

2N4124

NPN SMALL SIGNAL GENERAL PURPOSE AMPLIFIER AND SWITCH

ABSOLUTE MAXIMUM RATINGS

†Maximum Temperatures

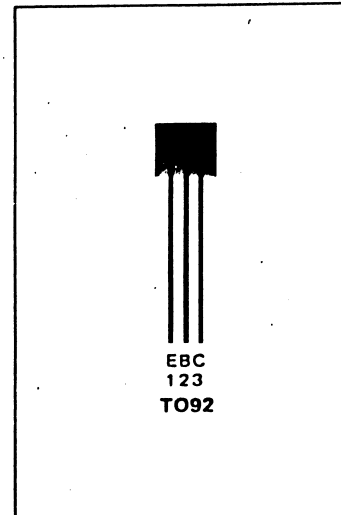
Storage Temperature	-55°C to +150°C
Operating Junction Temperature	150°C
Lead Temperature (60 seconds)	230°C

†Maximum Power Dissipation

Total Dissipation at 25°C Case Temperature	1.0 W
at 25°C Ambient Temperature	0.625 W
at 70°C Ambient Temperature	0.400 W

Maximum Voltages and Current

V _{CB0}	Collector to Base Voltage	2N4124
V _{CEO}	Collector to Emitter Voltage	30 V
		25 V
V _{EB0}	Emitter to Base Voltage	5.0 V
I _C	Collector Current	200 mA



ELECTRICAL CHARACTERISTICS (25°C Ambient Temperature unless otherwise noted)

SYMBOL	CHARACTERISTIC	2N4124		UNITS	TEST CONDITIONS
		MIN.	MAX.		
h _{FE}	DC Pulse Current Gain	120	360		I _C = 2.0 mA, V _{CE} = 1.0 V I _C = 50 mA, V _{CE} = 1.0 V
V _{CE(sat)}	Collector Saturation Voltage		0.3	V	I _C = 50 mA, I _B = 5.0 mA
V _{BE(sat)}	Base Saturation Voltage		0.95	V	I _C = 50 mA, I _B = 5.0 mA
I _{CBO}	Collector Cutoff Current		50	nA	V _{CB} = 20 V, I _E = 0
I _{EBO}	Emitter Cutoff Current		50	nA	V _{EB} = 3.0 V, I _C = 0
BV _{CB0}	Collector to Base Breakdown Voltage	30		V	I _C = 10 μA, I _E = 0
BV _{CEO}	Collector to Emitter Breakdown Voltage	25		V	I _C = 1.0 mA, I _B = 0
BV _{EBO}	Emitter to Base Breakdown Voltage	5.0		V	I _C = 0, I _E = 10 μA
C _{cb}	Collector to Base Capacitance		4.0	pF	I _E = 0, V _{CB} = 5.0 V, f = 100 kHz
C _{ib}	Input Capacitance		8.0	pF	I _C = 0, V _{EB} = 0.5 V, f = 100 kHz
h _{fe}	Magnitude of Small Signal Current Gain	3.0			I _C = 10 mA, V _{CE} = 20 V, f = 100 MHz
h _{fe}	Small Signal Current Gain	120	480		I _C = 2.0 mA, V _{CE} = 10 V, f = 1.0 kHz
NF	Noise Figure		5.0	dB	I _C = 100 μA, V _{CE} = 5.0 V, R _S = 1.0 kΩ, f = 10 Hz to 15.7 kHz

