

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

KF2003-GK42A

KF2003-GK42A is suitable for devices, such as high-speed POS and label printer applications, that require thermal printheads capable of higher printing rates. Improved power circuit design means that with heavier current it is possible to print at speeds as high as 150 mm/s. The GK Series is thus ideal for label printers that need high printing rates.

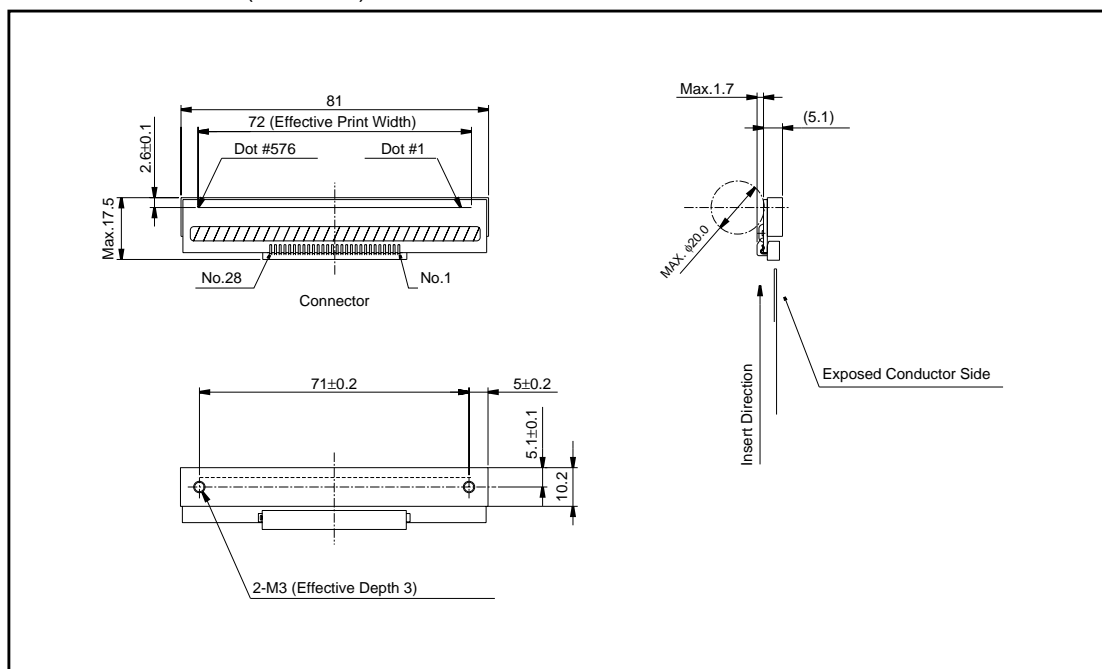
●Applications

POS terminals, Label printers, CAT terminals, Multi-purpose small-sized printers

●Features

- 1) Using a special compact partial glaze and new heating element structure, achieves high-speed printing at 150 mm/s.
- 2) The use of the newly developed highly-durable conductive protective film has improved countermeasures against static electricity.
- 3) The VH and GND sections of the power circuitry have been strengthened so that heavier current can be applied.
- 4) Ultra small connectors, designed to conform with FCCs, and miniature driver chips have been used. Although the resulting printheads are surprisingly compact and lightweight, they can be used with large platens of up to 20 mm in diameter.
- 5) One rank resistance value of $800\Omega \pm 3\%$ eliminates the inconvenience of rank selection.
- 6) 2-inch, 3-inch and 4-inch series are available.

●External dimensions (Units : mm)



Printheads

●Equivalent circuit

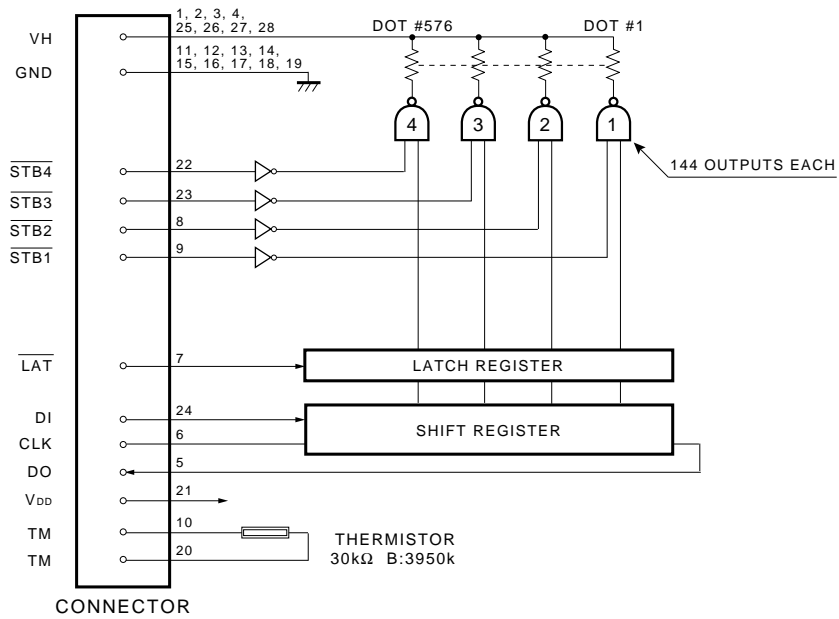


Fig.1

●Pin assignments

No.	Circuit	No.	Circuit
1	VH	15	GND
2	VH	16	GND
3	VH	17	GND
4	VH	18	GND
5	DO	19	GND
6	CLK	20	TM
7	LAT	21	V _{DD}
8	STB2	22	STB4
9	STB1	23	STB3
10	TM	24	DI
11	GND	25	VH
12	GND	26	VH
13	GND	27	VH
14	GND	28	VH

Printheads

●Timing chart

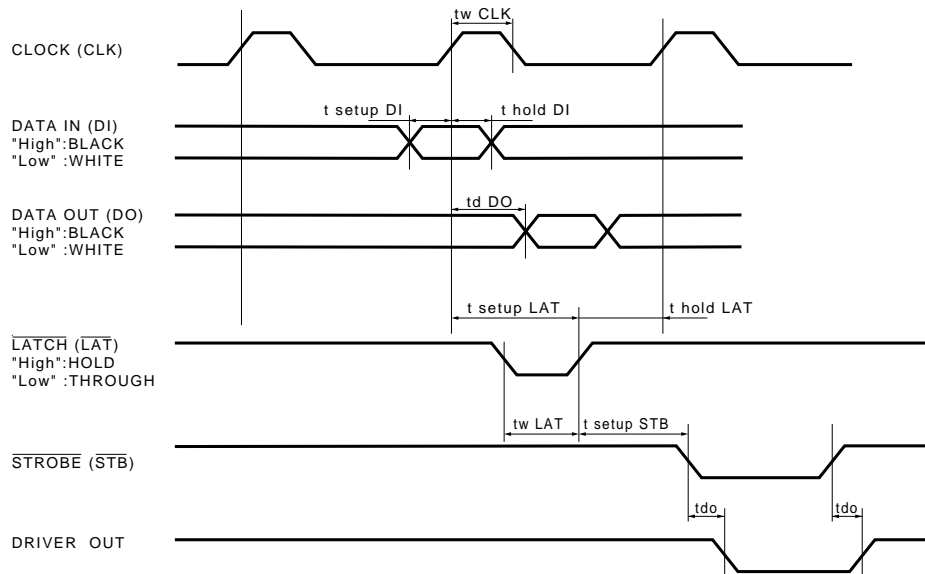


Fig.2

●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	Ω
Applied voltage	V _H	24.0	V
Applied power	P _O	0.59	W/dot
Print cycle	SLT	1.0	ms
Pulse width	T _{ON}	0.43	ms
Maximum number of dots energized simultaneously	-	288	dots
Maximum clock frequency	-	4	MHz
Maximum roller diameter	-	$\phi 20.0$	mm
Running life / pulse life	-	50/5×10 ⁷	km/pulses
Operating temperature	-	5~45	°C

Printheads

●Electrical characteristic curves

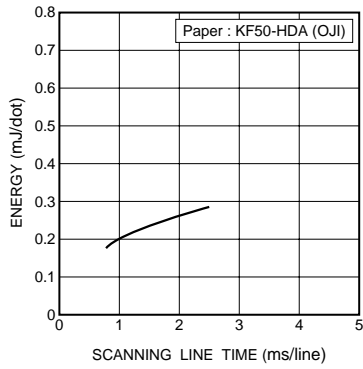


Fig.3 Adaptive speed chart

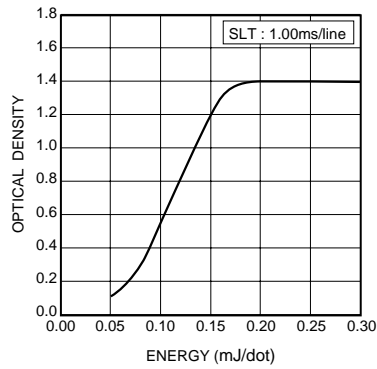


Fig.4 Representative density curve

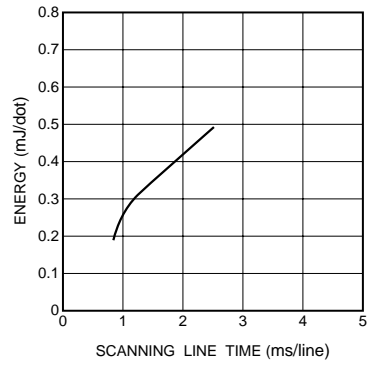


Fig.5 Maximum energy curve

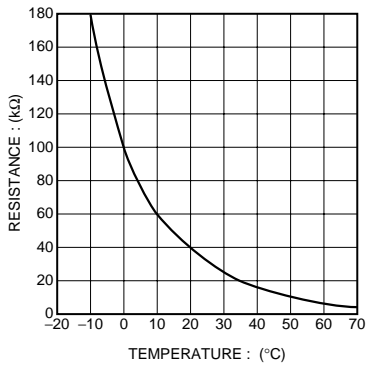


Fig.6 Thermistor curve

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