



## UM1671

CMOS IC

### LOW VOLTAGE OPERATING 75Ω DRIVER

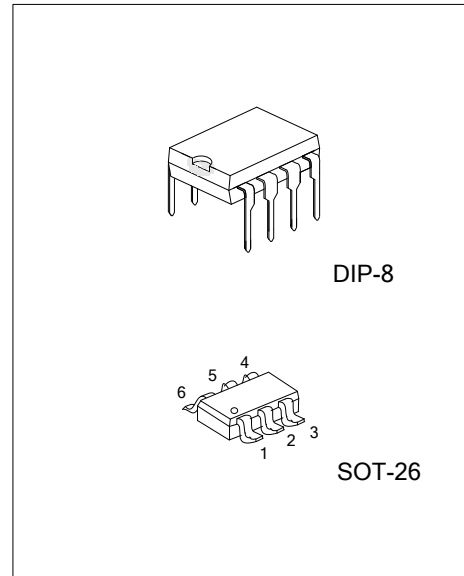
#### DESCRIPTION

The UTC **UM1671** is a low voltage operating 75Ω driver, operating supply voltage from 2.8V to 5.5V. Including a high-performance 4-order LPF, a available output gain built-in amp and a sag auxiliary circuit, etc.

The UTC **UM1671** is suitable for video signal output in devices ranging from portable equipment such as digital still cameras to stationary equipment such as DVD players.

#### FEATURES

- \* Supports 3V and 5V systems
- \* High-precision voltage gain
- \* Including a high-performance 4-order LPF, a available output gain built-in amp and a sag auxiliary circuit



#### ORDERING INFORMATION

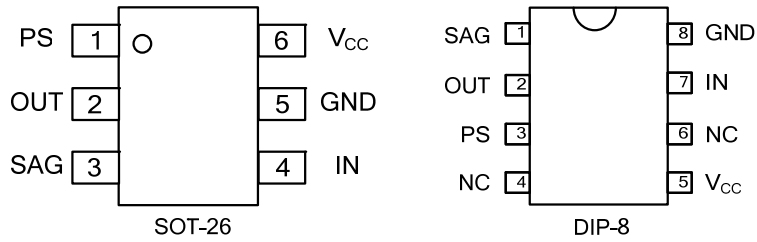
Ordering Number		Package	Packing
Lead Free	Halogen Free		
UM1671L-AG6-R	UM1671G-AG6-R	SOT-26	Tape Reel
UM1671L-D08-R	UM1671G-D08-R	DIP-8	Tube

<p>UM1671G-AG6-R</p> <p>(1) Packing Type</p> <p>(2) Package Type</p> <p>(3) Green Package</p>	<p>(1) R: Tape Reel</p> <p>(2) AG6: SOT-26, D08: DIP-8</p> <p>(3) G: Halogen Free and Lead Free, L: Lead Free</p>
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#### MARKING

SOT-26	DIP-8
<p>L: Lead Free G: Halogen Free</p>	<p>Date Code</p> <p>L: Lead Free G: Halogen Free Lot Code</p>

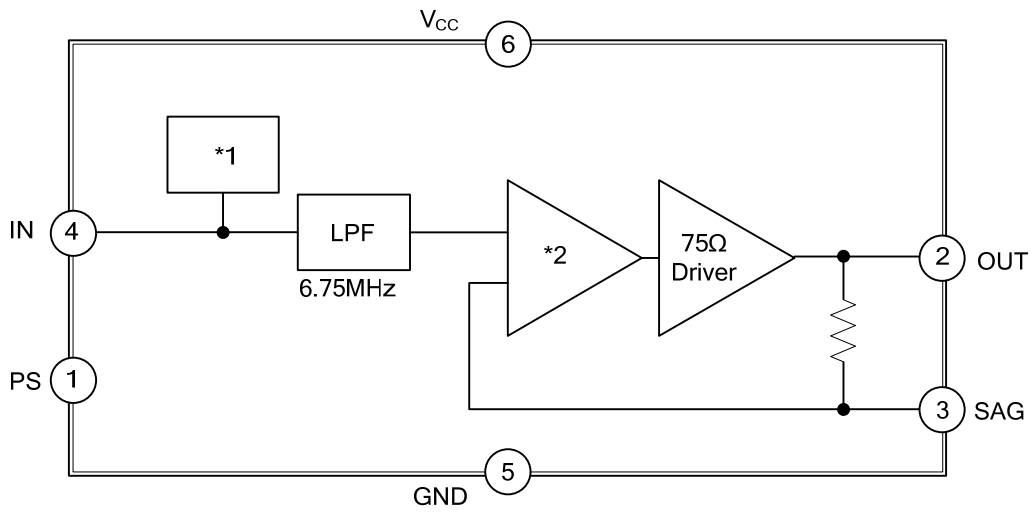
## PIN CONFIGURATION



## PIN DESCRIPTION

PIN NO.		PIN NAME	DESCRIPTION	INTERNAL EQUIVALENT CIRCUIT DIAGRAM
SOT-26	DIP-8			
1	3	PS	Power Save	
2	2	OUT	Signal Output	
3	1	SAG	SAG Correction	
4	7	IN	Signal Input	
5	8	GND	GND	
6	5	V <sub>CC</sub>	V <sub>CC</sub>	
-	4, 6	NC	No Connect	

■ BLOCK DIAGRAM



*1 INPUT CLAMP	*2 BUILT-IN AMPLIFIER
clamp	6dB(*2)

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### ■ ABSOLUTE MAXIMUM RATING (T<sub>A</sub>=25°C)

PARAMETER		SYMBOL	RATINGS	UNIT
Supply Voltage		V <sub>CC</sub>	7 (MAX.)	V
Power Dissipation	SOT-26	P <sub>D</sub>	200	mW
	DIP-8		600	mW
Storage Temperature		T <sub>STG</sub>	-65~+150	°C
Operating Temperature		T <sub>OPR</sub>	-40~+85	°C

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

### ■ RECOMMENDED OPERATING CONDITIONS

PARAMETER		SYMBOL	RATINGS	UNIT
Operating Voltage		V <sub>CCOP</sub>	2.8~5.5	V
Operating Temperature		T <sub>OPR</sub>	-40~+85	°C

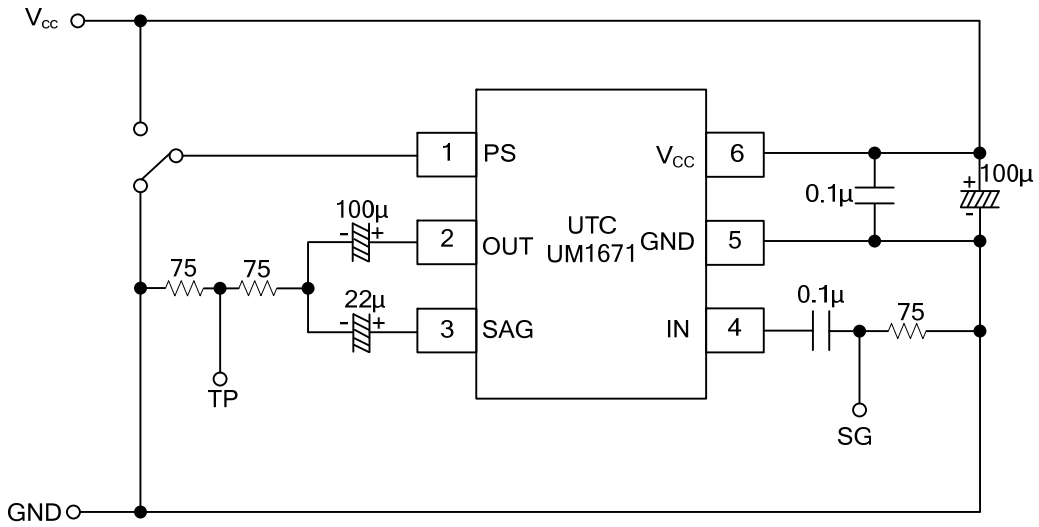
### ■ ELECTRICAL CHARACTERISTICS (Except where noted otherwise, T<sub>A</sub>=25°C, V<sub>CC</sub>=3V)

PARAMETER		SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Supply Current		I <sub>CC1</sub>	No Signal		7	10	mA
Supply Current (At Power Save Mode)		I <sub>CC2</sub>	No Signal, PS: ON			1	μA
Power Save Terminal Input Current	H	I <sub>PSH</sub>	1PIN V <sub>H</sub> =2.8V			360	μA
	L	I <sub>PSL</sub>	1PIN V <sub>L</sub> =0.2V			18	μA
Power Save Terminal Input Voltage	H	V <sub>PSH</sub>		2.0		V <sub>CC</sub>	V
	L	V <sub>PSL</sub>				0.5	V
Input Terminal Voltage		V <sub>IN</sub>	4PIN		1.2		V
Output Terminal Voltage		V <sub>OUT</sub>	2PIN	0.15	0.3	0.45	V
Voltage Gain		G <sub>V</sub>	SIN Wave: 1V, f=100kHz	5.7	6.0	6.3	dB
Frequency Characteristic 1		f <sub>C1</sub>	SIN Wave: 1V, 6.75MHz/100kHz	-1.0	0	1.0	dB
Frequency Characteristic 2		f <sub>C2</sub>	SIN Wave: 1V, 27MHz/100kHz		-40	-27	dB
Differential Gain		DG	Staircase Signal 1V		0.7	1.5	%
Differential Phase		DP	Staircase Signal 1V		0.7	1.5	°
Output Dynamic Range		DR	SIN Wave: 100kHz, THD=1.0%	2.2	2.4		V
S/N		SN	BW: 100k~6MHz		74		dB
Group Delay		t <sub>1</sub>	at 100kHz		50	80	ns
Group Delay	Δt <sub>1</sub>		to 3.58MHz		4	10	ns
			to 4.43MHz		6	10	ns
			to 6MHz		12	20	ns

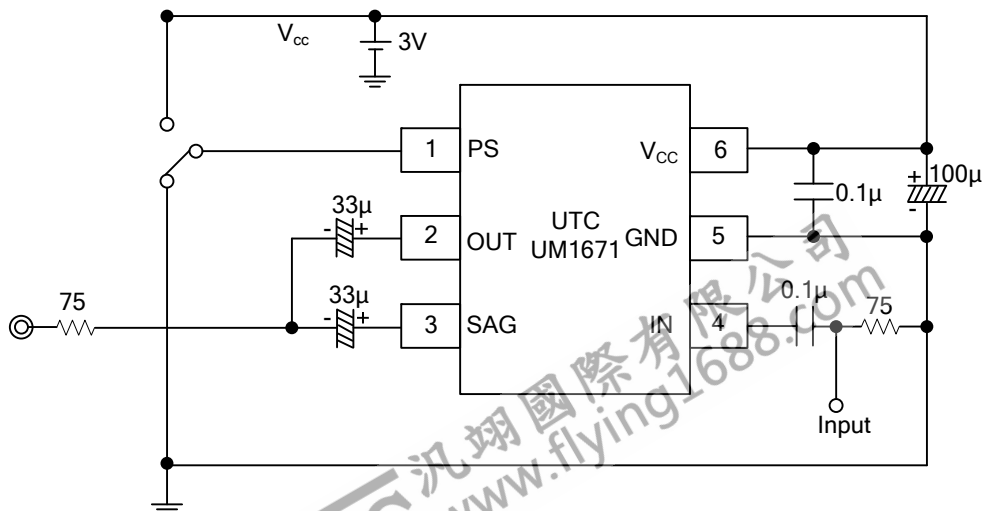
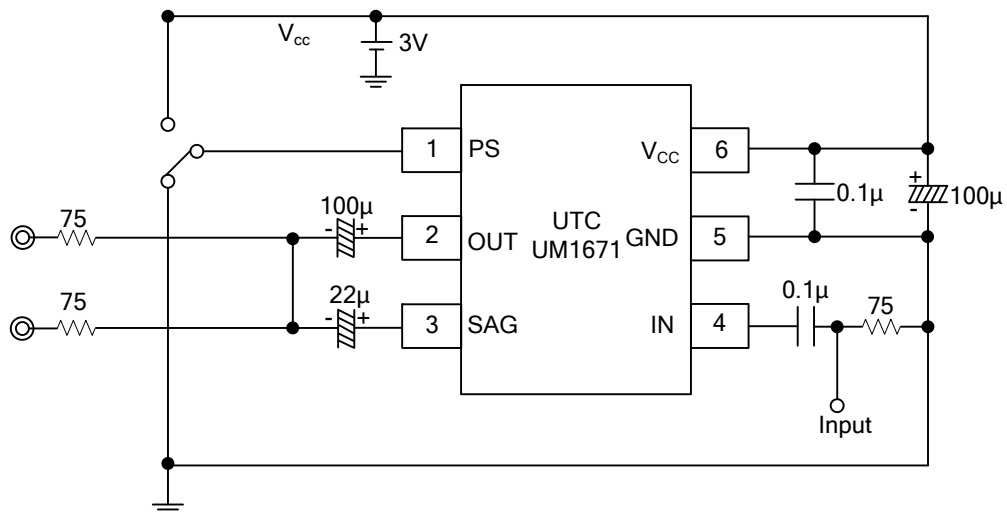
### ■ SWITCH CONTROL TABLE

PS-PIN	POWER SAVE
H	OFF
L	ON
OPEN	ON

## ■ TEST CIRCUIT



## ■ TYPICAL APPLICATION CIRCUIT



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