

Reference	FFLab	Calibration date	October 04 2020
Ref P/N	3458A-A9	Ambient Temperature	24.51 °C
Serial	XFER	Relative Humidity	51.33 %
ID Number	Calibration test, as received;	Pressure	1020.57 hPa
Notes	Test as received, 5h warmup	Test type	Front PTFE cable terminals

Reference standard	Mfg	Model	Options	Serial / Unc	CEID	Calibration date	Due date
DCV REFERENCE	Fluke	732B	10.0000592 VDC ?	7350002	None	Invalid	Invalid
DMM	HP	3458A		FF-4	XD3	None	None

REDACTED. Actual measurement uncertainty available upon request was calculated using the expanded method and is expressed in values at approximately the 95% confidence level using a coverage factor of K= 2.

Certificate statements are based on test results within specified limits without reduction of the uncertainty of the test and/or measurement. The test and measurement data here relate only to the item tested and/or measured. Unit acceptance of failure includes uncertainty data compilation. Calibration due date that appears on the Certificate of Calibration and labels are determined by the customer and does not imply conformance to a standard.

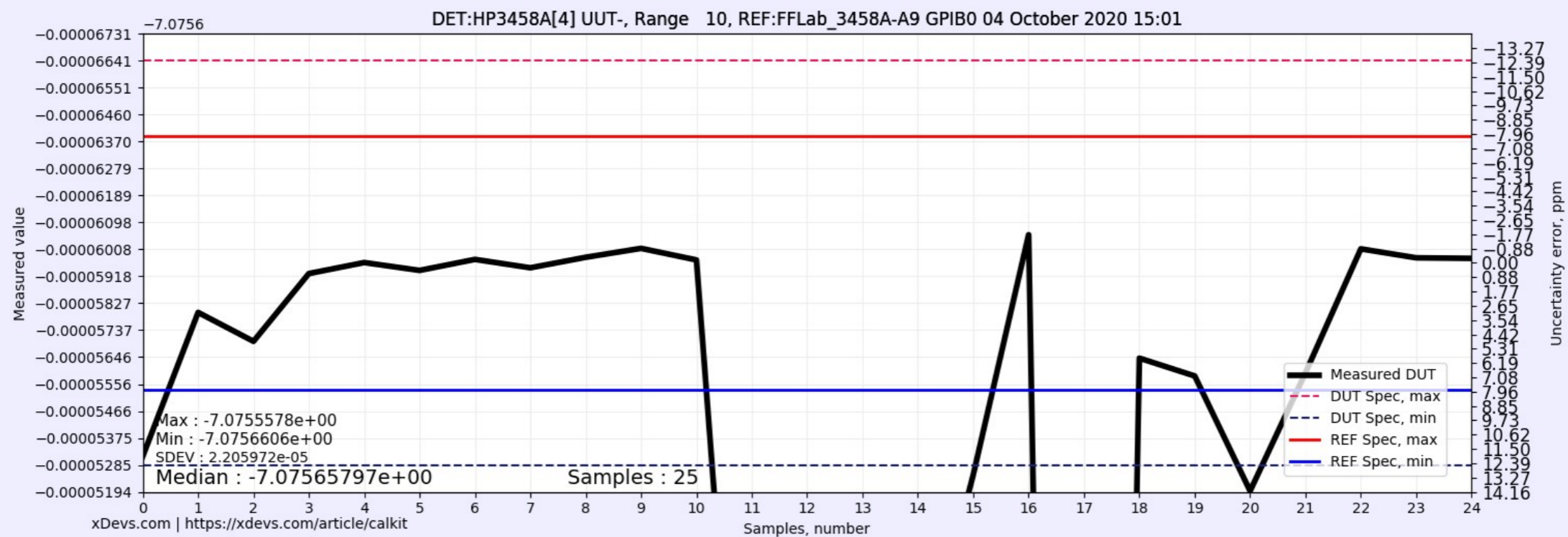
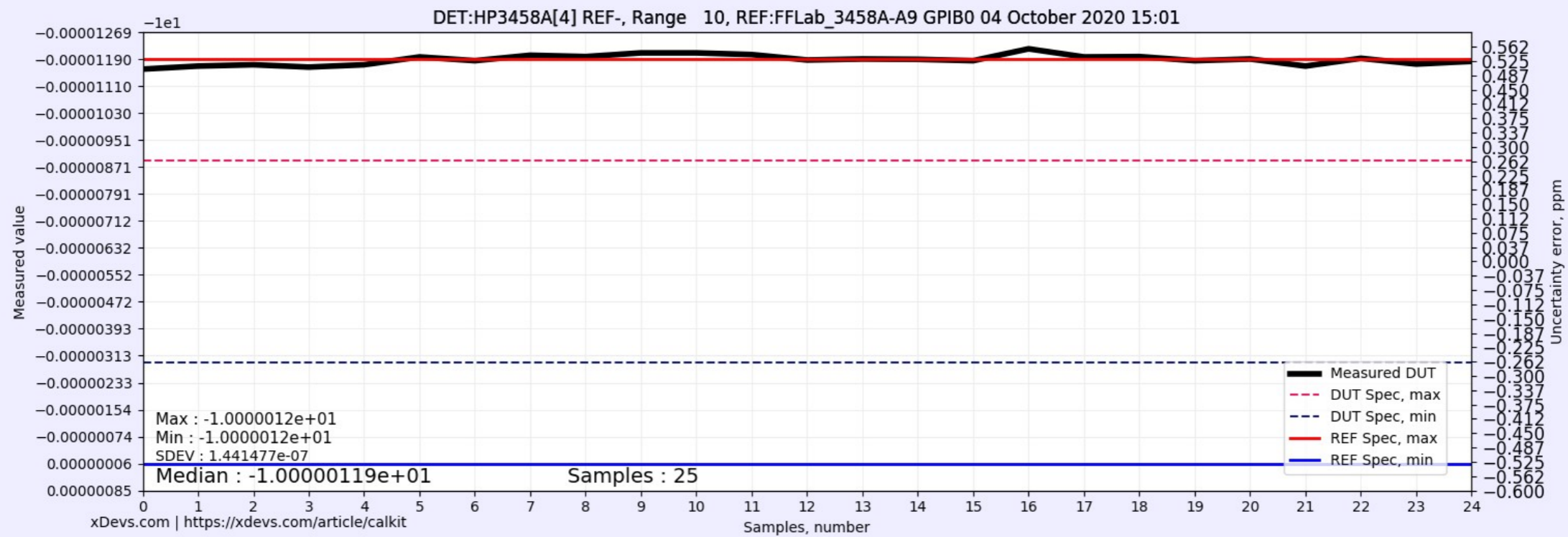
UUT output transferred by manual ratiometric measurement with reference standard.

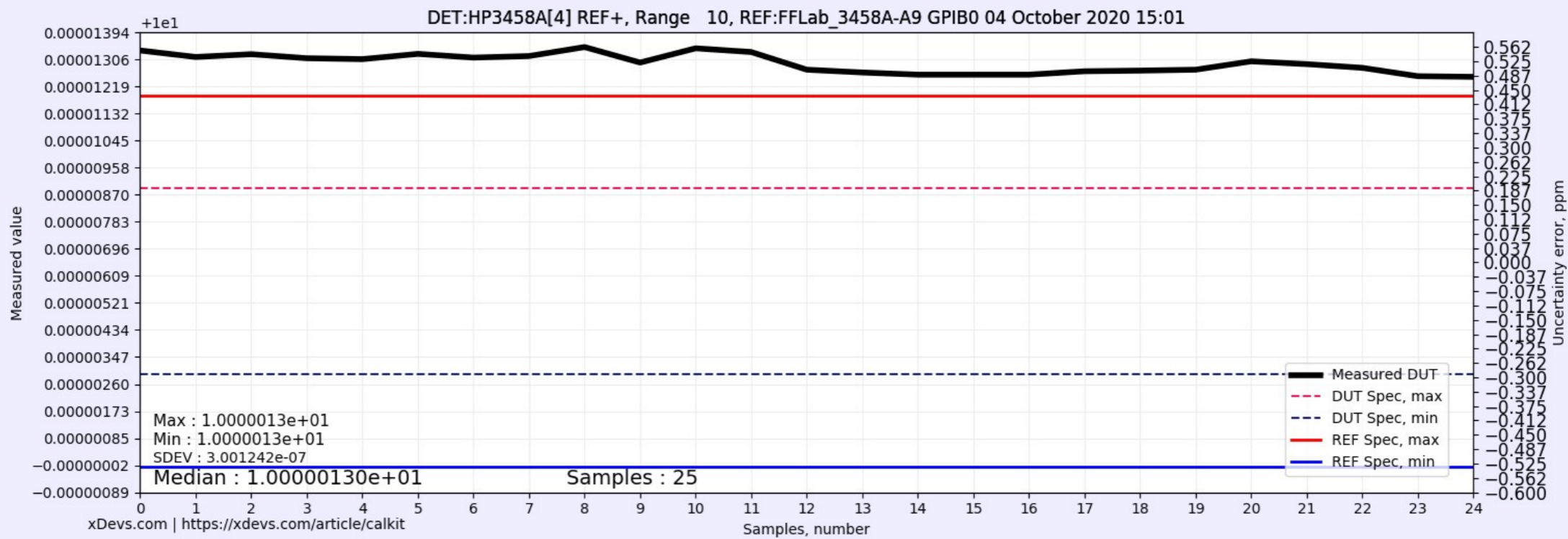
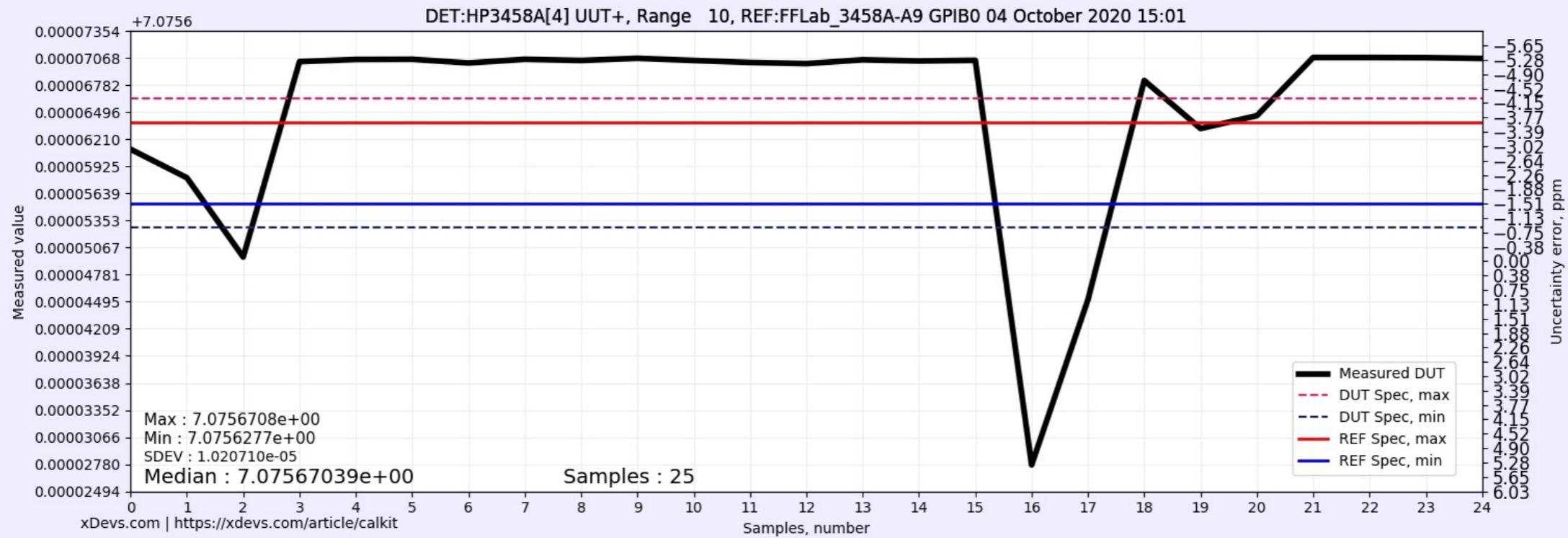
Fixed 1.000e+01 range is used on the Keysight 3458A/X02 detector. The following test use 10 minute transfer specification with FFLab 3458A-A9 output source as reference. Gain verified for stability ±0.10 ppm over the test period. Detector zero offset is DUT is nulled prior to the measurement.

Configuration : Battery power STD, NPLC100, NDIG8, Guard is open.

	Measurement	Unit	Uncertainty	Standard Deviation	DUT Spec / Δ	Degree of freedom / Notes
Transfer reference output	10.000059	VDC	±0.100 ppm			
Reference measured output (+)	10.0000128	VDC	±0.100 ppm	σ = 3.035441e-07 VDC	Δ = 0.685 ppm	25
Reference measured output (-)	-10.0000119	VDC	±0.100 ppm	σ = 1.152215e-07 VDC	Δ = 0.600 ppm	25
Reference calculated +/-	10.0000123	VDC	±0.100 ppm		Δ = 0.642 ppm	
Detector zero offset	-0.0000001	VDC		σ = 0.000000e+00 VDC		
UUT measured output (+)	7.0756704	VDC	±0.121 ppm	σ = 1.052803e-05 VDC		25
UUT measured output (-)	-7.0756579	VDC	±0.121 ppm	σ = 24.2641 μVDC		25
Ratio positive polarity	0.70756614		±0.221 ppm			Inf
Ratio negative polarity	0.70756495		±0.221 ppm			Inf
UUT calculated output (+)	7.0756656	VDC	±0.321 ppm		Δ = 0.844 ppm	
UUT calculated output (-)	-7.0756537	VDC	±0.321 ppm		Δ = -0.844 ppm	
Temperature Δ	0.211	°C	±1.00 %		±1.0 °C	
UUT previous data	7.0756652	VDC	±0.100 ppm			Report
Deviation from previous	-0.792 ppm	VDC	±0.262 ppm			
UUT transfer result (Linear)	7.0756596	VDC	±0.321 ppm		0.1%	In spec
UUT transfer result (RSS)	7.0756596	VDC	±0.242 ppm		0.1%	In spec

[Statistics image data](#)





Test procedure : \$Id\$

Lab temperature maintained +23°C ±1°C

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RAW data	Result
Array Ref P	[10.00001336, 10.00001315, 10.00001324, 10.00001311, 10.00001308, 10.00001325, 10.00001313, 10.00001318, 10.00001347, 10.00001297, 10.00001343, 10.00001331, 10.00001274, 10.00001265, 10.00001258, 10.00001258, 10.00001269, 10.00001271, 10.00001274, 10.00001301, 10.00001292, 10.0000128, 10.00001253, 10.00001251]
Array Ref N	[-10.00001161, -10.0000117, -10.00001174, -10.00001167, -10.00001174, -10.00001197, -10.00001186, -10.00001202, -10.00001198, -10.00001209, -10.00001209, -10.00001204, -10.00001188, -10.00001191, -10.0000119, -10.00001186, -10.00001221, -10.00001197, -10.00001198, -10.00001186, -10.00001191, -10.0000117, -10.00001193, -10.00001176, -10.00001184]
Array UUT P	[7.075661068, 7.075658054, 7.075649681, 7.075670322, 7.075670551, 7.075670569, 7.075670181, 7.075670569, 7.075670446, 7.075670675, 7.075670446, 7.075670234, 7.075670111, 7.075670516, 7.075670393, 7.075670463, 7.075627718, 7.075645169, 7.07566833, 7.075663254, 7.075664611, 7.075670763, 7.075670763, 7.075670745, 7.075670657]
Array UUT N	[-7.075653136, -7.075657966, -7.075656996, -7.07565927, -7.07565964, -7.075659376, -7.075659746, -7.075659464, -7.075659817, -7.075660116, -7.075659728, -7.075635333, -7.075605596, -7.075642066, -7.075645345, -7.075652519, -7.075660574, -7.075557792, -7.075656432, -7.075655833, -7.075651973, -7.075655939, -7.075660099, -7.075659799, -7.075659781]

Histogramm

