

## SELECTABLE GAIN TYPE LOW VOLTAGE VIDEO AMPLIFIER WITH LPF

### ■ GENERAL DESCRIPTION

The **NJM2560** is a Low Voltage Video Amplifier contained LPF circuit. Internal  $75\Omega$  driver is easy to connect TV monitor directly. The **NJM2560** can respond to various input voltage by gain switch. The **NJM2560** features low power and small package, and is suitable for low power design on downsizing of DSC and DVC.

### ■ PACKAGE OUTLINE

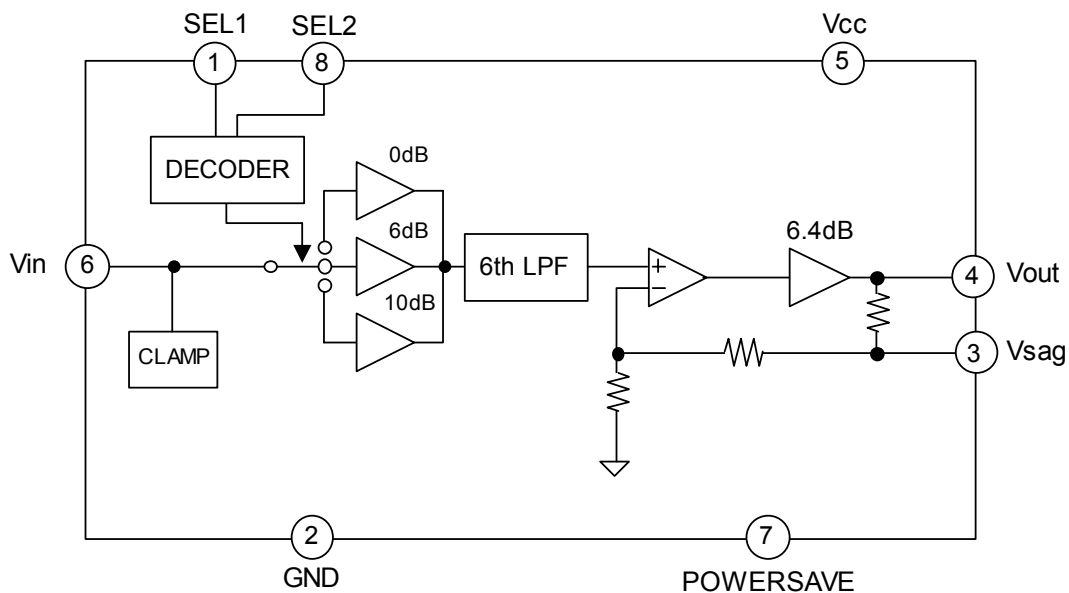


**NJM2560RB1**

### ■ FEATURES

- Operating Voltage 2.8 to 5.5V
- Internal LPF 29dB at 19MHz typ.
- Internal gain switch 6dB, 12dB, and 16dB
- Internal  $75\Omega$  driver circuit(2-system drive)
- Internal Power Save circuit
- Package Outline TVSP8

### ■ BLOCK DIAGRAM



# NJM2560

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

PARAMETER	SYMBOL	RATING	UNIT
Supply Voltage	V <sup>+</sup>	7.0	V
Power Dissipation	P <sub>D</sub>	320	mW
Operating Temperature Range	Topr	-40 to +85	°C
Storage Temperature Range	Tstg	-40 to +125	°C

## ■ ELECTRICAL CHARACTERISTICS (V<sup>+</sup>=3.0V, RL=150Ω, Ta=25°C, Select 6dB unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Supply Current	I <sub>CC</sub>	No signal	-	9.0	12.0	mA
Supply Current at Power save	Isave	Power save mode	-	50	60	uA
Maximum Output Level 1	Vomv1	Select 6dB, f=100kHz, THD=1%	2.2	2.5	-	Vp-p
Maximum Output Level 2	Vomv2	Select 12dB, f=100kHz, THD=1%	2.2	2.5	-	Vp-p
Maximum Output Level 3	Vomv3	Select 16dB, f=100kHz, THD=1%	2.2	2.5	-	Vp-p
Voltage Gain 1	Gv6	Select 6dB, Vin=100kHz, 1.0Vp-p, Sin-signal	6.0	6.4	6.8	dB
Voltage Gain 2	Gv12	Select 12dB, Vin=100kHz, 0.5Vp-p, Sin-signal	12.0	12.4	12.8	dB
Voltage Gain 3	Gv16	Select 16dB, Vin=100kHz, 0.3Vp-p, Sin-signal	16.0	16.4	16.8	dB
LPF Characteristics 1	Gfy4.5M1	Select 6dB, Vin=4.5MHz/100kHz, 1.0Vp-p	-0.6	-0.1	0.4	dB
	Gfy19M1	Select 6dB, Vin=19MHz/100kHz, 1.0Vp-p	-	-29	-19	
LPF Characteristics 2	Gfy4.5M2	Select 12dB, Vin=4.5MHz/100kHz, 0.5Vp-p	-0.6	-0.1	0.4	dB
	Gfy19M2	Select 12dB, Vin=19MHz/100kHz, 0.5Vp-p	-	-29	-19	
LPF Characteristics 3	Gfy4.5M3	Select 16dB, Vin=4.5MHz/100kHz, 0.3Vp-p	-0.7	-0.1	0.3	dB
	Gfy19M3	Select 16dB, Vin=19MHz/100kHz, 0.3Vp-p	-	-29	-19	
Differential Gain 1	DG1	Select 6dB, Vin=1.0Vp-p, 10step video signal	-	0.8	-	%
Differential Gain 2	DG2	Select 12dB, Vin=0.5Vp-p, 10step video signal	-	1.4	-	%
Differential Gain 3	DG3	Select 16dB, Vin=0.3Vp-p, 10step video signal	-	2.0	-	%
Differential Phase	DP	Vin=1.0Vp-p, 10step video signal	-	0.5	-	deg
S/N Ratio	SNv	Vin=1.0Vp-p, 100% White video signal, RL=75Ω, 100KHz to 6MHz	-	+60	-	dB
2 <sup>nd</sup> Distortion	Hv	Vin=1.0Vp-p, 3.58MHz Sin Video signal, RL=75Ω	-	-45	-	dB
SW High Level	VthH		1.8	-	V <sup>+</sup>	V
SW Low Level	VthL		0	-	0.3	

Ver.5

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## ■ CONTROL TERMINAL FUNCTION

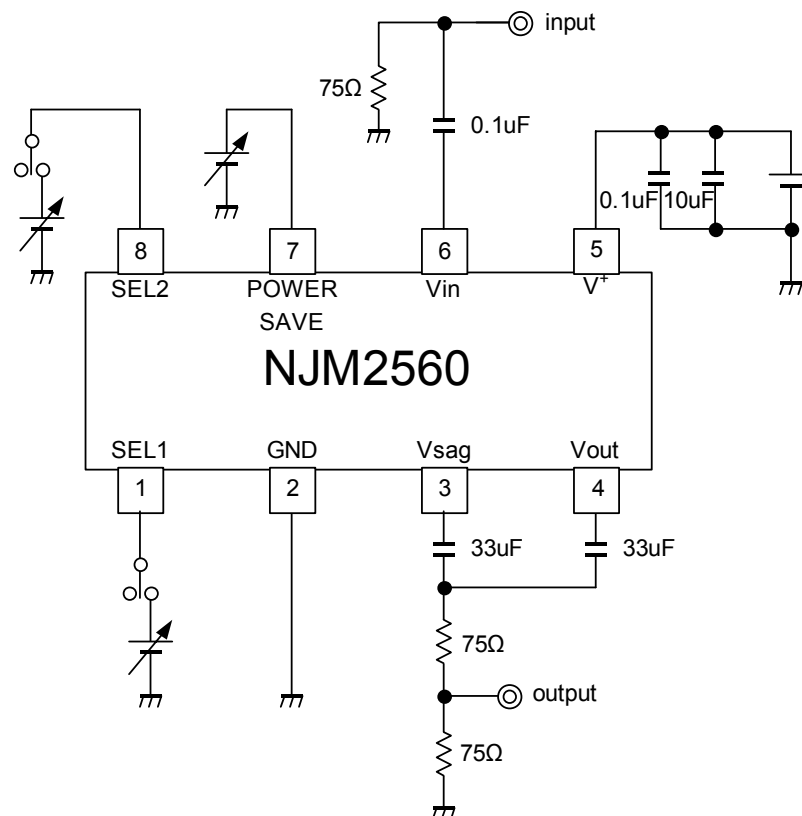
### POWER SAVE

TERMINAL	CONTROL	STATE
Power Save	H	Power Save: OFF
	L	Power Save: ON
	OPEN	Power Save: ON

### VOLTAGE GAIN

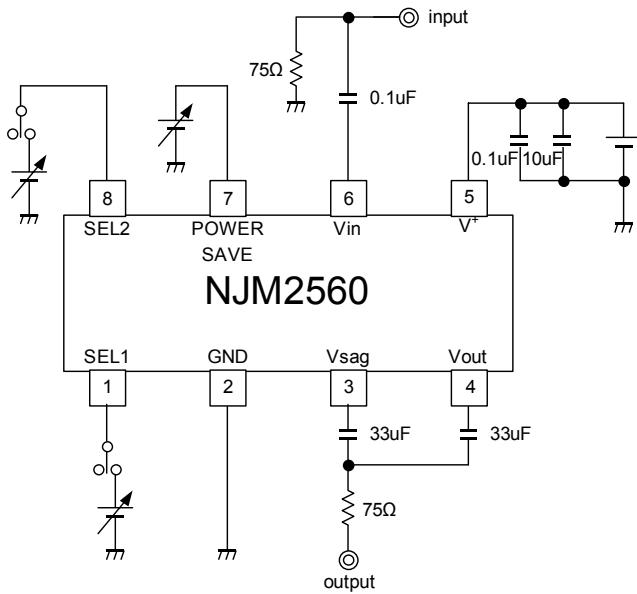
TERMINAL	SEL 1	SEL 2	STATE
SEL	L / OPEN	L / OPEN	6dB
	H	L / OPEN	12dB
	Don't care	H	16dB

## ■ TEST CIRCUIT

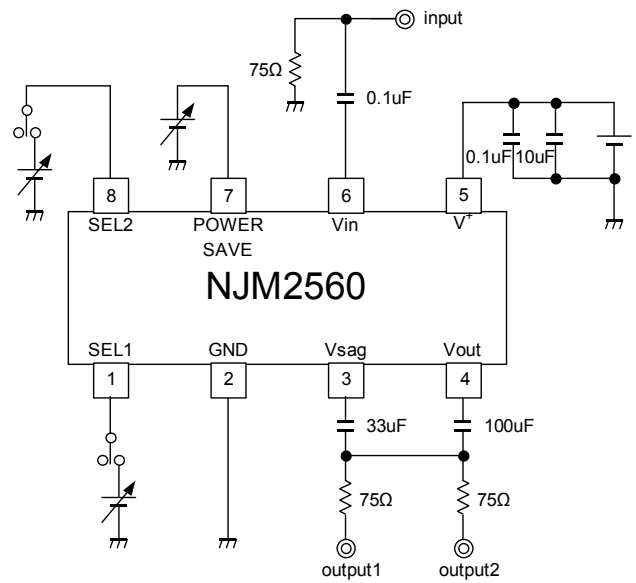


# NJM2560

## APPLICATION CIRCUIT



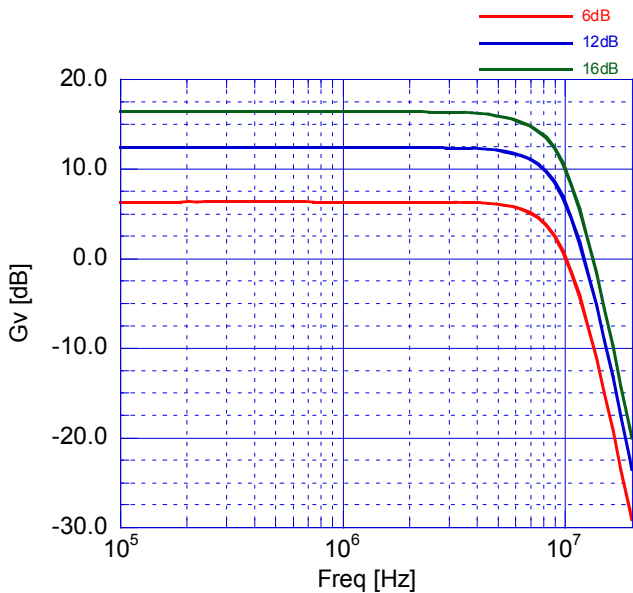
(1-system drive)



(2-system drive)

## TYPICAL CHARACTERISTICS

Voltage Gain vs. Frequency



**[CAUTION]**

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