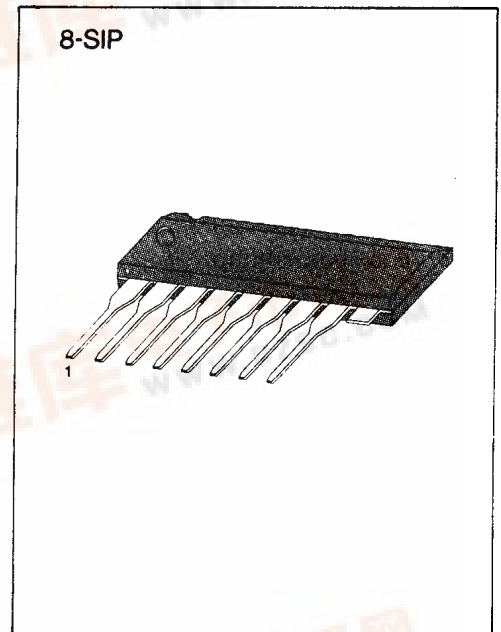


DUAL LOW NOISE EQUALIZER AMPLIFIER

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

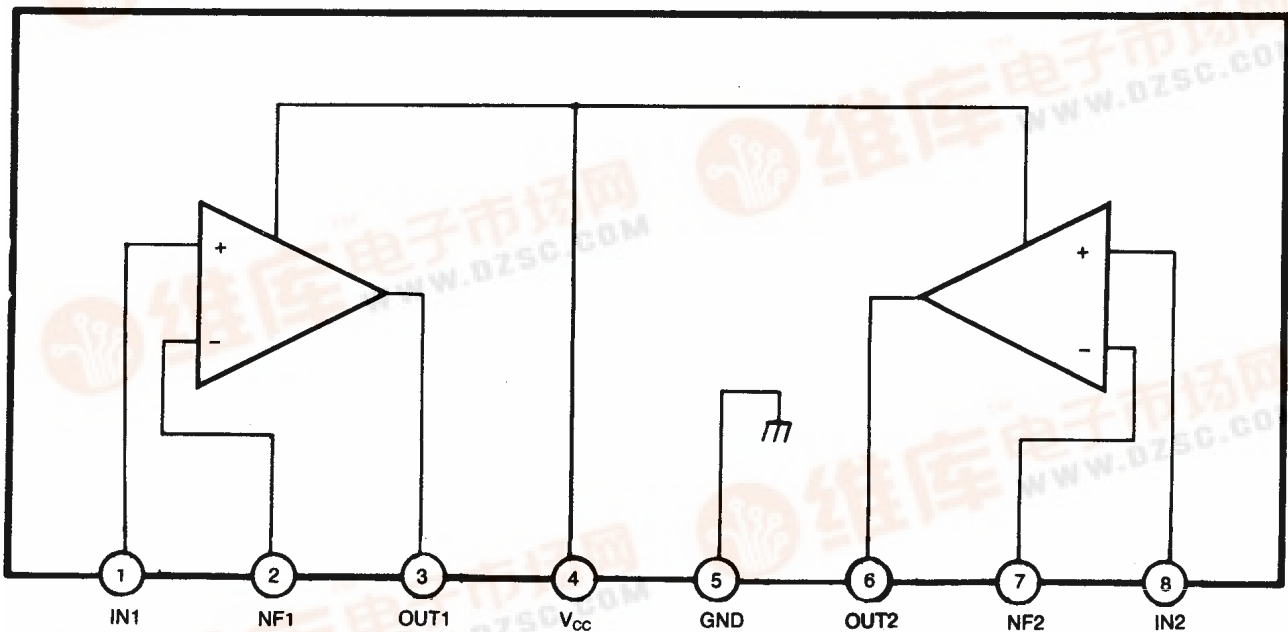


Fig. 1

ABSOLUTE MAXIMUM RATINGS (T_a = 25°C)

Characteristic	Symbol	Value	Unit
Supply Voltage	V _{CC}	7.5	V
Power Dissipation	P _D	200	mW
Operating Temperature	T _{OPR}	-20 ~ +70	°C
Storage Temperature	T _{STG}	-40 ~ +125	°C

ELECTRICAL CHARACTERISTICS

(T_a = 25°C, V_{CC} = 4V, R_L = 10KΩ, R_G = 600Ω, f = 1KHz, NAB, unless otherwise specified)

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

TEST CIRCUIT

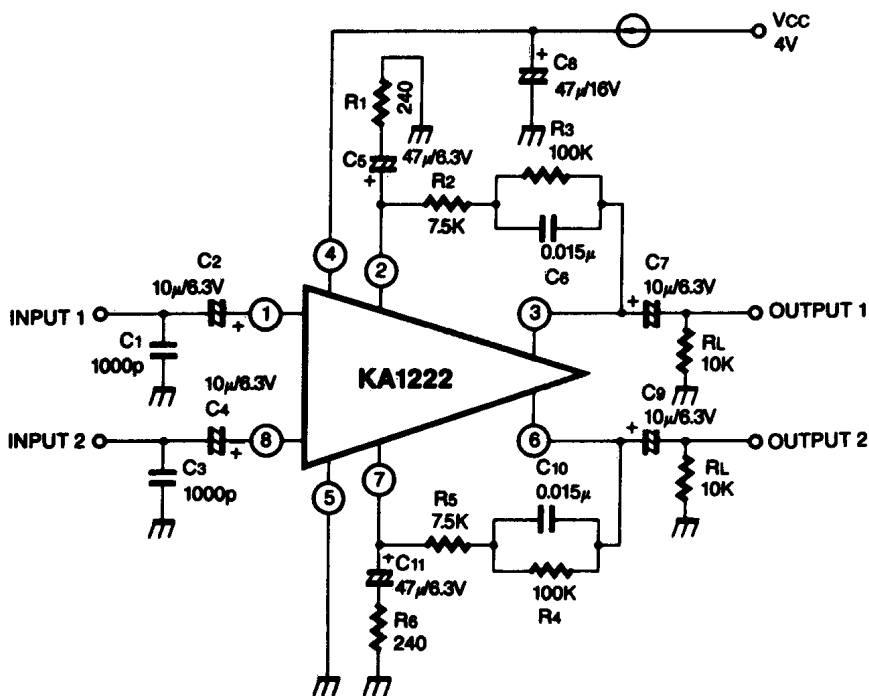
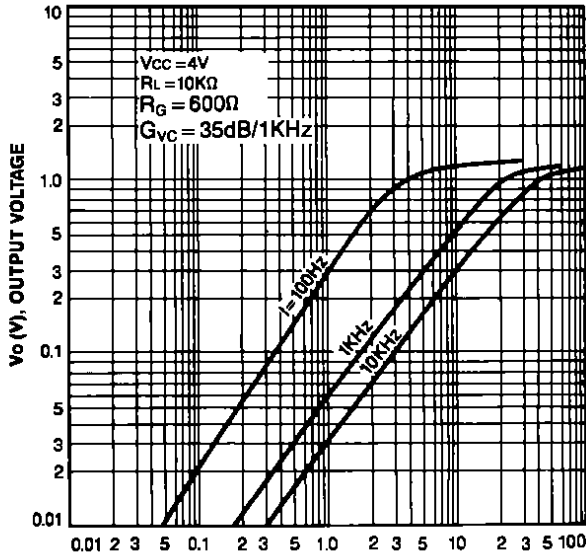
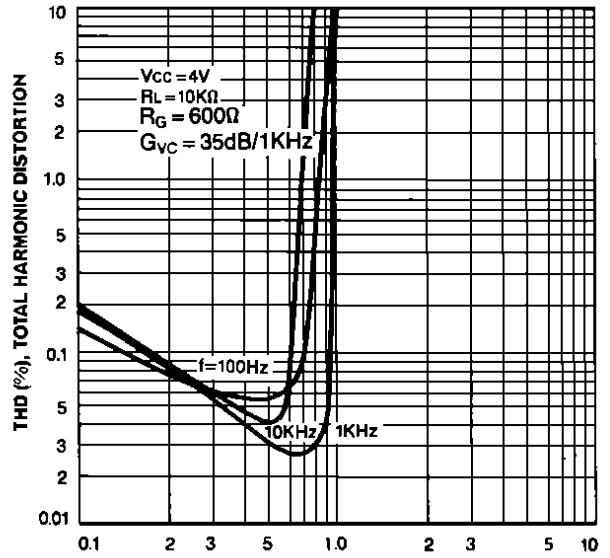


Fig. 2

OUTPUT VOLTAGE-INPUT VOLTAGE

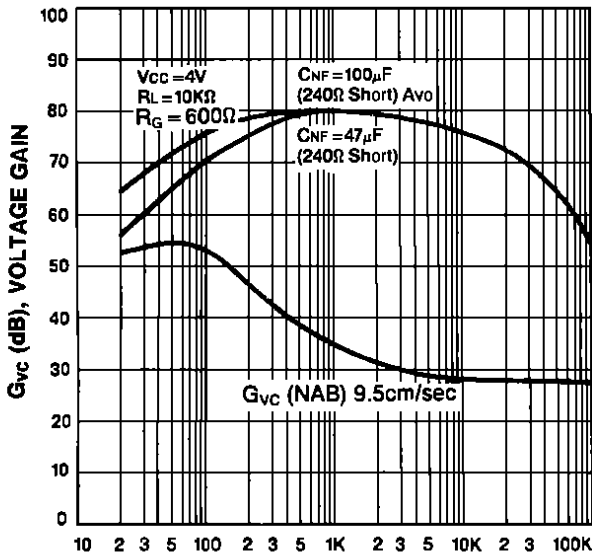


TOTAL HARMONIC DISTORTION-OUTPUT VOLTAGE

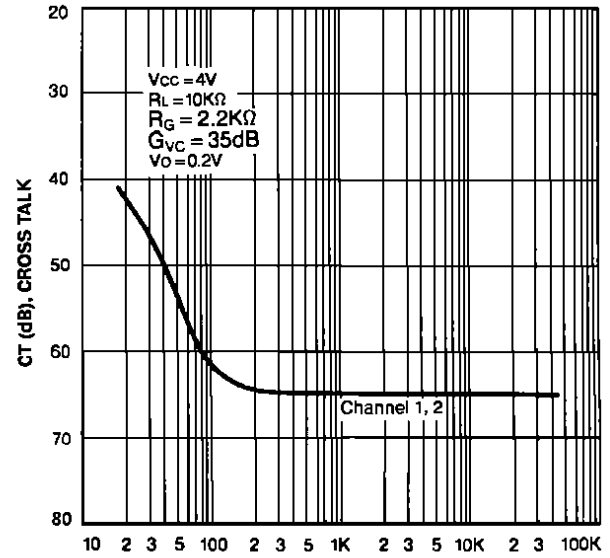


V_i(mW), INPUT VOLTAGE

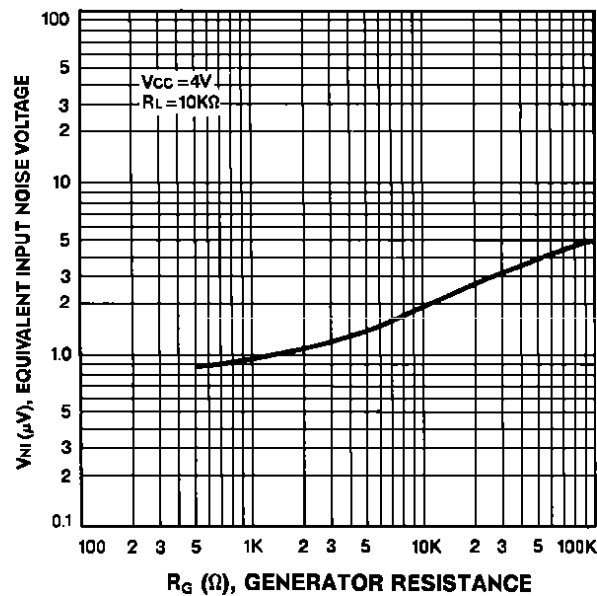
VOLTAGE GAIN-FREQUENCY



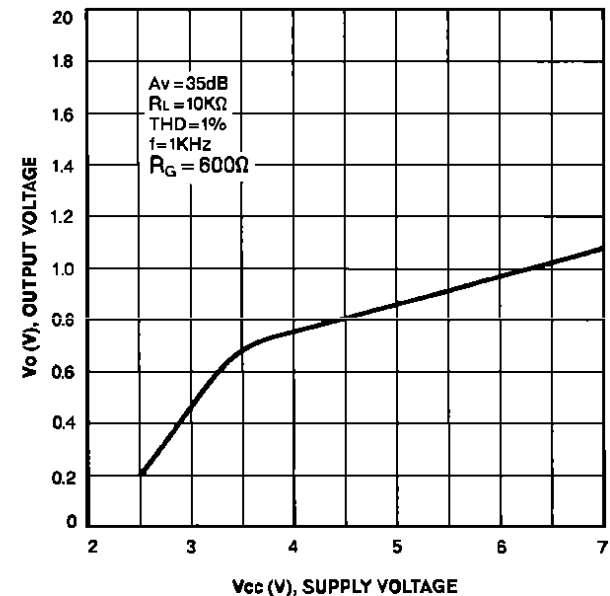
CROSS TALK-FREQUENCY

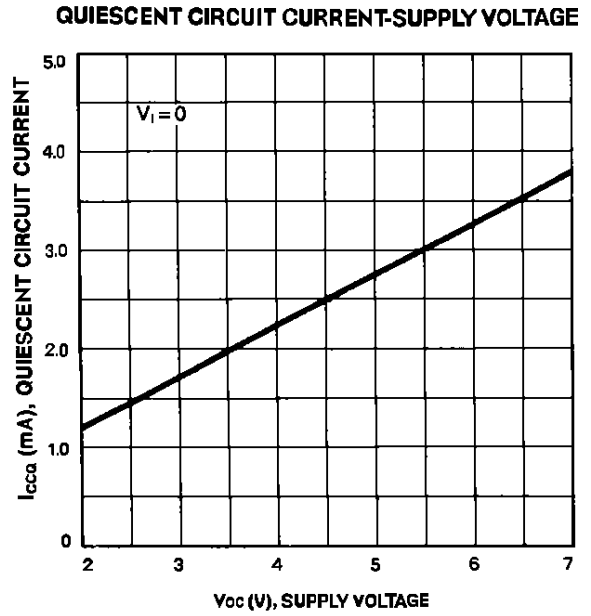
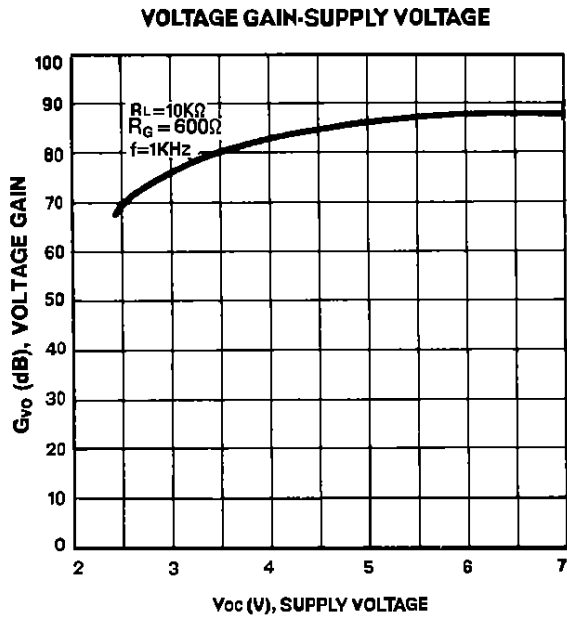


EQUIVALENT INPUT NOISE VOLTAGE GENERATOR RESISTANCE



OUTPUT VOLTAGE-SUPPLY VOLTAGE





APPLICATION CIRCUIT

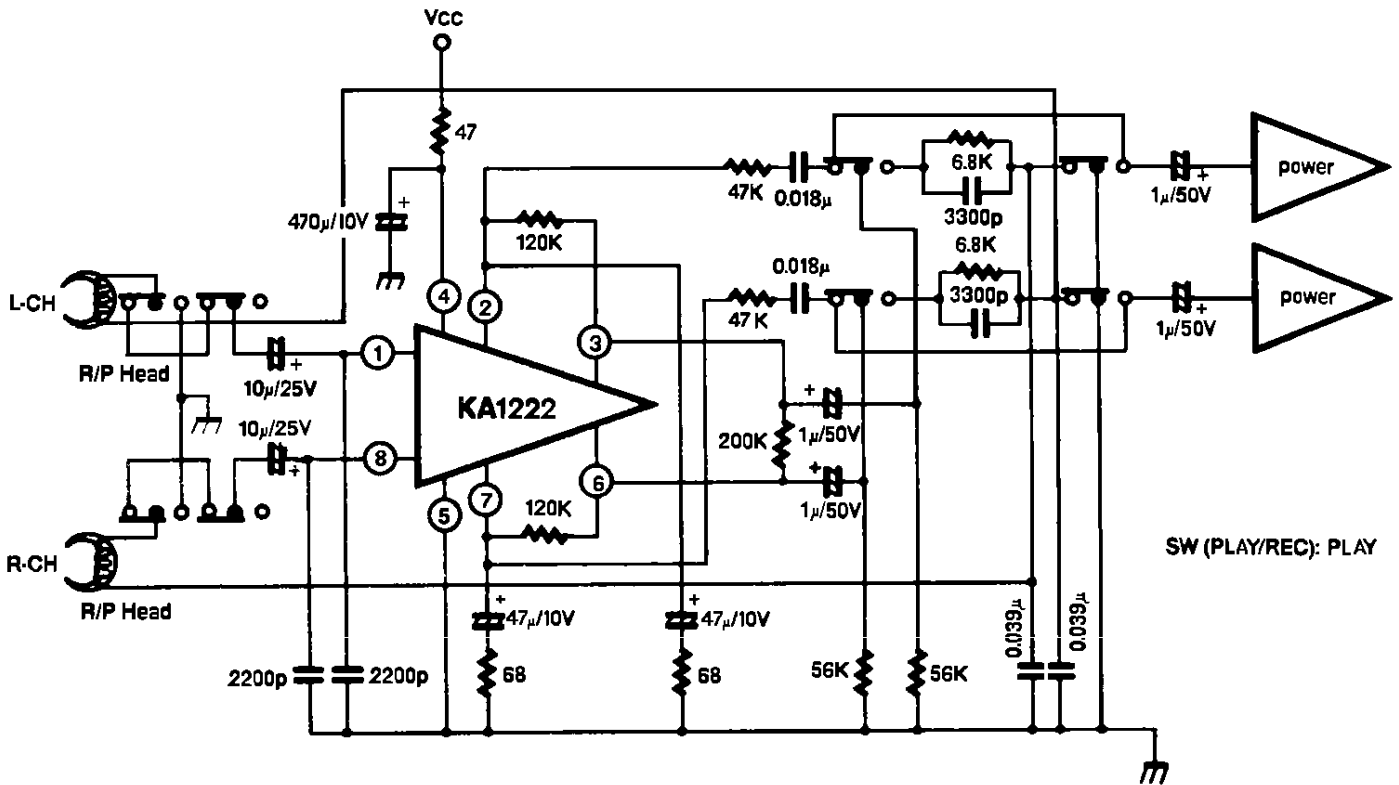


Fig. 3