

NTE1009 Integrated Circuit AF Power Amplifier, 1W

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

Maximum Supply Voltage, $V_{CC\text{max}}$	16V
Maximum Power Dissipation (Note 1), $P_{D\text{max}}$	2.8W
Maximum Output Current (Note 1), $I_{O\text{max}}$	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.

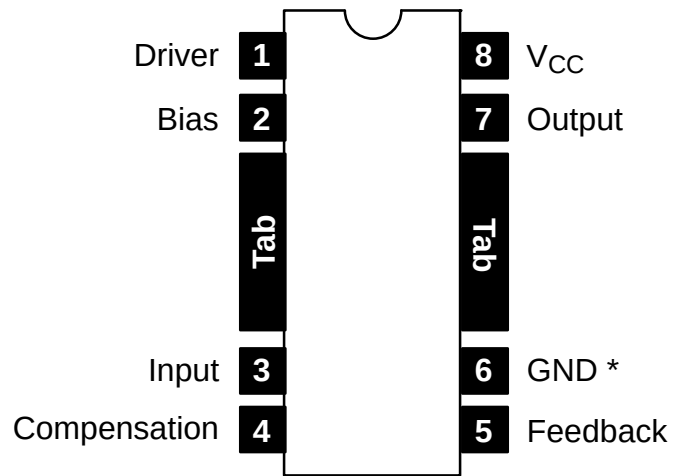
Recommended Operating Conditions: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

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

