

## 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

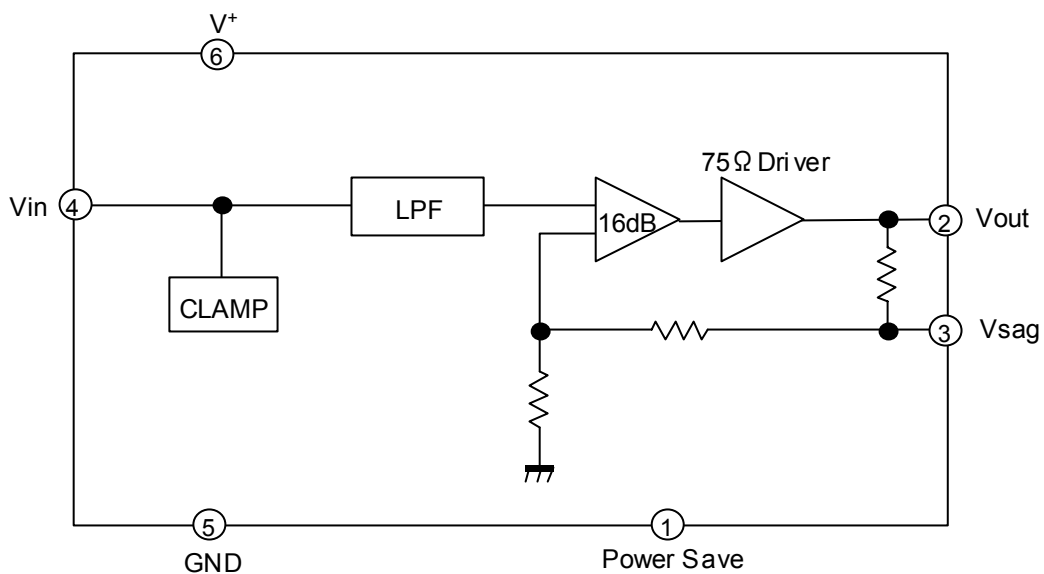
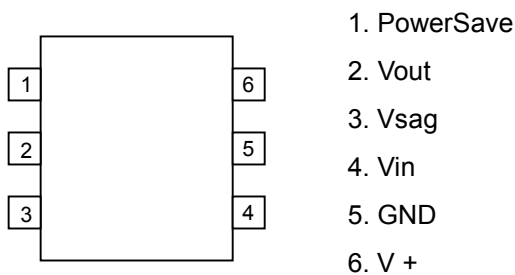


**NJM2563F1**

### ■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

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## ■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	T <sub>opr</sub>	-40 to +85	°C
Storage Temperature Range	T <sub>stg</sub>	-40 to +125	°C

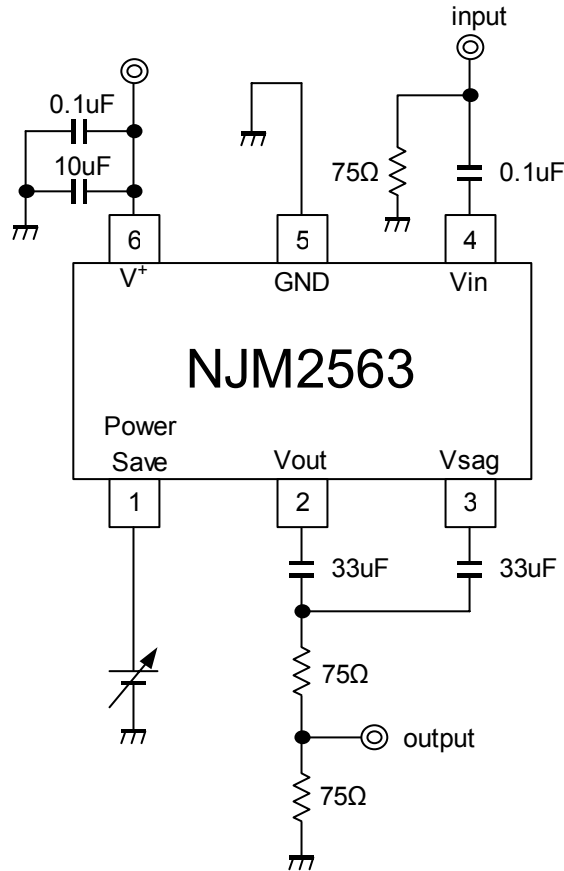
## ■ELECTRICAL CHARACTERISTICS (V<sup>+</sup>=3.0V, R<sub>L</sub>=150Ω, Ta=25°C)

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, 0.3Vp-p, Input Sine Signal	16.1	16.5	16.9	dB
Low Pass Filter Characteristic	G <sub>fy4.5M</sub>	V <sub>in</sub> =4.5MHz/100kHz, 0.3Vp-p	-0.6	-0.1	0.4	dB
	G <sub>fy19M</sub>	V <sub>in</sub> =19MHz/100kHz, 0.3Vp-p	-	-31	-21	
Differential Gain	DG	V <sub>in</sub> =0.3Vp-p, 10step Video Signal	-	0.5	-	%
Differential Phase	DP	V <sub>in</sub> =0.3Vp-p, 10step Video Signal	-	0.5	-	deg
S/N Ratio	SN <sub>v</sub>	V <sub>in</sub> =0.3Vp-p, R <sub>L</sub> =75Ω 100% White Video Signal, 100KHz to 6MHz	-	+60	-	dB
2nd. Distortion	H <sub>v</sub>	V <sub>in</sub> =0.3Vp-p, 3.58MHz, Sine Signal, 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	

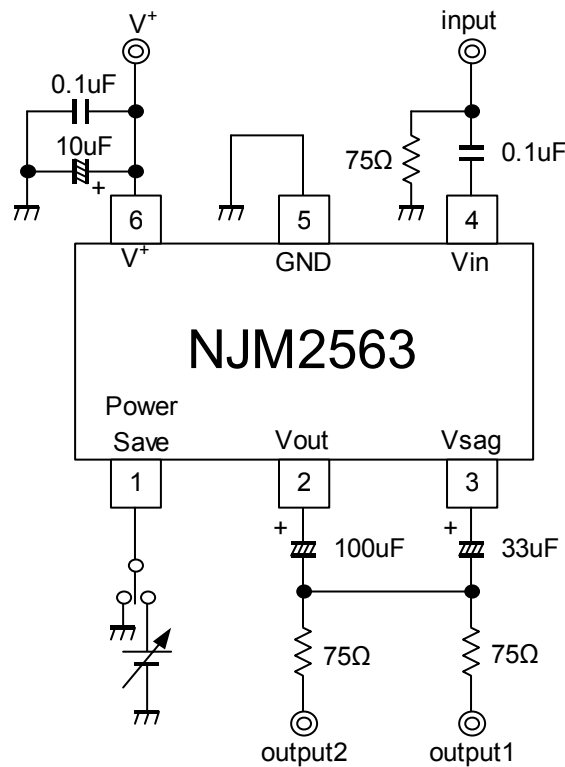
## ■CONTROL TERMINAL

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

## TEST CIRCUIT



## APPLICATION CIRCUIT (2-system drive)



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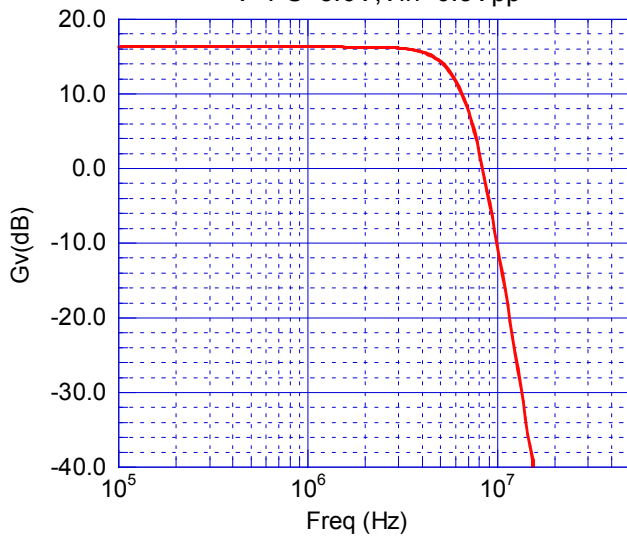
## ■ TERMINAL DESCRIPTION

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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