



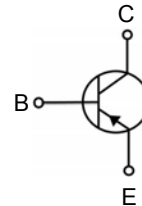
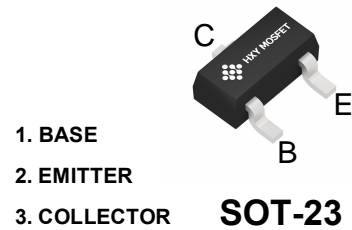
## Features

- Ideally suited for automatic insertion
- For switching and AF amplifier applications

## Ordering Information

Product ID	Pack	Marking	Qty(PCS)
BC846/BC847 /BC848	SOT-23	1x	3000

x: BC846A=A; BC846B=B; BC846C=C;  
BC847A=E; BC847B=F; BC847C=G;  
BC848A=J; BC848B=K; BC848C=L.



## Maxmim Ratings (Ta=25 unless otherwise noted)

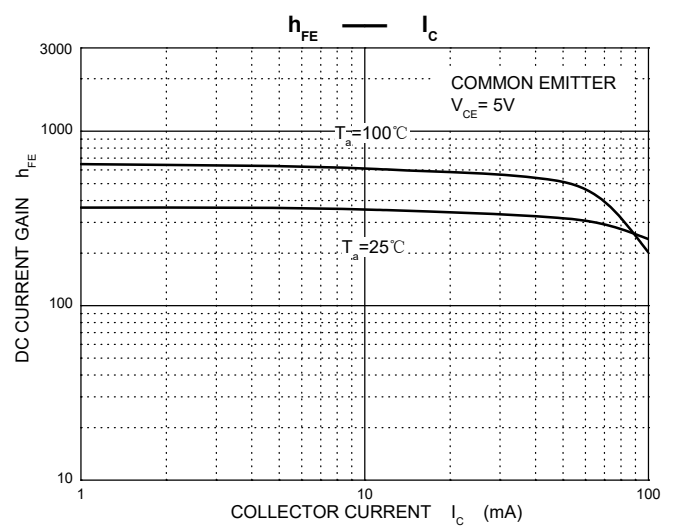
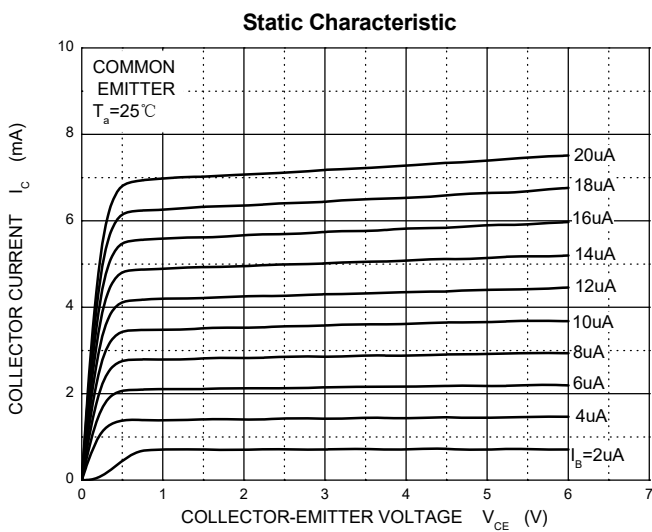
Symbol	Parameter	Limit	Unit
$V_{CBO}$	Collector-Base Voltage	BC846 80	V
		BC847 50	
		BC848 30	
$V_{CEO}$	Collector-Emitter Voltage	BC846 65	V
		BC847 45	
		BC848 30	
$V_{EBO}$	Emitter-Base Voltage	6	V
$I_C$	Collector Current	100	mA
$P_C$	Collector Power Dissipation	200	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	625	°C/W
$T_j$	Junction Temperature	150	°C
$T_{stg}$	Storage Temperature	-55~+150	°C

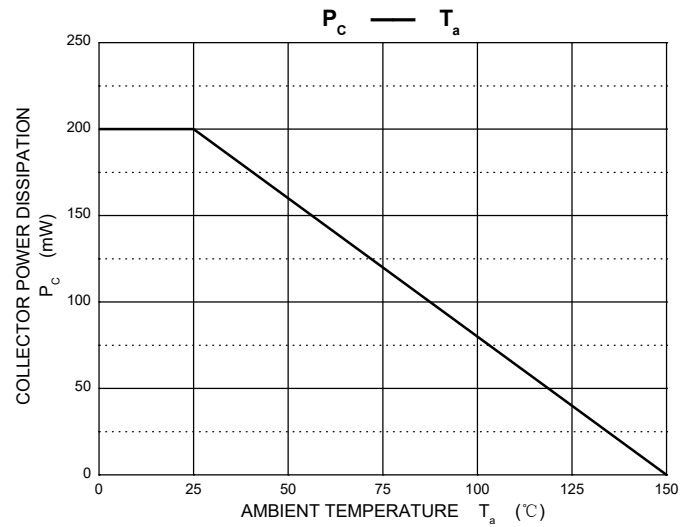
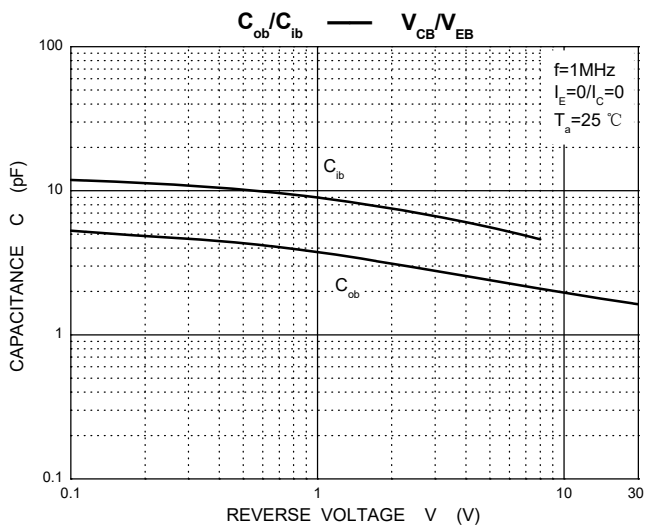
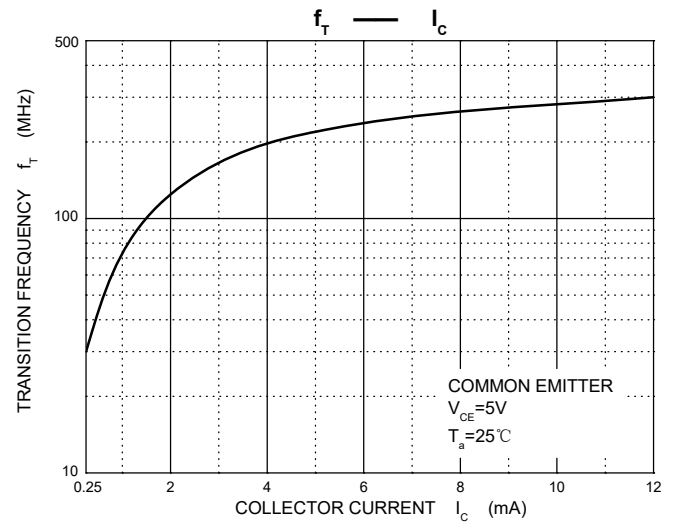
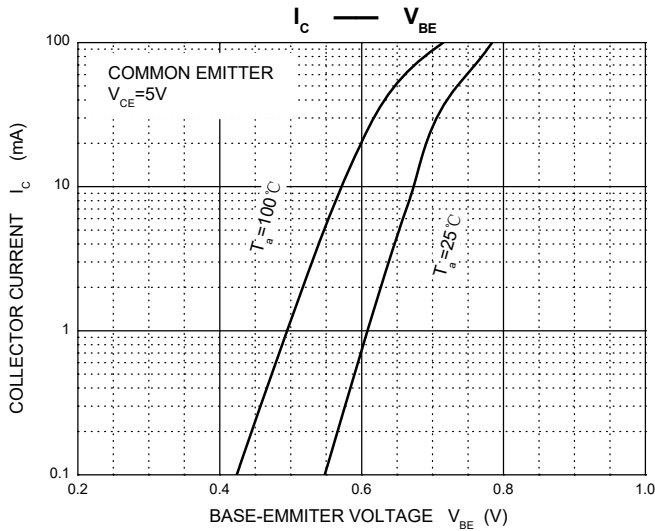
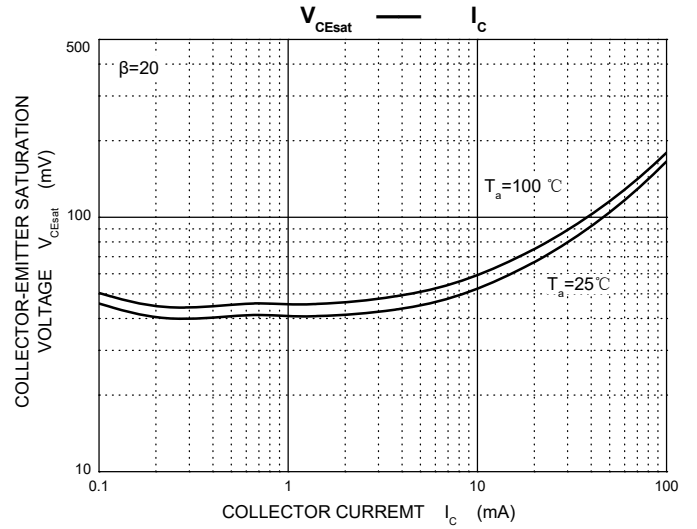
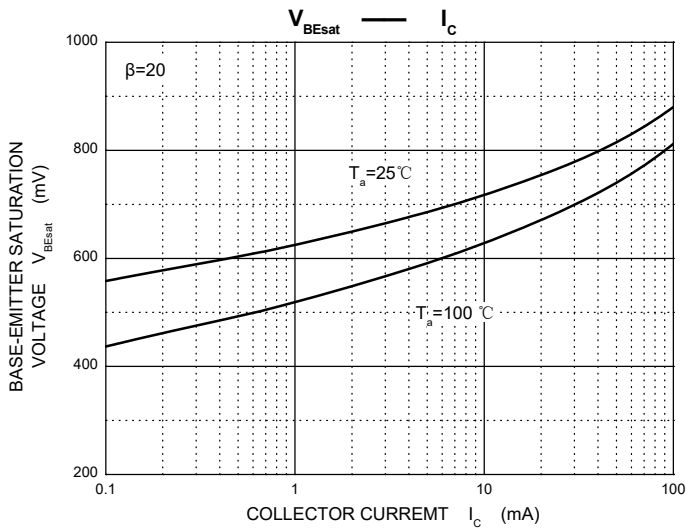


**Electrcal Characteristics (Ta=25 unless otherwise specified)**

Symbol	Parameter		Test conditions	Min	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	BC846 BC847 BC848	$I_C=10\mu A, I_E=0$	80 50 30		V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	BC846 BC847 BC848	$I_C=10mA, I_B=0$	65 45 30		V
$V_{(BR)EBO}$	Emitter-base breakdown voltage		$I_E=10\mu A, I_C=0$	6		V
$I_{CBO}$	Collector cut-off current	BC846 BC847 BC848	$V_{CB}=70V, I_E=0$ $V_{CB}=50V, I_E=0$ $V_{CB}=30V, I_E=0$		100	nA
$I_{EBO}$	Emitter cut-off current		$V_{EB}=5V, I_C=0$		100	nA
$h_{FE}$	DC current gain	BC846A BC847A BC848A BC846B BC847B BC848B BC846C BC847C BC848C	$V_{CE}=5V, I_C=2mA$	110 200 420	220 450 800	
$V_{CE(sat)}$	Collector-emitter saturation voltage		$I_C=100mA, I_B=5mA$		0.5	V
$V_{BE(sat)}$	Base-emitter saturation voltage				1.1	V
$f_T$	Transition frequency		$V_{CE}=5V, I_C=10mA,$ $f=30MHz$	100		MHz
$C_{ob}$	Collector output capacitance		$V_{CB}=10V, f=1MHz$		4.5	pF

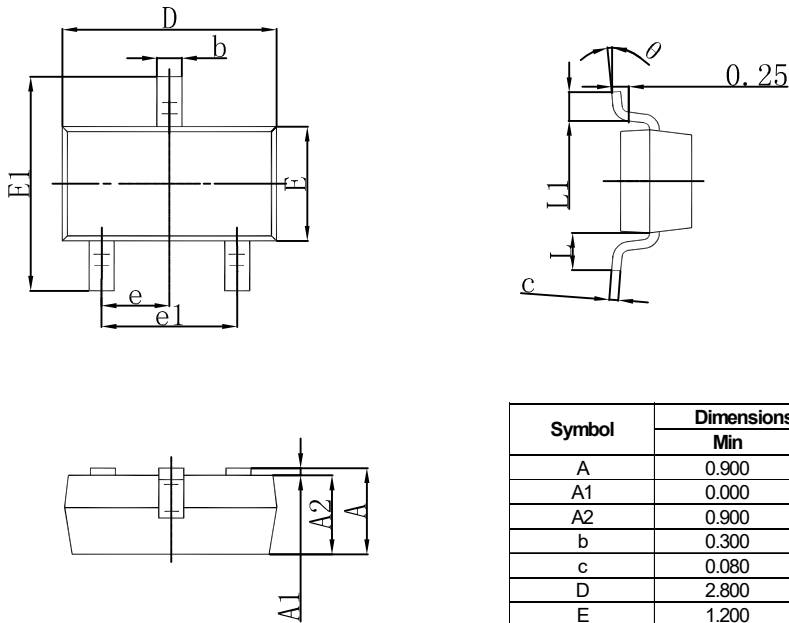
**Typical Characteristics**





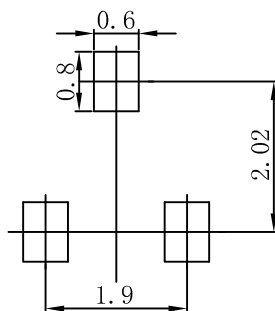


### SOT-23 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

### SOT-23 Suggested Pad Layout



- Note:
1. Controlling dimension: in millimeters.
  2. General tolerance:  $\pm 0.05\text{mm}$ .
  3. The pad layout is for reference purposes only.



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