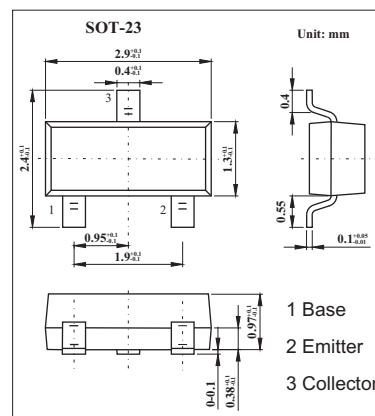
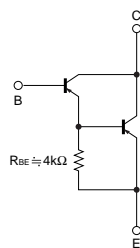


# 2SB852

## Features

- Darlington connection for high DC current gain.
- Built-in 4kΩ resistor between base and emitter.



## Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V <sub>CB0</sub>	-40	V
Collector-Emitter Voltage	V <sub>CEO</sub>	-32	V
Emitter-Base Voltage	V <sub>EB0</sub>	-6	V
Collector Current -Continuous	I <sub>C</sub>	-300	mA
Collector Power Dissipation(TOTAL)	P <sub>C</sub>	200	mW
Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-55 to 150	°C

## Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-to-base breakdown voltage	V <sub>(BR)CB0</sub>	I <sub>C</sub> = -100μA, I <sub>E</sub> = 0	-40			V
Collector-to-emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> = -1 mA, I <sub>B</sub> = 0	-32			V
Emitter-to-base breakdown voltage	V <sub>(BR)EB0</sub>	I <sub>E</sub> = -100 μA, I <sub>C</sub> = 0	-6			V
Collector cutoff current	I <sub>CBO</sub>	V <sub>CB</sub> = -24 V, I <sub>E</sub> = 0			-1	μA
Collector cutoff current	I <sub>EBO</sub>	V <sub>CE</sub> = -4.5V, I <sub>C</sub> = 0			-1	μA
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> = -5V, I <sub>C</sub> = -100mA	5000			
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = -200 mA, I <sub>B</sub> = -0.4mA			-1.5	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> = -5V, I <sub>C</sub> = -10mA, f = 100MHz		200		MHz
Output capacitance	C <sub>ob</sub>	V <sub>CB</sub> = -10V, I <sub>E</sub> = 0A, f = 1MHz		3		PF

## Marking

Marking	U*
---------	----

■ TypIacl Characteristics

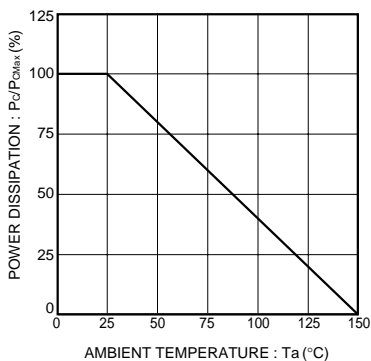


Fig.1 Power dissipation curves

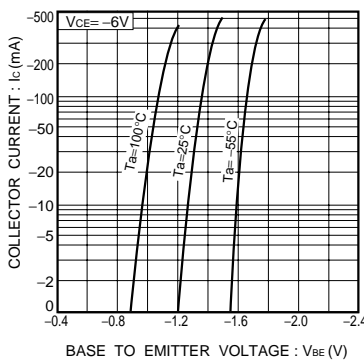


Fig.2 Ground emitter propagation characteristics

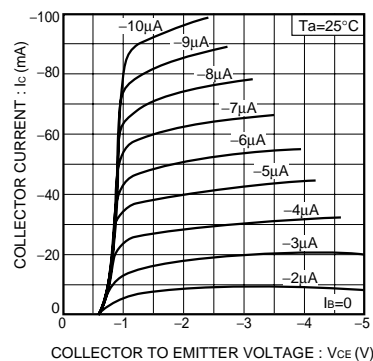


Fig.3 Ground emitter output characteristics

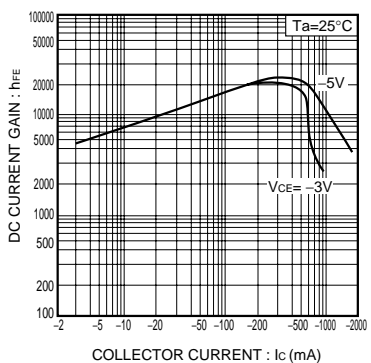


Fig.4 DC current gain vs. collector current ( I )

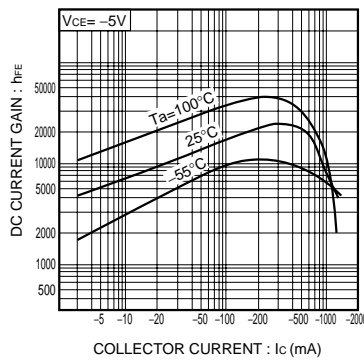


Fig.5 DC current gain vs. collector current ( II )

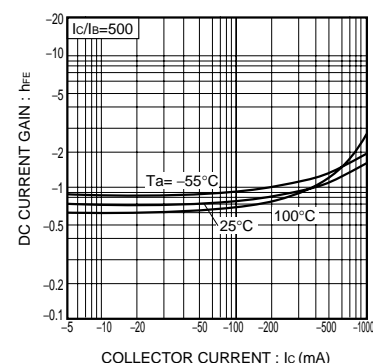


Fig.6 Collector-emitter saturation voltage vs. collector current

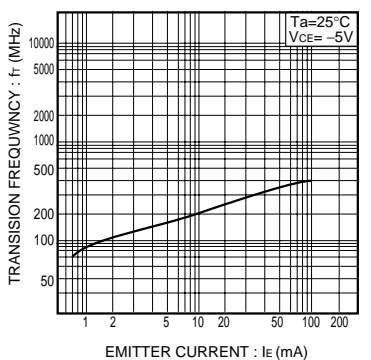


Fig.7 Gain bandwidth product vs. emitter current

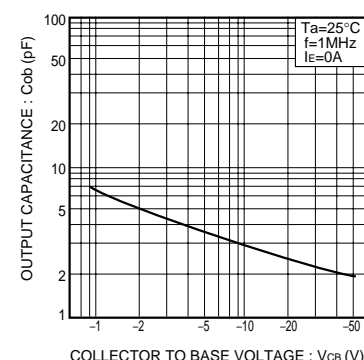


Fig.8 Collector output capacitance vs. collector-base voltage

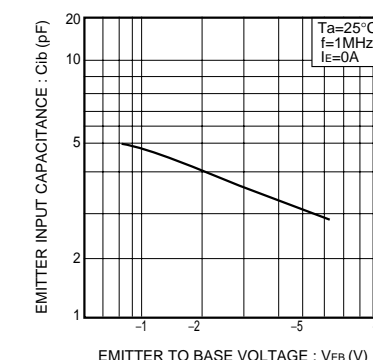


Fig.9 Emitter input capacitance vs. emitter-base voltage