

## Printheads

# High Speed Thermal Printhead (8dots / mm)

## SE2002-DC90A

High speed, high quality, and high durability are achieved by using step free structure with high performance partial glaze and highly conductive overcoat layer. SE200\*-DC90A series are lined up which can accommodate with all types of barcode labeling printers from Direct to Thermal Transfer, normal to high speed (over 300mm/s).

### ●Applications

Bar code label printers

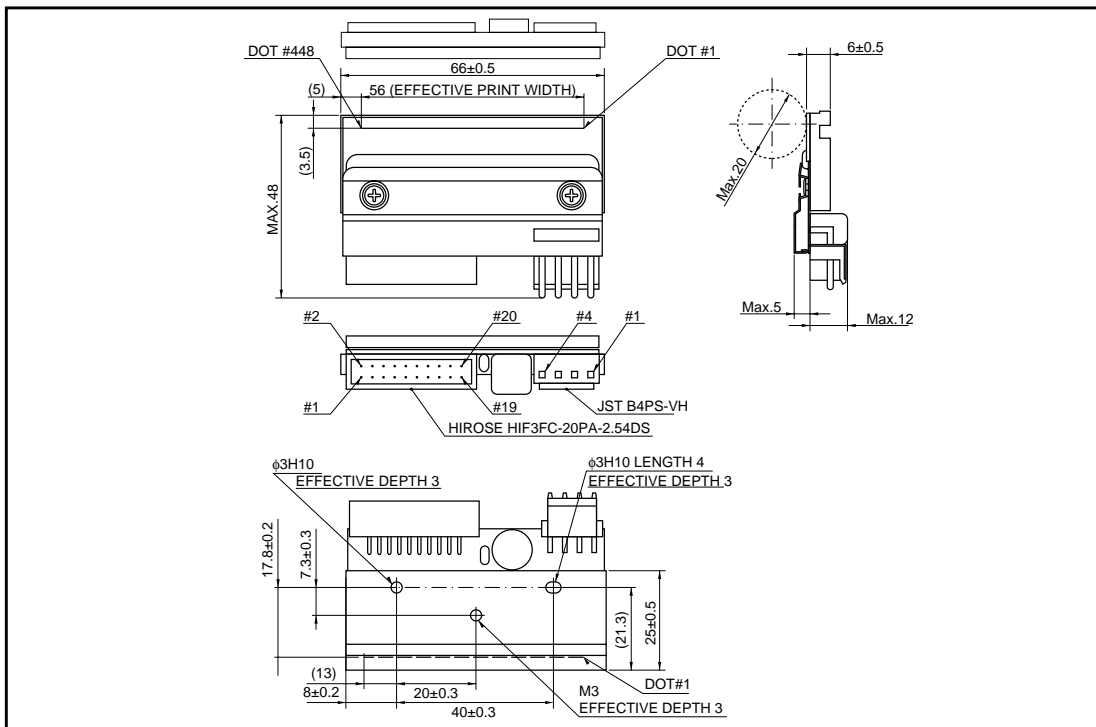
Ticket printers

General purpose compact printers

### ●Features

- 1) ROHM new technology "STEP FREE" structure will provide, high corrosion resistance, better resistance against scratching damage, high efficiency.
- 2) Standard glazed components to accommodate thick paper.
- 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.
- 5) Compatible with the SE3002-DC90A (300dpi) in mechanical specifications, to facilitate the making of a series of printers.

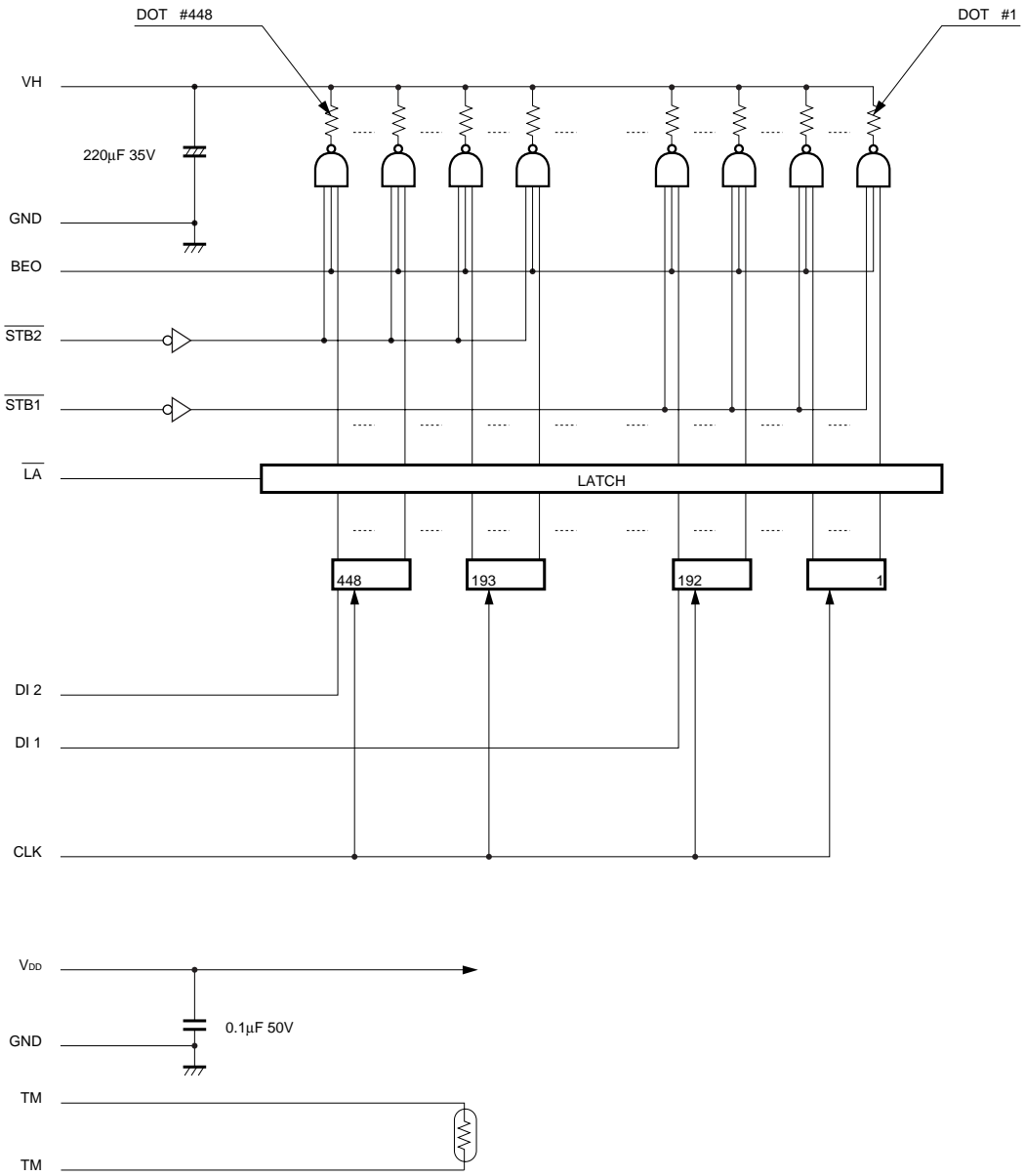
### ●External dimensions (Unit : mm)



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

Printheads

●Equivalent circuit



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

Fig. 1

## Printheads

### ●Pin configuration

HIROSE			
No.	Circuit	No.	Circuit
1	V <sub>DD</sub>	2	BEO
3	GND	4	DI2
5	N.C.	6	CLK
7	$\overline{\text{LA}}$	8	GND
9	GND	10	DI1
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	GND
4	GND

### ●Timing chart

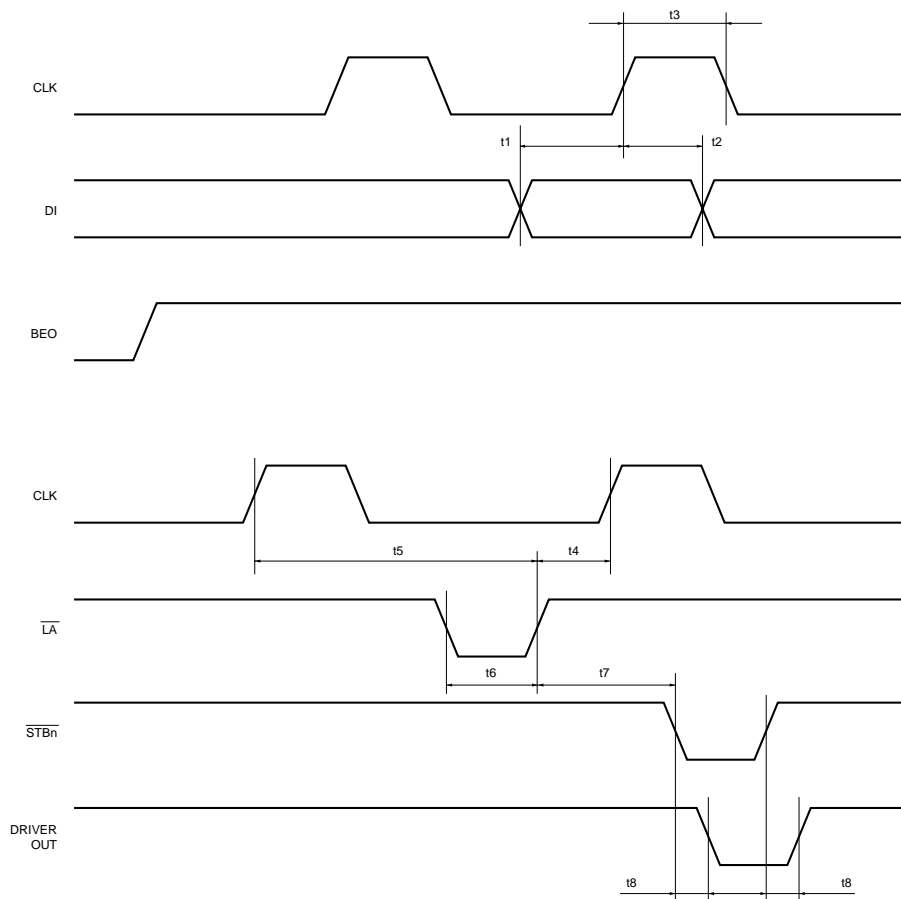


Fig. 2

## Printheads

### ●Characteristics

Parameter	Symbol	Typical	Unit
Effective printing width	–	56	mm
Dot pitch	–	0.125	mm
Total dot number	–	448	dots
Average resistance value	Rave	550	$\Omega$
Applied voltage	V <sub>H</sub>	24	V
Applied power	P <sub>o</sub>	0.923	W / dot
Print cycle	SLT	0.42	ms
Maximum number of dots energized simultaneously	–	448	dots
Maximum clock frequency	–	10	MHz
Maximum roller diameter	–	20	mm
Running life / pulse life	–	50 / 10 <sup>8</sup>	km / pulses
Operating temperature	–	5 to 45	°C

### ●Electrical characteristics curves

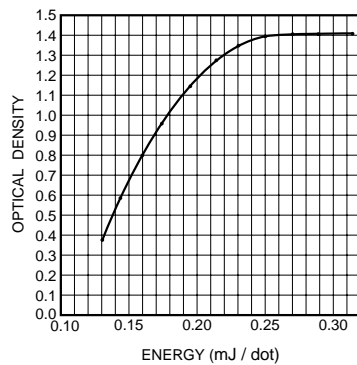


Fig. 3 Representative density curve

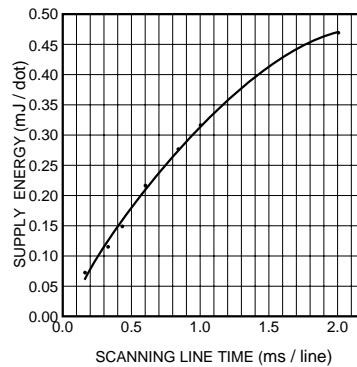


Fig. 4 Maximum energy curve

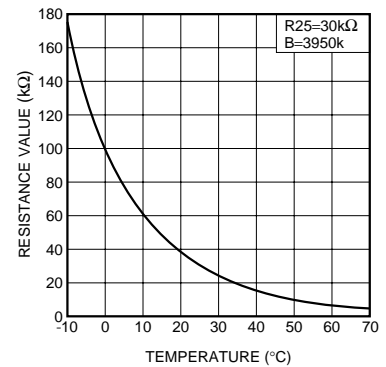


Fig. 5 Thermistor curve

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