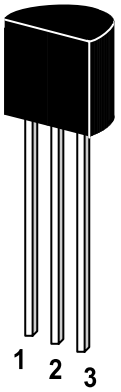
2N5400 / 2N5401

PNP Silicon Epitaxial Planar Transistors
for general purpose, high voltage amplifier applications.

As complementary types the NPN transistors
ST 2N5550 and ST 2N5551 are recommended.

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



1. Emitter 2. Base 3. Collector

TO-92 Plastic Package
Weight approx. 0.19g

Absolute Maximum Ratings (T_a = 25°C)

		Symbol	Value	Unit
Collector Emitter Voltage	ST 2N5400	$-V_{CEO}$	120	V
	ST 2N5401	$-V_{CEO}$	150	V
Collector Base Voltage	ST 2N5400	$-V_{CBO}$	130	V
	ST 2N5401	$-V_{CBO}$	160	V
Emitter Base Voltage		$-V_{EBO}$	5	V
Collector Current		$-I_C$	600	mA
Power Dissipation		P_{tot}	625[1)]	mW
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_S	-55 to +150	°C

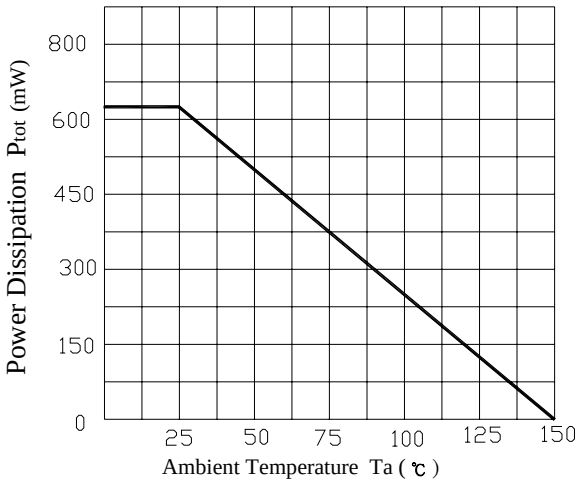
[1)] Valid provided that leads are kept at ambient temperature at a distance of 2 mm from case.

Characteristics at T_{amb}=25 °C

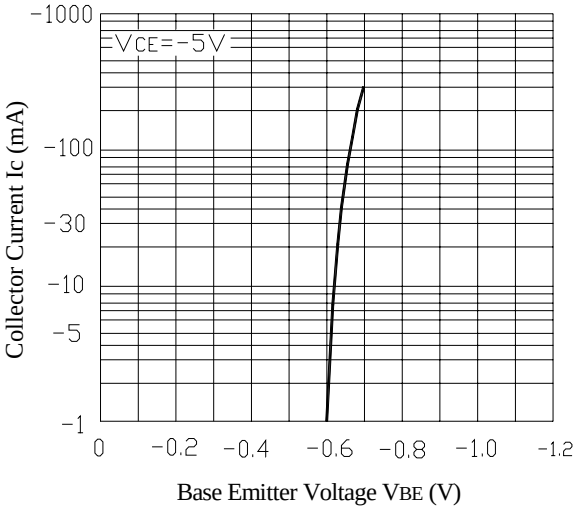
		Symbol	Min.	Typ.	Max.	Unit
DC Current Gain						
at-V_{CE}=5V, -I_C=1mA	ST 2N5400	h_{FE}	30	-	-	-
	ST 2N5401	h_{FE}	50	-	-	-
at -V_{CE}=5V, -I_C=10mA	ST 2N5400	h_{FE}	40	-	180	-
	ST 2N5401	h_{FE}	60	-	240	-
at -V_{CE}=5V, -I_C=50mA	ST 2N5400	h_{FE}	40	-	-	-
	ST 2N5401	h_{FE}	50	-	-	-
Collector Emitter Breakdown Voltage						
at -I_C=1mA	ST 2N5400	$-V_{(BR)CEO}$	120	-	-	V
	ST 2N5401	$-V_{(BR)CEO}$	150	-	-	V
Collector Base Breakdown Voltage						
at -I_C=100µA	ST 2N5400	$-V_{(BR)CBO}$	130	-	-	V
	ST 2N5401	$-V_{(BR)CBO}$	160	-	-	V
Emitter Base Breakdown Voltage						
at -I_E=10µA		$-V_{(BR)EBO}$	5	-	-	V
Collector Cutoff Current						
at -V_{CB}=100V	ST 2N5400	$-I_{CBO}$	-	-	100	nA
at -V_{CB}=120V	ST 2N5401	$-I_{CBO}$	-	-	50	nA
Emitter Cutoff Current						
at -V_{EB}=3V		$-I_{EBO}$	-	-	50	nA
Collector Saturation Voltage						
at -I_C=10mA, -I_B=1mA		$-V_{CE\ sat}$	-	-	0.2	V
at -I_C=50mA, -I_B=5mA		$-V_{CE\ sat}$	-	-	0.5	V
Base Saturation Voltage						
at -I_C=10mA, -I_B=1mA		$-V_{BEsat}$	-	-	1	V
at -I_C=50mA, -I_B=5mA		$-V_{BEsat}$	-	-	1	V
Gain Bandwidth Product						
at -V_{CE}=10V,-I_C=10mA,f=100MHz	ST 2N5400	f_T	100	-	400	MHz
	ST 2N5401	f_T	100	-	400	MHz
Collector Base Capacitance						
at -V_{CB}=10V, f=1MHz		C_{CBO}	-	-	6	pF
Noise Figure						
at -V_{CE}=5V,-I_C=200µA,R_G=2kΩ,f=30H_Z…15kH_Z		F	-	-	8	dB
Thermal Resistance Junction to Ambient		R_{thA}	-	-	200[1)]	K/W

[1)] Valid provided that leads are kept at ambient temperature at a distance of 2 mm from case.

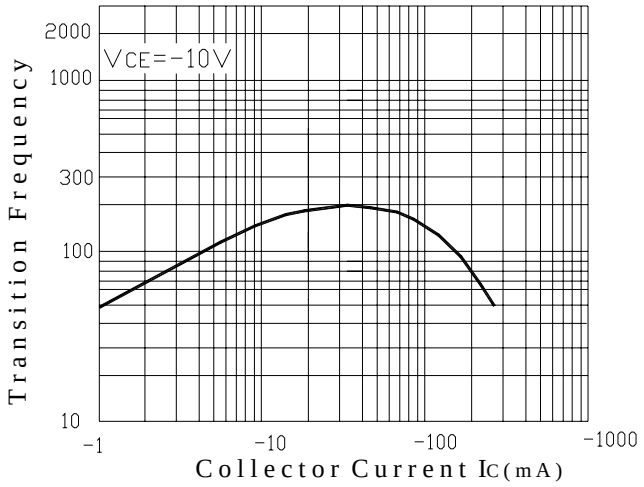
Ptot-Ta



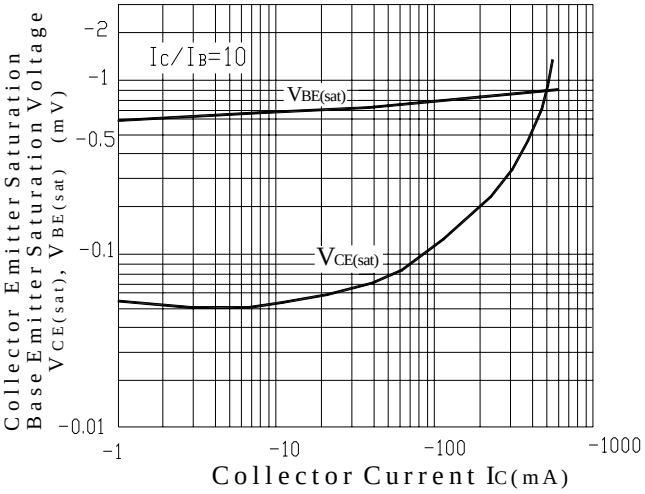
IC - VBE



fT - IC



VCE(sat), VBE(sat) - I C



Cob - VCB