

**Micro Commercial Components** 



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Min

Max

## BC846A THRU BC849C

# NPN Plastic-Encapsulate Transistors

## **Features**

- Lead Free Finish/RoHS Compliant ("P" Suffix designates
  - RoHS Compliant. See ordering information) Power Dissipation: 0.225W (T<sub>amb</sub>=25°C)(Note 1)
- Collector Current: 0.1A
- Epoxy meets UL 94 V-0 flammability rating
- Moisure Sensitivity Level 1

**Maximum Ratings** 

Operating temperature : -55°C to +150°C
Storage temperature : -55°C to +150°C

#### **DEVICE MARKING**

Symbol

BC846A=1A,46A; BC846B=1B,46B;

BC847A=1E,47A; BC847B=1F,47B; BC847C=1G,47C; BC848A=1J,48A; BC848B=1K,48B: BC848C=1L,48C

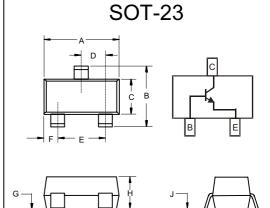
Parameter

BC849B=49B; BC849C=49C;

### Electrical Characteristics @ $25^{\circ}$ C Unless Otherwise Specified

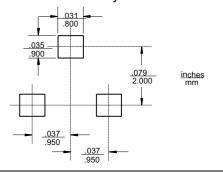
OFF CHARA	CTERISTICS			
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage (I <sub>C</sub> =10µAdc, I <sub>E</sub> =0)			Vdc
	BC846		80	
	BC847		50	
	BC848, BC849		30	
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage (I <sub>C</sub> =10mAdc, I <sub>B</sub> =0)			Vdc
	BC846		65	
	BC847		45	
	BC848,BC849		30	
$V_{(BR)EBO}$	Collector-Emitter Breakdown Voltage (I <sub>E</sub> =10µAdc, I <sub>C</sub> =0) 6			
I <sub>CBO</sub>	Collector Cut-off Current BC846 (V <sub>CB</sub> =80V, I <sub>E</sub> =0) BC847 (V <sub>CB</sub> =50V, I <sub>E</sub> =0) BC848, BC849 (V <sub>CB</sub> =30V, I <sub>E</sub> =0)		0.1	μAdc
I <sub>CEO</sub>	Collector Cut-off Current  BC846 (V <sub>CE</sub> =60V, I <sub>B</sub> =0)  BC847 (V <sub>CE</sub> =45V, I <sub>B</sub> =0)  BC848, BC849 (V <sub>CE</sub> =30V, I <sub>B</sub> =0)		0.1	μAdc
I <sub>EBO</sub>	Emitter Cut-off Current (V <sub>EB</sub> =5V, I <sub>C</sub> =0mA)		0.1	μAdc
H <sub>FE(1)</sub>	DC Current Gain(V <sub>CE</sub> =5V, I <sub>C</sub> =2mA) BC846A, 847A, 848A BC846B, 847B, 848B,849B BC847C, BC848C,BC849C	110 200 420	220 450 800	
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage (I <sub>C</sub> =100mA, I <sub>B</sub> =5mA)	0.5 Vdc		
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage (I <sub>C</sub> =100mA, I <sub>B</sub> =5mA)		1.1	Vdc
f⊤	Transition Frequency (V <sub>CE</sub> =5V, I <sub>C</sub> =10mA, f=100MHz)	100		MHz

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



DIMENSIONS							
	INCHES		MM				
DIM	MIN	MAX	MIN	MAX	NOTE		
Α	.110	.120	2.80	3.04			
В	.083	.098	2.10	2.64			
С	.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			
Н	.035	.044	.89	1.12			
J	.003	.007	.085	.180			
K	015	020	37	51			

## Suggested Solder Pad Layout





#### **Micro Commercial Components**

## **Ordering Information:**

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

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