

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

Model                            **B H 7 6 1 0 9 H F V**

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

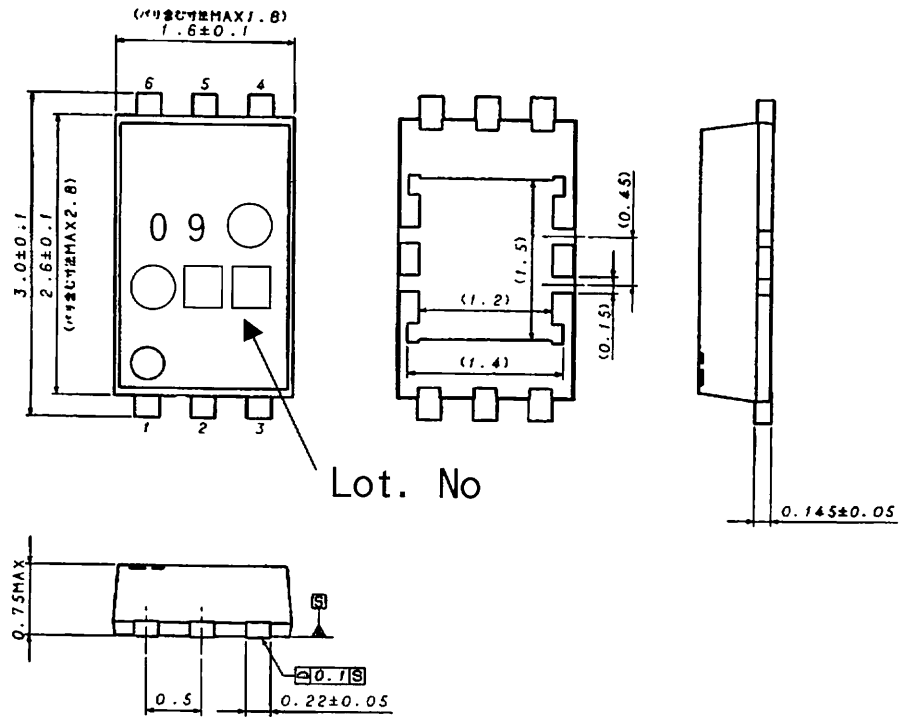
■ **Electrical characteristics**      【Ta=25°C, VCC=3V unless otherwise specified】

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

■ **Control Terminal**

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

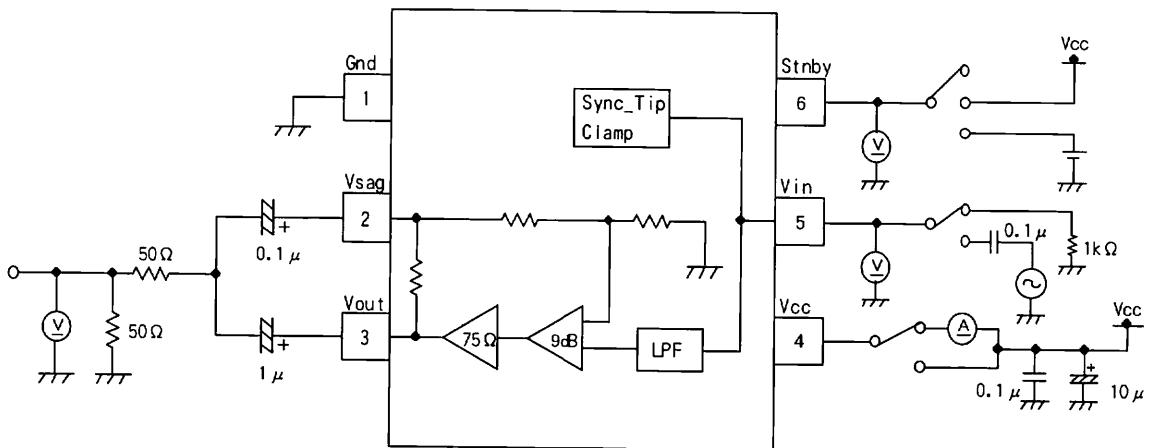
■ Physical dimensions



(UNIT: mm)

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

■ Measurement circuit



■ Application circuit

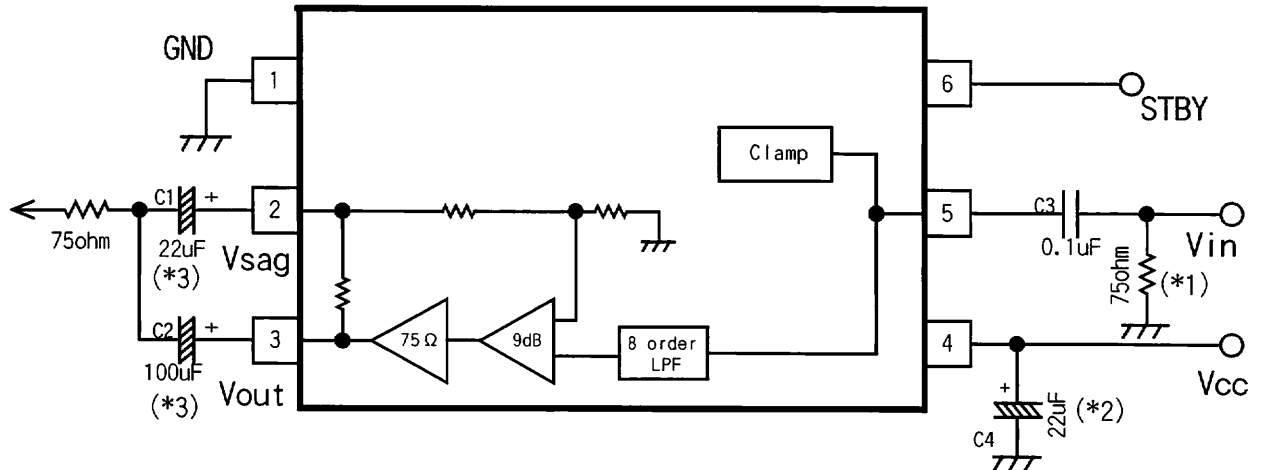


Fig 2

■ 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  $\mu$ F 33  $\mu$ F 33  $\mu$ F

C2 68  $\mu$ F 47  $\mu$ F 33  $\mu$ F

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

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