4-INPUT 1 MUTE VIDEO SWITCH

GENERAL DESCRIPTION

The NJM2293 is a switching IC for switching over from one audio for 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(2VP-P Input)
- Package Outline DIP16, DMP16.
- Bipolar Technology

RECOMMENDED OPERATING CONDITION

V۴

Operating Voltage

APPLICATIONS

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

BLOCK DIAGRAM

In4 GND3 In3 NC CTL2 NC GND2 In2 16 15 14 13 12 11 10 9 BIAS BIAS ĽĽ BIAS Н н н Ο \cap I I. BIAS 1 2 3 4 5 6 7 8 OUT NC CTL3 NC GND1 ٧+ In 1 CTLI NJM2293D

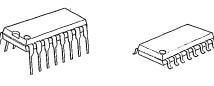
NJM2293M

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NJM2293D

4.75~13.0V





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MAXIMUM RATINGS (Ta=25℃) . SYMBOL RATINGS UNIT PARAMETER V⁺ Supply Voltage i4 v Pp mW (DIP-16) 700 Power Dissipation (DMP-16) 350 mW Topr °C Operating Temperature Range $-40 \sim +85$ -40~+125 °C Tstg Storage Temperature Range

ELECTRICAL CHARACTERISTICS

(V⁺=5V, Ta=25℃)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Operating Current (1)	Iccl	V+=5V (Note1)	4.5	6.5	8.5	mA .
Operating Current (2)	lcc2	V ⁺ =9V (Notel)	5.8	8.3	10.8	mA
Voltage Gain	Gv	$V_1 = 100 \text{kHz}, 2V_{P-P}, V_0 / V_1$	-0.7	-0.2	+0.3	dB
Frequency Gain (1)	GF I	$V_1 = 2V_{P-P}$, $V_0(7MHz)/V_0(100kHz)$	-1.0	0	+1.0	dB
Frequency Gain (2)	GF 2	$V_1 = IV_{P-P}, V_0(10MHz)/V_0(100kHz)$	—	0	_	dB
Differential Gain	DG	$V_1 = 2V_{P-P}$, Standerd Staircase Signal	-	0.3		%
Differential Phasa	DP	$V_1 = 2V_{P-P}$, Standerd Staircase Signal	-	0.3	_	deg
OutPut offset Voltage	Vos	(Note2)	-4.5	0	+45	mV
Crosstalk	СТ	$V_1 = 2V_{P-P}, 4.43MHz, V_0 / V_1$	_	-75		dB
Switch Change Over Voltage	V _{CH}	All inside Switches ON	2.5	_	_	v
Switch Change Over Voltage	VCL	All inside Switches OFF	<u> </u>		1.0	v

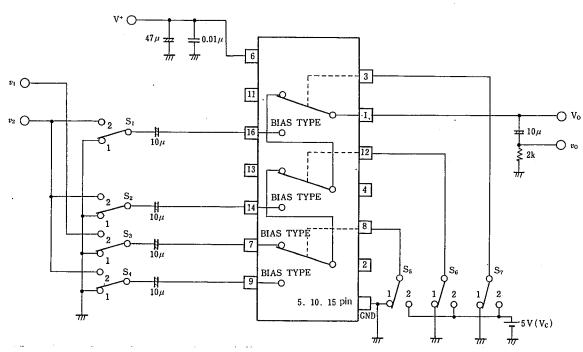
(Notel) S1=S2=S3=S4=S5=S6=S7=1

(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

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TEST CIRCUIT

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NJM2293

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	$ \begin{array}{c} $	
8 12 3	CTL1 CTL2 CTL3 (Switching)			
1	OUT (Output)	1.8V		
6	V+	5 V		
5 10 15	GND 1 GND 2 GND 3			

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MEMO

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