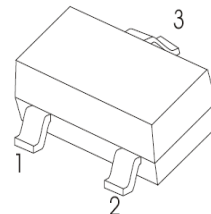


SOT-23 Plastic-Encapsulate Transistor

BC846A, B, C

TRANSISTOR (NPN)

SOT-23
BC847A, B, C
BC848A, B, C


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	190×190×190	45000	400×400×220	180000

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

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage		V
		BC846	
		BC847	
		BC848	
V _{CEO}	Collector-Emitter Voltage		V
		BC846	
		BC847	
		BC848	
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

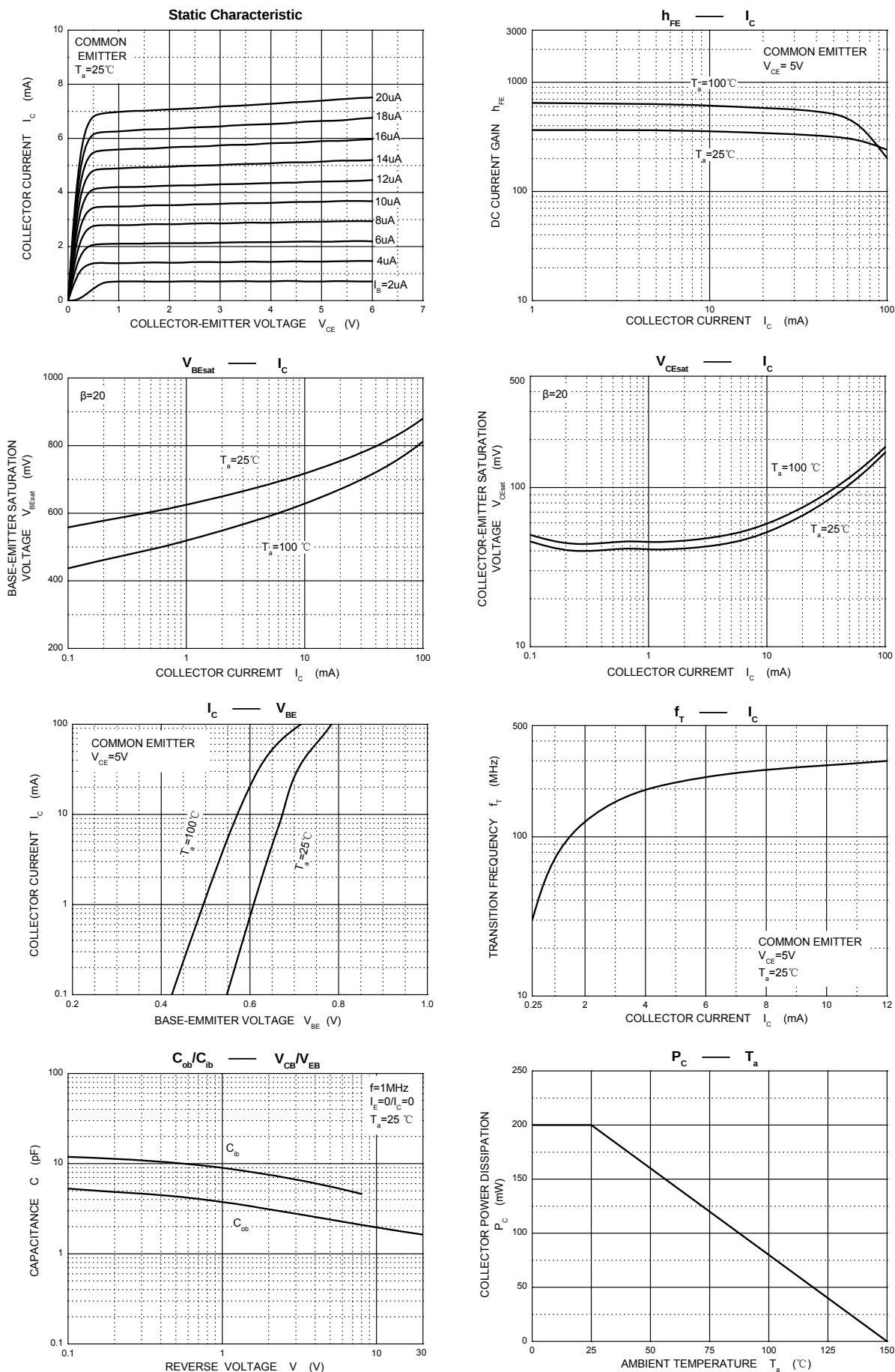
BC846A=1A; BC846B=1B; BC846C=1C;
 BC847A=1E; BC847B=1F; BC847C=1G;
 BC848A=1J; BC848B=1K; BC848C=1L

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

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{CBO}	I _C = 10μA, I _E =0	80			V
BC846			50			
BC847			30			
Collector-emitter breakdown voltage	V _{CEO}	I _C = 10mA, I _B =0	65			V
BC846			45			
BC847			30			
BC848						
Emitter-base breakdown voltage	V _{EBO}	I _E = 10μA, I _C =0	6			V
Collector cut-off current	I _{CBO}	V _{CB} =70 V , I _E =0			0.1	μA
BC846		V _{CB} =50 V , I _E =0				
BC847		V _{CB} =30 V , I _E =0				
BC848						
Emitter cut-off current	I _{EBO}	V _{EB} =5 V , I _C =0			0.1	μA
DC current gain	h _{FE}	V _{CE} = 5V, I _C = 2mA	110		220	
BC846A,847A,848A			200		450	
BC846B,847B,848B			420		800	
BC846C,847C,848C						
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.

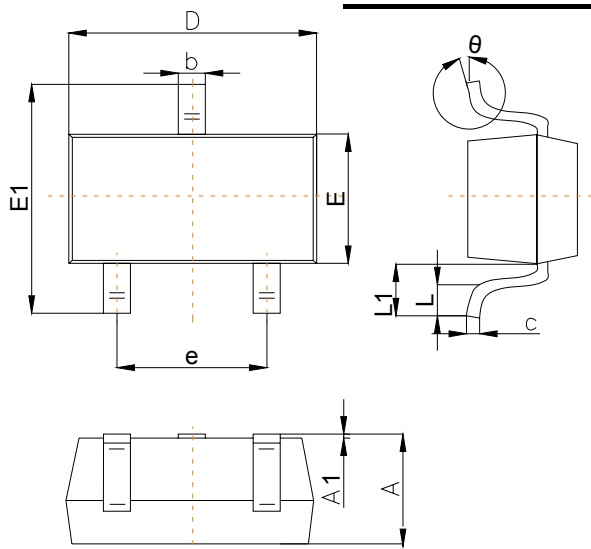
Typical Characteristics



The curve above is for reference only.

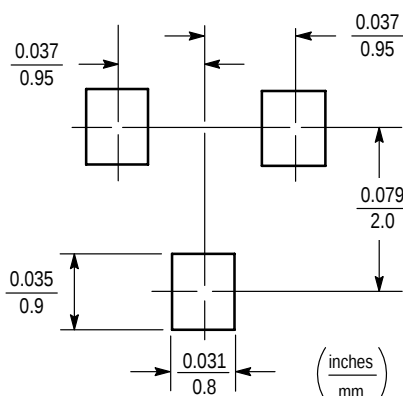
Outlitne Drawing

SOT-23 Package Outline Dimensions



Symbol	Dimensions In Millimeters		
	Min	Typ	Max
A	0.65		1.40
A1	0.00		0.20
b	0.30		0.55
c	0.08		0.20
D	2.70		3.10
E	1.15		1.65
E1	2.10		2.80
e	1.70		2.10
L	0.15		0.50
L1	0.35		0.70
θ	0°		12°

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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