Printheads

High speed thermal printhead (300 dots / inch)

NB3004-VA10A

The NB3004-VA10A is a flat thin-film thermal printhead capable of printing speeds up to 10 inch / second, and suited for general purpose compact printers as well as label printers.

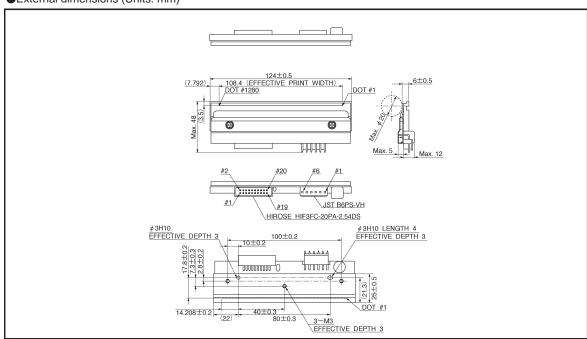
Applications

High definition bar code label printers High definition ticket printers General purpose compact printers

Features

- 1) High resolution of 300 dots / inch.
- 2) Special glazed components for high speed, high quality printing.
- 3) High speed clock (10MHz) to facilitate external heat history control.
- 4) Using a hard conductive film as a protective film on the heating element offers excellent resistance to electrostatic damage.
- Compatible with the NB2004-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		Typical	Unit
Effective printing width	_	108.4	mm
Dot pitch	_	0.0847	mm
Total dot number	_	1280	dots
Average resistance value	Rave	850	Ω
Applied voltage	V _H	24	V
Applied power	Po	0.602	W / dot
Print cycle	SLT	0.83	ms
Pulse width	Ton	0.191	ms
Maximum number of dots energized simultaneously	_	1280	dots
Maximum clock frequency	_	10	MHz
Maximum roller diameter	_	20	mm
Running life / pulse life	_	50 / 10 ⁸	km / pulses
Operating temperature	_	5~45	Ĉ

Pin assignments

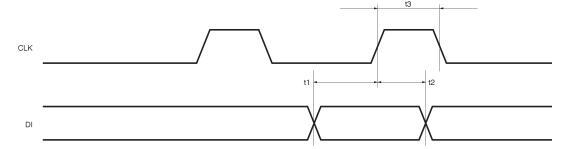
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4			
1	V_{DD}	2	BEO
3	GND	4	DI4
5	DI3	6	CLK
7	LA	8	GND
9	GND	10	DI2
11	DI1	12	GND
13	VDD	14	STB2
15	STB1	16	TM
17	TM	18	SENS1
19	SENS2	20	SENS3

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

Timing chart





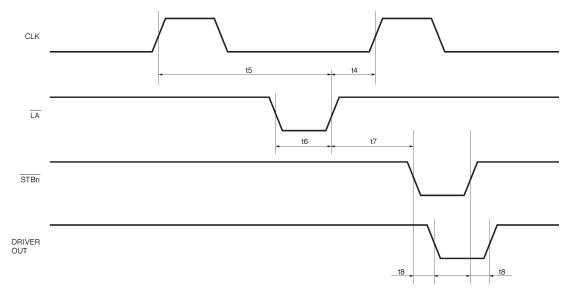
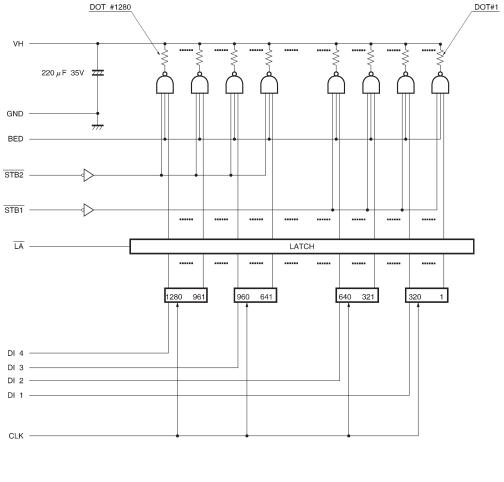
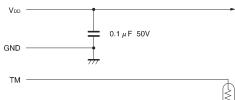


Fig.1

●Equivalent circuit





DI No.	DOT No.
DI 4	1280~961
DI 3	960~641
DI 2	640~321
DI 1	320~ 1

STB No.	DOT No.
STB 2	1280~641
STB 1	640~ 1

Fig. 2

TM -

Supported speeds chart



Electrical characteristic curves

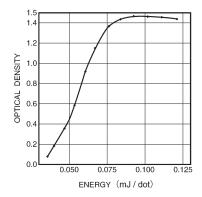


Fig. 3 Representative density curve

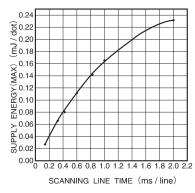


Fig. 4 Maximum energy curve

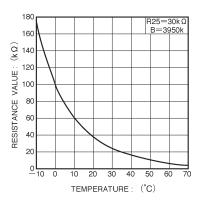


Fig. 5 Thermistor curve