

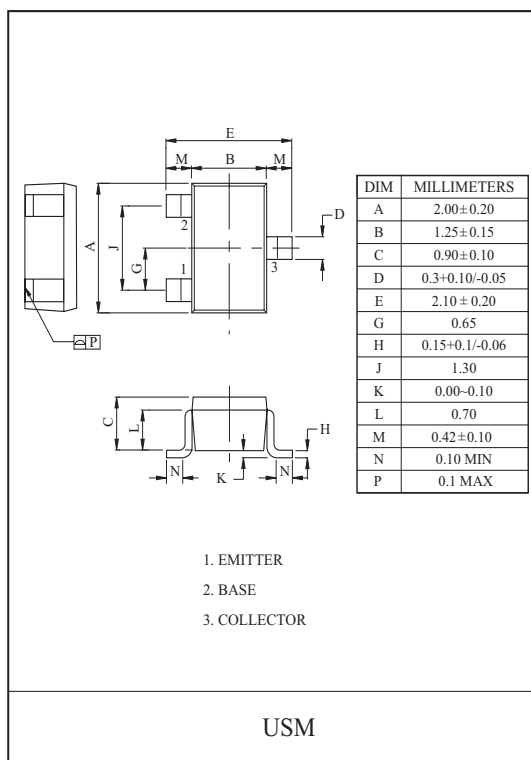
GENERAL PURPOSE APPLICATION.  
SWITCHING APPLICATION.

### FEATURES

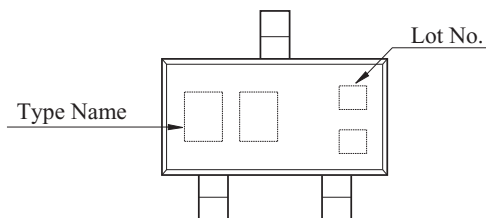
- For Complementary With NPN Type BC846W/847W/848W.
- Suffix U : Qualified to AEC-Q101.  
ex) BC857W-B-RTK/PU

### MAXIMUM RATING (Ta=25 )

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	BC856W	-80	V
	BC857W	-50	
	BC858W	-30	
Collector-Emitter Voltage	BC856W	-65	V
	BC857W	-45	
	BC858W	-30	
Emitter-Base Voltage	BC856W	-5	V
	BC857W	-5	
	BC858W	-5	
Collector Current	I <sub>C</sub>	-100	mA
Emitter Current	I <sub>E</sub>	100	mA
Collector Power Dissipation	P <sub>C</sub>	100	mW
Junction Temperature	T <sub>j</sub>	150	
Storage Temperature Range	T <sub>stg</sub>	-55 150	



### Marking



### MARK SPEC

TYPE	BC856W-A	BC856W-B	BC857W-A	BC857W-B	BC857W-C	BC858W-A	BC858W-B	BC858W-C
MARK	3A	3B	3E	3F	3G	3J	3K	3L

# BC856W/7W/8W

## ELECTRICAL CHARACTERISTICS (Ta=25 °C)

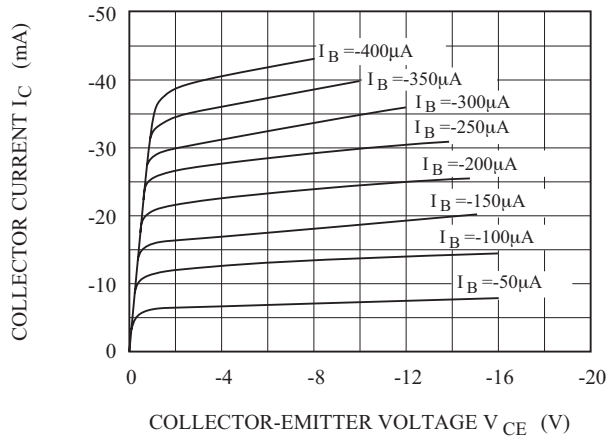
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		$I_{CBO}$	$V_{CB}=-30V, I_E=0$	-	-	-15	nA
DC Current Gain (Note)	BC856W	$h_{FE}$	$V_{CE}=-5V, I_C=-2mA$	125	-	475	
	BC857W			125	-	800	
	BC858W			125	-	800	
Collector-Emitter Saturation Voltage		$V_{CE(sat)1}$	$I_C=-10mA, I_B=-0.5mA$	-	-0.09	-0.3	V
		$V_{CE(sat)2}$	$I_C=-100mA, I_B=-5mA$	-	-0.25	-0.65	
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		$V_{BE(ON1)}$	$V_{CE}=-5V, I_C=-2mA$	-0.6	-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		$C_{ob}$	$V_{CB}=-10V, I_E=0, f=1MHz$	-	4.5	-	pF
Noise Figure		NF	$V_{CE}=-6V, I_C=-0.2mA$ $R_g=2k\Omega, f=1kHz$	-	2.0	10	dB

NOTE : According to the value of  $h_{FE}$  the BC856, BC857, BC858 are classified as follows.

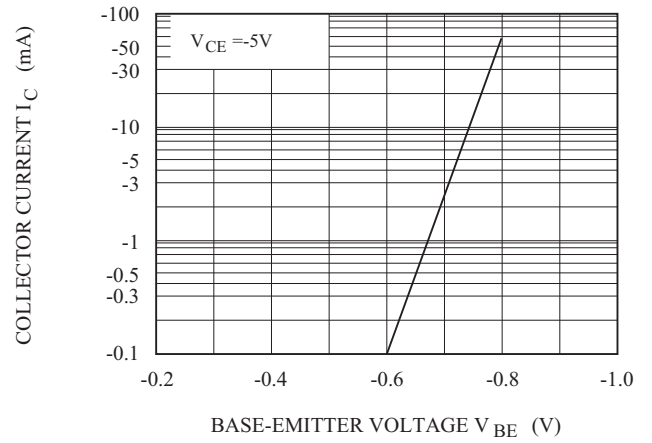
CLASSIFICATION		A	B	C
$h_{FE}$	BC856W	125 250	220 475	-
	BC857W	125 250	220 475	420 800
	BC858W	125 250	220 475	420 800

# BC856W/7W/8W

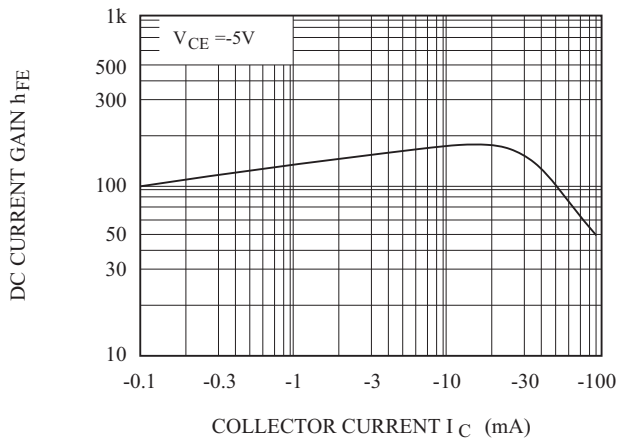
$I_C - V_{CE}$



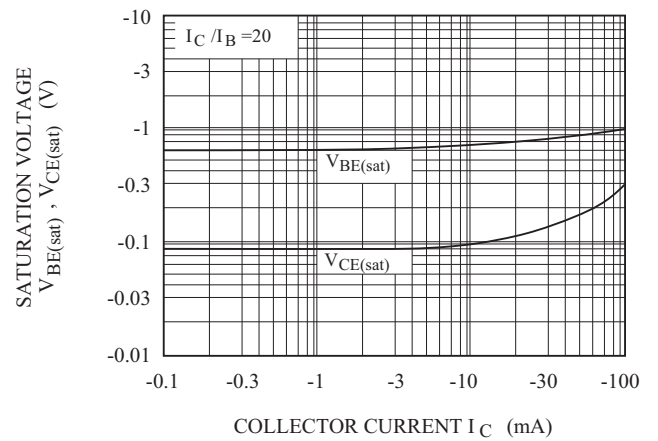
$I_C - V_{BE}$



$h_{FE} - I_C$



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



$C_{ob} - V_{CB}$

