

## NTE1135 Integrated Circuit High Gain Audio Preamp

**Features:**

- Power Supply with Wide Working Voltage Range
- High Open-Loop Gain
- Extremely Low Distortion
- Low Noise
- High Input Impedance and Low Output Impedance
- Low Current Dissipation

**Applications:**

- Car Stereos
- Tape Recorders

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

Power Supply Voltage, $V_{CC}$ .....	20V
Power Dissipation, $P_D$ .....	500mW
Derate Above $25^\circ\text{C}$ .....	5.0mW/ $^\circ\text{C}$
Operating Temperature Range, $T_{opr}$ .....	$-25^\circ$ to $+75^\circ\text{C}$
Storage Temperature Range, $T_{stg}$ .....	$-55^\circ$ to $+125^\circ\text{C}$

**Electrical Characteristics:** ( $T_A = +25^\circ\text{C}$ ,  $V_{CC} = 12\text{V}$  unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Quiescent Current	$I_Q$		0.9	1.5	2.3	mA
Open Loop Voltage Gain	$G_{VO}$	$V_{IN} = -80\text{dBm}$ , $f = 1\text{kHz}$	70	79	–	dB
Maximum Output Voltage	$V_{OM}$	$f = 1\text{kHz}$ , THD = 1%	2.0	2.6	–	V
Total Harmonic Distortion	THD	$f = 1\text{kHz}$ , $V_{OUT} = 0.5V_{rms}$	–	0.06	0.15	%
Output Noise Voltage	$V_{NO}$	BW: 30Hz to 20kHz	–	60	100	$\mu\text{V}_{rms}$
Input Resistance	$R_{IN}$		–	120	–	$\text{k}\Omega$
Output Resistance	$R_{OUT}$		–	5	–	$\Omega$

**Pin Connection Diagram**  
(Front View)

