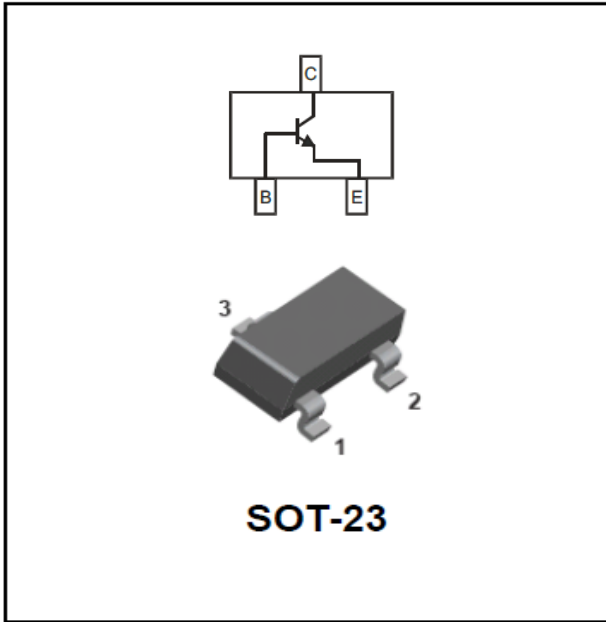


## NPN Transistor



### Features

- Epoxy meets UL-94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking:  
BC846A=1A; BC846B=1B;  
BC847A=1E; BC847B=1F; BC847C=1G;  
BC848A=1J; BC848B=1K; BC848C=1L

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

Symbol	Parameter	Value	Unit
VCBO	Collector-Base Voltage	BC846	80
		BC847	50
		BC848	30
VCEO	Collector-Emitter Voltage	BC846	65
		BC847	45
		BC848	30
VEBO	Emitter-Base Voltage	6	V
IC	Collector Current –Continuous	0.1	A
PC	Collector Power Dissipation	200	mW
ReJA	Thermal Resistance From Junction To Ambient	625	°C/W
Tj	Junction Temperature	150	°C
Tstg	Storage Temperature	-55~+150	°C

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

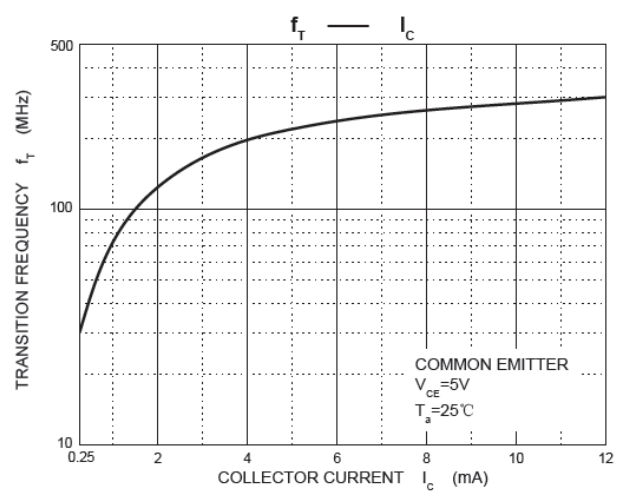
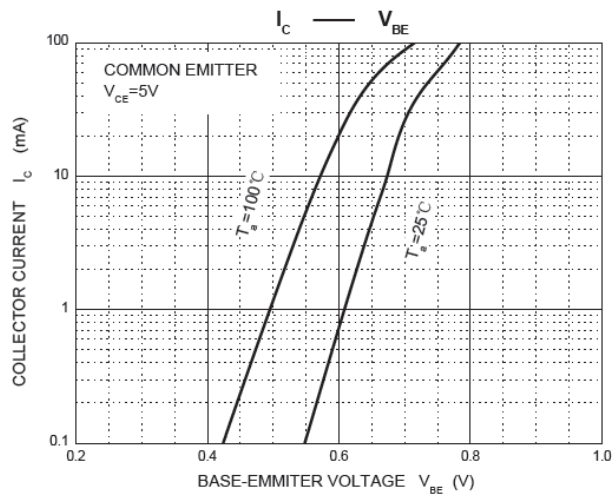
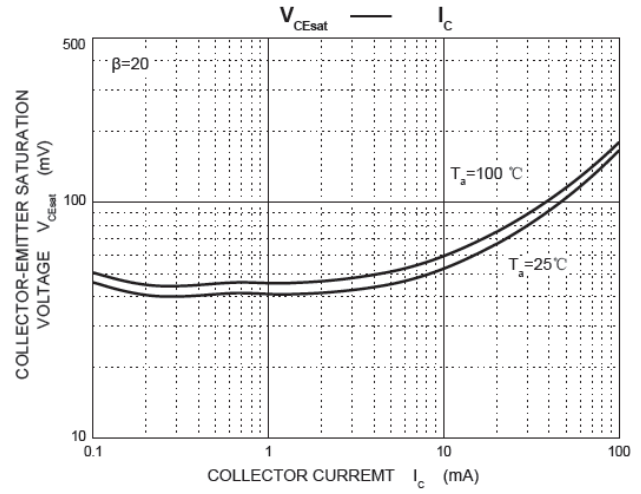
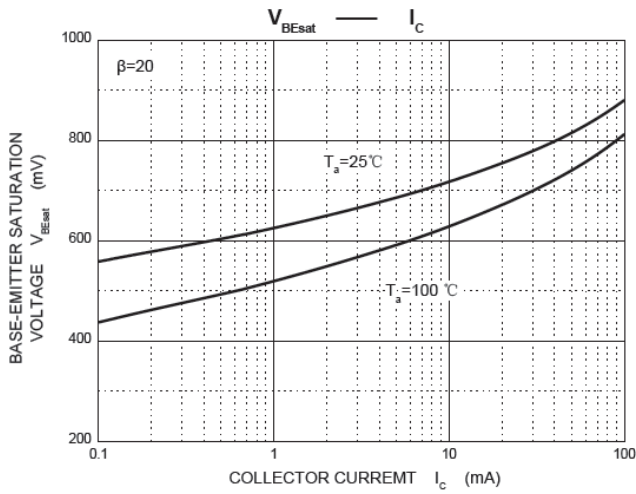
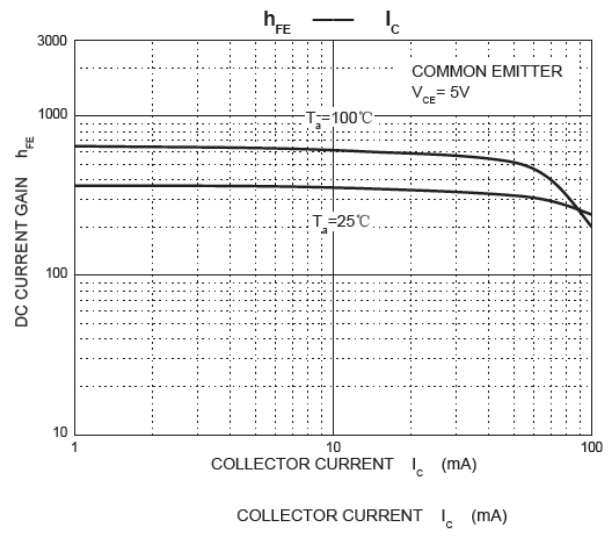
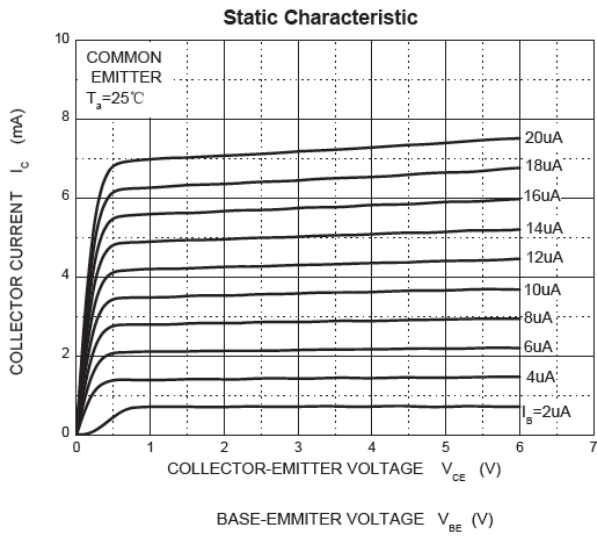
Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage BC846 BC847 BC848	VCBO	IC= 10μA, IE=0	80 50 30		V
Collector-emitter breakdown voltage BC846 BC847 BC848	VCEO	IC= 10mA, IB=0	65 45 30		V
Emitter-base breakdown voltage	VEBO	IE= 10μA, IC=0	6		V
Collector cut-off current BC846 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 BC846A,847A,848A BC846B,847B,848B BC847C,BC848C	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

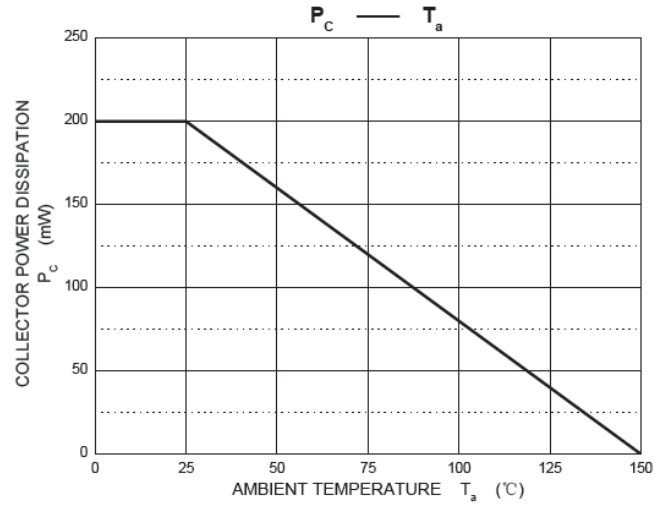
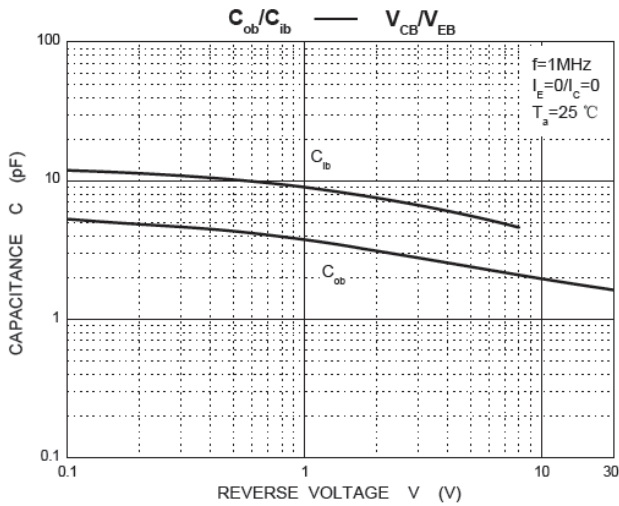
■ **Ordering Information** (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
BC846/BC847/BC848	F2	Approximate 0.008	3000	30000	120000	7" reel

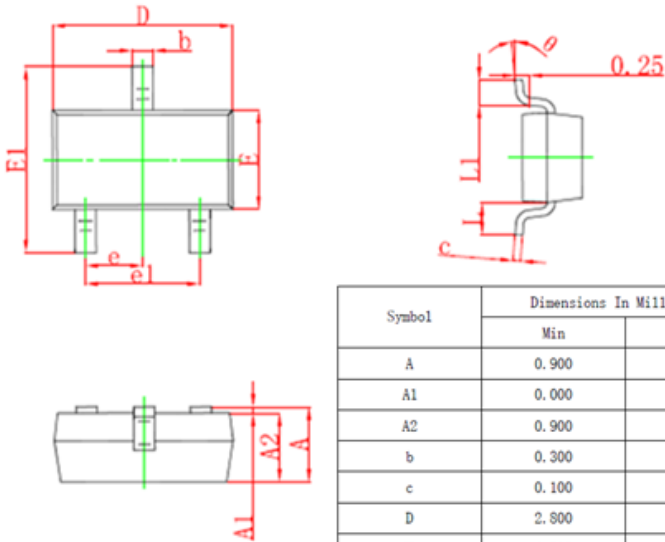


■ Characteristics(Typical)



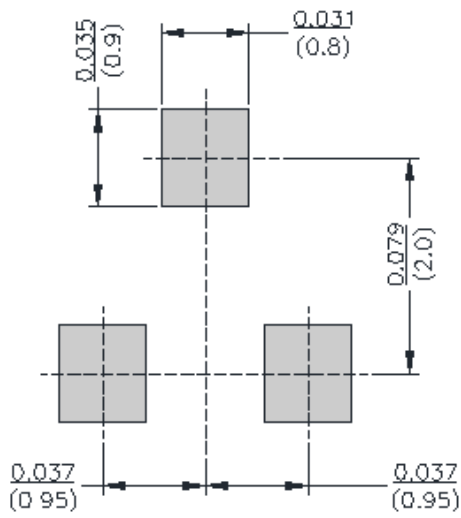


## ■SOT-23 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950TYP		0.037TYP	
e1	1.800	2.000	0.071	0.079
L	0.550REF		0.022REF	
L1	0.300	0.500	0.012	0.020
$\theta$	0°	8°	0°	8°

■SOT-23Suggested Pad Layout





---

**Disclaimer**

The information presented in this document is for reference only. Yangzhou Yangjie Electronic Technology Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website [http:// www.21yangjie.com](http://www.21yangjie.com) , or consult your nearest Yangjie's sales office for further assistance.