

SOT-23 Plastic-Encapsulate Transistors

Features

- Complementary to BC817
- 300 mW Power Dissipation of 300mW
- High Stability and High Reliability

Mechanical Data

- SOT-23 Small Outline Plastic Package
- Epoxy UL: 94V-0
- Mounting Position: Any



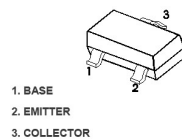
RoHS
COMPLIANT



Marking:

BC807 -16 : 5A
BC807 -25 : 5B
BC807 -40 : 5C

SOT-23



Pin definition

Maximum Ratings & Electrical Characteristics (T_A=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V _{CBO}	-50	V
Collector-Emitter Voltage	V _{CEO}	-45	V
Emitter -Base Voltage	V _{EBO}	-5	V
Collector Current-Continuous	I _C	-500	mA
Collector Power Dissipation	P _C	300	mW
Operating junction temperature range	T _J	150	°C
Storage temperature range	T _{STG}	-55 to +150	°C
Thermal Resistance from Junction to Ambient	R _{θJA}	417	°C/W

Electrical Specifications (T_A=25°C unless otherwise noted)

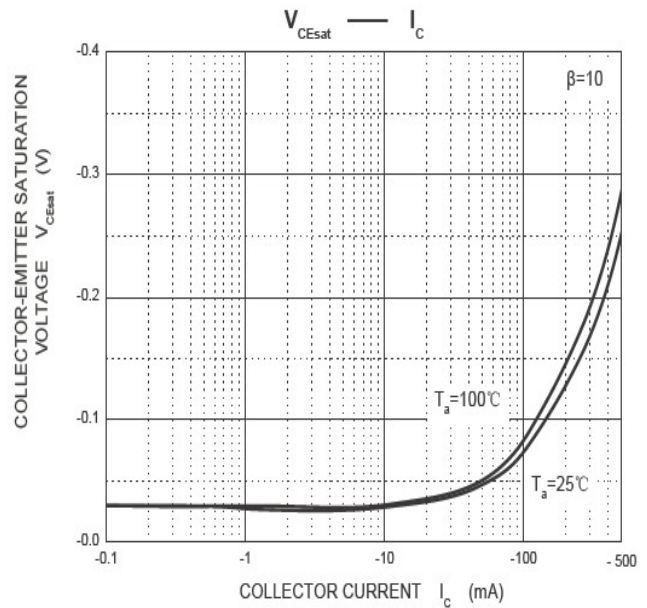
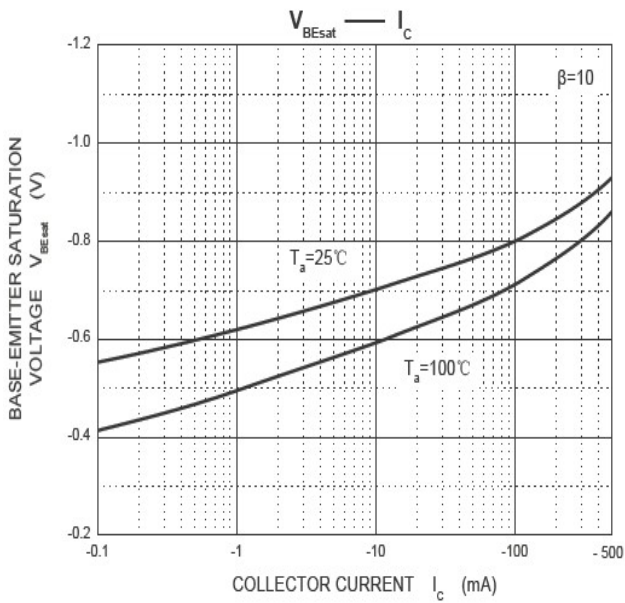
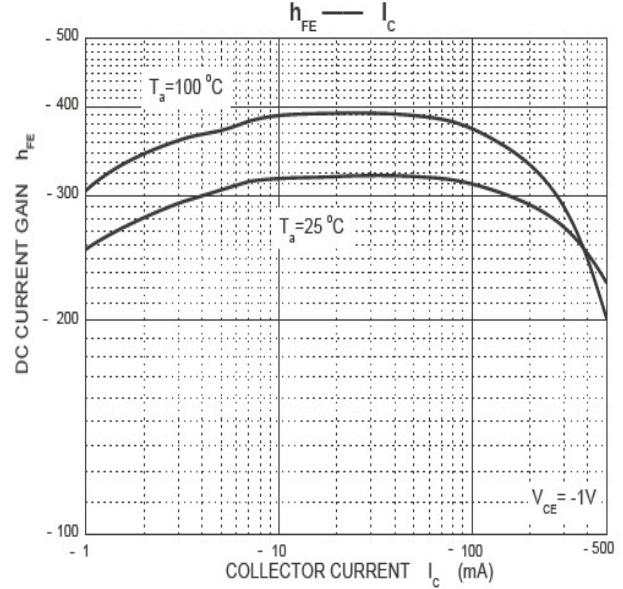
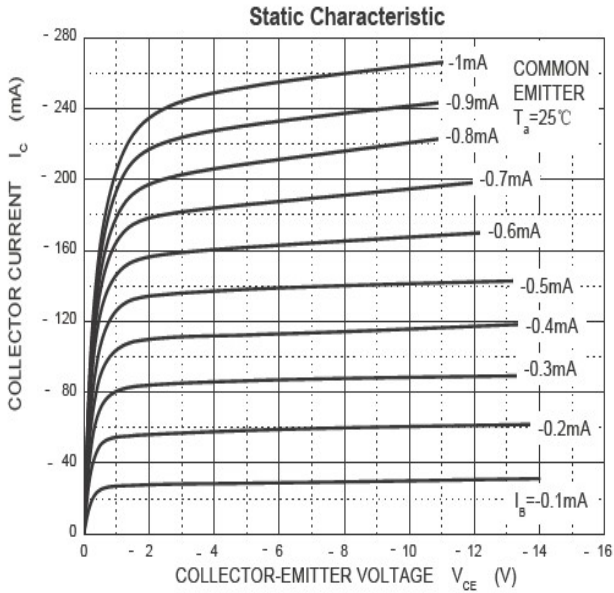
Parameter	Symbol	Test Conditions	Limits		Unit
			Min	Max	
Collector-base breakdown voltage	V(BR)CBO	IC=-10uA, IE=0	-50		V
Collector-emitter breakdown voltage	V(BR)CEO	IC=-10mA, IB=0	-45		
Emitter-base breakdown voltage	V(BR)EBO	IE=-1uA, IC=0	-5		
Collector cut-off current	ICBO	VCE=-45V, IE=0		-100	nA
Emitter cut-off current	IEBO	VEB=-4V, IC=0		-100	nA
DC current gain	hFE(1)	VCE=-1V, IC=-100mA	100	600	
	hFE(2)	VCE=-1V, IC=-500mA	40		
Collector-emitter saturation voltage	VCE(sat)	IC=-500mA, IB=-50mA		-0.7	V
Base -emitter saturation voltage	VBE(sat)	IC=-500mA, IB=-50mA		-1.20	
Transition frequency	fT	VCE=-5V, IC=10mA, f=100 MHz	100		MHz

Classification OF h_{FE(1)}

RANK	BC807 -16	BC807 -25	BC807 -40
RANGE	100-250	160-400	250-600

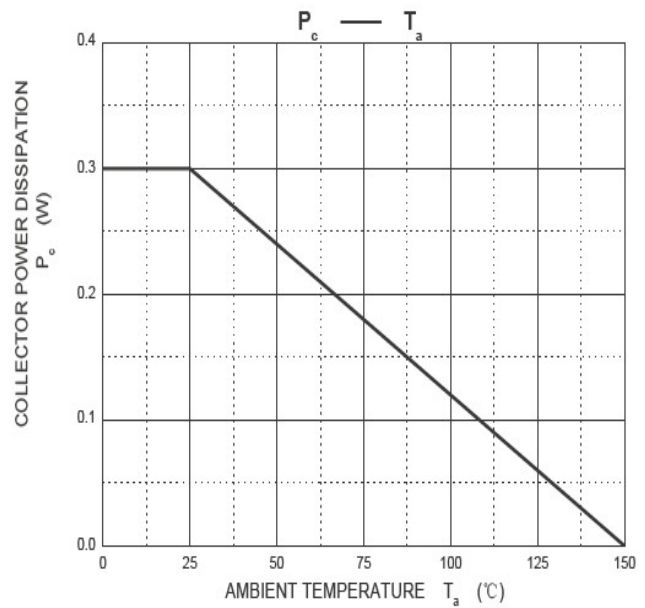
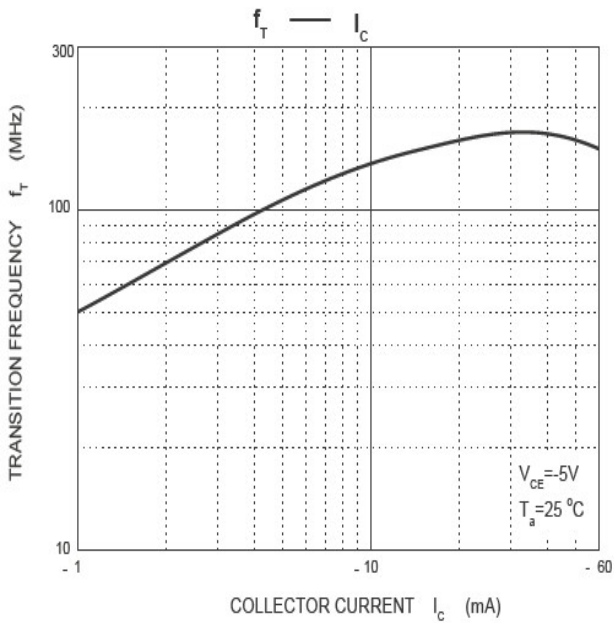
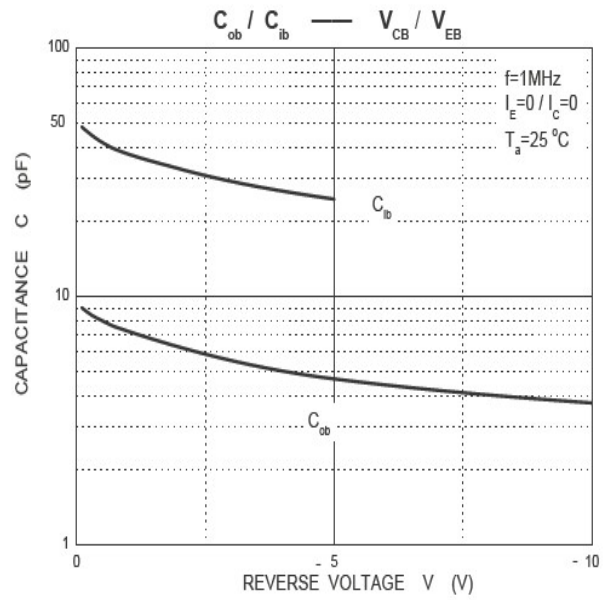
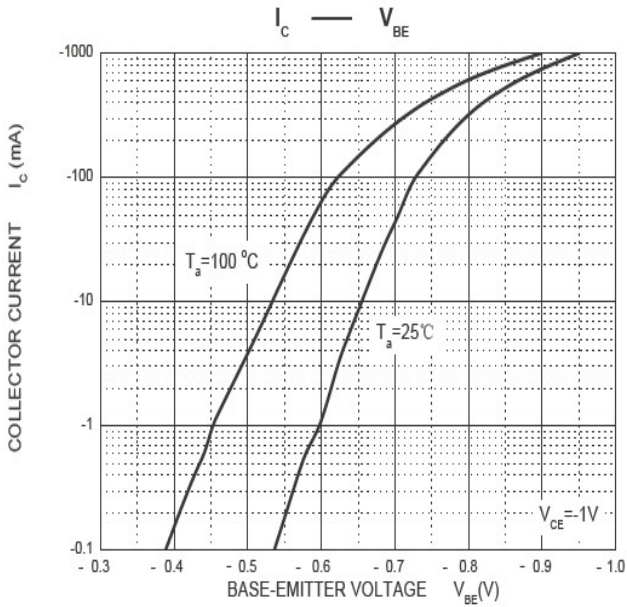
Ratings and Characteristics Curves

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



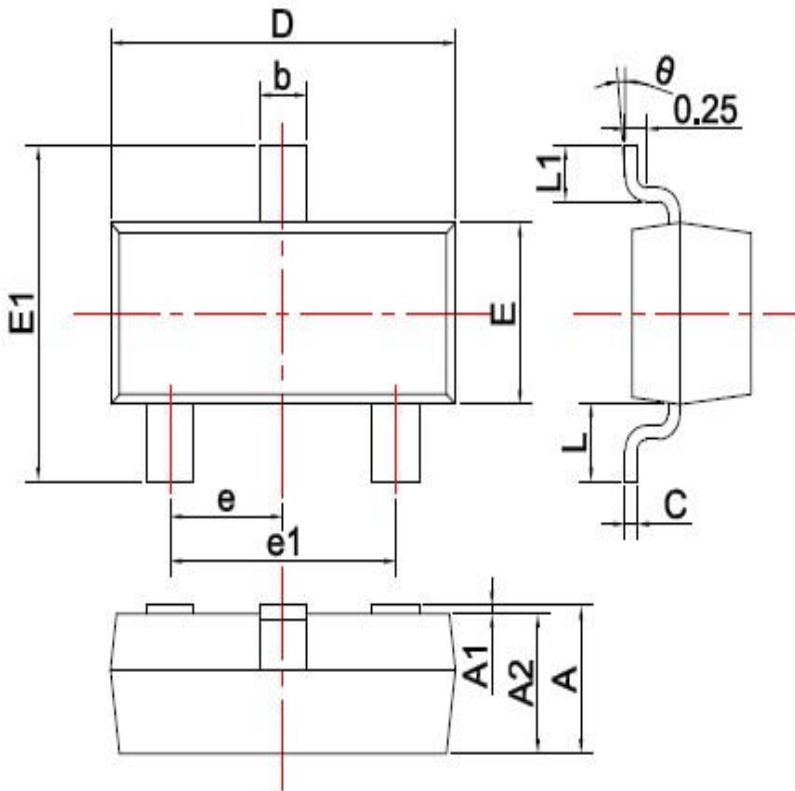
Ratings and Characteristics Curves

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



Package Outline Dimensions

millimeters



SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.900	1.150
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.150
D	2.800	3.000
E	1.200	1.400
E1	2.250	2.550
e	0.950TYP	
e1	1.800	2.000
L	0.550REF	
L1	0.300	0.500
θ	0°	8°

Revision History

Document Version	Date of release	Description of changes
Rev.A	2017.11.13	First issue

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