



Micro Commercial Components

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20736 Marilla Street Chatsworth
CA 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

BC846A THRU BC848C

NPN Plastic-Encapsulate Transistors

Features

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

Maximum Ratings

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

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

Electrical Characteristics @ 25°C Unless Otherwise Specified

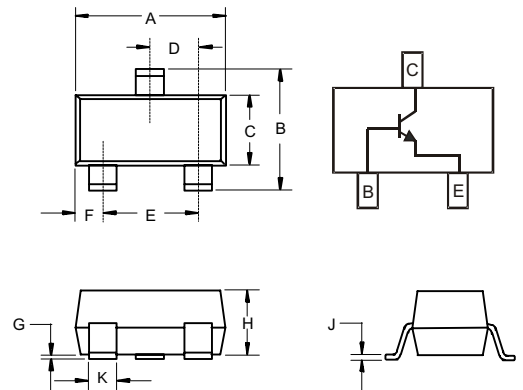
Symbol	Parameter	Min	Max	Units
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OFF CHARACTERISTICS

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

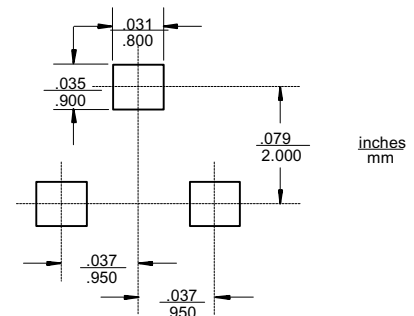
Note 1: Transistor mounted on an FR4 printed-circuit board

SOT-23



DIMENSIONS					
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



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