

# Near edge thermal printhead (8 dots / mm)

## NE2002-VA10A

The NE2002-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.

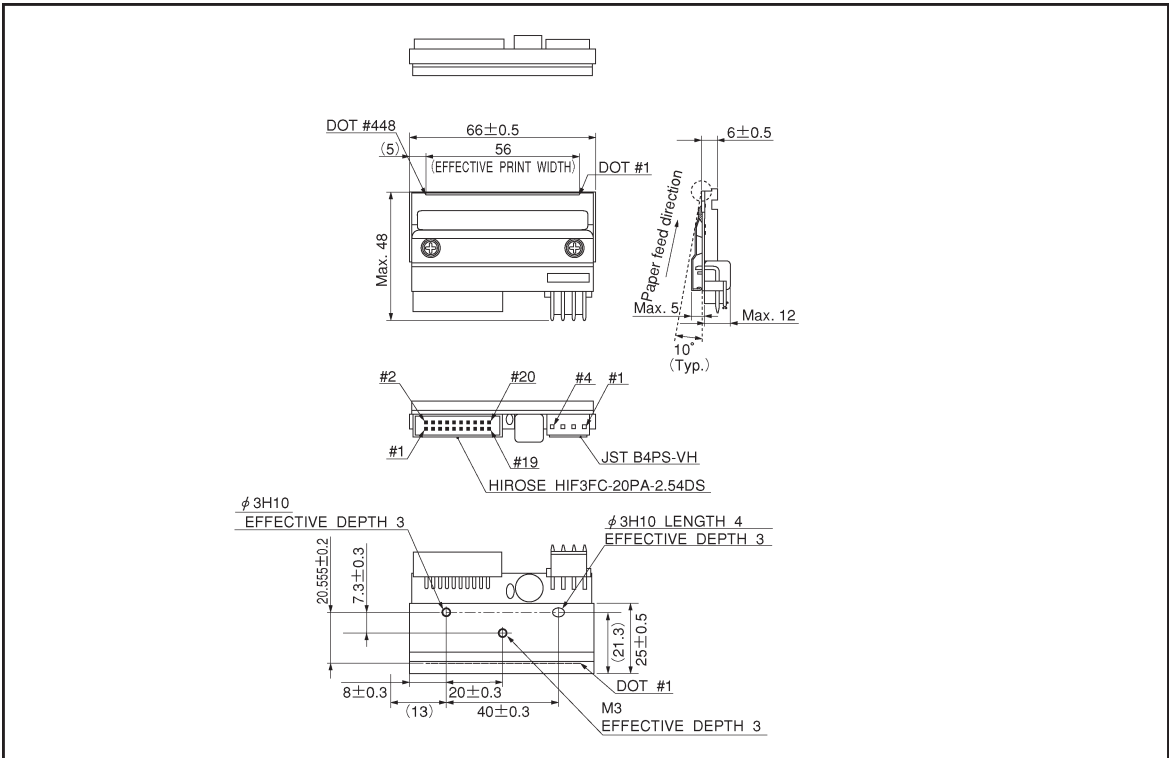
●Applications

- Bar code label 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 NE3002-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.

●Characteristics

Parameter	Symbol	Typical	Unit
Effective printing width	—	56	mm
Dot pitch	—	0.125	mm
Total dot number	—	448	dots
Average resistance value	Rave	850	Ω
Applied voltage	V <sub>H</sub>	24	V
Applied power	P <sub>O</sub>	0.59	W / dot
Print cycle	SLT	1.5	ms
Pulse width	T <sub>ON</sub>	0.36	ms
Maximum number of dots energized simultaneously	—	448	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	$\overline{\text{LA}}$	8	GND
9	GND	10	N.C.
11	N.C.	12	GND
13	V <sub>DD</sub>	14	$\overline{\text{STB2}}$
15	$\overline{\text{STB1}}$	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

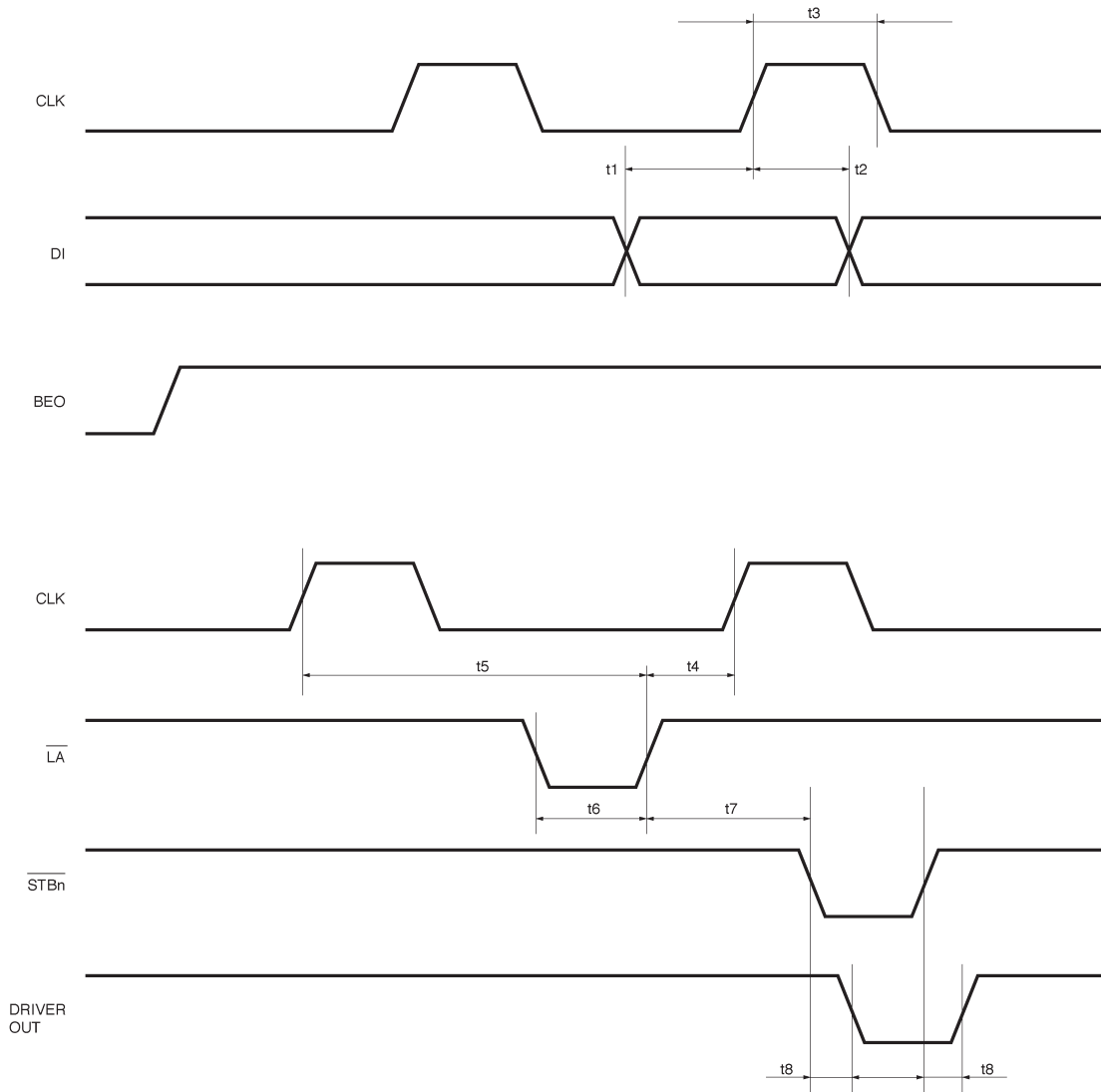
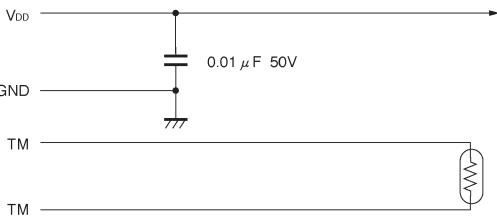
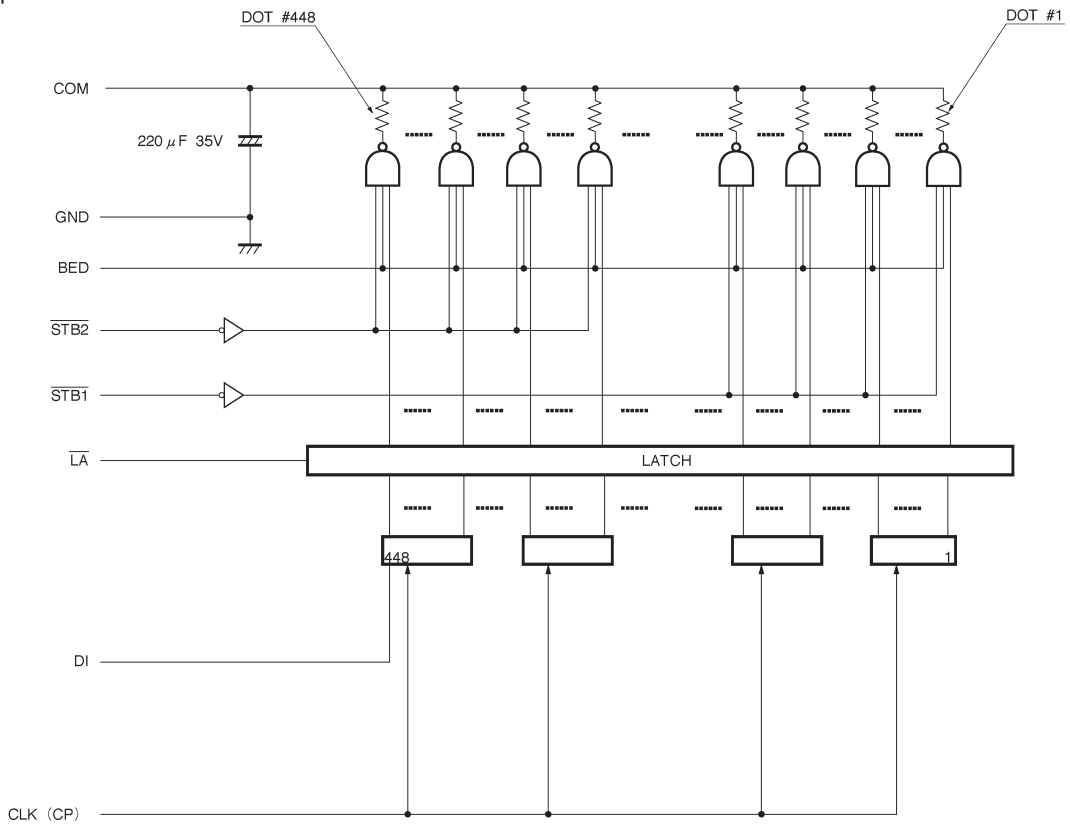


Fig.1

●Equivalent circuit



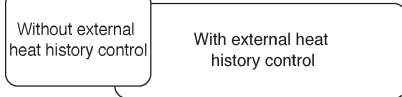
DI No.	DOT No.
DI	448~1

$\overline{\text{STB}} \text{ No.}$	DOT No.
$\overline{\text{STB}} 2$	448~193
$\overline{\text{STB}} 1$	192~ 1

Fig. 2

●Supported speeds chart

Inch / second [IPS]											
0	1	2	3	4	5	6	7	8	9	10	OVER



●Electrical characteristic curves

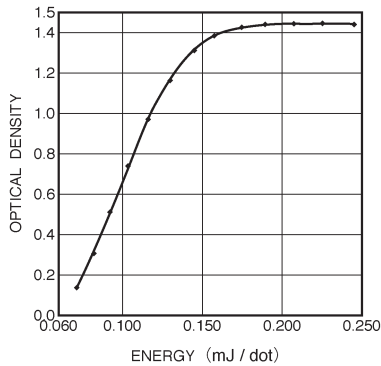


Fig. 3 Representative density curve

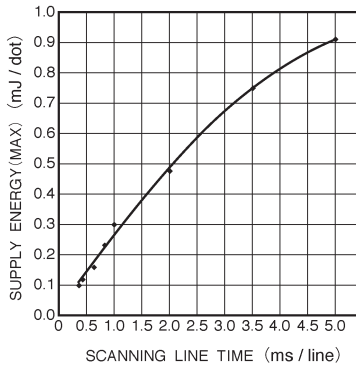


Fig. 4 Maximum energy curve

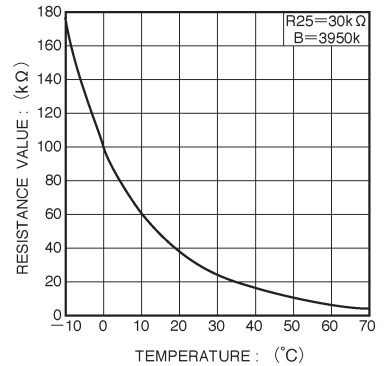


Fig. 5 Thermistor curve