

- Structure : Silicon Monolithic Integrated Circuit
- Product name : 6-input 1-output video switch
- Type : **BH76360FV**
- Features :
 - 6-dB amp and 75Ω Driver are built in
 - Able to be used in low supply voltage
 - Wide output dynamic range
 - Sync tip clamp input
 - Built-in mute function
 - Built-in standby function
 - Enables two load drivers [when using output coupling capacitor]
 - Able to be used without output coupling capacitor

○Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Supply voltage	VCC	7.0	V
Power dissipation	Pd	450 *1	mW
Input voltage range	V _{IN}	0 ~ VCC+0.2	V
Operating temperature	Topr	-40~+85	°C
Storage temperature	Tstg	-55~+125	°C

*1 When mounting on a 70mmX70mmX1.6mm PCB board
Reduced by 4.5mW/°C at 25°C or higher

○Operating Condition (Ta=25°C)

Parameter	Symbol	Min	Typ	Max	Unit
Supply voltage	VCC	2.8	5.0	5.5	V

* This product is not designed for protection against radioactive rays

Status of this document

The Japanese version of this document is the formal specification.
A customer may use this translation version only for a reference to help reading the formal version.
If there are any differences in translation version of this document, formal version takes priority.

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 of 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.

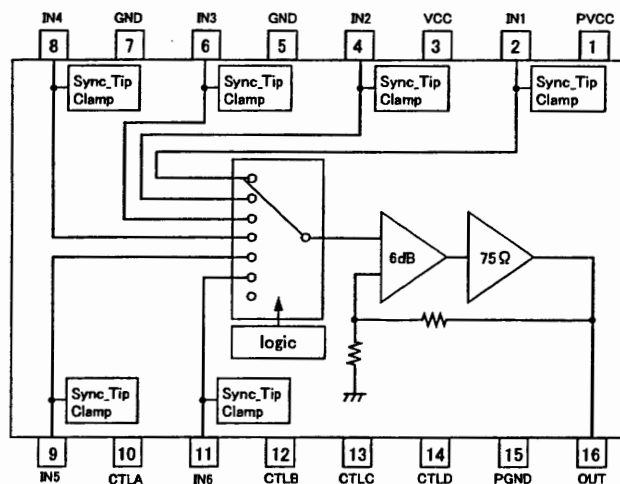
ROHM assumes no responsibility for use of any circuits described herein, conveys no license under any patent or other right, and makes no representations that the circuits are free from patent infringement.

DESIGN	CHECK	APPROVAL	DATE: 15/Oct/2007	SPECIFICATION No. TSZ02201-BH76360FV-1-2
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○Electrical characteristics (Unless otherwise specified, Ta= 25°C, VCC=5.0V)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Circuit current 1	I _{cc1}	-	12	19	mA	No signal
Circuit current 2	I _{cc2}	-	0	5	uA	STBY MODE
Maximum output level	V _{OM}	2.2	2.7	-	V _{pp}	VCC=3V, f=10kHz, THD=1.0%
Voltage gain	G _V	5.5	6.0	6.5	dB	Vin=1.0V _{pp} , f=100kHz
Frequency characteristics	G _F	-2.0	0	1.0	dB	Vin=1.0V _{pp} , f=10MHz/100kHz
Channel crosstalk	C _T	-	-65	-55	dB	Vin=1.0V _{pp} , f=4.43MHz
Mute attenuation	M _T	-	-65	-55	dB	Vin=1.0V _{pp} , f=4.43MHz
CTL terminal switching level	V _{THH}	1.2	-	VCC	V	High Level threshold voltage
	V _{THL}	0.0	-	0.45	V	Low Level threshold voltage
CTL pin inflow current	I _{THH}	-	-	50	uA	CTL pin=2.0V impressing

○Block diagram



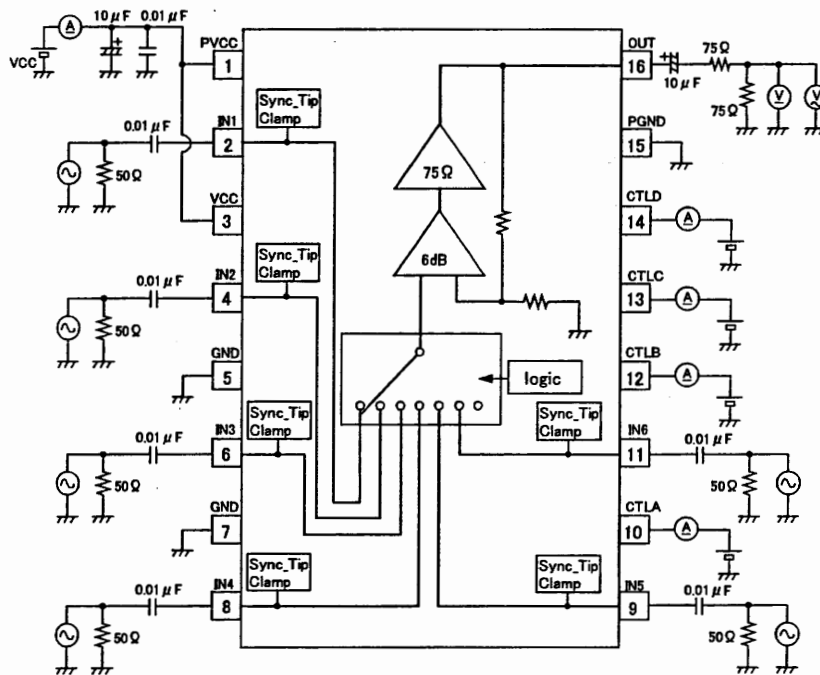
○Pin number and Pin name

Pin Number	Pin name	Pin Number	Pin name
1	PVCC	9	IN5
2	IN1	10	CTLA
3	VCC	11	IN6
4	IN2	12	CTLB
5	GND	13	CTLC
6	IN3	14	CTLD
7	GND	15	PGND
8	IN4	16	OUT

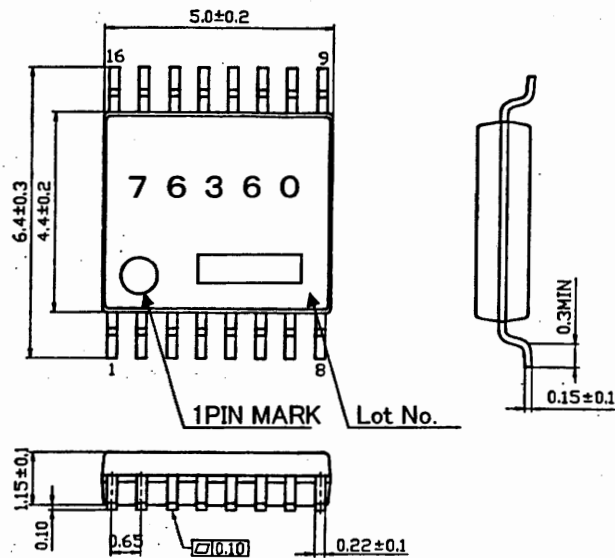
○Control pin settings

	CTL			
	A	B	C	D
IN1	L	L	L	H
IN2	H	L	L	H
IN3	L	H	L	H
IN4	H	H	L	H
IN5	L	L	H	H
IN6	H	L	H	H
MUTE	※	H	H	H
STBY	※	※	※	L

○ Test Circuit Diagrams



○ External dimensions and label codes



SSOP-B16 (unit : mm)

● Cautions for use

(1) Absolute maximum ratings

If the absolute maximum ratings for applied voltage and/or operation temperature are exceeded, LSI damage may result. Therefore, do not apply voltage or use in a temperature that exceeds these absolute maximum ratings. If it is possible that absolute maximum ratings will be exceeded, use a physical safety device such as a fuse and make sure that no conditions that might exceed the absolute maximum ratings will be applied to the LSI IC.

(2) GND potential

Regardless of the operation mode, the voltage of the GND pin should be at least the minimum voltage. Actually check whether or not the voltage at each pin, including transient phenomena, is less than the GND pin voltage.

(3) Thermal design

The thermal design should be done using an ample margin that takes into consideration the allowable dissipation under actual use conditions.

(4) Shorts between pins and mounting errors

When mounting LSI ICs onto the circuit board, make sure each LSI's orientation and position is correct. The ICs may become damaged if they are not mounted correctly when the power is turned on. Similarly, damage may also result if a short occurs, such as when a foreign object is positioned between pins in an IC, or between a pin and a power supply or GND connection.

(5) Operation in strong electromagnetic field

When used within a strong electromagnetic field, evaluate carefully to avoid the risk of operation faults.

(6) Used without output coupling capacitor

Using or not using output-coupling capacitor hardly affects electrical characteristics and reliability. However, when the output coupling capacitor is omitted, a direct current flows to the connected set, so the specifications of the connected set should be noted carefully before starting use.