

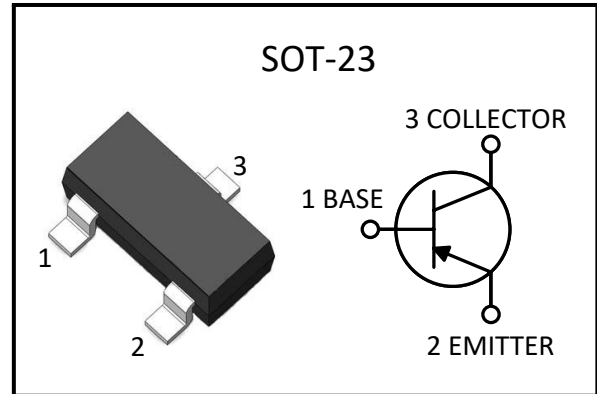
# BC807

PNP Plastic-Encapsulate Transistor

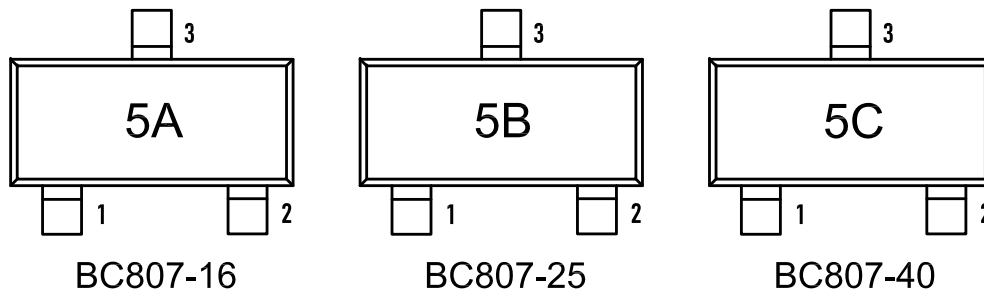
## Features

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

## Package



## Marking



## 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 @ $T_A = 25^\circ C$ 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	$^\circ C/W$
$T_J, T_{stg}$	Operation Junction And Storage Temperature Range	-55 to + 150	$^\circ C$



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**Electrical Characteristics** ( $T_A=+25^{\circ}\text{C}$ , unless otherwise specified)

Symbol	Parameter	Test condition	Min.	Typ.	Max.	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=-10\mu\text{A}, I_E=0$	-50	-	-	V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=-10\text{mA}, I_B=0$	-45	-	-	
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=-1\mu\text{A}, I_C=0$	-5	-	-	
$I_{CBO}$	Collector cut-off current	$V_{CB}=-45\text{V}, I_E=0$	-	-	-0.1	uA
$I_{EBO}$	Emitter cut-off current	$V_{EB}=-4\text{V}, I_C=0$	-	-	-0.1	
$h_{FE(1)}$	DC current gain	$V_{CE}=-1\text{V}, I_C=-100\text{mA}$	100	-	600	
$h_{FE(2)}$	DC current gain	$V_{CE}=-1\text{V}, I_C=-500\text{mA}$	40	-	-	
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C=-500\text{mA}, I_B=-50\text{mA}$	-	-	-0.7	V
$V_{BE(sat)}$	Base-emitter saturation voltage	$I_C=-500\text{mA}, I_B=-50\text{mA}$	-	-	-1.2	
$f_T$	Transition frequency	$V_{CE}=-5\text{V}, I_C=-10\text{mA}, f=100\text{MHZ}$	100	-	-	MHZ
$h_{FE}\text{Rank}$	BC807-16(120~200)	BC807-25(160~400)	BC807-40(250~600)			



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Typical Performance Characteristics ( $T_J = 25^\circ\text{C}$ , unless otherwise noted)

Figure 1 : Static Characteristic

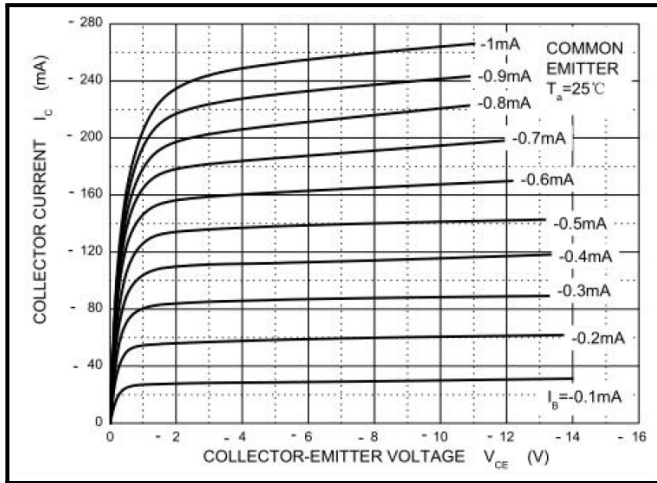


Figure 2 :  $h_{FE}-I_C$

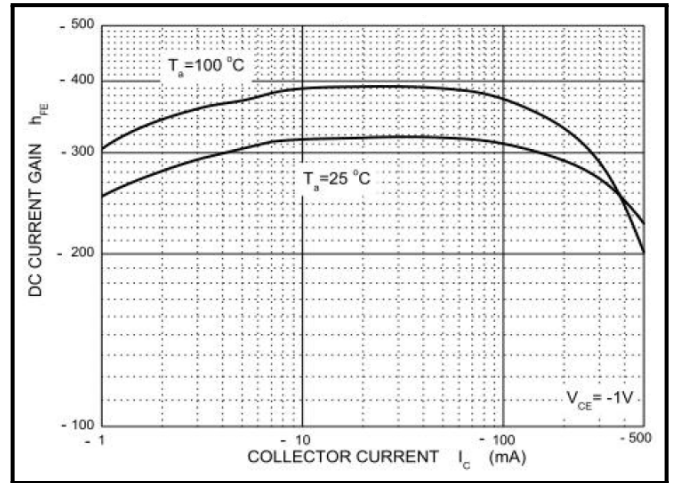


Figure 3 :  $V_{BEsat}-I_C$

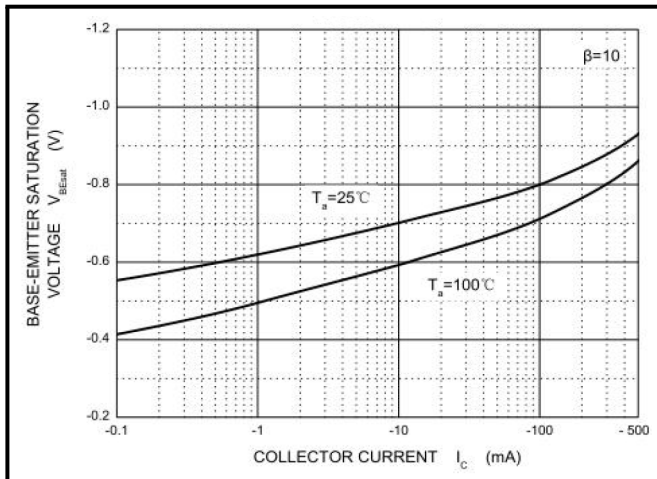
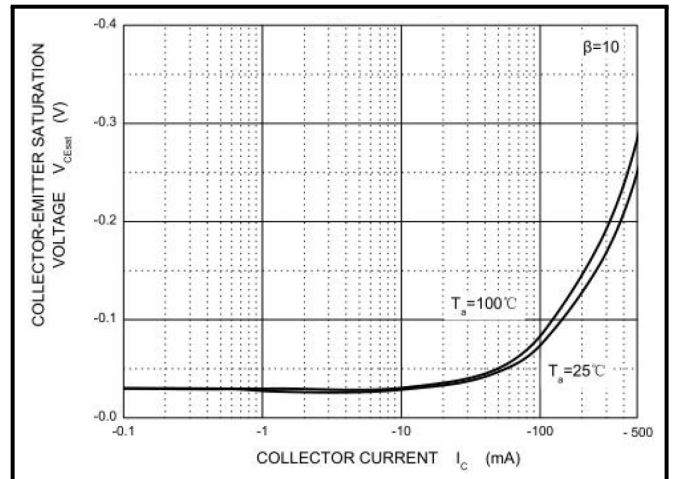


Figure 4 :  $V_{CEsat}-I_C$



# BC807

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Typical Performance Characteristics ( $T_J = 25^\circ\text{C}$ , unless otherwise noted)

Figure 5 :  $I_C - V_{BE}$

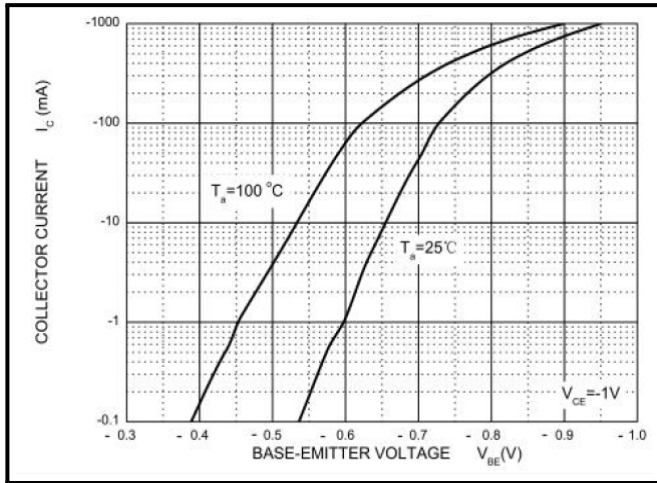


Figure 6 :  $C_{ob}/C_{ib} - V_{CB}/V_{EB}$

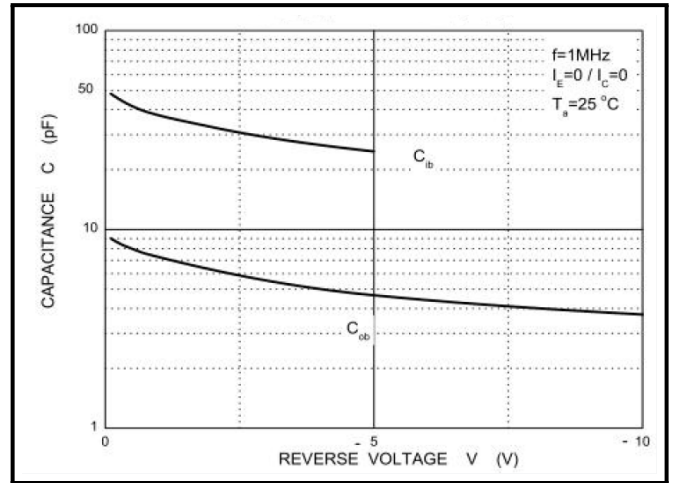


Figure 7 :  $f_T - I_C$

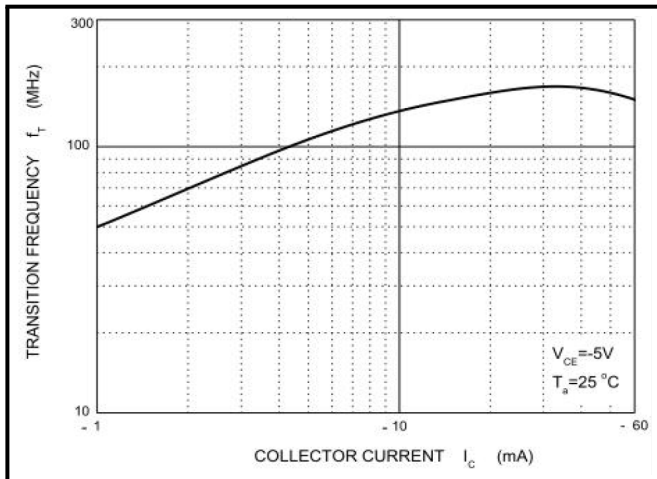
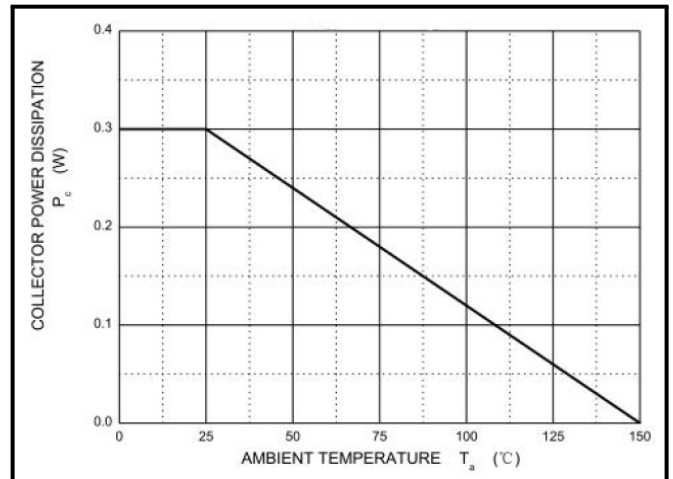


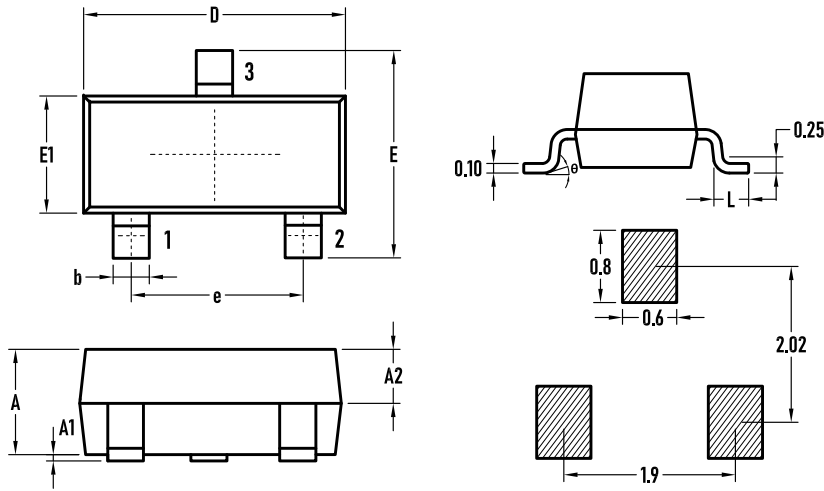
Figure 8 :  $P_C - T_A$



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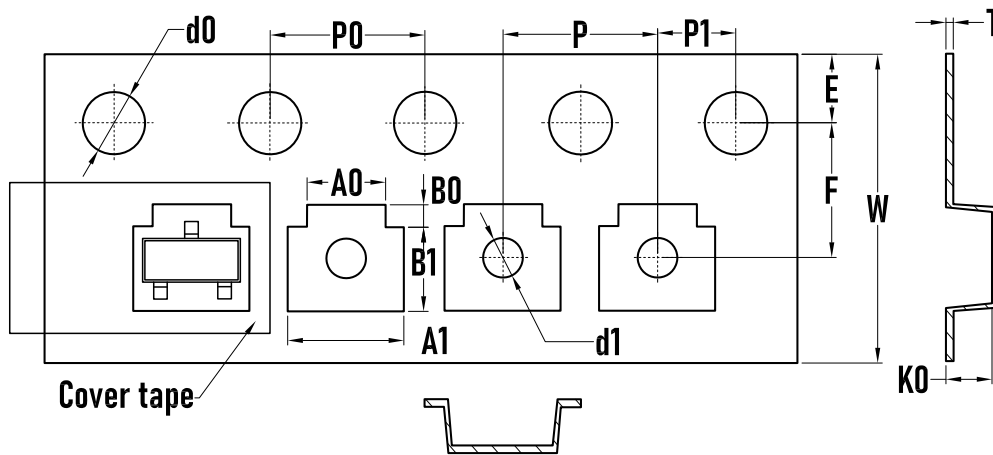
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## Outline Drawing - SOT-23



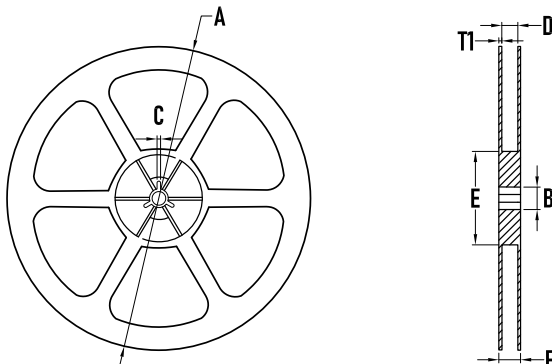
SYMBOL	MILLIMETER		
	MIN.	Typ	MAX
A	0.95	1.00	—
A1	0.02	0.06	0.10
A2	—	0.60	—
D	2.85	2.90	2.95
b	0.37	0.40	0.43
E	2.35	2.40	2.45
E1	1.25	1.30	1.35
e	1.85	1.90	1.95
L	0.35	0.40	0.48
$\theta$	0	—	6°

## 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

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Specifications are subject to change without notice.

Please refer to <http://www.born-tw.com> for current information.

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