No.2403

LA7300M

Monolithic Linear IC

VHS VTR PLAYBACK HEAD AMP, RECORDING AMP

CONTINUED PRODUCT

Functions

- 3-channel playback head amp
- Single-channel recording amp
- PB: One head select switch, two mode select switches
- REC: Two head select switches

Features

- No more than one IC required for 3-head/2-head use
- On-chip driver transistor permitting direct recording
- On-chip head select switches (3 types) facilitating the pattern design of a set

Maximum Ratings at Ta=25°C

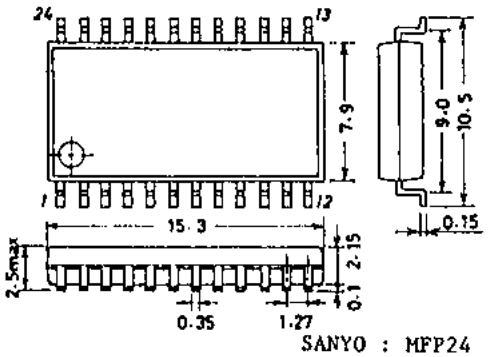
			unit
Maximum Supply Voltage	V_{CC} max	(PB) 7.0	V
		(REC) 13.5	V
Alowable Power Dissipation	Pd max	480	mW
Operating Temperature	Topg	-10 to +65	°C
Storage Temperature	Tstg	-40 to +125	°C

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

The application circuit diagrams and circuit constants herein are included as an example and provide no guarantee for designing equipment to be mass-produced.
The information herein is believed to be accurate and reliable. However, no responsibility is assumed by SANYO for its use, nor for any infringements of patents or other rights of third parties which may result from its use.

Case Outline 3045B-M24IC
(unit:mm)



SANYO : MFP24

These specifications are subject to change without notice.

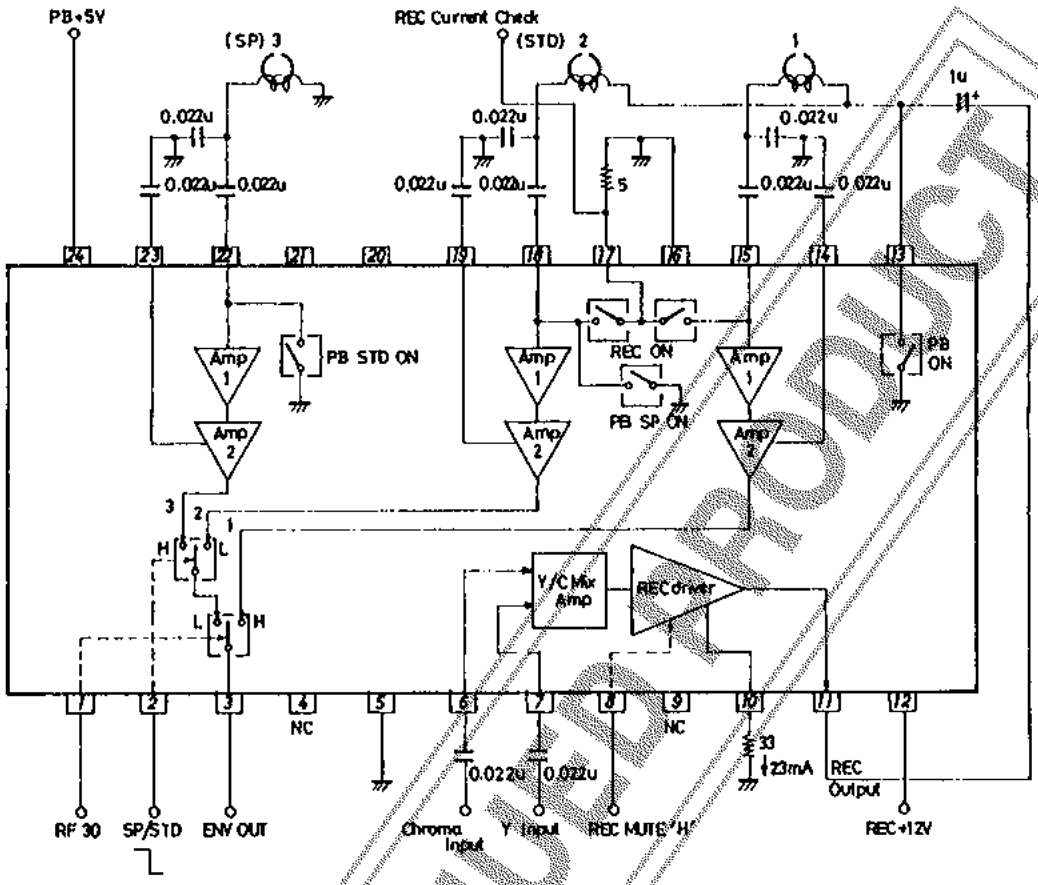
SANYO ELECTRIC CO., LTD. SEMICONDUCTOR DIVISION
15-13, 6-CHOME, SOTOKANDA, CHIYODA-KU, TOKYO 101 JAPAN

Electrical Characteristics at Ta=25°C

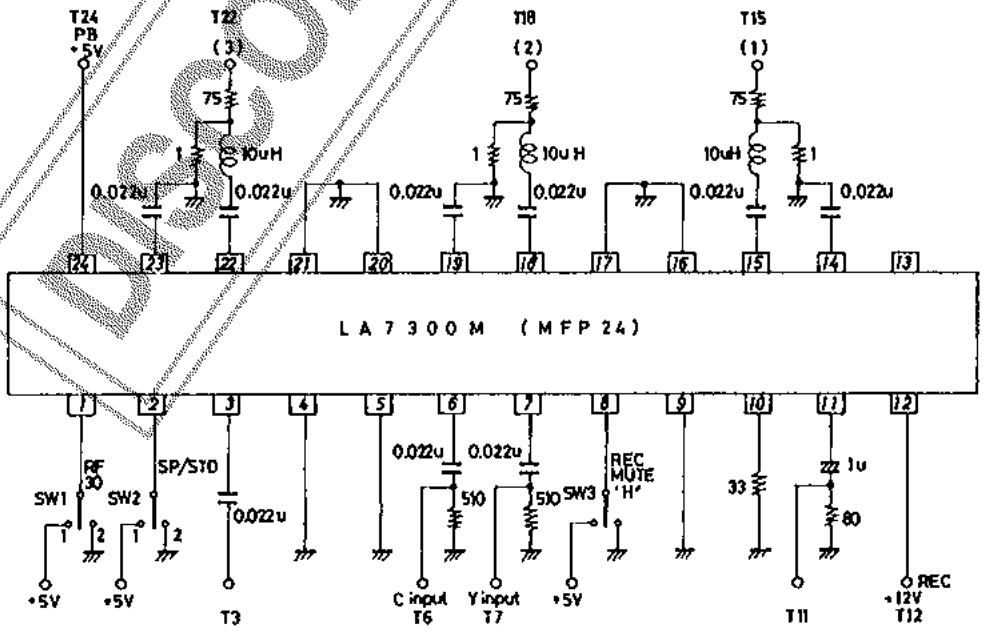
Characteristic		Symbol	Input	Output	Test Conditions	SW1	SW2	SW3	Limits min	Limits typ	Limits max	unit
(PB mode)			T24		PB+5V	RF	SP/STD	REC MUTE				
Current Dissipation		I_{CCP}	T24		Pin24 flow-in current	1	1		12.0	16.0	20.0	mA
Voltage Gain	CH1	$G_{VP}(1)$	T15	T3	Vi=38mVpp	1						
	2	(2)	T18	T3	f=1MHz	2	2		56.5	59.5	62.5	dB
	3	(3)	T22	T3		2	1					
Voltage Gain Difference 1	STD	$\Delta G_{VP}(1)$			$G_{VP}(1)-G_{VP}(2)$				-1.0	0	1.0	dB
Voltage Gain Difference 2	SP	$\Delta G_{VP}(2)$			$G_{VP}(1)-G_{VP}(3)$				-1.0	0	1.0	dB
Equivalent Input Noise Voltage	CH1	$V_{NIN}(1)$		T3	V_{out}	1						
	2	(2)		T3	$G_{VP}(1),(2),(3)$	2	2			1.1	1.5	uVrms
	3	(3)		T3	after 1.1MHz L.P.F	2	1					
Frequency Characteristic	CH1	$\Delta V_{fP}(1)$	T15	T3	Vi=38mVpp	1						
	2	(2)	T18	T3	f=100kHz,7MHz	2	2		-2.5	0		dB
	3	(3)	T22	T3	7M/100K output ratio	2	1					
Second Harmonic Distortion	CH1	$V_{HDP}(1)$	T15	T3	Vi=38mVpp	1						
	2	(2)	T18	T3	f=4MHz	2	2			-40	-35	dB
	3	(3)	T22	T3	8M/4M output ratio	2	1					
Maximum Output Level	CH1	$V_{OMP}(1)$	T15	T3	f=1MHz	1						
	2	(2)	T18	T3	Output level when	2	2		0.8	1.0		Vpp
	3	(3)	T22	T3	3rd harmonic distortion is -30dB	2	1					
Crosstalk 1 STD	CH1	$V_{CR1}(1)$	T18	T3	Vi=38mVpp, f=1MHz	1						
	2	(2)	T15	T3	$V_{out}/G_{VP}(1),(2)$ output ratio	2	2			-40	-35	dB
Crosstalk 2 SP	CH1	$V_{CR2}(1)$	T22	T3	Vi=38mVpp, f=1MHz	1						
	3	(3)	T15	T3	$V_{out}/G_{VP}(1),(3)$ output ratio	2	1			-40	-35	dB
Output DC Offset 1		$\Delta V_{ODC}1$	-	Pin3	Output DC difference (STD)	1→2	2		-100	0	100	mV
Output DC Offset 2		$\Delta V_{ODC}2$	-	Pin3	Output DC difference (SP)	1→2	1		100	0	100	mV
(REC mode)			T12		REC+12V	RF	SP/STD	REC MUTE				
Current Dissipation		I_{CCR}	T12		Pin12 flow-in current			2	25.0	37.0	49.0	mA
Voltage Gain	C	$G_{VR}(C)$	T6	T11	Vi=0.3Vpp			2	16.0	19.0	22.0	dB
	Y	(Y)	T7	T11	f=1MHz			2				
Voltage Gain Difference		ΔG_{VR}	-	-	$G_{VR}(C)-(Y)$				-1.0	0	1.0	dB
Frequency Characteristic	C	$\Delta V_{fR}(C)$	T6	T11	Vi=0.3Vpp, f=1MHz 7MHz			2				
	Y	(Y)	T7	T11	7M/1M output ratio			2	-1.0	0		dB
Second Harmonic Distortion	C	$V_{HDR}(C)$	T6	T11	Vi=0.3Vpp, f=4MHz			2				
	Y	(Y)	T7	T11	8M/4M output ratio			2		-50	-40	dB
Maximum Output Level	C	$V_{OMR}(C)$	T6	T11	f=1MHz Output level			2				
	Y	(Y)	T7	T11	when 3rd harmonic distortion is -30dB			2	3.5	4.0		Vpp
Mute Attenuation	C	$V_{MR}(C)$	T6	T11	Vi=0.3Vpp, f=1MHz			1				
	Y	(Y)	T7	T11	$V_{out}/G_{VR(C),(Y)}$ output ratio			1		-60	-50	dB
Cross Modulation Relative Level		V_{CY}	T6 T7	T11	T6 Vi=40mVpp, f=630kHz T7 Vi=0.3Vpp, f=4MHz 4±0.63M / 4MHz output ratio			2	-50		-40	dB

Discontinued Product

Block Diagram



Test Circuit



DISCONTINUED PRODUCT