



SANYO Semiconductors

## DATA SHEET

# 2SA1179N / 2SC2812N — PNP / NPN Epitaxial Planar Silicon Transistors

## Low-Frequency General-Purpose Amp Applications

### Features

- Miniature package facilitates miniaturization in end products.
- High breakdown voltage.

### Specifications ( ) : 2SA1179N

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V <sub>CB0</sub>		(-)55	V
Collector-to-Emitter Voltage	V <sub>CEO</sub>		(-)50	V
Emitter-to-Base Voltage	V <sub>EBO</sub>		(-)5	V
Collector Current	I <sub>C</sub>		(-)150	mA
Collector Current (Pulse)	I <sub>CP</sub>		(-)300	mA
Base Current	I <sub>B</sub>		(-)30	mA
Collector Dissipation	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 at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I <sub>CBO</sub>	V <sub>CB</sub> =(-)35V, I <sub>E</sub> =0A			(-)0.1	μA
Emitter Cutoff Current	I <sub>EBO</sub>	V <sub>EB</sub> =(-)4V, I <sub>C</sub> =0A			(-)0.1	μA
DC Current Gain	h <sub>FE</sub>	V <sub>CE</sub> =(-)6V, I <sub>C</sub> =(-)1mA	200		400	
Gain-Bandwidth Product	f <sub>T</sub>	2SC2812N : V <sub>CE</sub> =6V, I <sub>C</sub> =1mA		100		MHz
		2SA1179N : V <sub>CE</sub> =-6V, I <sub>C</sub> =-10mA		(180)		MHz
Output Capacitance	C <sub>ob</sub>	V <sub>CB</sub> =(-)6V, f=1MHz		(4.0)3.0		pF
Collector-to-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =(-)50mA, I <sub>B</sub> =(-)5mA		(-0.15)0.1	(-)0.5	V
Base-to-Emitter Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =(-)50mA, I <sub>B</sub> =(-)5mA			(-)1.0	V
Collector-to-Base Breakdown Voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =(-)10μA, I <sub>E</sub> =0A	(-)55			V
Collector-to-Emitter Breakdown Voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> =(-)1mA, R <sub>BE</sub> =∞	(-)50			V
Emitter-to-Base Breakdown Voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =(-)10μA, I <sub>C</sub> =0A	(-)5			V

Marking : 2SA1179N : M / 2SC2812N : L

\* : The 2SA1179N / 2SC2812N are classified by 1mA h<sub>FE</sub> as follows:

Rank	6
h <sub>FE</sub>	200 to 400

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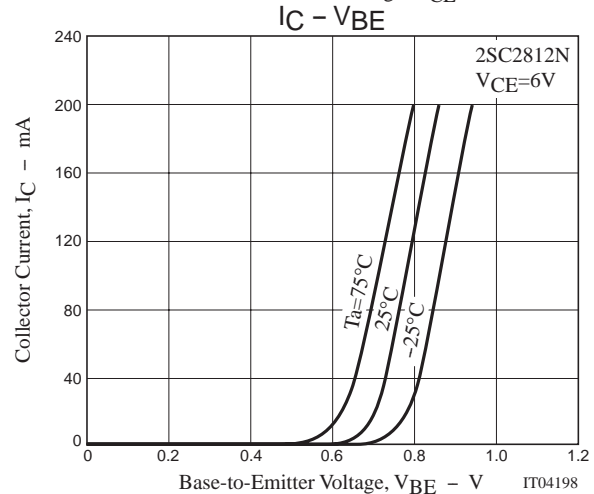
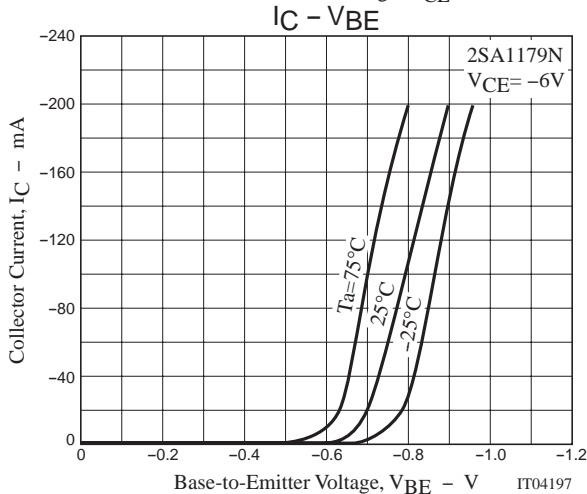
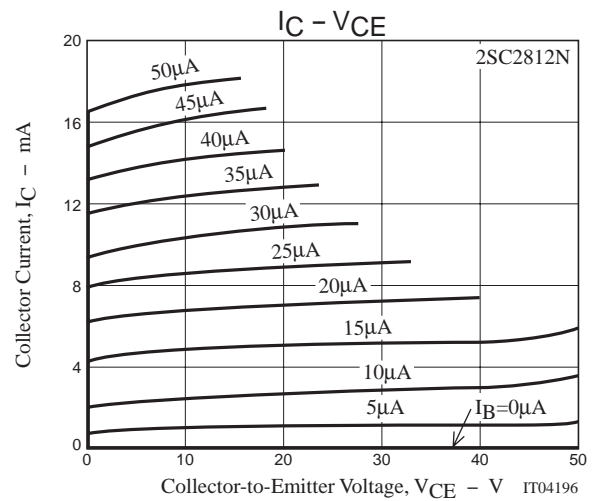
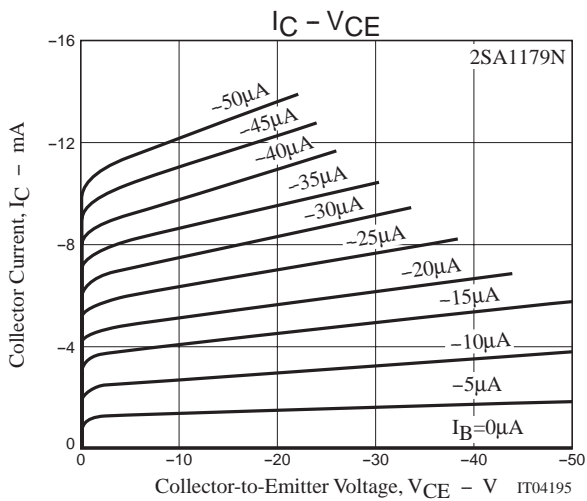
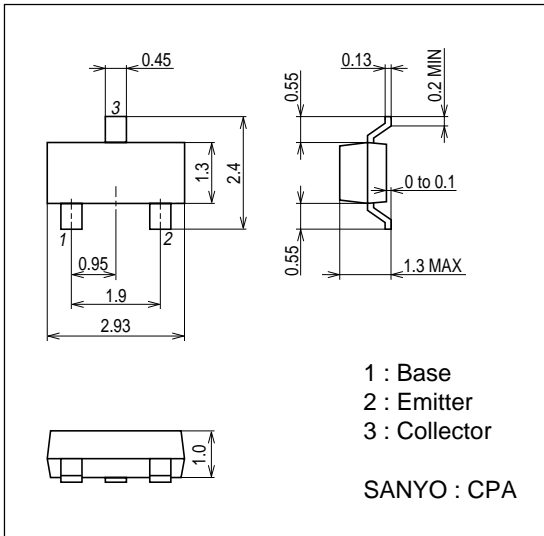
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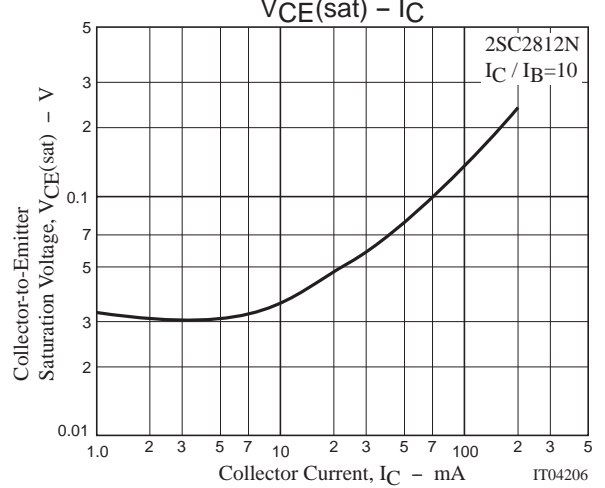
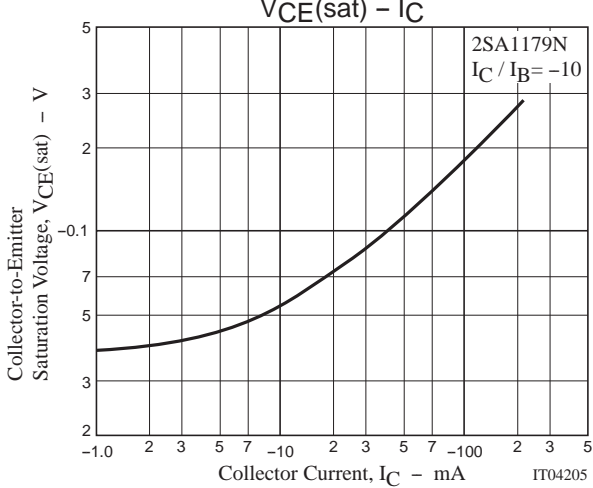
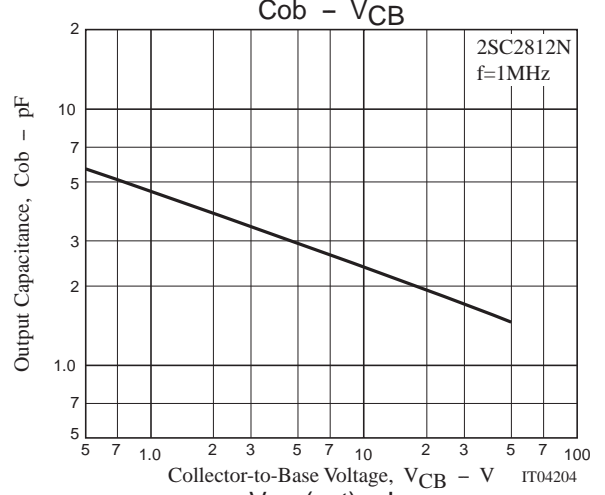
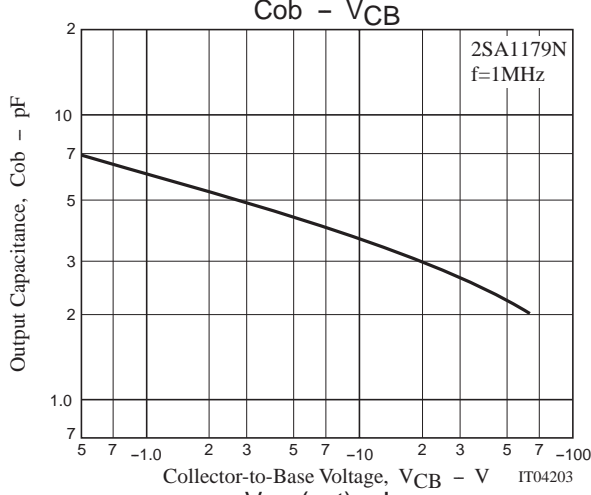
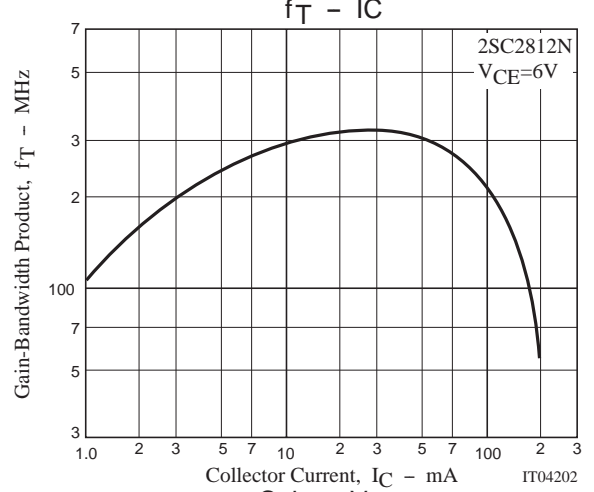
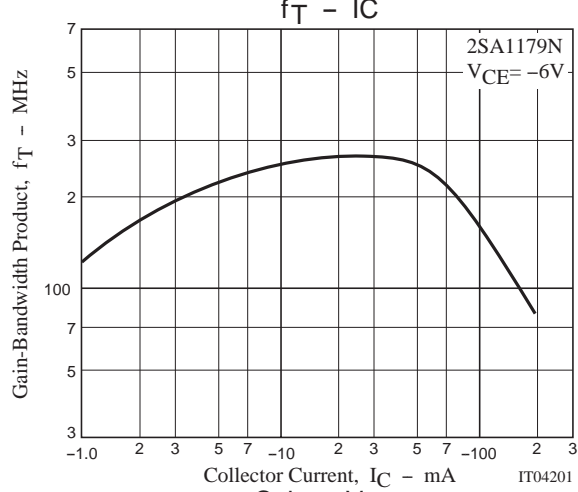
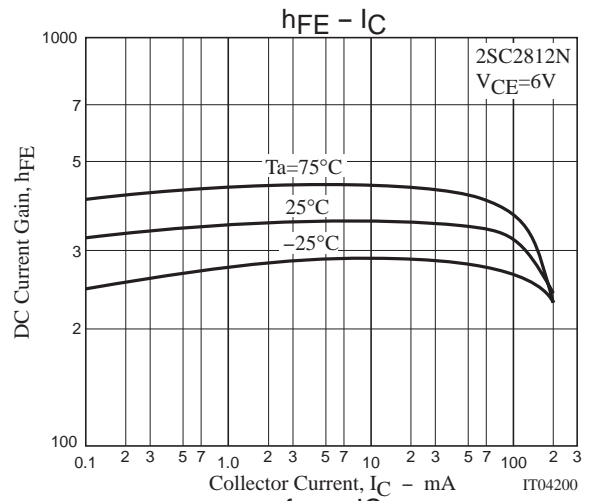
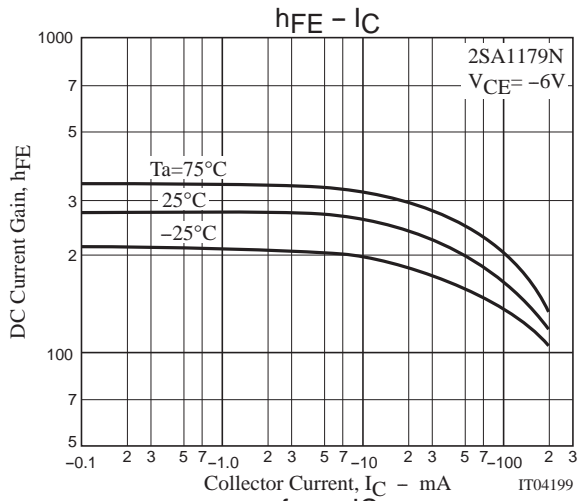
## Package Dimensions

unit : mm (typ)

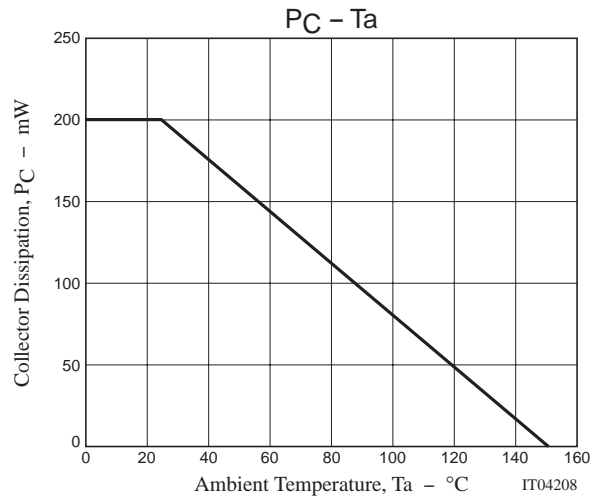
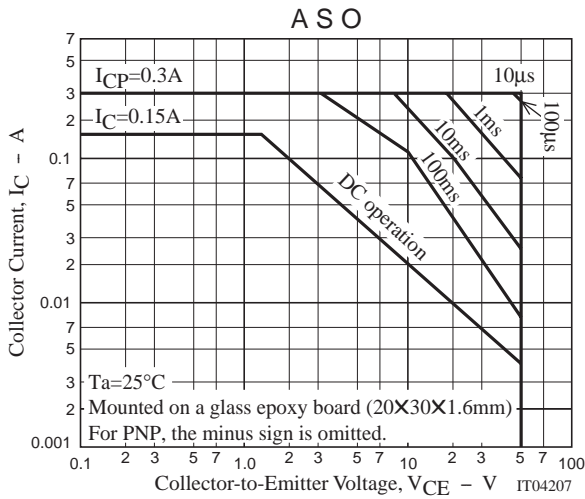
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