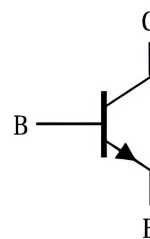


Features

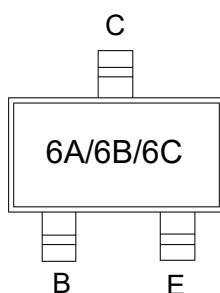
- For General AF Applications
- High Collector Current
- High Current Gain
- Low Collector-Emitter Saturation Voltage



SOT-323 top view



Schematic diagram



Marking and pin assignment



Halogen-Free

Maximum Ratings (Ta=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	50	V
V_{CEO}	Collector-Emitter Voltage	45	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	0.5	A
P_C	Collector Power Dissipation	0.2	W
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	625	°C/W
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

Ordering Information (Example)

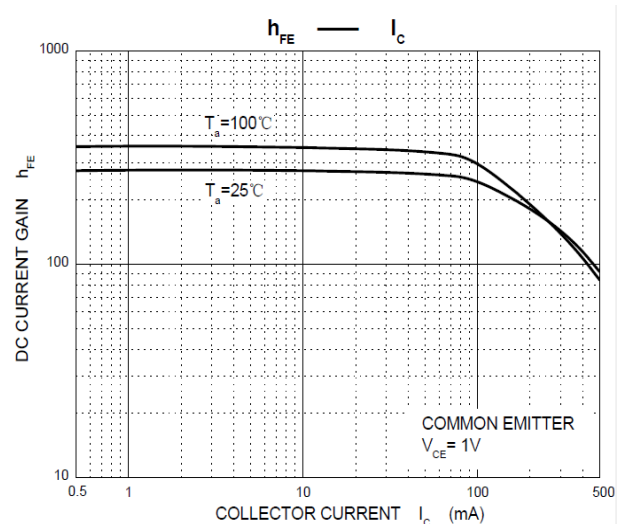
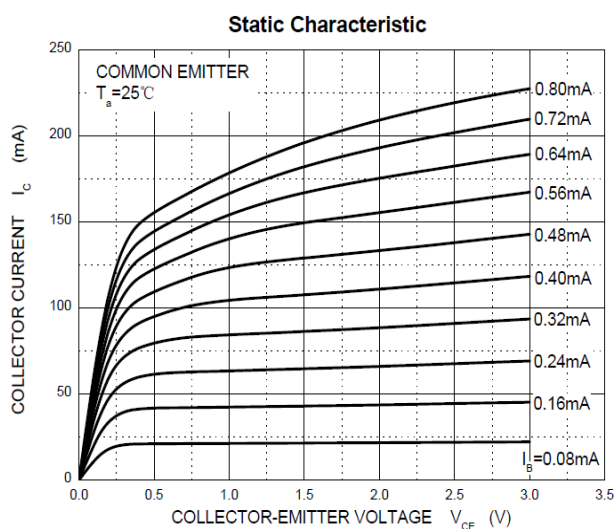
Type	Package	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
BC817W	SOT-323	6A/6B/6C	3,000	45,000	180,000	7"reel

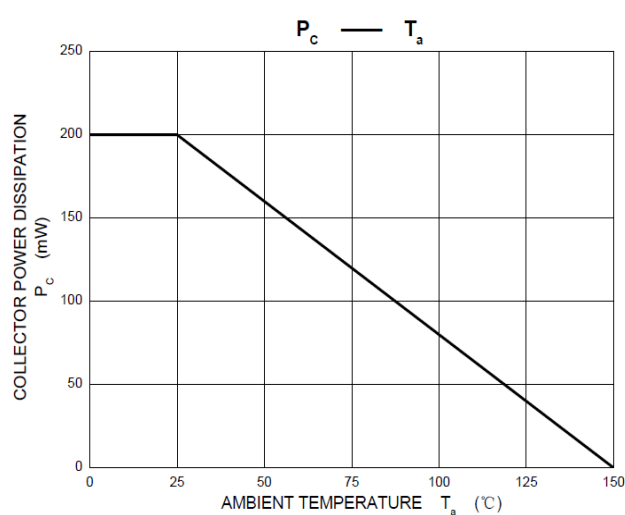
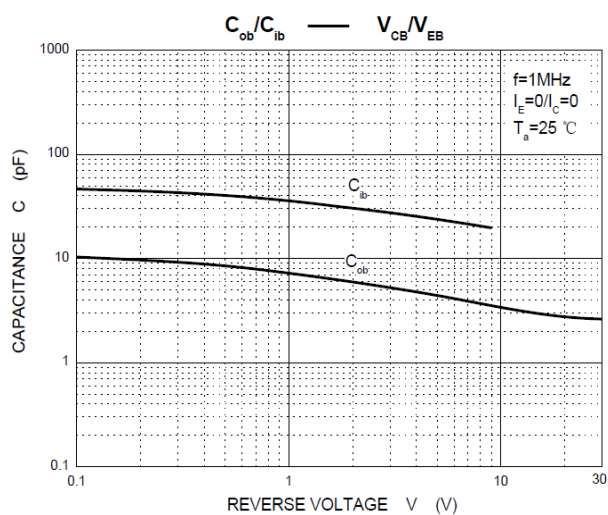
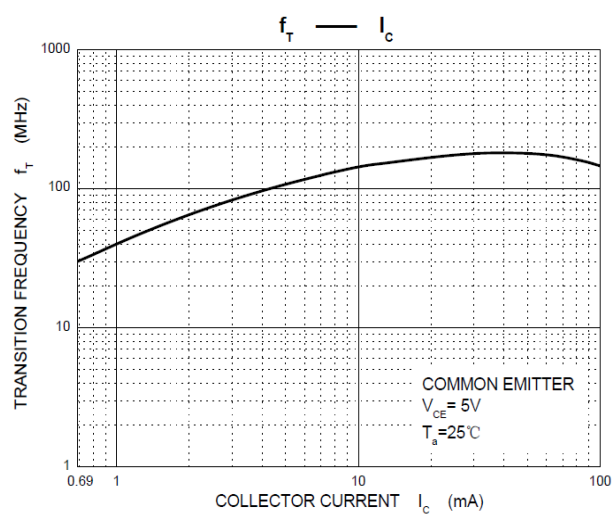
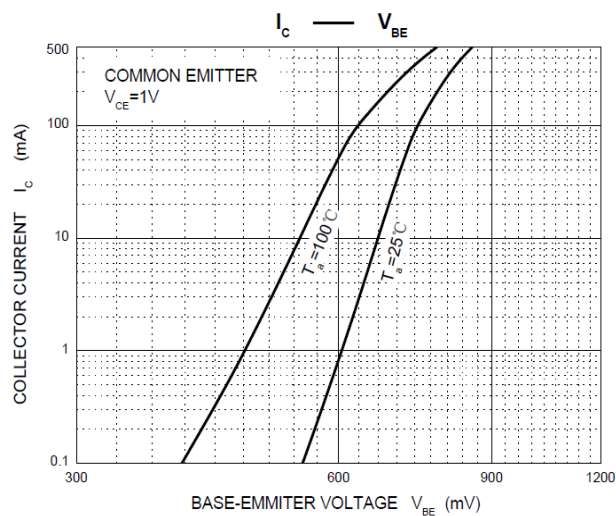
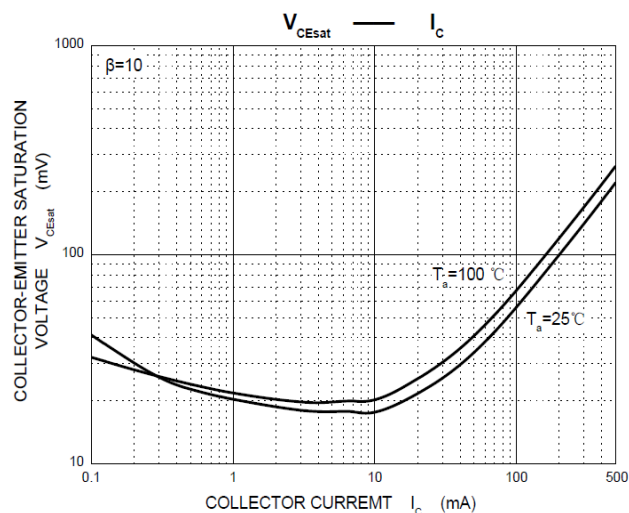
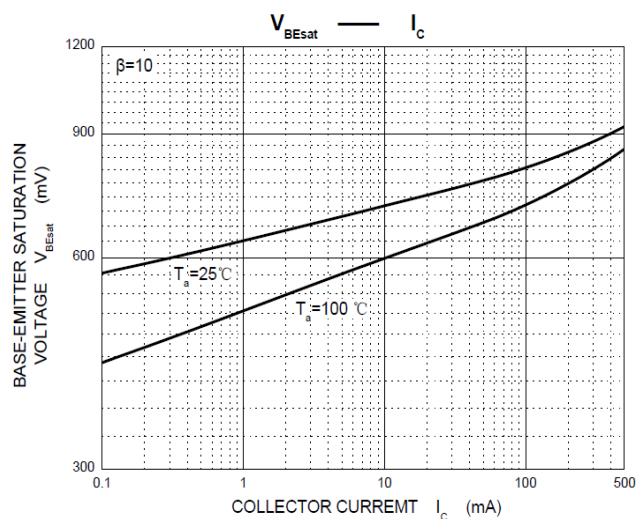
Electrical Characteristics (Ta=25°C unless otherwise specified)

Symbol	Parameter	Condition	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=10\mu A, I_E=0$	50	--	--	V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=10mA, I_B=0$	45	--	--	V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=1\mu A, I_C=0$	5	--	--	V
I_{CBO}	Collector cut-off current	$V_{CB}=20V, I_E=0$	--	--	0.1	μA
I_{EBO}	Emitter cut-off current	$V_{EB}=5V, I_C=0$	--	--	0.1	μA
$h_{FE(1)}$	DC current gain	$V_{CE}=1V, I_C=100mA$	100	--	600	
$h_{FE(2)}$	DC current gain	$V_{CE}=1V, I_C=500mA$	40	--	--	
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C=500mA, I_B=50mA$	--	--	0.7	V
$V_{BE(on)}$	Base-emitter voltage	$V_{CE}=1V, I_C=500mA$			1.2	V
$V_{BE(sat)}$	Base-emitter saturation voltage	$I_C=500mA, I_B=50mA$	--	--	1.2	V
C_{ob}	Collector output capacitance	$V_{CB}=10V, f=1MHz$	--	--	5	pF
F_t	Transition frequency	$V_{CE}=5V, I_C=10mA, f=100MHz$	100	--	--	MHz

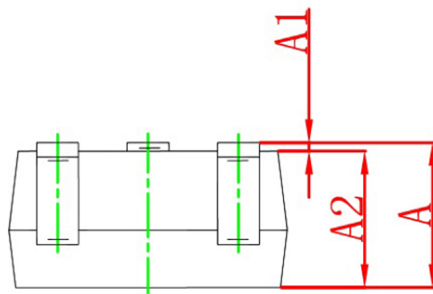
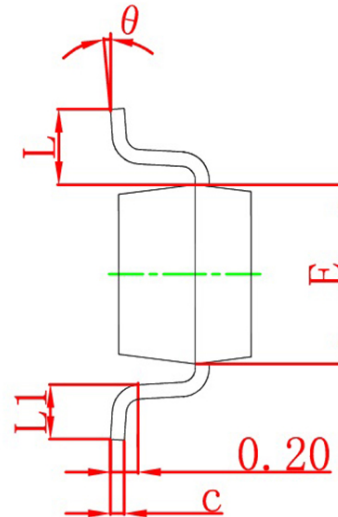
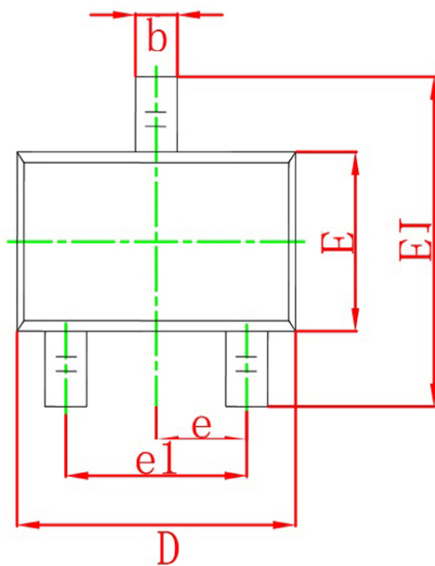
Classification of hFE

Rank	BC817-16W	BC817-25W	BC817-40W
Marking	6A	6B	6C
Range	100-250	160-400	250-600

Typical Characteristics




SOT-323 Package information



Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650TYP		0.026TYP	
e1	1.200	1.400	0.047	0.055
L	0.525REF		0.021REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°