

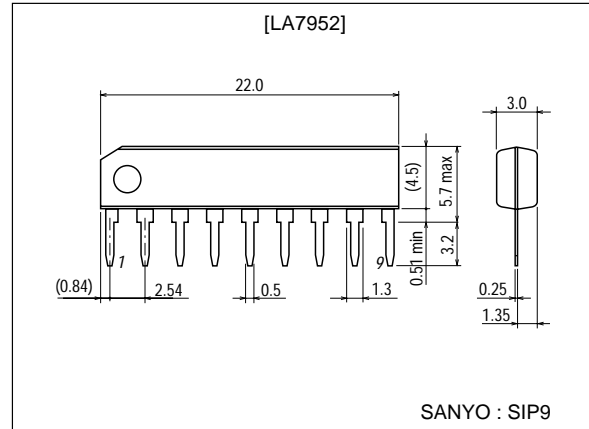
**LA7952****Video Switch for TV/VCR Use****Features**

- On-chip driver with 4 inputs, 1 output, 75Ω termination.
- On-chip 6dB amplifier.
- Excellent crosstalk characteristic.
- Wide band.
- Input with DC restoration circuit.

Package Dimensions

unit:mm

3017D-SIP9

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

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	$V_7 \text{ max}$		14	V
Maximum input supply voltage 1	$V_4 \text{ max}, V_6 \text{ max}, V_8 \text{ max}, V_9 \text{ max}$		8	V
Maximum input supply voltage 2	$V_2 \text{ max}, V_3 \text{ max}$	$V_{CC}=14\text{V}$	14	V
Maximum output current	$I_1 \text{ max}$		10	mA
Allowable power dissipation	$P_d \text{ max}$	$T_a \leq 65^\circ\text{C}$	540	mW
Operating temperature	T_{opr}		-20 to +65	$^\circ\text{C}$
Storage temperature	T_{stg}		-55 to +150	$^\circ\text{C}$

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

Parameter	Symbol	Conditions	Ratings	Unit
Operating voltage range	$V_{CC \text{ op}}$		10.5 to 13.5	V
Recommended supply voltage	V_{CC}		12	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.

LA7952

Operating Characteristics at $T_a = 25^\circ\text{C}$, $V_{CC}=12\text{V}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Quiescent current dissipation	I_{CC}		14	20	28	mA
Input bias voltage	V_4, V_6, V_8, V_9		2.7	3.0	3.3	V
Output bias voltage 1	V_1		4.6	6.1	7.6	V
Output DC offset voltage	V_{OS}	Note 1		15	100	mV
Control threshold voltage	V_{2H}, V_{3H}		3.0			V
	V_{2L}, V_{3L}				1.5	V
Control input current	I_2, I_3		-20	-6		μA
Voltage gain	GV	$f=1\text{MHz}, V_{IN}=1\text{Vp-p}$, Note 1	5.6	6.1	6.6	dB
Frequency characteristic	GV-f	0dB at $f=100\text{kHz}$, Note 1, $f=10\text{MHz}$, $V_{IN}=1\text{Vp-p}$	-3	0		dB
Output dynamic range	V_{DR}	$f=15\text{kHz}, V_{IN}=1.5\text{Vp-p}$, Note 1	1.4	1.5		Vp-p
Crosstalk (Note 2)	C_T	$V_{IN}=1\text{Vp-p}, f=3\text{MHz}$, Note 1	48	58		dB
		$V_{IN}=1\text{Vp-p}, f=5\text{MHz}$, Note 1	45	55		dB

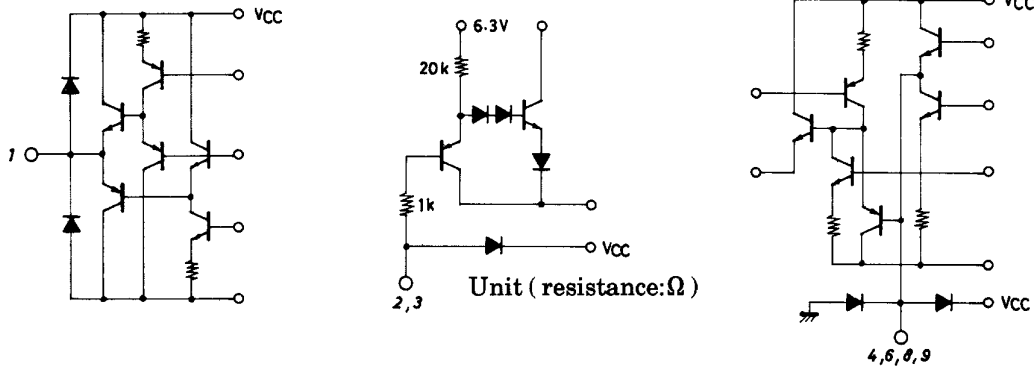
* Current direction : Plus : Flowing into IC
 Minus : Flowing out of IC

Video Switch Truth Table

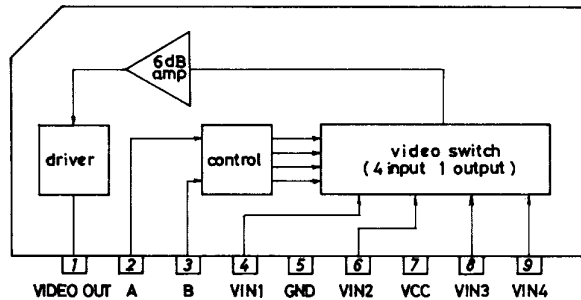
S2 (Pin 2)	S3 (Pin 3)	V_{IN1} (Pin 4)	V_{IN2} (Pin 6)	V_{IN3} (Pin 8)	V_{IN4} (Pin 9)
H	H	ON	OFF	OFF	OFF
L	H	OFF	ON	OFF	OFF
H	L	OFF	OFF	ON	OFF
L	L	OFF	OFF	OFF	ON

Note 1 : Refer to this Truth Table and make measurements by switching S2, S3.

Input/Output Equivalent Circuit

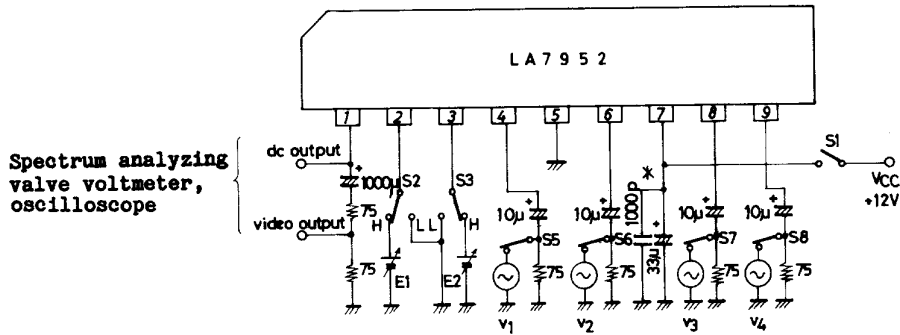


Equivalent Circuit Block Diagram



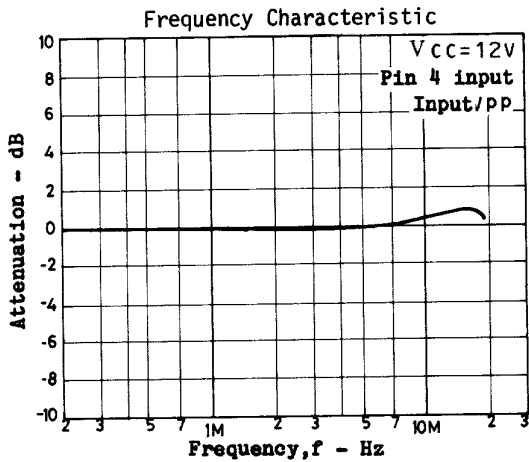
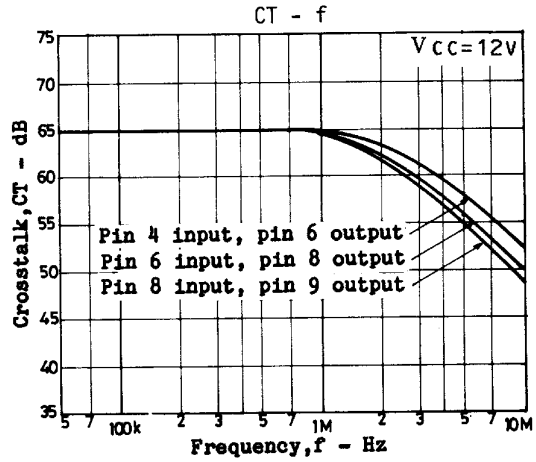
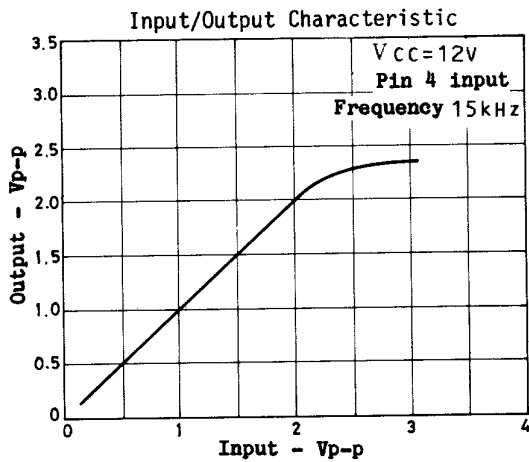
LA7952

Test Circuit



* Connect the capacitor for V_{CC} as close to pin 7 as possible.

Unit (resistance:Ω, capacitance:F)



Proper Cares in Using the IC

If the signal source impedance is increased, the sync pulse will shrink because of the DC restoration circuit contained in the input. Therefore, the signal source impedance must be kept low.

- 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 January, 2001. Specifications and information herein are subject to change without notice.