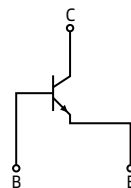


Features

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



SOT-323



Equivalent Circuit

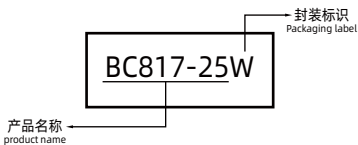
Absolute Maximum Ratings($T_A=25^{\circ}\text{C}$)

Symbol	Parameter	Value	Unit
V_{CB0}	Collector-Base Voltage	50	V
V_{CE0}	Collector-Emitter Voltage	45	V
V_{EB0}	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	$^{\circ}\text{C/W}$
T_J, T_{stg}	Operation Junction And Storage Temperature Range	-55 ~ +150	$^{\circ}\text{C}$

Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

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

Ordering information

Product ID	Pack	Naming rule	Marking	$h_{FE(1)}$	Qty(PCS)
BC817-25W	SOT-323		6B	160-400	3000
BC817-40W			6C	250-600	



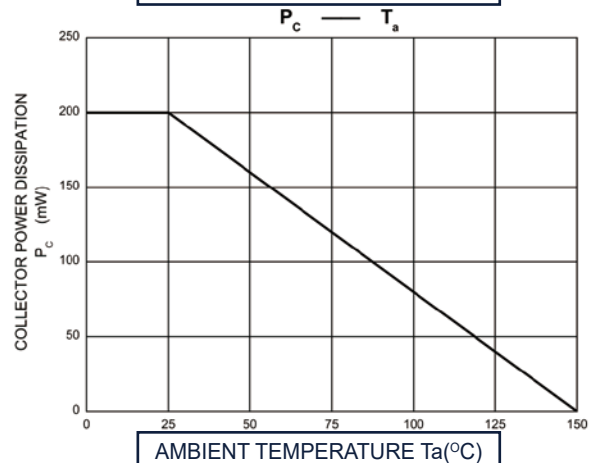
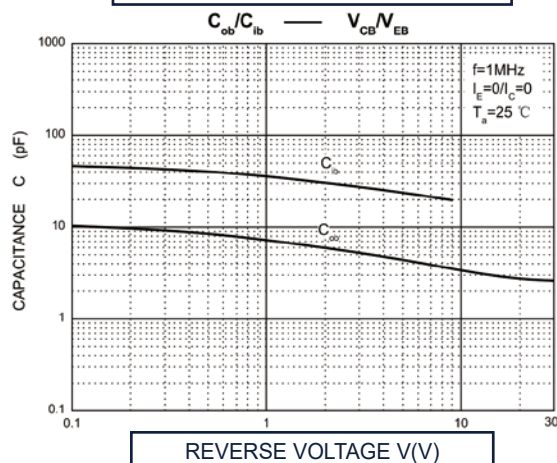
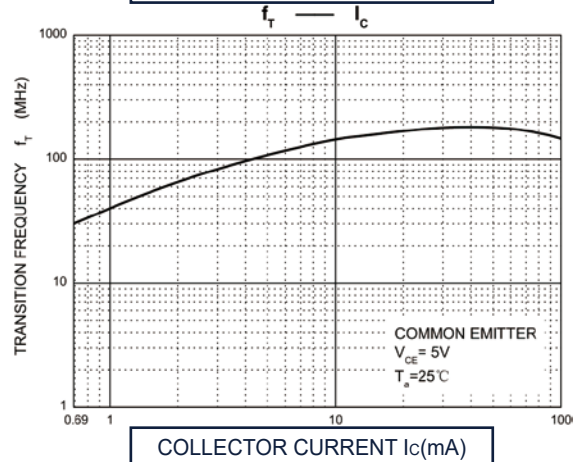
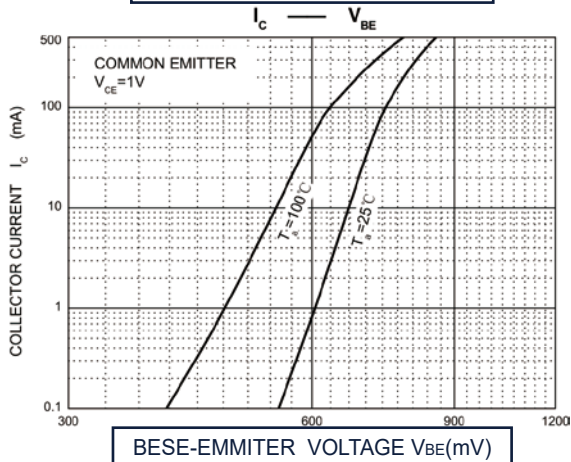
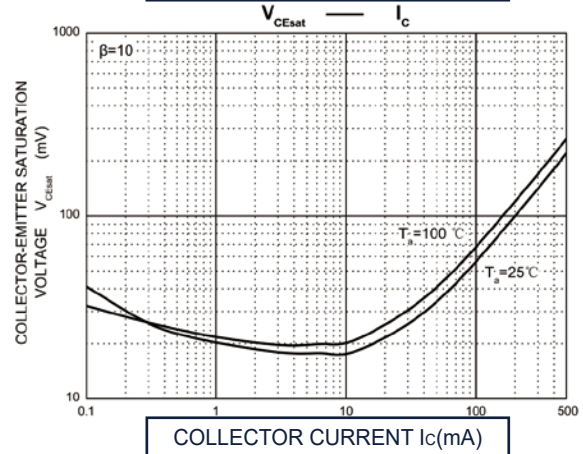
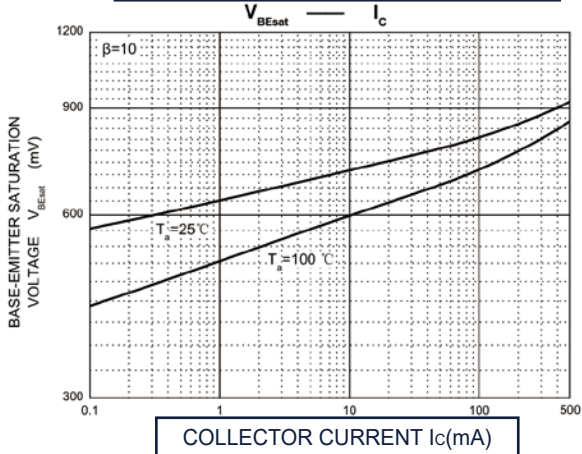
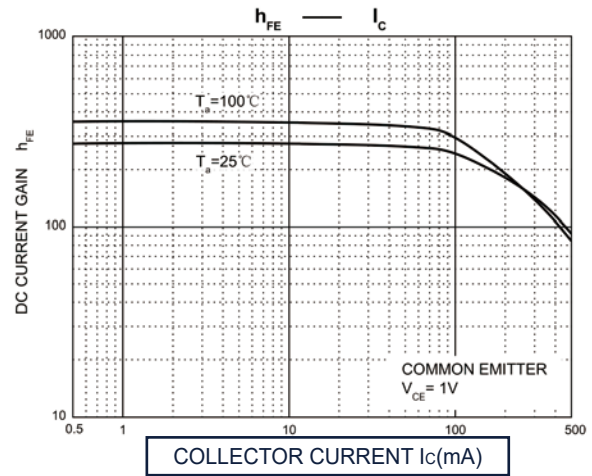
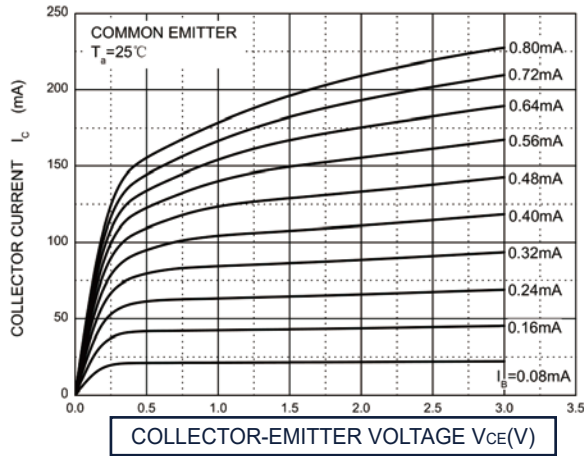
TWTLSEMI

TL-BC817-25W

SOT-323 Plastic-Encapsulate Transistors (NPN)

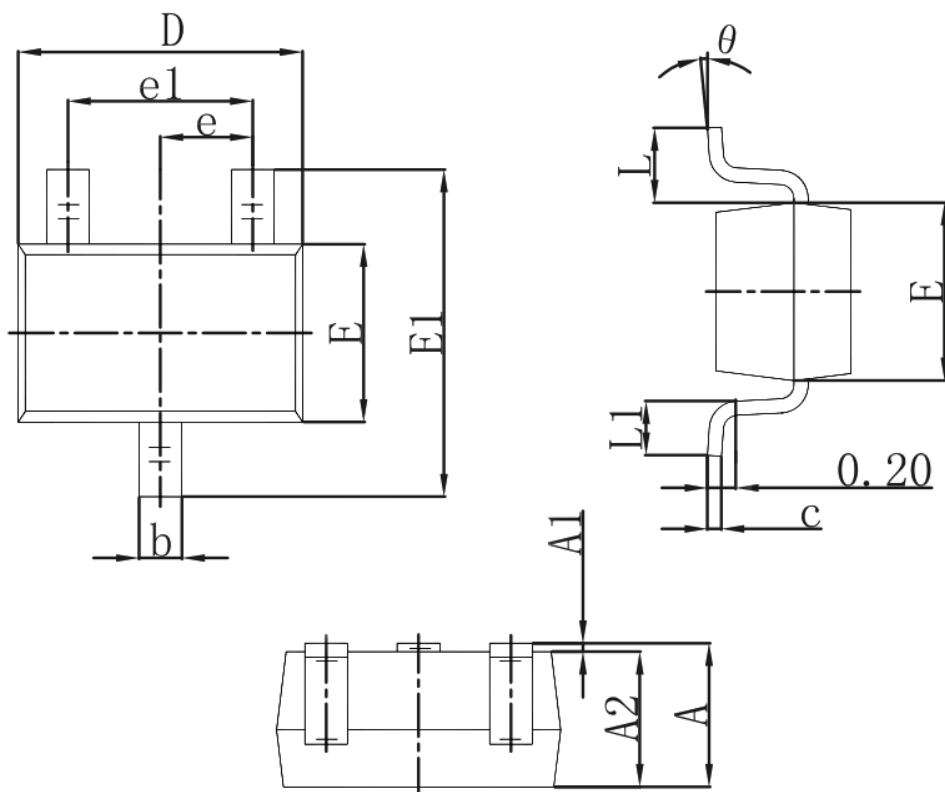
Typical Characteristics

Static Characteristic





SOT-323 Package Outline Dimensions



Symbol	Dimensions in Millimeters		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	1.350	2.450	0.085	0.096
e	0.650 TYP		0.026 TYP	
e1	1.200	1.400	0.047	0.055
L	0.525 REF		0.021 REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°