

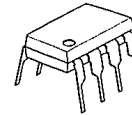
### 3-INPUT VIDEO SWITCH WITH 6dB AMPLIFIER

■ GENERAL DESCRIPTION

The NJM2245 is a three input integrated video switch which selects one video or audio signal from three input signals.

It contains 6dB amplifier and its operating supply voltage range is 8.5 to 13V and bandwidth is 5MHz. Crosstalk is 65dB (at 4.43MHz).

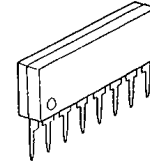
■ PACKAGE OUTLINE



NJM2245D



NJM2245M



NJM2245L

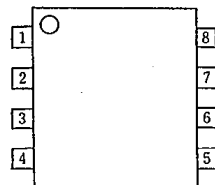
■ FEATURES

- Operating Voltage 8.5~13V
- 3 Input-1 Output
- Internal 6dB Amplifier
- Muting Function available
- Cross-talk 65dB(at 4.43MHz)
- Wide Frequency Range 5MHz(1V<sub>P-P</sub> Input)
- Package Outline DIP8, DMP8, SIP8
- Bipolar Technology

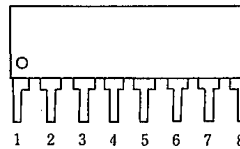
■ APPLICATION

- VCR AV-TV Video Disc Player

■ PIN CONFIGURATION



NJM2245D  
NJM2245M

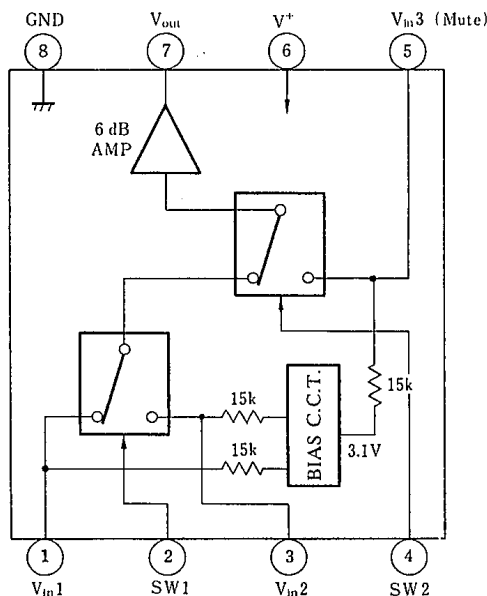


NJM2245L

PIN FUNCTION

1. V<sub>in1</sub>
2. SW1
3. V<sub>in2</sub>
4. SW2
5. V<sub>in3</sub>
6. V<sup>+</sup>
7. V<sub>out</sub>
8. GND

■ BLOCK DIAGRAM



■ INPUT CONTROL SIGNAL-OUTPUT SIGNAL

SW 1	SW 2	OUTPUT SIGNAL
L	L	V <sub>in 1</sub>
H	L	V <sub>in 2</sub>
L/H	H	V <sub>in 3</sub>



## ■ ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V*	15	V
Power Dissipation	Pd	(DIP8) 500	mW
		(DMP8) 300	mW
		(SIP8) 800	mW
Operating Temperature Range	Topr	-40~+85	°C
Storage Temperature Range	Tstg	-40~+125	°C

## ■ ELECTRICAL CHARACTERISTICS

(V\*=9V, Ta=25°C)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Recommended Supply Voltage	V*		8.5	—	13.0	V
Operating Current	Icc	S1=S2=S3=S4=S5=2	10.0	16.5	23.0	mA
Voltage Gain	Gv	Vin=1.0Vp-p, 100kHz, Vo/Vi, RL=1kΩ	5.7	6.2	6.7	dB
Frequency Characteristic	Gf	Vin=1.0Vp-p, Vo(10MHz)/Vo(100kHz) RL=1kΩ	-1.0	—	+1.0	dB
Differential Gain	DG	Vin=1.0Vp-p, staircase, RL=1kΩ	—	0.3	—	%
Differential Phase	DP	Vin=1.0Vp-p, staircase, RL=1kΩ	—	0.3	—	deg.
Output Offset Voltage	Voff	S1=S2=S3=2, S5=1→2 Vo:voltage change	—	—	±60	mV
Crosstalk	CT	Vin=1Vp-p, 4.43MHz, Vo/Vi	—	-65	—	dB
Switch Change Voltage	VCH	All inside SW:ON	2.4	—	—	V
	VCL	All inside SW:OFF	—	—	0.8	V
Input Impedance	Ri		—	15	—	kΩ

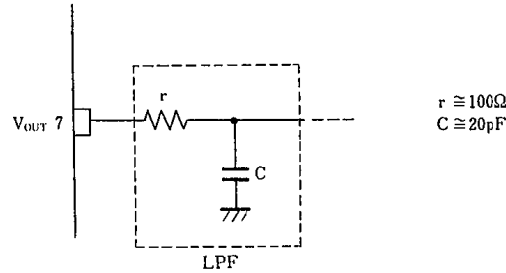
(note) Unless specified, tested with three mode below.

a) S1=1, S2=S3=S4=S5=2 b) S2=S4=1, S1=S3=S5=2 c) S1=S2=2, S3=S5=1, S4=1 or 2

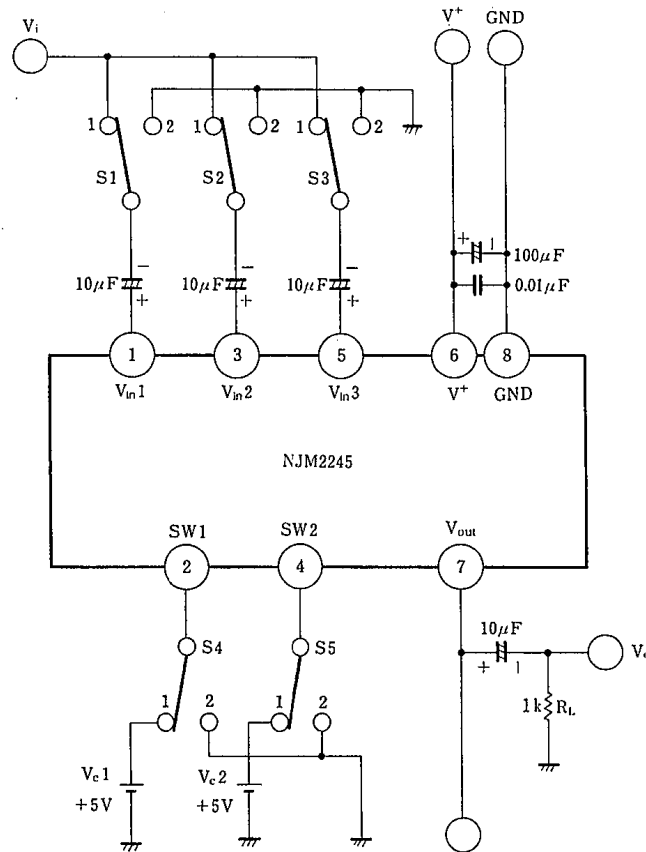
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## ■ APPLICATION

Oscillation Prevention on light loading conditions Recommended under circuit.



## ■ TEST CIRCUIT



DC Voltage Each Terminal  
Typ. on Test Circuit  $T_a = 25^\circ C$

Terminal Name	$V_{IN1}$	SW1	$V_{IN2}$	SW2	$V_{IN3}$	$V^+$	$V_{OUT}$	GND
DC Voltage	$\frac{2}{5} V^+$	—	$\frac{2}{5} V^+$	—	$\frac{2}{5} V^+$	—	$\frac{2}{5} V^+ - 2.1$	—

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## ■ EQUIVALENT CIRCUIT

PIN NO. PIN	FUNCTION	INSIDE EQUIVALENT CIRCUIT	PIN NO. PIN	FUNCTION	INSIDE EQUIVALENT CIRCUIT
1	V <sub>IN 1</sub>		5	V <sub>IN 3</sub> (Mute)	
2	SW 1		6	V+	
3	V <sub>IN 2</sub>		7	V <sub>OUT</sub>	
4	SW 2		8	GND	

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## MEMO

**[CAUTION]**

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