

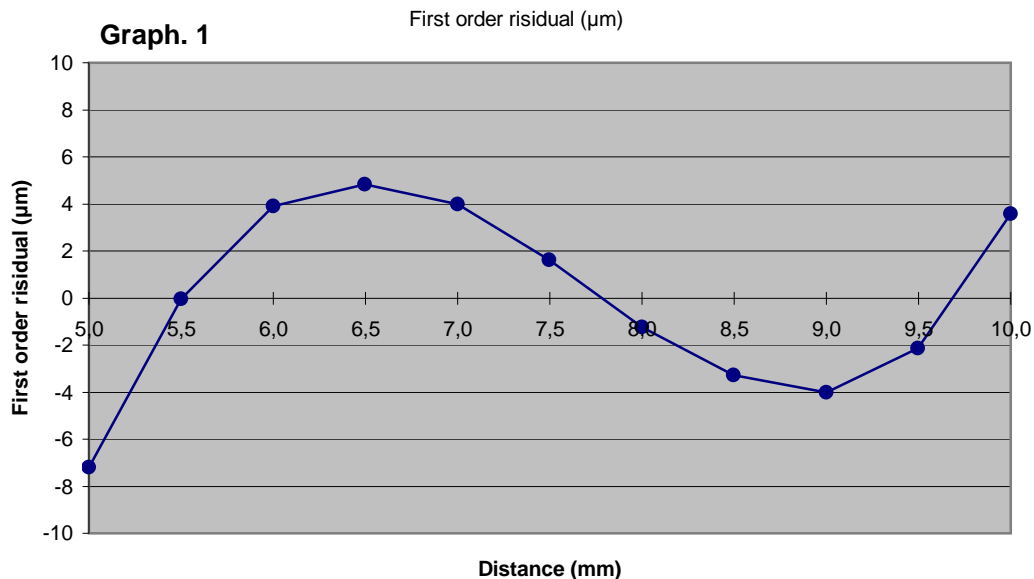
# H7DC-057

Date : 19/12/2012

## First order linearization

First order regression coefficients

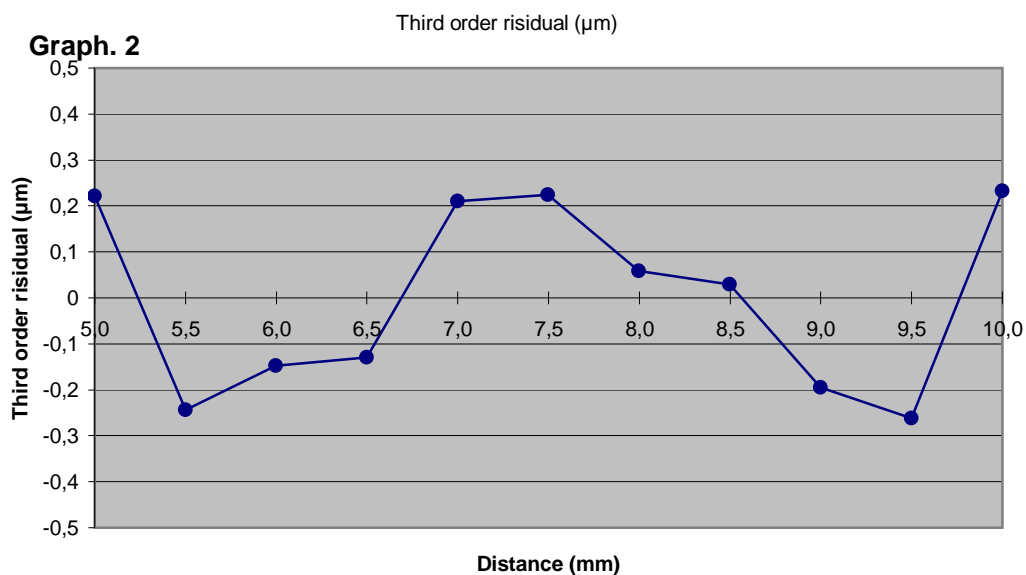
$$d = 5,0069 + 0,49843 V$$



## Third order linearization

Third order regression coefficients

$$d = 4,9995 + 0,50835 V - 0,002378 V^2 + 0,0001493 V^3$$



Legend : Linearization polynoms express distance  $d$  as a fonction of voltage  $V$

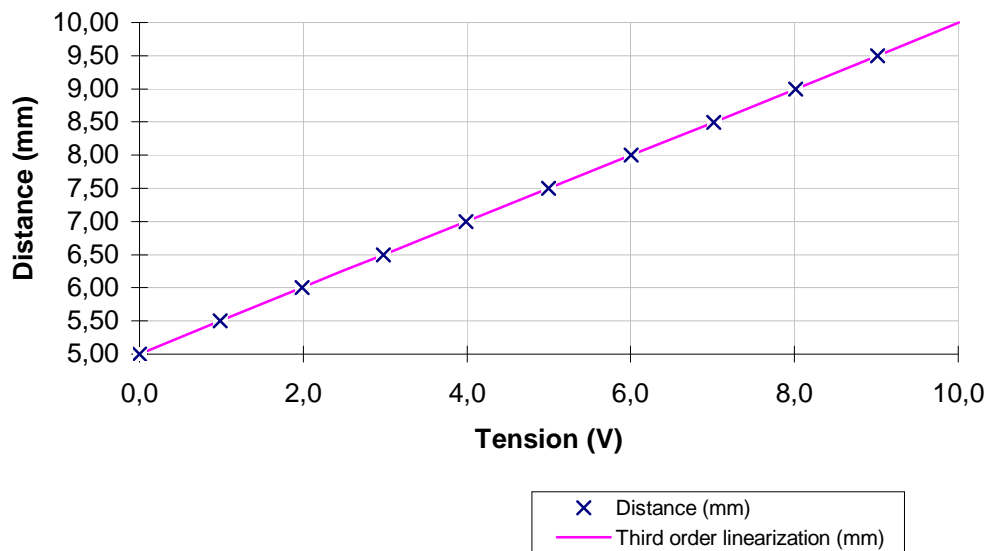
- Distance is in mm

- Voltage is in V

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## Sensor linearization



## Résults

Distance (mm)	Voltage (V)
4,9997	-0,0001
5,4997	0,9887
5,9995	1,9835
6,4980	2,9818
6,9986	3,9879
7,4978	4,9942
7,9986	6,0046
8,4977	7,0101
8,9985	8,0163
9,4979	9,0145
9,9984	10,0072