

Structure Silicon Monolithic Integrated Circuit

Product name Low voltage operation video driver with LPF

Model **B H 7 6 8 1 6 F V M**

Outer dimensions Fig 1 M S O P — 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 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

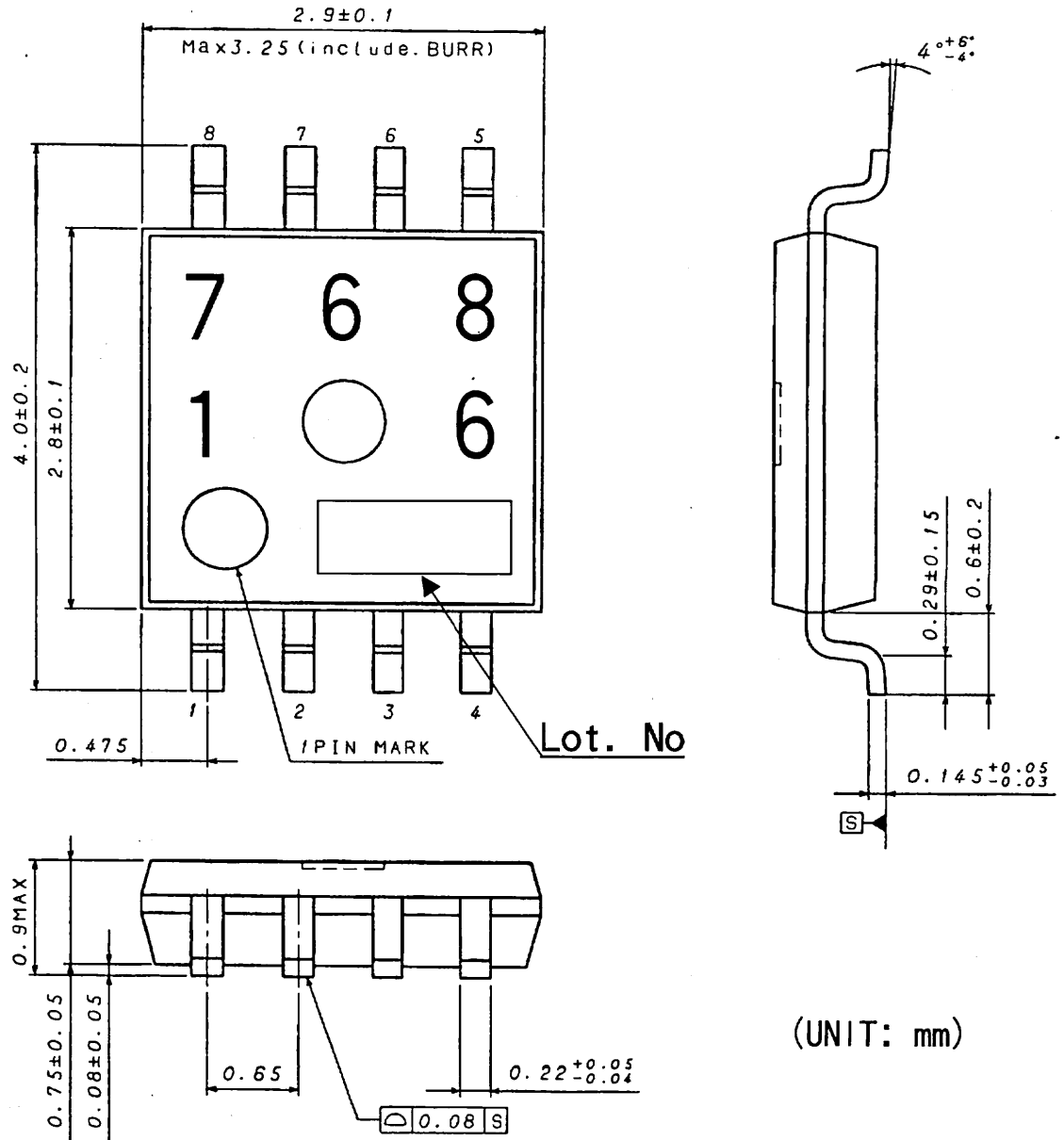
■ Electrical characteristics [Ta=25°C, VCC=3V unless otherwise specified]

Parameter	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	V _{in} =100KHz,0.3Vpp
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} = 0.3Vp-p Standard stair step signal
Differential Phase	D _P	—	1.0	3.0	deg	V _{IN} = 0.3Vp-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 150Ω
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

■ Physical dimensions



(UNIT: mm)

Fig 1 MSOP-8 (Plastic mold)

■ Measurement circuit

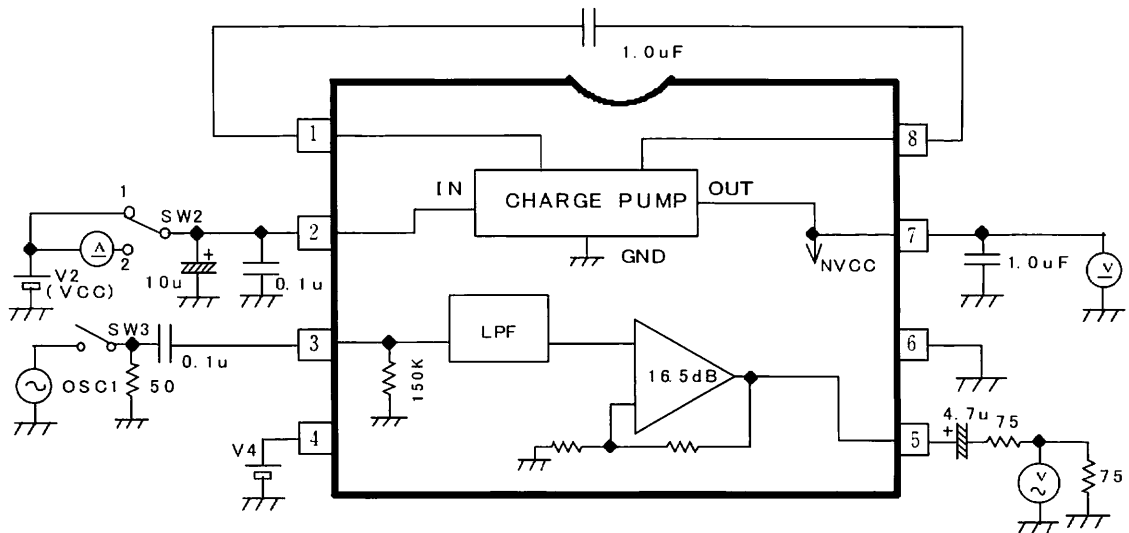


Fig 2

■ Block diagram

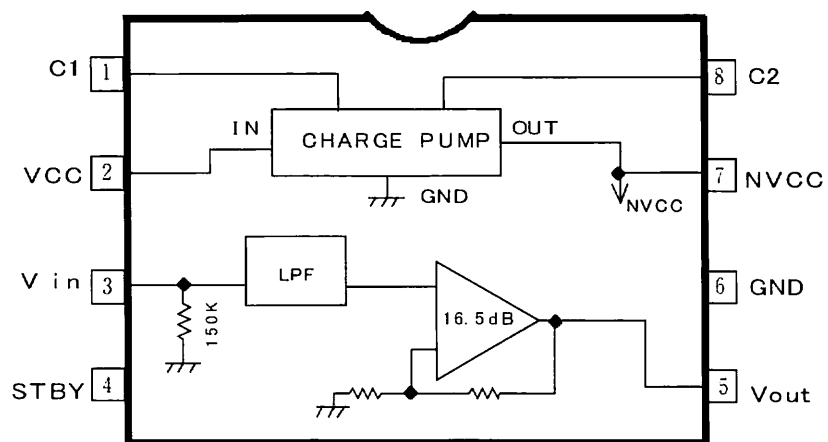


Fig 3

■ Notification on use

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

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