

TO-92 Plastic-Encapsulate Transistors

2N4124 TRANSISTOR (NPN)

FEATURES

- High DC Current Gain
- High Transition Frequency

MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

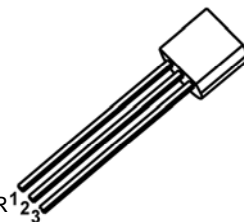
Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	30	V
V_{CEO}	Collector-Emitter Voltage	25	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	0.2	A
P_C	Collector Power Dissipation	350	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	357	$^{\circ}\text{C}/\text{W}$
T_j	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55~+150	$^{\circ}\text{C}$

TO - 92

1. EMITTER

2. BASE

3. COLLECTOR



ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 0.01\text{mA}, I_E = 0$	30			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 1\text{mA}, I_B = 0$	25			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 0.01\text{mA}, I_C = 0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB} = 20\text{V}, I_E = 0$			50	nA
Emitter cut-off current	I_{EBO}	$V_{EB} = 3\text{V}, I_C = 0$			50	nA
DC current gain	$h_{FE(1)}$	$V_{CE} = 1\text{V}, I_C = 2\text{mA}$	120		360	
	$h_{FE(2)}$	$V_{CE} = 1\text{V}, I_C = 50\text{mA}$	60			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 50\text{mA}, I_B = 5\text{mA}$			0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 50\text{mA}, I_B = 5\text{mA}$			0.95	V
Collector output capacitance	C_{ob}	$V_{CB} = 5\text{V}, I_E = 0, f = 1\text{MHz}$			4	pF
Transition frequency	f_T	$V_{CE} = 20\text{V}, I_C = 10\text{mA}, f = 100\text{MHz}$	300			MHz