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.
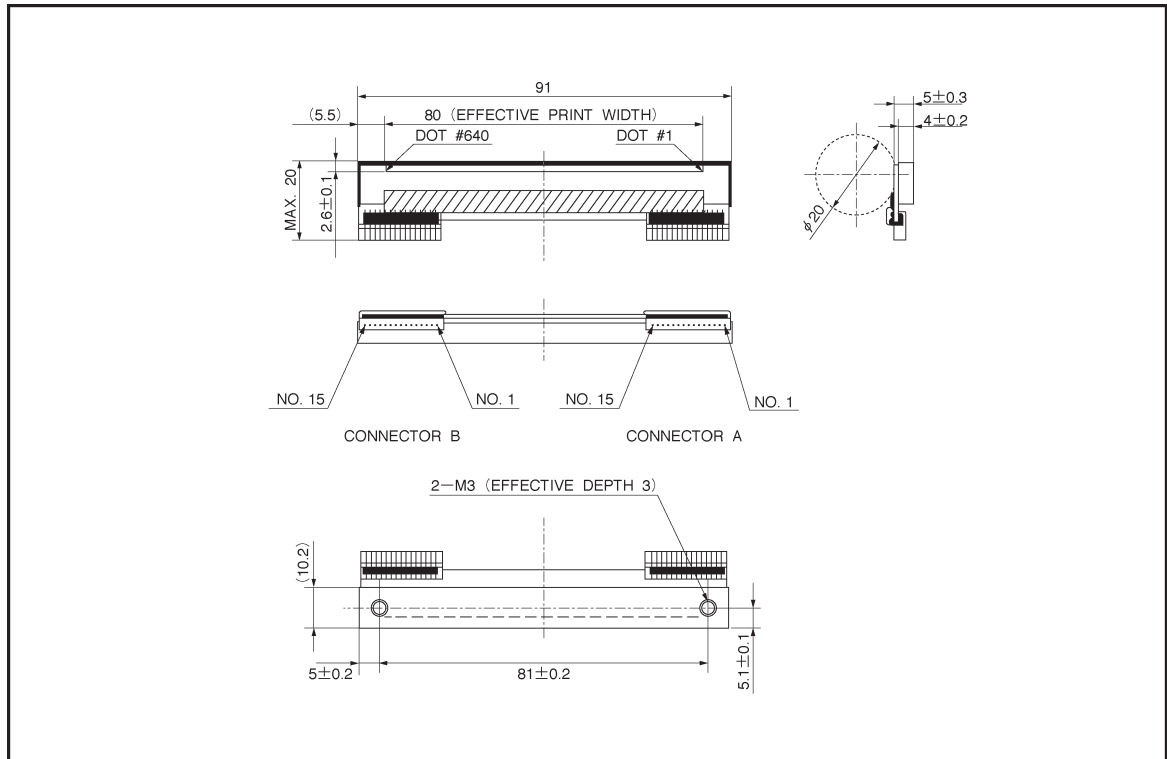
●Applications
Bar code label printers
Portable printers
Label printers

●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.
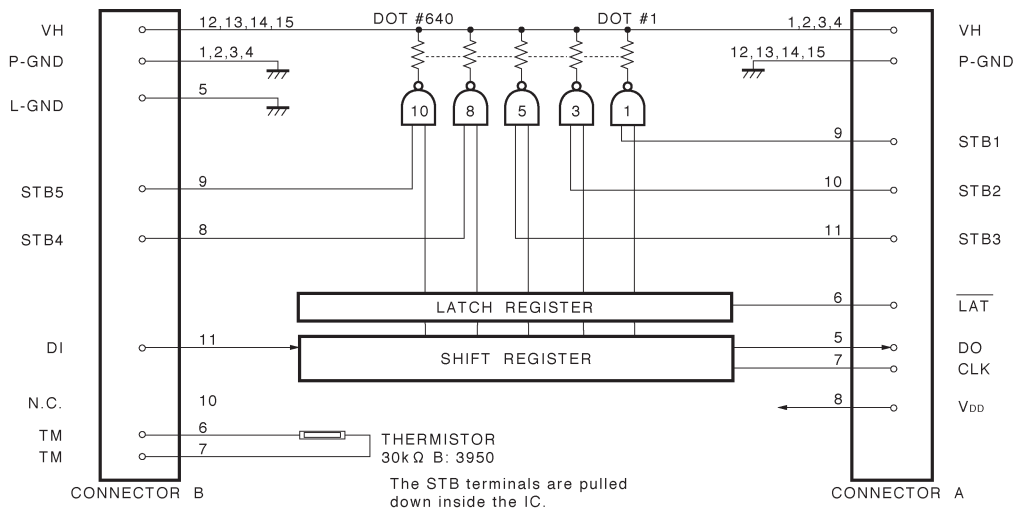
●External dimensions (Units: mm)

●Equivalent circuit

Fig. 1

●Pin assignments

No.	Circuit (CONNECTOR A)	No.	Circuit (CONNECTOR B)
1	VH	1	P-GND
2	VH	2	P-GND
3	VH	3	P-GND
4	VH	4	P-GND
5	DO	5	L-GND
6	$\overline{\text{LAT}}$	6	TM
7	CLK	7	TM
8	V_{DD}	8	STB4
9	STB1	9	STB5
10	STB2	10	N.C.
11	STB3	11	DI
12	P-GND	12	VH
13	P-GND	13	VH
14	P-GND	14	VH
15	P-GND	15	VH

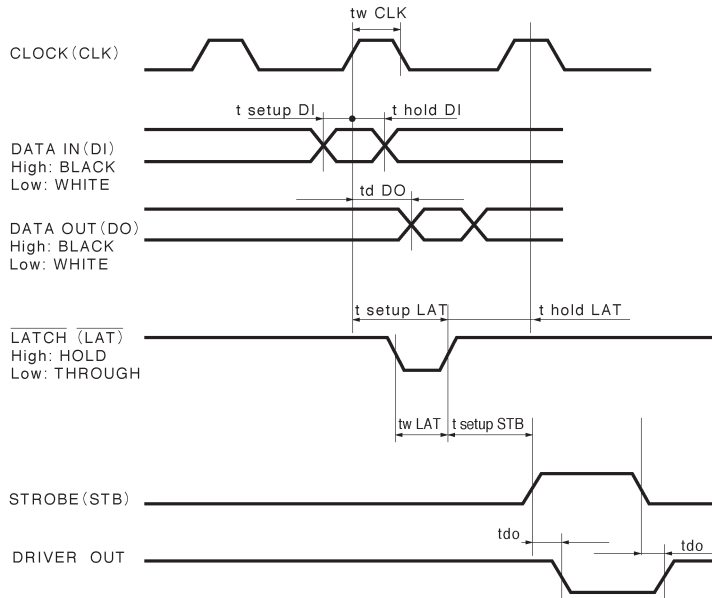L-GND: LOGIC GROUND
P-GND: POWER GROUND

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●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	Ω
Applied voltage	V$_H$	12.0	V
Applied power	P$_O$	0.31	W / dot
Print cycle	SLT	4.0	ms
Pulse width	T$_{ON}$	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	℃

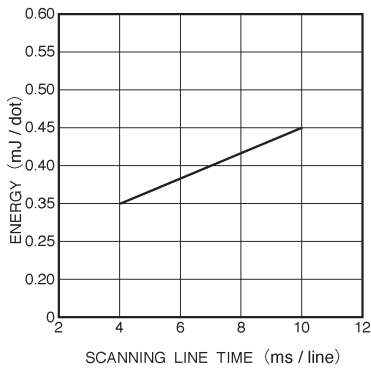●Electrical characteristic curves
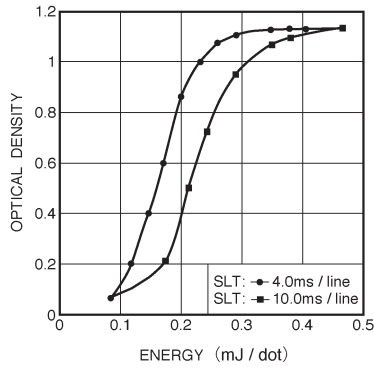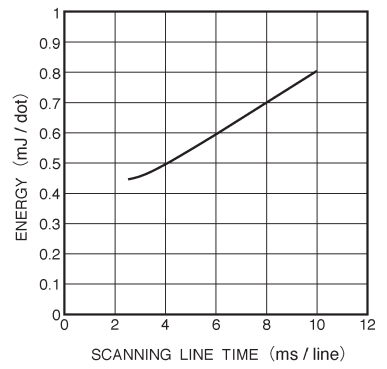
Fig. 3 Adaptive speed chart

Fig. 4 Representative density curve

Fig. 5 Maximum energy curve

Fig. 6 Thermistor curve

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