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NTE7211 & NTE7212 Integrated Circuit Class AB Audio Power Amplifier, 2 Channel

Description:

The NTE7211 and NTE7212 are audio power amplifier hybrid integrated circuits in a 15-Lead SIP type package consisting of optimally-designed discrete component power amplifier circuits.

Features:

- Miniature Package
- Available in 2 Different Outputs (THD = 0.4%, f = 20Hz to 20kHz):
 50W/Ch (NTE7211)
 80W/Ch (NTE7212)
- Output Load Impedance: $R_L = 6\Omega$
- Allowable Load Shorted Time: 0.3 seconds
- Supports the Use of Standby, Muting, and Load Shorting Protection Circuits

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

Maximum Supply Voltage (No Signal), V_{CCmax}	
NTE7211	$\pm 54\text{V}$
NTE7212	$\pm 65\text{V}$
Maximum Supply Voltage ($R_L = 6\Omega$), V_{CCmax}	
NTE7211	$\pm 47\text{V}$
NTE7212	$\pm 57\text{V}$
Recommended Supply Voltage ($R_L = 6\Omega$), V_{CC}	
NTE7211	$\pm 32\text{V}$
NTE7212	$\pm 39\text{V}$
Operating Junction Temperature (Note 1), T_{Jmax}	$+150^\circ\text{C}$
Operating IC Substrate Temperature (Not 1), T_{Cmax}	$+125^\circ\text{C}$
Storage Temperature Range, T_{stg}	-30° to $+125^\circ\text{C}$
Thermal Resistance, Junction-to-Case (Per Power Transistor), R_{thJC}	2.2°C/W
Allowable Load Shorted Time ($R_L = 6\Omega$, $f = 50\text{Hz}$), t_s	
NTE7211 ($V_{CC} = \pm 32\text{V}$, $P_O = 50\text{W}$)	0.3s
NTE7212 ($V_{CC} = \pm 39\text{V}$, $P_O = 80\text{W}$)	0.3s

Note 1. Both the T_{Jmax} and the T_{Cmax} conditions must be met.

Operating Characteristics: ($T_A = +25^\circ\text{C}$, $R_L = 6\Omega$ (non-inductive load), $R_g = 600\Omega$, $V_G = 30\text{dB}$, Note 2 unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit	
Output Power NTE7211	P_O	$V_{CC} = \pm 32\text{V}$	$f = 20\text{Hz to } 20\text{kHz}$, THD = 0.4%	-	50	-	W
			$f = 1\text{kHz}$, THD = 10%	-	80	-	W
		$V_{CC} = \pm 39\text{V}$	$f = 20\text{Hz to } 20\text{kHz}$, THD = 0.4%	-	80	-	W
			$f = 1\text{kHz}$, THD = 10%	-	120	-	W
Total Harmonic Distortion	THD	$V_{CC} = \pm 32\text{V}$, $V_G = 30\text{dB}$	$f = 20\text{Hz to } 20\text{kHz}$, $P_O = 1\text{W}$	-	-	0.4	%
			$f = \text{kHz}$, $P_O = 5\text{W}$	-	0.01	-	%
Frequency Characteristics	f_L, f_H	$V_{CC} = \pm 32\text{V}$, $P_O = 1\text{W}$, +0 -3dB	-	20 to 50k	-	Hz	
Input Impedance	r_i	$V_{CC} = \pm 32\text{V}$, $f = 1\text{kHz}$, $P_O = 1\text{W}$	-	55	-	k Ω	
Output Noise Voltage	V_{NO}	$V_{CC} = \pm 39\text{V}$, $R_g = 2.2\text{k}\Omega$, Note 3	-	-	1.2	mV _{rms}	
Quiescent Current	I_{CCO}	$V_{CC} = \pm 39\text{V}$	10	40	80	mA	
Neutral Voltage	V_N	$V_{CC} = \pm 39\text{V}$	-70	0	+70	mV	

Note 2. Unless otherwise noted, use a constant-voltage supply for the power supply used during inspection.

Note 3. The output noise voltage values shown are peak values read with a VTM. However, an AC stabilized (50Hz) power supply should be used to minimize the influence of AC primary side flicker noise on the reading.



