

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

## KF2003-GF84A

KF2003-GF84A of low voltage thermal printheads have a 1.25-mm pitch connectors and reduced power supply circuit voltage requirements. This makes them useful for a wide range of applications, including CAT, FET-POS and naturally, handheld devices that demand printer heads which can operate with low supplied voltage.

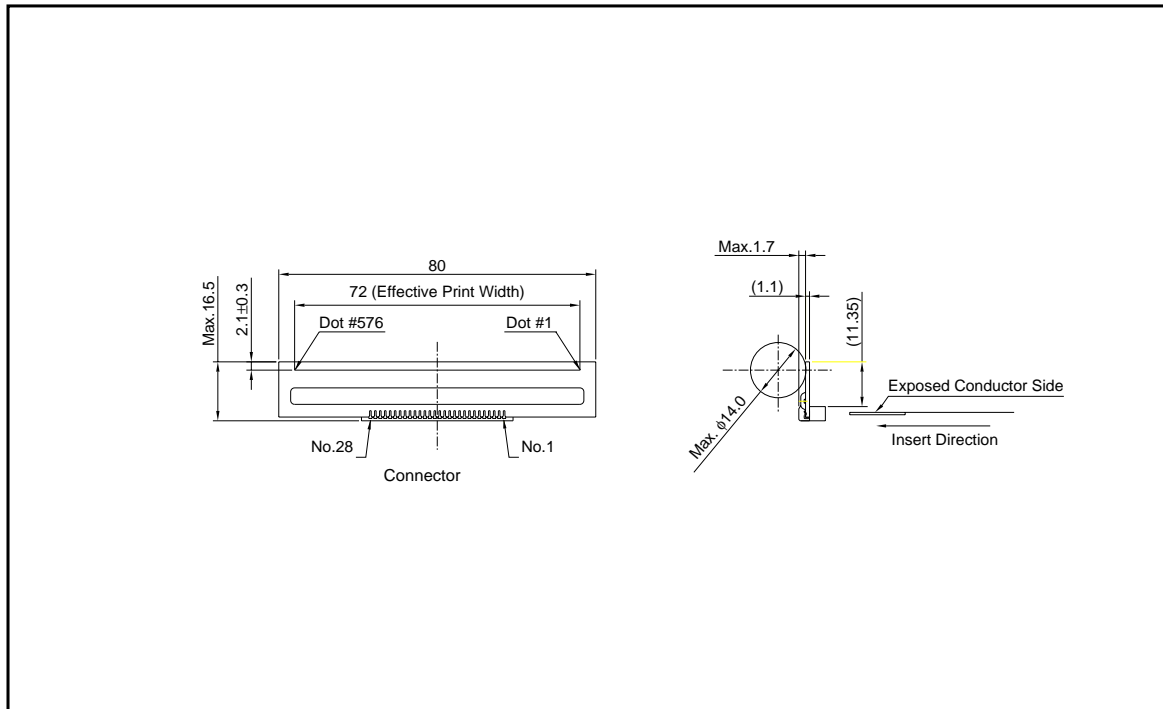
### ●Applications

Mobile printers  
FET-POS printers  
Hand-held printers  
Debit printers

### ●Features

- 1) Both the circuit voltage and the voltage required during printing are 3.3V ; this allows the design of complete printer assemblies with energy-saving low power consumption.
- 2) KF2003-GF84A has a resistance value of 176Ω and can take a maximum current of 8.5V for printing. This is useful in applications where the peak voltage is restricted.
- 3) Because the connectors accept 1.25-mm pitch FFC (full flat cables) it is possible to reduce the size of printer mechanism control boards.
- 4) 2-inch, 3-inch and 4-inch series are available.

### ●External dimensions (Units : mm)



Printheads

●Equivalent circuit

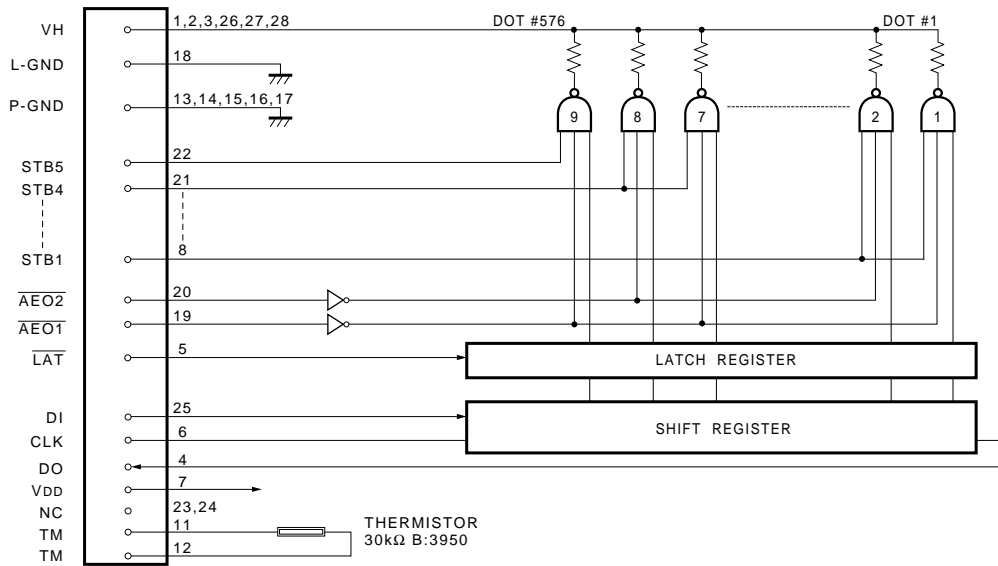


Fig.1

●Pin assignments

No.	Circuit	No.	Circuit
1	VH	15	P-GND
2	VH	16	P-GND
3	VH	17	P-GND
4	DO	18	L-GND
5	LAT	19	AEO1
6	CLK	20	AEO2
7	V <sub>DD</sub>	21	STB4
8	STB1	22	STB5
9	STB2	23	NC
10	STB3	24	NC
11	TM	25	DI
12	TM	26	VH
13	P-GND	27	VH
14	P-GND	28	VH

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

Printheads

●Timing chart

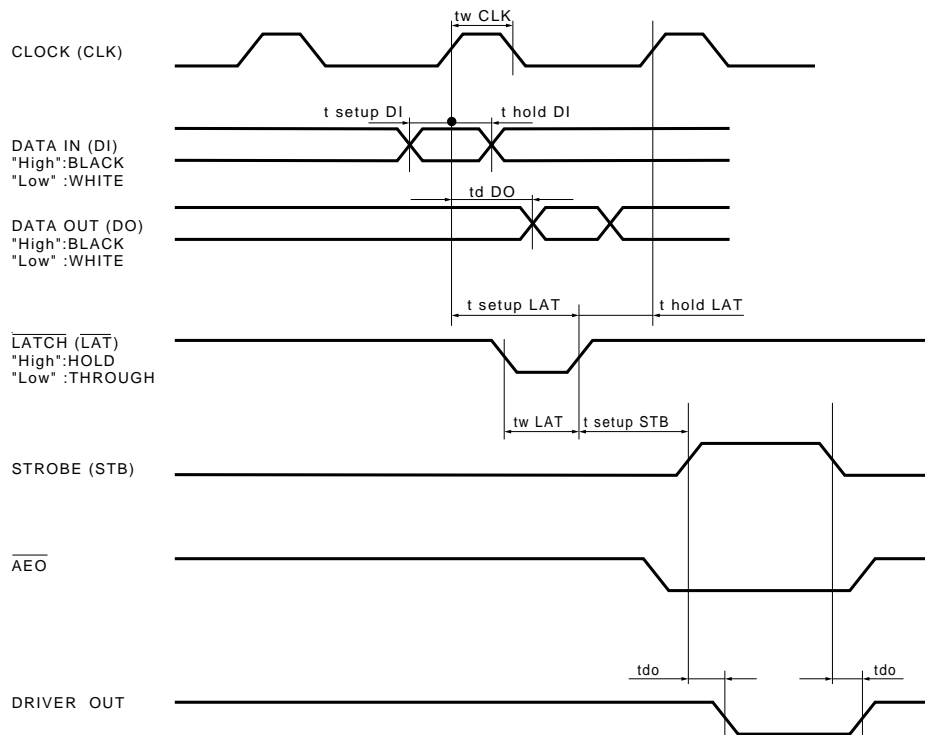


Fig.2

●Characteristics

Parameter	Symbol	Typical	Unit
Effective printing width	—	72	mm
Dot pitch	—	0.125	mm
Total dot number	—	576	dots
Average resistance value	Rave	176	$\Omega$
Applied voltage	V <sub>H</sub>	7.2	V
Applied power	P <sub>O</sub>	0.24	W/dot
Print cycle	SLT	1.25	ms
Pulse width	T <sub>ON</sub>	0.55	ms
Maximum number of dots energized simultaneously	—	64	dots
Maximum clock frequency	—	8	MHz
Maximum roller diameter	—	$\phi$ 14.0	mm
Running life / pulse life	—	100/2×10 <sup>8</sup>	km/pulses
Operating temperature	—	0~50	°C

Printheads

●Electrical characteristic curves

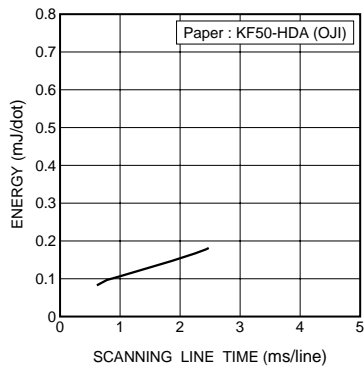


Fig.3 Adaptive speed chart

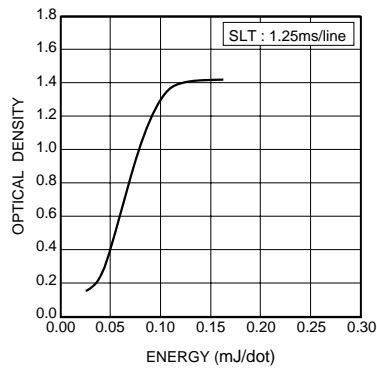


Fig.4 Representative density curve

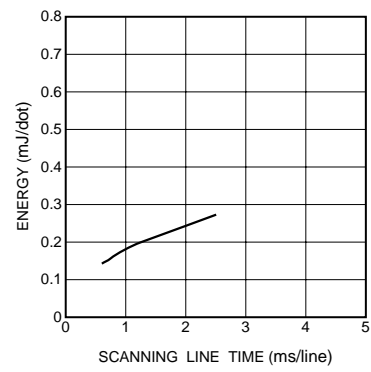


Fig.5 Maximum energy curve

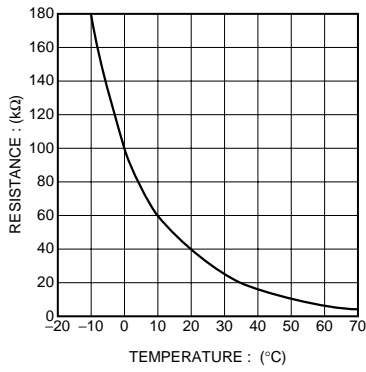


Fig.6 Thermistor curve

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