

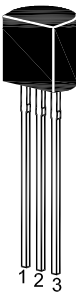
ST 2N5550 / 2N5551

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 °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	°C
Storage Temperature Range		T_{stg}	- 55 to + 150	°C

ST 2N5550 / 2N5551

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

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

Fig. 1 $P_C - T_a$

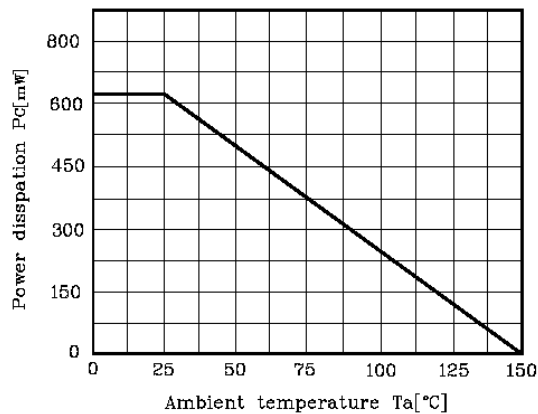


Fig. 2 $I_C - V_{BE}$

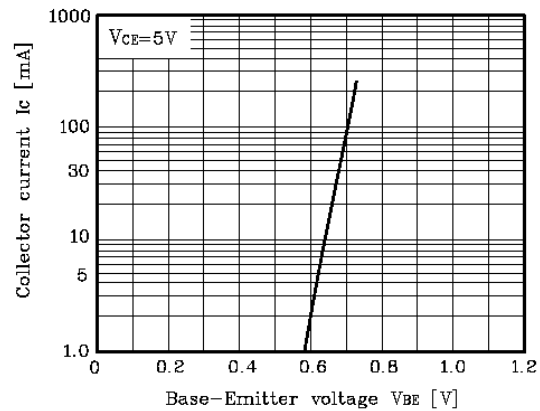


Fig. 3 $f_T - I_C$

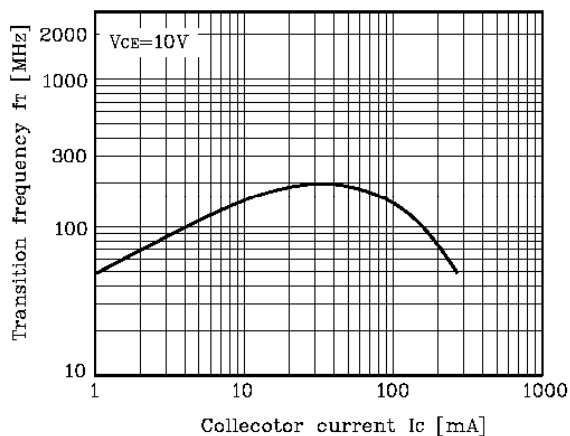


Fig. 4 $V_{CE(sat)}, V_{BE(sat)} - I_C$

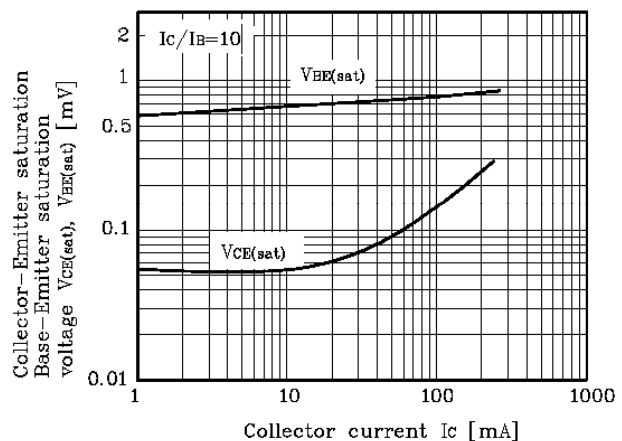


Fig. 5 $C_{ob} - V_{CB}$

