

## Thermal Print head **TPH 13050.xx**

### Two inch Thermal Printhead, 192 dots, 3,76 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 : 192 dots
- Heat element pitch : 0.266 mm (3.76 dots/mm)
- Print width: 51.07 mm
- Average Resistor Value: 827Ω
- serial interface 4 MHz
- printing speed 1200mm/s
- High power efficiency
- Supplied with thermistor SMD type
- Supplied with cable
- Controlled current ramping high current dot supply for transient and EMI reduction

#### General characteristics

Characteristics	Value	Unit	Note
Print Width	51.07	mm	
Number of Dots	192	dots	
Dot Pitch	0.266	mm	
Dot Density	3.76	dots/mm	
Dot Dimension	0.266 X 0.266	mm	
Heat Element Resistance	625 - 1030	Ω	Typical mean value is 827 Ω
Heat Element Resistance Variation	+/- 15	%	Max. variation within head

## Maximum ratings

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

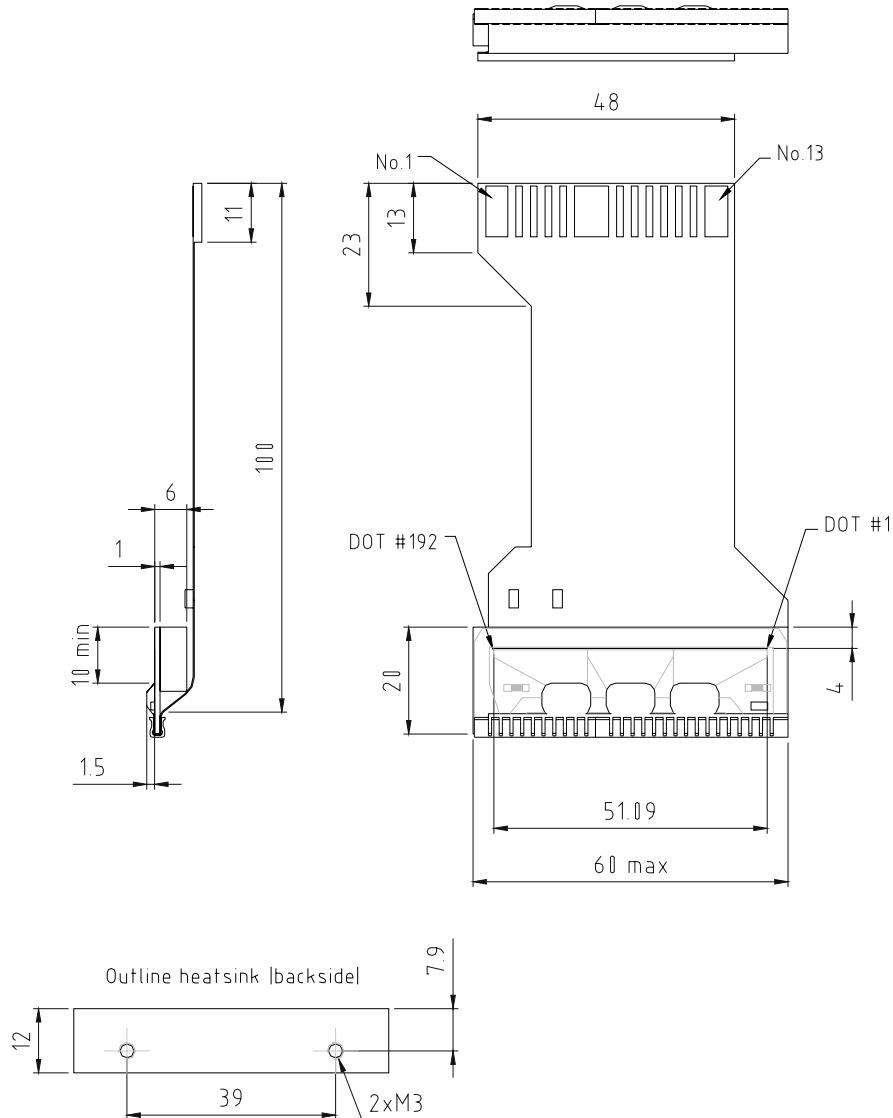
Symbol	Parameter	min.	max.	Unit
$V_{DD}$	DC Logic Supply Voltage Range	-0.5	6	V dc
$V_{dot}$	DC Driver Transistor Supply Voltage	0	35	V dc
$V_I$	Input Voltage Range, All Inputs	-0.5	VDD+0.5	V dc
$I_I$	DC Input Current, Any One Input		±10	mA dc
$E_{dot}$	Dot Energy ( $T_{ON} = 2ms$ )		3.92	mJ/dot
$P_{dot}$	Dot Power		1.96	W/dot
$T_{stg}$	Storage Temperature Range	- 20	+85	°C
$T_{amb}$	Ambient Temperature, Operating	- 10	+55	°C
	Environment Humidity	10	90	% RH

## 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	-	4.75	5.25	V
$V_{dot}$	DC Driver Transistor Supply Voltage	-	22.25	25.71	V
$f_{CLK}$	Maximum Input Clock Frequency	4.75-5.25V	-	4.0	MHz
$T_{sub}$	Substrate Operating Temperature	4.75-5.25V	-10	+55	°C

## Mechanical outline



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