

## Printheads

# Near edge thermal printhead (8dots / mm)

## SH2004-DC90A

SH-DC90 series was developed with two key structures step-free and near edge for the packaging printer market which requires high speed continuous printing. It is suitable for printers in factory line where high speed 24 hours continuous printing is required.

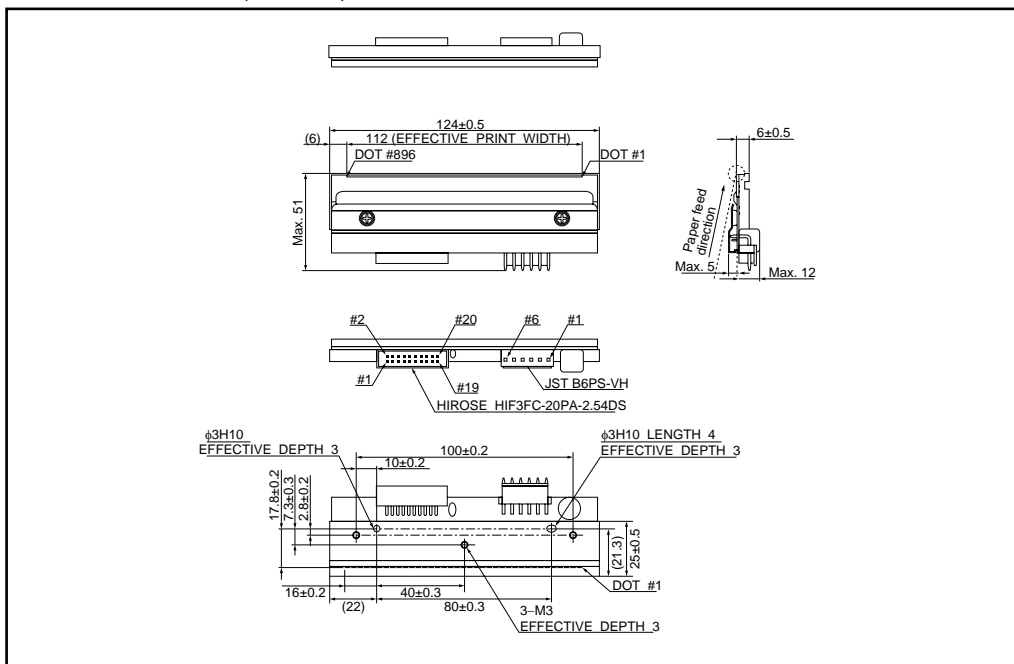
### ●Applications

Bar code printers  
Card printers  
Ticket printers  
General purpose compact printers

### ●Features

- 1) ROHM new technology "STEP FREE" structure will provide, high corrosion resistance, better resistance against scratching damage, high efficiency.
- 2) Inclined toward the printing surface to provide excellent printing quality even for cards and thick paper.
- 3) Prints directly on printing medium that cannot be bent.
- 4) Using a hard conductive film as a protective film on the heating element offers excellent resistance to electrostatic Damage.
- 5) Being low-profile when installed enables smaller printers.
- 6) Compatible with the SH3004-DC90A (300dpi) in mechanical specifications, to facilitate the making of a series of printers.

### ●External dimensions (Unit : mm)



Note: No heat history control function inside the thermal printhead. External heat history control is required for high speed printing.

## Printheads

### ●Characteristics

Parameter	Symbol	Typical	Unit
Effective printing width	–	112	mm
Dot pitch	–	0.125	mm
Total dot number	–	896	dots
Average resistance value	Rave	550	$\Omega$
Applied voltage	V <sub>H</sub>	24	V
Applied power	P <sub>O</sub>	0.91	W / dot
Print cycle	SLT	0.42	ms
Maximum number of dots energized simultaneously	–	896	dots
Maximum clock frequency	–	10	MHz
Maximum roller diameter	–	–	mm
Running life / pulse life	–	50 / 10 <sup>8</sup>	km / pulses
Operating temperature	–	5 to 45	°C

### ●Pin configuration

#### HIROSE

No.	Circuit	No.	Circuit
1	V <sub>DD</sub>	2	BEO
3	GND	4	DI2
5	N.C.	6	CLK
7	LA	8	GND
9	GND	10	DI1
11	N.C.	12	GND
13	V <sub>DD</sub>	14	STB2
15	STB1	16	TM
17	TM	18	SENS1
19	SENS2	20	SENS3

#### JST

No.	Circuit
1	VH
2	VH
3	VH
4	GND
5	GND
6	GND

Printheads

●Timing chart

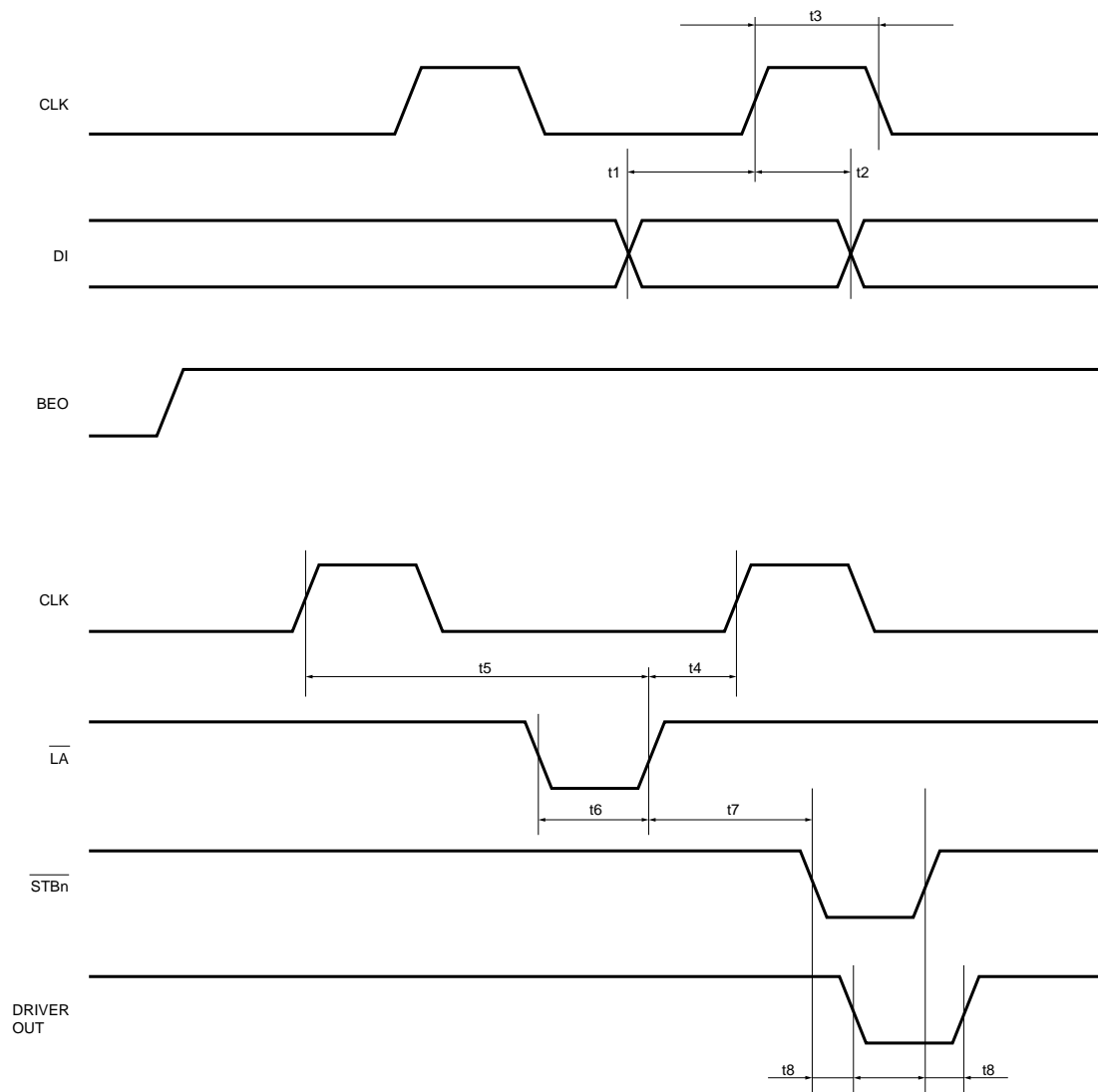
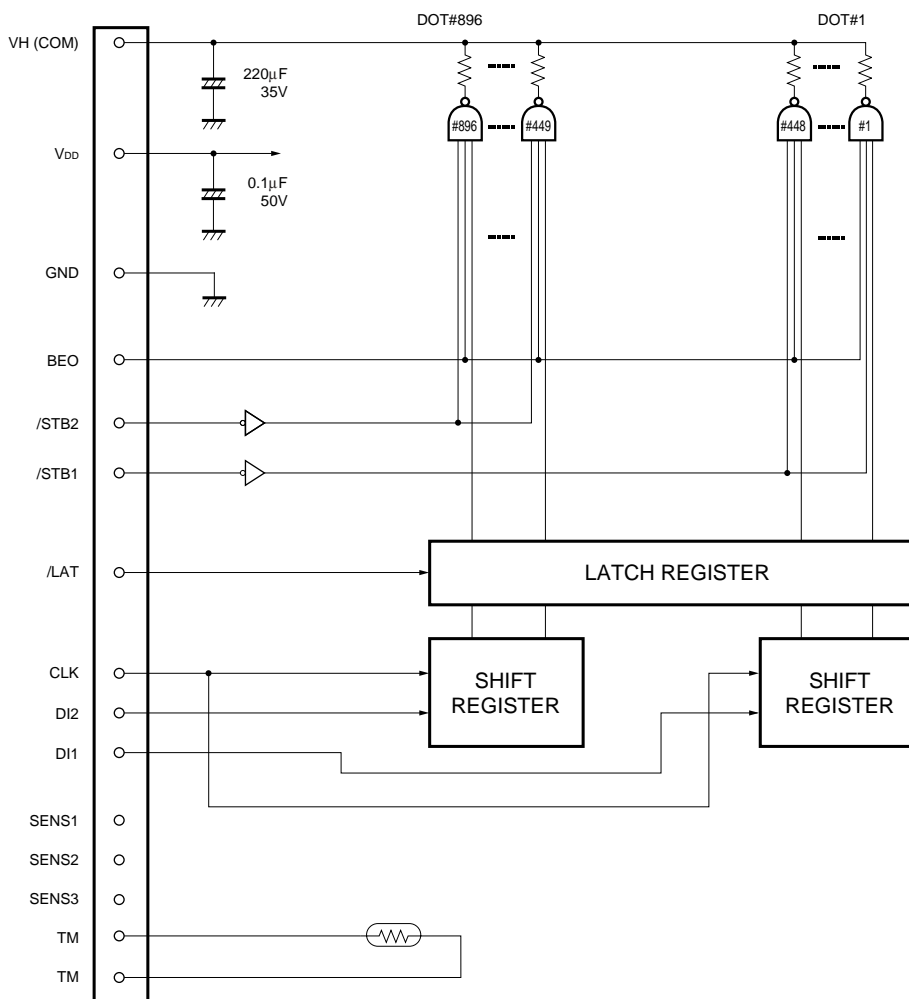


Fig.1

Printheads

●Equivalent circuit



DI No.	DOT No.	STB No.	DOT No.
DI2	896 to 449	STB 2	896 to 449
DI1	448 to 1	STB 1	448 to 1

Fig. 2

Printheads

●Electrical characteristics curves

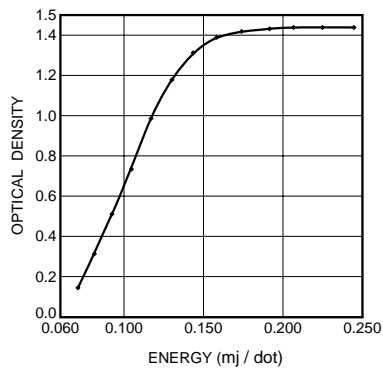


Fig. 3 Representative density curve

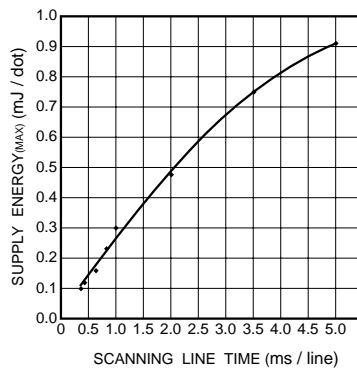


Fig. 4 Maximum energy curve

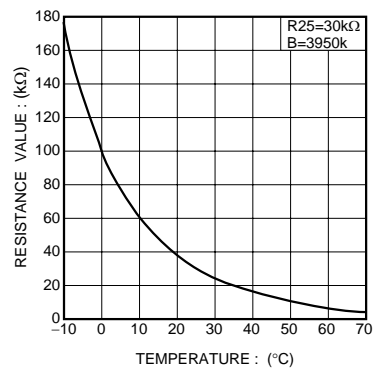


Fig. 5 Thermistor curve

## Appendix

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