

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 signal. 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.

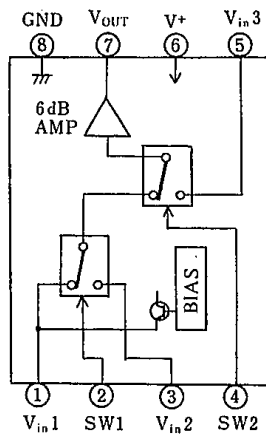
■ FEATURES

- Wide Operating Voltage (4.75~13V)
- 3 Input, 1 - Output
- Internal 6 dB Amplifier Circuit
- Internal Sink Chip Clamp Function (V_{IN1})
- Internal Luminance Signal Control Function (V_{IN2} , V_{IN3})
- Crosstalk 65dB(at 4.43MHz)
- Package Outline DIP8, DMP8, SIP8
- Bipolar Technology

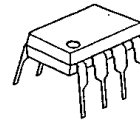
■ APPLICATIONS

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

■ BLOCK DIAGRAM



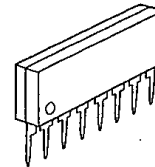
■ PACKAGE OUTLINE



NJM2266D



NJM2266M



NJM2266L

■ ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

| 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 | °C |
| Storage Temperature Range | T _{stg} | -40~+125 | °C |

■ ELECTRICAL CHARACTERISTICS

(V⁺=5V, Ta=25±2°C)

| 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 _{in2} , V _{in3} —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.

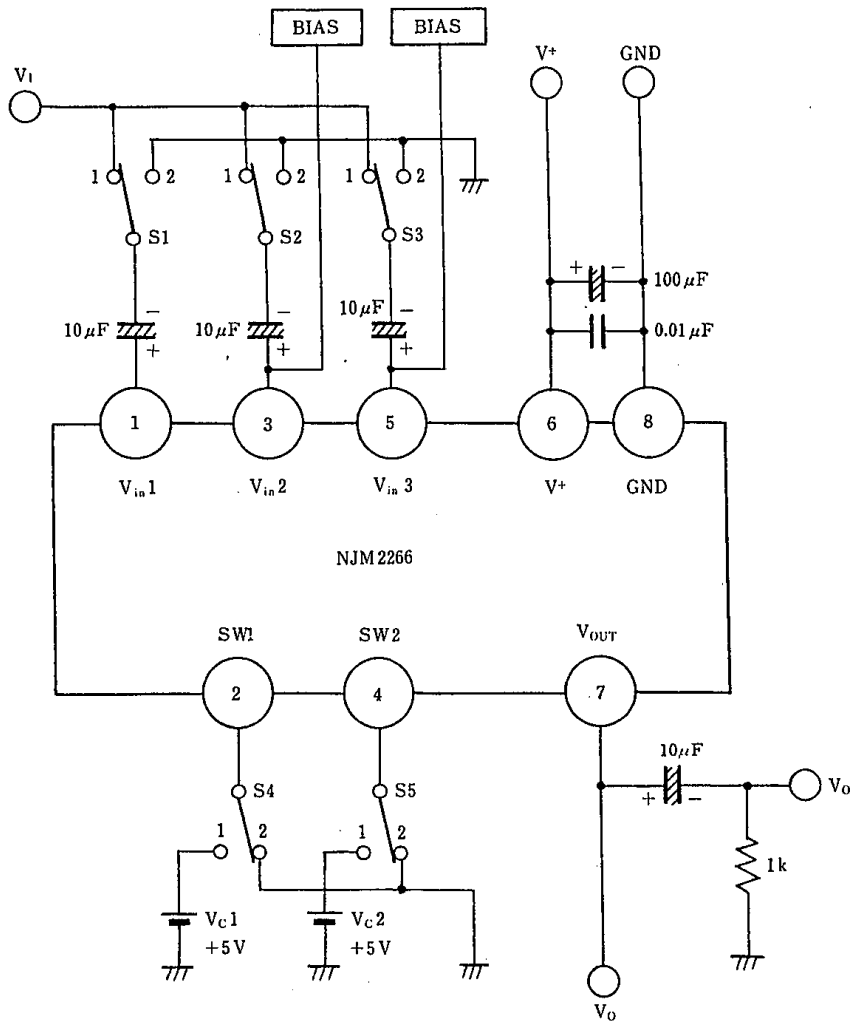
a) S1=S4=1, S2=S3=2, S5=1 and 2 b) S2=1, S1=S3=S4=2, S5=1 and 2 c) S3=1, S1=S2=S5=2, S4=1 and 2

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

■ SWITCH CONTROL SIGNAL-OUTPUT SIGNAL

| SW 1 | SW 2 | OUTPUT SIGNAL |
|------|------|------------------|
| L | L | V _{in1} |
| H | L | V _{in2} |
| L/H | H | V _{in3} |

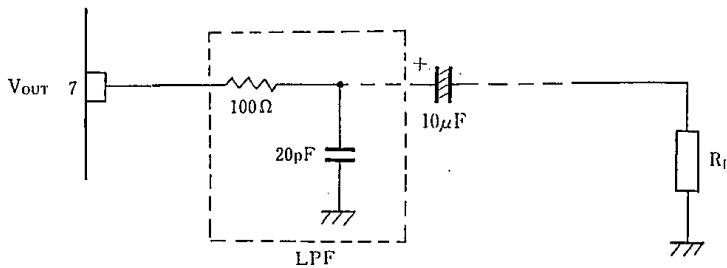
■ TEST CIRCUIT



■ APPLICATION

Oscillation Prevention

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

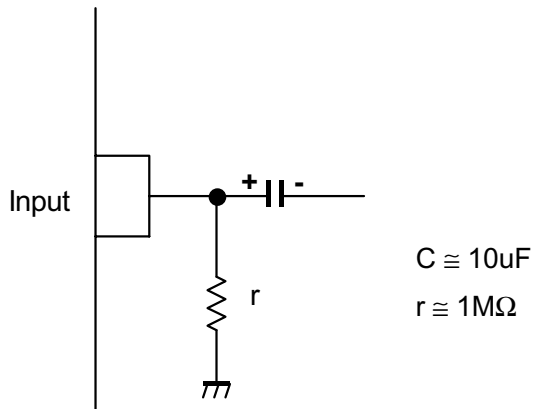


5

NJM2266

■APPLICATION

This IC requires $1\text{M}\Omega$ resistance between INPUT and GND pin for clamp type input since the minute current causes an unstable pin voltage.



This IC requires $0.1\mu\text{F}$ capacitor between INPUT and GND, $1\text{M}\Omega$ resistance between INPUT and GND for clamp type input at mute mode.

