



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

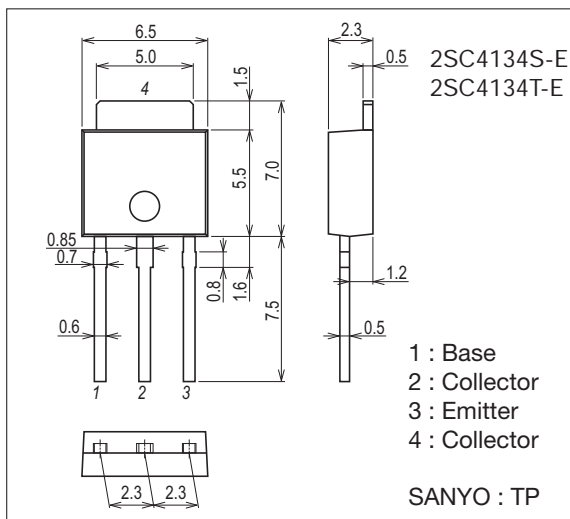
### Specifications

Absolute Maximum Ratings at Ta=25°C

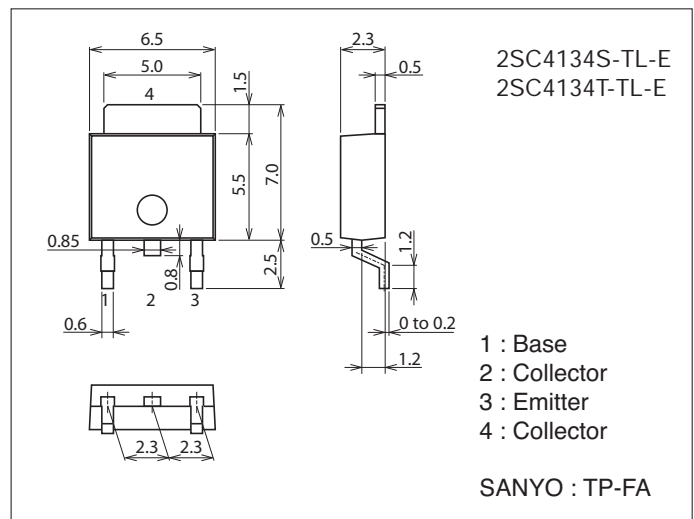
Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	VCBO		120	V
Collector-to-Emitter Voltage	VCEO		100	V
Emitter-to-Base Voltage	VEBO		6	V
Collector Current	IC		1	A
Collector Current (Pulse)	ICP		2	A

Continued on next page.

Package Dimensions unit : mm (typ)  
7518-003



Package Dimensions unit : mm (typ)  
7003-003

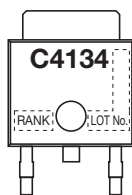


### Product & Package Information

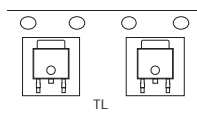
- Package : TP
- JEITA, JEDEC : SC-64, TO-251
- Minimum Packing Quantity : 500 pcs./bag

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

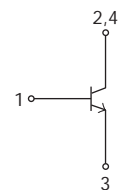
### Marking (TP, TP-FA)



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



### Electrical Connection



## 2SC4134

Continued from preceding page.

Parameter	Symbol	Conditions	Ratings	Unit
Collector Dissipation	PC		0.8	W
		$T_c=25^\circ\text{C}$	10	W
Junction Temperature	$T_j$		150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$		-55 to +150	$^\circ\text{C}$

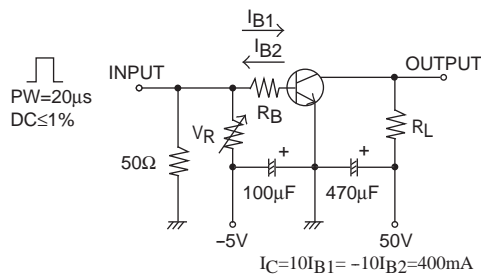
### Electrical Characteristics at $T_a=25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=100\text{V}, I_E=0\text{A}$			100	nA
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=4\text{V}, I_C=0\text{A}$			100	nA
DC Current Gain	$h_{FE}$	$V_{CE}=5\text{V}, I_C=100\text{mA}$	100*		400*	
Gain-Bandwidth Product	$f_T$	$V_{CE}=10\text{V}, I_C=100\text{mA}$		120		MHz
Output Capacitance	$C_{ob}$	$V_{CB}=10\text{V}, f=1\text{MHz}$		8.5		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=400\text{mA}, I_B=40\text{mA}$		0.1	0.4	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=400\text{mA}, I_B=40\text{mA}$		0.85	1.2	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\mu\text{A}, I_E=0\text{A}$	120			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}, R_{BE}=\infty$	100			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=10\mu\text{A}, I_C=0\text{A}$	6			V
Turn-ON Time	$t_{on}$	See specified Test Circuit.		80		ns
Storage Time	$t_{stg}$			850		ns
Fall Time	$t_f$			50		ns

\* : The 2SC4134 is classified by 100mA  $h_{FE}$  as follows :

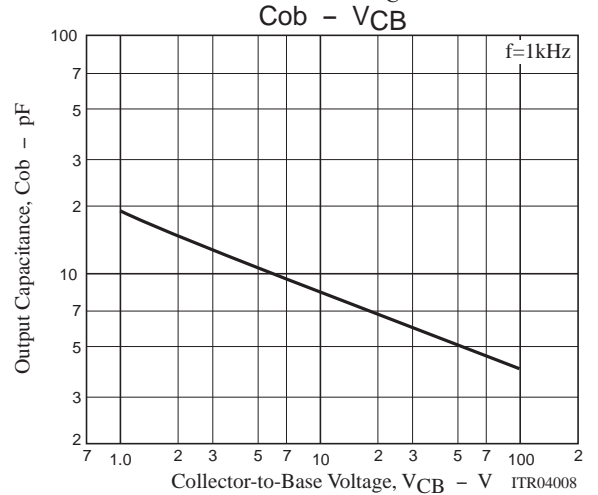
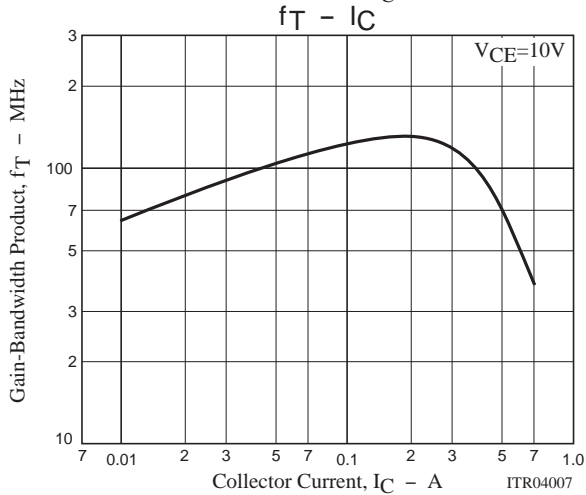
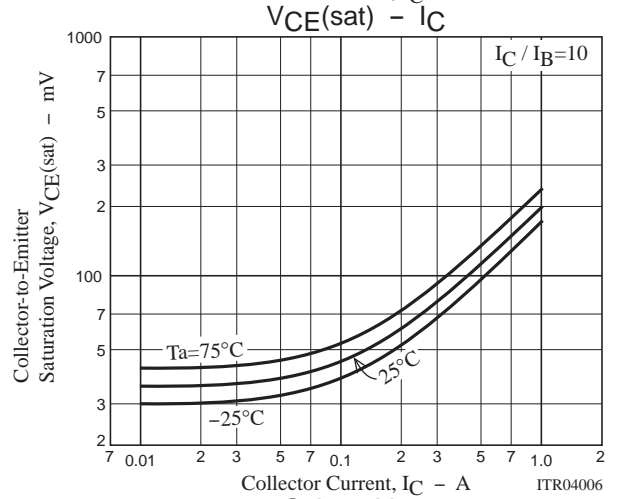
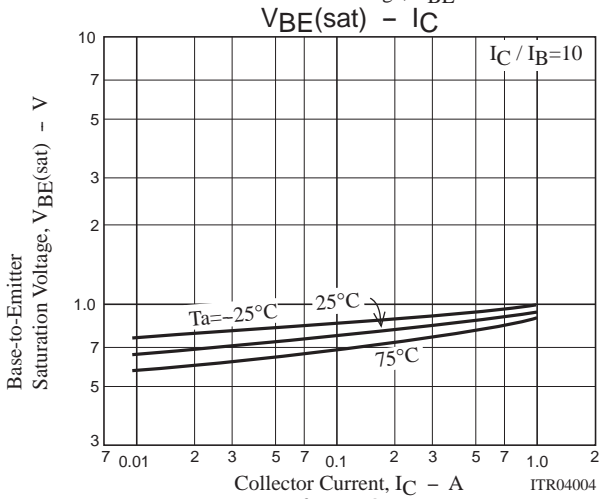
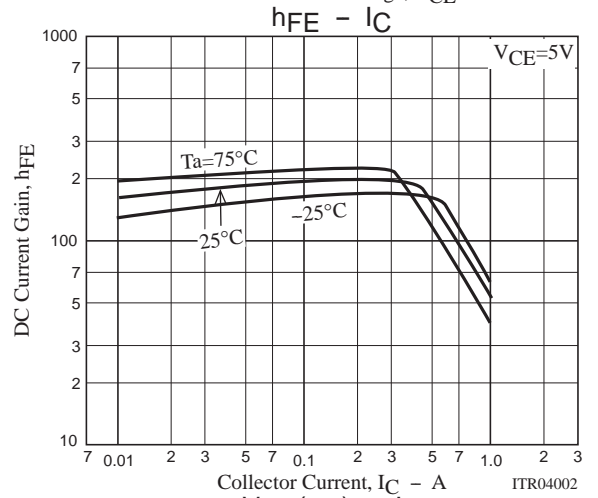
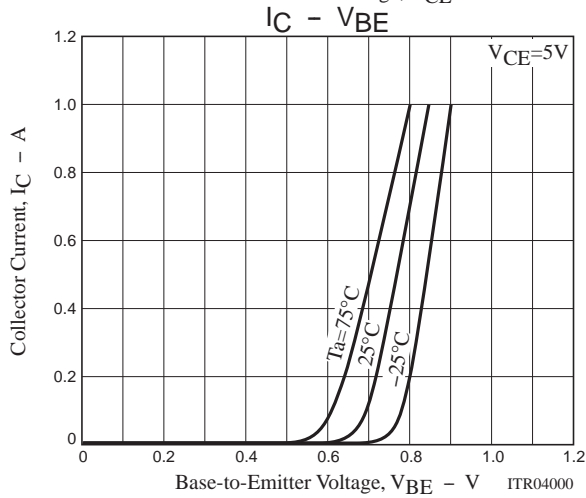
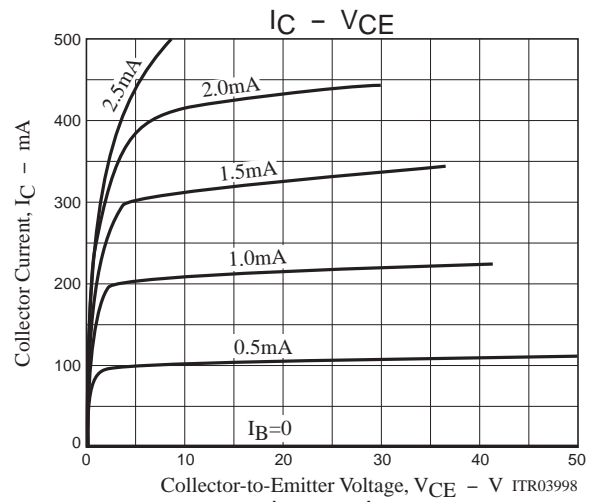
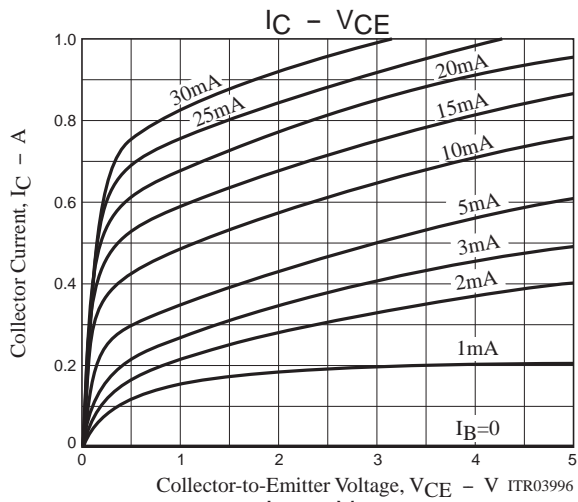
Rank	R	S	T
$h_{FE}$	100 to 200	140 to 280	200 to 400

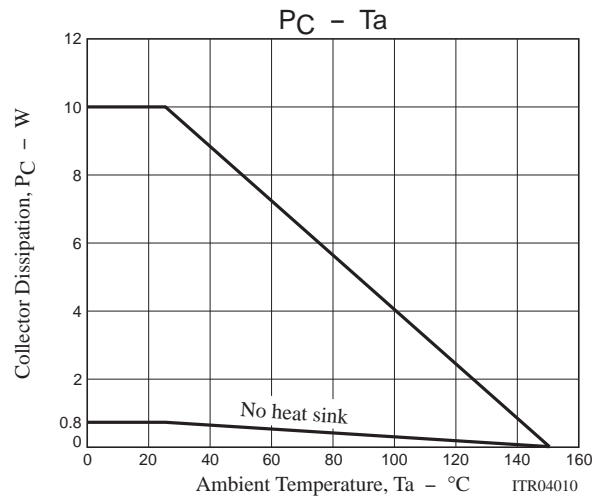
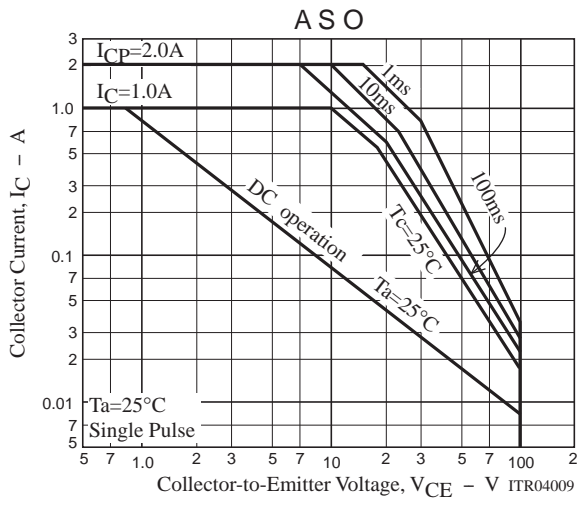
### Switching Time Test Circuit



### 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

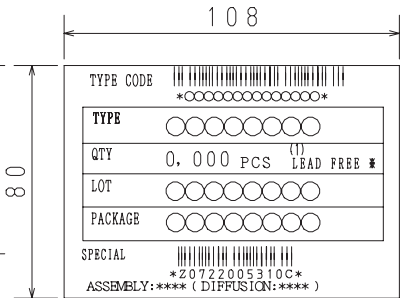
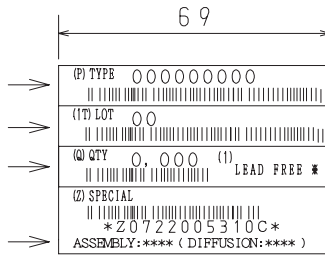
It is a label at the time of factory shipments.  
The form of a label may change in physical distribution process.

Packing method



Reel label

Type No.  
LOT No.  
Quantity  
Origin



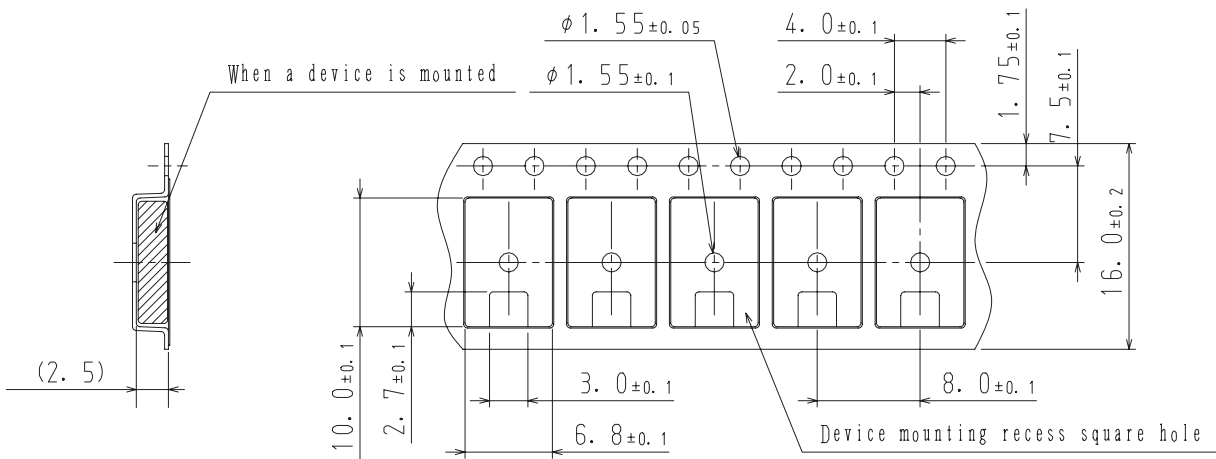
NOTE (1)

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

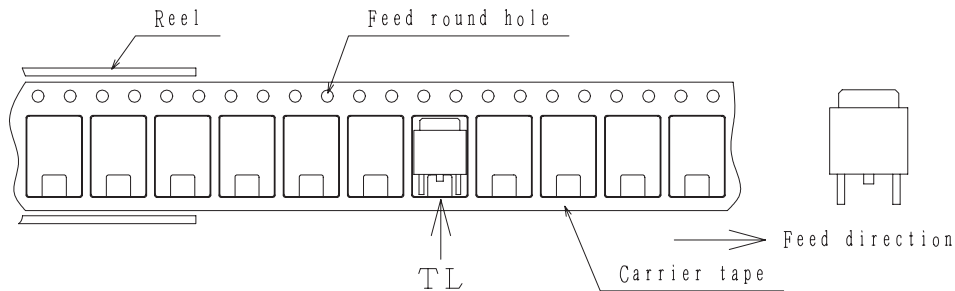
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

Taping configuration

1. Carrier tape size (unit:mm)



2. Device placement direction



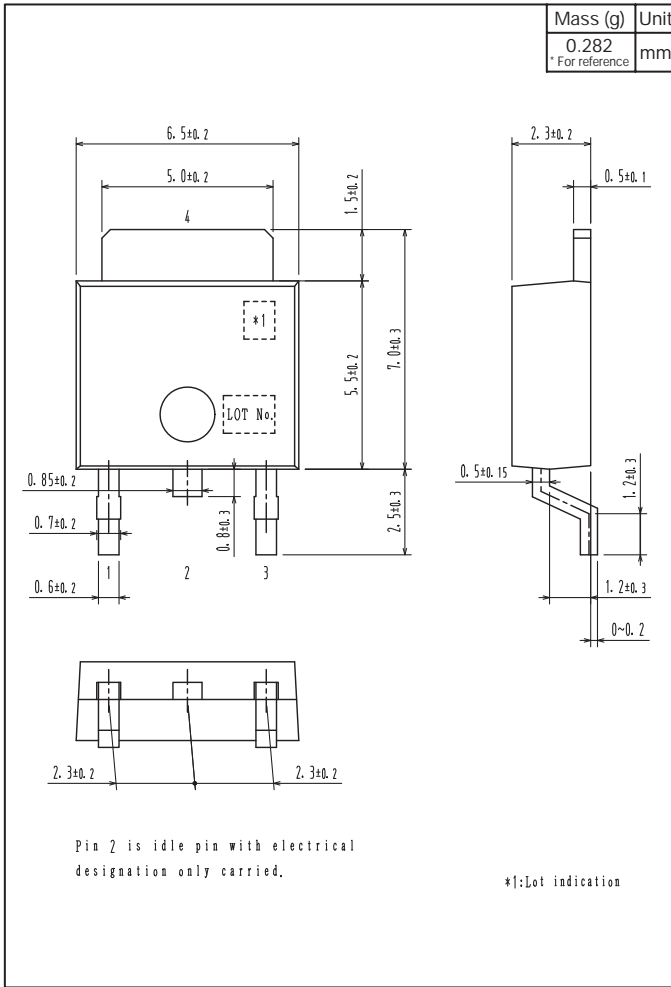
Those with one electrode terminal on the feed hole side.....TL

# 2SC4134

## Outline Drawing

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

## Land Pattern Example



Bag Packing Specification

2SC4134S-E, 2SC4134T-E

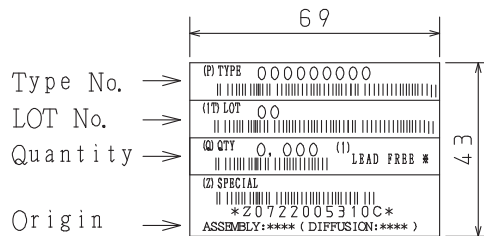
1. Packing Format

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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