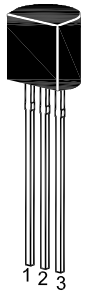
2N5400 / 2N5401

PNP Silicon Epitaxial Planar Transistors

for general purpose, high voltage amplifier applications.

As complementary types the NPN transistors 2N5550 and 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

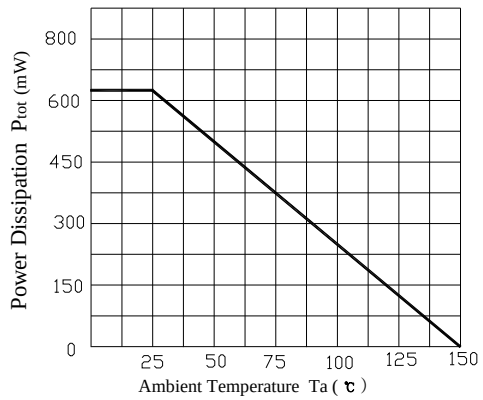
Absolute Maximum Ratings (T_a = 25 °C)

Parameter		Symbol	Value	Unit
Collector Base Voltage	2N5400 2N5401	$-V_{CBO}$	130 160	V
Collector Emitter Voltage	2N5400 2N5401	$-V_{CEO}$	120 150	V
Emitter Base Voltage		$-V_{EBO}$	5	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

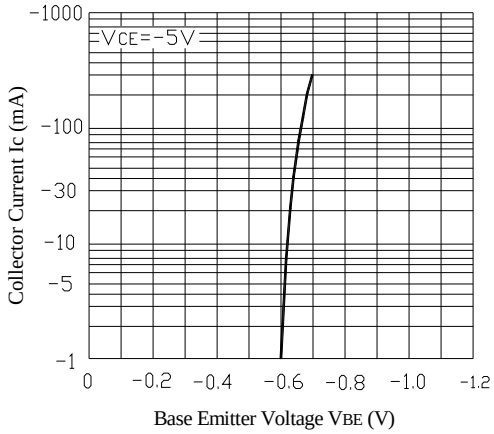
Characteristics at T_a = 25 °C

Parameter		Symbol	Min.	Max.	Unit
DC Current Gain					
at $-V_{CE}$ = 5 V, $-I_C$ = 1 mA	2N5400	h_{FE}	30	-	-
	2N5401	h_{FE}	50	-	-
at $-V_{CE}$ = 5 V, $-I_C$ = 10 mA	2N5400	h_{FE}	40	180	-
	2N5401	h_{FE}	60	240	-
at $-V_{CE}$ = 5 V, $-I_C$ = 50 mA	2N5400	h_{FE}	40	-	-
	2N5401	h_{FE}	50	-	-
Collector Base Cutoff Current					
at $-V_{CB}$ = 100 V	2N5400	$-I_{CBO}$	-	100	nA
at $-V_{CB}$ = 120 V	2N5401		-	50	
Emitter Base Cutoff Current					
at $-V_{EB}$ = 3 V		$-I_{EBO}$	-	50	nA
Collector Base Breakdown Voltage					
at $-I_C$ = 100 µA	2N5400	$-V_{(BR)CBO}$	130	-	V
	2N5401		160	-	
Collector Emitter Breakdown Voltage					
at $-I_C$ = 1 mA	2N5400	$-V_{(BR)CEO}$	120	-	V
	2N5401		150	-	
Emitter Base Breakdown Voltage					
at $-I_E$ = 10 µA		$-V_{(BR)EBO}$	5	-	V
Collector Emitter Saturation Voltage					
at $-I_C$ = 10 mA, $-I_B$ = 1 mA		$-V_{CE(sat)}$	-	0.2	V
at $-I_C$ = 50 mA, $-I_B$ = 5 mA			-	0.5	
Base Emitter Saturation Voltage					
at $-I_C$ = 10 mA, $-I_B$ = 1 mA		$-V_{BE(sat)}$	-	1	V
at $-I_C$ = 50 mA, $-I_B$ = 5 mA			-	1	
Gain Bandwidth Product					
at $-V_{CE}$ = 10 V, $-I_C$ = 10 mA, f = 100 MHz		f_T	100	400	MHz
Collector Output Capacitance					
at $-V_{CB}$ = 10 V, f = 1 MHz		C_{ob}	-	6	pF

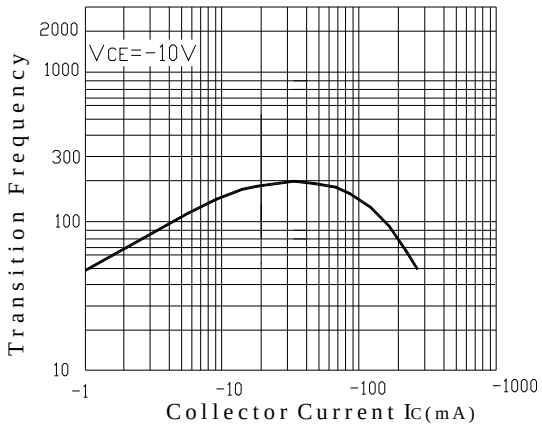
Ptot-Ta



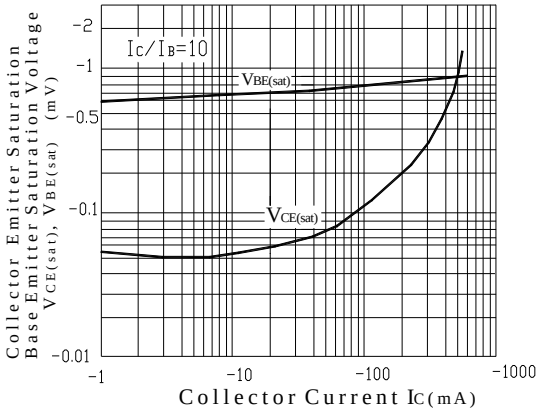
IC - VBE



fT - IC



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



Cob - VCB