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Chamber of Commerce
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telefication

FCC and ISED Test Report for Parts 15.247, and RSS-247, RSS Gen (DTS)

Product name	: Deeper Start
Applicant	: Deeper, UAB
FCC ID	: 2AHKO-STR
ISED ID	: 21307-STR

Test report No. : 171100866 01 Ver 1.00

Laboratory information

Accreditation

Telefication is designated by the FCC as an Accredited Test Firm for compliance testing of equipment subject to Certification under Parts 15 & 18. The Designation number is: NL0001

The Industry Canada registration number for the 3 meter test chamber of Telefication is: 4173A-1.

Documentation

Telefication complies with the accreditation criteria for test laboratories as laid down in ISO/IEC 17025:2005. The accreditation covers the quality system of the laboratory as well as the specific activities as described in the authorized annex bearing the accreditation number L021 and is granted on 30 November 1990 by the Dutch Council For Accreditation (RvA: Raad voor Accreditatie).

The test report must always be reproduced in full; reproduction of an excerpt only is subject to written approval of the testing laboratory. The documentation of the testing performed on the tested devices is archived for 10 years at Telefication Netherlands

Testing Location

Test Site	Telefication BV
Test Site location	Edisonstraat 12a 6902 PK Zevenaar The Netherlands Tel. +31889983600 Fax. +31316583189
Test Site FCC	NL0001

Revision History

Version	Date	Remarks	By
v0.50	12-01-2018	First draft	RvB
v1.00	26-01-2018	Release version	RvB

Table of Contents

Summary of Test results

FCC	ISED	Description	Section in report	Verdict
15.247(a)	RSS-247 5.2 (1)	6dB Bandwidth	3.1	Pass
--	RSS-GEN 6.6	99% Bandwidth	3.2	Pass
15.247(b)	RSS-247 5.1 (2)	RF output power	3.3	Pass
15.247(e)	RSS-247 5.2 (2)	Power spectral density	3.4	Pass
15.247(d)	RSS-247 5.5	Conducted Spurious emissions	3.5	Pass
15.247(d)	RSS-247 5.5	Conducted Band edge	3.5	Pass
15.209 (a)	RSS-247 5.4	Radiated Spurious emissions	3.6	Pass
15.205 (a)	RSS Gen 8.10	Spurious emissions in the restricted bands	3.6	Pass
15.207 (a)	RSS-Gen 8.8	Conducted spurious on AC mains	3.7	Pass

1 General Description

1.1 Applicant

Client name:	Deeper UAB
Address	Sauletekio ave 15, Vilnius, Lithuania
Zip code:	10224
Telephone:	+37065033273
Contact name:	D. Malinauskas
E-mail:	donatas.malinauskas@deeper.eu

1.2 Manufacturer

Manufacturer name:	Deeper UAB
Address:	Sauletekio ave 15, Vilnius, Lithuania
Zip code:	10224
Telephone:	+37065033273
Contact name:	D. Malinauskas
E-mail:	donatas.malinauskas@deeper.eu

1.3 Tested Equipment Under Test (EUT)

Product name:	Deeper Start
Brand name:	Deeper
Product type:	Wireless Fishfinder
FCC ID:	2AHKO-STR
ISED ID	21307-STR
Model(s):	DP2H10S10
Software version:	--
Hardware version:	--
Date of receipt	18-12-2017
Tests started:	18-12-2017
Testing ended:	19-12-2017

1.4 Product specifications of Equipment under test

TX Frequency range (MHz):	Wlan(802.11b/g/n): 2400 – 2462
RX frequency range (MHz):	Wlan(802.11b/g/n): 2400 – 2462
Maximum output power to antenna (dBm):	IEEE 802.11b: 17.89
Antenna type :	Wlan(802.11b/g): Monopole
Antenna gain(dBi):	Wlan(802.11b/g): 1
Type of modulation:	Wlan: Acc. to IEEE 802.11 b/g
Emission designator 802.11b:	11M5G1D
Emission designator 802.11g:	17M3G1D

1.5 Modification of the Equipment Under Test (EUT)

None.

1.6 Observations and remarks

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1.7 Environmental conditions

Test date	18-12-2017	19-12-2017
Ambient temperature	24.6 °C	22.6 °C
Humidity	39.7 %	35.6 %

1.8 Measurement Standards

- FCC KDB Publication No. 558074 D01DTS Meas. Guidance V03r05
- ANSI C63.10:2013

1.9 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15 Subpart C §15.247, §15.207
- RSS-247 Issue 2, RSS-GEN Issue 4.

1.10 Conclusions

The sample of the product showed **NO NON-COMPLIANCES** to the specifications stated in paragraph 1.9 of this report.

The results of the test as stated in this report, are exclusively applicable to the product items as identified in this report. Telefication accepts no responsibility for any properties of product items in this test report, which are not supported by the tests as specified in paragraph 1.9 *"Applicable standards".*

All tests are performed by:

Name : ing. R. van Barneveld

Review of test methods and report by:

Name : ing P.A. Suringa

The above conclusions have been verified by the following signatory:

Date : 2-2-2018

Name : ing. K.A. Roes

Function : Coordinator Radio Laboratory

Signature :

2 Test configuration of the Equipment Under Test

2.1 Test mode

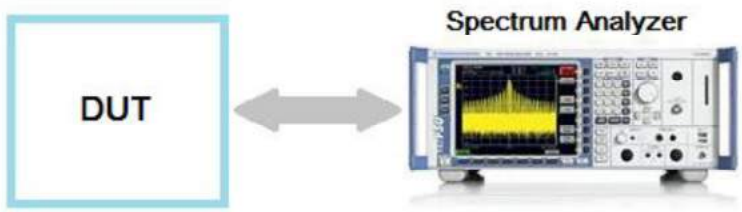
The applicant provided test mode firmware for the EUT, in which it was possible to configure the EUT into different test channels.

2.2 Tested channels and Data rates

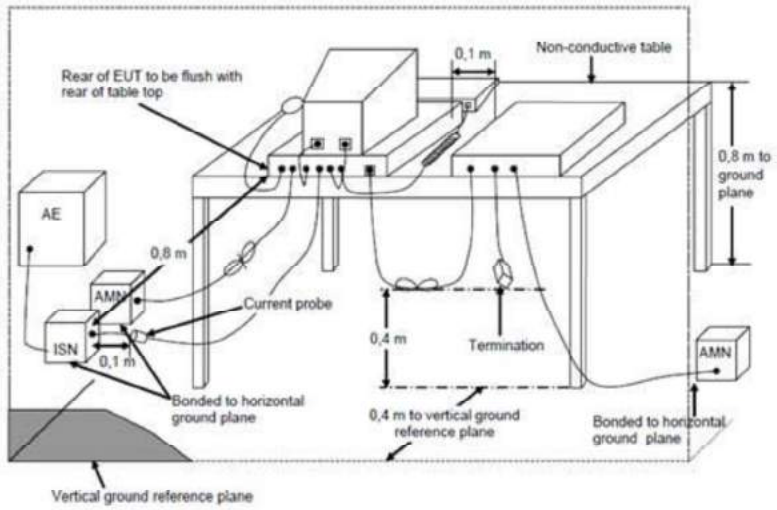
Technology	Channels	Data rate	Frequency (MHz)
802.11b	1	11 Mbps	2412
	6	11 Mbps	2437
	11	11 Mbps	2462
802.11g	1	54 Mbps	2412
	6	54 Mbps	2437
	11	54 Mbps	2462

2.3 Conducted Test setup

RF tests at antenna connector

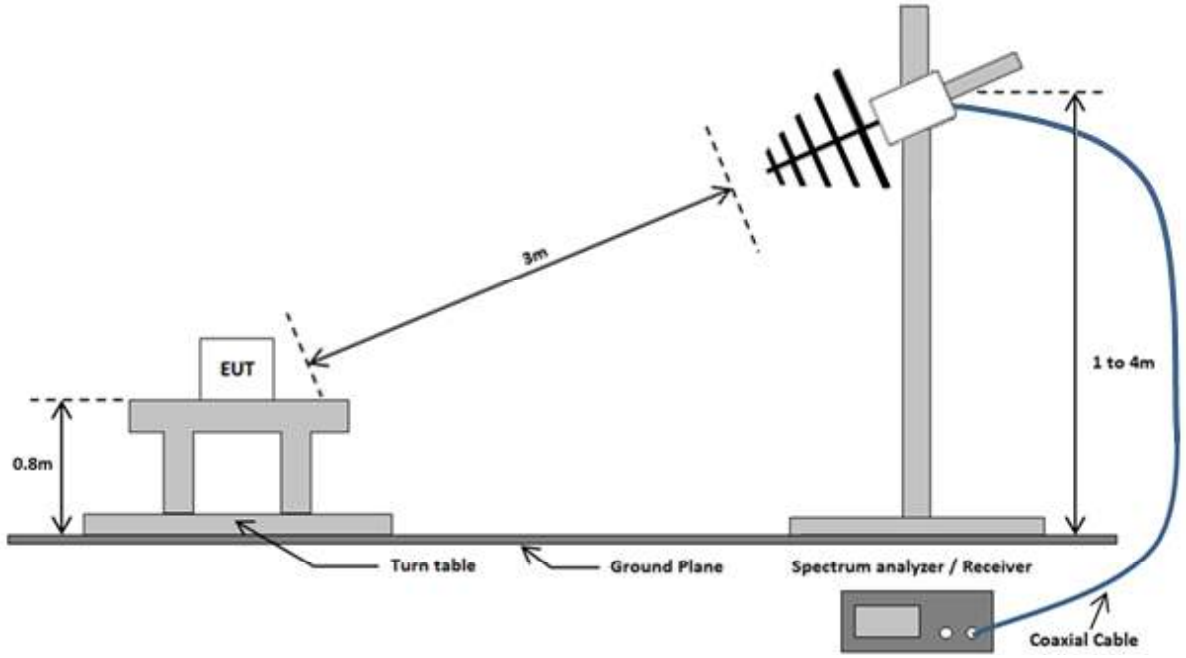


Emissions test at AC mains

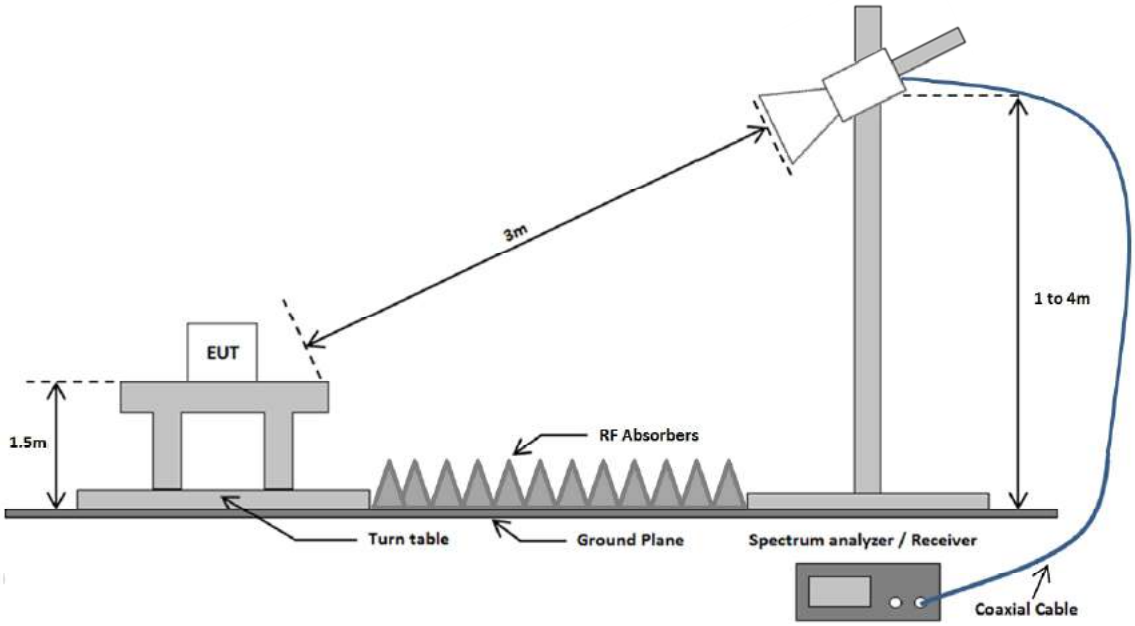


2.4 Radiated Test setup

Radiated emissions test setup 30 MHz - 1 GHz



Radiated emissions test setup above 1 GHz



2.5 Equipment used in the test configuration

Description	Manufacturer	Model	ID	Used at Par.
Signal Generator	Hewlett Packard	83650B	TE00487	3.1 to 3.5
Spectrum Analyzer	Rohde & Schwarz	FSV	TE01269	3.1 to 3.5
Spectrum Analyzer	Rohde & Schwarz	FSP40	TE11125	3.6
Spectrum Analyzer	Rohde & Schwarz	ESR7	TE01220	3.6, 3.7
10 MHz distribution Amplifier	Stanford Research Systems	FS735/1	TE01278	3.1 to 3.5
USB to GPIB adapter	National Instruments	GPIB-USB-HS+	TE01283	3.1 to 3.5
Biconilog Antenna	Chase	CBL6112A	TE00967	3.6
Horn Antenna	EMCO The Electro –Mechanics Co	3115	TE00531	3.6
SAC Chamber	Comtest Engineering BV	-	TE00861	3.6
Artificial Mains Network (AMN)	Rohde & Schwarz	ESH3-Z5	TE00208	3.7
Pulse limiter	Rohde & Schwarz	ESH3-Z2	TE00756	3.7
High pass filter	Wainwright instruments	WHK3.0/18G-40EF	TE01146	3.6
Pre-amplifier	Miteq	AFS42-041001800-28-10P-42	TE11132	3.6
AC power source	Chroma	61601	TE02001	3.7
Software	D.A.R.E Instruments	Radimation	2016.2.8	3.6 - 3.7

2.6 Explanation of the Measurement results for all conducted test items

The path loss between the EUT and the spectrum analyser for the frequency range of 30 MHz to 40 GHz has been measured and stored in the transducer table of the spectrum analyser. This transducer table is used for level offset of the spectrum analyser. With this level offset the spectrum analysers reading will be exactly the RF output.

2.7 Sample calculation

Field Strength Measurement example:

Frequency (GHz)	Polarization	Height(m)	Peak (dBµV/m)
7,236	Horizontal	2	52.5

The following relation applies:

E (dBµV/m) = U(dBµV) + AF (dB/m) – G (dB) + CL (dB)

Where:

E = Electric field strength
U = Measuring receiver voltage
AF = Antenna factor
G = Gain of the pre-amplifier
CL = Cable loss

(52.5 = 48.12 + 36.1 - 37.42 + 5.7)

3 Test results

3.1 6dB bandwidth Measurement

3.1.1 Limit

The minimum 6 dB Bandwidth shall be at least 500 kHz.

3.1.2 Measurement instruments

The measurement instruments are listed in chapter 2.5 of this report.

3.1.3 Test setup

The test setup is as shown in chapter 2.3 of this report.

3.1.4 Test procedure

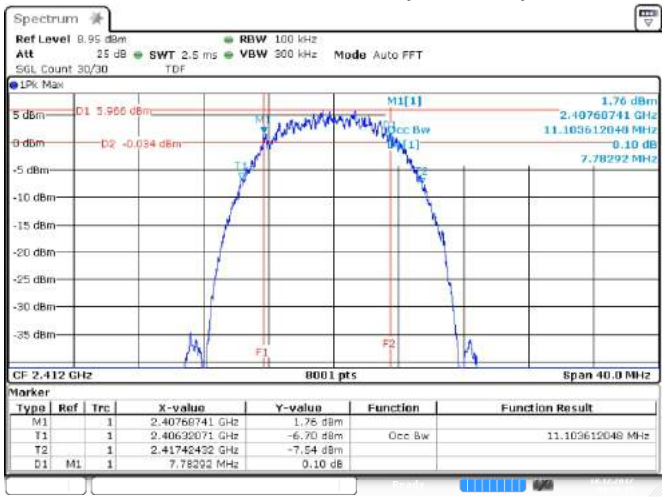
The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r05.

3.1.5 Test Results of the 6 dB bandwidth Measurement

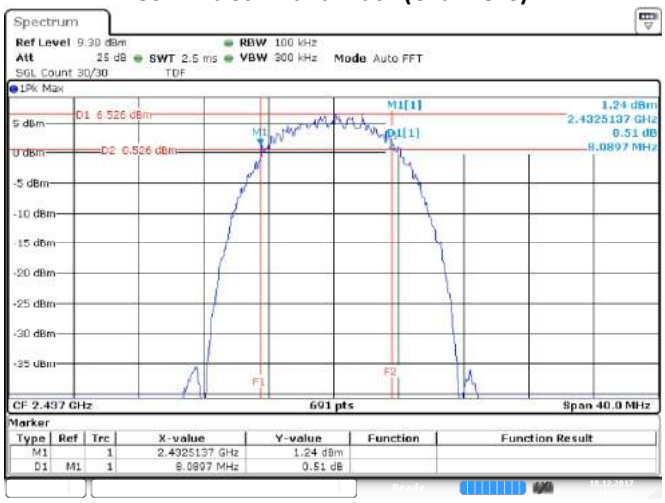
Technology Std.	Channel	Frequency (MHz)	Data rate	6dB bandwidth (MHz)
IEEE 802.11b	1	2412	11 Mbps	7.829
	6	2437	11 Mbps	8.089
	11	2462	11 Mbps	8.089
IEEE 802.11g	1	2412	54 Mbps	16.466
	6	2437	54 Mbps	16.408
	11	2462	54 Mbps	16.408
Uncertainty	± 362 kHz			

3.1.6 Plots of the 6 dB bandwidth Measurement

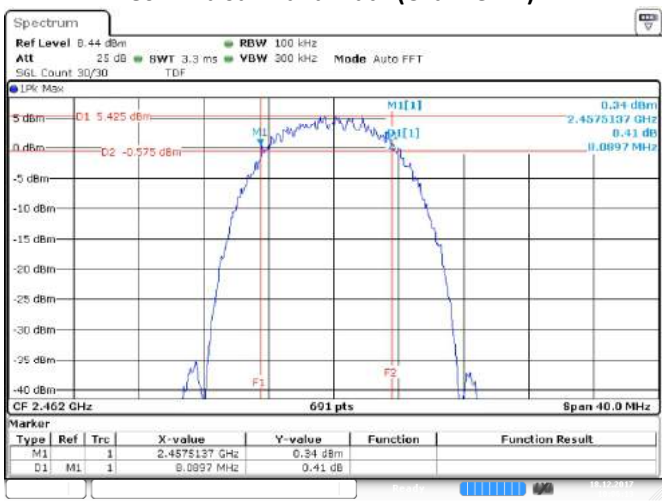
802.11b 6dB Bandwidth (Channel 1)



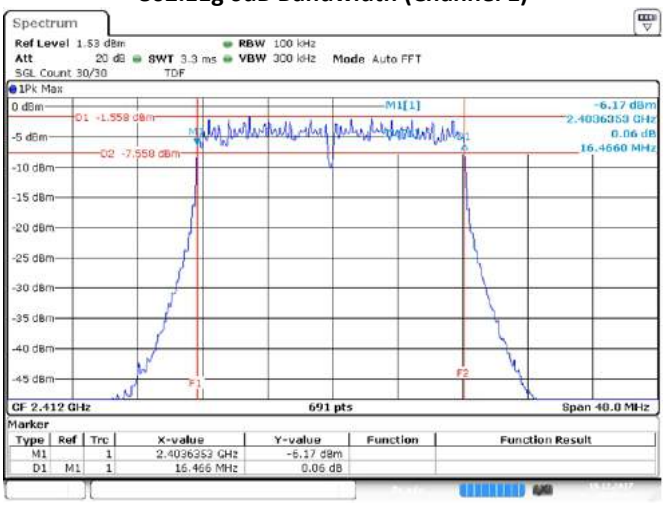
802.11b 6dB Bandwidth (Channel 6)



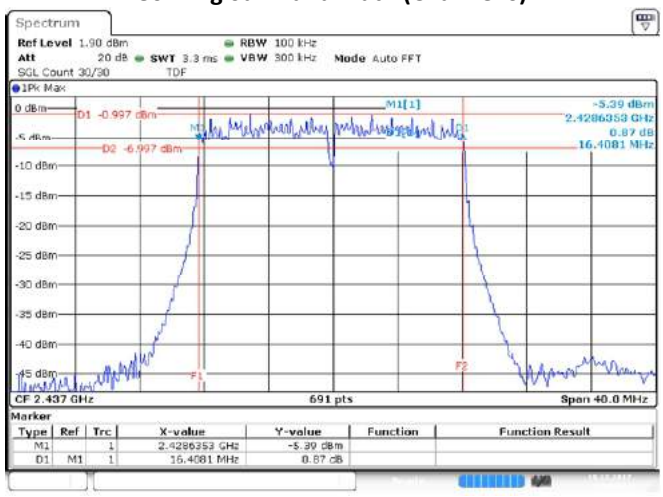
802.11b 6dB Bandwidth (Channel 11)



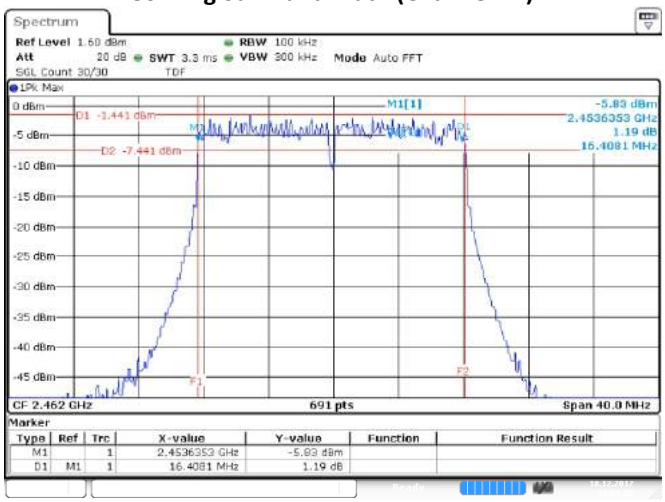
802.11g 6dB Bandwidth (Channel 1)



802.11g 6dB Bandwidth (Channel 6)



802.11g 6dB Bandwidth (Channel 11)



3.2 99% Occupied Bandwidth

3.2.1 Limit

According to RSS-Gen 6.6.

3.2.2 Measurement instruments

The measurement instruments are listed in chapter 2.5 of this report.

3.2.3 Test setup

The test setup is as shown in chapter 2.3 of this report.

3.2.4 Test procedure

1 Set the centre frequency to the nominal EUT channel centre frequency.
2 Set span = 1.5 times to 0.5 times the Occupied Bandwidth.
3 Set VBW ≥ 3 x RBW.
4 Video averaging is not permitted. Where practical detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode(until the trace stabilizes) shall be used.

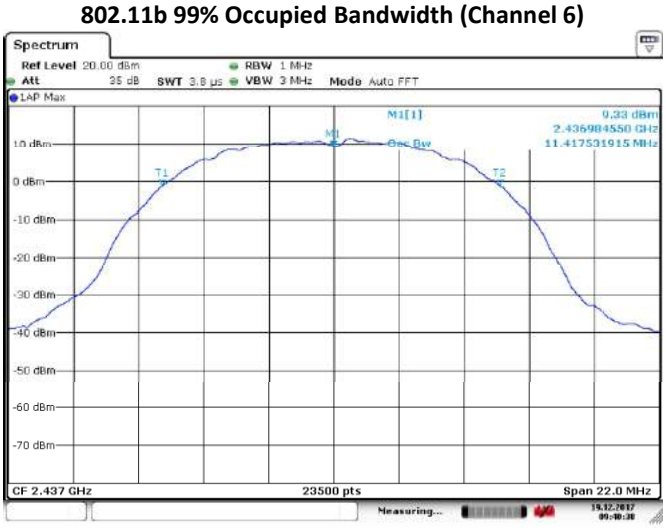
3.2.5 Test results of the 99% Occupied Bandwidth Measurement

Technology Std.	Channel	Frequency (MHz)	Data rate	99% bandwidth (MHz)
IEEE 802.11b	1	2412	11 Mbps	11.475
	6	2437	11 Mbps	11.417
	11	2462	11 Mbps	11.515
IEEE 802.11g	1	2412	54 Mbps	17.091
	6	2437	54 Mbps	17.318
	11	2462	54 Mbps	17.041
Uncertainty	± 362 kHz			

3.2.6 Plots of the 99% Occupied Bandwidth Measurement

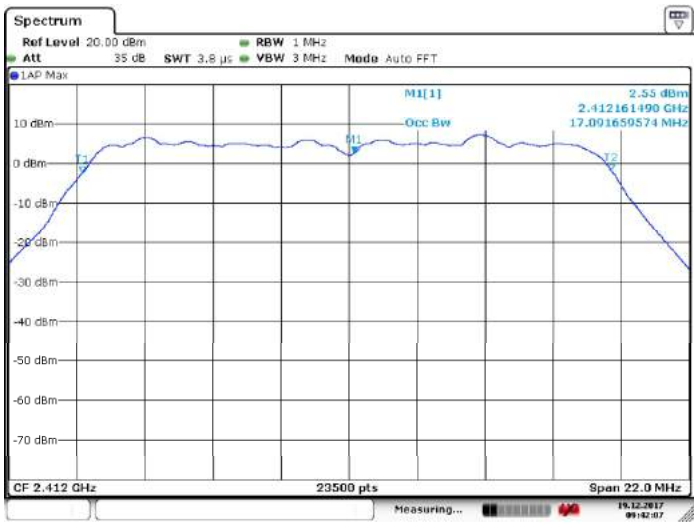
802.11b 99% Occupied Bandwidth (Channel 1)

802.11b 99% Occupied Bandwidth (Channel 6)

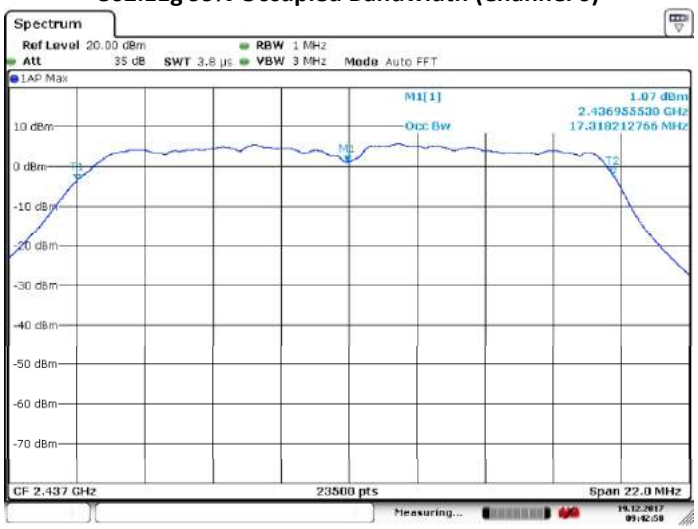


802.11b 99% Occupied Bandwidth (Channel 11)

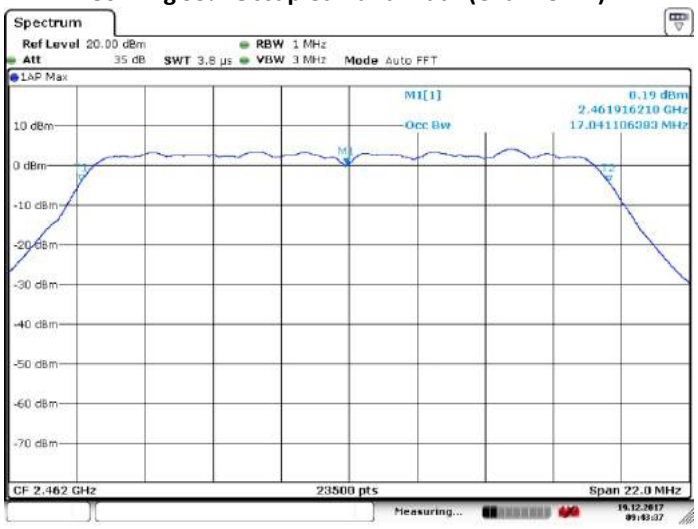
802.11g 99% Occupied Bandwidth (Channel 1)



802.11g 99% Occupied Bandwidth (Channel 6)



802.11g 99% Occupied Bandwidth (Channel 11)



3.3 Output Power Measurement

3.3.1 Limit

For systems using digital modulation in the 2400-2483.5 MHz, the limit for the peak output power is 30 dBm. If transmitting antenna of directional gain greater than 6 dBi is used, the peak output power from the intentional radiator shall be reduced below the above stated value by the amount in dB that the directional gain of the antenna exceeds 6 dBi. In case of point to point operation, the limit has to be reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

3.3.2 Measurement instruments

The measurement instruments are listed in chapter 2.5 of this report.

3.3.3 Test setup

The test setup is as shown in chapter 2.3 of this report.

3.3.4 Test procedure

The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r05.

3.3.5 Test results of Output Power Measurement

Duty cycle

Technology Std.	Channel	Frequency (MHz)	Data rate	Duty cycle (%)
IEEE 802.11b	1	2412	11 Mbps	100
	6	2437	11 Mbps	100
	11	2462	11 Mbps	100
IEEE 802.11g	1	2412	54 Mbps	97.65
	6	2437	54 Mbps	98.81
	11	2462	54 Mbps	98.81

Peak method

Technology Std.	Channel	Frequency (MHz)	Data rate	Peak output power (dBm)
IEEE 802.11b	1	2412	11 Mbps	18.48
	6	2437	11 Mbps	18.89
	11	2462	11 Mbps	18.06
Uncertainty	±0.63 dB			

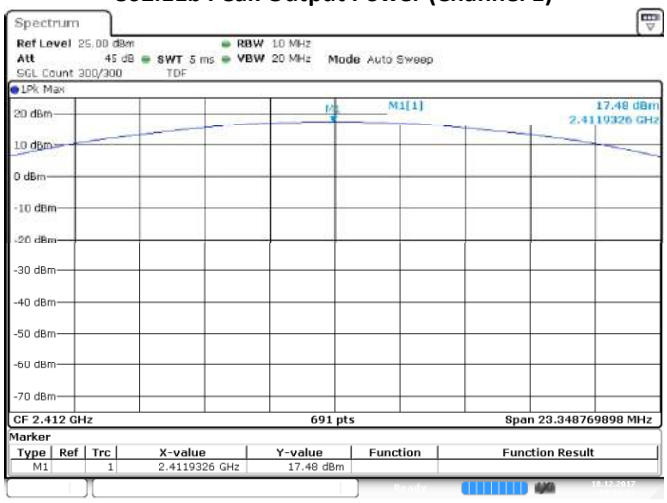
Average method

Technology Std.	Channel	Frequency (MHz)	Data rate	Average output power (dBm)
IEEE 802.11g	1	2412	54 Mbps	7.64
	6	2437	54 Mbps	8.18
	11	2462	54 Mbps	7.66
Uncertainty	±0.63 dB			

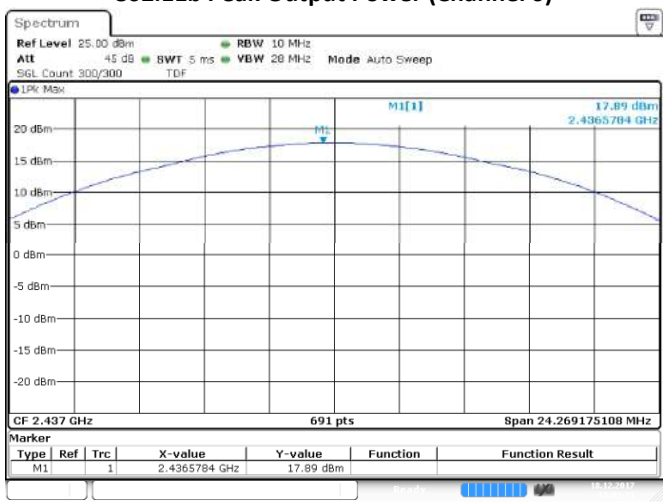
Note: Output power (dBm) =Conducted output power(dBm) + antenna gain (dBi)

3.3.6 Plots of Output Power Measurement

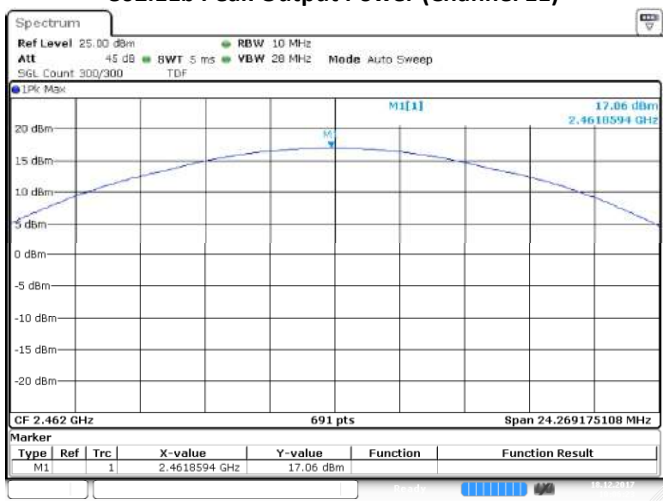
802.11b Peak Output Power (Channel 1)



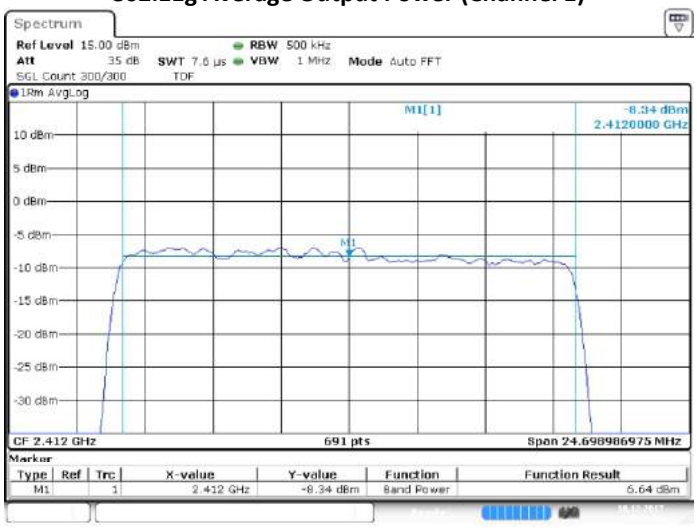
802.11b Peak Output Power (Channel 6)



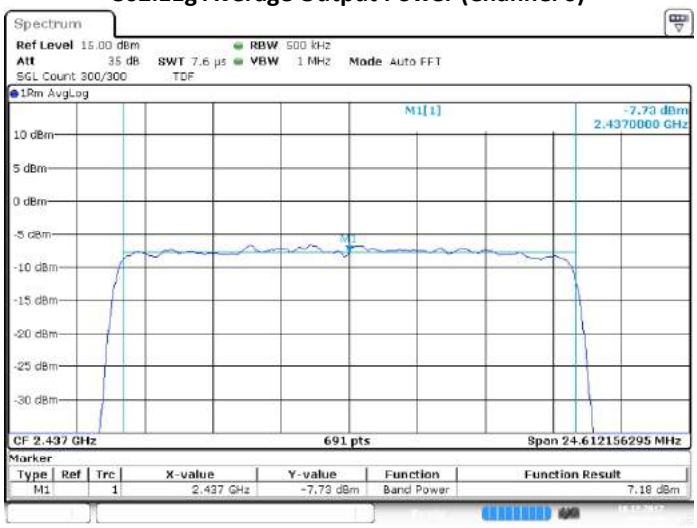
802.11b Peak Output Power (Channel 11)



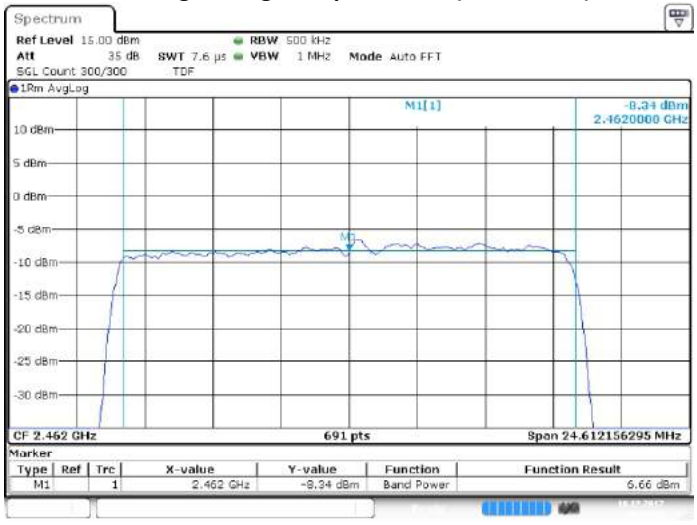
802.11g Average Output Power (Channel 1)



802.11g Average Output Power (Channel 6)



802.11g Average Output Power (Channel 11)



3.4 Power Spectral Density

3.4.1 Limit

The peak power spectral density shall not be greater than 8 dBm in any 3 kHz band at any time interval of continuous transmission.

3.4.2 Measurement instruments

The measurement instruments are listed in chapter 2.5 of this report.

3.4.3 Test setup

The test setup is as shown in chapter 2.3 of this report.

3.4.4 Test procedure

The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r05.

3.4.5 Test results of Power Spectral Density Measurement

Peak Power spectral density

Technology Std.	Channel	Frequency (MHz)	Data rate	PSD/3 kHz (dBm)
IEEE 802.11b	1	2412	11 Mbps	-7.32
	6	2437	11 Mbps	-6.73
	11	2462	11 Mbps	-7.78
Uncertainty	±0.63 dB			

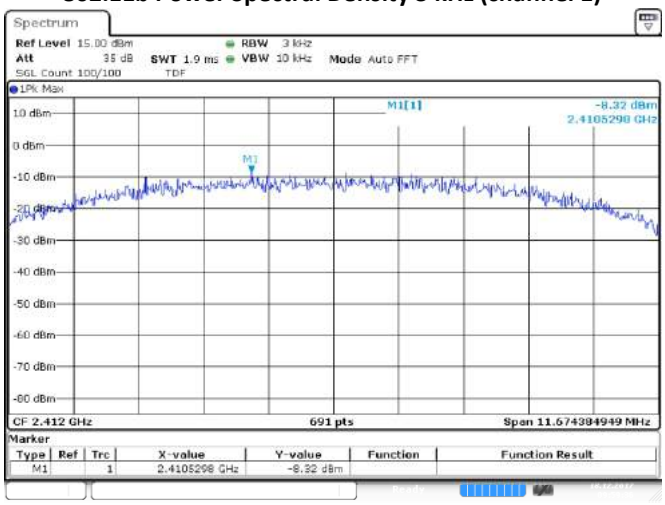
Average Power spectral density

Technology Std.	Channels	Frequency (MHz)	Data rate	PSD/100 kHz (dBm)
IEEE 802.11g	1	2412	54 Mbps	-10.69
	6	2437	54 Mbps	-10.75
	11	2462	54 Mbps	-10.81
Uncertainty	±0.63 dB			

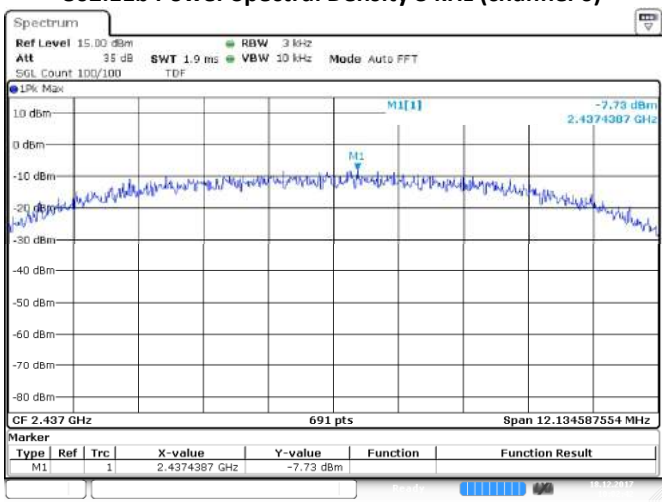
Note: Power Spectral Density (dBm) =Conducted Power Spectral Density(dBm) + antenna gain (dBi)

3.4.6 Plots of the Power Spectral Density Measurements

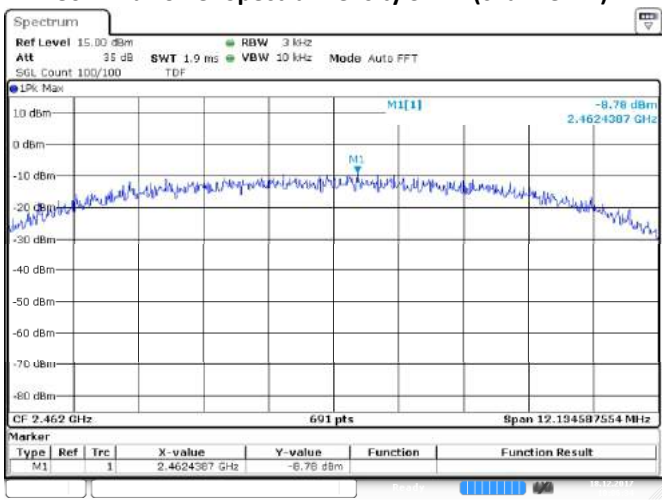
802.11b Power Spectral Density 3 kHz (channel 1)



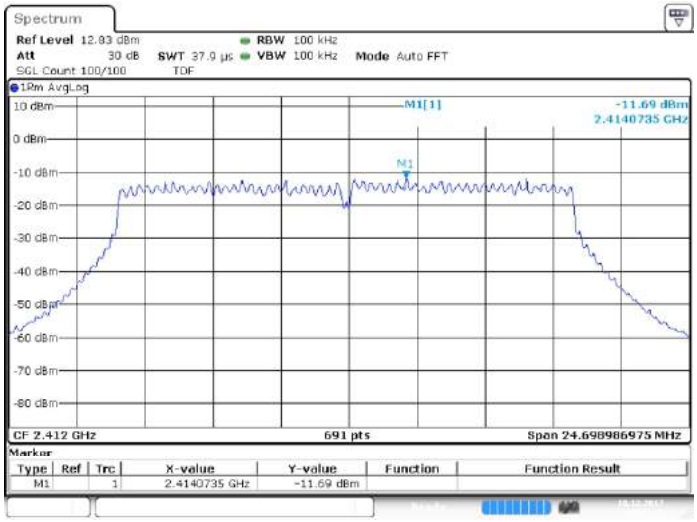
802.11b Power Spectral Density 3 kHz (channel 6)



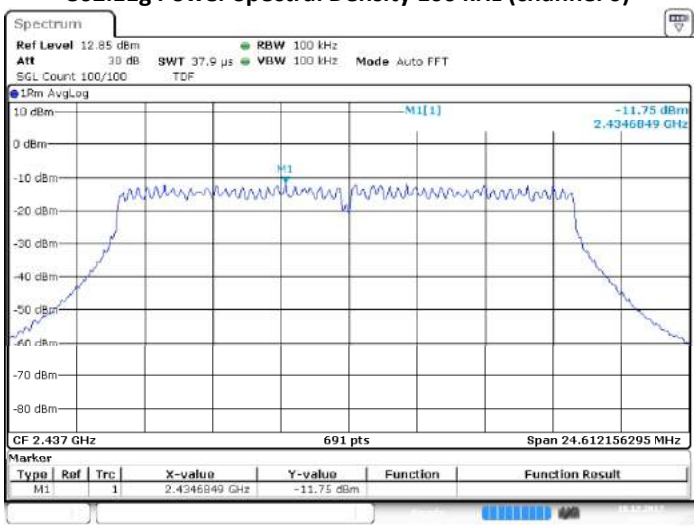
802.11b Power Spectral Density 3 kHz (channel 11)



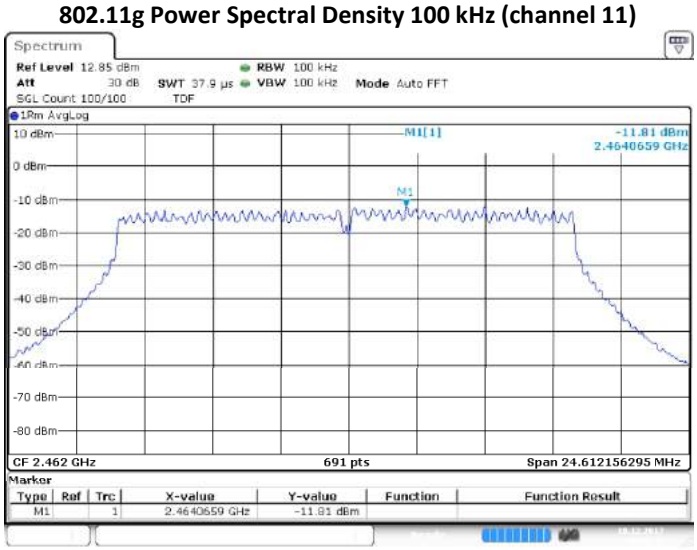
802.11g Power Spectral Density 100 kHz (channel 1)



802.11g Power Spectral Density 100 kHz (channel 6)



802.11g Power Spectral Density 100 kHz (channel 11)



3.5 Conducted Band edge and Spurious Emissions Measurement

3.5.1 Limit

Spurious Emissions:
In any 100 kHz bandwidth outside the operating frequency band, the RF power shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either a RF conducted or a radiated measurement.

Band edge:
At the edge of the authorized band the RF power shall be at least 20 dB down.

3.5.2 Measurement instruments

The measurement instruments are listed in chapter 2.5 of this report.

3.5.3 Test setup

The test setup is as shown in chapter 2.3 of this report.

3.5.4 Test procedure

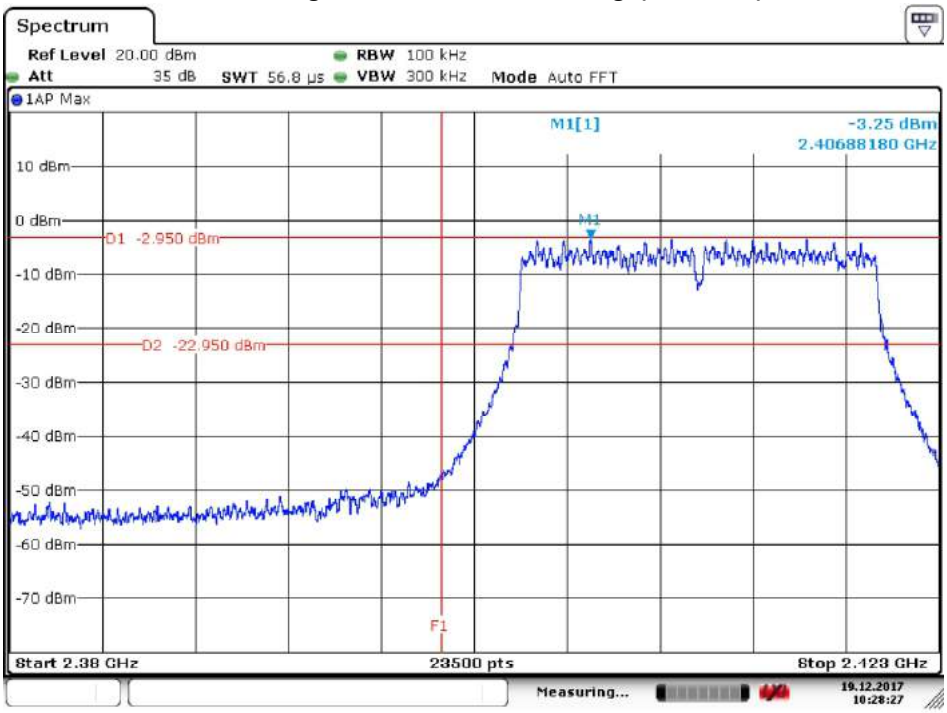
According to KDB Publication 558074 V03r05, sections 11.3 and 12.1.

3.5.5 Test results of conducted Band Edge Measurements

See next page.

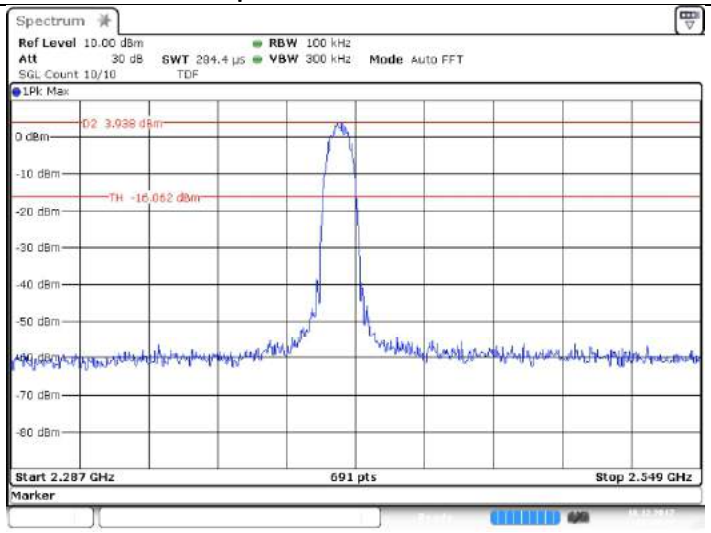
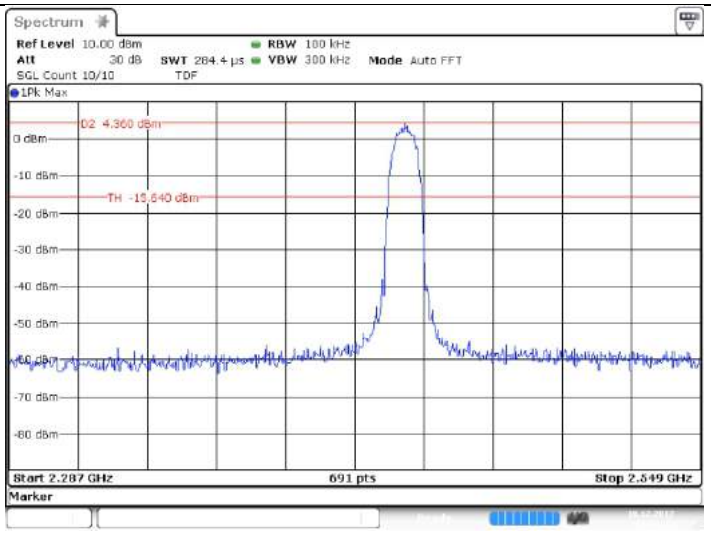
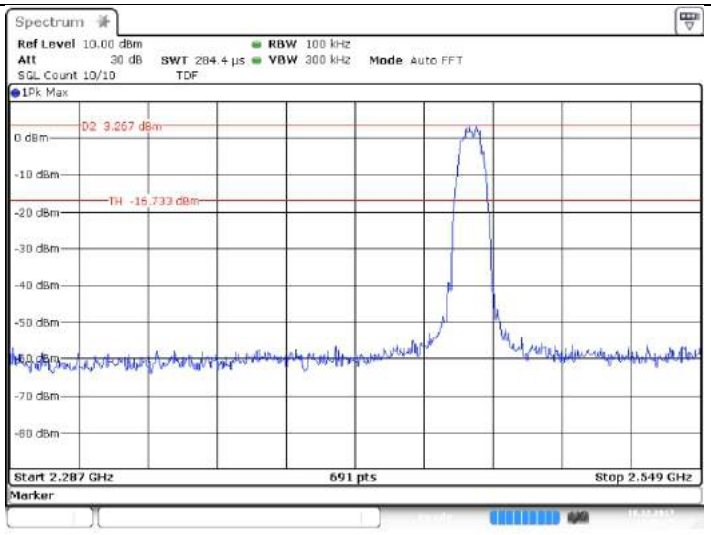
3.5.6 Plots of the Conducted Spurious an Band edge Measurements

IEEE 802.11g Conducted Lower band edge(Channel 1)

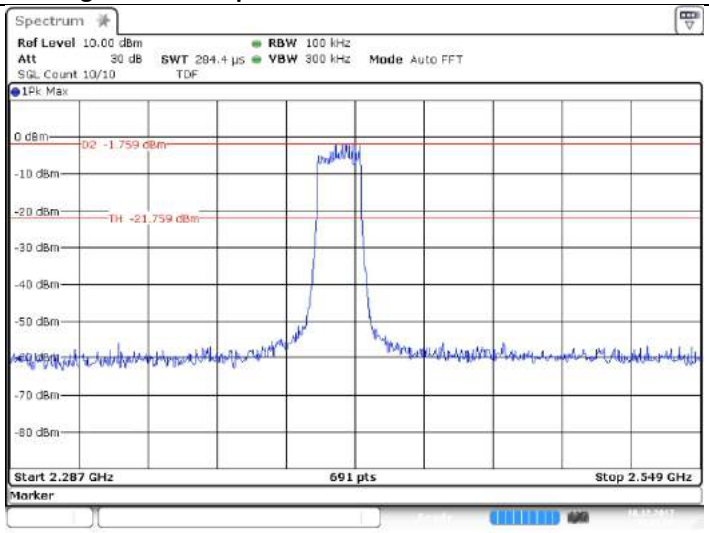
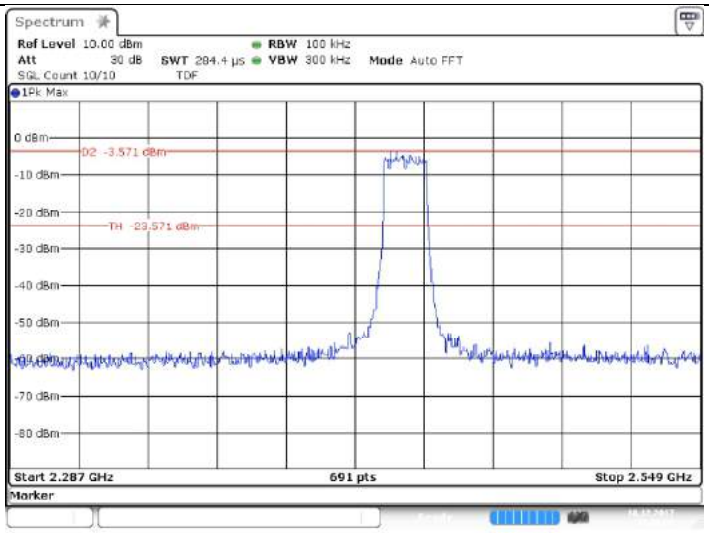
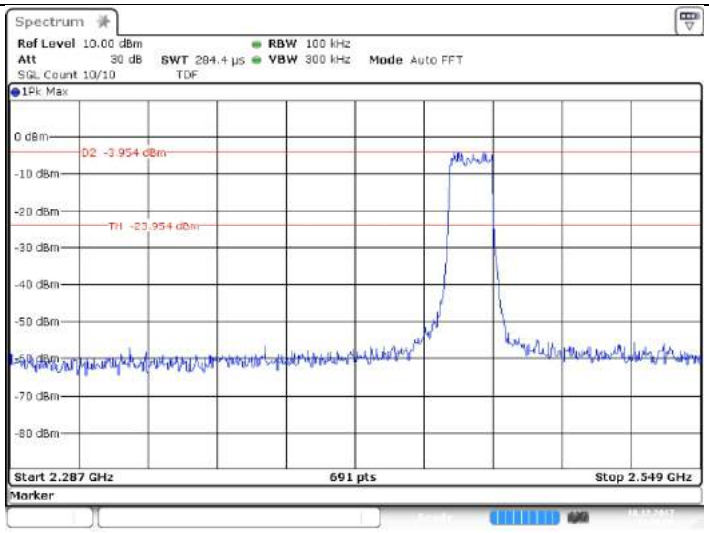


As channel 11 is more than 20 MHz away from the band edge, no measurements were performed for channel 11

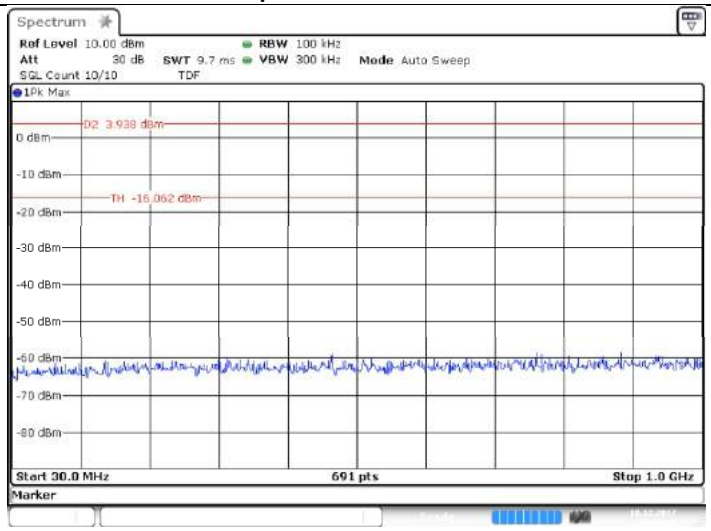
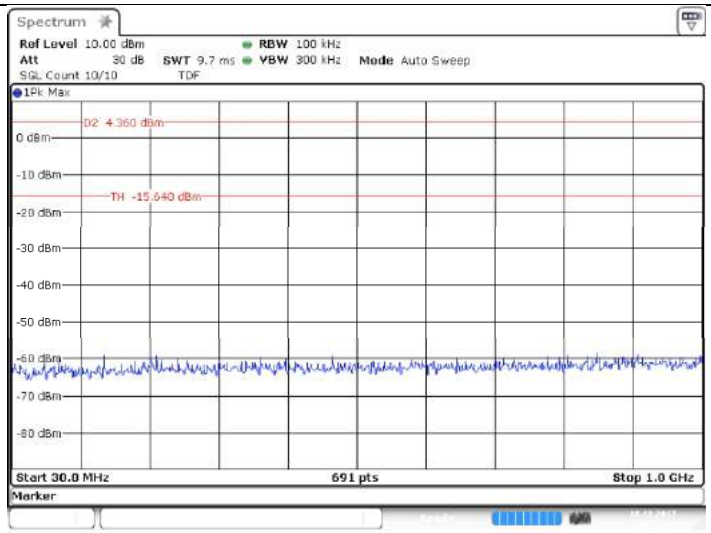
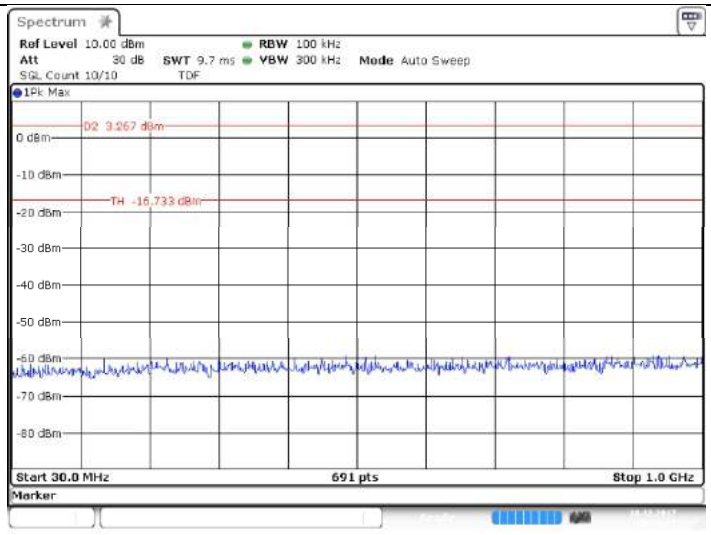
IEEE 802.11b Conducted Spurious Emissions Fundamental level

Low ch	
Mid ch	
High ch	

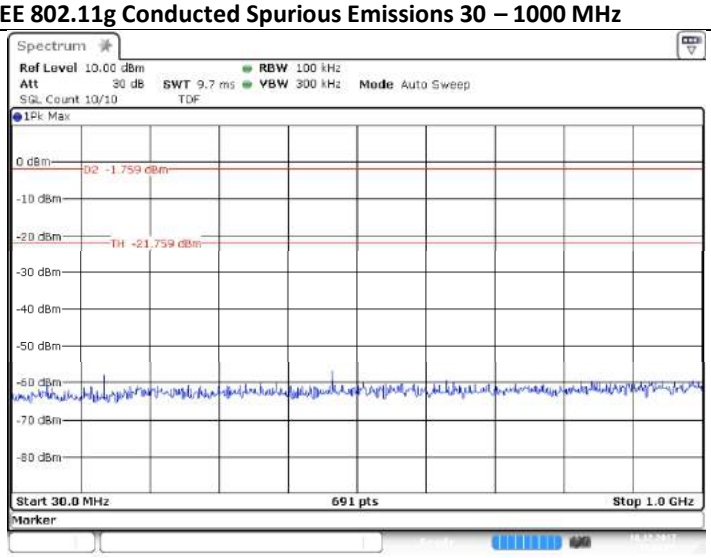
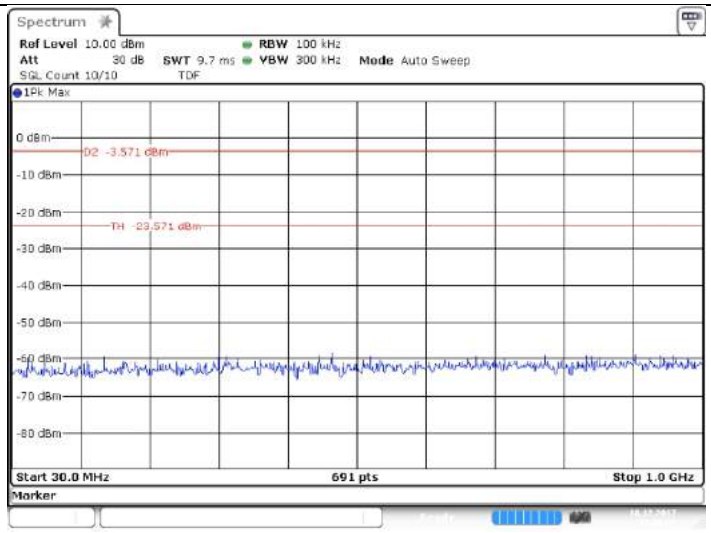
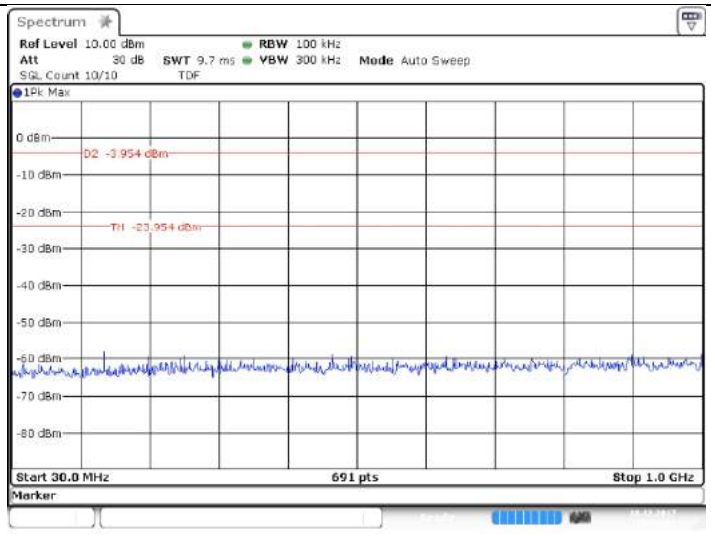
IEEE 802.11g Conducted Spurious Emissions Fundamental level

Low ch	
Mid ch	
High ch	

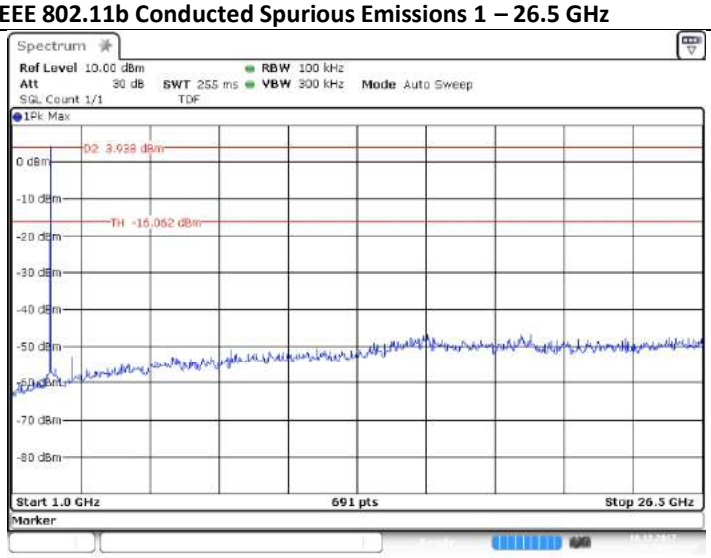
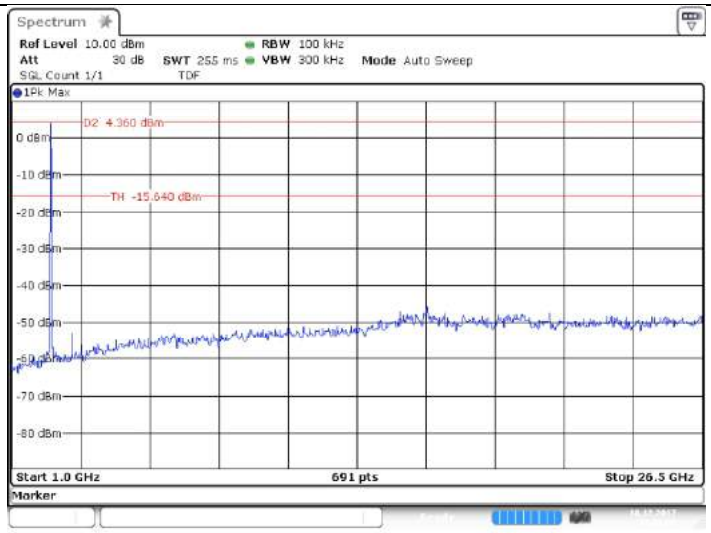
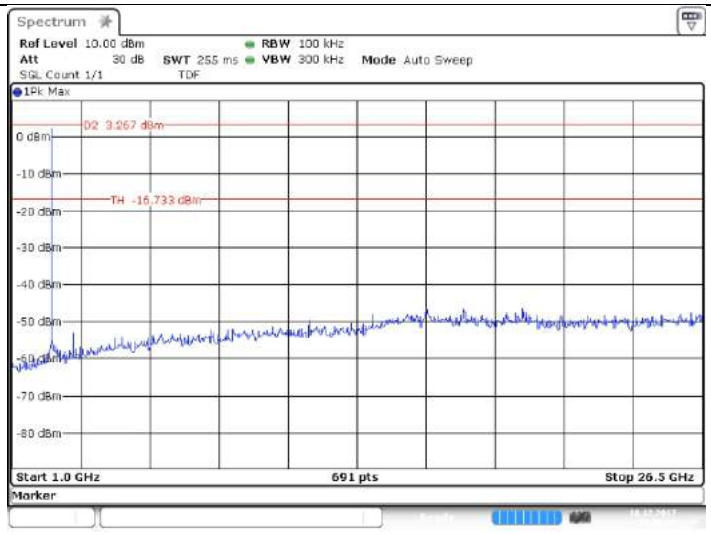
IEEE 802.11b Conducted Spurious Emissions 30 – 1000 MHz

Low ch	
Mid ch	
High ch	

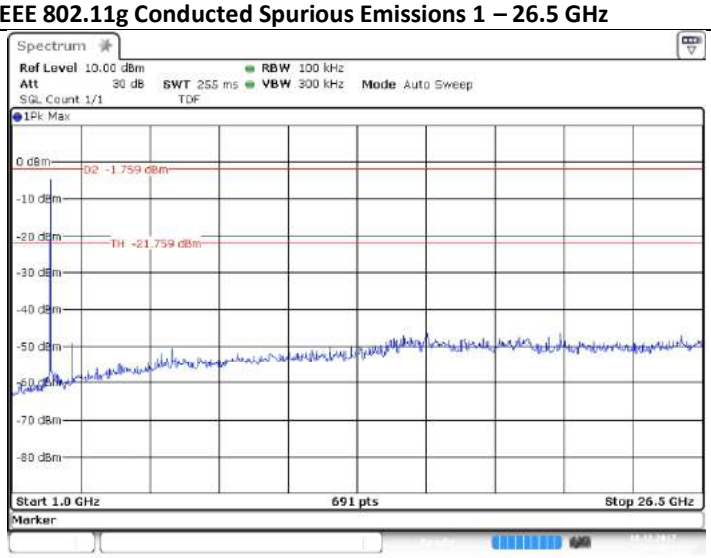
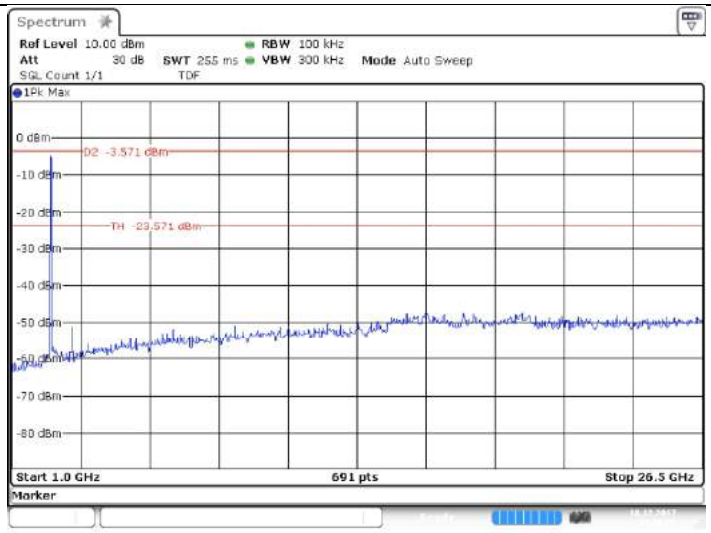
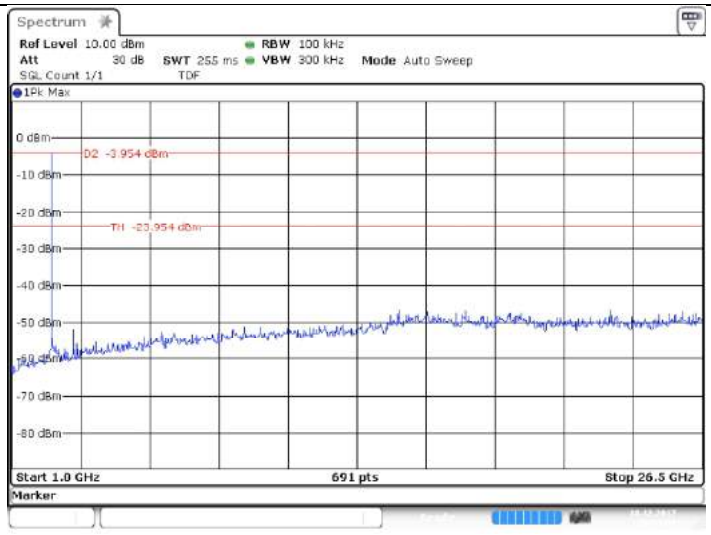
IEEE 802.11g Conducted Spurious Emissions 30 – 1000 MHz

Low ch	
Mid ch	
High ch	

IEEE 802.11b Conducted Spurious Emissions 1 – 26.5 GHz

Low ch	
Mid ch	
High ch	

IEEE 802.11g Conducted Spurious Emissions 1 – 26.5 GHz

Low ch	
Mid ch	
High ch	

3.6 Radiated Spurious Emissions Measurement

3.6.1 Limit

The emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

15.209

Frequency (MHz)	Field strength (µV/m)	Measurement distance(m)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 - 30	30	30
30 -88	100	3
88 - 216	150	3
216-960	200	3
Above 960	500	3

3.6.2 Measurement instruments

The measurement instruments are listed in chapter 2.5 of this report.

3.6.3 Test setup

The test setup is as shown in chapter 2.4 of this report.

3.6.4 Test procedure

The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz.
Radiated emission limits in these three bands are based on measurements employing an average detector.

Other details are according to KDB Publication 558074 V02r05, sections 11.3 and 12.1.

3.6.5 Notes

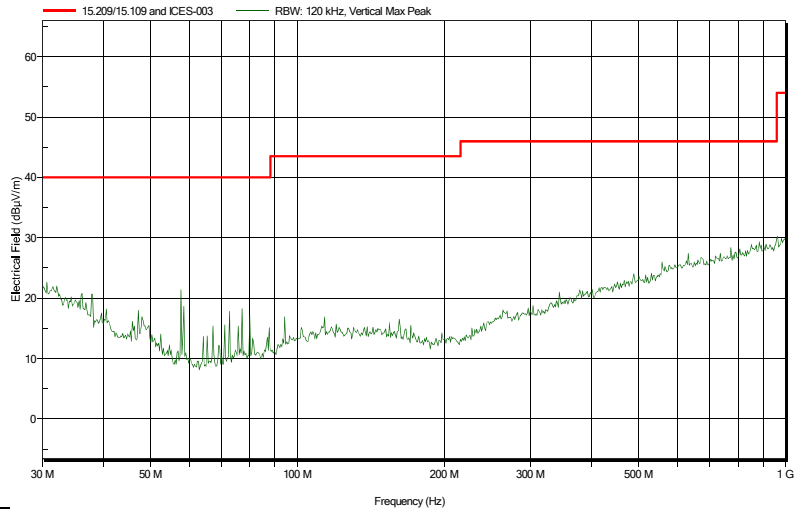
- In the frequency range of 1 – 18 GHz the green trace is measured using a peak detector and the red trace is measured using an average detector. The top limit line represent the peak limit and the bottom limit represents the average limit.

3.6.6 Plots of the Radiated Spurious Emissions Measurement

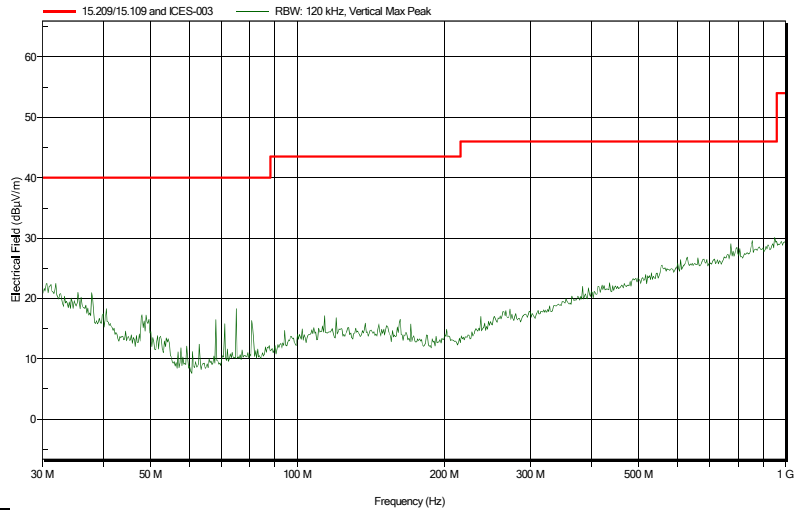
30 – 1000 MHz

Vertical polarization, 802.11b

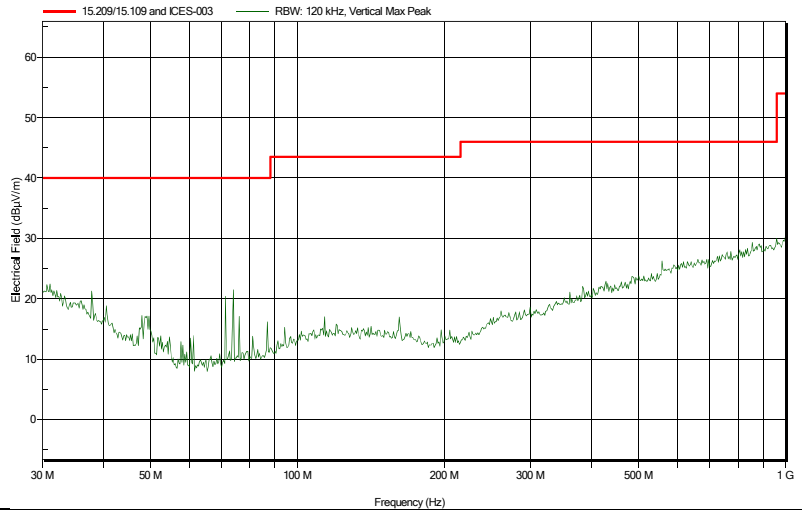
Low ch



Mid ch

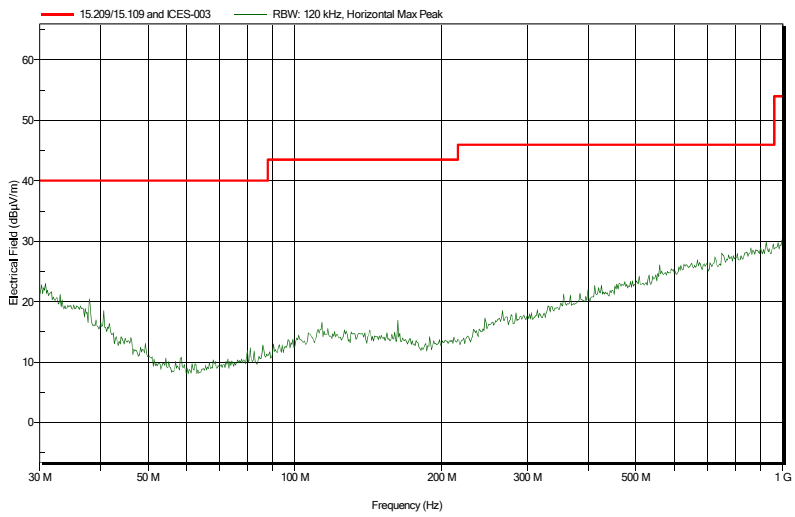
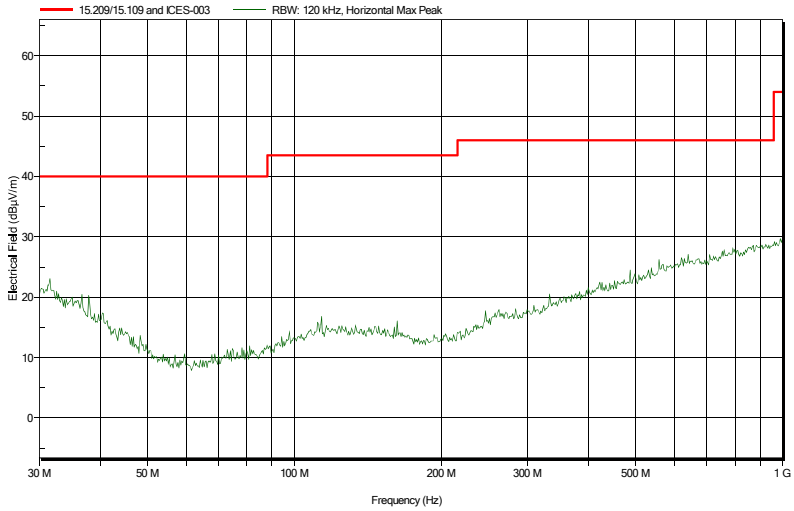
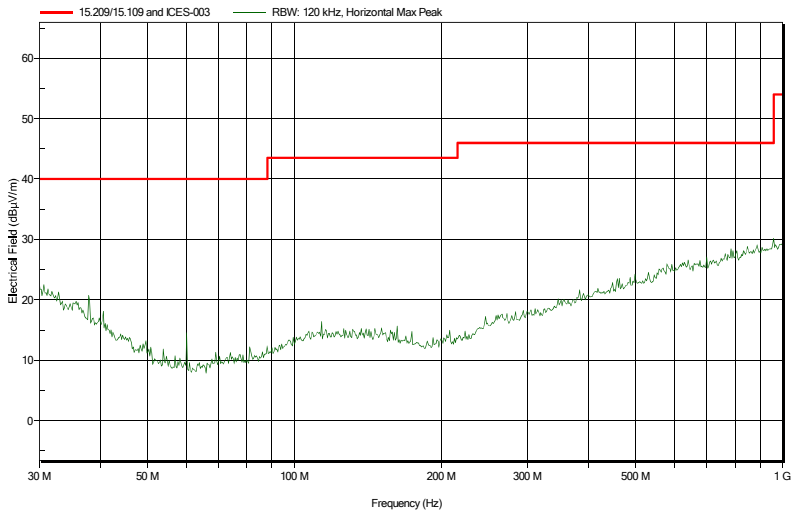


High ch



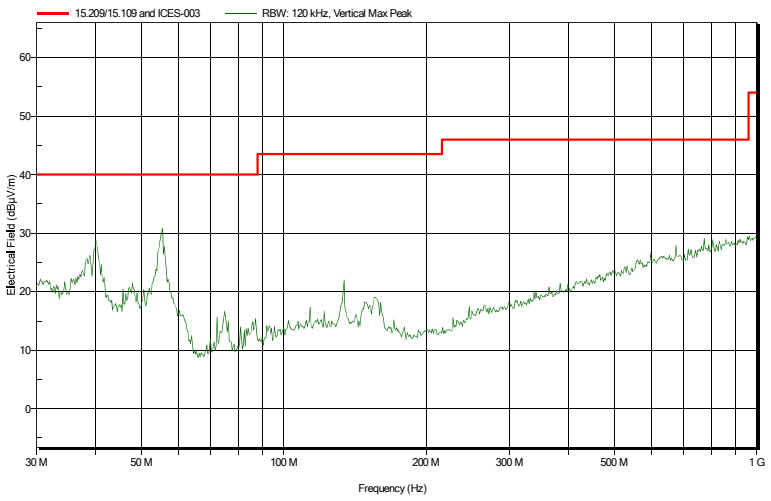
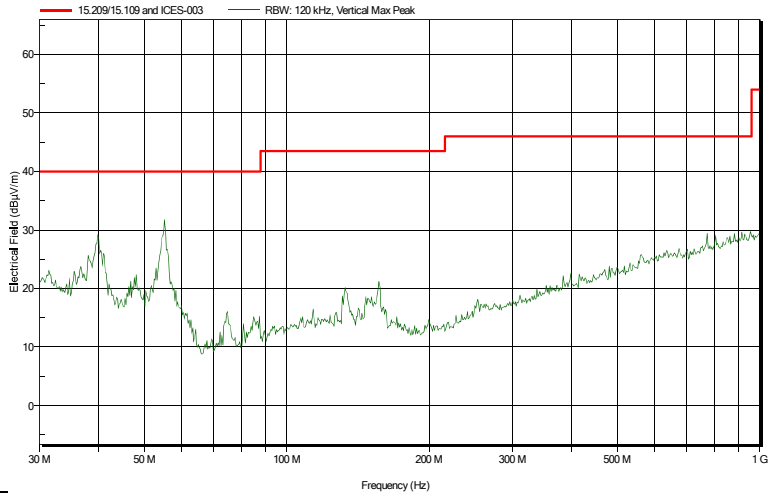
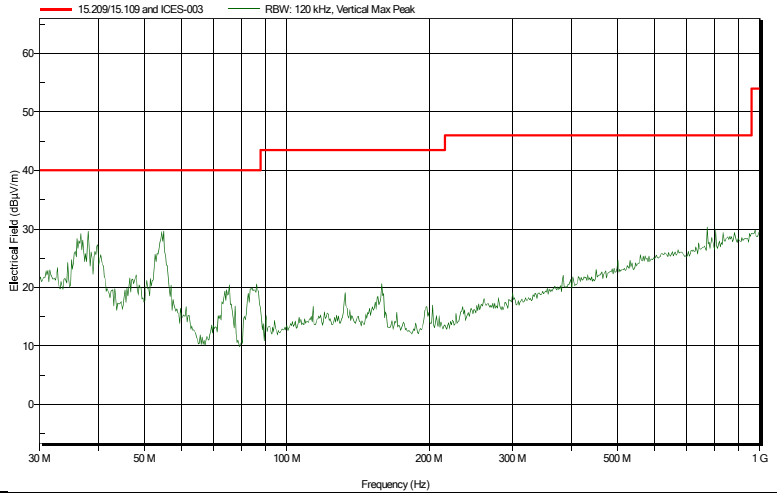
Note: No USB cable connected

Horizontal polarization, 802.11b

Low ch	
Mid ch	
High ch	

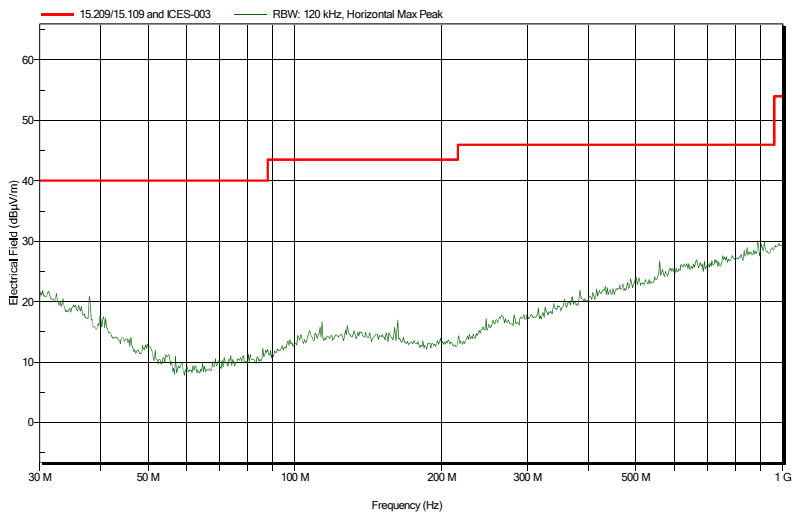
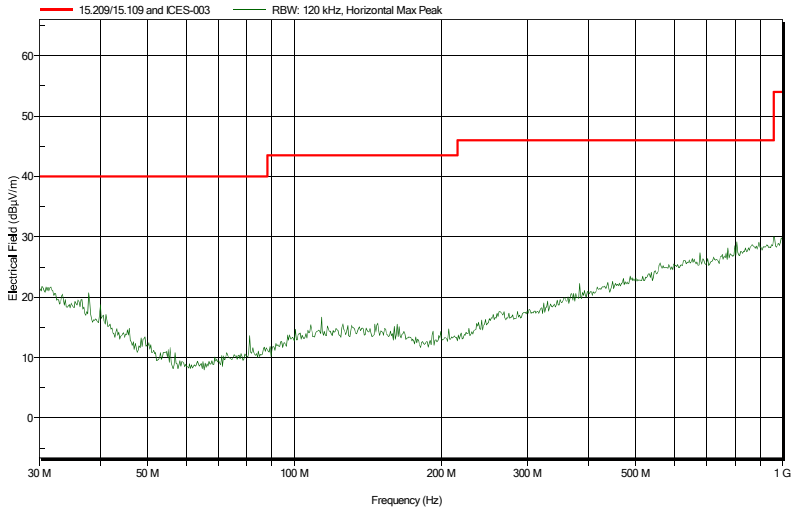
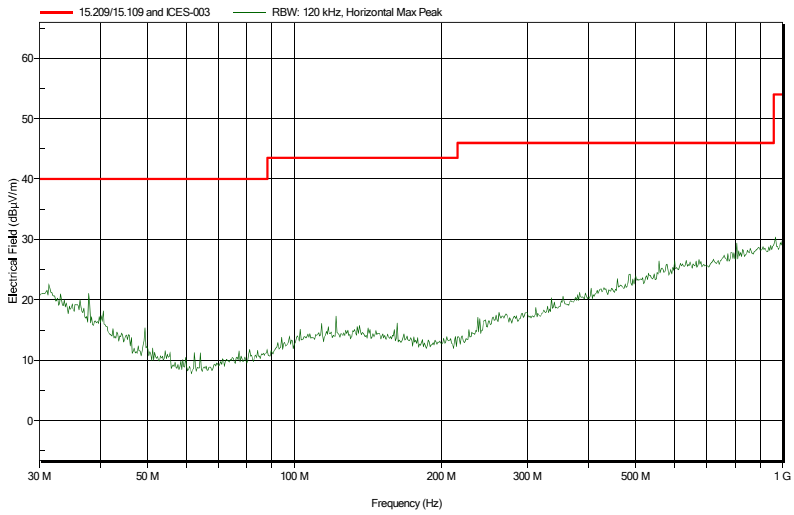
Note: No USB cable connected

Vertical polarization, 802.11g

Low ch	
Mid ch	
High ch	

Note: USB cable connected

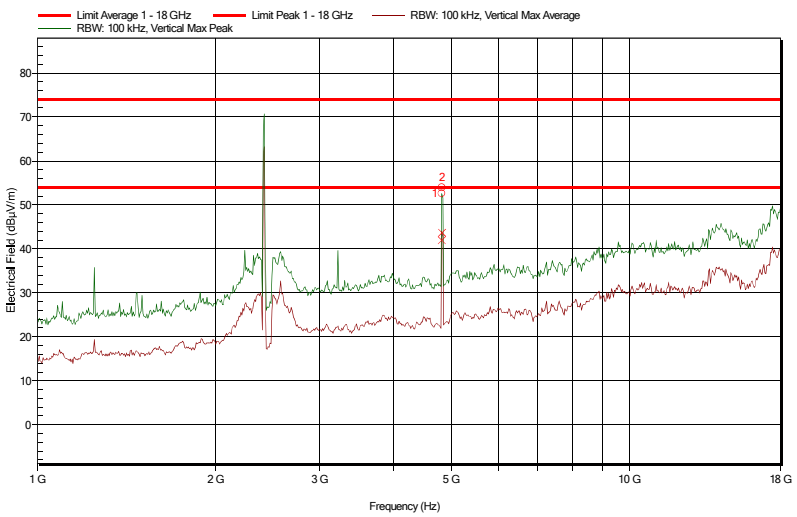
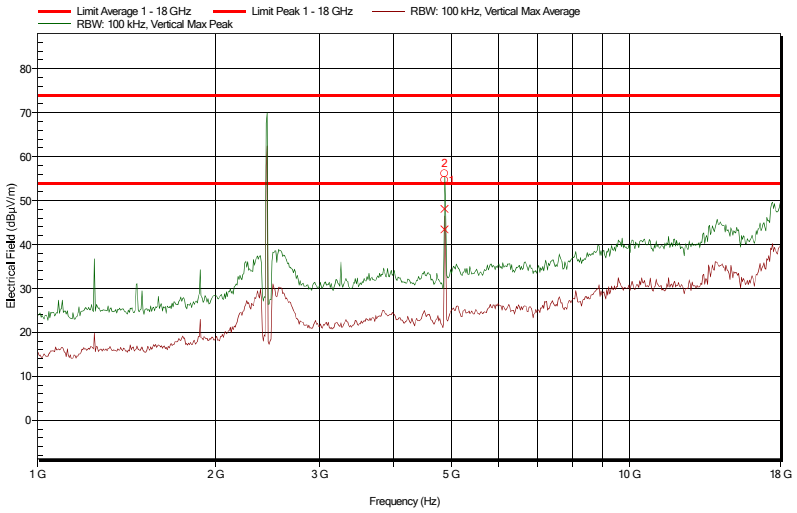
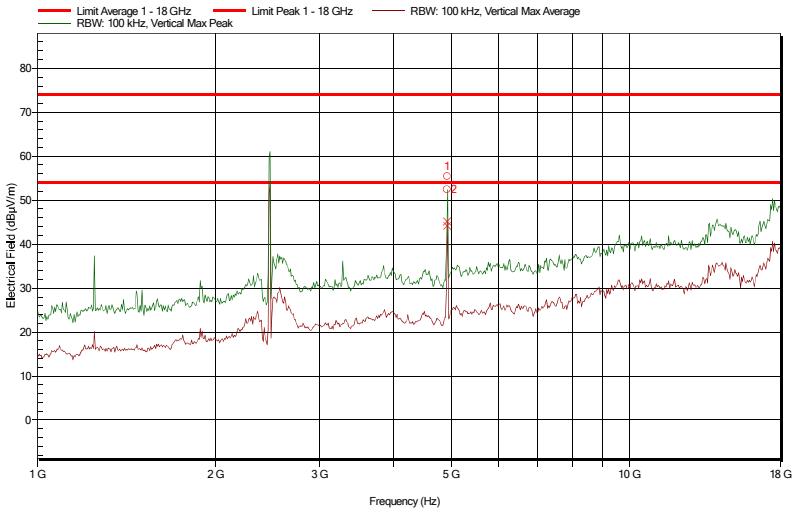
Horizontal polarization, 802.11g

Low ch	
Mid ch	
High ch	

Note: USB cable connected

1 – 18 GHz

Vertical polarization, 802.11b

Low ch	
Mid ch	
High ch	

Measured peaks Vertical 1 – 18 GHz Low channel

Frequency	Polarization	Height	Peak	Average	Peak Limit	Average Limit	Peak Difference	Average Difference
4,823 GHz	Vertical	3,5 m	52,6 dBµV/m	41,9 dBµV/m	74 dBµV/m	54 dBµV/m	-21,4 dB	-12,1 dB

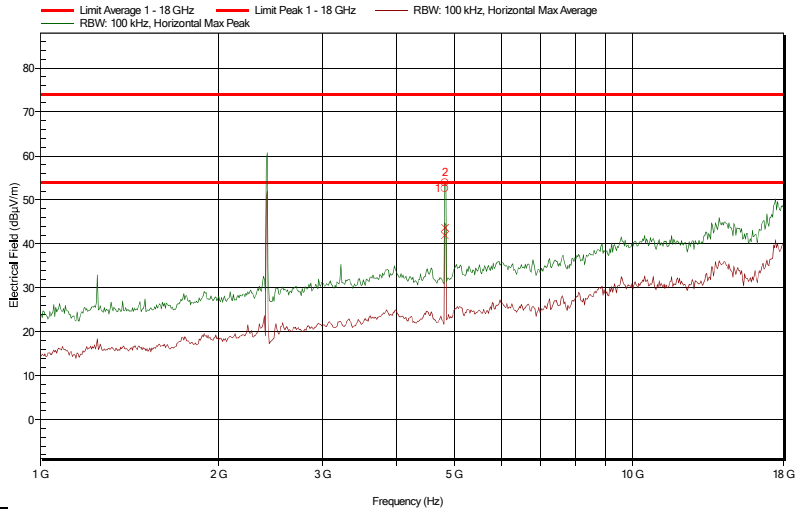
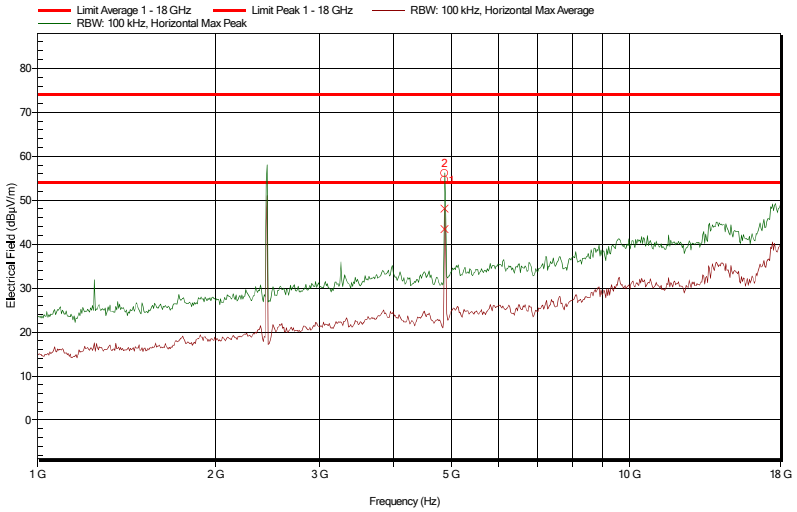
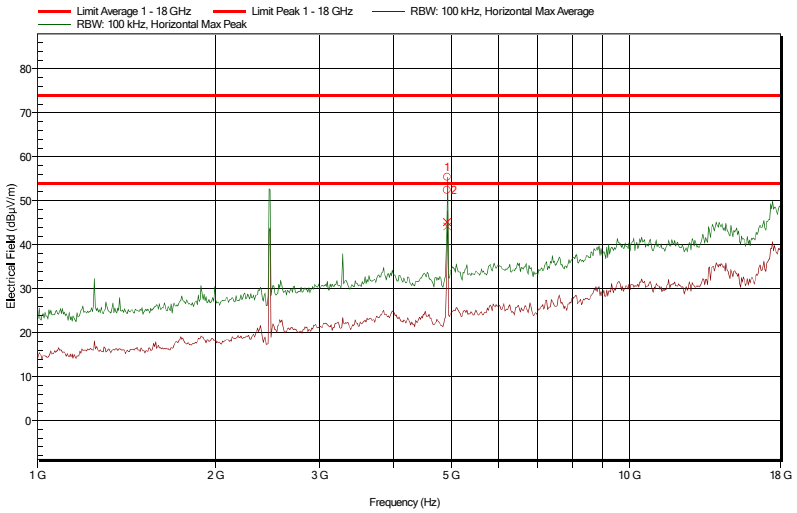
Measured peaks Vertical 1 – 18 GHz Middle channel

Frequency	Polarization	Height	Peak	Average	Peak Limit	Average Limit	Peak Difference	Average Difference
4,874 GHz	Vertical	3 m	54,6 dBµV/m	43,4 dBµV/m	74 dBµV/m	54 dBµV/m	-19,4 dB	-10,6 dB

Measured peaks Vertical 1 – 18 GHz High channel

Frequency	Polarization	Height	Peak	Average	Peak Limit	Average Limit	Peak Difference	Average Difference
4,923 GHz	Vertical	4 m	52,5 dBµV/m	45,2 dBµV/m	74 dBµV/m	54 dBµV/m	-21,5 dB	-8,8 dB

Horizontal polarization, 802.11b

Low ch	
Mid ch	
High ch	

Measured peaks Horizontal 1 – 18 GHz Low channel

Frequency	Polarization	Height	Peak	Average	Peak Limit	Average Limit	Peak Difference	Average Difference
4,825 GHz	Horizontal	3 m	53,9 dBµV/m	43,7 dBµV/m	74 dBµV/m	54 dBµV/m	-20,1 dB	-10,3 dB

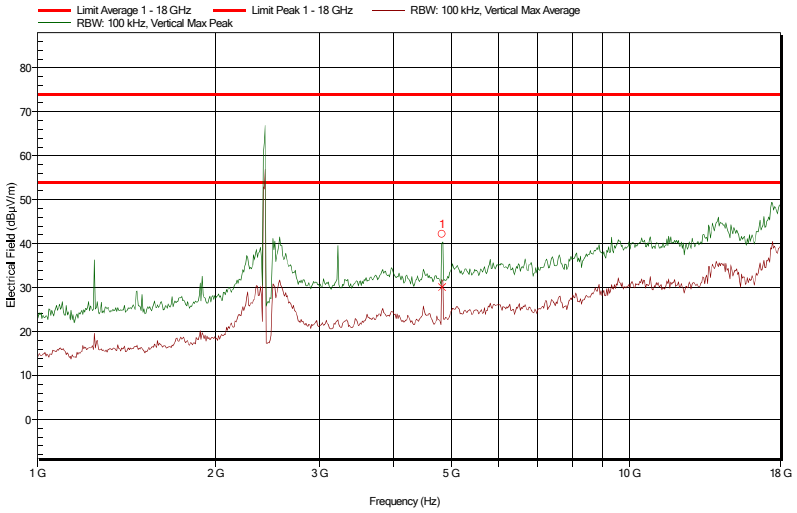
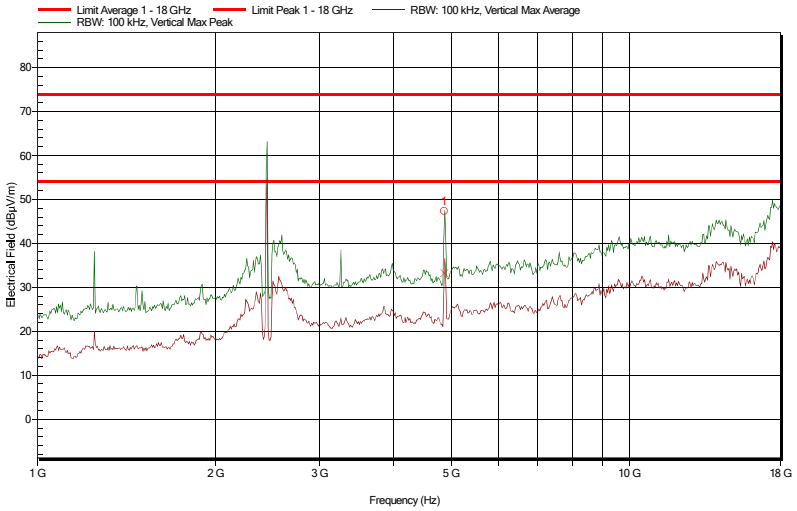
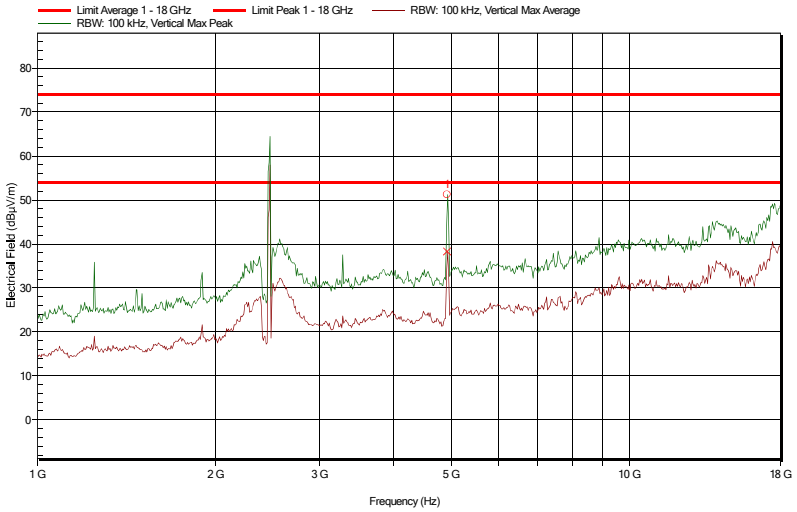
Measured peaks Horizontal 1 – 18 GHz Middle channel

Frequency	Polarization	Height	Peak	Average	Peak Limit	Average Limit	Peak Difference	Average Difference
4,874 GHz	Horizontal	1,5 m	56,2 dBµV/m	48,1 dBµV/m	74 dBµV/m	54 dBµV/m	-17,8 dB	-5,9 dB

Measured peaks Horizontal 1 – 18 GHz High channel

Frequency	Polarization	Height	Peak	Average	Peak Limit	Average Limit	Peak Difference	Average Difference
4,927 GHz	Horizontal	1,5 m	55,4 dBµV/m	44,2 dBµV/m	74 dBµV/m	54 dBµV/m	-18,6 dB	-9,8 dB

Vertical polarization, 802.11g

Low ch	
Mid ch	
High ch	

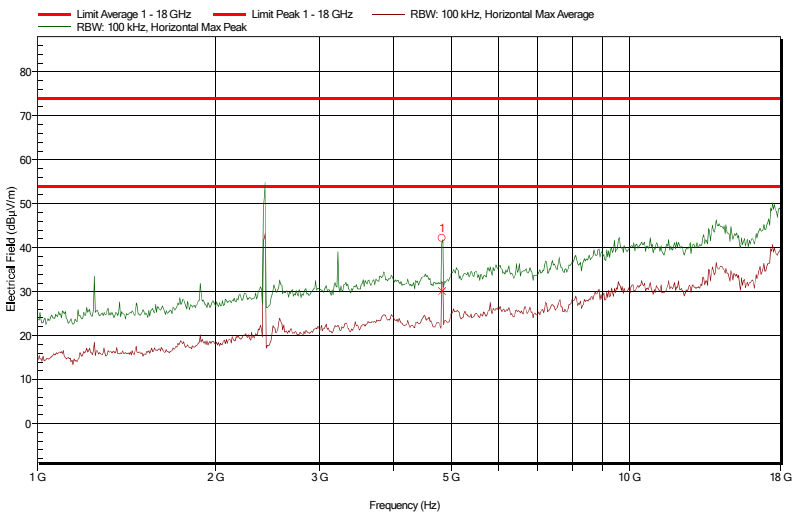
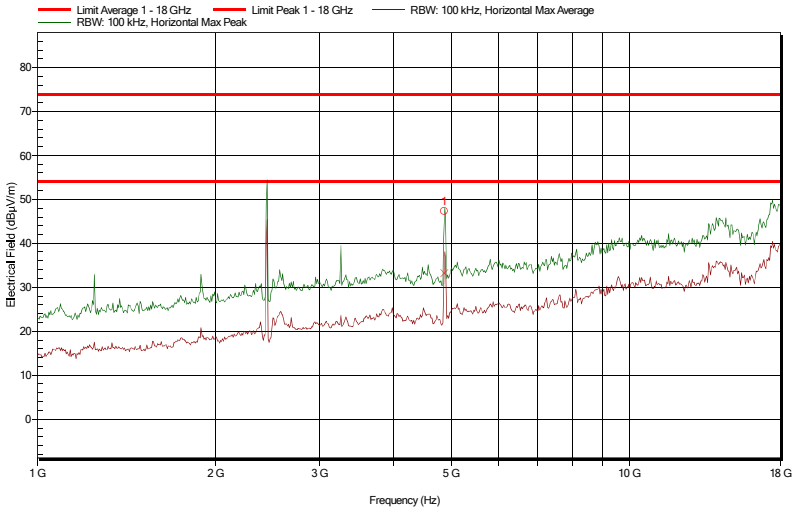
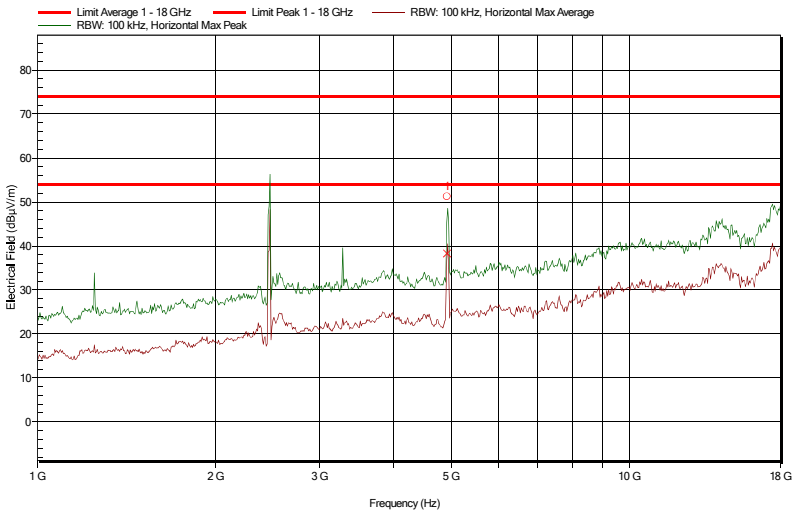
Measured peaks Vertical 1 – 18 GHz Middle channel

Frequency	Polarization	Height	Peak	Average	Peak Limit	Average Limit	Peak Difference	Average Difference
4,872 GHz	Vertical	1,5 m	47,3 dBµV/m	33,2 dBµV/m	74 dBµV/m	54 dBµV/m	-26,7 dB	-20,8 dB

Measured peaks Vertical 1 – 18 GHz High channel

Frequency	Polarization	Height	Peak	Average	Peak Limit	Average Limit	Peak Difference	Average Difference
4,923 GHz	Vertical	4 m	51,3 dBµV/m	38,3 dBµV/m	74 dBµV/m	54 dBµV/m	-22,7 dB	-15,7 dB

Horizontal polarization, 802.11g

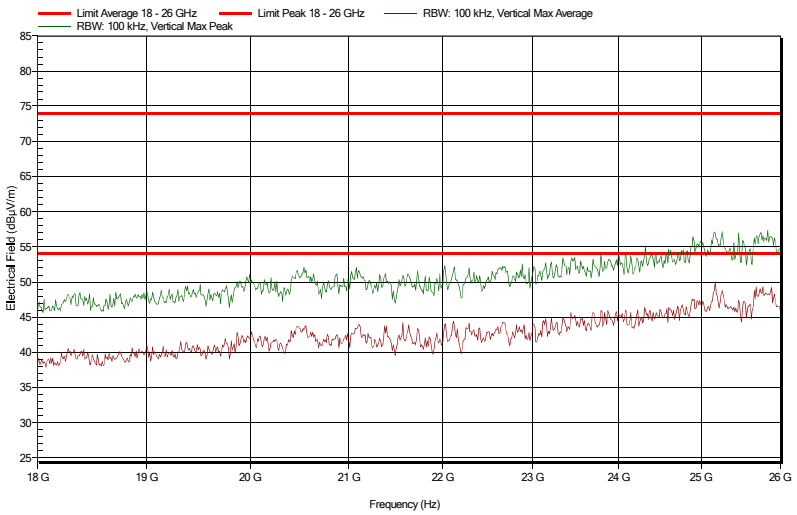
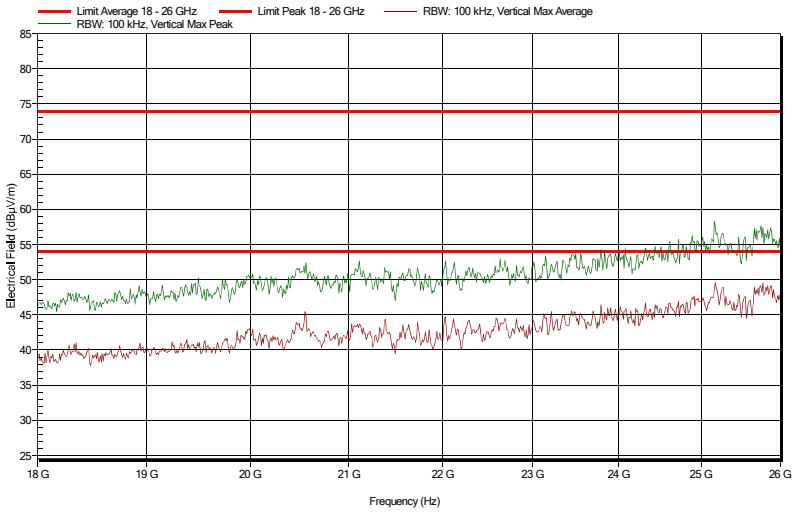
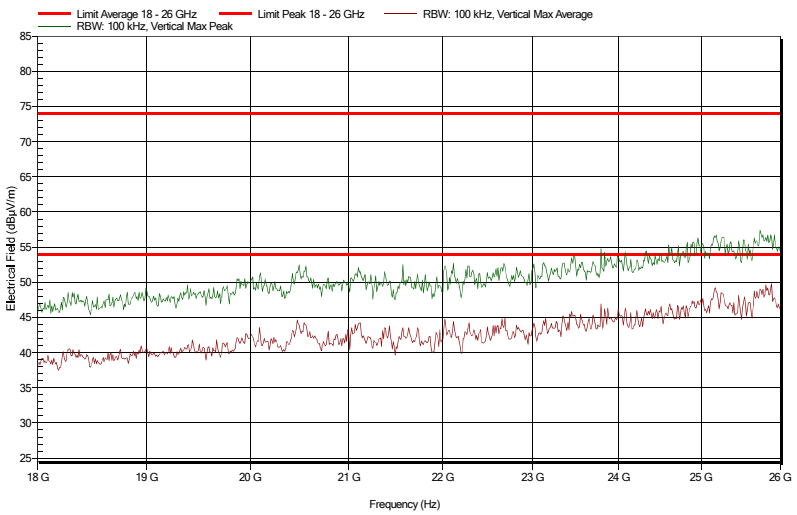
Low ch	
Mid ch	
High ch	

Measured peaks Horizontal 1 – 18 GHz Low channel

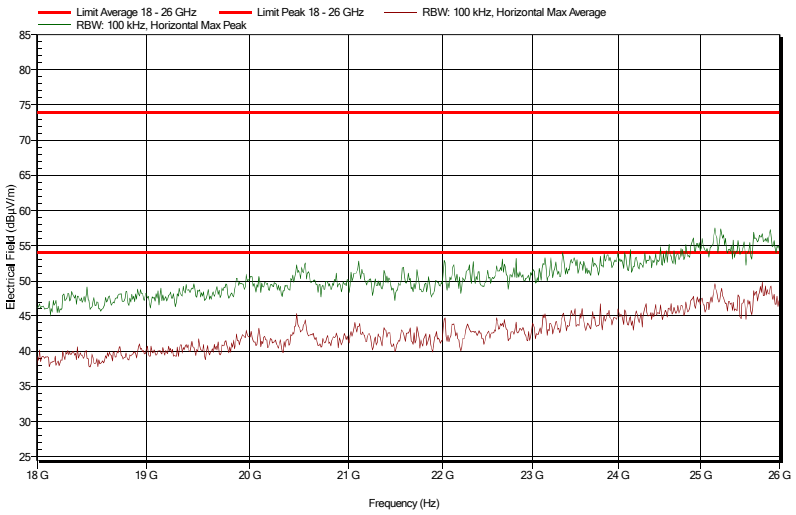
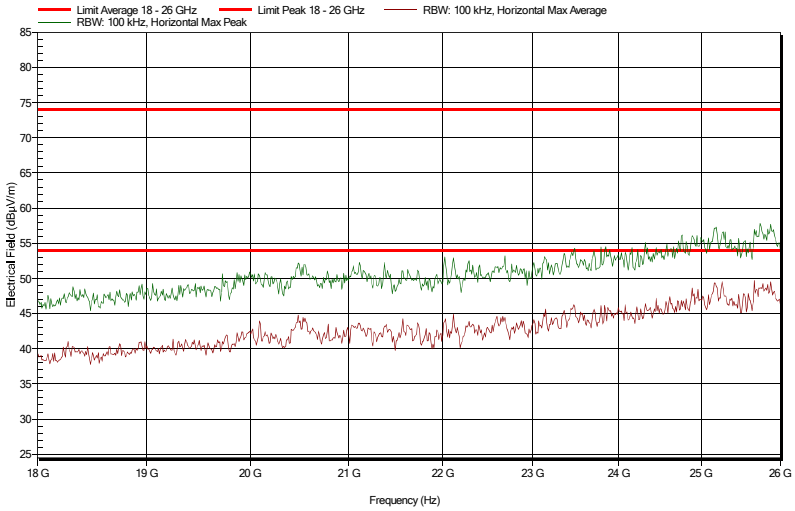
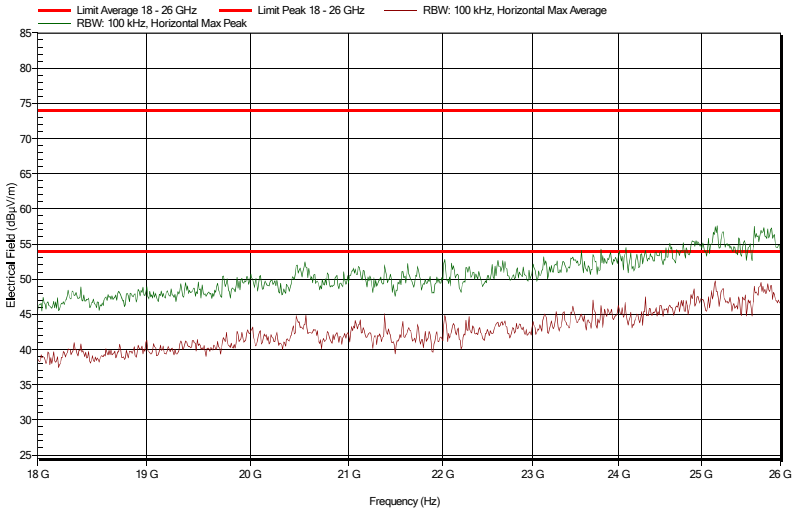
Frequency	Polarization	Height	Peak	Average	Peak Limit	Average Limit	Peak Difference	Average Difference
4,825 GHz	Horizontal	1,5 m	42,2 dBµV/m	30,1 dBµV/m	74 dBµV/m	54 dBµV/m	-31,8 dB	-23,9 dB

18 GHz to 26.5 GHz

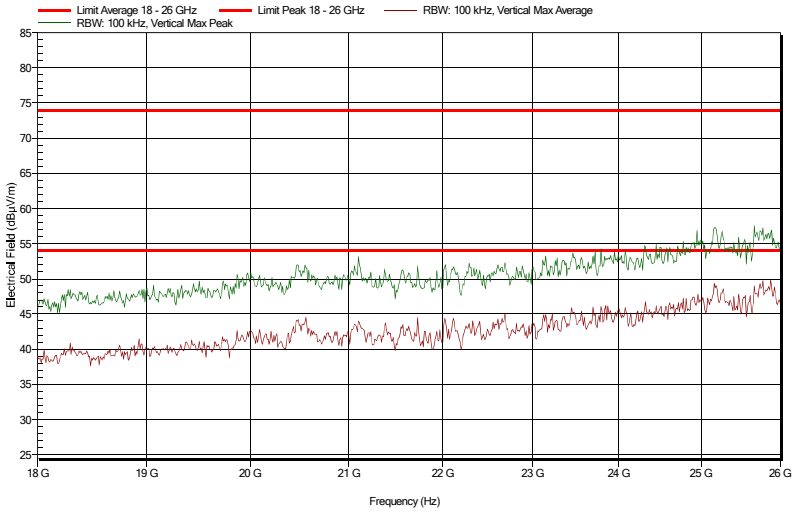
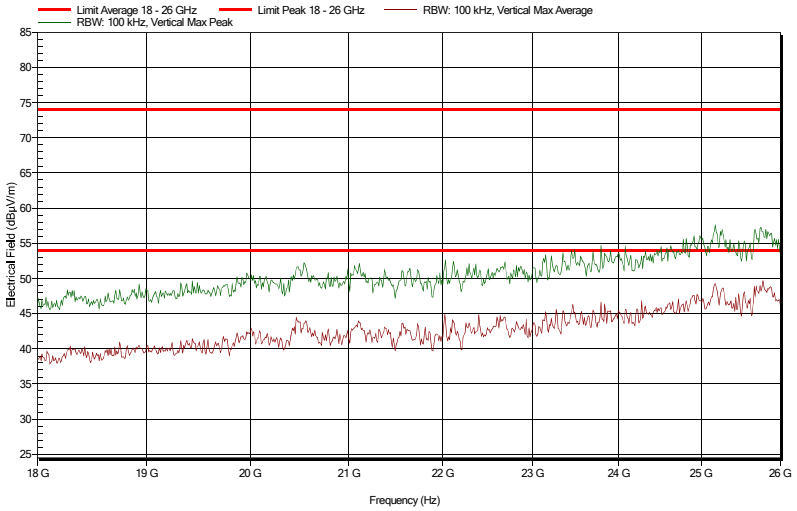
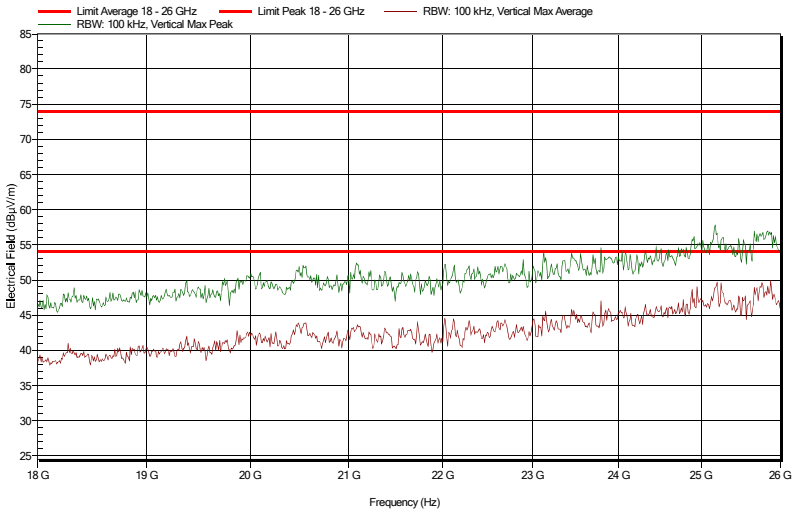
Vertical polarization, 802.11b

Low ch	
Mid ch	
High ch	

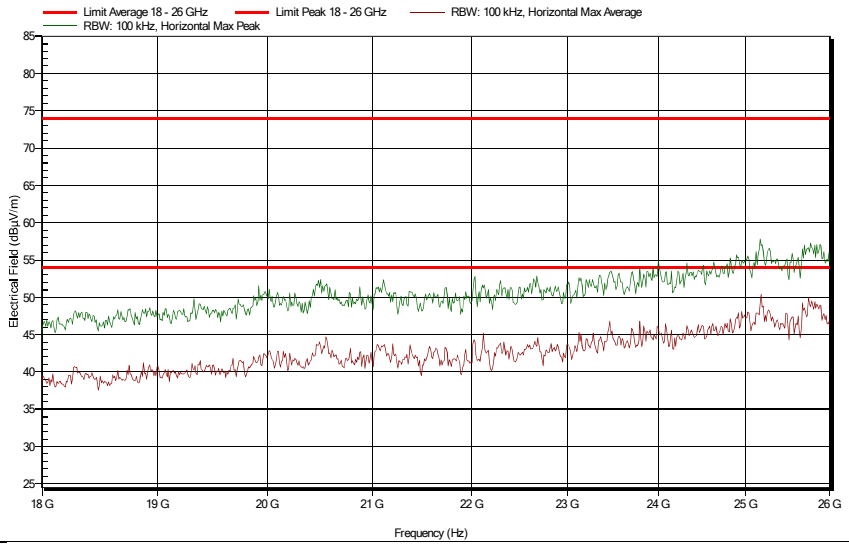
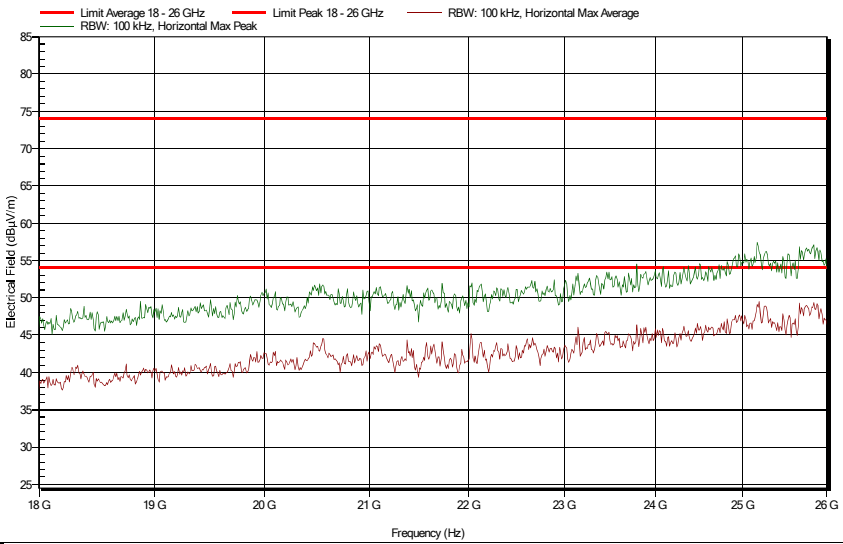
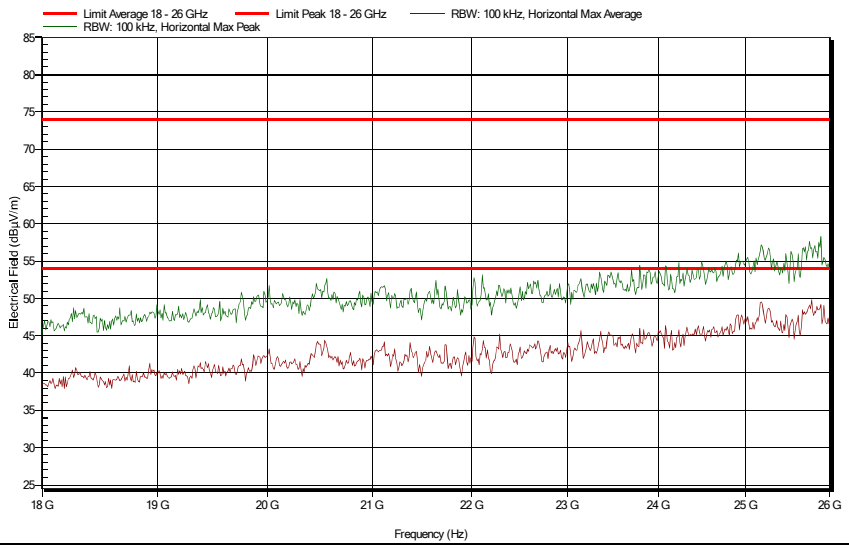
Horizontal polarization, 802.11b

Low ch	
Mid ch	
High ch	

Vertical polarization, 802.11g

Low ch	
Mid ch	
High ch	

Horizontal polarization, 802.11g

Low ch	
Mid ch	
High ch	

3.6.7 Measurement Uncertainty

Measurement uncertainty Radiated emissions below 1 GHz

Horizontal polarization	
30 – 200 MHz	4.5 dB
200 – 1000 MHz	3.6 dB
Vertical polarization	
30 – 200 MHz	5.4 dB
200 – 1000 MHz	4.6 dB

Measurement uncertainty Radiated emissions above 1 GHz

1000- 18000 MHZ	5.7 dB
18000 – 26000 MHZ	3.9 dB

3.7 AC conducted mains measurement

3.7.1 Limit

According to 15.207 (a)

an intentional radiator 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 limits in the following table.

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.

3.7.2 Measurement instruments

The measurement instruments are listed in chapter 2.5 of this report.

3.7.3 Test setup

The test setup is as shown in chapter 2.3 of this report.

3.7.4 Test procedure

According to ANSI C63.4: 2014, section 13.3.

3.7.5 Test results and plots of the AC conducted mains measurement

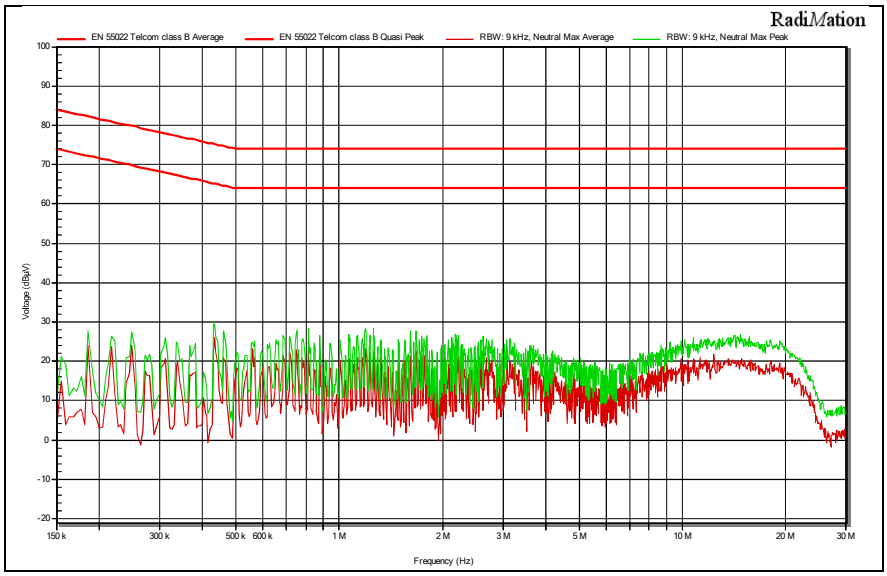
See next page.

3.7.6 Measurement uncertainty

+/- 3.6 dB.

3.7.7 Plots of the AC conducted spurious measurement

Phase



Neutral