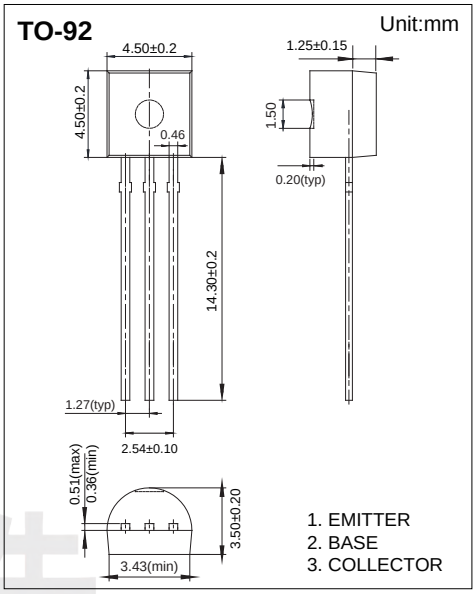
PNP Transistors

2N5401



■ Features

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

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	-160	V
Collector - Emitter Voltage	V_{CEO}	-150	
Emitter - Base Voltage	V_{EBO}	-5	
Collector Current - Continuous	I_C	-0.6	A
Collector Power Dissipation	P_C	625	mW
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	200	℃/W
Junction Temperature	T_J	150	℃
Storage Temperature	T_{stg}	-55 to 150	

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■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collecto- base breakdown voltage	V_{CBO}	I_C= -100 μA， I_E=0	-160			V
Collector- emitter breakdown voltage	V_{CEO}	I_C= -1 mA， I_B=0	-150			
Emitter - base breakdown voltage	V_{EBO}	I_E= -100 μA， I_C=0	-5			
Collector cut-off current	I_{CBO}	V_{CB}= -120 V , I_E=0			-0.05	μA
Emitter cut-off current	I_{EBO}	V_{EB}= -3V , I_C=0			-0.05	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-50 mA, I_B= -5mA			-0.5	V
Base - emitter saturation voltage	$V_{BE(sat)}$	I_C=-50 mA, I_B= -5mA			-1	
DC current gain	$h_{FE(1)}$	V_{CE}= -5V, I_C= -1mA	80			
	$h_{FE(2)}$	V_{CE}= -5V, I_C= -10mA	60		300	
	$h_{FE(3)}$	V_{CE}= -5V, I_C= -50mA	50			
Transition frequency	f_T	V_{CE}= -5V, I_C= -10mA,f=30MHz	100		300	MHz

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

■ Classification of hFE(2)

Rank		A	B	C
Range	60-100	100-150	150-200	200-300

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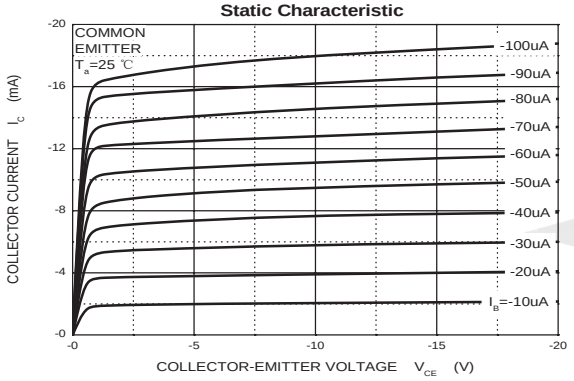
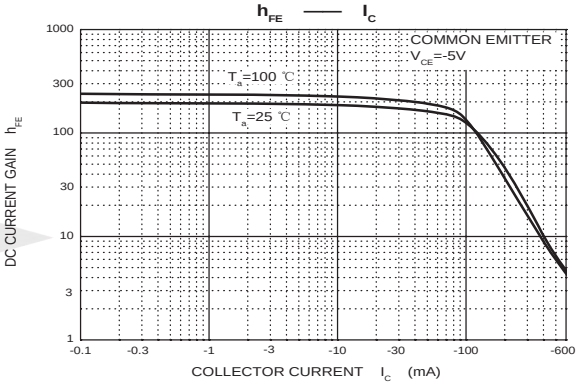
■ Typical Characterisitics

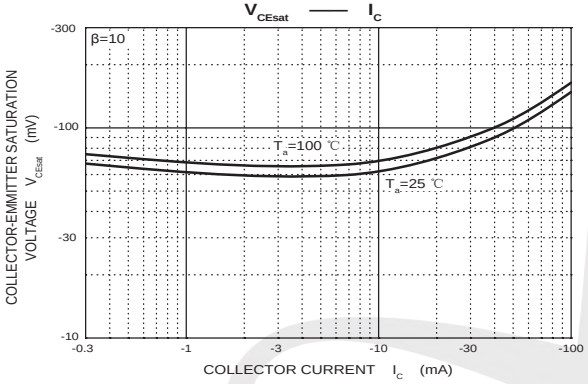
Static Characteristic



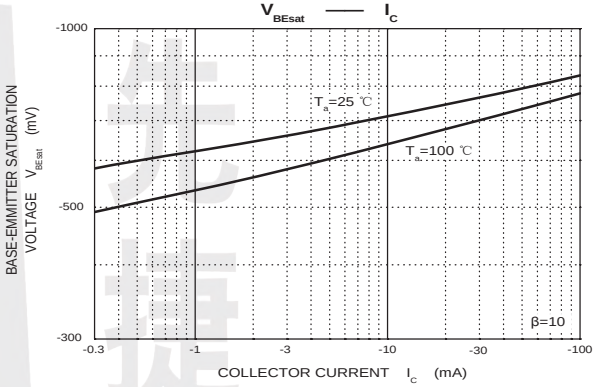
h_{FE} —— I_C



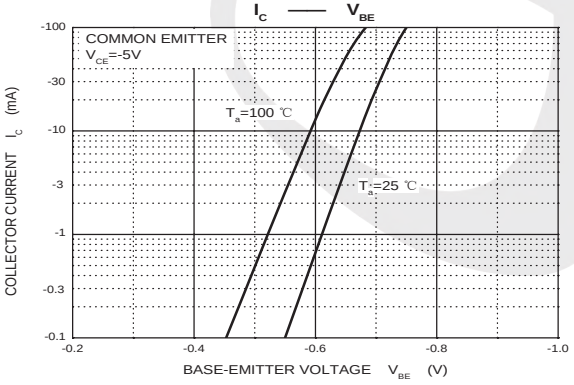
V_{CEsat} —— I_C



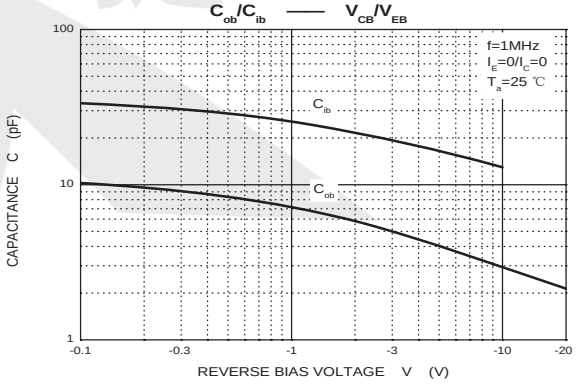
V_{BEsat} —— I_C



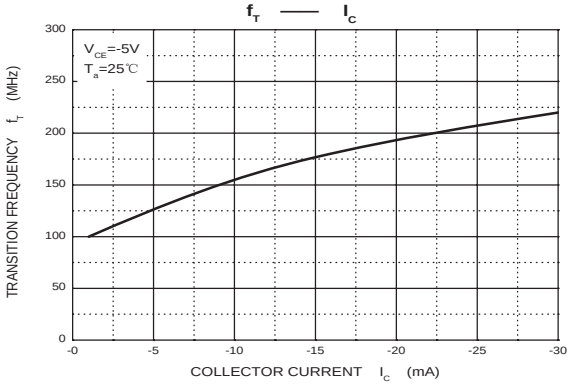
I_C —— V_{BE}



C_{ob}/C_{ib} —— V_{CB}/V_{EB}



f_T —— I_C



P_C —— T_a