

The LA7221 is an electronic switch that was designed for use in audio video applications. It provides a wide dynamic range. The LA7221 has on-chip video clamp circuits (clamp elimination function).

Features

- Low-voltage (5V) operation.
- Three inputs selectable and muting function.
- Video clamp circuits on chip.
- Wide dynamic range (2.0Vp-p or greater).

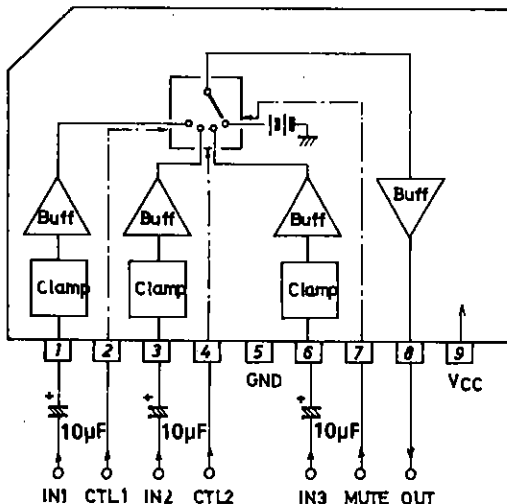
Maximum Ratings at $T_a = 25^\circ\text{C}$

			unit
Maximum Supply Voltage	$V_{CC \text{ max}}$	7.0	V
Allowable Power Dissipation	$P_d \text{ max}$	100	mW
Operating Temperature	T_{op}	-10 to +70	$^\circ\text{C}$
Storage Temperature	T_{stg}	-40 to +125	$^\circ\text{C}$

Operatings Characteristics at $T_a = 25^\circ\text{C}$, $V_{CC} = 5.0\text{V}$

		min	typ	max	unit
Operating Voltage	$V_{CC \text{ op}}$	4.5	5.0	6.2	V
Current Dissipation	I_{CC}	3.5	4.6	6.6	mA
Maximum Input Level	$V_{IN \text{ max}}$	2.0	2.2		Vp-p
Frequency Characteristic	G_F		0	± 0.5	dB
Total Harmonic Distortion	THD		0.03	0.1	%
Crosstalk	CT		-70	-60	dB
Crosstalk Appearing in Muting Circuit	CT_m		-60	-50	dB
Output DC Offset	ΔV_{OUT}		5	15	mV
CTL Changeover Level	V_{CTL}	1.0	1.4	1.8	V
Differential Gain	DG		0.5	1.0	%
Differential Phase	DP		0.5	1.0	deg

Block Diagram and Application Circuit



Truth Table

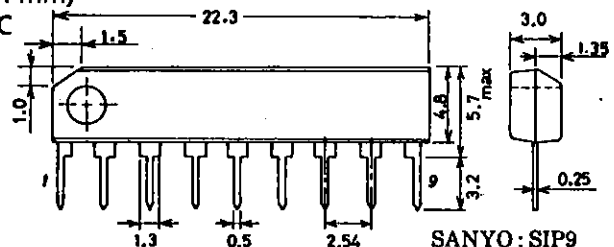
CTL.1	H	L	-	L
CTL.2	L	H	-	L
MUTE CTL	L	L	H	L
OUT	IN 1	IN 2	DC	IN 3

*: The output is indeterminate at other states than shown above.

Package Dimensions

(unit : mm)

3017C



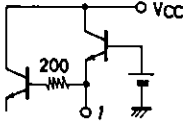
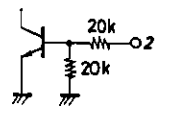
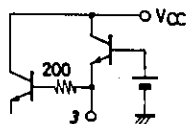
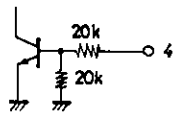
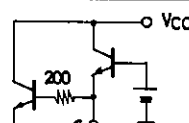
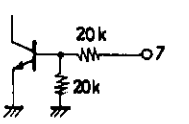
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LA7221

LA7221 Input / Output Configuration

Unit (resistance:Ω)

Pin	Name	I/O Impedance or I/O Configuration	DC Voltage	Remarks
1	IN1	∞	 2.4V	
2	CONTROL 1	∞	 0V	ON at 2.0V or greater
3	IN2	∞	 2.4V	
4	CONTROL 2	∞	 0V	ON at 2.0V or greater
5	GND		0V	
6	IN3	∞	 2.4V	
7	MUTE CONTROL	∞	 0V	ON at 2.0V or greater
8	OUT	20Ω	Emitter follower	Collector current 1.6mA
9	Vcc		5.0V	

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