



Micro Commercial Components

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**BC807-16**  
**BC807-25**  
**BC807-40**

## Features

- Capable of 0.3Watts of Power Dissipation.
- Collector-current 0.5A
- Collector-base Voltage 50V
- Operating and storage junction temperature range: -55°C to +150°C
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL Rating 1

**PNP Silicon**  
**General Purpose**  
**Transistors**

## Mechanical Data

- Case: SOT-23 Molded Plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Weight: 0.008 grams (approx.)
- Device Marking: BC807-16 5A1  
BC807-25 5B  
BC807-40 5C

## Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
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### OFF CHARACTERISTICS

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

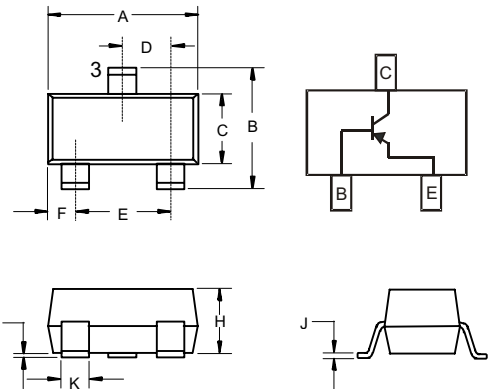
### ON CHARACTERISTICS

$h_{FE(1)}$	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

### SMALL SIGNAL CHARACTERISTICS

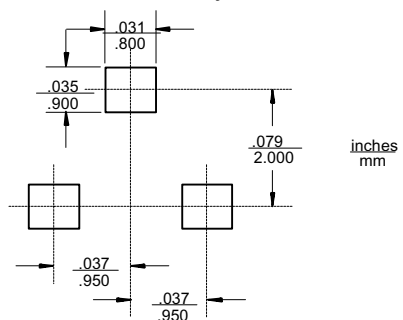
$f_T$	Current-Gain-Bandwidth Product ( $V_{CE}=5.0\text{V}$ , $f=100\text{MHz}$ , $I_C=10\text{mA}$ )	100	---	MHz
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## SOT-23



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.110	.120	2.80	3.04	
B	.083	.098	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



# BC807-16 thru BC807-40

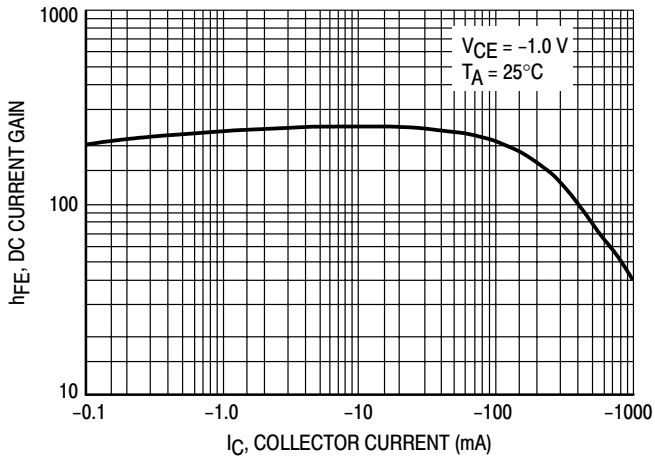


Figure 1. DC Current Gain

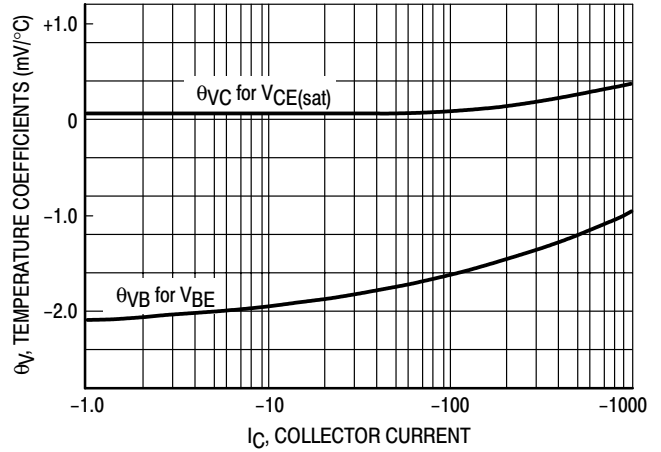


Figure 4. Temperature Coefficients

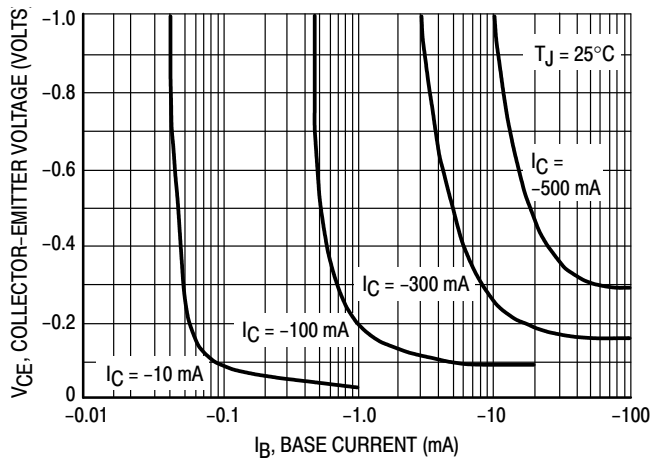


Figure 2. Saturation Region

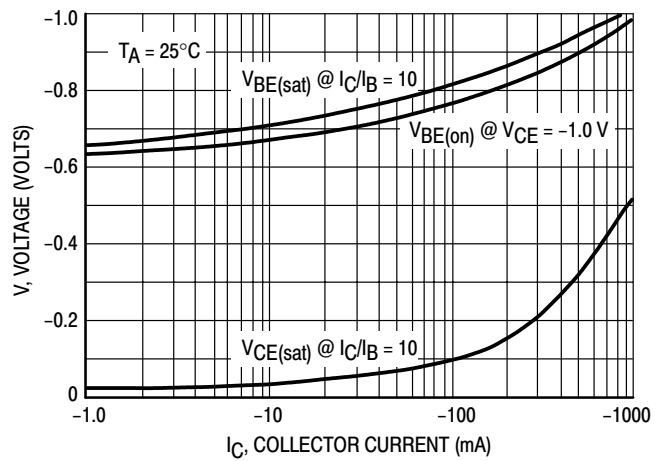


Figure 3. "On" Voltages



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## Ordering Information

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

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