

GENERAL PURPOSE APPLICATION.  
SWITCHING APPLICATION .

#### FEATURES

- High Voltage : BC846  $V_{CE0}=65V$ .
- For Complementary With PNP Type BC856/857/858.

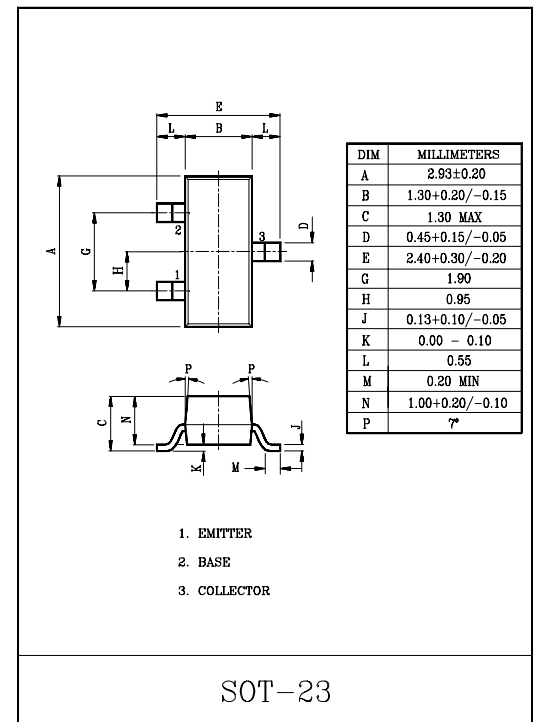
#### MAXIMUM RATINGS ( $T_a=25^{\circ}C$ )

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	BC846	80	V
	BC847	50	
	BC848	30	
Collector-Emitter Voltage	BC846	65	V
	BC847	45	
	BC848	30	
Emitter-Base Voltage	BC846	6	V
	BC847	6	
	BC848	5	
Collector Current	$I_C$	100	mA
Emitter Current	$I_E$	-100	mA
Collector Power Dissipation	$P_C$ *	350	mW
Junction Temperature	$T_j$	150	$^{\circ}C$
Storage Temperature Range	$T_{stg}$	-55~150	$^{\circ}C$

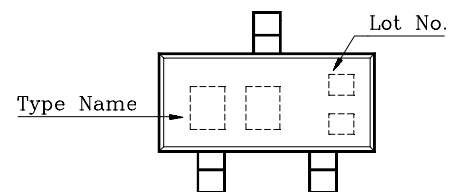
$P_C$ \* : Package Mounted On 99.5% Alumina  $10 \times 8 \times 0.6mm$ .

#### MARK SPEC

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



#### Marking



# BC846/7/8

## ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CBO}$	$V_{CB}=30V, I_E=0$	-	-	15	nA
DC Current Gain (Note)	BC846	$V_{CE}=5V, I_C=2mA$	110	-	450	
	BC847		110	-	800	
	BC848		110	-	800	
Collector-Emitter Saturation Voltage	$V_{CE(sat) 1}$	$I_C=10mA, I_B=0.5mA$	-	0.09	0.25	V
	$V_{CE(sat) 2}$	$I_C=100mA, I_B=5mA$	-	0.2	0.6	
Base-Emitter Saturation Voltage	$V_{BE(sat) 1}$	$I_C=10mA, I_B=0.5mA$	-	0.7	-	V
	$V_{BE(sat) 2}$	$I_C=100mA, I_B=5mA$	-	0.9	-	
Base-Emitter Voltage	$V_{BE(ON1)}$	$V_{CE}=5V, I_C=2mA$	0.58	-	0.7	V
	$V_{BE(ON2)}$	$V_{CE}=5V, I_C=10mA$	-	-	0.75	V
Transition Frequency	$f_T$	$V_{CE}=5V, I_C=10mA, f=100MHz$	-	300	-	MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB}=10V, f=1MHz$	-	2.5	4.5	pF
Noise Figure	NF	$V_{CE}=6V, I_C=0.1mA, R_g=10k\Omega, f=1kHz$	-	1.0	10	dB

NOTE : According to the value of  $h_{FE}$  the BC846, BC847, BC848 are classified as follows.

CLASSIFICATION		A	B	C
$h_{FE}$	BC846	110~220	200~450	-
	BC847	110~220	200~450	420~800
	BC848	110~220	200~450	420~800

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