

LOW VOLTAGE VIDEO AMPLIFIER WITH LPF

■GENERAL DESCRIPTION

The **NJM2563** is a Low Voltage Video Amplifier contained LPF circuit. Internal 75Ω driver is easy to connect TV monitor directly.

The **NJM2563** features low power and small package, and is suitable for low power design on downsizing of DSC and DVC.

■PACKAGE OUTLINE

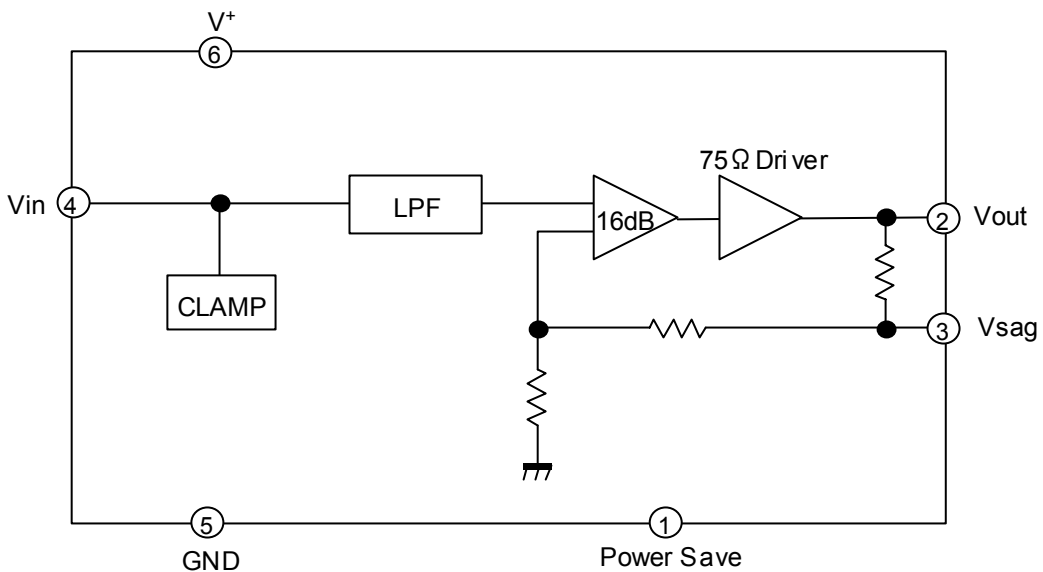
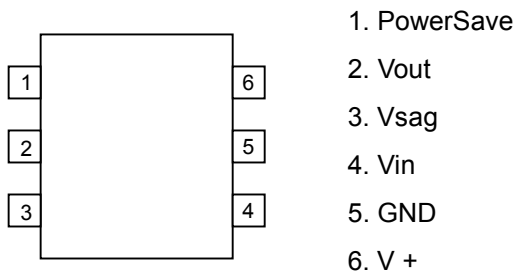


NJM2563F1

■FEATURES

- Operating Voltage 2.8 to 5.5V
- 16dB amplifier
- Internal LPF -31dB at 19MHz typ.
- Internal 75Ω Driver Circuit (2-system drive)
- Power Save Circuit
- Bipolar Technology
- Package Outline MTP6

■BLOCK DIAGRAM



NJM2563

■ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

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

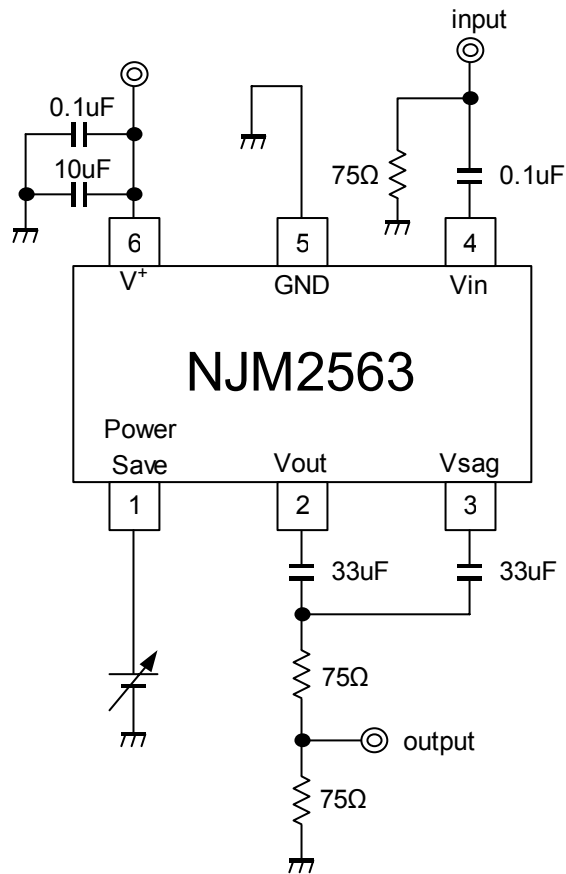
■ELECTRICAL CHARACTERISTICS (V⁺=3.0V, R_L=150Ω, Ta=25°C)

| PARAMETER | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|---------------------------------|----------------------|---|------|------|----------------|------|
| Operating Current | I _{CC} | No Signal | - | 8.0 | 12.0 | mA |
| Operating Current at Power Save | I _{save} | Power Save Mode | - | 30 | 50 | uA |
| Maximum Output Voltage Swing | V _{omv} | f=100kHz, THD=1% | 2.2 | 2.5 | - | Vp-p |
| Voltage Gain | G _v | V _{in} =100kHz, 0.3Vp-p, Input Sine Signal | 16.1 | 16.5 | 16.9 | dB |
| Low Pass Filter Characteristic | G _{fy} 4.5M | V _{in} =4.5MHz/100kHz, 0.3Vp-p | -0.6 | -0.1 | 0.4 | dB |
| | G _{fy} 19M | V _{in} =19MHz/100kHz, 0.3Vp-p | - | -31 | -21 | |
| Differential Gain | DG | V _{in} =0.3Vp-p, 10step Video Signal | - | 0.5 | - | % |
| Differential Phase | DP | V _{in} =0.3Vp-p, 10step Video Signal | - | 0.5 | - | deg |
| S/N Ratio | SN _v | V _{in} =0.3Vp-p, R _L =75Ω 100% White Video Signal, 100KHz to 6MHz | - | +60 | - | dB |
| 2nd. Distortion | H _v | V _{in} =0.3Vp-p, 3.58MHz, Sine Signal, R _L =75Ω | - | -50 | - | dB |
| SW Change Voltage High Level | V _{thPH} | Active | 1.8 | - | V ⁺ | V |
| SW Change Voltage Low Level | V _{thPL} | Non-active | 0 | - | 0.3 | |

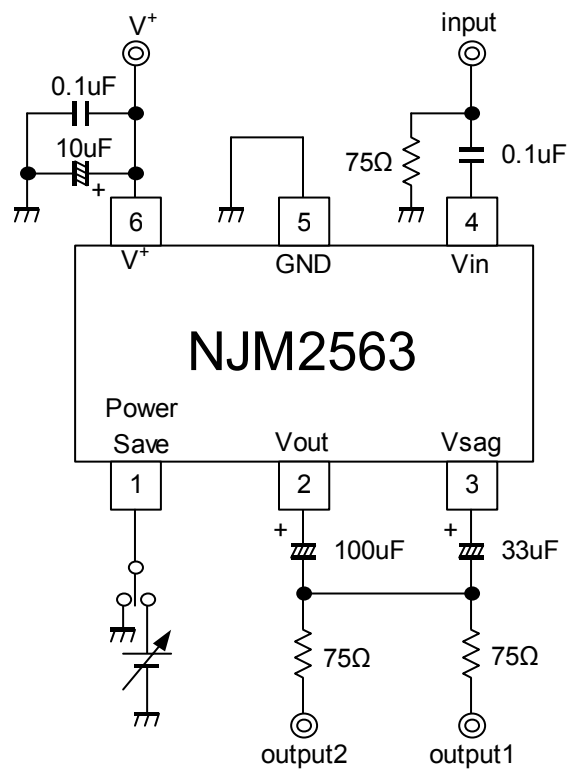
■CONTROL TERMINAL

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

TEST CIRCUIT



APPLICATION CIRCUIT (2-system drive)



NJM2563

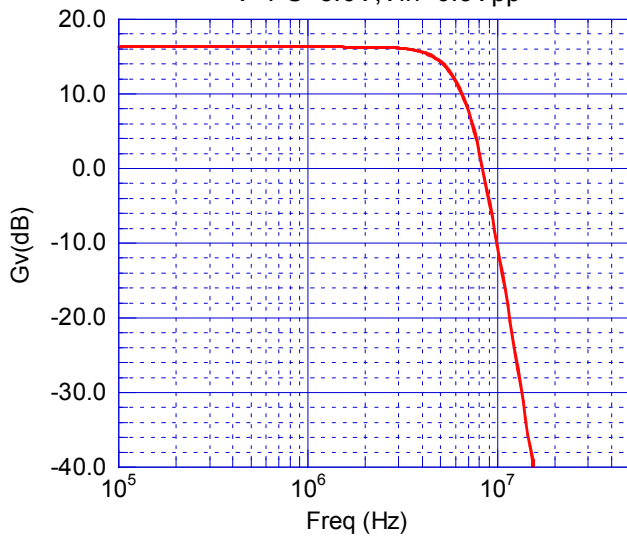
■ TERMINAL DESCRIPTION

| 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=0.3Vpp



[CAUTION]

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