



ELECTRONICS, INC.
44 FARRAND STREET
BLOOMFIELD, NJ 07003
(973) 748-5089
<http://www.nteinc.com>

NTE1373 Integrated Circuit Dual Audio Power Amplifier Circuit, 7.5W

Description:

The NTE1373 is an integrated circuit designed for use as a 7.5W (16W, 4Ω) power amplifier output with low noise and low distortion suitable for TV sets with multi-sound.

Stereo operation is possible due to incorporating two amplifiers on one 12-Lead SIP type chip.

Features:

- Built-In Protection Circuits (Surge, Thermal Protection, etc.)
- Automatic Operating Point Stabilizer Circuit
- Low Distortion, Low 1/f Noise
- Low Shock Noise from Power ON/OFF Operation
- Better Channel Separation
- Few External Components Required

Absolute Maximum Ratings: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Supply Voltage, V_{CC}

Note 1 24V

Note 2 20V

Supply Current, I_{CC} 4A

Power Dissipation ($T_A = +45^\circ\text{C}$), P_D 30W

Operating Ambient Temperature Range, T_{opr} -30° to $+75^\circ\text{C}$

Storage Temperature Range, T_{stg} -55° to $+150^\circ\text{C}$

Note 1. Without signal $V_{CC} = 24\text{V}$ (For non-stabilized supply)

Note 2. Operation $V_{CC} = 20\text{V}$ (For stabilized supply)

Electrical Characteristics: ($T_A = +25^\circ\text{C}$, $V_{CC} = 13.2\text{V}$, $R_L = 4\Omega$, $f = 1\text{kHz}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Quiescent Curcuit Current	I_{CQ}	$V_i = 0$	40	70	120	mA
		$V_{CC} = 16\text{V}$, $R_L = 8\Omega$, $V_i = 0$	40	80	150	mA
Voltage Gain	G_V	$V_i = 3\text{mV}$	52	54	56	dB
		$V_{CC} = 16\text{V}$, $R_L = 8\Omega$, $V_i = 4\text{mV}$	53	54	56	dB

Electrical Characteristics (Cont'd): ($T_A = +25^\circ\text{C}$, $V_{CC} = 13.2\text{V}$, $R_L = 4\Omega$, $f = 1\text{kHz}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output Power	P_O	THD = 10%	4.8	5.5	–	W
		$V_{CC} = 16\text{V}$, THD = 10%	–	7.5	–	W
		$V_{CC} = 16\text{V}$, $R_L = 8\Omega$, THD = 10%	4.0	4.5	–	W
Total Harmonic Distortion	THD	$V_i = 3\text{mV}$	–	0.15	1.0	%
		$V_{CC} = 16\text{V}$, $R_L = 8\Omega$, $V_i = 4\text{mV}$	–	0.1	1.0	%
Output Noise Voltage	V_{no}	$R_g = 10\text{k}\Omega$	–	1	3	mV
		$V_{CC} = 16\text{V}$, $R_L = 8\Omega$, $R_g = 10\text{k}\Omega$	–	1	3	mV
Channel Balance	CB	$V_i = 3\text{mV}$	–	0	1	dB
Channel Separation	Sep	$V_i = 3\text{mV}$	45	50	–	dB
Ripple Rejection	RR	$f = 60\text{Hz}$, $R_g = 600\Omega$	–	40	–	dB
Crosstalk	CT	$V_{CC} = 16\text{V}$, $R_L = 8\Omega$, $V_i = 4\text{mV}$, $R_g = 10\text{k}\Omega$	45	–	–	dB

Pin Connection Diagram
(Front View)



