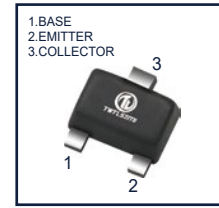
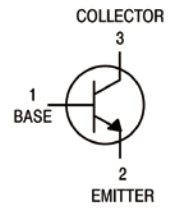


Features

- Moisture sensitivity level 1
- Halogen free and RoHS compliant
- Surface mount package ideally suited for automatic insertion



SOT-723



Equivalent Circuit

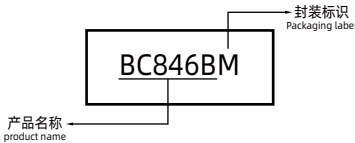
Absolute Maximum Ratings($T_A=25^{\circ}\text{C}$)

Symbol	Parameter	Value	Unit
V_{CB0}	Collector-Base Voltage	80	V
V_{CE0}	Collector-Emitter Voltage	65	V
V_{EB0}	Emitter-Base Voltage	6	V
I_C	Collector Current	0.1	A
P_D	Power dissipation	100	mW
T_J, T_{stg}	Operation Junction And Storage Temperature Range	-55 ~ +150	$^{\circ}\text{C}$
$R_{\theta J-A}^{(1)}$	Thermal resistance, junction-to-ambient	1250	$^{\circ}\text{C/W}$
$R_{\theta J-C}^{(1)}$	Thermal resistance, junction-to-case	1000	$^{\circ}\text{C/W}$

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	$I_E=10\mu\text{A}, I_C=0$	6			V
I_{CBO}	Collector cut-off current	$V_{CB}=70\text{V}, I_E=0$			0.1	μA
I_{EBO}	Emitter-base cutoff current	$V_{EB}=5\text{V}, I_C=0$			0.1	μA
h_{FE}	DC current gain	$V_{CE}=5\text{V}, I_C=2\text{mA}$	200		450	
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C=100\text{mA}, I_B=5\text{mA}$			0.5	V
$V_{BE(sat)}$	Base-emitter saturation voltage	$I_C=100\text{mA}, I_B=5\text{mA}$			1.1	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	$V_{CB}=10\text{V}, f=1\text{MHz}$			4.5	pF

Ordering information

Product ID	Pack	Naming rule	Marking	$h_{FE}(1)$	Qty(PCS)
BC846BM	SOT-723		1B	200-450	8000



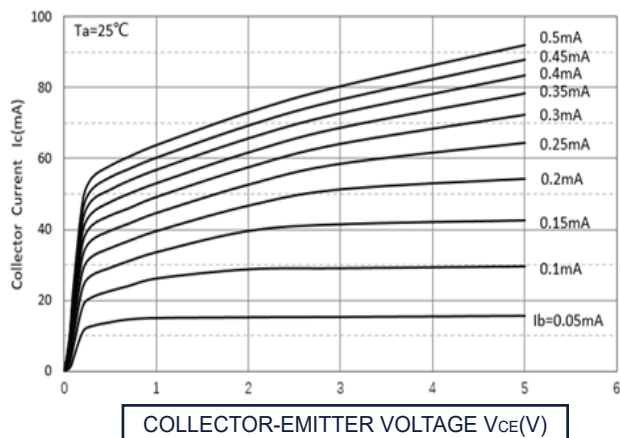
TWTLSEMI

TL-BC846BM

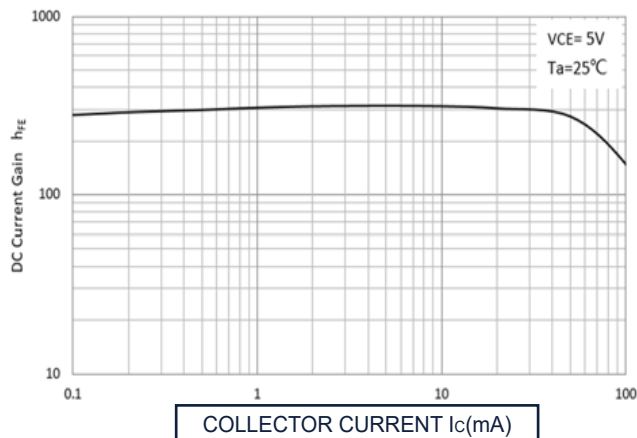
SOT-723 Plastic-Encapsulate Transistors (NPN)

Typical Characteristics

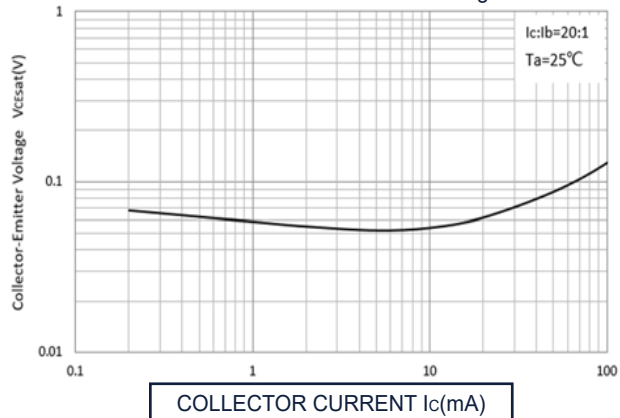
Static Characteristics



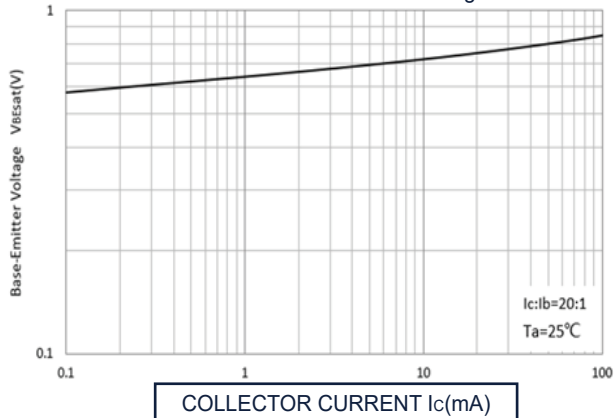
DC Current Gain Characteristics



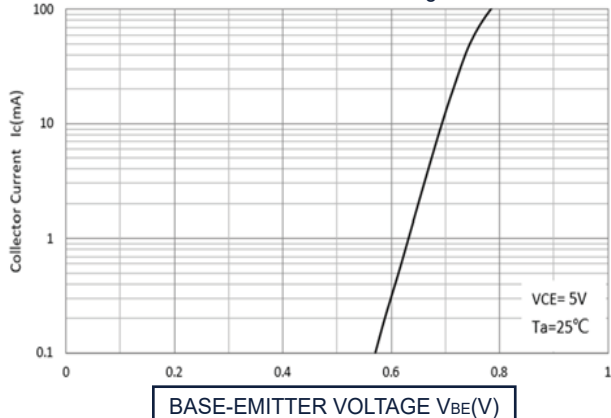
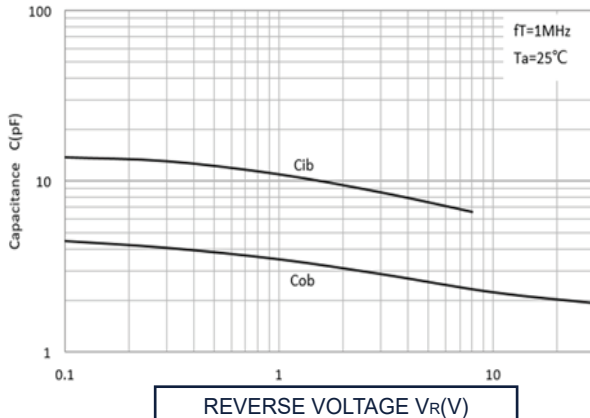
Collector-Emitter Saturation Voltage



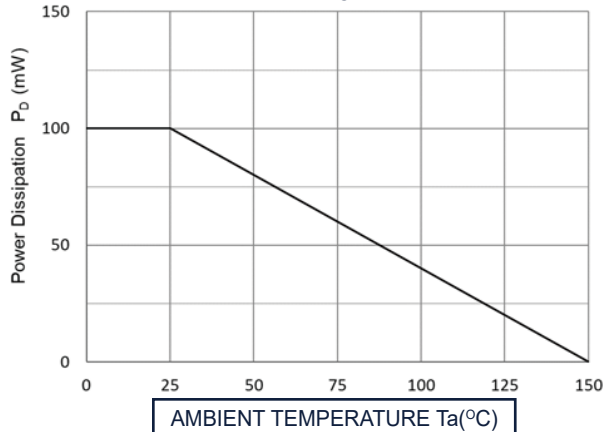
Base-Emitter Saturation Voltage



Base-Emitter on Voltage

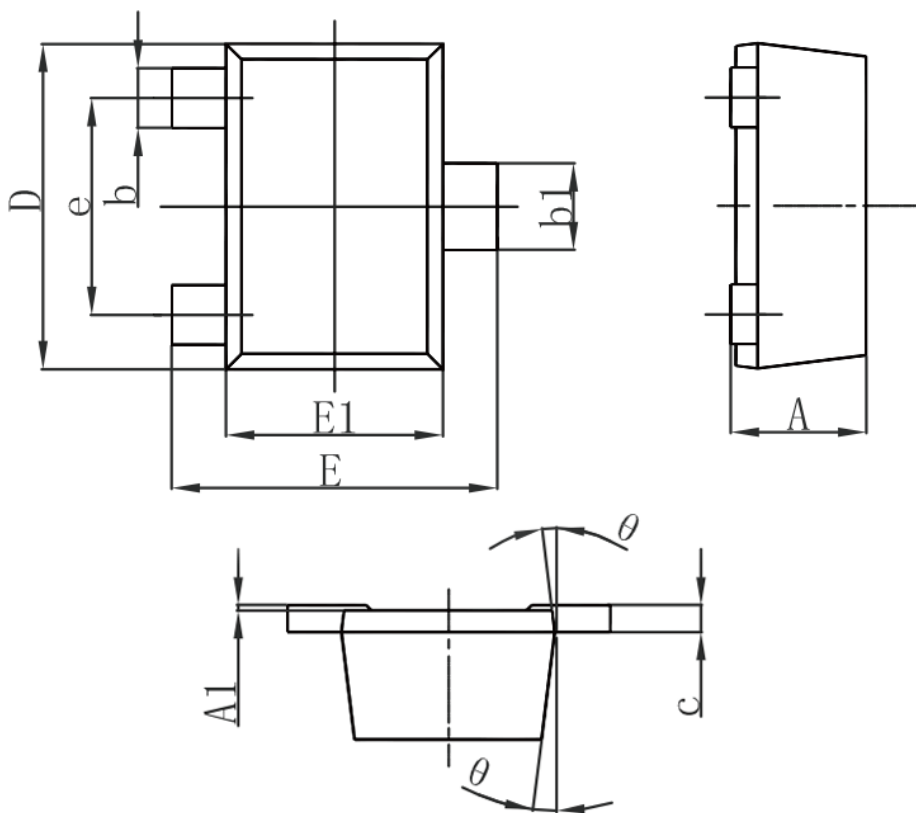
 $C_{ob}/C_{ib}-V_{CB}/V_{EB}$ 

Pd-Ta Curve





SOT-723 Package Outline Dimensions



Symbol	Dimensions in Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A		0.500		0.020
A1	0.000	0.050	0.000	0.002
b	0.170	0.270	0.007	0.011
b1	0.270	0.370	0.011	0.015
c		0.150		0.006
D	1.150	1.250	0.045	0.045
E	1.150	1.250	0.045	0.049
E1	0.750	0.850	0.030	0.033
e	0.800TYP.		0.031TYP.	
θ	7° REF.		7° REF.	