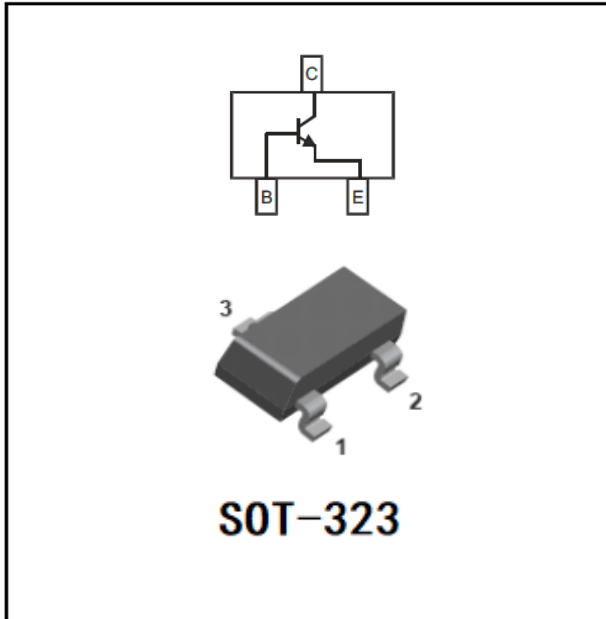


## NPN Transistor



### Features

- Epoxy meets UL-94 V-0 flammability rating
- Moisture Sensitivity Level 1
- High Conductance
- Surface Mount Package Ideally Suited for Automatic Insertion

### Mechanical Data

- **Package:** SOT-323  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Marking:**  
BC846AW=1A; BC846BW=1B;  
BC847AW=1E; BC847BW=1F; BC847CW=1G;  
BC848AW=1J; BC848BW=1K; BC848CW=1L

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

Symbol	Parameter	Value	Unit
BVCBO	Collector-Base Voltage	BC846AW、BC846BW	80
		BC847AW、BC847BW、BC847CW	50
		BC848AW、BC848BW、BC848CW	30
BVCEO	Collector-Emitter Voltage	BC846AW、BC846BW	65
		BC847AW、BC847BW、BC847CW	45
		BC848AW、BC848BW、BC848CW	30
BVEBO	Emitter-Base Voltage	6	V
IC	Collector Current –Continuous	0.1	A
PC	Collector Power Dissipation	200	mW
RθJA	Thermal Resistance From Junction To Ambient	625	°C/W
Tj	Junction Temperature	150	°C
Tstg	Storage Temperature	-55~+150	°C



# BC846AW THRU BC848CW

RoHS  
COMPLIANT

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

Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage BC846 BC847 BC848	BVCBO	IC= 10μA, IE=0	80 50 30		V
Collector-emitter breakdown voltage BC846 BC847 BC848	BVCEO	IC= 10mA, IB=0	65 45 30		V
Emitter-base breakdown voltage	BVEBO	IE= 10μA, IC=0	6		V
Collector cut-off current BC846 BC847 BC848	ICBO	VCB=70 V ,IE=0 VCB=50 V ,IE=0 VCB=30 V ,IE=0		0.1	μ A
Collector cut-off current BC846 BC847 BC848	ICEO	VCE=60 V ,IB=0 VCE=45 V ,IB=0 VCE=30 V ,IB=0		0.1	μ A
Emitter cut-off current	IEBO	VEB=5 V , IC=0		0.1	μ A
DC current gain BC846AW,847AW,848AW BC846BW,847BW,848BW BC847CW,BC848CW	hFE	VCE= 5V, IC= 2mA	110 200 420	220 450 800	
Collector-emitter saturation voltage	VCE(sat)	IC=100mA, IB= 5mA		0.5	V
Base-emitter saturation voltage	VBE(sat)	IC=100mA, IB= 5mA		1.1	V
Transition frequency	fT	VCE= 5 V, IC= 10mA f=100MHz	100		MHz
Collector output capacitance	Cob	VCB=10V,f=1MHz		4.5	pF

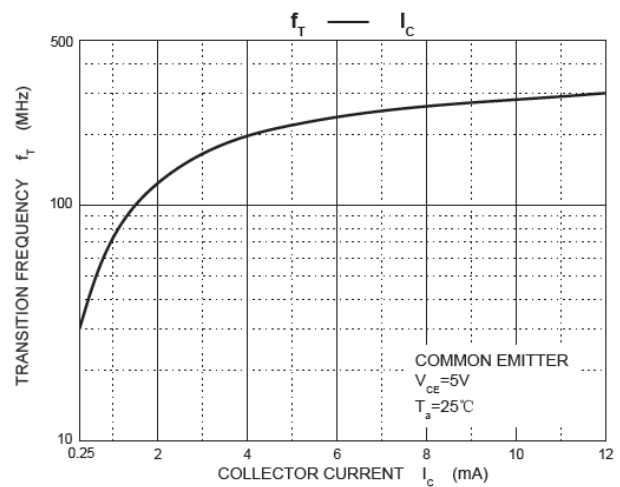
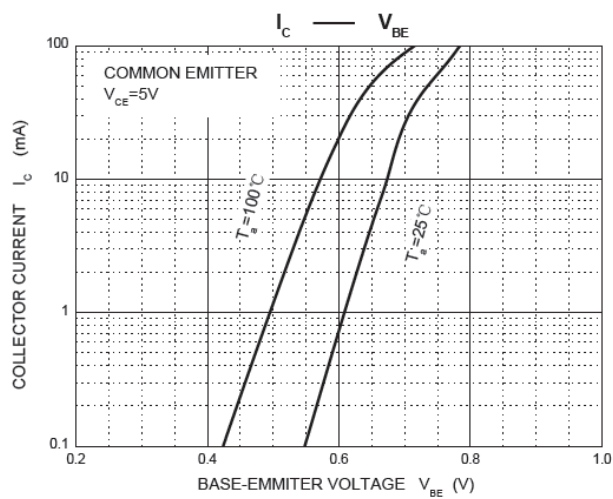
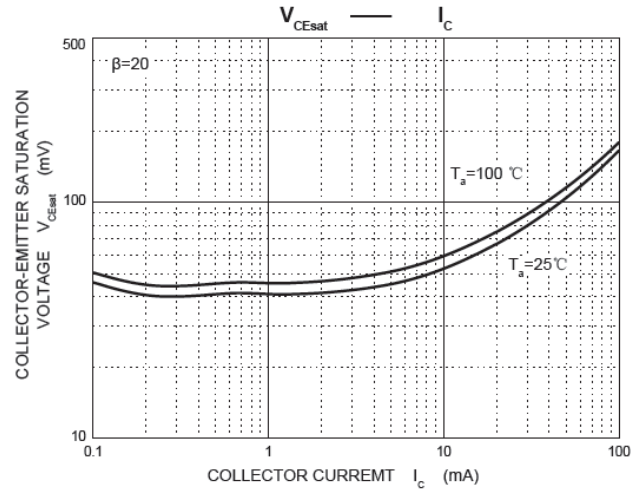
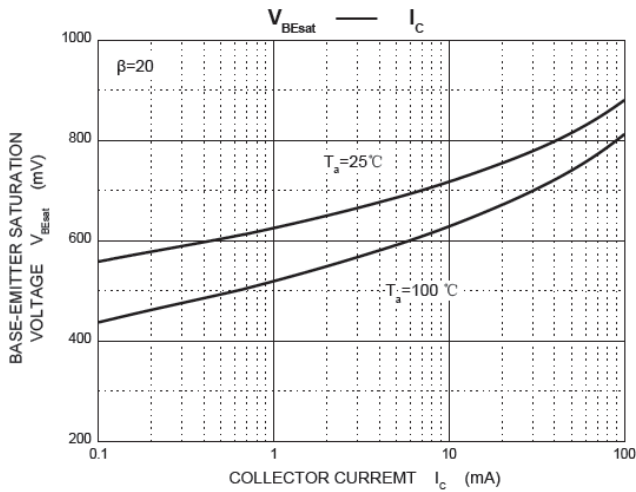
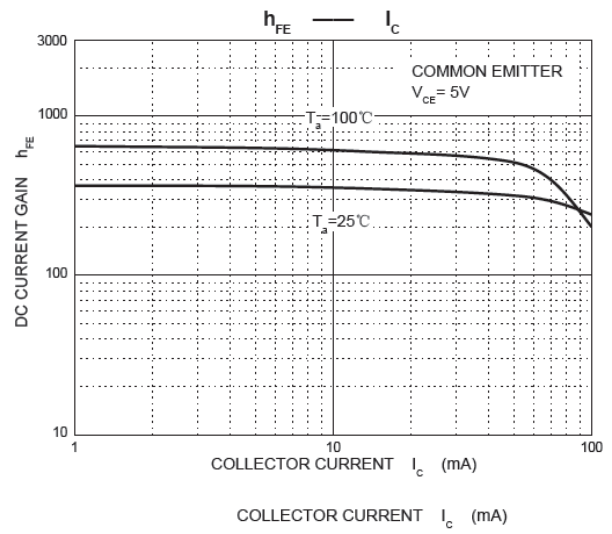
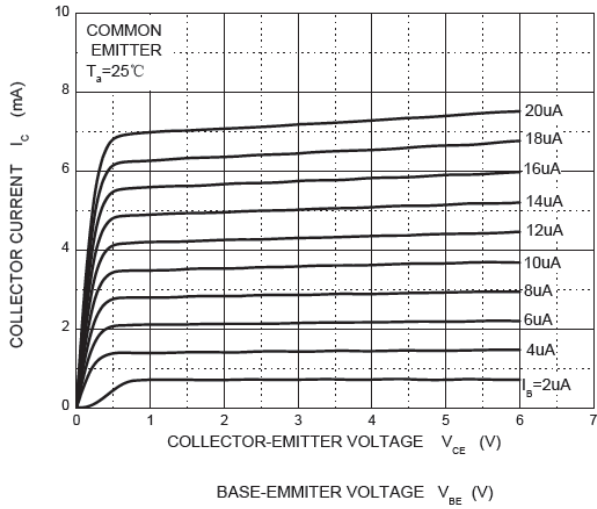
## ■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
BC846AW THRU BC848CW	F2	Approximate 0.005	3000	30000	120000	7" reel



## ■ Characteristics(Typical)

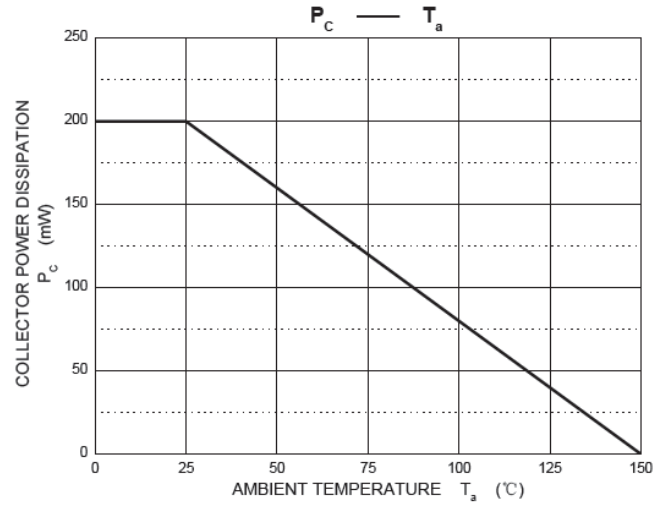
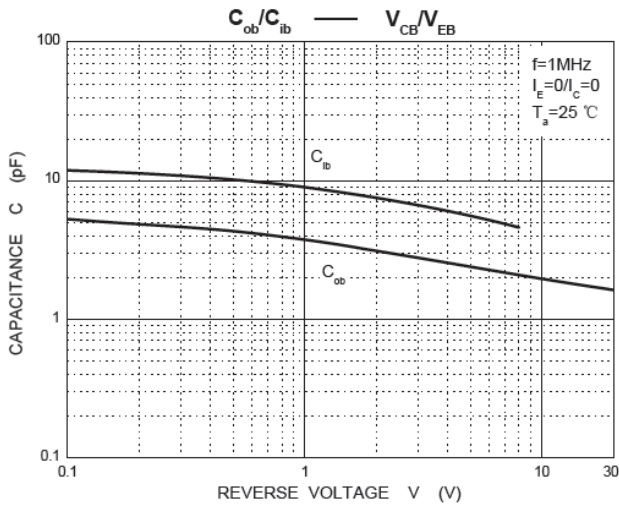
### Static Characteristic



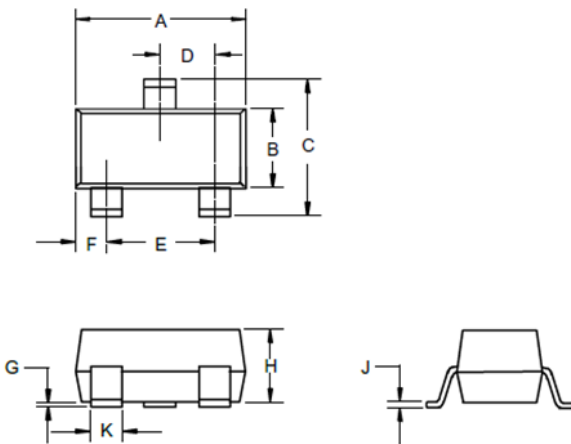


# BC846AW THRU BC848CW

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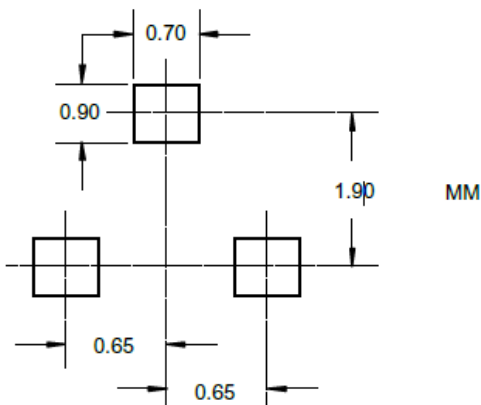


## ■ SOT-323 Package Outline Dimensions



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.071	.087	1.80	2.20	
B	.045	.053	1.15	1.35	
C	.083	.096	2.10	2.45	
D	.026 Nominal		0.65Nominal		
E	.047	.055	1.20	1.40	
F	.012	.016	.30	.40	
G	.000	.004	.000	.100	
H	.035	.039	.90	1.00	
J	.004	.010	.100	.250	
K	.006	.016	.15	.40	

## ■ SOT-323 Suggested Pad Layout





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