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## NTE804 Integrated Circuit Dual Audio Power Amp, 2W

**Description:**

The NTE804 is a monolithic dual power amplifier which offers high quality performance for stereo phographs, tape players, recorders and AM-FM stereo receivers, etc.

The NTE804 will deliver 2W/channel into 8 or 16Ω loads. The amplifier is designed to operate with a minimum of external components and contains an internal bias regulator to bias each amplifier. Device overload protection consists of both internal current limit and thermal shutdown.

**Features:**

- $A_{VO} = 90\text{dB Typ}$
- 2W Per Channel
- 70dB Ripple Rejection
- 75dB Channel Separation
- Internal Stabilization
- Self Centering Biasing
- $3\text{M}\Omega$  Input Impedance
- 10-26V Operation
- Internal Current Limiting
- Internal Thermal Protection

**Applications:**

- Multi-Channel Audio System
- Tape Recorders and Players
- Movie Projectors
- Automotive System
- Stereo Phonographs
- Bridge Output Stages
- AM-FM Radio Receivers
- Intercoms
- Stereo Amplifiers
- Instrument Systems

**Absolute Maximum Ratings:**

Supply Voltage .....	26V
Input Voltage .....	$0\text{V}-V_{\text{supply}}$
Operating Temperature Range, $T_{\text{opr}}$ .....	$0^{\circ}$ to $+70^{\circ}\text{C}$
Storage Temperature Range, $T_{\text{stg}}$ .....	$-65^{\circ}$ to $+150^{\circ}\text{C}$
Junction Temperature, $T_{\text{J}}$ .....	$+150^{\circ}\text{C}$
Lead Temperature (During Soldering, 10sec max), $T_{\text{L}}$ .....	$+300^{\circ}\text{C}$

**Electrical Characteristics:** ( $V_S = 20V$ ,  $T_{TAB} = +25^\circ C$ ,  $R_L = 8\Omega$ ,  $A_V = 50$  (34dB) unless otherwise specified)

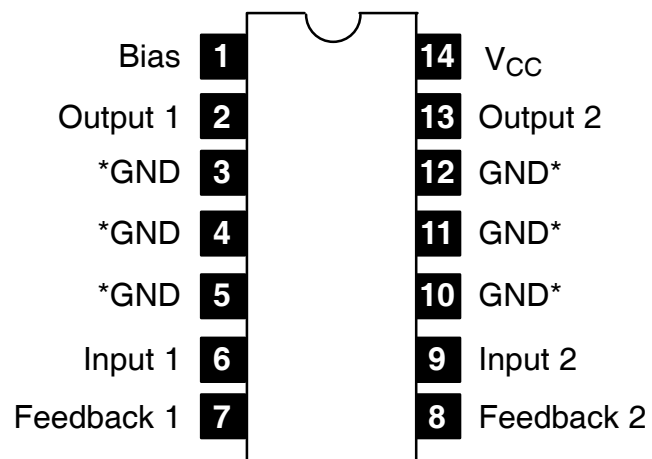
Parameter	Test Conditions	Min	Typ	Max	Unit
Total Supply Current	$P_{OUT} = 0W$	-	15	50	mA
	$P_{OUT} = 1.5W/Ch$	-	430	500	mA
DC Output Level		-	10	-	V
Supply Voltage		10	-	26	V
Output Power	THD = < 5%	2	2.5	-	W
Total Harmonic Distortion	$P_{OUT} = 0.05W/Ch$ , $f = 1kHz$	-	0.25	-	%
	$P_{OUT} = 1W/Ch$ , $f = 1kHz$	-	0.07	1	%
	$P_{OUT} = 2W/Ch$ , $f = 1kHz$	-	0.10	-	%
Offset Voltage		-	15	-	mV
Input Bias Current		-	100	-	nA
Input Impedance		3	-	-	M $\Omega$
Open Loop Gain	$R_S = 0\Omega$	66	90	-	dB
Output Swing		-	$V_S - 6$	-	$V_{p-p}$
Channel Separation	$C_F = 250\mu F$ , $f = 1kHz$	50	70	-	dB
Ripple Rejection	$f = 120Hz$ , $C_F = 250\mu F$	60	70	-	dB
Current Limit		-	1.5	-	A
Slew Rate		-	1.4	-	V/ $\mu s$
Equivalent Input Noise Voltage	$R_S = 600\Omega$ , 100Hz – 10kHz	-	3	-	$\mu V_{rms}$

Note 1 For operating at ambient temperatures greater than  $+25^\circ C$ , the NTE804 must be derated based on a maximum  $+150^\circ C$  junction temperature using a thermal resistance which depends upon device mounting techniques.

Note 2 Dissipation characteristics are shown for four mounting configurations.

- a. Infinite sink  $-13.4^\circ C/W$
- b. PC board  $+V_7$  sink  $-21^\circ C/WQ$ . PC board is 2 1/2 square inches. Staver  $V_7$  sink is 0.02 inch thick copper and has a radiating surface area of 10 square inches.
- c. PC board only  $-29^\circ C/W$ . Device soldered to 2 1/2 square inch PC board.
- d. Free air  $-58^\circ C/W$ .

### Pin Connection Diagram



\* NOTE: These leads are internally connected.

