

NTE1024 Integrated Circuit Module – Hybrid, Audio Power Amplifier

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

Maximum Supply Voltage, $V_{CC\text{max}}$ 35V
 Operating Case Temperature, T_C $+85^\circ\text{C}$
 Storage Temperature Range, T_{stg} -30° to $+100^\circ\text{C}$
 Available Load Shorting Time ($V_{CC} = 25\text{V}$, $P_O = 5\text{W}$, $R_L = 8\Omega$, $f = 50\text{Hz}$), t_s 2sec

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

Supply Voltage, V_{CC} 25V
 Load Resistance, R_L 8Ω

Electrical Characteristics: ($T_A = +25^\circ\text{C}$, $V_{CC} = 25\text{V}$, $R_L = 8\Omega$, $R_g = 600\Omega$, $f = 1\text{kHz}$, $R_{NF} = 3\text{k}\Omega$ unless otherwise specified)

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|------------------------------|-----------|-------------------------------------|-----------|-----|-----|------------------|
| Supply Current | I_{CCO} | | – | – | 50 | mA |
| Output Power | P_O | THD = 2% | 6.5 | 8.0 | – | W |
| Voltage Gain | VG | $P_O = 100\text{mW}$ | 34 | 35 | 36 | dB |
| Total Harmonic Distortion | THD | $P_O = 100\text{mW}$ | – | – | 1.0 | % |
| Input Impedance | r_i | $P_O = 100\text{mW}$ | 15 | 40 | – | $\text{k}\Omega$ |
| Output Impedance | r_o | $P_O = 100\text{mW}$ | – | 0.2 | – | Ω |
| High Level Cut-Off Frequency | f_{CH} | $V_i = 50\text{mV}$, -3dB | 50 | – | – | kHz |
| Low Level Cut-Off Frequency | f_{CL} | $V_i = 50\text{mV}$, -3dB | – | – | 30 | Hz |
| Power Bandwidth | PBW | THD = 2%, $\pm 3\text{dB}$ | 30 to 30k | | | Hz |
| Output Noise Voltage | V_{NO} | $R_g = 10\text{k}\Omega$ | – | – | 4 | mV |

Pin Connection Diagram
(Front View)

