

## TO-92 Plastic-Encapsulated Transistors

### 2N5401 TRANSISTOR (PNP)

#### FEATURE

Power dissipation

$$P_{CM} : 0.625 \text{ W (Tamb=25°C)}$$

Collector current

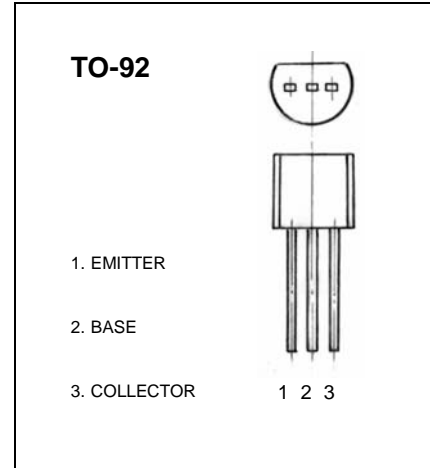
$$I_{CM} : -0.6 \text{ A}$$

Collector-base voltage

$$V_{(BR)CBO} : -160 \text{ V}$$

Operating and storage junction temperature range

$$T_J, T_{stg}: -55^\circ\text{C to } +150^\circ\text{C}$$



#### ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -100 \mu\text{A}, I_E = 0$	-160			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -1 \text{ mA}, I_B = 0$	-150			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -10 \mu\text{A}, I_C = 0$	-5			V
Collector cut-off current	$I_{CBO}$	$V_{CB} = -120 \text{ V}, I_E = 0$			-0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -4 \text{ V}, I_C = 0$			-0.1	$\mu\text{A}$
DC current gain	$h_{FE(1)}$	$V_{CE} = -5 \text{ V}, I_C = -1 \text{ mA}$	80			
	$h_{FE(2)}$	$V_{CE} = -5 \text{ V}, I_C = -10 \text{ mA}$	80		250	
	$h_{FE(3)}$	$V_{CE} = -5 \text{ V}, I_C = -50 \text{ mA}$	50			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -50 \text{ mA}, I_B = -5 \text{ mA}$			-0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -50 \text{ mA}, I_B = -5 \text{ mA}$			-1	V
Transition frequency	$f_T$	$V_{CE} = -5 \text{ V}, I_C = -10 \text{ mA}$ $f = 30 \text{ MHz}$	100			MHz

**CLASSIFICATION OF  $h_{FE(2)}$** 

<b>Rank</b>	A	B	C
<b>Range</b>	80-160	120-180	150-250