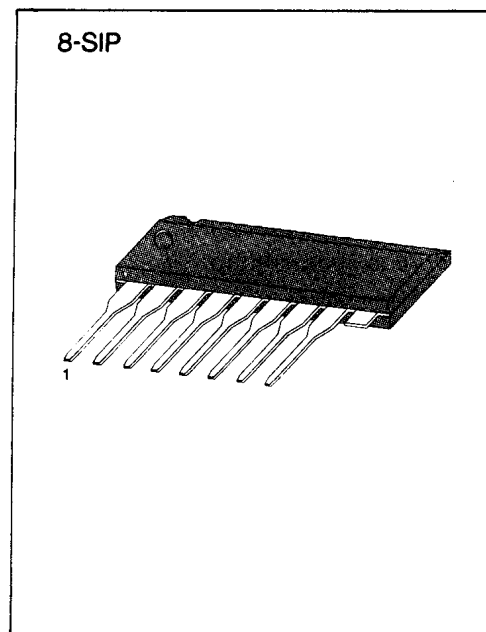


## DUAL LOW NOISE EQUALIZER AMPLIFIER

The KA1222 is a monolithic integrated circuit consisting of a 2-channel pre-amplifier in a 8-pin plastic single in line package. Minimum operating voltage is 2.5 volts, thus it is suitable for low voltage application.

### FEATURES

- Wide operating supply voltage:  $V_{CC} = 2.5V \sim 6V$
- Low noise ( $V_{NI} = 1.0\mu V$ : Typ).
- High channel separation.
- Good ripple rejection ratio.
- Minimum number of external parts required.



### ORDERING INFORMATION

Device	Package	Operating Temperature
KA1222	8-SIP	-20 ~ +70°C

### BLOCK DIAGRAM

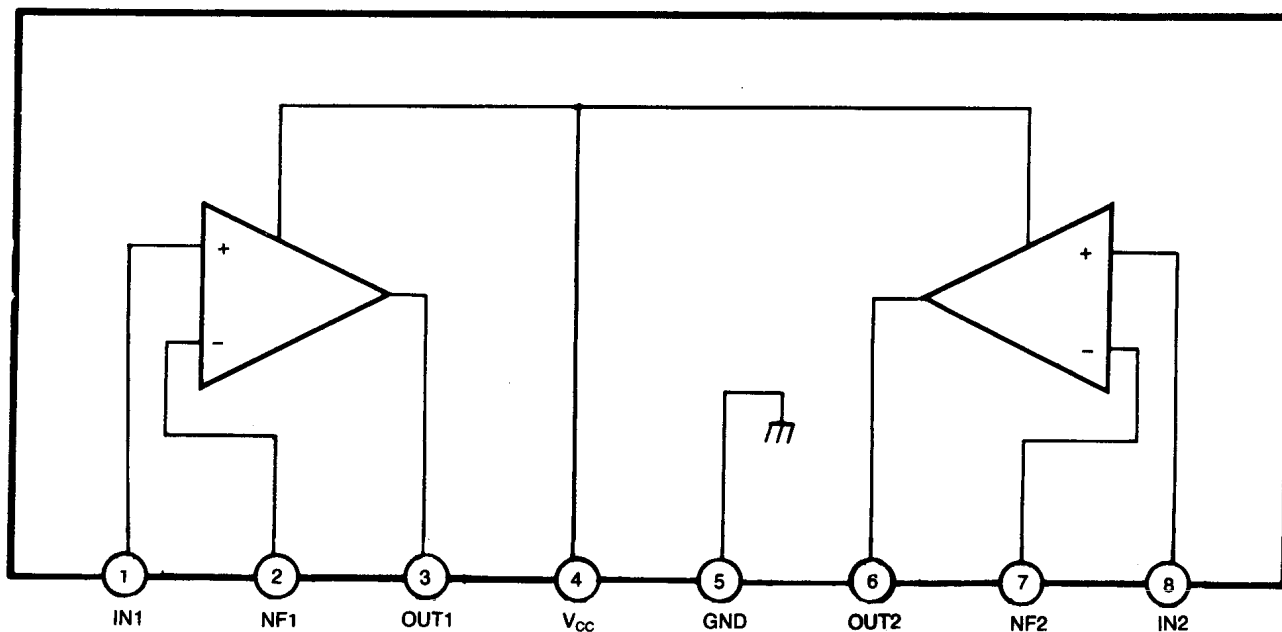


Fig. 1

## ABSOLUTE MAXIMUM RATINGS (T<sub>a</sub> = 25°C)

Characteristic	Symbol	Value	Unit
Supply Voltage	V <sub>CC</sub>	7.5	V
Power Dissipation	P <sub>D</sub>	200	mW
Operating Temperature	T <sub>OPR</sub>	-20 ~ +70	°C
Storage Temperature	T <sub>STG</sub>	-40 ~ +125	°C

## ELECTRICAL CHARACTERISTICS

(T<sub>a</sub> = 25°C, V<sub>CC</sub> = 4V, R<sub>L</sub> = 10KΩ, R<sub>G</sub> = 600Ω, f = 1KHz, NAB, unless otherwise specified)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Quiescent Circuit Current	I <sub>CCQ</sub>	V <sub>I</sub> = 0		2.0	6.0	mA
Open Loop Voltage Gain	G <sub>VO</sub>		65	80		dB
Closed Loop Voltage Gain	G <sub>VC</sub>	V <sub>O</sub> = 0.2V	33	35	37	dB
Output Voltage	V <sub>O</sub>	THD = 1%	0.4	0.7		V
Total Harmonic Distortion	THD	V <sub>O</sub> = 0.2V		0.1	0.3	%
Input Resistance	R <sub>I</sub>			150		KΩ
Equivalent Input Noise Voltage	V <sub>NI</sub>	R <sub>G</sub> = 2.2KΩ BW (-3dB) = 15Hz ~ 30KHz		1.0	2.0	μV
Cross Talk	CT	R <sub>G</sub> = 2.2KΩ	50	65		dB

## TEST CIRCUIT

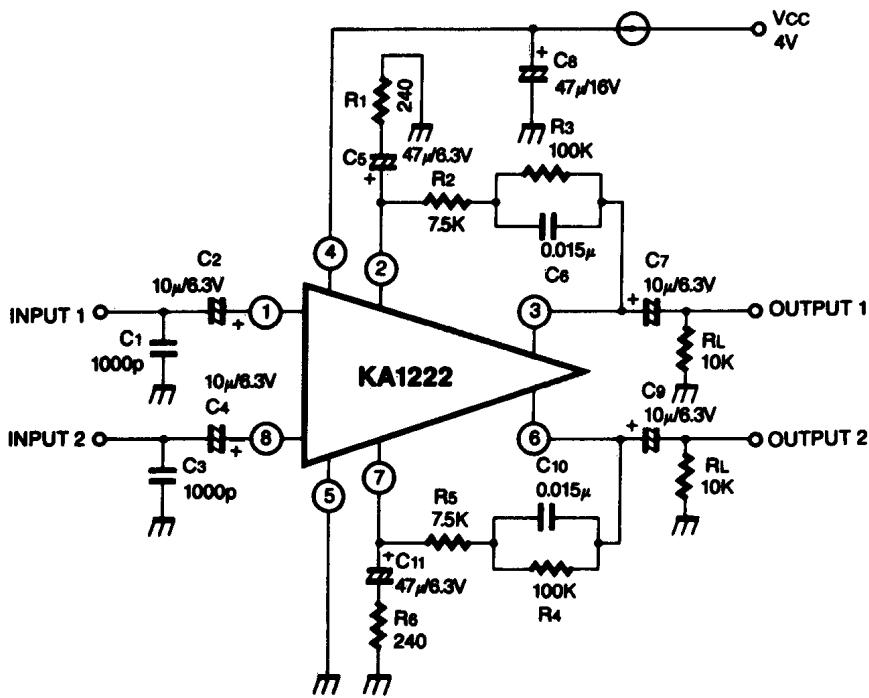
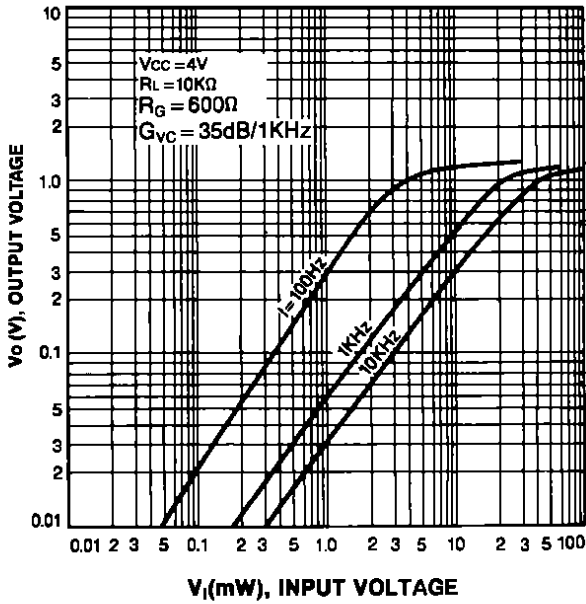
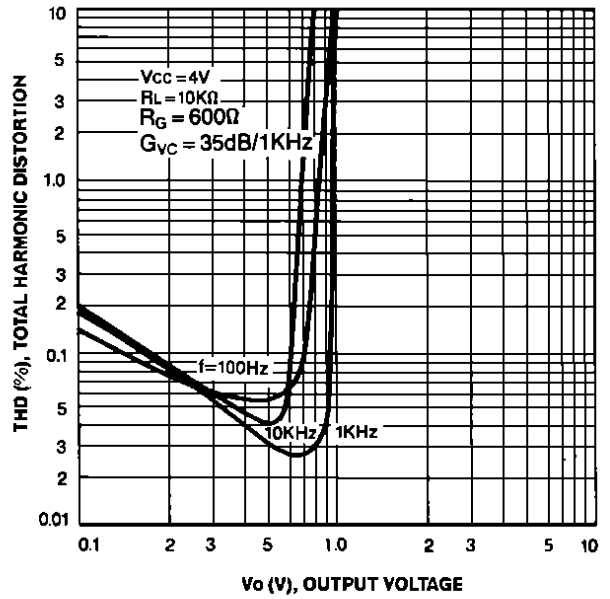


Fig. 2

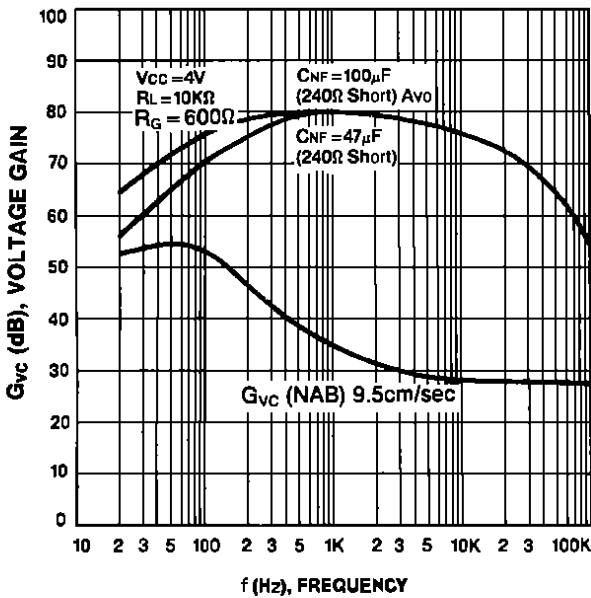
**OUTPUT VOLTAGE-INPUT VOLTAGE**



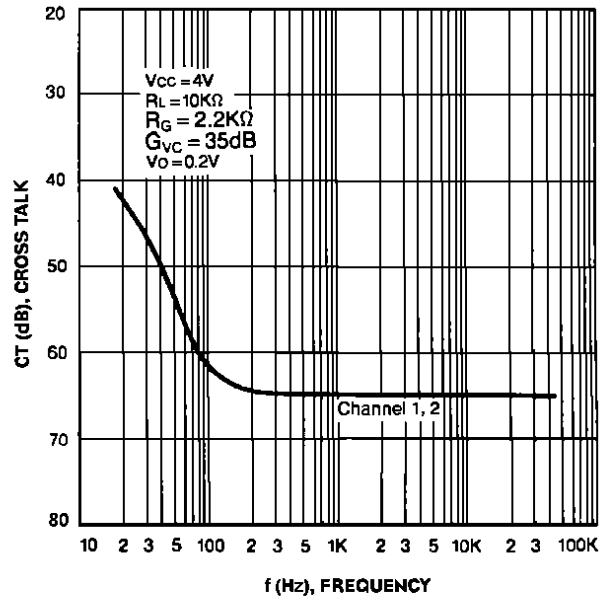
**TOTAL HARMONIC DISTORTION-OUTPUT VOLTAGE**



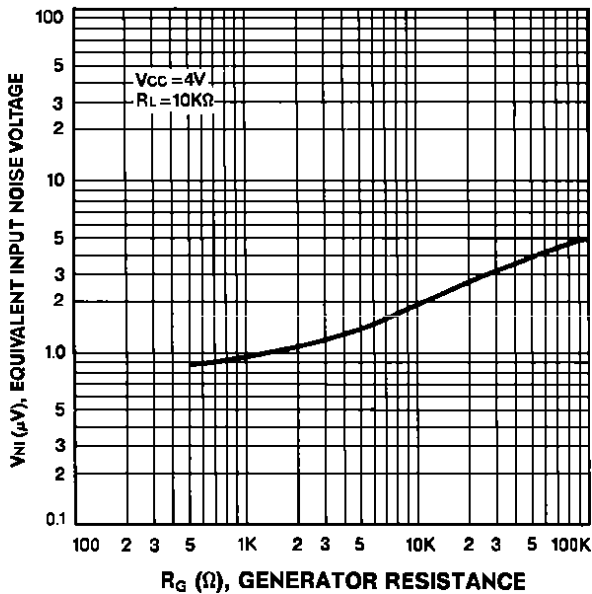
**VOLTAGE GAIN-FREQUENCY**



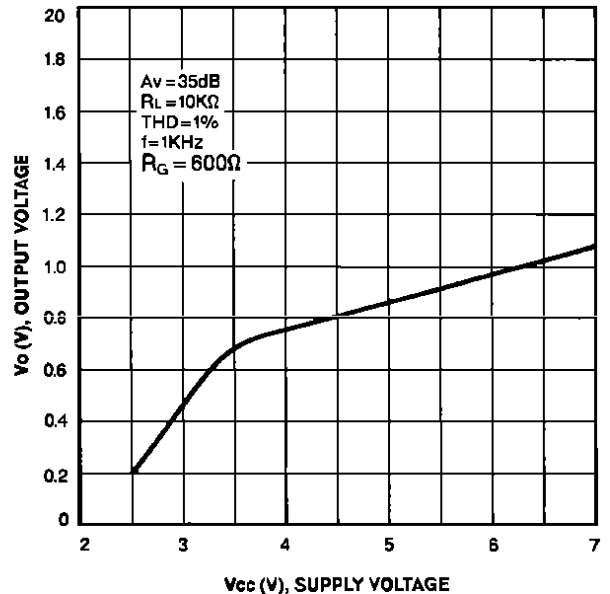
**CROSS TALK-FREQUENCY**

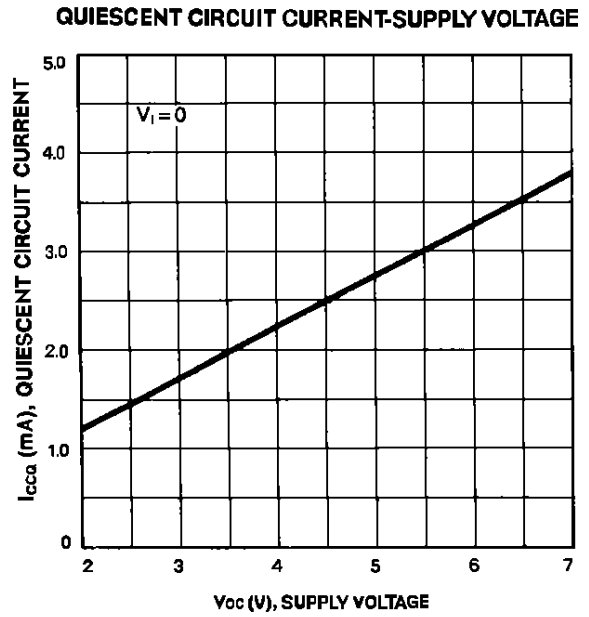
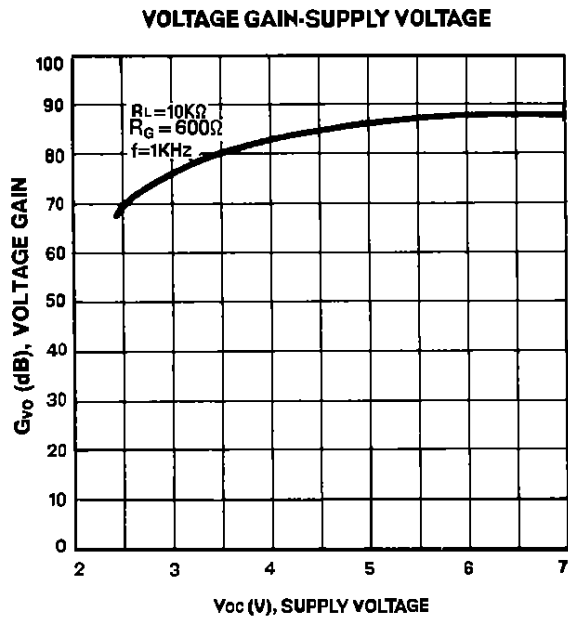


**EQUIVALENT INPUT NOISE VOLTAGE GENERATOR RESISTANCE**



**OUTPUT VOLTAGE-SUPPLY VOLTAGE**





## APPLICATION CIRCUIT

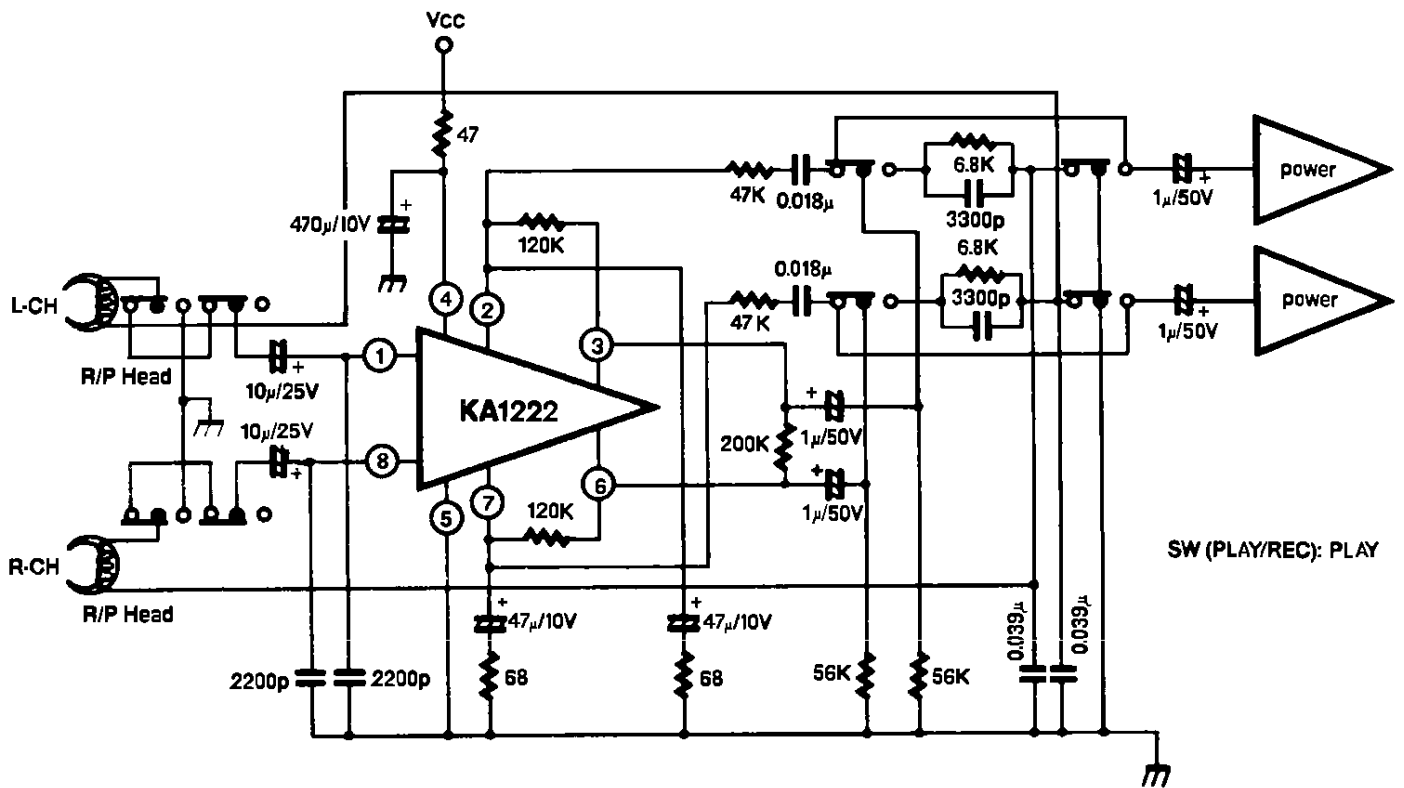


Fig. 3



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