

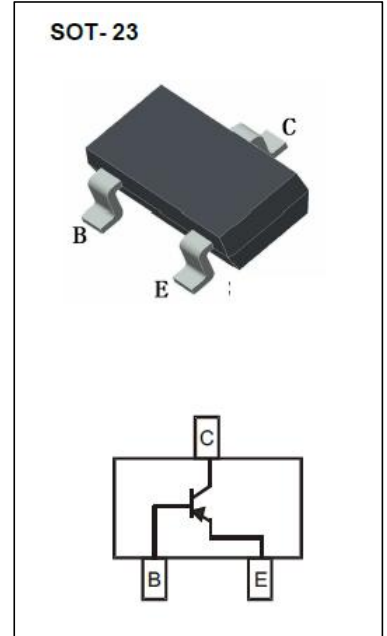


SOT-23 Plastic-Encapsulate Transistors

BC807 TRANSISTOR (PNP)

FEATURES

- High collector current
- High current gain
- Low collector-emitter saturation voltage
- Complementary types: BC817(NPN)
- AEC Q101 Qualified



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	-500	mA
P _C	Collector Power Dissipation	300	mW
R _{θJA}	Thermal Resistance From Junction To Ambient	417	°C/W
T _J , T _{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

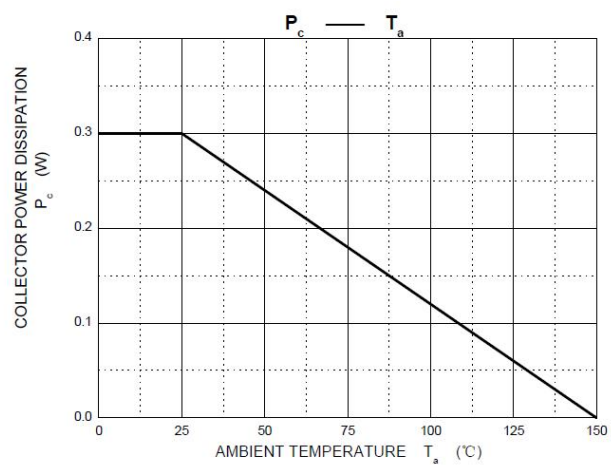
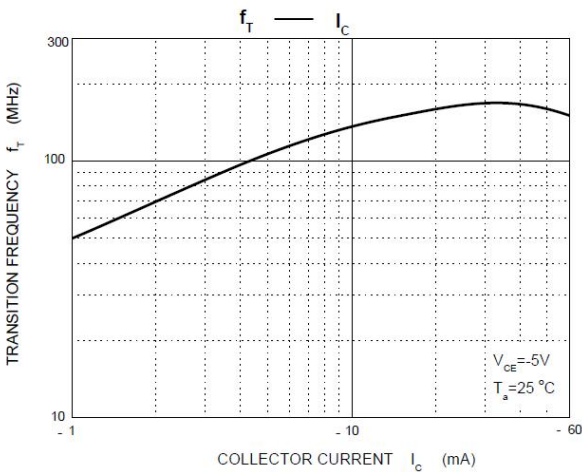
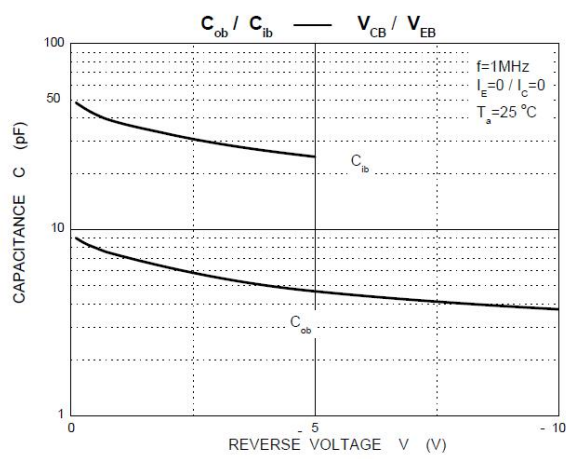
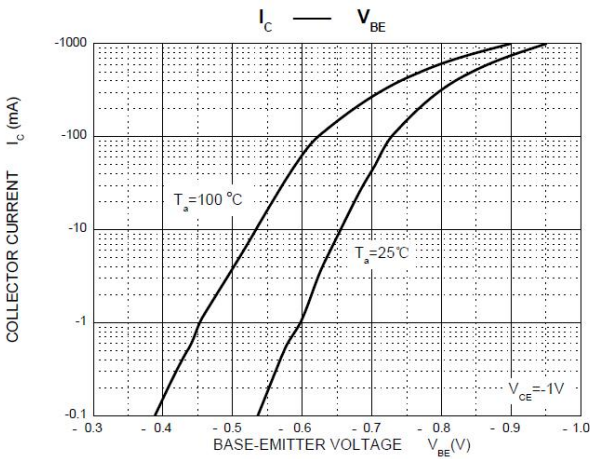
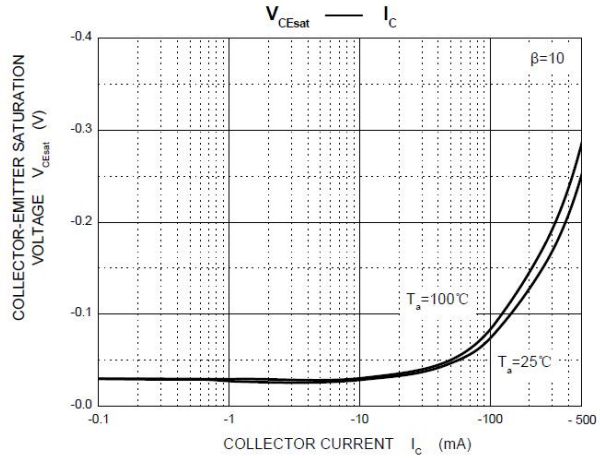
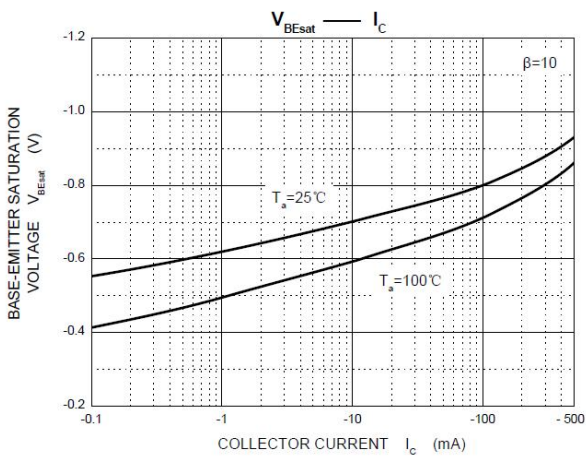
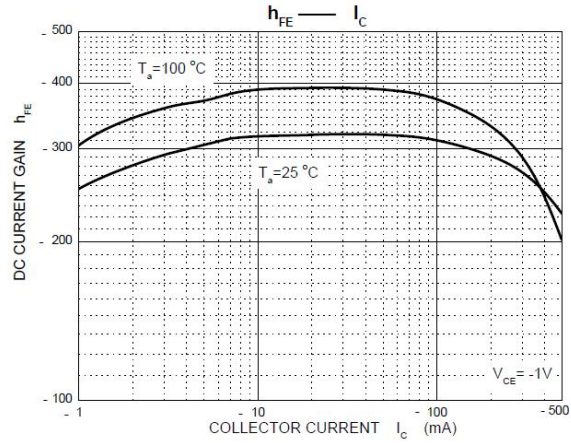
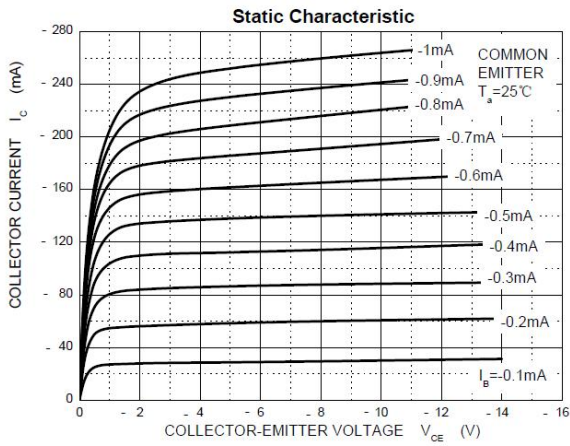
ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	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} = -45 V, I _E =0			0.1	μA
Emitter cut-off current	I _{EBO}	V _{EB} = -4V, 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 = 50mA			0.7	V
Base-emitter saturation voltage	V _{BE(sat)}	I _C =-500mA, I _B =-50mA			1.2	V
Transition frequency	f _T	V _{CE} =-5 V, I _C =-10mA f=100MHz	100			MHz

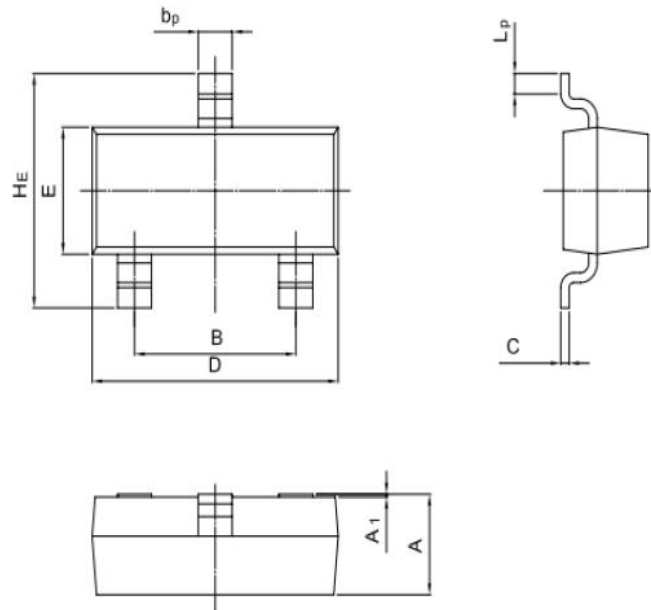
CLASSIFICATION OF h_{FE}

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

Typical Characteristics

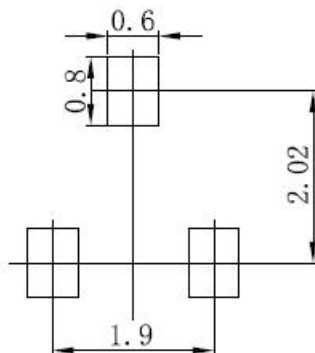


SOT-23 Package Outline Dimensions



UNIT	A	B	b_p	C	D	E	H_E	A_1	L_p
mm	1.40 0.95	2.04 1.78	0.50 0.35	0.19 0.08	3.10 2.70	1.65 1.20	3.00 2.20	0.100 0.013	0.50 0.20

SOT-23 Suggested Pad Layout



Note:

1. Controlling dimension: In millimeters.
2. General tolerance: ± 0.05 mm.
3. The pad layout is for reference purposes only.

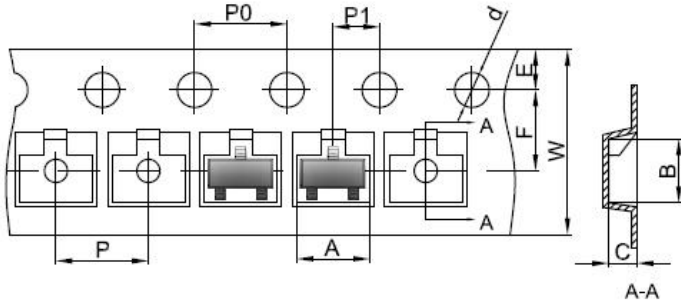
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Reel Taping Specifications For Surface Mount Devices-SOT-23

SOT-23 Embossed Carrier Tape



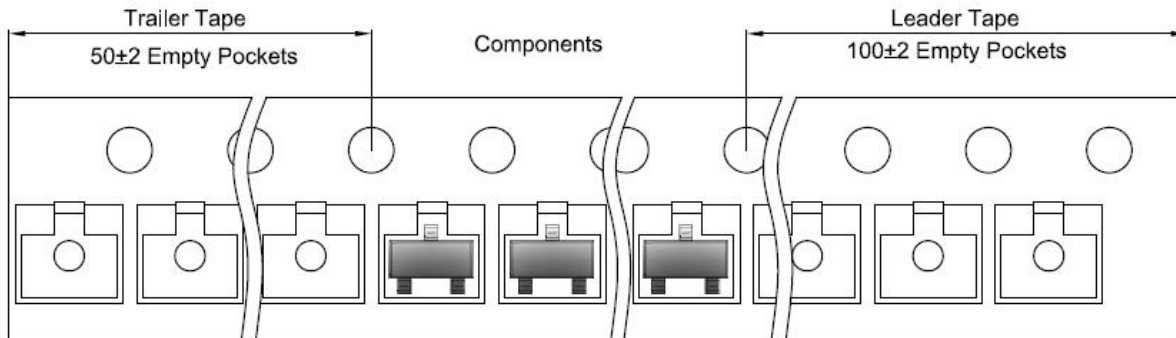
Packaging Description:

SOT-23 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000 units per 7" or 17.8cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

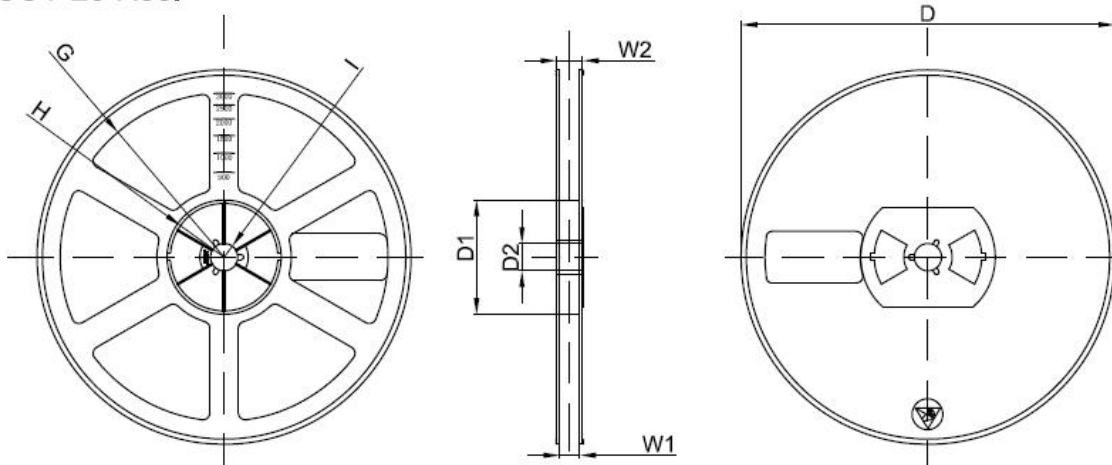
Dimensions are in millimeter

Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-23	3.15	2.77	1.22	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

SOT-23 Tape Leader and Trailer



SOT-23 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	438×438×230	

Date of change	Rev #	revise content
2023/08/23	A/0	/