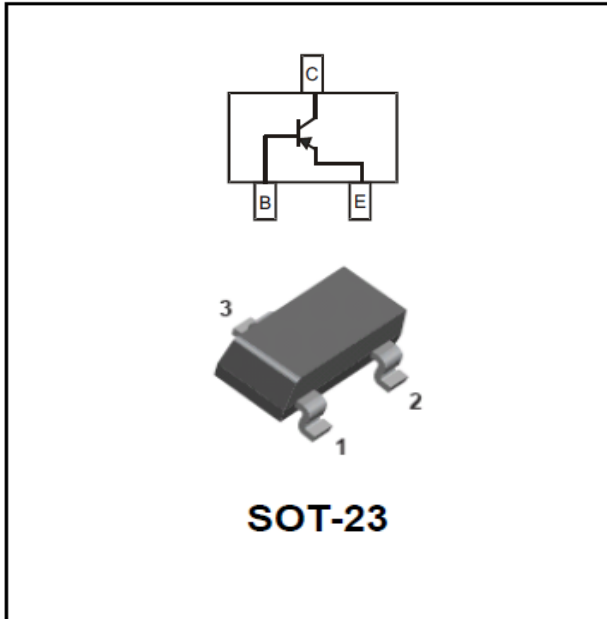


PNP General Purpose Amplifier



Features

- Capable of 0.3Watts(TA=25°C) of Power Dissipation
- Collector-current 0.5A
- Collector-base Voltage 50V
- Epoxy meets UL-94 V-0 flammability rating
- Halogen free available upon request by adding suffix "HF"
- Moisture Sensitivity Level 1
- Device Marking: BC807-16 5A
BC807-25 5B
BC807-40 5C



■ Off Characteristics

Item	Symbol	Unit	Conditions	MIN	MAX
Collector-Emitter Voltage*	V_{CE0}	V	$I_C=10\text{mAdc}$, $I_E=0$	45	
Collector-Base Voltage	V_{CBO}	V	$I_C=10\text{uAdc}$, $I_E=0$	50	
Emitter-Base Voltage	V_{EBO}	V	$I_E=1.0\text{uAdc}$, $I_C=0$	5.0	
Emitter Cutoff Current	I_{EBO}	uAdc	$V_{EB}=4.0\text{Vdc}$, $I_C=0$		0.1
Collector Cutoff Current	I_{CBO}	uAdc	$V_{CB}=45\text{Vdc}$, $I_E=0$		0.1
Collector Cutoff Current	I_{CE0}	uAdc	$V_{CE}=40\text{Vdc}$, $I_E=0$		0.2
Power Dissipation	P_D	mW		300	
Operation Junction Temperature	T_J	°C		-55 to +150	
Storage Temperature	T_{STG}	°C		-55 to +150	

*Pulse Width $\leq 300\text{us}$, Duty Cycle $\leq 2.0\%$

■ On Characteristics

Item		Symbol	Unit	Conditions	Min	Max
DC Current Gain	BC807-16	$h_{FE(1)}$		$I_C=100mA, V_{CE}=1.0Vdc$	100	250
	BC807-25				160	400
	BC807-40				250	600
DC Current Gain		$h_{FE(2)}$		$I_C=500mA, V_{CE}=1.0Vdc$	40	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	V	$I_C=500mA, I_B=50mA$		0.7
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	V	$I_C=500mA, I_B=50mA$		1.2

■ Small-signal Characteristics

Item	Symbol	Unit	Conditions	Min	Max
Current Gain-Bandwidth Product	f_T	MHz	$I_C=10mA, V_{CE}=5.0Vdc, f=100MHz$	100	

■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
BC807-16- Thru BC807-40	F2	Approximate 0.008	3000	30000	120000	7" reel

■ Characteristics (Typical)

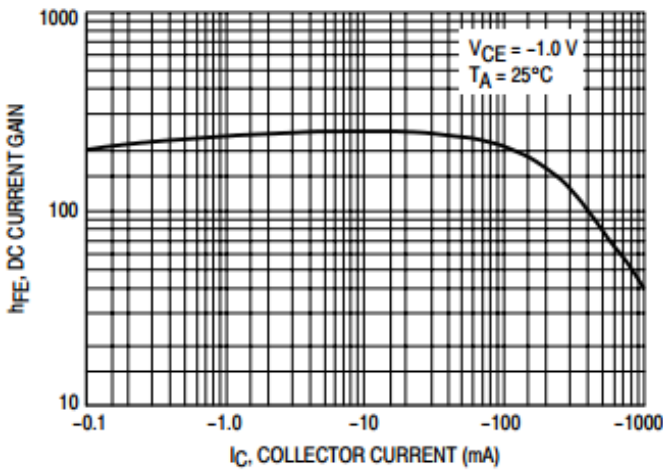


Figure 1. DC Current Gain

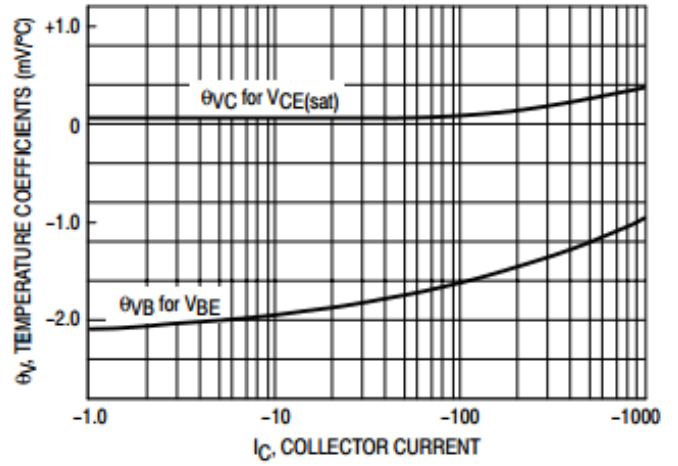


Figure 4. Temperature Coefficients

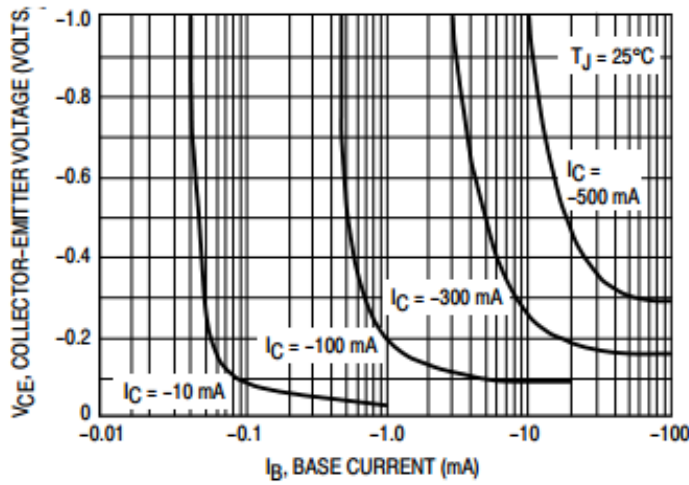


Figure 2. Saturation Region

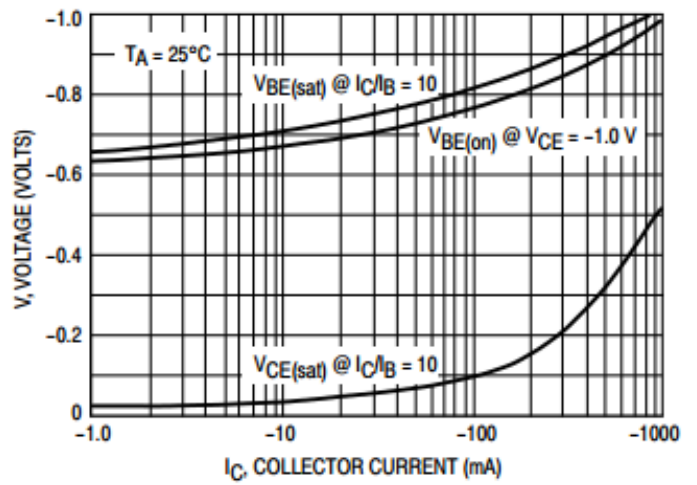


Figure 5. "On" Voltages

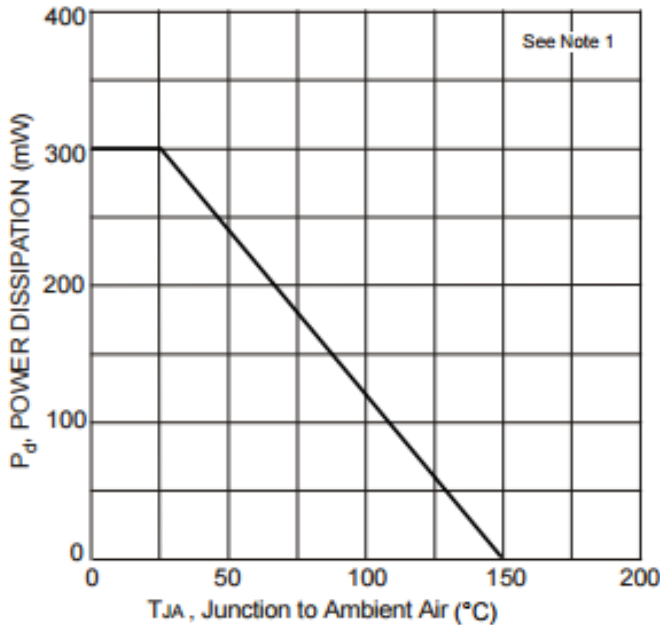
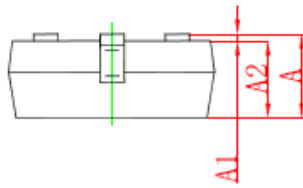
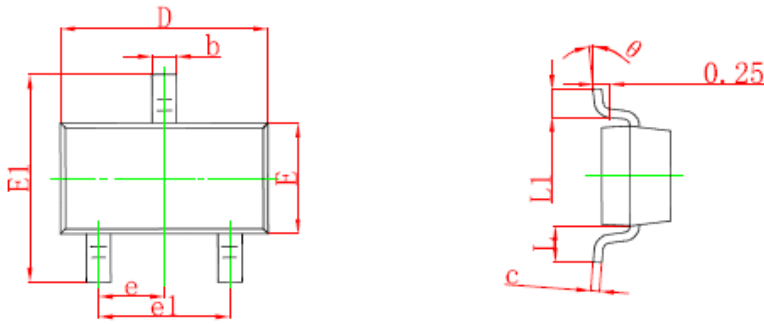


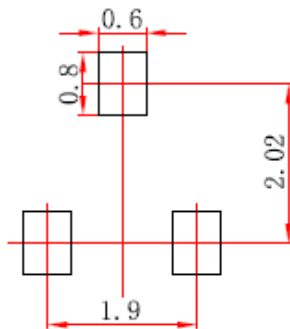
Figure 3. Power Derating Curve

■ SOT-23 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
theta	0°	8°	0°	8°

■ SOT-23 Suggested Pad Layout



- Note:
1. Controlling dimension: In millimeters.
 2. General tolerance: $\pm 0.05\text{mm}$.
 3. The pad layout is for reference purposes only.

Disclaimers

These materials are intended as a reference to assist our customers in the selection of the Steifpower Technology products best suited to the customer's applications, they do not convey any license under any intellectual property rights, or any other rights, belonging to Steifpower Technology or third party. Steifpower Technology assumes no responsibility for any damage, or infringement of any third-party's rights, originating in the use of any product data, diagrams, charts, programs, algorithms, or circuit application examples contained in these materials. All information contained in these materials, including product data, diagrams, charts, programs and algorithms represents information on products at the time of publication of these materials, and is subject to change by Steifpower Technology without notice due to product improvements or other reasons.

It is therefore recommended that customers contact Steifpower Technology or an authorized Steifpower Technology representative for the latest product information before purchasing a product listed herein.

The information described here may contain technical inaccuracies or typographical errors.

Steifpower Technology assumes no responsibility for any damage, liability, or other loss arising from these inaccuracies or errors.

Please also pay attention to information published by Steifpower Technology by various means including our website home page (<http://www.steifpower.com>).

When using any or all of the information contained in these materials, including product data diagrams, charts, programs, and algorithms, please be sure to evaluate all information as a total system before making a final decision on the applicability of the information and products.

Steifpower Technology assumes no responsibility for any damage, liability or other loss resulting from the information contained herein.

The prior written approval of Steifpower Technology is necessary to reprint or reproduce in whole or in part these materials.

Please contact Steifpower Technology or an authorized distributor for further details on these materials or the products contained herein.