Structure Silicon Monolithic Integrated Circuit

Product name Low voltage operation video driver with LPF

Model **BH76816FVM**

Outer dimensions Fig 1 MSOP－8 (Plastic mold)

Function
- Built in 16.5dB AMP
- Built in LPF(8order) (f = 4.5MHz)
- MSOP-8 plastic mold
- Built in standby function (Standby current is 0 μA;TYP)
- No output coupling capacitor required

※ Radiation resistance is not included in the design

■Absolute maximum rating (Ta=25℃)

Parameter	Symbol	Rating	Unit
Impressed voltage	Vcc	3．55	V
Power Dissipation	Pd	470	mW
Operating temperature range	Topr	－40～＋85	℃
Storage temperature range	Tstg	－55～＋125	℃

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

■Operating voltage range (Ta=25℃)

Parameter	Symbol	Min.	Std.	Max.	Unit
Operating voltage range	Vcc	2.5	3.0	3．45	V

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

Parameter	Symbol	Specifications			Unit	Testing condition
		Min.	Std.	Max.		
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	+16.0	+16.5	+17.0	dB	Vin=100KHz,0.3Vpp
Maximum output level	Vomv	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	%	VIN= 0.3Vp-p Standard stair step signal
Differential Phase	D_P	—	1.0	3.0	deg	VIN= 0.3Vp-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	Iextin	—	30	—	mA	Add 4.5V to Output pin through 150Ω
Output DC offset	Voff	-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

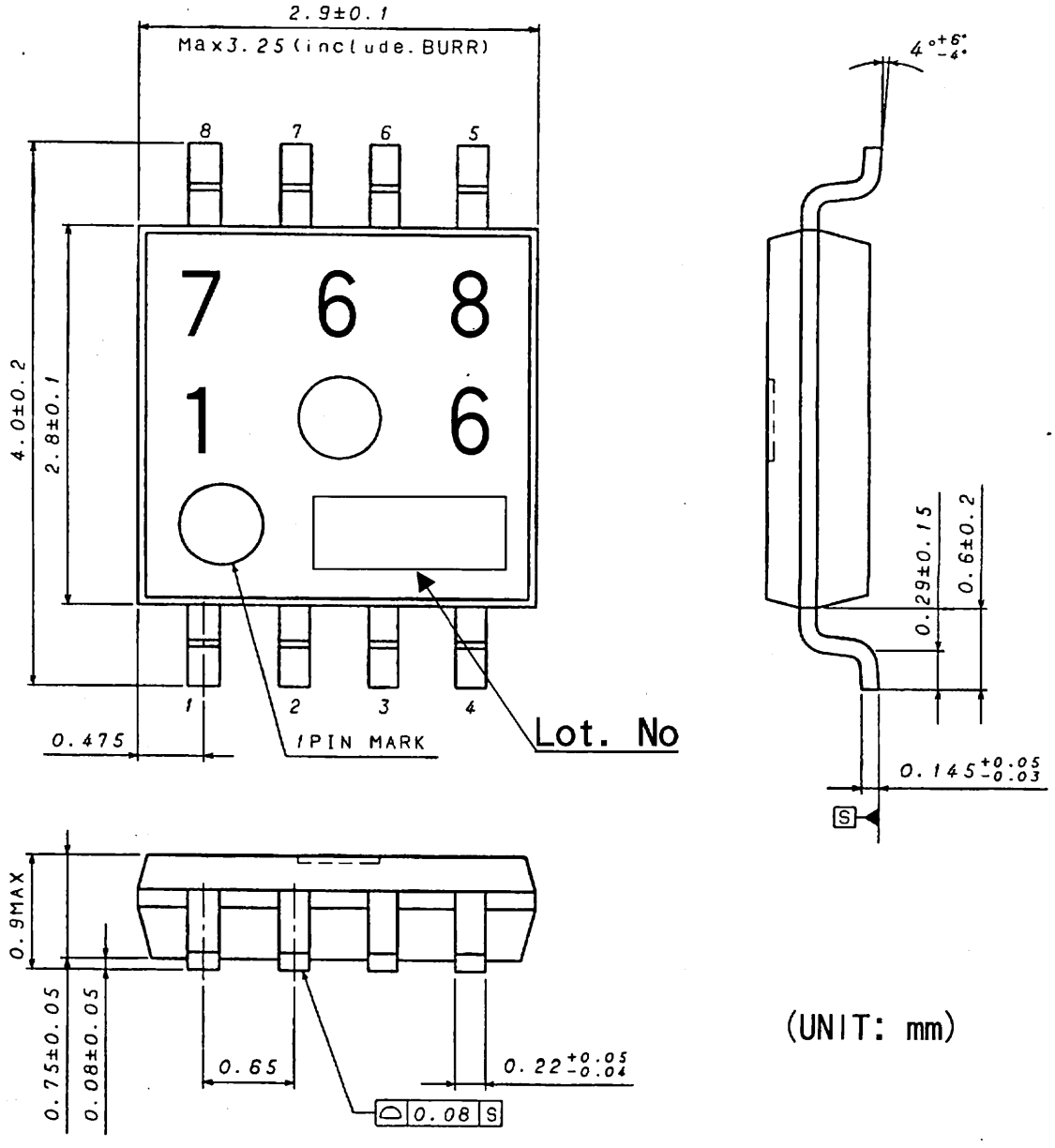

Fig 1 MSOP−8 (Plastic mold)

■ Measurement circuit

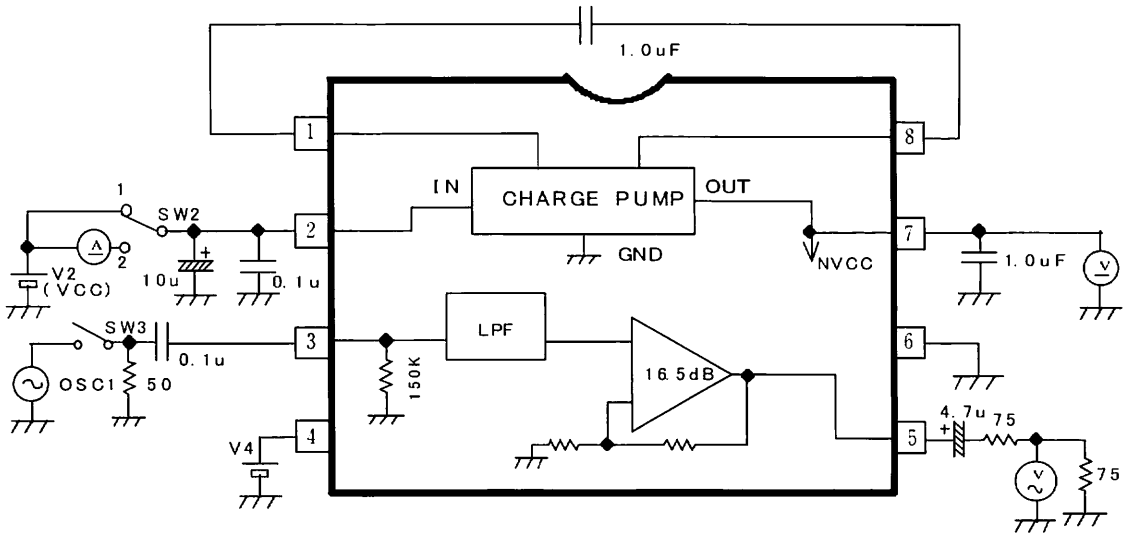

Fig 2

■ Block diagram

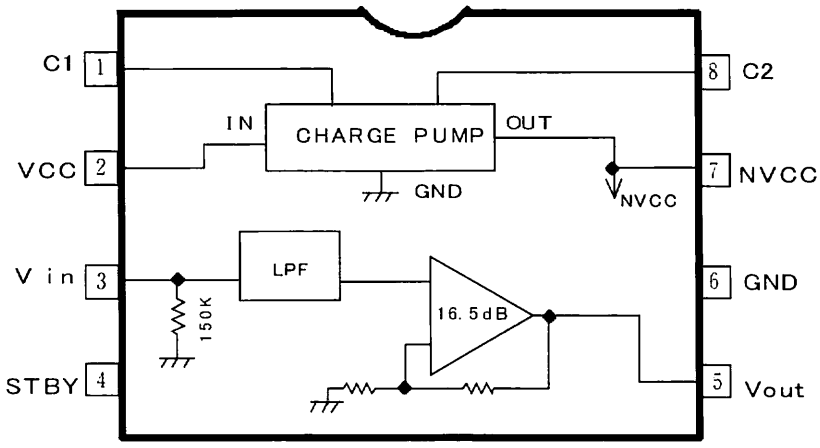

Fig 3

■ Notification on use

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

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