

NTE983 Integrated Circuit Low Noise Dual Preamp

Description:

The NTE983 is a linear monolithic integrated circuit in a 14-Lead DIP type package designed for use with low-level signals in low-noise applications. This device offers outstanding value, performance, and reliability in both consumer and industrial products such as stereo tape players, microphone amplifiers, phonograph preamplifiers, and FM stereo receivers.

An integral voltage regulator eliminates the need for audio or RF decoupling. Internal feedback resistors are provided for NAB equalization.

Features:

- Single Power Supply Operation
- Wide Supply Voltage Range
- Matched Open Loop Voltage Gain
- Turn-On Delay

Absolute Maximum Ratings:

Power Supply, V_{CC} +16V
 Power Dissipation, P_D 670mW
 Derate Above 25°C 8.3mW/°C
 Operating Temperature Range, T_{opr} -20° to +85°C
 Storage Temperature Range, T_{stg} -65° to +150°C

Electrical Characteristics: ($T_A = +25^\circ\text{C}$, $+10.5\text{V} \leq V_{CC} \leq +16\text{V}$ unless otherwise noted)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Voltage Gain	G_V	$f = 1\text{kHz}$	40	—	46	dB
Total Harmonic Distortion	THD	$f = 1\text{kHz}$, $V_{out} = 500\text{mV}_{rms}$	—	0.5	1.0	%
Noise Out		$R_S = 620\Omega$	—	1.5	—	mV
Gain Balance			—	—	2.0	dB
Channel Separation	Sep		40	—	—	kΩ
Input Impedance	Z_i		—	40	—	kΩ
Ripple Rejection	RR	$f = 1\text{kHz}$	—	35	—	dB
Input Bias Current	I_B		—	—	3.0	μA
Turn-On Delay	t_d		—	1.0	—	sec
Supply Current	I_{CC}		—	—	12	mA

Pin Connection Diagram

