

## 47 $\mu$ F AC-Coupling Capacitor Low Voltage Video Driver with LPF

### ■GENERAL DESCRIPTION

The **NJM2512A** is a Low Voltage Video Amplifier featuring small AC-coupling Capacitor.

The NJRC original Technology "ASC(Advanced SAG Correction)" realizes 47 $\mu$ F AC-Coupling Capacitor which enables to downsize mounting space.

No worrying about beat noise caused by charge-pump circuit, and over-current caused by circuit short out than Capacitor-less video driver.

The **NJM2512A** is suitable for any video application.

NJM2512: Gain=6dB

NJM2512A : Gain=12dB

### ■PACKAGE OUTLINE

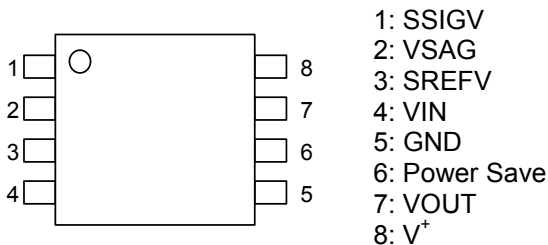


**NJM2512ARB1**

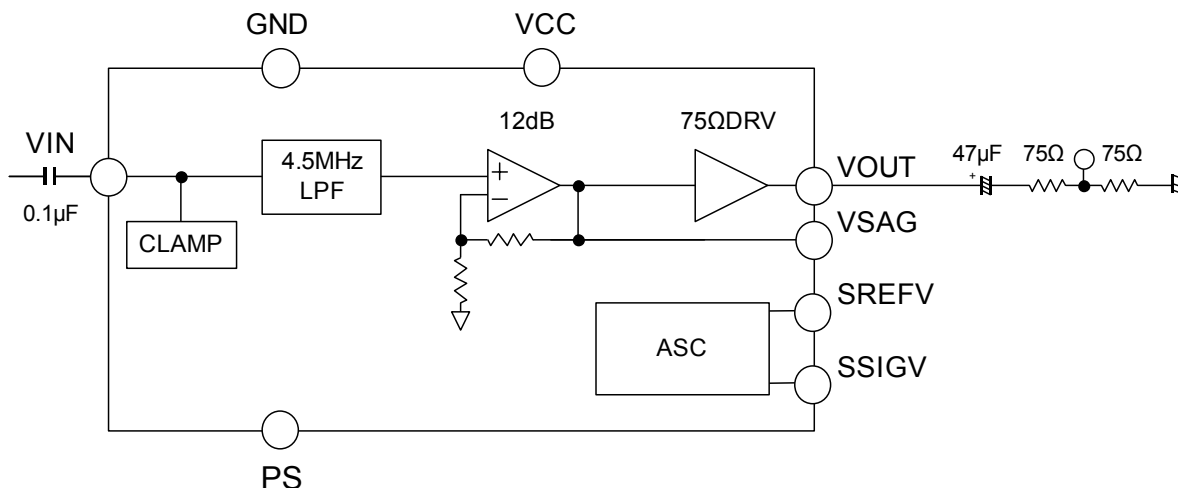
### ■FEATURES

- Operating Voltage           3.0 to 5.5V
- AC-Coupling capacitor    47 $\mu$ F
- 6dB Amplifier
- 75 $\Omega$  Driver
- Internal LPF                0dBtyp.at 4.5MHz  
                                     -33dBtyp.at 19MHz
- Power-save Circuit
- Bipolar Technology
- Package Outline            TVSP8

### ■PIN CONNECTION



### ■BLOCK DIAGRAM



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

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V <sup>+</sup>	7.0	V
Power Dissipation	P <sub>D</sub>	580(Note1)	mW
Operating Temperature Range	Topr	-40 to +85	°C
Storage Temperature Range	Tstg	-40 to +150	°C

(Note1) At on a board of EIA/JEDEC specification. (114.3 x 76.2 x 1.6mm Two layers, FR-4)

## ■RECCOMENDED OPERATING CONDITIONS (Ta=25°C)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Operating voltage	Vopr		3.0	-	5.5	V

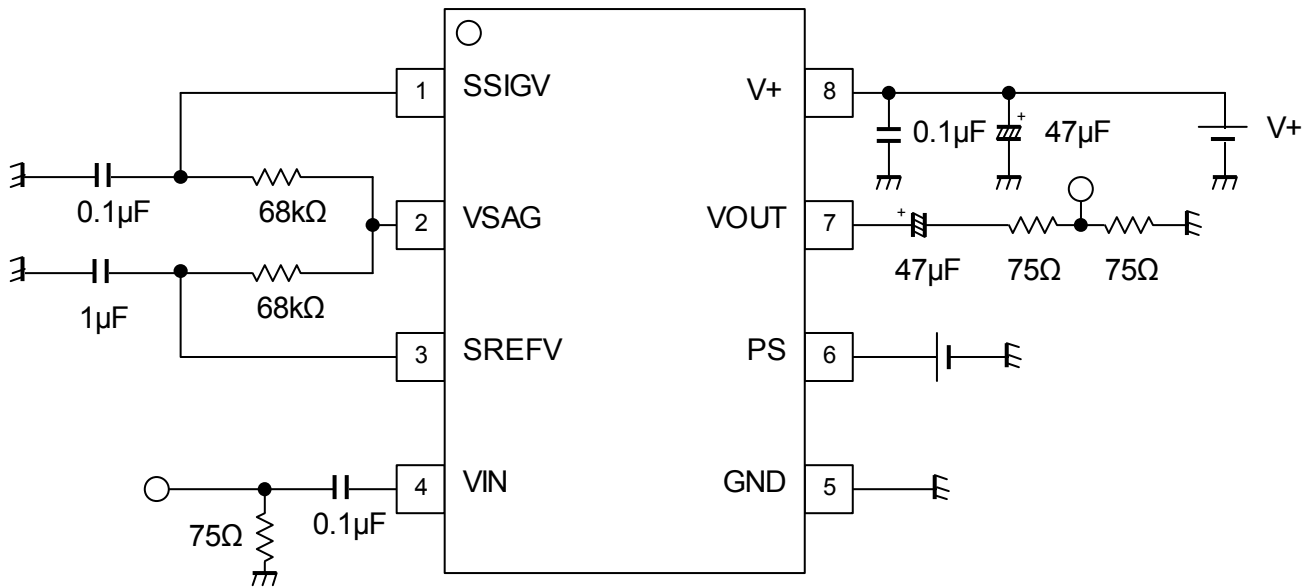
## ■ELECTRICAL CHARACTERISTICS (V<sup>+</sup>=3.3V, RL=150Ω, Ta=25°C)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Supply Current	I <sub>CC</sub>	No signal	-	10	15	mA
Supply Current at Power Save Mode	I <sub>save</sub>	Power save mode	-	20	50	μA
Maximum Output Level	V <sub>om</sub>	Vin=100kHz, sin-signal, THD=1%,	2.2	-	-	Vp-p
Voltage Gain	G <sub>v</sub>	Vin=1MHz, 1.0Vp-p sin-signal	11.5	12.0	12.5	dB
Low Pass Filter Characteristic	Gf4.5M	Vin=4.5MHz/1MHz, 1.0Vpp sin-signal	-0.6	-0.1	+0.4	dB
	Gf19 M	Vin=19MHz/1MHz, 1.0Vpp sin-signal	-	-33	-23	dB
Differential Gain	DG	Vin=1.0Vp-p 10step video signal	-	0.5	-	%
Differential Phase	DP	Vin=1.0Vp-p 10step video signal	-	0.5	-	deg
S/N Ratio	SN	100kHz to 6MHz, Vin=1.0Vp-p 100% White Video Signal, RL=75Ω	-	60	-	dB
SW Voltage High Level	V <sub>thH</sub>	Active	1.8	-	V <sup>+</sup>	V
SW Voltage Low Level	V <sub>thL</sub>	Non-Active	0	-	0.3	V
SW Sink Current High Level	I <sub>thH</sub>	V=5V	-	-	300	μA
SW Sink Current Low Level	I <sub>thL</sub>	V=0.3V	-	-	5	μA

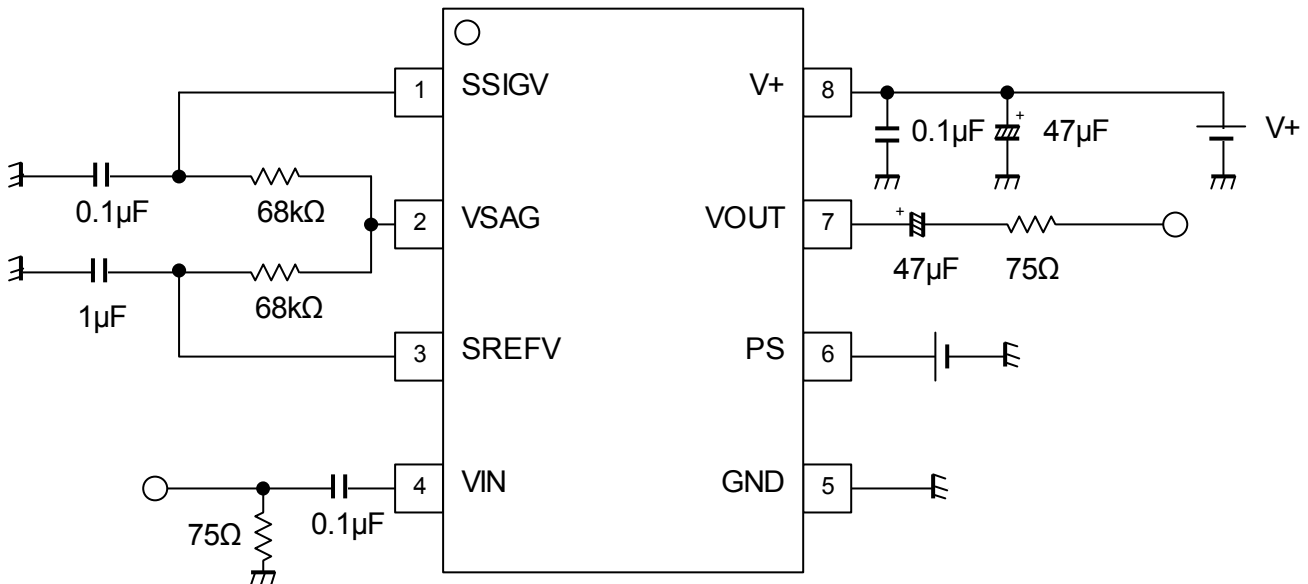
## ■ CONTROL TERMINAL

PARAMETER	STATUS	MODE
Power Save	H	Power save: OFF Active mode
	L	Power save: ON Non-Active mode (Mute)
	OPEN	Power save: OFF Non-Active mode (Mute)

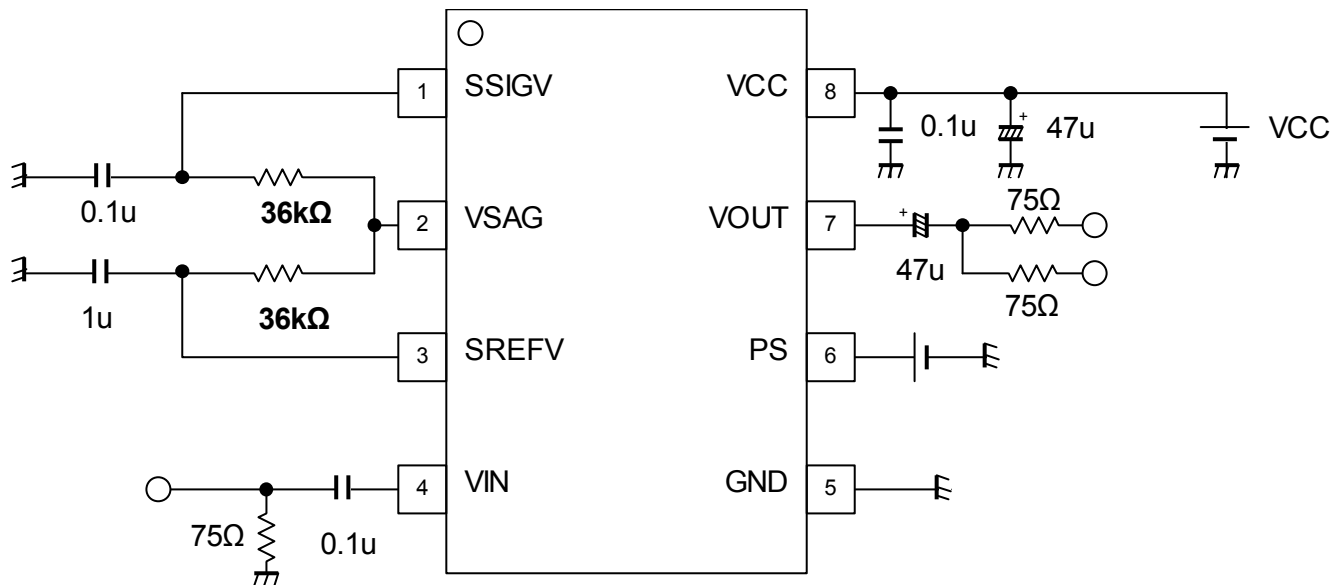
## ■ TEST CIRCUIT



## APPLICATION CIRCUIT1



## APPLICATION CIRCUIT2(2-line drive)



## APPLICATION NOTE

NJM2512 A has possibilities that decrease in the capacitance in low-frequency band when the ceramic capacitor is used (pin 7). It is a possibility that the sag is generated when the ceramic capacitor decreases capacity. Please verify it in consideration of the capacity drop of the ceramic capacitor.

### [CAUTION]

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