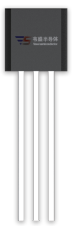
2N5401 TRANSISTOR (PNP)



TO-92

1.EMITTER
2.COLLECTOR
3.BASE

FEATURES

- Switching and Amplification in High Voltage
- Applications such as Telephony
- Low Current
- High Voltage

ORDERING INFORMATION

Part Number	Package	Packing Method	Pack Quantity
2N5401	TO-92	Bulk	1000pcs/Bag
2N5401-TA	TO-92	Tape	2000pcs/Box

MAXIMUM RATINGS (T_a=25 ℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-160	V
V_{CEO}	Collector-Emitter Voltage	-150	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-0.6	A
P_C	Collector Power Dissipation	625	mW
R_{KJA}	Thermal Resistance From Junction To Ambient	200	℃ /W
T_J,T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	℃

T_a=25℃ unless otherwise specified

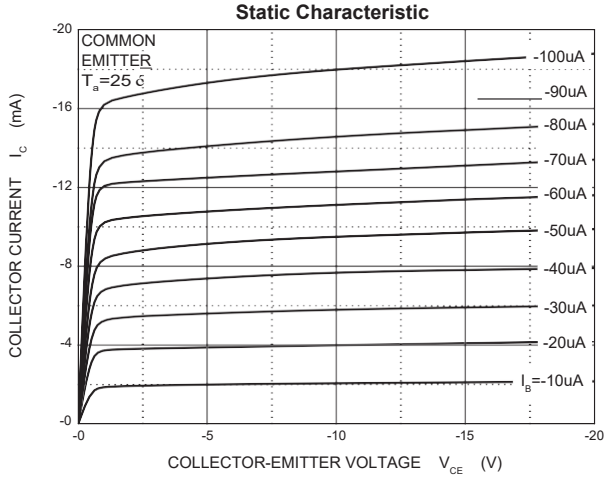
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C= -0.1mA,I_E=0	-160			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=-1mA,I_B=0	-150			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=-0.01mA,I_C=0	-5			V
Collector cut-off current	I_{CBO}	V_{CB}=-120V,I_E=0			-50	nA
Emitter cut-off current	I_{EBO}	V_{EB}=-3V,I_C=0			-50	nA
DC current gain	$h_{FE(1)}$	V_{CE}=-5V, I_C=-1mA	80			
	$h_{FE(2)}$	V_{CE}=-5V, I_C=-10mA	100		300	
	$h_{FE(3)}$	V_{CE}=-5V, I_C=-50mA	50			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-50mA,I_B=-5mA			-0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=-50mA,I_B=-5mA			-1	V
Transition frequency	f_T	V_{CE}=-5V,I_C=-10mA, f =30MHz	100		300	MHz

*Pulse test: pulse width ≤300μs, duty cycle≤ 2.0%.

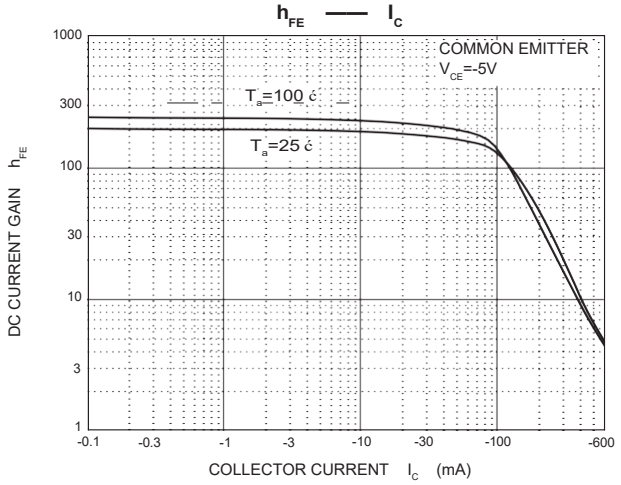
CLASSIFICATION OF $h_{FE(2)}$

RANK	A	B	C
RANGE	100-150	150-200	200-300

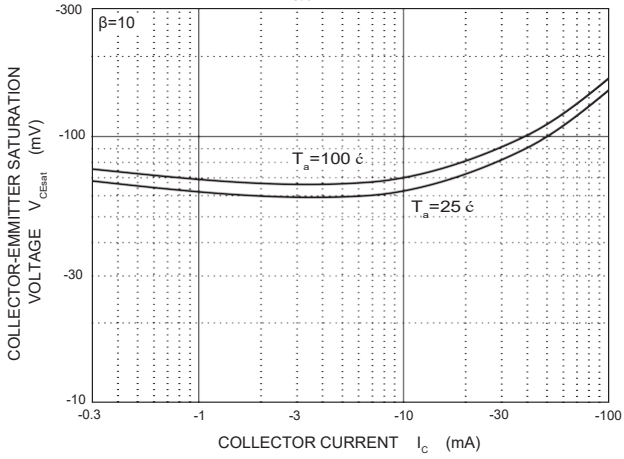
Static Characteristic



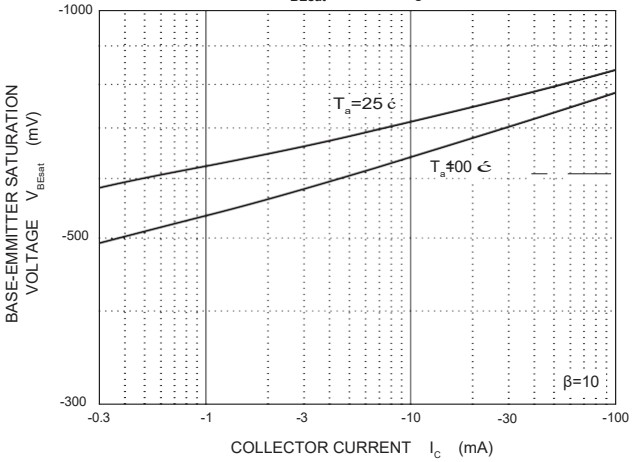
h_{FE} — I_C



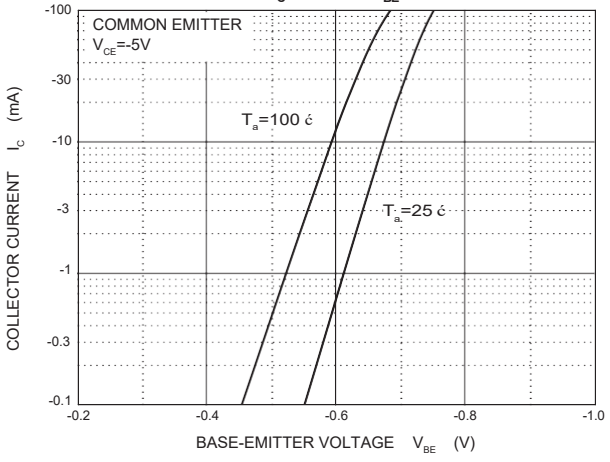
V_{CEsat} — I_C



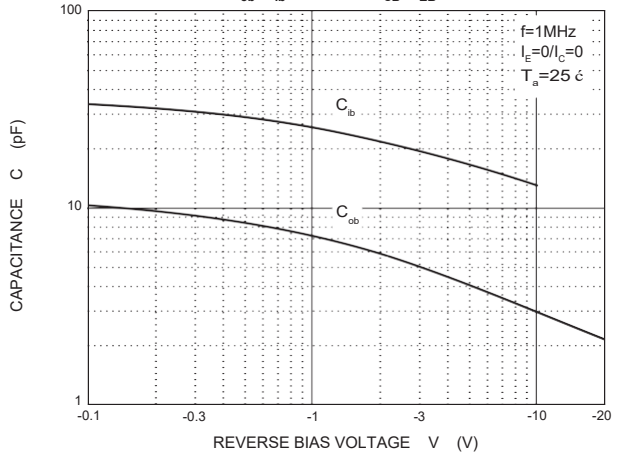
V_{BEsat} — I_C



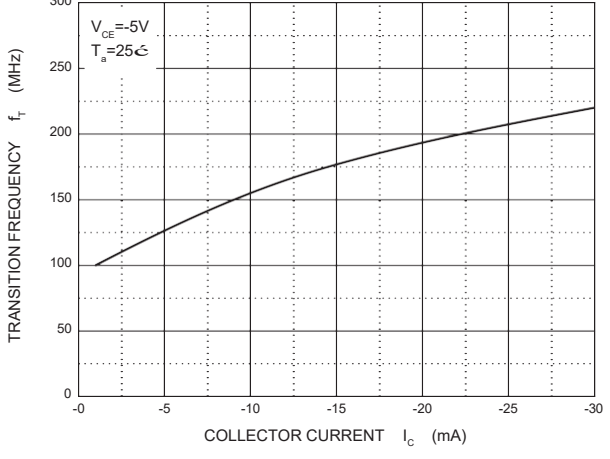
I_C — V_{BE}



C_{ob}/C_{ib} — V_{CB}/V_{EB}



f_T — I_C



P_C — T_a