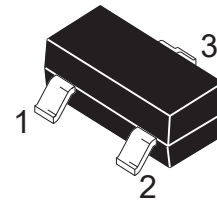


Features

- Low current (max. 100 mA)
- Low voltage (max. 45 V)

SOT-23


1.Base 2.Emitter 3.Collector

Marking

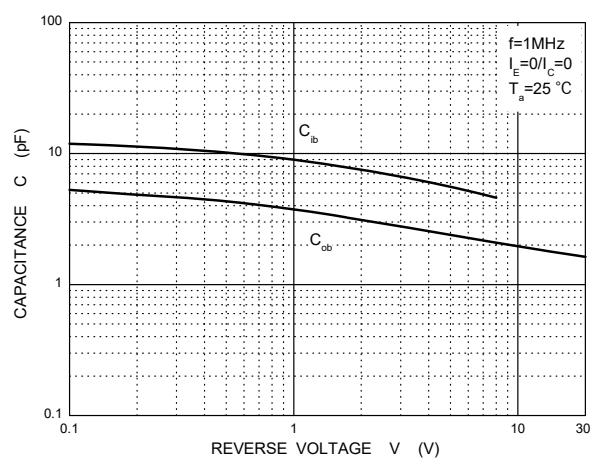
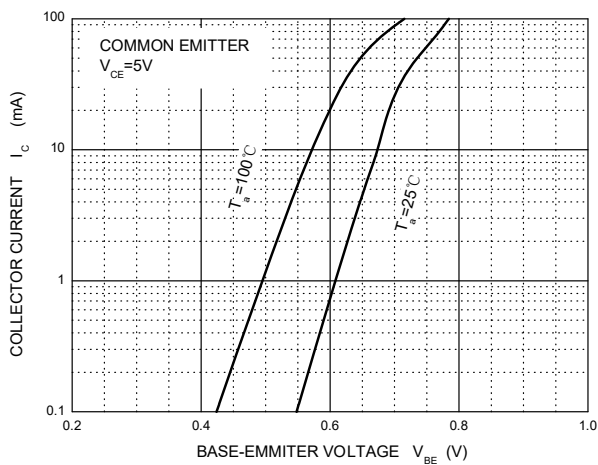
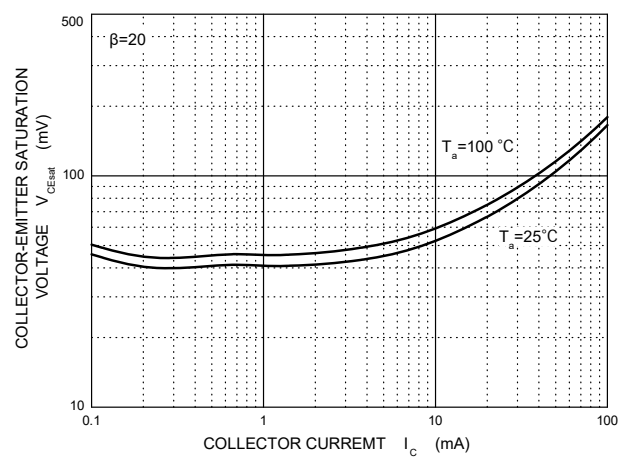
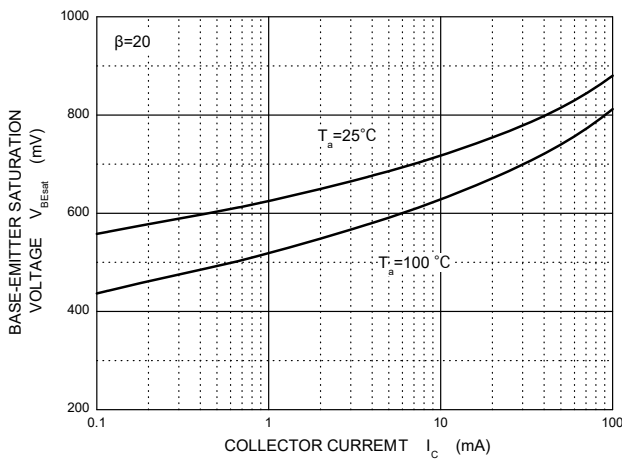
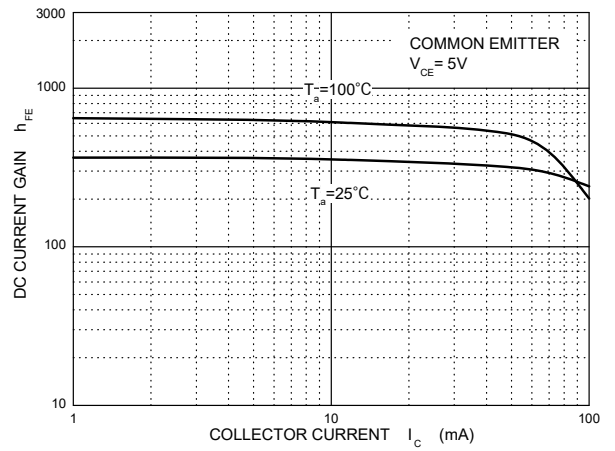
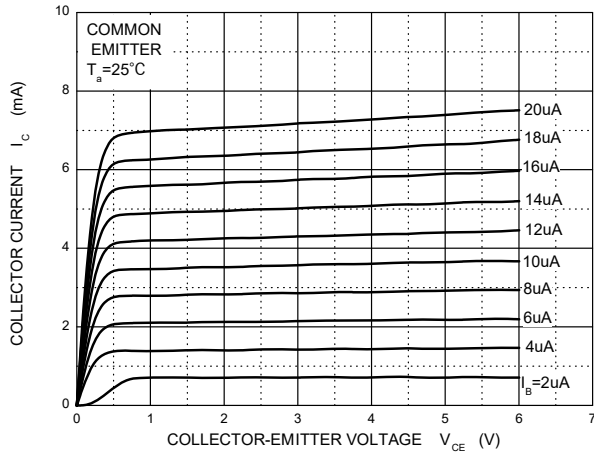
BC846A - 1A; BC846B - 1B; BC846C - 1C
 BC847A - 1E; BC847B - 1F; BC847C - 1G
 BC848A - 1J; BC848B - 1K; BC848C - 1L
 BC849A - 2A; BC849B - 2B; BC849C - 2C
 BC850A - 2E; BC850B - 2F; BC850C - 2G

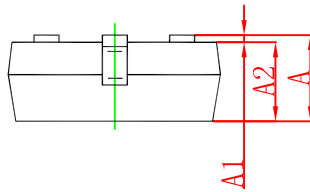
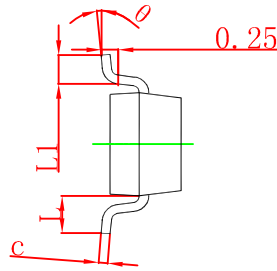
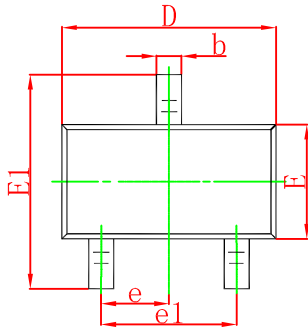
Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Value	Unit	
Collector Base Voltage	BC846	V_{CBO}	80	V
	BC847 BC850	V_{CBO}	50	V
	BC848 BC849	V_{CBO}	30	V
Collector Emitter Voltage	BC846	V_{CEO}	65	V
	BC847 BC850	V_{CEO}	45	V
	BC848 BC849	V_{CEO}	30	V
Emitter Base Voltage	BC846, BC847	V_{EBO}	6	V
	BC848, BC849, BC850	V_{EBO}	5	V
Collector Current	I_C	100	mA	
Peak Collector Current	I_{CM}	200	mA	
Power Dissipation	P_{tot}	300	mW	
Junction Temperature	T_J	150	°C	
Storage Temperature Range	T_{STG}	- 65 to + 150	°C	

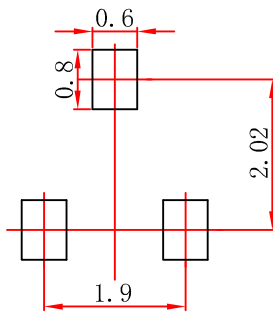
ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	
DC Current Gain at V _{CE} = 5 V, I _C = 2 mA	Current Gain Group A B C	h _{FE} h _{FE} h _{FE}	110 200 420	- - -	220 450 800	- - -
Collector Base Cutoff Current at V _{CB} = 30 V	I _{CBO}	-	-	15	nA	
Collector Base Breakdown Voltage at I _C = 100 μA	BC846 BC847 BC850 BC848 BC849	V _{(BR)CBO} V _{(BR)CBO} V _{(BR)CBO}	80 50 30	- - -	- - -	V V V
Collector Emitter Breakdown Voltage at I _C = 2 mA	BC846 BC847 BC850 BC848 BC849	V _{(BR)CEO} V _{(BR)CEO} V _{(BR)CEO}	65 45 30	- - -	- - -	V V V
Collector Emitter Breakdown Voltage at I _C = 100 μA	BC846, BC847 BC848, BC849, BC850	V _{(BR)EBO} V _{(BR)EBO}	6 5	- -	- -	V V
Collector Emitter Saturation Voltage at I _C = 10 mA, I _B = 0.5 mA at I _C = 100 mA, I _B = 5 mA	V _{CEsat} V _{CEsat}	- -	- -	250 600	mV mV	
Base Emitter On Voltage at V _{CE} = 5 V, I _C = 2 mA at V _{CE} = 5 V, I _C = 10 mA	V _{BE(on)} V _{BE(on)}	- -	- -	700 720	mV mV	
Transition Frequency at V _{CE} = 5 V, I _C = 10 mA, f = 100 MHz	f _T	-	300	-	MHz	
Output Capacitance at V _{CB} = 10 V, f = 1 MHz	C _{ob}	-	-	6	pF	
Input Capacitance at V _{EB} = 0.5 V, f = 1 MHz	C _{ib}	-	9	-	pF	

Rating And Characteristics Curves


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

Note:

1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05 mm.
3. The pad layout is for reference purposes only.