

Video Amplifier Monolithic IC MM1196

Outline

This is a 75Ω, 2 system drive IC that supports S. Y input and V input have clamps, while C input does not have a clamp. Also, Y output and V output have anti-sag pins, and the output capacitor is used at a low value.

Features

1. Supports S
Three 75Ω 2 system drive circuits built in
2. Current consumption 24mA typ.
3. Power supply voltage 5V
4. Frequency response 7MHz
5. Crosstalk 60dB (at 4.43MHz)
6. Anti-sag pin

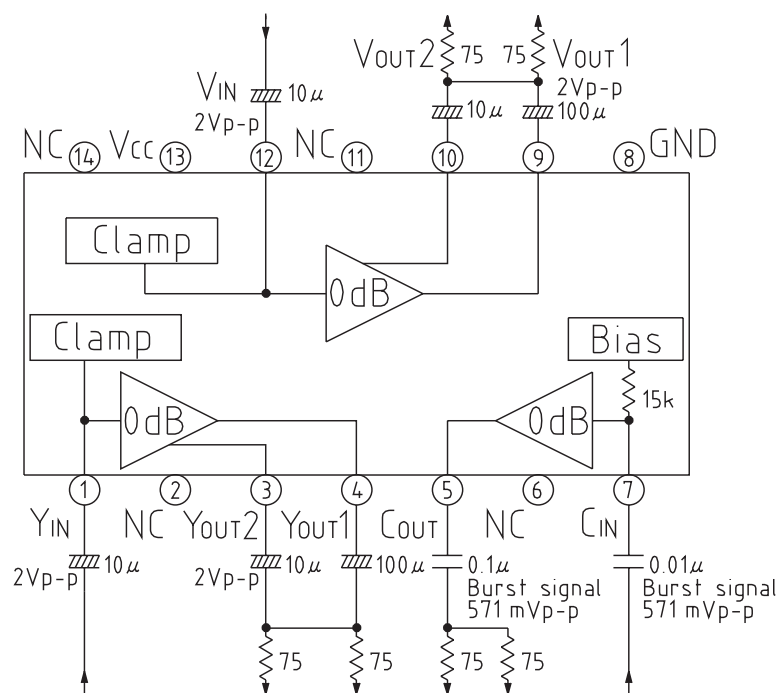
Package

SOP-14B (MM1196XF)

Applications

1. Free-standing VCR

Block Diagram



Pin Description

Pin no.	Pin name	Function	Internal equivalent circuit diagram
1 12	Y _{IN} and V _{IN}	Y and V input	
2, 6 11, 14	NC		
3 10	Y _{OUT2} and V _{OUT2}	Y and V feedback input	
4 9	Y _{OUT1} and V _{OUT1}	Y and V output	
5	C _{OUT}	C output	
7	C _{IN}	C input	
8	GND	GND	
13	V _{CC}	Power supply	

Absolute Maximum Ratings (Ta=25°C)

Item	Symbol	Ratings	Units
Storage temperature	T _{STG}	-40~+125	°C
Operating temperature	T _{OPR}	-20~+75	°C
Power supply voltage	V _{CC} max.	7	V
Allowable loss	P _d	350	mW

Electrical Characteristics (Except where noted otherwise, Ta=25°C, V_{CC}=5.0V, SW1, SW2, SW3 : B, SG1, SG2, SG3 : no

Item	Symbol	Measurement circuit	Measurement conditions	Min.	Typ.	Max.	Units
Operating power supply voltage	V _{CC}	V _{CC}		4.7	5.0	5.3	V
Consumption current	I _{CC}				24.0	33.0	mA
Y amp output SW1 : A							
Voltage gain	G _{v1}	TP1	SG1 : Sine wave 2V _{P-P} , 0.1MHz	-0.5	0	0.5	dB
Frequency characteristic	F _{c1}		SG1 : Sweep signal 2V _{P-P} , 7MHz/0.1MHz	-1.0	0	1.0	dB
Differential gain	D _{G1}	TP2	SG1 : Staircase wave 2V _{P-P} , APL=10, 50, 90%		0	±3	%
Differential phase	D _{P1}		SG1 : Staircase wave 2V _{P-P} , APL=10, 50, 90%		0	±3	deg
Video amp output SW2 : A							
Voltage gain	G _{v2}	TP3	SG2 : Sine wave 2V _{P-P} , 0.1MHz	-0.5	0	0.5	dB
Frequency characteristic	F _{c2}		SG2 : Sweep signal 2V _{P-P} , 7MHz/0.1MHz	-1.0	0	1.0	dB
Differential gain	D _{G2}	TP4	SG2 : Staircase wave 2V _{P-P} , APL=10, 50, 90%		0	±3	%
Differential phase	D _{P2}		SG2 : Staircase wave 2V _{P-P} , APL=10, 50, 90%		0	±3	deg
Chroma amp output SW3 : A							
Voltage gain	G _{v3}	TP5	SG3 : Sine wave 2V _{P-P} , 0.1MHz	-0.5	0	0.5	dB
Frequency characteristic	F _{c3}		SG3 : Sweep signal 2V _{P-P} , 7MHz/0.1MHz	-1.0	0	1.0	dB
Crosstalk							
Y _{IN} → V _{OUT}	C _{T1}	TP3	SG1 : Sine wave 2V _{P-P} , 4.43MHz V _{OUT} /Y _{IN} , SW1 : A		-60	-50	dB
Y _{IN} → C _{OUT}	C _{T2}	TP5	SG1 : Sine wave 2V _{P-P} , 4.43MHz C _{OUT} /Y _{IN} , SW1 : A		-60	-50	dB
V _{IN} → Y _{OUT}	C _{T3}	TP1	SG2 : Sine wave 2V _{P-P} , 4.43MHz Y _{OUT} /V _{IN} , SW2 : A		-60	-50	dB
V _{IN} → C _{OUT}	C _{T4}	TP5	SG2 : Sine wave 2V _{P-P} , 4.43MHz C _{OUT} /V _{IN} , SW2 : A		-60	-50	dB
C _{IN} → Y _{OUT}	C _{T5}	TP1	SG3 : Sine wave 2V _{P-P} , 4.43MHz Y _{OUT} /C _{IN} , SW3 : A		-60	-50	dB
C _{IN} → V _{OUT}	C _{T6}	TP3	SG3 : Sine wave 2V _{P-P} , 4.43MHz V _{OUT} /C _{IN} , SW3 : A		-60	-50	dB

Measuring Circuit

■ MM1196XF

