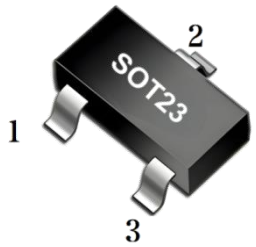
BC846/47/48

NPN SILICON TRANSISTOR

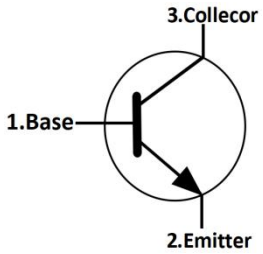
FEATURES

*Ideally suited for automatic insertion
*For switching and AF amplifier applications
*Power Dissipation of 200mW



APPLICATIONS

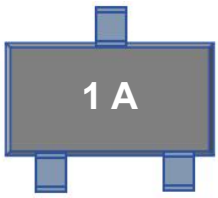
*For switching and amplifier



MARKING

BC846	BC847	BC848
1A/1B	1E/1F/1G	1J/1K/1L
A: A、E、J	B: B、F、K	C: G、L

Type Code: Marking: **1 A**



ABSOLUTE MAXIMUM RATINGS (Tc=25°C, unless otherwise specified)

SYMBOL	PARAMETER		VALUE	UNIT
V_{CBO}	Collector-base voltage	BC846	80	V
		BC847	50	V
		BC848	30	V
V_{CEO}	Collector-emitter voltage	BC846	65	V
		BC847	45	V
		BC848	30	V
V_{EBO}	Emitter-base voltage		6	V
I_C	Collector Current-Continuous		0.1	A
P_C	Collector Power Dissipation		0.2	W
T_j	Junction Temperature		150	°C
Tstg	Storage Temperature		-55~150	°C
RΘJA	Thermal Resistance From Junction To Ambient		625	°C/W

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.
Absolute maximum ratings are stress ratings only and functional device operation is not implied.

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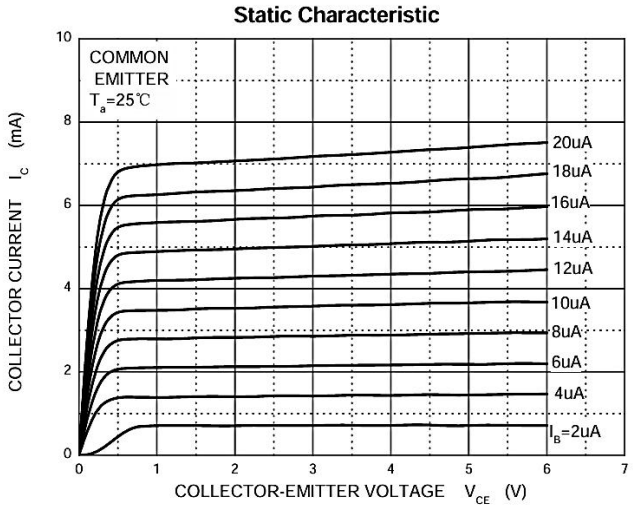
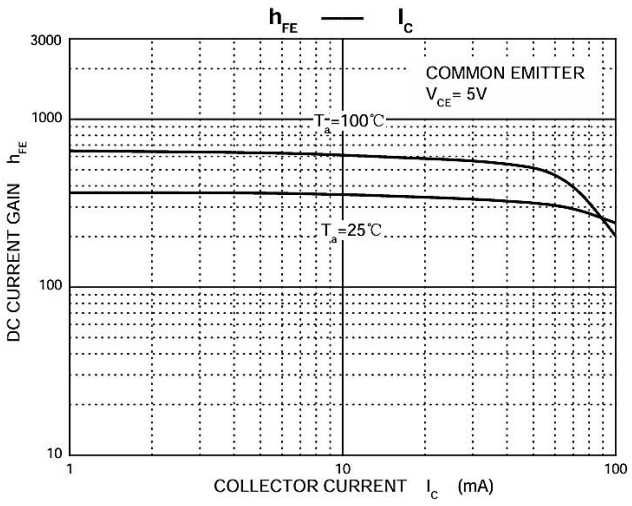
NPN SILICON TRANSISTOR

■ ELECTRICAL CHARACTERISTICS (Tc=25°C, unless otherwise specified)

PARAMETER		SYMBOL	TEST CONDITIONS	MIN	MAX	UNIT
Collector-emitter breakdown voltage	BC846	$V_{(BR)CBO}$	I_C= 10μA,I_E=0	80		V
	BC847			50		V
	BC848			30		V
Collector-base breakdown voltage	BC846	$V_{(BR)CEO}$	I_C=10mA,I_B=0	65		V
	BC847			45		V
	BC848			30		V
Emitter-base breakdown voltage		$V_{(BR)EBO}$	I_E=10μA,I_C=0	6		V
Collector cut-off current	BC846	I_{CBO}	V_{CB}=70V,I_E=0		0.1	μA
	BC847		V_{CB}=50V,I_E=0			μA
	BC848		V_{CB}=30V,I_E=0			μA
Emitter cut-off current		I_{EBO}	V_{EB}=5V, I_C=0		0.1	μA
DC Current Gain	BC846A/847A/848A	h_{FE}	V_{CE}=5V,I_C=2 mA	110	220	
	BC846B/847B/848B			200	450	
	BC847C/BC848C			420	800	
Collector-emitter saturation voltage		$V_{CE(sat)}$	I_C=100mA,I_B=5mA		0.5	V
Base-emitter saturation voltage		$V_{BE(sat)}$	I_C=100mA,I_B=5mA		1.1	V
Transition frequency		f_T	V_{CE}=5V,I_C=10mA,f=100MHz	100		MHz
Collector output capacitance		Cob	V_{CB}=10V,f=1MHz		4.5	pF

■ TYPICAL CHARACTERISTICS





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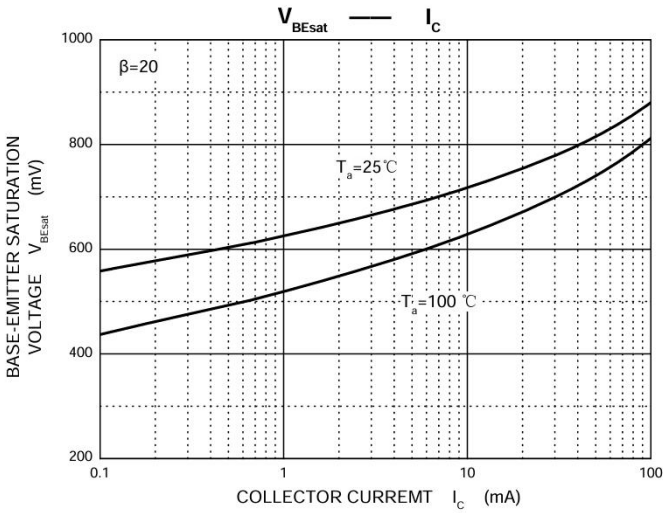
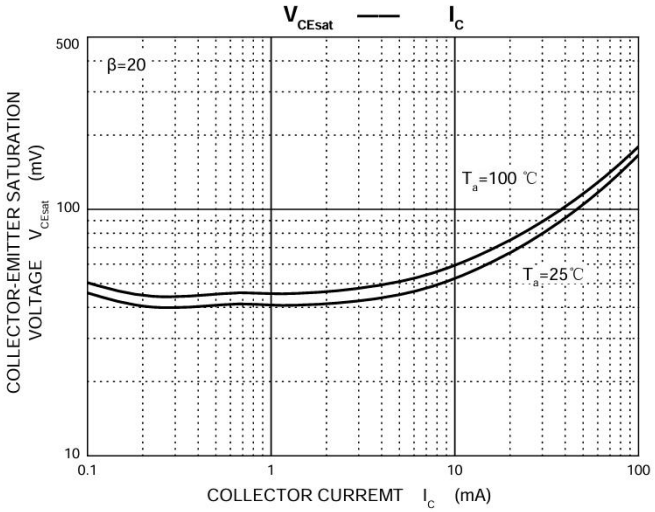
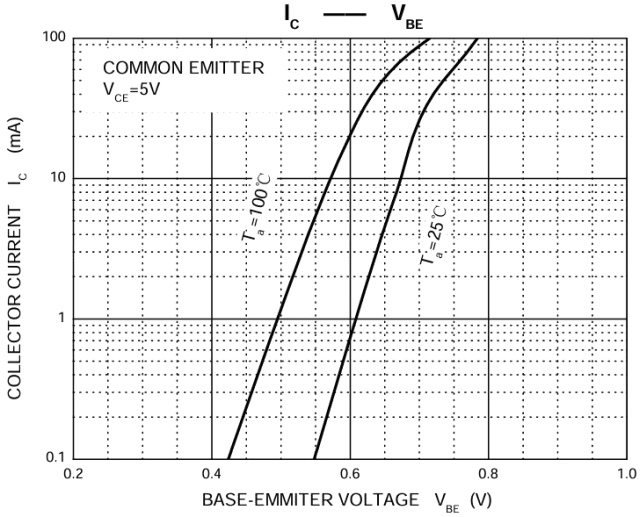
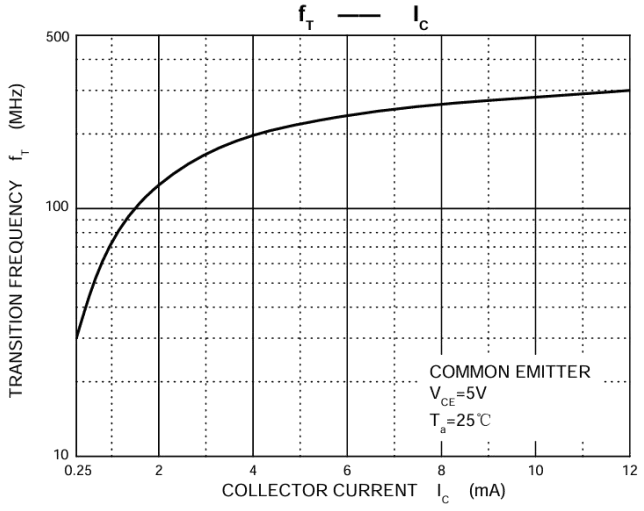
NPN SILICON TRANSISTOR

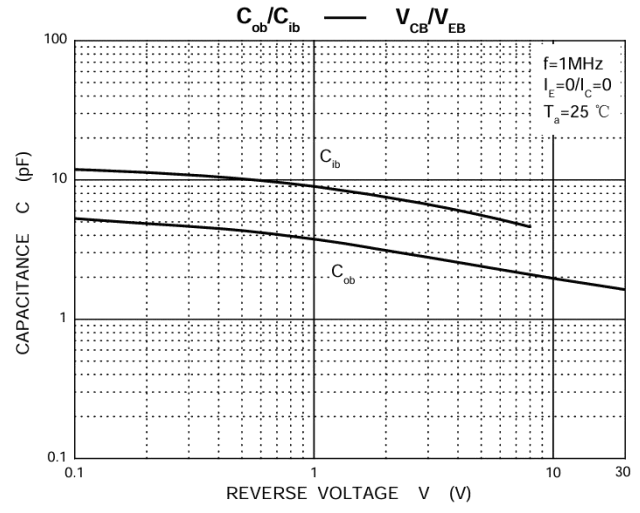
■ TYPICAL CHARACTERISTICS(Con.t)

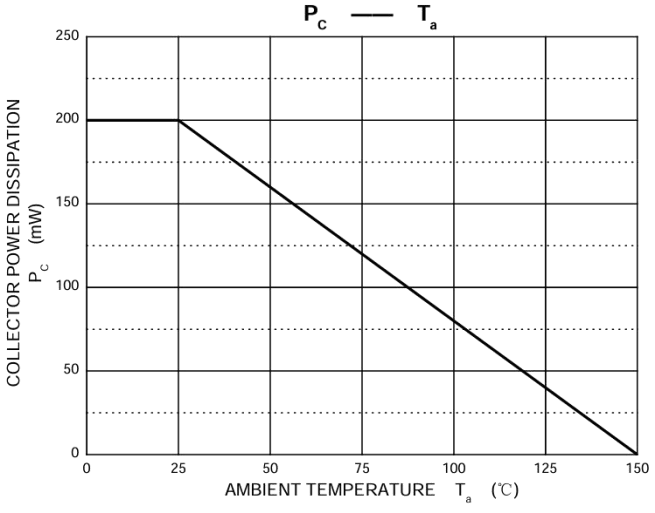












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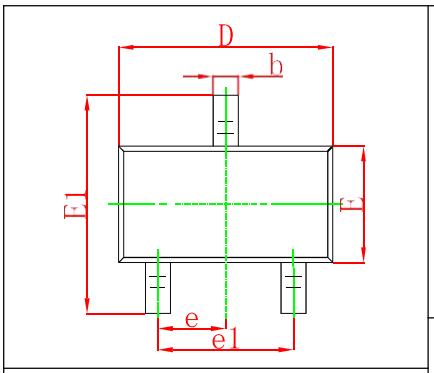
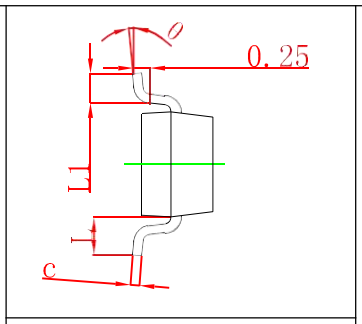
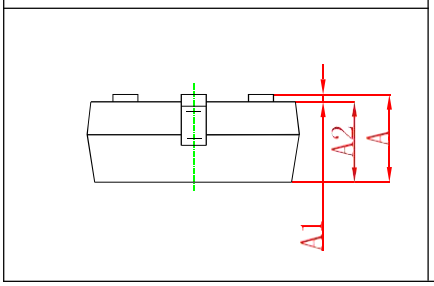
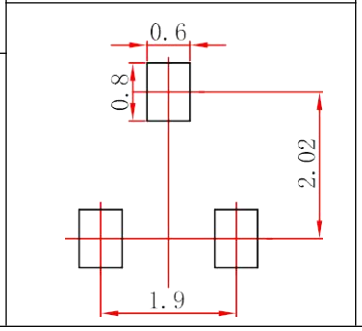
NPN SILICON TRANSISTOR

■ SOT23 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°

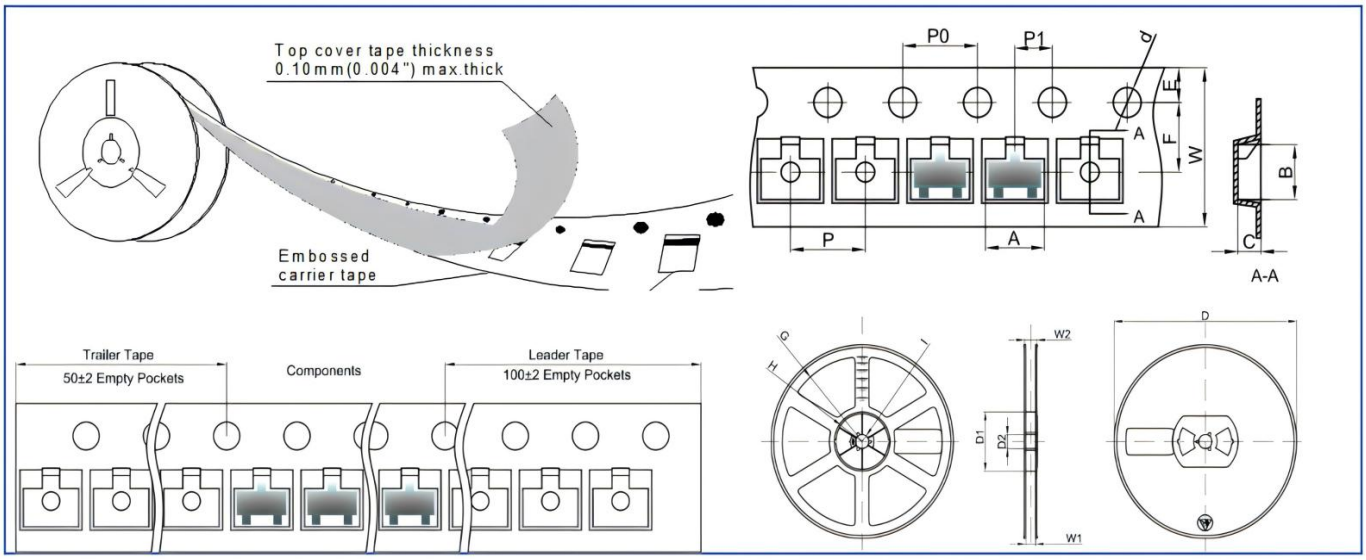
Note:

1.Controlling dimension:in millimeters.

2.General tolerance:±0.05mm.

3.The pad layout is for reference purposes only.

■ REEL PACKING



Dimensions are in millimeter										
PKG TYPE	A	B	C	d	E	F	Po	P	P1	W
SOT-23	3.15	2.77	1.22	Φ1.50	1.75	3.50	4.00	4.00	2.00	8.00
Reel Optiom	D	D1	D2	G	H	I	W1	W2	Q.TY PER REEL	
7" Dia	Φ178.0	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30	3000PCS	
13"Dia	φ330.0	/	13.00	/	/	R6.50	9.50	12.30	10000PCS	