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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 2mm<sup>3</sup> 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	-	$k\Omega$

**Pin Connection Diagram**  
(Front View)

