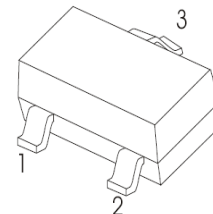


SOT-23 Plastic-Encapsulate Transistor

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

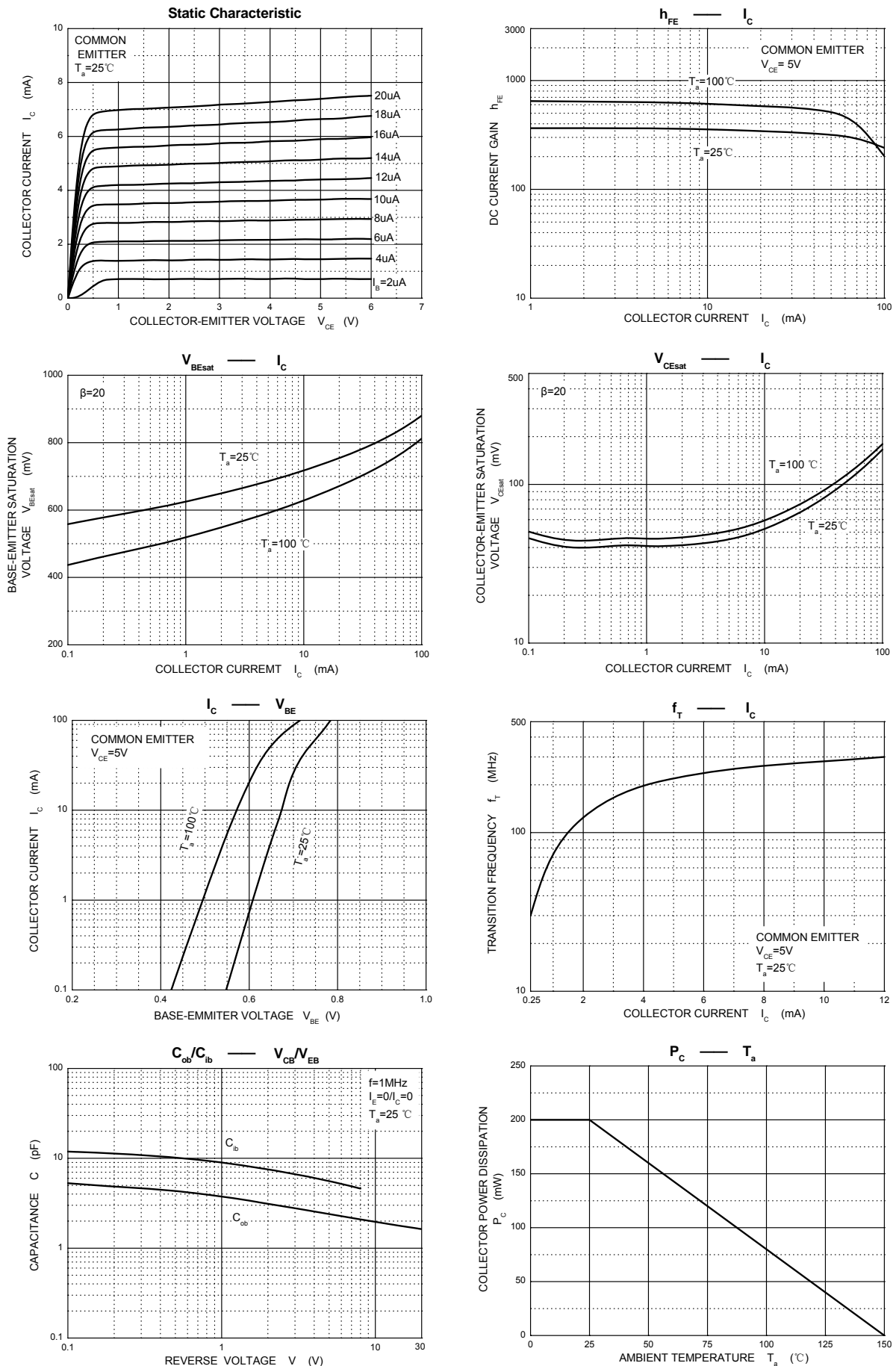
DEVICE MARKING

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)

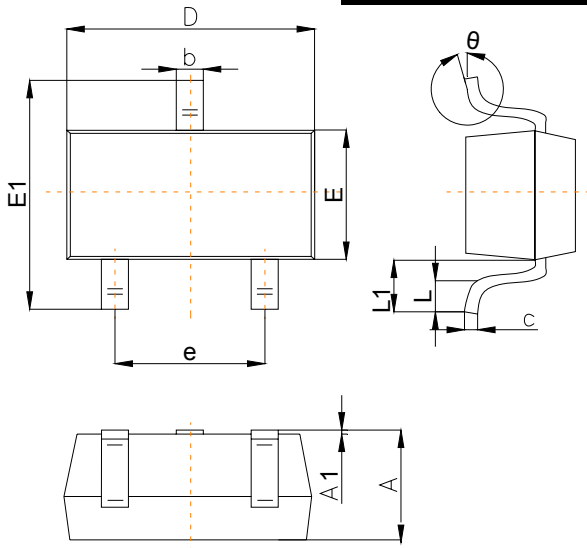
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit	
Collector-base breakdown voltage	BC846	I _C = 10μA, I _E =0	80			V	
	BC847		50				
	BC848		30				
Collector-emitter breakdown voltage	BC846	I _C = 10mA, I _B =0	65			V	
	BC847		45				
	BC848		30				
Emitter-base breakdown voltage	V _{EBO}	I _E = 10μA, I _C =0	6			V	
Collector cut-off current	BC846	I _{CBO}	V _{CB} =70 V, I _E =0		0.1	μA	
	BC847		V _{CB} =50 V, I _E =0				
	BC848		V _{CB} =30 V, I _E =0				
Collector cut-off current	BC846	I _{CEO}	V _{CE} =60 V, I _B =0		0.1	μA	
	BC847		V _{CE} =45 V, I _B =0				
	BC848		V _{CE} =30 V, I _B =0				
Emitter cut-off current	I _{EBO}	V _{EB} =5 V, I _C =0			0.1	μA	
DC current gain	BC846A,847A,848A	h _{FE}	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} = 5 V, 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


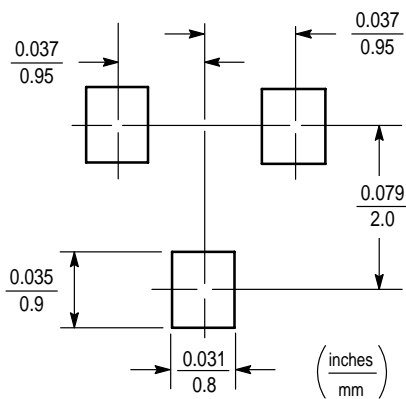
Outlitne Drawing

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: ± 0.05 mm.
3. The pad layout is for reference purposes only.