

NTE1627 Integrated Circuit Power Amp, 550mW, for Battery Operated Radios

Description:

The NTE1627 is a monolithic integrated circuit in a 9-Lead SIP type package consisting of a power amplifier intended for applications such as portable radios, tape recorders, and intercoms. It operates from a supply voltage of 6V and can deliver the rated output power of 350mW (THD = 10%) to a load of 8Ω. A maximum output power of 550mW is attainable.

Features:

- Delivers 350mW (THD = 10%) of Output Power to a 8Ω Load with 6V Operation
- Excellent Low-Voltage Characteristics (Starting Voltage < 2V)
- Housed in a Compact 9-Lead SIP Package Comparable in Size to a Preamplifier IC
- Low Current Consumption (Typically 4.8mA)

Applications:

- Portable Radios
- Portable Tape Recorders
- Intercoms

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

Supply Voltage, V_{CC} 12V
 Power Dissipation, P_D 500mW
 Operating Temperature Range, T_{opr} -25° to $+75^\circ\text{C}$
 Storage Temperature Range, T_{stg} -55° to $+125^\circ\text{C}$

Electrical Characteristics: ($T_A = +25^\circ\text{C}$, $V_{CC} = 6\text{V}$, $R_L = 8\Omega$, $f = 1\text{kHz}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Quiescent Current	I_Q	$V_{IN} = 0\text{V}$	—	4.8	7	mA
Voltage Gain (Closed Loop)	G_{VC}	$R_{NF} = 68\Omega$	47	50	53	dB
Maximum Output Power	P_{OM}	$V_{IN} = -30\text{dBm}$	420	550	—	mW
Rated Output Power	P_{OUT}	THD = 10%	250	350	—	mW
Total Harmonic Distortion	THD	$P_O = 100\text{mW}$	—	1.1	2.5	%
Output Noise Voltage	V_{NO}	$R_g = 10\text{k}\Omega$	—	1.0	2.5	mV_{rms}
Input Resistance	R_{IN}		—	25	—	$\text{k}\Omega$

Pin Connection Diagram
(Front View)

