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

KF2002-GF94A

KF2002-GF94A 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.

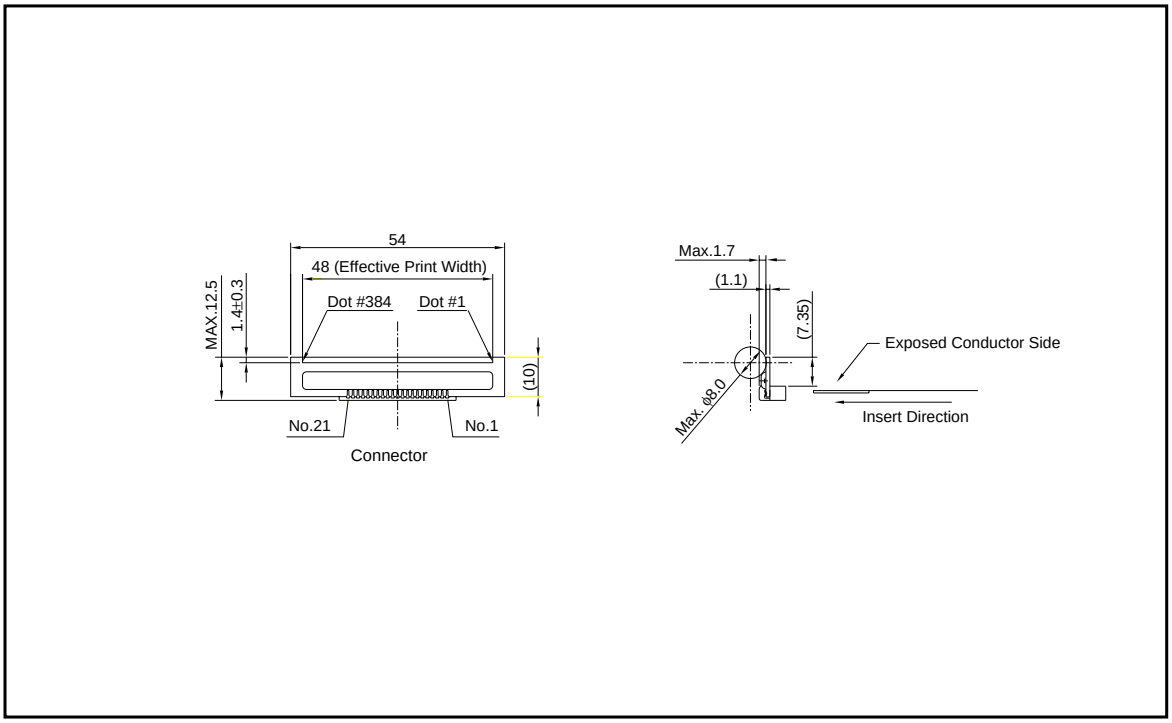
●Applications

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) KF2002-GF94A 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.

●External dimensions (Units : mm)



●**Equivalent circuit**

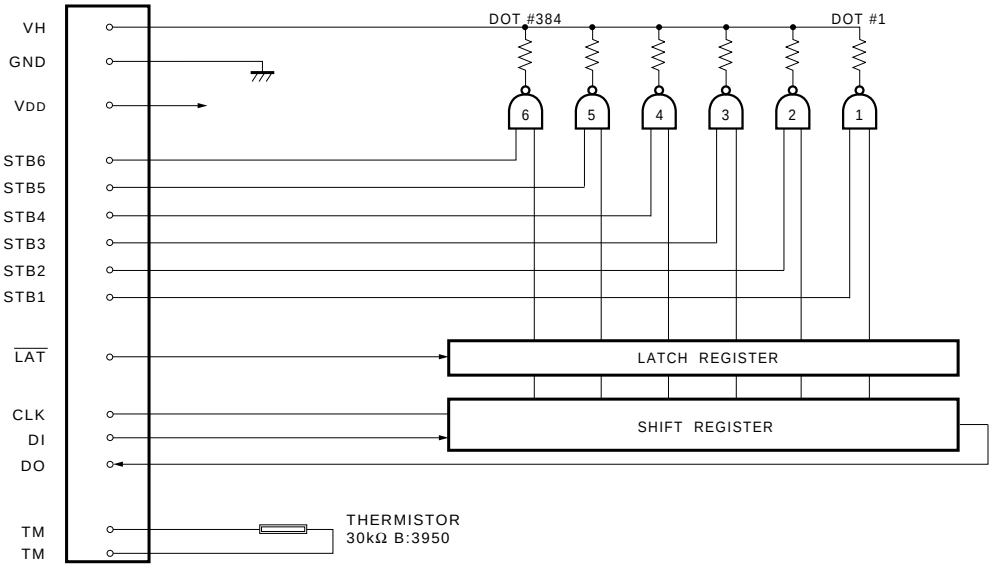


Fig.1

●Pin assignments

No.	Circuit
1	VH
2	VH
3	DO
4	$\overline{LAT}$
5	GND
6	GND
7	STB1
8	STB2
9	STB3
10	TM
11	TM

No.	Circuit
12	V_{DD}
13	STB4
14	STB5
15	STB6
16	GND
17	GND
18	CLK
19	DI
20	VH
21	VH

Note) The GND terminal 5 and 6 are not connected with the GND terminal 16 and 17.
These terminals shall be connected each other at the closest point to the printhead.

●Timing chart

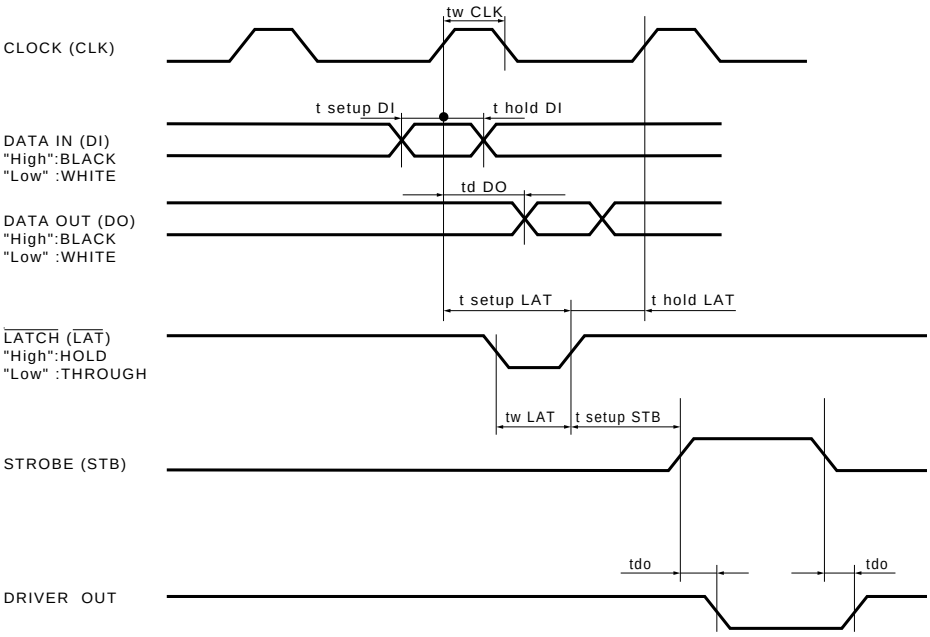


Fig.2

●Characteristics

Parameter	Symbol	Typical	Unit
Effective printing width	–	48	mm
Dot pitch	–	0.125	mm
Total dot number	–	384	dots
Average resistance value	Rave	176	Ω
Applied voltage	V_H	7.2	V
Applied power	P_O	0.23	W/dot
Print cycle	SLT	1.25	ms
Pulse width	T_{ON}	0.56	ms
Maximum number of dots energized simultaneously	–	64	dots
Maximum clock frequency	–	8	MHz
Maximum roller diameter	–	ϕ8.0	mm
Running life / pulse life	–	$50/1\times10^8$	km/pulses
Operating temperature	–	0~50	°C

●Electrical characteristic curves

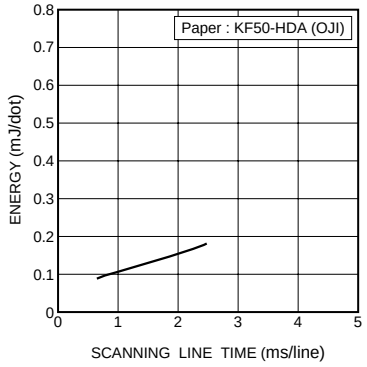


Fig.3 Adaptive speed chart

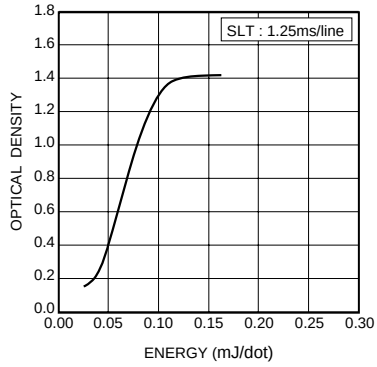


Fig.4 Representative density curve

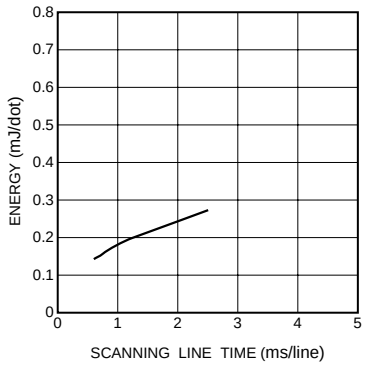


Fig.5 Maximum energy curve

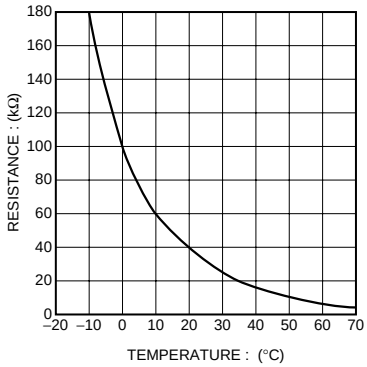


Fig.6 Thermistor curve

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