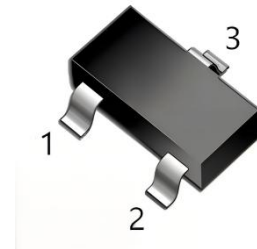


TRANSISTOR (NPN)

Marking Code		
BC846A=1A	BC846B=1B	
BC847A=1E	BC847B=1F	BC847C=1G
BC848A=1J	BC848B=1K	BC848C=1L

1. BASE
2. EMITTER
3. COLLECTOR



SOT-23

Features

- Low profile package
- Ideal for automated placement
- Power Dissipation of 200mW
- High Stability and High Reliability

Applications

- amplifying signal
- Electronic switch
- Oscillating circuit
- variable resistance

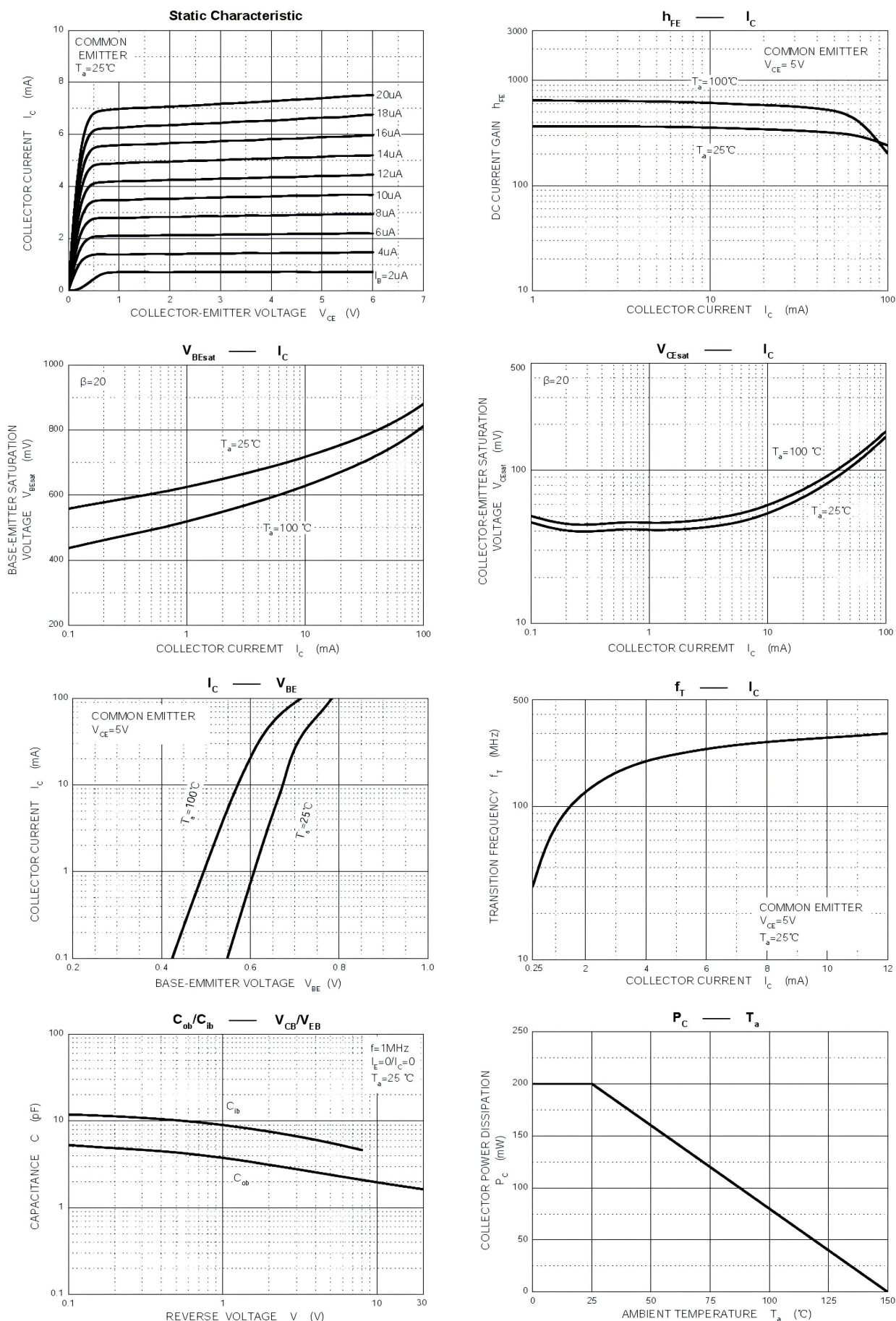
Absolute maximum ratings (Ta=25°C unless otherwise noted)

Symbol	Parameter	BC846	BC847	BC848	Unit
V_{CBO}	Collector-Base Voltage	80	50	30	V
V_{CEO}	Collector-Emitter Voltage	65	45	30	V
V_{EBO}	Emitter-Base Voltage	6			V
I_C	Collector Current Continuous	100			mA
P_C	Collector Power Dissipation	200			mW
T_J	Junction Temperature	-55 to +150			°C
T_{STG}	Junction and Storage Temperature	-55 to +150			°C
$R_{\theta JA}$	Thermal Resistance From Junction to Ambient	625			°C/W

Electrical characteristics (Ta=25°C unless otherwise noted)

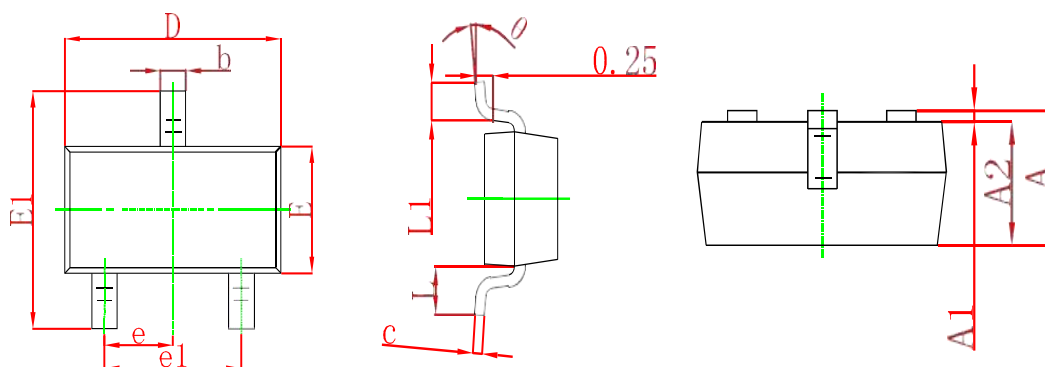
Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage BC846 BC847 BC848	$V_{(BR)CBO}$	$I_C = 10\mu A, I_E = 0$	80 50 30		V
Collector-emitter breakdown voltage BC846 BC847 BC848	$V_{(BR)CEO}$	$I_C = 10mA, I_B = 0$	65 45 30		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 10\mu A, I_C = 0$	6		V
Collector cut-off current BC846 BC847 BC848	I_{CBO}	$V_{CE} = 70V, I_E = 0$ $V_{CE} = 50V, I_E = 0$ $V_{CE} = 30V, I_E = 0$		100	nA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5V, I_C = 0$		100	nA
DC current gain BC846A,BC847A,BC848A BC846B,BC847B,BC848B BC847C,BC848C	$h_{FE(1)}$	$V_{CE} = 5V, I_C = 2mA$	110 200 420	220 450 800	
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	C_{ob}	$V_{CB} = 10V, f = 1MHz$		4.5	pF

Typical characteristics



Package Outline Dimensions

SOT-23



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°

*Important Usage Information and Disclaimer

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