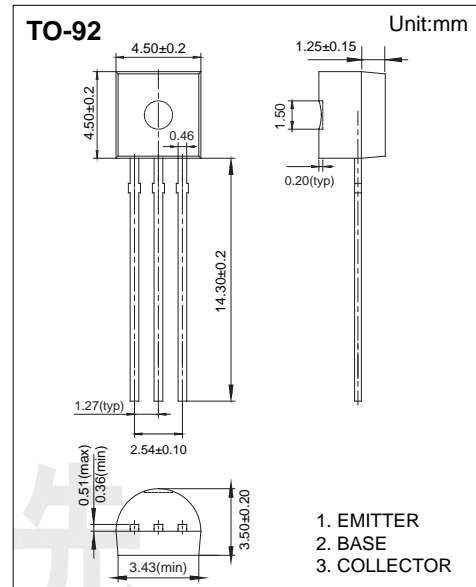


Transistor

NPN Transistors 2N4401

■ Features

- Collector current: $I_c=0.6A$



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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	60	V
Collector - Emitter Voltage	V_{CEO}	40	
Emitter - Base Voltage	V_{EBO}	6	
Collector Current - Continuous	I_c	600	mA
Collector Power Dissipation	P_c	625	mW
Thermal Resistance, junction to Ambient	$R_{\theta JA}$	357	$^\circ C/W$
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature	T_{stg}	-55 to 150	

Transistor

NPN Transistors 2N4401

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V _{CBO}	I _C = 100 μA, I _E =0	60			V
Collector- emitter breakdown voltage	V _{CEO}	I _C = 1 mA, I _B =0	40			
Emitter - base breakdown voltage	V _{EBO}	I _E = 100 μA, I _C =0	6			
Collector cut-off current	I _{CBO}	V _{CB} = 35 V, I _E =0			0.1	μA
Emitter cut-off current	I _{EBO}	V _{EB} = 5V, I _C =0			0.1	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =150 mA, I _B = 15mA			0.4	V
		I _C =500 mA, I _B = 50mA			0.75	
Base - emitter saturation voltage	V _{BE(sat)}	I _C =150 mA, I _B = 15mA			0.95	
		I _C =500 mA, I _B = 50mA			1.2	
DC current gain	h _{FE(1)}	V _{CE} = 1V, I _C = 0.1mA	20			
	h _{FE(2)}	V _{CE} = 1V, I _C = 1mA	40			
	h _{FE(3)}	V _{CE} = 1V, I _C = 10mA	80			
	h _{FE(4)}	V _{CE} = 1V, I _C = 150mA	100		300	
	h _{FE(5)}	V _{CE} = 1V, I _C = 500mA	40			
Delay time	t _d	V _{CC} =30V, V _{BE(OFF)} =2V			15	ns
Rise time	t _r	I _C =150mA, I _{B1} =15mA			20	
Storage time	t _s	V _{CC} =30V, I _C =150mA			225	
Fall time	t _f	I _{B1} =-I _{B2} = 15mA			30	
Output Capacitance	C _{ob}	V _{CB} =10V, I _E = 0, f=100KHz			6.5	
Transition frequency	f _T	V _{CE} = 10V, I _C = 20mA, f=100MHz	250			MHz

Transistor

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Typical Characteristics

