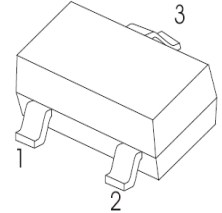


**SOT-23 Plastic-Encapsulate Transistor**

BC846A, B TRANSISTOR (NPN)
BC847A, B, C
BC848A, B, C

SOT-23

1. BASE
2. EMITTER
3. COLLECTOR

FEATURES

- Ideally suited for automatic insertion
- For Switching and AF Amplifier Applications

PACKAGE SPECIFICATIONS

Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (pcs)	Box Size (mm)	QTY/Box (pcs)	Carton Size (mm)	Q'TY/Carton (pcs)
SOT-23	7'	330	3000	203×203×195	45000	438×438×220	180000

MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage	BC846	80
		BC847	50
		BC848	30
V _{CEO}	Collector-Emitter Voltage	BC846	65
		BC847	45
		BC848	30
V _{EBO}	Emitter-Base Voltage	6	V
I _C	Collector Current –Continuous	0.1	A
P _C *	Collector Power Dissipation	200	mW
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-65-150	°C

DEVICE MARKING

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

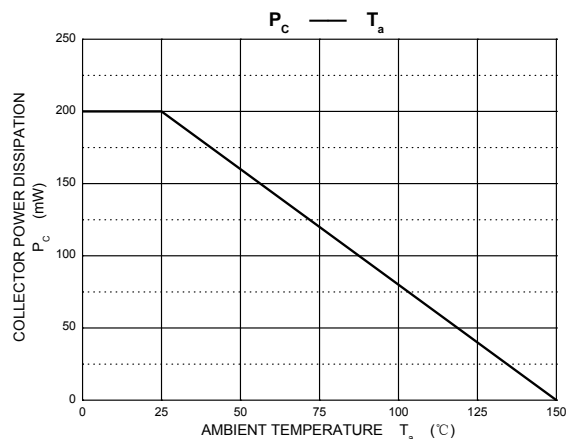
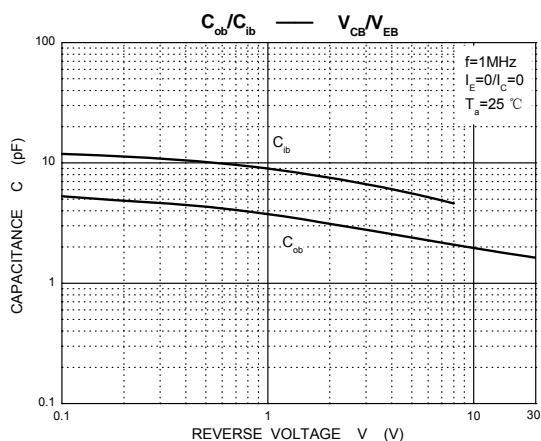
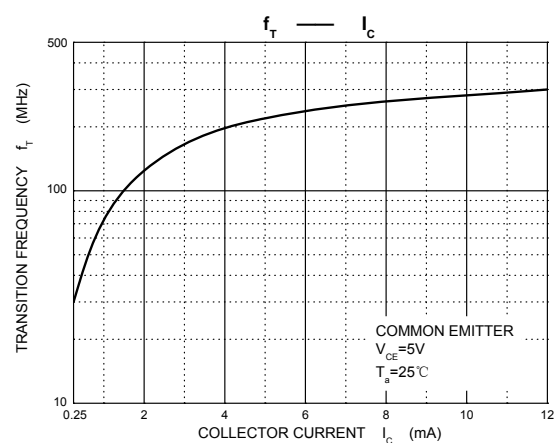
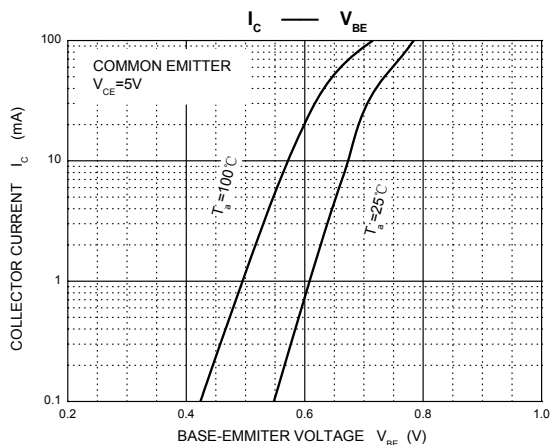
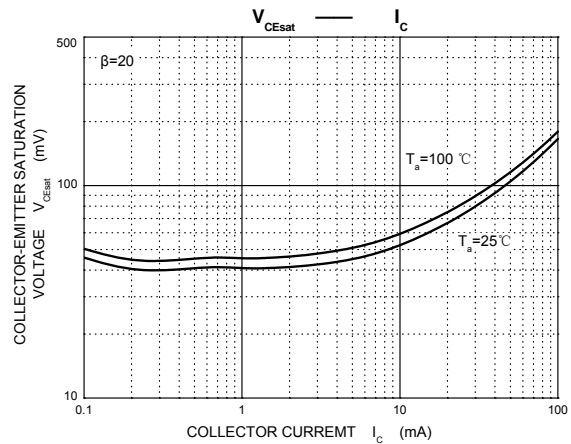
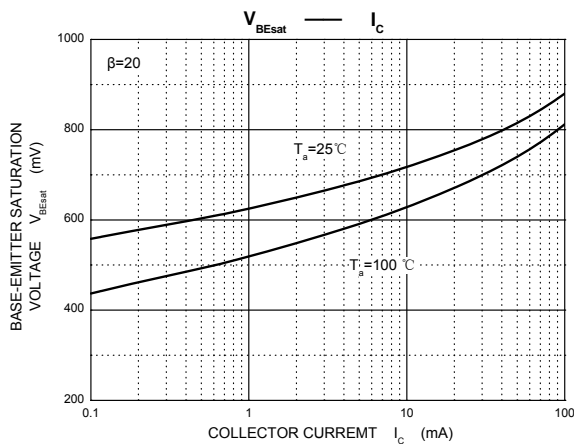
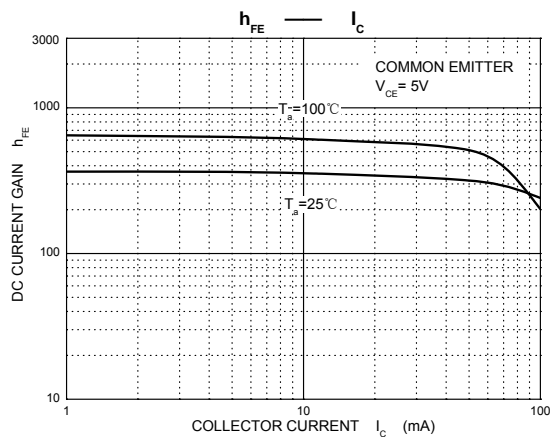
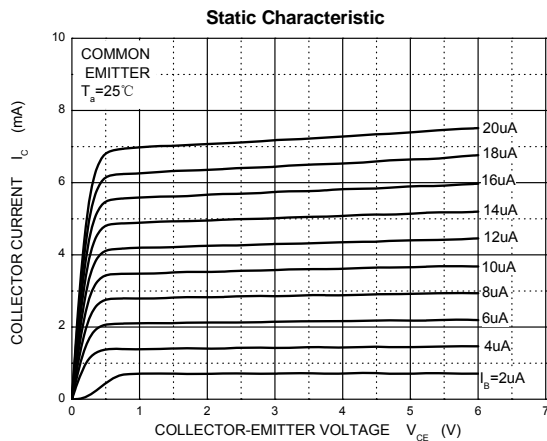


ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit	
Collector-base breakdown voltage	BC846	$I_C = 10\mu A, I_E = 0$	80			V	
	BC847		50				
	BC848		30				
Collector-emitter breakdown voltage	BC846	$I_C = 10mA, I_B = 0$	65			V	
	BC847		45				
	BC848		30				
Emitter-base breakdown voltage	V_{EBO}	$I_E = 10\mu A, I_C = 0$	6			V	
Collector cut-off current	BC846	$V_{CB} = 70V, I_E = 0$			0.1	μA	
	BC847		$V_{CB} = 50V, I_E = 0$				
	BC848		$V_{CB} = 30V, I_E = 0$				
Collector cut-off current	BC846	$V_{CE} = 60V, I_B = 0$			0.1	μA	
	BC847		$V_{CE} = 45V, I_B = 0$				
	BC848		$V_{CE} = 30V, I_B = 0$				
Emitter cut-off current	I_{EBO}	$V_{EB} = 5V, I_C = 0$			0.1	μA	
DC current gain	BC846A,847A,848A	$V_{CE} = 5V, I_C = 2mA$	110		220		
	BC846B,847B,848B		200		450		
	BC847C,BC848C		420		800		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 100mA, I_B = 5mA$			0.5	V	
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 100mA, I_B = 5mA$			1.1	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	

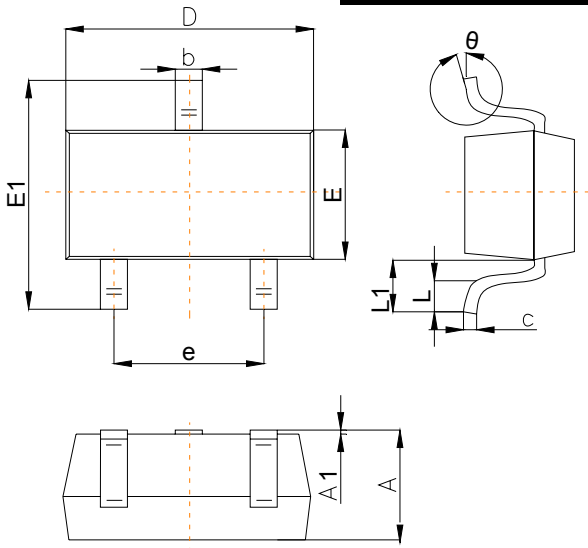
The above data are for reference only.

Typical Characteristics



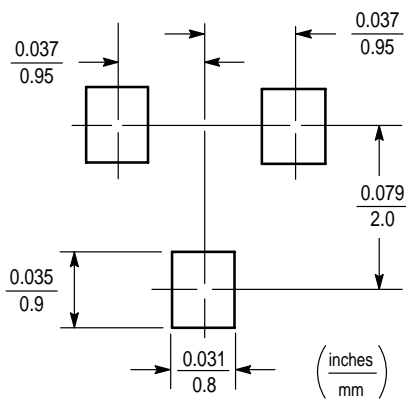
Outline Drawing

SOT-23 Package Outline Dimensions



Symbol	Dimensions In Millimeters		
	Min	Typ	Max
A	0.90		1.40
A1	0.00		0.10
b	0.30		0.50
c	0.08		0.20
D	2.80	2.90	3.10
E	1.20		1.60
E1	2.25		2.80
e	1.80	1.90	2.00
L	0.10		0.50
L1	0.4		0.55
θ	0°		10°

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.