

AN7108

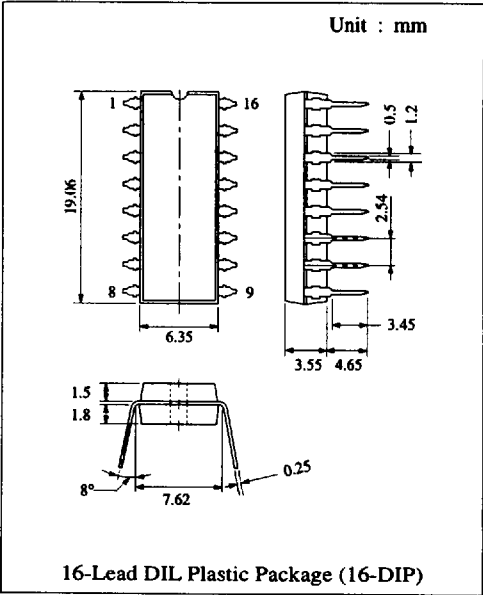
1-Chip Stereo Pre-Amplifier / Power Amplifier Circuit (3V)

Description

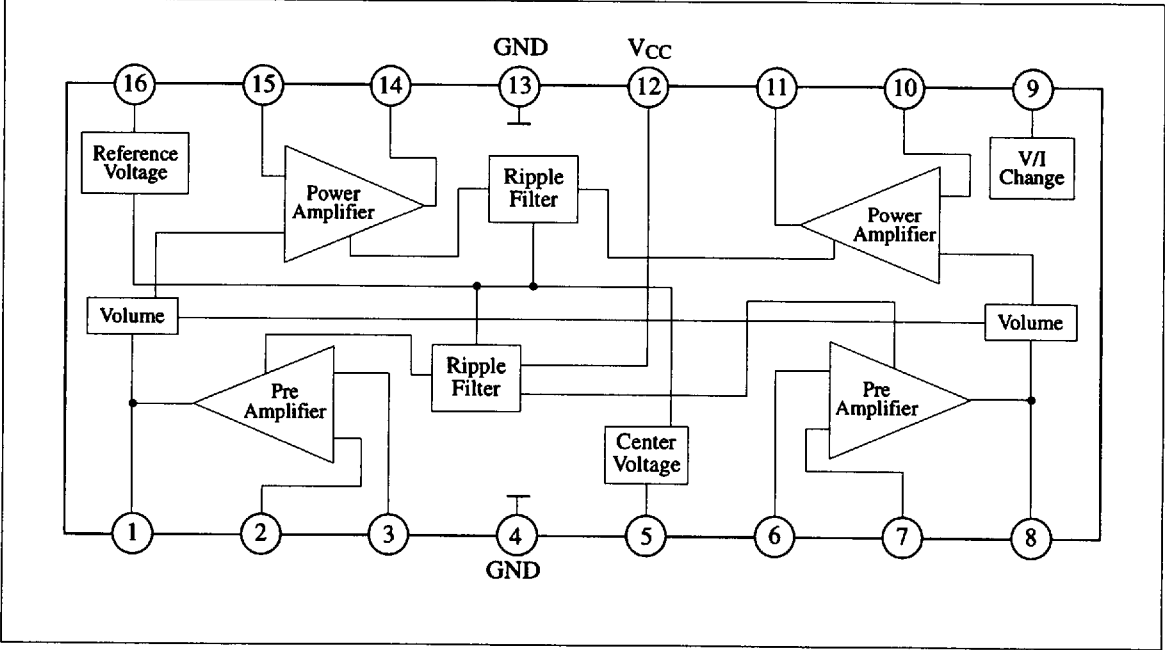
The AN7108 is a monolithic integrated circuit designed for dual pre and power amplifier suitable for 3V headphone stereo.

Features

- V_{CC} range : $V_{CC} = 1.8V \sim 6.0V$
- Voltage gain: $G_V = 65dB$ (1kHz)
- Incorporation of DC volume, pre-amp. and power amp. in one chip
- Volume Attenuation: $V_{min} = -80dB$



Block Diagram



■ Absolute Maximum Ratings (Ta=25°C)

Item	Symbol	Rating	Unit
Supply Voltage	V _{CC}	7	V
Supply Current	I _{CC}	150	mA
Power Dissipation	P _D	1000	mW
Operating Ambient Temperature	Topr	-20 ~ +75	°C
Storage Temperature	Tstg	-55 ~ +150	°C

Operating Supply Voltage Range: V_{CC} = 1.8V ~ 6.0V

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

Item	Symbol	Condition	min.	typ.	max.	Unit
Quiescent Circuit Current	I _{CQ}	V _{in} = 0mV	10	14	20	mA
Voltage Gain	G _v	V _{OUT} = 0.3V	62	65	68	dB
Channel Balance	CB	V _{OUT} = 0.3V	-1.5	0	1.5	dB
Total Harmonic Distortion	THD	V _{OUT} = 0.3V		0.7	1.0	%
Maximum Power Output	P _{O(max)}	THD = 10%	25	30		mW
Channel Crosstalk	CT	V _{OUT} = 1.0V, R _g = 2kΩ		-55		dB
Volume Attenuation	V _{min}	V _{in} = 5mV, Pin 9 = 0V		-80		dB
Output Noise Voltage	V _{no}	R _g = 2.2kΩ, DIN/AUDIO			2	mV
Signal to Noise Ratio	S/N		50			dB
Ripple Rejection	RR	f = 1kHz, V _R = 33mV		-57		dB

■ Pin

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

■ Application Circuit

