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## NTE740A Integrated Circuit Audio Power Amp, 2W

### Description:

The NTE740A is an Audio Power Amplifier in a 14-Lead DIP type package designed for minimal external component requirements.

### Features:

- Low Distortion
- Low Quiescent Current
- 34dB Internally Fixed Gain
- High Input Impedance
- Thermal Overload Protection
- Output Short Circuit Current Limiting

### Absolute Maximum Ratings:

Supply Voltage,  $V_{CC}$  ..... 26V  
 Peak Output Current,  $I_O$  ..... 1.2A  
 Operating Ambient Temperature Range,  $T_A$  .....  $-25^{\circ}$  to  $+70^{\circ}$ C  
 Storage Temperature Range,  $T_{stg}$  .....  $-65^{\circ}$  to  $+150^{\circ}$ C

### Electrical Characteristics: ( $T_A = +25^{\circ}$ C, $V_{CC} = 18$ V, $f = 1$ kHz, $R_L = 8\Omega$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Supply Voltage Range	$V_{CC}$		9	10	26	V
Quiescent Supply Current	$I_{CC}$	No Signal Applied	–	15	–	mA
Quiescent Output Voltage	$V_{OQ}$	No Signal Applied, Note 1	9	–	–	V
Output Voltage Swing	$V_O$	$P_{out} = 2W$	–	12	–	$V_{P-P}$
Voltage Gain	$A_V$	$P_{out} = 0$	31	34	37	dB
Total Harmonic Distortion	THD	$P_{out} = 2W$ , Note 2	–	1.0	2.0	%
		$P_{out} = 50mW$ , Note 3	–	0.5	1.0	%
Audio Output Power	$P_{out}$	THD = 2%, $R_L = 8\Omega$ , Note 4	2.0	2.5	–	W
		THD = 2%, $R_L = 16\Omega$ , Note 4	2.0	2.5	–	W
Input Impedance	$Z_{in}$	Each Input	140	170	–	k $\Omega$
Power Supply Rejection Ratio	PSRR	$P_{out} = 0$ , $f = 120$ Hz, Note 5	–	40	–	dB
Equivalent Input Noise Voltage		$f = 20$ Hz to 20kHz	–	60	–	$\mu V_{rms}$
Sensitivity Input Voltage	$e_{in}$	$e_{out} = 4.0V_{rms}$ , $P_{out} = 2W$	–	80	–	mV
Bandwidth (–3dB)	BW	$P_{out} = 1W$ , Note 6	–	100	–	kHz

Note 1. The quiescent output voltage typically equals 1/2 the normal  $V_{CC}$  voltage = 1 Volt.

Note 2. When driving a 16 $\Omega$  load, the nominal  $V_{CC}$  is 24V.

Note 3. When driving a 16 $\Omega$  load, the maximum low level distortion is reduced to 0.50%.

Note 4. Tested at  $V_{CC}$  equals nominal and measured in watts (rms).

Note 5. Measurement made with a 5 $\mu$ F capacitor from Pin1 to GND. Voltage at Pin14 is at a ripple frequency of 60Hz.

Note 6. Unity gain occurs between 10 and 100MHz.

### Pin Connection Diagram

