

47 μ F AC-Coupling Capacitor Low Voltage Video Driver with LPF

■GENERAL DESCRIPTION

The **NJM2512** is a Low Voltage Video Amplifier featuring small AC-coupling Capacitor.

The NJRC original Technology "ASC(Advanced SAG Correction)" realizes 47 μ 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 **NJM2512** is suitable for any video application.

■PACKAGE OUTLINE

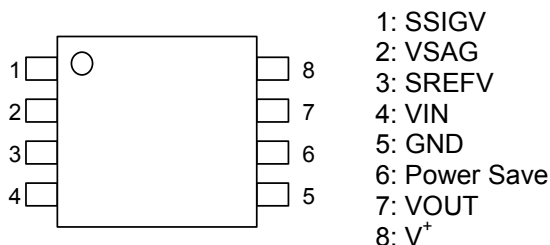


NJM2512RB1

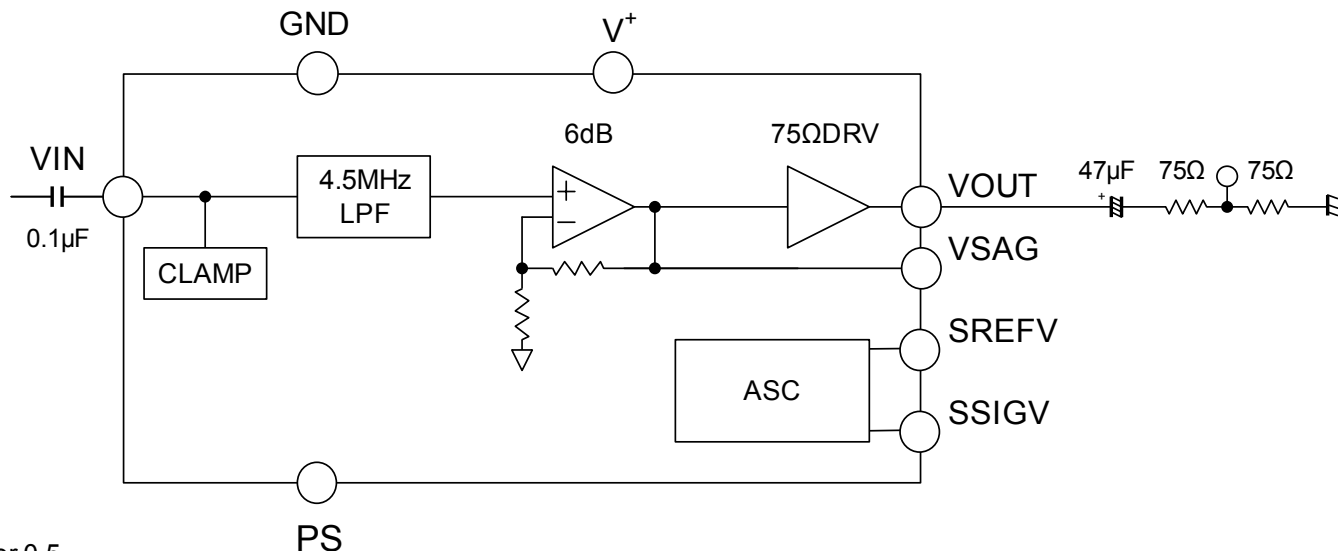
■FEATURES

- Operating Voltage 3.0 to 6.0V
- AC-Coupling capacitor 47 μ F
- 6dB Amplifier
- 75 Ω Driver
- Internal LPF 0dBtyp.at 4.5MHz
-33dBtyp.at 19MHz
- Power-save Circuit
- Bipolar Technology
- Package Outline TVSP8

■PIN CONNECTION



■BLOCK DIAGRAM



Ver.0.5

■ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V ⁺	7.0	V
Power Dissipation	P _D	580(Note1)	mW
Operating Temperature Range	T _{opr}	-40 to +85	°C
Storage Temperature Range	T _{stg}	-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	V _{opr}		3.0	-	6.0	V

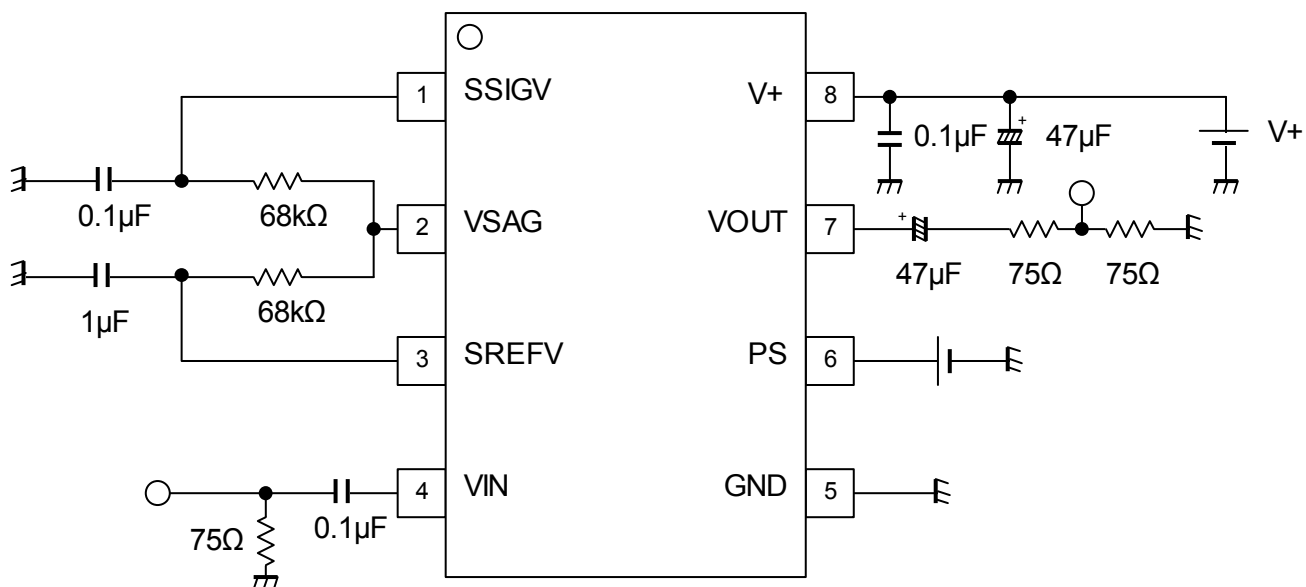
■ELECTRICAL CHARACTERISTICS (V⁺=3.3V, R_L=150Ω, Ta=25°C)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Supply Current	I _{CC}	No signal	-	10	15	mA
Supply Current at Power Save Mode	I _{save}	Power save mode	-	20	50	μA
Maximum Output Level	V _{om}	V _{in} =100kHz, sin-signal, THD=1%,	2.2	-	-	V _{p-p}
Voltage Gain	G _v	V _{in} =1MHz, 1.0V _{p-p} sin-signal	5.5	6.0	6.5	dB
Low Pass Filter Characteristic	G _f 4.5M	V _{in} =4.5MHz/1MHz, 1.0V _{pp} sin-signal	-0.6	-0.1	+0.4	dB
	G _f 19 M	V _{in} =19MHz/1MHz, 1.0V _{pp} sin-signal	-	-33	-23	dB
Differential Gain	DG	V _{in} =1.0V _{p-p} 10step video signal	-	0.5	-	%
Differential Phase	DP	V _{in} =1.0V _{p-p} 10step video signal	-	0.5	-	deg
S/N Ratio	SN	100kHz to 6MHz, V _{in} =1.0V _{p-p} 100% White Video Signal, R _L =75Ω	-	60	-	dB
SW Voltage High Level	V _{thH}	Active	1.8	-	V ⁺	V
SW Voltage Low Level	V _{thL}	Non-Active	0	-	0.3	V
SW Sink Current High Level	I _{thH}	V=5V	-	-	300	μA
SW Sink Current Low Level	I _{thL}	V=0.3V	-	-	5	μA

■ CONTROL TERMINAL

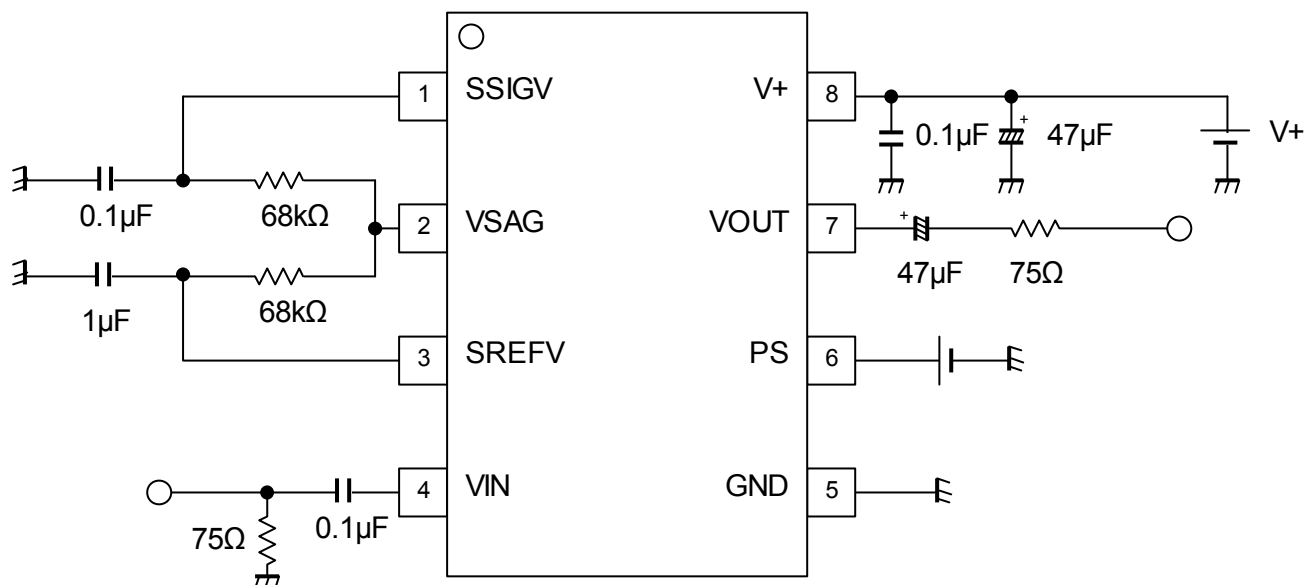
PARAMETER	STATUS	MODE
Power Save	H	Power save: OFF Active mode
	L	Power save: ON Non-Active mode (Mute)
	OPEN	Power save: OFF Non-Active mode (Mute)

■ TEST CIRCUIT

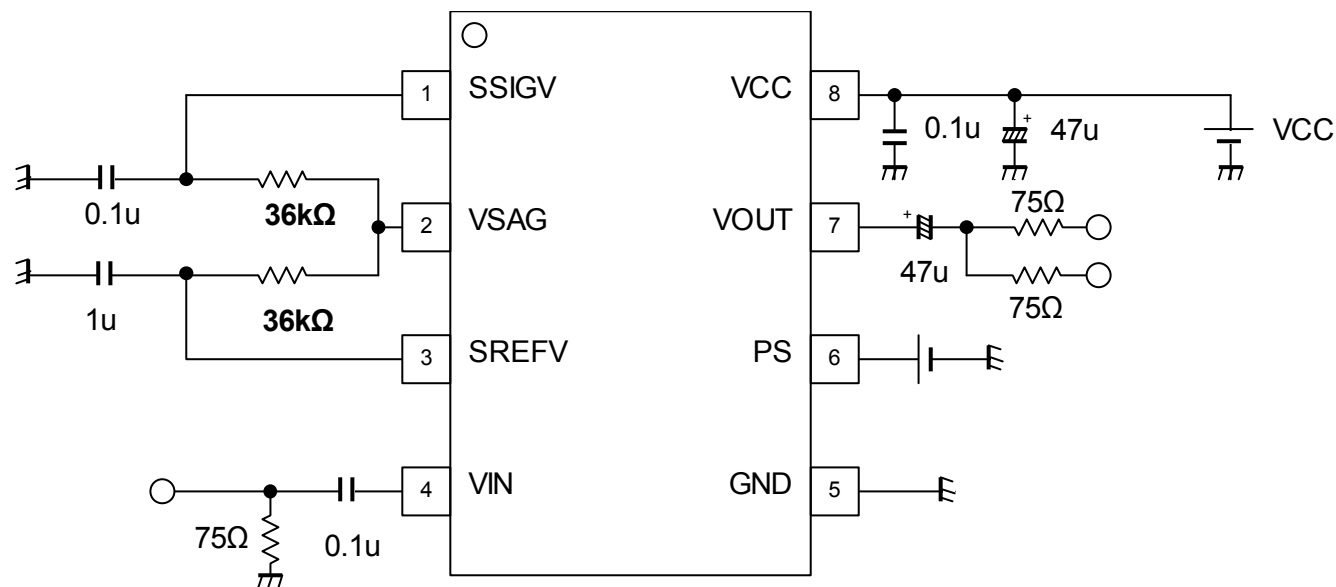


NJM2512

APPLICATION CIRCUIT1



APPLICATION CIRCUIT2(2-line drive)



APPLICATION NOTE

NJM2512 has possibilities that decrease in the capacitance in low-frequency band when the ceramic capacitor is used(pin7). 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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