

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

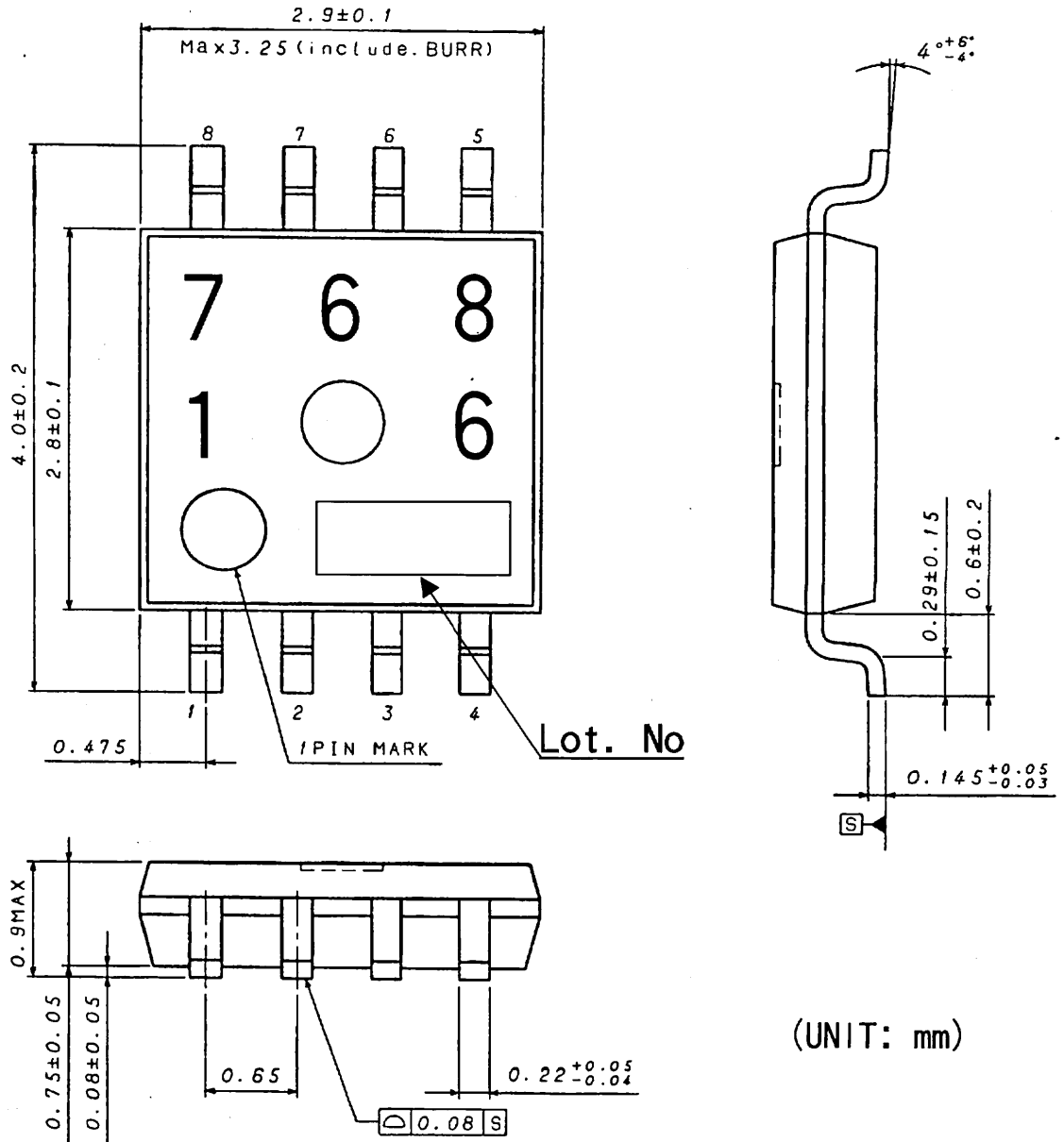
■ Electrical characteristics **[Ta=25°C, VCC=3V unless otherwise specified]**

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	μ A	Standby mode
Voltage gain	G_v	+16.0	+16.5	+17.0	dB	$V_{in}=100\text{KHz}, 0.3\text{Vpp}$
Maximum output level	V_{omv}	4.5	5.2	—	Vpp	$f=10\text{KHz}$ 、THD=1%
Frequency characteristics 1	G_{f1}	-0.95	-0.45	0.05	dB	$f=4.5\text{MHz}/100\text{KHz}$
Frequency characteristics 2	G_{f2}	-5.0	-3.0	-1.0	dB	$f=8.0\text{MHz}/100\text{KHz}$
Frequency characteristics 3	G_{f3}	—	-32	-18	dB	$f=18\text{MHz}/100\text{KHz}$
Frequency characteristics 4	G_{f4}	—	-51	—	dB	$f=23.5\text{MHz}/100\text{KHz}$
Differential Gain	D_G	—	0.5	3.0	%	$V_{IN}= 0.3\text{Vp-p}$ Standard stair step signal
Differential Phase	D_P	—	1.0	3.0	deg	$V_{IN}= 0.3\text{Vp-p}$ 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	μ A	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

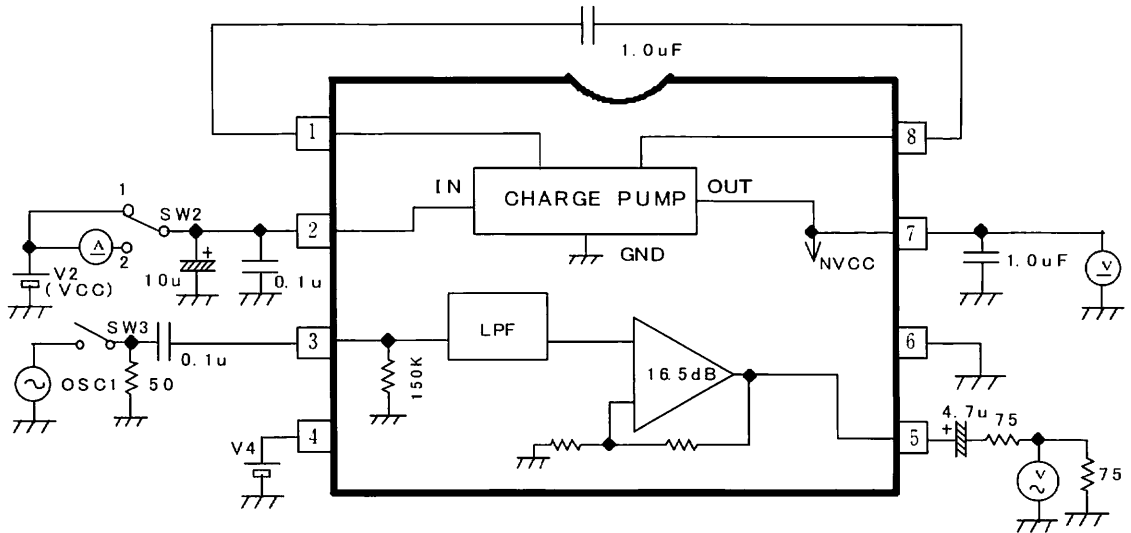


Fig 2

■ Block diagram

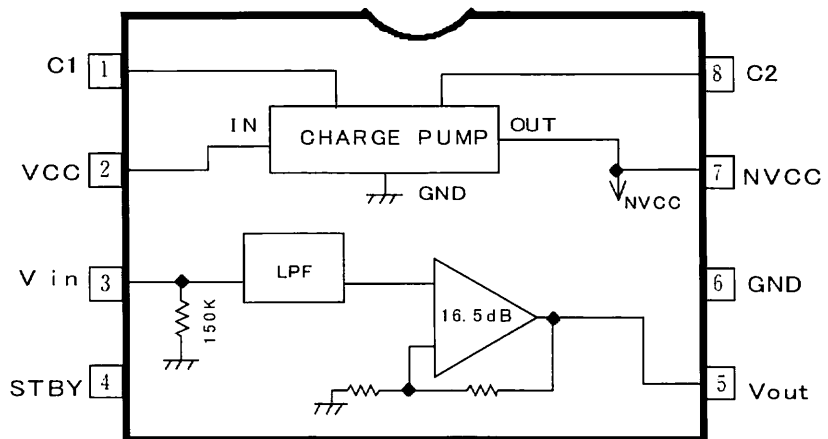


Fig 3

■ Notification on use

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

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