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NTE1497 Integrated Circuit Audio Preamp ^w/ALC

Description:

The NTE1497 is a silicon monolithic integrated circuit in a 7-Lead SIP type package designed for use as a high gain, low noise preamplifier with Automatic Level Control (ALC). This device is primarily used as a record and playback amplifier in cassette tape recorders.

Features:

- Low Noise
- Wide Supply Voltage Range: $V_{CC} = 2.2V$ to $15V$
- High Gain: $A_{vo} = 70dB$ Typ
- High Output Voltage: $V_{OM} = 1.0 V_{rms}$ Typ.
- Low Distortion
- Wide ALC Range

Absolute Maximum Ratings: ($T_A = +25^{\circ}C$ unless otherwise specified)

Supply Voltage, V_{CC}	15V
Package Dissipation ($T_A = 75^{\circ}C$), P_D	270mW
Operating Temperature, T_{opt}	-20° to $+75^{\circ}C$
Storage Temperature, T_{stg}	-40° to $+125^{\circ}C$

Recommended Operating Conditions: ($T_A = +25^{\circ}C$ unless otherwise specified)

Operating Supply Voltage	5V
Supply Voltage Range	2.2V to 15V

Electrical Characteristics: ($T_A = +25^{\circ}C$, $V_{CC} = 5V$, $f = 1kHz$, $R_L = 10k\Omega$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Circuit Current	I_{CC}	$v_{in} = 0$	0.9	1.5	2.2	mA
Open Loop Voltage Gain	A_{vo}	$v_{in} = -80dBm$	64	70	-	dB
Voltage Gain	A_v	$v_{in} = -50dBm$	-	33.5	-	dB
Maximum Output Voltage	V_{OM}	T.H.D. = 1%	0.7	1.0	-	V
Input Impedance	r_i	$f = 1kHz$	-	100	-	$k\Omega$
Equivalent Input Noise Voltage	v_{nin}	$R_G = 2.2k\Omega$, NAB Equalized 15 to 30kHz BPF + 40dB Amp	-	1.2	2.0	μV_{rms}
Collector Voltage of ALC Transistor	V_{Pin5}	Pin7 to Pin6: $100k\Omega$, Pin7 to Pin5: 100Ω	-	0.7	-	V

Pin Connection Diagram
(Front View)

