

TEST REPORT
of the accredited test laboratory**TÜV Nr.:M/FG-15/137****TÜV AUSTRIA
SERVICES GMBH****Geschäftsstelle:**
Deutschstraße 10
1230 Wien**Telefon:**
+43 1 61091-0**Fax:**
+43 1 61091-6505
emv@tuv.at**Geschäftsbereich:**
Medizintechnik/
Nachrichtentechnik/
EMV**Fachbereich:**
Prüfstelle für
Nachrichtentechnik /
EMV

TÜV®

**Applicant:** Lautsprecher Teufel GmbH
Budapester Strasse 44
10787 Berlin – Germany**Tested Product:** WIFI Module**FCC-ID:** 2ADQS-STREAM800**IC-ID:** N/A**Manufacturer:** StreamUnlimited Engineering GmbH
High Tech Campus Vienna
Gutheil-Schoder-Gasse 10
1102 Wien – Austria**Output power /** 64,6 mW cond. **power supply:** 5 VDC
field strength:**Frequency range:** 2412 - 2462 MHz **Channel separation:** 5 MHz**Standard:** FCC: 47 CFR Part 15 (October 1, 2014 edition)
RSS-210 Issue 8, December 2010**Akkreditiert als:**
Prüfstelle,
Inspektionsstelle,
Zertifizierungsstelle,
Kalibrierstelle,
Erst- und
Kesselprüfstelle,
Verifizierungsstelle**Notified Body 0408
IC 2932K-1****Vorsitzender des
Aufsichtsrats:**
KR Dipl.-Ing. Johann
MARIHART**Geschäftsführung:**
Dipl.-Ing. Dr. Stefan
HAAS
Mag. Christoph
WENNINGER**Sitz:**
Krugerstraße 16
1015 Wien/Österreich**weitere
Geschäftsstellen:**
Dornbirn, Graz,
Innsbruck, Klagenfurt,
Linz, Salzburg, St. Pölten,
Wels, Wien, Brixen (I)
und Filderstadt (D)**Firmenbuchgericht/
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Test laboratory for EMC

Supervisor of EMC-laboratory:

Ing. Wilhelm Seier

27.03.2015

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The results of this test report only refer to the provided equipment.

LIST OF MEASUREMENTS

The complete list of measurements called for in 47 CFR 15 and RSS-210 is given below.

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TEST OBJECT DATA

General EUT Description

This WIFI module is using either 2.4 GHz Frequencies or 5 GHz. This test report is only for the 2.4 GHz part. See additional test report for 5 GHz measurement results.

2.1033 (c) Technical description

2.1033 (4) Type of emission:

802.11 standards – Channel bandwidths 10,4 MHz (DSSS), 20 MHz (OFDM) and 40 MHz (aggregation of 2 non-overlapping OFDM channels) – Channel spacing 5 MHz.

2.1033 (5) Frequency range:

2412 till 2462 MHz (channel center frequencies) in 5 MHz steps resulting in 11 Channels (DSSS and 20 MHz channels)
2422 till 2452 MHz (channel center frequencies) in 5 MHz steps resulting in 7 Channels of 40 MHz bandwidth

2.1033 (6) Power range and Controls: The maximum peak output power is 64,6 mW and there is no power regulation.

2.1033 (7) Maximum output power rating: 64,6 mW.

2.1033 (8) DC Voltage and Current: 5 V DC

maximum current consumption: 200 mA)

RSS-135 This standard does not apply to:

- 1.1.(a) a receiver that scans radio frequencies for the purpose of enabling its associated transmitter to avoid transmitting in an occupied frequency but which does not have the capability of decoding the message (e.g. converting it to audio voice) contained in the radio signal

Tests were performed on 11th, 12th and 27th February 2015.

Test Report Reference:
M/FG-15/137



Ambient temperature: 24°C

Relative humidity: 25%

Number of channels and channel spacing

§ 2.1033

Conducted Measurement

Rated output power: 64,6 mW

There are 11 Channels used starting at 2412 till 2462 MHz each separated by 5 MHz channel spacing with a maximum bandwidth of 20 MHz.

Two channels spaced by 20 MHz can be used simultaneously to give a RF-Bandwidth of 40 MHz, resulting in 7 different channels with 40 MHz bandwidth and center frequencies of 2422 till 2452 MHz each separated by 5 MHz channel spacing.

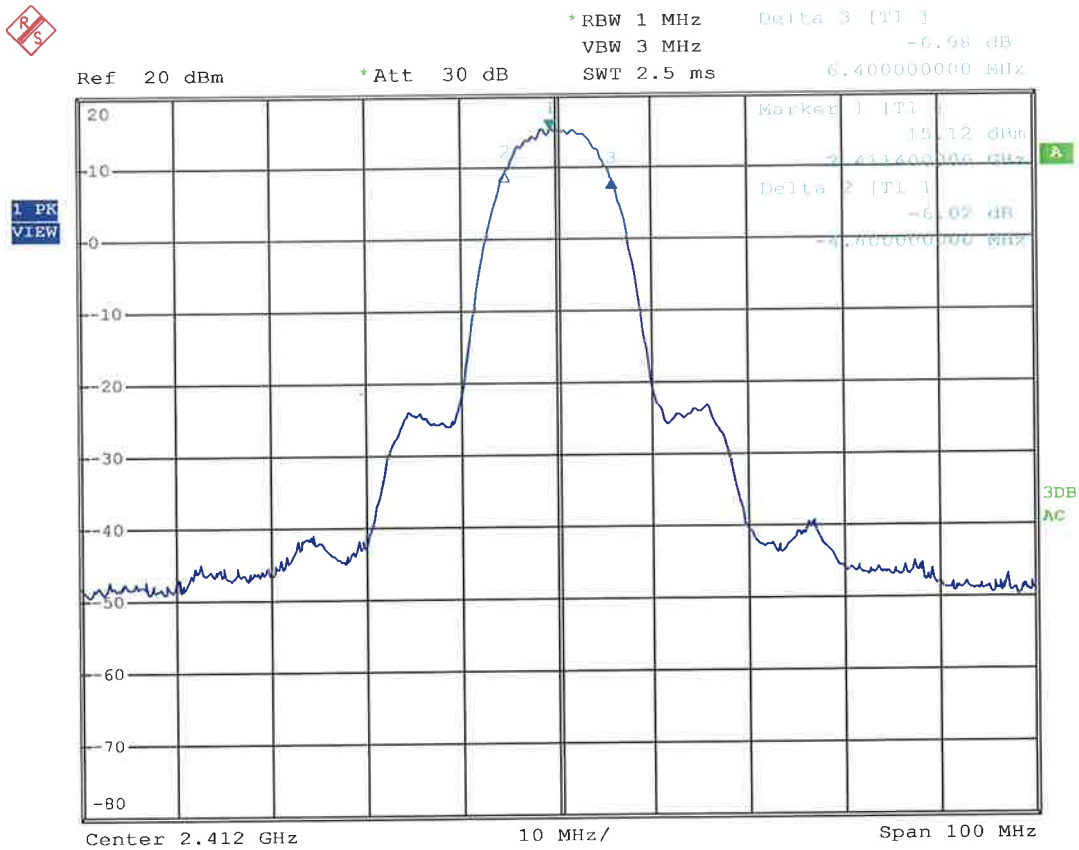
Test Equipment used: N/A

6dB Bandwidth

**§ 15.247(a)(2)
A8.2(a)**

Conducted Measurement

Rated output power: 64,6 mW Channel 1 (2412 MHz center frequency) – DSSS



Date: 12.FEB.2015 12:49:03

6dB Bandwidth: 10,4 MHz

LIMIT SUBCLAUSE 15.247(e) – A8.2(b)

Under normal test conditons	6 dB Bandwidth at least 500 kHz
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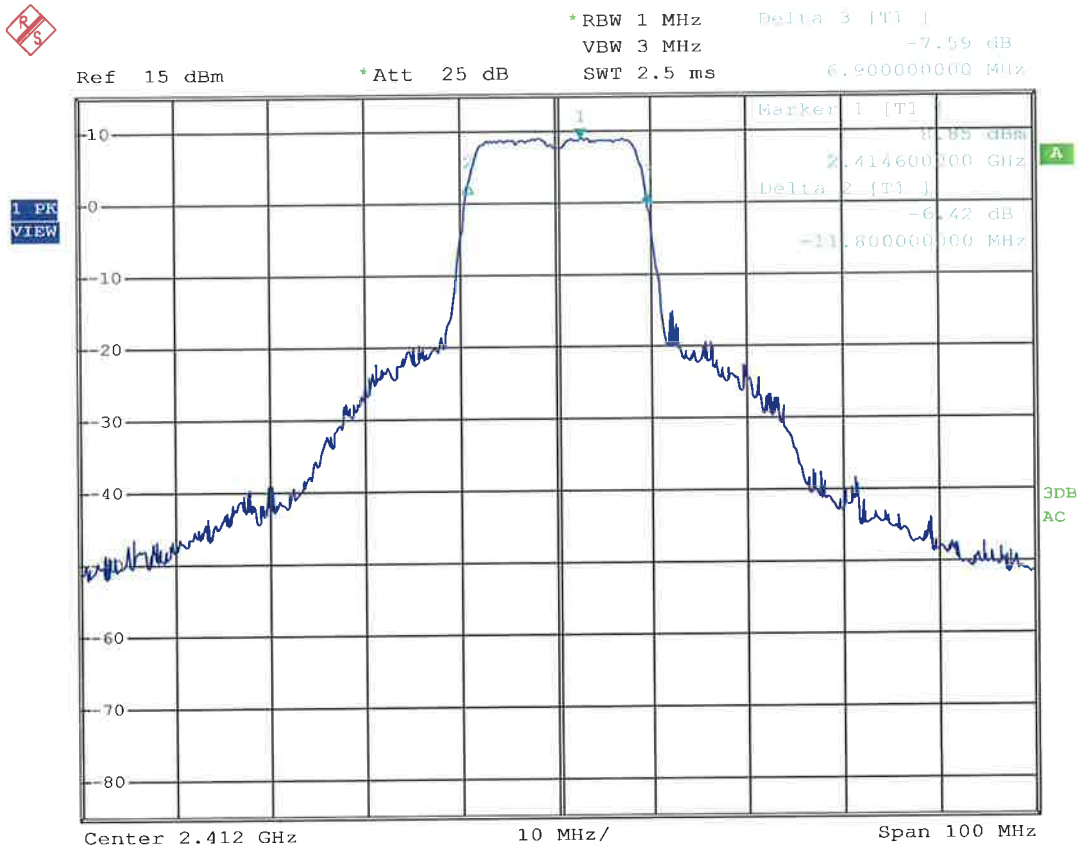
Test Equipment used: NT-203/1

6dB Bandwidth

**§ 15.247(a)(2)
A8.2(a)**

Conducted Measurement

Rated output power: 64,6 mW Channel 1 (2412 MHz center frequency) – OFDM



Date: 12.FEB.2015 12:46:26

6dB Bandwidth: 18,7 MHz

LIMIT SUBCLAUSE 15.247(e) – A8.2(b)

Under normal test conditons	6 dB Bandwidth at least 500 kHz
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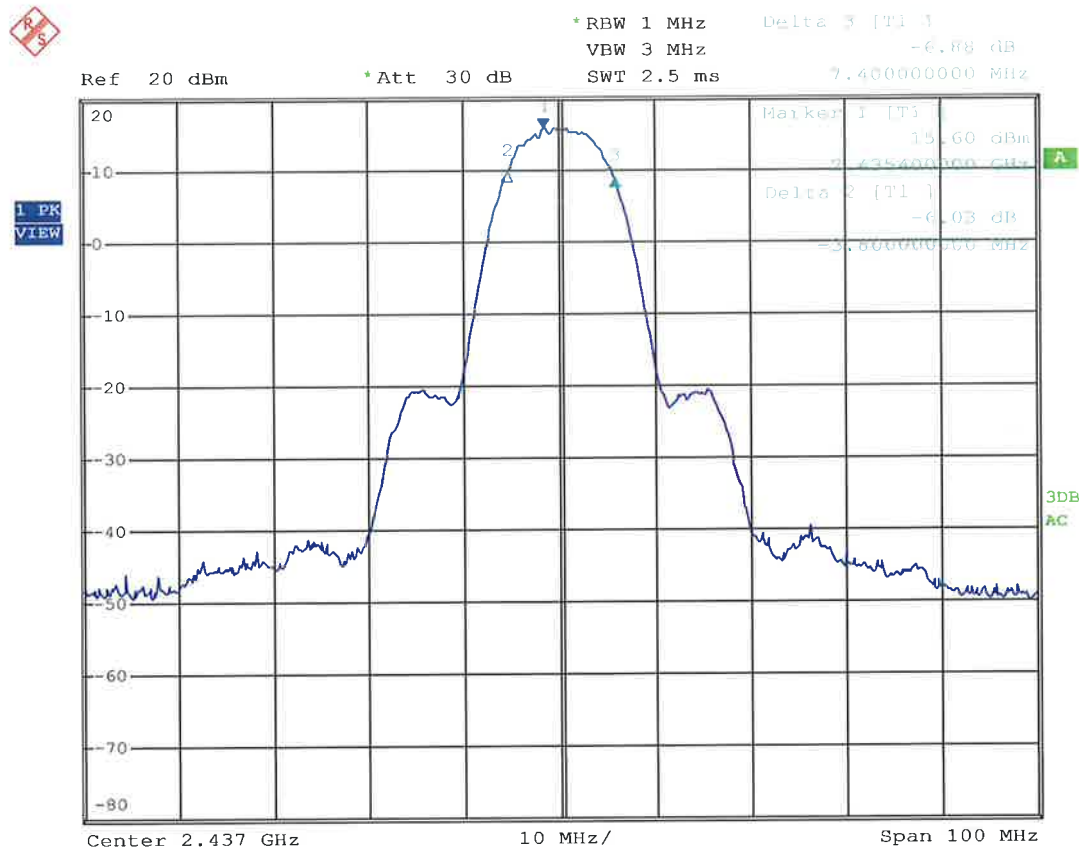
Test Equipment used: NT-203/1

6dB Bandwidth

**§ 15.247(a)(2)
A8.2(a)**

Conducted Measurement

Rated output power: 64,6 mW Channel 6 (2437 MHz center frequency) – DSSS



Date: 12.FEB.2015 12:52:02

6dB Bandwidth: 10,4 MHz

LIMIT SUBCLAUSE 15.247(e) – A8.2(b)

Under normal test conditons	6 dB Bandwidth at least 500 kHz
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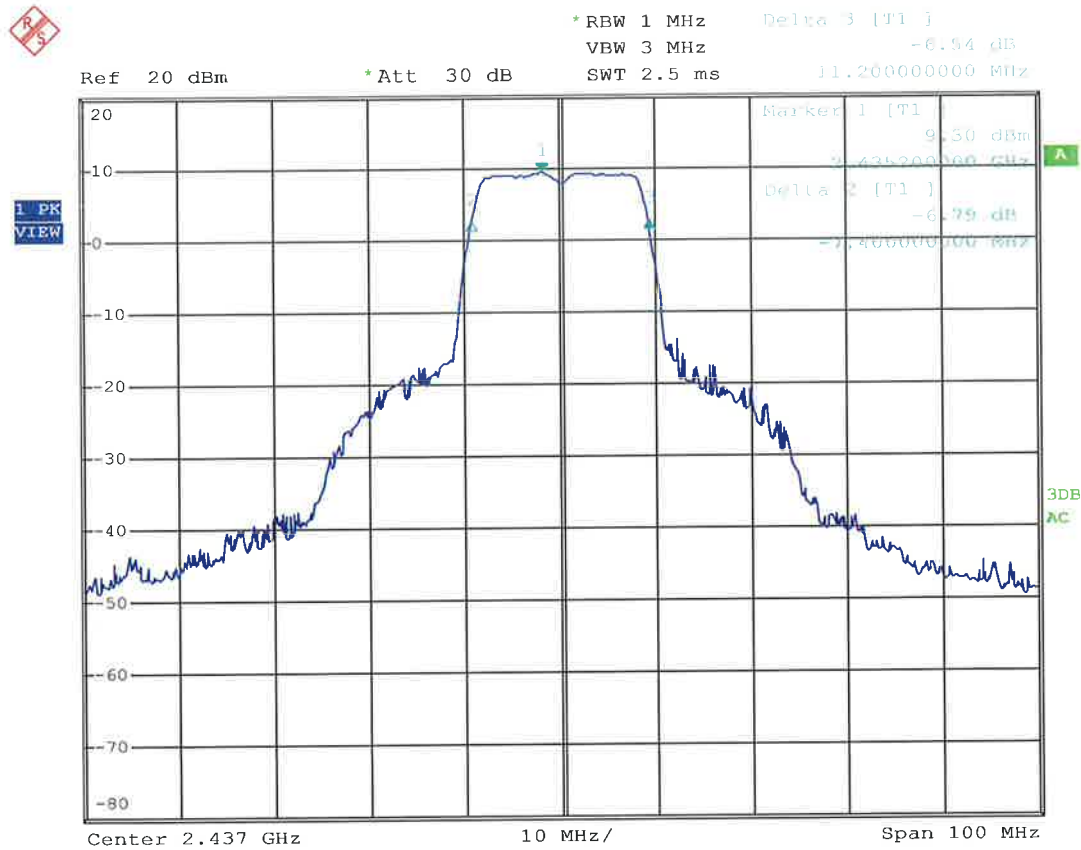
Test Equipment used: NT-203/1

6dB Bandwidth

**§ 15.247(a)(2)
A8.2(a)**

Conducted Measurement

Rated output power: 64,6 mW Channel 6 (2437 MHz center frequency) – OFDM



Date: 12.FEB.2015 12:51:04

6dB Bandwidth: 18,6 MHz

LIMIT SUBCLAUSE 15.247(e) – A8.2(b)

Under normal test conditons	6 dB Bandwidth at least 500 kHz
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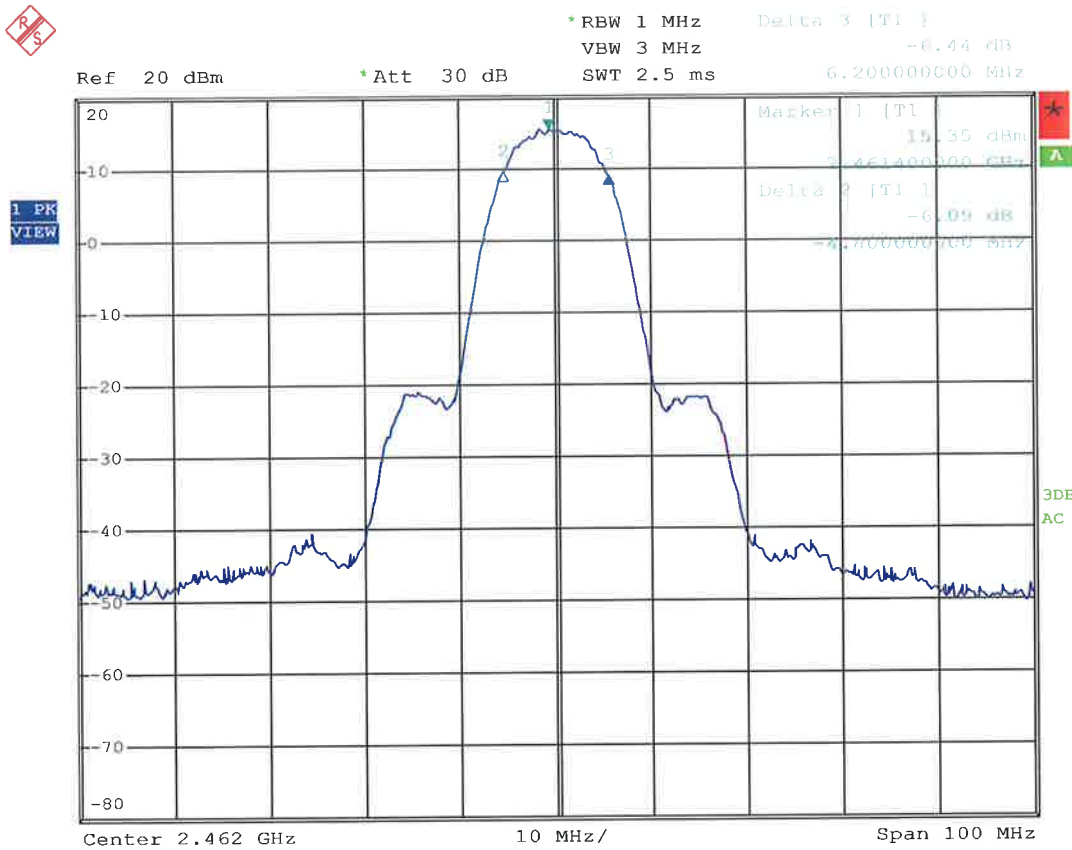
Test Equipment used: NT-203/1

6dB Bandwidth

**§ 15.247(a)(2)
A8.2(a)**

Conducted Measurement

Rated output power: 64,6 mW Channel 11 (2462 MHz center frequency) – DSSS



Date: 12.FEB.2015 12:53:55

6dB Bandwidth: 10,2 MHz

LIMIT SUBCLAUSE 15.247(e) – A8.2(b)

Under normal test conditons	6 dB Bandwidth at least 500 kHz
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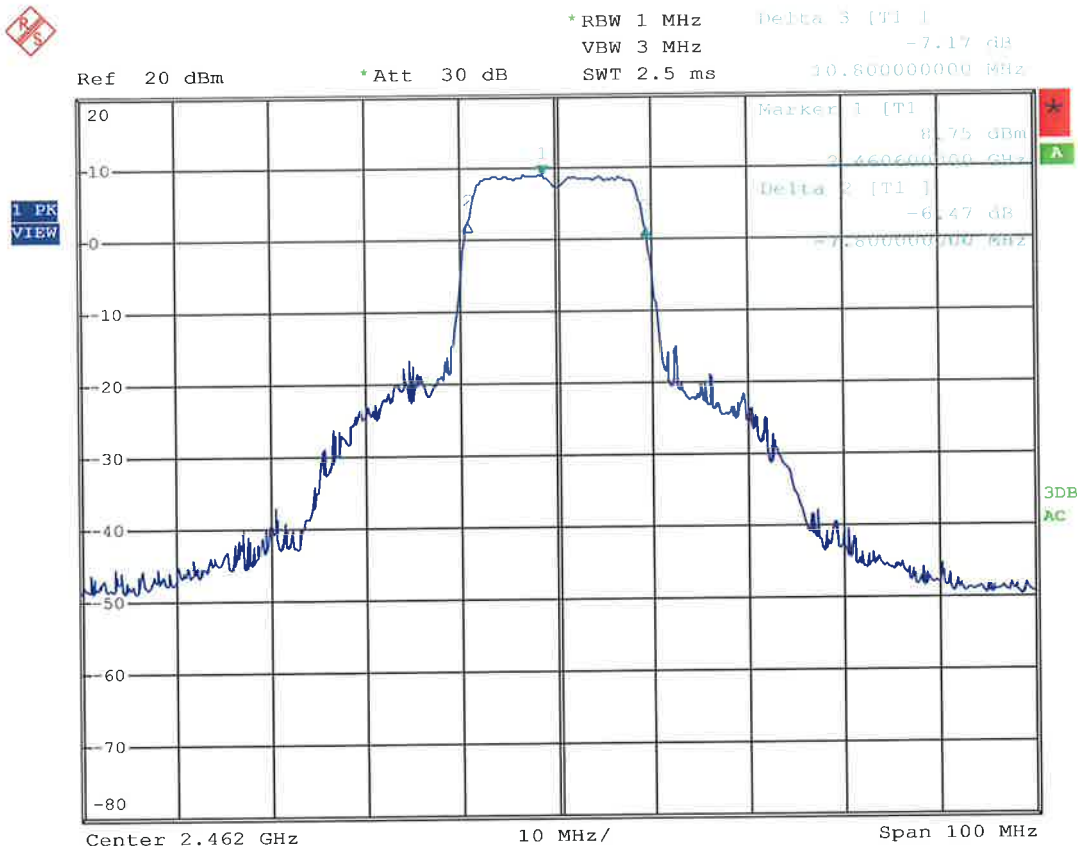
Test Equipment used: NT-203/1

6dB Bandwidth

**§ 15.247(a)(2)
A8.2(a)**

Conducted Measurement

Rated output power: 64,6 mW Channel 11 (2462 MHz center frequency) – OFDM



Date: 12.FEB.2015 12:57:05

6dB Bandwidth: 18,6 MHz

LIMIT SUBCLAUSE 15.247(e) – A8.2(b)

Under normal test conditons	6 dB Bandwidth at least 500 kHz
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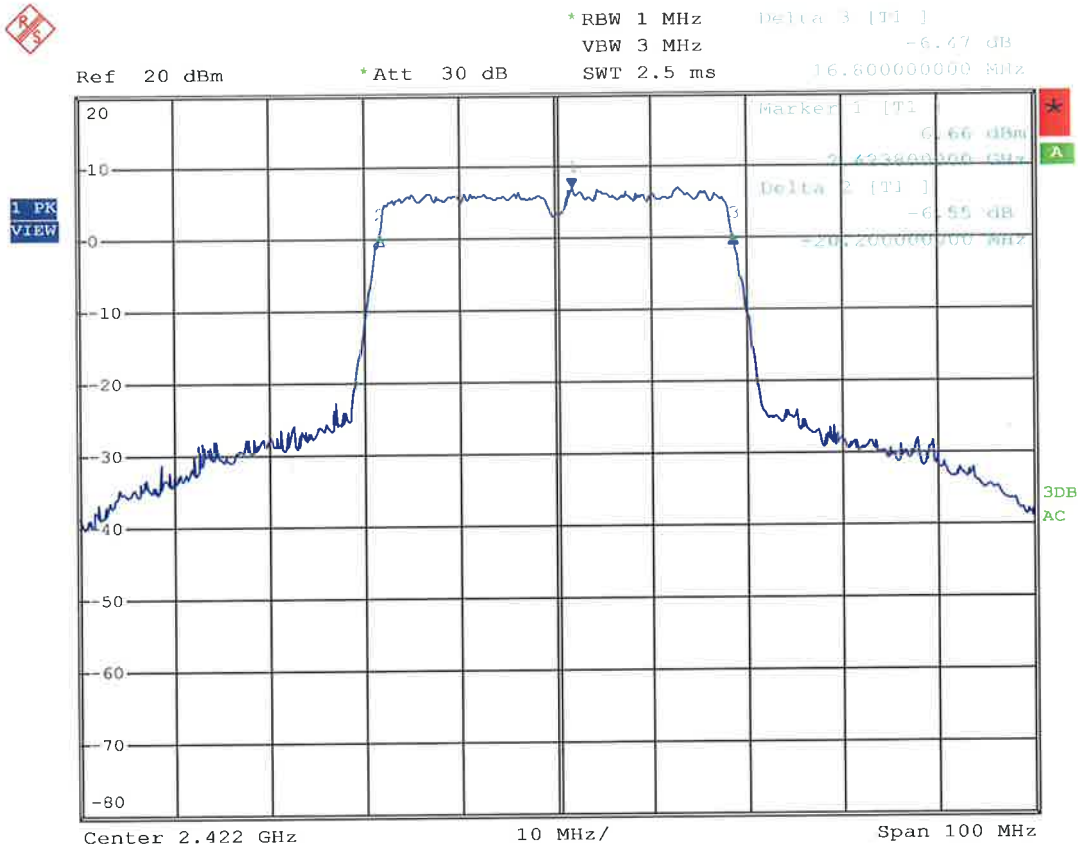
Test Equipment used: NT-203/1

6dB Bandwidth

**§ 15.247(a)(2)
A8.2(a)**

Conducted Measurement

Rated output power: 64,6 mW Channels 1+5 (2422 MHz center frequency)



Date: 12.FEB.2015 12:58:37

6dB Bandwidth: 37,0 MHz

LIMIT SUBCLAUSE 15.247(e) – A8.2(b)

Under normal test conditons	6 dB Bandwidth at least 500 kHz
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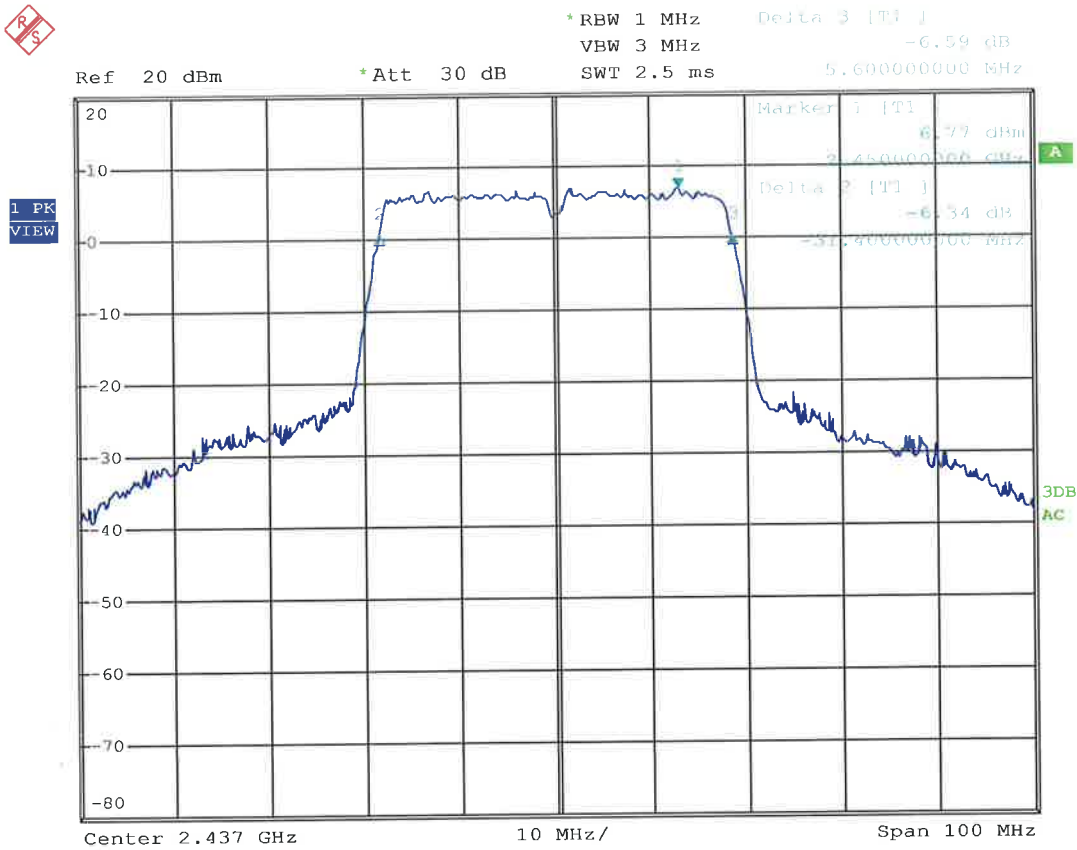
Test Equipment used: NT-203/1

6dB Bandwidth

**§ 15.247(a)(2)
A8.2(a)**

Conducted Measurement

Rated output power: 64,6 mW Channels 4 + 8 (2437 MHz center frequency)



Date: 12.FEB.2015 13:00:15

6dB Bandwidth: 37,0 MHz

LIMIT SUBCLAUSE 15.247(e) – A8.2(b)

Under normal test conditons	6 dB Bandwidth at least 500 kHz
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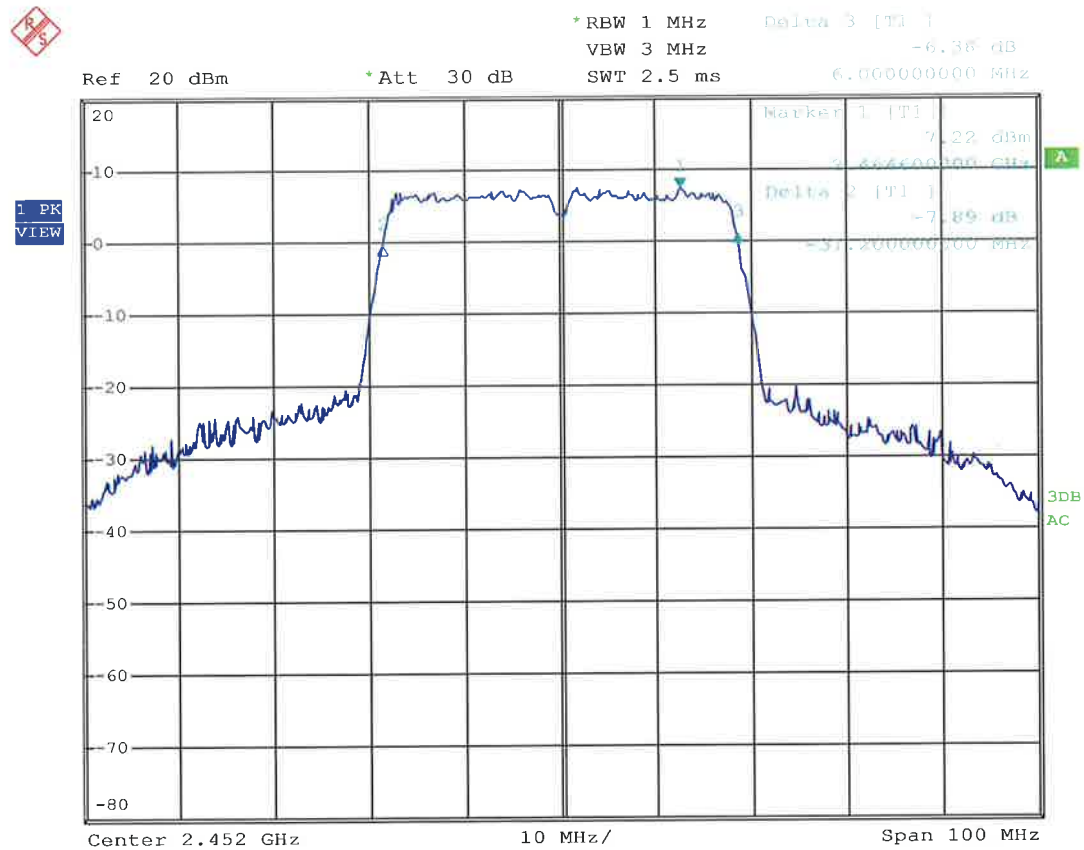
Test Equipment used: NT-203/1

6dB Bandwidth

**§ 15.247(a)(2)
A8.2(a)**

Conducted Measurement

Rated output power: 64,6 mW Channel 7 + 11 (2452 MHz center frequency)



Date: 12.FEB.2015 13:01:33

6dB Bandwidth: 37,2 MHz

LIMIT SUBCLAUSE 15.247(e) – A8.2(b)

Under normal test conditons	6 dB Bandwidth at least 500 kHz
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Test Equipment used: NT-203/1

Maximum Peak RF Power Output (conducted)

**§ 15.247(b)(3)
A8.4(4)**

Conducted Measurement

Rated output power: 64,6 mW

Test conditions		Transmitter power (mW)		
		2412 (2422) MHz	2437 MHz	2462 (2452) MHz
T _{nom} (24)°C	DSSS	58,9	64,6	61,7
	OFDM – 20 MHz	15,8	16,6	16,2
	OFDM – 40 MHz	15,8	16,2	16,2
Measurement uncertainty		± 0,75 dB		

LIMIT

SUBCLAUSE 15.247(b)(3) – A8.4(4)

Under normal test conditons	1W conducted (4W eirp)
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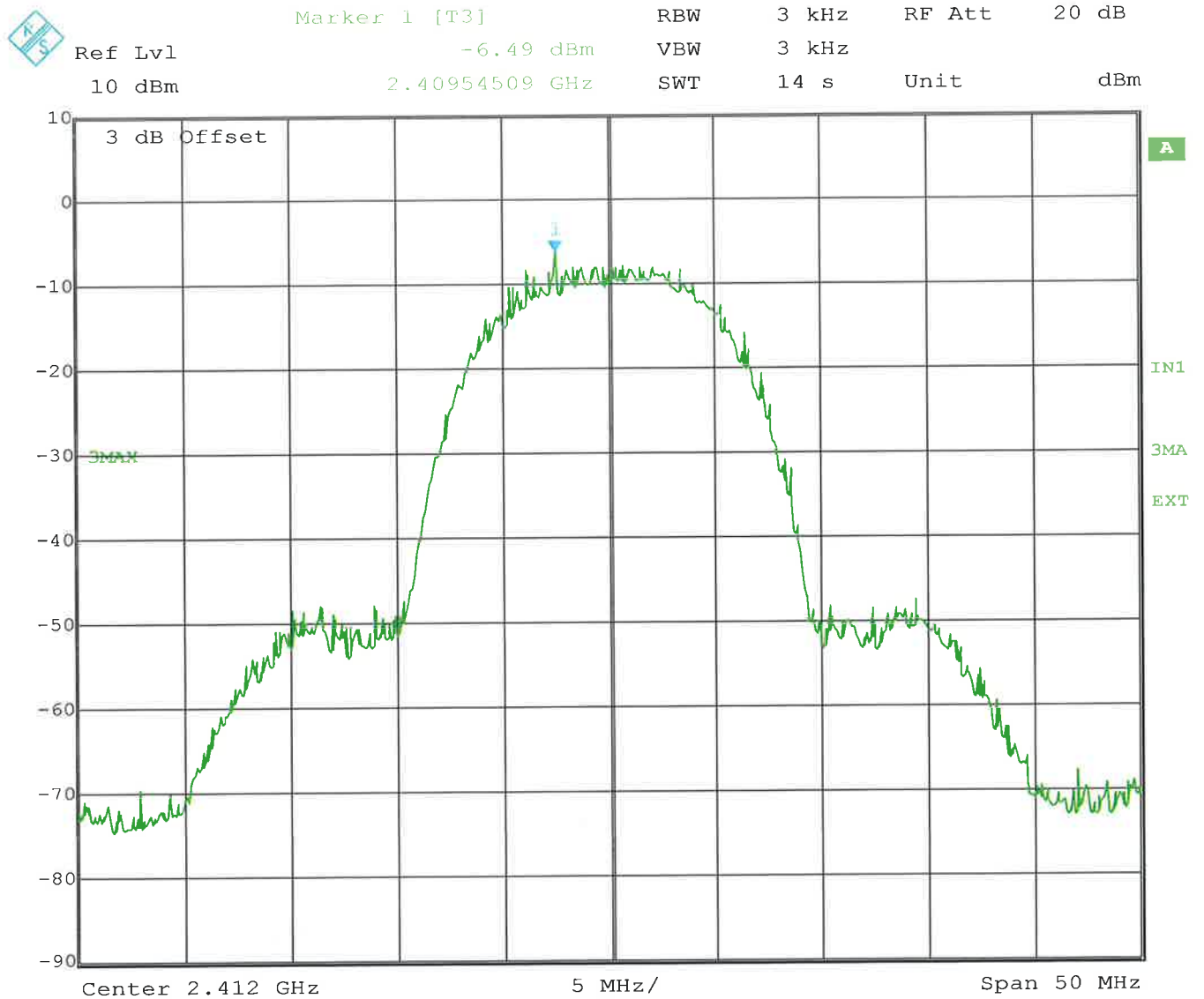
Test Equipment used: NT-204; NT-229; NT233/1a

Power spectral density (conducted)

**§ 15.247(e)
A8.2(b)**

Conducted Measurement

Rated output power: 64,6 mW Channel 1 (2412 MHz center frequency) – DSSS



Date: 27.FEB.2015 13:44:51

Power Spectral density: -6,49 dBm @ 2409,545 MHz

LIMIT SUBCLAUSE 15.247(e) – A8.2(b)

Under normal test conditons	+8dBm in any 3 kHz band
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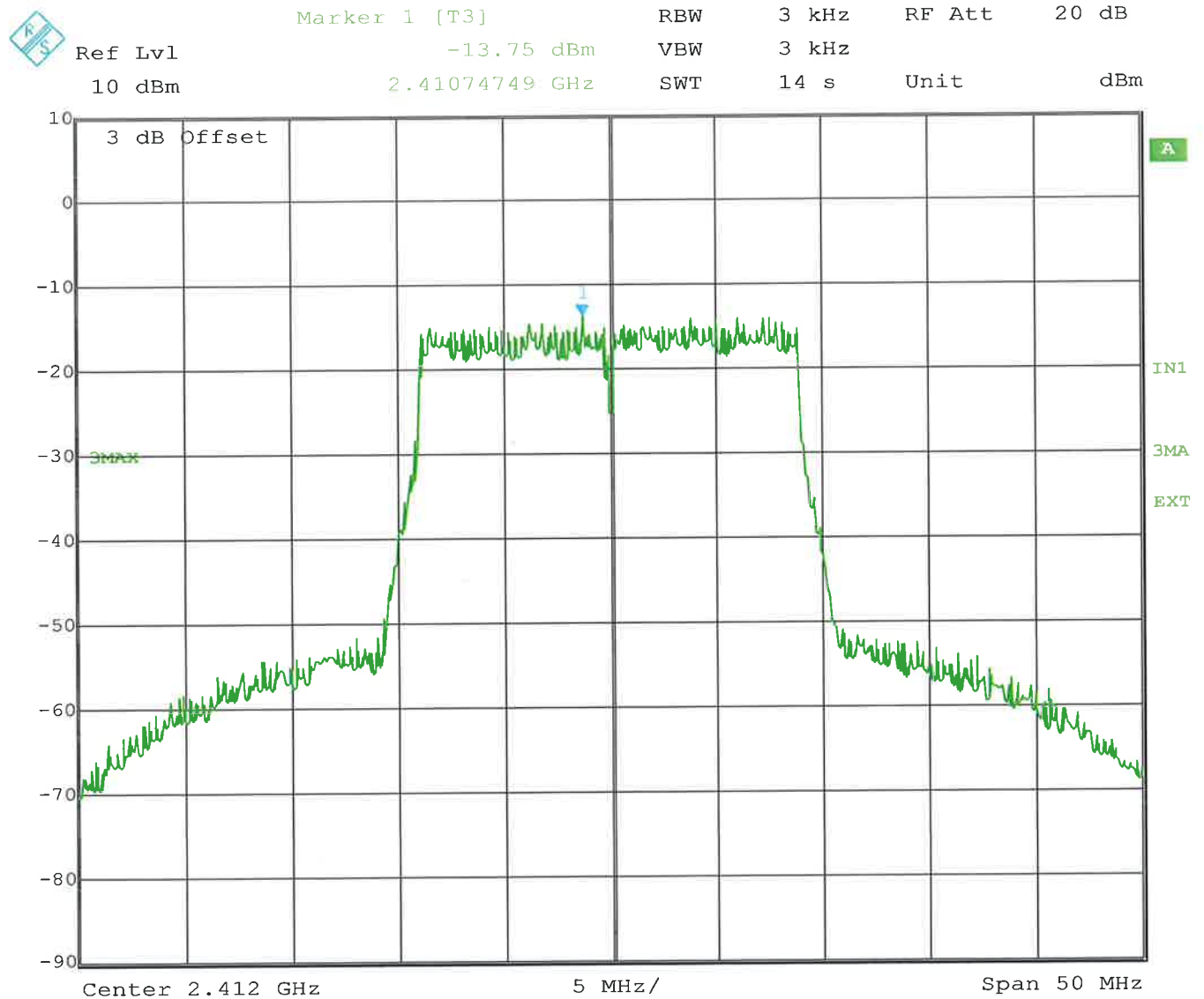
Test Equipment used: NT-207

Power spectral density (conducted)

**§ 15.247(e)
A8.2(b)**

Conducted Measurement

Rated output power: 64,6 mW Channel 1 (2412 MHz center frequency) – OFDM



Date: 27.FEB.2015 13:47:11

Power Spectral density: -13,75 dBm @ 2410,747 MHz

LIMIT SUBCLAUSE 15.247(e) – A8.2(b)

Under normal test conditons	+8dBm in any 3 kHz band
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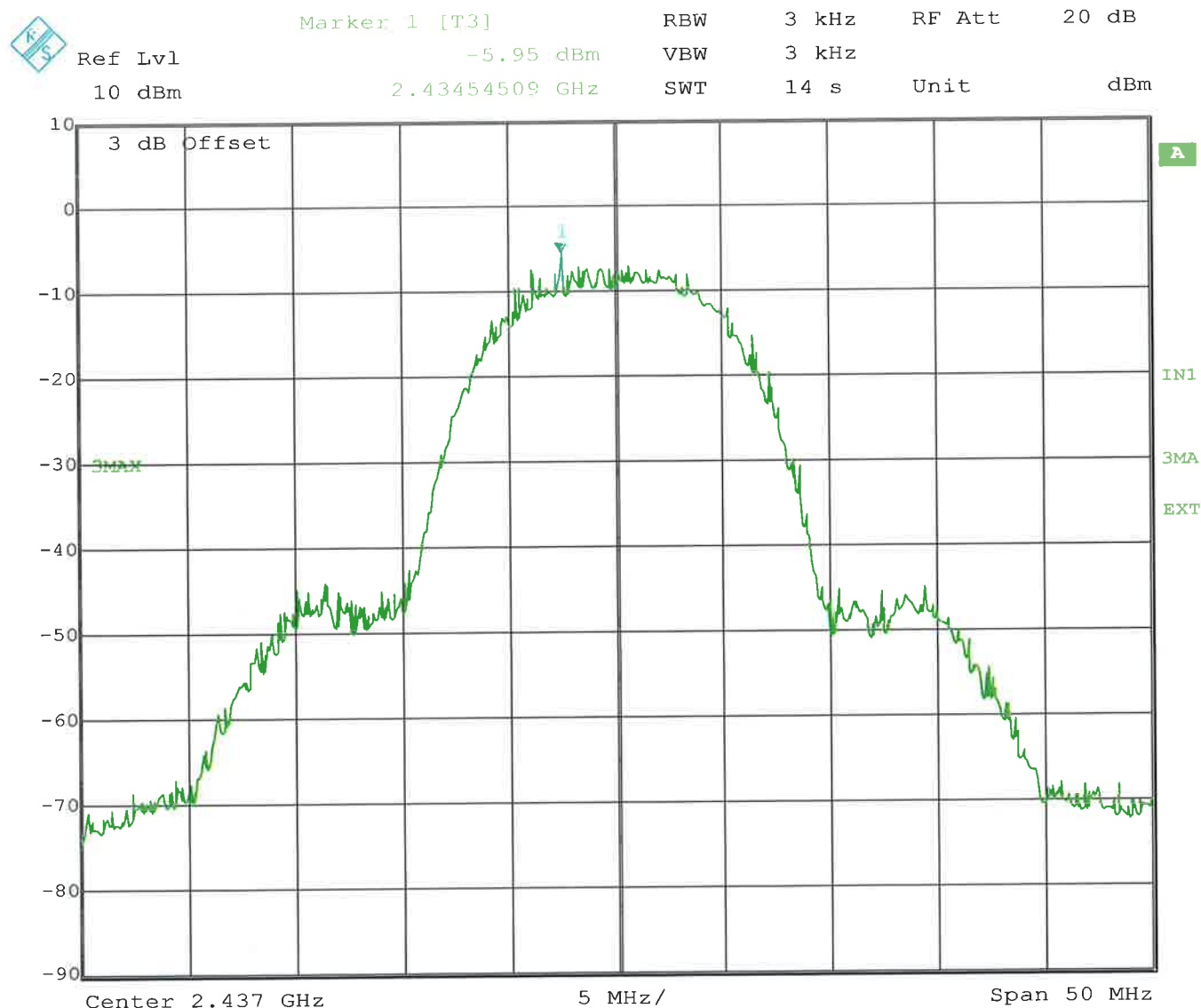
Test Equipment used: NT-207

Power spectral density (conducted)

**§ 15.247(e)
A8.2(b)**

Conducted Measurement

Rated output power: 64,6 mW Channel 6 (2437 MHz center frequency) – DSSS



Date: 27.FEB.2015 13:52:09

Power Spectral density: -5,95 dBm @ 2434,545 MHz

LIMIT SUBCLAUSE 15.247(e) – A8.2(b)

Under normal test conditons	+8dBm in any 3 kHz band
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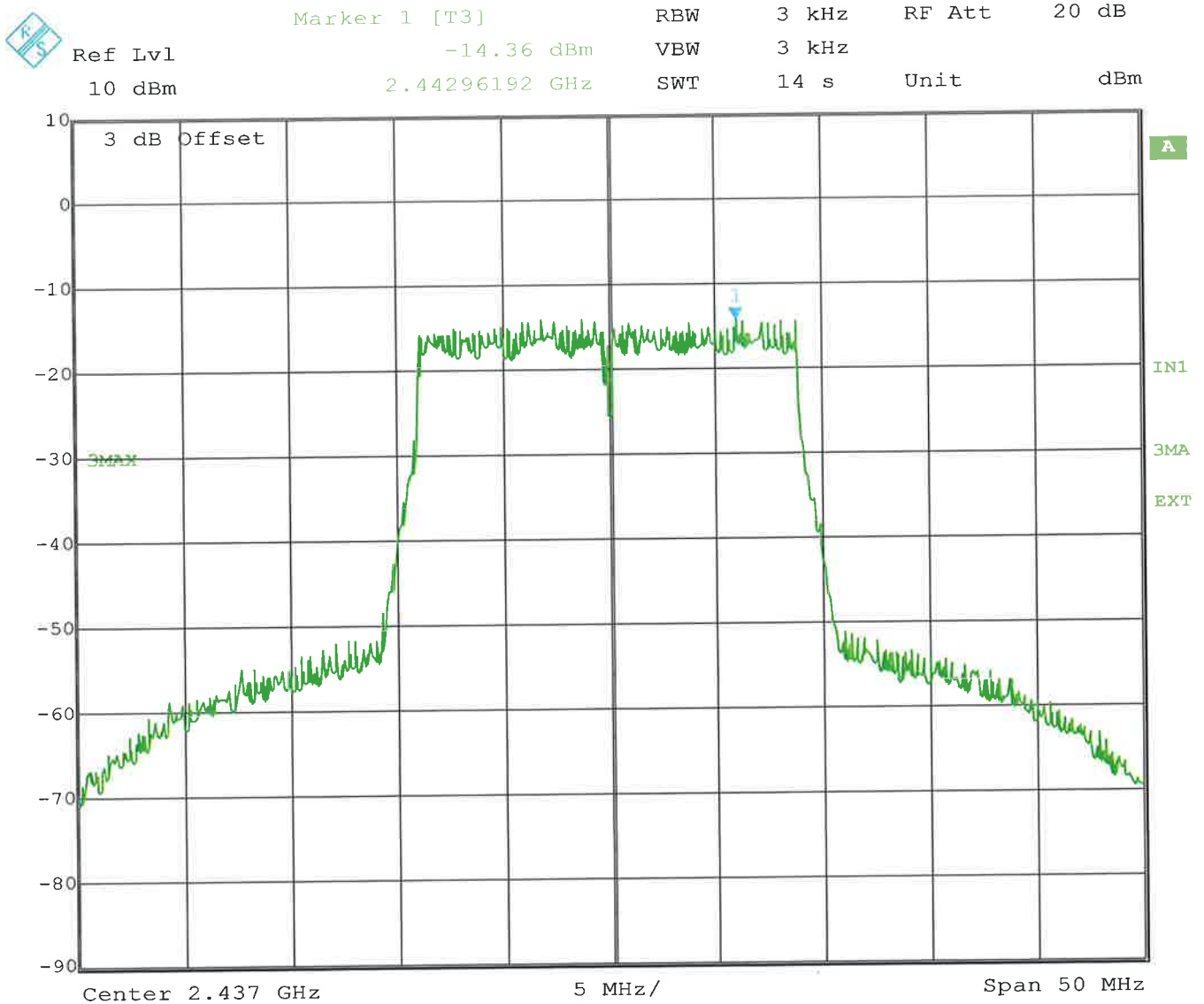
Test Equipment used: NT-207

Power spectral density (conducted)

**§ 15.247(e)
A8.2(b)**

Conducted Measurement

Rated output power: 64,6 mW Channel 6 (2437 MHz center frequency) – OFDM



Date: 27.FEB.2015 13:49:57

Power Spectral density: -14,36 dBm @ 2442,962 MHz

LIMIT SUBCLAUSE 15.247(e) – A8.2(b)

Under normal test conditons	+8dBm in any 3 kHz band
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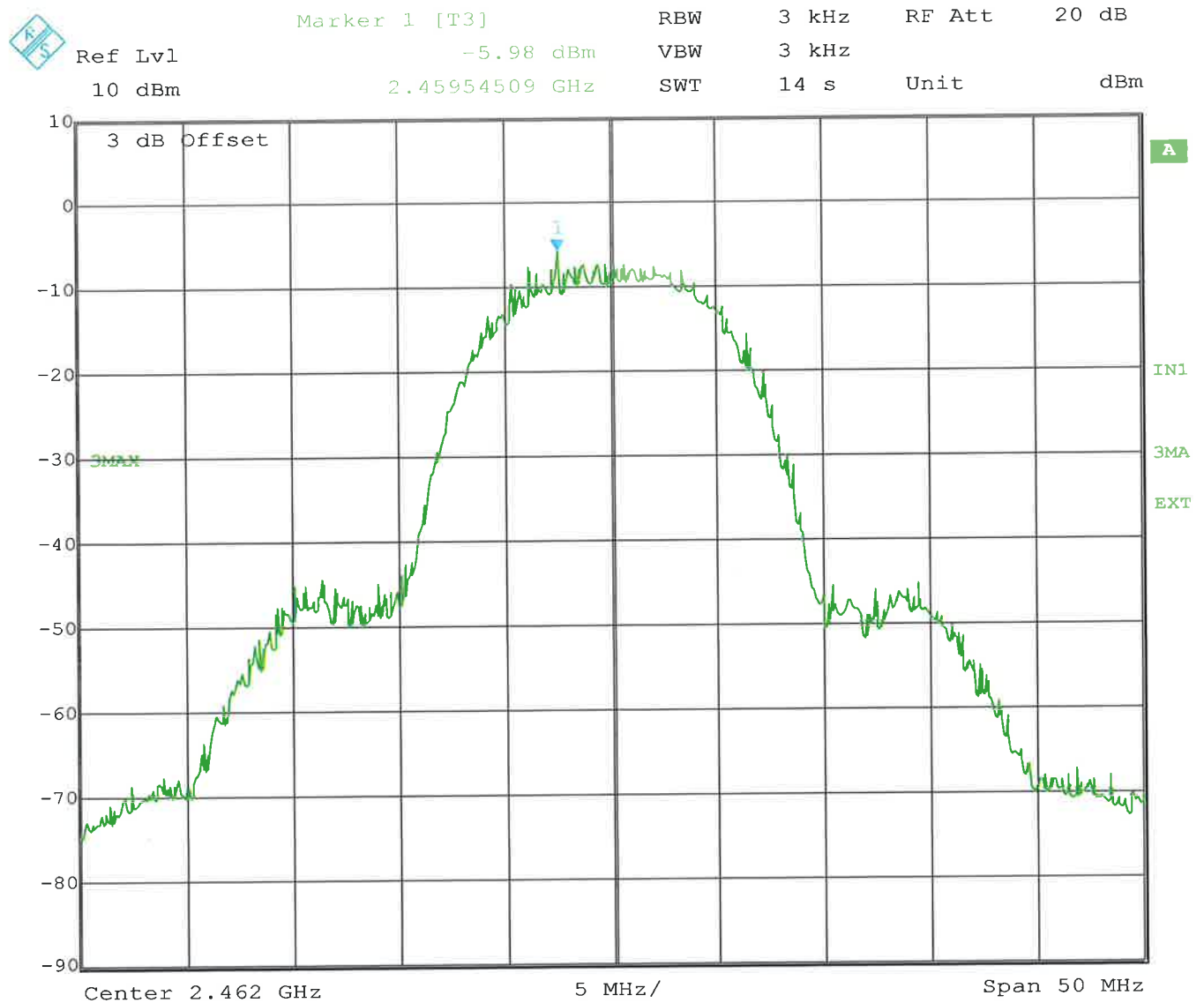
Test Equipment used: NT-207

Power spectral density (conducted)

**§ 15.247(e)
A8.2(b)**

Conducted Measurement

Rated output power: 64,6 mW Channel 11 (2462 MHz center frequency) – DSSS



Date: 27.FEB.2015 13:56:54

Power Spectral density: -5,98 dBm @ 2459,545 MHz

LIMIT SUBCLAUSE 15.247(e) – A8.2(b)

Under normal test conditons	+8dBm in any 3 kHz band
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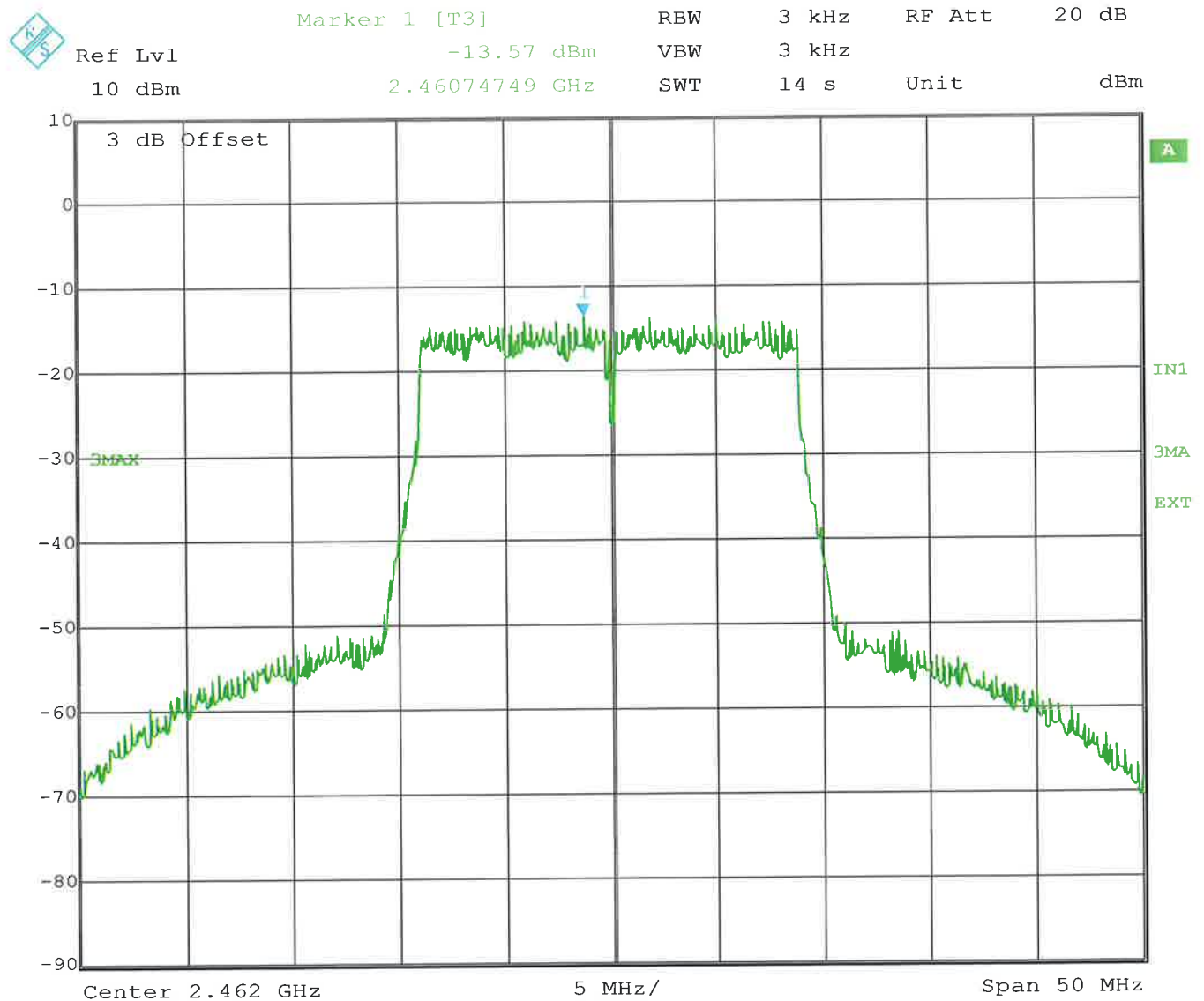
Test Equipment used: NT-207

Power spectral density (conducted)

**§ 15.247(e)
A8.2(b)**

Conducted Measurement

Rated output power: 64,6 mW Channel 11 (2462 MHz center frequency) – OFDM



Date: 27.FEB.2015 13:54:09

Power Spectral density: -13,57 dBm @ 2460,747 MHz

LIMIT SUBCLAUSE 15.247(e) – A8.2(b)

Under normal test conditons	+8dBm in any 3 kHz band
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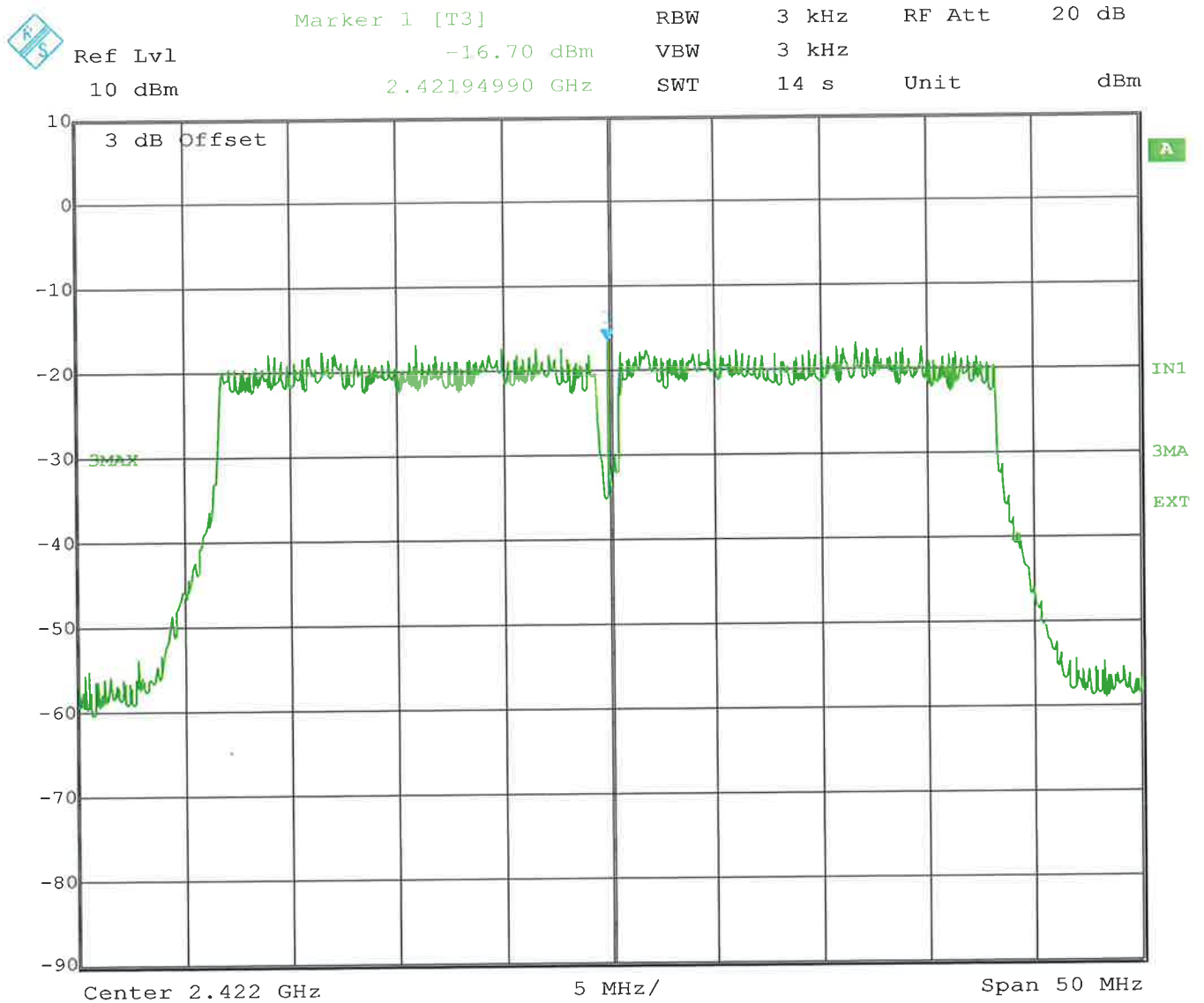
Test Equipment used: NT-207

Power spectral density (conducted)

**§ 15.247(e)
A8.2(b)**

Conducted Measurement

Rated output power: 64,6 mW Channel 1 + 5 (2422 MHz center frequency)



Date: 27.FEB.2015 13:59:04

Power Spectral density: -16,70 dBm @ 2421,949 MHz

LIMIT SUBCLAUSE 15.247(e) – A8.2(b)

Under normal test conditons	+8dBm in any 3 kHz band
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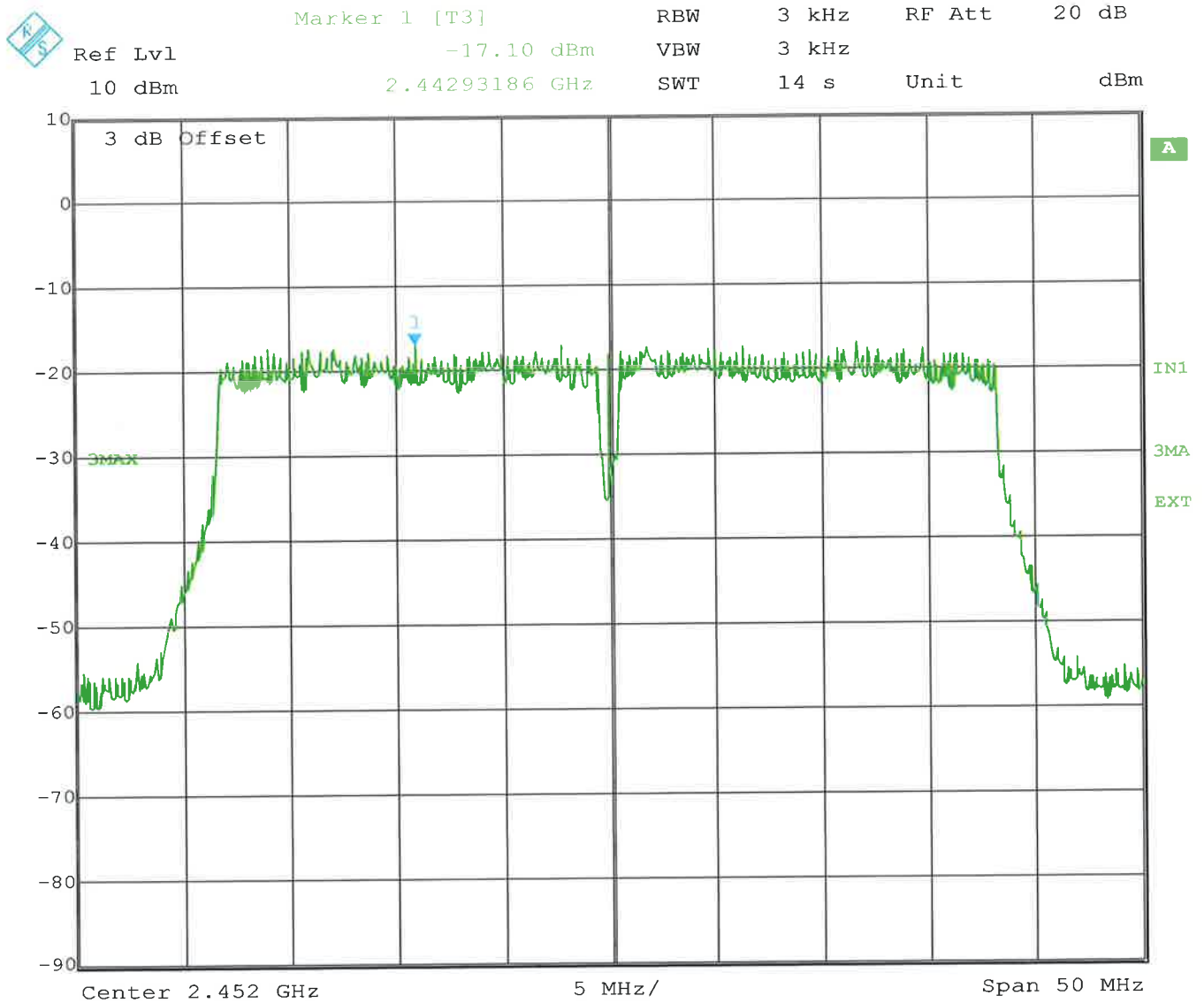
Test Equipment used: NT-207

Power spectral density (conducted)

**§ 15.247(e)
A8.2(b)**

Conducted Measurement

Rated output power: 64,6 mW Channel 7 + 11 (2452 MHz center frequency)



Date: 27.FEB.2015 14:08:25

Power Spectral density: -17,10 dBm @ 2442,932 MHz

LIMIT SUBCLAUSE 15.247(e) – A8.2(b)

Under normal test conditons	+8dBm in any 3 kHz band
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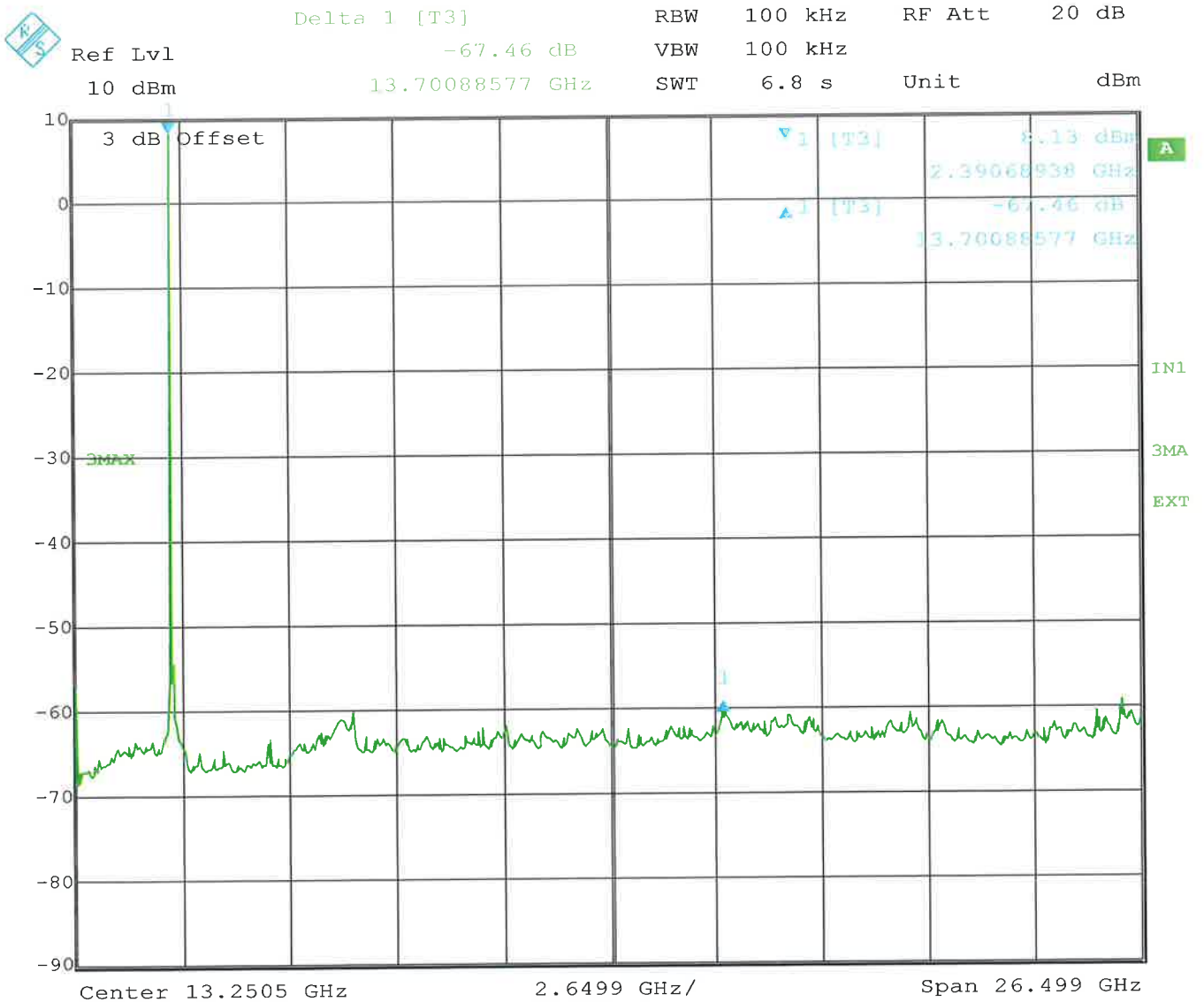
Test Equipment used: NT-207

Out-of-band Emission

**§ 15.247(d)
A8.5**

Conducted measurement

Setup: CH 1: 2412 MHz – DSSS



Date: 27.FEB.2015 13:30:51

LIMIT SUBCLAUSE 15.247(d) – A8.5

In any 100 kHz bandwidth outside the frequency band in which the radio device is operating.	At least 20dB below the power in the 100 kHz bandwidth within the band that contains the highest level of the desired power.
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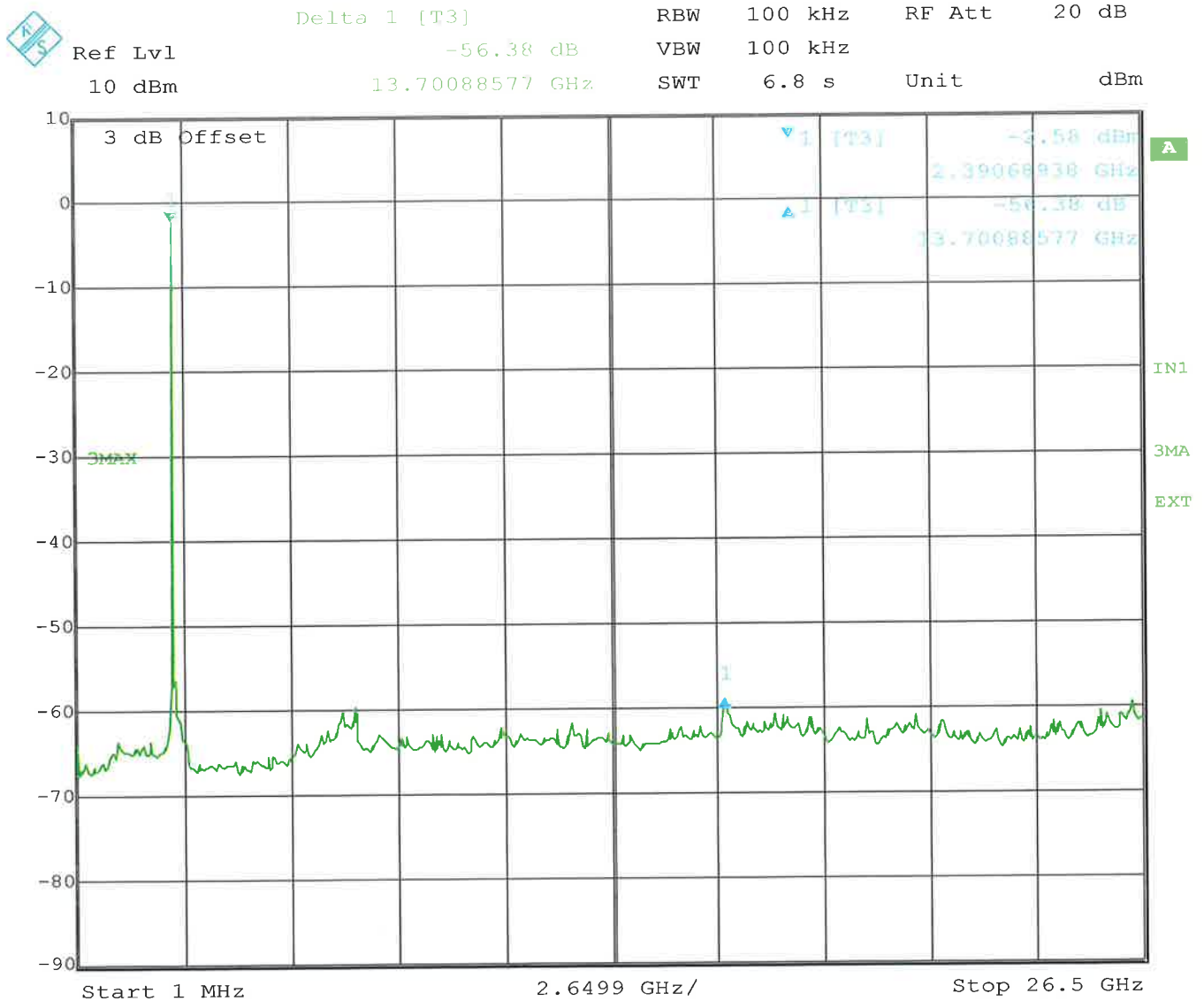
Test Equipment used: NT-207

Out-of-band Emission

**§ 15.247(d)
A8.5**

Conducted measurement

Setup: CH 1: 2412 MHz – OFDM



Date: 27.FEB.2015 13:26:39

LIMIT SUBCLAUSE 15.247(d) – A8.5

In any 100 kHz bandwidth outside the frequency band in which the radio device is operating.	At least 20dB below the power in the 100 kHz bandwidth within the band that contains the highest level of the desired power.
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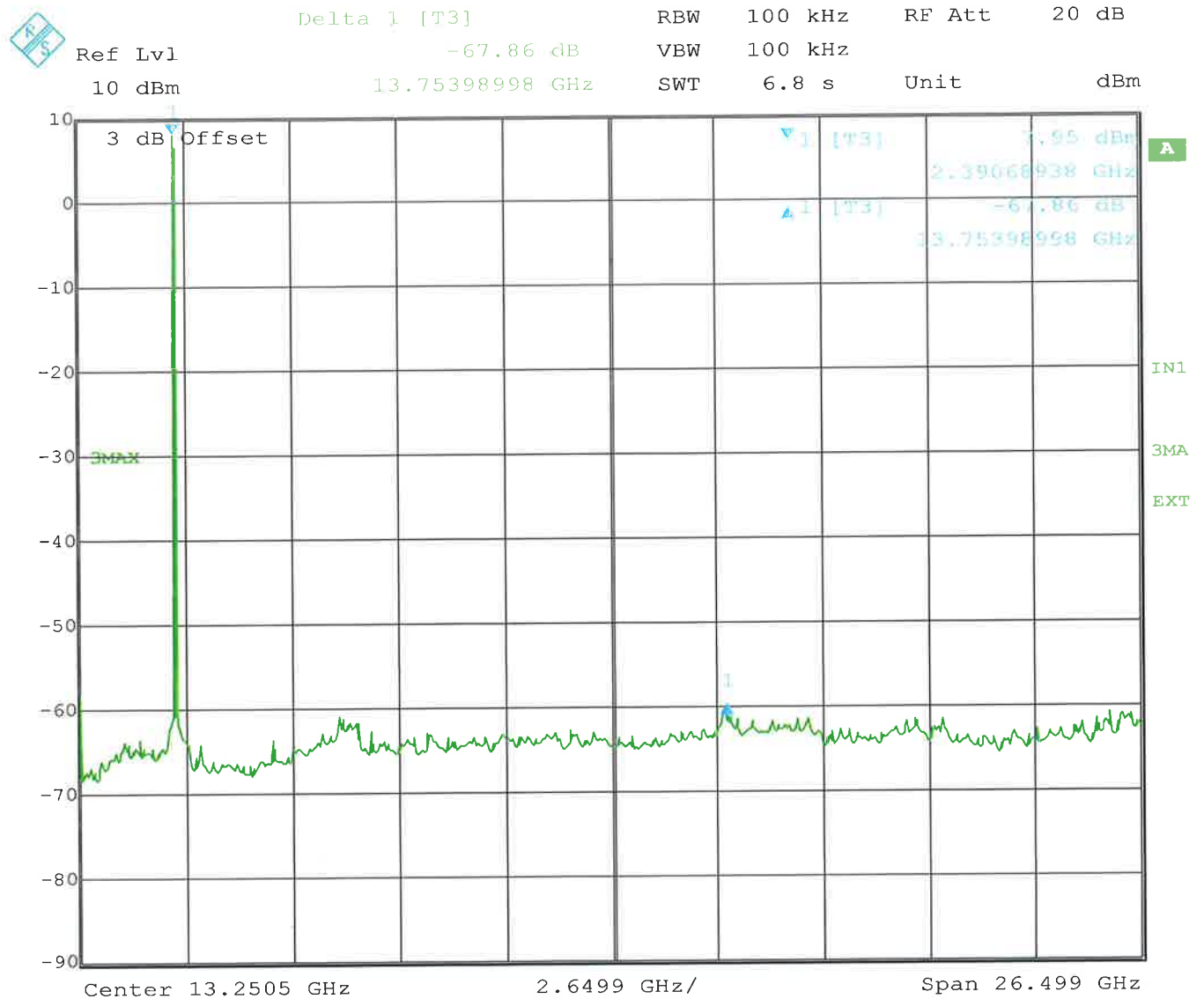
Test Equipment used: NT-207

Out-of-band Emission

**§ 15.247(d)
A8.5**

Conducted measurement

Setup: CH 6: 2437 MHz – DSSS



Date: 27.FEB.2015 13:32:28

LIMIT SUBCLAUSE 15.247(d) – A8.5

In any 100 kHz bandwidth outside the frequency band in which the radio device is operating.	At least 20dB below the power in the 100 kHz bandwidth within the band that contains the highest level of the desired power.
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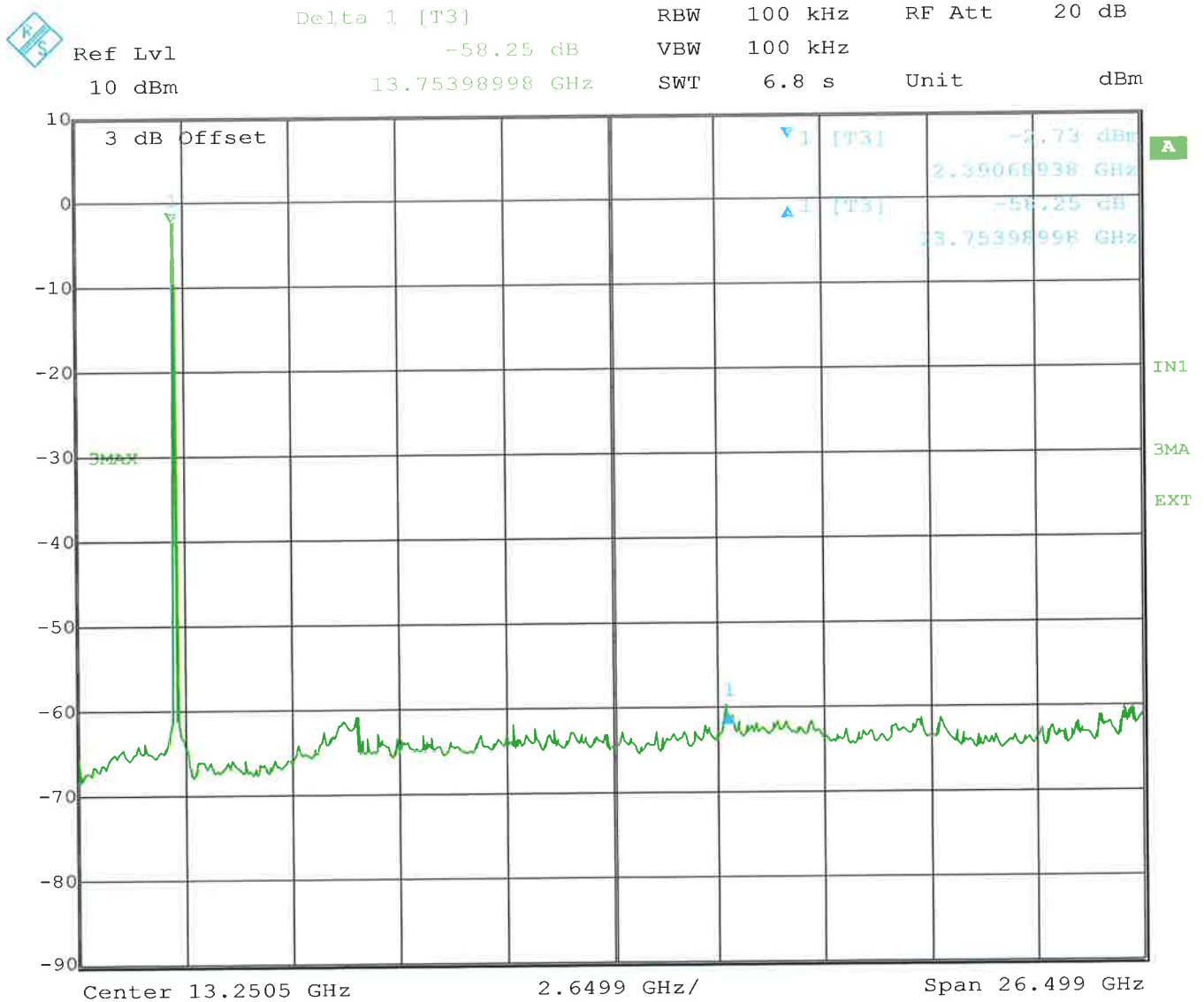
Test Equipment used: NT-207

Out-of-band Emission

**§ 15.247(d)
A8.5**

Conducted measurement

Setup: CH 6: 2437 MHz – OFDM



Date: 27.FEB.2015 13:33:40

LIMIT SUBCLAUSE 15.247(d) – A8.5

In any 100 kHz bandwidth outside the frequency band in which the radio device is operating.	At least 20dB below the power in the 100 kHz bandwidth within the band that contains the highest level of the desired power.
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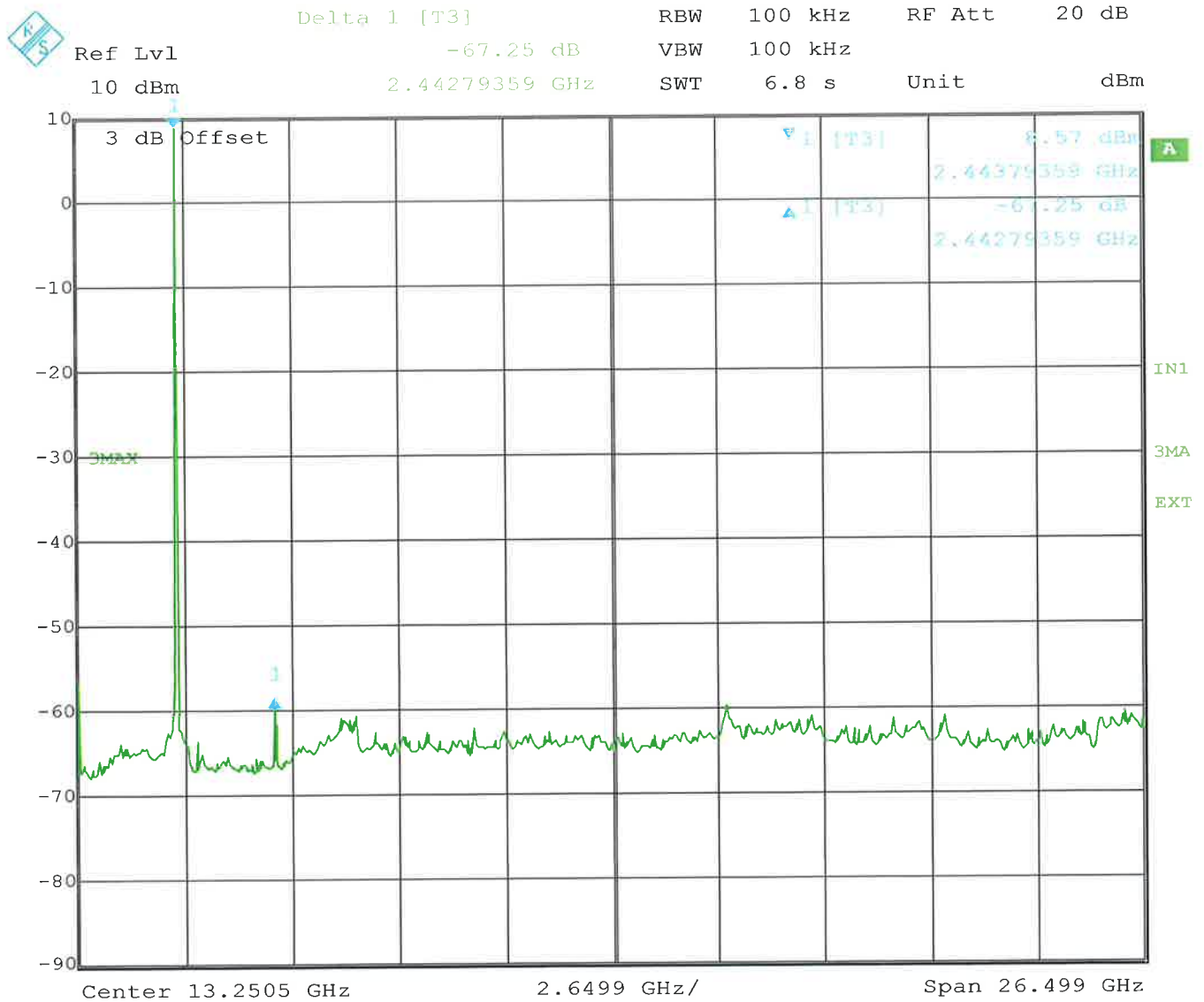
Test Equipment used: NT-207

Out-of-band Emission

**§ 15.247(d)
A8.5**

Conducted measurement

Setup: CH 11: 2462 MHz – DSSS



Date: 27.FEB.2015 13:37:09

LIMIT SUBCLAUSE 15.247(d) – A8.5

<p>In any 100 kHz bandwidth outside the frequency band in which the radio device is operating.</p>	<p>At least 20dB below the power in the 100 kHz bandwidth within the band that contains the highest level of the desired power.</p>
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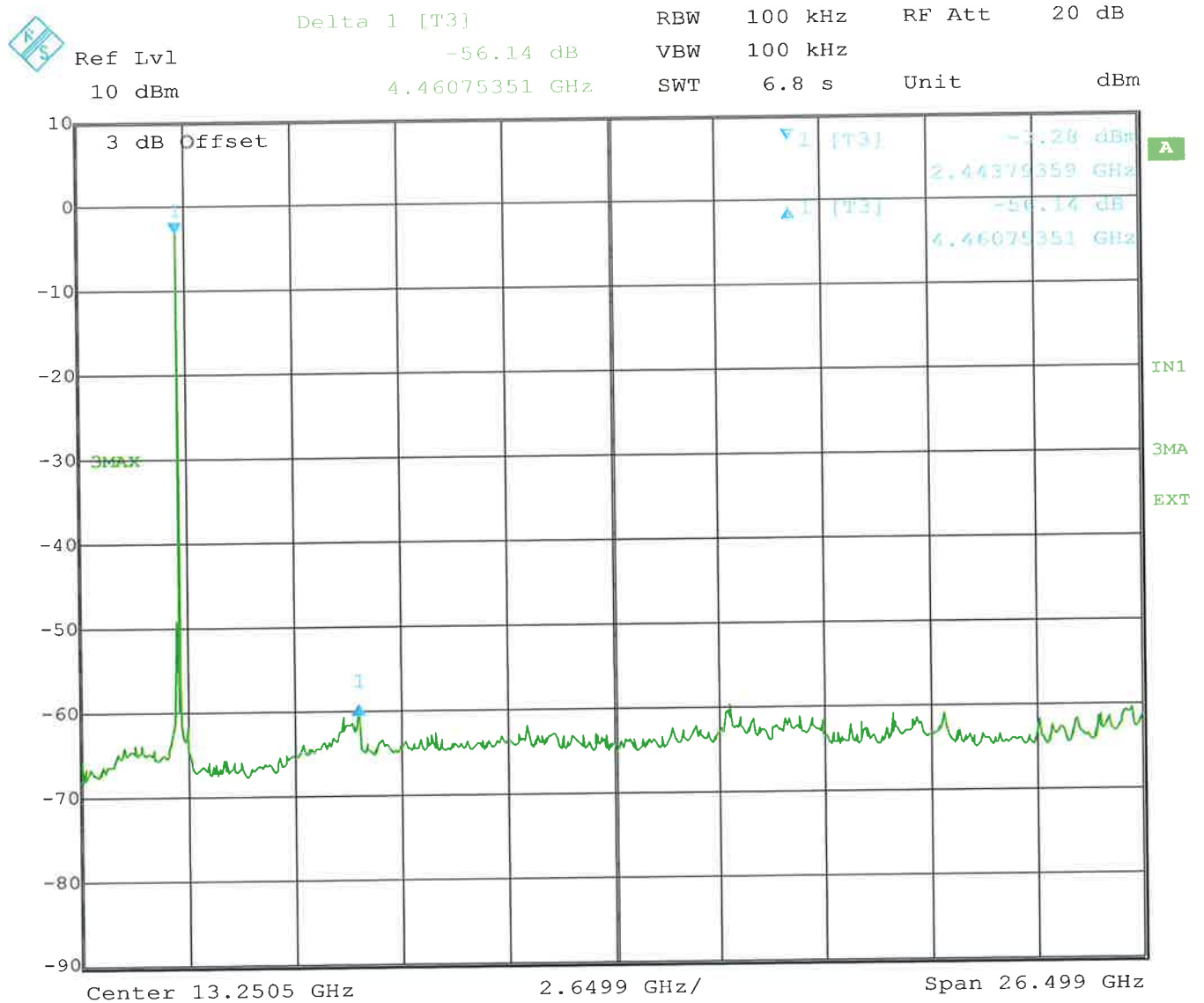
Test Equipment used: NT-207

Out-of-band Emission

**§ 15.247(d)
A8.5**

Conducted measurement

Setup: CH 11: 2462 MHz – OFDM



Date: 27.FEB.2015 13:35:28

LIMIT SUBCLAUSE 15.247(d) – A8.5

In any 100 kHz bandwidth outside the frequency band in which the radio device is operating.	At least 20dB below the power in the 100 kHz bandwidth within the band that contains the highest level of the desired power.
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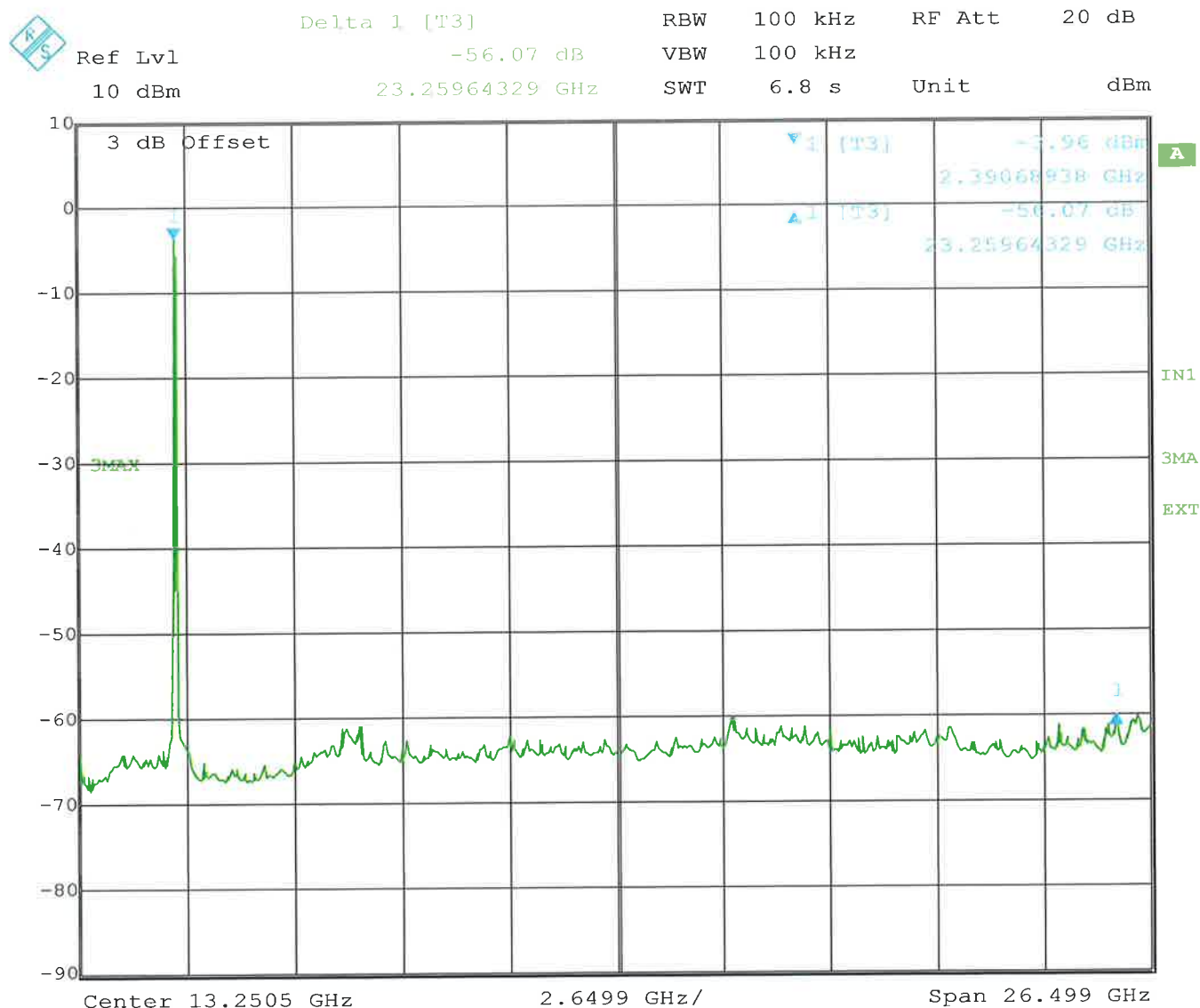
Test Equipment used: NT-207

Out-of-band Emission

**§ 15.247(d)
A8.5**

Conducted measurement

Setup: CH 1 + 5: 2422 MHz



Date: 27.FEB.2015 13:38:47

LIMIT SUBCLAUSE 15.247(d) – A8.5

In any 100 kHz bandwidth outside the frequency band in which the radio device is operating.	At least 20dB below the power in the 100 kHz bandwidth within the band that contains the highest level of the desired power.
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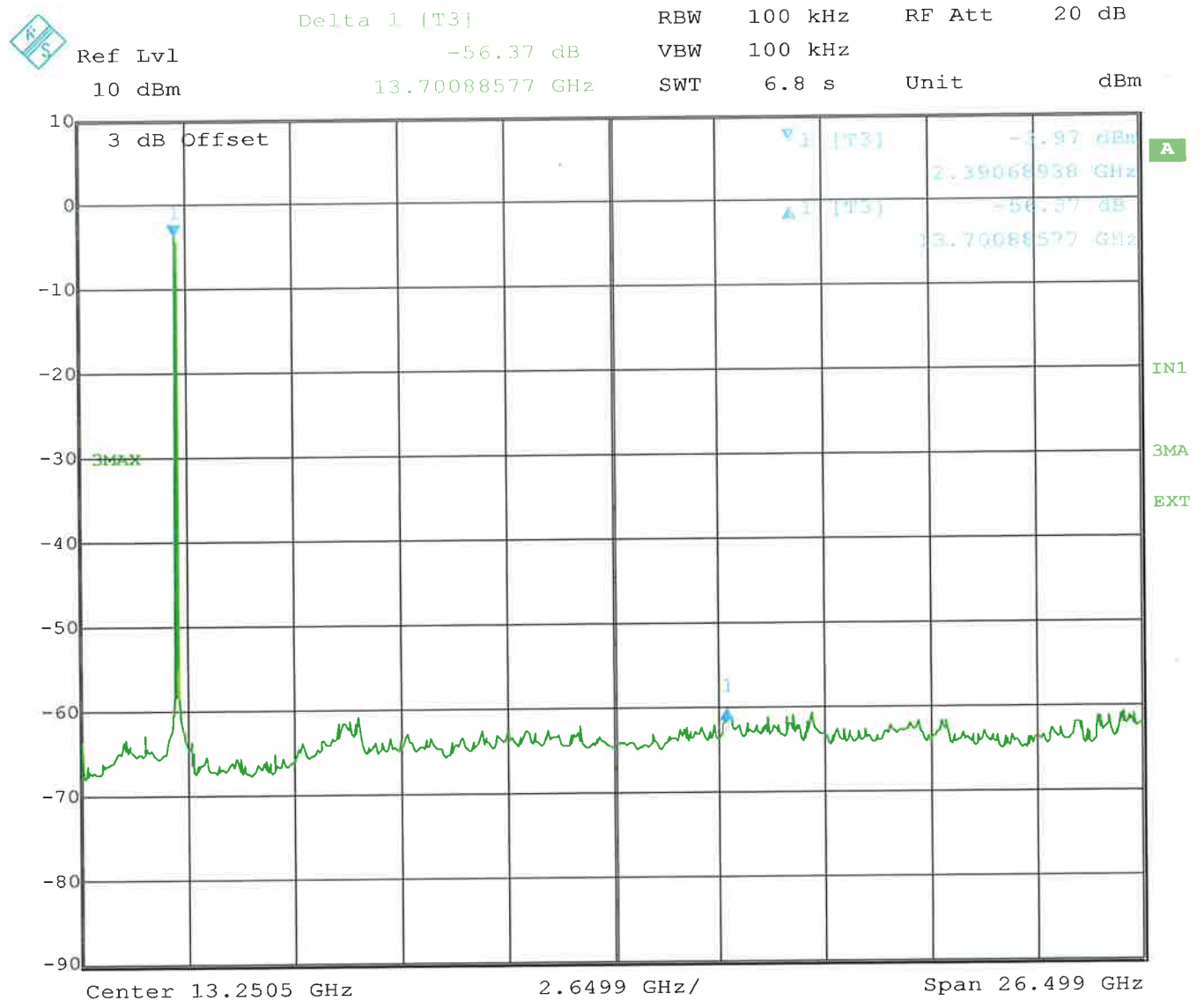
Test Equipment used: NT-207

Out-of-band Emission

**§ 15.247(d)
A8.5**

Conducted measurement

Setup: CH 4 + 8: 2437 MHz



Date: 27.FEB.2015 13:40:49

LIMIT SUBCLAUSE 15.247(d) – A8.5

In any 100 kHz bandwidth outside the frequency band in which the radio device is operating.	At least 20dB below the power in the 100 kHz bandwidth within the band that contains the highest level of the desired power.
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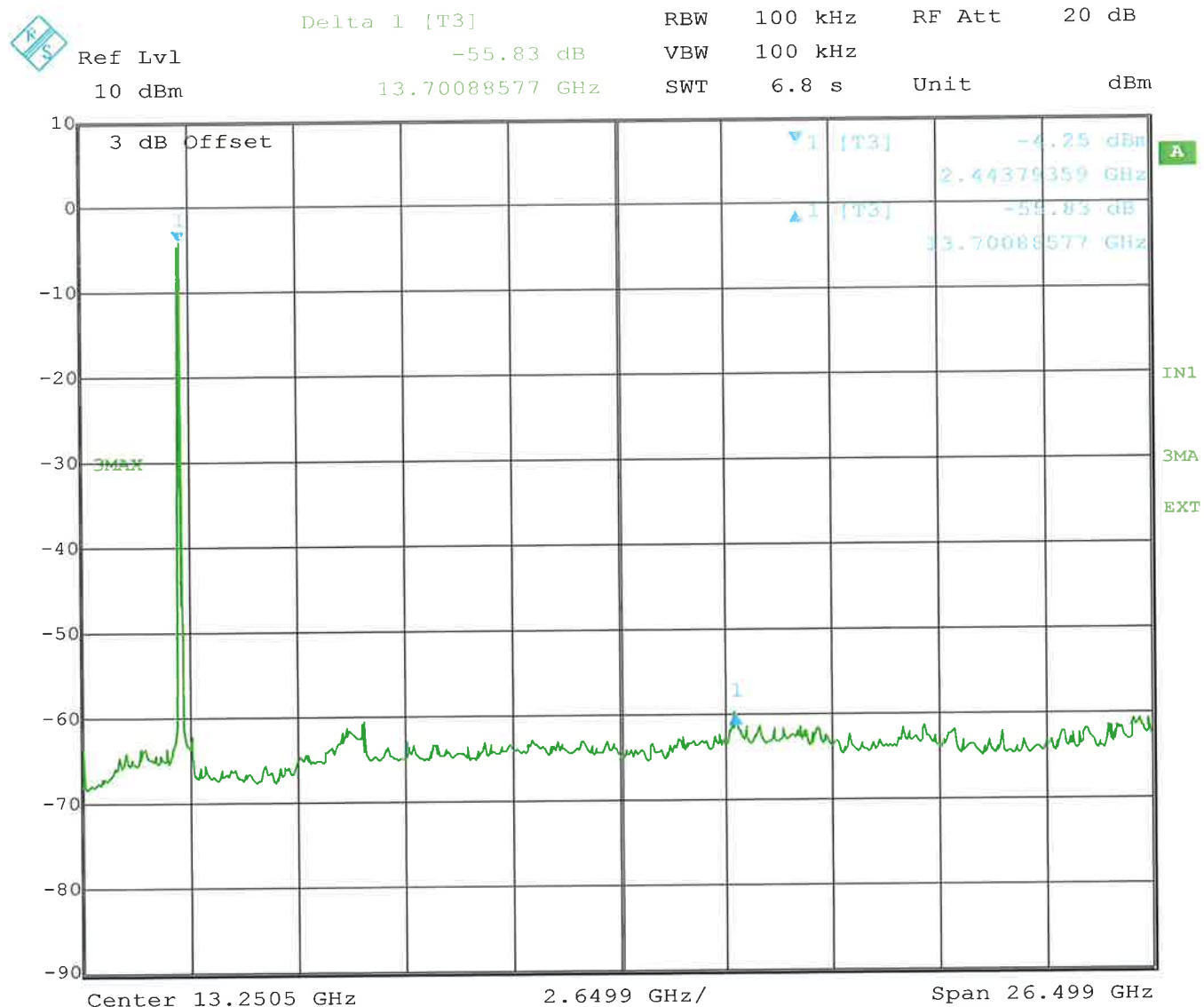
Test Equipment used: NT-207

Out-of-band Emission

**§ 15.247(d)
A8.5**

Conducted measurement

Setup: CH 7 + 11: 2452 MHz



Date: 27.FEB.2015 13:42:20

LIMIT SUBCLAUSE 15.247(d) – A8.5

In any 100 kHz bandwidth outside the frequency band in which the radio device is operating.	At least 20dB below the power in the 100 kHz bandwidth within the band that contains the highest level of the desired power.
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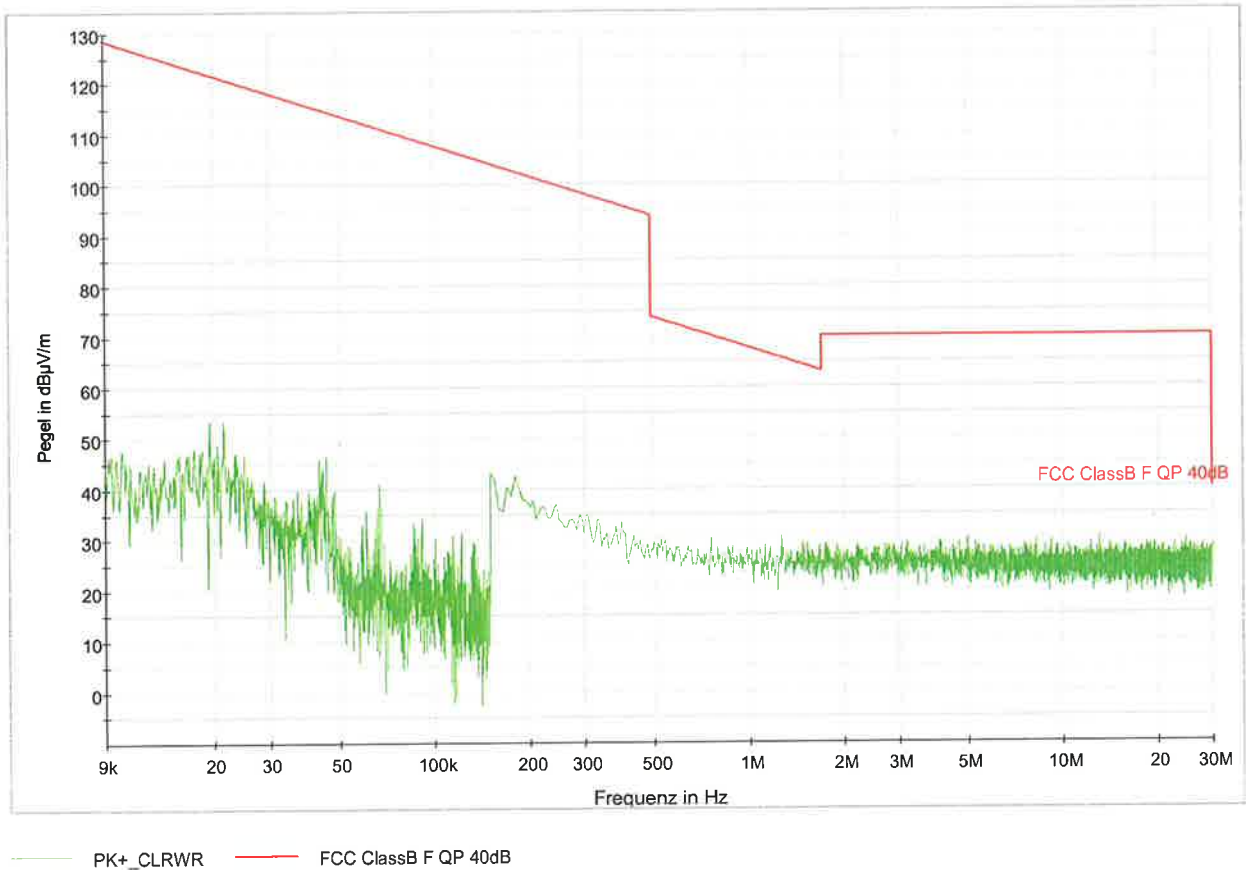
Test Equipment used: NT-207

Emissions in restricted bands

§ 15.209(a)

Measurement with Peak-Detector:

Setup: CH 1: 2412 MHz – DSSS



Worst case emission: 53,6 dBµV/m @ 19,3 kHz

Remark: As the highest spurious conducted emission was measured as to be -55 dB below the fundamental, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load.

LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

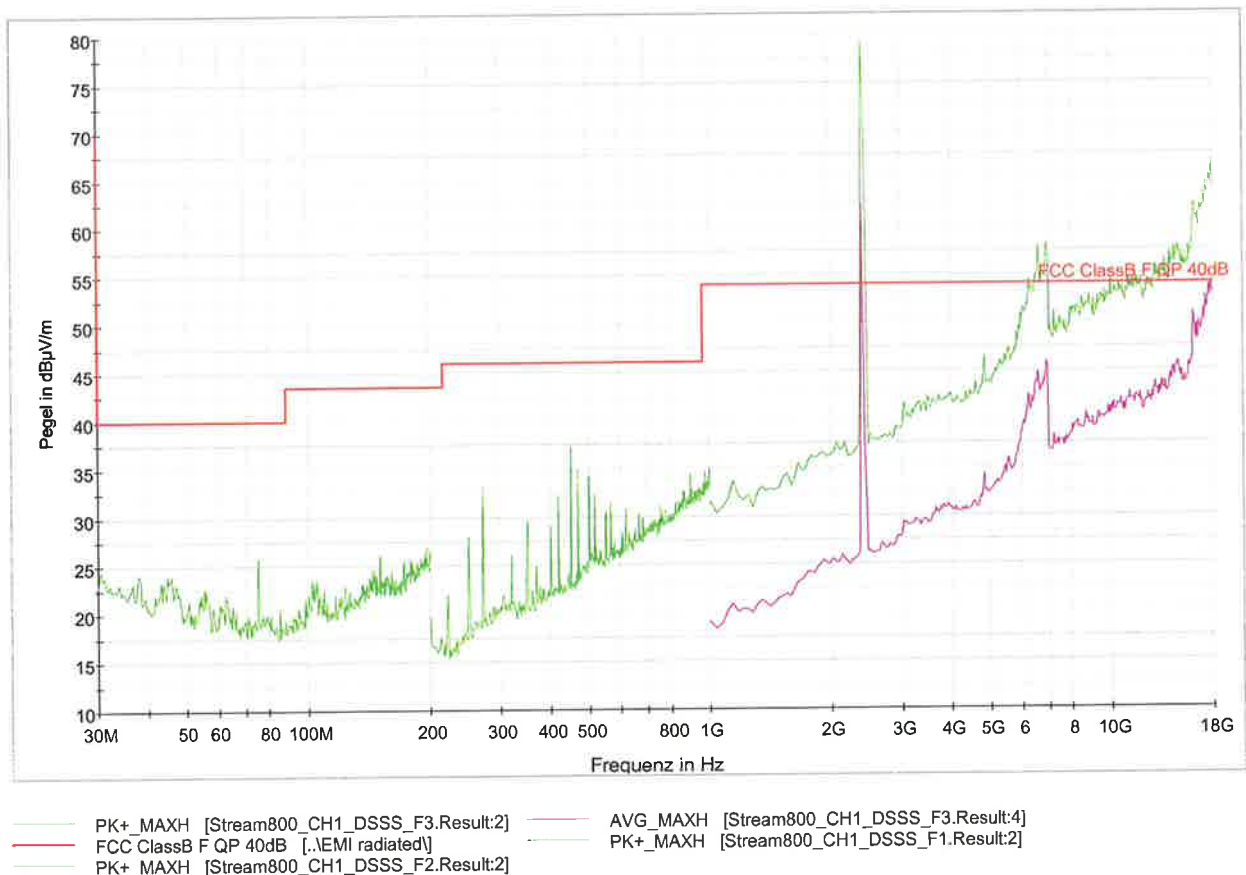
Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-122; NT-207

Emissions in restricted bands

§ 15.209(a)

Measurement with Peak-Detector (green line) and Average detector (magenta line):

Setup: CH 1: 2412 MHz – DSSS



Worst case emission: 37,2 dBµV/m @ 450,1 MHz

Remark: As the highest spurious conducted emission was measured as to be -55 dB below the fundamental, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load. Although the measurement above ends at 18 GHz, all measurements were performed up to the thenth harmonics of the transmitter frequency.

LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

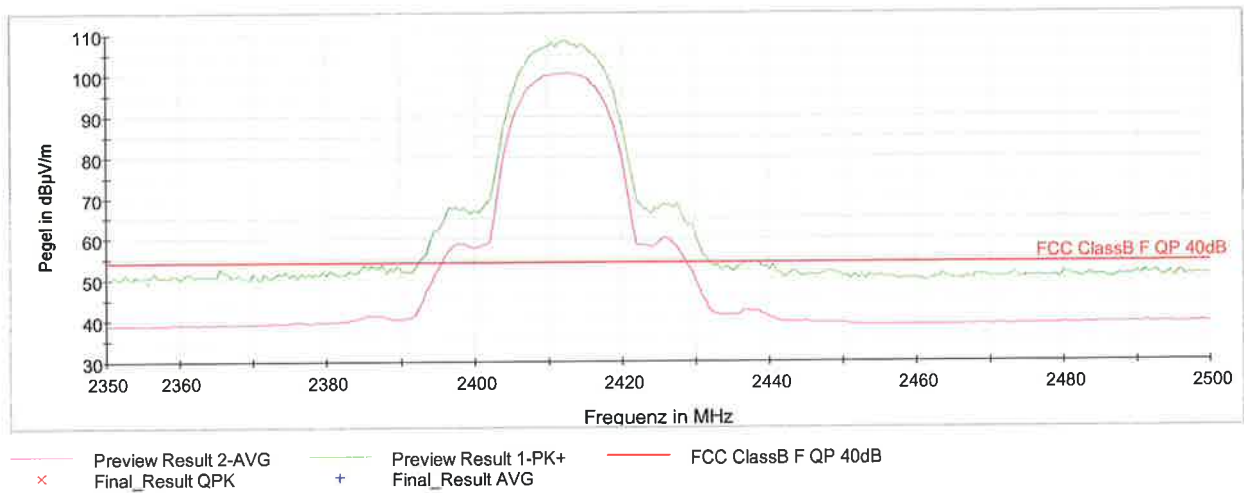
Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-126; NT-129; NT-131; NT-139; NT-207; NT-211; NT-337

Emissions in restricted bands

§ 15.209(a)

Measurement with Peak-Detector (green line) and Average detector (magenta line): Band Edge requirement

Setup: CH 1: 2412 MHz – DSSS



LIMIT

SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

Band edges of the nearest restricted bands: 2390 MHz and 2483,5 MHz.

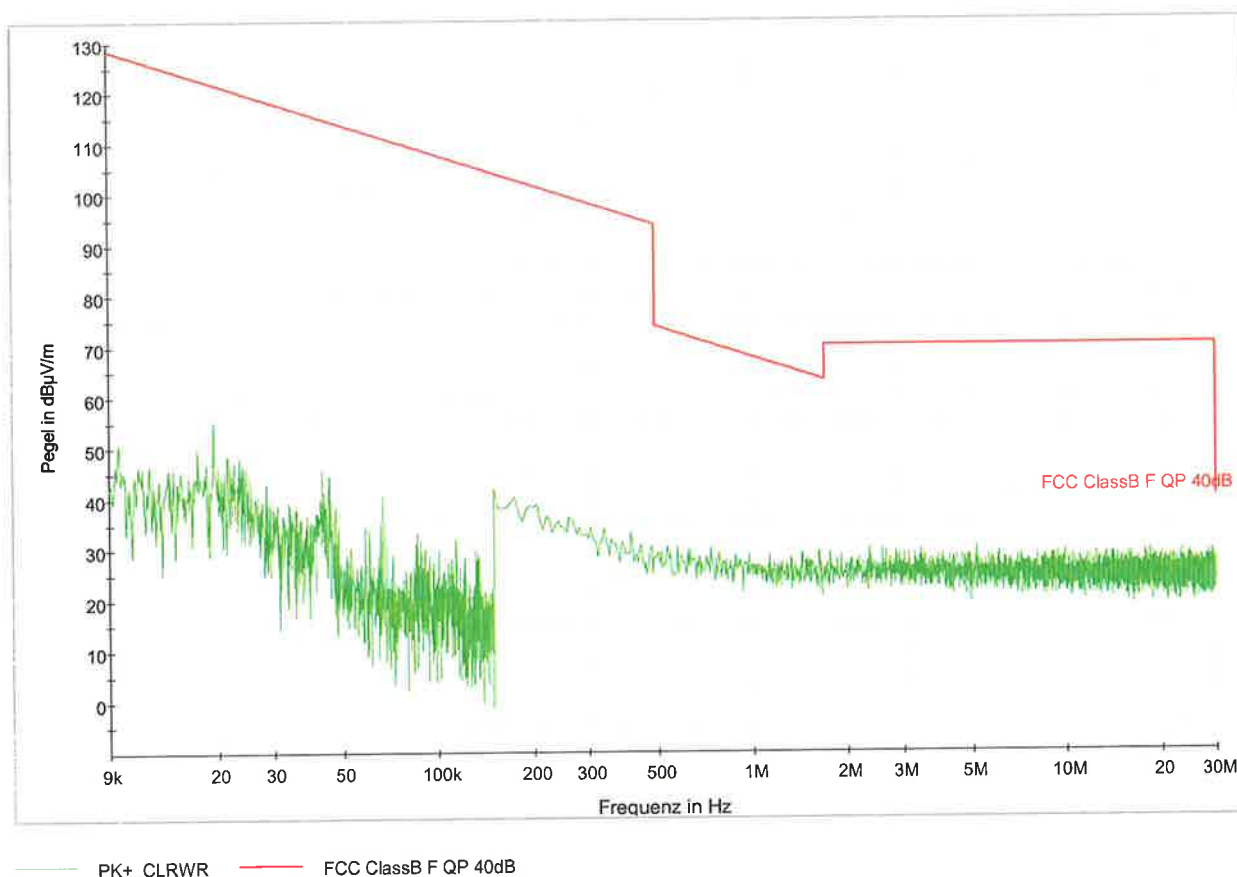
Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-139; NT-207

Emissions in restricted bands

§ 15.209(a)

Measurement with Peak-Detector:

Setup: CH 1: 2412 MHz – OFDM



Worst case emission: 55,3 dBµV/m @ 19,3 kHz

Remark: As the highest spurious conducted emission was measured as to be -55 dB below the fundamental, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load.

LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

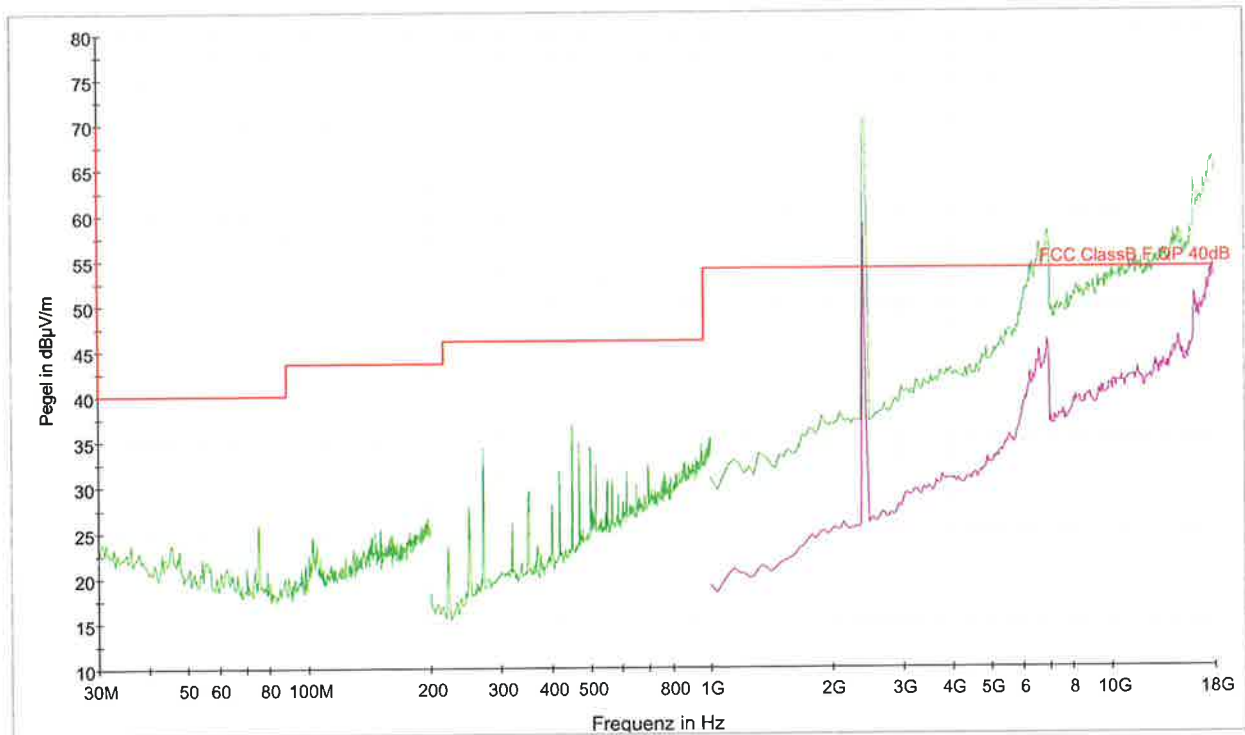
Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-122; NT-207

Emissions in restricted bands

§ 15.209(a)

Measurement with Peak-Detector (green line) and Average detector (magenta line):

Setup: CH 1: 2412 MHz – OFDM



— PK+_MAXH [Stream800_CH1_OFDM_F3.Result:2] — AVG_MAXH [Stream800_CH1_OFDM_F3.Result:4]
— FCC ClassB F QP 40dB [..EMI radiated] — PK+_MAXH [Stream800_CH1_OFDM_F1.Result:2]
— PK+_MAXH [Stream800_CH1_OFDM_F2.Result:2]

Worst case emission: 36,7 dBµV/m @ 450,1 MHz

Remark: As the highest spurious conducted emission was measured as to be -55 dB below the fundamental, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load. Although the measurement above ends at 18 GHz, all measurements were performed up to the thenth harmonics of the transmitter frequency.

LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

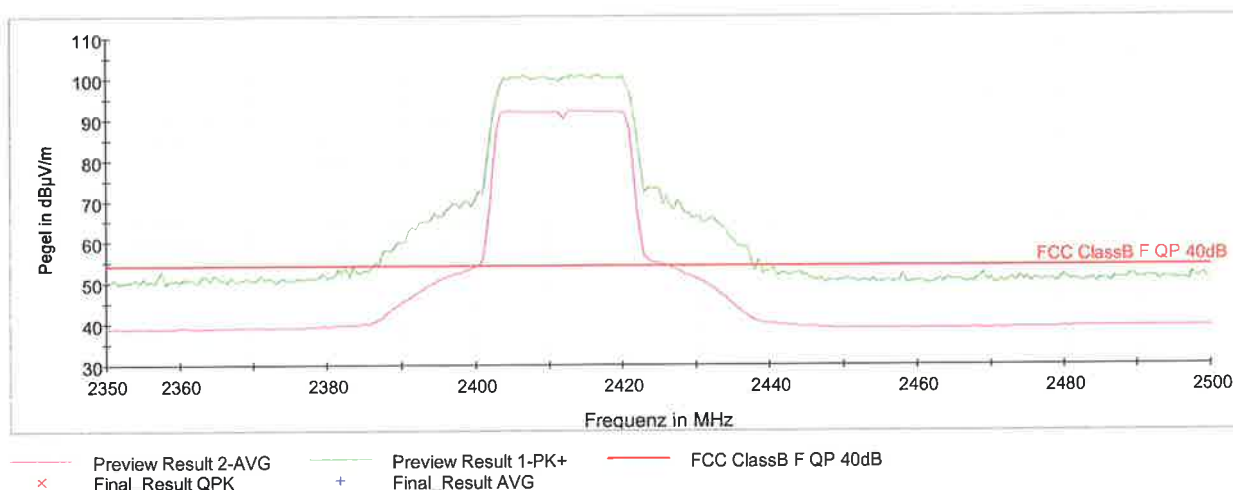
Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-126; NT-129; NT-131; NT-139; NT-207; NT-211; NT-337

Emissions in restricted bands

§ 15.209(a)

Measurement with Peak-Detector (green line) and Average detector (magenta line): Band Edge requirement

Setup: CH 1: 2412 MHz – OFDM



LIMIT

SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

Band edges of the nearest restricted bands: 2390 MHz and 2483,5 MHz.

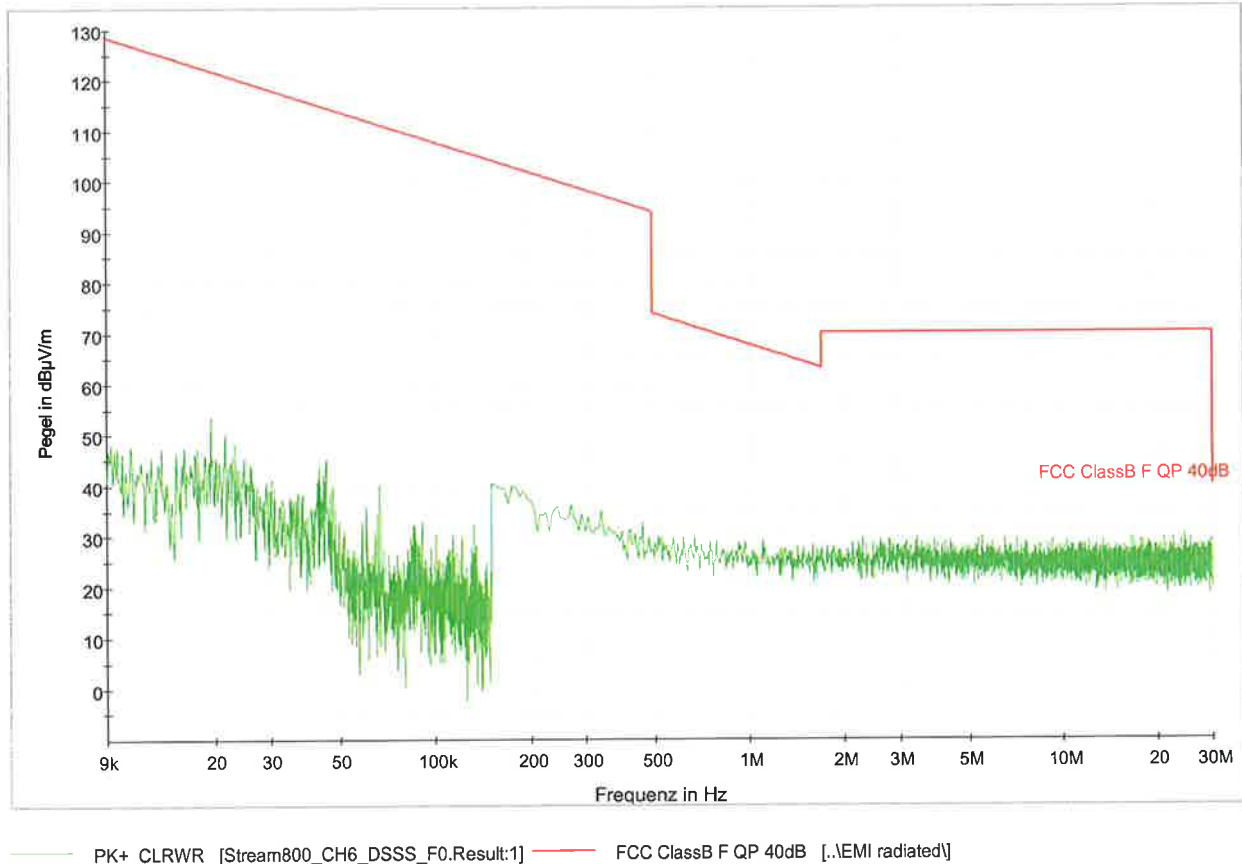
Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-139; NT-207

Emissions in restricted bands

§ 15.209(a)

Measurement with Peak-Detector:

Setup: CH 6: 2437 MHz – DSSS



Worst case emission: 53,5 dBµV/m @ 19,3 kHz

Remark: As the highest spurious conducted emission was measured as to be -55 dB below the fundamental, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load.

LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

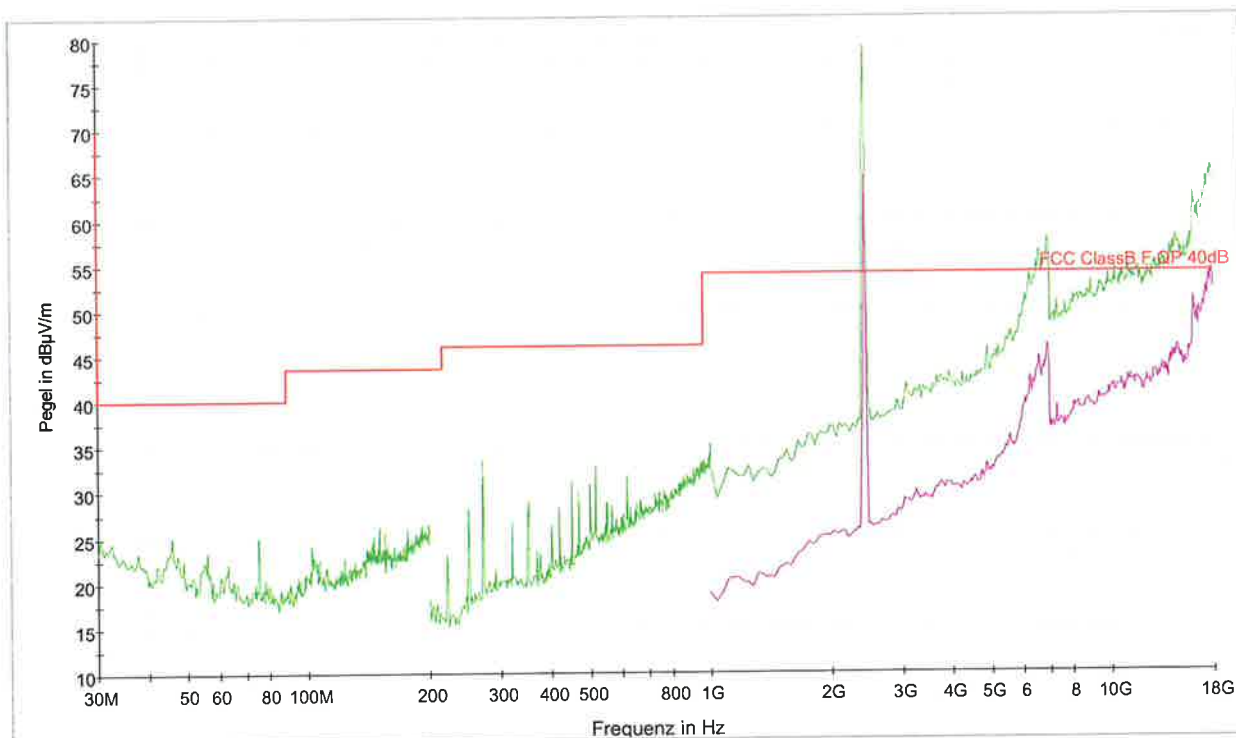
Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-122; NT-207

Emissions in restricted bands

§ 15.209(a)

Measurement with Peak-Detector (green line) and Average detector (magenta line):

Setup: CH 6: 2437 MHz – DSSS



— PK+_MAXH [Stream800_CH6_DSSS_F3.Result:2] — AVG_MAXH [Stream800_CH6_DSSS_F3.Result:4]
— FCC ClassB F QP 40dB [..NEMI radiated] — PK+_MAXH [Stream800_CH6_DSSS_F2.Result:2]
— PK+_MAXH [Stream800_CH6_DSSS_F1.Result:2]

Worst case emission: 33,3 dBµV/m @ 270,5 MHz

Remark: As the highest spurious conducted emission was measured as to be -55 dB below the fundamental, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load. Although the measurement above ends at 18 GHz, all measurements were performed up to the thenth harmonics of the transmitter frequency.

LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

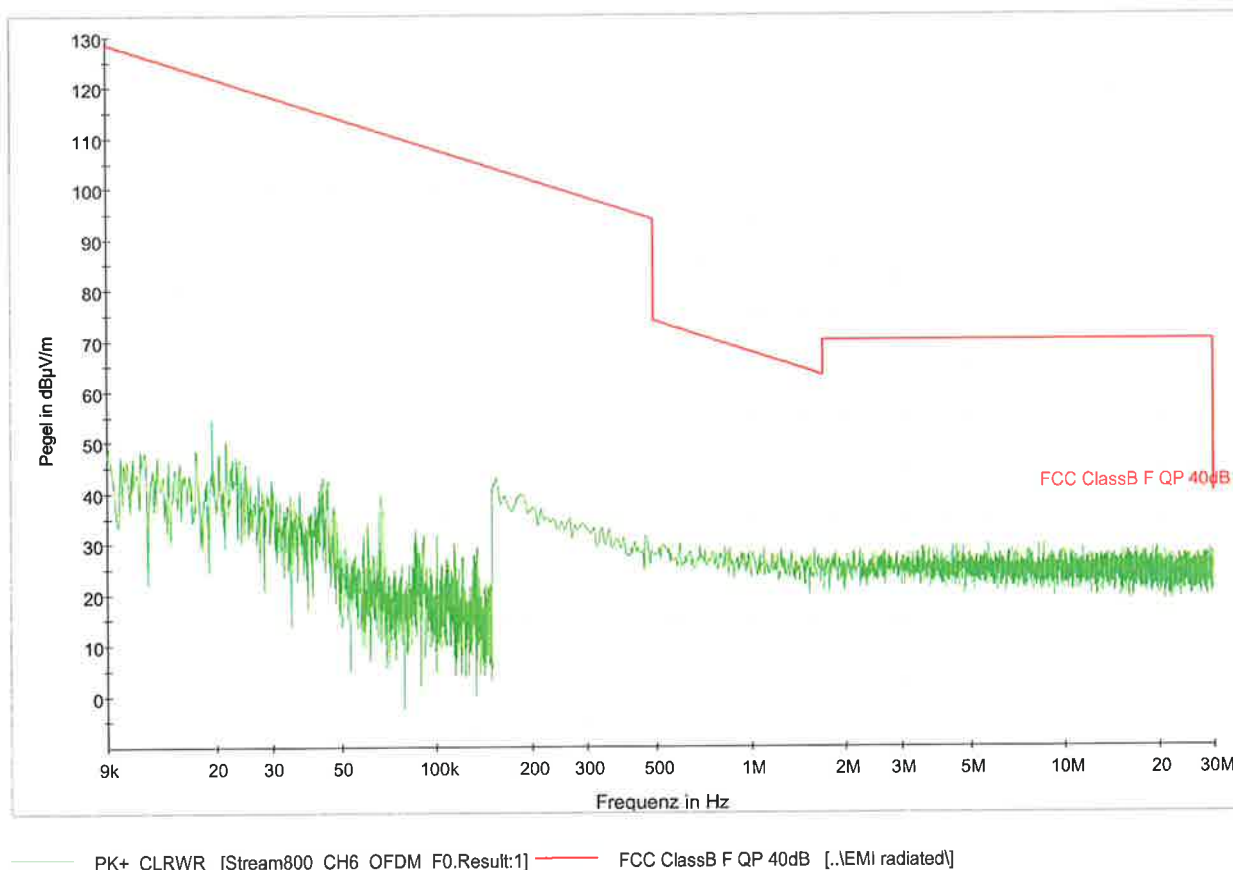
Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-126; NT-129; NT-131; NT-139; NT-207; NT-211; NT-337

Emissions in restricted bands

§ 15.209(a)

Measurement with Peak-Detector:

Setup: CH 6: 2437 MHz – OFDM



Worst case emission: 54,8 dBµV/m @ 19,4 kHz

Remark: As the highest spurious conducted emission was measured as to be -55 dB below the fundamental, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load.

LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

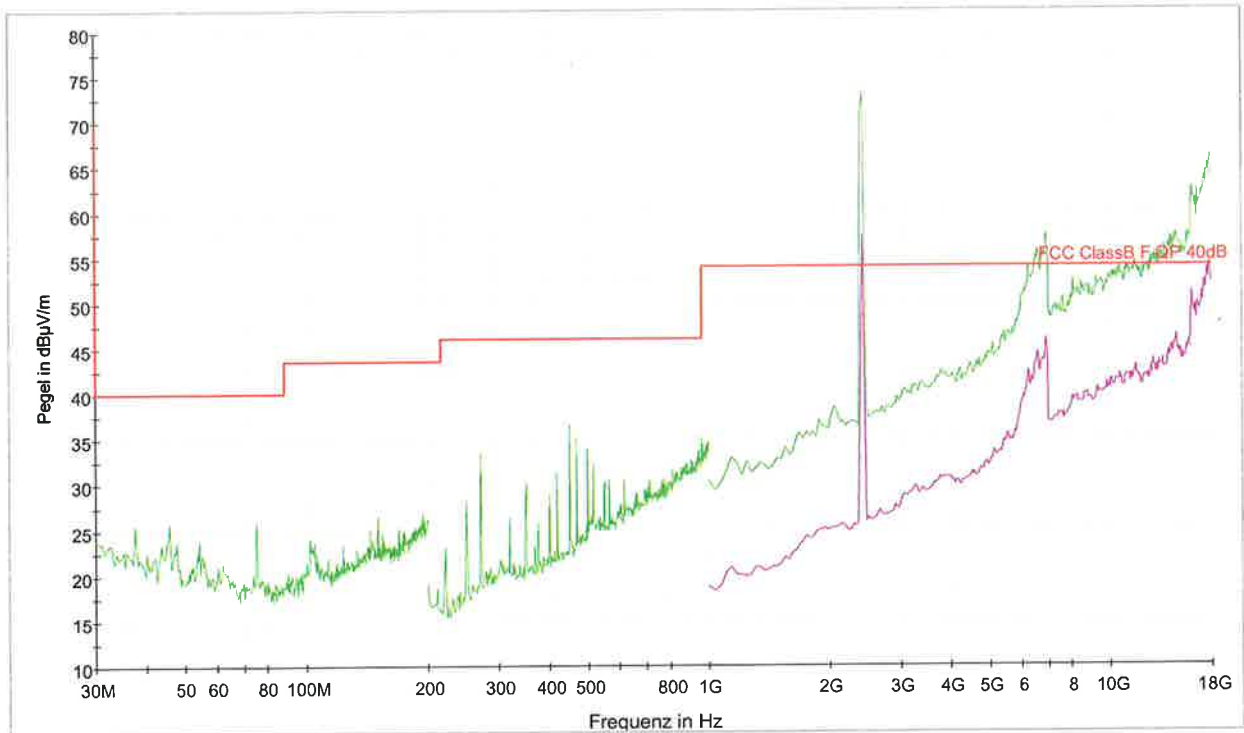
Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-122; NT-207

Emissions in restricted bands

§ 15.209(a)

Measurement with Peak-Detector (green line) and Average detector (magenta line):

Setup: CH 6: 2437 MHz – OFDM



— PK+ _MAXH [Stream800_CH6_OFDM_F3.Result:2] — AVG_MAXH [Stream800_CH6_OFDM_F3.Result:4]
— FCC ClassB F QP 40dB [..IEMI radiated] — PK+ _MAXH [Stream800_CH6_OFDM_F2.Result:2]
— PK+ _MAXH [Stream800_CH6_OFDM_F1.Result:2]

Worst case emission: 36,6 dBµV/m @ 450,1 MHz

Remark: As the highest spurious conducted emission was measured as to be -55 dB below the fundamental, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load. Although the measurement above ends at 18 GHz, all measurements were performed up to the tenth harmonics of the transmitter frequency.

LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

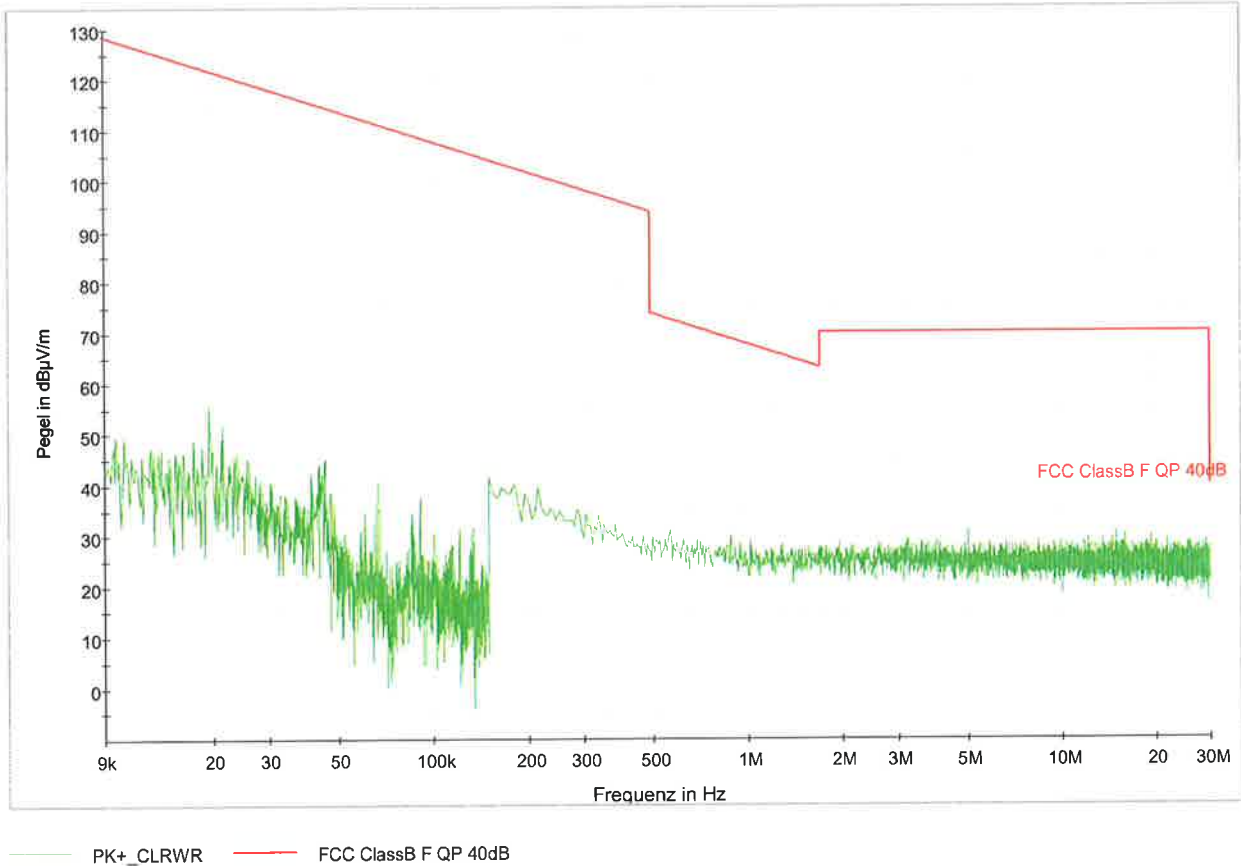
Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-126; NT-129; NT-131; NT-139; NT-207; NT-211; NT-337

Emissions in restricted bands

§ 15.209(a)

Measurement with Peak-Detector:

Setup: CH 11: 2462 MHz – DSSS



Worst case emission: 55,6 dBµV/m @ 19,4 kHz

Remark: As the highest spurious conducted emission was measured as to be -55 dB below the fundamental, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load.

LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

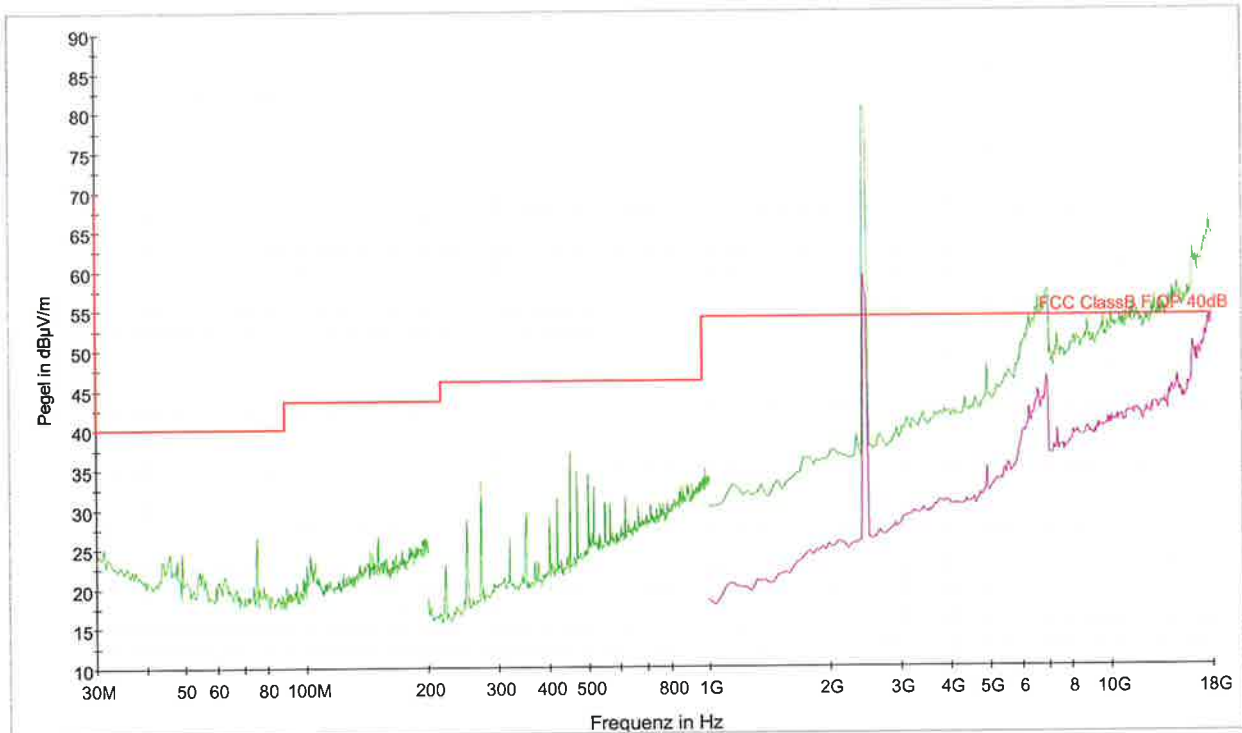
Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-122; NT-207

Emissions in restricted bands

§ 15.209(a)

Measurement with Peak-Detector (green line) and Average detector (magenta line):

Setup: CH 11: 2462 MHz – DSSS



— PK+_MAXH [Stream800_CH11_DSSS_F3.Result:2] — AVG_MAXH [Stream800_CH11_DSSS_F3.Result:4]
— FCC ClassB F/QP 40dB [..\EMI radiated] — PK+_MAXH [Stream800_CH11_DSSS_F1.Result:2]
— PK+_MAXH [Stream800_CH11_DSSS_F2.Result:2]

Worst case emission: 37,1 dBµV/m @ 450,1 MHz

Remark: As the highest spurious conducted emission was measured as to be -55 dB below the fundamental, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load. Although the measurement above ends at 18 GHz, all measurements were performed up to the tenth harmonics of the transmitter frequency.

LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

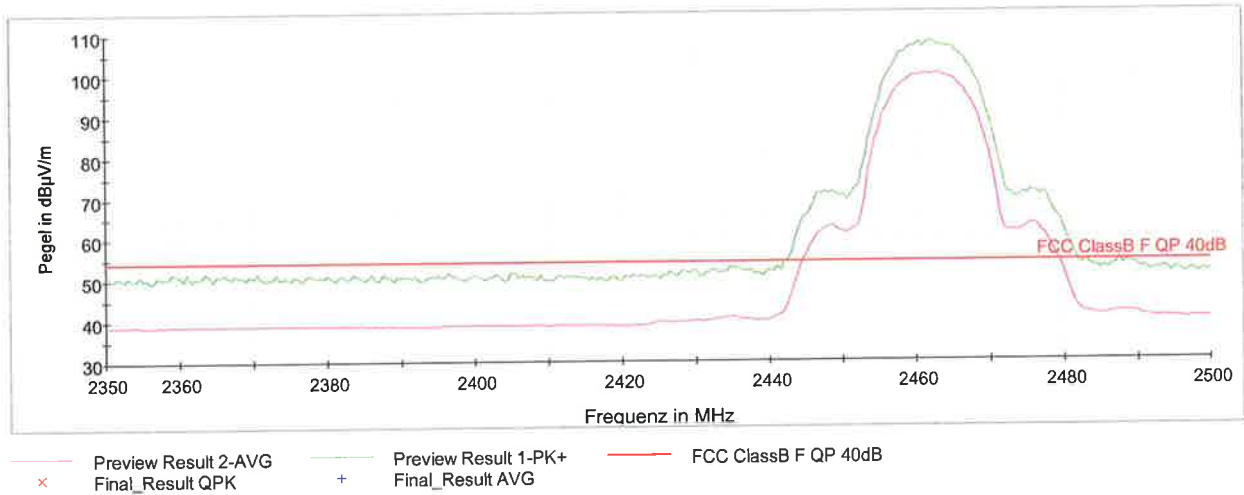
Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-126; NT-129; NT-131; NT-139; NT-207; NT-211; NT-337

Emissions in restricted bands

§ 15.209(a)

Measurement with Peak-Detector (green line) and Average detector (magenta line): Band Edge requirement

Setup: CH 11: 2462 MHz – DSSS



LIMIT

SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

Band edges of the nearest restricted bands: 2390 MHz and 2483,5 MHz.

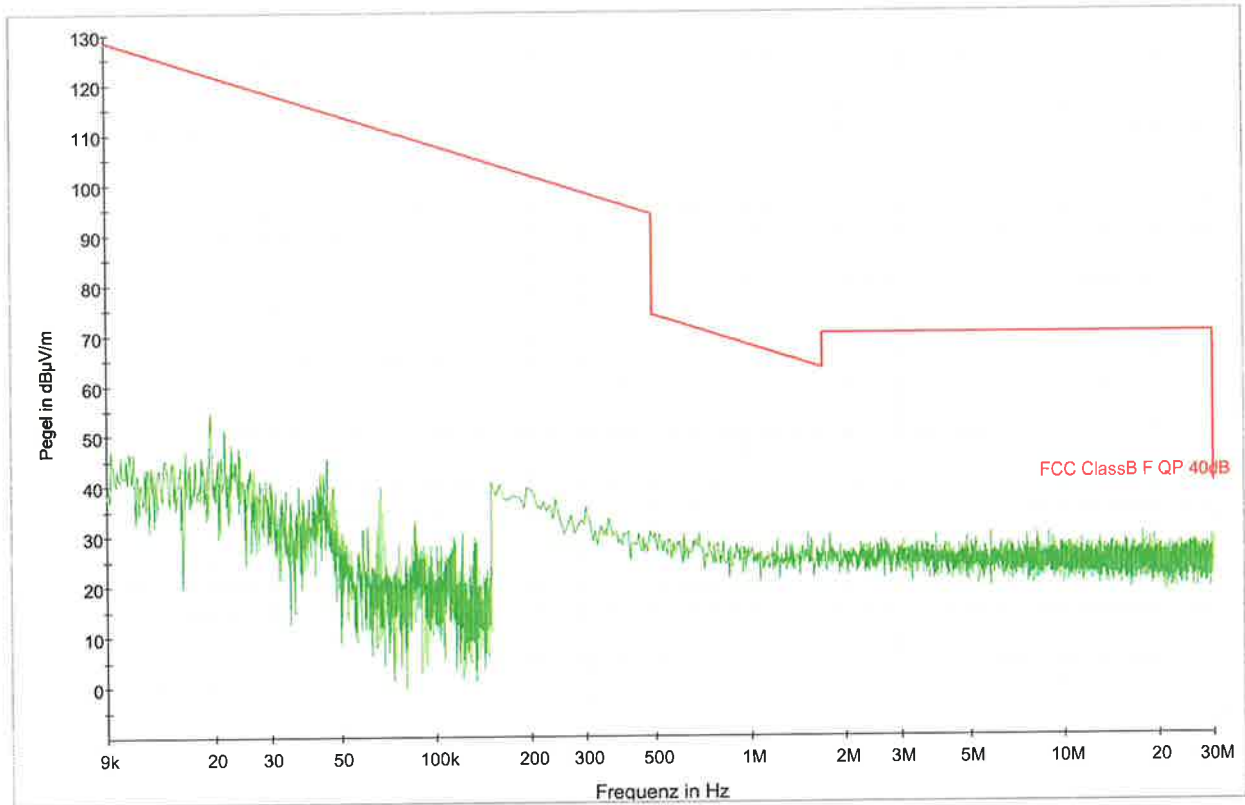
Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-139; NT-207

Emissions in restricted bands

§ 15.209(a)

Measurement with Peak-Detector:

Setup: CH 11: 2462 MHz – OFDM



PK+_CLRWR [Stream800_CH11_OFDM_F0.Result:1] FCC ClassB F QP 40dB [..EMI radiated]

Worst case emission: 54,5 dBµV/m @ 19,3 kHz

Remark: As the highest spurious conducted emission was measured as to be -55 dB below the fundamental, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load.

LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

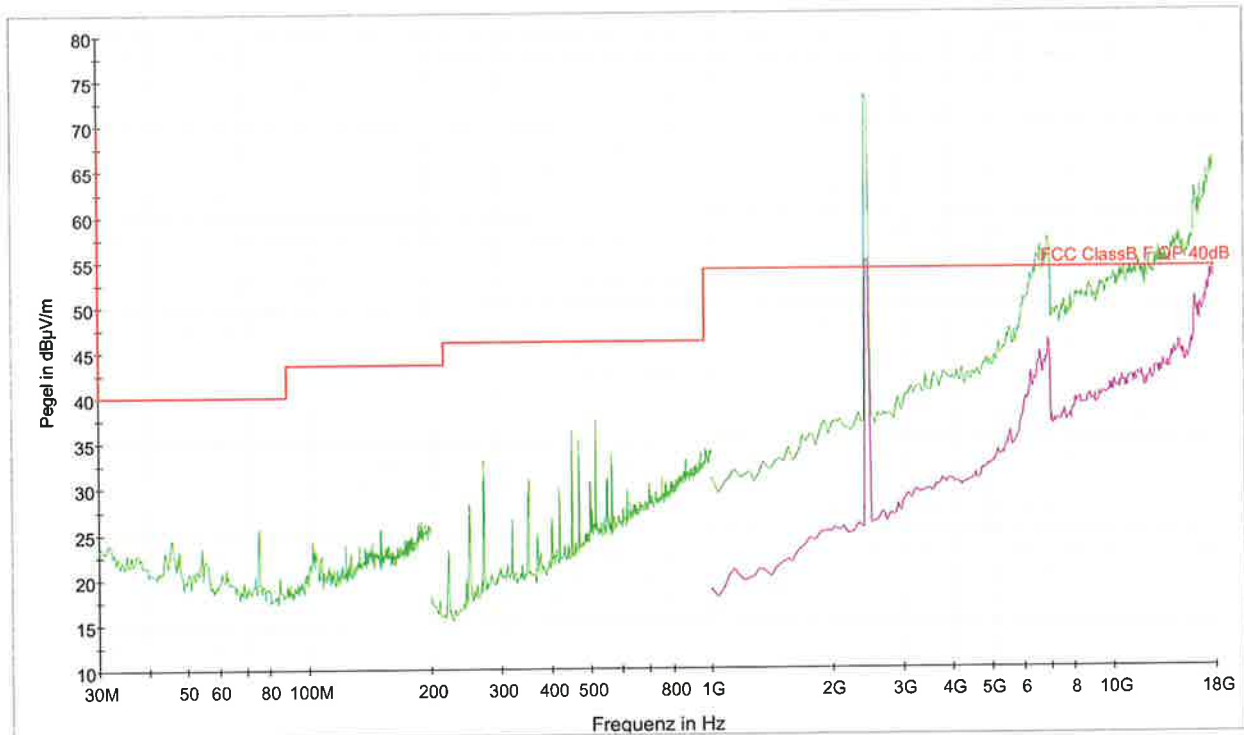
Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-122; NT-207

Emissions in restricted bands

§ 15.209(a)

Measurement with Peak-Detector (green line) and Average detector (magenta line):

Setup: CH 11: 2462 MHz – OFDM



— PK+_MAXH [Stream800_CH11_OFDM_F3.Result:2] — AVG_MAXH [Stream800_CH11_OFDM_F3.Result:4]
— FCC ClassB F QP 40dB [..\EMI radiated\] — PK+_MAXH [Stream800_CH11_OFDM_F2.Result:2]
— PK+_MAXH [Stream800_CH11_OFDM_F1.Result:2]

Worst case emission: 37,4 dBµV/m @ 515,8 MHz

Remark: As the highest spurious conducted emission was measured as to be -55 dB below the fundamental, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load. Although the measurement above ends at 18 GHz, all measurements were performed up to the thenth harmonics of the transmitter frequency.

LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

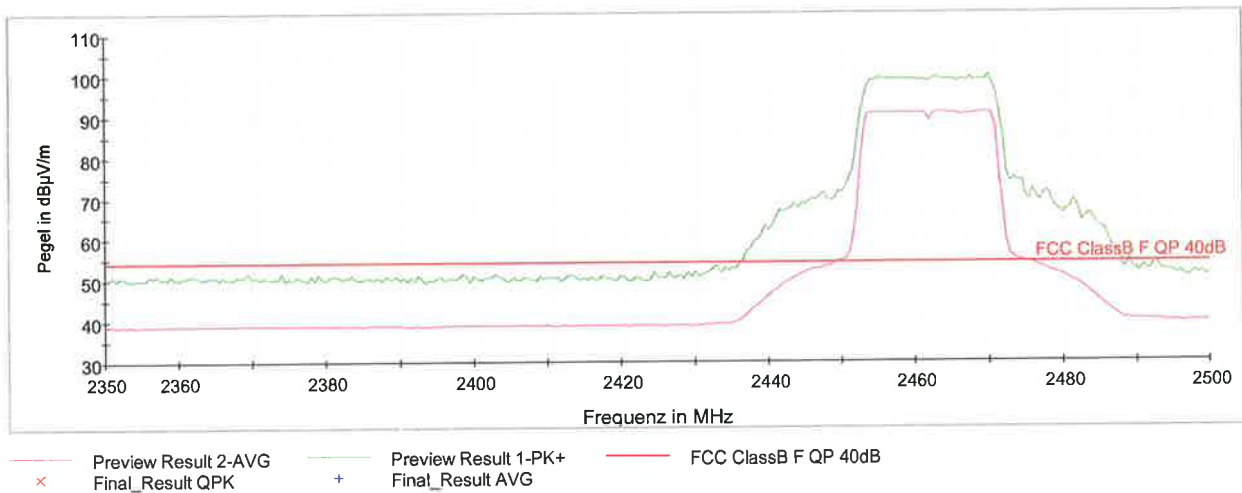
Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-126; NT-129; NT-131; NT-139; NT-207; NT-211; NT-337

Emissions in restricted bands

§ 15.209(a)

Measurement with Peak-Detector (green line) and Average detector (magenta line): Band Edge requirement

Setup: CH 11: 2462 MHz – OFDM



LIMIT

SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

Band edges of the nearest restricted bands: 2390 MHz and 2483,5 MHz.

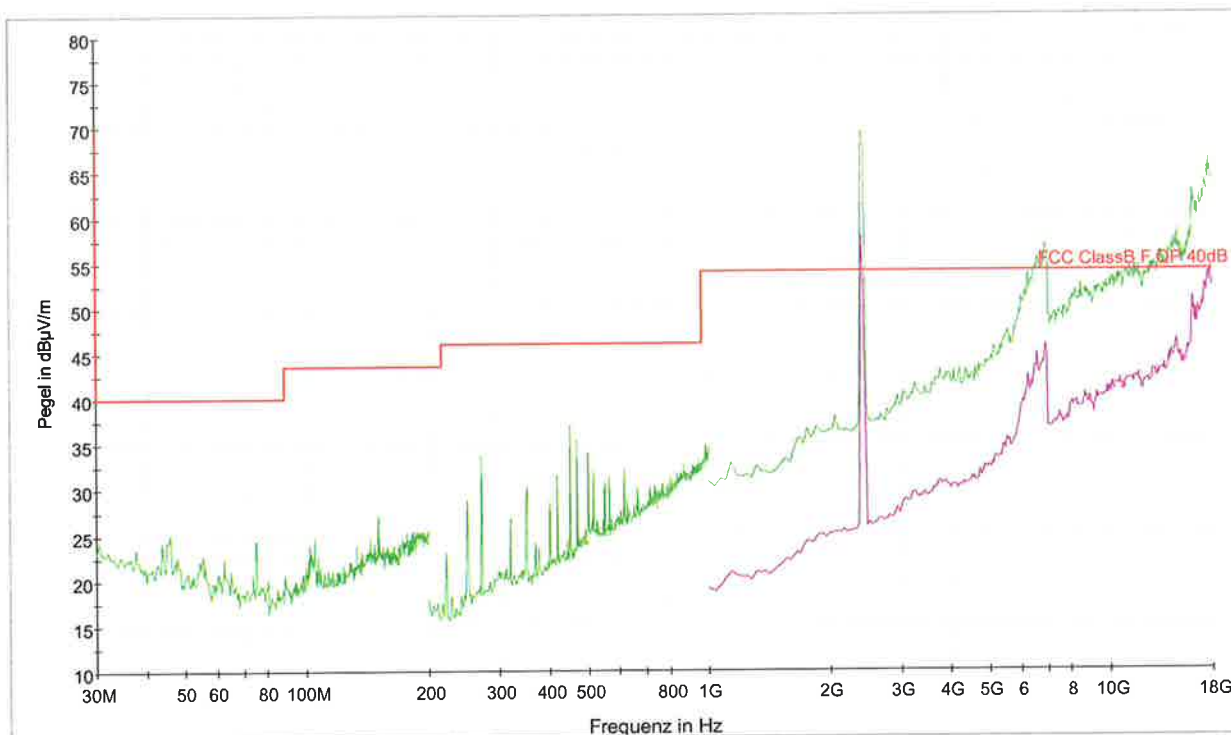
Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-139; NT-207

Emissions in restricted bands

§ 15.209(a)

Measurement with Peak-Detector (green line) and Average detector (magenta line):

Setup: CH 1 + 5: 2422 MHz



— PK+_MAXH [Stream800_CH15_F3.Result:2] — AVG_MAXH [Stream800_CH15_F3.Result:4]
— FCC ClassB F QP 40dB [..EMI radiated] — PK+_MAXH [Stream800_CH15_F2.Result:2]
— PK+_MAXH [Stream800_CH15_F1.Result:2]

Worst case emission: 36,9 dBµV/m @ 450,1 MHz

Remark: As the highest spurious conducted emission was measured as to be -55 dB below the fundamental, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load. Although the measurement above ends at 18 GHz, all measurements were performed up to the tenth harmonics of the transmitter frequency.

LIMIT

SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

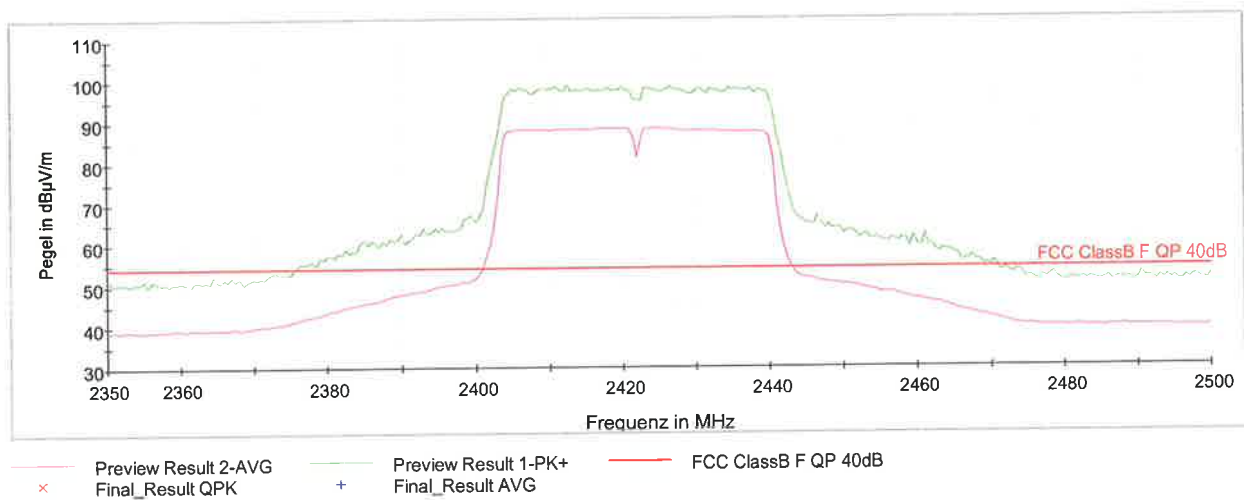
Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-126; NT-129; NT-131; NT-139; NT-207; NT-211; NT-337

Emissions in restricted bands

§ 15.209(a)

Measurement with Peak-Detector (green line) and Average detector (magenta line): Band Edge requirement

Setup: CH 1 + 5: 2422 MHz



LIMIT

SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

Band edges of the nearest restricted bands: 2390 MHz and 2483,5 MHz.

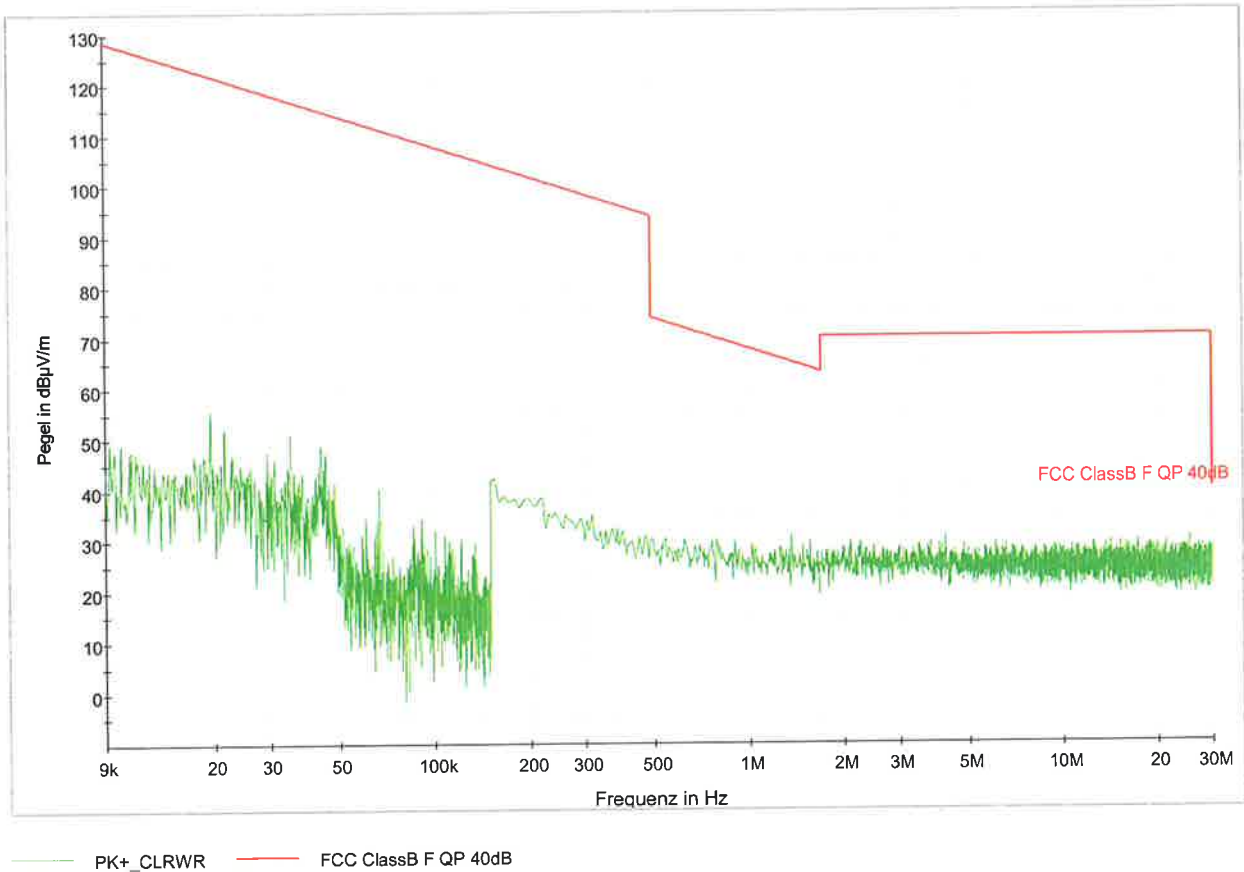
Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-139; NT-207

Emissions in restricted bands

§ 15.209(a)

Measurement with Peak-Detector:

Setup: CH 4 + 8: 2437 MHz



Worst case emission: 55,6 dBµV/m @ 19,4 kHz

Remark: As the highest spurious conducted emission was measured as to be -55 dB below the fundamental, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load.

LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

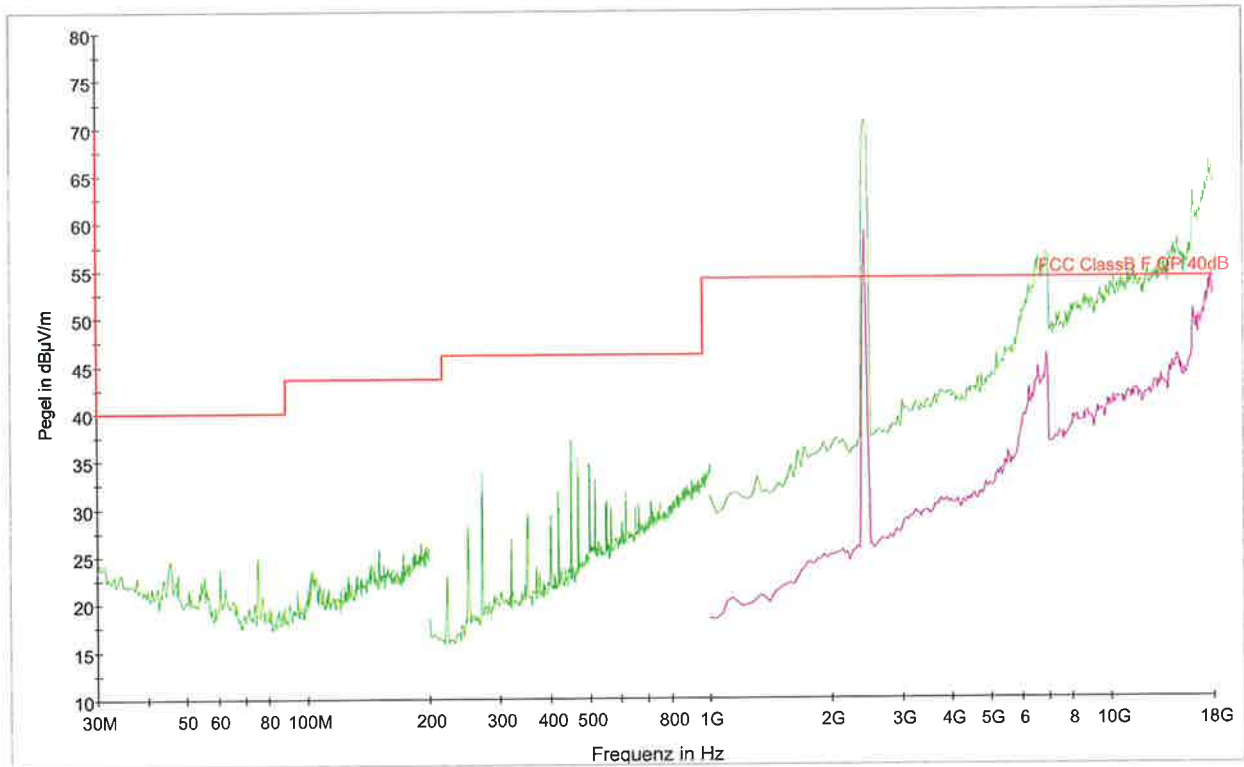
Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-122; NT-207

Emissions in restricted bands

§ 15.209(a)

Measurement with Peak-Detector (green line) and Average detector (magenta line):

Setup: CH 4 + 8: 2437 MHz



— PK+_MAXH [Stream800_CH0408_F3.Result:2] — AVG_MAXH [Stream800_CH0408_F3.Result:4]
— PK+_MAXH [Stream800_CH0408_F2.Result:2] — PK+_MAXH [Stream800_CH0408_F1.Result:2]
— FCC ClassB F QP 40dB [..EMI radiated]

Worst case emission: 37,1 dBµV/m @ 450,1 MHz

Remark: As the highest spurious conducted emission was measured as to be -55 dB below the fundamental, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load. Although the measurement above ends at 18 GHz, all measurements were performed up to the thenth harmonics of the transmitter frequency.

LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F (kHz)	300
0.490-1.705	24000/F (kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

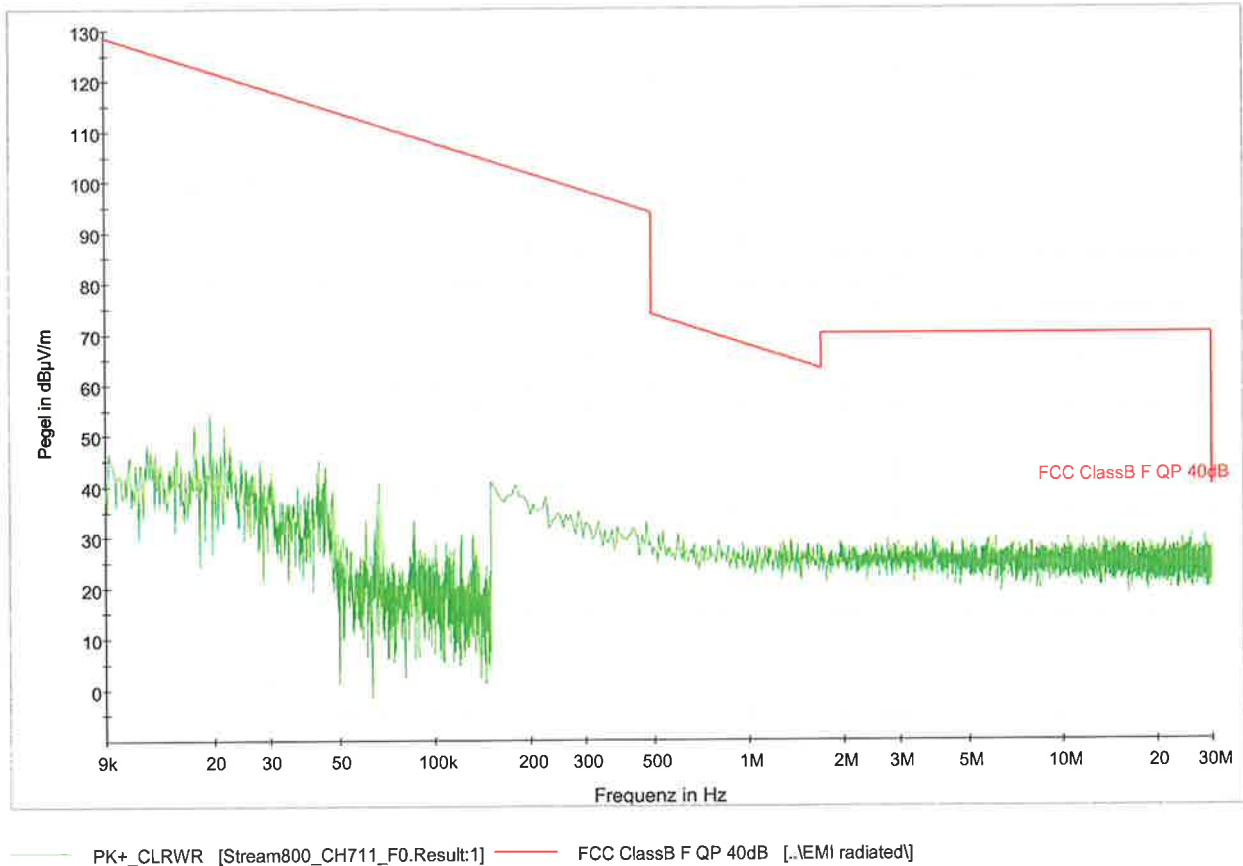
Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-126; NT-129; NT-131; NT-139; NT-207; NT-211; NT-337

Emissions in restricted bands

§ 15.209(a)

Measurement with Peak-Detector:

Setup: CH 7 + 11: 2452 MHz



Worst case emission: 54,4 dBµV/m @ 19,4 kHz

Remark: As the highest spurious conducted emission was measured as to be -55 dB below the fundamental, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load.

LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

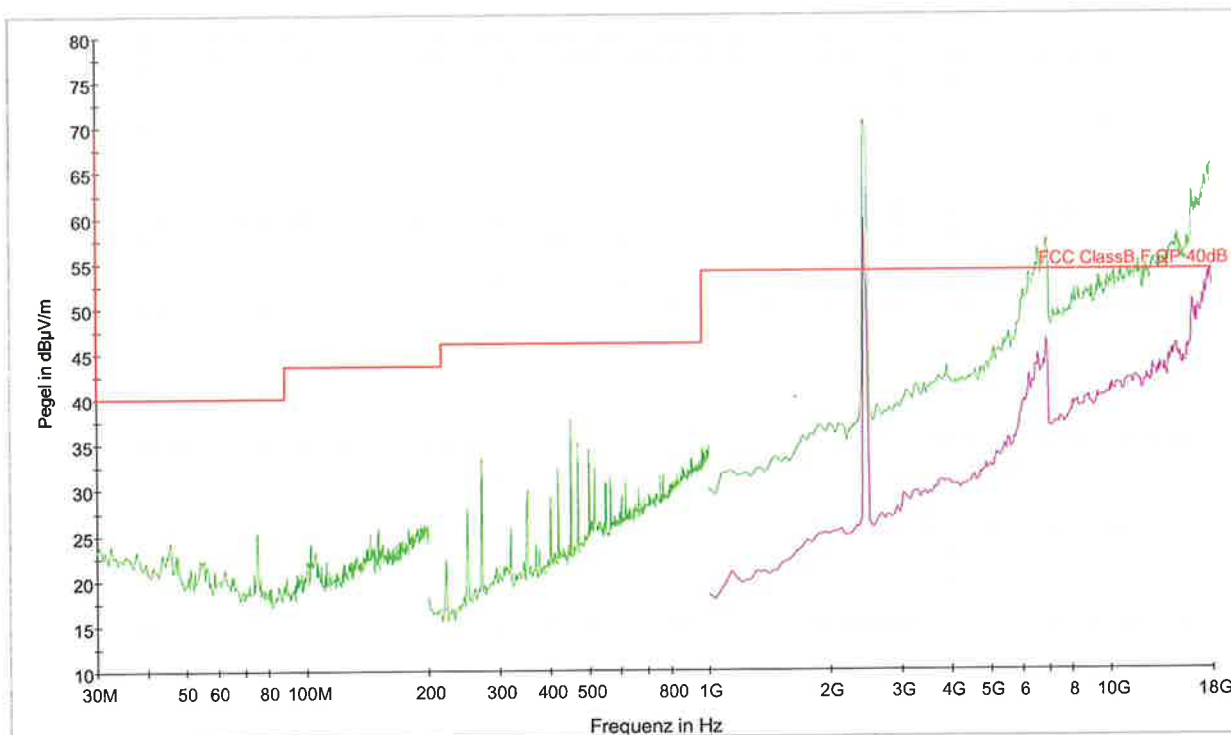
Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-122; NT-207

Emissions in restricted bands

§ 15.209(a)

Measurement with Peak-Detector (green line) and Average detector (magenta line):

Setup: CH 7 + 11: 2452 MHz



— PK+_MAXH [Stream800_CH711_F3.Result:2] — AVG_MAXH [Stream800_CH711_F3.Result:4]
— FCC ClassB F QP 40dB [..\NEMI radiated] — PK+_MAXH [Stream800_CH711_F1.Result:2]
— PK+_MAXH [Stream800_CH711_F2.Result:2]

Worst case emission: 37,7 dBµV/m @ 450,1 MHz

Remark: As the highest spurious conducted emission was measured as to be -55 dB below the fundamental, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load. Although the measurement above ends at 18 GHz, all measurements were performed up to the tenth harmonics of the transmitter frequency.

LIMIT

SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F (kHz)	300
0.490-1.705	24000/F (kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

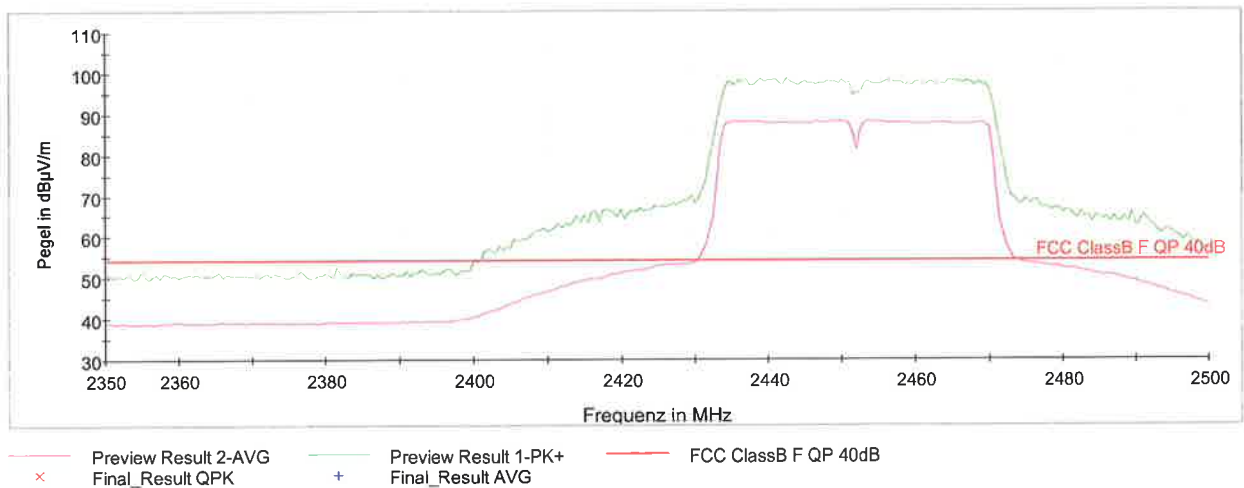
Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-126; NT-129; NT-131; NT-139; NT-207; NT-211; NT-337

Emissions in restricted bands

§ 15.209(a)

Measurement with Peak-Detector (green line) and Average detector (magenta line): Band Edge requirement

Setup: CH 7 + 11: 2452 MHz



LIMIT

SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

Band edges of the nearest restricted bands: 2390 MHz and 2483,5 MHz.

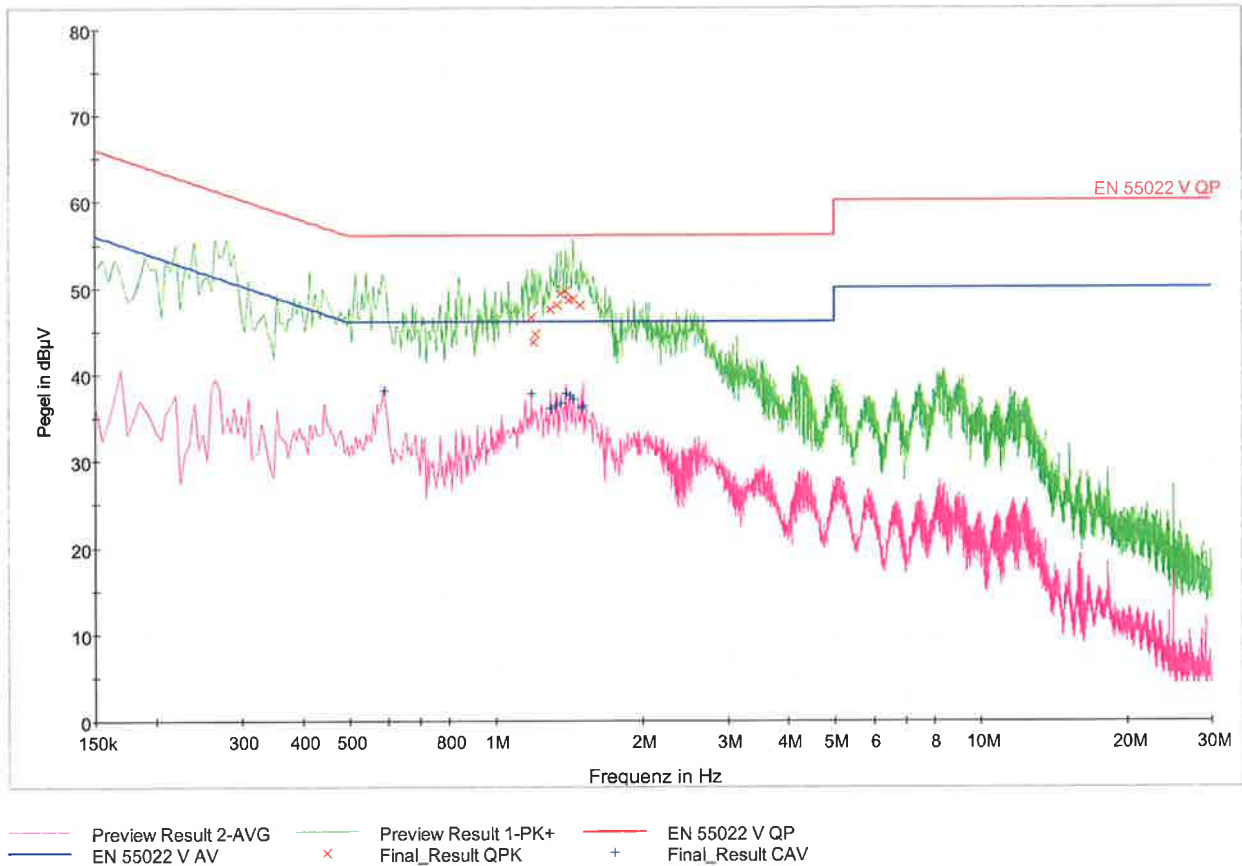
Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-139; NT-207

Conducted Limits

§ 15.207

Measurement with Peak-Detector (green line) and Average detector (magenta line):

Setup: CH 6: 2437 MHz



LIMIT SUBCLAUSE 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.

Test Equipment used: NT-300; NT-554; NT-441; NT-207

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Ambient temperature: 24°C

Relative humidity: 25%



Maximum permissible Exposure

§ 15.247(i)

This kind of radio equipment is categorically excluded from routine environmental evaluation.

Appendix 1

Test equipment used

<input type="checkbox"/>	Anechoic Chamber with 3m measurement distance	NT-100	<input type="checkbox"/>	Spectrum analyzer – FSP7 9 kHz – 7 GHz	NT-200
<input type="checkbox"/>	Stripline according to ISO 11452-5	NT-108	<input type="checkbox"/>	ESCI - Test receiver 9 kHz - 7 GHz	NT-203/1
<input type="checkbox"/>	MA4000 - Antenna mast 1 - 4 m height	NT-110/1	<input type="checkbox"/>	ESI26 – Test receiver 20 Hz – 26,5 GHz	NT-207
<input type="checkbox"/>	DS - Turntable 0 - 400 ° Azimuth	NT-111/1	<input type="checkbox"/>	Digital Radio Tester CTS55	NT-208
<input type="checkbox"/>	CO3000 Controller Mast+Turntable	NT-112/1	<input type="checkbox"/>	Noise-gen., ITU-R 559-2 20 Hz – 20 kHz	NT-209
<input type="checkbox"/>	HUF-Z3 - Log. Per. Antenna 200 - 1000 MHz	NT-121	<input type="checkbox"/>	CMTA - Radiocommunication analyzer ; 0,1 - 1000 MHz	NT-210
<input type="checkbox"/>	HFH-Z2 - Loop Antenna 9 kHz - 30 MHz	NT-122	<input type="checkbox"/>	3271 - Spectrum analyzer 100 Hz - 26,5 GHz	NT-211
<input type="checkbox"/>	HFH-Z6 - Rod Antenna 9 kHz - 30 MHz	NT-123	<input type="checkbox"/>	Digital Radio Tester Aeroflex 3920	NT-212/1
<input type="checkbox"/>	3121C - Dipole Antenna 28 - 1000 MHz	NT-124	<input type="checkbox"/>	Mixer M28HW 26,5 GHz - 40 GHz	NT-214
<input type="checkbox"/>	3115 - Horn Antenna 1 - 18 GHz (immunity)	NT-125	<input type="checkbox"/>	RubiSource T&M Timing reference	NT-216
<input type="checkbox"/>	3116 - Horn Antenna 18 - 40 GHz	NT-126	<input type="checkbox"/>	Radiocommunication analyzer SWR 1180 MD	NT-217
<input type="checkbox"/>	SAS-200/543 - Bicon. Antenna 20 MHz - 300 MHz	NT-127	<input type="checkbox"/>	Mixer M19HWD 40 GHz – 60 GHz	NT-218
<input type="checkbox"/>	AT-1080 - Log. Per. Antenna 80 - 1000 MHz	NT-128	<input type="checkbox"/>	Mixer M12HWD 60 GHz – 90 GHz	NT-219
<input type="checkbox"/>	HK-116 - bicon. Antenna 20 MHz - 300 MHz	NT-129	<input type="checkbox"/>	DSO9104 Digital scope	NT-220/1
<input type="checkbox"/>	HK-116 - bicon. Antenna 20 MHz - 300 MHz	NT-130	<input type="checkbox"/>	TPS 2014 Digital scope	NT-222
<input type="checkbox"/>	3146 - Log. Per. Antenna 200 – 1000 MHz	NT-131	<input type="checkbox"/>	Artificial Ear according to IEC 60318	NT-224
<input type="checkbox"/>	Loop Antenna H-Field	NT-132	<input type="checkbox"/>	1 kHz Sound calibrator	NT-225
<input type="checkbox"/>	Horn Antenna 500 MHz - 2900 MHz	NT-133	<input type="checkbox"/>	B10 - Harmonics and flicker analyzer	NT-232
<input type="checkbox"/>	Horn Antenna 500 MHz - 6000 MHz	NT-133/1	<input type="checkbox"/>	ARS 16/3 – Harmonics- flicker analyzer	NT-232/1
<input type="checkbox"/>	Log. per. Antenna 800 MHz - 2500 MHz	NT-134	<input type="checkbox"/>	SRM-3000 Spectrum analyzer	NT-233
<input type="checkbox"/>	Log. per. Antenna 800 MHz - 2500 MHz	NT-135	<input type="checkbox"/>	SRM-3006 Spectrum analyzer	NT-233/1a
<input type="checkbox"/>	BiConiLog Antenna 26 MHz – 2000 MHz	NT-137	<input type="checkbox"/>	E-field probe SRM 75 MHz – 3 GHz	NT-234
<input type="checkbox"/>	Conical Dipol Antenna PCD8250	NT-138	<input type="checkbox"/>	Field Meter NBM-500 incl. E- and H-Field probes	NT-240a-d
<input type="checkbox"/>	HF 906 - Horn Antenna 1 - 18 GHz (emission)	NT-139	<input type="checkbox"/>	Hall-Teslameter ETM-1	NT-241
<input type="checkbox"/>	HZ-1 Antenna tripod	NT-150	<input type="checkbox"/>	EFA-3 H-field- / E-field probe	NT-243
<input type="checkbox"/>	BN 1500 Antenna tripod	NT-151	<input type="checkbox"/>	Field Meter EMR-200 100 kHz – 3 GHz	NT-244
<input type="checkbox"/>	Ant. tripod for EN61000-4-3 Model TP1000A	NT-156	<input type="checkbox"/>	E-field probe 100 kHz – 3 GHz	NT-245
<input type="checkbox"/>	Power quality analyzer Fluke 1760 (complete set)	NT-160 - NT-173	<input type="checkbox"/>	H-field probe 300 kHz – 30 MHz	NT-246

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Appendix 1 (continued)

Test equipment used

<input type="checkbox"/>	E-field probe 3 MHz – 18 GHz	NT-247	<input type="checkbox"/>	VCS 500-M6 Surge-Generator	NT-326	Division Medical Technology/
<input type="checkbox"/>	H-field probe 27 MHz – 1 GHz	NT-248	<input type="checkbox"/>	Oscillatory Wave Simulator incl. Coupling networks	NT- 328a+b+c	Communication Technology/ EMC
<input type="checkbox"/>	ELT-400 1 Hz – 400 kHz	NT-249	<input type="checkbox"/>	BTA-250 - RF-Amplifier 9 kHz - 220 MHz / 250 W	NT-330	Department: FG
<input type="checkbox"/>	MDS 21 - Absorbing clamp 30 - 1000 MHz	NT-250	<input type="checkbox"/>	T82-50 RF-Amplifier 2 GHz – 8 GHz	NT-331	Test report number: M/FG-15/137
<input type="checkbox"/>	FCC-203I EM Injection clamp	NT-251	<input type="checkbox"/>	500W1000M7 - RF-Amplifier 80 - 1000 MHz / 500 W	NT-332	Page: 2 of 3
<input type="checkbox"/>	FCC-203I-DCN Ferrite decoupling network	NT-252	<input type="checkbox"/>	AS0102-65R - RF-Amplifier 1 GHz - 2 GHz	NT-333	Date: 27.03.2015
<input type="checkbox"/>	PR50 Current Probe	NT-253	<input type="checkbox"/>	APA01 – RF-Amplifier 0,5 GHz – 2,5 GHz	NT-334	Checked by: 
<input type="checkbox"/>	i310s Current Probe	NT-254/1	<input type="checkbox"/>	Preamplifier 1 GHz - 4 GHz	NT-335	
<input type="checkbox"/>	Fluke 87 V True RMS Multimeter	NT-260	<input type="checkbox"/>	Preamplifier for GPS MKU 152 A	NT-336	
<input type="checkbox"/>	Model 2000 Digital Multimeter	NT-261	<input type="checkbox"/>	Preamplifier 100 MHz – 23 GHz	NT-337	
<input type="checkbox"/>	Fluke 87 V Digital Multimeter	NT-262/1	<input type="checkbox"/>	DC Block 10 MHz – 18 GHz Model 8048	NT-338	
<input type="checkbox"/>	ESH2-Z5-U1 Artificial mains network 4x25A	NT-300	<input type="checkbox"/>	2-97201 Electronic load	NT-341	
<input type="checkbox"/>	ESH3-Z5-U1 Artificial mains network 2x10A	NT-301	<input type="checkbox"/>	TSX3510P - Power supply 0-30 V / 0 - 10 A	NT-344	
<input type="checkbox"/>	ESH3-Z6-U1 Artificial mains network 1x100A	NT-302	<input type="checkbox"/>	TSX3510P - Power supply 0-30 V / 0 - 10 A	NT-345	
<input type="checkbox"/>	ESH3-Z6-U1 Artificial mains network 1x100A	NT-302a	<input type="checkbox"/>	VDS 200 Mobil-impuls-generator	NT-350	
<input type="checkbox"/>	PHE 4500/B Power amplifier	NT-304	<input type="checkbox"/>	LD 200 Mobil-impuls-generator	NT-351	
<input type="checkbox"/>	PAS 5000 Power amplifier	NT- 304/1a	<input type="checkbox"/>	MPG 200 Mobil-impuls-Generators	NT-352	
<input type="checkbox"/>	EZ10 T-Artificial Network	NT-305	<input type="checkbox"/>	EFT 200 Mobil-impuls-generator	NT-353	
<input type="checkbox"/>	SMG - Signal generator 0,1 - 1000 MHz	NT-310	<input type="checkbox"/>	AN 200 S1 Artificial Network	NT-354	
<input type="checkbox"/>	SMA100A - Signal generator 9 kHz - 6 GHz	NT-310/1	<input type="checkbox"/>	FP-EFT 32M 3 ph. Coupling filter (Burst)	NT-400/1	
<input type="checkbox"/>	RefRad Reference generator	NT-312	<input type="checkbox"/>	PHE 4500 - Mains impedance network	NT-401	
<input type="checkbox"/>	SMP 02 Signal generator 10 MHz - 20 GHz	NT-313	<input type="checkbox"/>	IP 6.2 Coupling filter for data lines (Surge)	NT-403	
<input type="checkbox"/>	40 MHz Arbitrary Generator TGA1241	NT-315	<input type="checkbox"/>	TK 9421 High Power Volt. Probe 150 kHz - 30 MHz	NT-409	
<input type="checkbox"/>	Artificial mains network NSLK 8127-PLC	NT-316	<input type="checkbox"/>	ESH2-Z3 - Probe 9 kHz - 30 MHz	NT-410	
<input type="checkbox"/>	Inrush Current Source for PAS 5000	NT-317a	<input type="checkbox"/>	IP 4 - Capacitive clamp (Burst)	NT-411	
<input type="checkbox"/>	Control and measurement device Sycore	NT-318	<input type="checkbox"/>	Highpass-Filter 100 MHz – 3 GHz	NT-412	
<input type="checkbox"/>	PEFT - Burst generator up to 4 kV	NT-320	<input type="checkbox"/>	Highpass-Filter 600 MHz – 4 GHz	NT-413	
<input type="checkbox"/>	ESD 30 System up to 25 kV	NT-321	<input type="checkbox"/>	Highpass-Filter 1250 MHz – 4 GHz	NT-414	
<input type="checkbox"/>	PSURGE 4.1 Surge generator	NT-324	<input type="checkbox"/>	Highpass-Filter 1800 MHz – 16 GHz	NT-415	
<input type="checkbox"/>	IMU4000 Immunity test system	NT-325/1				

Appendix 1 (continued)

Test equipment used

<input type="checkbox"/>	Highpass-Filter 3500 MHz – 18 GHz	NT-416	<input type="checkbox"/>	FCC-801-S25 Coupling decoupling network	NT-462
<input type="checkbox"/>	RF-Attenuator 10 dB DC – 18 GHz / 50 W	NT-417	<input type="checkbox"/>	FCC-801-T4 Coupling decoupling network	NT-463
<input type="checkbox"/>	RF-Attenuator 6 dB DC – 18 GHz / 50 W	NT-418	<input type="checkbox"/>	FCC-801-C1 Coupling decoupling network	NT-464
<input type="checkbox"/>	RF-Attenuator 3 dB DC – 18 GHz / 50 W	NT-419	<input type="checkbox"/>	F-16A - Current probe 1kHz - 70MHz	NT-465
<input type="checkbox"/>	RF-Attenuator 20 dB DC - 1000 MHz / 25 W	NT-421	<input type="checkbox"/>	95242-1 – Current probe 1 MHz – 400 MHz	NT-468
<input type="checkbox"/>	RF-Attenuator 30 dB DC - 1000 MHz / 1 W	NT-423	<input type="checkbox"/>	94106-1L-1 – Current probe 100 kHz – 450 MHz	NT-471
<input type="checkbox"/>	RF-Attenuator 30 dB	NT-424	<input type="checkbox"/>	GA 1240 Power amplifier according to EN 61000-4-16	NT-480
<input type="checkbox"/>	RF-Attenuator 6 dB DC - 1000 MHz / 1 W	NT-425	<input type="checkbox"/>	Coupling networks according to EN 61000-4-16	NT-481 - NT-483
<input type="checkbox"/>	RF-Attenuator 6 dB DC - 1000 MHz / 1 W	NT-426	<input type="checkbox"/>	Van der Hoofden Test Head	NT-484
<input type="checkbox"/>	RF-Attenuator 6 dB	NT-428	<input type="checkbox"/>	PC P4 3 GHz Test computer	NT-500
<input type="checkbox"/>	RF-Attenuator 0 dB - 81 dB	NT-429	<input type="checkbox"/>	PC P4 1700 MHz Notebook	NT-505
<input type="checkbox"/>	WRU 27 - Band blocking 27 MHz	NT-430	<input type="checkbox"/>	Monitoring camera with Monitor	NT-511
<input type="checkbox"/>	WHJ450C9 AA - High pass 450 MHz	NT-431	<input type="checkbox"/>	ES-K1 Version 1.71 SP2 Test software	NT-520
<input type="checkbox"/>	WHJ250C9 AA - High pass 250 MHz	NT-432	<input type="checkbox"/>	EMC32 Version 9.15 Test software	NT-520/1
<input type="checkbox"/>	RF-Load 150 W	NT-433	<input type="checkbox"/>	SRM-TS Version 1.3 software for SRM-3000	NT-522
<input type="checkbox"/>	Impedance transducer 1:4 ; 1:9 ; 1:16	NT-435	<input type="checkbox"/>	SRM-TS Version 1.3.1 software for SRM-3006	NT-522/1
<input type="checkbox"/>	RF-Attenuator DC – 18 GHz 6 dB	NT-436	<input type="checkbox"/>	Spitzenberger und Spies Test software V3.4	NT-525
<input type="checkbox"/>	RF-Attenuator DC – 18 GHz 6 dB	NT-437	<input type="checkbox"/>	Noise power test apparatus according to EN 55014	NT-530
<input type="checkbox"/>	RF-Attenuator DC – 18 GHz 10 dB	NT-438	<input type="checkbox"/>	Vertical coupling plane (ESD)	NT-531
<input type="checkbox"/>	RF-Attenuator DC – 18 GHz 20 dB	NT-439	<input type="checkbox"/>	Test cable #4 for EN 61000-4-6	NT-553
<input type="checkbox"/>	I+P 7780 Directional coupler 100 - 2000 MHz	NT-440	<input type="checkbox"/>	Test cable #3 for conducted emission	NT-554
<input type="checkbox"/>	ESH3-Z2 - Pulse limiter 9 kHz - 30 MHz	NT-441	<input type="checkbox"/>	Test cable #5+#6 ESD-cable (2x470k)	NT-555 + NT-556
<input type="checkbox"/>	Power Divider 6 dB/1 W/50 Ohm	NT-443	<input type="checkbox"/>	Test cable #8 Sucoflex 104EA	NT-559
<input type="checkbox"/>	Directional coupler 0,1 MHz – 70 MHz	NT-444	<input type="checkbox"/>	Test cable #9 (for outdoor measurements)	NT-580
<input type="checkbox"/>	Directional coupler 0,1 MHz – 70 MHz	NT-445	<input type="checkbox"/>	Test cable #10 (for outdoor measurements)	NT-581
<input type="checkbox"/>	Tube imitations according to EN 55015	NT-450	<input type="checkbox"/>	Test cable #13 Sucoflex 104PE	NT-584
<input type="checkbox"/>	FCC-801-M3-16A Coupling decoupling network	NT-458	<input type="checkbox"/>	Test cable #21 for SRM-3000	NT-592
<input type="checkbox"/>	FCC-801-M2-50A Coupling decoupling network	NT-459	<input type="checkbox"/>	Shield chamber	NT-600
<input type="checkbox"/>	FCC-801-M5-25 Coupling decoupling network	NT-460	<input type="checkbox"/>	Climatic chamber	M-1200
<input type="checkbox"/>	FCC-801-AF10 Coupling decoupling network	NT-461			


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Appendix 2 Photodocumentation

Description: Module on evaluation board view #1

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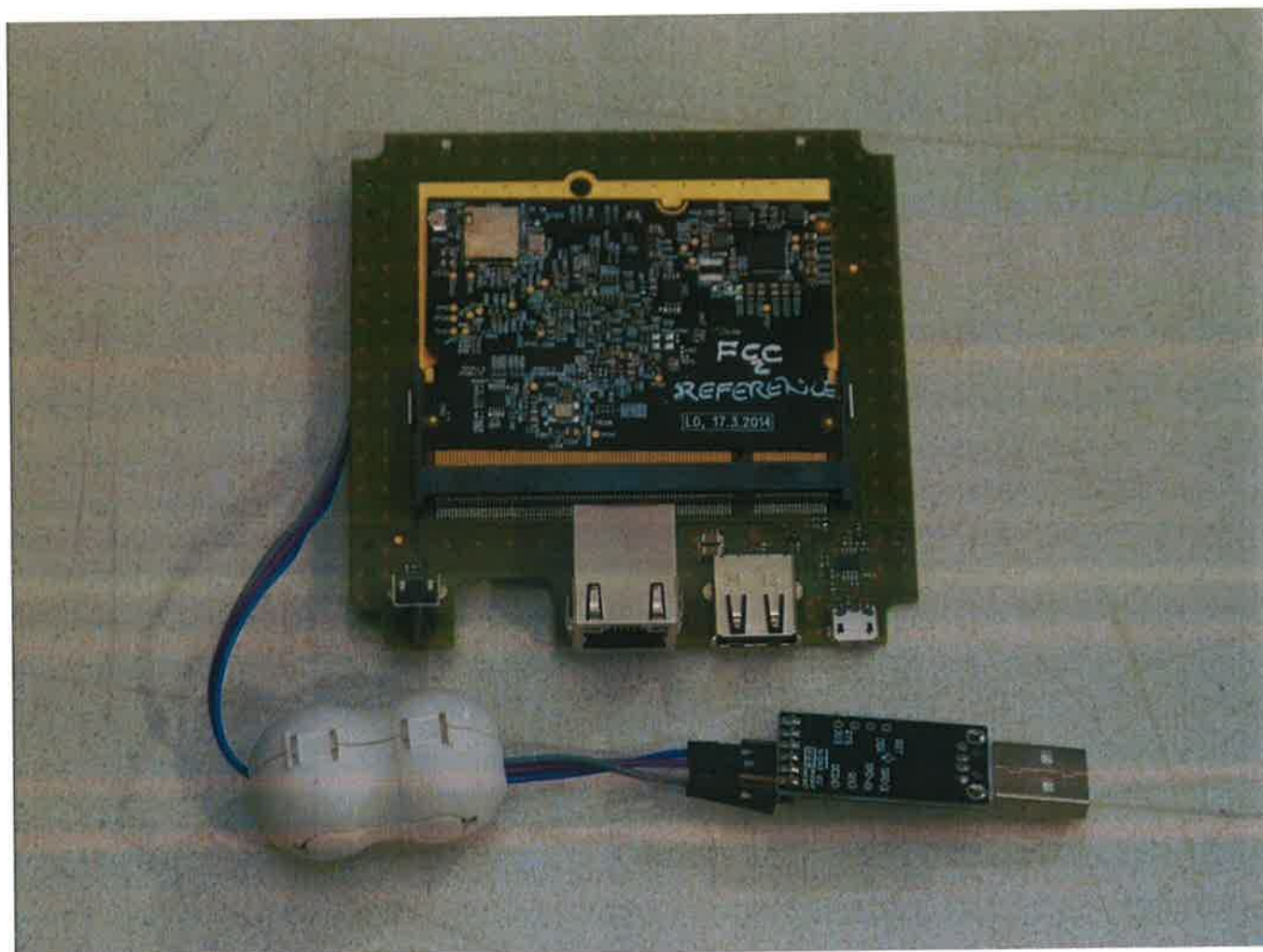
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Appendix 2 Photodocumentation

Description: Module on evaluation board view #2

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Appendix 2 Photodocumentation

Description: Antenna – variant #2


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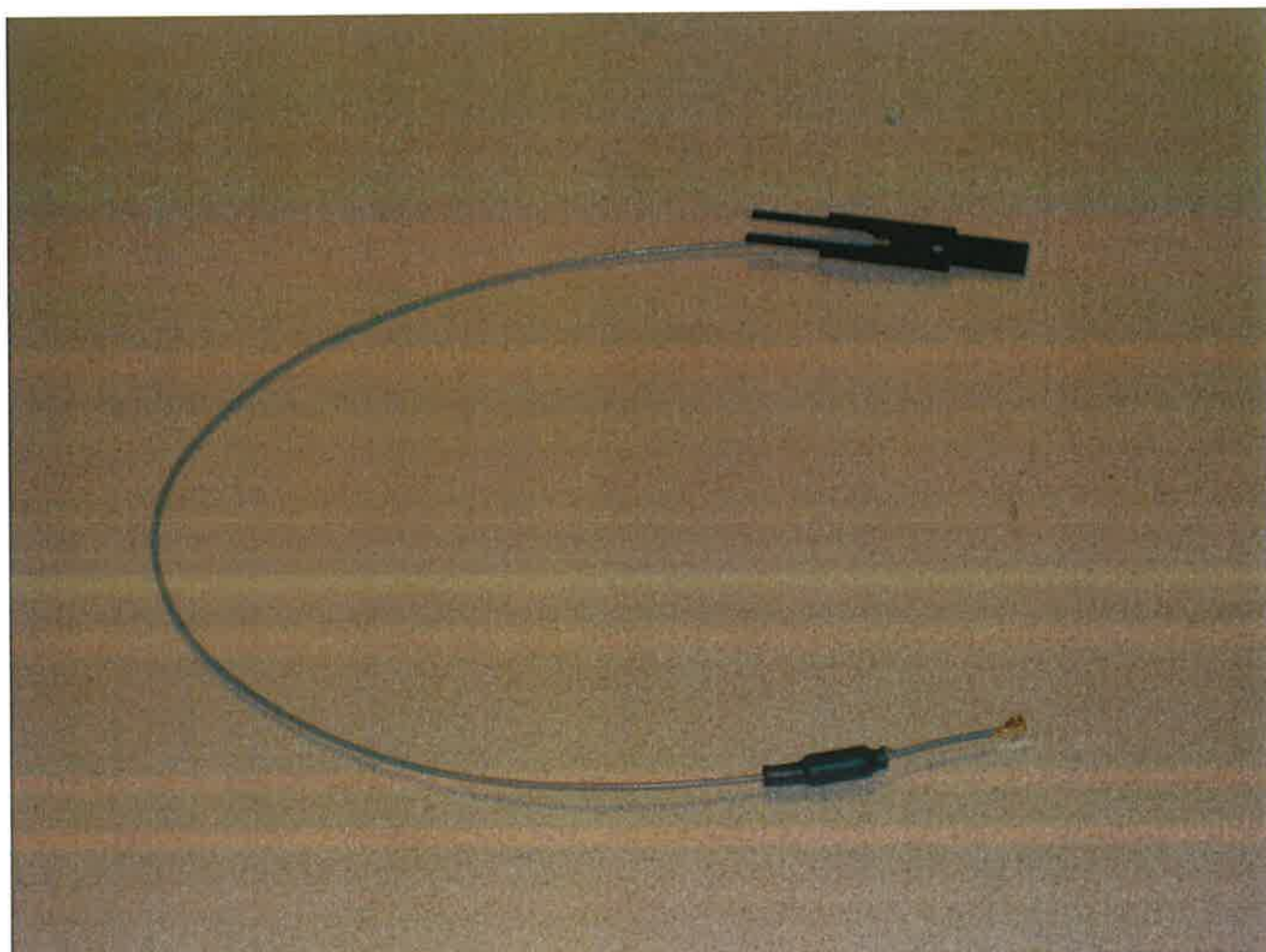
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Description: Module view #1

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Appendix 2 Photodocumentation

Description: RF section without shielding

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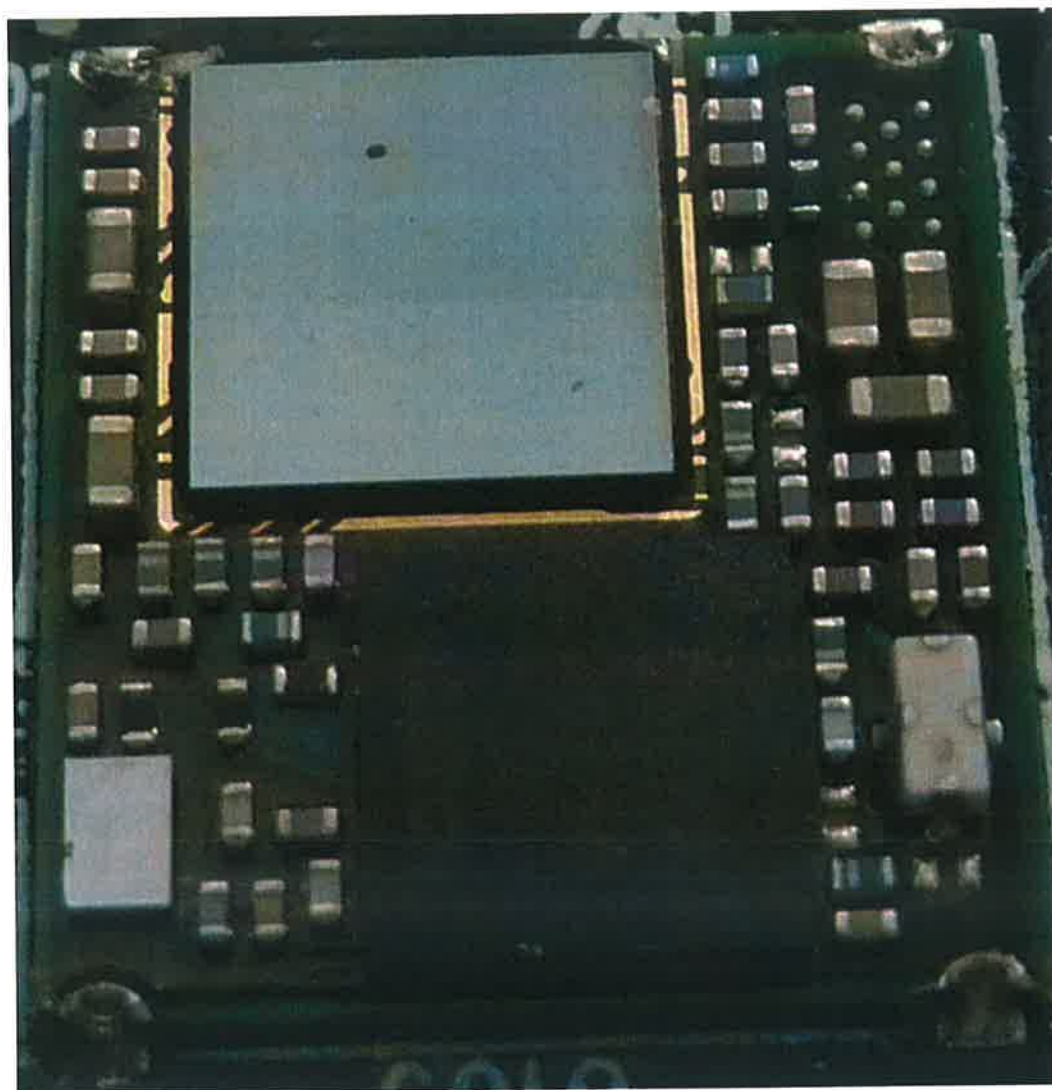
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Appendix 2 Photodocumentation

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Appendix 2 Photodocumentation

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Appendix 2 Photodocumentation

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