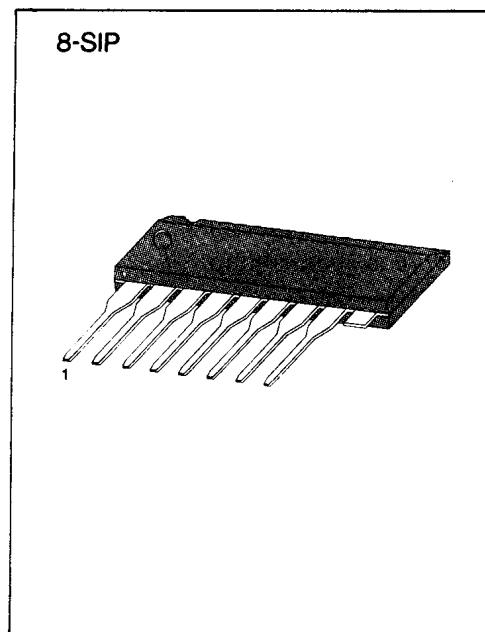


## DUAL LOW NOISE EQUALIZER AMPLIFIER

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

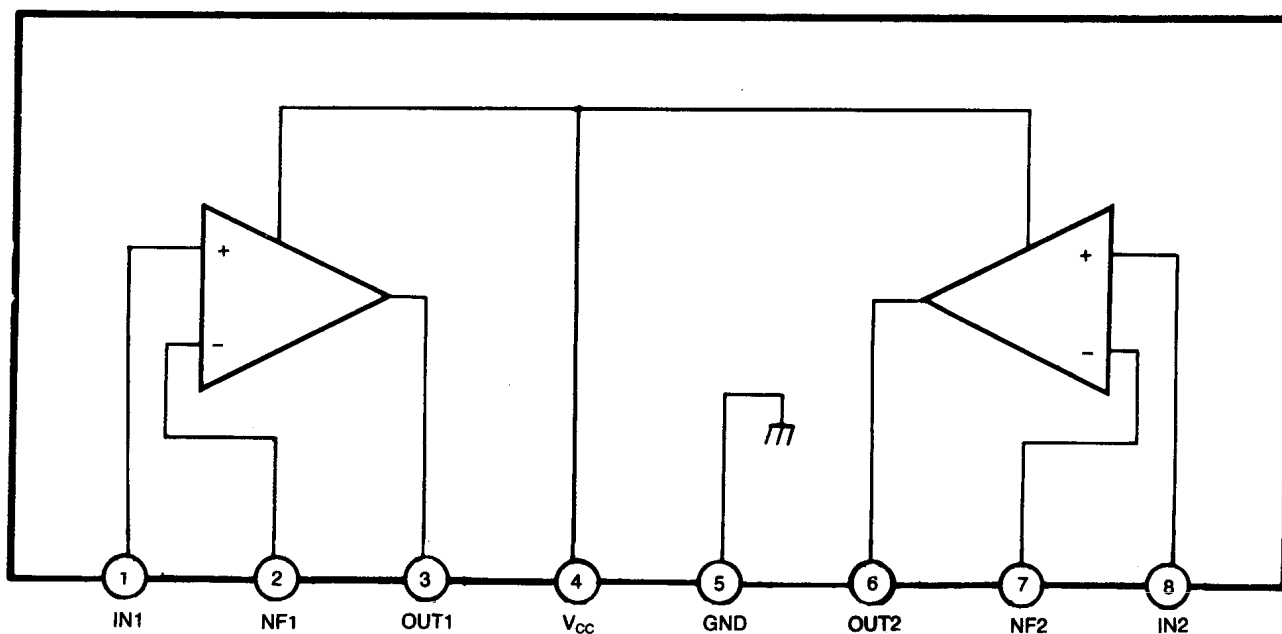


Fig. 1

## 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<br>BW (-3dB) = 15Hz ~ 30KHz |     | 1.0 | 2.0 | μV   |
| Cross Talk                     | CT               | R <sub>G</sub> = 2.2KΩ                             | 50  | 65  |     | dB   |

## TEST CIRCUIT

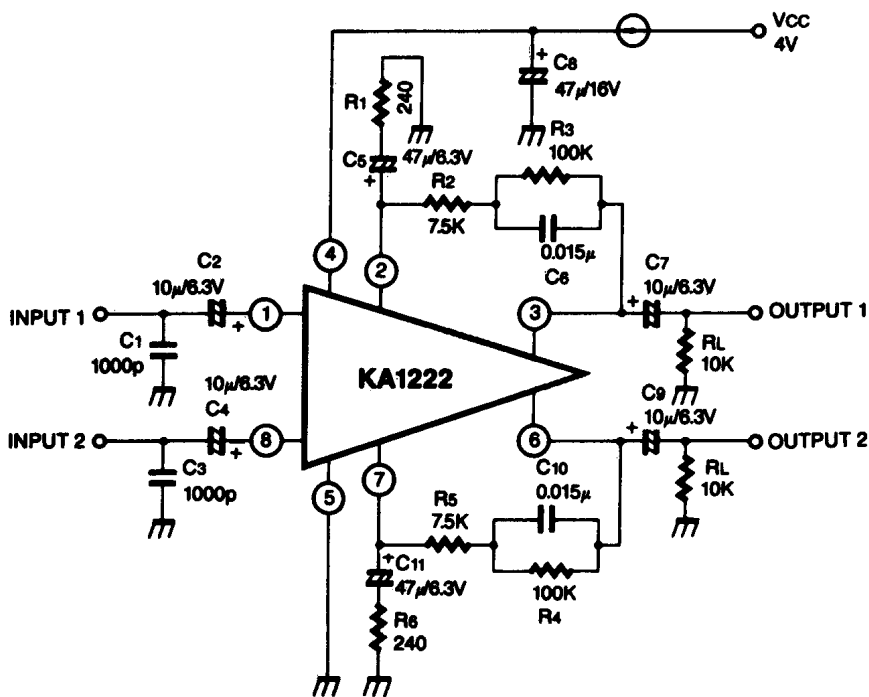
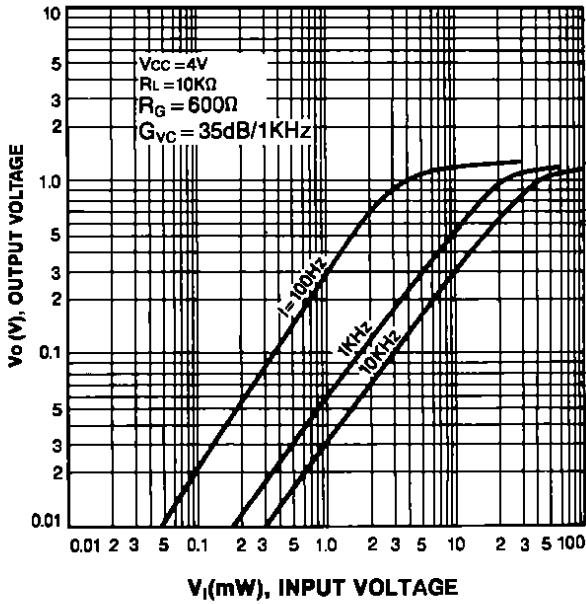
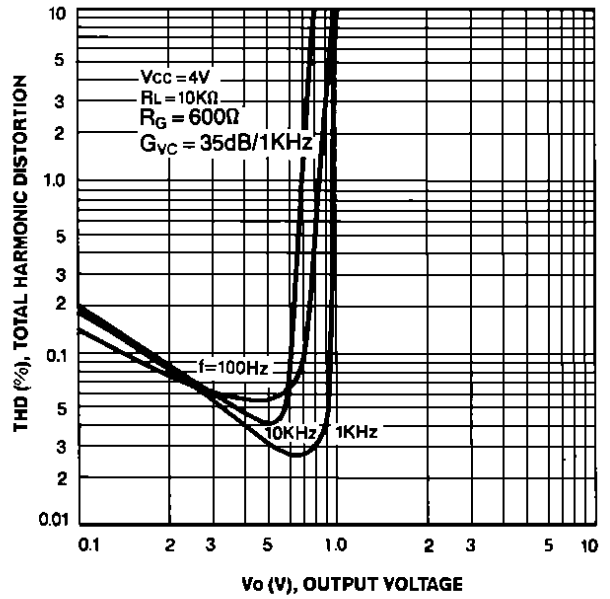


Fig. 2

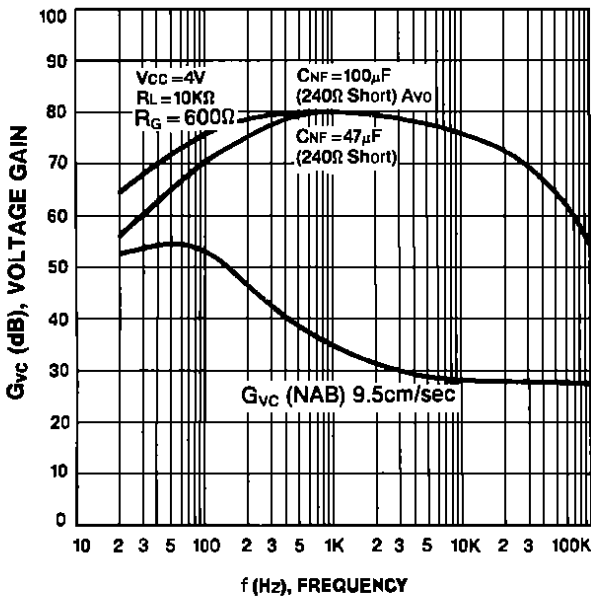
**OUTPUT VOLTAGE-INPUT VOLTAGE**



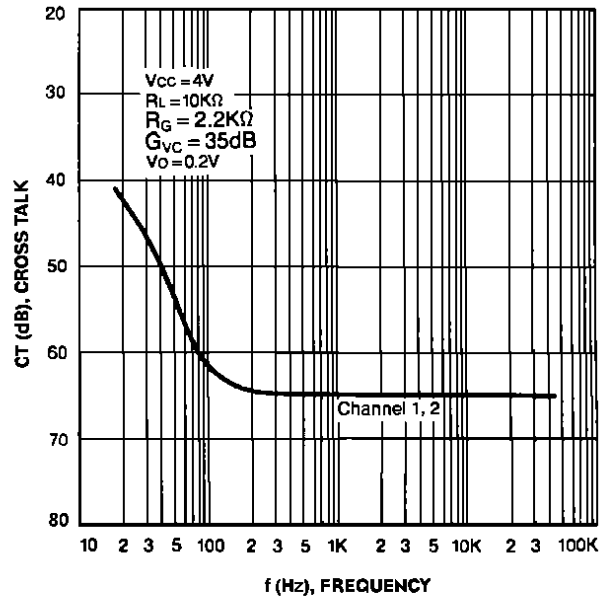
**TOTAL HARMONIC DISTORTION-OUTPUT VOLTAGE**



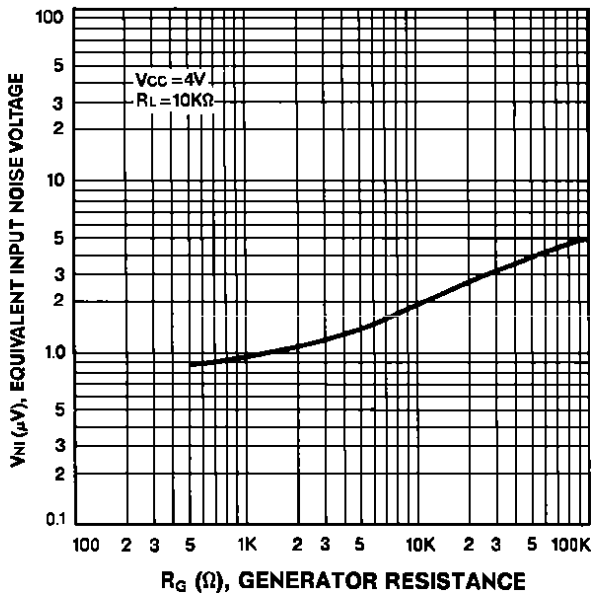
**VOLTAGE GAIN-FREQUENCY**



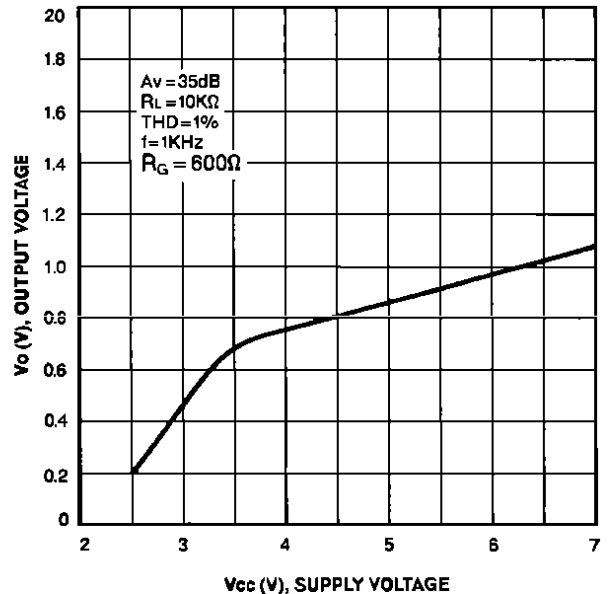
**CROSS TALK-FREQUENCY**

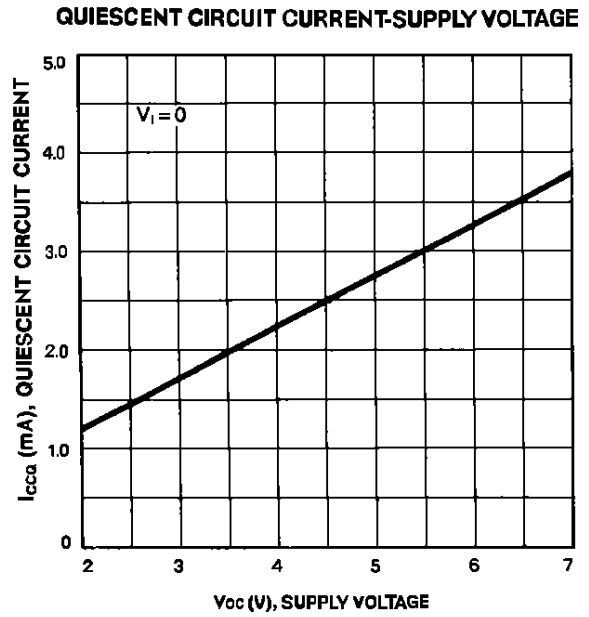
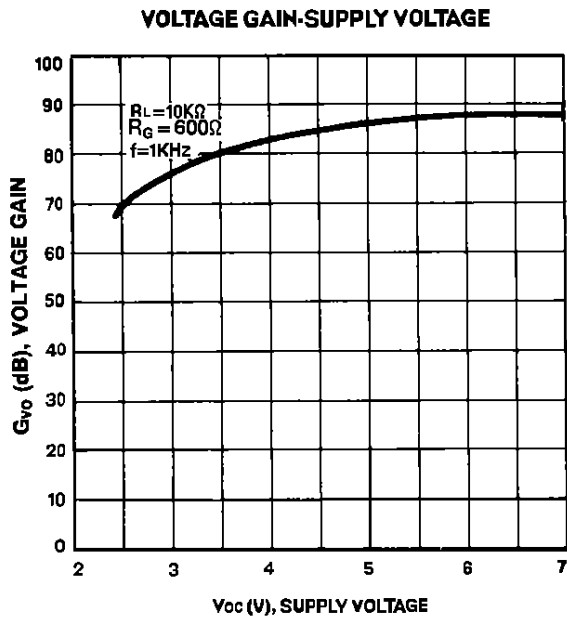


**EQUIVALENT INPUT NOISE VOLTAGE GENERATOR RESISTANCE**



**OUTPUT VOLTAGE-SUPPLY VOLTAGE**





## APPLICATION CIRCUIT

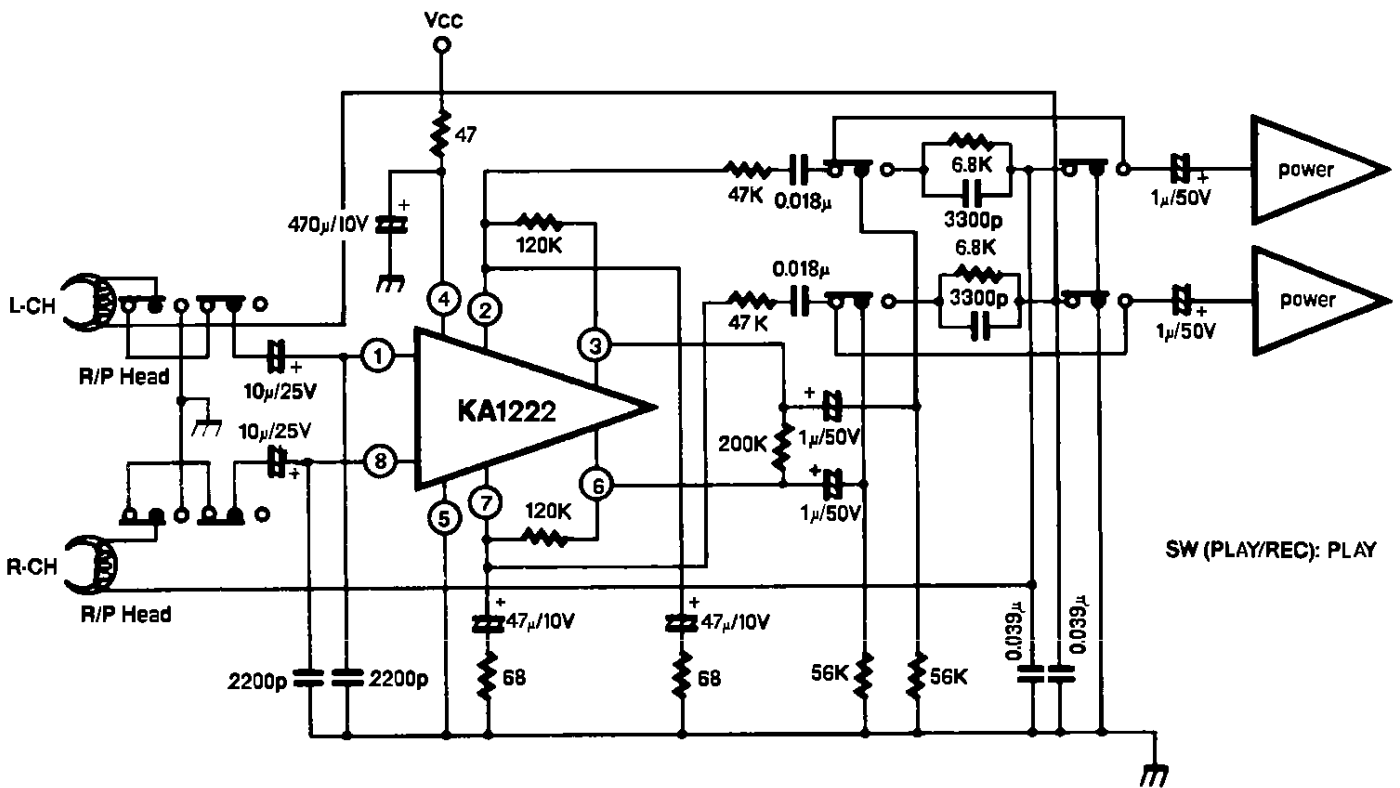


Fig. 3

This datasheet has been download from:

[www.datasheetcatalog.com](http://www.datasheetcatalog.com)

Datasheets for electronics components.