

# Thick film thermal printhead (8 dots / mm)

## KD2002-DC10A

The KD2002-DC10A is a 24 V standard thick film thermal printhead with a printing speed up to 6 inches / s that has been developed mainly for label printer use.

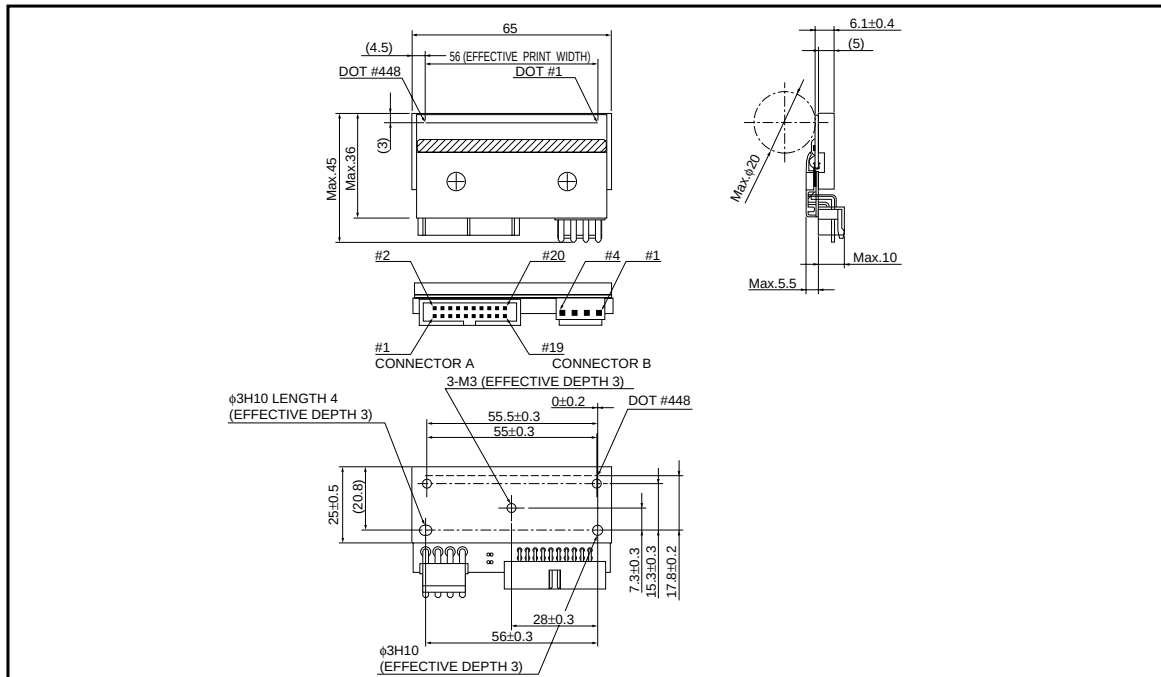
### ●Applications

High speed label printer  
High speed bar code printer  
High speed ticket printer  
Various high speed terminal printers

### ●Features

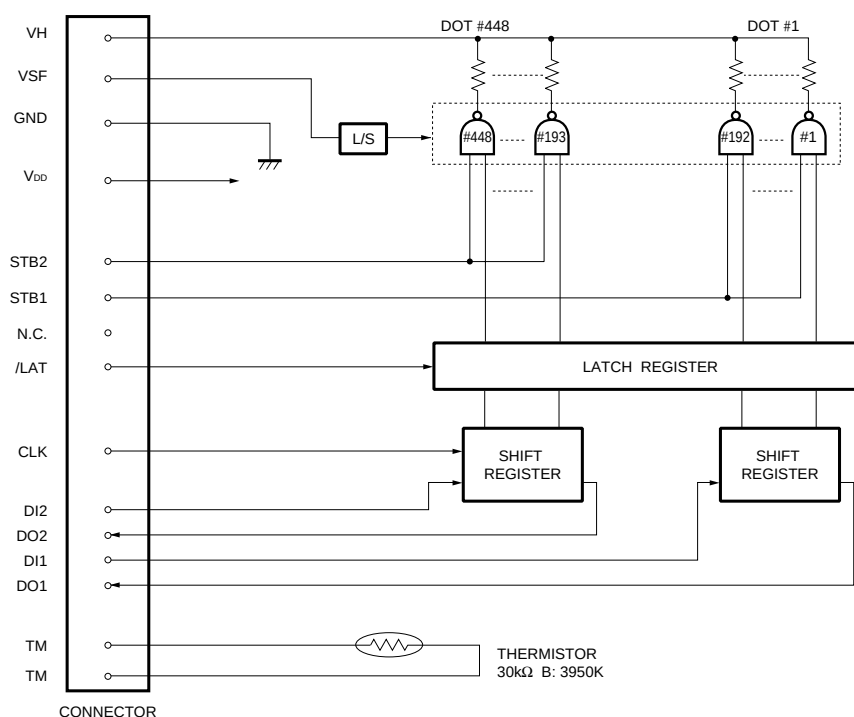
- 1) Newly developed thick-film fast response thermal element is employed for this series and 6 inches / s or 150 mm / s is possible without thermal history control. It is possible to print 10 inches / s or 250 mm / s if external thermal history control is used.
- 2) 150km life realized by attributing durable new protection film.
- 3) New partial glaze construction makes it compatible with the thermal transfer application.

### ●External dimensions (Unit : mm)



## Printheads

### ●Equivalent circuit



VSF : Usually VSF and VH are connected.  
When measuring R value of Heat-  
element , VSF and VH should be  
separated.

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

| STB No. | DOT No.    |
|---------|------------|
| STB1    | 1 to 192   |
| STB2    | 193 to 448 |

Fig. 1

### ●Pin assignments

#### CONNECTOR A

| No. | Circuit | No. | Circuit |
|-----|---------|-----|---------|
| 1   | GND     | 11  | TM      |
| 2   | VSF     | 12  | TM      |
| 3   | GND     | 13  | DI1     |
| 4   | VDD     | 14  | DO1     |
| 5   | STB2    | 15  | N.C.    |
| 6   | CLK     | 16  | N.C.    |
| 7   | DI2     | 17  | N.C.    |
| 8   | DO2     | 18  | N.C.    |
| 9   | STB1    | 19  | N.C.    |
| 10  | LAT     | 20  | N.C.    |

#### CONNECTOR B

| No. | Circuit |
|-----|---------|
| 1   | VH      |
| 2   | VH      |
| 3   | GND     |
| 4   | GND     |

## Printheads

### ●Timing chart

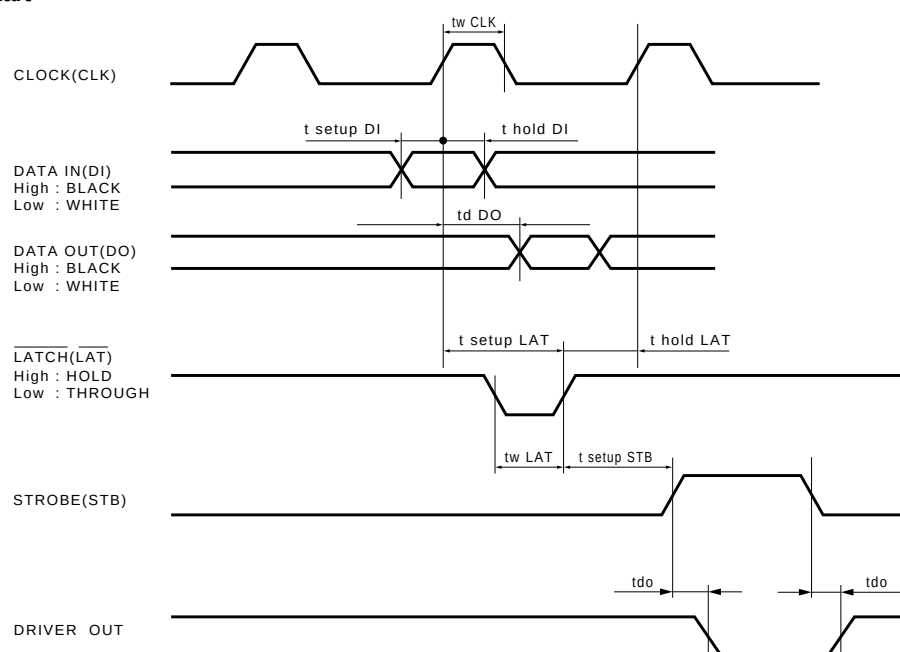


Fig.2

### ●Characteristics

| Parameter                                       | Symbol | Typical                    | Unit        |
|-------------------------------------------------|--------|----------------------------|-------------|
| Effective printing width                        | —      | 56                         | mm          |
| Dot pitch                                       | —      | 0.125                      | mm          |
| Total dot number                                | —      | 448                        | dots        |
| Average resistance value                        | Rave   | 650                        | $\Omega$    |
| Applied voltage                                 | $V_H$  | 24                         | V           |
| Applied power                                   | $P_o$  | 0.82                       | W / dot     |
| Print cycle                                     | SLT    | 0.82                       | ms          |
| Maximum number of dots energized simultaneously | —      | 448                        | dots        |
| Maximum clock frequency                         | —      | 12                         | MHz         |
| Maximum roller diameter                         | —      | $\phi 20.0$                | mm          |
| Running life / pulse life                       | —      | 150 / (1×10 <sup>8</sup> ) | km / pulses |
| Operating temperature                           | —      | 5 to 45                    | °C          |

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