

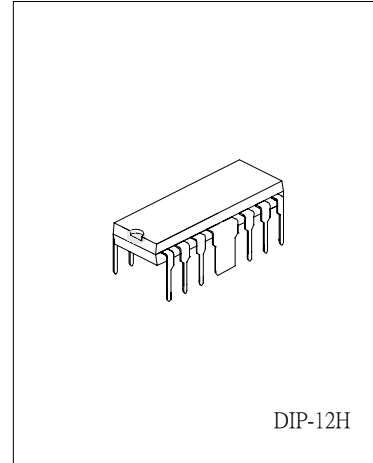
2.5W DUAL AUDIO POWER AMP

DESCRIPTION

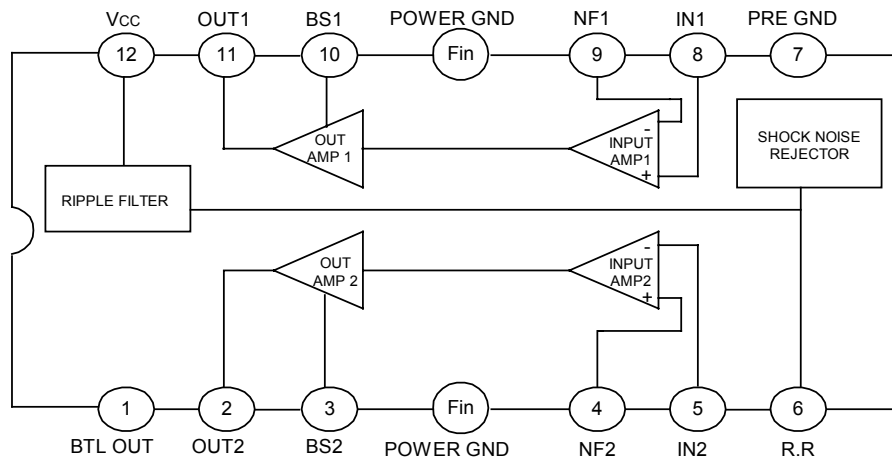
The 2206 is a monolithic integrated circuit consisting of a 2-channel power amplifier. It is suitable for stereo and bridge amplifier application of radio cassette tape recorders.

FEATURES

- *High output power
Stereo: $P_o=2.3W$ (Typ) at $V_{cc}=9V, R_L=4\Omega$.
Bridge: $P_o=4.7W$ (Typ) at $V_{cc}=9V, R_L=8\Omega$.
- *Low switching distortion at high frequency.
- *Small shock noise at the time of power on/off due to a built-in muting circuit
- *Good ripple rejection due to a built-in ripple filter.
- *Good channel separation.
- *Closed loop voltage gain fixed 45dB(Bridge:51dB) but availability with external resistor added.
- *Minimum number of external parts required.
- *Easy to design radiator fin.



BLOCK DIAGRAM



ABSOLUTE MAXIMUM RATINGS (Ta=25℃)

CHARACTERISTICS	SYMBOL	RATING	UNIT
Supply Voltage	V _{cc}	15	V
Power Dissipation	P _o	4 *	W
Operating Temperature	TOPR	-20~+70	℃
Storage Temperature	TSTG	-40~+150	℃

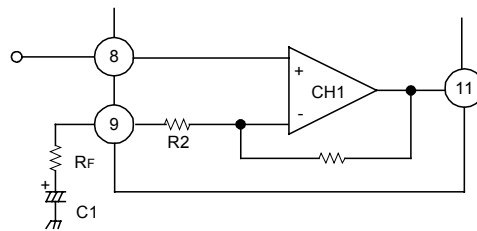
*Fin is soldering on the PCB

ELECTRICAL CHARACTERISTICS (Ta=25℃, V_{cc}=9V, f=1KHz R_G=600Ω, unless otherwise specified)

CHARACTERISTICS	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Operating Supply Voltage	V _{cc}			9	11	V
Quiescent Circuit Current	I _{ccQ}	V _i =0, Stereo		40	55	mA
Closed Loop Voltage Gain	GVC	Stereo	43	45	47	dB
		Bridge	49	51	53	dB
Output Power	P _o	Stereo	1.7	2.3		W
		RL=4Ω, THD=10%		1.3		W
		RL=8Ω, THD=10%		4.7		W
Channel Balance	CB	Stereo	-1	0	1	dB
Total Harmonic Distortion	THD	Stereo		0.3	1.5	%
		Bridge		0.5		%
Input Resistance	R _i		21	30		KΩ
Ripple Rejection Ratio	RR	Stereo, R _G =0Ω, V _r =150mV, f=100Hz	40	46		dB
Output Noise Voltage	V _{NO}	Stereo, R _G =0Ω		0.3	1.0	mV
		Stereo, R _G =10KΩ		0.5	2.0	mV
Cross Talk	CT	Stereo, R _G =10KΩ, V _o =0dBm	40	55		dB

APPLICATION INFORMATION

1. Stereo application



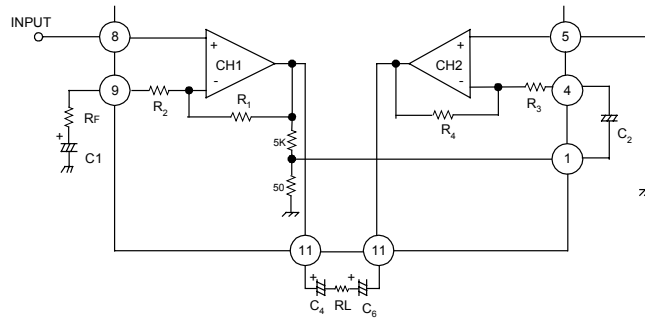
- i) Fixed voltage gain
(Pin 9 connected to GND directly)

$$G_v = 20 \log \frac{R_1}{R_2} \text{ (dB)}$$

- ii) Variable voltage gain
(R_f and C₁ connected with pin 9)

$$G_v = 20 \log \frac{R_1}{R_2 + R_f} \text{ (dB)}$$

2. Bridge application



i) Fixed voltage gain (Pin 9 connected to GND directly)

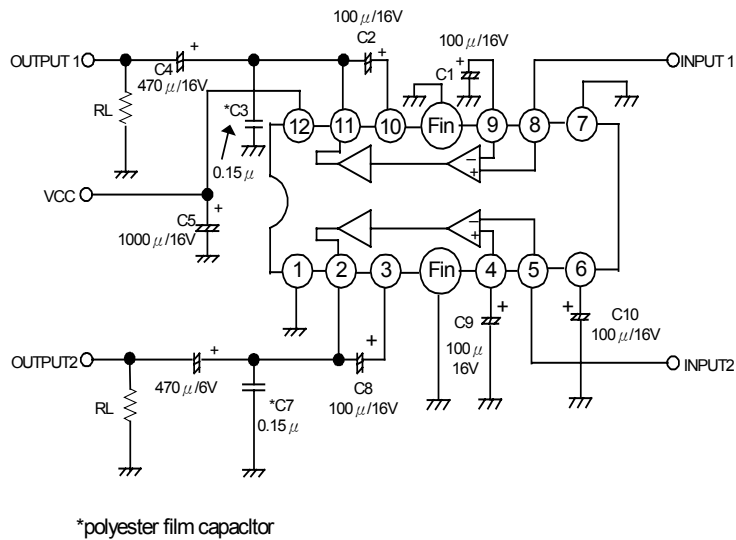
$$G_v = 20 \log \frac{R_1}{R_2} + 6(\text{dB})$$

ii) Variable voltage gain R_F and C_1 connected with pin 9)

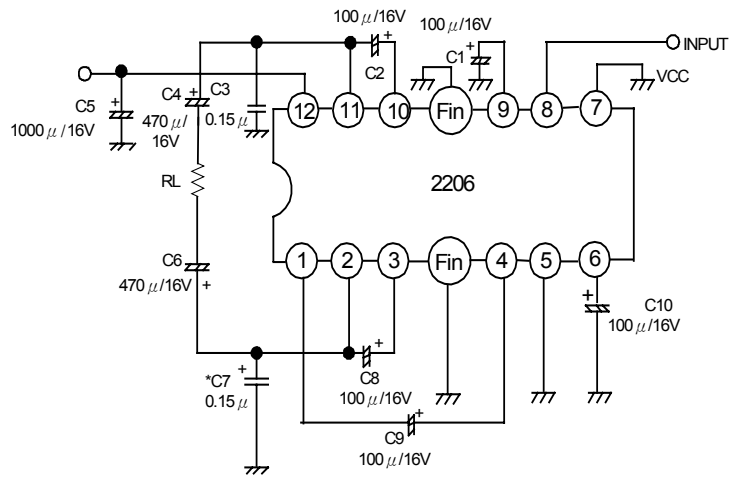
$$G_v = 20 \log \frac{R_1}{R_2 + R_F} + 6(\text{dB})$$

APPLICATION CIRCUIT

1. Stereo Amplifier



2. Bridge Amplifier



*polyester film capacitor

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