

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

## KF2003-GE10A

The KF2003-GE10A is a standard type 12 V compact and lightweight thick-film thermal printhead, developed mainly for label printers. Maximum printing speed of 2 inch / second is possible with external simple history control.

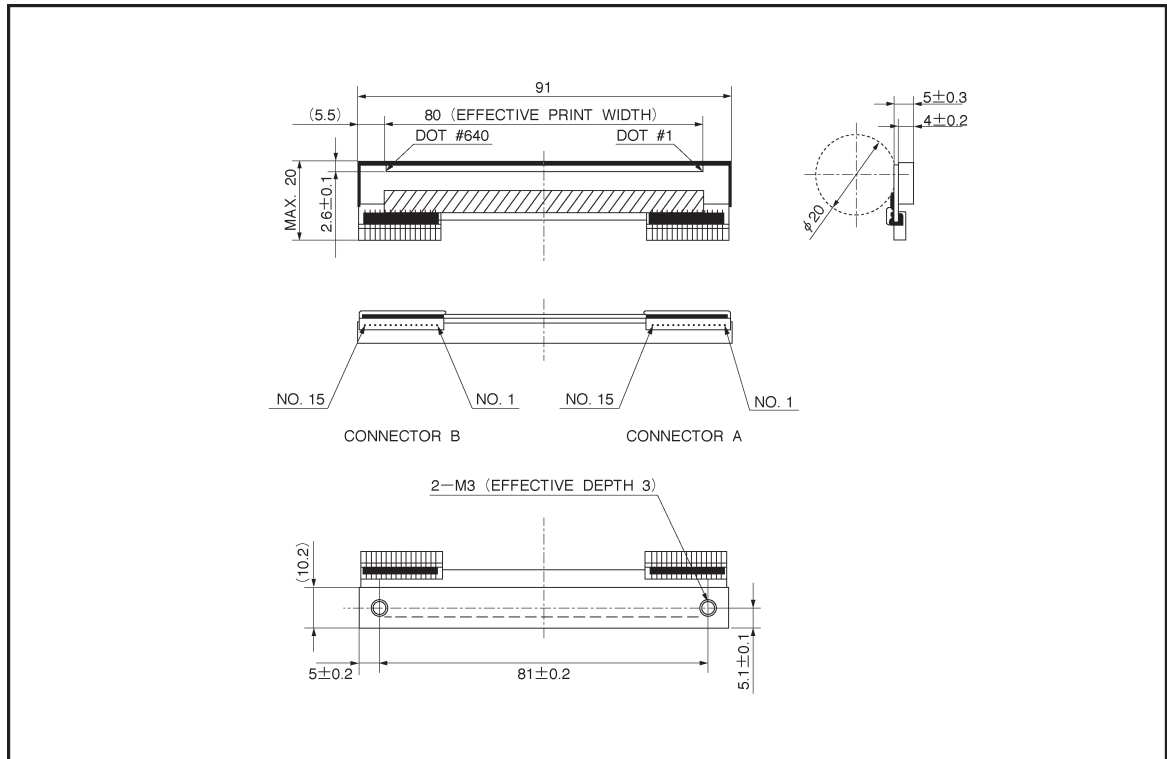
●Applications

- Bar code label printers
- Portable printers
- Label printers

●Features

- 1) A new pin connector structure greatly reduces the size and weight.
- 2) Completely compatible with the KF2003-GC10A (24 V standard type) in shape to enable sets with a common design.
- 3) Hard protective coating on the heating element meets the demand for long life labels.
- 4) 2-inch, 3-inch and 4-inch series are available.

●External dimensions (Units: mm)



●Equivalent circuit

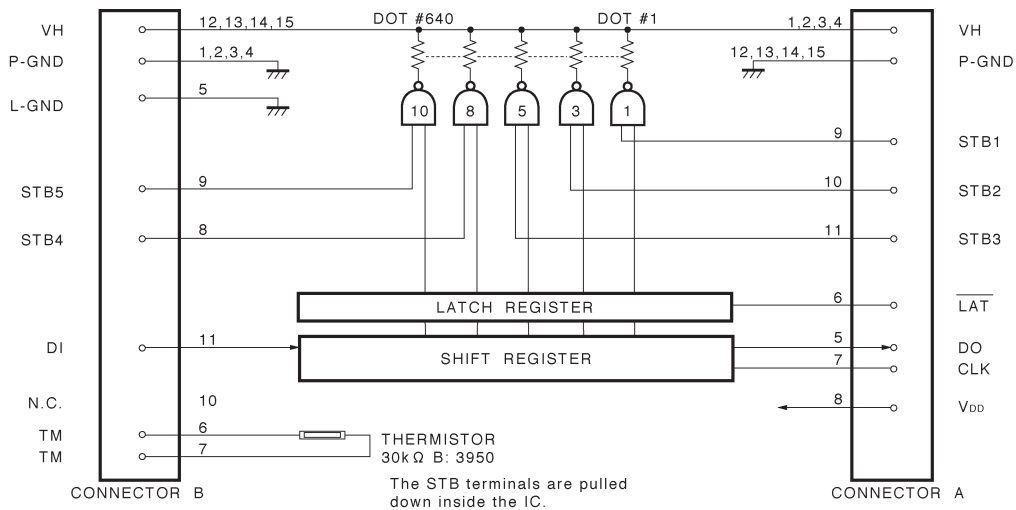


Fig. 1

●Pin assignments

CONNECTOR A	
No.	Circuit
1	VH
2	VH
3	VH
4	VH
5	DO
6	LAT
7	CLK
8	V <sub>DD</sub>
9	STB1
10	STB2
11	STB3
12	P-GND
13	P-GND
14	P-GND
15	P-GND

CONNECTOR B	
No.	Circuit
1	P-GND
2	P-GND
3	P-GND
4	P-GND
5	L-GND
6	TM
7	TM
8	STB4
9	STB5
10	N.C.
11	DI
12	VH
13	VH
14	VH
15	VH

L-GND: LOGIC GROUND  
P-GND: POWER GROUND

●Timing chart

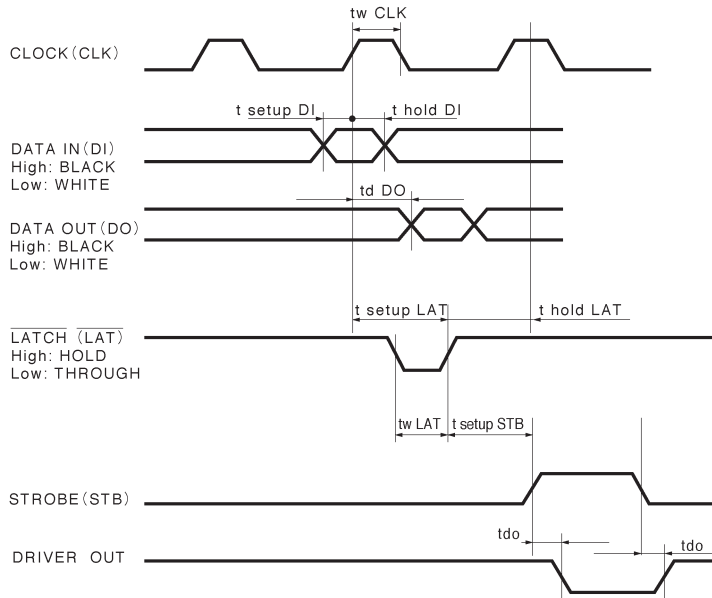


Fig. 2

●Characteristics

Parameter	Symbol	Typical	Unit
Effective printing width	—	80	mm
Dot pitch	—	0.125	mm
Total dot number	—	640	dots
Average resistance value	Rave	350	$\Omega$
Applied voltage	V <sub>H</sub>	12.0	V
Applied power	P <sub>O</sub>	0.31	W / dot
Print cycle	SLT	4.0	ms
Pulse width	T <sub>ON</sub>	0.87	ms
Maximum number of dots energized simultaneously	—	384	dots
Maximum clock frequency	—	4	MHz
Maximum roller diameter	—	20.0	mm
Running life / pulse life	—	50 / $5 \times 10^7$	km / pulses
Operating temperature	—	5~45	$^{\circ}\text{C}$

● Electrical characteristic curves

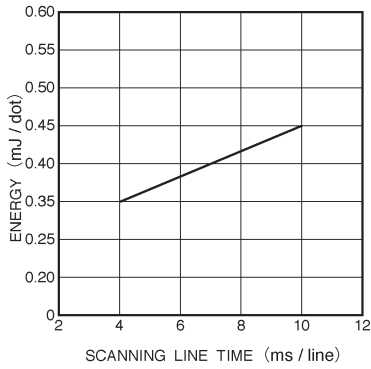


Fig. 3 Adaptive speed chart

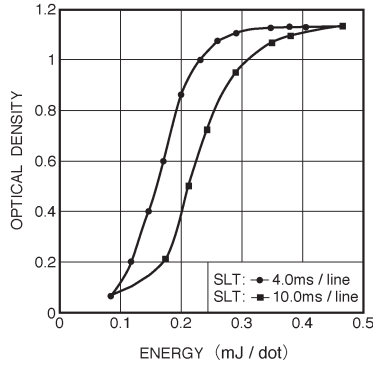


Fig. 4 Representative density curve

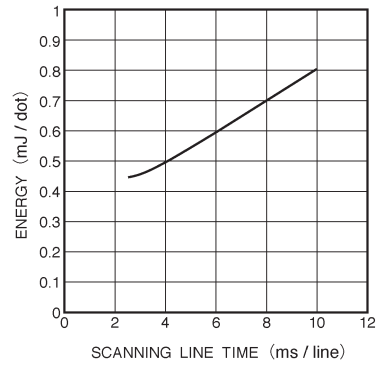


Fig. 5 Maximum energy curve

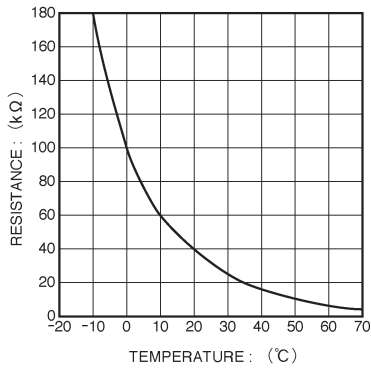


Fig. 6 Thermistor curve