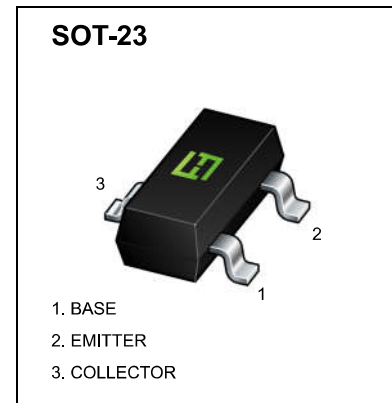


## FEATURES

- Ideally suited for automatic insertion
- For switching and AF amplifier applications



## MAXIMUM RATINGS (T<sub>a</sub>=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V <sub>CB0</sub>	Collector-Base Voltage	BC846	80
		BC847	50
		BC848	30
V <sub>CEO</sub>	Collector-Emitter Voltage	BC846	65
		BC847	45
		BC848	30
V <sub>EBO</sub>	Emitter-Base Voltage	6	V
I <sub>C</sub>	Collector Current –Continuous	0.1	A
P <sub>C</sub>	Collector Power Dissipation	200	mW
R <sub>θJA</sub>	Thermal Resistance From Junction To Ambient	625	°C/W
T <sub>J</sub> , T <sub>stg</sub>	Operation Junction and Storage Temperature Range	-55~+150	°C

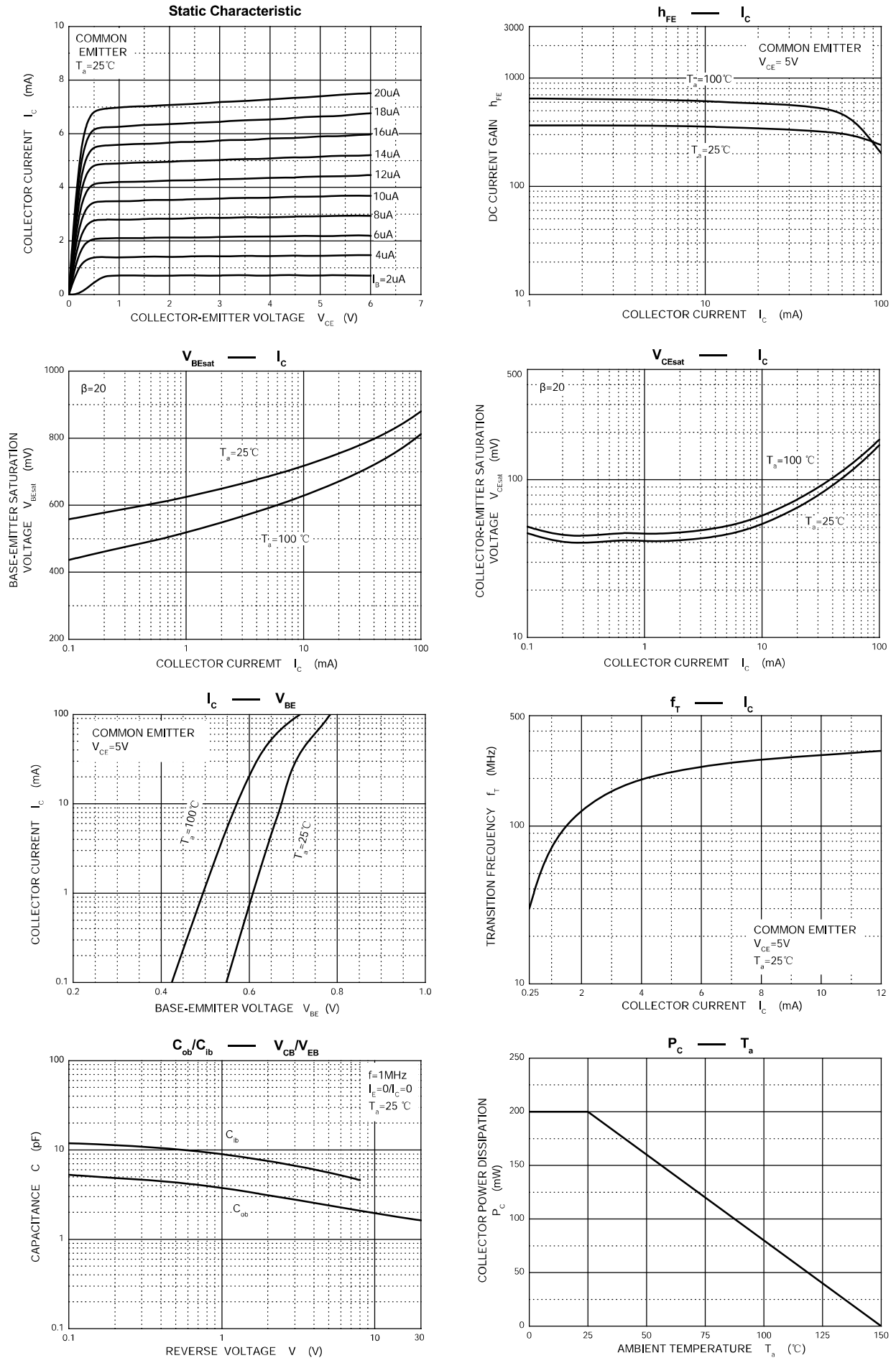
## DEVICE MARKING

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

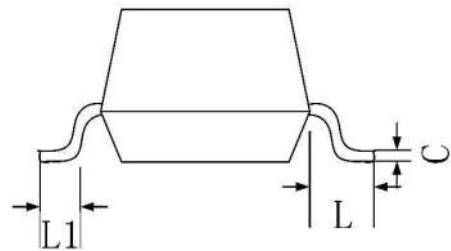
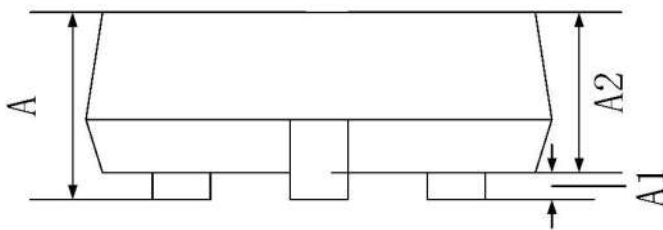
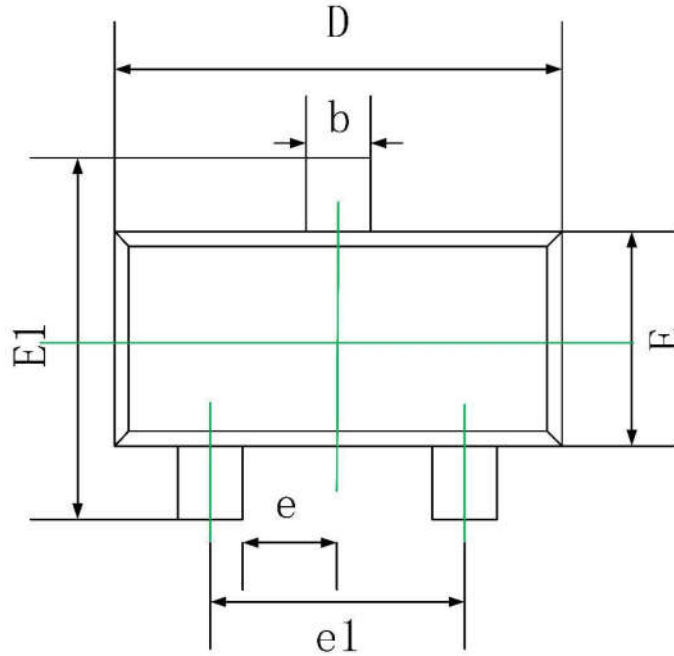
**ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C unless otherwise specified)**

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit	
Collector-base breakdown voltage	BC846	$I_C = 10\mu A, I_E = 0$	80			V	
	BC847		50				
	BC848		30				
Collector-emitter breakdown voltage	BC846	$I_C = 10mA, I_B = 0$	65			V	
	BC847		45				
	BC848		30				
Emitter-base breakdown voltage	$V_{EBO}$	$I_E = 10\mu A, I_C = 0$	6			V	
Collector cut-off current	BC846	$I_{CBO}$	$V_{CB} = 70V, I_E = 0$			0.1	$\mu A$
	BC847		$V_{CB} = 50V, I_E = 0$				
	BC848		$V_{CB} = 30V, I_E = 0$				
Emitter cut-off current	$I_{EBO}$	$V_{EB} = 5V, I_C = 0$			0.1	$\mu A$	
DC current gain	BC846A,847A,848A	$h_{FE}$	$V_{CE} = 5V, I_C = 2mA$	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	$C_{ob}$	$V_{CB} = 10V, f = 1MHz$			4.5	pF	

## Typical Characteristics



**SOT-23 Package Information**



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