

4-INPUT 1MUTE VIDEO SWITCH

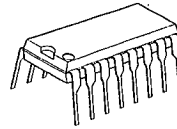
■ GENERAL DESCRIPTION

The NJM2293 is a switching IC for switching over from one audio or video input signal to another. It is a higher efficiency video switch, featuring the operating voltage 4.75 to 13V, the frequency feature 7MHz, and then the Crosstalk 75dB (at 4.43MHz).

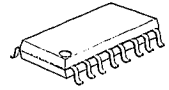
■ FEATURES

- 4 Input-1 Output
- Operating Voltage (+4.75V ~ +13V)
- Crosstalk 75dB(at 4.43MHz)
- Wide Bandwidth Frequency 7MHz(2V_{p-p} Input)
- Package Outline DIP16, DMP16.
- Bipolar Technology

■ PACKAGE OUTLINE



NJM2293D



NJM2293M

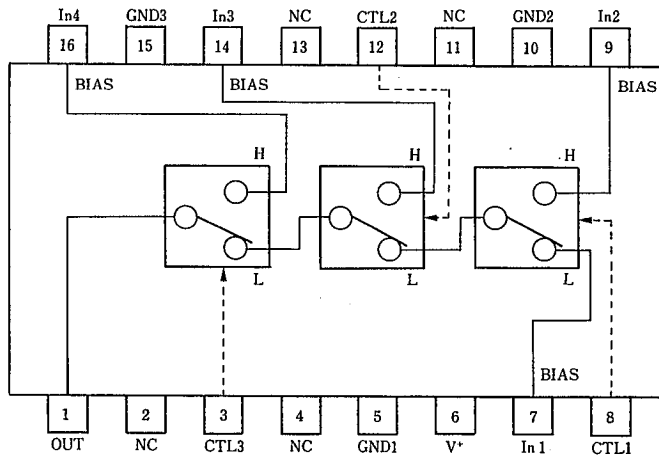
■ RECOMMENDED OPERATING CONDITION

- Operating Voltage V⁺ 4.75~13.0V

■ APPLICATIONS

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

■ BLOCK DIAGRAM



NJM2293D
NJM2293M

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■ MAXIMUM RATINGS

(Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V*	14	V
Power Dissipation	Pd	(DIP-16) 700	mW
		(DMP-16) 350	mW
Operating Temperature Range	Topr	-40~+85	°C
Storage Temperature Range	Tstg	-40~+125	°C

■ ELECTRICAL CHARACTERISTICS

(V+=5V, Ta=25°C)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Operating Current (1)	Icc1	V+=5V (Note1)	4.5	6.5	8.5	mA
Operating Current (2)	Icc2	V+=9V (Note1)	5.8	8.3	10.8	mA
Voltage Gain	Gv	V1 = 100kHz, 2Vp-p, Vo/V1	-0.7	-0.2	+0.3	dB
Frequency Gain (1)	Gf1	V1 = 2Vp-p, Vo(7MHz)/Vo(100kHz)	-1.0	0	+1.0	dB
Frequency Gain (2)	Gf2	V1 = 1Vp-p, Vo(10MHz)/Vo(100kHz)	—	0	—	dB
Differential Gain	DG	V1 = 2Vp-p, Standard Staircase Signal	—	0.3	—	%
Differential Phase	DP	V1 = 2Vp-p, Standard Staircase Signal	—	0.3	—	deg
OutPut offset Voltage	Vos	(Note2)	-4.5	0	+45	mV
Crosstalk	CT	V1 = 2Vp-p, 4.43MHz, Vo/V1	—	-75	—	dB
Switch Change Over Voltage	VCH	All inside Switches ON	2.5	—	—	V
Switch Change Over Voltage	VCL	All inside Switches OFF	—	—	1.0	V

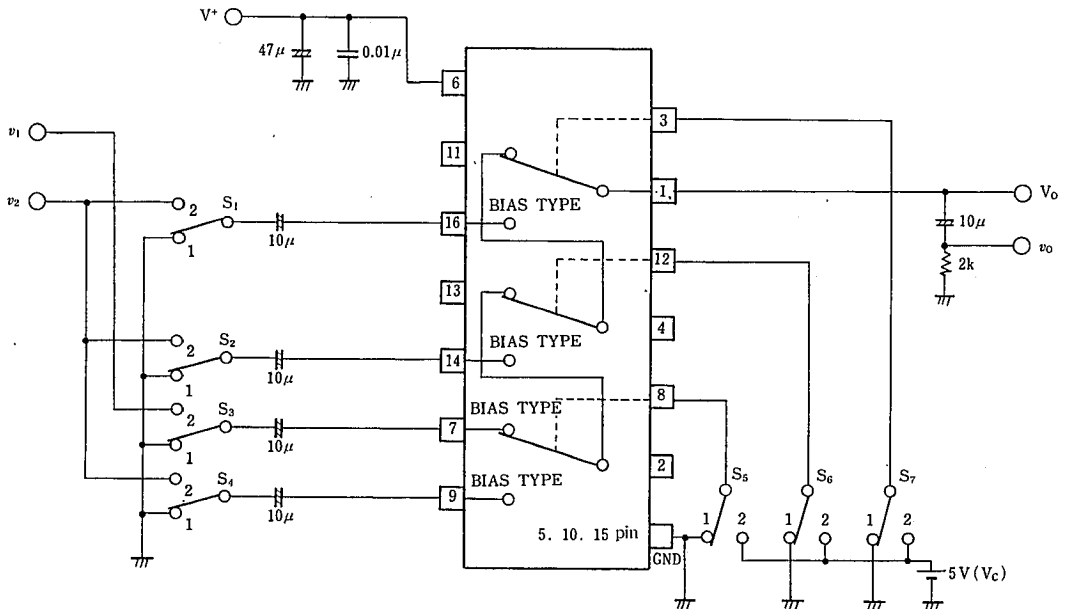
(Note1) S1=S2=S3=S4=S5=S6=S7=1

(Note2) S1=S2=S3=S4=1 Measure the output DC voltage difference

a) S5=S6=S7=1, b) S7=2, S5=S6=1

c) S6=2, S5=1 d) S5=2

■ TEST CIRCUIT



■ TERMINAL EXPLANATION

PIN NO.	PIN NAME	VOLTAGE	INSIDE EQUIVALENT CIRCUIT
7 9 14 16	IN 1 IN 2 IN 3 IN 4 (Input)	2.5V	
8 12 3	CTL1 CTL2 CTL3 (Switching)		
1	OUT (Output)	1.8V	
6	V+	5V	
5 10 15	GND 1 GND 2 GND 3		

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MEMO

[CAUTION]

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