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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° to $+75^{\circ}\text{C}$
 Storage Temperature Range, T_{stg} -55° 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)

