



SANYO Semiconductors

# DATA SHEET

An ON Semiconductor Company

## 2SC4134 — NPN Epitaxial Planar Silicon Transistor High-Voltage Switching Applications

### Applications

- Power supplies, relay drivers, lamp drivers

### Features

- Adoption FBET, MBIT processes
- Fast switching speed
- Small and slim package permitting 2SC4134-applied sets to be made more compact
- High breakdown voltage and large current capacity

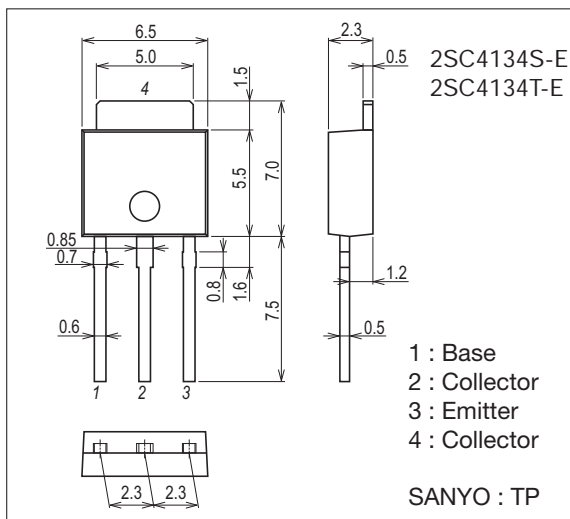
### Specifications

Absolute Maximum Ratings at Ta=25°C

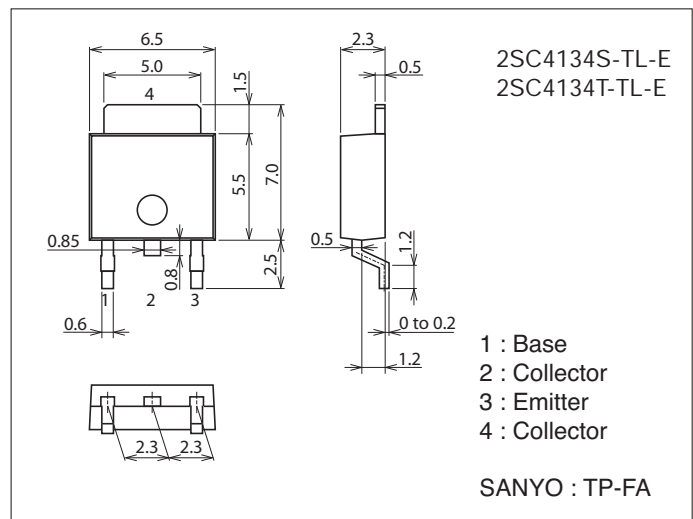
Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	VCBO		120	V
Collector-to-Emitter Voltage	VCEO		100	V
Emitter-to-Base Voltage	VEBO		6	V
Collector Current	IC		1	A
Collector Current (Pulse)	ICP		2	A

Continued on next page.

Package Dimensions unit : mm (typ)  
7518-003



Package Dimensions unit : mm (typ)  
7003-003

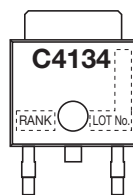


### Product & Package Information

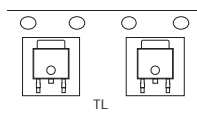
- Package : TP
- JEITA, JEDEC : SC-64, TO-251
- Minimum Packing Quantity : 500 pcs./bag

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

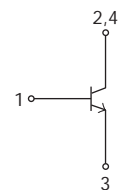
### Marking (TP, TP-FA)



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



### Electrical Connection



## 2SC4134

Continued from preceding page.

Parameter	Symbol	Conditions	Ratings	Unit
Collector Dissipation	PC		0.8	W
		T <sub>c</sub> =25°C	10	W
Junction Temperature	T <sub>j</sub>		150	°C
Storage Temperature	T <sub>stg</sub>		-55 to +150	°C

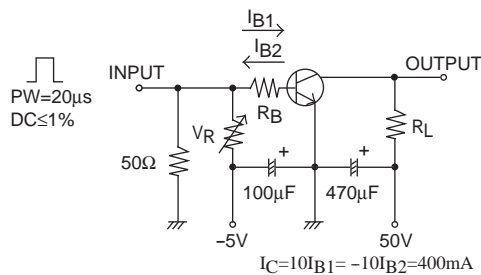
### Electrical Characteristics at T<sub>a</sub>=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I <sub>CBO</sub>	V <sub>CB</sub> =100V, I <sub>E</sub> =0A			100	nA
Emitter Cutoff Current	I <sub>EBO</sub>	V <sub>EB</sub> =4V, I <sub>C</sub> =0A			100	nA
DC Current Gain	h <sub>FE</sub>	V <sub>CE</sub> =5V, I <sub>C</sub> =100mA	100*		400*	
Gain-Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =100mA		120		MHz
Output Capacitance	C <sub>ob</sub>	V <sub>CB</sub> =10V, f=1MHz		8.5		pF
Collector-to-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =400mA, I <sub>B</sub> =40mA		0.1	0.4	V
Base-to-Emitter Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =400mA, I <sub>B</sub> =40mA		0.85	1.2	V
Collector-to-Base Breakdown Voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =10μA, I <sub>E</sub> =0A	120			V
Collector-to-Emitter Breakdown Voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> =1mA, R <sub>BE</sub> =∞	100			V
Emitter-to-Base Breakdown Voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =10μA, I <sub>C</sub> =0A	6			V
Turn-ON Time	t <sub>on</sub>	See specified Test Circuit.		80		ns
Storage Time	t <sub>stg</sub>			850		ns
Fall Time	t <sub>f</sub>			50		ns

\* : The 2SC4134 is classified by 100mA h<sub>FE</sub> as follows :

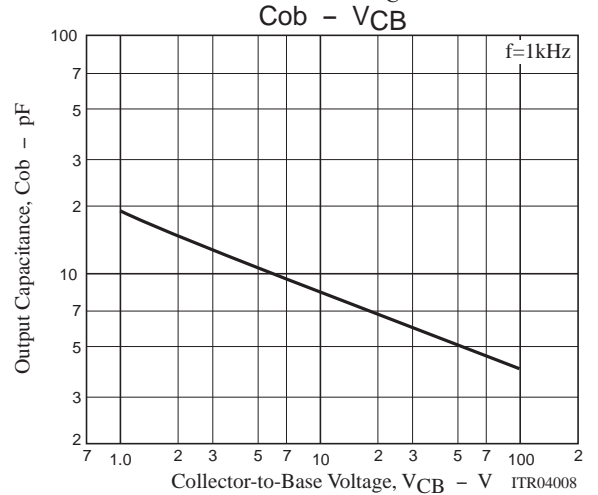
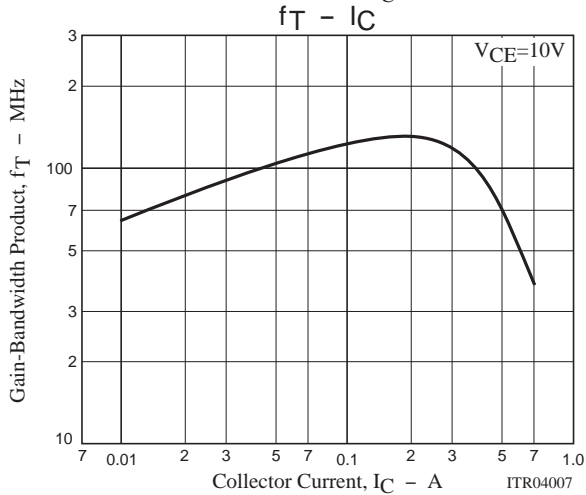
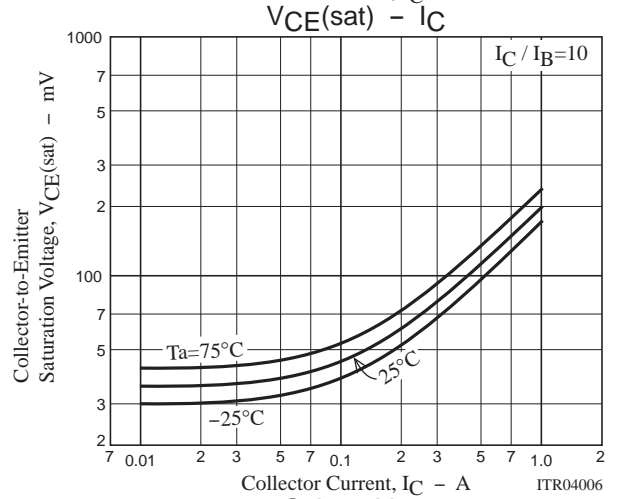
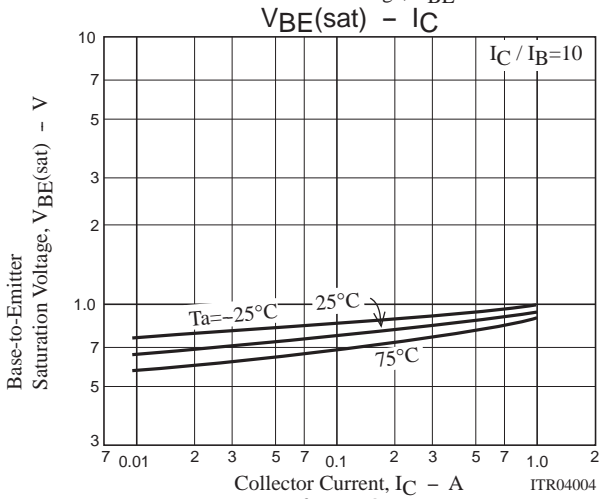
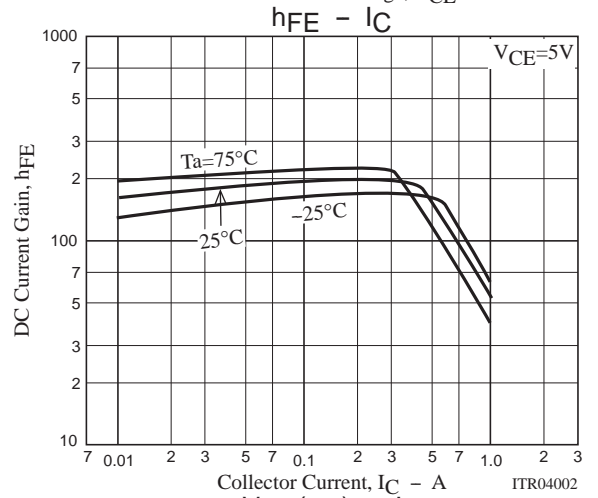
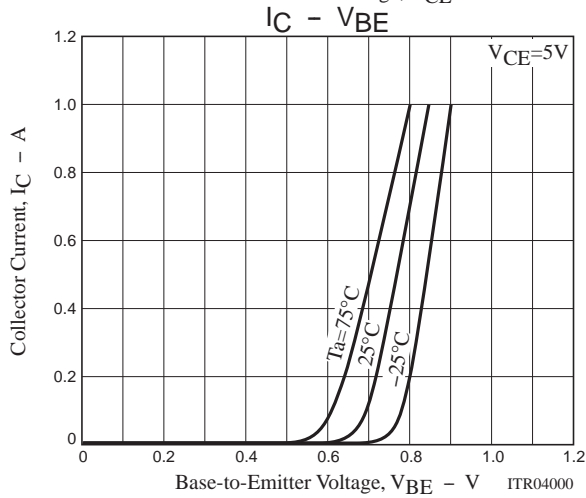
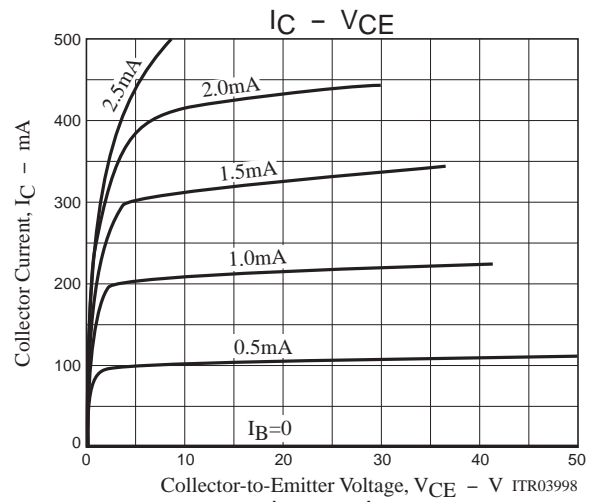
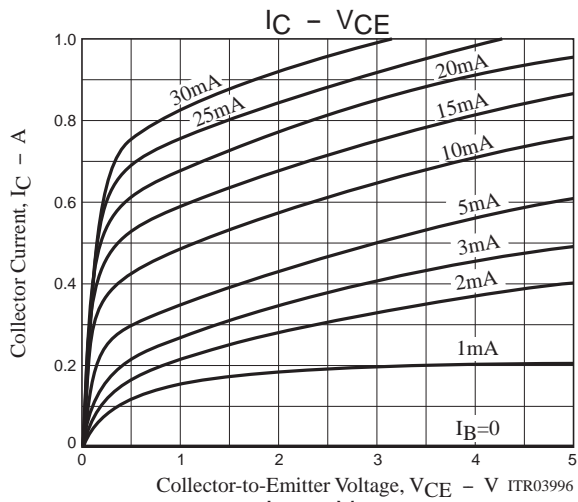
Rank	R	S	T
h <sub>FE</sub>	100 to 200	140 to 280	200 to 400

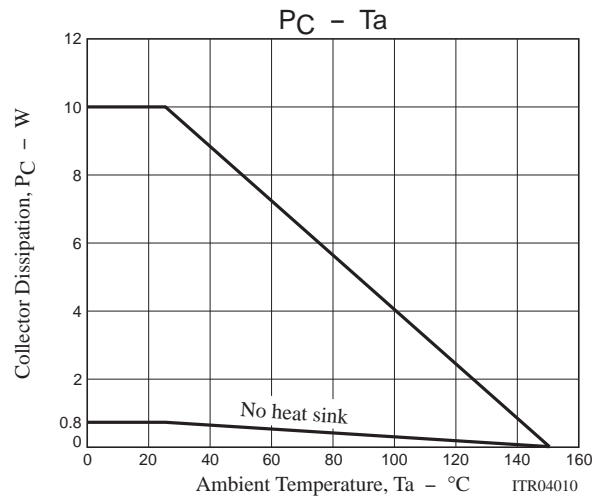
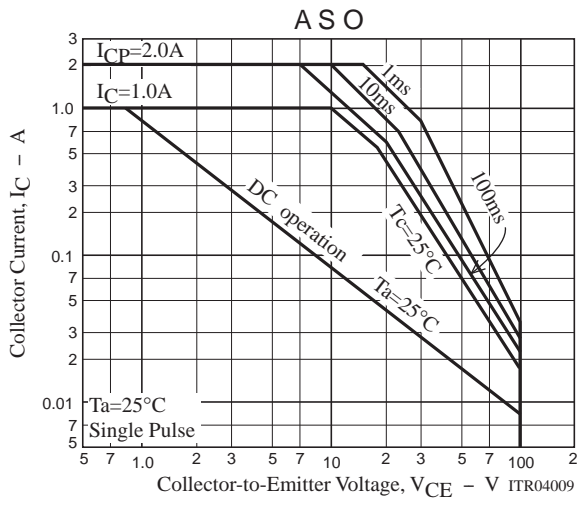
### Switching Time Test Circuit



### Ordering Information

Device	Package	Shipping	memo
2SC4134S-E	TP	500pcs./bag	Pb Free
2SC4134T-E	TP	500pcs./bag	
2SC4134S-TL-E	TP-FA	700pcs./reel	
2SC4134T-TL-E	TP-FA	700pcs./reel	





Taping Specification

2SC4134S-TL-E, 2SC4134T-TL-E

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



Type No.  
LOT No.  
Quantity  
Origin

Reel label



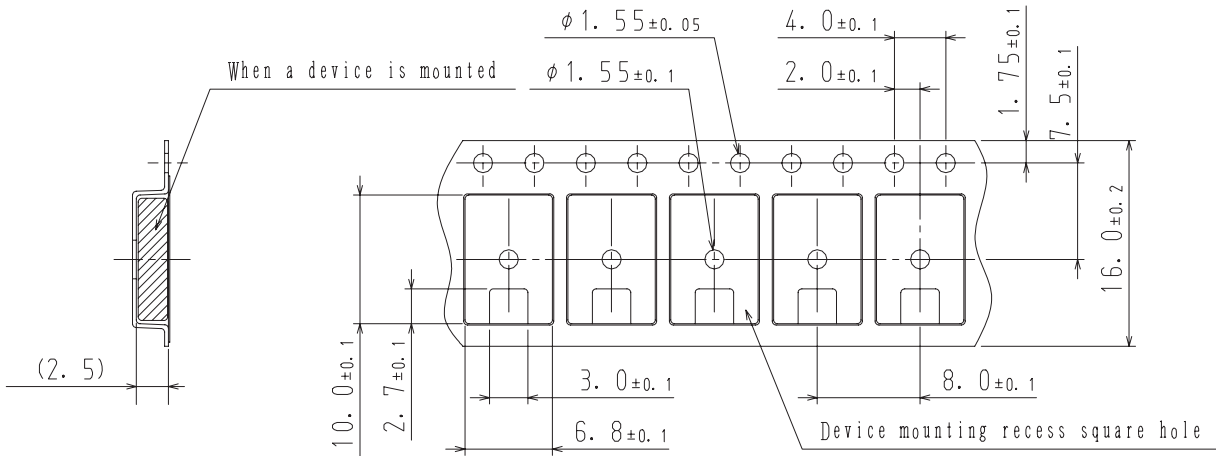
NOTE (1)

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

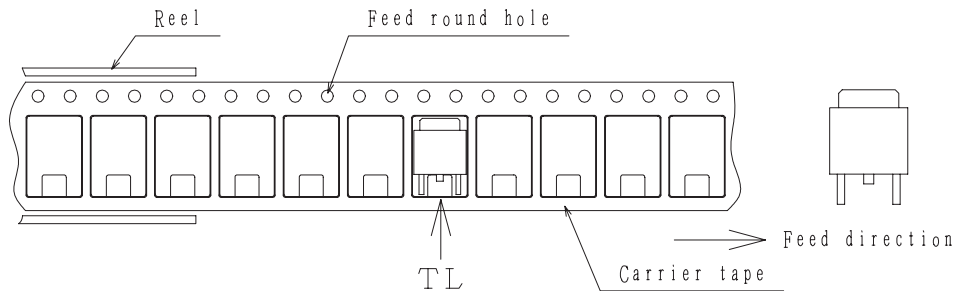
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

Taping configuration

1. Carrier tape size (unit:mm)



2. Device placement direction



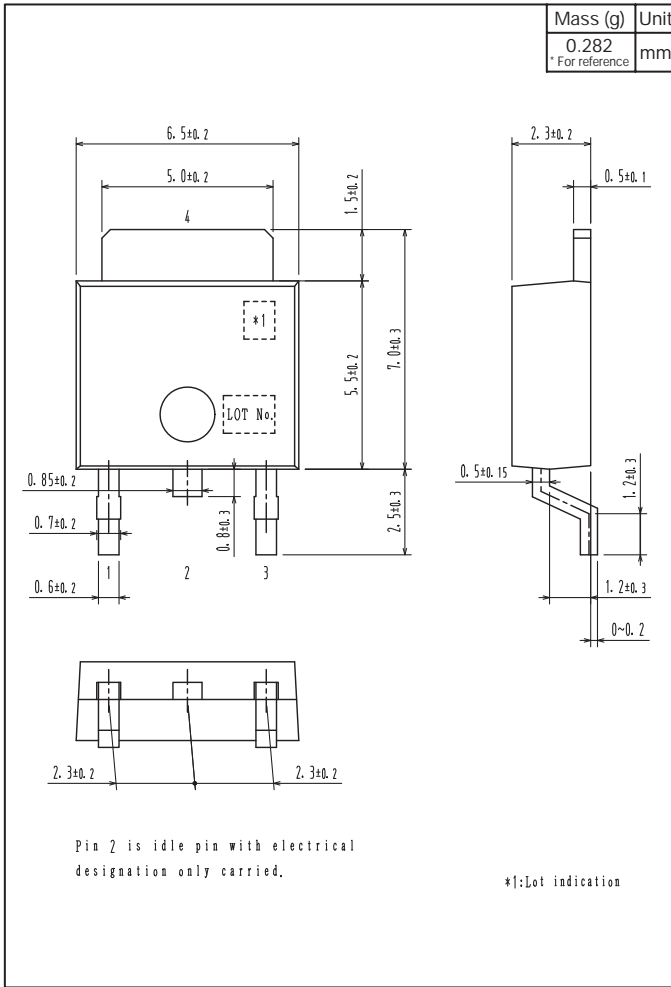
Those with one electrode terminal on the feed hole side.....TL

# 2SC4134

## Outline Drawing

2SC4134S-TL-E, 2SC4134T-TL-E

## Land Pattern Example



Bag Packing Specification

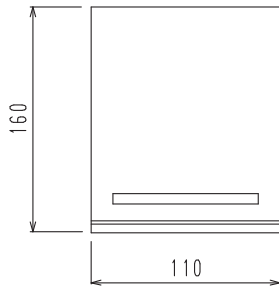
2SC4134S-E, 2SC4134T-E

1. Packing Format

Package Name	Maximum Number of devices contained (pcs)			
	Bag	Inner box	Outer box	
TP	500	B-1	A-1	A-2
		10,000	50,000	30,000
	Packing format (Dimensions:mm (external))			
		Inner box	Outer box	
		B-1	A-1	A-2
		445×225×55	470×250×300	470×250×190

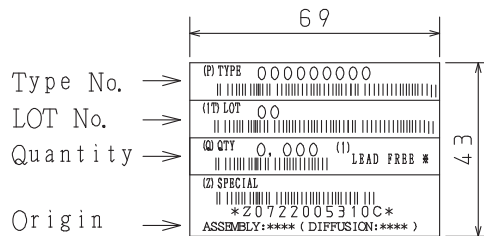
2. Bag dimensions

(unit:mm)



3. Bag label, Inner box label

(unit:mm)



4. Outer box label

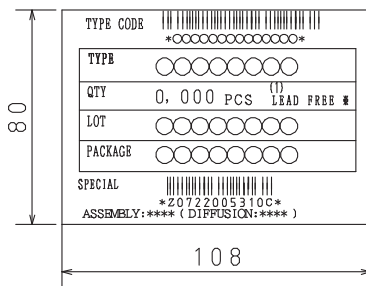
(unit:mm)

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

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



# 2SC4134

## Outline Drawing

2SC4134S-E, 2SC4134T-E





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- Поставка образцов и прототипов;
- Техническая поддержка проекта;
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