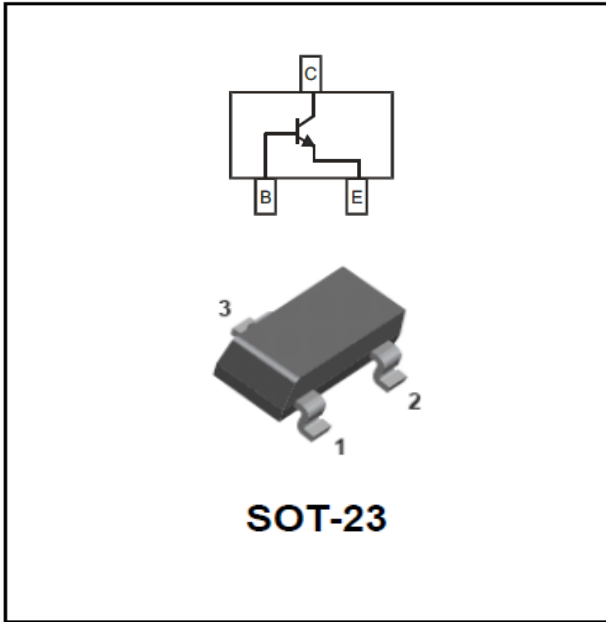


## NPN Transistor



### 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
R <sub>θJA</sub>	Thermal Resistance From Junction To Ambient	625	°C/W
T <sub>j</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	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

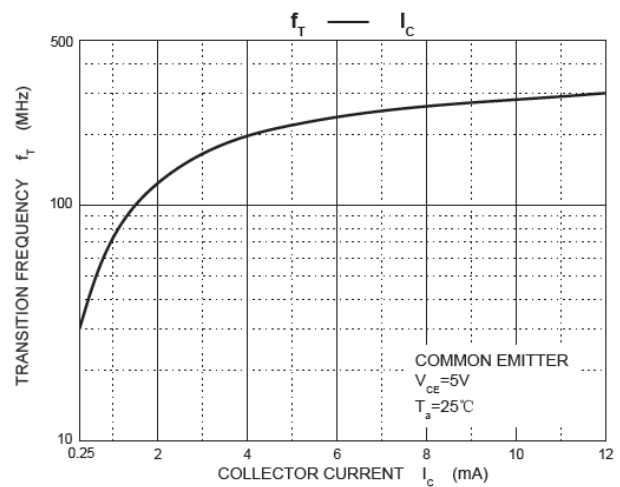
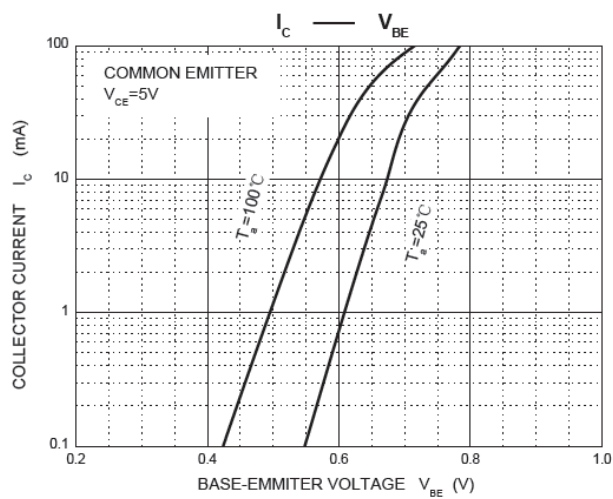
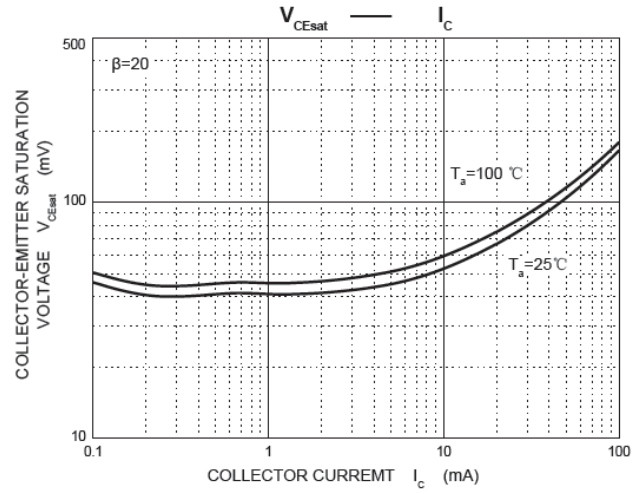
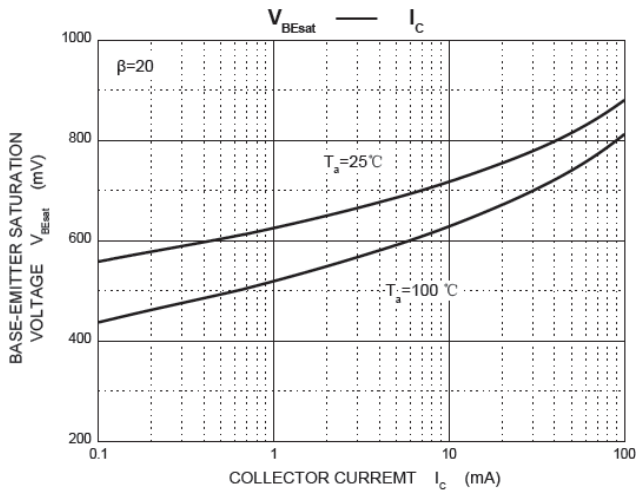
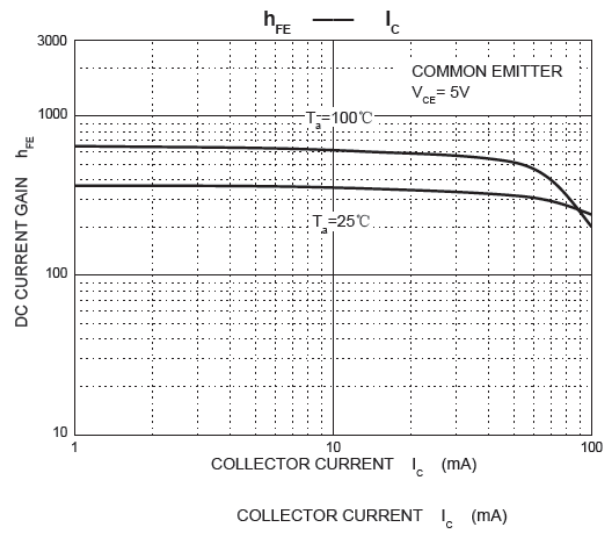
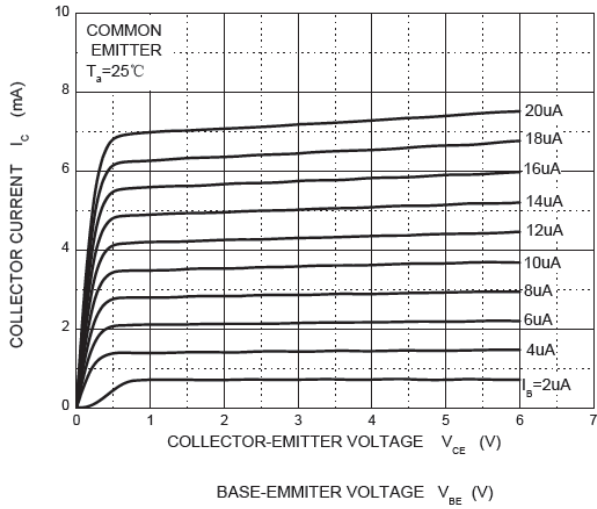
■ **Ordering Information** (Example)

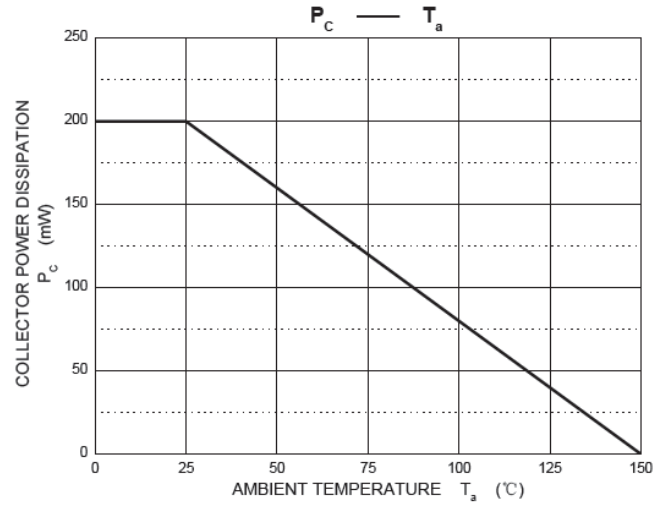
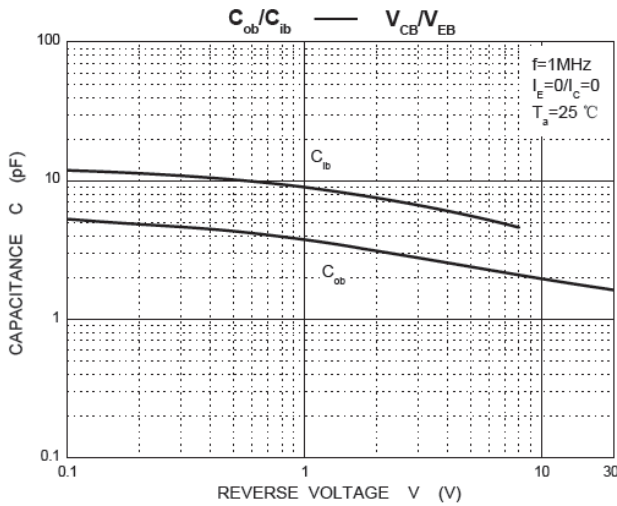
PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
BC846/BC847/BC848	F2	Approximate 0.008	3000	30000	120000	7" reel



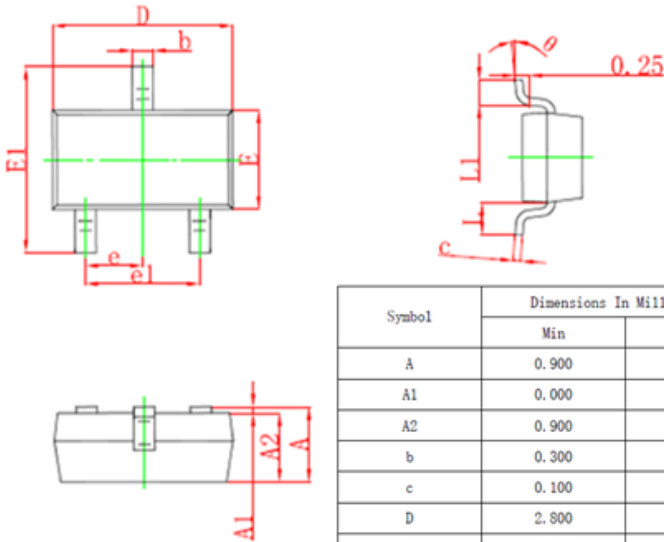
■ Characteristics(Typical)

Static Characteristic



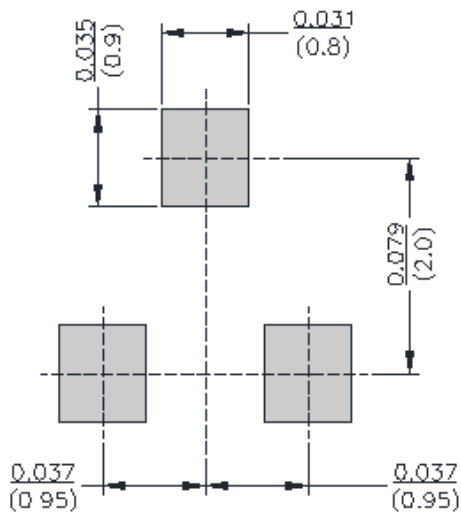


## ■SOT-23 Package Outline Dimensions



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





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