KA2206

DATASHEET

Specification Revision History:

Version	Date	Description
V1.0	2020/04	New
V1.1	2021/02	Modify Ordering Information
V1.2	2023/02	Modify Ordering Information
V1.3	2024/03	Add application precautions and overall typesetting.

Description

The KA2206 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 recorder.

KA2206 is available in HDIP12 package.

FEATURES

· High output power

Stereo:Po=2.3W(Typ)at Vcc=9V,RL=4Ω

Bridge:Po=4.7W(Typ)at Vcc=9V,RL=8Ω

· 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

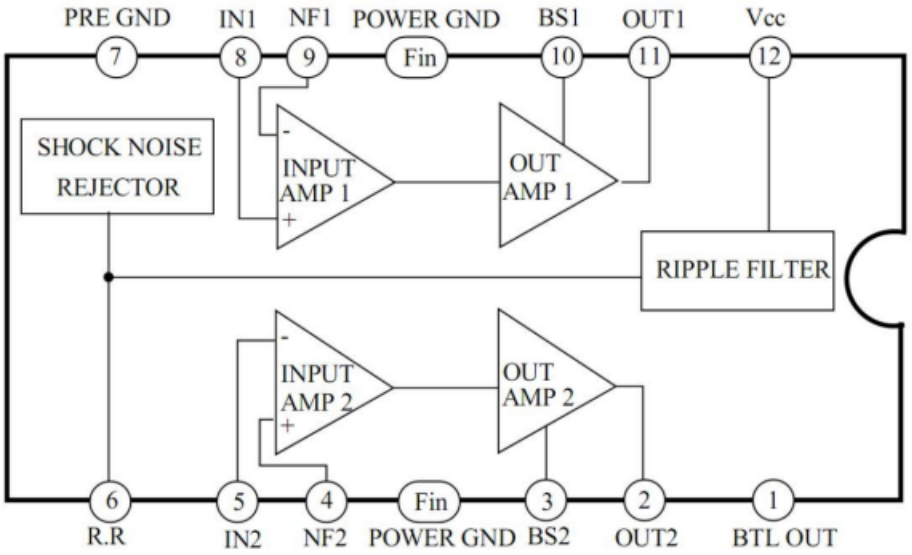
The appearance of the product

HDIP-12

Ordering Information

Product Model	Package Type	Marking	Packing	Packing Qty
KA2206(GMIC)	HDIP12	KA2206 305	TUBE	1000PCS/BOX
KA2206(GMIC)	HDIP12	KA2206 C05	TUBE	1000PCS/BOX

Block Diagram and Pin Connection



Absolute Maximum Ratings (Tamb=25℃)

Characteristic	Symbol	Value	Unit
Supply Voltage	Vcc	15	V
Out Peak Currentt	Io	1.5	A
Operating Temperature	Topr	-25~85	℃
Storage Temperature	Tstg	-40~150	℃

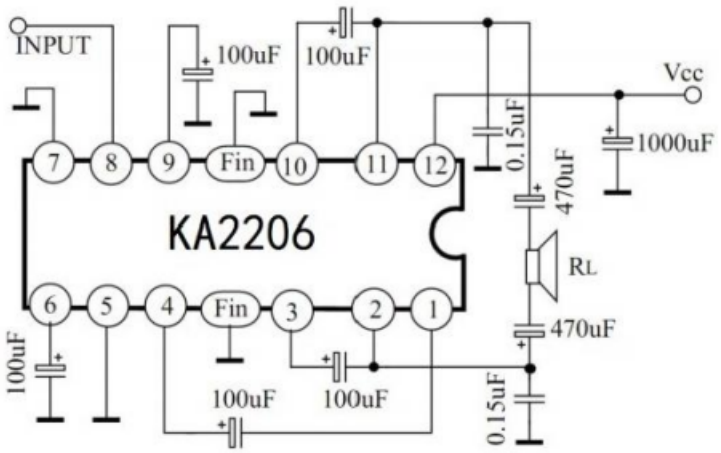
*Fin is soldering on the PCB

Electrical Characteristics

(Unless otherwise specified:Ta=25°C,Vcc=9V;Rg=600Ω,f=1kHz)

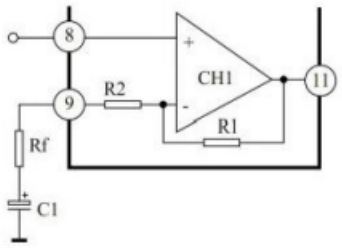
Characteristics	Test conditions		Symbol	Min.	Typ.	Max.	Unit
Operating Supply Voltage			Vcc		9	11	V
Quiescent Current	Vi=0V,Stereo		IccQ		40	55	mA
Closed Loop Voltage Gain	Stereo	Vi=-45dBm	Gvc	43	45	47	dB
	Bridge			49	51	53	
Channel Balance	Stereo		CB	-1	0	+1	dB
Output Power	Stereo	THD=10%,R_L=4Ω	Po	1.7	2.3		W
		THD=10%,R_L=8Ω			1.3		
	Bridge	THD=10%,R_L=8Ω			4.7		
Total Harmonic Distortion	Stereo	Po=250Mw,RL=4Ω	THD		0.3	1.5	%
	Bridge				0.5		
Input Resistance			Ri	21	30		kΩ
Ripple Rejection Ratio	Stereo,Rg=0Ω,Vi=150mW,f=100Hz		RR	40	46		dB
Output Noise Voltage	Stereo Rg=0Ω		Vno		0.3	1.0	mV
	Stereo Rg=10kΩ				0.5	2.0	
Cross Talk	Stereo Rg=10kQ,Vo=0dBm		CT	40	55		dB

Bridge Amplifier Test and Application Circuit



Application Information

1.Stereo application



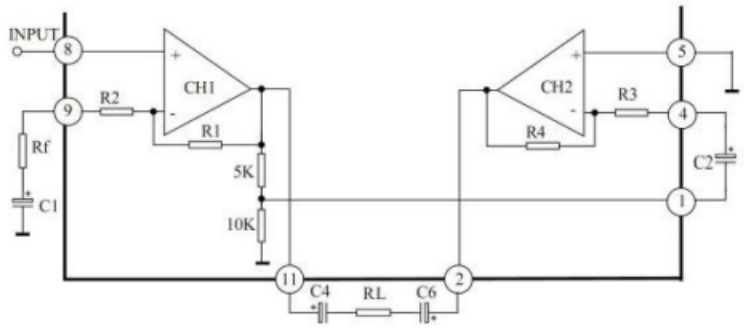
(1)Fixed Voltage gain

(Pin 9 connected to GND directly) Gv=20 log(R1/R2)

(2)Variable voltage gain

(Rf and C,Connected with pin 9) Gv=20 log(R1/(R2+Rf)

2.Bridge application

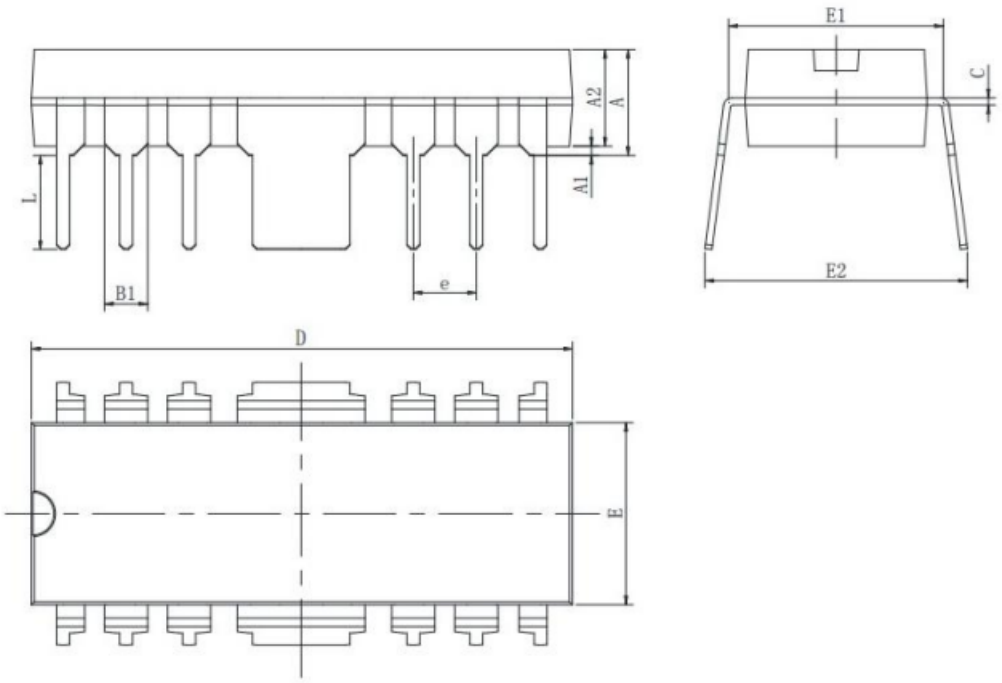


(1)Fixed voltage gain(pin 9 connected to GND directly) Gv=20log(R1/R2)

(2)Variable voltage gain Rf and C1 connected with pin 9 Gv=20 log(R1/(R2+Rf))

Outline Drawing

HDIP12: **Unit:mm**



Symbol	Dimensions In Millimenters		Dimensions In Inches	
	Min	Max	Min	Max
A	3.710	4.310	0.146	0.170
A1	0.510		0.020	
A2	3.200	3.600	0.126	0.142
B	0.330	0.510	0.013	0.020
B1	1.524(BSC)		0.060(BSC)	
C	0.204	0.360	0.008	0.014
D	18.800	19.200	0.740	0.756
E	6.200	6.600	0.244	0.260
E1	7.320	7.920	0.288	0.312
e	2.540(BSC)		0.100(BSC)	
L	3.000	3.600	0.118	0.142
E2	7.800	9.000	0.307	0.354

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