



ELECTRONICS, INC.  
 44 FARRAND STREET  
 BLOOMFIELD, NJ 07003  
 (973) 748-5089  
<http://www.nteinc.com>

## NTE1316 Integrated Circuit Module, Dual, AF PO, 50W

**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, $V_{CCmax}$ .....	±52.5V
Junction Temperature, $T_J$ .....	+150°C
Substrate Temperature, $T_C$ .....	+125°C
Storage Temperature Range, $T_{stg}$ .....	-30° to +125°C
Thermal Resistance, Junction-to-Case, $T_{thJC}$ .....	1.8°C/W
Turn-on Time, $t_s$ ( $V_{CC} = \pm 35V, R_L = 8\Omega, f = 50\text{Hz}, P_O = 50W$ ) .....	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:** ( $T_A = +25^\circ\text{C}, V_{CC} = \pm 35V, R_L = 8\Omega, R_g = 600\Omega, V_G = 40\text{dB}$  unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Idle Current	$I_{CCO}$	$V_{CC} = \pm 42V$	20	40	100	mA
Power Out	$P_{O(1)}$	THD = 0.4%, $f = 20\text{Hz} \sim 20\text{kHz}$	50	-	-	W
	$P_{O(2)}$	$V_{CC} = \pm 31V, \text{THD} = 1.0\%, R_L = 4\Omega, f = 1\text{kHz}$	55	-	-	W
Total Harmonic Distortion	THD	$P_O = 1.0W, f = 1\text{kHz}$	-	-	0.3	%
Breakpoints	$f_L, f_H$	$P_O = 1.0W, -3\text{dB}$	20 to 50k			Hz
Source Impedance	$r_i$	$P_O = 1.0W, f = 1\text{kHz}$	-	55	-	kΩ
Input Noise Voltage	$V_{NO}$	$V_{CC} = \pm 42V, R_g = 10\text{k}\Omega$	-	-	1.2	mV <sub>rms</sub>
Transient Noise Voltage	$V_N$	$V_{CC} = \pm 42V$	-70	0	70	mV
Muting Voltage	$V_M$		-2	-5	-10	V

### Pin Connection Diagram

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

