

# High speed thermal printhead (300 dots / inch)

## NF3002-VA30A

NF-VA30 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.

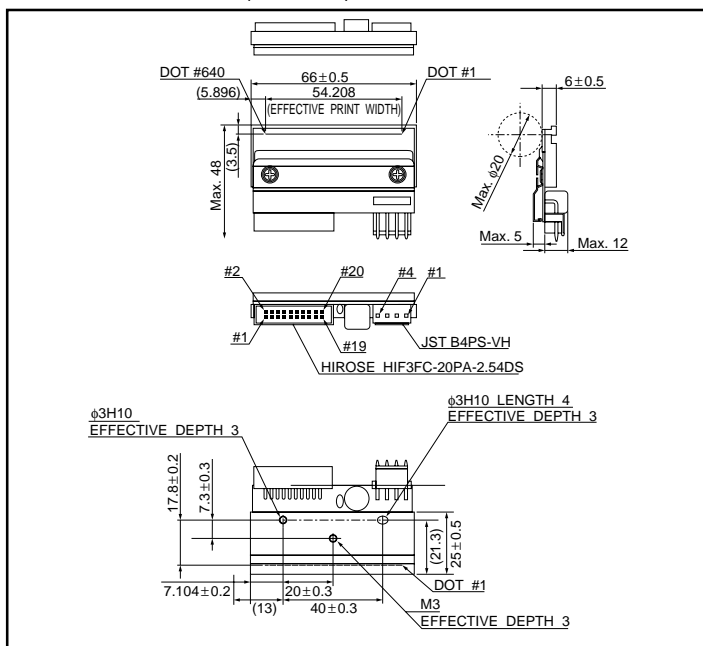
### ●Applications

Bar code printer  
Label printer  
Packaging printer  
ATM  
Ticket printer

### ●Features

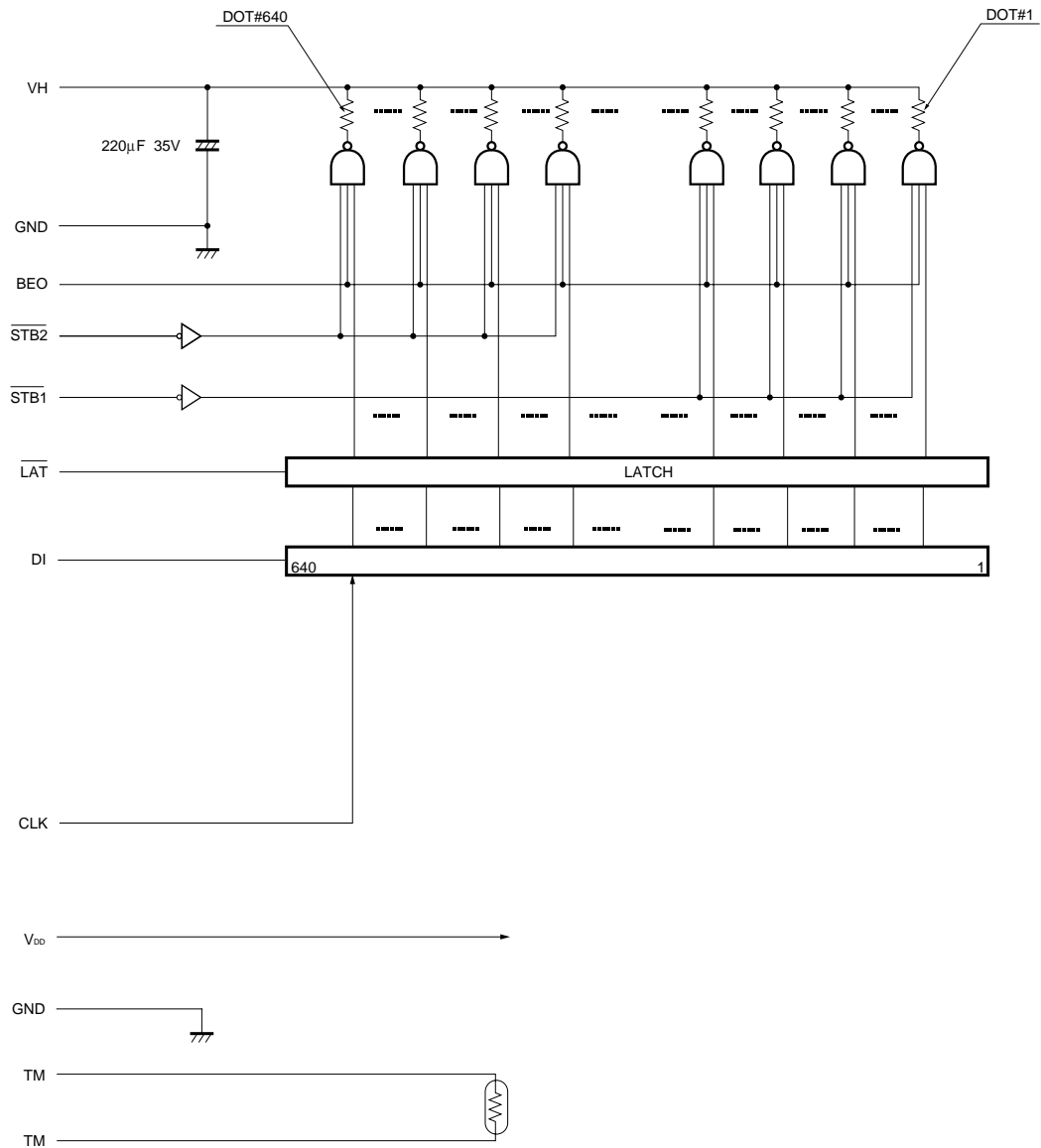
- 1) High dot reproducibility with step-free structure.
- 2) High-hardness protect cote type "W-coat" is employed with 150km abrasion life-time.
- 3) Even without history-control, high-speed printing more than 300mm / s can be achieved at 300dpi with clear print image. With history-control, 500mm / s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

### ●External dimensions (Unit : mm)



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

●Equivalent circuit



DI No.	DOT No.
DI	640 to 1

STB No.	DOT No.
STB2	640 to 321
STB1	320 to 1

●Pin assignments

No.	Circuit	No.	Circuit	No.	Circuit
1	V <sub>DD</sub>	2	BEO	1	VH
3	GND	4	DI	2	VH
5	N.C.	6	CLK	3	VH
7	$\overline{\text{LAT}}$	8	GND	4	GND
9	GND	10	N.C.	5	GND
11	N.C.	12	GND	6	GND
13	V <sub>DD</sub>	14	$\overline{\text{STB2}}$		
15	$\overline{\text{STB1}}$	16	TM		
17	TM	18	SENS1		
19	SENS2	20	SENS3		

●Characteristics

Parameter	Symbol	Typical	Unit
Effective printing width	–	54.2	mm
Dot pitch	–	0.0847	mm
Total dot number	–	640	dots
Average resistance value	R <sub>ave</sub>	850	Ω
Applied voltage	V <sub>H</sub>	24	V
Applied power	P <sub>O</sub>	0.59	W / dot
Print cycle	SLT	0.28	ms
Maximum number of dots energized simultaneously	–	640	dots
Maximum clock frequency	–	8	MHz
Maximum roller diameter	–	φ20	mm
Running life / pulse life	–	150 / 10 <sup>8</sup>	km / pulses
Operating temperature	–	5 to 45	°C

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