



SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

2SA1179N/2SC2812N — PNP / NPN Epitaxial Planar Silicon Transistor Low-Frequency General-Purpose Amp Applications

Features

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

Specifications () : 2SA1179N

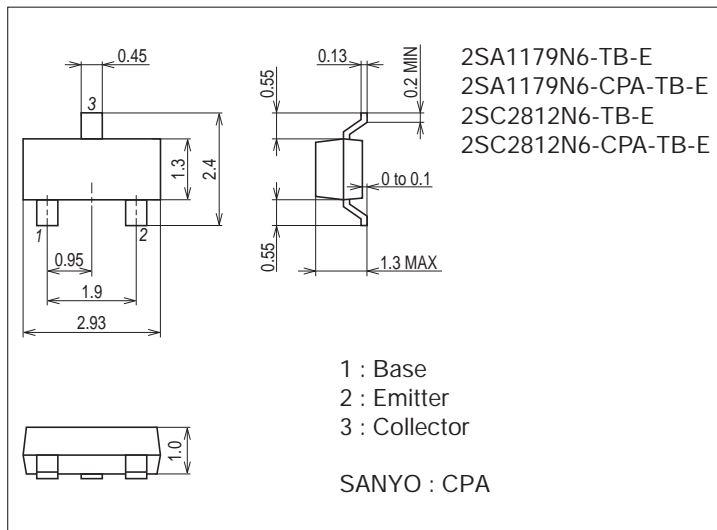
Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	VCBO		(-)55	V
Collector-to-Emitter Voltage	VCEO		(-)50	V
Emitter-to-Base Voltage	VEBO		(-)5	V
Collector Current	IC		(-)150	mA
Collector Current (Pulse)	ICP		(-)300	mA
Base Current	IB		(-)30	mA
Collector Dissipation	PC		200	mW
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Package Dimensions

unit : mm (typ)

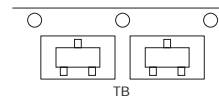
7053-001



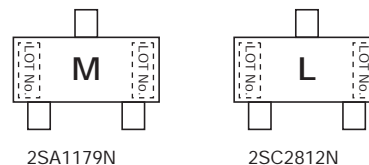
Product & Package Information

- Package : CPA
- JEITA, JEDEC : SC-59, TO-236, SOT-23, TO-236AB
- Minimum Packing Quantity : 3,000 pcs./reel

Packing Type: TB



Marking



2SA1179N/2SC2812N

Electrical Characteristics at Ta=25°C

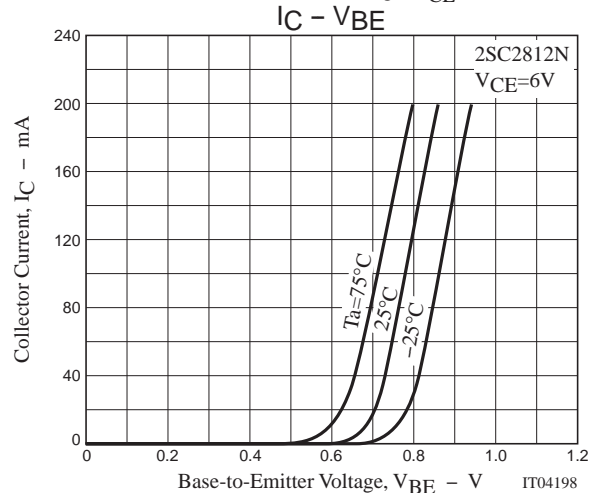
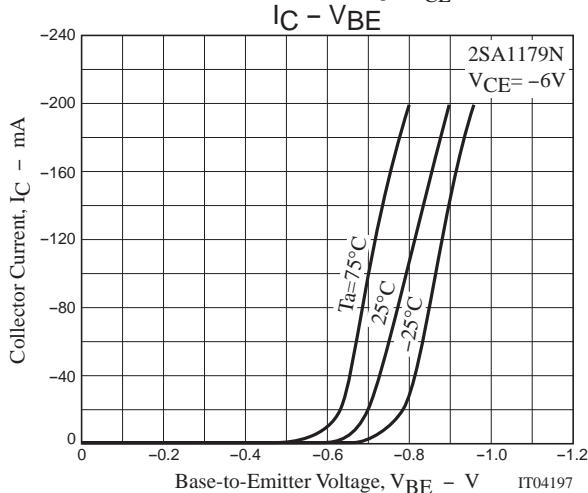
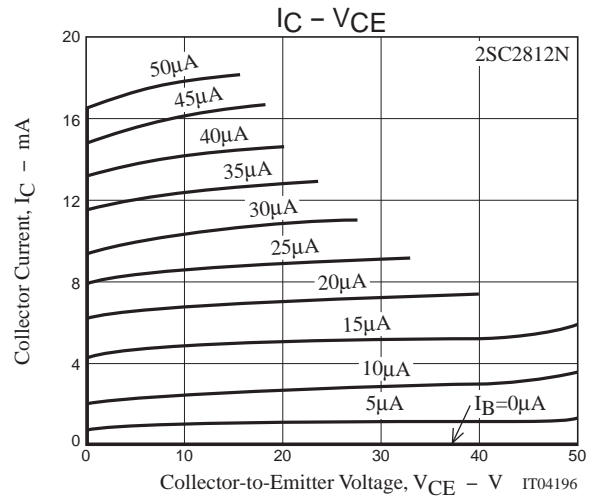
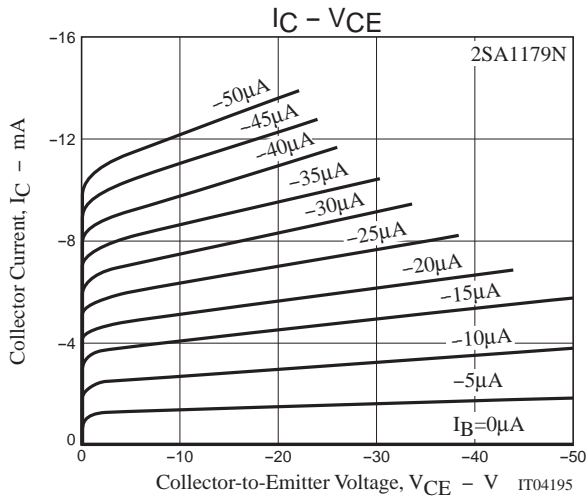
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB}=(-)35V, I_E=0A$			(-)0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=(-)4V, I_C=0A$			(-)0.1	μA
DC Current Gain	h_{FE}	$V_{CE}=(-)6V, I_C=(-)1mA$	200		400	
Gain-Bandwidth Product	f_T	2SC2812N : $V_{CE}=6V, I_C=1mA$		100		MHz
		2SA1179N : $V_{CE}=-6V, I_C=-10mA$		(180)		MHz
Output Capacitance	C_{ob}	$V_{CB}=(-)6V, f=1MHz$		(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	$V_{(BR)CBO}$	$I_C=(-)10\mu A, I_E=0A$	(-)55			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-)1mA, R_{BE}=\infty$	(-)50			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=(-)10\mu A, I_C=0A$	(-)5			V

* : The 2SA1179N / 2SC2812N are classified by 1mA h_{FE} as follows :

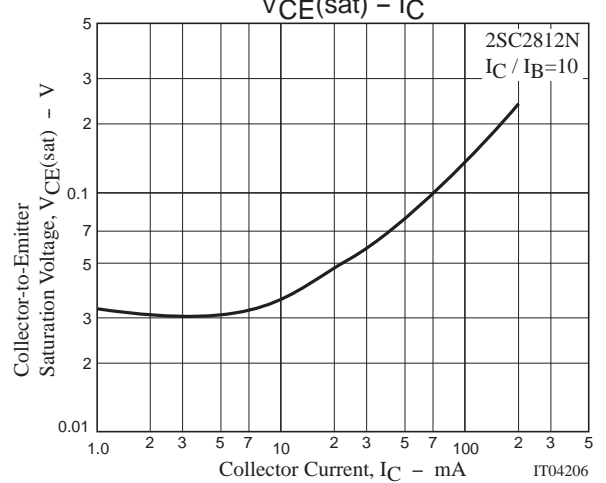
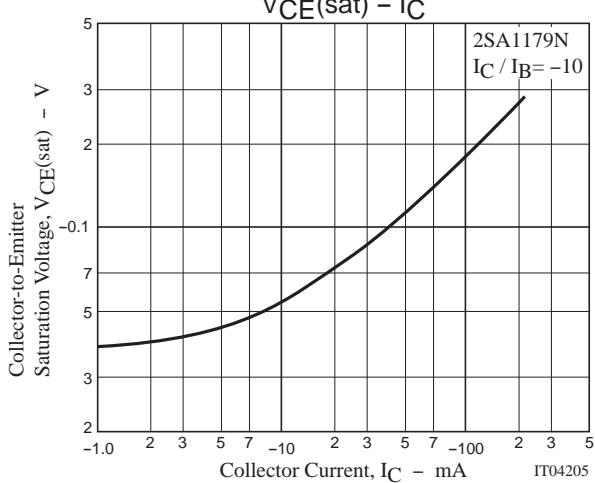
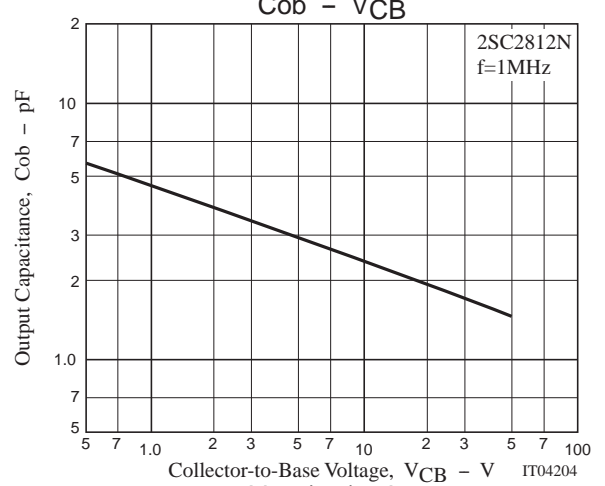
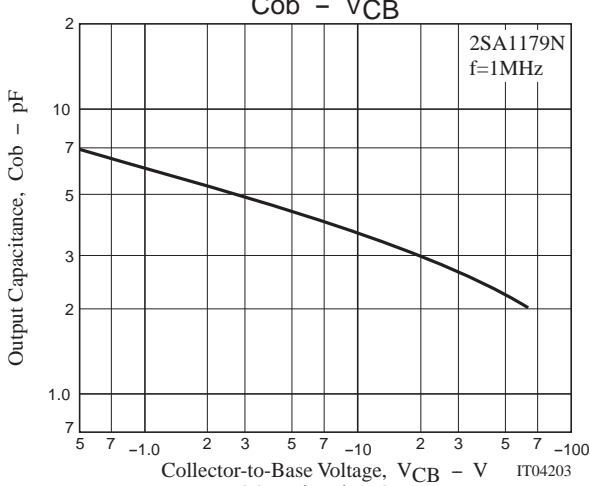
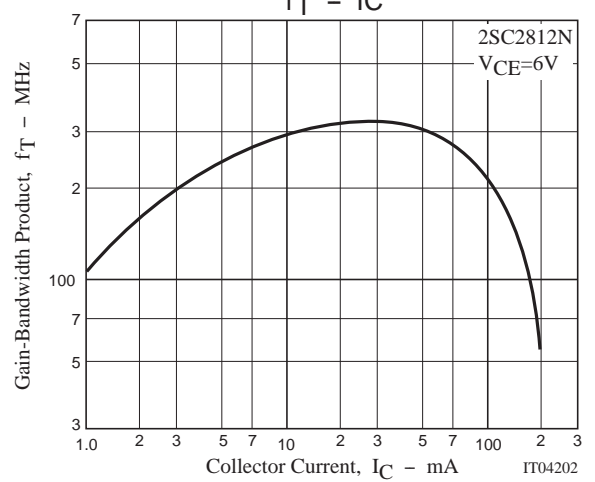
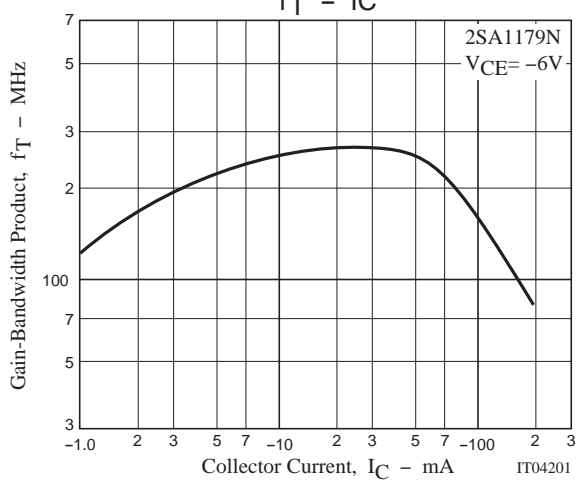
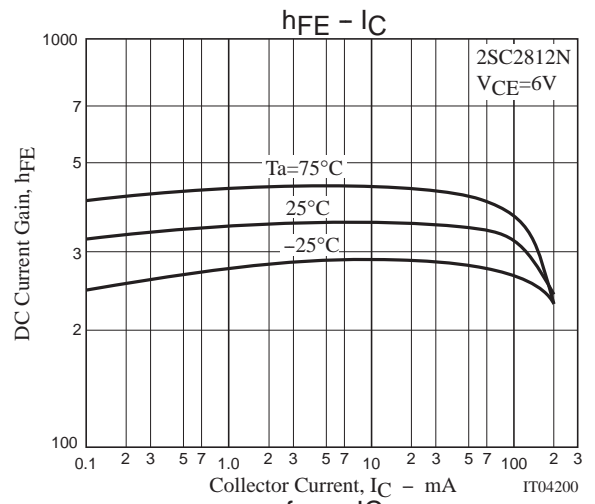
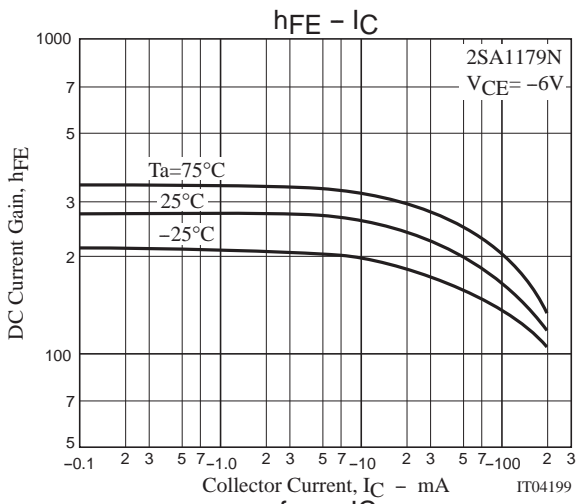
Rank	6
h_{FE}	200 to 400

Ordering Information

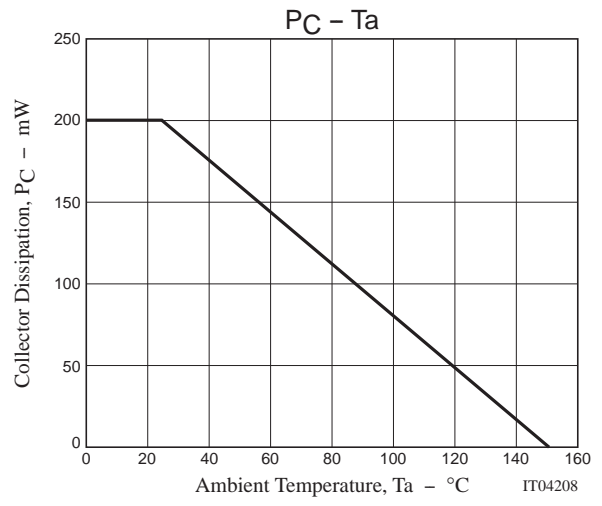
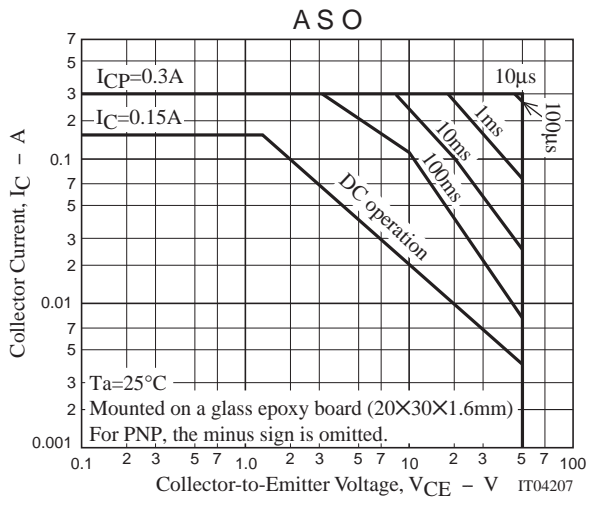
Device	Package	Shipping	memo
2SA1179N6-TB-E	CPA	3,000pcs./reel	Pb Free
2SA1179N6-CPA-TB-E	CPA	3,000pcs./reel	
2SC2812N6-TB-E	CPA	3,000pcs./reel	
2SC2812N6-CPA-TB-E	CPA	3,000pcs./reel	



2SA1179N/2SC2812N



2SA1179N/2SC2812N



2SA1179N/2SC2812N

Embossed Taping Specification

2SA1179N6-TB-E, 2SA1179N6-CPA-TB-E, 2SC2812N6-TB-E, 2SC2812N6-CPA-TB-E

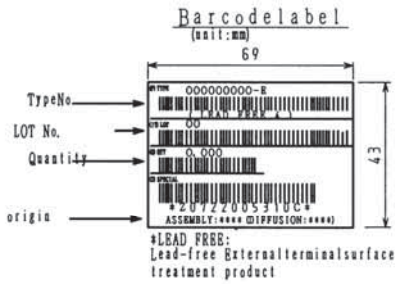
1. Packing format

Storage package Outline name	Carriertape Typenumber	Maximum Number of Devices contained (PCS)			Packing format	
		Reel	Innerbox	Outerbox	Innerbox BOX (C-1)	Outerbox BOX (A-7)
CPA	CPA	3,000	15,000	90,000	5 reels contained Dimensions: mm (external) 183×72×185	6 innerboxes contained Dimensions: mm (external) 440×195×210

Packing method



Barcode label



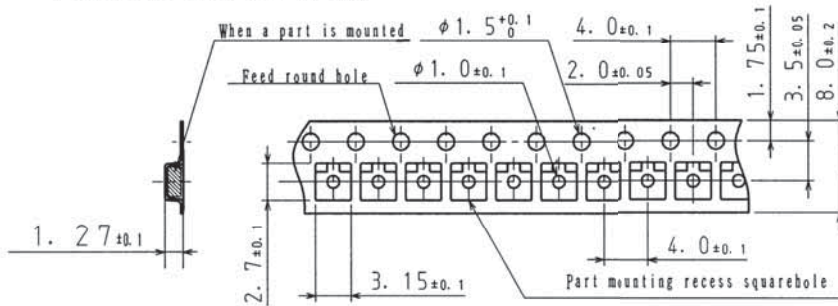
Shipping Label

It is a label at the time of factory shipments
The form of a label may change in physical
distribution process

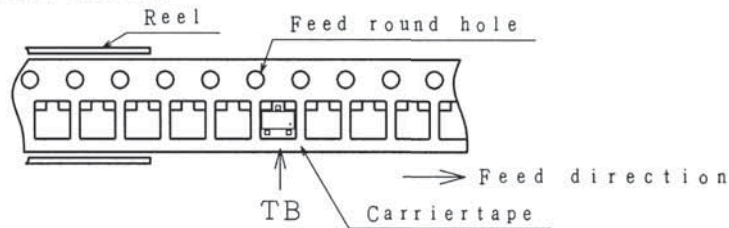


2. Taping structure

2-1. Carrier tape size (unit: mm)



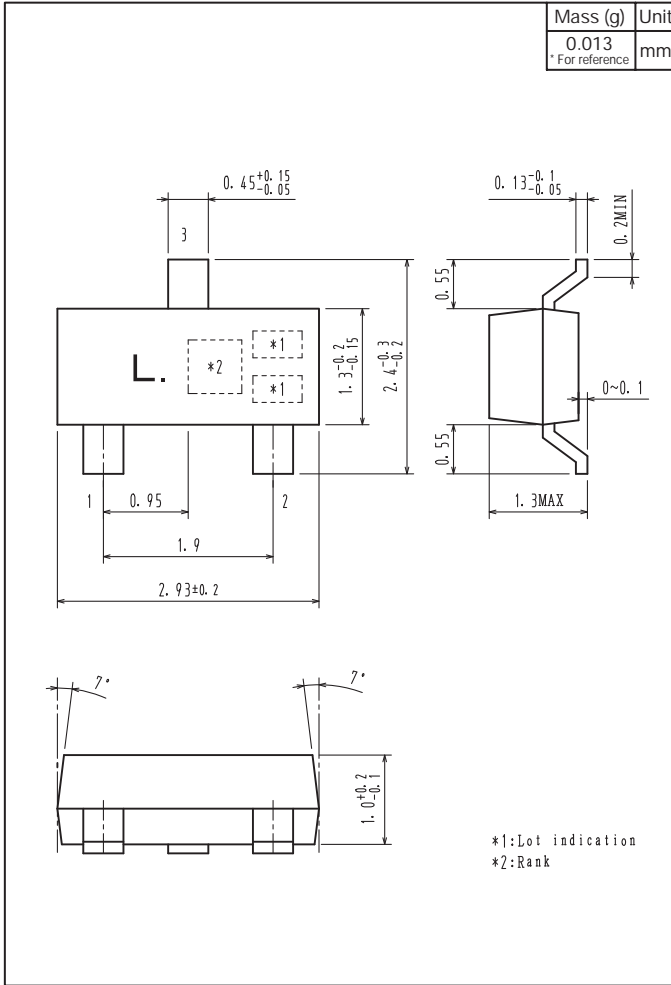
2-2. Parts placement direction



2SA1179N/2SC2812N

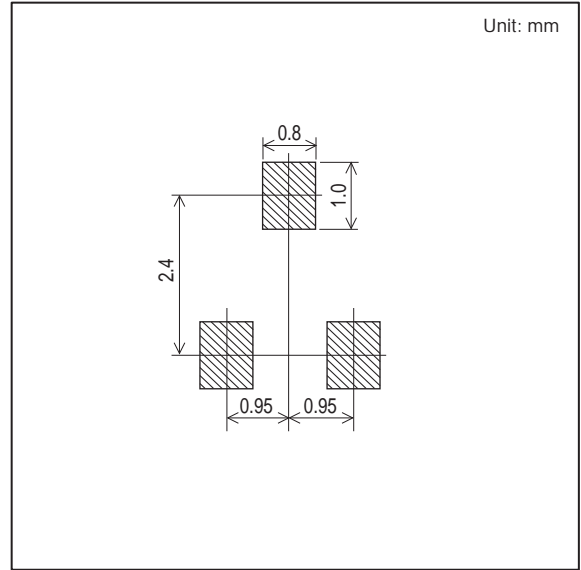
Outline Drawing

2SA1179N6-TB-E, 2SA1179N6-CPA-TB-E, 2SC2812N6-TB-E, 2SC2812N6-CPA-TB-E



Land Pattern Example

Unit: mm



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