

GENERAL PURPOSE APPLICATION.
SWITCHING APPLICATION .

FEATURES

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

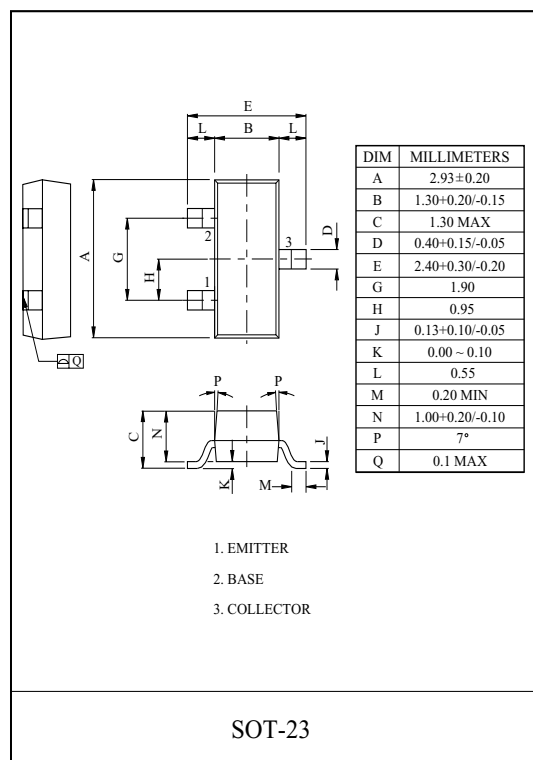
MAXIMUM RATING ($T_a=25^{\circ}C$)

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	DC	I_C	mA
	PULSE	I_{CP}	
Base Current	I_B	20	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	$^{\circ}C$

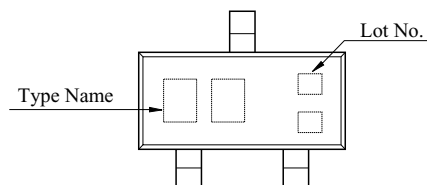
P_C^* : Package Mounted On 99.5% Alumina $10 \times 8 \times 0.6mm$.

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)

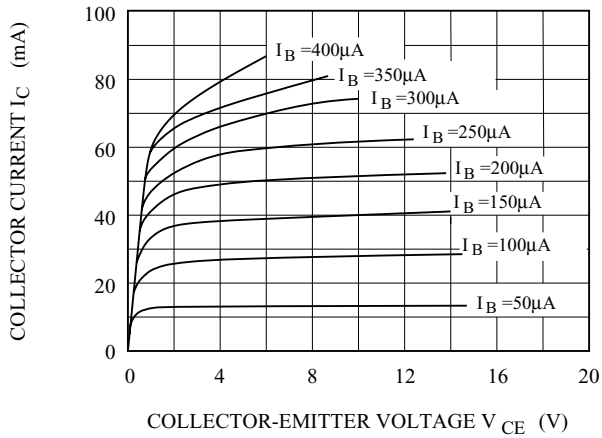
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB}=30V, I_E=0$	-	-	15	nA
DC Current Gain (Note)	BC846	h_{FE}	$V_{CE}=5V, I_C=2mA$	110	-	450	
	BC847			110	-	800	
	BC848			110	-	800	
Collector-Emitter Saturation Voltage		$V_{CE(sat)} 1$	$I_C=10mA, I_B=0.5mA$	-	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}	$V_{CB}=10V, I_E=0, f=1MHz$	-	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.

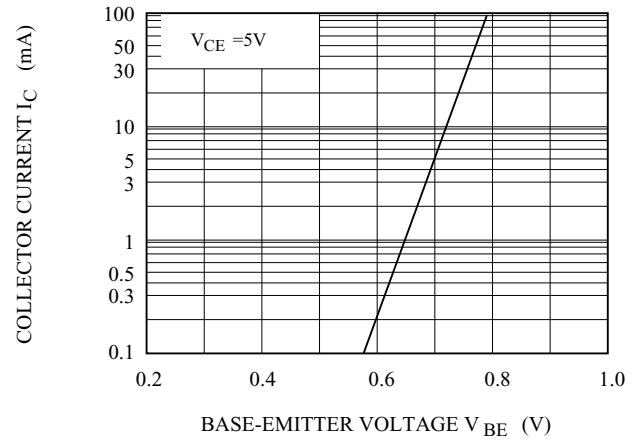
CLASSIFICATION		A	B	C
h_{FE}	BC846	110 220	200 450	-
	BC847	110 220	200 450	420 800
	BC848	110 220	200 450	420 800

BC846/7/8

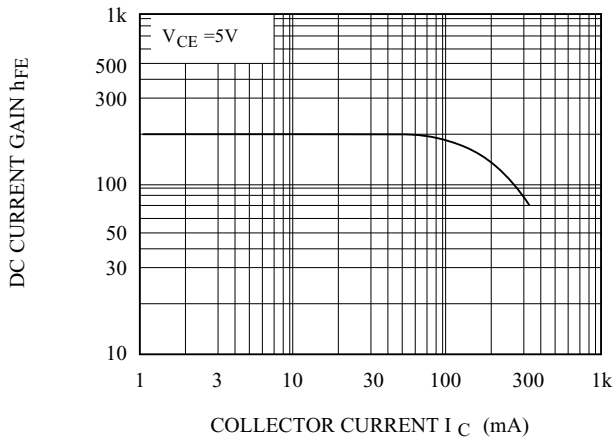
$I_C - V_{CE}$



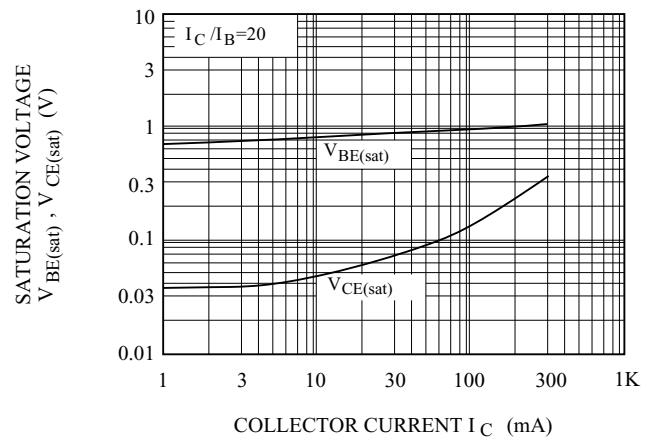
$I_C - V_{BE}$



$h_{FE} - I_C$



$V_{BE(sat)}, V_{CE(sat)} - I_C$



$C_{ob} - V_{CB}$

