



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 $T_a=25^\circ\text{C}$

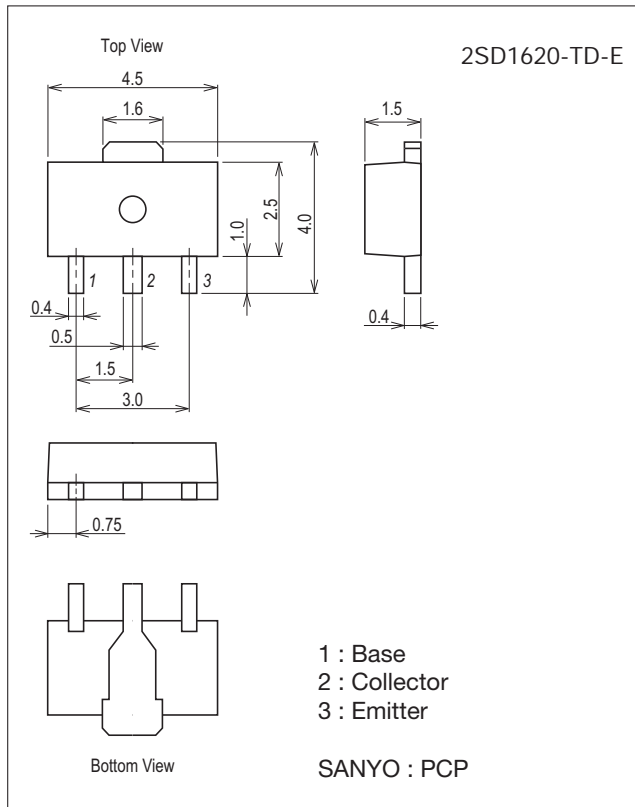
Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		30	V
Collector-to-Emitter Voltage	V_{CEX}		20	V
Collector-to-Emitter Voltage	V_{CEO}		10	V
Emitter-to-Base Voltage	V_{EBO}		6	V
Collector Current	I_C		3	A
Collector Current (Pulse)	I_{CP}		5	A

Continued on next page.

Package Dimensions

unit : mm (typ)

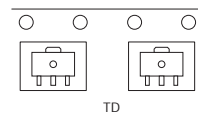
7007B-004



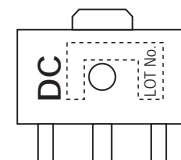
Product & Package Information

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

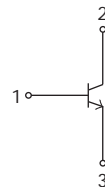
Packing Type: TD



Marking



Electrical Connection



2SD1620

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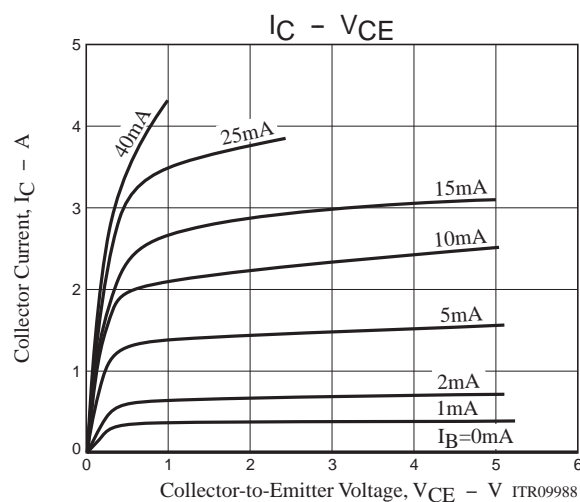
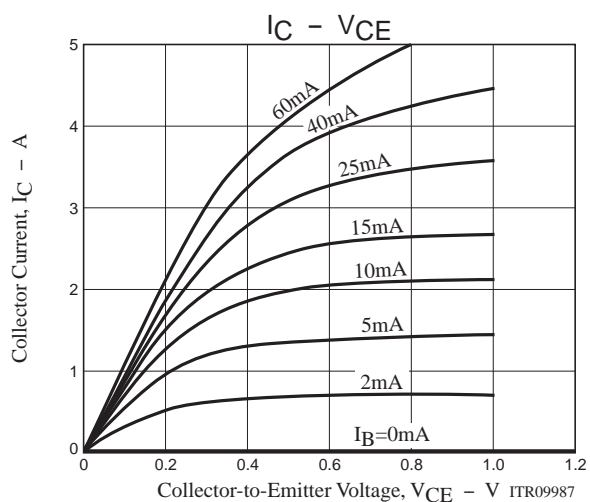
Parameter	Symbol	Conditions	Ratings	Unit
Collector Dissipation	P _C		500	mW
		When mounted on ceramic substrate (250mm ² ×0.8mm)	1.3	W
Junction Temperature	T _j		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

Electrical Characteristics at T_a=25°C

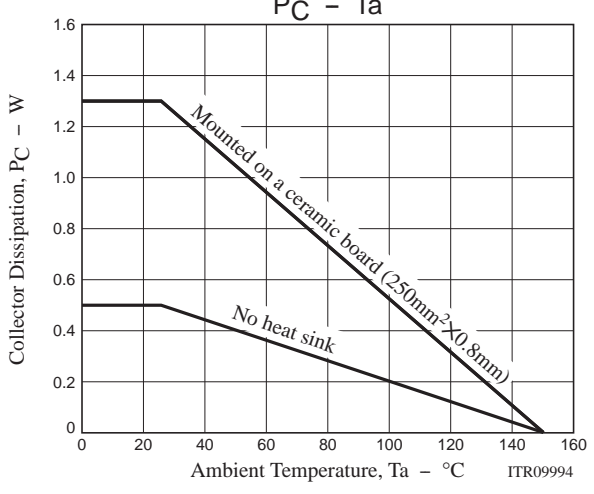
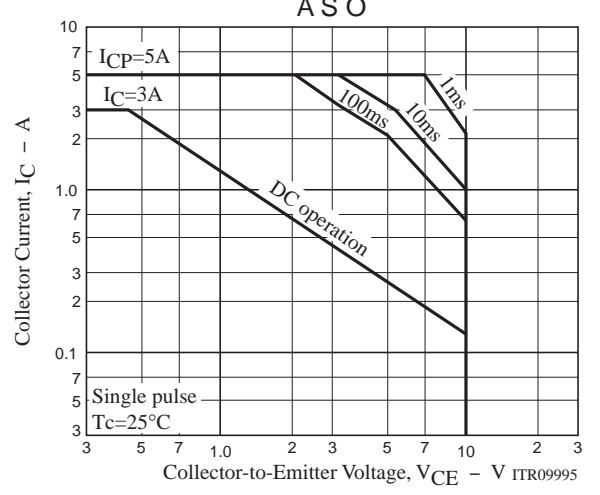
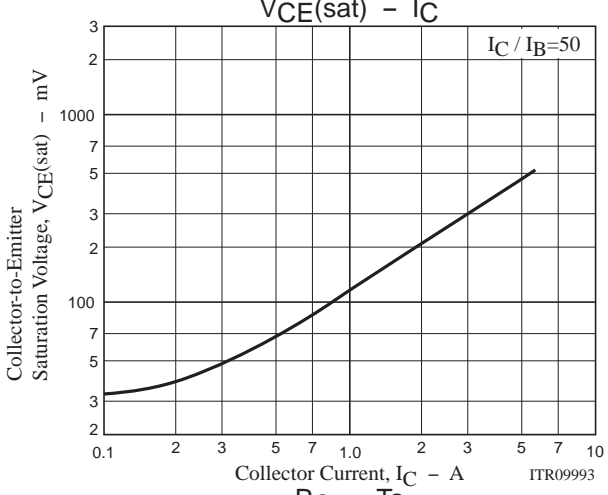
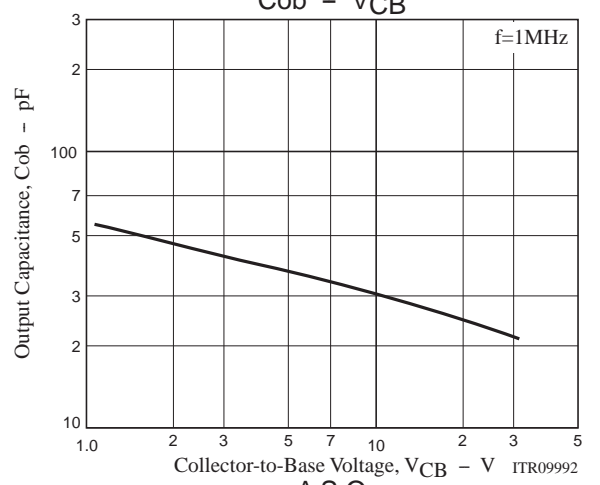
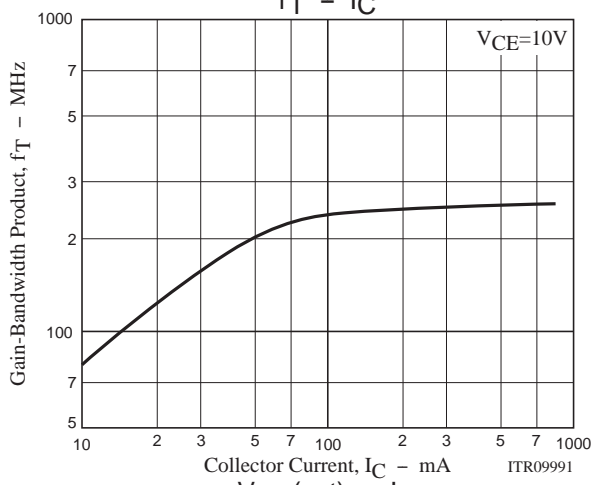
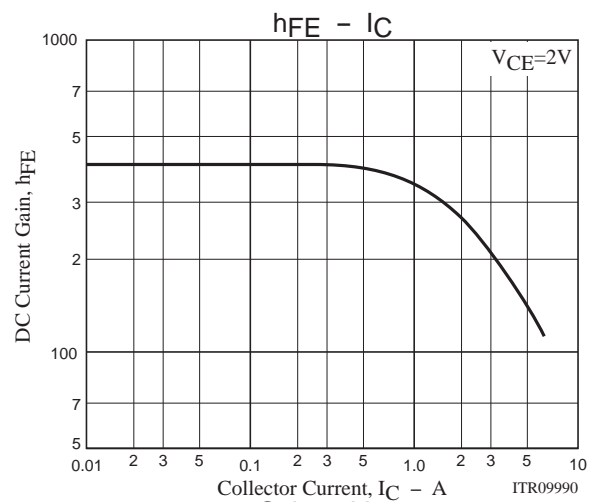
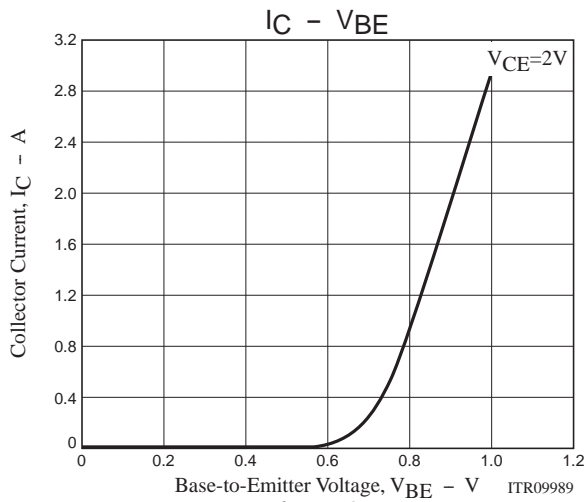
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I _{CBO}	V _{CB} =20V, I _E =0A			100	nA
Emitter Cutoff Current	I _{EBO}	V _{EB} =4V, I _C =0A			100	nA
DC Current Gain	h _{FE}	V _{CE} =2V, I _C =3A	140	210		
Gain-Bandwidth Product	f _T	V _{CE} =10V, I _C =50mA		200		MHz
Output Capacitance	C _{ob}	V _{CB} =10V, f=1MHz		30		pF
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	I _C =3A, I _B =60mA		0.3	0.4	V
Collector-to-Base Breakdown Voltage	V _{(BR)CBO}	I _C =10μA, I _E =0A	30			V
Collector-to-Emitter Breakdown Voltage	V _{(BR)CEX}	I _C =1mA, V _{BE} =3V	20			V
Collector-to-Emitter Breakdown Voltage	V _{(BR)CEO}	I _C =1mA, R _{BE} =∞	10			V
Emitter-to-Base Breakdown Voltage	V _{(BR)EBO}	I _E =10μA, I _C =0A	6			V

Ordering Information

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



2SD1620



Bag Packing Specification

2SD1620-TD-E

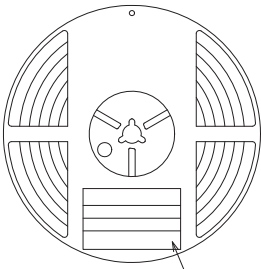
1. Packing Format

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)

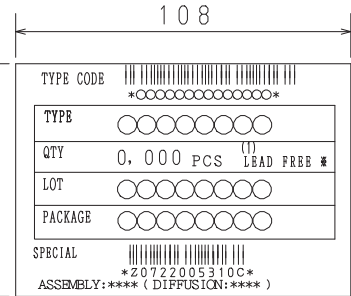
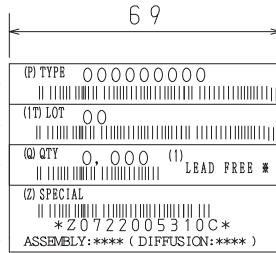
Outer box label
It is a label at the time of factory shipments.
The form of a label may change in physical distribution process.

Packing method



Reel label

Type No.
LOT No.
Quantity
Origin



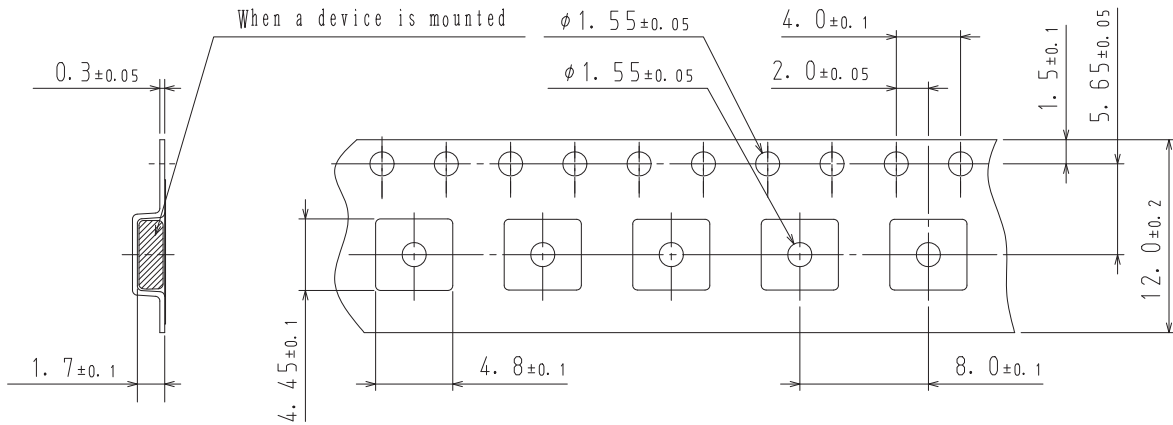
NOTE (1)

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

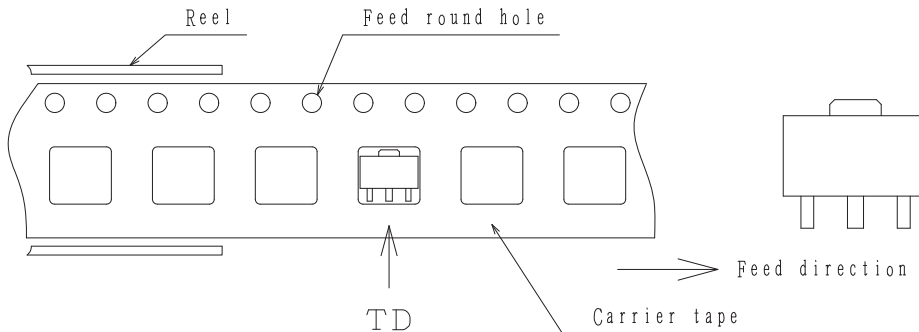
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

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



2-2. Device placement direction

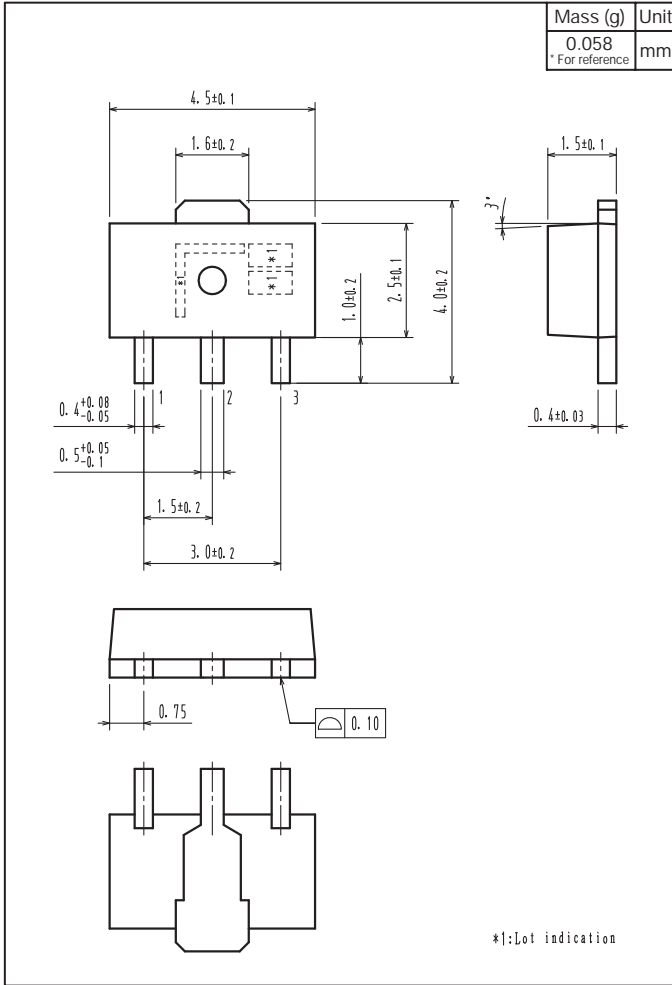


Those with pin 1 index on the feed hole side.....TD

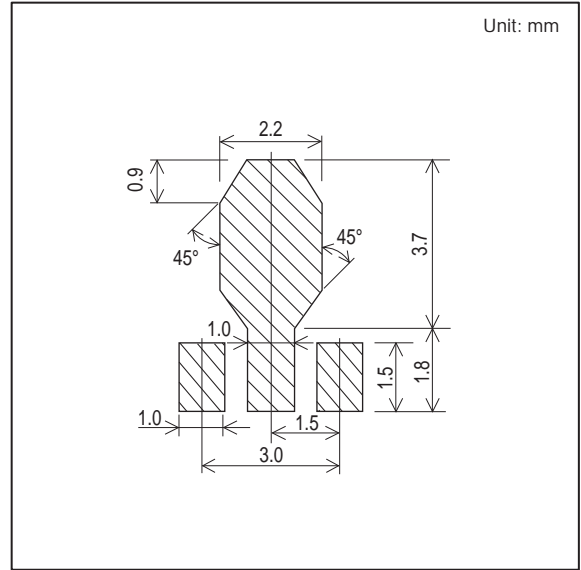
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Outline Drawing

2SD1620-TD-E



Land Pattern Example



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