

## Printheads

# Near edge thin film thermal printhead (8 dots / mm) NE2004-VA10A

The NE2004-VA10A is a near edge thin-film thermal printhead, where the printing medium passes straight through at printing speeds up to 10 inch / second. It is suited for high-speed label printers.

### ●Applications

Bar code printers

Card printers

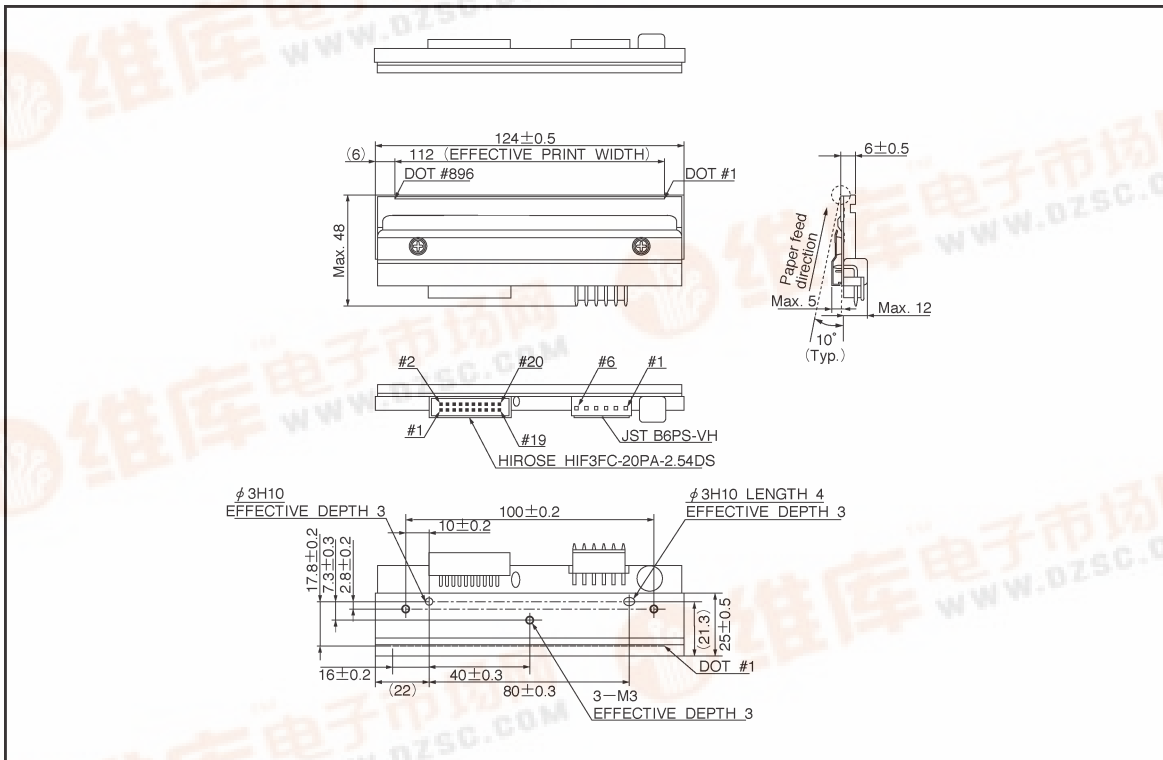
Ticket printers

General purpose compact printers

### ●Features

- 1) Inclined toward the printing surface to provide excellent printing quality even for cards and thick paper.
- 2) Prints directly on printing medium that cannot be bent.
- 3) Using a hard conductive film as a protective film on the heating element offers excellent resistance to electrostatic damage.
- 4) Being low-profile when installed enables smaller printers.
- 5) Compatible with the NE3004-VA10A (300 dpi) in mechanical specifications, to facilitate the making of a series of printers.

### ●External dimensions (Units: mm)



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

## Printheads

NE2004-VA10A

### ●Characteristics

Parameter	Symbol	Typical	Unit
Effective printing width	—	112	mm
Dot pitch	—	0.125	mm
Total dot number	—	896	dots
Average resistance value	Rave	850	Ω
Applied voltage	V <sub>H</sub>	24	V
Applied power	P <sub>O</sub>	0.58	W / dot
Print cycle	SLT	1.5	ms
Pulse width	T <sub>ON</sub>	0.37	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	—	5~45	°C

### ●Pin assignments

#### HIROSE

No.	Circuit	No.	Circuit
1	V <sub>DD</sub>	2	BEO
3	GND	4	DI
5	N.C.	6	CLK
7	LA	8	GND
9	GND	10	N.C.
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

## ● Timing chart

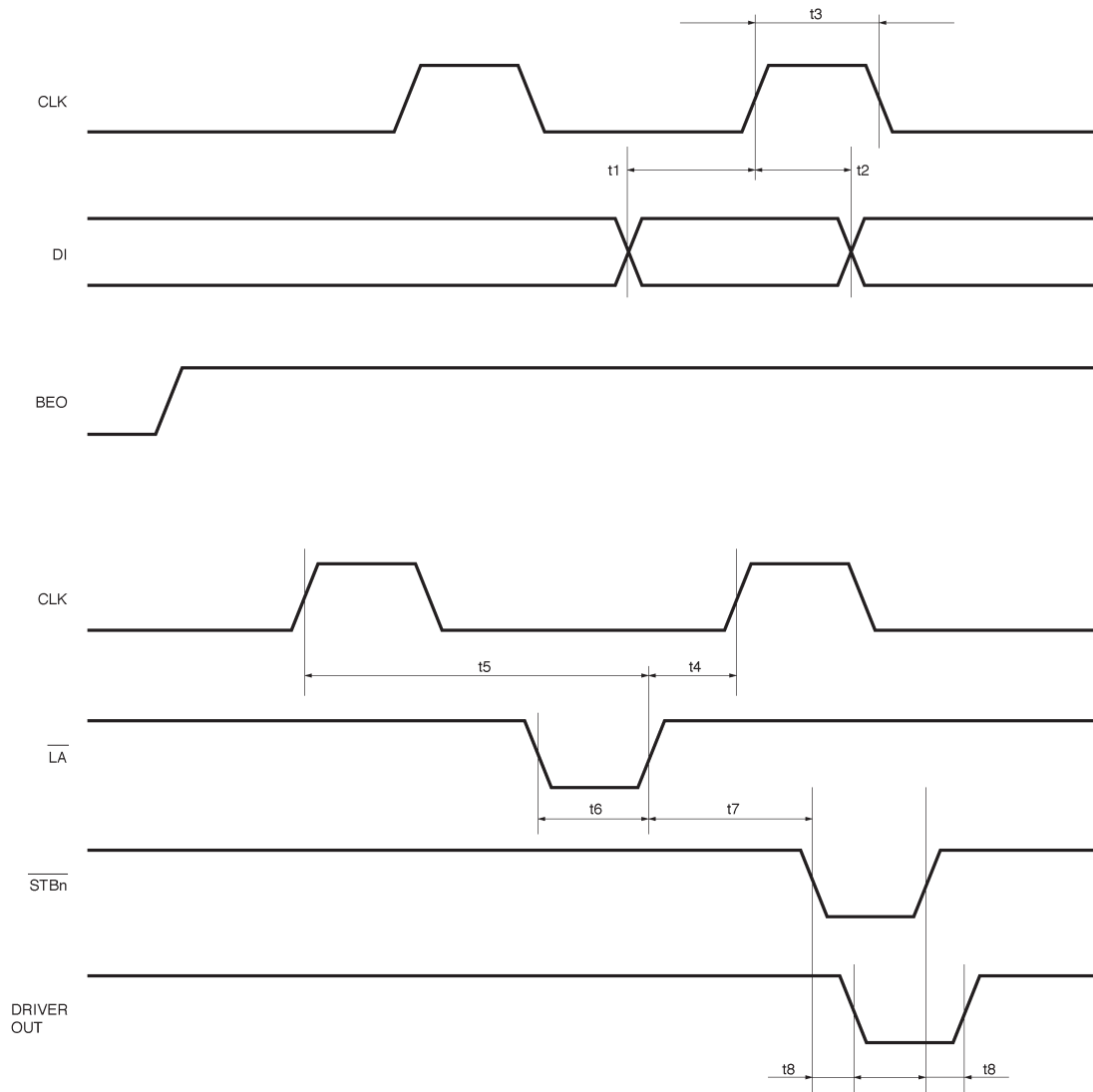
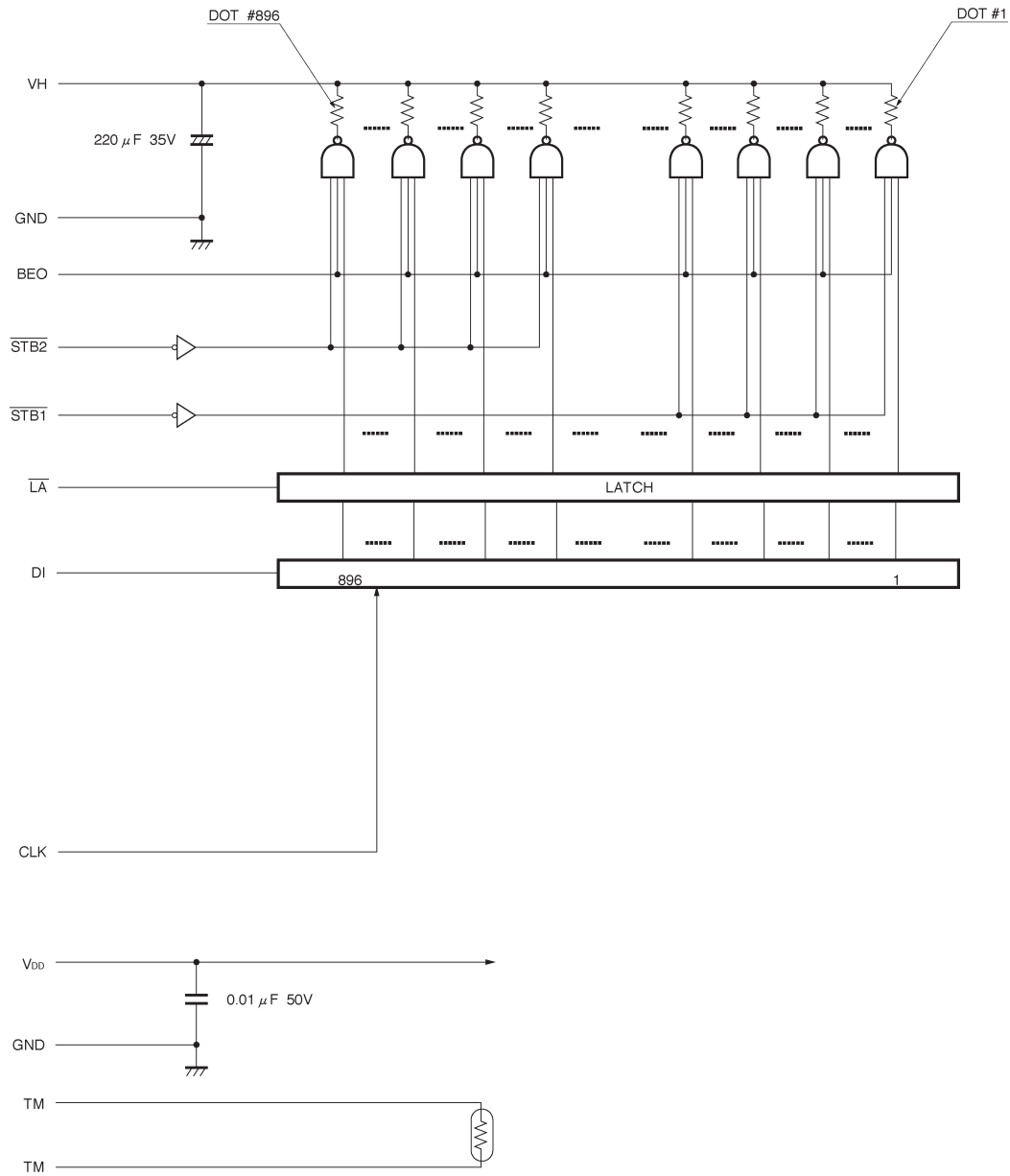


Fig.1

## ●Equivalent circuit

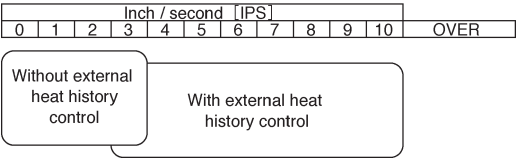


DI No.	DOT No.
DI	896 ~ 1

STB No.	DOT No.
STB 2	896 ~ 449
STB 1	448 ~ 1

Fig. 2

●Supported speeds chart



●Electrical characteristic curves

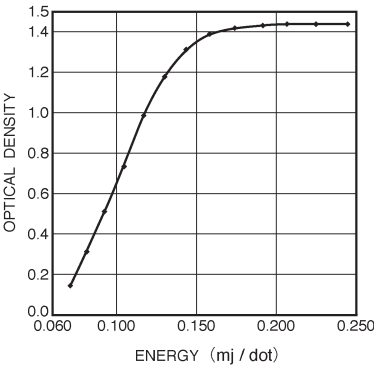


Fig. 3 Representative density curve

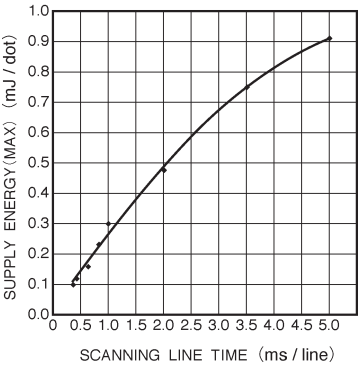


Fig. 4 Maximum energy curve

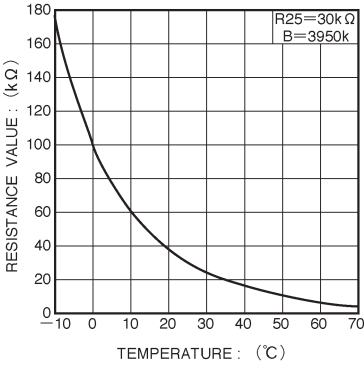


Fig. 5 Thermistor curve