

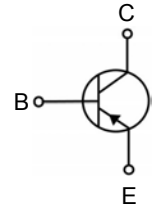
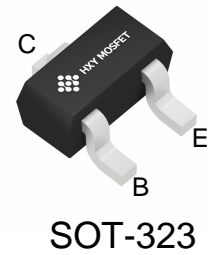


## Features

- Small Surface Mount Package
- Ideal for Medium Power Amplification and Switching

## Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
BC806-16WF	SOT-323	K4M	3000



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

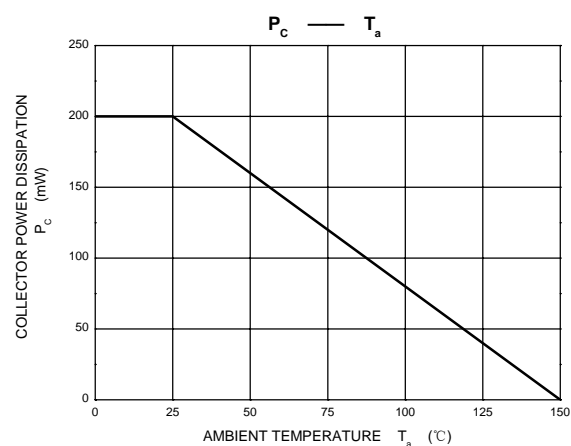
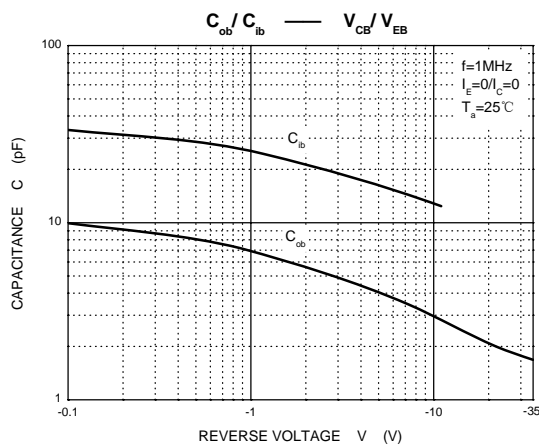
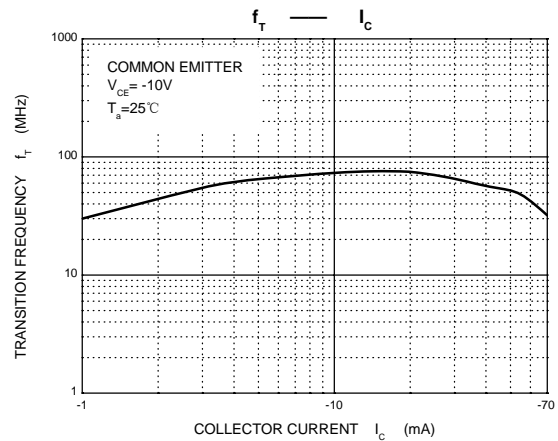
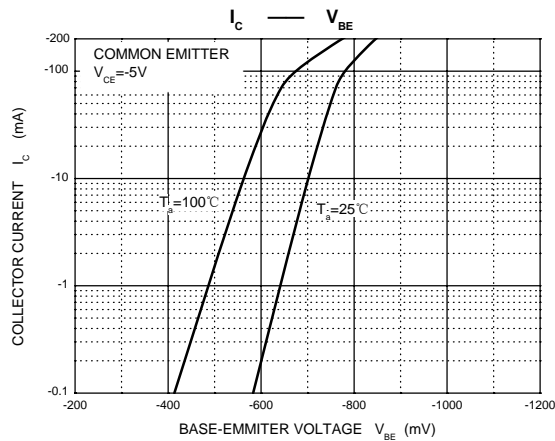
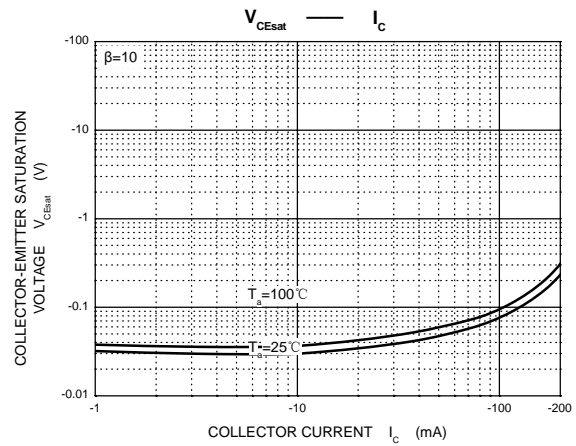
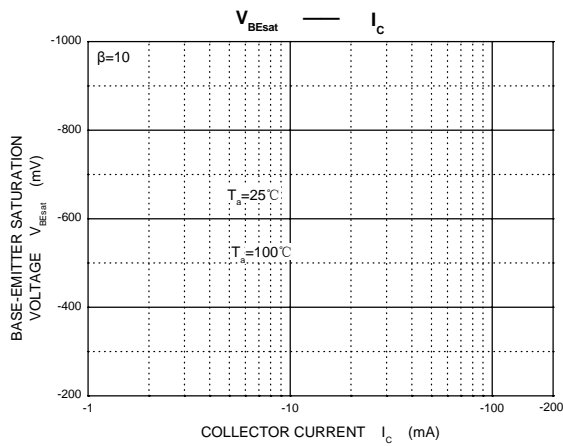
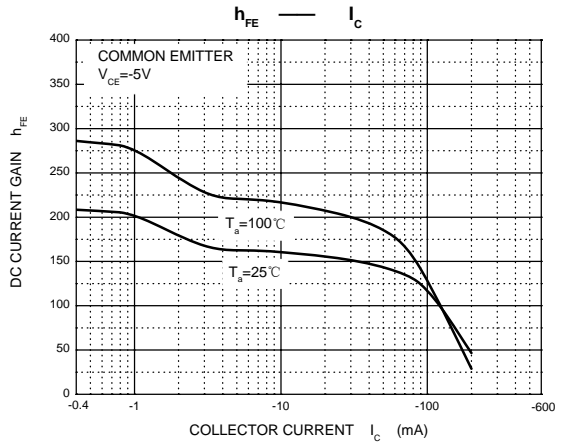
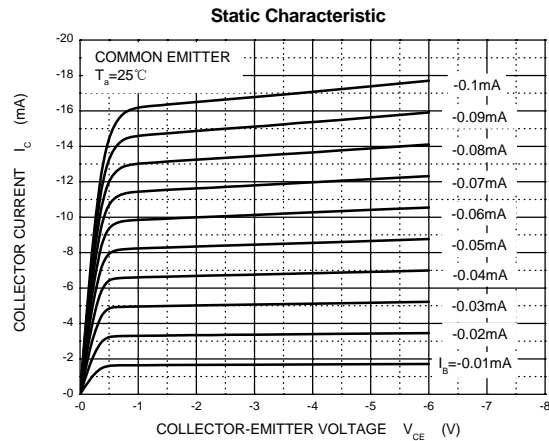
Symbol	Parameter	Value	Unit
V <sub>CBO</sub>	Collector-Base Voltage	-160	V
V <sub>CEO</sub>	Collector-Emitter Voltage	-150	V
V <sub>EBO</sub>	Emitter-Base Voltage	-5	V
I <sub>C</sub>	Collector Current-Continuous	-600	mA
P <sub>C</sub>	Collector Power Dissipation	200	mW
R <sub>ΘJA</sub>	Thermal Resistance From Junction To Ambient	625	°C/W
T <sub>stg</sub>	Storage Temperature	-55-150	°C

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

Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =-100μA, I <sub>E</sub> =0	-160		V
Collector-emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> =-1mA, I <sub>B</sub> =0	-150		V
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =-10μA, I <sub>C</sub> =0	-5		V
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> =-120V, I <sub>E</sub> =0		-50	nA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> =-3V, I <sub>C</sub> =0		-50	nA
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> =-5V, I <sub>C</sub> =-1mA	50		
		V <sub>CE</sub> =-5V, I <sub>C</sub> =-10mA	100	300	
		V <sub>CE</sub> =-5V, I <sub>C</sub> =-50mA	50		
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =-50mA, I <sub>B</sub> =-5mA		-0.5	V
		I <sub>C</sub> =-10mA, I <sub>B</sub> =-1mA		-0.2	V
Base-emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =-50mA, I <sub>B</sub> =-5mA		-1	V
		I <sub>C</sub> =-10mA, I <sub>B</sub> =-1mA		-1	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> =-10V, I <sub>C</sub> =-10mA, f=100MHz	100		MHz
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> =-10V, I <sub>E</sub> =0, f=1MHz		6	pF

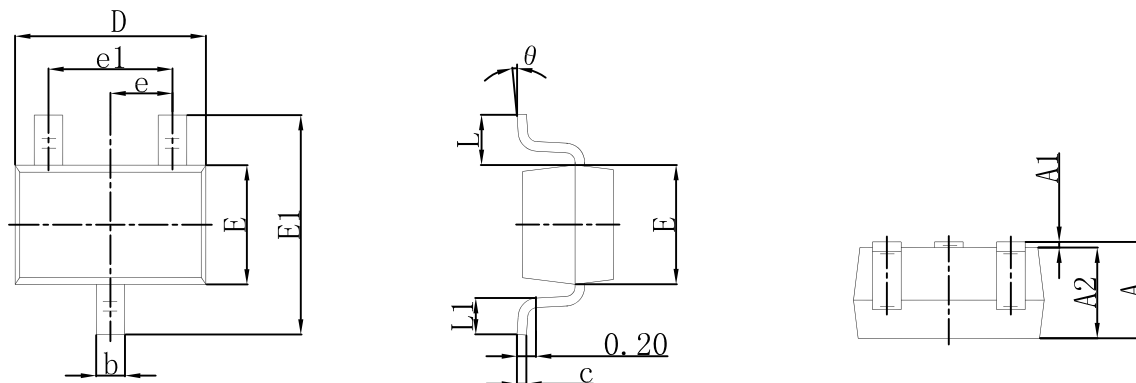


## Typical Characteristics



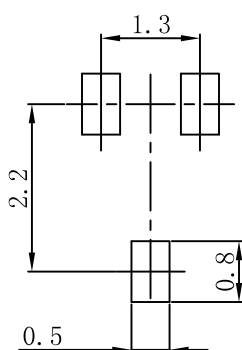


## Package Dimensions SOT-323



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	2.150	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
K	0°	8°	0°	8°

## SOT-323 Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05\text{mm}$ .
3. The pad layout is for reference purposes only.



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