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## NTE1476 Integrated Circuit Audio Power Amplifier, 1.4W 10-Lead SIP Type Package

**Description:**

The NTE1476 is an audio power amplifier in a 10-Lead SIP type package designed for use as a power amplifier in portable cassette tape recorder applications.

**Features:**

- Recommended Supply Voltage:  $V_{CC} = 7.5V, 9.0V$
- Output Power:  
 $P_{OUT} = 1.4W$  (Typ) at  $V_{CC} = 7.5V, R_L = 4\Omega$   
 $P_{OUT} = 2.0W$  (Typ) at  $V_{CC} = 9.0V, R_L = 4\Omega$  THD = 10%
- Minimum Operating Voltage:  $V_{CC} = 5.0V$
- Low Quiescent Current
- Excellent Ripple Rejection
- Built in Turn-On Muting Circuit

**Absolute Maximum Ratings:** ( $T_A = +25^\circ C$ )

Supply Voltage, $V_{CC}$	14V
Output Current (Peak), $I_{O(peak)}$	1.8A
Power Dissipation, $P_D$	5.0W
Operating Temperature Range, $T_{opr}$	$-20^\circ$ to $+75^\circ C$
Storage Temperature Range, $T_{stg}$	$-55^\circ$ to $+150^\circ C$

**Electrical Characteristics:** ( $T_A = +25^\circ C, R_L = 4\Omega, R_g = 600\Omega, R_f = 150\Omega, f = 1kHz$  unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit	
Quiescent Current	$I_{CCQ}$	$V_{CC} = 5V$	55	–	–	mA	
		$V_{CC} = 9V$	7	–	30	mA	
		$V_{CC} = 14V$	–	–	35	mA	
Output Power	$P_{OUT}$	THD = 10%	$V_{CC} = 5V$	–	0.65	–	W
			$V_{CC} = 7.5V$	–	1.4	–	W
			$V_{CC} = 9V$	1.5	2.0	–	W

**Electrical Characteristics (Cont'd):** ( $T_A = +25^\circ\text{C}$ ,  $R_L = 4\Omega$ ,  $R_g = 600\Omega$ ,  $R_f = 150\Omega$ ,  $f = 1\text{kHz}$  unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit	
Total Harmonic Distortion	THD	$P_{OUT} = 100\text{mW}$	$V_{CC} = 7.5\text{V}$	-	0.35	-	%
			$V_{CC} = 9\text{V}$	-	0.35	1.0	%
Open Loop Voltage Gain	$G_{VO}$	$V_{CC} = 9\text{V}$ , $R_f = 0$ , $V_{IN} = 0.245\text{mV}_{\text{rms}}$	-	72	-	dB	
Closed Loop Voltage Gain	$G_V$	$V_{CC} = 9\text{V}$ , $R_f = 150\Omega$ , $V_{IN} = 3.9\text{mV}_{\text{rms}}$	-	46	-	dB	
Input Resistance	$R_{IN}$	$V_{CC} = 9\text{V}$ , $V_{OUT} = 1\text{V}_{\text{rms}}$	25	30	-	k $\Omega$	
Output Noise Voltage	$V_{NO}$	$V_{CC} = 9\text{V}$ , $R_g = 10\text{k}\Omega$ , $\text{BW} = 50\text{Hz to } 20\text{kHz}$	-	-	1.0	mV	

**Pin Connection Diagram**  
(Front View)

