



# 2SC5551A

## RF Transistor

30V, 300mA,  $f_T=3.5\text{GHz}$ , NPN Single PCP

ON Semiconductor®

<http://onsemi.com>

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

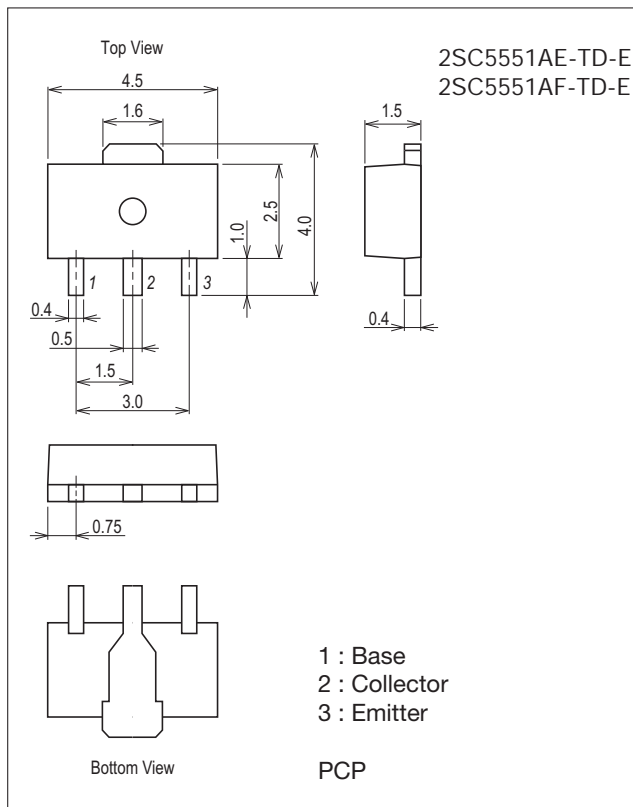
Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	$V_{CBO}$		40	V
Collector-to-Emitter Voltage	$V_{CEO}$		30	V
Emitter-to-Base Voltage	$V_{EBO}$		2	V
Collector Current	$I_C$		300	mA
Collector Current (Pulse)	$I_{CP}$		600	mA
Collector Dissipation	$P_C$	When mounted on ceramic substrate (250mm <sup>2</sup> ×0.8mm)	1.3	W
Junction Temperature	$T_j$		150	°C
Storage Temperature	$T_{stg}$		-55 to +150	°C

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

### Package Dimensions

unit : mm (typ)

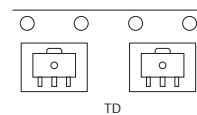
7007B-004



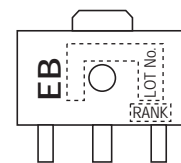
### Product & Package Information

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

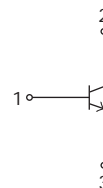
### Packing Type: TD



### Marking



### Electrical Connection



# 2SC5551A

## Electrical Characteristics at Ta=25°C

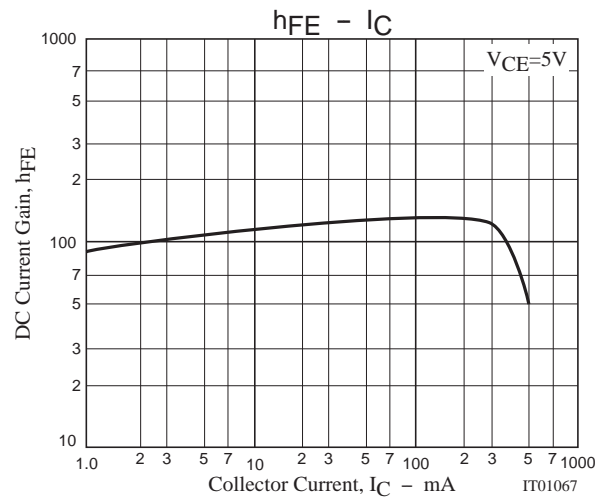
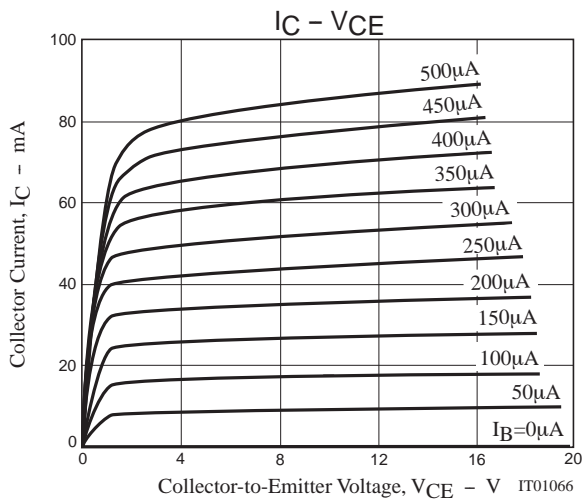
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=20V, I_E=0A$			1.0	$\mu A$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=1V, I_C=0A$			5.0	$\mu A$
DC Current Gain	$h_{FE1}$	$V_{CE}=5V, I_C=50mA$	90		270	
	$h_{FE2}$	$V_{CE}=5V, I_C=300mA$	20			
Gain-Bandwidth 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 :

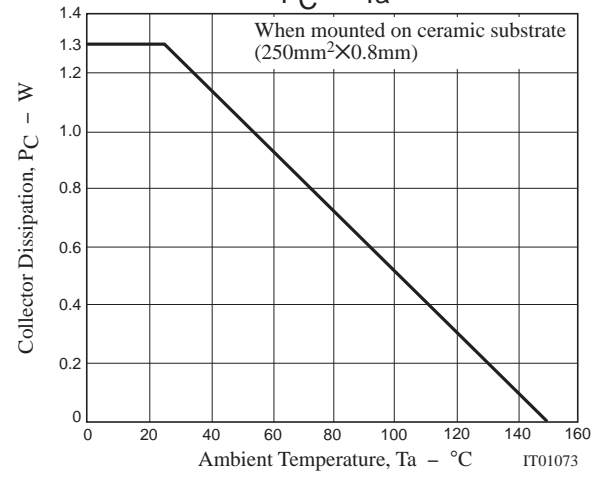
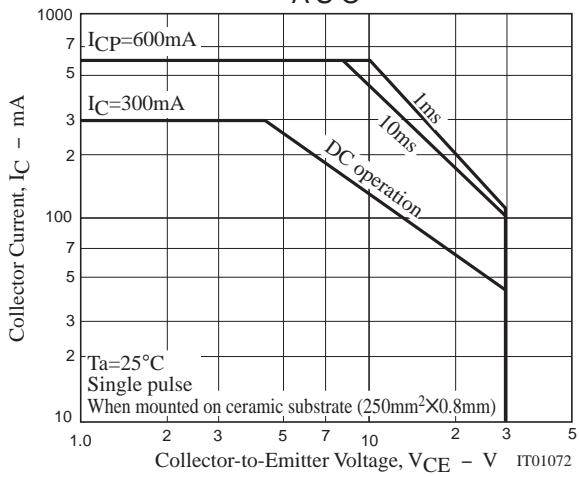
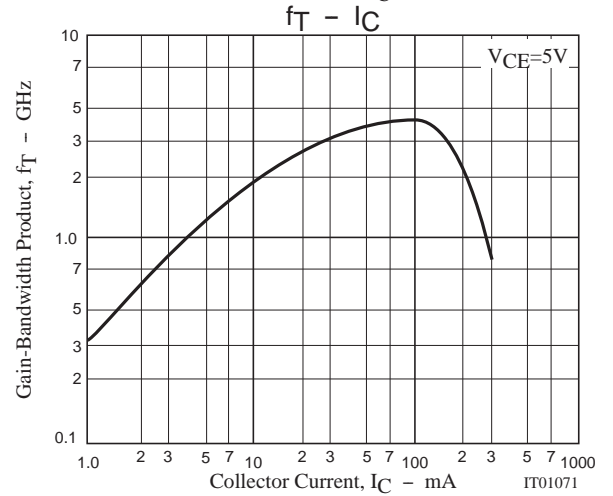
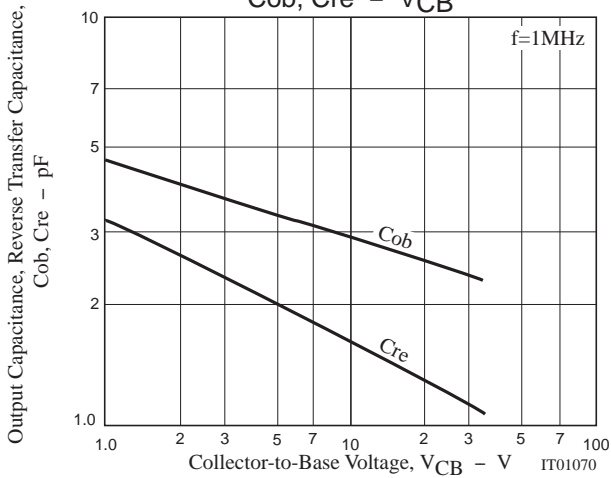
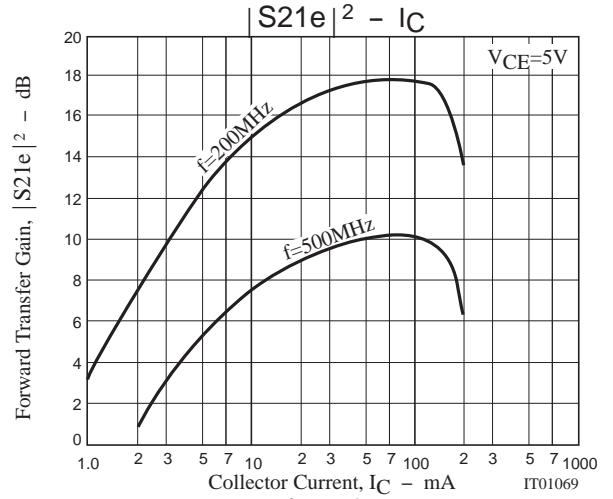
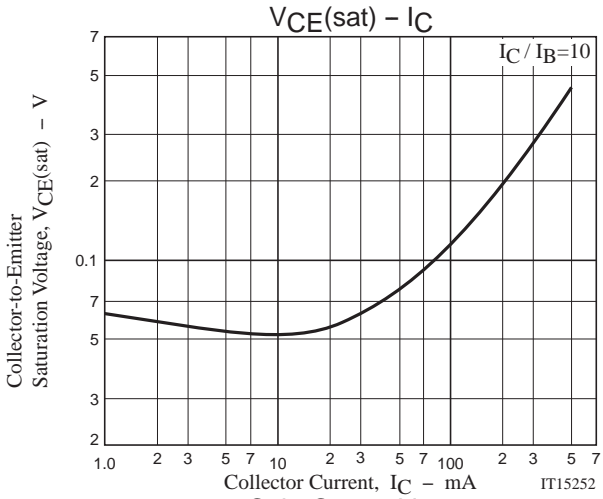
Rank	E	F
$h_{FE}$	90 to 180	135 to 270

## Ordering Information

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



# 2SC5551A



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## Bag Packing Specification

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

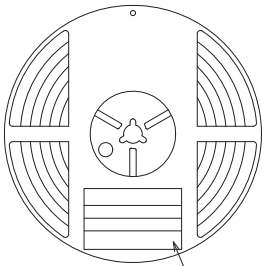
### 1. Packing Format

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)

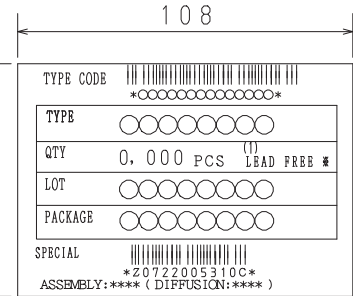
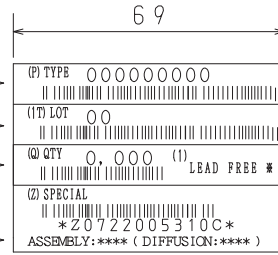
Outer box label  
It is a label at the time of factory shipments.  
The form of a label may change in physical distribution process.

#### Packing method



Reel label

Type No. →  
LOT No. →  
Quantity →  
Origin →



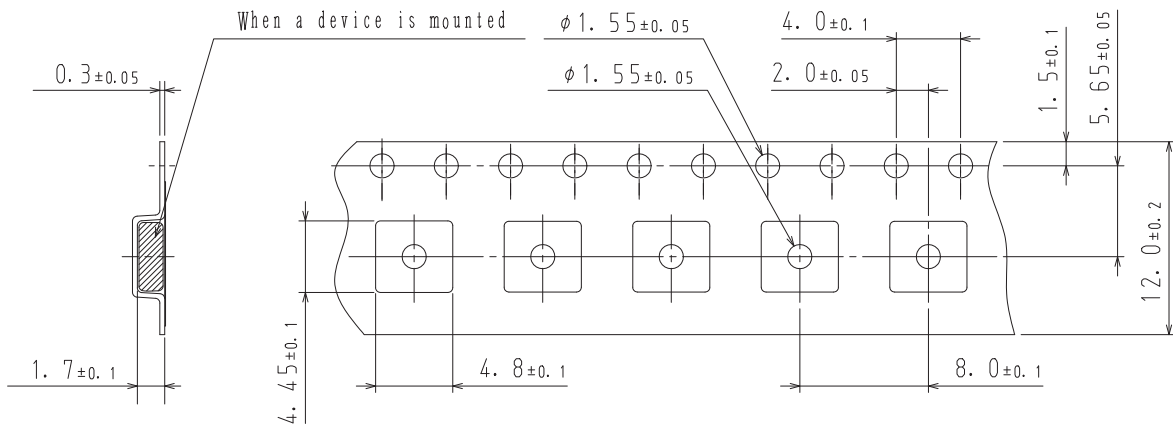
#### NOTE (1)

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

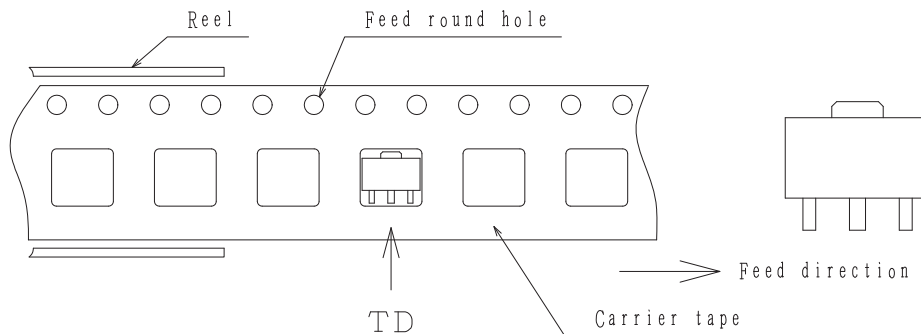
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

### 2. Taping configuration

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



#### 2-2. Device placement direction

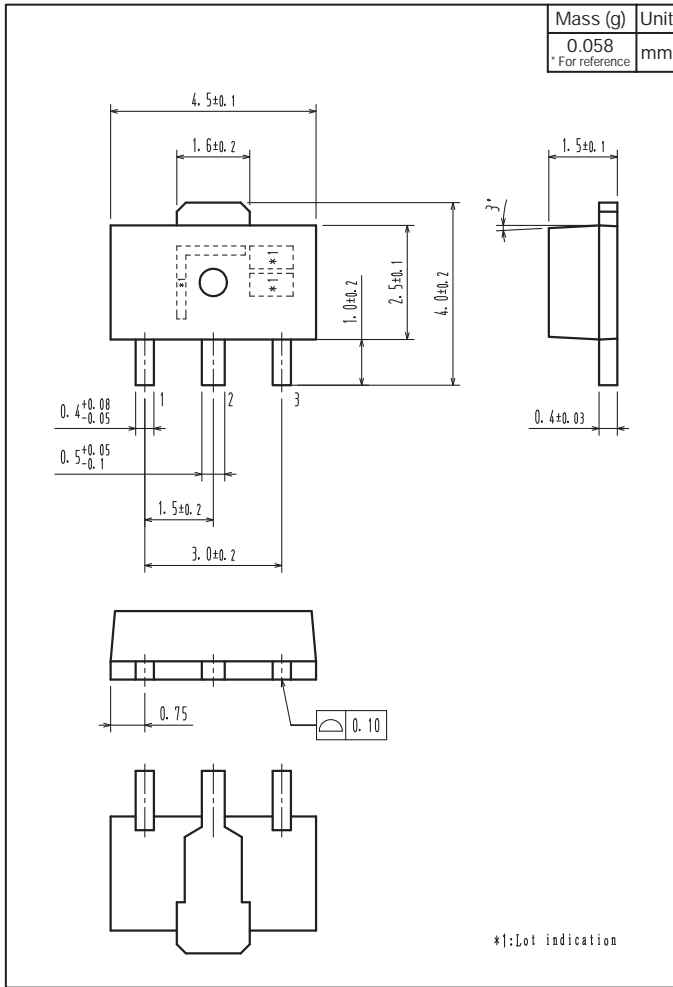


Those with pin 1 index on the feed hole side.....TD

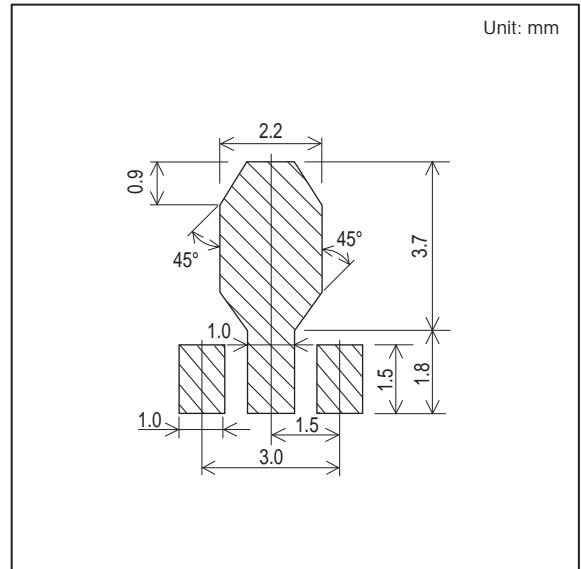
# 2SC5551A

## Outline Drawing

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



## Land Pattern Example



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