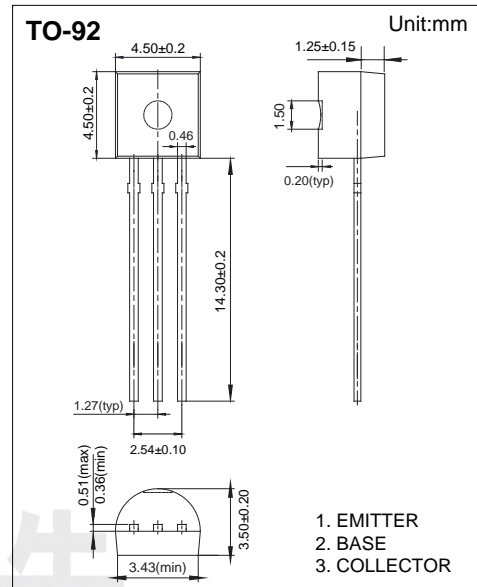


# Transistor

## PNP Transistors 2N4403

### ■ Features

- Collector current:  $I_c=0.6A$



### ■ Absolute Maximum Ratings $T_a = 25^\circ C$

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	$V_{CB0}$	-40	V
Collector - Emitter Voltage	$V_{CE0}$	-40	
Emitter - Base Voltage	$V_{EB0}$	-5	
Collector Current - Continuous	$I_c$	-0.6	A
Collector Power Dissipation	$P_c$	625	mW
Thermal Resistance, junction to Ambient	$R_{\theta JA}$	200	$^\circ C/W$
Junction Temperature	$T_J$	150	$^\circ C$
Storage Temperature	$T_{stg}$	-55 to 150	

# Transistor

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### ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collecto- base breakdown voltage	V <sub>CB0</sub>	I <sub>C</sub> = -100 μA, I <sub>E</sub> =0	-40			V
Collector- emitter breakdown voltage	V <sub>CEO</sub>	I <sub>C</sub> = -1 mA, I <sub>B</sub> =0	-40			
Emitter - base breakdown voltage	V <sub>EB0</sub>	I <sub>E</sub> = -100 μA, I <sub>C</sub> =0	-5			
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> = -35 V, I <sub>E</sub> =0			-0.1	μA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> = -5V, I <sub>C</sub> =0			-0.1	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =-150 mA, I <sub>B</sub> = -15mA			-0.4	V
		I <sub>C</sub> =-500 mA, I <sub>B</sub> = -50mA			-0.75	
Base - emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =-150 mA, I <sub>B</sub> = -15mA	-0.75		-0.95	
		I <sub>C</sub> =-500 mA, I <sub>B</sub> = -50mA			-1.3	
DC current gain	h <sub>FE(1)</sub>	V <sub>CE</sub> = -1V, I <sub>C</sub> = -0.1mA	30			
	h <sub>FE(2)</sub>	V <sub>CE</sub> = -1V, I <sub>C</sub> = -1mA	60			
	h <sub>FE(3)</sub>	V <sub>CE</sub> = -1V, I <sub>C</sub> = -10mA	100			
	h <sub>FE(4)</sub>	V <sub>CE</sub> = -2V, I <sub>C</sub> = -150mA	100		300	
	h <sub>FE(5)</sub>	V <sub>CE</sub> = -2V, I <sub>C</sub> = -500mA	20			
Delay time	t <sub>d</sub>				15	ns
Rise time	t <sub>r</sub>	V <sub>CC</sub> =-30V, I <sub>C</sub> =-150mA			20	
Storage time	t <sub>s</sub>	I <sub>B1</sub> =- I <sub>B2</sub> =-15mA			225	
Fall time	t <sub>f</sub>				30	
Collector capacitance	C <sub>ob</sub>	V <sub>CB</sub> =-10V, I <sub>E</sub> =0, f=100KHz			8.5	pF
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> = -10V, I <sub>C</sub> = -20mA, f=100MHz	200			MHz

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### Typical Characteristics

