



FUKUCOM COMPANY LTD.

福 靈 有 限 公 司

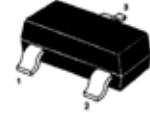
FLAT P, 3/F., EVEREST INDUSTRIAL CENTRE, 396 KWUN TONG ROAD,
KWUN TONG, KOWLOON, HONG KONG.

TEL: 852-2790 0314 FAX: 852-2790 0206

BC846 ~ BC848

NPN Epitaxial Silicon Transistor

- Epitaxial Die Construction
- Ideally Suited Automatic Insertion
- 310mW Power Dissipation
- Complementary PNP Types Available (BC856~BC858)
- For Switching and AF Amplifier Applications



1. Base 2. Emitter 3. Collector
SOT-23 Plastic Package

Absolute Maximum Ratings Ta=25°C unless otherwise noted

Symbol	Characteristic	Value	Units
V _{CBO}	Collector-Base Voltage		
	BC846	80	V
	BC847	50	V
	BC848	30	V
V _{CEO}	Collector-Emitter Voltage		
	BC846	65	V
	BC847	45	V
	BC848	30	V
V _{EBO}	Emitter-Base Voltage		
	BC846	6	V
	BC847	6	V
	BC848	5	V
I _C	Collector Current	100	mA
P _D	Collector Dissipation Ta=25°C *	310	mW
T _J	Junction Temperature	150	°C
T _{STG}	Storage Temperature	-65~150	°C

Electrical Characteristics Ta=25°C unless otherwise noted

Symbol	Characteristic	Test Condition	Min.	Typ.	Max.	Units
BV _{CBO}	Collector-Base Breakdown Voltage	I _C =10 μA, I _E =0				
	BC846		80			V
	BC847		50			V
	BC848		30			V
BV _{CEO}	Collector-Emitter Breakdown Voltage	I _C =10mA, I _B =0				
	BC846		65			V
	BC847		45			V
	BC848		30			V
V _{BE}	Base-Emitter Voltage	V _{CE} =5.0V I _C =2.0mA	580	660	770	mV
		V _{CE} =5.0V I _C =10mA			720	mV



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h_{FE}	DC Current Gain Group A Group B Group C	$V_{CE}=5V, I_C=10\mu A$		90 150 270		
h_{FE}	DC Current Gain Group A Group B Group C	$V_{CE}=5V, I_C=2mA$	110 200 420	180 290 520	220 450 800	
I_{CES}	Collector-Emitter Cutoff Current BC846 BC847 BC848	$V_{CE}=80V$ $V_{CE}=50V$ $V_{CE}=30V$		0.2 0.2 0.2	15 15 15	nA nA nA
	BC846 BC847 BC848	$V_{CE}=80V, T_j=125^\circ C$ $V_{CE}=50V, T_j=125^\circ C$ $V_{CE}=30V, T_j=125^\circ C$			4.0 4.0 4.0	μA μA μA
I_{CBO}		$V_{CE}=30V$ $V_{CE}=30V, T_j=125^\circ C$			15 5.0	nA μA
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=10mA, I_B=0.5mA$ $I_C=100mA, I_B=5mA$		90 200	250 600	mV mV
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=10mA, I_B=0.5mA$ $I_C=100mA, I_B=5mA$		700 900		mV mV
C_{CBO}	Collector-Base Capacitance	$V_{CB}=10V; I_E=0$ $f=1MHz$		3.5	6.0	pf
C_{EBO}	Emitter-Base Capacitance	$V_{EB}=0.5V; I_E=0$ $f=1MHz$		9.0		pf
NF	Noise Figure	$V_{CE}=5V, I_C=200\mu A$ $R_G=2K\Omega$ $f=100MHz \Delta f=200Hz$			10	dB
f_T	Gain-Bandwidth Product	$V_{CE}=5V, I_C=10mA$ $f=100MHz$		300		MHz

* Total Device Dissipation : FR=1x0.75x0.062 in Board, Derate 25°C

Pulse Test : Pulse Width $\leq 300\mu s$, Duty cycle $\leq 2\%$

Marking :

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