

47 μ F AC-Coupling Capacitor Wide Band 3ch Video Driver with LPF

■GENERAL DESCRIPTION

The **NJM2516** is 3ch video amplifier with LPF for the high definition signal.

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 **NJM2516** is suitable for the Video system to the high definition signal output.

■PACKAGE OUTLINE

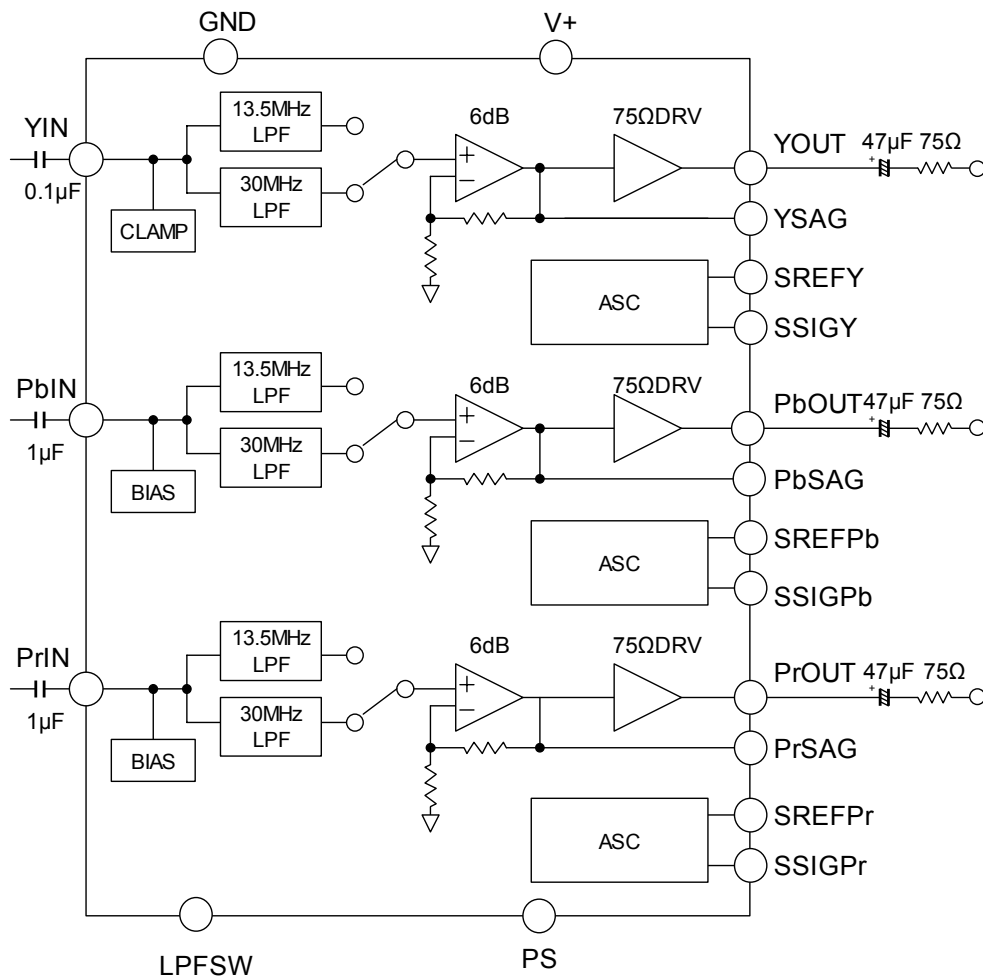


NJM2516VC3

■FEATURES

- Operating Voltage 4.5 to 9.5V
- AC-Coupling Capacitor 47 μ F
- Input Signal Y,Pb,Pr
- Internal 6dB Amplifier
- Internal 75 Ω Driver
- Internal LPF *fc=13.5MHz/30MHz SW
- Internal Power Save Circuit
- Bipolar Technology
- Package Outline SSOP20-C3

■BLOCK DIAGRAM



NJM2516

■ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V ⁺	10	V
Power Dissipation	P _D	1500(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, 4 layers, FR-4)

■RECCOMENDED OPERATING CONDITIONS(Ta=25°C)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Operating voltage	Vopr	V ⁺	4.5	-	9.5	V

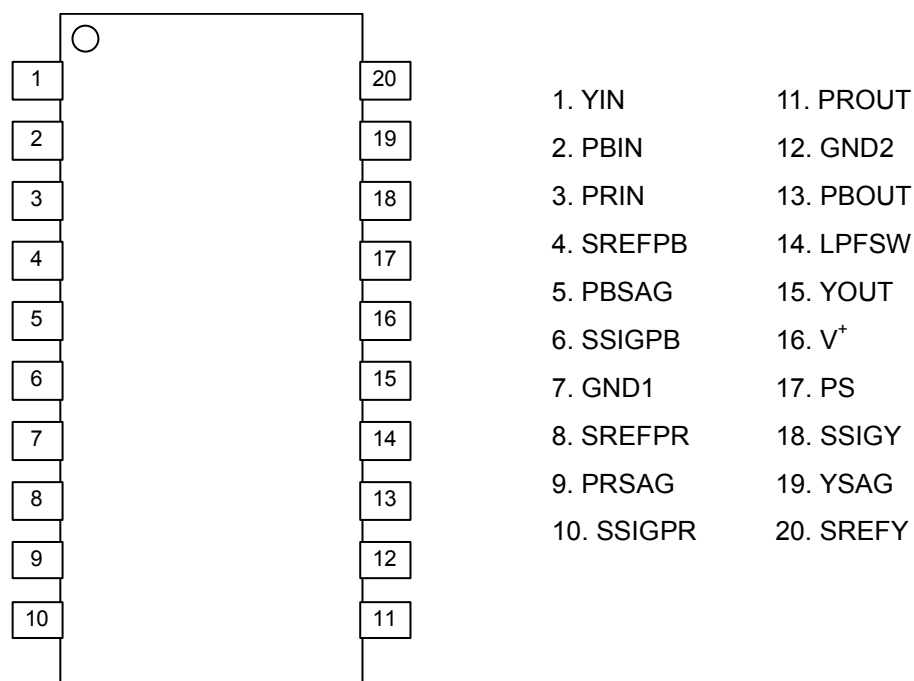
■ELECTRICAL CHRACTERISTCS (V⁺=5V, RL=150Ω,Ta=25°C)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Supply Current	I _{CC}	No signal	-	40	60	mA
Supply Current at Power Save Mode	I _{save}	Power save mode, No signal	-	0.8	1.4	mA
Maximum Output Level	V _{om}	V _{in} =100kHz, sin-signal, THD=1%	2.4	-	-	V _{p-p}
Voltage Gain	G _v	V _{in} =1MHz, 1.0V _{p-p} sin-signal	5.5	6.0	6.5	dB
Difference of Voltage Gain Between Input Terminals	ΔG _{vl}	V _{in} =1MHz, 1.0V _{p-p} sin-signal	-0.25	0	+0.25	dB
LPF Characteristics 1	G _{fSD} 13.5M	V _{in} =13.5MHz/1MHz, 1.0V _{p-p} sin-signal	-1.0	0	1.0	dB
	G _{fSD} 54M	V _{in} =54MHz/1MHz, 1.0V _{p-p} sin-signal	-	-40.0	-24.0	dB
LPF Characteristics 2	G _{fD} 30M	V _{in} =30MHz/1MHz, 1.0V _{p-p} sin-signal	-	-2.0	-	dB
	G _{fD} 74M	V _{in} =74MHz/1MHz, 1.0V _{p-p} sin-signal	-	-40.0	-24.0	dB
Differential Gain	DG	YIN=1.0V _{p-p} , PBIN, PRIN=0.7V _{p-p} , 10step video signal	-	0.5	-	%
Differential Phase	DP	YIN=1.0V _{p-p} , PBIN, PRIN=0.7V _{p-p} , 10step video signal	-	0.3	-	deg
S/N Ratio	SN	YIN=1.0V _{p-p} , PBIN, PRIN=0.7V _{p-p} , white video signal, BW=100kHz to 6MHz, RL=75Ω	-	80	-	dB
SW Voltage High Level	V _{thH}	Active	2.5	-	V ⁺	V
SW Voltage Low Level	V _{thL}	Non-Active	0	-	1.0	V
SW Sink Current High Level	I _{thH}	V=5V	-	-	120	μA
SW Sink Current Low Level	I _{thL}	V=0.3V	-	-	8.0	μA

■CONTROL CHARACTERISTIC

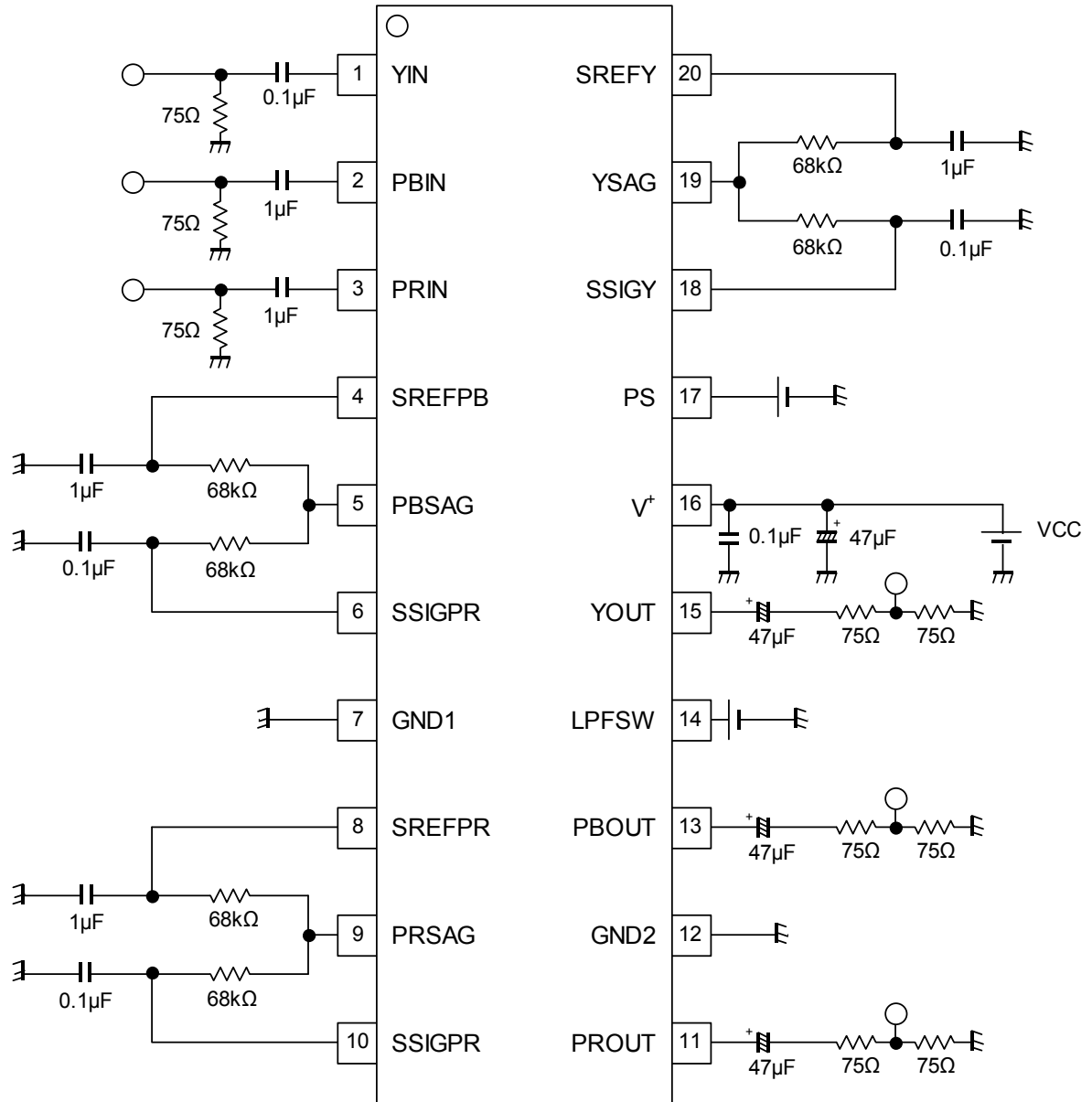
PARAMETER	STATUS	MODE
Power Save	H	Power save: OFF Active mode
	L	Power save: ON Non-Active mode (Mute)
	OPEN	Power save: ON Non-Active mode (Mute)
LPF	H	30MHz LPF
	L	13.5MHz LPF
	OPEN	13.5MHz LPF

■PIN CONFIGURATION

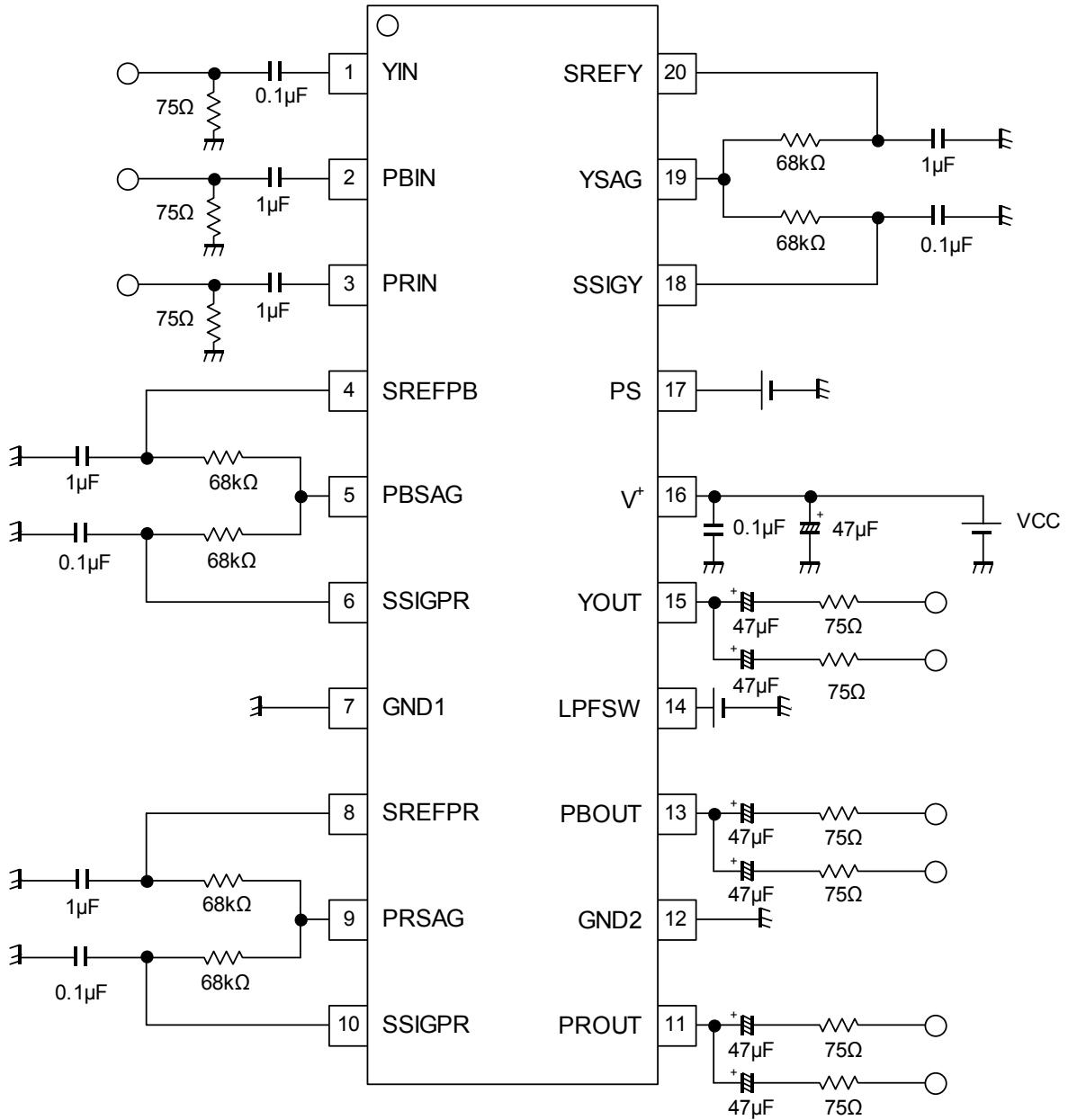


NJM2516

■ TEST CIRCUIT



APPLICATION CIRCUIT



[CAUTION]

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