

SANYO

No.2404

LA7301, 7301M

Monolithic Linear IC

VHS VTR PLAYBACK HEAD AMP, RECORDING AMP

Functions

- . 4-channel playback head amp
- . 2-channel recording amp
- . PB: 2 head select switches, 4 mode select switches
- . REC: 4 head select switches, 2 mode select switches
- . Comparator for special playback

Features

- . No more than one IC required for 4-head use
- . On-chip comparator permitting GT-4-head use
- . On-chip driver transistor permitting direct recording
- . On-chip head select switches (4 types) facilitating the pattern design of a set

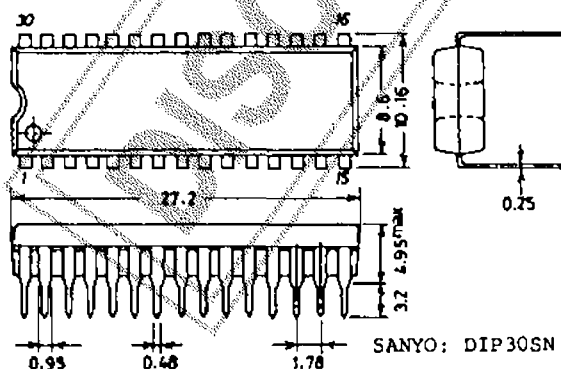
Maximum Ratings at Ta=25°C

			unit
Maximum Supply Voltage	V _{CC} max	(PB) 7.0	V
		(REC) 13.5	V
Allowable Power Dissipation	P _d max	(DIP) 920	mW
		(MFP) 840	mW
Operating Temperature	T _{opg}	-10 to +65	°C
Storage Temperature	T _{stg}	-40 to +125	°C

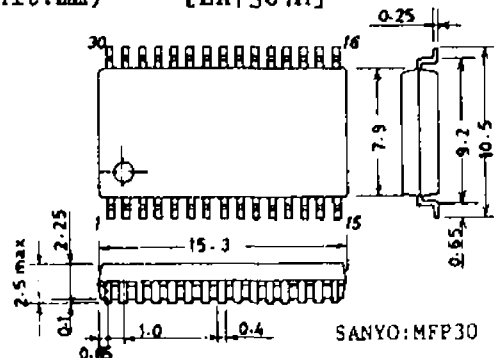
Operating Conditions at Ta=25°C

			unit
Supply Voltage	V _{CC}	(PB) 5.0	V
		(REC) 12.0	V
Operating Voltage Range	V _{CC} opg	(PB) 4.75 to 5.6	V
		(REC) 8.5 to 13.0	V

Case Outline 3061-D30SNIC
(unit:mm) [LA7301]



Case Outline 3073A-M30SIC
(unit:mm) [LA7301M]



These specifications are subject to change without notice.

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4027TA, TS No.2404-1/4

Electrical Characteristics at $T_a=25^\circ\text{C}$

Characteristic	Symbol	Test Conditions		Limits					unit
		Input	Output	SW1	SW2	SW3	SW4	SW5	
(PB mode) CH		T1		RF	HA	6H/2H	REC	Special PB "H"	
				30					
Current Dissipation	I_{CCP}								
Voltage Gain	$G_{VP}(1)$	T27	T6	1	1	1		1	22.5
	$G_{VP}(2)$	T25	T6	1	1	1		2	30
	$G_{VP}(3)$	T21	T6	2	1	1		2	37.5
	$G_{VP}(4)$	T20	T6	1	2	2		2	59.5
				2	2	2		2	62.5
Voltage Gain Difference 1	$\Delta G_{VP}(1)$								54.0
Voltage Gain Difference 2	$\Delta G_{VP}(2)$								57.0
Gain Difference between Modes	$\Delta G_{VP6H-2H}$								60.0
Equivalent Input Noise Voltage	$V_{NIN}(1)$		T6						-1.0
	$V_{NIN}(2)$		T6						0
	$V_{NIN}(3)$		T6						1.0
	$V_{NIN}(4)$		T6						1.5
Frequency Characteristic	$\Delta V_{FP}(1)$	T27	T6	1	1	1		2	
	$\Delta V_{FP}(2)$	T25	T6	2	1	1		2	
	$\Delta V_{FP}(3)$	T21	T6	1	2	2		2	
	$\Delta V_{FP}(4)$	T20	T6	2	2	2		2	
Second Harmonic Distortion	$V_{HDP}(1)$	T27	T6	1	1	1		2	
	$V_{HDP}(2)$	T25	T6	2	1	1		2	
	$V_{HDP}(3)$	T21	T6	1	2	2		2	
	$V_{HDP}(4)$	T20	T6	2	2	2		2	
Maximum Output Level	$V_{OMP}(1)$	T27	T6	1	1	1		2	
	$V_{OMP}(2)$	T25	T6	2	1	1		2	
	$V_{OMP}(3)$	T21	T6	1	2	2		2	
	$V_{OMP}(4)$	T20	T6	2	2	2		2	
Crosstalk 1 6H	$V_{CR1}(1)$	T25	T6	1	1	1		2	
	$V_{CR1}(2)$	T27	T6	2	1	1		2	
Crosstalk 2 2H	$V_{CR2}(3)$	T20	T6	1	2	2		2	
	$V_{CR2}(4)$	T21	T6	2	2	2		2	
Output DC Offset 1 to 6	ΔV_{ODC}^1		Pin6	1-2	1			1	
				1-2	2			1	
				1	1-2			1	
				2	1-2			1	
				1-2	1-2			1	
				2-1	1-2			1	
Comparator Control Characteristic	V_{CH1}	T5	T5	1	1			1	
	V_{CH2}	T27	T5	1	1			1	

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Characteristic	Symbol	Test Conditions		Limits					unit
		Input	Output	SW1 RF	SW2 HA	SW3 6H/ 2H	SW4 REC MUTE	SW5 Special PB "H"	
(REC mode)		T14							
Current Dissipation	I_{CCR}	T14				1	2		mA
Voltage Gain	$G_{VR}(6C)$	T8	T17			1	2		
6H	(6Y)	T9	T17			1	2		
2H	(2C)	T8	T15			2	2		
	(2Y)	T9	T15			2	2		
Voltage Gain Difference 1	$\Delta G_{VR}(6H)$	-	-						dB
Voltage Gain Difference 2	$\Delta G_{VR}(2H)$	-	-						dB
Frequency Characteristic	$\Delta V_{FR}(6C)$	T8	T17			1	2		
	(6Y)	T9	T17			1	2		
	(2C)	T8	T15			2	2		
	(2Y)	T9	T15			2	2		
Second Harmonic Distortion	$V_{HDR}(6C)$	T8	T17			1	2		
	(6Y)	T9	T17			1	2		
	(2C)	T8	T15			2	2		
	(2Y)	T9	T15			2	2		
Maximum Output Level	$V_{OHR}(6C)$	T8	T17			1	2		Vpp
	(6Y)	T9	T17			1	2		
	(2C)	T8	T15			2	2		
	(2Y)	T9	T15			2	2		
Mute Attenuation	$V_{MR}(6C)$	T8	T17			1	1		
	(6Y)	T9	T17			1	1		
	(2C)	T8	T15			2	1		
	(2Y)	T9	T15			2	1		
Cross Modulation Relative Level	$V_{CY}(6H)$	T8	T17			1	2		dB
	(2H)	T8	T15			2	2		dB

The application circuit diagrams and circuit constants herein are included as an example and provide no guarantee for designing equipment to be mass-produced.

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