



FCC RADIO TEST REPORT

FCC ID : IHDT56XM1
Equipment : Mobile Cellular Phone
Brand Name : Motorola
Model Name : XT2000-1
Applicant : Motorola Mobility LLC
222 W Merchandise Mart Plaza, Suite 1800,
Chicago, IL 60654, United States
Manufacturer : Motorola Mobility LLC
222 W Merchandise Mart Plaza, Suite 1800,
Chicago, IL 60654, United States
Standard : FCC Part 15 Subpart C §15.247

The product was received on Jan. 24, 2019 and testing was started from Jan. 31, 2019 and completed on Feb. 22, 2019. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Approved by: Jones Tsai

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory

No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)



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History of this test report

Report No.	Version	Description	Issued Date
FR912419C	01	Initial issue of report	Mar. 25, 2019
FR912419C	02	Remove watermark.	Mar. 29, 2019

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.247(a)(2)	6dB Bandwidth	Pass	-
3.1	2.1049	99% Occupied Bandwidth	Reporting only	-
3.2	15.247(b)	Power Output Measurement	Pass	-
3.3	15.247(e)	Power Spectral Density	Pass	-
3.4	15.247(d)	Conducted Band Edges	Pass	-
		Conducted Spurious Emission	Pass	-
3.5	15.247(d)	Radiated Band Edges and Radiated Spurious Emission	Pass	Under limit 3.13 dB at 2390.000 MHz
3.6	15.207	AC Conducted Emission	Pass	Under limit 19.00 dB at 2.83425 MHz
3.7	15.203 & 15.247(b)	Antenna Requirement	Pass	-

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: Wii Chang

Report Producer: Natasha Hsieh



1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Cellular Phone
Brand Name	Motorola
Model Name	XT2000-1
FCC ID	IHDT56XM1
IMEI Code	Conducted : IMEI: 355573090013332 Conduction : IMEI: 355573090013654 Radiation : IMEI: 355573090013720
EUT supports Radios application	CDMA/EV-DO/GSM/EGPRS/WCDMA/HSPA/LTE/GNSS/ NFC WLAN 11b/g/n HT20 WLAN 11a/n HT20/HT40 WLAN 11ac VHT20/VHT40/VHT80 Bluetooth BR/EDR/LE
HW Version	DVT3
EUT Stage	Identical Prototype

Remark: The above EUT's information was declared by manufacturer.

Accessory List	
AC Adapter	Brand Name : Motorola
	Model Name : SA18C45883
	Manufacturer : Salom
Battery 1	Brand Name : Motorola
	Model Name : KV40
	Manufacturer : Amperex
Battery 2	Brand Name : Motorola
	Model Name : KV30
	Manufacturer : Amperex
Headset Jack Adaptor	Brand Name : Motorola
	Model Name : SC18C45885
	Manufacturer : Luxshare
USB-C Data Cable	Brand Name : Motorola
	Model Name : SC18C45884
	Manufacturer : Luxshare
USB-C Headset 2	Brand Name : Motorola
	Model Name : SH38C48284
	Manufacturer : Grandsun

Supported Unit Used in Test Configuration and System	
USB-C Headset 1	Brand Name : Google
	Model Name : G019A
	Manufacturer : Grandsun

1.2 Product Specification of Equipment Under Test

Standards-related Product Specification												
Tx/Rx Channel Frequency Range		2412 MHz ~ 2462 MHz										
Maximum Output Power to antenna		<Ant. 1> 802.11b : 17.30 dBm (0.0537 W) 802.11g : 17.20 dBm (0.0525 W) 802.11n HT20 : 17.10 dBm (0.0513 W) <Ant. 2> 802.11b : 17.30 dBm (0.0537 W) 802.11g : 17.20 dBm (0.0525 W) 802.11n HT20 : 17.10 dBm (0.0513 W) MIMO <Ant. 1+2> 802.11b : 20.46 dBm (0.1112 W) 802.11g : 20.41 dBm (0.1099 W) 802.11n HT20 : 20.27 dBm (0.1064 W)										
99% Occupied Bandwidth		MIMO <Ant. 1> 802.11b : 14.00MHz 802.11g : 18.15MHz 802.11n HT20 : 18.05MHz MIMO <Ant. 2> 802.11b : 14.05MHz 802.11g : 18.05MHz 802.11n HT20 : 18.05MHz										
Antenna Type / Gain		<Ant. 1> : Fixed Internal type with gain 0.60 dBi <Ant. 2> : Fixed Internal type with gain -6.50 dBi										
Type of Modulation		802.11b : DSSS (DBPSK / DQPSK / CCK) 802.11g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)										
Antenna Function Description		<table><tr><td></td><td>Ant. 1</td><td>Ant. 2</td></tr><tr><td>802.11 b/g/n</td><td>V</td><td>V</td></tr><tr><td>802.11 b/g/n MIMO</td><td>V</td><td>V</td></tr></table>			Ant. 1	Ant. 2	802.11 b/g/n	V	V	802.11 b/g/n MIMO	V	V
	Ant. 1	Ant. 2										
802.11 b/g/n	V	V										
802.11 b/g/n MIMO	V	V										

Remark: MIMO Ant. 1+2 is a calculated result from sum of the power MIMO Ant. 1 and MIMO Ant. 2.

1.3 Modification of EUT

No modifications are made to the EUT during all test items.



1.4 Testing Location

Test Site	SPORTON INTERNATIONAL INC.		
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978		
Test Site No.	Sporton Site No.		
	TH05-HY	CO05-HY	03CH07-HY

Note: The test site complies with ANSI C63.4 2014 requirement.

FCC Designation No.: TW1190

1.5 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
- ♦ FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v05r01
- ♦ FCC KDB 414788 D01 Radiated Test Site v01r01.
- ♦ FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
- ♦ ANSI C63.10-2013

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

2 Test Configuration of Equipment Under Test

- a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in five orthogonal panels, X, Y, Z, Open Mode and Close Mode. The worst cases (X plane) were recorded in this report.
- b. AC power line Conducted Emission was tested under maximum output power.

2.1 Carrier Frequency and Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
2400-2483.5 MHz	1	2412	7	2442
	2	2417	8	2447
	3	2422	9	2452
	4	2427	10	2457
	5	2432	11	2462
	6	2437		

2.2 Test Mode

Final test modes are considering the modulation and worse data rates as below table.

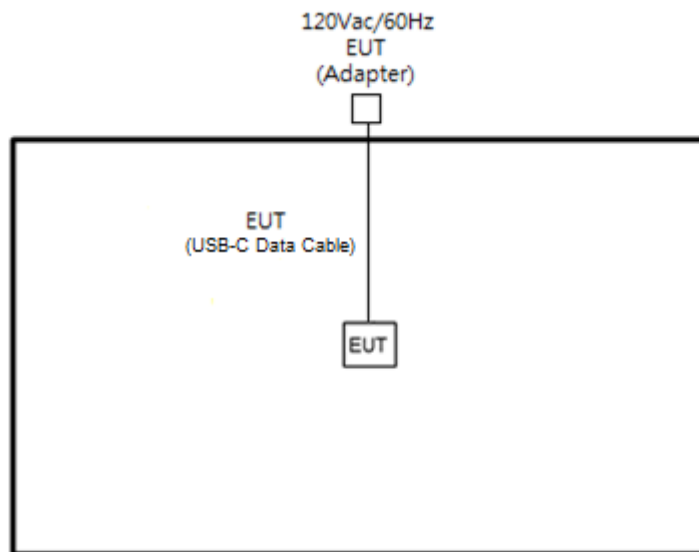
MIMO Antenna

Modulation	Data Rate
802.11b	1 Mbps
802.11g	6 Mbps
802.11n HT20	MCS0

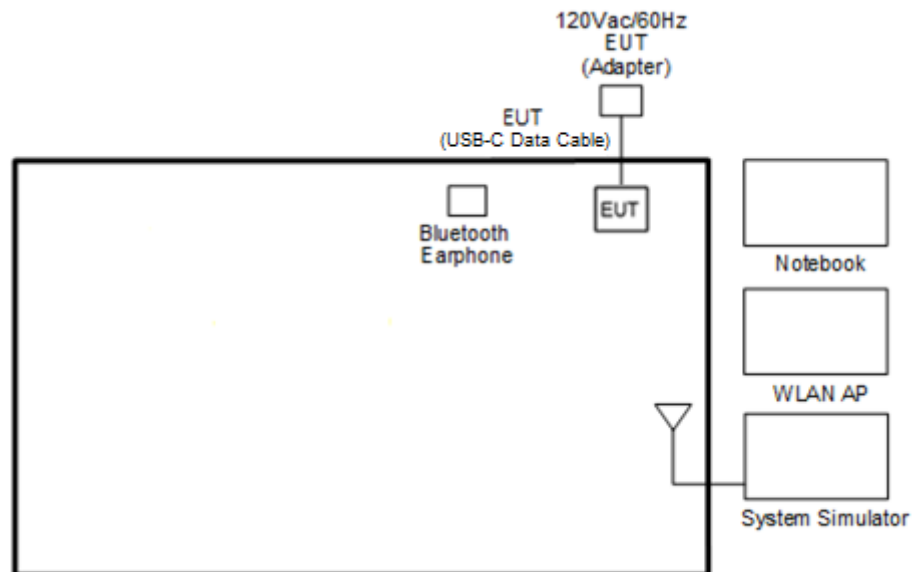
Test Cases	
AC Conducted Emission	Mode 1: GSM850 Link + Bluetooth Link + WLAN (2.4GHz) Link + MPEG4 + USB-C Data Cable (Charging from Adapter) + Battery < 10% for Open Mode
Remark: All the radiation test items were performed with USB-C Headset 1.	

2.3 Connection Diagram of Test System

<WLAN Tx Mode>



<AC Conducted Emission Mode>



2.4 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
2.	WLAN AP	ASUS	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded, 1.8 m
3.	Notebook	DELL	Latitude E6320	FCC DoC/ Contains FCC ID: QDS-BRCM1054	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
4.	Bluetooth Earphone	Lenovo	LBH 301	FCC DoC	N/A	N/A

2.5 EUT Operation Test Setup

The RF test items, utility “adb” was installed in Notebook which was programmed in order to make the EUT get into the engineering modes to provide channel selection, power level, data rate and the application type and for continuous transmitting signals.

2.6 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example:

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 4.2 dB and 10dB attenuator.

Offset(dB) = RF cable loss(dB) + attenuator factor(dB).

= 4.2 + 10 = 14.2 (dB)

3 Test Result

3.1 6dB and 99% Bandwidth Measurement

3.1.1 Limit of 6dB and 99% Bandwidth

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

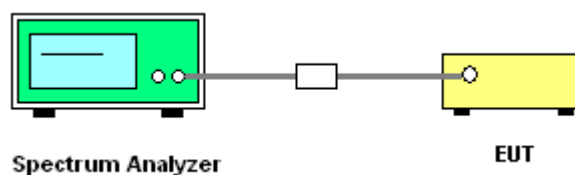
3.1.2 Measuring Instruments

See list of measuring equipment of this test report.

3.1.3 Test Procedures

1. The testing follows the ANSI C63.10 Section 6.9.3 (OBW) and 11.8.1 (6dB BW).
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. Set the Video bandwidth (VBW) = 300 kHz. In order to make an accurate measurement. The 6 dB bandwidth must be greater than 500 kHz.
5. For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) is set 1-5% of the emission bandwidth and set the Video bandwidth (VBW) $\geq 3 * RBW$.
6. Measure and record the results in the test report.

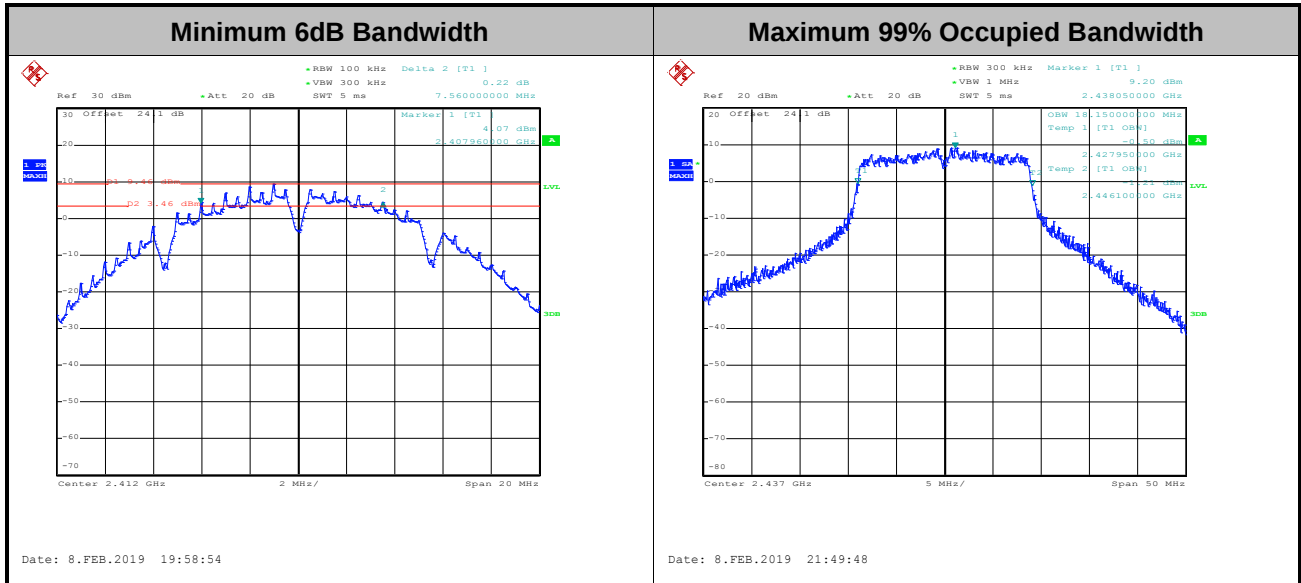
3.1.4 Test Setup





3.1.5 Test Result of 6dB and 99% Occupied Bandwidth

Please refer to Appendix A.



Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

3.2 Output Power Measurement

3.2.1 Limit of Output Power

For systems using digital modulation in the 2400-2483.5MHz, the limit for peak output power is 30dBm. If transmitting antenna with directional gain greater than 6dBi 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 1dB for every 3dB that the directional gain of the antenna exceeds 6dBi.

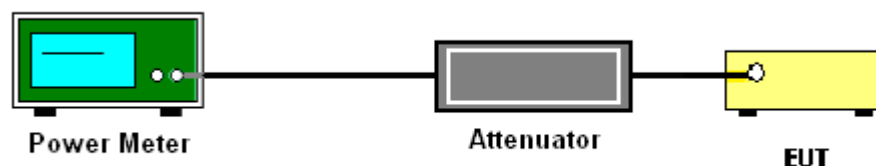
3.2.2 Measuring Instruments

See list of measuring equipment of this test report.

3.2.3 Test Procedures

1. For Average Power, the testing follows ANSI C63.10 Section 11.9.2.3.2 Method AVGPM-G.
2. The RF output of EUT was connected to the power meter by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Measure the conducted output power and record the results in the test report.
5. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

3.2.4 Test Setup



3.2.5 Test Result of Average output Power

Please refer to Appendix A.

3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

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

3.3.2 Measuring Instruments

See list of measuring equipment of this test report.

3.3.3 Test Procedures

1. The testing follows the ANSI C63.10 Section 11.10.2 Method PKPSD.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 3 kHz. Video bandwidth VBW = 10 kHz In order to make an accurate measurement, set the span to 1.5 times DTS Channel Bandwidth. (6dB BW)
5. Detector = peak, Sweep time = auto couple, Trace mode = max hold, Allow trace to fully stabilize. Use the peak marker function to determine the maximum power level.
6. Measure and record the results in the test report.
7. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

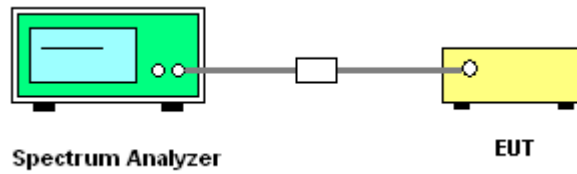
If measurements performed using method (2) plus $10 \log(N)$ exceeds the emission limit, the test should choose method (1) before declaring that the device fails the emission limit.

Method (1): Measure and sum the spectra across the outputs.

The total final Power Spectral Density is from a device with 2 transmitter outputs. The spectrum measurements of the individual outputs are all performed with the same span and number of points, the spectrum value in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 to obtain the value for the first frequency bin of the summed spectrum.

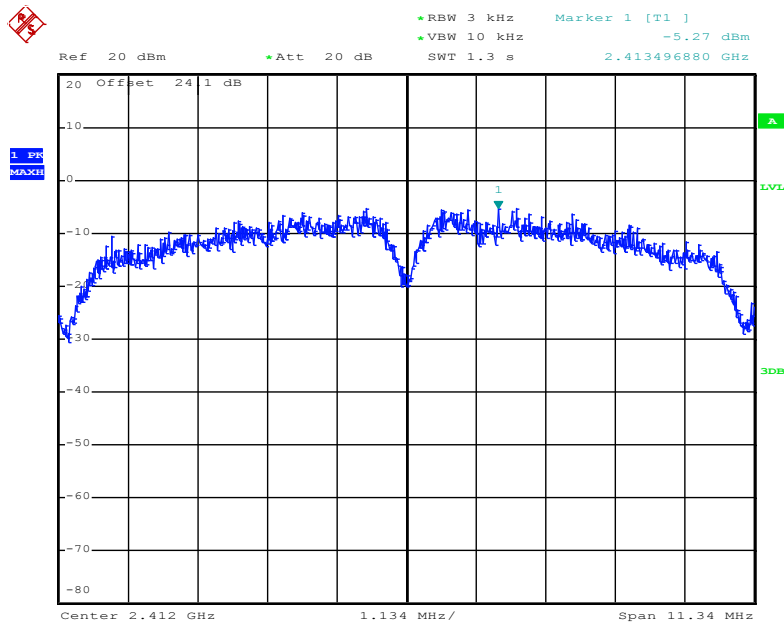
Method (2): Measure and add $10 \log(N)$ dB, where N is the number of outputs. (N=2)

3.3.4 Test Setup

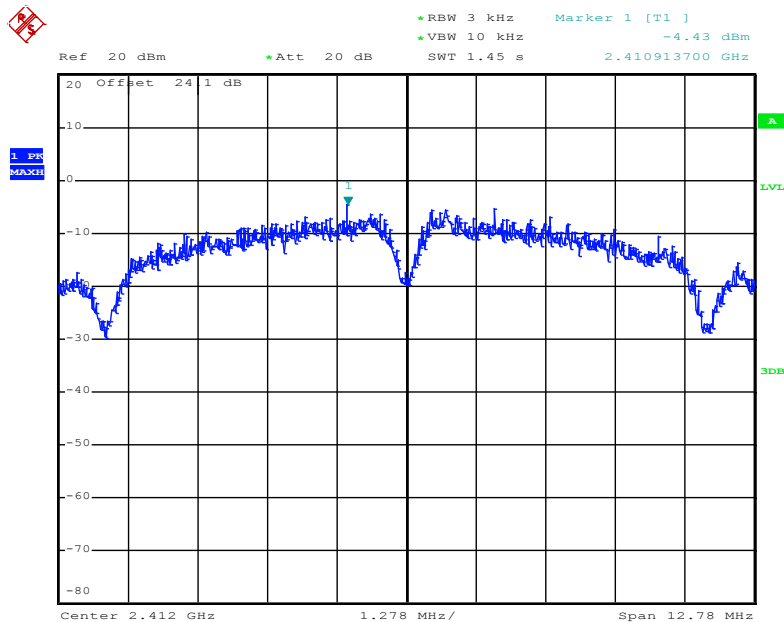


3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

**Worst Case Power Density (dBm/3kHz) for MIMO Ant. 1**

Date: 8.FEB.2019 19:59:46

Worst Case Power Density (dBm/3kHz) for MIMO Ant. 2

Date: 8.FEB.2019 20:15:23

3.4 Conducted Band Edges and Spurious Emission Measurement

3.4.1 Limit of Conducted Band Edges and Spurious Emission Measurement

In any 100 kHz bandwidth outside of the authorized frequency band, the emissions which fall in the non-restricted bands shall be attenuated at least 20 dB / 30dB relative to the maximum PSD level in 100 kHz by RF conducted measurement.

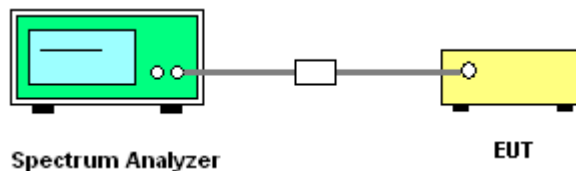
3.4.2 Measuring Instruments

See list of measuring equipment of this test report.

3.4.3 Test Procedures

1. The testing follows the ANSI C63.10 Section 11.11.3 Emission level measurement.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Set RBW = 100 kHz, VBW=300 kHz, Peak Detector. Unwanted Emissions measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz when maximum peak conducted output power procedure is used. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB per 15.247(d).
5. Measure and record the results in the test report.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

3.4.4 Test Setup



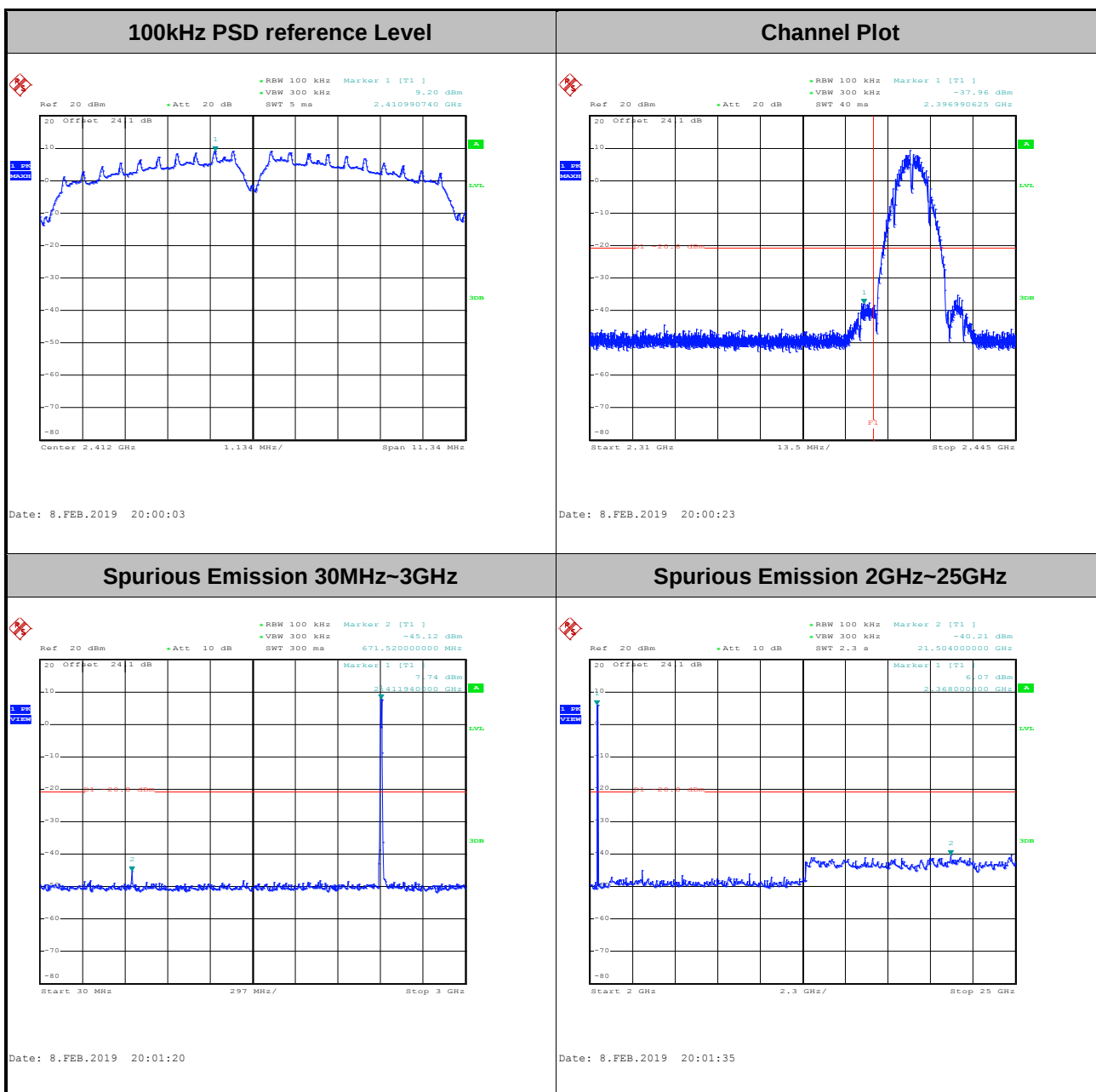


3.4.5 Test Result of Conducted Band Edges and Spurious Emission

Test Engineer :	Luffy Lin	Temperature :	21~25°C
		Relative Humidity :	51~54%

Number of TX = 2, Ant. 1 (Measured)

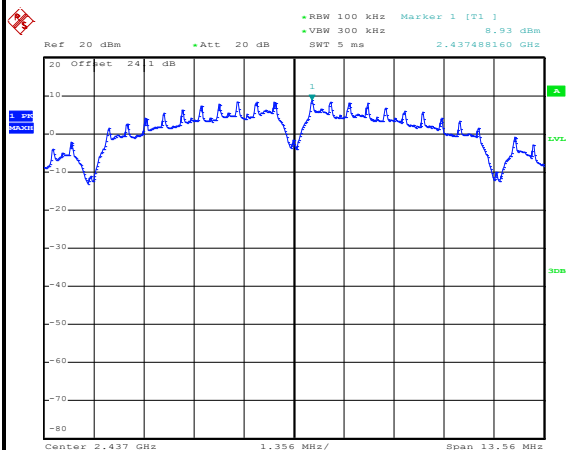
Test Mode :	802.11b	Test Channel :	01
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Test Mode :	802.11b	Test Channel :	06
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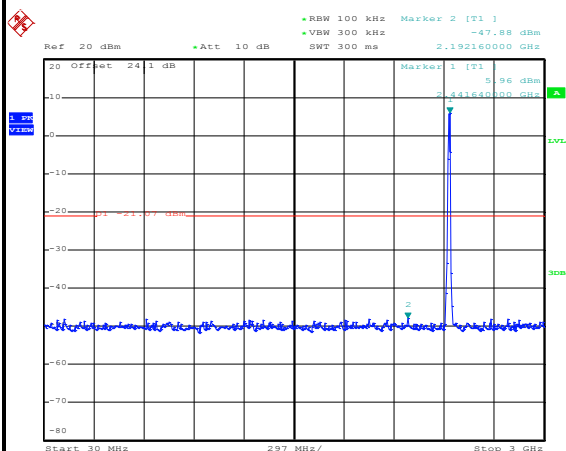
100kHz PSD reference Level



Date: 8.FEB.2019 20:20:15

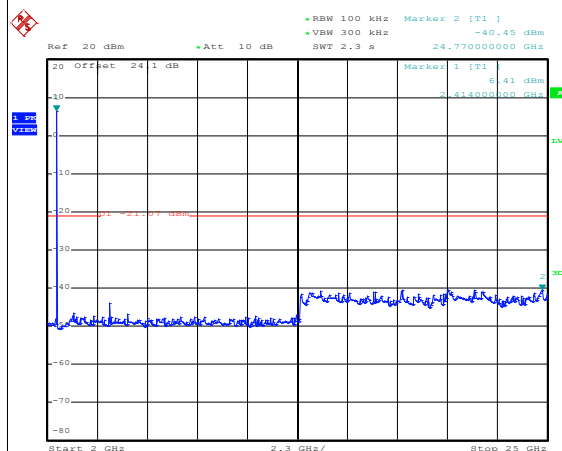
Channel Plot

Spurious Emission 30MHz~3GHz



Date: 8.FEB.2019 20:20:55

Spurious Emission 2GHz~25GHz

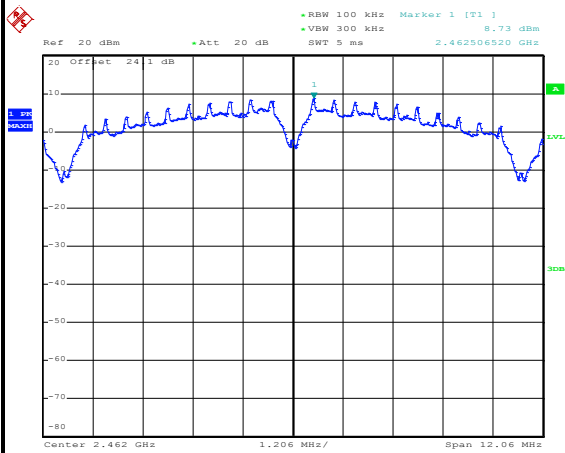


Date: 8.FEB.2019 20:21:11



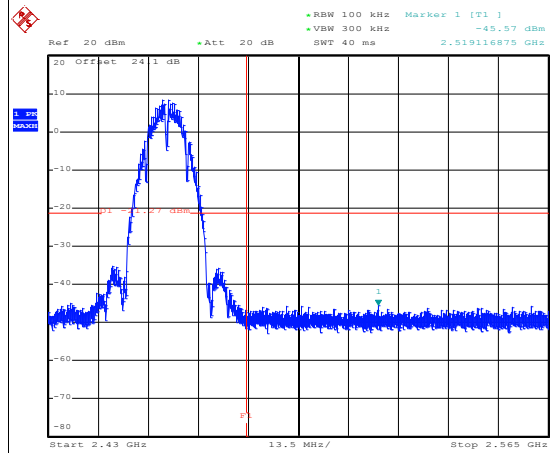
Test Mode :	802.11b	Test Channel :	11
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100kHz PSD reference Level



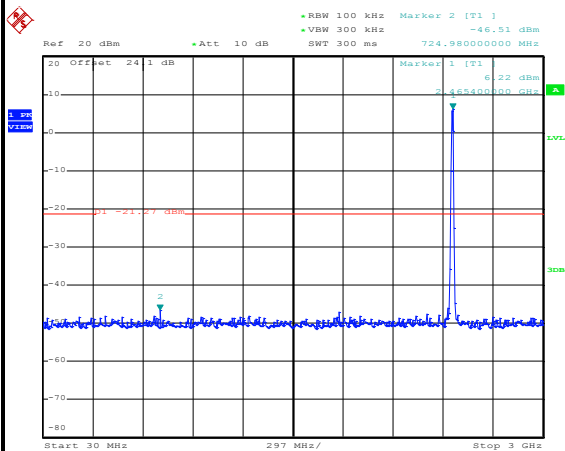
Date: 8.FEB.2019 20:34:37

Channel Plot



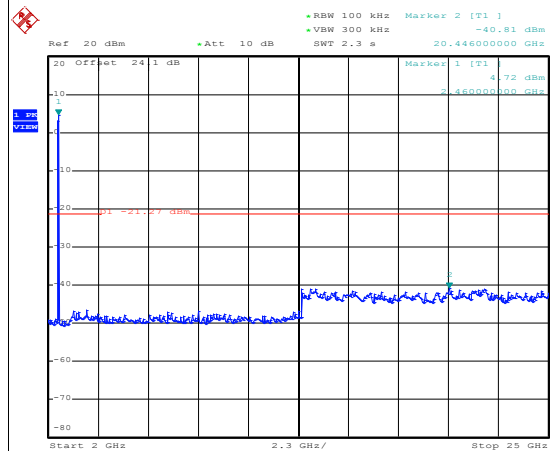
Date: 8.FEB.2019 20:34:55

Spurious Emission 30MHz~3GHz



Date: 8.FEB.2019 20:35:18

Spurious Emission 2GHz~25GHz

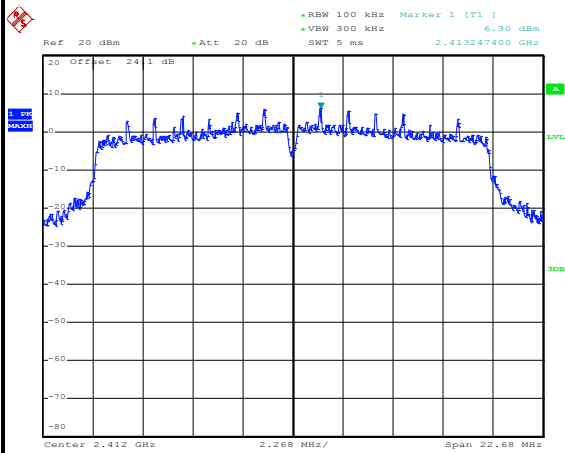


Date: 8.FEB.2019 20:35:33



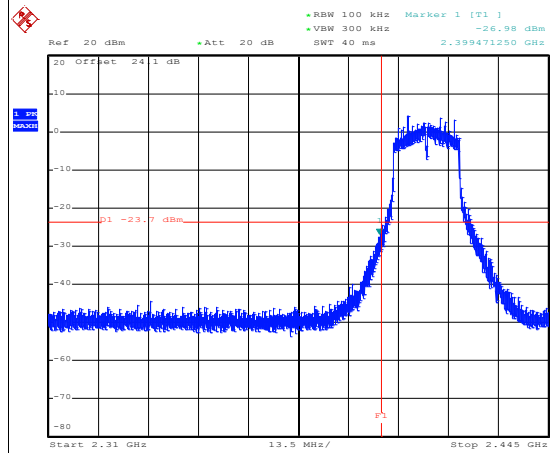
Test Mode :	802.11g	Test Channel :	01
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100kHz PSD reference Level



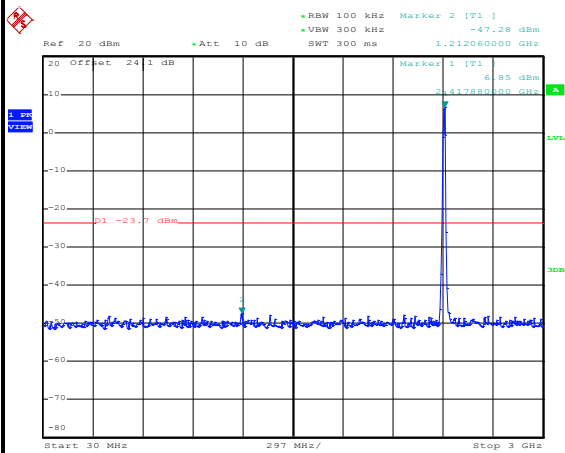
Date: 8.FEB.2019 21:10:38

Channel Plot



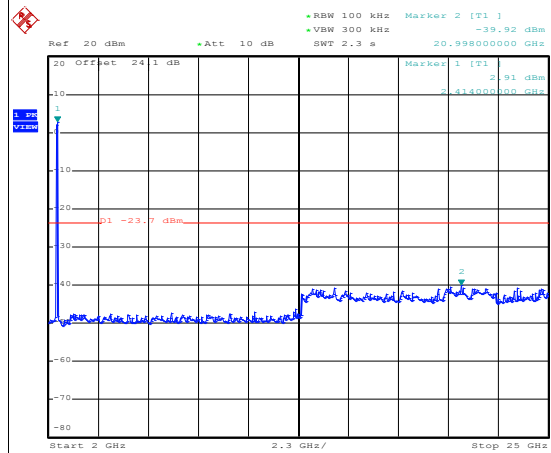
Date: 8.FEB.2019 21:10:52

Spurious Emission 30MHz~3GHz



Date: 8.FEB.2019 21:11:29

Spurious Emission 2GHz~25GHz

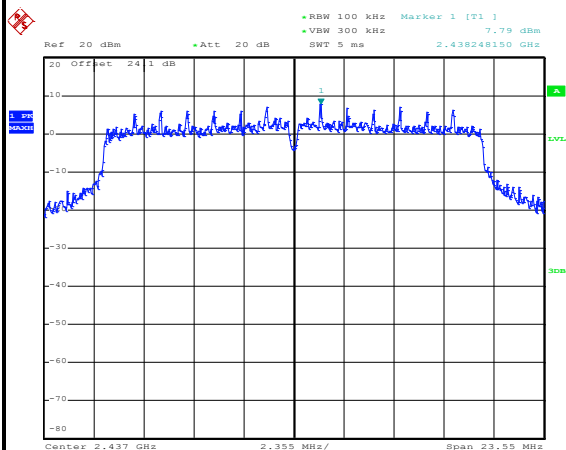


Date: 8.FEB.2019 21:11:46



Test Mode :	802.11g	Test Channel :	06
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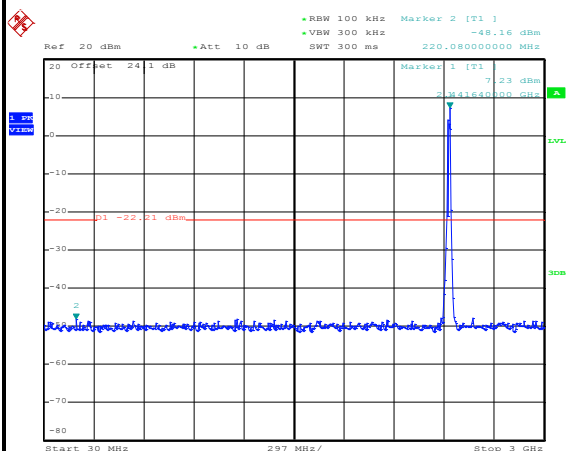
100kHz PSD reference Level



Date: 8.FEB.2019 21:48:28

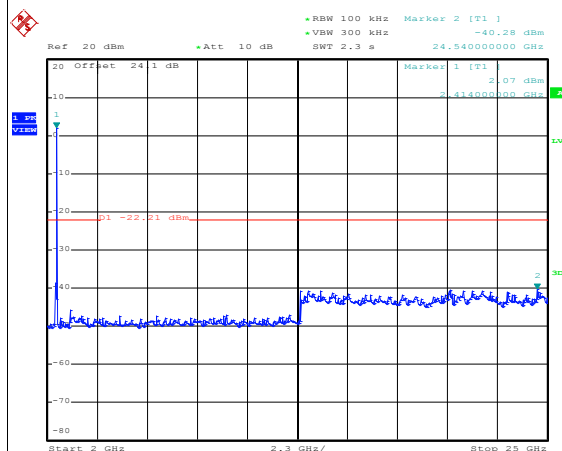
Channel Plot

Spurious Emission 30MHz~3GHz



Date: 8.FEB.2019 21:49:12

Spurious Emission 2GHz~25GHz



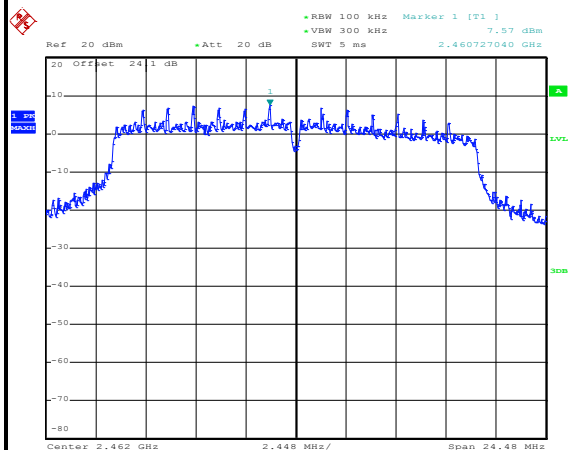
Date: 8.FEB.2019 21:49:28



Test Mode : 802.11g

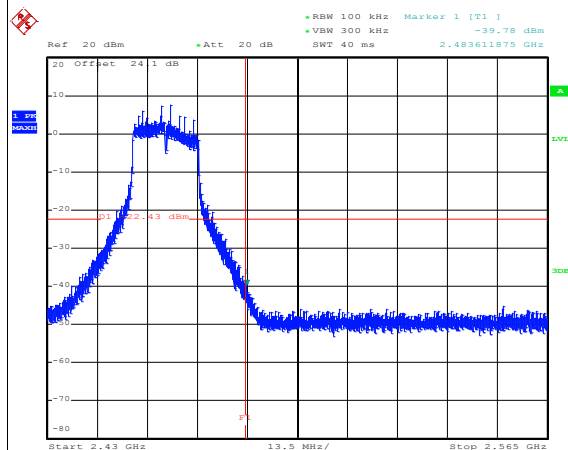
Test Channel : 11

100kHz PSD reference Level



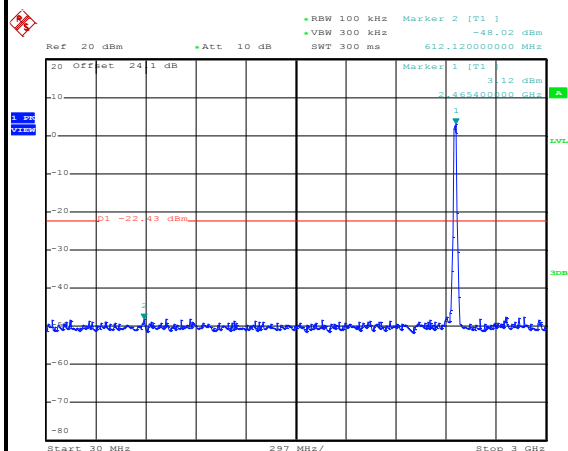
Date: 8.FEB.2019 21:54:54

Channel Plot



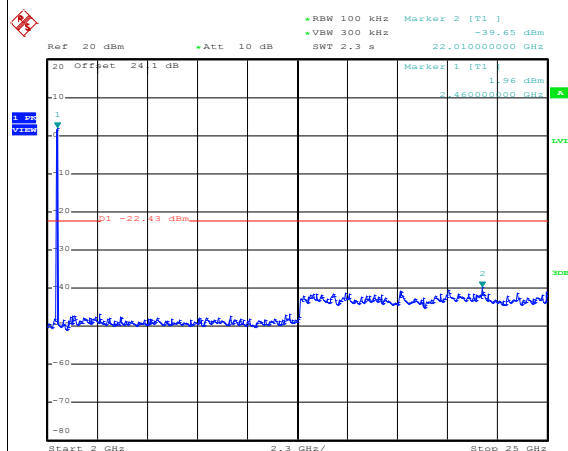
Date: 8.FEB.2019 21:55:11

Spurious Emission 30MHz~3GHz

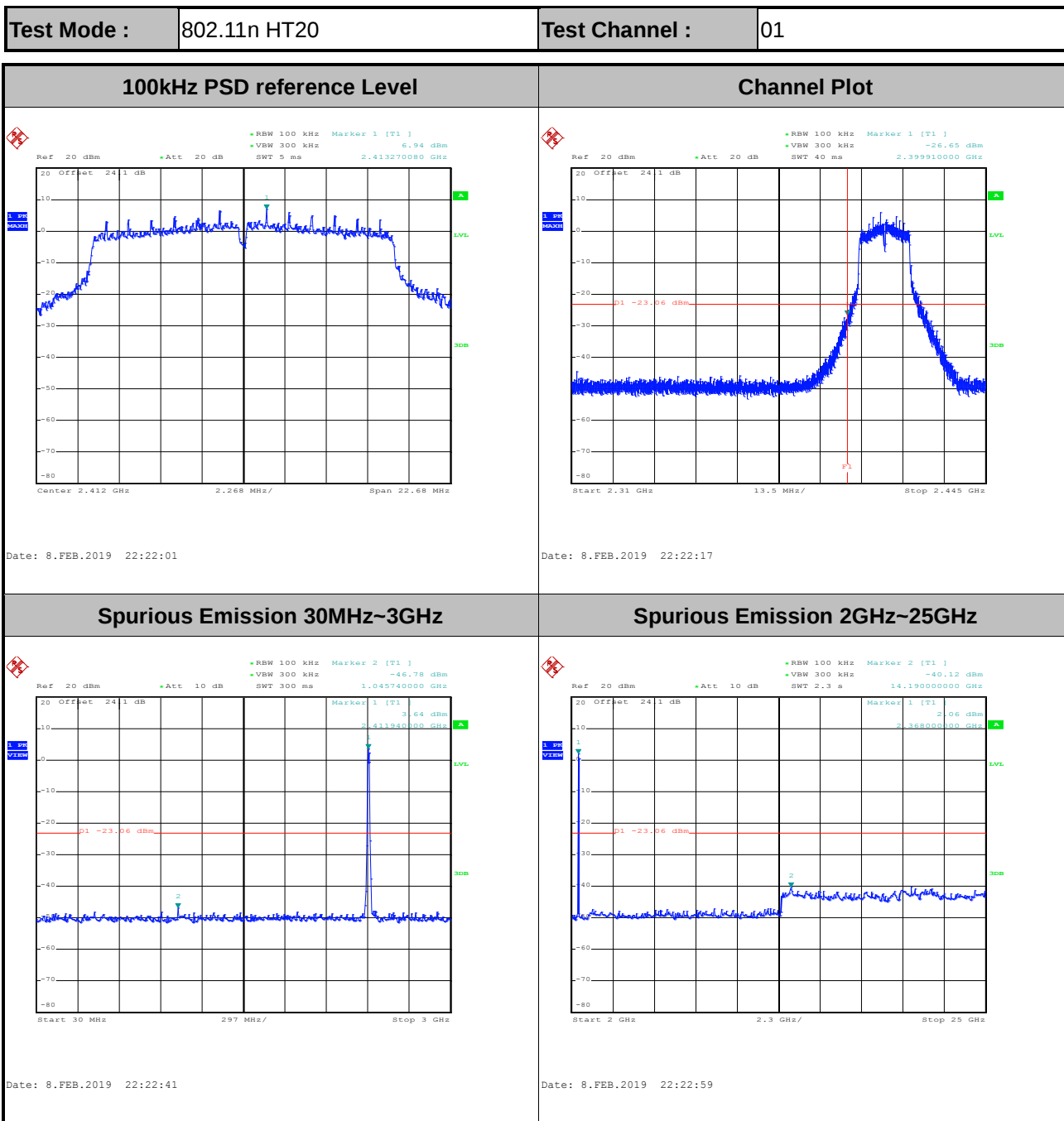


Date: 8.FEB.2019 21:55:27

Spurious Emission 2GHz~25GHz

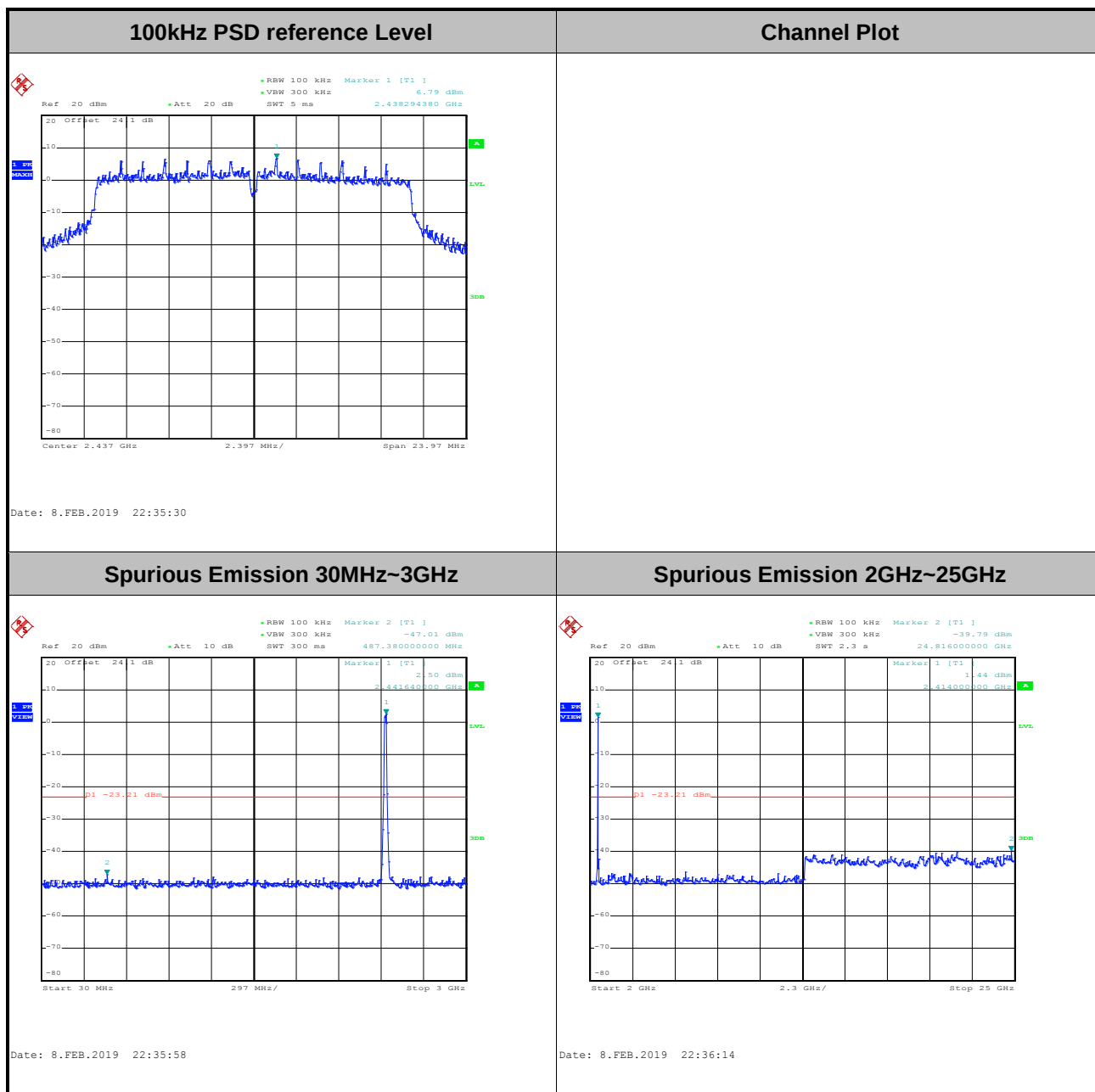


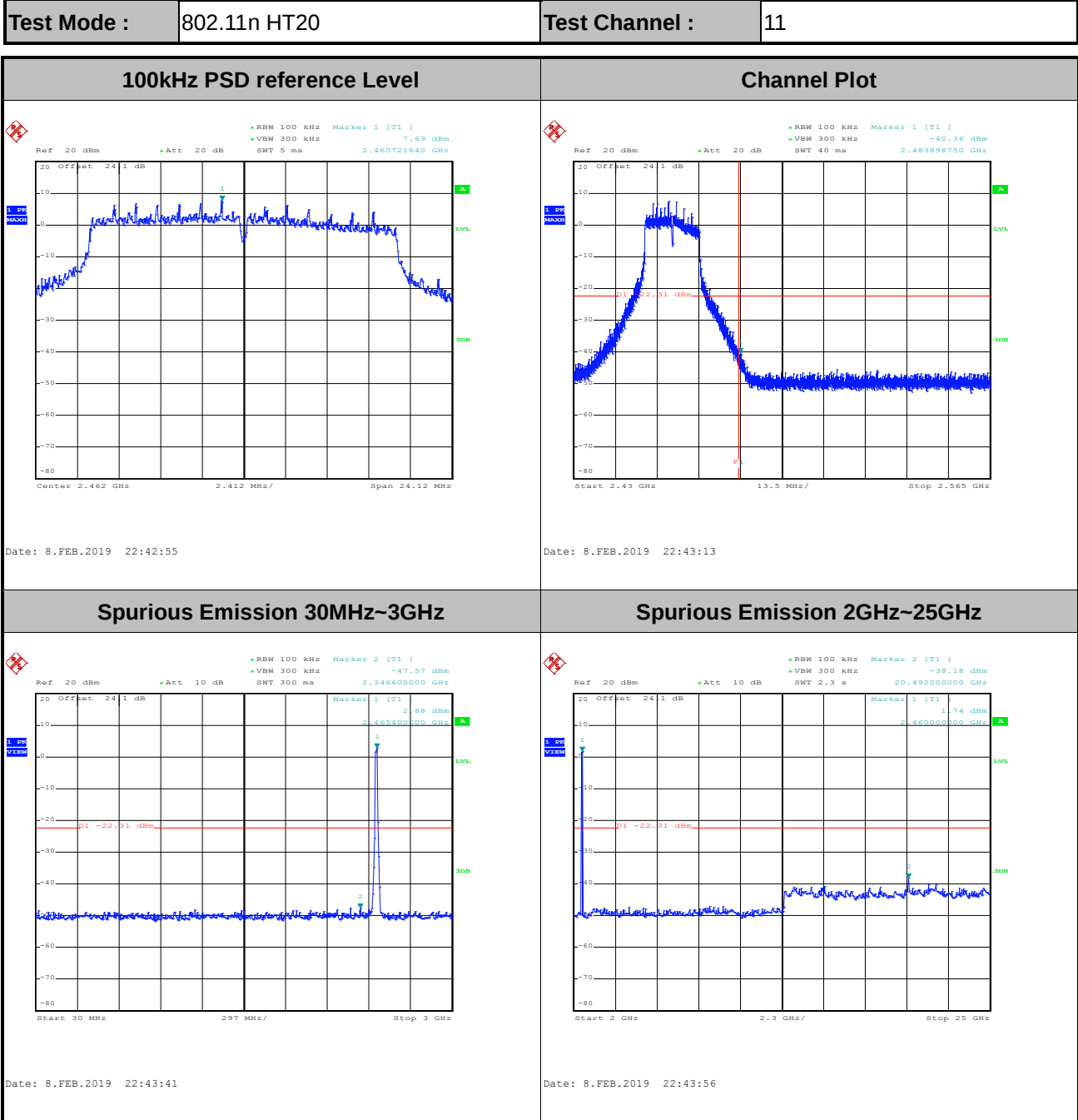
Date: 8.FEB.2019 21:55:43





Test Mode :	802.11n HT20	Test Channel :	06
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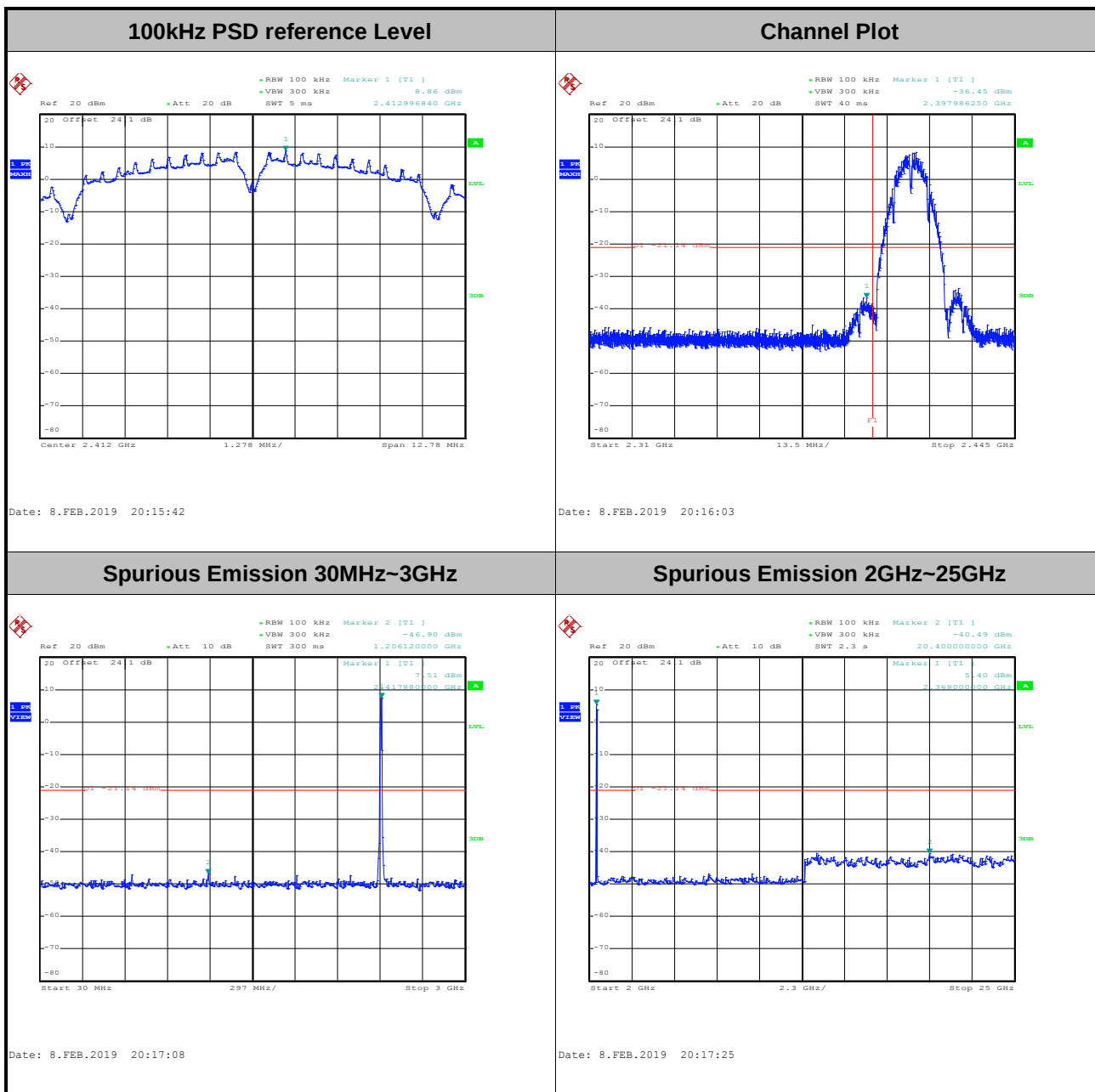






Number of TX = 2, Ant. 2 (Measured)

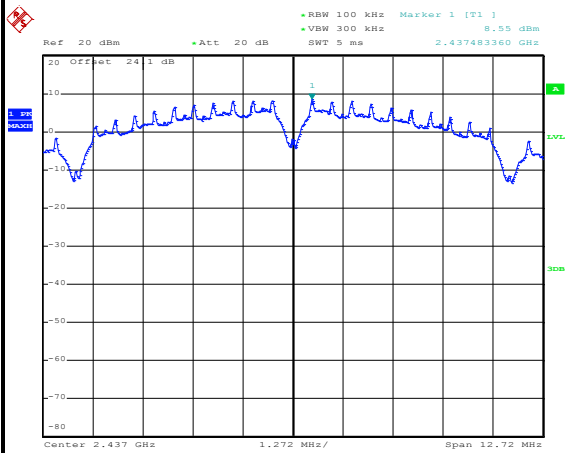
Test Mode :	802.11b	Test Channel :	01
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Test Mode :	802.11b	Test Channel :	06
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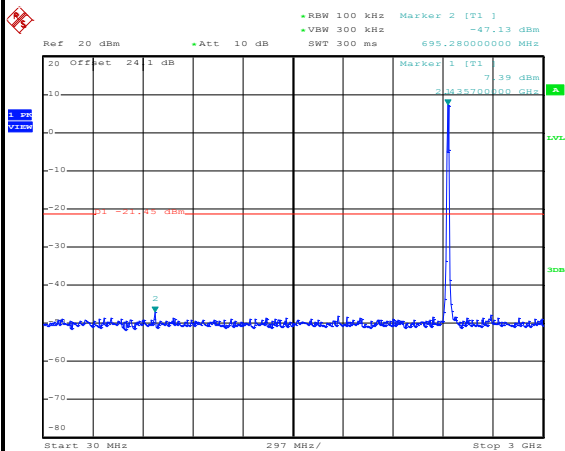
100kHz PSD reference Level



Date: 8.FEB.2019 20:23:52

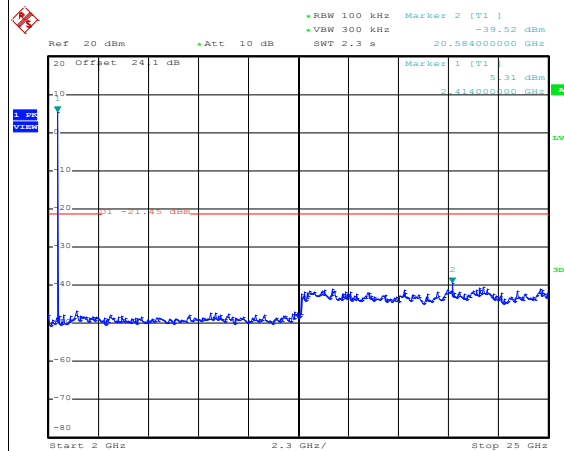
Channel Plot

Spurious Emission 30MHz~3GHz



Date: 8.FEB.2019 20:24:13

Spurious Emission 2GHz~25GHz



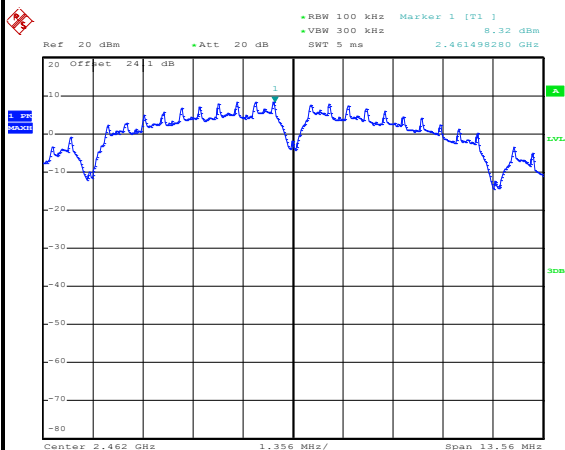
Date: 8.FEB.2019 20:24:33



Test Mode : 802.11b

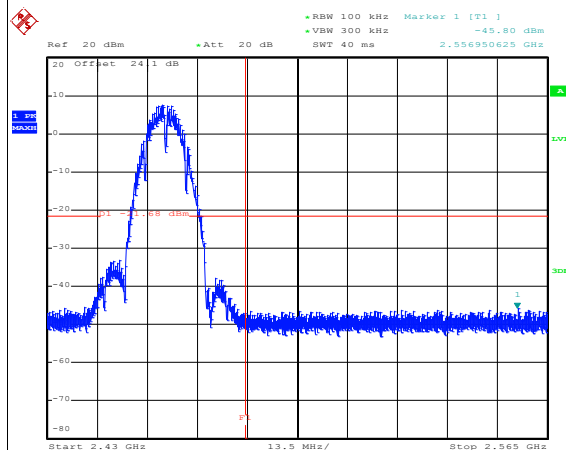
Test Channel : 11

100kHz PSD reference Level



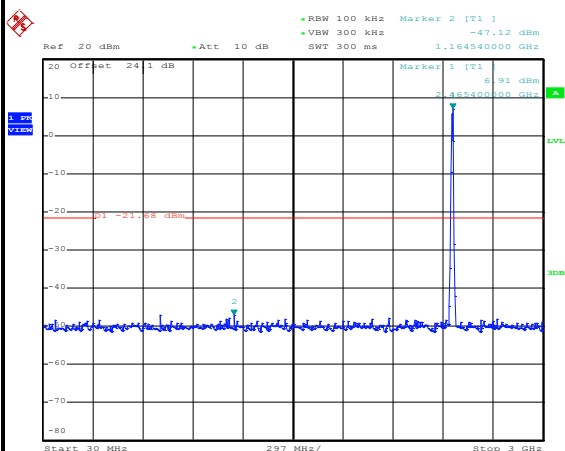
Date: 8.FEB.2019 20:27:11

Channel Plot



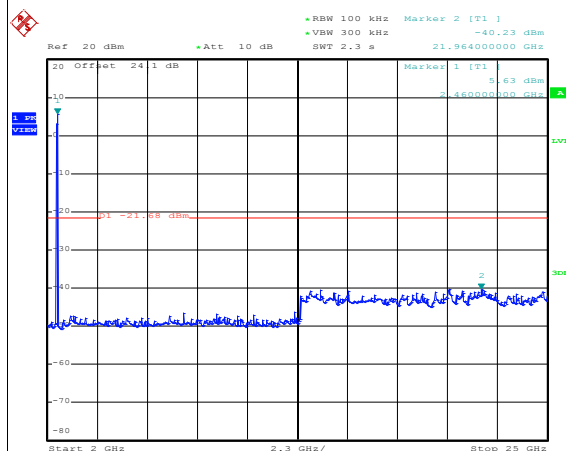
Date: 8.FEB.2019 20:27:30

Spurious Emission 30MHz~3GHz



Date: 8.FEB.2019 20:27:57

Spurious Emission 2GHz~25GHz



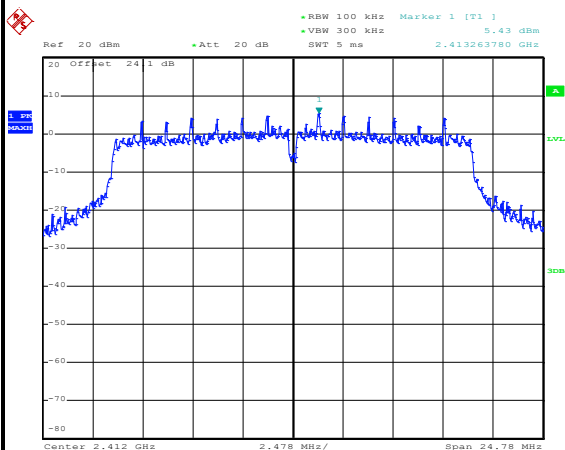
Date: 8.FEB.2019 20:28:13



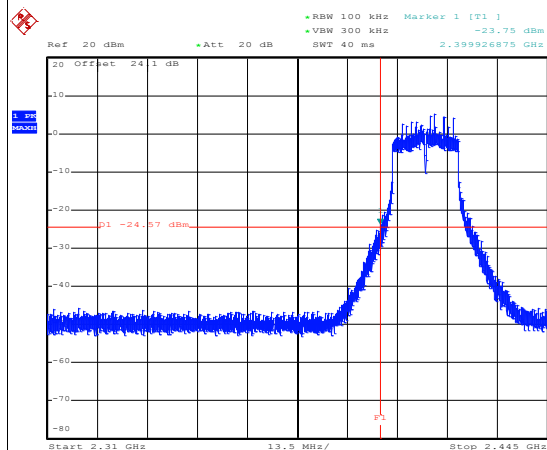
Test Mode : 802.11g

Test Channel : 01

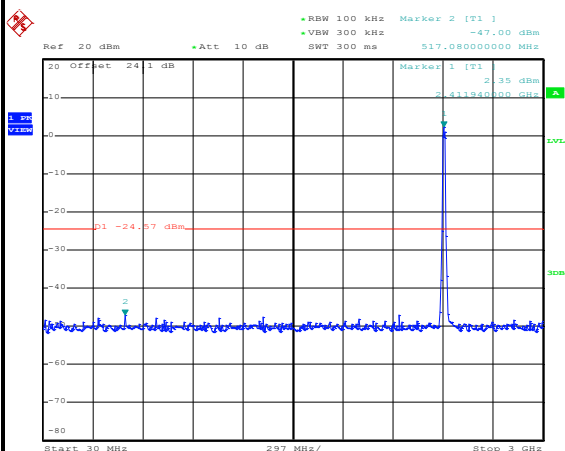
100kHz PSD reference Level



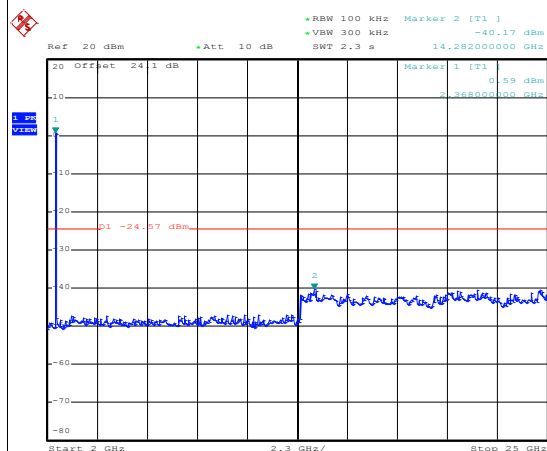
Channel Plot



Spurious Emission 30MHz~3GHz



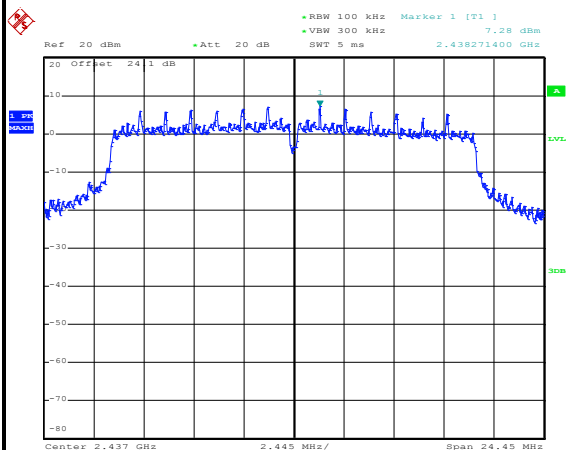
Spurious Emission 2GHz~25GHz





Test Mode :	802.11g	Test Channel :	06
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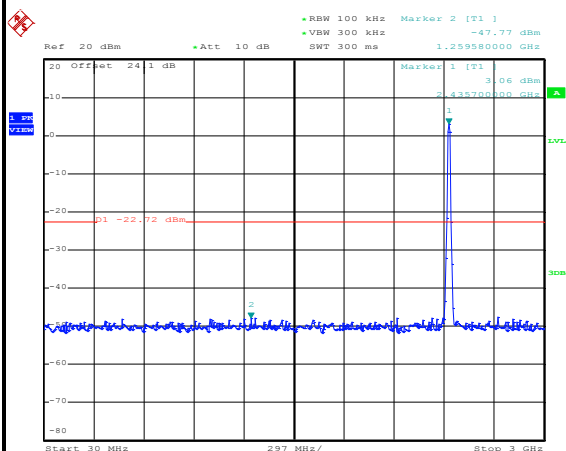
100kHz PSD reference Level



Date: 8.FEB.2019 21:51:50

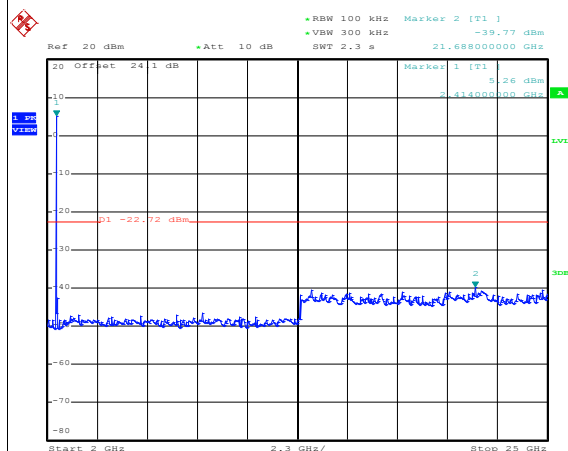
Channel Plot

Spurious Emission 30MHz~3GHz



Date: 8.FEB.2019 21:52:08

Spurious Emission 2GHz~25GHz

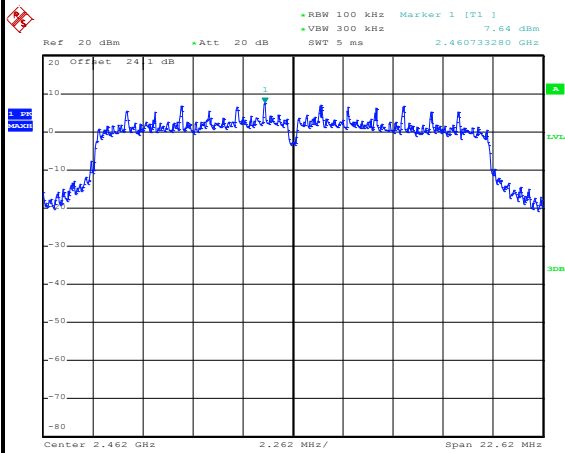


Date: 8.FEB.2019 21:52:22



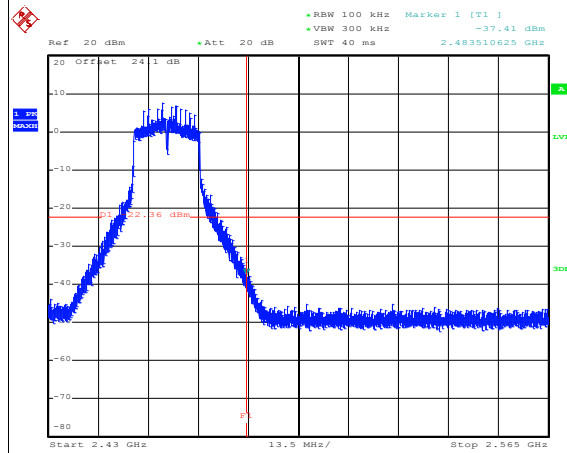
Test Mode :	802.11g	Test Channel :	11
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100kHz PSD reference Level



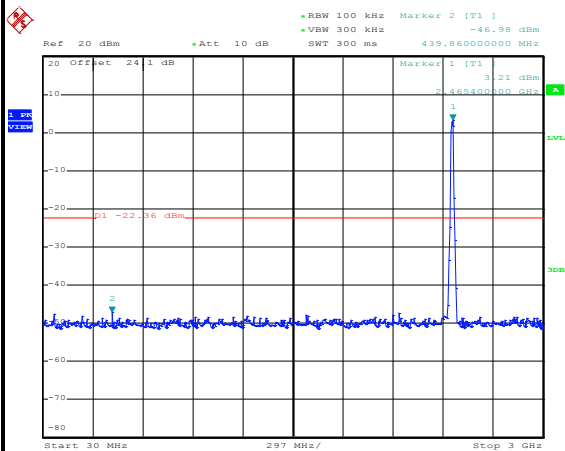
Date: 8.FEB.2019 21:58:13

Channel Plot



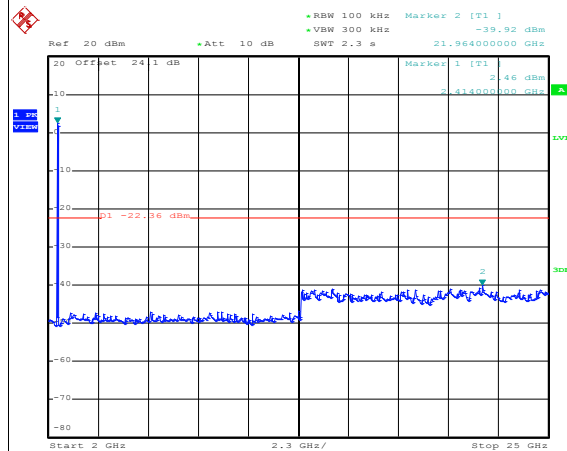
Date: 8.FEB.2019 21:58:35

Spurious Emission 30MHz~3GHz



Date: 8.FEB.2019 21:58:58

Spurious Emission 2GHz~25GHz



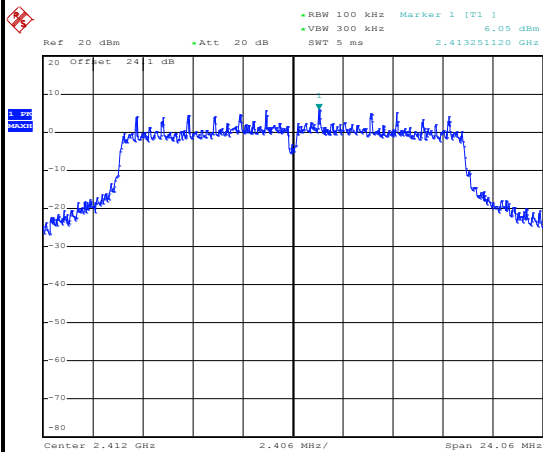
Date: 8.FEB.2019 21:59:16



Test Mode : 802.11n HT20

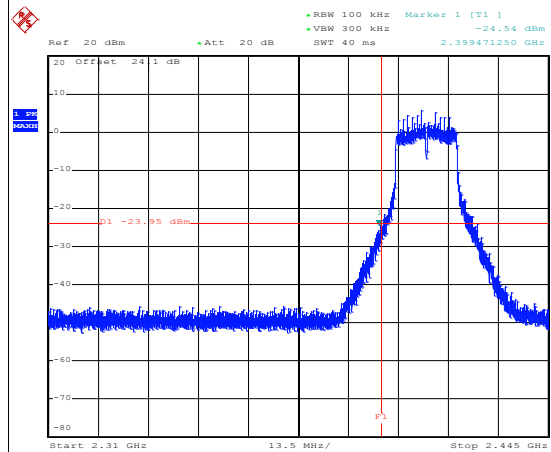
Test Channel : 01

100kHz PSD reference Level



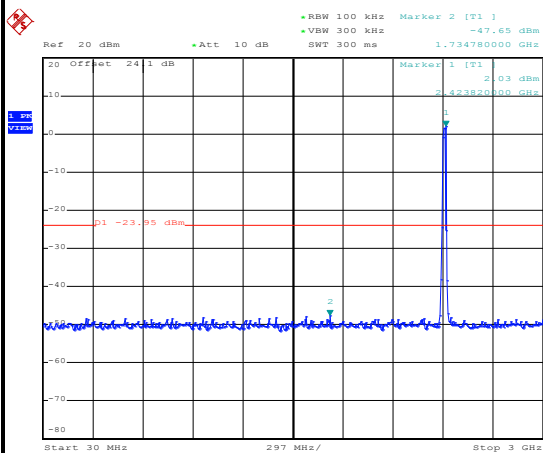
Date: 8.FEB.2019 22:16:44

Channel Plot



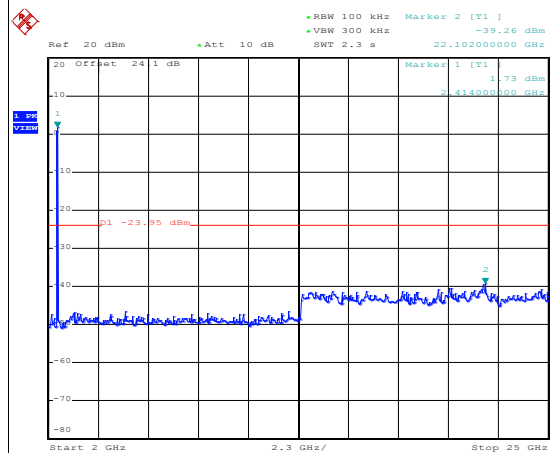
Date: 8.FEB.2019 22:17:00

Spurious Emission 30MHz~3GHz



Date: 8.FEB.2019 22:17:27

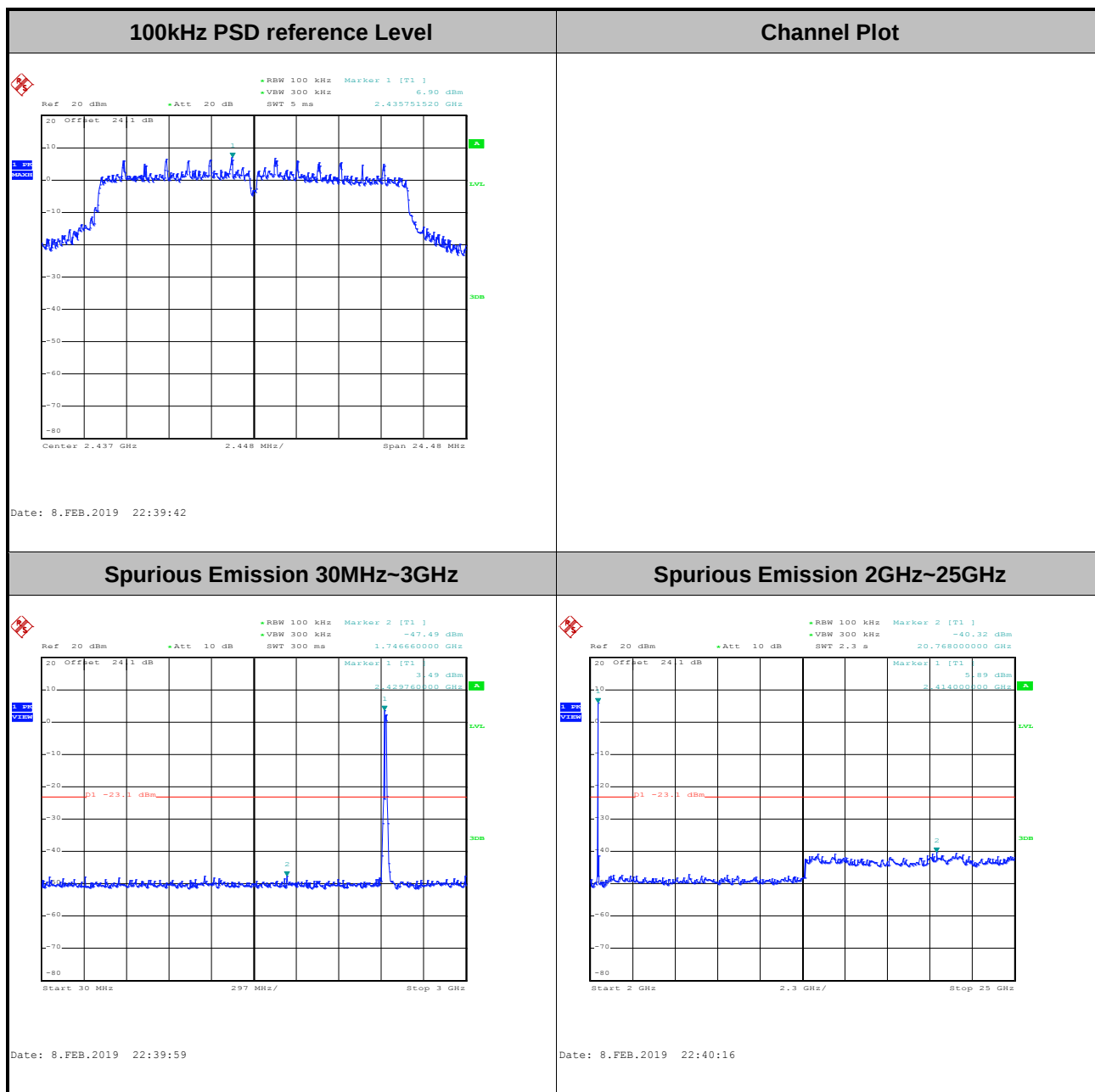
Spurious Emission 2GHz~25GHz

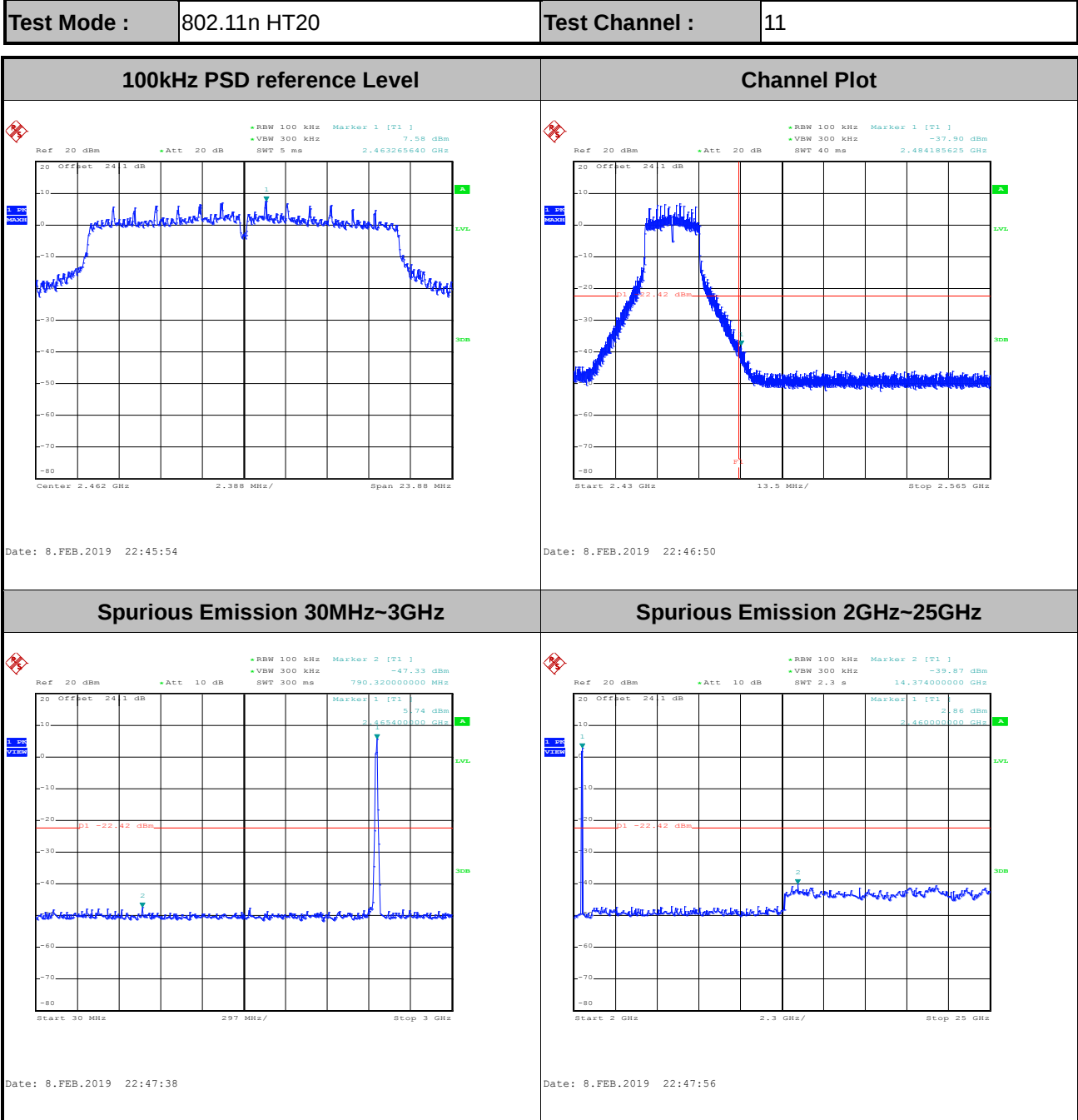


Date: 8.FEB.2019 22:17:43



Test Mode :	802.11n HT20	Test Channel :	06
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3.5 Radiated Band Edges and Spurious Emission Measurement

3.5.1 Limit of Radiated band edge and Spurious Emission Measurement

In any 100 kHz bandwidth outside the intentional radiator frequency band, all harmonics/spurious must be at least 20 dB below the highest emission level within the authorized band. If the output power of this device was measured by spectrum analyzer, the attenuation under this paragraph shall be 30 dB instead of 20 dB. In addition, radiated emissions which fall in the restricted bands must also comply with the limits as below.

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

3.5.2 Measuring Instruments

See list of measuring equipment of this test report.

3.5.3 Test Procedures

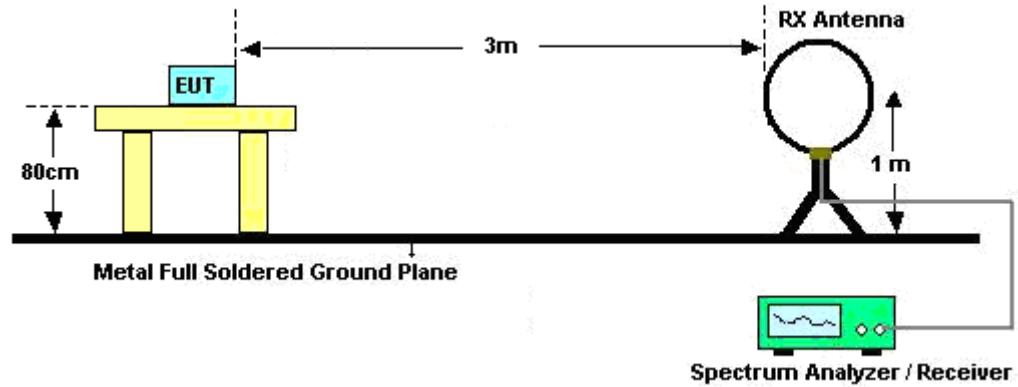
1. The testing follows the ANSI C63.10 Section 11.12.1 Radiated emission measurements.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
8. Use the following spectrum analyzer settings:
 - (1) Span shall wide enough to fully capture the emission being measured;
 - (2) Set RBW=100 kHz for $f < 1$ GHz; VBW $\geq$ RBW; Sweep = auto; Detector function = peak; Trace = max hold;
 - (3) Set RBW = 1 MHz, VBW= 3MHz for $f \geq 1$ GHz for peak measurement.

For average measurement:

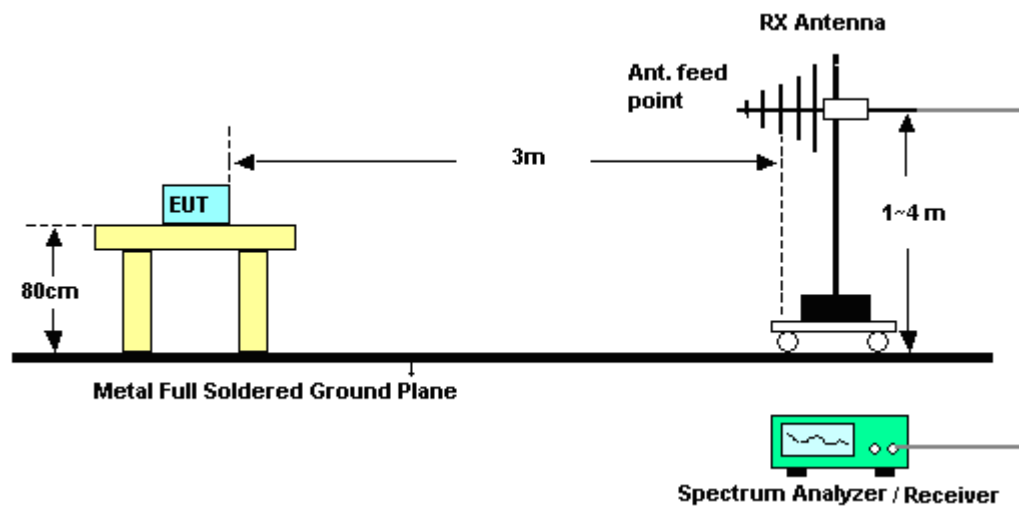
 - VBW = 10 Hz, when duty cycle is no less than 98 percent.
 - VBW $\geq 1/T$, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

3.5.4 Test Setup

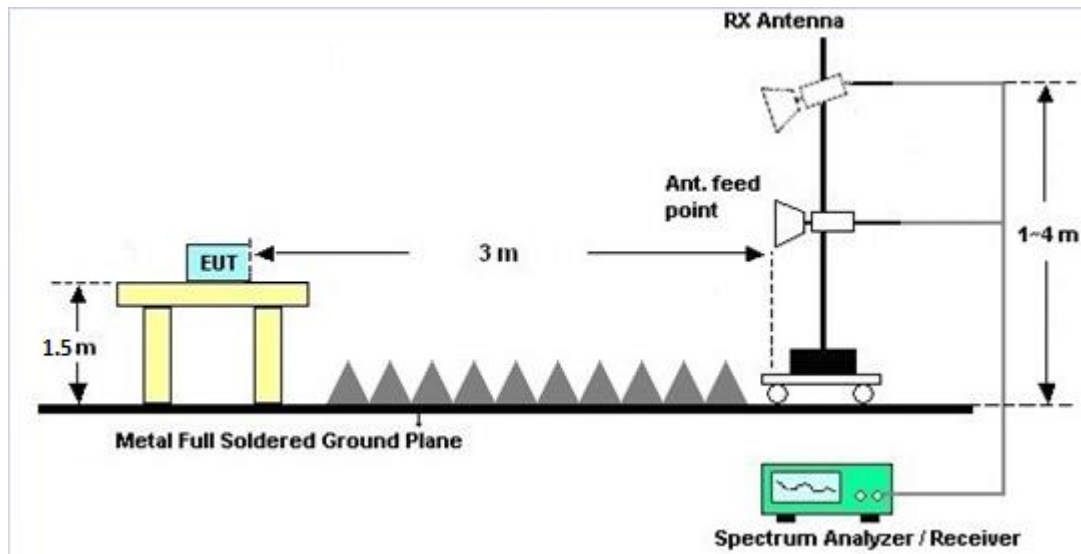
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



3.5.5 Test Results of Radiated Spurious Emissions (9kHz ~ 30MHz)

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

There is a comparison data of both open-field test site and alternative test site - semi-Anechoic chamber according to 414788 D01 Radiated Test Site v01r01, and the result came out very similar.

3.5.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix C and D.

3.5.7 Duty Cycle

Please refer to Appendix E.

3.5.8 Test Result of Radiated Spurious Emission (30MHz ~ 10th Harmonic)

Please refer to Appendix C and D.

3.6 AC Conducted Emission Measurement

3.6.1 Limit of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency of Emission (MHz)	Conducted Limit (dB μ V)	
	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.

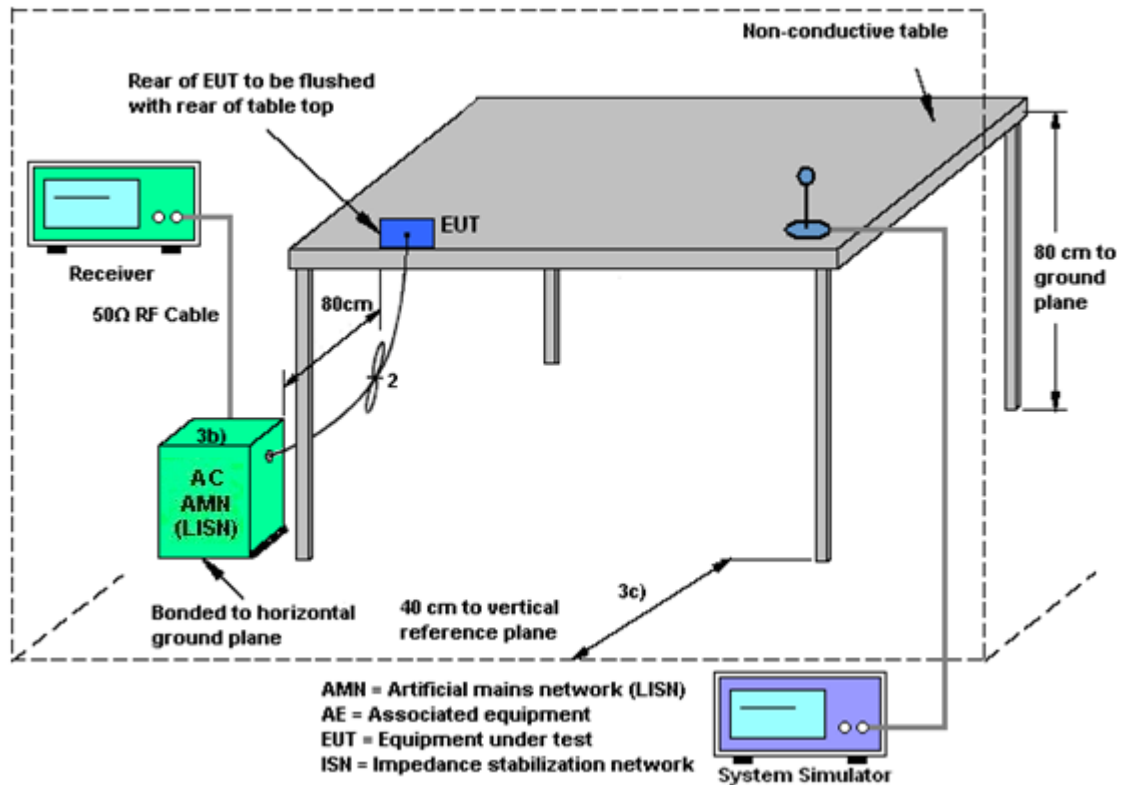
3.6.2 Measuring Instruments

See list of measuring equipment of this test report.

3.6.3 Test Procedures

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF bandwidth = 9kHz) with Maximum Hold Mode.

3.6.4 Test Setup



3.6.5 Test Result of AC Conducted Emission

Please refer to Appendix B.

3.7 Antenna Requirements

3.7.1 Standard Applicable

If directional gain of transmitting Antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi. The use of a permanently attached Antenna or of an Antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the rule.

3.7.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.7.3 Antenna Gain

<CDD Modes >

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

For CDD transmissions, directional gain is calculated as

Directional gain = G_{ANT} + Array Gain, where Array Gain is as follows.

For power spectral density (PSD) measurements on all devices,

Array Gain = $10 \log(N_{ANT}/N_{SS}=1)$ dB.

For power measurements on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$.

Directional gain may be calculated by using the formulas applicable to equal gain antennas with G_{ANT} set equal to the gain of the antenna having the highest gain;

The EUT supports CDD mode.

For power, the directional gain G_{ANT} is set equal to the antenna having the highest gain, i.e., F)2)f)i).

For PSD, the directional gain calculation is following F)2)f)ii) of KDB 662911 D01 v02r01.

The power and PSD limit should be modified if the directional gain of EUT is over 6 dBi,

The directional gain "DG" is calculated as following table.

<CDD Modes>						
			DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
	Ant. 1 (dBi)	Ant. 2 (dBi)				
2.4 GHz	0.60	-6.50	0.60	0.77	0.00	0.00

Power Limit Reduction = $DG(\text{Power}) - 6\text{dBi}$, (min = 0)

PSD Limit Reduction = $DG(\text{PSD}) - 6\text{dBi}$, (min = 0)



4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Hygrometer	Testo	608-H1	34893241	N/A	Mar. 06, 2018	Jan. 31, 2019~ Feb. 15, 2019	Mar. 05, 2019	Conducted (TH05-HY)
Power Meter	Anritsu	ML2495A	1218006	N/A	Oct. 08, 2018	Jan. 31, 2019~ Feb. 15, 2019	Oct. 07, 2019	Conducted (TH05-HY)
Power Sensor	Anritsu	MA2411B	1207363	300MHz~40GHz	Oct. 08, 2018	Jan. 31, 2019~ Feb. 15, 2019	Oct. 07, 2019	Conducted (TH05-HY)
Power Sensor	DARE	RadiPower	15I00041SN O09	10MHz~6GHz	May 07, 2018	Jan. 31, 2019~ Feb. 15, 2019	May 06, 2019	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100057	9kHz~40GHz	Nov. 21, 2018	Jan. 31, 2019~ Feb. 15, 2019	Nov. 20, 2019	Conducted (TH05-HY)
Switch Box & RF Cable	Burgeon	ETF-058	EC1300484	N/A	Mar. 01, 2018	Jan. 31, 2019~ Feb. 15, 2019	Feb. 28, 2019	Conducted (TH05-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Feb. 17, 2019	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	9KHz~3.6GHz	Nov. 12, 2018	Feb. 17, 2019	Nov. 11, 2019	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34913912	N/A	Mar. 06, 2018	Feb. 17, 2019	Mar. 05, 2019	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Nov. 14, 2018	Feb. 17, 2019	Nov. 13, 2019	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Nov. 09, 2018	Feb. 17, 2019	Nov. 08, 2019	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	Feb. 17, 2019	N/A	Conduction (CO05-HY)
RF Cable	HUBER + SUHNER	RG 214/U	1358175	9kHz~30MHz	Sep. 14, 2018	Feb. 17, 2019	Sep. 13, 2019	Conduction (CO05-HY)
Pulse Limiter	SCHWARZBECK	VTSD 9561-F N	9561-F N00373	9kHz~200MHz	Nov. 08, 2018	Feb. 17, 2019	Nov. 07, 2019	Conduction (CO05-HY)
Preamplifier	Agilent	8449B	3008A01917	1GHz~26.5GHz	Apr. 23, 2018	Feb. 03, 2019~ Feb. 22, 2019	Apr. 22, 2019	Radiation (03CH07-HY)
Bilog Antenna	TESEQ	CBL 6111D&00800 N1D01N-06	35419&03	30MHz to 1GHz	Dec. 17, 2018	Feb. 03, 2019~ Feb. 22, 2019	Dec. 16, 2019	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	00075962	1GHz ~ 18GHz	Dec. 02, 2018	Feb. 03, 2019~ Feb. 22, 2019	Dec. 03, 2019	Radiation (03CH07-HY)
EMI Test Receiver	Agilent	N9038A (MXE)	MY53290053	20Hz to 26.5GHz	Jan. 23, 2019	Feb. 03, 2019~ Feb. 22, 2019	Jan. 22, 2020	Radiation (03CH07-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100315	9 kHz~30 MHz	Jan. 11, 2019	Feb. 03, 2019~ Feb. 22, 2019	Jan. 10, 2020	Radiation (03CH07-HY)
Preamplifier	MITEQ	AMF-7D-0010 1800-30-10P	1590075	1GHz ~ 18GHz	Apr. 25, 2018	Feb. 03, 2019~ Feb. 22, 2019	Apr. 24, 2019	Radiation (03CH07-HY)
Preamplifier	COM-POWER	PA-103A	161241	10MHz~1GHz	May 21, 2018	Feb. 03, 2019~ Feb. 22, 2019	May 20, 2019	Radiation (03CH07-HY)
Preamplifier	Agilent	8449B	3008A02362	1GHz~ 26.5GHz	Nov. 02, 2018	Feb. 03, 2019~ Feb. 22, 2019	Nov. 01, 2019	Radiation (03CH07-HY)



Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Hygrometer	Testo	608-H2	41410070	N/A	Oct. 22, 2018	Feb. 03, 2019~ Feb. 22, 2019	Oct. 21, 2019	Radiation (03CH07-HY)
Controller	ChainTek	Chaintek 3000	N/A	Control Turn table	N/A	Feb. 03, 2019~ Feb. 22, 2019	N/A	Radiation (03CH07-HY)
Controller	Max-Full	MF7802	MF78020836 8	Control Ant Mast	N/A	Feb. 03, 2019~ Feb. 22, 2019	N/A	Radiation (03CH07-HY)
Antenna Mast	Max-Full	MFA520BS	N/A	1m~4m	N/A	Feb. 03, 2019~ Feb. 22, 2019	N/A	Radiation (03CH07-HY)
Turn Table	ChainTek	Chaintek 3000	N/A	0~360 Degree	N/A	Feb. 03, 2019~ Feb. 22, 2019	N/A	Radiation (03CH07-HY)
Amplifier	MITEQ	TTA1840-35-H G	1871923	18GHz~40GHz, VSWR : 2.5:1 max	Jul. 16, 2018	Feb. 03, 2019~ Feb. 22, 2019	Jul. 15, 2019	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZBE CK	BBHA 9170	BBHA917025 1	18GHz- 40GHz	Nov. 20, 2018	Feb. 03, 2019~ Feb. 22, 2019	Nov. 19, 2019	Radiation (03CH07-HY)
Spectrum Analyzer	Agilent	N9010A	MY53470118	10Hz~44GHz	Apr. 17, 2018	Feb. 03, 2019~ Feb. 22, 2019	Apr. 16, 2019	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY24971/4, MY28655/4	9KHz~30MHz	Feb. 27, 2018	Feb. 03, 2019~ Feb. 22, 2019	Feb. 26, 2019	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY28655/4, MY24971/4, MY15682/4	30MHz~1GHz	Feb. 27, 2018	Feb. 03, 2019~ Feb. 22, 2019	Feb. 26, 2019	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY28655/4, MY24971/4, MY15682/4	1GHz~18GHz	Feb. 27, 2018	Feb. 03, 2019~ Feb. 22, 2019	Feb. 26, 2019	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY2858/2	18GHz~40GHz	Feb. 27, 2018	Feb. 03, 2019~ Feb. 22, 2019	Feb. 26, 2019	Radiation (03CH07-HY)
Filter	Microwave	H1G013G1	SN477215	1.0G High Pass	Dec. 07, 2017	Feb. 03, 2019~ Feb. 22, 2019	Dec. 06, 2018	Radiation (03CH07-HY)
Filter	Wainwright	WLKS1200-8S S	SN3	1.2G Low Pass	Nov. 21, 2017	Feb. 03, 2019~ Feb. 22, 2019	Nov. 20, 2018	Radiation (03CH07-HY)
Filter	Microwave	H3G018G1	SN477220	3.0G High Pass	Nov. 21, 2017	Feb. 03, 2019~ Feb. 22, 2019	Nov. 20, 2018	Radiation (03CH07-HY)
Filter	Microwave	WHKX7.0/26.5 G-6SS	SN4	7G High Pass	Nov. 21, 2017	Feb. 03, 2019~ Feb. 22, 2019	Nov. 20, 2018	Radiation (03CH07-HY)
Software	Audix	E3 6.2009-8-2 4	8050400465 6H	N/A	N/A	Feb. 03, 2019~ Feb. 22, 2019	N/A	Radiation (03CH07-HY)

5 Uncertainty of Evaluation

Uncertainty of Conducted Emission Measurement (150kHz ~ 30MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.20
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.70
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Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.50
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Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.20
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Appendix A. Test Result of Conducted Test Items

Test Engineer:	Luffy Lin	Temperature:	21~25	°C
Test Date:	2019/01/31 ~ 2019/02/15	Relative Humidity:	51~54	%

TEST RESULTS DATA
6dB and 99% Occupied Bandwidth

2.4GHz Band										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Occupied BW (MHz)		6dB BW (MHz)		6dB BW Limit (MHz)	Pass/Fail
					Ant 1	Ant 2	Ant 1	Ant 2		
11b	1Mbps	2	1	2412	13.55	13.85	7.56	8.52	0.50	Pass
11b	1Mbps	2	6	2437	14.00	14.05	9.04	8.48	0.50	Pass
11b	1Mbps	2	11	2462	14.00	13.70	8.04	9.04	0.50	Pass
11g	6Mbps	2	1	2412	17.75	17.95	15.12	16.52	0.50	Pass
11g	6Mbps	2	6	2437	18.15	18.05	15.70	16.30	0.50	Pass
11g	6Mbps	2	11	2462	18.00	17.90	16.32	15.08	0.50	Pass
HT20	MCS0	2	1	2412	16.60	16.75	15.12	16.04	0.50	Pass
HT20	MCS0	2	6	2437	18.05	18.05	15.98	16.32	0.50	Pass
HT20	MCS0	2	11	2462	17.90	18.05	16.08	15.92	0.50	Pass

TEST RESULTS DATA
Average Output Power

2.4GHz Band																
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	Average Conducted Power (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass /Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	
11b	1Mbps	1	1	2412	17.30	17.30	-	30.00	30.00	0.60	-6.50	17.90	10.80	36.00	36.00	Pass
11b	1Mbps	1	6	2437	17.20	17.10		30.00	30.00	0.60	-6.50	17.80	10.60	36.00	36.00	Pass
11b	1Mbps	1	11	2462	17.20	17.20		30.00	30.00	0.60	-6.50	17.80	10.70	36.00	36.00	Pass
11g	6Mbps	1	1	2412	15.70	15.40		30.00	30.00	0.60	-6.50	16.30	8.90	36.00	36.00	Pass
11g	6Mbps	1	6	2437	17.20	17.20		30.00	30.00	0.60	-6.50	17.80	10.70	36.00	36.00	Pass
11g	6Mbps	1	11	2462	16.90	16.80		30.00	30.00	0.60	-6.50	17.50	10.30	36.00	36.00	Pass
HT20	MCS0	1	1	2412	14.30	14.20		30.00	30.00	0.60	-6.50	14.90	7.70	36.00	36.00	Pass
HT20	MCS0	1	6	2437	17.10	17.10	-	30.00	30.00	0.60	-6.50	17.70	10.60	36.00	36.00	Pass
HT20	MCS0	1	11	2462	15.90	15.70		30.00	30.00	0.60	-6.50	16.50	9.20	36.00	36.00	Pass
11b	1Mbps	2	1	2412	17.60	17.30	20.46	30.00		0.60		21.06		36.00		Pass
11b	1Mbps	2	6	2437	17.50	17.10	20.31	30.00		0.60		20.91		36.00		Pass
11b	1Mbps	2	11	2462	17.40	17.10	20.26	30.00		0.60		20.86		36.00		Pass
11g	6Mbps	2	1	2412	15.90	15.50	18.71	30.00		0.60		19.31		36.00		Pass
11g	6Mbps	2	6	2437	17.60	17.20	20.41	30.00		0.60		21.01		36.00		Pass
11g	6Mbps	2	11	2462	17.00	16.90	19.96	30.00		0.60		20.56		36.00		Pass
HT20	MCS0	2	1	2412	14.40	14.20	17.31	30.00		0.60		17.91		36.00		Pass
HT20	MCS0	2	6	2437	17.50	17.00	20.27	30.00		0.60		20.87		36.00		Pass
HT20	MCS0	2	11	2462	16.10	15.70	18.91	30.00		0.60		19.51		36.00		Pass

Note: Measured power (dBm) has offset with cable loss.

TEST RESULTS DATA
Peak Power Spectral Density

2.4GHz Band												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Peak PSD (dBm/3kHz)			DG (dBi)		Peak PSD Limit (dBm/3kHz)		Pass/Fail
					Ant 1	Ant 2	Worse + 3.01	Ant 1	Ant 2	Ant 1	Ant 2	
11b	1Mbps	2	1	2412	-5.27	-4.43	-1.42	0.77		8.00		Pass
11b	1Mbps	2	6	2437	-5.68	-6.45	-2.67	0.77		8.00		Pass
11b	1Mbps	2	11	2462	-5.89	-5.19	-2.18	0.77		8.00		Pass
11g	6Mbps	2	1	2412	-9.83	-10.93	-6.82	0.77		8.00		Pass
11g	6Mbps	2	6	2437	-9.24	-7.73	-4.72	0.77		8.00		Pass
11g	6Mbps	2	11	2462	-9.43	-8.55	-5.54	0.77		8.00		Pass
HT20	MCS0	2	1	2412	-11.33	-11.34	-8.32	0.77		8.00		Pass
HT20	MCS0	2	6	2437	-8.50	-8.93	-5.49	0.77		8.00		Pass
HT20	MCS0	2	11	2462	-9.72	-10.24	-6.71	0.77		8.00		Pass

Measured power density (dBm) has offset with cable loss.



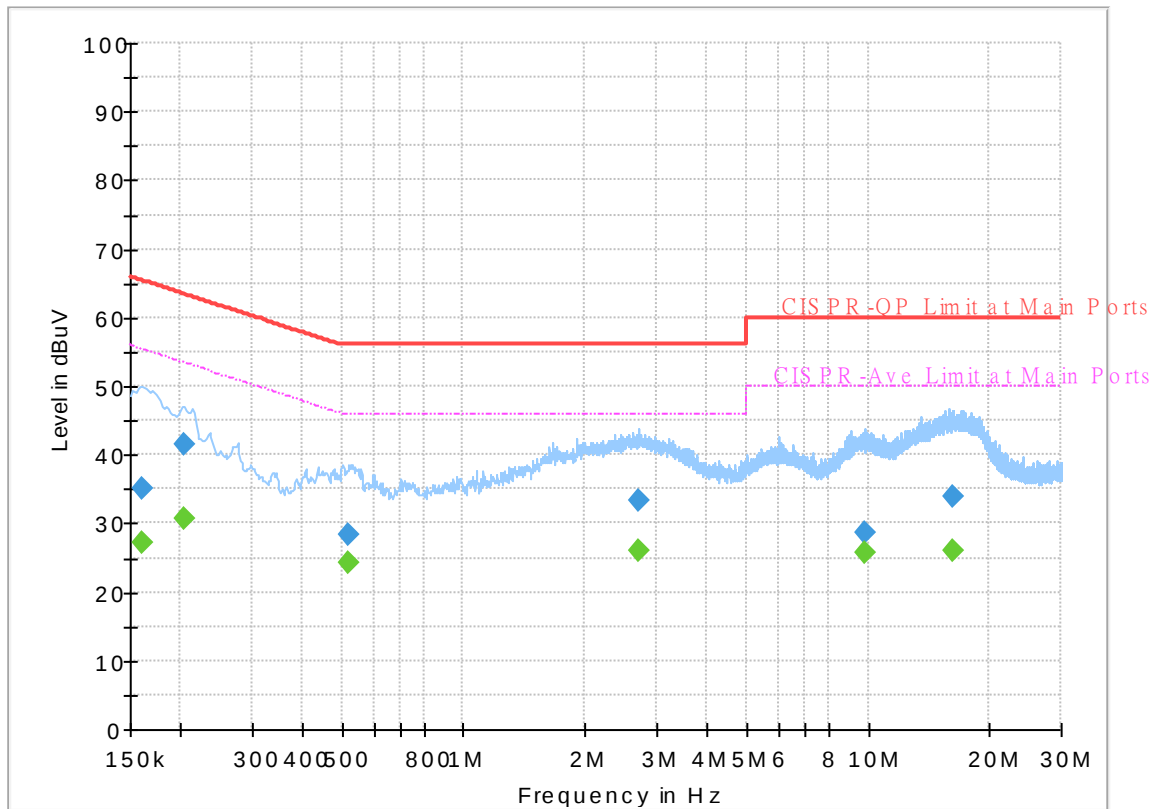
Appendix B. AC Conducted Emission Test Results

Test Engineer :	Eric Jeng	Temperature :	22~25°C
		Relative Humidity :	52~55%

EUT Information

Report NO : 912419
Test Mode : Mode 1
Test Voltage : 120Vac/60Hz
Phase : Line

Full Spectrum



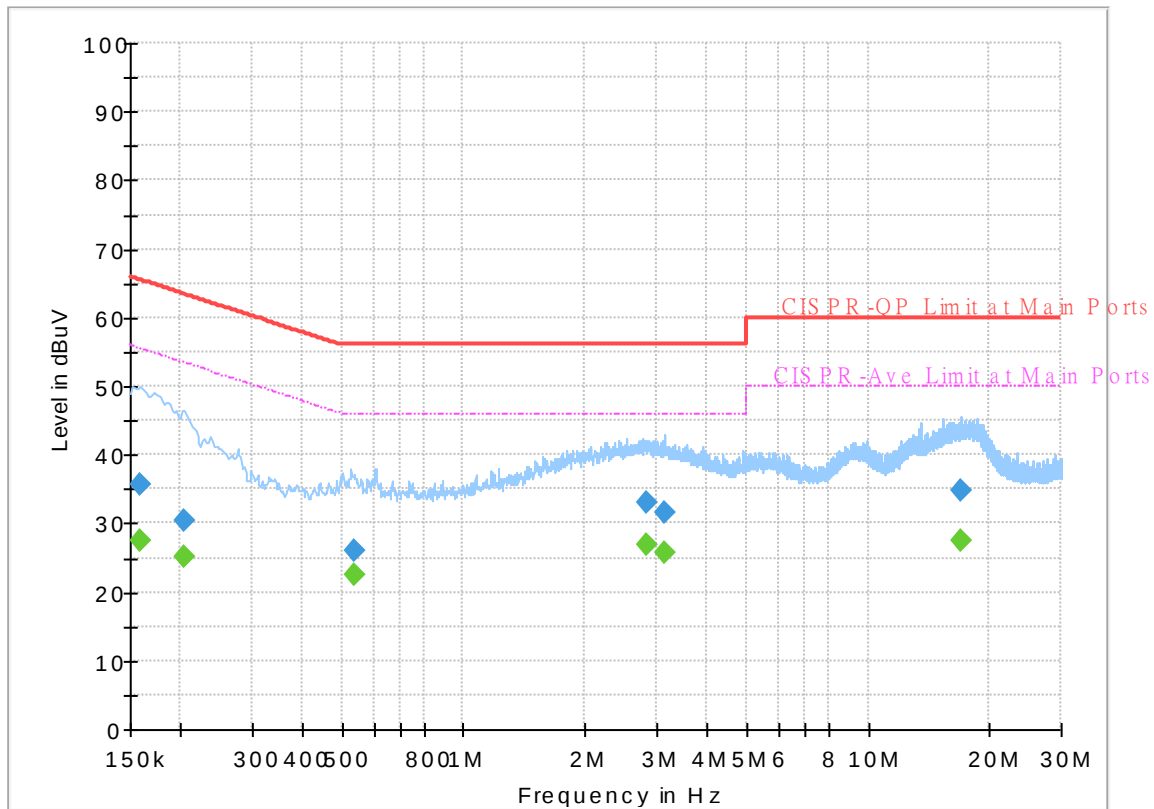
Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.161250	---	27.23	55.40	28.17	L1	OFF	19.5
0.161250	35.20	---	65.40	30.20	L1	OFF	19.5
0.204000	---	30.76	53.45	22.69	L1	OFF	19.5
0.204000	41.62	---	63.45	21.83	L1	OFF	19.5
0.519000	---	24.39	46.00	21.61	L1	OFF	19.5
0.519000	28.28	---	56.00	27.72	L1	OFF	19.5
2.717250	---	26.12	46.00	19.88	L1	OFF	19.6
2.717250	33.35	---	56.00	22.65	L1	OFF	19.6
9.863250	---	25.73	50.00	24.27	L1	OFF	19.9
9.863250	28.77	---	60.00	31.23	L1	OFF	19.9
16.208250	---	25.94	50.00	24.06	L1	OFF	20.1
16.208250	33.86	---	60.00	26.14	L1	OFF	20.1

EUT Information

Report NO : 912419
Test Mode : Mode 1
Test Voltage : 120Vac/60Hz
Phase : Neutral

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.159000	---	27.35	55.52	28.17	N	OFF	19.5
0.159000	35.62	---	65.52	29.90	N	OFF	19.5
0.204000	---	25.29	53.45	28.16	N	OFF	19.5
0.204000	30.44	---	63.45	33.01	N	OFF	19.5
0.537000	---	22.52	46.00	23.48	N	OFF	19.5
0.537000	26.00	---	56.00	30.00	N	OFF	19.5
2.834250	---	27.00	46.00	19.00	N	OFF	19.6
2.834250	33.00	---	56.00	23.00	N	OFF	19.6
3.142500	---	25.78	46.00	20.22	N	OFF	19.6
3.142500	31.68	---	56.00	24.32	N	OFF	19.6
17.022750	---	27.55	50.00	22.45	N	OFF	20.2
17.022750	34.94	---	60.00	25.06	N	OFF	20.2



Appendix C. Radiated Spurious Emission

Test Engineer :	Jesse Wang, Stan Hsieh, Troye Hsieh	Temperature :	22~25°C
		Relative Humidity :	55~60%

<Open Mode>

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preampl Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		2381.715	54.31	-19.69	74	39.88	31.93	17.44	34.94	327	120	P	H
		2386.965	43.72	-10.28	54	29.22	32	17.44	34.94	327	120	A	H
	*	2412	108.76	-	-	94.2	32.07	17.44	34.95	327	120	P	H
	*	2412	105.63	-	-	91.07	32.07	17.44	34.95	327	120	A	H
													H
		2386.545	54.46	-19.54	74	39.96	32	17.44	34.94	399	191	P	V
		2389.905	43.62	-10.38	54	29.13	32	17.44	34.95	399	191	A	V
	*	2412	104.74	-	-	90.18	32.07	17.44	34.95	399	191	P	V
	*	2412	101.45	-	-	86.89	32.07	17.44	34.95	399	191	A	V
													V
802.11b CH 06 2437MHz		2350.46	54.28	-19.72	74	40.05	31.8	17.37	34.94	148	36	P	H
		2389.52	43.7	-10.3	54	29.2	32	17.44	34.94	148	36	A	H
	*	2437	108.65	-	-	93.91	32.2	17.5	34.96	148	36	P	H
	*	2437	105.45	-	-	90.71	32.2	17.5	34.96	148	36	A	H
		2485.51	54.46	-19.54	74	39.67	32.2	17.56	34.97	148	36	P	H
		2484.88	43.63	-10.37	54	28.84	32.2	17.56	34.97	148	36	A	H
		2330.86	54.34	-19.66	74	40.16	31.8	17.31	34.93	396	191	P	V
		2389.94	43.6	-10.4	54	29.11	32	17.44	34.95	396	191	A	V
	*	2437	105.88	-	-	91.14	32.2	17.5	34.96	396	191	P	V
	*	2437	102.58	-	-	87.84	32.2	17.5	34.96	396	191	A	V
		2494.19	54.58	-19.42	74	39.8	32.2	17.56	34.98	396	191	P	V
		2483.5	43.6	-10.4	54	28.81	32.2	17.56	34.97	396	191	A	V



802.11b CH 11 2462MHz	*	2462	107.69	-	-	92.9	32.2	17.56	34.97	300	55	P	H
	*	2462	104.71	-	-	89.92	32.2	17.56	34.97	300	55	A	H
		2484.28	55.23	-18.77	74	40.44	32.2	17.56	34.97	300	55	P	H
		2484.12	43.65	-10.35	54	28.86	32.2	17.56	34.97	300	55	A	H
													H
													H
	*	2462	104.79	-	-	90	32.2	17.56	34.97	339	51	P	V
	*	2462	101.32	-	-	86.53	32.2	17.56	34.97	339	51	A	V
		2492.8	53.89	-20.11	74	39.11	32.2	17.56	34.98	339	51	P	V
		2484.36	43.61	-10.39	54	28.82	32.2	17.56	34.97	339	51	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11b (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11b CH 01 2412MHz		4824	45	-29	74	59.26	34.1	10.98	59.34	100	0	P	H
													H
													H
													H
		4824	45.15	-28.85	74	59.41	34.1	10.98	59.34	100	0	P	V
													V
													V
													V
802.11b CH 06 2437MHz		4874	43.76	-30.24	74	57.84	34.13	11.03	59.24	100	0	P	H
		7311	43.48	-30.52	74	52.25	35.7	13.66	58.13	100	0	P	H
													H
													H
		4874	43.81	-30.19	74	57.89	34.13	11.03	59.24	100	0	P	V
		7305	43.2	-30.8	74	51.97	35.7	13.66	58.13	100	0	P	V
													V
													V
802.11b CH 11 2462MHz		4924	45.77	-28.23	74	59.65	34.17	11.09	59.14	100	0	P	H
		7386	43.5	-30.5	74	52.5	35.5	13.76	58.26	100	0	P	H
													H
													H
		4924	43.06	-30.94	74	56.94	34.17	11.09	59.14	100	0	P	V
		7386	43.84	-30.16	74	52.84	35.5	13.76	58.26	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz
WIFI 802.11g (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11g CH 01 2412MHz		2390	61.26	-12.74	74	46.77	32	17.44	34.95	328	121	P	H
		2390	50.87	-3.13	54	36.38	32	17.44	34.95	328	121	A	H
	*	2412	108.8	-	-	94.24	32.07	17.44	34.95	328	121	P	H
	*	2412	101.06	-	-	86.5	32.07	17.44	34.95	328	121	A	H
													H
													H
		2389.905	56.37	-17.63	74	41.88	32	17.44	34.95	367	82	P	V
		2389.59	46.53	-7.47	54	32.03	32	17.44	34.94	367	82	A	V
	*	2412	103.46	-	-	88.9	32.07	17.44	34.95	367	82	P	V
	*	2412	95.7	-	-	81.14	32.07	17.44	34.95	367	82	A	V
													V
													V
802.11g CH 06 2437MHz		2325.26	55.44	-18.56	74	41.26	31.8	17.31	34.93	158	151	P	H
		2388.12	44.72	-9.28	54	30.22	32	17.44	34.94	158	151	A	H
	*	2437	110.56	-	-	95.82	32.2	17.5	34.96	158	151	P	H
	*	2437	103.34	-	-	88.6	32.2	17.5	34.96	158	151	A	H
		2485.93	54.73	-19.27	74	39.94	32.2	17.56	34.97	158	151	P	H
		2484.95	44.39	-9.61	54	29.6	32.2	17.56	34.97	158	151	A	H
		2332.96	53.99	-20.01	74	39.81	31.8	17.31	34.93	394	178	P	V
		2386.72	44.53	-9.47	54	30.03	32	17.44	34.94	394	178	A	V
	*	2437	106.38	-	-	91.64	32.2	17.5	34.96	394	178	P	V
	*	2437	98.64	-	-	83.9	32.2	17.5	34.96	394	178	A	V
		2487.68	54.83	-19.17	74	40.04	32.2	17.56	34.97	394	178	P	V
		2484.81	44.58	-9.42	54	29.79	32.2	17.56	34.97	394	178	A	V



802.11g CH 11 2462MHz	*	2462	109.62	-	-	94.83	32.2	17.56	34.97	284	118	P	H
	*	2462	102.2	-	-	87.41	32.2	17.56	34.97	284	118	A	H
		2484.36	60.92	-13.08	74	46.13	32.2	17.56	34.97	284	118	P	H
		2483.76	50.71	-3.29	54	35.92	32.2	17.56	34.97	284	118	A	H
													H
													H
	*	2462	105.08	-	-	90.29	32.2	17.56	34.97	400	83	P	V
	*	2462	97.91	-	-	83.12	32.2	17.56	34.97	400	83	A	V
		2483.88	57.66	-16.34	74	42.87	32.2	17.56	34.97	400	83	P	V
		2483.6	47.57	-6.43	54	32.78	32.2	17.56	34.97	400	83	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11g (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11g CH 01 2412MHz		4824	42.9	-31.1	74	57.16	34.1	10.98	59.34	100	0	P	H
													H
													H
													H
		4824	42.13	-31.87	74	31.58	-500	10.55	-500	100	0	P	V
													V
													V
													V
802.11g CH 06 2437MHz		4874	44.8	-29.2	74	58.88	34.13	11.03	59.24	100	0	P	H
		7311	43.07	-30.93	74	51.84	35.7	13.66	58.13	100	0	P	H
													H
													H
		4874	42.19	-31.81	74	56.27	34.13	11.03	59.24	100	0	P	V
		7311	43.22	-30.78	74	51.99	35.7	13.66	58.13	100	0	P	V
													V
													V
802.11g CH 11 2462MHz		4924	43	-31	74	56.88	34.17	11.09	59.14	100	0	P	H
		7386	43.49	-30.51	74	52.49	35.5	13.76	58.26	100	0	P	H
													H
													H
		4924	43.69	-30.31	74	57.57	34.17	11.09	59.14	100	0	P	V
		7386	43.62	-30.38	74	52.62	35.5	13.76	58.26	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 01 2412MHz		2389.905	60	-14	74	45.51	32	17.44	34.95	329	121	P	H
		2389.905	50.04	-3.96	54	35.55	32	17.44	34.95	329	121	A	H
	*	2412	106.96	-	-	92.4	32.07	17.44	34.95	329	121	P	H
	*	2412	98.62	-	-	84.06	32.07	17.44	34.95	329	121	A	H
													H
													H
		2389.8	55.81	-18.19	74	41.32	32	17.44	34.95	367	39	P	V
		2390	46.31	-7.69	54	31.82	32	17.44	34.95	367	39	A	V
	*	2412	102.24	-	-	87.68	32.07	17.44	34.95	367	39	P	V
	*	2412	94.2	-	-	79.64	32.07	17.44	34.95	367	39	A	V
													V
													V
802.11n HT20 CH 06 2437MHz		2360.54	54.26	-19.74	74	39.95	31.87	17.38	34.94	206	46	P	H
		2389.1	44.88	-9.12	54	30.38	32	17.44	34.94	206	46	A	H
	*	2437	109.42	-	-	94.68	32.2	17.5	34.96	206	46	P	H
	*	2437	102.1	-	-	87.36	32.2	17.5	34.96	206	46	A	H
		2490.27	54.48	-19.52	74	39.69	32.2	17.56	34.97	206	46	P	H
		2484.04	44.74	-9.26	54	29.95	32.2	17.56	34.97	206	46	A	H
		2373	54.37	-19.63	74	40	31.93	17.38	34.94	400	187	P	V
		2387	44.44	-9.56	54	29.94	32	17.44	34.94	400	187	A	V
	*	2437	106.61	-	-	91.87	32.2	17.5	34.96	400	187	P	V
	*	2437	98.68	-	-	83.94	32.2	17.5	34.96	400	187	A	V
		2488.45	53.81	-20.19	74	39.02	32.2	17.56	34.97	400	187	P	V
		2494.96	44.59	-9.41	54	29.81	32.2	17.56	34.98	400	187	A	V



802.11n HT20 CH 11 2462MHz	*	2462	107.27	-	-	92.48	32.2	17.56	34.97	400	91	P	H
	*	2462	99.76	-	-	84.97	32.2	17.56	34.97	400	91	A	H
		2483.56	59.17	-14.83	74	44.38	32.2	17.56	34.97	400	91	P	H
		2483.52	50.21	-3.79	54	35.42	32.2	17.56	34.97	400	91	A	H
													H
													H
	*	2462	104.23	-	-	89.44	32.2	17.56	34.97	400	82	P	V
	*	2462	97.2	-	-	82.41	32.2	17.56	34.97	400	82	A	V
		2483.76	57.12	-16.88	74	42.33	32.2	17.56	34.97	400	82	P	V
		2483.68	47.96	-6.04	54	33.17	32.2	17.56	34.97	400	82	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz
WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 01 2412MHz		4824	41.57	-32.43	74	55.83	34.1	10.98	59.34	100	0	P	H
													H
													H
													H
		4824	41.6	-32.4	74	55.86	34.1	10.98	59.34	100	0	P	V
													V
													V
													V
802.11n HT20 CH 06 2437MHz		4874	42.01	-31.99	74	56.09	34.13	11.03	59.24	100	0	P	H
		7311	43.09	-30.91	74	51.86	35.7	13.66	58.13	100	0	P	H
													H
													H
		4874	41.68	-32.32	74	55.76	34.13	11.03	59.24	100	0	P	V
		7311	44.02	-29.98	74	52.79	35.7	13.66	58.13	100	0	P	V
													V
													V
802.11n HT20 CH 11 2462MHz		4924	42.46	-31.54	74	56.34	34.17	11.09	59.14	100	0	P	H
		7386	43.63	-30.37	74	52.63	35.5	13.76	58.26	100	0	P	H
													H
													H
		4924	42.25	-31.75	74	56.13	34.17	11.09	59.14	100	0	P	V
		7386	43.73	-30.27	74	52.73	35.5	13.76	58.26	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Emission below 1GHz

2.4GHz WIFI 802.11g (LF)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
2.4GHz 802.11g LF		30	22.87	-17.13	40	27.12	24.6	1.33	30.18			P	H
		97.23	27.93	-15.57	43.5	40.82	15.45	1.74	30.08			P	H
		162.03	25.94	-17.56	43.5	37.34	16.36	2.25	30.01			P	H
		736.1	36.09	-9.91	46	33.76	27.5	4.37	29.54			P	H
		743.1	39.17	-6.83	46	36.52	27.7	4.46	29.51	100	0	P	H
		955.2	34.54	-11.46	46	27.37	30.64	5.05	28.52			P	H
													H
													H
													H
													H
													H
													H
													H
		35.67	33.59	-6.41	40	40.92	21.51	1.33	30.17	100	0	P	V
		39.18	31.34	-8.66	40	40.29	19.88	1.34	30.17			P	V
		97.23	28.62	-14.88	43.5	41.51	15.45	1.74	30.08			P	V
		741.7	34.85	-11.15	46	32.21	27.7	4.46	29.52			P	V
		745.9	37.31	-8.69	46	34.63	27.73	4.46	29.51			P	V
		955.9	34.29	-11.71	46	27.07	30.69	5.05	28.52			P	V
													V
													V
													V
													V
													V
												V	
												V	
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



<Close Mode>

2.4GHz 2400~2483.5MHz

WIFI 802.11g (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11g CH 01 2412MHz		2388.645	58.62	-15.38	74	44.12	32	17.44	34.94	298	119	P	H
		2389.275	48.83	-5.17	54	34.33	32	17.44	34.94	298	119	A	H
	*	2412	107.55	-	-	92.99	32.07	17.44	34.95	298	119	P	H
	*	2412	99.68	-	-	85.12	32.07	17.44	34.95	298	119	A	H
													H
													H
		2389.905	57.71	-16.29	74	43.22	32	17.44	34.95	300	6	P	V
		2390	48.73	-5.27	54	34.24	32	17.44	34.95	300	6	A	V
	*	2412	105.26	-	-	90.7	32.07	17.44	34.95	300	6	P	V
	*	2412	98.08	-	-	83.52	32.07	17.44	34.95	300	6	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**2.4GHz 2400~2483.5MHz****WIFI 802.11g (Harmonic @ 3m)**

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11g CH 01 2412MHz		4824	41.8	-32.2	74	56.06	34.1	10.98	59.34	100	0	P	H
													H
													H
													H
		4824	41.56	-32.44	74	55.82	34.1	10.98	59.34	100	0	P	V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Note symbol

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
!	Test result is over limit line.
P/A	P eak or A verage
H/V	H orizontal or V ertical

A calculation example for radiated spurious emission is shown as below:

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
CH 01													
2412MHz		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

1. Path Loss(dB) = Cable loss(dB) + Filter loss(dB) + Attenuator loss(dB)

2. Level(dBμV/m) =

Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

3. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

= 32.22(dB/m) + 4.58(dB) + 54.51(dBμV) – 35.86 (dB)

= 55.45 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

= 32.22(dB/m) + 4.58(dB) + 42.6(dBμV) – 35.86 (dB)

= 43.54 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 43.54(dBμV/m) – 54(dBμV/m)

= -10.46(dB)

Both peak and average measured complies with the limit line, so test result is “PASS”.



Appendix D. Radiated Spurious Emission Plots

Test Engineer :	Jesse Wang, Stan Hsieh, Troye Hsieh	Temperature :	22~25°C
		Relative Humidity :	55~60%

Note symbol

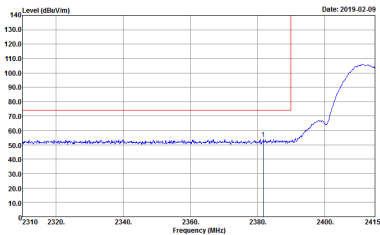
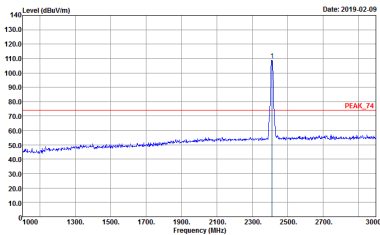
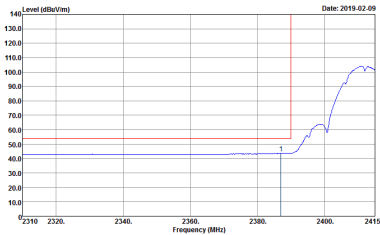
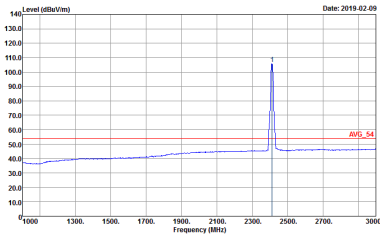
-L	Low channel location
-R	High channel location



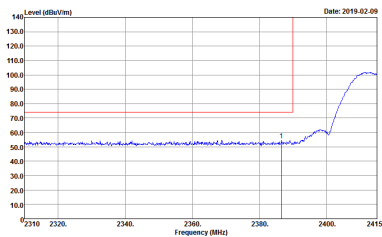
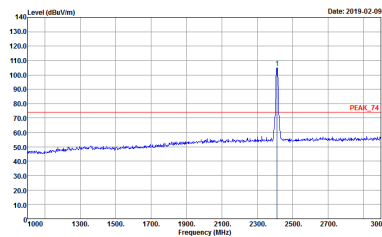
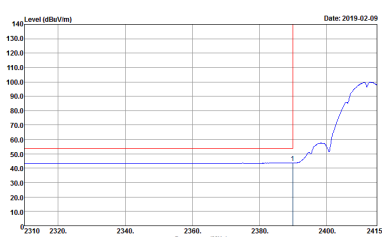
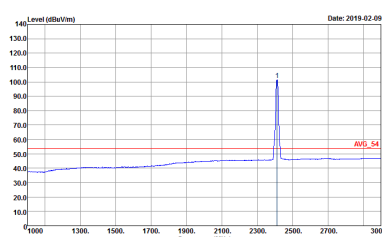
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2.4GHz 2400~2483.5MHz

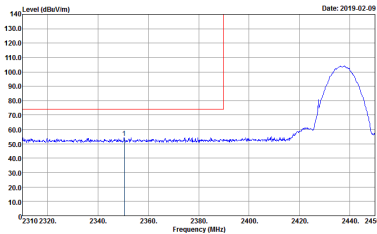
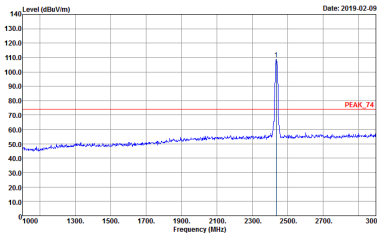
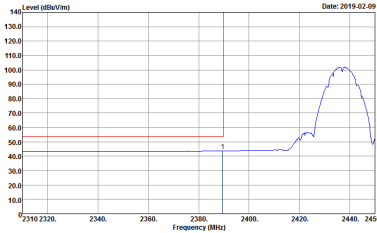
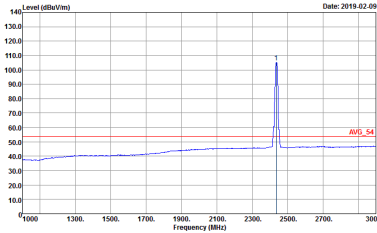
WIFI 802.11b (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 912419 Mode : 14	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 912419 Mode : 14
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 912419 Mode : 14	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 912419 Mode : 14

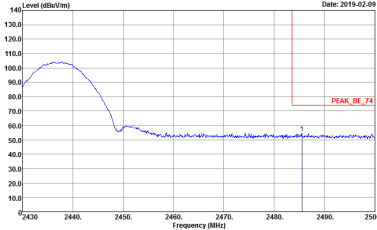
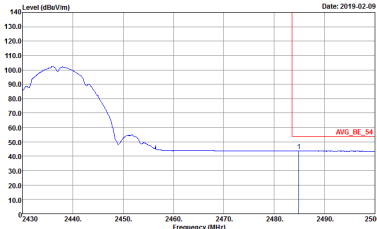


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 912419 Mode : 14	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 912419 Mode : 14
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 912419 Mode : 14	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 912419 Mode : 14

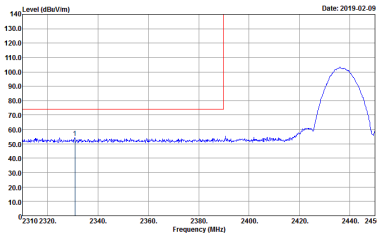
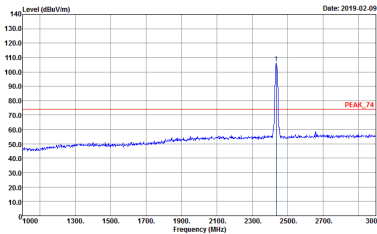
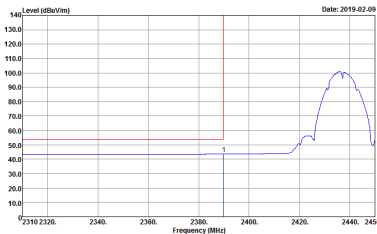
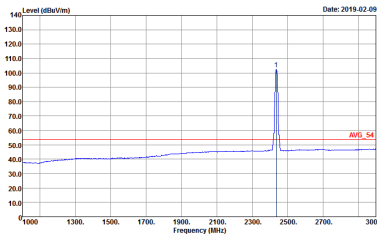


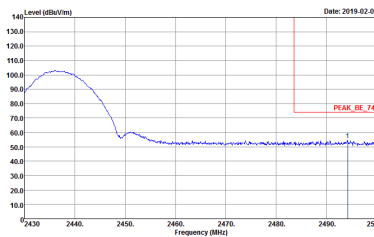
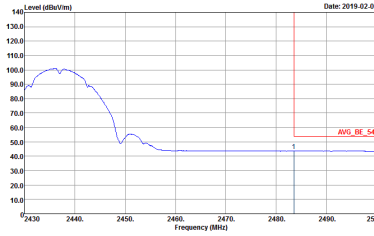
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : 912419 Mode : 15	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : 912419 Mode : 15
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : 912419 Mode : 15	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 HORIZONTAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : 912419 Mode : 15



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : 912419 Mode : 15	Left blank
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : 912419 Mode : 15	Left blank



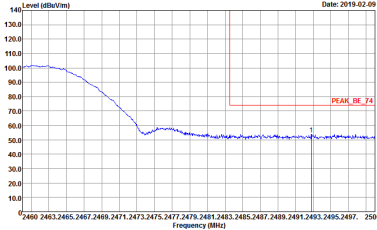
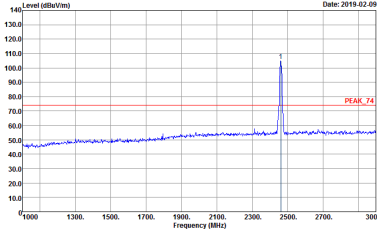
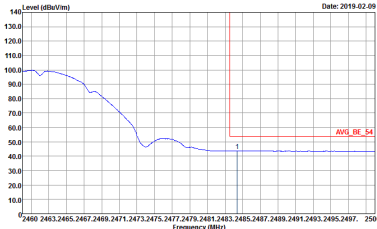
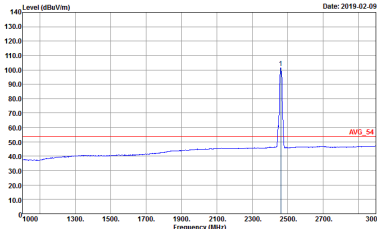
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
1+2	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : Peak Mode : 912419 : 15	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : Peak Mode : 912419 : 15
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : Peak Mode : 912419 : 15	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : Peak Mode : 912419 : 15

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
1+2	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 912419 Mode : 15	Left blank
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 912419 Mode : 15	Left blank

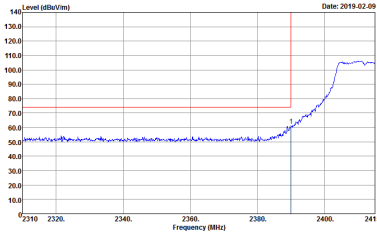
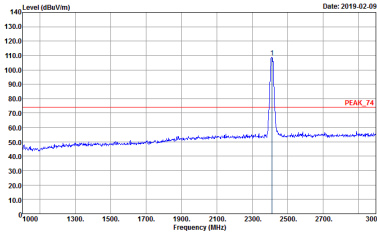
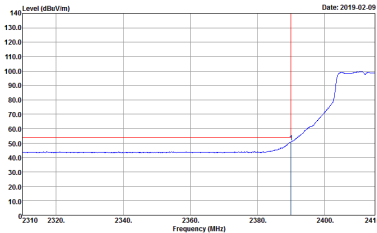
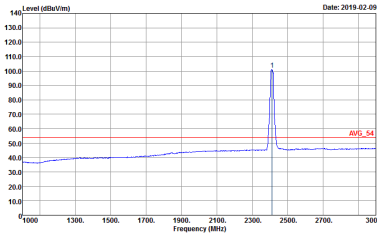


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
1+2	Horizontal	Fundamental
Peak	Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : 912419 Mode : 16	Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : 912419 Mode : 16
Avg.	Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : 912419 Mode : 16	Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 HORIZONTAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : 912419 Mode : 16

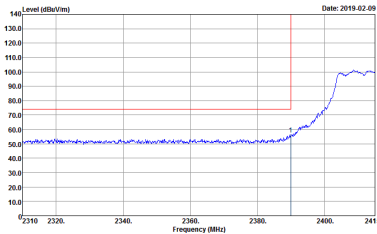
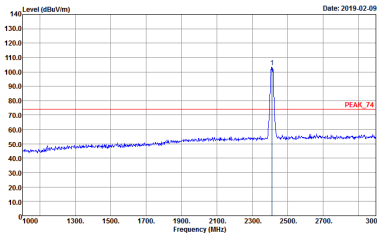
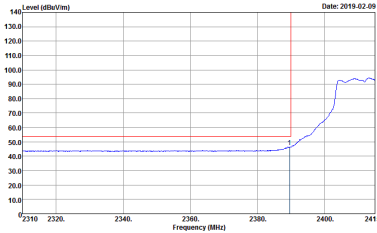
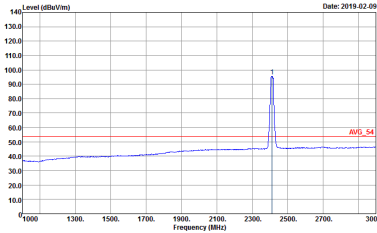


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : Peak Mode : 912419 16	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : Peak Mode : 912419 16
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : Peak Mode : 912419 16	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : Peak Mode : 912419 16

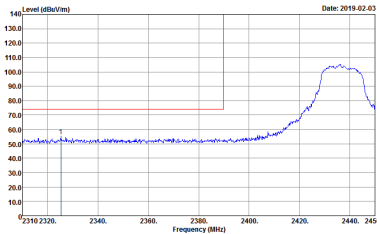
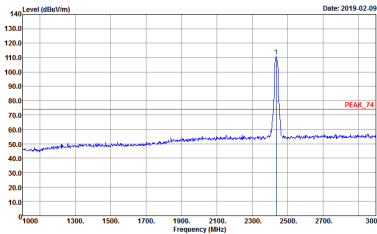
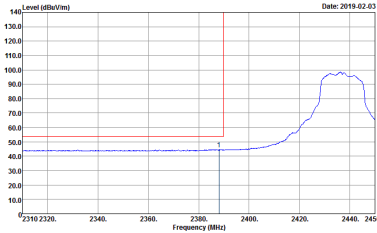
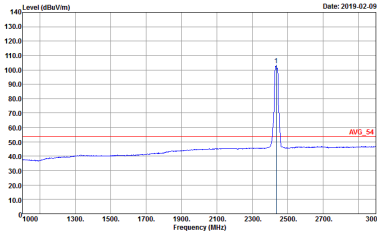
2.4GHz 2400~2483.5MHz
WIFI 802.11g (Band Edge @ 3m)

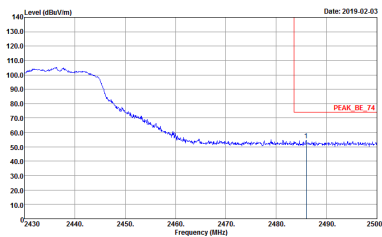
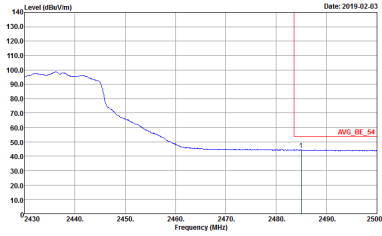
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 912419 Mode : 17 Setting : 15.5	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 912419 Mode : 17 Setting : 15.5
	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 912419 Mode : 17 Setting : 15.5	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 912419 Mode : 17 Setting : 15.5



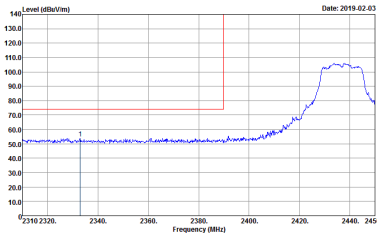
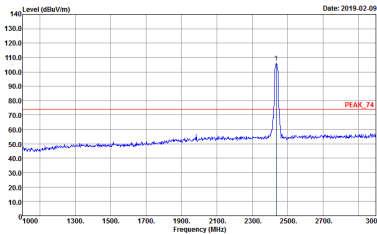
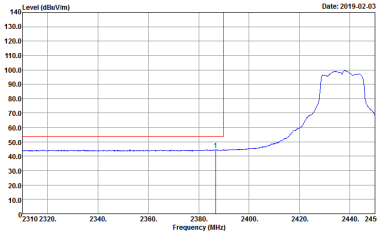
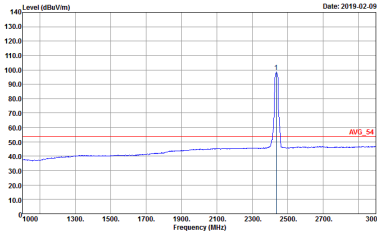
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : Peak Mode : 912419 Setting : 17 Setting : 15.5	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : Peak Mode : 912419 Setting : 17 Setting : 15.5
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Project : Peak Mode : 912419 Setting : 17 Setting : 15.5	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Project : Peak Mode : 912419 Setting : 17 Setting : 15.5

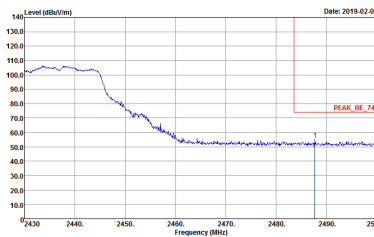
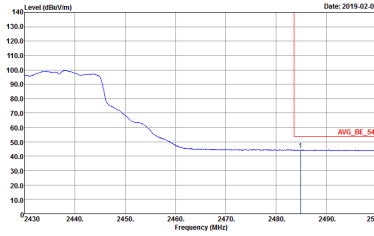


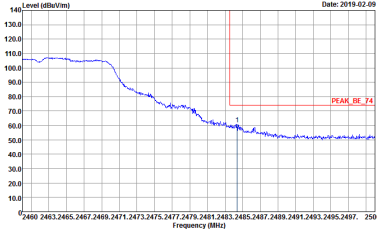
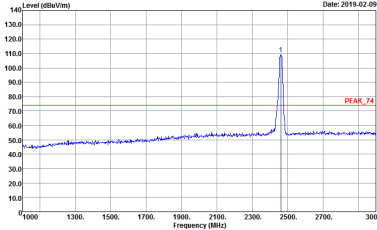
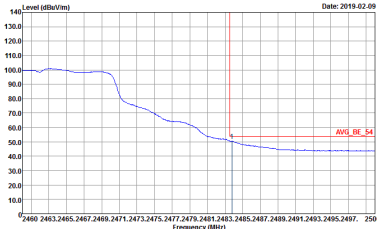
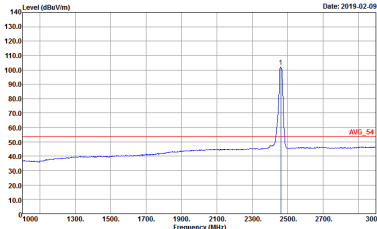
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : Peak Mode : 18	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : Peak Mode : 18
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL Detector : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Project : Peak Mode : 18	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 HORIZONTAL Detector : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Project : Peak Mode : 18

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : 912419 Mode : 18	Left blank
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL Detector : RBW:1000.000kHz VBW:1.000kHz SWT:Auto Project : 912419 Mode : 18	Left blank

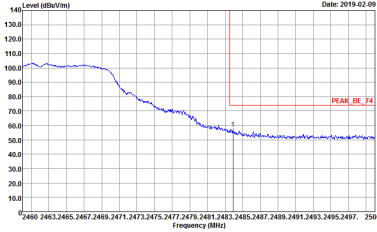
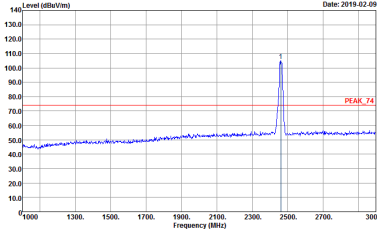
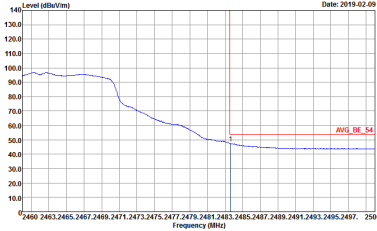
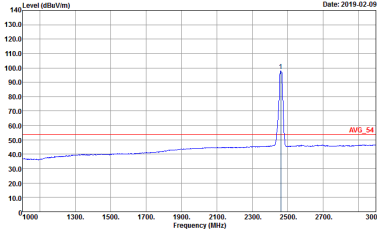


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
1+2	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 912419 Mode : 18	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 912419 Mode : 18
	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 912419 Mode : 18	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 912419 Mode : 18

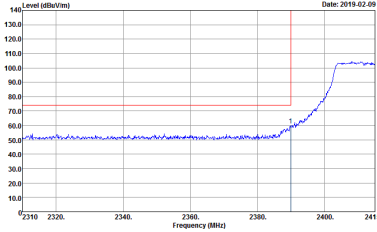
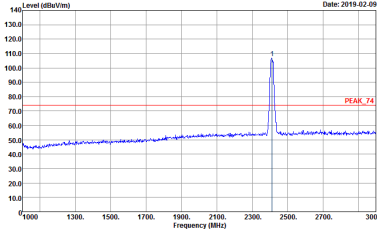
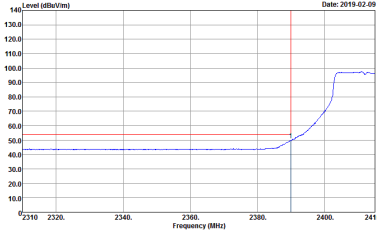
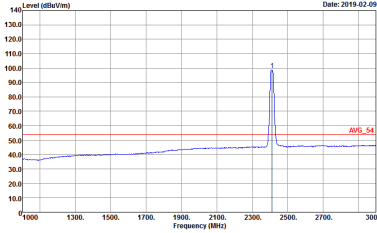
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
1+2	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 912419 Mode : 18	Left Blank
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 912419 Mode : 18	Left Blank

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 912419 Mode : 19 Setting : 17	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 912419 Mode : 19 Setting : 17
	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 912419 Mode : 19 Setting : 17	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 912419 Mode : 19 Setting : 17

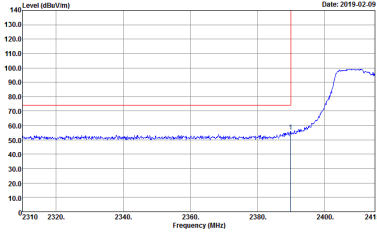
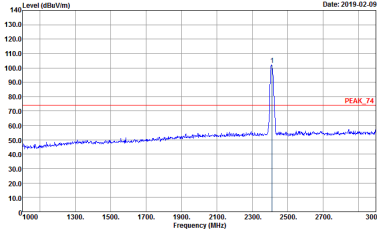
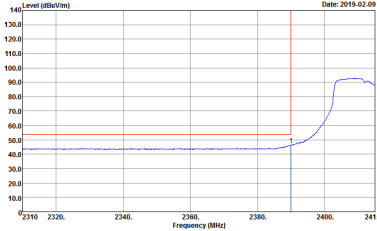
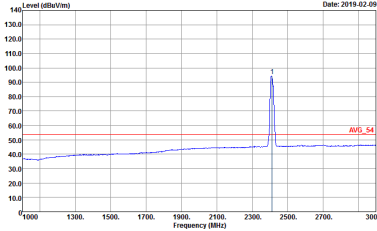


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : Peak Mode : 912419 Setting : 17	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : Peak Mode : 912419 Setting : 17
	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Project : Peak Mode : 912419 Setting : 17	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Project : Peak Mode : 912419 Setting : 17

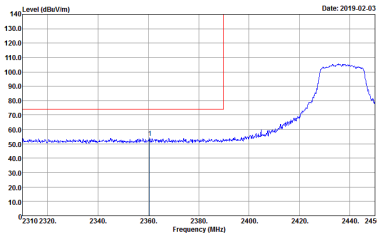
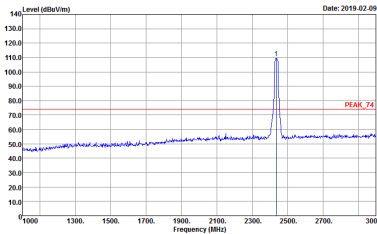
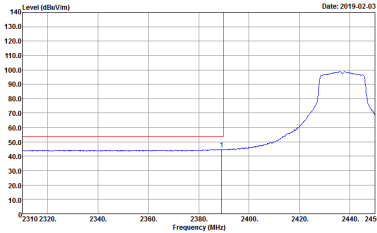
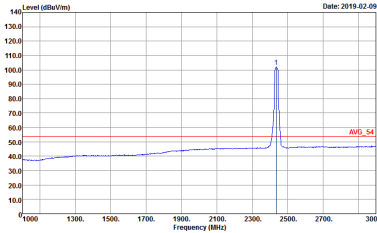
2.4GHz 2400~2483.5MHz
WIFI 802.11n HT20 (Band Edge @ 3m)

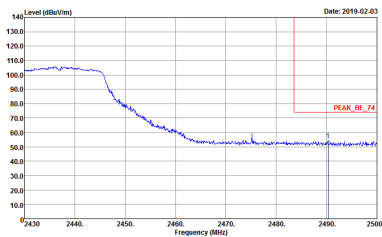
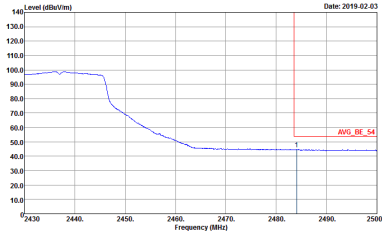
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 912419 Mode : 20 Setting : 14	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 912419 Mode : 20 Setting : 14
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 912419 Mode : 20 Setting : 14	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 HORIZONTAL Detector : Peak Project : 912419 Mode : 20 Setting : 14



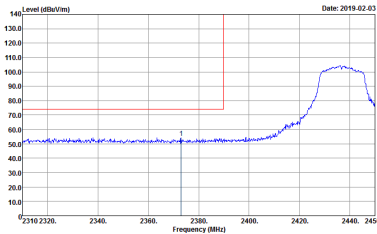
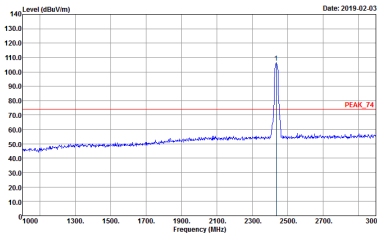
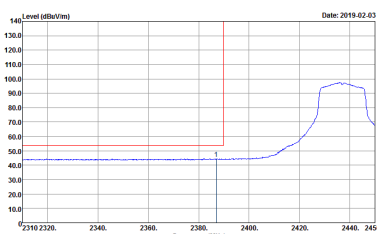
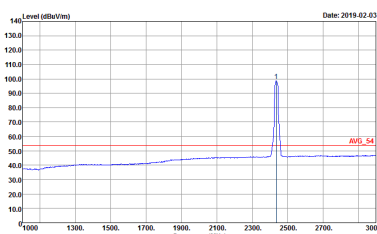
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : Peak Mode : 912419 Setting : 20 Setting : 14	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : Peak Mode : 912419 Setting : 20 Setting : 14
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Project : Peak Mode : 912419 Setting : 20 Setting : 14	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Project : Peak Mode : 912419 Setting : 20 Setting : 14



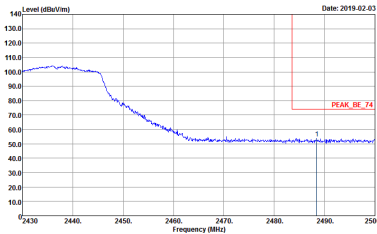
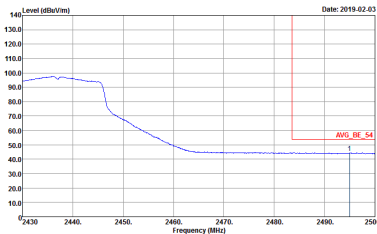
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - L	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 912419 Mode : Z1	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 912419 Mode : Z1
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL Detector : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Project : 912419 Mode : Z1	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 HORIZONTAL Detector : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Project : 912419 Mode : Z1

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - R	
1+2	Horizontal	Fundamental
Peak	 Date: 2019.02.03 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : Peak Mode : 912419 : Z1	Left blank
Avg.	 Date: 2019.02.03 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL Detector : RBW:1000.000kHz VBW:1.000kHz SWT:Auto Project : Peak Mode : 912419 : Z1	Left blank

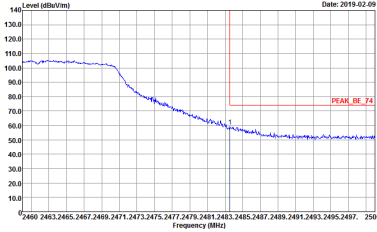
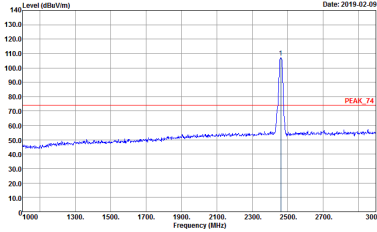
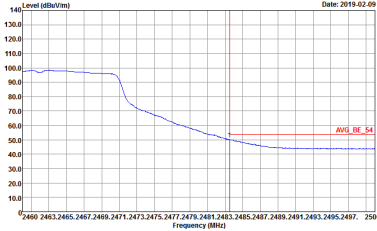
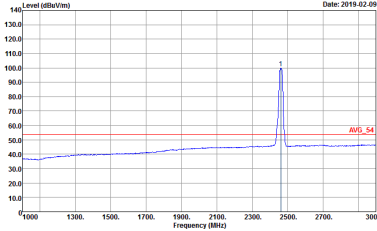


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - L	
1+2	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 912419 Mode : Z1	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 912419 Mode : Z1
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Project : 912419 Mode : Z1	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Project : 912419 Mode : Z1

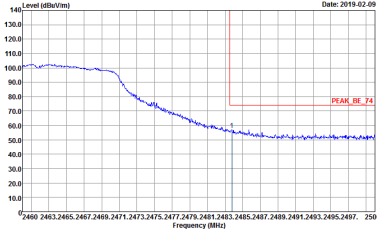
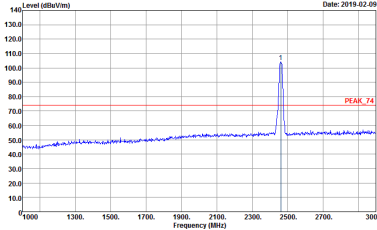
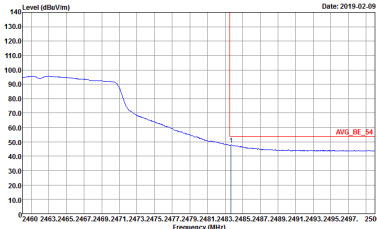
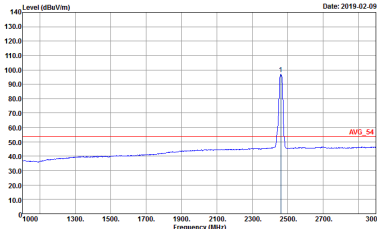


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - R	
1+2	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : 912419 Mode : Z1	Left Blank
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000kHz VBW:1.000kHz SWT:Auto Project : 912419 Mode : Z1	Left Blank



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : Peak Mode : 912419 Setting : 22 Setting : 16	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : Peak Mode : 912419 Setting : 22 Setting : 16
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL Detector : RBW:1000.000kHz VBW:1.000kHz SWT:Auto Project : Peak Mode : 912419 Setting : 22 Setting : 16	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 HORIZONTAL Detector : RBW:1000.000kHz VBW:1.000kHz SWT:Auto Project : Peak Mode : 912419 Setting : 22 Setting : 16



WIFI	2.4GHz 2400~2483.5MHz Fundamental @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : Peak Mode : 912419 Setting : 22 Setting : 16	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : Peak Mode : 912419 Setting : 22 Setting : 16
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Project : Peak Mode : 912419 Setting : 22 Setting : 16	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Project : Peak Mode : 912419 Setting : 22 Setting : 16

**2.4GHz 2400~2483.5MHz****WIFI 802.11b (Harmonic @ 3m)**

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH01 2412MHz	
1+2	Horizontal	Vertical
Peak Avg.	Horizontal spectrum plot showing Level (dBuV/m) vs Frequency (MHz). The plot includes a peak at 2412 MHz and an average line. The date is 2019-02-05. Site : 03CH07-HY Condition : PEAK_74 3m SHF-EHF_131029 HORIZONTAL Detector : Peak Project : 912419 Mode : 14	Vertical spectrum plot showing Level (dBuV/m) vs Frequency (MHz). The plot includes a peak at 2412 MHz and an average line. The date is 2019-02-05. Site : 03CH07-HY Condition : PEAK_74 3m SHF-EHF_131029 VERTICAL Detector : Peak Project : 912419 Mode : 14



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH06 2437MHz	
1+2	Horizontal	Vertical
Peak Avg.	Level (dBuV/m) Date: 2019-02-05 Frequency (MHz) Site : E0CH07-HY Condition : PEAK_74 3m SHF-EHF_131029 HORIZONTAL Detector : Peak Project : 912419 Mode : 15	Level (dBuV/m) Date: 2019-02-05 Frequency (MHz) Site : E0CH07-HY Condition : PEAK_74 3m SHF-EHF_131029 VERTICAL Detector : Peak Project : 912419 Mode : 15

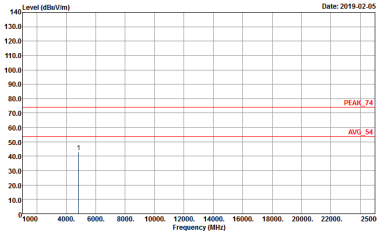
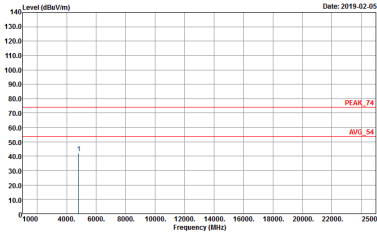


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH11 2462MHz	
1+2	Horizontal	Vertical
Peak Avg.	Level (dBuV/m) Date: 2019-02-05 Frequency (MHz) Site : E0CH07-HY Condition : PEAK_74 3m SHF-EHF_131029 HORIZONTAL Detector : Peak Project : 912419 Mode : 1G	Level (dBuV/m) Date: 2019-02-05 Frequency (MHz) Site : E0CH07-HY Condition : PEAK_74 3m SHF-EHF_131029 VERTICAL Detector : Peak Project : 912419 Mode : 1G



2.4GHz 2400~2483.5MHz

WIFI 802.11g (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH01 2412MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH07-HY Condition : PEAK_74 3m SHF-EHF_131029 HORIZONTAL Detector : Peak Project : 912419 Mode : 17	 Site : 03CH07-HY Condition : PEAK_74 3m SHF-EHF_131029 VERTICAL Detector : Peak Project : 912419 Mode : 17



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m																																																	
ANT	802.11g CH06 2437MHz																																																	
1+2	Horizontal	Vertical																																																
Peak Avg.	Level (dBuV/m) Date: 2019-02-05 Site : E0CH07-HY Condition : PEAK_74 3m SHF-EHF_131029 HORIZONTAL Detector : Peak Project : 912419 Mode : 18 <table><tr><th></th><th>Freq</th><th>Level</th><th>Over</th><th>Limit</th><th>Read</th></tr><tr><th></th><th>MHz</th><th>dBuV/m</th><th>dB</th><th>dBuV/m</th><th>dBuV</th></tr><tr><td>1</td><td>4874.00</td><td>44.80</td><td>-29.20</td><td>74.00</td><td>58.88</td></tr><tr><td>2</td><td>7311.00</td><td>43.07</td><td>-30.93</td><td>74.00</td><td>51.84</td></tr></table>		Freq	Level	Over	Limit	Read		MHz	dBuV/m	dB	dBuV/m	dBuV	1	4874.00	44.80	-29.20	74.00	58.88	2	7311.00	43.07	-30.93	74.00	51.84	Level (dBuV/m) Date: 2019-02-05 Site : E0CH07-HY Condition : PEAK_74 3m SHF-EHF_131029 VERTICAL Detector : Peak Project : 912419 Mode : 18 <table><tr><th></th><th>Freq</th><th>Level</th><th>Over</th><th>Limit</th><th>Read</th></tr><tr><th></th><th>MHz</th><th>dBuV/m</th><th>dB</th><th>dBuV/m</th><th>dBuV</th></tr><tr><td>1</td><td>4874.00</td><td>42.19</td><td>-31.81</td><td>74.00</td><td>56.27</td></tr><tr><td>2</td><td>7311.00</td><td>43.22</td><td>-30.78</td><td>74.00</td><td>51.99</td></tr></table>		Freq	Level	Over	Limit	Read		MHz	dBuV/m	dB	dBuV/m	dBuV	1	4874.00	42.19	-31.81	74.00	56.27	2	7311.00	43.22	-30.78	74.00	51.99
	Freq	Level	Over	Limit	Read																																													
	MHz	dBuV/m	dB	dBuV/m	dBuV																																													
1	4874.00	44.80	-29.20	74.00	58.88																																													
2	7311.00	43.07	-30.93	74.00	51.84																																													
	Freq	Level	Over	Limit	Read																																													
	MHz	dBuV/m	dB	dBuV/m	dBuV																																													
1	4874.00	42.19	-31.81	74.00	56.27																																													
2	7311.00	43.22	-30.78	74.00	51.99																																													

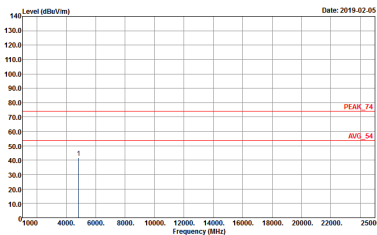
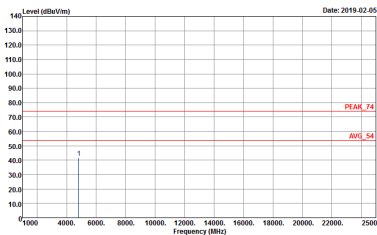


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH11 2462MHz	
1+2	Horizontal	Vertical
Peak Avg.	Level (dBuV/m) Date: 2019-02-05 Frequency (MHz) Site : E0CH07-HY Condition : PEAK_74 3m SHF-EHF_131029 HORIZONTAL Detector : Peak Project : 912419 Mode : 19	Level (dBuV/m) Date: 2019-02-05 Frequency (MHz) Site : E0CH07-HY Condition : PEAK_74 3m SHF-EHF_131029 VERTICAL Detector : Peak Project : 912419 Mode : 19



2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH07-HY Condition : PEAK_74 3m SHF-EHF_131029 HORIZONTAL Detector : Peak Project : 912419 Mode : 20	 Site : 03CH07-HY Condition : PEAK_74 3m SHF-EHF_131029 VERTICAL Detector : Peak Project : 912419 Mode : 20



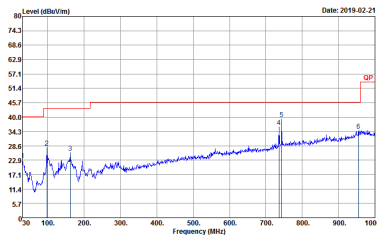
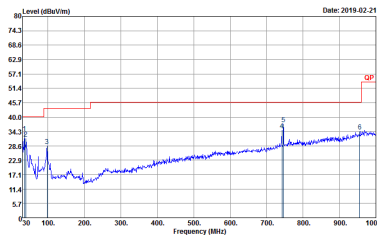
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH06 2437MHz	
1+2	Horizontal	Vertical
Peak Avg.	Level (dBu/V/m) Date: 2019-02-05 Frequency (MHz) Site : E0CH07-HY Condition : PEAK_74 3m SHF-EHF_131029 HORIZONTAL Detector : Peak Project : 912419 Mode : 21	Level (dBu/V/m) Date: 2019-02-05 Frequency (MHz) Site : E0CH07-HY Condition : PEAK_74 3m SHF-EHF_131029 VERTICAL Detector : Peak Project : 912419 Mode : 21



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
1+2	Horizontal	Vertical
Peak Avg.	Level (dBuV/m) Date: 2019-02-05 Frequency (MHz) Site : E0CH07-HY Condition : PEAK_74 3m SHF-EHF_131029 HORIZONTAL Detector : Peak Project : 912419 Mode : 22	Level (dBuV/m) Date: 2019-02-05 Frequency (MHz) Site : E0CH07-HY Condition : PEAK_74 3m SHF-EHF_131029 VERTICAL Detector : Peak Project : 912419 Mode : 22



Emission below 1GHz
2.4GHz WIFI 802.11g (LF)

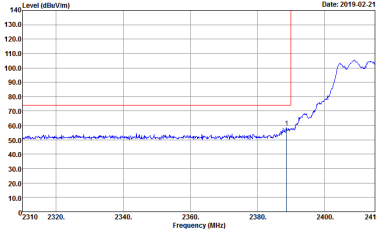
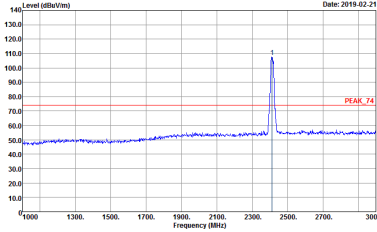
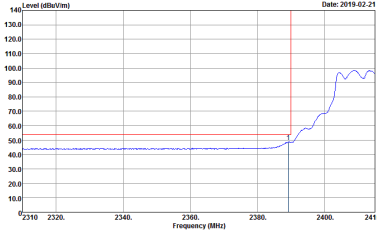
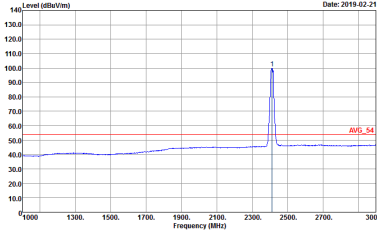
WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11g LF	
1+2	Horizontal	Vertical
QP / Peak	 Site : 03CH07-HY Condition : QP 3m LF-ANT-35419(g) HORIZONTAL Detector : Peak Project : 912419 Mode : 24	 Site : 03CH07-HY Condition : QP 3m LF-ANT-35419(g) VERTICAL Detector : Peak Project : 912419 Mode : 24



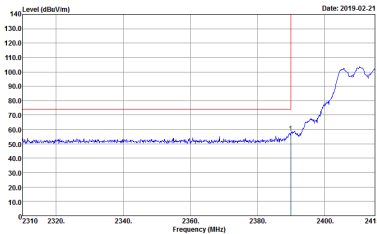
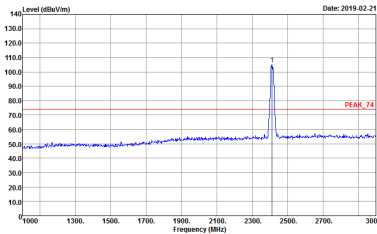
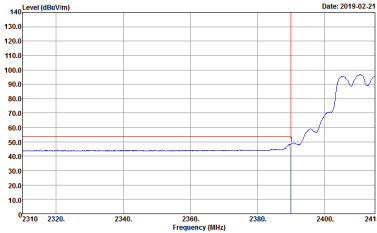
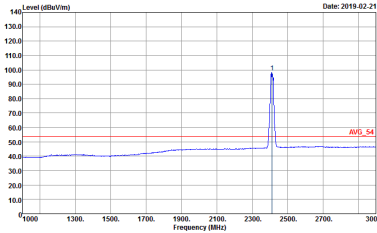
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2.4GHz 2400~2483.5MHz

WIFI 802.11g (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : 912419 Mode : 26	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : 912419 Mode : 26
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL Detector : RBW:1000.000kHz VBW:1.000kHz SWT:Auto Project : 912419 Mode : 26	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 HORIZONTAL Detector : RBW:1000.000kHz VBW:1.000kHz SWT:Auto Project : 912419 Mode : 26

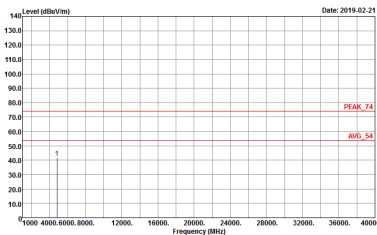
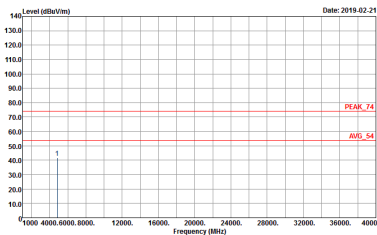


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 912419 Mode : 26	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 912419 Mode : 26
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 912419 Mode : 26	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 VERTICAL Detector : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 912419 Mode : 26



2.4GHz 2400~2483.5MHz

WIFI 802.11g (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH01 2412MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH07-HY Condition : PEAK_74 3m SHF-EHF_131029 HORIZONTAL Detector : Peak Project : 912419 Mode : 17	 Site : 03CH07-HY Condition : PEAK_74 3m SHF-EHF_131029 VERTICAL Detector : Peak Project : 912419 Mode : 17

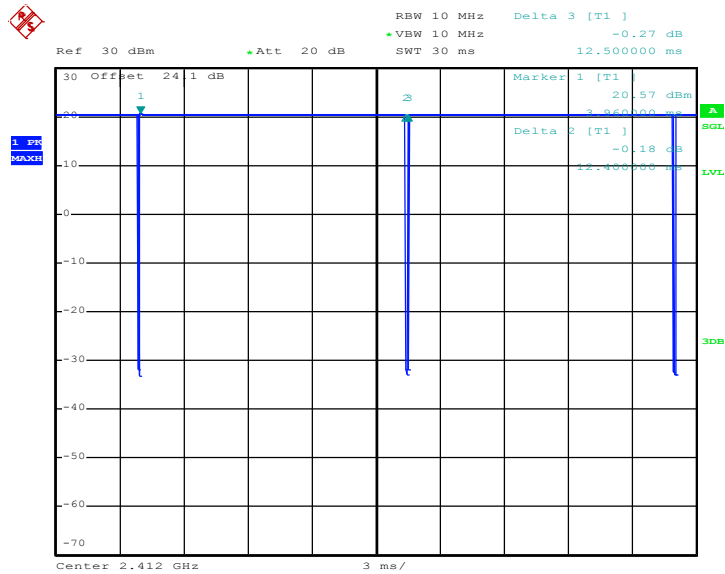
Appendix E. Duty Cycle Plots

Antenna	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting	Duty Factor(dB)
1	802.11b	99.20	-	-	10Hz	0.03
2	802.11b	98.88	-	-	10Hz	0.05
1+2	802.11b for Ant. 1	99.08	-	-	10Hz	0.04
1+2	802.11b for Ant. 2	98.80	-	-	10Hz	0.05
1	802.11g	97.87	2065	0.48	1kHz	0.09
2	802.11g	97.87	2070	0.48	1kHz	0.09
1+2	802.11g for Ant. 1	97.64	2075	0.48	1kHz	0.10
1+2	802.11g for Ant. 2	97.64	2065	0.48	1kHz	0.10
1	2.4GHz 802.11n HT20	97.73	1935	0.52	1kHz	0.10
2	2.4GHz 802.11n HT20	97.97	1935	0.52	1kHz	0.09
1+2	2.4GHz 802.11n HT20 for Ant. 1	97.72	1930	0.52	1kHz	0.10
1+2	2.4GHz 802.11n HT20 for Ant. 2	97.47	1925	0.52	1kHz	0.11



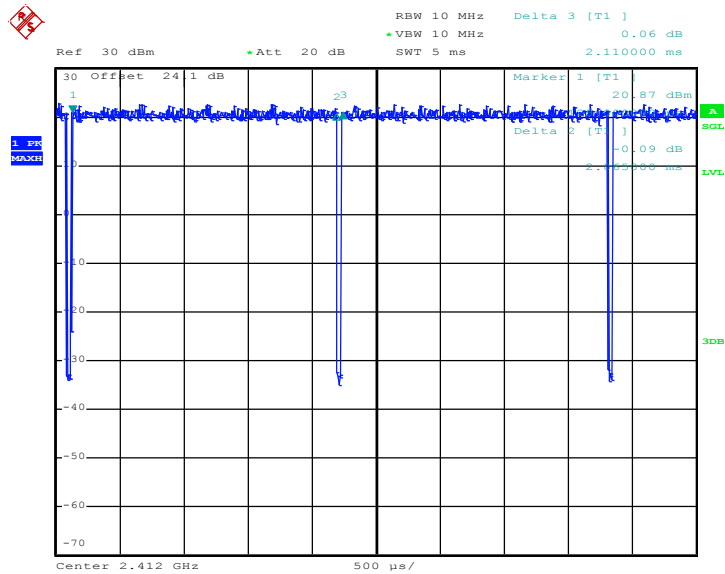
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802.11b

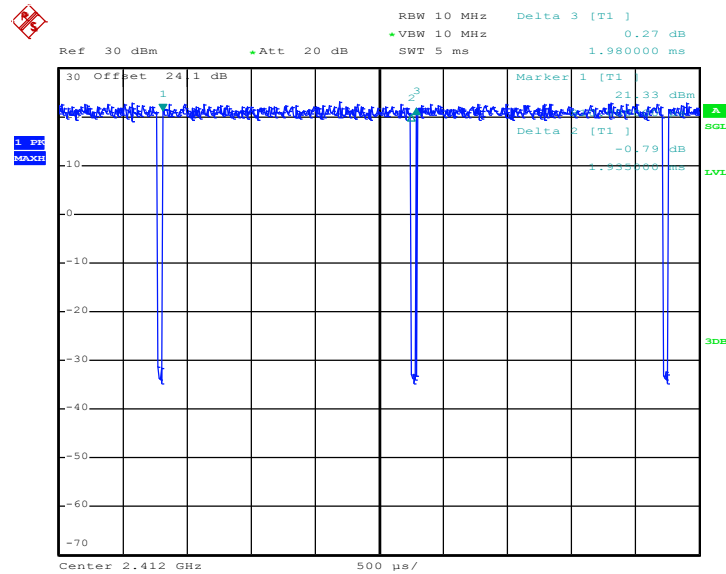


Date: 31.JAN.2019 23:53:28

802.11g

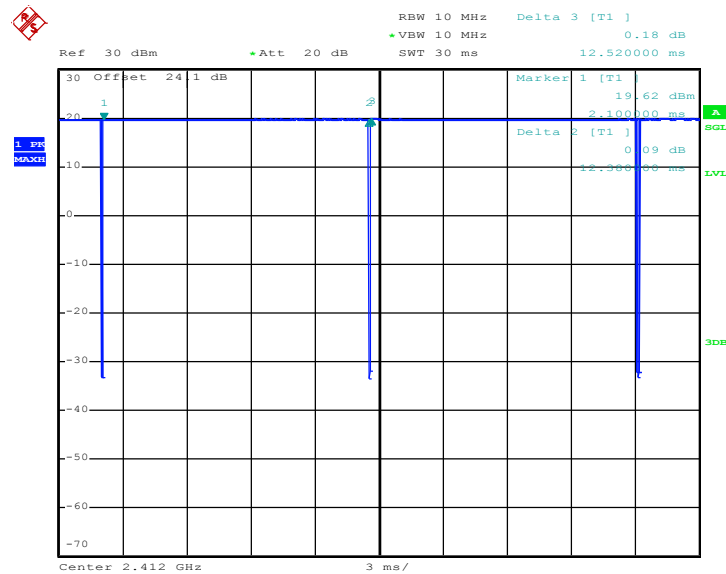


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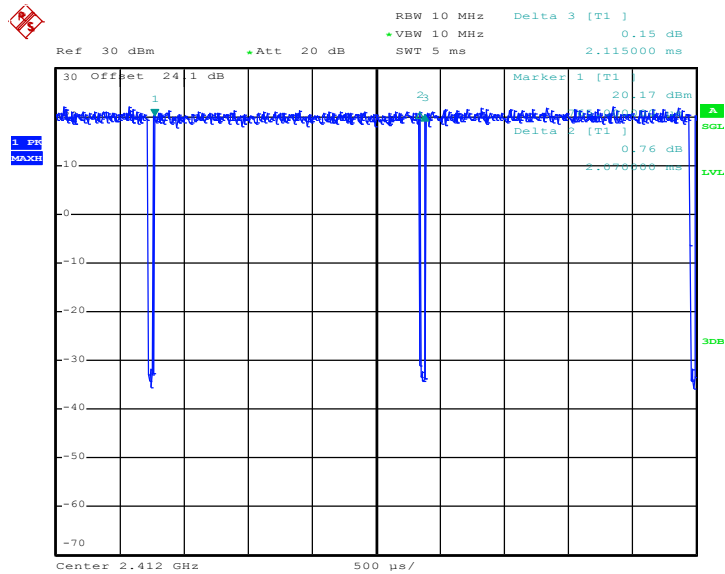
802.11n HT20


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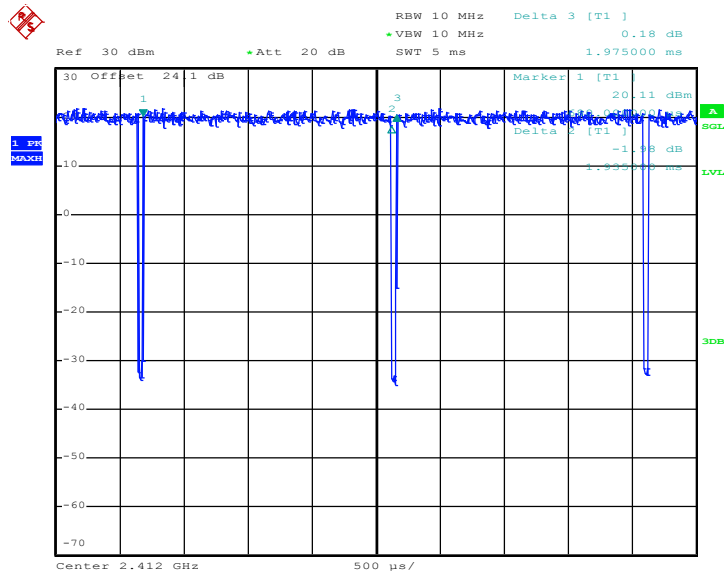
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802.11b


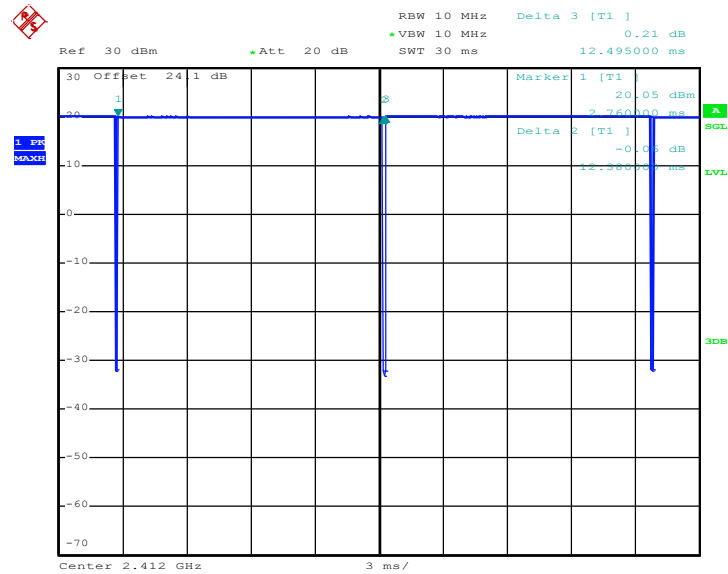
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802.11g


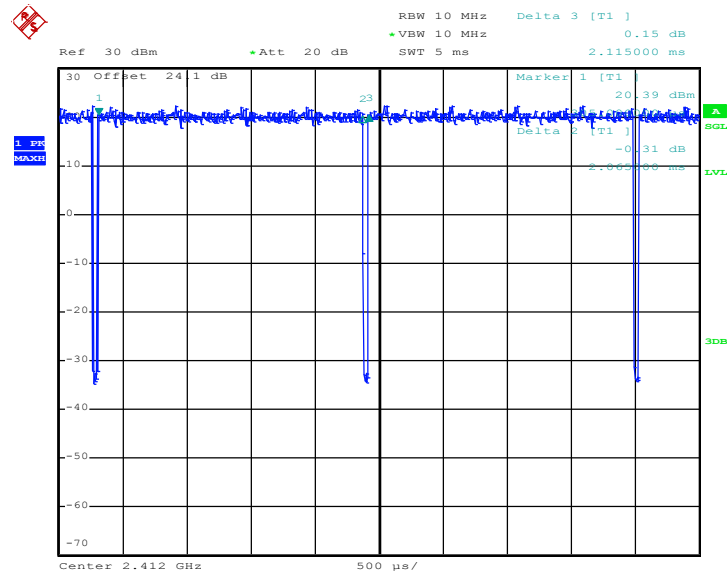
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802.11n HT20


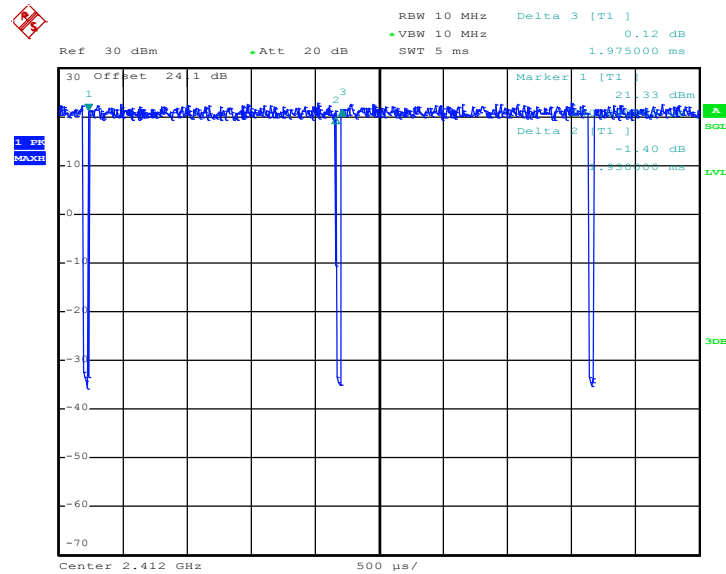
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MIMO <Ant. 1>
802.11b


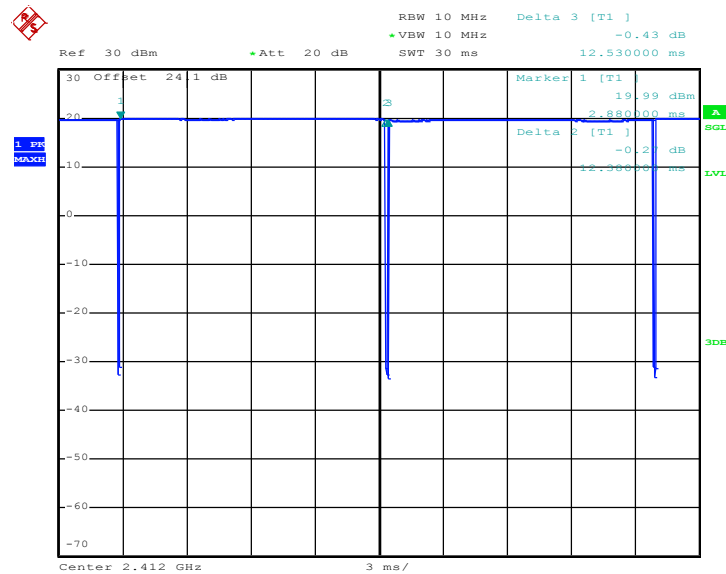
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802.11g


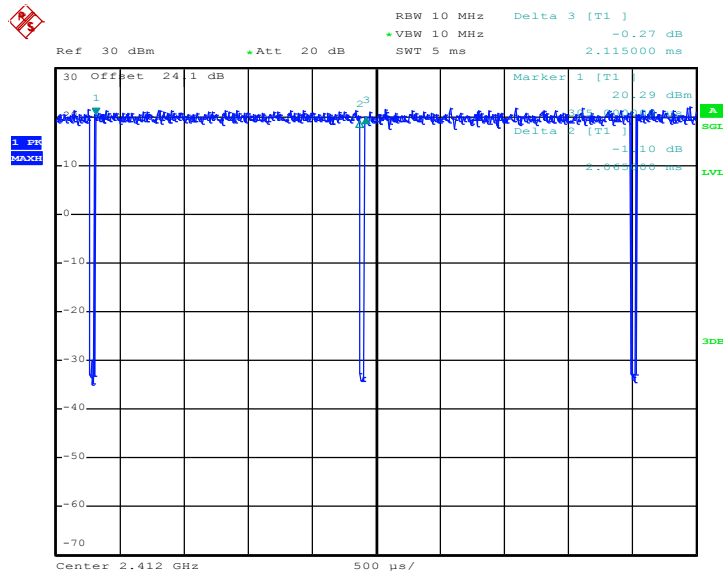
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802.11n HT20


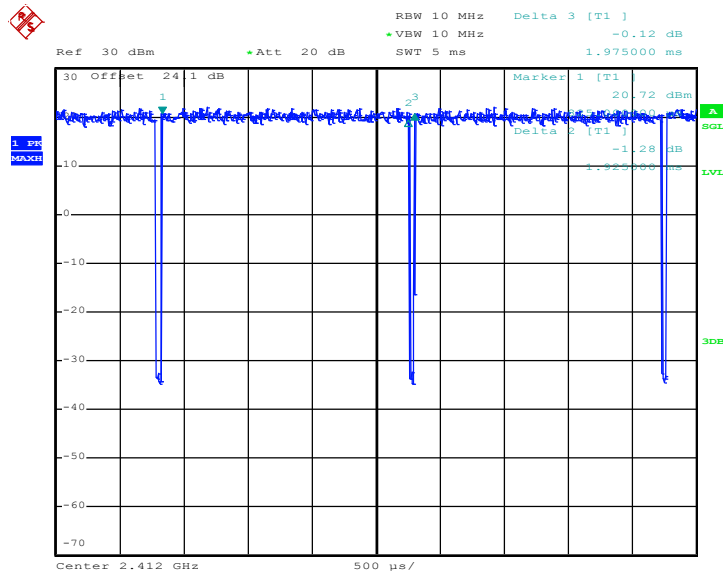
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MIMO <Ant. 2>
802.11b


Date: 1.FEB.2019 00:03:04

802.11g


Date: 1.FEB.2019 00:17:13

802.11n HT20


Date: 1.FEB.2019 00:29:51

———THE END—————