



SANYO Semiconductors

# DATA SHEET

An ON Semiconductor Company

## 2SA2126 — PNP Epitaxial Planar Silicon Transistor — DC / DC Converter Applications

### Applications

- DC / DC converter, relay drivers, lamp drivers, motor drivers

### Features

- Adoption of MBIT processes
- Low collector-to-emitter saturation voltage
- High current capacitance
- High-speed switching

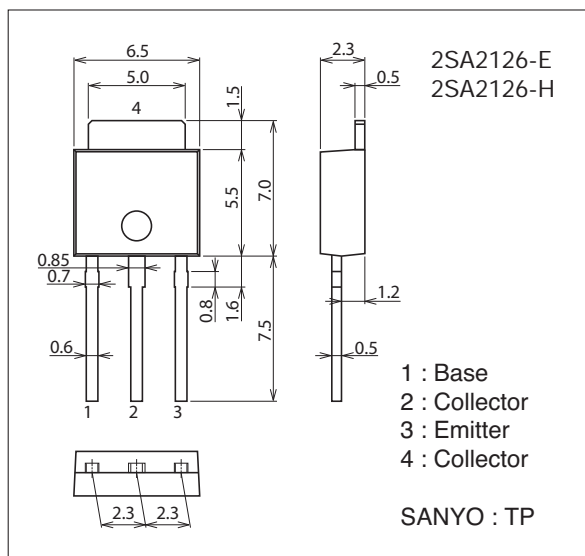
### Specifications

Absolute Maximum Ratings at Ta=25°C

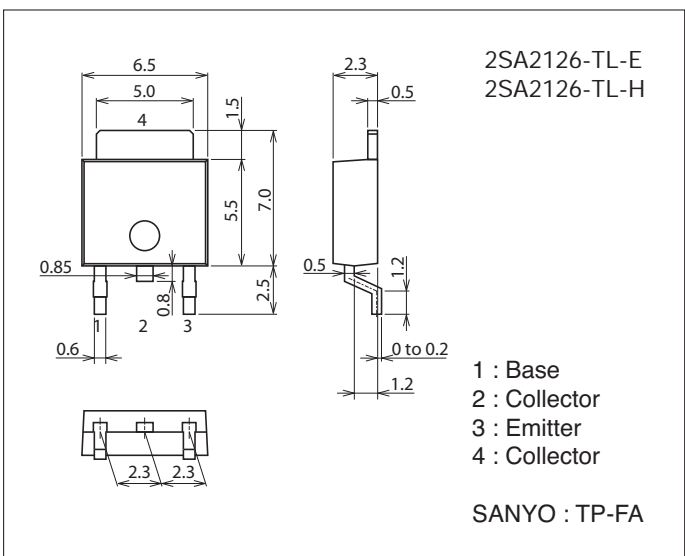
Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	VCBO		-50	V
Collector-to-Emitter Voltage	VCES		-50	V
Collector-to-Emitter Voltage	VCEO		-50	V
Emitter-to-Base Voltage	VEBO		-6	V
Collector Current	IC		-3	A
Collector Current (Pulse)	ICP		-6	A
Base Current	IB		-600	mA

Continued on next page.

### Package Dimensions unit : mm (typ)



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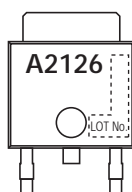


### Product & Package Information

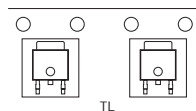
- Package : TP
- JEITA, JEDEC : SC-64, TO-251
- Minimum Packing Quantity : 500 pcs./bag

- Package : TP-FA
- JEITA, JEDEC : SC-63, TO-252
- Minimum Packing Quantity : 700 pcs./reel

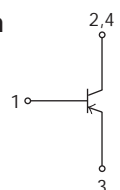
### Marking (TP, TP-FA)



### Packing Type (TP-FA) : TL



### Electrical Connection



## 2SA2126

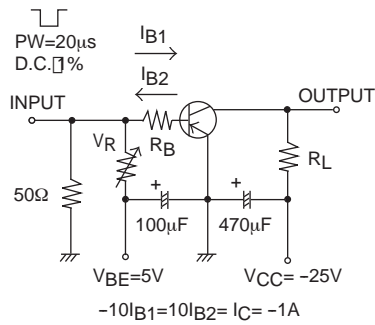
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Parameter	Symbol	Conditions	Ratings	Unit
Collector Dissipation	PC		0.8	W
		Tc=25°C	15	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

### Electrical Characteristics at Ta=25°C

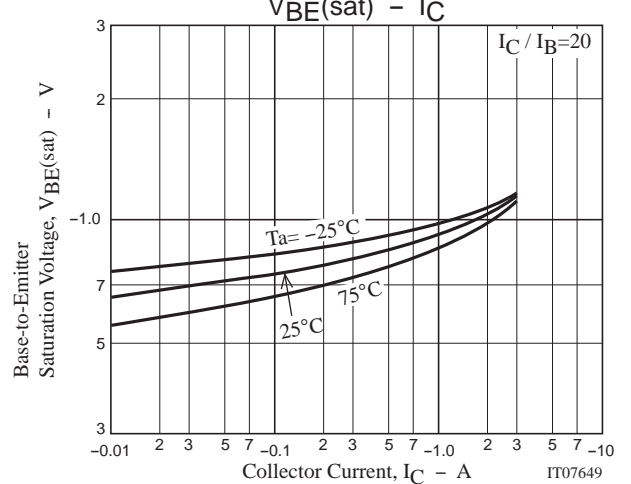
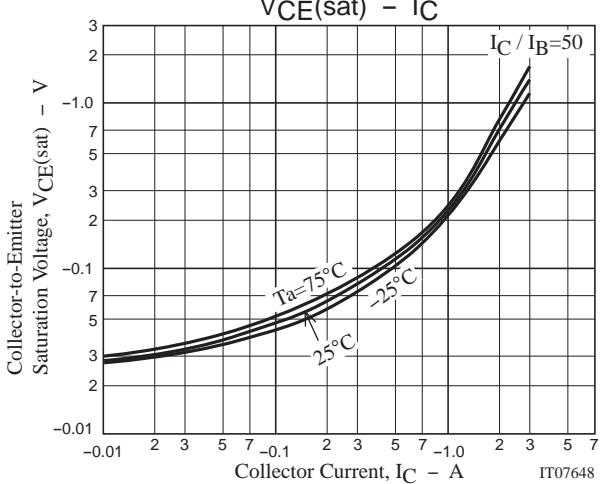
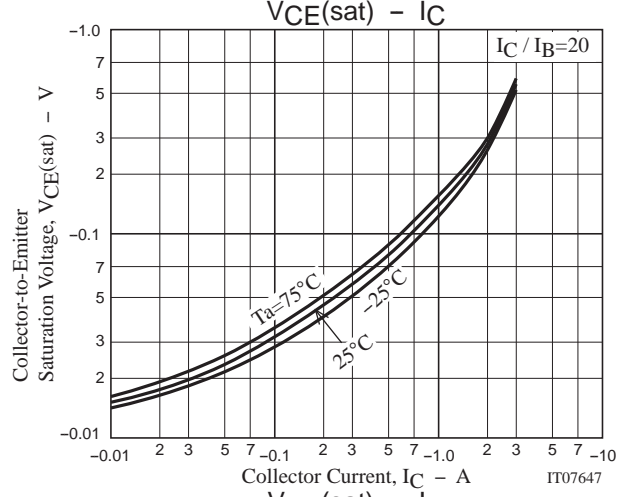
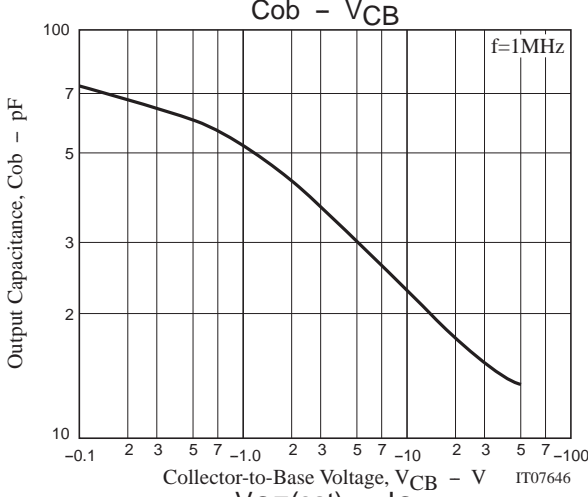
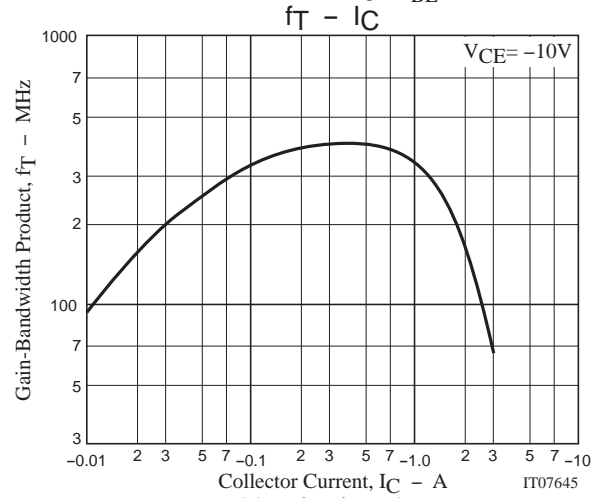
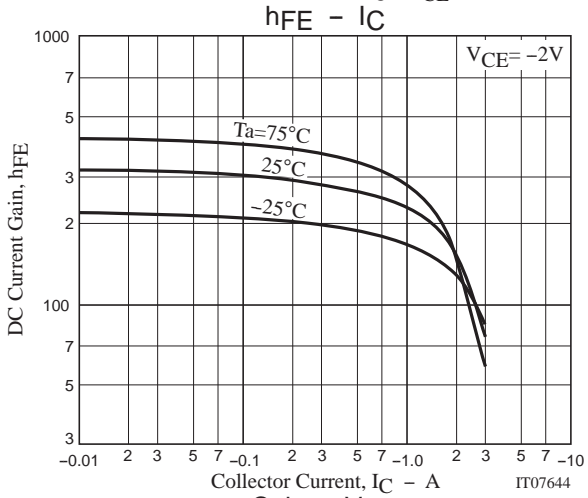
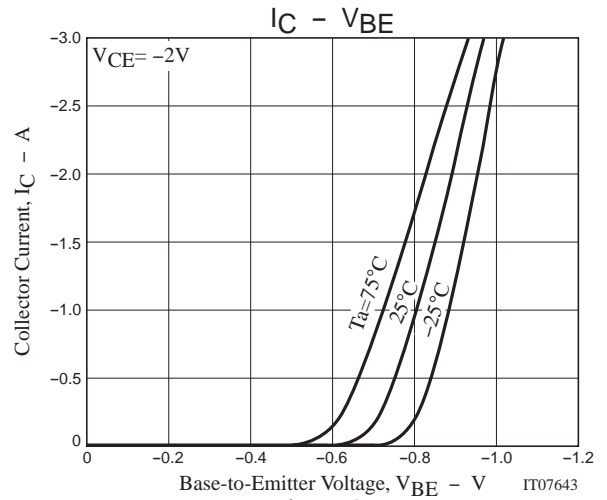
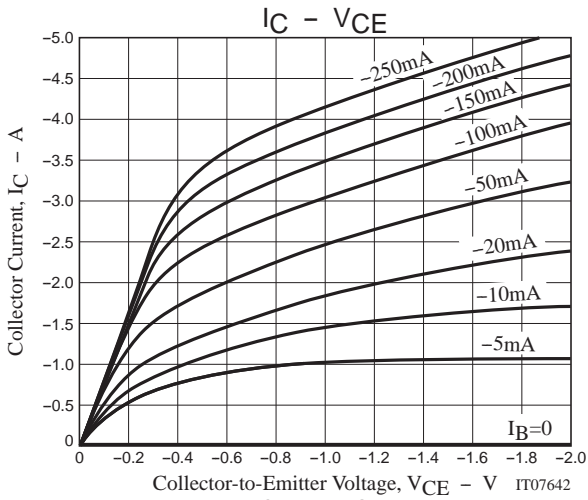
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	ICBO	V <sub>CB</sub> = -40V, I <sub>E</sub> = 0A			-1	μA
Emitter Cutoff Current	IEBO	V <sub>EB</sub> = -4V, I <sub>C</sub> = 0A			-1	μA
DC Current Gain	h <sub>FE</sub>	V <sub>CE</sub> = -2V, I <sub>C</sub> = -100mA	200		560	
Gain-Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> = -10V, I <sub>C</sub> = -500mA		390		MHz
Output Capacitance	Cob	V <sub>CB</sub> = -10V, f = 1MHz		24		pF
Collector-to-Emitter Saturation Voltage	V <sub>CE(sat)1</sub>	I <sub>C</sub> = -1A, I <sub>B</sub> = -50mA		-135	-270	mV
	V <sub>CE(sat)2</sub>	I <sub>C</sub> = -2A, I <sub>B</sub> = -100mA		-260	-520	mV
Base-to-Emitter Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> = -2A, I <sub>B</sub> = -100mA		-0.96	-1.2	V
Collector-to-Base Breakdown Voltage	V(BR)CBO	I <sub>C</sub> = -10μA, I <sub>E</sub> = 0A	-50			V
Collector-to-Emitter Breakdown Voltage	V(BR)CES	I <sub>C</sub> = -100μA, R <sub>BE</sub> = 0	-50			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	-6			V
Turn-On Time	t <sub>on</sub>	See specified Test Circuit.		30		ns
Storage Time	t <sub>stg</sub>			230		ns
Fall Time	t <sub>f</sub>			18		ns

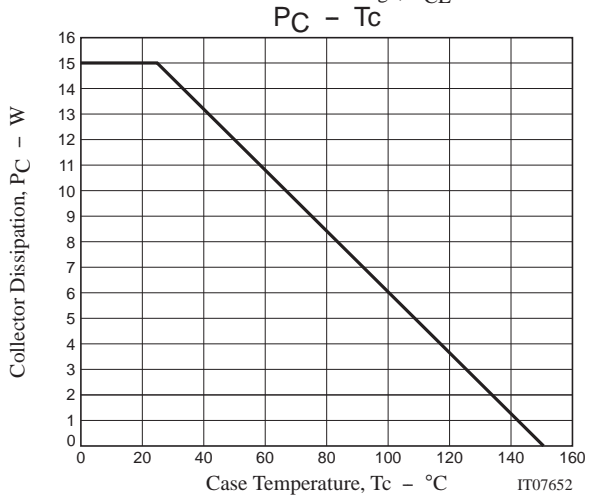
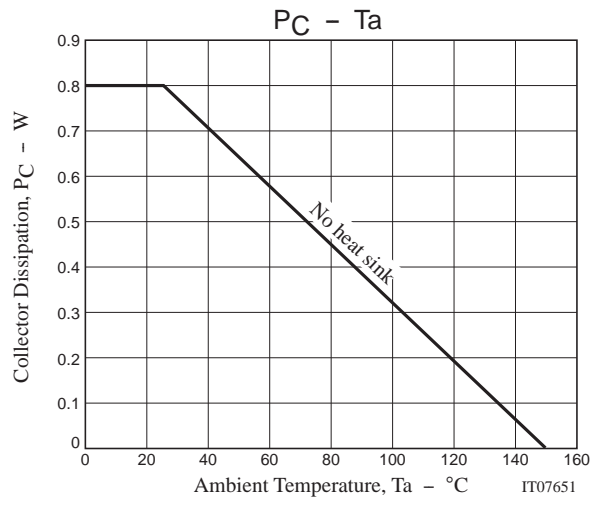
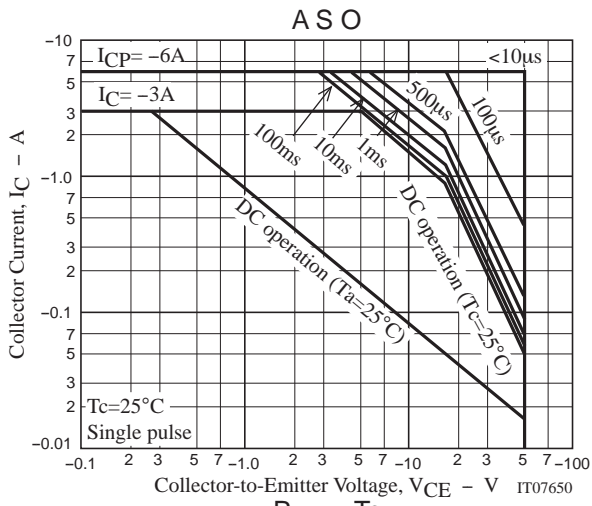
### Switching Time Test Circuit



### Ordering Information

Device	Package	Shipping	memo
2SA2126-E	TP	500pcs./bag	Pb Free
2SA2126-H	TP	500pcs./bag	Pb Free and Halogen Free
2SA2126-TL-E	TP-FA	700pcs./reel	Pb Free
2SA2126-TL-H	TP-FA	700pcs./reel	Pb Free and Halogen Free





Taping Specification

2SA2126-TL-E, 2SA2126-TL-H

Packing Format

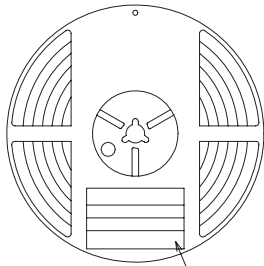
Package Name	Carrier Tape Type	Maximum Number of devices contained (pcs)			Packing format	
		Reel	Inner box	Outer box	Inner BOX (C-1)	Outer BOX (A-7)
TP-FA	TP	700	2,100	12,600	3 reels contained Dimensions:mm (external) 183×72×185	6 inner boxes contained Dimensions:mm (external) 440×195×210

Reel label, Inner box label  
(unit:mm)

Outer box label

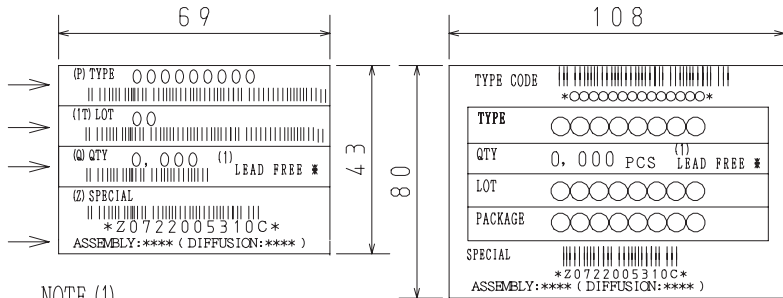
It is a label at the time of factory shipments.  
The form of a label may change in physical distribution process.

Packing method



Reel label

Type No.  
LOT No.  
Quantity  
Origin



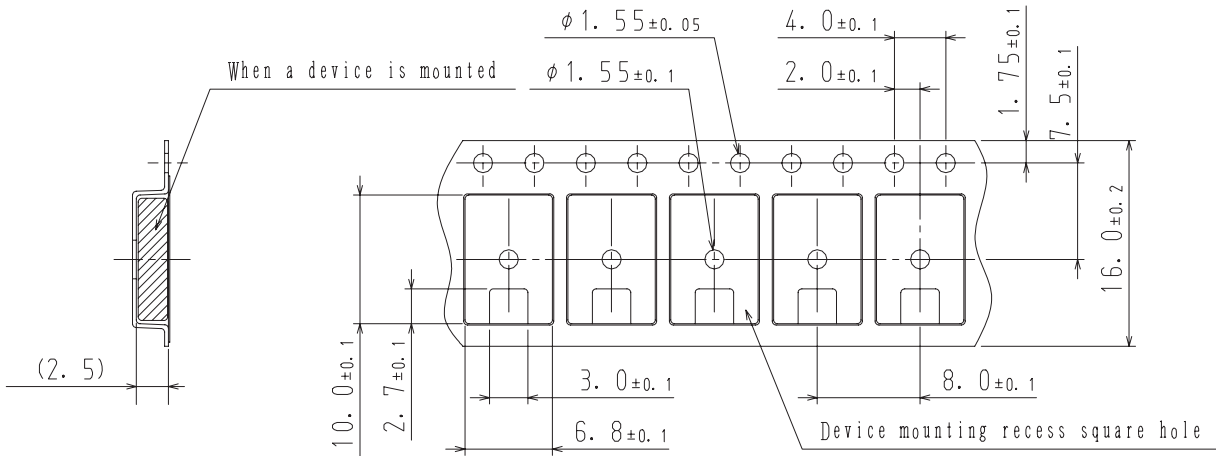
NOTE (1)

The LEAD FREE \* description shows that the surface treatment of the terminal is lead free.

Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

Taping configuration

1. Carrier tape size (unit:mm)



2. Device placement direction



Those with one electrode terminal on the feed hole side.....TL

# 2SA2126

## Outline Drawing

2SA2126-TL-E, 2SA2126-TL-H



## Land Pattern Example

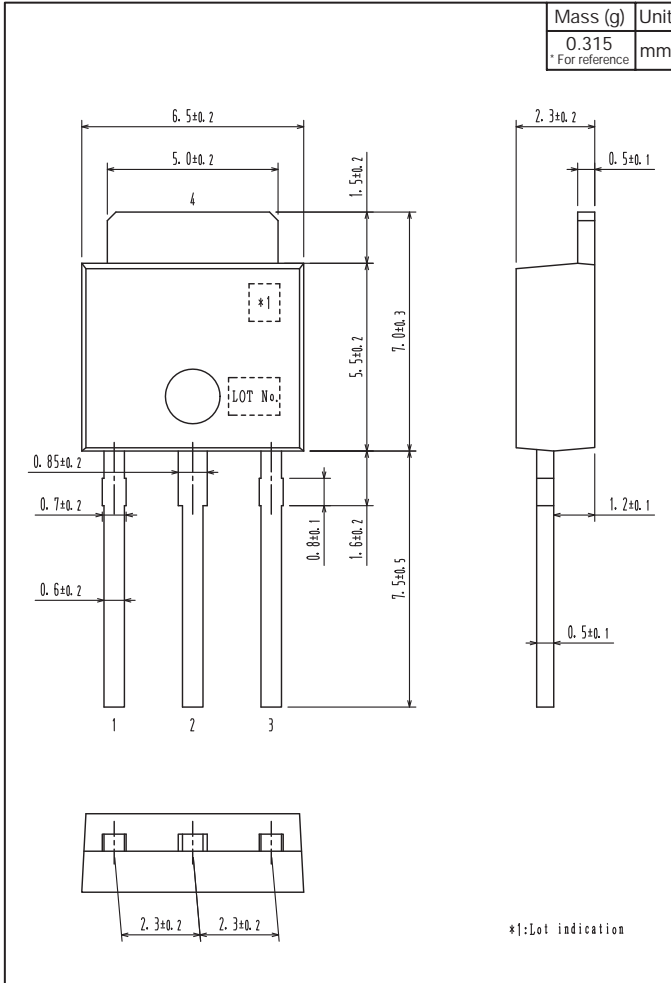




# 2SA2126

## Outline Drawing

2SA2126-E, 2SA2126-H





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