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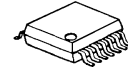
Video Amplifier with 75 ohms Driver

■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

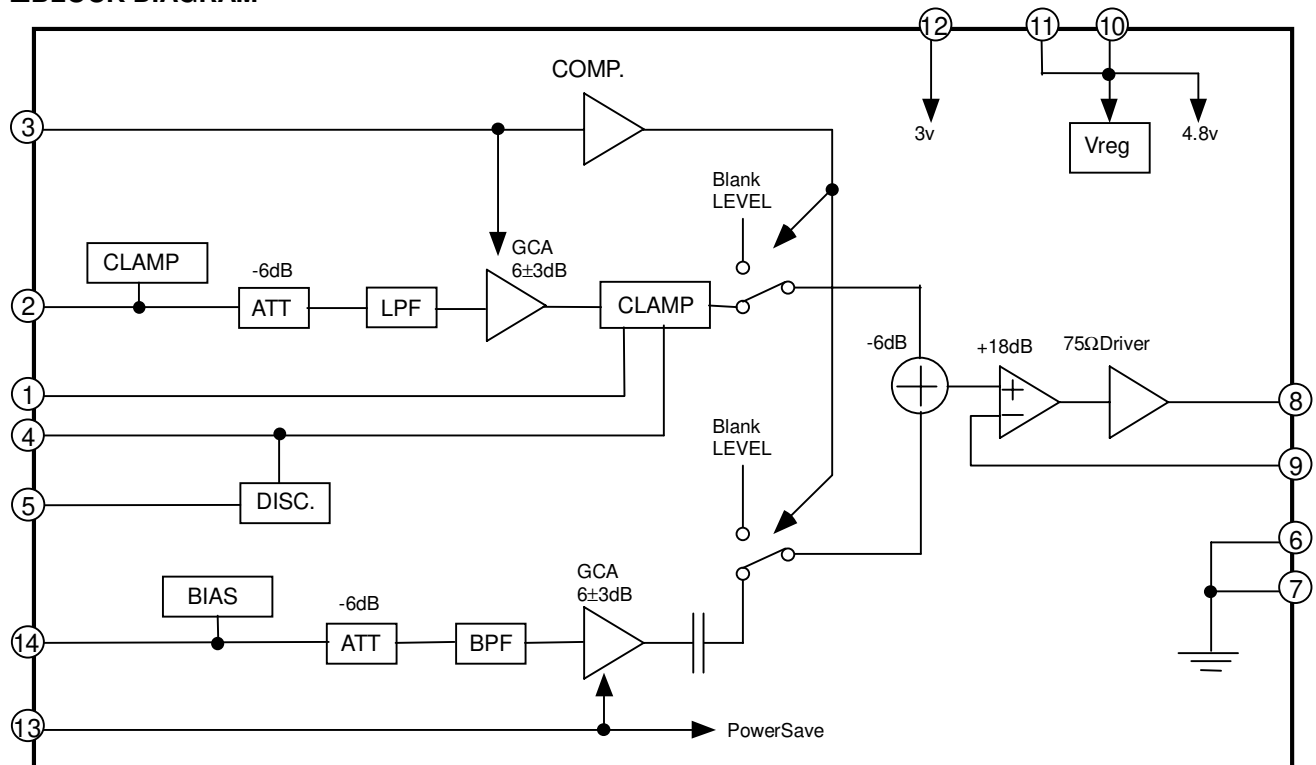


NJM2568V

■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 ⁺ | 7.0 | V |
| Power Dissipation | P _D | 300 | mW |
| Operating Temperature Range | T _{opr} | -20 to +85 | °C |
| Storage Temperature Range | T _{stg} | -40 to +125 | °C |

■ELECTRICAL CHARACTERISTICS (Ta=25°C, V⁺1=4.8V, V⁺2=3.0V, R_L=150Ω)

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

(Y Amplifier)

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

(C Amplifier)

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

(Filter Characteristics)

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

(YC Delay)

| | | | | | | |
|----------|-----------------|---|---|-----|---|------|
| YC Delay | T _{YC} | T _{YOUT} -T _{COOUT} at 4MHz | - | +25 | - | nsec |
|----------|-----------------|---|---|-----|---|------|

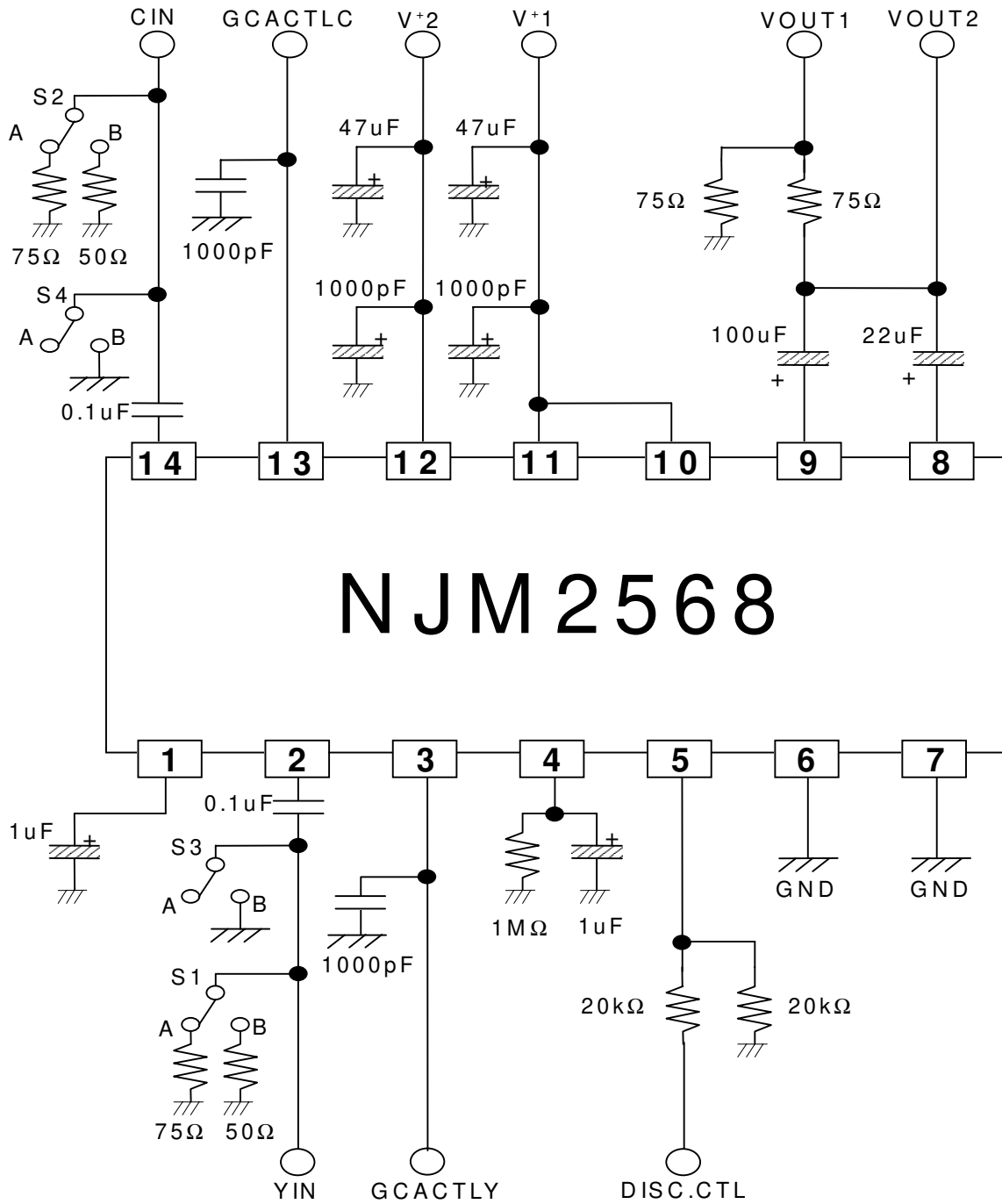
(Maximum Output Swing)

| | | | | | | |
|-------|------------------|--|-----|---|---|------|
| V-OUT | V _{OVm} | 100kHz, Sine Wave, R _L =75Ω | 1.2 | - | - | Vp-p |
|-------|------------------|--|-----|---|---|------|

(GCA Control Signal)

| | | | | | | |
|---------|------------------|---------------------|-----|---|-----|---|
| GCACTLY | V _{GC1} | GCA Control Voltage | 0.5 | - | 2.5 | V |
| | V _{GL1} | MUTE Voltage | GND | - | 0.3 | V |
| GCACTLC | V _{GC2} | GCA Control Voltage | 0.5 | - | 2.5 | V |
| | V _{GL2} | Power Down Voltage | GND | - | 0.3 | V |

■ TEST CIRCUIT



MEMO

<注意事項>

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