

BC857T Transistor(PNP)

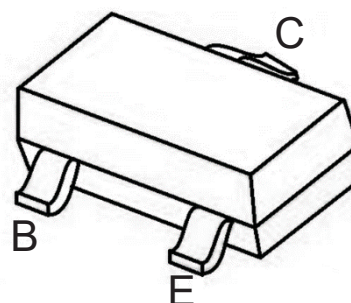
Feature

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

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

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CB0}	-50	V
Collector-Emitter Voltage	V_{CE0}	-45	V
Emitter-Base Voltage	V_{EB0}	-6	V
Collector Current -Continuous	I_c	-0.1	A
Collector Power Dissipation	P_c	0.15	W
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55~ +150	$^{\circ}\text{C}$

SOT-523



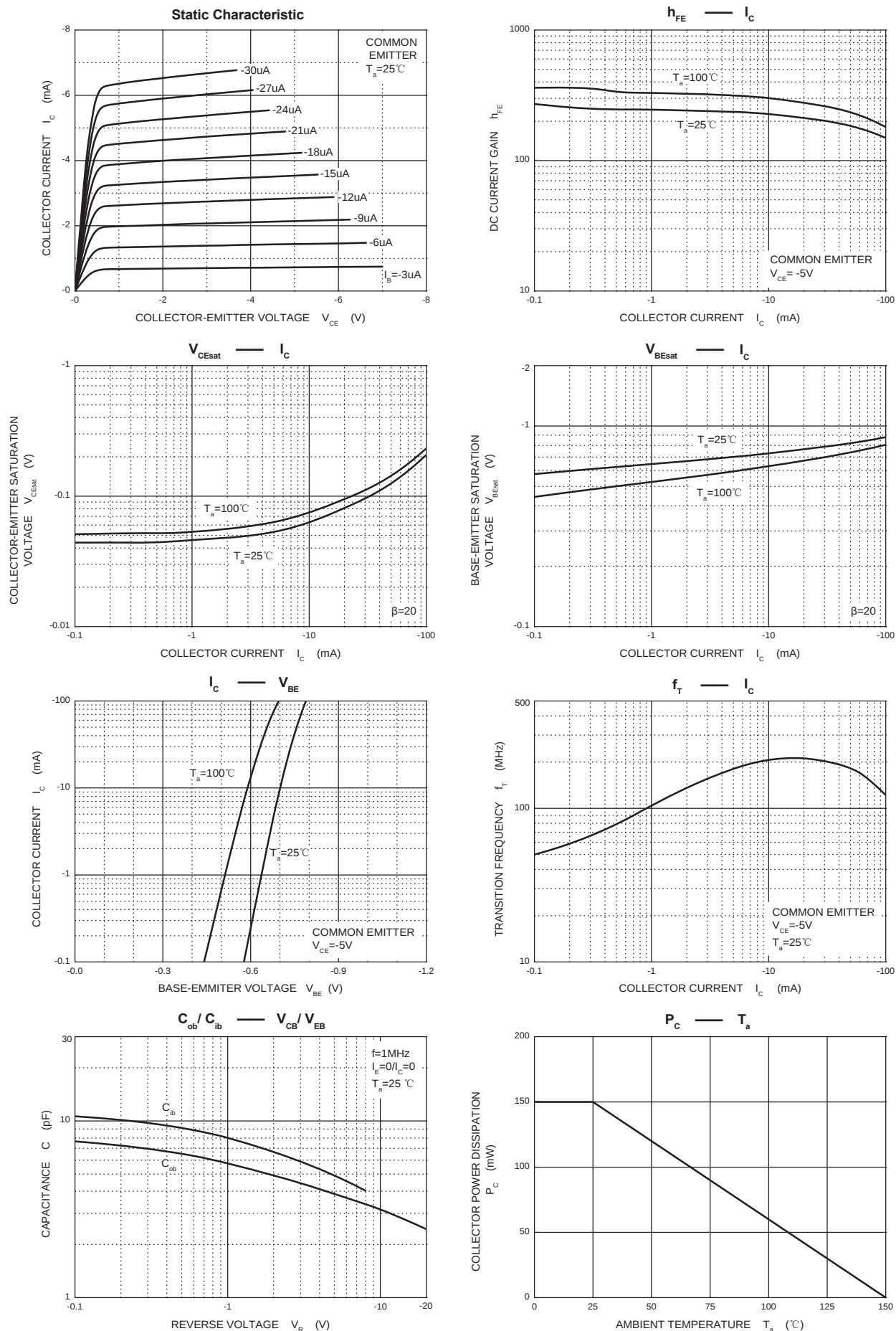
ELECTRICAL CHARACTERISTICS($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_c=-10\mu\text{A}, I_E=0$	-50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_c=-10\text{mA}, I_B=0$	-45			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-1\mu\text{A}, I_C=0$	-6			V
Collector cut-off current	I_{CBO}	$V_{CB}=-30\text{V},$			-15	nA
DC current gain	h_{FE}	$V_{CE}=-5\text{V}, I_c=-2\text{mA}$	125		800	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_c=-10\text{mA}, I_B=-0.5\text{mA}$			-0.3	V
		$I_c=-100\text{mA}, I_B=-5\text{mA}$			-0.65	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_c=-10\text{mA}, I_B=-0.5\text{mA}$		-0.7		V
		$I_c=-100\text{mA}, I_B=-5\text{mA}$		-0.9		V
Transition frequency	f_T	$V_{CE}=-5\text{V}, I_c=-10\text{mA}, f=100\text{MHz}$	100			MHZ
Base-emitter voltage	$V_{BE(on)}$	$V_{CE}=-5\text{V}, I_c=-2\text{mA}$	-600		-750	mV
		$V_{CE}=-5\text{V}, I_c=-10\text{mA}$			-820	mV
Collector output capacitance	C_{ob}	$V_{CB}=-10\text{V}, f=1\text{MHz}$			4.5	pF
Noise figure	NF	$V_{CE}=-5\text{V}, I_C=-0.2\text{mA}, f=1\text{kHz},$ $R_S=2\text{k}\Omega, BW=200\text{Hz}$			10	dB

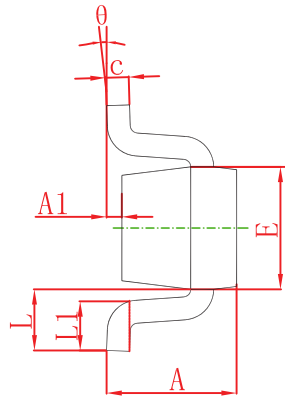
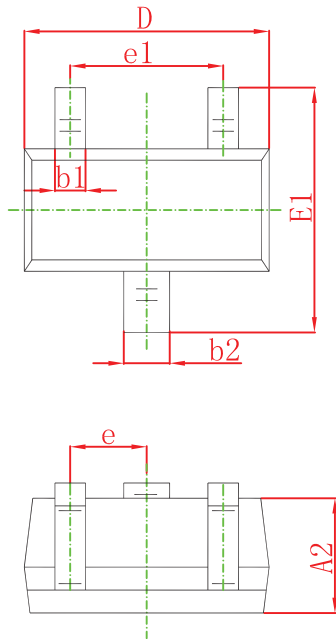
CLASSIFICATION OF h_{FE}

Rank	A	B	C
Range	125~250	220~457	420~800
Marking	3E	3F	3G

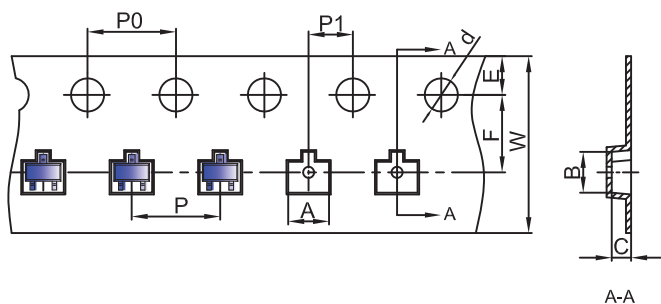
Typical Characteristics



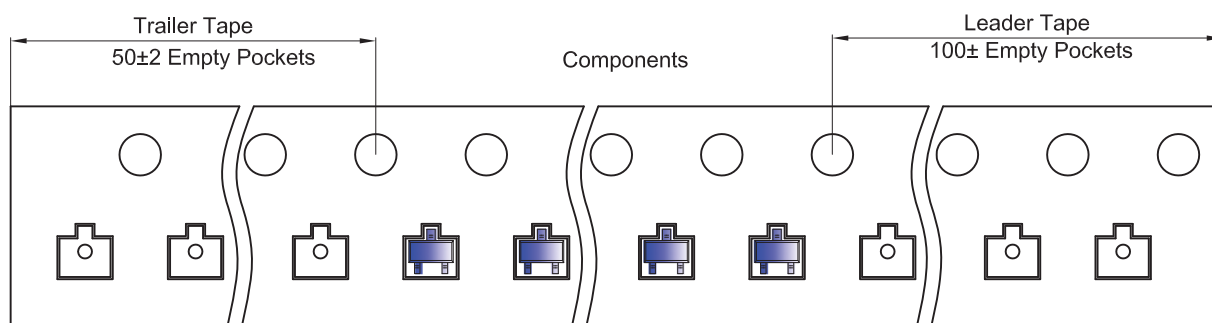
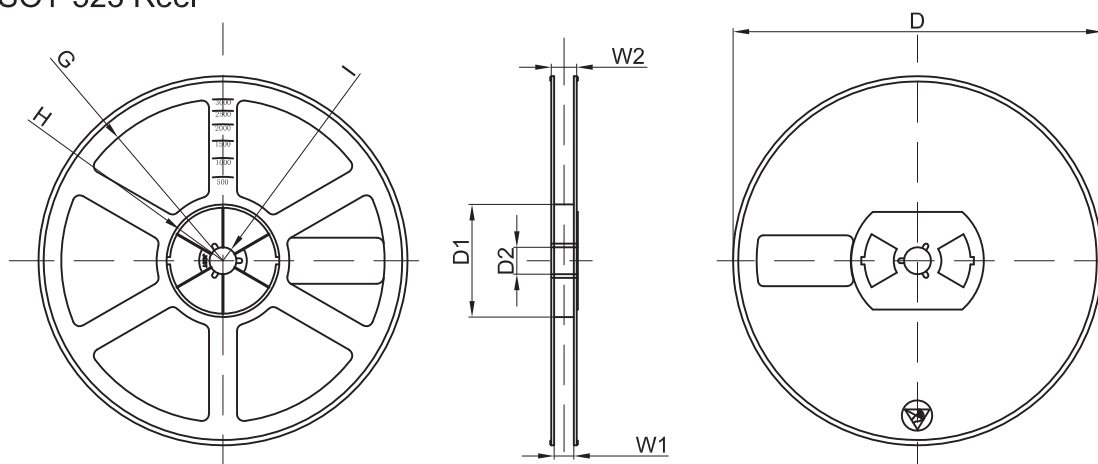
SOT-523 Package Information



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 Tape and Reel
SOT-523 Embossed Carrier Tape


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-523	1.85	1.85	0.875	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

SOT-523 Tape Leader and Trailer

SOT-523 Reel


Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7"Dia	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3000 pcs	7 inch	45,000 pcs	203×203×195	180,000 pcs	438×438×220	