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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 Ω
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 20kHz	–	60	–	μV_{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 16Ω load, the nominal V_{CC} is 24V.

Note 3. When driving a 16Ω 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

