

NTE1009 Integrated Circuit AF Power Amplifier, 1W

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

| | |
|--|-------------------------------------|
| Maximum Supply Voltage, V_{CCmax} | 16V |
| Maximum Power Dissipation (Note 1), P_{Dmax} | 2.8W |
| Maximum Output Current (Note 1), I_{Omax} | 1.0A |
| Operating Temperature Range, T_{opr} | -20° to $+80^\circ\text{C}$ |
| Storage Temperature Range, T_{stg} | -40° to $+125^\circ\text{C}$ |

Note 1. With $100\text{cm}^2 \times 1\text{mm}$ Al heat sink.

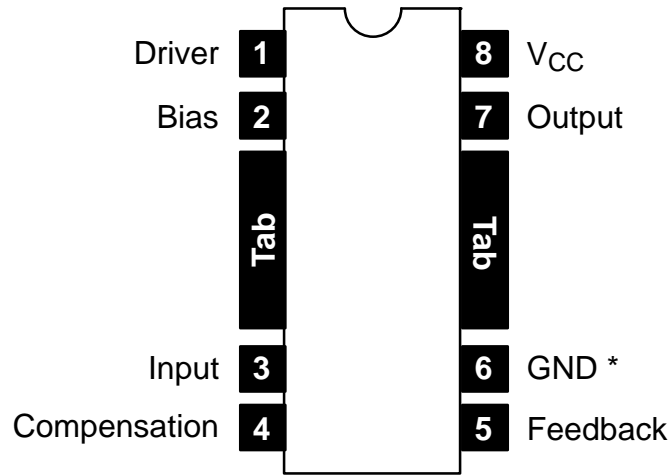
Recommended Operating Conditions: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

| | |
|--|-----------|
| Recommended Supply Voltage, V_{CC} | 11V |
| Load Resistance, R_L | 8Ω |

Electrical Characteristics: ($T_A = +25^\circ\text{C}$, $V_{CC} = 11\text{V}$, $R_L = 8\Omega$, $f = 1\text{kHz}$, $R_{NF} = 300\Omega$ unless otherwise specified)

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---------------------------|-----------|---------------------|-----|------|-----|----------|
| Quiescent Current | I_{CCO} | | – | 15 | 25 | mA |
| Voltage Gain | VG | | 27 | 30 | 33 | dB |
| Output Power | P_O | THD = 10% | 0.8 | 1.0 | – | W |
| Efficiency | η | $P_O = 1\text{W}$ | – | 50 | – | % |
| Total Harmonic Distortion | THD | $P_O = 0.5\text{W}$ | – | 0.5 | 1.5 | % |
| Input Resistance | r_i | | 6k | 8k | – | Ω |
| Output Resistance | r_o | | – | 0.45 | – | Ω |
| Bandwidth | BW | –3dB | 100 | – | – | kHz |
| Output Noise Voltage | V_{NO} | | – | – | 1.0 | mV |

Pin Connection Diagram



* NOTE: Connected to Tab

