

# Thick film thermal printhead (with thermal historical control)

## KF2003-GM50A

GM50 series is the new product that newly added the future history control and driver LSI which has the function of thermal historical control, to GL50 series which is employing the conventional thick-film fast response thermal element.

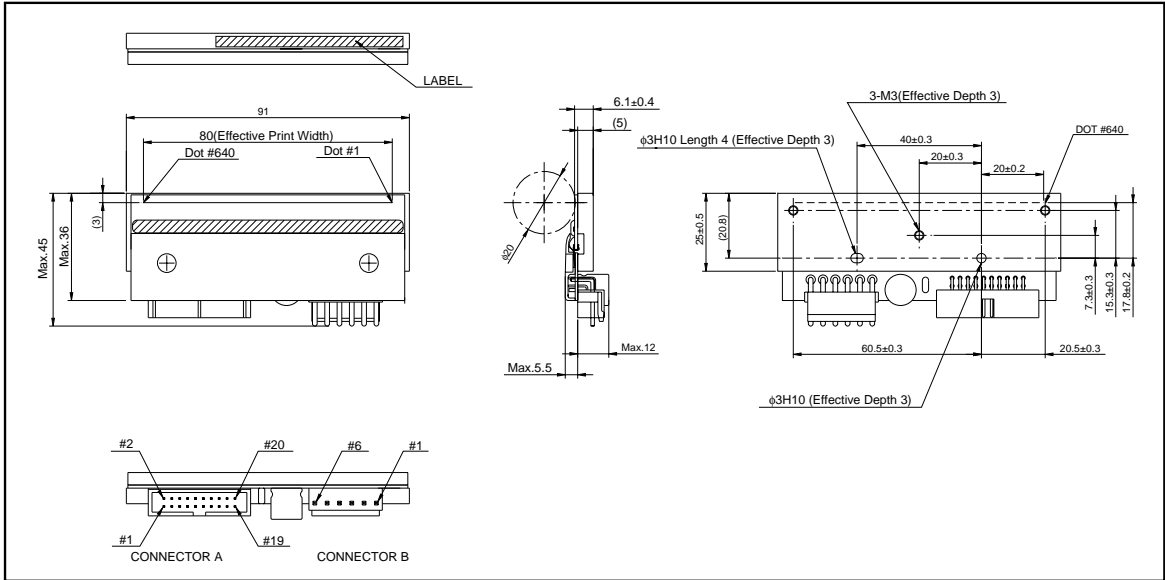
**●Applications**

- High speed label printer
- High speed bar code printer
- High speed ticket printer
- Various high speed terminal printers

**●Features**

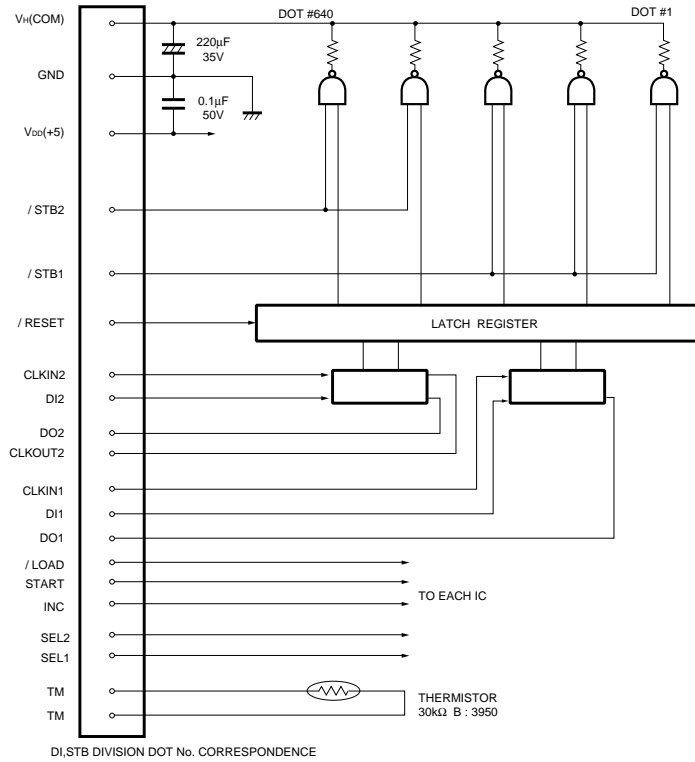
- 1) Newly developed thick-film fast response thermal element and driver LSI with the function of thermal history control which is added the future history control are employed for this series. It is possible to print with super high speed of 10 inches / s or 250 mm / s.
- 2) 150km life realized by attributing durable new protection film.
- 3) New partial glaze construction makes it compatible with the thermal transfer application.
- 4) Market-proven G-series printhead construction ensures high reliability.

**●External dimensions (Units : mm)**



Printhead

●Equivalent circuit



DI No.	DOT No.	/ STB No.	DOT No.	CLK No.	DOT No.
DI2	640~385	/ STB2	640~385	CLKIN2	640~385
DI1	384~ 1	/ STB1	384~ 1	CLKIN1	384~ 1

Fig.1

●Pin assignments

CONNECTOR A		CONNECTOR B	
No.	Circuit	No.	Circuit
1	V <sub>DD</sub>	11	/ RESET
2	V <sub>DD</sub>	12	START
3	SEL2	13	DO1
4	SEL1	14	DO2
5	CLKIN2 (CP)	15	TM
6	NC	16	TM
7	DI2	17	/ STB2
8	DI1	18	/ STB1
9	INC	19	CLKOUT2
10	/ LOAD	20	CLKIN1

CONNECTOR B	
No.	Circuit
1	V <sub>H</sub> (COM)
2	V <sub>H</sub> (COM)
3	V <sub>H</sub> (COM)
4	GND
5	GND
6	GND

Printhead

●Characteristics

Parameter	Symbol	Typical	Unit
Effective printing width	—	80	mm
Dot pitch	—	0.125	mm
Total dot number	—	640	dots
Average resistance value	Rave	550	Ω
Applied voltage	V <sub>H</sub>	24	V
Applied power	P <sub>o</sub>	0.897	W/dot
Print cycle	SLT	0.49	ms
Pulse width	T <sub>ON</sub>	0.246	ms
Maximum number of dots energized simultaneously	—	640	dots
Maximum clock frequency	—	8	MHz
Maximum roller diameter	—	φ20.0	mm
Running life / pulse life	—	150/(1×10 <sup>8</sup> )	km/pulses
Operating temperature	—	5~45	°C

●Data sheets

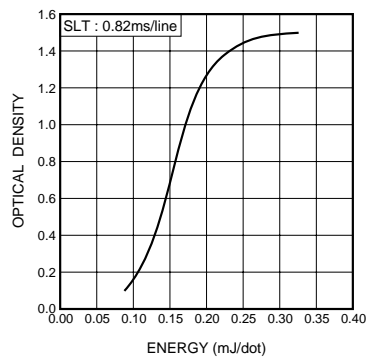


Fig.2 Representative density curve

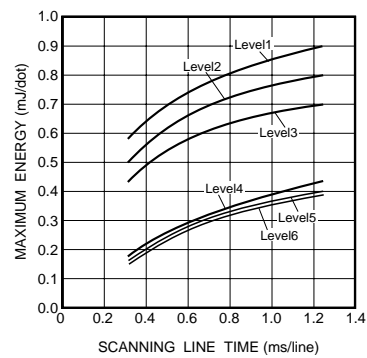


Fig.3 Maximum energy curve