

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)

