



Micro Commercial Components

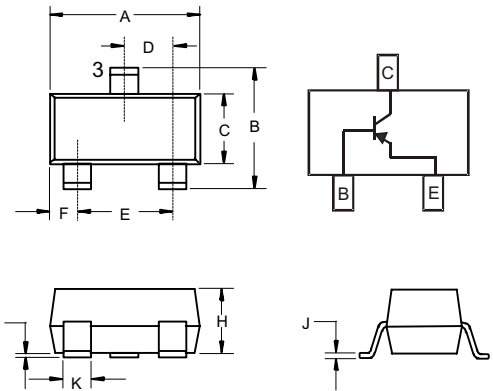


Micro Commercial Components
130 W Cochran St, Unit B
Simi Valley, CA 93065
Tel:818-701-4933

BC807-16
BC807-25
BC807-40

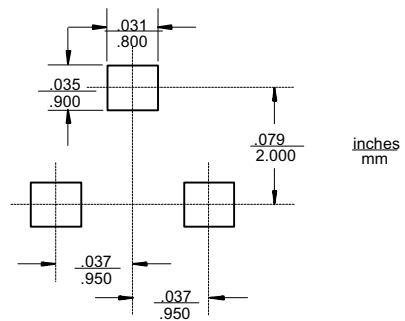
PNP Silicon
General Purpose
Transistors

SOT-23



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.110	.120	2.80	3.04	
B	.083	.104	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

Suggested Solder Pad Layout



Features

- Halogen free available upon request by adding suffix "-HF"
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Capable of 0.3Watts of Power Dissipation.
- Continuous Collector-current I_C : 0.5A
- Peak Collector-current I_{CM} : 1A
- Collector-base Voltage 50V
- Operating and storage junction temperature range: -55°C to $+150^{\circ}\text{C}$
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

Mechanical Data

- Case: SOT-23 Molded Plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Weight: 0.008 grams (approx.)
- Device Marking: BC807-16 5A
BC807-25 5B
BC807-40 5C

Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage ($I_C=10\text{mAdc}$, $I_B=0$)	45	---	Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ($I_C=10\mu\text{Adc}$, $I_E=0$)	50	---	Vdc
$V_{(BR)EBO}$	Collector-Emitter Breakdown Voltage ($I_C=1.0\mu\text{Adc}$, $I_C=0$)	5.0	---	Vdc
I_{CBO}	Collector Cutoff Current ($V_{CB}=45\text{Vdc}$, $I_E=0$)	---	0.1	μAdc
I_{CEO}	Collector Cutoff Current ($V_{CE}=40\text{Vdc}$, $I_E=0$)	---	0.2	μAdc
I_{EBO}	Emitter Cutoff Current ($V_{EB}=4.0\text{Vdc}$, $I_C=0$)	---	0.1	μAdc

ON CHARACTERISTICS

$h_{FE(1)}$	DC Current Gain ($I_C=100\text{mAdc}$, $V_{CE}=1.0\text{Vdc}$) BC807-16 BC807-25 BC807-40	100 160 250	250 400 600	---
$h_{FE(2)}$	DC Current Gain ($I_C=500\text{mAdc}$, $V_{CE}=1.0\text{Vdc}$)	40	---	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ($I_C=500\text{mAdc}$, $I_B=50\text{mAdc}$)	---	0.7	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage ($I_C=500\text{mAdc}$, $I_B=50\text{mAdc}$)	---	1.2	Vdc
$R_{\theta JA}$	$T_A = 25^{\circ}\text{C}$	---	403	$^{\circ}\text{C/W}$

SMALL SIGNAL CHARACTERISTICS

f_T	Current-Gain-Bandwidth Product ($V_{CE}=5.0\text{V}$, $f=100\text{MHz}$, $I_C=10\text{mA}$)	100	---	MHz
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BC807-16 thru BC807-40

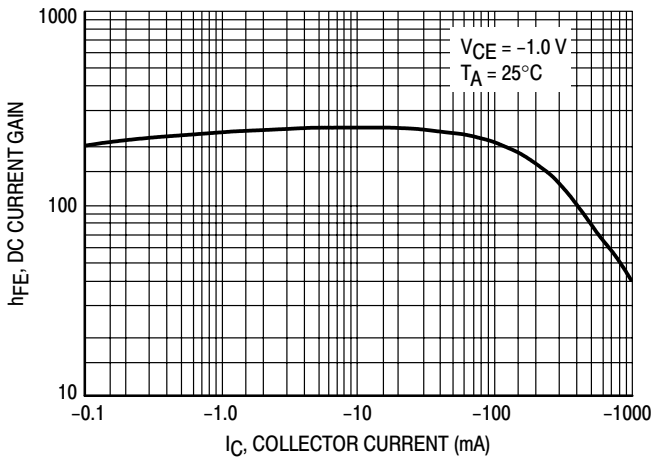


Figure 1. DC Current Gain

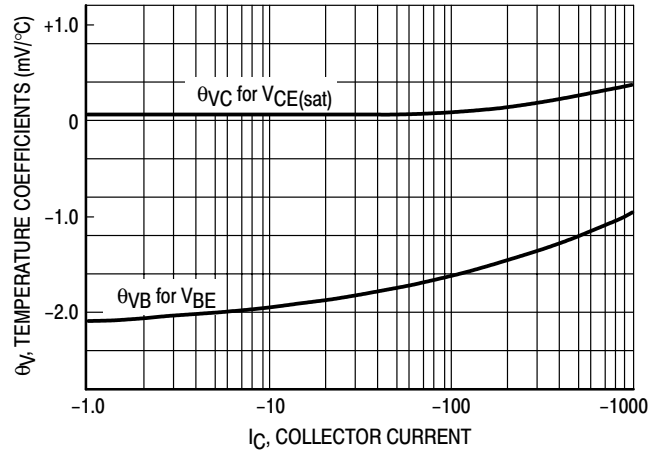


Figure 4. Temperature Coefficients

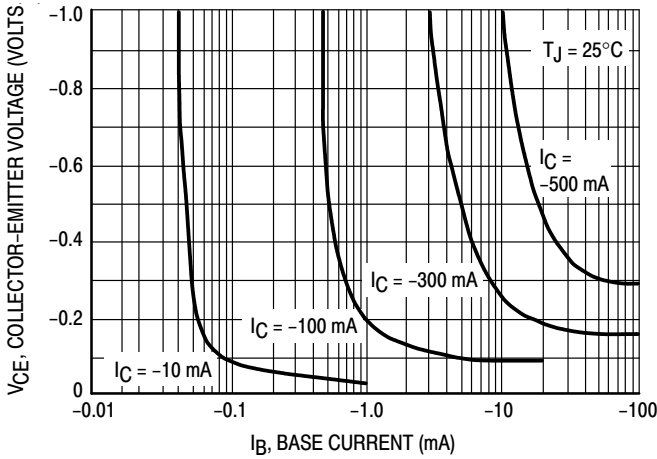


Figure 2. Saturation Region

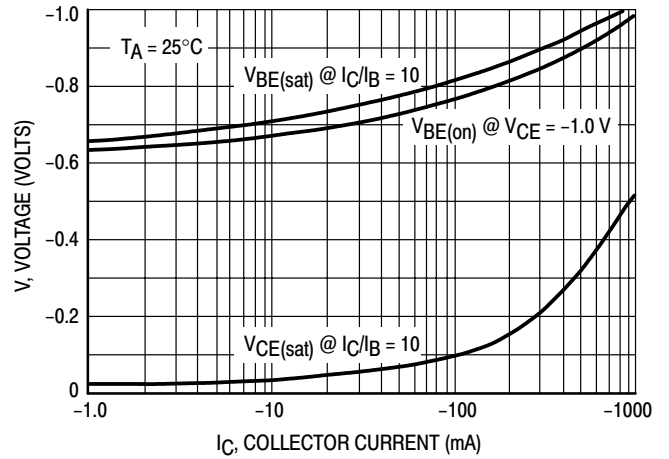


Figure 5. "On" Voltages

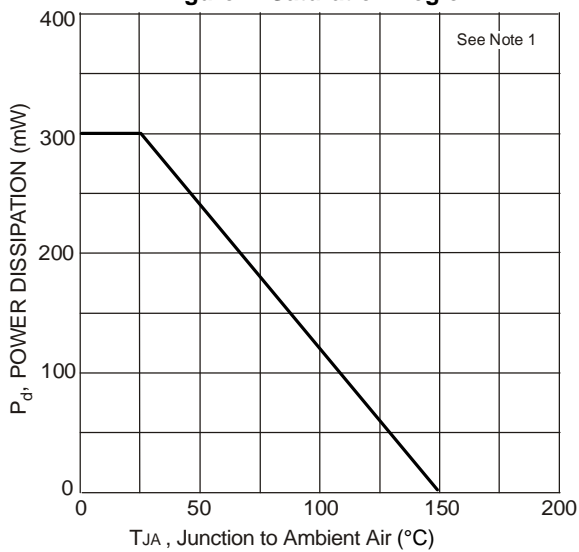


Figure 3. Power Derating Curve



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Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel; 3Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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