

BA7615N

Multimedia ICs

# Video signal switcher for VTR, TV

## BA7615N

BA7615N has built-in 6dB amplifier, 75Ω driver and mute function. This IC is consisted of 4 inputs (IN1, IN2, IN3, IN4), 1 output (out) and 3 control terminals (CTL-A, CTL-B, CTL-C). Each circuit input terminal is sync tip clamp type.

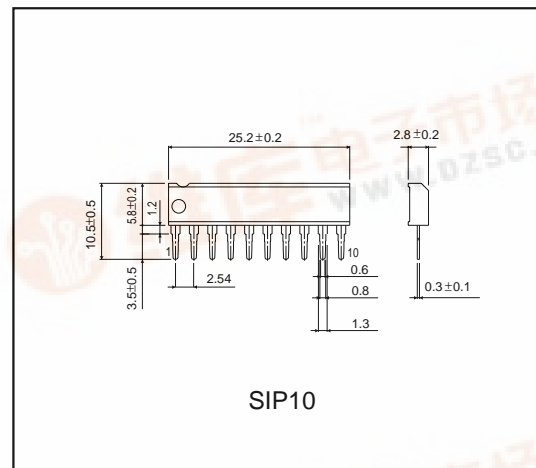
### ●Applications

TV, VTR

### ●Features

- 1) 4-input 1-output switch.
- 2) Built-in 6dB amplifier and 75Ω driver.
- 3) Built-in mute function.
- 4) Sync tip clamp input.
- 5) Wide operating supply voltage range. (4.5V to 13.0V)
- 6) Low power consumption. (Typ.100mW)
- 7) Excellent frequency characteristic. (Typ.10MHz, 0dB)
- 8) Wide dynamic range. (Typ.3.5V<sub>P-P</sub>)
- 9) Few cross talk between channels.  
(Typ.-65dB, f=4.43MHz)

### ●External dimensions (Units : mm)



### ●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>	850 *	mW
Operating temperature range	T <sub>opr</sub>	-25 to +75	°C
Storage temperature range	T <sub>stg</sub>	-55 to +125	°C

\* Derating : 8.5mW per 1°C when using this IC in Ta=25°C above.

### ●Operating voltage condition (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Operating voltage range	V <sub>CC</sub>	4.5	5.0	13.0	V

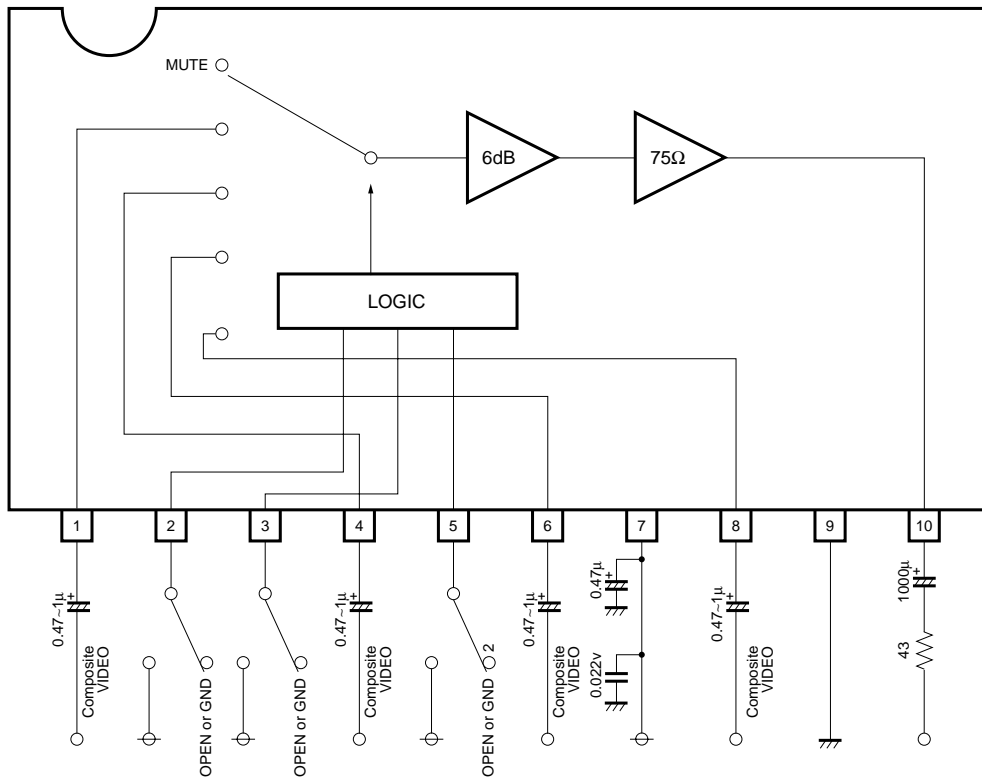
\*This product is not designed for protection against radioactive rays.

Multimedia ICs

●Electrical characteristics (Unless otherwise noted, Ta=25°C, Vcc=5V)

Characteristics	Symbol	Min.	Typ.	Max.	Unit	Conditions
Circuit current	I <sub>CC</sub>	–	19.5	29.0	mA	No signal
Max 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>	5.5	6.0	6.5	dB	f=1KHz, 1V <sub>P-P</sub>
Frequency caharacteristics	G <sub>F</sub>	–3.0	0.0	1.0	dB	f=10MHz / 1MHz, 1V <sub>P-P</sub>
Channel to channel crosstalk	C <sub>T</sub>	–	–65	–	dB	f=4.43MHz, 1V <sub>P-P</sub>
CTL terminal threshold level A	V <sub>THA</sub>	1.0	2.0	3.0	V	CTLA threshold voltage
CTL terminal threshold level B	V <sub>THB</sub>	1.0	2.0	3.0	V	CTLB threshold voltage
CTL terminal threshold level C	V <sub>THC</sub>	1.0	2.0	3.0	V	CTLC threshold voltage

●Application circuit



\*The output impedance has 32Ω, please use 43Ω resistor for outside matching.

### Notes

- No technical content pages of this document may be reproduced in any form or transmitted by any means without prior permission of ROHM CO.,LTD.
- The contents described herein are subject to change without notice. The specifications for the product described in this document are for reference only. Upon actual use, therefore, please request that specifications to be separately delivered.
- Application circuit diagrams and circuit constants contained herein are shown as examples of standard use and operation. Please pay careful attention to the peripheral conditions when designing circuits and deciding upon circuit constants in the set.
- Any data, including, but not limited to application circuit diagrams information, described herein are intended only as illustrations of such devices and not as the specifications for such devices. ROHM CO.,LTD. disclaims any warranty that any use of such devices shall be free from infringement of any third party's intellectual property rights or other proprietary rights, and further, assumes no liability of whatsoever nature in the event of any such infringement, or arising from or connected with or related to the use of such devices.
- Upon the sale of any such devices, other than for buyer's right to use such devices itself, resell or otherwise dispose of the same, no express or implied right or license to practice or commercially exploit any intellectual property rights or other proprietary rights owned or controlled by
- ROHM CO., LTD. is granted to any such buyer.
- Products listed in this document use silicon as a basic material.  
Products listed in this document are no antiradiation design.

The products listed in this document are 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 these products 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.

#### About Export Control Order in Japan

Products described herein are the objects of controlled goods in Annex 1 (Item 16) of Export Trade Control Order in Japan.

In case of export from Japan, please confirm if it applies to "objective" criteria or an "informed" (by MITI clause) on the basis of "catch all controls for Non-Proliferation of Weapons of Mass Destruction.