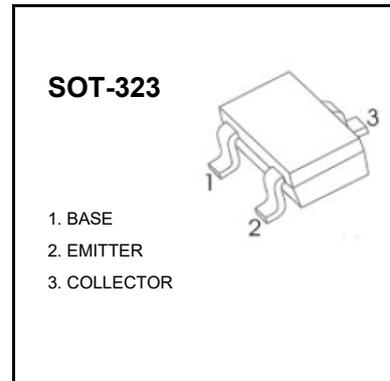


SOT-323 Plastic-Encapsulate Transistors

FEATURES

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



MAXIMUM RATINGS ($T_a=25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CB0}	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
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	833	$^\circ\text{C}/\text{W}$
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55 ~ +150	$^\circ\text{C}$

DEVICE MARKING

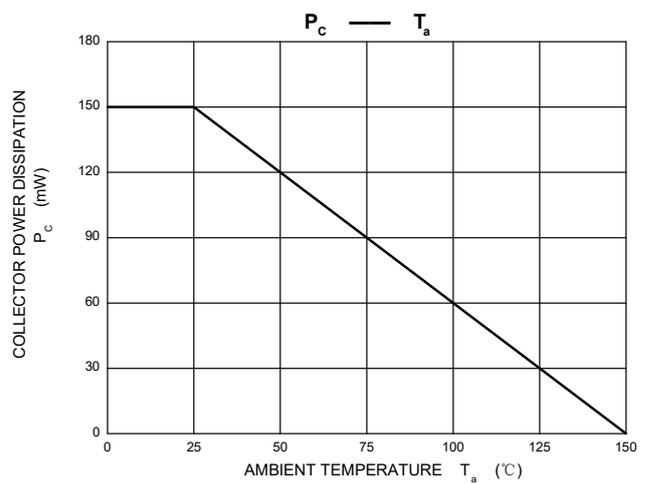
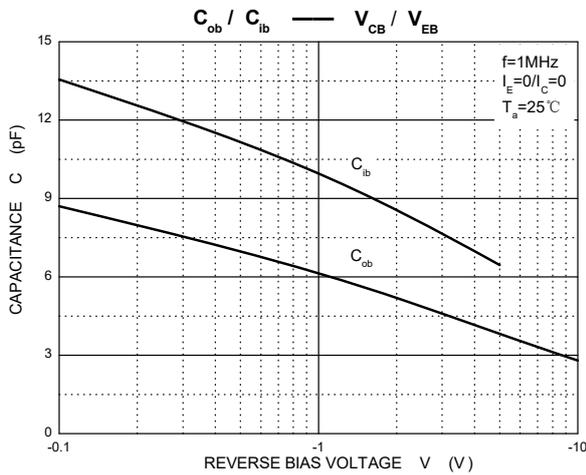
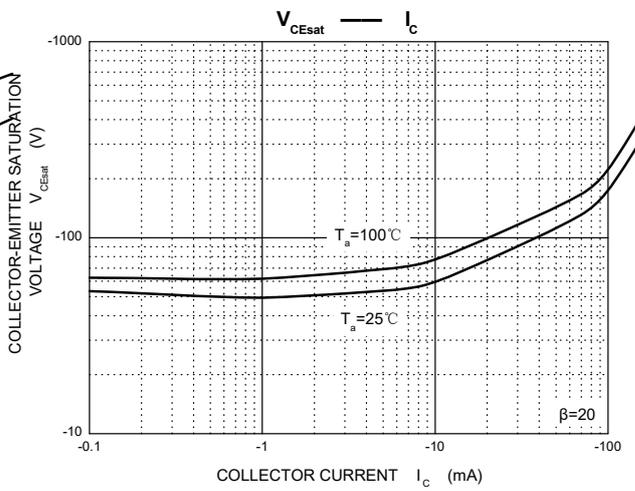
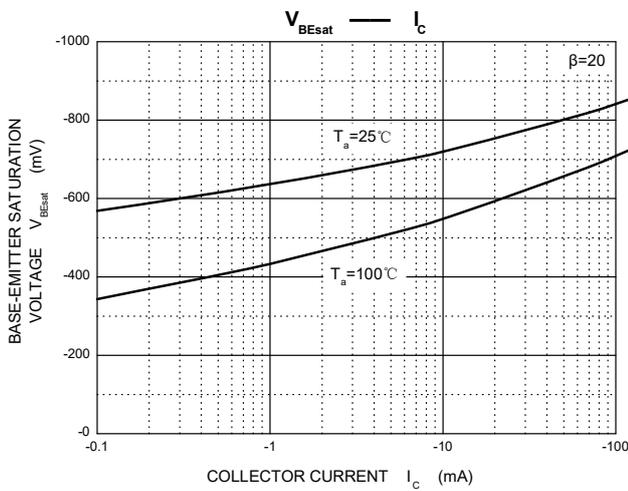
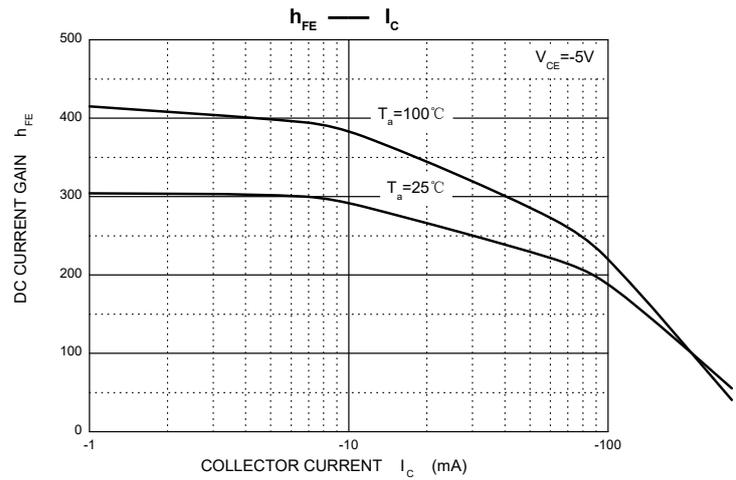
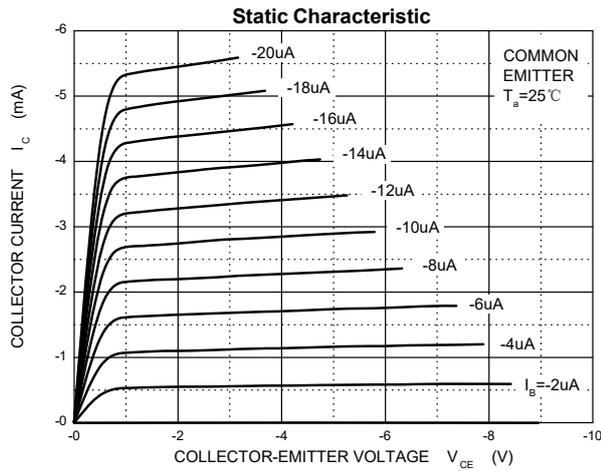
BC856AW=3A; BC856BW=3B;
 BC857AW=3E; BC857BW=3F; BC857CW=3G;
 BC858AW=3J; BC858BW=3K; BC858CW=3L

ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

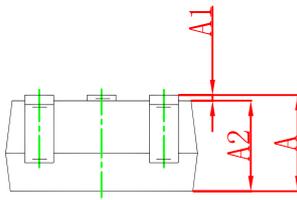
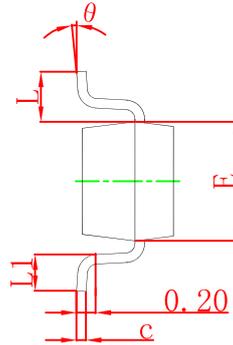
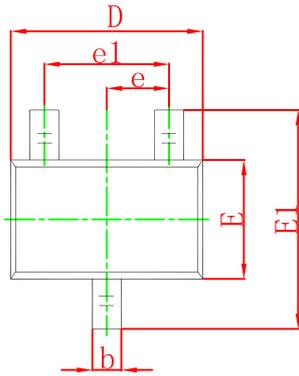
Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	BC856W BC857W BC858W	V_{CBO}	$I_C = -10\mu A, I_E = 0$	-80 -50 -30	V
Collector-emitter breakdown voltage	BC856W BC857W BC858W	V_{CEO}	$I_C = -10mA, I_B = 0$	-65 -45 -30	V
Emitter-base breakdown voltage		V_{EBO}	$I_E = -1\mu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

Typical Characteristics

TRANSISTOR (NPN)

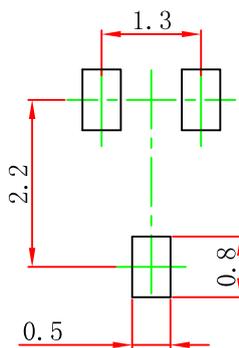


SOT-323 Package Outline Dimensions



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°

SOT-323 Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05 mm.
3. The pad layout is for reference purposes only.