High speed thick film thermal printhead (12 dots / mm)

KF3008-GD34A

Using its expertise in LSI technology, ROHM has developed new high density driver chips for use in the KF3008-GD34A . 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.

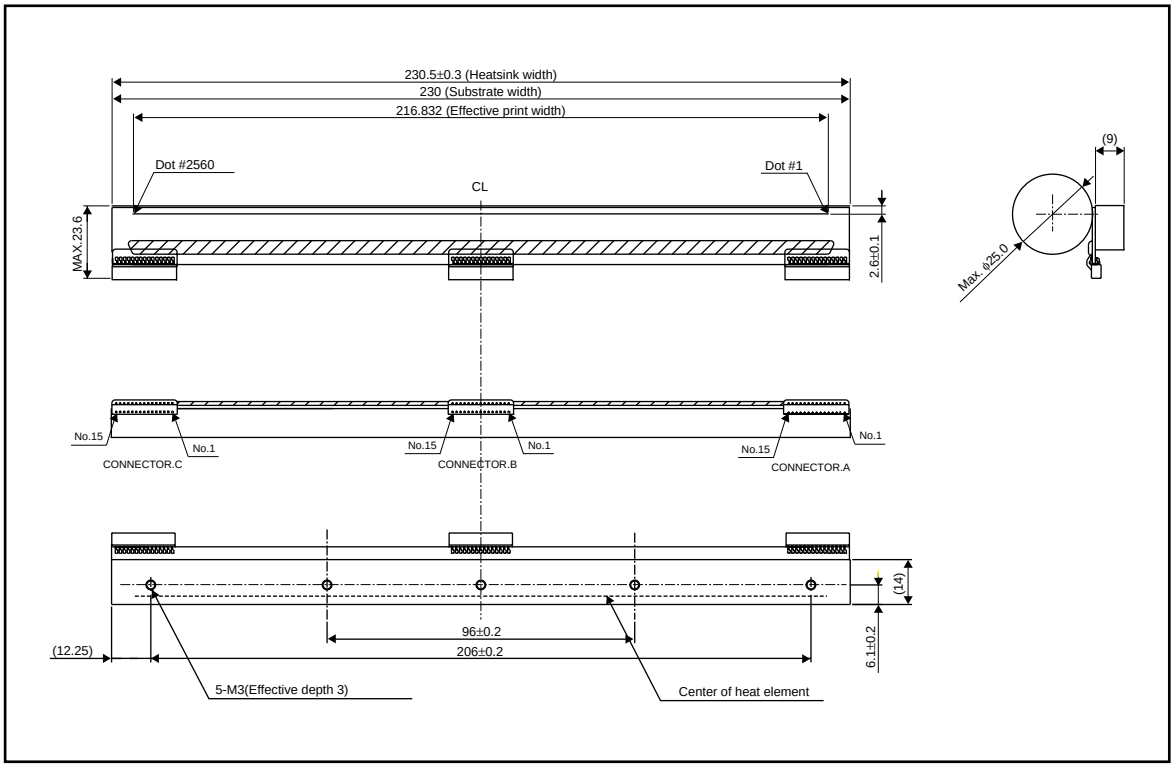
●Applications

Label printers
ATM printers
KIOSK printers
Ticket printers

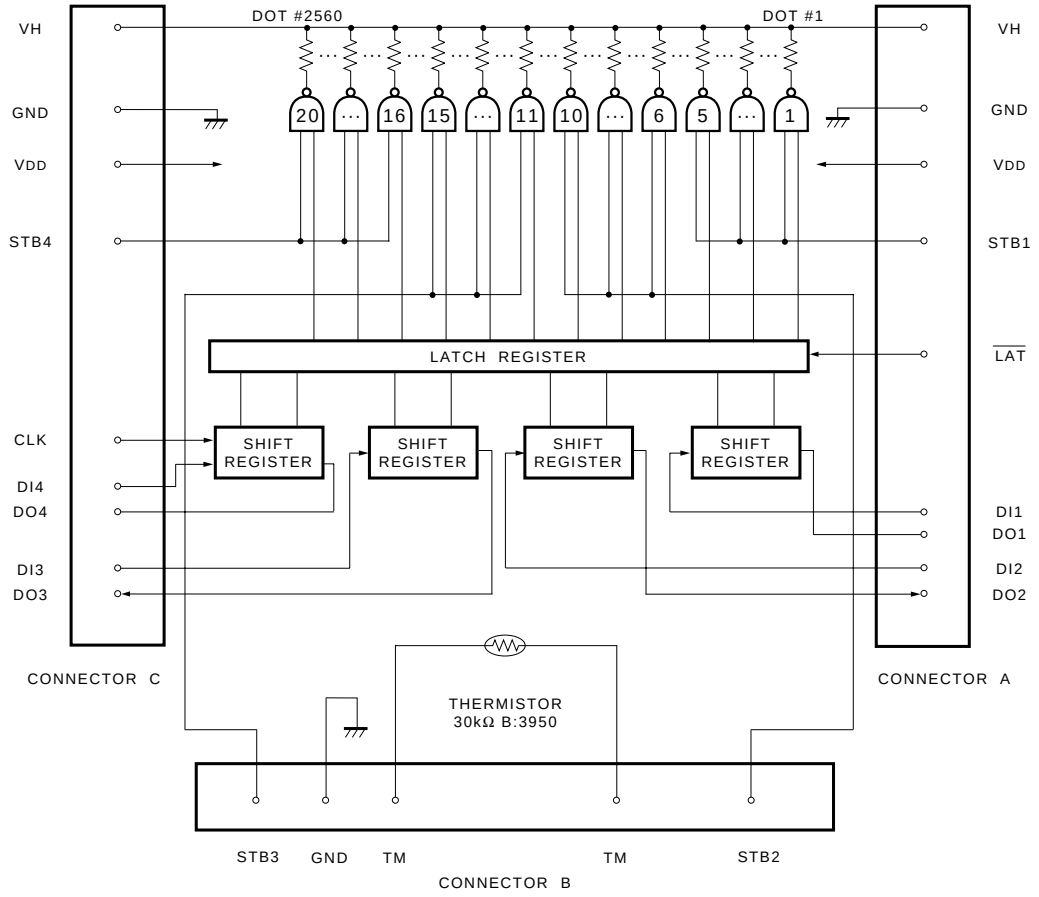
●Features

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.

●External dimensions (Unit : mm)



●**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 / STB
1	1 to 640	640
2	641 to 1280	640
3	1281 to 1920	640
4	1921 to 2560	640

Fig. 1

●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	$\overline{LAT}$
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

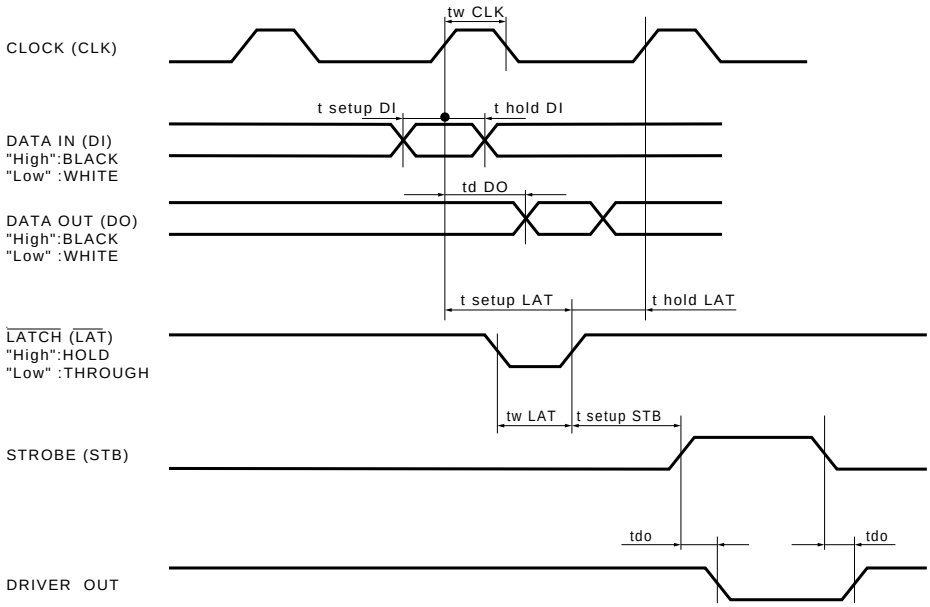


Fig.2

●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	–	$50/1\times10^8$	km/pulses
Operating temperature	–	5 to 45	°C

●Electrical characteristic curves

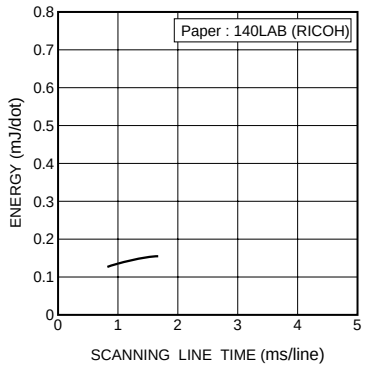


Fig.3 Adaptive speed chart

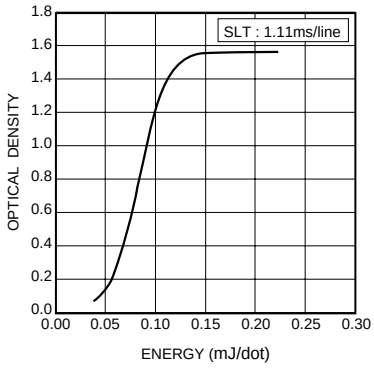


Fig.4 Representative density curve

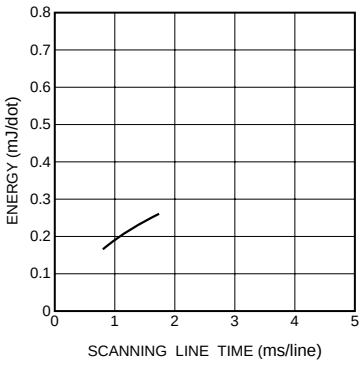


Fig.5 Maximum energy curve

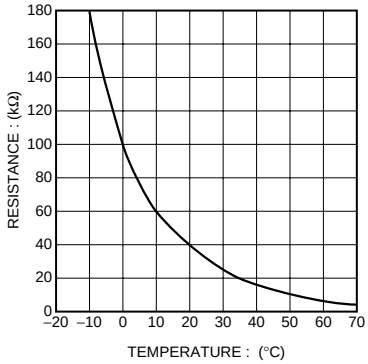


Fig.6 Thermistor curve

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