

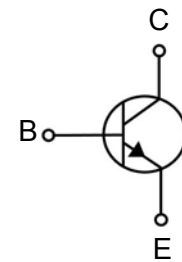
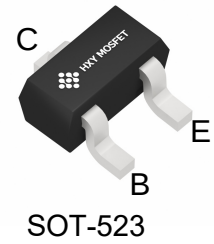


Features

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

Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
BC857BT-7-F	SOT-523	3F	3000



Maximum Ratings (Ta=25°C unless otherwise noted)

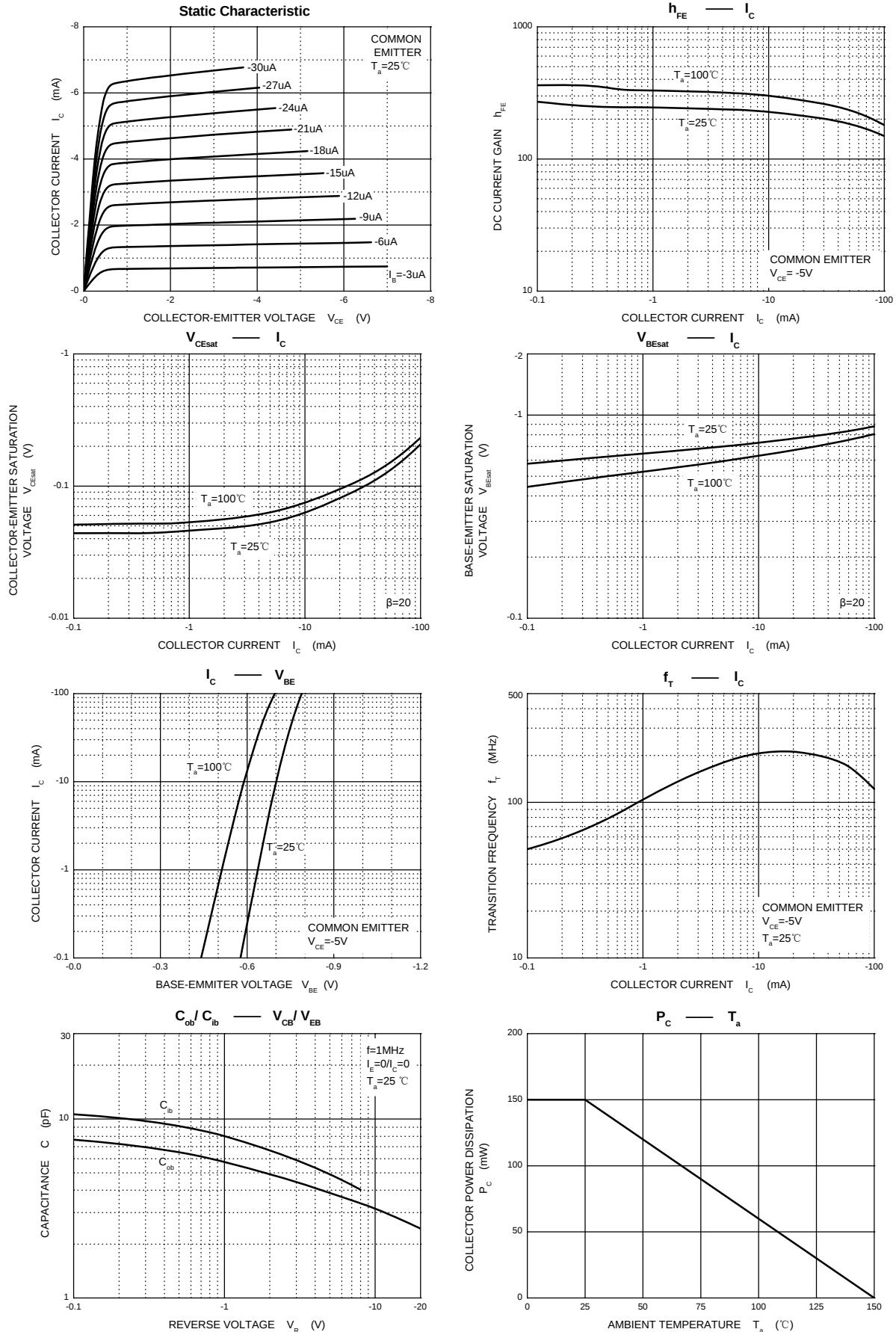
Parameter	Symbol	Limit	Unit
Collector-Base Voltage	V_{CBO}	-50	V
Collector-Emitter Voltage	V_{CEO}	-45	V
Emitter-Base Voltage	V_{EBO}	-6	V
Collector Current	I_C	-0.1	A
Collector Power Dissipation	P_C	150	mW
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55~+150	°C

Electrical Characteristics (Ta=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-10\mu A, I_E=0$	-50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-10mA, I_B=0$	-45			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-1\mu A, I_C=0$	-6			V
Collector Cutoff Current	I_{CBO}	$V_{CB}=-30V$			-15	nA
DC current gain	h_{FE}	$V_{CE}=-5V, I_C=-2mA$	220		475	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-10mA, I_B=-0.5mA$ $I_C=-100mA, I_B=-5mA$			-0.3 -0.65	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=-10mA, I_B=-0.5mA$ $I_C=-100mA, I_B=-5mA$		-0.7 -0.9		V
Base-emitter voltage	$V_{BE(on)}$	$V_{CE}=-5V, I_C=-2mA$ $V_{CE}=-5V, I_C=-10mA$	-600		-750 -820	mV
Transition frequency	f_T	$V_{CE}=-5V, I_C=-10mA$ $f=100MHz$	100			MHz
Collector output capacitance	C_{ob}	$V_{CB}=-10V, f=1MHz$			4.5	pF
Noise figure	NF	$V_{CE}=-5V, I_C=-0.2mA,$ $f=1kHz,$ $R_S=2k\Omega, BW=200Hz$			10	dB

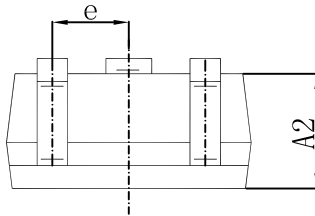
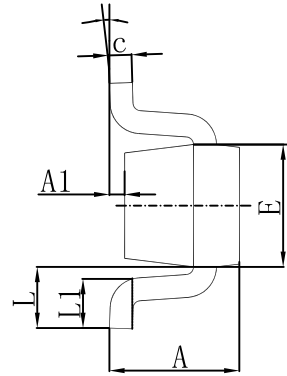
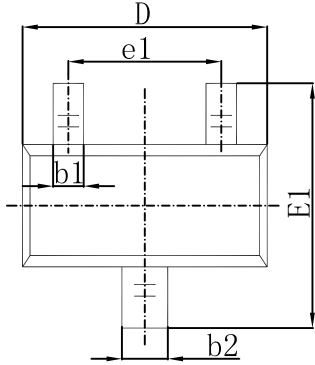


Typical Characteristics



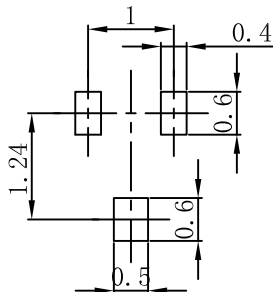


SOT-523 Package Information



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°

SOT-523 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.



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