

Structure : Silicon Monolithic Integrated Circuit  
 Product name : Single Circuit Wide Dynamic Range Video Signal Switchers

Type : **BA7649AF**

- Features :
- 1) Built-in mute function
  - 2) Wide operating power supply voltage range
  - 3) Good frequency characteristics (Typ. 10 MHz, 0 dB)
  - 4) Wide dynamic range (Typ. 3.5 Vp-p)
  - 5) Sync-tip clamp input
  - 6) Low interchannel crosstalk (Typ. -65 dB, f=4.43 MHz)

○Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Supply voltage	V <sub>cc</sub>	13.5	V
Power dissipation	P <sub>d</sub>	450 *1	mW
Operating temperature	T <sub>opr</sub>	-25~+75	°C
Storage temperature	T <sub>stg</sub>	-55~+125	°C

\*1 Deratings is done at 4.5mW/°C above Ta=25°C.

○Operating Range (Ta=25°C)

Parameter	Symbol	Min	Typ	Max	Unit
Power supply voltage	V <sub>cc</sub>	4.5	5.0	13.0	V

\* This product is not designed for protection against radioactive rays.

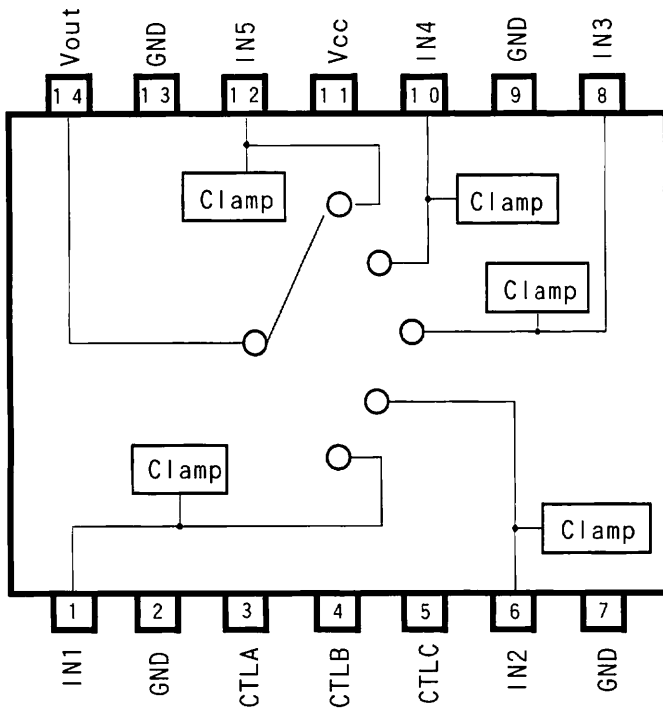
Application example

The product described in this specification is designed to be used with ordinary electronic equipment or devices (such as audio-visual equipment, office-automation equipment, communications devices, electrical appliances, and electronic toys). Should you intend to use this product with equipment or devices which require an extremely high level or reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), please be sure to consult with our sales representative in advance.

○Electrical characteristics (Unless otherwise noted, Ta= 25°C, Vcc=5.0V)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Circuit current	I <sub>cc</sub>	-	9.5	14.5	mA	
Maximum output level	V <sub>OM</sub>	3.0	3.5	-	V <sub>p-p</sub>	f=1kHz, THD=0.5%
Voltage gain	G <sub>v</sub>	-0.5	0	+0.5	dB	f=1MHz, Vin=1.0V <sub>p-p</sub>
Interchannel crosstalk	C <sub>T</sub>	-	-65	-	dB	f=4.43MHz, Vin=1.0V <sub>p-p</sub>
Frequency characteristic	G <sub>F</sub>	-3.0	0.0	+1.0	dB	10MHz/1MHz, Vin=1.0V <sub>p-p</sub>
CTL pin switching level A	V <sub>TH-A</sub>	1.0	2.0	3.0	V	
CTL pin switching level B	V <sub>TH-B</sub>	1.0	2.0	3.0	V	
CTL pin switching level C	V <sub>TH-C</sub>	1.0	2.0	3.0	V	

○Block diagram



○Pin number and pin name

Pin No.	Pin name
1	IN1
2	GND
3	CTLA
4	CTLB
5	CTLC
6	IN2
7	GND
8	IN3
9	GND
10	IN4
11	Vcc
12	IN5
13	GND
14	Vout



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