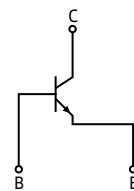


Features

- Ideally suited for automatic insertion
- For Switching and AF Amplifier Applications



SOT-323



Equivalent Circuit

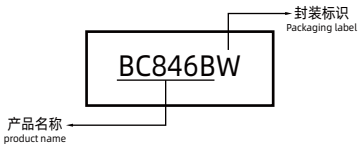
Absolute Maximum Ratings($T_A=25^{\circ}\text{C}$)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	65	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current	0.1	A
P_C	Collector Power Dissipation	150	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	833	$^{\circ}\text{C/W}$
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	$I_C=10\mu\text{A}, I_E=0$	80			V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=10\text{mA}, I_B=0$	65			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=1\mu\text{A}, I_C=0$	6			V
I_{CBO}	Collector cut-off current	$V_{CB}=30\text{V}$			15	nA
h_{FE}	DC current gain	$V_{CE}=5\text{V}, I_C=10\mu\text{A}$		150		
		$V_{CE}=5\text{V}, I_C=2\text{mA}$	200		450	
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C=10\text{mA}, I_B=0.5\text{mA}$			0.25	V
		$I_C=100\text{mA}, I_B=5\text{mA}$			0.6	
$V_{BE(sat)}$	Base-emitter saturation voltage	$I_C=10\text{mA}, I_B=0.5\text{mA}$		0.7		V
		$I_C=100\text{mA}, I_B=5\text{mA}$		0.9		
$V_{BE(on)}$	Base-emitter voltage	$V_{CE}=5\text{V}, I_C=2\text{mA}$	580	660	700	V
		$V_{CE}=5\text{V}, I_C=10\text{mA}$			770	
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	$V_{CB}=10\text{V}, f=1\text{MHz}$			4.5	pF
NF	Noise figure	$V_{CE}=5\text{V}, I_C=0.2\text{mA}, f=1\text{KHz}, R_S=2\text{K}\Omega, BW=200\text{Hz}$			10	dB

Ordering information

Product ID	Pack	Naming rule	Marking	$h_{FE}(1)$	Qty(PCS)
BC846BW	SOT-323		1B	200-450	3000



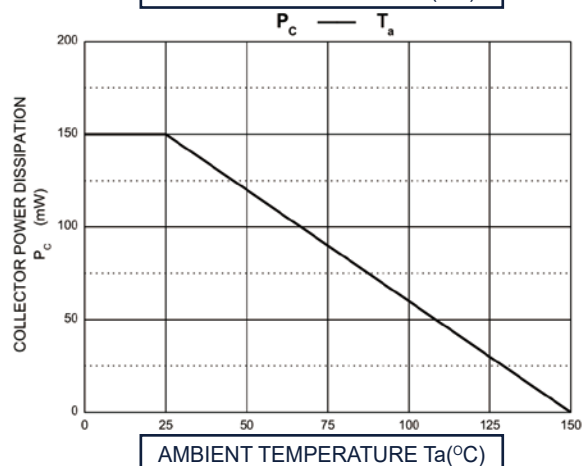
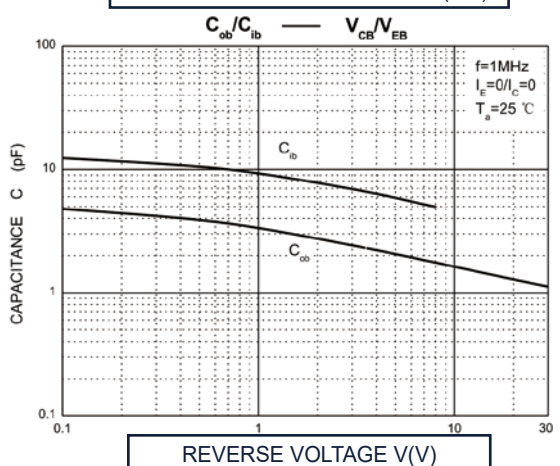
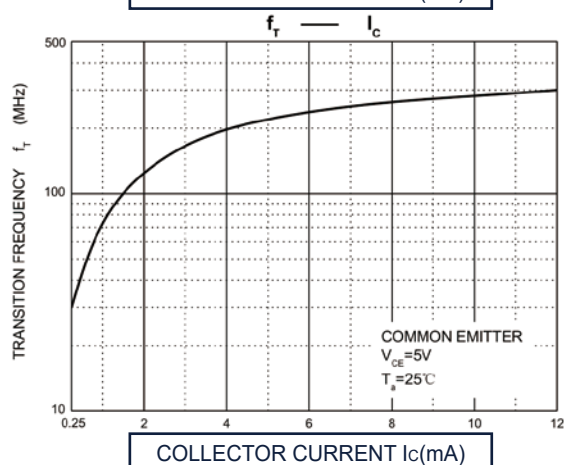
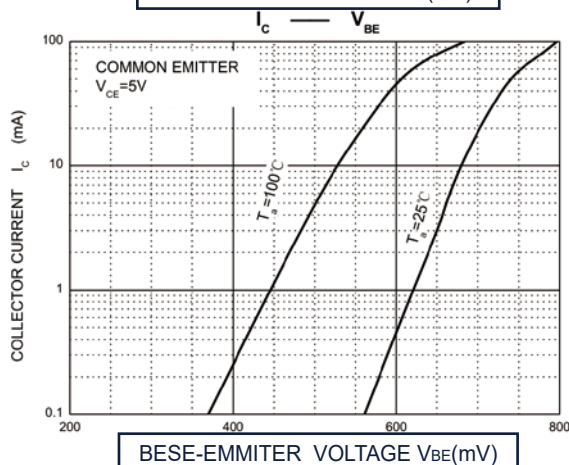
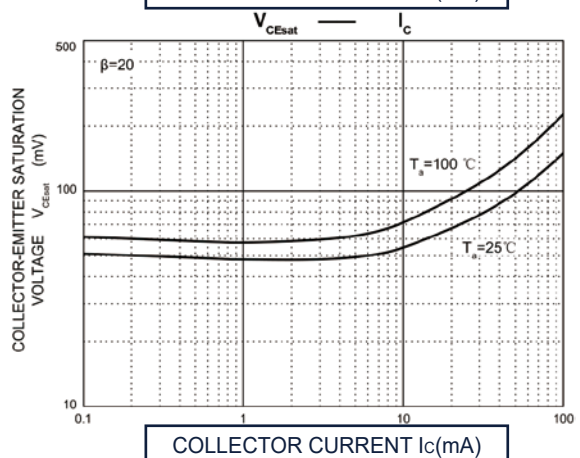
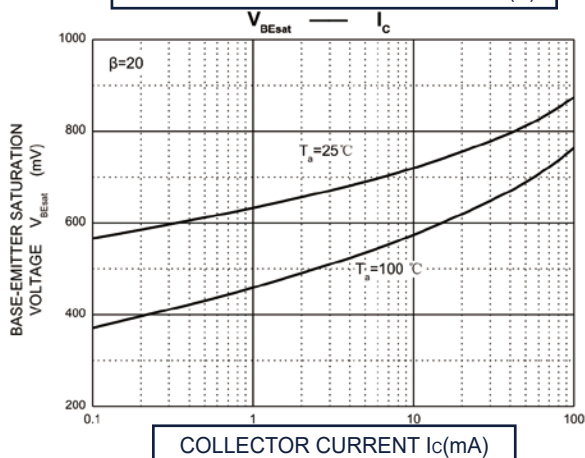
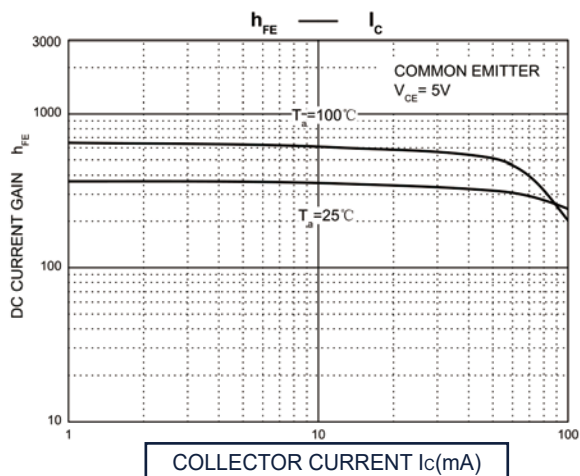
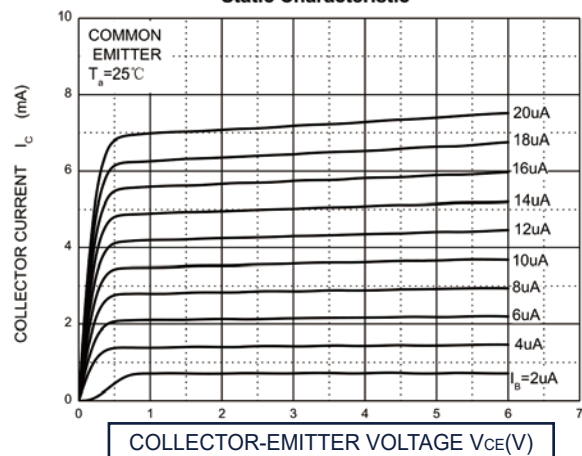
TWTLSEMI

TL-BC846BW

SOT-323 Plastic-Encapsulate Transistors (NPN)

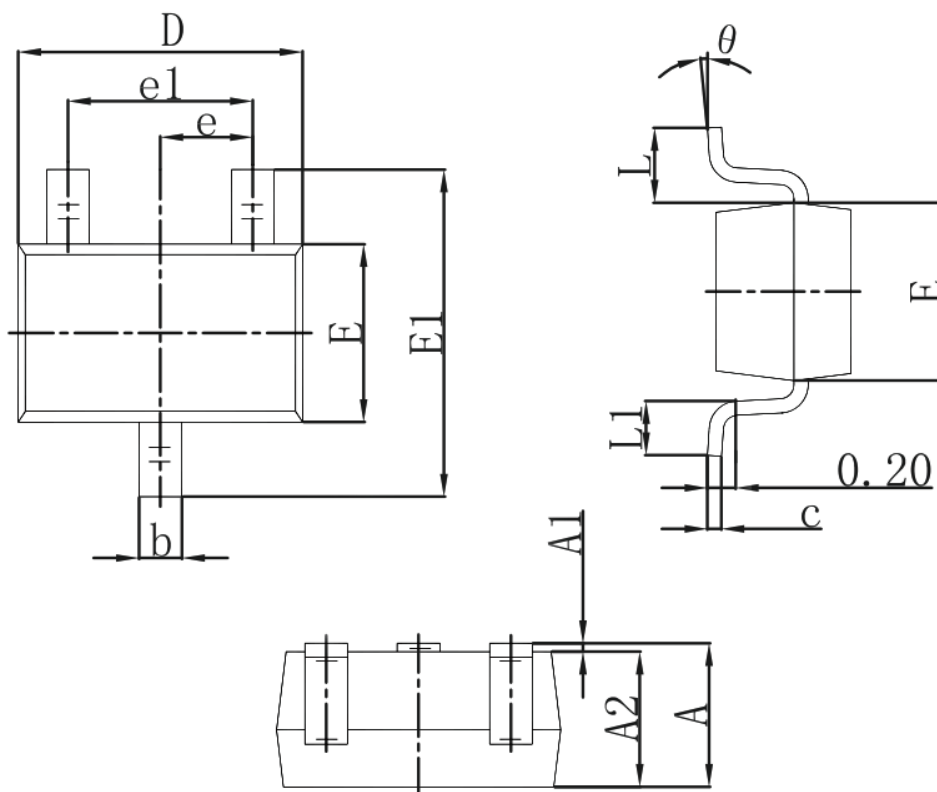
Typical Characteristics

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°