

High speed thermal printhead (300 dots / inch)

SE3002-DC94A

High speed, high quality, and high durability are achieved by using step free structure with high performance partial glaze and highly conductive overcoat layer. SE300*-DC94A 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).

Implementation of ROHM Unique technology, Anti Sticking Treatment, reduces sticking problems (print skip at media feed direction) under the tough print conditions at low print speed, using label media with over coated.

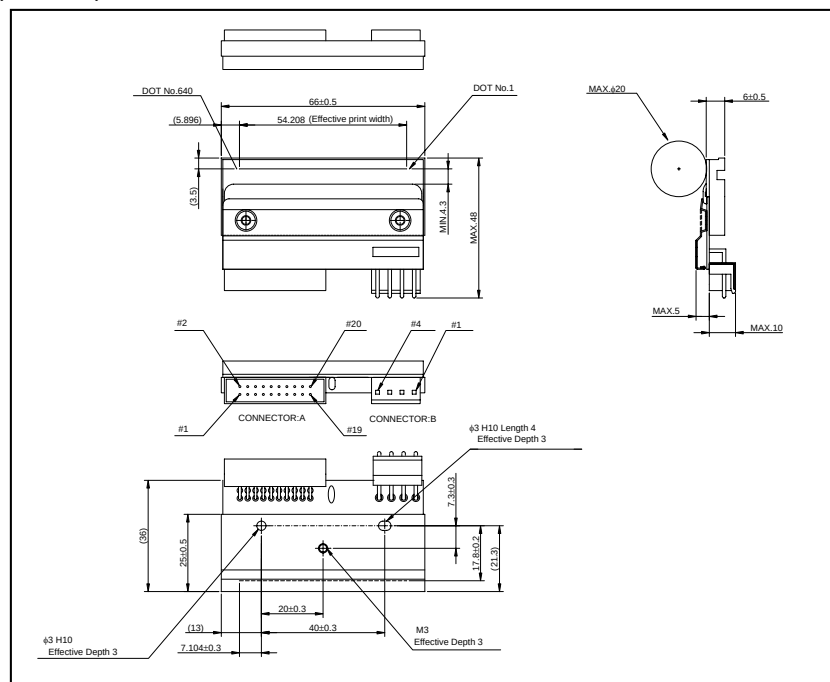
●Applications

Bar code printer
Label printer
Packaging printer
ATM
Ticket printer

●Features

- 1) Anti Sticking Treatment reduces sticking problems and achieves high print quality at any environmental conditions.
- 2) ROHM new technology "STEP FREE" structure will provide, high corrosion resistance, better resistance against scratching damage, high efficiency.
- 3) Standard glazed components to accommodate thick paper.
- 4) Using a hard conductive film as a protective film on the heating element offers excellent resistance to electrostatic damage.

●Dimensions (Unit : mm)



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

The schematic diagram illustrates the digital logic circuit for the 640x480x60Hz mode. The circuit is powered by a connector providing pins for V_H (COM), V_{DD} , GND, BEO, $\overline{STB2}$, $\overline{STB1}$, /LAT, CLK, DI2, DI1, SENS1, SENS2, SENS3, TM, and TM. A 0.1μF 50V capacitor is connected between V_{DD} and GND. The logic consists of four shift registers: two 640x480x60Hz mode shift registers (labeled #640 and #321) and two 320x480x60Hz mode shift registers (labeled #320 and #1). The shift registers are connected to a latch register. The output of the latch register is connected to the TM pins. The circuit also includes a 0.1μF 50V capacitor connected to V_{DD} and GND.

DI No.	DOT No.	STB No.	DOT No.
DI2	640 to 321	STB2	640 to 321
DI1	320 to 1	STB1	320 to 1

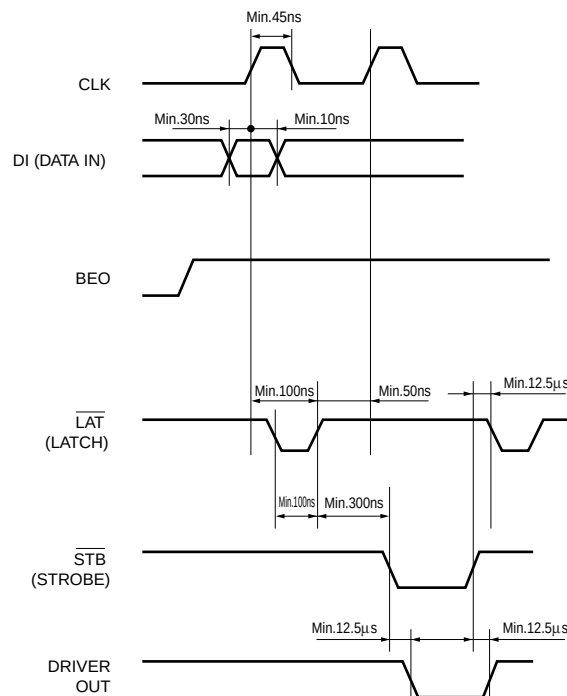
Printheads

●Pin assignments

No.	Circuit	No.	Circuit
1	V _{DD}	2	BEO
3	GND	4	DI2
5	N.C.	6	CLK
7	LAT	8	GND
9	GND	10	DI1
11	N.C.	12	GND
13	V _{DD}	14	STB2
15	STB1	16	TM
17	TM	18	SENS1
19	SENS2	20	SENS3

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

●Timing chart



Printheads

●Characteristics

Parameter	Symbol	Typical	Unit
Effective printing width	—	54.2	mm
Dot pitch	—	0.0847	mm
Total dot number	—	640	dots
Average resistance value	Rave	850	Ω
Applied voltage	V _H	24	V
Applied power	P _O	0.59	W / dot
Print cycle	SLT	0.42	ms
Maximum number of dots energized simultaneously	—	640	dots
Maximum clock frequency	—	10	MHz
Maximum roller diameter	—	$\phi 20$	mm
Running life / pulse life	—	150 / 10 ⁸	km / pulses
Operating temperature	—	5 to 45	°C

Notes

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