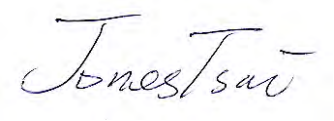
FCC RADIO TEST REPORT

FCC ID	:	**A4RG020I**
Equipment	:	**Phone**
Model Name	:	**G020I**
Applicant	:	**Google LLC** **1600 Amphitheatre Parkway,** **Mountain View, California, 94043 USA**
Standard	:	**FCC Part 15 Subpart C §15.247**

The product was received on Nov. 06, 2018 and testing was started from Apr. 03, 2019 and completed on Jun. 19, 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
FR8N0616-05C	01	Initial issue of report	Jun. 26, 2019
FR8N0616-05C	02	Revise the antenna numbers in the report	Jul. 05, 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 1.54 dB at 2483.520 MHz
3.6	15.207	AC Conducted Emission	Pass	Under limit 8.94 dB at 1.469 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: Elise Chang

1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature	
Equipment	Phone
Model Name	G020I
FCC ID	A4RG020I
EUT supports Radios application	CDMA/EV-DO/GSM/EGPRS/WCDMA/HSPA/LTE/NFC/GNSS/WPC WLAN 11b/g/n HT20 WLAN 11a/n HT20/HT40 WLAN 11ac VHT20/VHT40/VHT80 Bluetooth BR/EDR/LE 60 GHz Low Power Transmitter
EUT Stage	Identical Prototype

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

EUT Information List	
No.	S/N
#1	934AZ06943
#2	935AZ06969
#3	935AZ07022

1.2 Product Specification of Equipment Under Test

<table>
<tr><th colspan="2">Standards-related Product Specification</th></tr>
<tr><td>Tx/Rx Channel Frequency Range</td><td>2412 MHz ~ 2472 MHz</td></tr>
<tr><td>Maximum (Average) Output Power to antenna</td><td><Ant. 2>
802.11b : 22.90 dBm (0.1950 W)
802.11g : 22.20 dBm (0.1660 W)
802.11n HT20 : 22.10 dBm (0.1622 W)
802.11 ac VHT20 : 22.00 dBm (0.1585 W)
<Ant. 3>
802.11b : 22.90 dBm (0.1950 W)
802.11g : 22.10 dBm (0.1622 W)
802.11n HT20 : 22.00 dBm (0.1585 W)
802.11 ac VHT20 : 22.00 dBm (0.1585 W)
MIMO <Ant. 2+3>
802.11b : 25.96 dBm (0.3945 W)
802.11g : 25.26 dBm (0.3357 W)
802.11n HT20 : 25.11 dBm (0.3243 W)
802.11 ac VHT20 : 25.01 dBm (0.3170 W)</td></tr>
<tr><td>99% Occupied Bandwidth</td><td><MIMO Ant. 2>
802.11b : 14.10MHz
802.11g : 17.40MHz
802.11n HT20 : 19.50MHz
<MIMO Ant. 3>
802.11b : 14.15MHz
802.11g : 18.70MHz
802.11n HT20 : 20.15MHz</td></tr>
<tr><td>Antenna Type / Gain</td><td><Ant. 2>IFA Antenna type with gain -0.50 dBi
<Ant. 3>ILA Antenna type with gain -1.00 dBi</td></tr>
<tr><td>Type of Modulation</td><td>802.11b : DSSS (DBPSK / DQPSK / CCK)
802.11g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)
802.11ac : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM)</td></tr>
<tr><td>Antenna Function for Transmitter</td><td>
<table>
<tr><td></td><td>Ant. 2</td><td>Ant. 3</td></tr>
<tr><td>802.11 b/g/n/ac</td><td>V</td><td>V</td></tr>
<tr><td>802.11 b/g/n/ac MIMO</td><td>V</td><td>V</td></tr>
</table>
</td></tr>
</table>

Note: MIMO Ant. 2+3 is a calculated result from sum of the power MIMO Ant. 2 and MIMO Ant. 3.

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. EMC & Wireless Communications Laboratory	
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

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

Test Site	SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	**Sporton Site No.**
	03CH13-HY

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

FCC designation No.: TW1190 and TW0007

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 v05r02
- 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 three orthogonal panels, X, Y, Z. The worst cases (X plane with adapter ; Z plane with WPC) 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	8	2447
	2	2417	9	2452
	3	2422	10	2457
	4	2427	11	2462
	5	2432	12	2467
	6	2437	13	2472
	7	2442		

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
802.11ac VHT20 (Covered by HT20)	MCS0

Test Cases	
AC Conducted Emission	Mode 1 :WLAN (2.4GHz) Link + Bluetooth Link + USB Cable (Type C) (Charging from AC Adapter 1) Mode 2 :WLAN (2.4GHz) Link + Bluetooth Link + Earphone (Type C) + Wireless Charging

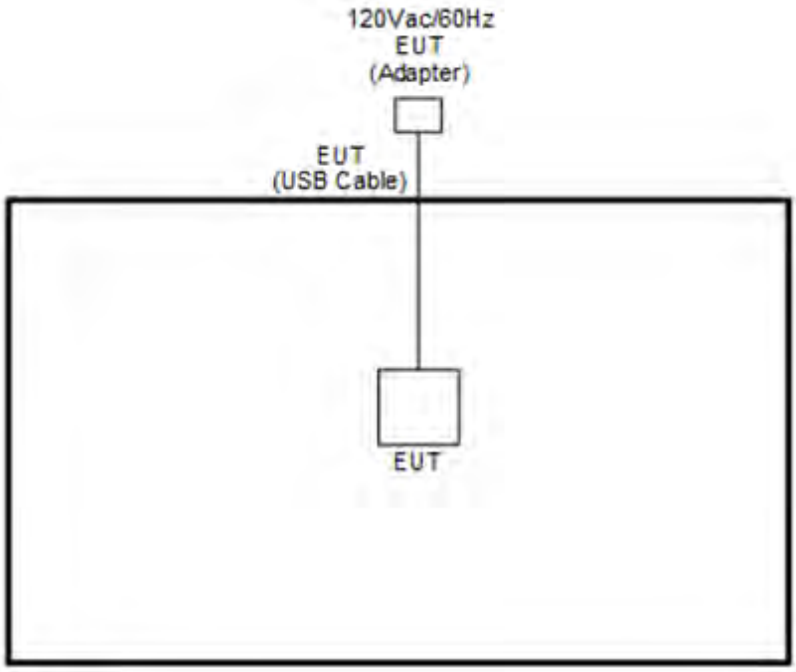
Remark:

1. The worst case of conducted emission is mode 2; only the test data of it was reported.

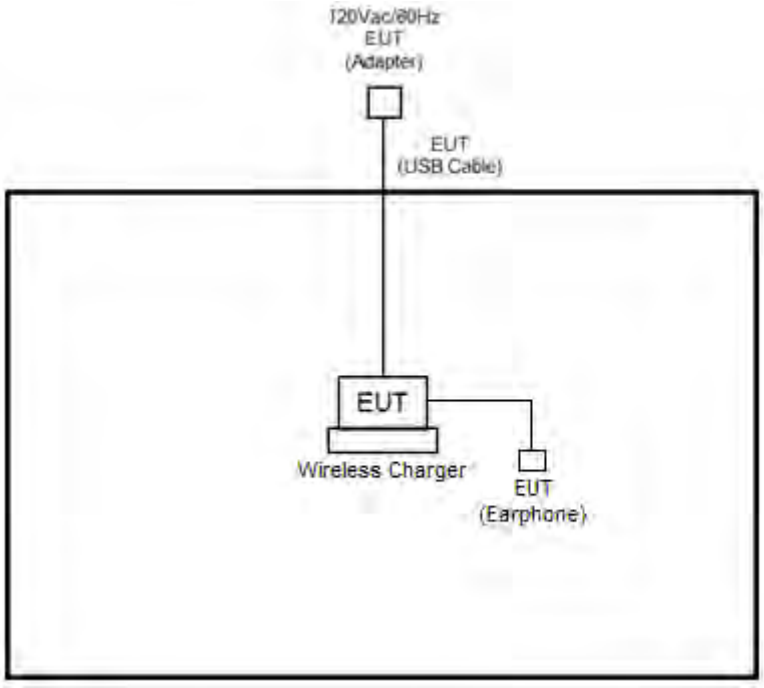
2. For Radiated Test Cases, the tests were performed with Adapter 1.

2.3 Connection Diagram of Test System

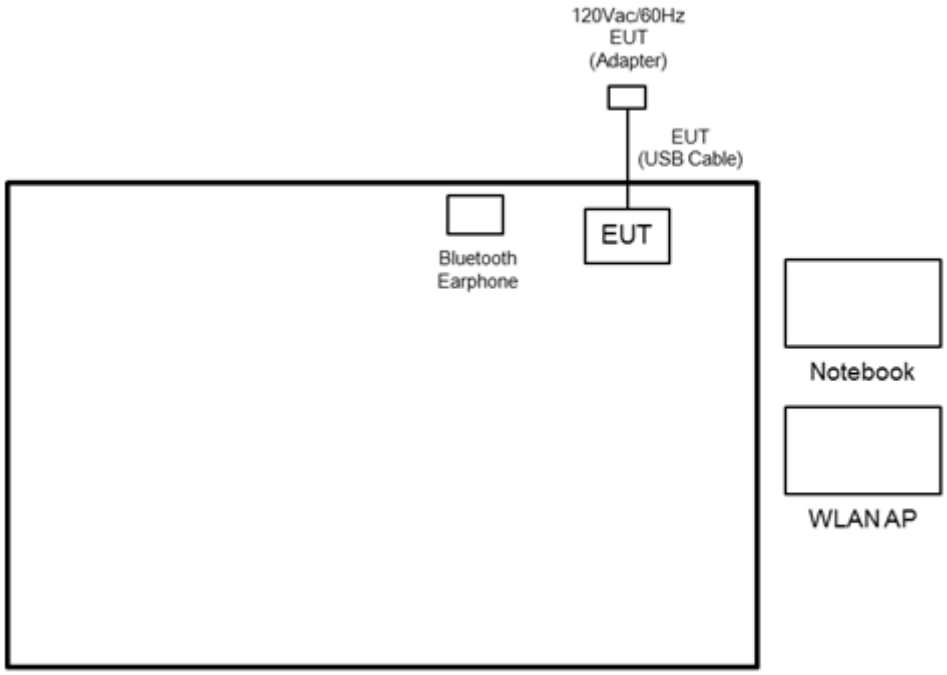
<WLAN Tx Mode>



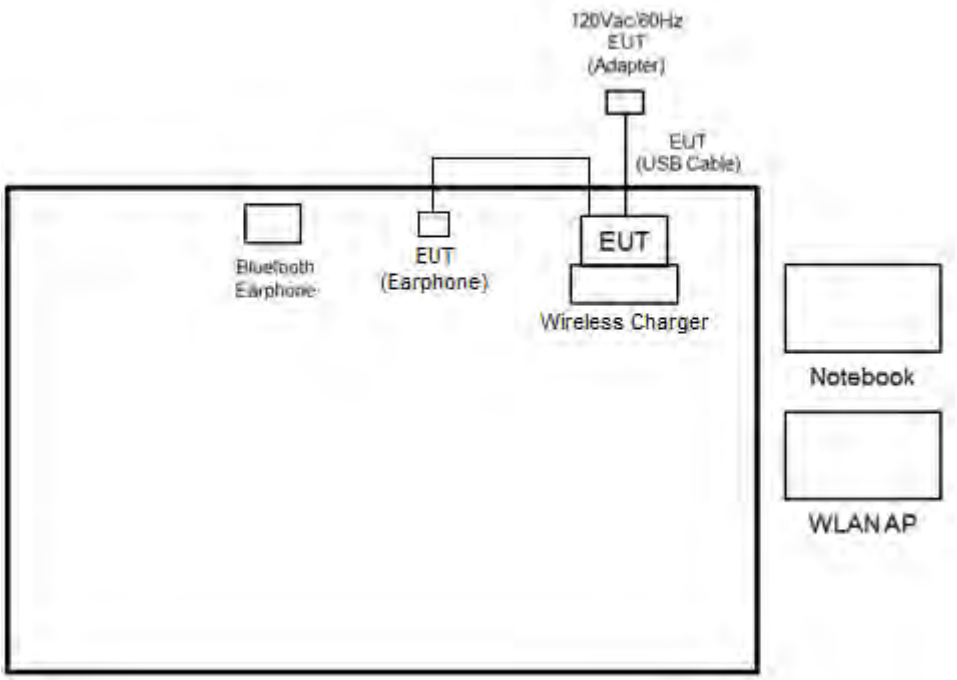
<WLAN Tx with WPC Charging Mode>



<AC Conducted Emissions Mode>



<AC Conducted Emissions with WPC Charging Mode>



2.4 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	WLAN AP	ASUS	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded, 1.8 m
2.	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
3.	Bluetooth Earphone	Google	G015B	SZGG015B	N/A	N/A
4.	Wireless charger	Google	G019C	2APYSG019C	N/A	Unshielded,1.95m

2.5 EUT Operation Test Setup

The RF test items, utility “QRCT 3.0.271.0” 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.

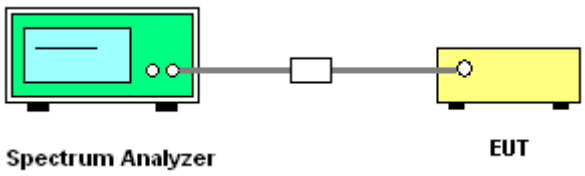
3.1.2 Measuring Instruments

See list of measuring equipment of this test report.

3.1.3 Test Procedures

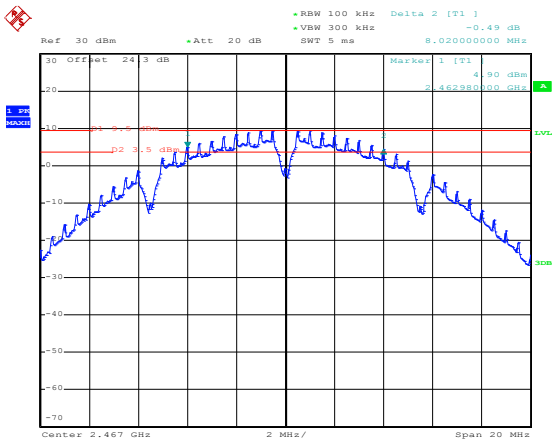
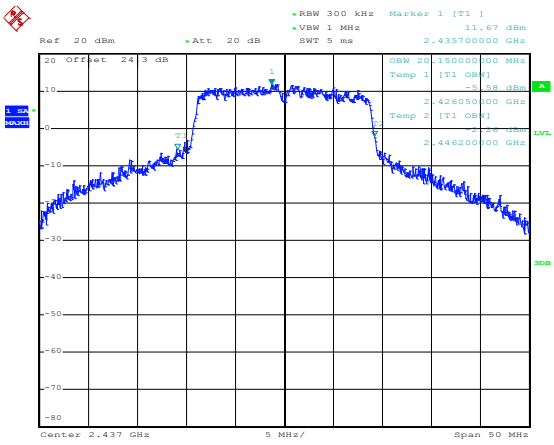
1. The testing follows the ANSI C63.10 Section 6.9.3 (OBW) and 11.8.1 (6dB BW).
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit 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) ≥ 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.

Minimum 6dB Bandwidth	Maximum 99% Occupied Bandwidth
	

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.

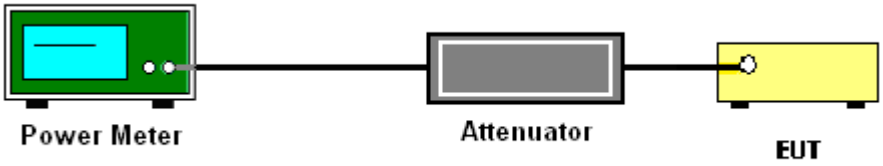
3.2.2 Measuring Instruments

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.

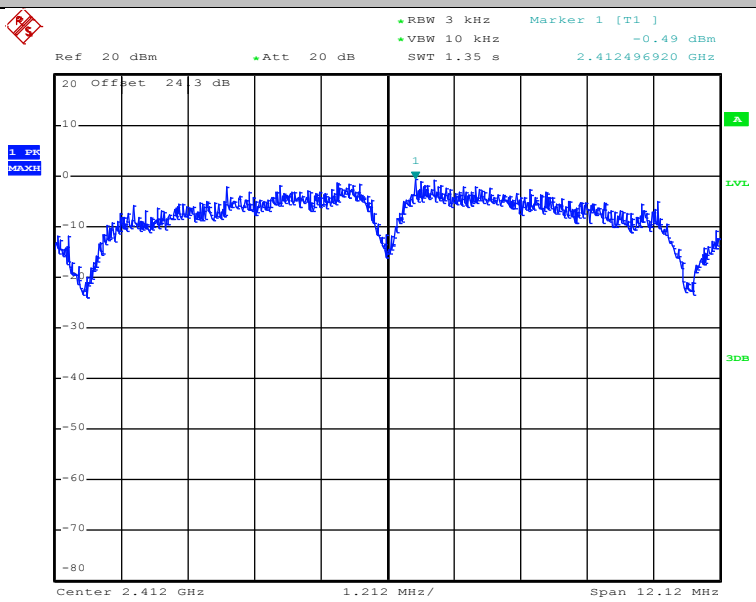
   Method (2): Measure and add 10 log (N) dB, where N is the number of outputs. (N=2)

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. 2



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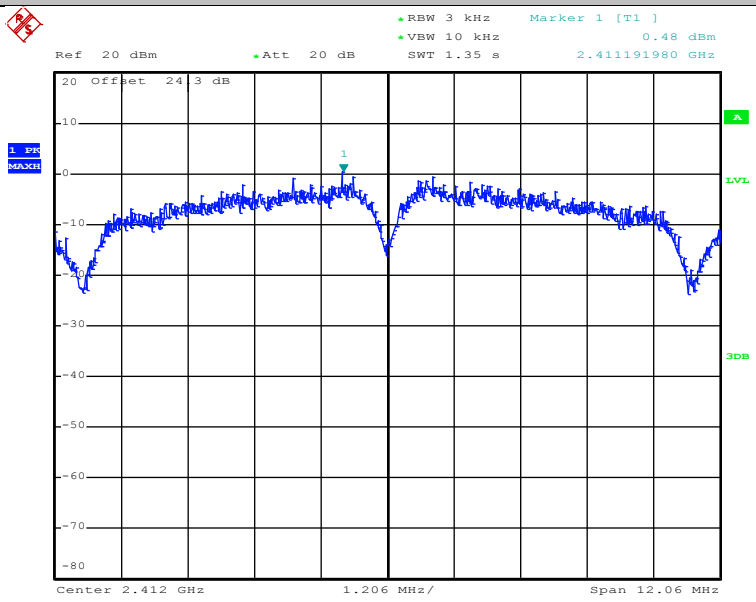
Worst Case Power Density (dBm/3kHz) for MIMO Ant. 3



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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

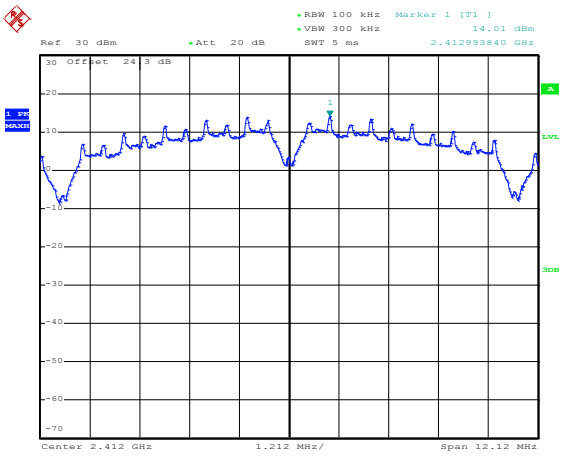
3.4.5 Test Result of Conducted Band Edges and Spurious Emission

Test Engineer :	Leo Li, Rebecca Li	**Temperature :**	21~25℃
		Relative Humidity :	51~54%

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

Test Mode :	802.11b	**Test Channel :**	01

100kHz PSD reference Level



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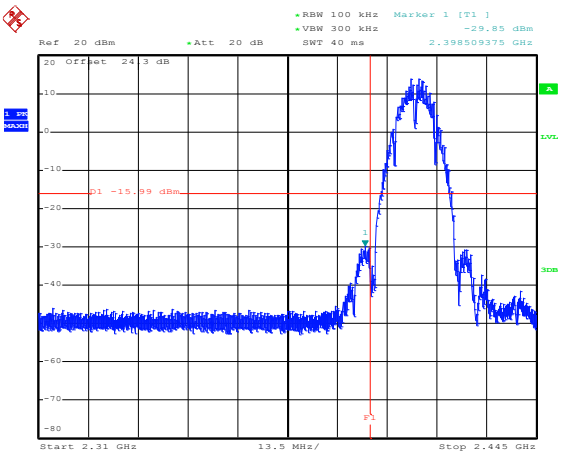
Channel Plot



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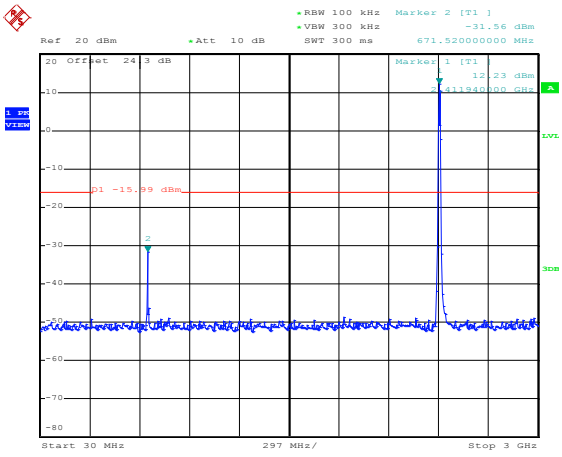
Spurious Emission 30MHz~3GHz



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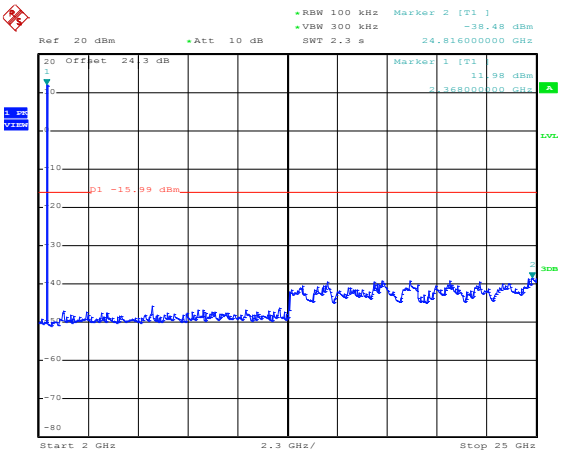
Spurious Emission 2GHz~25GHz



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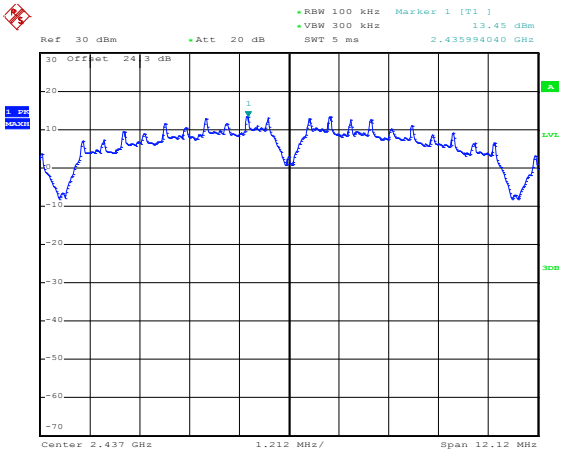
Test Mode :	802.11b	Test Channel :	06

100kHz PSD reference Level	Channel Plot
	

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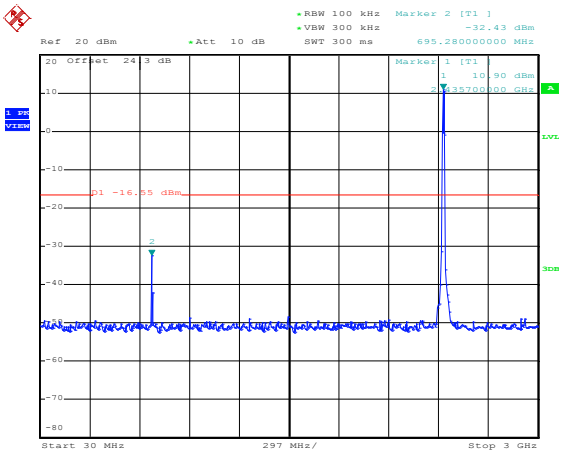
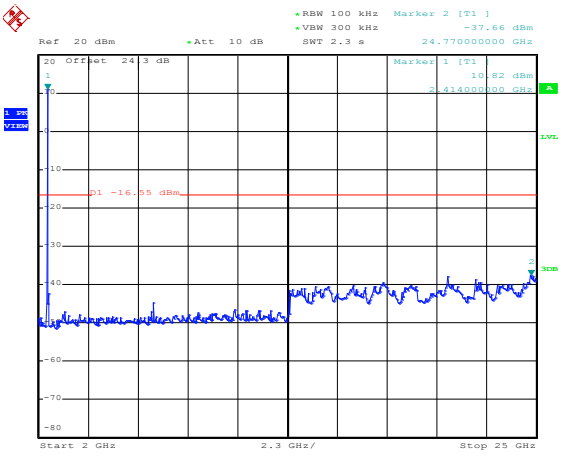
Spurious Emission 30MHz~3GHz	Spurious Emission 2GHz~25GHz
	

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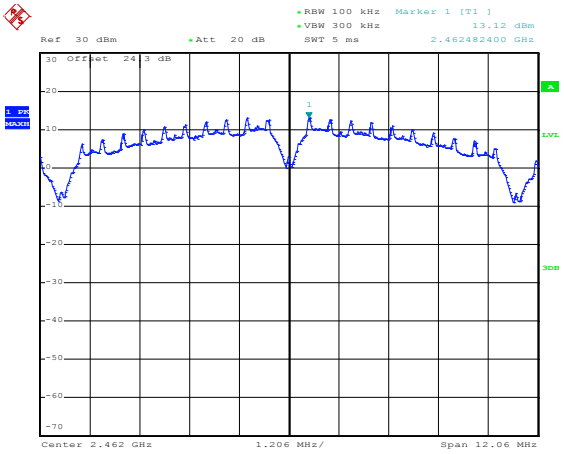
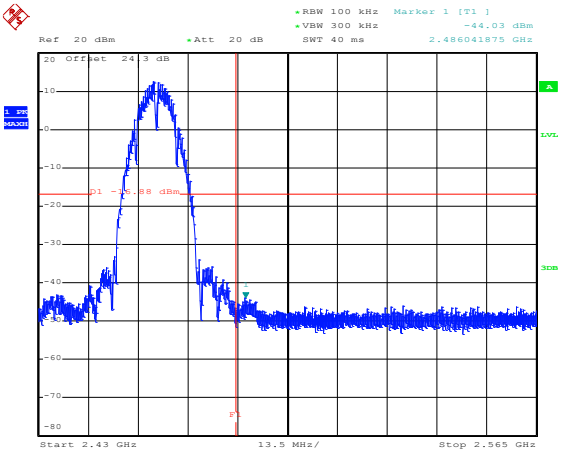
Test Mode :	802.11b	Test Channel :	11

100kHz PSD reference Level	Channel Plot
	
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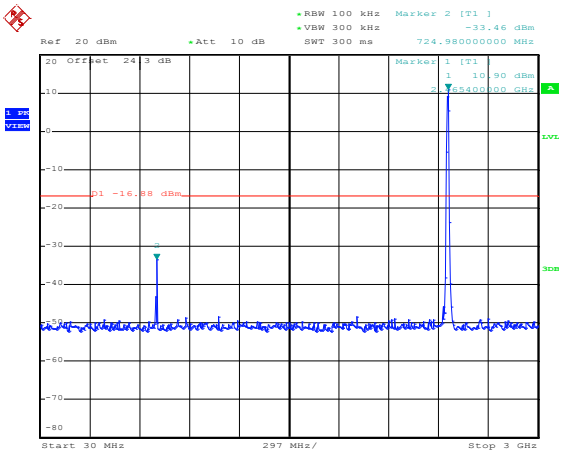
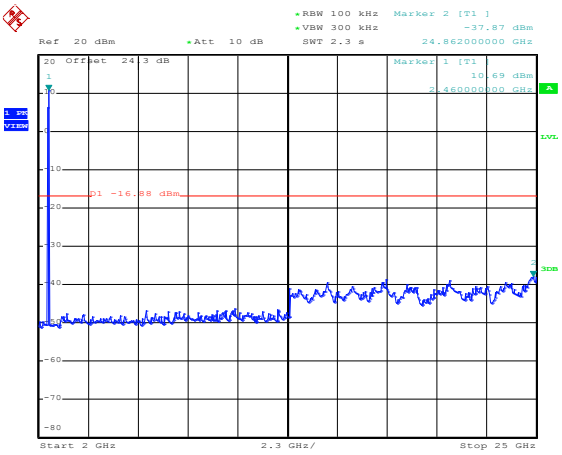
Spurious Emission 30MHz~3GHz	**Spurious Emission 2GHz~25GHz**
	
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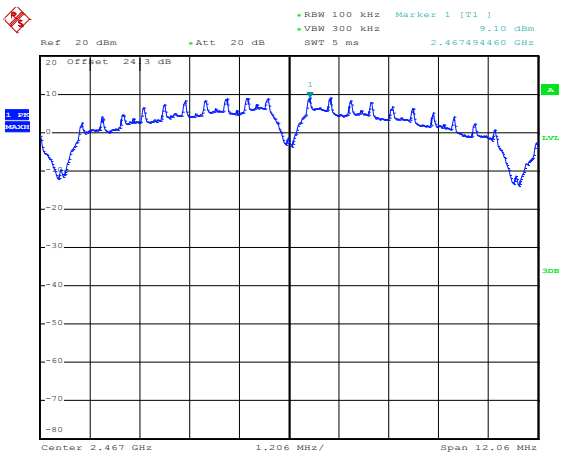
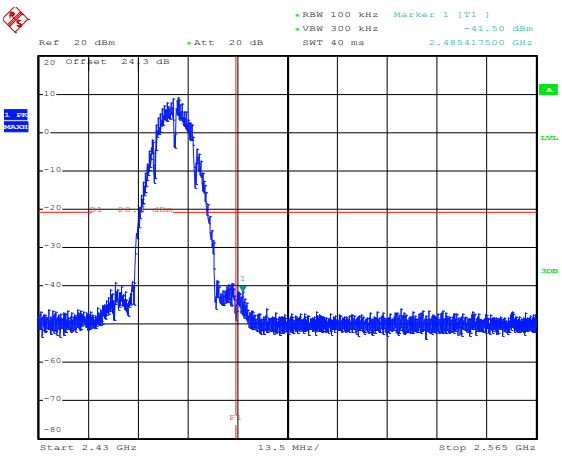
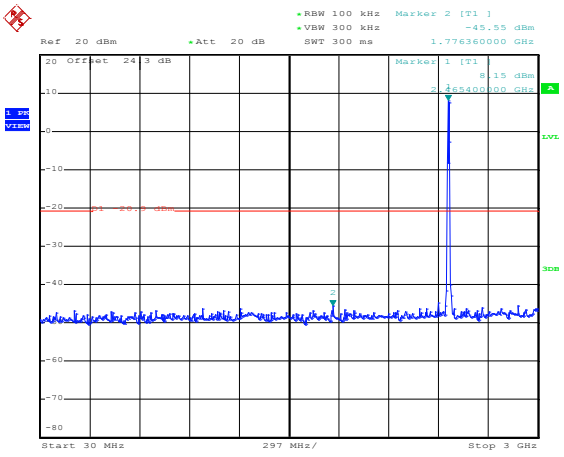
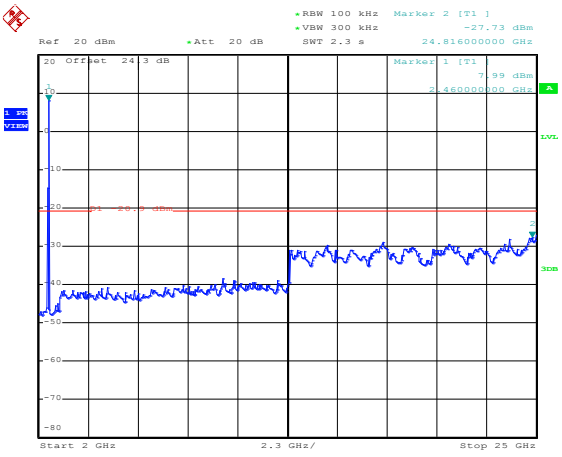
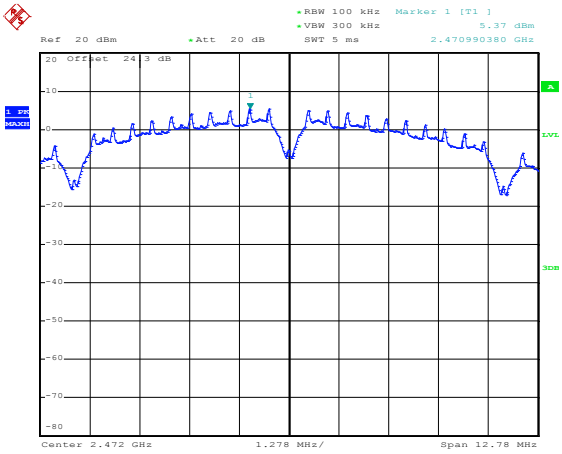
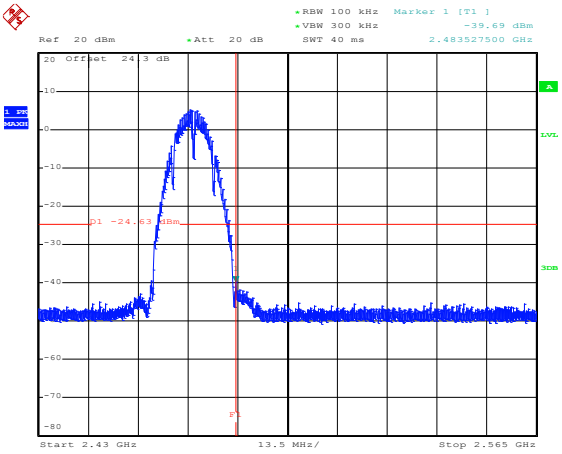
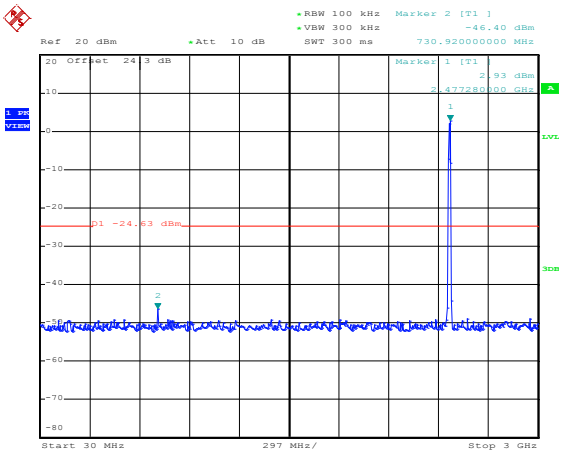
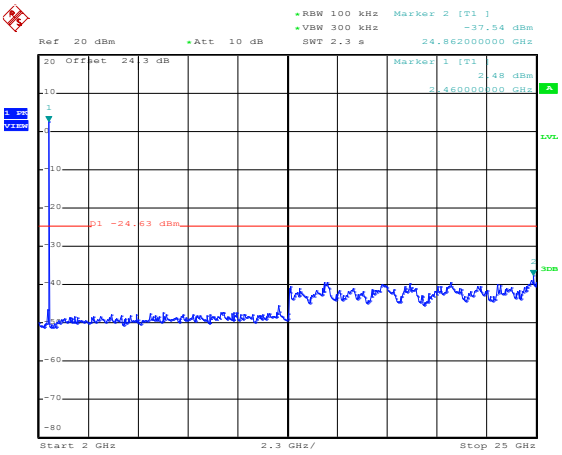
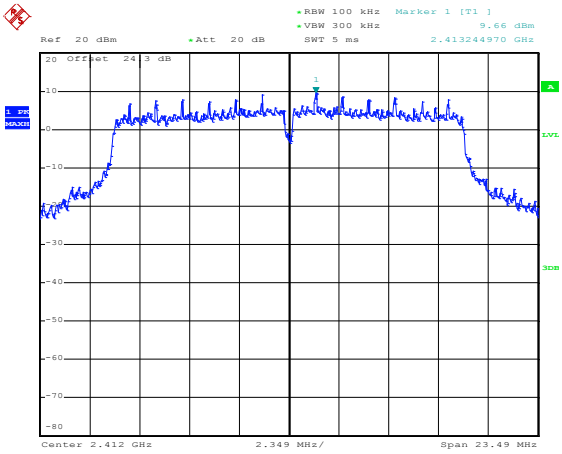
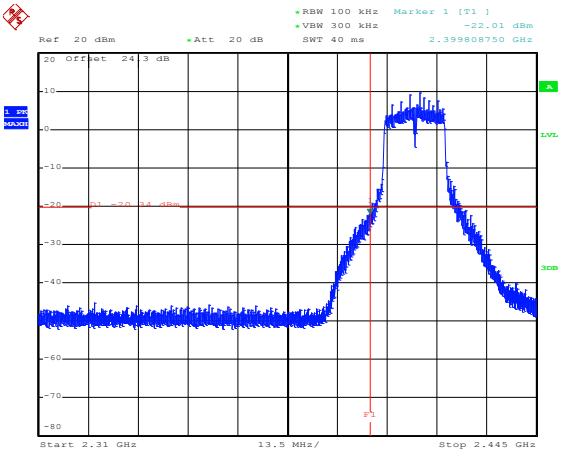
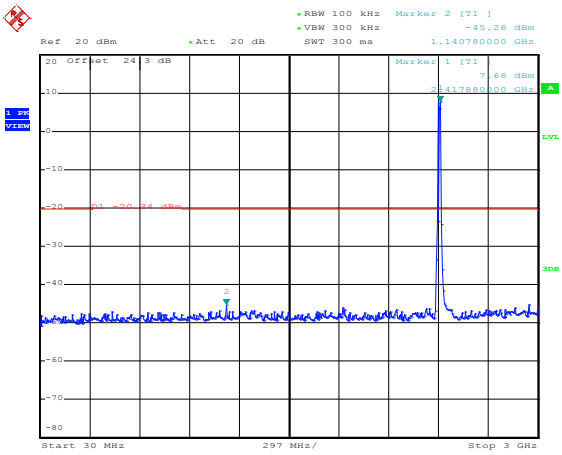
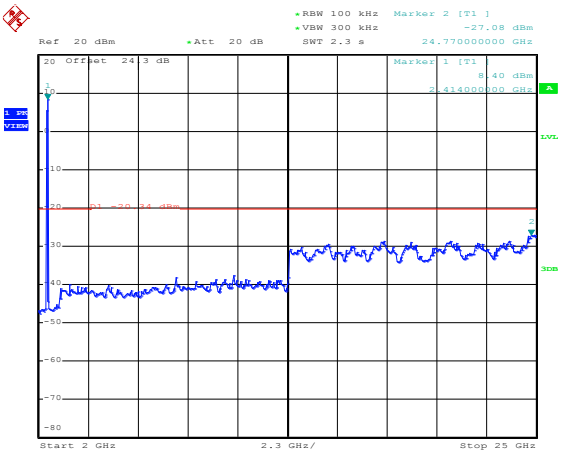
Test Mode :	802.11b	Test Channel :	12

100kHz PSD reference Level	Channel Plot
 Date: 2.MAY.2019 09:36:00	 Date: 2.MAY.2019 09:36:15
Spurious Emission 30MHz~3GHz	**Spurious Emission 2GHz~25GHz**
 Date: 2.MAY.2019 09:37:02	 Date: 2.MAY.2019 09:38:14

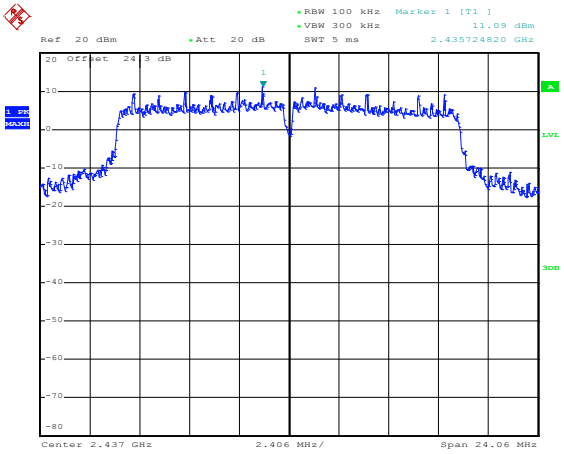
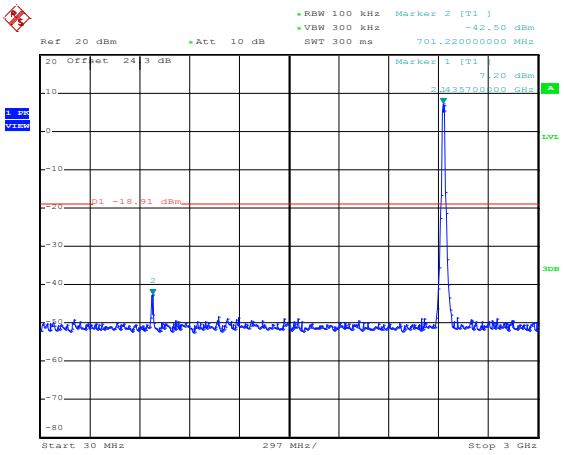
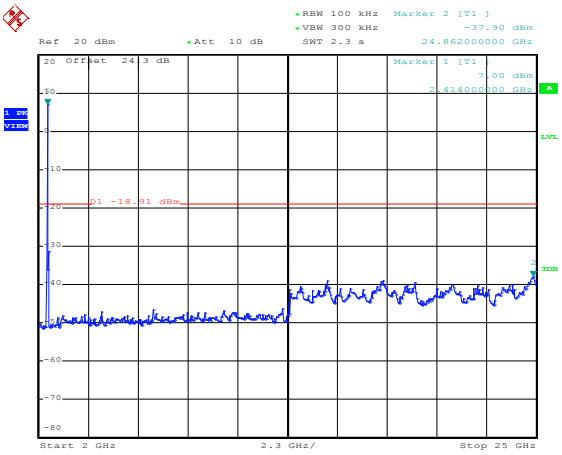
Test Mode :	802.11b	Test Channel :	13

100kHz PSD reference Level	Channel Plot
	
Date: 30.APR.2019 17:08:02	Date: 30.APR.2019 17:10:13
Spurious Emission 30MHz~3GHz	**Spurious Emission 2GHz~25GHz**
	
Date: 30.APR.2019 17:10:44	Date: 30.APR.2019 17:11:12

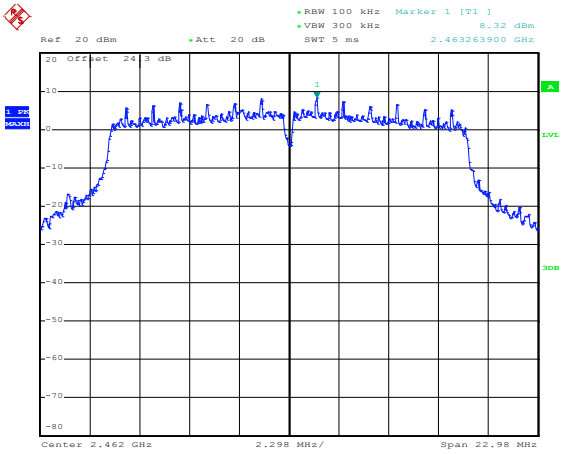
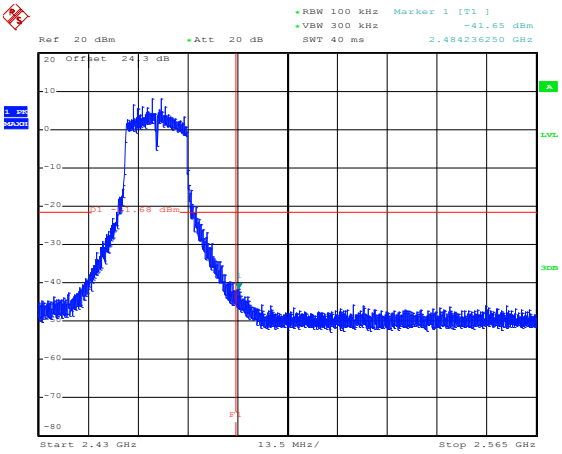
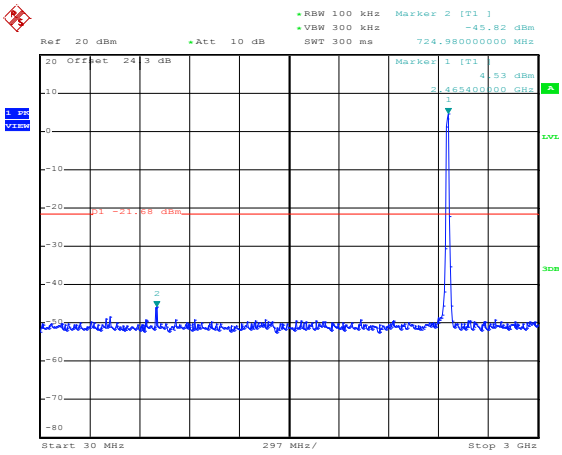
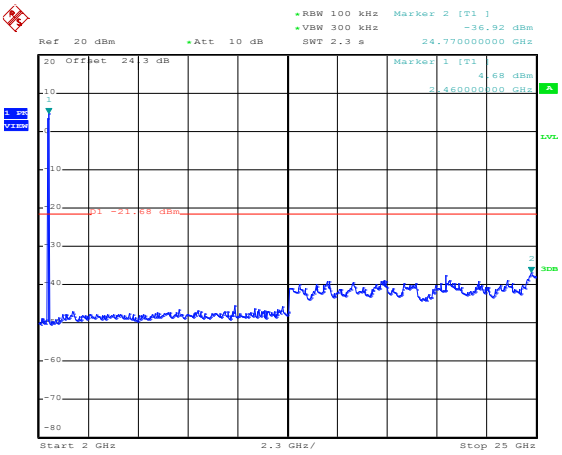
Test Mode :	802.11g	Test Channel :	01

100kHz PSD reference Level	Channel Plot
	
Date: 30.APR.2019 18:17:55	Date: 30.APR.2019 18:18:14
Spurious Emission 30MHz~3GHz	**Spurious Emission 2GHz~25GHz**
	
Date: 29.MAY.2019 12:09:19	Date: 29.MAY.2019 12:15:02

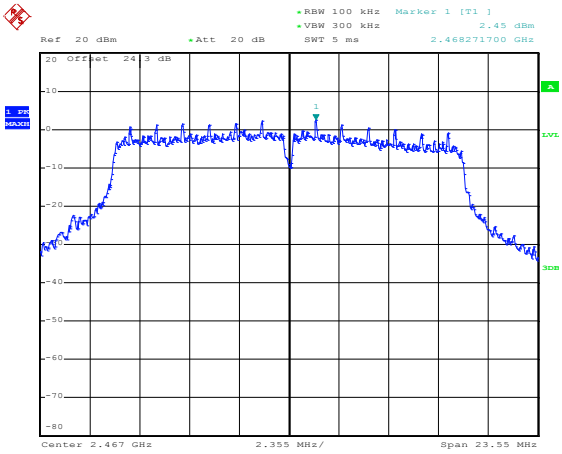
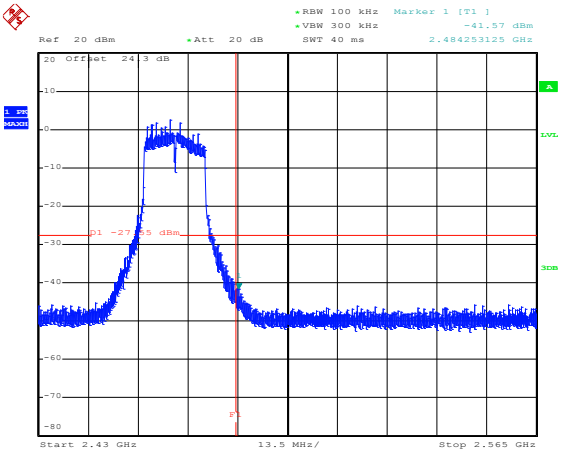
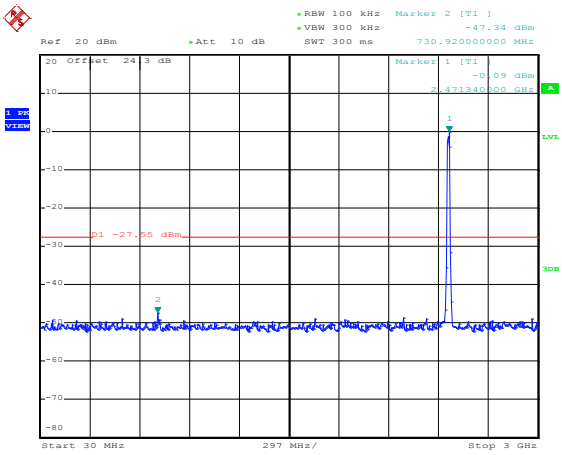
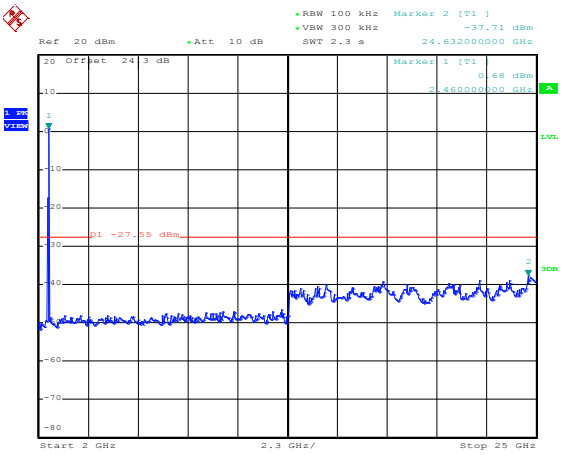
Test Mode :	802.11g	Test Channel :	06

100kHz PSD reference Level	Channel Plot
	
Spurious Emission 30MHz~3GHz	Spurious Emission 2GHz~25GHz
	

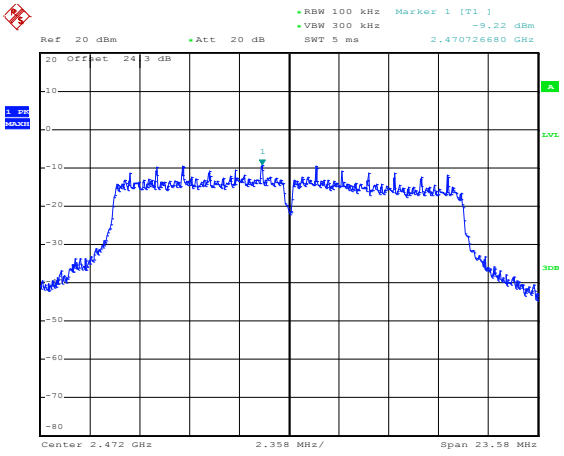
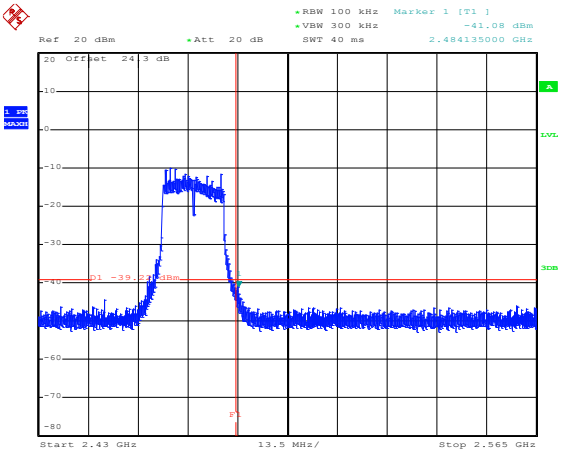
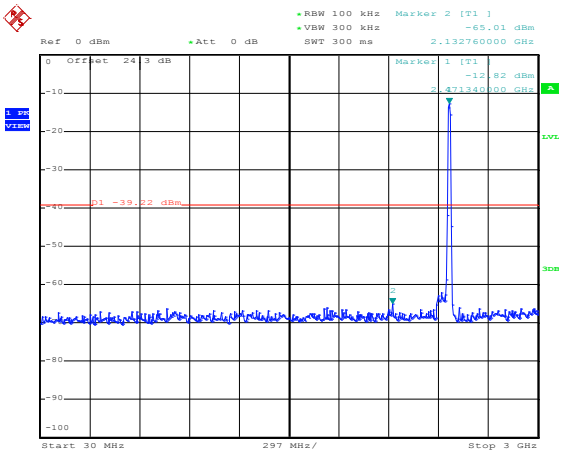
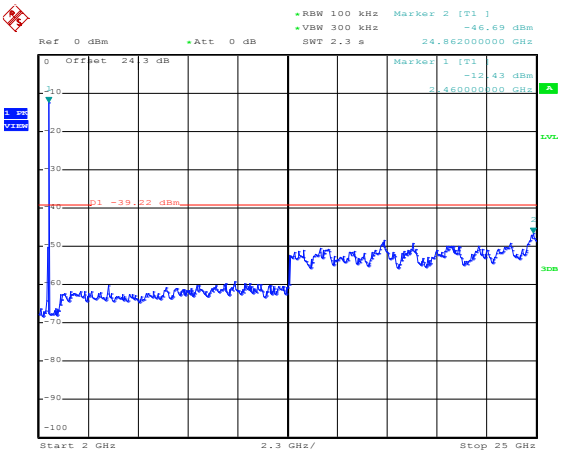
Test Mode :	802.11g	Test Channel :	11

100kHz PSD reference Level	Channel Plot
	
Date: 30.APR.2019 18:37:19	Date: 30.APR.2019 18:37:41
Spurious Emission 30MHz~3GHz	**Spurious Emission 2GHz~25GHz**
	
Date: 30.APR.2019 18:39:20	Date: 30.APR.2019 18:38:58

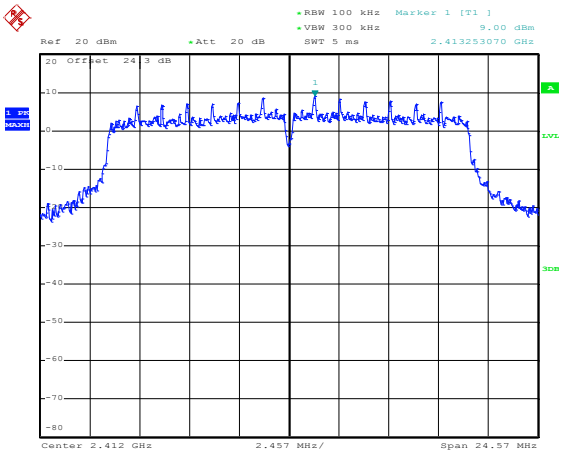
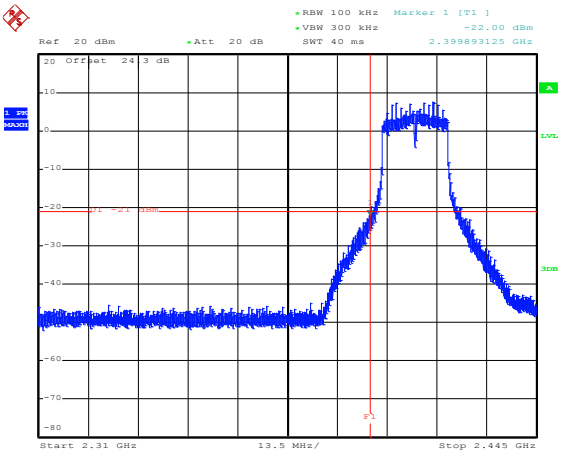
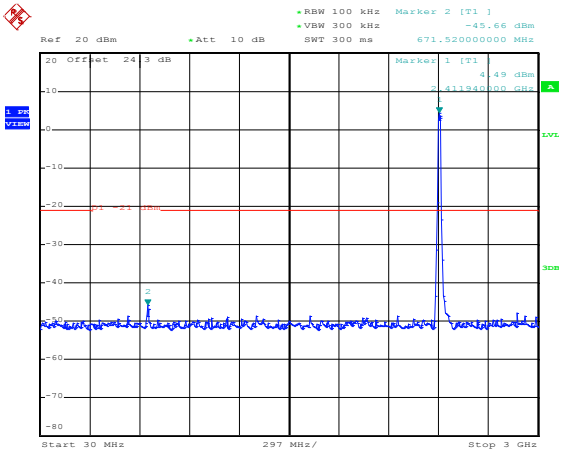
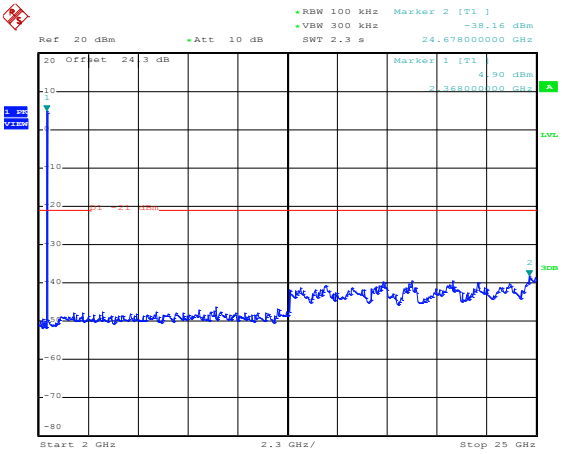
Test Mode :	802.11g	Test Channel :	12

100kHz PSD reference Level	Channel Plot
	
Date: 30.APR.2019 18:48:00	Date: 30.APR.2019 18:49:46
Spurious Emission 30MHz~3GHz	**Spurious Emission 2GHz~25GHz**
	
Date: 30.APR.2019 18:52:29	Date: 30.APR.2019 18:52:52

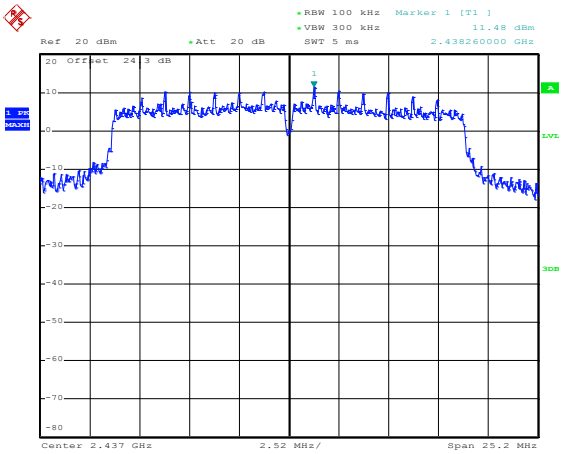
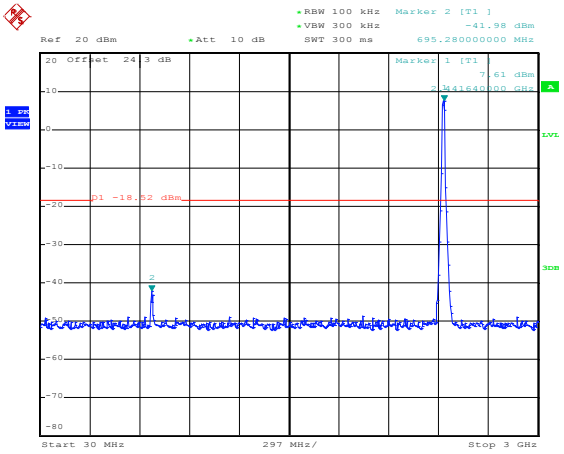
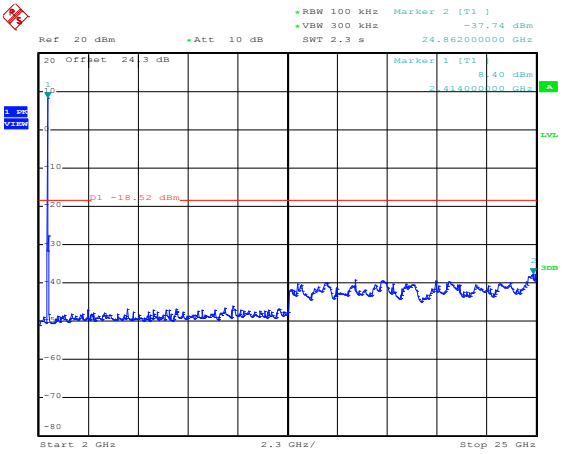
Test Mode :	802.11g	Test Channel :	13

100kHz PSD reference Level	Channel Plot
	
Date: 30.APR.2019 19:21:10	Date: 30.APR.2019 19:21:30
Spurious Emission 30MHz~3GHz	**Spurious Emission 2GHz~25GHz**
	
Date: 2.MAY.2019 11:20:41	Date: 2.MAY.2019 11:20:59

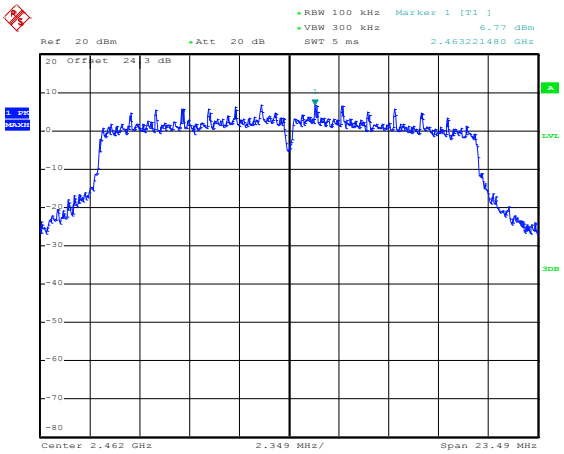
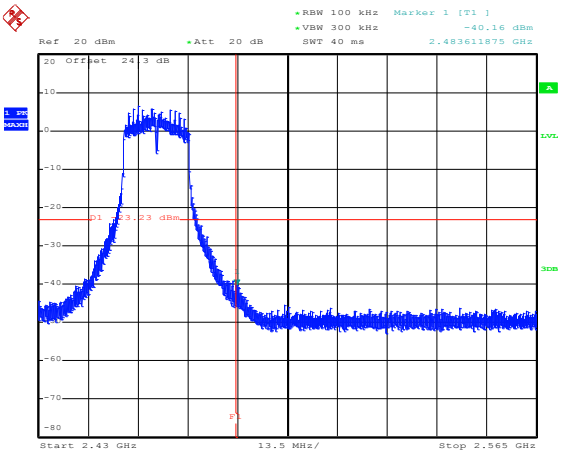
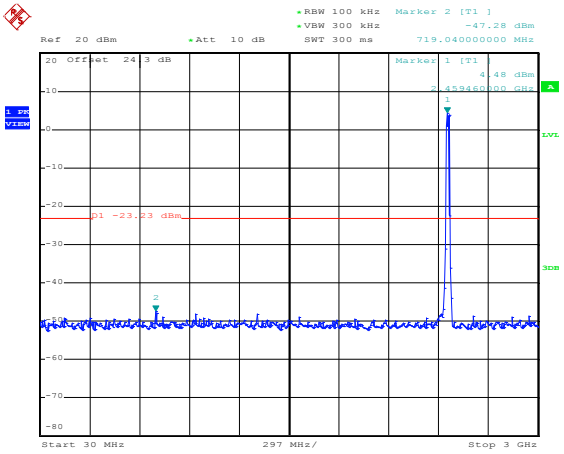
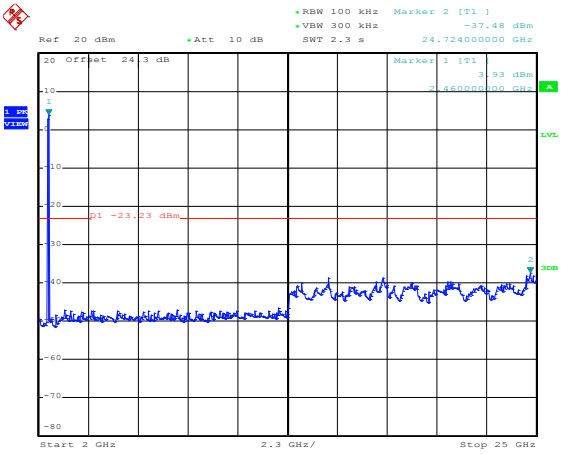
Test Mode :	802.11n HT20	Test Channel :	01

100kHz PSD reference Level	Channel Plot
	
Date: 2.MAY.2019 10:49:49	Date: 2.MAY.2019 10:50:52
Spurious Emission 30MHz~3GHz	**Spurious Emission 2GHz~25GHz**
	
Date: 2.MAY.2019 10:52:37	Date: 2.MAY.2019 10:53:10

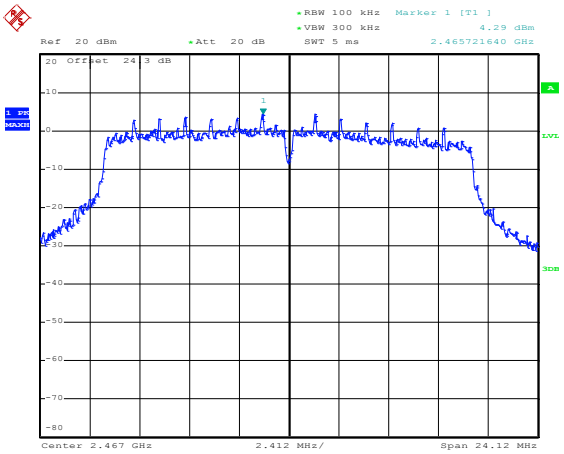
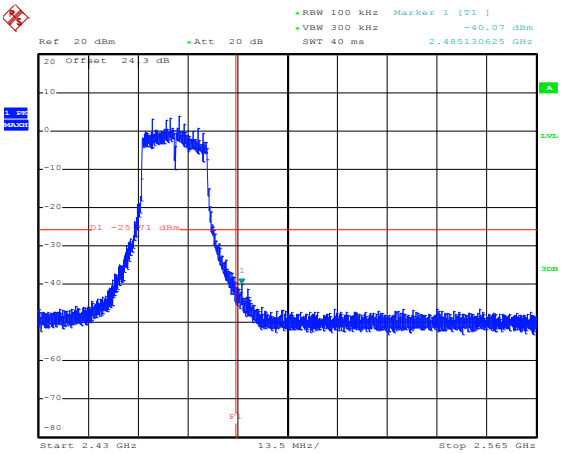
Test Mode :	802.11n HT20	Test Channel :	06

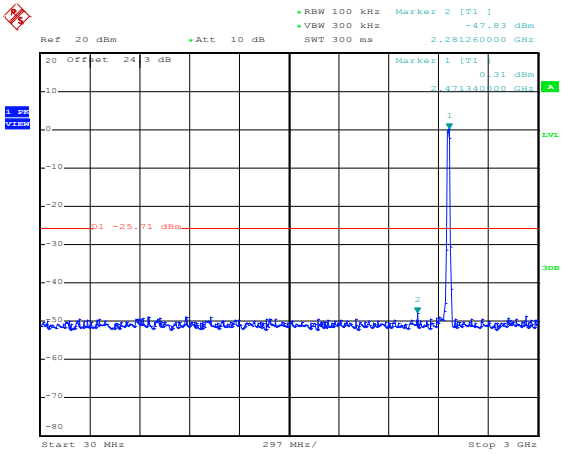
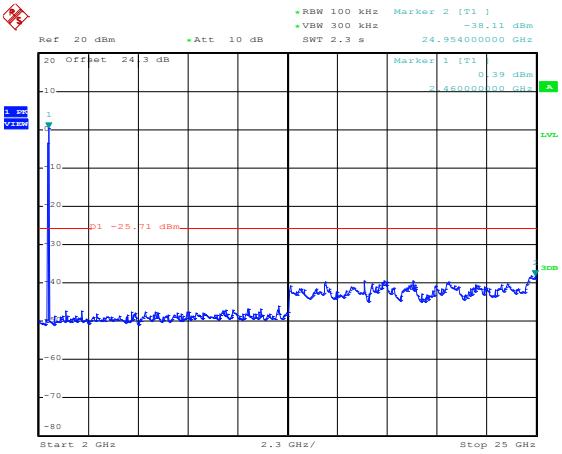
100kHz PSD reference Level	Channel Plot
	
Spurious Emission 30MHz~3GHz	Spurious Emission 2GHz~25GHz
	

Test Mode :	802.11n HT20	Test Channel :	11

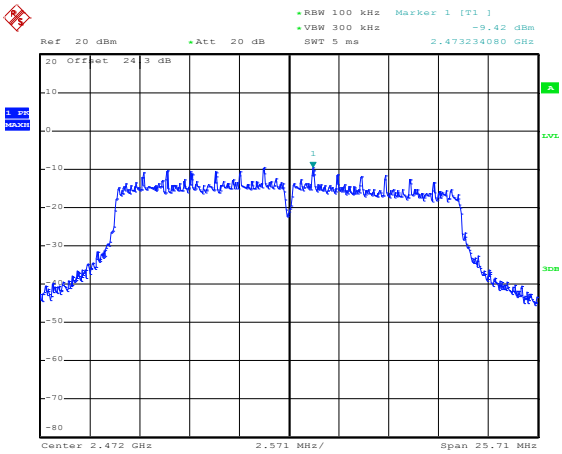
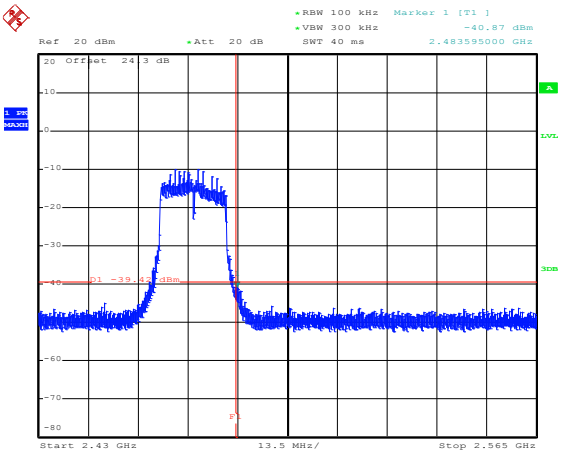
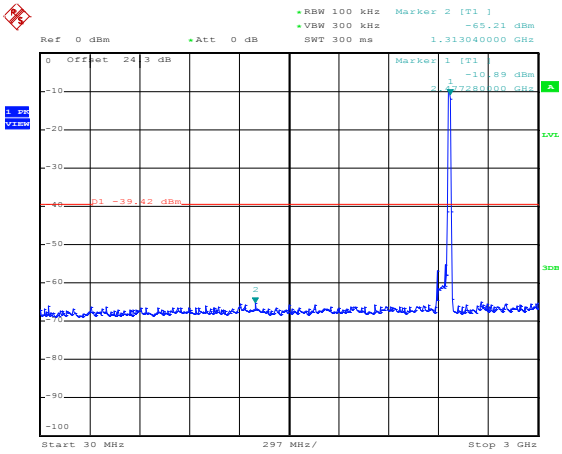
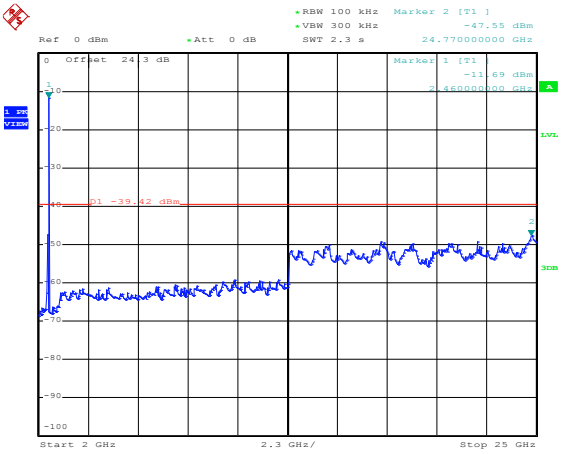
100kHz PSD reference Level	Channel Plot
	
Date: 2.MAY.2019 11:21:57	Date: 2.MAY.2019 11:22:33
Spurious Emission 30MHz~3GHz	**Spurious Emission 2GHz~25GHz**
	
Date: 2.MAY.2019 11:25:46	Date: 2.MAY.2019 11:26:19

Test Mode :	802.11n HT20	Test Channel :	12

100kHz PSD reference Level	Channel Plot
	
Date: 2.MAY.2019 11:44:46	Date: 2.MAY.2019 11:45:03

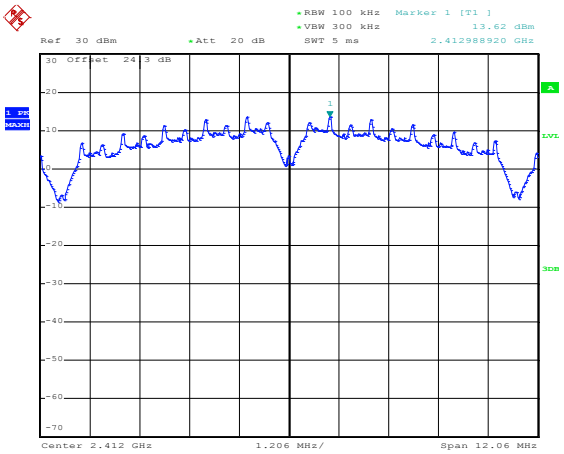
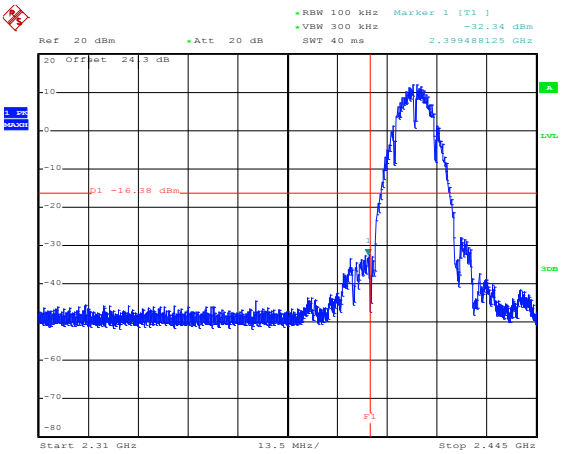
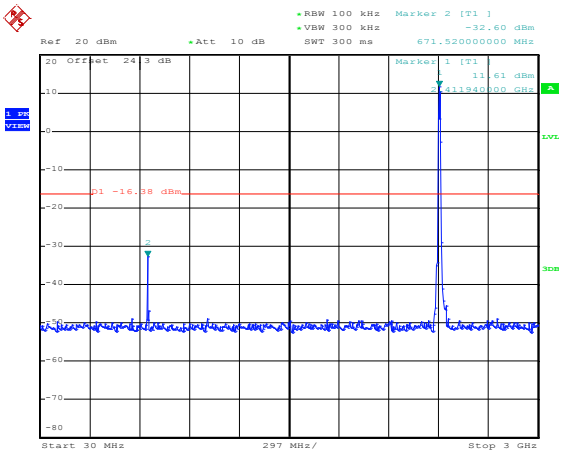
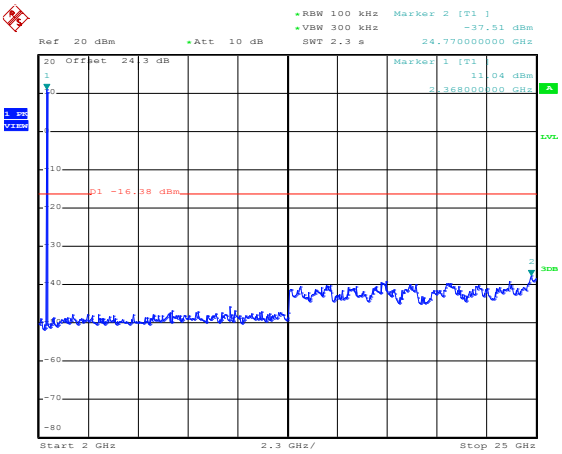
Spurious Emission 30MHz~3GHz	Spurious Emission 2GHz~25GHz
	
Date: 2.MAY.2019 11:45:26	Date: 2.MAY.2019 11:45:44

Test Mode :	802.11n HT20	Test Channel :	13

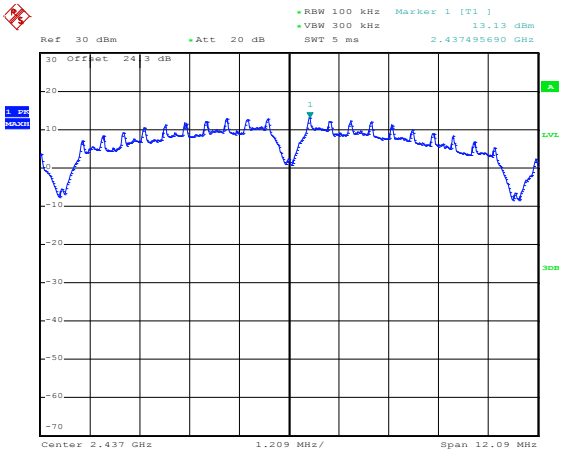
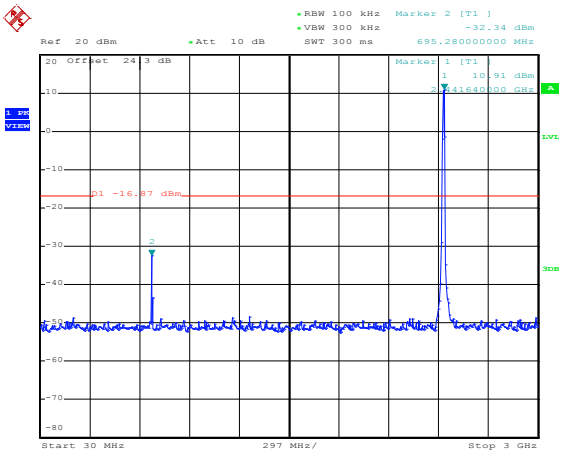
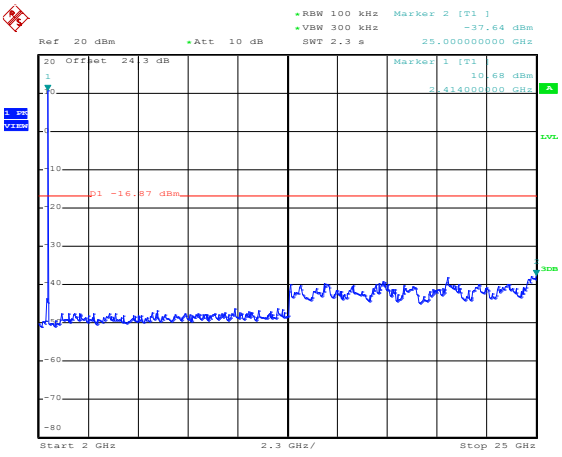
100kHz PSD reference Level	Channel Plot
	
Date: 2.MAY.2019 11:57:14	Date: 2.MAY.2019 11:57:45
Spurious Emission 30MHz~3GHz	**Spurious Emission 2GHz~25GHz**
	
Date: 2.MAY.2019 10:01:24	Date: 2.MAY.2019 10:02:10

Number of TX = 2, Ant. 3 (Measured)

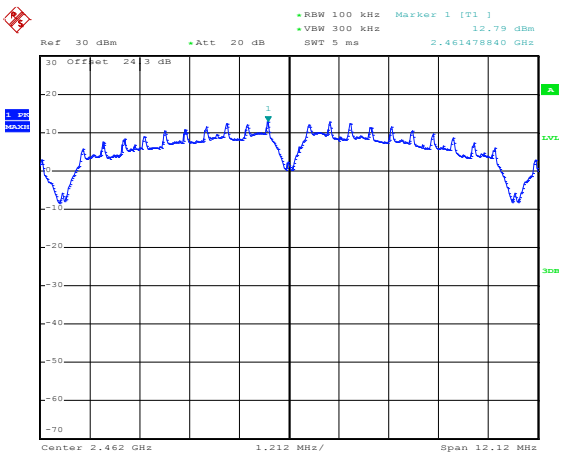
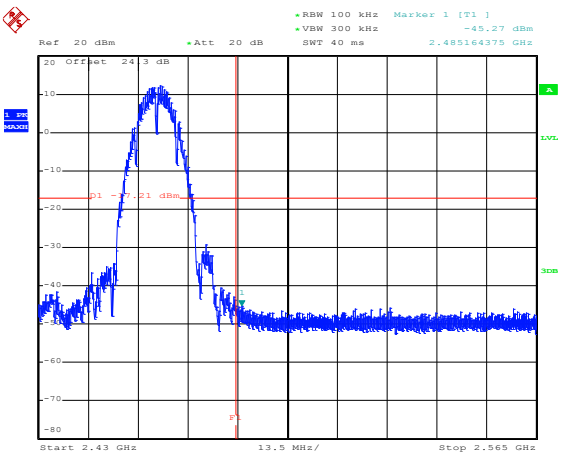
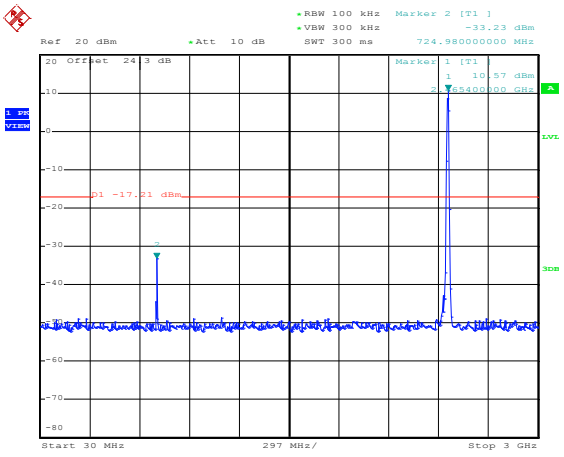
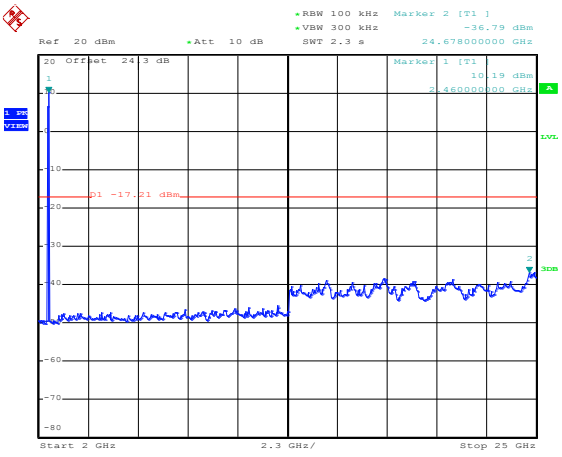
Test Mode :	802.11b	Test Channel :	01

100kHz PSD reference Level	Channel Plot
	
Date: 30.APR.2019 16:07:17	Date: 30.APR.2019 16:07:46
Spurious Emission 30MHz~3GHz	**Spurious Emission 2GHz~25GHz**
	
Date: 30.APR.2019 16:08:12	Date: 30.APR.2019 16:08:30

Test Mode :	802.11b	Test Channel :	06

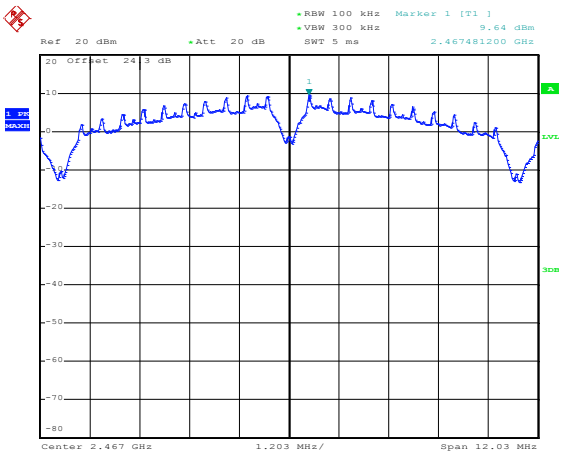
100kHz PSD reference Level	Channel Plot
	
Spurious Emission 30MHz~3GHz	Spurious Emission 2GHz~25GHz
	

Test Mode :	802.11b	Test Channel :	11

100kHz PSD reference Level	Channel Plot
	
Date: 30.APR.2019 17:30:53	Date: 30.APR.2019 17:32:54
Spurious Emission 30MHz~3GHz	**Spurious Emission 2GHz~25GHz**
	
Date: 30.APR.2019 17:34:46	Date: 30.APR.2019 17:34:23

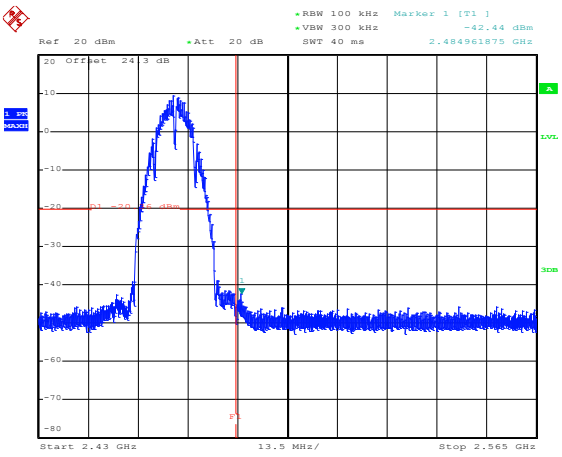
Test Mode :	802.11b	Test Channel :	12

100kHz PSD reference Level



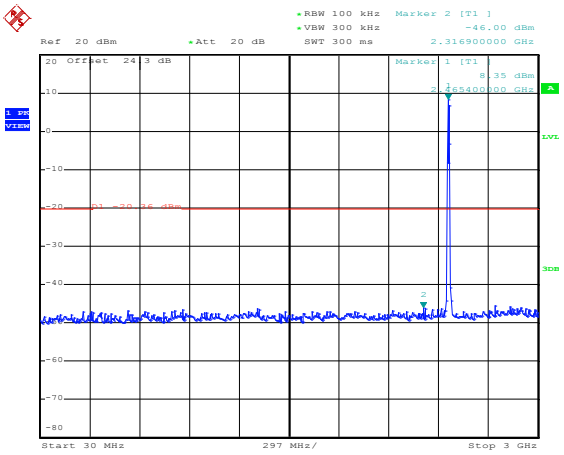
Date: 2.MAY.2019 09:43:41

Channel Plot



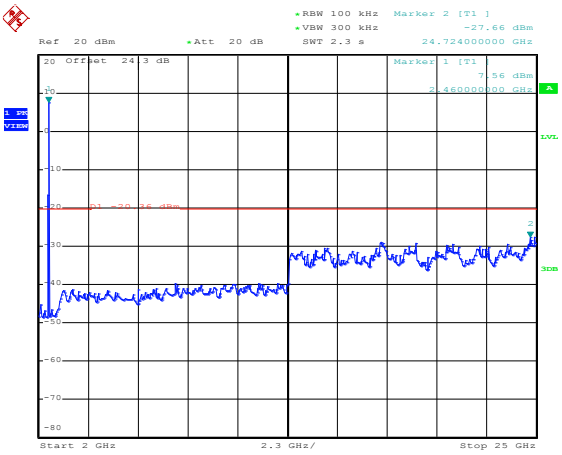
Date: 2.MAY.2019 09:44:11

Spurious Emission 30MHz~3GHz



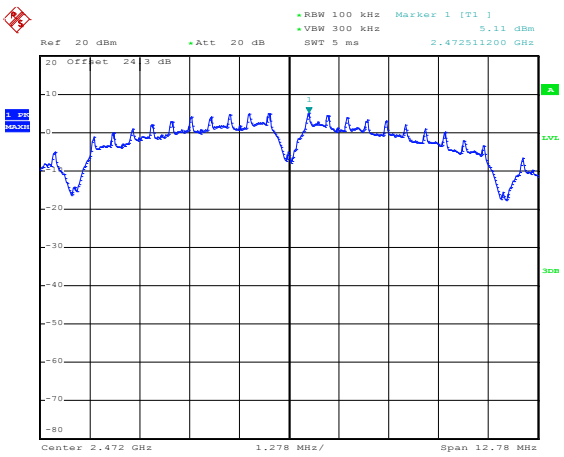
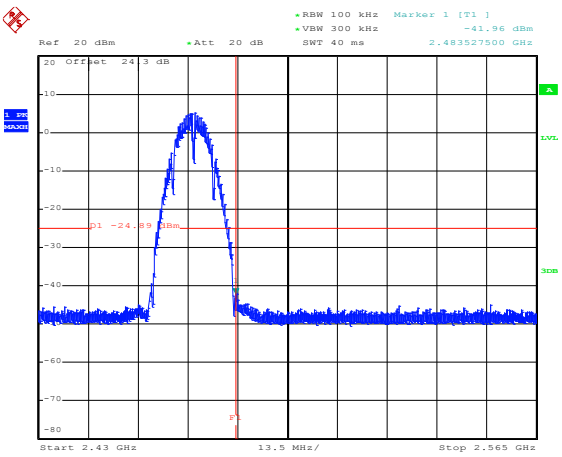
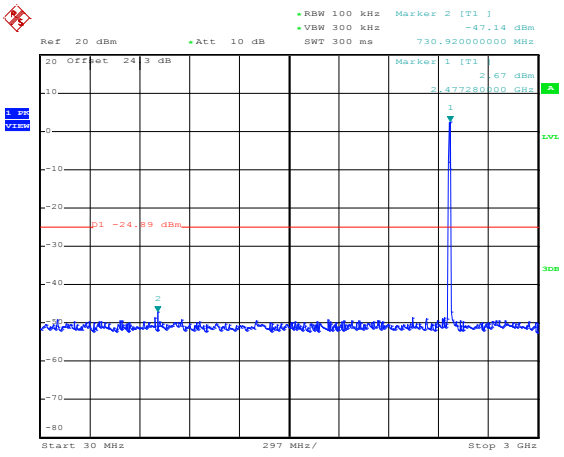
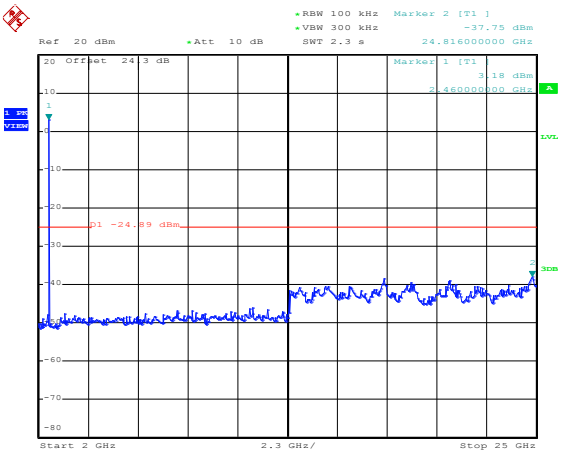
Date: 2.MAY.2019 09:44:28

Spurious Emission 2GHz~25GHz



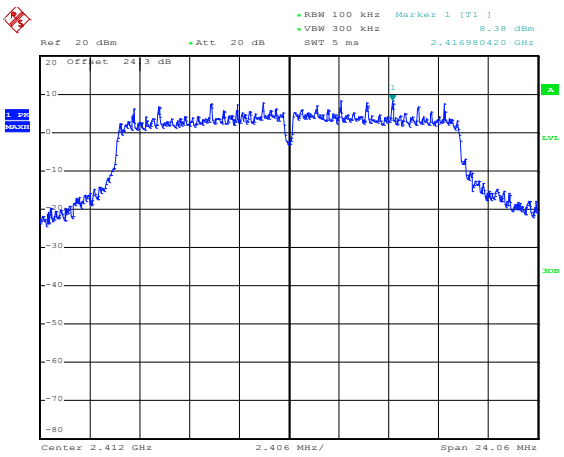
Date: 2.MAY.2019 09:45:22

Test Mode :	802.11b	Test Channel :	13

100kHz PSD reference Level	Channel Plot
	
Date: 30.APR.2019 17:16:20	Date: 30.APR.2019 17:18:22
Spurious Emission 30MHz~3GHz	**Spurious Emission 2GHz~25GHz**
	
Date: 30.APR.2019 17:20:01	Date: 30.APR.2019 17:20:35

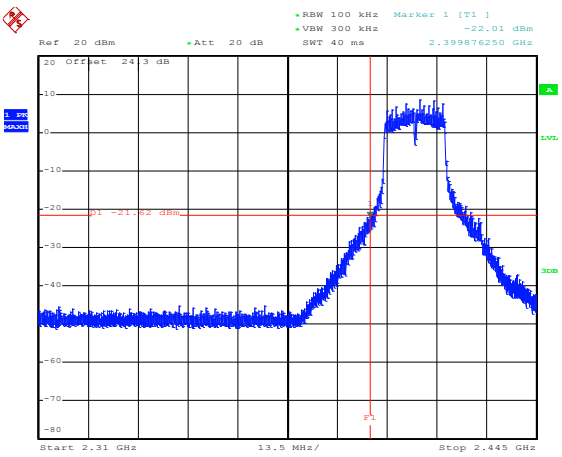
Test Mode :	802.11g	Test Channel :	01

100kHz PSD reference Level



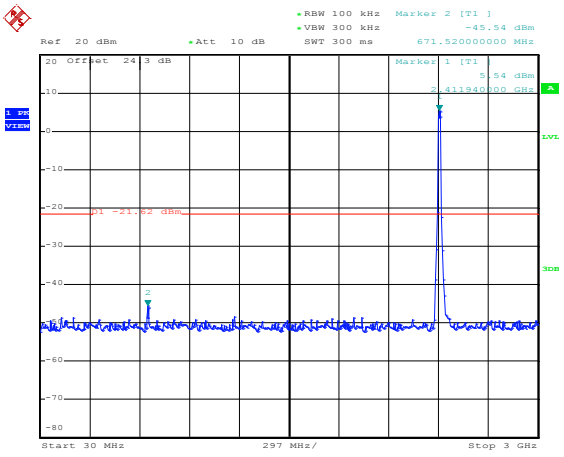
Date: 30.APR.2019 18:13:29

Channel Plot



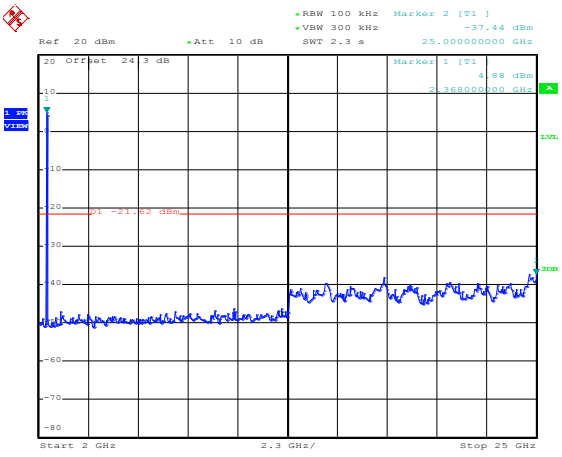
Date: 30.APR.2019 18:14:12

Spurious Emission 30MHz~3GHz



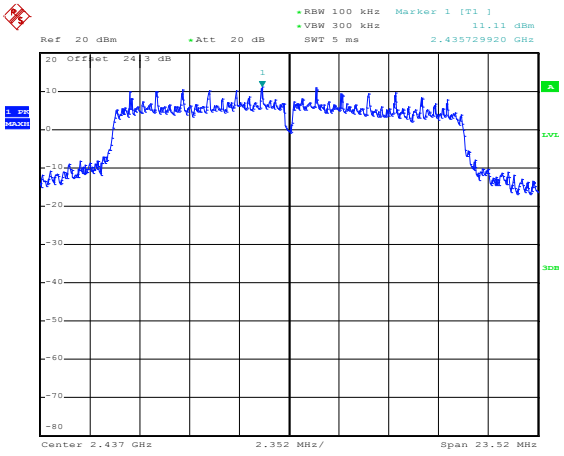
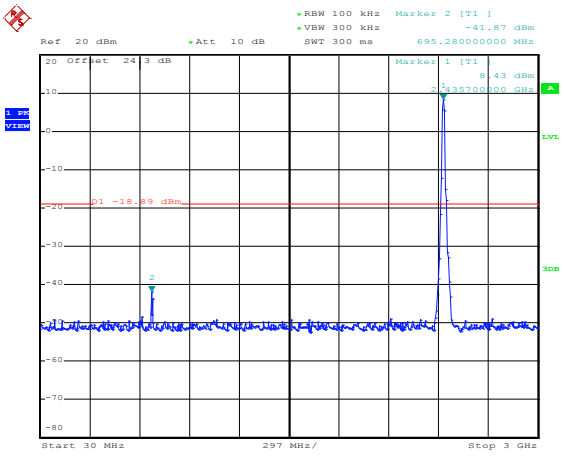
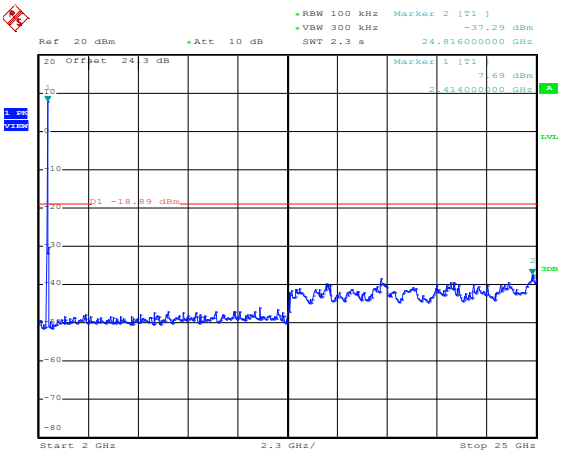
Date: 30.APR.2019 18:14:46

Spurious Emission 2GHz~25GHz

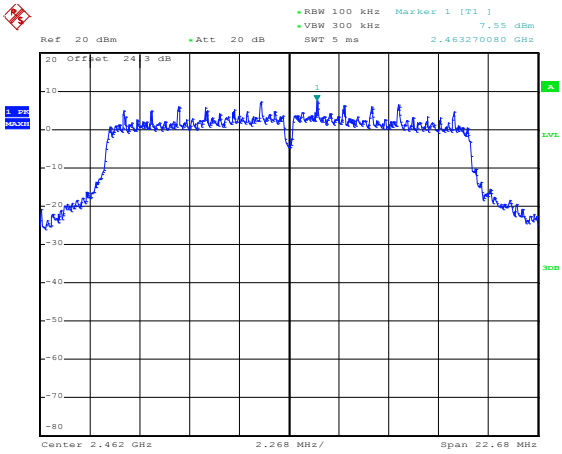
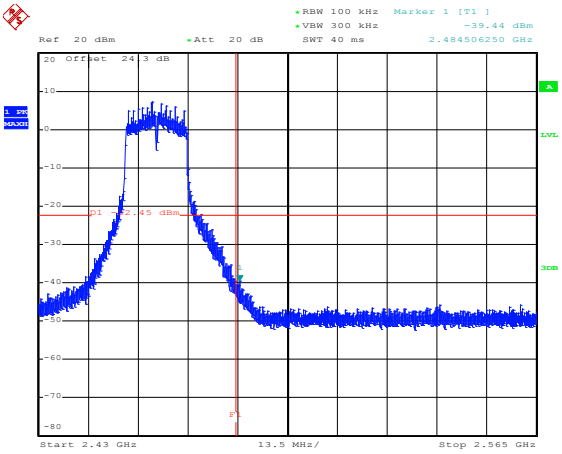
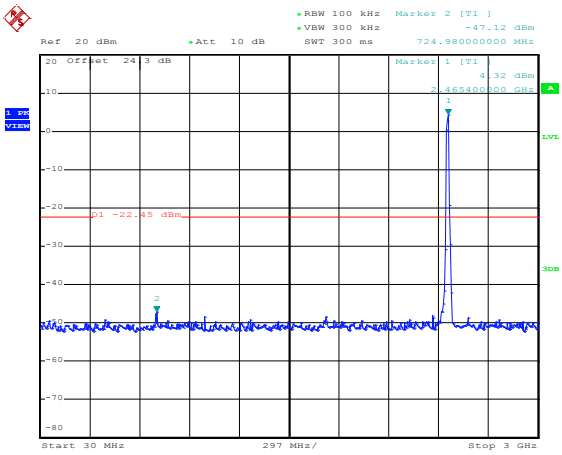
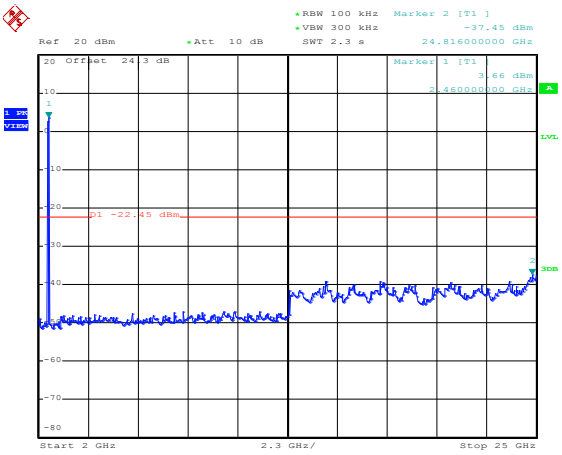


Date: 30.APR.2019 18:15:03

Test Mode :	802.11g	Test Channel :	06

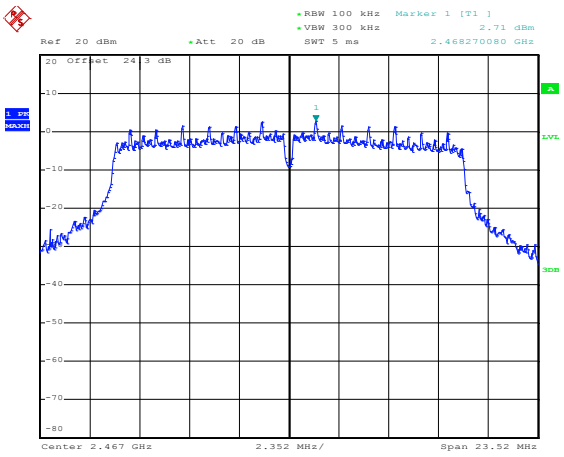
100kHz PSD reference Level	Channel Plot
	
Spurious Emission 30MHz~3GHz	Spurious Emission 2GHz~25GHz
	

Test Mode :	802.11g	Test Channel :	11

100kHz PSD reference Level	Channel Plot
	
Date: 30.APR.2019 18:42:01	Date: 30.APR.2019 18:43:46
Spurious Emission 30MHz~3GHz	**Spurious Emission 2GHz~25GHz**
	
Date: 30.APR.2019 18:42:38	Date: 30.APR.2019 18:42:53

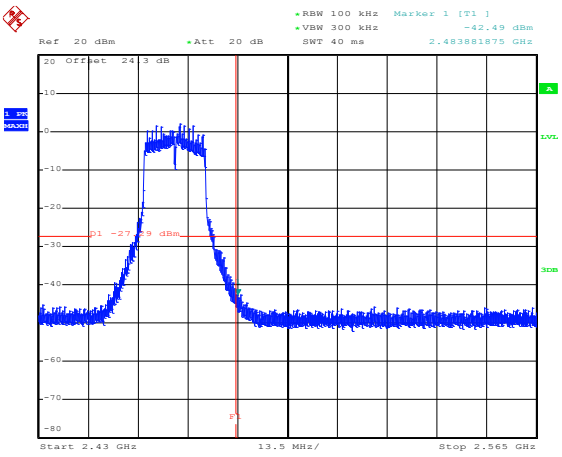
Test Mode :	802.11g	Test Channel :	12

100kHz PSD reference Level



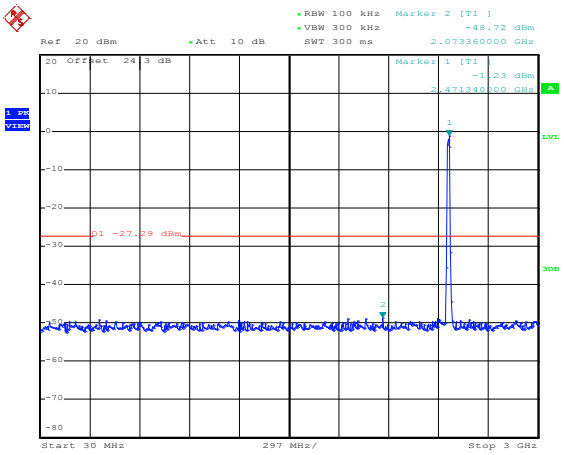
Date: 30.APR.2019 18:58:25

Channel Plot



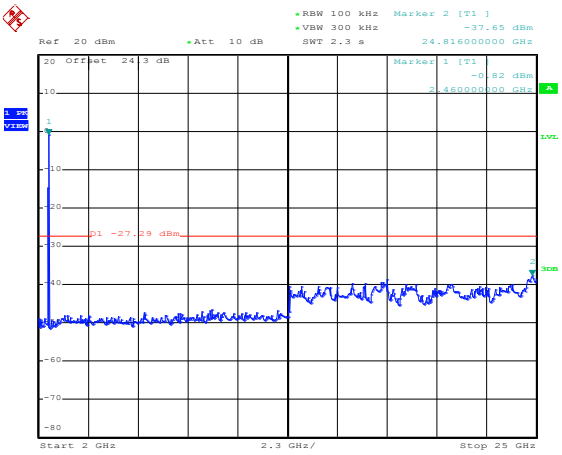
Date: 30.APR.2019 19:00:14

Spurious Emission 30MHz~3GHz



Date: 30.APR.2019 19:00:44

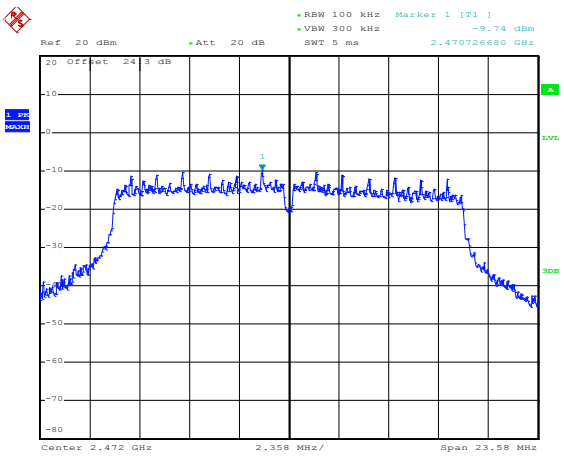
Spurious Emission 2GHz~25GHz



Date: 30.APR.2019 19:00:59

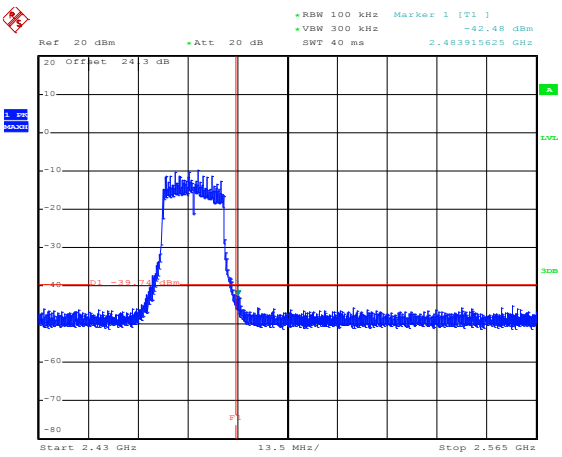
Test Mode :	802.11g	Test Channel :	13

100kHz PSD reference Level



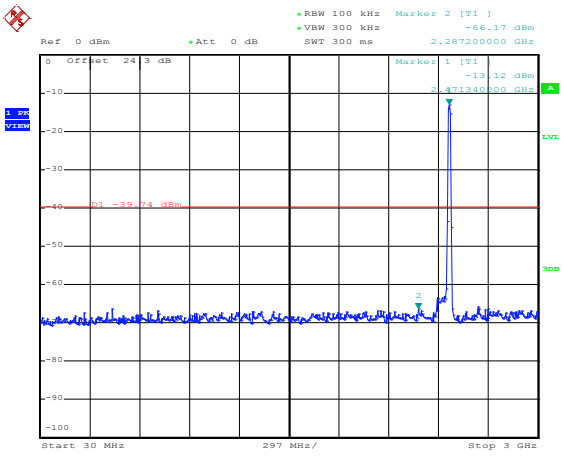
Date: 30.APR.2019 19:16:08

Channel Plot



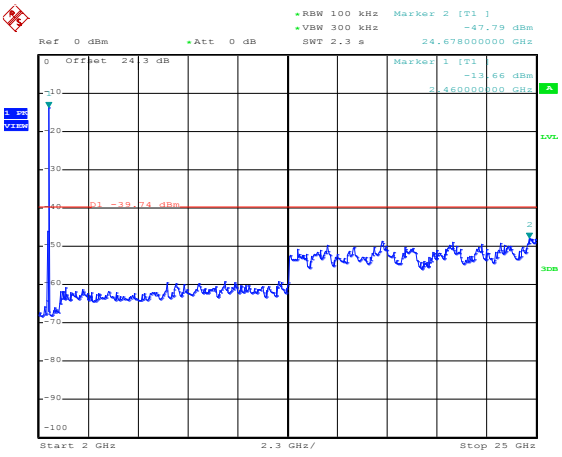
Date: 30.APR.2019 19:16:53

Spurious Emission 30MHz~3GHz



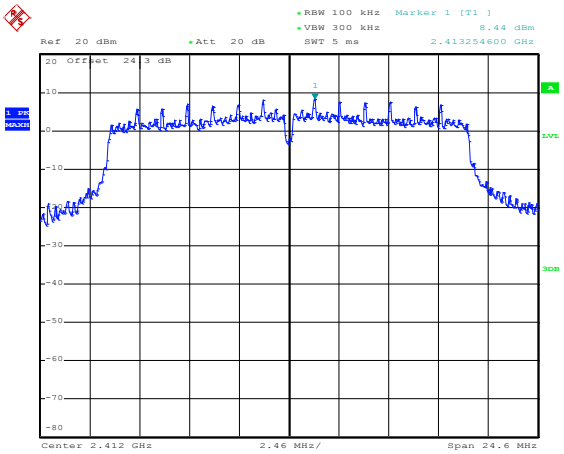
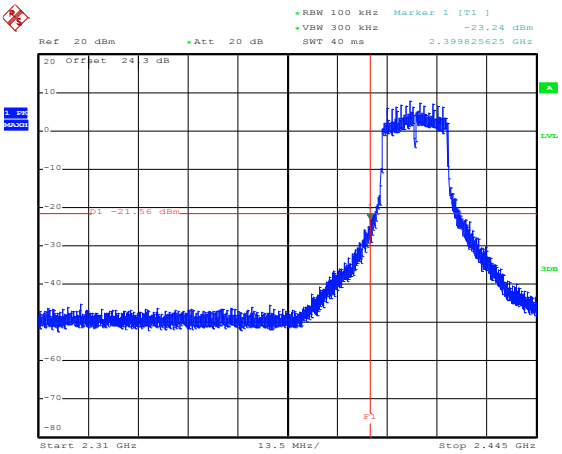
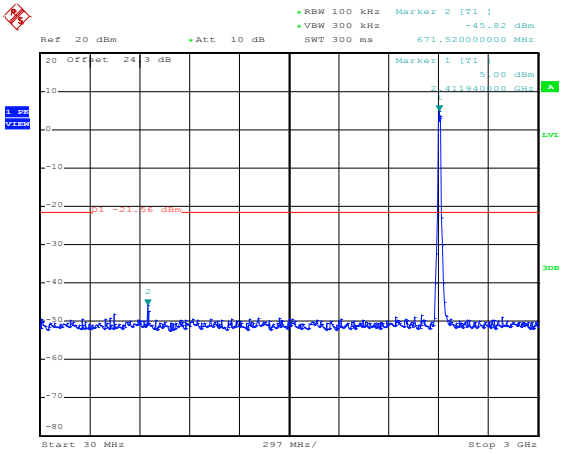
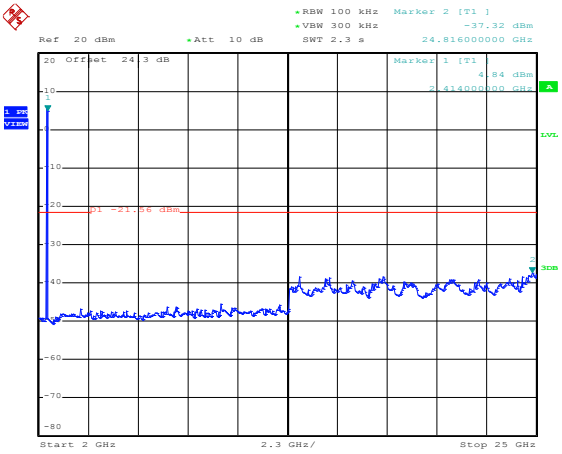
Date: 2.MAY.2019 11:24:57

Spurious Emission 2GHz~25GHz

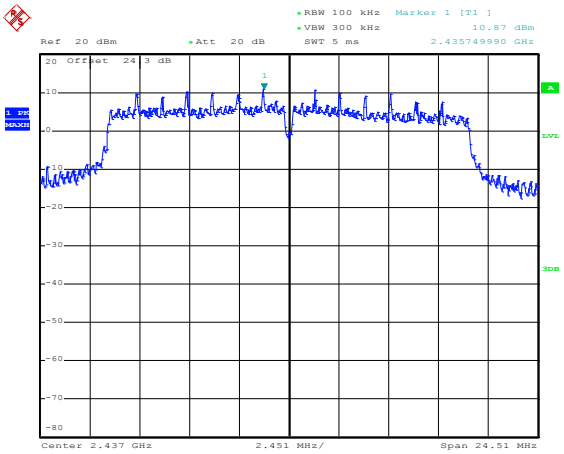
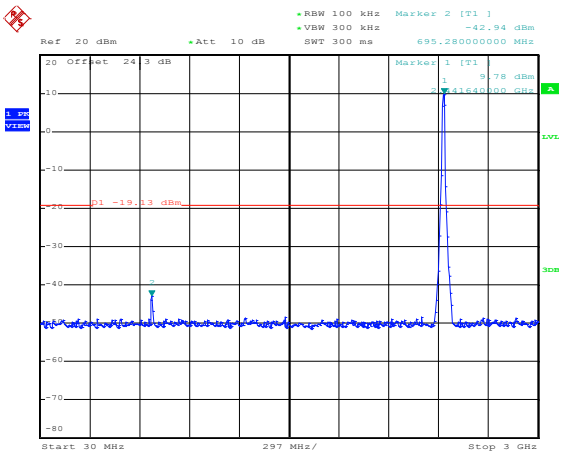
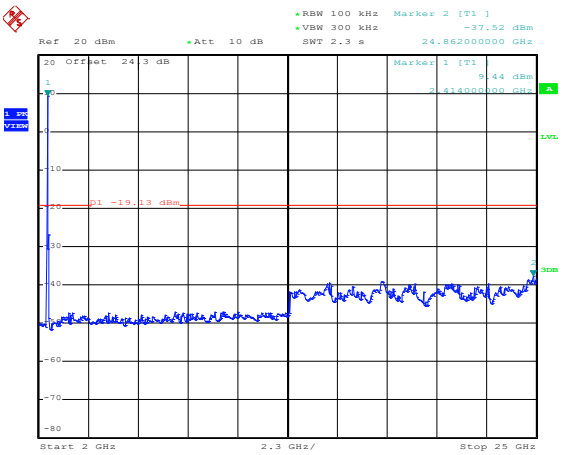


Date: 2.MAY.2019 11:25:15

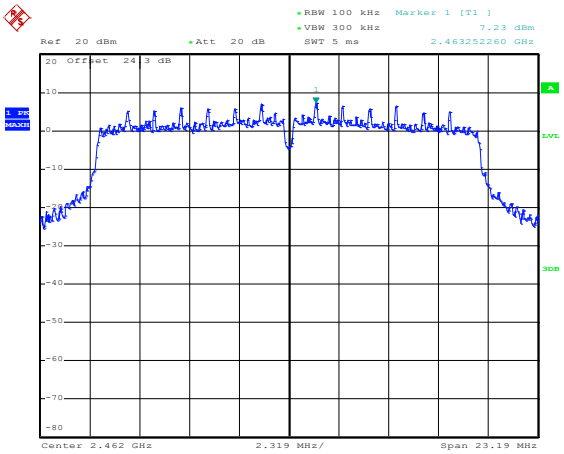
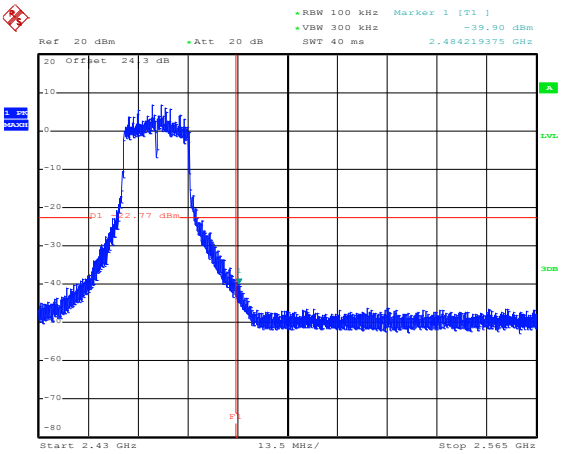
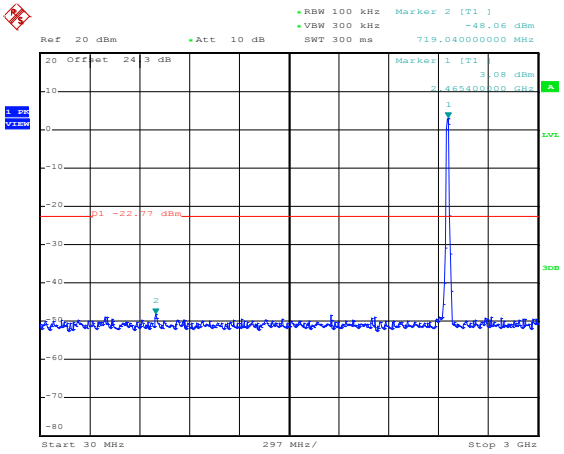
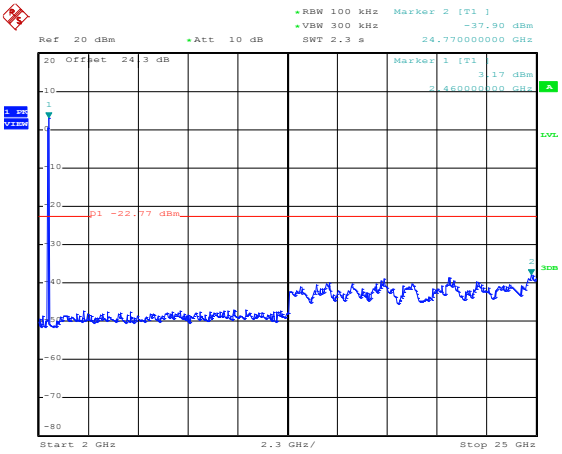
Test Mode :	802.11n HT20	Test Channel :	01

100kHz PSD reference Level	Channel Plot
	
Date: 2.MAY.2019 10:40:47	Date: 2.MAY.2019 09:51:02
Spurious Emission 30MHz~3GHz	**Spurious Emission 2GHz~25GHz**
	
Date: 2.MAY.2019 10:43:21	Date: 2.MAY.2019 10:44:41

Test Mode :	802.11n HT20	Test Channel :	06

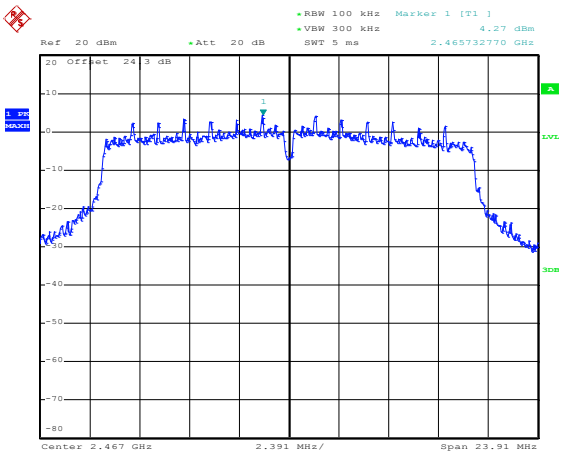
100kHz PSD reference Level	Channel Plot
	
Spurious Emission 30MHz~3GHz	Spurious Emission 2GHz~25GHz
	

Test Mode :	802.11n HT20	Test Channel :	11

100kHz PSD reference Level	Channel Plot
	
Date: 2.MAY.2019 11:35:12	Date: 2.MAY.2019 11:35:30
Spurious Emission 30MHz~3GHz	**Spurious Emission 2GHz~25GHz**
	
Date: 2.MAY.2019 11:36:26	Date: 2.MAY.2019 11:38:26

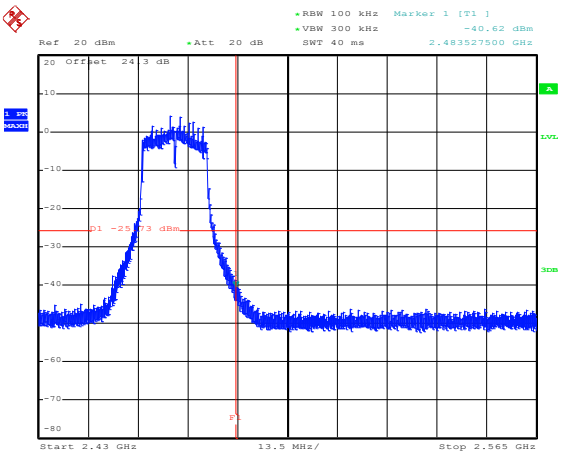
Test Mode :	802.11n HT20	Test Channel :	12

100kHz PSD reference Level



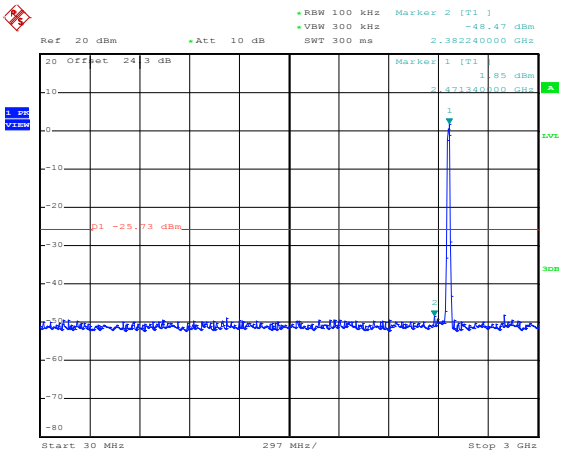
Date: 2.MAY.2019 11:49:39

Channel Plot



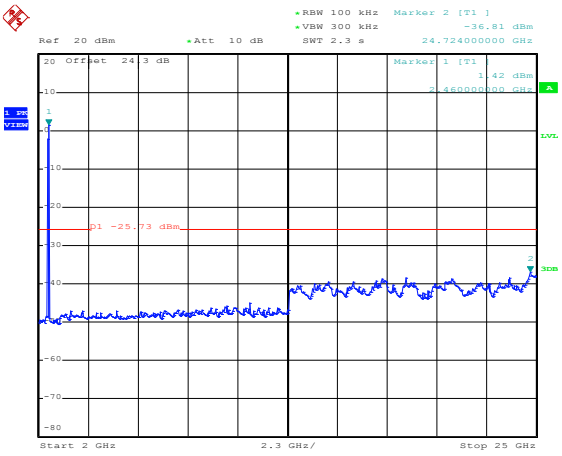
Date: 2.MAY.2019 11:52:25

Spurious Emission 30MHz~3GHz



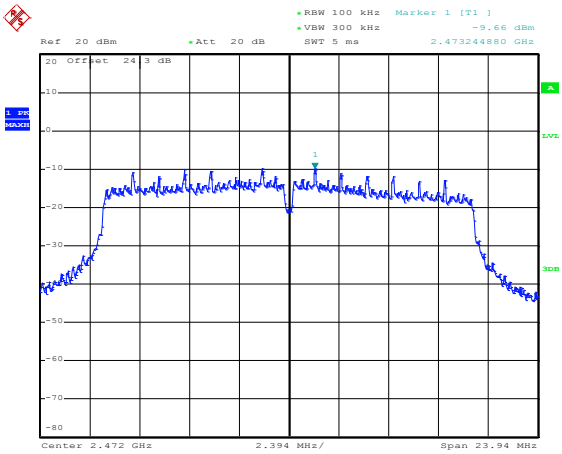
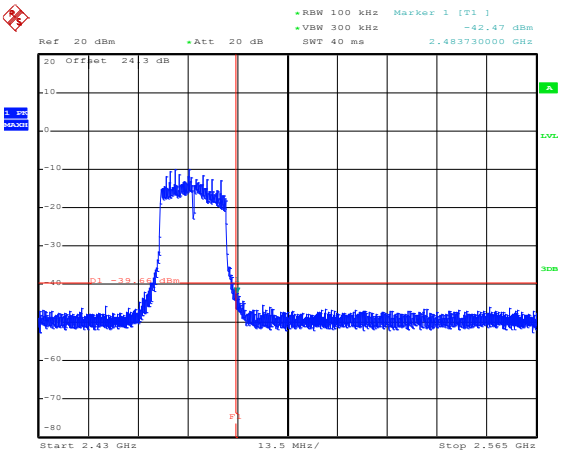
Date: 2.MAY.2019 11:50:13

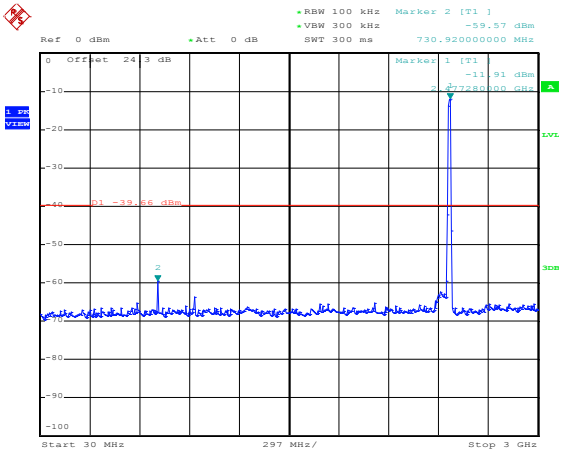
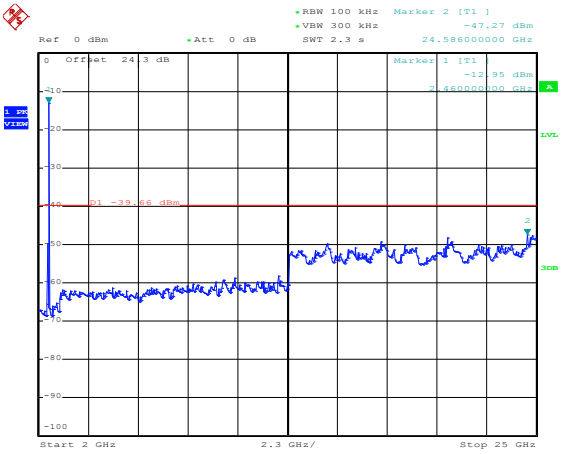
Spurious Emission 2GHz~25GHz



Date: 2.MAY.2019 11:51:51

Test Mode :	802.11n HT20	Test Channel :	13

100kHz PSD reference Level	Channel Plot
	
Date: 2.MAY.2019 12:01:18	Date: 2.MAY.2019 12:01:45

Spurious Emission 30MHz~3GHz	Spurious Emission 2GHz~25GHz
	
Date: 2.MAY.2019 09:57:59	Date: 2.MAY.2019 09:58:19

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

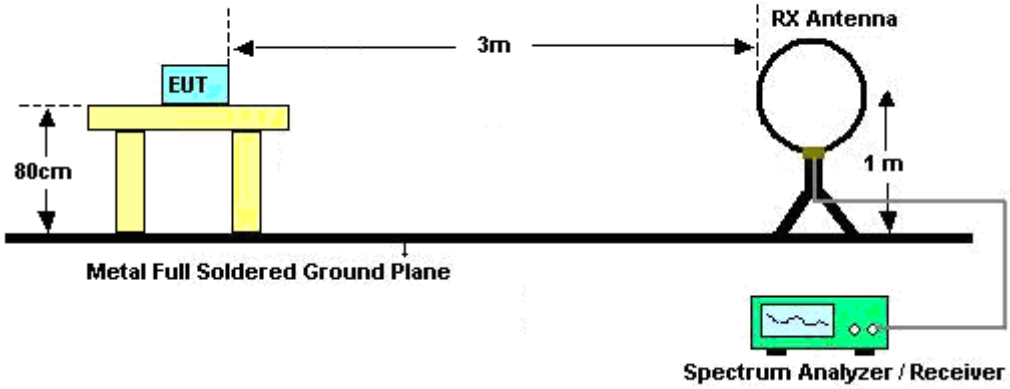
See list of measuring equipment of this test report.

3.5.3 Test Procedures

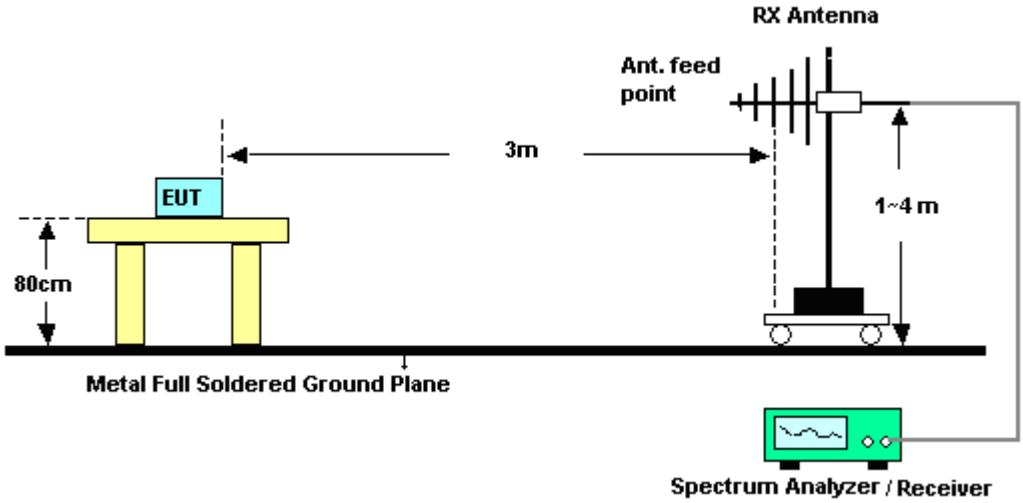
1. The testing follows the ANSI C63.10 Section 11.12.1 Radiated emission measurements.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the 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 ≥ RBW; Sweep = auto; Detector function = peak; Trace = max hold;
   (3) Set RBW = 1 MHz, VBW= 3MHz for f ≥ 1 GHz for peak measurement.
   For average measurement:
   - VBW = 10 Hz, when duty cycle is no less than 98 percent.
   - VBW ≥ 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

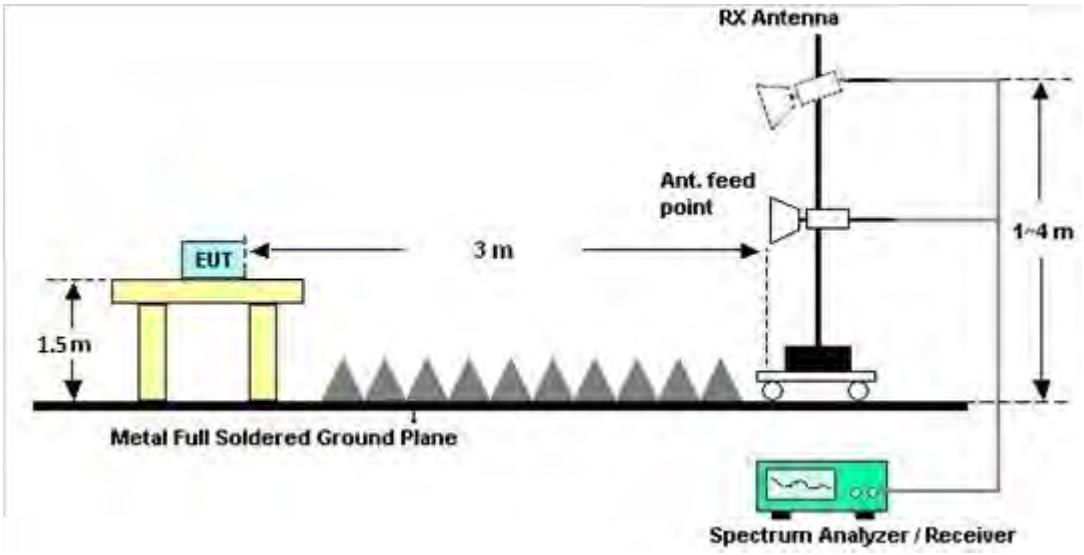
For radiated emissions below 30MHz



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 (dBμV)	
	Quasi-Peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

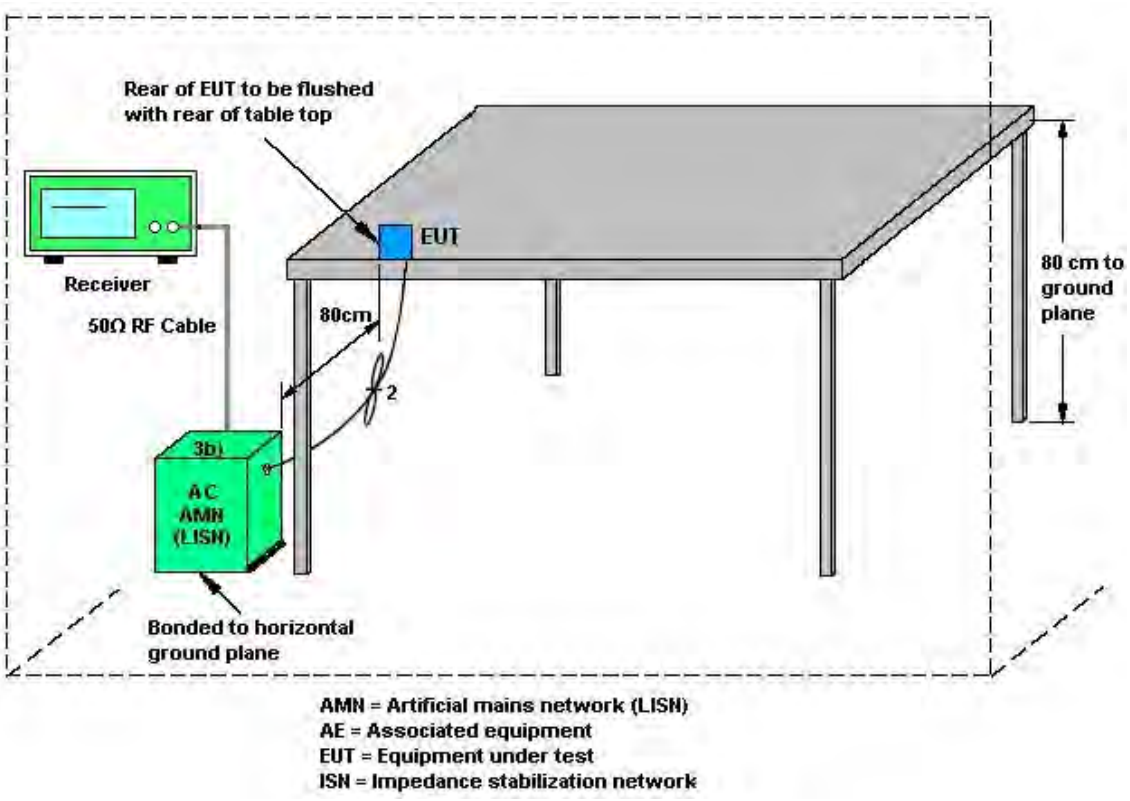
3.6.2 Measuring Instruments

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>

	Ant. 2 (dBi)	Ant. 3 (dBi)	DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
2.4 GHz	-0.50	-1.00	-0.50	2.26	0.00	0.00

Power Limit Reduction = DG(Power) – 6dBi, (min = 0)

PSD Limit Reduction = DG(PSD) – 6dBi, (min = 0)

4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Jan. 07, 2019	Apr. 15, 2019 ~ Jun. 19, 2019	Jan. 06, 2020	Radiation (03CH13-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1241	1GHz ~ 18GHz	Jun. 29, 2018	Apr. 15, 2019 ~ Jun. 19, 2019	Jun. 28, 2019	Radiation (03CH13-HY)
Bilog Antenna	TESEQ	CBL 6111D&00800 N1D01N-06	37059&01	30MHz~1GHz	Oct. 13, 2018	Apr. 15, 2019 ~ Jun. 19, 2019	Oct. 12, 2019	Radiation (03CH13-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170584	18GHz- 40GHz	Dec. 05, 2018	Apr. 15, 2019 ~ Jun. 19, 2019	Dec. 04, 2019	Radiation (03CH13-HY)
Preamplifier	Keysight	83017A	MY53270080	1GHz~26.5GHz	Nov. 14, 2018	Apr. 15, 2019 ~ Jun. 19, 2019	Nov. 13, 2020	Radiation (03CH13-HY)
Preamplifier	MITEQ	AMF-7D-00101800-30-10P	1590074	1GHz~18GHz	May 21, 2018	Apr. 15, 2019 ~ Apr. 28, 2019	May 20, 2019	Radiation (03CH13-HY)
Preamplifier	MITEQ	AMF-7D-00101800-30-10P	1590074	1GHz~18GHz	May. 20, 2019	Jun. 19, 2019	May. 19, 2020	Radiation (03CH13-HY)
Amplifier	Sonoma-Instrument	310 N	187282	9KHz~1GHz	Dec. 18, 2018	Apr. 15, 2019 ~ Jun. 19, 2019	Dec. 17, 2019	Radiation (03CH13-HY)
Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz, VSWR : 2.5:1 max	Jul. 16, 2018	Apr. 15, 2019 ~ Jun. 19, 2019	Jul. 15, 2019	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 126E	0030/126E	30M-18G	Feb. 13, 2019	Apr. 15, 2019 ~ Jun. 19, 2019	Feb. 12, 2020	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	804793/4	30M-18G	Feb. 13, 2019	Apr. 15, 2019 ~ Jun. 19, 2019	Feb. 12, 2020	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY24961/4	30M-18G	Feb. 13, 2019	Apr. 15, 2019 ~ Jun. 19, 2019	Feb. 12, 2020	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY2859/2	30M~40GHz	Mar. 13, 2019	Apr. 15, 2019 ~ Jun. 19, 2019	Mar. 12, 2020	Radiation (03CH13-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY4274/2	30M~40GHz	Mar. 13, 2019	Apr. 15, 2019 ~ Jun. 19, 2019	Mar. 12, 2020	Radiation (03CH13-HY)
Spectrum Analyzer	Keysight	N9010A	MY55370526	10Hz~44GHz	Mar. 19, 2019	Apr. 15, 2019 ~ Jun. 19, 2019	Mar. 18, 2020	Radiation (03CH13-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1m~4m	N/A	Apr. 15, 2019 ~ Jun. 19, 2019	N/A	Radiation (03CH13-HY)
Turn Table	EMEC	TT2000	N/A	0~360 Degree	N/A	Apr. 15, 2019 ~ Jun. 19, 2019	N/A	Radiation (03CH13-HY)
Software	AUDIX	E3 6.2009-8-24c	RK-001124	N/A	N/A	Apr. 15, 2019 ~ Jun. 19, 2019	N/A	Radiation (03CH13-HY)
EMI Test Receiver	Keysight	N9038A(MXE)	MY54130085	20Hz ~ 8.4GHz	Nov. 01, 2018	Apr. 15, 2019 ~ Jun. 19, 2019	Oct. 31, 2019	Radiation (03CH13-HY)
Filter	Woken	WHKX8-5272.5-6750-18000-40ST	SN5	6.75G Highpass	Mar. 13, 2019	Apr. 15, 2019 ~ Jun. 19, 2019	Mar. 12, 2020	Radiation (03CH13-HY)
Filter	Wainwright	WHKX12-1080-1200-15000-60ST	SN3	1.2G Low Pass	Jul. 05, 2018	Apr. 15, 2019 ~ Jun. 19, 2019	Jul. 04, 2019	Radiation (03CH13-HY)
Filter	Wainwright	WHKX12-2700-3000-18000-60SS	SN2	3G High Pass	Jul. 16, 2018	Apr. 15, 2019 ~ Jun. 19, 2019	Jul. 15, 2019	Radiation (03CH13-HY)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Switch Box & RF Cable	Burgeon	ETF-058	EC1208382	N/A	Mar. 27, 2019	Apr. 05,2019~ May 29,2019	Mar. 26, 2020	Conducted (TH05-HY)
Power Sensor	DARE	RPR3006W	13I00030SNO32	9kHz~6GHz	Dec. 03, 2018	Apr. 05,2019~ May 29,2019	Dec. 02, 2019	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100057	9kHz-40GHz	Nov. 21, 2018	Apr. 05,2019~ May 29,2019	Nov. 20, 2019	Conducted (TH05-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Apr. 03, 2019	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	9KHz~3.6GHz	Nov. 12, 2018	Apr. 03, 2019	Nov. 11, 2019	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Nov. 14, 2018	Apr. 03, 2019	Nov. 13, 2019	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	Apr. 03, 2019	N/A	Conduction (CO05-HY)
LF Cable	HUBER + SUHNER	RG-214/U	LF01	N/A	Dec. 31, 2018	Apr. 03, 2019	Dec. 30, 2019	Conduction (CO05-HY)
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100851	N/A	Dec. 31, 2018	Apr. 03, 2019	Dec. 30, 2019	Conduction (CO05-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

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.90

Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.40

Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.30

Appendix A. Test Result of Conducted Test Items

Test Engineer:	Leo Li / Rebecca Li	Temperature:	21~25	℃
Test Date:	2019/4/5 ~ 2019/5/29	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 2	Ant 3	Ant 2	Ant 3		
11b	1Mbps	2	1	2412	14.10	14.15	8.08	8.04	0.50	Pass
11b	1Mbps	2	6	2437	14.00	14.05	8.08	8.06	0.50	Pass
11b	1Mbps	2	11	2462	13.75	14.10	8.04	8.08	0.50	Pass
11b	1Mbps	2	12	2467	13.60	13.55	8.04	8.02	0.50	Pass
11b	1Mbps	2	13	2472	13.90	13.65	8.52	8.52	0.50	Pass
11g	6Mbps	2	1	2412	16.80	16.70	15.66	16.04	0.50	Pass
11g	6Mbps	2	6	2437	17.40	18.70	16.04	15.68	0.50	Pass
11g	6Mbps	2	11	2462	16.55	16.50	15.32	15.12	0.50	Pass
11g	6Mbps	2	12	2467	16.60	16.50	15.70	15.68	0.50	Pass
11g	6Mbps	2	13	2472	16.75	16.60	15.72	15.72	0.50	Pass
HT20	MCS0	2	1	2412	17.90	17.90	16.38	16.40	0.50	Pass
HT20	MCS0	2	6	2437	19.50	20.15	16.80	16.34	0.50	Pass
HT20	MCS0	2	11	2462	17.70	17.75	15.66	15.46	0.50	Pass
HT20	MCS0	2	12	2467	17.75	17.70	16.08	15.94	0.50	Pass
HT20	MCS0	2	13	2472	17.85	17.75	17.14	15.96	0.50	Pass

Report Number : FR8N0616-05C

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 2	Ant 3	SUM	Ant 2	Ant 3	Ant 2	Ant 3	Ant 2	Ant 3	Ant 2	Ant 3	
11b	1Mbps	1	1	2412	22.80	22.70		30.00	30.00	-0.50	-1.00	22.30	21.70	36.00	36.00	Pass
11b	1Mbps	1	6	2437	22.90	22.90		30.00	30.00	-0.50	-1.00	22.40	21.90	36.00	36.00	Pass
11b	1Mbps	1	11	2462	22.40	22.20		30.00	30.00	-0.50	-1.00	21.90	21.20	36.00	36.00	Pass
11b	1Mbps	1	12	2467	17.80	17.80		30.00	30.00	-0.50	-1.00	17.30	16.80	36.00	36.00	Pass
11b	1Mbps	1	13	2472	13.90	14.10		30.00	30.00	-0.50	-1.00	13.40	13.10	36.00	36.00	Pass
11g	6Mbps	1	1	2412	19.80	19.90		30.00	30.00	-0.50	-1.00	19.30	18.90	36.00	36.00	Pass
11g	6Mbps	1	6	2437	22.20	22.10		30.00	30.00	-0.50	-1.00	21.70	21.10	36.00	36.00	Pass
11g	6Mbps	1	11	2462	18.50	18.80		30.00	30.00	-0.50	-1.00	18.00	17.80	36.00	36.00	Pass
11g	6Mbps	1	12	2467	13.60	13.60		30.00	30.00	-0.50	-1.00	13.10	12.60	36.00	36.00	Pass
11g	6Mbps	1	13	2472	1.70	1.80		30.00	30.00	-0.50	-1.00	1.20	0.80	36.00	36.00	Pass
HT20	MCS0	1	1	2412	19.30	19.40	-	30.00	30.00	-0.50	-1.00	18.80	18.40	36.00	36.00	Pass
HT20	MCS0	1	6	2437	22.10	22.00		30.00	30.00	-0.50	-1.00	21.60	21.00	36.00	36.00	Pass
HT20	MCS0	1	11	2462	17.90	18.20		30.00	30.00	-0.50	-1.00	17.40	17.20	36.00	36.00	Pass
HT20	MCS0	1	12	2467	15.20	15.30		30.00	30.00	-0.50	-1.00	14.70	14.30	36.00	36.00	Pass
HT20	MCS0	1	13	2472	1.90	1.90		30.00	30.00	-0.50	-1.00	1.40	0.90	36.00	36.00	Pass
VHT20	MCS0	1	1	2412	19.30	19.40		30.00	30.00	-0.50	-1.00	18.80	18.40	36.00	36.00	Pass
VHT20	MCS0	1	6	2437	22.00	22.00		30.00	30.00	-0.50	-1.00	21.50	21.00	36.00	36.00	Pass
VHT20	MCS0	1	11	2462	17.90	18.10		30.00	30.00	-0.50	-1.00	17.40	17.10	36.00	36.00	Pass
VHT20	MCS0	1	12	2467	14.90	15.00		30.00	30.00	-0.50	-1.00	14.40	14.00	36.00	36.00	Pass
VHT20	MCS0	1	13	2472	1.70	1.80		30.00	30.00	-0.50	-1.00	1.20	0.80	36.00	36.00	Pass
11b	1Mbps	2	1	2412	23.00	22.90	25.96	30.00		-0.50		25.46		36.00		Pass
11b	1Mbps	2	6	2437	22.80	23.10	25.96	30.00		-0.50		25.46		36.00		Pass
11b	1Mbps	2	11	2462	22.20	22.70	25.47	30.00		-0.50		24.97		36.00		Pass
11b	1Mbps	2	12	2467	17.80	17.90	20.86	30.00		-0.50		20.36		36.00		Pass
11b	1Mbps	2	13	2472	14.20	14.10	17.16	30.00		-0.50		16.66		36.00		Pass
11g	6Mbps	2	1	2412	20.20	19.90	23.06	30.00		-0.50		22.56		36.00		Pass
11g	6Mbps	2	6	2437	22.20	22.30	25.26	30.00		-0.50		24.76		36.00		Pass
11g	6Mbps	2	11	2462	18.90	18.70	21.81	30.00		-0.50		21.31		36.00		Pass
11g	6Mbps	2	12	2467	13.70	13.60	16.66	30.00		-0.50		16.16		36.00		Pass
11g	6Mbps	2	13	2472	2.00	1.60	4.81	30.00		-0.50		4.31		36.00		Pass
HT20	MCS0	2	1	2412	19.70	19.30	22.51	30.00		-0.50		22.01		36.00		Pass
HT20	MCS0	2	6	2437	22.00	22.20	25.11	30.00		-0.50		24.61		36.00		Pass
HT20	MCS0	2	11	2462	18.40	18.10	21.26	30.00		-0.50		20.76		36.00		Pass
HT20	MCS0	2	12	2467	15.30	15.30	18.31	30.00		-0.50		17.81		36.00		Pass
HT20	MCS0	2	13	2472	1.90	1.90	4.91	30.00		-0.50		4.41		36.00		Pass
VHT20	MCS0	2	1	2412	19.60	19.30	22.46	30.00		-0.50		21.96		36.00		Pass
VHT20	MCS0	2	6	2437	22.10	21.90	25.01	30.00		-0.50		24.51		36.00		Pass
VHT20	MCS0	2	11	2462	18.30	18.00	21.16	30.00		-0.50		20.66		36.00		Pass
VHT20	MCS0	2	12	2467	15.20	15.30	18.26	30.00		-0.50		17.76		36.00		Pass
VHT20	MCS0	2	13	2472	1.90	1.70	4.81	30.00		-0.50		4.31		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 2	Ant 3	Worse + 3.01	Ant 2	Ant 3	Ant 2	Ant 3	
11b	1Mbps	2	1	2412	-0.49	0.48	3.49	2.26		8.00		Pass
11b	1Mbps	2	6	2437	-0.87	-0.54	2.47	2.26		8.00		Pass
11b	1Mbps	2	11	2462	-0.45	-1.58	2.56	2.26		8.00		Pass
11b	1Mbps	2	12	2467	-4.26	-4.35	-1.25	2.26		8.00		Pass
11b	1Mbps	2	13	2472	-7.84	-9.95	-4.83	2.26		8.00		Pass
11g	6Mbps	2	1	2412	-7.15	-8.00	-4.14	2.26		8.00		Pass
11g	6Mbps	2	6	2437	-5.44	-4.92	-1.91	2.26		8.00		Pass
11g	6Mbps	2	11	2462	-8.12	-8.65	-5.11	2.26		8.00		Pass
11g	6Mbps	2	12	2467	-14.54	-14.27	-11.26	2.26		8.00		Pass
11g	6Mbps	2	13	2472	-25.65	-26.37	-22.64	2.26		8.00		Pass
HT20	MCS0	2	1	2412	-8.07	-7.77	-4.76	2.26		8.00		Pass
HT20	MCS0	2	6	2437	-6.21	-6.27	-3.20	2.26		8.00		Pass
HT20	MCS0	2	11	2462	-8.26	-8.55	-5.25	2.26		8.00		Pass
HT20	MCS0	2	12	2467	-11.26	-12.60	-8.25	2.26		8.00		Pass
HT20	MCS0	2	13	2472	-24.91	-24.82	-21.81	2.26		8.00		Pass

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

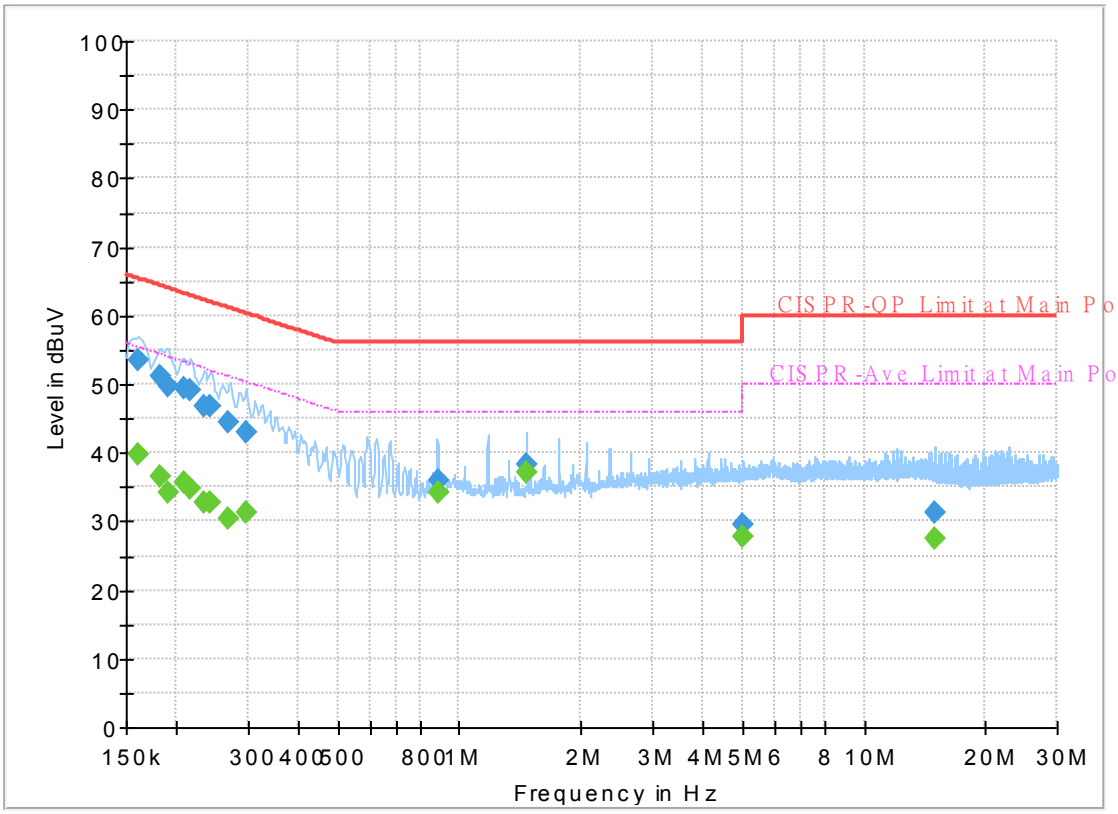
Appendix B. AC Conducted Emission Test Results

Test Engineer :	Jimmy Chang	**Temperature :**	24~26℃
		Relative Humidity :	51~54%

EUT Information

Report NO :	8N0616-05
Test Mode :	Mode 2
Test Voltage :	120Vac/60Hz
Phase :	Line

Full Spectrum



Final_Result

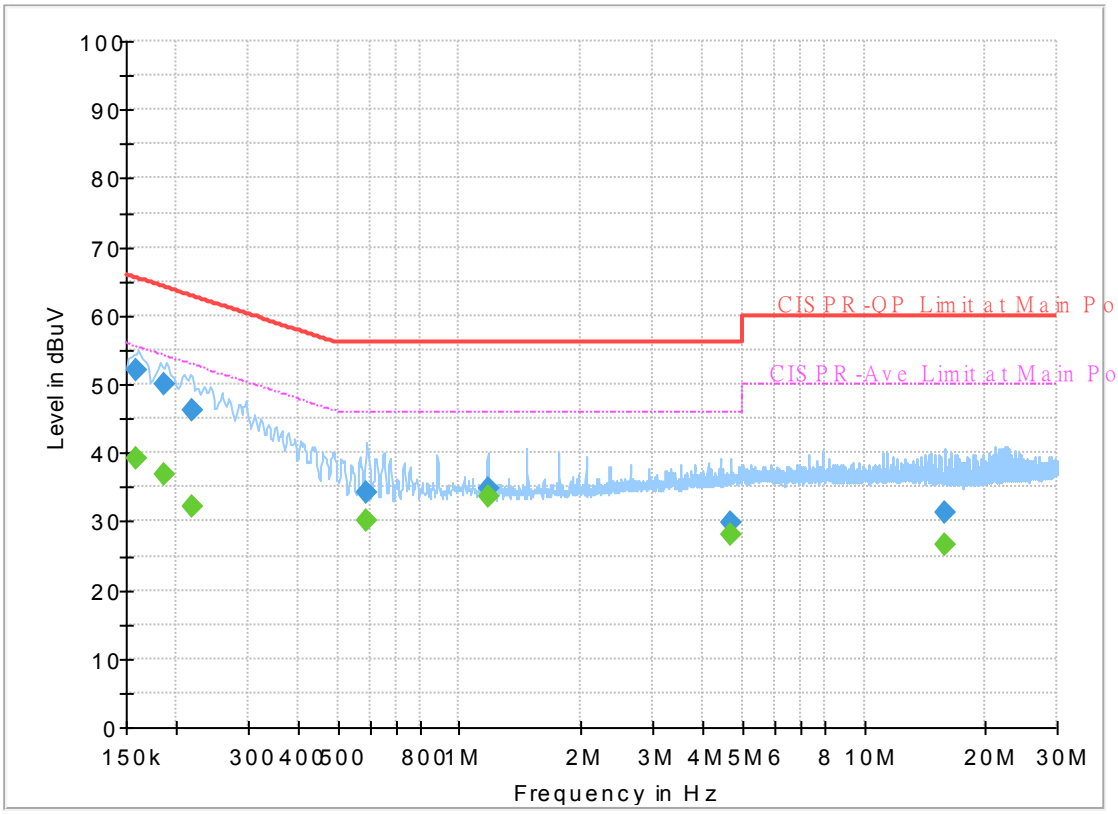
Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.161250	---	39.69	55.40	15.71	L1	OFF	19.5
0.161250	53.60	---	65.40	11.80	L1	OFF	19.5
0.181500	---	36.56	54.42	17.86	L1	OFF	19.5
0.181500	51.09	---	64.42	13.33	L1	OFF	19.5
0.190500	---	34.33	54.02	19.69	L1	OFF	19.5
0.190500	49.69	---	64.02	14.33	L1	OFF	19.5
0.208500	---	35.57	53.27	17.70	L1	OFF	19.5
0.208500	49.55	---	63.27	13.72	L1	OFF	19.5
0.215250	---	34.93	53.00	18.07	L1	OFF	19.5
0.215250	49.08	---	63.00	13.92	L1	OFF	19.5
0.233250	---	32.73	52.33	19.60	L1	OFF	19.5
0.233250	46.73	---	62.33	15.60	L1	OFF	19.5
0.242250	---	32.67	52.02	19.35	L1	OFF	19.5
0.242250	46.67	---	62.02	15.35	L1	OFF	19.5
0.269250	---	30.53	51.14	20.61	L1	OFF	19.5
0.269250	44.37	---	61.14	16.77	L1	OFF	19.5
0.296250	---	31.28	50.35	19.07	L1	OFF	19.5
0.296250	42.85	---	60.35	17.50	L1	OFF	19.5
0.883500	---	34.28	46.00	11.72	L1	OFF	19.6
0.883500	35.96	---	56.00	20.04	L1	OFF	19.6
1.468500	---	37.06	46.00	8.94	L1	OFF	19.6

1.468500	38.39	---	56.00	17.61	L1	OFF	19.6
4.989750	---	27.63	46.00	18.37	L1	OFF	19.7
4.989750	29.65	---	56.00	26.35	L1	OFF	19.7
14.977500	---	27.46	50.00	22.54	L1	OFF	20.1
14.977500	31.16	---	60.00	28.84	L1	OFF	20.1

EUT Information

Report NO :	8N0616-05
Test Mode :	Mode 2
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	---	39.21	55.52	16.31	N	OFF	19.5
0.159000	52.11	---	65.52	13.41	N	OFF	19.5
0.186000	---	36.97	54.21	17.24	N	OFF	19.5
0.186000	49.94	---	64.21	14.27	N	OFF	19.5
0.217500	---	32.06	52.91	20.85	N	OFF	19.5
0.217500	46.09	---	62.91	16.82	N	OFF	19.5
0.588750	---	30.17	46.00	15.83	N	OFF	19.5
0.588750	34.15	---	56.00	21.85	N	OFF	19.5
1.173750	---	33.71	46.00	12.29	N	OFF	19.6
1.173750	34.70	---	56.00	21.30	N	OFF	19.6
4.699500	---	28.14	46.00	17.86	N	OFF	19.7
4.699500	29.84	---	56.00	26.16	N	OFF	19.7
15.857250	---	26.57	50.00	23.43	N	OFF	20.2
15.857250	31.37	---	60.00	28.63	N	OFF	20.2

Appendix C. Radiated Spurious Emission

Test Engineer :	Alex Jheng, JC Liang, Wilson Wu	**Temperature :**	24.8~25.2℃
		Relative Humidity :	50~51%

2.4GHz 2400~2483.5MHz

WIFI 802.11b (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.	
2+3		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		2389.695	53.16	-20.84	74	41.59	27.23	13.92	29.58	352	66	P	H
		2389.275	43.68	-10.32	54	32.11	27.23	13.92	29.58	352	66	A	H
	*	2412	111.92	-	-	100.28	27.28	13.94	29.58	352	66	P	H
	*	2412	108.83	-	-	97.19	27.28	13.94	29.58	352	66	A	H
													H
													H
		2387.805	52.97	-21.03	74	41.4	27.23	13.92	29.58	352	121	P	V
		2387.07	42.53	-11.47	54	30.96	27.23	13.92	29.58	352	121	A	V
	*	2412	108.18	-	-	96.54	27.28	13.94	29.58	352	121	P	V
	*	2412	105.04	-	-	93.4	27.28	13.94	29.58	352	121	A	V
													V
													V
802.11b CH 06 2437MHz		2383.78	52.57	-21.43	74	41.04	27.19	13.92	29.58	341	71	P	H
		2389.94	41.54	-12.46	54	29.97	27.23	13.92	29.58	341	71	A	H
	*	2437	111.13	-	-	99.38	27.37	13.96	29.58	341	71	P	H
	*	2437	108.17	-	-	96.42	27.37	13.96	29.58	341	71	A	H
		2491.32	52.64	-21.36	74	40.7	27.5	14.01	29.57	341	71	P	H
		2483.83	42.1	-11.9	54	30.21	27.46	14	29.57	341	71	A	H
		2386.72	52.6	-21.4	74	41.03	27.23	13.92	29.58	387	112	P	V
		2389.94	41.36	-12.64	54	29.79	27.23	13.92	29.58	387	112	A	V
	*	2437	109.12	-	-	97.37	27.37	13.96	29.58	387	112	P	V
	*	2437	106.13	-	-	94.38	27.37	13.96	29.58	387	112	A	V
		2495.31	53.17	-20.83	74	41.23	27.5	14.01	29.57	387	112	P	V
		2483.97	41.75	-12.25	54	29.86	27.46	14	29.57	387	112	A	V

802.11b CH 11 2462MHz	*	2462	112.52	-	-	100.7	27.41	13.98	29.57	331	80	P	H
	*	2462	109.35	-	-	97.53	27.41	13.98	29.57	331	80	A	H
		2487.2	55.13	-18.87	74	43.24	27.46	14	29.57	331	80	P	H
		2485.96	47.2	-6.8	54	35.31	27.46	14	29.57	331	80	A	H
													H
													H
	*	2462	110.25	-	-	98.43	27.41	13.98	29.57	379	113	P	V
	*	2462	107.21	-	-	95.39	27.41	13.98	29.57	379	113	A	V
		2486.52	54.13	-19.87	74	42.24	27.46	14	29.57	379	113	P	V
		2486.12	44.7	-9.3	54	32.81	27.46	14	29.57	379	113	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

WIFI Ant. 2+3	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 12 2467MHz	*	2467	108.44	-	-	96.61	27.41	13.99	29.57	332	75	P	H
	*	2467	105.35	-	-	93.52	27.41	13.99	29.57	332	75	A	H
		2484.12	58.23	-15.77	74	46.34	27.46	14	29.57	332	75	P	H
		2484.24	51.42	-2.58	54	39.53	27.46	14	29.57	332	75	A	H
													H
													H
	*	2467	106.74	-	-	94.91	27.41	13.99	29.57	378	112	P	V
	*	2467	103.71	-	-	91.88	27.41	13.99	29.57	378	112	A	V
		2484.28	55.73	-18.27	74	43.84	27.46	14	29.57	378	112	P	V
		2484.36	48.08	-5.92	54	36.19	27.46	14	29.57	378	112	A	V
													V
													V
802.11b CH 13 2472MHz	*	2472	104.44	-	-	92.56	27.46	13.99	29.57	331	75	P	H
	*	2472	101.24	-	-	89.36	27.46	13.99	29.57	331	75	A	H
		2483.8	58.17	-15.83	74	46.28	27.46	14	29.57	331	75	P	H
		2483.52	51.94	-2.06	54	40.05	27.46	14	29.57	331	75	A	H
													H
													H
	*	2472	102.5	-	-	90.62	27.46	13.99	29.57	378	110	P	V
	*	2472	99.48	-	-	87.6	27.46	13.99	29.57	378	110	A	V
		2485.92	54.99	-19.01	74	43.1	27.46	14	29.57	378	110	P	V
		2485.88	46.73	-7.27	54	34.84	27.46	14	29.57	378	110	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. 2+3	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	38.64	-35.36	74	58.51	31.26	6.42	57.55	100	0	P	H
													H
													H
													H
		4824	38.94	-35.06	74	58.81	31.26	6.42	57.55	100	0	P	V
													V
													V
													V
802.11b CH 06 2437MHz		4874	53.15	-20.85	74	72.68	31.36	6.08	57.45	100	234	P	H
		4874	50.76	-3.24	54	70.29	31.36	6.08	57.45	100	234	A	H
		7311	44.34	-29.66	74	57.23	36.18	7.79	57.27	100	0	P	H
													H
		4874	47.09	-26.91	74	66.62	31.36	6.08	57.45	100	0	P	V
		7311	45.71	-28.29	74	58.6	36.18	7.79	57.27	100	0	P	V
													V
													V
802.11b CH 11 2462MHz		4924	53.49	-20.51	74	72.68	31.46	6.23	57.35	100	234	P	H
		4924	51.59	-2.41	54	70.78	31.46	6.23	57.35	100	234	A	H
		7380	44.53	-29.47	74	57.41	36.33	7.76	57.36	100	0	P	H
													H
		4924	47.46	-26.54	74	66.65	31.46	6.23	57.35	100	0	P	V
		7386	44.76	-29.24	74	57.61	36.37	7.76	57.36	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

WIFI Ant. 2+3	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 12 2467MHz		4934	37.72	-36.28	74	56.86	31.46	6.73	57.33	100	0	P	H
		7401	43.71	-30.29	74	56.55	36.41	8.13	57.38	100	0	P	H
													H
													H
		4934	37.42	-36.58	74	56.56	31.46	6.73	57.33	100	0	P	V
		7401	44.62	-29.38	74	57.46	36.41	8.13	57.38	100	0	P	V
													V
													V
802.11b CH 13 2472MHz		4944	37.9	-36.1	74	56.95	31.5	6.76	57.31	100	0	P	H
		7416	42.57	-31.43	74	55.4	36.41	8.16	57.4	100	0	P	H
													H
													H
		4944	37.77	-36.23	74	56.82	31.5	6.76	57.31	100	0	P	V
		7416	43.63	-30.37	74	56.46	36.41	8.16	57.4	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. 2+3	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	57.48	-16.52	74	45.91	27.23	13.92	29.58	349	65	P	H
		2390	46.08	-7.92	54	34.51	27.23	13.92	29.58	349	65	A	H
	*	2412	110.78	-	-	99.14	27.28	13.94	29.58	349	65	P	H
	*	2412	103.1	-	-	91.46	27.28	13.94	29.58	349	65	A	H
													H
													H
		2390	56.81	-17.19	74	45.24	27.23	13.92	29.58	346	107	P	V
		2390	44.66	-9.34	54	33.09	27.23	13.92	29.58	346	107	A	V
	*	2412	107.64	-	-	96	27.28	13.94	29.58	346	107	P	V
	*	2412	99.94	-	-	88.3	27.28	13.94	29.58	346	107	A	V
													V
													V
802.11g CH 06 2437MHz		2370.76	51.93	-22.07	74	40.42	27.19	13.91	29.59	337	65	P	H
		2389.94	41.61	-12.39	54	30.04	27.23	13.92	29.58	337	65	A	H
	*	2437	109.3	-	-	97.55	27.37	13.96	29.58	337	65	P	H
	*	2437	101.7	-	-	89.95	27.37	13.96	29.58	337	65	A	H
		2483.62	52.7	-21.3	74	40.81	27.46	14	29.57	337	65	P	H
		2483.5	42.45	-11.55	54	30.56	27.46	14	29.57	337	65	A	H
		2314.48	52.21	-21.79	74	40.93	27.01	13.86	29.59	341	107	P	V
		2389.94	41.42	-12.58	54	29.85	27.23	13.92	29.58	341	107	A	V
	*	2437	107.78	-	-	96.03	27.37	13.96	29.58	341	107	P	V
	*	2437	99.97	-	-	88.22	27.37	13.96	29.58	341	107	A	V
		2497.76	53.08	-20.92	74	41.14	27.5	14.01	29.57	341	107	P	V
		2484.04	41.96	-12.04	54	30.07	27.46	14	29.57	341	107	A	V

802.11g CH 11 2462MHz	*	2462	112.81	-	-	100.99	27.41	13.98	29.57	332	69	P	H
	*	2462	106.09	-	-	94.27	27.41	13.98	29.57	332	69	A	H
		2486.4	61.68	-12.32	74	49.79	27.46	14	29.57	332	69	P	H
		2483.52	51.32	-2.68	54	39.43	27.46	14	29.57	332	69	A	H
													H
													H
	*	2462	110.57	-	-	98.75	27.41	13.98	29.57	378	118	P	V
	*	2462	103.34	-	-	91.52	27.41	13.98	29.57	378	118	A	V
		2483.56	59.77	-14.23	74	47.88	27.46	14	29.57	378	118	P	V
		2483.52	49.7	-4.3	54	37.81	27.46	14	29.57	378	118	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

WIFI Ant. 2+3	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 12 2467MHz	*	2467	107.65	-	-	95.82	27.41	13.99	29.57	332	71	P	H
	*	2467	99.72	-	-	87.89	27.41	13.99	29.57	332	71	A	H
		2483.52	64.06	-9.94	74	52.17	27.46	14	29.57	332	71	P	H
		2483.52	51.49	-2.51	54	39.6	27.46	14	29.57	332	71	A	H
													H
													H
	*	2467	104.89	-	-	93.06	27.41	13.99	29.57	378	133	P	V
	*	2467	97.18	-	-	85.35	27.41	13.99	29.57	378	133	A	V
		2483.52	60.78	-13.22	74	48.89	27.46	14	29.57	378	133	P	V
		2483.52	48.08	-5.92	54	36.19	27.46	14	29.57	378	133	A	V
													V
													V
802.11g CH 13 2472MHz	*	2472	96.03	-	-	84.15	27.46	13.99	29.57	335	73	P	H
	*	2472	88.25	-	-	76.37	27.46	13.99	29.57	335	73	A	H
		2483.56	64.87	-9.13	74	52.98	27.46	14	29.57	335	73	P	H
		2483.52	52.46	-1.54	54	40.57	27.46	14	29.57	335	73	A	H
													H
													H
	*	2472	93.21	-	-	81.33	27.46	13.99	29.57	379	120	P	V
	*	2472	86.01	-	-	74.13	27.46	13.99	29.57	379	120	A	V
		2483.64	61.3	-12.7	74	49.41	27.46	14	29.57	379	120	P	V
		2483.52	49.17	-4.83	54	37.28	27.46	14	29.57	379	120	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. 2+3	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	37.59	-36.41	74	57.46	31.26	6.42	57.55	100	0	P	H
													H
													H
													H
		4824	37.71	-36.29	74	57.58	31.26	6.42	57.55	100	0	P	V
													V
													V
													V
802.11g CH 06 2437MHz		4874	40.4	-33.6	74	59.93	31.36	6.56	57.45	100	0	P	H
		7311	49.73	-24.27	74	62.62	36.18	8.2	57.27	100	0	P	H
													H
													H
		4874	38.76	-35.24	74	58.29	31.36	6.56	57.45	100	0	P	V
		7311	58.51	-15.49	74	71.4	36.18	8.2	57.27	100	149	P	V
		7311	48	-6	54	60.89	36.18	8.2	57.27	100	149	A	V
													V
802.11g CH 11 2462MHz		4924	39.98	-34.02	74	59.17	31.46	6.7	57.35	100	0	P	H
		7386	44.47	-29.53	74	57.32	36.37	8.14	57.36	100	0	P	H
													H
													H
		4924	40.07	-33.93	74	59.26	31.46	6.7	57.35	100	0	P	V
		7386	48.32	-25.68	74	61.17	36.37	8.14	57.36	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

WIFI Ant. 2+3	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 12 2467MHz		4934	37.91	-36.09	74	57.05	31.46	6.73	57.33	100	0	P	H
		7401	42.14	-31.86	74	54.98	36.41	8.13	57.38	100	0	P	H
													H
													H
		4934	37.94	-36.06	74	57.08	31.46	6.73	57.33	100	0	P	V
		7401	42.1	-31.9	74	54.94	36.41	8.13	57.38	100	0	P	V
													V
													V
802.11g CH 13 2472MHz		4944	37.42	-36.58	74	56.47	31.5	6.76	57.31	100	0	P	H
		7416	42.45	-31.55	74	55.28	36.41	8.16	57.4	100	0	P	H
													H
													H
		4944	37.63	-36.37	74	56.68	31.5	6.76	57.31	100	0	P	V
		7416	43	-31	74	55.83	36.41	8.16	57.4	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. 2+3	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)
		2390	61.09	-12.91	74	49.52	27.23	13.92	29.58	349	72	P	H
		2390	48.56	-5.44	54	36.99	27.23	13.92	29.58	349	72	A	H
	*	2412	112.24	-	-	100.6	27.28	13.94	29.58	349	72	P	H
	*	2412	104.56	-	-	92.92	27.28	13.94	29.58	349	72	A	H
802.11n													H
HT20													H
CH 01		2389.8	57.05	-16.95	74	45.48	27.23	13.92	29.58	394	122	P	V
2412MHz		2390	44.22	-9.78	54	32.65	27.23	13.92	29.58	394	122	A	V
	*	2412	108.84	-	-	97.2	27.28	13.94	29.58	394	122	P	V
	*	2412	100.99	-	-	89.35	27.28	13.94	29.58	394	122	A	V
													V
													V
		2389.38	55.15	-18.85	74	43.58	27.23	13.92	29.58	338	75	P	H
		2389.94	43.5	-10.5	54	31.93	27.23	13.92	29.58	338	75	A	H
	*	2437	115.24	-	-	103.49	27.37	13.96	29.58	338	75	P	H
	*	2437	107.37	-	-	95.62	27.37	13.96	29.58	338	75	A	H
802.11n		2484.39	58.14	-15.86	74	46.25	27.46	14	29.57	338	75	P	H
HT20		2483.5	45.64	-8.36	54	33.75	27.46	14	29.57	338	75	A	H
CH 06		2389.24	52.8	-21.2	74	41.23	27.23	13.92	29.58	388	121	P	V
2437MHz		2389.94	42.08	-11.92	54	30.51	27.23	13.92	29.58	388	121	A	V
	*	2437	111.76	-	-	100.01	27.37	13.96	29.58	388	121	P	V
	*	2437	103.92	-	-	92.17	27.37	13.96	29.58	388	121	A	V
		2483.5	54.74	-19.26	74	42.85	27.46	14	29.57	388	121	P	V
		2483.5	43.15	-10.85	54	31.26	27.46	14	29.57	388	121	A	V

	*	2462	112.54	-	-	100.72	27.41	13.98	29.57	332	70	P	H
	*	2462	104.86	-	-	93.04	27.41	13.98	29.57	332	70	A	H
		2483.8	61.66	-12.34	74	49.77	27.46	14	29.57	332	70	P	H
		2483.5	50.75	-3.25	54	38.86	27.46	14	29.57	332	70	P	H
802.11n													H
HT20													H
CH 11	*	2462	109.97	-	-	98.15	27.41	13.98	29.57	380	107	P	V
2462MHz	*	2462	101.92	-	-	90.1	27.41	13.98	29.57	380	107	A	V
		2485.28	58.4	-15.6	74	46.51	27.46	14	29.57	380	107	P	V
		2483.52	48.52	-5.48	54	36.63	27.46	14	29.57	380	107	A	V
													V
													V

Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.

WIFI Ant. 2+3	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)
	*	2467	107.7	-	-	95.87	27.41	13.99	29.57	335	72	P	H
	*	2467	100.19	-	-	88.36	27.41	13.99	29.57	335	72	A	H
		2483.52	64.12	-9.88	74	52.23	27.46	14	29.57	335	72	P	H
		2483.52	51.91	-2.09	54	40.02	27.46	14	29.57	335	72	A	H
802.11n													H
HT20													H
CH 12	*	2467	105.89	-	-	94.06	27.41	13.99	29.57	378	111	P	V
2467MHz	*	2467	98.29	-	-	86.46	27.41	13.99	29.57	378	111	A	V
		2483.52	60.82	-13.18	74	48.93	27.46	14	29.57	378	111	P	V
		2483.52	48.08	-5.92	54	36.19	27.46	14	29.57	378	111	A	V
													V
													V
	*	2472	94.02	-	-	82.14	27.46	13.99	29.57	332	72	P	H
	*	2472	86.11	-	-	74.23	27.46	13.99	29.57	332	72	A	H
		2483.56	66.66	-7.34	74	54.77	27.46	14	29.57	332	72	P	H
		2483.52	51.98	-2.02	54	40.09	27.46	14	29.57	332	72	A	H
802.11n													H
HT20													H
CH 13	*	2472	91.56	-	-	79.68	27.46	13.99	29.57	378	109	P	V
2472MHz	*	2472	83.68	-	-	71.8	27.46	13.99	29.57	378	109	A	V
		2483.6	61.36	-12.64	74	49.47	27.46	14	29.57	378	109	P	V
		2483.52	48.29	-5.71	54	36.4	27.46	14	29.57	378	109	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. 2+3	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)
		4824	37.83	-36.17	74	57.7	31.26	6.42	57.55	100	0	P	H
													H
802.11n													H
HT20													H
CH 01		4824	37.31	-36.69	74	57.18	31.26	6.42	57.55	100	0	P	V
2412MHz													V
													V
													V
		4874	39.59	-34.41	74	59.12	31.36	6.56	57.45	100	0	P	H
		7311	49.96	-24.04	74	62.85	36.18	8.2	57.27	100	0	P	H
802.11n													H
HT20													H
CH 06		4874	38.39	-35.61	74	57.92	31.36	6.56	57.45	100	0	P	V
2437MHz		7311	58.81	-15.19	74	71.7	36.18	8.2	57.27	100	149	P	V
		7311	46.66	-7.34	54	59.55	36.18	8.2	57.27	100	149	A	V
													V
		4924	39.82	-34.18	74	59.01	31.46	6.7	57.35	100	0	P	H
		7386	48.36	-25.64	74	61.21	36.37	8.14	57.36	100	0	P	H
802.11n													H
HT20													H
CH 11		4924	37.9	-36.1	74	57.09	31.46	6.7	57.35	100	0	P	V
2462MHz		7386	55.2	-18.8	74	68.05	36.37	8.14	57.36	100	150	P	V
		7386	42.18	-11.82	54	55.03	36.37	8.14	57.36	100	150	A	V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

WIFI Ant. 2+3	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)
		4934	38.92	-35.08	74	58.06	31.46	6.73	57.33	100	0	P	H
		7401	43.35	-30.65	74	56.19	36.41	8.13	57.38	100	0	P	H
802.11n													H
HT20													H
CH 12		4934	38.61	-35.39	74	57.75	31.46	6.73	57.33	100	0	P	V
2467MHz		7401	43.5	-30.5	74	56.34	36.41	8.13	57.38	100	0	P	V
													V
													V
		4944	37.92	-36.08	74	56.97	31.5	6.76	57.31	100	0	P	H
		7416	42.99	-31.01	74	55.82	36.41	8.16	57.4	100	0	P	H
802.11n													H
HT20													H
CH 13		4944	38.59	-35.41	74	57.64	31.5	6.76	57.31	100	0	P	V
2472MHz		7416	44.1	-29.9	74	56.93	36.41	8.16	57.4	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

Emission below 1GHz

2.4GHz WIFI 802.11g (LF)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
2+3		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
2.4GHz 802.11g LF		30	24.75	-15.25	40	32.41	24.17	0.46	32.29			P	H
		68.8	25.12	-14.88	40	44.65	12.08	0.65	32.26			P	H
		172.59	24.69	-18.81	43.5	40.23	15.48	1.14	32.16			P	H
		223.03	28.33	-17.67	46	43.73	15.45	1.29	32.14			P	H
		893.3	33.7	-12.3	46	33.5	29.03	2.61	31.44	100	0	P	H
		947.62	32.98	-13.02	46	30.88	30.45	2.66	31.01			P	H
													H
													H
													H
													H
													H
													H
		32.91	24.45	-15.55	40	33.38	22.89	0.47	32.29			P	V
		45.52	30.97	-9.03	40	46.25	16.49	0.52	32.29			P	V
		51.34	33.54	-6.46	40	51.6	13.69	0.54	32.29	100	0	P	V
		69.77	25.7	-14.3	40	45.14	12.16	0.66	32.26			P	V
		100.81	28.09	-15.41	43.5	43.51	15.95	0.84	32.21			P	V
		902.03	33.37	-12.63	46	33.12	29.03	2.61	31.39			P	V
													V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												

<WPC Mode>

2.4GHz 2400~2483.5MHz

WIFI 802.11g (Band Edge @ 3m)

WIFI Ant. 2+3	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 13 2472MHz	*	2472	92.27	-	-	80.39	27.46	4.06	29.57	400	16	P	H
	*	2472	84.73	-	-	72.85	27.46	4.06	29.57	400	16	A	H
		2483.6	62.14	-11.86	74	50.25	27.46	4.07	29.57	400	16	P	H
		2483.52	49.25	-4.75	54	37.36	27.46	4.07	29.57	400	16	A	H
													H
													H
	*	2472	91.48	-	-	79.6	27.46	4.06	29.57	113	267	P	V
	*	2472	84.12	-	-	72.24	27.46	4.06	29.57	113	267	A	V
		2483.6	57.24	-16.76	74	45.35	27.46	4.07	29.57	113	267	P	V
		2483.52	45.51	-8.49	54	33.62	27.46	4.07	29.57	113	267	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. 2+3	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 13 2472MHz		4944	37.86	-36.14	74	56.91	31.5	6.76	57.31	100	0	P	H
		7416	42.2	-31.8	74	55.03	36.41	8.16	57.4	100	0	P	H
													H
													H
		4944	37.94	-36.06	74	56.99	31.5	6.76	57.31	100	0	P	V
		7416	43.16	-30.84	74	55.99	36.41	8.16	57.4	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

Emission below 1GHz

2.4GHz WIFI 802.11g (LF)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
2+3		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
2.4GHz 802.11g LF		41.64	25.31	-14.69	40	38.68	18.4	0.48	32.29	-	-	P	H
		66.86	25.71	-14.29	40	45.4	11.92	0.61	32.26	-	-	P	H
		104.69	24.14	-19.36	43.5	38.97	16.52	0.8	32.21	-	-	P	H
		163.86	30.11	-13.39	43.5	44.94	16.24	1	32.17	100	0	P	H
		180.35	25.18	-18.32	43.5	41.15	15.01	1.06	32.15	-	-	P	H
		880.69	32.23	-13.77	46	32	29.11	2.45	31.5	-	-	P	H
													H
													H
													H
													H
													H
													H
		40.67	33.31	-6.69	40	46.21	18.87	0.48	32.29	100	0	P	V
		78.5	28.07	-11.93	40	46.44	13.15	0.68	32.24	-	-	P	V
		91.11	25.7	-17.8	43.5	42.2	14.96	0.72	32.22	-	-	P	V
		163.86	25.09	-18.41	43.5	39.92	16.24	1	32.17	-	-	P	V
		644.98	28.41	-17.59	46	32.18	26.21	2.08	32.17	-	-	P	V
		895.24	37.91	-8.09	46	37.71	29.02	2.44	31.43	-	-	P	V
													V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against 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.	
2+3		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
		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

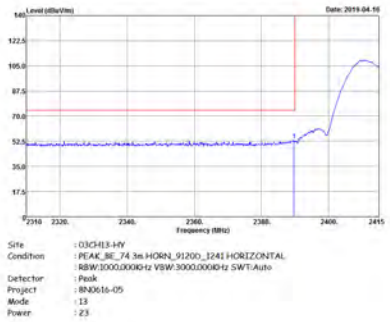
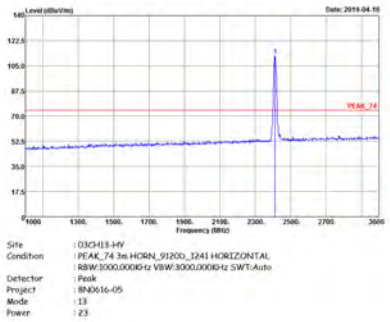
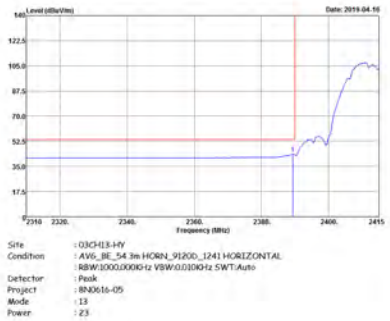
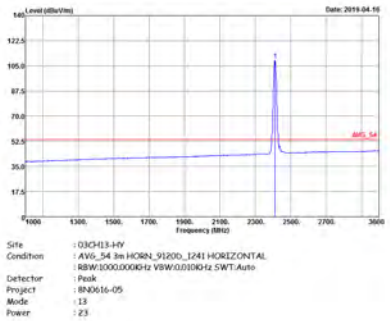
Test Engineer :	Alex Jheng, JC Liang, Wilson Wu	**Temperature :**	24.8~25.2℃
		Relative Humidity :	50~51%

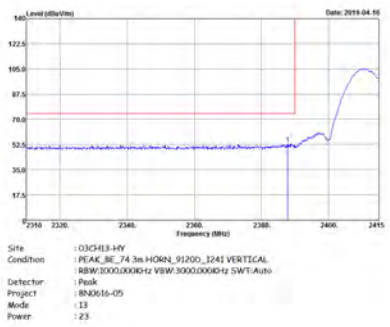
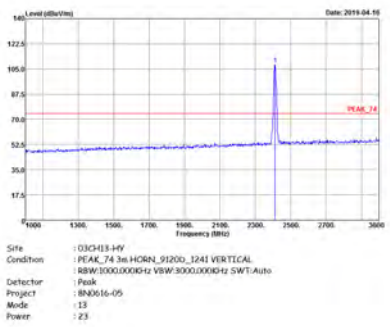
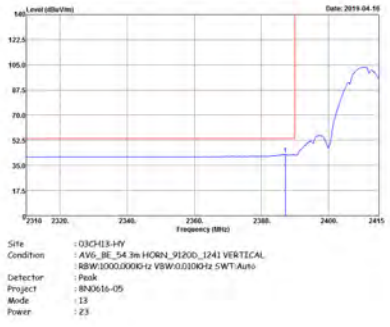
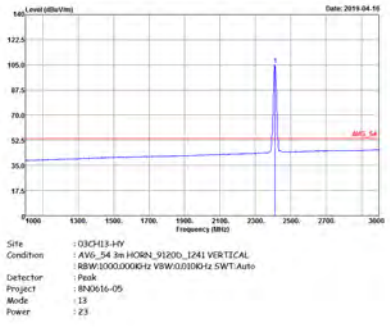
Note symbol

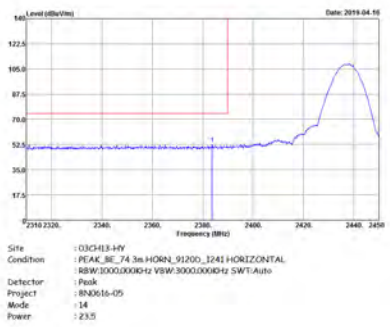
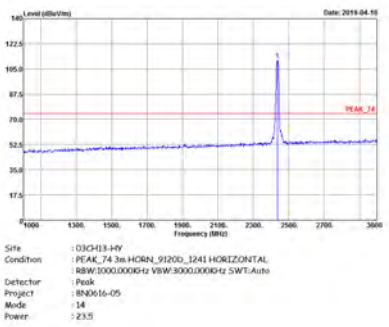
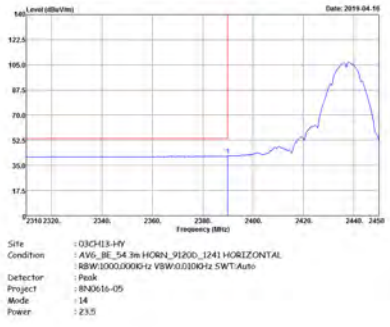
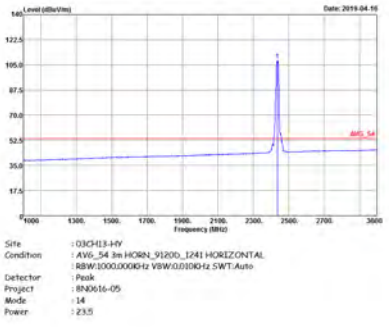
-L	**Low channel location**
-R	**High channel location**

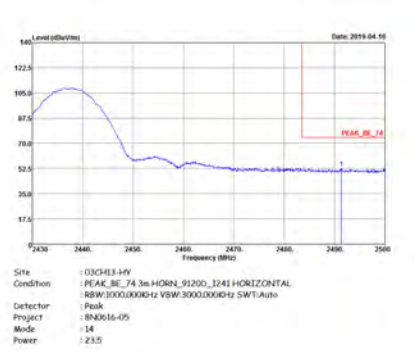
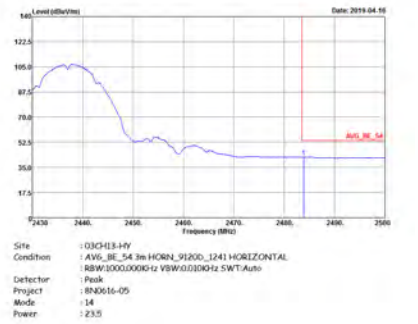
2.4GHz 2400~2483.5MHz

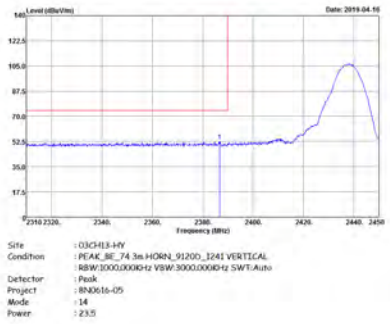
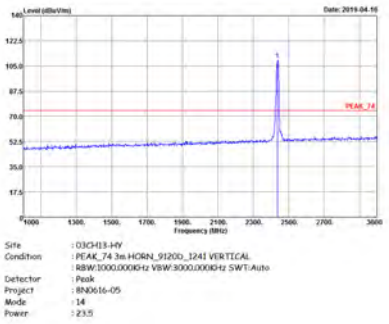
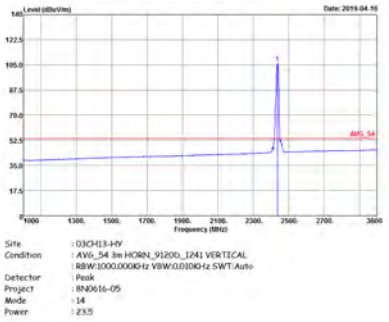
WIFI 802.11b (Band Edge @ 3m)

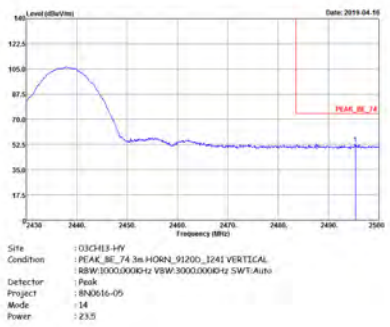
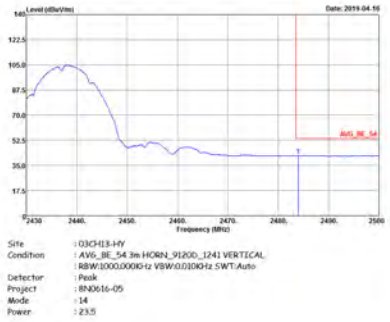
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
2+3	Horizontal	Fundamental
Peak		
Avg.		

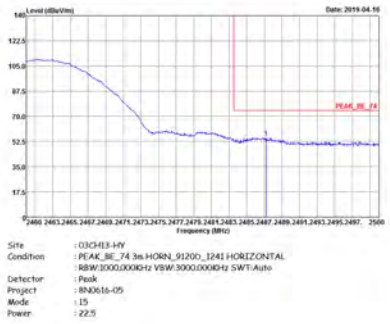
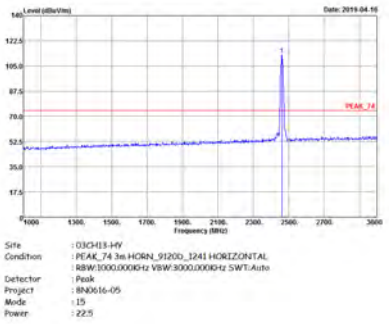
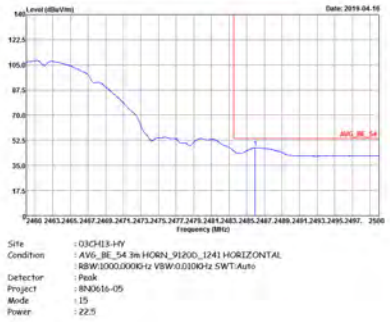
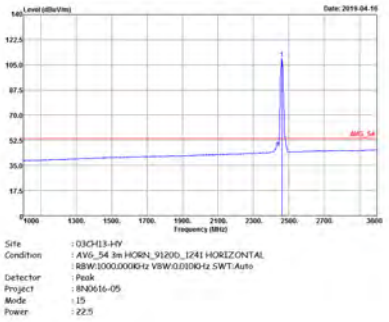
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
2+3	Vertical	Fundamental
Peak		
Avg.		

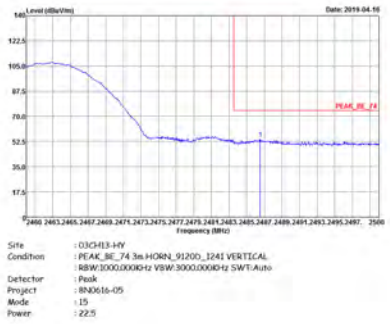
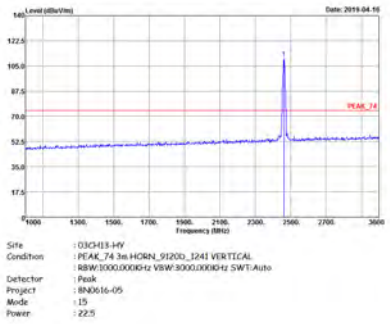
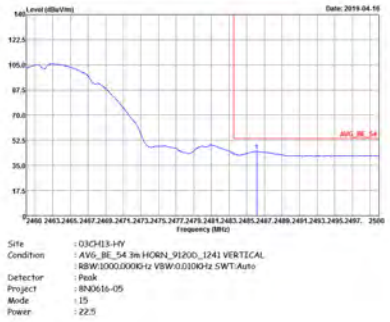
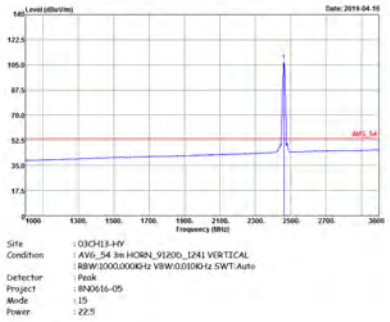
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
2+3	Horizontal	Fundamental
Peak		
Avg.		

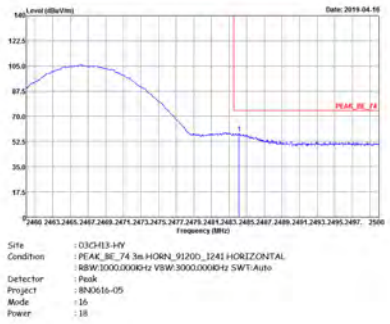
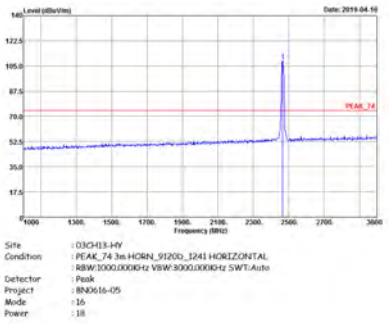
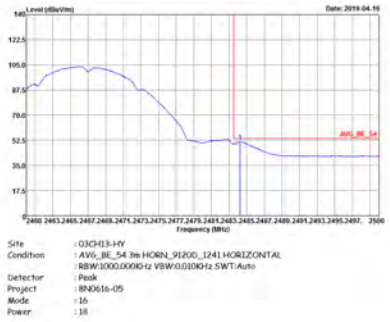
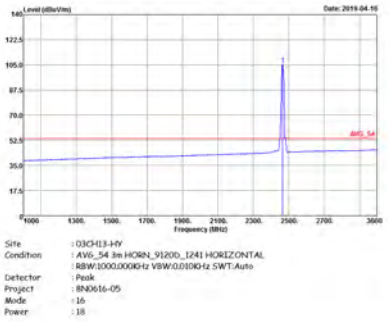
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
2+3	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

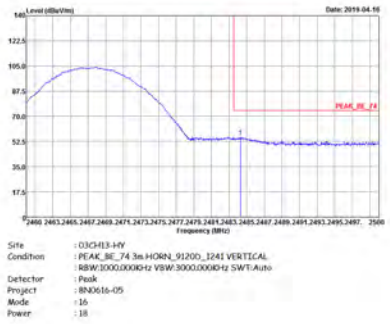
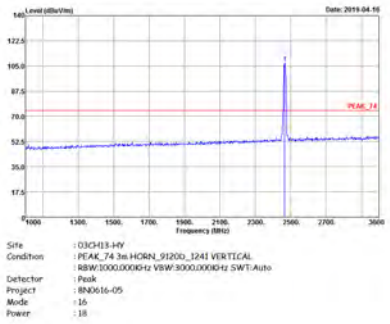
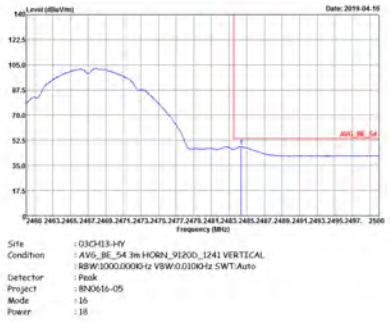
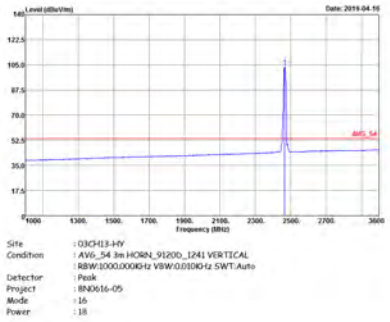
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
2+3	Vertical	Fundamental
Peak		
Avg.		

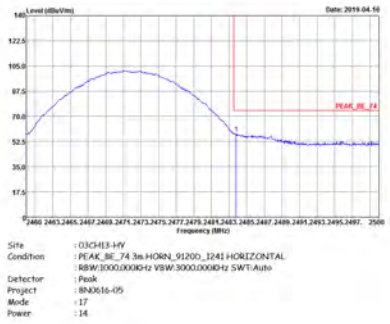
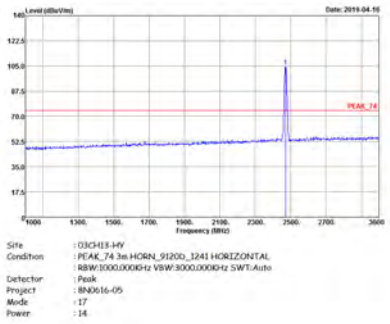
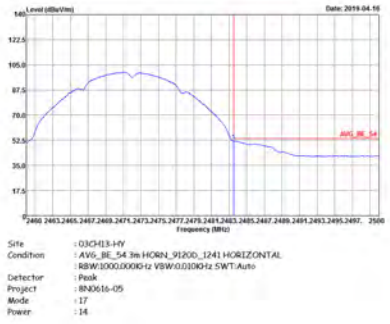
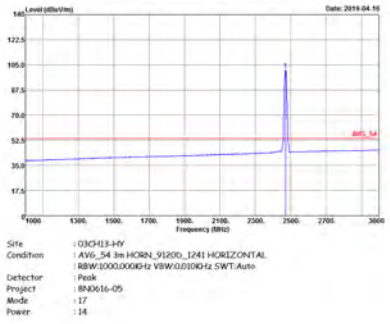
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
2+3	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

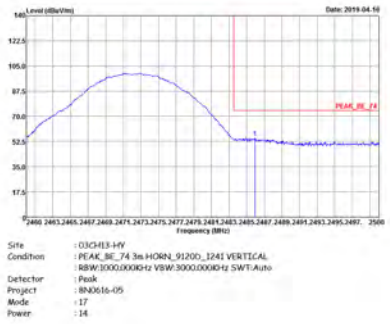
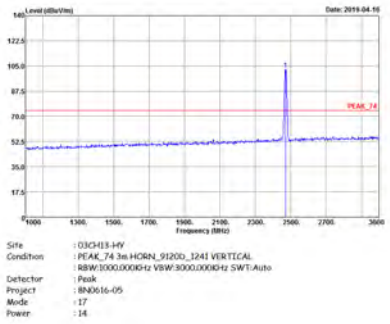
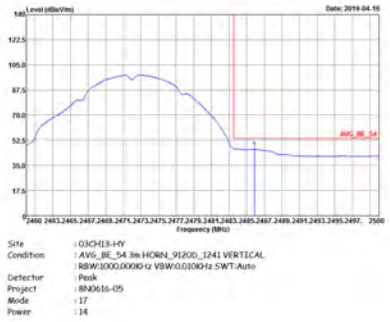
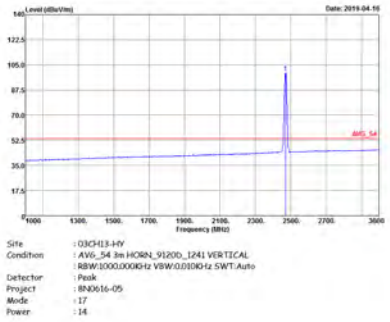
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
2+3	Horizontal	Fundamental
Peak		
Avg.		

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
2+3	Vertical	Fundamental
Peak		
Avg.		

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH12 2467MHz	
2+3	Horizontal	Fundamental
Peak		
Avg.		

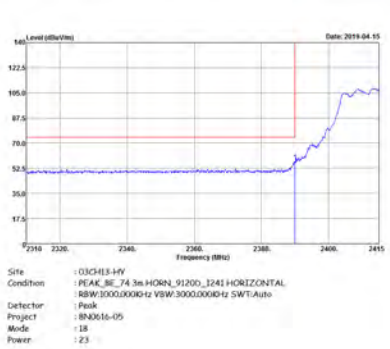
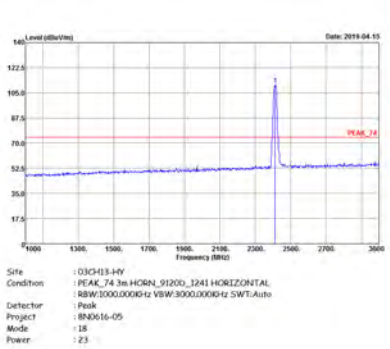
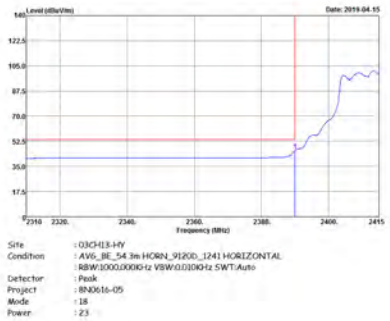
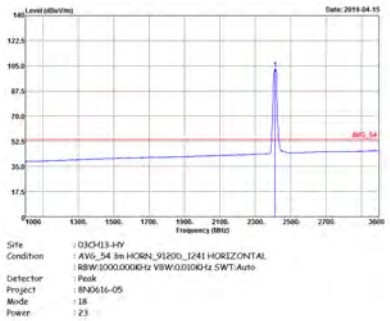
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH12 2467MHz	
2+3	Vertical	Fundamental
Peak		
Avg.		

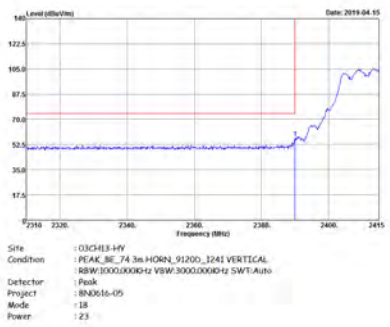
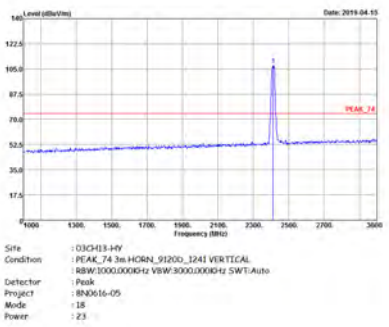
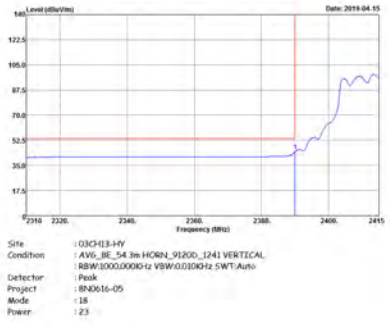
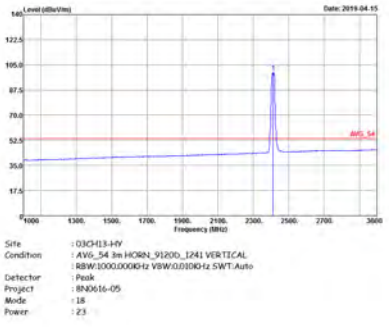
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH13 2472MHz	
2+3	Horizontal	Fundamental
Peak		
Avg.		

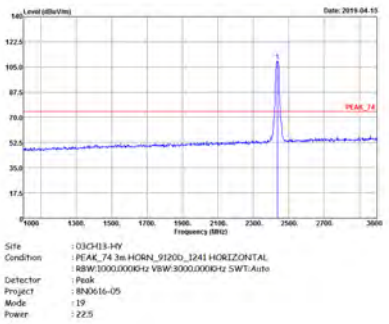
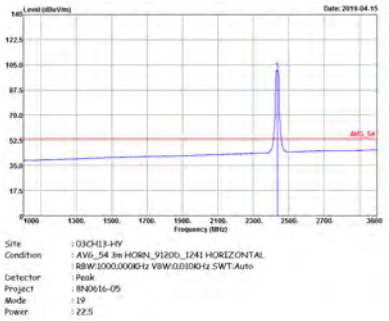
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH13 2472MHz	
2+3	Vertical	Fundamental
Peak		
Avg.		

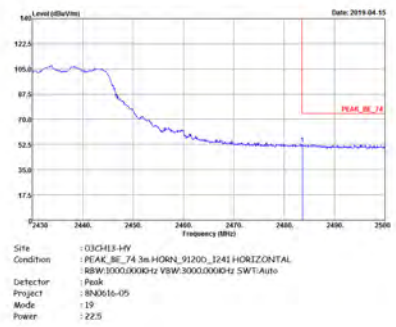
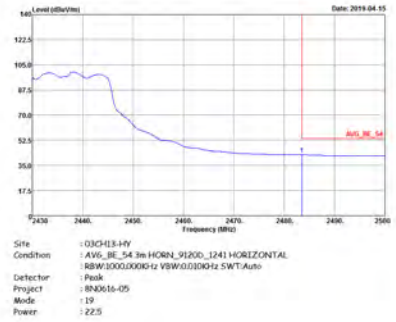
2.4GHz 2400~2483.5MHz

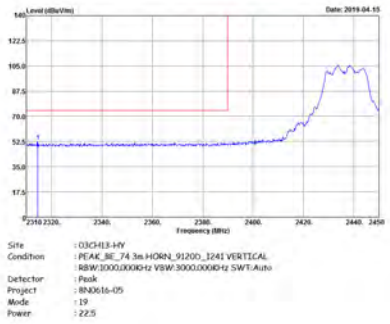
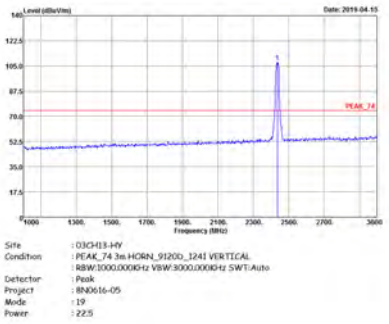
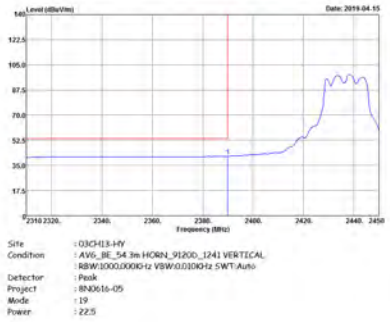
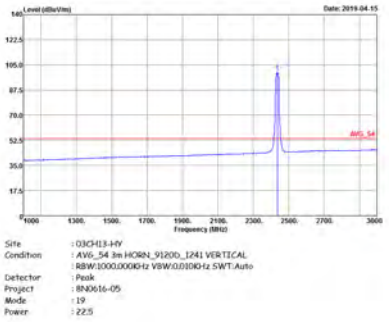
WIFI 802.11g (Band Edge @ 3m)

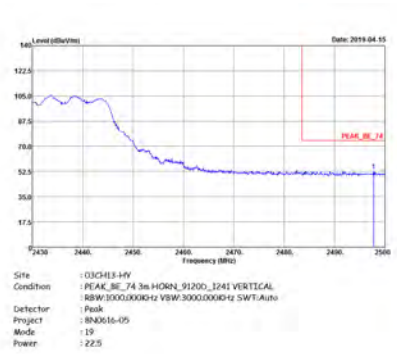
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
2+3	Horizontal	Fundamental
Peak		
Avg.		

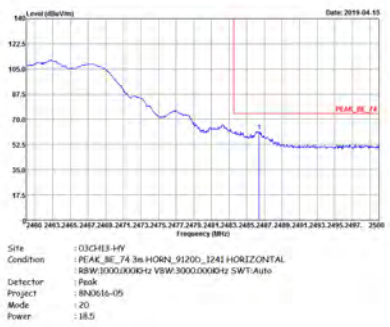
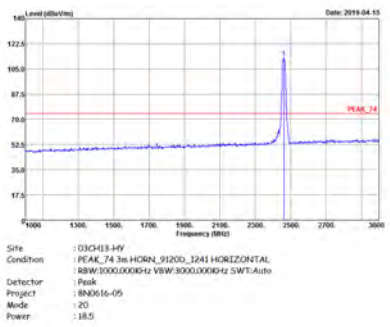
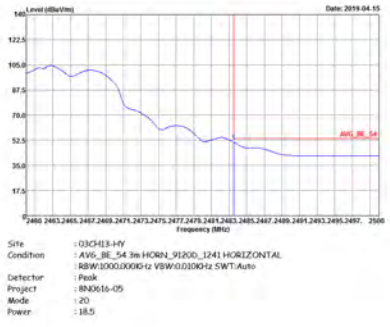
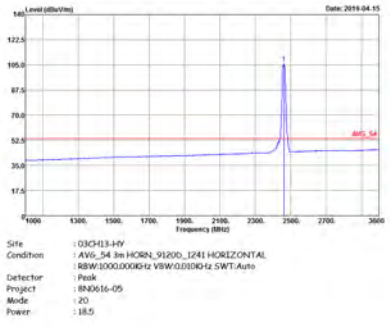
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
2+3	Vertical	Fundamental
Peak		
Avg.		

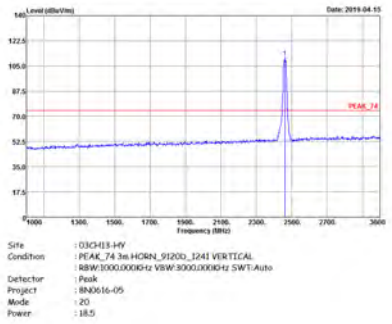
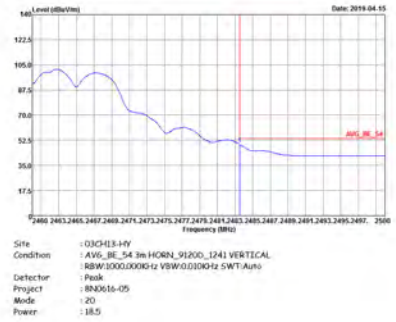
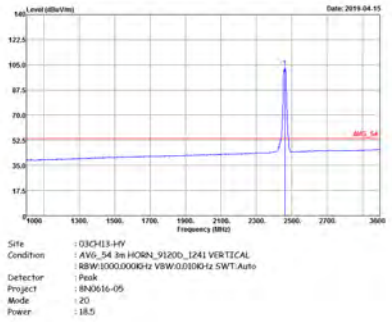
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
2+3	Horizontal	Fundamental
Peak		
Avg.		

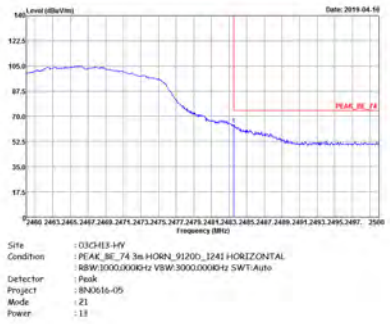
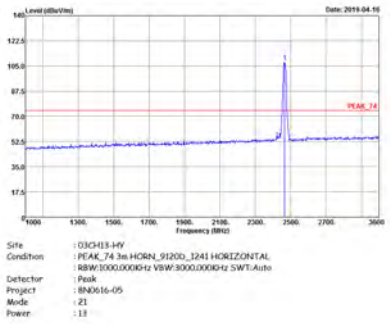
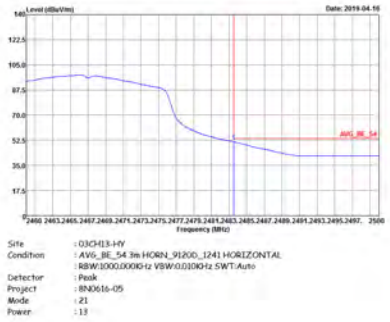
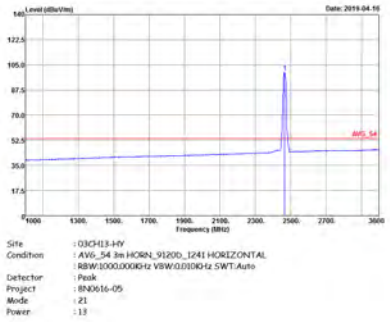
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
2+3	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

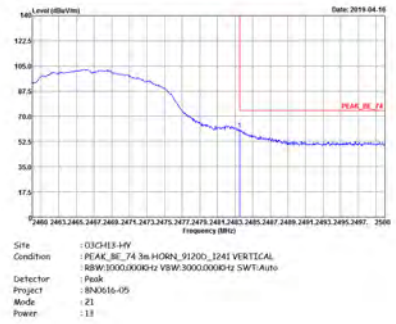
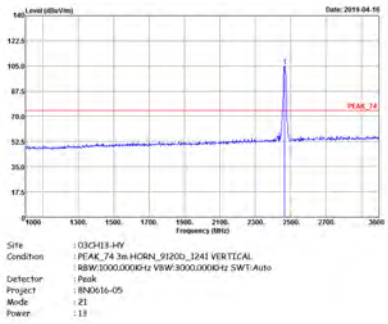
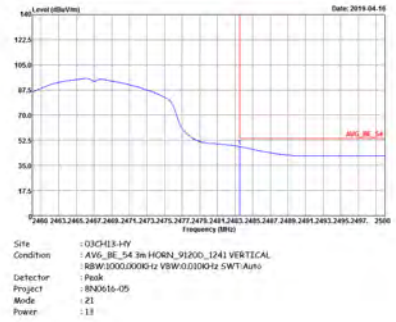
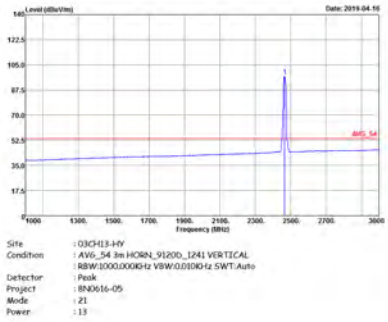
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
2+3	Vertical	Fundamental
Peak		
Avg.		

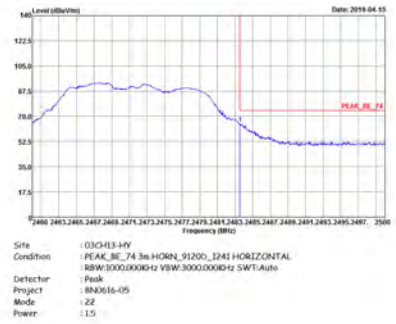
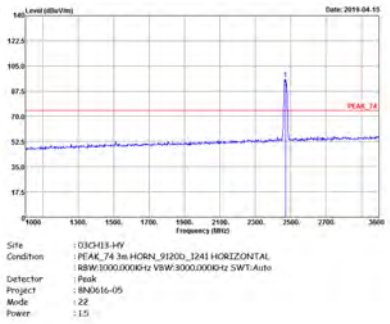
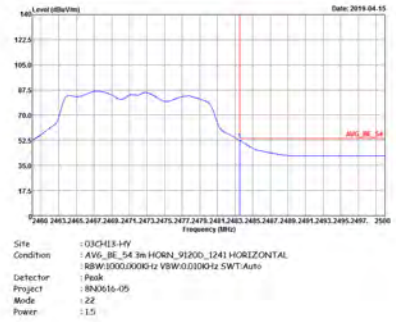
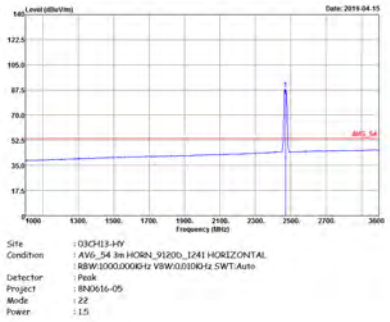
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
2+3	Vertical	Fundamental
Peak		Left Blank
Avg.		Left Blank

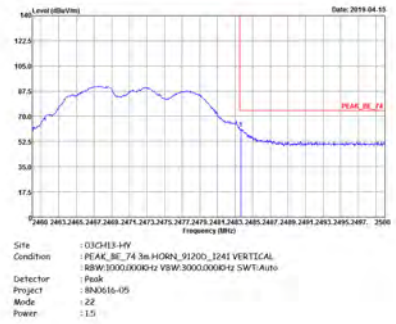
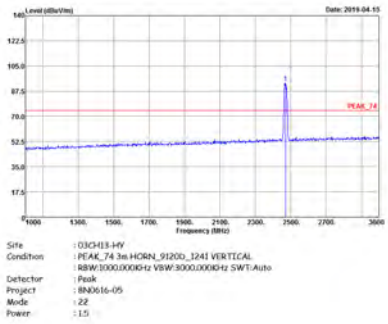
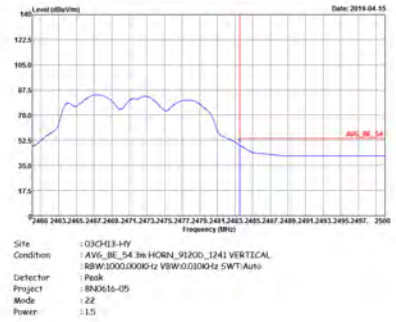
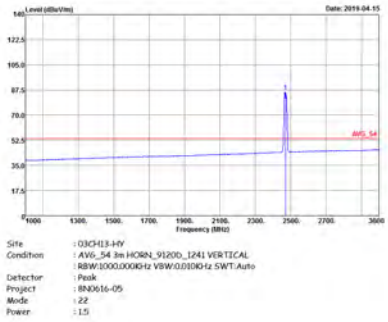
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
2+3	Horizontal	Fundamental
Peak		
Avg.		

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
2+3	Vertical	Fundamental
Peak		
Avg.		

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH12 2467MHz	
2+3	Horizontal	Fundamental
Peak		
Avg.		

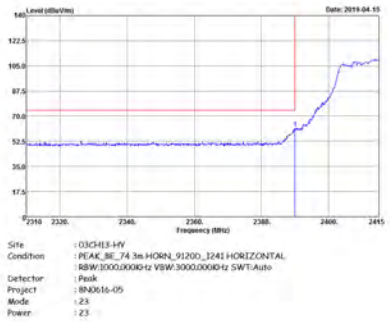
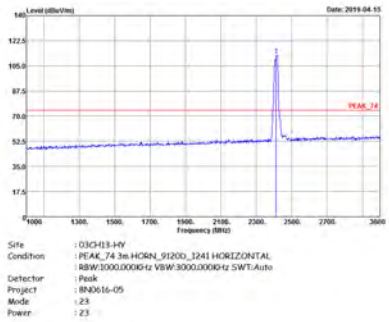
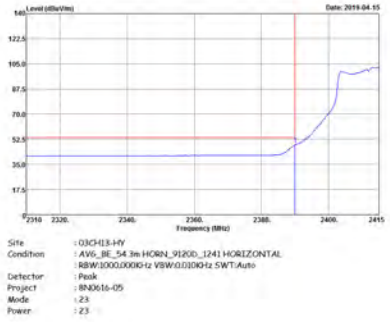
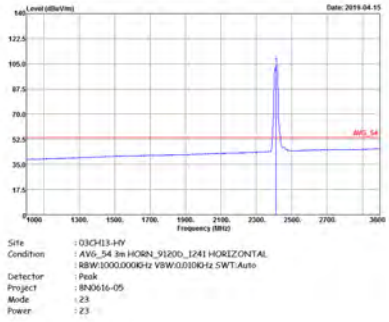
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH12 2467MHz	
2+3	Vertical	Fundamental
Peak		
Avg.		

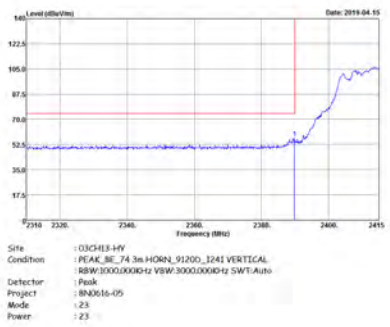
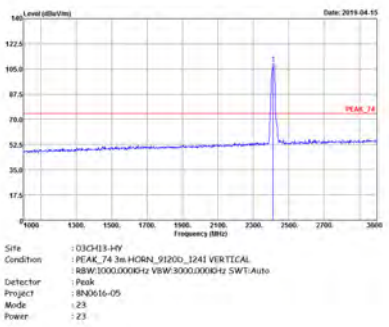
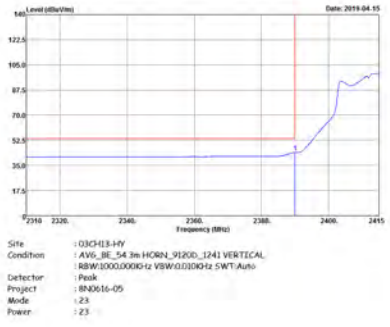
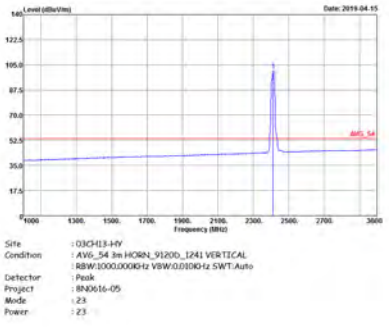
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH13 2472MHz	
2+3	Horizontal	Fundamental
Peak		
Avg.		

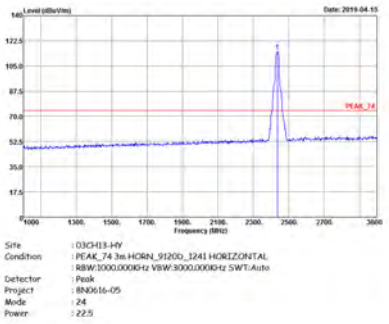
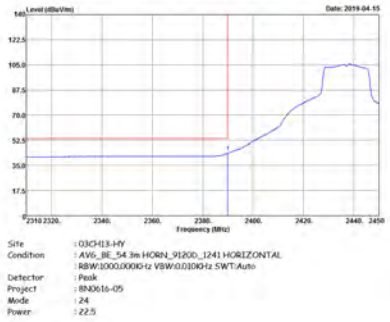
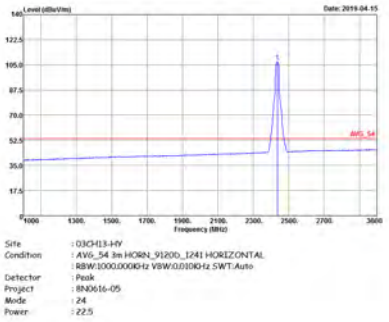
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH13 2472MHz	
2+3	Vertical	Fundamental
Peak		
Avg.		

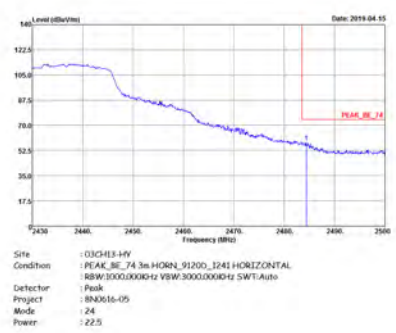
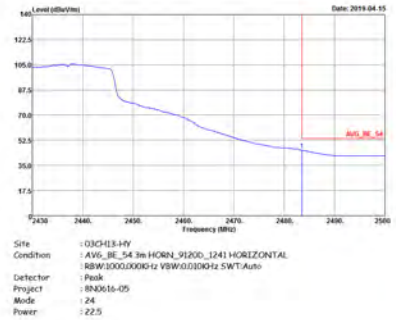
2.4GHz 2400~2483.5MHz

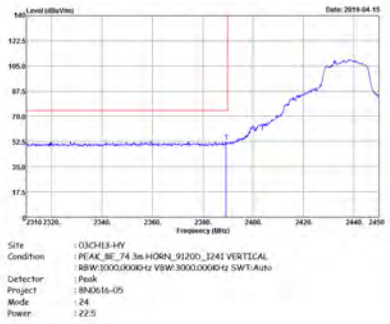
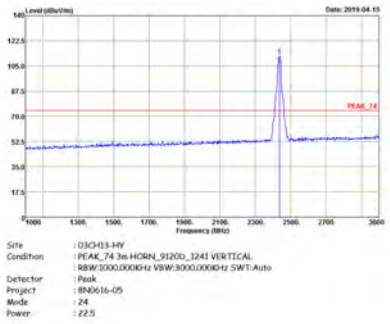
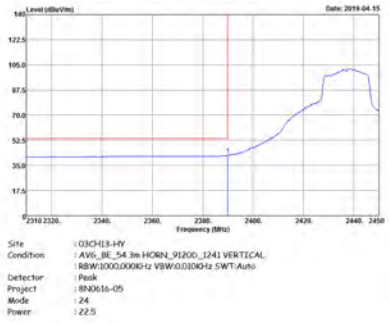
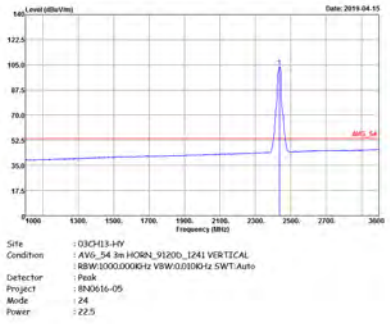
WIFI 802.11n HT20 (Band Edge @ 3m)

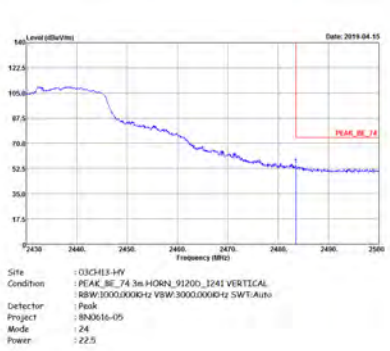
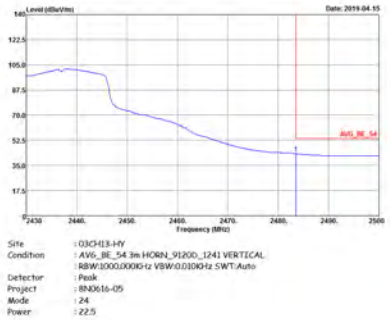
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
2+3	Horizontal	Fundamental
Peak		
Avg.		

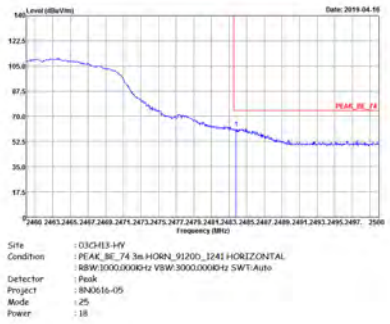
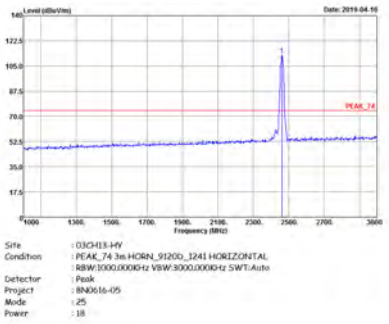
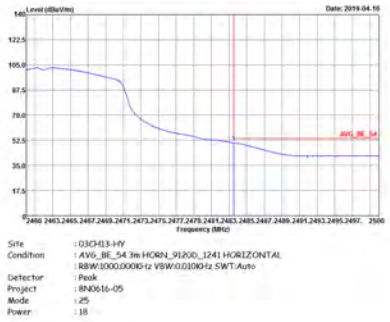
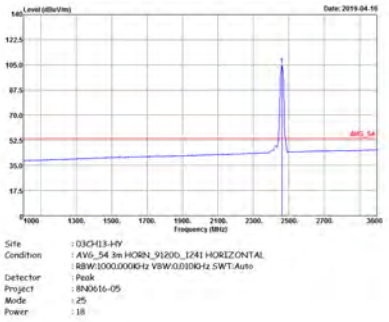
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
2+3	Vertical	Fundamental
Peak		
Avg.		

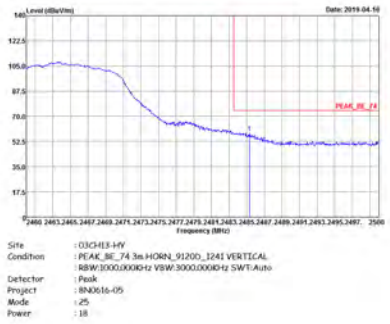
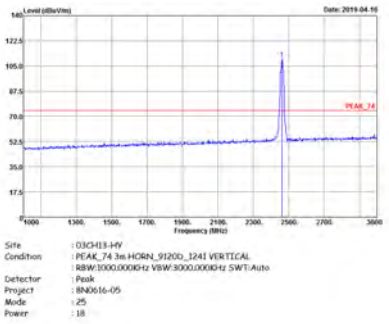
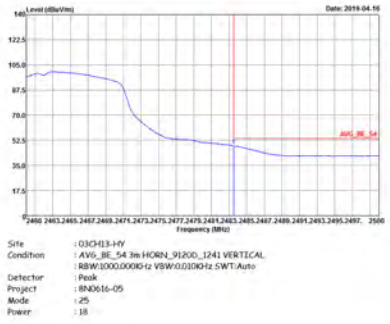
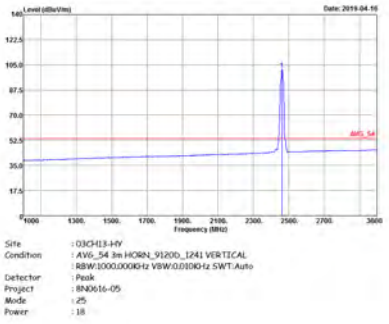
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - L	
2+3	Horizontal	Fundamental
Peak		
Avg.		

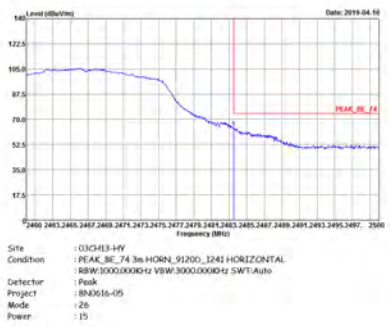
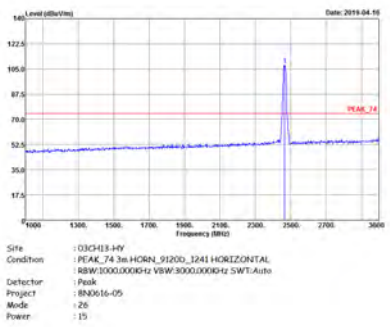
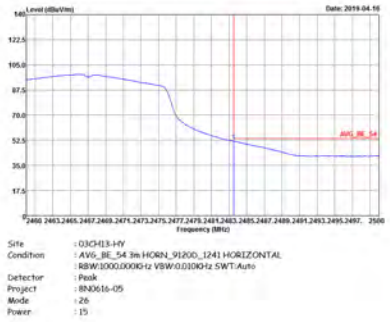
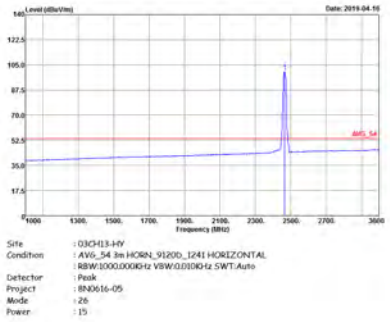
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - R	
2+3	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

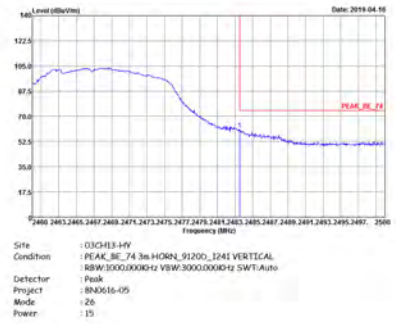
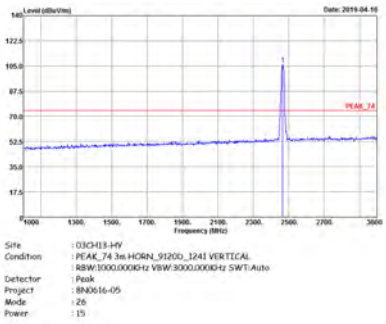
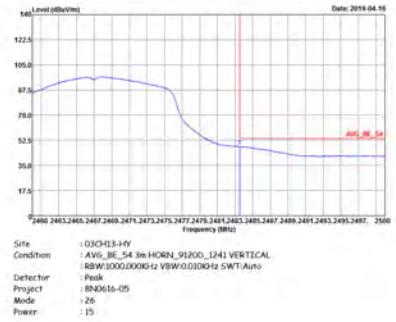
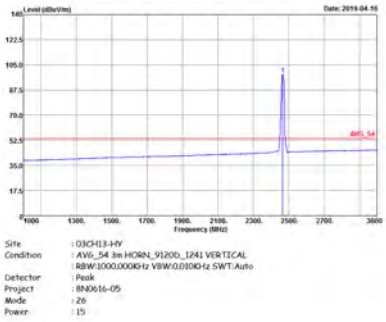
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - L	
2+3	Vertical	Fundamental
Peak		
Avg.		

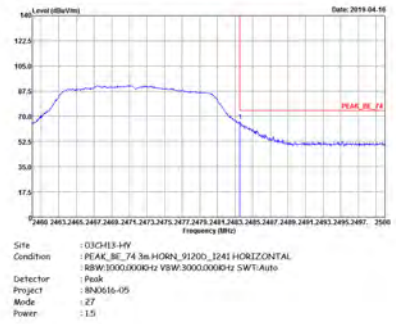
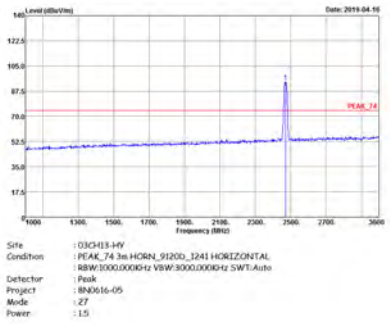
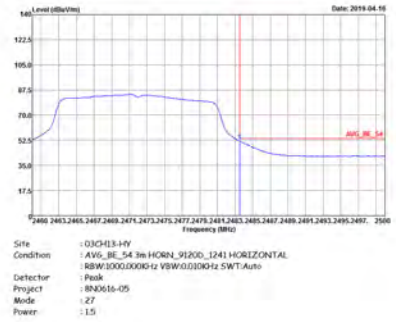
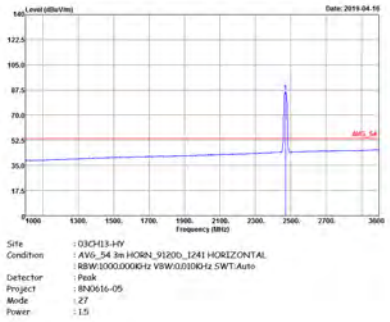
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - R	
2+3	Vertical	Fundamental
Peak		Left Blank
Avg.		Left Blank

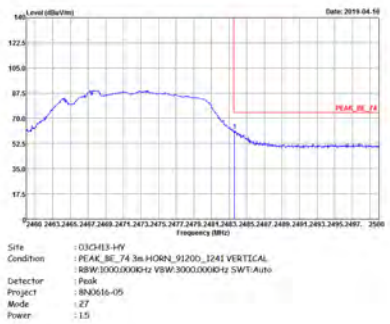
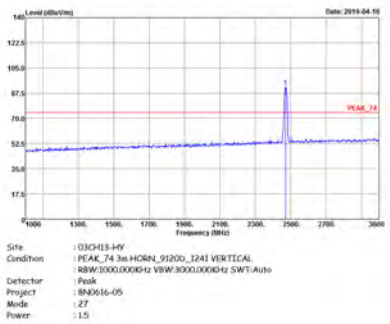
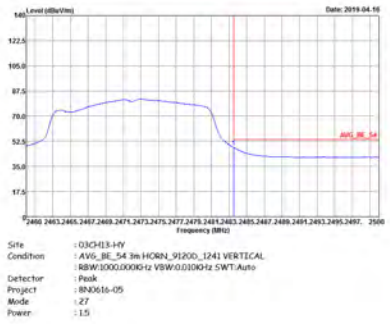
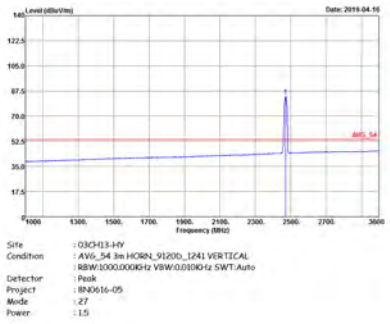
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
2+3	Horizontal	Fundamental
Peak		
Avg.		

WIFI	2.4GHz 2400~2483.5MHz Fundamental @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
2+3	Vertical	Fundamental
Peak		
Avg.		

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH12 2467MHz	
2+3	Horizontal	Fundamental
Peak		
Avg.		

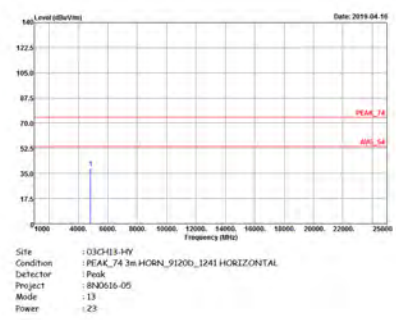
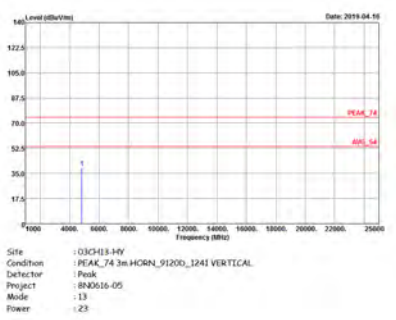
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH12 2467MHz	
2+3	Vertical	Fundamental
Peak		
Avg.		

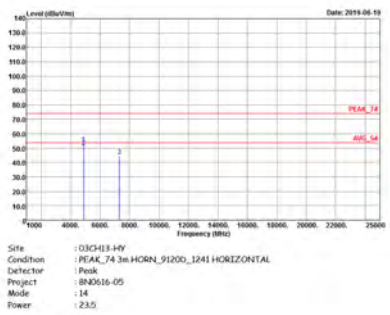
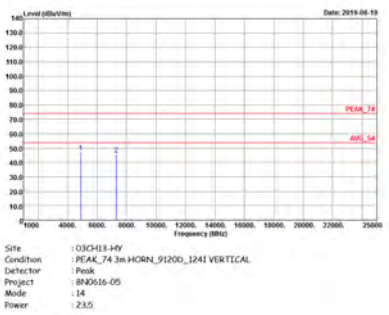
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH13 2472MHz	
2+3	Horizontal	Fundamental
Peak		
Avg.		

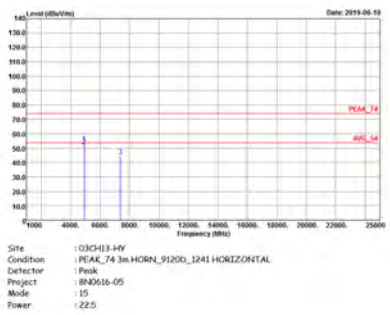
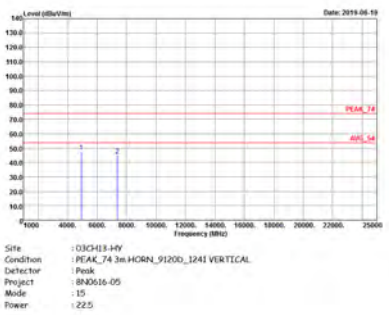
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH13 2472MHz	
2+3	Vertical	Fundamental
Peak		
Avg.		

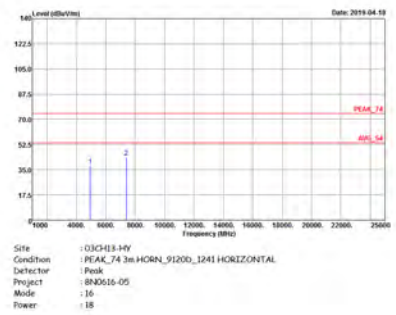
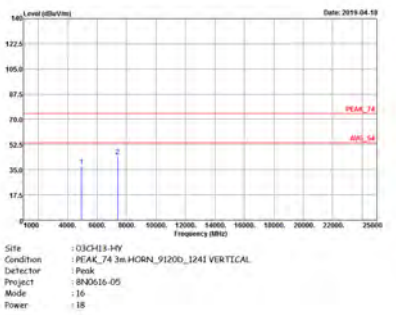
2.4GHz 2400~2483.5MHz

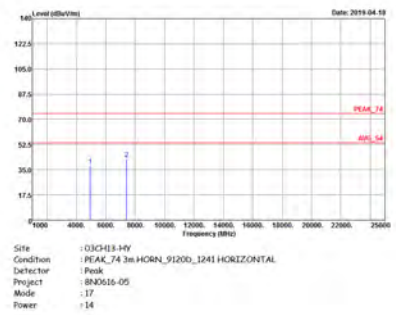
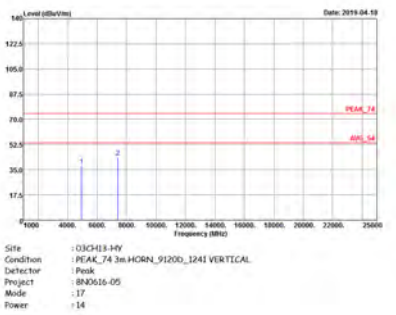
WIFI 802.11b (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH01 2412MHz	
2+3	Horizontal	Vertical
Peak Avg.		

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH06 2437MHz	
2+3	Horizontal	Vertical
Peak Avg.		

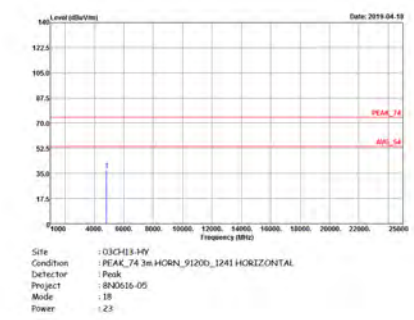
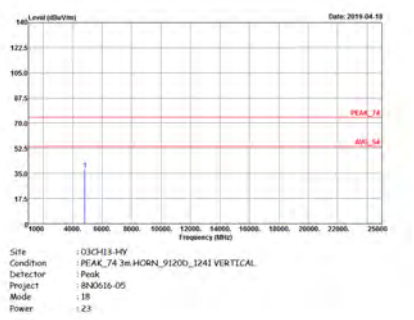
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH11 2462MHz	
2+3	Horizontal	Vertical
Peak Avg.		

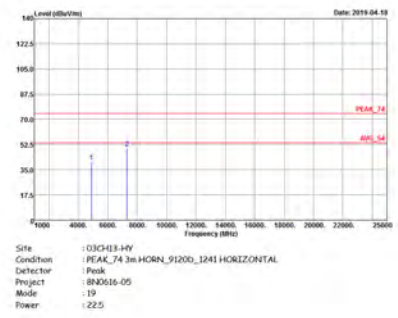
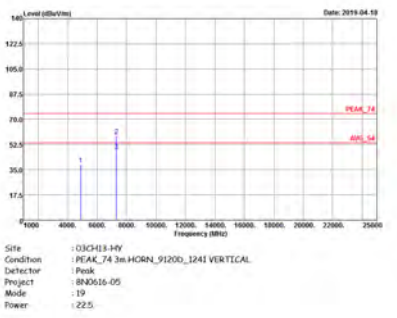
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH12 2467MHz	
2+3	Horizontal	Vertical
Peak Avg.		

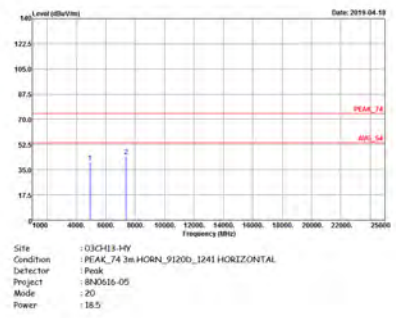
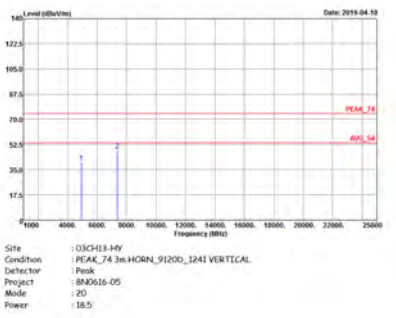
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH13 2472MHz	
2+3	Horizontal	Vertical
Peak Avg.		

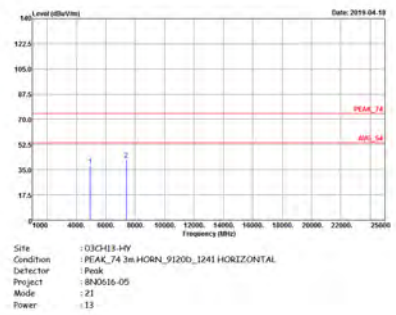
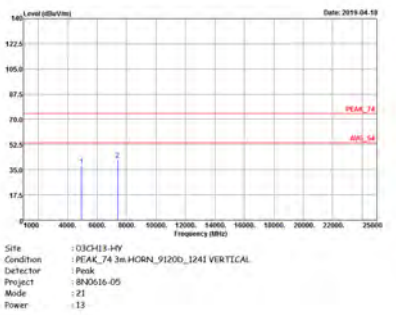
2.4GHz 2400~2483.5MHz

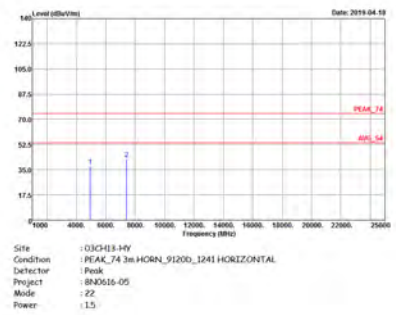
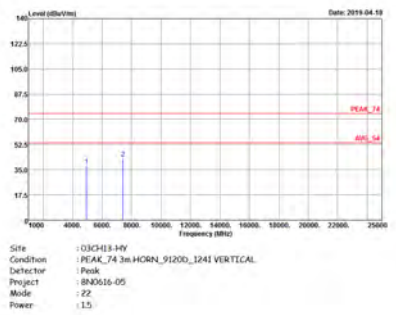
WIFI 802.11g (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH01 2412MHz	
2+3	Horizontal	Vertical
Peak Avg.		

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH06 2437MHz	
2+3	Horizontal	Vertical
Peak Avg.		

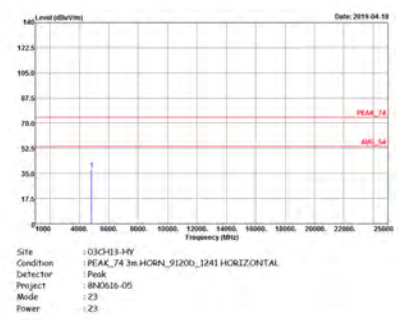
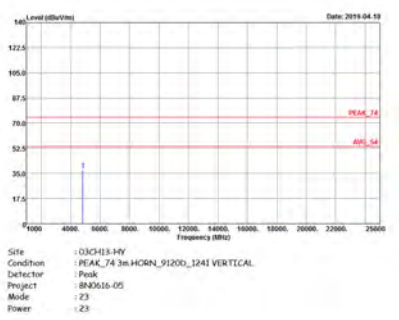
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH11 2462MHz	
2+3	Horizontal	Vertical
Peak Avg.		

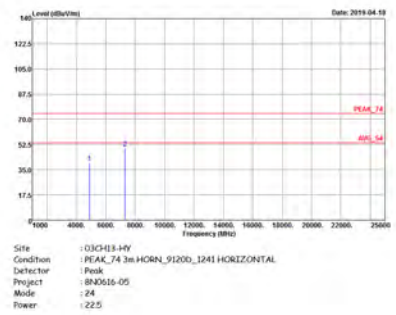
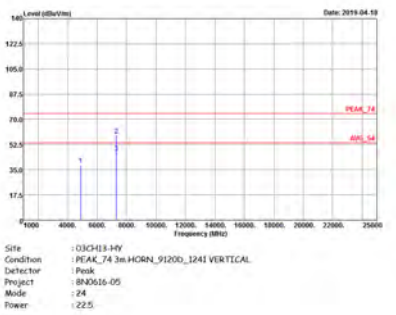
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH12 2467MHz	
2+3	Horizontal	Vertical
Peak Avg.		

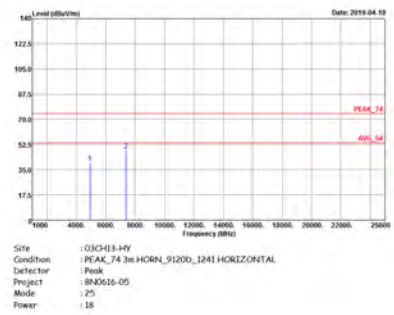
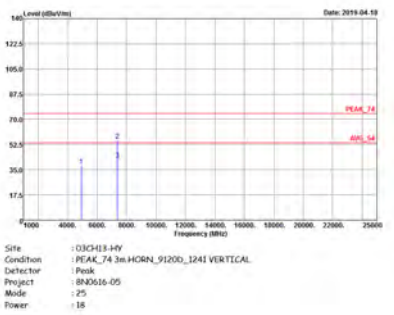
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH13 2472MHz	
2+3	Horizontal	Vertical
Peak Avg.		

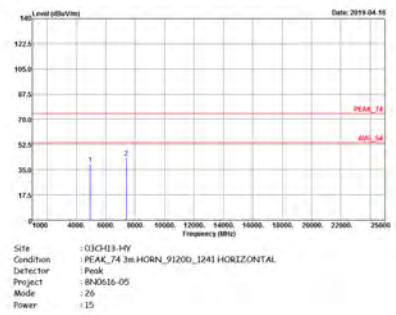
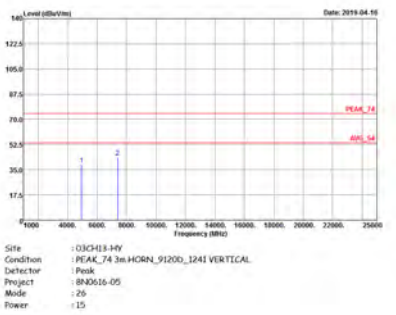
2.4GHz 2400~2483.5MHz

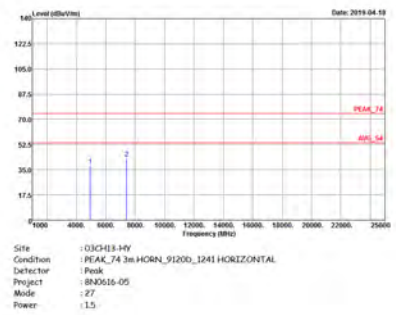
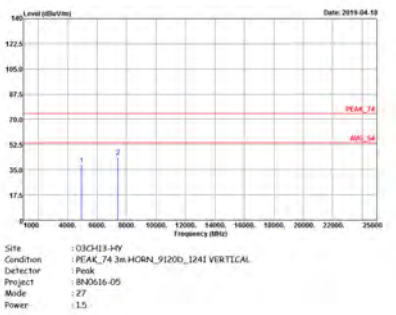
WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
2+3	Horizontal	Vertical
Peak Avg.		

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH06 2437MHz	
2+3	Horizontal	Vertical
Peak Avg.		

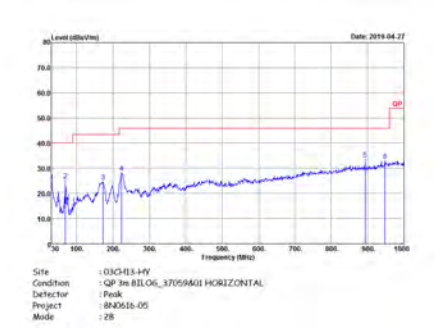
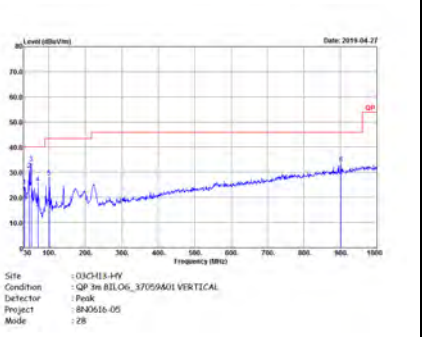
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
2+3	Horizontal	Vertical
Peak Avg.		

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH12 2462MHz	
2+3	Horizontal	Vertical
Peak Avg.		

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH13 2472MHz	
2+3	Horizontal	Vertical
Peak Avg.		

Emission below 1GHz

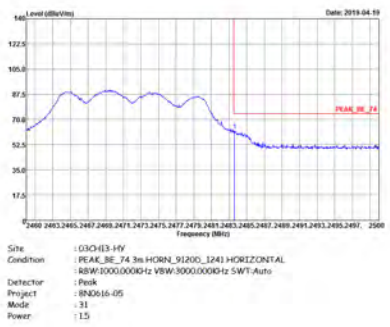
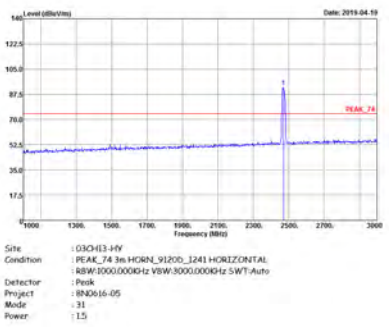
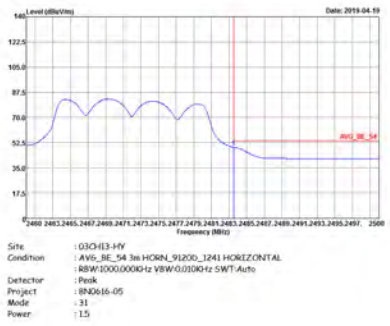
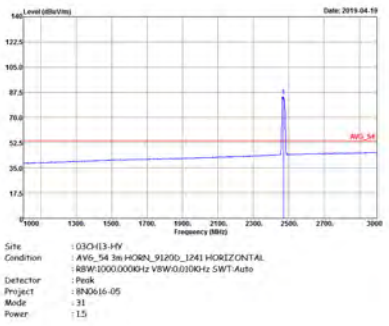
2.4GHz WIFI 802.11g (LF)

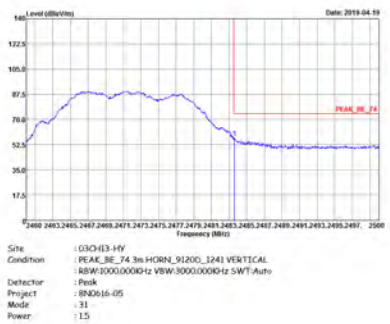
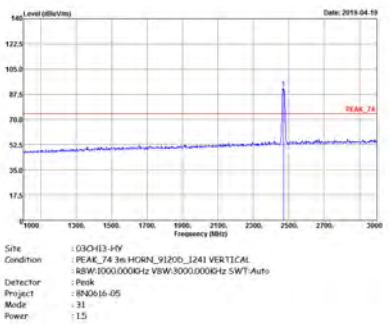
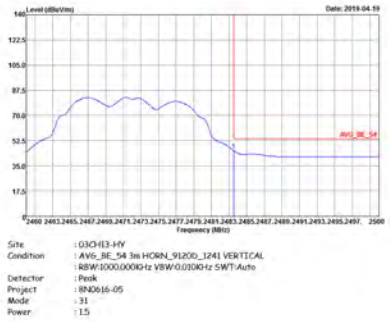
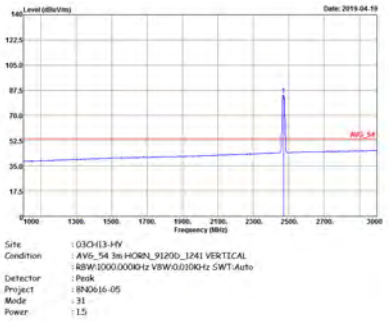
WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11g LF	
2+3	Horizontal	Vertical
QP / Peak		

<WPC Mode>

2.4GHz 2400~2483.5MHz

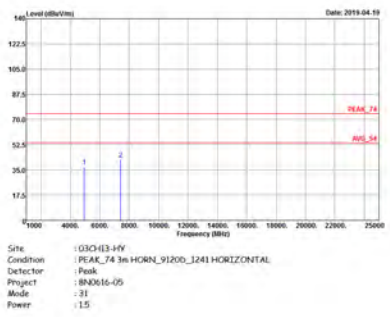
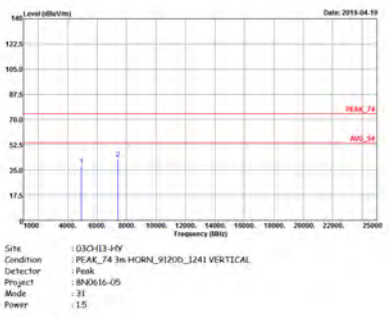
WIFI 802.11g (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH13 2472MHz	
2+3	Horizontal	Fundamental
Peak		
Avg.		

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH13 2472MHz	
2+3	Vertical	Fundamental
Peak		
Avg.		

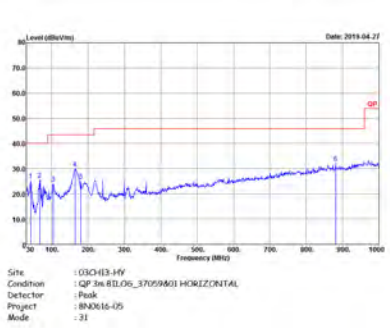
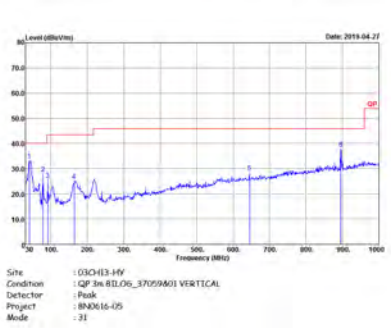
2.4GHz 2400~2483.5MHz

WIFI 802.11g (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH13 2472MHz	
2+3	Horizontal	Vertical
Peak Avg.		

Emission below 1GHz

2.4GHz WIFI 802.11g (LF)

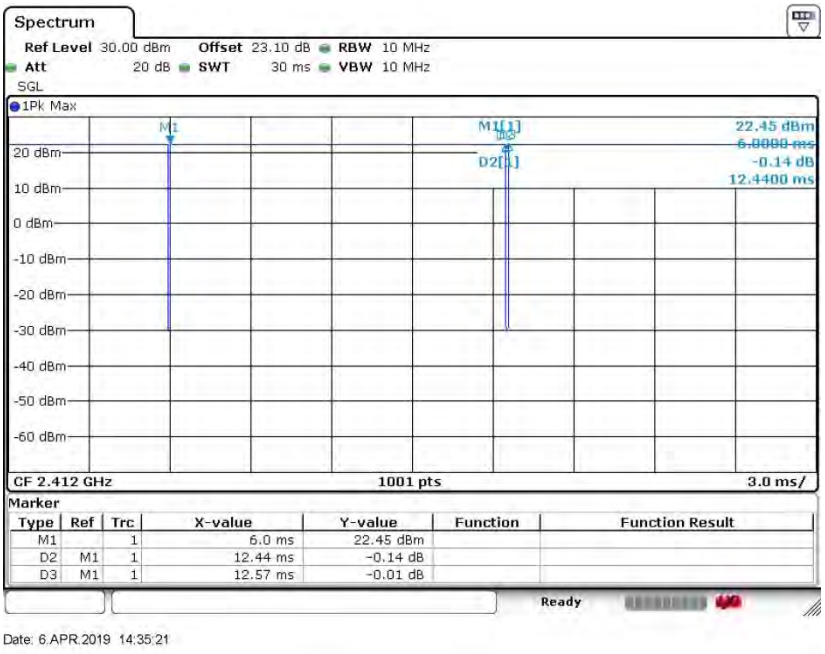
WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11g LF	
2+3	Horizontal	Vertical
QP / Peak		

Appendix E. Duty Cycle Plots

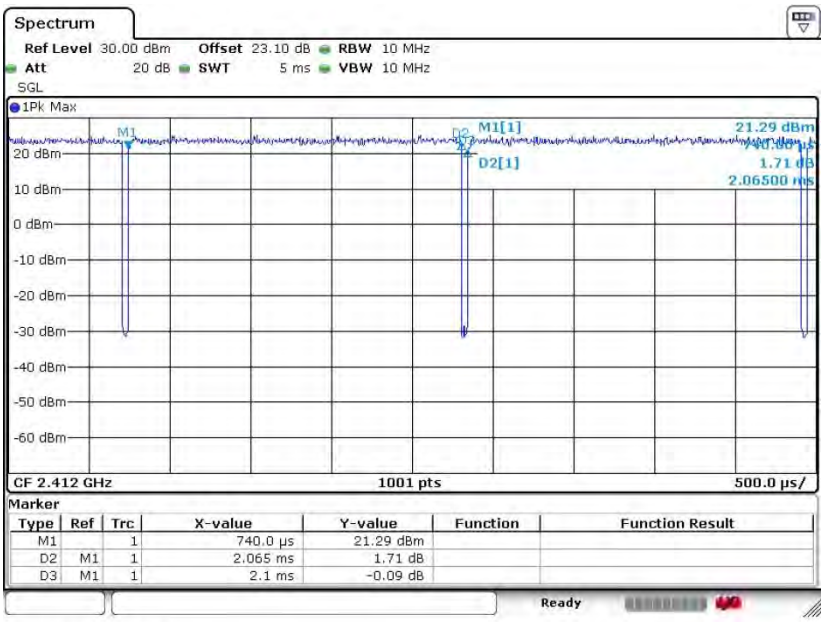
Antenna	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting	Duty Factor(dB)
2+3	802.11b for Ant. 2	98.96	-	-	10Hz	0.05
2+3	802.11b for Ant. 3	99.20	-	-	10Hz	0.03
2+3	802.11g for Ant. 2	98.33	-	-	10Hz	0.07
2+3	802.11g for Ant. 3	98.33	-	-	10Hz	0.07
2+3	2.4GHz 802.11n HT20 for Ant. 2	98.21	-	-	10Hz	0.08
2+3	2.4GHz 802.11n HT20 for Ant. 3	98.21	-	-	10Hz	0.08

MIMO <Ant. 2>

802.11b

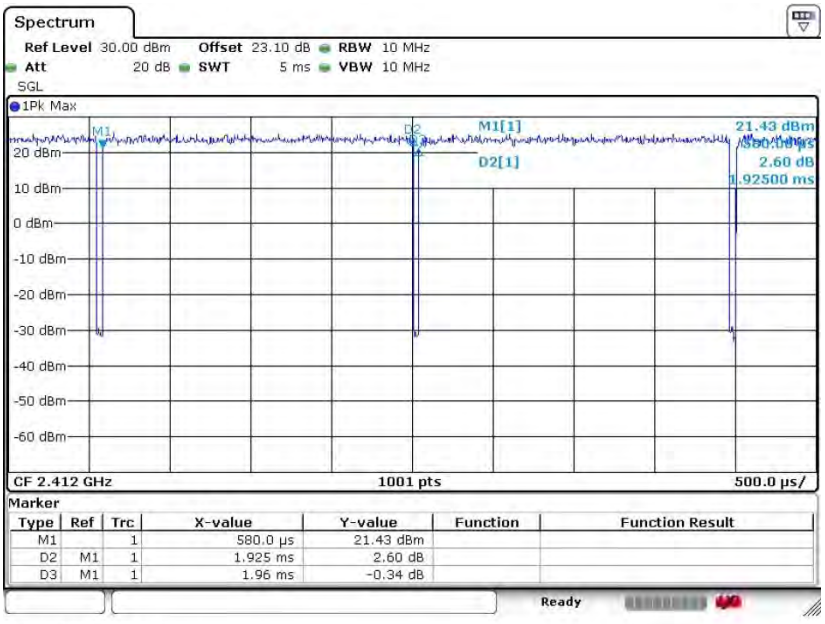


802.11g



Date: 6.APR.2019 14:37:16

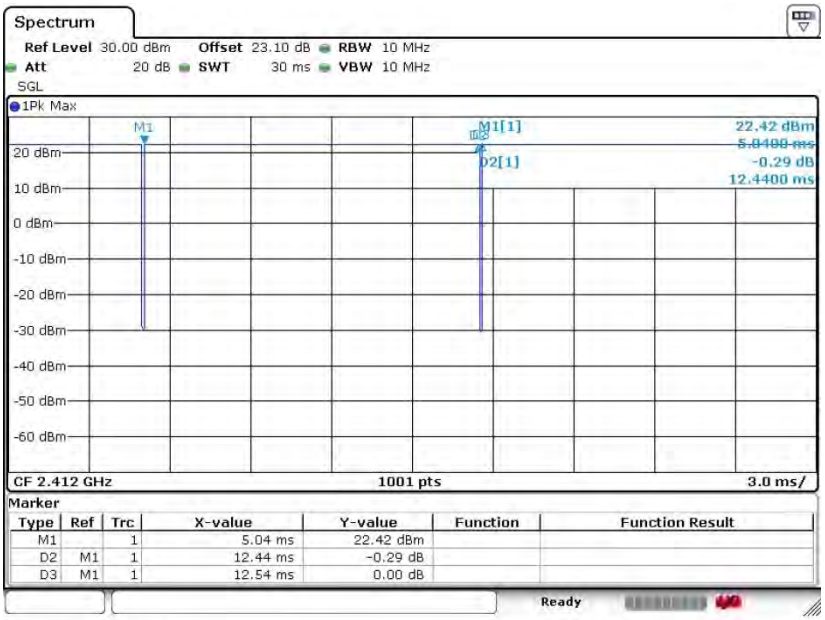
802.11n HT20



Date: 6.APR.2019 14:40:21

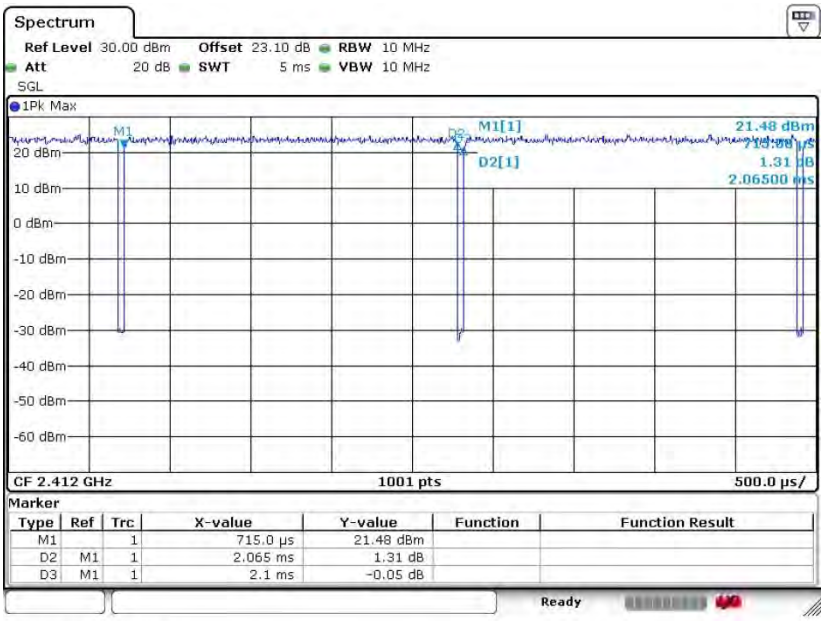
MIMO <Ant. 3>

802.11b



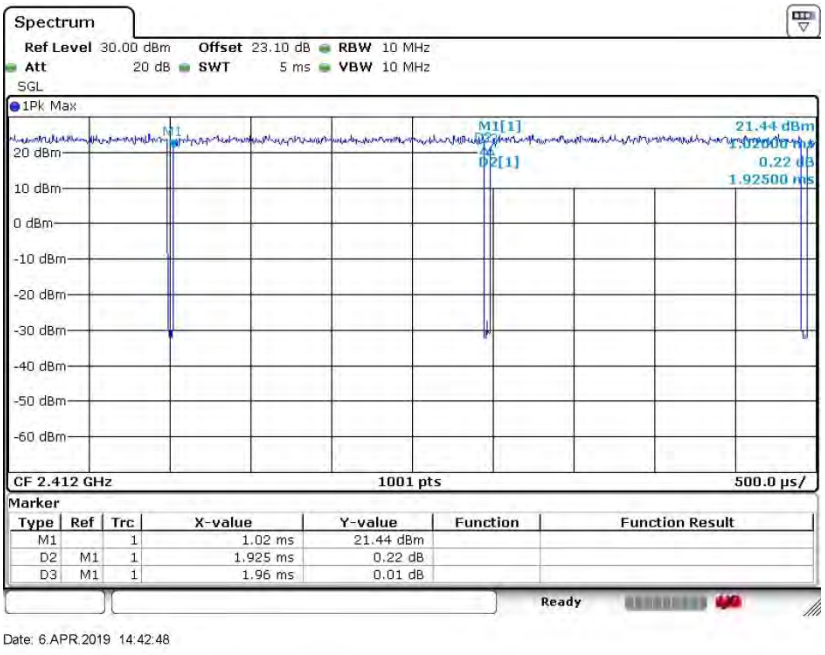
Date: 6.APR.2019 14:36:19

802.11g



Date: 6.APR.2019 14:38:18

802.11n HT20



———THE END———