



SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

2SC5551A — High-Frequency Medium-Output Amplifier Applications

NPN Epitaxial Planar Silicon Transistor

Features

- High f_T : ($f_T=3.5\text{GHz}$ typ)
- Large current : ($I_C=300\text{mA}$)
- Large allowable collector dissipation (1.3W max)

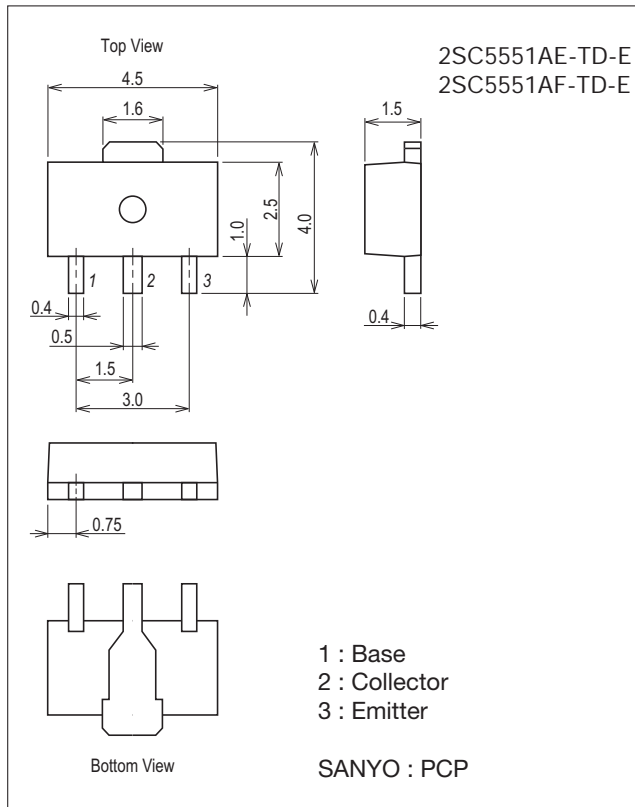
Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		40	V
Collector-to-Emitter Voltage	V_{CEO}		30	V
Emitter-to-Base Voltage	V_{EBO}		2	V
Collector Current	I_C		300	mA
Collector Current (Pulse)	I_{CP}		600	mA
Collector Dissipation	P_C	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

Package Dimensions

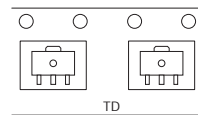
unit : mm (typ)
7007B-004



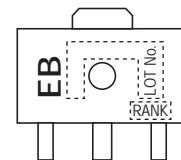
Product & Package Information

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

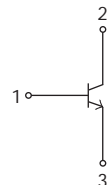
Packing Type: TD



Marking



Electrical Connection



2SC5551A

Electrical Characteristics at Ta=25°C

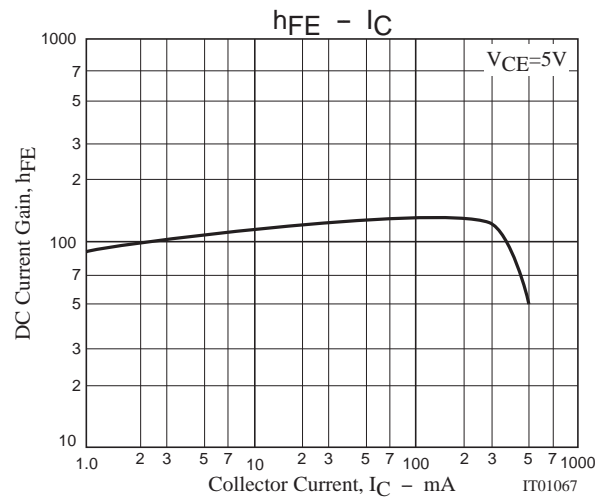
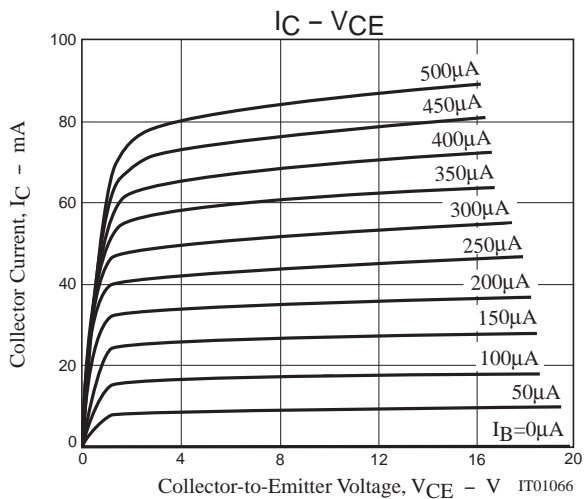
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB}=20V, I_E=0A$			1.0	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=1V, I_C=0A$			5.0	μA
DC Current Gain	h_{FE1}	$V_{CE}=5V, I_C=50mA$	90		270	
	h_{FE2}	$V_{CE}=5V, I_C=300mA$	20			
Gain-Bandwidth Product	f_T	$V_{CE}=5V, I_C=50mA$		3.5		GHz
Output Capacitance	C_{ob}	$V_{CB}=10V, f=1MHz$		2.9	4.0	pF
Reverse Transfer Capacitance	C_{re}			1.5		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=50mA, I_B=5mA$		0.07	0.3	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=50mA, I_B=5mA$		0.8	1.2	V

* : The 2SC5551A is classified by 50mA h_{FE} as follows :

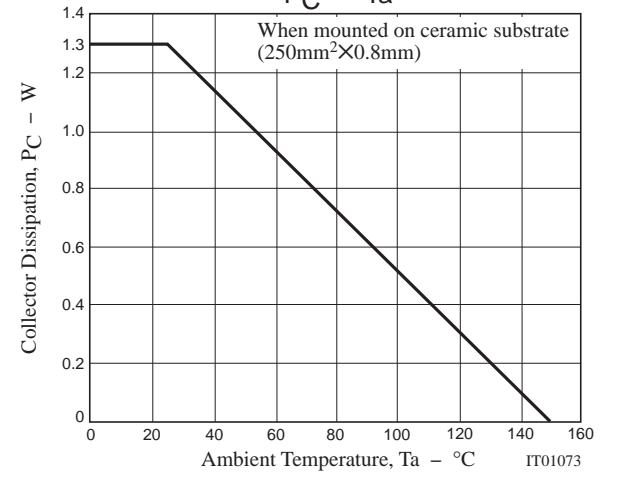
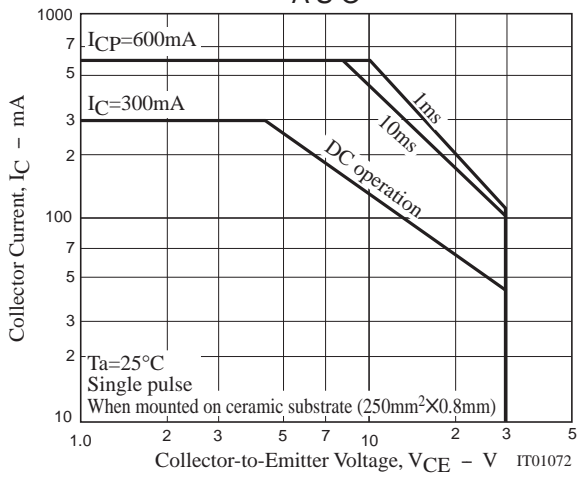
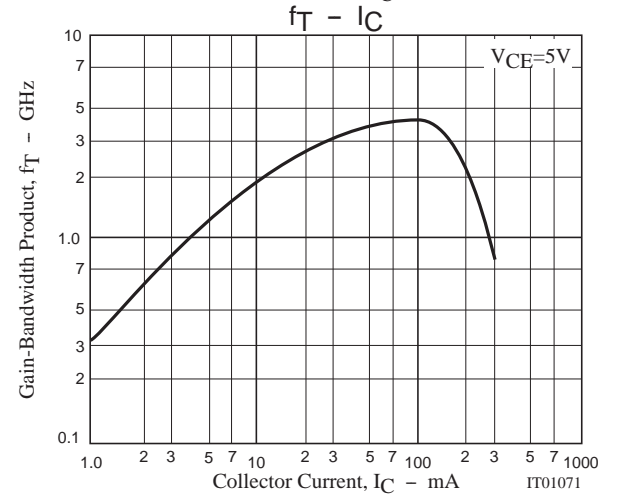
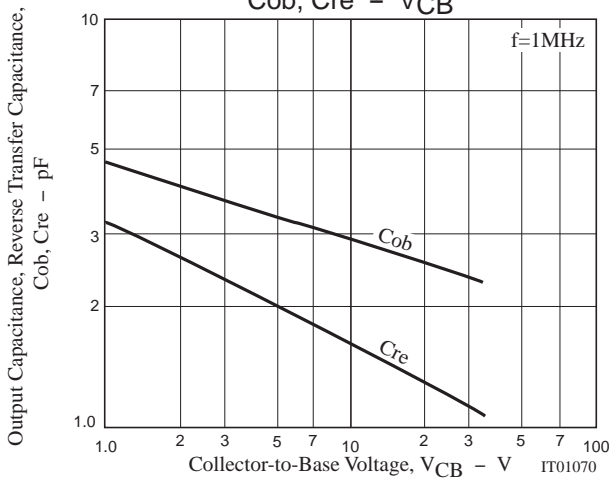
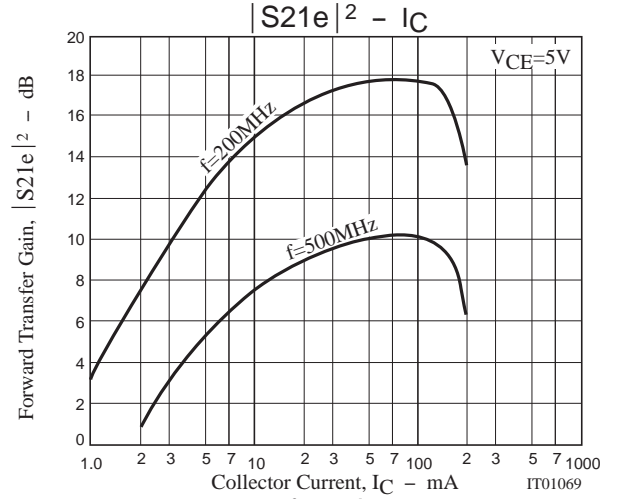
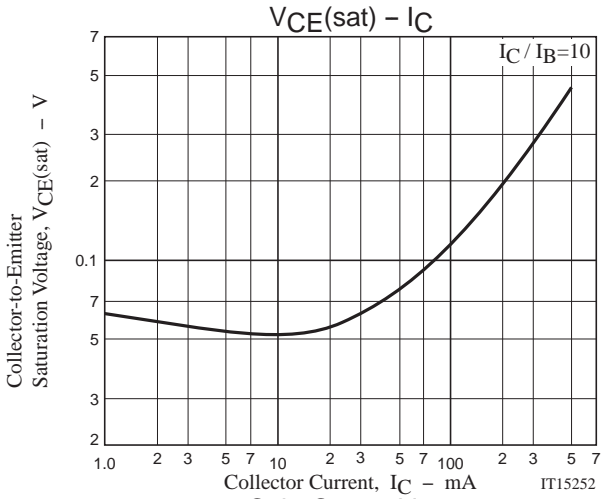
Rank	E	F
h_{FE}	90 to 180	135 to 270

Ordering Information

Device	Package	Shipping	memo
2SC5551AE-TD-E	PCP	1,000pcs./reel	Pb Free
2SC5551AF-TD-E	PCP	1,000pcs./reel	



2SC5551A



2SC5551A

Bag Packing Specification

2SC5551AE-TD-E, 2SC5551AF-TD-E

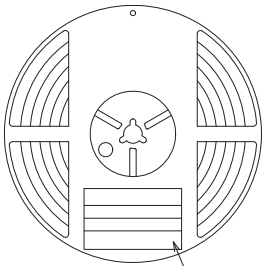
1. Packing Format

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)

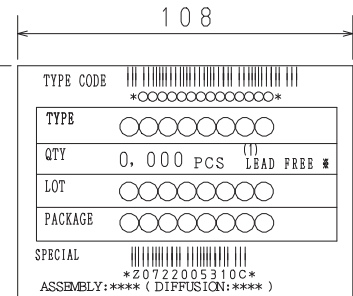
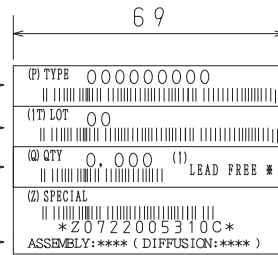
Outer box label
It is a label at the time of factory shipments.
The form of a label may change in physical distribution process.

Packing method



Type No.
LOT No.
Quantity
Origin

Reel label



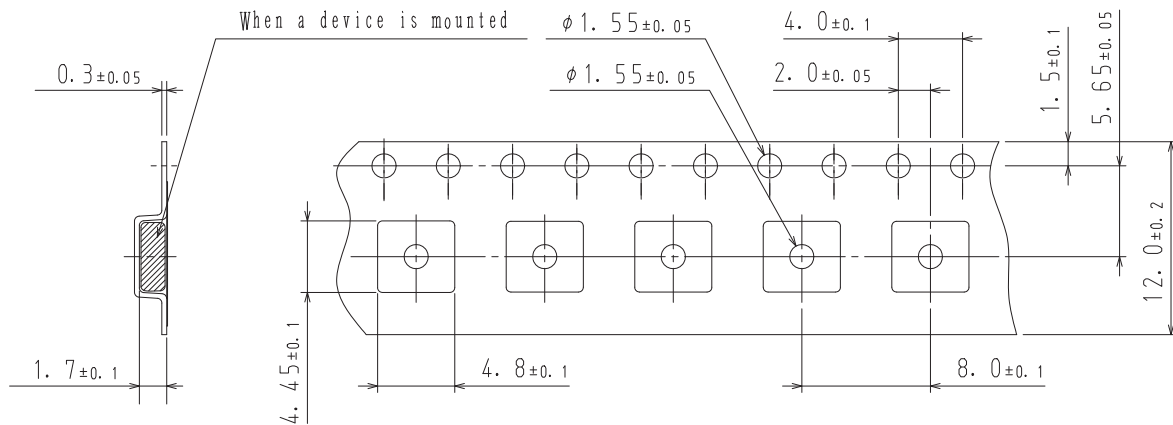
NOTE (1)

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

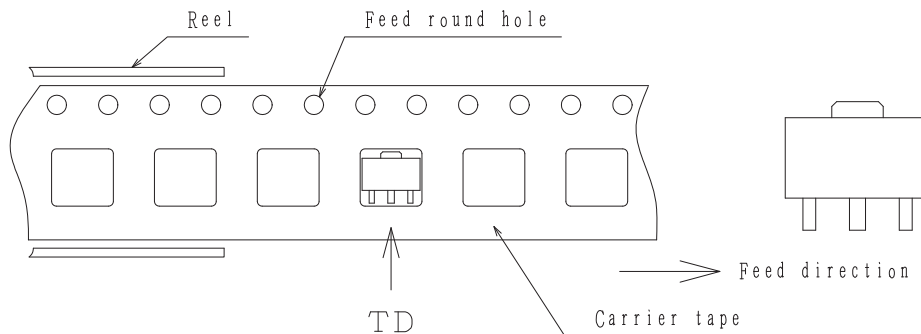
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

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



2-2. Device placement direction

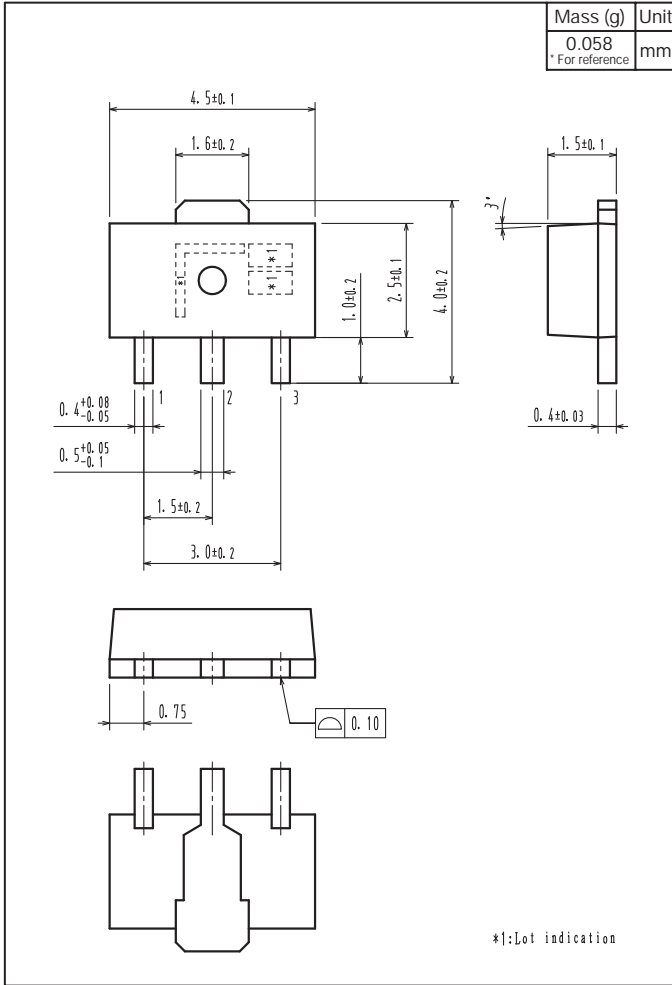


Those with pin 1 index on the feed hole side.....TD

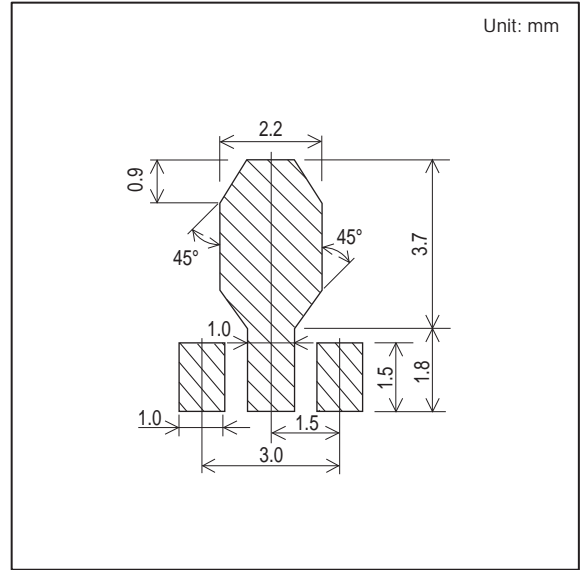
2SC5551A

Outline Drawing

2SC5551AE-TD-E, 2SC5551AF-TD-E



Land Pattern Example



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