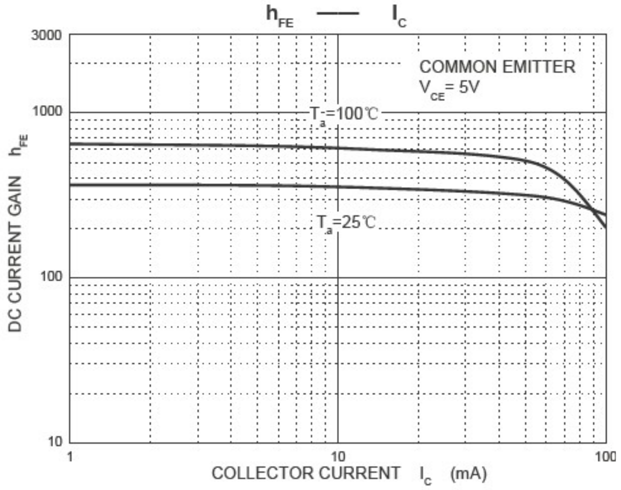
电特性 (T_A = 25℃ 除非另有规定)

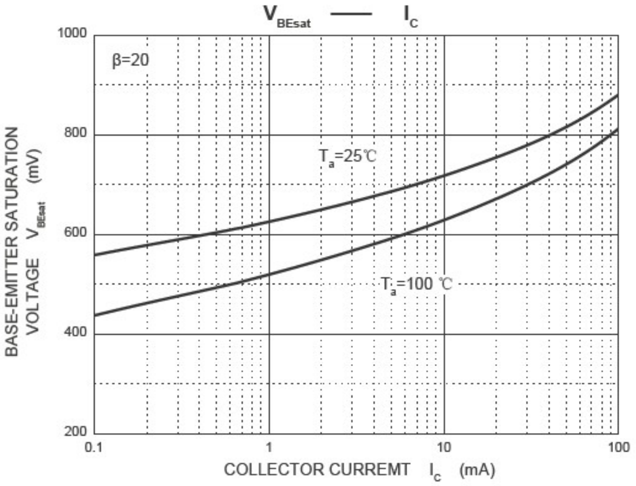
Electrical Characteristics (Ratings at 25℃ ambient temperature unless otherwise specified).

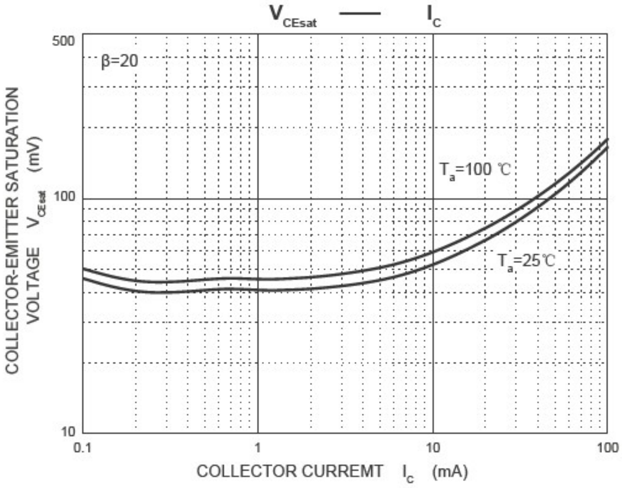
参数 Parameter	符号 Symbols	测试条件 Test Condition		界限 Limits		单位 Unit
				Min	Max	
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=10uA, I_E=0	BC846	80		V
			BC847	50		
			BC848	30		
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=10mA, I_B=0	BC846	65		V
			BC847	45		
			BC848	30		
Emitter-base breakdown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

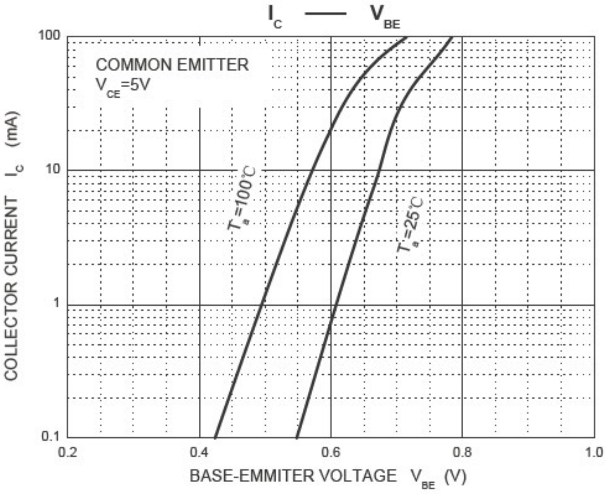
Ratings And Characteristic Curves

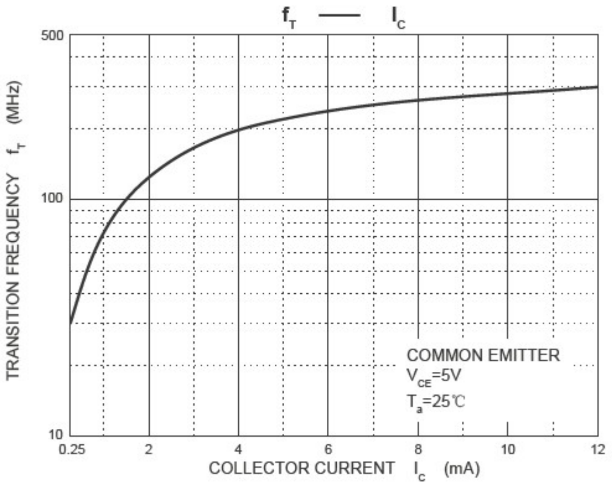

Static Characteristic


h_{FE} —— I_C

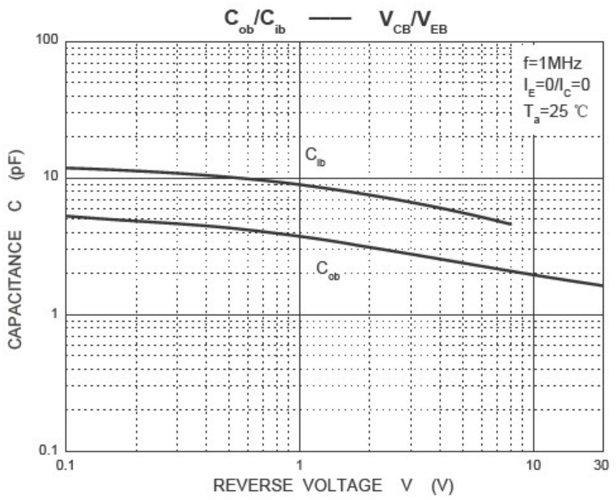

V_{BEsat} —— I_C

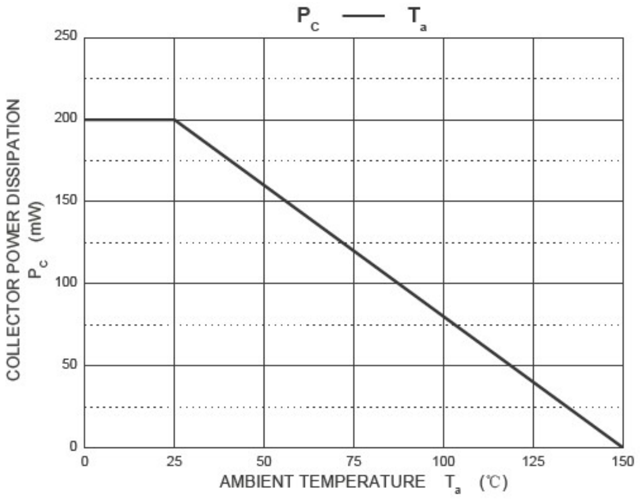

V_{CEsat} —— I_C


I_C —— V_{BE}

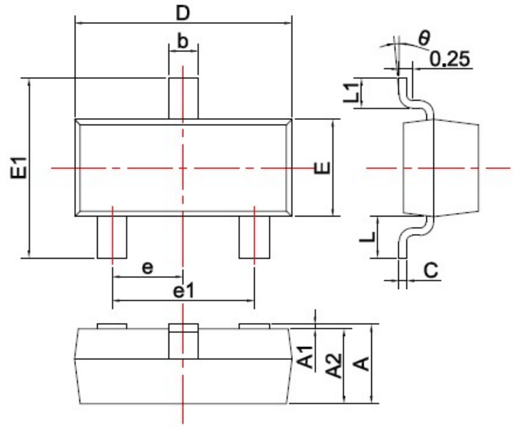

f_T —— I_C

Ratings And Characteristic Curves





SOT-23 PACKAGE OUTLINE Plastic surface mounted package

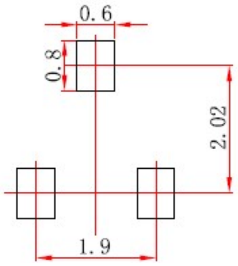


SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.900	1.150
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.150
D	2.800	3.000
E	1.200	1.400
E1	2.250	2.550
e	0.950TYP	
e1	1.800	2.000
L	0.550REF	
L1	0.300	0.500
θ	0°	8°

Unit: mm

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.