

High speed thick film thermal printhead (11.8 dots / mm) KD3008-DF54A

Using its expertise in LSI technology, ROHM has developed new high density driver chips for use in the KD3008-DF54A. Capable of being employed for both thermal and thermal transfer printing, with a print speed of 100mm/s, the resulting print heads are the fastest in their class. The high-speed and high-density printing answers the needs of POS, ATM, KIOSK, and ticket printing devices, which are increasingly being called upon to produce graphical output.

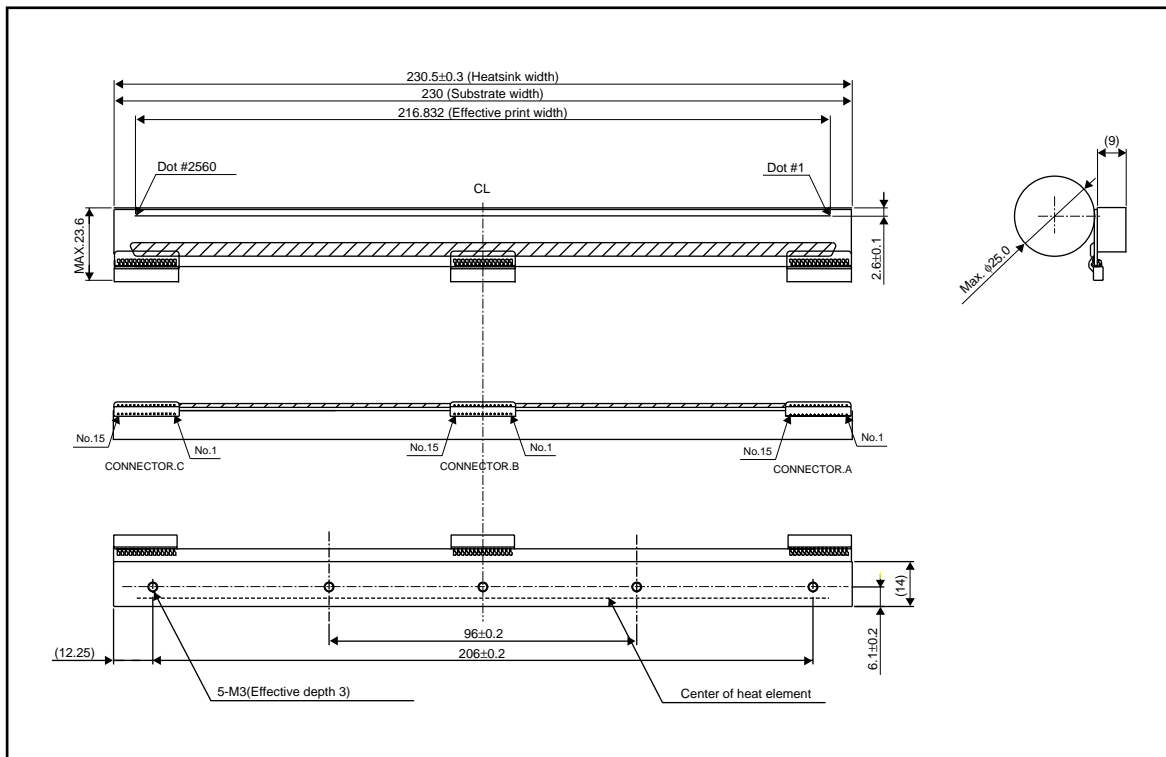
●Applications

- Label printers
- ATM printers
- KIOSK printers
- Ticket printers

●Features

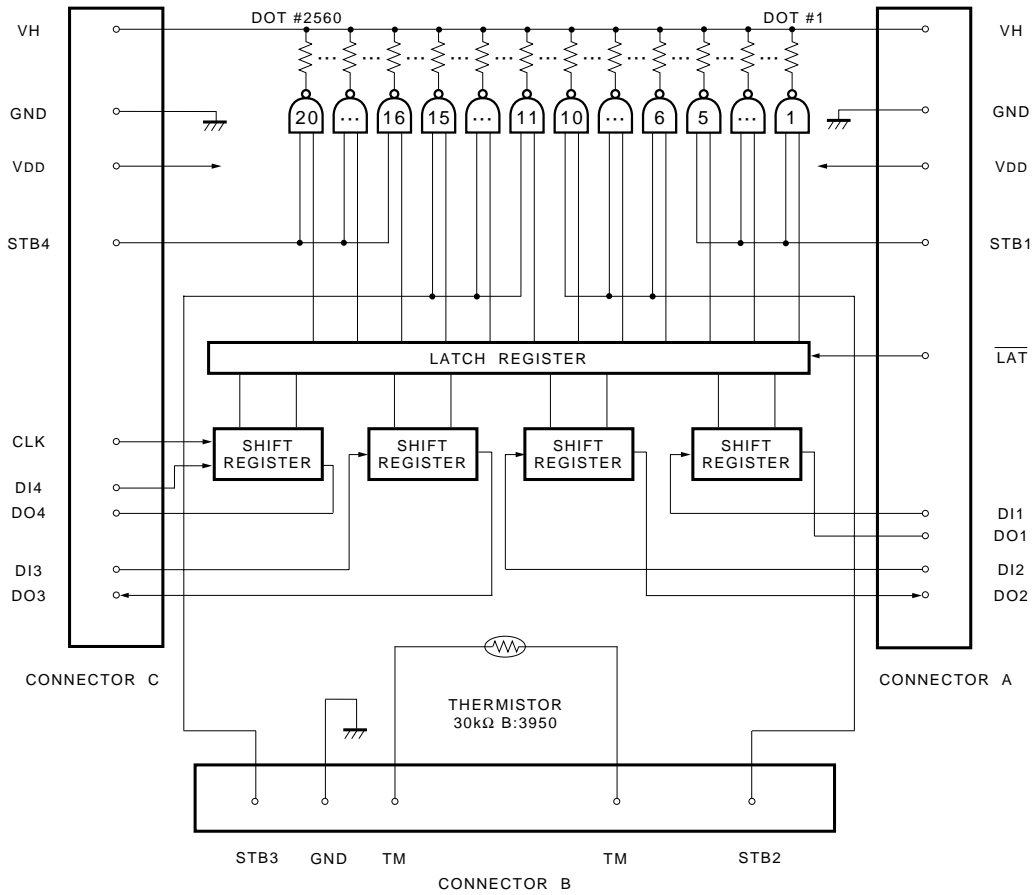
- 1) The use of a special partial glaze and the latest heating element structure, along with new high-density driver chips that can accept big current, has allowed ROHM to achieve print speeds of 100mm/s with using thermal history control, the fastest in its class.
- 2) Standard printheads in the line up are capable of 300dpi. They achieve the high resolution needed for graphics and other complex print patterns.

●Dimensions (Unit : mm)



Printheads

●Equivalent circuit



STB No.	Dot No.	Dots / STB.
1	1 to 640	640
2	641 to 1280	640
3	1281 to 1920	640
4	1921 to 2560	640

DI No.	Dot No.	Dots / DI
1	1 to 640	640
2	641 to 1280	640
3	1281 to 1920	640
4	1921 to 2560	640

Printheads

●Pin assignments

CONNECTOR A	
No.	Circuit
1	VH
2	VH
3	VH
4	VH
5	VH
6	VH
7	DO1
8	DI1
9	DO2
10	DI2
11	V _{DD}
12	$\overline{\text{LAT}}$
13	STB1
14	GND
15	GND

CONNECTOR B	
No.	Circuit
1	GND
2	GND
3	GND
4	GND
5	GND
6	NC
7	STB2
8	TM
9	TM
10	STB3
11	GND
12	GND
13	GND
14	GND
15	GND

CONNECTOR C	
No.	Circuit
1	GND
2	GND
3	STB4
4	CLK
5	V _{DD}
6	DO3
7	DI3
8	DO4
9	DI4
10	VH
11	VH
12	VH
13	VH
14	VH
15	VH

●Timing chart

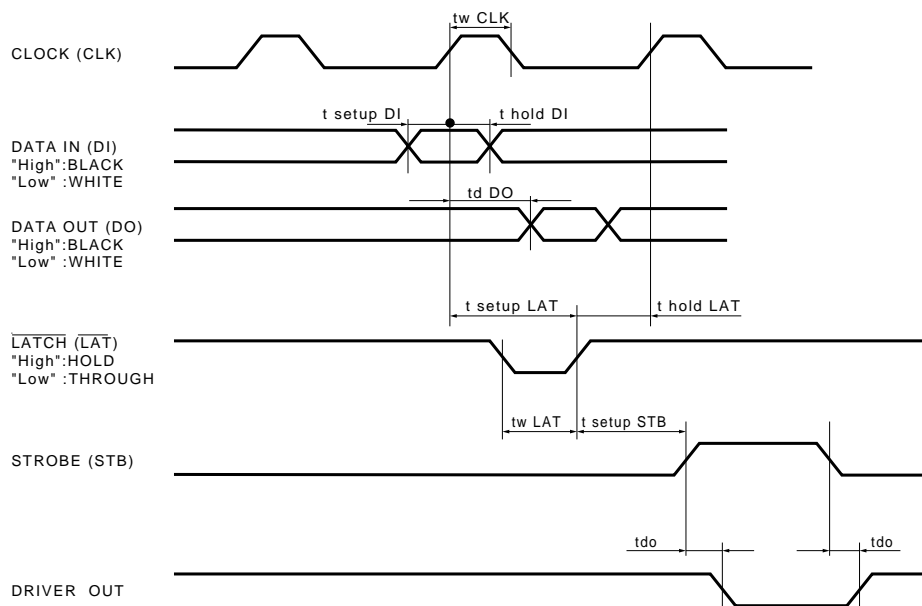


Fig.2

Printheads

●Characteristics

Parameter	Symbol	Typical	Unit
Effective printing width	—	216.832	mm
Dot pitch	—	0.0847	mm
Total dot number	—	2560	dots
Average resistance value	Rave	660	Ω
Applied voltage	V _H	24	V
Applied power	P _O	0.52	W/dot
Print cycle	SLT	1.11	ms
Pulse width	T _{ON}	0.27	ms
Maximum number of dots energized simultaneously	—	1280	dots
Maximum clock frequency	—	8	MHz
Maximum roller diameter	—	φ25.0	mm
Running life / pulse life	—	50/5×10 ⁷	km/pulses
Operating temperature	—	5~45	°C

●Electrical characteristic curves

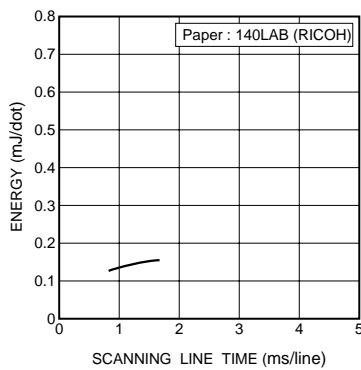


Fig.3 Adaptive speed chart

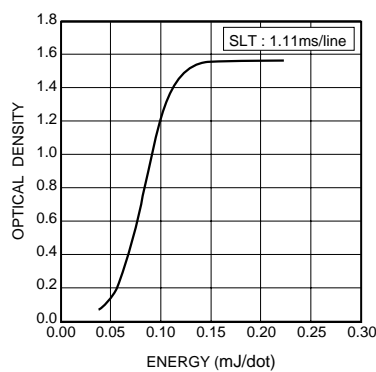


Fig.4 Representative density curve

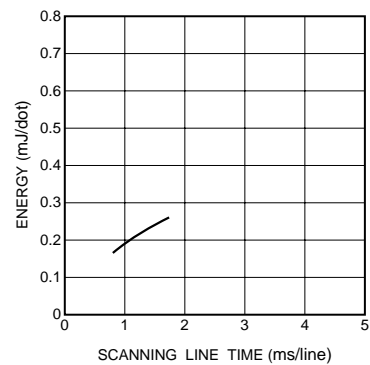


Fig.5 Maximum energy curve

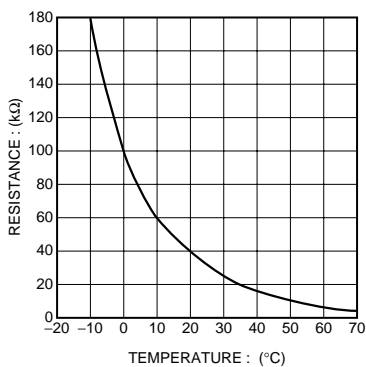


Fig.6 Thermistor curve

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