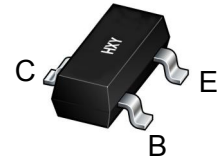




## FEATURES

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

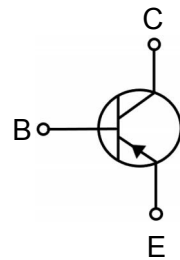


SOT-23

## Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
BC856/BC857 /BC858	SOT-23	3*	3000

\*: BC856A= **A**; BC856B= **B**; BC856C= **C**;  
BC857A= **E**; BC857B= **F**; BC857C= **G**;  
BC858A= **J**; BC858B= **K**; BC858C= **L**;



## MAXIMUM RATINGS (Ta=25 unless otherwise noted)

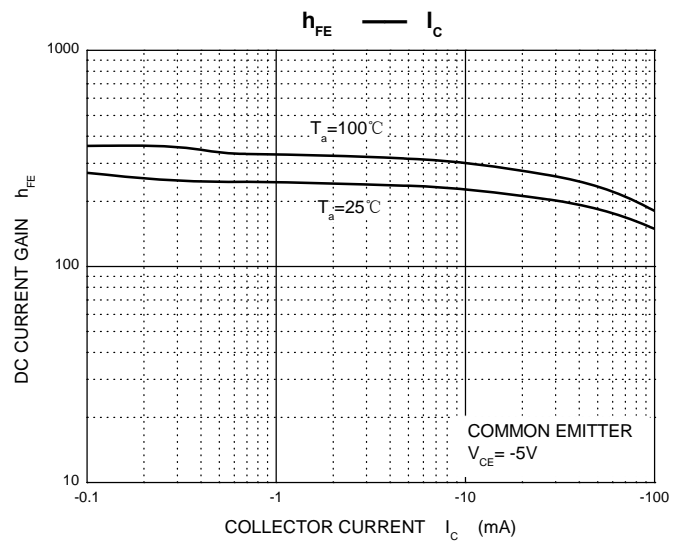
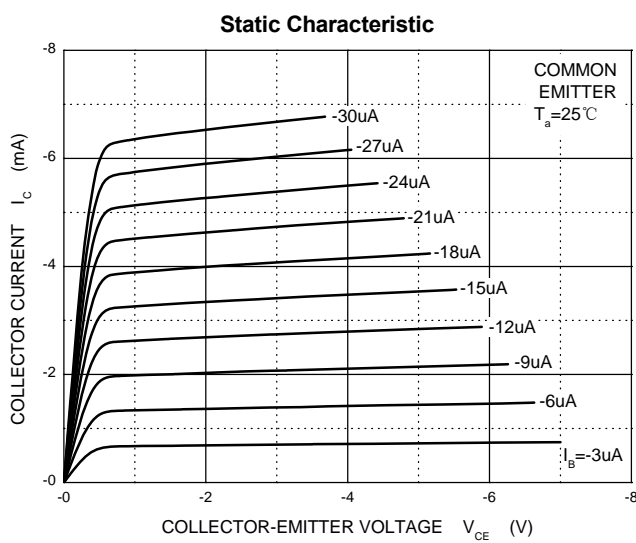
Symbol	Parameter	Limit	Unit	
$V_{CBO}$	Collector-Base Voltage	BC856	-80	V
		BC857	-50	
		BC858	-30	
$V_{CEO}$	Collector-Emitter Voltage	BC856	-65	V
		BC857	-45	
		BC858	-30	
$V_{EBO}$	Emitter-Base Voltage	-5	V	
$I_C$	Collector Current	-100	mA	
$P_C$	Collector Power Dissipation	200	mW	
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	625	$^{\circ}C/W$	
$T_j$	Junction Temperature	150	$^{\circ}C$	
$T_{stg}$	Storage Temperature	-55~+150	$^{\circ}C$	

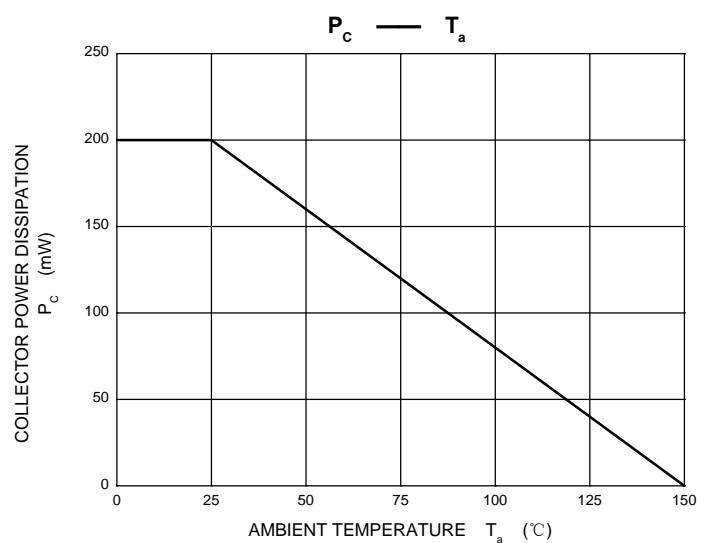
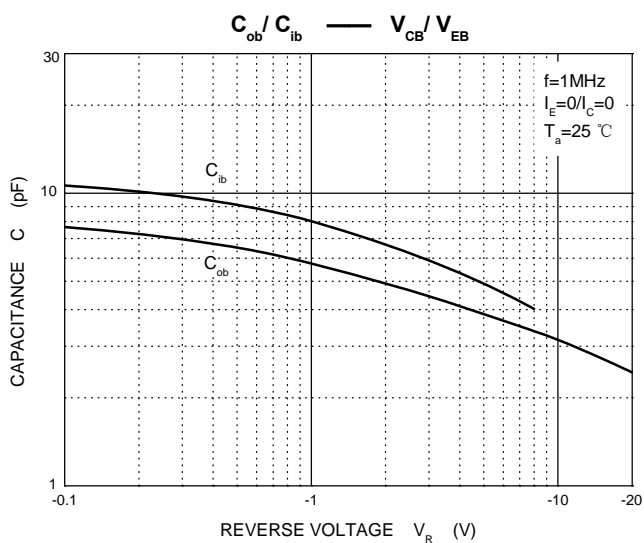
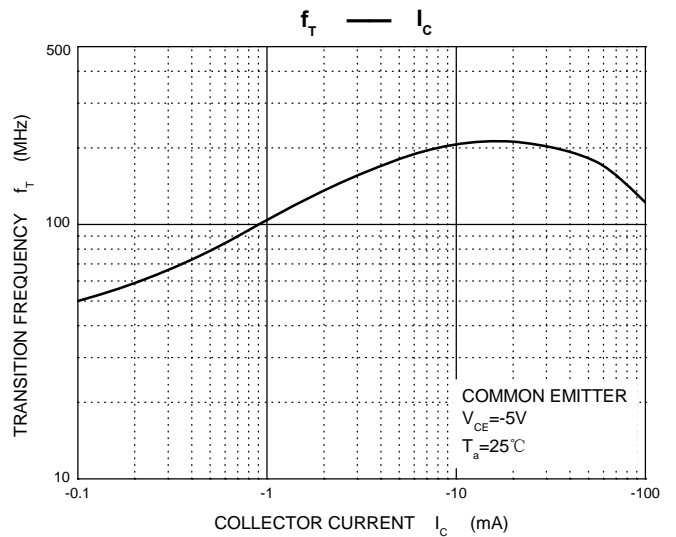
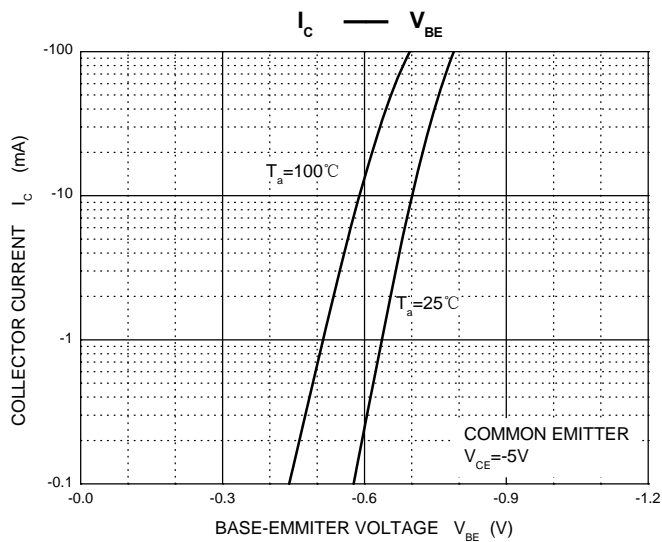
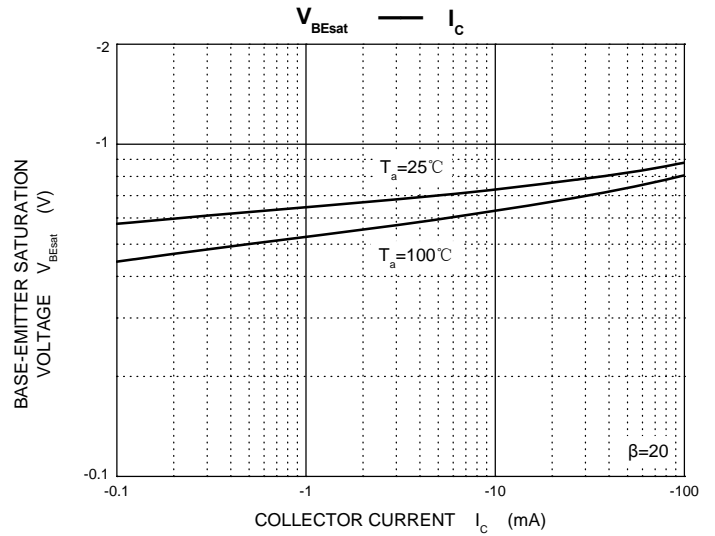
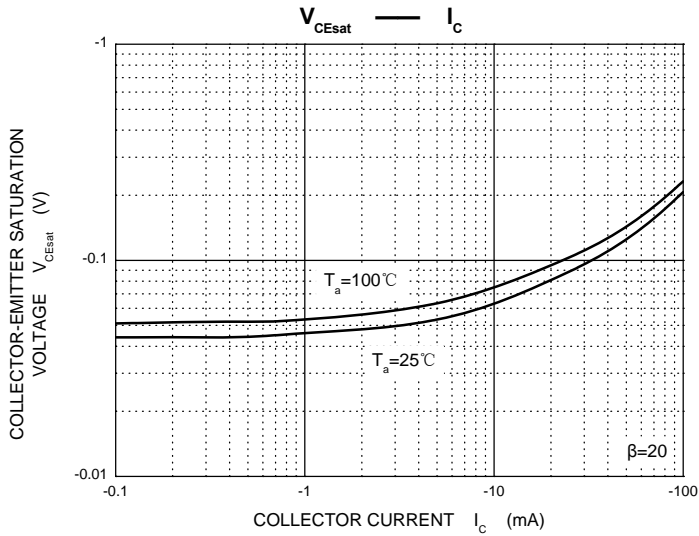


**ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25 unless otherwise specified)**

Symbol	Parameter	Part	Test conditions	Min	Max	Unit
V <sub>(BR)CBO</sub>	Collector-base breakdown voltage	BC856 BC857 BC858	I <sub>C</sub> =-10μA, I <sub>E</sub> =0	-80 -50 -30		V
V <sub>(BR)CEO</sub>	Collector-emitter breakdown voltage	BC856 BC857 BC858	I <sub>C</sub> =-10mA, I <sub>B</sub> =0	-65 -45 -30		V
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage		I <sub>E</sub> =-10μA, I <sub>C</sub> =0	-5		V
I <sub>CBO</sub>	Collector cut-off current	BC856 BC857 BC858	V <sub>CB</sub> =-70V, I <sub>E</sub> =0 V <sub>CB</sub> =-50V, I <sub>E</sub> =0 V <sub>CB</sub> =-30V, I <sub>E</sub> =0		-100	nA
I <sub>EBO</sub>	Emitter cut-off current		V <sub>EB</sub> =-5V, I <sub>C</sub> =0		-100	nA
h <sub>FE</sub>	DC current gain	BC856A BC857A BC858A BC856B BC857B BC858B BC856C BC857C BC858C	V <sub>CE</sub> =-5V, I <sub>C</sub> =-2mA	110 200 420	220 450 800	
V <sub>CE(sat)</sub>	Collector-emitter saturation voltage		I <sub>C</sub> =-100mA		-0.5	V
V <sub>BE(sat)</sub>	Base-emitter saturation voltage		I <sub>B</sub> =-5mA		-1.1	V
f <sub>T</sub>	Transition frequency		V <sub>CE</sub> =-5V, I <sub>C</sub> =-10mA, f=30MHz	100		MHz
C <sub>ob</sub>	Collector output capacitance		V <sub>CB</sub> =-10V, f= 1MHz		4.5	pF

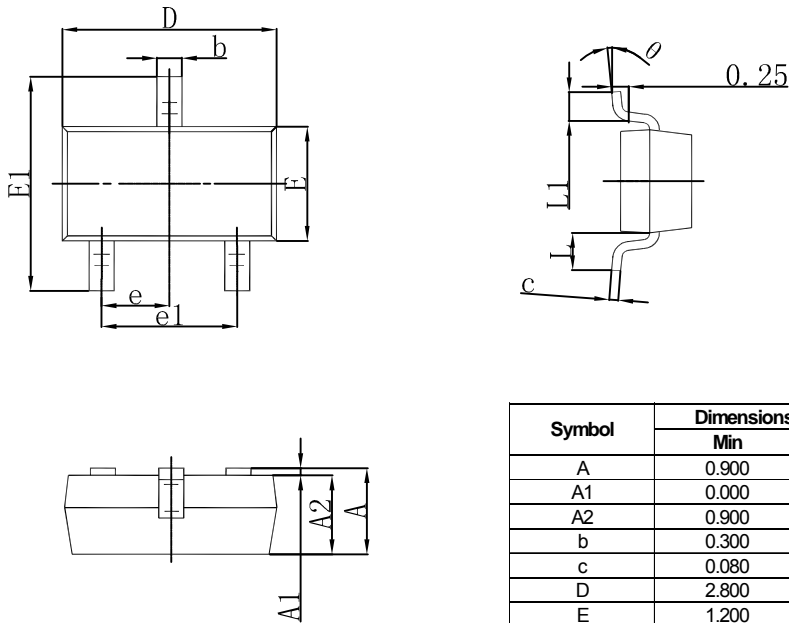
**Typical Characteristics**





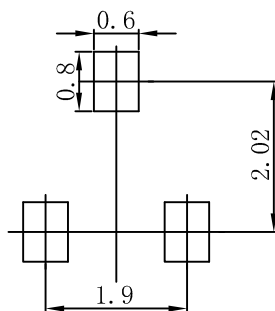


### SOT-23 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

### SOT-23 Suggested Pad Layout



- Note:
1. Controlling dimension: in millimeters.
  2. General tolerance:  $\pm 0.05\text{mm}$ , -100
  3. The pad layout is for reference purposes only.



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