

# Thick film thermal printhead (8 dots / mm)

## KD2003-DC10A

The KD2003-DC10A is a 24 V standard thick film thermal printhead with a printing speed up to 6 inches / s that has been developed mainly for label printer use.

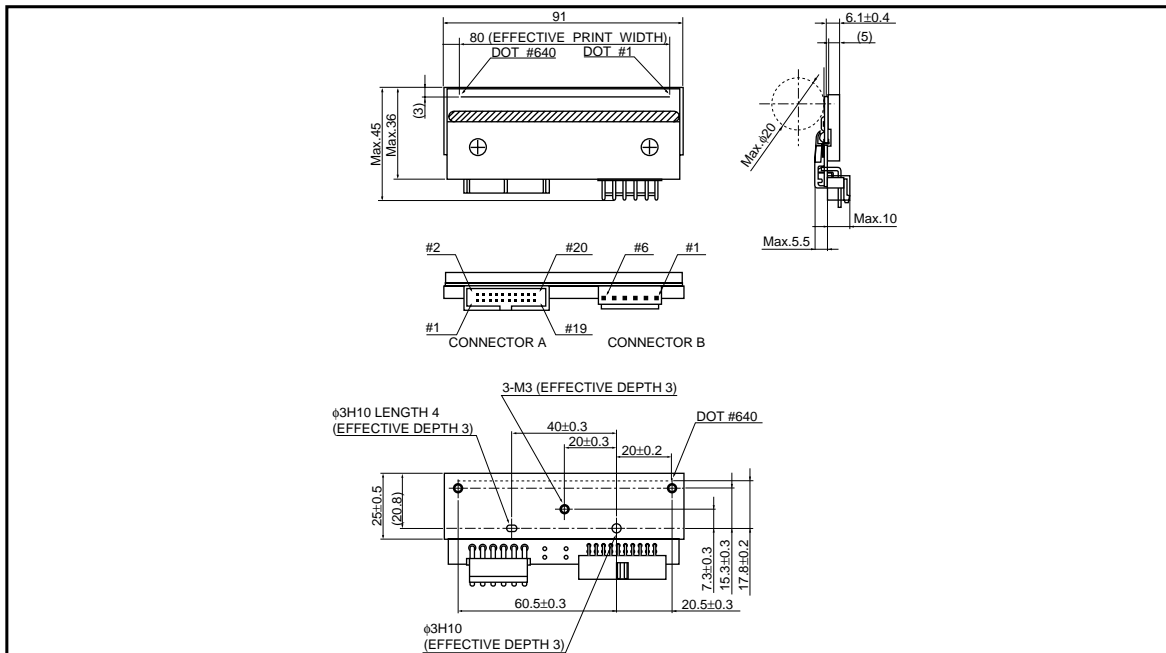
●Applications

- High speed label printer
- High speed bar code printer
- High speed ticket printer
- Various high speed terminal printers

●Features

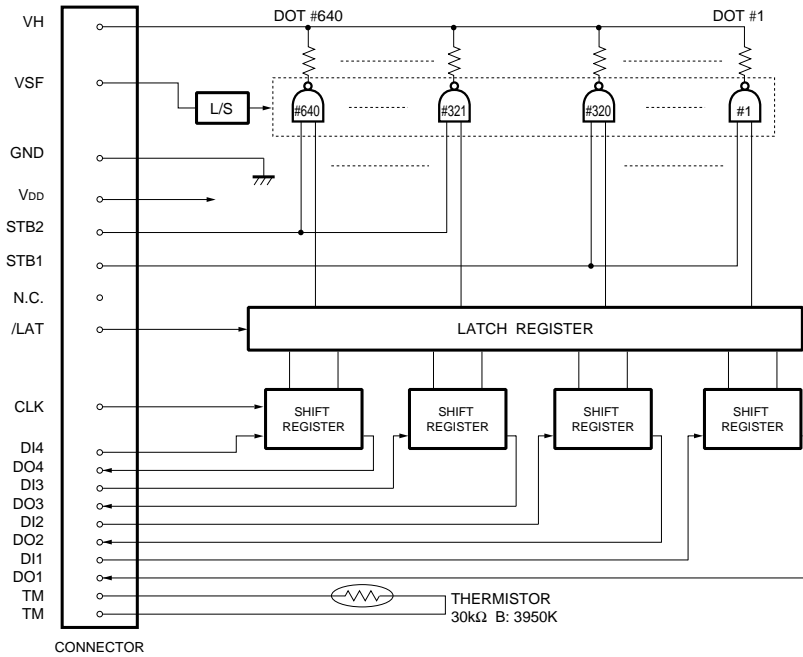
- 1) Newly developed thick-film fast response thermal element is employed for this series and 6 inches / s or 150 mm / s is possible without thermal history control. It is possible to print 10 inches / s or 250 mm / s if external thermal history control is used.
- 2) 150km life realized by attributing durable new protection film.
- 3) New partial glaze construction makes it compatible with the thermal transfer application.

●External dimensions (Unit : mm)



Printheads

●Equivalent circuit



VSF : Usually VSF and VH are connected.  
When measuring R value of Heat-element , VSF and VH should be separated.

DI No.	DOT No.	STB No.	DOT No.
DI1	1 to 192	STB1	1 to 320
DI2	193 to 320	STB2	321 to 640
DI3	321 to 512		
DI4	513 to 640		

Fig. 1

●Pin assignments

CONNECTOR A			
No.	Circuit	No.	Circuit
1	GND	11	TM
2	VSF	12	TM
3	GND	13	DI3
4	V <sub>DD</sub>	14	DO3
5	STB2	15	DI2
6	CLK	16	DO2
7	DI4	17	N.C.
8	DO4	18	STB1
9	N.C.	19	DI1
10	$\overline{\text{LAT}}$	20	DO1

CONNECTOR B	
No.	Circuit
1	VH
2	VH
3	VH
4	GND
5	GND
6	GND

Printheads

●Timing chart

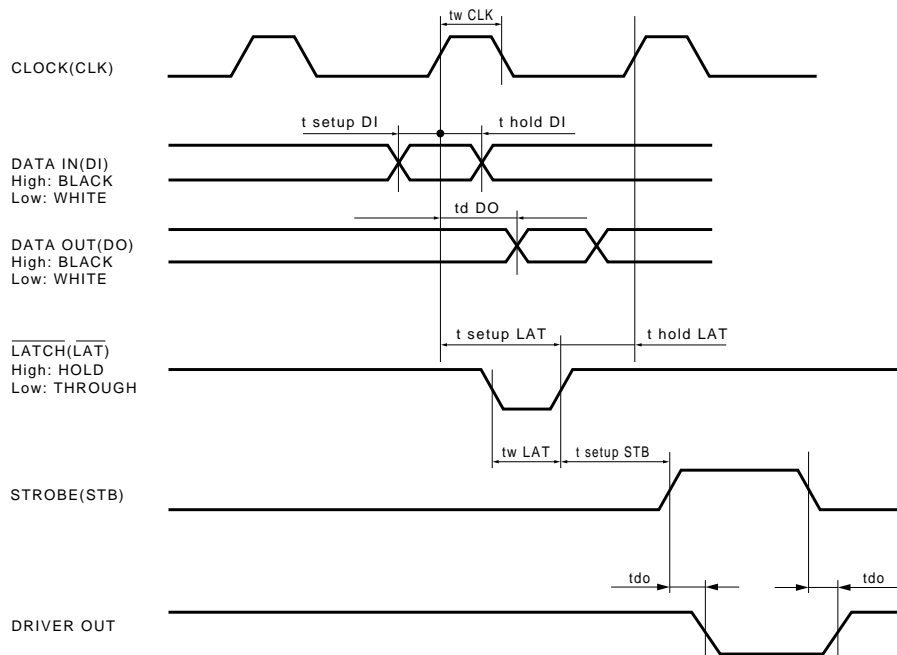


Fig.2

●Characteristics

Parameter	Symbol	Typical	Unit
Effective printing width	-	80	mm
Dot pitch	-	0.125	mm
Total dot number	-	640	dots
Average resistance value	Rave	650	$\Omega$
Applied voltage	$V_H$	24	V
Applied power	$P_o$	0.80	W / dot
Print cycle	SLT	0.82	ms
Maximum number of dots energized simultaneously	-	640	dots
Maximum clock frequency	-	12	MHz
Maximum roller diameter	-	$\phi 20.0$	mm
Running life / pulse life	-	150 / ( $1 \times 10^8$ )	km / pulses
Operating temperature	-	5 to 45	$^{\circ}C$

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