

Manufacturer	HEWLETT-PACKARD	Calibration date	June 13 2018
Model Number	3458A	Ambient Temperature	0.00 °C
Serial	3458B	Relative Humidity	0.00 %
ID Number	IM5700A	Pressure	0.00
Notes	Test A7Mark,TA9,A10	Test type	M5700

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	05/17/2018	06/17/2018
DMM	HP	3458A	001,X02	MY45040325	XD2	04/23/2018	07/23/2018
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	04/23/2018	04/23/2019
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	1 days ago	MFC since DCV ZERO	1 days ago
MFC since WBFLAT	1 days ago	MFC since WBGAIN	1 days ago
MFC Confidence level	24h 95%	MFC Calibrate date	Debug
MFC Calibrate date Zero	Debug	Calibrate date WB Flatness	Debug
Calibrate date WB Gain	Debug	CAL CONST 6.5V reference voltage	1
CAL CONST 13V reference voltage	1	CAL CONST 22V range positive zero	1
CAL CONST 22V range negative zero	1	CAL CONST DAC Linearity	1
CAL CONST 10KOHM true output resistance	1	CAL CONST 10KOHM standard resistance	1
CAL CONST, Zero calibration temperature	1	CAL CONST, All calibration temp	1

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	0.0000000E+00	-0.52 µV	0.75 µV	-0.910 µV	0.910 µV	N/A	0.16 µV	PASS
Short 0.0 VDC	0.0000000E+00	-0.49 µV	0.75 µV	-0.900 µV	0.900 µV	N/A	0.15 µV	PASS
Short 00.0 VDC	0.0000000E+00	0.33 µV	0.75 µV	-1.070 µV	1.070 µV	N/A	0.32 µV	PASS
Short 000.0 VDC	0.0000000E+00	-10.33 µV	0.75 µV	-14.750 µV	14.750 µV	N/A	14.00 µV	PASS
Short 0000.0 VDC	0.0000000E+00	47.28 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	0.099999945	3.81 ppm	0.099999069	0.10000093	-0.554 ppm	5.50 ppm	PASS 5.95 %
-0.1 VDC (0.10 Range)	-0.1000000	-0.099999915	3.81 ppm	-0.10000093	-0.099999069	-0.846 ppm	5.50 ppm	PASS 9.08 %
0.1 VDC (1.00 Range)	0.1000000	0.10000054	2.45 ppm	0.099999575	0.10000043	5.377 ppm	1.80 ppm	FAIL 126.52 %
0.2 VDC (1.00 Range)	0.2000000	0.20000064	2.45 ppm	0.19999915	0.20000085	3.216 ppm	1.80 ppm	PASS 75.67 %
1.0 VDC (1.00 Range)	1.0000000	1.000001	2.45 ppm	0.99999575	1.0000042	0.955 ppm	1.80 ppm	PASS 22.47 %
-0.1 VDC (1.00 Range)	-0.1000000	-0.099999843	2.45 ppm	-0.10000043	-0.099999575	-1.567 ppm	1.80 ppm	PASS 36.87 %
-0.2 VDC (1.00 Range)	-0.2000000	-0.19999985	2.45 ppm	-0.20000085	-0.19999915	-0.728 ppm	1.80 ppm	PASS 17.14 %
-1.0 VDC (1.00 Range)	-1.0000000	-1.0000002	2.45 ppm	-1.0000042	-0.99999575	0.151 ppm	1.80 ppm	PASS 3.55 %
1.0 VDC (10.00 Range)	1.0000000	1.0000014	1.47 ppm	0.99999798	1.000002	1.391 ppm	0.55 ppm	PASS 68.86 %
2.0 VDC (10.00 Range)	2.0000000	2.0000005	1.47 ppm	1.999996	2.000004	0.259 ppm	0.55 ppm	PASS 12.82 %
10.0 VDC (10.00 Range)	10.0000000	10.000001	1.47 ppm	9.9999798	10.00002	0.147 ppm	0.55 ppm	PASS 7.28 %
-1.0 VDC (10.00 Range)	-1.0000000	-0.99999938	1.47 ppm	-1.000002	-0.99999798	-0.615 ppm	0.55 ppm	PASS 30.45 %
-2.0 VDC (10.00 Range)	-2.0000000	-1.9999986	1.47 ppm	-2.000004	-1.999996	-0.692 ppm	0.55 ppm	PASS 34.23 %
-10.0 VDC (10.00 Range)	-10.0000000	-9.9999987	1.47 ppm	-10.00002	-9.9999798	-0.133 ppm	0.55 ppm	PASS 6.56 %
10 VDC (100.00 Range)	10.0000000	10.000003	2.36 ppm	9.9999484	10.000052	0.250 ppm	2.80 ppm	PASS 4.84 %
20 VDC (100.00 Range)	20.0000000	19.999994	2.36 ppm	19.999897	20.000103	-0.304 ppm	2.80 ppm	PASS 5.90 %
100 VDC (100.00 Range)	100.0000000	100.00001	2.36 ppm	99.999484	100.00052	0.061 ppm	2.80 ppm	PASS 1.18 %
-10 VDC (100.00 Range)	-10.0000000	-10.000009	2.36 ppm	-10.000052	-9.9999484	0.904 ppm	2.80 ppm	PASS 17.52 %
-20 VDC (100.00 Range)	-20.0000000	-20.000018	2.36 ppm	-20.000103	-19.999897	0.916 ppm	2.80 ppm	PASS 17.75 %
-100 VDC (100.00 Range)	-100.0000000	-100.00002	2.36 ppm	-100.00052	-99.999484	0.249 ppm	2.80 ppm	PASS 4.83 %
100 VDC (1000.00 Range)	100.0000000	100.00001	2.85 ppm	99.999455	100.00055	0.064 ppm	2.60 ppm	PASS 1.17 %
200 VDC (1000.00 Range)	200.0000000	199.99993	2.85 ppm	199.99891	200.00109	-0.359 ppm	2.60 ppm	PASS 6.60 %
1000 VDC (1000.00 Range)	1000.0000000	1000.0014	2.85 ppm	999.98255	1000.0175	1.434 ppm	2.60 ppm	PASS 8.22 %
-100 VDC (1000.00 Range)	-100.0000000	-100.00004	2.85 ppm	-100.00055	-99.999455	0.435 ppm	2.60 ppm	PASS 7.98 %
-200 VDC (1000.00 Range)	-200.0000000	-199.9999	2.85 ppm	-200.00109	-199.99891	-0.490 ppm	2.60 ppm	PASS 8.99 %
-1000 VDC (1000.00 Range)	-1000.0000000	-1000.0016	2.85 ppm	-999.99345	-1000.0065	1.643 ppm	2.60 ppm	PASS 25.08 %

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
1.0999999	1.0999999	1.1000008	2.73 ppm	1.099996	1.100004	0.83 ppm	0.55 ppm	PASS 25.36 %
0.9999999	0.9999999	1.0000008	2.73 ppm	0.9999966	1.000003	0.92 ppm	0.55 ppm	PASS 28.05 %
0.9000000	0.9000000	0.9000010	2.73 ppm	0.899997	0.900003	1.08 ppm	0.55 ppm	PASS 32.78 %
0.8888888	0.8888888	0.8888898	2.73 ppm	0.8888859	0.8888917	1.11 ppm	0.55 ppm	PASS 33.86 %
0.8000000	0.8000000	0.8000010	2.73 ppm	0.7999974	0.8000026	1.31 ppm	0.55 ppm	PASS 39.80 %
0.7777777	0.7777777	0.7777787	2.73 ppm	0.7777751	0.7777803	1.34 ppm	0.55 ppm	PASS 40.96 %
0.7000000	0.7000000	0.7000009	2.73 ppm	0.6999977	0.7000023	1.33 ppm	0.55 ppm	PASS 40.56 %
0.6666666	0.6666666	0.6666676	2.73 ppm	0.6666644	0.6666688	1.45 ppm	0.55 ppm	PASS 44.13 %
0.6000000	0.6000000	0.6000009	2.73 ppm	0.599998	0.600002	1.53 ppm	0.55 ppm	PASS 46.73 %
0.5555555	0.5555555	0.5555565	2.73 ppm	0.5555537	0.5555573	1.74 ppm	0.55 ppm	PASS 53.05 %
0.5000000	0.5000000	0.5000009	2.73 ppm	0.4999984	0.5000016	1.84 ppm	0.55 ppm	PASS 56.01 %
0.4444444	0.4444444	0.4444453	2.73 ppm	0.4444429	0.4444459	1.92 ppm	0.55 ppm	PASS 58.47 %
0.4000000	0.4000000	0.4000008	2.73 ppm	0.3999987	0.4000013	2.10 ppm	0.55 ppm	PASS 64.00 %
0.3333333	0.3333333	0.3333340	2.73 ppm	0.3333322	0.3333344	2.18 ppm	0.55 ppm	PASS 66.53 %
0.3000000	0.3000000	0.3000007	2.73 ppm	0.299999	0.300001	2.41 ppm	0.55 ppm	PASS 73.43 %
0.2222222	0.2222222	0.2222228	2.73 ppm	0.2222215	0.2222229	2.57 ppm	0.55 ppm	PASS 78.34 %
0.2000000	0.2000000	0.20000058	2.73 ppm	0.1999993	0.2000007	2.90 ppm	0.55 ppm	PASS 88.36 %
0.1234567	0.1234567	0.1234572	2.73 ppm	0.1234563	0.1234571	3.96 ppm	0.55 ppm	FAIL 120.69 %
0.1111111	0.1111111	0.1111115	2.73 ppm	0.1111107	0.1111115	3.87 ppm	0.55 ppm	FAIL 118.09 %
0.1000000	0.1000000	0.1000004	2.73 ppm	0.09999967	0.1000003	4.13 ppm	0.55 ppm	FAIL 126.02 %
0.0987654	0.0987654	0.0987658	2.73 ppm	0.09876508	0.09876572	4.39 ppm	0.55 ppm	FAIL 133.80 %
0.0111111	0.0111111	0.0111114	2.73 ppm	0.01111106	0.01111114	31.07 ppm	0.55 ppm	FAIL 947.21 %
-0.0111111	-0.0111111	-0.0111108	2.73 ppm	-0.01111114	-0.01111106	-27.11 ppm	0.55 ppm	FAIL 826.67 %
-0.0987654	-0.0987654	-0.0987652	2.73 ppm	-0.09876572	-0.09876508	-1.92 ppm	0.55 ppm	PASS 58.56 %
-0.1000000	-0.1000000	-0.0999998	2.73 ppm	-0.1000003	-0.09999967	-1.65 ppm	0.55 ppm	PASS 50.44 %
-0.1111111	-0.1111111	-0.1111109	2.73 ppm	-0.1111115	-0.1111107	-1.45 ppm	0.55 ppm	PASS 44.09 %
-0.1234567	-0.1234567	-0.1234566	2.73 ppm	-0.1234571	-0.1234563	-1.02 ppm	0.55 ppm	PASS 31.03 %
-0.2000000	-0.2000000	-0.1999999	2.73 ppm	-0.2000007	-0.1999993	-0.41 ppm	0.55 ppm	PASS 12.60 %
-0.2222222	-0.2222222	-0.2222221	2.73 ppm	-0.2222229	-0.2222215	-0.30 ppm	0.55 ppm	PASS 9.16 %
-0.3000000	-0.3000000	-0.3000000	2.73 ppm	-0.300001	-0.299999	-0.06 ppm	0.55 ppm	PASS 1.88 %
-0.3333333	-0.3333333	-0.3333333	2.73 ppm	-0.3333344	-0.3333322	-0.01 ppm	0.55 ppm	PASS 0.28 %
-0.4000000	-0.4000000	-0.4000001	2.73 ppm	-0.4000013	-0.3999987	0.18 ppm	0.55 ppm	PASS 5.35 %
-0.4444444	-0.4444444	-0.4444445	2.73 ppm	-0.4444459	-0.4444429	0.30 ppm	0.55 ppm	PASS 9.00 %
-0.5000000	-0.5000000	-0.5000001	2.73 ppm	-0.5000016	-0.4999984	0.21 ppm	0.55 ppm	PASS 6.41 %
-0.5555555	-0.5555555	-0.5555557	2.73 ppm	-0.5555573	-0.5555537	0.40 ppm	0.55 ppm	PASS 12.10 %
-0.6000000	-0.6000000	-0.6000002	2.73 ppm	-0.600002	-0.599998	0.33 ppm	0.55 ppm	PASS 9.96 %
-0.6666666	-0.6666666	-0.6666669	2.73 ppm	-0.6666688	-0.6666644	0.46 ppm	0.55 ppm	PASS 14.11 %
-0.7000000	-0.7000000	-0.7000003	2.73 ppm	-0.7000023	-0.6999977	0.44 ppm	0.55 ppm	PASS 13.39 %
-0.7777777	-0.7777777	-0.7777780	2.73 ppm	-0.7777803	-0.7777751	0.43 ppm	0.55 ppm	PASS 13.22 %
-0.8000000	-0.8000000	-0.8000003	2.73 ppm	-0.8000026	-0.7999974	0.37 ppm	0.55 ppm	PASS 11.20 %
-0.8888888	-0.8888888	-0.8888891	2.73 ppm	-0.8888917	-0.8888859	0.30 ppm	0.55 ppm	PASS 9.00 %
-0.9000000	-0.9000000	-0.9000003	2.73 ppm	-0.900003	-0.899997	0.38 ppm	0.55 ppm	PASS 11.54 %
-0.9999999	-0.9999999	-1.0000003	2.73 ppm	-1.000003	-0.9999966	0.35 ppm	0.55 ppm	PASS 10.71 %
-1.0999999	-1.0999999	-1.1000002	2.73 ppm	-1.100004	-1.099996	0.27 ppm	0.55 ppm	PASS 8.18 %
DCV Linearity	10V Range	DUT	Source unc.	Low Limit	Hi limit	Measured	24h spec	Result
10.999999	10.999999	11.0000000	2.73 ppm	10.99996	11.00004	0.09 ppm	0.55 ppm	PASS 2.89 %
10.101010	10.101010	10.1010115	2.73 ppm	10.10098	10.10104	0.15 ppm	0.55 ppm	PASS 4.54 %
10.000000	10.000000	10.0000010	2.73 ppm	9.999967	10.00003	0.10 ppm	0.55 ppm	PASS 3.04 %
9.999999	9.999999	10.0000005	2.73 ppm	9.999966	10.00003	0.15 ppm	0.55 ppm	PASS 4.63 %
9.000000	9.000000	9.0000012	2.73 ppm	8.99997	9.00003	0.13 ppm	0.55 ppm	PASS 4.02 %
8.888888	8.888888	8.8888890	2.73 ppm	8.888859	8.888917	0.12 ppm	0.55 ppm	PASS 3.56 %
8.000000	8.000000	8.0000009	2.73 ppm	7.999974	8.000026	0.12 ppm	0.55 ppm	PASS 3.60 %
7.777777	7.777777	7.7777779	2.73 ppm	7.777751	7.777803	0.11 ppm	0.55 ppm	PASS 3.47 %
7.000000	7.000000	7.0000010	2.73 ppm	6.999977	7.000023	0.15 ppm	0.55 ppm	PASS 4.53 %
6.666666	6.666666	6.6666668	2.73 ppm	6.666644	6.666688	0.12 ppm	0.55 ppm	PASS 3.80 %
6.000000	6.000000	6.0000008	2.73 ppm	5.99998	6.00002	0.13 ppm	0.55 ppm	PASS 4.03 %
5.555555	5.555555	5.5555557	2.73 ppm	5.555537	5.555573	0.13 ppm	0.55 ppm	PASS 3.85 %
5.000000	5.000000	5.0000006	2.73 ppm	4.999984	5.000016	0.12 ppm	0.55 ppm	PASS 3.79 %
4.444444	4.444444	4.4444446	2.73 ppm	4.444429	4.444459	0.15 ppm	0.55 ppm	PASS 4.44 %
4.000000	4.000000	4.0000005	2.73 ppm	3.999987	4.000013	0.13 ppm	0.55 ppm	PASS 4.04 %
3.333333	3.333333	3.3333335	2.73 ppm	3.333322	3.333344	0.14 ppm	0.55 ppm	PASS 4.41 %

3.000000	3.000000	3.0000004	2.73 ppm	2.99999	3.00001	0.14 ppm	0.55 ppm	PASS 4.23 %
2.222222	2.222222	2.2222224	2.73 ppm	2.22215	2.222229	0.16 ppm	0.55 ppm	PASS 5.00 %
2.000000	2.000000	2.0000003	2.73 ppm	1.999993	2.000007	0.15 ppm	0.55 ppm	PASS 4.53 %
1.111111	1.111111	1.1111112	2.73 ppm	1.111107	1.111115	0.14 ppm	0.55 ppm	PASS 4.20 %
1.000000	1.000000	0.9999999	3.86 ppm	0.9999956	1.000004	-0.11 ppm	0.55 ppm	PASS 2.59 %
0.555555	0.555555	0.5555550	7.27 ppm	0.5555507	0.5555593	-0.08 ppm	0.55 ppm	PASS 0.97 %
-0.555555	-0.555555	-0.5555550	7.27 ppm	-0.5555593	-0.5555507	-0.08 ppm	0.55 ppm	PASS 0.97 %
-1.000000	-1.000000	-1.0000000	3.86 ppm	-1.000004	-0.9999956	0.03 ppm	0.55 ppm	PASS 0.59 %
-1.111111	-1.111111	-1.1111110	2.73 ppm	-1.111115	-1.111107	0.01 ppm	0.55 ppm	PASS 0.20 %
-2.000000	-2.000000	-2.0000001	2.73 ppm	-2.000007	-1.999993	0.07 ppm	0.55 ppm	PASS 2.04 %
-2.222222	-2.222222	-2.2222222	2.73 ppm	-2.222229	-2.222215	0.10 ppm	0.55 ppm	PASS 2.92 %
-3.000000	-3.000000	-3.0000002	2.73 ppm	-3.00001	-2.99999	0.07 ppm	0.55 ppm	PASS 2.16 %
-3.333333	-3.333333	-3.3333330	2.73 ppm	-3.333344	-3.333322	-0.01 ppm	0.55 ppm	PASS 0.23 %
-4.000000	-4.000000	-3.9999998	2.73 ppm	-4.000013	-3.999987	-0.06 ppm	0.55 ppm	PASS 1.74 %
-4.444444	-4.444444	-4.4444438	2.73 ppm	-4.444459	-4.444429	-0.04 ppm	0.55 ppm	PASS 1.17 %
-5.000000	-5.000000	-4.9999998	2.73 ppm	-5.000016	-4.999984	-0.03 ppm	0.55 ppm	PASS 0.95 %
-5.555555	-5.555555	-5.5555545	2.73 ppm	-5.555573	-5.555537	-0.09 ppm	0.55 ppm	PASS 2.65 %
-6.000000	-6.000000	-5.9999992	2.73 ppm	-6.00002	-5.99998	-0.13 ppm	0.55 ppm	PASS 4.01 %
-6.666666	-6.666666	-6.6666653	2.73 ppm	-6.666688	-6.666644	-0.10 ppm	0.55 ppm	PASS 3.01 %
-7.000000	-7.000000	-6.9999992	2.73 ppm	-7.000023	-6.999977	-0.11 ppm	0.55 ppm	PASS 3.30 %
-7.777777	-7.777777	-7.7777763	2.73 ppm	-7.777803	-7.777751	-0.09 ppm	0.55 ppm	PASS 2.78 %
-8.000000	-8.000000	-7.9999995	2.73 ppm	-8.000026	-7.999974	-0.06 ppm	0.55 ppm	PASS 1.81 %
-8.888888	-8.888888	-8.8888873	2.73 ppm	-8.888917	-8.888859	-0.08 ppm	0.55 ppm	PASS 2.41 %
-9.000000	-9.000000	-8.9999989	2.73 ppm	-9.00003	-8.99997	-0.12 ppm	0.55 ppm	PASS 3.57 %
-9.999999	-9.999999	-9.9999977	2.73 ppm	-10.00003	-9.999966	-0.13 ppm	0.55 ppm	PASS 4.04 %
-10.000000	-10.000000	-9.9999987	2.73 ppm	-10.00003	-9.999967	-0.13 ppm	0.55 ppm	PASS 4.10 %
-10.101010	-10.101010	-10.1010089	2.73 ppm	-10.10104	-10.10098	-0.11 ppm	0.55 ppm	PASS 3.38 %
-10.999999	-10.999999	-10.9999973	2.73 ppm	-11.00004	-10.99996	-0.15 ppm	0.55 ppm	PASS 4.70 %
DCV Linearity	100V Range	DUT	Source unc.	Low Limit	Hi limit	Measured	24h spec	Result
100.99999	100.99999	100.9999987	2.73 ppm	100.99966	101.00032	0.09 ppm	0.55 ppm	PASS 1.92 %
100.10101	100.10101	100.1010072	2.73 ppm	100.10068	100.10134	-0.03 ppm	0.55 ppm	PASS 0.63 %
100.00000	100.00000	99.9999871	2.73 ppm	99.999672	100.00033	-0.13 ppm	0.55 ppm	PASS 3.92 %
99.99999	99.99999	99.9999825	2.73 ppm	99.999662	100.00032	-0.07 ppm	0.55 ppm	PASS 2.28 %
90.00000	90.00000	89.9999841	2.73 ppm	89.999705	90.000295	-0.18 ppm	0.55 ppm	PASS 5.38 %
88.88888	88.88888	88.8888735	2.73 ppm	88.888588	88.889172	-0.07 ppm	0.55 ppm	PASS 2.25 %
80.00000	80.00000	79.9999922	2.73 ppm	79.999738	80.000262	-0.10 ppm	0.55 ppm	PASS 2.98 %
77.77777	77.77777	77.7777608	2.73 ppm	77.777515	77.778025	-0.12 ppm	0.55 ppm	PASS 3.60 %
70.00000	70.00000	69.9999993	2.73 ppm	69.99977	70.00023	-0.01 ppm	0.55 ppm	PASS 0.33 %
66.66666	66.66666	66.6666572	2.73 ppm	66.666441	66.666879	-0.04 ppm	0.55 ppm	PASS 1.30 %
60.00000	60.00000	59.9999989	2.73 ppm	59.999803	60.000197	-0.02 ppm	0.55 ppm	PASS 0.56 %
55.55555	55.55555	55.5555418	2.73 ppm	55.555368	55.555732	-0.15 ppm	0.55 ppm	PASS 4.51 %
50.00000	50.00000	49.9999966	2.73 ppm	49.999836	50.000164	-0.07 ppm	0.55 ppm	PASS 2.09 %
44.44444	44.44444	44.4444335	2.73 ppm	44.444294	44.444586	-0.15 ppm	0.55 ppm	PASS 4.45 %
40.00000	40.00000	39.9999895	2.73 ppm	39.999869	40.000131	-0.26 ppm	0.55 ppm	PASS 8.03 %
33.33333	33.33333	33.3333218	2.73 ppm	33.333221	33.333439	-0.25 ppm	0.55 ppm	PASS 7.49 %
30.00000	30.00000	29.9999936	2.73 ppm	29.999902	30.000098	-0.21 ppm	0.55 ppm	PASS 6.49 %
22.22222	22.22222	22.2222049	2.73 ppm	22.222147	22.222293	-0.68 ppm	0.55 ppm	PASS 20.71 %
20.00000	20.00000	19.9999832	2.73 ppm	19.999934	20.000066	-0.84 ppm	0.55 ppm	PASS 25.65 %
11.11111	11.11111	11.1110969	2.73 ppm	11.111075	11.111147	-1.27 ppm	0.55 ppm	PASS 38.58 %
10.00000	10.00000	9.9999782	2.73 ppm	9.9999672	10.000033	-2.18 ppm	0.55 ppm	PASS 66.41 %
9.87654	9.87654	9.8765197	2.73 ppm	9.8765106	9.8765754	-2.36 ppm	0.55 ppm	PASS 71.86 %
-9.87654	-9.87654	-9.8765611	2.73 ppm	-9.8765754	-9.8765106	1.83 ppm	0.55 ppm	PASS 55.72 %
-10.00000	-10.00000	-10.0000186	2.73 ppm	-10.000033	-9.9999672	1.86 ppm	0.55 ppm	PASS 56.58 %
-11.11111	-11.11111	-11.1111336	2.73 ppm	-11.111147	-11.111075	2.03 ppm	0.55 ppm	PASS 62.00 %
-20.00000	-20.00000	-20.0000247	2.73 ppm	-20.000066	-19.999934	1.24 ppm	0.55 ppm	PASS 37.71 %
-22.22222	-22.22222	-22.2222449	2.73 ppm	-22.222293	-22.222147	1.12 ppm	0.55 ppm	PASS 34.16 %
-30.00000	-30.00000	-30.0000299	2.73 ppm	-30.000098	-29.999902	1.00 ppm	0.55 ppm	PASS 30.36 %
-33.33333	-33.33333	-33.3333574	2.73 ppm	-33.333439	-33.333221	0.82 ppm	0.55 ppm	PASS 25.08 %
-40.00000	-40.00000	-40.0000250	2.73 ppm	-40.000131	-39.999869	0.63 ppm	0.55 ppm	PASS 19.07 %
-44.44444	-44.44444	-44.4444649	2.73 ppm	-44.444586	-44.444294	0.56 ppm	0.55 ppm	PASS 17.06 %
-50.00000	-50.00000	-50.0000195	2.73 ppm	-50.000164	-49.999836	0.39 ppm	0.55 ppm	PASS 11.90 %
-55.55555	-55.55555	-55.5555706	2.73 ppm	-55.555732	-55.555368	0.37 ppm	0.55 ppm	PASS 11.31 %
-60.00000	-60.00000	-60.0000157	2.73 ppm	-60.000197	-59.999803	0.26 ppm	0.55 ppm	PASS 7.99 %
-66.66666	-66.66666	-66.6666783	2.73 ppm	-66.666879	-66.666441	0.27 ppm	0.55 ppm	PASS 8.37 %
-70.00000	-70.00000	-70.0000150	2.73 ppm	-70.00023	-69.99977	0.21 ppm	0.55 ppm	PASS 6.54 %
-77.77777	-77.77777	-77.7777776	2.73 ppm	-77.778025	-77.777515	0.10 ppm	0.55 ppm	PASS 2.97 %

-80.00000	-80.00000	-80.0000075	2.73 ppm	-80.000262	-79.999738	0.09 ppm	0.55 ppm	PASS 2.85 %
-88.88888	-88.88888	-88.8888702	2.73 ppm	-88.889172	-88.888588	-0.11 ppm	0.55 ppm	PASS 3.35 %
-90.00000	-90.00000	-90.0000041	2.73 ppm	-90.000295	-89.999705	0.05 ppm	0.55 ppm	PASS 1.38 %
-99.99999	-99.99999	-99.9999811	2.73 ppm	-100.00032	-99.999662	-0.09 ppm	0.55 ppm	PASS 2.70 %
-100.00000	-100.00000	-99.9999877	2.73 ppm	-100.00033	-99.999672	-0.12 ppm	0.55 ppm	PASS 3.76 %
-100.10101	-100.10101	-100.1010005	2.73 ppm	-100.10134	-100.10068	-0.10 ppm	0.55 ppm	PASS 4.58 %
-100.99999	-100.99999	-100.9999846	2.73 ppm	-101.00032	-100.99966	-0.05 ppm	0.55 ppm	PASS 2.57 %

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	0.9997848	0.99979205	27.0 ppm	9.9974981E-01	9.9981979E-01	7.252 ppm	8.0 ppm	PASS 20.72 %
1.9 Ω	1.8998263	1.8998188	20.0 ppm	1.8997731E+00	1.8998795E+00	-3.954 ppm	8.0 ppm	PASS 14.12 %
10 Ω	9.999695	9.9996514	4.0 ppm	9.9995750E+00	9.9998150E+00	-4.360 ppm	8.0 ppm	PASS 36.33 %
19 Ω	18.9982	18.998268	3.5 ppm	1.8998020E+01	1.8998380E+01	3.603 ppm	6.0 ppm	PASS 37.93 %
100 Ω	99.99801	99.997717	1.6 ppm	9.9997250E+01	9.9998770E+01	-2.926 ppm	6.0 ppm	PASS 38.50 %
190 Ω	189.98804	189.9876	1.6 ppm	1.8998732E+02	1.8998876E+02	-2.329 ppm	2.2 ppm	PASS 61.28 %
1.0 kΩ	999.9383	999.93581	1.6 ppm	9.9993450E+02	9.9994210E+02	-2.489 ppm	2.2 ppm	PASS 65.49 %
1.9 kΩ	1899.8875	1899.8827	1.6 ppm	1.8998803E+03	1.8998947E+03	-2.548 ppm	2.2 ppm	PASS 67.06 %
10 kΩ	9999.581	9999.5418	1.6 ppm	9.9995430E+03	9.9996190E+03	-3.924 ppm	2.2 ppm	FAIL 103.27 %
19 kΩ	18999.12	18999.02	1.6 ppm	1.8999048E+04	1.8999192E+04	-5.290 ppm	2.2 ppm	FAIL 139.20 %
100 kΩ	99992.75	99992.119	1.6 ppm	9.9992370E+04	9.9993130E+04	-6.309 ppm	2.2 ppm	FAIL 166.02 %
190 kΩ	189998.12	189996.13	1.6 ppm	1.8999573E+05	1.9000051E+05	-10.496 ppm	11.0 ppm	PASS 83.30 %
1.0 MΩ	999879.7	999861.78	2.0 ppm	9.9986670E+05	9.9989270E+05	-17.922 ppm	11.0 ppm	FAIL 137.86 %
1.9 MΩ	1899907	1899870.3	2.5 ppm	1.8997978E+06	1.9000162E+06	-19.312 ppm	55.0 ppm	PASS 33.59 %
10 MΩ	9998137	9997229.9	8.0 ppm	9.9975071E+06	9.9987669E+06	-90.729 ppm	55.0 ppm	FAIL 144.01 %
19 MΩ	18998461	18999736	16.0 ppm	1.8988468E+07	1.9008454E+07	67.101 ppm	510.0 ppm	PASS 12.76 %
100 MΩ	1.0000477E+08	1.0000777E+08	40.0 ppm	9.9949767E+07	1.0005977E+08	30.047 ppm	510.0 ppm	PASS 5.46 %
1 GΩ STD	9.9551672E+08	1.0000000E+09	30000.0 ppm	960663679.633	1030369760.37	4503.470 ppm	5010.00 ppm	PASS 12.86 %

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 -0.0000144 Ω	5.000e-05 Ω	-5e-05	5e-05	N/A	8.0000e-06 Ω	PASS
100 Ω	Range -0.0000047 Ω	5.500e-04 Ω	-0.00055	0.00055	N/A	2.2000e-06 Ω	PASS
1.0 kΩ	Range -0.0001381 Ω	5.500e-03 Ω	-0.0055	0.0055	N/A	2.2000e-06 Ω	PASS
10 kΩ	Range -0.0007916 Ω	5.500e-02 Ω	-0.055	0.055	N/A	2.2000e-06 Ω	PASS
100 kΩ	Range -0.0131913 Ω	5.500e-01 Ω	-0.55	0.55	N/A	2.2000e-06 Ω	PASS
1.0 MΩ	Range -0.7262252 Ω	5.500e+00 Ω	-5.5	5.5	N/A	2.2000e-06 Ω	PASS
10 MΩ	Range -7.1069129 Ω	5.500e+01 Ω	-55	55	N/A	2.2000e-06 Ω	PASS
100 MΩ	Range -0.1409773 Ω	5.500e+02 Ω	-550	550	N/A	2.2000e-06 Ω	PASS
1 GΩ	Range -7.9610629 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 0.4681726 Ω	5.000e-05 Ω	-5e-05	5e-05	N/A	8.0000e-06 Ω	FAIL
100 Ω	Range 0.4672677 Ω	5.500e-04 Ω	-0.00055	0.00055	N/A	2.2000e-06 Ω	FAIL
1.0 kΩ	Range 0.4662898 Ω	5.500e-03 Ω	-0.0055	0.0055	N/A	2.2000e-06 Ω	FAIL
10 kΩ	Range 0.4756225 Ω	5.500e-02 Ω	-0.055	0.055	N/A	2.2000e-06 Ω	FAIL
100 kΩ	Range 0.4712416 Ω	5.500e-01 Ω	-0.55	0.55	N/A	2.2000e-06 Ω	PASS
1.0 MΩ	Range 0.6521310 Ω	5.500e+00 Ω	-5.5	5.5	N/A	2.2000e-06 Ω	PASS
10 MΩ	Range 2.2749861 Ω	5.500e+01 Ω	-55	55	N/A	2.2000e-06 Ω	PASS
100 MΩ	Range 0.9582770 Ω	5.500e+02 Ω	-550	550	N/A	2.2000e-06 Ω	PASS
1 GΩ	Range 0.9453771 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	1.0001614	129.09	0.99955091	1.00044909	VAC	161.389 ppm	320.0 ppm	PASS 35.94 %
1.0 VAC @ 1.0 MHz	1.0	1.0160351	0.2500 %	0.9874	1.0126	VAC	1.6035 %	1.0100 %	FAIL 127.26 %
10 VAC @ 10 Hz	10	9.981806	2085	9.97805	10.02195	VAC	-1819.403 ppm	110.0 ppm	PASS 82.89 %
10 VAC @ 200 Hz	10	10.000751	73.18	9.9983682	10.0016318	VAC	75.139 ppm	90.0 ppm	PASS 46.05 %
10 VAC @ 500 Hz	10	10.000764	73.18	9.9983682	10.0016318	VAC	76.391 ppm	90.0 ppm	PASS 46.81 %
10 VAC @ 50.0 kHz	10	10.000445	129.09	9.9955091	10.0044909	VAC	44.502 ppm	320.0 ppm	PASS 9.91 %
10 VAC @ 1.0 MHz	10	10.158897	0.3000 %	9.869	10.131	VAC	1.5890 %	1.0100 %	FAIL 121.30 %

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
0.01 V AC+DC @ 10 Hz	0.01000074	372.33	0.009990	0.010010	74.010 ppm	600.0 ppm	PASS 7.61 %
0.01 V AC+DC @ 20 Hz	0.00999981	372.33	0.009990	0.010010	-18.996 ppm	600.0 ppm	PASS 1.95 %
0.01 V AC+DC @ 40 Hz	0.0099995573	372.33	0.009990	0.010010	-44.274 ppm	600.0 ppm	PASS 4.55 %
0.01 V AC+DC @ 100 Hz	0.0099996429	372.33	0.009993	0.010007	-35.708 ppm	310.0 ppm	PASS 5.23 %
0.01 V AC+DC @ 1.0 kHz	0.0099996565	372.33	0.009993	0.010007	-34.352 ppm	310.0 ppm	PASS 5.03 %
0.01 V AC+DC @ 10.0 kHz	0.010001821	372.33	0.009992	0.010008	182.111 ppm	410.0 ppm	PASS 23.28 %
0.01 V AC+DC @ 20.0 kHz	0.010000287	372.33	0.009992	0.010008	28.694 ppm	410.0 ppm	PASS 3.67 %
0.01 V AC+DC @ 50.0 kHz	0.010000355	0.0613 %	0.009983	0.010017	0.0035 %	0.1110 %	PASS 2.06 %
0.01 V AC+DC @ 100.0 kHz	0.0099872544	0.1200 %	0.009937	0.010063	-0.1275 %	0.5110 %	PASS 20.20 %
0.01 V AC+DC @ 300.0 kHz	0.0098263999	0.1800 %	0.009580	0.010420	-1.7360 %	4.0200 %	PASS 41.33 %
0.01 V AC+DC @ 500.0 kHz	0.009609277	0.2900 %	0.006766	0.013234	-3.9072 %	32.0500 %	PASS 12.08 %
0.01 V AC+DC @ 1.0 MHz	0.0087209617	0.4400 %	0.006751	0.013249	-12.7904 %	32.0500 %	PASS 39.37 %
0.1 V AC+DC @ 10 Hz	0.10000147	422.72	0.099947	0.100053	14.656 ppm	110.0 ppm	PASS 2.75 %
0.1 V AC+DC @ 20 Hz	0.099994941	206.36	0.099968	0.100032	-50.585 ppm	110.0 ppm	PASS 15.99 %
0.1 V AC+DC @ 40 Hz	0.099993149	206.36	0.099968	0.100032	-68.508 ppm	110.0 ppm	PASS 21.66 %
0.1 V AC+DC @ 100 Hz	0.099991847	121.36	0.099979	0.100021	-81.525 ppm	90.0 ppm	PASS 38.57 %
0.1 V AC+DC @ 1.0 kHz	0.099994485	121.36	0.099979	0.100021	-55.151 ppm	90.0 ppm	PASS 26.09 %
0.1 V AC+DC @ 10.0 kHz	0.09999627	121.36	0.099972	0.100028	-37.302 ppm	160.0 ppm	PASS 13.26 %
0.1 V AC+DC @ 20.0 kHz	0.099991129	121.36	0.099972	0.100028	-88.710 ppm	160.0 ppm	PASS 31.53 %
0.1 V AC+DC @ 50.0 kHz	0.09998753	345.45	0.099933	0.100067	-124.703 ppm	320.0 ppm	PASS 18.74 %
0.1 V AC+DC @ 100.0 kHz	0.099951688	886.36	0.099829	0.100171	-483.123 ppm	820.0 ppm	PASS 28.31 %
0.1 V AC+DC @ 300.0 kHz	0.099770028	0.1100 %	0.099580	0.100420	-0.2300 %	0.3100 %	PASS 54.76 %
0.1 V AC+DC @ 500.0 kHz	0.099604132	0.1700 %	0.098820	0.101180	-0.3959 %	1.0100 %	PASS 33.55 %
0.1 V AC+DC @ 1.0 MHz	0.099462234	0.3500 %	0.098640	0.101360	-0.5378 %	1.0100 %	PASS 39.54 %
1.0 V AC+DC @ 10 Hz	1.0000678	436.36	0.999454	1.000546	67.754 ppm	110.0 ppm	PASS 12.40 %
1.0 V AC+DC @ 20 Hz	0.99999915	141.36	0.999749	1.000251	-0.850 ppm	110.0 ppm	PASS 0.34 %
1.0 V AC+DC @ 40 Hz	0.99998011	141.36	0.999749	1.000251	-19.888 ppm	110.0 ppm	PASS 7.91 %
1.0 V AC+DC @ 100 Hz	0.99997211	62.72	0.999847	1.000153	-27.887 ppm	90.0 ppm	PASS 18.26 %
1.0 V AC+DC @ 1.0 kHz	0.99998793	62.72	0.999847	1.000153	-12.069 ppm	90.0 ppm	PASS 7.90 %
1.0 V AC+DC @ 10.0 kHz	0.9999879	62.72	0.999777	1.000223	-12.101 ppm	160.0 ppm	PASS 5.43 %
1.0 V AC+DC @ 20.0 kHz	0.99995065	62.72	0.999777	1.000223	-49.346 ppm	160.0 ppm	PASS 22.16 %
1.0 V AC+DC @ 50.0 kHz	1.0000336	129.09	0.999551	1.000449	33.598 ppm	320.0 ppm	PASS 7.48 %
1.0 V AC+DC @ 100.0 kHz	1.0001134	266.36	0.998914	1.001086	113.403 ppm	820.0 ppm	PASS 10.44 %
1.0 V AC+DC @ 300.0 kHz	1.0014846	0.0468 %	0.996432	1.003568	0.1485 %	0.3100 %	PASS 41.61 %
1.0 V AC+DC @ 500.0 kHz	1.0036379	0.1200 %	0.988700	1.011300	0.3638 %	1.0100 %	PASS 32.19 %
1.0 V AC+DC @ 1.0 MHz	1.0097279	0.2500 %	0.987400	1.012600	0.9728 %	1.0100 %	PASS 77.21 %
10.0 V AC+DC @ 10 Hz	10.000893	403.63	9.993564	10.006436	89.349 ppm	240.0 ppm	PASS 13.88 %
10.0 V AC+DC @ 20 Hz	10.000238	141.36	9.996186	10.003814	23.792 ppm	240.0 ppm	PASS 6.24 %
10.0 V AC+DC @ 40 Hz	10.000071	141.36	9.996186	10.003814	7.105 ppm	240.0 ppm	PASS 1.86 %
10.0 V AC+DC @ 100 Hz	9.9999736	62.72	9.997173	10.002827	-2.640 ppm	220.0 ppm	PASS 0.93 %
10.0 V AC+DC @ 1.0 kHz	10.000131	62.72	9.997173	10.002827	13.137 ppm	220.0 ppm	PASS 4.65 %
10.0 V AC+DC @ 10.0 kHz	9.999507	62.72	9.997173	10.002827	-49.299 ppm	220.0 ppm	PASS 17.44 %
10.0 V AC+DC @ 20.0 kHz	9.9993513	62.72	9.997173	10.002827	-64.866 ppm	220.0 ppm	PASS 22.94 %
10.0 V AC+DC @ 50.0 kHz	9.9992997	129.09	9.995009	10.004991	-70.031 ppm	370.0 ppm	PASS 14.03 %
10.0 V AC+DC @ 100.0 kHz	9.9968397	0.0248 %	9.985318	10.014682	-0.0316 %	0.1220 %	PASS 21.53 %
10.0 V AC+DC @ 300.0 kHz	9.9923705	0.0577 %	9.953227	10.046773	-0.0763 %	0.4100 %	PASS 16.31 %
10.0 V AC+DC @ 500.0 kHz	10.009997	0.1400 %	9.835000	10.165000	0.1000 %	1.5100 %	PASS 6.06 %
10.0 V AC+DC @ 1.0 MHz	10.101204	0.3000 %	9.819000	10.181000	1.0120 %	1.5100 %	PASS 55.91 %
100.0 V AC+DC @ 1.0 kHz	100.00271	65.0	99.951500	100.048500	27.051 ppm	420.0 ppm	PASS 5.56 %
100.0 V AC+DC @ 10.0 kHz	100.00113	65.0	99.931500	100.068500	11.292 ppm	620.0 ppm	PASS 1.65 %
100.0 V AC+DC @ 20.0 kHz	99.998148	65.0	99.931500	100.068500	-18.525 ppm	620.0 ppm	PASS 2.70 %
100.0 V AC+DC @ 50.0 kHz	99.999283	0.0170 %	99.860998	100.139002	-0.0007 %	0.1220 %	PASS 0.52 %
100.0 V AC+DC @ 100.0 kHz	99.987312	0.0400 %	99.657997	100.342003	-0.0127 %	0.3020 %	PASS 3.71 %
700.0 V AC+DC @ 1.0 kHz	700.05867	78.64	699.650952	700.349048	83.816 ppm	420.0 ppm	PASS 16.53 %

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	1.5294488E-11	71.82 ppm	0	0	Z-check	410 ppm	INFO
50 nADC	5E-08	4.9978552E-08	71.82 ppm	4.997591E-08	5.002409E-08	-428.966 ppm	410 ppm	INFO
100 nADC	1E-07	9.9955173E-08	71.82 ppm	9.995182E-08	1.000482E-07	-448.267 ppm	410 ppm	PASS 93.04 %
-100 nADC	-1E-07	-1.000606E-07	71.82 ppm	-1.000482E-07	-9.995182E-08	605.996 ppm	410 ppm	FAIL 125.77 %
-50 nADC	-5E-08	-4.9962475E-08	71.82 ppm	-5.002409E-08	-4.997591E-08	-750.499 ppm	410 ppm	INFO
Zero µADC	0	-7.8239162E-11	71.82 ppm	0	0	Z-check	410 ppm	INFO
0.5 µADC	5E-07	5.0001427E-07	71.82 ppm	4.999391E-07	5.000609E-07	28.545 ppm	50 ppm	PASS 23.43 %
1.0 µADC	1E-06	9.9997969E-07	71.82 ppm	9.998782E-07	1.000122E-06	-20.309 ppm	50 ppm	PASS 16.67 %
-1.0 µADC	-1E-06	-1.0000068E-06	71.82 ppm	-1.000122E-06	-9.998782E-07	6.784 ppm	50 ppm	PASS 5.57 %
-0.5 µADC	-5E-07	-4.9997088E-07	71.82 ppm	-5.000609E-07	-4.999391E-07	-58.237 ppm	50 ppm	PASS 47.81 %
Zero 00 µADC	0	5.6836498E-11	71.82 ppm	0	0	Z-check	410 ppm	INFO
5 µADC	5E-06	5.0000019E-06	71.82 ppm	4.999556E-06	5.000444E-06	0.388 ppm	17 ppm	PASS 0.44 %
10 µADC	1E-05	9.9999574E-06	71.82 ppm	9.999112E-06	1.000089E-05	-4.258 ppm	17 ppm	PASS 4.79 %
-10 µADC	-1E-05	-9.9999192E-06	71.82 ppm	-1.000089E-05	-9.999112E-06	-8.085 ppm	17 ppm	PASS 9.10 %
-5 µADC	-5E-06	-4.9999832E-06	71.82 ppm	-5.000444E-06	-4.999556E-06	-3.361 ppm	17 ppm	PASS 3.78 %
Zero 000 µADC	0	2.1723303E-11	71.82 ppm	0	0	Z-check	410 ppm	INFO
50 µADC	5E-05	4.9999915E-05	71.82 ppm	4.999561E-05	5.000439E-05	-1.694 ppm	16 ppm	PASS 1.93 %
100 µADC	0.0001	9.9999751E-05	71.82 ppm	9.999122E-05	0.0001000088	-2.493 ppm	16 ppm	PASS 2.84 %
-100 µADC	-0.0001	-9.9999853E-05	71.82 ppm	-0.0001000088	-9.999122E-05	-1.467 ppm	16 ppm	PASS 1.67 %
-50 µADC	-5E-05	-4.9999957E-05	71.82 ppm	-5.000439E-05	-4.999561E-05	-0.854 ppm	16 ppm	PASS 0.97 %
Zero mADC	0	-2.4015873E-11	33.64 ppm	0	0	Z-check	410 ppm	INFO
0.5 mADC	0.0005	0.00049999785	33.64 ppm	0.0004999762	0.0005000238	-4.301 ppm	14 ppm	PASS 9.03 %
1.0 mADC	0.001	0.00099999584	33.64 ppm	0.0009999524	0.001000048	-4.160 ppm	14 ppm	PASS 8.73 %
-1.0 mADC	-0.001	-0.00099999556	33.64 ppm	-0.001000048	-0.0009999524	-4.442 ppm	14 ppm	PASS 9.32 %
-0.5 mADC	-0.0005	-0.00049999795	33.64 ppm	-0.0005000238	-0.0004999762	-4.105 ppm	14 ppm	PASS 8.62 %
Zero 00 mADC	0	2.7331282E-11	32.27 ppm	0	0	Z-check	410 ppm	INFO
5 mADC	0.005	0.004999958	32.27 ppm	0.004999769	0.005000231	-8.397 ppm	14 ppm	PASS 18.15 %
10 mADC	0.01	0.009999935	32.27 ppm	0.009999537	0.01000046	-6.501 ppm	14 ppm	PASS 14.05 %
-10 mADC	-0.01	-0.0099999599	32.27 ppm	-0.01000046	-0.009999537	-4.011 ppm	14 ppm	PASS 8.67 %
-5 mADC	-0.005	-0.0049999804	32.27 ppm	-0.005000231	-0.004999769	-3.913 ppm	14 ppm	PASS 8.46 %
Zero 000 mADC	0	1.1110147E-11	53.32 ppm	0	0	Z-check	410 ppm	INFO
50 mADC	0.05	0.050000546	53.32 ppm	0.04999588	0.05000412	10.925 ppm	29 ppm	PASS 13.27 %
100 mADC	0.1	0.10000011	53.32 ppm	0.09999177	0.1000082	1.109 ppm	29 ppm	PASS 1.35 %
-100 mADC	-0.1	-0.10000023	53.32 ppm	-0.1000082	-0.09999177	2.334 ppm	29 ppm	PASS 2.84 %
-50 mADC	-0.05	-0.050000491	53.32 ppm	-0.05000412	-0.04999588	9.811 ppm	29 ppm	PASS 11.92 %
Zero ADC	0	6.3319821E-11	115.22 ppm	0	0	Z-check	410 ppm	INFO
0.5 ADC	0.5	0.50000451	115.22 ppm	0.4998874	0.5001126	9.012 ppm	110 ppm	PASS 4.00 %
1.0 ADC	1	0.99999843	115.22 ppm	0.9997748	1.000225	-1.571 ppm	110 ppm	PASS 0.70 %
-1.0 ADC	-1	-1.0000269	115.22 ppm	-1.000225	-0.9997748	26.870 ppm	110 ppm	PASS 11.93 %
-0.5 ADC	-0.5	-0.50001205	115.22 ppm	-0.5001126	-0.4998874	24.095 ppm	110 ppm	PASS 10.70 %

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	1.0030268E-05	0.0165 %	9.9893455e-06	1.00106545e-05	3026.841 ppm	0.0900 %	INFO
100 µA AC @ 50 Hz	0.0001	9.9987691E-05	0.0165 %	9.9893455e-05	0.000100106545	-123.094 ppm	0.0900 %	PASS 11.55 %
1.0 mA AC @ 50 Hz	0.001	0.00099999155	0.0165 %	0.00099903455	0.00100096545	-8.451 ppm	0.0800 %	PASS 0.88 %
10 mA AC @ 50 Hz	0.01	0.009999933	0.0165 %	0.0099903455	0.0100096545	-6.696 ppm	0.0800 %	PASS 0.69 %
100 mA AC @ 50 Hz	0.1	0.10000442	0.0138 %	0.099906182	0.100093818	44.155 ppm	0.0800 %	PASS 4.71 %
1.0 A AC @ 50 Hz	1.0	1.0000106	0.0138 %	0.99886182	1.00113818	0.0011 %	0.1000 %	PASS 0.93 %
10 µA AC @ 60 Hz	1e-05	1.0012077E-05	0.0138 %	9.9896182e-06	1.00103818e-05	1207.672 ppm	0.0900 %	INFO
100 µA AC @ 60 Hz	0.0001	9.9970636E-05	0.0138 %	9.9896182e-05	0.000100103818	-293.640 ppm	0.0900 %	PASS 28.28 %
1.0 mA AC @ 60 Hz	0.001	0.0010007883	133.64	0.00099906636	0.00100093364	788.314 ppm	800.0 ppm	PASS 84.43 %
10 mA AC @ 60 Hz	0.01	0.010000179	0.0134 %	0.0099906636	0.0100093364	17.888 ppm	0.0800 %	PASS 1.92 %
100 mA AC @ 60 Hz	0.1	0.1000075	0.0308 %	0.099889182	0.100110818	75.032 ppm	0.0800 %	PASS 6.77 %
1.0 A AC @ 60 Hz	1.0	1.0000328	0.0308 %	0.99869182	1.00130818	0.0033 %	0.1000 %	PASS 2.51 %
10 µA AC @ 1.0 kHz	1e-05	1.0030278E-05	0.0165 %	9.9893455e-06	1.00106545e-05	3027.751 ppm	0.0900 %	INFO
100 µA AC @ 1.0 kHz	0.0001	9.9977965E-05	0.0165 %	9.9893455e-05	0.000100106545	-220.350 ppm	0.0900 %	PASS 20.68 %
1.0 mA AC @ 1.0 kHz	0.001	0.0010000768	0.0165 %	0.00099933455	0.00100066545	76.757 ppm	0.0500 %	PASS 11.53 %
10 mA AC @ 1.0 kHz	0.01	0.010000757	0.0165 %	0.0099933455	0.0100066545	75.685 ppm	0.0500 %	PASS 11.37 %
100 mA AC @ 1.0 kHz	0.1	0.10001388	0.0138 %	0.099936182	0.100063818	138.784 ppm	0.0500 %	PASS 21.75 %
1.0 A AC @ 1.0 kHz	1.0	1.0002146	0.0138 %	0.99866182	1.00133818	0.0215 %	0.1200 %	PASS 16.03 %

Test date	13 June 2018 15:42
UUT Internal TEMP?	1
Destructive overloads?	1

Lab temperature maintained +24°C ±2°C

Internal use only

Not validated