



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,  $T_{opr}$  .....  $-30^\circ$  to  $+75^\circ\text{C}$

Storage Temperature Range,  $T_{stg}$  .....  $-55^\circ$  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	$V_{CC} = 16\text{V}$ , $R_i = 8\Omega$ , $V_i = 4\text{mV}$ , $R_g = 10\text{k}\Omega$	45	-	-	dB

**Pin Connection Diagram**  
(Front View)



