

## 2 INPUT 1 OUTPUT 3ch VIDEO SWITCH with ISOLATION AMP.

### ■ GENERAL DESCRIPTION

The NJM2524 is a 2-input 1-output 3-circuit video switch with isolation amplifier. Isolation circuit removes the noise of a signal.

The NJM2524 includes pedestal clamp circuit. It is suitable for the change of the RGB signal of the Car AV equipment.

### ■ PACKAGE OUTLINE

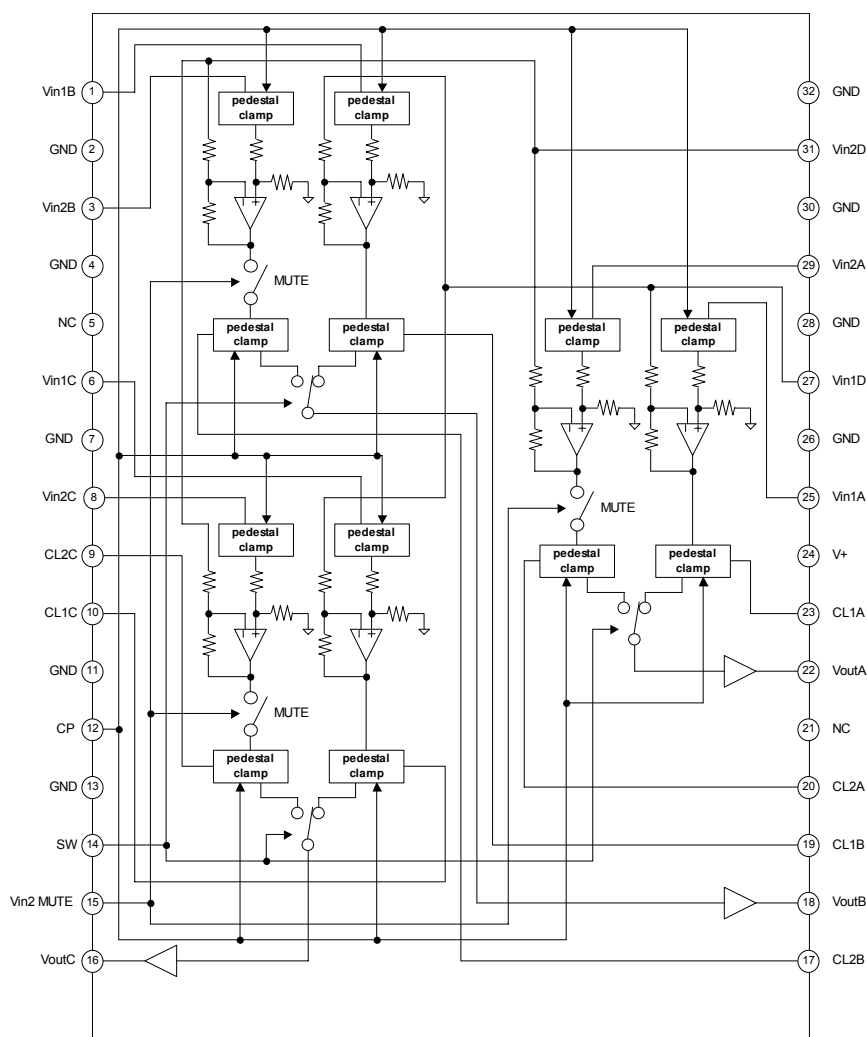


NJM2524V

### ■ FEATURES

- Operating Voltage 4.5 to 9.0V
- Internal Isolation Amp.
- Internal 3ch 2 input 1 output Video Switch
- Pedestal Clamp
- Bipolar Technology
- Package Outline SSOP32

### ■ BLOCK DIAGRAM



## ■ ABOSOLUTE MAXIMUM RATINGS (Ta=25°C)

| PARAMETER                   | SYMBOL         | RATING        | UNIT |
|-----------------------------|----------------|---------------|------|
| Supply Voltage              | V <sup>+</sup> | 15.0          | V    |
| Power Dissipation           | P <sub>D</sub> | SSOP32: 800 * | mW   |
| Operating Temperature Range | Topr           | -40 to +85    | °C   |
| Storage Temperature Range   | Tstg           | -40 to +125   | °C   |

\*EIA/JEDEC STANDARD Test Board(76.2x114.3x1.6mm,2layers,FR-4)mounting

## ■ RECOMMENDED OPERATING CONDITION(Ta=25°C)

| PARAMETER         | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|-------------------|--------|----------------|------|------|------|------|
| Operating Voltage | Vopr   |                | 4.5  | -    | 9.0  | V    |

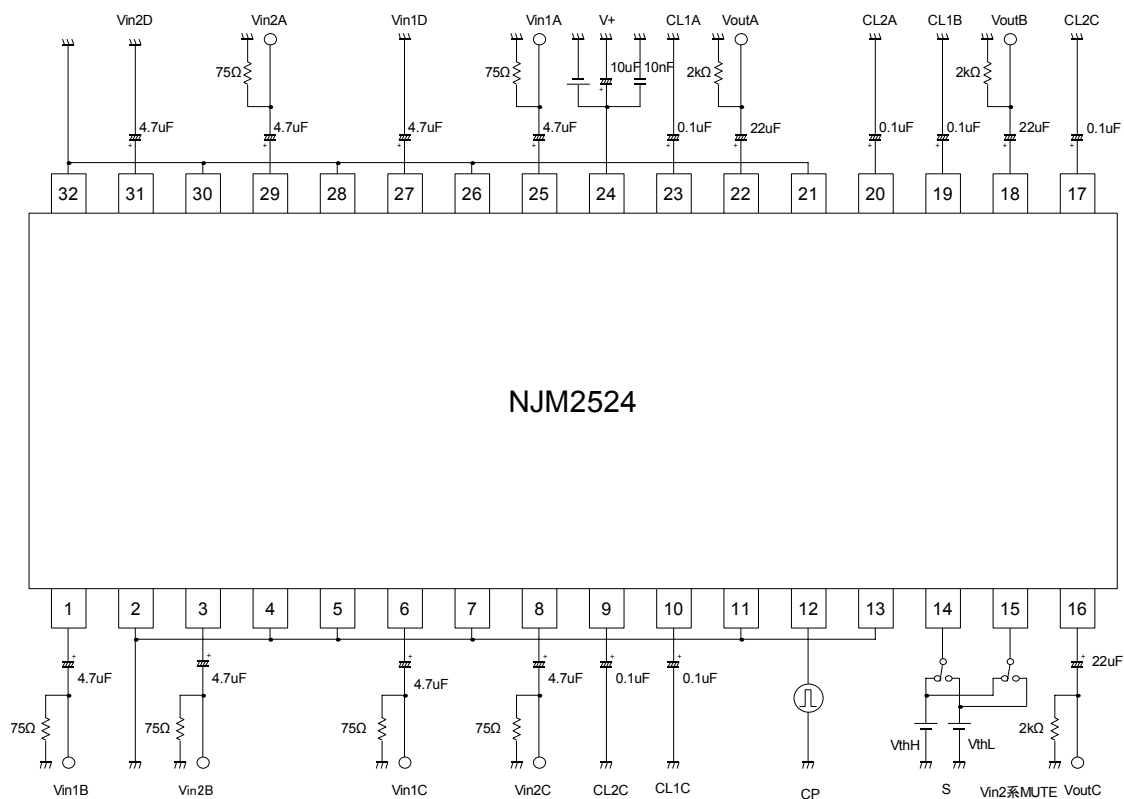
## ■ ELECTRICAL CHARACTERISTICS( V<sup>+</sup> =5.0V, Ta=25°C)

| PARAMETER                   | SYMBOL          | TEST CONDITION                        | MIN. | TYP. | MAX.           | UNIT |
|-----------------------------|-----------------|---------------------------------------|------|------|----------------|------|
| Operating Current           | I <sub>CC</sub> | No Signal                             | -    | 19   | 28.5           | mA   |
| Maximum Output Level        | Vom1            | Vin=100kHz, Sigh-Signal, THD=1%,      | 1.4  | 1.6  | -              | Vp-p |
| Voltage Gain                | Gv              | Vin=100kHz, 1.0Vp-p Sign-Signal       | -1.0 | 0    | 1.0            | dB   |
| Frequency Characteristics   | Gf              | Vin=10MHz / 1MHz , 1.0Vpp Sign-Signal | -1.0 | 0    | 1.0            | dB   |
| Common Mode Rejection Ratio | CMR             | Vin=20kHz, 1Vpp                       | -    | -45  | -              | dB   |
| Crosstalk Between Input     | CT-I            | Vin=4.43MHz, 1.0Vp-p Sign-Signal      | -    | -65  | -              | dB   |
| Crosstalk Between SW Block  | CT-B            | Vin=4.43MHz, 1.0Vp-p Sign-Signal      | -    | -65  | -              | dB   |
| Differential Gain           | DG              | Vin=1.0Vp-p 10step Video Signal       | -    | 0.5  | -              | %    |
| Differential Phase          | DP              | Vin=1.0Vp-p 10step Video Signal       | -    | 0.5  | -              | deg  |
| SW Change High Level        | VthH            |                                       | 2.0  | -    | V <sup>+</sup> | V    |
| SW Change Low Level         | VthL            |                                       | 0    | -    | 0.6            | V    |

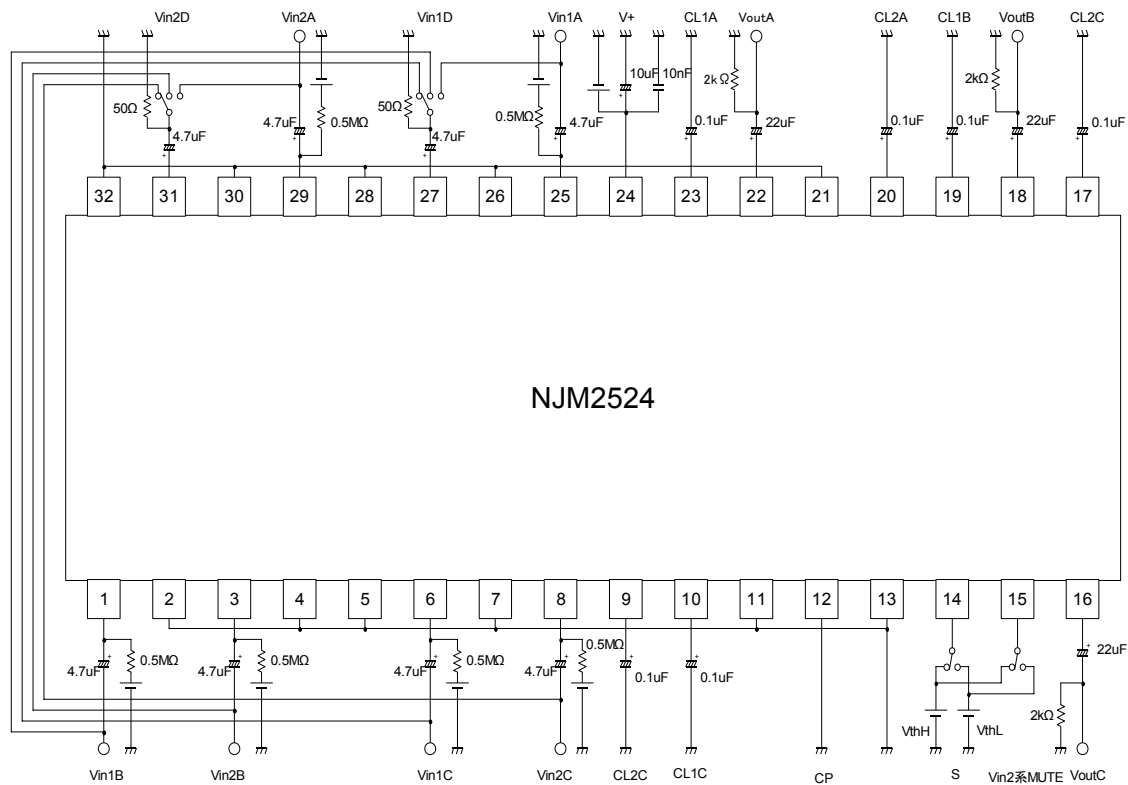
## ■ SW vs. INPUT/OUTPUT

| SW | MUTE | VoutA | VoutB | VoutC |
|----|------|-------|-------|-------|
| L  | H    | Vin1A | Vin1B | Vin1C |
| L  | L    | Vin1A | Vin1B | Vin1C |
| H  | H    | MUTE  | MUTE  | MUTE  |
| H  | L    | Vin2A | Vin2B | Vin2C |

## ■ TEST CIRCUIT (Measure Video-signal)

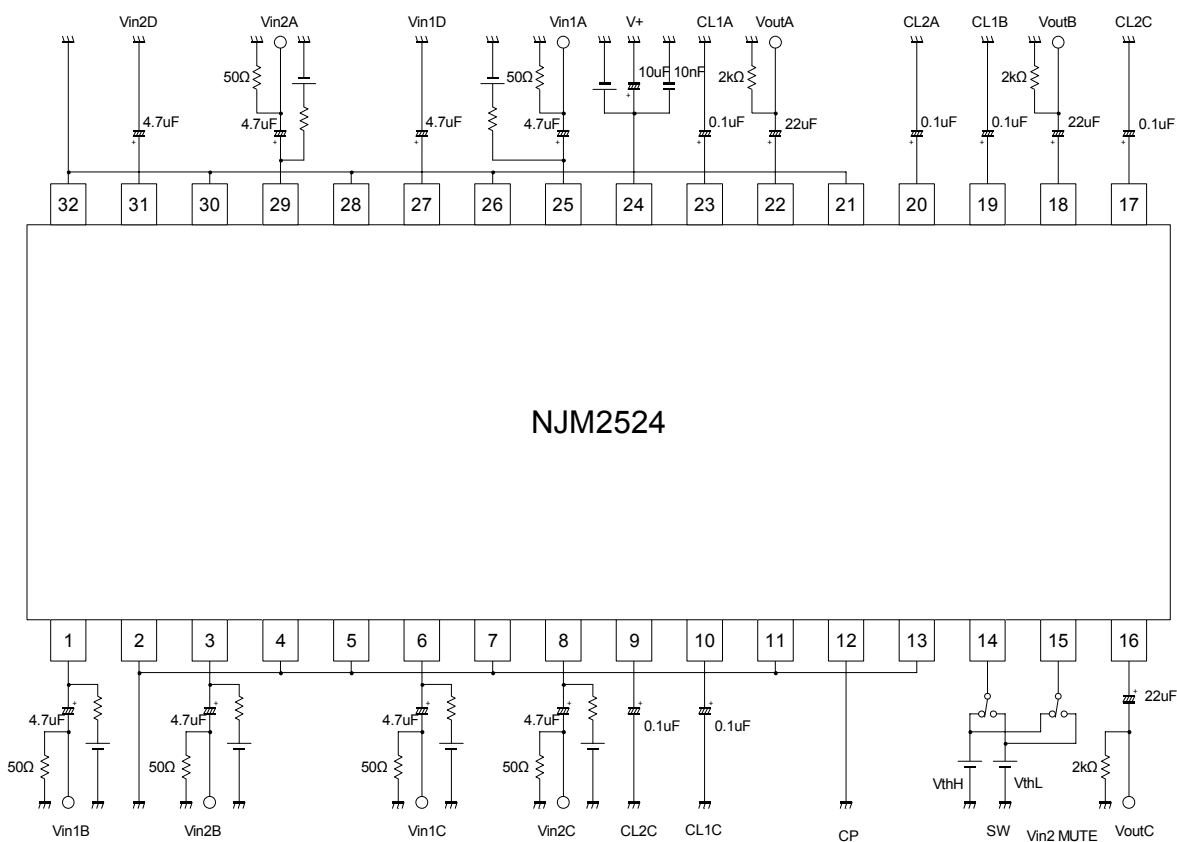


## ■ TEST CIRCUIT(Measure CMR)



# NJM2524

## ■ TEST CIRCUIT(sign-signal)



[CAUTION]  
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