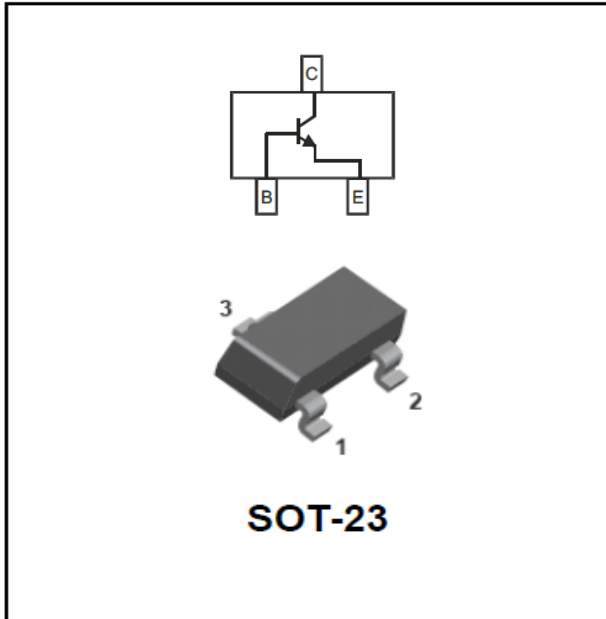


NPN General Purpose Amplifier



Features

- Capable of 0.3Watts($T_A=25^{\circ}\text{C}$) of Power Dissipation
- Epoxy meets UL-94 V-0 flammability rating
- Halogen free available upon request by adding suffix "HF"
- Moisture Sensitivity Level 1
- Device Marking: BC817-16 6A
BC817-25 6B
BC817-40 6C

■ Maximum Rating

Item	Symbol	Unit	Value
Collector-Emitter Saturation Voltage	V_{CE0}	V	45
Emitter -Base Voltage	V_{EBO}	V	5
Collector Current	I_C	mA	500
Power Dissipation	P_D	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_{thJA}	$^{\circ}\text{C/W}$	417

■ Off Characteristics

Item	Symbol	Unit	Conditions	MIN	MAX
Collector-Emitter Voltage*	V_{CE0}	V	$I_C=10\text{mA}, I_E=0$	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 Cutoff Current	I_{EBO}	μA	$V_{EB}=4.0\text{Vdc}, I_C=0$		0.1
Collector Cutoff Current	I_{CBO}	μA	$V_{CB}=45\text{Vdc}, I_E=0$		0.1



BC817-16 THRU BC817-40

■ On Characteristics

Item		Symbol	Unit	Conditions	Min	Max
DC Current Gain	BC817-16	h_{FE}		$I_C=100mA_{dc}, V_{CE}=1.0V_{dc}$	100	250
	BC817-25				160	400
	BC817-40				250	600
DC Current Gain		h_{FE}		$I_C=500mA_{dc}, V_{CE}=1.0V_{dc}$	40	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	V	$I_C=500mA_{dc}, I_B=50mA_{dc}$		0.7
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	V	$I_C=500mA_{dc}, I_B=50mA_{dc}$		1.2

■ Small-signal Characteristics

Item	Symbol	Unit	Conditions	Min	Typ	Max
Transition frequency	f_T	MHz	$I_C=10mA_{dc}, V_{CE}=5.0V_{dc}, f=100MHz$	100		
Collector Capacitance	C_{ob}	pF	$V_{CB}=10V, F=1MHz$		10	

■ Ordering Information (Example)

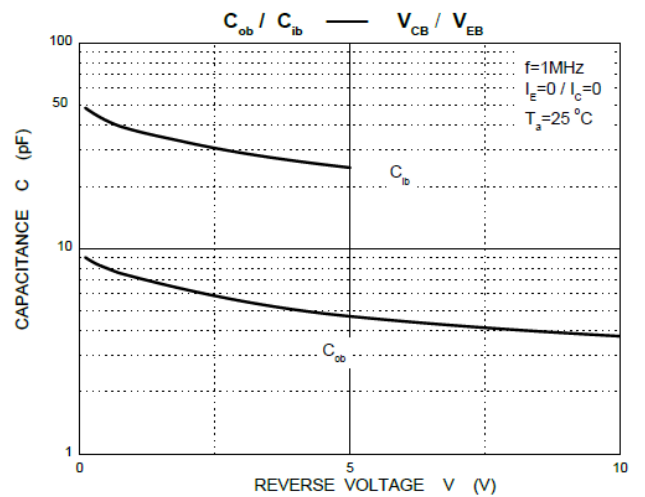
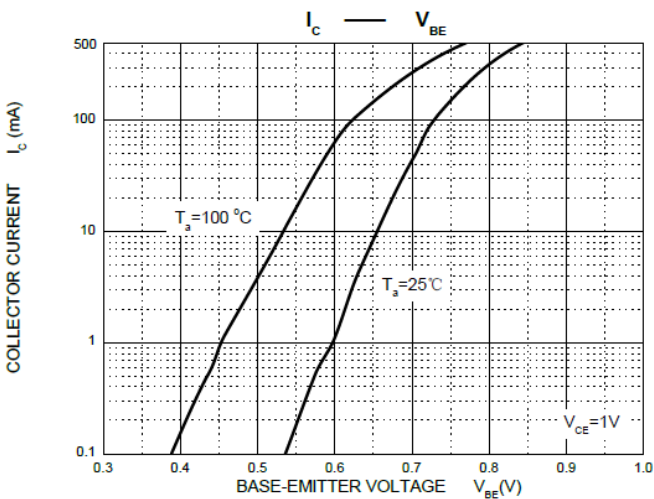
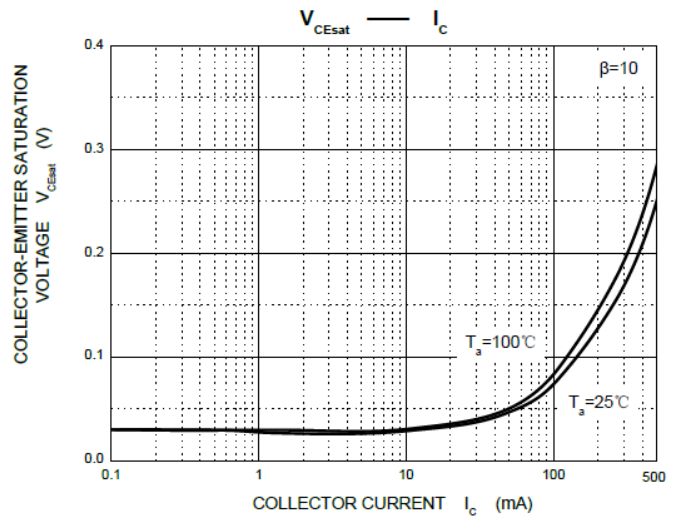
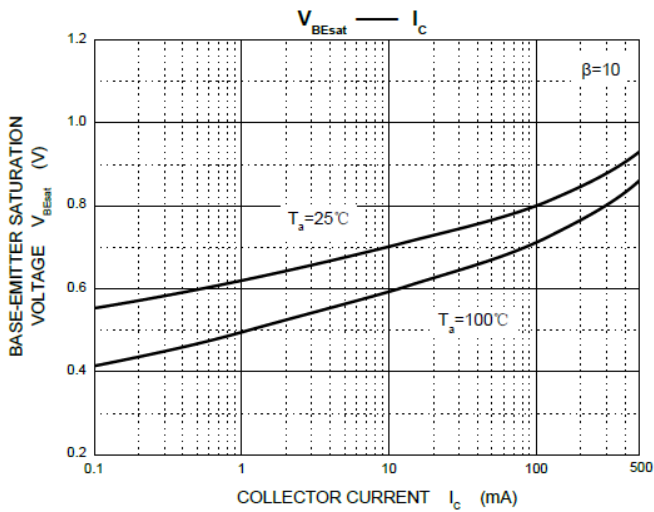
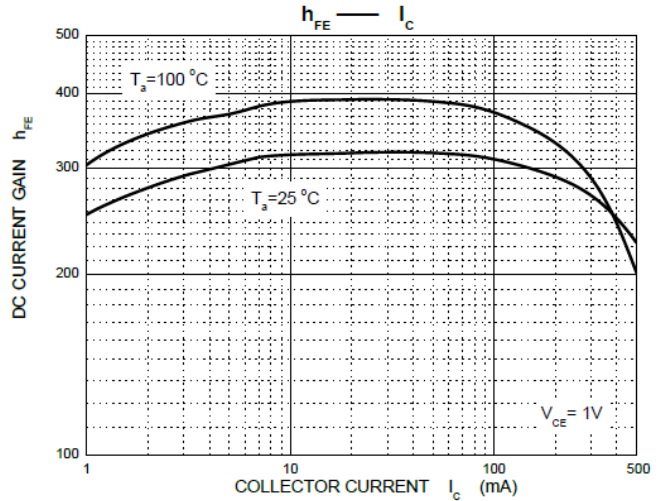
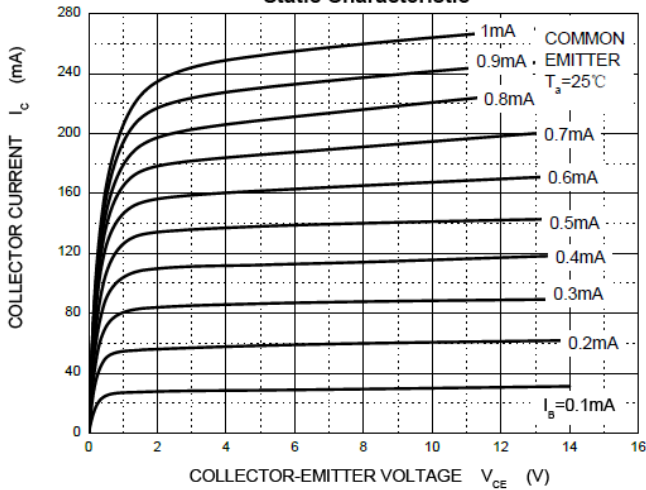
PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
BC817-16 Thru BC817-40	F2	Approximate 0.008	3000	30000	120000	7" reel



BC817-16 THRU BC817-40

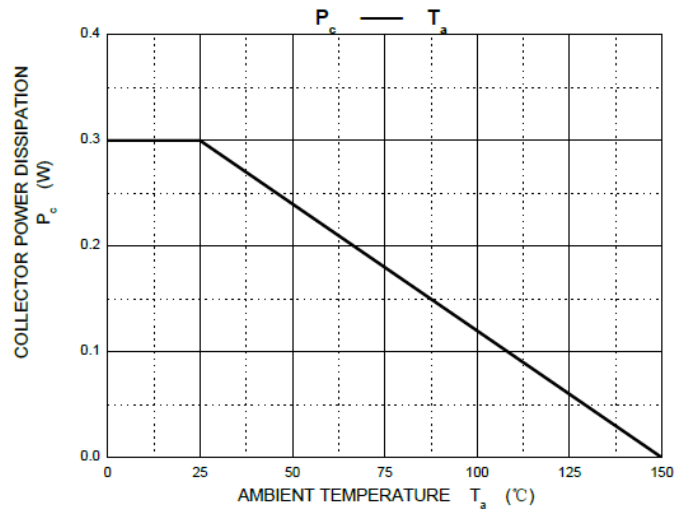
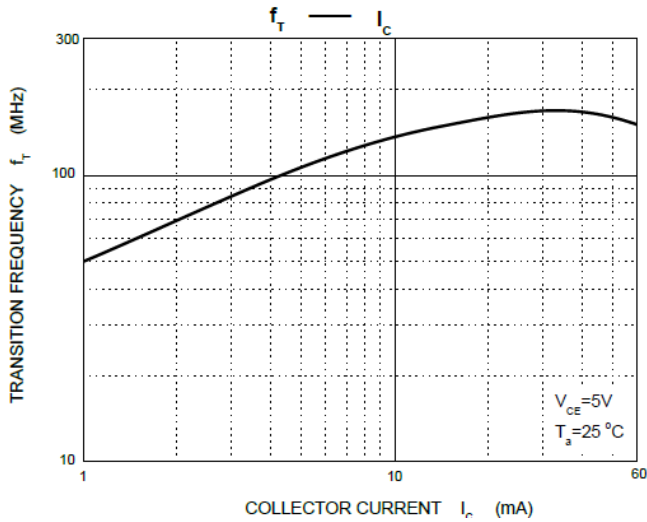
■ Characteristics (Typical)

Static Characteristic

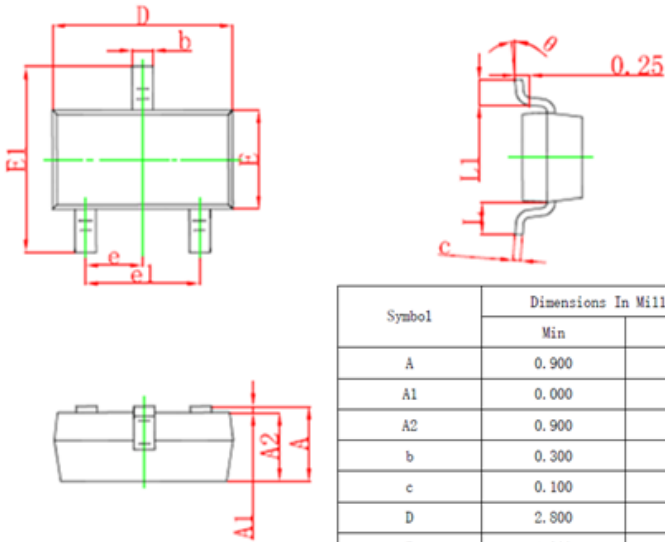




BC817-16 THRU BC817-40



■ SOT-23 Package Outline Dimensions

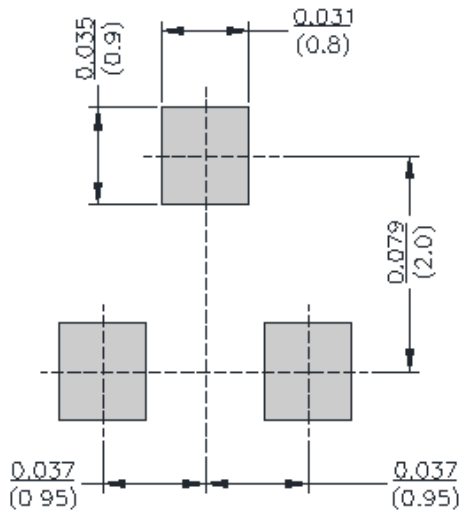


Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950TYP		0.037TYP	
e1	1.800	2.000	0.071	0.079
L	0.550REF		0.022REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°



BC817-16 THRU BC817-40

■SOT-23Suggested Pad Layout





Disclaimer

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