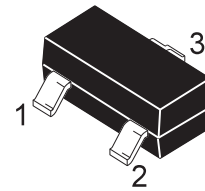


SOT-23
■ Features

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



1. Base 2. Emitter 3. Collector

Marking

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

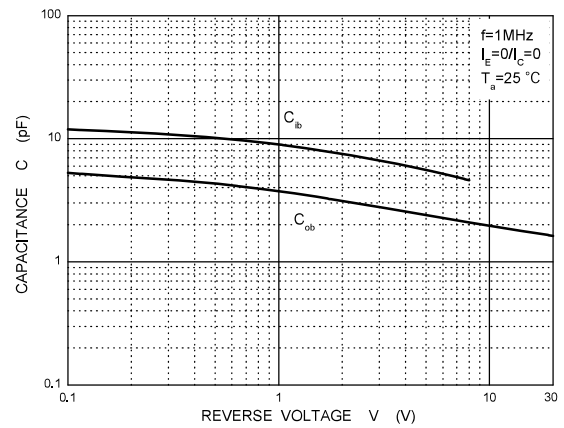
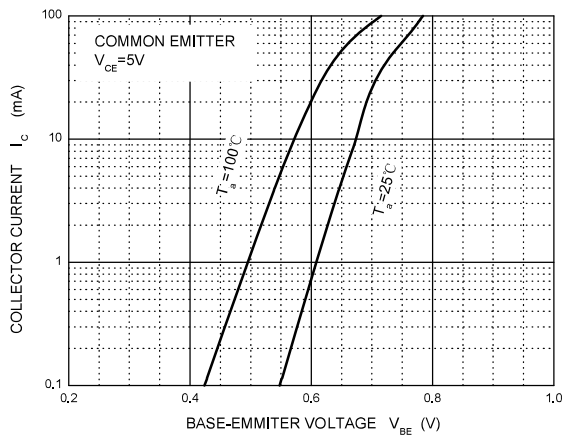
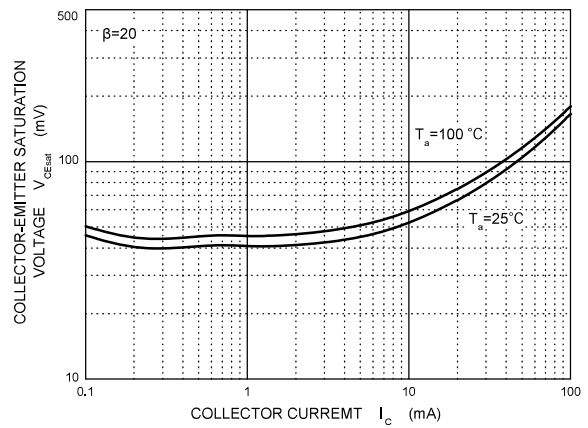
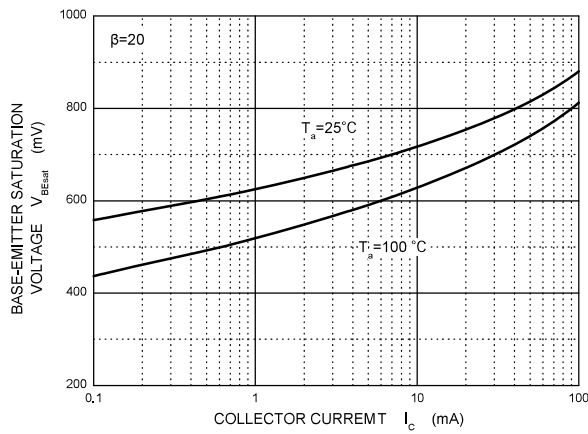
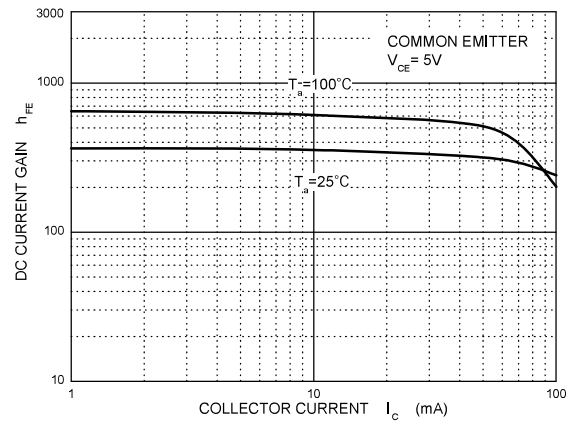
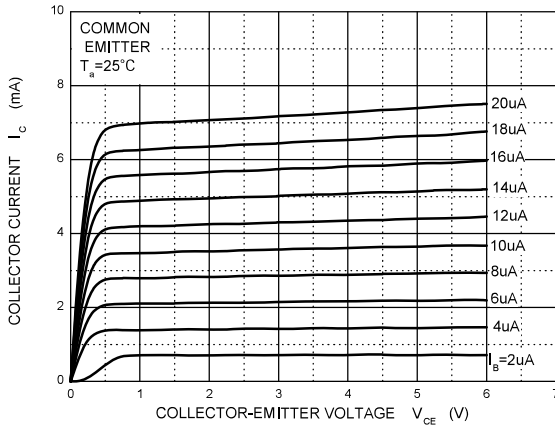
Absolute Maximum Ratings (Ta=25°C)

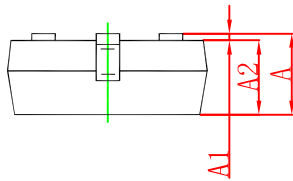
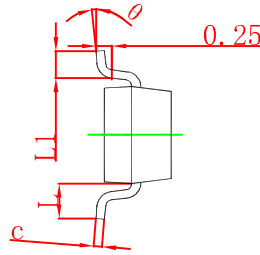
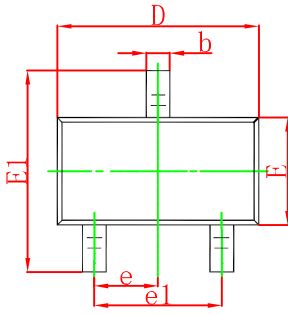
Parameter		Symbol	Value	Unit
Collector Base Voltage	BC846	V_{CBO}	80	V
	BC847 BC850	V_{CBO}	50	V
	BC848 BC849	V_{CBO}	30	V
Collector Emitter Voltage	BC846	V_{CEO}	65	V
	BC847 BC850	V_{CEO}	45	V
	BC848 BC849	V_{CEO}	30	V
Emitter Base Voltage	BC846, BC847	V_{EBO}	6	V
	BC848, BC849, BC850	V_{EBO}	5	V
Collector 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)

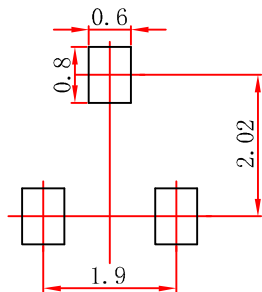
Parameter	Symbol	Min.	Typ.	Max.	Unit	
DC Current Gain at V _{CE} = 5 V, I _C = 2 mA	Current Gain Group A	h _{FE}	110	-	220	-
	B	h _{FE}	200	-	450	-
	C	h _{FE}	420	-	800	-
Collector Base Cutoff Current at V _{CB} = 30 V	I _{CBO}	-	-	15	nA	
Collector Base Breakdown Voltage at I _C = 100 μA	BC846	V _{(BR)CBO}	80	-	-	V
	BC847 BC850	V _{(BR)CBO}	50	-	-	V
	BC848 BC849	V _{(BR)CBO}	30	-	-	V
Collector Emitter Breakdown Voltage at I _C = 2 mA	BC846	V _{(BR)CEO}	65	-	-	V
	BC847 BC850	V _{(BR)CEO}	45	-	-	V
	BC848 BC849	V _{(BR)CEO}	30	-	-	V
Collector Emitter Breakdown Voltage at I _C = 100 μA	BC846, BC847	V _{(BR)EBO}	6	-	-	V
	BC848, BC849, BC850	V _{(BR)EBO}	5	-	-	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}	-	-	250	mV	
	V _{CEsat}	-	-	600	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)}	-	-	700	mV	
	V _{BE(on)}	-	-	720	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.