

High speed thermal printhead (with thermal historical control)

NF3004-WA30A

NF-WA30 series are the thermal printheads developed for high-speed / high-resolution printing for the market of bar-code printer & scale-printer, based on "step-free" structure. These printheads realize ultra-highspeed printing with long life & high reliability.

●Applications

Barcode printer
Label printer
Packaging printer
Ticket printer
Scale printer
ATM

●Features

- 1) High dot reproducibility with step-free structure.
- 2) High-hardness protect cote type "W-coat" is employed with 150km abrasion life-time.
- 3) Even without history-control, high-speed printing more than 300mm / s can be achieved at 300dpi with clear print image. With history-control, 500mm / s printing is also possible at 300dpi.

Technical drawing of the printer head assembly, showing dimensions and labels for various components.

Top View Dimensions:

- Overall width: 124 ± 0.5
- Distance from left edge to center of first hole: 7.792
- Distance between centers of two holes: 108.416
- Overall height: 51 (MAX)
- Distance from top edge to center of first hole: 3.5

Side View Dimensions:

- Distance from right edge to center of first hole: 6 ± 0.5
- Maximum width of the head: $Max. 20$
- Maximum height of the head: $Max. 4.5$
- Maximum length of the head: $Max. 11$

Cross-sectional View Labels:

- #1: Type of PRINTHEAD
- #2: CONNECTOR:A
- #19: CONNECTOR:B
- #6: CONNECTOR:C
- #20: CONNECTOR:D

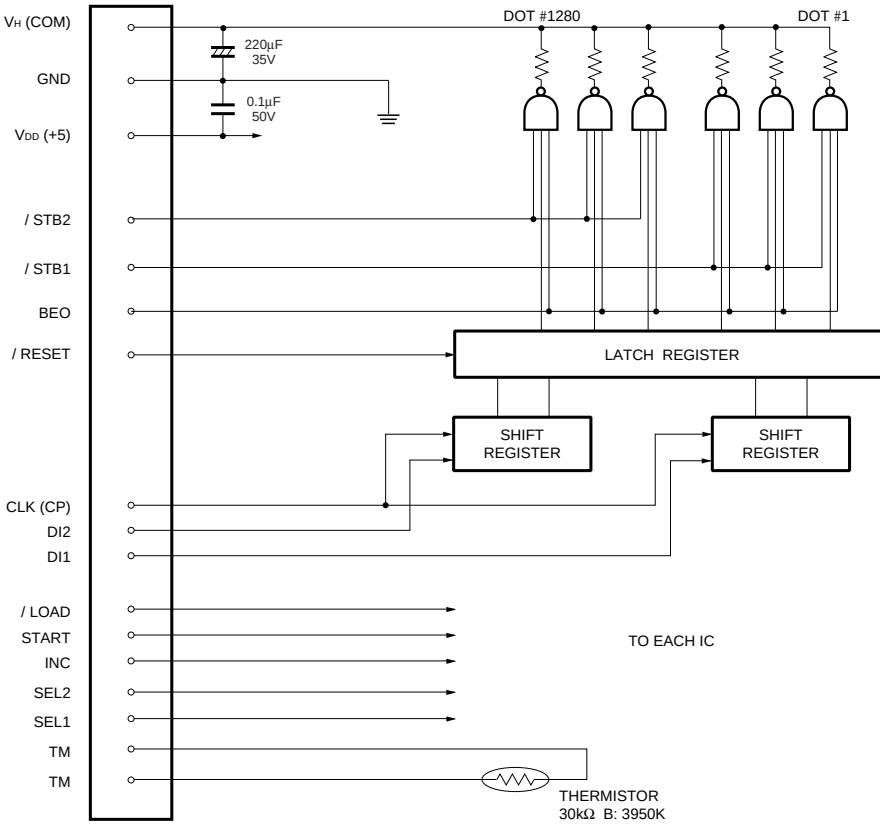
Bottom View Dimensions:

- Overall width: 100 ± 0.2
- Distance from left edge to center of first hole: 10 ± 0.2
- Distance between centers of two holes: 40 ± 0.3
- Distance from left edge to center of second hole: 14.208 ± 0.3
- Distance from left edge to center of third hole: 80 ± 0.3
- Overall height: 43
- Distance from top edge to center of first hole: 31.0 ± 0.5
- Distance from top edge to center of second hole: 2.8 ± 0.2
- Distance from top edge to center of third hole: 7.3 ± 0.3
- Distance from top edge to center of fourth hole: 17.8 ± 0.2
- Distance from top edge to center of fifth hole: 21.3

Labels and Notes:

- DOT No.1
- 3-M3 Effective Depth 3
- $\phi 3$ H10 Effective Depth 3
- $\phi 3$ H10 Length 4 Effective Depth 3

●Equivalent circuit



DI, STB DIVISION DOT No. CORRESPONDENCE

DI No.	DOT No.	/ STB No.	DOT No.
DI2	1280 to 641	/ STB2	1280 to 641
DI1	640 to 1	/ STB1	640 to 1

●Pin assignments

CONNECTOR : A

No.	Circuit	No.	Circuit
1	V _{DD}	2	BEO
3	GND	4	DI2
5	GND	6	CLK (CP)
7	/LOAD	8	START
9	INC	10	DI1
11	SEL2	12	SEL1
13	/RESET	14	/STB2
15	/STB1	16	TM
17	TM	18	SENS1
19	SENS2	20	SENS3

CONNECTOR : B

No.	Circuit	No.	Circuit
1	V _H (COM)	2	V _H (COM)
3	V _H (COM)	4	GND
5	GND	6	GND

●Characteristics

Parameter	Symbol	Typical	Unit
Effective printing width	—	108.416	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	P _o	0.57	W/dot
Print cycle	SLT	0.28	ms
Maximum number of dots energized simultaneously	—	1280	dots
Maximum clock frequency	—	8	MHz
Maximum roller diameter	—	φ20	mm
Running life / pulse life	—	150/(1×10 ⁸)	km/pulses
Operating temperature	—	5 to 45	°C

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