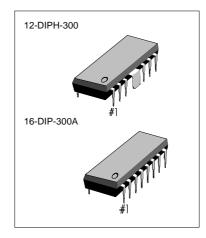
# **KA2206B**

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.

#### **FEATURES**

- High output power
- Stereo :  $P_0 = 2.3W(Typ)$  at  $V_{CC} = 9V$ ,  $R_L = 4\Omega$ . Bridge :  $P_0 = 4.7W$  (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.



#### **ORDERING INFORMATION**

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

### **BLOCK DIAGRAM**

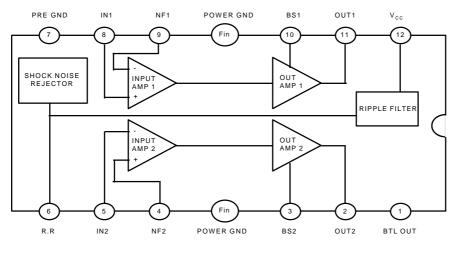


Fig. 1



### ABSOLUTE MAXIMUM RATINGS

Characteristic	Symbol	Value	Unit
Supply Voltage	Vcc	15	V
Power Dissipation	PD	4*	W
Operating Temperature	T <sub>OPR</sub>	-20 ~ +70	°C
Storage Temperature	T <sub>STG</sub>	-40 ~ +150	°C

\* Fin is soldering on the PCB

### **ELECTRICAL CHARACTERISTICS**

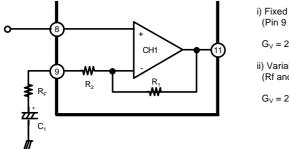
(Ta = 25  $^\circ\text{C},~\text{V}_{\text{CC}}$  = 9V, f = 1KHz R\_G = 600  $\Omega,$  unless otherwise specified)

Characteristic	Symbol	Test Conditions		Min	Тур	Max	Unit
Operating Supply Voltage	V <sub>CC</sub>				9	11	V
Quiescent Circuit Current	Iccq	V <sub>I</sub> = 0, Stereo			40	55	mA
Closed Loop Voltage Gain	Gvc	Stereo	V <sub>I</sub> = -45dBm	43	45	47	dB
		Bridge	1	49	51	53	dB
Channel Balance	СВ	Stereo		-1	0	+1	dB
		Stereo	$R_L=4\Omega$ , THD = 10%,	1.7	2.3		W
Ouptut Power	Po		$R_L=8\Omega$ , THD = 10%,		1.3		W
		Bridge	$R_L=8\Omega$ , THD = 10%,		4.7		W
Total Harmonic Distortion	THD	Stereo	Po=250mW, $R_L = 4\Omega$		0.3	1.5	%
		Bridge			0.5		%
Input Resistance	RI		·	21	30		KΩ
Ripple Rejection Ratio	RR	Stereo, $R_G=0\Omega$ , $V_I=150mW$		40	46		dB
		f=100Hz					
Output Noise Voltage	V <sub>NO</sub>	Stereo, $R_G = 0\Omega$			0.3	1.0	mW
		Stereo, $R_G = 10 K\Omega$			0.5	2.0	mV
Cross Talk	СТ	Stereo, $R_G$ =10K $\Omega$ , $V_O$ =0dBm		40	55		dB



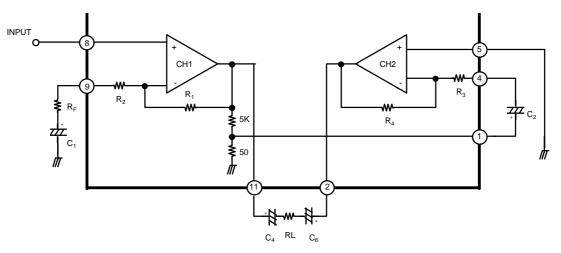
## **APPLICATION INFORMATION**

1.Stereo application



i) Fixed voltage gain (Pin 9 connected to GND directly)  $G_V = 20 \log (c \frac{R_1}{R_2})$ ii) Variable voltage gain (Rf and C<sub>1</sub> 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)

$$G_{V} = 20 \log + \frac{R_1}{R_2} B)$$

ii) Variable voltage gain  $R_{\!F}$  and  $C_1$  connected with pin 9)

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

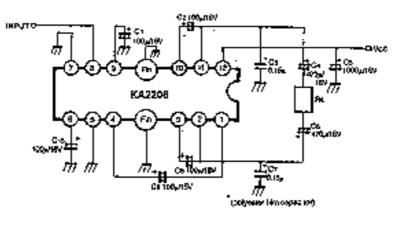


# KA2206B

### **APPLICATION CIRCUIT**

1. Stereo Amplifier

2. Bridge Amplifier







12-DIPH-300

