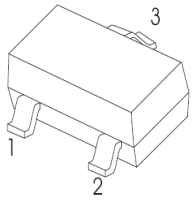
SOT-523 Plastic-Encapsulate Transistor

TRANSISTOR (PNP)

BC856AT, BT, CT
BC857AT, BT, CT
BC858AT, BT, CT

SOT-523



1. BASE
2. EMITTER
3. COLLECTOR

FEATURES

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

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage		V
	BC856T	-80	
	BC857T	-50	
	BC858T	-30	
V_{CEO}	Collector-Emitter Voltage		V
	BC856T	-65	
	BC857T	-45	
	BC858T	-30	
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current –Continuous	-0.1	A
P_{C*}	Collector Power Dissipation	150	mW
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-65-150	℃

DEVICE MARKING

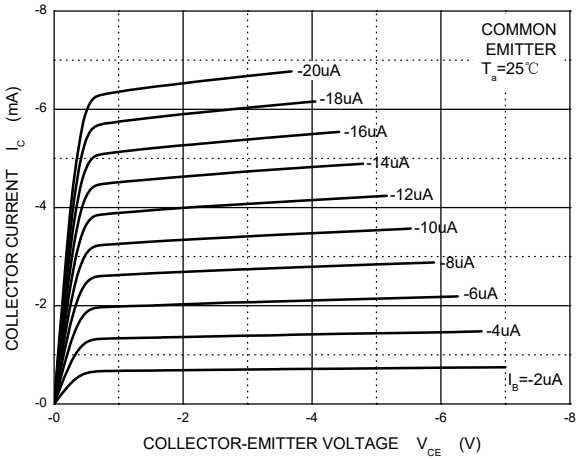
BC856AT=3A; BC856BT=3B;
BC857AT=3E; BC857BT=3F; BC857CT=3G;
BC858AT=3J; BC858BT=3K: BC858CT=3L

ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

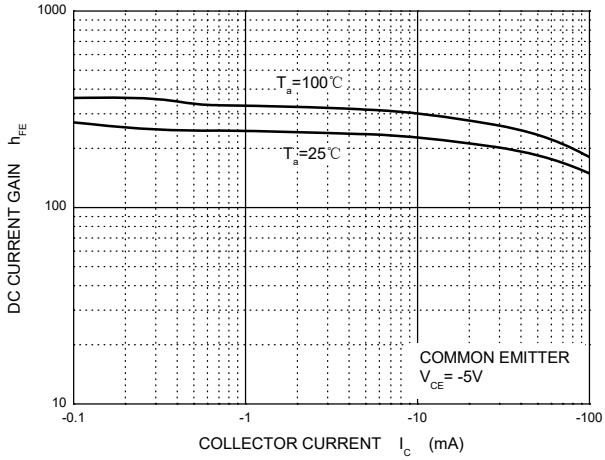
Parameter		Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	**BC856T** **BC857T** **BC858T**	V_{CBO}	I_C= -10μA, I_E=0	-80 -50 -30			V
Collector-emitter breakdown voltage	**BC856T** **BC857T** **BC858T**	V_{CEO}	I_C= -10mA, I_B=0	-65 -45 -30			V
Emitter-base breakdown voltage		V_{EBO}	I_E= -1μA, I_C=0	-5			V
Collector cut-off current	**BC856T** **BC857T** **BC858T**	I_{CBO}	V_{CB}=-70 V , I_E=0 V_{CB}=-50 V , I_E=0 V_{CB}=-30 V , I_E=0			-15	nA
Emitter cut-off current		I_{EBO}	V_{EB}=-5 V , I_C=0			-0.1	uA
DC current gain	**BC856AT,857AT,858AT** **BC856BT,857BT,858BT** **BC857CT,858CT**	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			-0.9	V
Transition frequency		f_T	V_{CE}= -5 V, I_C= - 10mA f=100MHz	100			MHz
Collector output capacitance		C_{ob}	V_{CB}=-10V,f=1MHz			4.5	pF

Typical Characteristics

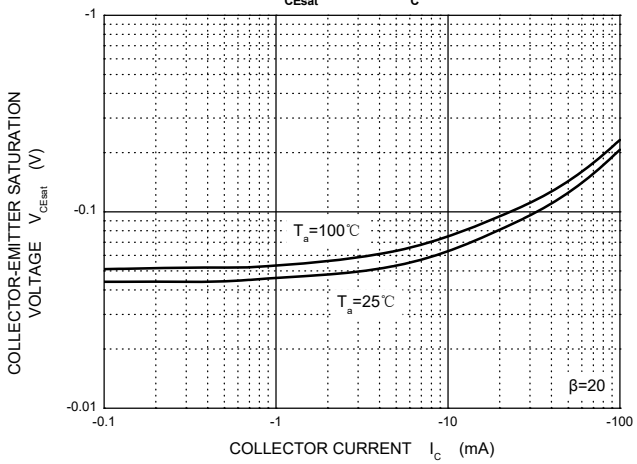
Static Characteristic



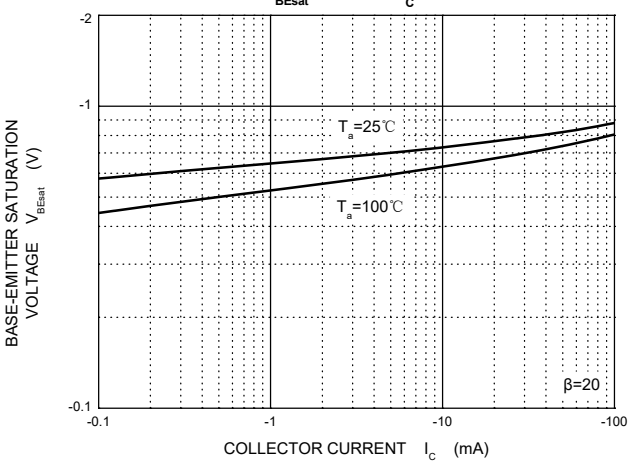
h_{FE} — I_C



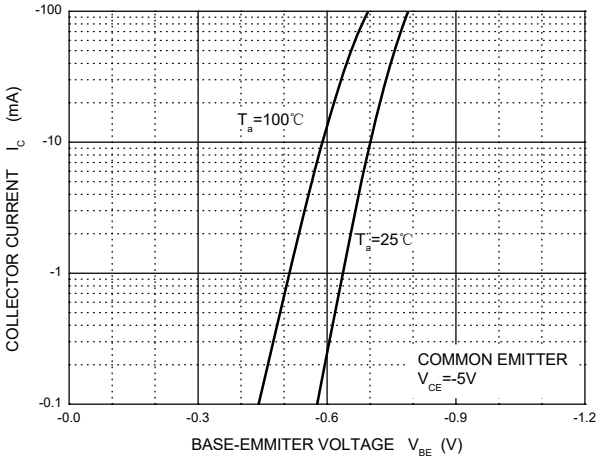
V_{CEsat} — I_C



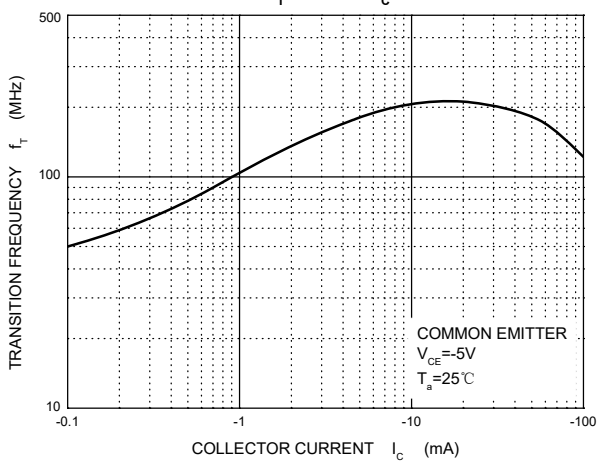
V_{BEsat} — I_C



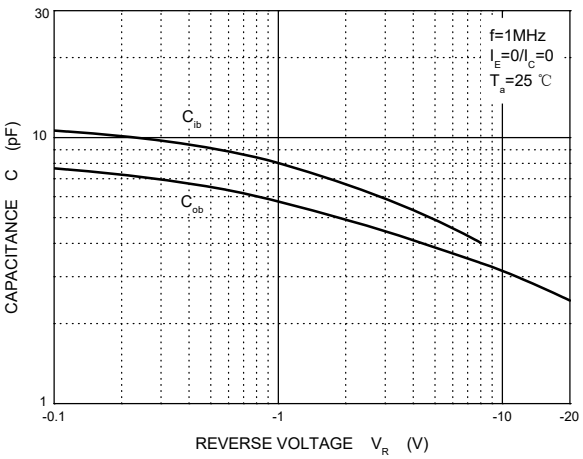
I_C — V_{BE}



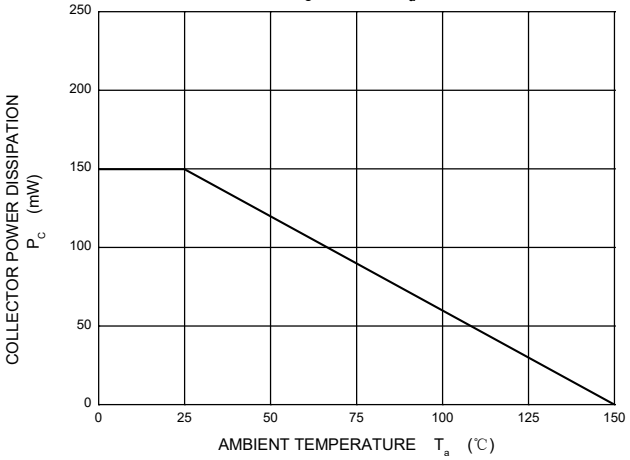
f_T — I_C



C_{ob} / C_{ib} — V_{CB} / V_{EB}

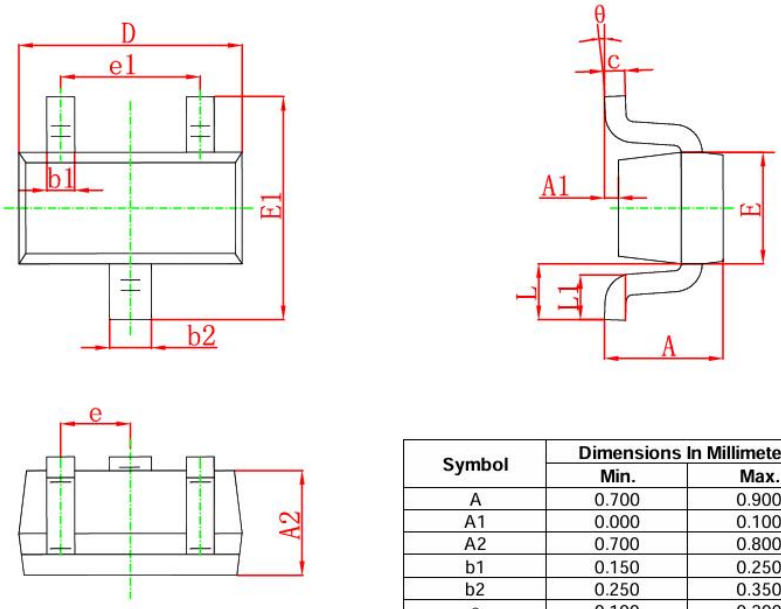


P_C — T_a



Outlitne Drawing

SOT-523 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.700	0.900	0.028	0.035
A1	0.000	0.100	0.000	0.004
A2	0.700	0.800	0.028	0.031
b1	0.150	0.250	0.006	0.010
b2	0.250	0.350	0.010	0.014
c	0.100	0.200	0.004	0.008
D	1.500	1.700	0.059	0.067
E	0.700	0.900	0.028	0.035
E1	1.450	1.750	0.057	0.069
e	0.500 TYP.		0.020 TYP.	
e1	0.900	1.100	0.035	0.043
L	0.400 REF.		0.016 REF.	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

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