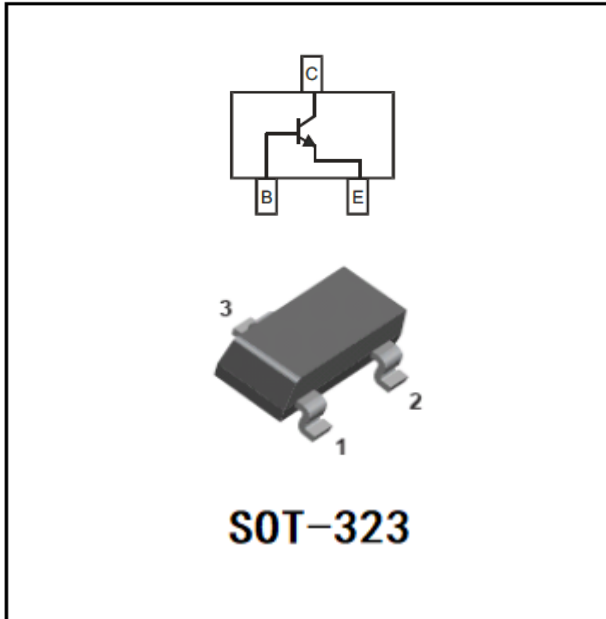


## NPN General Purpose Amplifier



### Features

- Capable of 0.2Watts( $T_A=25^{\circ}\text{C}$ ) 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:

BC817-16W	6A
BC817-25W	6B
BC817-40W	6C

### ■Maximum Ratings ( $T_A=25^{\circ}\text{C}$ Unless otherwise specified)

Item	Symbol	Value	Unit
Collector-Emitter Voltage	$V_{CE0}$	45	V
Collector-Base Voltage	$V_{CBO}$	50	V
Emitter-Base Voltage	$V_{EBO}$	5.0	V
Collector Current	$I_C$	0.5	A
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	625	$^{\circ}\text{C}/\text{W}$
Operation Junction Temperature	$T_j$	-55 to +150	$^{\circ}\text{C}$
Storage Temperature	$T_{stg}$	-55 to +150	$^{\circ}\text{C}$



## BC817-16W THRU BC817-40W

### ■ Electrical Characteristics (Ta=25°C unless otherwise specified)

Item	Symbol	Unit	Conditions	MIN	MAX
Collector-Emitter Voltage	$V_{CE0}$	V	$I_C=10\text{mAdc}$ , $I_B=0$	45	
Collector-Base Voltage	$V_{CBO}$	V	$I_C=10\text{uAdc}$ , $I_E=0$	50	
Emitter-Base Voltage	$V_{EBO}$	V	$I_E=1.0\text{uAdc}$ , $I_C=0$	5.0	
Emitter-base Cut-off Current	$I_{EBO}$	uAdc	$V_{EB}=4.0\text{Vdc}$ , $I_C=0$		0.1
Collector-base Cut-off Current	$I_{CBO}$	uAdc	$V_{CB}=45\text{Vdc}$ , $I_E=0$		0.1
DC Current Gain	$h_{FE(1)}$		$I_C=100\text{mAdc}$ , $V_{CE}=1.0\text{Vdc}$	100	600
	$h_{FE(2)}$		$I_C=500\text{mAdc}$ , $V_{CE}=1.0\text{Vdc}$	40	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	V	$I_C=500\text{mAdc}$ , $I_B=50\text{mAdc}$		0.7
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	V	$I_C=500\text{mAdc}$ , $I_B=50\text{mAdc}$		1.2

### ■ Small-signal Characteristics

Item	Symbol	Unit	Conditions	Min	Max
Transition frequency	$f_T$	MHz	$I_C=10\text{mAdc}$ , $V_{CE}=5.0\text{Vdc}$ , $f=100\text{MHz}$	100	

### ■ Classification of $h_{FE}$

Rank	BC817-16W	BC817-25W	BC817-40W
Range	100-250	160-400	250-600

### ■ Ordering Information (Example)

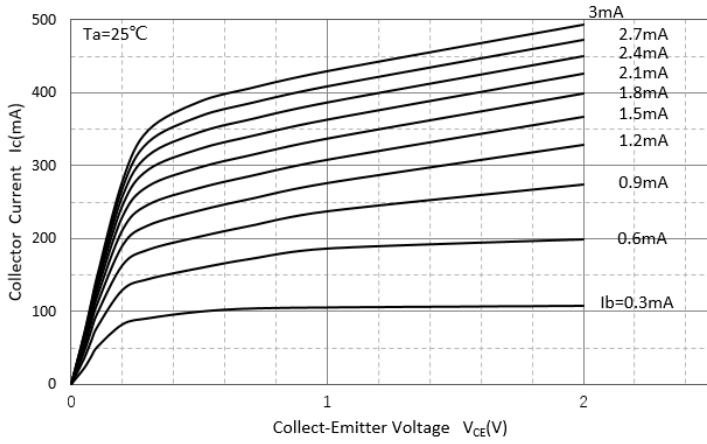
Preferred P/N	Packing Code	Unit Weight(G)	Minimum Package(Pcs)	Inner Box Quantity(Pcs)	Outer Carton Quantity(Pcs)	Delivery Mode
BC817-16W THRU BC817-40W	F2	Approximate 0.008	3000	30000	120000	7" reel



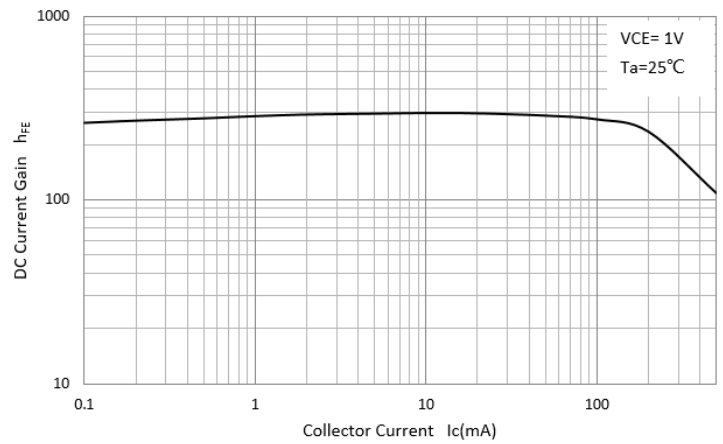
# BC817-16W THRU BC817-40W

## ■ Characteristics (Typical)

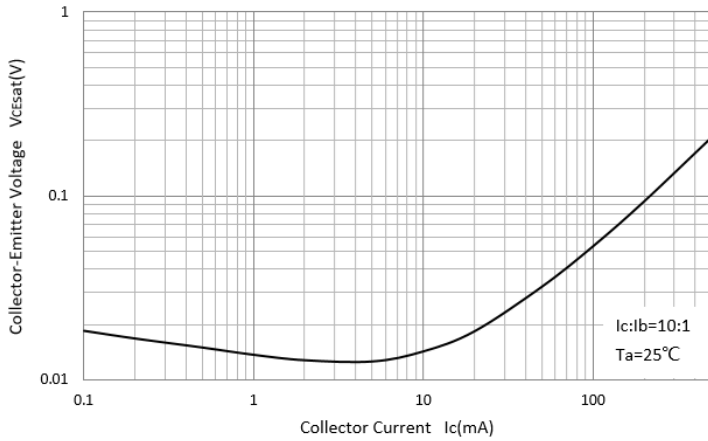
Static Characteristic



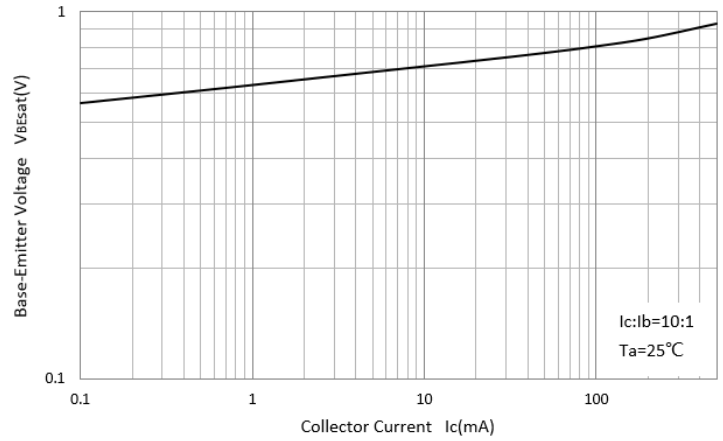
DC Current Gain



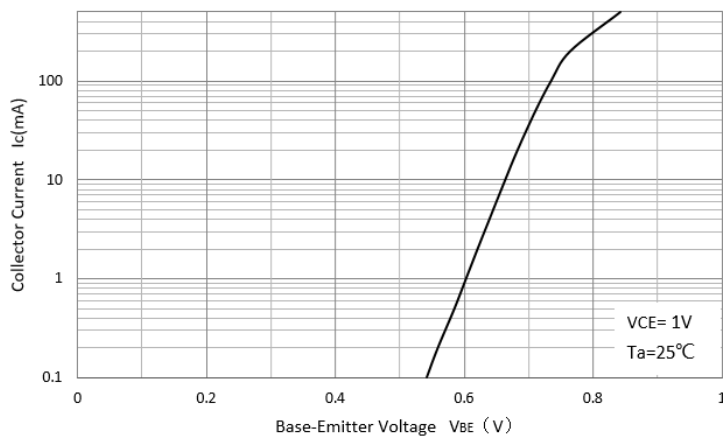
Collector-Emmitter Saturation Voltage



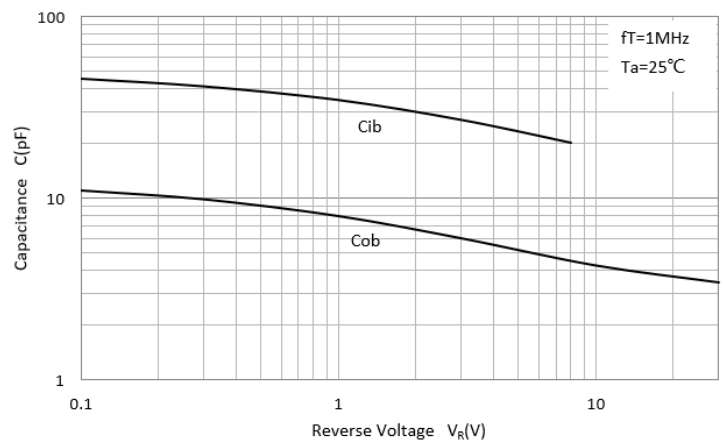
Base-Emmitter Saturation Voltage



Base-Emmitter On Voltage



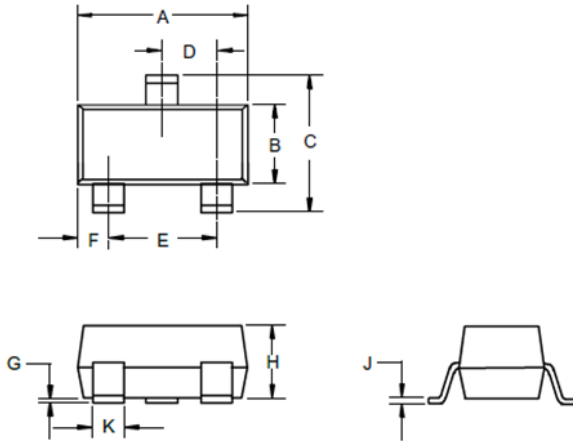
$C_{ob}/C_{ib}-V_{CB}/V_{EB}$





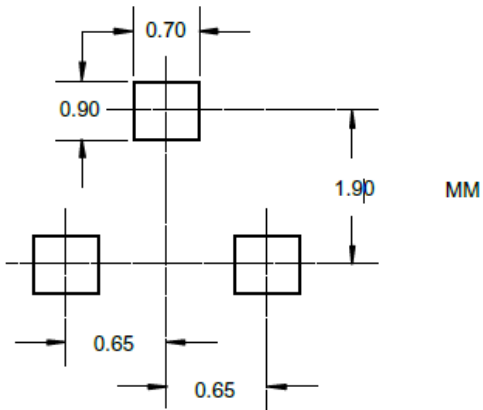
# BC817-16W THRU BC817-40W

## ■ SOT-323 Package Outline Dimensions



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.071	.087	1.80	2.20	
B	.045	.053	1.15	1.35	
C	.083	.096	2.10	2.45	
D	.026 Nominal		0.65Nominal		
E	.047	.055	1.20	1.40	
F	.012	.016	.30	.40	
G	.000	.004	.000	.100	
H	.035	.039	.90	1.00	
J	.004	.010	.100	.250	
K	.006	.016	.15	.40	

## ■ SOT-323 Soldering Footprint





## BC817-16W THRU BC817-40W

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### Disclaimer

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