

The KA2206B 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.
- Soft tone at the time of output saturation.
- 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.

12-DIPH-300



ORDERING INFORMATION

Device	Package	Operating Temperature
KS2206B	12-DIPH-300	-20°C ~ +70°C
KS22069BN	16-DIP-300A	

BLOCK DIAGRAM

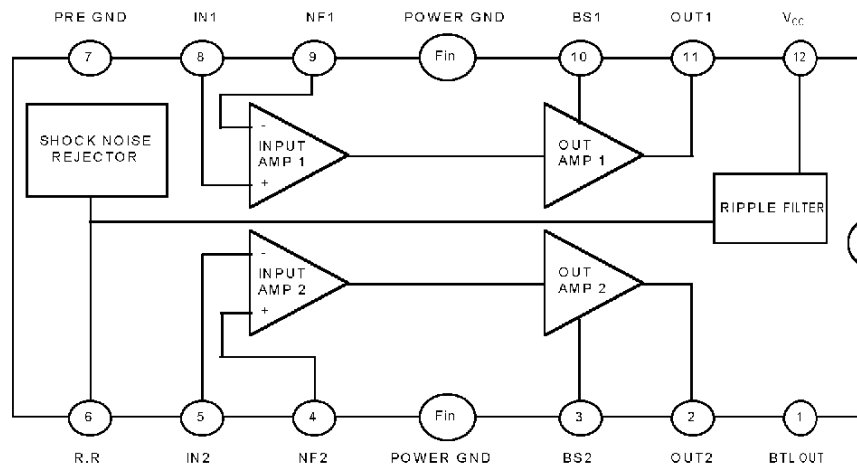


Fig. 1

ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

Characteristics	Symbol	Value	Unit
Supply Voltage	V _{CC}	15	V
Power Dissipation	P _O	4*	W
Operating Temperature	T _{OPR}	-20 ~ +70	°C
Storage Temperature	T _{STG}	-40 ~ +150	°C

* Fin is soldering on the PCB

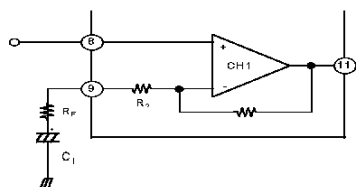
ELECTRICAL CHARACTERISTICS

(Ta = 25°C, 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
Channel Balance	CB	Stereo	-1	0	+1	dB
Output Power	P _O	Stereo	R _L =4Ω, THD = 10%, R _L =8Ω, THD = 10%,	1.7	2.3	W
		Bridge	R _L =8Ω, THD = 10%,	4.7		W
Total Harmonic Distortion	THD	Stereo	R _O =250mW, R _L = 4Ω	0.3	1.5	%
		Bridge		0.5		%
Input Resistance	R _I		21	30		KΩ
Ripple Rejection Ratio	RR	Stereo, R _G =0Ω, V _I =150mW 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



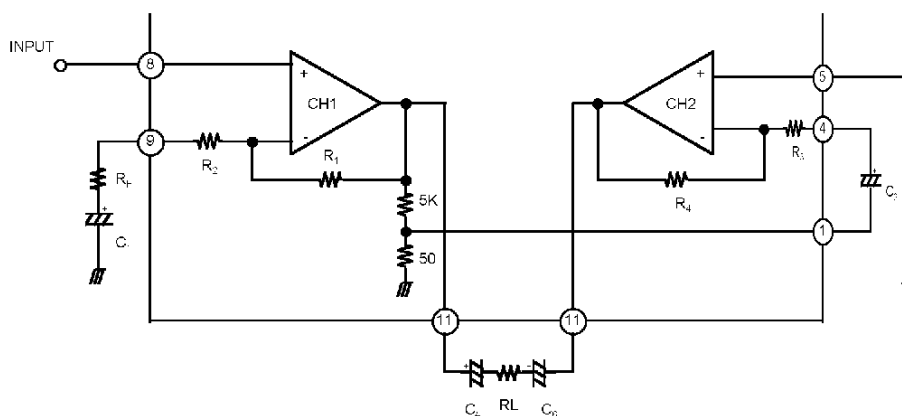
- i) Fixed voltage gain
(Pin 9 connected to GND directly)

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

- ii) Variable voltage gain
(R_F and C_1 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

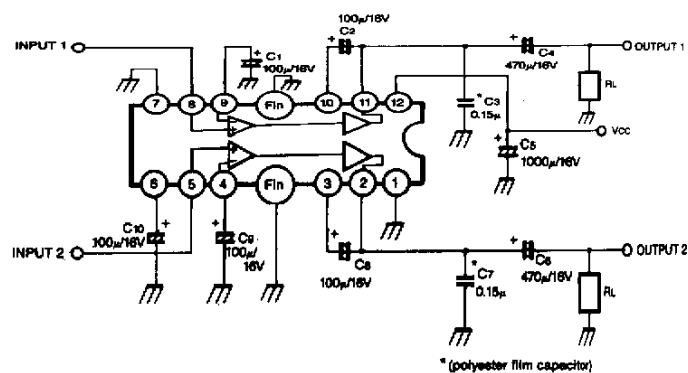


Fig. 2

2. Bridge Amplifier

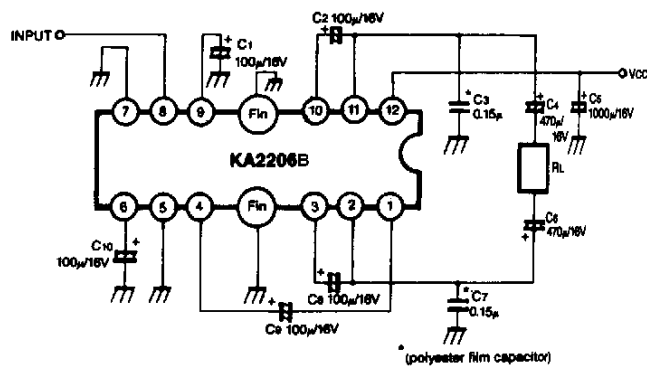


Fig. 3

Dimensions in Millimeters

