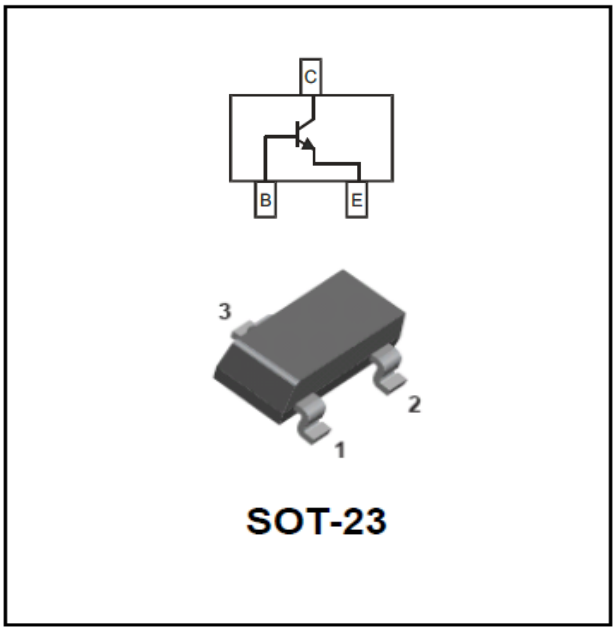
NPN General Purpose Amplifier



Features

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

■ Off Characteristics

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

■ On Characteristics

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

■ Small-signal Characteristics

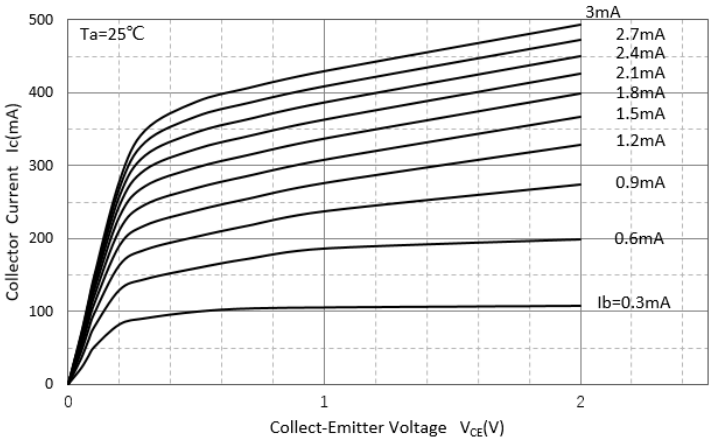
Item	Symbol	Unit	Conditions	Min	Typ	Max
Transition frequency	f_T	MHz	I_C=10mAdc,V_{CE}=5.0Vdc, f=100MHz	100		
Collector-base output capacitance	Cob	pF	VCB=10V,F=1MHz		4	

■ Ordering Information (Example)

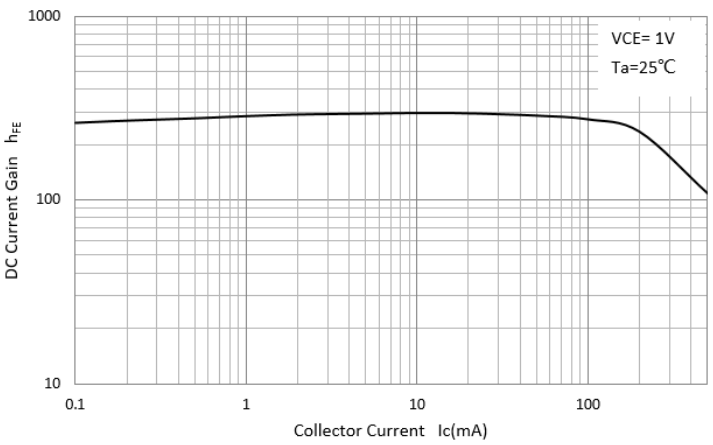
PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
BC817-16 Thru BC817-40	F2	Approximate 0.008	3000	30000	120000	7” reel

■ **Characteristics** (Typical)

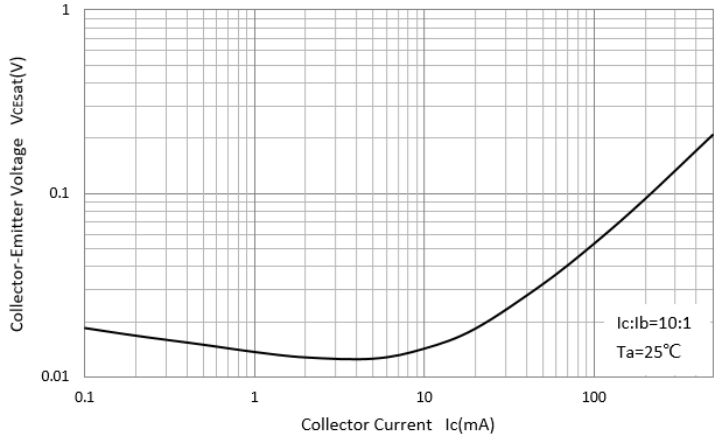
Static Characteristic



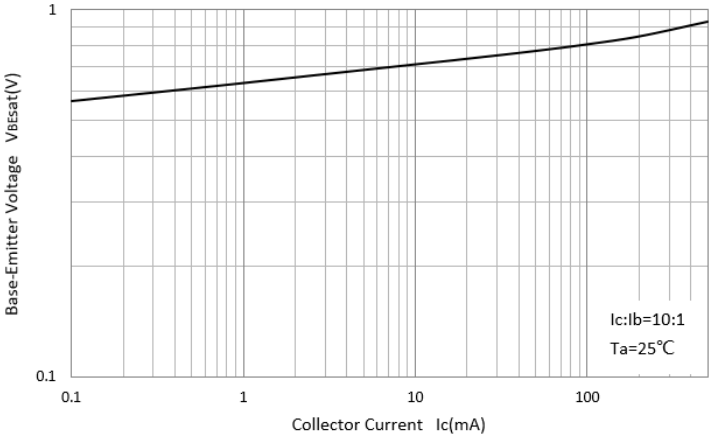
DC Current Gain



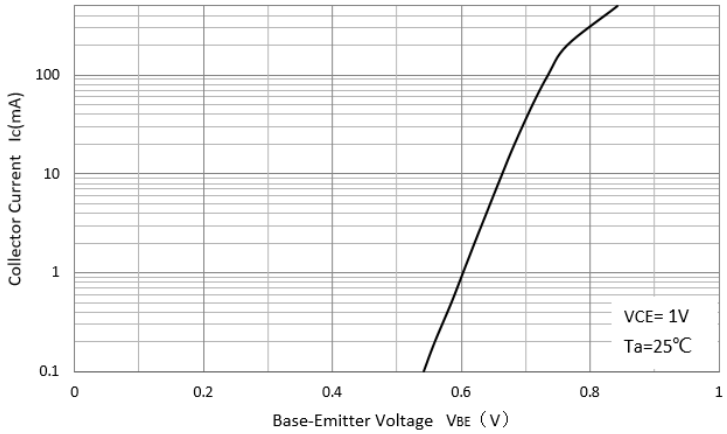
Collector-Emitter Saturation Voltage



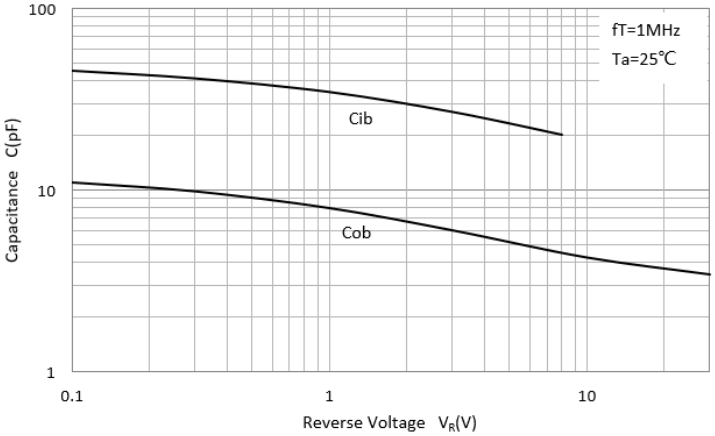
Base-Emitter Saturation Voltage



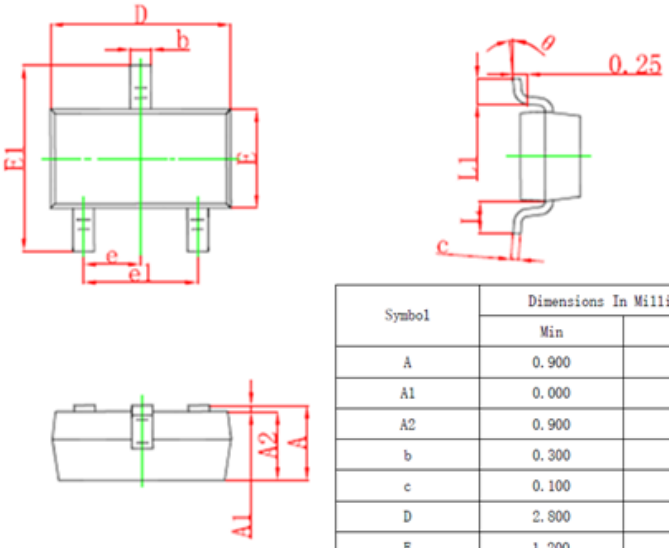
Base-Emitter On Voltage



Cob/Cib-V_{CB}/V_{EB}

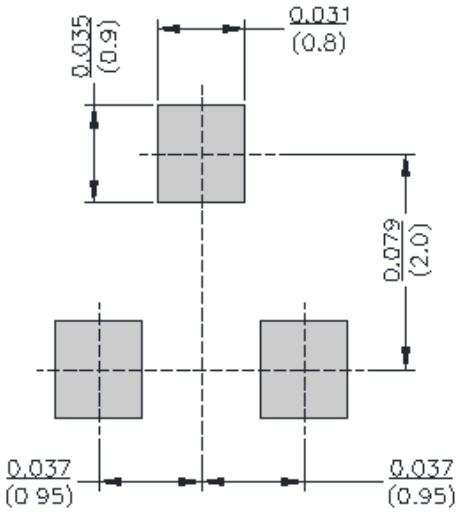


■SOT-23 Package Outline Dimensions



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°

■SOT-23 Soldering Footprint



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