

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

## KD2008-CG50A

KD2008-CG50A is suitable for devices, such as high-speed POS and label printer applications, that require thermal printheads capable of higher printing rates. Improved power circuit design means that with heavier current it is possible to print at speeds as high as 125 mm/s. The GK Series is the thus ideal for label printers that need high printing rates.

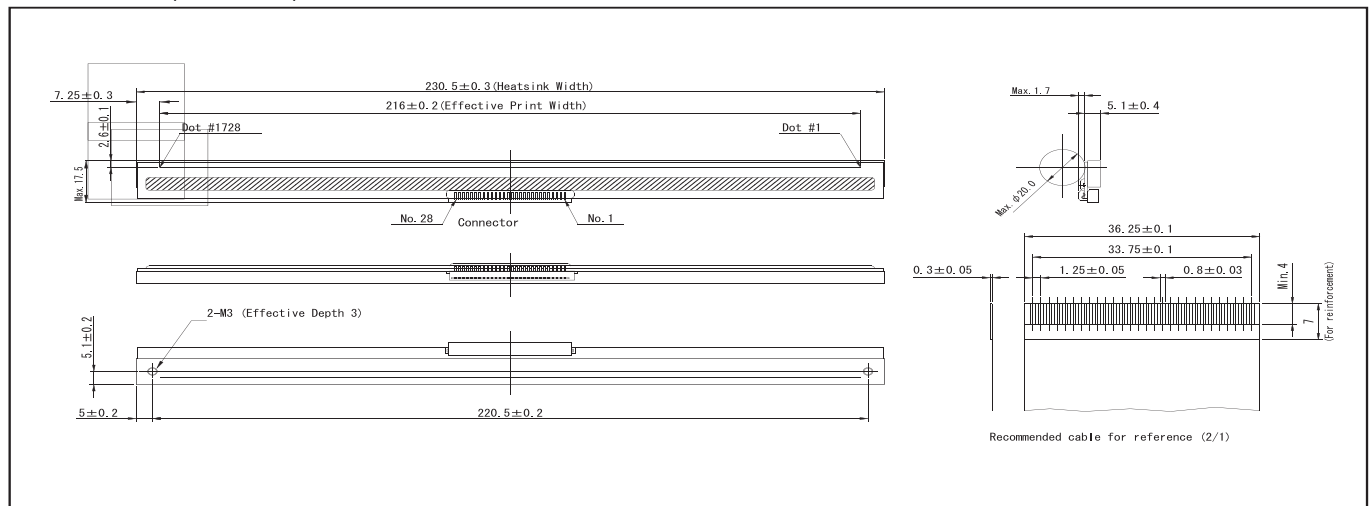
### ●Applications

POS terminal printers  
Label printers  
CAT printers  
General purpose compact printers

### ●Features

- 1) Using a special compact partial glaze and new heating element structure, achieves high-speed printing at 125 mm/s.
- 2) The use of the newly developed highly-durable conductive protective film has improved countermeasures against static electricity.
- 3) The VH and GND sections of the power circuitry have been strengthened so that heavier current can be applied.
- 4) Ultra small connectors, designed to conform with FFCs, and miniature driver chips have been used.  
Although the resulting printheads are surprisingly compact and lightweight, they can be used with large platens of up to 20 mm in diameter.
- 5) One rank resistance value of  $800\Omega\pm 3\%$  eliminates the inconvenience of rank selection.

### ●Dimensions (Units : mm)



●Inner circuit

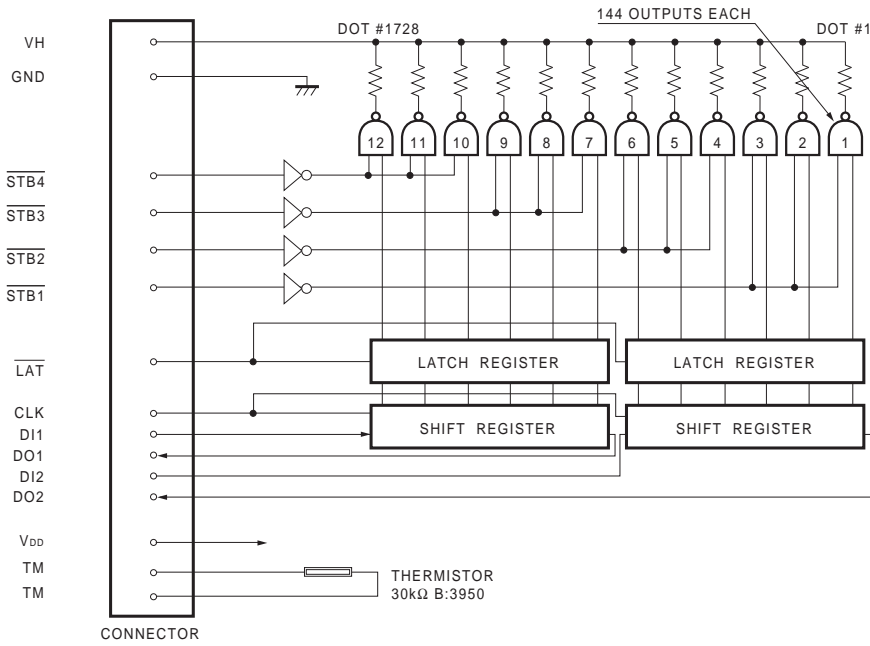


Fig. 1

●Pin configuration

No.	Circuit	No.	Circuit
1	VH	15	GND
2	VH	16	GND
3	VH	17	GND
4	DO2	18	GND
5	DI2	19	TM
6	CLK	20	V <sub>DD</sub>
7	LAT	21	STB3
8	STB1	22	STB4
9	STB2	23	DO1
10	TM	24	DI1
11	GND	25	VH
12	GND	26	VH
13	GND	27	VH
14	GND	28	VH

●Timing chart

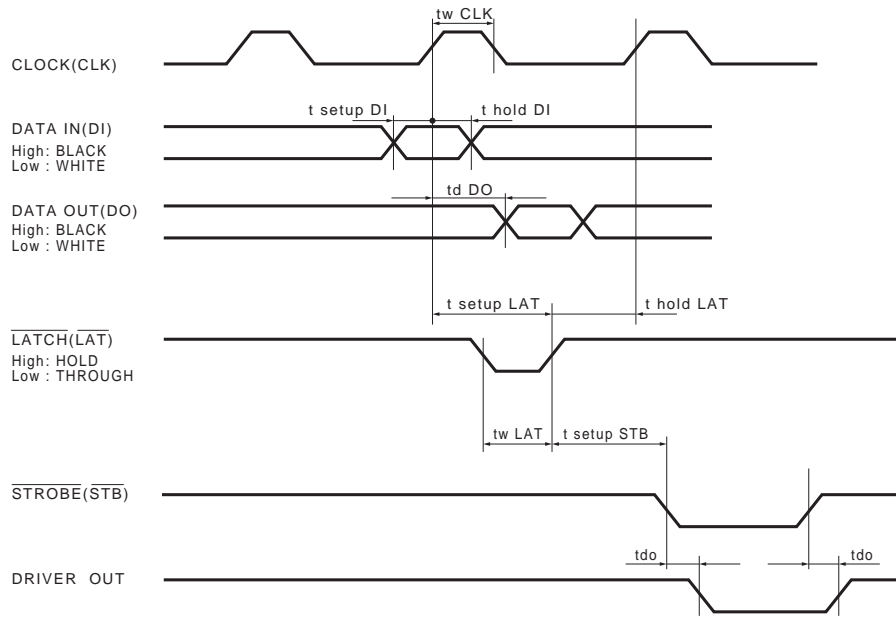


Fig. 2

●Characteristics

Parameter	Symbol	Typ.	Unit
Effective printing width	—	216	mm
Dot pitch	—	0.125	mm
Total dot number	—	1728	dots
Average resistance value	Rave	800	$\Omega$
Applied voltage	V <sub>H</sub>	24	V
Applied power	P <sub>o</sub>	0.5	W / dot
Print cycle	SLT	1	ms
Pulse width	T <sub>ON</sub>	0.4	ms
Maximum number of dots energized simultaneously	—	432	dots
Maximum clock frequency	—	5	MHz
Maximum roller diameter	—	20	mm
Running life / pulse life	—	50 / 5×10 <sup>7</sup>	km / pulses
Operating temperature	—	5~45	°C

●Electrical characteristic curves

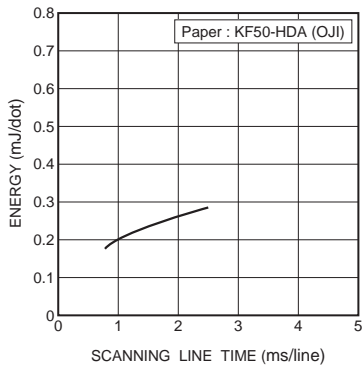


Fig.3 Adaptive speed chart

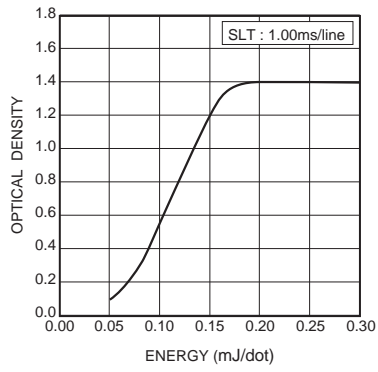


Fig.4 Representative density curve

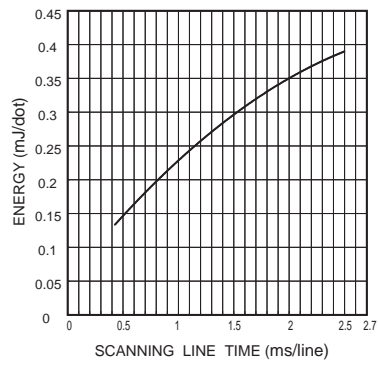


Fig.5 Maximum energy curve

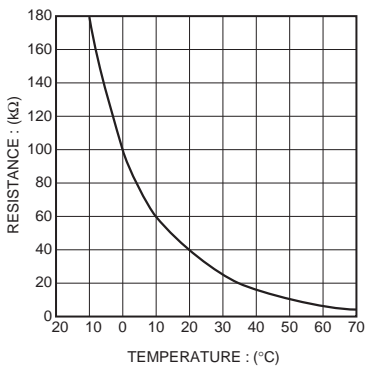


Fig.6 Thermistor curve

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