



SANYO Semiconductors

DATA SHEET

Monolithic Linear IC

LA7300M — VHS VTR Playback Head Amp, Recording Amp

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

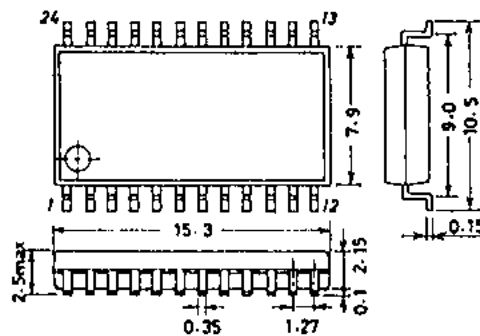
			unit
Maximum Supply Voltage	V _{CC} max	(PB) 7.0 (REC) 13.5	V
Allowable Power Dissipation	P _d max	480	mW
Operating Temperature	T _{opg}	-10 to +65	°C
Storage Temperature	T _{stg}	-40 to +125	°C

Operating Conditions at Ta=25°C

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

Case Outline 3045B-M24IC
(unit:mm)

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.



SANYO : MFP24

These specifications are subject to change without notice.

SANYO Electric Co.,Ltd. Semiconductor Company

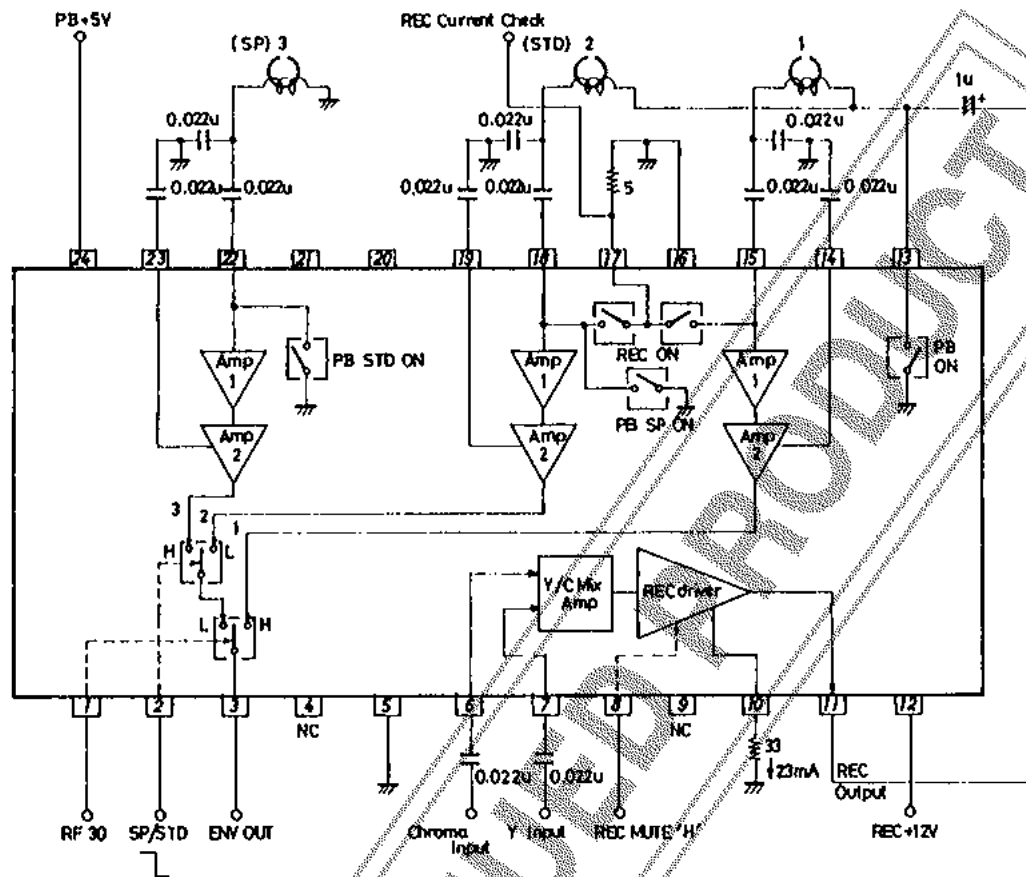
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4067TA No.2403-1/3

Electrical Characteristics at Ta=25°C

Characteristic	Symbol	Test Conditions		Limits			unit
		Input	Output	min	typ	max	
(PB mode)		T24					
Current Dissipation	I_{CCP}	T24	PB+5V Pin24 flow-in current	1	1	12.0	mA
Voltage Gain	CH1 $G_{VP}(1)$ 2 (2) 3 (3)	T15 T18 T22	T3 T3 T3	$V_i=38mV_{pp}$ $f=1MHz$	1 2 2	56.5	dB
Voltage Gain Difference 1	STD $\Delta G_{VP}(1)$					-1.0	dB
Voltage Gain Difference 2	SP $\Delta G_{VP}(2)$					-1.0	dB
Equivalent Input Noise Voltage	CH1 $V_{NIN}(1)$ 2 (2) 3 (3)		T3 T3 T3	V_{out} $G_{VP}(1), (2), (3)$ after 1.1MHz L.P.F	1 2 2	1.1	μV_{rms}
Frequency Characteristic	CH1 $\Delta V_{FP}(1)$ 2 (2) 3 (3)	T15 T18 T22	T3 T3 T3	$V_i=38mV_{pp}$ $f=100kHz, 7MHz$ 7M/100K output ratio	1 2 2	-2.5	dB
Second Harmonic Distortion	CH1 $V_{HDP}(1)$ 2 (2) 3 (3)	T15 T18 T22	T3 T3 T3	$V_i=38mV_{pp}$ $f=4MHz$ 8M/4M output ratio	1 2 2	-40	dB
Maximum Output Level	CH1 $V_{OMP}(1)$ 2 (2) 3 (3)	T15 T18 T22	T3 T3 T3	$f=1MHz$ Output level when 3rd harmonic distortion is -30dB	1 2 2	0.8	Vpp
Crosstalk 1 STD	CH1 $V_{CR1}(1)$ 2 (2)	T18 T15	T3 T3	$V_i=38mV_{pp}, f=1MHz$ $V_{out}/G_{VP}(1), (2)$ output ratio	1 2	-40	dB
Crosstalk 2 SP	CH1 $V_{CR2}(1)$ 3 (3)	T22 T15	T3 T3	$V_i=38mV_{pp}, f=1MHz$ $V_{out}/G_{VP}(1), (3)$ output ratio	1 2	-40	dB
Output DC Offset 1	ΔV_{ODC1}	-	Pin3	Output DC difference (STD)	1+2	-100	mV
Output DC Offset 2	ΔV_{ODC2}	-	Pin3	Output DC difference (SP)	1+2	100	mV
(REC mode)		T12					
Current Dissipation	I_{CCR}	T12	REC+12V Pin12 flow-in current			25.0	mA
Voltage Gain	C $G_{VR}(C)$ Y (Y)	T6 T7	T11 T11	$V_i=0.3V_{pp}$ $f=1MHz$		16.0	dB
Voltage Gain Difference	ΔG_{VR}			$G_{VR}(C) - (Y)$		-1.0	dB
Frequency Characteristic	C $\Delta V_{FR}(C)$ Y (Y)	T6 T7	T11 T11	$V_i=0.3V_{pp}, f=1MHz$ 7MHz		-1.0	dB
Second Harmonic Distortion	C $V_{HDR}(C)$ Y (Y)	T6 T7	T11 T11	$V_i=0.3V_{pp}, f=4MHz$ 8M/4M output ratio		-50	dB
Maximum Output Level	C $V_{OMR}(C)$ Y (Y)	T6 T7	T11 T11	$f=1MHz$ Output level when 3rd harmonic distortion is -30dB		3.5	Vpp
Mute Attenuation	C $V_{MR}(C)$ Y (Y)	T6 T7	T11 T11	$V_i=0.3V_{pp}, f=1MHz$ $V_{out}/G_{VR}(C) (Y)$ output ratio		-60	dB
Cross Modulation Relative Level	V_{CY}	T6 T7	T11	T6 $V_i=40mV_{pp}, f=630kHz$ T7 $V_i=0.3V_{pp}, f=4MHz$ $4 \pm 0.63M$ output ratio		-50	dB

Block Diagram



Test Circuit

