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

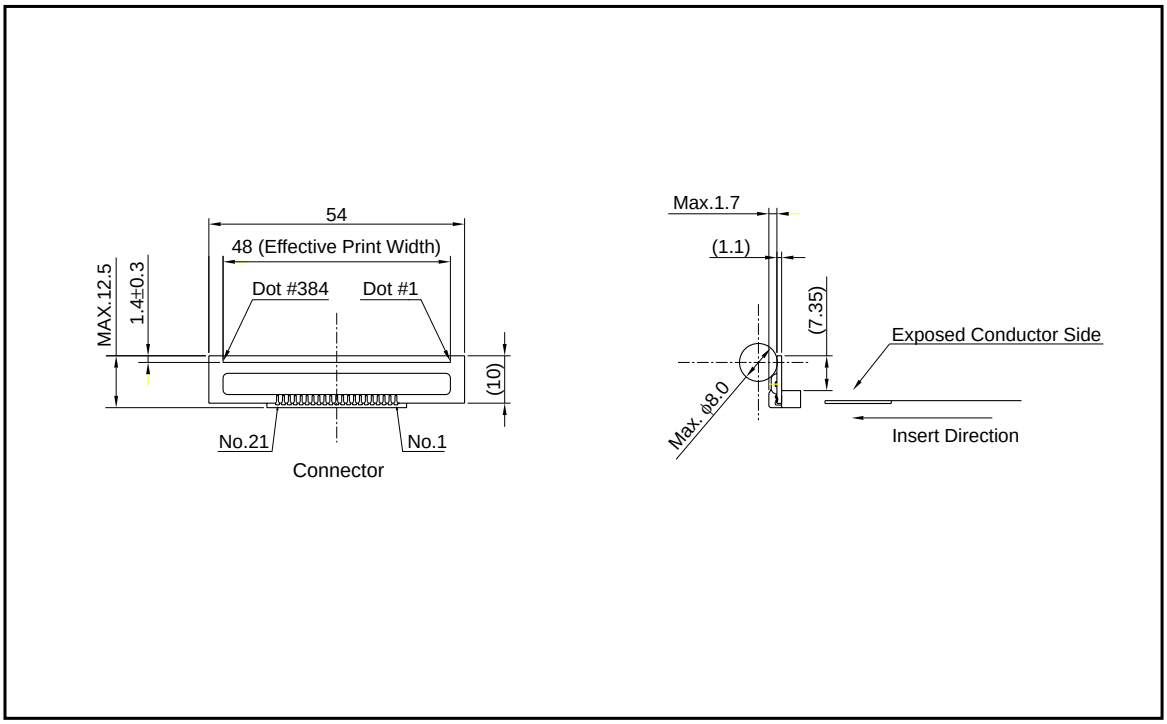
## KA2002-BE10A

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.

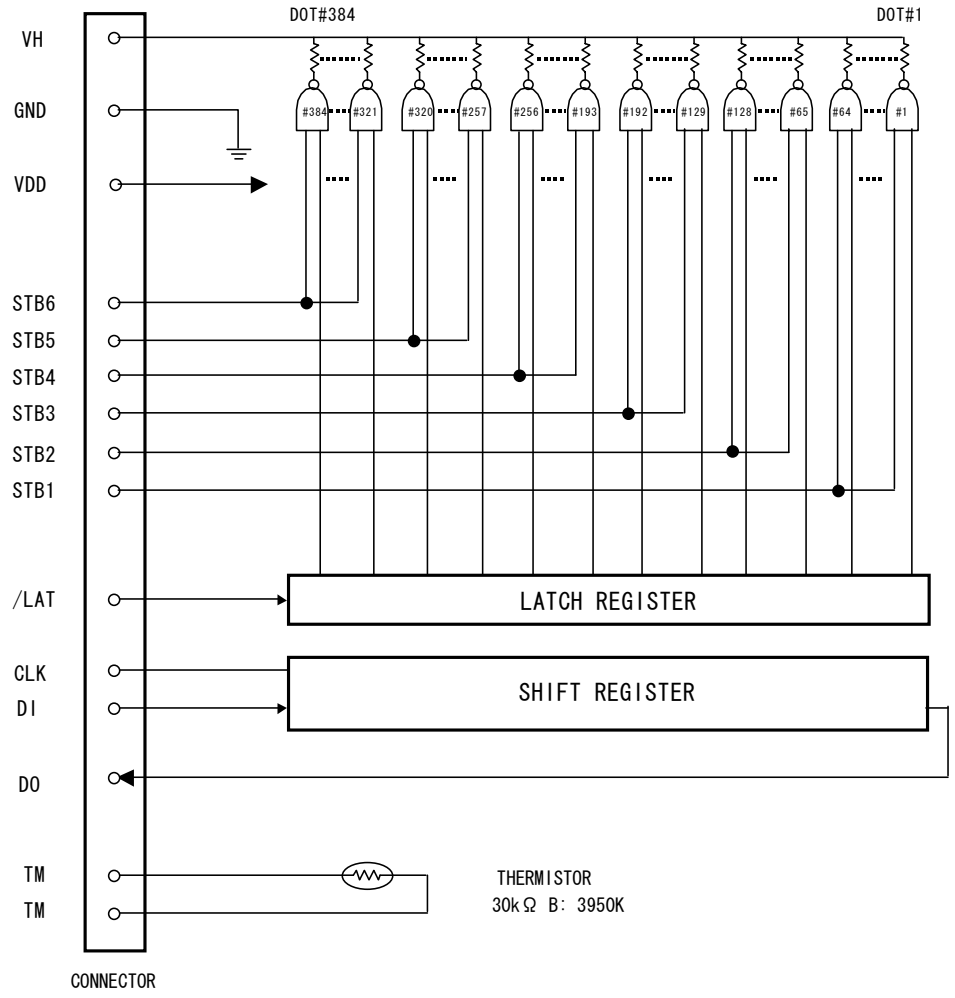
**●Applications**
Mobile printers
EFT-POS printers
Hand-held printers
Debit printers

**●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)



●**Equivalent circuit**



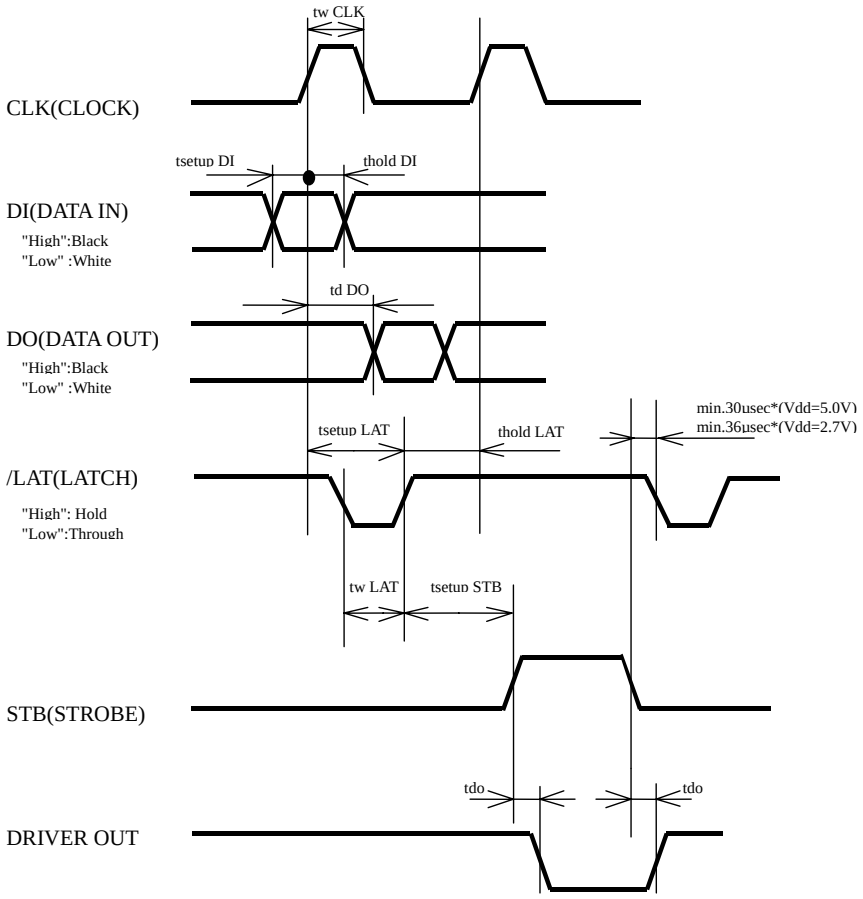

●**Pin assignments**

| No. | Circuit |
|---|---|
| 1 | VH |
| 2 | VH |
| 3 | DO |
| 4 | $\overline{LAT}$ |
| 5 | GND |
| 6 | GND |
| 7 | STB1 |
| 8 | STB2 |
| 9 | STB3 |
| 10 | TM |
| 11 | TM |

| No. | Circuit |
|---|---|
| 12 | $V_{DD}$ |
| 13 | STB4 |
| 14 | STB5 |
| 15 | STB6 |
| 16 | GND |
| 17 | GND |
| 18 | CLK |
| 19 | DI |
| 20 | VH |
| 21 | VH |

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.

●**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 | – | ϕ8.0 | mm |
| Running life / pulse life | – | $50/1\times10^8$ | km/pulses |
| Operating temperature | – | 0~50 | °C |

●**Electrical characteristic curves**

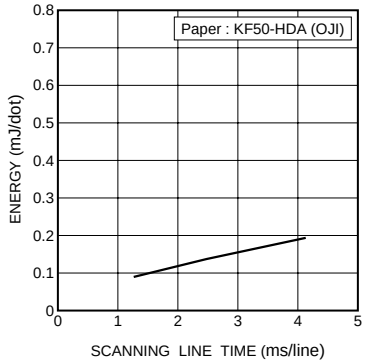



Fig.3 Adaptive speed chart

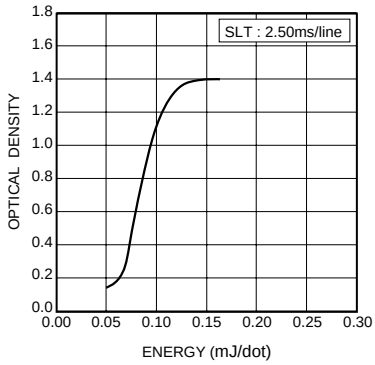



Fig.4 Representative density curve

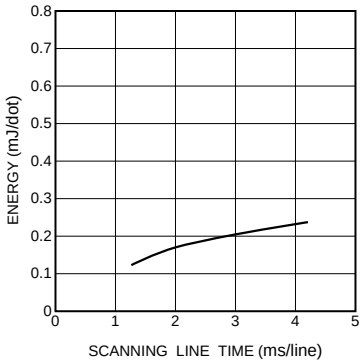



Fig.5 Maximum energy curve

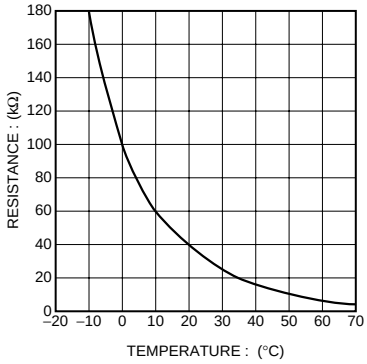



Fig.6 Thermistor curve

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