

4-INPUT 1MUTE VIDEO SWITCH

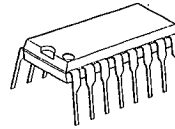
■ GENERAL DESCRIPTION

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).

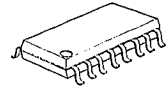
■ FEATURES

- 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

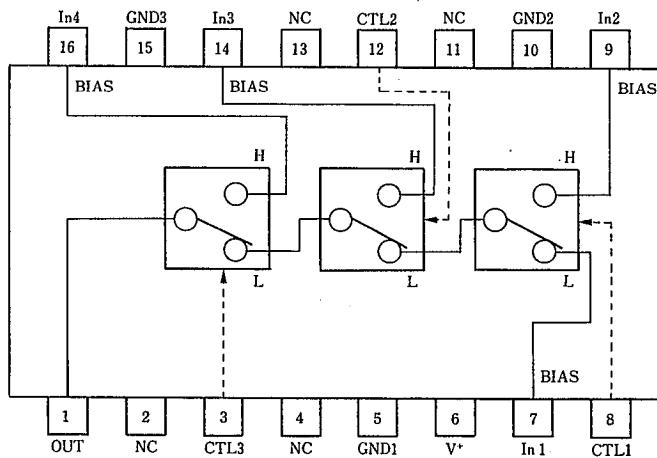
■ RECOMMENDED OPERATING CONDITION

- Operating Voltage V⁺ 4.75~13.0V

■ APPLICATIONS

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

■ BLOCK DIAGRAM



NJM2293D
NJM2293M

■ 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

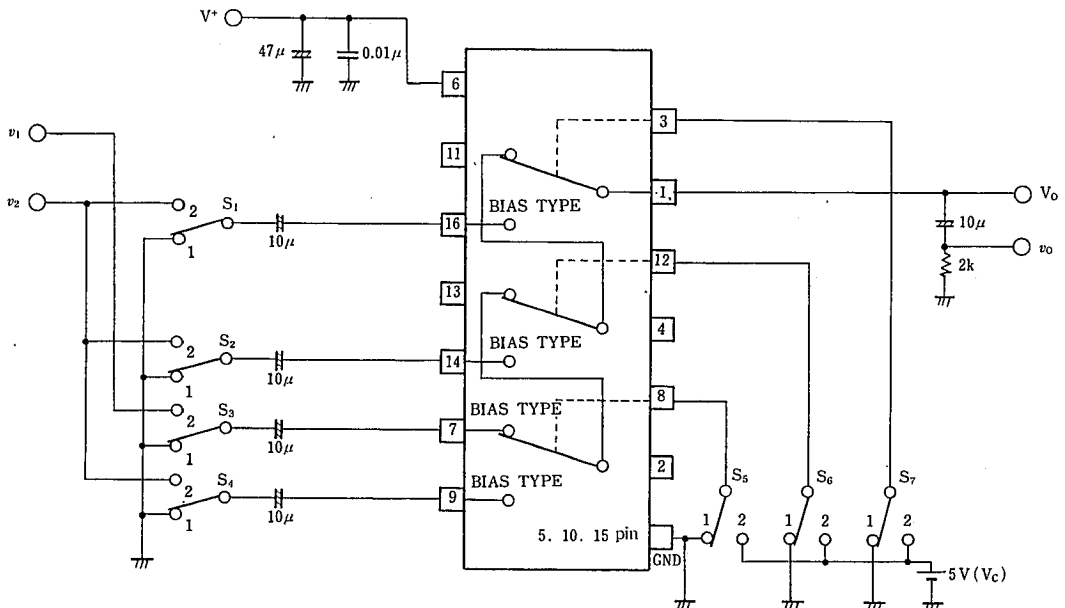
(Note1) S1=S2=S3=S4=S5=S6=S7=1

(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		

5

MEMO

[CAUTION]

The specifications on this databook are only given for information, without any guarantee as regards either mistakes or omissions. The application circuits in this databook are described only to show representative usages of the product and not intended for the guarantee or permission of any right including the industrial rights.