



ELECTRONICS, INC.

44 FARRAND STREET
 BLOOMFIELD, NJ 07003
 (973) 748-5089
<http://www.nteinc.com>

NTE1606 Integrated Circuit Dual Audio Power Amplifier, 4W to 7W

Description:

The NTE1606 is an audio power amplifier integrated circuit in a 12-Lead SIP type package specifically designed for cassette radio applications. This device delivers 4.3W per channel under a 12V power supply and 6.8W under a 15V power supply to a 4Ω load.

Features:

- Low Quiescent Current for Efficient Battery Operation
- Audio Muting Circuit Included
- Designed for Low Crossover Distortion Under a Low Idling Current
- No Electrical Isolation Needed for Simple Chassis Mounting
- Internal Thermal Protection

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

Operating Supply Voltage	20V
Peak Output Current	4A
Power Dissipation	15W
Operating Temperature Range, T_{opr}	-20° to $+70^\circ\text{C}$
Storage Temperature Range, T_{stg}	-55° to $+125^\circ\text{C}$
Junction Temperature, T_J	$+150^\circ\text{C}$

Electrical Characteristics: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit	
Quiescent Current	I_Q	$V_{in} = 0$	–	36	60	mA	
Input Bias Current	I_B	$V_{in} = 0$	–	–	1.0	μA	
Voltage Gain	G_V	$V_{in} = 46\text{dB}$	44	46	48	dB	
Difference of Voltage Gain	ΔG_V	$V_{in} = -46\text{dBm}$	–	–	± 1.5	dB	
Output Power Per Channel	P_{out}	$R_L = 4\Omega$, THD = 10%	$V_{CC} = 12\text{V}$	3.8	4.3	–	W
			$V_{CC} = 15\text{V}$	6.0	6.8	–	W
Total Harmonic Distortion	THD	$P_{out} = 0.5\text{W}$	–	0.25	1.0	%	
Noise Output	WBN	$R_g = 10\text{k}\Omega$, BW = 20Hz to 20kHz	–	0.4	1.0	mV	
Supply Voltage Rejection Ratio	SVR	$f = 100\text{Hz}$, $V_{ripple} = 0\text{dBm}$	40	44	–	dB	
Rolloff Frequency	f_H	$V_{in} = -46\text{dBm}$, $G_V = 3\text{dB}$ from $f = 1\text{kHz}$ Ref	12	20	33	Hz	
Crosstalk	CT	$V_{in} = -46\text{dBm}$	–	60	–	dB	
Muting Attenuation	ATT	$I_{MUTE} = 5\text{mA}$, $V_{in} = -46\text{dBm}$	–	60	–	dB	

Pin Connection Diagram
(Front View)

