

# Video Amplifier 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

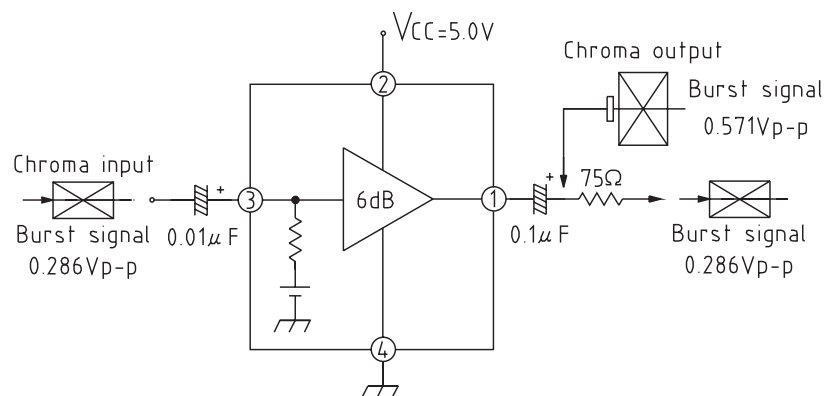
- MMP-4A (MM1041XM)
- SIP-5A (MM1041XS)

## Applications

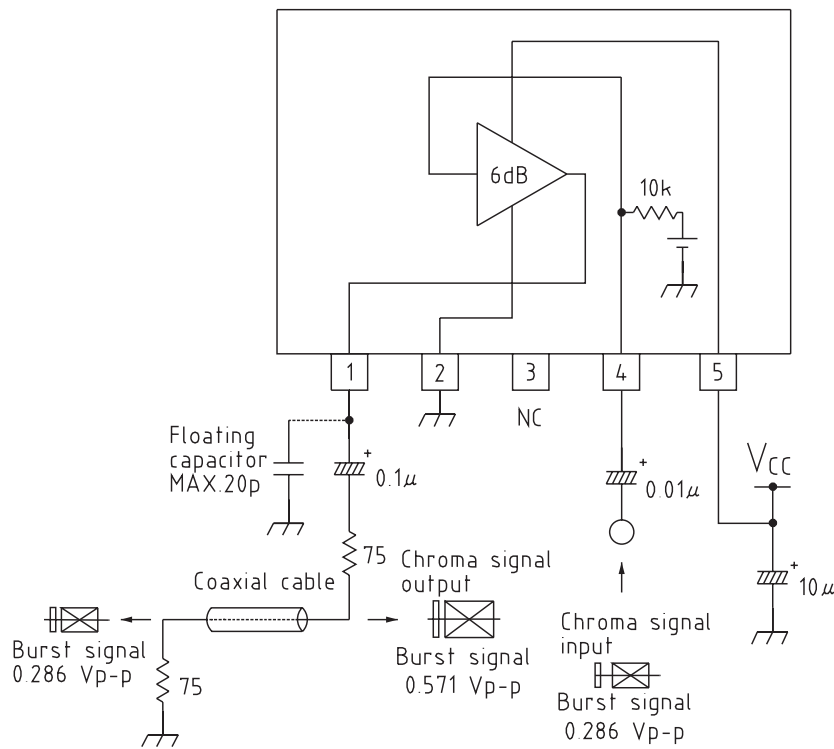
1. TV
2. Free-standing VCR
3. VCR with camera
4. Other video equipment

## Block Diagram

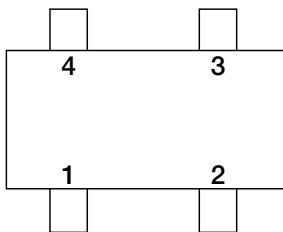
### ■ MMP-4A



■ SIP-5A



Pin Description



MMP-4A

Pin no.		Pin name
MMP-4A	SIP-5A	
1	1	Output
2	5	V <sub>CC</sub>
3	4	Input
4	2	GND

Absolute Maximum Ratings (Ta=25°C)

Item	Symbol	Ratings	Units
Storage temperature	T <sub>STG</sub>	-40~+125	°C
Operating temperature	T <sub>OPR</sub>	-20~+75	°C
Power supply voltage	V <sub>CC</sub> max.	7	V
Allowable loss	P <sub>D</sub>	200	mW

**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, 0.9V <sub>P-P</sub> , 0.1MHz	5.5	6.0	6.5	dB
Frequency characteristic	fc1	TP2	SI Sine wave, 0.9V <sub>P-P</sub> , 7MHz/0.1MHz *	-1	0	1	dB
Input impedance	Zi	TP1			10		kΩ

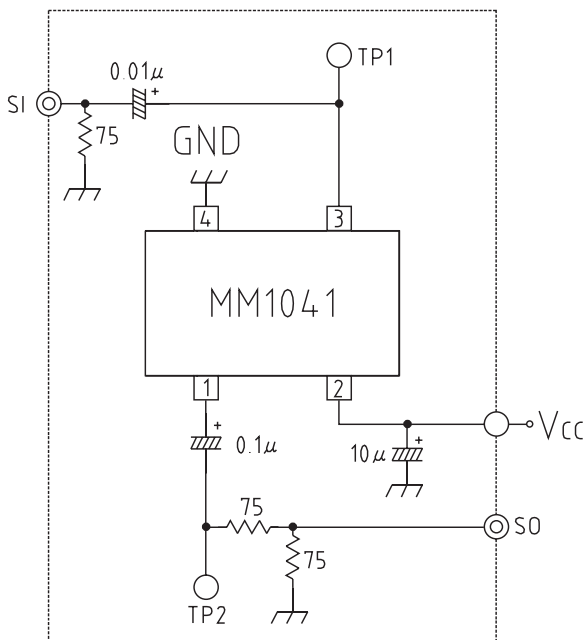
Note : Frequency response fc

Given video output for 0.9V<sub>P-P</sub>, 0.1MHz sweep signal input as V1, and output for 7MHz input as V2, fc1 is obtained as follows.

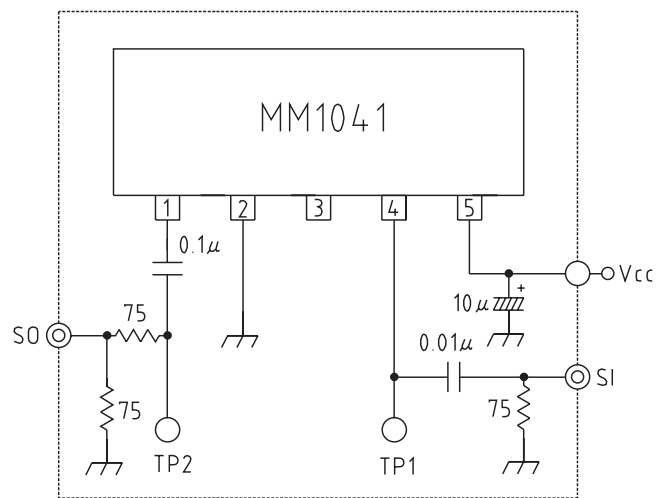
$$fc1 = 20 \text{LOG} \frac{V2}{V1} \text{ dB}$$

**Measuring Circuit**

■ MM1041XM

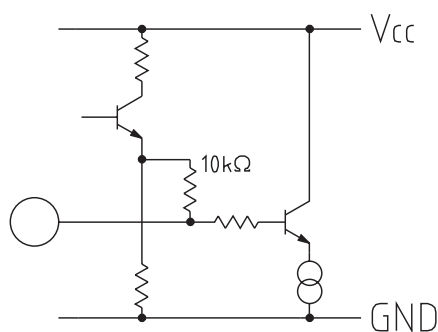


■ MM1041XS



**Equivalent Circuit Diagram**

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



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

