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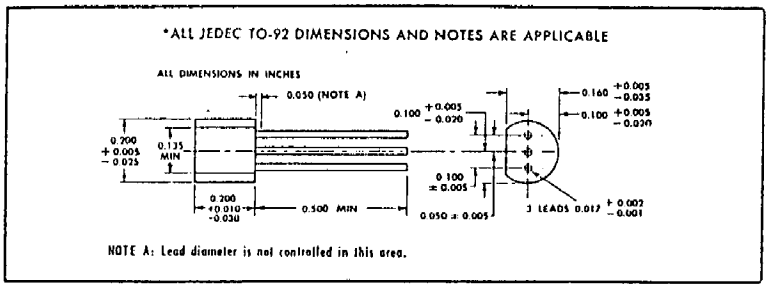
2N4997

N-P-N SILICON TRANSISTOR



***absolute maximum ratings at 25°C free-air temperature (unless otherwise noted)**

Collector-Base Voltage	30 V
Collector-Emitter Voltage (See Note 1)	18 V
Emitter-Base Voltage	4 V
Continuous Collector Current	50 mA
Continuous Device Dissipation at (or below) 25°C Free-Air Temperature (See Note 2)	250 mW
Storage Temperature Range	−65°C to 150°C
Lead Temperature 1/16 Inch from Case for 10 Seconds	260°C

NOTES: 1. This value applies when the base-emitter diode is open-circuited.

2. Derate linearly to 150°C free-air temperature at the rate of 2 mW/deg.

*Indicates JEDEC registered data

***electrical characteristics at 25°C free-air temperature (unless otherwise noted)**

	PARAMETER	TEST CONDITIONS		MIN	TYP	MAX	UNIT
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	I_C = 10 μA, I_E = 0		30			V
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C = 2 mA, I_B = 0,	See Note 3	18			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	I_E = 10 μA, I_C = 0		4			V
I_{CBO}	Collector Cutoff Current	V_{CB} = 15 V, I_E = 0				100	nA
		V_{CB} = 15 V, I_E = 0,	T_A = 85°C			10	μA
h_{FE}	Static Forward Current Transfer Ratio	V_{CE} = 10 V, I_C = 2 mA		30		150	
$\|h_{fe}\|$	Small-Signal Common-Emitter Forward Current Transfer Ratio	V_{CE} = 10 V, I_C = 2 mA,	f = 100 MHz	6		14	
$\|y_{fe}\|$	Small-Signal Common-Emitter Forward Transfer Admittance	V_{CE} = 10 V, I_C = 2 mA,	f = 10 MHz		70		mmho
C_{cb}	Collector-Base Capacitance	V_{CB} = 10 V, I_E = 0,	f = 1 MHz, See Note 4	0.1		0.65	pF
r_{oep}	Parallel-Equivalent Common-Emitter Short-Circuit Output Resistance	V_{CE} = 10 V, I_C = 2 mA,	f = 10 MHz	50			kΩ
$r_b'C_c$	Collector-Base Time Constant	V_{CB} = 10 V, I_E = −2 mA,	f = 79.8 MHz		14	20	ps

operating characteristics at 25°C free-air temperature

	PARAMETER	TEST CONDITIONS	TYP	UNIT
NF	Spot Noise Figure	V_{CE} = 10 V, I_C = 2 mA, R_G = 100 Ω, f = 100 MHz	2.5	dB

*Indicates JEDEC registered data (typical data excluded)