

Product Catalog > [Transistors](#) > [Small Signal Bipolar Transistors](#) >

Part Number	BC847C
product family	SOT-23 Plastic-Encapsulate Bipolar Transistors
Product Polarity	NPN
SMD/ThroHole	SMD
VCEO	45V
VCBO	50V
VEBO	6.0V
Ic	100mA
PC	225mW
HFE(min)	420
@Ic	2.0mA
@VCE	5.0V
ICBO	0.1µA
IEBO	0.1µA
VCE(sat)	0.5V
VBE(sat)	1.1V
ft	100MHz
nf	
TON_max	
Package Qty	Tape: 3K/Reel , 120K/Ctn;

Green/Pb Free/RoHS/REACH

FAQ

[Soldering Profile](#)

[Tin Whisker Evaluation](#)

[Moisture Sensitivity Level](#)

[RoHS Test Report](#)

[PFOS&PFOA Test Report](#)

[Ordering Information](#)

[Certification of REACH Compliance](#)


[Certification of RoHS Compliance](#)

[Deca certification\(DecaBDE\)](#)

[MCC's EU RoHS and Green \(Halogen & Antimony Free\)](#)

[Parts List](#)

[REACH SVHC Test Report](#)





Micro Commercial Components

BC846A THRU BC849C

NPN Plastic-Encapsulate Transistors

Features

- Power Dissipation: 0.225W ($T_{amb}=25^{\circ}C$)(Note 1)
- Collector Current: 0.1A
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL Rating 1

Maximum Ratings

- Operating temperature : $-55^{\circ}C$ to $+150^{\circ}C$
- Storage temperature : $-55^{\circ}C$ to $+150^{\circ}C$

DEVICE MARKING

BC846A=1A,46A; BC846B=1B,46B;
BC847A=1E,47A; BC847B=1F,47B; BC847C=1G,47C;
BC848A=1J,48A; BC848B=1K,48B; BC848C=1L,48C
BC849B=49B; BC849C=49C;

Electrical Characteristics @ 25°C Unless Otherwise Specified

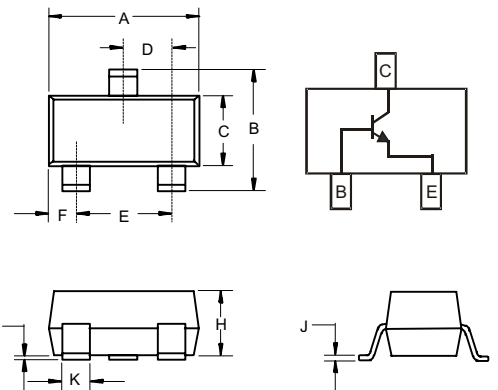
Symbol	Parameter	Min	Max	Units
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OFF CHARACTERISTICS

$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ($I_C=10\mu A_{dc}$, $I_E=0$)			Vdc
	BC846	---	80	
	BC847 BC848, BC849	---	50 30	
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage ($I_C=10mA_{dc}$, $I_B=0$)			Vdc
	BC846	---	65	
	BC847 BC848, BC849	---	45 30	
$V_{(BR)EBO}$	Collector-Emitter Breakdown Voltage ($I_E=10\mu A_{dc}$, $I_C=0$)	---	6	Vdc
I_{CBO}	Collector Cut-off Current	---	0.1	μA_{dc}
	BC846 ($V_{CB}=80V$, $I_E=0$) BC847 ($V_{CB}=50V$, $I_E=0$)			
	BC848, BC849 ($V_{CB}=30V$, $I_E=0$)			
I_{CEO}	Collector Cut-off Current	---	0.1	μA_{dc}
	BC846 ($V_{CE}=60V$, $I_B=0$) BC847 ($V_{CE}=45V$, $I_B=0$)			
	BC848, BC849 ($V_{CE}=30V$, $I_B=0$)			
I_{EBO}	Emitter Cut-off Current ($V_{EB}=5V$, $I_C=0mA$)	---	0.1	μA_{dc}
$H_{FE(1)}$	DC Current Gain($V_{CE}=5V$, $I_C=2mA$)			
	BC846A, 847A, 848A	110	220	
	BC846B, 847B, 848B, 849B	200	450	
	BC847C, BC848C, BC849C	420	800	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ($I_C=100mA$, $I_B=5mA$)	---	0.5	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage ($I_C=100mA$, $I_B=5mA$)	---	1.1	Vdc
f_T	Transition Frequency ($V_{CE}=5V$, $I_C=10mA$, $f=100MHz$)	100	---	MHz

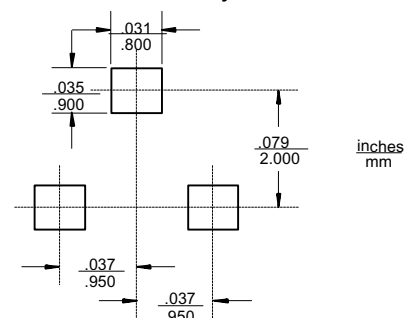
Note 1: Transistor mounted on an FR4 printed-circuit board

SOT-23



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.110	.120	2.80	3.04	
B	.083	.098	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

Suggested Solder Pad Layout





Ordering Information

Device	Packing
(Part Number)-TP	Tape&Reel;3Kpcs/Reel