**Features**

- The LA7222 is a 2-channel 2-position high-performance analog switch having wide application from audio band to video band.

**Maximum Ratings at Ta = 25°C**

|                             |                     |           |             |    |
|-----------------------------|---------------------|-----------|-------------|----|
| Maximum Supply Voltage      | V <sub>CC</sub> max |           | 15          | V  |
| Allowable Power Dissipation | P <sub>d</sub> max  | Ta = 65°C | 350         | mW |
| Operating Temperature       | T <sub>opr</sub>    |           | -20 to +65  | °C |
| Storage Temperature         | T <sub>stg</sub>    |           | -55 to +125 | °C |

**Operating Conditions at Ta = 25°C**

|                            |                    |         |   |
|----------------------------|--------------------|---------|---|
| Recommended Supply Voltage | V <sub>CC</sub>    | 12      | V |
| Operating Voltage Range    | V <sub>CC</sub> op | 8 to 13 | V |

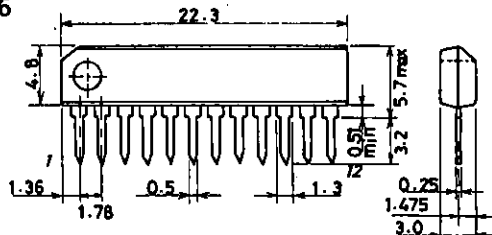
**Operating Characteristics at Ta = 25°C, V<sub>CC</sub> = 12V**

|                             |                   |   | min   | typ  | max             | unit             |
|-----------------------------|-------------------|---|-------|------|-----------------|------------------|
| Current Dissipation         | I <sub>CC</sub>   | No input  | 12    | 17   | 22              | mA               |
| Total Harmonic Distortion   | THD               | R <sub>g</sub> = 600Ω, V <sub>IN</sub> = 4.5V <sub>p-p</sub> , f = 1kHz   | 0.007 | 0.1  |                 | %                |
| Output Noise Voltage        | V <sub>ON</sub>   | R <sub>g</sub> = 600Ω, DIN AUDIO FILTER<br>(20Hz to 20kHz)  | -110  | -100 |                 | dBs              |
| Crosstalk (ch-1)            | CR1               | R <sub>g</sub> = 50Ω (no input side R <sub>g</sub> = 500Ω)<br>V <sub>IN</sub> = 2V <sub>p-p</sub> , f = 3.58MHz                             | -57   | -62  |                 | dB               |
| Crosstalk (ch-2)            | CR2               | R <sub>g</sub> = 50Ω (no input side R <sub>g</sub> = 500Ω)<br>V <sub>IN</sub> = 2V <sub>p-p</sub> , f = 3.58MHz                             | -52   | -57  |                 | dB               |
| Maximum Input Voltage       | V <sub>IN</sub>   | R <sub>g</sub> = 600Ω, f = 1kHz, THD = 1%   | 5.0   |      |                 | V <sub>p-p</sub> |
| 2nd Harmonic                | H <sub>2</sub>    | R <sub>g</sub> = 50Ω, V <sub>IN</sub> = 4V <sub>p-p</sub> , f = 1MHz  | -46   | -55  |                 | dB               |
| 3rd Harmonic                | H <sub>3</sub>    | R <sub>g</sub> = 50Ω, V <sub>IN</sub> = 4V <sub>p-p</sub> , f = 1MHz  | -46   | -55  |                 | dB               |
| Input Impedance             | z <sub>in</sub>   |   |       | 10   |                 | kΩ               |
| Output Impedance            | z <sub>o</sub>    |   |       | 30   | 60              | Ω                |
| Switch A Input Hold Voltage | V <sub>CA</sub>   | Pin 2, pin 4 DC   | 3.8   |      | V <sub>CC</sub> | V                |
| Switch B Input Hold Voltage | V <sub>CB</sub>   | Pin 2, pin 4 DC   | 0     |      | 2.0             | V                |
| Output DC Offset Voltage    | ΔV <sub>ODC</sub> | Output voltage difference at<br>the time of changeover from<br>switch A to B, and vice versa  | -50   | 0    | +50             | mV               |
| Crosstalk between Channels  | CRch              | R <sub>g</sub> = 500Ω, R <sub>L</sub> = ∞<br>Other channel input<br>R <sub>g</sub> = 50Ω, V <sub>IN</sub> = 2V <sub>p-p</sub> , f = 3.58MHz | -58   | -63  |                 | dB               |

**Package Dimensions**

(unit : mm)

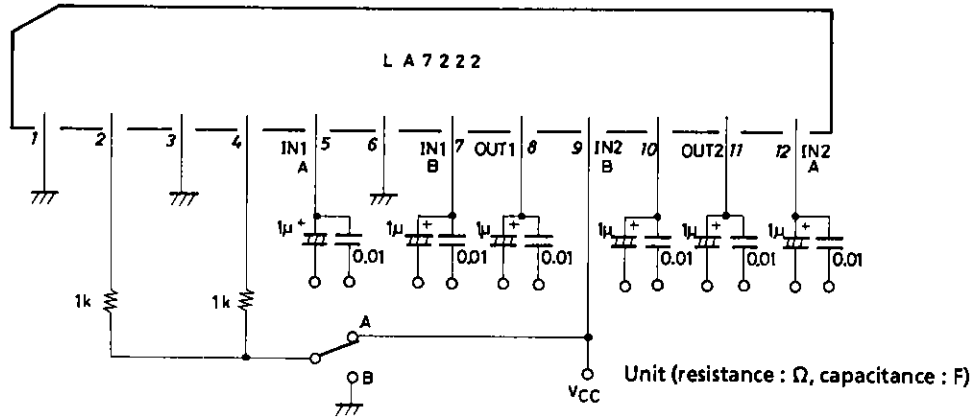
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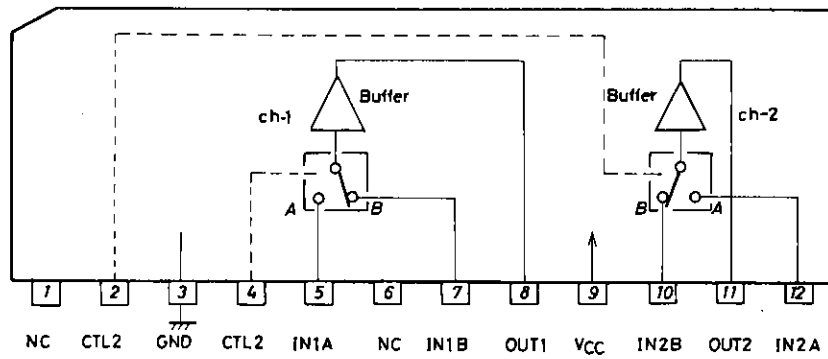
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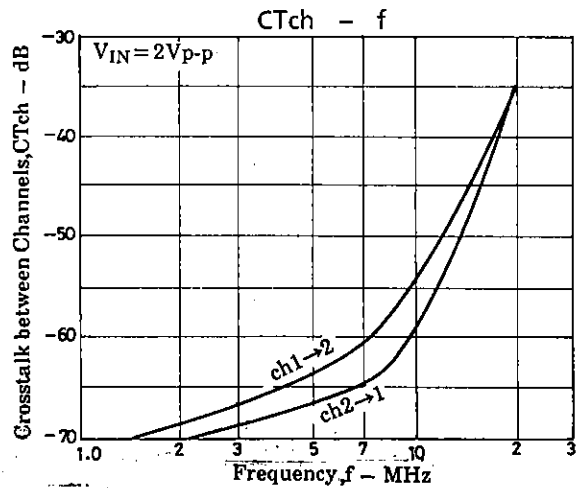
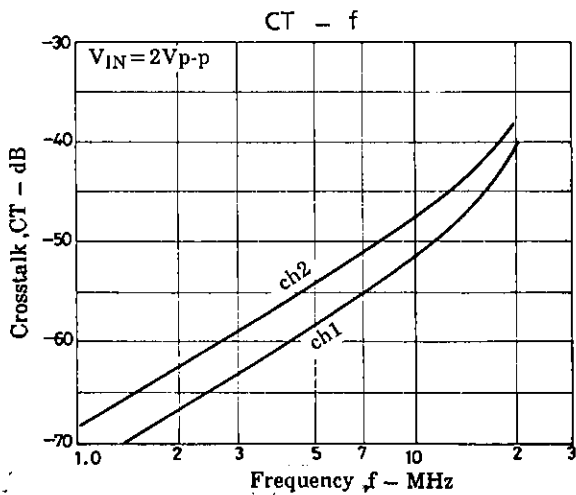
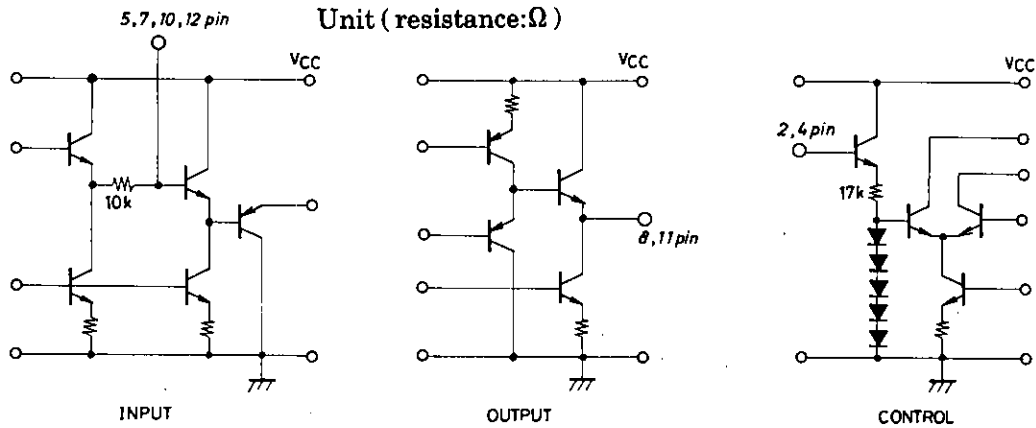
## Test Circuit



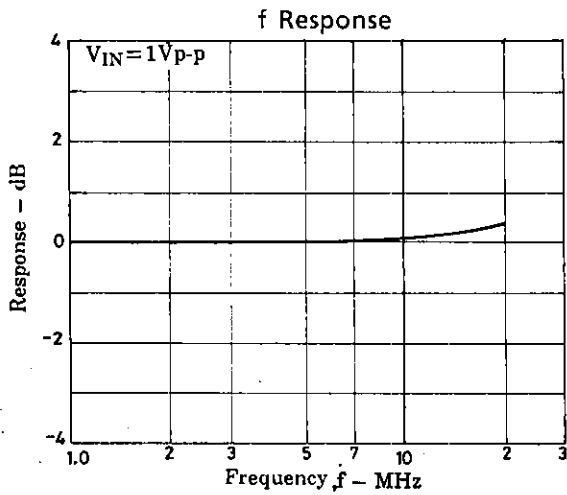
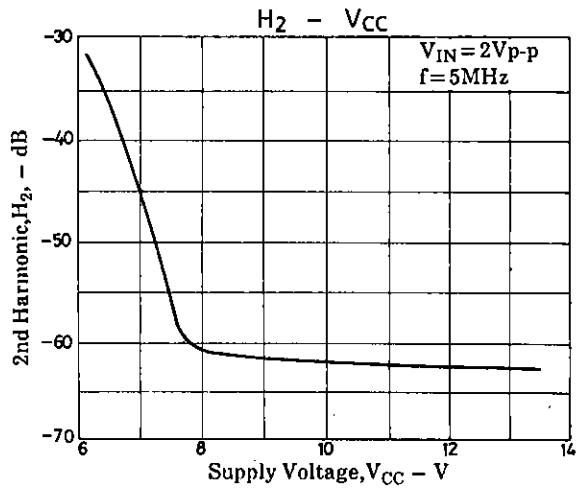
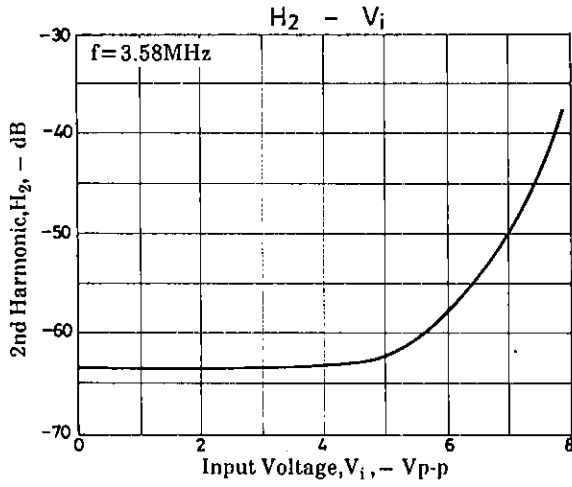
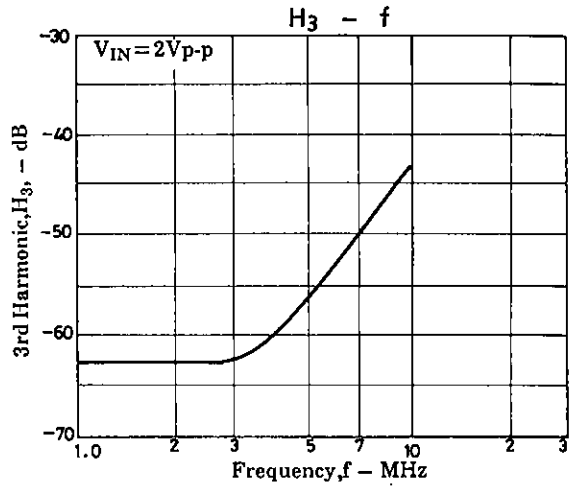
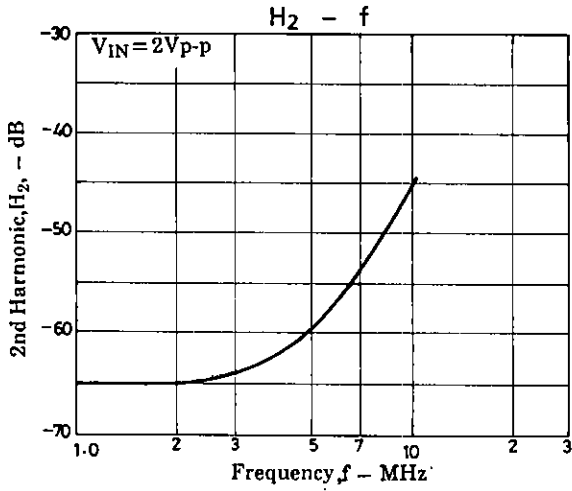
## Equivalent Circuit Block Diagram



## Input/Output Equivalent Circuit



LA7222



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