

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 | 3.55 | V |
| Power Dissipation | Pd | 470 | 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 4.7mW/°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 | 3.45 | V |

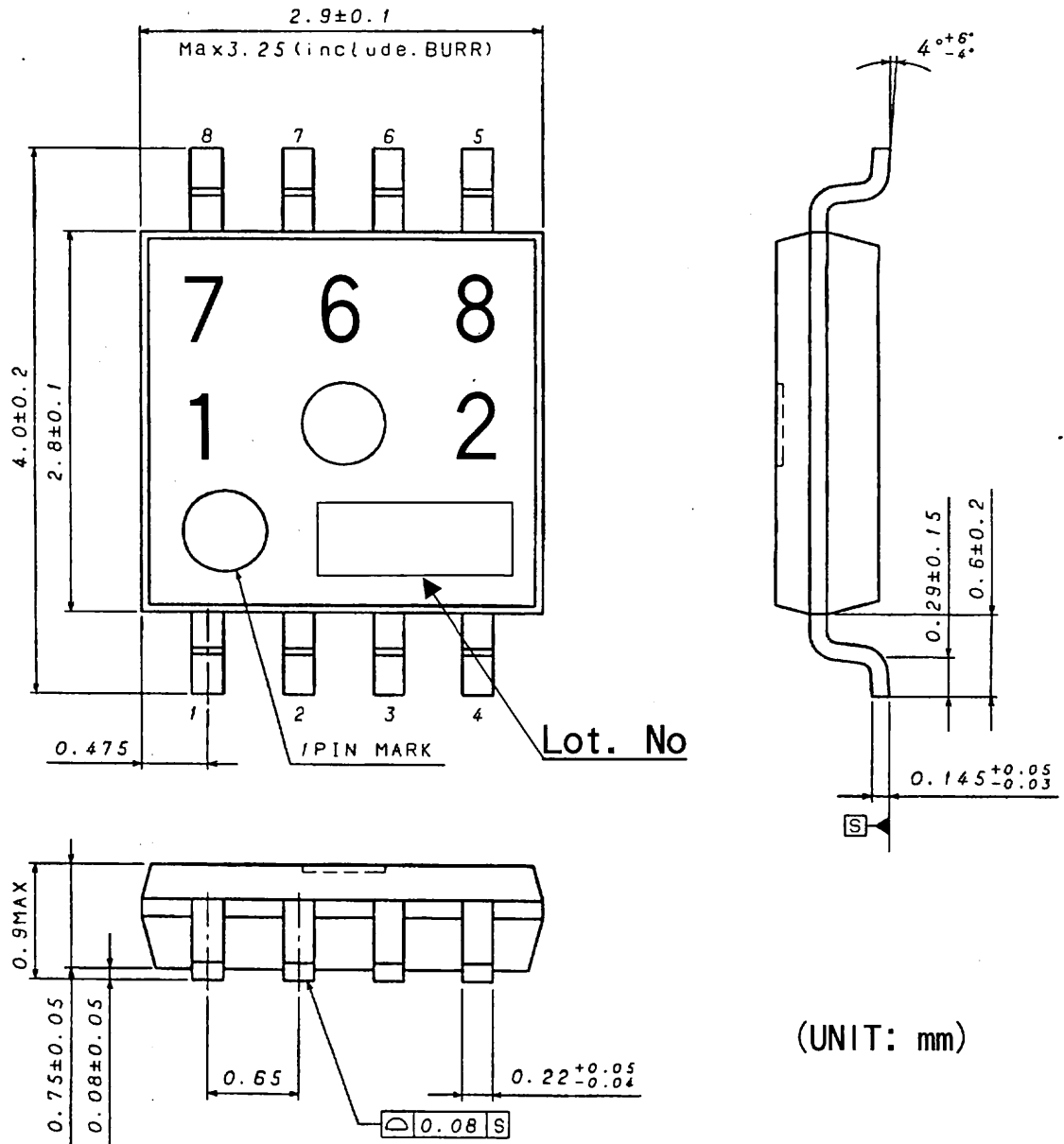
■ Electrical characteristics 【Ta=25°C, VCC=3V unless otherwise specified】

| 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 75Ω 100% White video signal |
| C signal output S/N (AM) | SN _{CA} | +50 | +75 | — | dB | Band 100~500kHz Terminal impedance 75Ω 100% chroma video signal |
| C signal output S/N (PM) | SN _{CP} | +50 | +65 | — | dB | Band 100~500kHz Terminal impedance 75Ω 100% chroma video signal |
| Output pin source current | I _{extin} | — | 30 | — | mA | Add 4.5V to Output pin through 150Ω |
| Output DC offset | V _{off} | -50 | 0 | 50 | mV | Terminal impedance 75Ω |
| 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 |

Physical dimensions



(UNIT: mm)

Fig 1 MSOP-8 (Plastic mold)

■ Measurement circuit

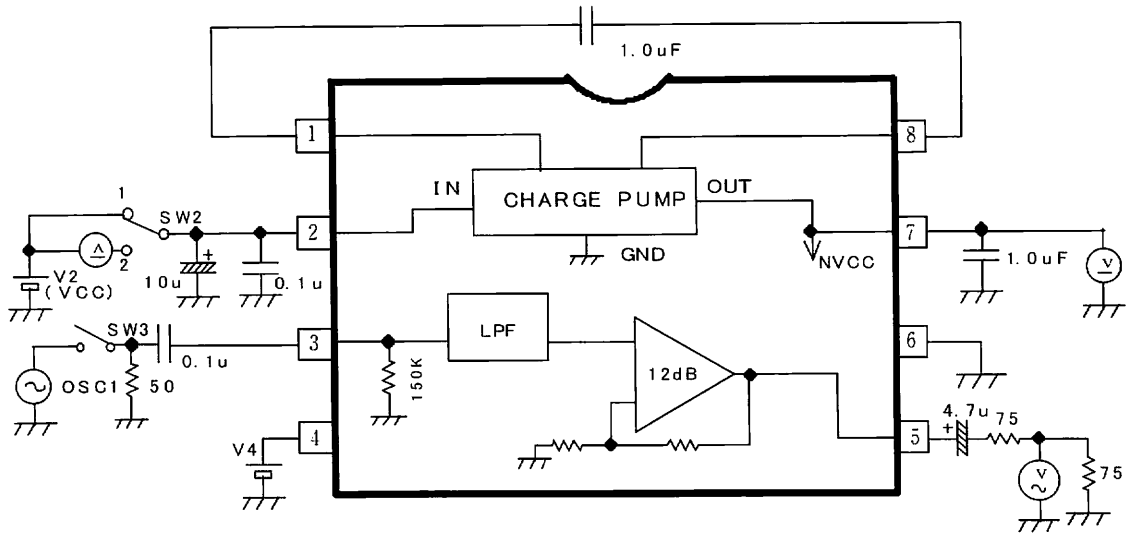


Fig 2

■ Block diagram

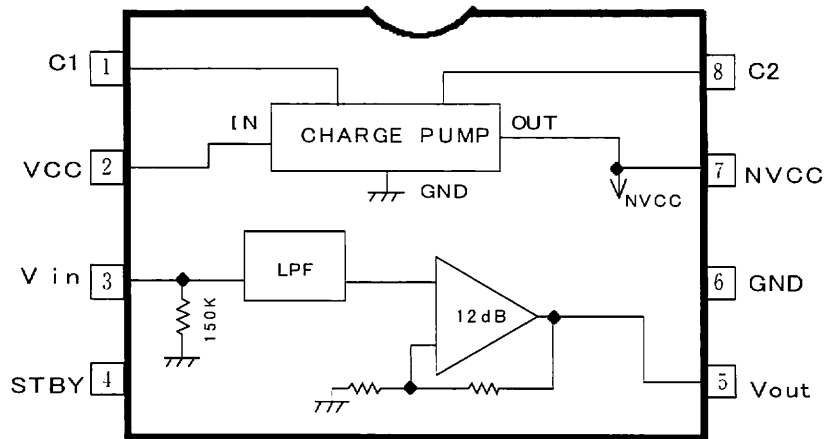


Fig 3

■ 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 |
| 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 |
|----------|-----------------------|------------------------|