

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

## KD2003-CF10A

The KD2003-CF10A is ideal for applications that require compact, lightweight thermal printheads, such as POS and label printer applications. The 203dpi has a resolution of the 2-, 3-, 4-, and 8-inch sizes. This series is suitable for a wide range of applications.

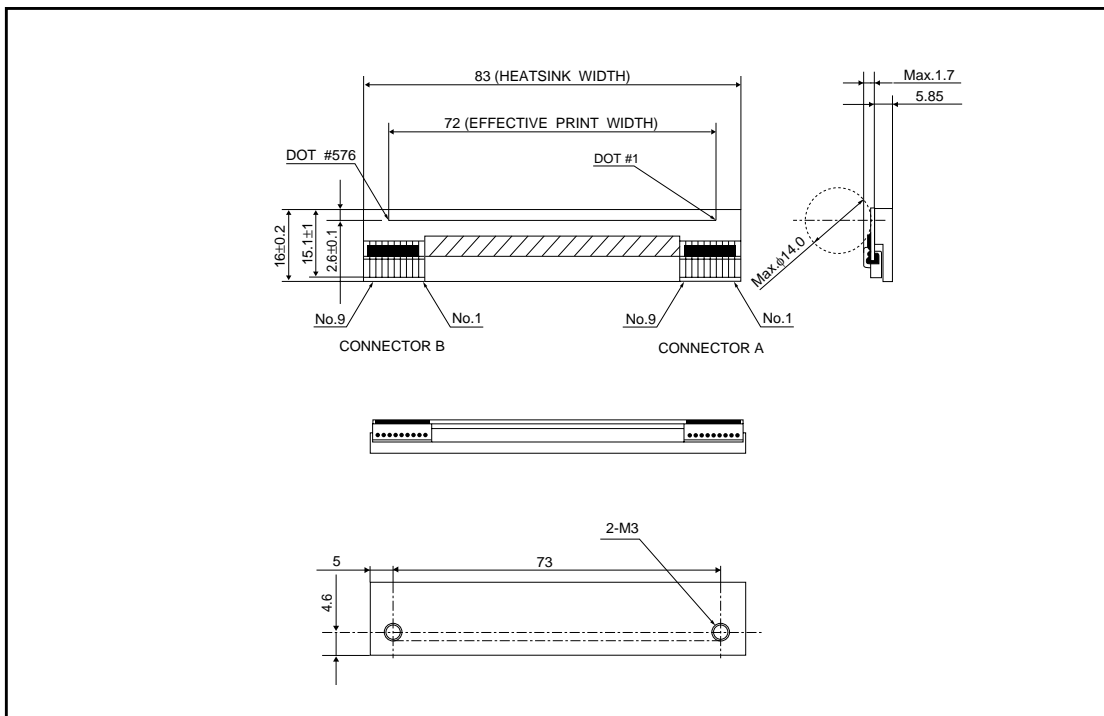
### ●Applications

POS printers  
Label printers  
Receipt printers  
General purpose compact printers

### ●Features

- 1) Both ROHM's advanced LSI technology and proprietary partial glaze are used to realize higher printing efficiency. With a high print speed of 100mm/s, this series is also suitable for thermal transfer printing.
- 2) Besides the fact that harness-type direct connectors at either end allow wiring to be fitted as convenient, the thermal printheads can be applied directly to the substrate without a heat sink. Both these features give engineers greater freedom when designing the printer mechanism.
- 3) One rank resistance value of  $800\Omega \pm 3\%$  eliminates the inconvenience of rank selection.
- 4) The required driving voltage of 3.13 to 5.25V allows wide range of power supply voltage setting. This also allows multiple choice of electronic components for printers.

### ●External dimensions (Unit : mm)



Printheads

●Equivalent circuit

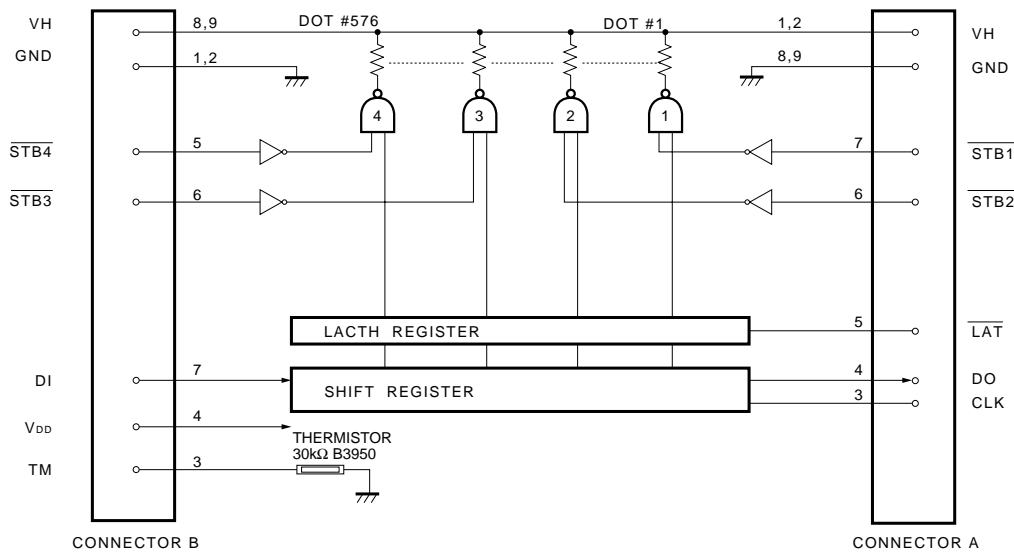


Fig.1

●Pin assignments

CONNECTOR B	
No.	Circuit
1	GND
2	GND
3	TM
4	V <sub>DD</sub>
5	$\overline{\text{STB4}}$
6	$\overline{\text{STB3}}$
7	DI
8	VH
9	VH

CONNECTOR A	
No.	Circuit
1	VH
2	VH
3	DO
4	CLK
5	$\overline{\text{LAT}}$
6	$\overline{\text{STB2}}$
7	$\overline{\text{STB1}}$
8	GND
9	GND

Printheads

●Timing chart

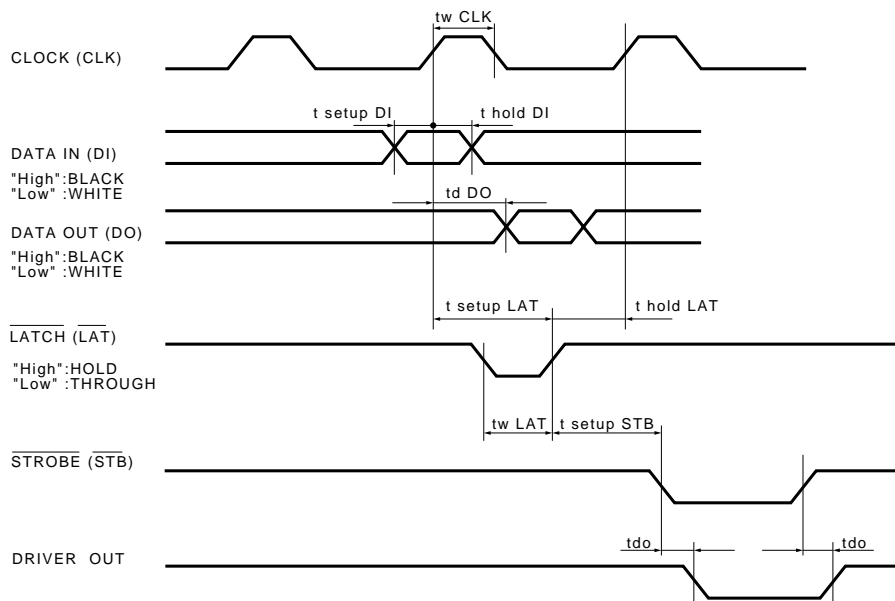


Fig.2

●Characteristics

Parameter	Symbol	Typical	Unit
Effective printing width	—	72.0	mm
Dot pitch	—	0.125	mm
Total dot number	—	576	dots
Average resistance value	Rave	800	$\Omega$
Applied voltage	V <sub>H</sub>	24.0	V
Applied power	P <sub>O</sub>	0.64	W/dot
Print cycle	SLT	1.25	ms
Pulse width	T <sub>ON</sub>	0.28	ms
Maximum number of dots energized simultaneously	—	288	dots
Maximum clock frequency	—	8	MHz
Maximum roller diameter	—	$\phi$ 14.0	mm
Running life / pulse life	—	50/5 $\times$ 10 <sup>7</sup>	km/pulses
Operating temperature	—	5~45	$^{\circ}$ C

Printheads

●Electrical characteristic curves

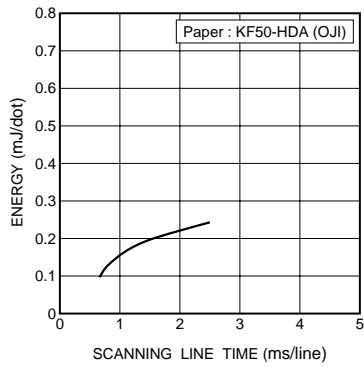


Fig.3 Adaptive speed chart

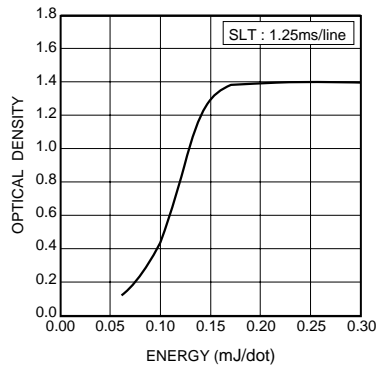


Fig.4 Representative density curve

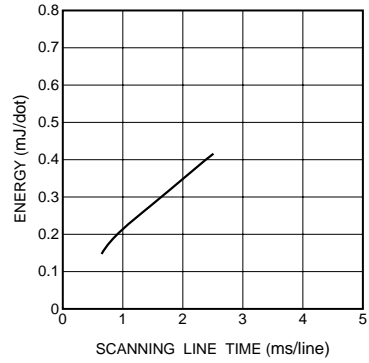


Fig.5 Maximum energy curve

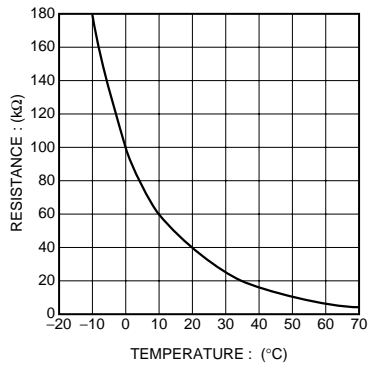


Fig.6 Thermistor curve

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