



ELECTRONICS, INC.

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## NTE7061 Integrated Circuit Dual 5.3W Audio Power Amplifier Circuit

### **Description:**

The NTE7061 is a dual 5.3W (12V, 3Ω) power amplifier in a 12-Lead SIP type package. Dual amplifier circuits make stereo operation possible using one chip. Low quiescent current makes the NTE7061 ideal for use in battery operated applications such as radio cassette recorders.

### **Features:**

- Low Quiescent Current, Low Distortion, Low Noise
- Low Shock Noise from Power ON/OFF Operation
- Minimum External Components

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

Supply Voltage,  $V_{CC}$  ..... 24V  
 Supply Current,  $I_{CC}$  ..... 4A  
 Power Dissipation,  $P_D$  ..... 41.7W  
 Operating Ambient Temperature Range,  $T_{opr}$  .....  $-30^\circ\text{ to }+75^\circ\text{C}$   
 Storage Temperature Range,  $T_{stg}$  .....  $-55^\circ\text{ to }+150^\circ\text{C}$

### **Electrical Characteristics:** ( $V_{CC} = 12\text{V}$ , $R_C = 3\Omega$ , $f = 1\text{kHz}$ , $T_A = +25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Quiescent Circuit Current	$I_{CQ}$	$V_i = 0$	–	13	19	mA
Voltage Gain	$G_V$	$P_O = 1\text{W}$	42.5	44.5	46.5	dB
Total Harmonic Distortion	THD	$P_O = 1\text{W}$ , $f = 1\text{kHz}$	–	0.2	0.75	%
		$P_O = 1\text{W}$ , $f = 100\text{Hz}$	–	0.4	–	%
		$P_O = 1\text{W}$ , $f = 10\text{kHz}$	–	0.3	–	%
Maximum Output Power	$P_O$	THD = 10%, $R_L = 3\Omega$	4.7	5.3	–	W
		THD = 10%, $R_L = 4\Omega$	–	4.3	–	W
		THD = 10%, $V_{CC} = 9\text{V}$ , $R_L = 3\Omega$	–	2.9	–	W
Output Noise Voltage	$V_{no}$	$R_G = 10\text{k}\Omega$ , $f = 15\text{Hz}$ , to 30kHz, 12dB/OCT	–	0.25	–	mV
		$R_G = 10\text{k}\Omega$ , Without Filter	–	0.40	0.50	mV
Channel Balance	CB	$P_O = 0.5\text{W}$	–	0	1.0	dB
Channel Separation	CS	$P_O = 0.5\text{W}$	40	50	–	dB
Ripple Rejection Ratio	RR	$P_O = 0.5\text{W}$	45	50	–	dB
Output Offset Voltage	$V_{O(\text{offset})}$	$V_i = 0$	–	0	200	mV

**Pin Connection Diagram**  
(Front View)

