



SANYO Semiconductors

DATA SHEET

LV1017 — Bi-CMOS IC

Passive Decoder for Dolby Surround Systems

Overview

The LV1017 is a passive decoder for Dolby surround systems.

Features

- Original A/D, D/A converter
- Wide dynamic range
- Virtual surround function
- Rear stereo, pseudo-multi-tap function
- Surround trim (Ls, Rs) external input
- Built-in Lch, Rch, Lsch, Rsch output switching function
- Reduced external component count

Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Maximum power supply voltage	$V_{CC\text{ max}}$		12	V
Allowable power dissipation	$P_d\text{ max}$	$T_a \leq 70^\circ\text{C}$	450	mW
Operating temperature	T_{opr}		-20 to +70	$^\circ\text{C}$
Storage temperature	T_{stg}		-40 to +125	$^\circ\text{C}$

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

Parameter	Symbol	Conditions	Ratings	Unit
Recommended operating voltage	V_{CC}		9	V
Allowable operating voltage range 1	$V_{CC\text{ range1}}$	When Dolby surround is ON	8 to 10	V
Allowable operating voltage range 2	$V_{CC\text{ range2}}$	When Dolby Pro Logic surround is ON	8.5 to 10	V
Dolby level	$V_O\text{ Dolby}$		300	mVrms
Input "H" level voltage	V_{IH}		3.5 to 5.5	V
Input "L" level voltage	V_{IL}		0 to 1.0	V

- Any and all SANYO products described or contained herein do not have specifications that can handle applications that require extremely high levels of reliability, such as life-support systems, aircraft's control systems, or other applications whose failure can be reasonably expected to result in serious physical and/or material damage. Consult with your SANYO representative nearest you before using any SANYO products described or contained herein in such applications.
- SANYO assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all SANYO products described or contained herein.

LV1017

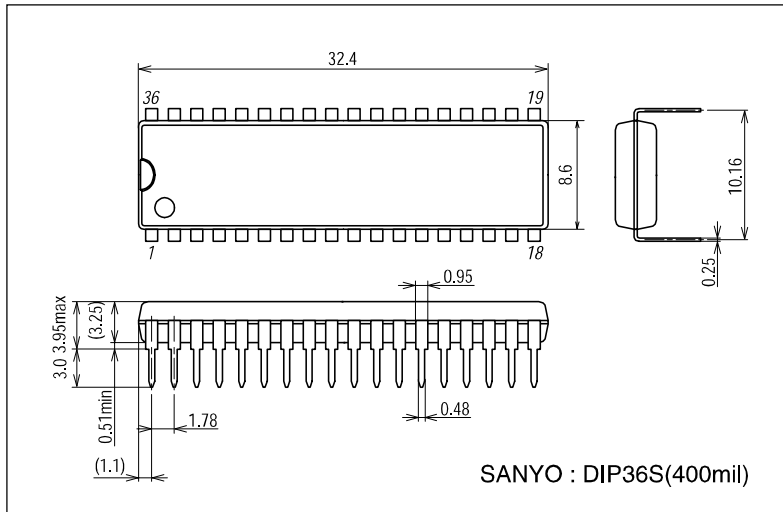
Electrical Characteristics at $T_a = 25^{\circ}\text{C}$, $V_{CC} = 9\text{V}$, $V_{IN} = 300\text{mV} = 0\text{dB}$, $h = 1\text{kHz}$, Dolby passive mode

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Current consumption	I_{CCO}	No signal	15	24	36	mA
[LS, RSch]						
Signal handling	SH1S	$V_{CC} = 8.5\text{V}$, DIST < 3%, S-IN	15			dB
	SH2S	$V_{CC} = 8\text{V}$, DIST < 3%, L-R-IN	10			dB
S/N	SNS	CCIR/ARM, $R_g = 10\text{k}$	65	75		dB
Output level variation	VOS		-3	0	+3	dB
Distortion factor	THDS			0.1	0.7	%
[Lch]						
Signal handling	SH1L	$V_{CC} = 8.5\text{V}$, DIST < 3%	15			dB
S/N	SNL	CCIR/ARM, $R_g = 10\text{k}$	80	90		dB
Output level variation	VOL		-2	0	+2	dB
Distortion factor	THDL			0.01	0.05	%
[Rch]						
Signal handling	SH1R	$V_{CC} = 8.5\text{V}$, DIST < 3%	15			dB
S/N	SNR	CCIR/ARM, $R_g = 10\text{k}$	80	90		dB
Output level variation	VOR		-2	0	+2	dB
Distortion factor	THDR			0.01	0.05	%
When s trim is -15dB	STRIM1	When setting -15dB	-16	-15	-14	dB
When s trim is -31dB	STRIM2	When setting -31dB	-33	-31	-29	dB
NR frequency characteristic	Dec1	0dB, 1kHz	-1.5	0	+1.5	dB
	Dec2	-20dB, 1kHz	-24	-22.5	+21	dB
	Dec3	0dB, 5kHz	-1.5	0	+1.5	dB
	Dec4	-20dB, 5kHz	-23.3	-21.8	+20.3	dB
	Dec5	-40dB, 5kHz	-46.8	-45.3	+43.8	dB

Package Dimensions

unit : mm

3107A



- Specifications of any and all SANYO products described or contained herein stipulate the performance, characteristics, and functions of the described products in the independent state, and are not guarantees of the performance, characteristics, and functions of the described products as mounted in the customer's products or equipment. To verify symptoms and states that cannot be evaluated in an independent device, the customer should always evaluate and test devices mounted in the customer's products or equipment.
- SANYO Electric Co., Ltd. strives to supply high-quality high-reliability products. However, any and all semiconductor products fail with some probability. It is possible that these probabilistic failures could give rise to accidents or events that could endanger human lives, that could give rise to smoke or fire, or that could cause damage to other property. When designing equipment, adopt safety measures so that these kinds of accidents or events cannot occur. Such measures include but are not limited to protective circuits and error prevention circuits for safe design, redundant design, and structural design.
- In the event that any or all SANYO products(including technical data,services) described or contained herein are controlled under any of applicable local export control laws and regulations, such products must not be exported without obtaining the export license from the authorities concerned in accordance with the above law.
- No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, or any information storage or retrieval system, or otherwise, without the prior written permission of SANYO Electric Co., Ltd.
- Any and all information described or contained herein are subject to change without notice due to product/technology improvement, etc. When designing equipment, refer to the "Delivery Specification" for the SANYO product that you intend to use.
- Information (including circuit diagrams and circuit parameters) herein is for example only ; it is not guaranteed for volume production. SANYO believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.

This catalog provides information as of May, 2004. Specifications and information herein are subject to change without notice.

This datasheet has been download from:

www.datasheetcatalog.com

Datasheets for electronics components.