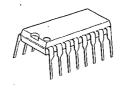
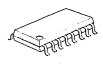
# 3-INPUT/2-INPUT VIDEO SWITCH

#### **■** GENERAL DESCRIPTION

The NJM2523 is a switching IC for switching over from one audio or video input signal to another. Internalizing 3 input-1 output, and 2 input-1 output and then each set can be operated independently. One of 2 input-1 output are Clamp type", and they can be operated while setting DC level fixed in position of the video signal. It is a higher efficiency video switch, featuring the operating voltage 4.75V to 13V, the frequency feature 10MHz, and then the Crosstalk 75dB (at 4.43MHz).

#### **■ PACKAGE OUTLINE**





NJM2523D

NJM2523M

## **■ FEATURES**

- Operating Voltage (+4.75V~+13V).
- Input-1 Output Internalizing 3 circuits (Two of them are Clamp type).
- Crosstalk 75dB(at 4.43MHz)
- Wide Bandwidth Frequency 10MHz(2V<sub>P-P</sub> Input)
- Package Outline

DIP16, DMP16.

## **■ RECOMMENDED OPERATING CONDITION**

Operating Voltage

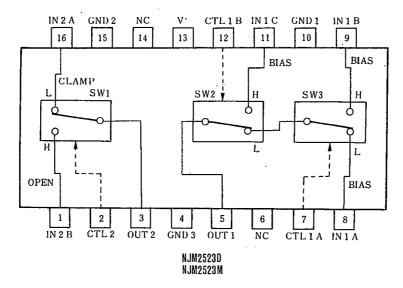
V٠

4.75~13.0V

## **■ APPLICATIONS**

• VCR, Video Camera, AV-TV, Video Disk Player.

#### **■ BLOCK DIAGRAM**



## **■ MAXIMUM RATINGS**

(Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V <sup>+</sup>	14	V
Power Dissipation	Pp .	(DIP16) 700	mW
		(DMP16) 350	mW
Operating Temperature Range	Торг	-40~+85	°C
Storage Temperature Range	Tstg	-40~+125	°C

## **■ ELECTRICAL CHARACTERISTICS**

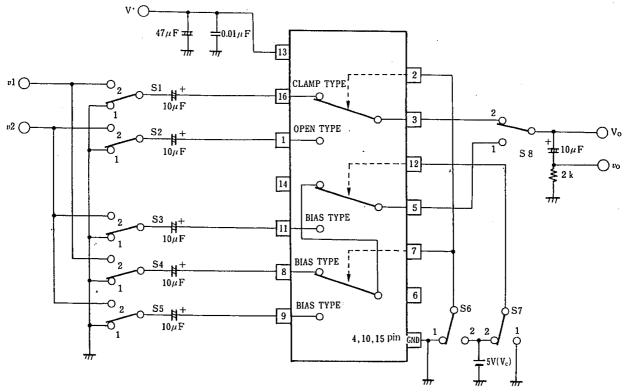
(V<sup>+</sup>=5V, Ta=25℃)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Operating Current (1)	lcc1	V+=5V (Notel)	6.7	9.7	12.7	mA
Operating Current (2)	lcc2	V+=9V (Note1)	8.6	12.3	16.0	mA
Voltage Gain	Gv	$V_1 = 100 \text{kHz}, 2 \text{V}_{P-P}, V_0 / V_1$	-0.6	-0.1	+0.4	dB
Frequency Gain	G <sub>F</sub> 1	$V_1 = 2V_{P-P}, V_O(10MHz)/V_O(100kHz)$	-1.0	0	+1.0	dB
Differential Gain	DG	V <sub>1</sub> =2V <sub>P-P</sub> , Standerd Staircase Signal	<u> </u>	0.3	_	%
Differential Phasa	DP	V <sub>I</sub> =2V <sub>P-P</sub> , Standerd Staircase Signal	_	0.3		deg
OutPut offset Voltage	Vos1	(Note2)	-25	0	+25	mV
Crosstalk	CT	$V_1 = 2V_{P-P}, 4.43MHz, V_0/V_1$	-	<b>−75</b>	—	dB
Switch Change Over Voltage	V <sub>CH</sub>	All inside Switches ON	2.5		_	v
Switch Change Over Voltage	V <sub>CL</sub>	All inside Switches OFF		_	1.0	v

(Note1) S1=S2=S3=S4=S5=S6=S7=1

(Note2) S1=S2=S3=S4=S5=1, S8=1, S7=1,  $S6=1\rightarrow 2$  (S6=1,  $S7=1\rightarrow 2$ ) Measure the output DC voltage difference

## **■ TEST CIRCUIT**



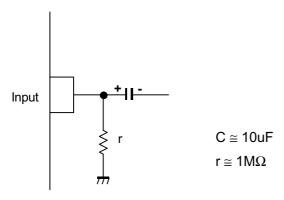
This IC requires  $1M\,\Omega$  resistance between INPUT and GND pin for clamp type input since the minute current causes an unstable pin voltage.

## **■ TERMINAL EXPLANATION**

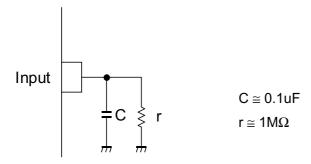
PIN NO.	PIN NAME	VOL	INSIDE EQUIVALENT CIRCUIT
8 9 11	IN 1 A IN 1 B IN 1 C (Input)	$\begin{pmatrix} 2.5V \\ \left(\frac{1}{2}V^*\right) \end{pmatrix}$	500 15k 2.5V
16	IN 2 A (Input)	$\left(\frac{3}{10}V^{+}\right)$	500 T 2.2V
1	IN 2B		500 500
7 12 2	CTL 1A CTL 1B CTL 2 (Switching)		8k OCTL 8kk 20k
5	OUT 1 (Output)	$\left(\frac{1.8V}{2}V^{+}-0.7\right)$	
3	OUT 2 (Output)	$\left(\frac{3}{10}V^{+}-0.7\right)$	OUT
13	V+	5 V	
15 4 10	GND 1 GND 2 GND 3		

## **■**APPLICATION

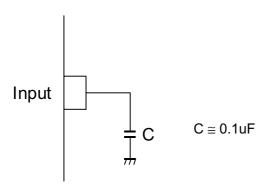
This IC requires  $1M\Omega$  resistance between INPUT and GND pin for clamp type input since the minute current causes an unstable pin voltage.



This IC requires 0.1uF capacitor between INPUT and GND, 1MΩ resistance between INPUT and GND for clamp type input at mute mode.



This IC requires 0.1uF capacitor between INPUT and GND for bias type input at mute mode.



## [CAUTION]

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