



# LA7222

## 2-Channel 2-Position AV Switch for VCR / Audio Use

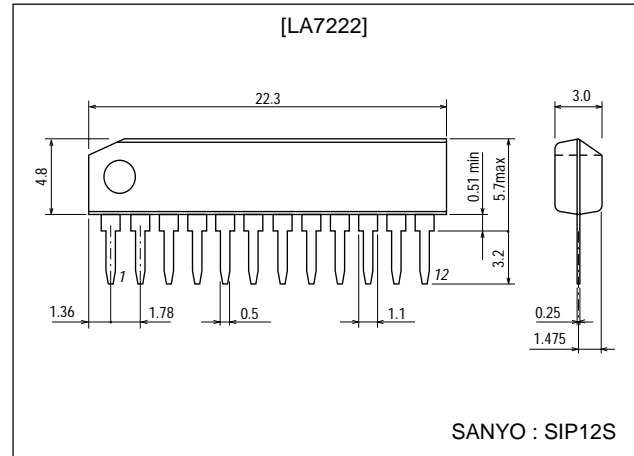
### Overview

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

### Package Dimensions

unit:mm

3116-SIP12S



### Specifications

Maximum Ratings at  $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	$V_{CC\text{ max}}$		15	V
Allowable power dissipation	$P_{d\text{ max}}$	$T_a=65^\circ\text{C}$	350	mW
Operating temperature	$T_{opr}$		-20 to +65	$^\circ\text{C}$
Storage temperature	$T_{stg}$		-55 to +125	$^\circ\text{C}$

Operating Conditions at  $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Recommended supply voltage	$V_{CC}$		12	V
Operating voltage	$V_{CC\text{ op}}$		8 to 13	V

Operating Characteristics at  $T_a = 25^\circ\text{C}$ ,  $V_{CC}=12\text{V}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Current drain	$I_{CC}$	No input	12	17	22	mA
Total harmonic distortion	THD	$R_g=600\Omega$ , $V_{IN}=4.5\text{Vp-p}$ , $f=1\text{kHz}$		0.007	0.1	%
Output noise voltage	$V_{ON}$	$R_g=600\Omega$ , DIN AUDIO FILTER (20Hz to 20kHz)		-110	-100	dBs
Crosstalk (ch-1)	CR1	$R_g=50\Omega$ (no input side $R_g=500\Omega$ ), $V_{IN}=2\text{Vp-p}$ , $f=3.58\text{MHz}$	-57	-62		dB
Crosstalk (ch-2)	CR2	$R_g=50\Omega$ (no input side $R_g=500\Omega$ ), $V_{IN}=2\text{Vp-p}$ , $f=3.58\text{MHz}$	-52	-57		dB
Maximum input voltage	$V_{IN}$	$R_g=600\Omega$ , $f=1\text{kHz}$ , THD=1%	5.0			Vp-p

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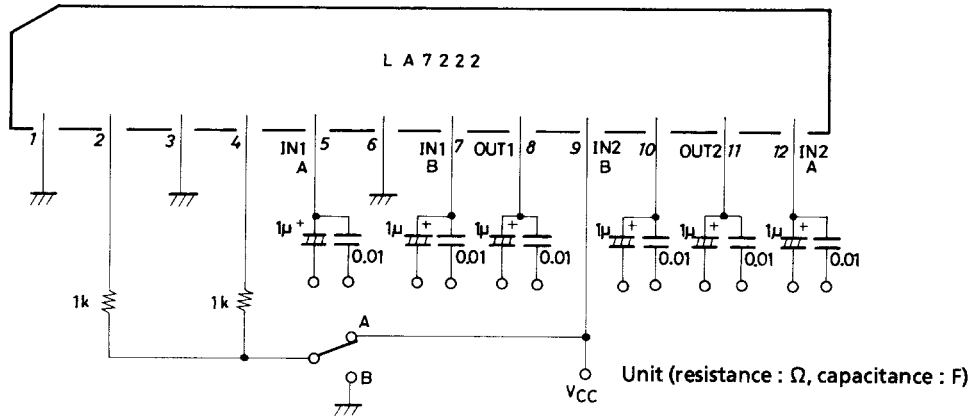
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

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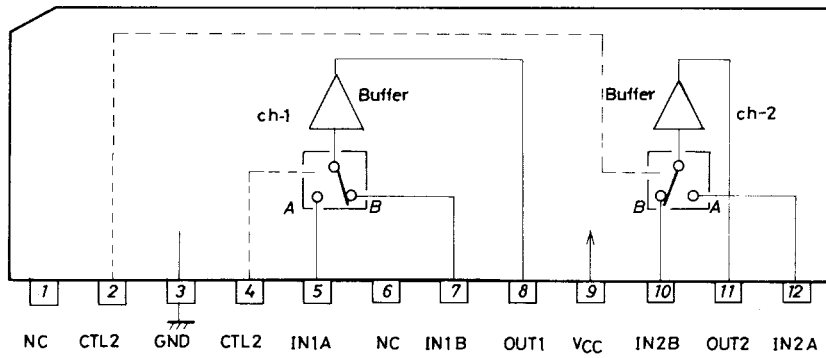
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
2nd harmonic	H <sub>2</sub>	R <sub>g</sub> =50Ω, V <sub>IN</sub> =4Vp-p, f=1MHz	-46	-55		dB
3rd harmonic	H <sub>3</sub>	R <sub>g</sub> =50Ω, V <sub>IN</sub> =4Vp-p, f=1MHz	-46	-55		dB
Input 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 the time of changeover from switch A to B, and vice versa	-50	0	+50	mV
Crosstalk between channels	CR <sub>ch</sub>	R <sub>g</sub> =500Ω, R <sub>L</sub> =∞, other channel input, R <sub>g</sub> =50Ω, V <sub>IN</sub> =2Vp-p, f=3.58MHz	-58	-63		dB

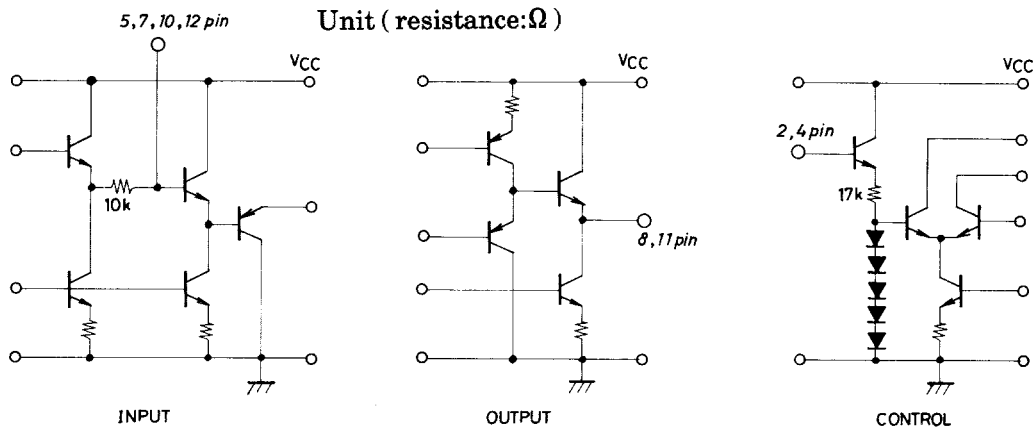
## Test Circuit



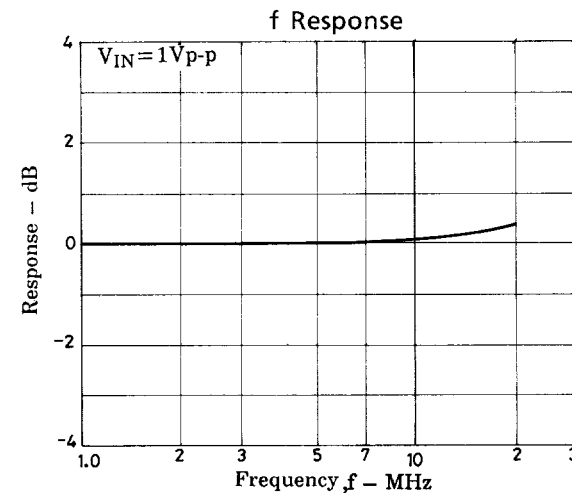
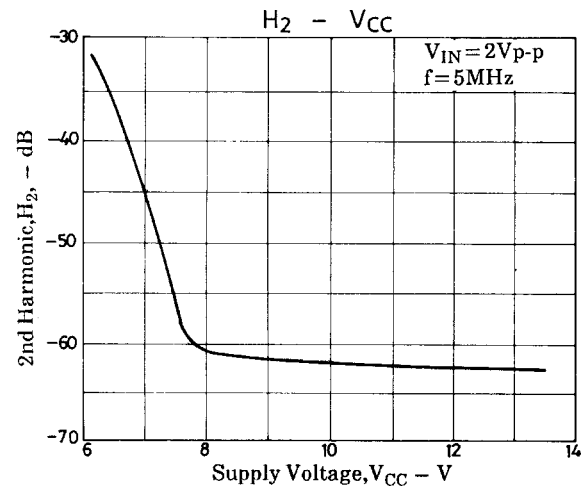
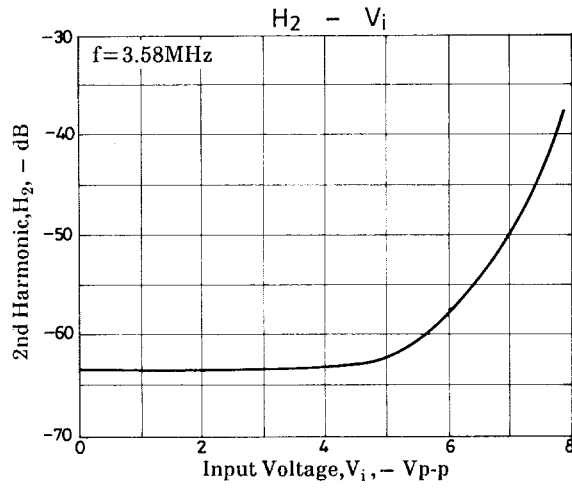
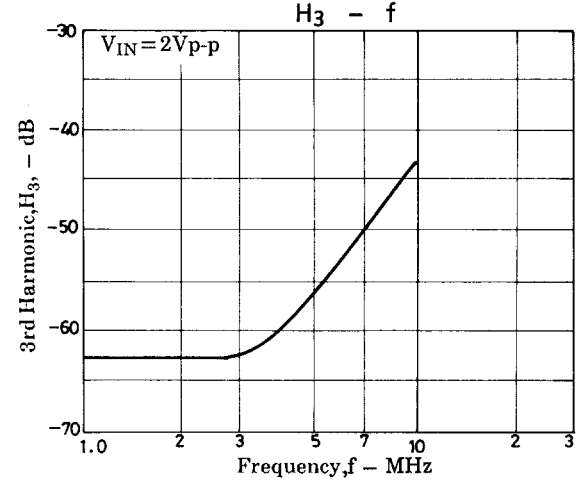
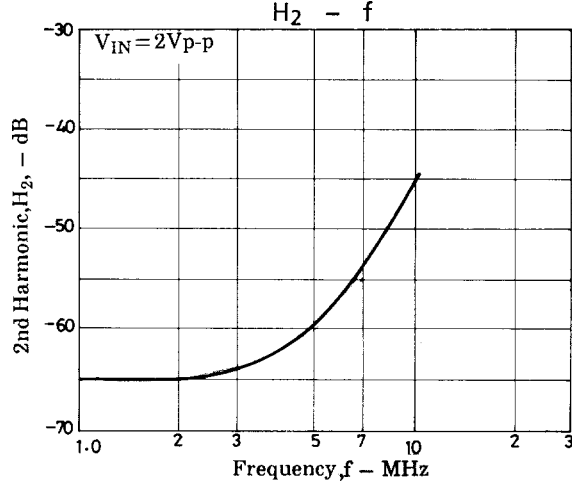
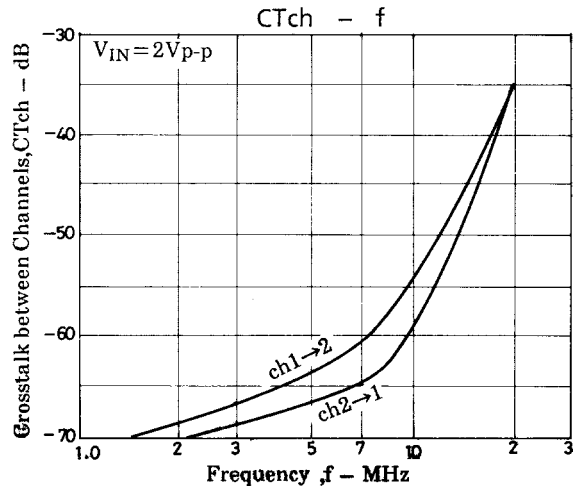
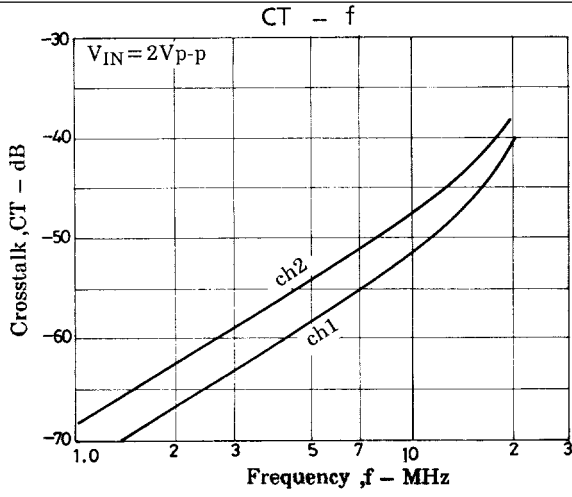
## Equivalent Circuit Block Diagram



## Input/Output Equivalent Circuit



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