



EMI - TEST REPORT

Type / Model Name : M260SE-HF

Product Description : Handheld Data Terminal (RFID) HF

Applicant : ACD Elektronik GmbH

Address : Engelberg 2

88480 ACHSTETTEN

GERMANY

Manufacturer : ACD Elektronik GmbH

Address : Engelberg 2

88480 ACHSTETTEN

GERMANY

Test Result according to the standards listed in clause 1 test standards:	POSITIVE
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Test Report No. : T41434-02-00WP	21. March 2017 Date of issue
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Deutsche
Akkreditierungsstelle
D-PL-12030-01-01
D-PL-12030-01-02

The test report merely corresponds to the test sample. It is not permitted to copy extracts of these test results without the written permission of the test laboratory.

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1 TEST STANDARDS

The tests were performed according to following standards:

FCC Rules and Regulations Part 15, Subpart A - General (September, 2016)

FCC Rules and Regulations Part 15, Subpart C - Intentional Radiators (September, 2016)

Part 15, Subpart C, Section 15.205	Restricted bands of operation
Part 15, Subpart C, Section 15.207	Conducted limits
Part 15, Subpart C, Section 15.209	Radiated emission limits, general requirements
Part 15, Subpart C, Section 15.215	Additional provisions to the general radiated emission limitations
Part 15, Subpart C, Section 15.225	Operation within the band 13.110 – 14.010
Part 15, Subpart C, Section 15.247	Operation within the bands 902 - 928 MHz, 2400 - 2483.5 MHz and 5725 - 5850 MHz

FCC Rules and Regulations Part 15, Subpart E – Unlicensed National Information Infrastructure Devices (September, 2016)

Part 15, Subpart E, Section 15.407	Operation within the bands 5.15 - 5.25 GHz, 5.25 - 5.35 GHz, 5.47 - 5.725 GHz and 5.725 - 5.85 GHz
ANSI C63.10: 2013	Testing Unlicensed Wireless Devices
ETSI TR 100 028 V1.3.1: 2001-03	Electromagnetic Compatibility and Radio Spectrum Matters (ERM); Uncertainties in the Measurement of Mobile Radio Equipment Characteristics—Part 1 and Part 2
KDB 558074 D01 v03r05	Guidance for performing compliance measurements on digital transmission systems (DTS) operating under §15.247
KDB 789033 D02 v01r03	Guidance for compliance Testing of U-NII devices, August 22, 2016.
KDB 174176 D01 v01r01	AC power-line conducted emissions frequently asked questions

2 SUMMARY

2.1 Test results

FCC Rule Part	Description	Result
15.207	AC power line conducted emissions	passed
15.209	Spurious emissions	passed
15.247	Average radiated output power	passed
15.407	Average radiated output power	passed
15.247	Maximum peak radiated output power	passed

2.2 GENERAL REMARKS:

The EUT is approved as battery operated RFID reader under the FCC ID O2FM260SEHF. As accessory a docking station DS260 is available for the device. In the docking station, the M260SE can be charged and transfer data. While charging the M260SE-HF is able to transmit. Additionally a WLAN module (FCC ID: TWG-SDCMSD30AG) and a Bluetooth module (FCC ID: SQGBT830) are integrated into the device. All three modules can transmit simultaneously while charging in the docking station DS260.

To show further compliance of the device, AC power line conducted emissions, spurious emissions from 30 MHz – 40 GHz and the peak radiated output power of the WLAN and Bluetooth modules have been remeasured. During the measurements, all radio modules were active and simultaneously transmitting in a typical use of the device.

For Frequencies below 1 GHz simultaneous transmission of Bluetooth, RFID and the middle WLAN channels (CH6 and CH40) for the supported WLAN Bands (2400 MHz – 2483.5 MHz and 5150 MHz – 5250 MHz) are measured.

During the measurements, the device was operated without SD card. The power of the Bluetooth module is set via registry key to 5 dBm.

FCC ID: O2FM260SEHF

2.3 FINAL ASSESSMENT:

The equipment under test fulfills the EMI requirements cited in clause 1 test standards.

Date of receipt of test sample : acc. to storage records

Testing commenced on : 08 February 2017

Testing concluded on : 15 March 2017

Checked by:



Klaus Gegenfurtner
I confirm the correctness
and Integrity of this
document
2017.03.21 15:17:50
+01'00'

Klaus Gegenfurtner
Teamleader Radio

Issued by:



Willibald Probst
I am the author of this
document
2017.03.21 15:04:33
+01'00'

Willibald Probst
Radio Team

3 EQUIPMENT UNDER TEST

3.1 Photo documentation of the EUT – Detailed photos see attachment A

3.2 Power supply system utilised

Power supply voltage : 7.4 V DC LiPO Battery
15 V DC (external power supply, while in docking station)

All tests were carried out with the AC/DC power supply supplied by the manufacturer.

3.3 Short description of the equipment under test (EUT)

The EUT is a mobile handheld Data Terminal with an integrated RFID reader, operating at 13.56 MHz (FCC ID: O2FM260SEHF). Additionally, a WLAN module (FCC ID: TWG-SDCM30AG) and a Bluetooth module (FCC ID: SQGBT830) are integrated into the device. It can be charged and operated in a docking station (DS260), which is available as accessory. While in the docking station, all radio modules can transmit simultaneously. The EUT supports the WLAN Channels 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 in the 2.4 GHz band and 36, 40, 44, 48 in the 5 GHz band.

Number of tested samples: 1
Serial number: 158100001613

EUT operation mode:

The equipment under test was operated during the measurement under the following conditions:

- charging in the docking station DS260 and simultaneous transmission of all radio modules

To achieve simultaneous transmission of all radio modules, the individual modules were operated in a operation mode typical for the device. RFID is operated in continuous tag reading mode. For WLAN and Bluetooth an active connection is established to a suitable companion device. For WLAN a file is repeatedly transmitted to the companion device. For Bluetooth data are sent continuously to a Bluetooth headset.

EUT configuration:

The following peripheral devices and interface cables were connected during the measurements:

- <u>TAG</u>	Model : <u>IQC21-50P, Pepperl+Fuchs</u>
- <u>Bluetooth Headset</u>	Model : <u>topsystem Lydia BlueMaster</u>
- <u>Docking Station</u>	Model : <u>DS260</u>
- <u>AC/DC power supply</u>	Model : <u>Taiytech, KSAS0361500240M2</u>

4 TEST ENVIRONMENT

4.1 Address of the test laboratory

**CSA Group Bayern GmbH
Ohmstrasse 1-4
94342 STRASSKIRCHEN
GERMANY**

4.2 Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature: 15-35 ° C

Humidity: 30-60 %

Atmospheric pressure: 86-106 kPa

4.3 Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. It is noted that the expanded measurement uncertainty corresponds to the measurement results from the standard measurement uncertainty multiplied by the coverage factor $k = 2$. The true value is located in the corresponding interval with a probability of 95 % The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16-4-2 / 11.2003 „Uncertainties, statistics and limit modelling – Uncertainty in EMC measurements“ and is documented in the quality system acc. to DIN EN ISO/IEC 17025. For all measurements shown in this report, the measurement uncertainty of the test laboratory, CSA Group Bayern GmbH, is below the measurement uncertainty as defined by CISPR. Therefore, no special measures must be taken into consideration with regard to the limits according to CISPR. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Measurement Type	Range	Confidence Level (%)	Calculated Uncertainty
AC Conducted Spurious Emissions	0.15 MHz to 30 MHz	95%	± 3.29 dB
20 dB Bandwidth	Center frequency of EuT	95%	$\pm 2.5 \times 10^{-7}$
99% Occupied Bandwidth	Center frequency of EuT	95%	$\pm 2.5 \times 10^{-7}$
Radiated Spurious Emissions	9 kHz to 30 MHz	95%	± 3.53 dB
Radiated Spurious Emissions	30 MHz to 1000 MHz	95%	± 3.71 dB
Radiated Spurious Emissions	1000 MHz to 10000 MHz	95%	± 2.34 dB
Peak conducted output power	Center frequency of EuT	95%	± 3.53 dB
Conducted Spurious Emissions	9 kHz to 10000 MHz	95%	± 2.15 dB

4.4 Measurement protocol for FCC

4.4.1 General information

4.4.1.1 Test methodology

Conducted and radiated disturbance testing is performed according to the procedures set out by the International Special Committee on Radio Interference (CISPR) Publication 22, European Standard EN 55022 as shown under section 1 of this report.

4.4.1.2 Justification

The equipment under test (EUT) is configured in a typical user arrangement in accordance with the manufacturer's instructions. A cable is connected to each available port and either terminated with a peripheral using the appropriate impedance characteristic or left unterminated. Where appropriate, cables are manually manipulated with respect to each other thus obtaining maximum disturbances from the unit.

4.4.1.3 Details of test procedures

The test methods used comply with CISPR Publication 22, EN 55022 - "Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement" and with ANSI C63.4 - "Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz". In compliance with 47 CFR Part 15 Subpart A, Section 15.38 testing for FCC compliance may be achieved by following the procedures set out in ANSI C63.4 and applying the CISPR 22 limits.

5 TEST CONDITIONS AND RESULTS

5.1 Conducted emissions

For test instruments and accessories used, see section 6 Part A 4.

Legend for tables:

QP-L ... QuasiPeak reading including correction factor

AV-L ... Average reading including correction factor

D-Limit... Measured value to limit delta (margin)

5.1.1 Description of the test location

Test location: Shielded Room S2

5.1.2 Photo documentation of the test set-up

with notebook:



FCC ID: O2FM260SEHF



without notebook:



FCC ID: O2FM260SEHF

5.1.3 Applicable standard

According to FCC Part 15, Section 15.207(a):

Except for Class A devices, for equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the given limits.

5.1.4 Description of Measurement

The measurements are performed following the procedures set out in ANSI C63.10 described under item 4.4.3. If the minimum limit margin appears to be less than 20 dB with a peak mode measurement, the emissions are remeasured using a tuned receiver with quasi-peak and average detection and recorded on the data sheets.

According to KDB 174176 emissions inside the transmitter's fundamental emission band, exceeding the applicable limit are retested with a dummy load in lieu of the antenna.

5.1.5 Test result

Frequency range: 0.15 MHz - 30 MHz

Min. limit margin 9.16 dB at 0.191 MHz

Limit according to FCC Part 15, Section 15.207(a):

Frequency of Emission (MHz)	Conducted Limit (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56 *	56 to 46 *
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency

The requirements are **FULFILLED**.

Remarks: For detailed test result please refer to following test protocols

FCC ID: O2FM260SEHF

5.1.6 Test protocol

Operation mode: charging in the docking station DS260 and simultaneous transmission of all radio modules (WLAN on CH 6)

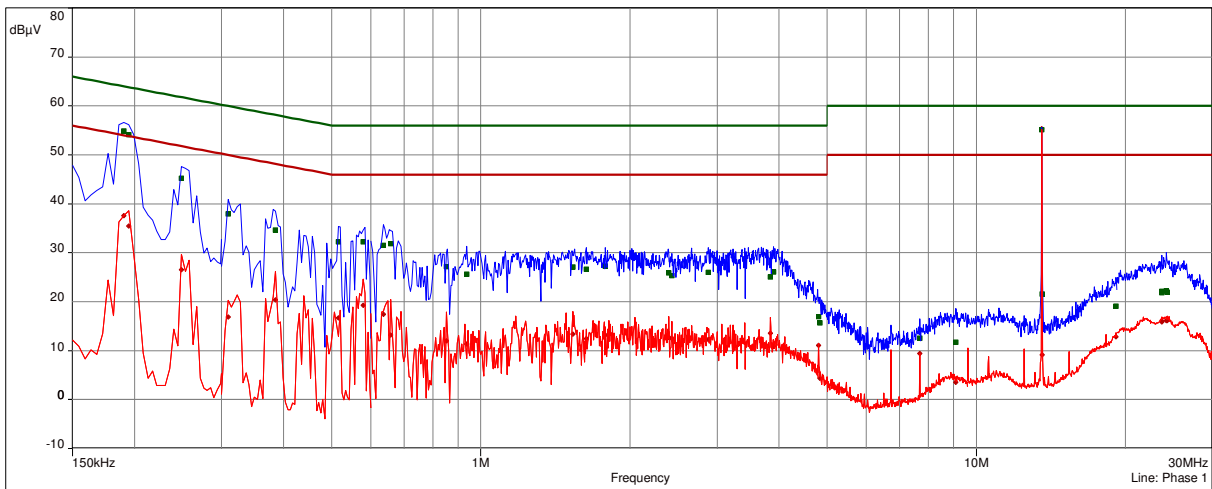
Result: passed

Remarks: test setup with notebook

Date: 15.02.2017

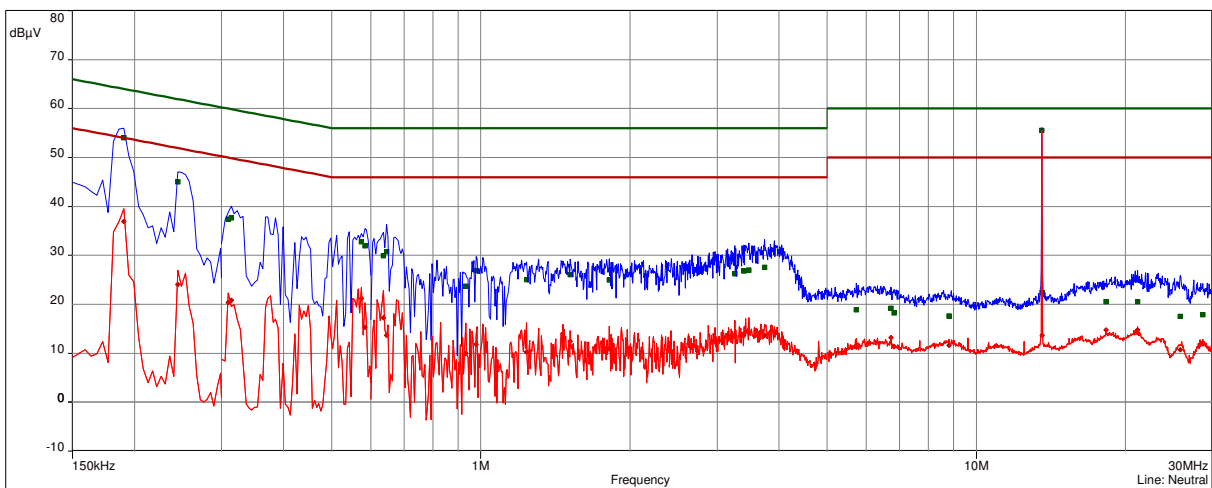
Tested by: Willibald Probst

- CISPR 22/CISPR22 B - Average/
- CISPR 22/CISPR22 B - QPeak/
- Meas.Peak (Phase 1)
- Meas.Avg (Phase 1)
- QuasiPeak (Finals) (Phase 1)
- Average (Finals) (Phase 1)



CISPR 22/CISPR22B

- CISPR 22/CISPR22 B - Average/
- CISPR 22/CISPR22 B - QPeak/
- Meas.Peak (Neutral)
- Meas.Avg (Neutral)
- QuasiPeak (Finals) (Neutral)
- Average (Finals) (Neutral)



CISPR 22/CISPR22B

FCC ID: O2FM260SEHF

Frequency (MHz)	SR	QuasiPeak (dBµV)	QP Margin	QP Limit	Average (dBµV)	AV Margin	AV Limit	Line	Correction (dB)
0.191	1	54.85	9.16	64.01	37.57	16.45	54.01	Phase 1	9.82
0.195	1	54.14	9.68	63.82	35.47	18.35	53.82	Phase 1	9.82
0.249	1	45.25	16.55	61.79	26.51	25.28	51.79	Phase 1	9.81
0.309	2	37.92	22.08	60.00	16.91	33.08	50.00	Phase 1	9.80
0.386	2	34.65	23.51	58.16	20.41	27.75	48.16	Phase 1	9.80
0.516	2	32.20	23.80	56.00	16.69	29.31	46.00	Phase 1	9.80
0.579	2	32.28	23.72	56.00	19.27	26.73	46.00	Phase 1	9.80
0.636	3	31.48	24.52	56.00	17.46	28.54	46.00	Phase 1	9.80
0.659	3	31.92	24.08	56.00	13.16	32.84	46.00	Phase 1	9.80
0.852	3	27.22	28.78	56.00	11.97	34.03	46.00	Phase 1	9.80
0.938	3	25.66	30.34	56.00	11.39	34.61	46.00	Phase 1	9.80
1.533	4	27.12	28.88	56.00	13.40	32.60	46.00	Phase 1	9.77
1.632	4	26.62	29.38	56.00	12.50	33.50	46.00	Phase 1	9.78
1.785	4	27.23	28.77	56.00	13.22	32.78	46.00	Phase 1	9.78
2.397	4	25.89	30.11	56.00	12.75	33.25	46.00	Phase 1	9.79
2.432	5	25.34	30.66	56.00	12.51	33.49	46.00	Phase 1	9.79
2.877	5	26.00	30.00	56.00	12.25	33.75	46.00	Phase 1	9.79
3.845	5	25.05	30.95	56.00	13.56	32.44	46.00	Phase 1	9.81
3.899	5	26.08	29.92	56.00	10.93	35.07	46.00	Phase 1	9.81
4.809	6	17.01	38.99	56.00	11.12	34.88	46.00	Phase 1	9.82
4.832	6	15.68	40.32	56.00	4.40	41.60	46.00	Phase 1	9.82
7.694	6	12.52	47.48	60.00	9.44	40.56	50.00	Phase 1	9.85
9.093	6	11.69	48.31	60.00	3.56	46.44	50.00	Phase 1	9.88
13.560	7	55.15	4.85	60.00	55.31	-5.31	50.00	Phase 1	10.05
13.587	7	21.57	38.43	60.00	9.17	40.83	50.00	Phase 1	10.05
19.158	7	19.07	40.93	60.00	12.87	37.13	50.00	Phase 1	10.30
23.682	8	21.88	38.12	60.00	15.91	34.09	50.00	Phase 1	10.35
23.700	8	22.13	37.87	60.00	16.00	34.00	50.00	Phase 1	10.35
24.168	8	22.25	37.75	60.00	16.12	33.88	50.00	Phase 1	10.35
24.299	8	21.94	38.06	60.00	16.12	33.88	50.00	Phase 1	10.35

FCC ID: O2FM260SEHF

Frequency (MHz)	SR	QuasiPeak (dBµV)	QP Margin	QP Limit	Average (dBµV)	AV Margin	AV Limit	Line	Correction (dB)
0.191	9	54.02	10.00	64.01	36.95	17.07	54.01	Neutral	9.83
0.245	9	45.06	16.89	61.94	24.09	27.85	51.94	Neutral	9.82
0.309	10	37.37	22.63	60.00	20.39	29.61	50.00	Neutral	9.80
0.314	10	37.69	22.19	59.88	20.83	29.05	49.88	Neutral	9.80
0.575	10	32.76	23.24	56.00	21.23	24.77	46.00	Neutral	9.80
0.584	10	31.99	24.01	56.00	15.36	30.64	46.00	Neutral	9.80
0.636	11	29.97	26.03	56.00	17.28	28.72	46.00	Neutral	9.80
0.645	11	30.80	25.20	56.00	13.69	32.31	46.00	Neutral	9.80
0.933	11	23.65	32.35	56.00	9.95	36.05	46.00	Neutral	9.80
0.978	11	26.91	29.09	56.00	11.85	34.15	46.00	Neutral	9.80
1.236	12	25.09	30.91	56.00	10.27	35.73	46.00	Neutral	9.79
1.515	12	26.05	29.95	56.00	12.50	33.50	46.00	Neutral	9.77
1.817	12	24.99	31.01	56.00	10.87	35.13	46.00	Neutral	9.79
3.255	13	26.30	29.70	56.00	13.53	32.47	46.00	Neutral	9.80
3.395	13	26.85	29.15	56.00	13.67	32.33	46.00	Neutral	9.81
3.476	13	26.96	29.04	56.00	14.25	31.75	46.00	Neutral	9.81
3.737	13	27.51	28.49	56.00	13.67	32.33	46.00	Neutral	9.81
5.723	14	18.92	41.08	60.00	11.26	38.74	50.00	Neutral	9.81
6.731	14	19.17	40.83	60.00	13.19	36.81	50.00	Neutral	9.81
6.834	14	18.23	41.77	60.00	11.38	38.62	50.00	Neutral	9.81
8.814	14	17.62	42.38	60.00	11.59	38.41	50.00	Neutral	9.82
13.560	15	55.49	4.51	60.00	55.65	-5.65	50.00	Neutral	9.90
13.587	15	22.40	37.60	60.00	13.67	36.33	50.00	Neutral	9.90
18.276	15	20.55	39.45	60.00	14.80	35.20	50.00	Neutral	10.06
21.162	16	20.60	39.40	60.00	14.77	35.23	50.00	Neutral	10.09
25.829	16	17.54	42.46	60.00	10.71	39.29	50.00	Neutral	9.90
28.668	16	17.90	42.10	60.00	11.94	38.06	50.00	Neutral	9.77

FCC ID: O2FM260SEHF

Operation mode: charging in the docking station DS260 and simultaneous transmission of all radio modules (WLAN on CH 6)

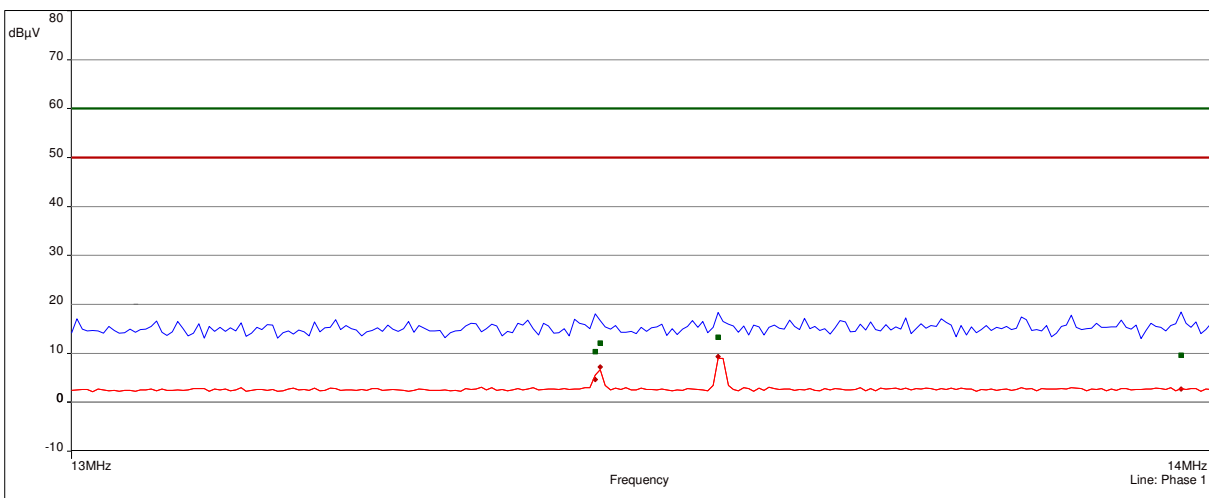
Remarks: test setup with notebook; retest with dummy load in lieu of the antenna

Date: 15.02.2017

Tested by: Willibald Probst

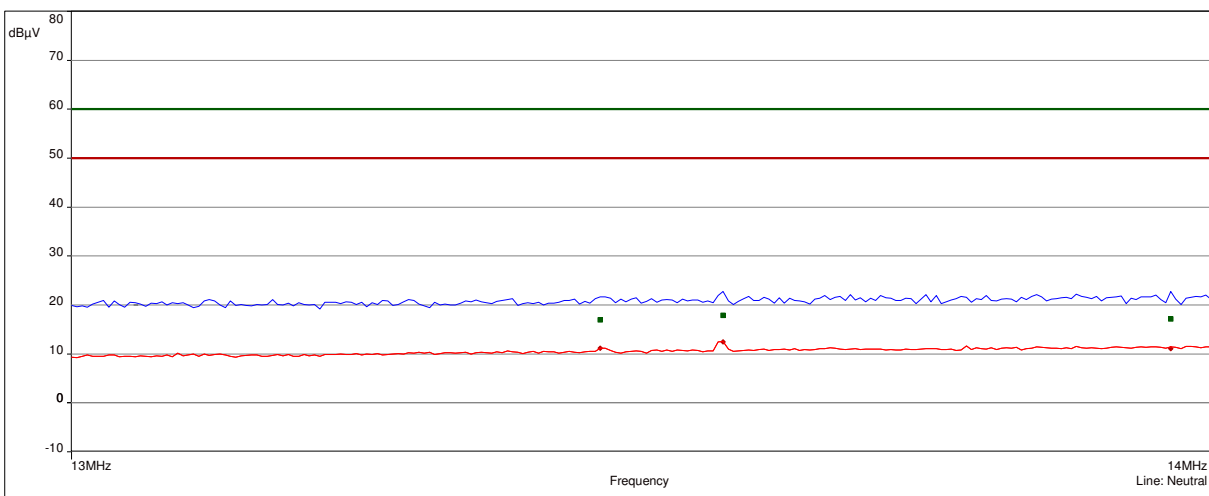
Result: passed

- CISPR 22/CISPR22 B - Average/
- CISPR 22/CISPR22 B - QPeak/
- Meas.Peak (Phase 1)
- Meas.Avg (Phase 1)
- QuasiPeak (Finals) (Phase 1)
- Average (Finals) (Phase 1)



CISPR 22/CISPR22B

- CISPR 22/CISPR22 B - Average/
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- Meas.Peak (Neutral)
- Meas.Avg (Neutral)
- QuasiPeak (Finals) (Neutral)
- Average (Finals) (Neutral)



CISPR 22/CISPR22B

FCC ID: O2FM260SEHF

Frequency (MHz)	SR	QuasiPeak (dBµV)	QP Margin	QP Limit	Average (dBµV)	AV Margin	AV Limit	Line	Correction (dB)
13.450	1	10.35	49.65	60.00	4.66	45.34	50.00	Phase 1	10.04
13.455	1	12.13	47.87	60.00	7.18	42.82	50.00	Phase 1	10.04
13.558	1	13.25	46.75	60.00	9.33	40.67	50.00	Phase 1	10.05
13.972	1	9.61	50.39	60.00	2.75	47.25	50.00	Phase 1	10.07

Frequency (MHz)	SR	QuasiPeak (dBµV)	QP Margin	QP Limit	Average (dBµV)	AV Margin	AV Limit	Line	Correction (dB)
13.455	2	16.95	43.05	60.00	11.19	38.81	50.00	Neutral	9.90
13.563	2	17.89	42.11	60.00	12.46	37.54	50.00	Neutral	9.90
13.963	2	17.14	42.86	60.00	11.09	38.91	50.00	Neutral	9.91

FCC ID: O2FM260SEHF

Operation mode: charging in the docking station DS260 and simultaneous transmission of all radio modules (WLAN on CH 40)

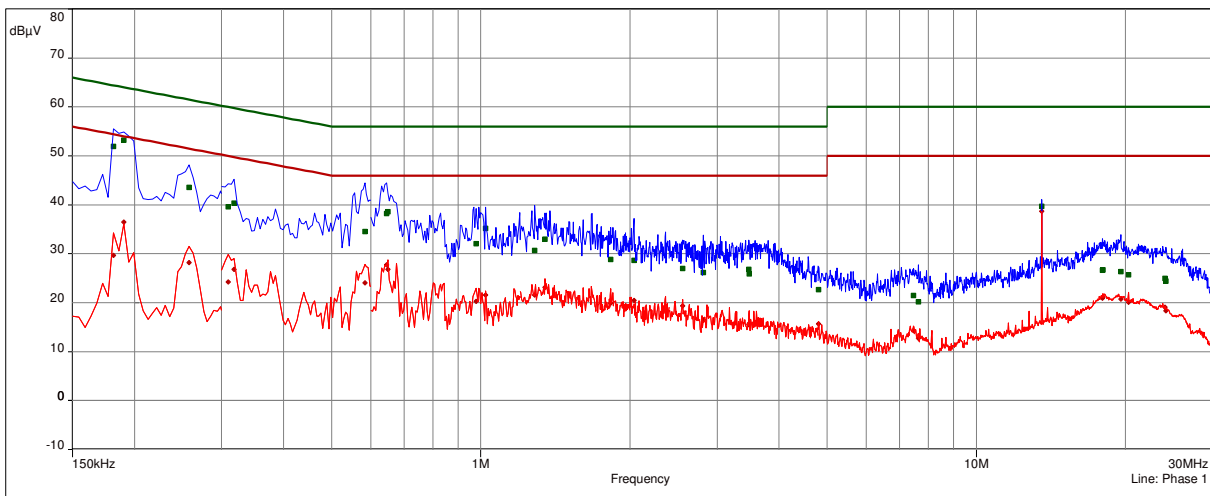
Result: passed

Remarks: test setup with notebook

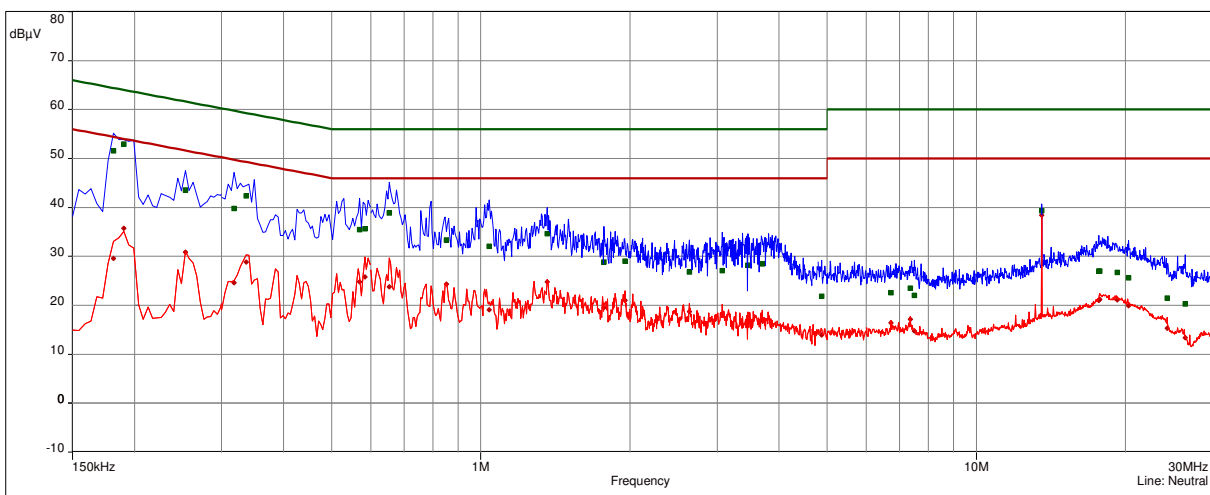
Date: 15.02.2017

Tested by: Willibald Probst

- CISPR 22/CISPR22 B - Average/
- CISPR 22/CISPR22 B - QPeak/
- Meas.Peak (Phase 1)
- Meas.Avg (Phase 1)
- QuasiPeak (Finals) (Phase 1)
- Average (Finals) (Phase 1)



- CISPR 22/CISPR22 B - Average/
- CISPR 22/CISPR22 B - QPeak/
- Meas.Peak (Neutral)
- Meas.Avg (Neutral)
- QuasiPeak (Finals) (Neutral)
- Average (Finals) (Neutral)



FCC ID: O2FM260SEHF

Frequency (MHz)	SR	QuasiPeak (dBµV)	QP Margin	QP Limit	Average (dBµV)	AV Margin	AV Limit	Line	Correction (dB)
0.182	1	51.97	12.45	64.42	29.71	24.71	54.42	Phase 1	9.82
0.191	1	53.25	10.76	64.01	36.51	17.51	54.01	Phase 1	9.82
0.258	1	43.59	17.91	61.50	28.20	23.29	51.50	Phase 1	9.81
0.309	2	39.57	20.43	60.00	24.21	25.78	50.00	Phase 1	9.80
0.318	2	40.36	19.40	59.76	26.85	22.91	49.76	Phase 1	9.80
0.584	2	34.54	21.46	56.00	24.03	21.97	46.00	Phase 1	9.80
0.645	3	38.24	17.76	56.00	27.71	18.29	46.00	Phase 1	9.80
0.650	3	38.58	17.42	56.00	26.84	19.16	46.00	Phase 1	9.80
0.978	3	32.09	23.91	56.00	20.26	25.74	46.00	Phase 1	9.80
1.023	3	35.20	20.80	56.00	21.53	24.47	46.00	Phase 1	9.80
1.286	4	30.68	25.32	56.00	21.61	24.39	46.00	Phase 1	9.78
1.349	4	33.00	23.00	56.00	23.17	22.83	46.00	Phase 1	9.78
1.830	4	28.85	27.15	56.00	19.95	26.05	46.00	Phase 1	9.79
2.037	4	28.65	27.35	56.00	20.46	25.54	46.00	Phase 1	9.80
2.553	5	27.04	28.96	56.00	19.35	26.65	46.00	Phase 1	9.78
2.814	5	26.17	29.83	56.00	16.48	29.52	46.00	Phase 1	9.78
3.476	5	26.85	29.15	56.00	15.51	30.49	46.00	Phase 1	9.82
3.480	5	25.90	30.10	56.00	15.77	30.23	46.00	Phase 1	9.82
4.809	6	22.64	33.36	56.00	15.64	30.36	46.00	Phase 1	9.82
7.464	6	21.52	38.48	60.00	14.31	35.69	50.00	Phase 1	9.85
7.635	6	20.22	39.78	60.00	12.76	37.24	50.00	Phase 1	9.85
13.560	7	39.67	20.33	60.00	38.67	11.33	50.00	Phase 1	10.05
17.988	7	26.62	33.38	60.00	20.97	29.03	50.00	Phase 1	10.24
18.024	7	26.73	33.27	60.00	21.07	28.93	50.00	Phase 1	10.24
19.583	8	26.39	33.61	60.00	20.77	29.23	50.00	Phase 1	10.32
20.280	8	25.69	34.31	60.00	20.07	29.93	50.00	Phase 1	10.34
24.051	8	24.99	35.01	60.00	19.13	30.87	50.00	Phase 1	10.35
24.137	8	24.45	35.55	60.00	18.37	31.63	50.00	Phase 1	10.35

FCC ID: O2FM260SEHF

Frequency (MHz)	SR	QuasiPeak (dBµV)	QP Margin	QP Limit	Average (dBµV)	AV Margin	AV Limit	Line	Correction (dB)
0.182	9	51.59	12.83	64.42	29.54	24.88	54.42	Neutral	9.83
0.191	9	52.97	11.05	64.01	35.74	18.27	54.01	Neutral	9.83
0.254	9	43.60	18.04	61.64	30.88	20.76	51.64	Neutral	9.82
0.318	10	39.83	19.93	59.76	24.66	25.10	49.76	Neutral	9.80
0.336	10	42.33	16.98	59.30	28.81	20.49	49.30	Neutral	9.80
0.570	10	35.45	20.55	56.00	24.81	21.19	46.00	Neutral	9.80
0.584	10	35.61	20.39	56.00	25.83	20.17	46.00	Neutral	9.80
0.654	11	38.91	17.09	56.00	23.77	22.23	46.00	Neutral	9.80
0.852	11	33.34	22.66	56.00	24.31	21.69	46.00	Neutral	9.80
1.041	11	32.10	23.90	56.00	19.05	26.95	46.00	Neutral	9.80
1.362	12	34.63	21.37	56.00	24.80	21.20	46.00	Neutral	9.78
1.772	12	28.81	27.19	56.00	19.59	26.41	46.00	Neutral	9.78
1.956	12	28.99	27.01	56.00	21.01	24.99	46.00	Neutral	9.80
2.639	13	26.83	29.17	56.00	18.76	27.24	46.00	Neutral	9.78
3.071	13	27.05	28.95	56.00	18.29	27.71	46.00	Neutral	9.79
3.462	13	28.24	27.76	56.00	16.48	29.52	46.00	Neutral	9.81
3.701	13	28.47	27.53	56.00	16.85	29.15	46.00	Neutral	9.81
4.877	14	21.85	34.15	56.00	13.96	32.04	46.00	Neutral	9.81
6.735	14	22.54	37.46	60.00	16.38	33.62	50.00	Neutral	9.81
7.356	14	23.51	36.49	60.00	17.17	32.83	50.00	Neutral	9.82
7.496	14	22.07	37.93	60.00	14.79	35.21	50.00	Neutral	9.81
13.560	15	39.35	20.65	60.00	38.44	11.56	50.00	Neutral	9.90
17.678	15	26.99	33.01	60.00	21.01	28.99	50.00	Neutral	10.03
17.750	15	26.97	33.03	60.00	21.20	28.80	50.00	Neutral	10.03
19.245	16	26.75	33.25	60.00	21.07	28.93	50.00	Neutral	10.09
20.307	16	25.63	34.37	60.00	19.89	30.11	50.00	Neutral	10.12
24.285	16	21.46	38.54	60.00	15.28	34.72	50.00	Neutral	9.96
26.400	16	20.24	39.76	60.00	13.40	36.60	50.00	Neutral	9.87

FCC ID: O2FM260SEHF

Operation mode: charging in the docking station DS260 and simultaneous transmission of all radio modules (WLAN on CH 6)

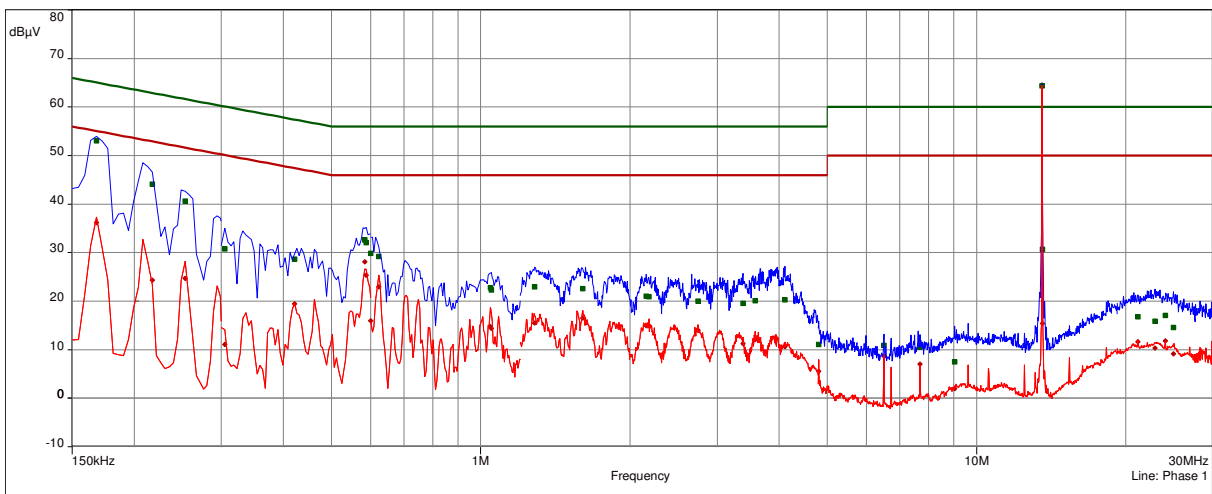
Result: passed

Remarks: test setup without notebook

Date: 15.02.2017

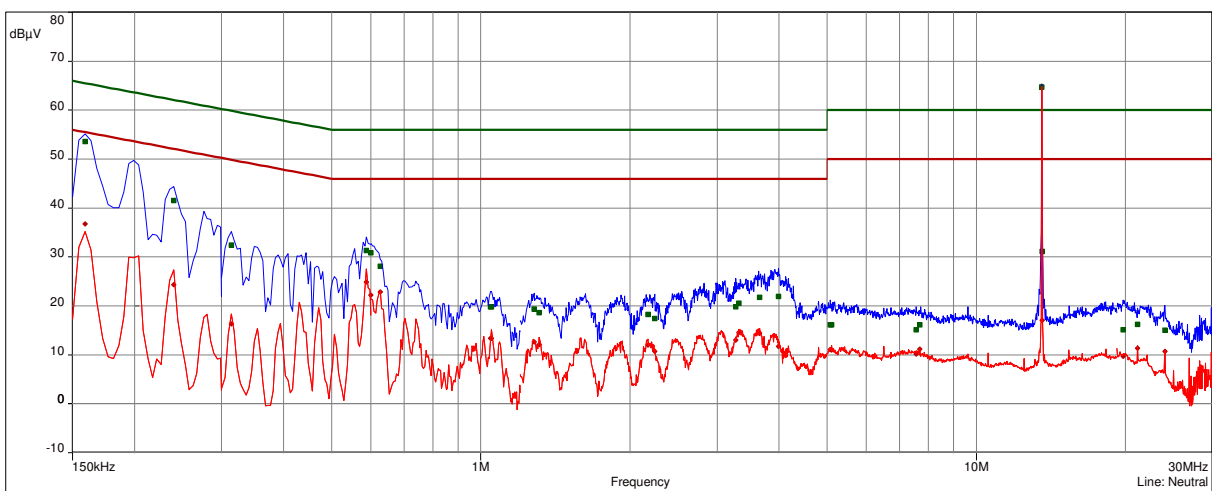
Tested by: Willibald Probst

— CISPR 22/CISPR22 B - Average/
— CISPR 22/CISPR22 B - QPeak/
— Meas.Peak (Phase 1)
— Meas.Avg (Phase 1)
■ QuasiPeak (Finals) (Phase 1)
● Average (Finals) (Phase 1)



CISPR 22/CISPR22B

— CISPR 22/CISPR22 B - Average/
— CISPR 22/CISPR22 B - QPeak/
— Meas.Peak (Neutral)
— Meas.Avg (Neutral)
■ QuasiPeak (Finals) (Neutral)
● Average (Finals) (Neutral)



CISPR 22/CISPR22B

FCC ID: O2FM260SEHF

Frequency (MHz)	SR	QuasiPeak (dBµV)	QP Margin	QP Limit	Average (dBµV)	AV Margin	AV Limit	Line	Correction (dB)
0.168	1	53.06	12.00	65.06	36.24	18.81	55.06	Phase 1	9.82
0.218	1	44.16	18.76	62.91	24.33	28.59	52.91	Phase 1	9.81
0.254	1	40.60	21.04	61.64	24.72	26.92	51.64	Phase 1	9.81
0.305	2	30.79	29.33	60.12	11.05	39.07	50.12	Phase 1	9.80
0.422	2	28.69	28.72	57.42	19.46	27.96	47.42	Phase 1	9.80
0.584	2	32.62	23.38	56.00	28.09	17.91	46.00	Phase 1	9.80
0.588	2	32.02	23.98	56.00	25.35	20.65	46.00	Phase 1	9.80
0.600	3	29.90	26.10	56.00	15.94	30.06	46.00	Phase 1	9.80
0.623	3	29.19	26.81	56.00	22.95	23.05	46.00	Phase 1	9.80
1.046	3	22.72	33.28	56.00	14.77	31.23	46.00	Phase 1	9.80
1.050	3	22.30	33.70	56.00	14.36	31.64	46.00	Phase 1	9.80
1.286	4	22.97	33.03	56.00	15.47	30.53	46.00	Phase 1	9.78
1.605	4	22.58	33.42	56.00	16.52	29.48	46.00	Phase 1	9.78
2.159	4	21.04	34.96	56.00	14.99	31.01	46.00	Phase 1	9.79
2.186	4	20.94	35.06	56.00	14.98	31.02	46.00	Phase 1	9.79
2.742	5	20.04	35.96	56.00	14.01	31.99	46.00	Phase 1	9.78
3.381	5	19.59	36.41	56.00	11.28	34.72	46.00	Phase 1	9.81
3.579	5	20.13	35.87	56.00	12.11	33.89	46.00	Phase 1	9.82
4.106	5	20.28	35.72	56.00	10.62	35.38	46.00	Phase 1	9.81
4.805	6	11.08	44.92	56.00	5.58	40.42	46.00	Phase 1	9.82
6.501	6	10.91	49.09	60.00	8.67	41.33	50.00	Phase 1	9.84
7.694	6	10.53	49.47	60.00	7.00	43.00	50.00	Phase 1	9.85
9.039	6	7.51	52.49	60.00	1.97	48.03	50.00	Phase 1	9.88
13.560	7	64.36	-4.36	60.00	64.55	-14.55	50.00	Phase 1	10.05
13.587	7	30.66	29.34	60.00	15.41	34.59	50.00	Phase 1	10.05
21.158	8	16.80	43.20	60.00	11.59	38.41	50.00	Phase 1	10.34
22.917	8	15.87	44.13	60.00	10.36	39.64	50.00	Phase 1	10.34
24.038	8	17.02	42.98	60.00	11.80	38.20	50.00	Phase 1	10.35
24.978	8	14.57	45.43	60.00	9.18	40.82	50.00	Phase 1	10.36

FCC ID: O2FM260SEHF

Frequency (MHz)	SR	QuasiPeak (dBµV)	QP Margin	QP Limit	Average (dBµV)	AV Margin	AV Limit	Line	Correction (dB)
0.159	9	53.56	11.96	65.52	36.74	18.77	55.52	Neutral	9.83
0.240	9	41.54	20.55	62.10	24.37	27.72	52.10	Neutral	9.82
0.314	10	32.46	27.42	59.88	16.29	33.59	49.88	Neutral	9.80
0.588	10	31.35	24.65	56.00	24.88	21.12	46.00	Neutral	9.80
0.600	11	30.91	25.09	56.00	22.19	23.81	46.00	Neutral	9.80
0.627	11	28.09	27.91	56.00	22.86	23.14	46.00	Neutral	9.80
1.046	11	19.82	36.18	56.00	13.34	32.66	46.00	Neutral	9.80
1.050	11	19.86	36.14	56.00	13.35	32.65	46.00	Neutral	9.80
1.281	12	19.35	36.65	56.00	12.68	33.32	46.00	Neutral	9.78
1.313	12	18.61	37.39	56.00	12.14	33.86	46.00	Neutral	9.78
2.177	12	18.21	37.79	56.00	11.99	34.01	46.00	Neutral	9.79
2.244	12	17.45	38.55	56.00	10.74	35.26	46.00	Neutral	9.79
3.269	13	19.79	36.21	56.00	13.05	32.95	46.00	Neutral	9.80
3.318	13	20.60	35.40	56.00	14.56	31.44	46.00	Neutral	9.80
3.656	13	21.72	34.28	56.00	14.43	31.57	46.00	Neutral	9.81
3.989	13	21.98	34.02	56.00	11.75	34.25	46.00	Neutral	9.81
5.075	14	16.13	43.87	60.00	11.06	38.94	50.00	Neutral	9.82
5.102	14	16.16	43.84	60.00	10.99	39.01	50.00	Neutral	9.82
7.572	14	15.13	44.87	60.00	10.19	39.81	50.00	Neutral	9.81
7.694	14	16.16	43.84	60.00	11.17	38.83	50.00	Neutral	9.81
13.560	15	64.76	-4.76	60.00	64.94	-14.94	50.00	Neutral	9.90
13.587	15	31.13	28.87	60.00	17.04	32.96	50.00	Neutral	9.90
19.794	16	15.12	44.88	60.00	9.67	40.33	50.00	Neutral	10.13
21.153	16	16.22	43.78	60.00	11.37	38.63	50.00	Neutral	10.09
24.038	16	15.05	44.95	60.00	10.72	39.28	50.00	Neutral	9.97

FCC ID: O2FM260SEHF

Operation mode: charging in the docking station DS260 and simultaneous transmission of all radio modules (WLAN on CH 6)

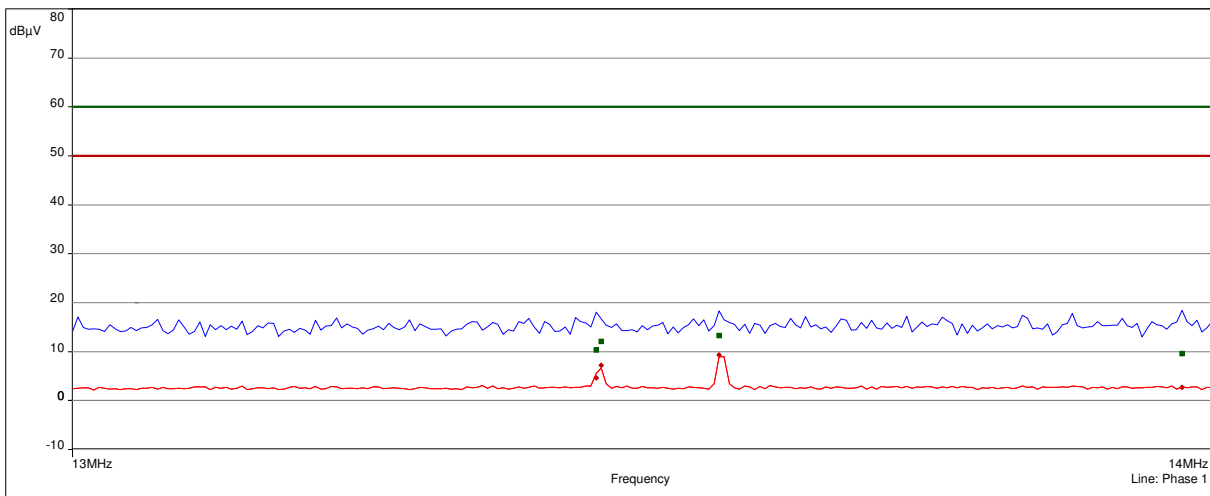
Remarks: test setup without notebook; retest with dummy load in lieu of the antenna

Date: 15.02.2017

Tested by: Willibald Probst

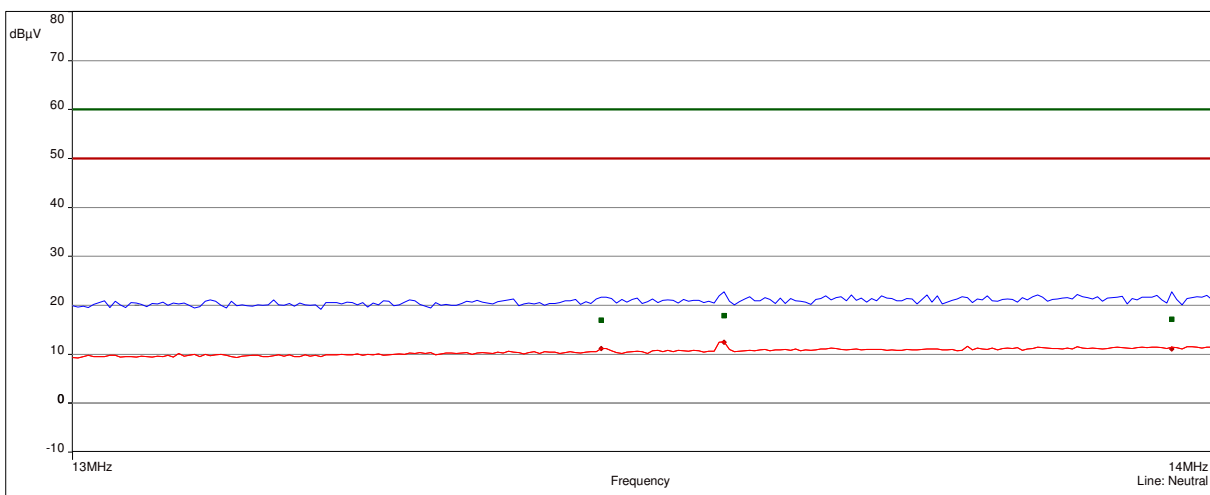
Result: passed

— CISPR 22/CISPR22 B - Average/
 — CISPR 22/CISPR22 B - QPeak/
 — Meas.Peak (Phase 1)
 — Meas.Avg (Phase 1)
 ■ QuasiPeak (Finals) (Phase 1)
 ◆ Average (Finals) (Phase 1)



CISPR 22/CISPR22B

— CISPR 22/CISPR22 B - Average/
 — CISPR 22/CISPR22 B - QPeak/
 — Meas.Peak (Neutral)
 — Meas.Avg (Neutral)
 ■ QuasiPeak (Finals) (Neutral)
 ◆ Average (Finals) (Neutral)



CISPR 22/CISPR22B

FCC ID: O2FM260SEHF

Frequency (MHz)	SR	QuasiPeak (dB μ V)	QP Margin	QP Limit	Average (dB μ V)	AV Margin	AV Limit	Line	Correction (dB)
13.464	1	10.21	49.79	60.00	6.22	43.78	50.00	Phase 1	10.04
13.468	1	9.10	50.90	60.00	4.67	45.33	50.00	Phase 1	10.04
13.558	1	19.13	40.87	60.00	18.49	31.51	50.00	Phase 1	10.05
13.563	1	18.72	41.28	60.00	18.04	31.96	50.00	Phase 1	10.05

Frequency (MHz)	SR	QuasiPeak (dB μ V)	QP Margin	QP Limit	Average (dB μ V)	AV Margin	AV Limit	Line	Correction (dB)
13.464	2	14.46	45.54	60.00	9.52	40.48	50.00	Neutral	9.90
13.558	2	21.00	39.00	60.00	19.10	30.90	50.00	Neutral	9.90

FCC ID: O2FM260SEHF

Operation mode: charging in the docking station DS260 and simultaneous transmission of all radio modules (WLAN on CH 40)

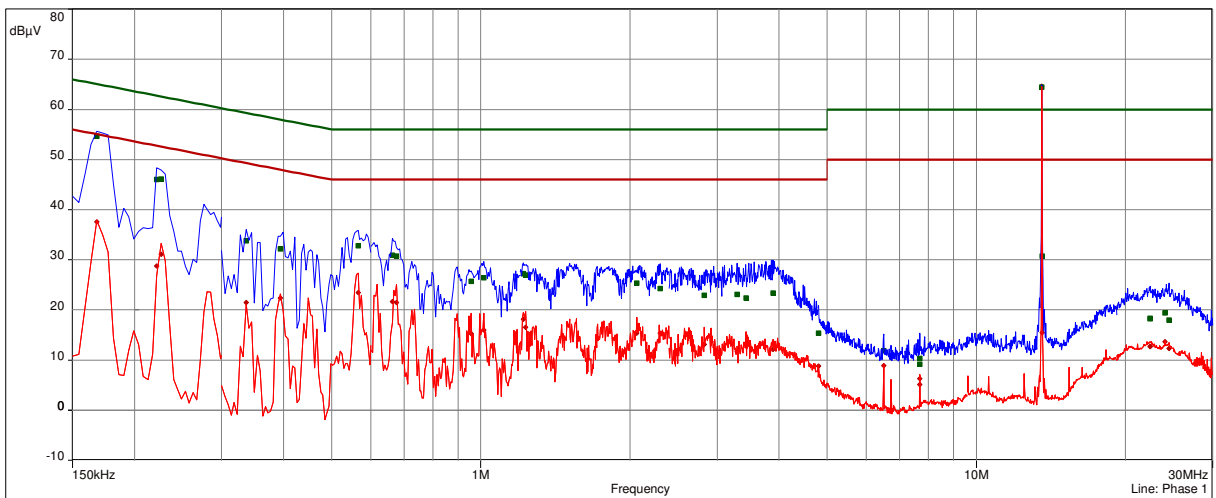
Result: passed

Remarks: test setup without notebook

Date: 15.02.2017

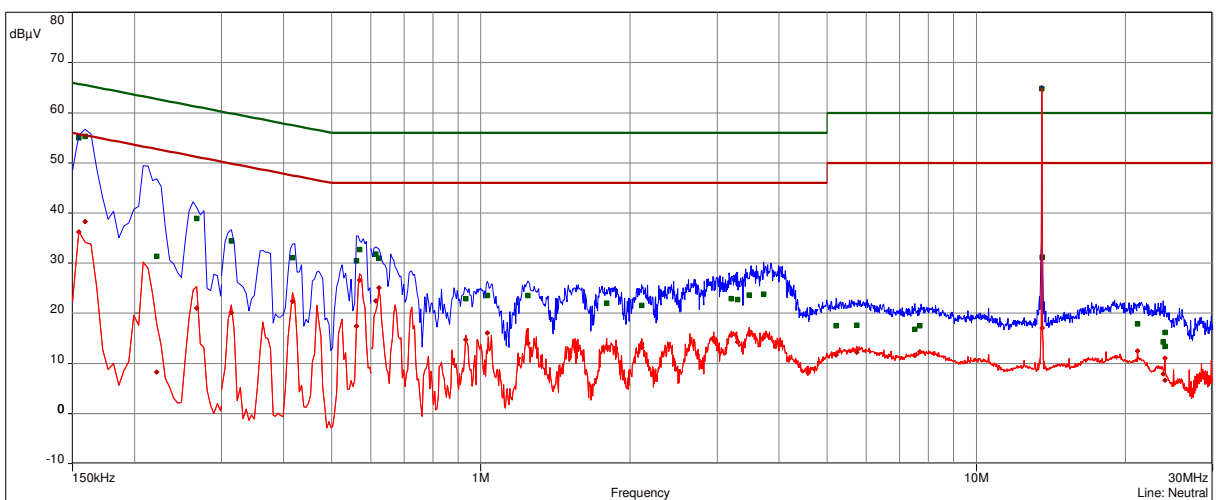
Tested by: Willibald Probst

— CISPR 22/CISPR22 B - Average/
— CISPR 22/CISPR22 B - QPeak/
— Meas.Peak (Phase 1)
— Meas.Avg (Phase 1)
■ QuasiPeak (Finals) (Phase 1)
● Average (Finals) (Phase 1)



CISPR 22/CISPR22B

— CISPR 22/CISPR22 B - Average/
— CISPR 22/CISPR22 B - QPeak/
— Meas.Peak (Neutral)
— Meas.Avg (Neutral)
■ QuasiPeak (Finals) (Neutral)
● Average (Finals) (Neutral)



CISPR 22/CISPR22B

FCC ID: O2FM260SEHF

Frequency (MHz)	SR	QuasiPeak (dBµV)	QP Margin	QP Limit	Average (dBµV)	AV Margin	AV Limit	Line	Correction (dB)
0.168	1	54.61	10.45	65.06	37.56	17.50	55.06	Phase 1	9.82
0.222	1	46.00	16.75	62.74	28.76	23.98	52.74	Phase 1	9.81
0.227	1	46.13	16.45	62.58	31.06	21.52	52.58	Phase 1	9.81
0.336	2	33.78	25.52	59.30	21.49	27.81	49.30	Phase 1	9.80
0.395	2	32.18	25.79	57.97	22.38	25.59	47.97	Phase 1	9.80
0.566	2	32.85	23.15	56.00	23.42	22.58	46.00	Phase 1	9.80
0.663	3	30.96	25.04	56.00	21.62	24.38	46.00	Phase 1	9.80
0.677	3	30.75	25.25	56.00	21.50	24.50	46.00	Phase 1	9.80
0.956	3	25.70	30.30	56.00	15.26	30.74	46.00	Phase 1	9.80
1.014	3	26.44	29.56	56.00	16.00	30.00	46.00	Phase 1	9.80
1.218	4	27.20	28.80	56.00	18.11	27.89	46.00	Phase 1	9.79
1.232	4	26.92	29.08	56.00	16.53	29.47	46.00	Phase 1	9.79
2.064	4	25.38	30.62	56.00	15.34	30.66	46.00	Phase 1	9.80
2.303	4	24.24	31.76	56.00	15.36	30.64	46.00	Phase 1	9.79
2.823	5	22.92	33.08	56.00	13.08	32.92	46.00	Phase 1	9.79
3.291	5	23.06	32.94	56.00	11.67	34.33	46.00	Phase 1	9.81
3.431	5	22.39	33.61	56.00	13.05	32.95	46.00	Phase 1	9.81
3.894	5	23.41	32.59	56.00	12.10	33.90	46.00	Phase 1	9.81
4.809	6	15.35	40.65	56.00	8.78	37.22	46.00	Phase 1	9.82
6.501	6	11.84	48.16	60.00	8.93	41.07	50.00	Phase 1	9.84
7.694	6	9.14	50.86	60.00	5.10	44.90	50.00	Phase 1	9.85
7.698	6	10.31	49.69	60.00	6.32	43.68	50.00	Phase 1	9.85
13.560	7	64.47	-4.47	60.00	64.65	-14.65	50.00	Phase 1	10.05
13.587	7	30.75	29.25	60.00	15.49	34.51	50.00	Phase 1	10.05
22.413	8	18.32	41.68	60.00	12.74	37.26	50.00	Phase 1	10.34
22.449	8	18.24	41.76	60.00	12.70	37.30	50.00	Phase 1	10.34
24.051	8	19.36	40.64	60.00	13.61	36.39	50.00	Phase 1	10.35
24.519	8	18.01	41.99	60.00	12.32	37.68	50.00	Phase 1	10.36

FCC ID: O2FM260SEHF

Frequency (MHz)	SR	QuasiPeak (dBµV)	QP Margin	QP Limit	Average (dBµV)	AV Margin	AV Limit	Line	Correction (dB)
0.155	9	55.06	10.70	65.75	36.24	19.52	55.75	Neutral	9.83
0.159	9	55.30	10.21	65.52	38.31	17.20	55.52	Neutral	9.83
0.222	9	31.33	31.41	62.74	8.28	44.47	52.74	Neutral	9.83
0.267	9	38.96	22.25	61.21	21.05	30.16	51.21	Neutral	9.81
0.314	10	34.45	25.43	59.88	20.13	29.75	49.88	Neutral	9.80
0.417	10	31.07	26.44	57.51	22.37	25.13	47.51	Neutral	9.80
0.561	10	30.46	25.54	56.00	17.42	28.58	46.00	Neutral	9.81
0.570	10	32.72	23.28	56.00	26.56	19.44	46.00	Neutral	9.80
0.614	11	31.81	24.19	56.00	22.45	23.55	46.00	Neutral	9.80
0.623	11	31.03	24.97	56.00	25.09	20.91	46.00	Neutral	9.80
0.933	11	22.91	33.09	56.00	14.77	31.23	46.00	Neutral	9.80
1.032	11	23.59	32.41	56.00	16.06	29.94	46.00	Neutral	9.80
1.245	12	23.56	32.44	56.00	13.98	32.02	46.00	Neutral	9.79
1.794	12	22.03	33.97	56.00	13.22	32.78	46.00	Neutral	9.78
2.114	12	21.60	34.40	56.00	13.21	32.79	46.00	Neutral	9.80
3.206	13	22.93	33.07	56.00	15.65	30.35	46.00	Neutral	9.80
3.300	13	22.77	33.23	56.00	14.26	31.74	46.00	Neutral	9.80
3.485	13	23.61	32.39	56.00	15.85	30.15	46.00	Neutral	9.81
3.723	13	23.80	32.20	56.00	15.18	30.82	46.00	Neutral	9.81
5.219	14	17.50	42.50	60.00	11.64	38.36	50.00	Neutral	9.82
5.741	14	17.57	42.43	60.00	12.24	37.76	50.00	Neutral	9.81
7.523	14	16.82	43.18	60.00	11.55	38.45	50.00	Neutral	9.81
7.698	14	17.49	42.51	60.00	12.30	37.70	50.00	Neutral	9.81
13.560	15	64.83	-4.83	60.00	65.01	-15.01	50.00	Neutral	9.90
13.587	15	31.15	28.85	60.00	17.10	32.90	50.00	Neutral	9.90
21.162	16	17.88	42.12	60.00	12.47	37.53	50.00	Neutral	10.09
23.831	16	14.26	45.74	60.00	7.92	42.08	50.00	Neutral	9.98
24.029	16	13.36	46.64	60.00	6.62	43.38	50.00	Neutral	9.97
24.047	16	16.13	43.87	60.00	11.09	38.91	50.00	Neutral	9.97

FCC ID: O2FM260SEHF

Operation mode: charging in the docking station DS260 and simultaneous transmission of all radio modules (WLAN on CH 40)

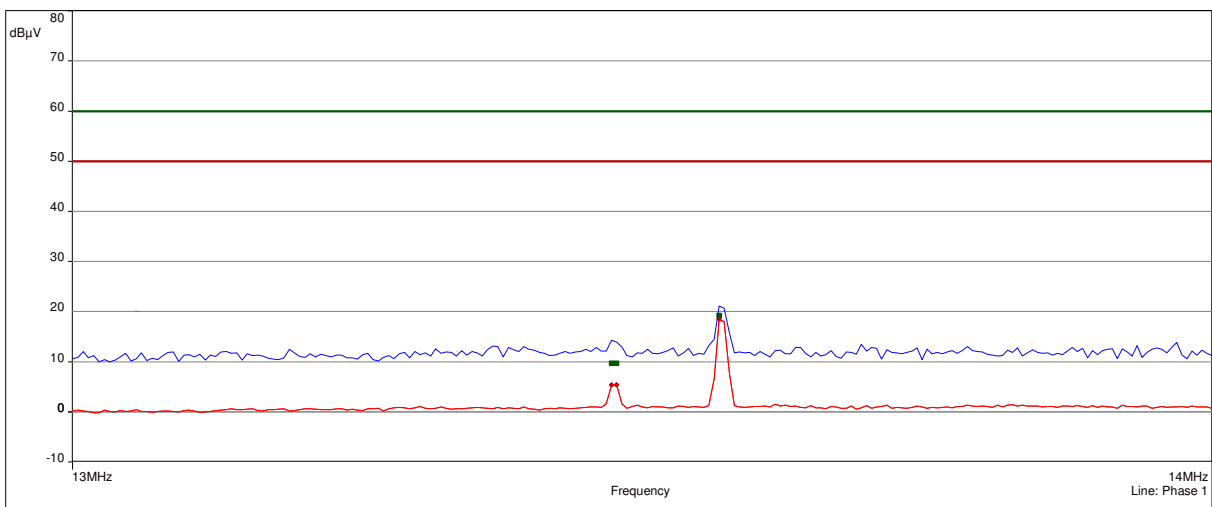
Remarks: test setup without notebook; retest with dummy load in lieu of the antenna

Date: 15.02.2017

Tested by: Willibald Probst

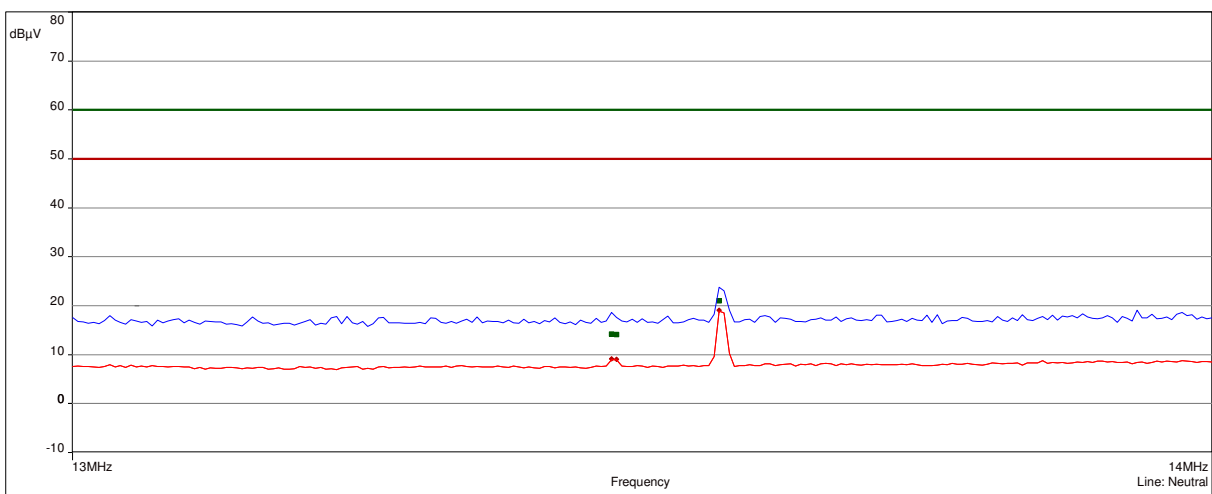
Result: passed

— CISPR 22/CISPR22 B - Average/
— CISPR 22/CISPR22 B - QPeak/
— Meas.Peak (Phase 1)
— Meas.Avg (Phase 1)
■ QuasiPeak (Finals) (Phase 1)
● Average (Finals) (Phase 1)



CISPR 22/CISPR22B

— CISPR 22/CISPR22 B - Average/
— CISPR 22/CISPR22 B - QPeak/
— Meas.Peak (Neutral)
— Meas.Avg (Neutral)
■ QuasiPeak (Finals) (Neutral)
● Average (Finals) (Neutral)



CISPR 22/CISPR22B

FCC ID: O2FM260SEHF

Frequency (MHz)	SR	QuasiPeak (dB μ V)	QP Margin	QP Limit	Average (dB μ V)	AV Margin	AV Limit	Line	Correction (dB)
13.464	1	9.70	50.30	60.00	5.37	44.63	50.00	Phase 1	10.04
13.468	1	9.71	50.29	60.00	5.43	44.57	50.00	Phase 1	10.04
13.558	1	19.19	40.81	60.00	18.51	31.49	50.00	Phase 1	10.05

Frequency (MHz)	SR	QuasiPeak (dB μ V)	QP Margin	QP Limit	Average (dB μ V)	AV Margin	AV Limit	Line	Correction (dB)
13.464	2	14.23	45.77	60.00	9.10	40.90	50.00	Neutral	9.90
13.468	2	14.12	45.88	60.00	9.02	40.98	50.00	Neutral	9.90
13.558	2	20.99	39.01	60.00	19.10	30.90	50.00	Neutral	9.90

5.2 Spurious emissions

For test instruments and accessories used see section 6 Part **SER 2**, **SER 3**.

5.2.1 Description of the test locations

Test location: OATS1
Test distance: 3 metres

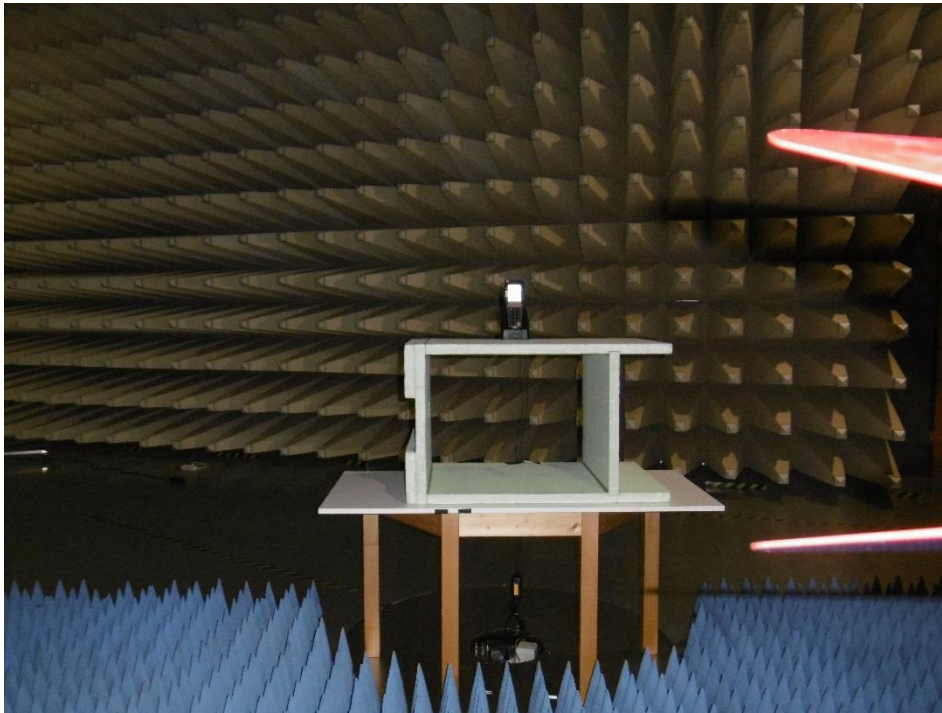
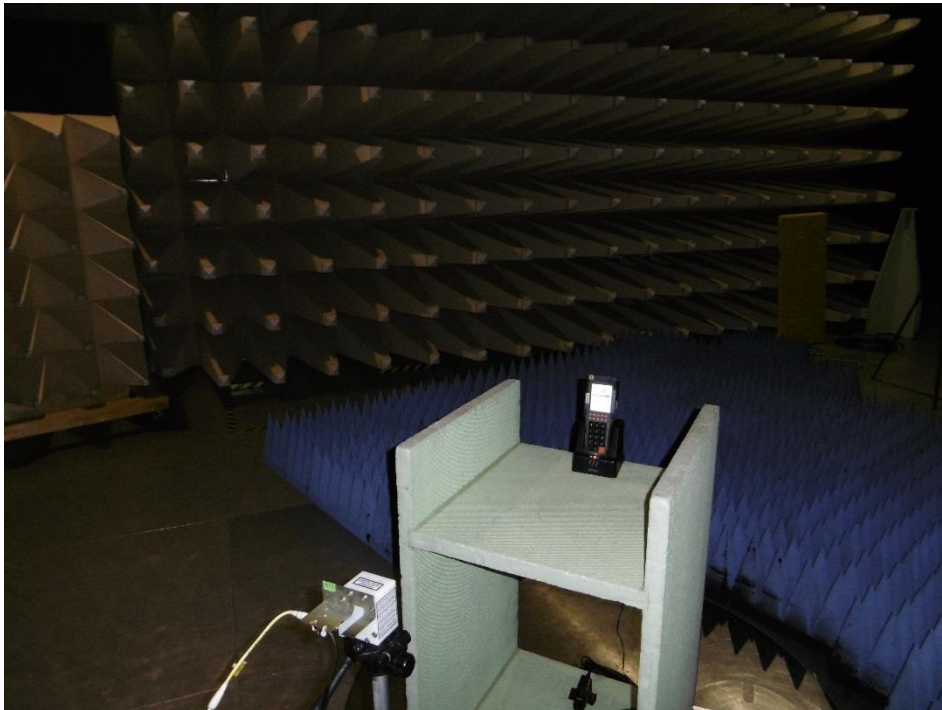
Test location: Anechoic chamber 1
Test distance: 3 metres

Test location: Anechoic chamber 1
Test distance: 1 metre

5.2.2 Photo documentation of the test set-up

30 MHz < f < 1 GHz:



FCC ID: O2FM260SEHF $1 \text{ GHz} < f < 18 \text{ GHz}$  $18 \text{ GHz} < f < 40 \text{ GHz}$ **5.2.3 Applicable standard**

FCC Part 15, Section 15.209

Instrument settings:

30 MHz – 1000 MHz:	RBW:	120 kHz
1 GHz – 40 GHz	RBW:	1 MHz

FCC ID: O2FM260SEHF
5.2.4 Test result
30 MHz < f < 1 GHz:

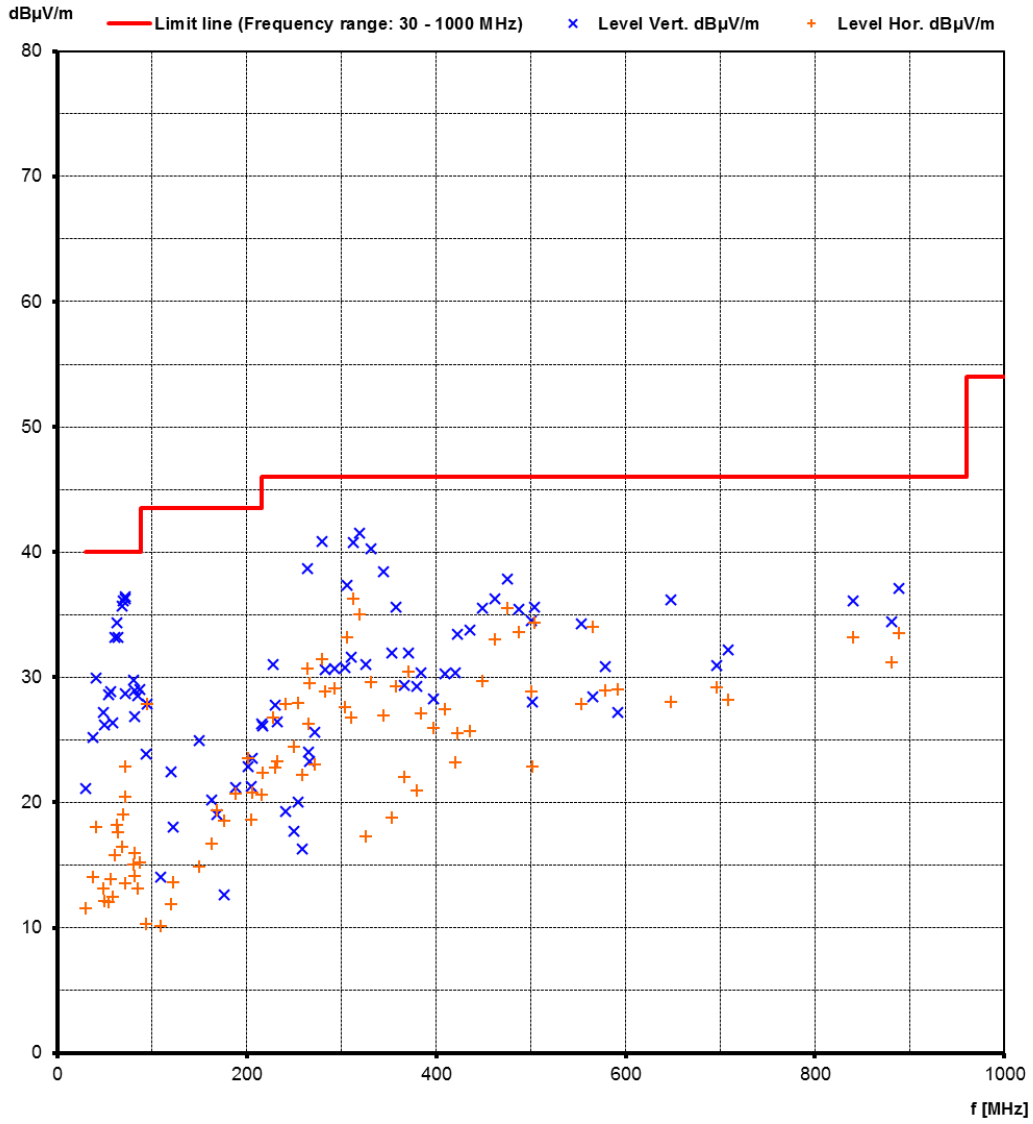
simultaneous transmission WLAN CH6, Bluetooth and RFID

Frequency (MHz)	Reading Vert. (dBµV)	Reading Hor. (dBµV)	Correct. Vert. (dB)	Correct. Hor. (dB)	Level Vert. (dBµV/m)	Level Hor. (dBµV/m)	Limit (dBµV/m)	Dlimit (dB)
30.00	7.0	-1.0	14.1	12.5	21.1	11.5	40.0	-18.9
37.40	10.9	1.0	14.3	13.1	25.2	14.1	40.0	-14.8
40.68	15.2	4.5	14.7	13.5	29.9	18.0	40.0	-10.1
48.00	12.0	-1.0	15.2	14.1	27.2	13.1	40.0	-12.8
49.70	11.0	-2.0	15.2	14.2	26.2	12.2	40.0	-13.8
54.40	13.6	-2.0	15.0	14.0	28.6	12.0	40.0	-11.4
56.60	14.0	-0.1	14.9	13.9	28.9	13.8	40.0	-11.1
58.00	11.5	-1.4	14.8	13.9	26.3	12.5	40.0	-13.7
60.80	18.5	2.0	14.7	13.8	33.2	15.8	40.0	-6.8
62.60	19.8	4.5	14.6	13.7	34.4	18.2	40.0	-5.6
63.40	18.7	4.0	14.5	13.7	33.2	17.7	40.0	-6.8
67.80	21.5	3.0	14.2	13.4	35.7	16.4	40.0	-4.3
69.20	22.0	5.7	14.1	13.4	36.1	19.1	40.0	-3.9
71.00	15.0	0.5	13.7	13.1	28.7	13.6	40.0	-11.3
71.50	22.7	7.5	13.6	13.0	36.3	20.5	40.0	-3.7
72.01	23.0	10.0	13.4	12.8	36.4	22.8	40.0	-3.6
79.90	18.7	4.2	11.1	10.8	29.8	15.0	40.0	-10.2
81.36	16.1	5.3	10.8	10.6	26.9	15.9	40.0	-13.1
81.60	18.2	3.5	10.7	10.6	28.9	14.1	40.0	-11.1
84.50	18.5	2.9	10.1	10.3	28.6	13.2	40.0	-11.4
86.90	19.5	5.2	9.5	10.0	29.0	15.2	40.0	-11.0
93.40	15.0	0.5	8.8	9.8	23.8	10.3	43.5	-19.7
94.92	19.0	18.0	8.8	9.8	27.8	27.8	43.5	-15.7
108.48	3.7	-1.1	10.4	11.3	14.1	10.2	43.5	-29.4
120.00	10.0	-1.0	12.4	12.9	22.4	11.9	43.5	-21.1
122.04	5.5	0.6	12.5	13.0	18.0	13.6	43.5	-25.5
149.52	11.0	0.1	13.9	14.7	24.9	14.8	43.5	-18.6
162.52	5.8	1.5	14.4	15.2	20.2	16.7	43.5	-23.3
168.03	5.0	4.5	14.1	14.8	19.1	19.3	43.5	-24.2
175.52	-1.0	4.2	13.6	14.4	12.6	18.6	43.5	-24.9
188.53	8.8	7.5	12.4	13.2	21.2	20.7	43.5	-22.3
201.53	11.5	11.5	11.3	12.0	22.8	23.5	43.5	-20.0
204.80	9.8	6.5	11.5	12.1	21.3	18.6	43.5	-22.2
206.10	12.0	8.6	11.6	12.2	23.6	20.8	43.5	-19.9
216.04	14.2	8.0	12.1	12.6	26.3	20.6	46.0	-19.7
217.00	14.0	9.7	12.1	12.6	26.1	22.3	46.0	-19.9
227.54	18.4	13.7	12.6	13.1	31.0	26.8	46.0	-15.0
229.90	15.0	9.6	12.8	13.2	27.8	22.8	46.0	-18.2
231.70	13.6	10.0	12.9	13.2	26.5	23.2	46.0	-19.5
240.54	6.0	14.3	13.3	13.6	19.3	27.9	46.0	-18.1
250.00	3.9	10.5	13.8	14.0	17.7	24.5	46.0	-21.5
253.54	6.0	13.8	14.0	14.2	20.0	28.0	46.0	-18.0

FCC ID: O2FM260SEHF

Frequency (MHz)	Reading Vert. (dBµV)	Reading Hor. (dBµV)	Correct. Vert. (dB)	Correct. Hor. (dB)	Level Vert. (dBµV/m)	Level Hor. (dBµV/m)	Limit (dBµV/m)	Dlimit (dB)
258.00	2.0	7.8	14.3	14.4	16.3	22.2	46.0	-23.8
264.00	24.0	16.0	14.7	14.7	38.7	30.7	46.0	-7.3
265.13	9.3	11.5	14.7	14.7	24.0	26.2	46.0	-19.8
266.54	8.5	14.7	14.8	14.8	23.3	29.5	46.0	-16.5
271.20	10.5	8.0	15.1	15.0	25.6	23.0	46.0	-20.4
279.54	25.2	16.0	15.6	15.5	40.8	31.5	46.0	-5.2
282.80	14.8	13.2	15.8	15.6	30.6	28.8	46.0	-15.4
292.55	14.3	13.0	16.4	16.1	30.7	29.1	46.0	-15.3
303.14	13.8	11.0	17.0	16.6	30.8	27.6	46.0	-15.2
305.54	20.3	16.5	17.1	16.7	37.4	33.2	46.0	-8.6
310.05	14.4	10.0	17.2	16.8	31.6	26.8	46.0	-14.4
312.05	23.5	19.4	17.3	16.8	40.8	36.2	46.0	-5.2
318.55	24.1	18.0	17.4	17.0	41.5	35.0	46.0	-4.5
325.44	13.4	0.0	17.6	17.3	31.0	17.3	46.0	-15.0
331.55	22.4	12.2	17.8	17.4	40.2	29.6	46.0	-5.8
344.55	20.2	9.1	18.2	17.8	38.4	26.9	46.0	-7.6
352.56	13.5	0.7	18.4	18.1	31.9	18.8	46.0	-14.1
357.56	17.0	11.0	18.6	18.2	35.6	29.2	46.0	-10.4
366.00	10.5	3.5	18.8	18.5	29.3	22.0	46.0	-16.7
370.56	13.0	11.8	19.0	18.6	32.0	30.4	46.0	-14.0
379.68	10.0	2.0	19.2	18.9	29.2	20.9	46.0	-16.8
383.56	11.0	8.1	19.4	19.0	30.4	27.1	46.0	-15.6
396.57	8.5	6.5	19.7	19.4	28.2	25.9	46.0	-17.8
409.56	10.2	7.6	20.1	19.8	30.3	27.4	46.0	-15.7
420.36	10.0	3.1	20.4	20.1	30.4	23.2	46.0	-15.6
422.56	13.0	5.4	20.4	20.2	33.4	25.6	46.0	-12.6
435.66	13.0	5.2	20.8	20.5	33.8	25.7	46.0	-12.2
448.57	14.4	8.8	21.1	20.9	35.5	29.7	46.0	-10.5
461.57	14.8	11.8	21.5	21.2	36.3	33.0	46.0	-9.7
474.57	16.0	14.0	21.8	21.6	37.8	35.6	46.0	-8.2
487.57	13.3	11.7	22.2	21.9	35.5	33.6	46.0	-10.5
500.58	12.0	6.6	22.5	22.3	34.5	28.9	46.0	-11.5
501.73	5.5	0.6	22.6	22.3	28.1	22.9	46.0	-17.9
503.80	13.0	12.0	22.6	22.4	35.6	34.4	46.0	-10.4
552.98	10.2	4.0	24.1	23.9	34.3	27.9	46.0	-11.7
565.59	4.0	9.8	24.4	24.2	28.4	34.0	46.0	-12.0
578.60	6.0	4.3	24.8	24.6	30.8	28.9	46.0	-15.2
591.60	2.0	4.0	25.2	25.0	27.2	29.0	46.0	-17.0
648.10	10.0	2.2	26.2	25.9	36.2	28.1	46.0	-9.8
696.12	4.0	2.8	26.9	26.4	30.9	29.2	46.0	-15.1
708.61	5.0	1.5	27.2	26.7	32.2	28.2	46.0	-13.8
840.13	6.0	3.5	30.1	29.7	36.1	33.2	46.0	-9.9
881.41	3.6	0.8	30.8	30.4	34.4	31.2	46.0	-11.6
888.15	6.2	3.0	30.9	30.5	37.1	33.5	46.0	-8.9

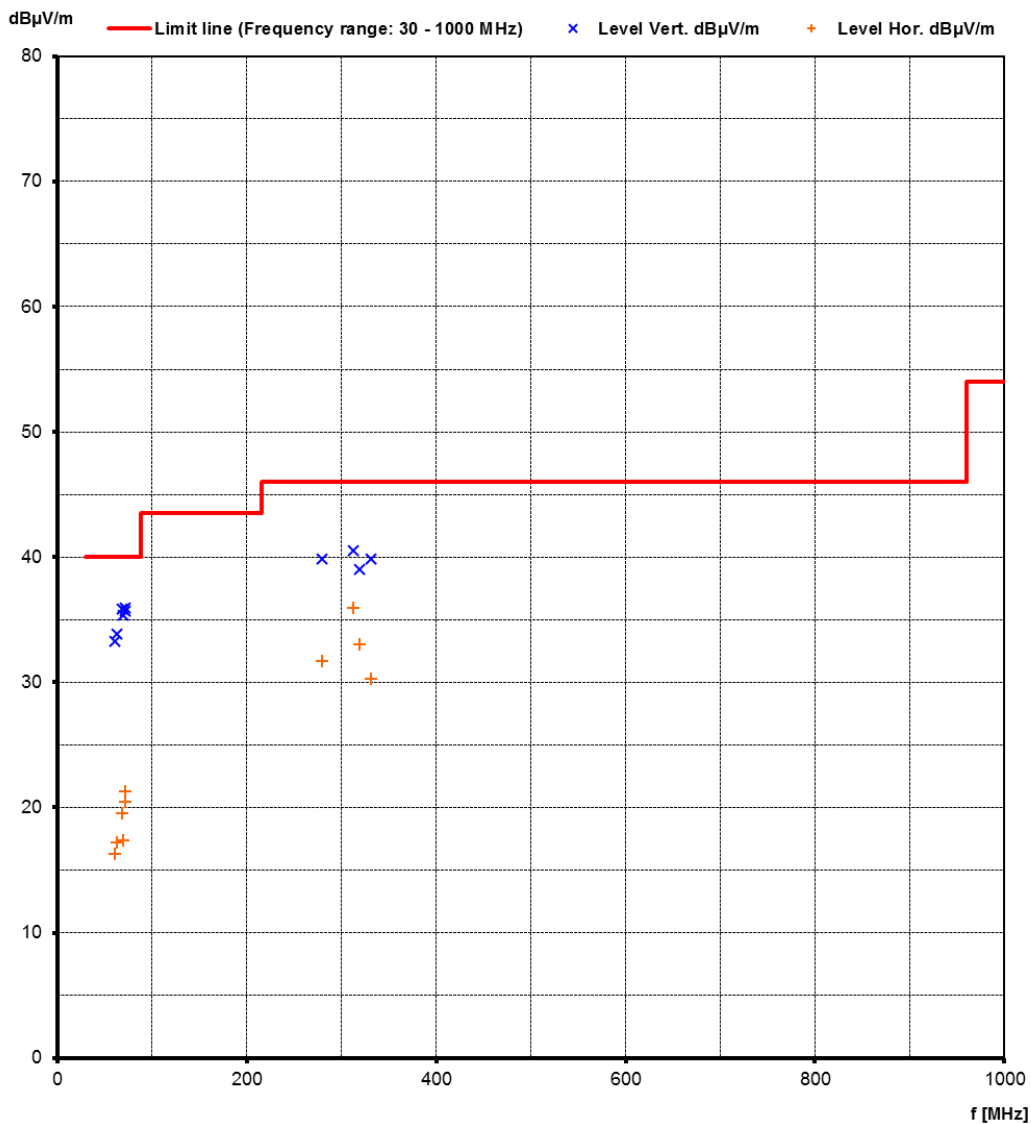
FCC ID: O2FM260SEHF



FCC ID: O2FM260SEHF

simultaneous transmission WLAN CH40, Bluetooth and RFID
 (only the 10 highest emissions from simultaneous transmission of WLAN CH6, Bluetooth and RFID are re-measured)

Frequency (MHz)	Reading Vert. (dBµV)	Reading Hor. (dBµV)	Correct. Vert. (dB)	Correct. Hor. (dB)	Level Vert. (dBµV/m)	Level Hor. (dBµV/m)	Limit (dBµV/m)	Dlimit (dB)
72.01	22.5	8.5	13.4	12.8	35.9	21.3	40.0	-4.1
60.80	18.6	2.5	14.7	13.8	33.3	16.3	40.0	-6.7
62.60	19.3	3.5	14.6	13.7	33.9	17.2	40.0	-6.1
67.80	21.7	6.1	14.2	13.4	35.9	19.5	40.0	-4.1
69.20	21.3	4.0	14.1	13.4	35.4	17.4	40.0	-4.6
71.50	22.1	7.5	13.6	13.0	35.7	20.5	40.0	-4.3
279.54	24.2	16.2	15.6	15.5	39.8	31.7	46.0	-6.2
312.05	23.3	19.1	17.3	16.8	40.6	35.9	46.0	-5.4
318.55	21.6	16.0	17.4	17.0	39.0	33.0	46.0	-7.0
331.55	22.0	12.8	17.8	17.4	39.8	30.2	46.0	-6.2

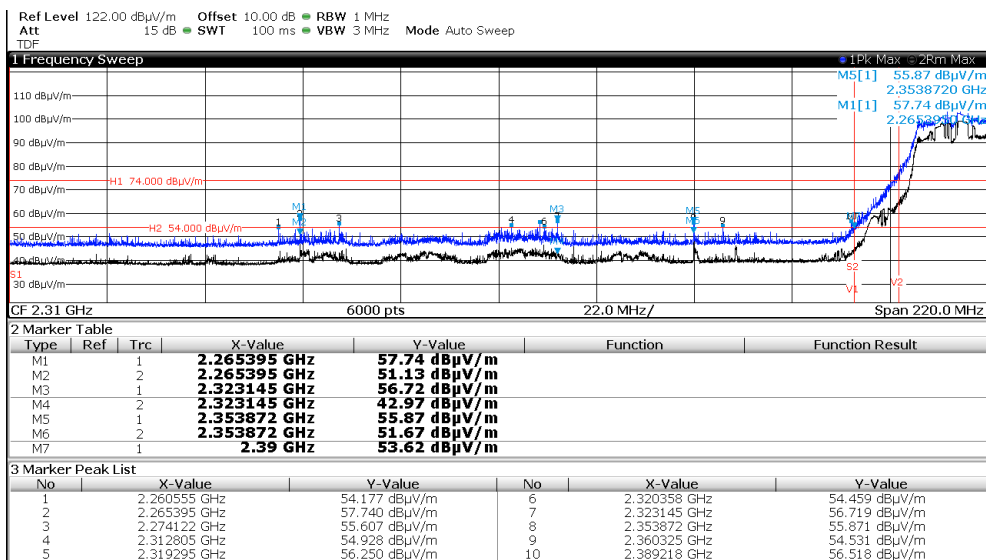
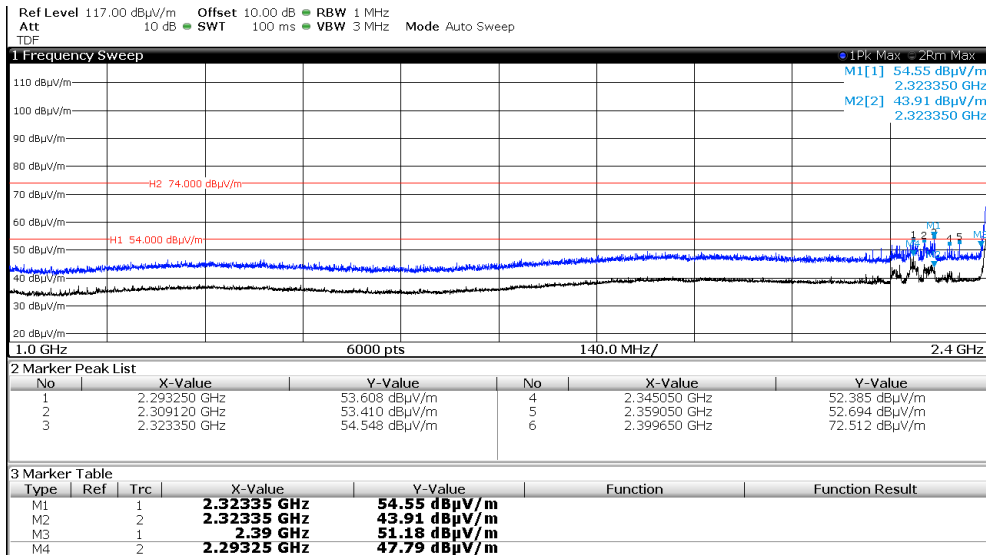


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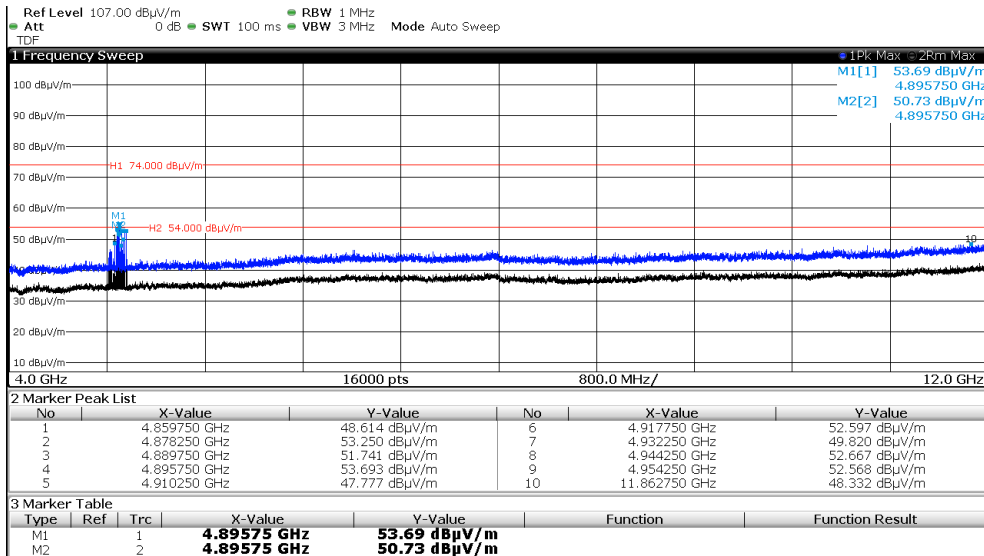
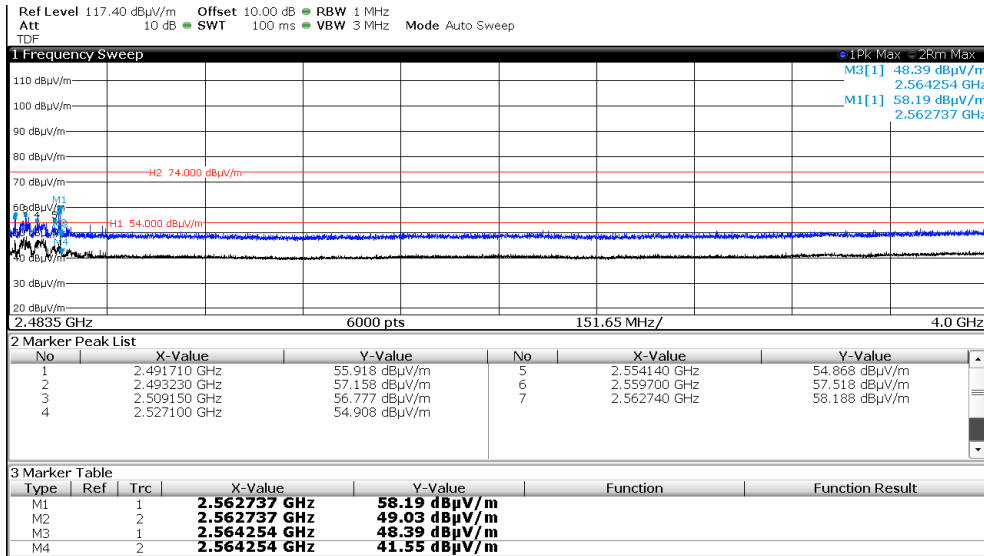
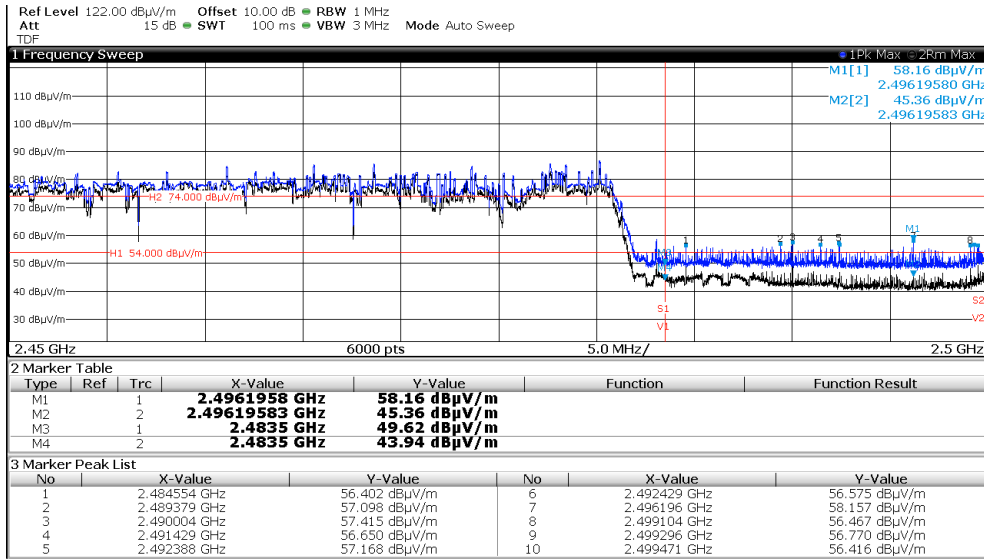
1 GHz < f < 40 GHz:

simultaneous transmission WLAN CH1, Bluetooth and RFID

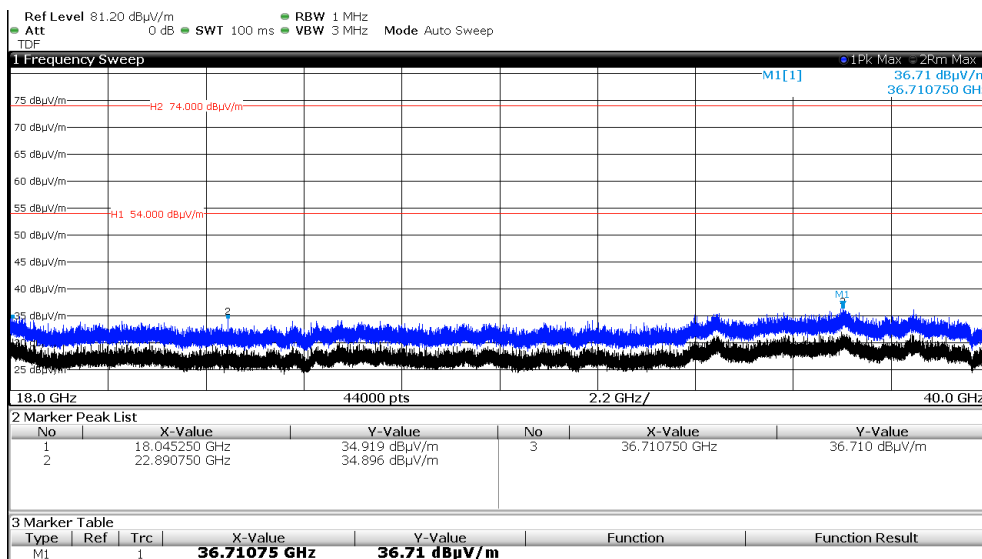
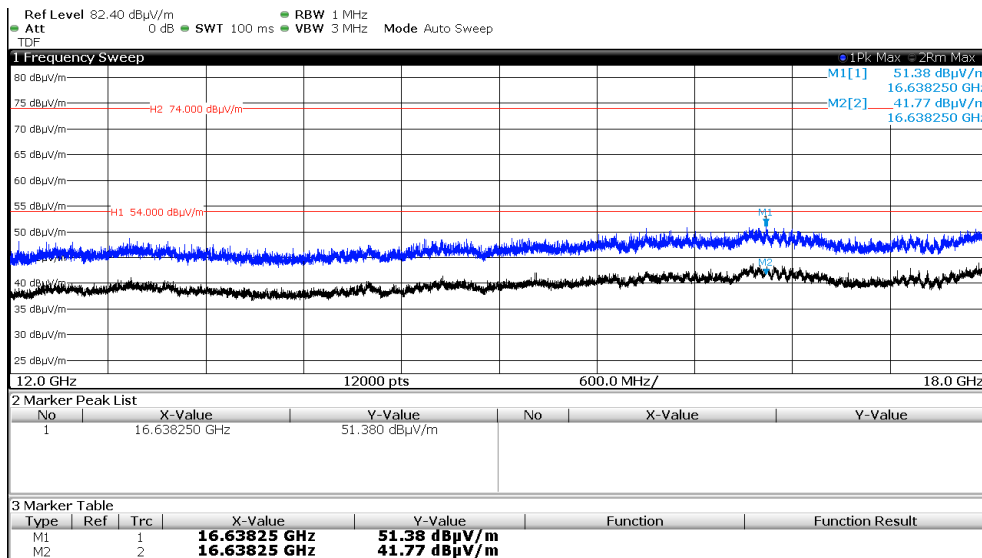
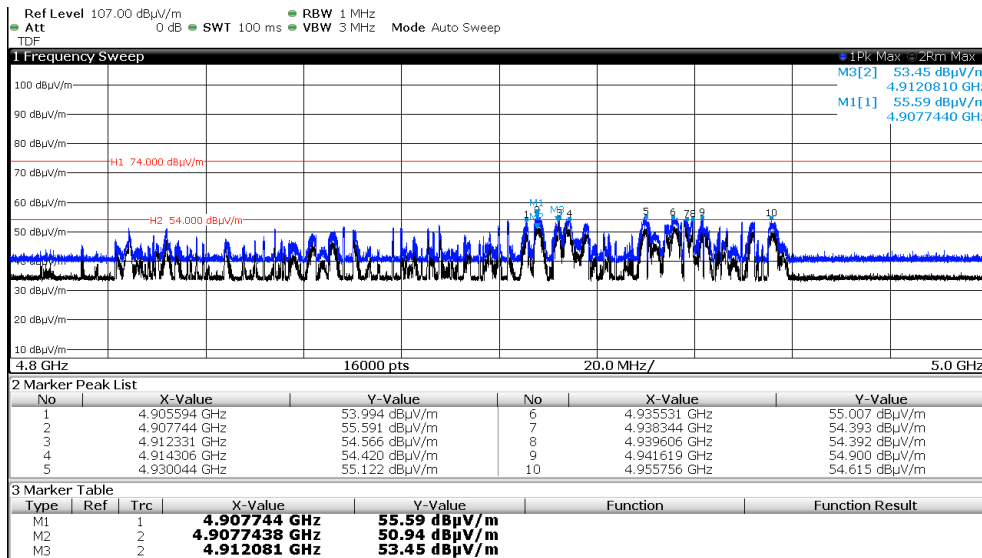
Frequency (MHz)	Level PK (dB(μV/m))	Level AV (dB(μV/m))	Limit PK (dB(μV/m))	Margin PK (dB)	Limit AV (dB(μV/m))	Margin AV (dB)
2323	56.7	43.0	74.0	-17.3	54.0	-11.0
2265	57.7	51.1	74.0	-16.2	54.0	-2.8
2293	-	47.8	74.0	-	54.0	-6.2
2353	55.9	51.7	74.0	-18.1	54.0	-2.3
2496	58.2	45.4	74.0	-15.8	54.0	-8.6
2562	58.2	49.0	74.0	-15.8	54.0	-4.9
4907	55.6	50.9	74.0	-18.4	54.0	-3.0
4912	-	53.5	74.0	-	54.0	-0.5
16638	51.4	41.8	74.0	-22.6	54.0	-12.2
36710	36.7	-	74.0	-37.3	54.0	-



FCC ID: O2FM260SEHF



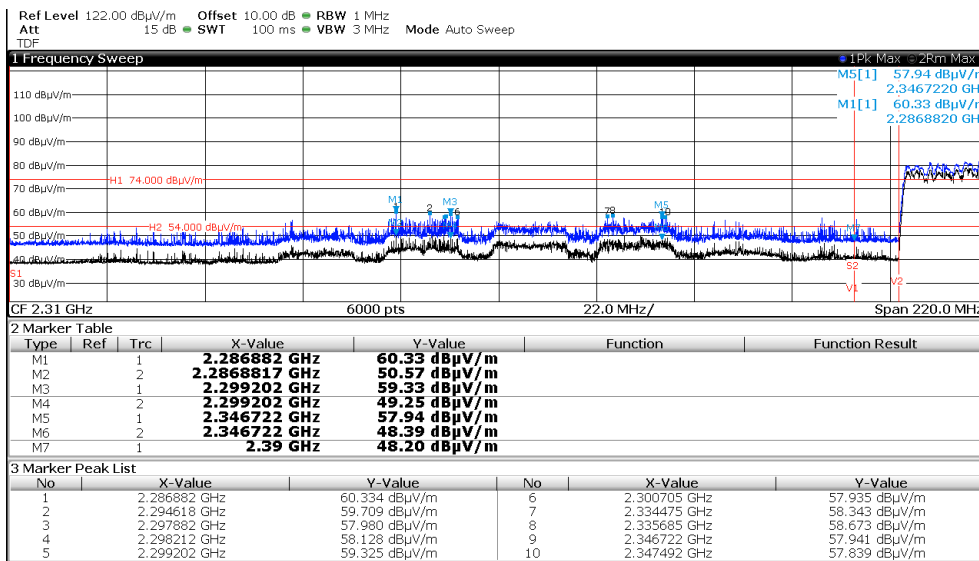
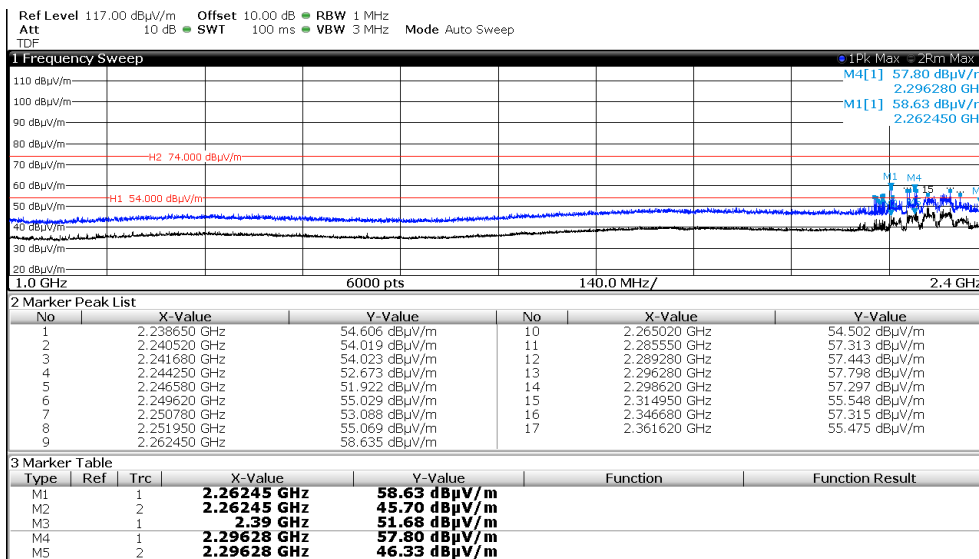
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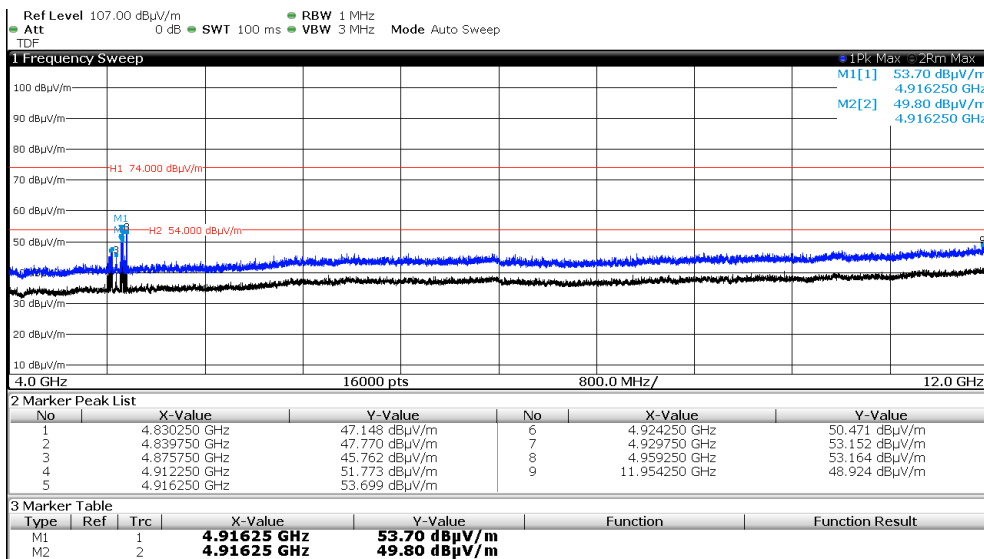
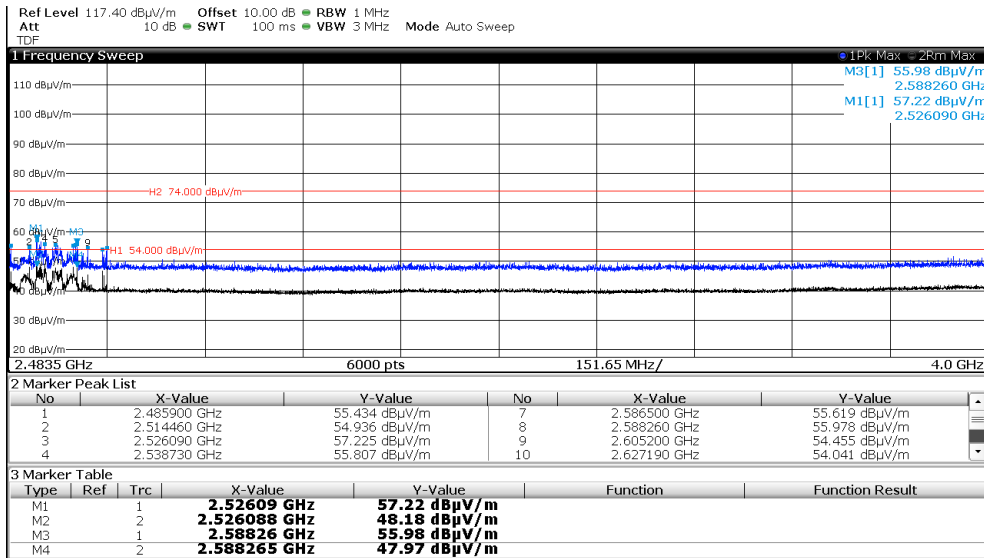
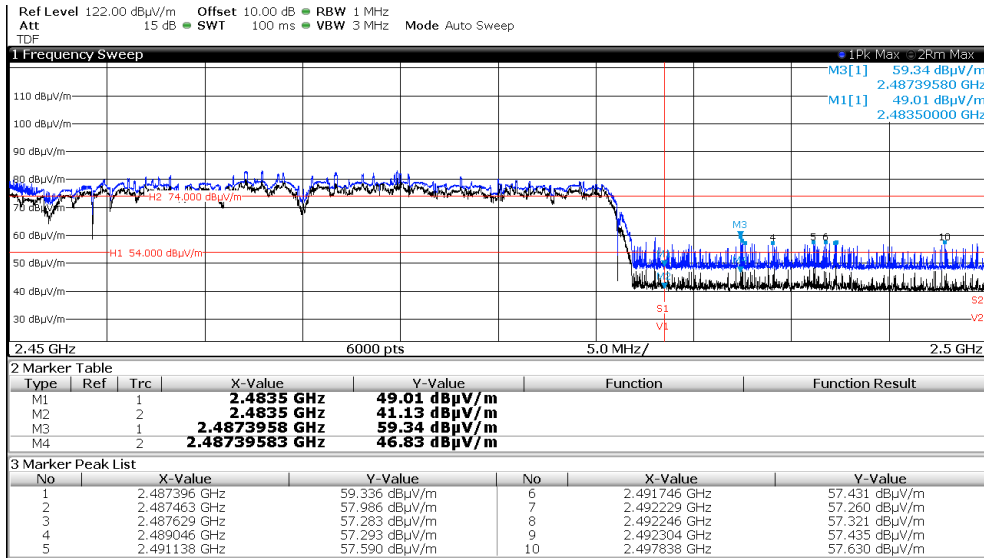
FCC ID: O2FM260SEHF

simultaneous transmission WLAN CH6, Bluetooth and RFID

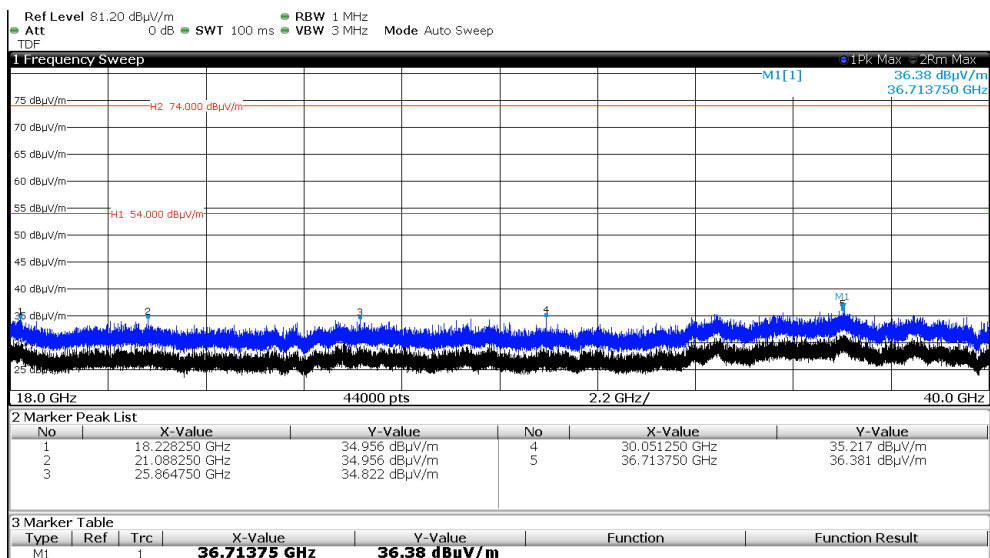
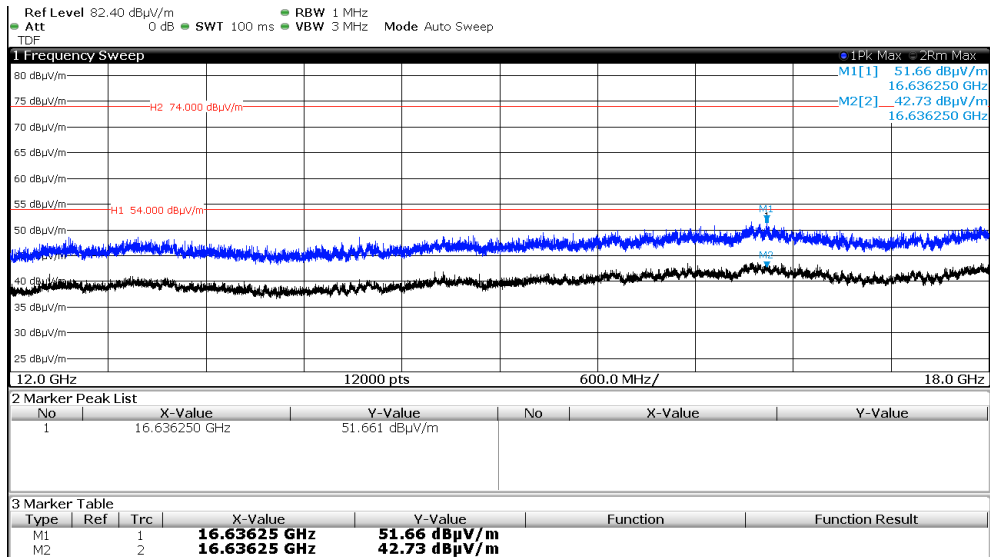
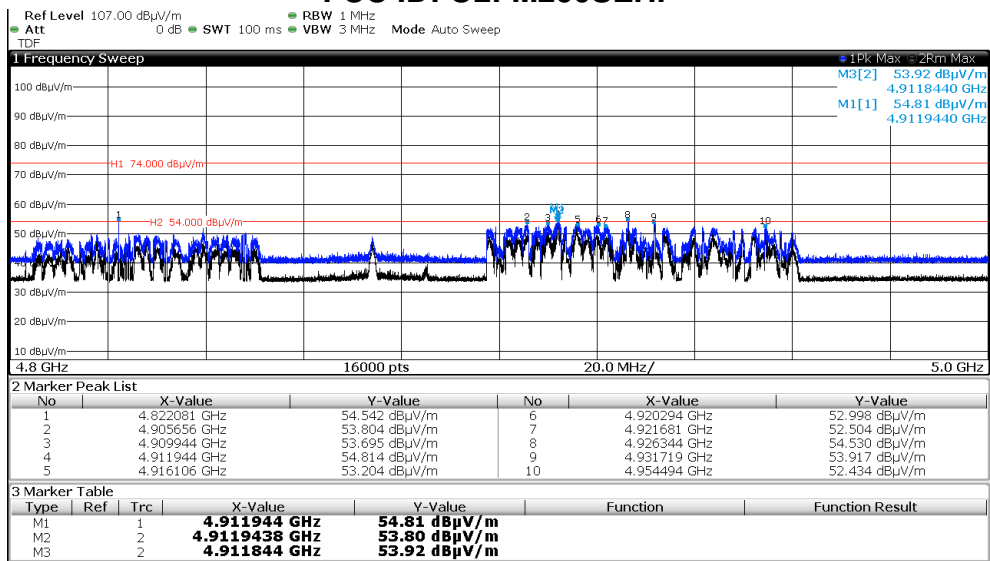
Frequency (MHz)	Level PK (dB(μV/m))	Level AV (dB(μV/m))	Limit PK (dB(μV/m))	Margin PK (dB)	Limit AV (dB(μV/m))	Margin AV (dB)
2262	58.6	45.7	74.0	-15.3	54.0	-8.3
2286	60.3	50.6	74.0	-13.6	54.0	-3.4
2296	57.8	46.3	74.0	-16.2	54.0	-7.6
2299	59.3	49.3	74.0	-14.6	54.0	-4.7
2346	57.9	48.4	74.0	-16.0	54.0	-5.6
2487	59.3	46.8	74.0	-14.6	54.0	-7.1
2526	57.2	48.2	74.0	-16.8	54.0	-5.8
2588	56.0	48.0	74.0	-18.0	54.0	-6.0
4912	54.8	53.9	74.0	-19.2	54.0	-0.1
16636	51.7	42.7	74.0	-22.3	54.0	-11.2
36714	36.4	-	74.0	-37.6	54.0	-



FCC ID: O2FM260SEHF



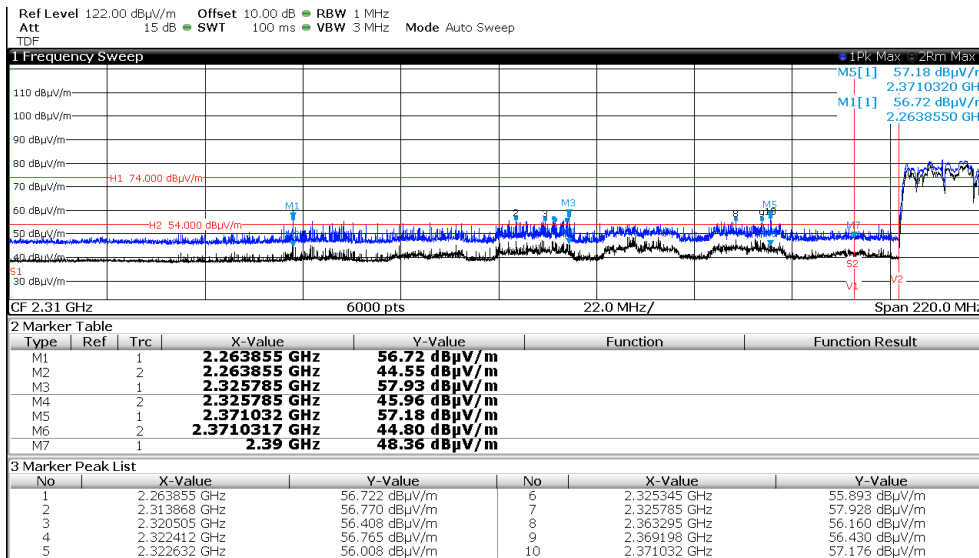
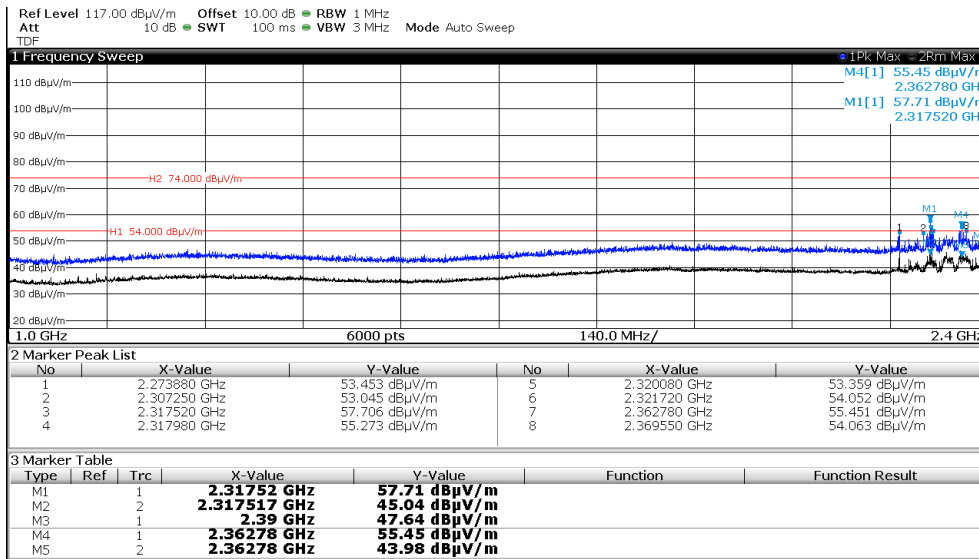
FCC ID: O2FM260SEHF



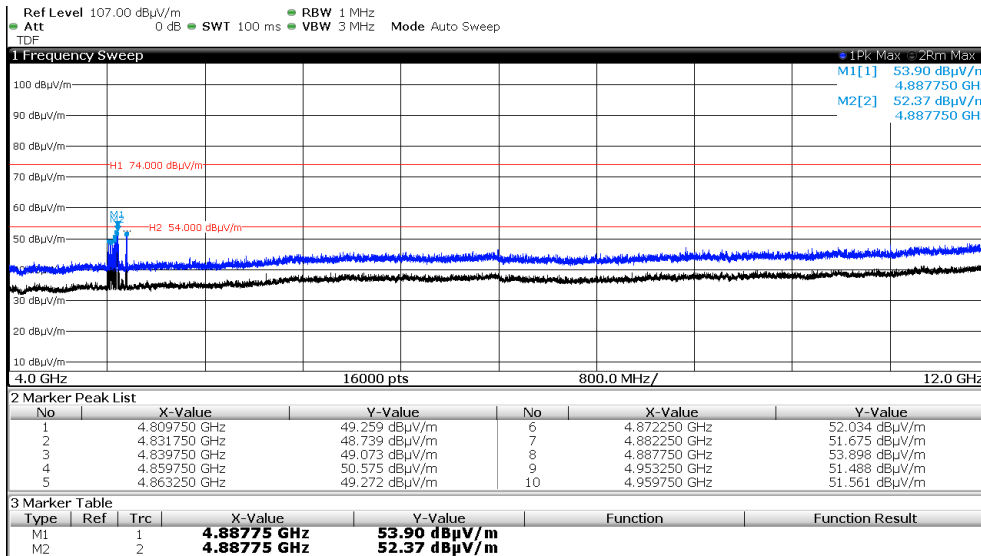
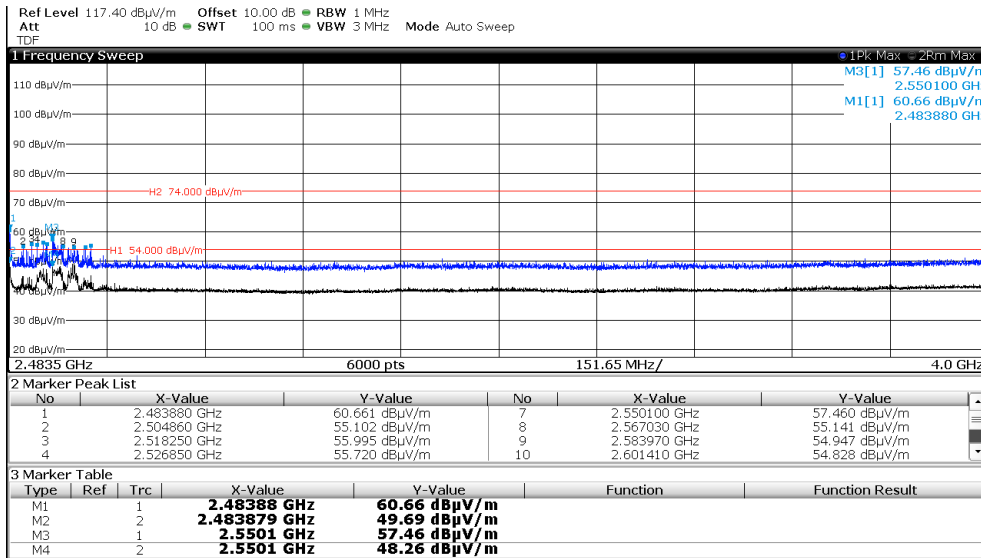
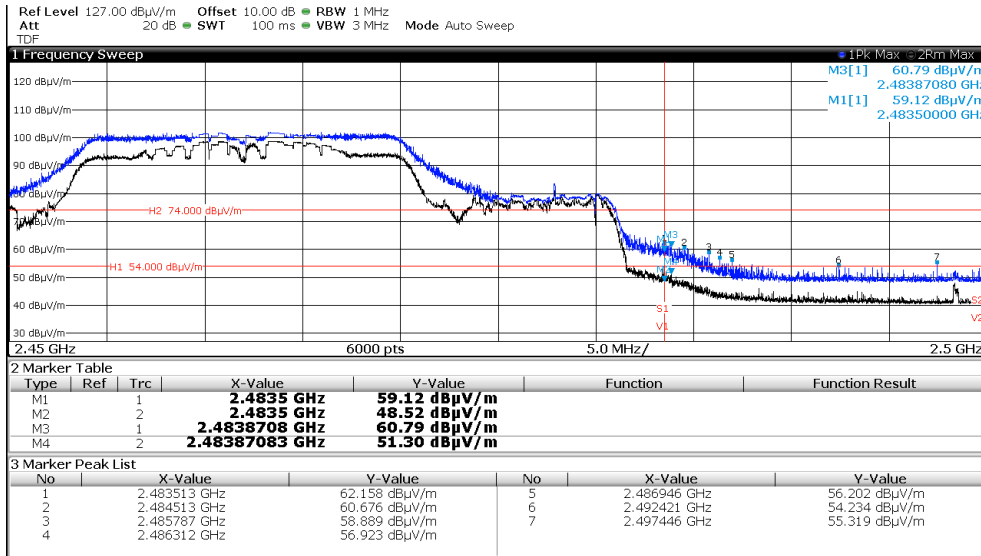
FCC ID: O2FM260SEHF

simultaneous transmission WLAN CH11, Bluetooth and RFID

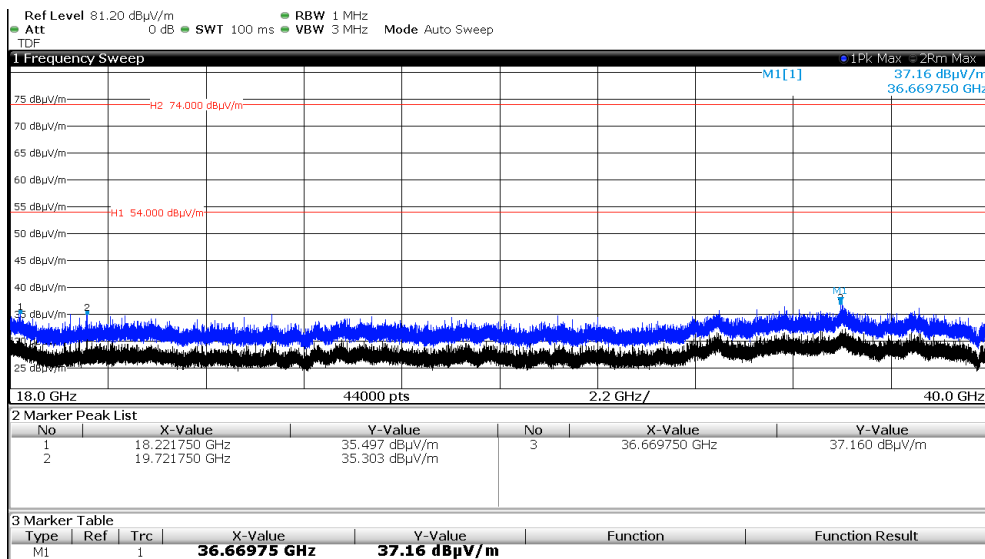
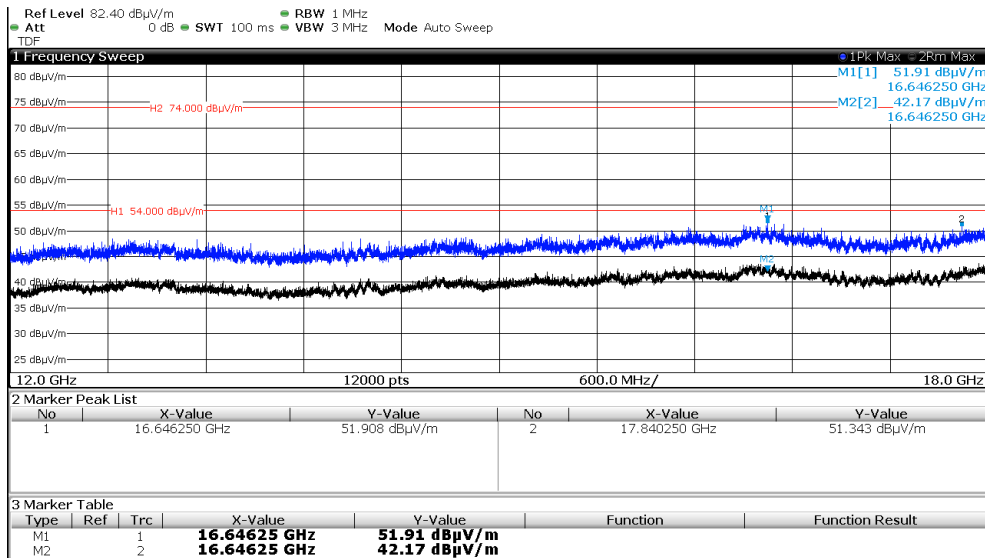
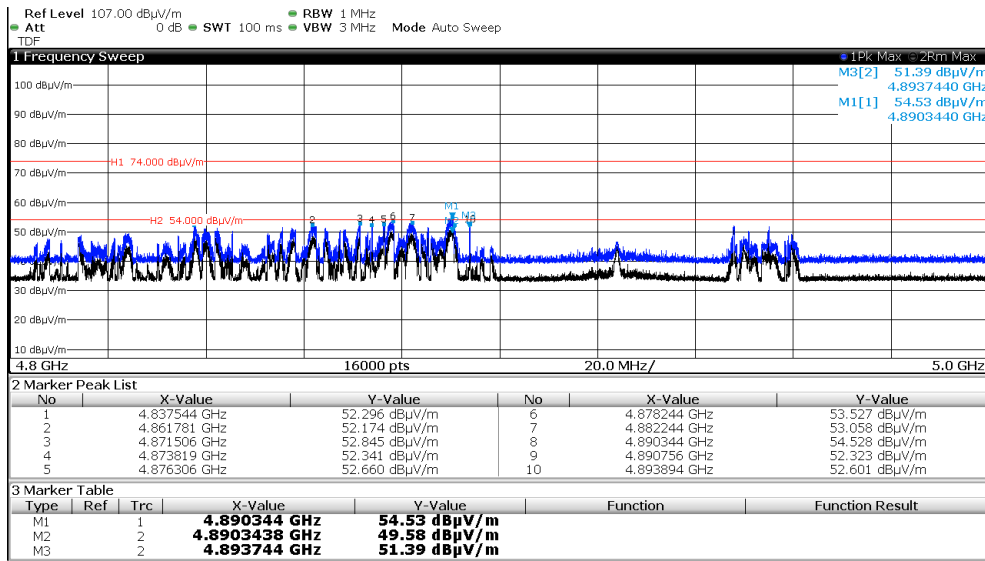
Frequency (MHz)	Level PK (dB(μV/m))	Level AV (dB(μV/m))	Limit PK (dB(μV/m))	Margin PK (dB)	Limit AV (dB(μV/m))	Margin AV (dB)
2264	56.7	44.6	74.0	-17.3	54.0	-9.4
2318	57.7	45.0	74.0	-16.3	54.0	-8.9
2326	57.9	46.0	74.0	-16.0	54.0	-8.0
2363	55.5	44.0	74.0	-18.5	54.0	-10.0
2371	57.2	44.8	74.0	-16.8	54.0	-9.2
2484	60.8	51.3	74.0	-13.2	54.0	-2.7
2550	57.5	48.3	74.0	-16.5	54.0	-5.7
4890	54.5	49.6	74.0	-19.4	54.0	-4.4
4894	-	51.4	74.0	-	54.0	-2.6
16646	51.9	42.2	74.0	-22.1	54.0	-11.8
36670	37.2	-	74.0	-36.8	54.0	-



FCC ID: O2FM260SEHF



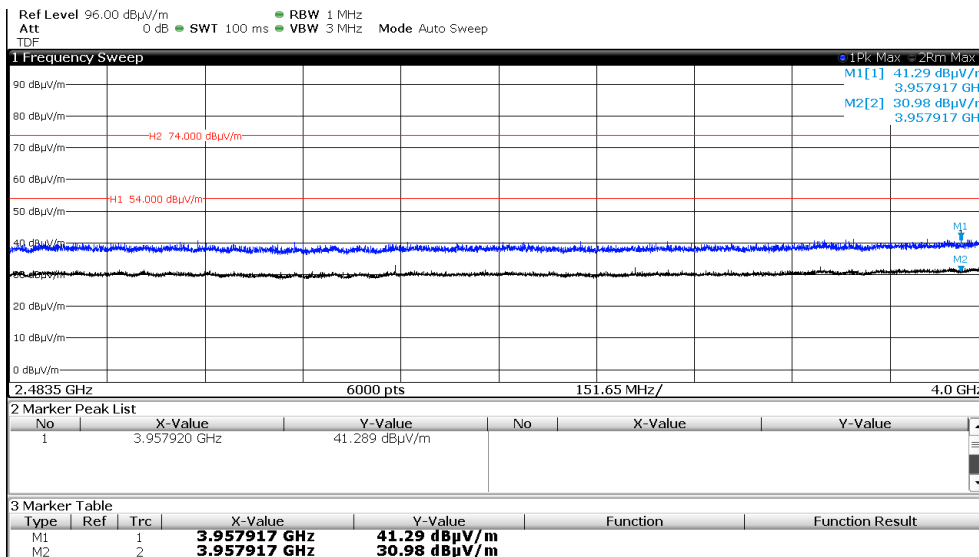
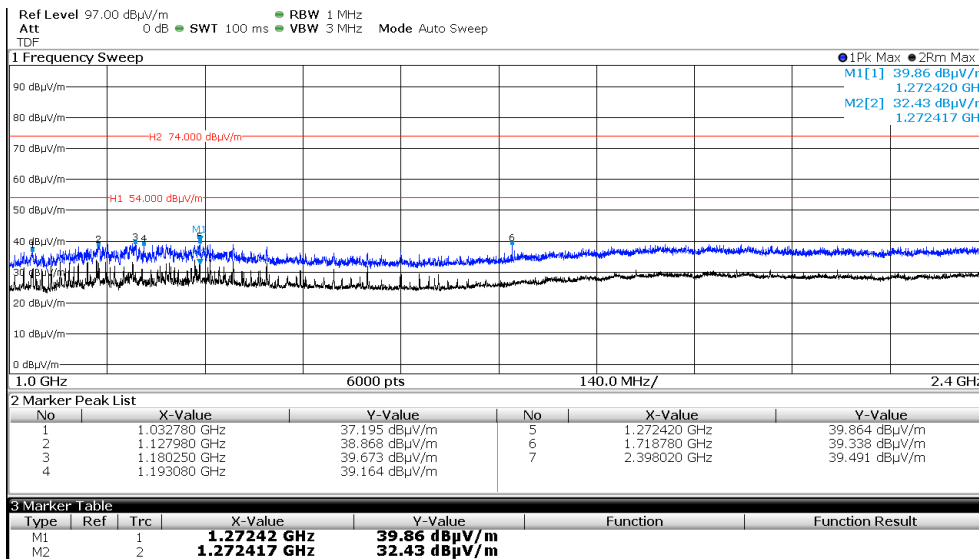
FCC ID: O2FM260SEHF



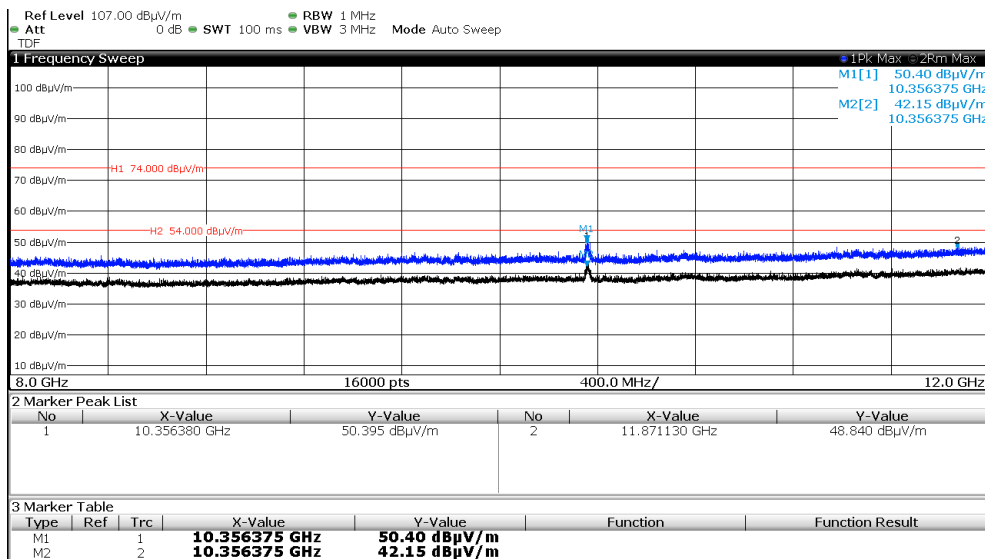
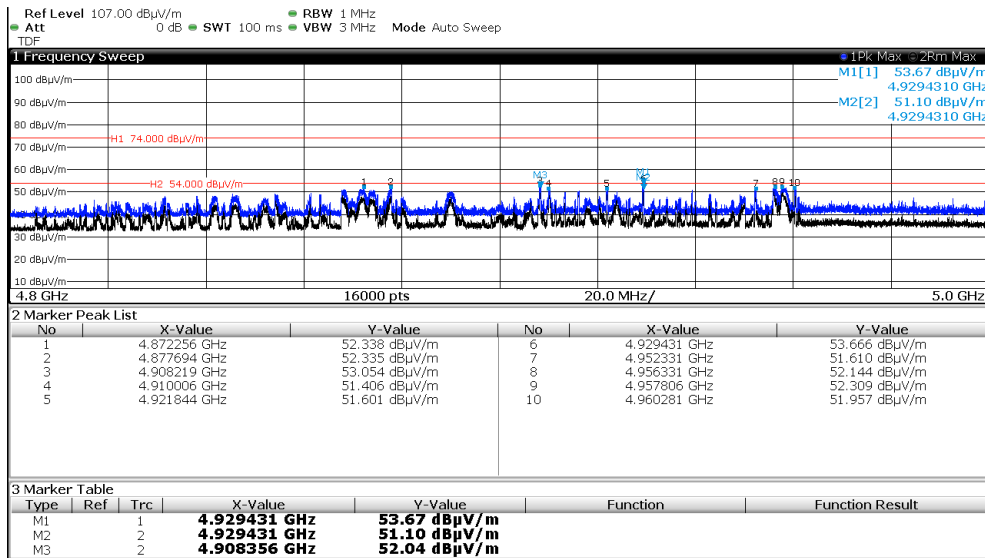
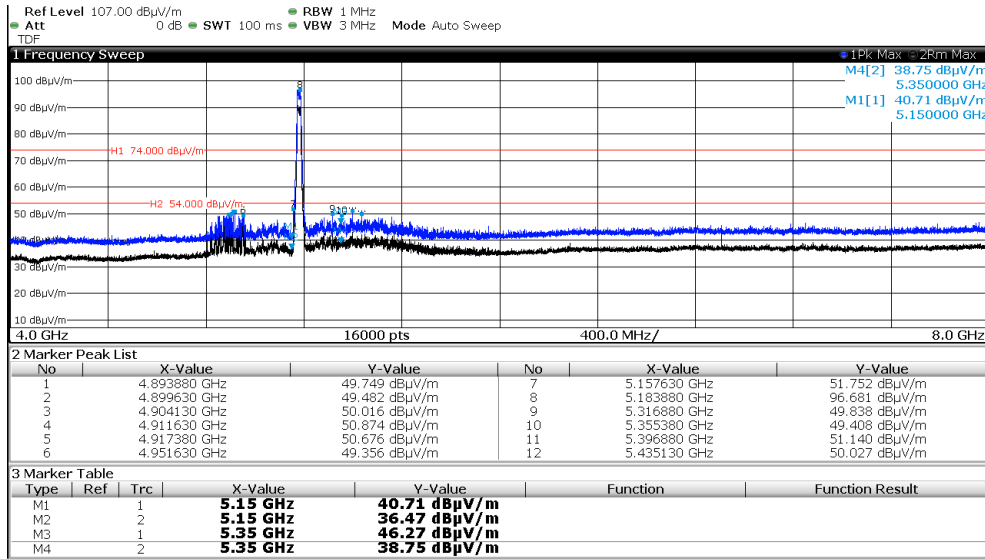
FCC ID: O2FM260SEHF

simultaneous transmission WLAN CH36, Bluetooth and RFID

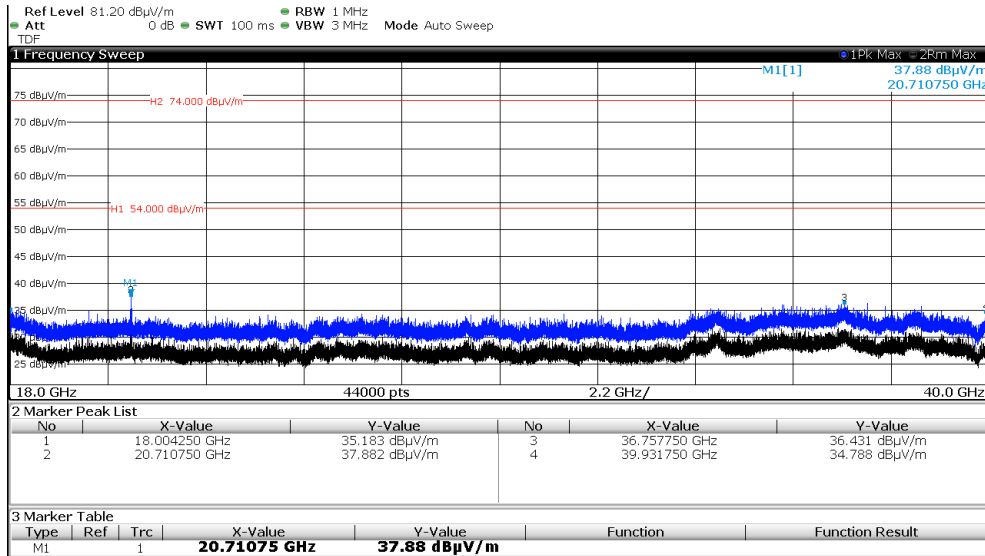
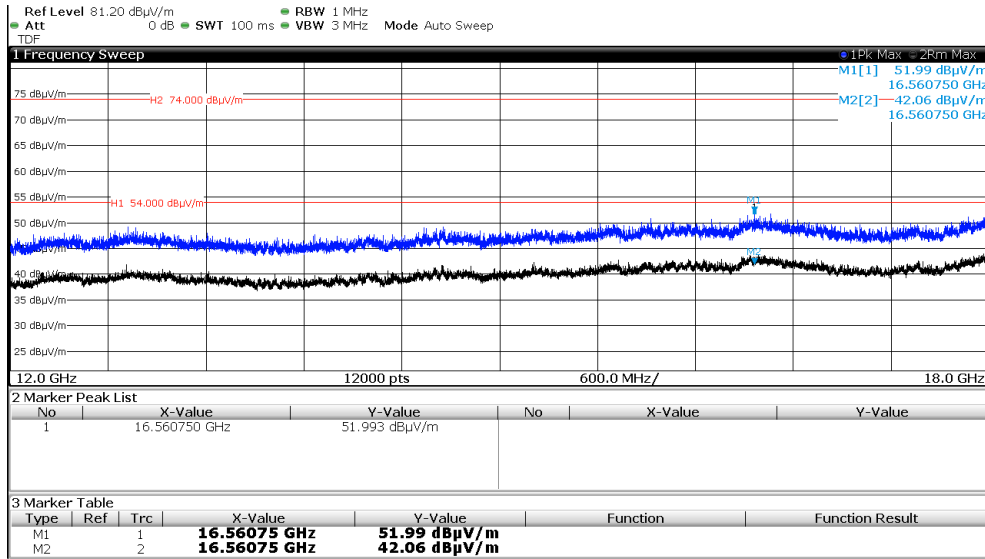
Frequency (MHz)	Level PK (dB(μV/m))	Level AV (dB(μV/m))	Limit PK (dB(μV/m))	Margin PK (dB)	Limit AV (dB(μV/m))	Margin AV (dB)
1272	39.9	32.4	74.0	-34.1	54.0	-21.5
3958	41.3	31.0	74.0	-32.7	54.0	-23.0
4908	-	52.0	74.0	-	54.0	-1.9
4929	53.7	51.1	74.0	-20.3	54.0	-2.9
10356	50.4	42.2	74.0	-23.6	54.0	-11.8
16560	52.0	42.1	74.0	-22.0	54.0	-11.9
20711	37.9	-	74.0	-36.1	54.0	-



FCC ID: O2FM260SEHF



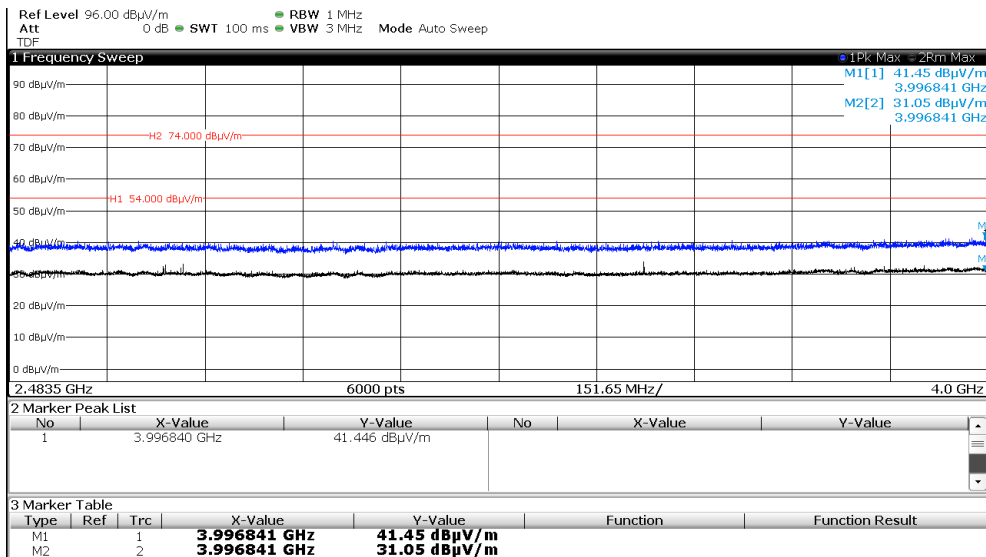
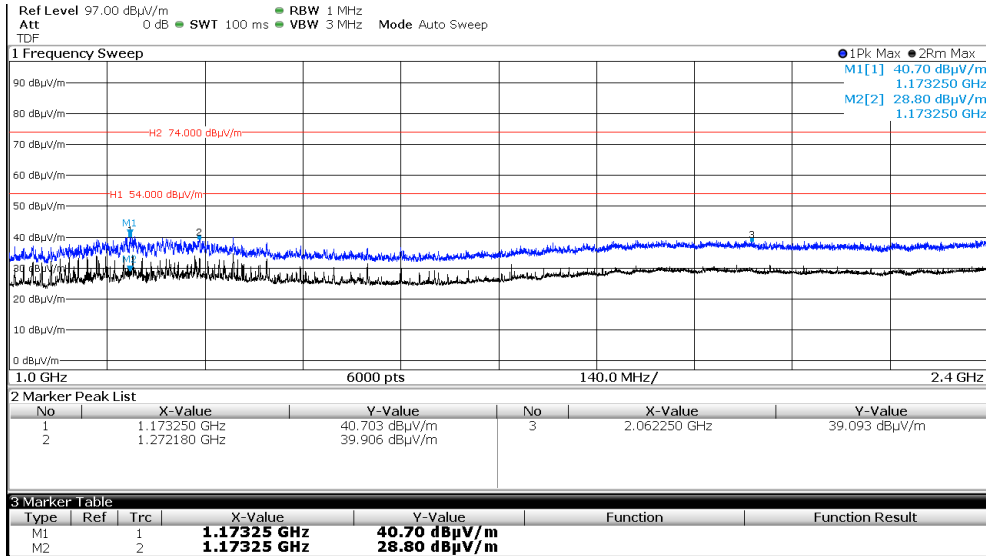
FCC ID: O2FM260SEHF



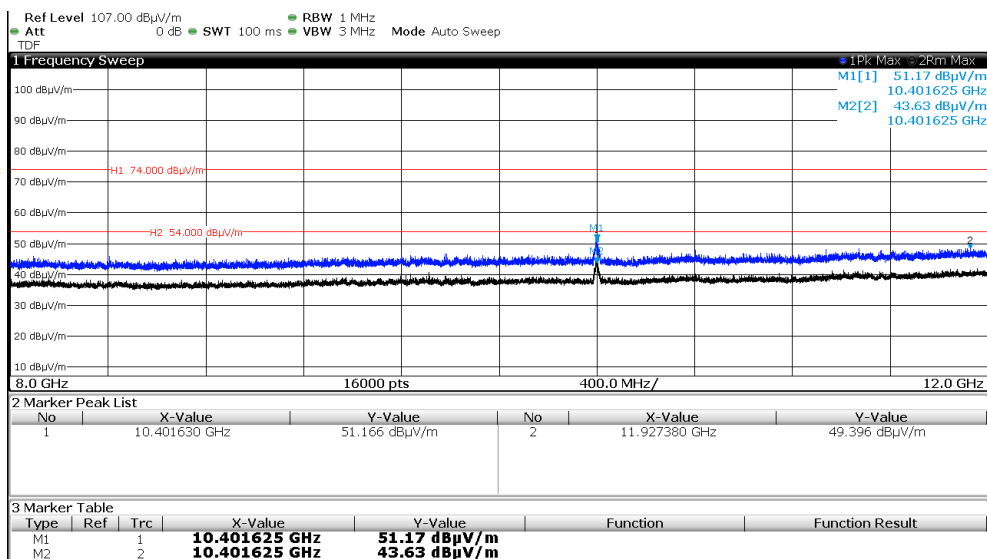
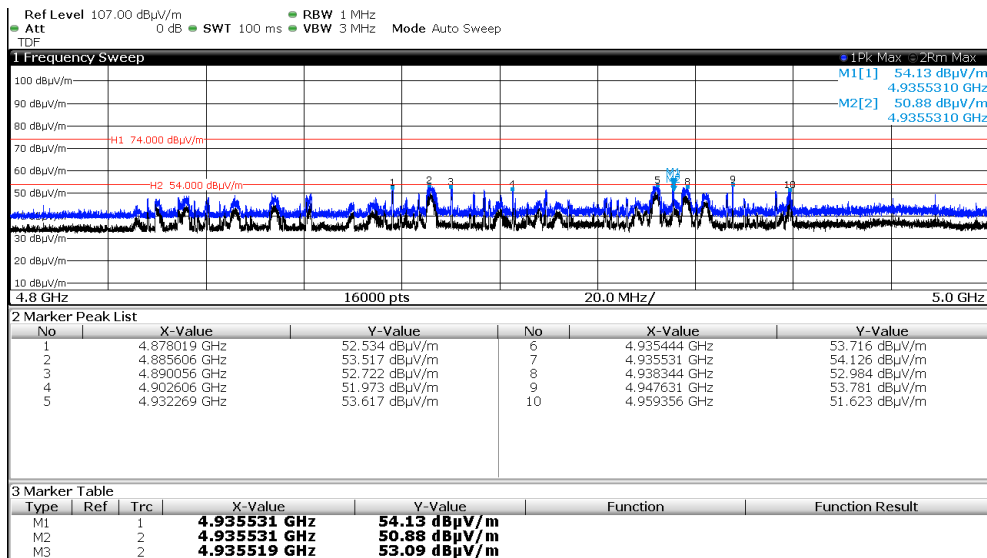
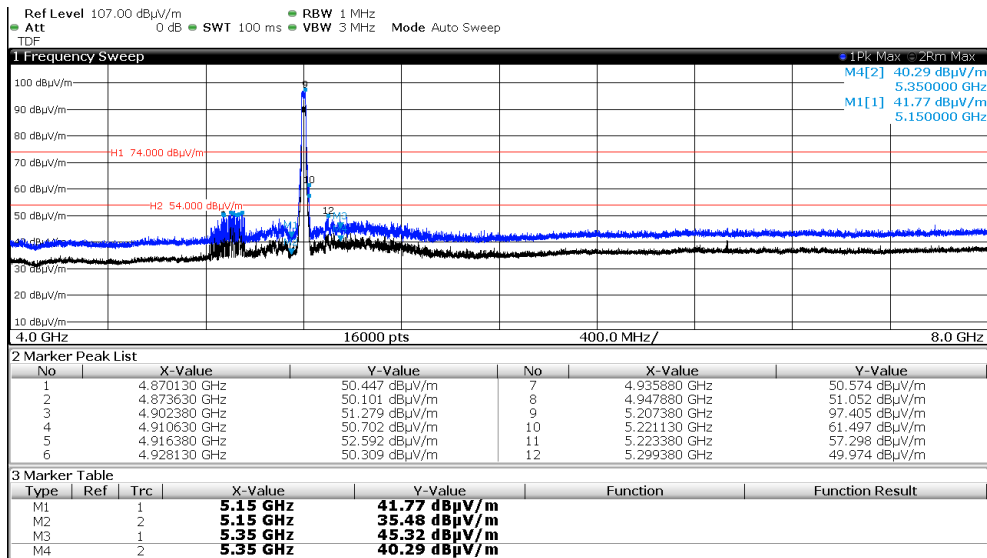
FCC ID: O2FM260SEHF

simultaneous transmission WLAN CH40, Bluetooth and RFID

Frequency (MHz)	Level PK (dB(μV/m))	Level AV (dB(μV/m))	Limit PK (dB(μV/m))	Margin PK (dB)	Limit AV (dB(μV/m))	Margin AV (dB)
1173	40.7	28.8	74.0	-33.3	54.0	-25.2
3997	41.5	31.1	74.0	-32.5	54.0	-22.9
4936	54.1	53.1	74.0	-19.8	54.0	-0.9
10402	51.2	43.6	74.0	-22.8	54.0	-10.3
16583	51.7	43.5	74.0	-22.3	54.0	-10.4
38308	37.0	-	74.0	-37.0	54.0	-



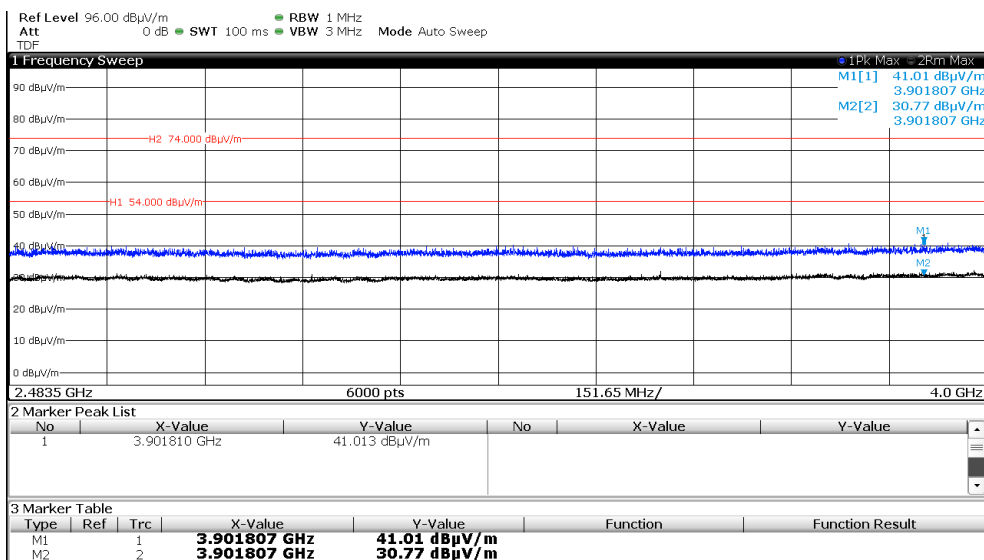
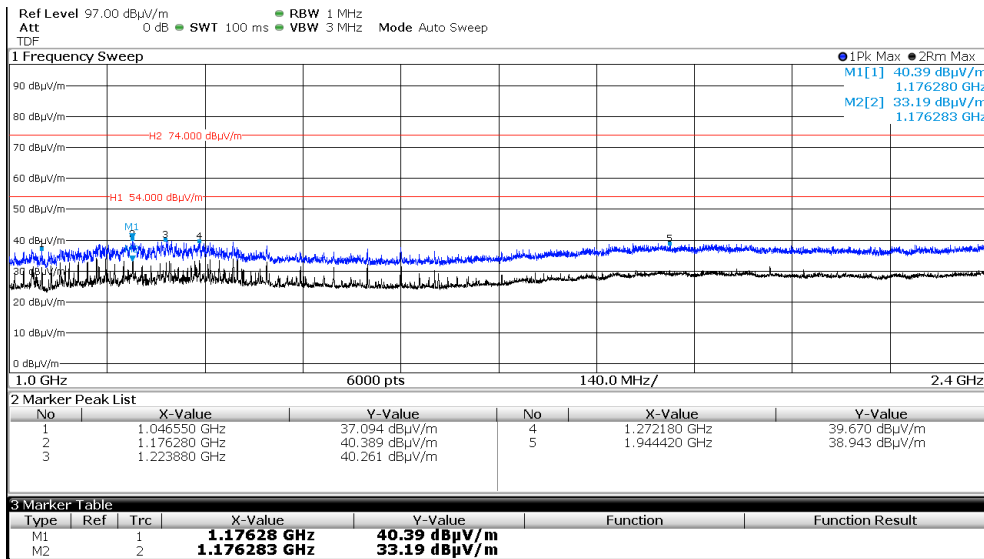
FCC ID: O2FM260SEHF



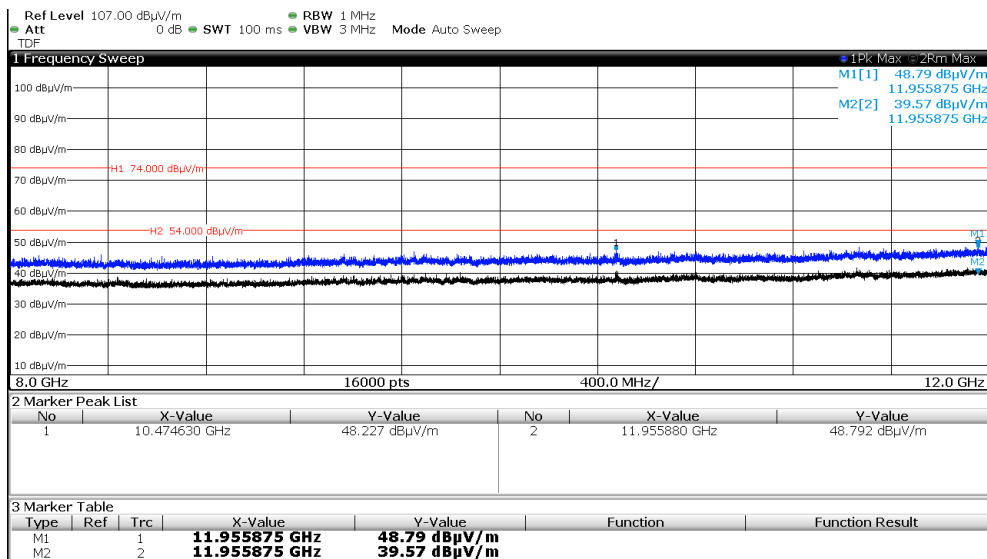
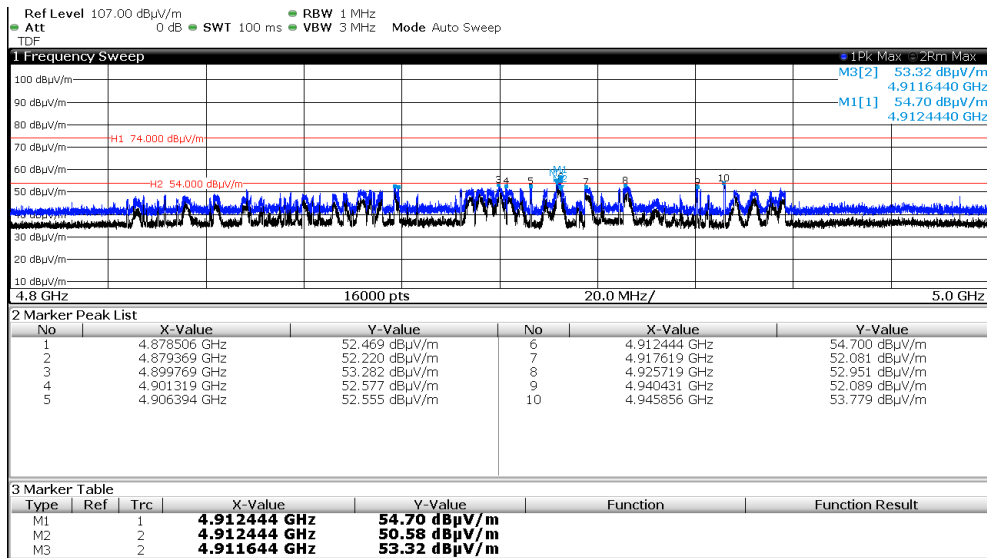
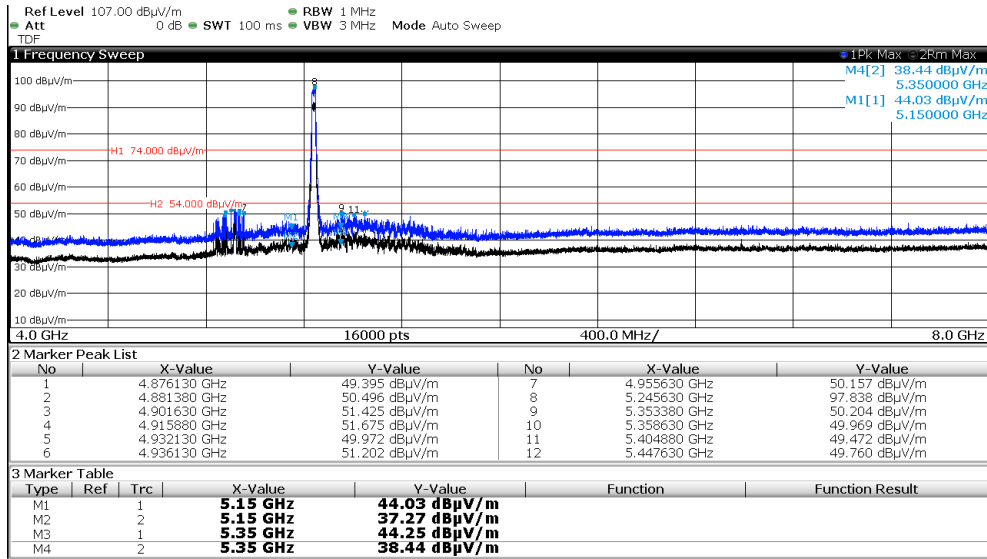
FCC ID: O2FM260SEHF

simultaneous transmission WLAN CH48, Bluetooth and RFID

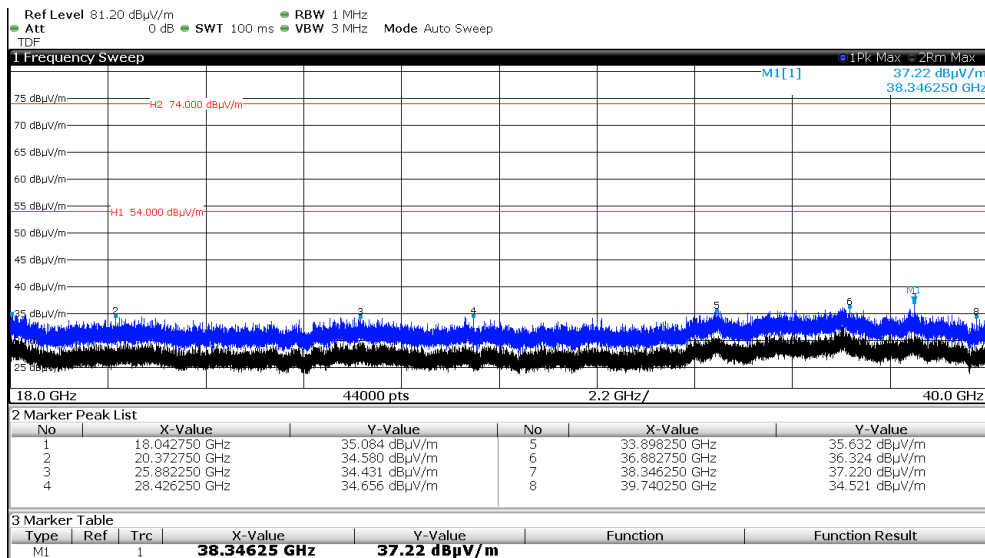
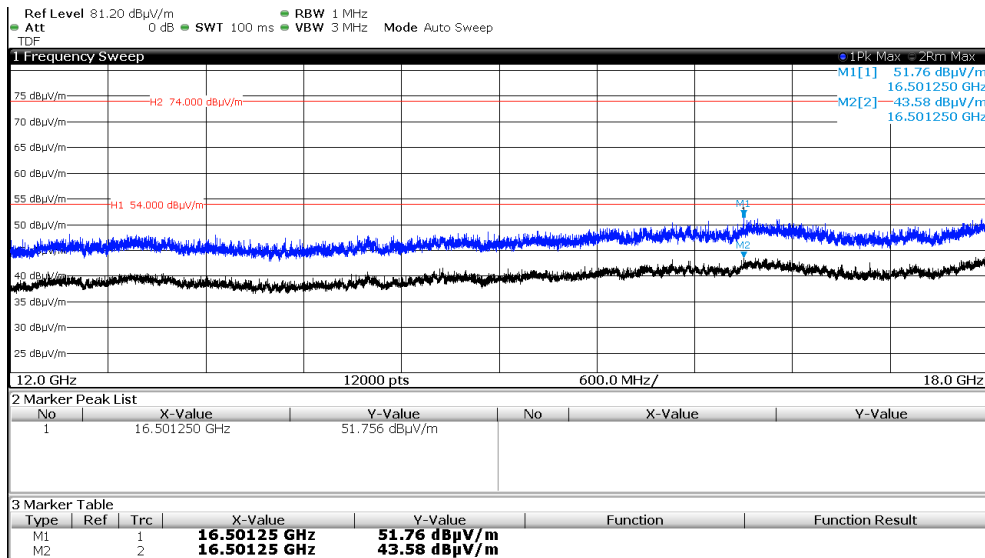
Frequency (MHz)	Level PK (dB(μV/m))	Level AV (dB(μV/m))	Limit PK (dB(μV/m))	Margin PK (dB)	Limit AV (dB(μV/m))	Margin AV (dB)
1176	40.4	33.2	74.0	-33.6	54.0	-20.8
3902	41.0	30.8	74.0	-33.0	54.0	-23.2
4912	54.7	53.3	74.0	-19.3	54.0	-0.7
11956	48.8	39.6	74.0	-25.2	54.0	-14.4
16501	51.8	43.6	74.0	-22.2	54.0	-10.4
38346	37.2	-	74.0	-36.8	54.0	-



FCC ID: O2FM260SEHF



FCC ID: O2FM260SEHF



Limit according to FCC Part 15, Section 15.209 and RSS-Gen, Section 8.9:

Frequency (MHz)	Field strength of spurious emissions (µV/m)	dB(µV/m)	Measurement distance (metres)
0.009 - 0.490	2400/F(kHz)	--	300
0.490 - 1.705	24000/F (kHz)	--	30
1.705 - 30.0	30	29.5	30
30 - 88	100	40	3
88 - 216	150	43.5	3
216 - 960	200	46	3
Above 960	500	54	3

The requirements are **FULFILLED**.

Remarks:

FCC ID: O2FM260SEHF

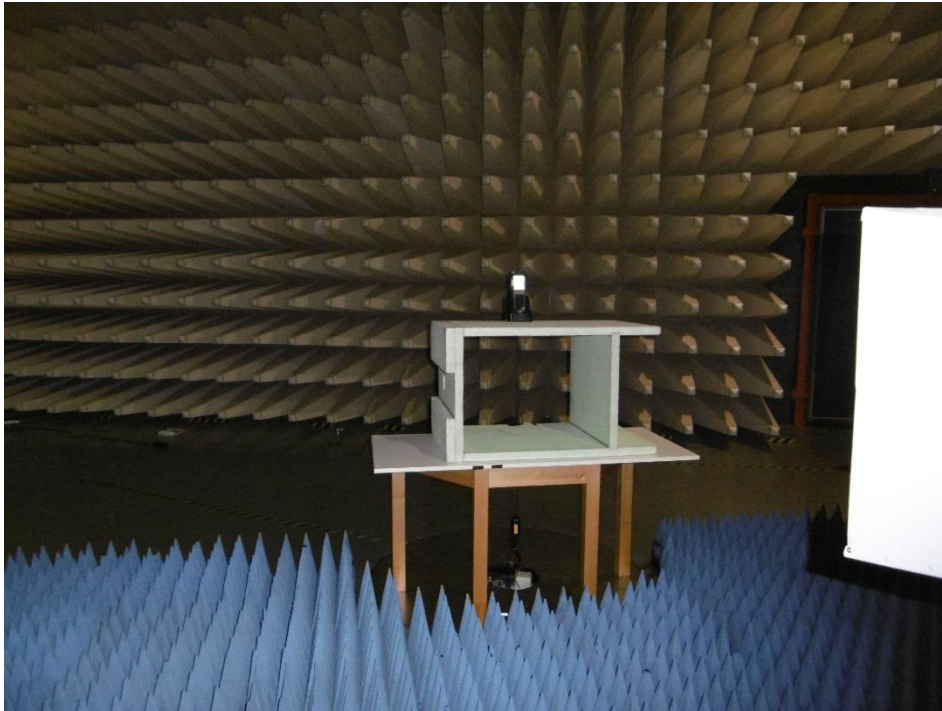
5.3 Average radiated output power (WLAN 2.4 GHz Band)

For test instruments and accessories used see section 6 Part CPR 3.

5.3.1 Description of the test location

Test location: Anechoic chamber 1
Test distance: 3 metres

5.3.2 Photo documentation of the test set-up



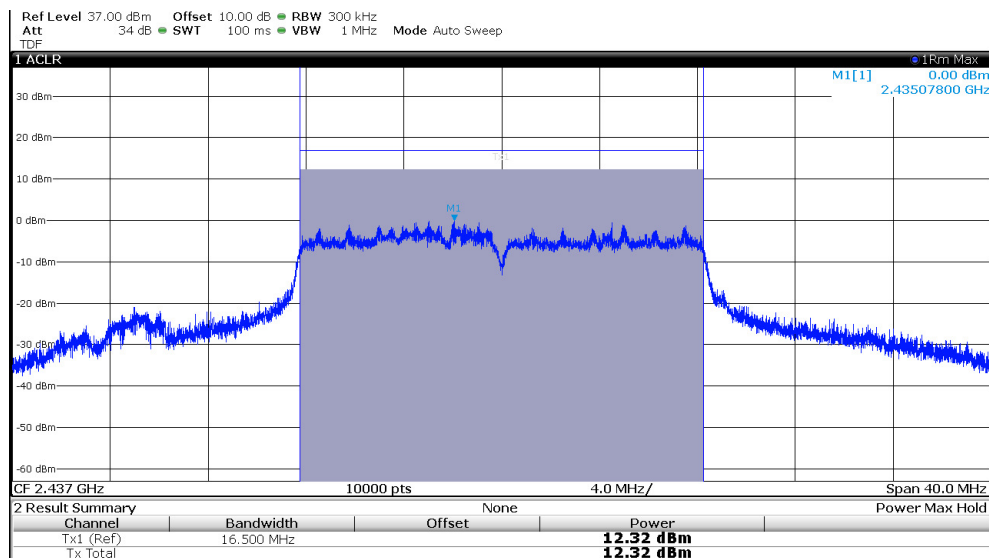
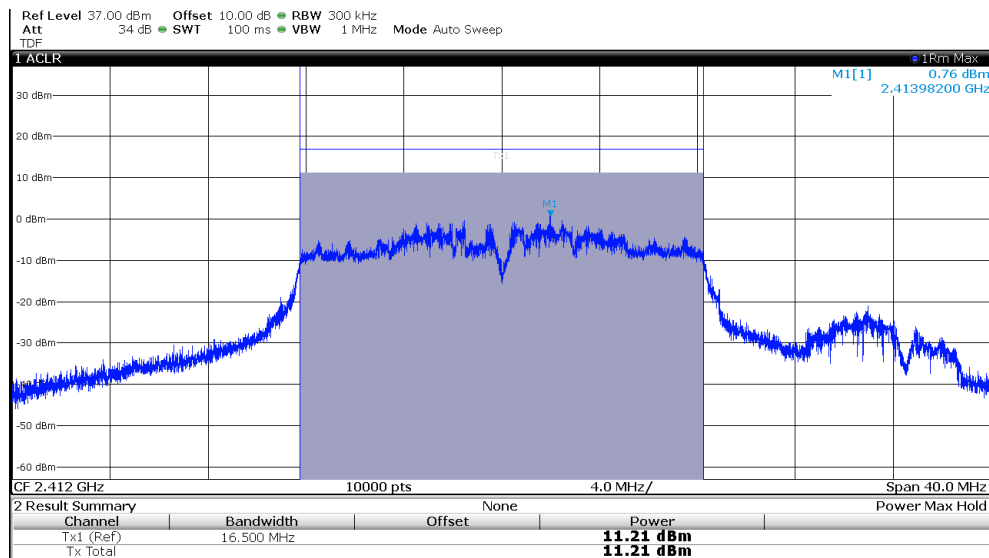
5.3.3 Description of Measurement

The maximum peak radiated output power is measured using a spectrum analyzer following the procedure set out in KDB 558074, item 9.2.2.6. The EUT is set in normal operating mode.

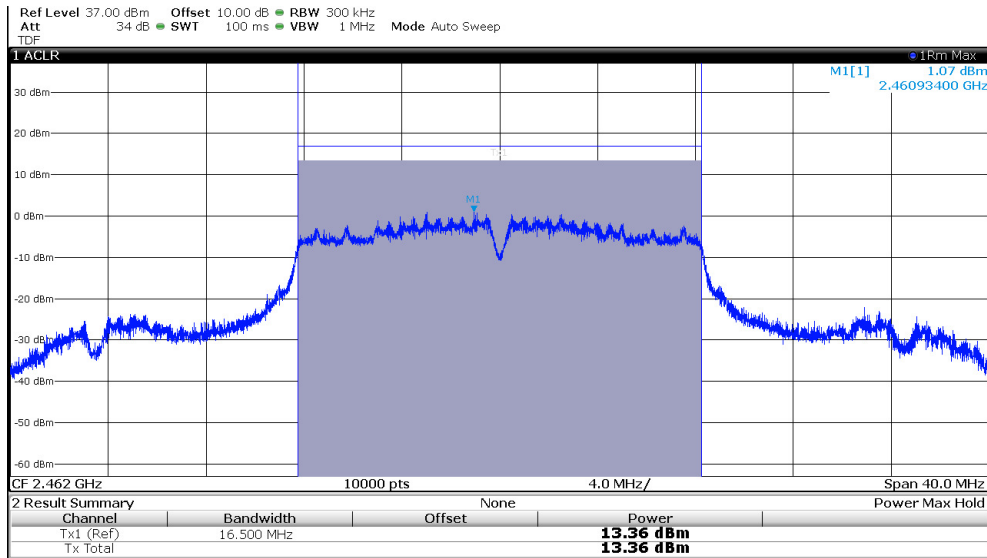
FCC ID: O2FM260SEHF

5.3.4 Test result

802.11, 2 TX		Test results radiated		
FTP Filetransfer				
2400 MHz - 2483.5 MHz		Pavg (EIRP) (dBm)	Limit (dBm)	Margin (dB)
Lowest frequency: CH1				
T_{nom}	V_{nom}	11.2	30.0	-18.8
Middle frequency: CH6				
T_{nom}	V_{nom}	12.3	30.0	-17.7
Highest frequency: CH11				
T_{nom}	V_{nom}	13.4	30.0	-16.6



FCC ID: O2FM260SEHF



The requirements are **FULFILLED**.

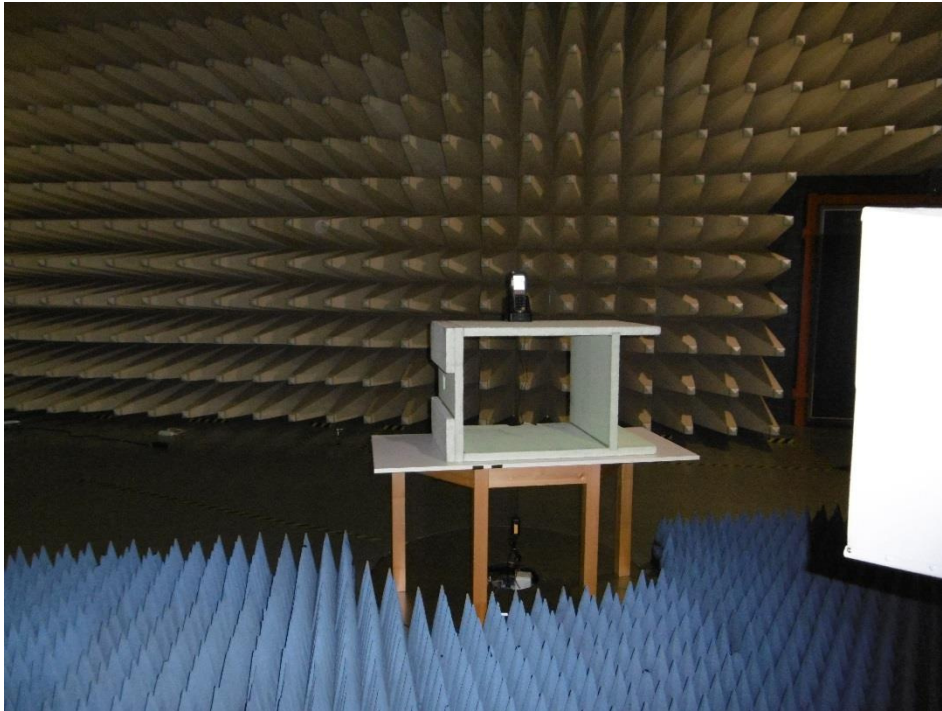
Remarks:

FCC ID: O2FM260SEHF**5.4 Average radiated output power (WLAN 5 GHz Band)**

For test instruments and accessories used see section 6 Part CPR 3.

5.4.1 Description of the test location

Test location: Anechoic chamber 1
Test distance: 3 metres

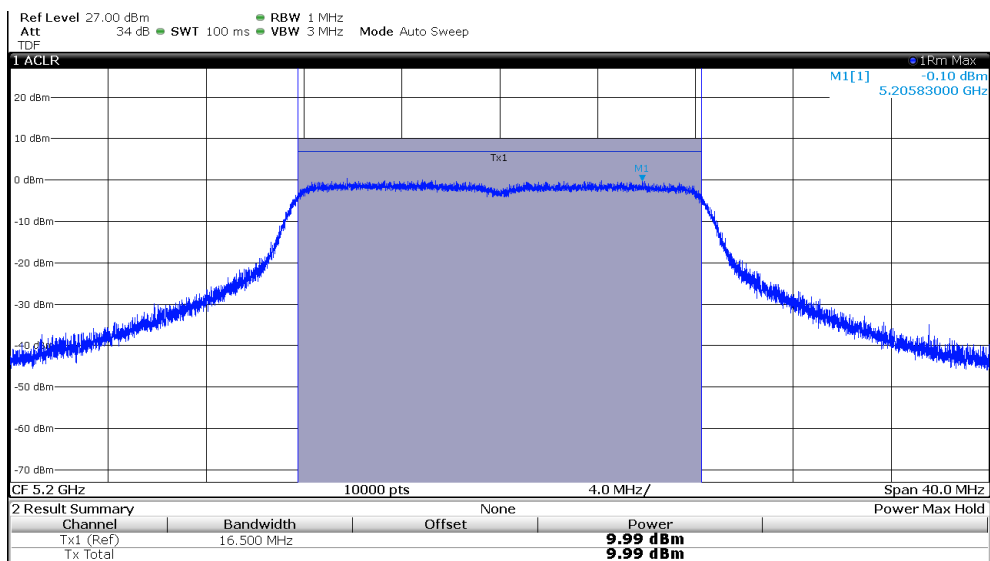
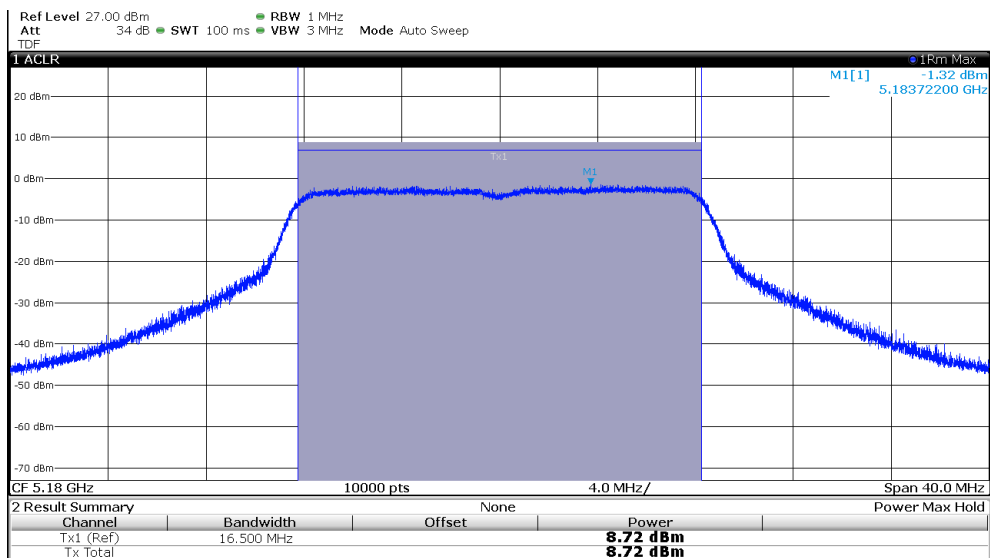
5.4.2 Photo documentation of the test set-up**5.4.3 Description of Measurement**

The maximum peak radiated output power is measured using a spectrum analyzer following the procedure set out in KDB 789033, Method SA-3. The EUT is set in normal operating mode.

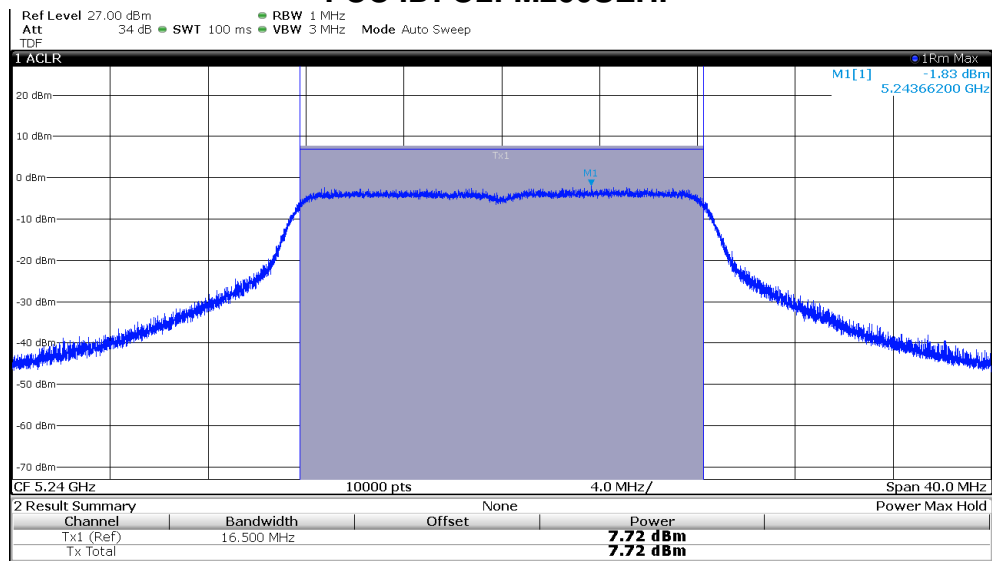
FCC ID: O2FM260SEHF

5.4.4 Test result

802.11, 2 TX		Test results radiated		
FTP Filetransfer				
5150 MHz - 5250 MHz		Pavg (EIRP) (dBm)	Limit (dBm)	Margin (dB)
Lowest frequency: CH36				
T_{nom}	V_{nom}	8.7	21.0	-12.3
Middle frequency: CH40				
T_{nom}	V_{nom}	10.0	21.0	-11.0
Highest frequency: CH48				
T_{nom}	V_{nom}	7.7	21.0	-13.3



FCC ID: O2FM260SEHF



The requirements are **FULFILLED**.

Remarks:

FCC ID: O2FM260SEHF

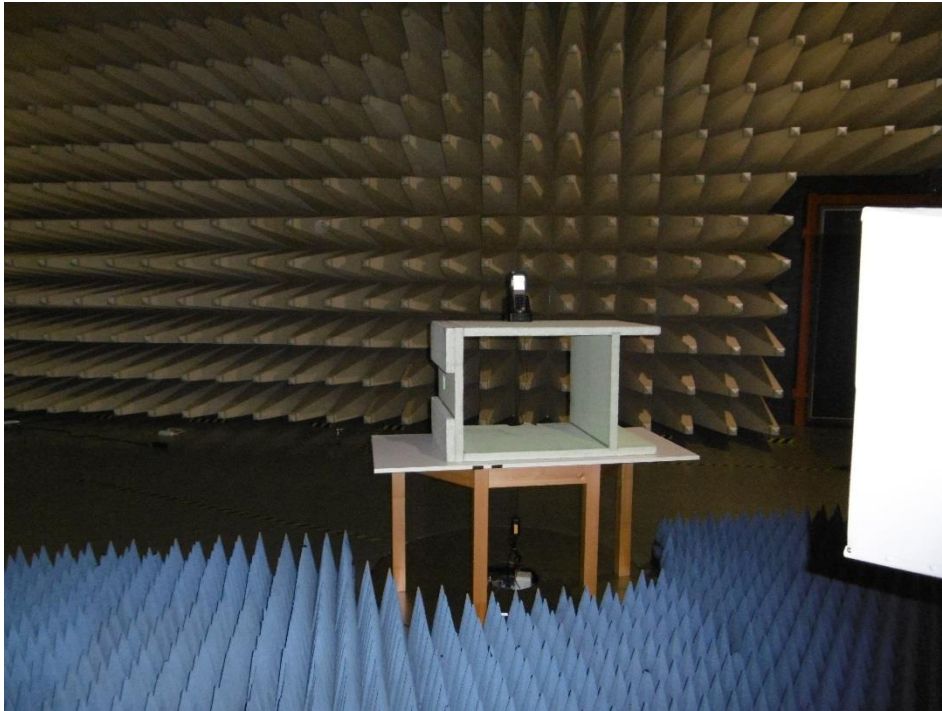
5.5 Maximum Peak radiated output power (Bluetooth)

For test instruments and accessories used see section 6 Part CPR 3.

5.5.1 Description of the test location

Test location: Anechoic chamber 1
Test distance: 3 metres

5.5.2 Photo documentation of the test set-up

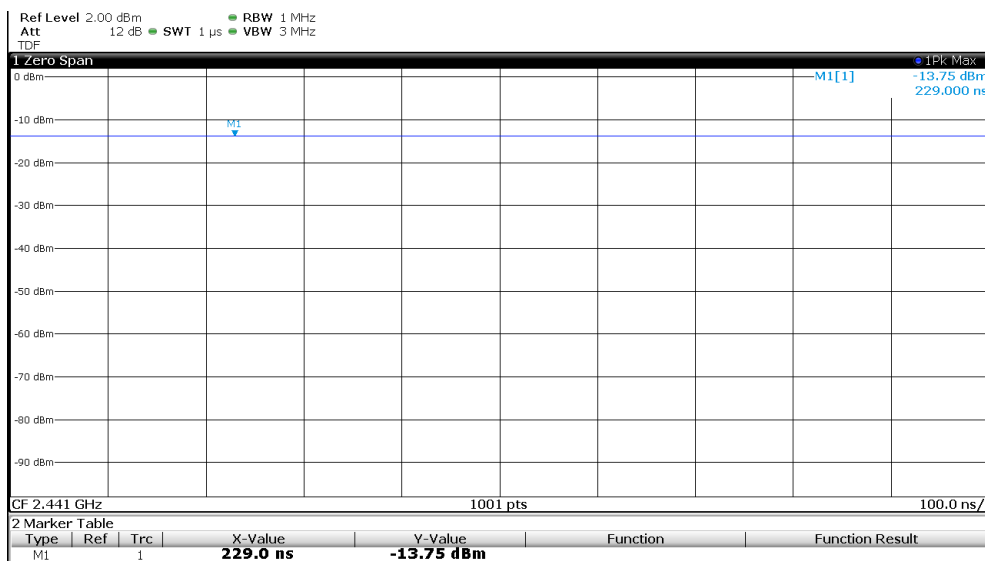


5.5.3 Description of Measurement

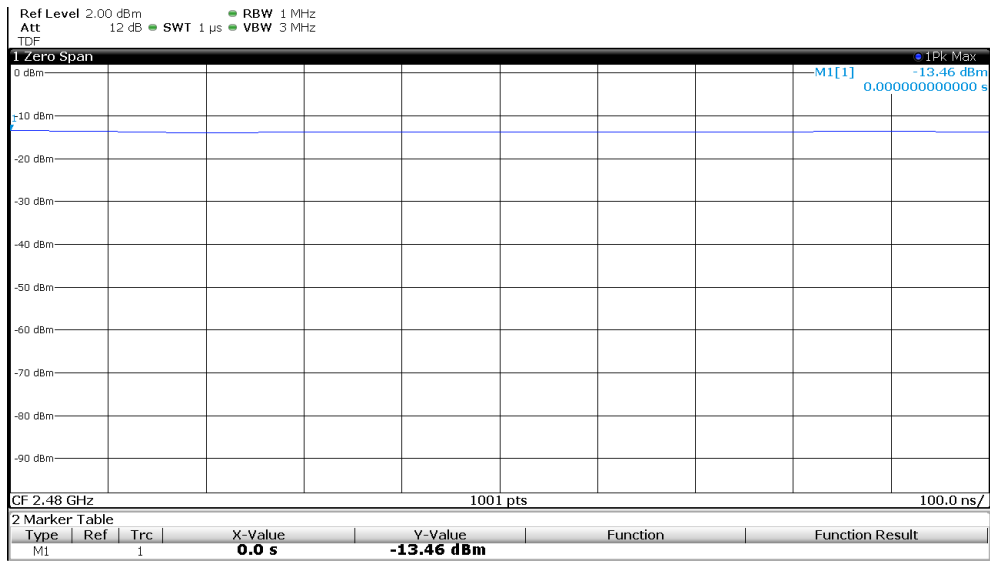
The maximum peak radiated output power is measured using a spectrum analyzer following the procedure set out in KDB 558074, item 9.1.1. The EUT is set in normal operating mode.

FCC ID: O2FM260SEHF
5.5.4 Test result

Bluetooth		Test results radiated		
Transmission to a Headset				
2400 MHz - 2483.5 MHz		Pmax (EIRP) (dBm)	Limit (dBm)	Margin (dB)
Lowest frequency: 2402 MHz				
T_{nom}	V_{nom}	-21.1	30.0	-51.1
Middle frequency: 2441 MHz				
T_{nom}	V_{nom}	-13.8	30.0	-43.8
Highest frequency: 2480 MHz				
T_{nom}	V_{nom}	-13.5	30.0	-43.5



FCC ID: O2FM260SEHF



The requirements are **FULFILLED**.

Remarks:

FCC ID: O2FM260SEHF
6 USED TEST EQUIPMENT AND ACCESSORIES

All test instruments used are calibrated and verified regularly. The calibration history is available on request.

Test ID	Model Type	Equipment No.	Next Calib.	Last Calib.	Next Verif.	Last Verif.
A 4	ESCI	02-02/03-15-001	23/05/2017	23/05/2016		
	ESH 2 - Z 5	02-02/20-05-004	26/10/2017	26/10/2015	24/05/2017	24/11/2016
	N-4000-BNC	02-02/50-05-138				
	N-1500-N	02-02/50-05-140				
	ESH 3 - Z 2	02-02/50-05-155	18/11/2019	18/11/2016	18/05/2017	18/11/2016
CPR 3	FSW43	02-02/11-15-001	25/07/2017	25/07/2016		
	AFS5-12001800-18-10P-6	02-02/17-06-002				
	AFS4-01000400-10-10P-4	02-02/17-13-002				
	AMF-4F-04001200-15-10P	02-02/17-13-003				
	BBHA 9120 E 251	02-02/24-05-006	19/04/2017	19/04/2016	23/06/2017	23/12/2016
	WBH2-18NHG	02-02/24-08-002	19/04/2017	19/04/2016	23/06/2017	23/12/2016
	Sucoflex N-2000-SMA	02-02/50-05-075				
	SF104/11N/11N/1500MM	02-02/50-13-015				
	SF104/11SMA/11N/1500MM	02-02/50-13-016				
	SF104/11SMA/11N/1500MM	02-02/50-13-017				
SER 2	VULB 9168	02-02/24-05-005	20/04/2017	20/04/2016	01/03/2017	01/09/2016
	NW-2000-NB	02-02/50-05-113				
	KK-EF393/U-16N-21N20 m	02-02/50-12-018				
	KK-SD_7/8-2X21N-33,0M	02-02/50-15-028				
SER 3	FSW43	02-02/11-15-001	25/07/2017	25/07/2016		
	JS4-18004000-30-5A	02-02/17-05-017				
	AFS5-12001800-18-10P-6	02-02/17-06-002				
	AFS4-01000400-10-10P-4	02-02/17-13-002				
	AMF-4F-04001200-15-10P	02-02/17-13-003				
	3117	02-02/24-05-009	24/05/2017	24/05/2016		
	BBHA 9170	02-02/24-05-014	02/06/2018	02/06/2015	09/12/2017	09/12/2016
	Sucoflex N-2000-SMA	02-02/50-05-075				
	KMS102-1 m	02-02/50-11-014				
	KMS102-0.2 m	02-02/50-11-020				
SF104/11N/11N/1500MM	02-02/50-13-015					