

Manufacturer	KEITHLEY INSTRUMENTS	Calibration date	April 21 2018
Model Number	Model 2001	Ambient Temperature	26.59 °C
Serial	0546015	Relative Humidity	42.76 %
ID Number	IX5700A	Pressure	1009.92
Notes	Final Checks	Test type	PERFVAL R14

This note is test dummy text block for further use. It allow to include user information for further reference

Reference standard	Mfg	Model	Options	Serial / Unc	CEID	Calibration date	Due date
TEST MFC	Fluke	5700A	None	x26	ID02	04/21/2018	05/21/2018
DMM	HP	3458A	001,X02	MY45040325	XD2	01/05/2017	01/05/2018
DMM	HP	3458A	001,X02	X	XD3	09/25/2016	09/25/2017
DMM	Keithley	2002	MEM2	0603805	XD4	02/25/2018	02/25/2019
STDR	ESI	SR104	10000.0011 KΩ	±1.00 ppm	XR04	05/25/2016	05/25/2018
STDR	xDevs.com	1GOhm	1.0 GΩ	XXX	MR00	08/23/2016	08/23/2017
STDR	xDevs.com/Fluke	SL935	1.00005616 Ω	±0.17 ppm	XR03	10/04/2018	10/04/2019
STDR	xDevs.com/Fluke	SL935	9999.9747 kΩ	±0.33 ppm	XR02	10/04/2018	10/04/2019
DC STD	xDevs.com	792X[2]	10.000009 VDC	±2.2 ppm	XD01	02/16/2018	08/16/2018

MFC last calibrated	0.0 days ago	MFC since DCV ZERO	0.0 days ago
MFC since WBFLAT	0.0 days ago	MFC since WBGAIN	0.0 days ago
MFC Confidence level	24h 95%	MFC Calibrate date	2018-04-21 00:00:00
MFC Calibrate date Zero	2018-04-21 00:00:00	Calibrate date WB Flatness	1988-10-01 00:00:00
Calibrate date WB Gain	1988-10-01 00:00:00	CAL CONST 6.5V reference voltage	6.54044338575
CAL CONST 13V reference voltage	13.0696835681	CAL CONST 22V range positive zero	398.18341
CAL CONST 22V range negative zero	398.18296	CAL CONST DAC Linearity	0.630394588863
CAL CONST 10KOHM true output resistance	9999.78145215	CAL CONST 10KOHM standard resistance	9999.11699665
CAL CONST, Zero calibration temperature	24.5	CAL CONST, All calibration temp	24.5

This note is test MFC dummy text block for further use.
Calibrator was warmed up >8 hours.

Meter Info	KEITHLEY INSTRUMENTS INC.,MODEL 2001,0546015,A08 /A01	Test date start	21 April 2018 15:37
Test specification interval	24 hour DUT spec	Line frequency	110V 60 Hz
Next calibration date	04/21/19	Last calibration date	04/21/18
DUT temperature to cal	0.2	Last calibration temperature	+23.8

Service information

Last calibration temperature

+23.8

All CAL values

9.994200E-01,-2.615209E-04,1.000028E+01,-2.886275E-04,1.000056E+00,-6.488010E-06,1.000624E+01,5.254278E-05,9.998189E+01,4.966413E+02,5.588051E-03,5.080047E-03,3.556033E-03,6.604061E-03,5.588051E-03,1.380000E+02,1.140000E+02,2.432947E-04,1.000313E+00,1.000316E+00,1.000361E+00,1.000202E+00,1.028731E-01,1.000711E+00,1.200000E+02,1.390000E+02,1.385000E+02,1.160000E+02,1.000000E+00,5.000000E-01,2.000000E+00,1.411056E+00,-4.717220E-05,1.763604E+00,-3.311094E-06,-7.054145E-01,1.981577E-05,1.763378E+00,-8.331487E-07,7.053248E-01,1.036494E-03,1.412358E+00,-1.738336E-05,1.412210E+00,-1.737424E-05,1.409961E+00,-1.734657E-05,1.395577E+00,-1.716960E-05,1.409930E+00,-1.734618E-05,1.517331E+00,-9.868634E-03,1.430408E+00,-1.029610E-03,1.787791E+00,-1.015351E-04,1.967744E+00,-1.351222E-05,2.477408E+00,-5.633017E-06,2.272255E+00,-4.364244E-06,2.491312E+00,-4.687154E-06,3.937018E+00,2.314618E-02,1.574748E+00,2.313838E-03,1.517331E+00,3.783760E-05,1.430408E+00,3.567001E-05,1.787791E+00,3.593600E-06,1.967744E+00,3.955321E-06,2.477408E+00,4.979784E-06,7.054153E-01,9.999982E-01,15612,8745,12157,29498,29498,29495,29498,1351,6453,9.299595E-03,9.864712E-04,9.864712E-04,8.962568E-05,7.118748E-06,7.761471E-07,7.079016E-08,4.479543E-09,4.479543E-09

Reference

K2001 final test

DUT Condition

Front terminals used, as shipped

Test procedure : \$!d\$

Source procedure : \$!d\$

Main DC Voltage ranges performance test.

Checks zero offset and +/-FS calibration on all ranges

The following test for the offset voltage specification using MFC 0V source in 4-wire ext sense mode as reference.

DCV gain range points verify gain of the DC voltage function, using uncorrected 24-hour MFC output. DC voltage offset of DUT is nulled before FS tests.

Test Description	Expected Value	Measured Value	Measurement Uncertainty	Lower Limit	Upper Limit	Deviation	DUT Spec	Test Status
Short 0 mVDC	0.000000E+00	0.52 µV	0.50 µV	-1.700 µV	1.700 µV	N/A	1.20 µV	PASS
Short 0.0 VDC	0.000000E+00	2.00 µV	0.50 µV	-4.500 µV	4.500 µV	N/A	4.00 µV	PASS
Short 00.0 VDC	0.000000E+00	7.00 µV	0.50 µV	-80.500 µV	80.500 µV	N/A	80.00 µV	PASS
Short 000.0 VDC	0.000000E+00	10.00 µV	0.50 µV	-600.500 µV	600.500 µV	N/A	0.60 mV	PASS
Short 0000.0 VDC	0.000000E+00	-600.00 µV	0.50 µV	-6000.501 µV	6000.499 µV	N/A	6.00 mV	PASS
DCV Test	0.1V-1000V	DUT	Source unc.	Low Limit	Hi limit	Measured	24h spec	Result
0.2 VDC (0.20 Range)	0.2000000	0.19999954	7.27 ppm	0.19999535	0.20000465	-2.283 ppm	16.00 ppm	PASS 9.81 %
-0.2 VDC (0.20 Range)	-0.2000000	-0.20000136	7.27 ppm	-0.20000465	-0.19999535	6.808 ppm	16.00 ppm	PASS 29.26 %
0.1 VDC (2.00 Range)	0.1000000	0.1000013	7.27 ppm	0.099998373	0.10000163	13.000 ppm	9.00 ppm	PASS 79.90 %
1.0 VDC (2.00 Range)	1.0000000	0.99999972	3.86 ppm	0.99998714	1.0000129	-0.283 ppm	9.00 ppm	PASS 2.20 %
2.0 VDC (2.00 Range)	2.0000000	1.9999965	3.86 ppm	1.9999743	2.0000257	-1.767 ppm	9.00 ppm	PASS 13.74 %
-0.1 VDC (2.00 Range)	-0.1000000	-0.09999875	7.27 ppm	-0.10000163	-0.099998373	-12.500 ppm	9.00 ppm	PASS 76.83 %
-1.0 VDC (2.00 Range)	-1.0000000	-0.9999995	3.86 ppm	-1.0000129	-0.99998714	-0.500 ppm	9.00 ppm	PASS 3.89 %
-2.0 VDC (2.00 Range)	-2.0000000	-1.9999993	3.86 ppm	-2.0000257	-1.9999743	-0.367 ppm	9.00 ppm	PASS 2.85 %
1.0 VDC (20.00 Range)	1.0000000	1.0000008	3.86 ppm	0.99998514	1.0000149	0.833 ppm	11.00 ppm	PASS 5.61 %
10.0 VDC (20.00 Range)	10.0000000	9.9999782	2.77 ppm	9.9998623	10.000138	-2.183 ppm	11.00 ppm	PASS 15.86 %
20.0 VDC (20.00 Range)	20.0000000	19.999971	2.73 ppm	19.999725	20.000275	-1.442 ppm	11.00 ppm	PASS 10.50 %
-1.0 VDC (20.00 Range)	-1.0000000	-0.99999867	3.86 ppm	-1.0000149	-0.99998514	-1.333 ppm	11.00 ppm	PASS 8.97 %
-10.0 VDC (20.00 Range)	-10.0000000	-9.999947	2.77 ppm	-10.000138	-9.9998623	-5.300 ppm	11.00 ppm	PASS 38.49 %
-20.0 VDC (20.00 Range)	-20.0000000	-19.999866	2.73 ppm	-20.000275	-19.999725	-6.692 ppm	11.00 ppm	PASS 48.74 %
10 VDC (200.00 Range)	10.0000000	9.99993	2.77 ppm	9.9998123	10.000188	-7.000 ppm	16.00 ppm	PASS 37.29 %
100 VDC (200.00 Range)	100.0000000	99.999465	3.73 ppm	99.998027	100.00197	-5.350 ppm	16.00 ppm	PASS 27.12 %
200 VDC (200.00 Range)	200.0000000	199.99884	3.73 ppm	199.99605	200.00395	-5.817 ppm	16.00 ppm	PASS 29.48 %
-10 VDC (200.00 Range)	-10.0000000	-9.999967	2.77 ppm	-10.000188	-9.9998123	-0.333 ppm	16.00 ppm	PASS 1.78 %
-100 VDC (200.00 Range)	-100.0000000	-99.999822	3.73 ppm	-100.00197	-99.998027	-1.783 ppm	16.00 ppm	PASS 9.04 %
-200 VDC (200.00 Range)	-200.0000000	-199.99947	3.73 ppm	-200.00395	-199.99605	-2.650 ppm	16.00 ppm	PASS 13.43 %
100 VDC (1000.00 Range)	100.0000000	99.9991	3.73 ppm	99.997327	100.00267	-9.000 ppm	23.00 ppm	PASS 33.67 %
200 VDC (1000.00 Range)	200.0000000	199.99833	3.73 ppm	199.99465	200.00535	-8.333 ppm	23.00 ppm	PASS 31.18 %
1000 VDC (1000.00 Range)	1000.0000000	999.99057	5.45 ppm	999.96905	1000.0309	-9.433 ppm	23.00 ppm	PASS 30.48 %
-100 VDC (1000.00 Range)	-100.0000000	-99.99995	3.73 ppm	-100.00267	-99.997327	-0.500 ppm	23.00 ppm	PASS 1.87 %
-200 VDC (1000.00 Range)	-200.0000000	-199.99962	3.73 ppm	-200.00535	-199.99465	-1.917 ppm	23.00 ppm	PASS 7.17 %
-1000 VDC (1000.00 Range)	-1000.0000000	-999.99195	5.45 ppm	-1000.0259	-999.97405	-8.050 ppm	23.00 ppm	PASS 31.02 %

Additional test for **combined DUT+MFC** DC Voltage Integral Linearity (INL) using fixed 10V range. Integral linearity is a measure of the device's deviation from ideal linear behaviour.

DCV Linearity	1V Range	DUT	Source unc.	Low Limit	Hi limit	Measured	24h spec	Result
2.0990000	2.0990000	2.0989966	2.73 ppm	2.098971	2.099029	-1.61 ppm	11.00 ppm	PASS 11.76 %
1.9999999	1.9999999	1.9999966	2.73 ppm	1.999972	2.000027	-1.67 ppm	11.00 ppm	PASS 12.18 %
1.8888888	1.8888888	1.8888867	2.73 ppm	1.888863	1.888915	-1.10 ppm	11.00 ppm	PASS 8.01 %
1.7777777	1.7777777	1.7777752	2.73 ppm	1.777753	1.777802	-1.41 ppm	11.00 ppm	PASS 10.24 %
1.6666666	1.6666666	1.6666647	2.73 ppm	1.666644	1.666689	-1.13 ppm	11.00 ppm	PASS 8.21 %
1.5555555	1.5555555	1.5555543	2.73 ppm	1.555534	1.555577	-0.80 ppm	11.00 ppm	PASS 5.83 %
1.4444444	1.4444444	1.4444438	2.73 ppm	1.444425	1.444464	-0.44 ppm	11.00 ppm	PASS 3.19 %
1.3333333	1.3333333	1.3333326	2.73 ppm	1.333315	1.333352	-0.54 ppm	11.00 ppm	PASS 3.95 %
1.2222222	1.2222222	1.2222222	2.73 ppm	1.222205	1.222239	0.04 ppm	11.00 ppm	PASS 0.26 %
1.1111111	1.1111111	1.1111105	2.73 ppm	1.111096	1.111126	-0.51 ppm	11.00 ppm	PASS 3.71 %
1.0999999	1.0999999	1.0999999	2.73 ppm	1.099985	1.100015	0.02 ppm	11.00 ppm	PASS 0.15 %
0.9999999	0.9999999	1.0000006	2.73 ppm	0.9999862	1.000014	0.74 ppm	11.00 ppm	PASS 5.42 %
0.8888888	0.8888888	0.8888898	2.73 ppm	0.8888766	0.888901	1.11 ppm	11.00 ppm	PASS 8.10 %
0.7777777	0.7777777	0.7777788	2.73 ppm	0.777767	0.7777884	1.37 ppm	11.00 ppm	PASS 9.99 %
0.6666666	0.6666666	0.6666679	2.73 ppm	0.6666574	0.6666758	1.98 ppm	11.00 ppm	PASS 14.45 %
0.5555555	0.5555555	0.5555570	2.73 ppm	0.5555479	0.5555631	2.62 ppm	11.00 ppm	PASS 19.08 %
0.4444444	0.4444444	0.4444463	2.73 ppm	0.4444383	0.4444505	4.38 ppm	11.00 ppm	PASS 31.86 %
0.3333333	0.3333333	0.3333354	2.73 ppm	0.3333287	0.3333379	6.27 ppm	11.00 ppm	PASS 45.64 %
0.2222222	0.2222222	0.2222241	2.73 ppm	0.2222191	0.2222253	8.75 ppm	11.00 ppm	PASS 63.73 %
0.1234567	0.1234567	0.12345852	7.27 ppm	0.1234544	0.123459	14.76 ppm	11.00 ppm	PASS 80.79 %
-0.1234567	-0.1234567	-0.1234555	7.27 ppm	-0.123459	-0.1234544	-9.54 ppm	11.00 ppm	PASS 52.22 %
-0.2222222	-0.2222222	-0.2222206	2.73 ppm	-0.2222253	-0.2222191	-7.40 ppm	11.00 ppm	PASS 53.90 %
-0.3333333	-0.3333333	-0.3333320	2.73 ppm	-0.3333379	-0.3333287	-3.77 ppm	11.00 ppm	PASS 27.43 %
-0.4444444	-0.4444444	-0.4444436	2.73 ppm	-0.4444505	-0.4444383	-1.88 ppm	11.00 ppm	PASS 13.66 %
-0.5555555	-0.5555555	-0.5555547	2.73 ppm	-0.5555631	-0.5555479	-1.42 ppm	11.00 ppm	PASS 10.34 %
-0.6666666	-0.6666666	-0.6666665	2.73 ppm	-0.6666758	-0.6666574	-0.20 ppm	11.00 ppm	PASS 1.46 %
-0.7777777	-0.7777777	-0.7777774	2.73 ppm	-0.7777884	-0.777767	-0.37 ppm	11.00 ppm	PASS 2.71 %
-0.8888888	-0.8888888	-0.8888884	2.73 ppm	-0.888901	-0.8888766	-0.41 ppm	11.00 ppm	PASS 3.00 %
-0.9999999	-0.9999999	-0.9999998	2.73 ppm	-1.000014	-0.9999862	-0.09 ppm	11.00 ppm	PASS 0.65 %
-1.0999999	-1.0999999	-1.0999997	2.73 ppm	-1.100015	-1.099985	-0.22 ppm	11.00 ppm	PASS 1.62 %
-1.1111111	-1.1111111	-1.1111103	2.73 ppm	-1.111126	-1.111096	-0.68 ppm	11.00 ppm	PASS 4.95 %
-1.2222222	-1.2222222	-1.2222216	2.73 ppm	-1.222239	-1.222205	-0.47 ppm	11.00 ppm	PASS 3.44 %
-1.3333333	-1.3333333	-1.3333342	2.73 ppm	-1.333352	-1.333315	0.64 ppm	11.00 ppm	PASS 4.67 %
-1.4444444	-1.4444444	-1.4444460	2.73 ppm	-1.444464	-1.444425	1.12 ppm	11.00 ppm	PASS 8.18 %
-1.5555555	-1.5555555	-1.5555577	2.73 ppm	-1.555577	-1.555534	1.39 ppm	11.00 ppm	PASS 10.09 %
-1.6666666	-1.6666666	-1.6666676	2.73 ppm	-1.666689	-1.666644	0.61 ppm	11.00 ppm	PASS 4.42 %
-1.7777777	-1.7777777	-1.7777792	2.73 ppm	-1.777802	-1.777753	0.84 ppm	11.00 ppm	PASS 6.10 %
-1.8888888	-1.8888888	-1.8888904	2.73 ppm	-1.888915	-1.888863	0.85 ppm	11.00 ppm	PASS 6.21 %
-1.9999999	-1.9999999	-2.0000011	2.73 ppm	-2.000027	-1.999972	0.59 ppm	11.00 ppm	PASS 4.29 %
-2.0990000	-2.0990000	-2.0990008	2.73 ppm	-2.099029	-2.098971	0.38 ppm	11.00 ppm	PASS 2.78 %
DCV Linearity	10V Range	DUT	Source unc.	Low Limit	Hi limit	Measured	24h spec	Result
20.990000	20.990000	20.9899630	2.73 ppm	20.98971	20.99029	-1.76 ppm	11.00 ppm	PASS 12.84 %
19.999999	19.999999	19.9999638	2.73 ppm	19.99972	20.00027	-1.76 ppm	11.00 ppm	PASS 12.83 %
18.888888	18.888888	18.8888566	2.73 ppm	18.88863	18.88915	-1.66 ppm	11.00 ppm	PASS 12.12 %
17.777777	17.777777	17.7777447	2.73 ppm	17.77753	17.77802	-1.82 ppm	11.00 ppm	PASS 13.25 %
16.666666	16.666666	16.6666379	2.73 ppm	16.66644	16.66689	-1.69 ppm	11.00 ppm	PASS 12.28 %
15.555555	15.555555	15.5555264	2.73 ppm	15.55534	15.55577	-1.84 ppm	11.00 ppm	PASS 13.37 %
14.444444	14.444444	14.4444152	2.73 ppm	14.44425	14.44464	-1.99 ppm	11.00 ppm	PASS 14.51 %
13.333333	13.333333	13.3333062	2.73 ppm	13.33315	13.33352	-2.01 ppm	11.00 ppm	PASS 14.63 %
12.222222	12.222222	12.2222002	2.73 ppm	12.22205	12.22239	-1.78 ppm	11.00 ppm	PASS 12.98 %
11.111111	11.111111	11.1110884	2.73 ppm	11.11096	11.11126	-2.03 ppm	11.00 ppm	PASS 14.79 %
10.999999	10.999999	10.9999841	2.73 ppm	10.99985	11.00015	-1.35 ppm	11.00 ppm	PASS 9.86 %
9.999999	9.999999	9.9999809	2.73 ppm	9.999862	10.00014	-1.81 ppm	11.00 ppm	PASS 13.19 %
8.888888	8.888888	8.8888636	2.73 ppm	8.888766	8.88901	-2.75 ppm	11.00 ppm	PASS 20.03 %
7.777777	7.777777	7.7777584	2.73 ppm	7.77767	7.777884	-2.39 ppm	11.00 ppm	PASS 17.38 %
6.666666	6.666666	6.6666489	2.73 ppm	6.666574	6.666758	-2.57 ppm	11.00 ppm	PASS 18.69 %
5.555555	5.555555	5.5555421	2.73 ppm	5.555479	5.555631	-2.32 ppm	11.00 ppm	PASS 16.90 %
4.444444	4.444444	4.4444319	2.73 ppm	4.444383	4.444505	-2.73 ppm	11.00 ppm	PASS 19.85 %
3.333333	3.333333	3.3333244	2.73 ppm	3.333287	3.333379	-2.57 ppm	11.00 ppm	PASS 18.69 %
2.222222	2.222222	2.2222198	2.73 ppm	2.222191	2.222253	-1.00 ppm	11.00 ppm	PASS 7.28 %
1.111111	1.111111	1.1111128	3.86 ppm	1.111094	1.111128	1.60 ppm	11.00 ppm	PASS 10.77 %

-1.111111	-1.111111	-1.1111121	3.86 ppm	-1.111128	-1.111094	1.00 ppm	11.00 ppm	PASS 6.73 %
-2.222222	-2.222222	-2.2222088	2.73 ppm	-2.222253	-2.222191	-5.95 ppm	11.00 ppm	PASS 43.34 %
-3.333333	-3.333333	-3.3333171	2.73 ppm	-3.333379	-3.333287	-4.77 ppm	11.00 ppm	PASS 34.72 %
-4.444444	-4.444444	-4.4444208	2.73 ppm	-4.444505	-4.444383	-5.23 ppm	11.00 ppm	PASS 38.06 %
-5.555555	-5.555555	-5.5555264	2.73 ppm	-5.555631	-5.555479	-5.14 ppm	11.00 ppm	PASS 37.44 %
-6.666666	-6.666666	-6.6666309	2.73 ppm	-6.666758	-6.666574	-5.27 ppm	11.00 ppm	PASS 38.36 %
-7.777777	-7.777777	-7.7777272	2.73 ppm	-7.777884	-7.77767	-6.40 ppm	11.00 ppm	PASS 46.61 %
-8.888888	-8.888888	-8.8888363	2.73 ppm	-8.88901	-8.888766	-5.81 ppm	11.00 ppm	PASS 42.33 %
-9.999999	-9.999999	-9.9999429	2.73 ppm	-10.00014	-9.999862	-5.61 ppm	11.00 ppm	PASS 40.87 %
-10.999999	-10.999999	-10.9999356	2.73 ppm	-11.00015	-10.99985	-5.77 ppm	11.00 ppm	PASS 42.01 %
-11.111111	-11.111111	-11.1110458	2.73 ppm	-11.11126	-11.11096	-5.87 ppm	11.00 ppm	PASS 42.75 %
-12.222222	-12.222222	-12.2221480	2.73 ppm	-12.22239	-12.22205	-6.05 ppm	11.00 ppm	PASS 44.10 %
-13.333333	-13.333333	-13.3332512	2.73 ppm	-13.33352	-13.33315	-6.13 ppm	11.00 ppm	PASS 44.67 %
-14.444444	-14.444444	-14.4443520	2.73 ppm	-14.44464	-14.44425	-6.37 ppm	11.00 ppm	PASS 46.39 %
-15.555555	-15.555555	-15.5554553	2.73 ppm	-15.55577	-15.55534	-6.41 ppm	11.00 ppm	PASS 46.67 %
-16.666666	-16.666666	-16.6665546	2.73 ppm	-16.66689	-16.66644	-6.69 ppm	11.00 ppm	PASS 48.70 %
-17.777777	-17.777777	-17.7776581	2.73 ppm	-17.77802	-17.77753	-6.69 ppm	11.00 ppm	PASS 48.71 %
-18.888888	-18.888888	-18.8887639	2.73 ppm	-18.88915	-18.88863	-6.57 ppm	11.00 ppm	PASS 47.86 %
-19.999999	-19.999999	-19.9998663	2.73 ppm	-20.00027	-19.99972	-6.63 ppm	11.00 ppm	PASS 48.31 %
-20.990000	-20.990000	-20.9898581	2.73 ppm	-20.99029	-20.98971	-6.76 ppm	11.00 ppm	PASS 49.23 %
DCV Linearity	100V Range	DUT	Source unc.	Low Limit	Hi limit	Measured	24h spec	Result
200.99000	200.99000	200.9886333	2.73 ppm	200.98724	200.99276	-6.80 ppm	11.00 ppm	PASS 47.78 %
199.99999	199.99999	199.9987211	2.73 ppm	199.99724	200.00274	-6.34 ppm	11.00 ppm	PASS 44.58 %
188.88888	188.88888	188.8876689	2.73 ppm	188.88629	188.89147	-6.41 ppm	11.00 ppm	PASS 45.15 %
177.77777	177.77777	177.7765722	2.73 ppm	177.77533	177.78021	-6.74 ppm	11.00 ppm	PASS 47.53 %
166.66666	166.66666	166.6665389	2.73 ppm	166.66437	166.66895	-6.13 ppm	11.00 ppm	PASS 43.31 %
155.55555	155.55555	155.5544956	2.73 ppm	155.55341	155.55769	-6.78 ppm	11.00 ppm	PASS 48.01 %
144.44444	144.44444	144.4436689	2.73 ppm	144.44246	144.44642	-5.34 ppm	11.00 ppm	PASS 37.89 %
133.33333	133.33333	133.3327022	2.73 ppm	133.33315	133.33516	-4.71 ppm	11.00 ppm	PASS 33.48 %
122.22222	122.22222	122.2215233	2.73 ppm	122.22054	122.2239	-5.70 ppm	11.00 ppm	PASS 40.61 %
111.11111	111.11111	111.1104967	2.73 ppm	111.10958	111.11264	-5.52 ppm	11.00 ppm	PASS 39.41 %
109.99999	109.99999	109.9993667	2.73 ppm	109.99848	110.0015	-5.67 ppm	11.00 ppm	PASS 40.46 %
99.99999	99.99999	99.9994844	2.73 ppm	99.998617	100.00136	-5.06 ppm	11.00 ppm	PASS 36.82 %
88.88888	88.88888	88.8883889	2.73 ppm	88.88766	88.8901	-5.53 ppm	11.00 ppm	PASS 40.24 %
77.77777	77.77777	77.7773100	2.73 ppm	77.776702	77.778838	-5.91 ppm	11.00 ppm	PASS 43.08 %
66.66666	66.66666	66.6663078	2.73 ppm	66.665745	66.667575	-5.28 ppm	11.00 ppm	PASS 38.48 %
55.55555	55.55555	55.5552600	2.73 ppm	55.554787	55.556313	-5.22 ppm	11.00 ppm	PASS 38.02 %
44.44444	44.44444	44.4442078	2.73 ppm	44.44383	44.44505	-5.23 ppm	11.00 ppm	PASS 38.06 %
33.33333	33.33333	33.3331644	2.73 ppm	33.332872	33.333788	-4.97 ppm	11.00 ppm	PASS 36.17 %
22.22222	22.22222	22.2220867	2.73 ppm	22.221915	22.222525	-6.00 ppm	11.00 ppm	PASS 43.70 %
11.11111	11.11111	11.1110378	3.86 ppm	11.110945	11.111275	-6.50 ppm	11.00 ppm	PASS 43.74 %
-11.11111	-11.11111	-11.1111411	3.86 ppm	-11.111275	-11.110945	2.80 ppm	11.00 ppm	PASS 18.84 %
-22.22222	-22.22222	-22.2221733	2.73 ppm	-22.222525	-22.221915	-2.10 ppm	11.00 ppm	PASS 15.29 %
-33.33333	-33.33333	-33.3332578	2.73 ppm	-33.333788	-33.332872	-2.17 ppm	11.00 ppm	PASS 15.78 %
-44.44444	-44.44444	-44.4443256	2.73 ppm	-44.44505	-44.44383	-2.58 ppm	11.00 ppm	PASS 18.75 %
-55.55555	-55.55555	-55.5553944	2.73 ppm	-55.556313	-55.554787	-2.80 ppm	11.00 ppm	PASS 20.39 %
-66.66666	-66.66666	-66.6664867	2.73 ppm	-66.667575	-66.665745	-2.60 ppm	11.00 ppm	PASS 18.94 %
-77.77777	-77.77777	-77.7775200	2.73 ppm	-77.778838	-77.776702	-3.21 ppm	11.00 ppm	PASS 23.41 %
-88.88888	-88.88888	-88.8886278	2.73 ppm	-88.8901	-88.88766	-2.84 ppm	11.00 ppm	PASS 20.67 %
-99.99999	-99.99999	-99.9996678	2.73 ppm	-100.00136	-99.998617	-3.22 ppm	11.00 ppm	PASS 23.47 %
-109.99999	-109.99999	-109.9996122	2.73 ppm	-110.0015	-109.99848	-3.43 ppm	11.00 ppm	PASS 25.52 %
-111.11111	-111.11111	-111.1107000	2.73 ppm	-111.11264	-111.10958	-3.69 ppm	11.00 ppm	PASS 27.43 %
-122.22222	-122.22222	-122.2218700	2.73 ppm	-122.2239	-122.22054	-2.86 ppm	11.00 ppm	PASS 21.33 %
-133.33333	-133.33333	-133.3329722	2.73 ppm	-133.33516	-133.33315	-2.68 ppm	11.00 ppm	PASS 20.03 %
-144.44444	-144.44444	-144.4440267	2.73 ppm	-144.44642	-144.44246	-2.86 ppm	11.00 ppm	PASS 21.40 %
-155.55555	-155.55555	-155.5549867	2.73 ppm	-155.55769	-155.55341	-3.62 ppm	11.00 ppm	PASS 27.14 %
-166.66666	-166.66666	-166.6662078	2.73 ppm	-166.66895	-166.66437	-2.71 ppm	11.00 ppm	PASS 20.38 %
-177.77777	-177.77777	-177.7773578	2.73 ppm	-177.78021	-177.77533	-2.32 ppm	11.00 ppm	PASS 17.45 %
-188.88888	-188.88888	-188.8882444	2.73 ppm	-188.89147	-188.88629	-3.36 ppm	11.00 ppm	PASS 25.38 %
-199.99999	-199.99999	-199.9993033	2.73 ppm	-200.00274	-199.99724	-3.43 ppm	11.00 ppm	PASS 25.95 %
-200.99000	-200.99000	-200.9891522	2.73 ppm	-200.99276	-200.98724	-4.22 ppm	11.00 ppm	PASS 31.89 %

4W test procedure for all test points that verify Gain of the OHMF function. 4-wire kelvin connection is used between DMM and MFC. 1GΩ resistance range is tested using the external standard, as MFC unable to provide this range value.

OHM Test	1 Ohm to 1 GOhm	DUT	Source unc.	Low Limit	Hi limit	Measured	24h spec	Result
1 Ω	0.999797	0.99980462	85.0 ppm	9.9967602E-01	9.9991798E-01	7.627 ppm	36.0 ppm	PASS 6.30 %
1.9 Ω	1.9003906	1.9004441	85.0 ppm	1.9001607E+00	1.9006205E+00	28.132 ppm	36.0 ppm	PASS 23.25 %
10 Ω	10.000335	10.000222	23.0 ppm	9.9997450E+00	1.0000925E+01	-11.331 ppm	36.0 ppm	PASS 19.20 %
19 Ω	19.000032	18.999823	23.0 ppm	1.8998911E+01	1.9001153E+01	-11.023 ppm	36.0 ppm	PASS 18.68 %
100 Ω	100.00335	100.00206	10.0 ppm	9.9999250E+01	1.0000745E+02	-12.866 ppm	31.0 ppm	PASS 31.38 %
190 Ω	189.99826	189.99582	10.0 ppm	1.8999047E+02	1.9000605E+02	-12.825 ppm	31.0 ppm	PASS 31.28 %
1.0 kΩ	1000.0107	999.99947	8.0 ppm	9.9997670E+02	1.0000447E+03	-11.233 ppm	26.0 ppm	PASS 33.04 %
1.9 kΩ	1900.0248	1900.0009	8.0 ppm	1.8999602E+03	1.9000894E+03	-12.570 ppm	26.0 ppm	PASS 36.97 %
10 kΩ	9999.796	9999.745	8.0 ppm	9.9994860E+03	1.0000106E+04	-5.100 ppm	23.0 ppm	PASS 16.45 %
19 kΩ	18999.411	18999.242	9.0 ppm	1.8998803E+04	1.9000019E+04	-8.886 ppm	23.0 ppm	PASS 27.77 %
100 kΩ	99994.79	99994.92	9.0 ppm	9.9991440E+04	9.9998140E+04	1.300 ppm	24.5 ppm	PASS 3.88 %
190 kΩ	189988.27	189988.35	9.0 ppm	1.8998191E+05	1.8999463E+05	0.404 ppm	24.5 ppm	PASS 1.20 %
1.0 MΩ	999980.6	999992.88	16.0 ppm	9.9991010E+05	1.0000511E+06	12.284 ppm	54.5 ppm	PASS 17.42 %
1.9 MΩ	1899961.7	1899982.8	17.0 ppm	1.8998259E+06	1.9000975E+06	11.086 ppm	54.5 ppm	PASS 15.50 %
10 MΩ	9998930	9997988.4	33.0 ppm	9.9969552E+06	1.0000905E+07	-94.166 ppm	164.5 ppm	PASS 47.68 %
19 MΩ	18998104	18995296	43.0 ppm	1.8994162E+07	1.9002046E+07	-147.788 ppm	164.5 ppm	PASS 71.22 %
100 MΩ	1.0000691E+08	99888102	100.0 ppm	9.9686888E+07	1.0032693E+08	-1187.999 ppm	3100.0 ppm	PASS 37.12 %
1 GΩ STD	9.9709110E+08	9.8425673E+08	30000.0 ppm	958104837.99	1036077362.01	-0.0129 %	9100.00 ppm	PASS 32.92 %

4W and 2W Zero test procedure for all test points that verify Zero offset of the OHMF function. 4-wire kelvin connection is used between DMM and MFC. 1GΩ resistance range is tested using the external standard, as MFC unable to provide this range value.

OHM ZERO 4W	DUT	Source unc.	Low Limit	Hi limit	Measured	24h spec	Result
20R Ω	Range 0.0000158 Ω	1.400e-04 Ω	-0.00014	0.00014	N/A	3.6000e-05 Ω	PASS
200R Ω	Range 0.0001683 Ω	1.400e-03 Ω	-0.0014	0.0014	N/A	2.3000e-05 Ω	PASS
2K Ω	Range 0.0003833 Ω	8.000e-03 Ω	-0.008	0.008	N/A	2.3000e-05 Ω	PASS
20K Ω	Range 0.0038333 Ω	8.000e-02 Ω	-0.08	0.08	N/A	2.3000e-05 Ω	PASS
200K Ω	Range 0.0600000 Ω	9.000e-01 Ω	-0.9	0.9	N/A	2.3000e-05 Ω	PASS
OHM ZERO 2W	DUT	Source unc.	Low Limit	Hi limit	Measured	24h spec	Result
20R Ω	Range -0.0014112 Ω	6.140e-03 Ω	-0.00614	0.00614	N/A	3.6000e-05 Ω	PASS
200R Ω	Range -0.0019617 Ω	7.400e-03 Ω	-0.0074	0.0074	N/A	2.3000e-05 Ω	PASS
2K Ω	Range 0.0005000 Ω	1.400e-02 Ω	-0.014	0.014	N/A	2.3000e-05 Ω	PASS
20K Ω	Range 0.0171667 Ω	8.000e-02 Ω	-0.08	0.08	N/A	2.3000e-05 Ω	PASS
200K Ω	Range 0.2700000 Ω	9.000e-01 Ω	-0.9	0.9	N/A	2.3000e-05 Ω	PASS
2M Ω	Range 2.4812500 Ω	9.000e+00 Ω	-9	9	N/A	2.3000e-05 Ω	PASS
20M Ω	Range 28.7500000 Ω	9.000e+01 Ω	-90	90	N/A	2.3000e-05 Ω	PASS
200M Ω	Range -410.0000000 Ω	2.000e+04 Ω	-20000.0	20000.0	N/A	2.3000e-05 Ω	PASS
1G Ω	Range -1918.7500000 Ω	1.000e+05 Ω	-100000	100000	N/A	2.3000e-05 Ω	PASS

Procedure for all test points in the AC performance verification for ANAlog mode. AC-measurements does not suffer from TEMF offsets, test connection can be made using shielded leads terminated with dual banana plugs. MFC main AC output is used as reference source

ACV ANA Test	1V-10V	DUT	w/Guardband	Low Limit	Hi limit	Units	Measured	24h spec	Result
1.0 VAC @ 50.0 kHz	1.0	0.9999576	0.0129 %	0.99672091	1.00327909	VAC	-0.0042 %	0.3150 %	PASS 1.29 %
1.0 VAC @ 1.0 MHz	1.0	0.9994893	0.2500 %	0.989	1.011	VAC	-0.0511 %	0.8500 %	PASS 4.64 %
10 VAC @ 100 Hz	10	9.997112	73.18	9.9947682	10.0052318	VAC	-288.800 ppm	450.0 ppm	PASS 55.20 %
10 VAC @ 400 Hz	10	9.999199	73.18	9.9947682	10.0052318	VAC	-80.100 ppm	450.0 ppm	PASS 15.31 %
10 VAC @ 1.0 kHz	10	9.999065	73.18	9.9947682	10.0052318	VAC	-93.500 ppm	450.0 ppm	PASS 17.87 %
10 VAC @ 50.0 kHz	10	10.006545	0.0129 %	9.9672091	10.0327909	VAC	0.0655 %	0.3150 %	PASS 19.96 %
10 VAC @ 1.0 MHz	10	10.175554	0.3000 %	9.76	10.24	VAC	1.7555 %	2.1000 %	PASS 73.15 %

Procedure for all test points in the AC performance verification for SYNCronous mode. This is highest AC accuracy test. AC-measurements does not suffer from TEMF offsets, test connection can be made using shielded leads terminated with dual banana plugs. MFC main AC output is used as reference source

ACV SYNC Test	DUT	w/Guardband	Low Limit	Hi limit	Measured	24h spec	Result, % spec
0.02 V AC+DC @ 10 Hz	0.020005	0.0312 %	0.019907	0.020093	0.0250 %	0.4325 %	PASS 5.39 %
0.02 V AC+DC @ 20 Hz	0.020004	0.0312 %	0.019907	0.020093	0.0200 %	0.4325 %	PASS 4.31 %
0.02 V AC+DC @ 50 Hz	0.020007	0.0312 %	0.019907	0.020093	0.0350 %	0.4325 %	PASS 7.55 %
0.02 V AC+DC @ 60 Hz	0.020011	0.0312 %	0.019907	0.020093	0.0550 %	0.4325 %	PASS 11.86 %
0.02 V AC+DC @ 100 Hz	0.020012	0.0312 %	0.019907	0.020093	0.0600 %	0.4325 %	PASS 12.94 %
0.02 V AC+DC @ 1.0 kHz	0.02001	0.0312 %	0.019907	0.020093	0.0500 %	0.4325 %	PASS 10.78 %
0.02 V AC+DC @ 6.25 kHz	0.020013	0.0312 %	0.019907	0.020093	0.0650 %	0.4325 %	PASS 14.02 %
0.02 V AC+DC @ 10.0 kHz	0.020014	0.0312 %	0.019907	0.020093	0.0700 %	0.4325 %	PASS 15.10 %
0.02 V AC+DC @ 20.0 kHz	0.020016	0.0312 %	0.019907	0.020093	0.0800 %	0.4325 %	PASS 17.25 %
0.02 V AC+DC @ 50.0 kHz	0.020022	0.0447 %	0.019905	0.020095	0.1100 %	0.4325 %	PASS 23.05 %
0.02 V AC+DC @ 100.0 kHz	0.020021	0.0773 %	0.019828	0.020172	0.1050 %	0.7825 %	PASS 12.21 %
0.02 V AC+DC @ 200.0 kHz	0.019983	0.1500 %	0.019800	0.020200	-0.0850 %	0.8500 %	PASS 8.50 %
0.02 V AC+DC @ 300.0 kHz	0.019975	0.1500 %	0.019800	0.020200	-0.1250 %	0.8500 %	PASS 12.50 %
0.02 V AC+DC @ 500.0 kHz	0.019994	0.2500 %	0.019530	0.020470	-0.0300 %	2.1000 %	PASS 1.28 %
0.02 V AC+DC @ 1.0 MHz	0.020017	0.4000 %	0.019500	0.020500	0.0850 %	2.1000 %	PASS 3.40 %
0.2 V AC+DC @ 10 Hz	0.199984	121.36	0.199866	0.200134	-80.000 ppm	550.0 ppm	PASS 11.92 %
0.2 V AC+DC @ 20 Hz	0.199967	121.36	0.199866	0.200134	-165.000 ppm	550.0 ppm	PASS 24.58 %
0.2 V AC+DC @ 50 Hz	0.199968	121.36	0.199886	0.200114	-160.000 ppm	450.0 ppm	PASS 28.00 %
0.2 V AC+DC @ 60 Hz	0.199966	121.36	0.199886	0.200114	-170.000 ppm	450.0 ppm	PASS 29.75 %
0.2 V AC+DC @ 100 Hz	0.199974	121.36	0.199886	0.200114	-130.000 ppm	450.0 ppm	PASS 22.75 %
0.2 V AC+DC @ 1.0 kHz	0.199998	121.36	0.199886	0.200114	-10.000 ppm	450.0 ppm	PASS 1.75 %
0.2 V AC+DC @ 6.25 kHz	0.200005	121.36	0.199886	0.200114	25.000 ppm	450.0 ppm	PASS 4.38 %
0.2 V AC+DC @ 10.0 kHz	0.200008	121.36	0.199886	0.200114	40.000 ppm	450.0 ppm	PASS 7.00 %
0.2 V AC+DC @ 20.0 kHz	0.200012	121.36	0.199886	0.200114	60.000 ppm	450.0 ppm	PASS 10.50 %
0.2 V AC+DC @ 50.0 kHz	0.200004	0.0256 %	0.199319	0.200681	0.0020 %	0.3150 %	PASS 0.59 %
0.2 V AC+DC @ 100.0 kHz	0.199886	0.0591 %	0.198332	0.201668	-0.0570 %	0.7750 %	PASS 6.83 %
0.2 V AC+DC @ 200.0 kHz	0.199474	0.0964 %	0.198107	0.201893	-0.2630 %	0.8500 %	PASS 27.79 %
0.2 V AC+DC @ 300.0 kHz	0.199178	0.0964 %	0.198107	0.201893	-0.4110 %	0.8500 %	PASS 43.43 %
0.2 V AC+DC @ 500.0 kHz	0.198923	0.1500 %	0.198000	0.202000	-0.5385 %	0.8500 %	PASS 53.85 %
0.2 V AC+DC @ 1.0 MHz	0.198803	0.3000 %	0.197700	0.202300	-0.5985 %	0.8500 %	PASS 52.04 %
2.0 V AC+DC @ 10 Hz	2.00009	49.55	1.998801	2.001199	45.000 ppm	550.0 ppm	PASS 7.51 %
2.0 V AC+DC @ 20 Hz	1.99988	49.55	1.998801	2.001199	-60.000 ppm	550.0 ppm	PASS 10.01 %
2.0 V AC+DC @ 50 Hz	1.99992	49.55	1.999001	2.000999	-40.000 ppm	450.0 ppm	PASS 8.01 %
2.0 V AC+DC @ 60 Hz	1.99991	49.55	1.999001	2.000999	-45.000 ppm	450.0 ppm	PASS 9.01 %
2.0 V AC+DC @ 100 Hz	1.99992	49.55	1.999001	2.000999	-40.000 ppm	450.0 ppm	PASS 8.01 %
2.0 V AC+DC @ 1.0 kHz	1.99999	49.55	1.999001	2.000999	-5.000 ppm	450.0 ppm	PASS 1.00 %
2.0 V AC+DC @ 6.25 kHz	2.00003	49.55	1.998901	2.001099	15.000 ppm	500.0 ppm	PASS 2.73 %
2.0 V AC+DC @ 10.0 kHz	2.00007	49.55	1.998901	2.001099	35.000 ppm	500.0 ppm	PASS 6.37 %
2.0 V AC+DC @ 20.0 kHz	2.00009	49.55	1.998901	2.001099	45.000 ppm	500.0 ppm	PASS 8.19 %
2.0 V AC+DC @ 50.0 kHz	1.99992	0.0085 %	1.993529	2.006471	-0.0040 %	0.3150 %	PASS 1.24 %
2.0 V AC+DC @ 100.0 kHz	1.9987	0.0138 %	1.984224	2.015776	-0.0650 %	0.7750 %	PASS 8.24 %
2.0 V AC+DC @ 200.0 kHz	1.99456	0.0425 %	1.982149	2.017851	-0.2720 %	0.8500 %	PASS 30.47 %
2.0 V AC+DC @ 300.0 kHz	1.99151	0.0425 %	1.982149	2.017851	-0.4245 %	0.8500 %	PASS 47.56 %
2.0 V AC+DC @ 500.0 kHz	1.99064	0.1100 %	1.955800	2.044200	-0.4680 %	2.1000 %	PASS 21.18 %
2.0 V AC+DC @ 1.0 MHz	1.99428	0.1800 %	1.954400	2.045600	-0.2860 %	2.1000 %	PASS 12.54 %
20 V AC+DC @ 10 Hz	19.9959	48.18	19.986036	20.013964	-205.000 ppm	650.0 ppm	PASS 29.36 %
20 V AC+DC @ 20 Hz	19.9947	48.18	19.986036	20.013964	-265.000 ppm	650.0 ppm	PASS 37.96 %
20 V AC+DC @ 50 Hz	19.9962	48.18	19.988036	20.011964	-190.000 ppm	550.0 ppm	PASS 31.76 %
20 V AC+DC @ 60 Hz	19.9962	48.18	19.988036	20.011964	-190.000 ppm	550.0 ppm	PASS 31.76 %
20 V AC+DC @ 100 Hz	19.9972	48.18	19.988036	20.011964	-140.000 ppm	550.0 ppm	PASS 23.40 %
20 V AC+DC @ 1.0 kHz	19.998	48.18	19.988036	20.011964	-100.000 ppm	550.0 ppm	PASS 16.72 %
20 V AC+DC @ 6.25 kHz	19.995	48.18	19.980036	20.019964	-250.000 ppm	950.0 ppm	PASS 25.05 %
20 V AC+DC @ 10.0 kHz	19.9955	48.18	19.980036	20.019964	-225.000 ppm	950.0 ppm	PASS 22.54 %
20 V AC+DC @ 20.0 kHz	19.9993	48.18	19.980036	20.019964	-35.000 ppm	950.0 ppm	PASS 3.51 %
20 V AC+DC @ 50.0 kHz	20.0078	0.0085 %	19.935291	20.064709	0.0390 %	0.3150 %	PASS 12.05 %
20 V AC+DC @ 100.0 kHz	20.0127	0.0121 %	19.932573	20.067427	0.0635 %	0.3250 %	PASS 18.84 %
20 V AC+DC @ 200.0 kHz	20.0116	0.0336 %	19.803273	20.196727	0.0580 %	0.9500 %	PASS 5.90 %
20 V AC+DC @ 300.0 kHz	20.0217	0.0336 %	19.803273	20.196727	0.1085 %	0.9500 %	PASS 11.03 %
20 V AC+DC @ 500.0 kHz	20.0734	0.1100 %	19.138000	20.862000	0.3670 %	4.2000 %	PASS 8.52 %
20 V AC+DC @ 1.0 MHz	20.3205	0.1700 %	19.126000	20.874000	1.6025 %	4.2000 %	PASS 36.67 %
200.0 V AC+DC @ 100 Hz	199.986	60.18	199.877964	200.122036	-70.000 ppm	550.0 ppm	PASS 11.46 %

200.0 V AC+DC @ 1.0 kHz	199.979	60.18	199.877964	200.122036	-105.000 ppm	550.0 ppm	PASS 17.19 %
200.0 V AC+DC @ 6.25 kHz	199.955	60.18	199.797964	200.202036	-225.000 ppm	950.0 ppm	PASS 22.26 %
200.0 V AC+DC @ 10.0 kHz	199.962	60.18	199.797964	200.202036	-190.000 ppm	950.0 ppm	PASS 18.80 %
200.0 V AC+DC @ 20.0 kHz	199.988	60.18	199.797964	200.202036	-60.000 ppm	950.0 ppm	PASS 5.94 %
700.0 V AC+DC @ 100 Hz	699.94	73.64	699.283452	700.716548	-85.714 ppm	950.0 ppm	PASS 8.36 %
700.0 V AC+DC @ 1.0 kHz	699.98	73.64	699.283452	700.716548	-28.571 ppm	950.0 ppm	PASS 2.79 %

Procedure for all test points that verify Gain of the DC current DCI function. Both +/-FS points are tested.
 2-wire connection at LO and DCI is used between DMM and MFC.
 DCI gain range points verify gain of the DC current function, using corrected 24-hour MFC output.

DCI Test 1µA - 2A	DUT	Source unc.	Low Limit	Hi limit	Measured	24h spec	Result
Zero µADC	3.3E-10				Z-check		INFO
1 µADC	1.00028E-06				280.000 ppm		INFO
2 µADC	2.00032E-06				160.000 ppm		INFO
-1 µADC	-9.9971E-07				-290.000 ppm		INFO
-2 µADC	-1.9997E-06				-150.000 ppm		INFO
Zero 00 µADC	2.1E-10				Z-check		INFO
10 µADC	1.000029E-05	71.82 ppm	9.998402E-06	1.00016E-05	29.000 ppm	88 ppm	PASS 18.15 %
20 µADC	2.00003E-05	71.82 ppm	1.99968E-05	2.00032E-05	15.000 ppm	88 ppm	PASS 9.39 %
-10 µADC	-9.99983E-06	71.82 ppm	-1.00016E-05	-9.998402E-06	-17.000 ppm	88 ppm	PASS 10.64 %
20 µADC	-1.999974E-05	71.82 ppm	-2.00032E-05	-1.99968E-05	-13.000 ppm	88 ppm	PASS 8.13 %
Zero 000 µADC	2.9E-10				Z-check		INFO
100 µADC	0.0001000001	71.82 ppm	9.998402E-05	0.000100016	1.000 ppm	88 ppm	PASS 0.63 %
200 µADC	0.00019999957	71.82 ppm	0.000199968	0.000200032	-2.150 ppm	88 ppm	PASS 1.35 %
-100 µADC	-0.0001	71.82 ppm	-0.000100016	-9.998402E-05	0.000 ppm	88 ppm	PASS 0.00 %
-200 µADC	-0.0001999999	71.82 ppm	-0.000200032	-0.000199968	-0.500 ppm	88 ppm	PASS 0.31 %
Zero mADC	-2E-10				Z-check		INFO
-1.0 mADC	0.001000017	33.64 ppm	0.0009998824	0.001000118	17.000 ppm	84 ppm	PASS 14.45 %
2.0 mADC	0.0020000312	33.64 ppm	0.001999765	0.002000235	15.600 ppm	84 ppm	PASS 13.26 %
-1.0 mADC	-0.00100002	33.64 ppm	-0.001000118	-0.0009998824	20.000 ppm	84 ppm	PASS 17.00 %
-2.0 mADC	-0.0020000373	33.64 ppm	-0.002000235	-0.001999765	18.650 ppm	84 ppm	PASS 15.85 %
Zero 00 mADC	-4E-09				Z-check		INFO
10 mADC	0.010000241	32.27 ppm	0.009998827	0.01000117	24.100 ppm	85 ppm	PASS 20.55 %
20 mADC	0.020000514	32.27 ppm	0.01999765	0.02000235	25.700 ppm	85 ppm	PASS 21.92 %
-10 mADC	-0.010000299	32.27 ppm	-0.01000117	-0.009998827	29.900 ppm	85 ppm	PASS 25.50 %
-20 mADC	-0.020000554	32.27 ppm	-0.02000235	-0.01999765	27.700 ppm	85 ppm	PASS 23.62 %
Zero 000 mADC	-8E-08				Z-check		INFO
100 mADC	0.10000163	53.32 ppm	0.09998307	0.1000169	16.300 ppm	116 ppm	PASS 9.63 %
200 mADC	0.19999776	53.32 ppm	0.1999661	0.2000339	-11.200 ppm	116 ppm	PASS 6.61 %
-100 mADC	-0.10000282	53.32 ppm	-0.1000169	-0.09998307	28.200 ppm	116 ppm	PASS 16.65 %
-200 mADC	-0.2000007	53.32 ppm	-0.2000339	-0.1999661	3.500 ppm	116 ppm	PASS 2.07 %
Zero ADC	-4.9E-06				Z-check		INFO
1.0 ADC	1.0000243	115.22 ppm	0.9993648	1.000635	24.300 ppm	520 ppm	PASS 3.83 %
2.0 ADC	1.9999684	115.22 ppm	1.99873	2.00127	-15.800 ppm	520 ppm	PASS 2.49 %
-1.0 ADC	-1.0001048	115.22 ppm	-1.000635	-0.9993648	104.800 ppm	520 ppm	PASS 16.50 %
-2.0 ADC	-2.0000072	115.22 ppm	-2.00127	-1.99873	3.600 ppm	520 ppm	PASS 0.57 %

Procedure for all test points that verify Gain of the AC Current ACI function. Three frequency band points are tested, 50 Hz, 60 Hz and 1 kHz. 2-wire connection at LO and DCI is used between DMM and MFC.

ACI Test	200µA-2A	DUT	Source unc.	Low Limit	Hi limit	Measured	24h spec	Result, % spec
100 µA AC @ 50 Hz	0.0001	0.0001000576	0.0165 %	9.9893455e-05	0.000100106545	576.000 ppm	0.0900 %	PASS 54.06 %
150 µA AC @ 50 Hz	0.00015	0.0001500423	0.0165 %	0.0001498401825	0.0001501598175	282.000 ppm	0.0900 %	PASS 26.47 %
200 µA AC @ 50 Hz	0.0002	0.0002000265	0.0165 %	0.00019978691	0.00020021309	132.500 ppm	0.0900 %	PASS 12.44 %
1.0 mA AC @ 50 Hz	0.001	0.0009999024	0.0138 %	0.00099896182	0.00100103818	-97.600 ppm	0.0900 %	PASS 9.40 %
2.0 mA AC @ 50 Hz	0.002	0.0019997923	0.0138 %	0.00199792364	0.00200207636	-103.850 ppm	0.0900 %	PASS 10.00 %
10 mA AC @ 50 Hz	0.01	0.00999929	0.0138 %	0.0099896182	0.0100103818	-71.000 ppm	0.0900 %	PASS 6.84 %
20 mA AC @ 50 Hz	0.02	0.01999839	0.0138 %	0.0199792364	0.0200207636	-80.500 ppm	0.0900 %	PASS 7.75 %
100 mA AC @ 50 Hz	0.1	0.09998892	0.0134 %	0.099896636	0.100103364	-110.800 ppm	0.0900 %	PASS 10.72 %
200 mA AC @ 50 Hz	0.2	0.19997163	0.0134 %	0.199793272	0.200206728	-141.850 ppm	0.0900 %	PASS 13.72 %
1.0 A AC @ 50 Hz	1.0	0.9998691	0.0308 %	0.99879182	1.00120818	-130.900 ppm	0.0900 %	PASS 10.83 %
2.0 A AC @ 50 Hz	2.0	1.9996405	0.0308 %	1.99758364	2.00241636	-179.750 ppm	0.0900 %	PASS 14.88 %
50 µA AC @ 60 Hz	5e-05	5.0047E-05	165.45	4.99467275e-05	5.00532725e-05	940.000 ppm	900.0 ppm	PASS 88.23 %
100 µA AC @ 60 Hz	0.0001	9.99904E-05	0.0165 %	9.9893455e-05	0.000100106545	-96.000 ppm	0.0900 %	PASS 9.01 %
150 µA AC @ 60 Hz	0.00015	0.000149981	0.0165 %	0.0001498401825	0.0001501598175	-126.667 ppm	0.0900 %	PASS 11.89 %
200 µA AC @ 60 Hz	0.0002	0.0002000264	0.0165 %	0.00019978691	0.00020021309	132.000 ppm	0.0900 %	PASS 12.39 %
1.0 mA AC @ 60 Hz	0.001	0.0010000008	0.0138 %	0.00099896182	0.00100103818	0.800 ppm	0.0900 %	PASS 0.08 %
2.0 mA AC @ 60 Hz	0.002	0.0019998462	0.0138 %	0.00199792364	0.00200207636	-76.900 ppm	0.0900 %	PASS 7.41 %
10 mA AC @ 60 Hz	0.01	0.010000336	0.0138 %	0.0099896182	0.0100103818	33.600 ppm	0.0900 %	PASS 3.24 %
20 mA AC @ 60 Hz	0.02	0.020000125	0.0138 %	0.0199792364	0.0200207636	6.250 ppm	0.0900 %	PASS 0.60 %
100 mA AC @ 60 Hz	0.1	0.09999275	0.0134 %	0.099896636	0.100103364	-72.500 ppm	0.0900 %	PASS 7.01 %
200 mA AC @ 60 Hz	0.2	0.19998302	0.0134 %	0.199793272	0.200206728	-84.900 ppm	0.0900 %	PASS 8.21 %
1.0 A AC @ 60 Hz	1.0	1.0000069	0.0308 %	0.99879182	1.00120818	6.900 ppm	0.0900 %	PASS 0.57 %
2.0 A AC @ 60 Hz	2.0	1.9997182	0.0308 %	1.99758364	2.00241636	-140.900 ppm	0.0900 %	PASS 11.66 %
100 µA AC @ 1.0 kHz	0.0001	0.0001000737	0.0165 %	9.9893455e-05	0.000100106545	737.000 ppm	0.0900 %	PASS 69.17 %
150 µA AC @ 1.0 kHz	0.00015	0.0001500644	0.0165 %	0.0001498401825	0.0001501598175	429.333 ppm	0.0900 %	PASS 40.30 %
200 µA AC @ 1.0 kHz	0.0002	0.0002000552	0.0165 %	0.00019978691	0.00020021309	276.000 ppm	0.0900 %	PASS 25.90 %
1.0 mA AC @ 1.0 kHz	0.001	0.0010000837	0.0138 %	0.00099896182	0.00100103818	83.700 ppm	0.0900 %	PASS 8.06 %
2.0 mA AC @ 1.0 kHz	0.002	0.002000152	0.0138 %	0.00199792364	0.00200207636	76.000 ppm	0.0900 %	PASS 7.32 %
10 mA AC @ 1.0 kHz	0.01	0.010002243	0.0138 %	0.0099896182	0.0100103818	224.300 ppm	0.0900 %	PASS 21.61 %
20 mA AC @ 1.0 kHz	0.02	0.020004282	0.0138 %	0.0199792364	0.0200207636	214.100 ppm	0.0900 %	PASS 20.62 %
100 mA AC @ 1.0 kHz	0.1	0.10002206	0.0134 %	0.099896636	0.100103364	220.600 ppm	0.0900 %	PASS 21.34 %
200 mA AC @ 1.0 kHz	0.2	0.20003804	0.0134 %	0.199793272	0.200206728	190.200 ppm	0.0900 %	PASS 18.40 %
1.0 A AC @ 1.0 kHz	1.0	1.00024	0.0308 %	0.99879182	1.00120818	240.000 ppm	0.0900 %	PASS 19.86 %
2.0 A AC @ 1.0 kHz	2.0	2.0000531	0.0308 %	1.99758364	2.00241636	26.550 ppm	0.0900 %	PASS 2.20 %
50 µA AC @ 10.0 kHz	5e-05	5.0033E-05	0.1400 %	4.986e-05	5.014e-05	0.0660 %	0.1400 %	PASS 23.57 %
100 µA AC @ 10.0 kHz	0.0001	9.99932E-05	0.1400 %	9.972e-05	0.00010028	-0.0068 %	0.1400 %	PASS 2.43 %
150 µA AC @ 10.0 kHz	0.00015	0.0001499423	0.1400 %	0.00014958	0.00015042	-0.0385 %	0.1400 %	PASS 13.74 %
200 µA AC @ 10.0 kHz	0.0002	0.0001998905	0.1400 %	0.00019944	0.00020056	-0.0548 %	0.1400 %	PASS 19.55 %
1.0 mA AC @ 10.0 kHz	0.001	0.0010002232	0.1400 %	0.0009972	0.0010028	0.0223 %	0.1400 %	PASS 7.97 %
2.0 mA AC @ 10.0 kHz	0.002	0.0020002057	0.1400 %	0.0019944	0.0020056	0.0103 %	0.1400 %	PASS 3.67 %
10 mA AC @ 10.0 kHz	0.01	0.010003574	0.1300 %	0.009973	0.010027	0.0357 %	0.1400 %	PASS 13.24 %
20 mA AC @ 10.0 kHz	0.02	0.020004447	0.1300 %	0.019946	0.020054	0.0222 %	0.1400 %	PASS 8.24 %
100 mA AC @ 10.0 kHz	0.1	0.10007901	0.1100 %	0.09975	0.10025	0.0790 %	0.1400 %	PASS 31.60 %
200 mA AC @ 10.0 kHz	0.2	0.20012504	0.1100 %	0.1995	0.2005	0.0625 %	0.1400 %	PASS 25.01 %
1.0 A AC @ 10.0 kHz	1.0	0.9982334	0.6100 %	0.9925	1.0075	-0.1767 %	0.1400 %	PASS 23.55 %
2.0 A AC @ 10.0 kHz	2.0	1.9920111	0.6100 %	1.985	2.015	-0.3994 %	0.1400 %	PASS 53.26 %

Test completed

Test date	22 April 2018 04:01
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Lab temperature maintained +24°C ±2°C

Internal use only

Not validated

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