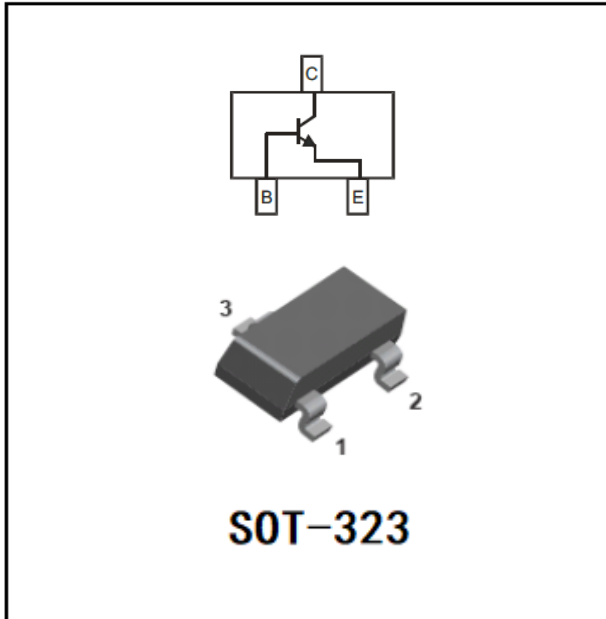


NPN General Purpose Amplifier



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*	BV_{CEO}	45	V
Collector-Base Voltage	BV_{CBO}	50	V
Emitter-Base Voltage	BV_{EBO}	5.0	V
Collector Current -Continuous	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*	BV_{CEO}	V	$I_C=10\text{mAdc}$, $I_B=0$	45	
Collector-Base Voltage	BV_{CBO}	V	$I_C=10\text{uAdc}$, $I_E=0$	50	
Emitter-Base Voltage	BV_{EBO}	V	$I_E=1.0\text{uAdc}$, $I_C=0$	5.0	
Emitter Cutoff Current	I_{EBO}	uAdc	$V_{EB}=4.0\text{Vdc}$, $I_C=0$		0.1
Collector Cutoff 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	$V_{CE}(\text{sat})$	V	$I_C=500\text{mAdc}$, $I_B=50\text{mAdc}$		0.7
Base-Emitter Saturation Voltage	$V_{BE}(\text{sat})$	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)

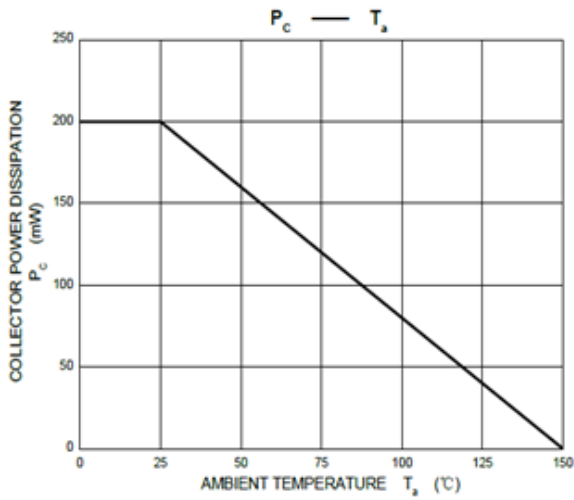


Fig. 1. Power Derating Curve

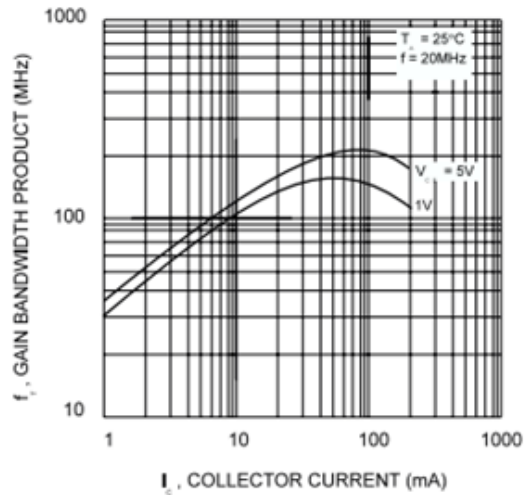


Fig. 2. Gain-Bandwidth Product vs Collector Current

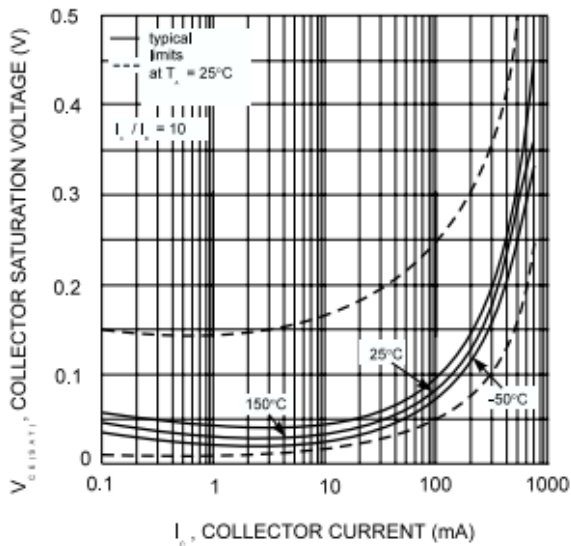


Fig. 3. Collector Sat. Voltage vs Collector Current

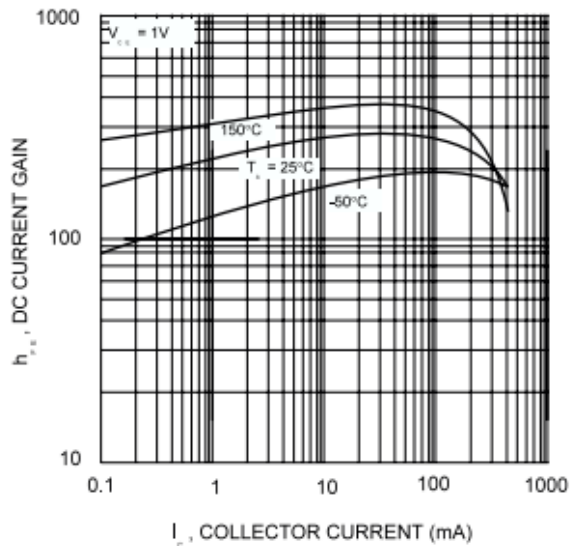
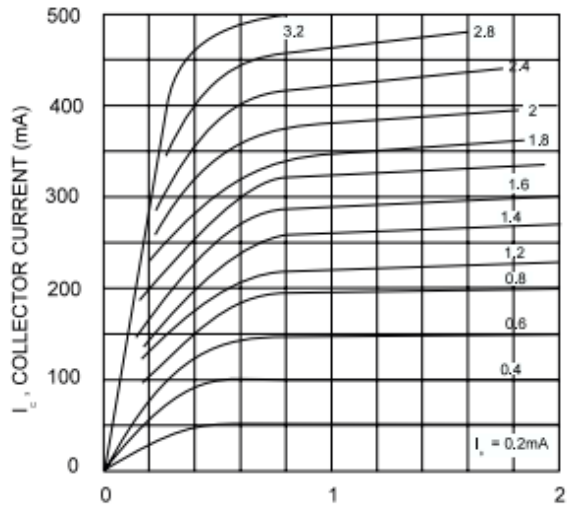


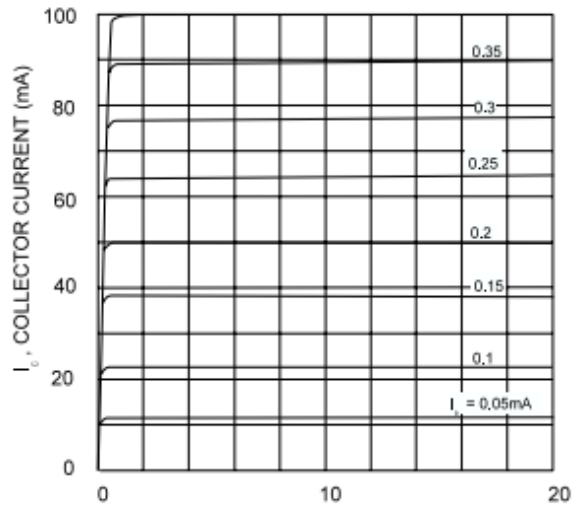
Fig. 4. DC Current Gain vs Collector Current



BC817-16W THRU BC817-40W



V_{ce} , COLLECTOR-EMITTER VOLTAGE (V)
Fig. 5, Typical Emitter-Collector Characteristics

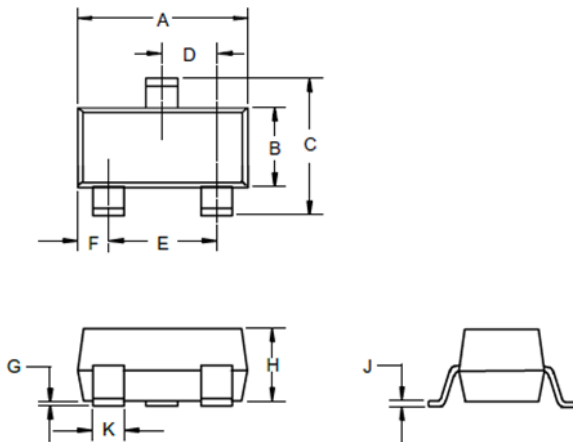


V_{ce} , COLLECTOR-EMITTER VOLTAGE (V)
Fig. 6, Typical Emitter-Collector Characteristics



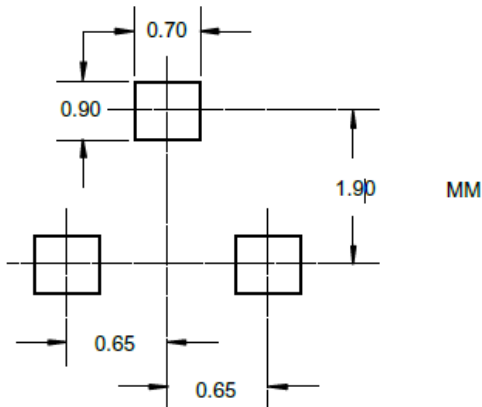
BC817-16W THRU BC817-40W

■ 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 Suggested Pad Layout



Disclaimer

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