3-INPUT VIDEO SUPER IMPOSER WITH 6dB AMPLIFIER

■ GENERAL DESCRIPTION

NJM2266 is 3-input, 1-output video switch with 6dB amplifier. One input is provided with sink chip clamp function, which adjust the DC level of video sighal. The other two inputs of transistor open base can make control of luminance signal. This video switch can be connected to TV monitor directly, as it has 6dB amplifier circuit internally. NJM2266 is a high performance video switch with is operated 4.75V supply voltage.

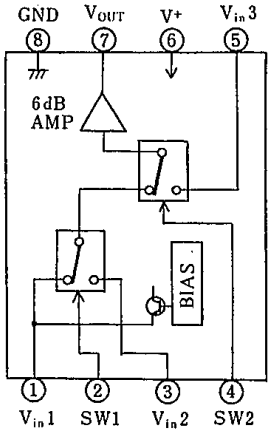
■ FEATURES

- Wide Operating Voltage (4.75～13V)
- 3 Input, 1 - Output
- Internal 6 dB Amplifier Circuit
- Internal Sink Chip Clamp Function ($V_{IN}1$)
- Internal Luminance Signal Control Function ($V_{IN}2$, $V_{IN}3$)
- Crosstalk 65dB(at 4.43MHz)
- Package Outline DIP8, DMP8, SIP8
- Bipolar Technology

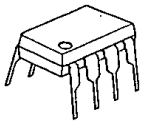
■ APPLICATIONS

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

■ BLOCK DIAGRAM

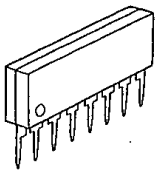


■ PACKAGE OUTLINE



NJM2266D

NJM2266M



NJM2266L

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■ ABSOLUTE MAXIMUM RATINGS

(Ta=25℃)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V^+	15	V
Power Dissipation	P_D	(DIP8) 500	mW
		(DMP8) 300	mW
		(SIP8) 800	mW
Operating Temperature Range	T_{opr}	−40～+85	℃
Storage Temperature Range	T_{stg}	−40～+125	℃

■ ELECTRICAL CHARACTERISTICS

(V^+=5V, Ta=25±2℃)

PARAMETERS	SYMBOLS	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Recommended Supply Voltage	V^+		4.75	—	13.0	V
Operating Current	I_{CC}	S1=S2=S3=S4=S5=2	—	15	21.0	mA
Voltage Gain	G_V	V_{in}=1.0V_{P-P}, 1MHz, V_o/V_i	5.7	6.2	6.7	dB
Frequency Characteristics	G_f	V_{in}=1.0V_{P-P}, V_o(5MHz)/V_o(1MHz)	−1.0	0	+1.0	dB
Differential Gain	DG	V_{in}=1.0V_{P-P}, Staircase, R_L=1kΩ	—	0.2	—	%
Differential Phase	DP	V_{in}=1.0V_{P-P}, Staircase, R_L=1kΩ	—	0.1	—	deg
Crosstalk	CT	V_o/V_i $V_{in}2$, $V_{in}3$—Biased (Note 2)		−65		dB
Switch Change Voltage	V_{CH}	Switch High Level Voltage	2.4	—	—	V
	V_{CL}	Switch Low Level Voltage	—	—	0.8	V

Note 1) Unless otherwise specified, tested with the following conditions.
a) S1=1, S2=S3=S4=S5=2 b) S2=S4=1, S1=S3=S5=2 c) S3=S5=1, S1=S2=1, S4=1 and 2

Note 2) Tested with the following conditions.
a) S1=S4=1, S2=S3=2, S5=1 and 2 b) S2=1, S1=S3=S4=2, S5=1 and 2 c) S3=1, S1=S2=S5=2, S4=1 and 2

Note 3) The clamp Input voltage of Vin1 is approximately (2.1×V^+)/5 (In case of V^+=5V, about 2.1V)

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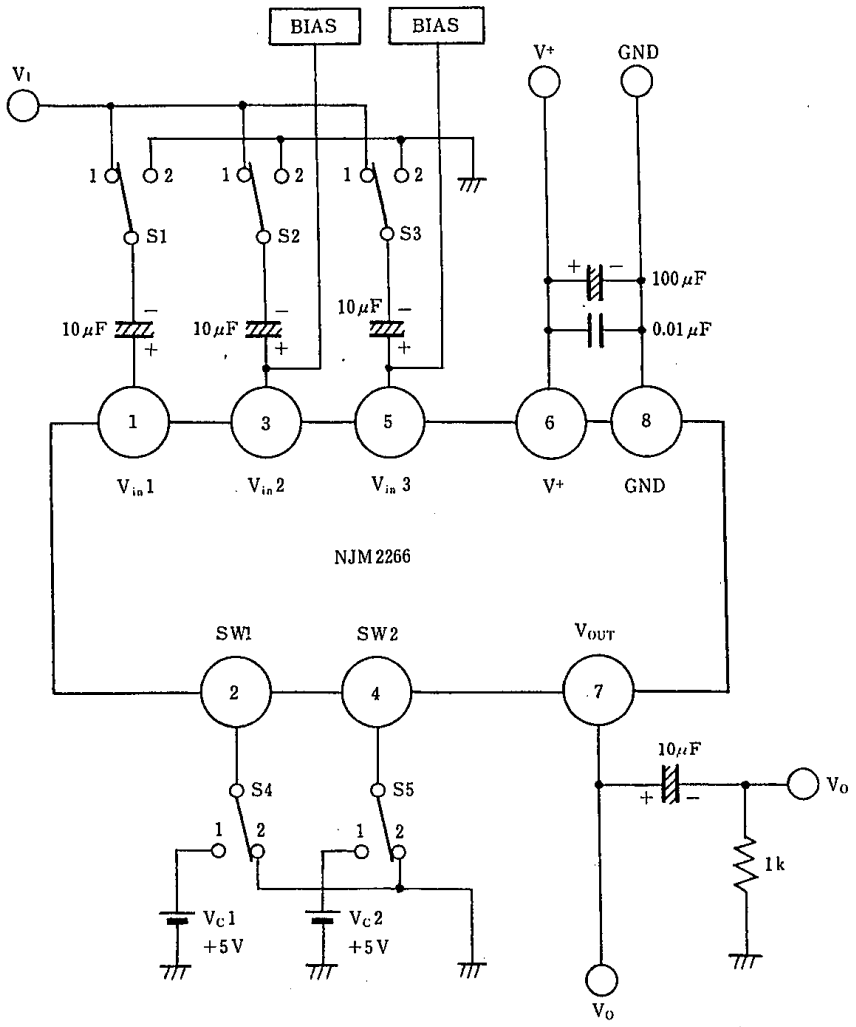
■ SWITCH CONTROL SIGNAL-OUTPUT SIGNAL

SW1	SW2	OUTPUT SIGNAL
L	L	$V_{in}1$
H	L	$V_{in}2$
L/H	H	$V_{in}3$

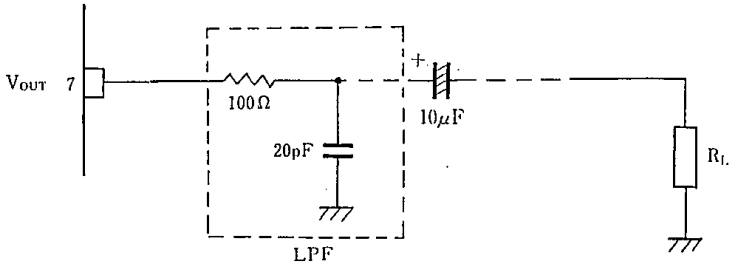
■ TEST CIRCUIT



■ APPLICATION

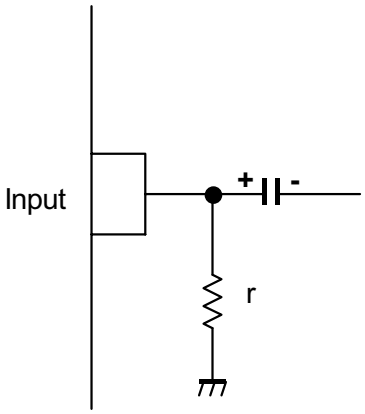
Oscillation Prevention

It is much effective to insert LPF(Cutoff Frequency 70 MHz) under light loading conditions ($R_L \gg 1k\Omega$)



■APPLICATION

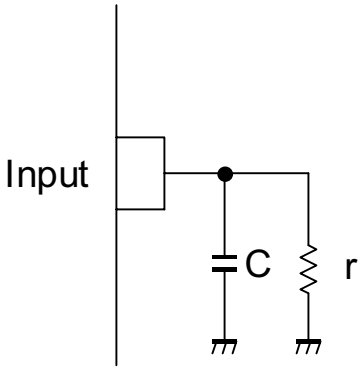
This IC requires 1MΩ resistance between INPUT and GND pin for clamp type input since the minute current causes an unstable pin voltage.



C ≅ 10uF

r ≅ 1MΩ

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



C ≅ 0.1uF

r ≅ 1MΩ