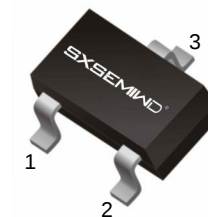


FEATURES

Ideally suited for automatic insertion

For Switching and AF Amplifier Applications

SOT-323



- 1. BASE
- 2. EMITTER
- 3. COLLECTOR

DEVICE MARKING

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

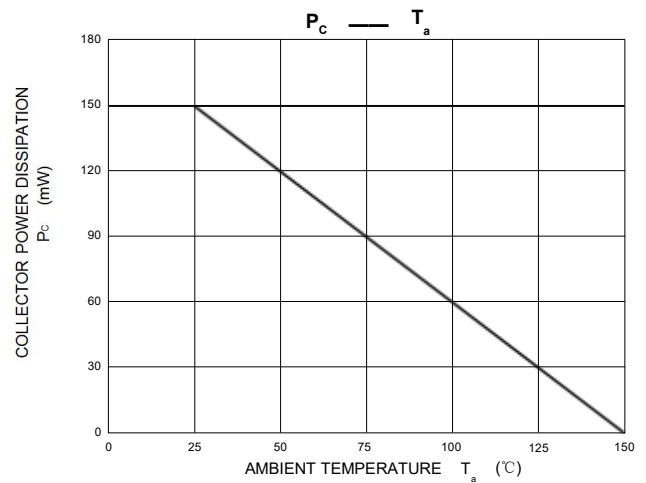
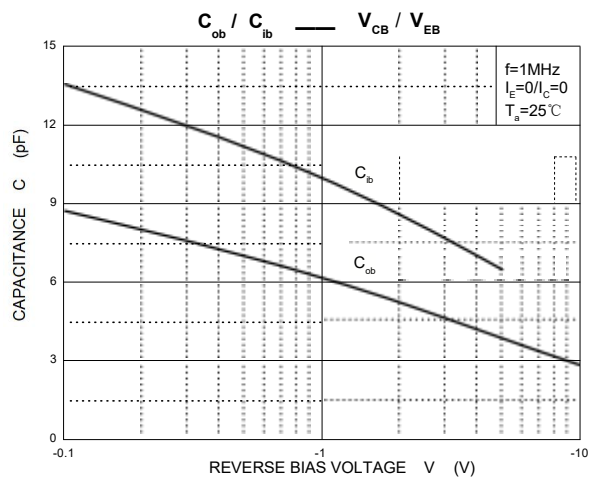
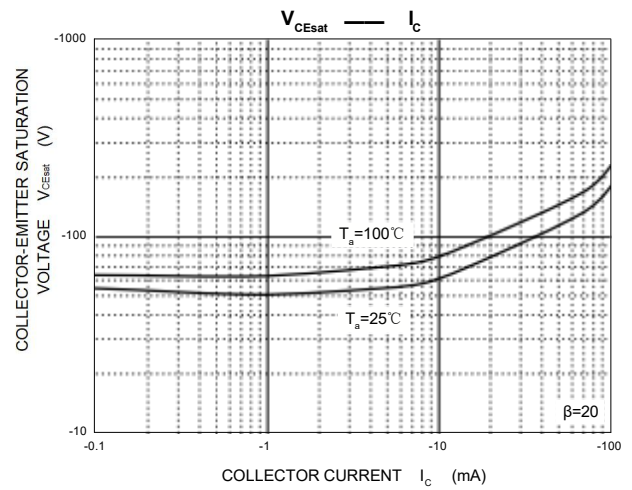
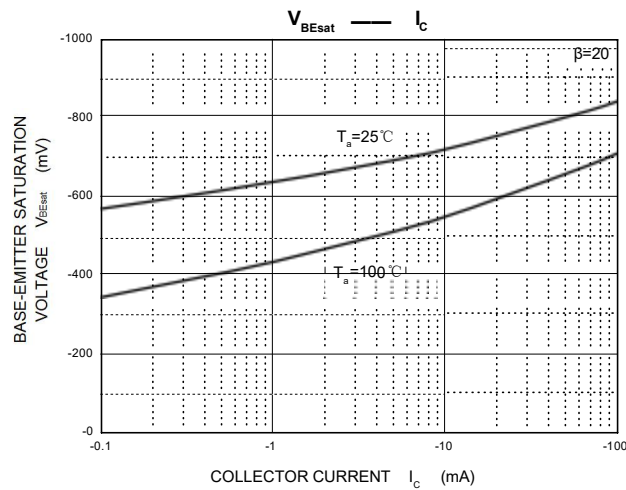
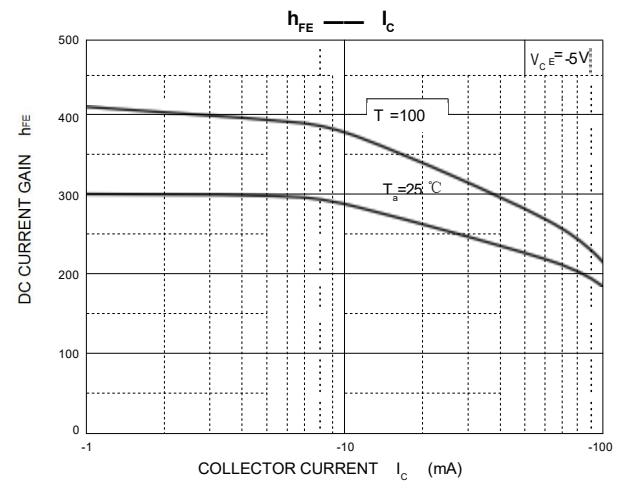
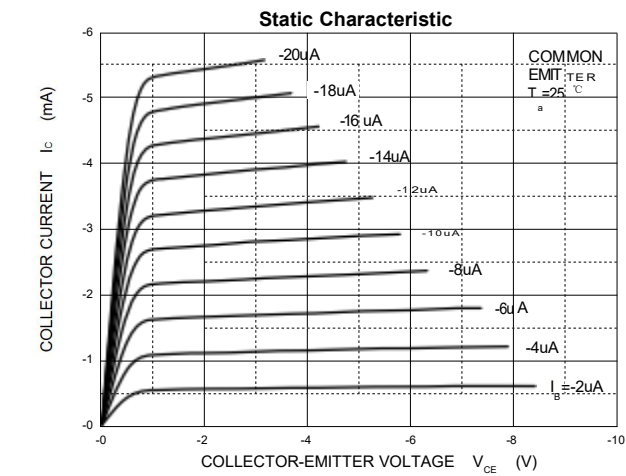
MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

Symbol	Parameter		Value	Unit
V_{CBO}	Collector-Base Voltage	BC856W	-80	V
		BC857W	-50	
		BC858W	-30	
V_{CEO}	Collector-Emitter Voltage	BC856W	-65	V
		BC857W	-45	
		BC858W	-30	
V_{EBO}	Emitter-Base Voltage		-5	V
I_C	Collector Current –Continuous		-0.1	A
P_C*	Collector Power Dissipation		150	mW
R_{θJA}	Thermal Resistance From Junction To Ambient		833	°C/W
T_J, T_{stg}	Operation Junction and Storage Temperature Range		-55 ~ +150	°C

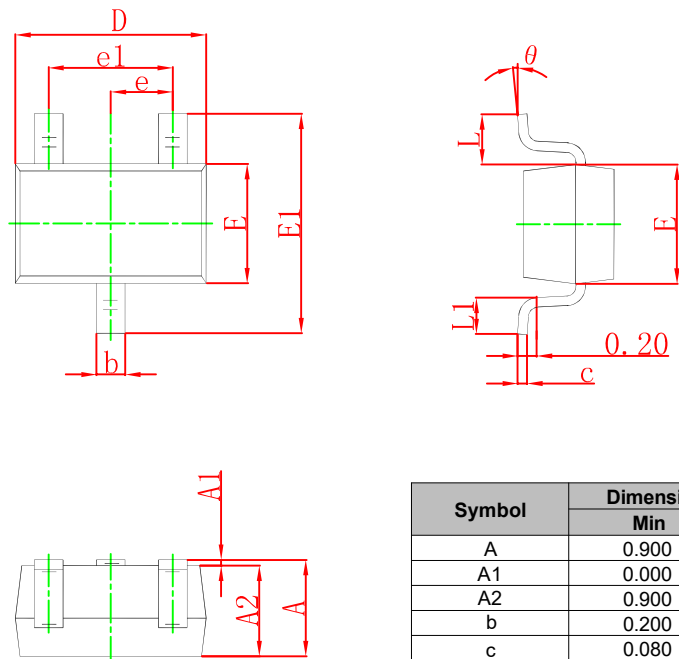
ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$ unless otherwise specified)

Parameter		Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	BC856W	V_{CBO}	$I_C = -10\mu\text{A}, I_E = 0$	-80		V
	BC857W			-50		
	BC858W			-30		
Collector-emitter breakdown voltage	BC856W	V_{CEO}	$I_C = -10\text{mA}, I_B = 0$	-65		V
	BC857W			-45		
	BC858W			-30		
Emitter-base breakdown voltage		V_{EBO}	$I_E = -1\mu\text{A}, I_C = 0$	-5		V
Collector cut-off current		I_{CBO}	$V_{CB} = -30\text{V}, I_E = 0$		-15	nA
DC current gain	BC856AW, 857AW, 858AW	h_{FE}	$V_{CE} = -5\text{V}, I_C = -2\text{mA}$	125	250	
	BC856BW, 857BW, 858BW			220	475	
	BC857CW, BC858CW			420	800	
Collector-emitter saturation voltage		$V_{CE(sat)}$	$I_C = -100\text{mA}, I_B = -5\text{mA}$		-0.65	V
Base-emitter saturation voltage		$V_{BE(sat)}$	$I_C = -100\text{mA}, I_B = -5\text{mA}$		-1.1	V
Transition frequency		f_T	$V_{CE} = -5\text{V}, I_C = -10\text{mA}$ $f = 100\text{MHz}$	100		MHz
Collector capacitance		C_{ob}	$V_{CB} = -10\text{V}, f = 1\text{MHz}$		4.5	pF

Typical Characteristics

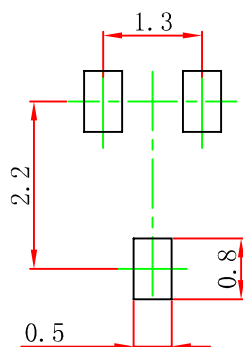


SOT-323 Package Outline Dimensions



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
θ	0°	8°	0°	8°

SOT-323 Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.