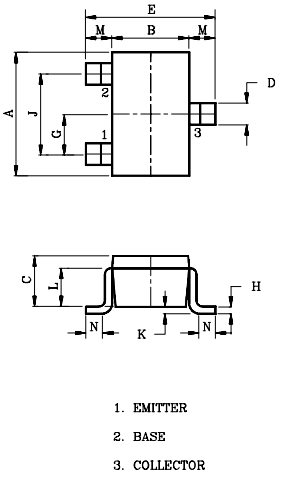
BC856W/7W/8W

EPITAXIAL PLANAR PNP TRANSISTOR

GENERAL PURPOSE APPLICATION.
SWITCHING APPLICATION.

FEATURE

· For Complementary With NPN Type BC846W/847W/848W.



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	0.2 MIN

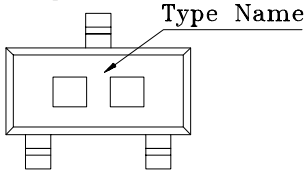
USM

MAXIMUM RATINGS (Ta=25℃)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage	BC856W	V_{CBO}	-80	V
	BC857W		-50	
	BC858W		-30	
Collector-Emitter Voltage	BC856W	V_{CEO}	-65	V
	BC857W		-45	
	BC858W		-30	
Emitter-Base Voltage	BC856W	V_{EBO}	-5	V
	BC857W		-5	
	BC858W		-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	℃

P_C* : Package Mounted On 99.5% Alumina 10×8×0.6mm.

Marking



MARK SPEC

TYPE	BC856AW	BC856BW	BC857AW	BC857BW	BC857CW	BC858AW	BC858BW	BC858CW
MARK	3A	3B	3E	3F	3G	3J	3K	3L

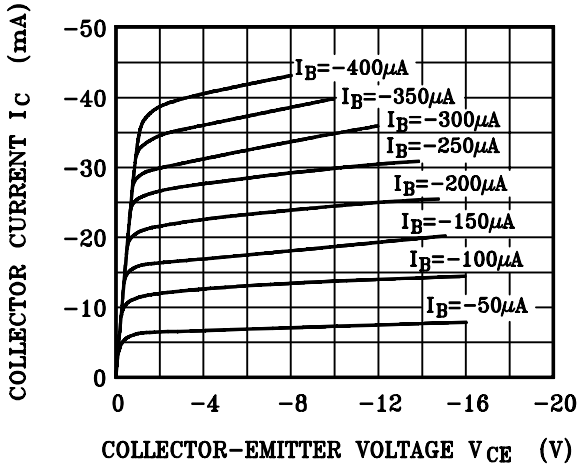
ELECTRICAL CHARACTERISTICS (Ta=25℃)

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)	BC856W	h_{FE}	V_{CE}=-5V, I_C=-2mA	125	-	475	
	BC857W			125	-	800	
	BC858W			125	-	800	
Collector-Emitter Saturation Voltage	BC856W	$V_{CE(sat)}$ 1	I_C=-10mA, I_B=-0.5mA	-	-0.09	-0.3	V
	BC857W	$V_{CE(sat)}$ 2	I_C=-100mA, I_B=-5mA	-	-0.25	-0.65	
Base-Emitter Saturation Voltage	BC856W	$V_{BE(sat)}$ 1	I_C=-10mA, I_B=-0.5mA	-	-0.7	-	V
	BC857W	$V_{BE(sat)}$ 2	I_C=-100mA, I_B=-5mA	-	-0.9	-	
Base-Emitter Voltage		$V_{BE(ON1)}$	V_{CE}=-5V, I_C=-2mA	-0.6	-0.65	-0.75	V
Base-Emitter Voltage		$V_{BE(ON2)}$	V_{CE}=-5V, I_C=-10mA	-	-	-0.82	V
Transition Frequency		f_T	V_{CE}=-5V, I_C=-10mA, f=100MHz	-	150	-	MHz
Collector Output Capacitance		C_{ob}	V_{CB}=-10V, f=1MHz	-	4.5	-	pF
Noise Figure		NF	V_{CE}=-6V, I_C=-0.2mA R_g=2kΩ, f=1kHz	-	2.0	10	dB

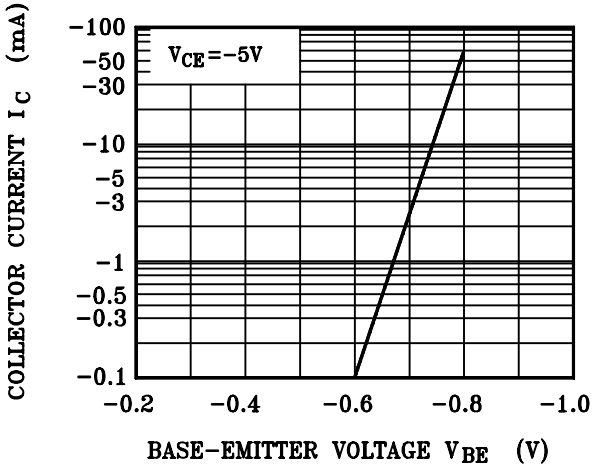
NOTE : According to the value of h_{FE} the BC856W, BC857W, BC858W are classified as follows.

CLASSIFICATION		A	B	C
h_{FE}	BC856W	125~250	220~475	-
	BC857W	125~250	220~475	420~800
	BC858W	125~250	220~475	420~800

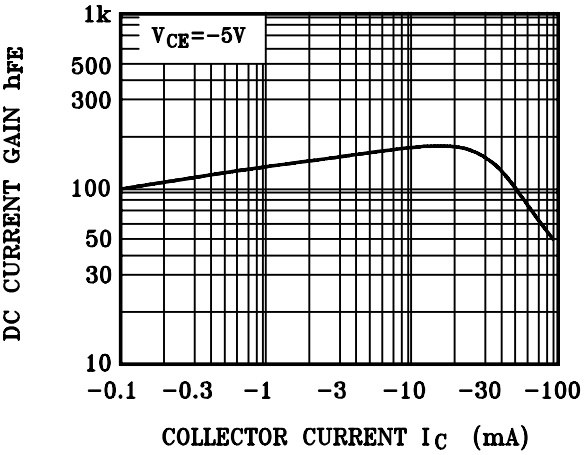
I_C – V_{CE}



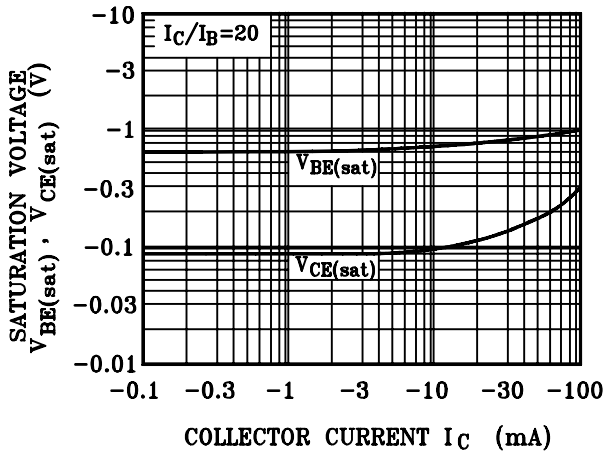
I_C – V_{BE}



h_{FE} – I_C



$V_{BE(sat)}$, $V_{CE(sat)}$ – I_C



C_{ob} – V_{CB}