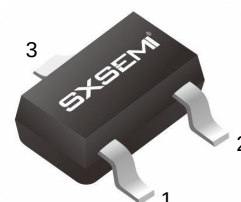


FEATURES

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

SOT-323



- 1. BASE
- 2. EMITTER
- 3. COLLECTOR

DEVICE MARKING

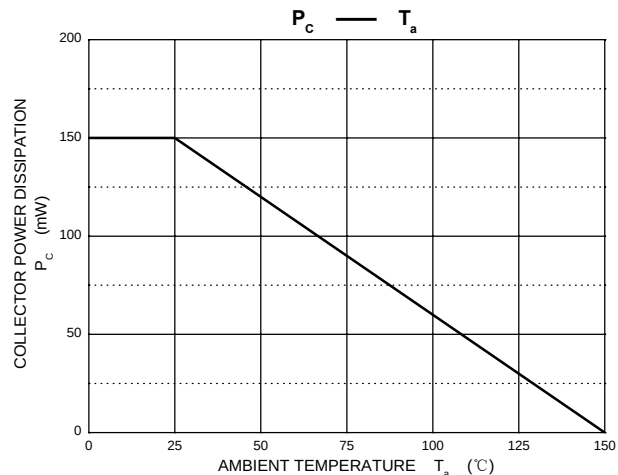
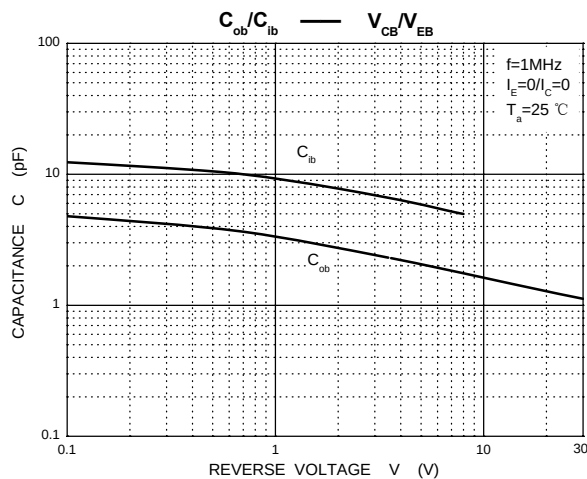
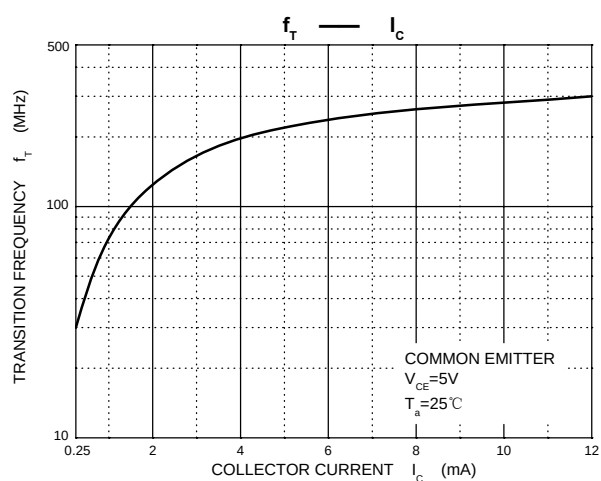
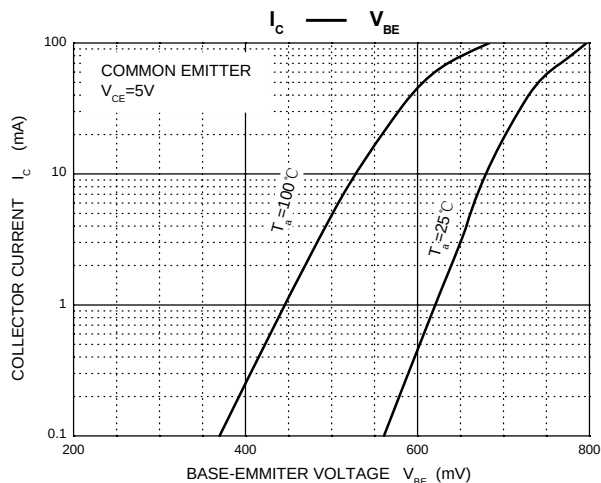
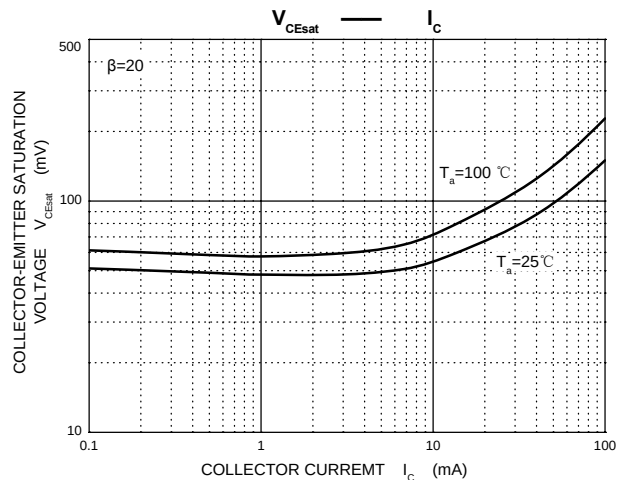
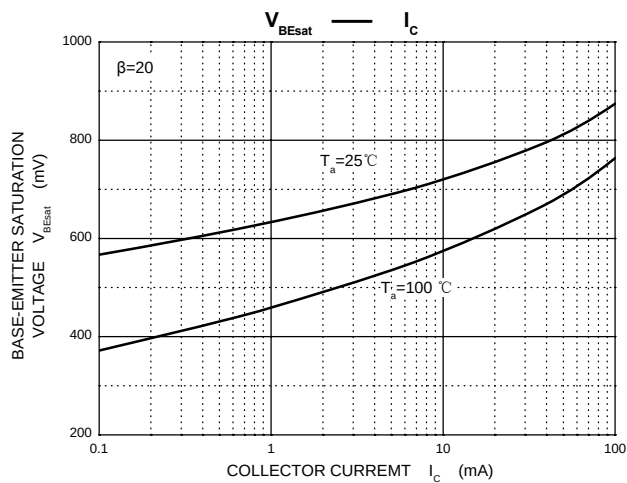
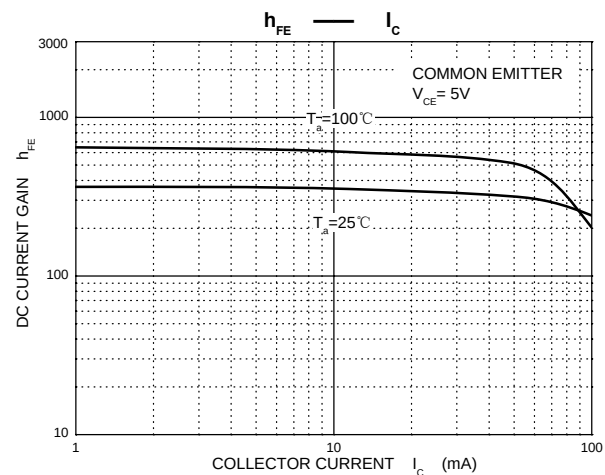
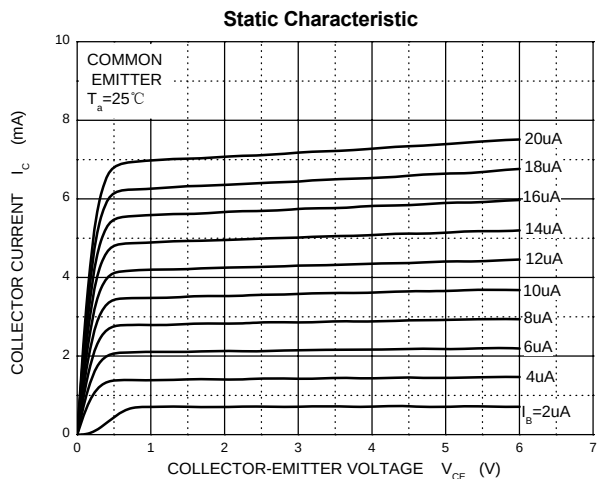
BC846AW=1A; BC846BW=1B;
 BC847AW=1E; BC847BW=1F; BC847CW=1G;
 BC848AW=1J; BC848BW=1K; BC848CW=1L

MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

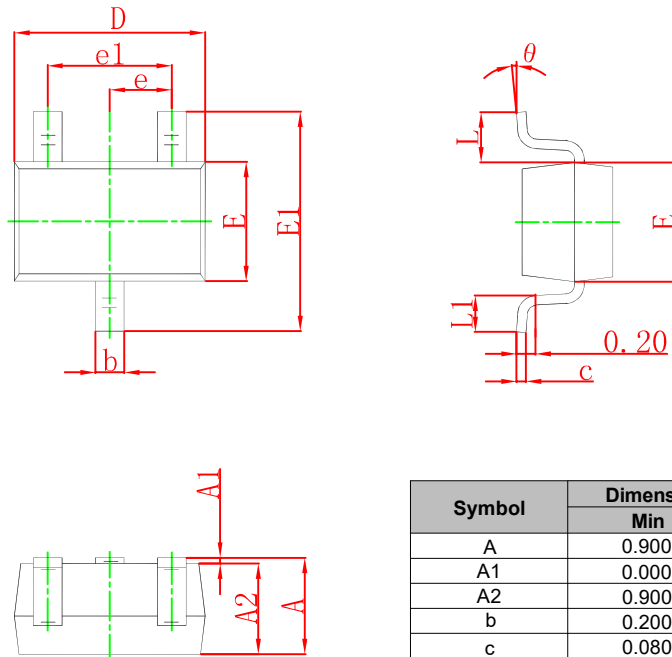
Symbol	Parameter		Value	Unit
V_{CB0}	Collector-Base Voltage	BC846W	80	V
		BC847W	50	
		BC848W	30	
V_{CEO}	Collector-Emitter Voltage	BC846W	65	V
		BC847W	45	
		BC848W	30	
V_{EB0}	Emitter-Base Voltage	BC846W	6	V
		BC847W	6	
		BC848W	5	
I_C	Collector Current –Continuous		0.1	A
P_C	Collector Power Dissipation		150	mW
R_{θJA}	Thermal Resistance From Junction To Ambient		833	°C/W
T_J, T_{stg}	Operation Junction and Storage Temperature Range		-55-150	°C

ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

Parameter		Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	BC846W	V _{CBO}	I _C = 10μA, I _E =0	80			V
	BC847W			50			
	BC848W			30			
Collector-emitter breakdown voltage	BC846W	V _{CEO}	I _C = 10mA, I _B =0	65			V
	BC847W			45			
	BC848W			30			
Emitter-base breakdown voltage	BC846W	V _{EBO}	I _E = 1 μA, I _C =0	6			V
	BC847W			6			
	BC848W			5			
Collector Cutoff Current		I _{CBO}	V _{CB} =30V			15	nA
DC current gain	BC846AW,847AW,848AW	h _{FE}	V _{CE} = 5V, I _C = 10μA		90		
	BC846BW,847BW,848BW				150		
	BC847CW,BC848CW				270		
	BC846AW,847AW,848AW		V _{CE} = 5V, I _C = 2mA	110		220	
	BC846BW,847BW,848BW			200		450	
	BC847CW,BC848CW			420		800	
Collector-emitter saturation voltage		V _{CE(sat)}	I _C =10mA, I _B =0.5mA I _C =100mA, I _B = 5mA			0.25 0.6	V
Base-emitter saturation voltage		V _{BE(sat)}	I _C =10mA, I _B =0.5mA I _C =100mA, I _B = 5mA		0.7 0.9		V
Base-emitter voltage		V _{BE(on)}	V _{CE} = 5V, I _C = 2mA V _{CE} = 5V, I _C = 10mA	580	660	700 770	mV
Transition frequency		f _T	V _{CE} = 5 V, I _C = 10mA f=100MHz	100			MHz
Collector output capacitance		C _{ob}	V _{CB} =10V,f=1MHz			4.5	pF
Noise figure	BC846AW,847AW,848AW	NF	V _{CE} =5V,I _C =0.2mA, f=1KHz,R _S =2KΩ BW=200Hz			10	
	BC846BW,847BW,848BW					10	dB
	BC847CW,BC848CW					4	

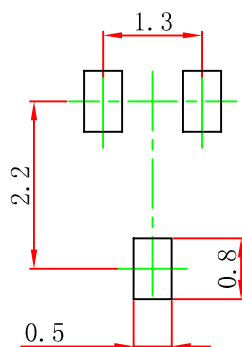


SOT-323 Package Outline Dimensions



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	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
θ	0°	8°	0°	8°

SOT-323 Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.

2. General tolerance: ± 0.05 mm.

3. The pad layout is for reference purposes only.