Near edge thermal printhead (300 dots / inch)

NE3002-VA10A

The NE3002-VA10A is a near edge thin-film thermal printhead, where the printing medium passes straight through at printing speeds up to 8 inch / second. It is suited for high-speed label printers.

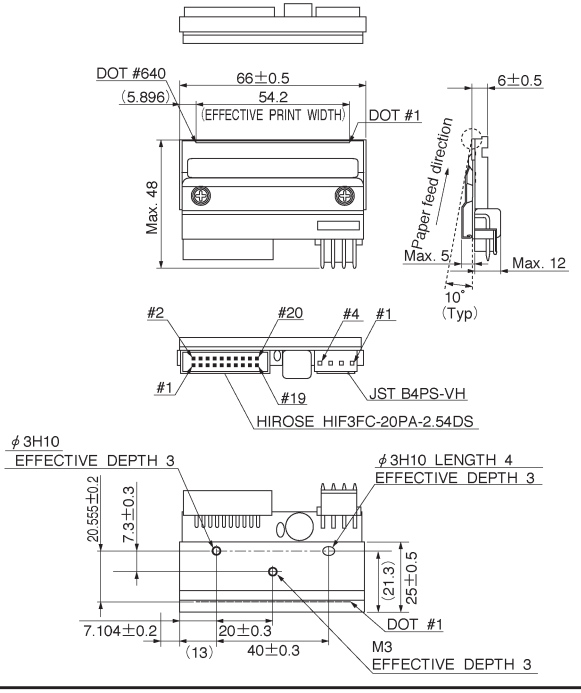
●Applications

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 NE2002-VA10A (8 dots / mm) 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	—	54.2	mm
Dot pitch	—	0.0847	mm
Total dot number	—	640	dots
Average resistance value	Rave	1250	Ω
Applied voltage	V_H	24	V
Applied power	P_O	0.42	W / dot
Print cycle	SLT	1.5	ms
Pulse width	T_{ON}	0.30	ms
Maximum number of dots energized simultaneously	—	640	dots
Maximum clock frequency	—	10	MHz
Maximum roller diameter	—	—	mm
Running life / pulse life	—	50 / 10^8	km / pulses
Operating temperature	—	5～45	℃

●Pin assignments

HIROSE

No.	Circuit	No.	Circuit
1	V_{DD}	2	BEO
3	GND	4	DI
5	N.C.	6	CLK
7	$\overline{LA}$	8	GND
9	GND	10	N.C.
11	N.C.	12	GND
13	V_{DD}	14	$\overline{STB2}$
15	$\overline{STB1}$	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

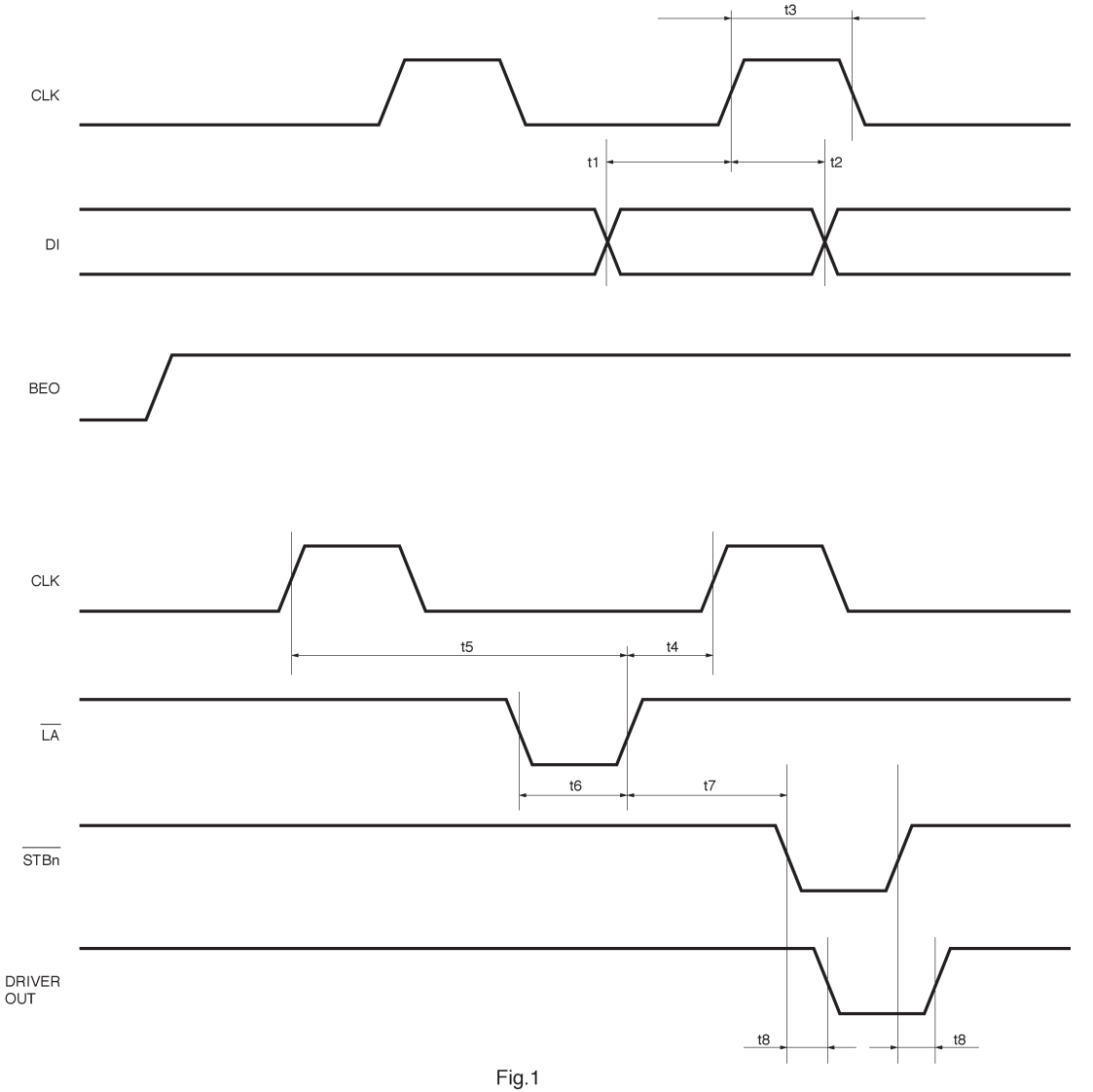
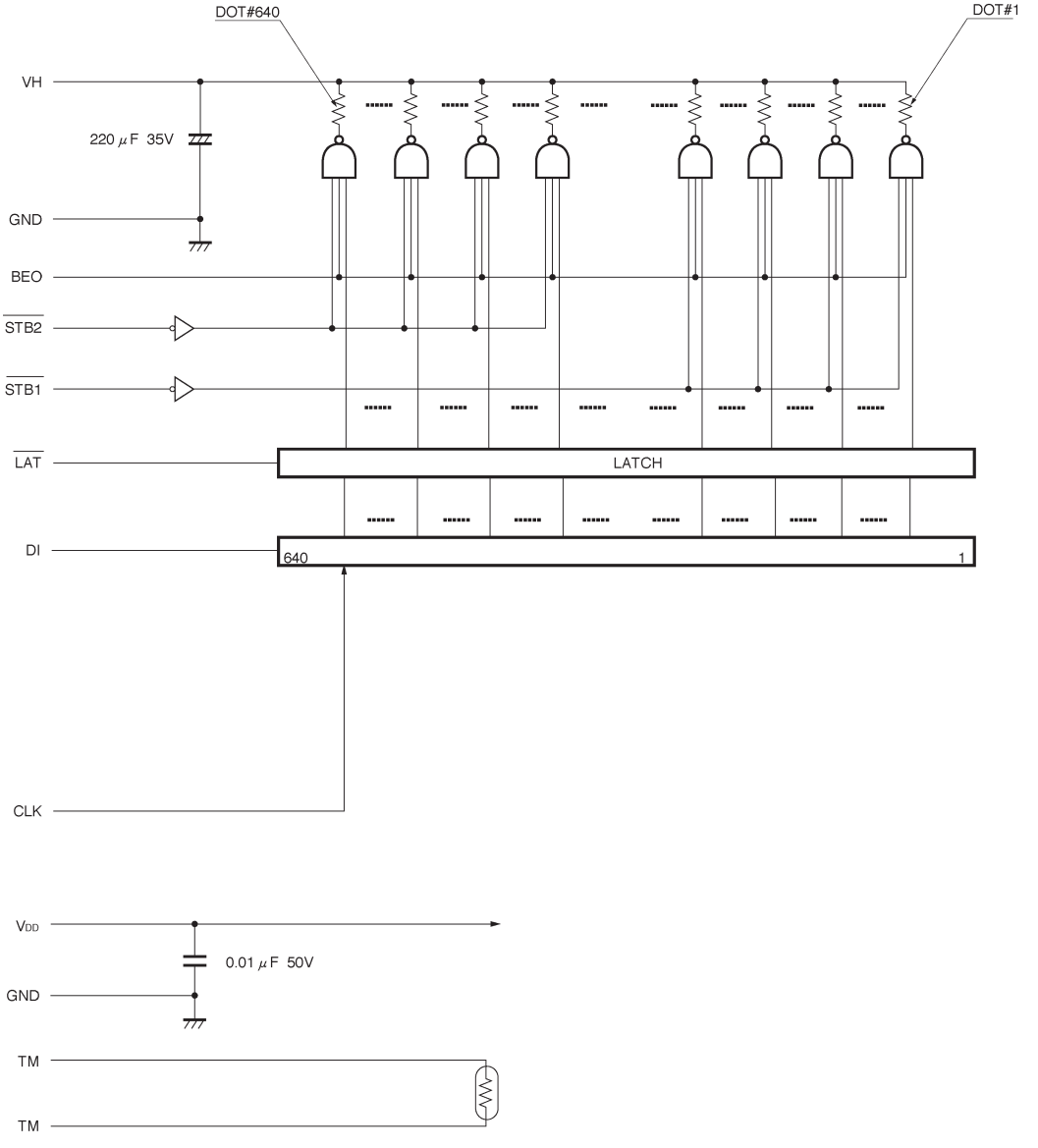


Fig.1

●Equivalent circuit

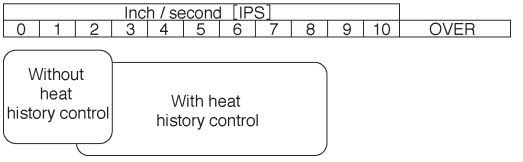


DI No.	DOT No.
DI	640～1

$\overline{\text{STB}}$ No.	DOT No.
$\overline{\text{STB 2}}$	640～321
$\overline{\text{STB 1}}$	320～ 1

Fig. 2

●Supported speeds chart



●Electrical characteristic curves

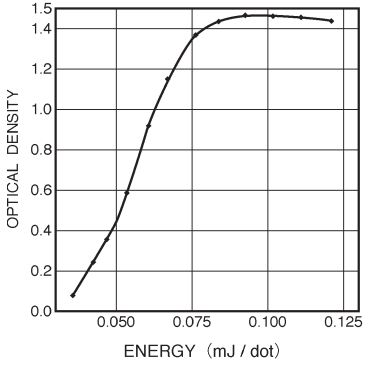


Fig. 3 Representative density curve

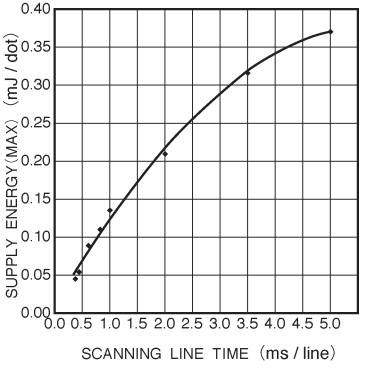


Fig. 4 Maximum energy curve

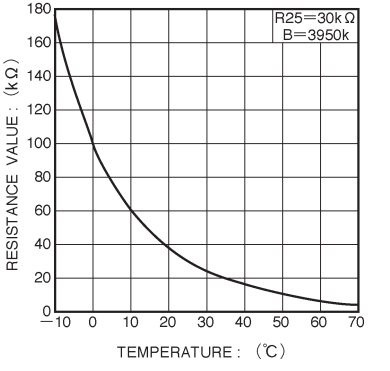


Fig. 5 Thermistor curve