

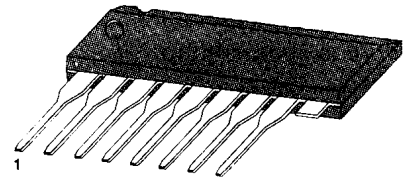
DUAL LOW NOISE EQUALIZER AMPLIFIER

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.

8-SIP



ORDERING INFORMATION

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

BLOCK DIAGRAM

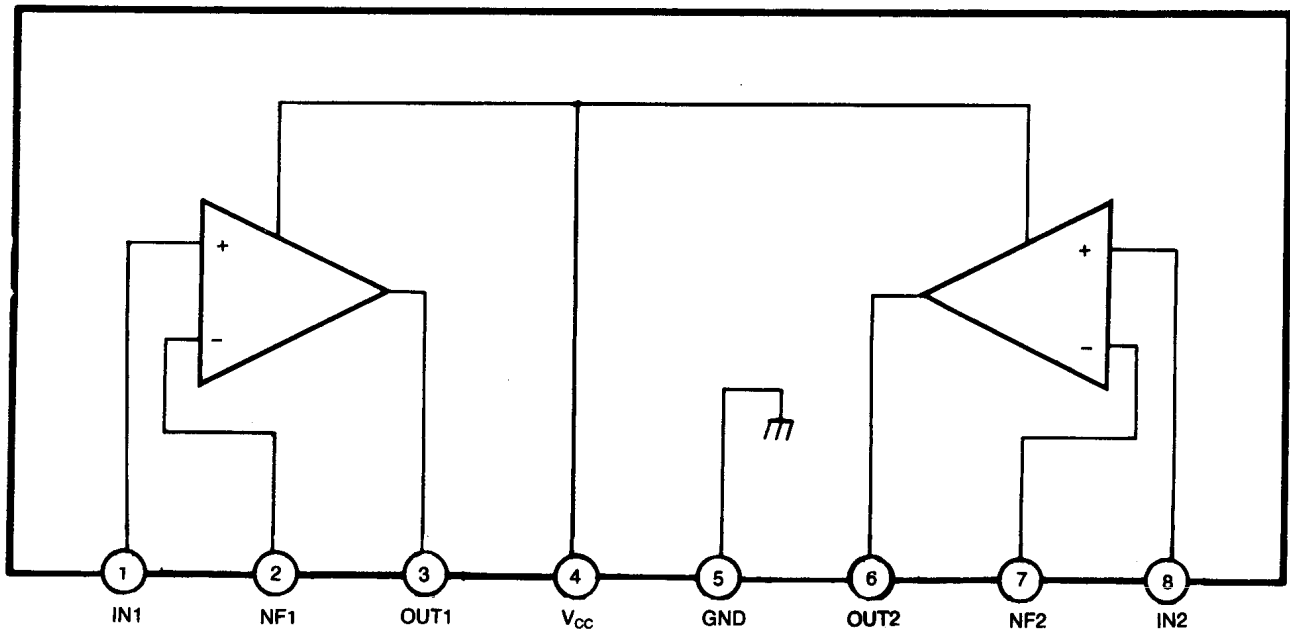


Fig. 1

ABSOLUTE MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$)

Characteristic	Symbol	Value	Unit
Supply Voltage	V_{CC}	7.5	V
Power Dissipation	P_D	200	mW
Operating Temperature	T_{OPR}	$-20 \sim +70$	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	$-40 \sim +125$	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS

($T_a = 25^{\circ}\text{C}$, $V_{CC} = 4\text{V}$, $R_L = 10\text{K}\Omega$, $R_G = 600\Omega$, $f = 1\text{KHz}$, 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}	$V_O = 0.2\text{V}$	33	35	37	dB
Output Voltage	V_O	THD=1%	0.4	0.7		V
Total Harmonic Distortion	THD	$V_O = 0.2\text{V}$		0.1	0.3	%
Input Resistance	R_I			150		$\text{K}\Omega$
Equivalent Input Noise Voltage	V_{NI}	$R_G = 2.2\text{K}\Omega$ $\text{BW} (-3\text{dB}) = 15\text{Hz} \sim 30\text{KHz}$		1.0	2.0	μV
Cross Talk	CT	$R_G = 2.2\text{K}\Omega$	50	65		dB

TEST CIRCUIT

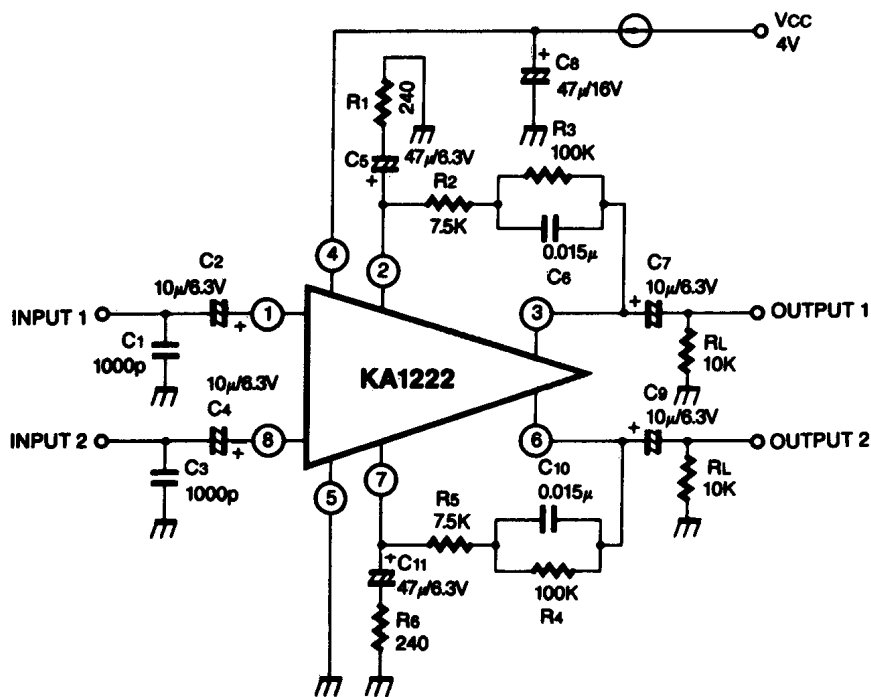
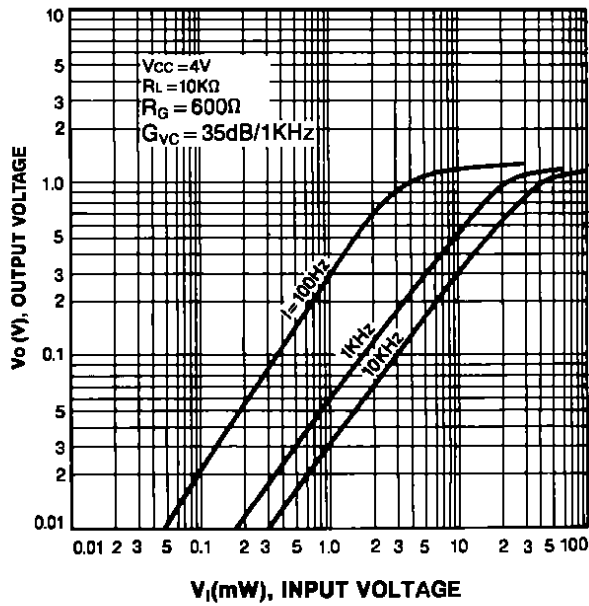
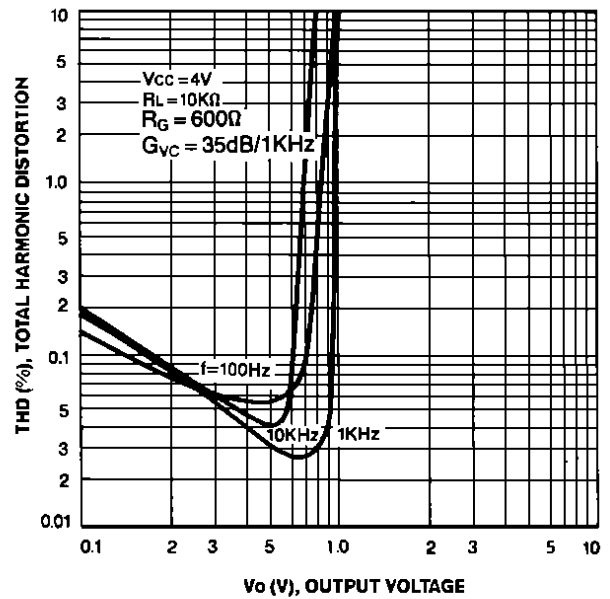


Fig. 2

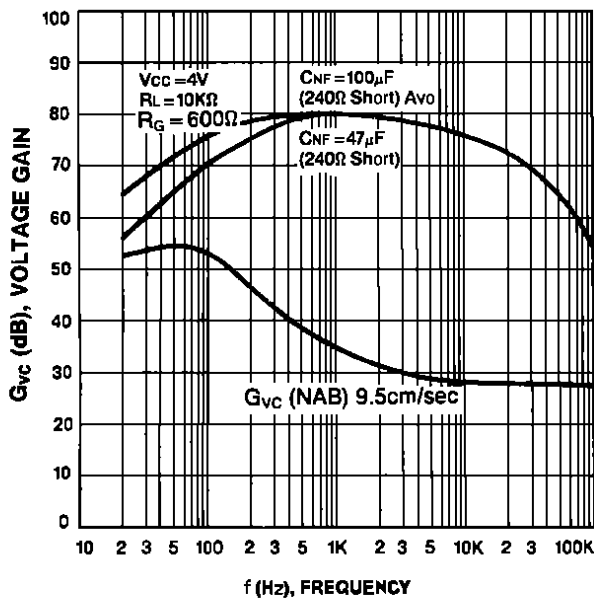
OUTPUT VOLTAGE-INPUT VOLTAGE



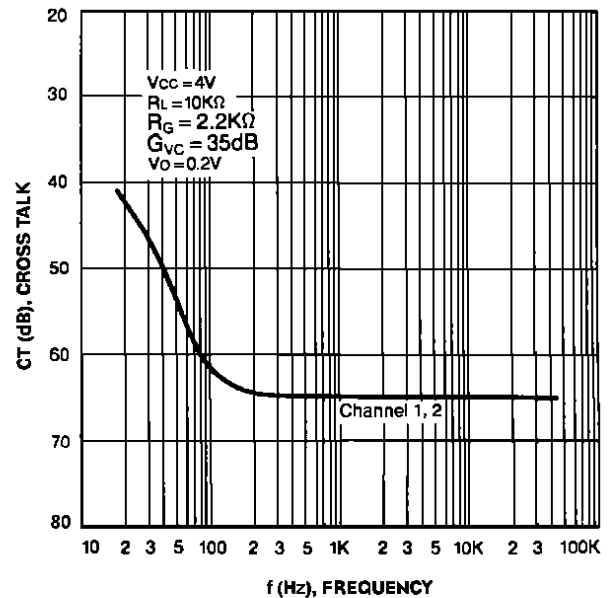
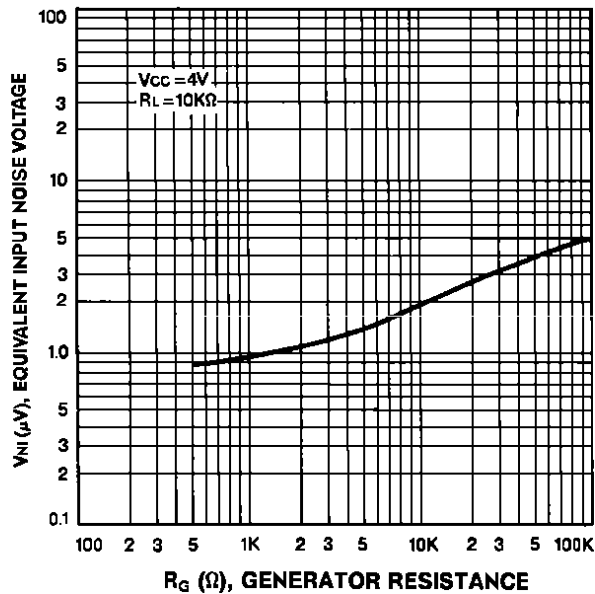
TOTAL HARMONIC DISTORTION-OUTPUT VOLTAGE



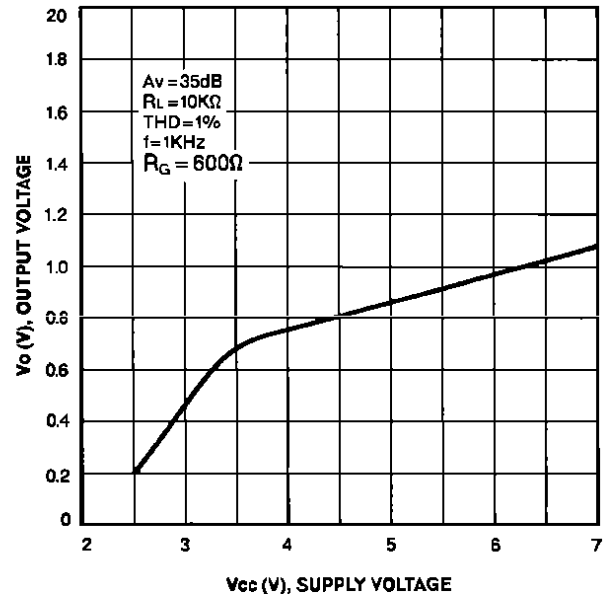
VOLTAGE GAIN-FREQUENCY

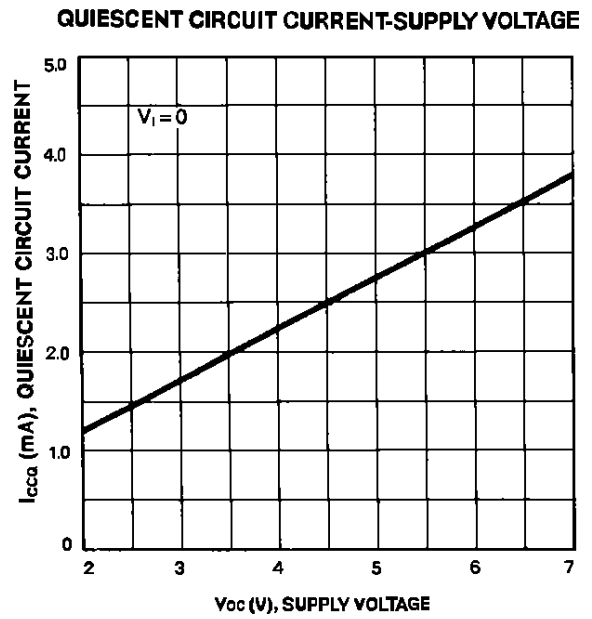
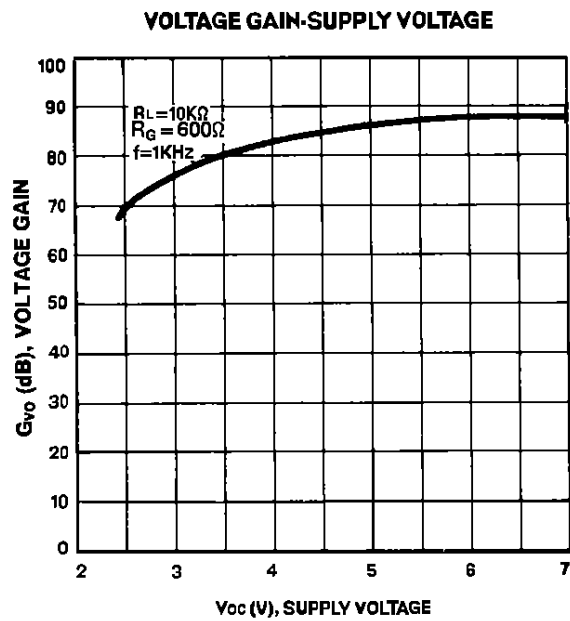


CROSS TALK-FREQUENCY

EQUIVALENT INPUT NOISE VOLTAGE
GENERATOR RESISTANCE

OUTPUT VOLTAGE-SUPPLY VOLTAGE





APPLICATION CIRCUIT

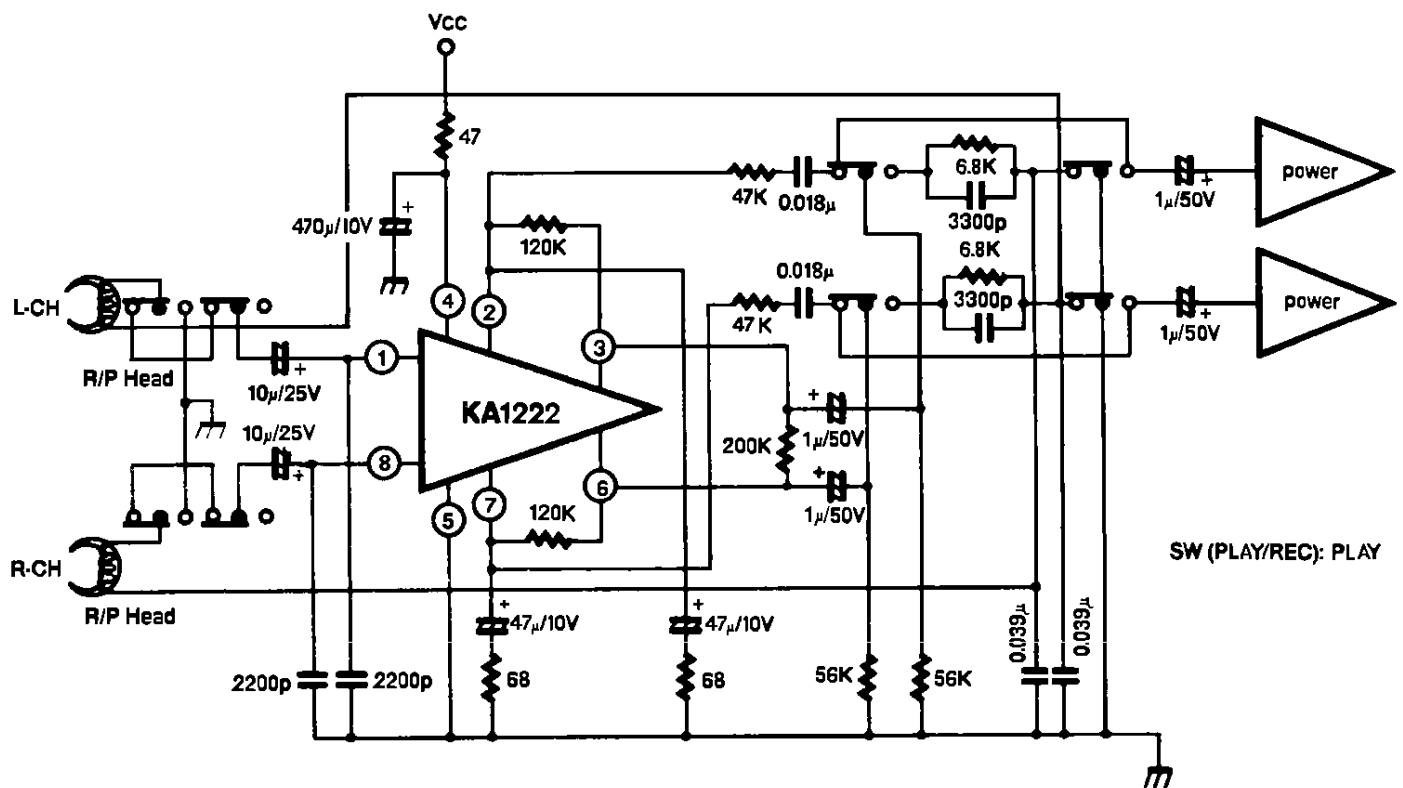


Fig. 3