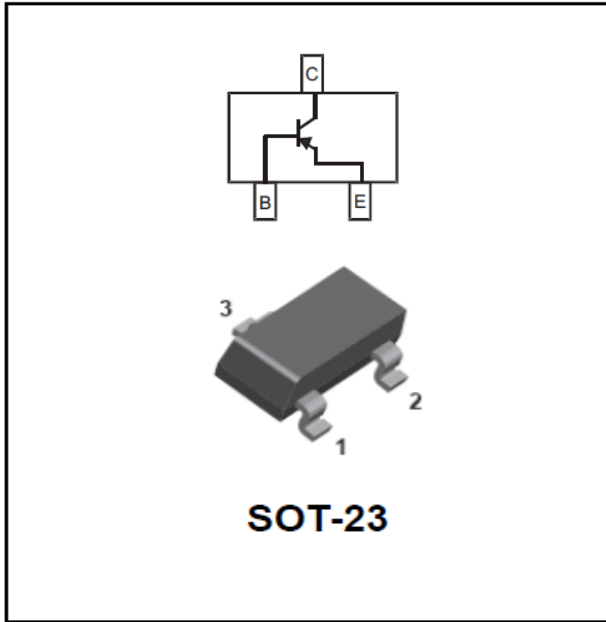


## PNP General Purpose Amplifier



### Features

- Capable of 0.3Watts( $T_A=25^{\circ}\text{C}$ ) 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

### ■ Maximum Rating

Item	Symbol	Unit	Value
Collector-Emitter Voltage	$V_{CEO}$	V	-45
Emitter -Base Voltage	$V_{EBO}$	V	-5
Collector Current	$I_C$	mA	-500
Collector Power Dissipation	$P_C$	mW	300
Operation Junction Temperature	$T_j$	$^{\circ}\text{C}$	-55 to +150
Storage Temperature	$T_{stg}$	$^{\circ}\text{C}$	-55 to +150
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	$^{\circ}\text{C}/\text{W}$	417

### ■ Off Characteristics

Item	Symbol	Unit	Conditions	MIN	MAX
Collector-Emitter Voltage*	$V_{CEO}$	V	$I_C=-10\text{mA}, I_B=0$	-45	
Collector-Base Voltage	$V_{CBO}$	V	$I_C=-10\mu\text{A}, I_E=0$	-50	
Emitter-Base Voltage	$V_{EBO}$	V	$I_E=-1.0\mu\text{A}, I_C=0$	-5.0	
Emitter-base Cut-off Current	$I_{EBO}$	$\mu\text{A}$	$V_{EB}=-4.0\text{Vdc}, I_C=0$		-0.1
Collector-base Cut-off Current	$I_{CBO}$	$\mu\text{A}$	$V_{CB}=-45\text{Vdc}, I_E=0$		-0.1



## BC807-16 THRU BC807-40

### ■ On Characteristics

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

### ■ Small-signal Characteristics

Item	Symbol	Unit	Conditions	Min	Typ	Max
Transition frequency	$f_T$	MHz	$I_C=-10\text{mA dc}, V_{CE}=-5.0\text{V dc}, f=100\text{MHz}$	100		
Collector-base output capacitance	$C_{ob}$	pF	$V_{CB}=-10\text{V}, f=1\text{MHz}$		10	

### ■ Ordering Information (Example)

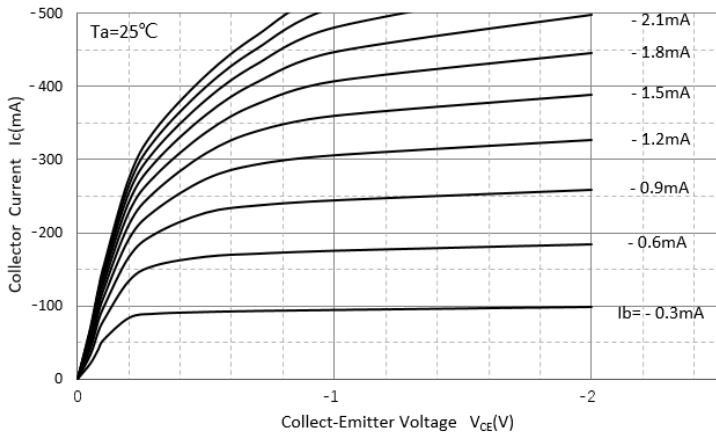
PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
BC807-16- Thru BC807-40	F2	Approximate 0.008	3000	30000	120000	7" reel



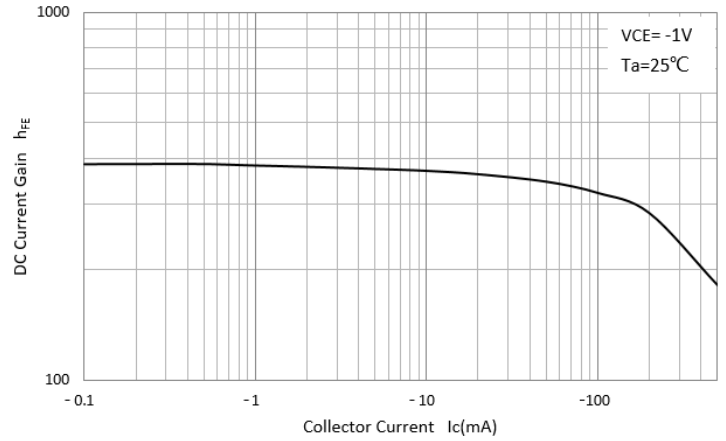
# BC807-16 THRU BC807-40

## ■ Characteristics (Typical)

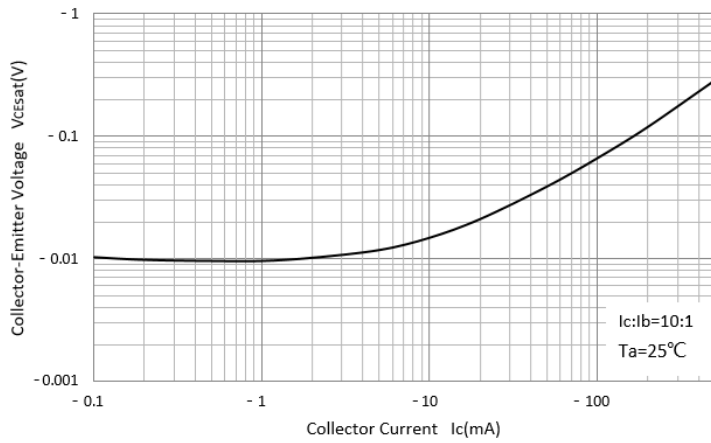
Static Characteristic



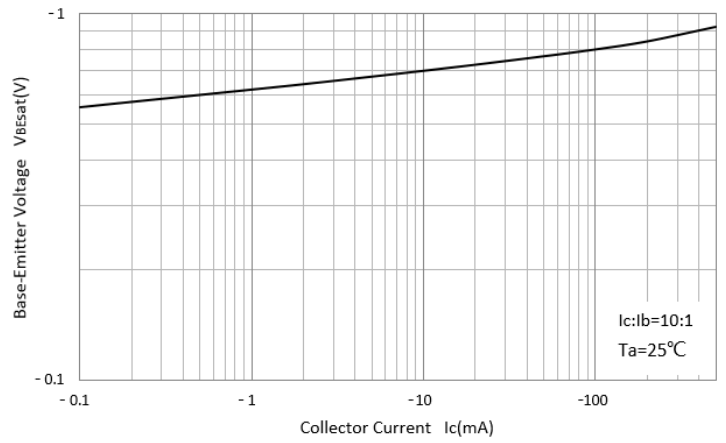
DC Current Gain



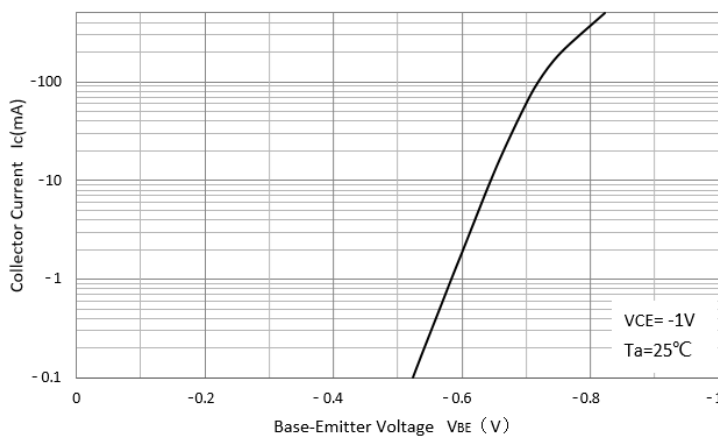
Collector-Emittor Saturation Voltage



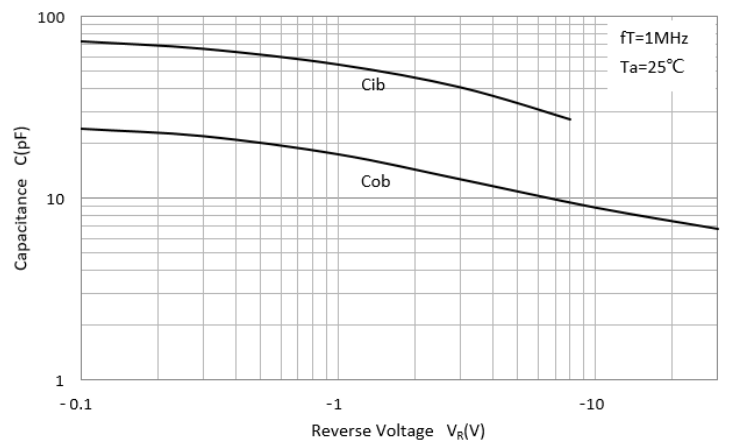
Base-Emittor Saturation Voltage



Base-Emittor On Voltage



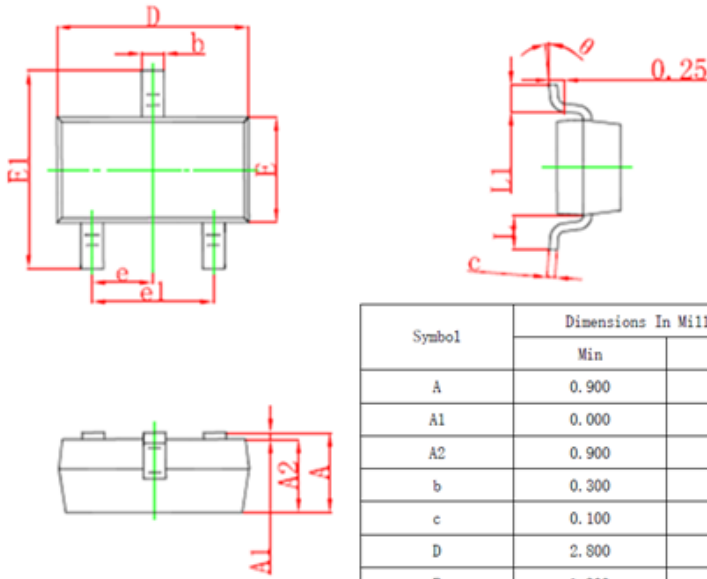
$C_{ob}/C_{ib}-V_{CB}/V_{EB}$





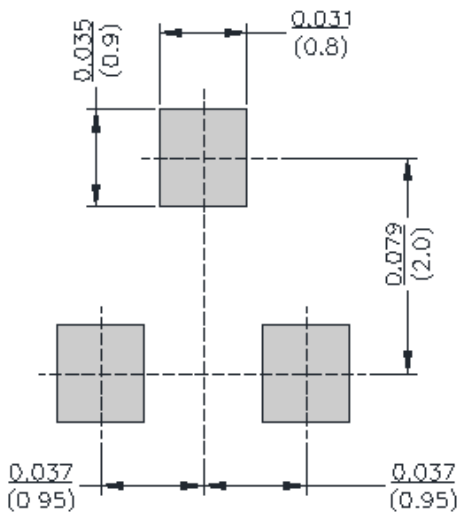
# BC807-16 THRU BC807-40

## ■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	0.100	0.200	0.004	0.008
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	0.950TYP		0.037TYP	
e1	1.800	2.000	0.071	0.079
L	0.550REF		0.022REF	
L1	0.300	0.500	0.012	0.020
ø	0°	8°	0°	8°

## ■SOT-23 Soldering Footprint





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