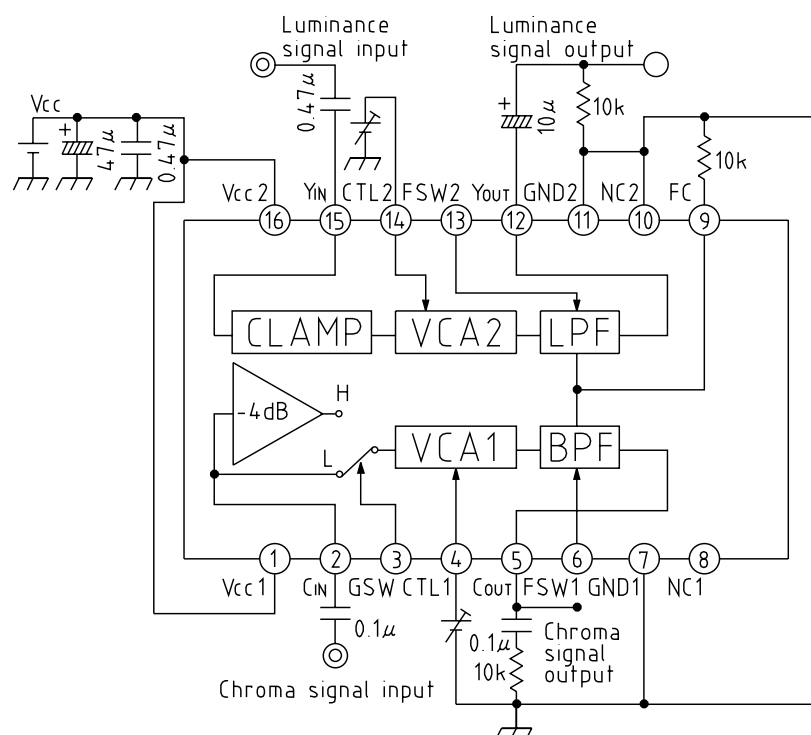
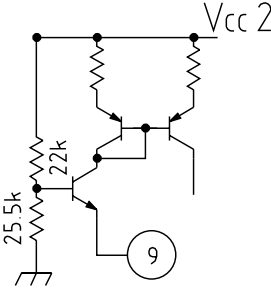
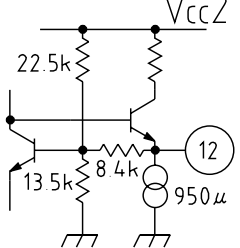
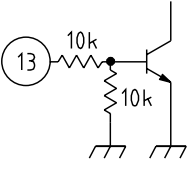
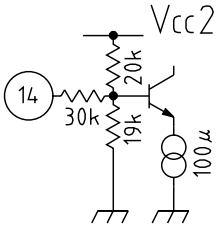
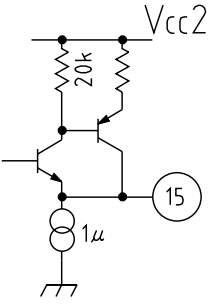




Pin Description

Pin no.	Pin name	Equivalent Circuit Diagram	Function
1	V _{CC1}		C power supply pin
2	C _{IN}		Chroma signal input.
3	GSW		C gain switching pin. Set at 7dB standard for low, and 3dB standard for high.
4	CTL1		C gain control pin.
5	C _{OUT}		Chroma signal output pin.
6	FSW1		C BPF frequency switching pin. Set at 3.58MHz BPF for high, and 4.43MHz BPF for low.
7	GND1		C GND
8	NC1		NC pin

9	FC		Pin for adjusting LPF and BPF frequency response. Connect 10kΩ between this pin and ground.
10	NC2		NC pin
11	GND2		Y GND
12	Y _{OUT}		Y output pin
13	FSW2		Y LPF frequency switching pin. Set at 4.4MHz LPF for high, and 5.4MHz LPF for low.
14	CTL2		Y gain control pin.
15	Y _{IN}		Luminance signal input pin.
16	V _{CC2}		Y power supply pin.

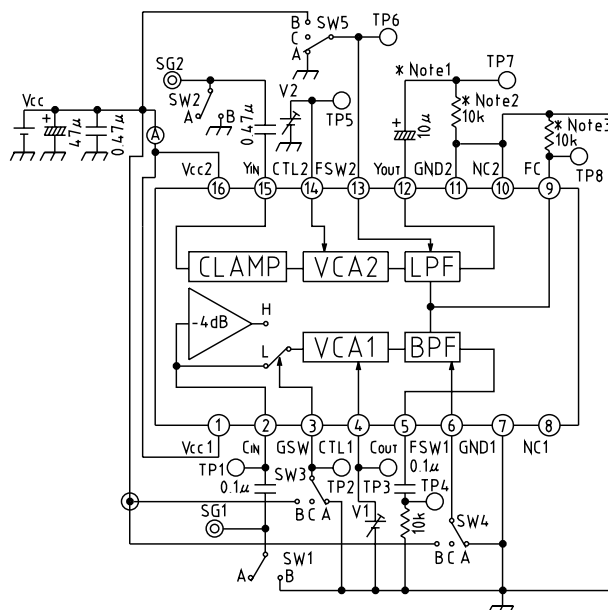
Absolute Maximum Ratings (Ta=25°C)

Item	Symbol	Ratings	Units
Storage temperature	T _{STG}	-40~+125	°C
Operating temperature	T _{OPR}	-20~+75	°C
Power supply voltage	V _{CC} max.	8	V
Allowable loss	P _d	500	mW

Electrical Characteristics (Ta=25°C, V_{CC}=4.75V, V₁=2.2V, V₂=2.1V, SG1~SG2 : no signal, SW1~SW5 : A)

Item	Symbol	Measurement circuit	Measurement conditions	Min.	Typ.	Max.	Units
Operating power supply voltage	V _{CC}			4.5	4.75	5.5	V
Consumption current	I _{CC}				10.6	13	mA
Y subsystem cutoff frequency 5.4 MHz							
Voltage gain 1	Gv1	TP7	SG2 : sine wave 2V _{P-P} 100kHz V2=1.0V	-7.5	-6	-4.5	dB
Voltage gain 2	Gv2	TP7	SG2 : sine wave 1V _{P-P} 100kHz	-1.5	0	-1.5	dB
Voltage gain 3	Gv3	TP7	SG2 : sine wave 0.5V _{P-P} 100kHz V2=4.2V	4.5	6	7.5	dB
Cutoff frequency 5.4 MHz	fc1	TP7	SG2 : sine wave 1V _{P-P}	5			MHz
Frequency characteristic 1	Gf1	TP7	SG2 : sine wave 1V _{P-P} 14.5MHz			-30	dB
Group delay characteristic 1	td1	TP7	SG2 : sine wave 1V _{P-P} 100kHz	85	105	125	nS
Group delay characteristic 2	td2	TP7	SG2 : sine wave 1V _{P-P} 1MHz	90	110	130	nS
S/N	S _N	TP7	SG2 : white 50% video signal		-47	-43	dB
Y subsystem cutoff frequency 4.4 MHz SW5 : B							
Cutoff frequency 5.4 MHz	fc2	TP7	SG2 : sine wave 1V _{P-P}	4			MHz
Frequency characteristic 2	Gf1	TP7	SG2 : sine wave 1V _{P-P} 9.5MHz			-25	dB
Group delay characteristic 3	td3	TP7	SG1 : sine wave 1V _{P-P} 100kHz	105	125	145	nS
Group delay characteristic 4	td4	TP7	SG2 : sine wave 1V _{P-P} 1MHz	110	130	150	nS
C system NTSC Except where noted otherwise, SW4 : B							
Voltage gain 4	Gv4	TP4	SG1 : sine wave 0.14V _{P-P} V1=4.4V	9	13	15	dB
Voltage gain 5	Gv5	TP4	SG1 : sine wave 0.28V _{P-P}	3	7	9	dB
Voltage gain 6	Gv6	TP4	SG1 : sine wave 0.56V _{P-P} V1=1.1V	-3	1	3	dB
Voltage gain 7	Gv7	TP4	SG1 : sine wave 0.28V _{P-P} SW3 : B	-1	3	5	dB
Frequency characteristic 3	Gf3	TP4	SG1 : sine wave 0.28V _{P-P} 2.78MHz	-5.5	-3.5	+2	dB
Frequency characteristic 4	Gf4	TP4	SG1 : sine wave 0.28V _{P-P} 4.38MHz	-7.5	-3.5	+2	dB
Frequency characteristic 5	Gf5	TP4	SG1 : sine wave 0.28V _{P-P} 1.08MHz			-10	dB
Frequency characteristic 6	Gf6	TP4	SG1 : sine wave 0.28V _{P-P} 6.08MHz			-5	dB
Frequency characteristic 7	Gf7	TP4	SG1 : sine wave 0.28V _{P-P} 10MHz			-20	dB
Frequency characteristic 8	Gf8	TP4	SG1 : sine wave 0.28V _{P-P} 15MHz			-30	dB
Group delay characteristic 5	td5	TP4	SG1 : sine wave 0.28V _{P-P}	230	310	340	nS
Group delay characteristic 6	td6	TP4	SG1 : sine wave 0.28V _{P-P} 2.78MHz	160	240	320	nS
Group delay characteristic 7	td7	TP4	SG1 : sine wave 0.28V _{P-P} 4.38MHz	150	200	250	nS
C system PAL Except where noted otherwise, SG1 : f=4.43MHz							
Voltage gain 8	Gv8	TP4	SG1 : sine wave 0.28V _{P-P}	3	7	9	dB
Frequency characteristic 9	Gf9	TP4	SG1 : sine wave 0.28V _{P-P} 3.63MHz	-5.5	-2.2	+2	dB
Frequency characteristic 10	Gf10	TP4	SG1 : sine wave 0.28V _{P-P} 5.23MHz	-7.5	-3.0	+2	dB
Frequency characteristic 11	Gf11	TP4	SG1 : sine wave 0.28V _{P-P} 1.93MHz			-10	dB
Frequency characteristic 12	Gf12	TP4	SG1 : sine wave 0.28V _{P-P} 6.93MHz			-5	dB
Frequency characteristic 13	Gf13	TP4	SG1 : sine wave 0.28V _{P-P} 10MHz			-15	dB
Frequency characteristic 14	Gf14	TP4	SG1 : sine wave 0.28V _{P-P} 15MHz			-30	dB
Group delay characteristic 8	td8	TP4	SG1 : sine wave 0.28V _{P-P}	180	260	290	nS
Group delay characteristic 9	td9	TP4	SG1 : sine wave 0.28V _{P-P} 3.63MHz	120	200	280	nS
Group delay characteristic 10	td10	TP4	SG1 : sine wave 0.28V _{P-P} 5.23MHz	130	200	250	nS
Crosstalk							
Y→C	C _{T1}	TP4	SG2 : sine wave 1V _{P-P} 4.43MHz SW1 : B		-55	-50	dB
C→Y	C _{T2}	TP7	SG1 : sine wave 0.28V _{P-P} 4.43MHz SW2 : B		-55	-50	dB
SW input voltage SW3~SW5 : C							
GSW (H)	V _{IH1}	TP4	SG1 : sine wave 0.28V _{P-P} 4.43MHz	2.1			V
GSW (L)	V _{IL1}	TP4	SG1 : sine wave 0.28V _{P-P} 4.43MHz			0.7	V
FSW1 (H)	V _{IH2}	TP4	SG1 : sine wave 0.28V _{P-P} 4.43MHz	2.1			V
FSW1 (L)	V _{IL2}	TP4	SG1 : sine wave 0.28V _{P-P} 4.43MHz			0.7	V
FSW2 (H)	V _{IH3}	TP7	SG2 : sine wave 1V _{P-P} 4.43MHz	2.1			V
FSW2 (L)	V _{IL3}	TP7	SG2 : sine wave 1V _{P-P} 4.43MHz			0.7	V

Measuring Circuit

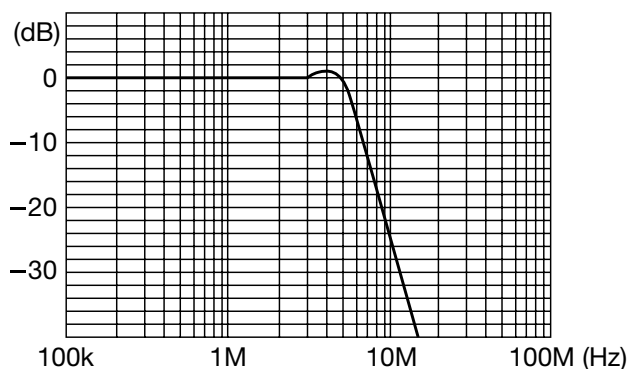


- *1 Design so that , to the extent possible, Y_{OUT} pin and FC pin are not capacitance coupled. Filter frequency response may be affected.
- *2 Connect NC2 pin to ground.
- *3 Use component with $\pm 1\%$ precision.

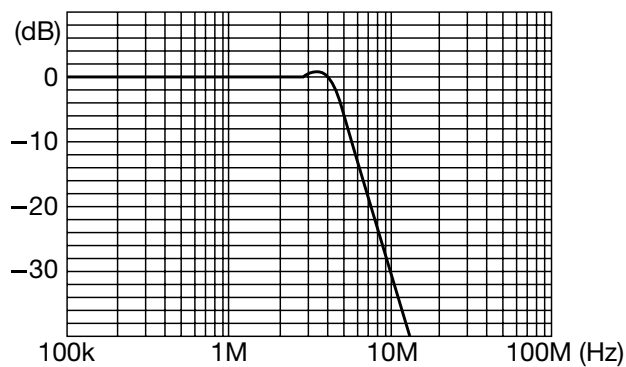
Characteristics (IC internal filters)

1. LPF

■ 5.4MHzLPF Amplitude-Frequency response

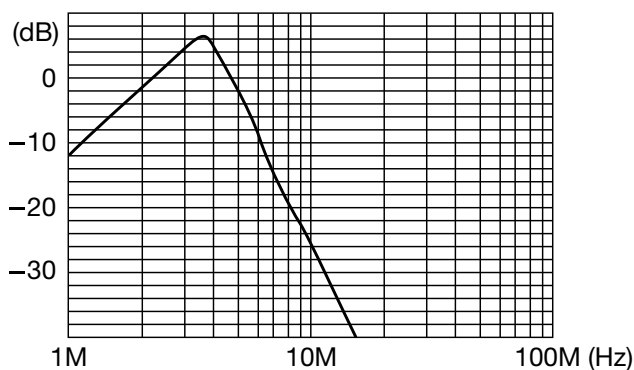


■ 4.4MHzLPF Amplitude-Frequency response



2. BPF

■ 3.58MHzBPF Amplitude-Frequency response



■ 4.43MHzBPF Amplitude-Frequency response

