

BC846A

DATASHEET

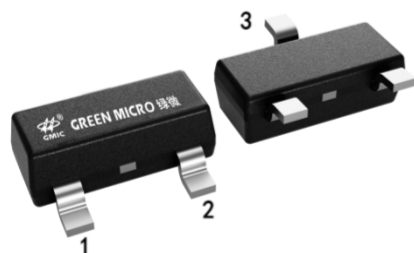
Specification Revision History:

Version	Date	Description
V1.0	2021/01	New
V1.1	2023/05	Modify Ordering Information
V1.2	2024/02	Modify Ordering Information
V1.3	2025/05	Add application precautions and overall typesetting.

FEATURES

- ※ TRANSISTOR (NPN)
- ※ Ideally suited for automatic insertion
- ※ For switching and AF amplifier applications

THE APPEARANCE OF THE PRODUCT



- 1、 BASE
- 2、 EMITTER
- 3、 COLLECTOR

SOT-23

ORDERING INFORMATION

Product Model	Package Type	Packing	Packing Qty
BC846A(GMIC)	SOT-23	REEL	3000PCS/REEL
BC846A	SOT-23	REEL	3000PCS/REEL

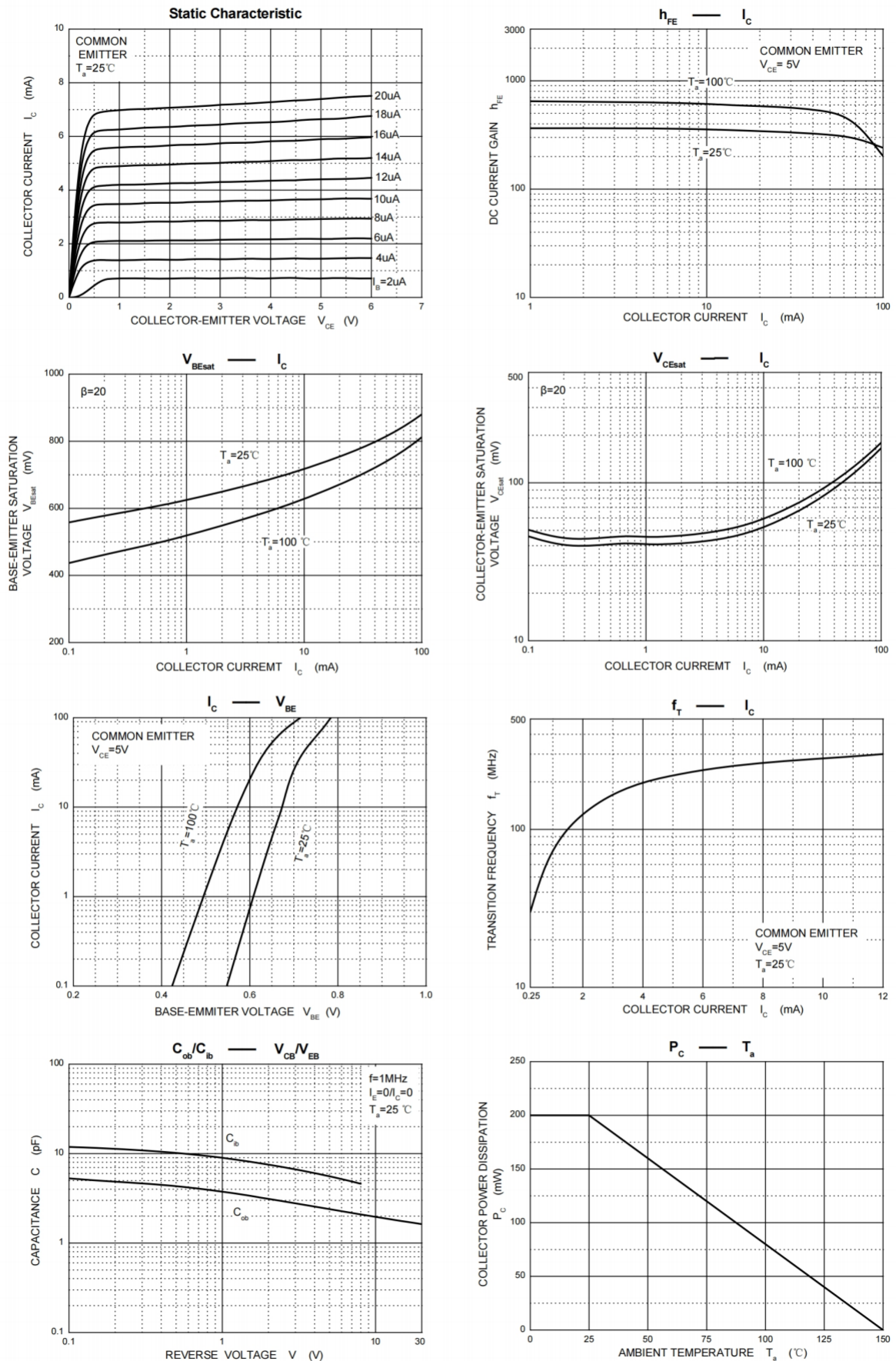
MAXIMUM RATINGS (Ta=25°C unless otherwise noted)

Symbol	Parameter	Value	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 –Continuous	0.1	A	
P _C	Collector Power Dissipation	200	mW	
R _{θJA}	Thermal Resistance From Junction To Ambient	625	°C/W	
T _J ,T _{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C	

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

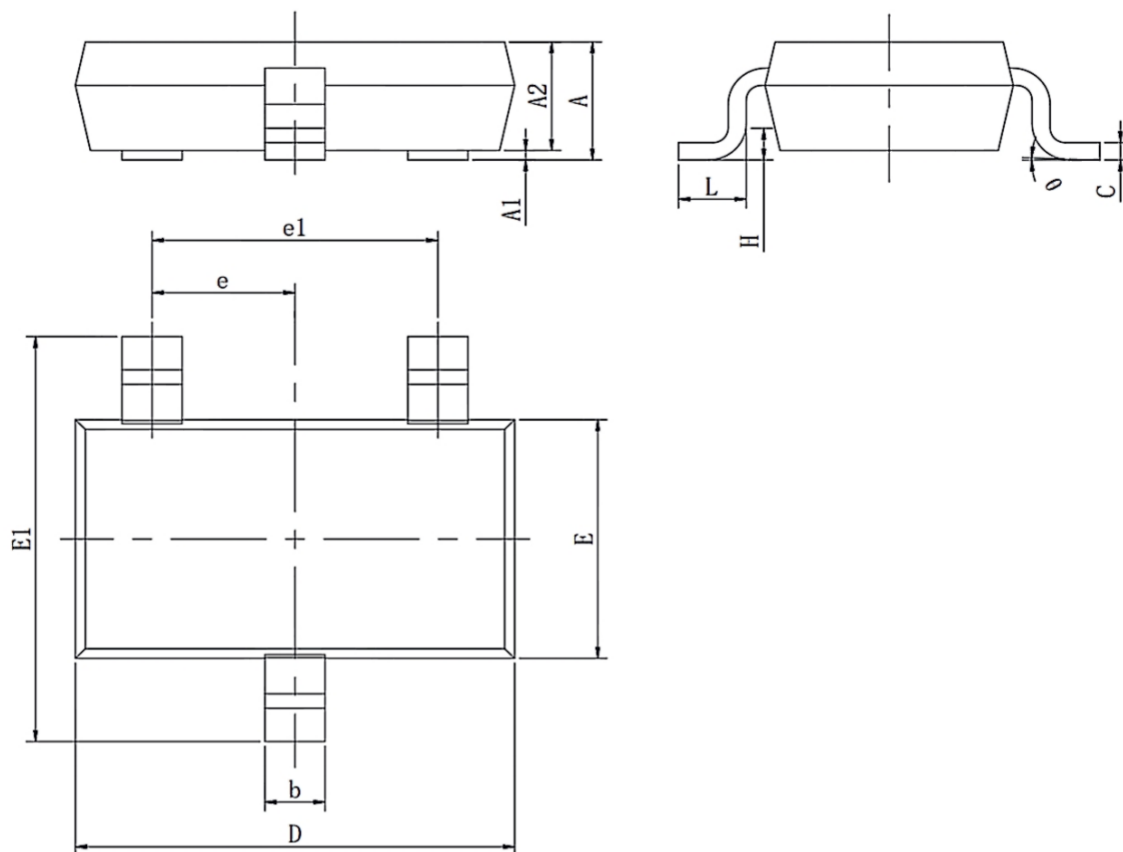
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{CBO}	I _C = 10μA, I _E =0	80			V
BC846			50			
BC847			30			
Collector-emitter breakdown voltage	V _{CEO}	I _C = 10mA, I _B =0	65			V
BC846			45			
BC847			30			
Emitter-base breakdown voltage	V _{EBO}	I _E = 10μA, 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				
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	
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

TYPICAL CHARACTERISTICS



OUTLINE DIMENSIONS

SOT-23



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	0.200	0.003	0.008
D	2.800	3.020	0.110	0.119
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.95 (BSC)		0.037(BSC)	
e1	1.90 (BSC)		0.075(BSC)	
L	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

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