



# 2SA1179N/2SC2812N

## Bipolar Transistor

(-) $50\text{V}$ , (-) $150\text{mA}$ , Low  $V_{CE(sat)}$ , (PNP)NPN Single CPA

ON Semiconductor®

<http://onsemi.com>

### Features

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

### Specifications ( ) : 2SA1179N

Absolute Maximum Ratings at  $T_a=25^\circ\text{C}$

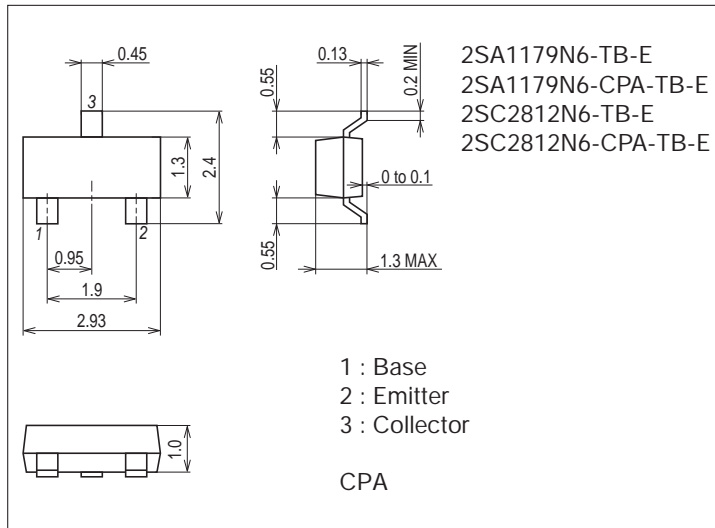
Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	$V_{CBO}$		(-) $55$	V
Collector-to-Emitter Voltage	$V_{CEO}$		(-) $50$	V
Emitter-to-Base Voltage	$V_{EBO}$		(-) $5$	V
Collector Current	$I_C$		(-) $150$	mA
Collector Current (Pulse)	$I_{CP}$		(-) $300$	mA
Base Current	$I_B$		(-) $30$	mA
Collector Dissipation	$P_C$		$200$	mW
Junction Temperature	$T_J$		$150$	$^\circ\text{C}$
Storage Temperature	$T_{stg}$		$-55$ to $+150$	$^\circ\text{C}$

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

### Package Dimensions

unit : mm (typ)

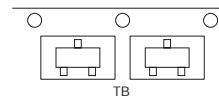
7053-001



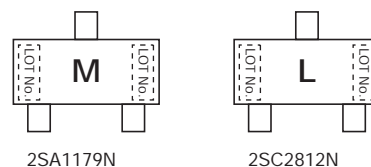
### Product & Package Information

- 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

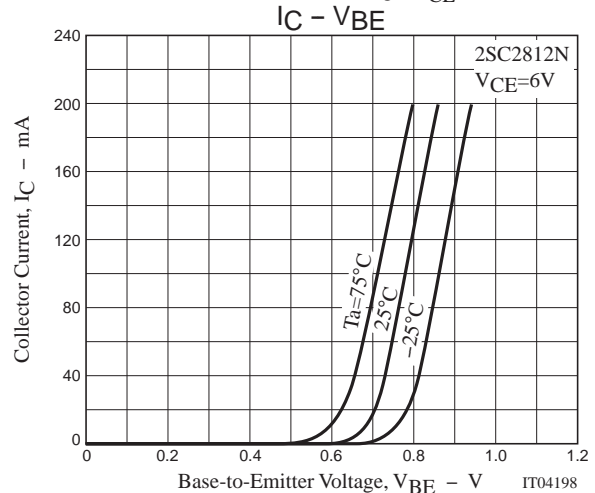
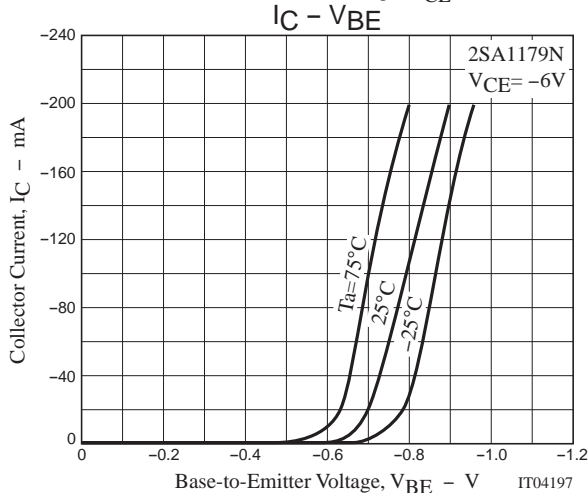
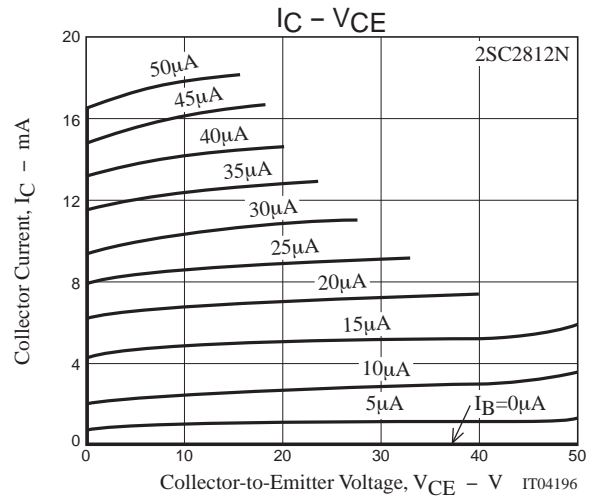
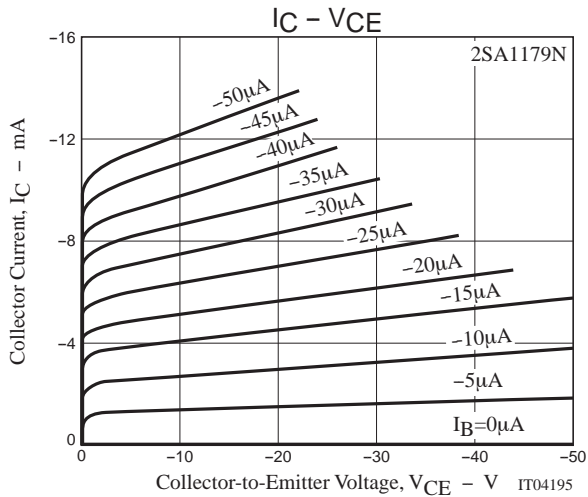
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	ICBO	V <sub>CB</sub> =(-)35V, I <sub>E</sub> =0A			(-)0.1	μA
Emitter Cutoff Current	I <sub>EBO</sub>	V <sub>EB</sub> =(-)4V, I <sub>C</sub> =0A			(-)0.1	μA
DC Current Gain	h <sub>FE</sub>	V <sub>CE</sub> =(-)6V, I <sub>C</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(BR)CBO	I <sub>C</sub> =(-)10μA, I <sub>E</sub> =0A	(-)55			V
Collector-to-Emitter Breakdown Voltage	V(BR)CEO	I <sub>C</sub> =(-)1mA, R <sub>BE</sub> =∞	(-)50			V
Emitter-to-Base Breakdown Voltage	V(BR)EBO	I <sub>E</sub> =(-)10μA, I <sub>C</sub> =0A	(-)5			V

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

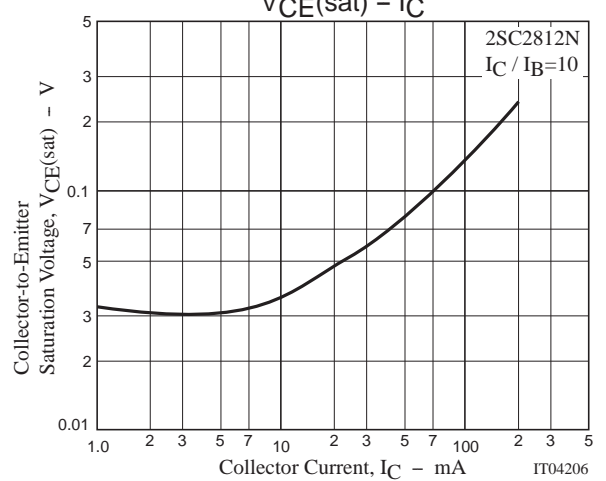
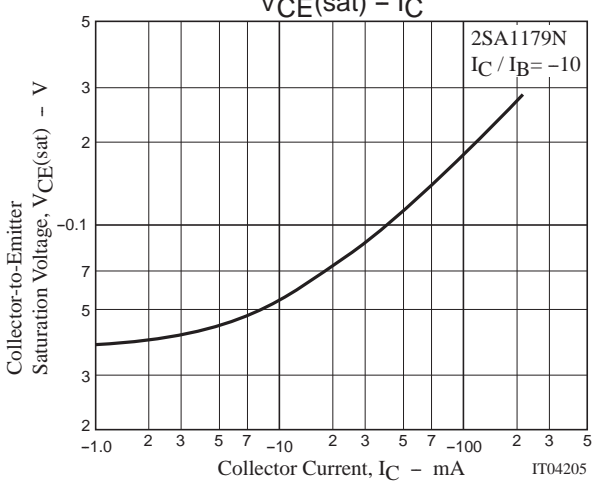
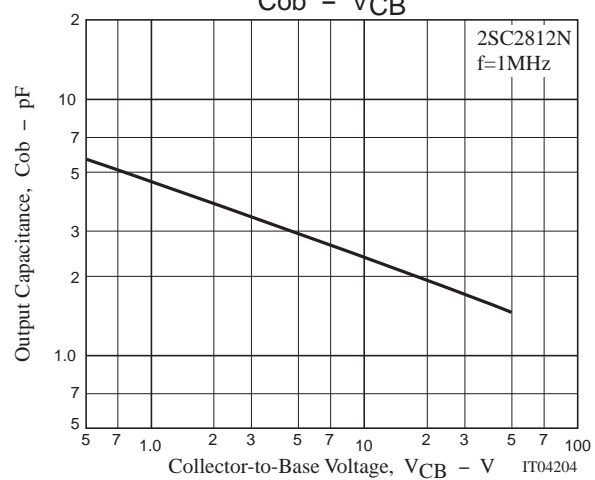
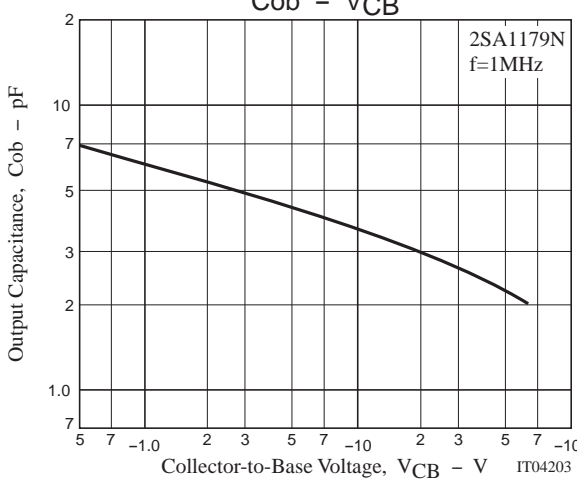
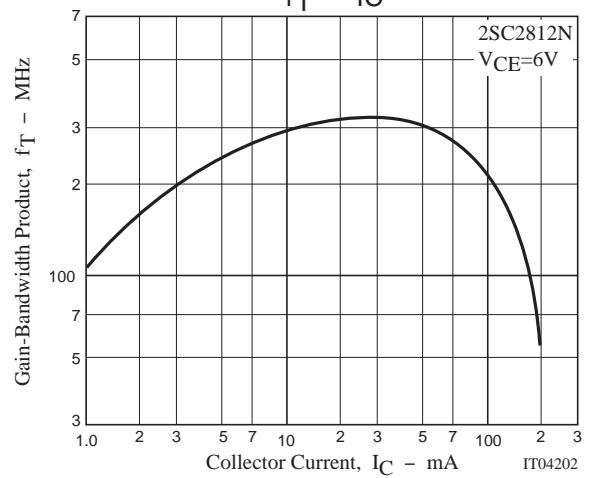
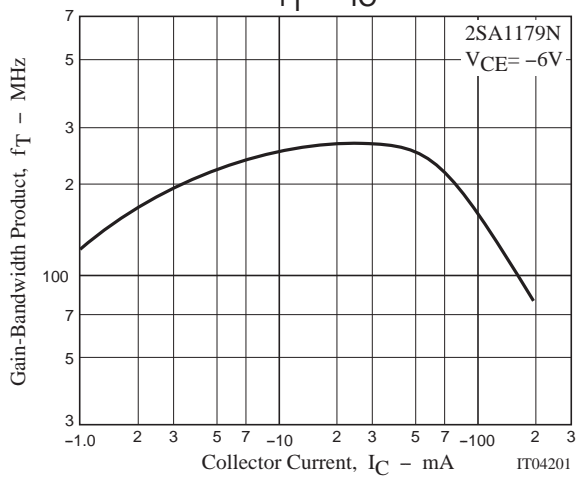
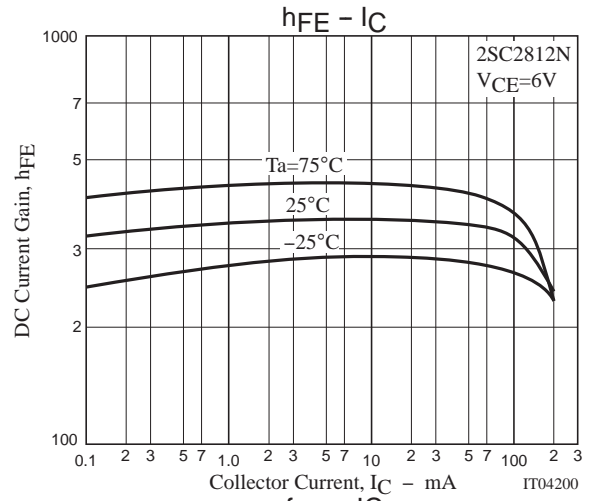
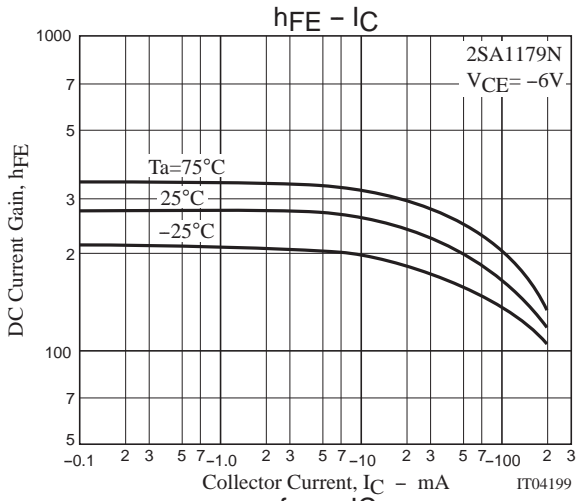
Rank	6
h <sub>FE</sub>	200 to 400

## Ordering Information

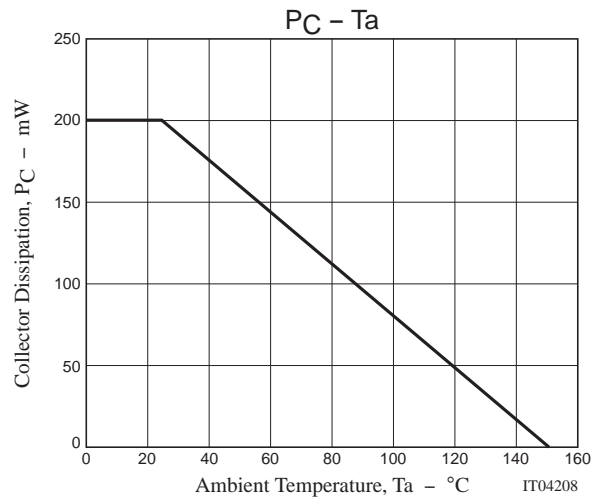
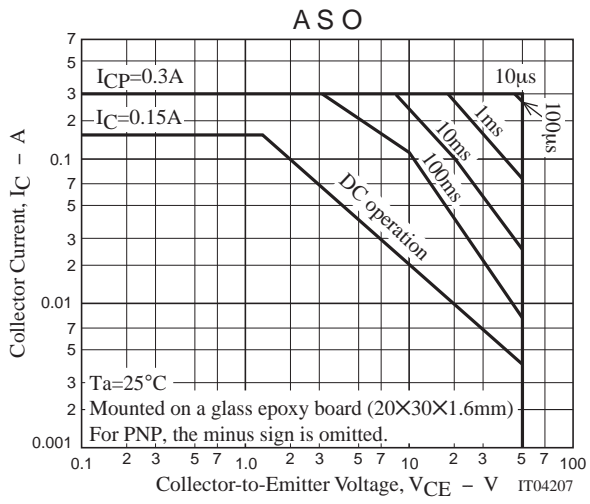
Device	Package	Shipping	memo
2SA1179N6-TB-E	CPA	3,000pcs./reel	Pb Free
2SA1179N6-CPA-TB-E	CPA	3,000pcs./reel	
2SC2812N6-TB-E	CPA	3,000pcs./reel	
2SC2812N6-CPA-TB-E	CPA	3,000pcs./reel	



2SA1179N / 2SC2812N



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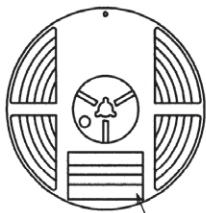
Embossed Taping Specification

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

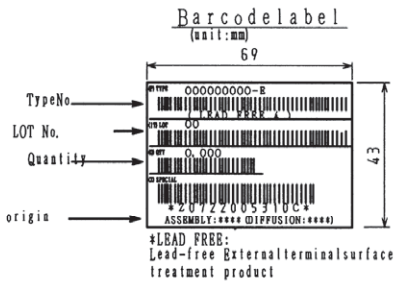
1. Packing format

Storage package Outline name	Carrier tape Typenumber	Maximum Number of Devices contained (PCS)			Packing format	
		Reel	Innerbox	Outerbox	Innerbox BOX (C-)	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



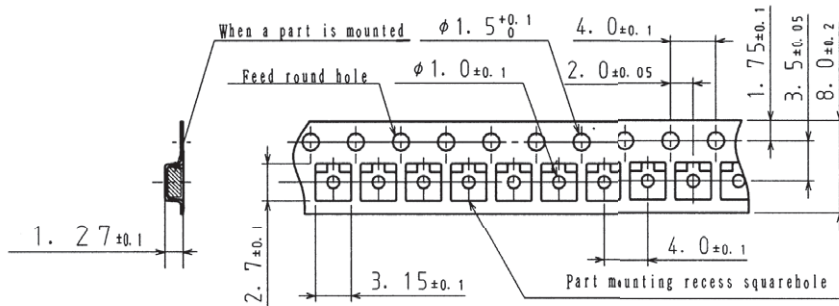
Shipping Label

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

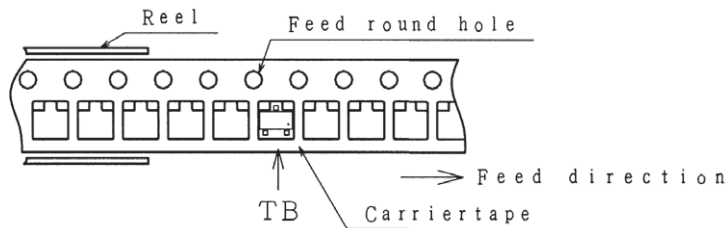


2. Taping structure

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



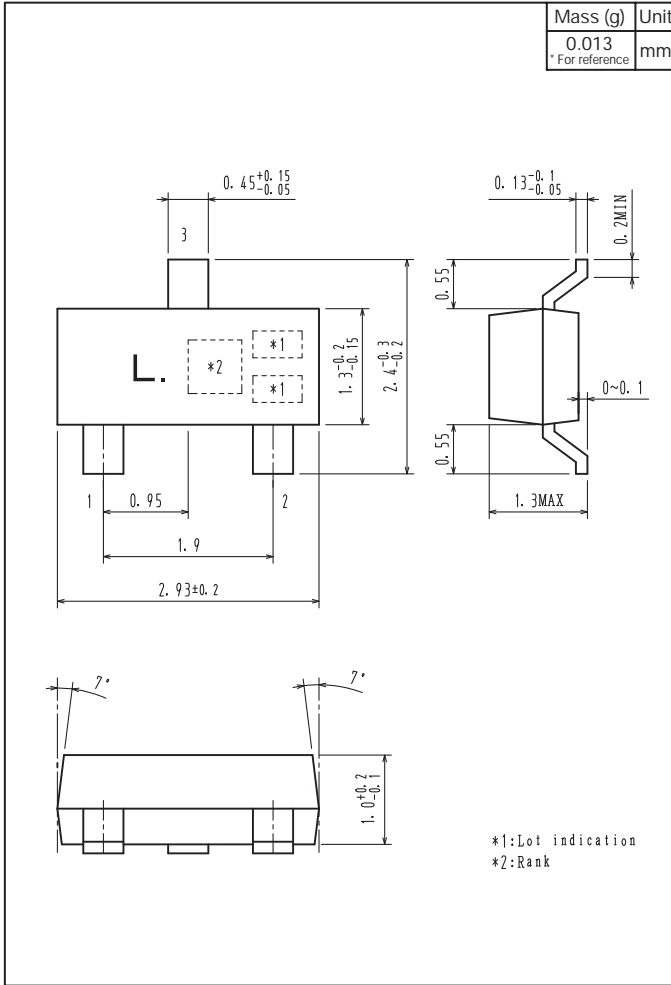
2-2. Parts placement direction



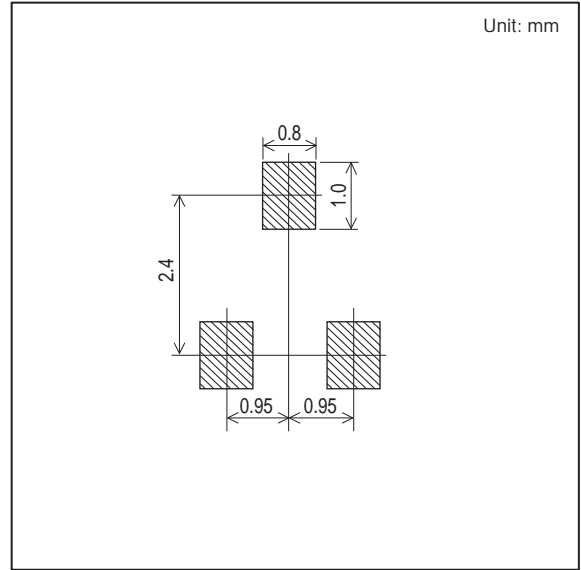
# 2SA1179N / 2SC2812N

## Outline Drawing

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



## Land Pattern Example



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