

Manufacturer	HEWLETT-PACKARD	Calibration date	January 28 2019
Model Number	3458A	Ambient Temperature	22.15 °C
Serial	xDevs	Relative Humidity	54.18 %
ID Number	3458C-Hulk	Pressure	1019.95
Notes	Test front ports	Test type	First

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
MFC	Fluke	5720A	03/HLK	E2E6	XC01	01/03/2019	07/03/2019
Amplifier	Fluke	5725A		5930005	XA01	12/06/2018	03/06/2019
DC STD	xDevs.com	792X[2]	9.9999854 VDC	±2.2 ppm	XD01	02/16/2018	02/16/2019
STDR	ESI	SR104	10000.0012 KΩ	±1.00 ppm	XR04	06/30/2018	06/30/2019
STDR	xDevs.com/Fluke	SL935	1.00005942 Ω	±0.17 ppm	XR03	05/31/2018	05/31/2019
STDR	xDevs.com/Fluke	SL935	9999.9755 kΩ	±0.33 ppm	XR02	05/31/2018	05/31/2019

MFC last calibrated	25.0 days ago	MFC since DCV ZERO	2.0 days ago
MFC since WBFLAT	11349.0 days ago	MFC since WBGAIN	11349.0 days ago
MFC Confidence level	24h 95% REL	MFC Calibrate date	2019-10-03 00:00:00
MFC Calibrate date Zero	2019-12-06 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	6.95748543901
CAL CONST 13V reference voltage	13.8553030062	CAL CONST 22V range positive zero	398.17999
CAL CONST 22V range negative zero	398.17948	CAL CONST DAC Linearity	0.0
CAL CONST 10KOHM true output resistance	9999.79162853	CAL CONST 10KOHM standard resistance	9998.74673115
CAL CONST, Zero calibration temperature	23.6000003815	CAL CONST, All calibration temp	23.6000003815

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

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	2.76 µV	0.75 µV	-0.910 µV	0.910 µV	N/A	0.16 µV	FAIL
Short 0.0 VDC	0.000000E+00	2.81 µV	0.75 µV	-0.900 µV	0.900 µV	N/A	0.15 µV	FAIL
Short 00.0 VDC	0.000000E+00	3.23 µV	0.75 µV	-1.070 µV	1.070 µV	N/A	0.32 µV	FAIL
Short 000.0 VDC	0.000000E+00	14.07 µV	0.75 µV	-14.750 µV	14.750 µV	N/A	14.00 µV	PASS
Short 0000.0 VDC	0.000000E+00	89.66 µV	0.75 µV	-41.750 µV	41.750 µV	N/A	41.00 µV	FAIL
DCV Test	0.1V-1000V	DUT	Source unc.	Low Limit	Hi limit	Measured	24h spec	Result
0.1 VDC (0.10 Range)	0.1000000	0.10000043	7.27 ppm	0.099998723	0.10000128	4.316 ppm	5.50 ppm	PASS 33.80 %
-0.1 VDC (0.10 Range)	-0.1000000	-0.10000063	7.27 ppm	-0.10000128	-0.099998723	6.284 ppm	5.50 ppm	PASS 49.21 %
0.1 VDC (1.00 Range)	0.1000000	0.10000045	7.27 ppm	0.099999093	0.10000091	4.470 ppm	1.80 ppm	PASS 49.29 %
0.2 VDC (1.00 Range)	0.2000000	0.20000084	3.86 ppm	0.19999887	0.20000113	4.208 ppm	1.80 ppm	PASS 74.35 %
1.0 VDC (1.00 Range)	1.0000000	1.000001	3.86 ppm	0.99999434	1.0000057	0.995 ppm	1.80 ppm	PASS 17.58 %
-0.1 VDC (1.00 Range)	-0.1000000	-0.100001	7.27 ppm	-0.10000091	-0.099999093	9.952 ppm	1.80 ppm	FAIL 109.72 %
-0.2 VDC (1.00 Range)	-0.2000000	-0.20000158	3.86 ppm	-0.20000113	-0.19999887	7.894 ppm	1.80 ppm	FAIL 139.47 %
-1.0 VDC (1.00 Range)	-1.0000000	-1.0000028	3.86 ppm	-1.0000057	-0.99999434	2.843 ppm	1.80 ppm	PASS 50.23 %
1.0 VDC (10.00 Range)	1.0000000	1.0000028	3.86 ppm	0.99999559	1.0000044	2.848 ppm	0.55 ppm	PASS 64.58 %
2.0 VDC (10.00 Range)	2.0000000	2.000005	2.77 ppm	1.9999934	2.0000066	2.497 ppm	0.55 ppm	PASS 75.21 %
10.0 VDC (10.00 Range)	10.0000000	10.000024	2.73 ppm	9.9999672	10.000033	2.369 ppm	0.55 ppm	PASS 72.24 %
-1.0 VDC (10.00 Range)	-1.0000000	-1.0000058	3.86 ppm	-1.0000044	-0.99999559	5.759 ppm	0.55 ppm	FAIL 130.59 %
-2.0 VDC (10.00 Range)	-2.0000000	-2.0000085	2.77 ppm	-2.0000066	-1.9999934	4.260 ppm	0.55 ppm	FAIL 128.31 %
-10.0 VDC (10.00 Range)	-10.0000000	-10.000029	2.73 ppm	-10.000033	-9.9999672	2.884 ppm	0.55 ppm	PASS 87.93 %
10 VDC (100.00 Range)	10.0000000	10.000056	2.77 ppm	9.9999443	10.000056	5.633 ppm	2.80 ppm	FAIL 101.13 %
20 VDC (100.00 Range)	20.0000000	20.00007	3.73 ppm	19.999869	20.000131	3.506 ppm	2.80 ppm	PASS 53.69 %
100 VDC (100.00 Range)	100.0000000	100.00038	3.73 ppm	99.999347	100.00065	3.836 ppm	2.80 ppm	PASS 58.74 %
-10 VDC (100.00 Range)	-10.0000000	-10.00002	2.77 ppm	-10.000056	-9.9999443	1.977 ppm	2.80 ppm	PASS 35.48 %
-20 VDC (100.00 Range)	-20.0000000	-20.000038	3.73 ppm	-20.000131	-19.999869	1.901 ppm	2.80 ppm	PASS 29.12 %
-100 VDC (100.00 Range)	-100.0000000	-100.00035	3.73 ppm	-100.00065	-99.999347	3.482 ppm	2.80 ppm	PASS 53.32 %
100 VDC (1000.00 Range)	100.0000000	100.00055	3.73 ppm	99.999367	100.00063	5.507 ppm	2.60 ppm	PASS 87.00 %
200 VDC (1000.00 Range)	200.0000000	200.0009	3.73 ppm	199.99873	200.00127	4.514 ppm	2.60 ppm	PASS 71.31 %
1000 VDC (1000.00 Range)	1000.0000000	1000.0082	5.45 ppm	999.97995	1000.02	8.162 ppm	2.60 ppm	PASS 40.71 %
-100 VDC (1000.00 Range)	-100.0000000	-100.00083	3.73 ppm	-100.00063	-99.999367	8.303 ppm	2.60 ppm	FAIL 131.17 %
-200 VDC (1000.00 Range)	-200.0000000	-200.00115	3.73 ppm	-200.00127	-199.99873	5.749 ppm	2.60 ppm	PASS 90.82 %
-1000 VDC (1000.00 Range)	-1000.0000000	-1000.0083	5.45 ppm	-1000.02	-999.97995	8.337 ppm	2.60 ppm	FAIL 211.08 %

DCV Linearity	1V Range	DUT	Source unc.	Low Limit	Hi limit	Measured	24h spec	Result
1.0999999	1.0999999	1.1000027	2.73 ppm	1.099996	1.100004	2.53 ppm	0.55 ppm	PASS 77.09 %
0.9999999	0.9999999	1.00000265	2.73 ppm	0.9999966	1.000003	2.75 ppm	0.55 ppm	PASS 83.90 %
0.9000000	0.9000000	0.90000268	2.73 ppm	0.899997	0.900003	2.98 ppm	0.55 ppm	PASS 90.92 %
0.8888888	0.8888888	0.88889140	2.73 ppm	0.8888859	0.8888917	2.93 ppm	0.55 ppm	PASS 89.24 %
0.8000000	0.8000000	0.80000256	2.73 ppm	0.7999974	0.8000026	3.20 ppm	0.55 ppm	PASS 97.64 %
0.7777777	0.7777777	0.7777803	2.73 ppm	0.7777751	0.7777803	3.32 ppm	0.55 ppm	FAIL 101.31 %
0.7000000	0.7000000	0.7000025	2.73 ppm	0.6999977	0.7000023	3.56 ppm	0.55 ppm	FAIL 108.41 %
0.6666666	0.6666666	0.6666691	2.73 ppm	0.6666644	0.6666688	3.72 ppm	0.55 ppm	FAIL 113.54 %
0.6000000	0.6000000	0.6000024	2.73 ppm	0.599998	0.600002	4.00 ppm	0.55 ppm	FAIL 121.94 %
0.5555555	0.5555555	0.5555578	2.73 ppm	0.5555537	0.5555573	4.18 ppm	0.55 ppm	FAIL 127.52 %
0.5000000	0.5000000	0.5000022	2.73 ppm	0.4999984	0.5000016	4.43 ppm	0.55 ppm	FAIL 135.19 %
0.4444444	0.4444444	0.4444465	2.73 ppm	0.4444429	0.4444459	4.72 ppm	0.55 ppm	FAIL 144.03 %
0.4000000	0.4000000	0.4000020	2.73 ppm	0.3999987	0.4000013	4.99 ppm	0.55 ppm	FAIL 152.25 %
0.3333333	0.3333333	0.3333353	2.73 ppm	0.3333322	0.3333344	5.85 ppm	0.55 ppm	FAIL 178.47 %
0.3000000	0.3000000	0.3000018	2.73 ppm	0.299999	0.300001	6.13 ppm	0.55 ppm	FAIL 186.84 %
0.2222222	0.2222222	0.2222239	2.73 ppm	0.2222215	0.2222229	7.59 ppm	0.55 ppm	FAIL 231.30 %
0.2000000	0.2000000	0.2000016	2.73 ppm	0.1999993	0.2000007	8.02 ppm	0.55 ppm	FAIL 244.37 %
0.1234567	0.1234567	0.1234582	2.73 ppm	0.1234563	0.1234571	12.05 ppm	0.55 ppm	FAIL 367.43 %
0.1111111	0.1111111	0.1111126	2.73 ppm	0.1111107	0.1111115	13.07 ppm	0.55 ppm	FAIL 398.46 %
0.1000000	0.1000000	0.1000014	2.73 ppm	0.0999967	0.1000003	14.30 ppm	0.55 ppm	FAIL 436.02 %
0.0987654	0.0987654	0.0987668	3.86 ppm	0.09876496	0.09876584	14.25 ppm	0.55 ppm	FAIL 323.15 %
0.0111111	0.0111111	0.0111123	7.27 ppm	0.0111101	0.0111119	111.56 ppm	0.55 ppm	FAIL 1426.66 %
-0.0111111	-0.0111111	-0.0111097	7.27 ppm	-0.0111119	-0.0111101	-125.40 ppm	0.55 ppm	FAIL 1603.60 %
-0.0987654	-0.0987654	-0.0987644	3.86 ppm	-0.09876584	-0.09876496	-10.04 ppm	0.55 ppm	FAIL 227.67 %
-0.1000000	-0.1000000	-0.0999990	2.73 ppm	-0.1000003	-0.0999967	-9.96 ppm	0.55 ppm	FAIL 303.73 %
-0.1111111	-0.1111111	-0.1111101	2.73 ppm	-0.1111115	-0.1111107	-8.72 ppm	0.55 ppm	FAIL 265.86 %
-0.1234567	-0.1234567	-0.1234557	2.73 ppm	-0.1234571	-0.1234563	-8.01 ppm	0.55 ppm	FAIL 244.36 %
-0.2000000	-0.2000000	-0.1999993	2.73 ppm	-0.2000007	-0.1999993	-3.69 ppm	0.55 ppm	FAIL 112.49 %
-0.2222222	-0.2222222	-0.2222214	2.73 ppm	-0.2222229	-0.2222215	-3.40 ppm	0.55 ppm	FAIL 103.52 %
-0.3000000	-0.3000000	-0.2999995	2.73 ppm	-0.3000001	-0.299999	-1.74 ppm	0.55 ppm	PASS 53.04 %
-0.3333333	-0.3333333	-0.3333328	2.73 ppm	-0.3333344	-0.3333322	-1.46 ppm	0.55 ppm	PASS 44.42 %
-0.4000000	-0.4000000	-0.3999997	2.73 ppm	-0.4000013	-0.3999987	-0.81 ppm	0.55 ppm	PASS 24.71 %
-0.4444444	-0.4444444	-0.4444441	2.73 ppm	-0.4444459	-0.4444429	-0.62 ppm	0.55 ppm	PASS 18.85 %
-0.5000000	-0.5000000	-0.4999999	2.73 ppm	-0.5000016	-0.4999984	-0.25 ppm	0.55 ppm	PASS 7.62 %
-0.5555555	-0.5555555	-0.5555555	2.73 ppm	-0.5555573	-0.5555537	0.00 ppm	0.55 ppm	PASS 0.11 %
-0.6000000	-0.6000000	-0.6000001	2.73 ppm	-0.6000002	-0.599998	0.20 ppm	0.55 ppm	PASS 6.24 %
-0.6666666	-0.6666666	-0.6666668	2.73 ppm	-0.6666688	-0.6666644	0.34 ppm	0.55 ppm	PASS 10.42 %
-0.7000000	-0.7000000	-0.7000004	2.73 ppm	-0.7000023	-0.6999977	0.53 ppm	0.55 ppm	PASS 16.06 %
-0.7777777	-0.7777777	-0.7777782	2.73 ppm	-0.7777803	-0.7777751	0.61 ppm	0.55 ppm	PASS 18.50 %
-0.8000000	-0.8000000	-0.8000005	2.73 ppm	-0.8000026	-0.7999974	0.65 ppm	0.55 ppm	PASS 19.81 %
-0.8888888	-0.8888888	-0.8888894	2.73 ppm	-0.8888917	-0.8888859	0.69 ppm	0.55 ppm	PASS 20.89 %
-0.9000000	-0.9000000	-0.9000007	2.73 ppm	-0.9000003	-0.8999997	0.73 ppm	0.55 ppm	PASS 22.19 %
-0.9999999	-0.9999999	-1.0000009	2.73 ppm	-1.0000003	-0.9999966	0.96 ppm	0.55 ppm	PASS 29.28 %
-1.0999999	-1.0999999	-1.1000010	2.73 ppm	-1.1000004	-1.099996	0.97 ppm	0.55 ppm	PASS 29.52 %
DCV Linearity	10V Range	DUT	Source unc.	Low Limit	Hi limit	Measured	24h spec	Result
10.250000	10.250000	10.2500277	1.04 ppm	10.24998	10.25002	2.71 ppm	0.55 ppm	FAIL 170.15 %
10.000000	10.000000	10.0000277	1.05 ppm	9.999984	10.00002	2.77 ppm	0.55 ppm	FAIL 173.13 %
9.750000	9.750000	9.7500275	1.06 ppm	9.749984	9.750016	2.82 ppm	0.55 ppm	FAIL 175.30 %
9.500000	9.500000	9.5000274	1.06 ppm	9.499985	9.500015	2.88 ppm	0.55 ppm	FAIL 179.16 %
9.250000	9.250000	9.2500265	1.07 ppm	9.249985	9.250015	2.86 ppm	0.55 ppm	FAIL 176.69 %
9.000000	9.000000	9.0000261	1.08 ppm	8.999985	9.000015	2.90 ppm	0.55 ppm	FAIL 177.89 %
8.750000	8.750000	8.7500253	1.09 ppm	8.749986	8.750014	2.89 ppm	0.55 ppm	FAIL 176.39 %
8.500000	8.500000	8.5000250	1.09 ppm	8.499986	8.500014	2.94 ppm	0.55 ppm	FAIL 179.10 %
8.250000	8.250000	8.2500240	1.10 ppm	8.249986	8.250014	2.91 ppm	0.55 ppm	FAIL 176.62 %
8.000000	8.000000	8.0000232	1.11 ppm	7.999987	8.000013	2.90 ppm	0.55 ppm	FAIL 174.74 %
7.750000	7.750000	7.7500231	1.12 ppm	7.749987	7.750013	2.98 ppm	0.55 ppm	FAIL 178.53 %
7.500000	7.500000	7.5000219	1.13 ppm	7.499987	7.500013	2.92 ppm	0.55 ppm	FAIL 174.09 %
7.250000	7.250000	7.2500216	1.14 ppm	7.249988	7.250012	2.98 ppm	0.55 ppm	FAIL 176.21 %
7.000000	7.000000	7.0000206	1.16 ppm	6.999988	7.000012	2.94 ppm	0.55 ppm	FAIL 171.90 %
6.750000	6.750000	6.7500203	1.17 ppm	6.749988	6.750012	3.01 ppm	0.55 ppm	FAIL 175.02 %
6.500000	6.500000	6.5000194	1.18 ppm	6.499989	6.500011	2.98 ppm	0.55 ppm	FAIL 172.16 %
6.250000	6.250000	6.2500189	1.20 ppm	6.249989	6.250011	3.02 ppm	0.55 ppm	FAIL 172.56 %
6.000000	6.000000	6.0000180	1.22 ppm	5.999989	6.000011	3.00 ppm	0.55 ppm	FAIL 169.67 %
5.750000	5.750000	5.7500175	1.23 ppm	5.74999	5.75001	3.04 ppm	0.55 ppm	FAIL 170.80 %
5.500000	5.500000	5.5000165	1.25 ppm	5.49999	5.50001	2.99 ppm	0.55 ppm	FAIL 166.34 %
5.250000	5.250000	5.2500158	1.28 ppm	5.24999	5.25001	3.01 ppm	0.55 ppm	FAIL 164.34 %
5.000000	5.000000	5.0000154	1.30 ppm	4.999991	5.000009	3.07 ppm	0.55 ppm	FAIL 166.19 %
4.750000	4.750000	4.7500143	1.33 ppm	4.749991	4.750009	3.02 ppm	0.55 ppm	FAIL 160.62 %
4.500000	4.500000	4.5000138	1.36 ppm	4.499991	4.500009	3.06 ppm	0.55 ppm	FAIL 160.41 %
4.250000	4.250000	4.2500131	1.39 ppm	4.249992	4.250008	3.08 ppm	0.55 ppm	FAIL 158.56 %
4.000000	4.000000	4.0000126	1.42 ppm	3.999992	4.000008	3.15 ppm	0.55 ppm	FAIL 159.73 %
3.750000	3.750000	3.7500116	1.47 ppm	3.749992	3.750008	3.10 ppm	0.55 ppm	FAIL 153.49 %
3.500000	3.500000	3.5000110	1.51 ppm	3.499993	3.500007	3.14 ppm	0.55 ppm	FAIL 152.57 %
3.250000	3.250000	3.2500104	1.57 ppm	3.249993	3.250007	3.21 ppm	0.55 ppm	FAIL 151.58 %
3.000000	3.000000	3.0000096	1.63 ppm	2.999993	3.000007	3.21 ppm	0.55 ppm	FAIL 147.43 %
2.750000	2.750000	2.7500091	1.71 ppm	2.749994	2.750006	3.31 ppm	0.55 ppm	FAIL 146.48 %
2.500000	2.500000	2.5000084	1.80 ppm	2.499994	2.500006	3.37 ppm	0.55 ppm	FAIL 143.40 %
2.250000	2.250000	2.2500077	1.91 ppm	2.249994	2.250006	3.42 ppm	0.55 ppm	FAIL 138.99 %

2.000000	2.000000	2.000069	2.05 ppm	1.999995	2.000005	3.45 ppm	0.55 ppm	FAIL 132.87 %
1.750000	1.750000	1.750063	2.23 ppm	1.749995	1.750005	3.58 ppm	0.55 ppm	FAIL 128.78 %
1.500000	1.500000	1.500055	2.47 ppm	1.499995	1.500005	3.69 ppm	0.55 ppm	FAIL 122.34 %
1.250000	1.250000	1.250048	2.80 ppm	1.249996	1.250004	3.87 ppm	0.55 ppm	FAIL 115.50 %
1.000000	1.000000	1.000041	3.30 ppm	0.9999961	1.000004	4.06 ppm	0.55 ppm	FAIL 105.48 %
0.750000	0.750000	0.7500326	4.13 ppm	0.7499965	0.7500035	4.35 ppm	0.55 ppm	PASS 92.84 %
0.500000	0.500000	0.5000269	5.80 ppm	0.4999968	0.5000032	5.37 ppm	0.55 ppm	PASS 84.58 %
0.250000	0.250000	0.2500017	10.80 ppm	0.2499972	0.2500028	6.76 ppm	0.55 ppm	PASS 59.56 %
0.100000	0.100000	0.1000013	25.80 ppm	0.09999737	0.1000026	12.82 ppm	0.55 ppm	PASS 48.67 %
-0.100000	-0.100000	-0.0999983	25.80 ppm	-0.1000026	-0.09999737	-16.71 ppm	0.55 ppm	PASS 63.42 %
-0.250000	-0.250000	-0.2500008	10.80 ppm	-0.2500028	-0.2499972	3.17 ppm	0.55 ppm	PASS 27.96 %
-0.500000	-0.500000	-0.5000016	5.80 ppm	-0.5000032	-0.4999968	3.24 ppm	0.55 ppm	PASS 51.08 %
-0.750000	-0.750000	-0.7500023	4.13 ppm	-0.7500035	-0.7499965	3.04 ppm	0.55 ppm	PASS 65.05 %
-1.000000	-1.000000	-1.0000029	3.30 ppm	-1.000004	-0.9999961	2.94 ppm	0.55 ppm	PASS 76.26 %
-1.250000	-1.250000	-1.2500378	2.80 ppm	-1.250004	-1.249996	3.03 ppm	0.55 ppm	PASS 90.30 %
-1.500000	-1.500000	-1.5000448	2.47 ppm	-1.500005	-1.499995	2.99 ppm	0.55 ppm	PASS 98.85 %
-1.750000	-1.750000	-1.7500051	2.23 ppm	-1.750005	-1.749995	2.92 ppm	0.55 ppm	FAIL 104.92 %
-2.000000	-2.000000	-2.0000058	2.05 ppm	-2.000005	-1.999995	2.91 ppm	0.55 ppm	FAIL 111.73 %
-2.250000	-2.250000	-2.2500068	1.91 ppm	-2.250006	-2.249994	3.00 ppm	0.55 ppm	FAIL 122.00 %
-2.500000	-2.500000	-2.5000074	1.80 ppm	-2.500006	-2.499994	2.98 ppm	0.55 ppm	FAIL 126.65 %
-2.750000	-2.750000	-2.7500080	1.71 ppm	-2.750006	-2.749994	2.91 ppm	0.55 ppm	FAIL 128.80 %
-3.000000	-3.000000	-3.0000085	1.63 ppm	-3.000007	-2.999993	2.85 ppm	0.55 ppm	FAIL 130.63 %
-3.250000	-3.250000	-3.2500094	1.57 ppm	-3.250007	-3.249993	2.90 ppm	0.55 ppm	FAIL 136.92 %
-3.500000	-3.500000	-3.5000102	1.51 ppm	-3.500007	-3.499993	2.92 ppm	0.55 ppm	FAIL 141.96 %
-3.750000	-3.750000	-3.7500108	1.47 ppm	-3.750008	-3.749992	2.88 ppm	0.55 ppm	FAIL 142.69 %
-4.000000	-4.000000	-4.0000118	1.42 ppm	-4.000008	-3.999992	2.94 ppm	0.55 ppm	FAIL 149.47 %
-4.250000	-4.250000	-4.2500125	1.39 ppm	-4.250008	-4.249992	2.93 ppm	0.55 ppm	FAIL 151.09 %
-4.500000	-4.500000	-4.5000132	1.36 ppm	-4.500009	-4.499991	2.92 ppm	0.55 ppm	FAIL 153.14 %
-4.750000	-4.750000	-4.7500137	1.33 ppm	-4.750009	-4.749991	2.88 ppm	0.55 ppm	FAIL 152.93 %
-5.000000	-5.000000	-5.0000145	1.30 ppm	-5.000009	-4.999991	2.91 ppm	0.55 ppm	FAIL 157.08 %
-5.250000	-5.250000	-5.2500151	1.28 ppm	-5.25001	-5.24999	2.88 ppm	0.55 ppm	FAIL 157.56 %
-5.500000	-5.500000	-5.5000160	1.25 ppm	-5.50001	-5.49999	2.90 ppm	0.55 ppm	FAIL 161.19 %
-5.750000	-5.750000	-5.7500170	1.23 ppm	-5.75001	-5.74999	2.95 ppm	0.55 ppm	FAIL 165.90 %
-6.000000	-6.000000	-6.0000175	1.22 ppm	-6.000011	-5.999989	2.91 ppm	0.55 ppm	FAIL 164.62 %
-6.250000	-6.250000	-6.2500183	1.20 ppm	-6.250011	-6.249989	2.94 ppm	0.55 ppm	FAIL 167.74 %
-6.500000	-6.500000	-6.5000184	1.18 ppm	-6.500011	-6.499989	2.83 ppm	0.55 ppm	FAIL 163.79 %
-6.750000	-6.750000	-6.7500194	1.17 ppm	-6.750012	-6.749988	2.87 ppm	0.55 ppm	FAIL 166.92 %
-7.000000	-7.000000	-7.0000199	1.16 ppm	-7.000012	-6.999988	2.85 ppm	0.55 ppm	FAIL 166.47 %
-7.250000	-7.250000	-7.2500209	1.14 ppm	-7.250012	-7.249988	2.88 ppm	0.55 ppm	FAIL 170.54 %
-7.500000	-7.500000	-7.5000216	1.13 ppm	-7.500013	-7.499987	2.88 ppm	0.55 ppm	FAIL 171.64 %
-7.750000	-7.750000	-7.7500226	1.12 ppm	-7.750013	-7.749987	2.92 ppm	0.55 ppm	FAIL 174.73 %
-8.000000	-8.000000	-8.0000234	1.11 ppm	-8.000013	-7.999987	2.93 ppm	0.55 ppm	FAIL 176.45 %
-8.250000	-8.250000	-8.2500240	1.10 ppm	-8.250014	-8.249986	2.91 ppm	0.55 ppm	FAIL 176.36 %
-8.500000	-8.500000	-8.5000250	1.09 ppm	-8.500014	-8.499986	2.94 ppm	0.55 ppm	FAIL 179.17 %
-8.750000	-8.750000	-8.7500255	1.09 ppm	-8.750014	-8.749986	2.91 ppm	0.55 ppm	FAIL 177.49 %
-9.000000	-9.000000	-9.0000260	1.08 ppm	-9.000015	-8.999985	2.89 ppm	0.55 ppm	FAIL 177.05 %
-9.250000	-9.250000	-9.2500268	1.07 ppm	-9.250015	-9.249985	2.90 ppm	0.55 ppm	FAIL 178.86 %
-9.500000	-9.500000	-9.5000277	1.06 ppm	-9.500015	-9.499985	2.92 ppm	0.55 ppm	FAIL 181.28 %
-9.750000	-9.750000	-9.7500283	1.06 ppm	-9.750016	-9.749984	2.90 ppm	0.55 ppm	FAIL 180.01 %
-10.000000	-10.000000	-10.0000291	1.05 ppm	-10.00002	-9.999984	2.91 ppm	0.55 ppm	FAIL 181.78 %
-10.250000	-10.250000	-10.2500301	1.04 ppm	-10.25002	-10.24998	2.94 ppm	0.55 ppm	FAIL 184.81 %
DCV Linearity	100V Range	DUT	Source unc.	Low Limit	Hi limit	Measured	24h spec	Result
100.99999	100.99999	101.0002492	2.73 ppm	100.99966	101.00032	2.57 ppm	0.55 ppm	PASS 57.13 %
100.10101	100.10101	100.1012674	2.73 ppm	100.10068	100.10134	2.57 ppm	0.55 ppm	PASS 57.39 %
100.00000	100.00000	100.0002542	2.73 ppm	99.999672	100.00033	2.54 ppm	0.55 ppm	PASS 56.75 %
99.99999	99.99999	100.0002525	2.73 ppm	99.999662	100.00032	2.63 ppm	0.55 ppm	PASS 58.60 %
90.00000	90.00000	90.00025071	2.73 ppm	89.999705	90.000295	2.79 ppm	0.55 ppm	PASS 84.93 %
88.88888	88.88888	88.88912725	2.73 ppm	88.888588	88.889172	2.78 ppm	0.55 ppm	PASS 84.80 %
80.00000	80.00000	80.00023301	2.73 ppm	79.999738	80.000262	2.91 ppm	0.55 ppm	PASS 88.80 %
77.77777	77.77777	77.77799585	2.73 ppm	77.777515	77.778025	2.90 ppm	0.55 ppm	PASS 88.53 %
70.00000	70.00000	70.00021233	2.73 ppm	69.99977	70.00023	3.03 ppm	0.55 ppm	PASS 92.48 %
66.66666	66.66666	66.66686648	2.73 ppm	66.666441	66.666879	3.10 ppm	0.55 ppm	PASS 94.42 %
60.00000	60.00000	60.00018593	2.73 ppm	59.999803	60.000197	3.10 ppm	0.55 ppm	PASS 94.48 %
55.55555	55.55555	55.55572268	2.73 ppm	55.555368	55.555732	3.11 ppm	0.55 ppm	PASS 94.76 %
50.00000	50.00000	50.0001644	2.73 ppm	49.999836	50.000164	3.29 ppm	0.55 ppm	FAIL 100.22 %
44.44444	44.44444	44.4445896	2.73 ppm	44.444294	44.444586	3.37 ppm	0.55 ppm	FAIL 102.63 %
40.00000	40.00000	40.0001330	2.73 ppm	39.999869	40.000131	3.33 ppm	0.55 ppm	FAIL 101.40 %
33.33333	33.33333	33.3334445	2.73 ppm	33.333221	33.333439	3.43 ppm	0.55 ppm	FAIL 104.72 %
30.00000	30.00000	30.0001047	2.73 ppm	29.999902	30.000098	3.49 ppm	0.55 ppm	FAIL 106.40 %
22.22222	22.22222	22.2222971	2.73 ppm	22.222147	22.222293	3.47 ppm	0.55 ppm	FAIL 105.76 %
20.00000	20.00000	20.0000711	2.73 ppm	19.999934	20.000066	3.55 ppm	0.55 ppm	FAIL 108.37 %
11.11111	11.11111	11.1111597	2.73 ppm	11.111075	11.111147	4.38 ppm	0.55 ppm	FAIL 133.66 %
10.00000	10.00000	10.00004135	3.86 ppm	9.9999559	10.000044	4.13 ppm	0.55 ppm	PASS 93.76 %
9.87654	9.87654	9.8765808	7.27 ppm	9.8764658	9.8766202	3.83 ppm	0.55 ppm	PASS 48.97 %
-9.87654	-9.87654	-9.8765658	7.27 ppm	-9.8766202	-9.8764658	2.31 ppm	0.55 ppm	PASS 29.50 %
-10.00000	-10.00000	-10.0000267	3.86 ppm	-10.000044	-9.9999559	2.67 ppm	0.55 ppm	PASS 60.66 %
-11.11111	-11.11111	-11.1111392	2.73 ppm	-11.111147	-11.111075	2.54 ppm	0.55 ppm	PASS 77.45 %
-20.00000	-20.00000	-20.00006256	2.73 ppm	-20.000066	-19.999934	3.13 ppm	0.55 ppm	PASS 95.37 %
-22.22222	-22.22222	-22.22228575	2.73 ppm	-22.222293	-22.222147	2.96 ppm	0.55 ppm	PASS 90.20 %
-30.00000	-30.00000	-30.00009477	2.73 ppm	-30.000098	-29.999902	3.16 ppm	0.55 ppm	PASS 96.31 %
-33.33333	-33.33333	-33.33343508	2.73 ppm	-33.333439	-33.333221	3.15 ppm	0.55 ppm	PASS 96.11 %
-40.00000	-40.00000	-40.00012275	2.73 ppm	-40.000131	-39.999869	3.07 ppm	0.55 ppm	PASS 93.56 %

-44.44444	-44.44444	-44.44458099	2.73 ppm	-44.444586	-44.444294	3.17 ppm	0.55 ppm	PASS 96.71 %
-50.00000	-50.00000	-50.00016146	2.73 ppm	-50.000164	-49.999836	3.23 ppm	0.55 ppm	PASS 98.45 %
-55.55555	-55.55555	-55.55572400	2.73 ppm	-55.555732	-55.555368	3.13 ppm	0.55 ppm	PASS 95.49 %
-60.00000	-60.00000	-60.00018637	2.73 ppm	-60.000197	-59.999803	3.11 ppm	0.55 ppm	PASS 94.70 %
-66.66666	-66.66666	-66.66687606	2.73 ppm	-66.666879	-66.666441	3.24 ppm	0.55 ppm	PASS 98.81 %
-70.00000	-70.00000	-70.00022165	2.73 ppm	-70.00023	-69.99977	3.17 ppm	0.55 ppm	PASS 96.54 %
-77.77777	-77.77777	-77.77800966	2.73 ppm	-77.778025	-77.777515	3.08 ppm	0.55 ppm	PASS 93.94 %
-80.00000	-80.00000	-80.00025016	2.73 ppm	-80.000262	-79.999738	3.13 ppm	0.55 ppm	PASS 95.34 %
-88.88888	-88.88888	-88.88915504	2.73 ppm	-88.889172	-88.888588	3.09 ppm	0.55 ppm	PASS 94.33 %
-90.00000	-90.00000	-90.00027771	2.73 ppm	-90.000295	-89.999705	3.09 ppm	0.55 ppm	PASS 94.07 %
-99.99999	-99.99999	-100.0002913	2.73 ppm	-100.00032	-99.999662	3.01 ppm	0.55 ppm	FAIL 144.83 %
-100.00000	-100.00000	-100.0003020	2.73 ppm	-100.00033	-99.999672	3.02 ppm	0.55 ppm	FAIL 145.19 %
-100.10101	-100.10101	-100.1013145	2.73 ppm	-100.10134	-100.10068	3.04 ppm	0.55 ppm	FAIL 146.36 %
-100.99999	-100.99999	-101.0002967	2.73 ppm	-101.00032	-100.99966	3.04 ppm	0.55 ppm	FAIL 146.86 %

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	0.9998084	0.99979281	32.0 ppm	9.9976841E-01	9.9984839E-01	-15.590 ppm	8.0 ppm	PASS 38.98 %
1.9 Ω	1.8998734	1.8998393	25.0 ppm	1.8998107E+00	1.8999361E+00	-17.950 ppm	8.0 ppm	PASS 54.39 %
10 Ω	10.000317	10.000301	5.0 ppm	1.0000187E+01	1.0000447E+01	-1.586 ppm	8.0 ppm	PASS 12.20 %
19 Ω	18.999988	18.999993	4.0 ppm	1.8999798E+01	1.9000178E+01	0.277 ppm	6.0 ppm	PASS 2.77 %
100 Ω	100.00316	100.00322	1.7 ppm	1.0000239E+02	1.0000393E+02	0.632 ppm	6.0 ppm	PASS 8.21 %
190 Ω	189.99804	189.99815	1.7 ppm	1.8999730E+02	1.8999878E+02	0.596 ppm	2.2 ppm	PASS 15.29 %
1.0 kΩ	1000.0095	1000.0091	1.7 ppm	1.0000056E+03	1.0000134E+03	-0.361 ppm	2.2 ppm	PASS 9.27 %
1.9 kΩ	1900.0228	1900.025	1.7 ppm	1.9000154E+03	1.9000302E+03	1.176 ppm	2.2 ppm	PASS 30.16 %
10 kΩ	9999.786	9999.7823	1.6 ppm	9.9997480E+03	9.9998240E+03	-0.370 ppm	2.2 ppm	PASS 9.74 %
19 kΩ	18999.389	18999.381	1.7 ppm	1.8999315E+04	1.8999463E+04	-0.433 ppm	2.2 ppm	PASS 11.09 %
100 kΩ	99994.67	99993.929	2.0 ppm	9.9994250E+04	9.9995090E+04	-7.411 ppm	2.2 ppm	FAIL 176.44 %
190 kΩ	189988.82	189989.77	2.0 ppm	1.8998635E+05	1.8999129E+05	4.976 ppm	11.0 ppm	PASS 38.28 %
1.0 MΩ	999979.9	999978.34	2.5 ppm	9.9996640E+05	9.9999340E+05	-1.562 ppm	11.0 ppm	PASS 11.57 %
1.9 MΩ	1899965.2	1899982.1	3.0 ppm	1.8998550E+06	1.9000754E+06	8.920 ppm	55.0 ppm	PASS 15.38 %
10 MΩ	9999004	9998782	10.0 ppm	9.9983541E+06	9.9996539E+06	-22.199 ppm	55.0 ppm	PASS 34.15 %
19 MΩ	18998380	18999229	20.0 ppm	1.8988311E+07	1.9008449E+07	44.663 ppm	510.0 ppm	PASS 8.43 %
100 MΩ	1.0000689E+08	1.0001983E+08	50.0 ppm	9.9950886E+07	1.0006289E+08	129.420 ppm	510.0 ppm	PASS 23.11 %

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
10 Ω	Range -0.0000021 Ω	5.000e-05 Ω	-5e-05	5e-05	N/A	8.0000e-06 Ω	PASS
100 Ω	Range 0.0000291 Ω	5.500e-04 Ω	-0.00055	0.00055	N/A	2.2000e-06 Ω	PASS
1.0 kΩ	Range -0.0000449 Ω	5.500e-03 Ω	-0.0055	0.0055	N/A	2.2000e-06 Ω	PASS
10 kΩ	Range 0.0003416 Ω	5.500e-02 Ω	-0.055	0.055	N/A	2.2000e-06 Ω	PASS
100 kΩ	Range -0.0017969 Ω	5.500e-01 Ω	-0.55	0.55	N/A	2.2000e-06 Ω	PASS
1.0 MΩ	Range 0.1652615 Ω	5.500e+00 Ω	-5.5	5.5	N/A	2.2000e-06 Ω	PASS
10 MΩ	Range 3.1986620 Ω	5.500e+01 Ω	-55	55	N/A	2.2000e-06 Ω	PASS
100 MΩ	Range 3.0549029 Ω	5.500e+02 Ω	-550	550	N/A	2.2000e-06 Ω	PASS
1 GΩ	Range 3.0189628 Ω	5.500e+03 Ω	-5500	5500	N/A	2.2000e-06 Ω	PASS
OHM ZERO 2W	DUT	Source unc.	Low Limit	Hi limit	Measured	24h spec	Result
10 Ω	Range 0.2596324 Ω	3.000e-01 Ω	-0.3	0.3	N/A	8.0000e-06 Ω	PASS
100 Ω	Range 0.2585112 Ω	3.500e-01 Ω	-0.35	0.35	N/A	2.2000e-06 Ω	PASS
1.0 kΩ	Range 0.2578666 Ω	4.000e-01 Ω	-0.4	0.4	N/A	2.2000e-06 Ω	PASS
10 kΩ	Range 0.2495557 Ω	4.000e-01 Ω	-0.4	0.4	N/A	2.2000e-06 Ω	PASS
100 kΩ	Range 0.2055697 Ω	5.500e-01 Ω	-0.55	0.55	N/A	2.2000e-06 Ω	PASS
1.0 MΩ	Range 0.9017528 Ω	5.500e+00 Ω	-5.5	5.5	N/A	2.2000e-06 Ω	PASS
10 MΩ	Range 6.3973092 Ω	5.500e+01 Ω	-55	55	N/A	2.2000e-06 Ω	PASS
100 MΩ	Range 5.3191139 Ω	5.500e+02 Ω	-550	550	N/A	2.2000e-06 Ω	PASS
1 GΩ	Range 5.1753539 Ω	5.500e+03 Ω	-5500	5500	N/A	2.2000e-06 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	0.99935312	129.09	0.99955091	1.00044909	VAC	-646.877 ppm	320.0 ppm	FAIL 144.04 %
1.0 VAC @ 1.0 MHz	1.0	1.0053486	0.2500 %	0.9874	1.0126	VAC	0.5349 %	1.0100 %	PASS 42.45 %
10 VAC @ 40 Hz	10	10.000495	0.0073 %	9.8982682	10.1017318	VAC	0.0049 %	1.0100 %	PASS 0.49 %
10 VAC @ 200 Hz	10	9.9996565	73.18	9.9983682	10.0016318	VAC	-34.354 ppm	90.0 ppm	PASS 21.05 %
10 VAC @ 500 Hz	10	9.9996418	73.18	9.9983682	10.0016318	VAC	-35.815 ppm	90.0 ppm	PASS 21.95 %
10 VAC @ 50.0 kHz	10	9.9936834	129.09	9.9955091	10.0044909	VAC	-631.663 ppm	320.0 ppm	FAIL 140.65 %
10 VAC @ 1.0 MHz	10	10.026145	0.3000 %	9.869	10.131	VAC	0.2615 %	1.0100 %	PASS 19.96 %

Procedure for all test points in the AC performance verification for SYNChronous 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
0.01 V AC+DC @ 10 Hz	0.0099986261	0.0312 %	0.009991	0.010009	-0.0137 %	0.0600 %	PASS 15.06 %
0.01 V AC+DC @ 20 Hz	0.0099979625	0.0312 %	0.009991	0.010009	-0.0204 %	0.0600 %	PASS 22.33 %
0.01 V AC+DC @ 40 Hz	0.0099979797	0.0312 %	0.009991	0.010009	-0.0202 %	0.0600 %	PASS 22.15 %
0.01 V AC+DC @ 100 Hz	0.0099982316	0.0312 %	0.009994	0.010006	-0.0177 %	0.0310 %	PASS 28.42 %
0.01 V AC+DC @ 1.0 kHz	0.009997874	0.0312 %	0.009994	0.010006	-0.0213 %	0.0310 %	PASS 34.17 %
0.01 V AC+DC @ 10.0 kHz	0.0099970024	0.0312 %	0.009993	0.010007	-0.0300 %	0.0410 %	PASS 41.50 %
0.01 V AC+DC @ 20.0 kHz	0.0099933939	0.0312 %	0.009993	0.010007	-0.0661 %	0.0410 %	PASS 91.46 %
0.01 V AC+DC @ 50.0 kHz	0.0099925659	0.0447 %	0.009984	0.010016	-0.0743 %	0.1110 %	PASS 47.74 %
0.01 V AC+DC @ 100.0 kHz	0.0099688083	0.0773 %	0.009941	0.010059	-0.3119 %	0.5110 %	PASS 53.02 %
0.01 V AC+DC @ 300.0 kHz	0.010297497	0.1500 %	0.009583	0.010417	2.9750 %	4.0200 %	PASS 71.34 %
0.01 V AC+DC @ 500.0 kHz	0.0095797049	0.2500 %	0.006770	0.013230	-4.2030 %	32.0500 %	PASS 13.01 %
0.01 V AC+DC @ 1.0 MHz	0.0087609468	0.4000 %	0.006755	0.013245	-12.3905 %	32.0500 %	PASS 38.18 %
0.03 V AC+DC @ 10 Hz	0.030001328	0.0121 %	0.029993	0.030007	0.0044 %	0.0110 %	PASS 19.14 %
0.03 V AC+DC @ 20 Hz	0.030000137	0.0121 %	0.029993	0.030007	0.0005 %	0.0110 %	PASS 1.97 %
0.03 V AC+DC @ 40 Hz	0.030000129	0.0121 %	0.029993	0.030007	0.0004 %	0.0110 %	PASS 1.85 %
0.03 V AC+DC @ 100 Hz	0.030000249	0.0121 %	0.029994	0.030006	0.0008 %	0.0090 %	PASS 3.93 %
0.03 V AC+DC @ 1.0 kHz	0.030000272	0.0121 %	0.029994	0.030006	0.0009 %	0.0090 %	PASS 4.29 %
0.03 V AC+DC @ 10.0 kHz	0.030002159	0.0121 %	0.029992	0.030008	0.0072 %	0.0160 %	PASS 25.58 %
0.03 V AC+DC @ 20.0 kHz	0.030000118	0.0121 %	0.029992	0.030008	0.0004 %	0.0160 %	PASS 1.40 %
0.03 V AC+DC @ 50.0 kHz	0.029999653	0.0256 %	0.029983	0.030017	-0.0012 %	0.0320 %	PASS 2.01 %
0.03 V AC+DC @ 100.0 kHz	0.029991488	0.0591 %	0.029958	0.030042	-0.0284 %	0.0820 %	PASS 20.11 %
0.03 V AC+DC @ 300.0 kHz	0.029970617	0.0964 %	0.029878	0.030122	-0.0979 %	0.3100 %	PASS 24.10 %
0.03 V AC+DC @ 500.0 kHz	0.02996815	0.1500 %	0.029652	0.030348	-0.1062 %	1.0100 %	PASS 9.15 %
0.03 V AC+DC @ 1.0 MHz	0.030028772	0.3000 %	0.029607	0.030393	0.0959 %	1.0100 %	PASS 7.32 %
0.1 V AC+DC @ 10 Hz	0.099999548	0.0121 %	0.099977	0.100023	-0.0005 %	0.0110 %	PASS 1.95 %
0.1 V AC+DC @ 20 Hz	0.099996784	0.0121 %	0.099977	0.100023	-0.0032 %	0.0110 %	PASS 13.90 %
0.1 V AC+DC @ 40 Hz	0.099996608	0.0121 %	0.099977	0.100023	-0.0034 %	0.0110 %	PASS 14.66 %
0.1 V AC+DC @ 100 Hz	0.099996394	0.0121 %	0.099979	0.100021	-0.0036 %	0.0090 %	PASS 17.06 %
0.1 V AC+DC @ 1.0 kHz	0.099995845	0.0121 %	0.099979	0.100021	-0.0042 %	0.0090 %	PASS 19.66 %
0.1 V AC+DC @ 10.0 kHz	0.10000261	0.0121 %	0.099972	0.100028	0.0026 %	0.0160 %	PASS 9.27 %
0.1 V AC+DC @ 20.0 kHz	0.099997926	0.0121 %	0.099972	0.100028	-0.0021 %	0.0160 %	PASS 7.37 %
0.1 V AC+DC @ 50.0 kHz	0.099999102	0.0256 %	0.099942	0.100058	-0.0009 %	0.0320 %	PASS 1.56 %
0.1 V AC+DC @ 100.0 kHz	0.099972679	0.0591 %	0.099859	0.100141	-0.0273 %	0.0820 %	PASS 19.36 %
0.1 V AC+DC @ 300.0 kHz	0.099523341	0.0964 %	0.099594	0.100406	-0.4767 %	0.3100 %	FAIL 117.30 %
0.1 V AC+DC @ 500.0 kHz	0.099907915	0.1500 %	0.098840	0.101160	-0.0921 %	1.0100 %	PASS 7.94 %
0.1 V AC+DC @ 1.0 MHz	0.10005922	0.3000 %	0.098690	0.101310	0.0592 %	1.0100 %	PASS 4.52 %
0.3 V AC+DC @ 10 Hz	0.30001643	0.0050 %	0.299952	0.300048	0.0055 %	0.0110 %	PASS 34.32 %
0.3 V AC+DC @ 20 Hz	0.30000944	0.0050 %	0.299952	0.300048	0.0031 %	0.0110 %	PASS 19.72 %
0.3 V AC+DC @ 40 Hz	0.30001038	0.0050 %	0.299952	0.300048	0.0035 %	0.0110 %	PASS 21.69 %
0.3 V AC+DC @ 100 Hz	0.30000944	0.0050 %	0.299958	0.300042	0.0031 %	0.0090 %	PASS 22.55 %
0.3 V AC+DC @ 1.0 kHz	0.30002326	0.0050 %	0.299958	0.300042	0.0078 %	0.0090 %	PASS 55.57 %
0.3 V AC+DC @ 10.0 kHz	0.30003862	0.0050 %	0.299937	0.300063	0.0129 %	0.0160 %	PASS 61.44 %
0.3 V AC+DC @ 20.0 kHz	0.30002106	0.0050 %	0.299937	0.300063	0.0070 %	0.0160 %	PASS 33.50 %
0.3 V AC+DC @ 50.0 kHz	0.30003873	0.0085 %	0.299878	0.300122	0.0129 %	0.0320 %	PASS 31.84 %
0.3 V AC+DC @ 100.0 kHz	0.30009268	0.0138 %	0.299713	0.300287	0.0309 %	0.0820 %	PASS 32.24 %
0.3 V AC+DC @ 300.0 kHz	0.30047963	0.0425 %	0.298942	0.301058	0.1599 %	0.3100 %	PASS 45.35 %
0.3 V AC+DC @ 500.0 kHz	0.301166	0.1100 %	0.296640	0.303360	0.3887 %	1.0100 %	PASS 34.70 %
0.3 V AC+DC @ 1.0 MHz	0.30319884	0.1800 %	0.296430	0.303570	1.0663 %	1.0100 %	PASS 89.60 %
1.0 V AC+DC @ 10 Hz	1.000038	0.0050 %	0.999840	1.000160	0.0038 %	0.0110 %	PASS 23.79 %
1.0 V AC+DC @ 20 Hz	1.0000174	0.0050 %	0.999840	1.000160	0.0017 %	0.0110 %	PASS 10.88 %
1.0 V AC+DC @ 40 Hz	1.000015	0.0050 %	0.999840	1.000160	0.0015 %	0.0110 %	PASS 9.38 %
1.0 V AC+DC @ 100 Hz	1.0000144	0.0050 %	0.999860	1.000140	0.0014 %	0.0090 %	PASS 10.29 %
1.0 V AC+DC @ 1.0 kHz	1.0000563	0.0050 %	0.999860	1.000140	0.0056 %	0.0090 %	PASS 40.37 %
1.0 V AC+DC @ 10.0 kHz	1.0001022	0.0050 %	0.999790	1.000210	0.0102 %	0.0160 %	PASS 48.79 %
1.0 V AC+DC @ 20.0 kHz	1.0000653	0.0050 %	0.999790	1.000210	0.0065 %	0.0160 %	PASS 31.16 %
1.0 V AC+DC @ 50.0 kHz	1.0001087	0.0085 %	0.999595	1.000405	0.0109 %	0.0320 %	PASS 26.80 %
1.0 V AC+DC @ 100.0 kHz	1.0002313	0.0138 %	0.999042	1.000958	0.0231 %	0.0820 %	PASS 24.14 %
1.0 V AC+DC @ 300.0 kHz	1.0015948	0.0425 %	0.996475	1.003525	0.1595 %	0.3100 %	PASS 45.24 %
1.0 V AC+DC @ 500.0 kHz	1.0038767	0.1100 %	0.988800	1.011200	0.3877 %	1.0100 %	PASS 34.61 %
1.0 V AC+DC @ 1.0 MHz	1.0118008	0.1800 %	0.988100	1.011900	1.1801 %	1.0100 %	PASS 99.17 %
3.0 V AC+DC @ 10 Hz	3.0002045	0.0048 %	2.999525	3.000475	0.0068 %	0.0110 %	PASS 43.10 %
3.0 V AC+DC @ 20 Hz	3.0001358	0.0048 %	2.999525	3.000475	0.0045 %	0.0110 %	PASS 28.61 %
3.0 V AC+DC @ 40 Hz	3.0001269	0.0048 %	2.999525	3.000475	0.0042 %	0.0110 %	PASS 26.75 %
3.0 V AC+DC @ 100 Hz	3.000118	0.0048 %	2.999585	3.000415	0.0039 %	0.0090 %	PASS 28.46 %
3.0 V AC+DC @ 1.0 kHz	3.0001846	0.0048 %	2.999585	3.000415	0.0062 %	0.0090 %	PASS 44.53 %
3.0 V AC+DC @ 10.0 kHz	3.0003278	0.0048 %	2.999375	3.000625	0.0109 %	0.0160 %	PASS 52.48 %
3.0 V AC+DC @ 20.0 kHz	3.0003496	0.0048 %	2.999375	3.000625	0.0117 %	0.0160 %	PASS 55.97 %
3.0 V AC+DC @ 50.0 kHz	3.0003454	0.0085 %	2.998784	3.001216	0.0115 %	0.0320 %	PASS 28.40 %
3.0 V AC+DC @ 100.0 kHz	3.0000807	0.0121 %	2.997176	3.002824	0.0027 %	0.0820 %	PASS 2.86 %
3.0 V AC+DC @ 300.0 kHz	2.9975826	0.0336 %	2.989691	3.010309	-0.0806 %	0.3100 %	PASS 23.45 %
3.0 V AC+DC @ 500.0 kHz	3.0018613	0.1100 %	2.966400	3.033600	0.0620 %	1.0100 %	PASS 5.54 %
3.0 V AC+DC @ 1.0 MHz	3.0249865	0.1700 %	2.964600	3.035400	0.8329 %	1.0100 %	PASS 70.58 %
10.0 V AC+DC @ 10 Hz	10.000487	0.0048 %	9.998418	10.001582	0.0049 %	0.0110 %	PASS 30.77 %
10.0 V AC+DC @ 20 Hz	10.000284	0.0048 %	9.998418	10.001582	0.0028 %	0.0110 %	PASS 17.98 %
10.0 V AC+DC @ 40 Hz	10.000239	0.0048 %	9.998418	10.001582	0.0024 %	0.0110 %	PASS 15.09 %
10.0 V AC+DC @ 100 Hz	10.000197	0.0048 %	9.998618	10.001382	0.0020 %	0.0090 %	PASS 14.27 %
10.0 V AC+DC @ 1.0 kHz	10.000414	0.0048 %	9.998618	10.001382	0.0041 %	0.0090 %	PASS 29.98 %

10.0 V AC+DC @ 10.0 kHz	10.000887	0.0048 %	9.997918	10.002082	0.0089 %	0.0160 %	PASS 42.62 %
10.0 V AC+DC @ 20.0 kHz	10.001032	0.0048 %	9.997918	10.002082	0.0103 %	0.0160 %	PASS 49.59 %
10.0 V AC+DC @ 50.0 kHz	10.000964	0.0085 %	9.995945	10.004054	0.0096 %	0.0320 %	PASS 23.77 %
10.0 V AC+DC @ 100.0 kHz	9.9994762	0.0121 %	9.990586	10.009414	-0.0052 %	0.0820 %	PASS 5.56 %
10.0 V AC+DC @ 300.0 kHz	9.9917694	0.0336 %	9.965636	10.034364	-0.0823 %	0.3100 %	PASS 23.95 %
10.0 V AC+DC @ 500.0 kHz	10.006005	0.1100 %	9.888000	10.112000	0.0601 %	1.0100 %	PASS 5.36 %
10.0 V AC+DC @ 1.0 MHz	10.092603	0.1700 %	9.882000	10.118000	0.9260 %	1.0100 %	PASS 78.48 %
30 V AC+DC @ 10 Hz	30.000815	0.0060 %	29.990995	30.009005	0.0027 %	0.0240 %	PASS 9.05 %
30 V AC+DC @ 20 Hz	30.000026	0.0060 %	29.990995	30.009005	0.0001 %	0.0240 %	PASS 0.28 %
30 V AC+DC @ 40 Hz	30.000025	0.0060 %	29.990995	30.009005	0.0001 %	0.0240 %	PASS 0.28 %
30 V AC+DC @ 100 Hz	30.000089	0.0060 %	29.991595	30.008405	0.0003 %	0.0220 %	PASS 1.05 %
30 V AC+DC @ 1.0 kHz	30.000669	0.0060 %	29.991595	30.008405	0.0022 %	0.0220 %	PASS 7.96 %
30 V AC+DC @ 10.0 kHz	30.002098	0.0060 %	29.991595	30.008405	0.0070 %	0.0220 %	PASS 24.96 %
30 V AC+DC @ 20.0 kHz	29.999796	0.0060 %	29.991595	30.008405	-0.0007 %	0.0220 %	PASS 2.43 %
30 V AC+DC @ 50.0 kHz	29.987299	0.0060 %	29.987095	30.012905	-0.0423 %	0.0370 %	PASS 98.41 %
30 V AC+DC @ 100.0 kHz	29.959123	0.0174 %	29.958191	30.041809	-0.1363 %	0.1220 %	PASS 97.77 %
30 V AC+DC @ 300.0 kHz	29.734774	0.0991 %	29.847273	30.152727	-0.8841 %	0.4100 %	FAIL 173.66 %
30 V AC+DC @ 500.0 kHz	29.500529	0.5200 %	29.391000	30.609000	-1.6649 %	1.5100 %	PASS 82.01 %
100.0 V AC+DC @ 10 Hz	100.00094	0.0060 %	99.969982	100.030018	0.0009 %	0.0240 %	PASS 3.13 %
100.0 V AC+DC @ 20 Hz	99.998545	0.0060 %	99.969982	100.030018	-0.0015 %	0.0240 %	PASS 4.85 %
100.0 V AC+DC @ 40 Hz	99.998507	0.0060 %	99.969982	100.030018	-0.0015 %	0.0240 %	PASS 4.97 %
100.0 V AC+DC @ 100 Hz	99.998365	0.0060 %	99.971982	100.028018	-0.0016 %	0.0220 %	PASS 5.84 %
100.0 V AC+DC @ 1.0 kHz	100.00075	0.0060 %	99.971982	100.028018	0.0008 %	0.0220 %	PASS 2.68 %
100.0 V AC+DC @ 10.0 kHz	100.0071	0.0060 %	99.971982	100.028018	0.0071 %	0.0220 %	PASS 25.24 %
100.0 V AC+DC @ 20.0 kHz	99.999042	0.0060 %	99.971982	100.028018	-0.0010 %	0.0220 %	PASS 3.42 %
100.0 V AC+DC @ 50.0 kHz	99.957558	0.0095 %	99.953455	100.046545	-0.0424 %	0.0370 %	PASS 91.19 %
100.0 V AC+DC @ 100.0 kHz	99.85827	0.0174 %	99.860636	100.139364	-0.1417 %	0.1220 %	FAIL 101.70 %
300.0 V AC+DC @ 100 Hz	299.9175	0.0079 %	299.850408	300.149592	-0.0275 %	0.0420 %	PASS 54.76 %
300.0 V AC+DC @ 1.0 kHz	299.92638	0.0079 %	299.850408	300.149592	-0.0245 %	0.0420 %	PASS 48.86 %
300.0 V AC+DC @ 10.0 kHz	149.94879	0.0079 %	299.790408	300.209592	-50.0171 %	0.0620 %	FAIL 71225.04 %
300.0 V AC+DC @ 20.0 kHz	149.8804	0.0110 %	299.780865	300.219135	-50.0399 %	0.0620 %	FAIL 68169.56 %
300.0 V AC+DC @ 50.0 kHz	149.67682	0.0110 %	299.600865	300.399135	-50.1077 %	0.1220 %	FAIL 37560.61 %
750.0 V AC+DC @ 100 Hz	749.72554	0.0245 %	749.501498	750.498502	-0.0366 %	0.0420 %	PASS 54.32 %
750.0 V AC+DC @ 1.0 kHz	749.75713	0.0660 %	749.190000	750.810000	-0.0324 %	0.0420 %	PASS 29.74 %
750.0 V AC+DC @ 10.0 kHz	749.75694	0.0079 %	749.476020	750.523980	-0.0324 %	0.0620 %	PASS 45.80 %
750.0 V AC+DC @ 20.0 kHz	749.75739	0.0079 %	749.476020	750.523980	-0.0323 %	0.0620 %	PASS 45.71 %

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	100nA-1A	DUT	Source unc.	Low Limit	Hi limit	Measured	24h spec	Result
Zero µADC	0	7.5879073E-11						INFO
50 nADC	5E-08	5.0068378E-08						INFO
100 nADC	1E-07	1.0000976E-07	71.82 ppm	9.995182E-08	1.000482E-07	97.610 ppm	410 ppm	PASS 20.26 %
-100 nADC	-1E-07	-9.9883448E-08	71.82 ppm	-1.000482E-07	-9.995182E-08	-1165.521 ppm	410 ppm	FAIL 241.90 %
-50 nADC	-5E-08	-4.9947187E-08						INFO
Zero µADC	0	3.8954367E-11						INFO
0.5 µADC	5E-07	4.9997177E-07	71.82 ppm	4.999391E-07	5.000609E-07	-56.467 ppm	50 ppm	PASS 46.35 %
1.0 µADC	1E-06	9.999623E-07	71.82 ppm	9.998782E-07	1.000122E-06	-37.701 ppm	50 ppm	PASS 30.95 %
-1.0 µADC	-1E-06	-9.9992762E-07	71.82 ppm	-1.000122E-06	-9.998782E-07	-72.379 ppm	50 ppm	PASS 59.41 %
-0.5 µADC	-5E-07	-4.9990413E-07	71.82 ppm	-5.000609E-07	-4.999391E-07	-191.733 ppm	50 ppm	FAIL 157.39 %
Zero 00 µADC	0	4.4744207E-11						INFO
5 µADC	5E-06	5.000051E-06	71.82 ppm	4.999556E-06	5.000444E-06	10.205 ppm	17 ppm	PASS 11.49 %
10 µADC	1E-05	1.0000071E-05	71.82 ppm	9.999112E-06	1.000089E-05	7.050 ppm	17 ppm	PASS 7.94 %
-10 µADC	-1E-05	-9.9999654E-06	71.82 ppm	-1.000089E-05	-9.999112E-06	-3.463 ppm	17 ppm	PASS 3.90 %
-5 µADC	-5E-06	-4.9999331E-06	71.82 ppm	-5.000444E-06	-4.999556E-06	-13.387 ppm	17 ppm	PASS 15.07 %
Zero 000 µADC	0	3.7273705E-11						INFO
50 µADC	5E-05	5.0000186E-05	71.82 ppm	4.999561E-05	5.000439E-05	3.730 ppm	16 ppm	PASS 4.25 %
100 µADC	0.0001	0.0001000047	71.82 ppm	9.999122E-05	0.0001000088	4.742 ppm	16 ppm	PASS 5.40 %
-100 µADC	-0.0001	-0.0001000074	71.82 ppm	-0.0001000088	-9.999122E-05	7.374 ppm	16 ppm	PASS 8.40 %
-50 µADC	-5E-05	-5.0000483E-05	71.82 ppm	-5.000439E-05	-4.999561E-05	9.659 ppm	16 ppm	PASS 11.00 %
Zero mADC	0	1.0942798E-11						INFO
0.5 mADC	0.0005	0.00050000126	33.64 ppm	0.0004999762	0.0005000238	2.528 ppm	14 ppm	PASS 5.31 %
1.0 mADC	0.001	0.001000004	33.64 ppm	0.0009999524	0.001000048	4.015 ppm	14 ppm	PASS 8.43 %
-1.0 mADC	-0.001	-0.0010000065	33.64 ppm	-0.001000048	-0.0009999524	6.517 ppm	14 ppm	PASS 13.68 %
-0.5 mADC	-0.0005	-0.0005000031	33.64 ppm	-0.0005000238	-0.0004999762	6.206 ppm	14 ppm	PASS 13.03 %
Zero 00 mADC	0	3.0042838E-12						INFO
5 mADC	0.005	0.0050000053	32.27 ppm	0.004999769	0.005000231	1.051 ppm	14 ppm	PASS 2.27 %
10 mADC	0.01	0.010000022	32.27 ppm	0.009999537	0.01000046	2.195 ppm	14 ppm	PASS 4.74 %
-10 mADC	-0.01	-0.010000049	32.27 ppm	-0.01000046	-0.009999537	4.925 ppm	14 ppm	PASS 10.64 %
-5 mADC	-0.005	-0.005000025	32.27 ppm	-0.005000231	-0.004999769	5.003 ppm	14 ppm	PASS 10.81 %
Zero 000 mADC	0	5.4569244E-11						INFO
50 mADC	0.05	0.050000604	53.32 ppm	0.04999588	0.05000412	12.079 ppm	29 ppm	PASS 14.67 %
100 mADC	0.1	0.10000113	53.32 ppm	0.09999177	0.1000082	11.309 ppm	29 ppm	PASS 13.74 %
-100 mADC	-0.1	-0.10000176	53.32 ppm	-0.1000082	-0.09999177	17.588 ppm	29 ppm	PASS 21.36 %
-50 mADC	-0.05	-0.050000848	53.32 ppm	-0.05000412	-0.04999588	16.962 ppm	29 ppm	PASS 20.60 %
Zero ADC	0	3.2786418E-10						INFO
0.5 ADC	0.5	0.50000814	115.22 ppm	0.4998874	0.5001126	16.275 ppm	110 ppm	PASS 7.23 %
1.0 ADC	1	0.99997583	115.22 ppm	0.9997748	1.000225	-24.170 ppm	110 ppm	PASS 10.73 %
-1.0 ADC	-1	-0.99994903	115.22 ppm	-1.000225	-0.9997748	-50.972 ppm	110 ppm	PASS 22.63 %
-0.5 ADC	-0.5	-0.49998868	115.22 ppm	-0.5001126	-0.4998874	-22.633 ppm	110 ppm	PASS 10.05 %

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
10 µA AC @ 50 Hz	1e-05	1.0019675E-05	0.0160 %	9.9893955e-06	1.00106045e-05	1967.515 ppm	0.0900 %	INFO
100 µA AC @ 50 Hz	0.0001	0.00010001679	0.0160 %	9.9893955e-05	0.000100106045	167.928 ppm	0.0900 %	PASS 15.84 %
1.0 mA AC @ 50 Hz	0.001	0.00099997624	0.0160 %	0.00099903955	0.00100096045	-23.758 ppm	0.0800 %	PASS 2.47 %
10 mA AC @ 50 Hz	0.01	0.0099997204	0.0160 %	0.0099903955	0.0100096045	-27.961 ppm	0.0800 %	PASS 2.91 %
100 mA AC @ 50 Hz	0.1	0.099999118	0.0133 %	0.099906682	0.100093318	-8.819 ppm	0.0800 %	PASS 0.95 %
1.0 A AC @ 50 Hz	1.0	1.0001862	0.0133 %	0.99886682	1.00113318	0.0186 %	0.1000 %	PASS 16.44 %
10 µA AC @ 60 Hz	1e-05	1.0020762E-05	0.0133 %	9.9896682e-06	1.00103318e-05	2076.199 ppm	0.0900 %	INFO
100 µA AC @ 60 Hz	0.0001	0.00010001893	0.0133 %	9.9896682e-05	0.000100103318	189.305 ppm	0.0900 %	PASS 18.32 %
1.0 mA AC @ 60 Hz	0.001	0.0010000075	0.0129 %	0.00099907136	0.00100092864	7.483 ppm	0.0800 %	PASS 0.81 %
10 mA AC @ 60 Hz	0.01	0.009999974	0.0129 %	0.0099907136	0.0100092864	-2.598 ppm	0.0800 %	PASS 0.28 %
100 mA AC @ 60 Hz	0.1	0.10000206	0.0288 %	0.099891182	0.100108818	20.554 ppm	0.0800 %	PASS 1.89 %
1.0 A AC @ 60 Hz	1.0	1.000209	0.0288 %	0.99871182	1.00128818	0.0209 %	0.1000 %	PASS 16.22 %
10 µA AC @ 1.0 kHz	1e-05	1.0017643E-05	0.0160 %	9.9893955e-06	1.00106045e-05	1764.270 ppm	0.0900 %	INFO
100 µA AC @ 1.0 kHz	0.0001	9.9986403E-05	0.0160 %	9.9893955e-05	0.000100106045	-135.965 ppm	0.0900 %	PASS 12.82 %
1.0 mA AC @ 1.0 kHz	0.001	0.0010000363	0.0160 %	0.00099933955	0.00100066045	36.282 ppm	0.0500 %	PASS 5.49 %
10 mA AC @ 1.0 kHz	0.01	0.010000324	0.0160 %	0.0099933955	0.0100066045	32.381 ppm	0.0500 %	PASS 4.90 %
100 mA AC @ 1.0 kHz	0.1	0.10000609	0.0133 %	0.099936682	0.100063318	60.851 ppm	0.0500 %	PASS 9.61 %
1.0 A AC @ 1.0 kHz	1.0	1.0001058	0.0133 %	0.99866682	1.00133318	0.0106 %	0.1200 %	PASS 7.94 %

Test date	28 January 2019 17:21
UUT Internal TEMP?	41.2
Destructive overloads?	154, DESTRUCTIVE OVERLOADS valid 2941

Lab temperature maintained +24°C ±2°C

Internal use only

Not validated