

**SANYO**

No.2614B

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

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

**Maximum Ratings at Ta=25°C**

			unit
Maximum Supply Voltage	V7max		14 V
Maximum Input Supply Voltage(1)	V4max, V6max V8max, V9max		8 V
Maximum Input Supply Voltage(2)	V2max, V3max	V <sub>CC</sub> =14V	14 V
Maximum Output Current	I1max		10 mA
Allowable Power Dissipation	Pdmax	Ta ≤ 65°C	540 mW
Operating Temperature	Topr		-20 to +65 °C
Storage Temperature	Tstg		-55 to +150 °C

**Operating Conditions at Ta=25°C**

		unit
Operating Voltage Range	V <sub>CCop</sub>	10.5 to 13.5 V
Recommended Supply Voltage	V <sub>CC</sub>	12 V

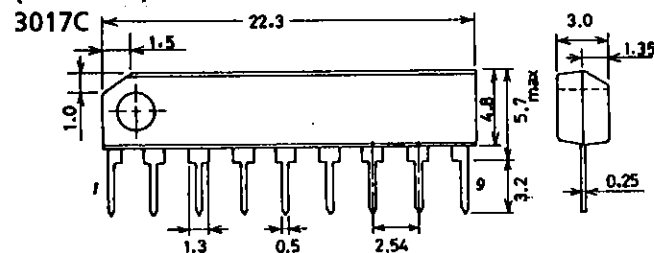
**Operating Characteristics at Ta=25°C, V<sub>CC</sub>=12V**

		min	typ	max	unit
Quiescent Current Dissipation	I <sub>CC</sub>	14	20	28	mA
Input Bias Voltage	V4, V6, V8, V9	2.7	3.0	3.3	V
Output Bias Voltage	V1	4.6	6.1	7.6	V
Output DC Offset Voltage	VOS		15	100	mV
Control Threshold Voltage	V2H, V3H V2L, V3L	3.0		1.5	V
Control Input Current	I2, I3	-20	-6		uA
Voltage Gain	G <sub>V</sub>	5.6	6.1	6.6	dB
Frequency Characteristic	G <sub>V-f</sub>	f=1MHz, V <sub>IN</sub> =1Vpp, Note 1			
		0dB at f=100kHz, Note 1	-3	0	dB
					f=10MHz, V <sub>IN</sub> =1Vpp

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**Package Dimensions**

(unit : mm)



SANYO : SIP9

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			min	typ	max	unit
Output Dynamic Range	$V_{DR}$	$f=15\text{kHz}, V_{IN}=1.5\text{p-p, Note 1}$	1.4	1.5		Vpp
Crosstalk (Note 2)	CT	$V_{IN}=1\text{Vp-p}, f=3\text{MHz, Note 1}$	48	58		dB
		$V_{IN}=1\text{Vp-p}, f=5\text{MHz, Note 1}$	45	55		dB

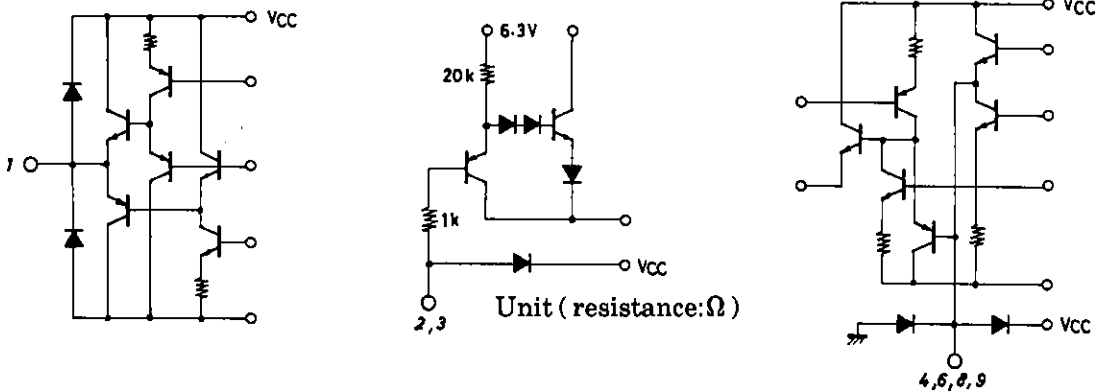
\* Current direction: Plus: Flowing into IC  
 Minus: Flowing out of IC

### Video Switch Truth Table

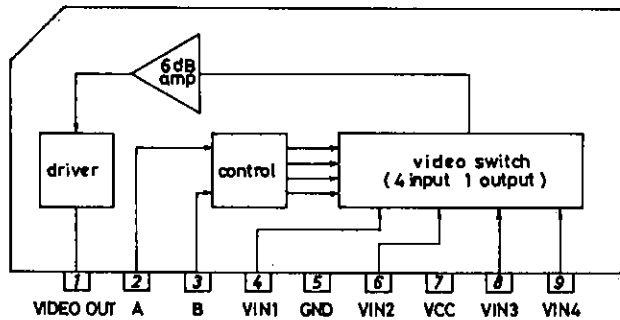
S2 (Pin 2)	S3 (pin 3)	VIN1 (Pin 4)	VIN2 (Pin 6)	VIN3 (Pin 8)	VIN4 (Pin 9)
H	H	ON	OFF	OFF	OFF
L	H	OFF	ON	OFF	OFF
H	L	OFF	OFF	ON	OFF
L	L	OFF	OFF	OFF	ON

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

### Input/Output Equivalent Circuit

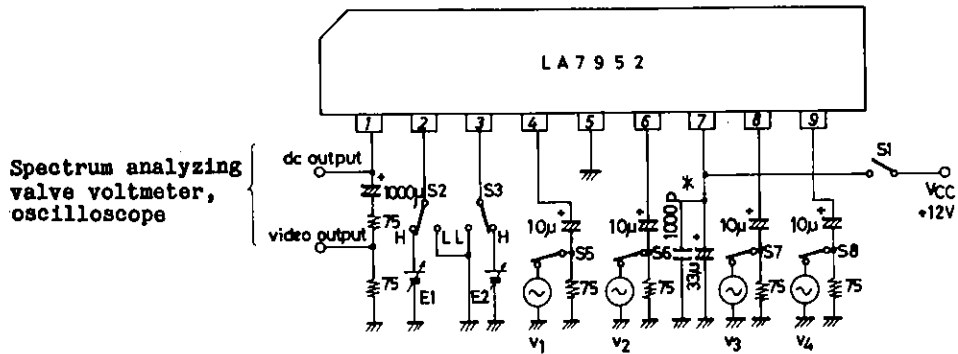


### Equivalent Circuit Block Diagram

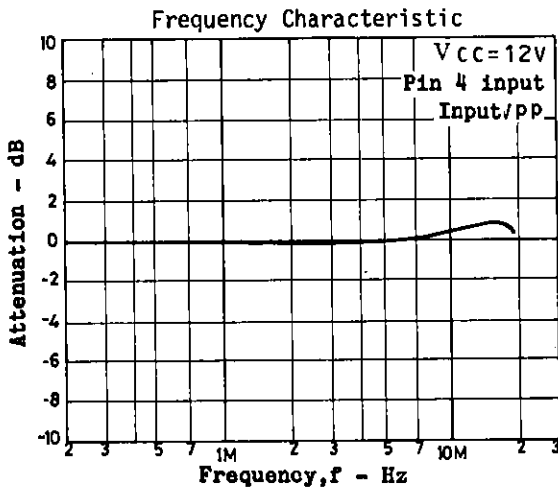
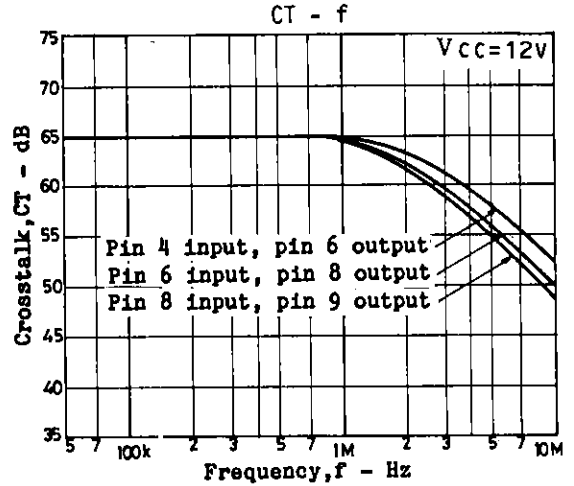
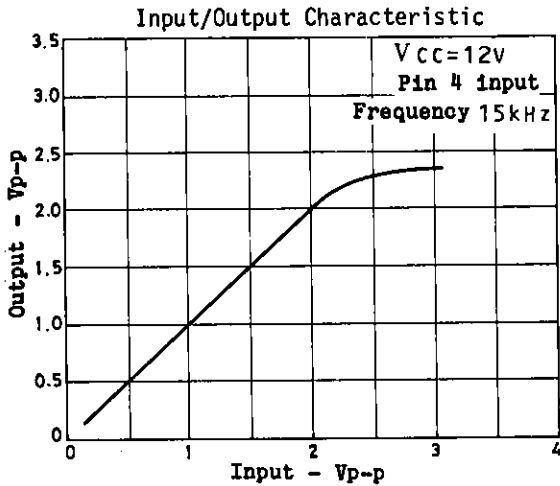


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## Test Circuit



\*Connect the capacitor for  $V_{CC}$  as close to pin 7 as possible.  
Unit (resistance:  $\Omega$ , 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.

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