Ordering number : ENA1118A

SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

NPN Epitaxial Planar Silicon Transistor

2SC5551A — High-Frequency Medium-Output Amplifier Applications

Features

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

Specifications

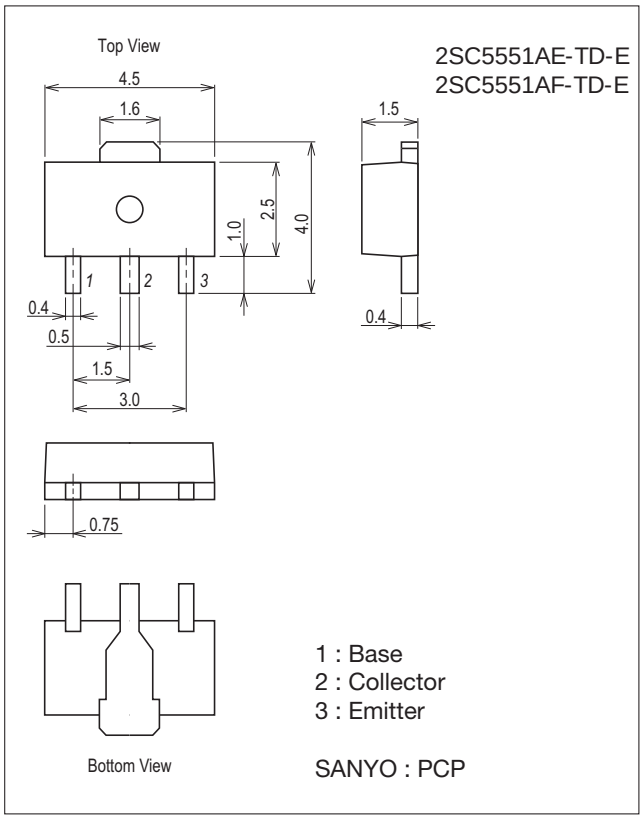
Absolute Maximum Ratings at Ta=25°C

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	Tj		150	°C
Storage Temperature	Tstg		−55 to +150	°C

Package Dimensions

unit : mm (typ)

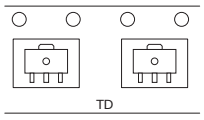
7007B-004



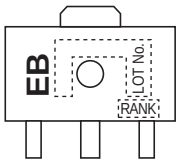
Product & Package Information

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

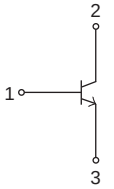
Packing Type: TD



Marking



Electrical Connection



Electrical Characteristics at Ta=25°C

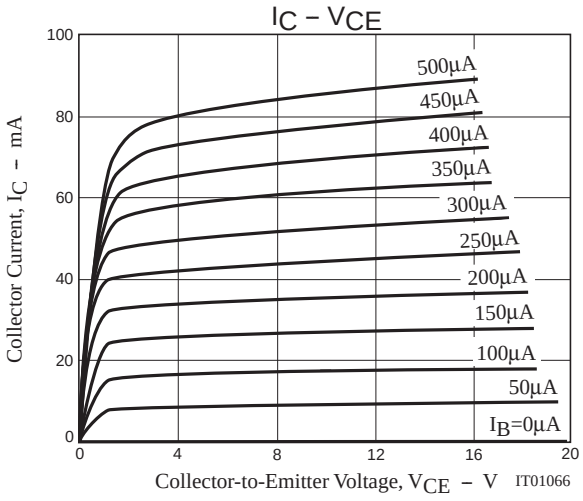
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	V_{CB}=20V, I_E=0A			1.0	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=1V, I_C=0A			5.0	μA
DC Current Gain	$h_{FE}1$	V_{CE}=5V, I_C=50mA	90		270	
	$h_{FE}2$	V_{CE}=5V, I_C=300mA	20			
Gain-Bandwidth Product	f_T	V_{CE}=5V, I_C=50mA		3.5		GHz
Output Capacitance	Cob	V_{CB}=10V, f=1MHz		2.9	4.0	pF
Reverse Transfer Capacitance	Cre			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

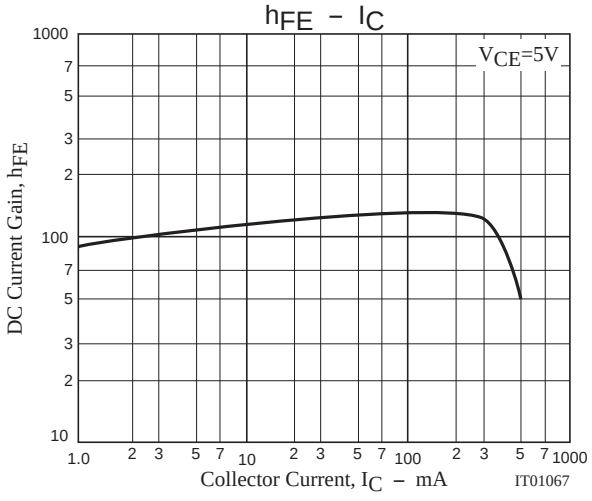
* : The 2SC5551A is classified by 50mA h_{FE} as follows :

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

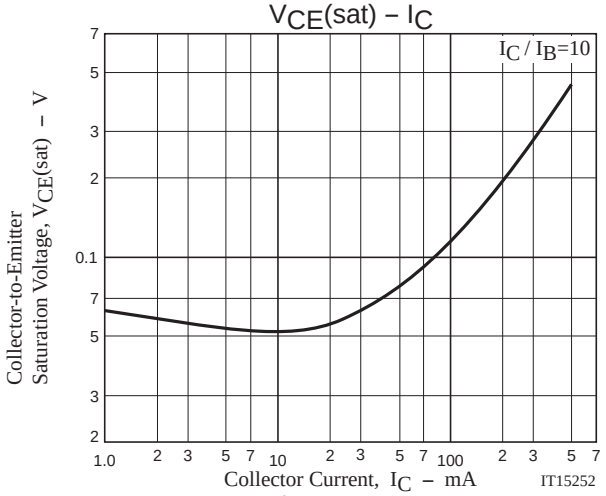
Ordering Information

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

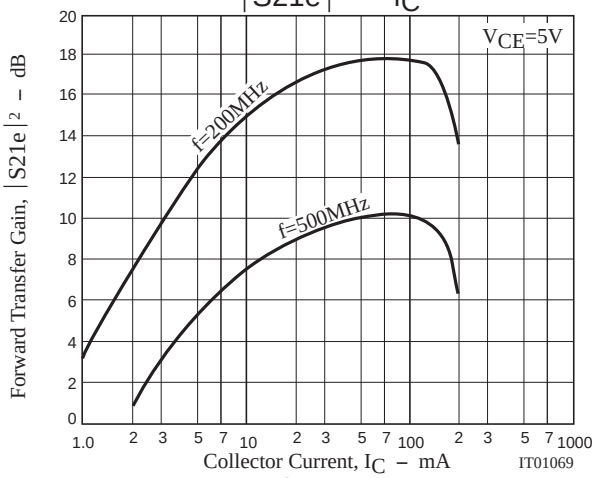




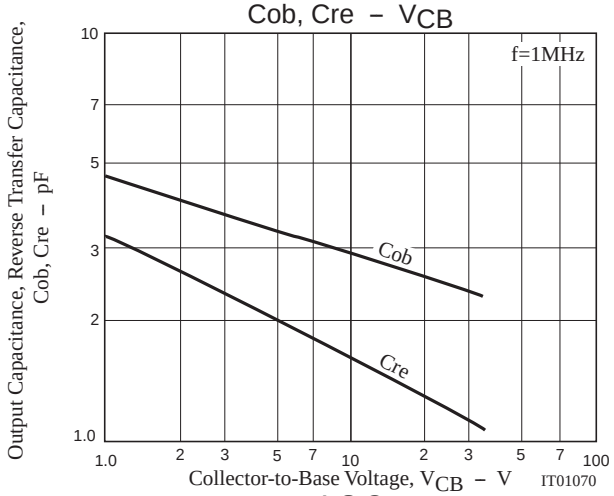
$V_{CE}(sat) - I_C$



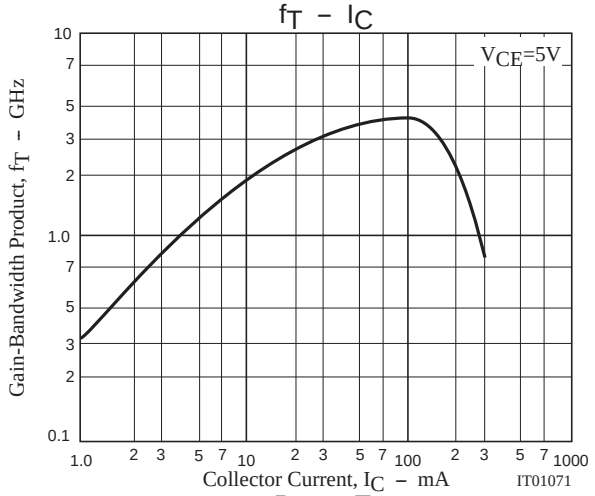
$|S21e|^2 - I_C$



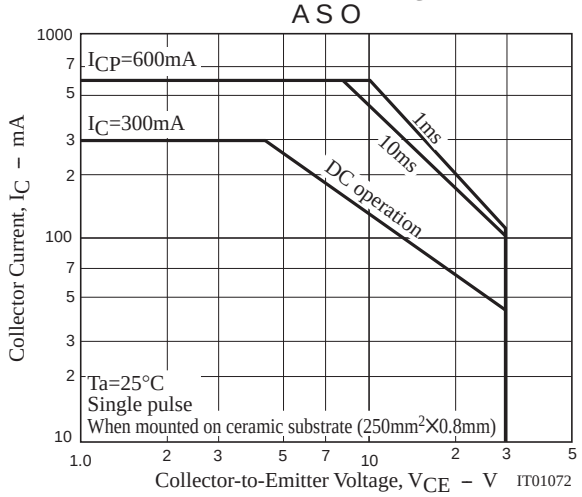
Cob, Cre – V_{CB}



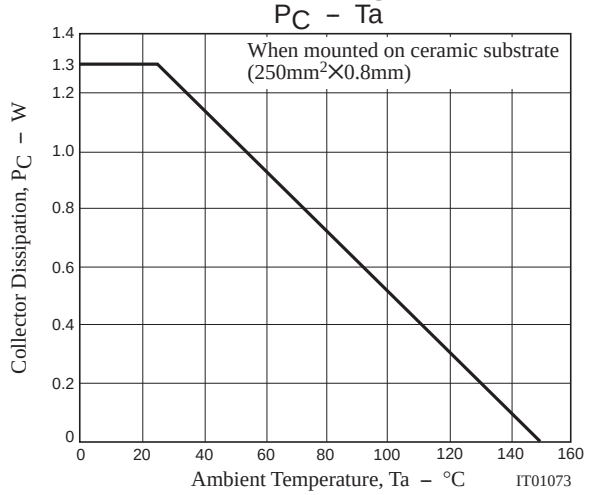
$f_T - I_C$



A S O



$P_C - Ta$



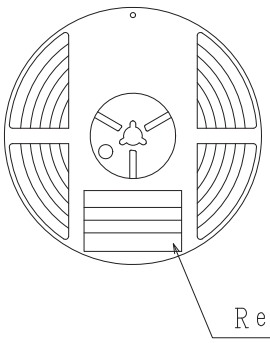
Bag Packing Specification

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

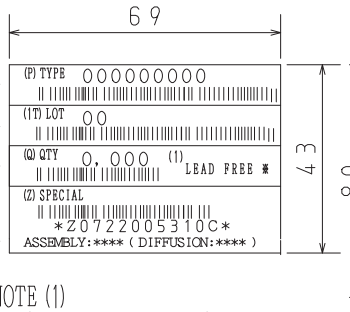
Packing method



Reel label

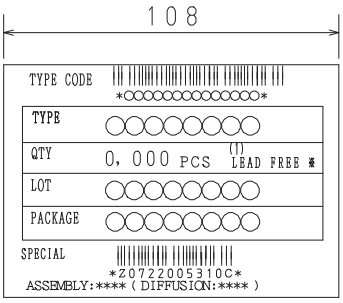
Reel label, Inner box label

(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.

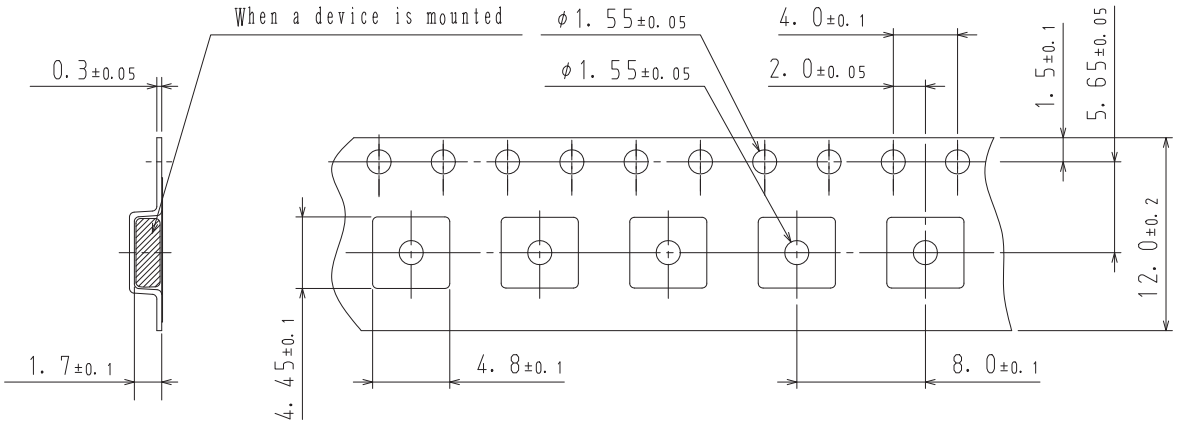


NOTE (1)
The LEAD FREE ※ description shows that the surface treatment of the terminal is lead free.

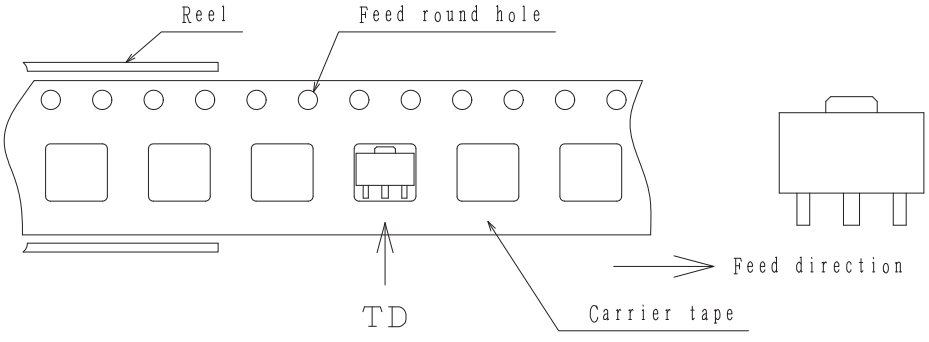
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

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



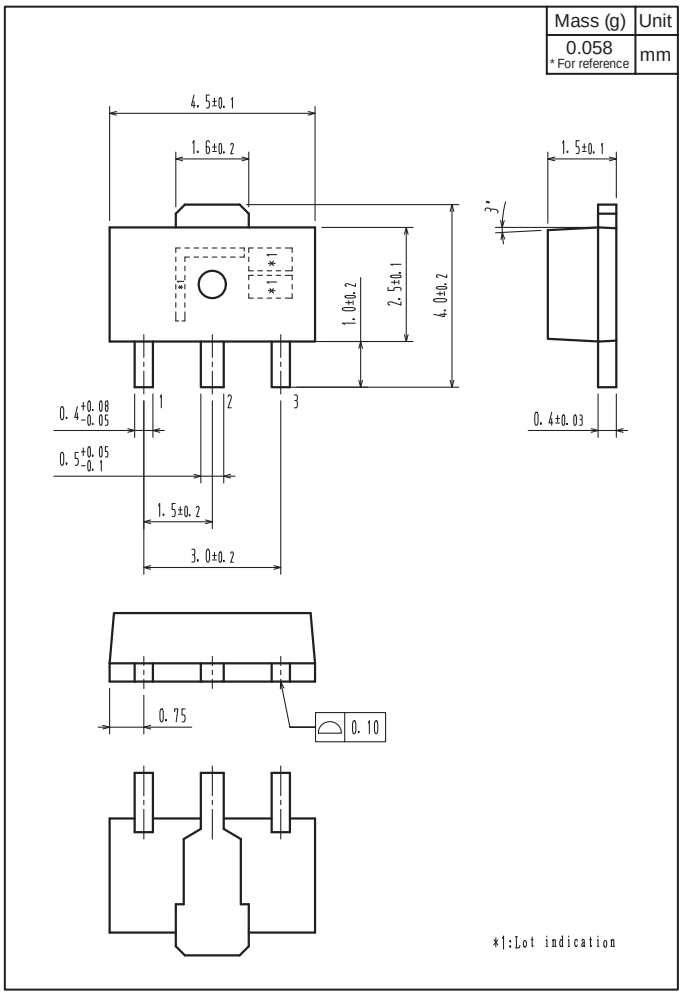
2-2. Device placement direction



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

Outline Drawing

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



Land Pattern Example