Compact high speed thick film thermal printhead (8dots / mm)

KD2002-DG10A

Using its expertise in LSI technology, ROHM has developed new high density driver chips for use in the KD2002-DG10A. Capable of being employed for both thermal and thermal transfer printing, with a print speed of 250mm/s, the resulting printheads are the fastest in their class. The high-speed and high-density printing answers the needs of ATM, kiosk and ticket printing devices, which are increasingly being called upon to produce graphical output.

Applications

Label printers

Ticket printers

POS printers

ATM printers

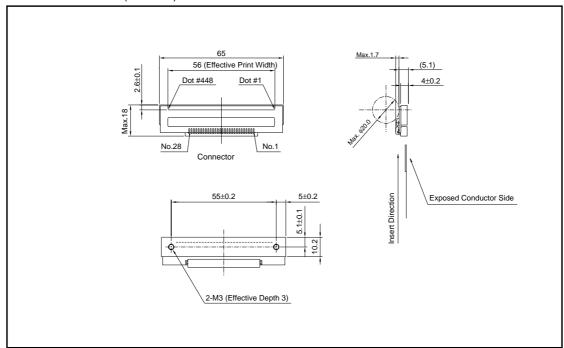
KIOSK printers

Terminal printers

● Features

- 1) The use of a special partial glaze and the latest heating element structure, along with new high-density driver chips that can accept big current, has allowed ROHM to achieve print speeds of 250mm/s, the fastest in its class.
- 2) One rank resistance value of $650\Omega\pm3\%$ eliminates the inconvenience of rank selection.
- 3) The required driving voltage of 3.15 to 5.25V allows wide range of power supply voltage setting. This also allows multiple choice of electronic components for printers.
- 4) 2-inch, 3-inch and 4-inch series are available.

External dimensions (Unit : mm)





●Equivalent circuit

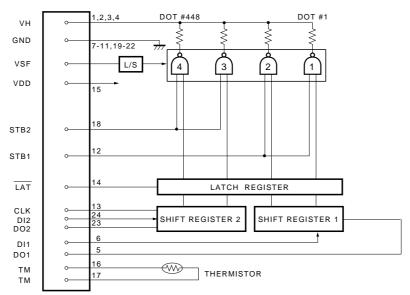


Fig.1

Pin assignments

No.	Circuit		
1	VH		
2	VH		
3	VH		
4	VH		
5	DO1		
6	DI1		
7	GND		
8	GND		
9	GND		
10	GND		
11	GND		
12	STB1		
13	CLK		
14	LAT		

No.	Circuit		
15	V _{DD}		
16	TM		
17	TM		
18	STB2		
19	GND		
20	GND		
21	GND		
22	GND		
23	DO2		
24	DI2		
25	VSF		
26	VH		
27	VH		
28	VH		

Timing chart

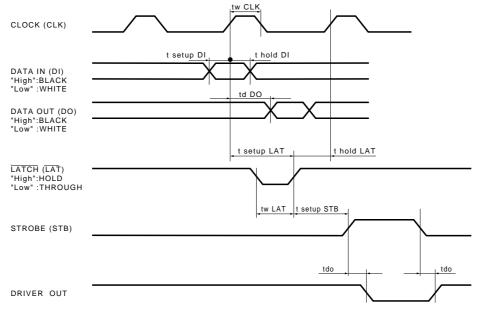


Fig.2

Characteristics

Parameter		Typical	Unit
Effective printing width	_	56.0	mm
Dot pitch	_	0.125	mm
Total dot number	_	448	dots
Average resistance value	Rave	650	Ω
Applied voltage	Vн	24	V
Applied power	Po	0.79	W/dot
Print cycle	SLT	0.5	ms
Pulse width	Том	0.19	ms
Maximum number of dots energized simultaneously	_	448	dots
Maximum clock frequency	-	16	MHz
Maximum roller diameter	_	ф20.0	mm
Running life / pulse life	_	50/5×10 ⁷	km/pulses
Operating temperature	_	5 to 45	°C

•Electrical characteristic curves

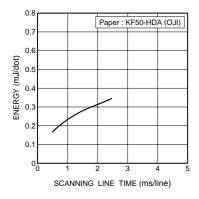


Fig.3 Adaptive speed chart

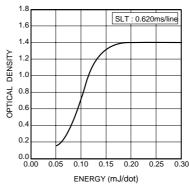


Fig.4 Representative density curve

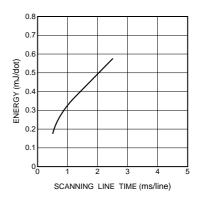


Fig.5 Maximum energy curve

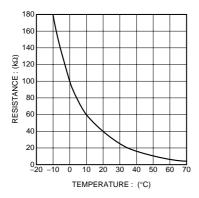


Fig.6 Thermistor curve

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