

Structure Silicon Monolithic Integrated Circuit

Product name Low voltage operation video driver with LPF

Model **BH76812FVM**

Outer dimensions Fig 1 MSOP-8 (Plastic mold)

- Function
- Built in 12dB AMP
 - Built in LPF(8order) (f = 4.5MHz)
 - MSOP-8 plastic mold
 - Built in standby function (Standby current is 0 μ A;TYP)
 - No output coupling capacitor required

※ Radiation resistance is not included in the design.

■ **Absolute maximum rating** (Ta=25°C)

Parameter	Symbol	Rating	Unit
Impressed voltage	Vcc	3 . 5 5	V
Power Dissipation	Pd	4 7 0	mW
Operating temperature range	Topr	− 4 0 ~ + 8 5	°C
Storage temperature range	Tstg	− 5 5 ~ + 1 2 5	°C

- * For operation above 25°C free-air temperature , power dissipation is decreasing 4.7mW/°C
- * In case mounting the ROHM standard application board(70mm×70mm×1.6mm)

■ **Operating voltage range** (Ta=25°C)

Parameter	Symbol	Min.	Std.	Max.	Unit
Operating voltage range	Vcc	2 . 5	3 . 0	3 . 4 5	V

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

Parameter	記 号	規 格 値			単位	測定条件
		最 小	標 準	最 大		
Circuit current 1	I _{CC1}	—	15	25	mA	No Signal
Circuit current 2	I _{CC2}	—	0.0	2	μA	Standby mode
Voltage gain	G _v	+11.5	+12.0	+12.5	dB	V _{in} =100KHz,0.5Vpp
Maximum output level	V _{omv}	4.5	5.2	—	Vpp	f=10KHz、THD=1%
Frequency characteristics 1	G _{f1}	-0.95	-0.45	0.05	dB	f=4.5MHz/100KHz
Frequency characteristics 2	G _{f2}	-5.0	-3.0	-1.0	dB	f=8.0MHz/100KHz
Frequency characteristics 3	G _{f3}	—	-32	-18	dB	f=18MHz/100KHz
Frequency characteristics 4	G _{f4}	—	-51	—	dB	f=23.5MHz/100KHz
Differential Gain	D _G	—	0.5	3.0	%	V _{IN} = 0.5Vp-p Standard stair step signal
Differential Phase	D _P	—	1.0	3.0	deg	V _{IN} = 0.5Vp-p Standard stair step signal
Y signal output S/N	SN _Y	+50	+70	—	dB	Band 100k~6MHz Terminal impedance 75 Ω 100% White video signal
C signal output S/N (AM)	SN _{CA}	+50	+75	—	dB	Band 100~500kHz Terminal impedance 75 Ω 100% chroma video signal
C signal output S/N (PM)	SN _{CP}	+50	+65	—	dB	Band 100~500kHz Terminal impedance 75 Ω 100% chroma video signal
Output pin source current	I _{extin}	—	30	—	mA	Add 4.5V to Output pin through 150 Ω
Output DC offset	V _{off}	-50	0	50	mV	Terminal impedance 75 Ω
Standby SW Change Voltage High Level	V _{thH}	1.2	—	V _{cc}	V	Standby OFF
Standby SW Change Voltage Low Level	V _{thL}	0	—	0.45	V	Standby ON
Standby SW input current Voltage High Level	I _{thH}	35	45	60	μA	4pin=3.0V

Control terminal

Parameter	Status	Note
STANDBY(4PIN)	H	STANDBY : OFF
	L	STANDBY : ON
	OPEN	STANDBY : ON

Technical drawing of a 16-pin connector, showing top and side views with dimensions and pin markings.

Top View Dimensions:

- Overall Width: 2.9 ± 0.1
- Pin Pitch: 0.475
- Overall Height: 4.0 ± 0.2
- Pin 1 to Pin 8 (Top): 2.8 ± 0.1
- Pin 1 to Pin 8 (Bottom): 0.475

Pin Markings:

- Top pins: 8, 7, 6, 5 (left to right)
- Bottom pins: 1, 2, 3, 4 (left to right)
- Internal markings: 7, 6, 8 (top row), 1, 2 (bottom row)
- Lot. No. (bottom right)

Side View Dimensions:

- Overall Height: 0.9 MAX
- Pin Height: 0.75 ± 0.05
- Pin Diameter: 0.08 ± 0.05
- Pin Spacing: 0.65
- Pin Diameter (Bottom): $0.22^{+0.05}_{-0.04}$

Surface Texture Symbol:

- Symbol: $\sqrt{0.08} S$

(UNIT: mm)

Fig 1 MSOP-8 (Plastic mold)

Measurement circuit

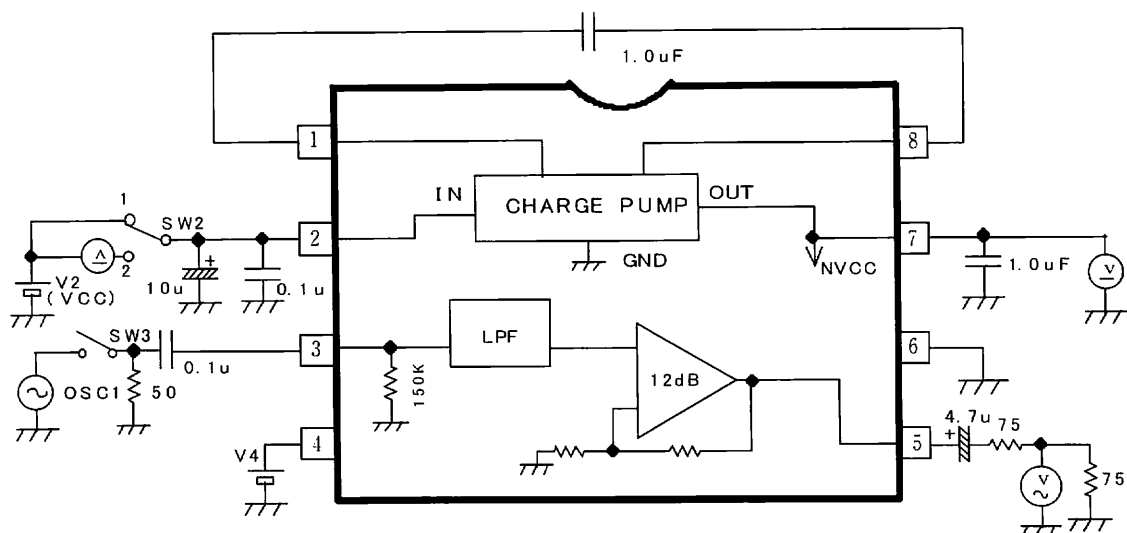


Fig 2

Block diagram

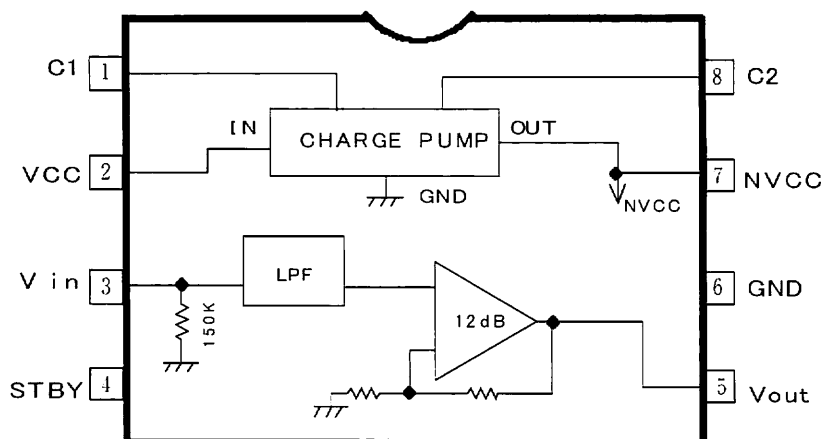


Fig 3

Notification on use

- 1; 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
Dalian	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