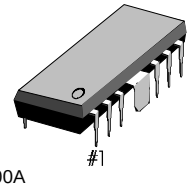
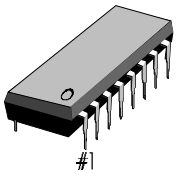
KA2206B 2.3W DUAL AUDIO POWER AMP

The KA2206B is a monolithic intergrated circuit consisting of a 2-channel power amplifier. It is suitable for stereo and bridge amplifier application of radio cassette tape recorder.

12-DIPH-300



16-DIP-300A



FEATURES

- High output power
  Stereo : P_O = 2.3W(Typ) at V_{CC} = 9V, R_L = 4Ω.
  Bridge : P_O = 4.7W (Typ) at V_{CC} = 9V, R_L = 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.

ORDERING INFORMATION

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

BLOCK DIAGRAM

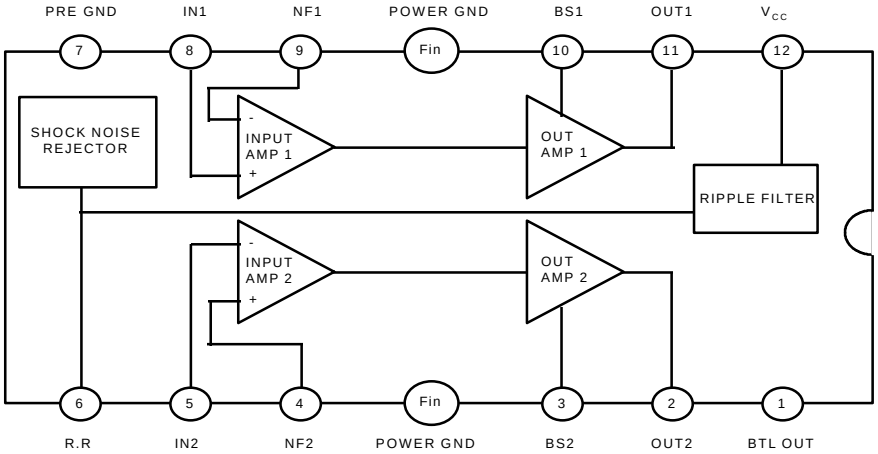


Fig. 1

ABSOLUTE MAXIMUM RATINGS

Characteristic	Symbol	Value	Unit
Supply Voltage	V_{CC}	15	V
Power Dissipation	P_D	4*	W
Operating Temperature	T_{OPR}	-20 ~ +70	°C
Storage Temperature	T_{STG}	-40 ~ +150	°C

* Fin is soldering on the PCB

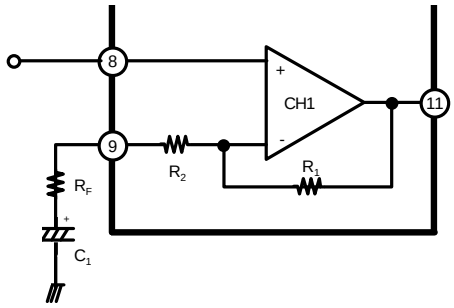
ELECTRICAL CHARACTERISTICS

(Ta = 25°C, V_{CC} = 9V, f = 1KHz R_G = 600Ω, unless otherwise specified)

Characteristic	Symbol	Test Conditions		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	V_I = -45dBm	43	45	47	dB
		Bridge		49	51	53	dB
Channel Balance	CB	Stereo		-1	0	+1	dB
Ouptut Power	PO	Stereo	R_L=4Ω, THD = 10%,	1.7	2.3		W
			R_L=8Ω, THD = 10%,		1.3		W
		Bridge	R_L=8Ω, THD = 10%,		4.7		W
Total Harmonic Distortion	THD	Stereo	PO=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	mW
		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



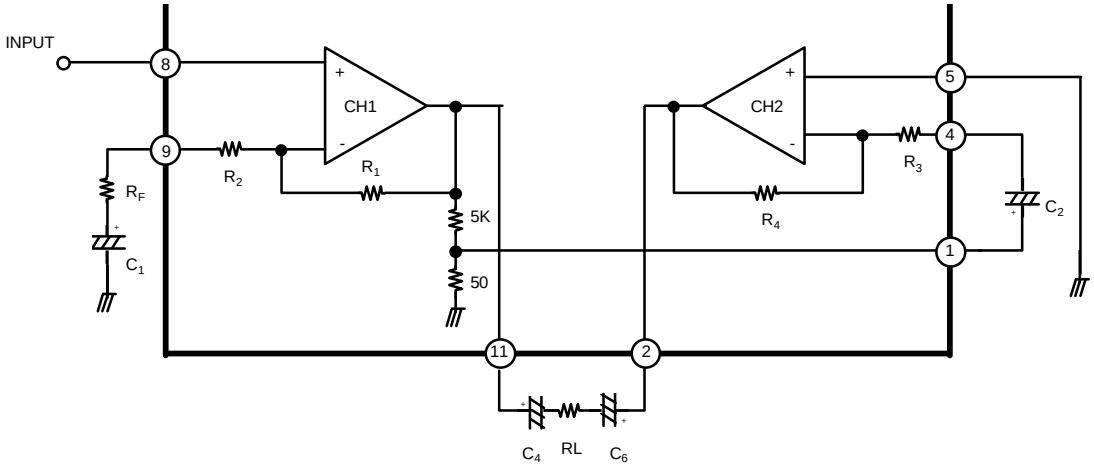
i) Fixed voltage gain
(Pin 9 connected to GND directly)

$G_V = 20 \log \left(\frac{R_1}{R_2}\right)$

ii) Variable voltage gain
(Rf and C_1 connected with pin 9)

$G_V = 20 \log \frac{R_1}{R_2+R_F}$

2. Bridge application



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

$G_V = 20 \log \left(\frac{R_1}{R_2}+B\right)$

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

$G_V = 20 \log \frac{R_1}{R_2+R_F}$

APPLICATION CIRCUIT

1. Stereo Amplifier

2. Bridge Amplifier

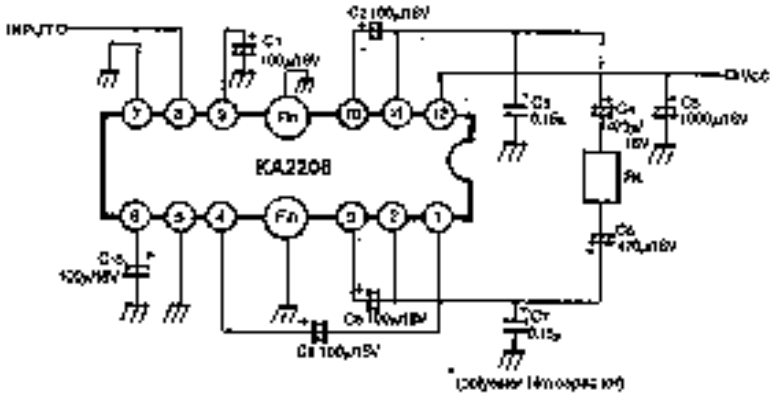
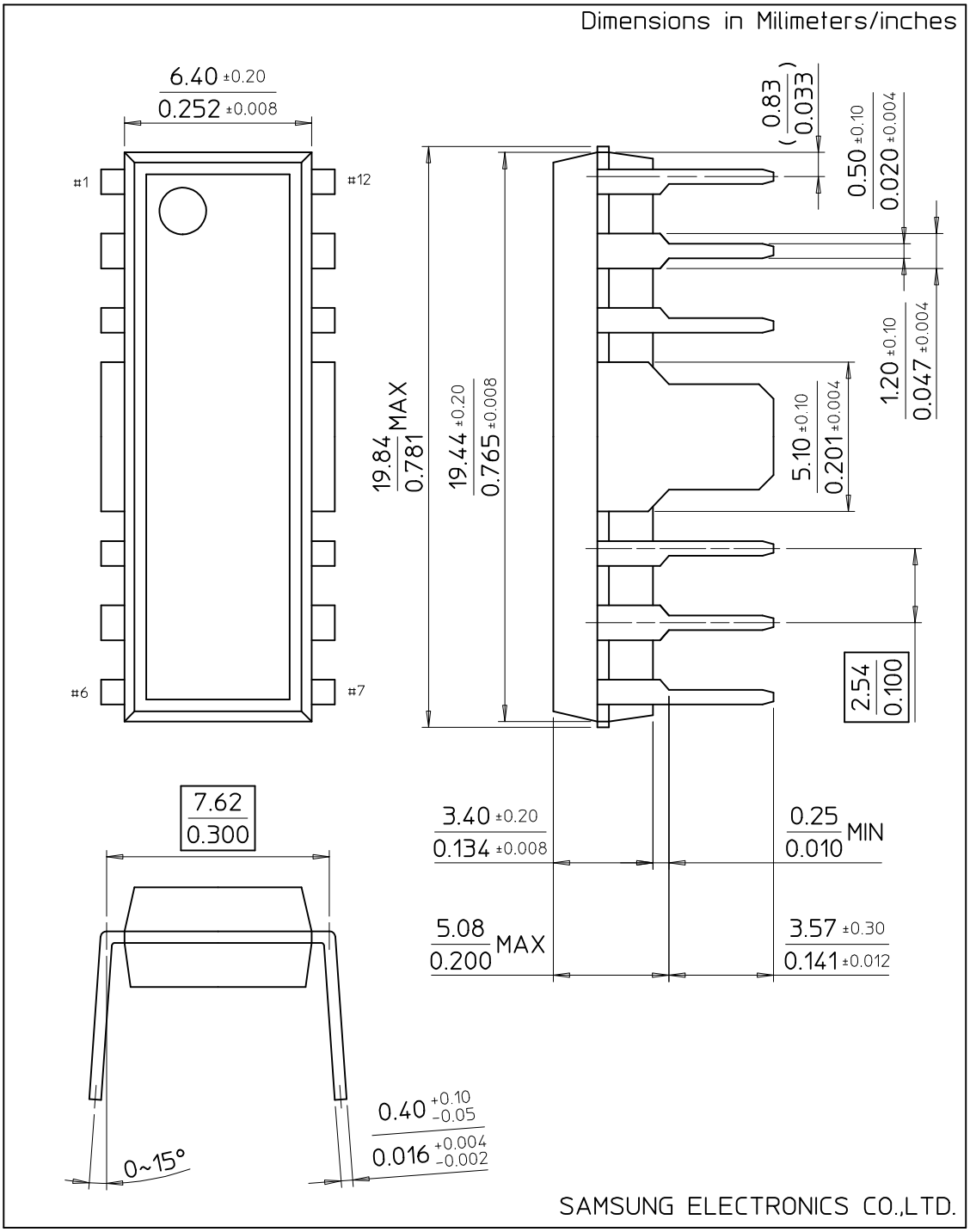


Fig. 3

12-DIPH-300

Dimensions in Milimeters/inches



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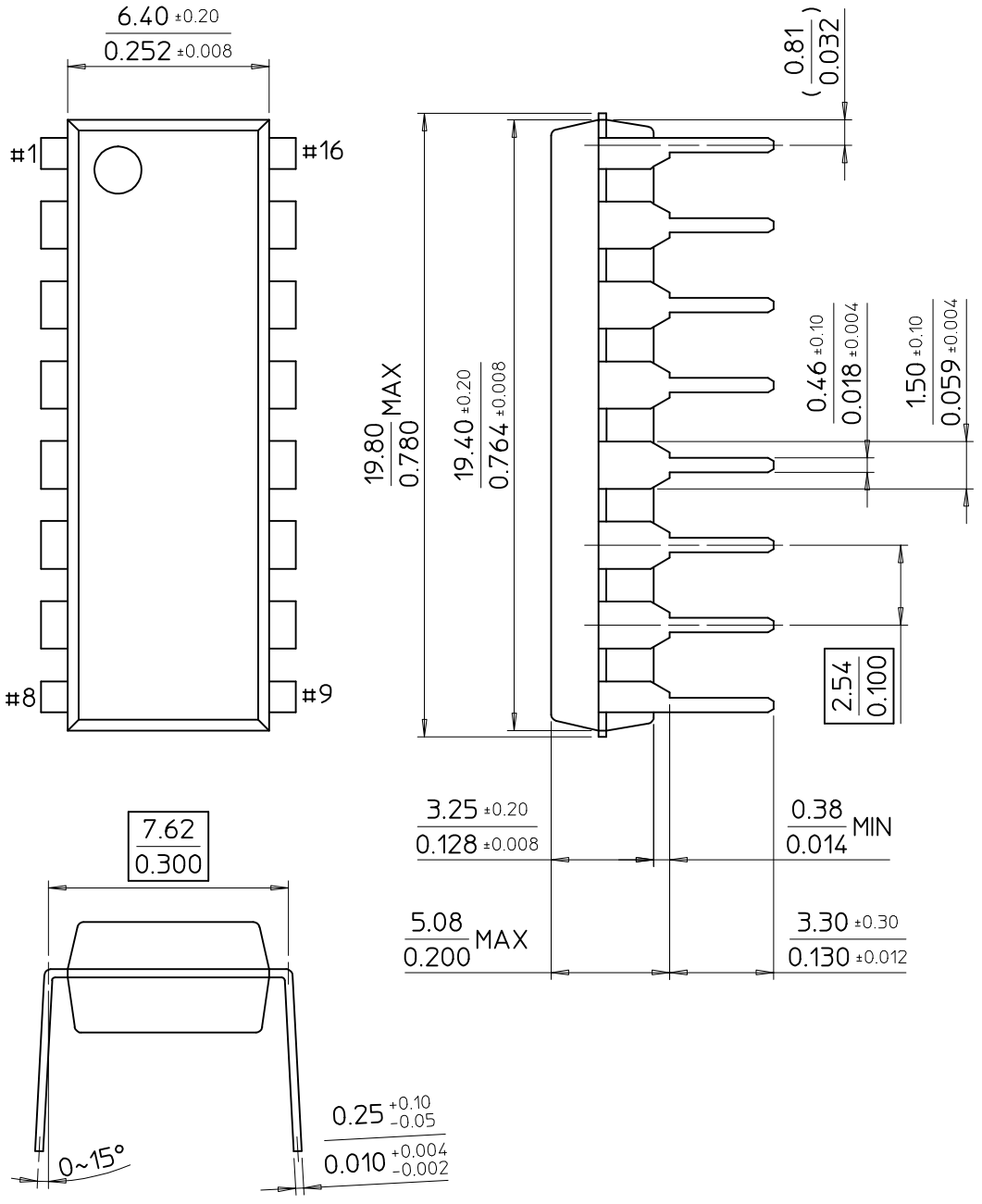
16-DIP-300A

Dimensions in Milimeters/inches



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