



SANYO Semiconductors

## DATA SHEET

# 2SC5551A

NPN Epitaxial Planar Silicon Transistor

## High-Frequency Medium-Output Amplifier Applications

### 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> X0.8mm)	1.3	W
Junction Temperature	$T_j$		150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$		-55 to +150	$^\circ\text{C}$

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

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=20\text{V}, I_E=0\text{A}$			1.0	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=1\text{V}, I_C=0\text{A}$			5.0	$\mu\text{A}$

Continued on next page.

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# 2SC551A

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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
DC Current Gain	hFE1	VCE=5V, IC=50mA	90		270	
	hFE2	VCE=5V, IC=300mA	20			
Gain-Bandwidth Product	fT	VCE=5V, IC=50mA		3.5		GHz
Output Capacitance	Cob	VCB=10V, f=1MHz		2.9	4.0	pF
Reverse Transfer Capacitance	Cre	VCB=10V, f=1MHz		1.5		pF
Collector-to-Emitter Saturation Voltage	VCE(sat)	IC=50mA, IB=5mA		0.07	0.3	V
Base-to-Emitter Saturation Voltage	VBE(sat)	IC=50mA, IB=5mA		0.8	1.2	V

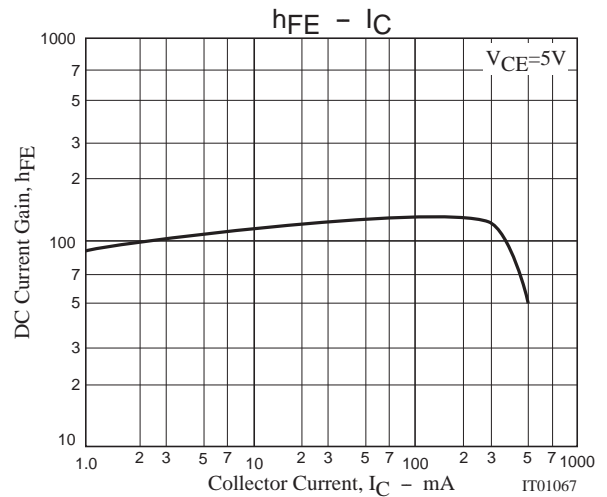
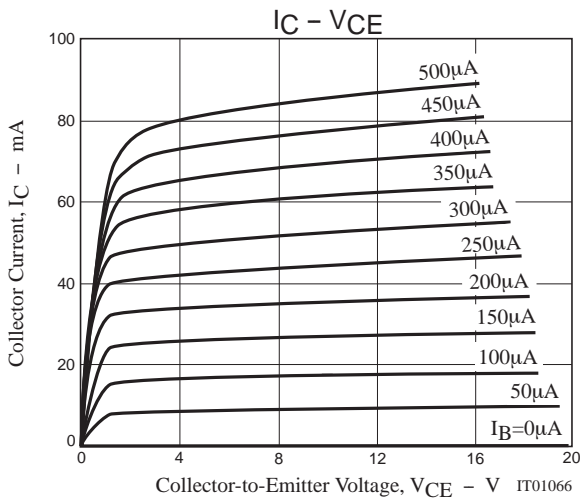
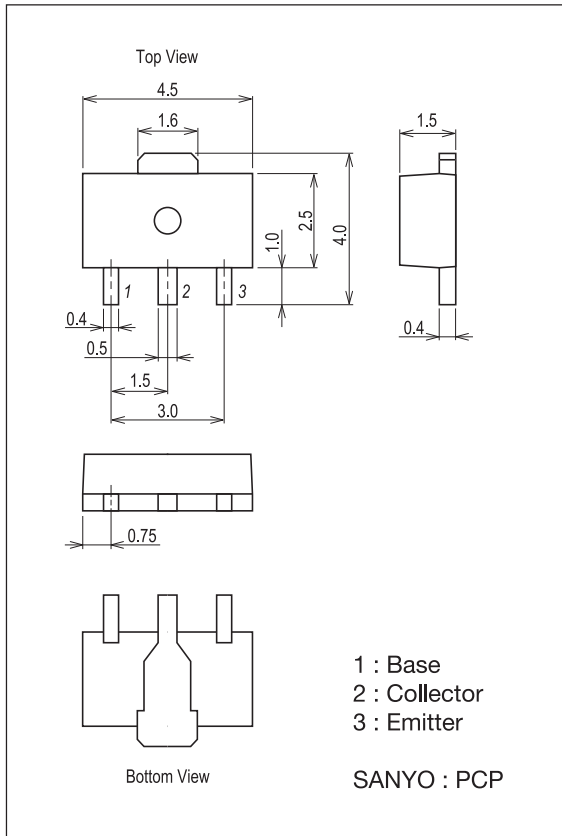
\* : The 2SC551A is classified by 50mA hFE as follows :

Marking	EB E	EB F
Rank	E	F
hFE	90 to 180	135 to 270

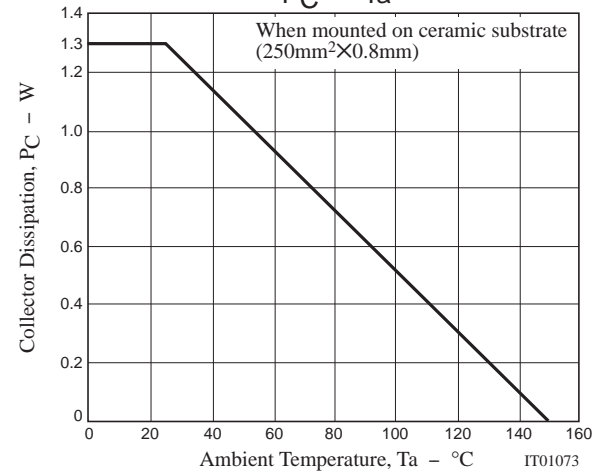
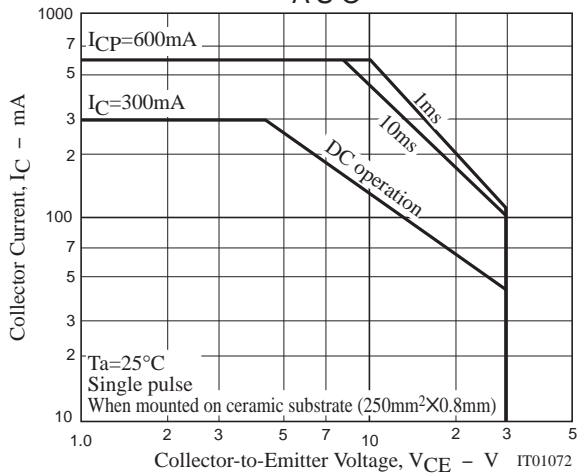
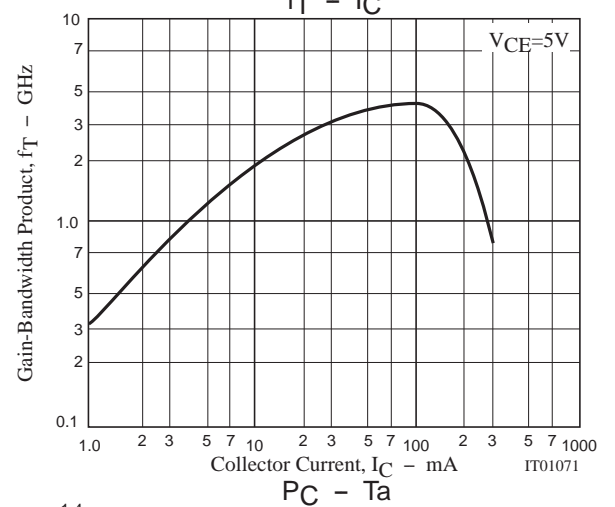
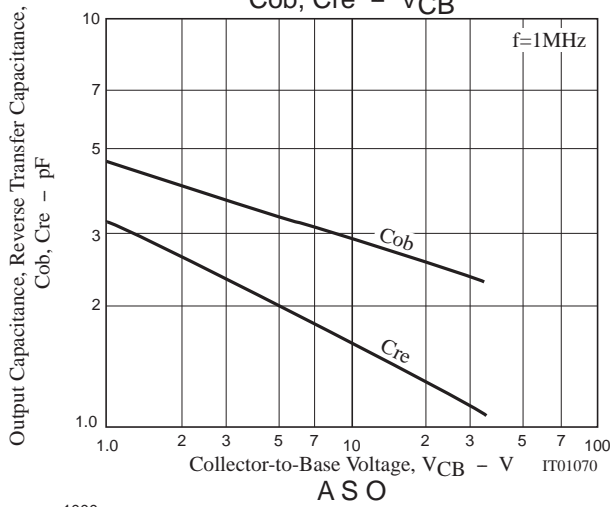
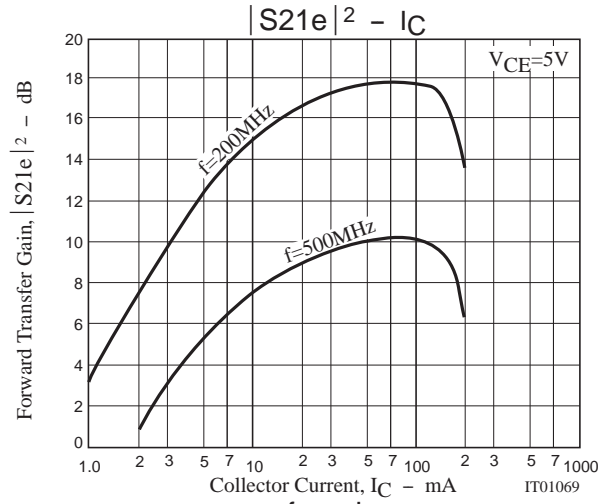
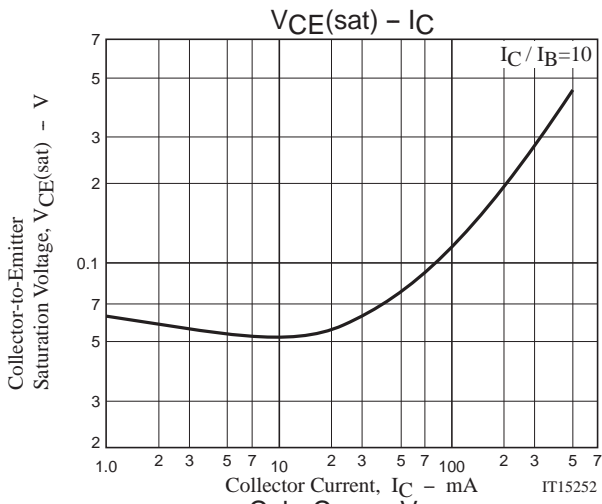
## Package Dimensions

unit : mm (typ)

7007B-004



# 2SC551A



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Телефон: 8 (812) 309-75-97 (многоканальный)

Факс: 8 (812) 320-03-32

Электронная почта: [ocean@oceanchips.ru](mailto:ocean@oceanchips.ru)

Web: <http://oceanchips.ru/>

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, д. 2, корп. 4, лит. А