



**浩畅半导体**  
www.szhaochang.cn

**2N5551** TRANSISTOR (NPN)

TO-92 Plastic-Encapsulate Transistors

产  
品  
规  
格  
书

承  
认  
书

客户确认：

公司签章：

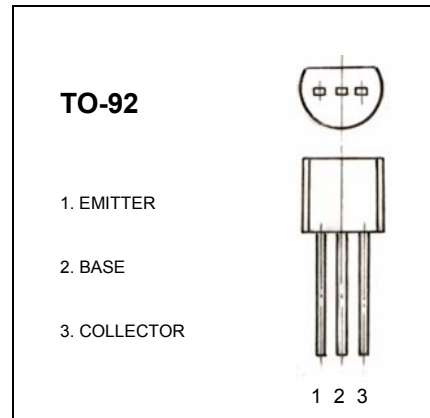
部门	工程部	品保部	采购部
签名			
日期			



**2N5551** TRANSISTOR (NPN)

**FEATURES**

- Switching and amplification in high voltage
- Applications such as telephony
- Low current(max. 600mA)
- High voltage(max.180V)



**MAXIMUM RATINGS (T<sub>A</sub>=25°C unless otherwise noted)**

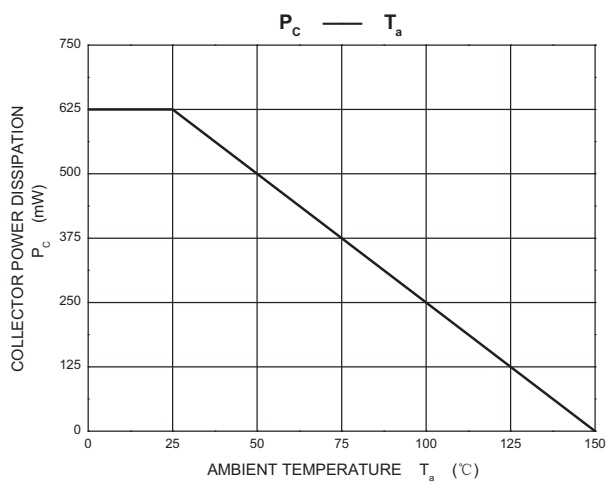
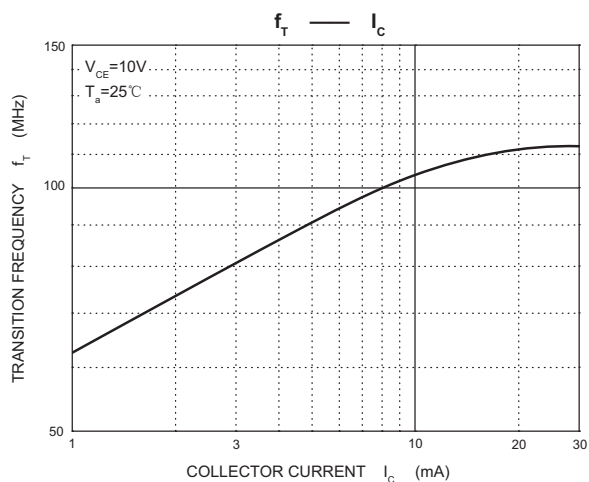
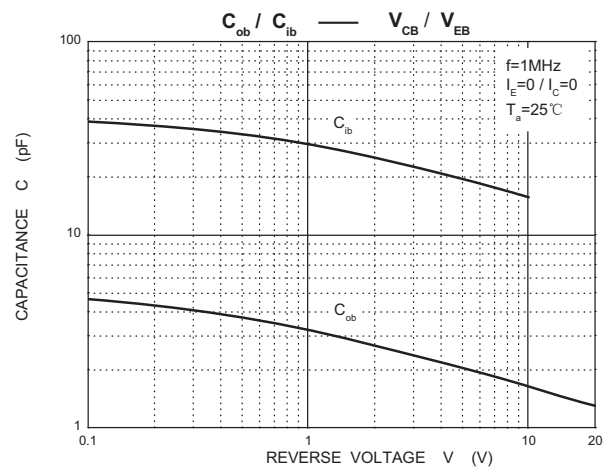
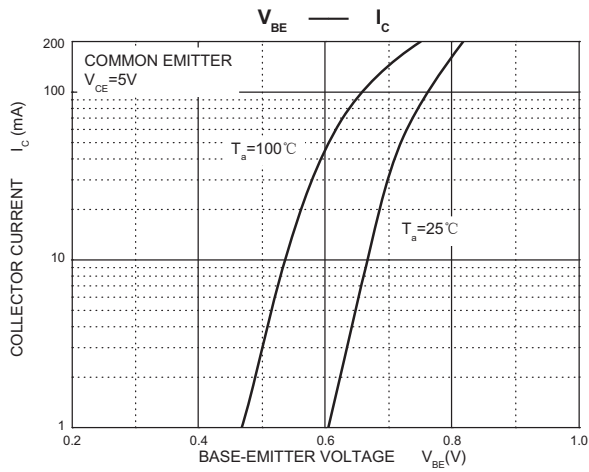
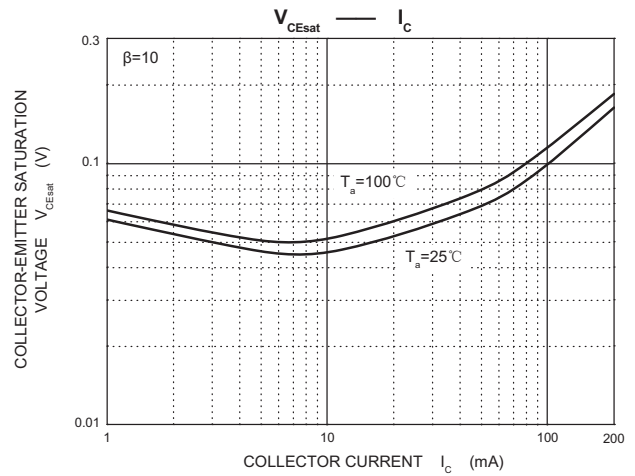
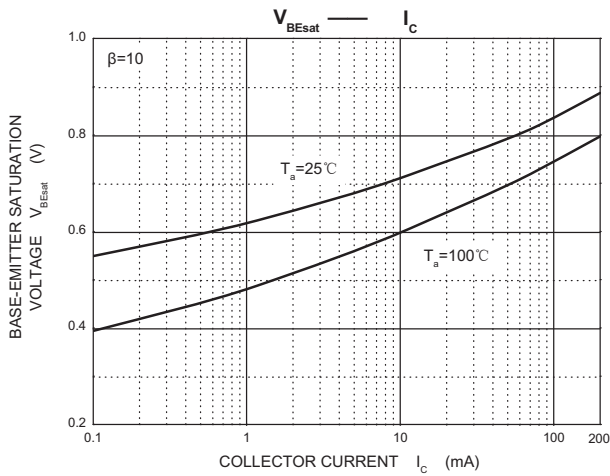
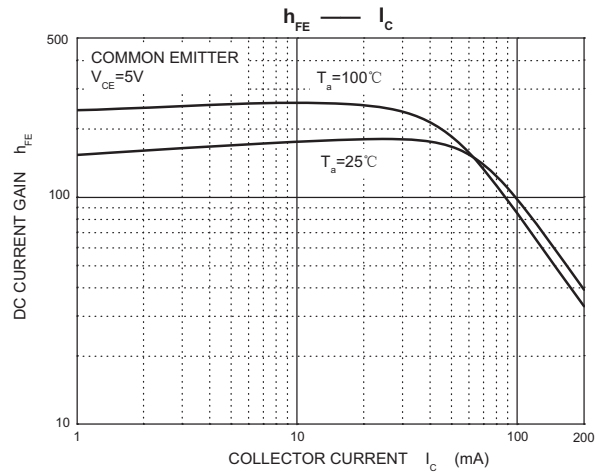
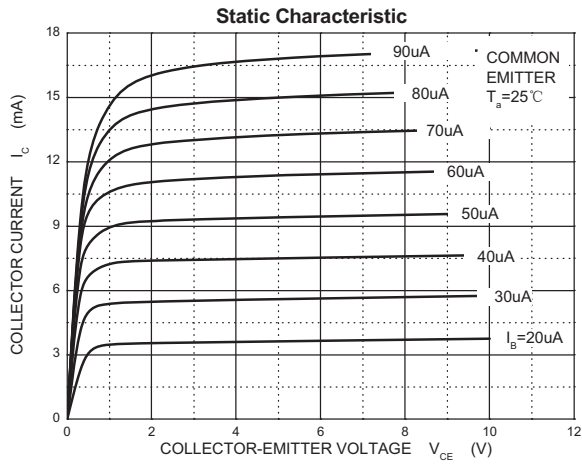
Symbol	Parameter	Value	Units
V <sub>CB0</sub>	Collector-Base Voltage	180	V
V <sub>CEO</sub>	Collector-Emitter Voltage	160	V
V <sub>EBO</sub>	Emitter-Base Voltage	6	V
I <sub>C</sub>	Collector Current -Continuous	0.6	A
P <sub>C</sub>	Collector Power Dissipation	0.625	W
T <sub>J</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature	-55-150	°C

**ELECTRICAL CHARACTERISTICS(T<sub>amb</sub>=25°C unless otherwise specified)**

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =100μA, I <sub>E</sub> =0	180			V
Collector-emitter breakdown voltage	V <sub>(BR)CEO</sub> *	I <sub>C</sub> = 1mA, I <sub>B</sub> =0	160			V
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> = 10μA, I <sub>C</sub> =0	6			V
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> = 120V, I <sub>E</sub> =0			50	nA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> = 4V, I <sub>C</sub> =0			50	nA
DC current gain	h <sub>FE1</sub> *	V <sub>CE</sub> =5V, I <sub>C</sub> =1mA	80			
	h <sub>FE2</sub> *	V <sub>CE</sub> =5V, I <sub>C</sub> =10mA	80		250	
	h <sub>FE3</sub>	V <sub>CE</sub> =5V, I <sub>C</sub> =50mA	30			
Collector-emitter saturation voltage	V <sub>CEsat</sub> *	I <sub>C</sub> =10mA, I <sub>B</sub> =1mA			0.15	V
		I <sub>C</sub> =50mA, I <sub>B</sub> =5mA			0.2	
Base-emitter saturation voltage	V <sub>BEsat</sub> *	I <sub>C</sub> =10mA, I <sub>B</sub> = 1mA			1	V
		I <sub>C</sub> =50mA, I <sub>B</sub> = 5mA			1	
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =10mA, f=100MHz	100		300	MHz
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1MHz			6	pF
Input capacitance	C <sub>ib</sub>	V <sub>BE</sub> =0.5V, I <sub>C</sub> =0, f=1MHz			20	pF
Noise figure	NF	V <sub>CE</sub> =5V, I <sub>C</sub> =0.25mA, f=10Hz to 15.7KHz, R <sub>S</sub> =1kΩ			8	dB

\*Pulse test

# Typical Characteristics

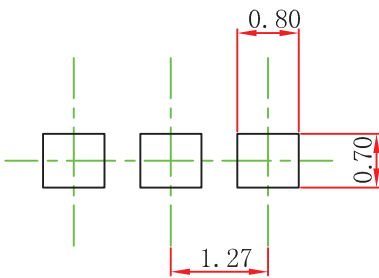


## TO-92 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	3.300	3.700	0.130	0.146
A1	1.100	1.400	0.043	0.055
b	0.380	0.550	0.015	0.022
c	0.360	0.510	0.014	0.020
D	4.300	4.700	0.169	0.185
D1	3.430		0.135	
E	4.300	4.700	0.169	0.185
e	1.270 TYP		0.050 TYP	
e1	2.440	2.640	0.096	0.104
L	14.100	14.500	0.555	0.571
Φ		1.600		0.063
h	0.000	0.380	0.000	0.015

## TO-92 Suggested Pad Layout



### Note:

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05\text{mm}$ .
3. The pad layout is for reference purposes only.