Ordering number : EN 2614B

Monolithic Linear IC

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_{CC}=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_{CC}op	10.5 to 13.5	V
Recommended Supply Voltage	V_{CC}	12	V

Operating Characteristics at Ta=25°C, V_{CC}=12V

			min	typ	max	unit
Quiescent Current Dissipation	I_{CC}		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	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		uA
Voltage Gain	G_V	f=1MHz,V_{IN}=1Vpp, Note 1	5.6	6.1	6.6	dB
Frequency Characteristic	G_{V-f}	0dB at f=100kHz, Note 1 f=10MHz,V_{IN}=1Vpp	-3	0		dB

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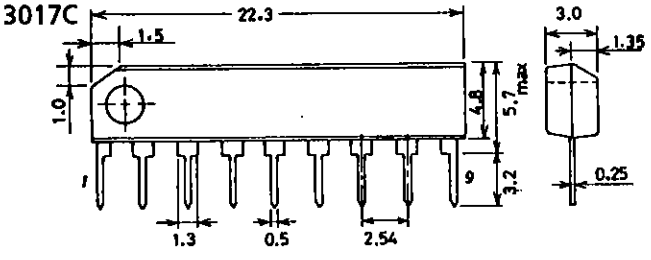
Package Dimensions

(unit : mm)

3017C



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

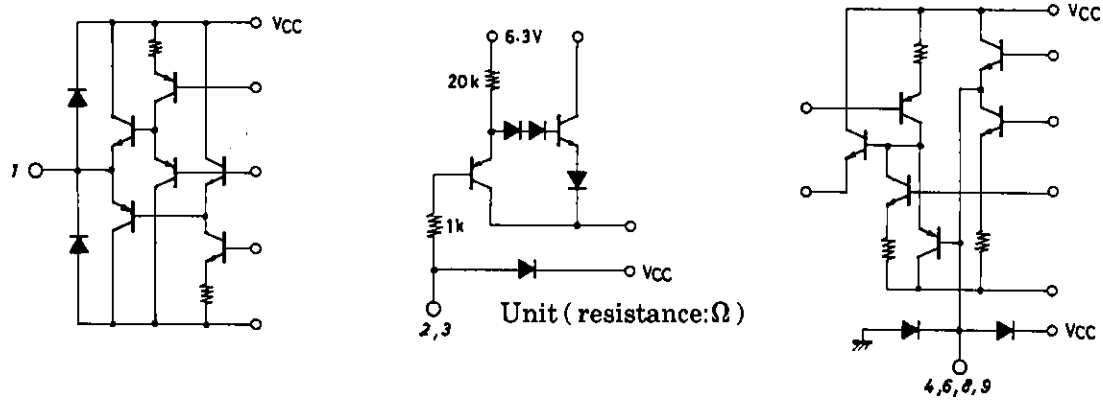
* Current direction: Plus: Flowing into IC
Minus: Flowing out of IC

Video Switch Truth Table

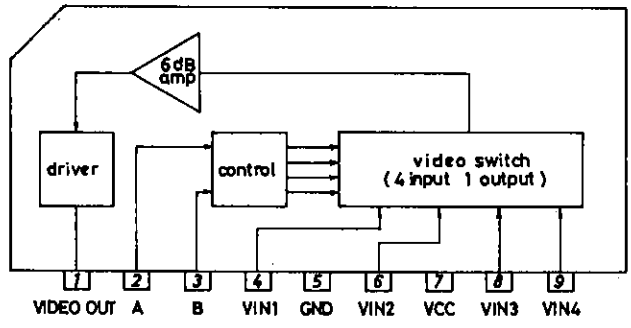
S2 (Pin 2)	S3 (pin 3)	VIN1 (Pin 4)	VIN2 (Pin 6)	VIN3 (Pin 8)	VIN4 (Pin 9)
H	H	ON	OFF	OFF	OFF
L	H	OFF	ON	OFF	OFF
H	L	OFF	OFF	ON	OFF
L	L	OFF	OFF	OFF	ON

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

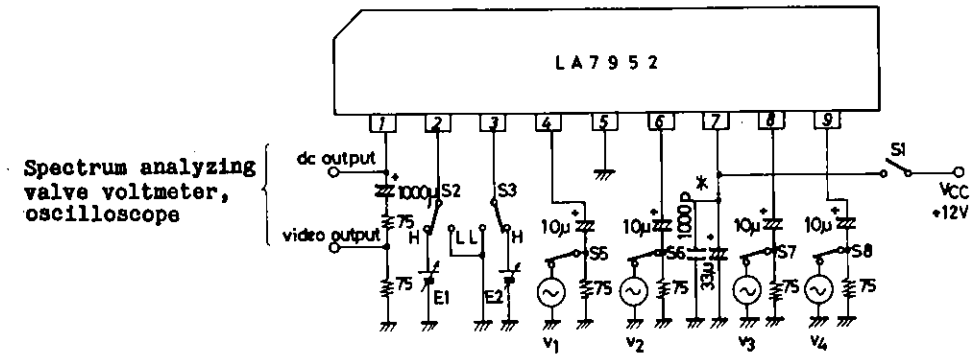
Input/Output Equivalent Circuit



Equivalent Circuit Block Diagram

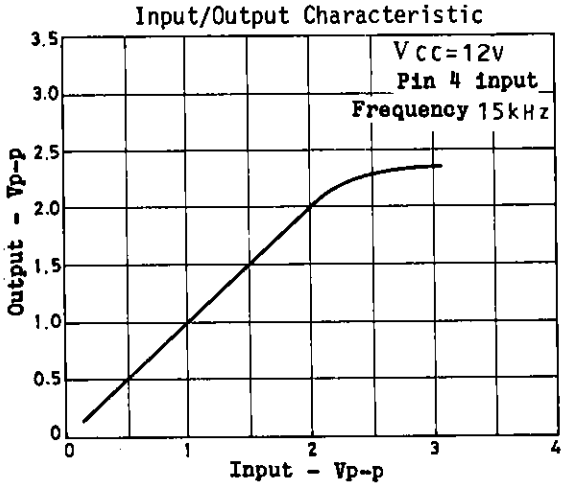


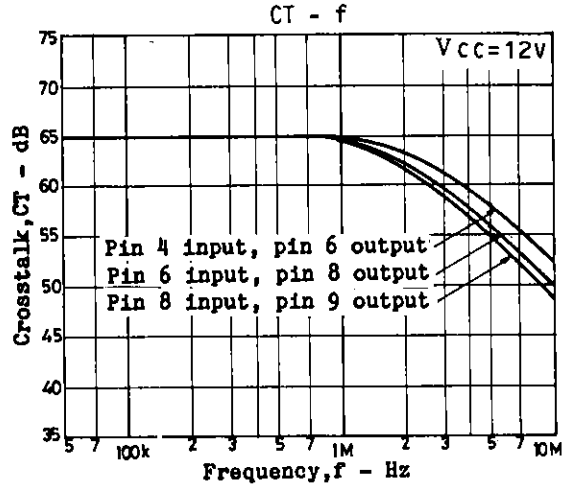
Test Circuit

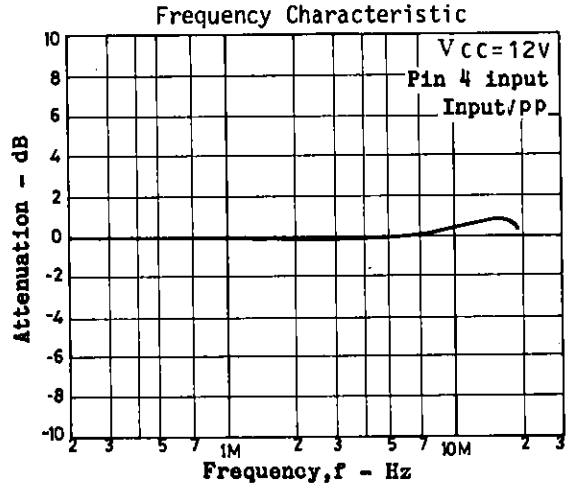


*Connect the capacitor for V_{CC} as close to pin 7 as possible.

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.

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