

# UNISONIC TECHNOLOGIES CO., LTD

**UM1671 CMOS IC Preliminary** 

## **LOW VOLTAGE OPERATING** 75Ω DRIVER

### **DESCRIPTION**

The UTC UM1671 is a low voltage operating  $75\Omega$  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.

# SOT-26

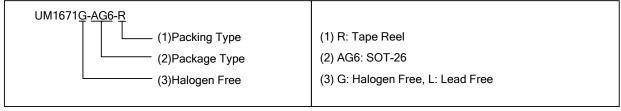
### **FEATURES**

- \* 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

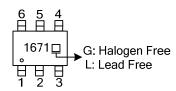
### **ORDERING INFORMATION**

Ordering	Number	Doolsono	Packing	
Lead Free	Halogen Free	Package		
UM1671L-AG6-R	UM1671G-AG6-R	SOT-26	Tape Reel	

xx: Output Voltage, refer to Marking Information. Note:

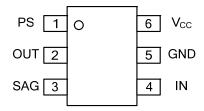


### **MARKING INFORMATION**

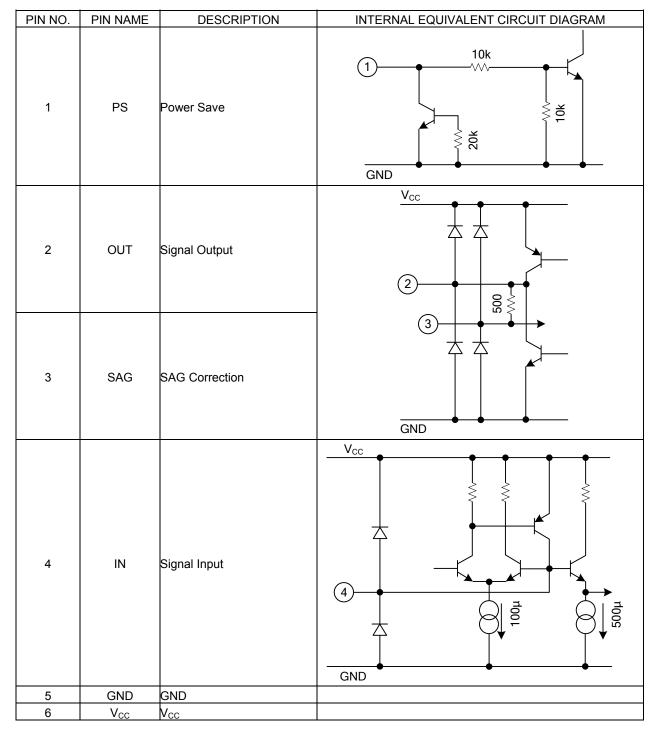


www.unisonic.com.tw 1 of 6 QW-R502-827.a

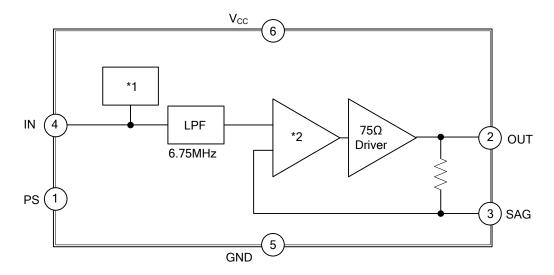
### **■ PIN CONFIGURATION**



### ■ PIN DESCRIPTION



### **■ BLOCK DIAGRAM**



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

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

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	$V_{CC}$	7 (MAX.)	V
Power Dissipation	$P_{D}$	200	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	$V_{CCOP}$	2.8~5.5	V
Operating Temperature	T <sub>OPR</sub>	-40~+85	Ô

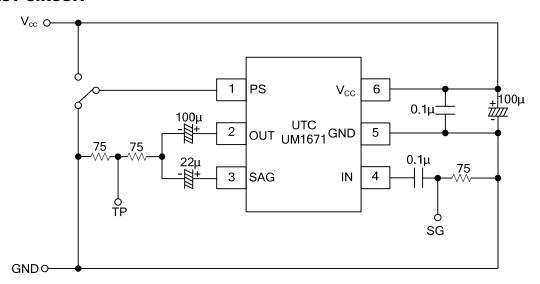
### ■ ELECTRICAL CHARACTERISTICS (Except where noted otherwise, T<sub>A</sub>=25°C, V<sub>CC</sub>=3V)

PARAMETER		SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Supply Current		I <sub>CC</sub> 1	No Signal		7	10	mA
Supply Current (At Power Save Mode)		I <sub>CC</sub> 2	No Signal, PS: ON			1	μΑ
Power Save Terminal H		I <sub>PSH</sub>	1PIN V <sub>H</sub> =2.8V			360	μΑ
Input Current L		I <sub>PSL</sub>	1PIN V <sub>L</sub> =0.2V			18	μΑ
Power Save Terminal H		$V_{PSH}$				$V_{CC}$	V
Input Voltage L		$V_{PSL}$				0.5	V
Input Terminal Voltage		$V_{IN}$	4PIN		1.2		V
Output Terminal Voltage		$V_{OUT}$	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	۰
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		t1	at 100kHz		50	80	ns
			to 3.58MHz		4	10	ns
Group Delay		Δt1	to 4.43MHz		6	10	ns
			to 6MHz		12	20	ns

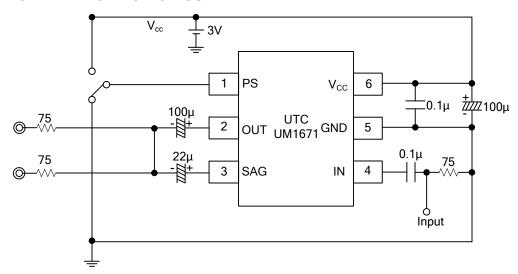
### **■ SWITCH CONTROL TABLE**

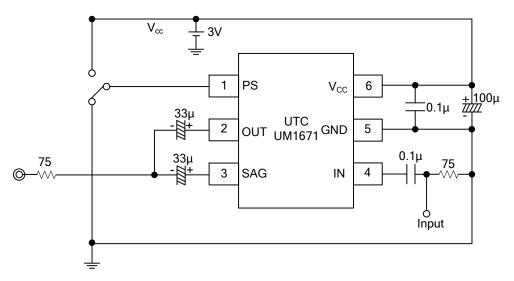
PS-PIN	POWER SAVE		
	OFF		
11	011		
L	ON		
OPEN	ON		

### TEST CIRCUIT



### ■ TYPICAL APPLICATION CIRCUIT





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