Multi Line Sensor Heads for Card-compatible

LSH2002-AA10A

ROHM's LSH2002-AA10A multi line sensor head utilizes a special ceramic substrate featuring superior dimensional precision and thermal dissipation characteristics, resulting in stable reading, even under fluctuating ambient temperature conditions. A unique prism, developed using the latest in optical technology, ensures simultaneous uniform light output and low light radiation to the media. In addition, bidirectional reading capability enables greater flexibility regarding carrier orientation.

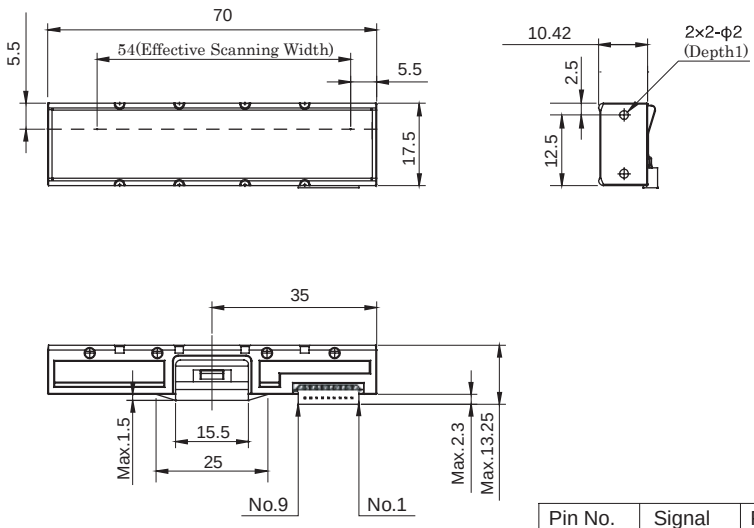
●Applications

Image scanners (i.e. business card), detection sets (e.g. surface, paper edge, paper type)

●Features

1）25in/s (635mm/s) read speed (monochrome)
2）Bidirectional reading capability
3）54mm read width (70mm total width)
4）Color light source (switchable)

●Dimensions (Unit : mm)



Pin No.	Signal	Pin No.	Signal
No.1	CLK	No.7	GLED
No.2	SP	No.8	BLED
No.3	V_{DD}	No.9	VLED
No.4	GND		
No.5	AO		
No.6	RLED		

(NOTE 1) Deflection at the top of glass:0-0.25
Projection to platen is positive.
(NOTE 2) Socket Housing:IL-Z-9S-S125C3(JAE)
Socket Contact:IL-Z-C3-A-15000(JAE)

●Characteristics

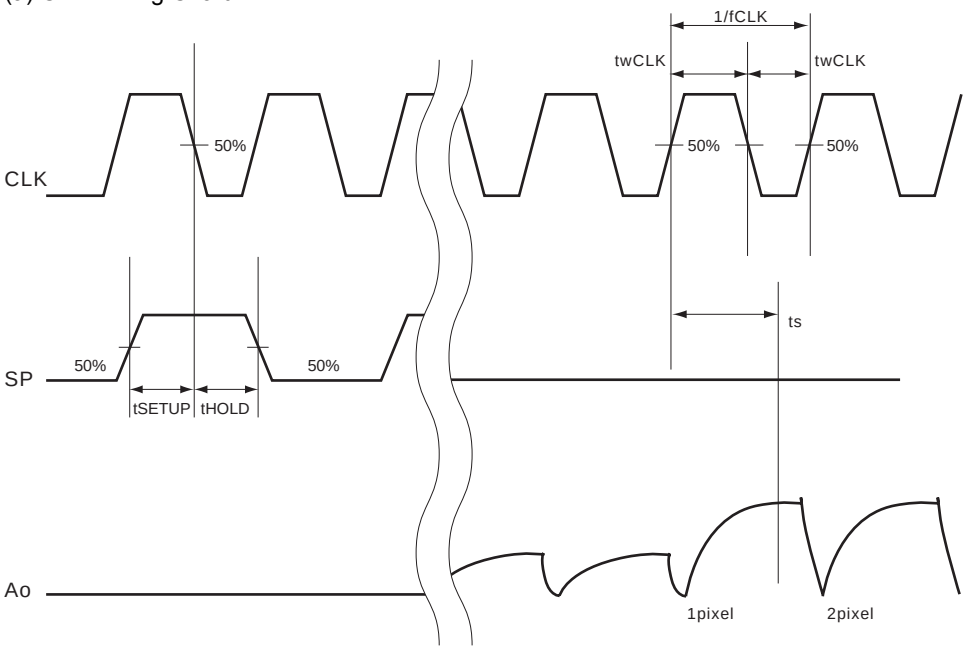
Parameter	Symbol	Typ.	Unit
Effective scanning width	–	54	mm
Primary scan dot density	–	200	dpi
Total dot number	–	432	dots
Power supply voltage	V_{DD}	3.3	V
Scanning speed	SLT	0.2×3	ms / line
Clock frequency	CLK	4	MHz
Maximum dynamic range (V_{DD}=5V)	VRMax.	0.5	V
Minimum dynamic range (V_{DD}=5V)	VRMin.	0.25	V
Maximum dynamic range (V_{DD}=3.3V)	VRMax.	0.4	V
Minimum dynamic range (V_{DD}=3.3V)	VRMin.	0.2	V
Dark output (V_{DD}=5V)	Vod	1.2±0.4	V
Dark output (V_{DD}=3.3V)	Vod	0.8±0.4	V
Operating temperature	–	5 to 45	°C

●Pin assignments

No.	Circuit	I / O	Functions
1	CLK	I	Clock
2	SP	I	Start Pulse
3	V_{DD}	I	Power Supply
4	GND	I	Ground
5	Ao	O	Analog Output
6	RLED	I	LED ground
7	GLED	I	LED ground
8	BLED	I	LED ground
9	VLED	I	LED power supply

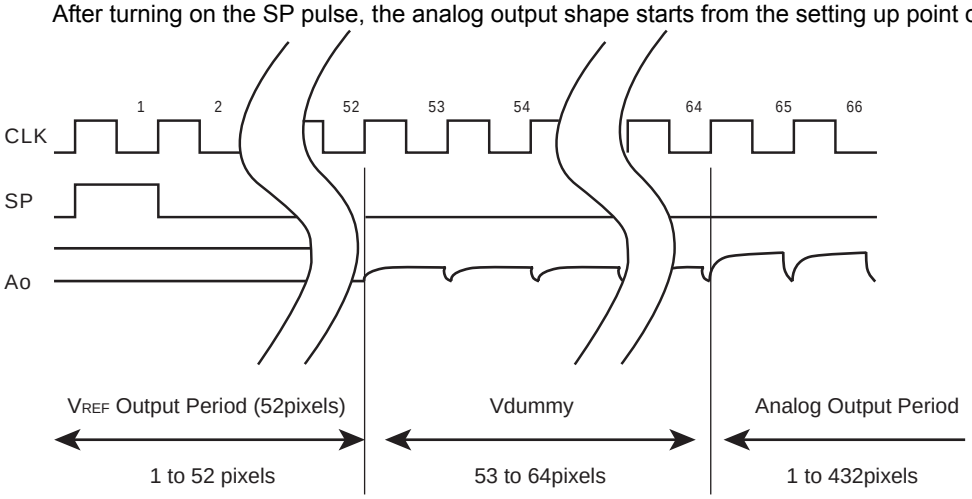
●Timing chart

(a) CLK Timing Chart



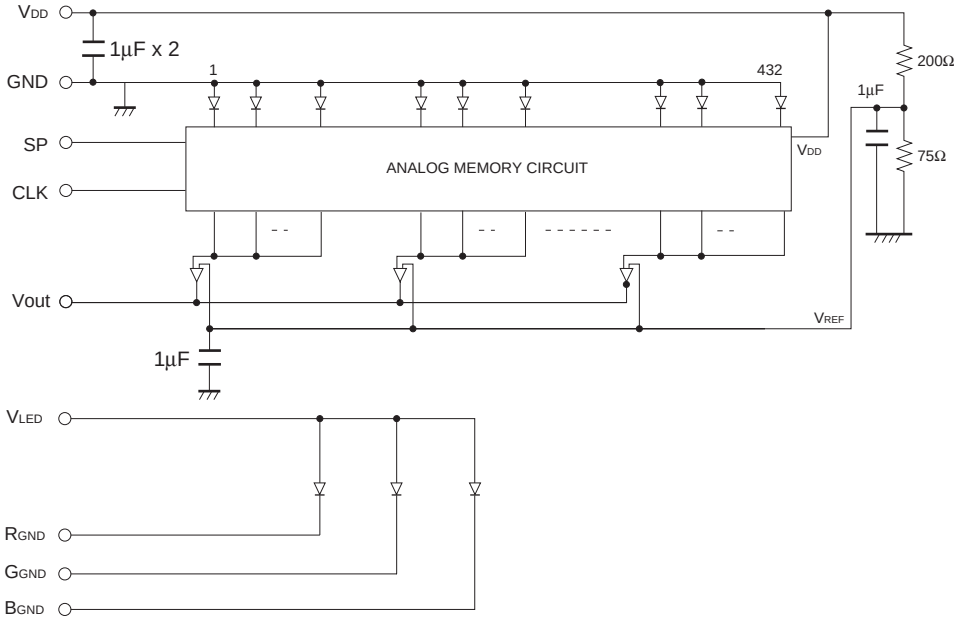
(b) Data Output Timing Chart

After turning on the SP pulse, the analog output shape starts from the setting up point of 65 clock pulse.

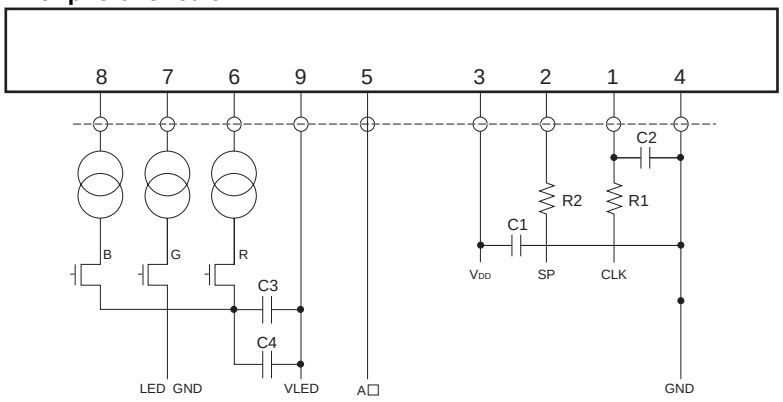


Note) Output blank part cannot be used as the analog output standard level.

●Inner circuit



●Peripheral circuit



∗ R1=R2=100Ω
C1=47µF, C2=100pF
C3=100µF, C4=0.1µF

∗ Please adjust the value of resistance to fit your interface circuit.

Notes

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