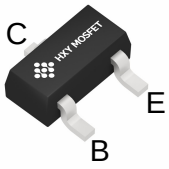
BC849-BC850

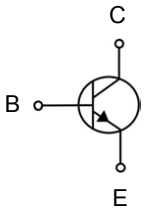
NPN Plastic-Encapsulate Transistors

Features

- Collector Current: I_C= 0.1A
- Power Dissipation of 250mW



SOT-23



Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
BC849-BC850	SOT-23	2x	3000

x:From B/C/F/G

Maxmim Ratings (Ta=25℃ unless otherwise noted)

Symbl	Parameter		Value	Unit
V_{CBO}	Collector-Base Voltage	BC849	30	V
		BC850	50	
V_{CEO}	Collector-Emitter Voltage	BC849	30	V
		BC850	45	
V_{EBO}	Emitter-Base Voltage		5	V
I_C	Collector Current-Continuous		0..1	A
T_j	Junction Temperature		150	℃
T_{stg}	Storage Temperature		-55-150	℃

Classifiction Of h_{FE}

Rank	BC849B	BC849C	BC850B	BC850C
Marking	2B	2C	2F	2G

Electrcal Charcteristics (Ta=25℃unless otherwise specified)

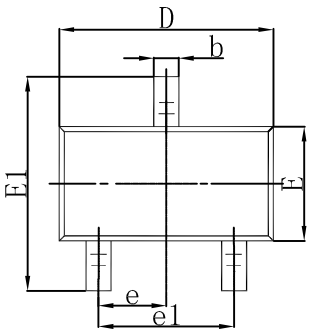
Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
collector cut-off current	I_{CBO}	I_E = 0; V_{CB} = 30 V			15	nA
		I_E = 0; V_{CB} = 30 V; T_j = 150 °C			5	ì A
emitter cut-off current	I_{EBO}	I_C = 0; V_{EB} = 5 V			100	nA
DC current gain BC849B; BC850B	h_{FE}	I_C = 10 ì A; V_{CE} = 5 V;		240		
BC849C; BC850C				450		
DC current gain BC849B; BC850B		I_C = 2 mA; V_{CE} = 5 V;	200	290	450	
BC849C; BC850C			420	520	800	
collector-emitter saturation voltage	V_{CEsat}	I_C = 10 mA; I_B = 0.5 mA		90	250	mV
		I_C = 100 mA; I_B = 5 mA		200	600	mV
base-emitter saturation voltage	V_{BEsat}	I_C = 10 mA; I_B = 0.5 mA; *1		700		mV
		I_C = 100 mA; I_B = 5 mA; *1		900		mV
base-emitter voltage	V_{BE}	I_C = 2 mA; V_{CE} = 5 V; *2	580	660	700	mV
		I_C = 10 mA; V_{CE} = 5 V;*2			770	mV
collector capacitance	C_c	I_E = i_e = 0; V_{CB} = 10 V; f = 1 MHz		2.5		pF
emitter capacitance	C_e	I_C = i_c = 0; V_{EB} = 500 mV; f = 1 MHz		11		pF
transition frequency	fT	I_C = 10 mA; V_{CE} = 5 V; f = 100 MHz	100			MHz
noise figure	F	I_C = 200 ìA; V_{CE} = 5 V; R_S = 2 kÙ,f = 10 Hz to 15.7 kHz			4	dB
		I_C = 200 ìA; V_{CE} = 5 V; R_S = 2 kÙ,f = 1 kHz; B = 200 Hz			4	dB

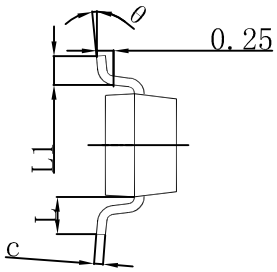
*1 V_{BEsat} decreases by about 1.7 mV/K with increasing temperature.

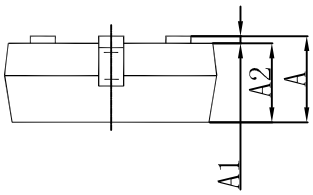
*2 V_{BE} decreases by about 2 mV/K with increasing temperature.

Package Dimensions

SOT-23

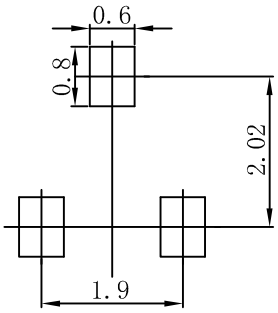






Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 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°

Suggested Pad Layout



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

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