Printheads

Thick film thermal printhead
(with thermal historical control)

KF2004-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 convertional 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 250mm / 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)
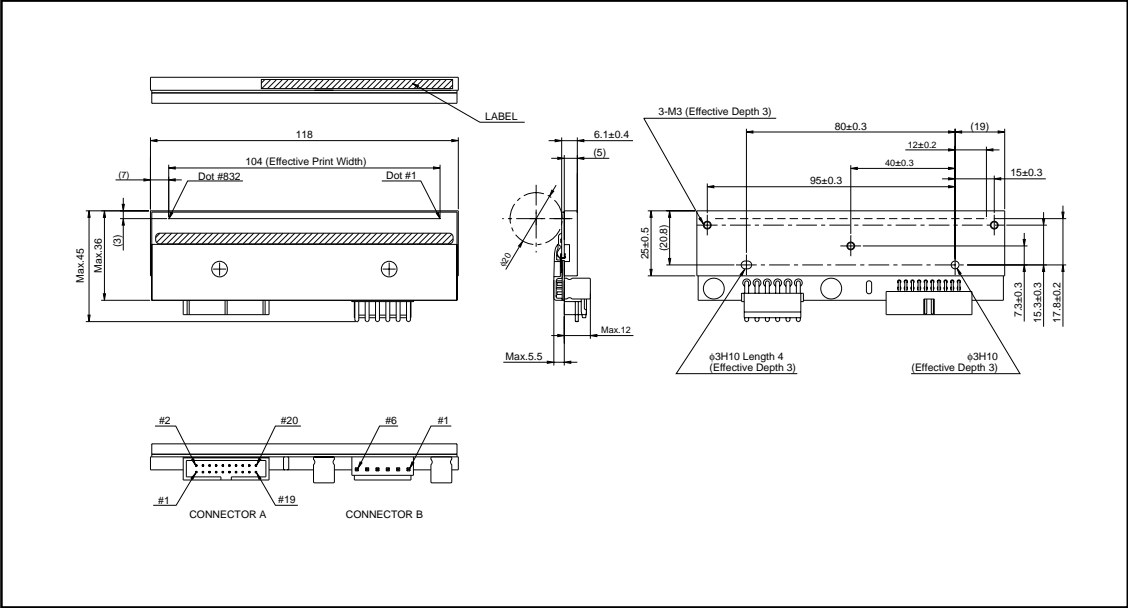
●**Equivalent circuit**
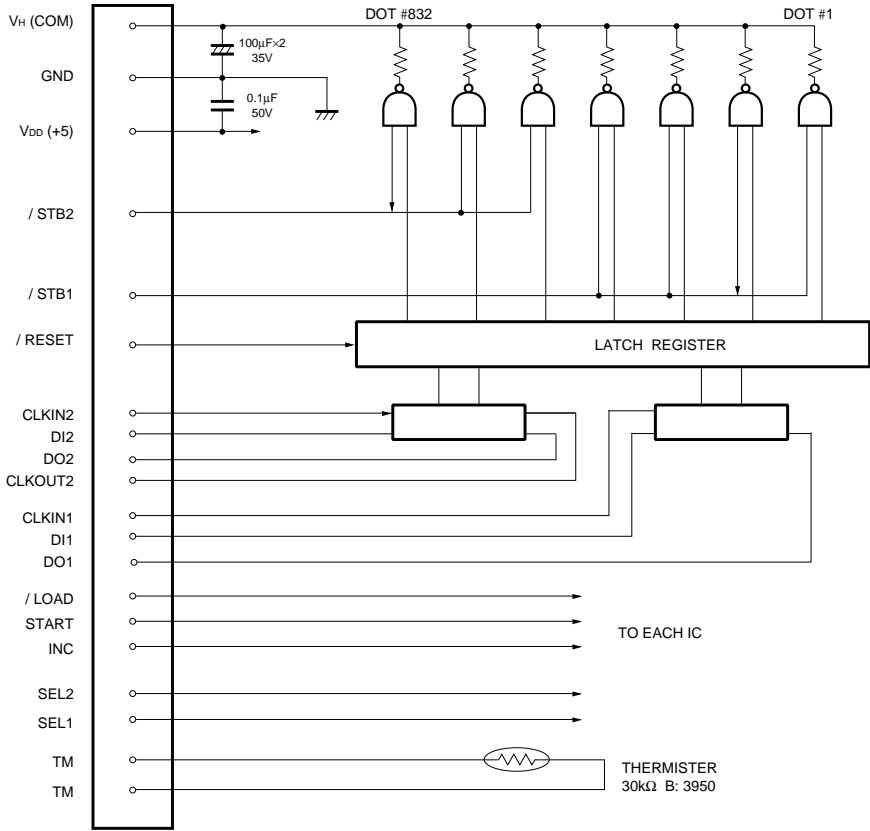
DI, STB DIVISION DOT No. CORRESPONDENCE

DI No.	DOT No.
DI2	832 ~ 449
DI1	448 ~ 1

/ STB No.	DOT No.
/ STB2	832 ~ 449
/ STB1	448 ~ 1

CLK No.	DOT No.
CLKIN2	832 ~ 449
CLKIN1	448 ~ 1

ROHM

Printheads

●Pin assignments

CONNECTOR A

No.	Circuit	No.	Circuit
1	V_{DD}	11	/ RESET
2	V_{DD}	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_H (COM)
2	V_H (COM)
3	V_H (COM)
4	GND
5	GND
6	GND

●Characteristics

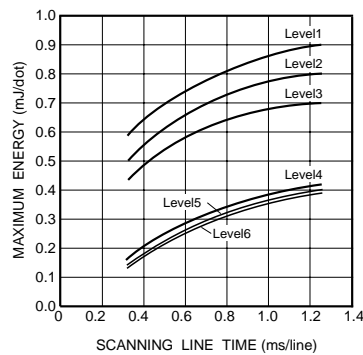| Parameter	Symbol	Typical	Unit
Effective printing width	–	104	mm
Dot pitch	–	0.125	mm
Total dot number	–	832	dots
Average resistance value	Rave	550	Ω
Applied voltage	V_H	24	V
Applied power	P_O	0.857	W/dot
Print cycle	SLT	0.490	ms
Pulse width	T_{ON}	0.258	ms
Maximum number of dots energized simultaneously	–	832	dots
Maximum clock frequency	–	8	MHz
Maximum roller diameter	–	ϕ20.0	mm
Running life / pulse life	–	$150/(1 \times 10^8)$	km/pulses
Operating temperature	–	5~45	°C

●Data sheets
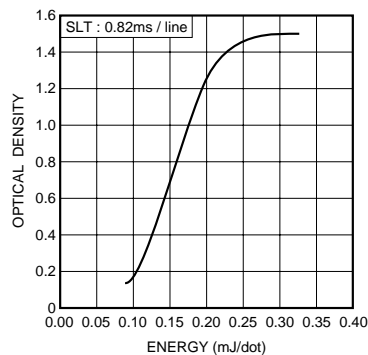
Fig.2 Representative density curve

Fig.3 Maximum energy curve