

RoHS Compliant Product  
A suffix of "-C" specifies halogen and lead-free

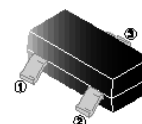
## FEATURES

- Ideally Suited for Automatic Insertion
- For Switching and AF Amplifier Applications

**SOT-323**

## MARKING

Product-Rank	BC856AW-C	BC856BW-C	-
Marking	3A	3B	-
Product-Rank	BC857AW-C	BC857BW-C	BC857CW-C
Marking	3E	3F	3G
Product-Rank	BC858AW-C	BC858BW-C	BC858CW-C
Marking	3J	3K	3L



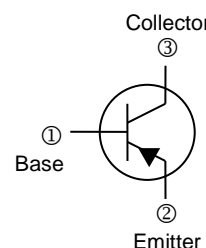
## PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-323	3K	7 inch

## ORDER INFORMATION

Part Number	Type
BC856□W-C	Lead (Pb)-free and Halogen-free
BC857□W-C	
BC858□W-C	

\*□=h<sub>FE</sub> Rank



## ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub>=25°C unless otherwise specified.)

Parameter	Symbol	Ratings			Unit
		BC856□W-C	BC857□W-C	BC858□W-C	
Collector-Base Voltage	V <sub>CBO</sub>	-80	-50	-30	V
Collector-Emitter Voltage	V <sub>CEO</sub>	-65	-45	-30	V
Emitter-Base Voltage	V <sub>EBO</sub>	-5			V
Collector Current-Continuous	I <sub>C</sub>	-0.1			A
Collector Power Dissipation	P <sub>C</sub>	150			mW
Thermal Resistance from Junction-Ambient	R <sub>θJA</sub>	833			°C/W
Junction, Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	150, -55~150			°C

\*□=h<sub>FE</sub> Rank

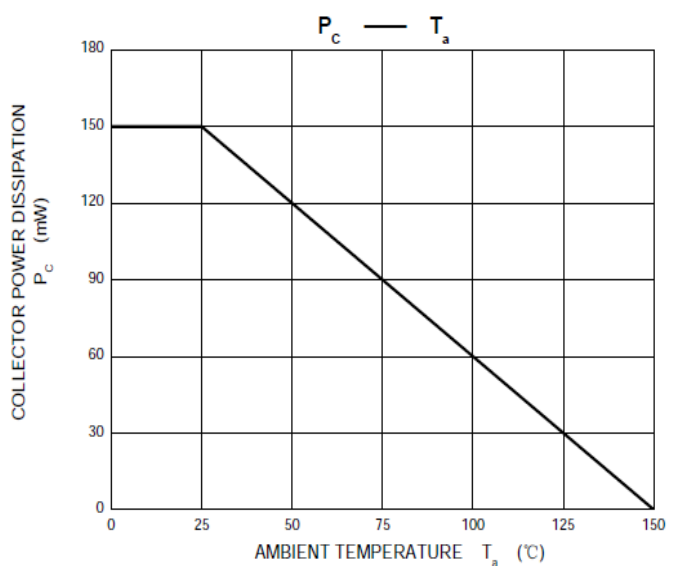
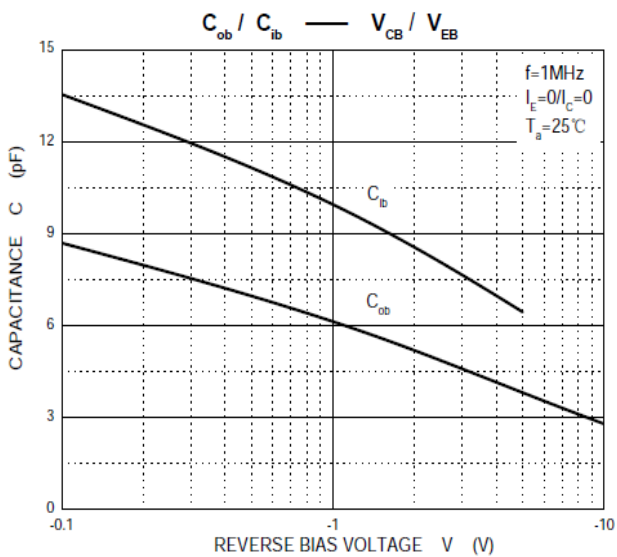
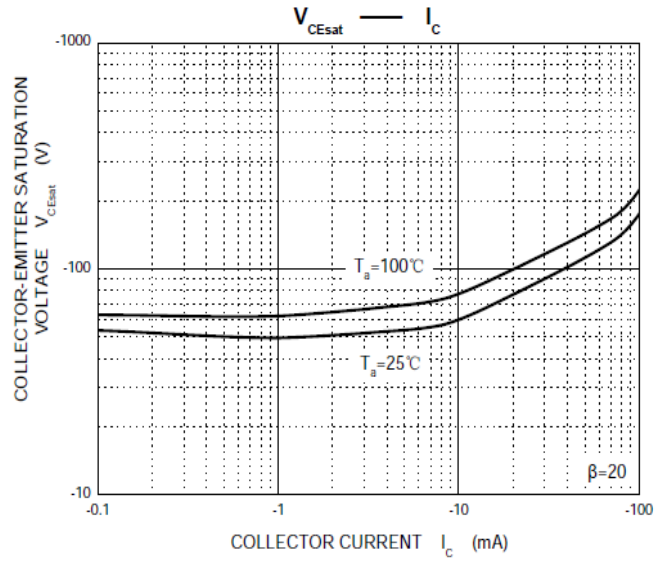
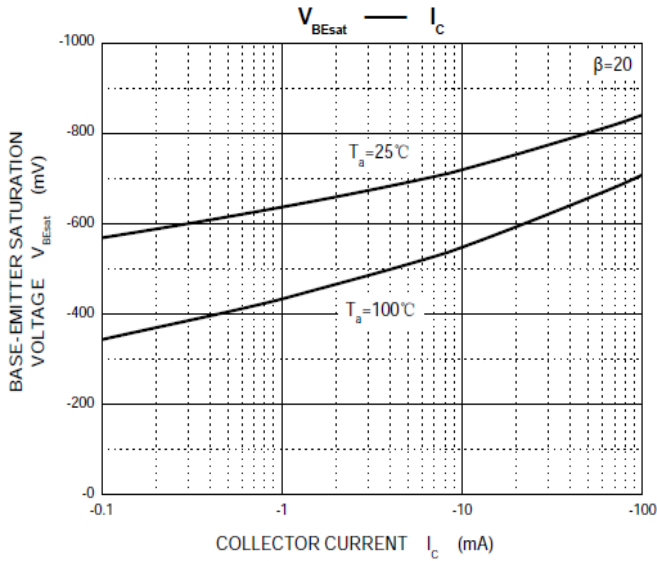
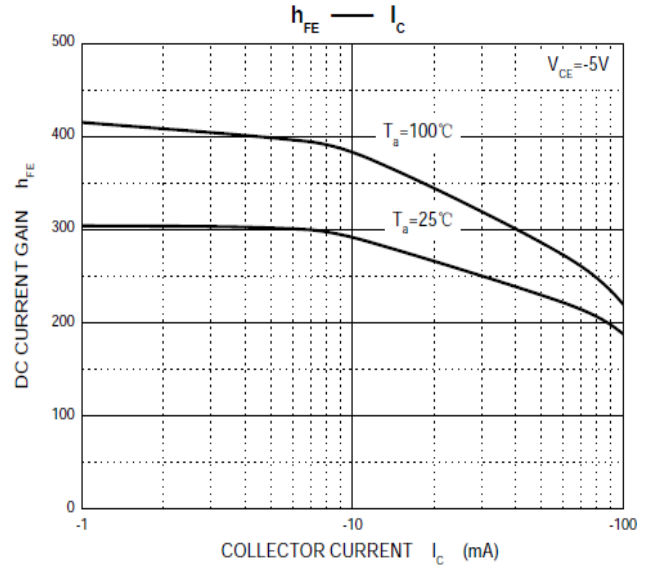
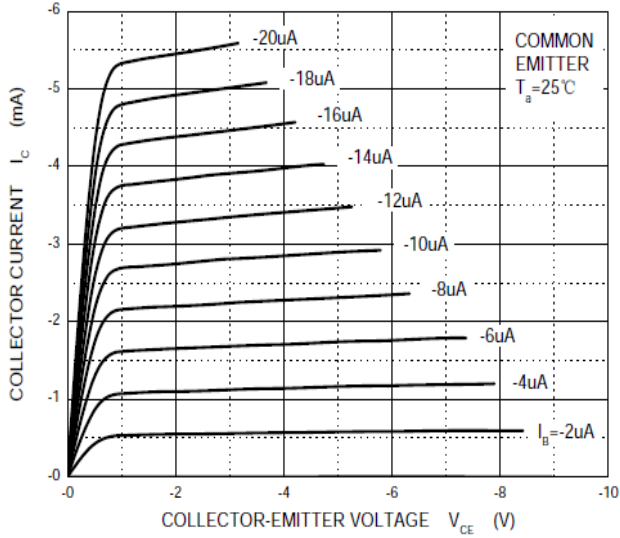
**ELECTRICAL CHARACTERISTICS** ( $T_A=25^\circ\text{C}$  unless otherwise specified.)

Parameter		Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector-Base Breakdown Voltage	BC856□W-C	$V_{(BR)CBO}$	-80	-	-	V	$I_C = -10\mu\text{A}, I_E = 0$
	BC857□W-C		-50	-	-		
	BC858□W-C		-30	-	-		
Collector-Emitter Breakdown Voltage	BC856□W-C	$V_{(BR)CEO}$	-65	-	-	V	$I_C = -10\text{mA}, I_B = 0$
	BC857□W-C		-45	-	-		
	BC858□W-C		-30	-	-		
Emitter-Base Breakdown Voltage		$V_{(BR)EBO}$	-5	-	-	V	$I_E = -1\mu\text{A}, I_C = 0$
Collector Cut-off Current		$I_{CBO}$	-	-	-15	nA	$V_{CB} = -30\text{V}, I_E = 0$
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	-	-	-0.65	V	$I_C = -100\text{mA}, I_B = -5\text{mA}$
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	-	-	-1.1	V	$I_C = -100\text{mA}, I_B = -5\text{mA}$
DC Current Gain	BC856AW-C, BC857AW-C, BC858AW-C	$h_{FE}$	125	-	250		$V_{CE} = 5\text{V}, I_C = 2\text{mA}$
	BC856BW-C, BC857BW-C, BC858BW-C		220	-	475		
	BC857CW-C, BC858CW-C		420	-	800		
Transition Frequency		$f_T$	100	-	-	MHz	$V_{CE} = -5\text{V}, I_C = -10\text{mA}, f = 100\text{MHz}$
Collector Output Capacitance		$C_{Ob}$	-	-	4.5	pF	$V_{CB} = -10\text{V}, f = 1\text{MHz}$

\*□=h<sub>FE</sub> Rank

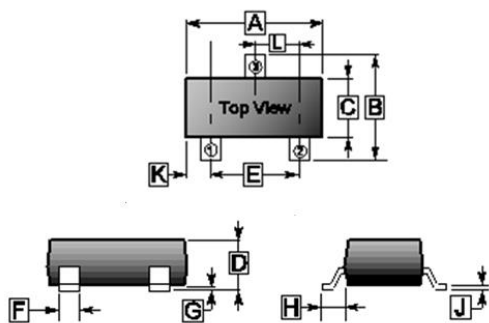
**CHARACTERISTIC CURVES**

Static Characteristic



**PACKAGE OUTLINE DIMENSIONS**

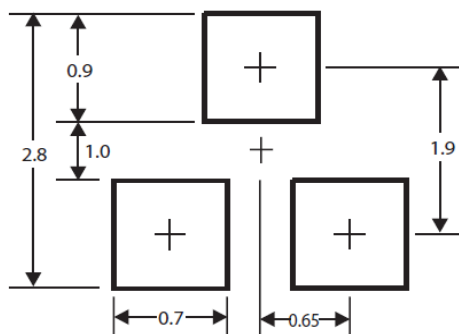
**SOT-323**



REF.	Millimeter	
	Min.	Max.
A	1.80	2.20
B	1.80	2.55
C	1.10	1.40
D	0.80	1.15
E	1.20	2.00
F	0.15	0.50
G	0.10 REF.	
H	0.525 REF.	
J	0.05	0.25
K	0.35 REF.	
L	0.65 TYP.	

**MOUNTING PAD LAYOUT**

**SOT-323**



\*Dimensions in millimeters