

BC846/BC847/BC848

BC846/BC847/BC848 SOT-23 Plastic-Encapsulate Transistors(NPN)

General description

SOT-23 Plastic-Encapsulate Transistors(NPN)

FEATURES

- Complementary to BC856/BC857/BC858
- Power Dissipation of 200mW
- Ideally suited for automatic insertion
- For switching and AF amplifier applications
- SOT-23 Small Outline Plastic Package
- Epoxy UL: 94V-0
- Mounting Position: Any



DEVICE MARKING CODE:

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

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

Parameters	Symbol		Value	Unit
Collector-Base Voltage	V_{CBO}	BC846 BC847 BC848	80 50 30	V
Collector-Emitter Voltage	V_{CEO}	BC846 BC847 BC848	65 45 30	V
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	°C
Storage Temperature	T_{stg}		-55-+150	°C
Thermal resistance From junction to ambient	$R_{\theta JA}$		625	°C/W

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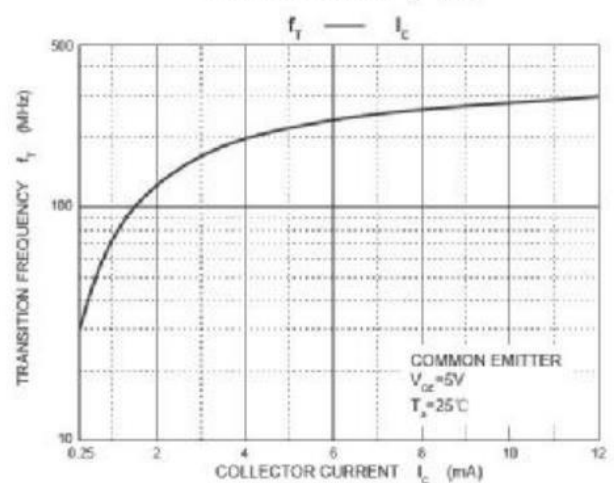
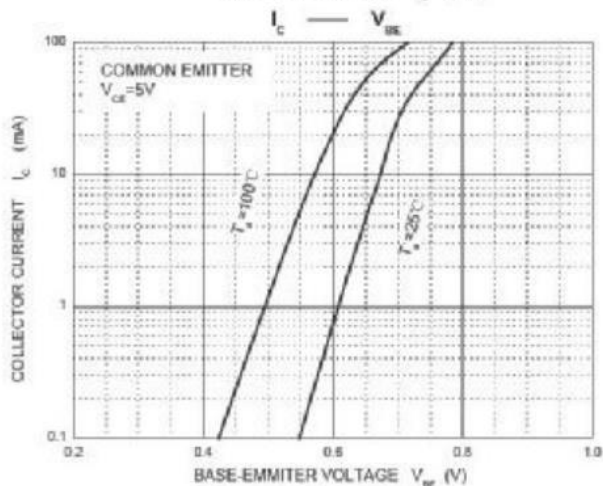
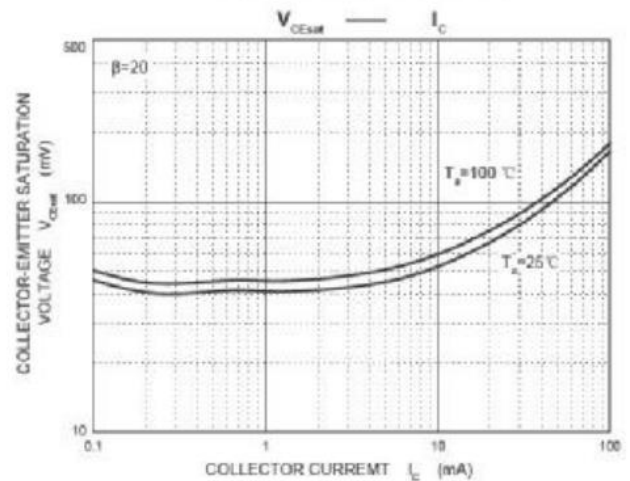
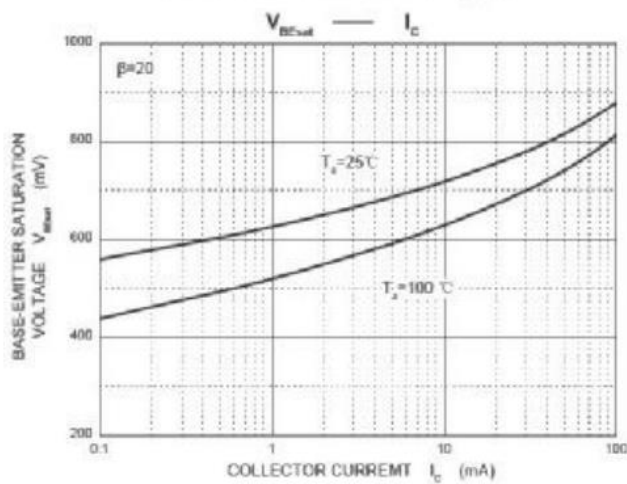
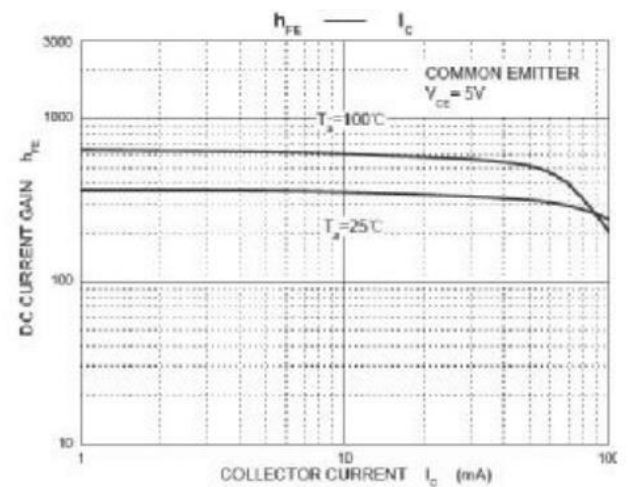
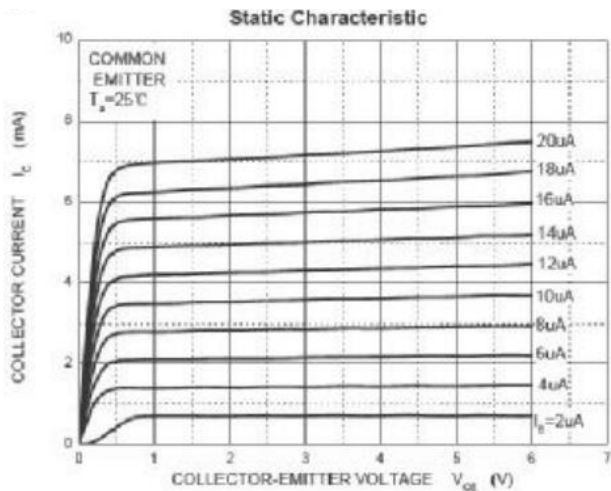
Electrical Characteristics (Ratings at 25°C ambient temperature unless otherwise specified).

Parameter	Symbols	Test Condition	Limits		Unit
			Min	Max	
Collector-base breakdown voltage	V(BR)CBO	IC=10uA, IE=0 BC846 BC847 BC848	80 50 30		V
Collector-emitter breakdown voltage	V(BR)CEO	IC=10mA, IB=0 BC846 BC847 BC848	65 45 30		V
Emitter-base breakdown voltage	V(BR)EBO	IE=10uA, IC=0	6		V
Collector cut-off current	ICBO	VCB=70V, IE=0 VCB=50V, IE=0 VCB=30V, IE=0 BC846 BC847 BC848		100	nA
Collector cut-off current	ICEO	VCE=60V, IB=0 VCE=45V, IB=0 VCE=30V, IB=0 BC846 BC847 BC848		100	nA
Emitter cut-off current	IEBO	VEB=5V, IC=0		100	nA
DC current gain	hFE	BC846A;BC847A;BC848A VCE=5V, IC=2mA BC846B;BC847B;BC848B BC847C;BC848C	110 200 420	220 450 800	
Collector-emitter saturation voltage	VCE(sat)	IC=100mA, IB=5mA		0.50	V
Base -emitter saturation voltage	VBE(sat)	IC=100mA, IB=5mA		1.10	V
Transition frequency	fT	VCE=5V, IC=10mA, f=100MHz	100		MHz
Collector output capacitance	Cob	VCB=10V, f=1MHz		4.5	pF



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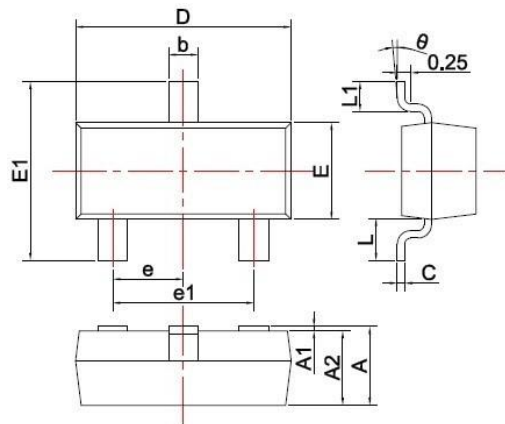
RATING AND CHARACTERISTIC CURVES





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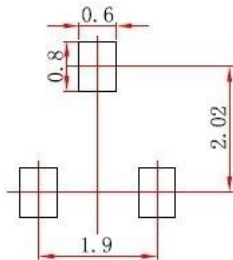
SOT-23 PACKAGE OUTLINE Plastic surface mounted package



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

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.

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