

For Mobile, FET-POS, Debit Card, PDA, ECR 2.7V Print Voltage (B Series)

KA2002-BE10A

Not only hand-held printers, but card payment terminals (EFT-POS) and compact label printers require less than 8.5V of supply voltage.

ROHM's B Series of thermal printheads, developed using cutting-edge LSI technology, can operate on a single lithium ion battery and contribute to end-product miniaturization.

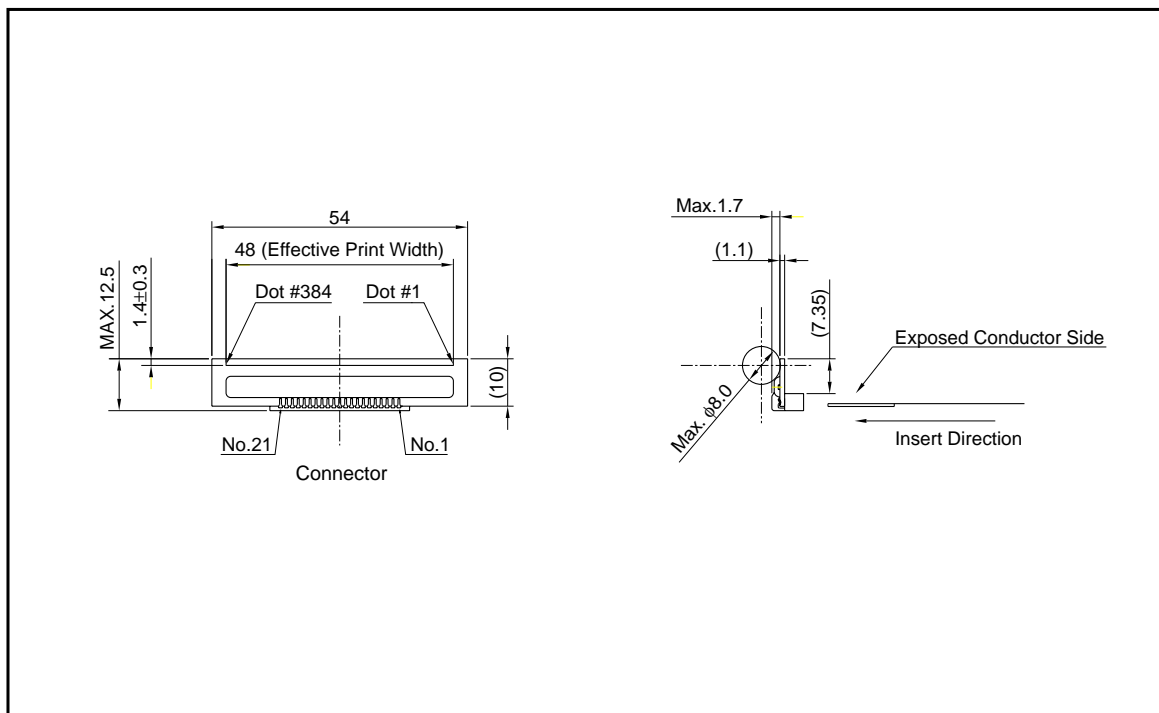
●Applications

Mobile printers
EFT-POS printers
Hand-held printers
Debit printers

●Features

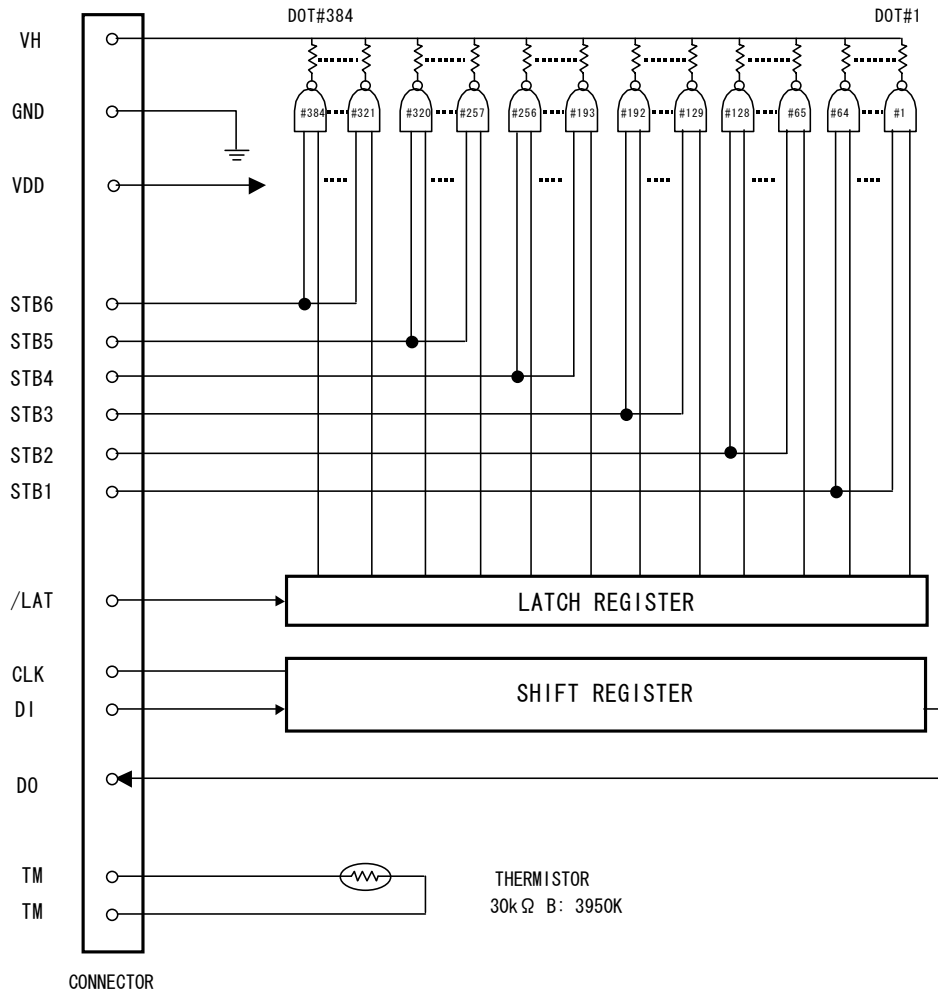
- 1) The B series brings reduced height of protective resin for IC and enlarged paper pathway for thermal papers. Thanks to ROHM's latest LSI high integrated mounting technology and it's ultra slim 192bit driver IC.
- 2) The B series accede the great world class low energy consumption characteristics of GP series.
- 3) Because the print heads circuits draw 2.7V, the printer can be driven using a single lithium battery.

●Dimensions (Unit : mm)



Printheads

●Equivalent circuit



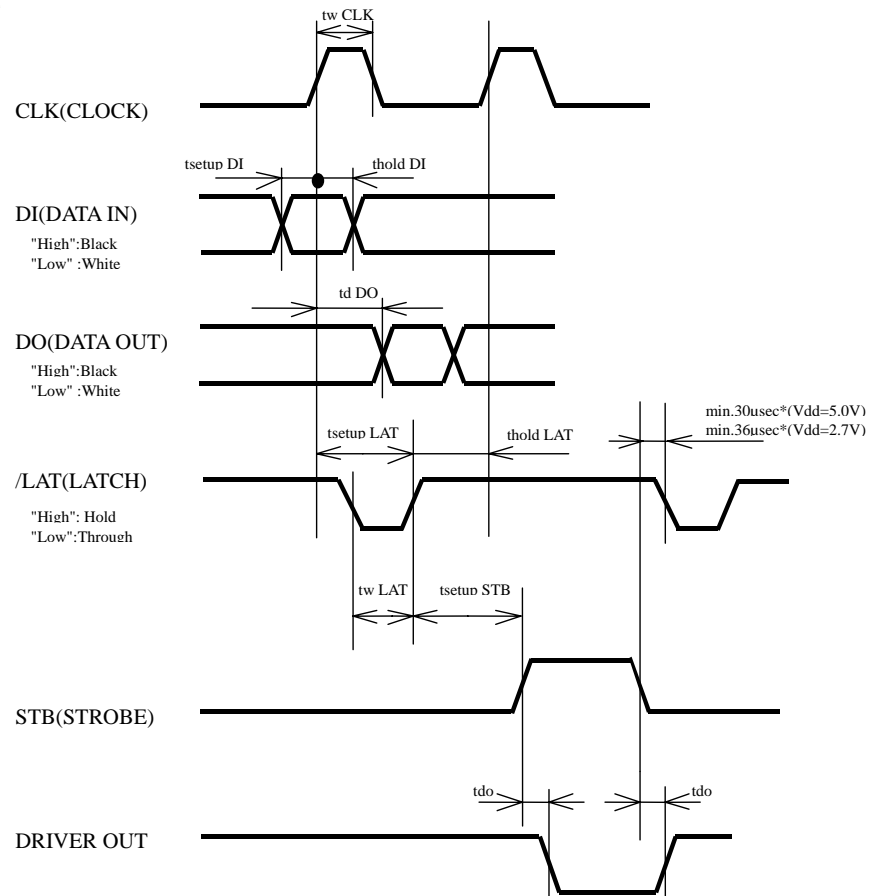
●Pin assignments

No.	Circuit	No.	Circuit
1	VH	12	V _{DD}
2	VH	13	STB4
3	DO	14	STB5
4	$\overline{\text{LAT}}$	15	STB6
5	GND	16	GND
6	GND	17	GND
7	STB1	18	CLK
8	STB2	19	DI
9	STB3	20	VH
10	TM	21	VH
11	TM		

Note) The GND terminal 5 and 6 are not connected with the GND terminal 16 and 17.
These terminals shall be connected each other at the closest point to the printhead.

Printheads

●Timing chart



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

●Characteristics

Parameter	Symbol	Typical	Unit
Effective printing width	—	48	mm
Dot pitch	—	0.125	mm
Total dot number	—	384	dots
Average resistance value	Rave	176	Ω
Applied voltage	V_H	7.2	V
Applied power	P_O	0.27	W/dot
Print cycle	SLT	1.25	ms
Pulse width	T_{ON}	0.49	ms
Maximum number of dots energized simultaneously	—	64	dots
Maximum clock frequency	—	8	MHz
Maximum roller diameter	—	$\phi 8.0$	mm
Running life / pulse life	—	$50/1 \times 10^8$	km/pulses
Operating temperature	—	0-50	$^{\circ}\text{C}$

Printheads

●Electrical characteristic curves

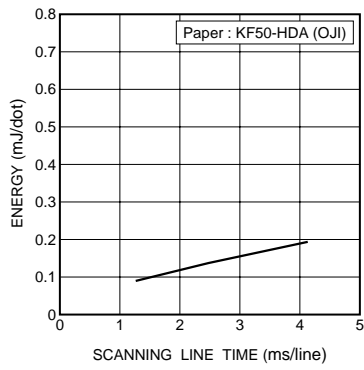


Fig.3 Adaptive speed chart

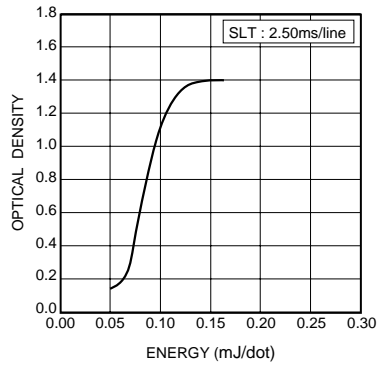


Fig.4 Representative density curve

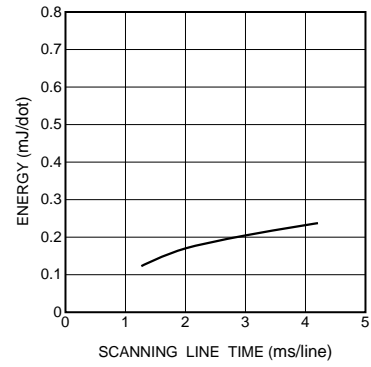


Fig.5 Maximum energy curve

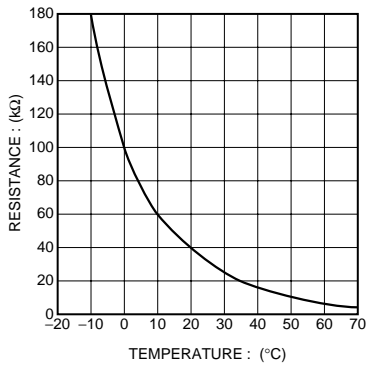


Fig.6 Thermistor curve

Notes

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