



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_{CB0}		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 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	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=1\text{V}$, $I_C=0\text{A}$			5.0	μA

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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

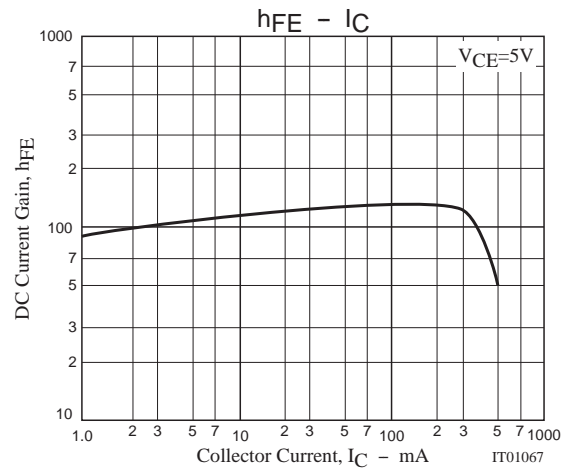
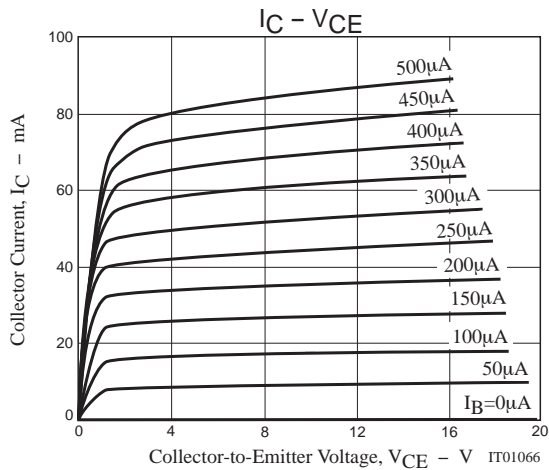
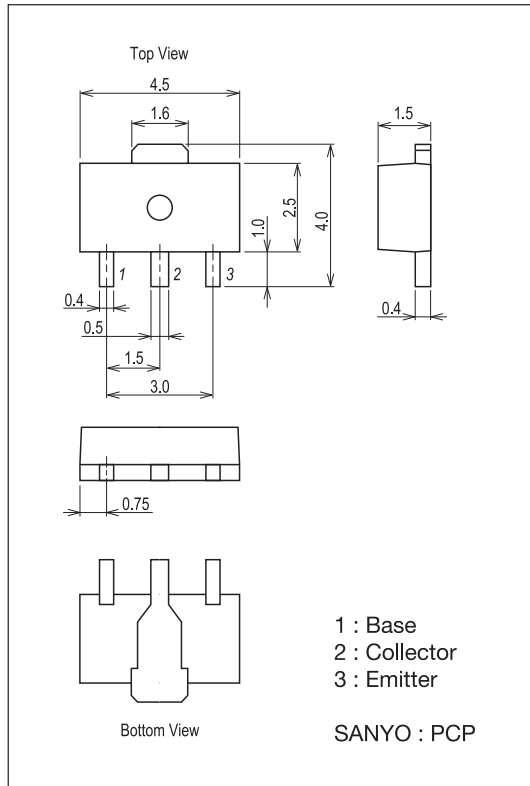
* : The 2SC5551A is classified by 50mA hFE as follows :

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

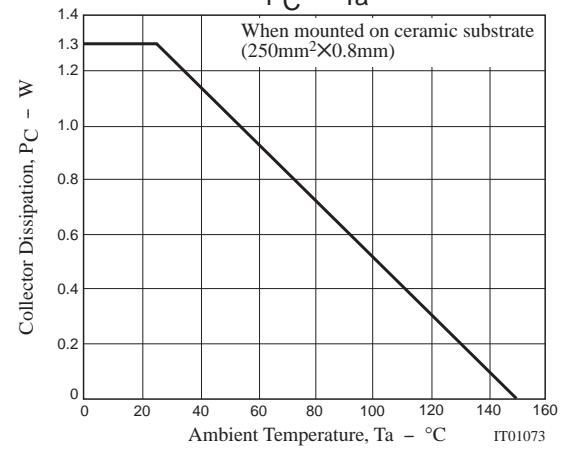
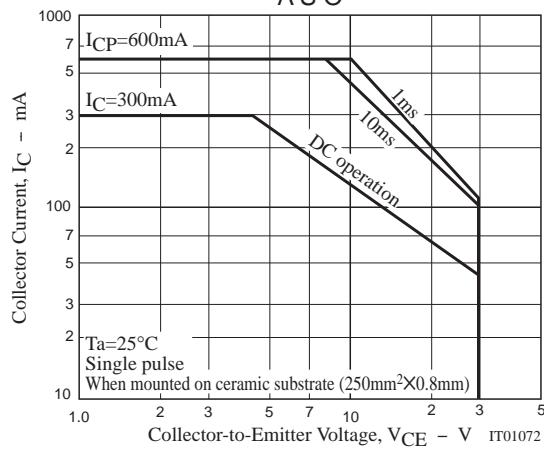
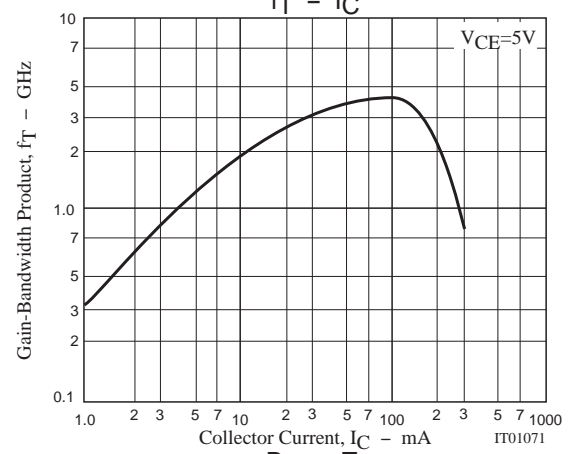
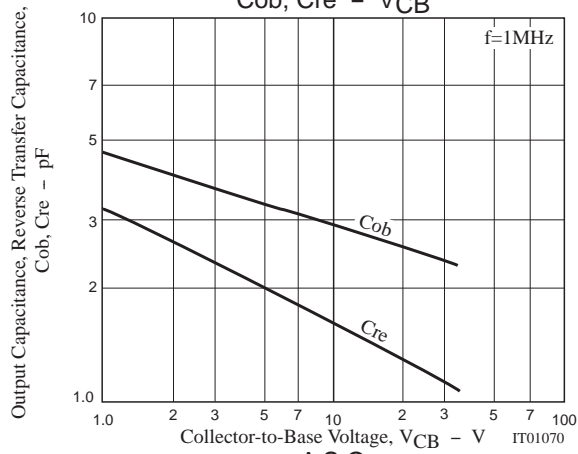
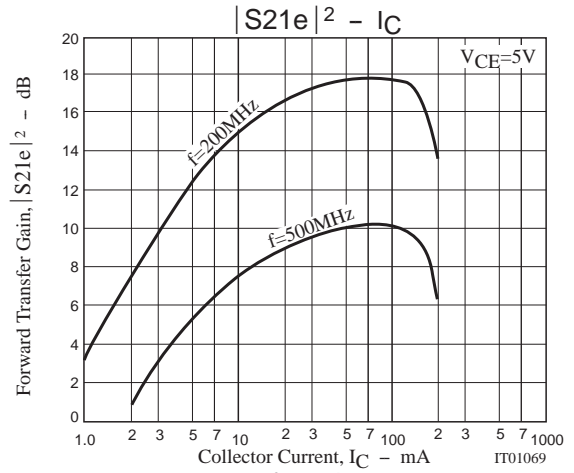
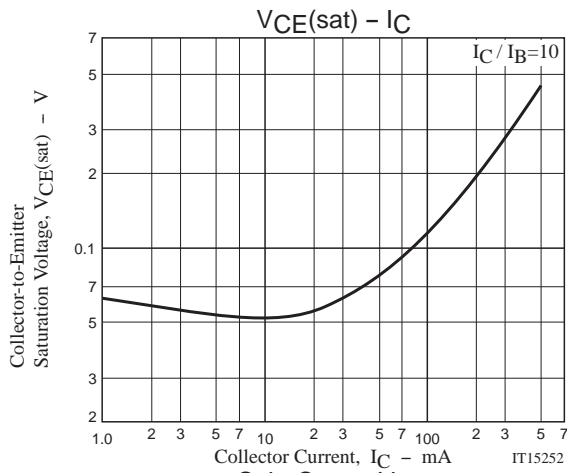
Package Dimensions

unit : mm (typ)

7007B-004



2SC551A



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