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

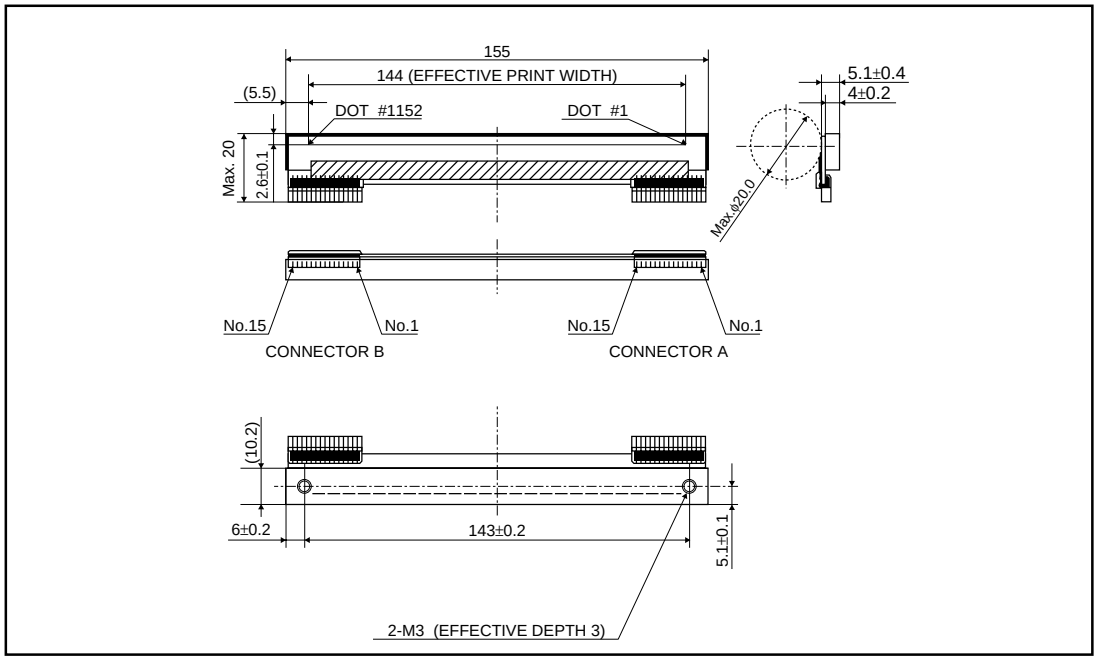
KF2005-GD45A

Using its expertise in LSI technology, ROHM has developed new high density driver chips for use in the KF2005-GD45A . Capable of being employed for both thermal and thermal transfer printing, with a print speed of 200mm/s, the resulting print heads are the fastest in their class. This high-speed and high-density printing answers the needs of POS, ATM, KIOSK and ticket printing devices, which are increasingly being called upon to produce graphical output.
Among the above applications, this head is best suitable for bankbook size print for ATM.

●Applications
ATM printers
POS printers
KIOSK printers
Ticket 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 200mm/s with using thermal history control, the fastest in its class.
2) Standard printheads in the line up are capable of 203 or 300 dpi. They achieve the high resolution needed for graphics and other complex print patterns.
3) One rank resistance value of 800Ω ± 3% eliminates the inconvenience of rank selection.
4) Achieves the high life expectancy by forming the electrically conductive hard over coating layer on the heat element.
5) 2-inch, 3-inch, 4-inch and 5.5-inch series are available.

●External dimensions (Unit : mm)



●**Equivalent circuit**

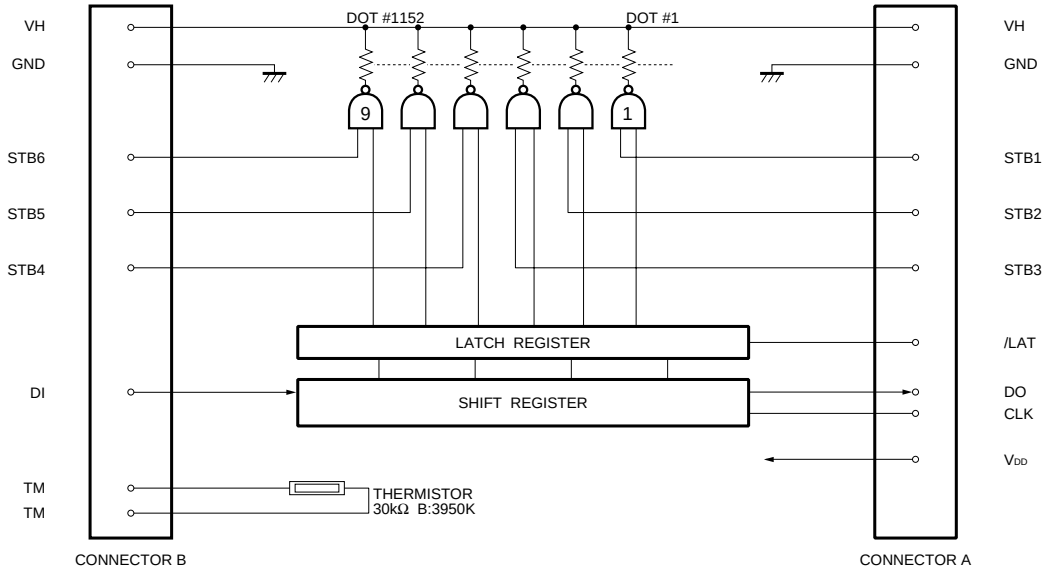


Fig.1

●**Pin assignments**

CONNECTOR B

No.	Circuit
1	GND
2	GND
3	GND
4	GND
5	GND
6	TM
7	TM
8	STB4
9	STB5
10	STB6
11	DI
12	VH
13	VH
14	VH
15	VH

CONNECTOR A

No.	Circuit
1	VH
2	VH
3	VH
4	VH
5	DO
6	$\overline{\text{LAT}}$
7	CLK
8	V_{DD}
9	STB1
10	STB2
11	STB3
12	GND
13	GND
14	GND
15	GND

●Timing chart

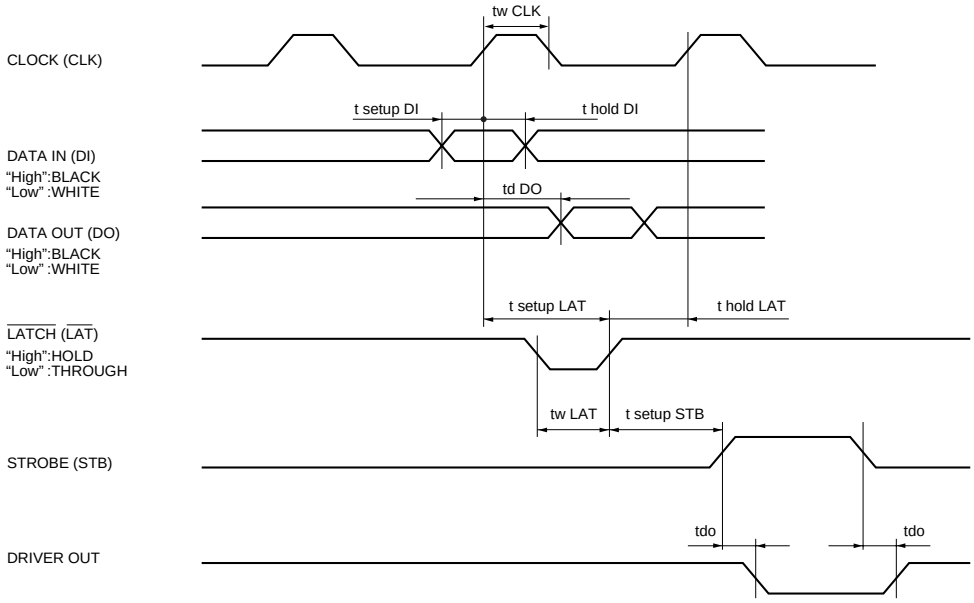


Fig.2

●Characteristics

Parameter	Symbol	Typical	Unit
Effective printing width	–	144	mm
Dot pitch	–	0.125	mm
Total dot number	–	1152	dots
Average resistance value	Rave	800	Ω
Applied voltage	V_H	24	V
Applied power	P_O	0.61	W/dot
Print cycle	SLT	1.25	ms
Pulse width	T_{ON}	0.29	ms
Maximum number of dots energized simultaneously	–	576	dots
Maximum clock frequency	–	8	MHz
Maximum roller diameter	–	ϕ20.0	mm
Running life / pulse life	–	$50/5\times10^7$	km/pulses
Operating temperature	–	5 to 45	°C

●**Electrical characteristic curves**

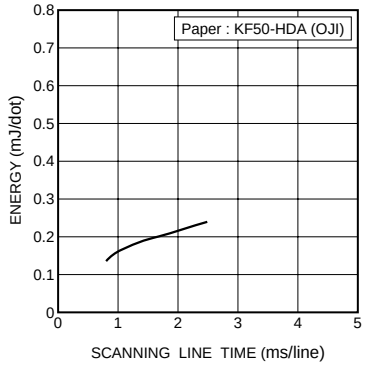


Fig.3 Adaptive speed chart

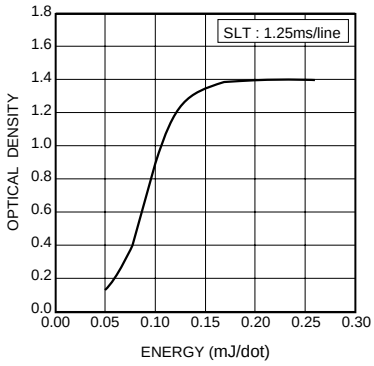


Fig.4 Representative density curve

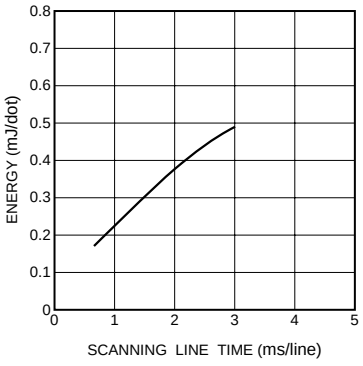


Fig.5 Maximum energy curve

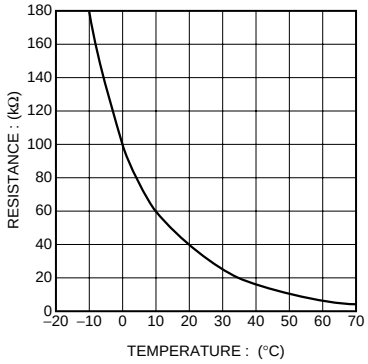


Fig.6 Thermistor curve

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