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NTE1707 Integrated Circuit AF Power Amp, 5.5W/Channel

Features:

- Dual Channels – 5.5W/Channel Typical
- Minimum Number of External Parts Required
- Low Pop Noise at the time of Power Supply ON/OFF and Good Starting Balance
- Good Ripple Rejection – 46dB Typical
- Good Channel Separation
- Low Residual Noise ($R_g = 0$)
- Built-In Protectors:
 - a. Thermal Protector
 - b. Overvoltage, Surge Protector
 - c. Adjacent Pins (9–10, 9–8) Short Circuit Protector

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

| | |
|---|-------------------------------------|
| Supply Voltage, | |
| Quiescent ($t = 30\text{sec}$), $V_{CC\text{max}1}$ | 25V |
| Operating, $V_{CC\text{max}2}$ | 18V |
| Surge Supply Voltage ($t \leq 0.2\text{sec}$), $V_{CC(\text{surge})}$ | 50V |
| Output Current (1 Channel), $I_{O\text{peak}}$ | 3.5A |
| Allowable Power Dissipation, $P_{D\text{max}}$ | 15W |
| Operating Temperature Range, T_{opg} | -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)

| | |
|---|-----------|
| Supply Voltage, V_{CC} | 13.2V |
| Load Resistance (2 Channels), R_L | 4Ω |
| Operating Voltage Range | 10 to 16V |

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

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---------------------------|-----------|---|------|------|------|-----------|
| Quiescent Current | I_{CCO} | | - | 75 | 150 | mA |
| Voltage Gain | V_G | | 49.5 | 51.5 | 53.5 | dB |
| Output Power | P_O | THD = 10%, 2 Channels | 5.0 | 5.5 | - | W |
| Total Harmonic Distortion | THD | $P_O = 1\text{W}$ | - | 0.15 | 1.0 | % |
| Input Resistance | r_i | | - | 30 | - | $k\Omega$ |
| Output Noise Voltage | V_{NO} | $R_g = 0$ | - | 0.6 | 1.0 | mV |
| | | $R_g = 10k\Omega$ | - | 1.0 | 2.0 | mV |
| Ripple Rejection | R_r | $R_g = 0$, $V_R = 200\text{mV}$, $f_R = 100\text{Hz}$ | - | 46 | - | dB |
| Channel Separation | ch sep | $R_g = 10k\Omega$, $V_O = 0\text{dBm}$ | 45 | 55 | - | dB |

Pin Connection Diagram
(Front View)



