



**ELECTRONICS, INC.**  
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## NTE1433 Integrated Circuit Audio Preamp

**Description:**

The NTE1433 is a linear integrated circuit in a 7-Lead SIP type package designed for use in high voltage preamplification applications.

**Features:**

- Power Supply with Wide Working Voltage Range (20–42 Volts)
- High Open Loop Gain
- Extremely Low Distortion
- Low Noise
- High Input Impedance and Low Output Impedance
- Low Current Dissipation

**Application:**

- Stereos Radios & Tape Recorders

**Absolute Maximum Ratings:**

Supply Voltage,  $V_{CC}$  ..... 42V  
 Supply Current,  $I_{CC}$  ..... 5mA  
 Operating Temperature Range,  $T_{opr}$  .....  $-25^{\circ}$  to  $+75^{\circ}C$   
 Storage Temperature Range,  $T_{stg}$  .....  $-55^{\circ}$  to  $+125^{\circ}C$

**Electrical Charactersitics:**

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Open Loop Voltage Gain	$G_{VO}$		82	90	–	dB
Max Output Voltage	$V_{om}$	KF = 0.1%, $R_{IAA}$	7.5	9.0	–	$V_{rms}$
Supply Current	$I_{cc}$	$V_{OUT} = 0$	–	3.5	–	mA
Output Noise Voltage	$V_{NO}$	$R_g = 2.2k\Omega$ , $R_{IAA}$	–	100	150	$\mu V_{rms}$
Input Noise Voltage	$V_{NI}$	$R_g = 2.2k$ $R_{IAA}$	–	1.0	1.5	$\mu V_{RMS}$
Total Harmonic Distortion	THD	$V_{OUT} = 5V_{rms}$ , $R_{IAA}$	–	0.03	–	%
Input Impedance	$Z_{in}$	$G_{VC} = 40dB$ , $R_{IAA}$	–	130	–	$k\Omega$
Output Impedance	$Z_{out}$	$G_{VC} = 40dB$ , $R_{IAA}$	–	12	–	$\Omega$

**Pin Connection Diagram**  
(Front View)

