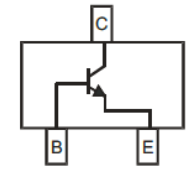
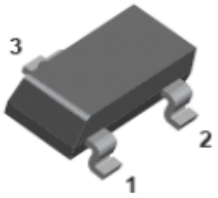
NPN Transistor





SOT-23

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℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage BC846 BC847 BC848	 80 50 30	V
V_{CEO}	Collector-Emitter Voltage BC846 BC847 BC848	 65 45 30	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current –Continuous	0.1	A
P_C	Collector Power Dissipation	200	mW
$R_{\Theta JA}$	Thermal Resistance From Junction To Ambient	625	℃/W
Tj	Junction Temperature	150	℃
Tstg	Storage Temperature	-55～+150	℃

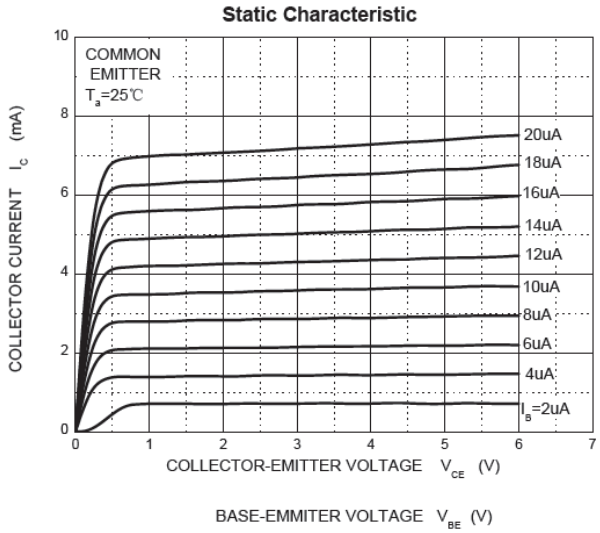
■ Electrical Characteristics (Ta=25℃ unless otherwise noted)

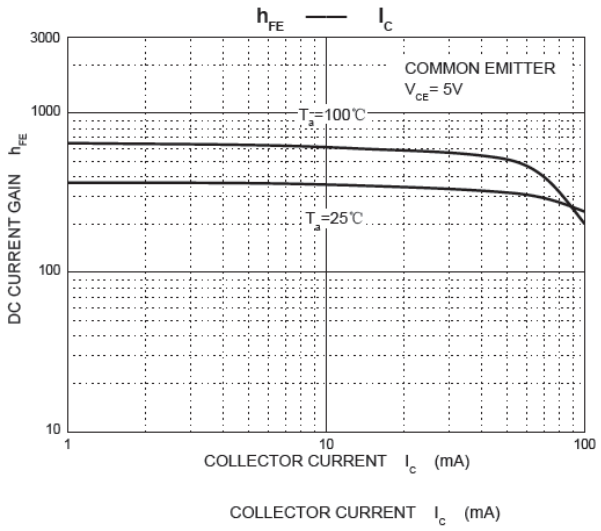
Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage BC846 BC847 BC848	VCBO	IC= 10μA, IE=0	 80 50 30		V
Collector-emitter breakdown voltage BC846 BC847 BC848	VCEO	IC= 10mA, IB=0	 65 45 30		V
Emitter-base breakdown voltage	VEBO	IE= 10μA, IC=0	6		V
Collector cut-off current BC846 BC847 BC848	ICBO	VCB=70 V ,IE=0 VCB=50 V ,IE=0 VCB=30 V ,IE=0		0.1	μA
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	μA
Emitter cut-off current	IEBO	VEB=5 V , IC=0		0.1	μA
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

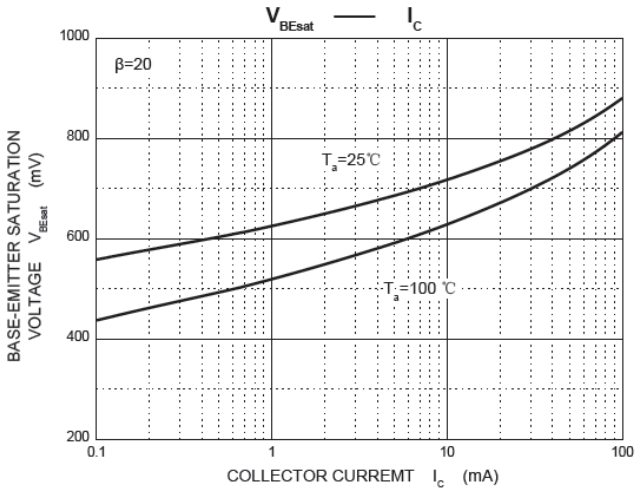
■ Ordering Information (Example)

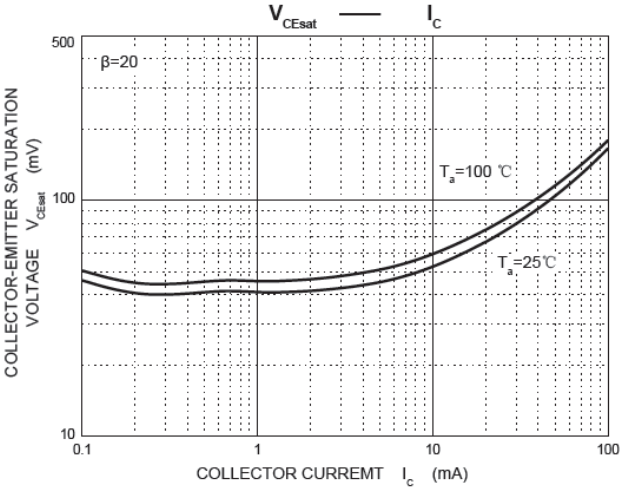
PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
BC846/BC847/BC848	F2	Approximate 0.008	3000	30000	120000	7” reel

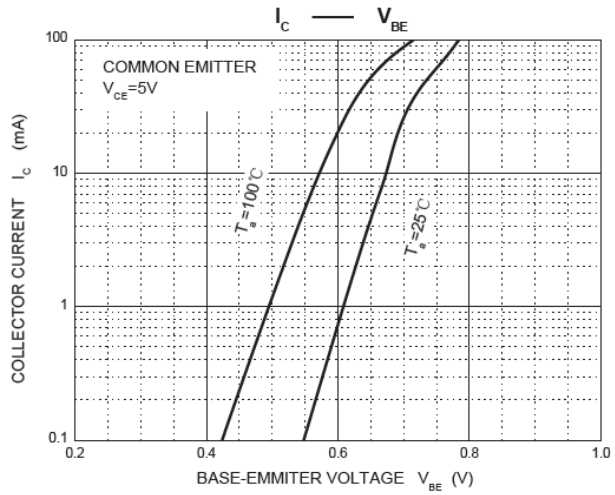
■ Characteristics(Typical)

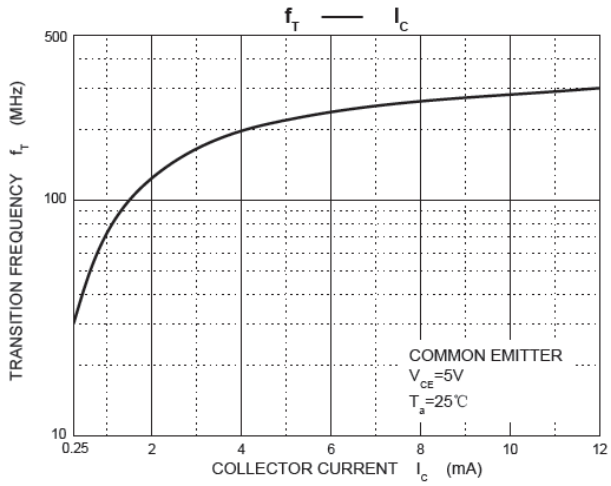


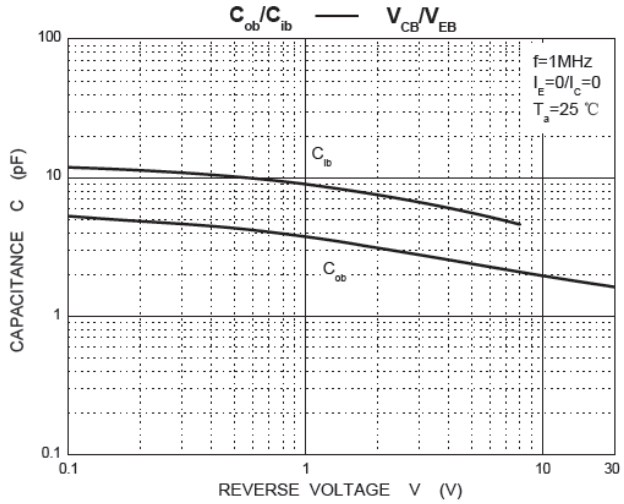


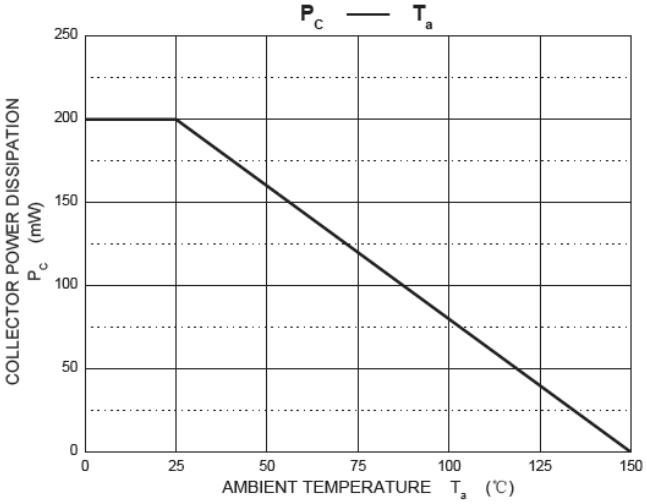




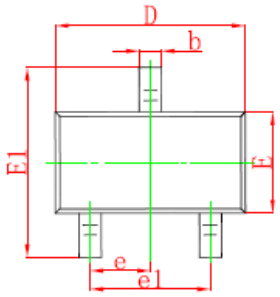


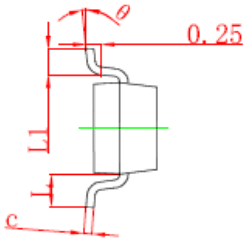


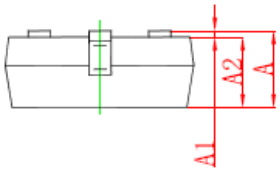




■SOT-23 Package Outline Dimensions

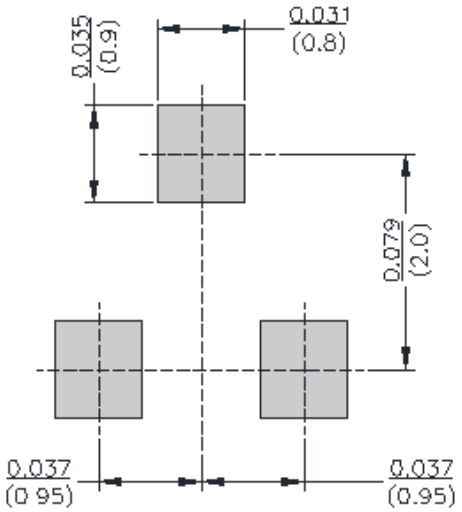






Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

■ **SOT-23 Suggested Pad Layout**



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