

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

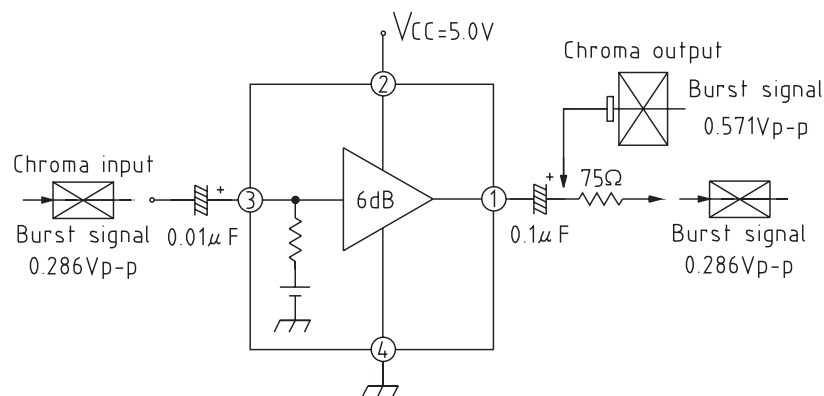
- MMP-4A (MM1041XM)
- SIP-5A (MM1041XS)

Applications

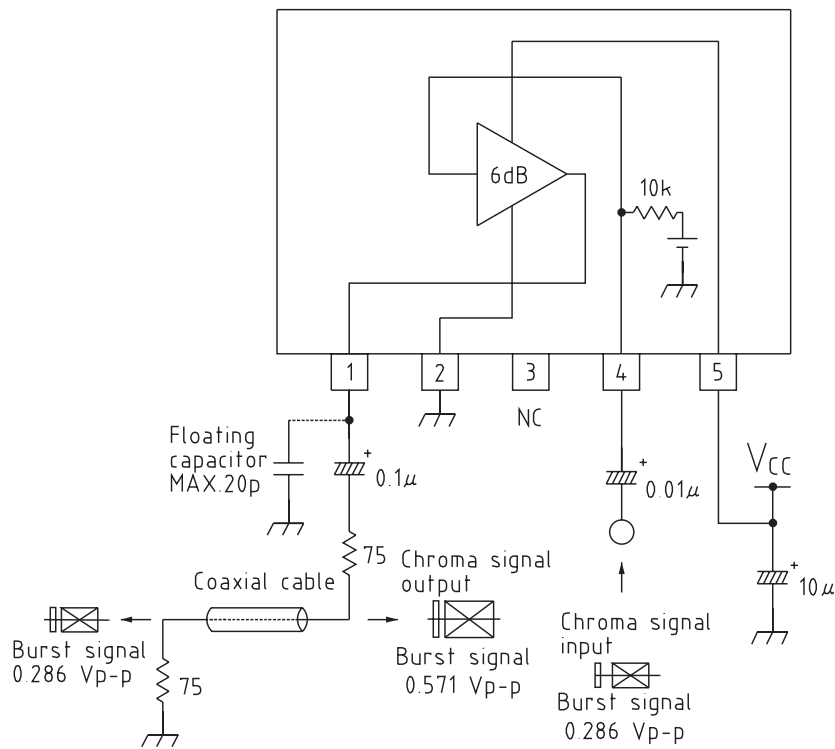
1. TV
2. Free-standing VCR
3. VCR with camera
4. Other video equipment

Block Diagram

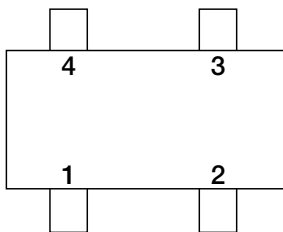
■ MMP-4A



■ SIP-5A



Pin Description



MMP-4A

Pin no.		Pin name
MMP-4A	SIP-5A	
1	1	Output
2	5	V _{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

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

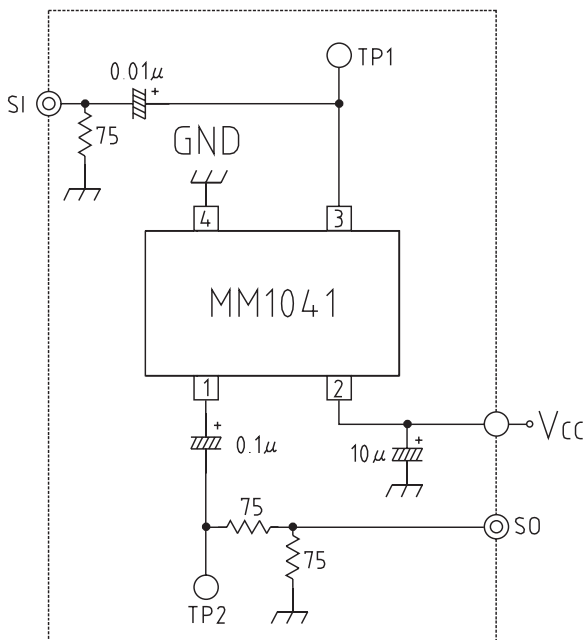
Note : Frequency response fc

Given video output for 0.9V_{P-P}, 0.1MHz sweep signal input as V1, and output for 7MHz input as V2, fc1 is obtained as follows.

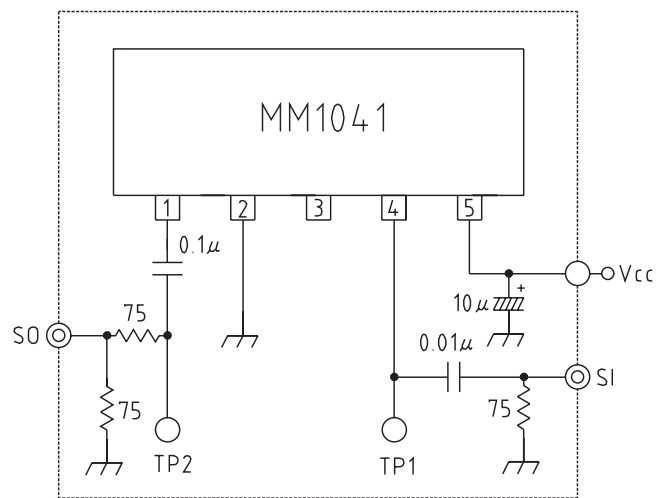
$$fc1 = 20 \text{LOG} \frac{V2}{V1} \text{ dB}$$

Measuring Circuit

■ MM1041XM

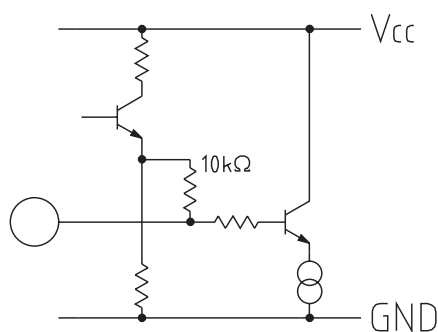


■ MM1041XS



Equivalent Circuit Diagram

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



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

