

# KA8404

# 2-INPUT SWITCH

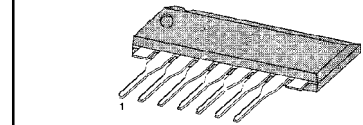
## 2-INPUT SWITCH

The KA8404 is a monolithic integrated circuit designed for the 2-input switch in a VCR or a TV system.

## FEATURES

- Suitable for video and audio signal
- Low current operation ( 5.5mA typ )
- Very low level crosstalk ( - 70dB typ )

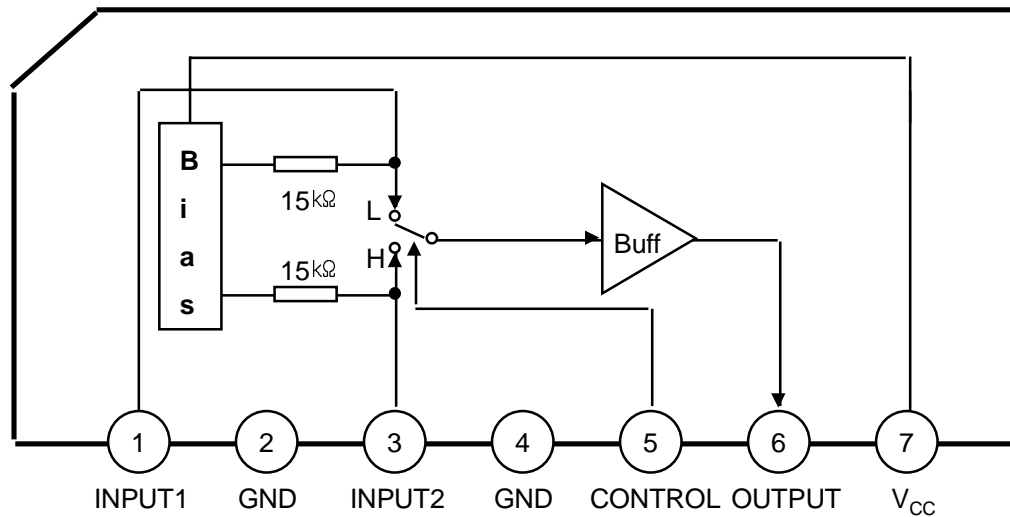
7- SIP



## ORDERING INFORMATION

Device	Package	Operating Temperature
KA8404	7-SIP	- 10 °C ~ + 75 °C

## BLOCK DIAGRAM



## ABSOLUTE MAXIMUM RATINGS

Characteristic	Symbol	Value	Unit
Supply Voltage	Vccmax	14	V
Signal Level At Input Pin	Vinput	5	Vpp
	Vct1	$V_{cc} - 0.2 < V_{cc} < V_{cc} + 0.2$	V
Power Dissipation	Pdmax	500	mW
Operating Temperature	Topr	- 20 ~ 75	°C
Storage Temperature	Tstg	- 40 ~ 125	°C

## ELECTRICAL CHARACTERISTICS ( Vcc = 9V, Ta = 25 °C)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Supply Voltage	Vcc	Note 1	8.0	9.0	10.0	V
Total current	Icc	SW1 ~ SW6 = "2"	4.1	5.5	8.1	mA
Frequency Characteristic	GF1	Vi = 2.5Vpp, 20Hz / 100KHz Vo ( 20Hz ) / Vo ( 100KHz )	- 0.5	0	0.5	dB
	GF2	Vi = 2.5Vpp, 20Hz / 100KHz Vo ( 20Hz ) / Vo ( 100KHz )				
Insertion Loss	GL	Vi = 2.5Vpp 100KHz, Vo / Vi	- 0.5	- 0.3	0	dB
Distotion	THD	Vi = 2.5Vpp, 1KHz	0	0.2	0.5	%
Differential Gain	DG	Vi = Input Waveform 1 (Note 2)	-	0.5	-	%
Differential Phase	DP	Vi = Input Waveform 1 (Note 2)	-	0.5	-	deg
Output Offset Voltage	Vos	Note 3	- 30	0	+ 30	mV
Cross - Talk	Cr	Vi = 2.0pp 4.43MHz	-	- 70	- 60	dB
SW Control Voltage	Vcon	Note 4	2.7	3.2	3.7	V
Video Output Level	Vout	Vi = 2.0pp 100KHz, Vo	1.89	1.93	2.00	Vpp
Input Impedance	Ri			15		kΩ
Output Impedance	Ro			10		Ω

Note 1 : Supply Voltage means a recommended operation range but spec data guarantee.

Note 2 : Not set system guaranteed but IC test program guaranteed

Note 3 : In SW1=SW2=2, SW3=1 → 2, read the difference of output DC voltage.

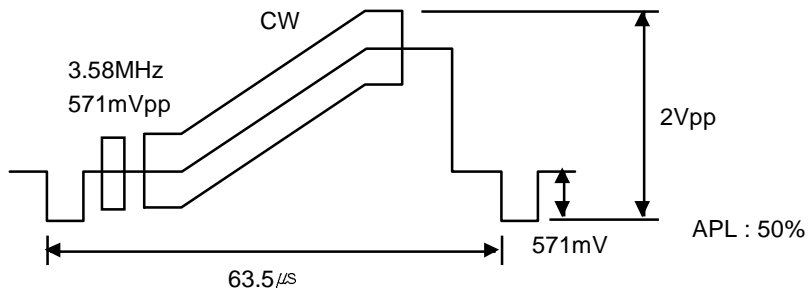
Note 4 : Guaranteed switching level (Active & Non-active)

Note 5 : Specifications are subject to change without notice.

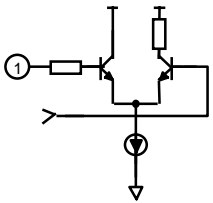
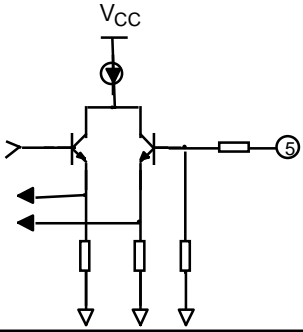
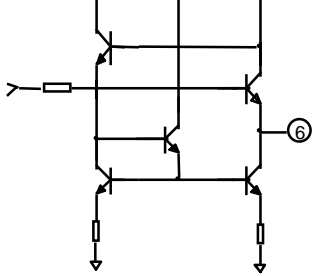
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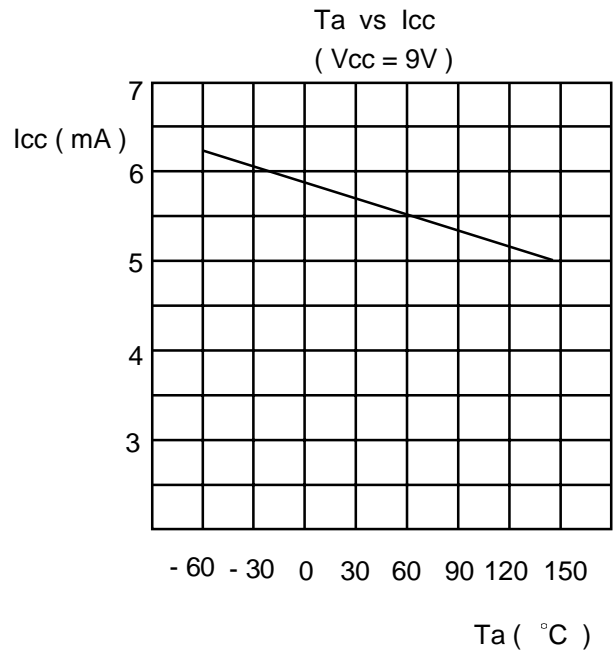
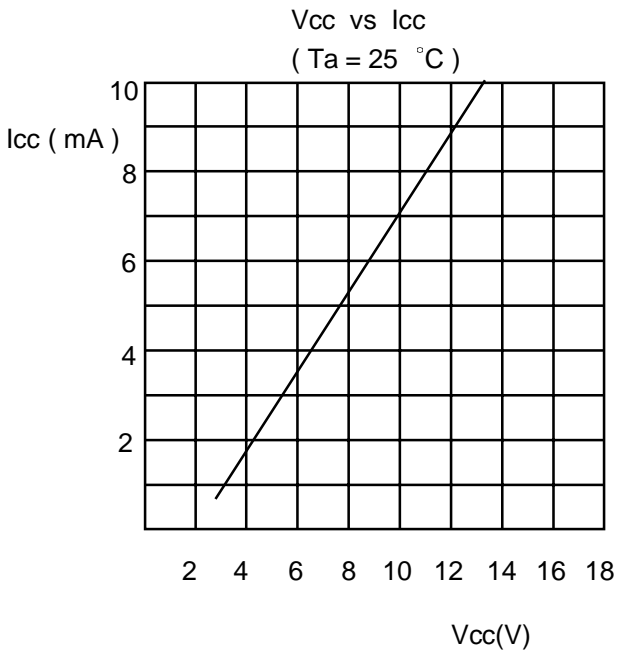
## INPUT WAVEFORM 1



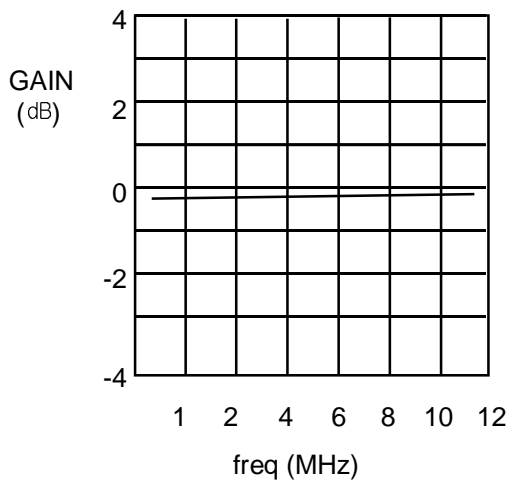
## PIN DESCRIPTIONS

PIN NO	FUNCTION	DC VOLTAGE	IN / OUT CIRCUIT
1	INPUT1	6.1V	
2	GND	0	
3	INPUT2	6.1V	SAME AS PIN 1
4	GND	0	
5	CONTROL INPUT	0V : Sel INPUT1 5V : Sel INPUT2	
6	OUTPUT	5.3V	
7	Vcc	9.0V	

## CHARACTERISTICS GRAPH



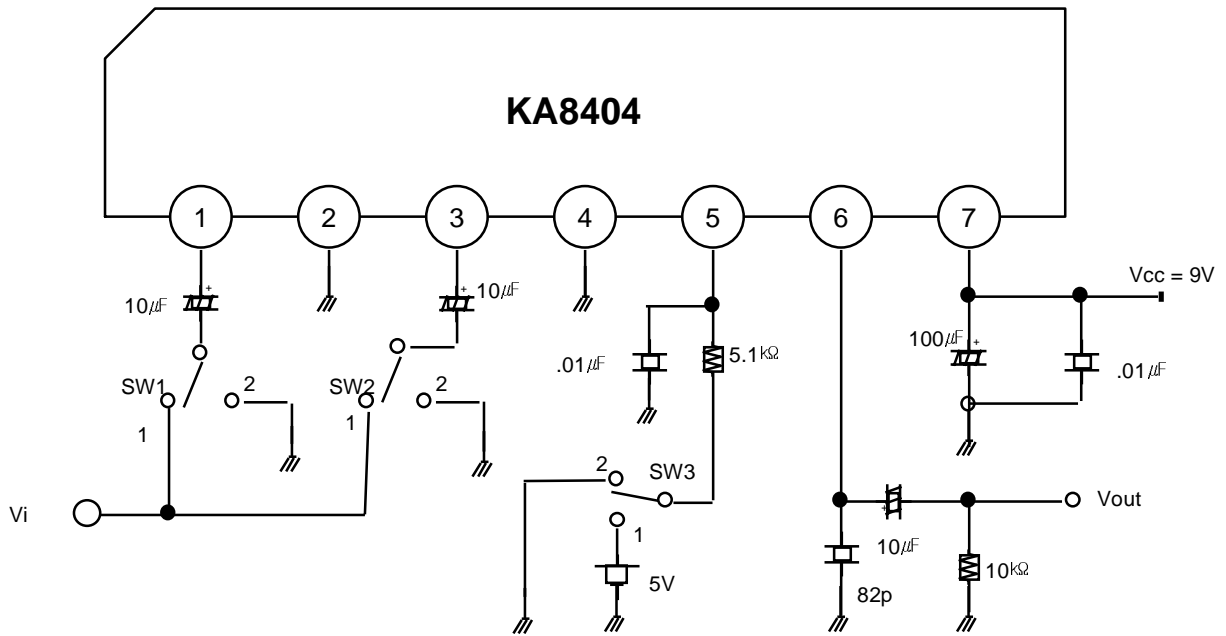
## FREQUENCY RESPONSE



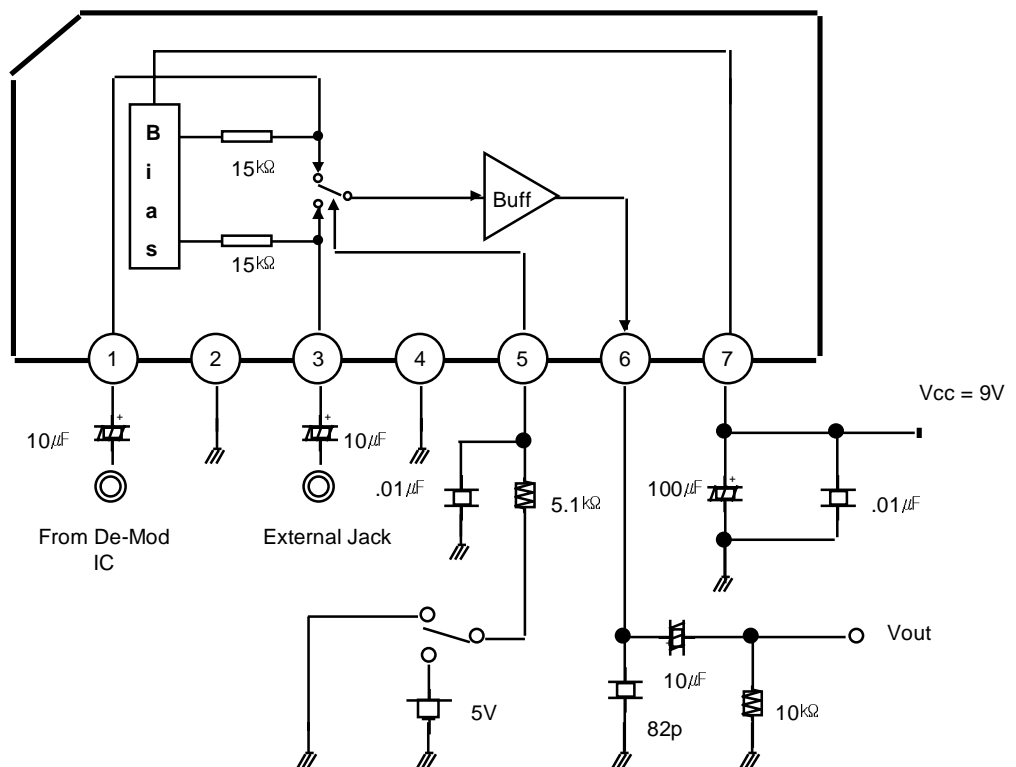
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## TEST CIRCUIT

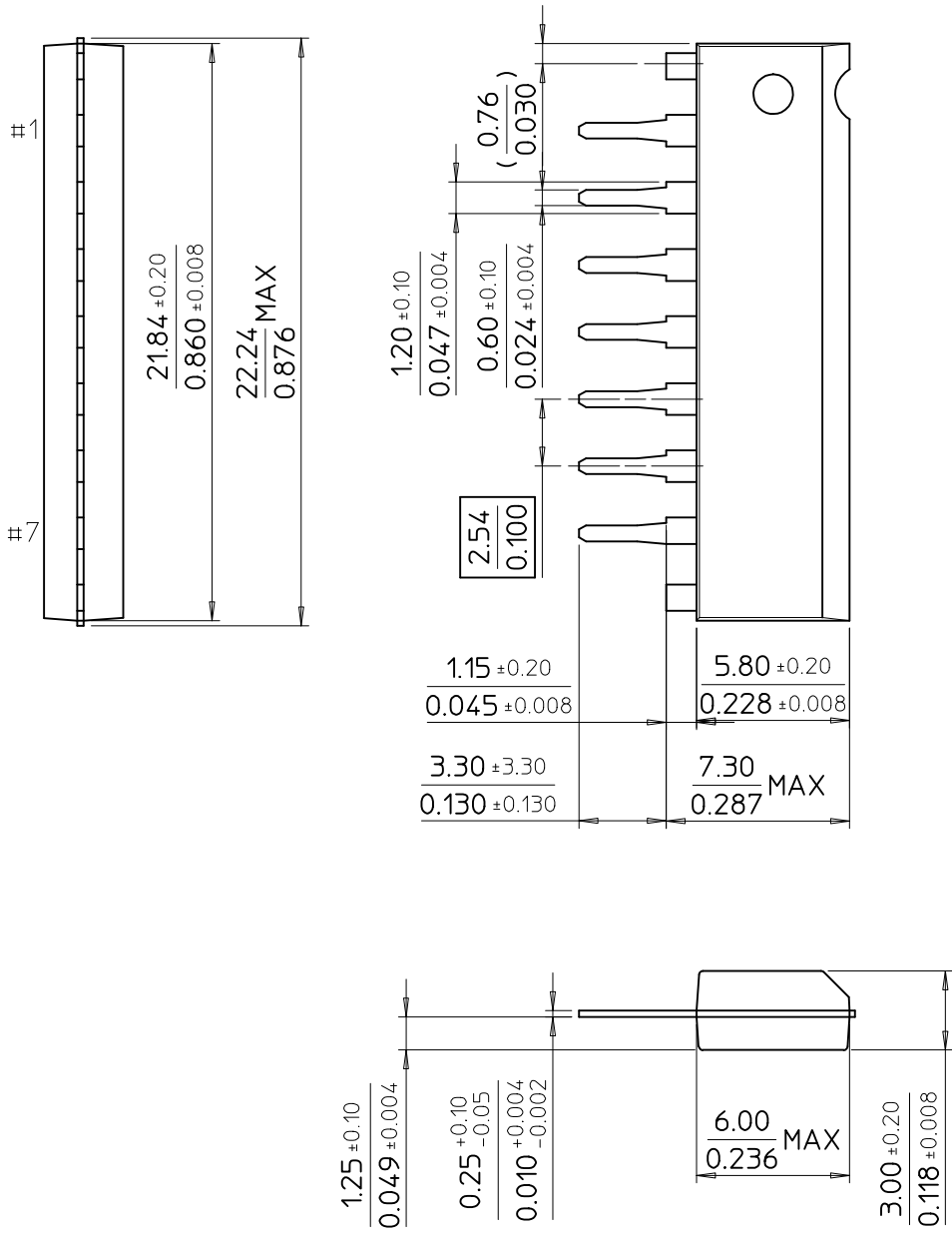


## APPLICATION CIRCUIT



# 9(7)-SIP

Dimensions in Millimeters/Inches



SAMSUNG ELECTRONICS CO.,LTD.