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## 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:

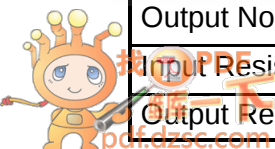
- Car Stereos
- Tape Recorders

### 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    | $V_{OM}$  | $f = 1\text{kHz}$ , $\text{THD} = 1\%$       | 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  | —    | k $\Omega$          |
| Output Resistance         | $R_{OUT}$ |                                              | —   | 5    | —    | $\Omega$            |



### Pin Connection Diagram (Front View)

