

## NTE1317 Integrated Circuit Module, 2 Power, 2 Channel, AF Power Amplifier, 50W Min.

### **Features:**

- Muting Circuit
- Reduced Heat Sink due to Case Temperature Dissipation up to +125°C

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

|                                                                                                              |                |
|--------------------------------------------------------------------------------------------------------------|----------------|
| Supply Voltage, $V_{CC\text{max}}$                                                                           | ±53.0V         |
| Operating Junction Temperature, $T_J$                                                                        | +150°C         |
| Substrate Temperature, $T_C$                                                                                 | +125°C         |
| Storage Temperature Range, $T_{\text{stg}}$                                                                  | -30° to +125°C |
| Thermal Resistance, Junction-to-Case, $R_{\text{thJC}}$                                                      | 1.8°C/W        |
| Turn-on Time ( $V_{CC} = \pm 35\text{V}$ , $R_L = 8\Omega$ , $f = 50\text{Hz}$ , $P_O = 50\text{W}$ ), $t_s$ | 2sec           |

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

|                          |      |
|--------------------------|------|
| Supply Voltage, $V_{CC}$ | ±35V |
| Load Resistance, $R_L$   | 8Ω   |

### **Electrical Characteristics:** ( $T_A = 25^\circ\text{C}$ , $V_{CC} = \pm 35\text{V}$ , $R_L = 8\Omega$ , $R_g = 600\Omega$ , $V_G = 40\text{dB}$ unless otherwise specified)

| Parameter                 | Symbol     | Test Conditions                                                             | Min       | Typ | Max  | Unit              |
|---------------------------|------------|-----------------------------------------------------------------------------|-----------|-----|------|-------------------|
| Idle Current              | $I_{CCO}$  | $V_{CC} = \pm 42.5\text{V}$                                                 | 20        | 40  | 100  | mA                |
| Power Out                 | $P_O$      | THD = 0.8%, $f = 20\text{Hz}$ to $20\text{kHz}$                             | 50        | —   | —    | W                 |
|                           |            | $V_{CC} = \pm 32\text{V}$ , THD = 0.2%, $R_L = 4\Omega$ , $f = 1\text{kHz}$ | 55        | —   | —    | W                 |
| Total Harmonic Distortion | THD        | $P_O = 1.0\text{W}$ , $f = 1\text{kHz}$                                     | —         | —   | 0.08 | %                 |
| Breakpoints               | $f_L, f_H$ | $P_O = 1.0\text{W}$ , +0 -3dB                                               | 20 to 50k |     |      | Hz                |
| Source Impedance          | $r_i$      | $P_O = 1.0\text{W}$ , $f = 1\text{kHz}$                                     | —         | 55  | —    | kΩ                |
| Input Noise Voltage       | $V_{NO}$   | $V_{CC} = \pm 42.5\text{V}$ , $R_g = 10\text{k}\Omega$                      | —         | —   | 1.2  | mV <sub>rms</sub> |
| Transient Noise Voltage   | $V_N$      | $V_{CC} = \pm 42.5\text{V}$                                                 | -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 (-)     |

