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## NTE1871 Integrated Circuit Module – Dual AF Power Amplifier, 50W/Ch, Dual Power Supplies

**Features:**

- Built-In Muting Circuit to Cut-Off Pop Noise

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

Maximum Supply Voltage, $V_{CCmax}$ .....	$\pm 52.5\text{V}$
Junction Temperature, $T_J$ .....	$+150^\circ\text{C}$
Operating Case Temperature, $T_C$ .....	$+125^\circ\text{C}$
Storage Temperature Range, $T_{stg}$ .....	$-30^\circ$ to $+125^\circ\text{C}$
Thermal Resistance, Junction-to-Case, $R_{thJC}$ .....	$1.8^\circ\text{C/W}$
Availabe Time for Lead Shorted ( $V_{CC} = \pm 35\text{V}$ , $R_L = 8\Omega$ , $f = 50\text{MHz}$ , $P_O = 50\text{W}$ ), $t_s$ .....	2sec

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

Recommended Supply Voltage, $V_{CC}$ .....	$\pm 35\text{V}$
Load Resistance, $R_L$ .....	$8\Omega$

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Quiescent Current	$I_{CCO}$	$V_{CC} = \pm 42\text{V}$	20	40	100	mA
Output Power	$P_O (1)$	THD = 0.4%, $f = 20\text{Hz}$ to $20\text{kHz}$	50	–	–	W
	$P_O (2)$	$V_{CC} = \pm 31\text{V}$ , THD = 1.0%, $R_L = 4\Omega$ , $f = 1\text{kHz}$	55	–	–	W
Total Harmonic Distortion	THD	$P_O = 1\text{W}$ , $f = 1\text{kHz}$	–	–	0.3	%
Frequency Characteristic	$f_L, f_H$	$P_O = 1\text{W}$ , +0, –3dB	20 to 50k			Hz
Input Resistance	$r_i$	$P_O = 1\text{W}$ , $f = 1\text{kHz}$	–	55	–	k $\Omega$
Output Noise Voltage	$V_{NO}$	$V_{CC} = \pm 42\text{V}$ , $R_g = 10\text{k}\Omega$	–	–	1.2	mV <sub>rms</sub>
Middle Point Voltage	$V_N$	$V_{CC} = \pm 42\text{V}$	–70	0	+70	mV
Muting Voltage	$V_M$		–2	–5	–10	V

Note 1. For power supply at the time of test, use a constant-voltage power supply unless otherwise specified.

Note 2. The output noise voltage is represented by the peak value on RMS scale (VTVM) of average value indicating type. For AC power supply, use an AC stabilized power supply (50Hz) to eliminate the effect of flicker noise in AC primary line.

**Pin Connection Diagram**  
(Front View)

