



ELECTRONICS, INC.
 44 FARRAND STREET
 BLOOMFIELD, NJ 07003
 (973) 748-5089

NTE1377 Integrated Circuit AF Power Amplifier, 6W/Channel

Features:

- Built-In 2 Channels (Dual) Enabling use in Stereo and Bridge Amplifier Applications
 Dual: 6W x 2 Typ
 Bridge: 19W Typ
- Minimum Number of External Parts Required
- Low Pop Noise during Power Supply ON/OFF and Good Starting Balance
- Good Ripple Rejection: 46dB Typ
- Good Channel Separation
- Low Residual Noise ($R_g = 0$)
- Low Distortion over a Wide Range of Low to High Frequencies
- Built-In Audio Muting Function
- Built-In Protectors:
 - a. Thermal Protection
 - b. Overvoltage, Surge Voltage Protection
 - c. Pin-to-Pin Short Protection

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

| | |
|---|-------------------------------------|
| Maximum Supply Voltage, V_{CCmax} | |
| Quiescent ($t = 30\text{sec}$) | 25V |
| Operating | 18V |
| Surge Supply Voltage ($t \leq 0.2\text{sec}$), $V_{CCsurge}$ | 50V |
| Allowable Power Dissipation ($T_C = +75^\circ\text{C}$), P_{dmax} | 15W |
| Thermal Resistance, Junction to Case, $R_{\theta JC}$ | 3°C/W |
| Operating Temperature Range, T_{opr} | -20° to $+75^\circ\text{C}$ |
| Storage Temperature Range, T_{stg} | -40° to $+150^\circ\text{C}$ |

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

| | |
|--------------------------------------|------------------------|
| Recommended Supply Voltage, V_{CC} | 13.2V |
| Load Resistance, R_L | |
| Dual | 2Ω to 8Ω |
| Bridge | 4Ω to 8Ω |

Electrical Characteristics: ($T_A = +25^\circ\text{C}$, $V_{CC} = 13.2\text{V}$, $R_L = 4\Omega$, $f = 1\text{kHz}$, $R_g = 600\Omega$, with $100 \times 100 \times 1.5\text{mm}^3$ Al fin unless otherwise specified)

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---------------------------|--------------|---|------|------|------|------------|
| Quiescent Current | I_{CCO} | | – | 100 | 200 | mA |
| Voltage Gain | V_G | | 49.5 | 51.5 | 53.5 | dB |
| Gain Differential | ΔV_G | | – | – | 2 | dB |
| Output Power Dual | P_O | THD = 10% | 5.0 | 6.0 | – | W |
| Bridge | | | – | 19 | – | W |
| Total Harmonic Distortion | THD | $P_O = 1\text{W}$ | – | 0.1 | 1.0 | % |
| Input Resistance | r_i | | – | 30 | – | k Ω |
| Output Noise Voltage | V_{no} | $R_g = 0$ | – | 0.6 | 1.0 | mV |
| | | $R_g = 10\text{k}\Omega$ | – | 1.0 | 2.0 | mV |
| Ripple Rejection Ratio | R_r | $V_R = 200\text{mV}$, $f_R = 100\text{Hz}$, $R_g = 0$ | – | 46 | – | dB |
| Channel Separation | Ch Sep | $v_o = 0\text{dBm}$, $R_g = 10\text{k}\Omega$ | 45 | 55 | – | dB |
| Muting Rejection | ATT | $v_o = 0\text{dBm}$, $V_M = 9\text{V}$ | – | 40 | – | dB |

Pin Connection Diagram
(Front View)

