

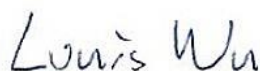


FCC RADIO TEST REPORT

FCC ID : XRAFB511
Equipment : Smartwatch
Brand Name : Fitbit
Model Name : FB511
Applicant : Fitbit, Inc.
199 Fremont Street, 14th Floor, San
Francisco, CA 94105 USA
Manufacturer : Fitbit, Inc.
199 Fremont Street, 14th Floor, San
Francisco, CA 94105 USA
Standard : FCC Part 15 Subpart C §15.247

The product was received on Mar. 20, 2020 and testing was started from Mar. 30, 2020 and completed on Jul. 06, 2020. 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 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: Louis Wu

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
FR032014C	01	Initial issue of report	Jul. 31, 2020
FR032014C	02	Revise Frequency and Channel list in test mode and section 2.1	Aug. 19, 2020

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.247(a)(2)	6dB Bandwidth	Pass	-
3.1	2.1049	99% Occupied Bandwidth	Reporting only	-
3.2	15.247(b)	Power Output Measurement	Pass	-
3.3	15.247(e)	Power Spectral Density	Pass	-
3.4	15.247(d)	Conducted Band Edges	Pass	-
		Conducted Spurious Emission	Pass	-
3.5	15.247(d)	Radiated Band Edges and Radiated Spurious Emission	Pass	Under limit 3.06 dB at 2483.520 MHz
3.6	15.207	AC Conducted Emission	Pass	Under limit 13.75 dB at 0.307 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: Celery Wei



1 General Description

1.1 Product Feature of Equipment Under Test

Bluetooth, Wi-Fi 2.4GHz 802.11b/g/n, NFC and GNSS.

Product Specification subjective to this standard	
Sample 1	Iron strap
Sample 2	Cloth strap
Sample 3	Plastic strap
Antenna Type	WLAN: Ring slot Antenna Bluetooth: Ring slot Antenna GPS: Metal split-ring Antenna NFC: Loop Antenna

1.2 Modification of EUT

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

1.3 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.	
	03CH11-HY	

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

FCC designation No.: TW1190 and TW0007

1.4 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.
- ♦ 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. The TAF code is not including all the FCC KDB listed without accreditation.
3. 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 (Z plane) were recorded in this report.
- b. AC power line Conducted Emission was tested under maximum output power.

2.1 Carrier Frequency and Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
2400-2483.5 MHz	1	2412	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.

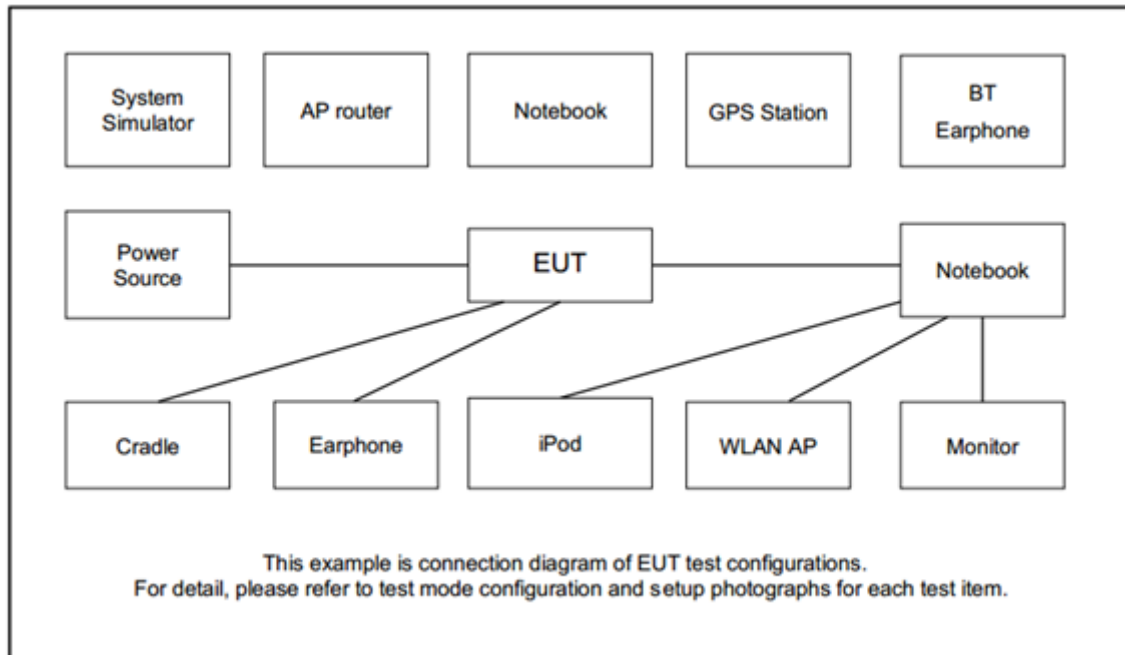
Modulation	Data Rate
802.11b	1 Mbps
802.11g	6 Mbps
802.11n HT20	MCS0

Test Cases	
AC Conducted Emission	Mode 1: WLAN (2.4GHz) Link + GPS Rx + Vibrate + Screen flicker + Battery + USB Cable (Data Link with Notebook) for Sample 1 Mode 2: Bluetooth Link + GPS Rx + Battery + USB Cable (Power From Notebook) for Sample 1
Remark: 1. The worst case of conducted emission is mode 2; only the test data of it was reported. 2. Data Link with Notebook means data application transferred mode between EUT and Notebook. 3. For Radiated Test Cases, the tests were performed with Sample 1.	

Ch. #	2400-2483.5 MHz		
	802.11b	802.11g	802.11n HT20
Low	01	01	01
Middle	06	06	06
High	11	11	11
	12	12	12
	13	13	13

Remark: For radiation spurious emission, the final modulation and the worst data rate was reference the max RF conducted power.

2.3 Connection Diagram of Test System



2.4 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	GPS Station	Pendulum	GSG-54	N/A	N/A	Unshielded, 1.8 m
2.	Bluetooth Earphone	SonyEricsson	MW600	PY7DDA-2029	N/A	N/A
3.	WLAN AP	ASUS	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded, 1.8 m
4.	Notebook	Apple	MacBook Pro(A1502)	QDS-BRCM 1080	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
5.	iPod	Apple	A1199	FCC DoC	Shielded, 1.0 m	N/A
6.	LCD Monitor	Dell	PB27UQ	FCC DoC	N/A	Unshielded,1.8m
7.	Adapter	Samsung	RF1C632EWSD	N/A	N/A	N/A



2.5 EUT Operation Test Setup

The RF test items, utility "Tera term V4.95" 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.

$$\begin{aligned} \text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)}. \\ &= 4.2 + 10 = 14.2 \text{ (dB)} \end{aligned}$$

3 Test Result

3.1 6dB and 99% Bandwidth Measurement

3.1.1 Limit of 6dB and 99% Bandwidth

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

3.1.2 Measuring Instruments

See list of measuring equipment of this test report.

3.1.3 Test Procedures

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

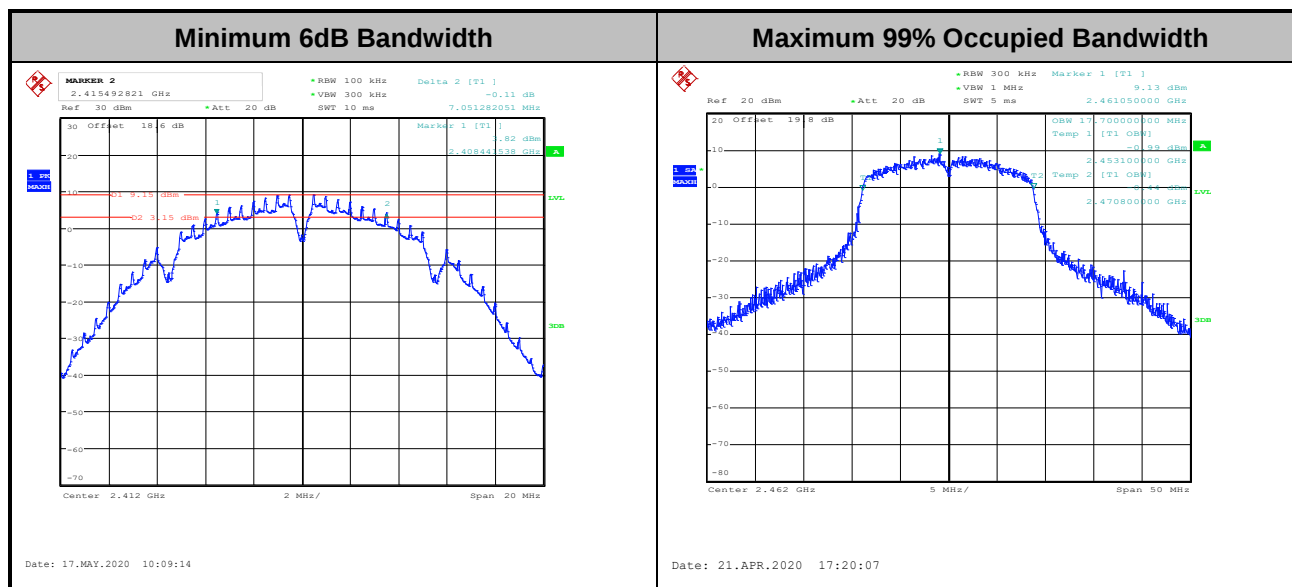
3.1.4 Test Setup





3.1.5 Test Result of 6dB and 99% Occupied Bandwidth

Please refer to Appendix A.



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

3.2 Output Power Measurement

3.2.1 Limit of Output Power

For systems using digital modulation in the 2400-2483.5MHz, the limit for 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.

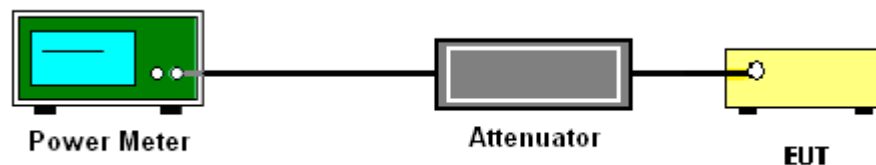
3.2.2 Measuring Instruments

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.

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.

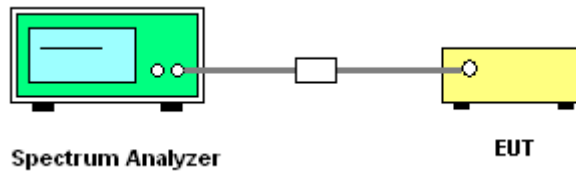
3.3.2 Measuring Instruments

See list of measuring equipment of this test report.

3.3.3 Test Procedures

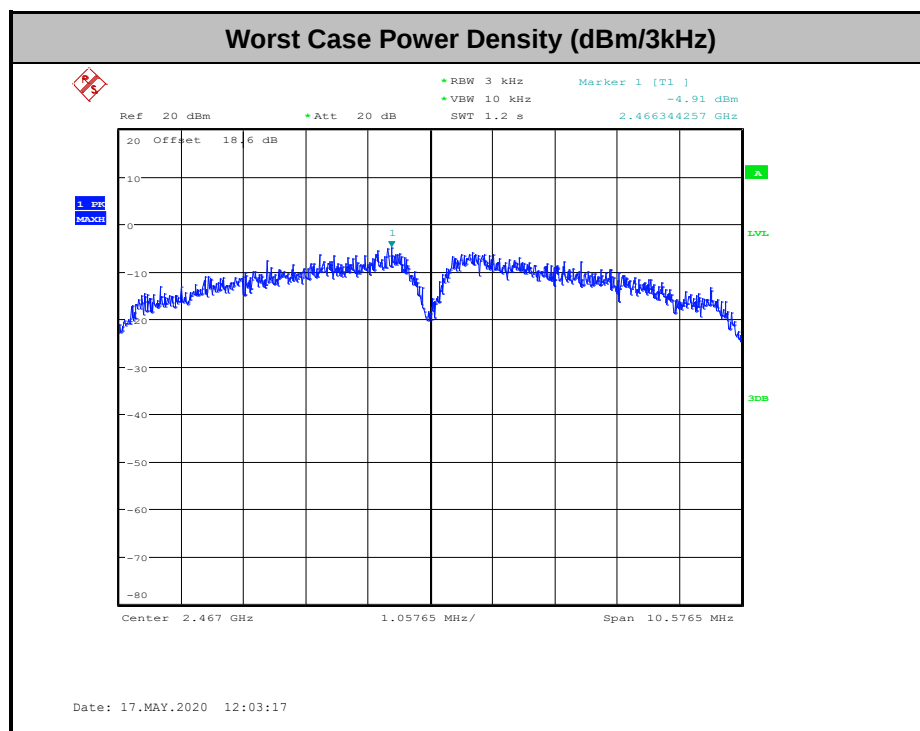
1. The testing follows the ANSI C63.10 Section 11.10.2 Method PKPSD.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
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.

3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.



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.

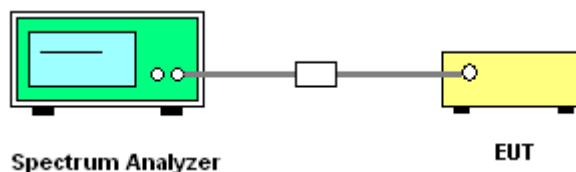
3.4.2 Measuring Instruments

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



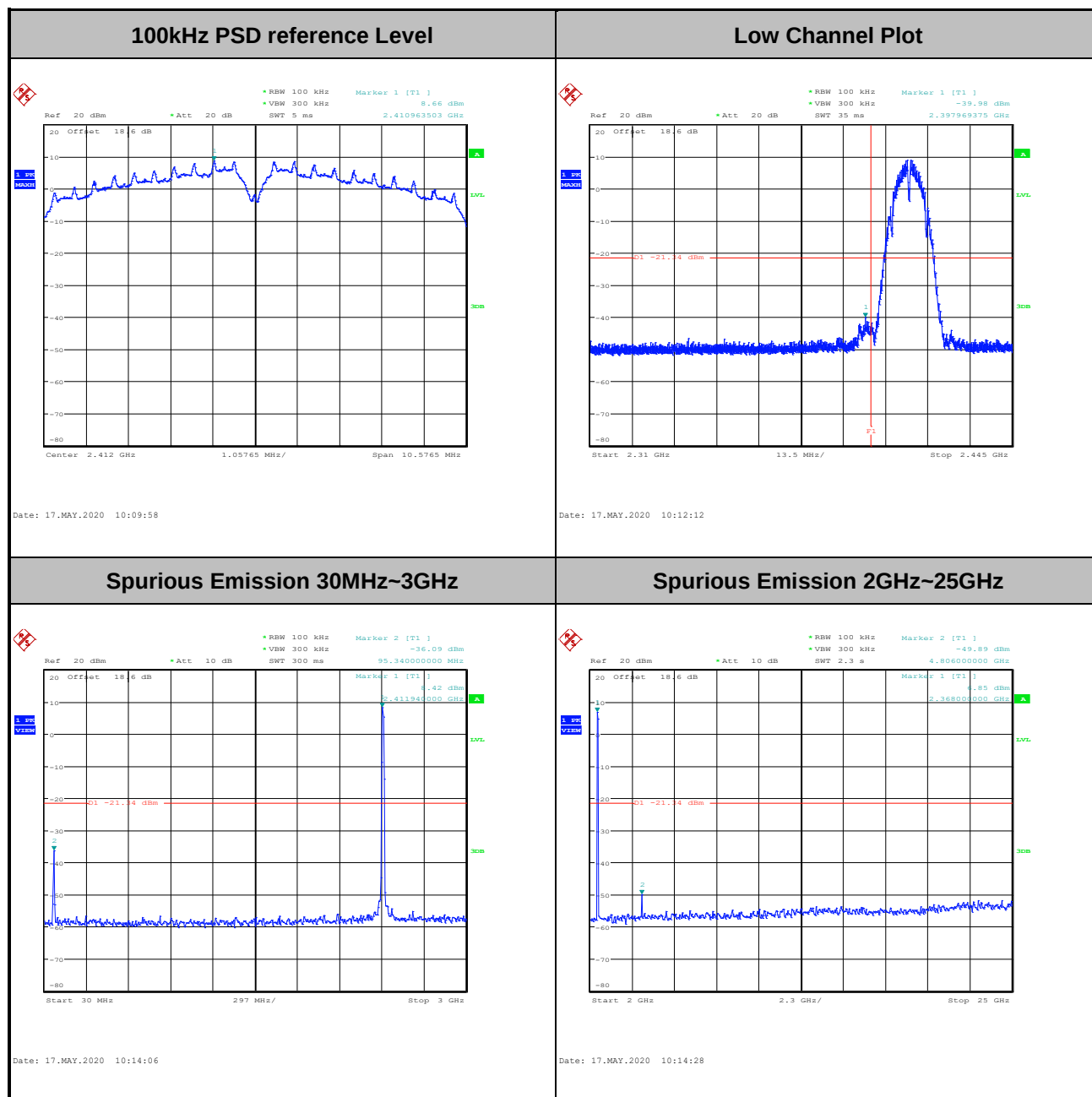


3.4.5 Test Result of Conducted Band Edges and Spurious Emission

Test Engineer :	Jacob Yu	Temperature :	21~25°C
		Relative Humidity :	51~54%

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

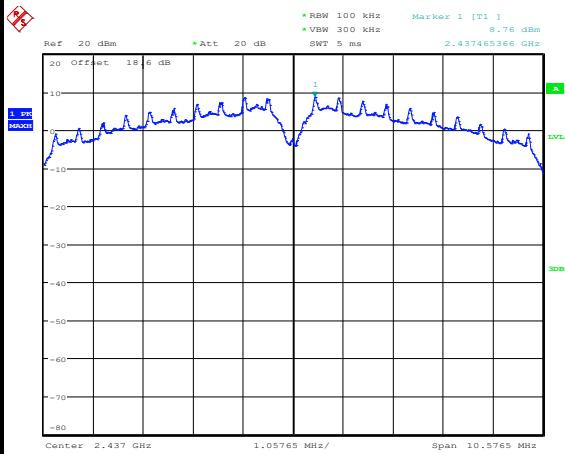
Test Mode :	802.11b	Test Channel :	01
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Test Mode :	802.11b	Test Channel :	06
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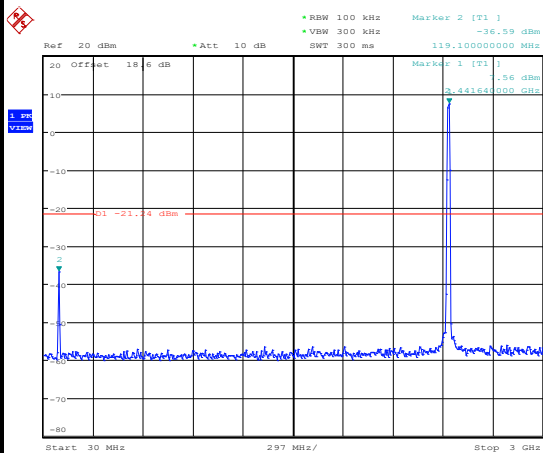
100kHz PSD reference Level



Date: 17.MAY.2020 10:57:18

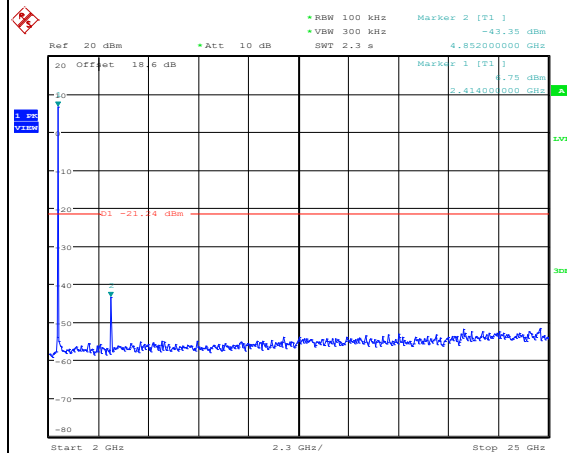
Mid Channel Plot

Spurious Emission 30MHz~3GHz



Date: 17.MAY.2020 10:57:51

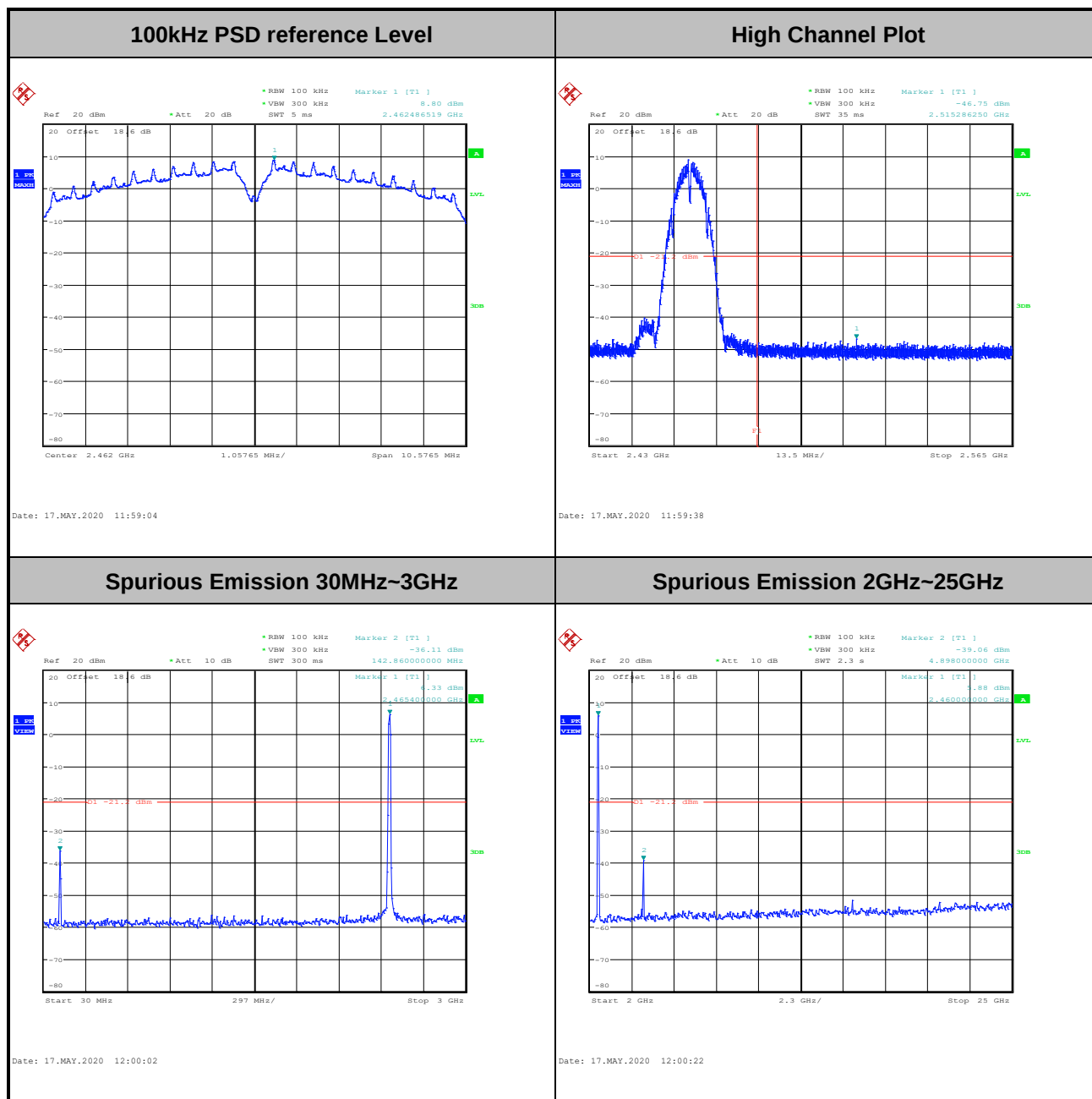
Spurious Emission 2GHz~25GHz

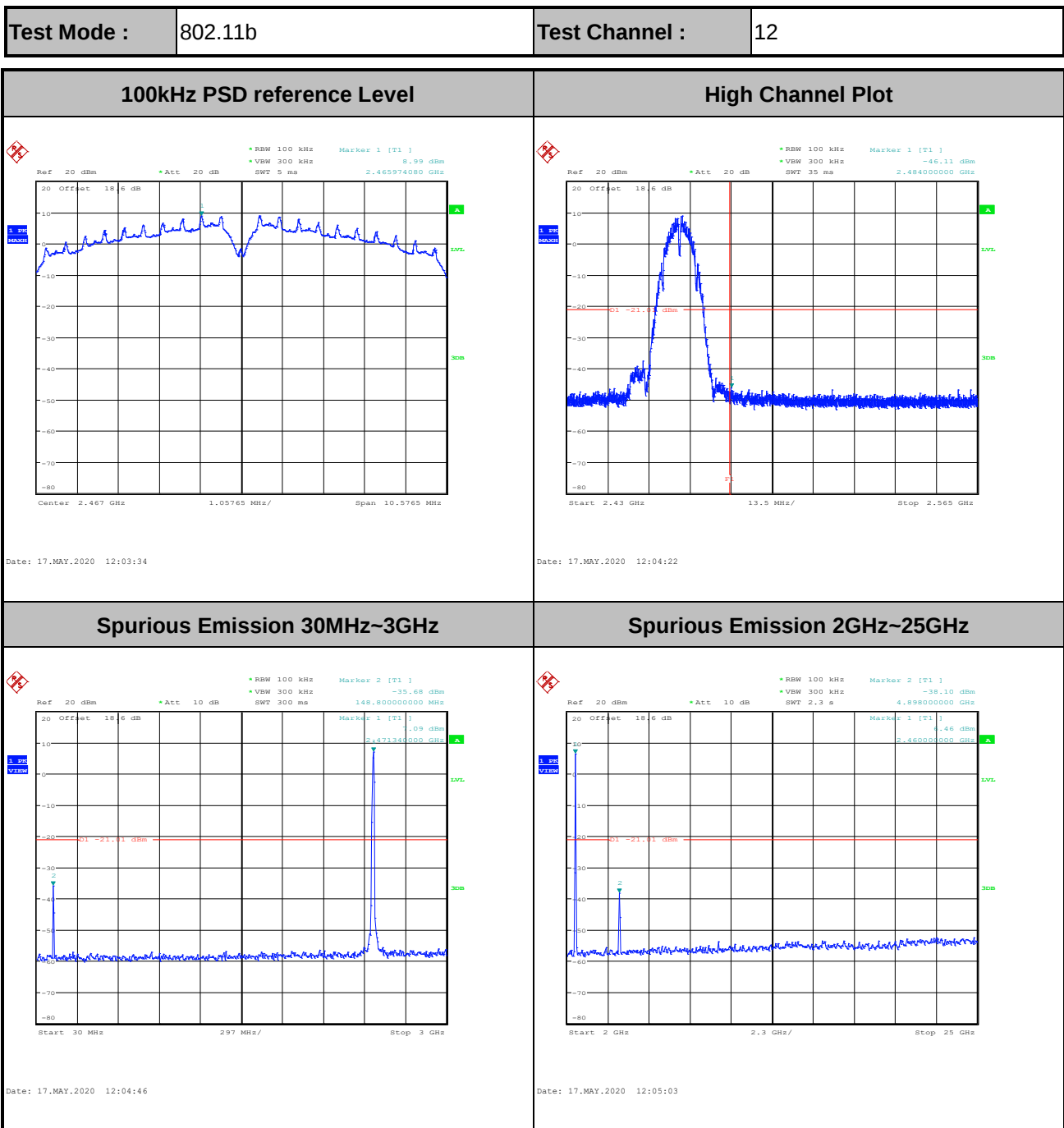


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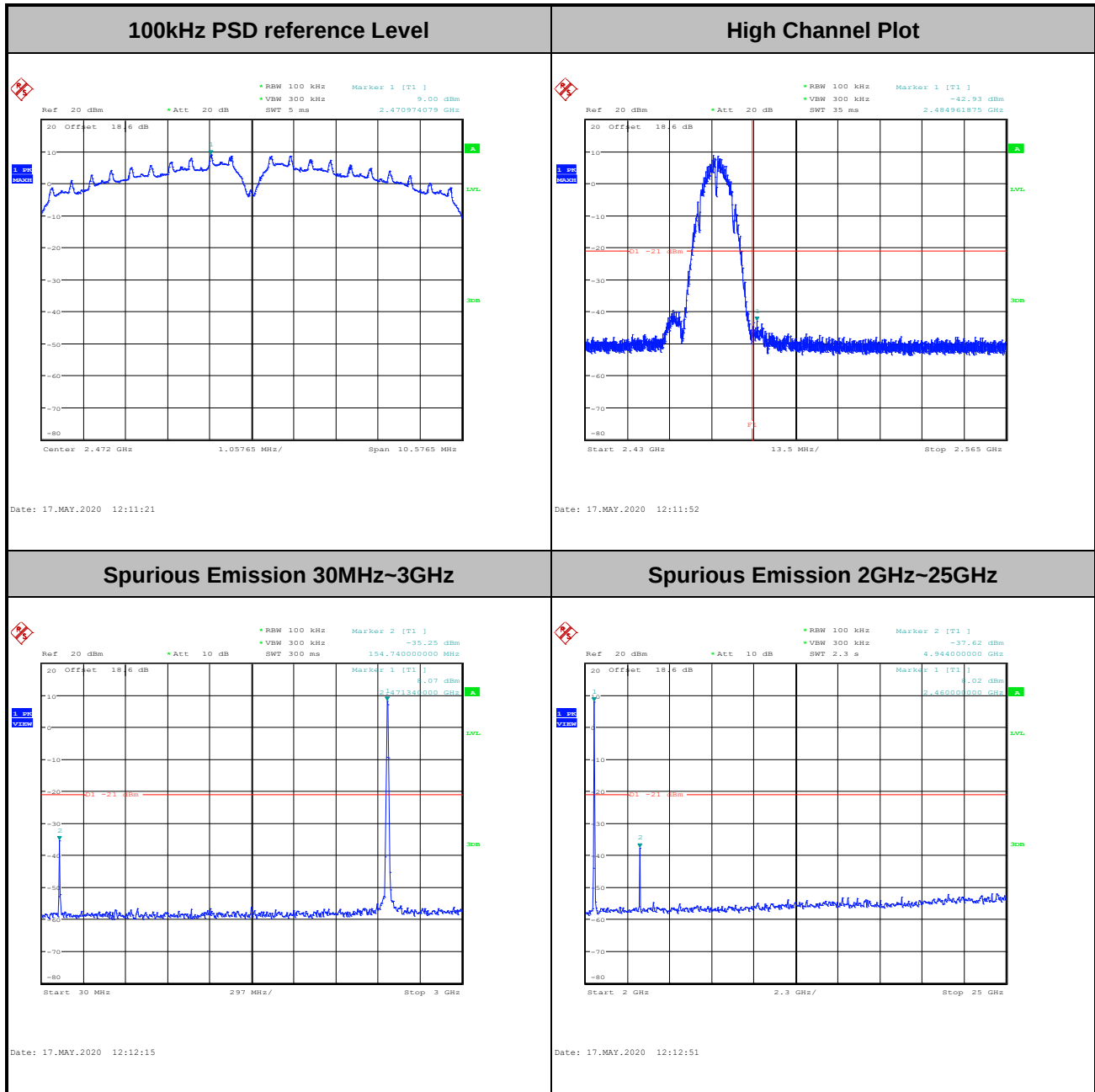
Test Mode :	802.11b	Test Channel :	11
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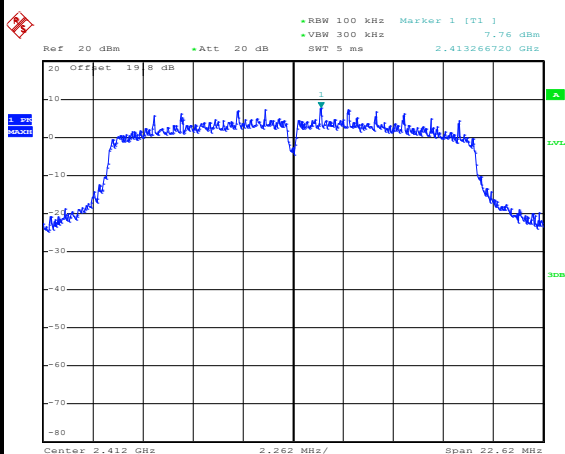
Test Mode :	802.11b	Test Channel :	13
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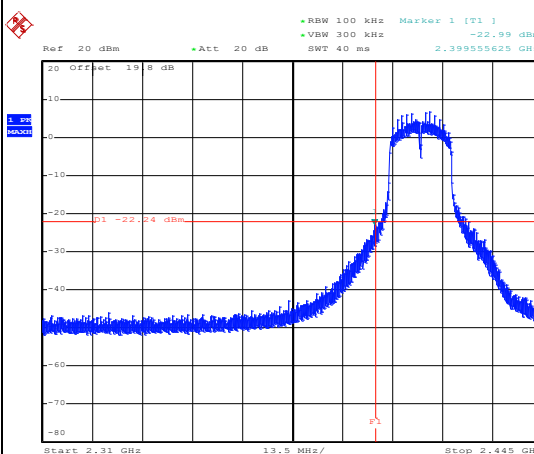
Test Mode :	802.11g	Test Channel :	01
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100kHz PSD reference Level



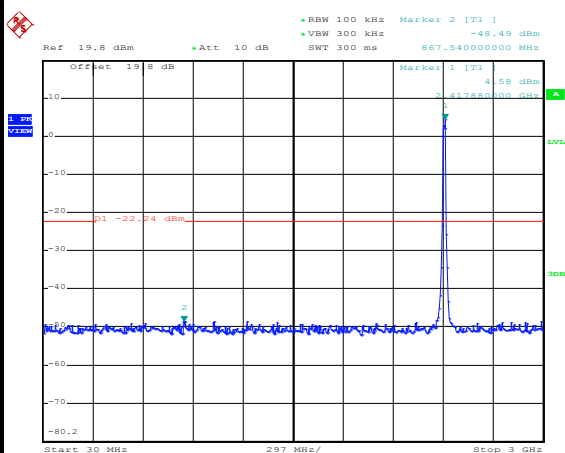
Date: 17.APR.2020 16:28:32

Low Channel Plot



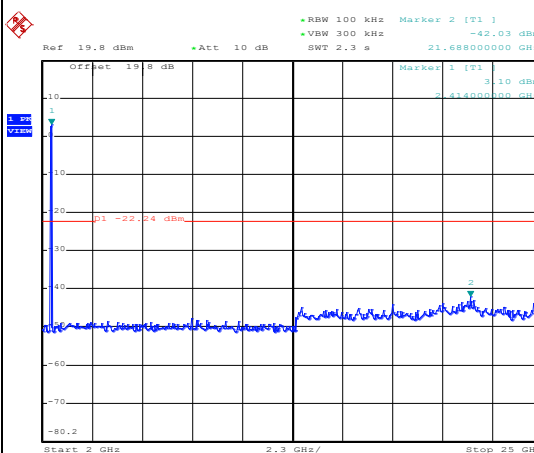
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Spurious Emission 30MHz~3GHz



Date: 21.APR.2020 16:28:38

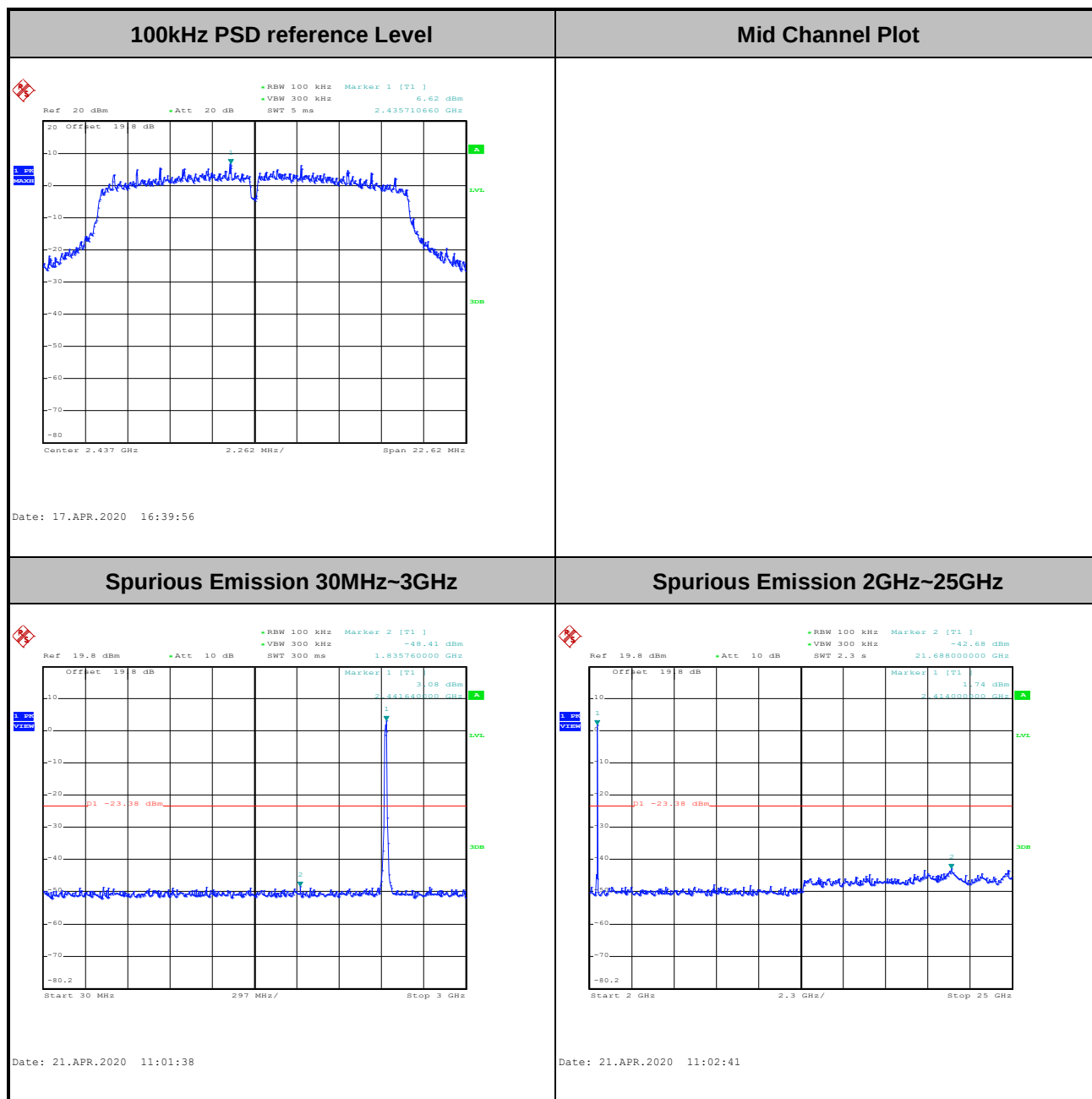
Spurious Emission 2GHz~25GHz



Date: 21.APR.2020 16:29:07

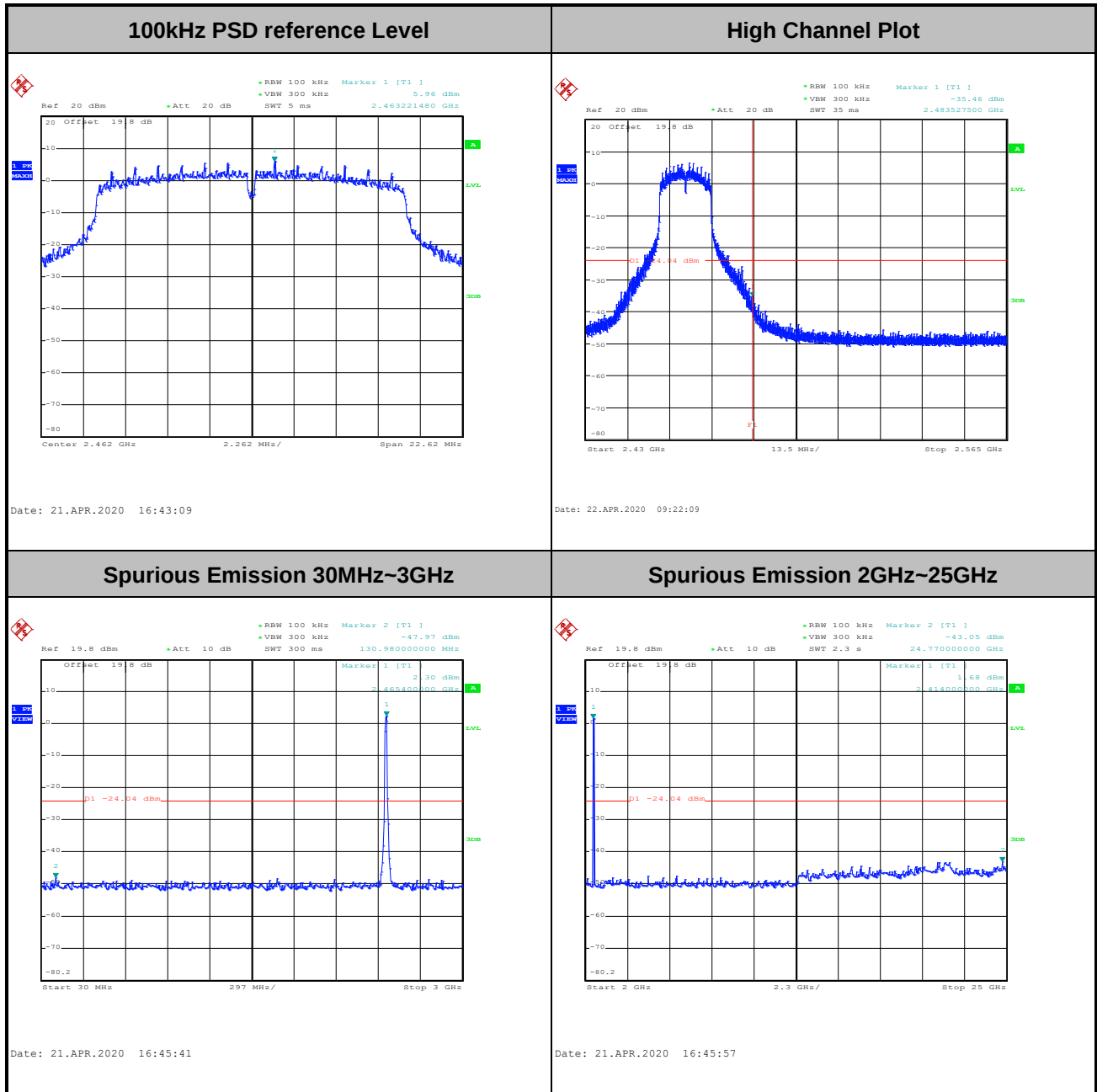


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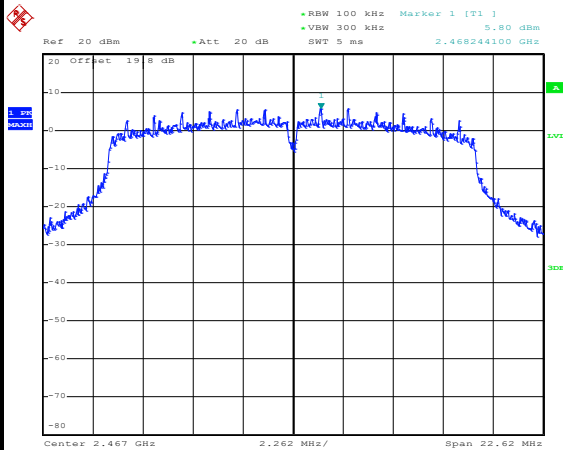
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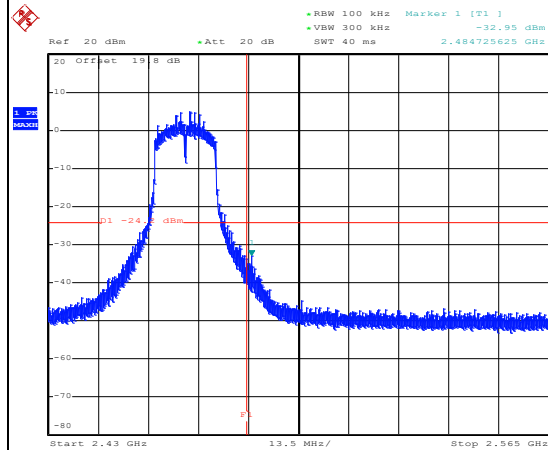
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100kHz PSD reference Level



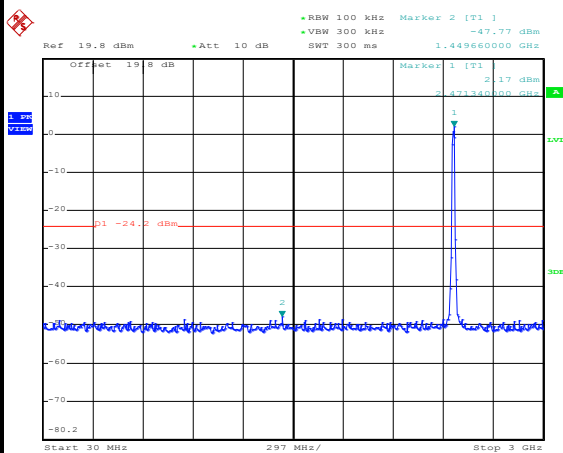
Date: 17.APR.2020 17:01:36

High Channel Plot



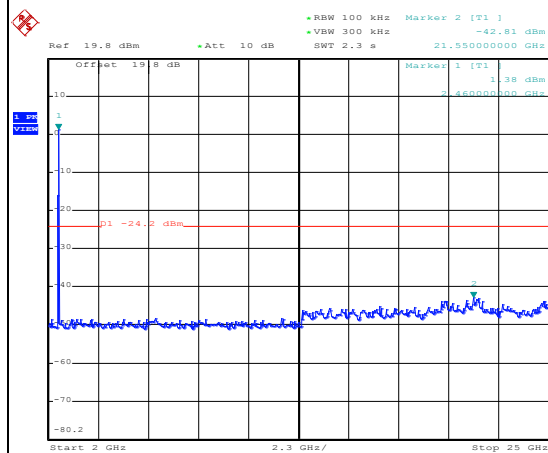
Date: 21.APR.2020 11:55:30

Spurious Emission 30MHz~3GHz



Date: 21.APR.2020 11:56:05

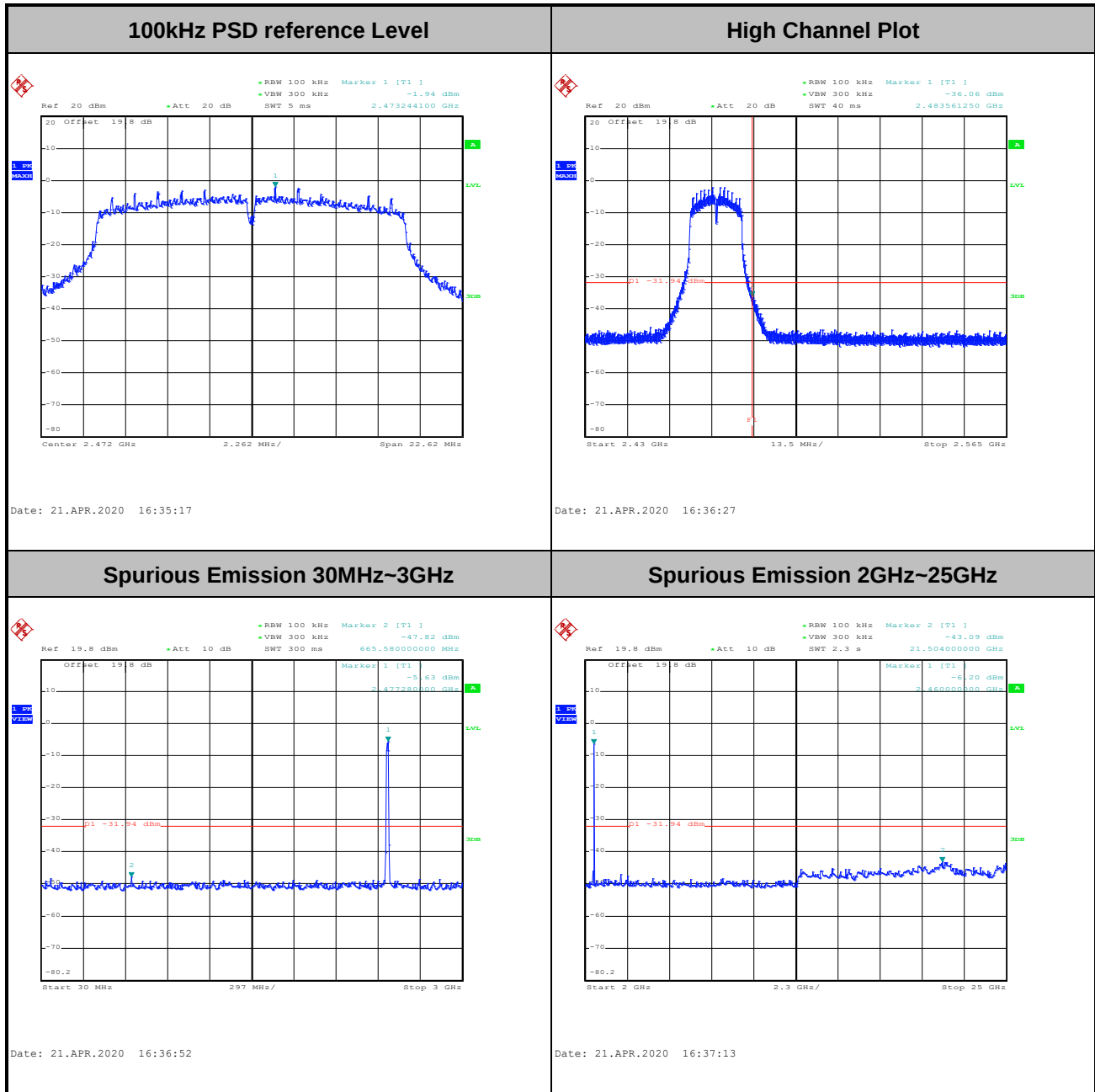
Spurious Emission 2GHz~25GHz



Date: 21.APR.2020 11:56:27

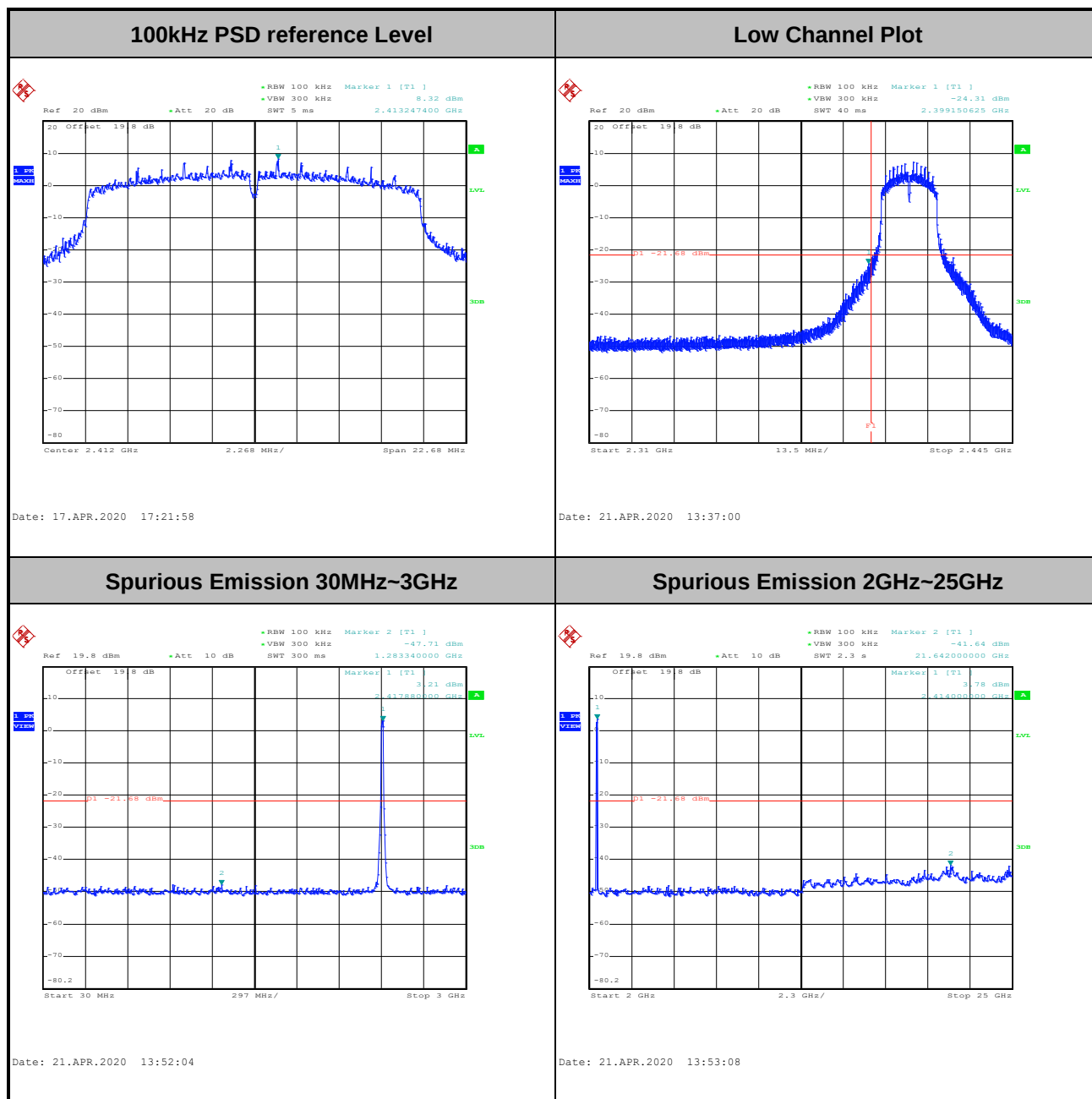


Test Mode :	802.11g	Test Channel :	13
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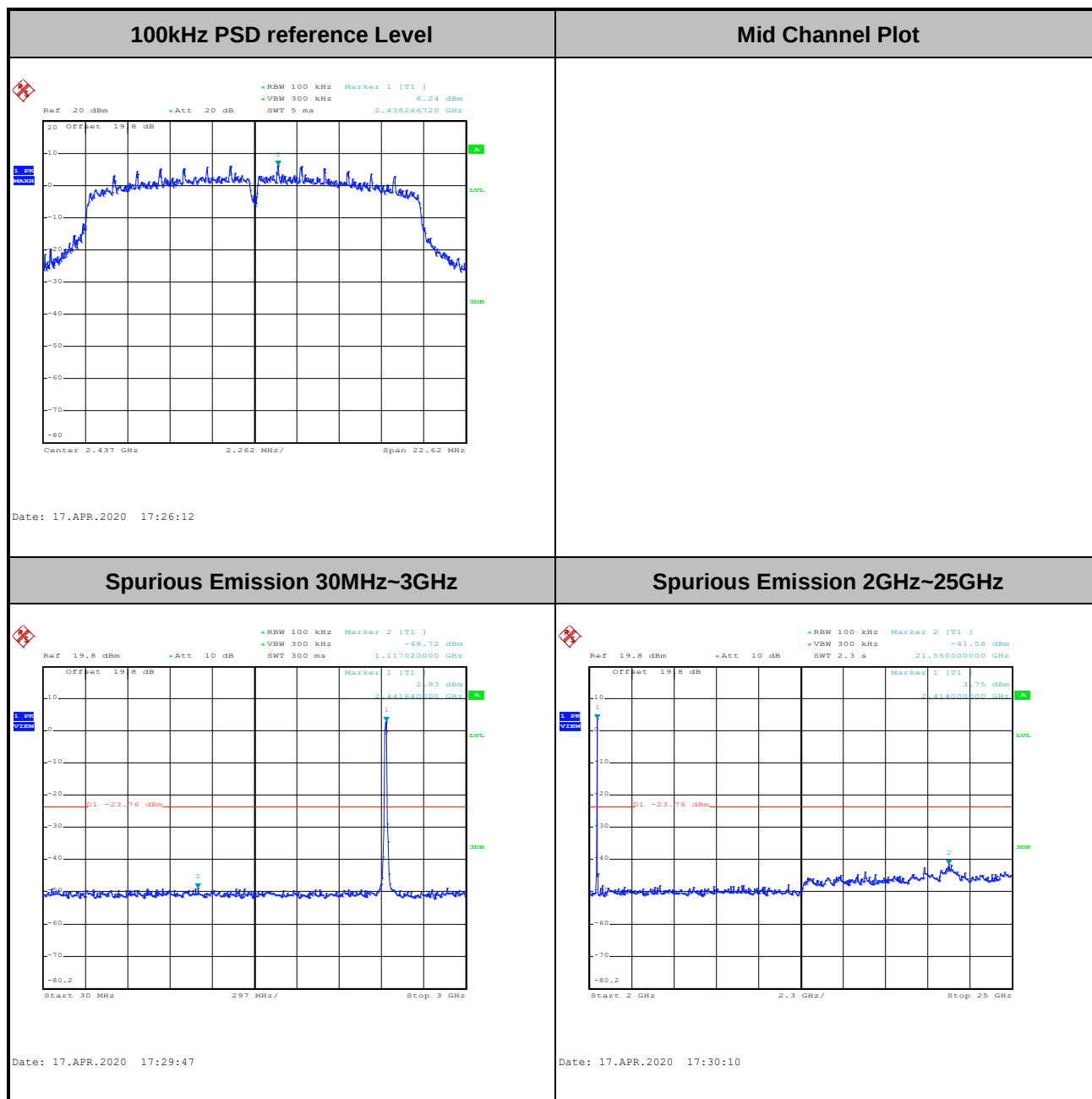


Test Mode :	802.11n HT20	Test Channel :	01
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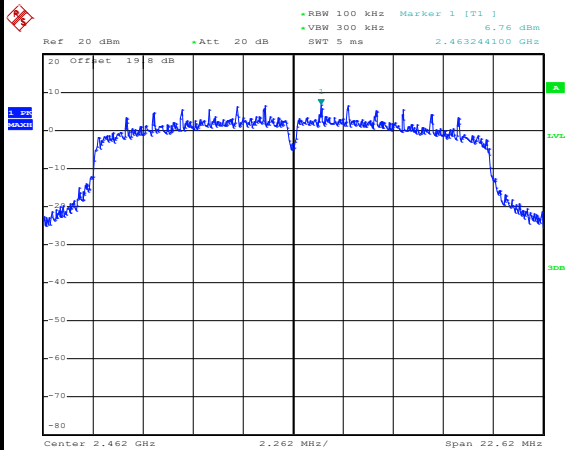
Test Mode :	802.11n HT20	Test Channel :	06
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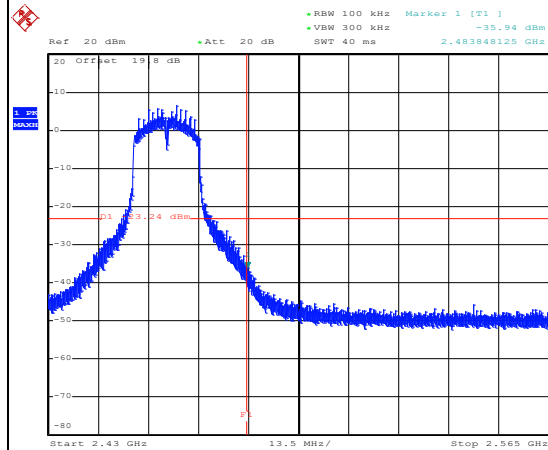
Test Mode :	802.11n HT20	Test Channel :	11
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100kHz PSD reference Level



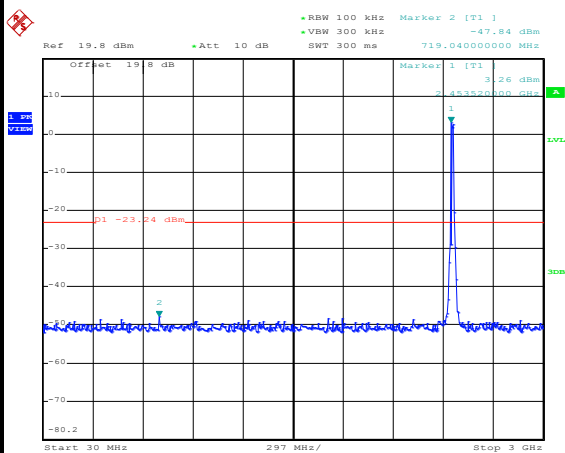
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High Channel Plot



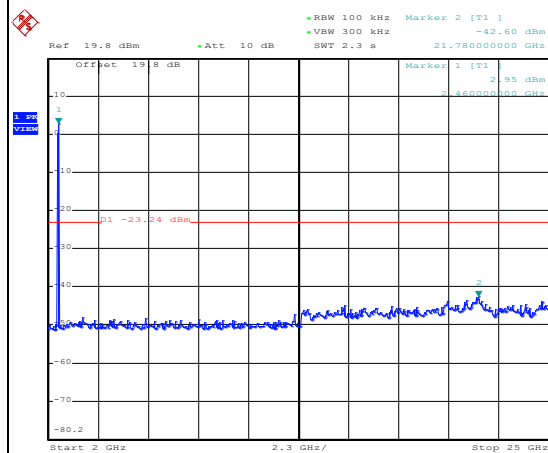
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Spurious Emission 30MHz~3GHz



Date: 21.APR.2020 17:19:35

Spurious Emission 2GHz~25GHz

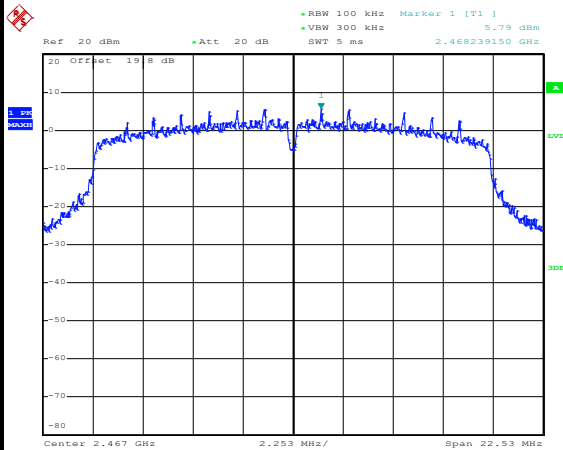


Date: 21.APR.2020 17:19:50



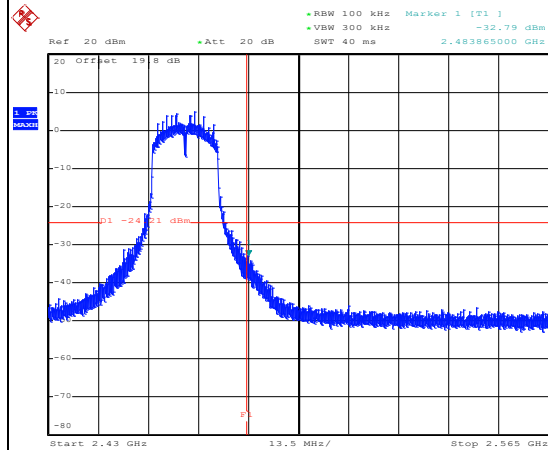
Test Mode :	802.11n HT20	Test Channel :	12
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100kHz PSD reference Level



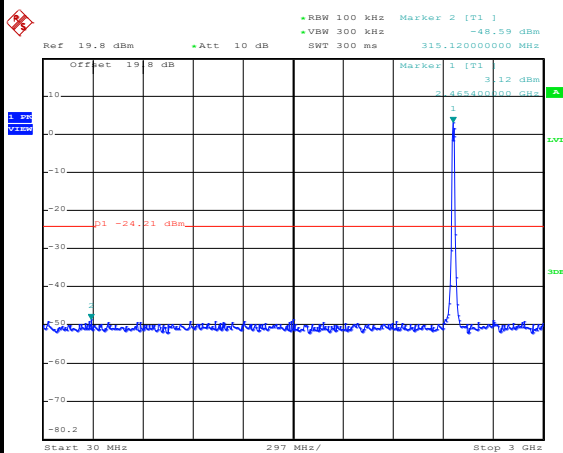
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High Channel Plot



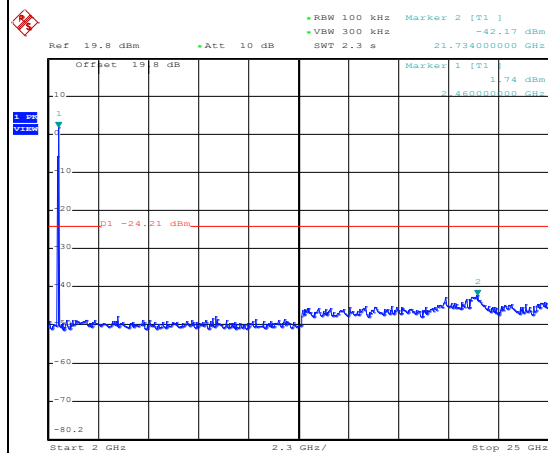
Date: 21.APR.2020 16:54:06

Spurious Emission 30MHz~3GHz

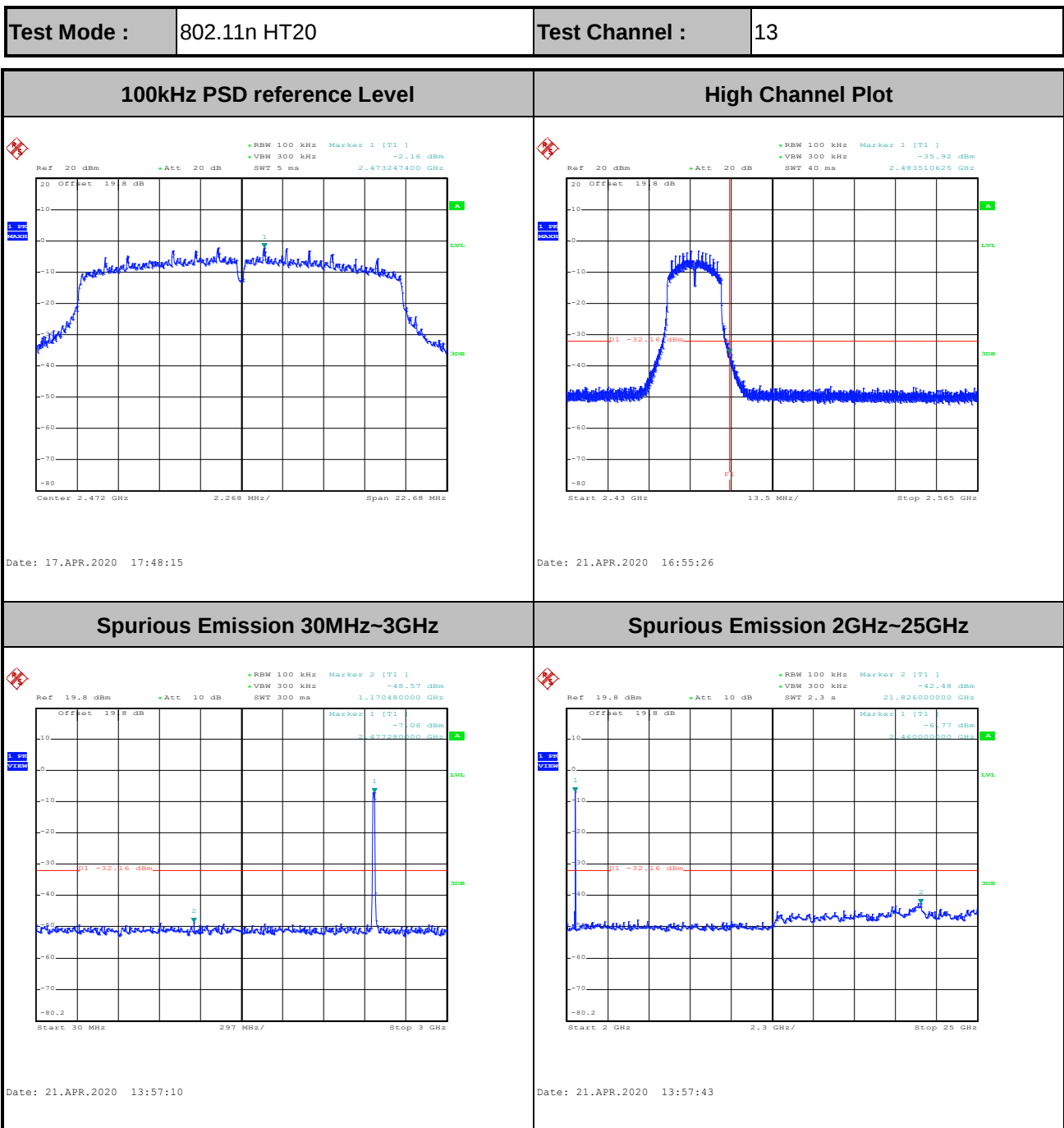


Date: 17.APR.2020 17:43:43

Spurious Emission 2GHz~25GHz



Date: 17.APR.2020 17:44:05





3.5 Radiated Band Edges and Spurious Emission Measurement

3.5.1 Limit of Radiated band edge and Spurious Emission Measurement

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

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

3.5.2 Measuring Instruments

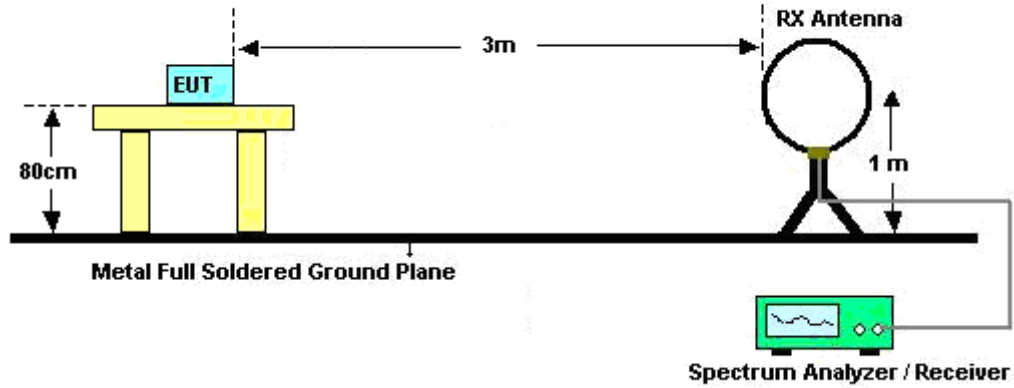
See list of measuring equipment of this test report.

3.5.3 Test Procedures

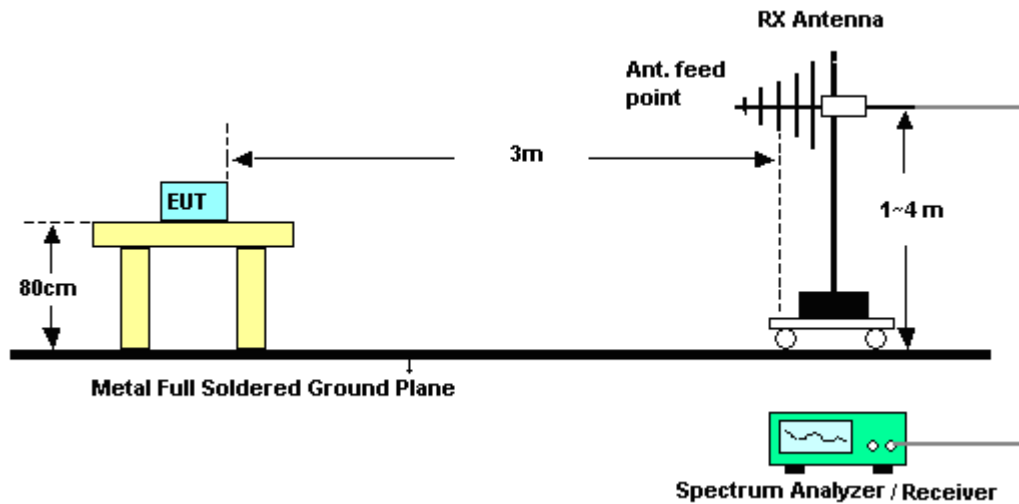
1. The testing follows the ANSI C63.10 Section 11.12.1 Radiated emission measurements.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
8. Use the following spectrum analyzer settings:
 - (1) Span shall wide enough to fully capture the emission being measured;
 - (2) Set RBW=100 kHz for $f < 1$ GHz; $VBW \geq RBW$; Sweep = auto; Detector function = peak; Trace = max hold;
 - (3) Set RBW = 1 MHz, VBW= 3MHz for $f \geq 1$ GHz for peak measurement.
For average measurement:
 - $VBW = 10$ Hz, when duty cycle is no less than 98 percent.
 - $VBW \geq 1/T$, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

3.5.4 Test Setup

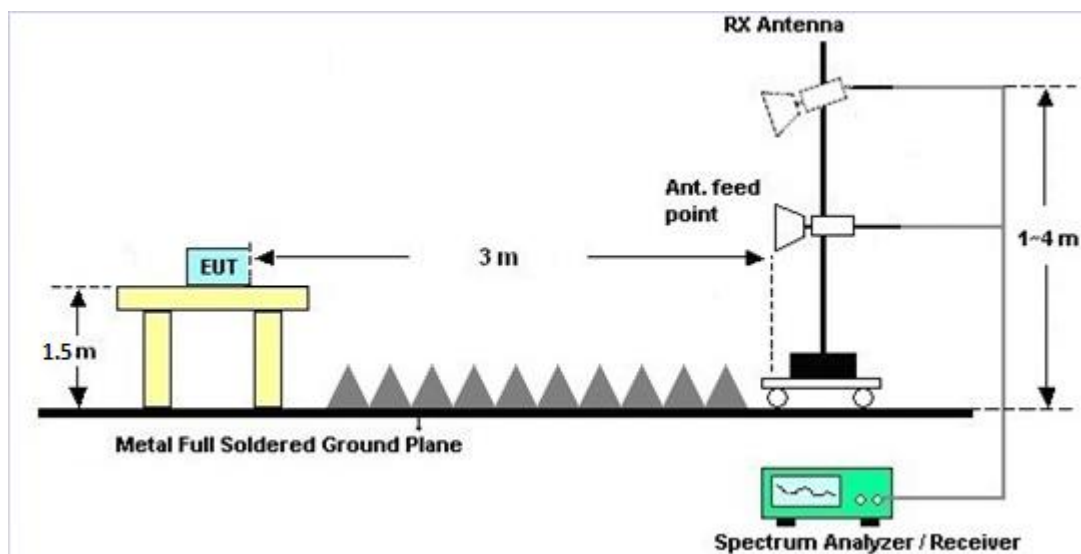
For radiated emissions below 30MHz



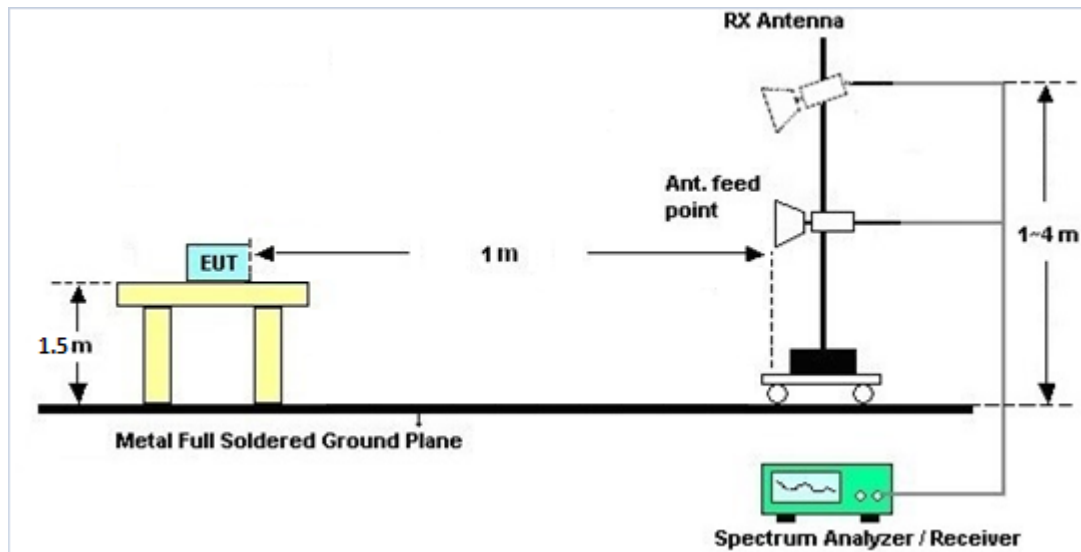
For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



For radiated emissions above 18GHz



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

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

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

3.5.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix C and D.

3.5.7 Duty Cycle

Please refer to Appendix E.

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

Please refer to Appendix C and D.

3.6 AC Conducted Emission Measurement

3.6.1 Limit of AC Conducted Emission

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

Frequency of Emission (MHz)	Conducted Limit (dB μ V)	
	Quasi-Peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

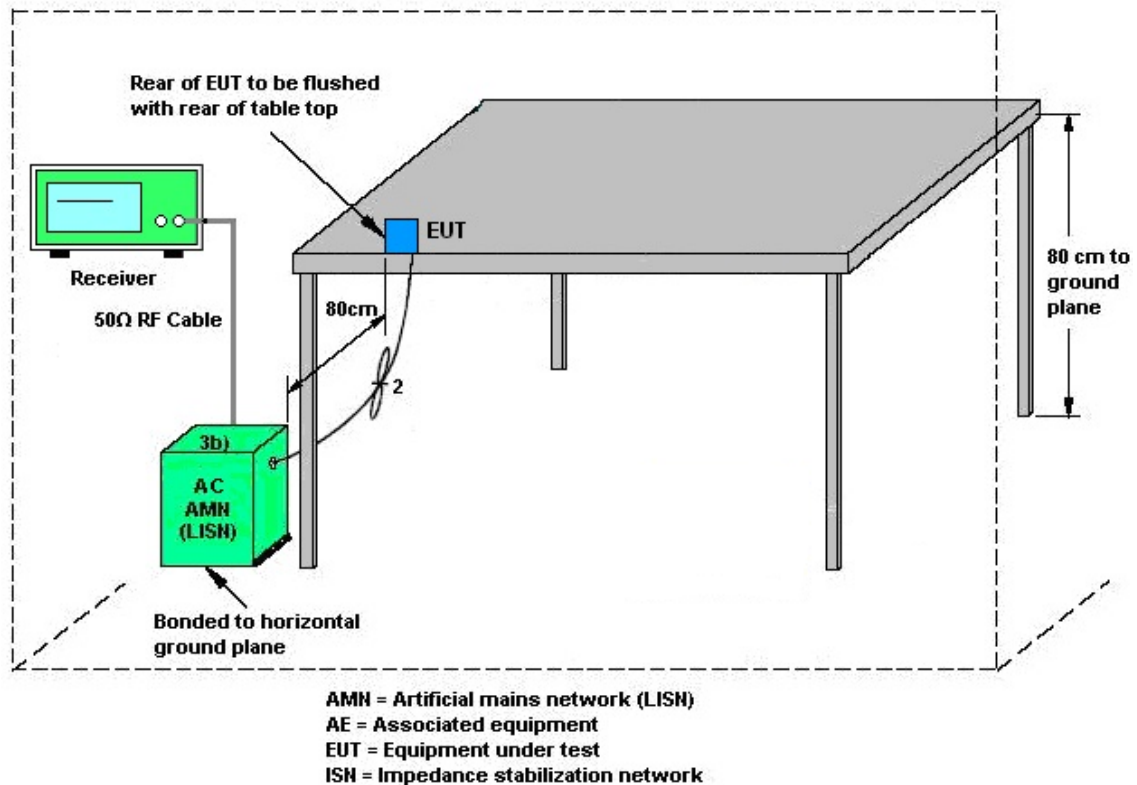
3.6.2 Measuring Instruments

See list of measuring equipment of this test report.

3.6.3 Test Procedures

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

3.6.4 Test Setup



3.6.5 Test Result of AC Conducted Emission

Please refer to Appendix B.



3.7 Antenna Requirements

3.7.1 Standard Applicable

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

3.7.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.7.3 Antenna Gain

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.



4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Preamplifier	EMCE	EMC184045B	980192	18GHz ~ 40GHz	Aug. 01, 2019	Apr. 07, 2020~ Jul. 06, 2020	Jul. 31, 2020	Radiation (03CH11-HY)
Amplifier	SONOMA	310N	187312	9kHz~1GHz	Dec. 03, 2019	Apr. 07, 2020~ Jul. 06, 2020	Dec. 02, 2020	Radiation (03CH11-HY)
Bilog Antenna	TESEQ	CBL 6111D & N-6-06	35414 & AT-N0602	30MHz~1GHz	Oct. 12, 2019	Apr. 07, 2020~ Jul. 06, 2020	Oct. 11, 2020	Radiation (03CH11-HY)
Horn Antenna	SCHWARZBE CK	BBHA 9120 D	9120D-132 6	1GHz ~ 18GHz	Nov. 04, 2019	Apr. 07, 2020~ Jul. 06, 2020	Nov. 03, 2020	Radiation (03CH11-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100315	9 kHz~30 MHz	Jan. 09, 2020	Apr. 07, 2020~ Jul. 06, 2020	Jan. 08, 2021	Radiation (03CH11-HY)
Preamplifier	Keysight	83017A	MY532700 80	1GHz~26.5GHz	Nov. 13, 2019	Apr. 07, 2020~ Jul. 06, 2020	Nov. 12, 2020	Radiation (03CH11-HY)
Spectrum Analyzer	Keysight	N9010A	MY542004 86	10Hz ~ 44GHz	Oct. 28, 2019	Apr. 07, 2020~ Jul. 06, 2020	Oct. 27, 2020	Radiation (03CH11-HY)
Controller	EMEC	EM 1000	N/A	Control Turn table & Ant Mast	N/A	Apr. 07, 2020~ Jul. 06, 2020	N/A	Radiation (03CH11-HY)
Antenna Mast	EMEC	AM-BS-4500- B	N/A	1~4m	N/A	Apr. 07, 2020~ Jul. 06, 2020	N/A	Radiation (03CH11-HY)
Turn Table	EMEC	TT 2000	N/A	0~360 Degree	N/A	Apr. 07, 2020~ Jul. 06, 2020	N/A	Radiation (03CH11-HY)
Preamplifier	Jet-Power	JPA0118-55-3 03K	171000180 0054002	1GHz~18GHz	Aug. 06, 2019	Apr. 07, 2020~ Jul. 06, 2020	Aug. 05, 2020	Radiation (03CH11-HY)
SHF-EHF Horn Antenna	SCHWARZBE CK	BBHA 9170	BBHA9170 576	18GHz- 40GHz	May 22, 2020	Apr. 07, 2020~ Jul. 06, 2020	May 21, 2021	Radiation (03CH11-HY)
Spectrum Analyzer	Keysight	N9010A	MY542004 86	10Hz~44GHz	Oct. 28, 2019	Apr. 07, 2020~ Jul. 06, 2020	Oct. 27, 2020	Radiation (03CH11-HY)
Software	Audix	E3 6.2009-8-24	RK-00105 3	N/A	N/A	Apr. 07, 2020~ Jul. 06, 2020	N/A	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY9837/4 PE	9kHz-30MHz	Mar. 12, 2020	Apr. 07, 2020~ Jul. 06, 2020	Mar. 11, 2021	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY2859/2	30MHz-40GHz	Mar. 12, 2020	Apr. 07, 2020~ Jul. 06, 2020	Mar. 11, 2021	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY9837/4 PE	30M-18G	Mar. 12, 2020	Apr. 07, 2020~ Jul. 06, 2020	Mar. 11, 2021	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY4274/2	30MHz-40GHz	Mar. 12, 2020	Apr. 07, 2020~ Jul. 06, 2020	Mar. 11, 2021	Radiation (03CH11-HY)
Filter	Wainwright	WLK4-1000-1 530-8000-40S S	SN11	1.53G Low Pass	Sep. 15, 2019	Apr. 07, 2020~ Jul. 06, 2020	Sep. 14, 2020	Radiation (03CH11-HY)
Filter	Wainwright	WHKX12-270 0-3000-18000 -60SS	SN3	3GHz High Pass Filter	Sep. 15, 2019	Apr. 07, 2020~ Jul. 06, 2020	Sep. 14, 2020	Radiation (03CH11-HY)
Hygrometer	TECPEL	DTN-303B	TP140325	N/A	Nov. 07, 2019	Apr. 07, 2020~ Jul. 06, 2020	Nov. 06, 2020	Radiation (03CH11-HY)
Hygrometer	TECPEL	DTN-303B	TP161237	N/A	Oct. 25, 2019	Apr. 07, 2020~ Jul. 06, 2020	Oct. 24, 2020	Radiation (03CH11-HY)



Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	May 05, 2020	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	9kHz~3.6GHz	Nov. 15, 2019	May 05, 2020	Nov. 14, 2020	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34913912	N/A	Nov. 07, 2019	May 05, 2020	Nov. 06, 2020	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Nov. 20, 2019	May 05, 2020	Nov. 19, 2020	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Nov. 15, 2019	May 05, 2020	Nov. 14, 2020	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	May 05, 2020	N/A	Conduction (CO05-HY)
LF Cable	HUBER + SUHNER	RG-214/U	LF01	N/A	Jan. 02, 2020	May 05, 2020	Jan. 01, 2021	Conduction (CO05-HY)
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100851	N/A	Jan. 02, 2020	May 05, 2020	Jan. 01, 2021	Conduction (CO05-HY)
Hygrometer	Testo	608-H2	41410069	N/A	Jun. 17, 2019	Mar. 30, 2020~ Jun. 04, 2020	Jun. 16, 2020	Conducted (TH05-HY)
Power Sensor	DARE	RPR3006W	15I00041S NO10	10MHz~6GHz	Jan. 22, 2020	Mar. 30, 2020~ Jun. 04, 2020	Jan. 21, 2021	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100057	9kHz-40GHz	Dec. 09, 2019	Mar. 30, 2020~ Jun. 04, 2020	Dec. 08, 2020	Conducted (TH05-HY)
Switch Control Manframe	Burgeon	ETF-1405-0	EC190015 7	N/A	Aug. 15, 2019	Mar. 30, 2020~ Jun. 04, 2020	Aug. 14, 2020	Conducted (TH05-HY)



5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.3
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.2
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Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.2
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Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.3
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Appendix A. Test Result of Conducted Test Items

Test Engineer:	Jacob Yu	Temperature:	21~25	°C
Test Date:	2020/3/30-2020/6/4	Relative Humidity:	51~54	%

TEST RESULTS DATA
6dB and 99% Occupied Bandwidth

2.4GHz Band Single Antenna										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Occupied BW (MHz)		6dB BW (MHz)		6dB BW Limit (MHz)	Pass/Fail
					Ant1	Ant2	Ant1	Ant2		
11b	1Mbps	1	1	2412	11.90	-	7.05	-	0.50	Pass
11b	1Mbps	1	6	2437	11.90	-	7.05	-	0.50	Pass
11b	1Mbps	1	11	2462	11.95	-	7.05	-	0.50	Pass
11b	1Mbps	1	12	2467	11.95	-	7.05	-	0.50	Pass
11b	1Mbps	1	13	2472	11.95	-	7.05	-	0.50	Pass
11g	6Mbps	1	1	2412	16.65	-	15.08	-	0.50	Pass
11g	6Mbps	1	6	2437	16.50	-	15.08	-	0.50	Pass
11g	6Mbps	1	11	2462	16.55	-	15.08	-	0.50	Pass
11g	6Mbps	1	12	2467	16.50	-	15.08	-	0.50	Pass
11g	6Mbps	1	13	2472	16.50	-	15.08	-	0.50	Pass
HT20	MCS0	1	1	2412	17.65	-	15.12	-	0.50	Pass
HT20	MCS0	1	6	2437	17.60	-	15.08	-	0.50	Pass
HT20	MCS0	1	11	2462	17.70	-	15.08	-	0.50	Pass
HT20	MCS0	1	12	2467	17.65	-	15.02	-	0.50	Pass
HT20	MCS0	1	13	2472	17.60	-	15.12	-	0.50	Pass

TEST RESULTS DATA
Average Output Power

2.4GHz Band Single Antenna																
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
					Ant1	Ant2	SUM	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	
11b	1Mbps	1	1	2412	17.40	-		30.00	-	-5.60	-	11.80	-	36.00	-	Pass
11b	1Mbps	1	6	2437	17.20	-		30.00	-	-5.60	-	11.60	-	36.00	-	Pass
11b	1Mbps	1	11	2462	17.40	-		30.00	-	-5.60	-	11.80	-	36.00	-	Pass
11b	1Mbps	1	12	2467	17.40	-		30.00	-	-5.60	-	11.80	-	36.00	-	Pass
11b	1Mbps	1	13	2472	17.60	-		30.00	-	-5.60	-	12.00	-	36.00	-	Pass
11g	6Mbps	1	1	2412	18.20	-		30.00	-	-5.60	-	12.60	-	36.00	-	Pass
11g	6Mbps	1	6	2437	17.50	-		30.00	-	-5.60	-	11.90	-	36.00	-	Pass
11g	6Mbps	1	11	2462	17.70	-		30.00	-	-5.60	-	12.10	-	36.00	-	Pass
11g	6Mbps	1	12	2467	16.90	-		30.00	-	-5.60	-	11.30	-	36.00	-	Pass
11g	6Mbps	1	13	2472	9.90	-		30.00	-	-5.60	-	4.30	-	36.00	-	Pass
HT20	MCS0	1	1	2412	18.10	-		30.00	-	-5.60	-	12.50	-	36.00	-	Pass
HT20	MCS0	1	6	2437	16.70	-		30.00	-	-5.60	-	11.10	-	36.00	-	Pass
HT20	MCS0	1	11	2462	16.60	-		30.00	-	-5.60	-	11.00	-	36.00	-	Pass
HT20	MCS0	1	12	2467	16.80	-		30.00	-	-5.60	-	11.20	-	36.00	-	Pass
HT20	MCS0	1	13	2472	9.00	-		30.00	-	-5.60	-	3.40	-	36.00	-	Pass

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

TEST RESULTS DATA
Peak Power Spectral Density

2.4GHz Band Single Antenna												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Peak PSD (dBm/3kHz)			DG (dBi)		Peak PSD Limit (dBm/3kHz)		Pass/Fail
					Ant1	Ant2	Worse + 3.01	Ant1	Ant2	Ant1	Ant2	
11b	1Mbps	1	1	2412	-5.31	-		-5.60	-	8.00	-	Pass
11b	1Mbps	1	6	2437	-6.22	-		-5.60	-	8.00	-	Pass
11b	1Mbps	1	11	2462	-5.38	-		-5.60	-	8.00	-	Pass
11b	1Mbps	1	12	2467	-4.91	-		-5.60	-	8.00	-	Pass
11b	1Mbps	1	13	2472	-5.63	-		-5.60	-	8.00	-	Pass
11g	6Mbps	1	1	2412	-6.73	-		-5.60	-	8.00	-	Pass
11g	6Mbps	1	6	2437	-7.76	-		-5.60	-	8.00	-	Pass
11g	6Mbps	1	11	2462	-8.34	-		-5.60	-	8.00	-	Pass
11g	6Mbps	1	12	2467	-8.38	-		-5.60	-	8.00	-	Pass
11g	6Mbps	1	13	2472	-16.57	-		-5.60	-	8.00	-	Pass
HT20	MCS0	1	1	2412	-7.35	-		-5.60	-	8.00	-	Pass
HT20	MCS0	1	6	2437	-8.31	-		-5.60	-	8.00	-	Pass
HT20	MCS0	1	11	2462	-8.32	-		-5.60	-	8.00	-	Pass
HT20	MCS0	1	12	2467	-8.50	-		-5.60	-	8.00	-	Pass
HT20	MCS0	1	13	2472	-15.29	-		-5.60	-	8.00	-	Pass

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



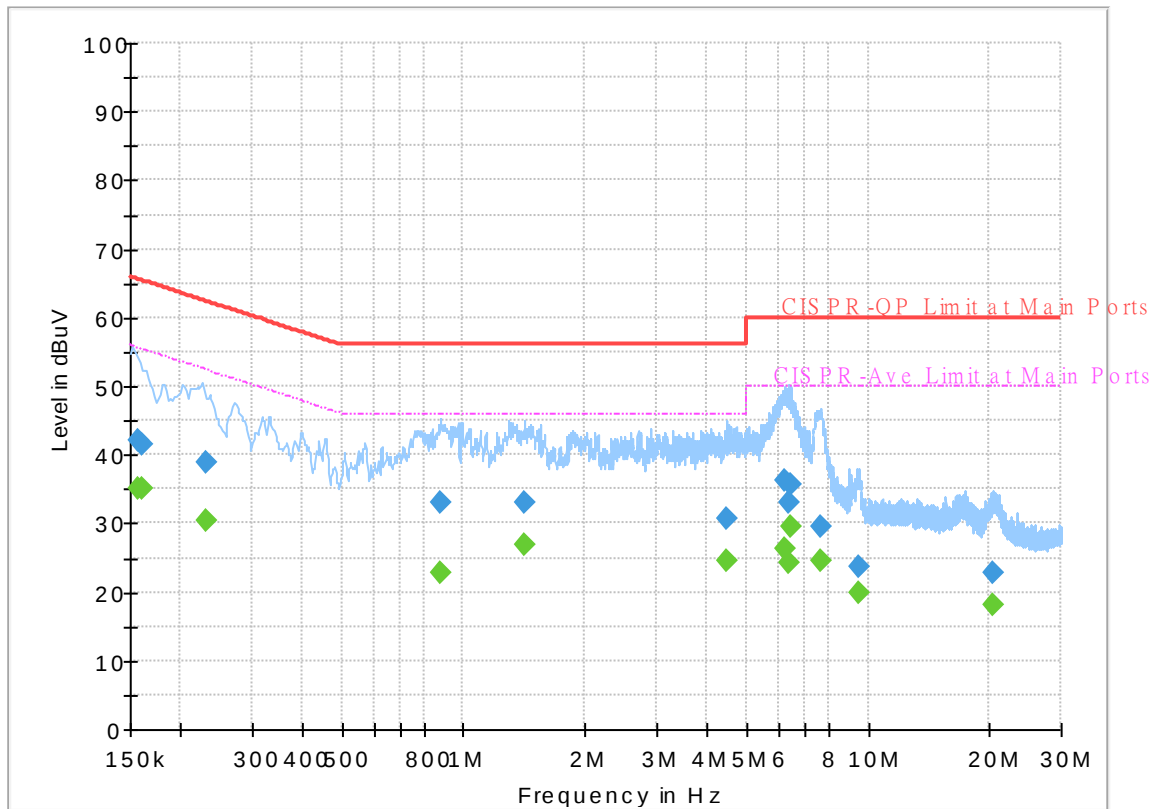
Appendix B. AC Conducted Emission Test Results

Test Engineer :	Howard Huang	Temperature :	21~25℃
		Relative Humidity :	42~45%

EUT Information

Report NO : 032014
 Test Mode : Mode 2
 Test Voltage : Power From System
 Phase : Line

Full Spectrum



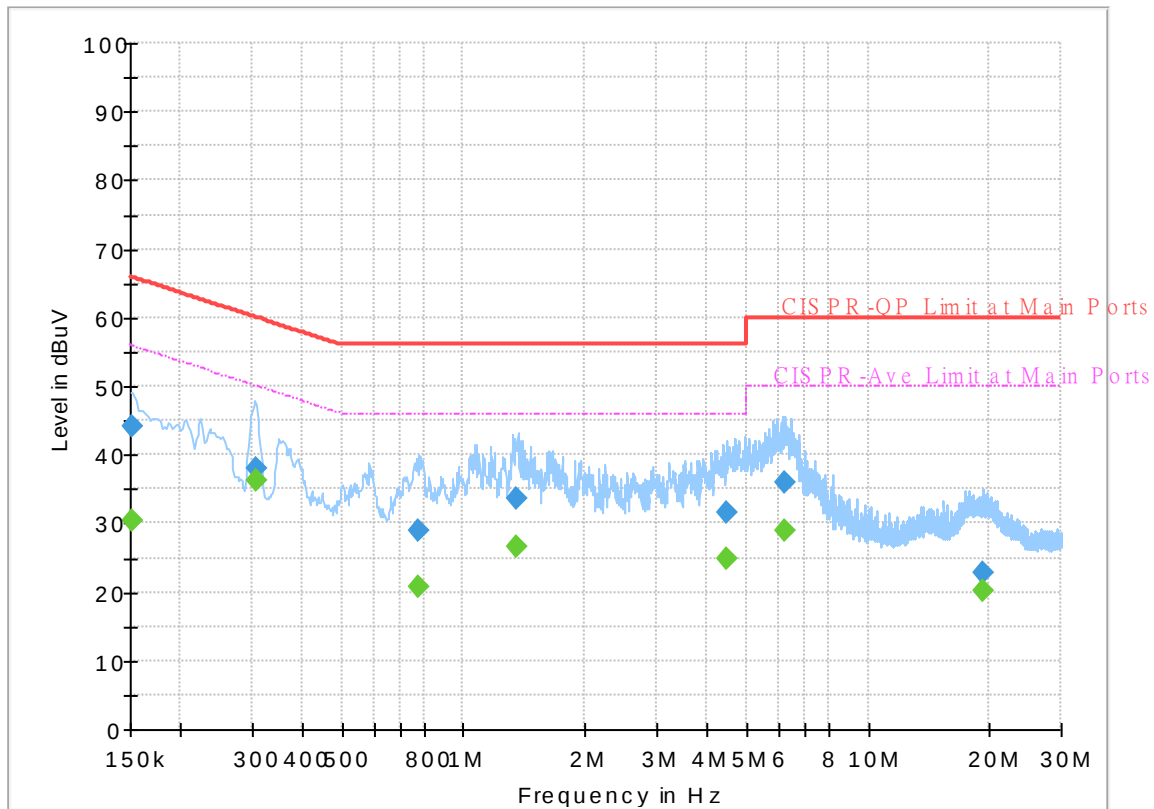
Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.156750	---	34.95	55.63	20.68	L1	OFF	19.5
0.156750	42.01	---	65.63	23.62	L1	OFF	19.5
0.160260	---	35.01	55.45	20.44	L1	OFF	19.5
0.160260	41.56	---	65.45	23.89	L1	OFF	19.5
0.231000	---	30.45	52.41	21.96	L1	OFF	19.5
0.231000	38.88	---	62.41	23.53	L1	OFF	19.5
0.872250	---	22.95	46.00	23.05	L1	OFF	19.5
0.872250	33.05	---	56.00	22.95	L1	OFF	19.5
1.421430	---	26.91	46.00	19.09	L1	OFF	19.6
1.421430	33.10	---	56.00	22.90	L1	OFF	19.6
4.479000	---	24.48	46.00	21.52	L1	OFF	19.6
4.479000	30.79	---	56.00	25.21	L1	OFF	19.6
6.245250	---	26.37	50.00	23.63	L1	OFF	19.7
6.245250	36.34	---	60.00	23.66	L1	OFF	19.7
6.383940	---	24.32	50.00	25.68	L1	OFF	19.7
6.383940	33.10	---	60.00	26.90	L1	OFF	19.7
6.472500	---	29.53	50.00	20.47	L1	OFF	19.7
6.472500	35.76	---	60.00	24.24	L1	OFF	19.7
7.617660	---	24.43	50.00	25.57	L1	OFF	19.7
7.617660	29.48	---	60.00	30.52	L1	OFF	19.7
9.462750	---	19.83	50.00	30.17	L1	OFF	19.8
9.462750	23.76	---	60.00	36.24	L1	OFF	19.8
20.323500	---	17.99	50.00	32.01	L1	OFF	19.8
20.323500	22.70	---	60.00	37.30	L1	OFF	19.8

EUT Information

Report NO : 032014
 Test Mode : Mode 2
 Test Voltage : Power From System
 Phase : Neutral

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.152160	---	30.41	55.88	25.47	N	OFF	19.5
0.152160	44.22	---	65.88	21.66	N	OFF	19.5
0.306870	---	36.31	50.06	13.75	N	OFF	19.5
0.306870	38.11	---	60.06	21.95	N	OFF	19.5
0.776400	---	20.90	46.00	25.10	N	OFF	19.6
0.776400	28.94	---	56.00	27.06	N	OFF	19.6
1.358250	---	26.61	46.00	19.39	N	OFF	19.6
1.358250	33.64	---	56.00	22.36	N	OFF	19.6
4.484940	---	24.76	46.00	21.24	N	OFF	19.6
4.484940	31.54	---	56.00	24.46	N	OFF	19.6
6.240750	---	28.94	50.00	21.06	N	OFF	19.7
6.240750	35.97	---	60.00	24.03	N	OFF	19.7
19.140180	---	20.17	50.00	29.83	N	OFF	19.9
19.140180	22.77	---	60.00	37.23	N	OFF	19.9



Appendix C. Radiated Spurious Emission

Test Engineer :	Cookie Ku, Fu Chen and Troye Hsieh	Temperature :	19.1~21.6°C
		Relative Humidity :	63.1~68.9%

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.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		2385.18	53.22	-20.78	74	42.31	27.53	16.62	33.24	166	318	P	H
		2390	42.53	-11.47	54	31.62	27.52	16.62	33.23	166	318	A	H
	*	2412	98.36	-	-	87.47	27.48	16.64	33.23	166	318	P	H
	*	2412	94.69	-	-	83.8	27.48	16.64	33.23	166	318	A	H
													H
													H
		2389.905	53.58	-20.42	74	42.67	27.52	16.62	33.23	219	20	P	V
		2390	43.4	-10.6	54	32.49	27.52	16.62	33.23	219	20	A	V
	*	2412	102.82	-	-	91.93	27.48	16.64	33.23	219	20	P	V
	*	2412	99.16	-	-	88.27	27.48	16.64	33.23	219	20	A	V
													V
													V
802.11b CH 06 2437MHz		2375.44	52.78	-21.22	74	41.86	27.55	16.61	33.24	203	315	P	H
		2385.04	41.88	-12.12	54	30.97	27.53	16.62	33.24	203	315	A	H
	*	2437	98.1	-	-	87.22	27.43	16.67	33.22	203	315	P	H
	*	2437	94.91	-	-	84.03	27.43	16.67	33.22	203	315	A	H
		2488.96	52.67	-21.33	74	41.91	27.24	16.73	33.21	203	315	P	H
		2484.32	41.75	-12.25	54	30.98	27.26	16.72	33.21	203	315	A	H
		2367.12	53.38	-20.62	74	42.45	27.57	16.6	33.24	237	0	P	V
		2389.68	42.16	-11.84	54	31.25	27.52	16.62	33.23	237	0	A	V
	*	2437	102.49	-	-	91.61	27.43	16.67	33.22	237	0	P	V
	*	2437	99.14	-	-	88.26	27.43	16.67	33.22	237	0	A	V
		2486.24	53.53	-20.47	74	42.76	27.26	16.72	33.21	237	0	P	V
		2484.88	41.74	-12.26	54	30.97	27.26	16.72	33.21	237	0	A	V



802.11b CH 11 2462MHz	*	2462	97.99	-	-	87.16	27.35	16.7	33.22	162	71	P	H
	*	2462	93.81	-	-	82.98	27.35	16.7	33.22	162	71	A	H
		2491.44	53.01	-20.99	74	42.26	27.23	16.73	33.21	162	71	P	H
		2484	42.63	-11.37	54	31.86	27.26	16.72	33.21	162	71	A	H
													H
													H
	*	2462	101.99	-	-	91.16	27.35	16.7	33.22	251	360	P	V
	*	2462	97.79	-	-	86.96	27.35	16.7	33.22	251	360	A	V
		2494.32	53.02	-20.98	74	42.28	27.22	16.73	33.21	251	360	P	V
		2483.96	43.2	-10.8	54	32.43	27.26	16.72	33.21	251	360	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



WIFI Ant. 1	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	98.31	-	-	87.5	27.33	16.7	33.22	319	76	P	H
	*	2467	95.13	-	-	84.32	27.33	16.7	33.22	319	76	A	H
		2495.12	53.01	-20.99	74	42.27	27.22	16.73	33.21	319	76	P	H
		2484.12	42.33	-11.67	54	31.56	27.26	16.72	33.21	319	76	A	H
													H
													H
	*	2467	100.88	-	-	90.07	27.33	16.7	33.22	309	28	P	V
	*	2467	97.77	-	-	86.96	27.33	16.7	33.22	309	28	A	V
		2486.72	53.1	-20.9	74	42.33	27.25	16.73	33.21	309	28	P	V
		2484.28	42.52	-11.48	54	31.75	27.26	16.72	33.21	309	28	A	V
													V
													V
802.11b CH 13 2472MHz	*	2472	98.74	-	-	87.94	27.31	16.71	33.22	318	72	P	H
	*	2472	94.95	-	-	84.15	27.31	16.71	33.22	318	72	A	H
		2483.96	53.76	-20.24	74	42.99	27.26	16.72	33.21	318	72	P	H
		2485.92	43.4	-10.6	54	32.63	27.26	16.72	33.21	318	72	A	H
													H
													H
	*	2472	101.05	-	-	90.25	27.31	16.71	33.22	400	27	P	V
	*	2472	97.33	-	-	86.53	27.31	16.71	33.22	400	27	A	V
		2483.8	54.28	-19.72	74	43.51	27.26	16.72	33.21	400	27	P	V
		2486	44.3	-9.7	54	33.53	27.26	16.72	33.21	400	27	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11b (Harmonic @ 3m)

WIFI Ant. 1	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	41.82	-32.18	74	60.32	31	10.94	60.44	100	0	P	H
													H
													H
													H
		4824	41.51	-32.49	74	60.01	31	10.94	60.44	100	0	P	V
													V
													V
													V
802.11b CH 06 2437MHz		4874	40.02	-33.98	74	58.46	31	10.96	60.4	100	0	P	H
		7311	54.4	-19.6	74	63.63	36.5	13.38	59.11	102	217	P	H
		7311	50.51	-3.49	54	59.74	36.5	13.38	59.11	102	217	A	H
													H
		4874	41.82	-32.18	74	60.26	31	10.96	60.4	100	0	P	V
		7311	54.8	-19.2	74	64.03	36.5	13.38	59.11	361	149	P	V
		7311	50.52	-3.48	54	59.75	36.5	13.38	59.11	361	149	A	V
													V
802.11b CH 11 2462MHz		4924	40.55	-33.45	74	58.88	31.05	10.98	60.36	100	0	P	H
		7386	50.7	-23.3	74	60.19	36.36	13.22	59.07	100	146	P	H
		7386	45.91	-8.09	54	55.4	36.36	13.22	59.07	100	146	A	H
													H
		4924	41.7	-32.3	74	60.03	31.05	10.98	60.36	100	0	P	V
		7386	53.09	-20.91	74	62.58	36.36	13.22	59.07	400	149	P	V
		7386	48.64	-5.36	54	58.13	36.36	13.22	59.07	400	149	A	V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



WIFI Ant. 1	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	41.21	-32.79	74	59.5	31.07	10.99	60.35	100	0	P	H
		7401	51.4	-22.6	74	60.97	36.3	13.19	59.06	100	146	P	H
		7401	45.9	-8.1	54	55.47	36.3	13.19	59.06	100	146	A	H
													H
		4934	41.55	-32.45	74	59.84	31.07	10.99	60.35	100	0	P	V
		7401	52.84	-21.16	74	62.41	36.3	13.19	59.06	368	168	P	V
		7401	48.33	-5.67	54	57.9	36.3	13.19	59.06	368	168	A	V
													V
802.11b CH 13 2472MHz		4944	40.72	-33.28	74	58.97	31.09	11	60.34	100	0	P	H
		7416	52.05	-21.95	74	61.57	36.33	13.2	59.05	100	71	P	H
		7416	46.78	-7.22	54	56.3	36.33	13.2	59.05	100	71	A	H
													H
		4944	41.92	-32.08	74	60.17	31.09	11	60.34	100	0	P	V
		7416	53.18	-20.82	74	62.7	36.33	13.2	59.05	396	168	P	V
		7416	48.41	-5.59	54	57.93	36.33	13.2	59.05	396	168	A	V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



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

WIFI Ant. 1	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	57.19	-16.81	74	46.28	27.52	16.62	33.23	262	63	P	H
		2390	44.93	-9.07	54	34.02	27.52	16.62	33.23	262	63	A	H
	*	2412	98.45	-	-	87.56	27.48	16.64	33.23	262	63	P	H
	*	2412	90.62	-	-	79.73	27.48	16.64	33.23	262	63	A	H
													H
													H
		2385.705	61.05	-12.95	74	50.14	27.53	16.62	33.24	357	15	P	V
		2390	48.27	-5.73	54	37.36	27.52	16.62	33.23	357	15	A	V
	*	2412	103.43	-	-	92.54	27.48	16.64	33.23	357	15	P	V
	*	2412	95.92	-	-	85.03	27.48	16.64	33.23	357	15	A	V
													V
													V
802.11g CH 06 2437MHz		2327.28	53.3	-20.7	74	42.34	27.65	16.56	33.25	287	71	P	H
		2385.2	41.95	-12.05	54	31.04	27.53	16.62	33.24	287	71	A	H
	*	2437	99.45	-	-	88.57	27.43	16.67	33.22	287	71	P	H
	*	2437	91.79	-	-	80.91	27.43	16.67	33.22	287	71	A	H
		2497.12	52.64	-21.36	74	41.9	27.21	16.74	33.21	287	71	P	H
		2485.28	41.81	-12.19	54	31.04	27.26	16.72	33.21	287	71	A	H
		2341.36	52.91	-21.09	74	41.96	27.62	16.57	33.24	260	29	P	V
		2389.84	42.63	-11.37	54	31.72	27.52	16.62	33.23	260	29	A	V
	*	2437	102.66	-	-	91.78	27.43	16.67	33.22	260	29	P	V
	*	2437	94.74	-	-	83.86	27.43	16.67	33.22	260	29	A	V
		2486.64	52.88	-21.12	74	42.11	27.25	16.73	33.21	260	29	P	V
		2483.92	41.88	-12.12	54	31.11	27.26	16.72	33.21	260	29	A	V



802.11g CH 11 2462MHz	*	2462	98.92	-	-	88.09	27.35	16.7	33.22	317	67	P	H
	*	2462	91.29	-	-	80.46	27.35	16.7	33.22	317	67	A	H
		2483.68	58.38	-15.62	74	47.6	27.27	16.72	33.21	317	67	P	H
		2483.52	45.16	-8.84	54	34.38	27.27	16.72	33.21	317	67	A	H
													H
													H
	*	2462	102.15	-	-	91.32	27.35	16.7	33.22	350	11	P	V
	*	2462	94.17	-	-	83.34	27.35	16.7	33.22	350	11	A	V
		2483.88	60.65	-13.35	74	49.88	27.26	16.72	33.21	350	11	P	V
		2483.52	46.49	-7.51	54	35.71	27.27	16.72	33.21	350	11	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



WIFI Ant. 1	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	97	-	-	86.19	27.33	16.7	33.22	283	80	P	H
	*	2467	89.68	-	-	78.87	27.33	16.7	33.22	283	80	A	H
		2483.96	65.12	-8.88	74	54.35	27.26	16.72	33.21	283	80	P	H
		2483.52	47.66	-6.34	54	36.88	27.27	16.72	33.21	283	80	A	H
													H
													H
	*	2467	101.03	-	-	90.22	27.33	16.7	33.22	347	13	P	V
	*	2467	93.44	-	-	82.63	27.33	16.7	33.22	347	13	A	V
		2483.68	67.95	-6.05	74	57.17	27.27	16.72	33.21	347	13	P	V
		2483.6	50.78	-3.22	54	40	27.27	16.72	33.21	347	13	A	V
													V
													V
802.11g CH 13 2472MHz	*	2472	91.06	-	-	80.26	27.31	16.71	33.22	284	65	P	H
	*	2472	83.46	-	-	72.66	27.31	16.71	33.22	284	65	A	H
		2483.56	65.28	-8.72	74	54.5	27.27	16.72	33.21	284	65	P	H
		2483.52	48.83	-5.17	54	38.05	27.27	16.72	33.21	284	65	A	H
													H
													H
	*	2472	95.19	-	-	84.39	27.31	16.71	33.22	354	13	P	V
	*	2472	86.36	-	-	75.56	27.31	16.71	33.22	354	13	A	V
		2483.6	64.85	-9.15	74	54.07	27.27	16.72	33.21	354	13	P	V
		2483.52	50.78	-3.22	54	40	27.27	16.72	33.21	354	13	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11g (Harmonic @ 3m)

WIFI Ant. 1	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	40.31	-33.69	74	58.81	31	10.94	60.44	100	0	P	H
		12060	48.56	-25.44	74	53.61	38.82	18.6	62.47	100	0	P	H
													H
													H
		4824	39.46	-34.54	74	57.96	31	10.94	60.44	100	0	P	V
		12060	49.72	-24.28	74	54.77	38.82	18.6	62.47	100	0	P	V
													V
													V
802.11g CH 06 2437MHz		7311	64.5	-9.5	74	73.73	36.5	13.38	59.11	100	150	P	H
		7311	49.13	-4.87	54	58.36	36.5	13.38	59.11	100	150	A	H
		12185	49.25	-24.75	74	54.3	38.9	18.67	62.62	100	0	P	H
													H
		7311	64.52	-9.48	74	73.75	36.5	13.38	59.11	348	144	P	V
		7311	48.7	-5.3	54	57.93	36.5	13.38	59.11	348	144	A	V
		12185	55.87	-18.13	74	60.92	38.9	18.67	62.62	307	199	P	V
		12185	39.91	-14.09	54	44.96	38.9	18.67	62.62	307	199	A	V
802.11g CH 11 2462MHz		7386	66.62	-7.38	74	76.11	36.36	13.22	59.07	100	52	P	H
		7386	50.28	-3.72	54	59.77	36.36	13.22	59.07	100	52	A	H
		12310	51.86	-22.14	74	57.2	38.69	18.74	62.77	400	94	P	H
		12310	37.25	-16.75	54	42.59	38.69	18.74	62.77	400	94	A	H
		7386	63.86	-10.14	74	73.35	36.36	13.22	59.07	357	142	P	V
		7386	48.08	-5.92	54	57.57	36.36	13.22	59.07	357	142	A	V
		12310	49.83	-24.17	74	55.17	38.69	18.74	62.77	100	0	P	V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



WIFI Ant. 1	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		7401	65.92	-8.08	74	75.49	36.3	13.19	59.06	100	57	P	H
		7401	48.18	-5.82	54	57.75	36.3	13.19	59.06	100	57	A	H
		12335	49.95	-24.05	74	55.32	38.67	18.76	62.8	100	0	P	H
													H
		7401	64.2	-9.8	74	73.77	36.3	13.19	59.06	396	149	P	V
		7401	46.84	-7.16	54	56.41	36.3	13.19	59.06	396	149	A	V
		12335	49.71	-24.29	74	55.08	38.67	18.76	62.8	100	0	P	V
													V
802.11g CH 13 2472MHz		4944	39.82	-34.18	74	58.07	31.09	11	60.34	100	0	P	H
		7416	43.04	-30.96	74	52.56	36.33	13.2	59.05	100	0	P	H
													H
													H
		4944	40.8	-33.2	74	59.05	31.09	11	60.34	100	0	P	V
		7416	43.47	-30.53	74	52.99	36.33	13.2	59.05	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 01 2412MHz		2389.59	61.01	-12.99	74	50.1	27.52	16.62	33.23	262	77	P	H
		2390	46.39	-7.61	54	35.48	27.52	16.62	33.23	262	77	A	H
	*	2412	99.47	-	-	88.58	27.48	16.64	33.23	262	77	P	H
	*	2412	91.97	-	-	81.08	27.48	16.64	33.23	262	77	A	H
													H
													H
		2389.695	65.99	-8.01	74	55.08	27.52	16.62	33.23	216	360	P	V
		2390	50	-4	54	39.09	27.52	16.62	33.23	216	360	A	V
	*	2412	104.09	-	-	93.2	27.48	16.64	33.23	216	360	P	V
	*	2412	96.66	-	-	85.77	27.48	16.64	33.23	216	360	A	V
													V
													V
802.11n HT20 CH 06 2437MHz		2334.16	53.01	-20.99	74	42.07	27.63	16.56	33.25	287	70	P	H
		2389.52	42.02	-11.98	54	31.11	27.52	16.62	33.23	287	70	A	H
	*	2437	100.04	-	-	89.16	27.43	16.67	33.22	287	70	P	H
	*	2437	91.91	-	-	81.03	27.43	16.67	33.22	287	70	A	H
		2489.92	52.97	-21.03	74	42.21	27.24	16.73	33.21	287	70	P	H
		2483.84	41.88	-12.12	54	31.11	27.26	16.72	33.21	287	70	A	H
		2369.36	53.02	-20.98	74	42.1	27.56	16.6	33.24	363	58	P	V
		2386.48	41.91	-12.09	54	30.99	27.53	16.62	33.23	363	58	A	V
	*	2437	96.85	-	-	85.97	27.43	16.67	33.22	363	58	P	V
	*	2437	89.14	-	-	78.26	27.43	16.67	33.22	363	58	A	V
		2494.56	53.08	-20.92	74	42.34	27.22	16.73	33.21	363	58	P	V
		2484.24	41.74	-12.26	54	30.97	27.26	16.72	33.21	363	58	A	V



802.11n HT20 CH 11 2462MHz	*	2462	99.62	-	-	88.79	27.35	16.7	33.22	282	65	P	H
	*	2462	91.41	-	-	80.58	27.35	16.7	33.22	282	65	A	H
		2484.8	61.66	-12.34	74	50.89	27.26	16.72	33.21	282	65	P	H
		2483.52	47.07	-6.93	54	36.29	27.27	16.72	33.21	282	65	A	H
													H
													H
	*	2462	101.87	-	-	91.04	27.35	16.7	33.22	350	24	P	V
	*	2462	94.33	-	-	83.5	27.35	16.7	33.22	350	24	A	V
		2484.36	64.27	-9.73	74	53.5	27.26	16.72	33.21	350	24	P	V
		2483.52	48.36	-5.64	54	37.58	27.27	16.72	33.21	350	24	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 12 2467MHz	*	2467	98.24	-	-	87.43	27.33	16.7	33.22	284	65	P	H
	*	2467	91.25	-	-	80.44	27.33	16.7	33.22	284	65	A	H
		2484.08	67.28	-6.72	74	56.51	27.26	16.72	33.21	284	65	P	H
		2483.56	49.25	-4.75	54	38.47	27.27	16.72	33.21	284	65	A	H
													H
													H
	*	2467	101.45	-	-	90.64	27.33	16.7	33.22	351	27	P	V
	*	2467	93.68	-	-	82.87	27.33	16.7	33.22	351	27	A	V
		2483.6	69.55	-4.45	74	58.77	27.27	16.72	33.21	351	27	P	V
		2483.52	50.94	-3.06	54	40.16	27.27	16.72	33.21	351	27	A	V
													V
													V
802.11n HT20 CH 13 2472MHz	*	2472	90.36	-	-	79.56	27.31	16.71	33.22	317	69	P	H
	*	2472	83.02	-	-	72.22	27.31	16.71	33.22	317	69	A	H
		2483.56	63.35	-10.65	74	52.57	27.27	16.72	33.21	317	69	P	H
		2483.52	48.71	-5.29	54	37.93	27.27	16.72	33.21	317	69	A	H
													H
													H
	*	2472	93.15	-	-	82.35	27.31	16.71	33.22	362	27	P	V
	*	2472	85.56	-	-	74.76	27.31	16.71	33.22	362	27	A	V
		2483.52	64.54	-9.46	74	53.76	27.27	16.72	33.21	362	27	P	V
		2483.52	50.36	-3.64	54	39.58	27.27	16.72	33.21	362	27	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



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

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 01 2412MHz		4824	39.93	-34.07	74	58.43	31	10.94	60.44	100	0	P	H
													H
													H
													H
		4824	40.6	-33.4	74	59.1	31	10.94	60.44	100	0	P	V
													V
													V
													V
802.11n HT20 CH 06 2437MHz		7311	66.07	-7.93	74	75.3	36.5	13.38	59.11	100	61	P	H
		7311	50.43	-3.57	54	59.66	36.5	13.38	59.11	100	61	A	H
		12185	49.93	-24.07	74	54.98	38.9	18.67	62.62	100	0	P	H
													H
		7311	65.79	-8.21	74	75.02	36.5	13.38	59.11	366	150	P	V
		7311	48.77	-5.23	54	58	36.5	13.38	59.11	366	150	A	V
		12185	49.96	-24.04	74	55.01	38.9	18.67	62.62	100	0	P	V
													V
802.11n HT20 CH 11 2462MHz		7386	66.59	-7.41	74	76.08	36.36	13.22	59.07	100	56	P	H
		7386	50.29	-3.71	54	59.78	36.36	13.22	59.07	100	56	A	H
		12310	48.3	-25.7	74	53.64	38.69	18.74	62.77	100	0	P	H
													H
		7386	63.27	-10.73	74	72.76	36.36	13.22	59.07	314	148	P	V
		7386	45.33	-8.67	54	54.82	36.36	13.22	59.07	314	148	A	V
		12310	47.46	-26.54	74	52.8	38.69	18.74	62.77	200	145	P	V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 12 2467MHz		7401	66.65	-7.35	74	76.22	36.3	13.19	59.06	100	58	P	H
		7401	48.9	-5.1	54	58.47	36.3	13.19	59.06	100	58	A	H
		12335	48.46	-25.54	74	53.83	38.67	18.76	62.8	100	0	P	H
													H
		7401	65.09	-8.91	74	74.66	36.3	13.19	59.06	368	147	P	V
		7401	48.86	-5.14	54	58.43	36.3	13.19	59.06	368	147	A	V
		12335	49.91	-24.09	74	55.28	38.67	18.76	62.8	100	0	P	V
													V
802.11n HT20 CH 13 2472MHz		4944	40.32	-33.68	74	58.57	31.09	11	60.34	100	0	P	H
		7416	43.13	-30.87	74	52.65	36.33	13.2	59.05	100	0	P	H
													H
													H
		4944	39.76	-34.24	74	58.01	31.09	11	60.34	100	0	P	V
		7416	42.22	-31.78	74	51.74	36.33	13.2	59.05	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 above 18GHz****2.4GHz WIFI 802.11n HT20 (SHF)**

WIFI Ant. 1	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)
2.4GHz 802.11n HT20 SHF		23635	42.72	-31.28	74	47.85	38.9	9.27	53.3	100	0	P	H
													H
													H
													H
													H
													H
		23579	41.95	-32.05	74	47.07	38.9	9.28	53.3	100	0	P	V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												

Emission below 1GHz

2.4GHz WIFI 802.11n HT20 (LF)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
2.4GHz 802.11n HT20 LF		39.7	23.39	-16.61	40	35.56	19.4	0.91	32.48	-	-	P	H
		53.28	19.65	-20.35	40	38.44	12.68	1.06	32.53	-	-	P	H
		129.91	25.72	-17.78	43.5	39.16	17.37	1.63	32.44	-	-	P	H
		862.26	29.25	-16.75	46	27.9	29.01	4.23	31.89	-	-	P	H
		911.73	29.54	-16.46	46	27.92	28.86	4.34	31.58	-	-	P	H
		942.77	30.66	-15.34	46	27.72	29.69	4.42	31.17	100	0	P	H
													H
													H
													H
													H
													H
													H
		39.7	33.29	-6.71	40	45.46	19.4	0.91	32.48	100	0	P	V
		49.4	27.54	-12.46	40	44.69	14.37	1.02	32.54	-	-	P	V
		53.28	29.29	-10.71	40	48.08	12.68	1.06	32.53	-	-	P	V
		854.5	29.34	-16.66	46	28.16	28.9	4.21	31.93	-	-	P	V
		902.03	29.45	-16.55	46	27.98	28.87	4.3	31.7	-	-	P	V
		940.83	30.92	-15.08	46	28.13	29.57	4.41	31.19	-	-	P	V
													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.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
CH 01													
2412MHz		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

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

2. Level(dBμV/m) =

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

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

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

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

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

= 55.45 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)

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

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

= 43.54 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 43.54(dBμV/m) – 54(dBμV/m)

= -10.46(dB)

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



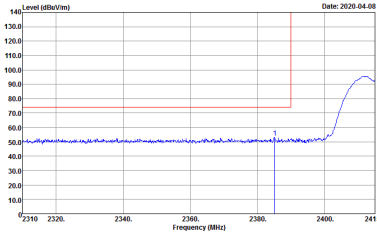
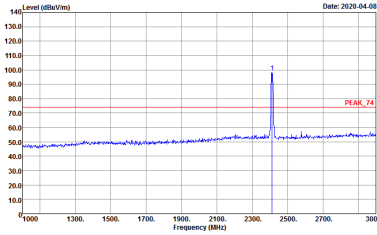
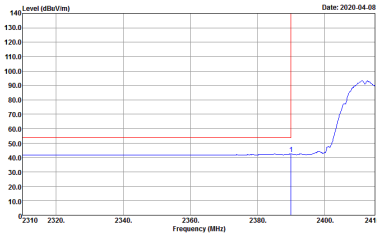
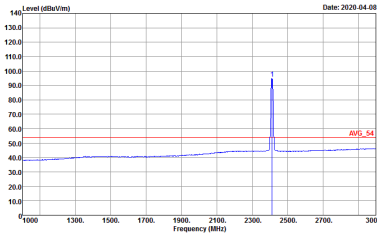
Appendix D. Radiated Spurious Emission Plots

Test Engineer :	Cookie Ku, Fu Chen and Troye Hsieh	Temperature :	19.1~21.6°C
		Relative Humidity :	63.1~68.9%

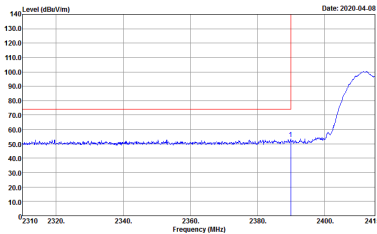
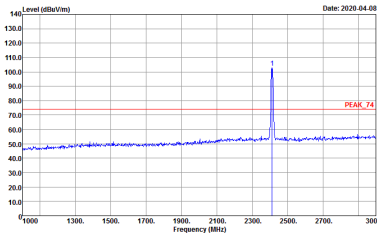
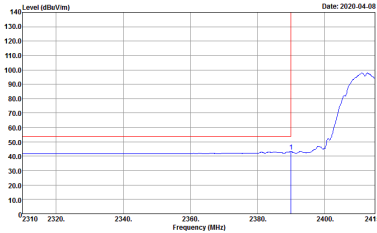
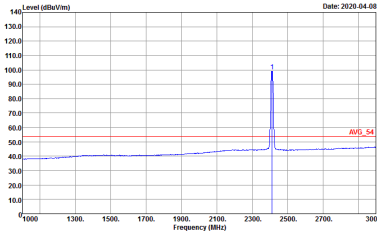
Note symbol

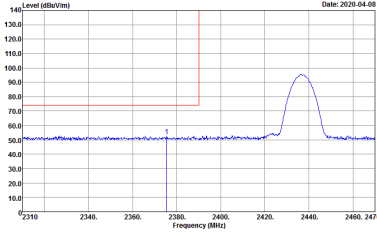
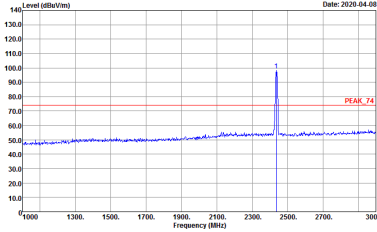
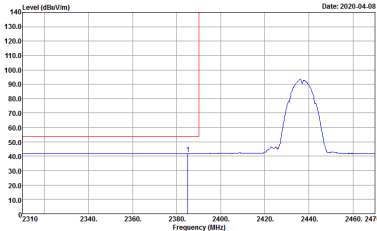
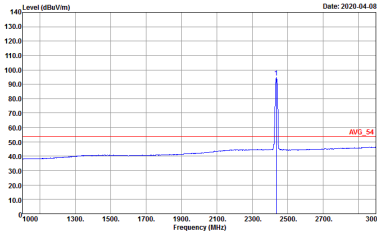
-L	Low channel location
-R	High channel location

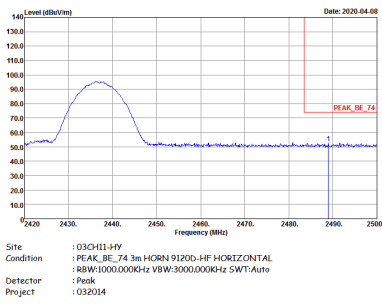
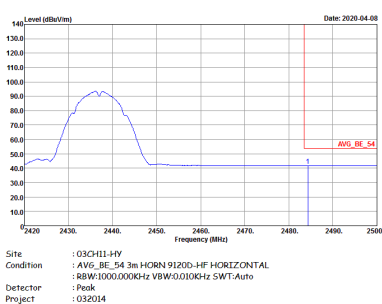
2.4GHz 2400~2483.5MHz
WIFI 802.11b (Band Edge @ 3m)

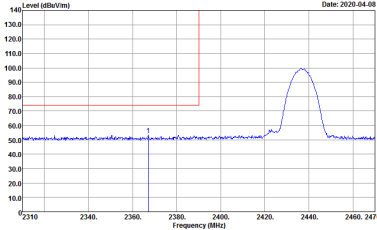
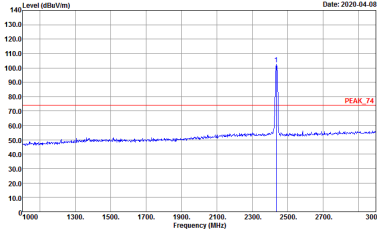
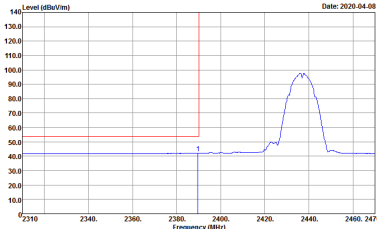
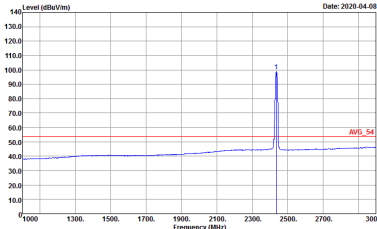
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014
	 Site : 03CH11-HY Condition : AV6_54 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014	 Site : 03CH11-HY Condition : AV6_54 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014

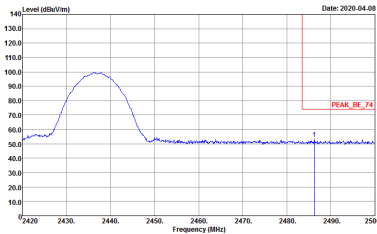
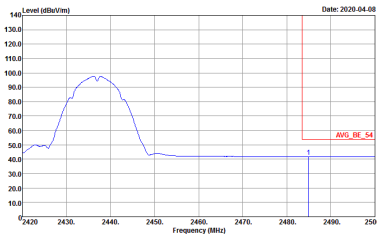


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 032014	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 032014
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 032014	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 032014

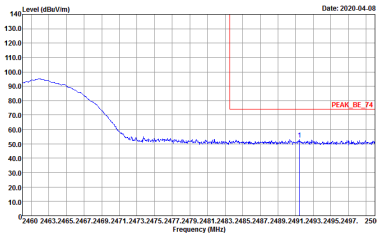
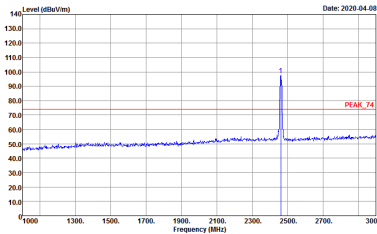
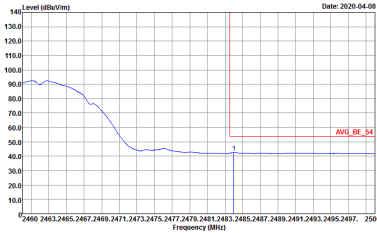
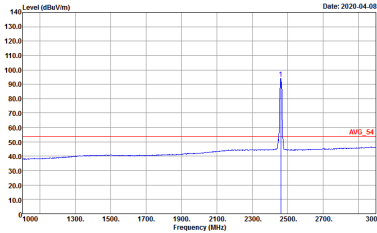
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
1	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014

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

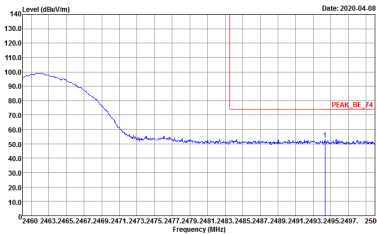
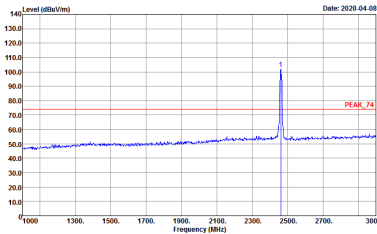
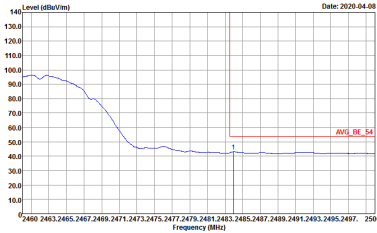
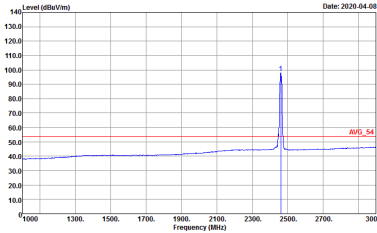
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
1	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014
	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
1	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 91200-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 032014	Left blank
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 91200-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 032014	Left blank

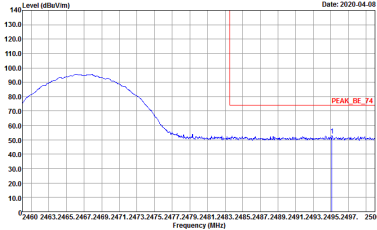
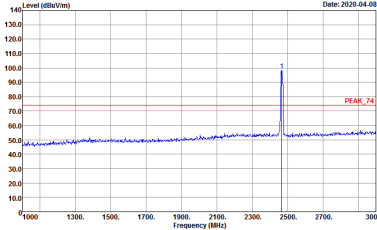
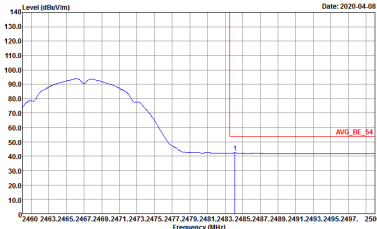
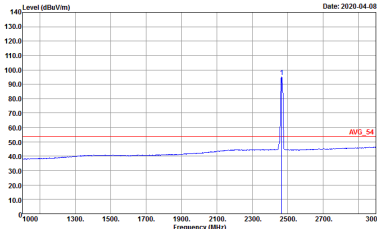


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014
	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014

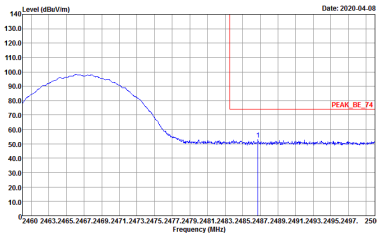
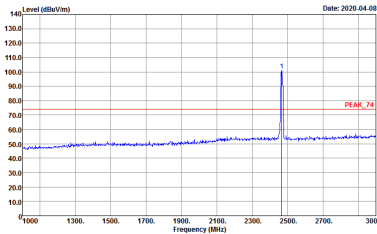
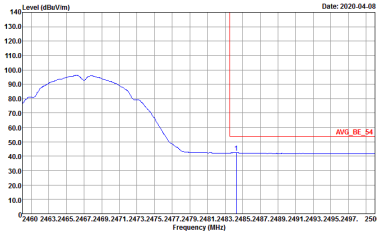
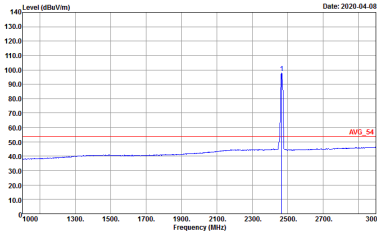


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 032014	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 032014
	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 032014	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 032014

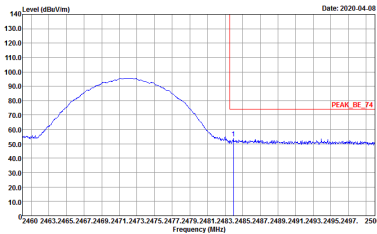
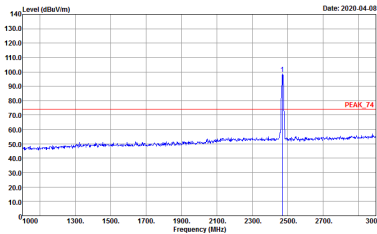
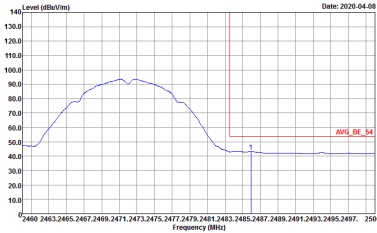
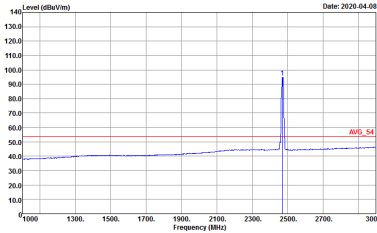


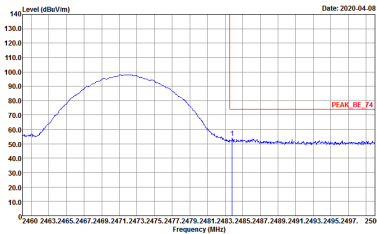
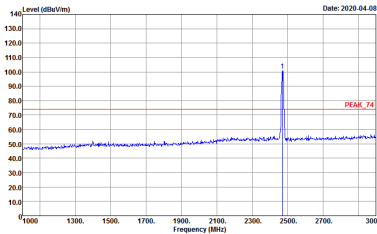
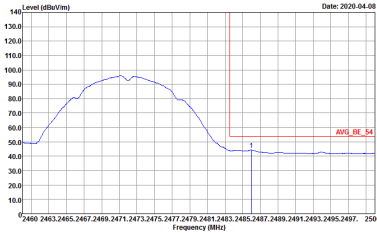
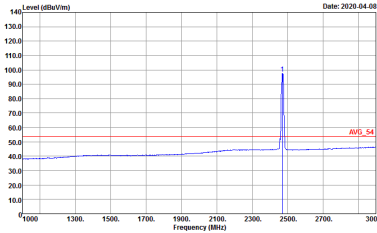
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH12 2467MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 032014	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 032014
	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 032014	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 032014
Avg.		



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH12 2467MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 032014	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 032014
	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 032014	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 032014



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH13 2472MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF HORIZONTAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : Peak Project : 032014	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : Peak Project : 032014
	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF HORIZONTAL Detector : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Project : Peak Project : 032014	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF HORIZONTAL Detector : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Project : Peak Project : 032014
Avg.		

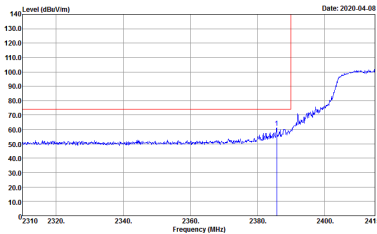
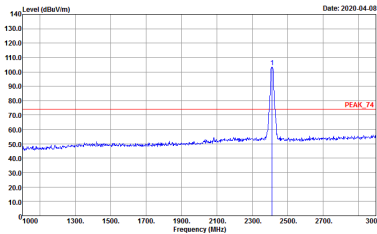
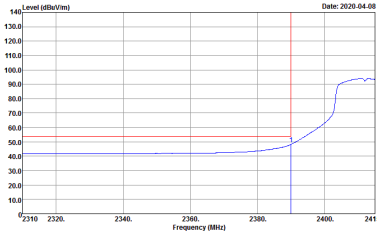
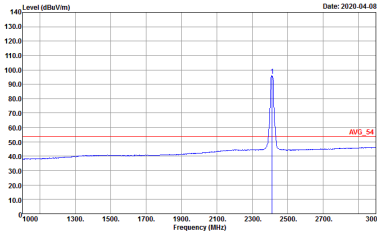
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH13 2472MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014
	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014

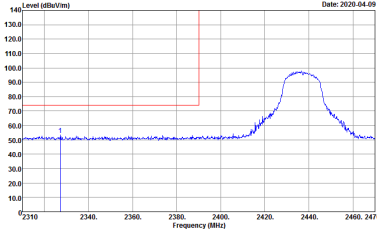
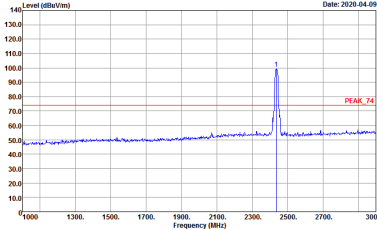
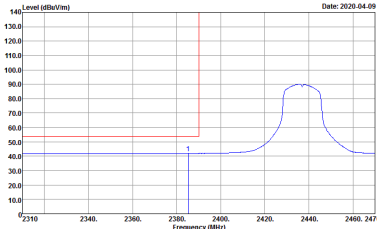
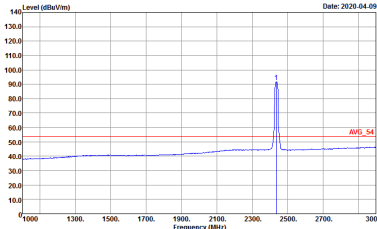


2.4GHz 2400~2483.5MHz

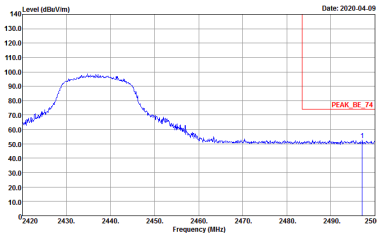
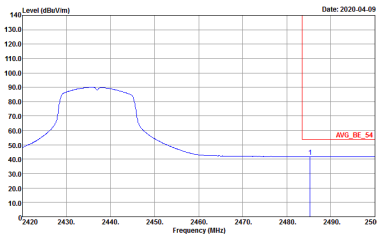
WIFI 802.11g (Band Edge @ 3m)

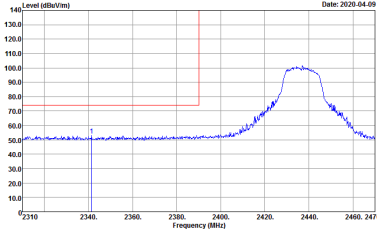
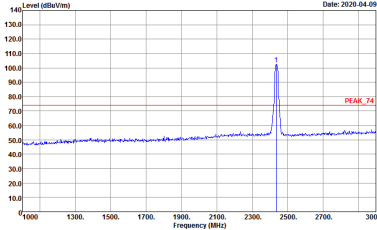
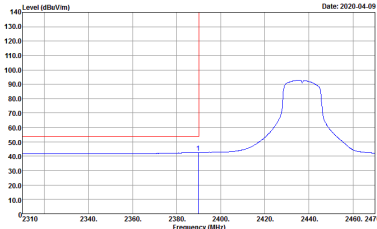
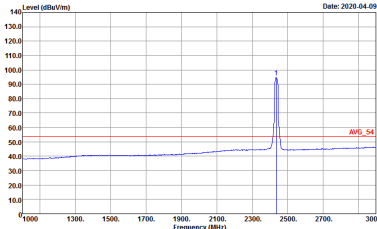
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
1	Horizontal	Fundamental
Peak	Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 032014	Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 032014
Avg.	Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 032014	Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 032014

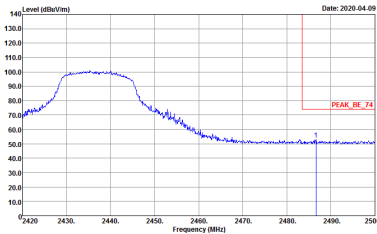
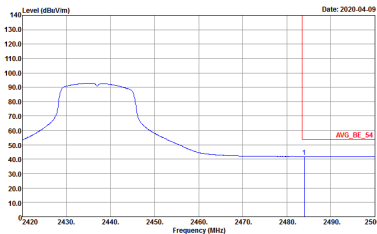
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014
	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
1	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014
	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014

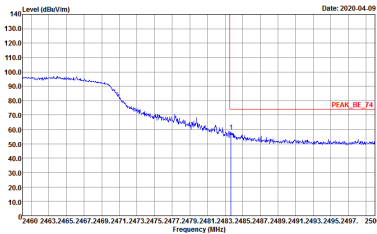
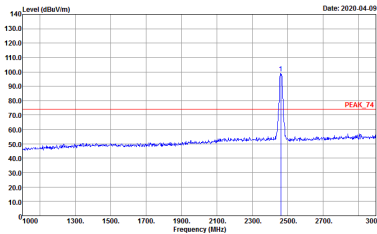
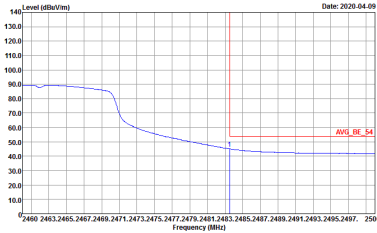
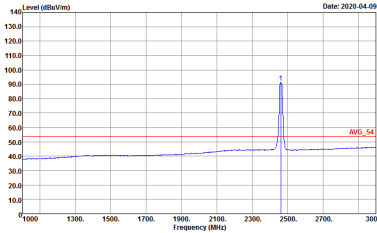


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
1	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 91200-HF HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 032014	Left blank
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 91200-HF HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 032014	Left blank

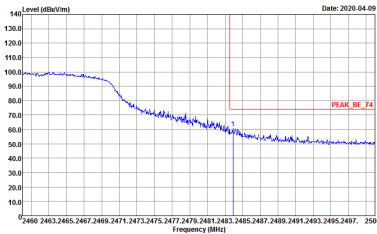
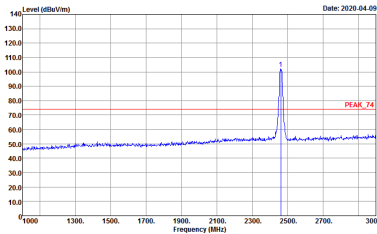
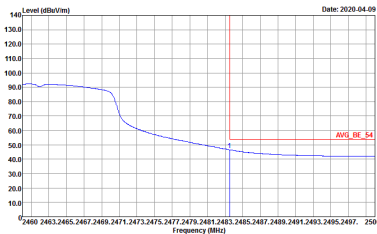
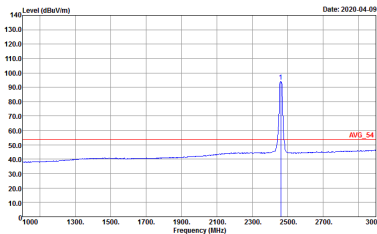
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
1	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014
	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014

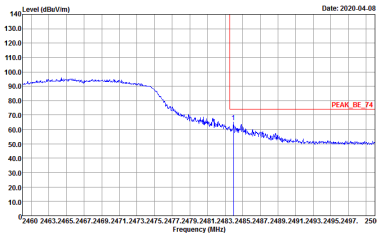
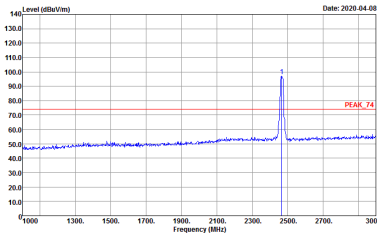
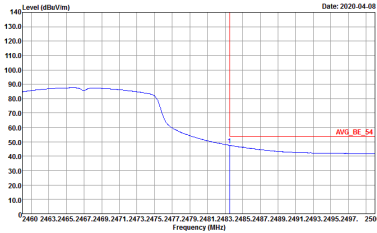
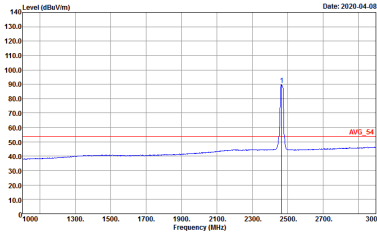
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
1	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 91200-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 032014	Left Blank
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 91200-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 032014	Left Blank



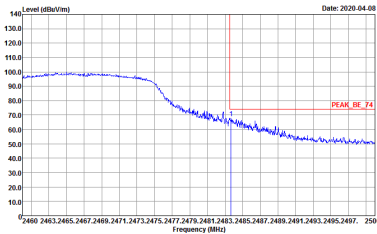
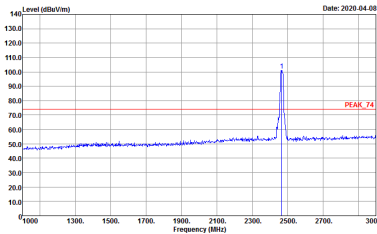
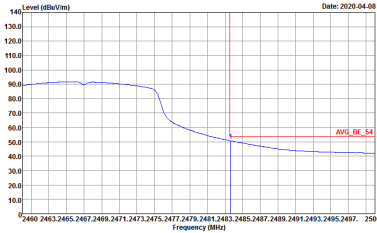
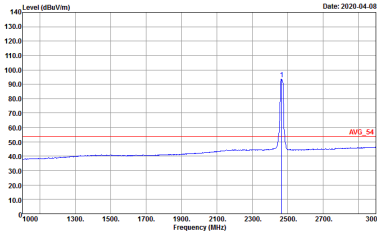
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
1	Horizontal	Fundamental
Peak	 Level (dBuV/m) vs Frequency (MHz) plot showing a peak at 2462 MHz. The y-axis ranges from 10.0 to 140.0 dBuV/m, and the x-axis ranges from 2460 to 2500 MHz. A red line marks the peak level at approximately 100 dBuV/m. Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014	 Level (dBuV/m) vs Frequency (MHz) plot showing a peak at 2462 MHz. The y-axis ranges from 10.0 to 140.0 dBuV/m, and the x-axis ranges from 1000 to 3000 MHz. A red line marks the peak level at approximately 100 dBuV/m. Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014
	 Level (dBuV/m) vs Frequency (MHz) plot showing the average spectrum. The y-axis ranges from 10.0 to 140.0 dBuV/m, and the x-axis ranges from 2460 to 2500 MHz. A red line marks the average level at approximately 50 dBuV/m. Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014	 Level (dBuV/m) vs Frequency (MHz) plot showing the average spectrum. The y-axis ranges from 10.0 to 140.0 dBuV/m, and the x-axis ranges from 1000 to 3000 MHz. A red line marks the average level at approximately 50 dBuV/m. Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014

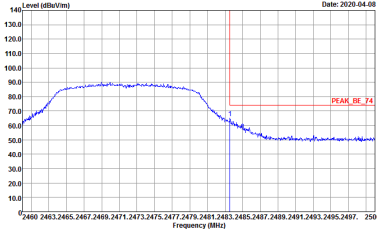
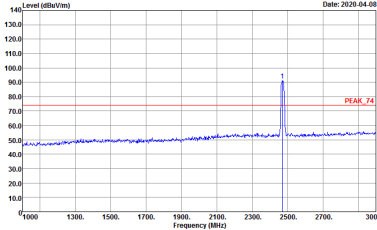
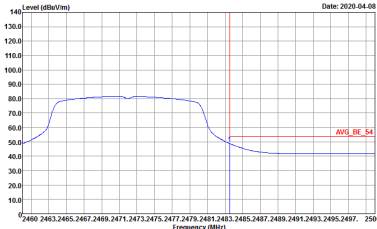
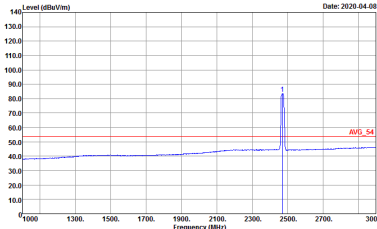


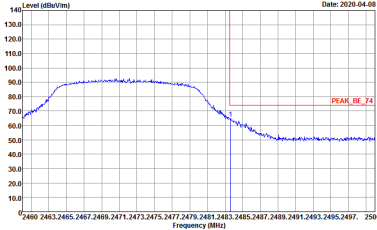
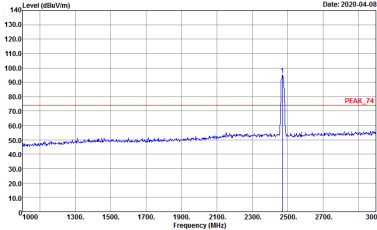
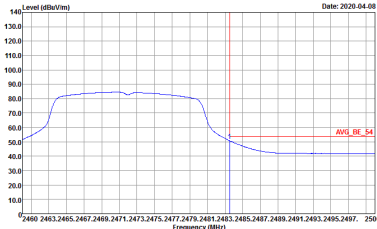
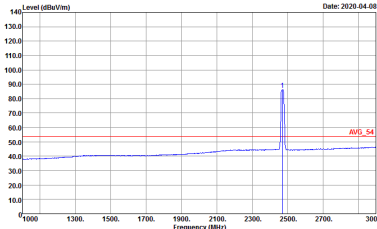
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH12 2467MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014 Setting : 64	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014 Setting : 64
	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014 Setting : 64	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014 Setting : 64



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH12 2467MHz	
1	Vertical	Fundamental
Peak	 Level (dBm/100kHz) vs Frequency (MHz) plot showing a peak at 2467 MHz. The y-axis ranges from 10.0 to 140.0 dBm/100kHz, and the x-axis ranges from 2460 to 2500 MHz. A red horizontal line indicates the peak level at approximately 80 dBm/100kHz. Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014 Setting : 64	 Level (dBm/100kHz) vs Frequency (MHz) plot showing a peak at 2467 MHz. The y-axis ranges from 10.0 to 140.0 dBm/100kHz, and the x-axis ranges from 1000 to 3000 MHz. A red horizontal line indicates the peak level at approximately 80 dBm/100kHz. Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014 Setting : 64
	 Level (dBm/100kHz) vs Frequency (MHz) plot showing the average level. The y-axis ranges from 10.0 to 140.0 dBm/100kHz, and the x-axis ranges from 2460 to 2500 MHz. A red horizontal line indicates the average level at approximately 50 dBm/100kHz. Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014 Setting : 64	 Level (dBm/100kHz) vs Frequency (MHz) plot showing the average level. The y-axis ranges from 10.0 to 140.0 dBm/100kHz, and the x-axis ranges from 1000 to 3000 MHz. A red horizontal line indicates the average level at approximately 50 dBm/100kHz. Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014 Setting : 64
Avg.		

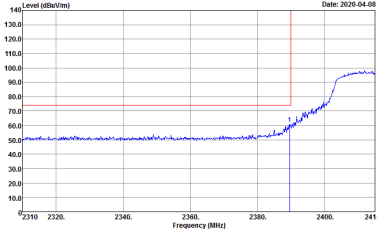
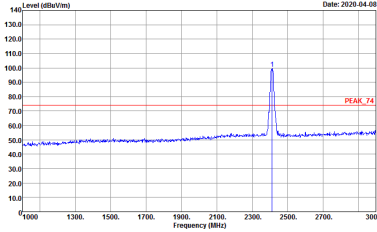
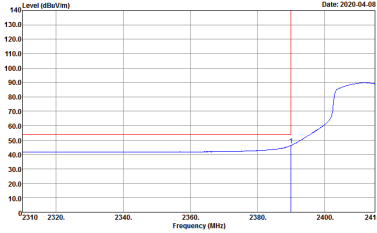
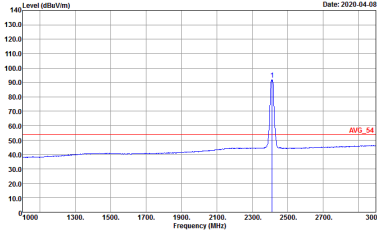
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH13 2472MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014 Setting : 34	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014 Setting : 34
	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014 Setting : 34	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014 Setting : 34

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH13 2472MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014 Setting : 34	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014 Setting : 34
	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014 Setting : 34	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014 Setting : 34

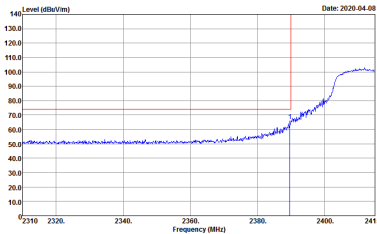
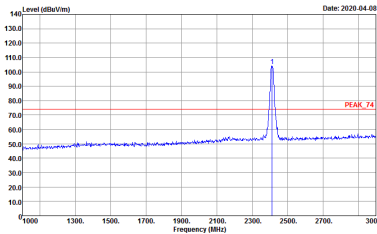
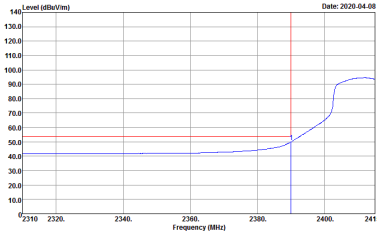
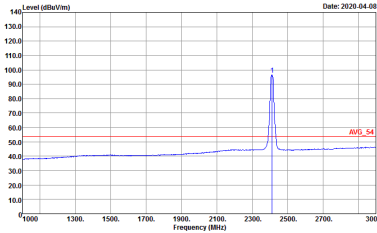


2.4GHz 2400~2483.5MHz

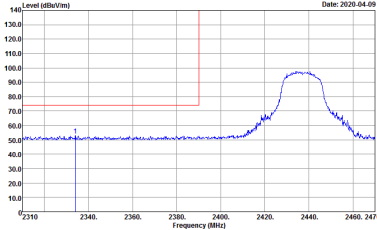
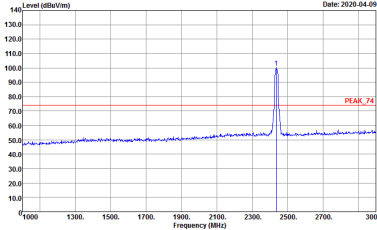
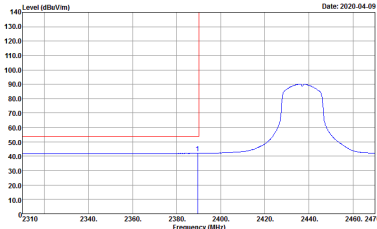
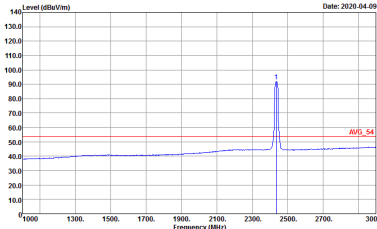
WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 032014	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 032014
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 032014	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 032014

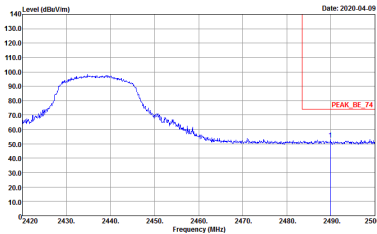
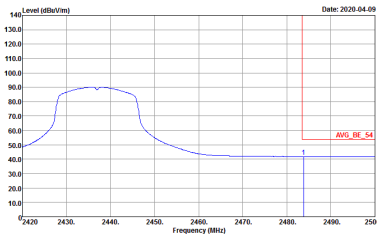


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : Peak Project : 032014	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : Peak Project : 032014
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : Peak Project : 032014	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : Peak Project : 032014



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - L	
1	Horizontal	Fundamental
Peak	 Level (dBuV/m) vs Frequency (MHz) plot showing a peak at approximately 2437 MHz. The y-axis ranges from 10.0 to 140.0 dBuV/m, and the x-axis ranges from 2310 to 2470 MHz. A red line indicates the peak level at approximately 130 dBuV/m. Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014	 Level (dBuV/m) vs Frequency (MHz) plot showing a peak at approximately 2437 MHz. The y-axis ranges from 10.0 to 140.0 dBuV/m, and the x-axis ranges from 1000 to 3000 MHz. A red line indicates the peak level at approximately 130 dBuV/m. Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014
	 Level (dBuV/m) vs Frequency (MHz) plot showing a peak at approximately 2437 MHz. The y-axis ranges from 10.0 to 140.0 dBuV/m, and the x-axis ranges from 2310 to 2470 MHz. A red line indicates the average level at approximately 130 dBuV/m. Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014	 Level (dBuV/m) vs Frequency (MHz) plot showing a peak at approximately 2437 MHz. The y-axis ranges from 10.0 to 140.0 dBuV/m, and the x-axis ranges from 1000 to 3000 MHz. A red line indicates the average level at approximately 130 dBuV/m. Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014

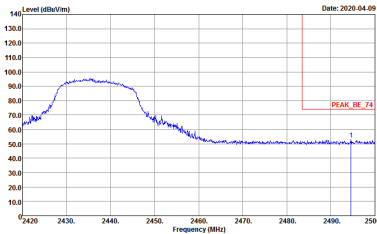
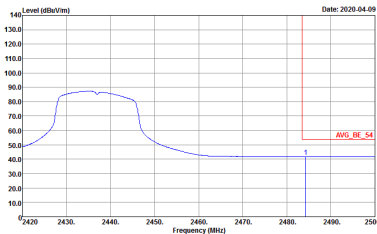


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - R	
1	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 91200-HF HORIZONTAL Detector : Peak Project : 032014	Left blank
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 91200-HF HORIZONTAL Detector : Peak Project : 032014	Left blank

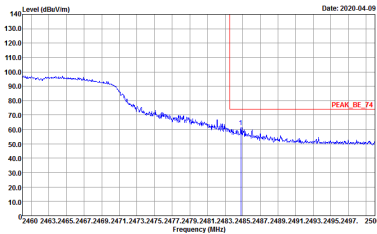
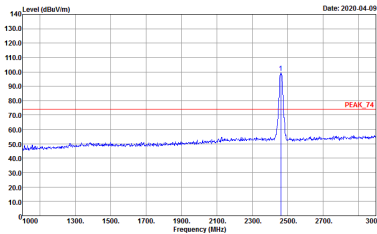
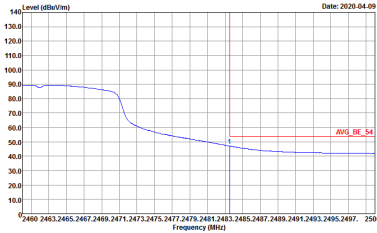
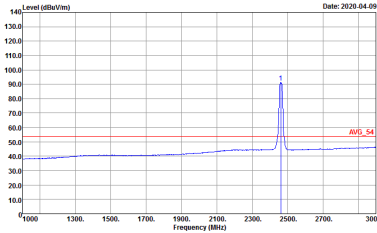


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - L	
1	Vertical	Fundamental
Peak	Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014	Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014
	Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014	Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014

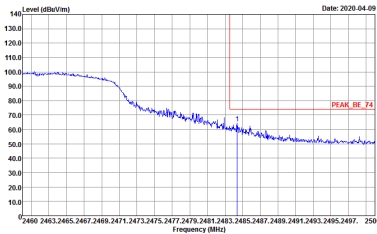
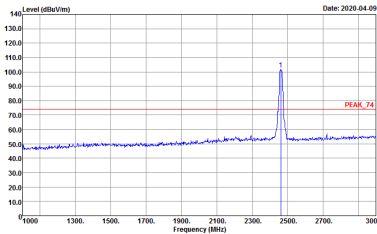
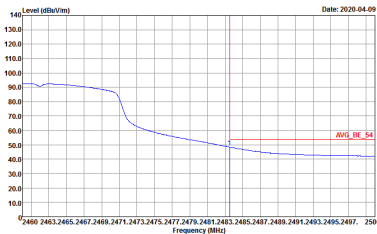
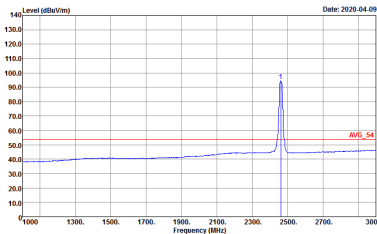


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - R	
1	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 91200-HF VERTICAL Detector : Peak Project : 032014	Left Blank
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 91200-HF VERTICAL Detector : Peak Project : 032014	Left Blank



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014
	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014

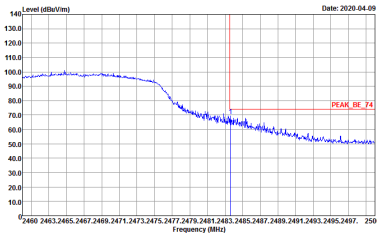
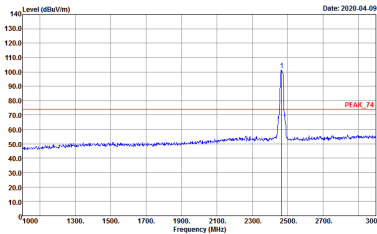
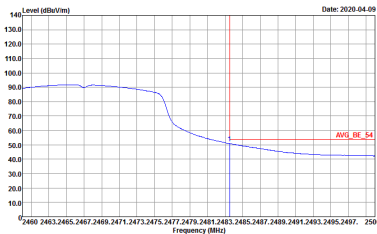
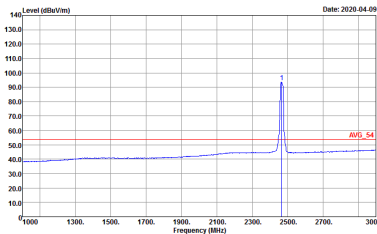


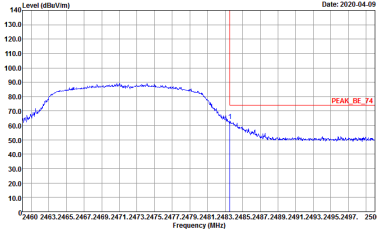
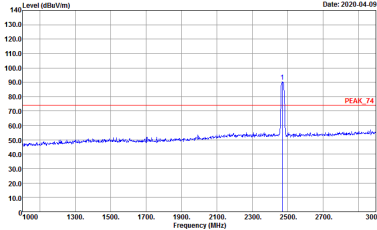
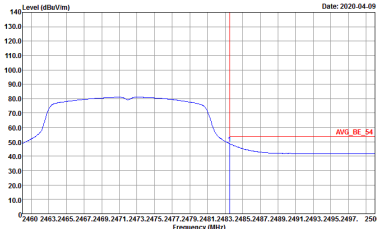
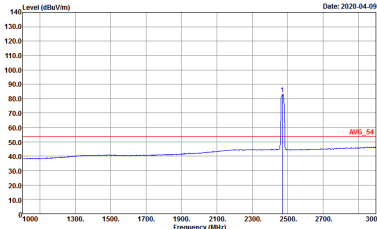
WIFI	2.4GHz 2400~2483.5MHz Fundamental @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014
	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014



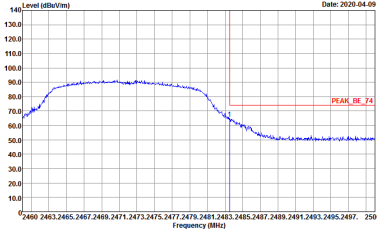
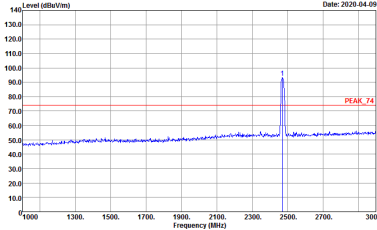
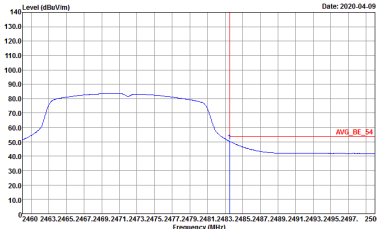
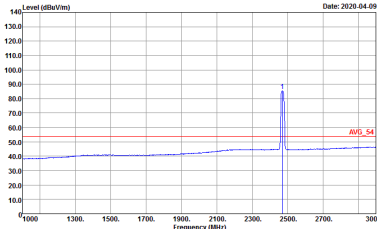
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH12 2467MHz	
1	Horizontal	Fundamental
Peak	Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014	Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014
Avg.	Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014	Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014



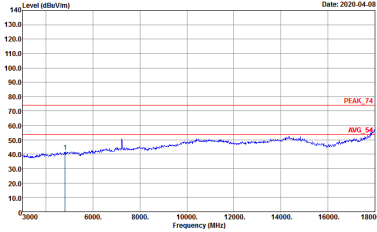
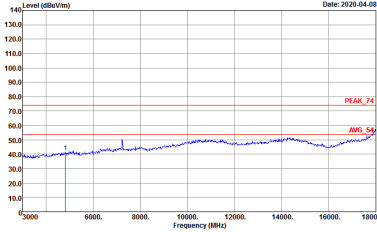
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH12 2467MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014
	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH13 2472MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014 Setting : 32	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014 Setting : 32
	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014 Setting : 32	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014 Setting : 32

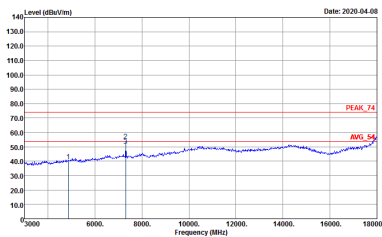
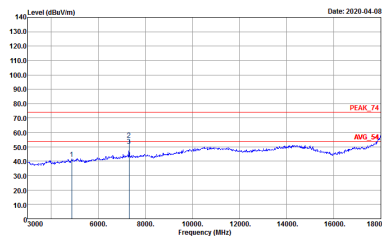


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH13 2472MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014 Setting : 32	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014 Setting : 32
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014 Setting : 32	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014 Setting : 32

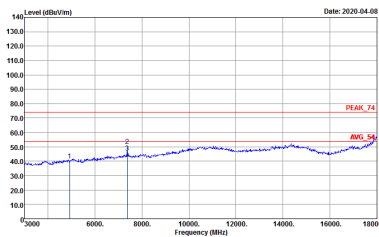
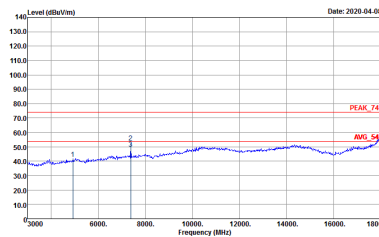
**2.4GHz 2400~2483.5MHz****WIFI 802.11b (Harmonic @ 3m)**

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH01 2412MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 032014	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 032014

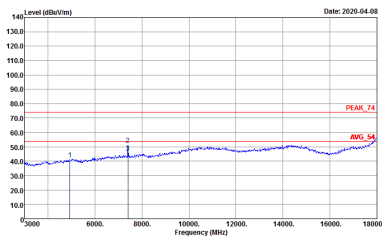
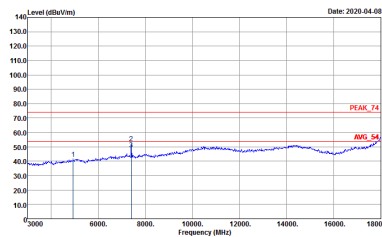


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH06 2437MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH11-14Y Condition : PEAK_74 3m HORN 91200-HF HORIZONTAL Detector : Peak Project : 032014	 Site : 03CH11-14Y Condition : PEAK_74 3m HORN 91200-HF VERTICAL Detector : Peak Project : 032014

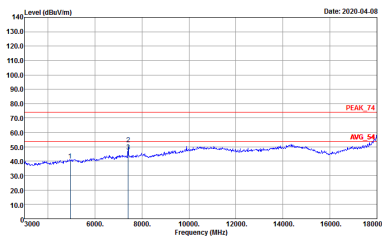
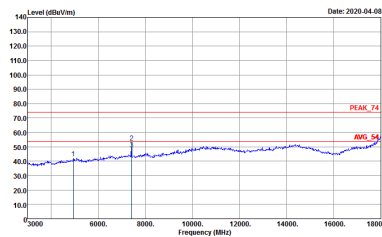


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH11 2462MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH11-1F Condition : PEAK_74 3m HORN 91200-HF HORIZONTAL Detector : Peak Project : 032014	 Site : 03CH11-1F Condition : PEAK_74 3m HORN 91200-HF VERTICAL Detector : Peak Project : 032014

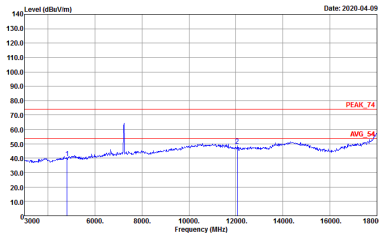
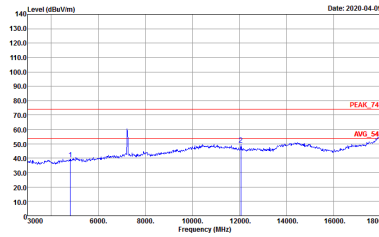


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH12 2467MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH11-14Y Condition : PEAK_74 3m HORN 91200-HF HORIZONTAL Detector : Peak Project : 032014	 Site : 03CH11-14Y Condition : PEAK_74 3m HORN 91200-HF VERTICAL Detector : Peak Project : 032014

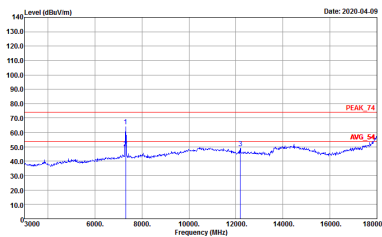
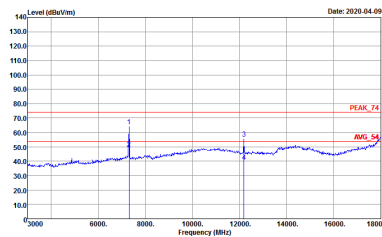


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH13 2472MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH11-14Y Condition : PEAK_74 3m HORN 91200-HF HORIZONTAL Detector : Peak Project : 032014	 Site : 03CH11-14Y Condition : PEAK_74 3m HORN 91200-HF VERTICAL Detector : Peak Project : 032014

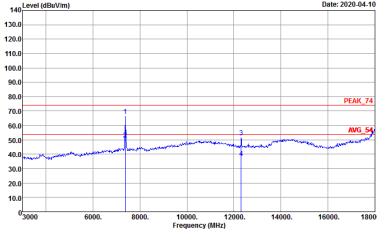
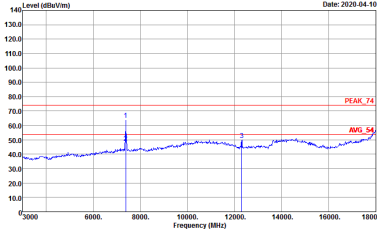
2.4GHz 2400~2483.5MHz
WIFI 802.11g (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH01 2412MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 91200-HF HORIZONTAL Detector : Peak Project : 032014	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 91200-HF VERTICAL Detector : Peak Project : 032014

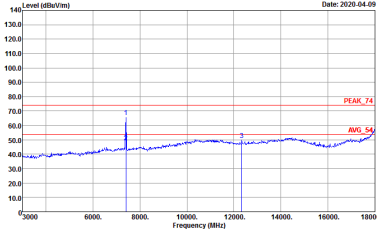
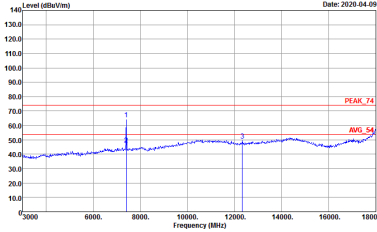


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH06 2437MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH11-14Y Condition : PEAK_74 3m HORN 91200-HF HORIZONTAL Detector : Peak Project : 032014 Setting : 66	 Site : 03CH11-14Y Condition : PEAK_74 3m HORN 91200-HF VERTICAL Detector : Peak Project : 032014 Setting : 66

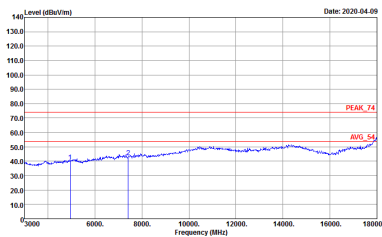
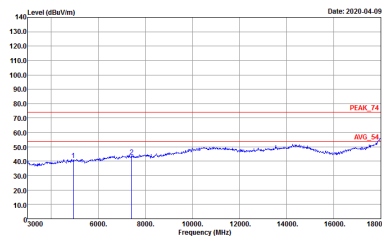


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH11 2462MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH11-14Y Condition : PEAK_74 3m HORN 91200-HF HORIZONTAL Detector : Peak Project : 032014 Setting : 68	 Site : 03CH11-14Y Condition : PEAK_74 3m HORN 91200-HF VERTICAL Detector : Peak Project : 032014 Setting : 68

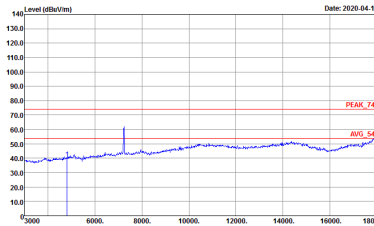
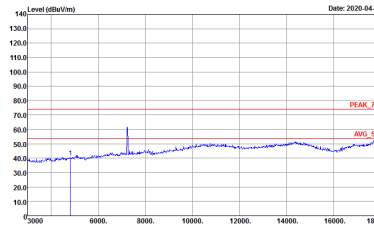


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH12 2467MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH11-14Y Condition : PEAK_74 3m HORN 91200-HF HORIZONTAL Detector : Peak Project : 032014	 Site : 03CH11-14Y Condition : PEAK_74 3m HORN 91200-HF VERTICAL Detector : Peak Project : 032014

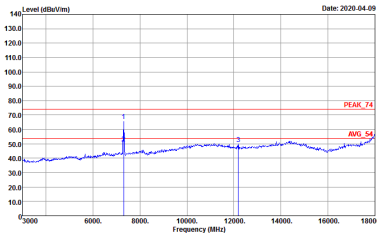
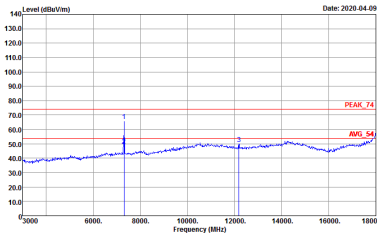


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH13 2472MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH11-14Y Condition : PEAK_74 3m HORN 91200-HF HORIZONTAL Detector : Peak Project : 032014	 Site : 03CH11-14Y Condition : PEAK_74 3m HORN 91200-HF VERTICAL Detector : Peak Project : 032014

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

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 91200-HF HORIZONTAL Detector : Peak Project : 032014	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 91200-HF VERTICAL Detector : Peak Project : 032014

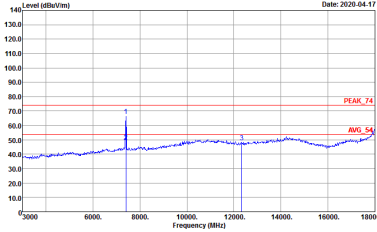
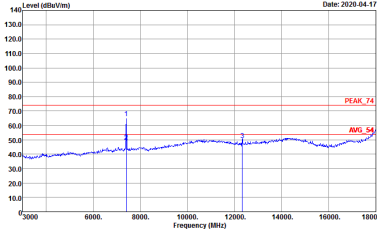


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH06 2437MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH11-14Y Condition : PEAK_74 3m HORN 91200-HF HORIZONTAL Detector : Peak Project : 032014 Setting : 64	 Site : 03CH11-14Y Condition : PEAK_74 3m HORN 91200-HF VERTICAL Detector : Peak Project : 032014 Setting : 64

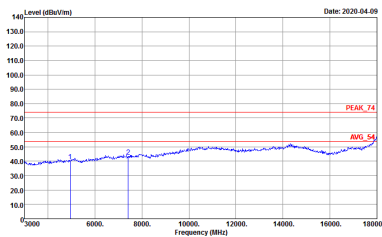
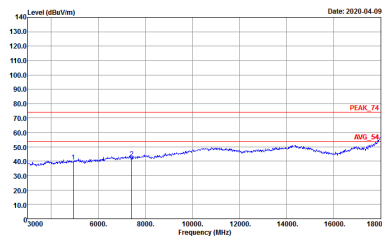


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
1	Horizontal	Vertical
Peak Avg.	Site : 03CH11-HY Condition : PEAK_74 3m HORN 91200-HF HORIZONTAL Detector : Peak Project : 032014	Site : 03CH11-HY Condition : PEAK_74 3m HORN 91200-HF VERTICAL Detector : Peak Project : 032014

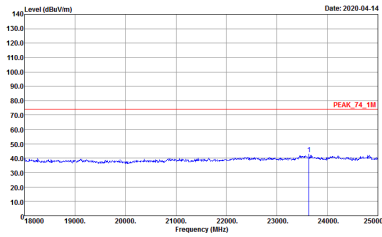
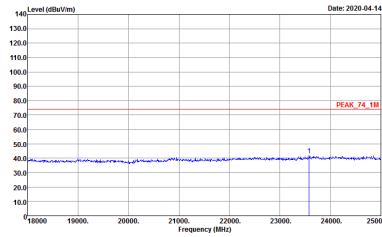


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH12 2462MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH11-14Y Condition : PEAK_74 3m HORN 91200-HF HORIZONTAL Detector : Peak Project : 032014 Setting : 64	 Site : 03CH11-14Y Condition : PEAK_74 3m HORN 91200-HF VERTICAL Detector : Peak Project : 032014 Setting : 64

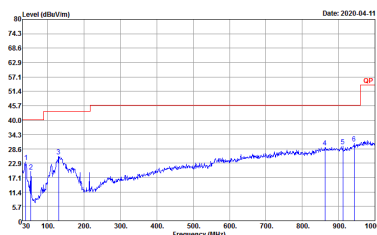
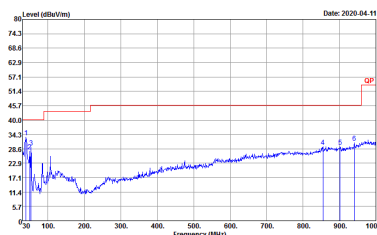


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH13 2472MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH11-14Y Condition : PEAK_74 3m HORN 91200-HF HORIZONTAL Detector : Peak Project : 032014	 Site : 03CH11-14Y Condition : PEAK_74 3m HORN 91200-HF VERTICAL Detector : Peak Project : 032014

Emission above 18GHz
2.4GHz WIFI 802.11n HT20 (SHF)

WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11n HT20 SHF	
1	Horizontal	Vertical
QP / Peak	 Site : 03CH11-HY Condition : PEAK_74_1M 1m SHF HORN BBH49170576 HORIZONTAL Project : 032014	 Site : 03CH11-HY Condition : PEAK_74_1M 1m SHF HORN BBH49170576 VERTICAL Project : 032014

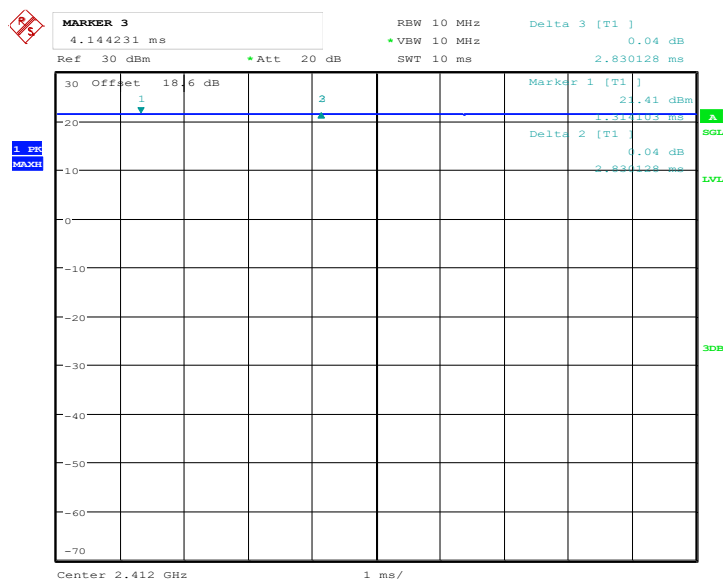
2.4GHz 2400~2483.5MHz
Emission below 1GHz
2.4GHz WIFI 802.11n HT20 (LF)

WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11n HT20 LF	
1	Horizontal	Vertical
QP / Peak	 Site : 03CH11-HY Condition : QP 5m BE-LOG 6111D-LF_ETC HORIZONTAL Detector : Peak Project : 032014	 Site : 03CH11-HY Condition : QP 5m BE-LOG 6111D-LF_ETC VERTICAL Detector : Peak Project : 032014

Appendix E. Duty Cycle Plots

Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting	Duty Factor(dB)
802.11b	100.00	-	-	10Hz	0.00
802.11g	98.43	-	-	10Hz	0.07
2.4GHz 802.11n HT20	98.77	-	-	10Hz	0.05

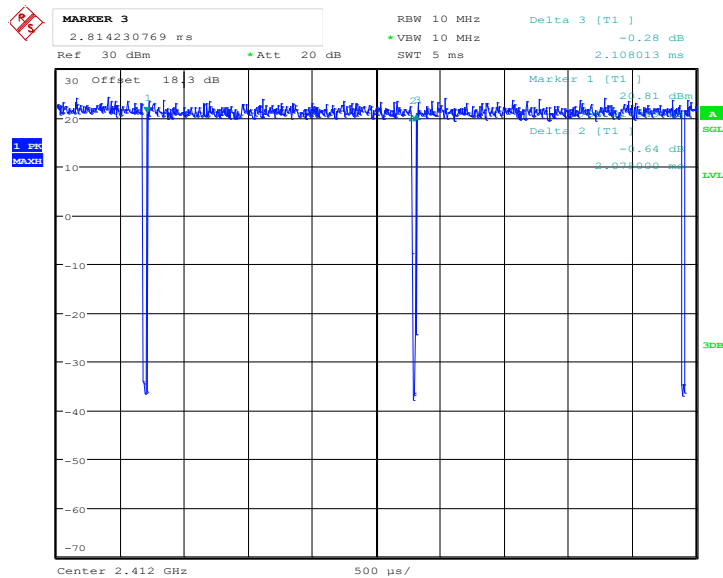
802.11b



Date: 31.MAR.2020 09:21:19

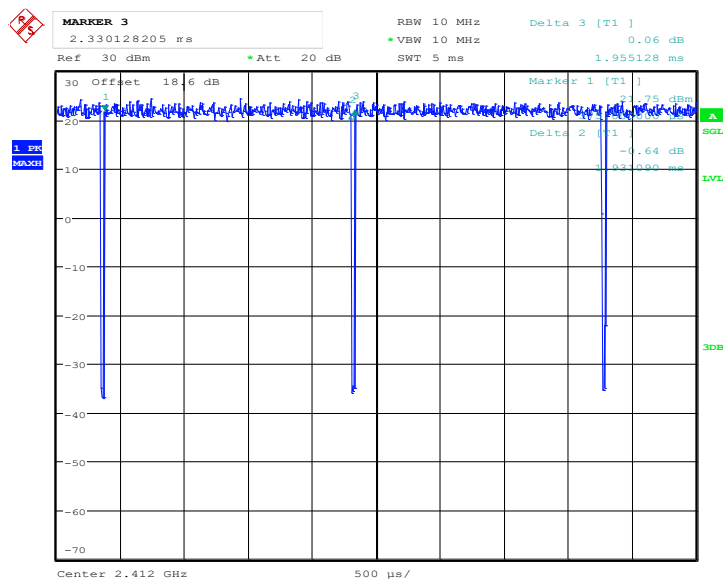


802.11g



Date: 30.MAR.2020 15:37:50

802.11n HT20



Date: 31.MAR.2020 09:23:32

—THE END—