



Description

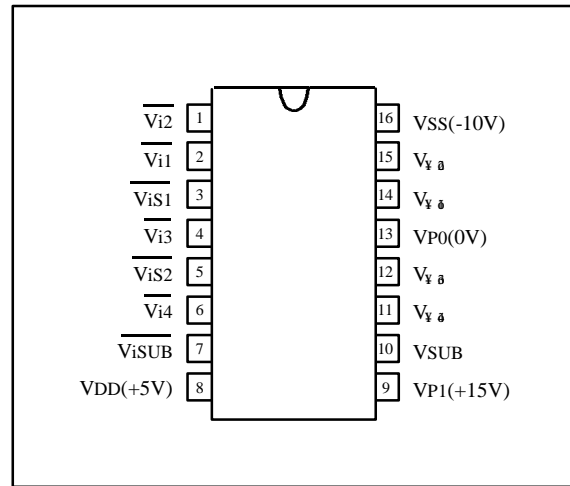
The Ai1001S is a clock driver for the vertical resistor drive of CCD.

Ai1001S is well suited for the B/W or color CCD camera and camcorder in NTSC or PAL camera system.

Feature

- 4 channel vertical clock driver and 1 channel substrate driver.
- Implemented with high voltage(+50V) and high performance CMOS process.

Pin Configuration



16 PIN SOP / SSOP
(Top View)

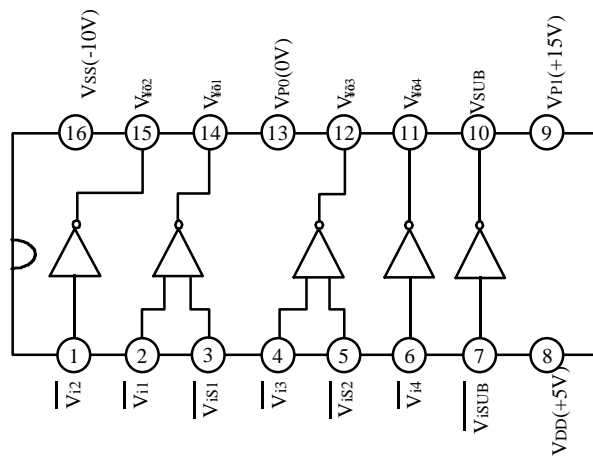
Absolute Maximum Ratings (Ta = 25; ħ)

Parameter	Symbol	Rating	Unit
Supply voltage	V _{SS}	Reference voltage	V
	V _{DD} , V _{P0} , V _{P1}	V _{SS} ± 0.3 to V _{SS} +35	V
Input voltage	V _I	V _{SS} ± 0.3 to V _{DD} +0.3	V
Output voltage	V _{Y a} , V _{Y a}	V _{SS} ± 0.3 to V _{P0} +0.3	V
	V _{Y a} , V _{Y a} , V _{Sub}	V _{SS} ± 0.3 to V _{P1} +0.3	V
Operating temperature	T _{OPR}	-25 to +85	ċ
Storage temperature	T _{STG}	-40 to +125	ċ

Recommended Operating Conditions

Parameter	Symbol	Rating	Unit
Supply Voltage	V _{DD}	V _{SS} +15	V
	V _{P0}	V _{SS} +10	V
	V _{P1}	V _{SS} +25	V
Operating temperature	T _{OPR}	-20 to +75	ċ

Block Diagram



Truth Table

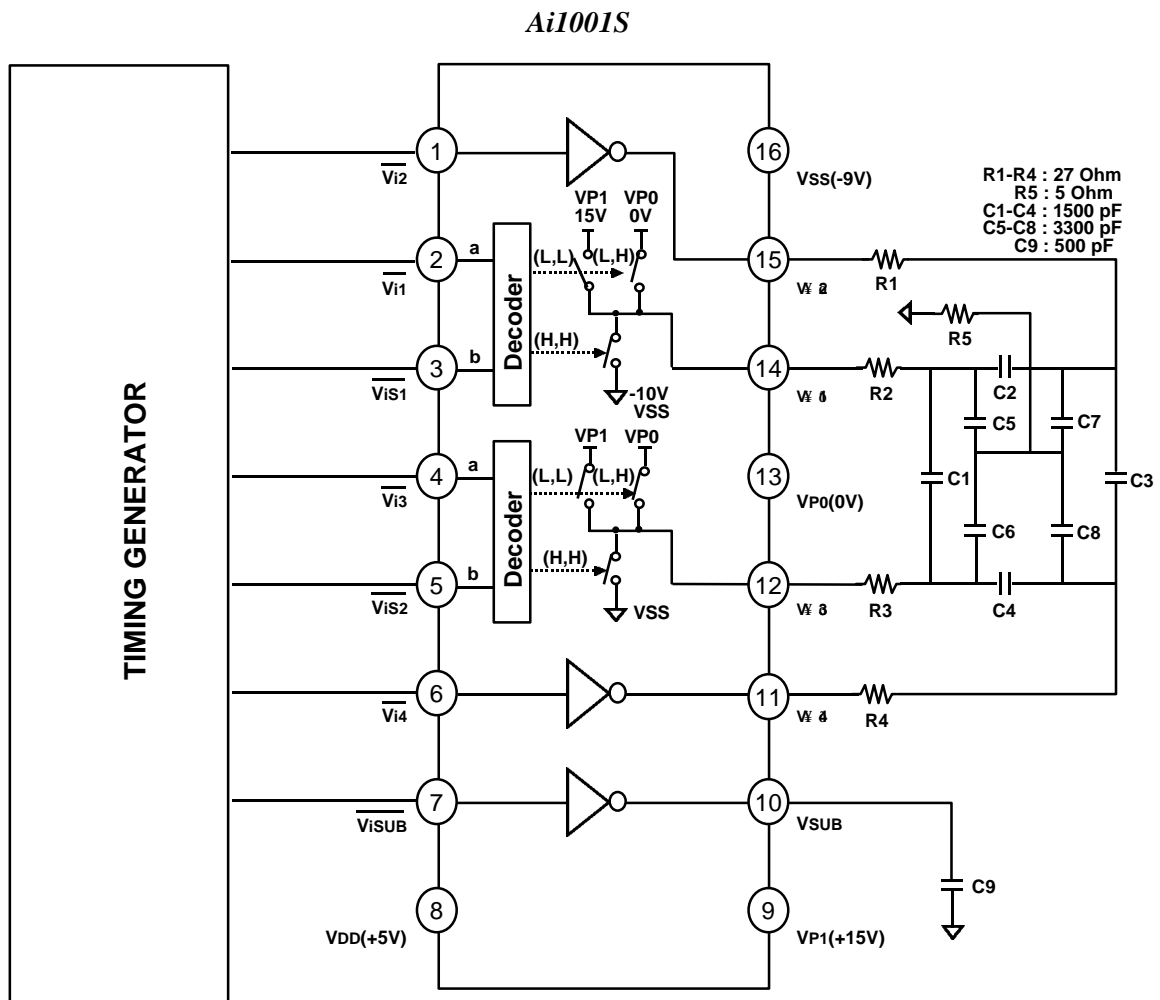
Input				Output		
$\overline{V_{i1,3}}$	$\overline{V_{iS1,2}}$	$\overline{V_{i2,4}}$	$\overline{V_{iSUB}}$	$V_{Y\ a,3}$	$V_{Y\ a,4}$	V_{SUB}
L L H H	L H L H			VP1 VP0 *Z VSS		
		L H			VP0 VSS	
			L H			VP1 VSS

* Z is high impedance.

Pin Description

No.	Symbol	I/O	Description
1	$\overline{V_{i2}}$	I	Output control ($V_{Y\ a}$)
2	$\overline{V_{i1}}$	I	Output control ($V_{Y\ a}$)
3	$\overline{V_{iS1}}$	I	Output control ($V_{Y\ a}$)
4	$\overline{V_{i3}}$	I	Output control ($V_{Y\ a}$)
5	$\overline{V_{iS2}}$	I	Output control ($V_{Y\ a}$)
6	$\overline{V_{i4}}$	I	Output control ($V_{Y\ a}$)
7	$\overline{V_{iSUB}}$	I	Output control (V_{SUB})
8	VDD	-	Power supply (+5V)
9	VP1	-	Power supply (+15V)
10	V_{SUB}	O	Output (2 level : VP1, VSS)
11	$V_{Y\ a,3}$	O	Output (2 level : VP0, VSS)
12	$V_{Y\ a,4}$	O	Output (3 level : VP1, VP0, VSS)
13	VP0	-	Power supply (0V)
14	$V_{Y\ a,4}$	O	Output (3 level : VP1, VP0, VSS)
15	$V_{Y\ a,3}$	O	Output (2 level : VP0, VSS)
16	VSS	-	Power supply (-10V)

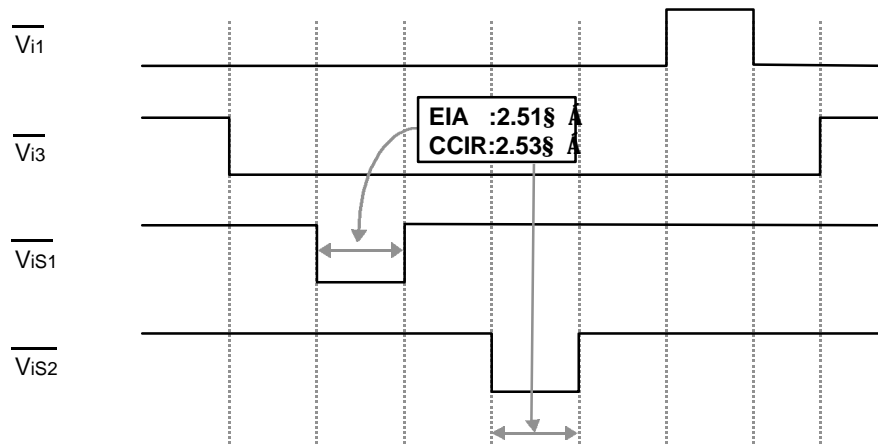
Test Circuit



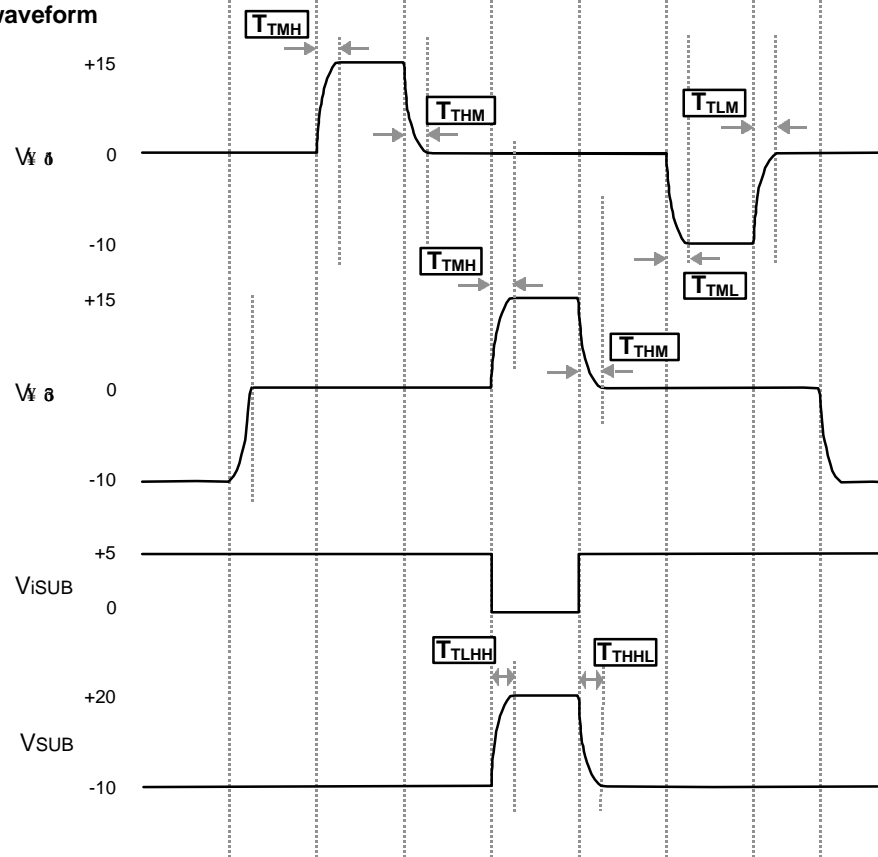
*(L, H) means the on-status of the switch when a = "L", b = "H".

Test Circuit I/O Waveform Diagram

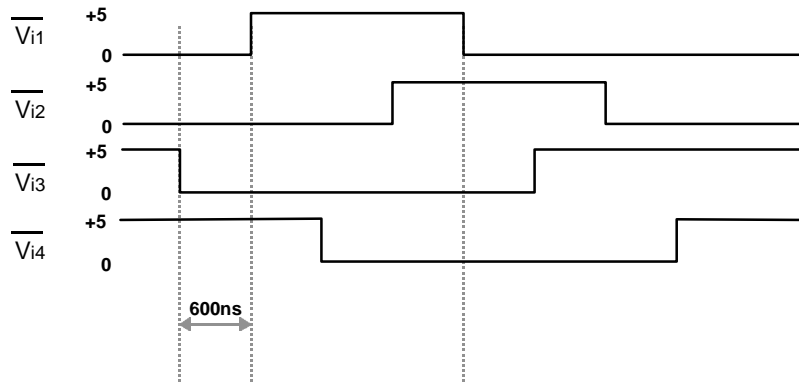
Input waveform



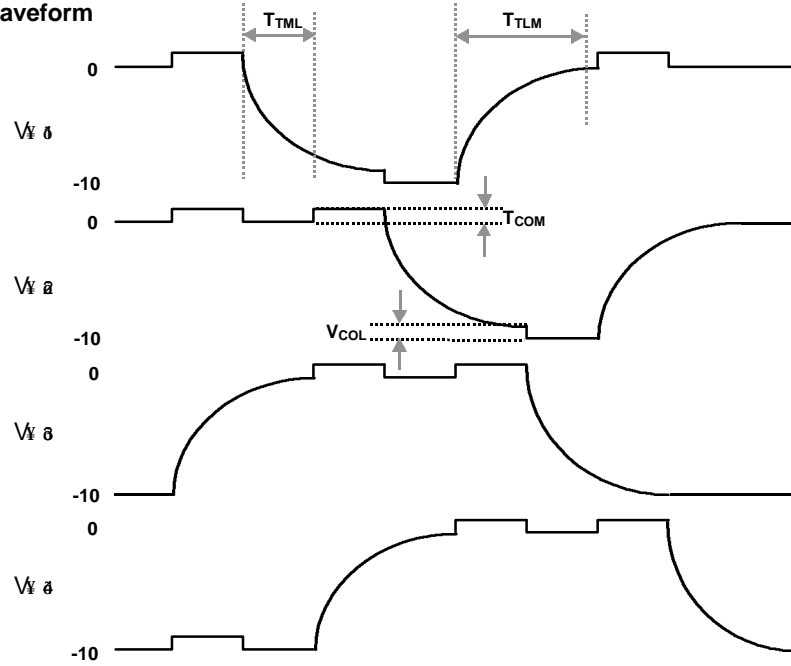
Output waveform



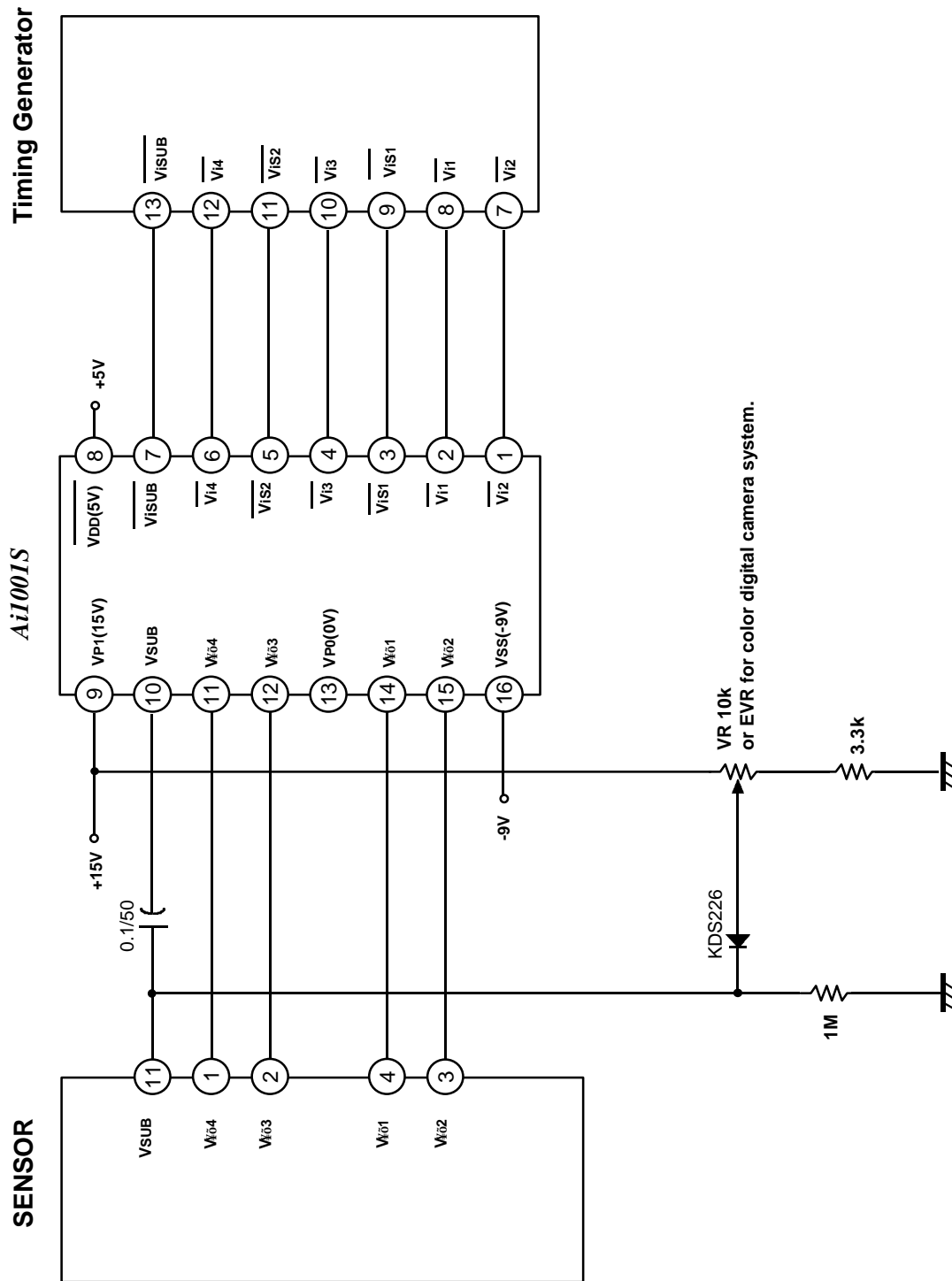
**Input waveform
(Repeat Cycle 15.7kHz)**



Output waveform



Application Circuit



Package Dimension (*Ai1001S* : 16 PIN SSOP)

UNIT = inch (mm)

