

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

## KF2003-GD10A

The KF2003-GD10A is a standard 24 V thick-film thermal printhead with a printing speed of 4 inches / second, developed mainly for label printers. The GD series is of the glazed component type and therefore excellent for thermal transfer printing.

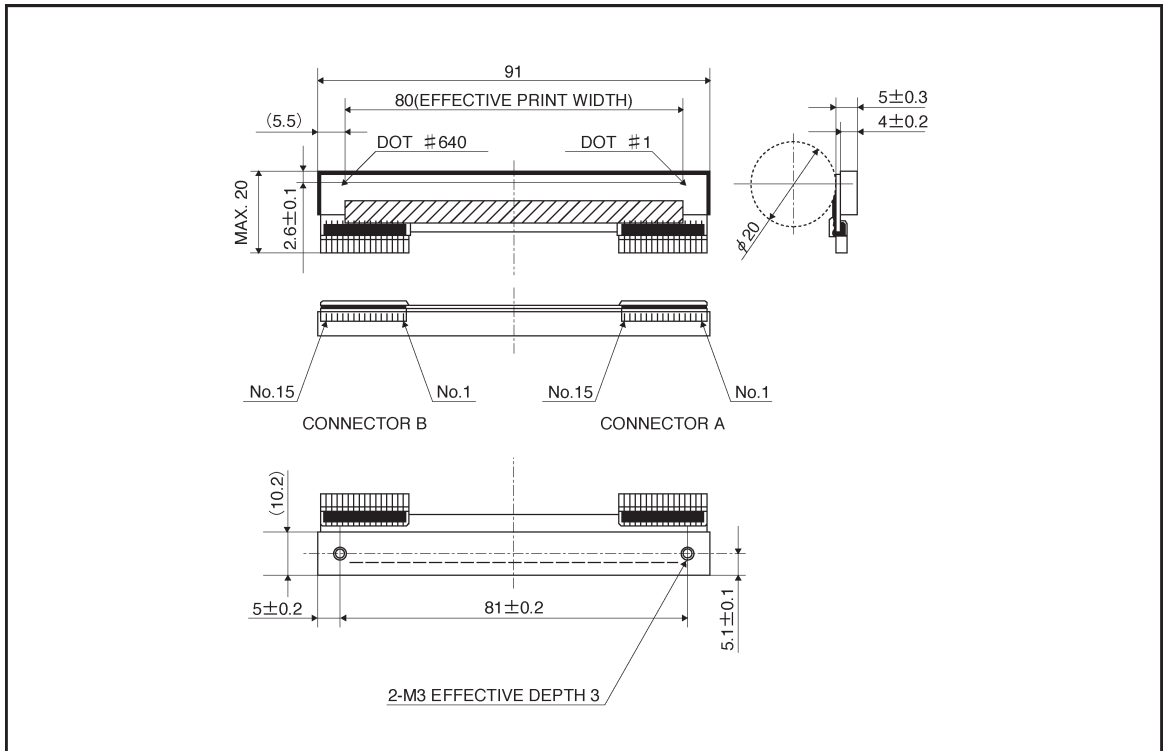
●Applications

Label printers  
Ticket printers  
Terminal printers

●Features

- 1) A new pin connector structure greatly reduces the size and weight.
- 2) A newly developed driving IC improves data transmission speed ( 8MHz ) and ON resistance ( half of the conventional product ) to support various control methods.
- 3) One rank resistance value of  $800 \Omega \pm 3\%$  eliminates the inconvenience of rank selection.
- 4) 2-inch, 3-inch and 4-inch series are available.

●External dimensions (Units: mm)



●Equivalent circuit

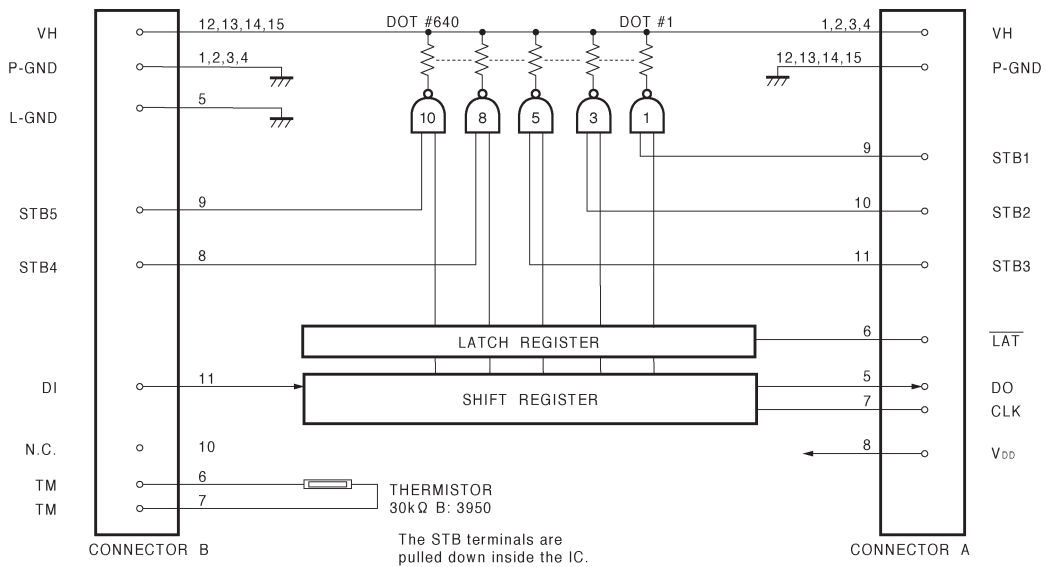


Fig. 1

●Pin assignments

CONNECTOR A	
No.	Circuit
1	VH
2	VH
3	VH
4	VH
5	DO
6	$\overline{\text{LAT}}$
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

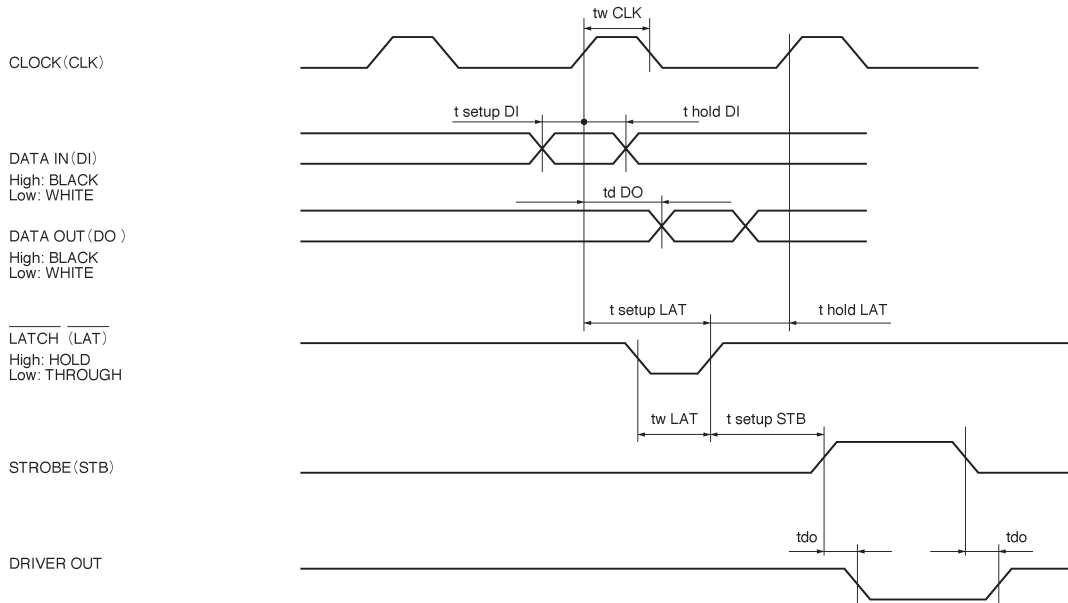


Fig.2

●Characteristics

Parameter	Symbol	Typical	Unit
Effective printing width	—	80	mm
Dot pitch	—	0.125	mm
Total dot number	—	640	dots
Average resistance value	Rave	800	$\Omega$
Applied voltage	$V_H$	24	V
Applied power	$P_O$	0.63	W / dot
Print cycle	SLT	1.25	ms
Pulse width	$T_{ON}$	0.35	ms
Maximum number of dots energized simultaneously	—	384	dots
Maximum clock frequency	—	8	MHz
Maximum roller diameter	—	$\phi 20.0$	mm
Running life / pulse life	—	$50 / 5 \times 10^7$	km / pulses
Operating temperature	—	5~45	$^{\circ}\text{C}$

●Electrical characteristic curves

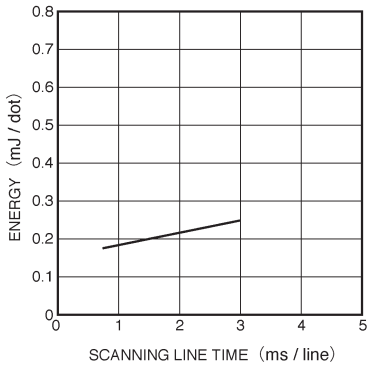


Fig. 3 Adaptive speed chart

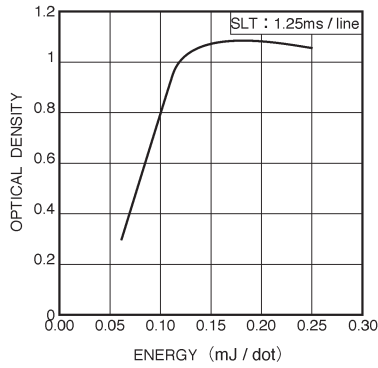


Fig. 4 Representative density curve

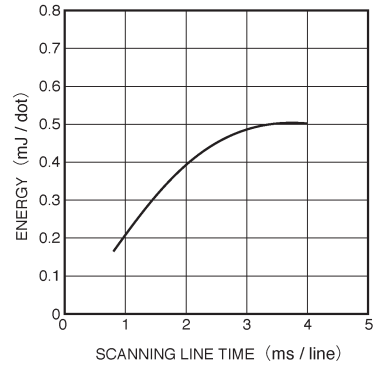


Fig. 5 Maximum energy curve

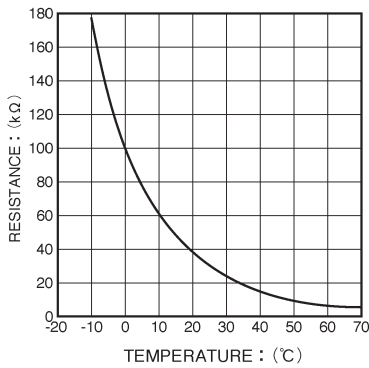


Fig. 6 Thermistor curve