

Structure Silicon Monolithic Integrated Circuit
 Product name 3V operation Video driver (with LPF for mobile applications)

Model **BH76109HFV**

Outer dimensions Fig 1 HVS0F6 (Plastic mold)

Application circuit Fig 2

- Function
- Built in 9dB AMP
 - Built in LPF(Border) for Y input (f=4.5MHz)
 - Sync Tip clamp circuit
 - HVSOF6 plastic mold
 - Built in standby function (Standby current is 0μA; TYP)
 - Operating voltage 3V (Dynamic range 2.6Vpp)

■ **Absolute maximum rating**

Parameter	Symbol	Rating	Unit
Supply voltage	Vcc	7	V
Power Dissipation	Pd	* 410	mW
Operating temperature range	Topr	- 40 ~ + 85	°C
Storage temperature range	Tstg	- 55 ~ + 125	°C

* For operation above 25°C free-air temperature , power dissipation is decreasing 4.1mW/ in case mounting the ROHM standard application board (70×70×1.6mm)

■ **Operating voltage range**

Parameter	Symbol	Min.	Std.	Max.	Unit
Operating voltage range	Vcc	2.6	3.0	5.5	V

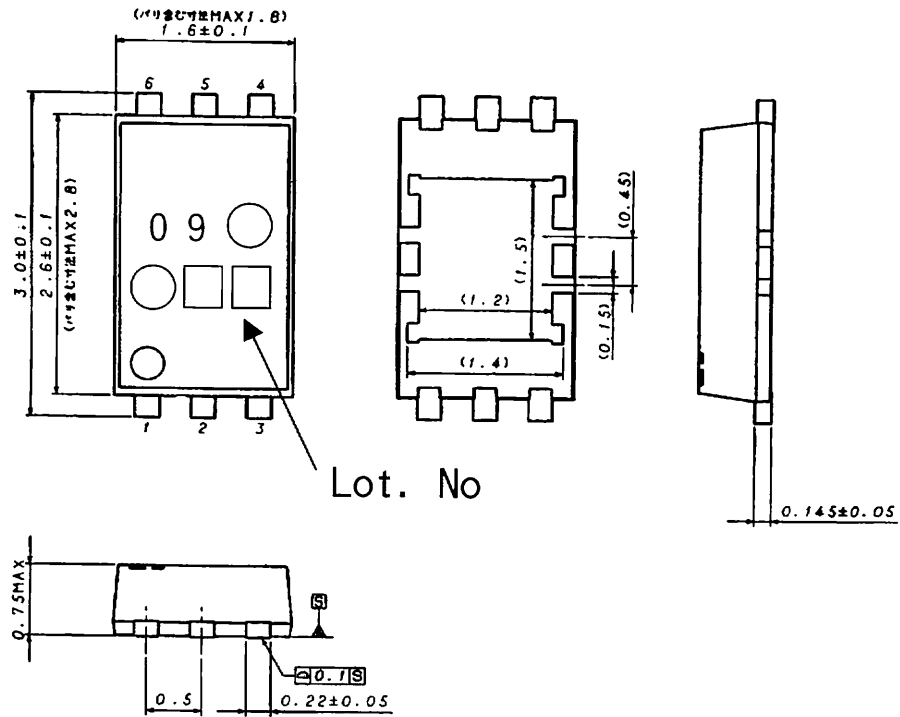
■ **Electrical characteristics** 【Ta=25°C, VCC=3V unless otherwise specified】

Parameter		Symbol	Specifications			Unit	Testing condition
			Min.	Std.	Max.		
Circuit current	ACTIVE	I _{CC1}	—	7	11	mA	No Signal
	STANBY	I _{CC2}	—	0.0	2	μA	Standby mode
Standby SW input current Voltage	HighLevel	I _{thH}	—	—	60	μA	6pin=3.0V
	Low Level	I _{thL}	—	—	4	μA	6pin=0.2V
Standby SW Change Voltage	HighLevel	V _{thH}	1.2	—	V _{CC}	V	Standby OFF
	Low Level	V _{thL}	0	—	0.45	V	Standby ON
Voltage gain		GV	+8.5	+9.0	+9.5	dB	V _{in} =100KHz, 0.7Vpp
Maximum output level		V _{omv}	2.2	2.6	—	Vpp	f=10KHz、THD=1%
Frequency characteristics	1	G _{f1}	-1.0	0.1	0.5	dB	f=4.5MHz/100KHz,0.7Vp-p
	2	G _{f2}	-7.0	-4.0	0.3	dB	f=8.2MHz/100KHz,0.7Vp-p
	3	G _{f3}	—	-45.0	—	dB	f=19MHz/100KHz,0.7Vp-p
Y signal output S / N		SN _y	—	-67.0	—	dB	Band 100KHz~6MHz Terminal impedance 75Ω, 100% White video signal
C signal output S / N	AM	SN _{CA}	—	-77.0	—	dB	Band 100Hz~500KHz Terminal impedance 75Ω, 100% chroma video signal
	PM	SN _{CP}	—	-65.0	—	dB	
Different Gain		D _G	—	0.7	3.0	%	V _{in} = 0.7Vp-p Standard stair step signal
Different Phase		D _P	—	0.7	3.0	deg	

■ **Control Terminal**

PARAMETER	STATUS	NOTE
STANDBY (6PIN)	H	STANDBY : OFF
	L	STANDBY : ON
	OPEN	STANDBY : ON

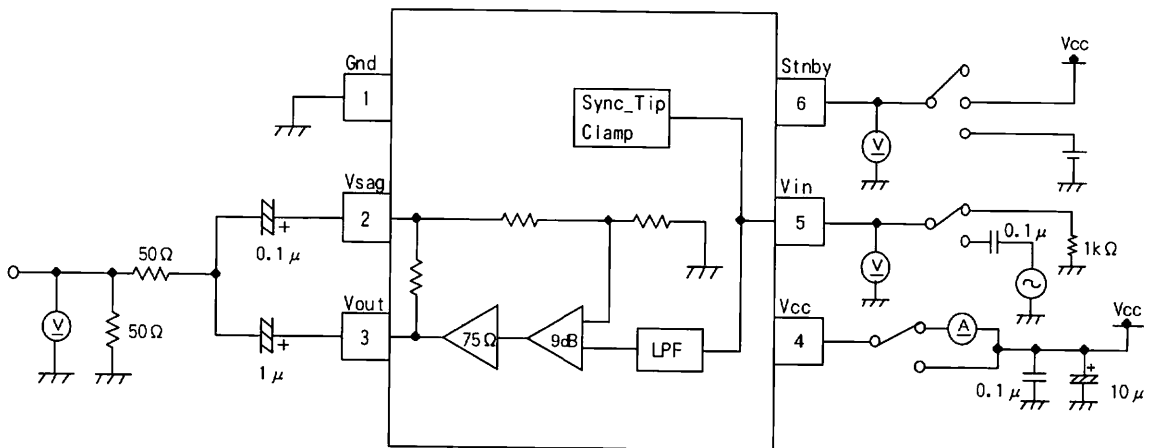
Physical dimensions



(UNIT: mm)

Fig.1 HV S O F 6 (Plastic mold)

Measurement circuit



■ Application circuit

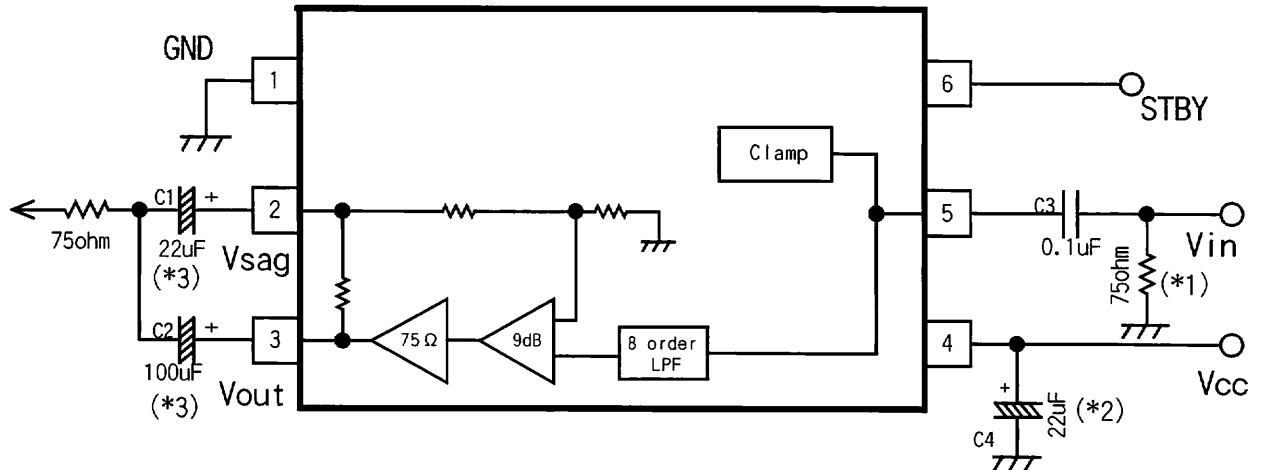


Fig 2

■ Notification on use

*1; The termination impedance of the input terminal (pin#5) should be less than 700ohm.

*2; Connect bypass capacitor as close to Vcc pin (pin#4).

*3; The recommended value of output coupling capacitor is indicated in Fig2.

If the value of output coupling capacitor is reduced, you should check sag effect by white-black bounds signal or Hbar signal.

(white-black bounds signal, Hbar signal ;The signal that easily worsens sag effect)

Please test the following combination as reference.

(Note: When lowering C2 capacitor value, sag deteriorates.)

C1 33 μ F 33 μ F 33 μ F

C2 68 μ F 47 μ F 33 μ F

*4; Pay particular attention on pin assignment to prevent irreversible damage to the IC.

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 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.

Thank you for your accessing to ROHM product informations.
More detail product informations and catalogs are available,
please contact your nearest sales office.

Please contact our sales offices for details ;

U.S.A / San Diego	TEL : +1(858)625-3630	FAX : +1(858)625-3670
Atlanta	TEL : +1(770)754-5972	FAX : +1(770)754-0691
Dallas	TEL : +1(972)312-8818	FAX : +1(972)312-0330
Germany / Dusseldorf	TEL : +49(2154)9210	FAX : +49(2154)921400
United Kingdom / London	TEL : +44(1)908-282-666	FAX : +44(1)908-282-528
France / Paris	TEL : +33(0)1 56 97 30 60	FAX : +33(0) 1 56 97 30 80
China / Hong Kong	TEL : +852(2)740-6262	FAX : +852(2)375-8971
Shanghai	TEL : +86(21)6279-2727	FAX : +86(21)6247-2066
Dilian	TEL : +86(411)8230-8549	FAX : +86(411)8230-8537
Beijing	TEL : +86(10)8525-2483	FAX : +86(10)8525-2489
Taiwan / Taipei	TEL : +866(2)2500-6956	FAX : +866(2)2503-2869
Korea / Seoul	TEL : +82(2)8182-700	FAX : +82(2)8182-715
Singapore	TEL : +65-6332-2322	FAX : +65-6332-5662
Malaysia / Kuala Lumpur	TEL : +60(3)7958-8355	FAX : +60(3)7958-8377
Philippines / Manila	TEL : +63(2)807-6872	FAX : +63(2)809-1422
Thailand / Bangkok	TEL : +66(2)254-4890	FAX : +66(2)256-6334

Japan /
(Internal Sales)

Tokyo	2-1-1, Yaesu, Chuo-ku, Tokyo 104-0082	TEL : +81(3)5203-0321	FAX : +81(3)5203-0300
Yokohama	2-4-8, Shin Yokohama, Kohoku-ku, Yokohama, Kanagawa 222-8575	TEL : +81(45)476-2131	FAX : +81(45)476-2128
Nagoya	Dainagayo Building 9F 3-28-12, Meieki, Nakamura-ku, Nagoya, Aichi 450-0002	TEL : +81(52)581-8521	FAX : +81(52)561-2173
Kyoto	579-32 Higashi Shiokouji-cho, Karasuma Nishi-iru, Shiokoujidori, Shimogyo-ku, Kyoto 600-8216	TEL : +81(75)311-2121	FAX : +81(75)314-6559

(Contact address for overseas customers in Japan)

Yokohama	TEL : +81(45)476-9270	FAX : +81(045)476-9271
----------	-----------------------	------------------------