1 TEST RESULTS EMISSION TEST

1.1 CONDUCTED EMISSION MEASUREMENT ON AC MAINS (150 kHz to 30 MHz)

Ambient temperature:	21 °C	Relative humidity:	50 %

Position of EUT: The EUT was set-up on a wooden table of a height of 0.8 m.

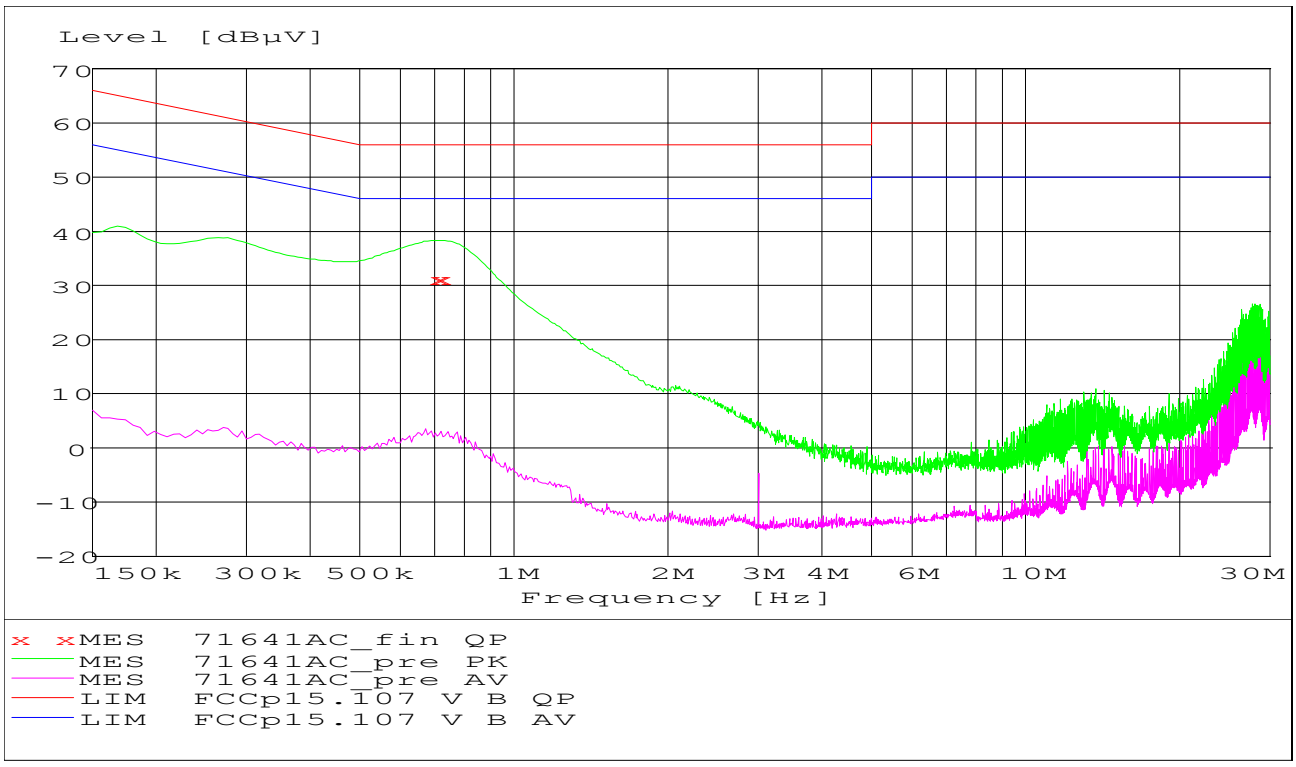
Cable guide: The cable of the EUT was fixed on the wooden table. For further information of the cable guide refer to the pictures in annex E of this test report.

Test record: The test was carried out in data communication and charging mode of the EUT (with reading a TAG). All results are shown in the following. The method of measurement is described in subclause 5.1 of the test report R71641.

Power supply: During this test the EUT was powered by an AC/DC type FW3288, which was connected to AC mains with 115 V /60 Hz.

Measurement uncertainty: +3.6 dB / -4.5 dB

Title:	AC Powerline Conducted Emission Test with protective ground conductor simulating network
EUT:	AWR100
Manufacturer:	Agrident GmbH
Operating Condition:	Reading TAG, data transfer, charging
Test site:	PHOENIX TEST-LAB Blomberg M4
Operator:	Th. KÜHN
Test Specification:	Using power supply type FW 3288, powered with external 115 V AC 60 Hz
Comment:	Connected to Laptop PC



Data record name: 71641AC

Frequency MHz	Level dBµV	Transducer dB	Limit dBµV	Margin dB	Line	PE
0.714000	31.50	0.2	56.0	24.5	L1	FLO
0.720000	31.50	0.2	56.0	24.5	L1	FLO

Data record name: 71641AC_fin QP

Test: Passed

TEST EQUIPMENT USED:
1 - 3, 5, 6

1.2 PRELIMINARY RADIATED EMISSION TEST (30 MHz to 1 GHz)

Ambient temperature:	21 °C	Relative humidity:	52 %

Position of EUT: The EUT was set-up on a wooden table of a height of 0.8 m.

Cable guide: The cable of the EUT was fixed on the wooden table. For further information of the cable guide refer to the pictures in annex E of this test report.

Test record: The test was carried out in data communication and charging mode of the EUT (without reading a TAG). All results are shown in the following. The method of measurement is described in subclause 5.4 of the test report R71641.

Power supply: During this test the EUT was powered by an AC/DC type FW3288, which was connected to AC mains with 115 V /60 Hz.

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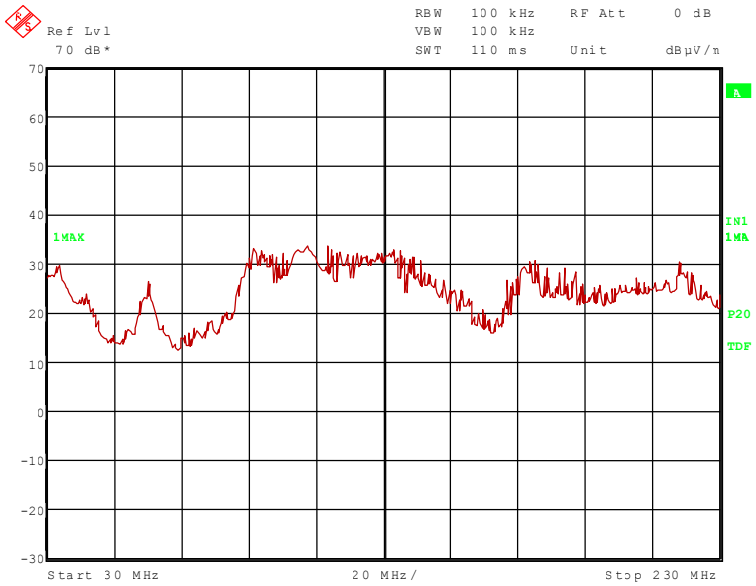
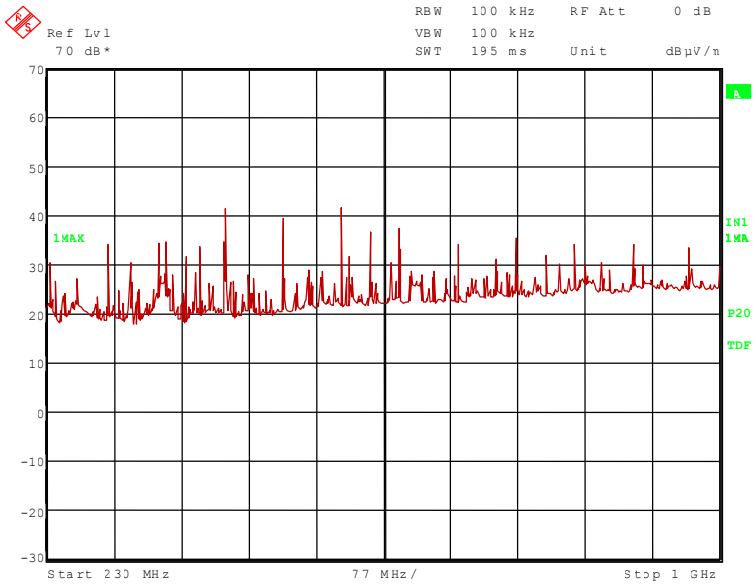
71641_6.wmf: Spurious emissions from 30 MHz to 230 MHz:



71641_7.wmf: Spurious emissions from 230 MHz to 1 GHz:



The following frequencies were found during the preliminary radiated emission test:

33.702 MHz, 60.550 MHz, 174.379 MHz, 217.966 MHz, 433.352 MHz, 500.022 MHz, 566.692 MHz, 600.027 MHz, 633.362 MHz and 766.701 MHz.

The following frequency was found inside the restricted bands according to FFC 47 CFR Part 15 section 15.205 [2].

110.668 MHz, 113.609 MHz and 133.795 MHz,

These frequencies have to be measured on the open area test site. The results of this final measurement are shown in subclause 2.3 of this test report.

TEST EQUIPMENT USED FOR THE TEST:
29, 31 – 35, 43

1.3 FINAL RADIATED EMISSION TEST (30 MHz to 1 GHz)

Ambient temperature:	21 °C	Relative humidity:	52 %

Position of EUT: The EUT was set-up on a wooden table of a height of 0.8 m.

Cable guide: The cable of the EUT was fixed on the wooden table. For further information of the cable guide refer to the pictures in annex E of this test report.

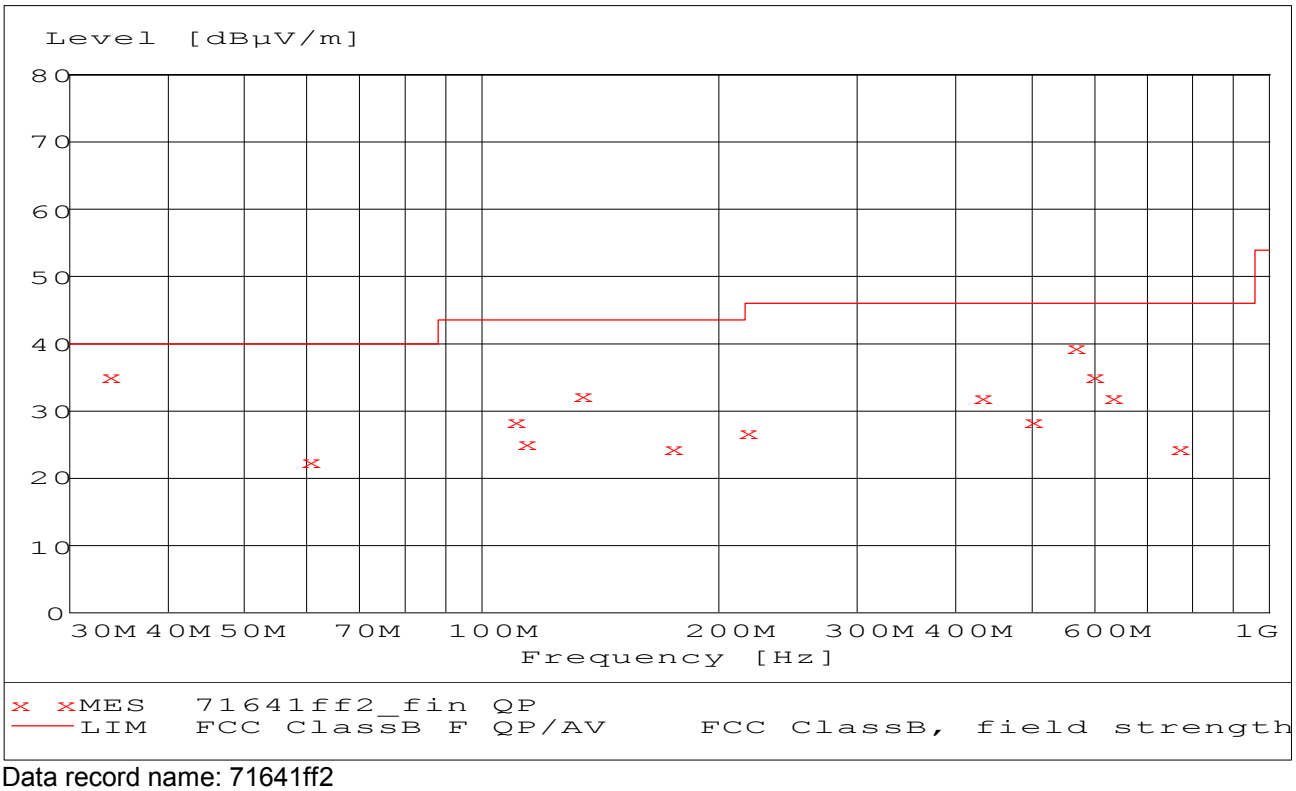
Test record: The test was carried out in data communication and charging mode of the EUT (without reading a TAG). All results are shown in the following. The method of measurement is described in subclause 5.3 of the test report R71641.

Power supply: During this test the EUT was powered by an AC/DC type FW3288, which was connected to AC mains with 115 V /60 Hz.

Test results: The test results were calculated with the following formula:

Result [dBµV/m] = reading [dBµV] + cable loss [dB] + antenna factor [dB/m]

The measured points and the limit line in the following diagram refer to the standard measurement of the emitted interference in compliance with the above-mentioned standard. The measured points marked with x are the measured results of the standard final measurement on the open area test site.



Data record name: 71641ff2

The results of the standard final measurement on the open area test site are indicated in the table below. The limits as well as the measured results (levels) refer to the above-mentioned standard while taking account of the specified requirements for a 3 m measuring distance.

The measurement time with the quasi-peak measuring detector is 1 second.

Result measured with the quasipeak detector:

(These values are marked in the above diagram by x)

Spurious emissions outside restricted bands									
Frequency MHz	Result dBµV/m	Limit dBµV/m	Margin dB	Readings dBµV	Antenna factor dB/m	Cable loss dB	Height cm	Azimuth deg	Pol.
33.702	35.2	40.0	4.8	16.5	18.3	0.4	101.0	182.0	Vert.
60.550	22.4	40.0	17.6	15.6	6.3	0.5	186.0	115.0	Vert.
174.379	24.7	43.5	18.8	14.0	9.9	0.8	122.0	96.0	Hor.
217.966	26.9	46.0	19.1	16.5	9.5	0.9	125.0	67.0	Hor.
433.352	32.1	46.0	13.9	14.4	16.4	1.3	101.0	206.0	Vert.
500.022	28.6	46.0	17.4	9.8	17.4	1.4	160.0	252.0	Hor.
566.692	39.7	46.0	6.3	18.8	19.4	1.5	134.0	214.0	Hor.
600.027	35.4	46.0	10.6	15.0	19.2	1.5	147.0	0.0	Hor.
633.362	31.9	46.0	14.1	10.5	19.8	1.6	137.0	0.0	Hor.
766.701	24.7	46.0	21.3	1.6	21.5	1.8	100.0	25.0	Vert.
Spurious emissions in restricted bands									
Frequency MHz	Result dBµV/m	Limit dBµV/m	Margin dB	Readings dBµV	Antenna factor dB/m	Cable loss dB	Height cm	Azimuth deg	Pol.
110.668	28.4	43.5	15.1	16.1	11.7	0.6	101.0	271.0	Vert.
113.609	25.2	43.5	18.3	12.6	12.0	0.6	122.0	161.0	Vert.
133.795	32.3	43.5	11.2	19.6	12.2	0.7	323.0	315.0	Vert.
Measurement uncertainty				+2.2 dB / -3.6 dB					

The test results were calculated with the following formula:

Result [dBµV/m] = reading [dBµV] + cable loss [dB] + antenna factor [dB/m]

Test: Passed

TEST EQUIPMENT USED FOR THE TEST:
14 - 20