

## LOW VOLTAGE VIDEO AMPLIFIER WITH LPF

### ■GENERAL DESCRIPTION

The **NJM2562** is a Low Voltage Video Amplifier contained LPF circuit. Internal 75Ω driver is easy to connect TV monitor directly.

The **NJM2562** features low power and small package, and is suitable for low power design on downsizing of DSC and DVC.

### ■PACKAGE OUTLINE

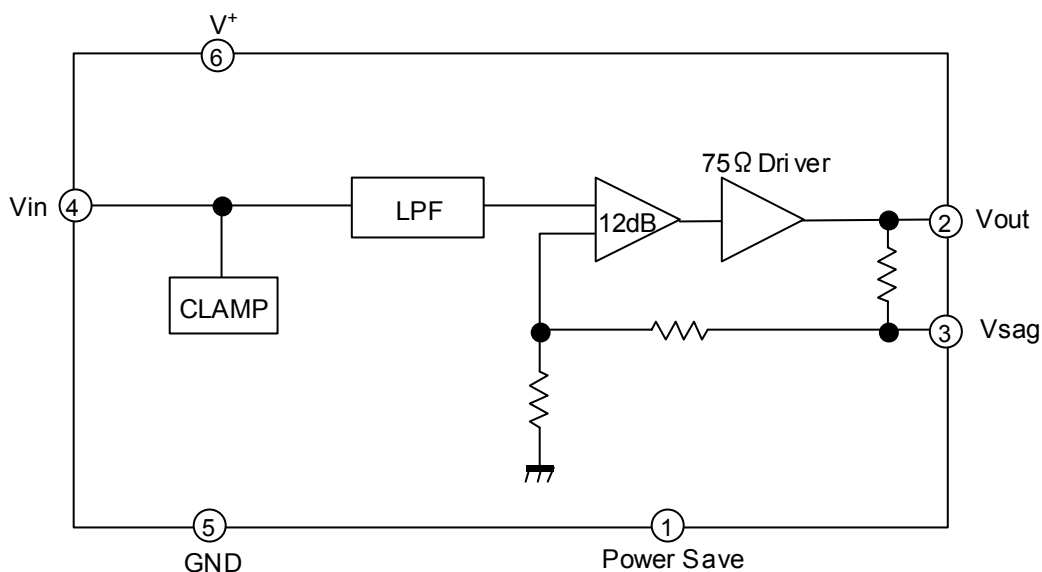
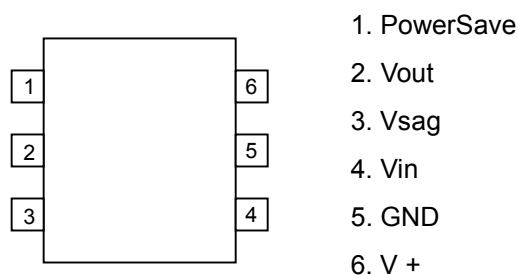


**NJM2562F1**

### ■FEATURES

- Operating Voltage                    2.8 to 5.5V
- 12dB amplifier
- Internal LPF                            -32dB at 19MHz typ.
- Internal 75Ω Driver Circuit (2-system drive)
- Power Save Circuit
- Bipolar Technology
- Package Outline                      MTP6

### ■BLOCK DIAGRAM



# NJM2562

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

| PARAMETER                   | SYMBOL         | RATINGS     | UNIT |
|-----------------------------|----------------|-------------|------|
| Supply Voltage              | V <sup>+</sup> | 7.0         | V    |
| Power Dissipation           | P <sub>D</sub> | 200         | mW   |
| Operating Temperature Range | Topr           | -40 to +85  | °C   |
| Storage Temperature Range   | Tstg           | -40 to +125 | °C   |

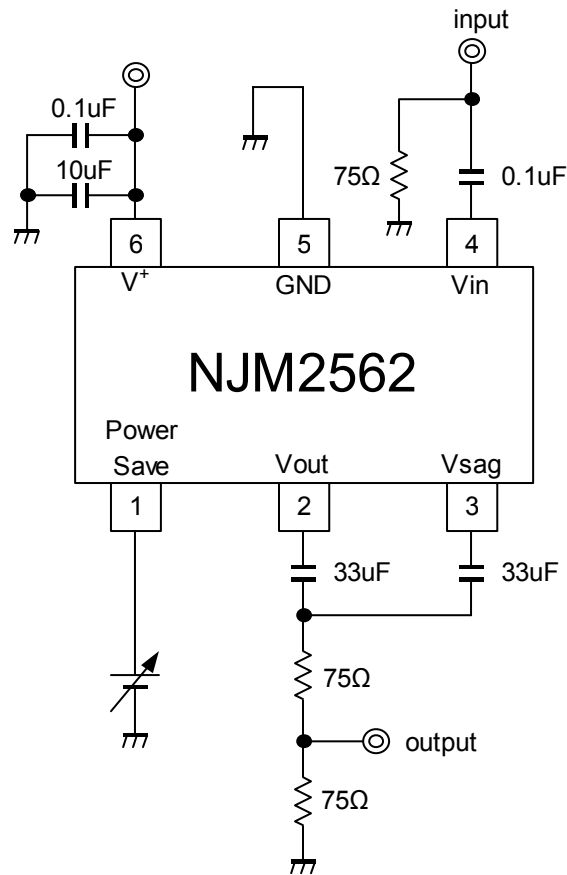
## ■ELECTRICAL CHARACTERISTICS (V<sup>+</sup>=3.0V, R<sub>L</sub>=150Ω, Ta=25°C)

| PARAMETER                       | SYMBOL               | TEST CONDITION                                                                              | MIN. | TYP. | MAX.           | UNIT |
|---------------------------------|----------------------|---------------------------------------------------------------------------------------------|------|------|----------------|------|
| Operating Current               | I <sub>CC</sub>      | No Signal                                                                                   | -    | 8.0  | 12.0           | mA   |
| Operating Current at Power Save | I <sub>save</sub>    | Power Save Mode                                                                             | -    | 30   | 50             | uA   |
| Maximum Output Voltage Swing    | V <sub>omv</sub>     | f=100kHz, THD=1%                                                                            | 2.2  | 2.5  | -              | Vp-p |
| Voltage Gain                    | G <sub>v</sub>       | V <sub>in</sub> =100kHz, 0.5Vp-p, Input Sine Signal                                         | 12.0 | 12.4 | 12.8           | dB   |
| Low Pass Filter Characteristic  | G <sub>fy</sub> 4.5M | V <sub>in</sub> =4.5MHz/100kHz, 0.5Vp-p                                                     | -0.6 | -0.1 | 0.4            | dB   |
|                                 | G <sub>fy</sub> 19M  | V <sub>in</sub> =19MHz/100kHz, 0.5Vp-p                                                      | -    | -32  | -22            |      |
| Differential Gain               | DG                   | V <sub>in</sub> =0.5Vp-p, 10step Video Signal                                               | -    | 0.5  | -              | %    |
| Differential Phase              | DP                   | V <sub>in</sub> =0.5Vp-p, 10step Video Signal                                               | -    | 0.5  | -              | deg  |
| S/N Ratio                       | SN <sub>v</sub>      | V <sub>in</sub> =0.5Vp-p, R <sub>L</sub> =75Ω<br>100% White Video Signal,<br>100KHz to 6MHz | -    | +60  | -              | dB   |
| 2nd. Distortion                 | H <sub>v</sub>       | V <sub>in</sub> =0.5Vp-p, 3.58MHz, Sine Signal,<br>R <sub>L</sub> =75Ω                      | -    | -50  | -              | dB   |
| SW Change Voltage High Level    | V <sub>thPH</sub>    | Active                                                                                      | 1.8  | -    | V <sup>+</sup> | V    |
| SW Change Voltage Low Level     | V <sub>thPL</sub>    | Non-active                                                                                  | 0    | -    | 0.3            |      |

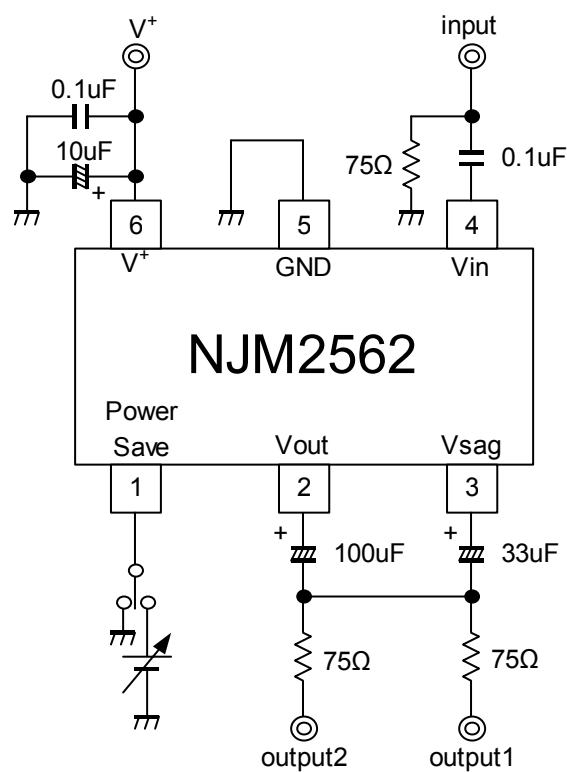
## ■CONTROL TERMINAL

| PARAMETER  | STATUS | NOTE            |
|------------|--------|-----------------|
| Power Save | H      | Power Save: OFF |
|            | L      | Power Save: ON  |
|            | OPEN   | Power Save: ON  |

## ■TEST CIRCUIT



## ■APPLICATION CIRCUIT (2-system drive)



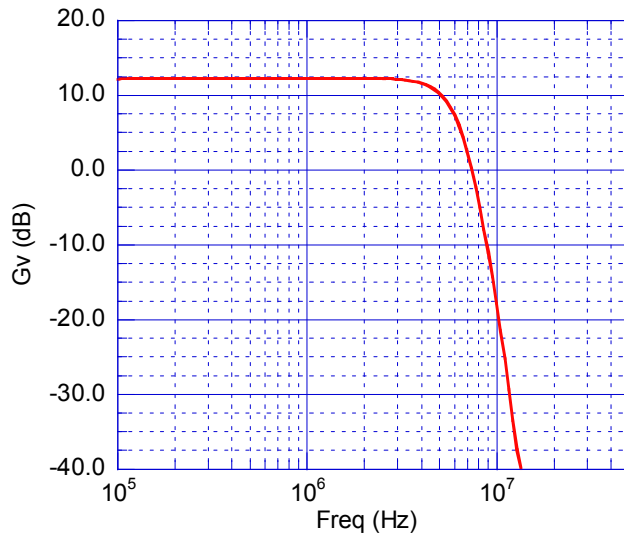
■ TERMINAL DESCRIPTION

| No. | SYMBOL     | VOLTAGE | EQUIVALENT CIRCUIT |
|-----|------------|---------|--------------------|
| 1   | Power Save | -       |                    |
| 2   | Vout       | 0.33V   |                    |
| 3   | Vsag       | -       |                    |
| 4   | Vin        | 1.10V   |                    |
| 5   | GND        | -       |                    |
| 6   | V+         | 3V      |                    |

## ■TYPICAL CHARACTERISTICS

### Voltage Gain vs. Frequency

V=PS=3.0V, Vin=0.5Vpp



#### [CAUTION]

The specifications on this databook are only given for information, without any guarantee as regards either mistakes or omissions. The application circuits in this databook are described only to show representative usages of the product and not intended for the guarantee or permission of any right including the industrial rights.