

Video Amplifier

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Monolithic IC MM1041

Outline

This IC is a 6dB video amplifier for chroma signal amplification. The gain is fixed at 6dB, and it is used in 75Ω output circuits.

Features

- 1. Chroma signal amplification
- 2. Fixed 6dB gain
- 3. Built-in 75Ω driver
- 4. Frequency response 7MHz
- 5. Current consumption 4mA typ.
- 6. Power supply voltage 5V

Package

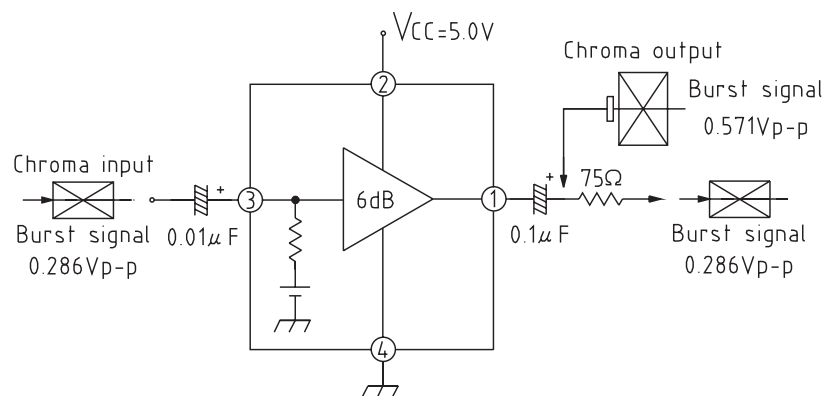
- MMP-4A (MM1041XM)
- SIP-5A (MM1041XS)

Applications

- 1. TV
- 2. Free-standing VCR
- 3. VCR with camera
- 4. Other video equipment

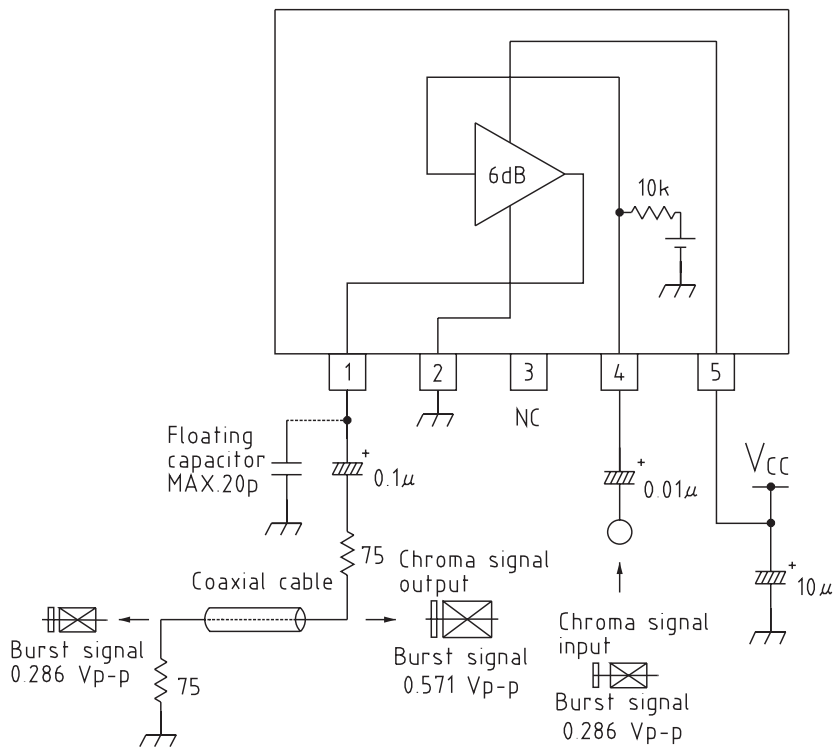
Block Diagram

MMP-4A

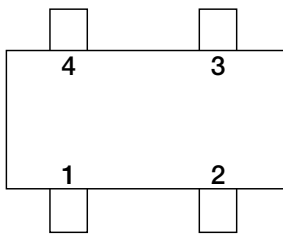


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SIP-5A



Pin Description



MMP-4A

Pin no.		Pin name
MMP-4A	SIP-5A	
1	1	Output
2	5	V _{CC}
3	4	Input
4	2	GND

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	200	mW

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Electrical Characteristics (Except where noted otherwise, Ta=25°C, Vcc=5.0V)

Item	Symbol	Measurement circuit	Measurement conditions	Min.	Typ.	Max.	Units
Operating power supply voltage	Vcc	Vcc		4.7	5.0	5.3	V
Consumption current	Id	Vcc			4.0	7.0	mA
Voltage gain	Gv	TP2	SI Sine wave, 0.9Vp-p, 0.1MHz	5.5	6.0	6.5	dB
Frequency characteristic	fc1	TP2	SI Sine wave, 0.9Vp-p, 7MHz/0.1MHz *	-1	0	1	dB
Input impedance	Zi	TP1			10		kΩ

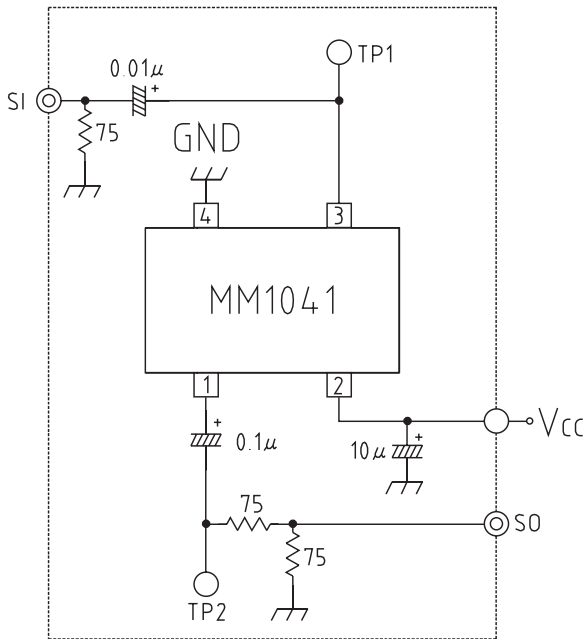
Note : Frequency response fc

Given video output for 0.9Vp-p, 0.1MHz sweep signal input as V1, and output for 7MHz input as V2, fc1 is obtained as follows.

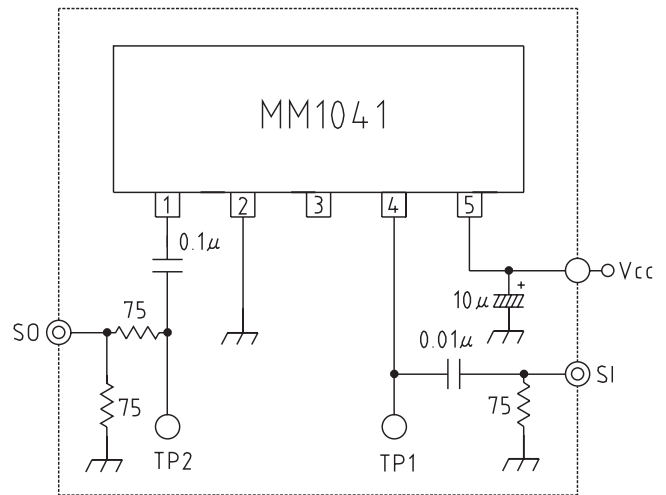
$$fc1 = 20 \text{LOG} \frac{V2}{V1} \text{ dB}$$

Measuring Circuit

■ MM1041XM

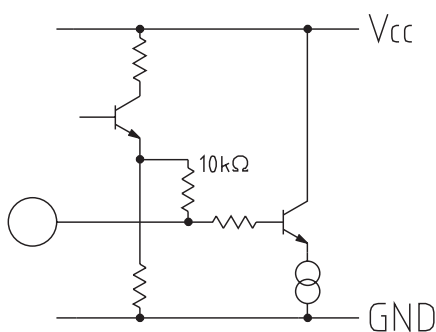


■ MM1041XS



Equivalent Circuit Diagram

Input pin(MMP:-3P/SIP:-4P)



Output pin(MMP:-1P/SIP:-1P)

