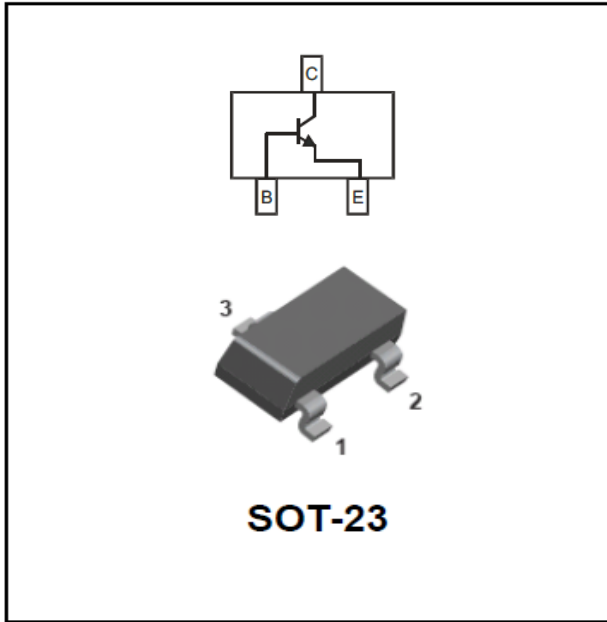


NPN General Purpose Amplifier



Features

- Capable of 0.3Watts(TA=25°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 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	°C	-55 to +150
Storage Temperature	T_{stg}	°C	-55 to +150
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	°C/W	417

■ Off Characteristics

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



BC817-16 THRU BC817-40

■ On Characteristics

Item		Symbol	Unit	Conditions	Min	Max
DC Current Gain	BC817-16	h_{FE}		$I_C=100mA, V_{CE}=1.0Vdc$	100	250
	BC817-25				160	400
	BC817-40				250	600
DC Current Gain		h_{FE}		$I_C=500mA, V_{CE}=1.0Vdc$	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

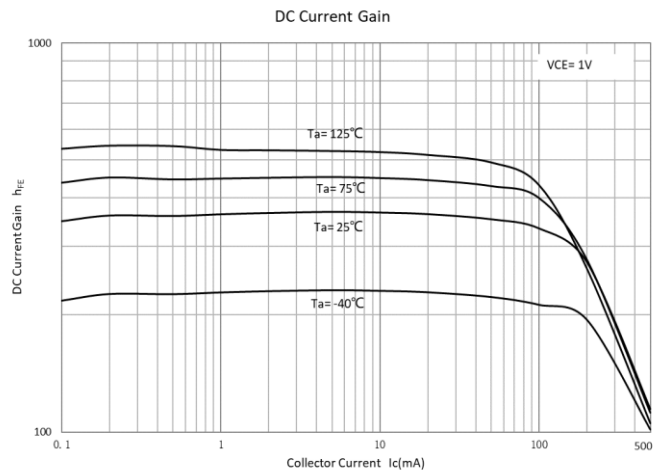
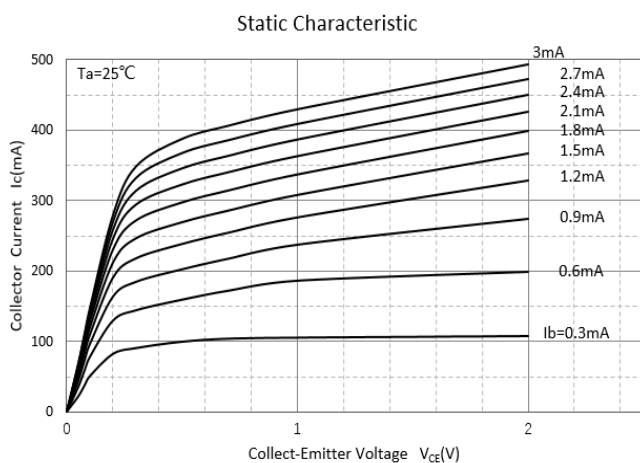
■ Small-signal Characteristics

Item	Symbol	Unit	Conditions	Min	Typ	Max
Transition frequency	f_T	MHz	$I_C=10mA, V_{CE}=5.0Vdc, f=100MHz$	100		
Collector-base output capacitance	C_{ob}	pF	$V_{CB}=10V, F=1MHz$		4	

■ Ordering Information (Example)

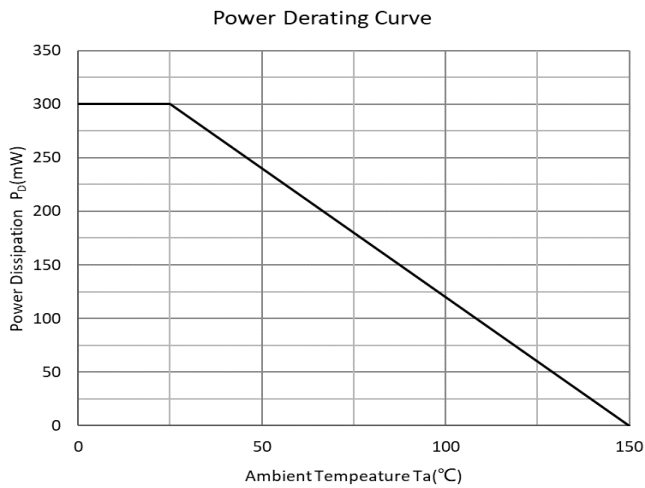
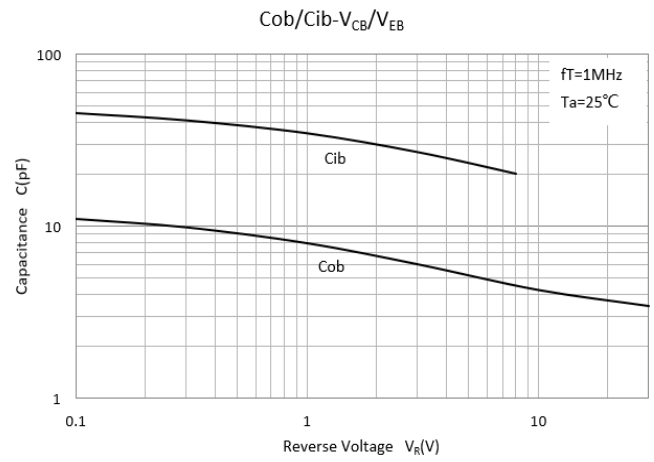
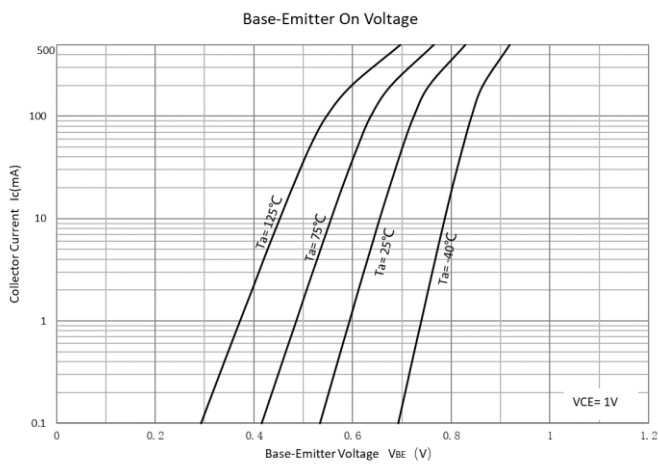
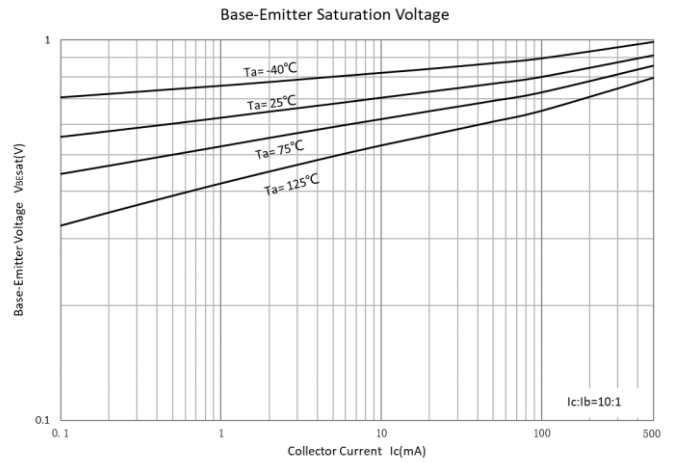
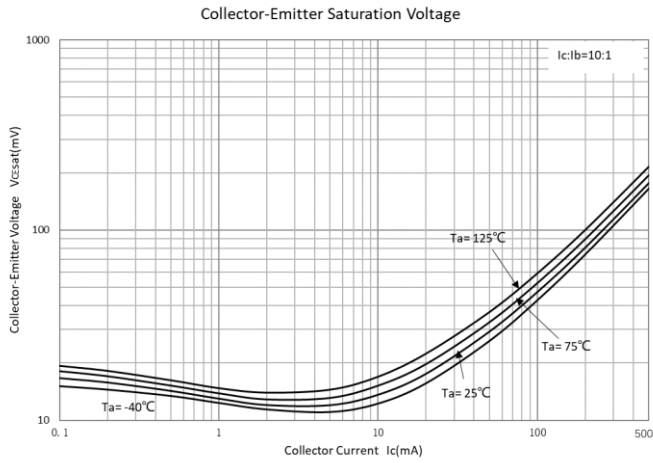
PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
BC817-16 Thru BC817-40	F2	Approximate 0.008	3000	30000	120000	7" reel
BC817-16 Thru BC817-40	F4	Approximate 0.008	10000	/	210000	13" reel

■ Characteristics (Typical)





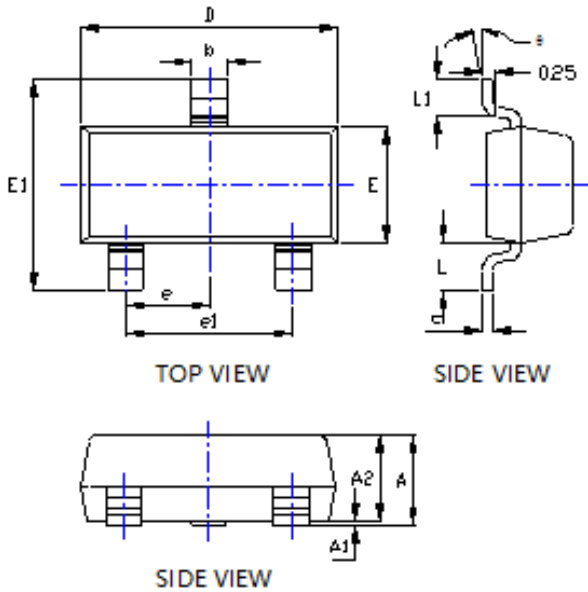
BC817-16 THRU BC817-40





BC817-16 THRU BC817-40

■SOT-23 Package Outline Dimensions

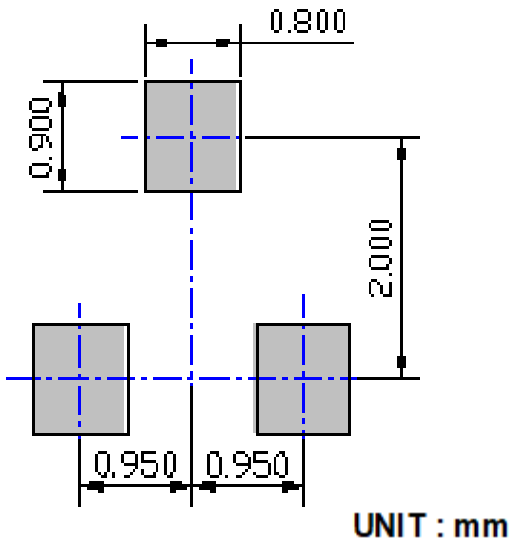


SYMBOL	DIMENSIONS			
	INCHES		Millimeter	
	MIN.	MAX.	MIN.	MAX.
A	0.035	0.045	0.900	1.150
A1	0.000	0.004	0.000	0.100
A2	0.035	0.041	0.900	1.050
b	0.012	0.020	0.300	0.500
c	0.004	0.008	0.100	0.200
D	0.110	0.118	2.800	3.000
E	0.047	0.055	1.200	1.400
E1	0.089	0.100	2.250	2.550
e	0.037TYP		0.950TYP	
e1	0.071	0.079	1.800	2.000
L	0.022REF		0.550REF	
L1	0.012	0.020	0.300	0.500
θ	0°	8°	0°	8°

Note:

- All dimensions are in millimeters (mm) unless otherwise specified.
[所有尺寸均以毫米为单位, 除非另有说明]
- General tolerances: $\pm 0.10\text{mm}$ unless otherwise specified.
[通用公差为 $\pm 0.10\text{mm}$, 除非另有说明]
- Dimensions and tolerances per ASME Y14.5M-2018.
[尺寸和公差遵循 ASME Y14.5M-2018 标准]
- All dimensions shown are exclusive of burrs and gate residues. Burrs and gate vestiges shall not exceed 0.15 mm in maximum.
[所有尺寸均不包括毛刺和浇口残留。毛刺与浇口残留的尺寸最大不得超过 0.15mm]
- Dimension b does not include dambar protrusion of max 0.100 mm per side.
[尺寸b不包括单边最大0.100 MM的中筋凸出部分]
- Dimensions D and E are the overall extreme outer dimensions of the mold compound. These dimensions exclude mold flash, lead flash, protrusions and burrs but include the maximum allowable mold mismatch.
[D和E是塑封体的外部极限尺寸, 不包括包封溢料、内引线溢料、凸出部分以及胶体毛刺, 但是包含了包封错位的最大尺寸]
- Formed leads shall be planar with respect to one another within a maximum of 0.076 mm relative to the seating plane.
[成型的管脚应为同一平面, 共面性最大为0.1mm]

■SOT-23 Soldering Footprint





BC817-16 THRU BC817-40

Disclaimer

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The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

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