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NTE1626 Integrated Circuit 4.2W Dual Audio Power Amplifier

Description:

The NTE1626 is a dual audio power amplifier in a 12-Lead SIP type package designed for use in a stereo radio cassette. This device has two audio power amplifiers and each of the two provides 4.2W power at 12V/4Ω.

Features:

- High Output Power:
 - 4.2W/ch (Typ) $V_{CC} = 12V, R_L = 4\Omega$
 - 5.0W/ch (Typ) $V_{CC} = 12V, R_L = 3\Omega$
 - 2.2W/ch (Typ) $V_{CC} = 9V, R_L = 4\Omega$
 - 3.0W/ch (Typ) $V_{CC} = 9V, R_L = 3\Omega$
- Wide Operating Voltage Range: $V_{CC} = 5$ to 16V
- No Shock Noise at Power Supply Switch On & Off
- Soft Clipping Wave Form
- High Ripple Rejection Ratio: R.R.R. = 50dB (Typ)
- Thermal Shutdown Circuit is Built In

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

Supply Voltage (No Signal), V_{CC1}	20V
Supply Voltage (Operating), V_{CC2}	16V
Allowable Power Dissipation (Note 1), P_D	13W
Operating Temperature Range, T_{opt}	-20° to +75°C
Storage Temperature Range, T_{stg}	-40° to +150°C

Note 1 100 x 100 x 2mm³ Al heat sink

Recommended Operating Conditions: ($T_A = +25^\circ C$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Supply Voltage	V_{CC}		5	12	16	V
Load Impedance	R_L		3	4	8	Ω

Electrical Characteristics: ($V_{CC} = 12V, R_L = 4\Omega, f = 1kHz, T_A = +25^\circ C$, 100 x 100 x 2mm Al Panel Heat Sink unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Circuit Current	I_{CC}	No Signal	20	45	90	mA
Voltage Gain	A_V	$P_O = 1W$	42	45	48	dB

Electrical Characteristics (Cont'd): ($V_{CC} = 12V$, $R_L = 4\Omega$, $f = 1kHz$, $T_A = +25^\circ C$, 100 x 100 x 2mm Al Panel Heat Sink unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output Power	P_O	THD = 10% $V_{CC} = 9V$, $R_L = 4\Omega$	1.8	2.2	-	W
		THD = 10% $V_{CC} = 9V$, $R_L = 3\Omega$	2.5	3	-	W
		THD = 10% $V_{CC} = 12V$, $R_L = 4\Omega$	3.2	4.2	-	W
		THD = 10% $V_{CC} = 12V$, $R_L = 3\Omega$	4	5	-	W
Total Harmonic Distortion	THD	$P_O = 1W$	-	0.2	1	%
Output Noise Voltage	NL	$R_G = 10k\Omega$	-	0.6	2	mV _{rms}
Cross Talk	CT	$P_O = 1W$, oth. ch. $R_G = 10k\Omega$	45	55	-	dB
Ripple Rejection	RR	$R_G = 0$, $f = 100Hz$, $V = 0.3V_{rms}$	40	50	-	dB
Input Impedance	Z_{in}		30	50	-	k Ω

Pin Connection Diagram
(Front View)

