Near edge thermal printhead (8dots / mm)

SH2002-DC90A

SH-DC90 series was developed with two key structures step-free and near edge for the packaging printer market which requires high speed continuous printing. It is suitable for printers in factory line where high speed 24 hours continuous printing is required.

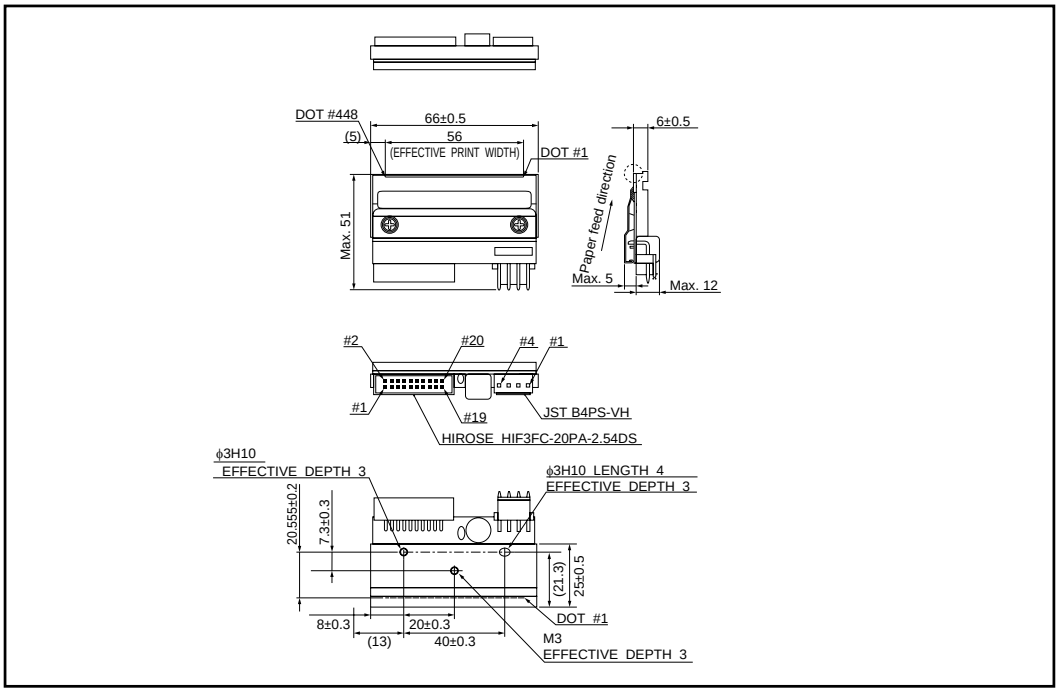
●Applications

Bar code printers
Card 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) Inclined toward the printing surface to provide excellent printing quality even for cards and thick paper.
3) Prints directly on printing medium that cannot be bent.
4) Using a hard conductive film as a protective film on the heating element offers excellent resistance to electrostatic damage.
5) Compatible with the SH3002-DC90A (300dpi) in mechanical specifications, to facilitate the making of a series of printers.

●Dimensions (Unit : 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	–	56	mm
Dot pitch	–	0.125	mm
Total dot number	–	448	dots
Average resistance value	Rave	550	Ω
Applied voltage	V_H	24	V
Applied power	P_O	0.86	W / dot
Print cycle	SLT	0.42	ms
Maximum number of dots energized simultaneously	–	448	dots
Maximum clock frequency	–	10	MHz
Maximum roller diameter	–	–	mm
Running life / pulse life	–	150 / $1x10^8$	km / pulses
Operating temperature	–	5 to 45	°C

●Pin configuration

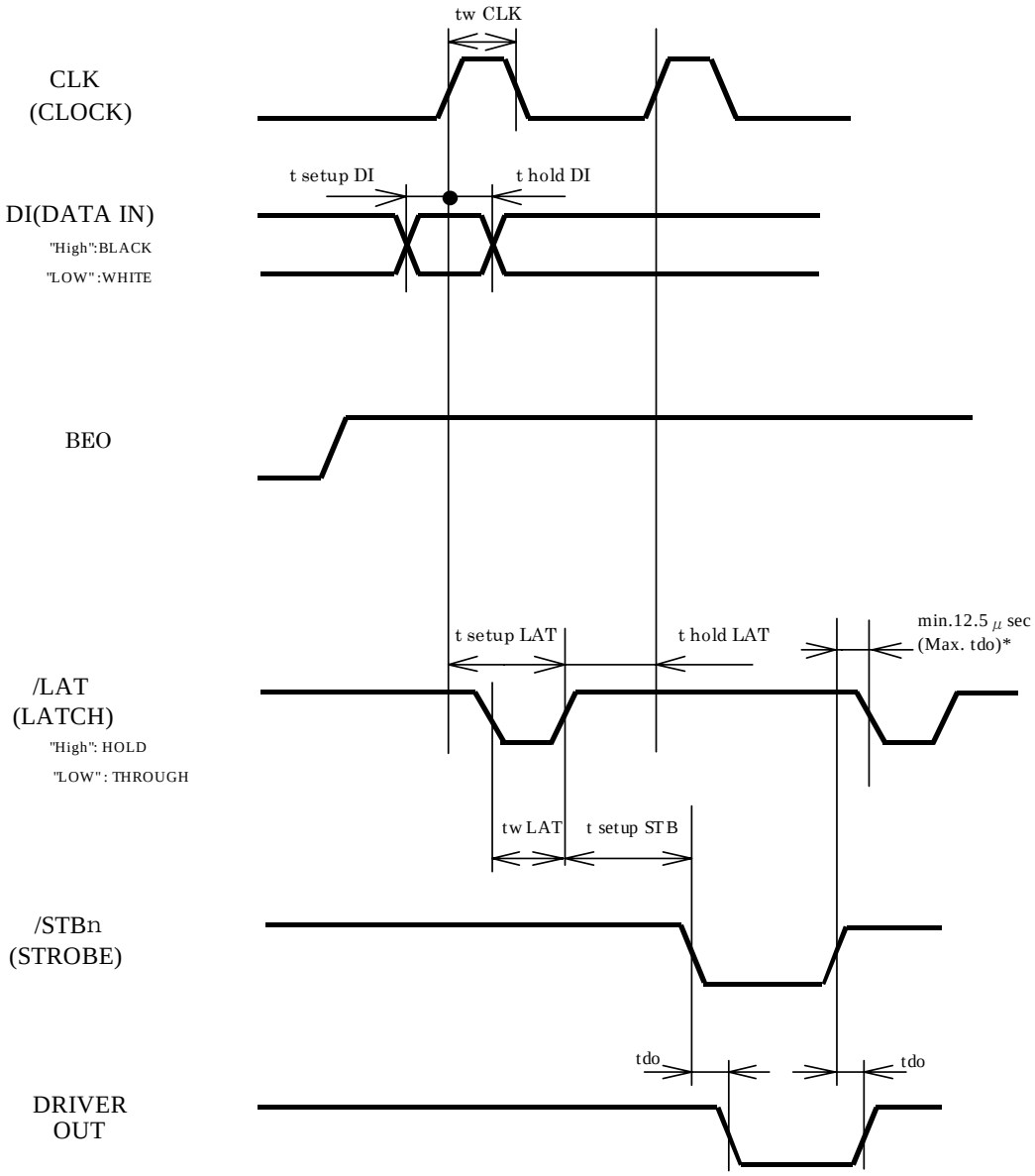
HIROSE

No.	Circuit	No.	Circuit
1	V_{DD}	2	BEO
3	GND	4	DI2
5	N.C.	6	CLK
7	$\overline{LAT}$	8	GND
9	GND	10	DI1
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

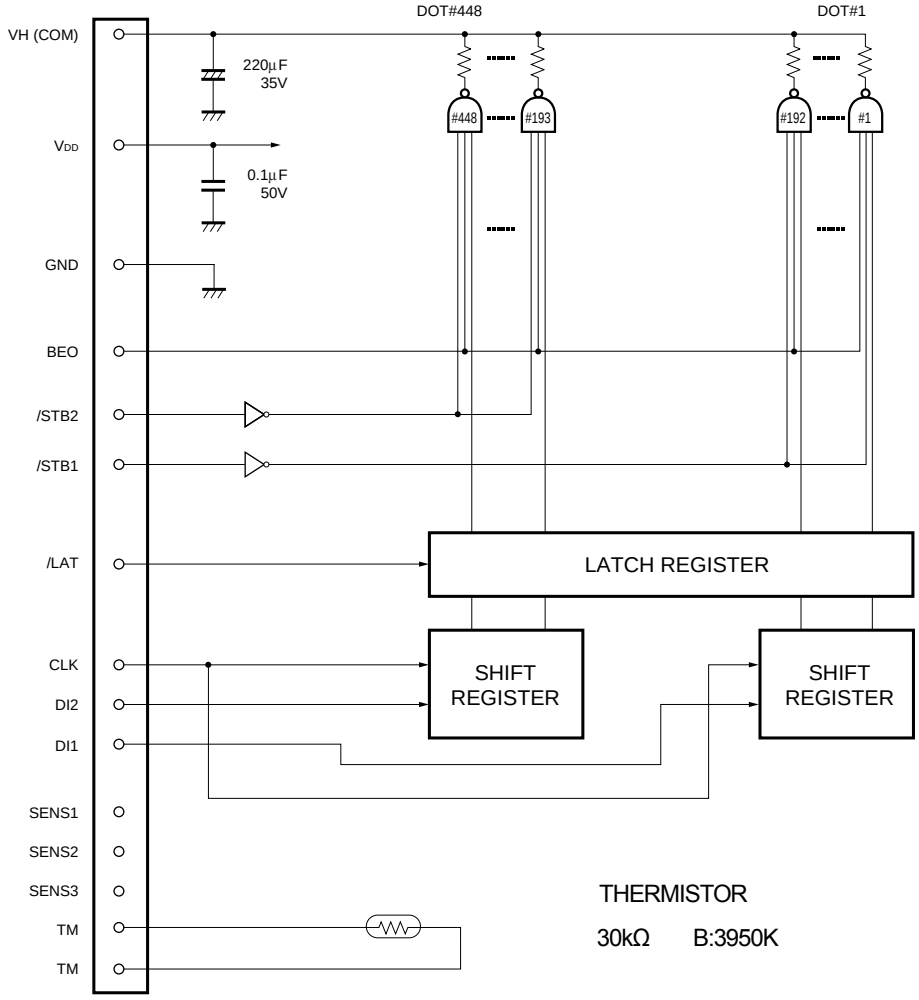
No.	Circuit
1	VH
2	VH
3	GND
4	GND

●**Timing chart**



*If delay time for Driver Out can not be secured enough, there is a possibility that VH would fluctuate greatly. Please design the circuit so that VH does not exceed peak voltage (Vp).

●**Equivalent circuit**



DI No.	DOT No.
DI2	448 to 193
DI1	192 to 1

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

Fig. 2

●**Electrical characteristics curves**

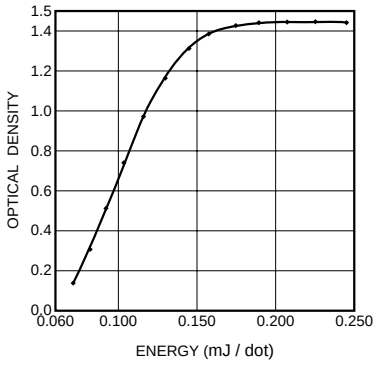


Fig. 3 Representative density curve

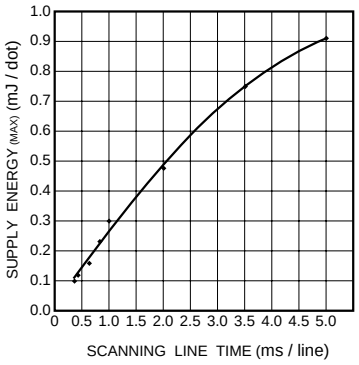


Fig. 4 Maximum energy curve

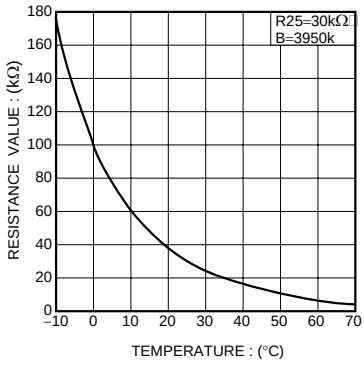


Fig. 5 Thermistor curve

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