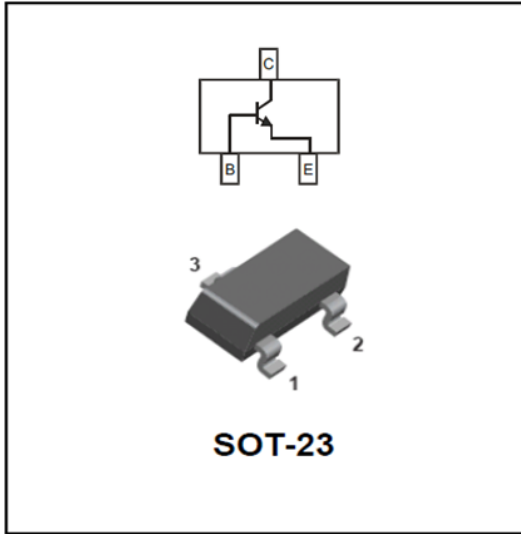


NPN Transistor



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°C unless otherwise noted)

Item	Symbol	Unit	Conditions	Value
Collector-Base Voltage	V_{CBO}	V	$I_C=100\mu A, I_E=0$	50
Collector-Emitter Voltage	V_{CEO}	V	$I_C=0.1mA, I_B=0$	45
Emitter-Base Voltage	V_{EBO}	V	$I_E=100\mu A, I_C=0$	5
Collector Current	I_C	A		0.1
Collector Power Dissipation	P_C	mW		200
Operation Junction Temperature	T_j	°C		150
Storage Temperature	T_{stg}	°C		-55 to +150

■ Ordering Information (Example)

PREFERRED 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



BC849B&BC849C

RoHS
COMPLIANT

■ Electrical Characteristics (Ta=25°C unless otherwise noted)

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

■ Other Characteristics (Ta=25°C Unless otherwise specified)

Item	Symbol	Unit	Conditions	Min	Max
Transition frequency	fT	MHz	$V_{CE}=5V, I_C=10mA, f=30MHz$	150	

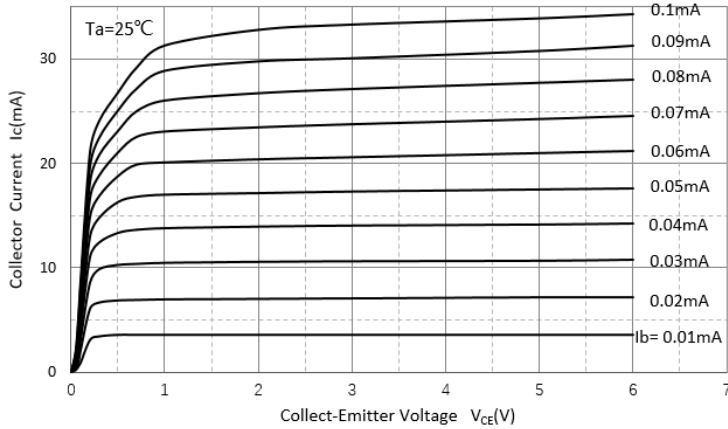
■ Classification of h_{FE}

Rank	BC849B	BC849C
Range	200-450	420-1000

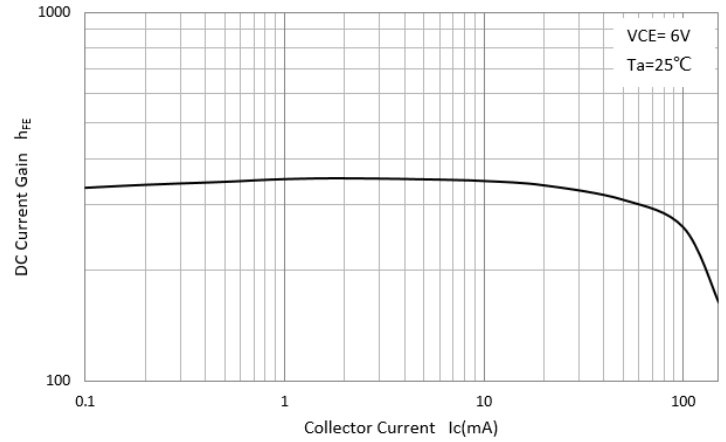


■ Characteristics(Typical)

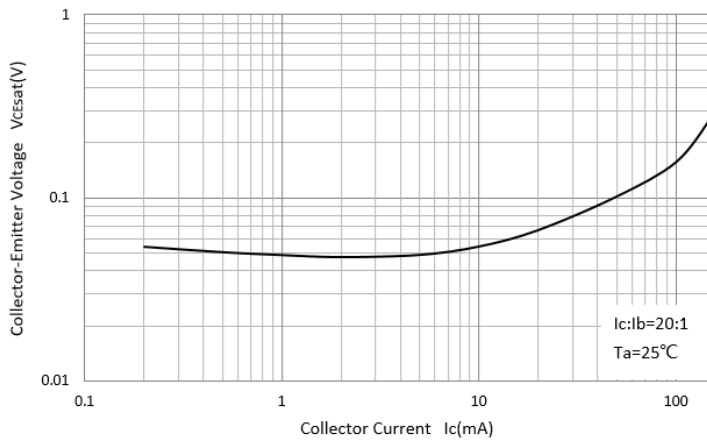
Static Characteristic



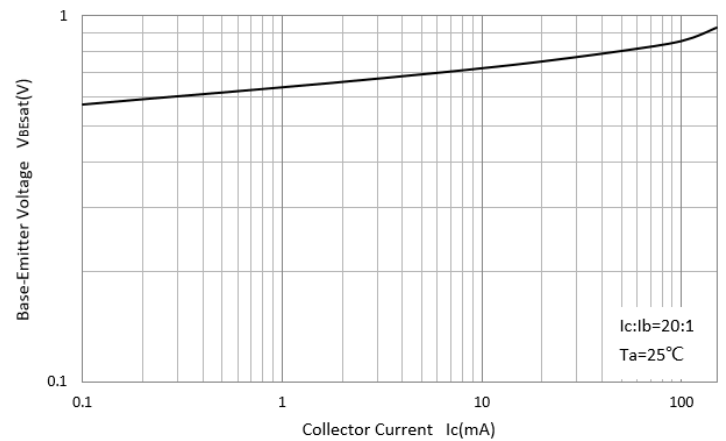
DC Current Gain



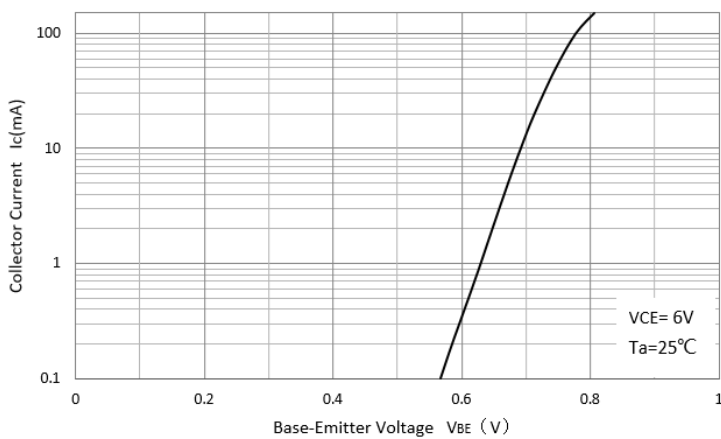
Collector-Emitter Saturation Voltage



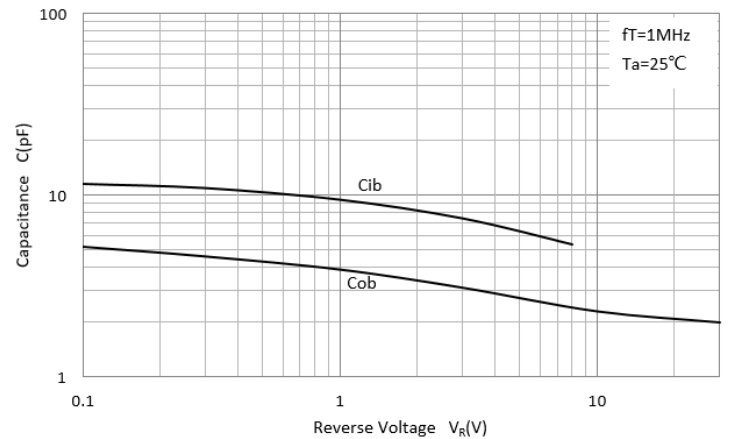
Base-Emitter Saturation Voltage



Base-Emitter On Voltage

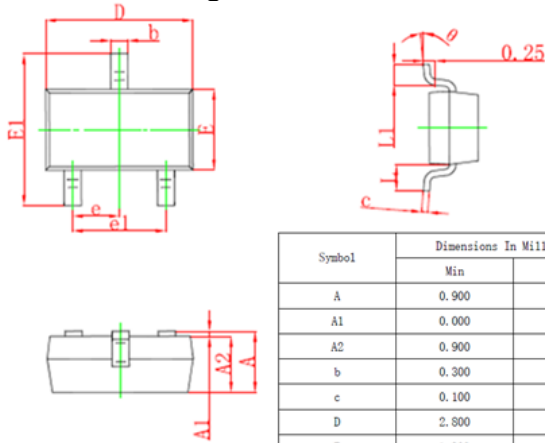


$C_{ob}/C_{ib}-V_{CB}/V_{EB}$



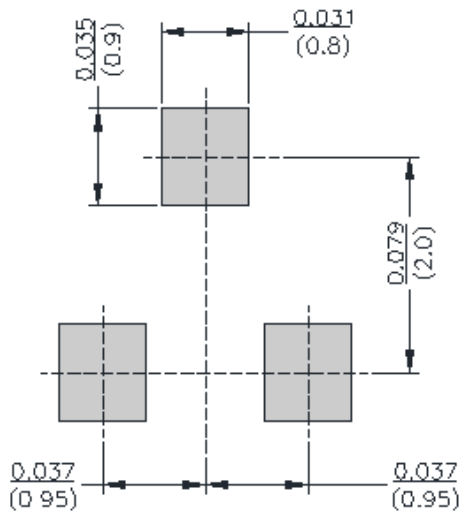


■SOT-23 Package Outline Dimensions



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
ø	0°	8°	0°	8°

■SOT-23 Soldering Footprint





Disclaimer

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The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

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