

AN7108

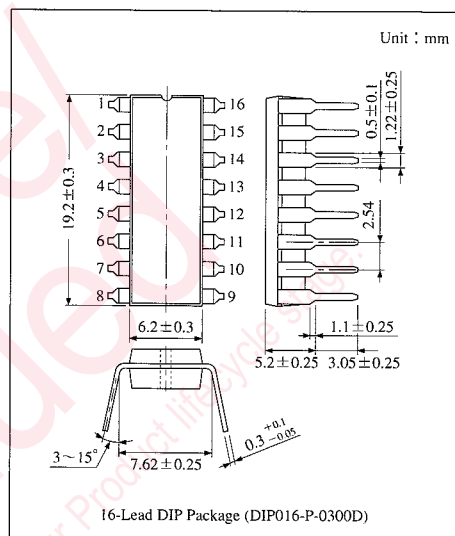
Dual Playback Pre-Amplifier/Power Amplifier (3V Operation)

Overview

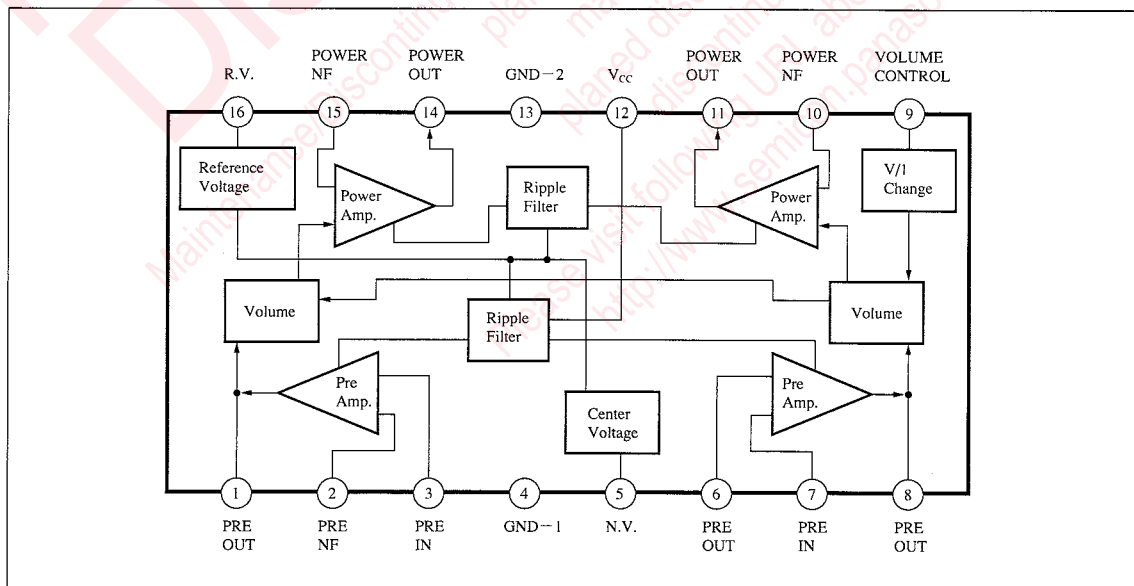
The AN7108 is a pre-power integrated circuit with electronic volume designed for 3V playback exclusive headphone. Connection capacitor is not necessary because pre-amp., electronic volume and power amp. are connected in IC. 30mW, 32Ω headphone is used for the output of power amplifier.

Features

- Incorporating electronic volume, playback amplifier circuit
- Voltage gain : $G_V = 65\text{dB}$
- Audio attenuation ratio : $V_{\min.} = -80\text{dB}$



Block Diagram



Pin Descriptions

Pin No.	Pin Name	Pin No.	Pin Name
1	Pre-amp. Output Ch.1	9	Volume
2	Pre-amp. NFB Ch.1	10	Power Amp. NFB Ch.2
3	Pre-amp. Input Ch.1	11	Power amp. Output Ch.2
4	GND1	12	V _{CC}
5	Center Voltage	13	GND2
6	Pre-amp. Input Ch.2	14	Power Amp. Output Ch.1
7	Pre-amp. NFB Ch.2	15	Power Amp. NFB Ch.1
8	Pre-amp. Output Ch.2	16	Reference Voltage

Absolute Maximum Ratings (Ta=25°C±2°C)

Parameter	Symbol	Rating	Unit
Supply Voltage	V _{CC}	7	V
Supply Current	I _{CC}	150	mA
Power Dissipation	P _D	1	W
Operating Ambient Temperature	T _{opr}	-20 ~ +75	°C
Storage Temperature	T _{stg}	-55 ~ +150	°C

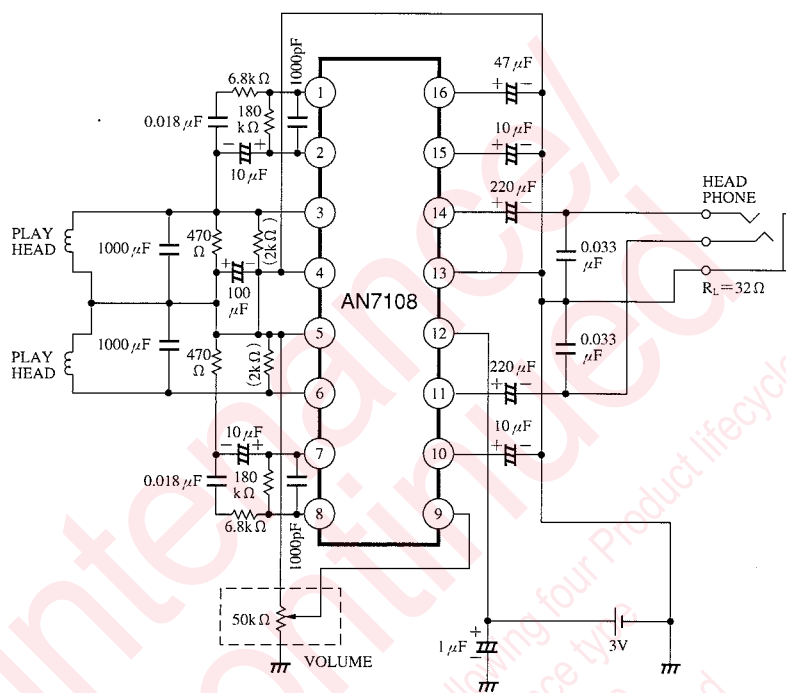
Electrical Characteristics (V_{CC}=3V, R_L=32Ω, f=1kHz, Ta=25°C)

Parameter	Symbol	Condition	min.	typ.	max.	Unit
Quiescent Circuit Current	I _{CQ}	V _{in} =0mV	—	14	20	mA
Voltage Gain	G _V	V _O =0.3V	61	65	69	dB
Channel Balance	CB	V _O =0.3V	-1.5	0	1.5	dB
Total Harmonic Distortion	THD	V _O =0.3V	—	0.8	2	%
Maximum Output Power	P _{O max.}	THD=10%	25	30	—	mW
Volume Attenuation Ratio *	V _{min.}	V _{in} =5mV, Pin⑨=0V	70	80	—	dB
Output Noise Voltage	V _{no}	R _g =2kΩ, DIN AUDIO	—	2	4	mV
Ripple Output	RR	f=1kHz, V _{RIP} =33mV	—	4	10	mV

Note) Operating Supply Voltage Range : V_{CC (opr.)} = 1.8V ~ 6V

* Volume Attenuation Ratio = 20log (Voltage Gain × 5mV / Output at Attenuation)

Application Circuit



ICs for
Cassette
Deck

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