

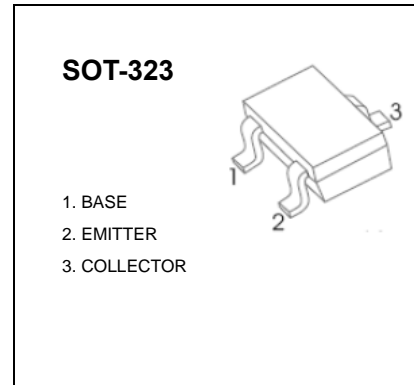
SOT-323 Plastic-Encapsulate Transistors

FEATURES

- Ideally suited for automatic insertion
- Epitaxial planar die construction
- Complementary to BC817W
- AEC-Q 101 qualified (Automotive grade with suffix " Q ")

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

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage	-50	V
V _{CEO}	Collector-Emitter Voltage	-45	V
V _{EBO}	Emitter-Base Voltage	-5	V
I _C	Collector Current -Continuous	-0.5	A
P _C	Collector Power Dissipation	0.2	W
R _{θJA}	Thermal Resistance from Junction to Ambient	6°C/W	°C/W
T _J , T _{stg}	Storage Temperature	-55~+150	°C



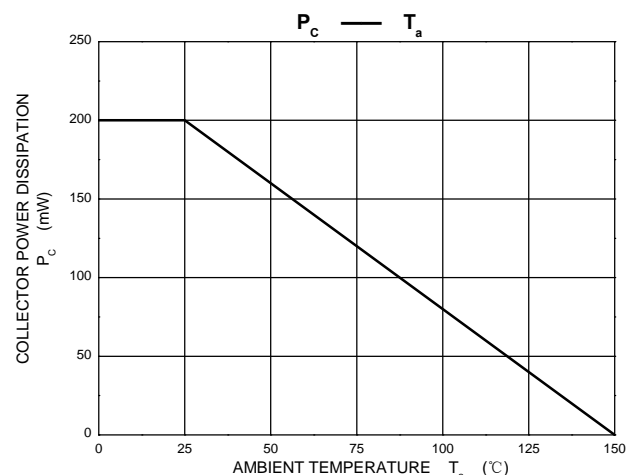
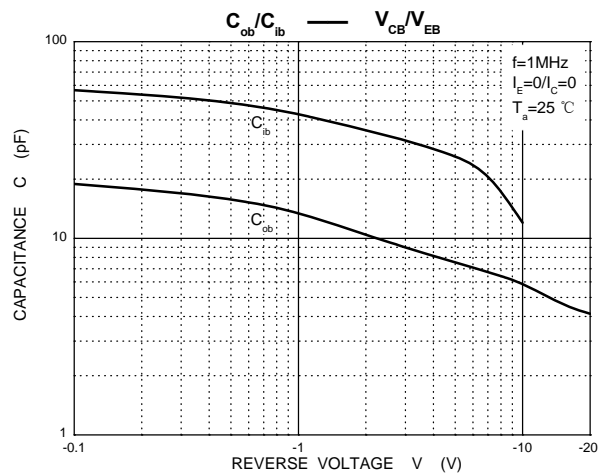
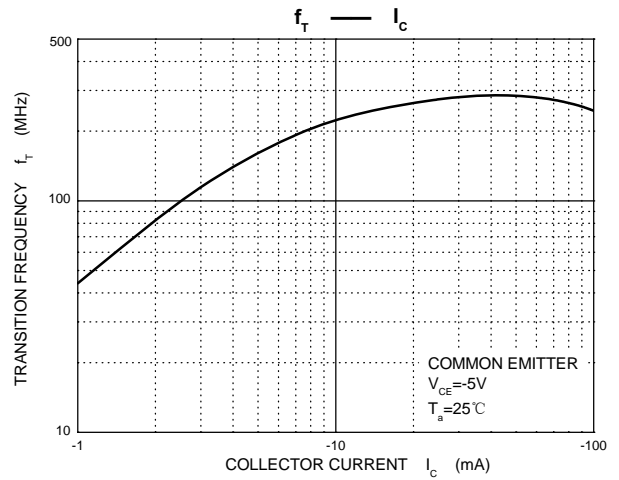
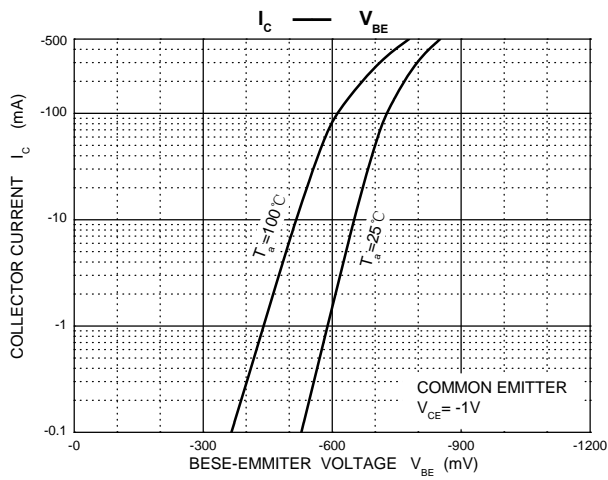
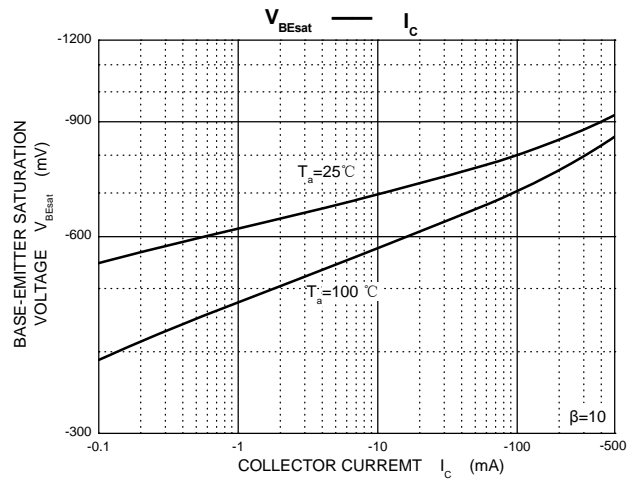
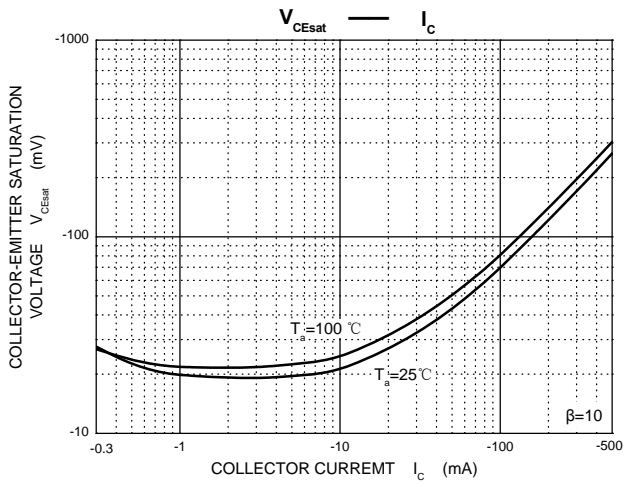
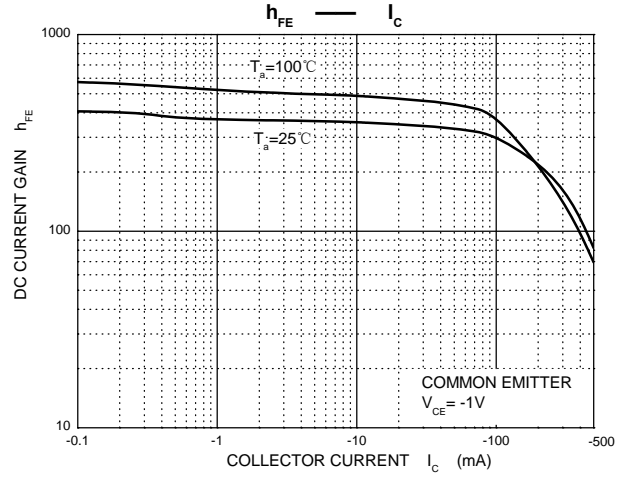
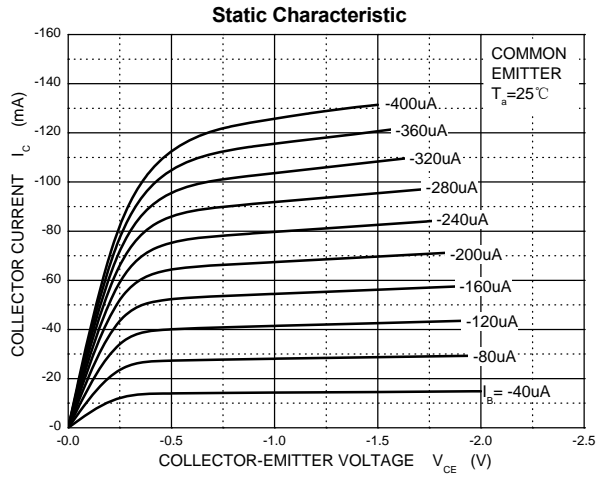
ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	V _{CBO}	I _C =-10μA, I _E =0	-50		V
Collector-emitter breakdown voltage	V _{CEO}	I _C =-10mA, I _B =0	-45		V
Emitter-base breakdown voltage	V _{EBO}	I _E =-1μA, I _C =0	-5		V
Collector cut-off current	I _{CBO}	V _{CB} =-20 V, I _E =0		-0.1	μA
Emitter cut-off current	I _{EBO}	V _{EB} =-5 V, I _C =0		-0.1	μA
DC current gain	h _{FE(1)}	V _{CE} =-1V, I _C = -100mA	100	600	
	h _{FE(2)}	V _{CE} =-1V, I _C = -500mA	40		
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =-500mA, I _B =-50 mA		-0.7	V
Base-emitter voltage	V _{BE(on)}	V _{CE} = -1V, I _C = -500mA		-1.2	V
Transition frequency	f _T	V _{CE} =-5 V, I _C = -10mA f=100MHz	80		MHz
Collector output capacitance	C _{ob}	V _{CB} =-10V, f=1MHz		10	pF

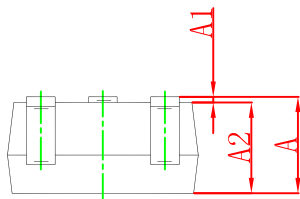
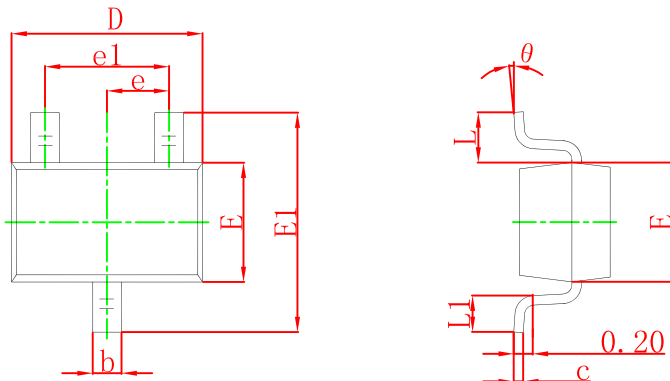
CLASSIFICATION of h_{FE(1)}

Rank	BC807-16W	BC807-25W	BC807-40W
Range	100-250	160-400	250-600
Marking	5A	5B	5C

Typical Characteristics

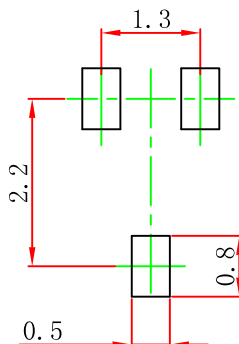


SOT-323 Package Outline Dimensions



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	0.650 TYP		0.026 TYP	
e1	1.200	1.400	0.047	0.055
L	0.525 REF		0.021 REF	
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: ± 0.05 mm.
3. The pad layout is for reference purposes only.