



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

## NTE1330 Integrated Circuit Module – Hybrid, Dual, Audio Power Amplifier, 15W/Ch, 2 Power Supplies Required

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

Maximum Supply Voltage,  $V_{CCmax}$  .....  $\pm 31\text{V}$   
 Operating Case Temperature,  $T_C$  .....  $+105^\circ\text{C}$   
 Storage Temperature Range,  $T_{stg}$  .....  $-30^\circ$  to  $+105^\circ\text{C}$   
 Allowable Load Shorting Time ( $V_{CC} = \pm 21\text{V}$ ,  $P_O = 15\text{W}$ ,  $R_L = 8\Omega$ ,  $f = 50\text{Hz}$ ),  $t_s$  ..... 2sec

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

Recommended Supply Voltage,  $V_{CC}$  .....  $\pm 21\text{V}$   
 Load Resistance,  $R_L$  .....  $8\Omega$

**Electrical Characteristics:** ( $T_A = +25^\circ\text{C}$ ,  $V_{CC} = \pm 21\text{V}$ ,  $R_L = 8\Omega$ ,  $R_g = 600\Omega$ ,  $V_G = 40\text{dB}$  unless otherwise specified)

| Parameter                 | Symbol     | Test Conditions  | Min        | Typ | Max  | Unit              |
|---------------------------|------------|--|------------|-----|------|-------------------|
| Quiescent Current         | $I_{CCO}$  | $V_{CC} = \pm 24\text{V}$  | 20         | 40  | 120  | mA                |
| Output Power              | $P_O$      | $f = 20\text{Hz}$ to $20\text{kHz}$ , THD = 0.08%                              | 15         | –   | –    | W                 |
|                           |            | $V_{CC} = \pm 19\text{V}$ , $f = 1\text{kHz}$ , THD = 0.2%,<br>$R_L = 4\Omega$ | 20         | –   | –    | W                 |
| Total Harmonic Distortion | THD        | $f = 20\text{Hz}$ to $20\text{kHz}$ , $P_O = 1\text{W}$                        | –          | –   | 0.08 | %                 |
| Frequency Response        | $f_L, f_H$ | +0, -3dB, $P_O = 1\text{W}$ , $f = 1\text{kHz}$                                | 10 to 100k |     |      | Hz                |
| Input Resistance          | $r_i$      | $f = 1\text{kHz}$ , $P_O = 1\text{W}$  | –          | 32  | –    | k $\Omega$        |
| Output Noise Voltage      | $V_{NO}$   | $V_{CC} = \pm 24\text{V}$ , $R_g = 10\text{k}\Omega$                           | –          | –   | 1.2  | mV <sub>rms</sub> |
| Midpoint Voltage          | $V_N$      | $V_{CC} = \pm 24\text{V}$  | -70        | –   | +70  | mV                |

**Pin Connection Diagram**  
(Front View)

|    |                       |
|----|-----------------------|
| 16 | Rt Ch Input           |
| 15 | Rt Ch Feedback        |
| 14 | GND                   |
| 13 | Rt Ch Bias            |
| 12 | (-) V <sub>CC</sub> 2 |
| 11 | Rt Ch Feedback        |
| 10 | Rt Ch Output          |
| 9  | (+) V <sub>CC</sub> 2 |
| 8  | (+) V <sub>CC</sub> 1 |
| 7  | Lt Ch Output          |
| 6  | Lt Ch Feedback        |
| 5  | (-) V <sub>CC</sub> 1 |
| 4  | Lt Ch Bias            |
| 3  | GND                   |
| 2  | Lt Ch Feedback        |
| 1  | Lt Ch Input           |

