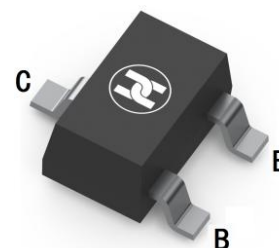
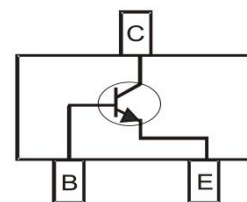


BIPOLAR TRANSISTOR (NPN)
FEATURES

- Complementary to BC807W
- High Current Gain
- High Collector Current
- Low Collector-emitter saturation voltage
- Surface Mount device


SOT-323

MECHANICAL DATA

- Case: SOT-323
- Case Material: Molded Plastic. UL flammability
- Classification Rating: 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Weight: 0.008 grams (approximate)

MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V _{CB0}	50	V
Collector-Emitter Voltage	V _{CEO}	45	V
Emitter-Base Voltage	V _{EBO}	5	V
Collector Current	I _C	500	mA
Collector Power Dissipation	P _C	200	mW
Thermal Resistance From Junction To Ambient	R _{θJA}	625	°C/W
Junction Temperature	T _J	150	°C
Storage Temperature	T _{STG}	-55 ~ +150	°C

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

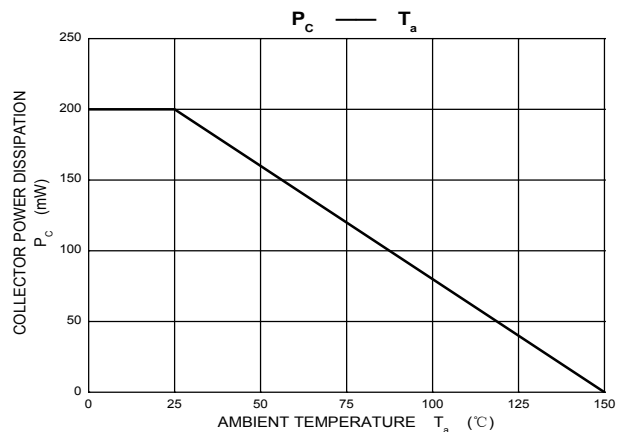
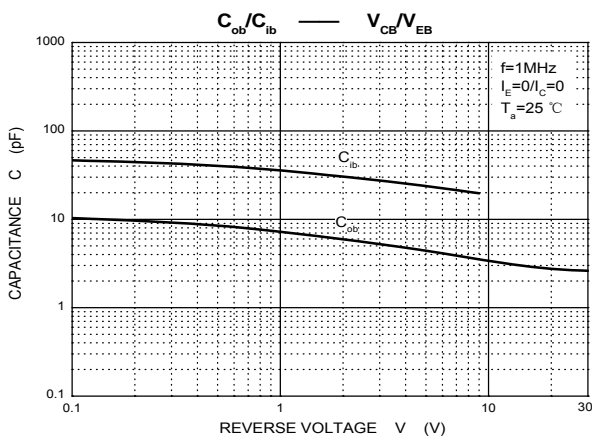
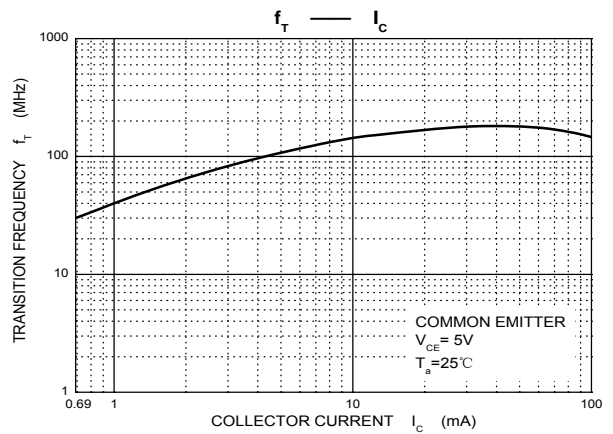
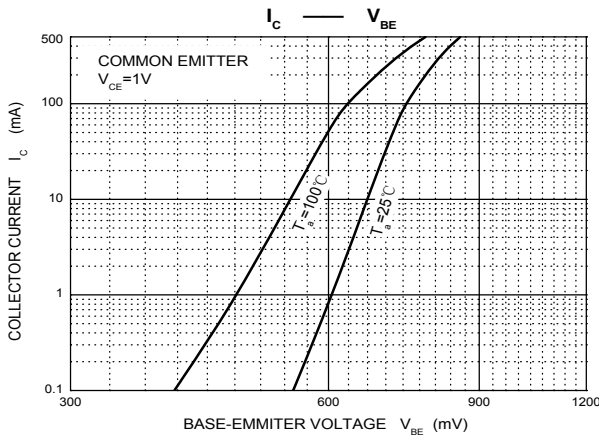
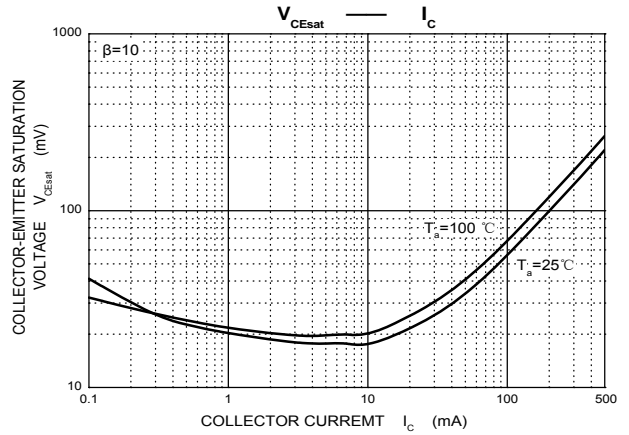
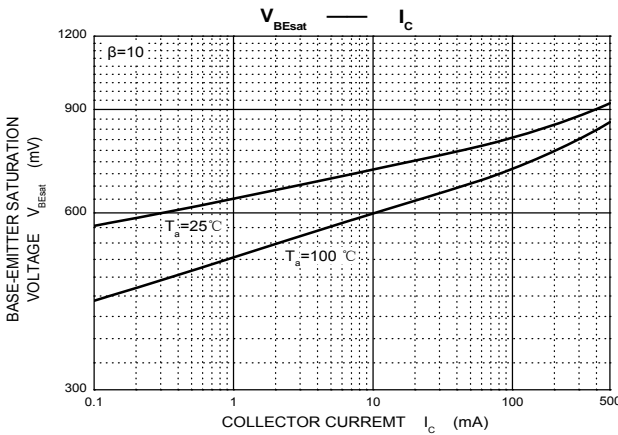
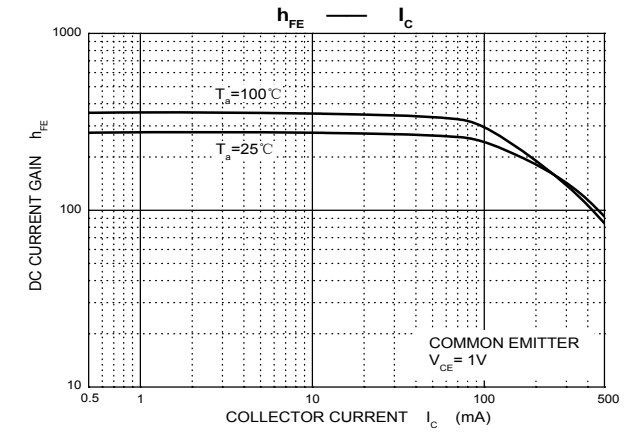
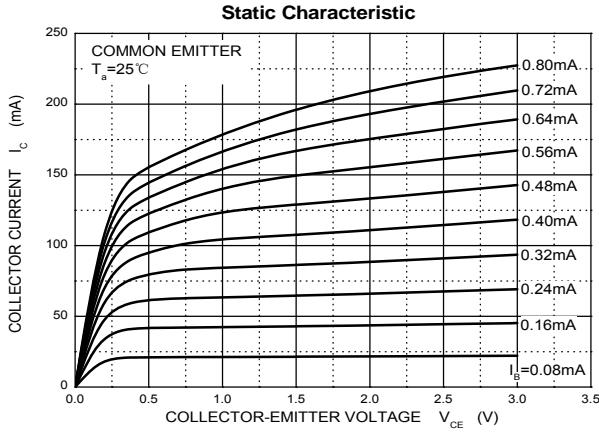
Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Collector-base breakdown voltage	V _{(BR)CBO}	50			V	I _C =10μA, I _E =0
Collector-emitter breakdown voltage	V _{(BR)CEO}	45			V	I _C =10mA, I _B =0
Emitter-base breakdown voltage	V _{(BR)EBO}	5			V	I _E =1μA, I _C =0
Collector cut-off current	I _{CB0}			0.1	μA	V _{CB} =20V, I _E =0
Emitter cut-off current	I _{EBO}			0.1	μA	V _{EB} =5V, I _C =0
DC current gain	h _{FE}	100		600		V _{CE} =1V, I _C =100mA
		40				V _{CE} =1V, I _C =500mA
Collector-emitter saturation voltage	V _{CE(sat)}			0.7	V	I _C =500mA, I _B =50mA
Base-emitter saturation voltage	V _{BE(sat)}			1.2	V	I _C =500mA, I _B =50mA
Base-emitter voltage	V _{BE}			1.2	V	V _{CE} =1V, I _C =500mA
Transition frequency	f _T	100			MHz	V _{CE} =5V, I _C =10mA, f=100MHz
Collector output capacitance	C _{ob}			5	pF	V _{CB} =10V, f=1MHz

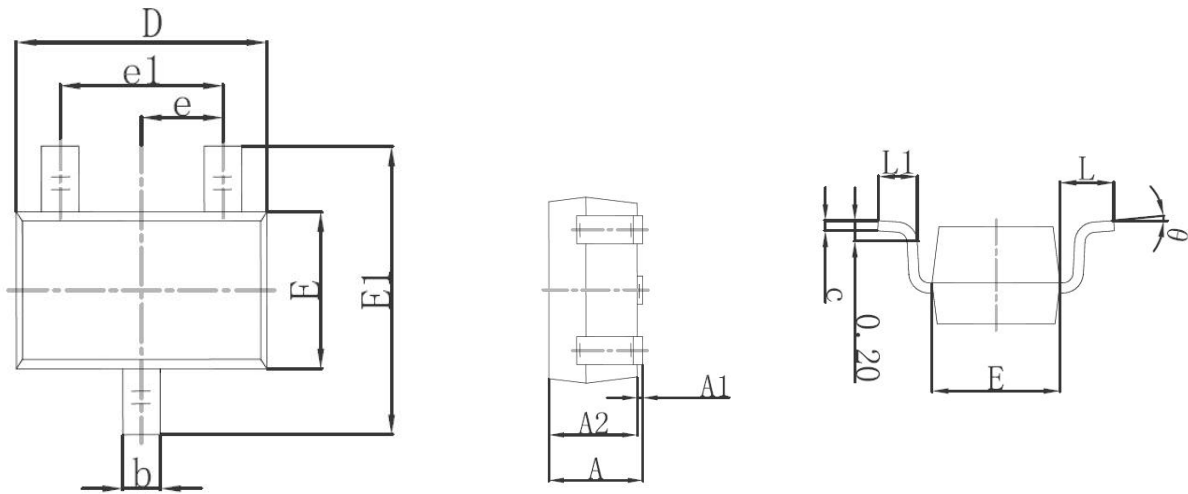
CLASSIFICATION OF h_{FE}

Rank	BC817-16W	BC817-25W	BC817-40W
Range	100-250	160-400	250-600
Marking	6A	6B	6C

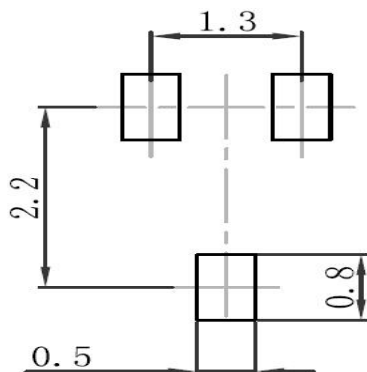
BIPOLAR TRANSISTOR (NPN)

Typical Characteristics

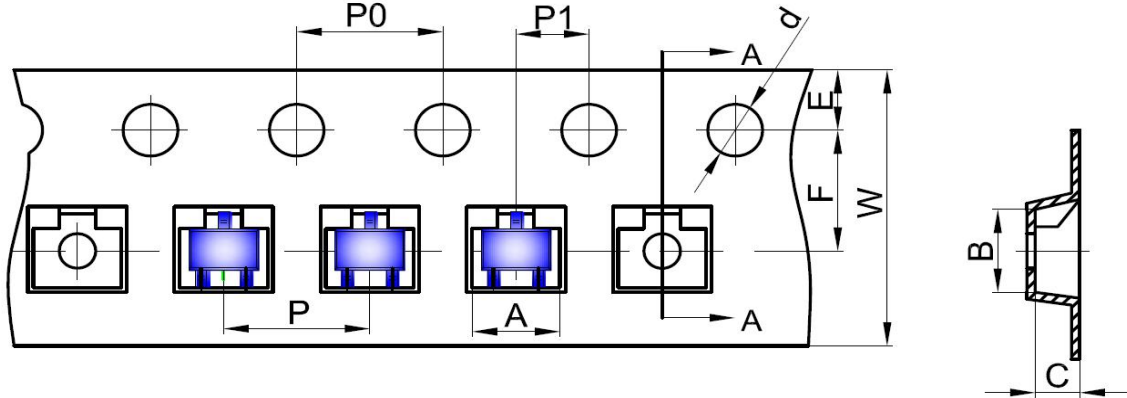


BIPOLAR TRANSISTOR (NPN)
SOT-323 Package Outline Dimensions


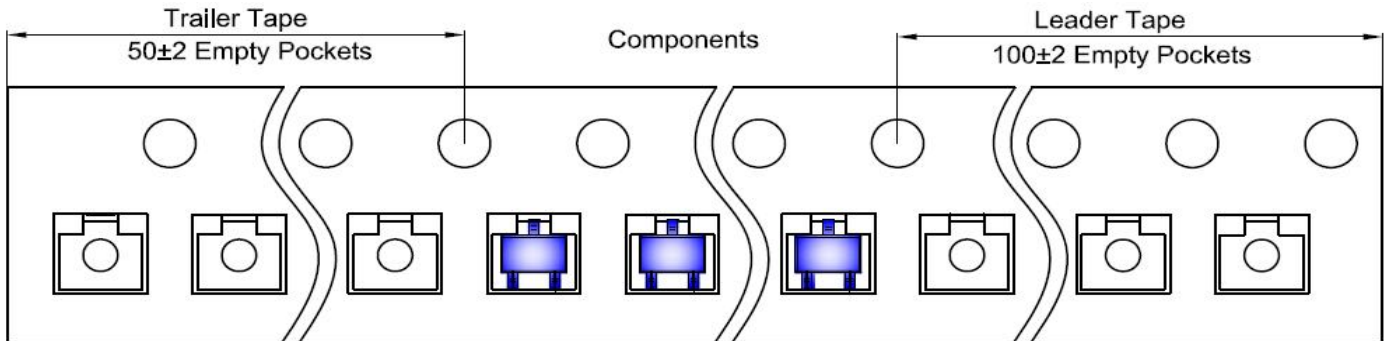
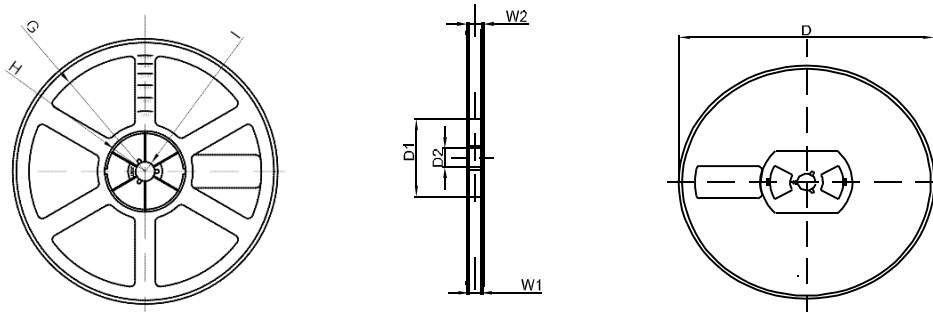
Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650TYP		0.026TYP	
e1	1.200	1.400	0.047	0.055
L	0.525REF		0.021REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

SOT-323 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

BIPOLAR TRANSISTOR (NPN)
SOT-323 Tape and Reel
SOT-323 Embossed Carrier Tape


DIMENSIONS ARE IN MILLIMETER										
TYPE	A	B	C	d	E	F	P0	P	P1	W
SOT-323	2.25	2.55	1.19	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00
TOLERANCE	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1

SOT-323 Tape Leader and Trailer

SOT-323 Reel


DIMENSIONS ARE IN MILLIMETER								
REEL OPTION	D	D1	D2	G	H	I	W1	W2
7" DIA	Ø178	54.40	13.00	R78	R25.60	R6.50	9.50	12.30
TOLERANCE	±2	±1	±1	±1	±1	±1	±1	±1