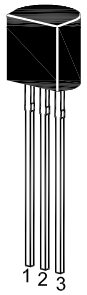
ST 2N5550 / 2N5551

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 2N5551	V_{CBO}	160 180	V
Collector Emitter Voltage	2N5550 2N5551	V_{CEO}	140 160	V
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

Characteristics at T_a = 25 °C

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

Fig. 1 P_C-T_a

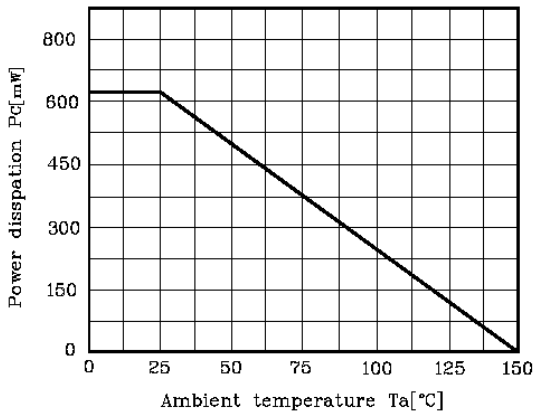


Fig. 2 I_C - V_{BE}

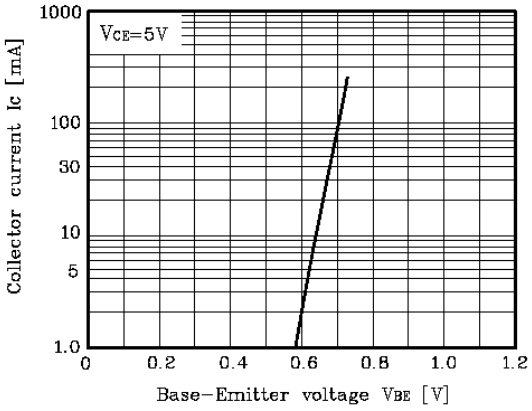


Fig. 3 f_T - I_C

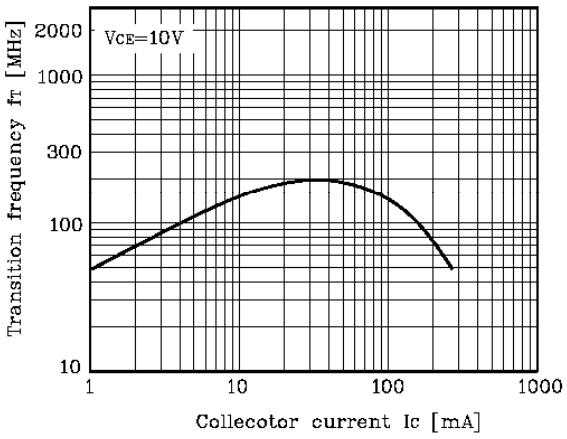


Fig. 4 $V_{CE(sat)}$, $V_{BE(sat)}$- I_C

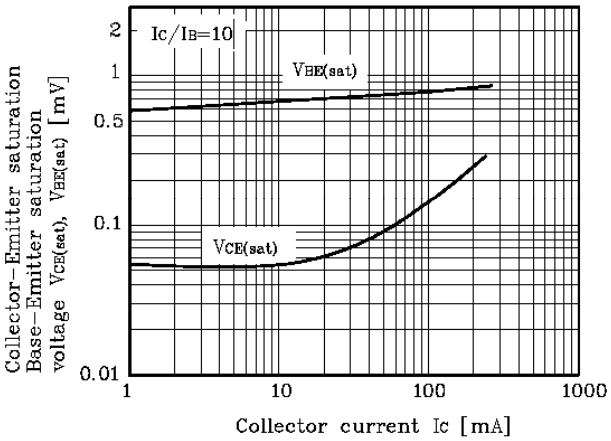


Fig. 5 C_{ob} - V_{CB}