



**TRANSISTOR (PNP)**

**FEATURES**

- Ideally suited for automatic insertion
- epitaxial planar die construction
- complementary NPN type available(BC817)

**SOT-23 -3L**



1. BASE
2. EMITTER
3. COLLECTOR

**MARKING: 807-16:5A; 807-25:5B; 807-40:5C**

**MAXIMUM RATINGS (T<sub>A</sub>=25°C unless otherwise noted)**

Symbol	Parameter	Value	Units
V <sub>CB0</sub>	Collector-Base Voltage	-50	V
V <sub>CE0</sub>	Collector-Emitter Voltage	-45	V
V <sub>EBO</sub>	Emitter-Base Voltage	-5	V
I <sub>C</sub>	Collector Current -Continuous	-0.5	A
P <sub>C</sub>	Collector Power Dissipation	0.3	W
T <sub>j</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature	-55-150	°C

**ELECTRICAL CHARACTERISTICS (T<sub>amb</sub>=25°C unless otherwise specified)**

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	V <sub>CB0</sub>	I <sub>C</sub> = -10μA, I <sub>E</sub> =0	-50		V
Collector-emitter breakdown voltage	V <sub>CE0</sub>	I <sub>C</sub> = -10mA, I <sub>B</sub> =0	-45		V
Emitter-base breakdown voltage	V <sub>EBO</sub>	I <sub>E</sub> = -1μA, I <sub>C</sub> =0	-5		V
Collector cut-off current	I <sub>CB0</sub>	V <sub>CB</sub> = -45V, I <sub>E</sub> =0		-0.1	μA
Collector cut-off current	I <sub>CE0</sub>	V <sub>CE</sub> = -40V, I <sub>B</sub> =0		-0.2	μA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> = -4 V, I <sub>C</sub> =0		-0.1	μA
DC current gain	h <sub>FE(1)</sub>	V <sub>CE</sub> = -1V, I <sub>C</sub> = -100mA	807-16	100	250
			807-25	160	400
			807-40	250	600
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =-500mA, I <sub>B</sub> = -50mA		-0.7	V
Base-emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> = -500mA, I <sub>B</sub> = -50mA		-1.2	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> = -5V, I <sub>C</sub> = -10mA f=100MHz	100		MHz



## Typical Characteristics

## BC807-16/-25/-40

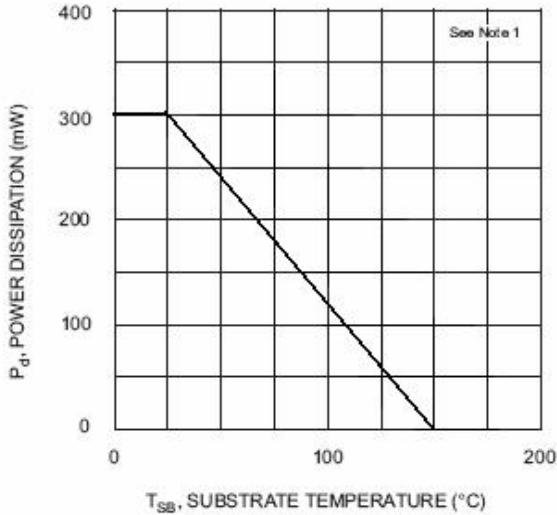


Fig. 1, Power Derating Curve

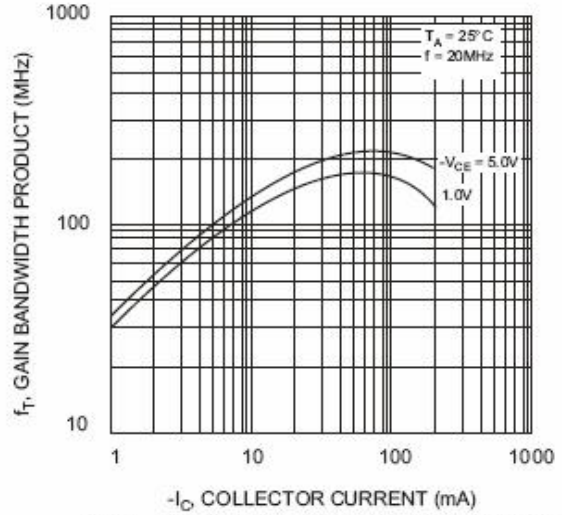


Fig. 2, Gain-Bandwidth Product vs. Collector Current

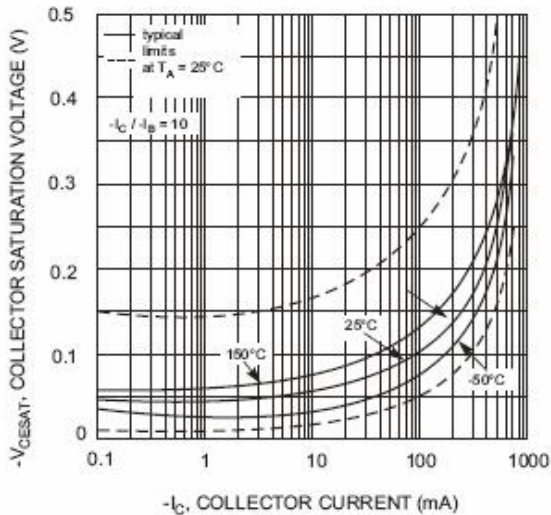


Fig. 3, Collector Sat. Voltage vs. Collector Current

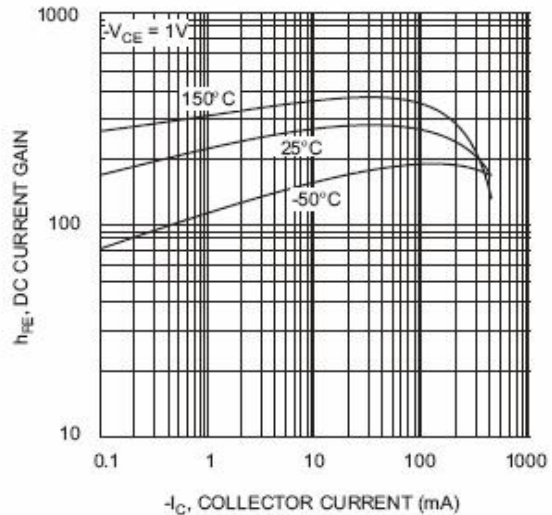


Fig. 4, DC Current Gain vs. Collector Current

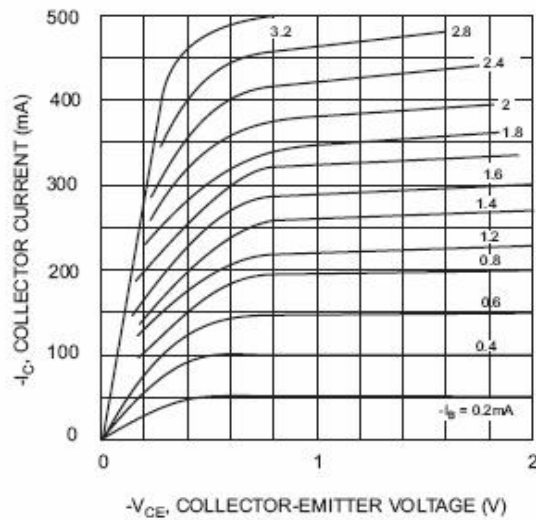


Fig. 5, Typical Emitter-Collector Characteristics

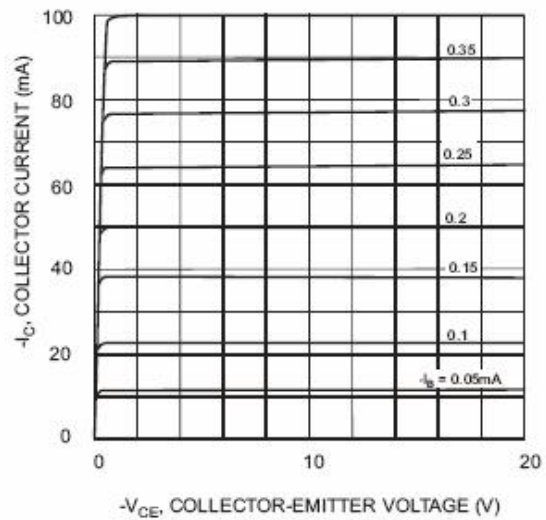
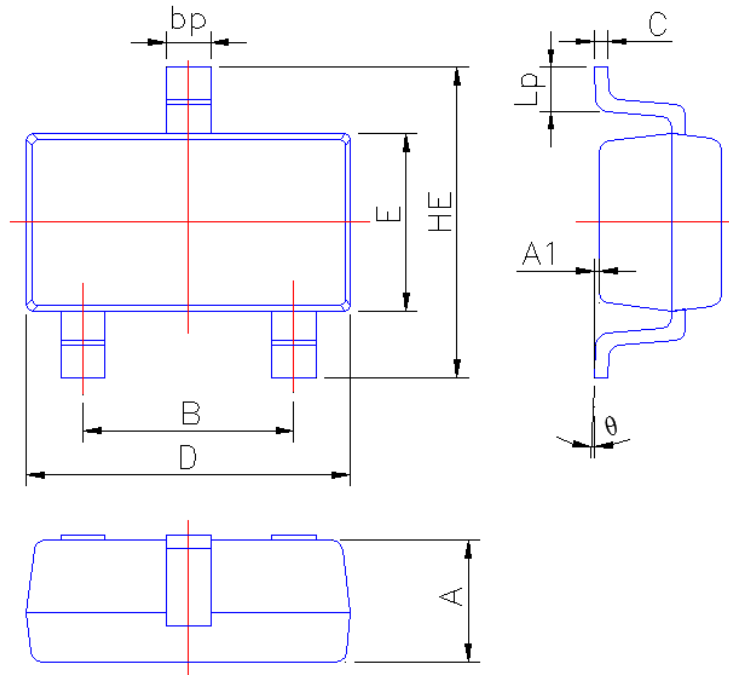


Fig. 6, Typical Emitter-Collector Characteristics



## SOT-23-3L Package Outline Dimensions



Symbol	Dimension in Millimeters	
	Min	Max
A	1.05	1.20
A1	0.010	0.100
B	1.80	2.00
bp	0.35	0.50
C	0.09	0.15
D	2.80	3.00
E	1.50	1.70
HE	2.60	3.00
Lp	0.25	0.55
θ	2°	6°