

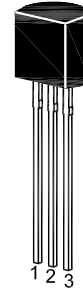
# 2N5550 / 2N5551

## NPN Silicon Epitaxial Planar Transistors

for general purpose, high voltage amplifier applications.

As complementary types the PNP transistors 2N5400 and 2N5401 are recommended.

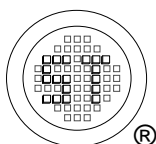
On special request, these transistors can be manufactured in different pin configurations.



1. Emitter 2. Base 3. Collector  
TO-92 Plastic Package

### Absolute Maximum Ratings ( $T_a = 25\text{ }^\circ\text{C}$ )

Parameter		Symbol	Value	Unit
Collector Base Voltage	2N5550	$V_{CBO}$	160	V
	2N5551		180	
Collector Emitter Voltage	2N5550	$V_{CEO}$	140	V
	2N5551		160	
Emitter Base Voltage		$V_{EBO}$	6	V
Collector Current		$I_C$	600	mA
Power Dissipation		$P_{tot}$	625	mW
Junction Temperature		$T_j$	150	$^\circ\text{C}$
Storage Temperature Range		$T_{stg}$	- 55 to + 150	$^\circ\text{C}$



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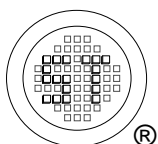


ISO/TS 16949 : 2009 Certificate No. 160713060  
ISO14001 : 2004 Certificate No. 71116  
ISO 9001 : 2008 Certificate No. 50719410  
BS-OHSAS 18001 : 2007 Certificate No. 71116  
IECQ QC 080000 Certificate No. PRC-1694-14831

# 2N5550 / 2N5551

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

Parameter		Symbol	Min.	Max.	Unit
DC Current Gain at $V_{CE} = 5\text{ V}$ , $I_C = 1\text{ mA}$  at $V_{CE} = 5\text{ V}$ , $I_C = 10\text{ mA}$  at $V_{CE} = 5\text{ V}$ , $I_C = 50\text{ mA}$	2N5550	$h_{FE}$	60	-	-
	2N5551	$h_{FE}$	80	-	-
	2N5550	$h_{FE}$	60	250	-
	2N5551	$h_{FE}$	80	250	-
	2N5550	$h_{FE}$	20	-	-
	2N5551	$h_{FE}$	30	-	-
Collector Base Cutoff Current at $V_{CB} = 100\text{ V}$ at $V_{CB} = 120\text{ V}$	2N5550	$I_{CBO}$	-	100	nA
	2N5551		-	50	
Emitter Base Cutoff Current at $V_{EB} = 4\text{ V}$		$I_{EBO}$	-	50	nA
Collector Base Breakdown Voltage at $I_C = 100\text{ }\mu\text{A}$	2N5550	$V_{(BR)CBO}$	160	-	V
	2N5551		180	-	
Collector Emitter Breakdown Voltage at $I_C = 1\text{ mA}$	2N5550	$V_{(BR)CEO}$	140	-	V
	2N5551		160	-	
Emitter Base Breakdown Voltage at $I_E = 10\text{ }\mu\text{A}$		$V_{(BR)EBO}$	6	-	V
Collector Emitter Saturation Voltage at $I_C = 10\text{ mA}$ , $I_B = 1\text{ mA}$ at $I_C = 50\text{ mA}$ , $I_B = 5\text{ mA}$	2N5550	$V_{CE(sat)}$	-	0.15	V
	2N5551		-	0.25	
	2N5551		-	0.2	
Base Emitter Saturation Voltage at $I_C = 10\text{ mA}$ , $I_B = 1\text{ mA}$ at $I_C = 50\text{ mA}$ , $I_B = 5\text{ mA}$	2N5550	$V_{BE(sat)}$	-	1	V
	2N5551		-	1.2	
	2N5551		-	1	
Gain Bandwidth Product at $V_{CE} = 10\text{ V}$ , $I_C = 10\text{ mA}$ , $f = 100\text{ MHz}$		$f_T$	100	300	MHz
Collector Output Capacitance at $V_{CB} = 10\text{ V}$ , $f = 1\text{ MHz}$		$C_{ob}$	-	6	pF



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SGS

Fig. 1  $P_C - T_a$

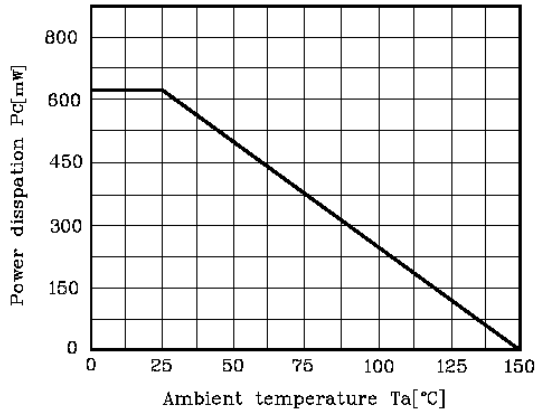


Fig. 2  $I_C - V_{BE}$

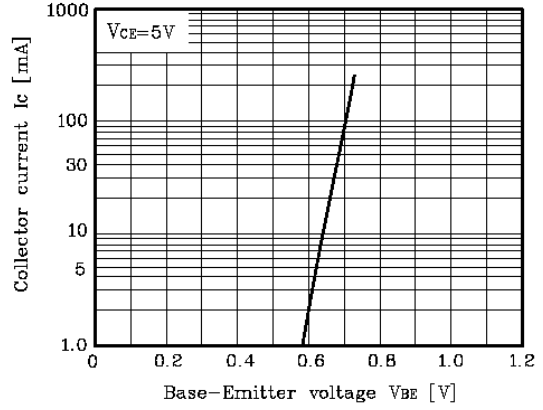


Fig. 3  $f_T - I_C$

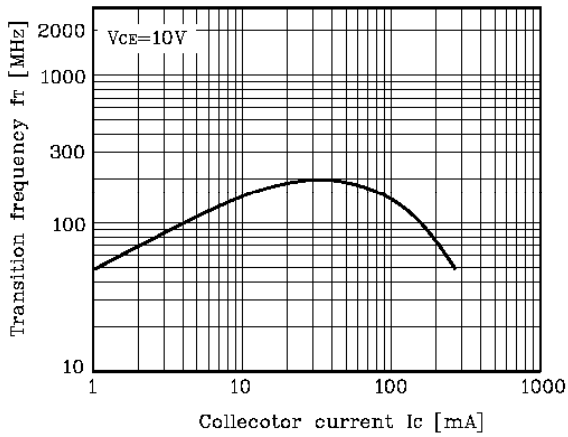


Fig. 4  $V_{CE(sat)}, V_{BE(sat)} - I_C$

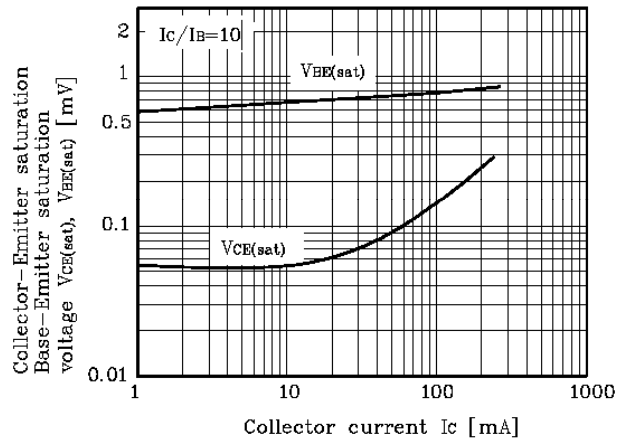
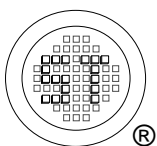
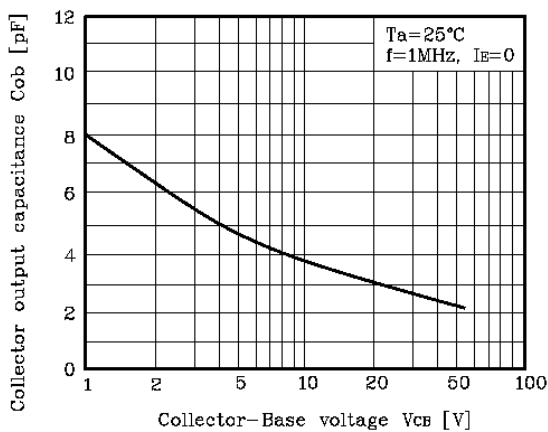


Fig. 5  $C_{ob} - V_{CB}$



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