

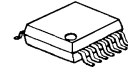
## Video Amplifier with 75 ohms Driver

### ■GENERAL DESCRIPTION

**THE NJM2568** is a video amplifier with 75 ohms drivers, which includes LPF and BPF of both Y and C system.

**THE NJM2568** can compose the output circuit of digital video items with a little external components. It is suitable for portable items.

### ■PACKAGE OUTLINE

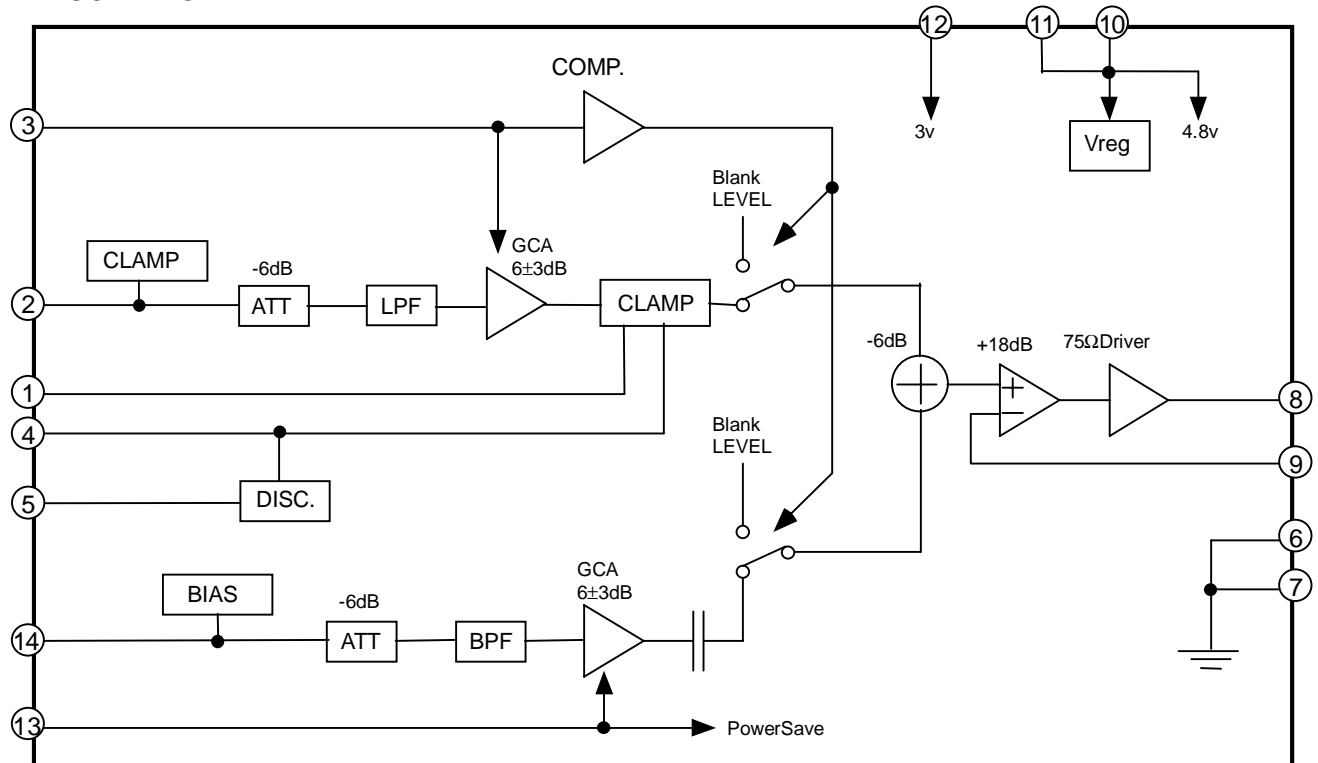


NJM2568V

### ■FEATURES

- Operating Voltage  $V^+1=4.5$  to  $5.3V$ ,  $V^+2=2.7$  to  $5.3V$
- Operating Current 9.5mA typ.  $V^+=4.8V$   
7.3mA typ.  $V^+=3.0V$
- Internal LPF, BPF
- Internal Clamp Discharge
- Bipolar Technology
- Package Outline SSOP14

### ■BLOCK DIAGRAM



- |                  |                         |
|------------------|-------------------------|
| 1. CLAMP REF     | 8. $V_{SAG}$            |
| 2. $Y_{IN}$      | 9. $V_{OUT}$            |
| 3. GCA CTLY/MUTE | 10. $V^+1$              |
| 4. CLAMP         | 11. $V^+1$              |
| 5. DIS CTL       | 12. $V^+2$              |
| 6. GND           | 13. GCA CTLC/POWER SAVE |
| 7. GND           | 14. $C_{IN}$            |

**■ABSOLUTE MAXIMUM RATINGS**

(Ta=25°C)

PARAMETERS	SYMBOL	RATINGS	UNIT
Supply Voltage	V <sup>+</sup>	7.0	V
Power Dissipation	P <sub>D</sub>	300	mW
Operating Temperature Range	T <sub>opr</sub>	-20 to +85	°C
Storage Temperature Range	T <sub>stg</sub>	-40 to +125	°C

**■ELECTRICAL CHARACTERISTICS** (Ta=25°C, V<sup>+</sup>1=4.8V, V<sup>+</sup>2=3.0V, R<sub>L</sub>=150Ω)

PARAMETERS	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Operating Current 1	I <sub>CC1</sub>	V <sup>+</sup> 1=4.8V, No Signal	-	9.5	12.5	mA
Operating Current 1 (Power Save Mode)	I <sub>save1</sub>	V <sup>+</sup> 1=4.8V, Power Save	-	1.6	2.1	mA
Operating Current 2	I <sub>CC2</sub>	V <sup>+</sup> 2=3.0V, No Signal	-	7.3	10.0	mA
Operating Current2 (Power Save Mode)	I <sub>save2</sub>	V <sup>+</sup> 2=3.0V, Power Save	-	0.37	0.9	mA

(Y Amplifier)

Voltage Gain 1	G <sub>VY1</sub>	Y <sub>IN</sub> to V <sub>OUT</sub> , G <sub>CACTLY</sub> =0.5V 100kHz, 0.5Vp-p @Sine Wave	+3.0	+6.0	+9.0	dB
Voltage Gain 2	G <sub>VY2</sub>	Y <sub>IN</sub> to V <sub>OUT</sub> , G <sub>CACTLY</sub> =2.5V 100kHz, 0.5Vp-p @Sine Wave	+13.0	+16.0	+19.0	dB

(C Amplifier)

Voltage Gain 1	G <sub>VC1</sub>	C <sub>IN</sub> to V <sub>OUT</sub> , G <sub>CACTLY</sub> =0.5V 4MHz, 143mVp-p @Sine Wave	+3.0	+6.0	+9.0	dB
Voltage Gain 2	G <sub>VC2</sub>	C <sub>IN</sub> to V <sub>OUT</sub> , G <sub>CACTLC</sub> =2.5V 4MHz, 143mVp-p @Sine Wave	+13.0	+16.0	+19.0	dB

(Filter Characteristics)

LPF (Y <sub>IN</sub> )	G <sub>fY6M</sub>	6MHz/100kHz, 100mVp-p @Sine Wave	-1.0	0	-	dB
	G <sub>fY7.2M</sub>	7.2MHz/100kHz, 100mVp-p @Sine Wave	-1.5	0	-	dB
	G <sub>fY20M</sub>	20MHz/100kHz, 100mVp-p @Sine Wave	-	-30	-20	dB
	DL <sub>Y</sub>	Group Delay  GD3MHz-GD6MHz	-	60	100	nsec
BPF (C <sub>IN</sub> )	G <sub>fC±1M</sub>	±1MHz/4MHz, 100mV @Sine Wave	-1.0	0	-	dB
	G <sub>fC±1.6M</sub>	±1.6MHz/4MHz, 100mV @Sine Wave	-3.0	0	-	dB
	G <sub>fC500k</sub>	500kHz/4MHz, 100mVp-p @Sine Wave	-	-15	-10	dB
	G <sub>fC20M</sub>	20MHz/4MHz, 100mVp-p @Sine Wave	-	-25	-10	dB
	DL <sub>C</sub>	Group Delay  GD3MHz-GD6MHz	-	60	90	nsec

(YC Delay)

YC Delay	T <sub>YC</sub>	T <sub>YOUT</sub> -T <sub>COOUT</sub> at 4MHz	-	+25	-	nsec
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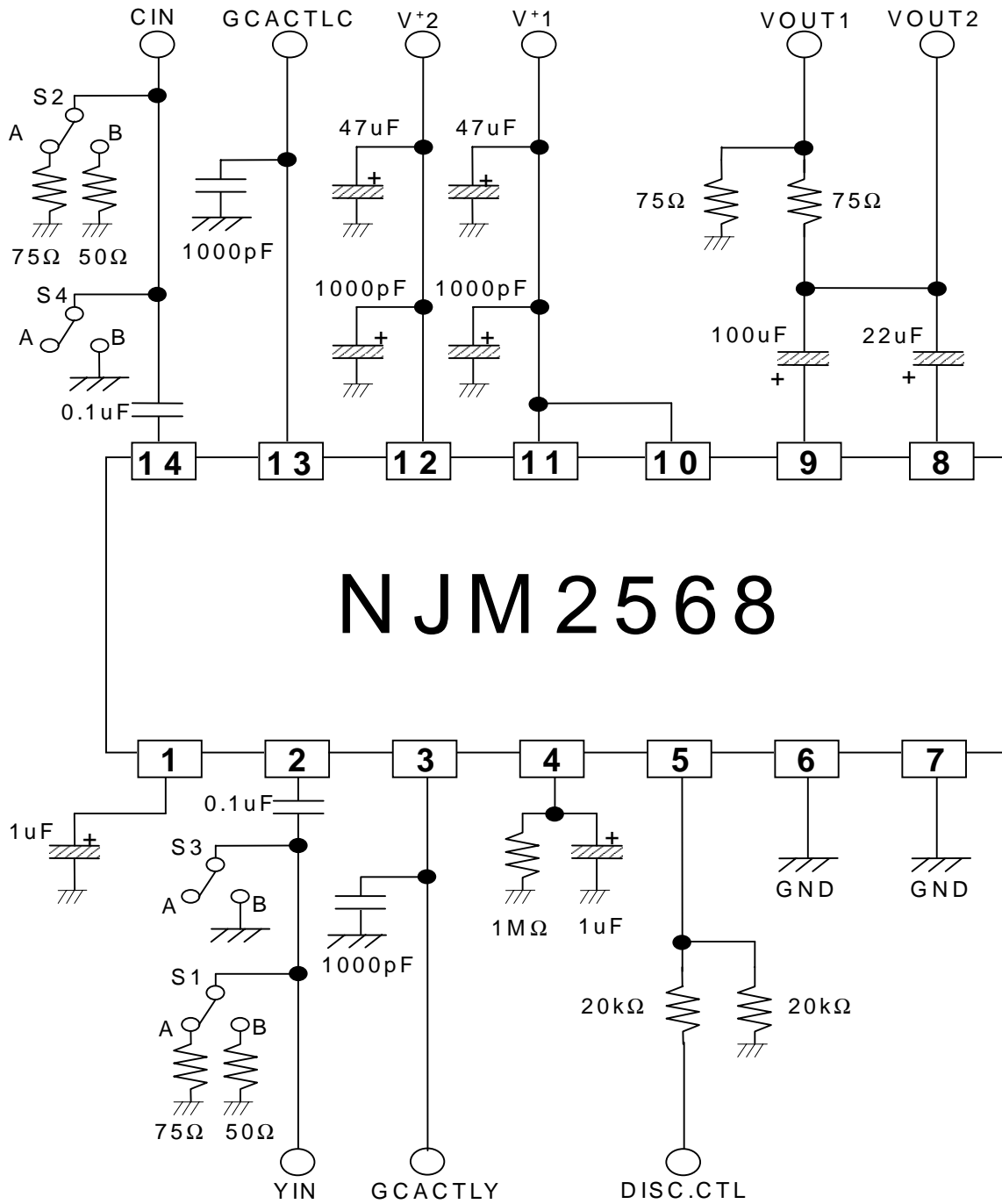
(Maximum Output Swing)

V-OUT	V <sub>OVm</sub>	100kHz, Sine Wave, R <sub>L</sub> =75Ω	1.2	-	-	Vp-p
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(GCA Control Signal)

GCACTLY	V <sub>GC1</sub>	GCA Control Voltage	0.5	-	2.5	V
	V <sub>GL1</sub>	MUTE Voltage	GND	-	0.3	V
GCACTLC	V <sub>GC2</sub>	GCA Control Voltage	0.5	-	2.5	V
	V <sub>GL2</sub>	Power Down Voltage	GND	-	0.3	V

■ TEST CIRCUIT



## MEMO

<注意事項>

このデータブックの掲載内容の正確さには万全を期しておりますが、掲載内容について何らかの法的な保証を行うものではありません。とくに応用回路については、製品の代表的な応用例を説明するためのものです。また、工業所有権その他の権利の実施権の許諾を伴うものではなく、第三者の権利を侵害しないことを保証するものではありません。