

Compact medium speed thick film thermal printhead (8dots / mm)

KD2004-CF20A

KD2004-CF20A is suitable for devices, such as high-speed POS and label printer applications, that require thermal printheads capable of higher printing rates. Improved power circuit design means that with heavier current it is possible to print at speeds as high as 150 mm/s. The GK Series is the thus ideal for label printers that need high printing rates.

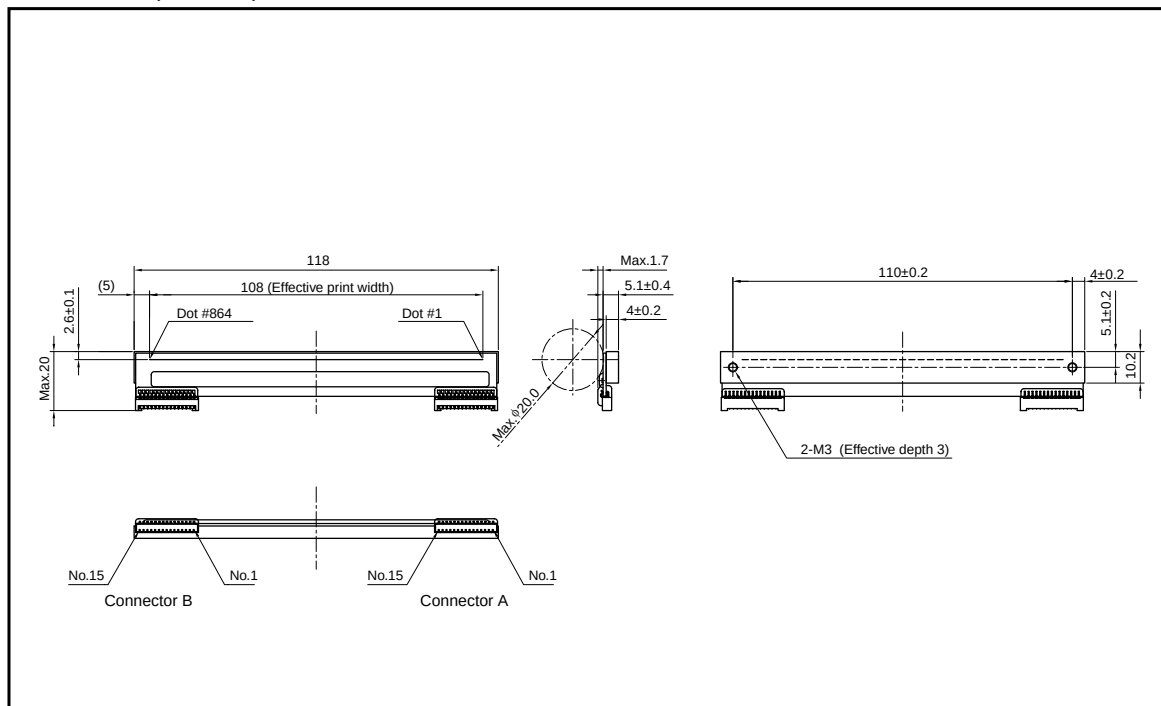
●Applications

POS terminals, Label printers, CAT terminals, Multi-purpose small-sized printers

●Features

- 1) Using a special compact partial glaze and new heating element structure, achieves high-speed printing at 150 mm/s.
- 2) The use of the highly-durable conductive protective film has improved countermeasures against static electricity.
- 3) The VH and GND sections of the power circuitry have been strengthened so that heavier current can be applied.
- 4) One rank resistance value of $800\Omega \pm 3\%$ eliminates the inconvenience of rank selection.
- 5) The required driving voltage of 3.15 to 5.25V allows wide range of power supply voltage setting. This also allows multiple choice of electronic components for printers.

●Dimensions (Unit : mm)



Printheads

●Equivalent circuit

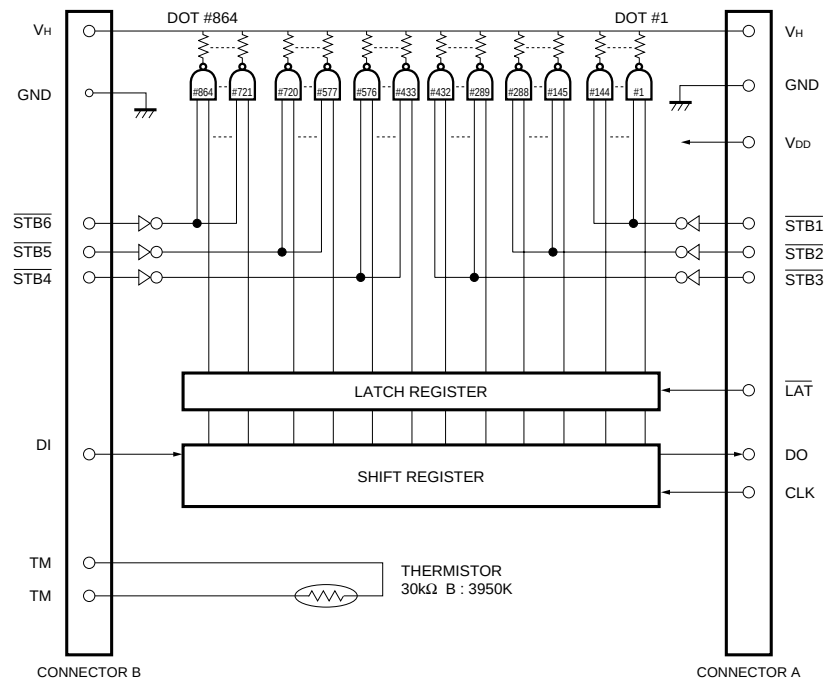


Fig. 1

●Pin assignments

CONNECTOR A

No.	Circuit
1	V _H
2	V _H
3	V _H
4	V _H
5	DO
6	LAT
7	CLK
8	V _{DD}
9	STB1
10	STB2
11	STB3
12	GND
13	GND
14	GND
15	GND

CONNECTOR B

No.	Circuit
1	GND
2	GND
3	GND
4	GND
5	GND
6	TM
7	TM
8	STB4
9	STB5
10	STB6
11	DI
12	V _H
13	V _H
14	V _H
15	V _H

Printheads

●Timing chart

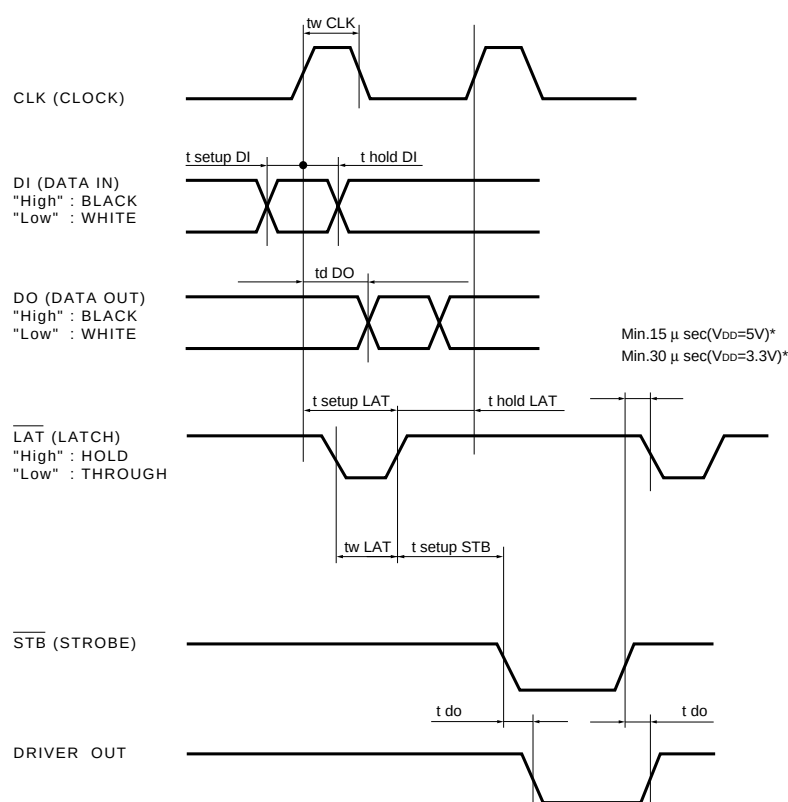


Fig.2

●Characteristics

Parameter	Symbol	Typical	Unit
Effective printing width	—	108	mm
Dot pitch	—	0.125	mm
Total dot number	—	864	dots
Average resistance value	Rave	800	Ω
Applied voltage	V_H	24.0	V
Applied power	P_O	0.59	W/dot
Print cycle	SLT	0.83	ms
Pulse width	T_{ON}	0.32	ms
Maximum number of dots energized simultaneously	—	432	dots
Maximum clock frequency	—	16	MHz
Maximum roller diameter	—	$\phi 20.0$	mm
Running life / pulse life	—	$50/5 \times 10^7$	km/pulses
Operating temperature	—	5 to 45	$^{\circ}\text{C}$

Printheads

●Electrical characteristic curves

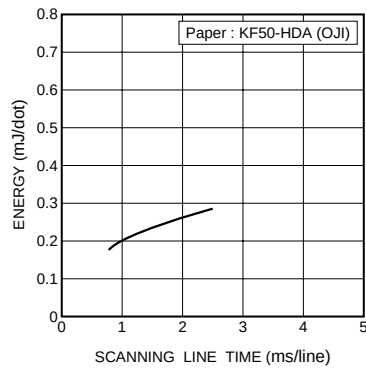


Fig.3 Adaptive speed chart

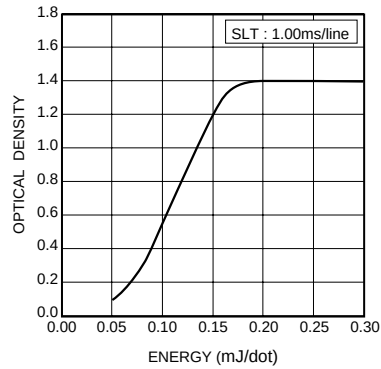


Fig.4 Representative density curve

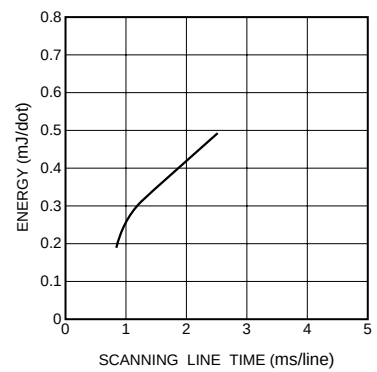


Fig.5 Maximum energy curve

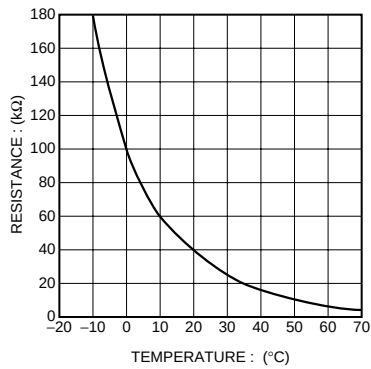


Fig.6 Thermistor curve

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