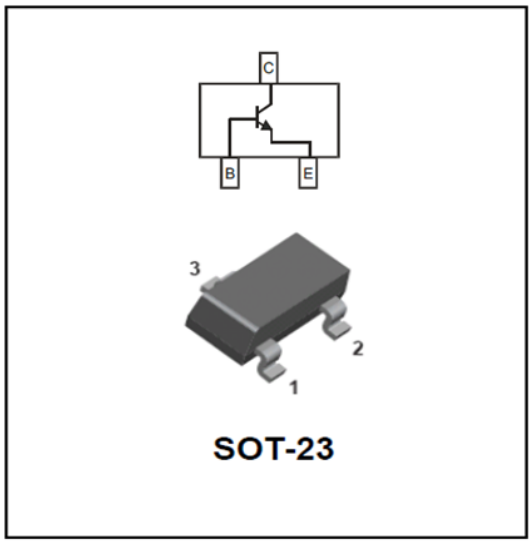
NPN Transistor



Features

- ●Epoxy meets UL-94 V-0 flammability rating
- ●Halogen free available upon request by adding suffix ”HF”
- ●Moisture Sensitivity Level 1
- ●Surface mount package ideally Suited for Automatic Insertion
- ●NPN

Mechanical Data

- ● **Package**: SOT-23
- ● **Terminals**: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- ● **Marking**:

BC849B	49B
BC849C	49C

■ Maximum Ratings (Ta=25℃ unless otherwise noted)

Item	Symbol	Unit	Conditions	Value
Collector-Base Voltage	V_{CBO}	V	IC=100μA,IE=0	50
Collector-Emitter Voltage	V_{CEO}	V	IC =0.1mA,IB=0	45
Emitter-Base Voltage	V_{EBO}	V	IE=100μA,IC=0	5
Collector Current	I_C	A		0.1
Collector Power Dissipation	P_C	mW		200
Operation Junction Temperature	T_j	℃		150
Storage Temperature	T_{stg}	℃		-55 to +150

■ Ordering Information (Example)

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
BC849B	F2	Approximate 0.009	3000	30000	120000	7” reel
BC849C	F2	Approximate 0.009	3000	30000	120000	7” reel

■ Electrical Characteristics (Ta=25℃ unless otherwise noted)

Item	Symbol	Unit	Conditions	Min	Max
Collector-base breakdown voltage	V_{CBO}	V	IC=100μA,IE=0	50	
Collector-emitter breakdown voltage	V_{CEO}	V	IC =0.1mA,IB=0	45	
Emitter-base breakdown voltage	V_{EBO}	V	IE=100μA,IC=0	5	
Collector-Base cut-off current	I_{CBO}	uA	V_{CB}=50 V ,IE=0		0.1
Collector-emitter cut-off current	I_{CEO}	uA	VCE=35 V , IB=0		0.1
Emitter-base cut-off current	I_{EBO}	uA	V_{EB}=3 V , IC=0		0.1
DC current gain	h_{FE}		VCE=5V,IC=1mA	200	1000
Collector-emitter saturation voltage	$V_{CE(sat)}$	V	IC=100mA,IB=5mA		0.3
Base-emitter saturation voltage	$V_{BE(sat)*}$	V	IC=100mA,IB=5mA		1

■Other Characteristics（T_a=25℃ Unless otherwise specified）

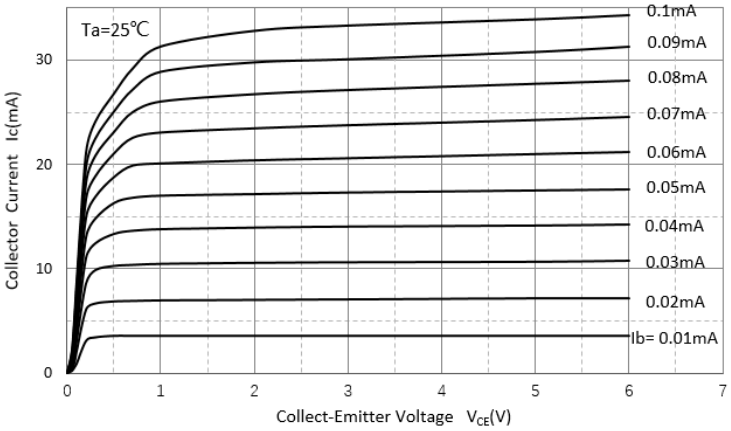
Item	Symbol	Unit	Conditions	Min	Max
Transition frequency	fT	MHz	VCE= 5 V, IC= 10mA, f=30MHz	150	

■ Classification of h_{FE}

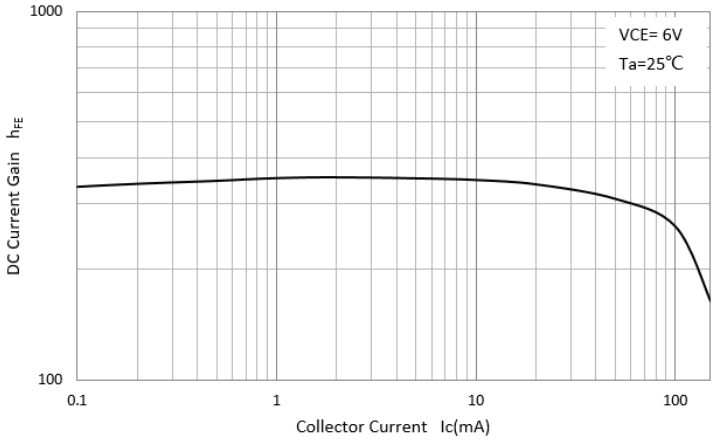
Rank	BC849B	BC849C
Range	200-450	420-1000

■ **Characteristics**(Typical)

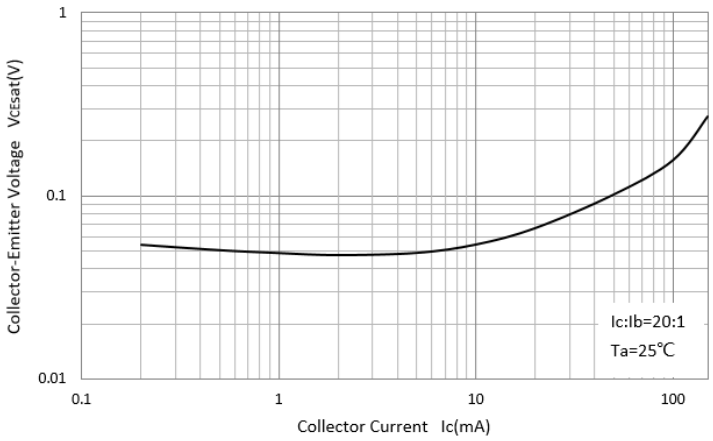
Static Characteristic



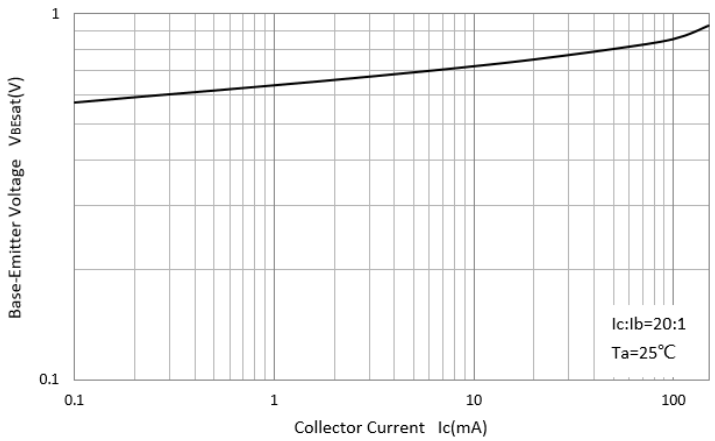
DC Current Gain



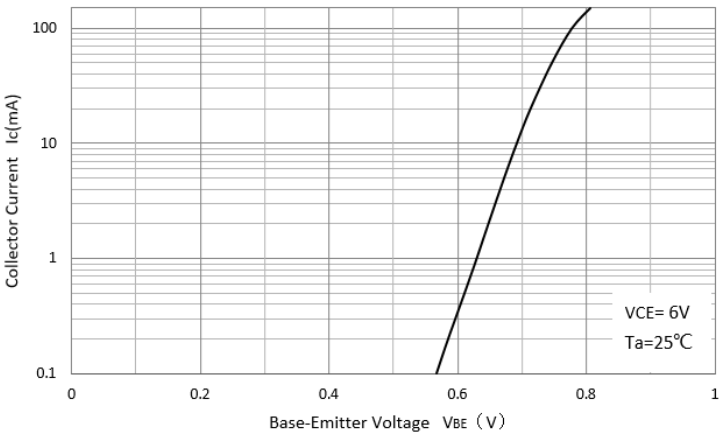
Collector-Emitter Saturation Voltage



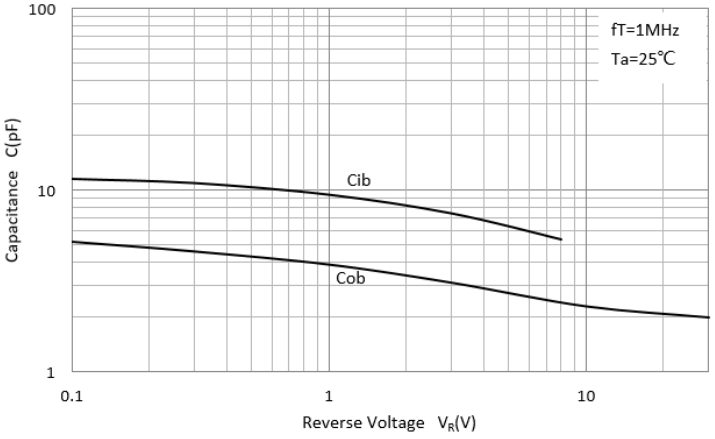
Base-Emitter Saturation Voltage



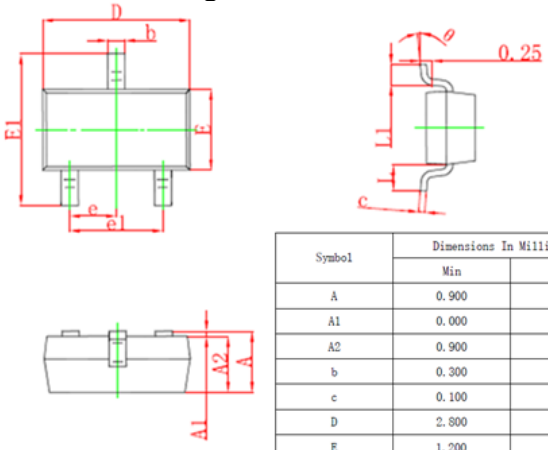
Base-Emitter On Voltage



Cob/Cib-V_{CB}/V_{EB}

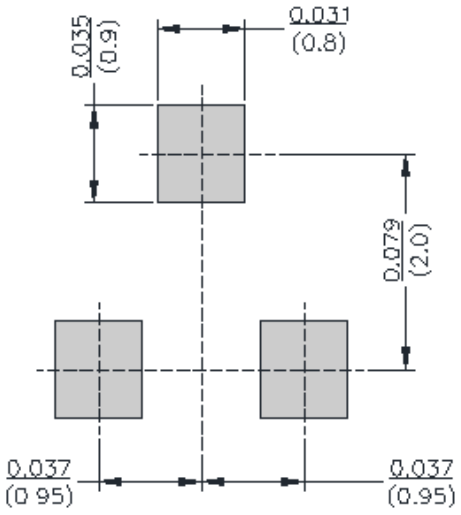


■SOT-23 Package Outline Dimensions



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	0.100	0.200	0.004	0.008
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	0.950TYP		0.037TYP	
e1	1.800	2.000	0.071	0.079
L	0.550REF		0.022REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

■SOT-23 Soldering Footprint



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