

## SOT-323 Plastic-Encapsulate Transistors

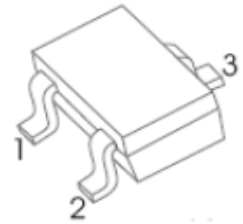
**BC856W** TRANSISTOR (PNP)

**BC857W**

**BC858W**

### FEATURES

- Ideally suited for automatic insertion
- For Switching and AF Amplifier Applications



### SOT-323

1. BASE
2. EMITTER
3. COLLECTOR

### MAXIMUM RATINGS (T<sub>a</sub>=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
<b>V<sub>CB0</sub></b>	Collector-Base Voltage		
	BC856W	-80	V
	BC857W	-50	
	BC858W	-30	
<b>V<sub>CEO</sub></b>	Collector-Emitter Voltage		
	BC856W	-65	V
	BC857W	-45	
	BC858W	-30	
<b>V<sub>EBO</sub></b>	Emitter-Base Voltage	-5	V
<b>I<sub>c</sub></b>	Collector Current –Continuous	-0.1	A
<b>P<sub>C*</sub></b>	Collector Power Dissipation	150	mW
<b>T<sub>J</sub></b>	Junction Temperature	150	°C
<b>T<sub>stg</sub></b>	Storage Temperature	-65-150	°C

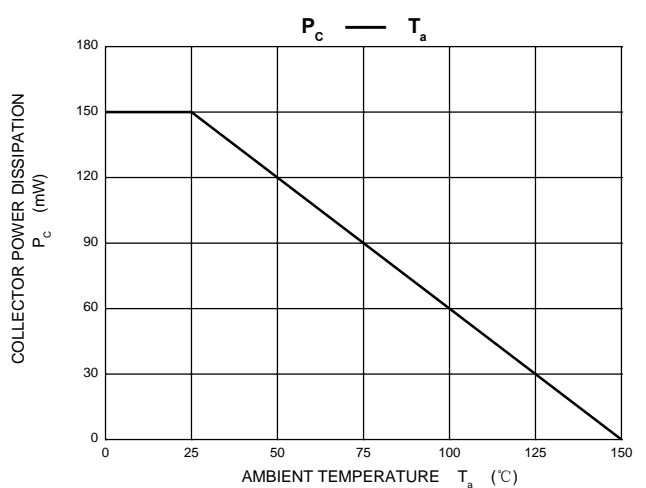
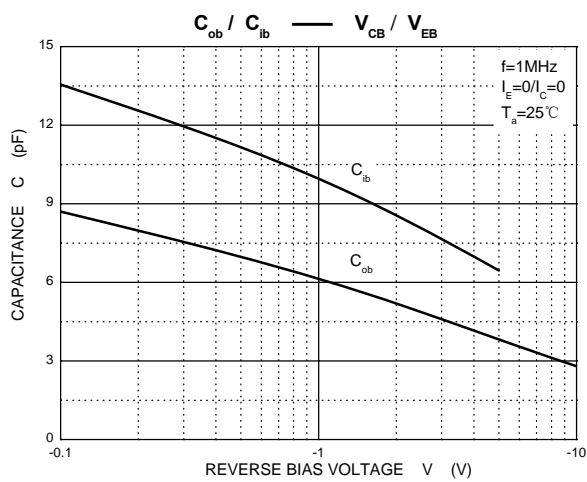
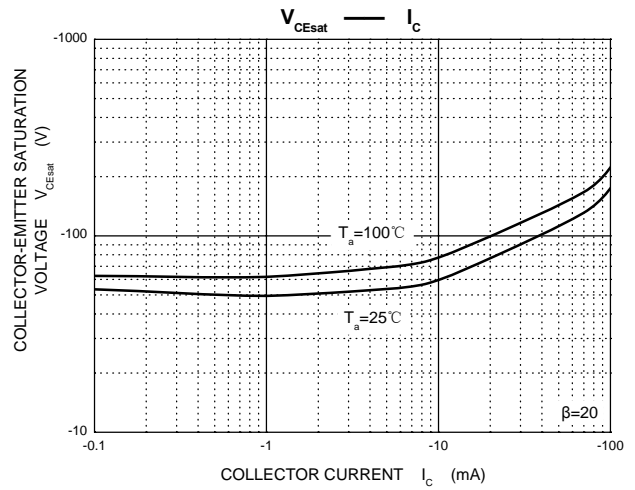
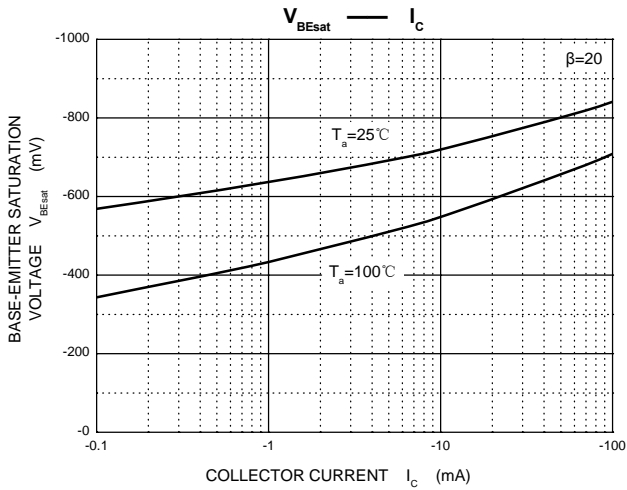
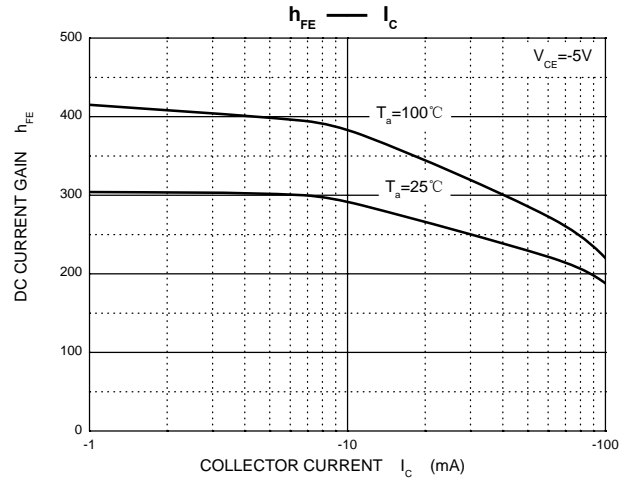
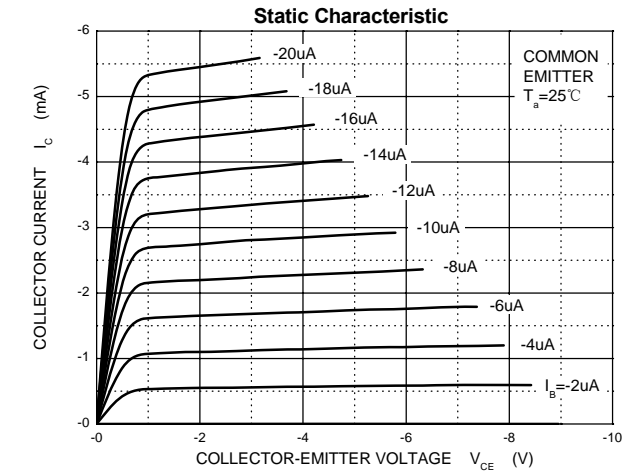
### DEVICE MARKING

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

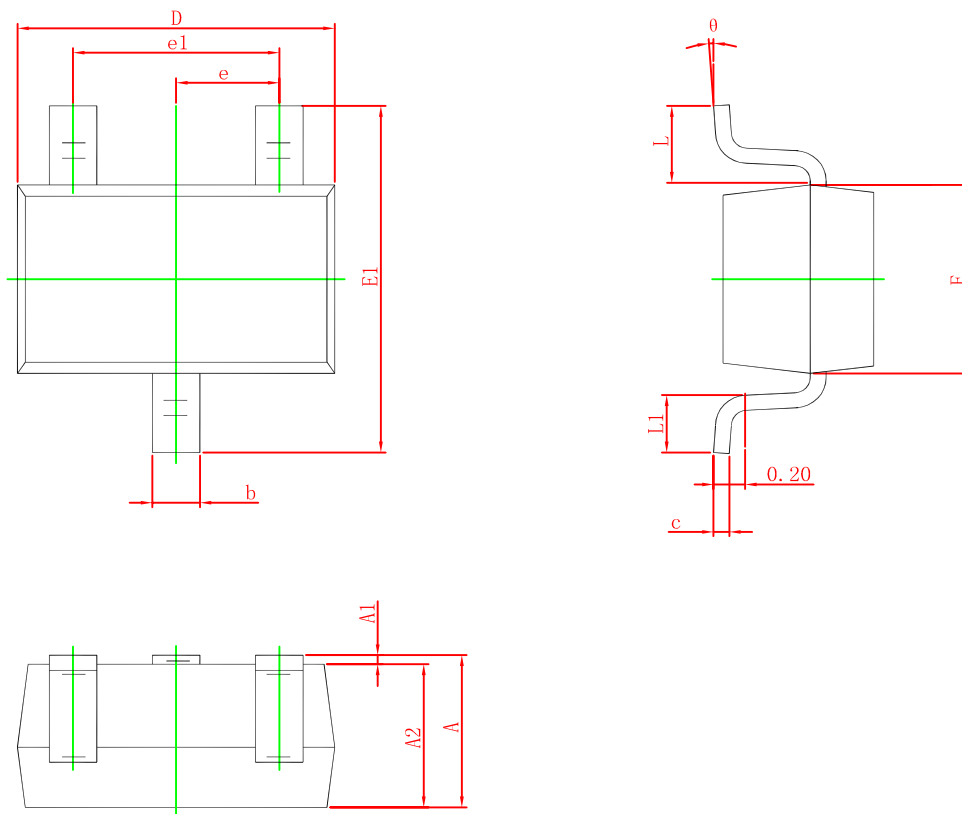
## ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	BC856W BC857W BC858W	V <sub>CBO</sub>	I <sub>C</sub> = -10μA, I <sub>E</sub> =0	-80 -50 -30	V
Collector-emitter breakdown voltage	BC856W BC857W BC858W	V <sub>CEO</sub>	I <sub>C</sub> = -10mA, I <sub>B</sub> =0	-65 -45 -30	V
Emitter-base breakdown voltage		V <sub>EBO</sub>	I <sub>E</sub> = -1μA, I <sub>C</sub> =0	-5	V
Collector cut-off current		I <sub>CBO</sub>	V <sub>CB</sub> = -30 V , I <sub>E</sub> =0		-15 nA
DC current gain	BC856AW, 857AW,858AW BC856BW, 857BW,858BW BC857CW,BC858CW	h <sub>FE</sub>	V <sub>CE</sub> = -5V, I <sub>C</sub> = -2mA	125 220 420	250 475 800
Collector-emitter saturation voltage		V <sub>CE(sat)</sub>	I <sub>C</sub> =-100mA, I <sub>B</sub> = -5mA		-0.65 V
Base-emitter saturation voltage		V <sub>BE(sat)</sub>	I <sub>C</sub> = -100mA, I <sub>B</sub> = -5mA		-1.1 V
Transition frequency		f <sub>T</sub>	V <sub>CE</sub> = -5V, I <sub>C</sub> = -10mA f=100MHz	100	MHz
Collector capacitance		C <sub>ob</sub>	V <sub>CB</sub> =-10V, f=1MHz		4.5 pF

## Typical Characteristics



## SOT-323 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650 TYP.		0.026 TYP.	
e1	1.200	1.400	0.047	0.055
L	0.525 REF.		0.021 REF.	
L1	0.260	0.460	0.010	0.018
$\theta$	0°	8°	0°	8°