



PRELIMINARY

LOW VOLTAGE VIDEO AMPLIFIER

DESCRIPTION

AA8641 is a low voltage 75 ohm video driver with built-in low pass filter. It supports 3V and 5V operating voltage, and is ideal for video output device, ranging from portable digital still camera and stationary equipment such as DVD player. It incorporates high performance 4-stage LPF which is ideal for removing DAC sampling noise. In addition, ultra-low power consumption is achieved through power saving to under 1uA. It prolongs the battery life of portable device.

FEATURES

- Operating voltage, typical 2.8V~5.5V
- Operating temperature range, -40~+85 °C
- Current consumption, 7.0mA typical
- Current consumption during power saving, 1.0uA
- High precision voltage gain, 6.0dB +/- 0.3dB
- Built-in high performance 4-stage LPF, 6.75 MHz/ 100KHz Max. +1/-5dB
15 MHz/ 100KHz Typ.-25dB
- Internal clamp, 1.28V
- Ultra small package, SOT26
- Support AC-couple and DC-couple (no need to use output capacitors) output

APPLICATION

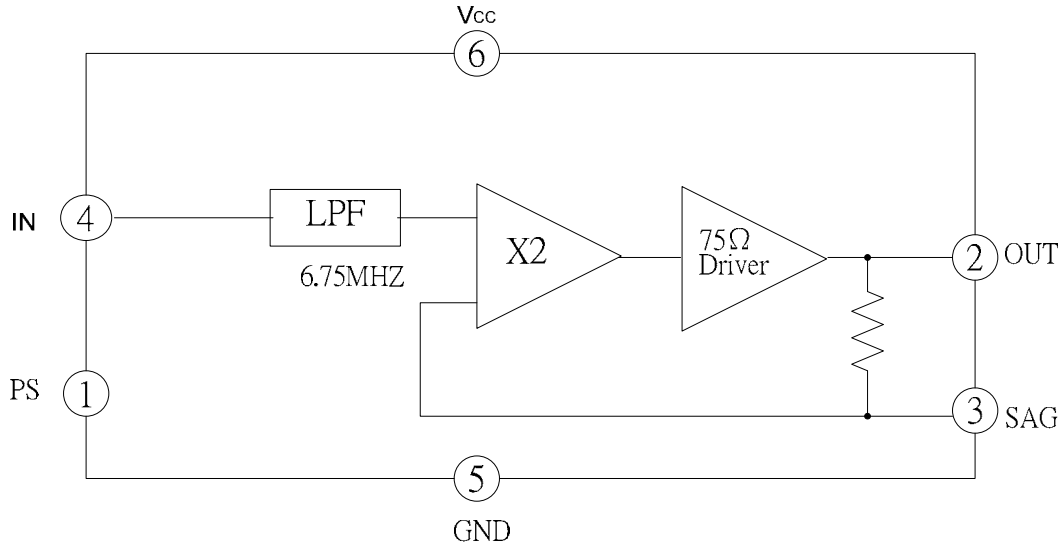
- Portable
- Digital camera
- DVD player
- Surveillance



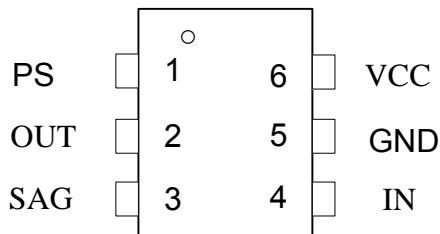
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■ **BLOCK DIAGRAM**



■ **PIN DESCRIPTIONS**



TOP VIEW

PIN NO.	PIN NAME	PIN FUNCTION
1	PS	Output is muted as this pin is set to low
2	OUT	Composite video signal output terminal
3	SAG	SAG correction is to reduce the capacitance of output coupling capacitor
4	IN	Composite video signal input terminal
5	GND	0V power supply
6	VCC	Typical 3V power supply

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■ **ABSOLUTE MAXIMUM RATINGS**

Ta=25°C

PARAMETER	SYMBOL	RATING	UNIT
Supply Voltage	VCC	8	V
Operating Ambient Temperature	TA	-40~+80	°C
Storage Temperature	TS	-65~+150	°C

NOTE: Stress above those listed under "Absolute Maximum Rating" may cause permanent damage to the device. This is a stress rating only and functional operation of the device at these or any other conditions above those indicated in the operational section of this specification is not implied. Exposure to absolute maximum rating conditions for the extended periods of time may affect device reliability.

■ **ELECTRICAL CHARACTERISTICS**

TA = 25°C, VCC = 3V

SYMBOL	PARAMETER	CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
ICC1	Supply current	No signal		7	9	mA
ICC2	Supply current (at power save mode)	No signal, PS: ON			1	uA
IPSH	Power save terminal input current	H 1P1N VH=2.8V			360	uA
IPSL		L 1P1N VL=0.2V			18	uA
VPSH	Power Save terminal input voltage	H	2.0		Vcc	V
VPSL		L			0.5	V
VIN	Input terminal voltage	4PIN		1.28		V
VOUT	Output terminal voltage	2PIN	0.12		0.35	V
GV	Voltage gain	SIN wave: 1V, f=100kHz	5.7	6.0	6.3	dB
FC1	Frequency characteristic 1	SIN wave: 1V, 6.75MHz/100kHz			-5	dB
FC2	Frequency characteristic 2	SIN wave: 1V, 15MHz/100kHz		-25		dB
DG	Differential gain	Staircase signal 1V		NA		%
DP	Differential phase	Staircase signal 1V		NA		°
SN	S/N	BW: 100k ~ 6MHz		NA		dB

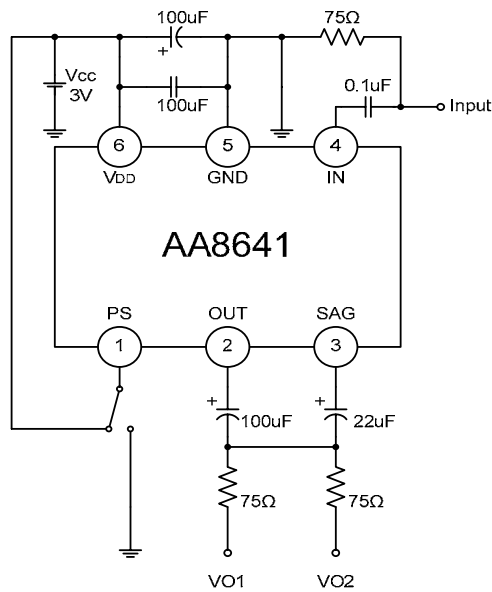
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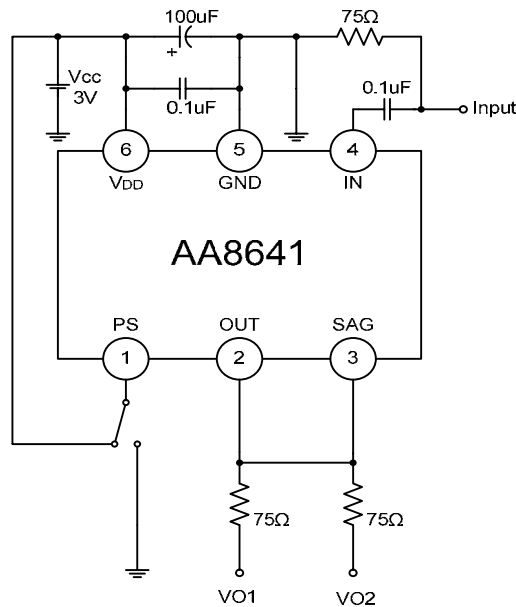
Power Saving MODE

Function	PS
Power Saving	L
Operation	H
Power Saving	Open

■ APPLICATION CIRCUIT1 – AC-COUPLE OUTPUT



■ APPLICATION CIRCUIT2 – DC-COUPLE OUTPUT



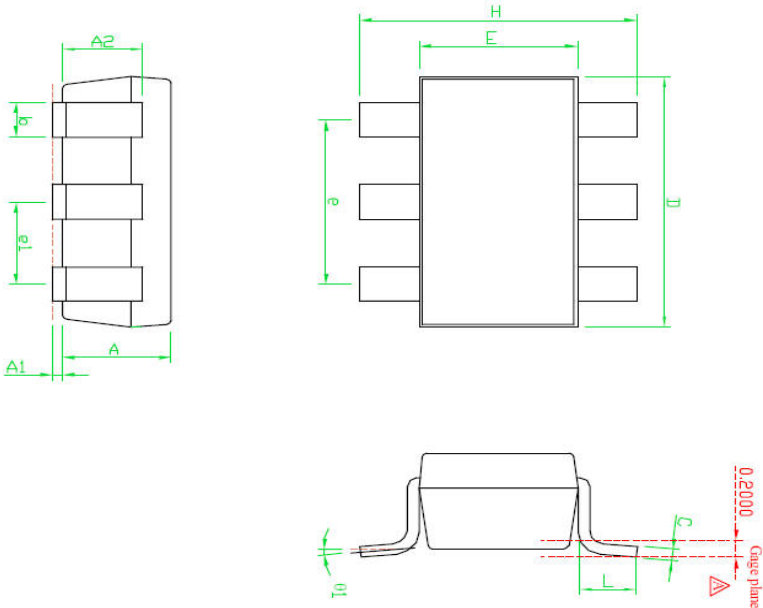
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ORDERING INFORMATION

ORDER NO.	PACKAGE	PACKING	ONE REEL Q'TY	MARK CHART	
AA8641A	SOT26L	Tape & Reel	3,000ea	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">8641 XXXX</td> </tr> </table>	8641 XXXX
8641 XXXX					

PACKAGE DIMENSIONS



SYMBOLS	DIMENSIONS IN MILLIMETERS		
	MIN	NOM	MAX
A	1.00	1.10	1.30
A1	0.00	---	0.10
A2	0.70	0.80	0.90
B	0.35	0.40	0.50
C	0.10	0.15	0.25
D	2.70	2.90	3.10
E	1.40	1.60	1.80
e	---	1.90(TYP)	---
H	2.60	2.80	3.00
L	0.37	---	---
θ1	1°	5°	9°
e1	---	0.95(TYP)	---

NOTES ON USE

- PACKAGE BODY SIZES EXCLUDE MOLD FLAH PROTRUSIONS OR GATE BURRS
- TOLERANCE ±0.1000mm(4mil) UNLESS OTHERWISE SPECIFIED
- COPLANARIT : 0.1000mm
- DIMENSIONL IS MEASURED IN GAGE PLANE