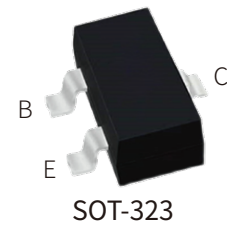


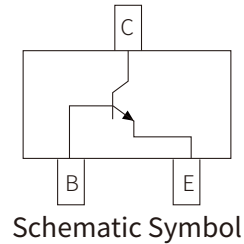
## FEATURES

- | Complementary to BC856W/BC857W/BC858W
- | Power Dissipation of 150mW
- | Ideally suited for automatic insertion
- | For switching and AF amplifier applications



## MECHANICAL DATA

- | Small Outline Plastic Package
- | Epoxy UL: 94V-0
- | Mounting position: Any



## APPROVALS

<b>RoHS</b>	Compliance with 2011/65/EU
<b>HF</b>	Compliance with IEC61249-2-21:2003

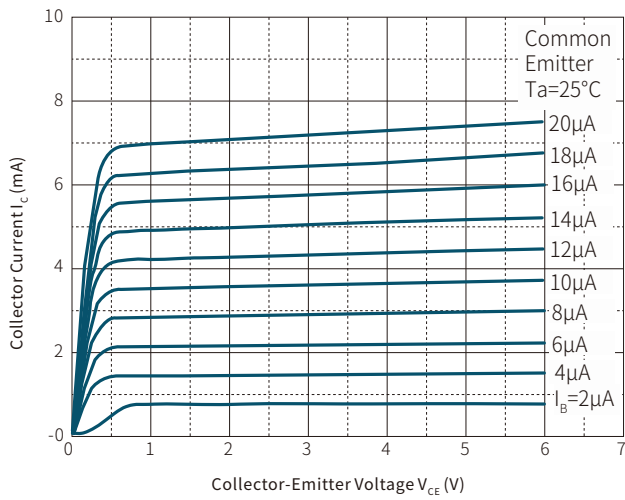
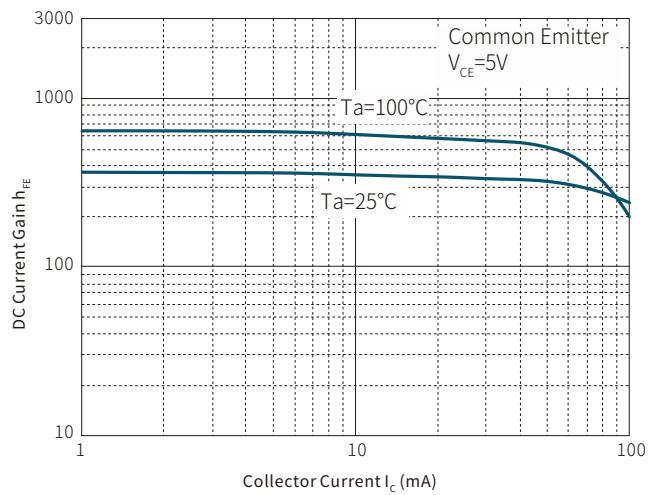
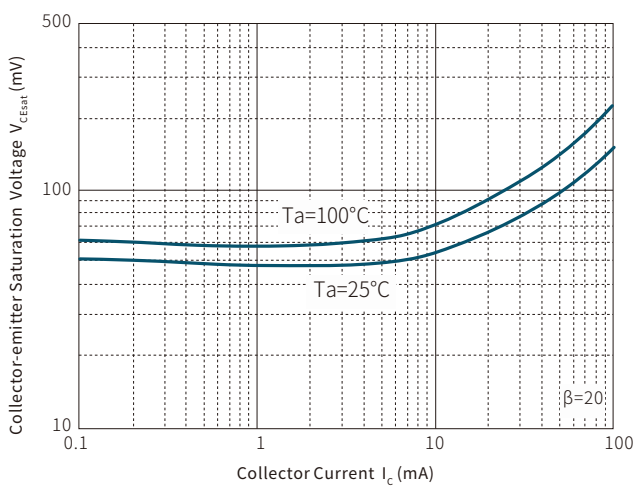
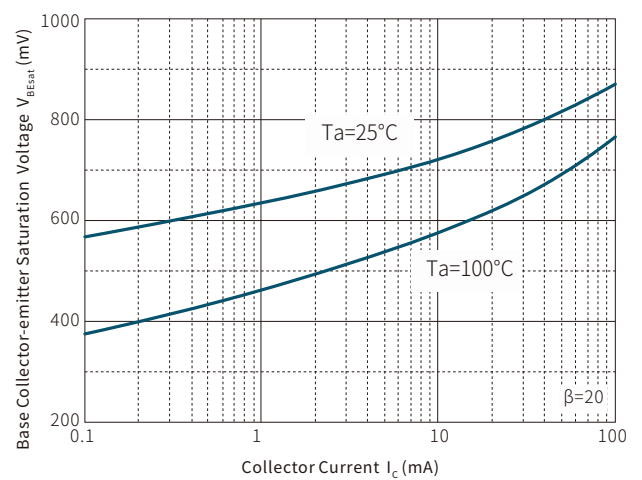
## MAXIMUM RATINGS (T<sub>A</sub>=25°C)

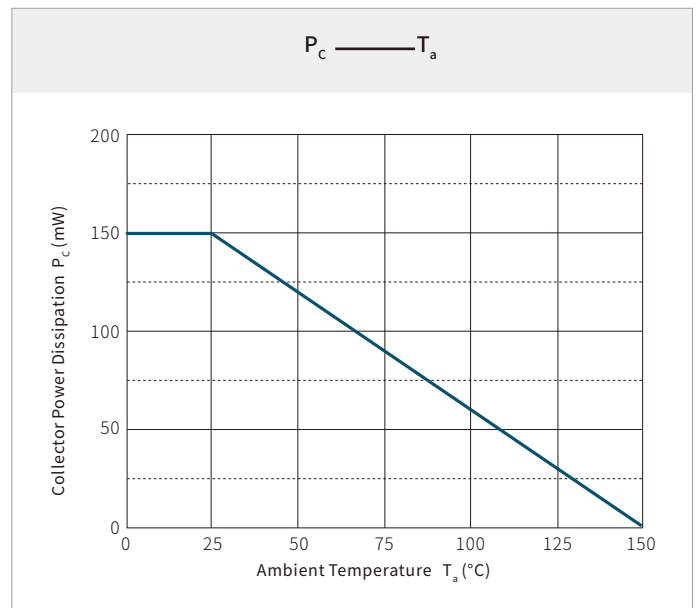
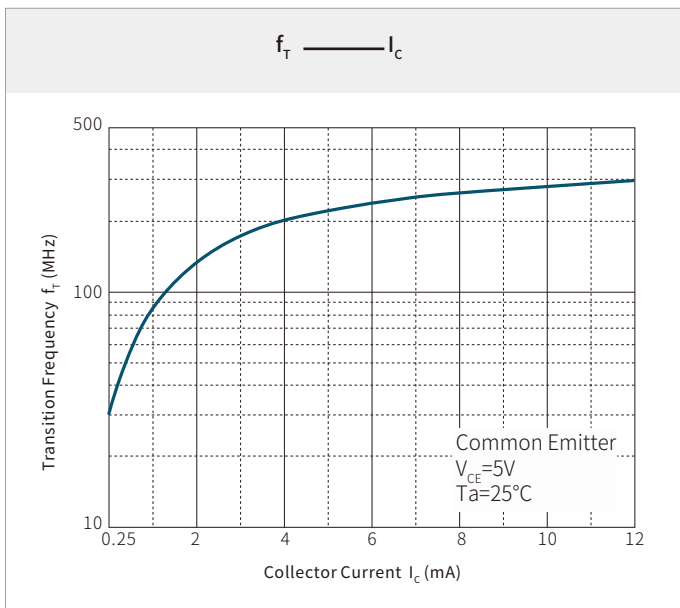
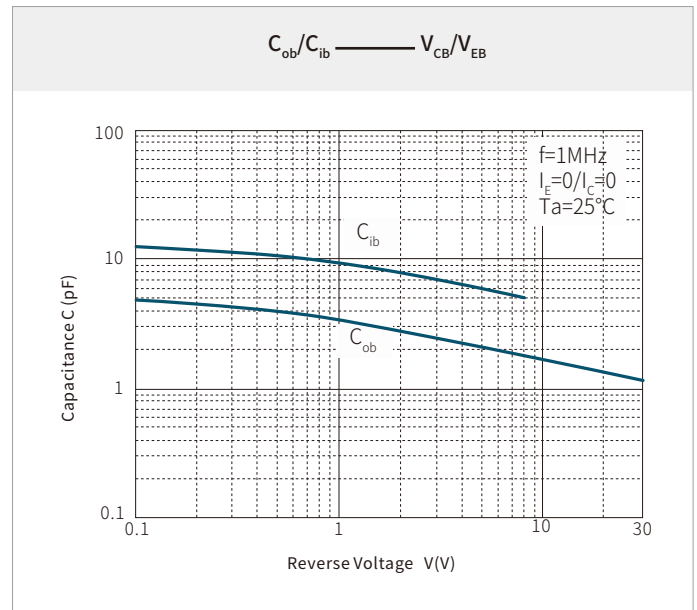
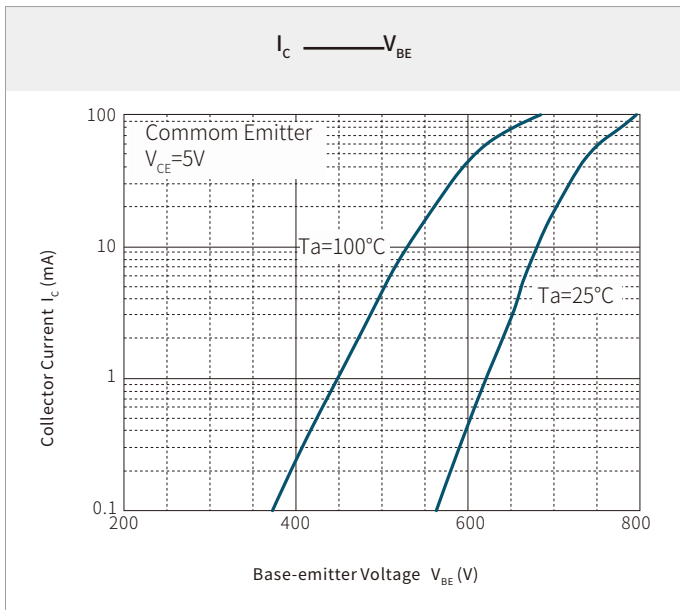
Parameter	Symbol	BC846W		BC847W			BC848W			Unit	
		BC846AW	BC846BW	BC847AW	BC847BW	BC847CW	BC848AW	BC848BW	BC848CW		
		1A	1B	1E	1F	1G	1J	1K	1L		
Collector-Base Voltage	V <sub>CBO</sub>	80		50			30			V	
Collector-Emitter Voltage	V <sub>CEO</sub>	65		45			30			V	
Emitter-Base Voltage	V <sub>EBO</sub>	6		6			5			V	
Collector Current-Continuous	I <sub>C</sub>	100									mA
Collector Power Dissipation	P <sub>C</sub>	150									mW
Thermal Resistance From Junction to Ambient	R <sub>θJA</sub>	833									°C/W
Junction Temperature	T <sub>J</sub>	150									°C
Storage Temperature	T <sub>STG</sub>	-55~+150									°C

## ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C)

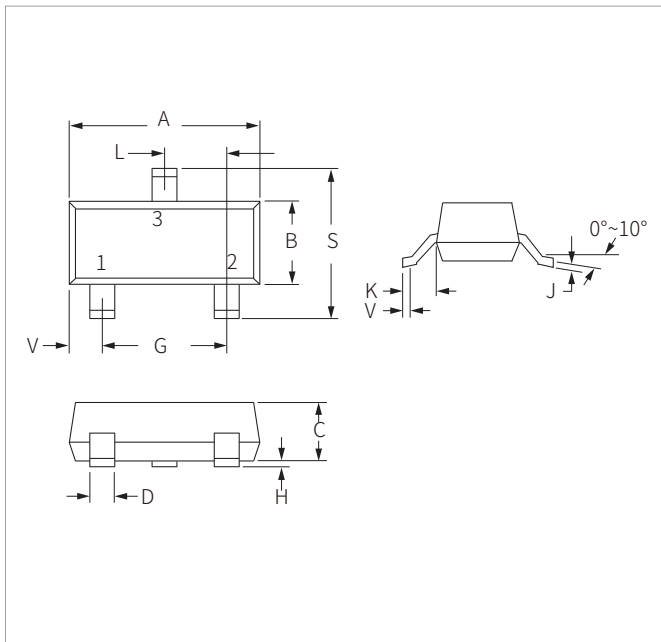
Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit	
Collector-Base Breakdown Voltage	V <sub>(BR)CBO</sub>	BC846W	80			V	
		BC847W	50				
		BC848W	30				
Collector-Emitter Breakdown Voltage	V <sub>(BR)CEO</sub>	BC846W	65			V	
		BC847W	45				
		BC848W	30				
Emitter-Base Breakdown Voltage	V <sub>(BR)EBO</sub>	BC846W	6			V	
		BC847W	6				
		BC848W	5				
Collector Cut-off Current	I <sub>CBO</sub>	V <sub>CB</sub> = 30V, I <sub>E</sub> = 0			15	nA	
DC Current Gain	h <sub>FE</sub>	BC846AW BC847AW,BC848AW	V <sub>CE</sub> = 5V, I <sub>C</sub> = 2mA		110	220	
		BC846BW BC847BW,BC848BW		200	450		
		BC847CW BC848CW		420	800		
Collector-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = 10mA, I <sub>B</sub> = 0.5mA			0.25	V	
		I <sub>C</sub> = 100mA, I <sub>B</sub> = 5mA			0.60		
Base -Emitter Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> = 100mA, I <sub>B</sub> = 5mA			1.10		
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	NF	BC846AW BC847AW,BC848AW	V <sub>CE</sub> = 5V, I <sub>C</sub> = 0.2mA f = 1MHz, R <sub>s</sub> = 2KΩ B <sub>w</sub> = 200HZ			10	dB
		BC846BW BC847BW,BC848BW				10	
		BC847CW BC848CW				4	

# TYPICAL CHARACTERISTICS

**Static Characteristic**

 $h_{FE} \text{ — } I_c$ 

 $V_{CEsat} \text{ — } I_c$ 

 $V_{BEsat} \text{ — } I_c$ 


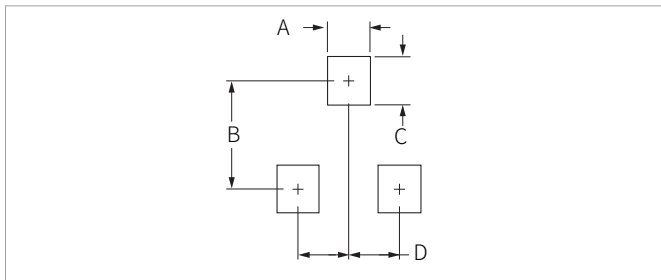


## SOT-323 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.00	2.20	0.079	0.087
B	1.15	1.35	0.045	0.053
C	0.80	1.10	0.031	0.043
D	0.20	0.40	0.008	0.016
G	1.20	1.40	0.047	0.055
H	0.00	0.10	0.000	0.004
J	0.08	0.15	0.003	0.006
K	0.525REF		0.021REF	
L	0.650TYP		0.026TYP	
S	2.15	2.45	0.085	0.096
V	0.26	0.46	0.010	0.018

## RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters	Inches
	NOR	NOR
A	0.50	0.020
B	2.20	0.087
C	0.80	0.031
D	1.30	0.051

## ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
BC846W-BC848W	SOT-323	3000PCS	7"

To find your local partner within Semiwell' s website : [www.semiwell.com.cn](http://www.semiwell.com.cn)

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