New Jersey Semi-Conductor Products, Inc.

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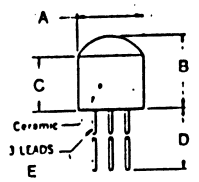
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2N4996

HIGH-FREQUENCY TRANSISTORS FOR TUNER AND IF-AMPLIFIER STAGES IN FM AND AM/FM STEREO-MULTIPLEX RECEIVERS

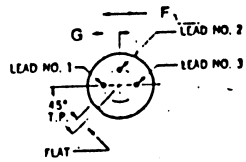
***absolute maximum ratings at 25°C free-air temperature (unless otherwise noted)**

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



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

PARAMETER		TEST CONDITIONS	2N4996 MIN	2N4996 TYP	2N4996 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,	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	50			
$\|h_{fe}\|$	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				mmho
C_{cb}	Collector-Base Capacitance	V_{CB} = 10 V, I_E = 0, f = 1 MHz,	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				kΩ
$r_b'C_c$	Collector-Base Time Constant	V_{CB} = 10 V, I_E = −2 mA, f = 79.8 MHz		14	20	ps



DIM.	INCHES MIN.	TYP.	MAX.
A	.192		.222
B			.240
C	.100		.120
D	.500		
E	.016		.019
F		.100	
G		.050	

operating characteristics at 25°C free-air temperature

PARAMETER		TEST CONDITIONS	2N4996 TYP	UNIT
NF	Spot Noise Figure	V_{CE} = 10 V, I_C = 2 mA, R_G = 100 Ω, f = 100 MHz	2.5	dB

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