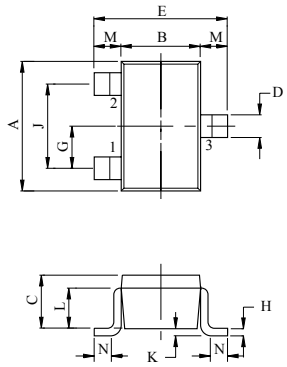
BC846W/7W/8W

EPITAXIAL PLANAR NPN TRANSISTOR

GENERAL PURPOSE APPLICATION.
SWITCHING APPLICATION .

FEATURES

· High Voltage : BC846W V_{CEO}=65V.
· For Complementary With PNP Type BC856W/857W/858W.



DIM	MILLIMETERS
A	2.00±0.20
B	1.25±0.15
C	0.90±0.10
D	0.3+0.10/-0.05
E	2.10± 0.20
G	0.65
H	0.15+0.1/-0.06
J	1.30
K	0.00-0.10
L	0.70
M	0.42±0.10
N	0.10 MIN

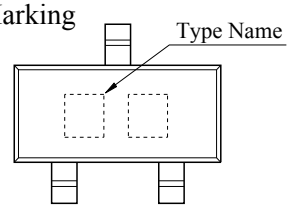
1. EMITTER
2. BASE
3. COLLECTOR

USM

MAXIMUM RATING (Ta=25℃)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage	BC846W	V_{CBO}	80	V
	BC847W		50	
	BC848W		30	
Collector-Emitter Voltage	BC846W	V_{CEO}	65	V
	BC847W		45	
	BC848W		30	
Emitter-Base Voltage	BC846W	V_{EBO}	6	V
	BC847W		6	
	BC848W		5	
Collector Current		I_C	100	mA
Emitter Current		I_E	-100	mA
Collector Power Dissipation		P_C	100	mW
Junction Temperature		T_j	150	℃
Storage Temperature Range		T_{stg}	-55 ~ 150	℃

Marking



MARK SPEC

TYPE	BC846W-A	BC846W-B	BC847W-A	BC847W-B	BC847W-C	BC848W-A	BC848W-B	BC848W-C
MARK	1A	1B	1E	1F	1G	1J	1K	1L

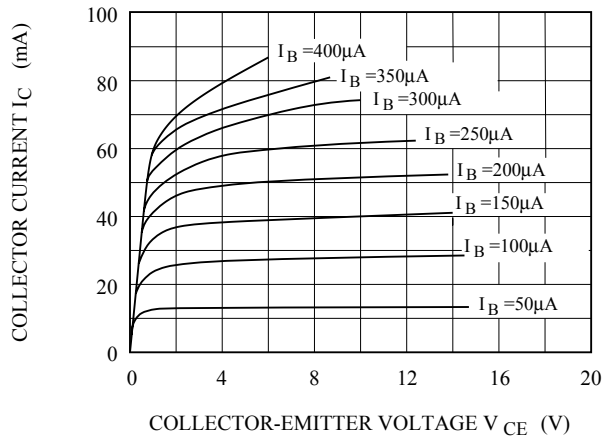
ELECTRICAL CHARACTERISTICS (Ta=25℃)

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)	BC846W	h_{FE}	V_{CE}=5V, I_C=2mA	110	-	450	
	BC847W			110	-	800	
	BC848W			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		$V_{BE(ON)}$ 1	V_{CE}=5V, I_C=2mA	0.58	-	0.7	V
		$V_{BE(ON)}$ 2	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=10kΩ, f=1kHz	-	1.0	10	dB

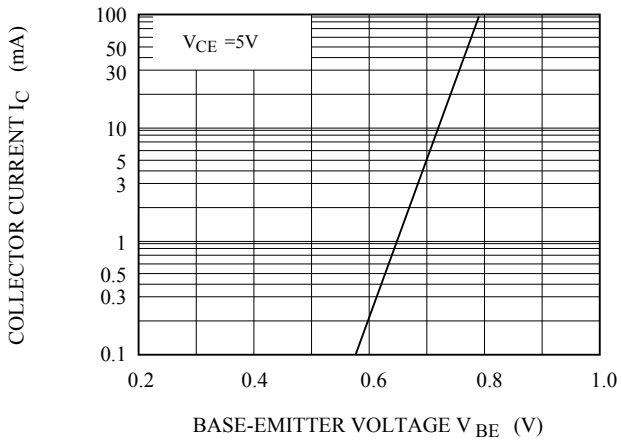
NOTE : According to the value of h_{FE} the BC846W, BC847W, BC848W are classified as follows.

CLASSIFICATION		A	B	C
h_{FE}	BC846W	110～220	200～450	-
	BC847W	110～220	200～450	420～800
	BC848W	110～220	200～450	420～800

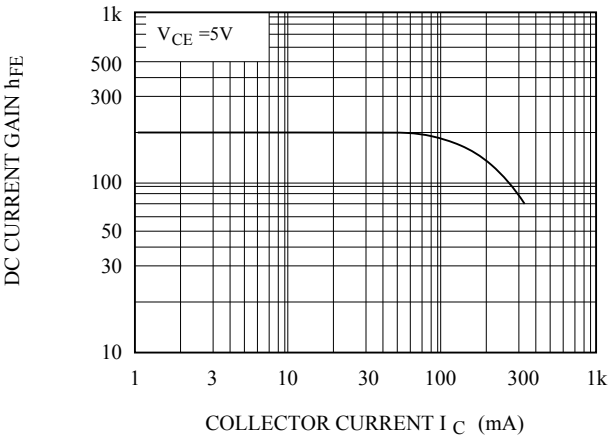
I_C - V_{CE}



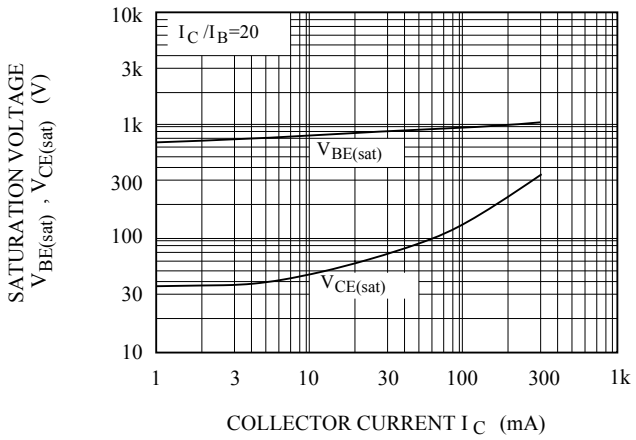
I_C - V_{BE}



h_{FE} - I_C



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



C_{ob} - V_{CB}