

KA2210**LINEAR INTEGRATED CIRCUIT****5.5W DUAL POWER AMPLIFIER**

The KA2210 is a monolithic integrated circuit consisting of 2 channel power amplifier. It is suitable for stereo and bridge amplifier application of car stereo.

FEATURES

- 2 channel amplifier: 5.5W×2 (Typ).
- Minimum number of external parts required.
- Small shock noise at the time of power on/off and good starting balance.
- High ripple rejection ratio: 46dB (Typ).
- Good channel separation.
- Small residual noise. (Rg=0)
- Included various kind of protectors.
 - Thermal protector.
 - Surge and over-voltage protector.
 - V_{cc} and output short protector.

12 SIP H/S

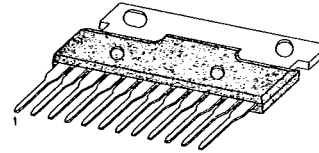
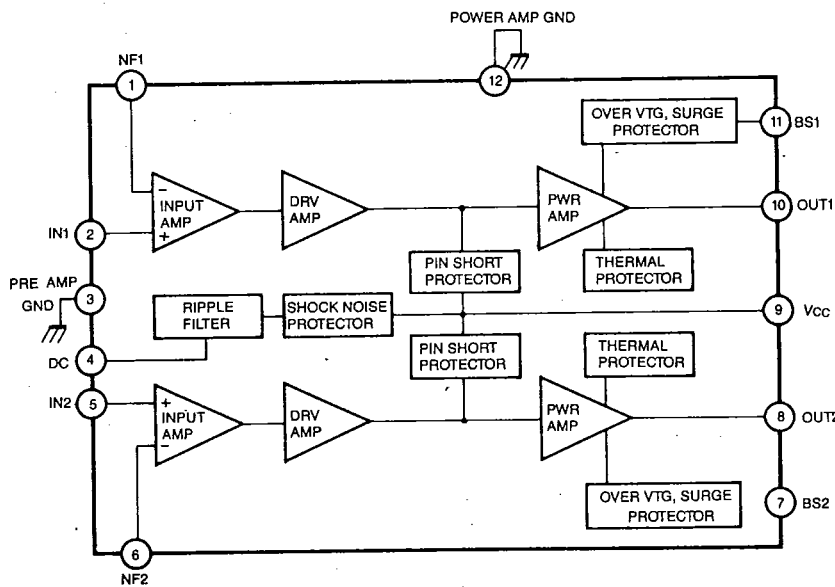
**BLOCK DIAGRAM**

Fig. 1



KA2210

LINEAR INTEGRATED CIRCUIT

ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

Characteristic	Symbol	Value	Unit
Maximum Supply Voltage (Quiescent)	V _{CC} (max 1)	25	V
Maximum Supply Voltage (with Signal)	V _{CC} (max 2)	18	V
Surge Voltage (t ≤ 0.2 sec)	V _{CC} (Surge)	50	V
Maximum Output Current (1 Channel)	I _o (peak)	3.5	A
Power Dissipation	P _d (max)	15	W
Operating Temperature	T _{opr}	-20 ~ +75	°C
Storage Temperature	T _{stg}	-40 ~ +150	°C

ELECTRICAL CHARACTERISTICS

(T_a = 25°C, V_{CC} = 13.2V, R_L = 4Ω, f = 1KHz R_o = 600Ω, 100 × 100 × 1.5mm³ Al H/S unless otherwise specified)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Operating Supply Voltage	V _{CC}		10	13.2	16	V
Quiescent Circuit Current	I _{CC}	V _i = 0		75	150	mA
Output Power	P _o	THD = 10%, Stereo	5.0	5.5		W
Voltage Gain	A _v	P _o = 1W	49.5	51.5	53.5	dB
Total Harmonic Distortion	THD	P _o = 1W		0.15	1.0	%
Input Resistance	R _i			30		KΩ
Output Noise Voltage	V _{NO}	R _o = 0, BW(-3dB) = 20Hz 20KHz		0.6	1.0	mV
		R _o = 10KΩ, BW(-3dB) = 20Hz 20KHz		1.0	2.0	mV
Ripple Rejection Ratio	RR	R _o = 0, V _r = 200mV, f = 100Hz		46		dB
Channel Separation	Sep	R _o = 10KΩ, V _o = 0dBm	45	55		dB



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TYPICAL APPLICATION CIRCUIT: STEREO

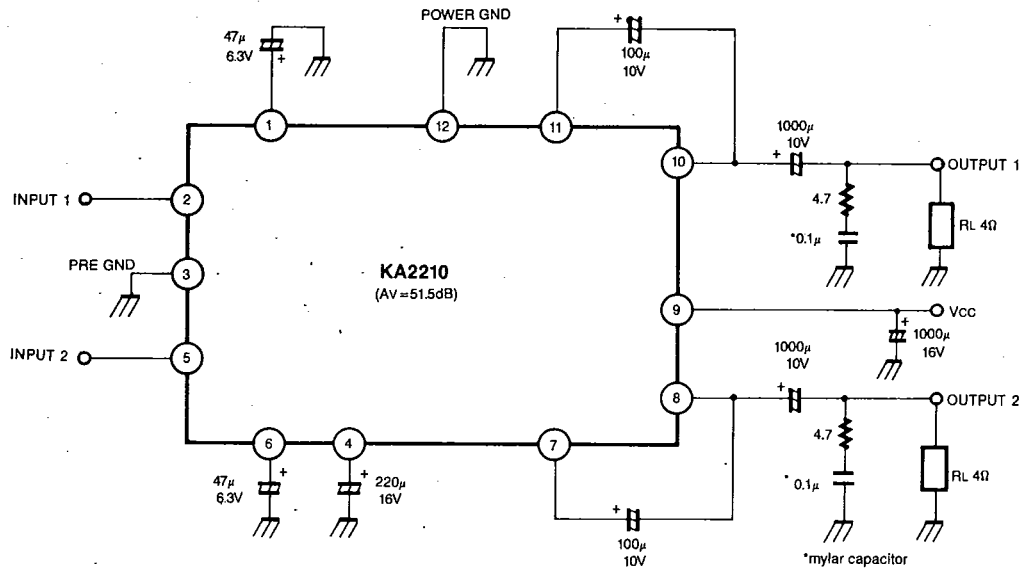


Fig. 2

APPLICATION CIRCUIT: BRIDGE

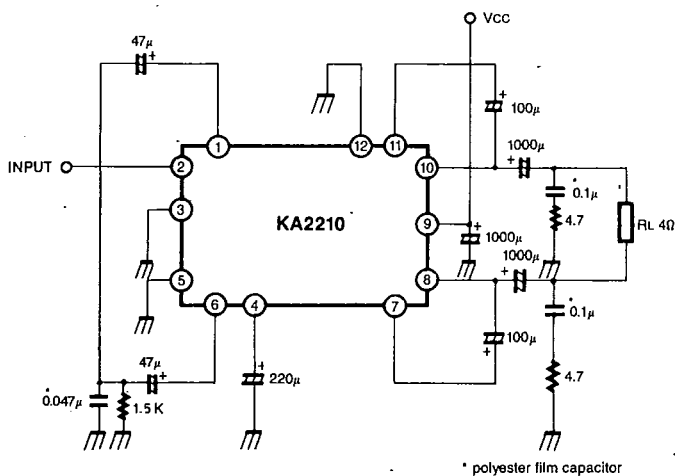
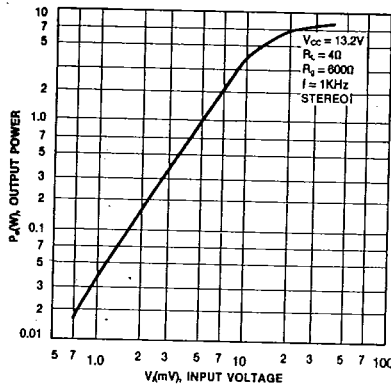


Fig. 3

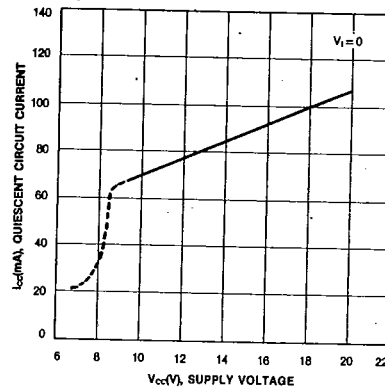
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LINEAR INTEGRATED CIRCUIT

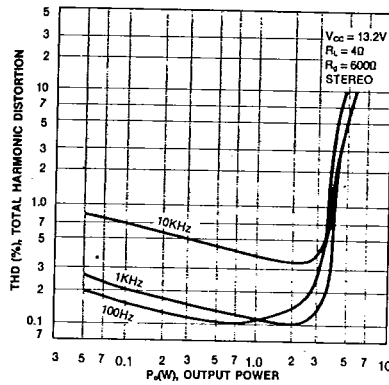
OUTPUT POWER-INPUT VOLTAGE



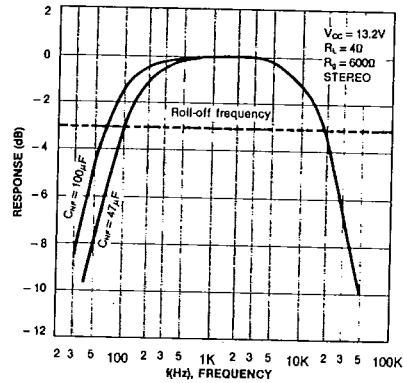
QUIESCENT CIRCUIT CURRENT-SUPPLY VOLTAGE



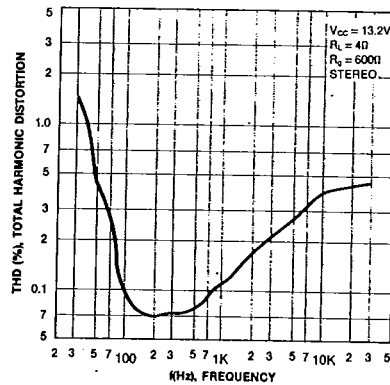
TOTAL HARMONIC DISTORTION-OUTPUT POWER



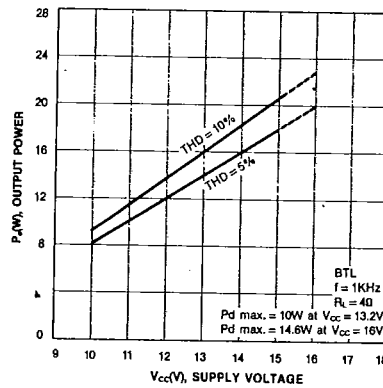
FREQUENCY RESPONSE



TOTAL HARMONIC DISTORTION-FREQUENCY



OUTPUT POWER-SUPPLY VOLTAGE



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