

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.

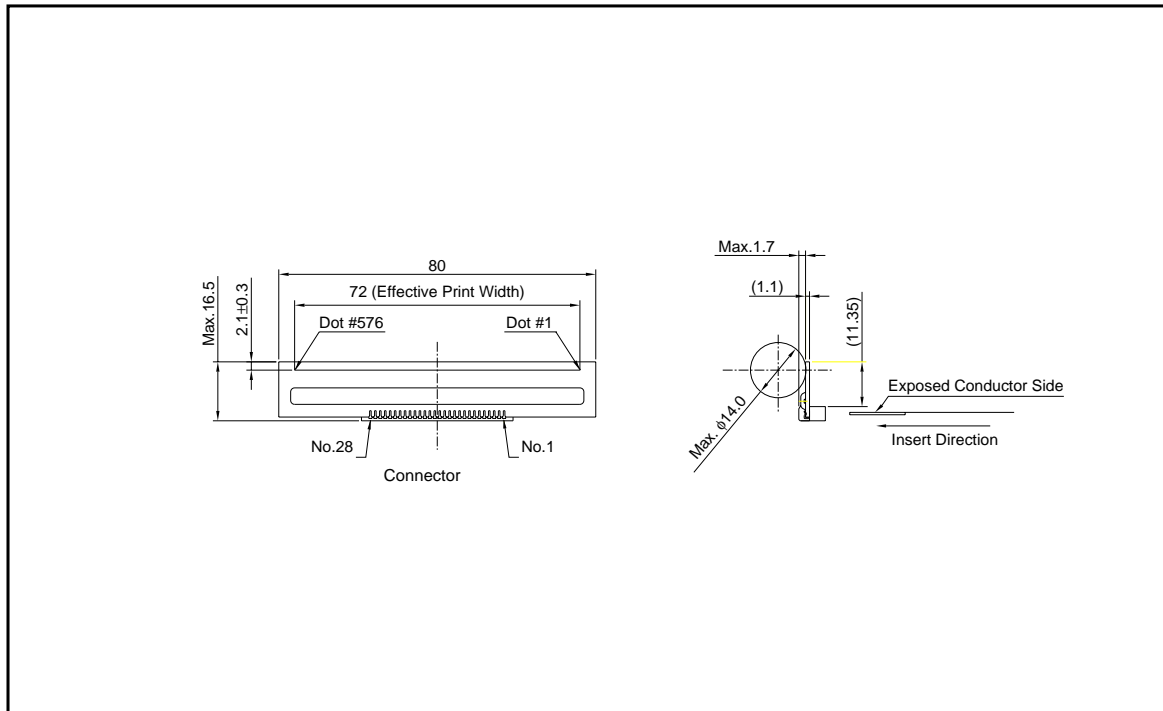
●Applications

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

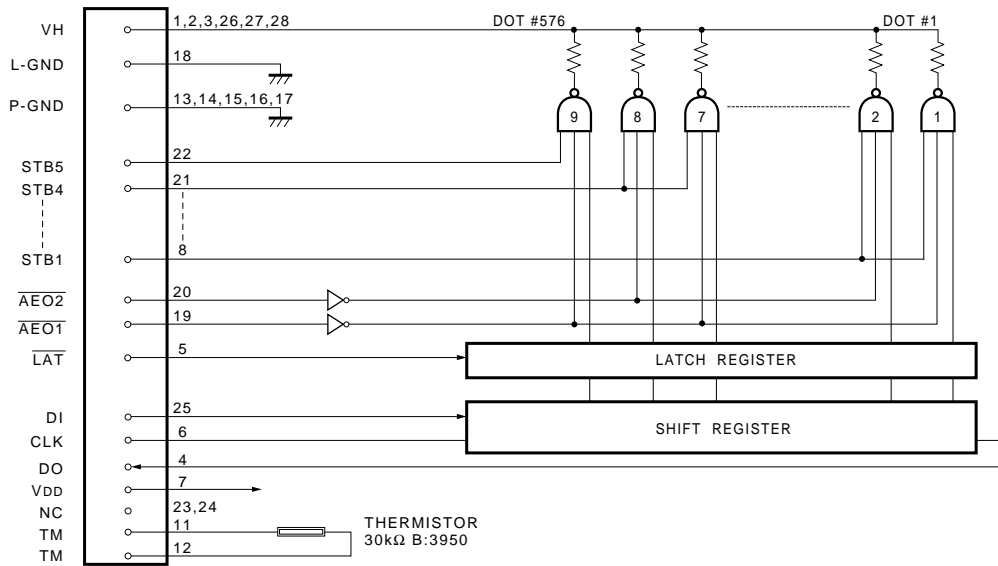


Fig.1

●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 _{DD} | 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

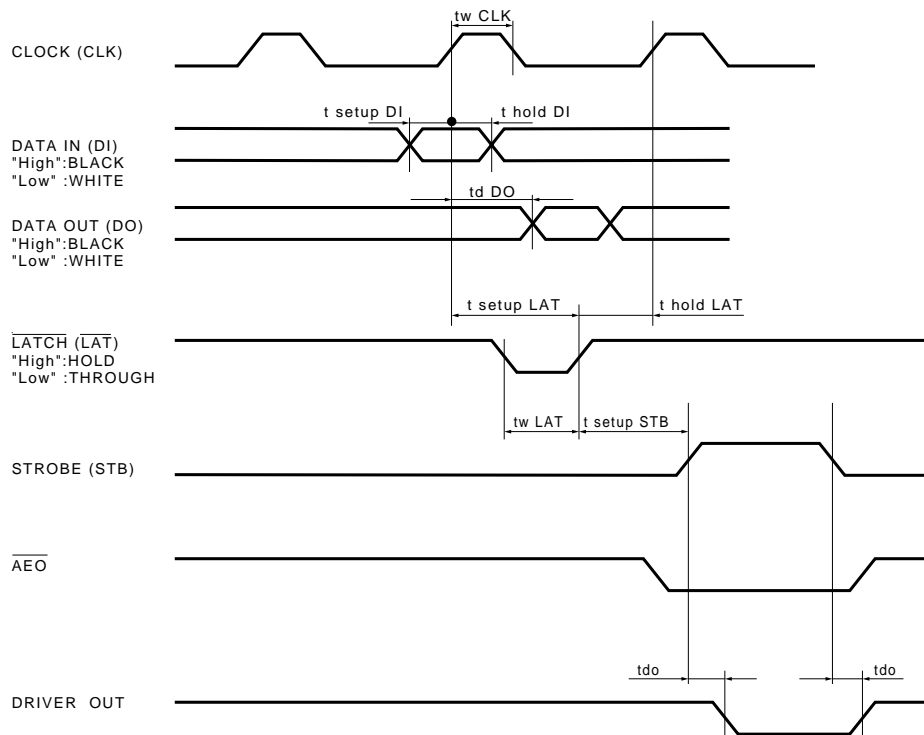


Fig.2

●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 | Ω |
| Applied voltage | V _H | 7.2 | V |
| Applied power | P _O | 0.24 | W/dot |
| Print cycle | SLT | 1.25 | ms |
| Pulse width | T _{ON} | 0.55 | ms |
| Maximum number of dots energized simultaneously | — | 64 | dots |
| Maximum clock frequency | — | 8 | MHz |
| Maximum roller diameter | — | ϕ 14.0 | mm |
| Running life / pulse life | — | 100/2 \times 10 ⁸ | km/pulses |
| Operating temperature | — | 0~50 | $^{\circ}$ C |

Printheads

●Electrical characteristic curves

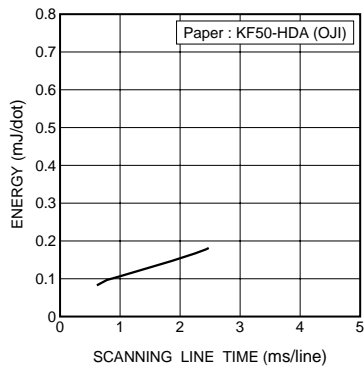


Fig.3 Adaptive speed chart

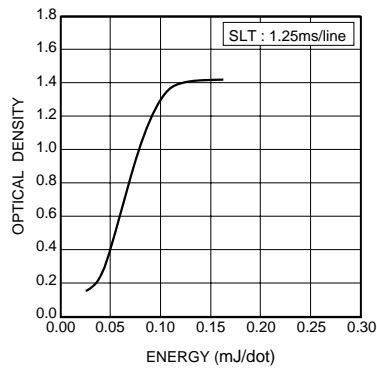


Fig.4 Representative density curve

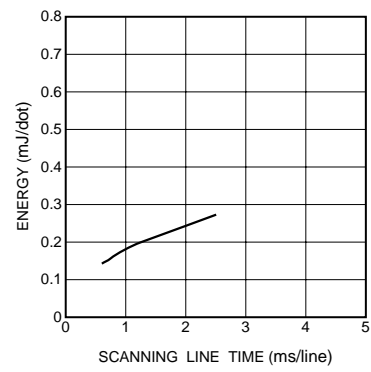


Fig.5 Maximum energy curve

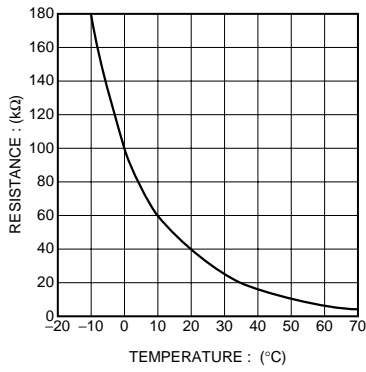


Fig.6 Thermistor curve

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