BORN SEMICONDUCTOR

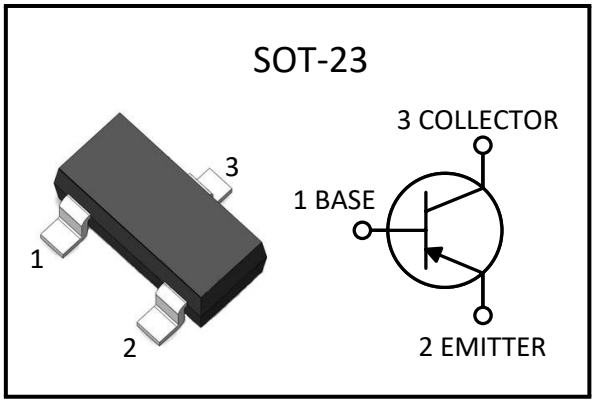
BC807

PNP Plastic-Encapsulate Transistor

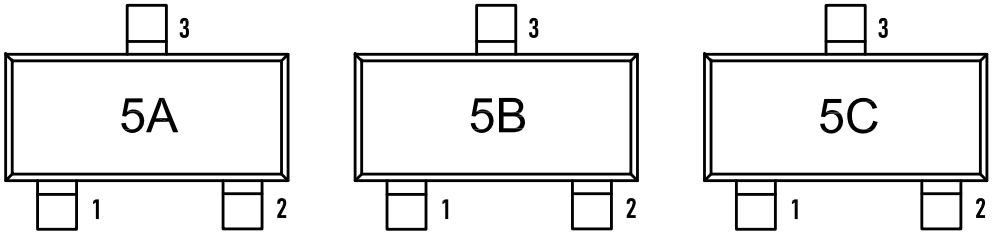
Features

- V_{CE}=-45V
- I_C=-0.5A
- f_T=100MHZ @V_{CE}=-5V, I_C=-10mA,f=100MHz
- General power amplifier and switching applications.
- High I_C ,complementary pair with BC817.

Package



Marking



BC807-16 BC807-25 BC807-40

Ordering information

Order code	Package	Marking	Base qty	h_{FE}
BC807-16	SOT-23	5A	3K	100~250
BC807-25	SOT-23	5B	3K	160~400
BC807-40	SOT-23	5C	3K	250~600

Absolute 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	-0.5	A
P_C	Collector Power Dissipation	300	mW
$R_{\Theta JA}$	Thermal Resistance From Junction To Ambient	400	°C/W
T_J ,T_{stg}	Operation Junction And Storage Temperature Range	-55 to + 150	°C

BORN SEMICONDUCTOR , INC. ALL RIGHT RESERVED

Specifications are subject to change without notice.
Please refer to http://*www.born-tw.com* for current information.

Revision: 2022-Jan-1-A

BC807

PNP Plastic-Encapsulate Transistor

Electrical Characteristics (T_A=+25°C, unless otherwise specified)

Symbol	Parameter	Test condition	Min.	Typ.	Max.	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	I_C=-10μA, I_E=0	-50	–	–	V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	I_C=-10mA,I_B=0	-45	–	–	
$V_{(BR)EBO}$	Emitter-base breakdown voltage	I_E=-1μA,I_C=0	-5	–	–	
I_{CBO}	Collector cut-off current	V_{CB}=-45V,I_E=0	–	–	-0.1	uA
I_{EBO}	Emitter cut-off current	V_{EB}=-4V,I_C=0	–	–	-0.1	
$h_{FE(1)}$	DC current gain	V_{CE}=-1V,I_C=-100mA	100	–	600	
$h_{FE(2)}$	DC current gain	V_{CE}=-1V,I_C=-500mA	40	–	–	
$V_{CE(sat)}$	Collector-emitter saturation voltage	I_C=-500mA,I_B=-50mA	–	–	-0.7	V
$V_{BE(sat)}$	Base-emitter saturation voltage	I_C=-500mA,I_B=-50mA	–	–	-1.2	
f_T	Transition frequency	V_{CE}=-5V,I_C=-10mA,f=100MHZ	100	–	–	MHZ
h_{FE}Rank	BC807-16(100~250)	BC807-25(160~400)	BC807-40(250~600)			

BORN SEMICONDUCTOR , INC. ALL RIGHT RESERVED

BC807

PNP Plastic-Encapsulate Transistor

Typical Performance Characteristics(T_J = 25 °C, unless otherwise noted)

Figure 1 : Static Characteristic

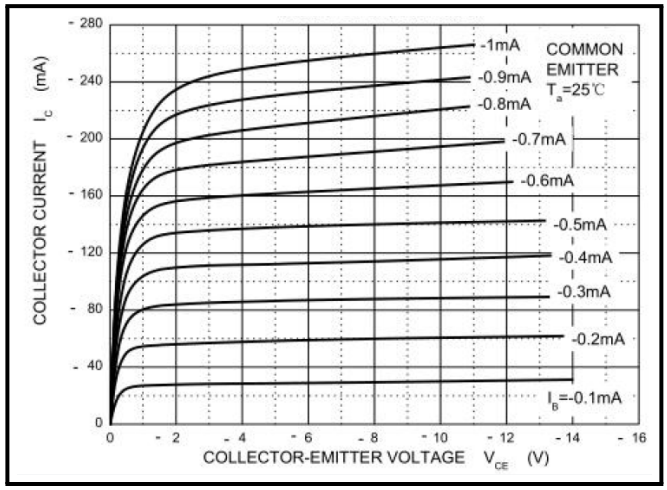


Figure 2 :h_{FE}–I_C

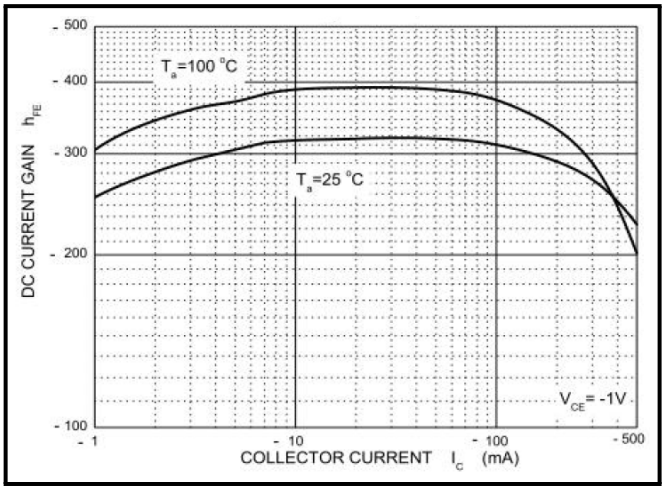


Figure 3 :V_{BEsat}–I_C

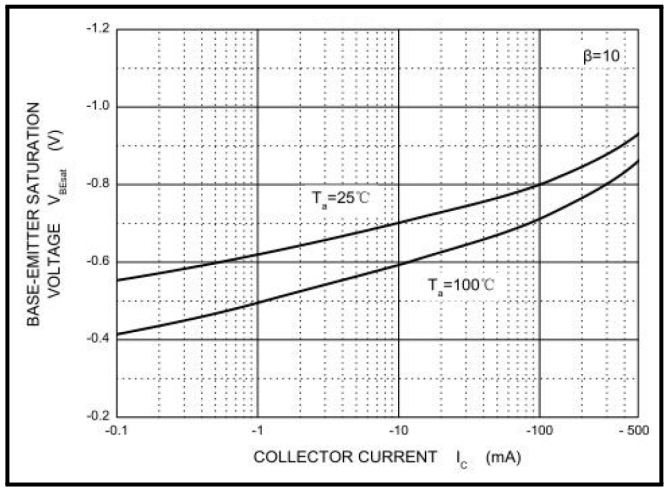
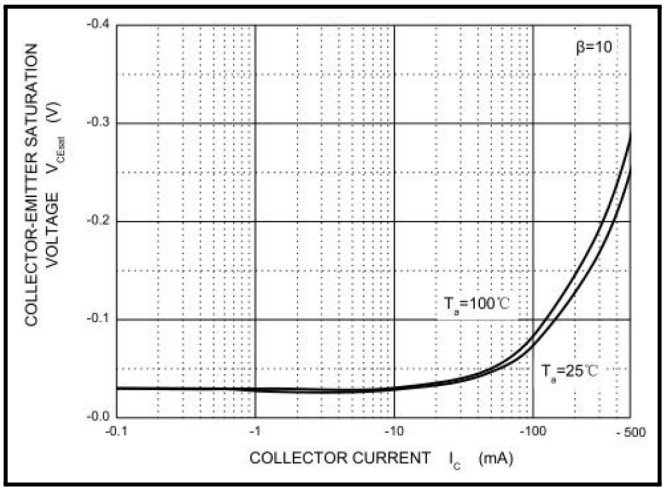


Figure 4 : V_{CEsat}–I_C



BORN SEMICONDUCTOR , INC. ALL RIGHT RESERVED

Specifications are subject to change without notice.
Please refer to http://*www.born-tw.com* for current information.

BC807

PNP Plastic-Encapsulate Transistor

Typical Performance Characteristics(T_J = 25 °C, unless otherwise noted)

Figure 5 : I_C–V_{BE}

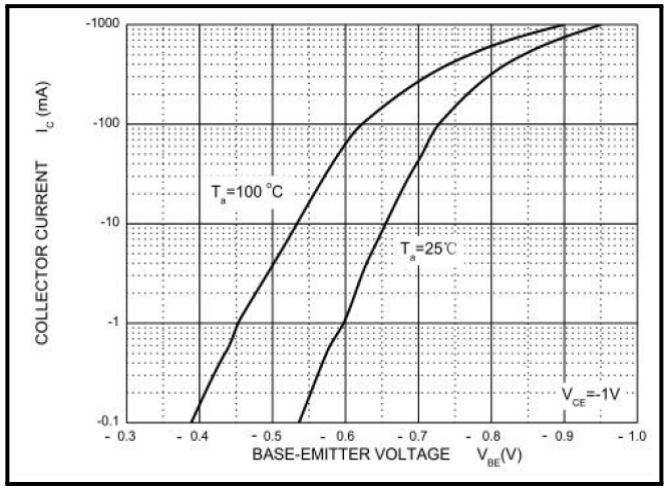


Figure 6 :C_{ob}/C_{ib}–V_{CB}/V_{EB}

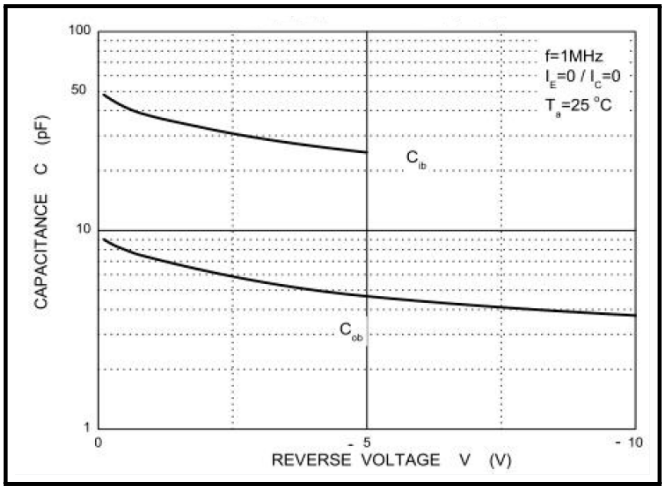


Figure 7 :f_T–I_C

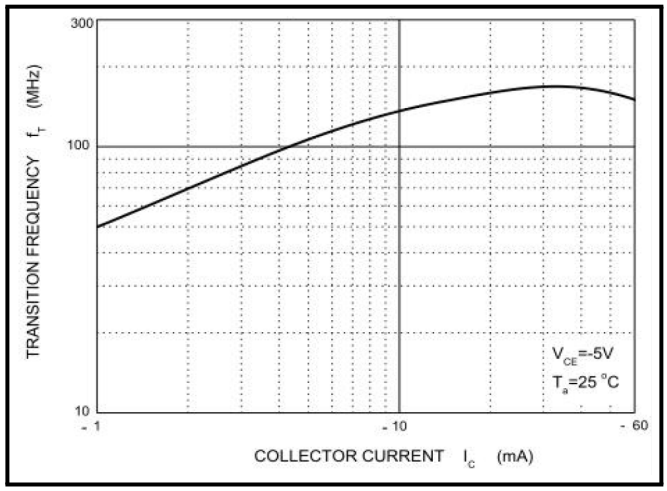
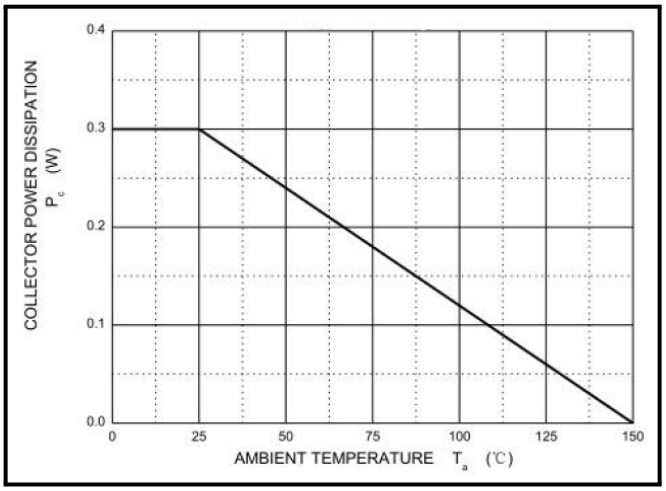


Figure 8 : P_C–T_A



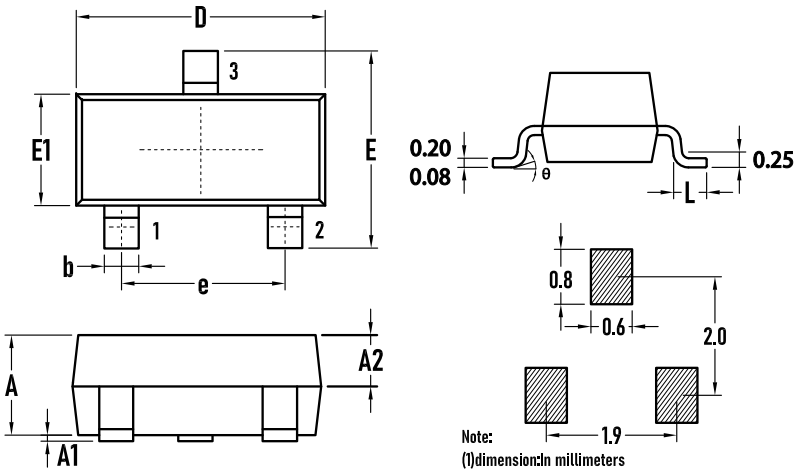
BORN SEMICONDUCTOR , INC. ALL RIGHT RESERVED

Specifications are subject to change without notice.
Please refer to http://*www.born-tw.com* for current information.

BC807

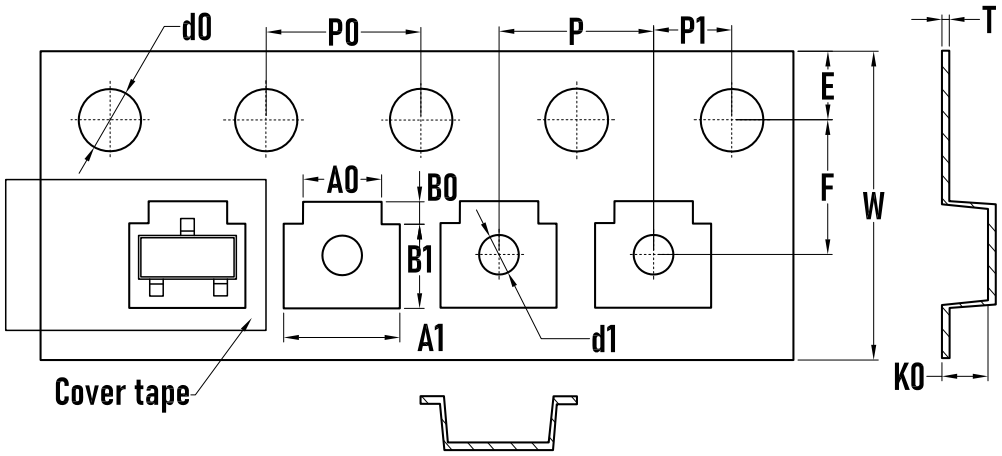
PNP Plastic-Encapsulate Transistor

Outline Drawing - SOT-23



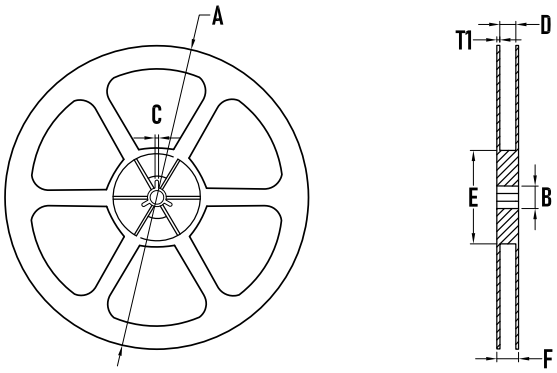
SYMBOL	MILLIMETER		
	MIN.	Typ	MAX
A	0.90	1.00	1.10
A1	0.01	–	0.10
A2	0.50	0.60	0.70
D	2.80	2.90	3.00
b	0.25	0.35	0.45
E	2.10	2.30	2.50
E1	1.20	1.30	1.40
e	1.80	1.90	2.00
L	0.25	0.35	0.45
θ	0	–	8°

Packaging Tape - SOT-23



SYMBOL	MILLIMETER
A0	2.10±0.10
A1	3.10±0.10
B0	0.65±0.10
B1	2.75±0.10
d0	1.55±0.10
d1	1.00±0.05
E	1.75±0.10
F	3.50±0.10
K0	1.10±0.10
P	4.00±0.10
P0	4.00±0.10
P1	2.00±0.10
W	8.00±0.30
T	0.20 ±0.05

Packaging Reel



SYMBOL	MILLIMETER
A	177.8±0.2
B	3.1
C	13.50
D	9.6±0.3
E	75±0.2
F	12.3±0.3
T1	1.0±0.2
Quantity	3000PCS

BORN SEMICONDUCTOR , INC. ALL RIGHT RESERVED

Specifications are subject to change without notice.
Please refer to http://*www.born-tw.com* for current information.

Revision: 2022-Jan-1-A