

Thermal Print head **TPH 14843.xx**

Two inch Thermal Printhead, 150 dots, 3 dots/mm, serial input

The following parameters are valid for a thermal print head, that means for a ceramic hybrid, mounted on an appropriate cooling plate to guarantee a good thermal contact and to transport the unnecessary heat away from the head.

The mechanical design of the cooling plate, the pin out as well as the operating conditions can be defined together with the customer or modified to satisfy his needs.

Major changes to standard heads or new designs to fit into new applications are welcome to be discussed with the developing engineers of the OECA.

For more detailed information please refer to the complete specification.

Main features

- Number of Heat Elements: 150 dots
- Heat element pitch: 0.33 mm (3 dots/mm)
- Print width: 49.5 mm
- High power efficiency
- Square dots suitable for bar code printing
- Protective overglass for longer lifetime

General characteristics

Characteristics	Value	Unit	Note
Print Width	49.5	mm	
Number of Dots	150	dots	
Dot Pitch	0.33	mm	
Dot Density	3	dots/mm	77.0 dots/inch
Dot Dimension	0.310 X 0.330	mm ²	
Dot Resistance	550 - 950	Ω	
Dot Resistance Variation	+/- 20	%	

Maximum ratings

Voltage referenced to V_{SS} terminal. All heating element (dot) ratings are valid only with paper in contact with the heating element.

Symbol	Parameter	min.	max.	Unit
E_{dotMAX}	Dot Energy	$t_{ON}=4.6ms$		6.1
V_{Max}	Head Supply Voltage			V_{DD}
P_{dotMAX}	Dot Power Dissipation	$t_{ON}=4.6ms$		1.32
t_{ONMax}	Strobe On Time	$P_{dot}=1.22W$		5
	Duty Cycle			65
T_{stg}	Storage Temperature Range		- 20	+85
T_{amb}	Ambient Temperature, Operating		0	+70
	Environment Humidity		10	90

Electrical operating conditions

Operating conditions at $T_{AMB}=+25^{\circ}C$. For maximum reliability, operating conditions should be selected within the following ranges.

Symbol	Parameter	Conditions	min	max.	Unit
V_{DD}	Logic Supply Voltage Range	Ref. to V_{SS}	8	12	V
V_{dot}	DC Driver Transistor Supply Voltage	Ref. to V_{SS}	-27	-15	V
f_{CLK}	Input Clock Frequency	$V_{DD} = 8V$	-	2	MHz
T_{sub}	Substrate Operating Temperature		0	70	$^{\circ}C$

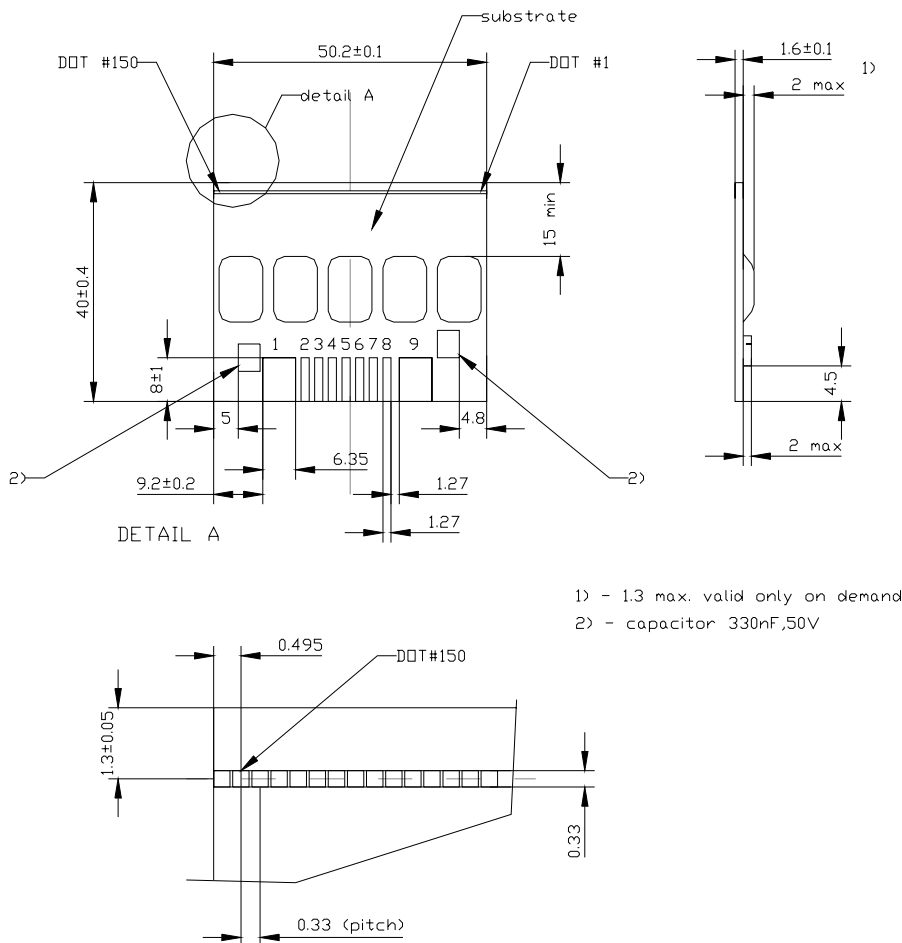
Expected lifetime

When operating according to specified printing conditions the expected lifetime for OECA-Standard Thermal print heads, manufactured all with the same technology and with the same base material, is as follows:

Parameter	Value	Unit	Note
Strobe pulses	50×10^6		
Mechanical wear	50	km	JUJO TP62 KM-A Or other OECA approved papers

Mechanical outline

TPH 14843.40



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