

## NTE1816 Integrated Circuit Module, Dual AF PO, 6W/Ch Dual Power Supplies Req'd

### **Features:**

- Built-In Muting Circuit to Cut Off Various Kinds of Shock Noise.
- Greatly Reduced Heat Sink due to Case Temperature +125°C Guaranteed.

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

|                                                                                                                                |                |
|--------------------------------------------------------------------------------------------------------------------------------|----------------|
| Maximum Supply Voltage, $V_{CC\text{max}}$                                                                                     | ±20.5V         |
| Junction Temperature, $T_J$                                                                                                    | +150°C         |
| Operating Case Temperature, $T_C$                                                                                              | +125°C         |
| Storage Temperature, $T_{\text{stg}}$                                                                                          | -30° to +125°C |
| Thermal Resistance, Junction-to-Case, $R_{\text{thJC}}$                                                                        | 5°C/W          |
| Available Time for Load Shorted ( $V_{CC} = \pm 13.2\text{V}$ , $R_L = 8\Omega$ , $f = 50\text{Hz}$ , $P_O 6\text{W}$ ), $t_s$ | 2sec           |

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

|                                      |       |
|--------------------------------------|-------|
| Recommended Supply Voltage, $V_{CC}$ | 13.2V |
| Recommended Load Resistance, $R_L$   | 8Ω    |

### **Electrical Characteristics:** ( $T_A = +25^\circ\text{C}$ , $V_{CC} = \pm 13.2\text{V}$ , $R_L = 8\Omega$ , $R_g = 600\Omega$ , $V_G = 40\text{dB}$ unless otherwise specified)

| Parameter                 | Symbol     | Test Conditions                                                           | Min       | Typ | Max | Unit              |
|---------------------------|------------|---------------------------------------------------------------------------|-----------|-----|-----|-------------------|
| Quiescent Current         | $I_{CCO}$  |                                                                           | 20        | 40  | 100 | mA                |
| Output Power              | $P_{O(1)}$ | THD = 0.4%, $f = 20\text{Hz}$ to $20\text{kHz}$                           | 6         | —   | —   | W                 |
|                           |            | $V_{CC} = \pm 12\text{V}$ , THD = 1%, $R_L = 4\Omega$ , $f = 1\text{kHz}$ | 6         | —   | —   | W                 |
| Total Harmonic Distortion | THD        | $P_O = 1\text{W}$ , $f = 1\text{kHz}$                                     | —         | —   | 0.3 | W                 |
| Frequency Characteristics | $f_L, f_H$ | $P_O = 1\text{W}$ , -3dB                                                  | 20 to 50k |     |     | Hz                |
| Input Resistance          | $r_i$      | $P_O = 1\text{W}$ , $f = 1\text{kHz}$                                     | —         | 55  | —   | kΩ                |
| Output Noise Voltage      | $V_{NO}$   | $V_{CC} = \pm 17\text{V}$ , $R_g = 10\text{k}\Omega$                      | —         | —   | 1.2 | mV <sub>rms</sub> |
| Middle Point Voltage      | $V_N$      | $V_{CC} = \pm 17\text{V}$                                                 | -70       | 0   | 70  | mV                |
| Muting Voltage            | $V_M$      |                                                                           | -2        | -5  | -10 | V                 |

**Pin Connection Diagram**  
(Front View)

|           |                     |
|-----------|---------------------|
| <b>18</b> | Rt Ch Input (–)     |
| <b>17</b> | Rt Ch Input (+)     |
| <b>16</b> | GND                 |
| <b>15</b> | Compensation        |
| <b>14</b> | (–) V <sub>CC</sub> |
| <b>13</b> | Rt Ch Output        |
| <b>12</b> | Bypass              |
| <b>11</b> | (+) V <sub>CC</sub> |
| <b>10</b> | Lt Ch Output        |
| <b>9</b>  | (–) V <sub>CC</sub> |
| <b>8</b>  | Compensation        |
| <b>7</b>  | Compensation        |
| <b>6</b>  | Muting              |
| <b>5</b>  | Compensation        |
| <b>4</b>  | Compensation        |
| <b>3</b>  | Compensation        |
| <b>2</b>  | Lt Ch Input (+)     |
| <b>1</b>  | Lt Ch Input (–)     |

