Ordering number : ENN7198

PNP / NPN Epitaxial Planar Silicon Transistors

2SA1179N / 2SC2812N

Low-Frequency General-Purpose Amp Applications

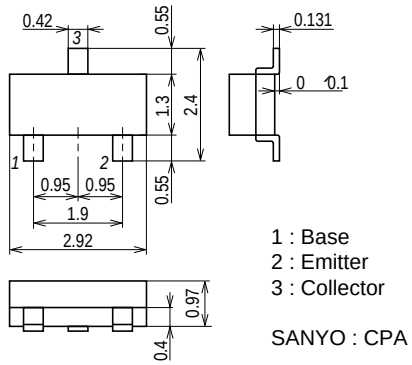
Features

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

Package Dimensions

unit : mm
2204

[2SA1179N / 2SC2812N]



Specifications

( ) : 2SA1179N

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		(–)55	V
Collector-to-Emitter Voltage	V_{CEO}		(–)50	V
Emitter-to-Base Voltage	V_{EBO}		(–)5	V
Collector Current	I_C		(–)150	mA
Collector Current (Pulse)	I_{CP}		(–)300	mA
Base Current	I_B		(–)30	mA
Collector Dissipation	P_C		200	mW
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		–55 to +150	°C

SANYO Electric Co.,Ltd. Semiconductor Company
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

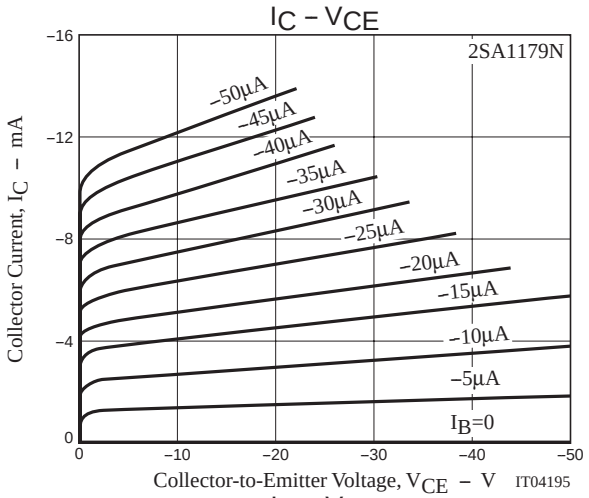
Electrical Characteristics at Ta=25°C

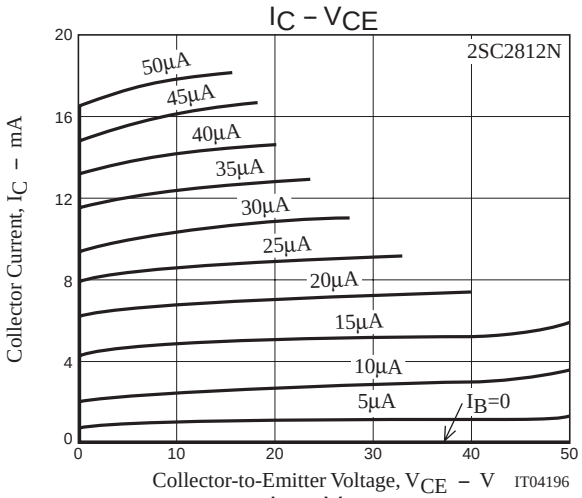
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	V_{CB}=(-)35V, I_E=0			(-)0.1	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=(-)4V, I_C=0			(-)0.1	μA
DC Current Gain	h_{FE}	V_{CE}=(-)6V, I_C=(-)1mA	200		400	
Gain-Bandwidth Product	f_T	2SC2812 : V_{CE}=6V, I_C=1mA		100		MHz
		2SA1179 : V_{CE}=-6V, I_C=-10mA		(180)		MHz
Output Capacitance	Cob	V_{CB}=(-)6V, f=1MHz		(4.0)3.0		pF
Collector-to-Emitter Saturation Voltage	V_{CE}(sat)	I_C=(-)50mA, I_B=(-)5mA		(-0.15)0.1	(-)0.5	V
Base-to-Emitter Saturation Voltage	V_{BE}(sat)	I_C=(-)50mA, I_B=(-)5mA			(-)1.0	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=(-)10μA, I_E=0	(-)55			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=(-)1mA, R_{BE}=∞	(-)50			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=(-)10μA, I_C=0	(-)5			V

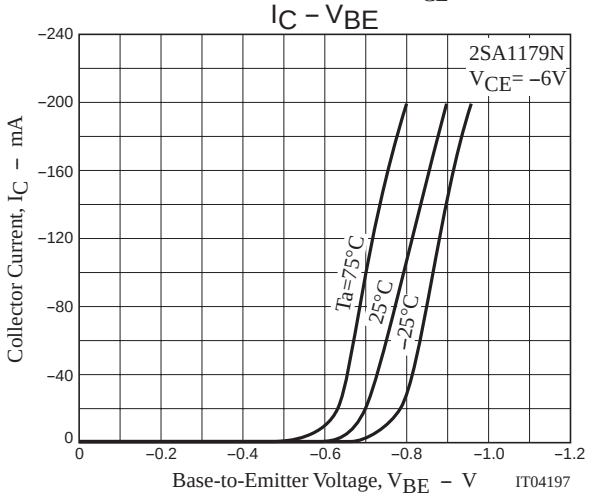
Marking : 2SA1179N M

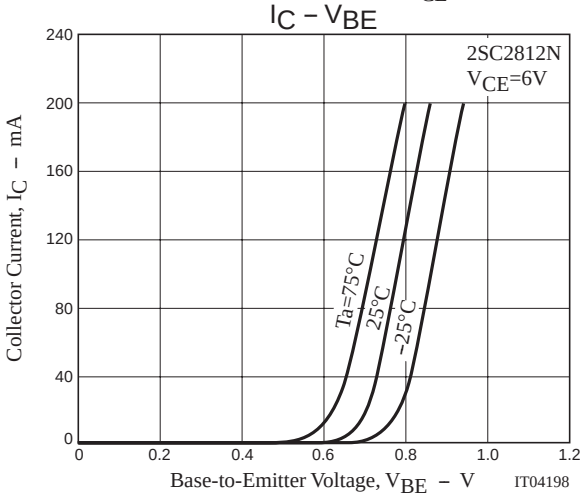
: 2SC2812N L

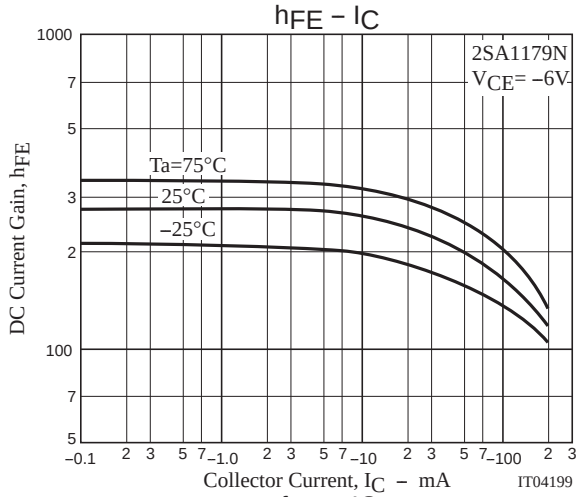
h_{FE} Rank : 6

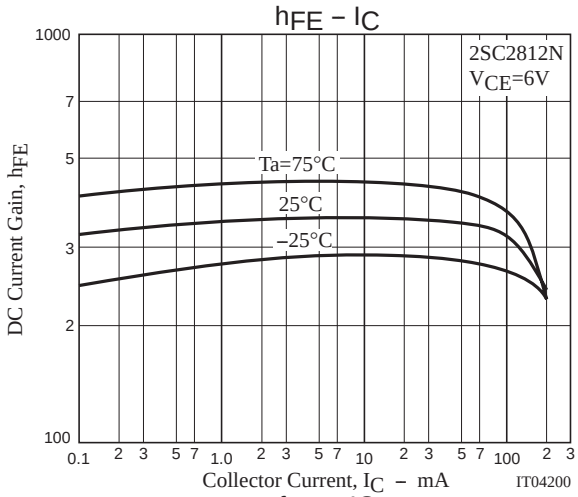


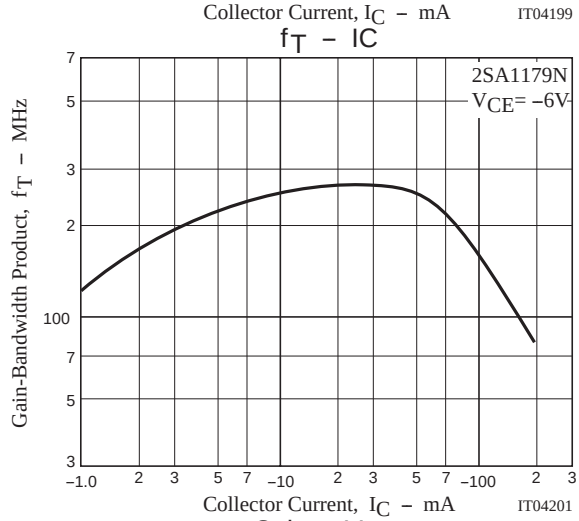


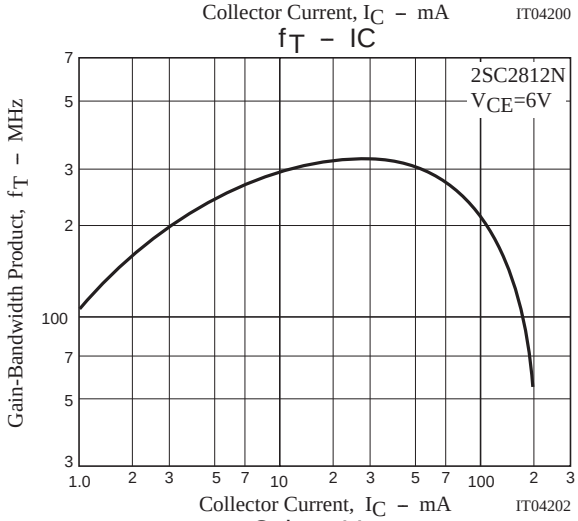


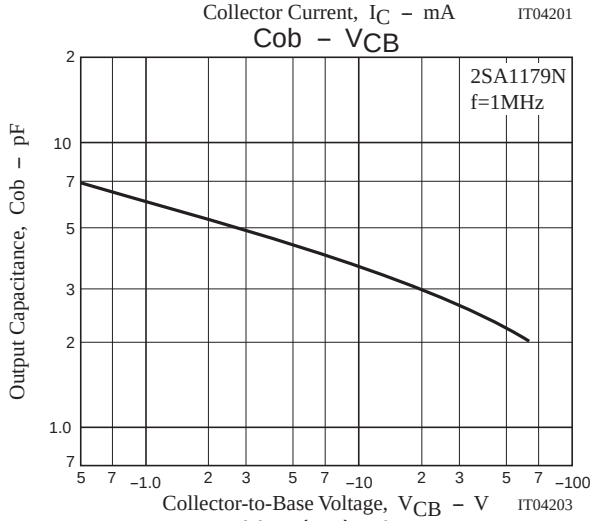


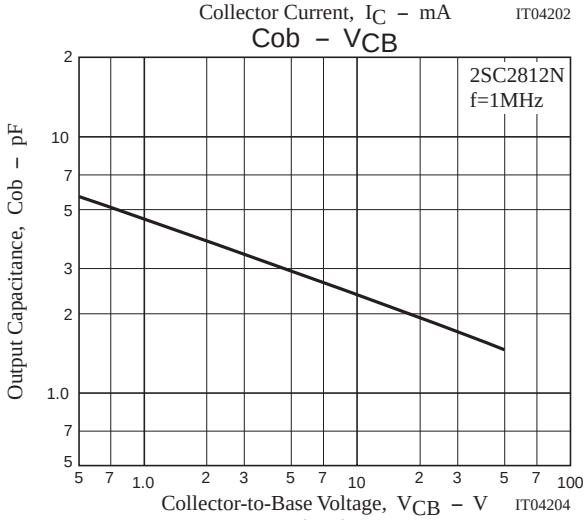

hFE – IC
2SA1179N
VCE= –6V
Ta=75°C
25°C
–25°C
DC Current Gain, hFE
Collector Current, IC – mA
IT04199

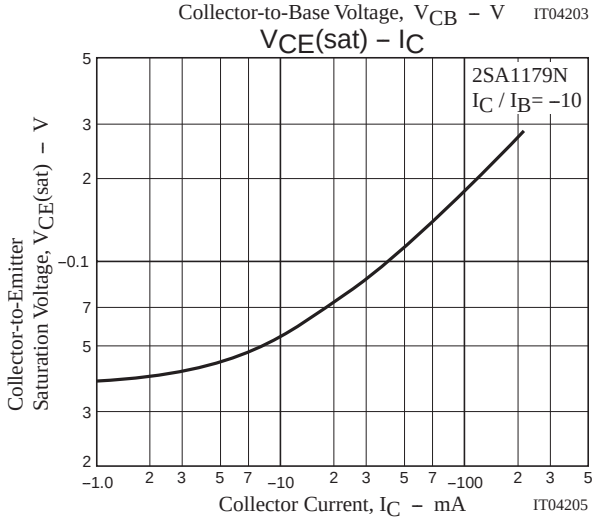

hFE – IC
2SC2812N
VCE=6V
Ta=75°C
25°C
–25°C
DC Current Gain, hFE
Collector Current, IC – mA
IT04200

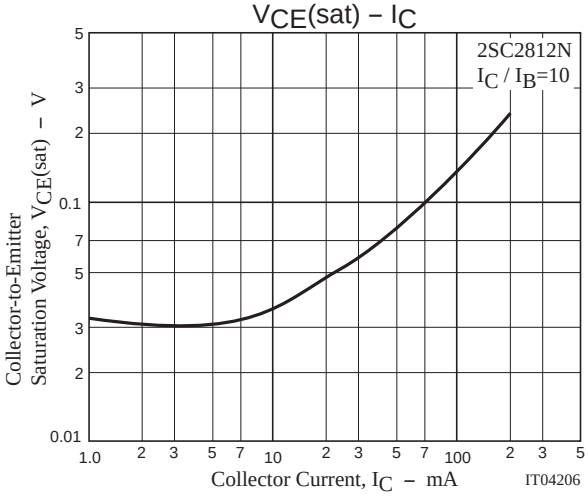

fT – IC
2SA1179N
VCE= –6V
Gain-Bandwidth Product, fT – MHz
Collector Current, IC – mA
IT04201


fT – IC
2SC2812N
VCE=6V
Gain-Bandwidth Product, fT – MHz
Collector Current, IC – mA
IT04202


Cob – VCB
2SA1179N
f=1MHz
Output Capacitance, Cob – pF
Collector-to-Base Voltage, VCB – V
IT04203


Cob – VCB
2SC2812N
f=1MHz
Output Capacitance, Cob – pF
Collector-to-Base Voltage, VCB – V
IT04204


VCE(sat) – IC
2SA1179N
IC / IB= –10
Collector-to-Emitter Saturation Voltage, VCE(sat) – V
Collector Current, IC – mA
IT04205


VCE(sat) – IC
2SC2812N
IC / IB=10
Collector-to-Emitter Saturation Voltage, VCE(sat) – V
Collector Current, IC – mA
IT04206