



BC846AW,BW/BC847AW,BW,CW  
/BC848AW,BW,CW

TRANSISTOR (NPN)

SOT-323

FEATURES

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

DEVICE MARKING:

BC846AW=1A;BC846BW=1B

BC847AW=1E;BC847BW=1F;BC847CW=1G

BC848AW=1J;BC848BW=1K;BC848CW=1L



- 1、BASE
- 2、EMITTER
- 3、COLLECTOR

Maximum Ratings ( @T<sub>A</sub>=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage BC846W	V <sub>CB0</sub>	80	V
BC847W		50	
BC848W		30	
Collector-Emitter Voltage BC846W	V <sub>CEO</sub>	65	V
BC847W		45	
BC848W		30	
Emitter-Base Voltage BC846W	V <sub>EBO</sub>	6	V
BC847W		6	
BC848W		5	
Collector Current –Continuous	I <sub>C</sub>	0.1	A
Collector Power Dissipation	P <sub>C</sub>	150	mW
Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature	T <sub>STG</sub>	-55~150	°C

勝特力材料 886-3-5753170  
勝特力电子(上海) 86-21-54151736  
勝特力电子(深圳) 86-755-83298787  
[Http://www.100y.com.tw](http://www.100y.com.tw)

**BC846AW,BW /BC847AW,BW,CW  
/BC848AW,BW,CW**



**Electrical Characteristics( @T<sub>A</sub>=25°C unless otherwise specified)**

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage BC846W BC847W BC848W	V <sub>CBO</sub>	I <sub>C</sub> =10μA,I <sub>E</sub> =0	80 50 30			V
Collector-emitter breakdown voltage BC846W BC847W BC848W	V <sub>CEO</sub>	I <sub>C</sub> =10mA,I <sub>B</sub> =0	65 45 30			V
Emitter-base breakdown voltage BC846W BC847W BC848W	V <sub>EBO</sub>	I <sub>E</sub> =1μA,I <sub>C</sub> =0	6 6 5			V
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> =30V			15	nA
DC current gain BC846AW,847AW,848AW BC846BW,847BW,848BW BC847CW,848CW BC846AW,847AW,848AW BC846BW,847BW,848BW BC847CW,848CW	h <sub>FE</sub>	V <sub>CE</sub> =5V,I <sub>C</sub> =10μA  V <sub>CE</sub> =5V,I <sub>C</sub> =2mA		90 150 270		
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =10mA,I <sub>B</sub> =0.5mA I <sub>C</sub> =100mA,I <sub>B</sub> =5mA			0.25 0.6	V
Base-emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =10mA,I <sub>B</sub> =0.5mA I <sub>C</sub> =100mA,I <sub>B</sub> =5mA		0.7 0.9		V
Base-emitter voltage	V <sub>BE(on)</sub>	V <sub>CE</sub> =5V,I <sub>C</sub> =2mA V <sub>CE</sub> =5V,I <sub>C</sub> =10mA	580	660	700 770	mV
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> =5V,I <sub>C</sub> =10mA,f=100MHz	100			MHz
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> =10V,f=1MHz			4.5	pF
Noise figure BC846AW,847AW,848AW BC846BW,847BW,848BW BC847CW,848CW	NF	V <sub>CE</sub> =5V,I <sub>C</sub> =0.2mA f=1KHz,R <sub>s</sub> =2KΩ BW=200Hz			10 4	dB

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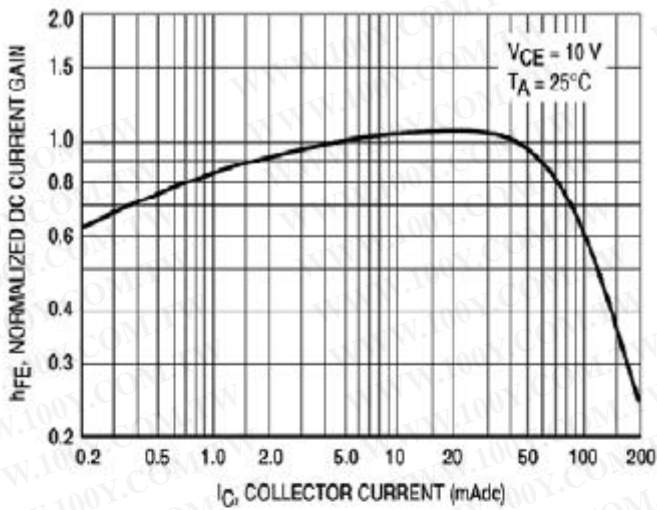


Figure 1. Normalized DC Current Gain

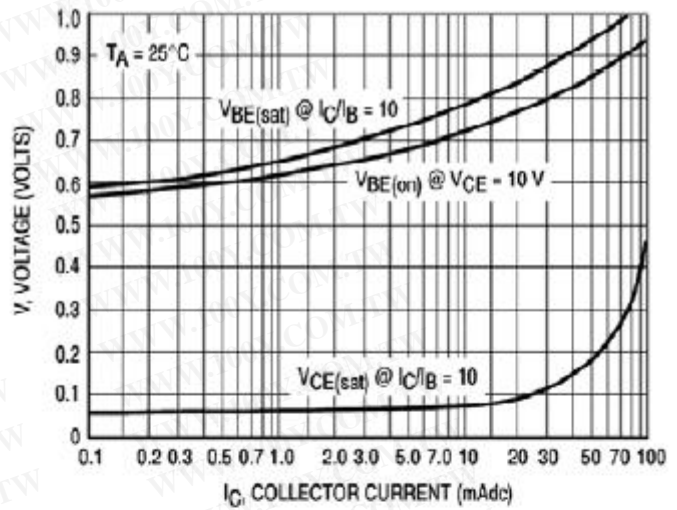


Figure 2. "Saturation" and "On" Voltages

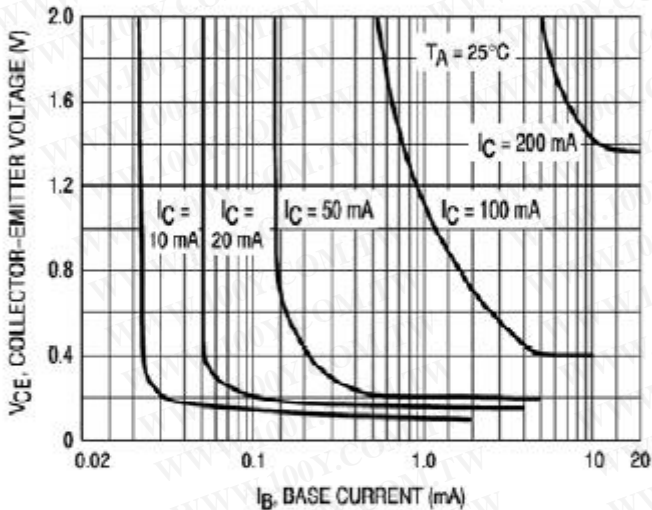


Figure 3. Collector Saturation Region

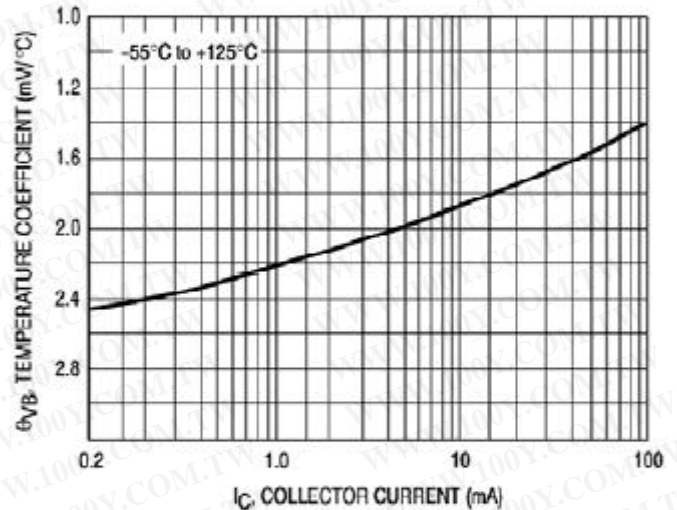


Figure 4. Base-Emitter Temperature Coefficient

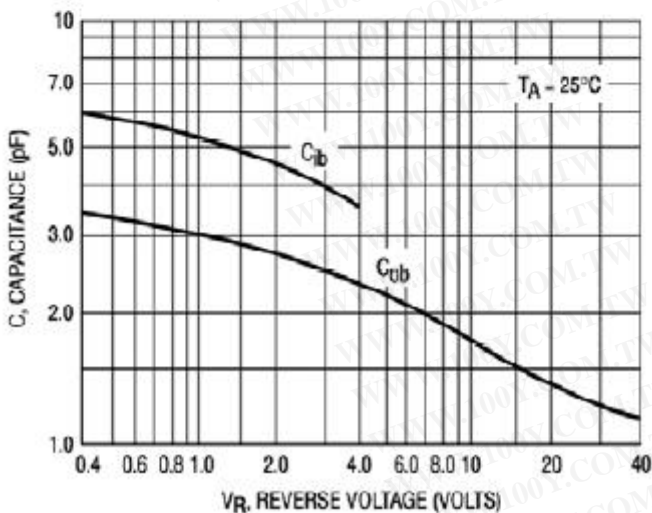


Figure 5. Capacitances

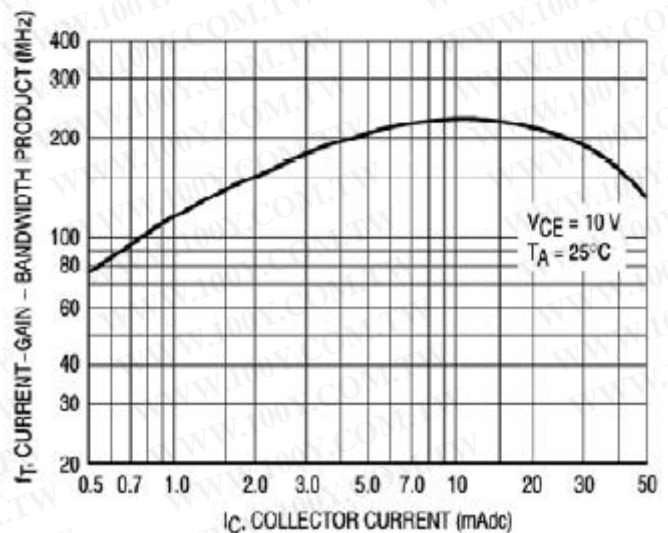


Figure 6. Current-Gain - Bandwidth Product

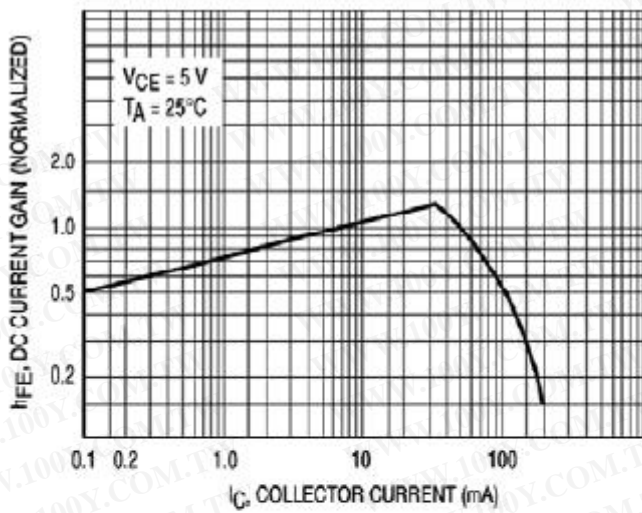


Figure 7. DC Current Gain

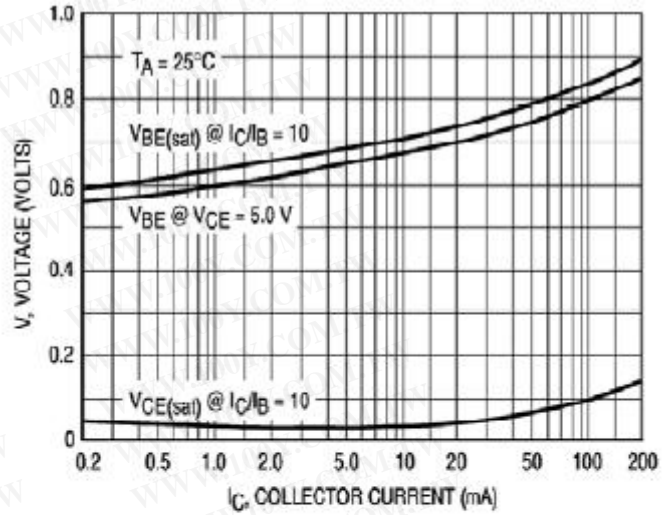


Figure 8. "On" Voltage

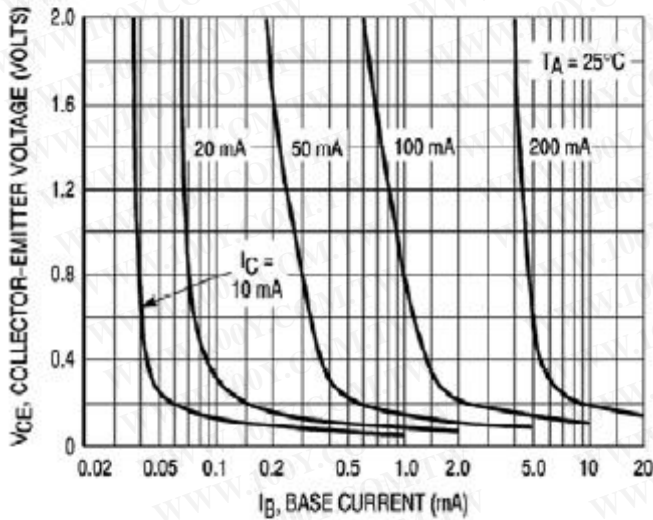


Figure 9. Collector Saturation Region

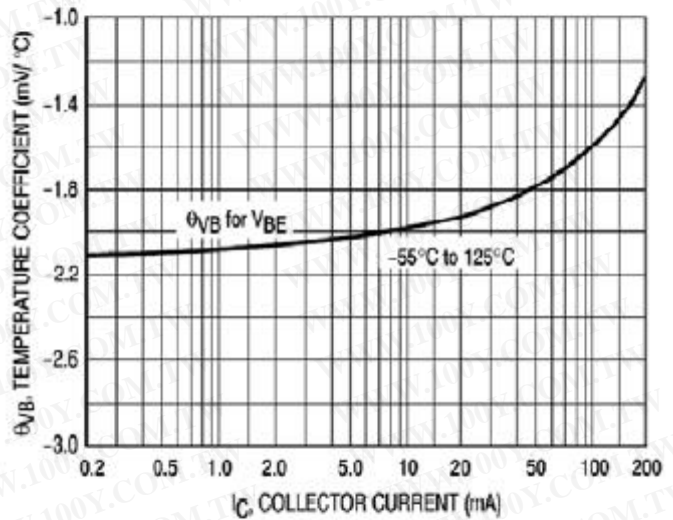


Figure 10. Base-Emitter Temperature Coefficient

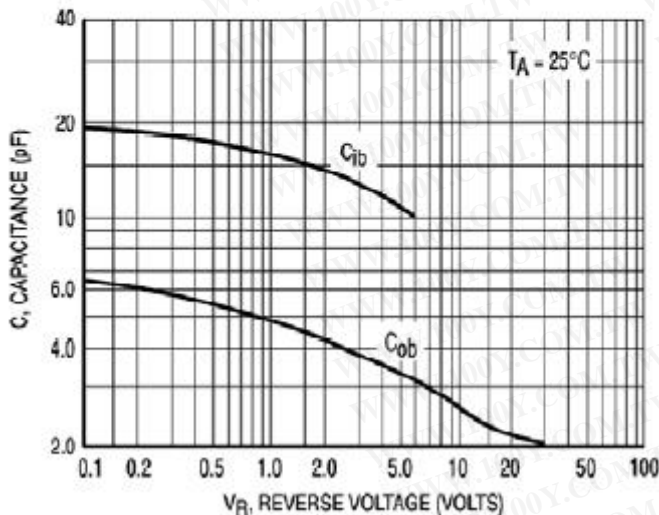


Figure 11. Capacitance

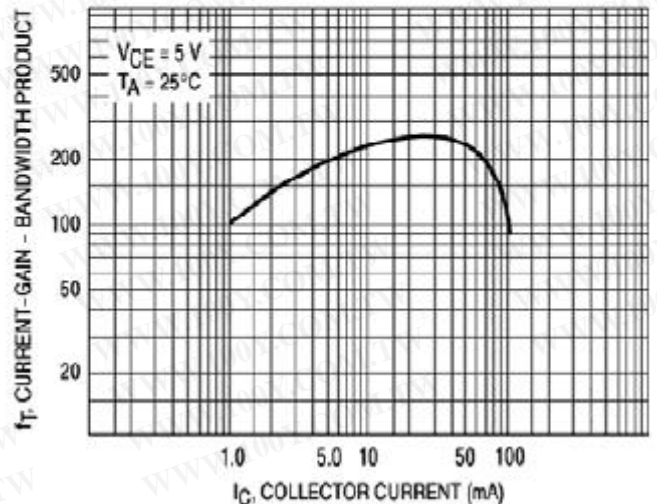


Figure 12. Current-Gain - Bandwidth Product