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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° to +70°C  
 Storage Temperature Range,  $T_{stg}$  ..... -65° to +150°C

### **Electrical Characteristics:** ( $T_A = +25^\circ\text{C}$ , $V_{CC} = 18\text{V}$ , $f = 1\text{kHz}$ , $R_L = 8\Omega$ 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	%
		$P_{out} = 50\text{mW}$ , 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	$P_{out} = 0$ , $f = 120\text{Hz}$ , Note 5	–	40	–	dB
Equivalent Input Noise Voltage		$f = 20\text{Hz}$ to $20\text{kHz}$	–	60	–	$\mu\text{V}_{rms}$
Sensitivity Input Voltage	$e_{in}$	$e_{out} = 4.0\text{V}_{rms}$ , $P_{out} = 2W$	–	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  $5\mu\text{F}$  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

