

Reference	ESI	Calibration date	July 03 2019
Ref P/N	SR104	Ambient Temperature	22.80 °C
Serial	001	Relative Humidity	24.96 %
ID Number	XPR1	Pressure	1005.56 hPa
Notes	Test 4W, OCOMP 1, DEL1, spade cables	Test type	Manual ratio

Reference standard	Mfg	Model	Options	Serial / Unc	CEID	Calibration date	Due date
10KR STD	ESI	SR104	9999.9995 KΩ	G202088930104	E190342A	06/06/2019	06/06/2020
DMM	HP	3458A	001,X02	2823A13345	XD3	06/16/2019	12/16/2019

xDevs.com certifies that this calibration used standards whose accuracies are traceable to the SI, through National Measurement Laboratory. 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.

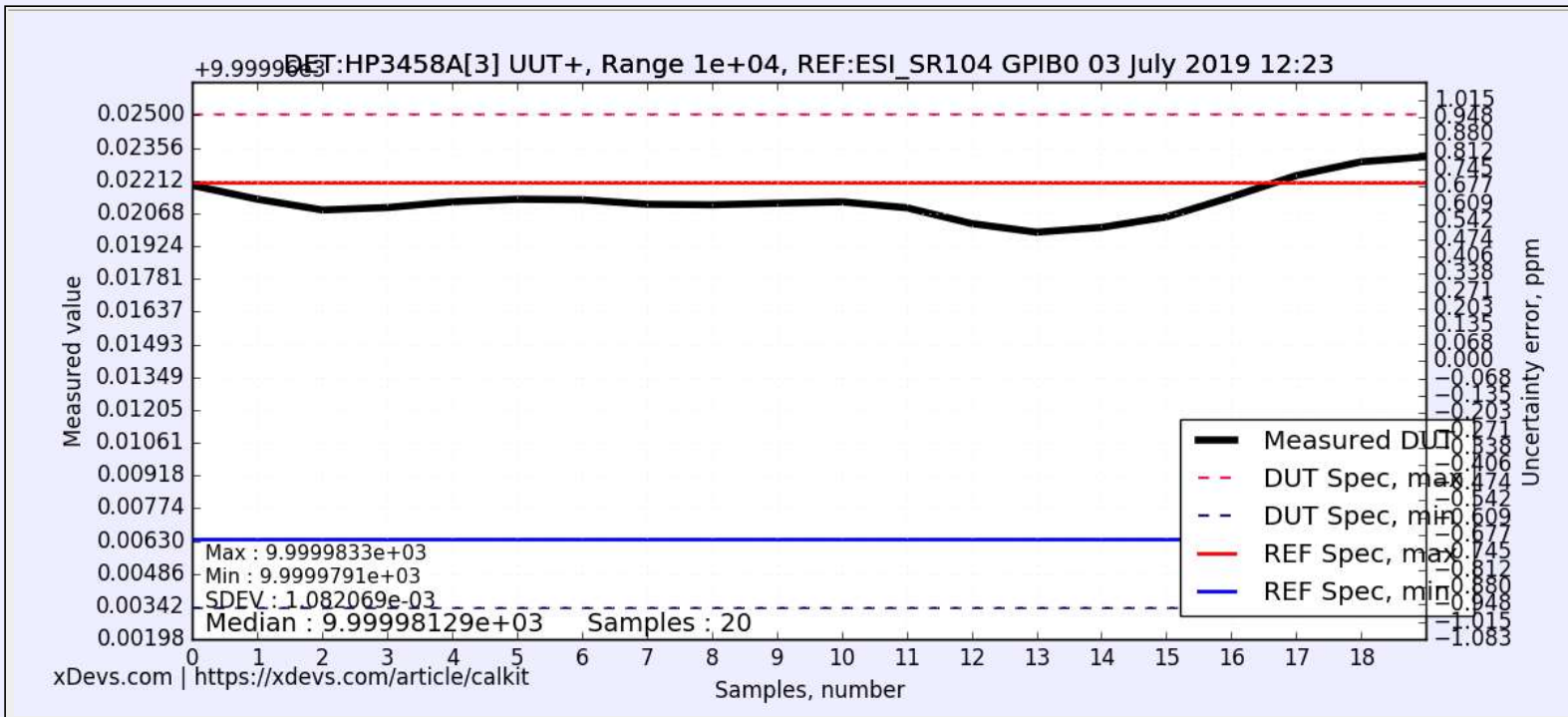
UUT output transferred by manual ratiometric measurement with reference standard.

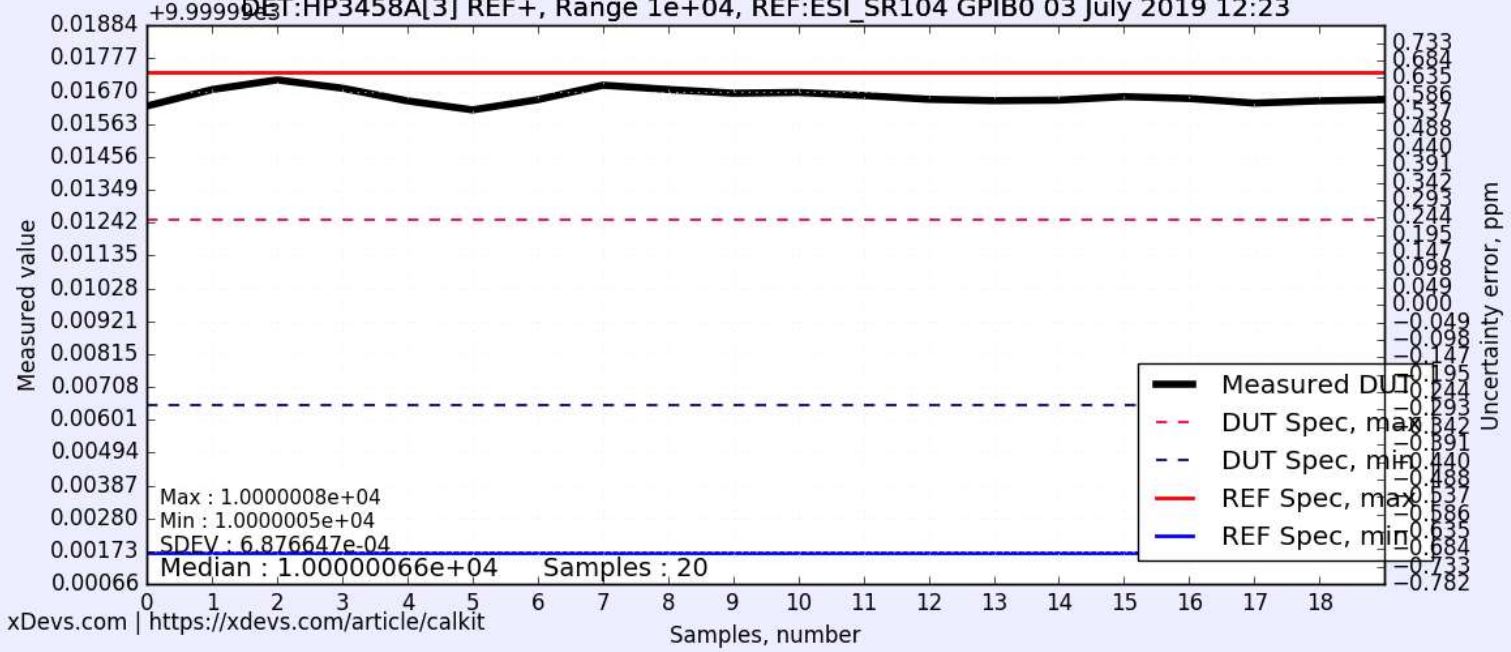
Fixed range is used on the Keysight 3458A/X02 detector. The following test use 10 minute transfer specification with ESI SR104 output source as reference. Detector offset is DUT is nulled prior to the measurement.

Configuration : Isolated STD, OCOMP 1, DELAY 1, NPLC100, NDIG8, Guard is open.

	Measurement	Unit	Uncertainty	Standard Deviation	DUT Spec / Δ	Test Status
<b>Transfer reference output</b>	<b>9999.9995000</b>	<b>Ω</b>	<b>±0.160 ppm</b>		0.300 ppm	In spec
Reference measured output (+)	10000.00663000	Ω	±0.101 ppm	σ = 647.7228 μΩ	Δ = 0.713 ppm	
Reference measured output (-)	10000.00663000	Ω	±0.101 ppm	σ = 647.7228 μΩ	Δ = -2000000.713 ppm	
Reference calculated EMF	0.00000000	Ω	±0.101 ppm		Δ = -1000000.000 ppm	
Detector zero offset	0.00000000	Ω		σ = 0.0010 μΩ		
UUT measured output (+)	9999.98134000	Ω	±0.101 ppm	σ = 1178.4473 μΩ		
UUT measured output (-)	9999.98134000	Ω	±0.101 ppm	σ = 1178.4473 μΩ		
Ratio positive polarity	0.99999747	Ω	±0.201 ppm			
Ratio negative polarity	0.99999747	Ω	±0.201 ppm			
UUT calculated output (+)	9999.97421002	Ω	±0.361 ppm		Δ = 0.000 ppm	
UUT calculated output (-)	-9999.97421002	Ω	±0.361 ppm		Δ = 0.000 ppm	
<b>UUT calculated EMF (Linear)</b>	<b>9999.97421002</b>	<b>Ω</b>	<b>±0.361 ppm</b>		0.1%	In spec
<b>UUT calculated EMF (RSS)</b>	<b>9999.97421002</b>	<b>Ω</b>	<b>±0.257 ppm</b>		0.1%	In spec

Statistics image data





Test procedure : \$Id: xfer\_dcv.py | Rev 1455 | 2019/07/03 11:10:05 tin\_fpga \$

Lab temperature maintained +23°C ±1°C

xDevs.com Confidential

2019 © cal.equipment