



SANYO Semiconductors

## DATA SHEET

An ON Semiconductor Company

# 2SD1620 — NPN Epitaxial Planar Silicon Transistor

## 1.5V, 3V Strobe Applications

### Features

- Less power dissipation because of low  $V_{CE(sat)}$ , permitting more flashes of light to be emitted
- Large current capacity and highly resistant to breakdown
- Excellent linearity of  $h_{FE}$  in the region from low current to high current
- Ultrasmall size supports high-density, ultrasmall-sized hybrid IC designs

### Specifications

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

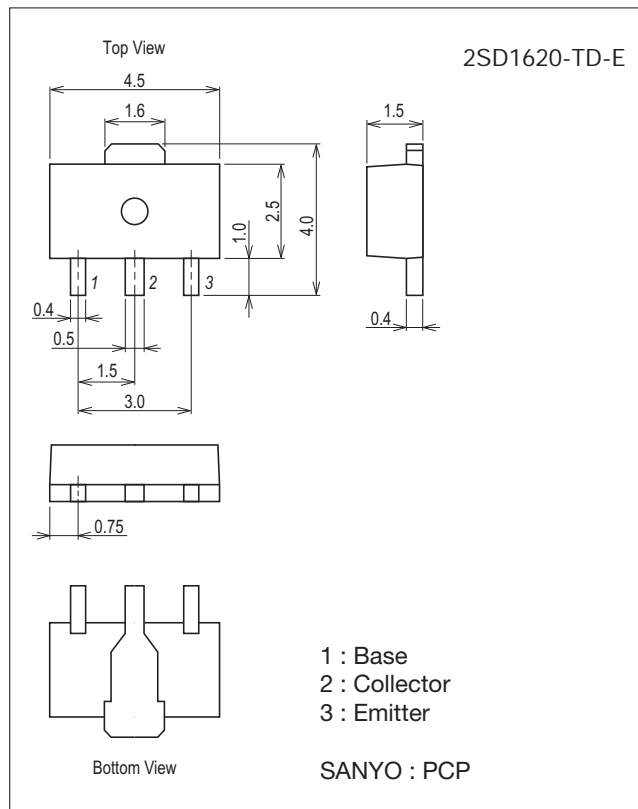
Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	$V_{CBO}$		30	V
Collector-to-Emitter Voltage	$V_{CEX}$		20	V
Collector-to-Emitter Voltage	$V_{CEO}$		10	V
Emitter-to-Base Voltage	$V_{EBO}$		6	V
Collector Current	$I_C$		3	A
Collector Current (Pulse)	$I_{CP}$		5	A

Continued on next page.

### Package Dimensions

unit : mm (typ)

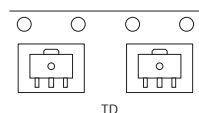
7007B-004



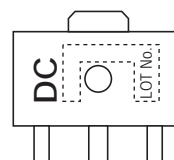
### Product & Package Information

- Package : PCP
- JEITA, JEDEC : SC-62, SOT-89, TO-243
- Minimum Packing Quantity : 1,000 pcs./reel

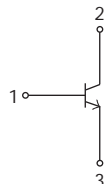
### Packing Type: TD



### Marking



### Electrical Connection



SANYO Semiconductor Co., Ltd.

<http://www.sanyosemi.com/en/network/>

# 2SD1620

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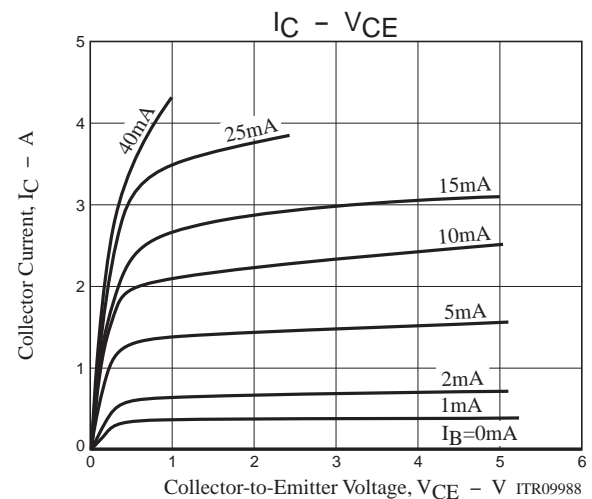
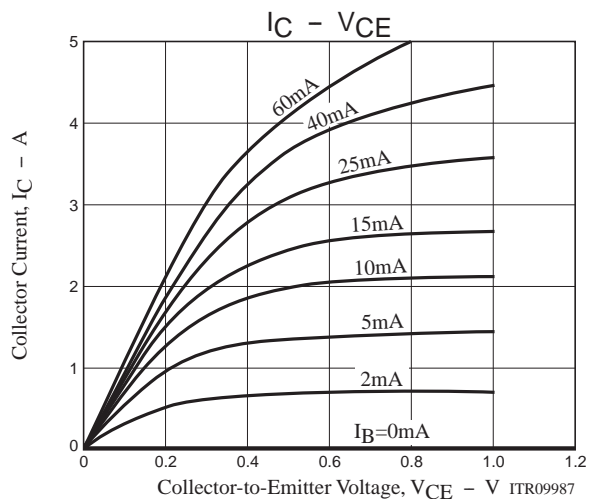
Parameter	Symbol	Conditions	Ratings	Unit
Collector Dissipation	P <sub>C</sub>		500	mW
		When mounted on ceramic substrate (250mm <sup>2</sup> ×0.8mm)	1.3	W
Junction Temperature	T <sub>J</sub>		150	°C
Storage Temperature	T <sub>stg</sub>		-55 to +150	°C

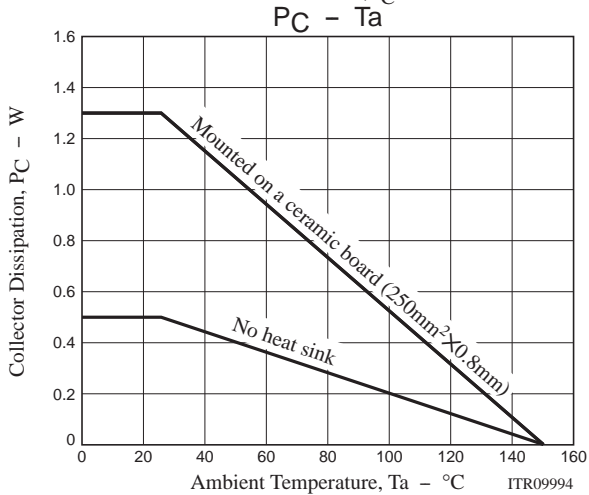
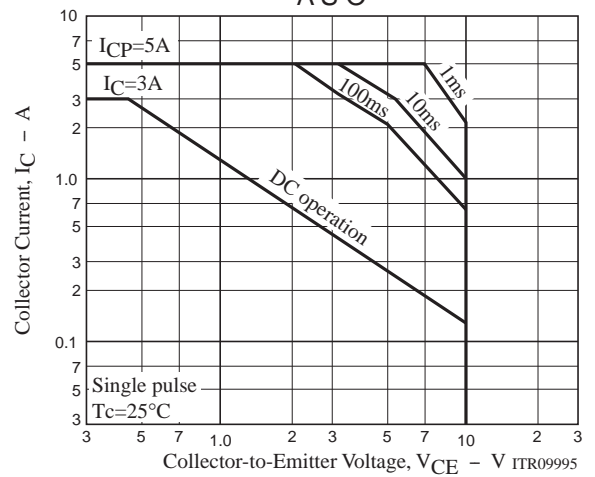
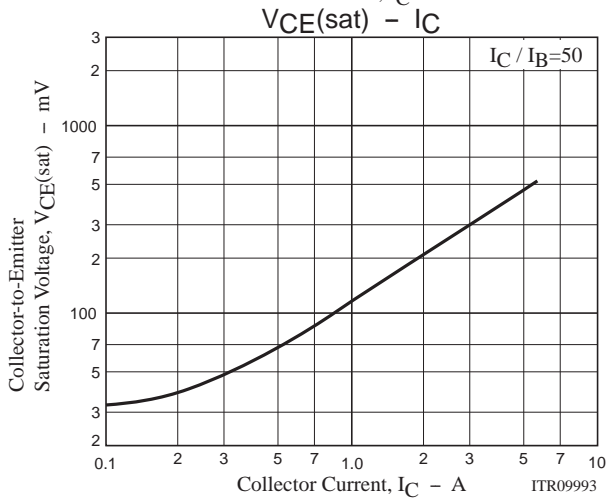
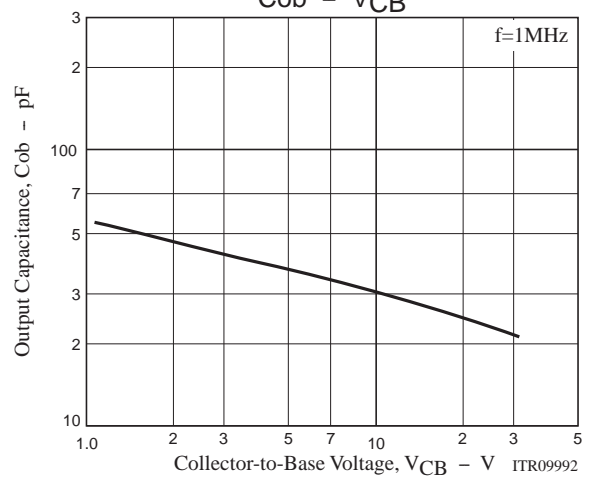
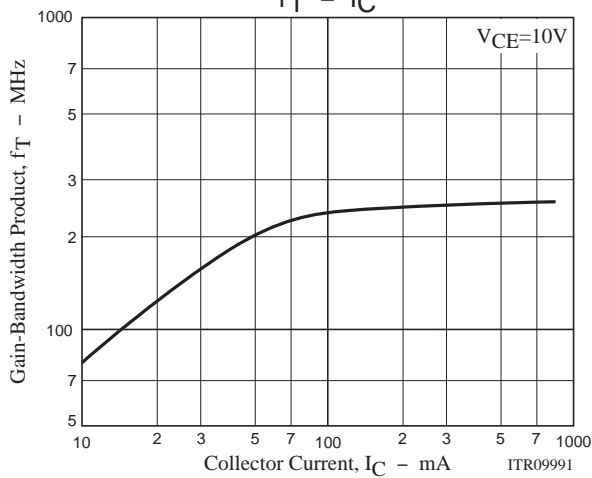
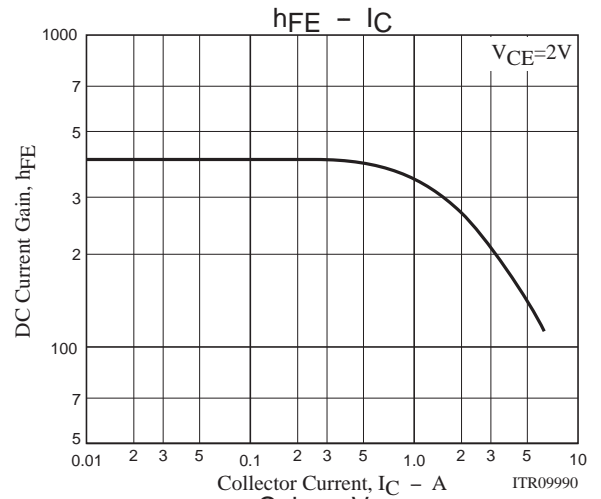
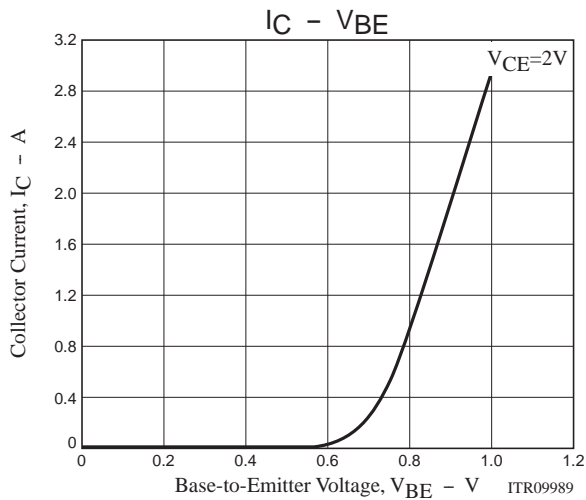
## Electrical Characteristics at T<sub>a</sub>=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I <sub>CBO</sub>	V <sub>CB</sub> =20V, 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> =2V, I <sub>C</sub> =3A	140	210		
Gain-Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =50mA		200		MHz
Output Capacitance	C <sub>ob</sub>	V <sub>CB</sub> =10V, f=1MHz		30		pF
Collector-to-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =3A, I <sub>B</sub> =60mA		0.3	0.4	V
Collector-to-Base Breakdown Voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =10μA, I <sub>E</sub> =0A	30			V
Collector-to-Emitter Breakdown Voltage	V <sub>(BR)CEX</sub>	I <sub>C</sub> =1mA, V <sub>BE</sub> =3V	20			V
Collector-to-Emitter Breakdown Voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> =1mA, R <sub>BE</sub> =∞	10			V
Emitter-to-Base Breakdown Voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =10μA, I <sub>C</sub> =0A	6			V

## Ordering Information

Device	Package	Shipping	memo
2SD1620-TD-E	PCP	1,000pcs./reel	Pb Free





## Bag Packing Specification

2SD1620-TD-E

## 1. Packing Format

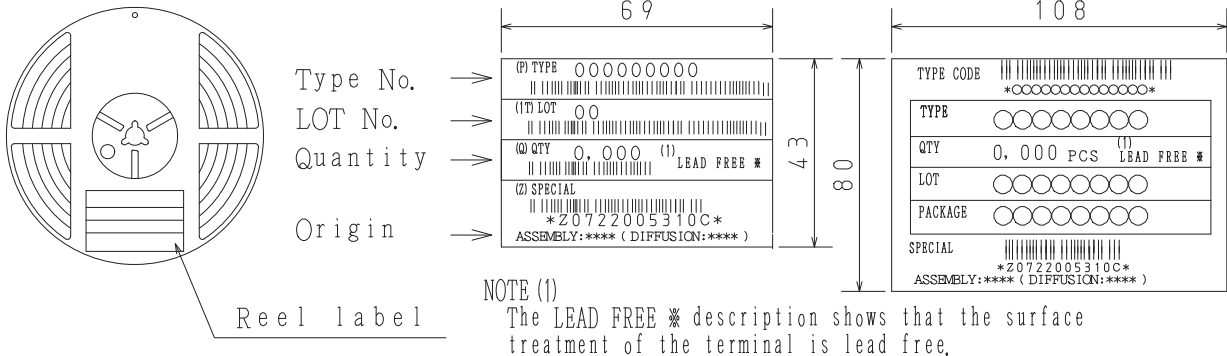
Package Name	Carrier Tape Type	Maximum Number of devices contained (pcs)			Packing format	
		Reel	Inner box	Outer box	Inner BOX (C-1)	Outer BOX (A-7)
PCP	PCP	1,000	4,000	24,000	4 reels contained Dimensions:mm (external) 183×72×185	6 inner boxes contained Dimensions:mm (external) 440×195×210

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.

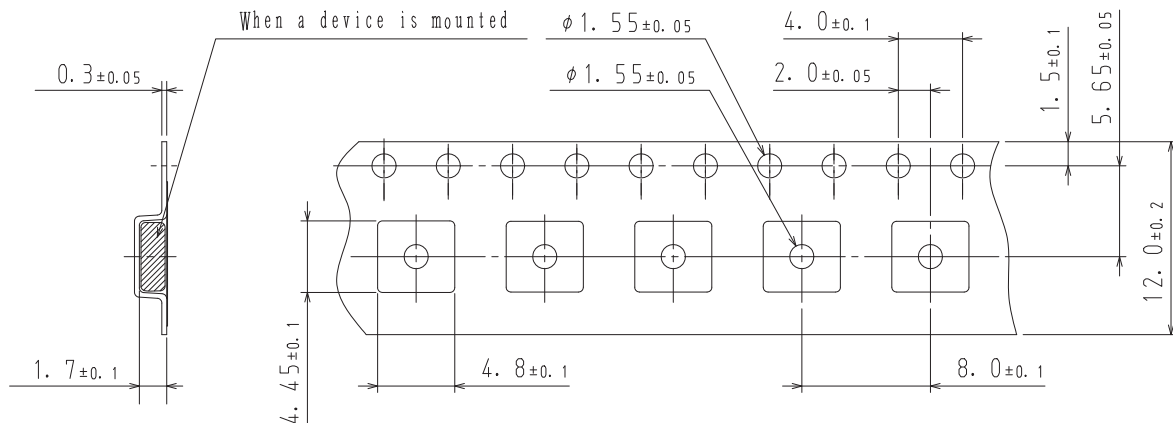
## Packing method



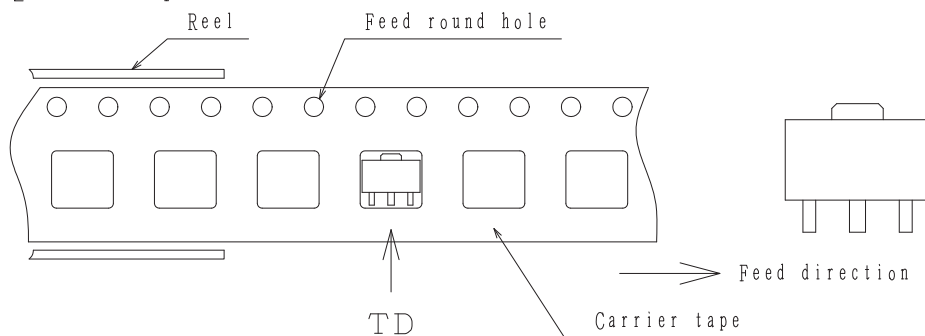
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

## 2. Taping configuration

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

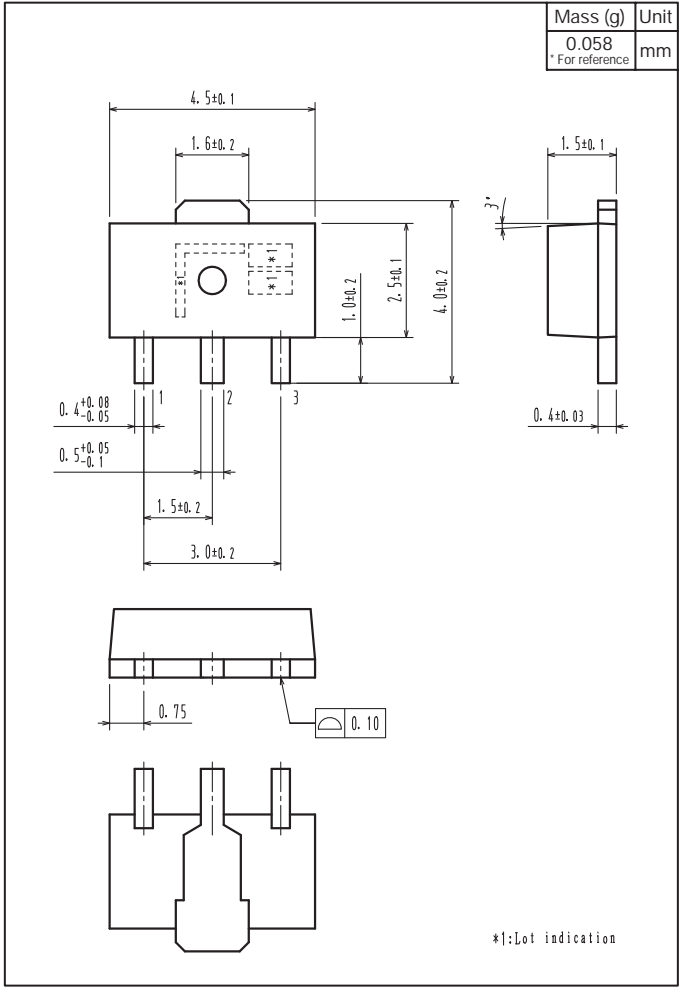


## 2-2. Device placement direction

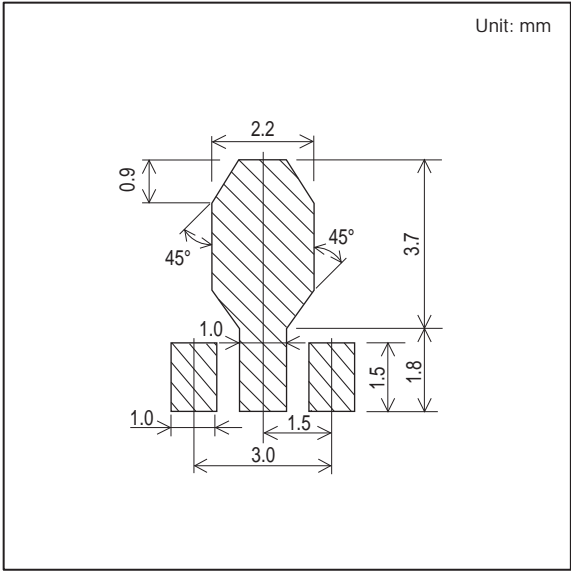


Those with pin 1 index on the feed hole side.....TD

Outline Drawing  
2SD1620-TD-E



Land Pattern Example



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