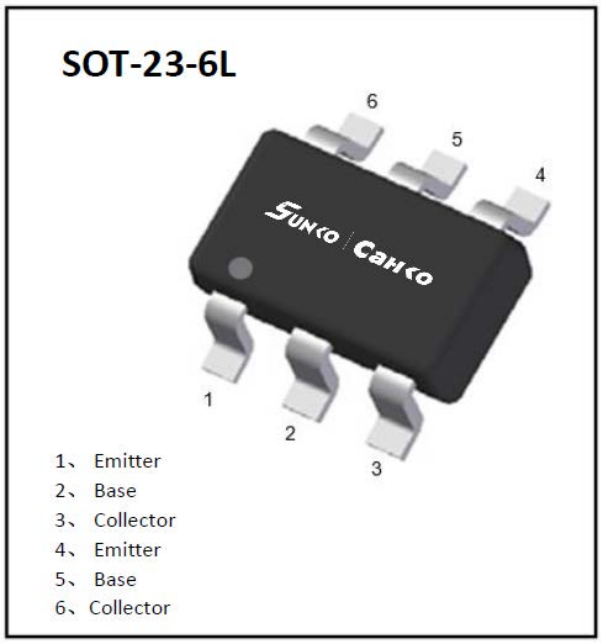
NPN+PNP Transistor



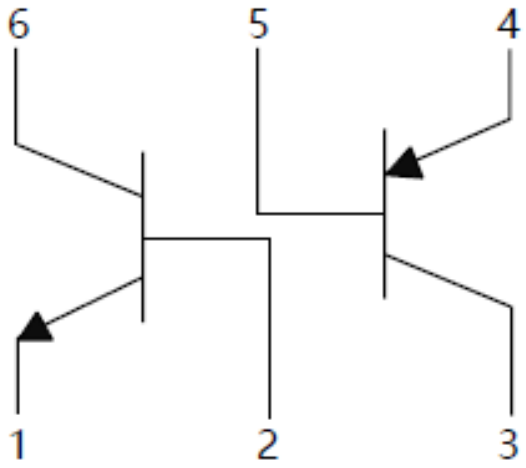
Features

- Epoxy meets UL-94 V-0 flammability rating
- Surface mount package ideally Suited for Automatic Insertion
- NPN+PNP

Mechanical Data

- **Package:** SOT-23-6L
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Marking:** 8017

■Equivalent circuit



■ Ordering Information (Example)

PREFERED P/N	PACKING CODE	UNIT WEIGHT(mg)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
BC817DPN	F2	Approximate 15.6	3000	30000	120000	7” reel

BC817DPN

■ NPN Transistor（Pin1、2、6）Maximum Ratings (Ta=25℃ Unless otherwise specified）

Item	Symbol	Unit	Value
Collector-Base Voltage	V_{CBO}	V	50
Collector-Emitter Voltage	V_{CEO}	V	45
Emitter –Base Voltage	V_{EBO}	V	5
Collector Current	I_C	mA	500
Collector Power Dissipation	P_C	mW	330
Operation Junction Temperature	T_j	℃	150
Storage Temperature	T_{stg}	℃	-55 to +150

■ PNP Transistor（Pin3、4、5）Maximum Ratings (Ta=25℃ Unless otherwise specified）

Item	Symbol	Unit	Value
Collector-Base Voltage	V_{CBO}	V	-50
Collector-Emitter Voltage	V_{CEO}	V	-45
Emitter –Base Voltage	V_{EBO}	V	-5
Collector Current	I_C	mA	-500
Collector Power Dissipation	P_C	mW	330
Operation Junction Temperature	T_j	℃	150
Storage Temperature	T_{stg}	℃	-55 to +150

■NPN Transistor （Pin1、2、6）Electrical Characteristics (Ta=25℃ unless otherwise specified)

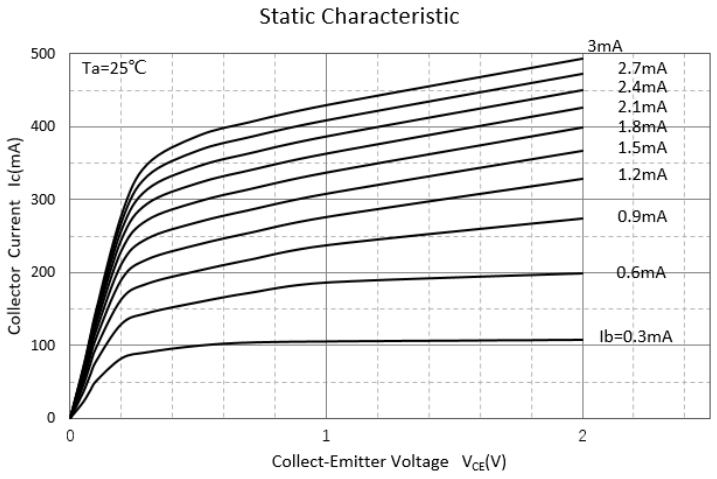
Item	Symbol	Unit	Conditions	MIN	MAX
Collector-Emitter Voltage	V_{CEO}	V	I_C=10mAdc, I_B=0	45	-
Collector-Base Voltage	V_{CBO}	V	I_C=10uAdc, I_E=0	50	-
Emitter-Base Voltage	V_{EBO}	V	I_E=1uAdc, I_C=0	5.0	-
Emitter-base Cut-off Current	I_{EBO}	nA	V_{EB}=5Vdc, I_C=0	-	100
Collector-base Cut-off Current	I_{CBO}	nA	V_{CB}=20Vdc, I_E=0	-	100
DC Current Gain	h_{FE1}		I_C=100mAdc, V_{CE}=1.0Vdc	160	400
	h_{FE2}		I_C=500mAdc, V_{CE}=1.0Vdc	40	-
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	V	I_C=500mAdc, I_B=50mAdc	-	0.7
Base-Emitter Saturation Voltage	V_{BE}	V	I_C=500mAdc, V_{CE}=1.0Vdc	-	1.2
Transition frequency	f_T	MHz	I_C=10mA,V_{CE}=5.0V, f=100MHz	100	-

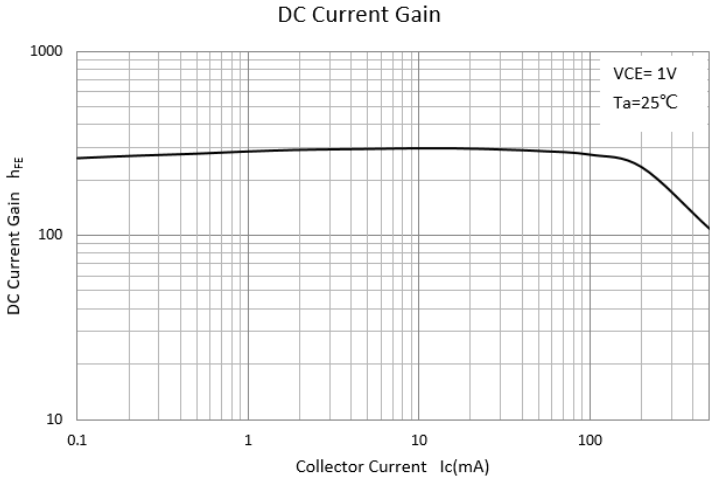
BC817DPN

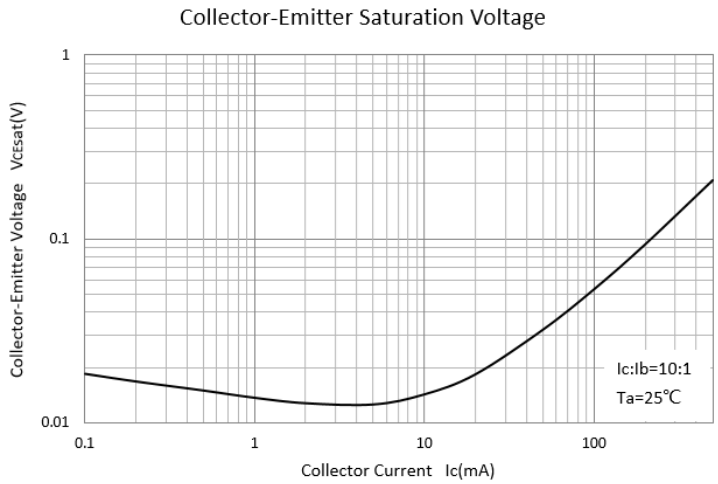
■PNP Transistor （Pin3、4、5）Electrical Characteristics (Ta=25℃ unless otherwise specified)

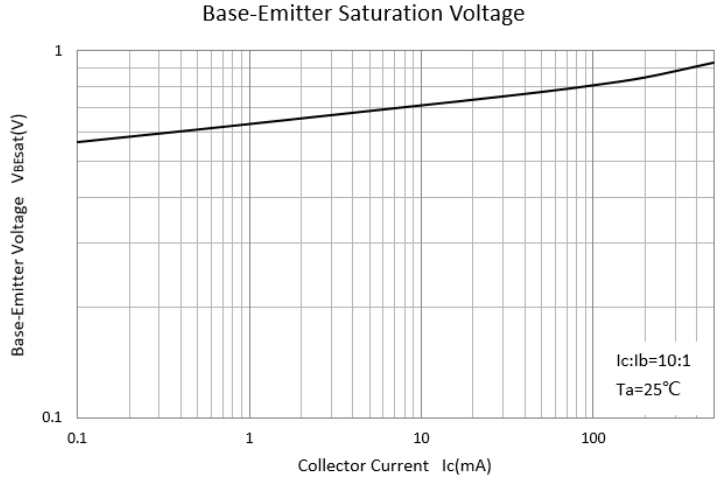
Item	Symbol	Unit	Conditions	MIN	MAX
Collector-Emitter Voltage*	V_{CEO}	V	I_C=-10mAdc, I_B=0	-45	-
Collector-Base Voltage	V_{CBO}	V	I_C=-10uAdc, I_E=0	-50	-
Emitter-Base Voltage	V_{EBO}	V	I_E=-1uAdc, I_C=0	-5.0	-
Emitter-base Cut-off Current	I_{EBO}	nA	V_{EB}=-5Vdc, I_C=0	-	-100
Collector-base Cut-off Current	I_{CBO}	nA	V_{CB}=-20Vdc, I_E=0	-	-100
DC Current Gain	h_{FE1}		I_C=-100mAdc, V_{CE}=-1.0Vdc	160	400
	h_{FE2}		I_C=-500mAdc, V_{CE}=-1.0Vdc	40	-
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	V	I_C=-500mAdc, I_B=-50mAdc	-	-0.7
Base-Emitter Saturation Voltage	V_{BE}	V	I_C=-500mAdc, V_{CE}=-1.0Vdc	-	-1.2
Transition frequency	f_T	MHz	I_C=-10mA,V_{CE}=-5.0V, f=100MHz	100	-

■ NPN Transistor （Pin1、2、6）Characteristics (Typical)

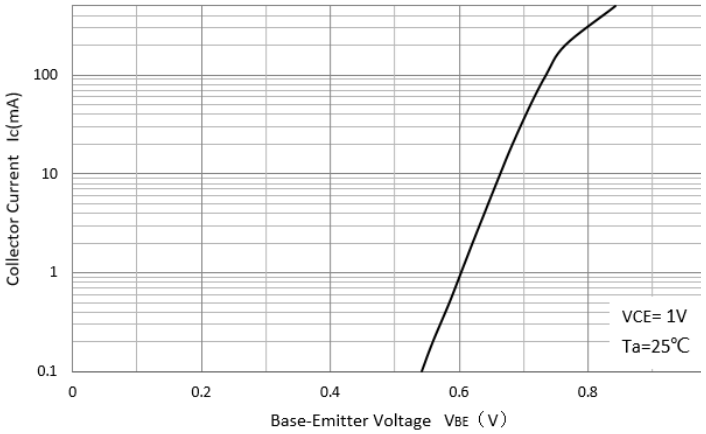




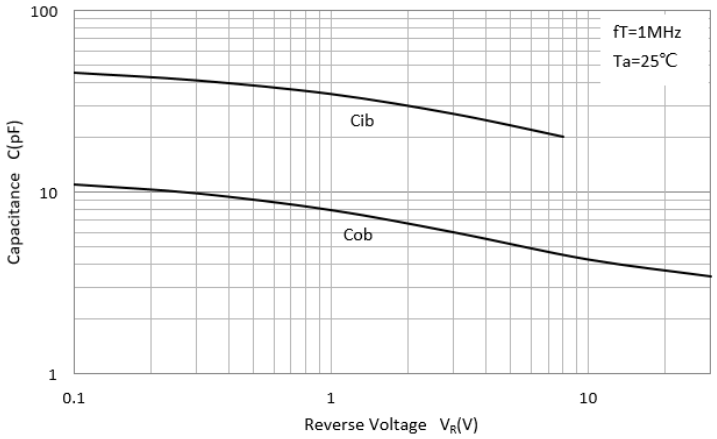




Base-Emitter On Voltage

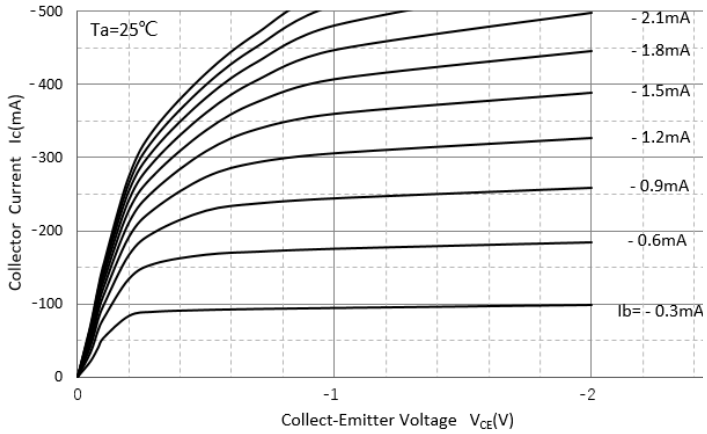


Cob/Cib-V_{CB}/V_{EB}

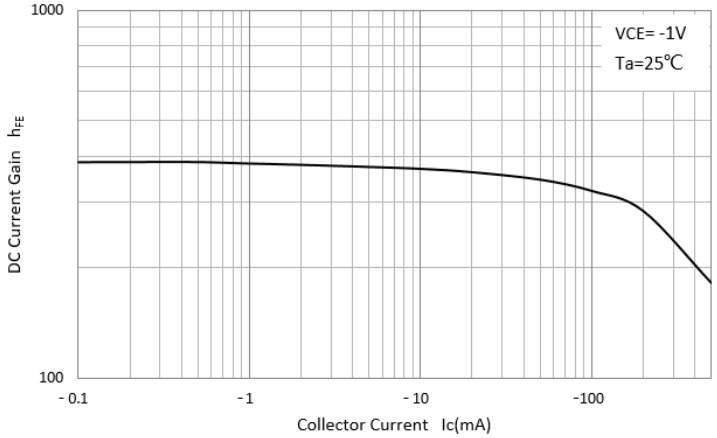


■ PNP Transistor （Pin3、4、5） Characteristics (Typical)

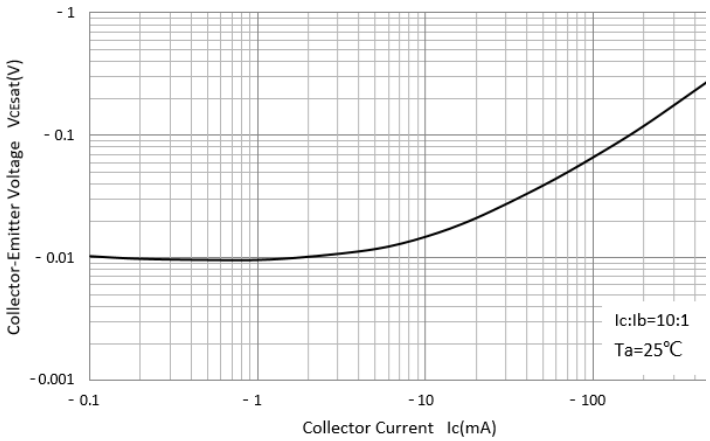
Static Characteristic



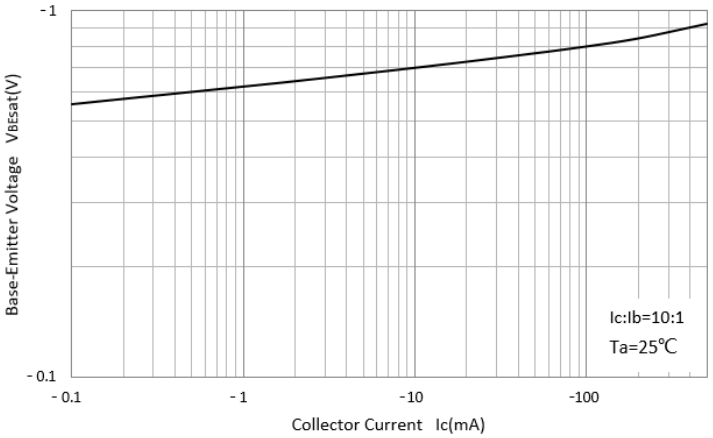
DC Current Gain



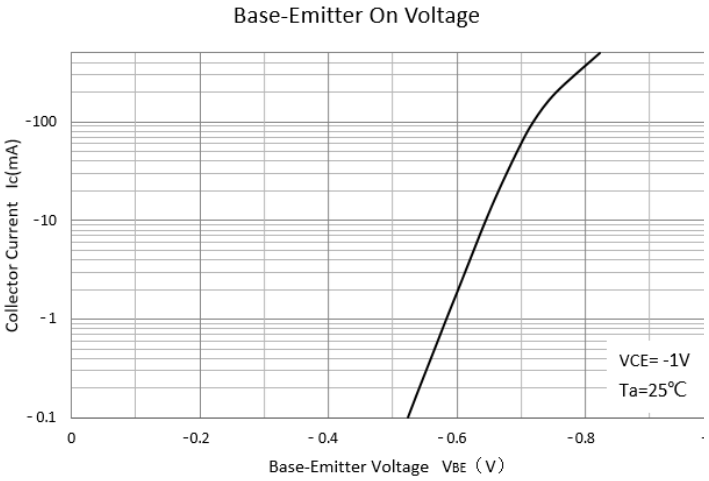
Collector-Emitter Saturation Voltage

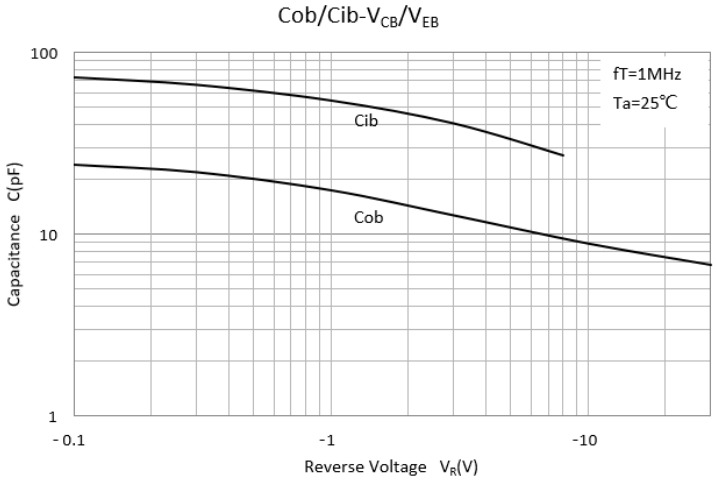


Base-Emitter Saturation Voltage

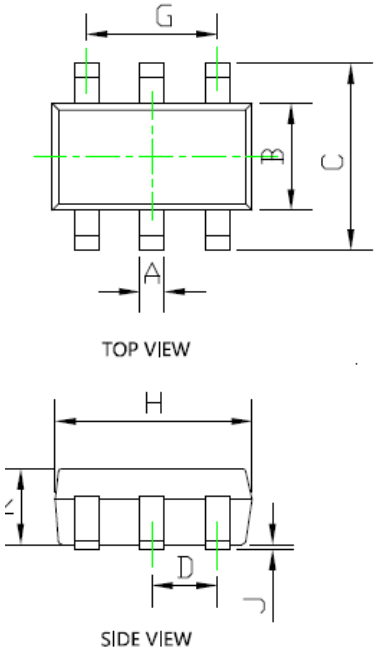


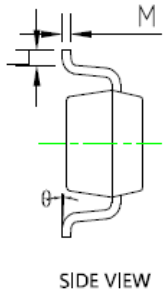
BC817DPN

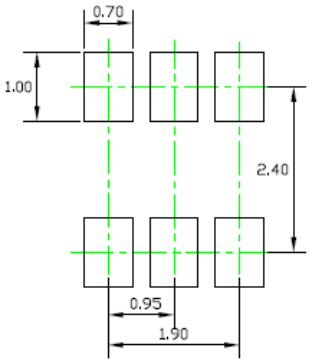




■SOT-23-6L Package information







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

DIMENSIONS				
SYMBOL	INCHES		Millimeter	
	MIN.	MAX.	MIN.	MAX.
A	0.012	0.020	0.300	0.500
B	0.059	0.067	1.500	1.700
C	0.104	0.116	2.650	2.950
D	0.037BSC		0.950BSC	
G	0.075BSC		1.900BSC	
H	0.111	0.119	2.820	3.020
J	0.000	0.004	0.000	0.100
K	0.041	0.045	1.050	1.150
L	0.012	0.024	0.300	0.600
M	0.004	0.008	0.100	0.200
θ	0°	8°	0°	8°

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