



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

NTE1637 Integrated Circuit Dual AF Power Amplifier, 4.3W

Features:

- Built-in 2 Channels Enabling use in Stereo and Bridge Amplifier Applications.
- Low Switching Distortion at High Frequencies
- Minimum Number of External Parts Required: 9 Pcs. Min. (Stereo/Bridge)
- Small Shock Noise at the Time of Power Supply ON/OFF due to Built-In Muting Circuit
- Good Ripple Rejection due to Built-In Ripple Filter
- Voltage Gain Fixed at 45dB (Bridge: 51dB). Variable Voltage Gain Available with External Resistor Added.
- Easy to Mount on Board and also easy to Design Radiator fin due to use of 14-Pin SIP

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

Supply Voltage, V_{CC} 18V
 Power Dissipation (Note 1), P_D 10W
 Operating Ambient Temperature Range, T_{opr} -20° to $+75^{\circ}\text{C}$
 Storage Temperature Range, T_{stg} -55° to $+150^{\circ}\text{C}$

Note 1. Using $100 \times 100 \times 1.5\text{mm}^3$ Al fin.

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

Supply Voltage, V_{CC} 12V
 Load Resistance, R_L
 Stereo 4Ω to 8Ω
 Bridge 8Ω

Electrical Characteristics: ($T_A = +25^{\circ}\text{C}$, $V_{CC} = 12\text{V}$, $f = 1\text{kHz}$, $R_L = 4\Omega$ Stereo 8Ω Bridge)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Quiescent Current	I_{CCO}		-	45	60	mA
Voltage Gain Stereo	V_G	Closed Loop	43	45	47	dB
Bridge			49	51	53	dB

Electrical Characteristics (Cont'd): ($T_A = +25^\circ\text{C}$, $V_{CC} = 12\text{V}$, $f = 1\text{kHz}$, $R_L = 4\Omega$ Stereo 8Ω Bridge)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Voltage Gain Difference	ΔV_G	Stereo	-	-	± 1	dB
Output Power Stereo 4Ω	P_O	THD = 10%	3.6	4.2	-	W
Stereo 8Ω			-	2.5	-	W
Bridge 8Ω			-	9.0	-	W
Total Harmonic Distortion Stereo	THD	$P_O = 250\text{mW}$	-	0.3	1.5	%
Bridge			-	0.5	-	%
Input Resistance	r_i		21	30	-	$k\Omega$
Output Noise Voltage	V_{NO}	$R_g = 0$, Stereo	-	0.3	1.0	mV
		$R_g = 10k\Omega$, Stereo	-	0.5	2.0	mV
Ripple Rejection	R_r	$R_g = 0$, $V_r = 150\text{mV}$, Stereo	40	46	-	dB
Channel Separation	Sep	$R_g = 10k\Omega$, $V_O = 0\text{dB}$, Stereo	40	55	-	dB

Pin Connection Diagram
(Front View)



