

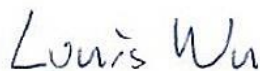


FCC RADIO TEST REPORT

FCC ID : 2ASZK-2887
Equipment : Smart Plug
Model Name : C2YY37
Applicant : Chemistry Universe FX LLC
303 Wyman Street, Suite 300
Waltham, Massachusetts 02451-1208
United States Of America
Standard : FCC Part 15 Subpart C §15.247

The product was received on Dec. 10, 2020 and testing was started from Dec. 10, 2020 and completed on Dec. 26, 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
FR000710-01B	01	Initial issue of report	Jan. 11, 2021

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)
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
3.6	15.207	AC Conducted Emission	Pass
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: Cindy Liu

1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature	
Equipment	Smart Plug
Model Name	C2YY37
FCC ID	2ASZK-2887
EUT supports Radios application	WLAN 11b/g/n HT20 Bluetooth LE

1.2 Product Specification of Equipment Under Test

Product Specification subjective to this standard					
Tx/Rx Frequency Range	2412 MHz ~ 2472 MHz				
Maximum Average Output Power to antenna	802.11b	18.70	dBm	0.0741	W
	802.11g	17.70	dBm	0.0589	W
	802.11n HT20	17.80	dBm	0.0603	W
99% Occupied Bandwidth	802.11b	14.49	MHz		
	802.11g	16.78	MHz		
	802.11n HT20	17.83	MHz		
Antenna Type	PCB Antenna				
Antenna Gain	0 dBi				
Type of Modulation	802.11b : DSSS (DBPSK / DQPSK / CCK) 802.11g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)				

Note: The above EUT's information was declared by manufacturer. Please refer to Comments and Explanations in report summary.

1.3 Modification of EUT

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



1.4 Testing Location

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

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

FCC designation No.: TW1190

1.5 Applicable Standards

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

- ♦ FCC Part 15 Subpart C §15.247
- ♦ FCC KDB Publication No. 558074 D01 DTS Meas. Guidance 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.

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 (Y 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

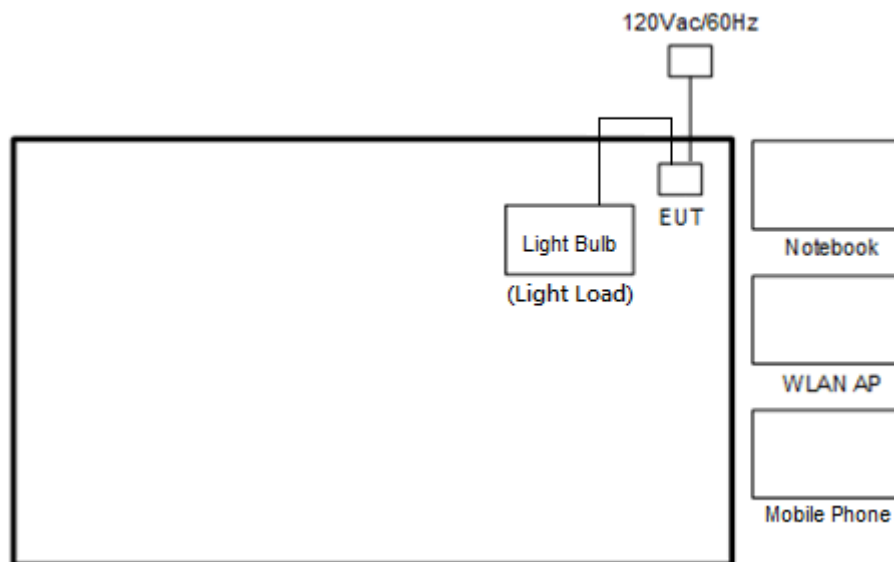
Test Cases	
AC Conducted Emission	Mode 1 :WLAN (2.4GHz) Link + Bluetooth Link + Light Bulb (0%)

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

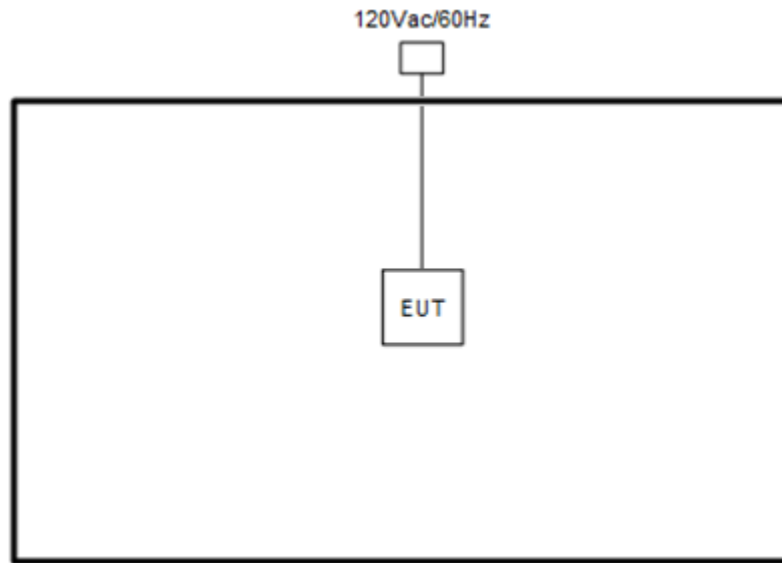
Remark: For radiation spurious emission, the final modulation and the worst data rate was reference the max RF conducted power.

2.3 Connection Diagram of Test System

<AC Conducted Emission Mode>



<WLAN Tx Mode>



2.4 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model Name	FCC ID	Data Cable	Power Cord
1.	WLAN AP	ASUS	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded, 1.8 m
2.	Notebook	DELL	Latitude E3400	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
3.	Light Bulb	Integrated industry	200W light bulb	N/A	N/A	N/A
4.	Light Load	N/A	N/A	N/A	N/A	N/A
5.	Mobile Phone	SAMSUNG	SM-A730F/DS	A3LSMA730F	N/A	N/A



2.5 EUT Operation Test Setup

The RF test items, utility “QA Tool 0.0.1.60” 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.

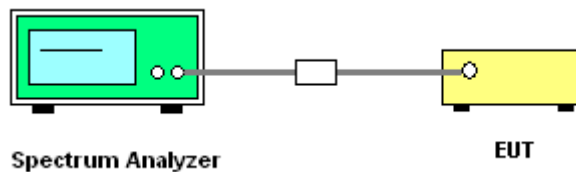
3.1.2 Measuring Instruments

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.

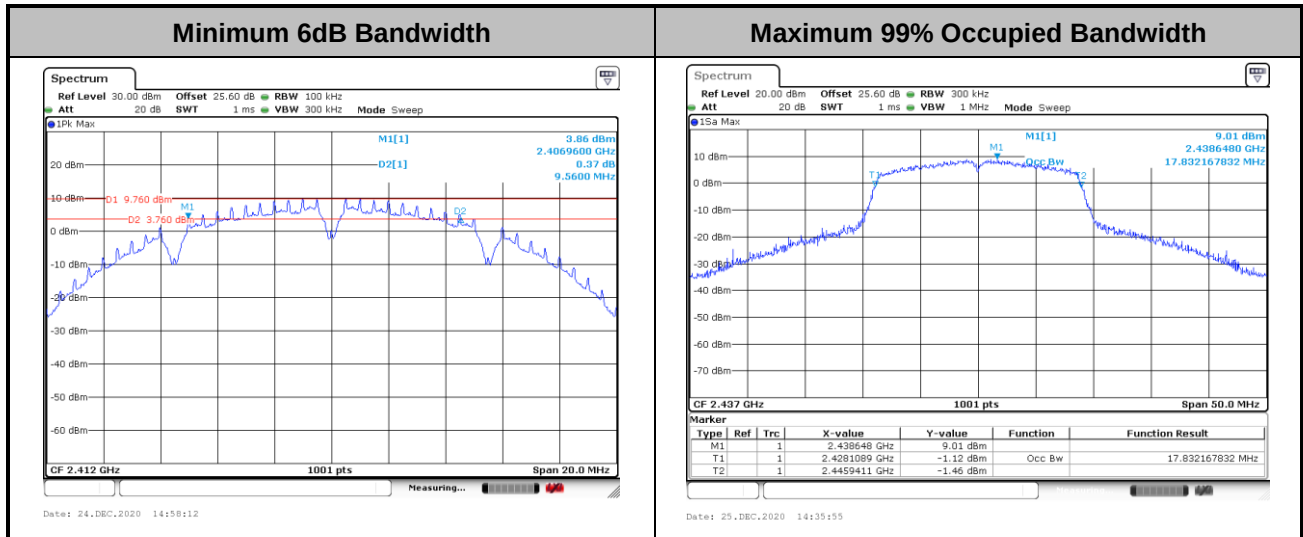
3.1.4 Test Setup





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.

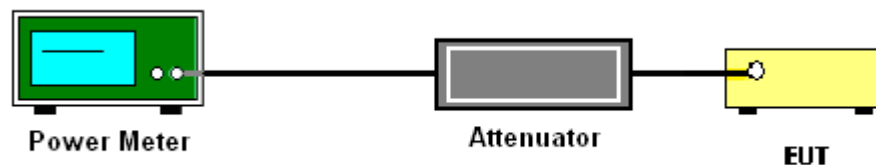
3.2.2 Measuring Instruments

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.

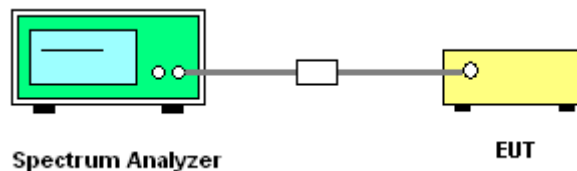
3.3.2 Measuring Instruments

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.

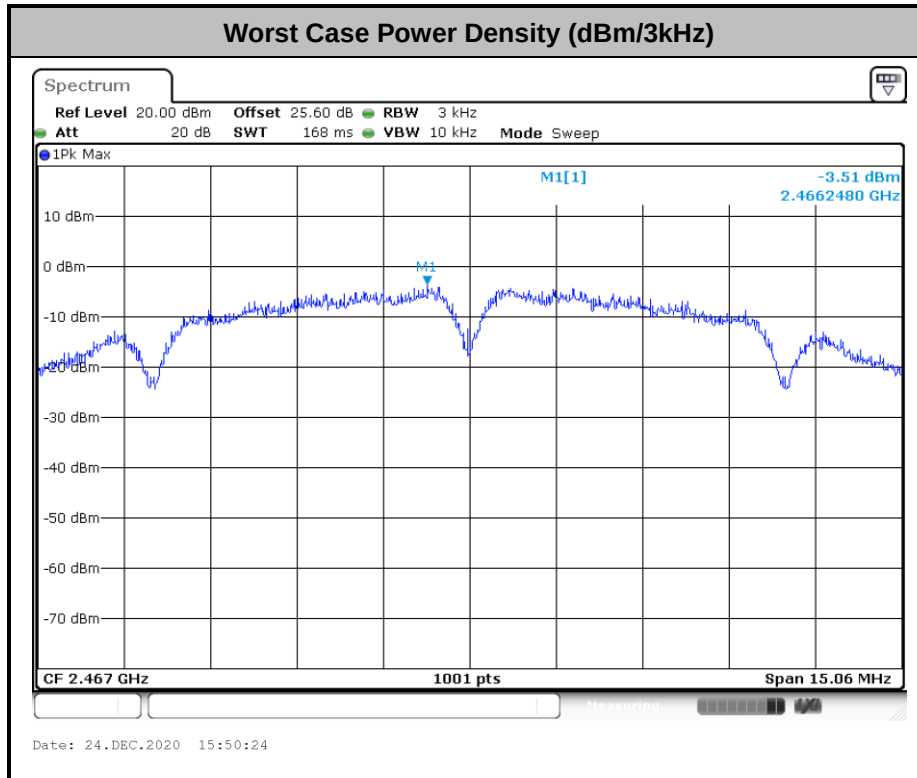
3.3.4 Test Setup





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.

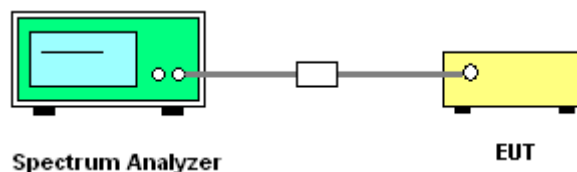
3.4.2 Measuring Instruments

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



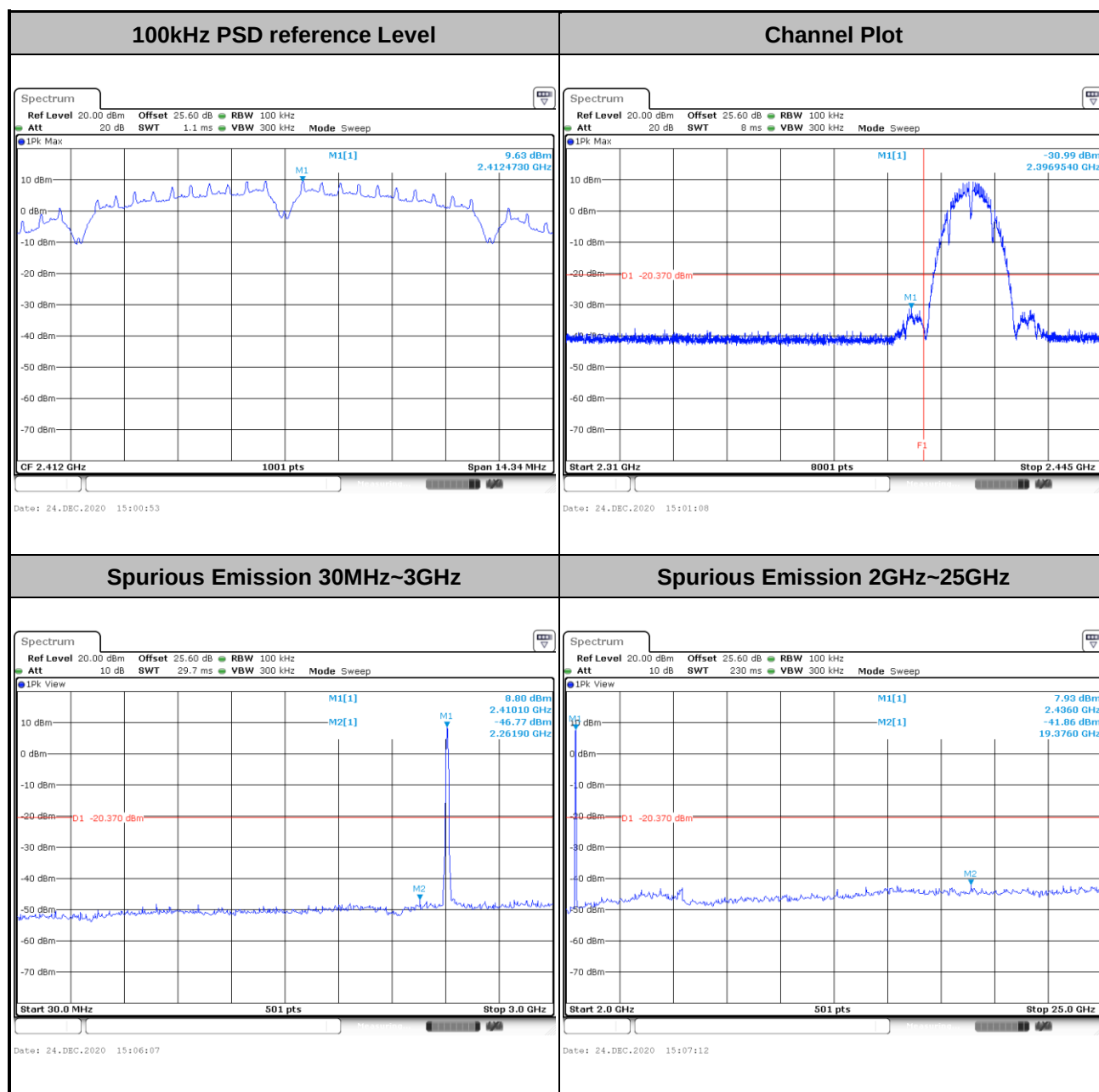


3.4.5 Test Result of Conducted Band Edges and Spurious Emission

Test Engineer :	Kathy Chen	Temperature :	21.3~23.4℃
		Relative Humidity :	54.6~57.3%

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

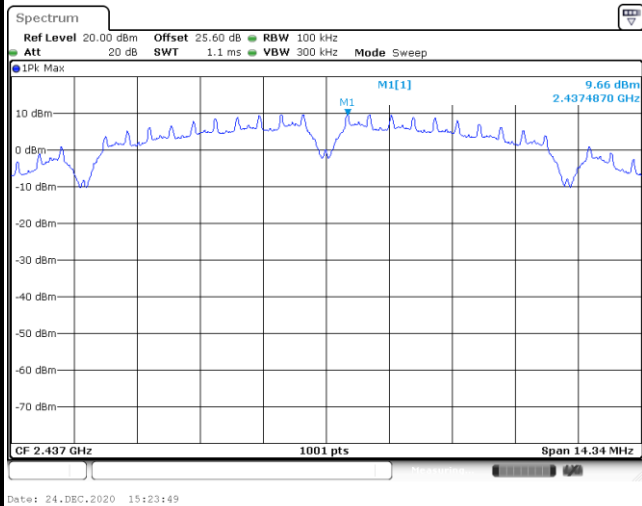
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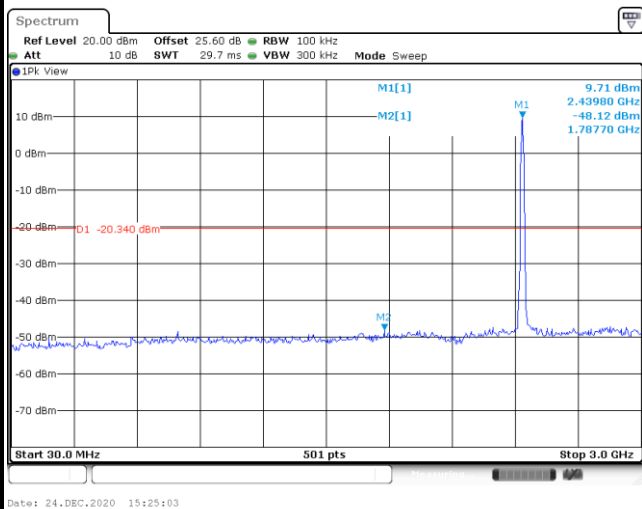
Test Mode :	802.11b	Test Channel :	06
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100kHz PSD reference Level

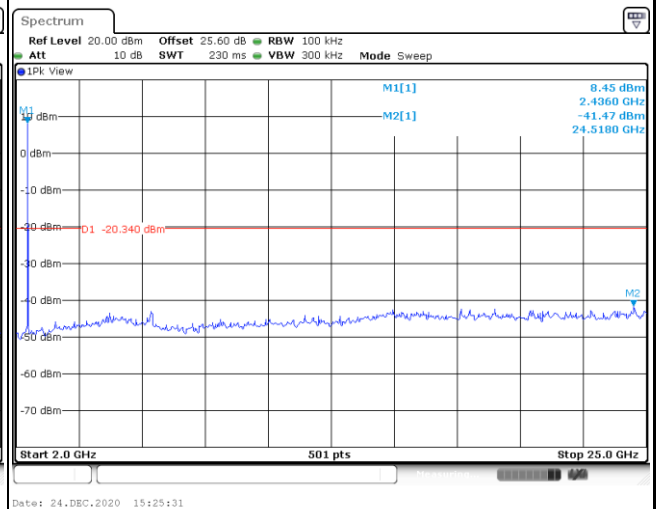


Channel Plot

Spurious Emission 30MHz~3GHz

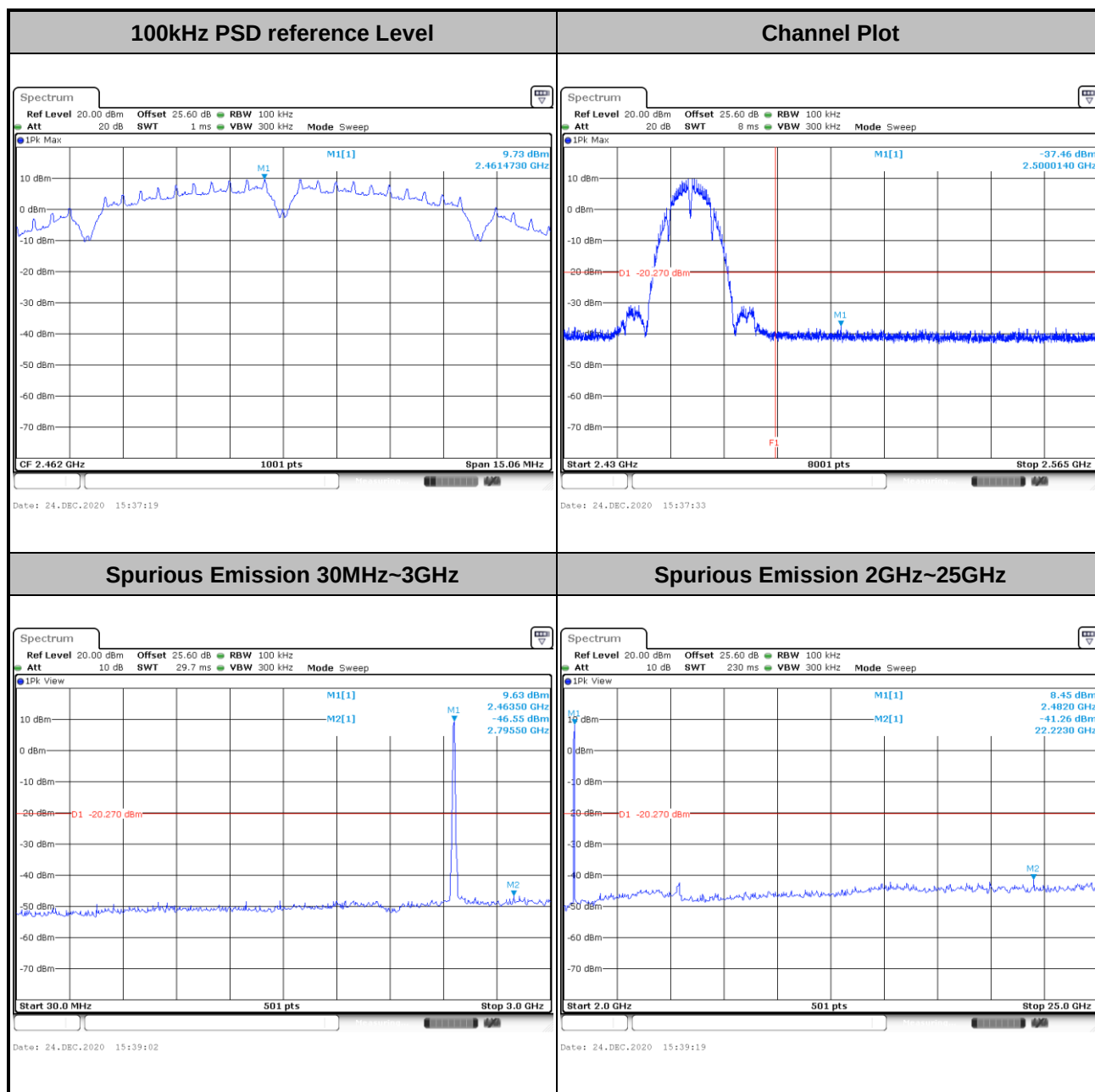


Spurious Emission 2GHz~25GHz



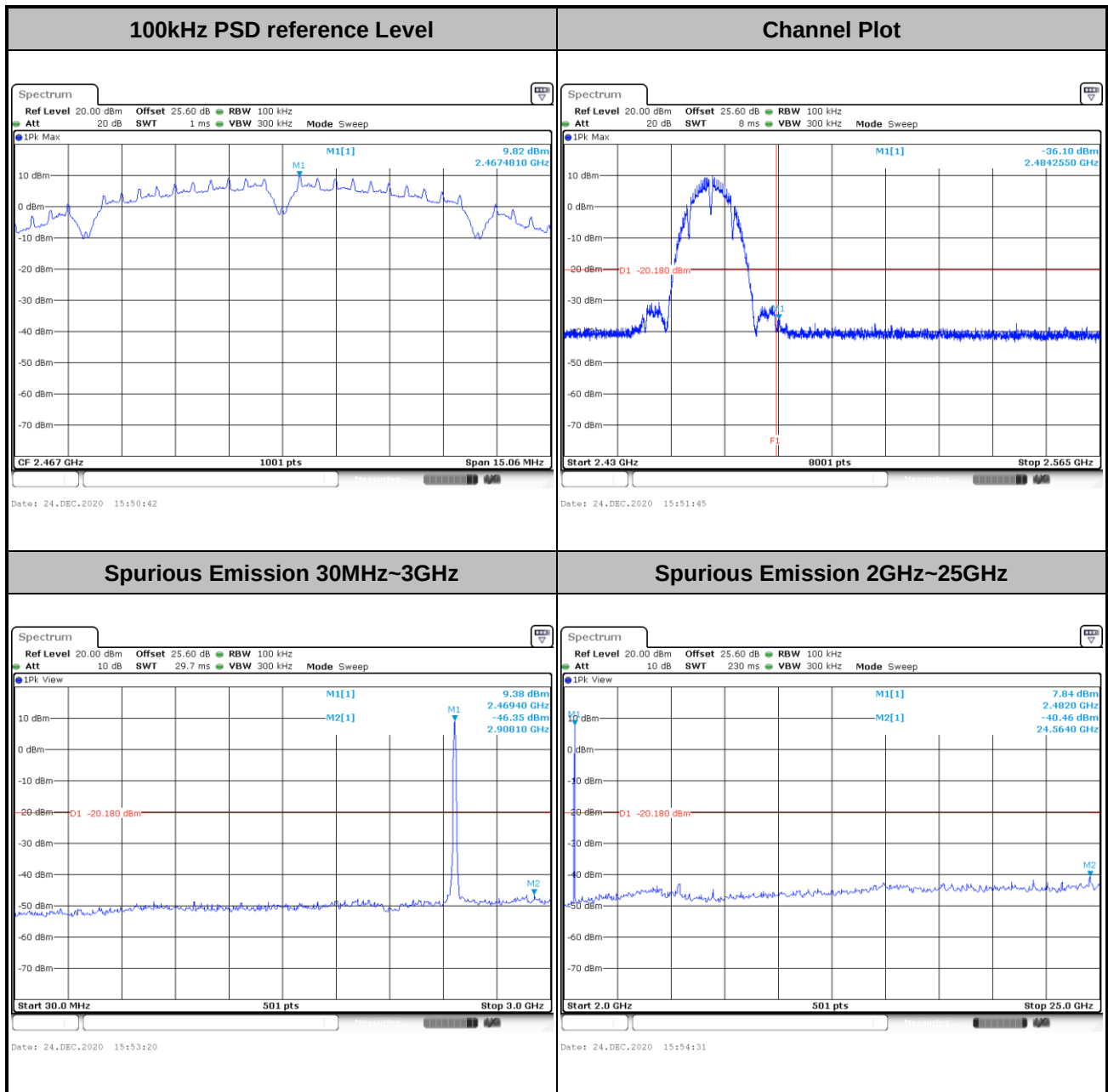


Test Mode :	802.11b	Test Channel :	11
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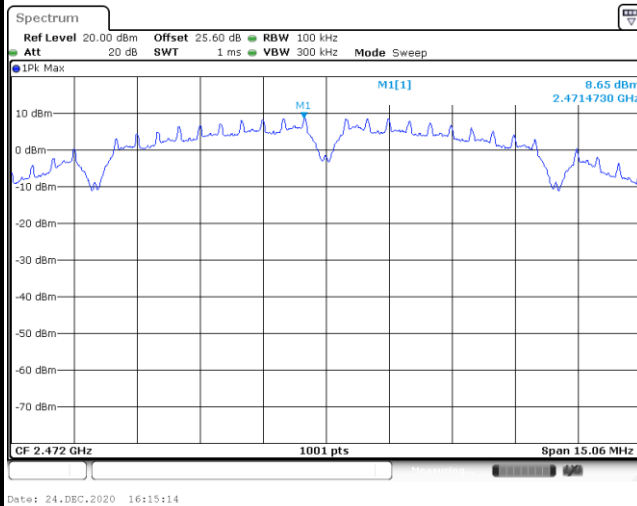
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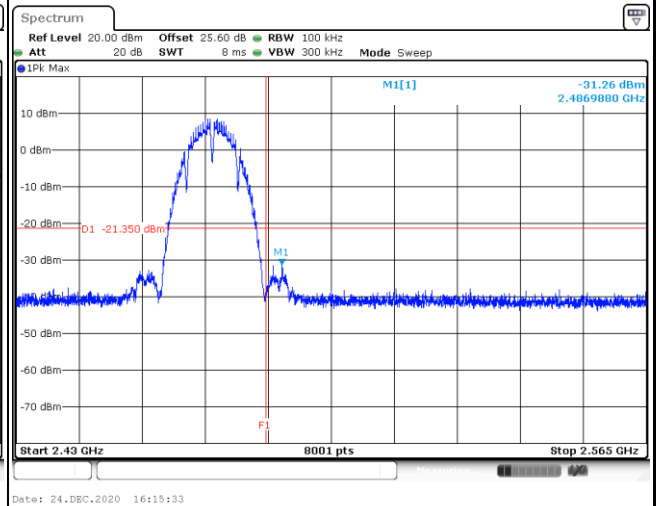


Test Mode :	802.11b	Test Channel :	13
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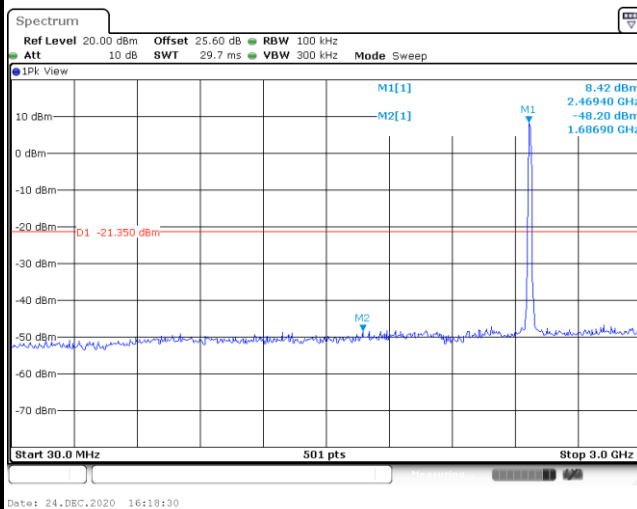
100kHz PSD reference Level



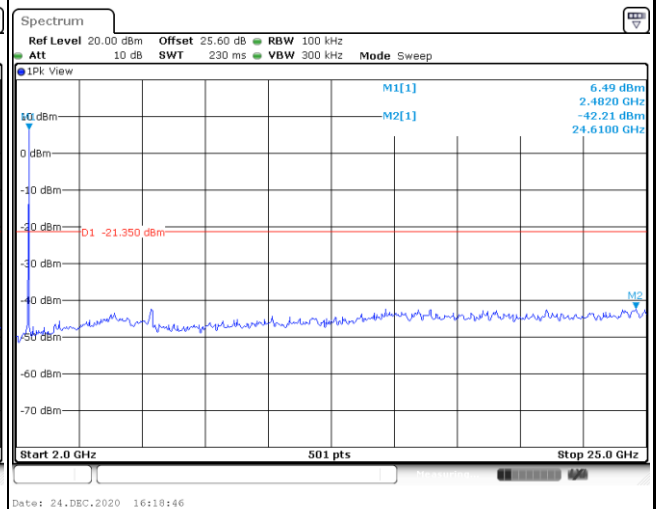
Channel Plot



Spurious Emission 30MHz~3GHz



Spurious Emission 2GHz~25GHz

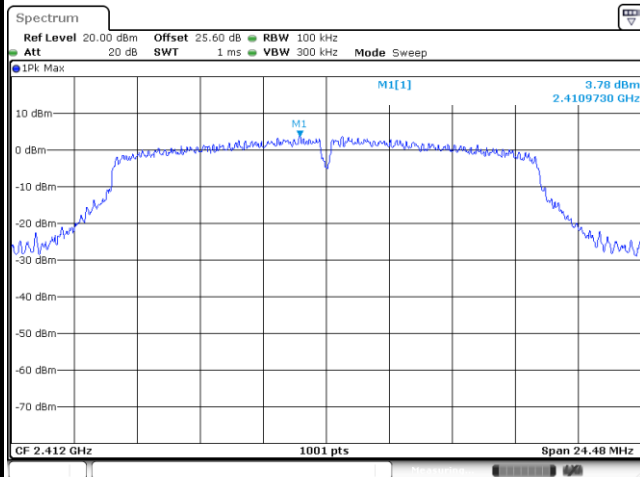




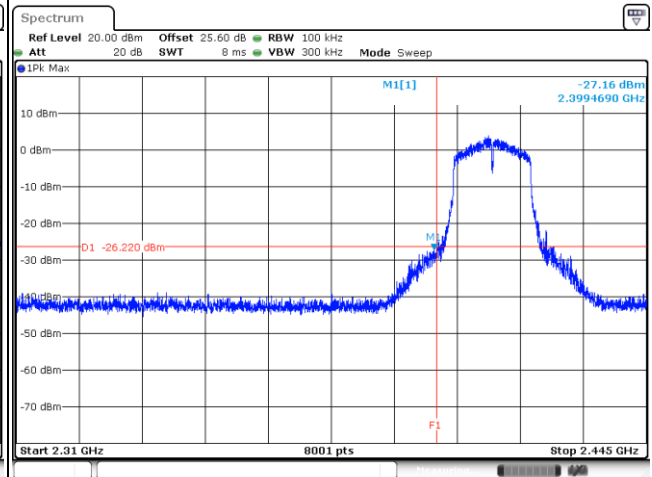
Test Mode : 802.11g

Test Channel : 01

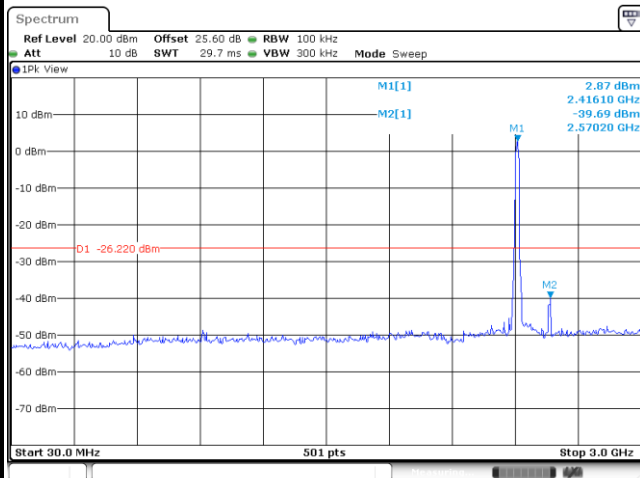
100kHz PSD reference Level



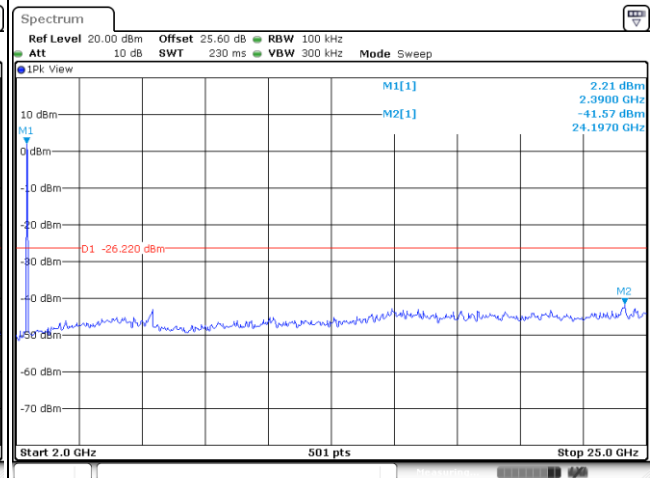
Channel Plot



Spurious Emission 30MHz~3GHz



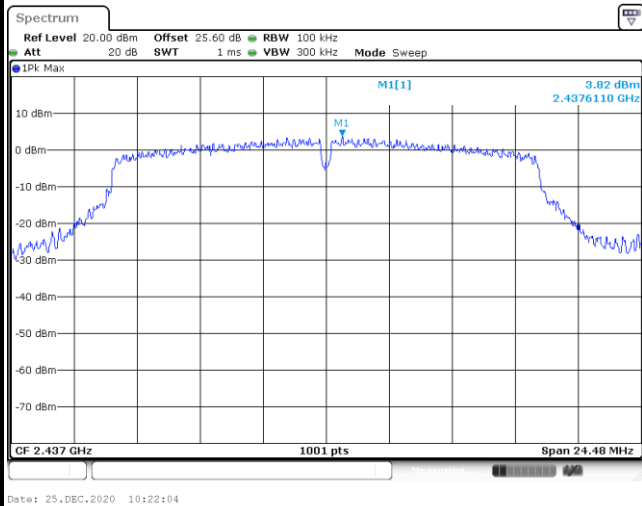
Spurious Emission 2GHz~25GHz





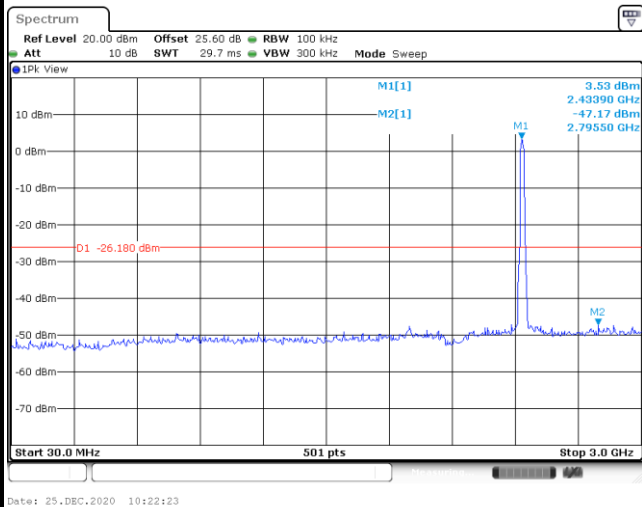
Test Mode :	802.11g	Test Channel :	06
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100kHz PSD reference Level

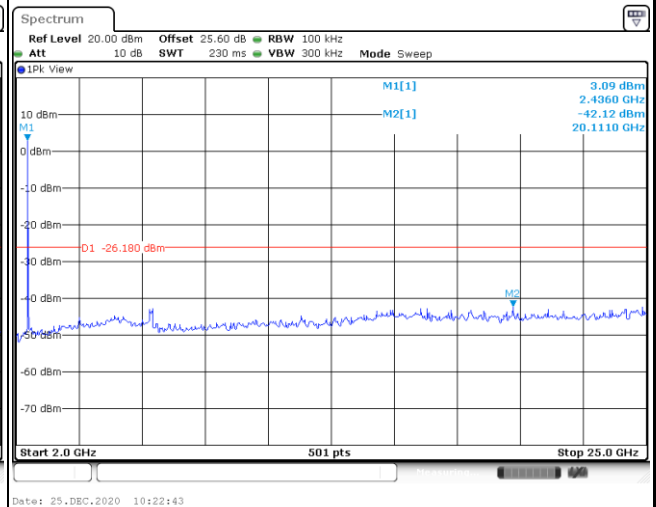


Channel Plot

Spurious Emission 30MHz~3GHz

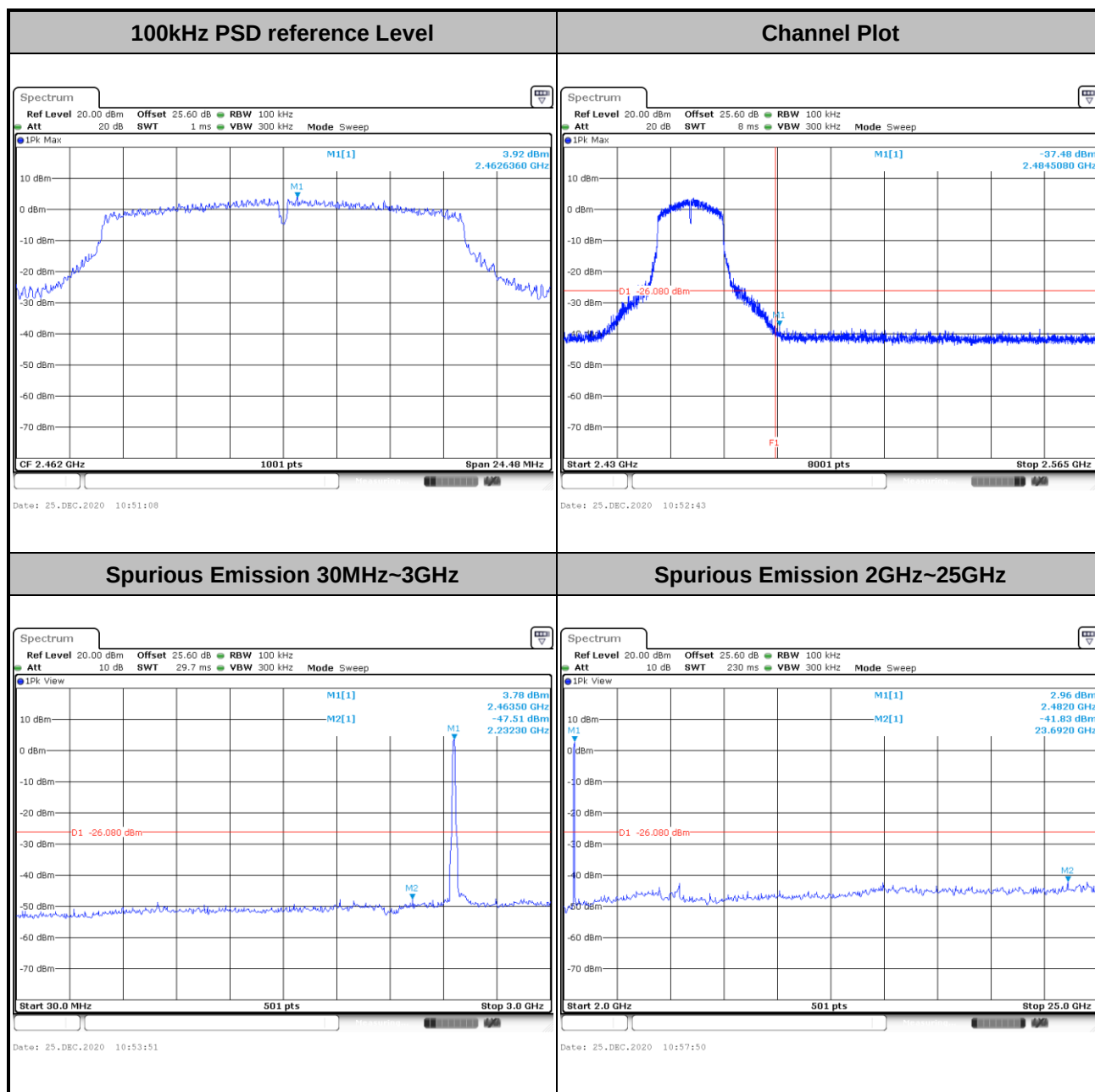


Spurious Emission 2GHz~25GHz



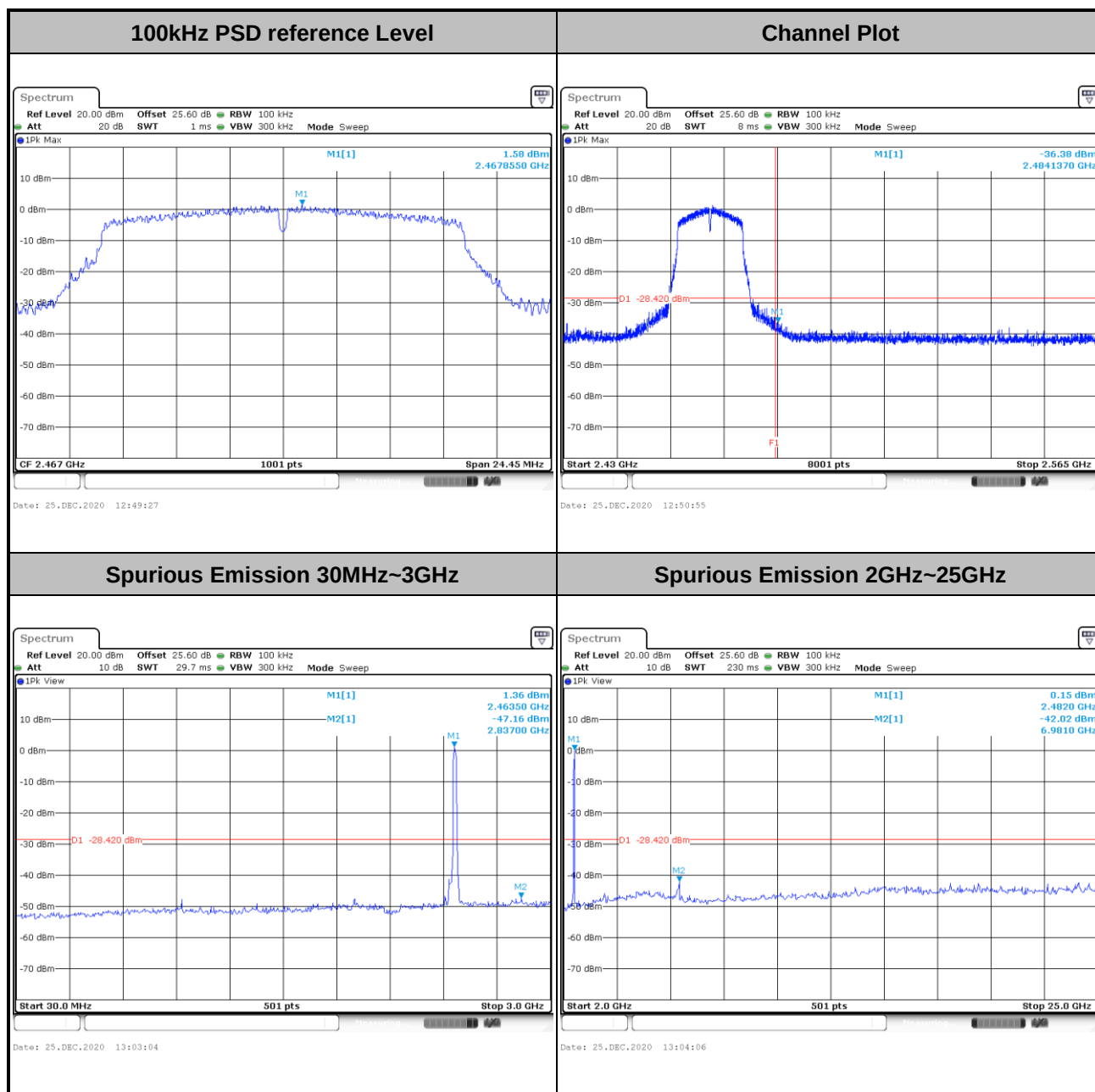


Test Mode :	802.11g	Test Channel :	11
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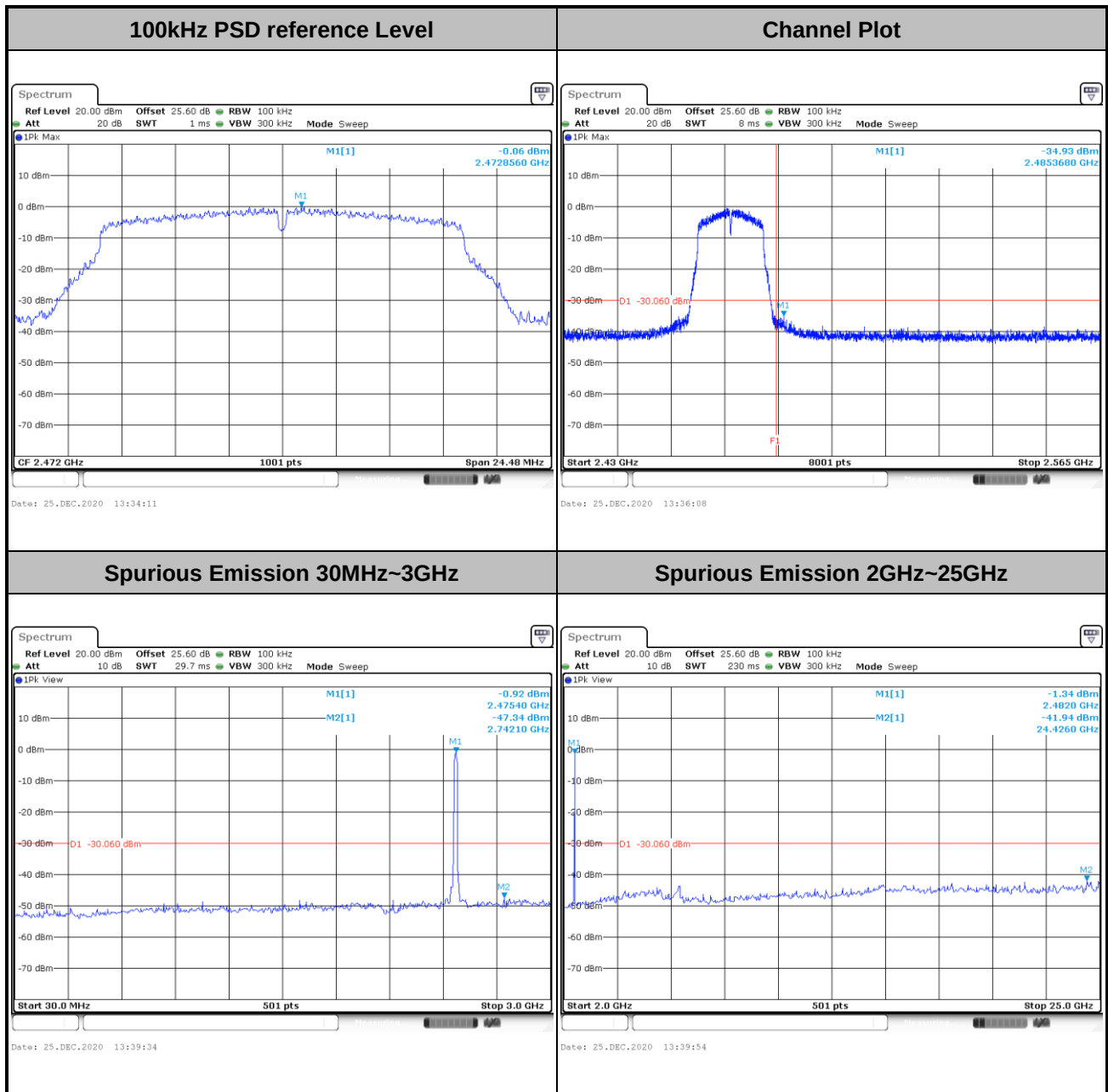


Test Mode :	802.11g	Test Channel :	12
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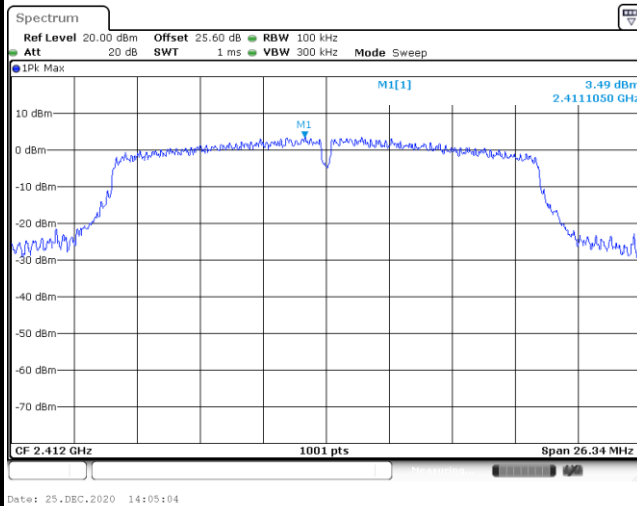
Test Mode :	802.11g	Test Channel :	13
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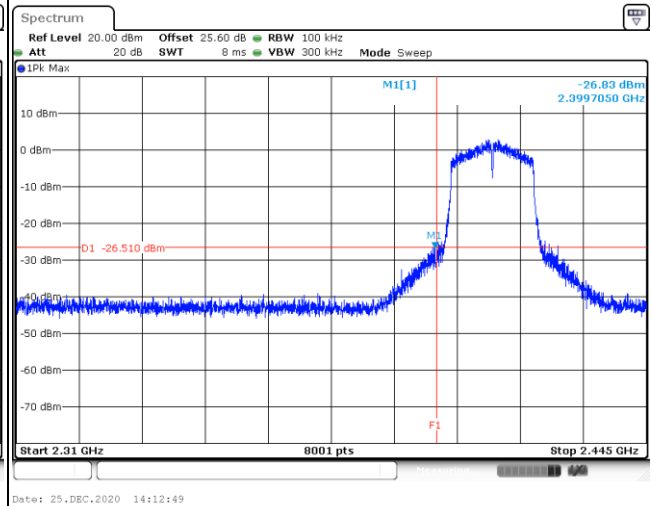


Test Mode :	802.11n HT20	Test Channel :	01
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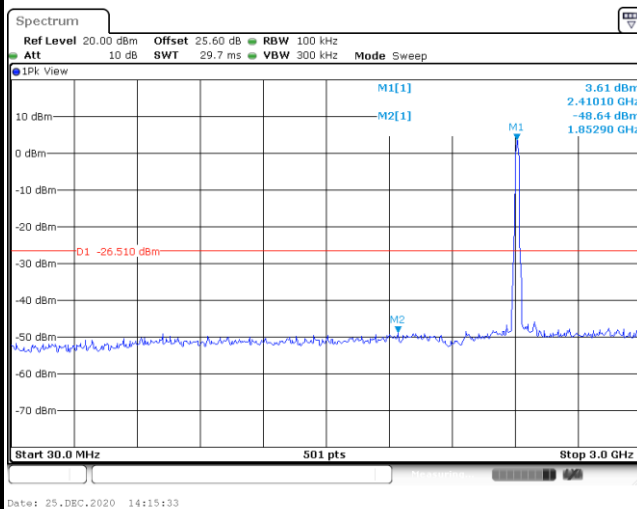
100kHz PSD reference Level



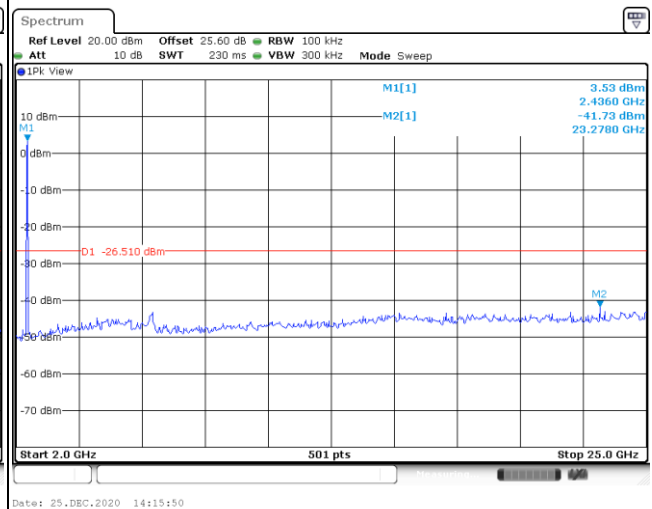
Channel Plot



Spurious Emission 30MHz~3GHz



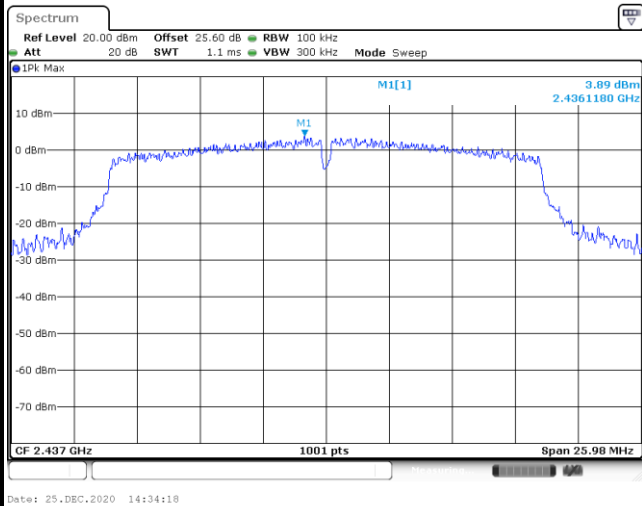
Spurious Emission 2GHz~25GHz





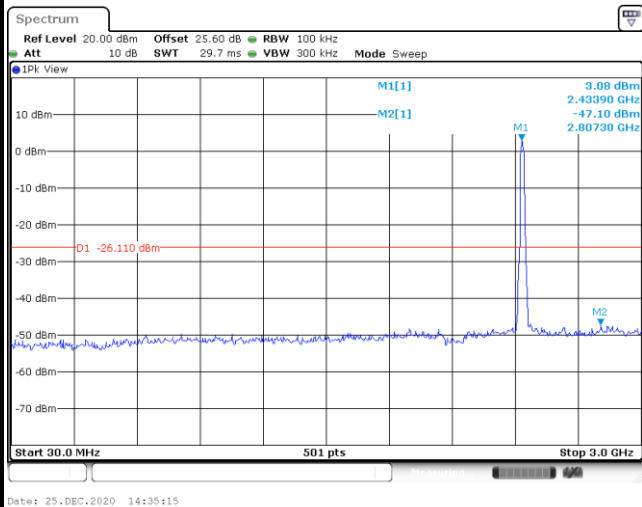
Test Mode :	802.11n HT20	Test Channel :	06
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100kHz PSD reference Level

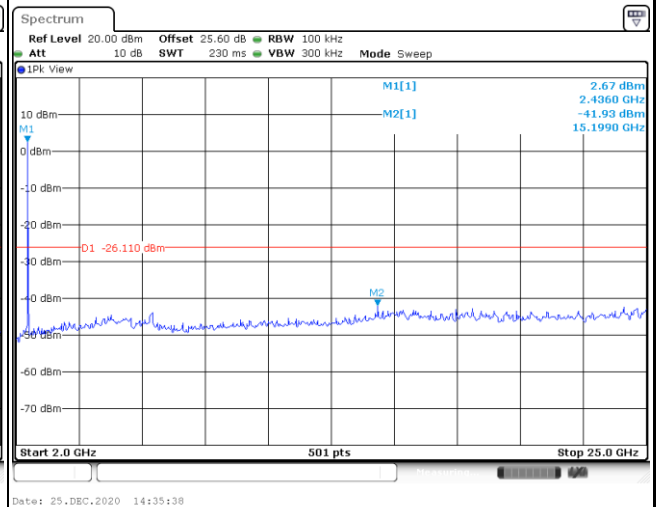


Channel Plot

Spurious Emission 30MHz~3GHz

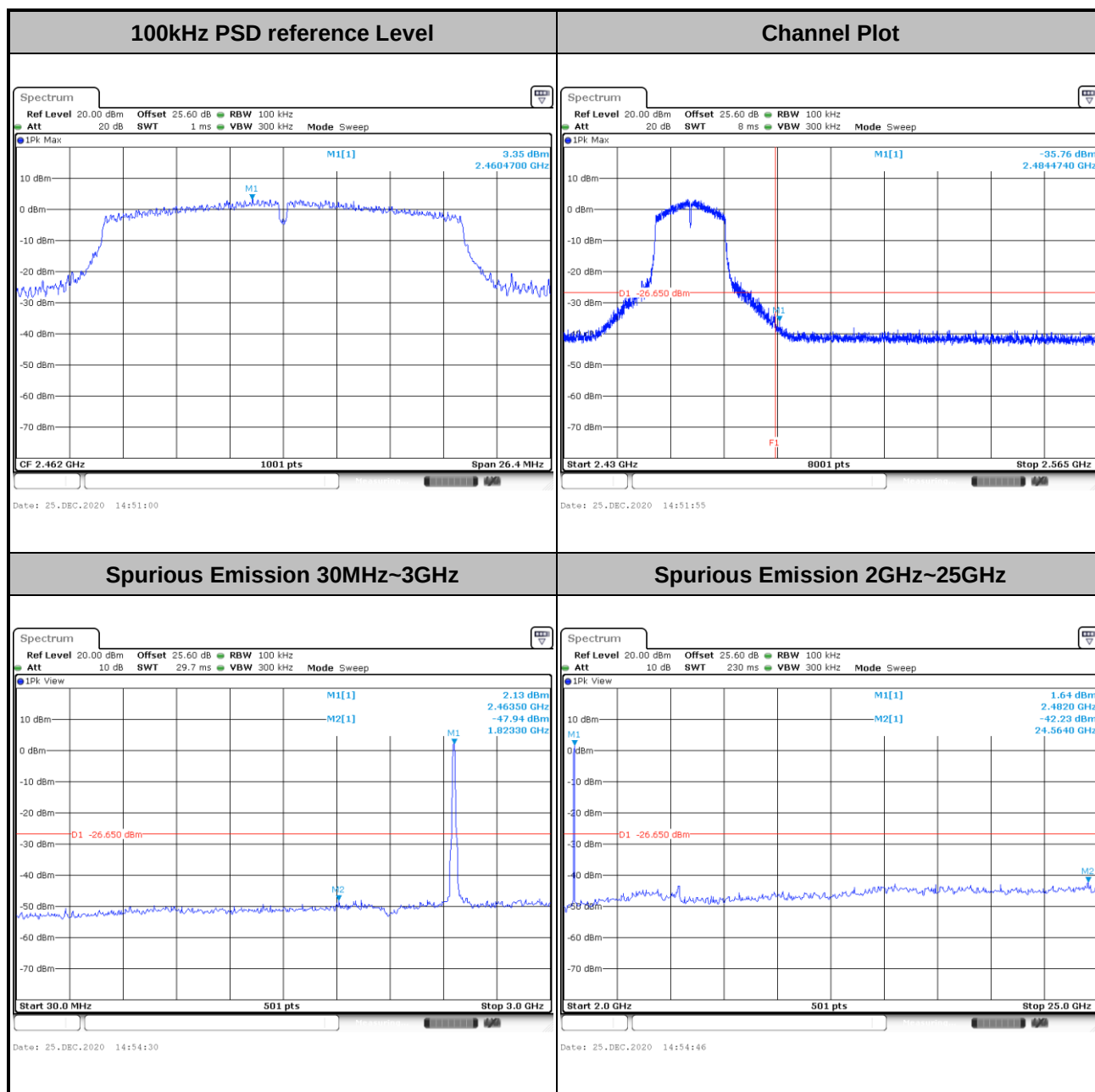


Spurious Emission 2GHz~25GHz





Test Mode :	802.11n HT20	Test Channel :	11
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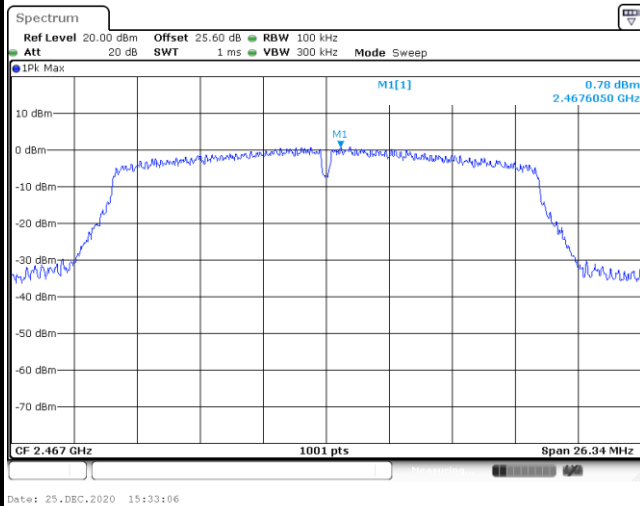




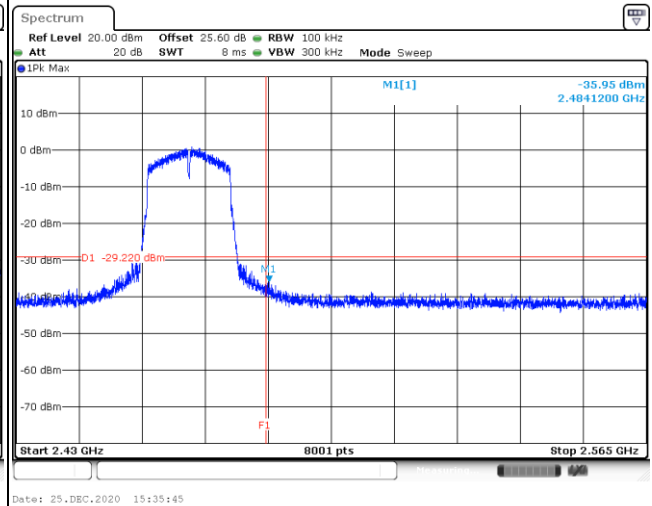
Test Mode : 802.11n HT20

Test Channel : 12

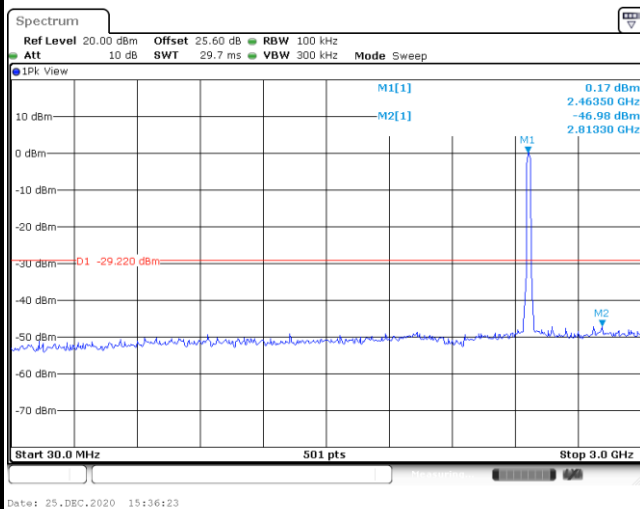
100kHz PSD reference Level



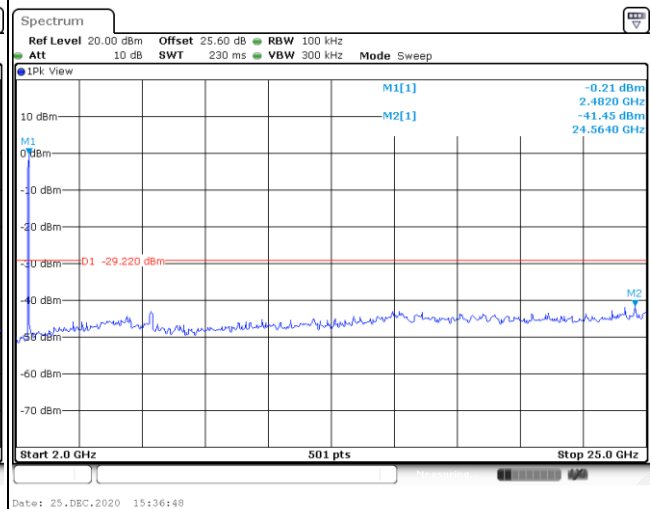
Channel Plot



Spurious Emission 30MHz~3GHz

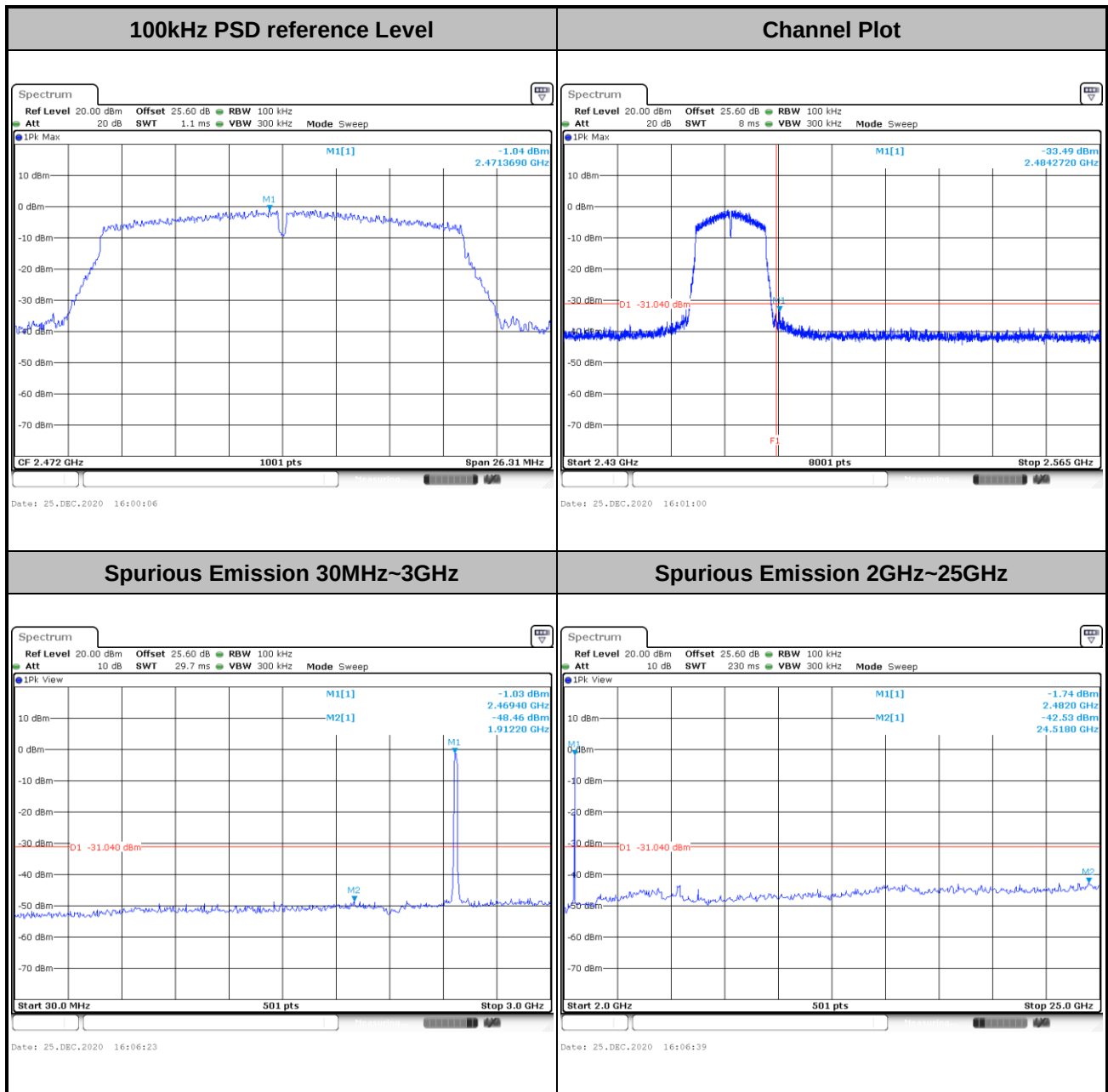


Spurious Emission 2GHz~25GHz





Test Mode :	802.11n HT20	Test Channel :	13
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3.5 Radiated Band Edges and Spurious Emission Measurement

3.5.1 Limit of Radiated band edge and Spurious Emission Measurement

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

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

3.5.2 Measuring Instruments

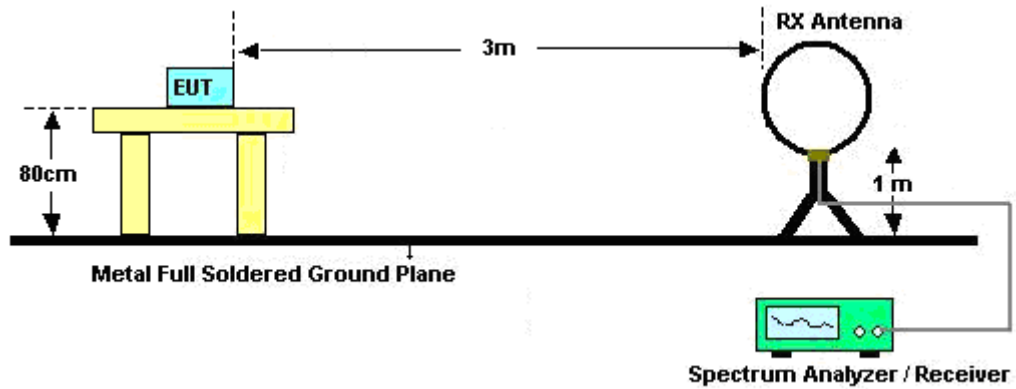
See list of measuring equipment of this test report.

3.5.3 Test Procedures

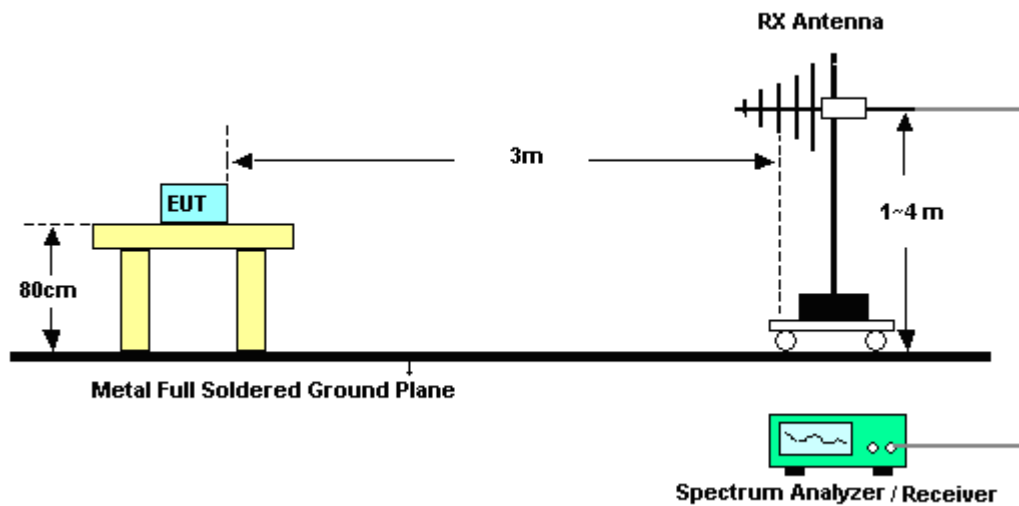
1. The testing follows the ANSI C63.10 Section 11.12.1 Radiated emission measurements.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the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

3.5.4 Test Setup

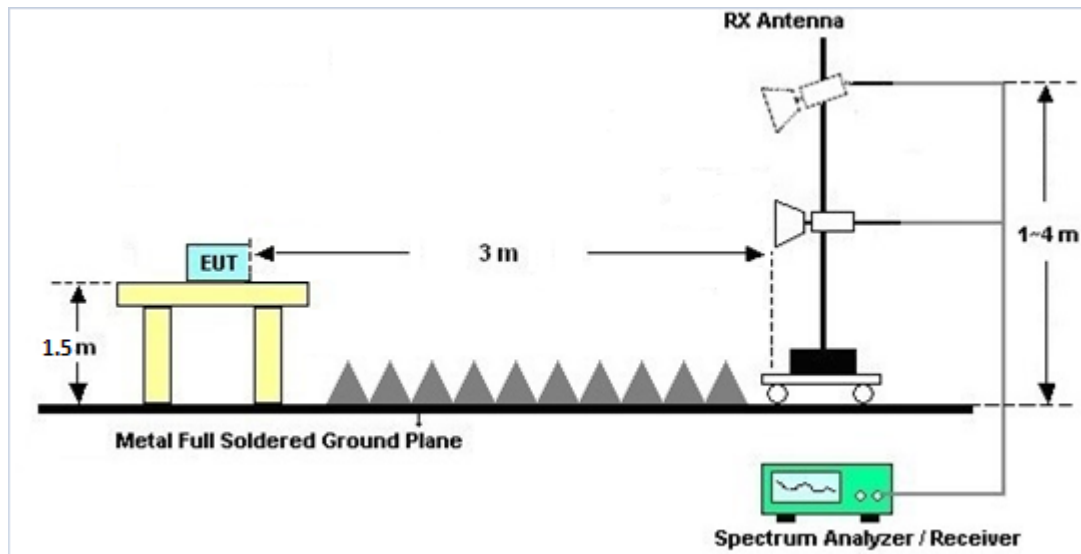
For radiated test below 30MHz



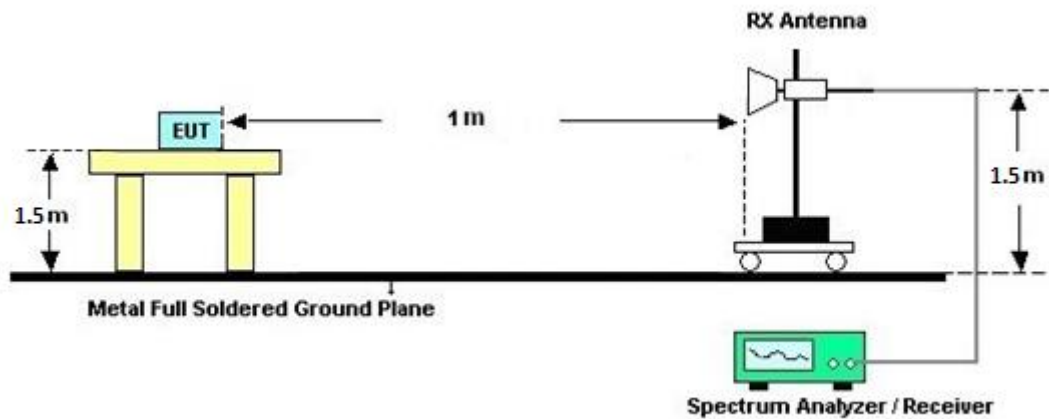
For radiated test from 30MHz to 1GHz



For radiated test from 1GHz to 18GHz



For radiated test 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.

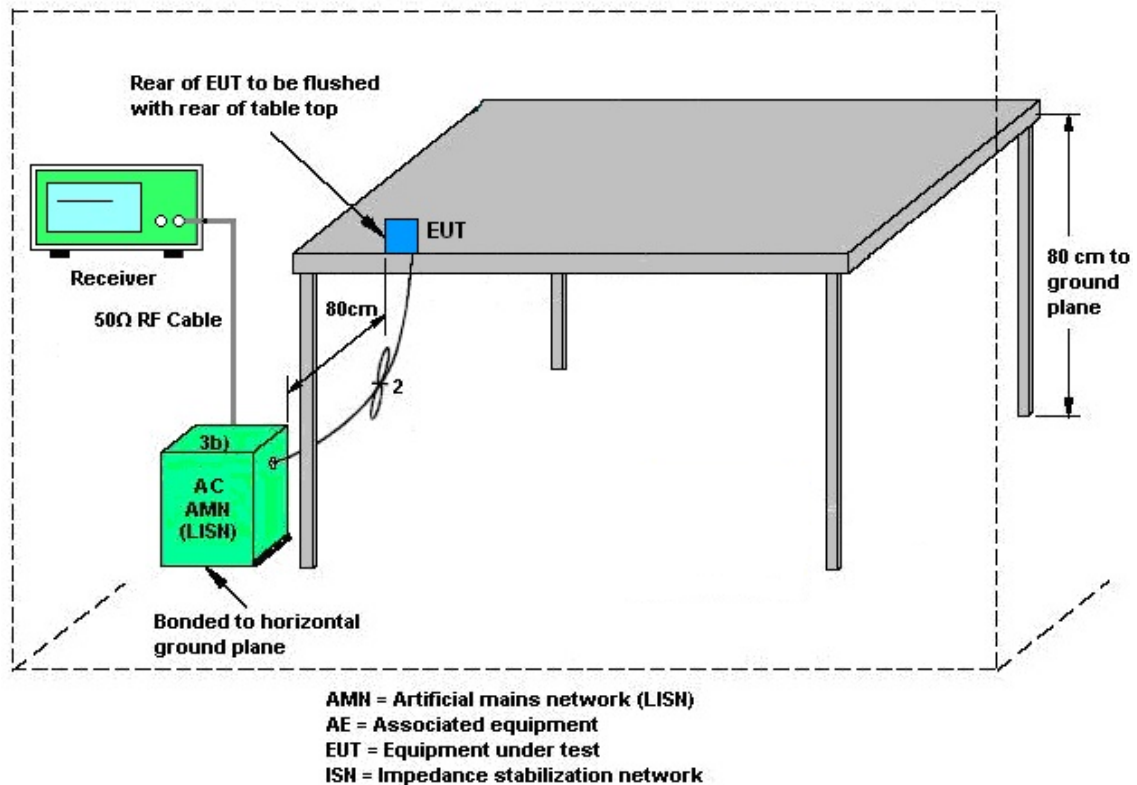
3.6.2 Measuring Instruments

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	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N-06	35419 & 03	30MHz~1GHz	Apr. 29, 2020	Dec. 19, 2020~ Dec. 26, 2020	Apr. 28, 2021	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	00075962	1GHz ~ 18GHz	Dec. 01, 2020	Dec. 19, 2020~ Dec. 26, 2020	Nov. 30, 2021	Radiation (03CH07-HY)
Preamplifier	MITEQ	AMF-7D-001018 00-30-10P	1590075	1GHz~18GHz	Apr. 23, 2020	Dec. 19, 2020~ Dec. 26, 2020	Apr. 22, 2021	Radiation (03CH07-HY)
Preamplifier	COM-POWER	PA-103A	161241	10MHz~1GHz	May 19, 2020	Dec. 19, 2020~ Dec. 26, 2020	May 18, 2021	Radiation (03CH07-HY)
Preamplifier	Agilent	8449B	3008A02362	1GHz~26.5GHz	Oct. 31, 2020	Dec. 19, 2020~ Dec. 26, 2020	Oct. 30, 2021	Radiation (03CH07-HY)
Spectrum Analyzer	Agilent	N9030A	MY52350276	3Hz~44GHz	Jun. 09, 2020	Dec. 19, 2020~ Dec. 26, 2020	Jun. 08, 2021	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY2858/2,80 1606/2	18GHz~40GHz	Feb. 25, 2020	Dec. 19, 2020~ Dec. 26, 2020	Feb. 24, 2021	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY24971/4, MY28655/4	9kHz~30MHz	Feb. 25, 2020	Dec. 19, 2020~ Dec. 26, 2020	Feb. 24, 2021	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY28655/4, MY24971/4, MY15682/4	30MHz~1GHz	Feb. 25, 2020	Dec. 19, 2020~ Dec. 26, 2020	Feb. 24, 2021	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY28655/4, MY24971/4, MY15682/4	1GHz~18GHz	Feb. 25, 2020	Dec. 19, 2020~ Dec. 26, 2020	Feb. 24, 2021	Radiation (03CH07-HY)
Controller	ChainTek	Chaintek 3000	N/A	Control Turn table	N/A	Dec. 19, 2020~ Dec. 26, 2020	N/A	Radiation (03CH07-HY)
Controller	Max-Full	MF7802	MF78020836 8	Control Ant Mast	N/A	Dec. 19, 2020~ Dec. 26, 2020	N/A	Radiation (03CH07-HY)
Antenna Mast	Max-Full	MFA520BS	N/A	1m~4m	N/A	Dec. 19, 2020~ Dec. 26, 2020	N/A	Radiation (03CH07-HY)
Turn Table	ChainTek	Chaintek 3000	N/A	0~360 Degree	N/A	Dec. 19, 2020~ Dec. 26, 2020	N/A	Radiation (03CH07-HY)
USB Data Logger	TECPEL	TR-32	HE17XB2495	N/A	N/A	Dec. 19, 2020~ Dec. 26, 2020	N/A	Radiation (03CH07-HY)
EMI Test Receiver	Agilent	N9038A(MXE)	MY53290045	20MHz~8.4GHz	Jan. 18, 2020	Dec. 19, 2020~ Dec. 26, 2020	Jan. 17, 2021	Radiation (03CH07-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Jul. 14, 2020	Dec. 19, 2020~ Dec. 26, 2020	Jul. 13, 2021	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA917025 1	18GHz~40GHz	Dec. 02, 2020	Dec. 19, 2020~ Dec. 26, 2020	Dec. 01, 2021	Radiation (03CH07-HY)
Software	Audix	E3 6.2009-8-24	N/A	N/A	N/A	Dec. 19, 2020~ Dec. 26, 2020	N/A	Radiation (03CH07-HY)
Preamplifier	EMEC	EM18G40G	060801	18GHz~40GHz	N/A	Dec. 19, 2020~ Dec. 26, 2020	N/A	Radiation (03CH07-HY)



Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Hygrometer	Testo	608-H1	34893241	N/A	Mar. 02, 2020	Dec. 14, 2020~ Dec. 25, 2020	Mar. 01, 2021	Conducted (TH05-HY)
Power Sensor	DARE	RPR3006W	16I00054SN O11	10MHz~6GHz	Dec. 30, 2019	Dec. 14, 2020~ Dec. 25, 2020	Dec. 29, 2020	Conducted (TH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV40	101566	10Hz ~ 40GHz	Jul. 22, 2020	Dec. 14, 2020~ Dec. 25, 2020	Jul. 21, 2021	Conducted (TH05-HY)
Switch Box & RF Cable	EM Electronics	EMSW18SE	SW200302	N/A	Mar. 17, 2020	Dec. 14, 2020~ Dec. 25, 2020	Mar. 16, 2021	Conducted (TH05-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Dec. 10, 2020	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102317	9kHz~3.6GHz	Sep. 11, 2020	Dec. 10, 2020	Sep. 10, 2021	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34913912	N/A	Nov. 18, 2020	Dec. 10, 2020	Nov. 17, 2021	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Nov. 16, 2020	Dec. 10, 2020	Nov. 15, 2021	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	Dec. 10, 2020	N/A	Conduction (CO05-HY)
LF Cable	HUBER + SUHNER	RG-214/U	LF01	N/A	Jan. 02, 2020	Dec. 10, 2020	Jan. 01, 2021	Conduction (CO05-HY)
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100851	N/A	Jan. 02, 2020	Dec. 10, 2020	Jan. 01, 2021	Conduction (CO05-HY)

5 Uncertainty of Evaluation

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

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.7
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Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.3
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Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.0
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Appendix A. Test Result of Conducted Test Items

Test Engineer:	Kathy Chen	Temperature:	21.3~23.4	°C
Test Date:	2020/12/14~2020/12/25	Relative Humidity:	54.6~57.3	%

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	14.44	-	9.56	-	0.50	Pass
11b	1Mbps	1	6	2437	14.44	-	9.56	-	0.50	Pass
11b	1Mbps	1	11	2462	14.49	-	10.04	-	0.50	Pass
11b	1Mbps	1	12	2467	14.44	-	10.04	-	0.50	Pass
11b	1Mbps	1	13	2472	14.44	-	10.04	-	0.50	Pass
11g	6Mbps	1	1	2412	16.78	-	16.32	-	0.50	Pass
11g	6Mbps	1	6	2437	16.78	-	16.32	-	0.50	Pass
11g	6Mbps	1	11	2462	16.73	-	16.32	-	0.50	Pass
11g	6Mbps	1	12	2467	16.78	-	16.30	-	0.50	Pass
11g	6Mbps	1	13	2472	16.63	-	16.32	-	0.50	Pass
HT20	MCS0	1	1	2412	17.73	-	17.56	-	0.50	Pass
HT20	MCS0	1	6	2437	17.83	-	17.32	-	0.50	Pass
HT20	MCS0	1	11	2462	17.78	-	17.60	-	0.50	Pass
HT20	MCS0	1	12	2467	17.63	-	17.56	-	0.50	Pass
HT20	MCS0	1	13	2472	17.68	-	17.54	-	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	18.70	-		30.00	-	0.00	-	18.70	-	36.00	-	Pass
11b	1Mbps	1	6	2437	18.70	-		30.00	-	0.00	-	18.70	-	36.00	-	Pass
11b	1Mbps	1	11	2462	18.70	-		30.00	-	0.00	-	18.70	-	36.00	-	Pass
11b	1Mbps	1	12	2467	18.70	-		30.00	-	0.00	-	18.70	-	36.00	-	Pass
11b	1Mbps	1	13	2472	17.70	-		30.00	-	0.00	-	17.70	-	36.00	-	Pass
11g	6Mbps	1	1	2412	17.70	-		30.00	-	0.00	-	17.70	-	36.00	-	Pass
11g	6Mbps	1	6	2437	17.70	-		30.00	-	0.00	-	17.70	-	36.00	-	Pass
11g	6Mbps	1	11	2462	17.70	-		30.00	-	0.00	-	17.70	-	36.00	-	Pass
11g	6Mbps	1	12	2467	15.50	-		30.00	-	0.00	-	15.50	-	36.00	-	Pass
11g	6Mbps	1	13	2472	13.90	-		30.00	-	0.00	-	13.90	-	36.00	-	Pass
HT20	MCS0	1	1	2412	17.40	-		30.00	-	0.00	-	17.40	-	36.00	-	Pass
HT20	MCS0	1	6	2437	17.80	-		30.00	-	0.00	-	17.80	-	36.00	-	Pass
HT20	MCS0	1	11	2462	17.40	-		30.00	-	0.00	-	17.40	-	36.00	-	Pass
HT20	MCS0	1	12	2467	14.90	-		30.00	-	0.00	-	14.90	-	36.00	-	Pass
HT20	MCS0	1	13	2472	13.10	-		30.00	-	0.00	-	13.10	-	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	-3.79	-		0.00	-	8.00	-	Pass
11b	1Mbps	1	6	2437	-3.57	-		0.00	-	8.00	-	Pass
11b	1Mbps	1	11	2462	-3.56	-		0.00	-	8.00	-	Pass
11b	1Mbps	1	12	2467	-3.51	-		0.00	-	8.00	-	Pass
11b	1Mbps	1	13	2472	-4.61	-		0.00	-	8.00	-	Pass
11g	6Mbps	1	1	2412	-7.78	-		0.00	-	8.00	-	Pass
11g	6Mbps	1	6	2437	-7.89	-		0.00	-	8.00	-	Pass
11g	6Mbps	1	11	2462	-7.89	-		0.00	-	8.00	-	Pass
11g	6Mbps	1	12	2467	-9.96	-		0.00	-	8.00	-	Pass
11g	6Mbps	1	13	2472	-11.61	-		0.00	-	8.00	-	Pass
HT20	MCS0	1	1	2412	-7.93	-		0.00	-	8.00	-	Pass
HT20	MCS0	1	6	2437	-7.62	-		0.00	-	8.00	-	Pass
HT20	MCS0	1	11	2462	-7.99	-		0.00	-	8.00	-	Pass
HT20	MCS0	1	12	2467	-10.66	-		0.00	-	8.00	-	Pass
HT20	MCS0	1	13	2472	-12.46	-		0.00	-	8.00	-	Pass

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



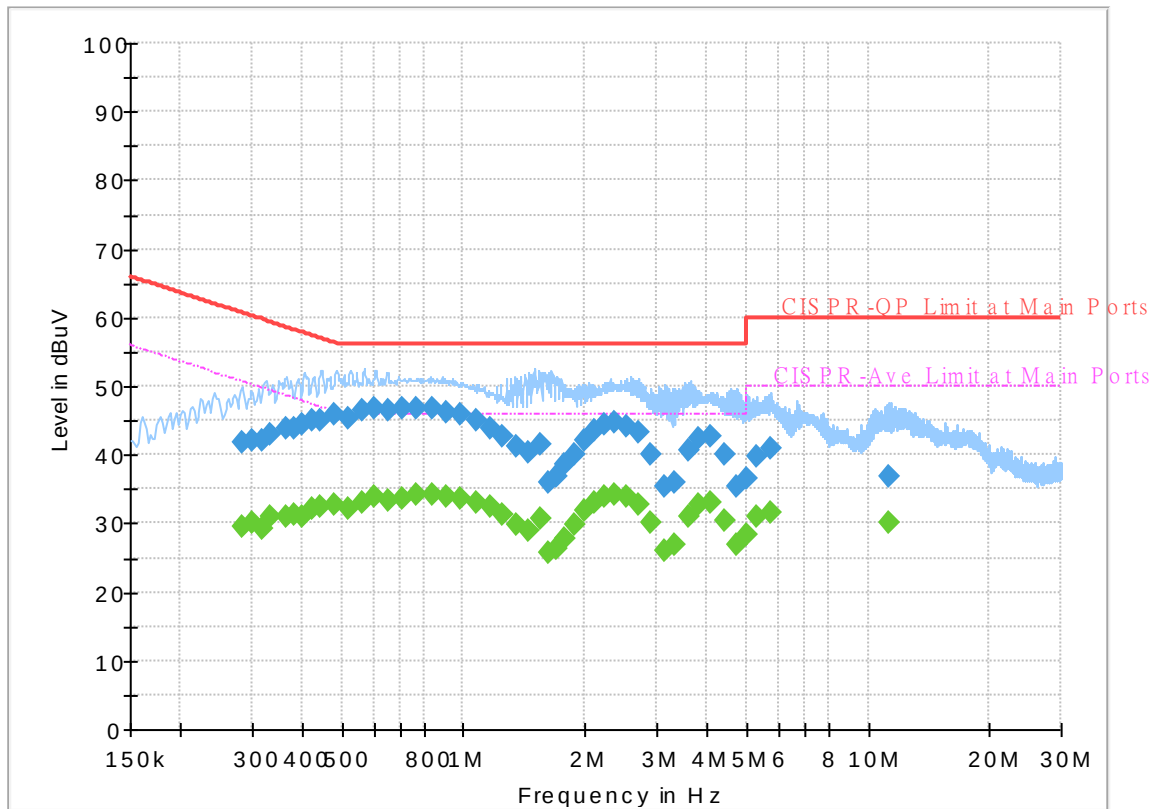
Appendix B. AC Conducted Emission Test Results

Test Engineer :	Tom Lee	Temperature :	24~26℃
		Relative Humidity :	42~50%

EUT Information

Report NO : 000710-01
 Test Mode : Mode 1
 Test Voltage : 120Vac/60Hz
 Phase : Line

Full Spectrum



Final Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.282750	---	29.40	50.74	21.34	L1	OFF	19.5
0.282750	41.68	---	60.74	19.06	L1	OFF	19.5
0.300120	---	30.09	50.24	20.15	L1	OFF	19.5
0.300120	42.24	---	60.24	18.00	L1	OFF	19.5
0.318300	---	29.21	49.75	20.54	L1	OFF	19.5
0.318300	42.17	---	59.75	17.58	L1	OFF	19.5
0.332250	---	30.92	49.40	18.48	L1	OFF	19.5
0.332250	42.87	---	59.40	16.53	L1	OFF	19.5
0.366000	---	31.11	48.59	17.48	L1	OFF	19.5
0.366000	43.77	---	58.59	14.82	L1	OFF	19.5
0.384000	---	31.32	48.19	16.87	L1	OFF	19.5
0.384000	43.90	---	58.19	14.29	L1	OFF	19.5
0.397500	---	30.90	47.91	17.01	L1	OFF	19.5
0.397500	44.34	---	57.91	13.57	L1	OFF	19.5
0.422250	---	32.30	47.40	15.10	L1	OFF	19.5
0.422250	45.14	---	57.40	12.26	L1	OFF	19.5
0.444570	---	32.33	46.98	14.65	L1	OFF	19.5
0.444570	45.06	---	56.98	11.92	L1	OFF	19.5
0.479490	---	32.83	46.35	13.52	L1	OFF	19.5
0.479490	45.85	---	56.35	10.50	L1	OFF	19.5
0.519000	---	32.25	46.00	13.75	L1	OFF	19.5

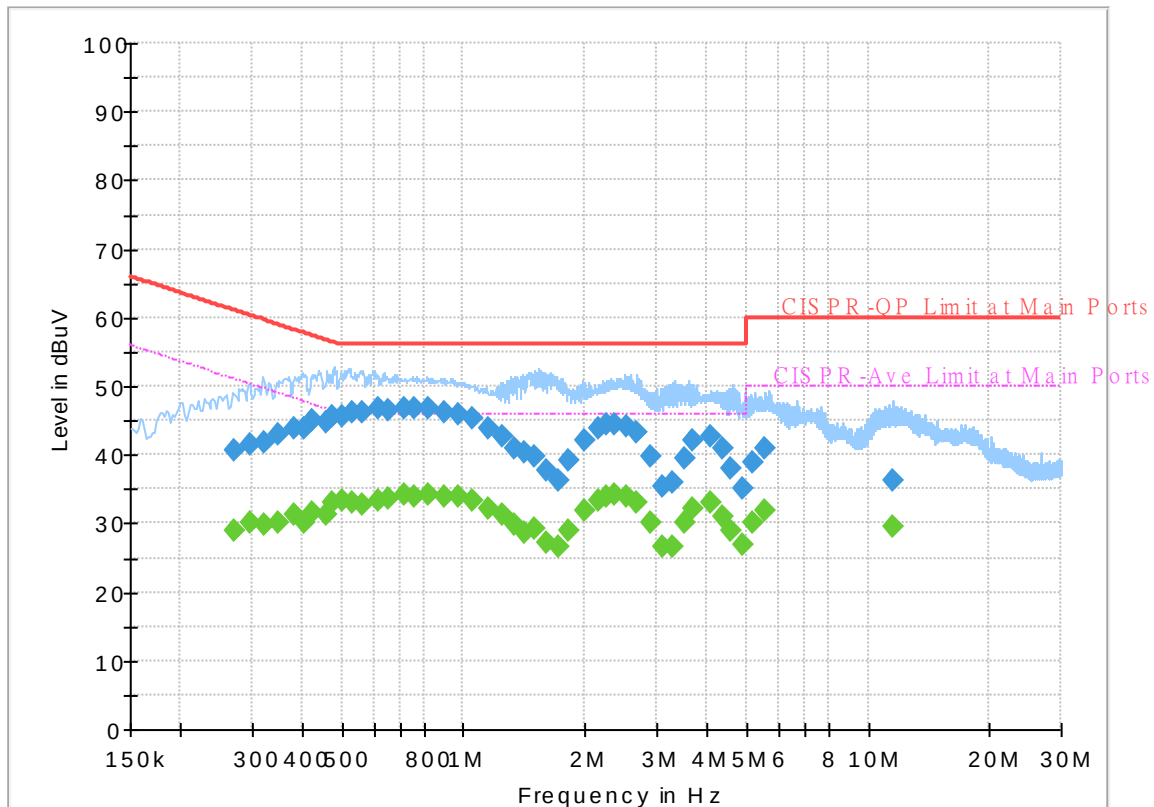
0.519000	45.46	---	56.00	10.54	L1	OFF	19.5
0.564180	---	33.18	46.00	12.82	L1	OFF	19.6
0.564180	46.39	---	56.00	9.61	L1	OFF	19.6
0.602250	---	33.86	46.00	12.14	L1	OFF	19.6
0.602250	46.76	---	56.00	9.24	L1	OFF	19.6
0.652830	---	33.47	46.00	12.53	L1	OFF	19.6
0.652830	46.46	---	56.00	9.54	L1	OFF	19.6
0.708540	---	33.72	46.00	12.28	L1	OFF	19.6
0.708540	46.65	---	56.00	9.35	L1	OFF	19.6
0.768750	---	34.12	46.00	11.88	L1	OFF	19.6
0.768750	46.80	---	56.00	9.20	L1	OFF	19.6
0.838500	---	34.12	46.00	11.88	L1	OFF	19.6
0.838500	46.66	---	56.00	9.34	L1	OFF	19.6
0.912750	---	33.84	46.00	12.16	L1	OFF	19.6
0.912750	46.27	---	56.00	9.73	L1	OFF	19.6
0.980250	---	33.74	46.00	12.26	L1	OFF	19.6
0.980250	45.92	---	56.00	10.08	L1	OFF	19.6
1.077000	---	33.17	46.00	12.83	L1	OFF	19.6
1.077000	44.98	---	56.00	11.02	L1	OFF	19.6
1.172040	---	32.33	46.00	13.67	L1	OFF	19.6
1.172040	43.78	---	56.00	12.22	L1	OFF	19.6
1.243500	---	31.15	46.00	14.85	L1	OFF	19.6
1.243500	42.55	---	56.00	13.45	L1	OFF	19.6
1.348980	---	29.77	46.00	16.23	L1	OFF	19.6
1.348980	41.26	---	56.00	14.74	L1	OFF	19.6
1.448700	---	28.90	46.00	17.10	L1	OFF	19.6
1.448700	40.32	---	56.00	15.68	L1	OFF	19.6
1.544730	---	30.84	46.00	15.16	L1	OFF	19.6
1.544730	41.62	---	56.00	14.38	L1	OFF	19.6
1.620420	---	25.82	46.00	20.18	L1	OFF	19.6
1.620420	35.94	---	56.00	20.06	L1	OFF	19.6
1.703220	---	26.22	46.00	19.78	L1	OFF	19.7
1.703220	36.78	---	56.00	19.22	L1	OFF	19.7
1.781430	---	27.88	46.00	18.12	L1	OFF	19.7
1.781430	38.55	---	56.00	17.45	L1	OFF	19.7
1.880250	---	29.96	46.00	16.04	L1	OFF	19.7
1.880250	40.05	---	56.00	15.95	L1	OFF	19.7
1.996440	---	31.99	46.00	14.01	L1	OFF	19.7
1.996440	42.23	---	56.00	13.77	L1	OFF	19.7
2.114250	---	33.01	46.00	12.99	L1	OFF	19.7
2.114250	43.63	---	56.00	12.37	L1	OFF	19.7
2.225040	---	33.78	46.00	12.22	L1	OFF	19.7
2.225040	44.42	---	56.00	11.58	L1	OFF	19.7
2.361750	---	34.18	46.00	11.82	L1	OFF	19.7
2.361750	44.76	---	56.00	11.24	L1	OFF	19.7
2.532750	---	33.81	46.00	12.19	L1	OFF	19.7
2.532750	44.20	---	56.00	11.80	L1	OFF	19.7
2.701860	---	32.77	46.00	13.23	L1	OFF	19.7
2.701860	43.14	---	56.00	12.86	L1	OFF	19.7
2.912910	---	30.09	46.00	15.91	L1	OFF	19.7
2.912910	39.95	---	56.00	16.05	L1	OFF	19.7
3.153390	---	25.95	46.00	20.05	L1	OFF	19.7
3.153390	35.39	---	56.00	20.61	L1	OFF	19.7
3.338790	---	27.00	46.00	19.00	L1	OFF	19.7
3.338790	36.07	---	56.00	19.93	L1	OFF	19.7
3.587010	---	31.05	46.00	14.95	L1	OFF	19.7
3.587010	40.67	---	56.00	15.33	L1	OFF	19.7
3.822270	---	32.71	46.00	13.29	L1	OFF	19.7
3.822270	42.50	---	56.00	13.50	L1	OFF	19.7
4.103970	---	32.95	46.00	13.05	L1	OFF	19.7
4.103970	42.67	---	56.00	13.33	L1	OFF	19.7
4.427250	---	30.51	46.00	15.49	L1	OFF	19.7
4.427250	40.05	---	56.00	15.95	L1	OFF	19.7
4.713720	---	26.94	46.00	19.06	L1	OFF	19.8
4.713720	35.31	---	56.00	20.69	L1	OFF	19.8
5.025750	---	28.33	50.00	21.67	L1	OFF	19.8
5.025750	36.61	---	60.00	23.39	L1	OFF	19.8
5.286390	---	30.90	50.00	19.10	L1	OFF	19.8
5.286390	39.82	---	60.00	20.18	L1	OFF	19.8
5.716500	---	31.61	50.00	18.39	L1	OFF	19.8
5.716500	40.83	---	60.00	19.17	L1	OFF	19.8

11.320080	---	30.22	50.00	19.78	L1	OFF	20.1
11.320080	36.75	---	60.00	23.25	L1	OFF	20.1

EUT Information

Report NO : 000710-01
 Test Mode : Mode 1
 Test Voltage : 120Vac/60Hz
 Phase : Neutral

Full Spectrum



Final Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.271050	---	29.06	51.09	22.03	N	OFF	19.6
0.271050	40.63	---	61.09	20.46	N	OFF	19.6
0.296250	---	30.00	50.35	20.35	N	OFF	19.6
0.296250	41.61	---	60.35	18.74	N	OFF	19.6
0.323250	---	29.74	49.62	19.88	N	OFF	19.6
0.323250	41.82	---	59.62	17.80	N	OFF	19.6
0.350250	---	29.98	48.96	18.98	N	OFF	19.6
0.350250	42.87	---	58.96	16.09	N	OFF	19.6
0.383460	---	31.28	48.20	16.92	N	OFF	19.6
0.383460	43.73	---	58.20	14.47	N	OFF	19.6
0.402090	---	30.23	47.81	17.58	N	OFF	19.6
0.402090	43.98	---	57.81	13.83	N	OFF	19.6
0.424500	---	31.53	47.36	15.83	N	OFF	19.6
0.424500	44.97	---	57.36	12.39	N	OFF	19.6
0.456000	---	31.39	46.77	15.38	N	OFF	19.6
0.456000	44.84	---	56.77	11.93	N	OFF	19.6
0.474000	---	32.94	46.44	13.50	N	OFF	19.6
0.474000	45.73	---	56.44	10.71	N	OFF	19.6
0.501000	---	33.29	46.00	12.71	N	OFF	19.6
0.501000	45.67	---	56.00	10.33	N	OFF	19.6
0.532500	---	33.08	46.00	12.92	N	OFF	19.6

0.532500	46.14	---	56.00	9.86	N	OFF	19.6
0.559500	---	32.87	46.00	13.13	N	OFF	19.6
0.559500	46.12	---	56.00	9.88	N	OFF	19.6
0.615750	---	33.26	46.00	12.74	N	OFF	19.6
0.615750	46.68	---	56.00	9.32	N	OFF	19.6
0.653100	---	33.75	46.00	12.25	N	OFF	19.6
0.653100	46.50	---	56.00	9.50	N	OFF	19.6
0.712500	---	34.08	46.00	11.92	N	OFF	19.6
0.712500	46.79	---	56.00	9.21	N	OFF	19.6
0.752370	---	33.89	46.00	12.11	N	OFF	19.6
0.752370	46.65	---	56.00	9.35	N	OFF	19.6
0.817530	---	34.32	46.00	11.68	N	OFF	19.6
0.817530	46.89	---	56.00	9.11	N	OFF	19.6
0.892410	---	33.95	46.00	12.05	N	OFF	19.6
0.892410	46.23	---	56.00	9.77	N	OFF	19.6
0.971250	---	33.90	46.00	12.10	N	OFF	19.6
0.971250	46.01	---	56.00	9.99	N	OFF	19.6
1.058370	---	33.25	46.00	12.75	N	OFF	19.6
1.058370	45.21	---	56.00	10.79	N	OFF	19.6
1.159440	---	32.29	46.00	13.71	N	OFF	19.6
1.159440	43.84	---	56.00	12.16	N	OFF	19.6
1.248000	---	31.16	46.00	14.84	N	OFF	19.6
1.248000	42.59	---	56.00	13.41	N	OFF	19.6
1.338450	---	29.84	46.00	16.16	N	OFF	19.6
1.338450	41.04	---	56.00	14.96	N	OFF	19.6
1.412250	---	28.71	46.00	17.29	N	OFF	19.6
1.412250	40.35	---	56.00	15.65	N	OFF	19.6
1.495500	---	29.29	46.00	16.71	N	OFF	19.7
1.495500	39.89	---	56.00	16.11	N	OFF	19.7
1.601250	---	27.09	46.00	18.91	N	OFF	19.7
1.601250	37.76	---	56.00	18.24	N	OFF	19.7
1.716360	---	26.47	46.00	19.53	N	OFF	19.7
1.716360	36.13	---	56.00	19.87	N	OFF	19.7
1.827960	---	28.96	46.00	17.04	N	OFF	19.7
1.827960	39.17	---	56.00	16.83	N	OFF	19.7
1.997250	---	31.97	46.00	14.03	N	OFF	19.7
1.997250	42.11	---	56.00	13.89	N	OFF	19.7
2.150250	---	33.31	46.00	12.69	N	OFF	19.7
2.150250	43.86	---	56.00	12.14	N	OFF	19.7
2.267250	---	34.02	46.00	11.98	N	OFF	19.7
2.267250	44.51	---	56.00	11.49	N	OFF	19.7
2.375250	---	34.08	46.00	11.92	N	OFF	19.7
2.375250	44.58	---	56.00	11.42	N	OFF	19.7
2.532390	---	33.89	46.00	12.11	N	OFF	19.7
2.532390	44.22	---	56.00	11.78	N	OFF	19.7
2.665500	---	33.06	46.00	12.94	N	OFF	19.7
2.665500	43.18	---	56.00	12.82	N	OFF	19.7
2.911920	---	30.02	46.00	15.98	N	OFF	19.7
2.911920	39.91	---	56.00	16.09	N	OFF	19.7
3.106500	---	26.61	46.00	19.39	N	OFF	19.7
3.106500	35.50	---	56.00	20.50	N	OFF	19.7
3.293250	---	26.48	46.00	19.52	N	OFF	19.7
3.293250	35.97	---	56.00	20.03	N	OFF	19.7
3.520500	---	30.03	46.00	15.97	N	OFF	19.7
3.520500	39.47	---	56.00	16.53	N	OFF	19.7
3.700500	---	32.17	46.00	13.83	N	OFF	19.7
3.700500	42.00	---	56.00	14.00	N	OFF	19.7
4.069500	---	33.00	46.00	13.00	N	OFF	19.7
4.069500	42.65	---	56.00	13.35	N	OFF	19.7
4.366500	---	31.13	46.00	14.87	N	OFF	19.8
4.366500	40.84	---	56.00	15.16	N	OFF	19.8
4.555500	---	28.93	46.00	17.07	N	OFF	19.8
4.555500	38.06	---	56.00	17.94	N	OFF	19.8
4.884000	---	26.86	46.00	19.14	N	OFF	19.8
4.884000	34.98	---	56.00	21.02	N	OFF	19.8
5.180640	---	30.01	50.00	19.99	N	OFF	19.8
5.180640	38.84	---	60.00	21.16	N	OFF	19.8
5.563500	---	31.90	50.00	18.10	N	OFF	19.8
5.563500	41.01	---	60.00	18.99	N	OFF	19.8
11.521860	---	29.52	50.00	20.48	N	OFF	20.1
11.521860	36.33	---	60.00	23.67	N	OFF	20.1



Appendix C. Radiated Spurious Emission

Test Engineer :	Jesse Wang, Stan Hsieh, Ken Wu and James Chiu	Temperature :	23~25°C
		Relative Humidity :	51~58%

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		2376.57	53.54	-20.46	74	39.09	31.87	17.99	35.41	142	60	P	H
		2382.66	42.86	-11.14	54	28.4	31.87	18	35.41	142	60	A	H
	*	2412	102.51	-	-	87.89	32	18.04	35.42	142	60	P	H
	*	2412	99.5	-	-	84.88	32	18.04	35.42	142	60	A	H
		2388.12	53.35	-20.65	74	38.85	31.9	18.01	35.41	100	251	P	V
		2389.17	42.78	-11.22	54	28.28	31.9	18.01	35.41	100	251	A	V
	*	2412	104.03	-	-	89.41	32	18.04	35.42	100	251	P	V
	*	2412	100.9	-	-	86.28	32	18.04	35.42	100	251	A	V
802.11b CH 06 2437MHz		2379.3	53.17	-20.83	74	38.72	31.87	17.99	35.41	163	351	P	H
		2388.82	42.56	-11.44	54	28.06	31.9	18.01	35.41	163	351	A	H
	*	2437	103.24	-	-	88.41	32.2	18.06	35.43	163	351	P	H
	*	2437	100.27	-	-	85.44	32.2	18.06	35.43	163	351	A	H
		2497.13	53.79	-20.21	74	38.52	32.6	18.13	35.46	163	351	P	H
		2487.47	43.58	-10.42	54	28.44	32.47	18.12	35.45	163	351	A	H
		2328.62	54.43	-19.57	74	40.16	31.77	17.89	35.39	287	98	P	V
		2389.38	42.54	-11.46	54	28.04	31.9	18.01	35.41	287	98	A	V
	*	2437	103.37	-	-	88.54	32.2	18.06	35.43	287	98	P	V
	*	2437	100.41	-	-	85.58	32.2	18.06	35.43	287	98	A	V
		2497.27	54.19	-19.81	74	38.92	32.6	18.13	35.46	287	98	P	V
		2483.5	43.58	-10.42	54	28.45	32.47	18.11	35.45	287	98	A	V



802.11b CH 11 2462MHz	*	2462	103.75	-	-	88.76	32.33	18.1	35.44	100	61	P	H
	*	2462	100.78	-	-	85.79	32.33	18.1	35.44	100	61	A	H
		2489.28	53.79	-20.21	74	38.52	32.6	18.12	35.45	100	61	P	H
		2498.84	43.9	-10.1	54	28.63	32.6	18.13	35.46	100	61	A	H
	*	2462	104.91	-	-	89.92	32.33	18.1	35.44	113	256	P	V
	*	2462	101.88	-	-	86.89	32.33	18.1	35.44	113	256	A	V
		2489.16	55.07	-18.93	74	39.8	32.6	18.12	35.45	113	256	P	V
		2498.88	43.93	-10.07	54	28.66	32.6	18.13	35.46	113	256	A	V
802.11b CH 12 2467MHz	*	2467	103.88	-	-	88.9	32.33	18.1	35.45	100	61	P	H
	*	2467	100.77	-	-	85.79	32.33	18.1	35.45	100	61	A	H
		2483.52	58.28	-15.72	74	43.15	32.47	18.11	35.45	100	61	P	H
		2483.52	50.06	-3.94	54	34.93	32.47	18.11	35.45	100	61	A	H
	*	2467	105.16	-	-	90.18	32.33	18.1	35.45	117	275	P	V
	*	2467	101.96	-	-	86.98	32.33	18.1	35.45	117	275	A	V
		2483.72	56.51	-17.49	74	41.38	32.47	18.11	35.45	117	275	P	V
		2483.52	48.96	-5.04	54	33.83	32.47	18.11	35.45	117	275	A	V
802.11b CH 13 2472MHz	*	2472	101.84	-	-	86.72	32.47	18.1	35.45	107	60	P	H
	*	2472	98.81	-	-	83.69	32.47	18.1	35.45	107	60	A	H
		2485.04	58.05	-15.95	74	42.92	32.47	18.11	35.45	107	60	P	H
		2487.4	50.78	-3.22	54	35.64	32.47	18.12	35.45	107	60	P	H
	*	2472	104.5	-	-	89.38	32.47	18.1	35.45	117	265	P	V
	*	2472	101.23	-	-	86.11	32.47	18.1	35.45	117	265	A	V
		2487.64	57.73	-16.27	74	42.46	32.6	18.12	35.45	117	265	P	V
		2487.4	50.87	-3.13	54	35.73	32.47	18.12	35.45	117	265	A	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	44.58	-29.42	74	57.55	34.05	11.87	58.89	100	0	P	H
		4824	44.5	-29.5	74	57.47	34.05	11.87	58.89	100	0	P	V
802.11b CH 06 2437MHz		4874	45.71	-28.29	74	58.36	34.1	12.01	58.76	100	0	P	H
		7311	40.76	-33.24	74	48.17	35.6	14.46	57.47	100	0	P	H
		4874	45.56	-28.44	74	58.21	34.1	12.01	58.76	100	0	P	V
		7311	41.27	-32.73	74	48.68	35.6	14.46	57.47	100	0	P	V
802.11b CH 11 2462MHz		4924	45.51	-28.49	74	57.84	34.17	12.14	58.64	100	0	P	H
		7386	40.9	-33.1	74	48.29	35.6	14.55	57.54	100	0	P	H
		4924	45.77	-28.23	74	58.1	34.17	12.14	58.64	100	0	P	V
		7386	40	-34	74	47.39	35.6	14.55	57.54	100	0	P	V
802.11b CH 12 2467MHz		4934	46.15	-27.85	74	58.43	34.17	12.17	58.62	100	0	P	H
		7401	40.36	-33.64	74	47.75	35.6	14.56	57.55	100	0	P	H
		4934	46.56	-27.44	74	58.84	34.17	12.17	58.62	100	0	P	V
		7401	40.42	-33.58	74	47.81	35.6	14.56	57.55	100	0	P	V
802.11b CH 13 2472MHz		4944	42.52	-31.48	74	54.71	34.2	12.2	58.59	100	0	P	H
		7416	39.78	-34.22	74	47.17	35.6	14.58	57.57	100	0	P	H
		4944	43.85	-30.15	74	56.04	34.2	12.2	58.59	100	0	P	V
		7416	39.5	-34.5	74	46.89	35.6	14.58	57.57	100	0	P	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		2389.8	60.32	-13.68	74	45.83	31.9	18.01	35.42	122	46	P	H
		2390	46.35	-7.65	54	31.86	31.9	18.01	35.42	122	46	A	H
	*	2412	104.66	-	-	90.04	32	18.04	35.42	122	46	P	H
	*	2412	97.33	-	-	82.71	32	18.04	35.42	122	46	A	H
		2389.8	57.61	-16.39	74	43.12	31.9	18.01	35.42	297	62	P	V
		2390	47.43	-6.57	54	32.94	31.9	18.01	35.42	297	62	A	V
	*	2412	105.13	-	-	90.51	32	18.04	35.42	297	62	P	V
	*	2412	97.89	-	-	83.27	32	18.04	35.42	297	62	A	V
802.11g CH 06 2437MHz		2377.34	53.24	-20.76	74	38.79	31.87	17.99	35.41	163	351	P	H
		2389.66	42.77	-11.23	54	28.27	31.9	18.01	35.41	163	351	A	H
	*	2437	105.41	-	-	90.58	32.2	18.06	35.43	163	351	P	H
	*	2437	98.39	-	-	83.56	32.2	18.06	35.43	163	351	A	H
		2495.17	54.68	-19.32	74	39.41	32.6	18.13	35.46	163	351	P	H
		2483.55	43.78	-10.22	54	28.65	32.47	18.11	35.45	163	351	A	H
		2313.64	53.62	-20.38	74	39.42	31.73	17.86	35.39	287	98	P	V
		2389.24	42.63	-11.37	54	28.13	31.9	18.01	35.41	287	98	A	V
	*	2437	106.43	-	-	91.6	32.2	18.06	35.43	287	98	P	V
	*	2437	98.74	-	-	83.91	32.2	18.06	35.43	287	98	A	V
		2490.27	54.8	-19.2	74	39.53	32.6	18.12	35.45	287	98	P	V
		2483.9	43.86	-10.14	54	28.73	32.47	18.11	35.45	287	98	A	V



802.11g CH 11 2462MHz	*	2462	105.5	-	-	90.51	32.33	18.1	35.44	100	42	P	H
	*	2462	97.93	-	-	82.94	32.33	18.1	35.44	100	42	A	H
		2483.64	62.11	-11.89	74	46.98	32.47	18.11	35.45	100	42	P	H
		2483.52	46.29	-7.71	54	31.16	32.47	18.11	35.45	100	42	A	H
	*	2462	105.94	-	-	90.95	32.33	18.1	35.44	282	88	P	V
	*	2462	98.37	-	-	83.38	32.33	18.1	35.44	282	88	A	V
		2483.64	60.11	-13.89	74	44.98	32.47	18.11	35.45	282	88	P	V
		2483.52	47.73	-6.27	54	32.6	32.47	18.11	35.45	282	88	A	V
802.11g CH 12 2467MHz	*	2467	103.34	-	-	88.36	32.33	18.1	35.45	125	59	P	H
	*	2467	95.75	-	-	80.77	32.33	18.1	35.45	125	59	A	H
		2483.52	63.91	-10.09	74	48.78	32.47	18.11	35.45	125	59	P	H
		2483.52	49.21	-4.79	54	34.08	32.47	18.11	35.45	125	59	A	H
	*	2467	104	-	-	89.02	32.33	18.1	35.45	281	86	P	V
	*	2467	96.35	-	-	81.37	32.33	18.1	35.45	281	86	A	V
		2484.08	64.96	-9.04	74	49.83	32.47	18.11	35.45	281	86	P	V
		2483.52	49.9	-4.1	54	34.77	32.47	18.11	35.45	281	86	A	V
802.11g CH 13 2472MHz	*	2472	101.57	-	-	86.45	32.47	18.1	35.45	134	60	P	H
	*	2472	93.67	-	-	78.55	32.47	18.1	35.45	134	60	A	H
		2484.6	64.38	-9.62	74	49.25	32.47	18.11	35.45	134	60	P	H
		2484.12	50.91	-3.09	54	35.78	32.47	18.11	35.45	134	60	A	H
	*	2472	101.75	-	-	86.63	32.47	18.1	35.45	282	84	P	V
	*	2472	94.16	-	-	79.04	32.47	18.1	35.45	282	84	A	V
		2483.76	66.81	-7.19	74	51.68	32.47	18.11	35.45	282	84	P	V
		2483.96	50.94	-3.06	54	35.81	32.47	18.11	35.45	282	84	A	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	41.3	-32.7	74	54.27	34.05	11.87	58.89	100	0	P	H
		4824	41.9	-32.1	74	54.87	34.05	11.87	58.89	100	0	P	V
802.11g CH 06 2437MHz		4874	40.54	-33.46	74	53.19	34.1	12.01	58.76	100	0	P	H
		7311	40.53	-33.47	74	47.94	35.6	14.46	57.47	100	0	P	H
		4874	41.34	-32.66	74	53.99	34.1	12.01	58.76	100	0	P	V
		7311	41.5	-32.5	74	48.91	35.6	14.46	57.47	100	0	P	V
802.11g CH 11 2462MHz		4924	41.23	-32.77	74	53.56	34.17	12.14	58.64	100	0	P	H
		7386	40.75	-33.25	74	48.14	35.6	14.55	57.54	100	0	P	H
		4924	43.27	-30.73	74	55.6	34.17	12.14	58.64	100	0	P	V
		7386	40.62	-33.38	74	48.01	35.6	14.55	57.54	100	0	P	V
802.11g CH 12 2467MHz		4934	41.28	-32.72	74	53.56	34.17	12.17	58.62	100	0	P	H
		7401	39.94	-34.06	74	47.33	35.6	14.56	57.55	100	0	P	H
		4934	43.06	-30.94	74	55.34	34.17	12.17	58.62	100	0	P	V
		7401	40.28	-33.72	74	47.67	35.6	14.56	57.55	100	0	P	V
802.11g CH 13 2472MHz		4944	40.5	-33.5	74	52.69	34.2	12.2	58.59	100	0	P	H
		7416	39.61	-34.39	74	47	35.6	14.58	57.57	100	0	P	H
		4944	40.81	-33.19	74	53	34.2	12.2	58.59	100	0	P	V
		7416	40.48	-33.52	74	47.87	35.6	14.58	57.57	100	0	P	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		2389.065	64.19	-9.81	74	49.69	31.9	18.01	35.41	122	46	P	H
		2390	49.46	-4.54	54	34.97	31.9	18.01	35.42	122	46	A	H
	*	2412	104.58	-	-	89.96	32	18.04	35.42	122	46	P	H
	*	2412	97.44	-	-	82.82	32	18.04	35.42	122	46	A	H
		2389.905	65.28	-8.72	74	50.79	31.9	18.01	35.42	298	73	P	V
		2390	50.84	-3.16	54	36.35	31.9	18.01	35.42	298	73	A	V
	*	2412	104.64	-	-	90.02	32	18.04	35.42	298	73	P	V
	*	2412	97.21	-	-	82.59	32	18.04	35.42	298	73	A	V
802.11n HT20 CH 06 2437MHz		2384.2	53.35	-20.65	74	38.89	31.87	18	35.41	163	351	P	H
		2389.24	42.73	-11.27	54	28.23	31.9	18.01	35.41	163	351	A	H
	*	2437	106.44	-	-	91.61	32.2	18.06	35.43	163	351	P	H
	*	2437	98.62	-	-	83.79	32.2	18.06	35.43	163	351	A	H
		2484.04	54.77	-19.23	74	39.64	32.47	18.11	35.45	163	351	P	H
		2493.35	43.68	-10.32	54	28.41	32.6	18.13	35.46	163	351	A	H
		2342.9	54.1	-19.9	74	39.78	31.8	17.92	35.4	288	98	P	V
		2389.1	42.7	-11.3	54	28.2	31.9	18.01	35.41	288	98	A	V
	*	2437	105.65	-	-	90.82	32.2	18.06	35.43	288	98	P	V
	*	2437	98.18	-	-	83.35	32.2	18.06	35.43	288	98	A	V
		2495.1	54.38	-19.62	74	39.11	32.6	18.13	35.46	288	98	P	V
		2483.69	43.76	-10.24	54	28.63	32.47	18.11	35.45	288	98	A	V



802.11n HT20 CH 11 2462MHz	*	2462	106.39	-	-	91.4	32.33	18.1	35.44	123	57	P	H
	*	2462	98.37	-	-	83.38	32.33	18.1	35.44	123	57	A	H
		2483.92	66.51	-7.49	74	51.38	32.47	18.11	35.45	123	57	P	H
		2483.52	49.7	-4.3	54	34.57	32.47	18.11	35.45	123	57	A	H
	*	2462	105.9	-	-	90.91	32.33	18.1	35.44	279	85	P	V
	*	2462	98.43	-	-	83.44	32.33	18.1	35.44	279	85	A	V
		2484	65.43	-8.57	74	50.3	32.47	18.11	35.45	279	85	P	V
		2483.52	50.14	-3.86	54	35.01	32.47	18.11	35.45	279	85	A	V
802.11n HT20 CH 12 2467MHz	*	2467	103.2	-	-	88.22	32.33	18.1	35.45	103	43	P	H
	*	2467	95.68	-	-	80.7	32.33	18.1	35.45	103	43	A	H
		2483.76	65.06	-8.94	74	49.93	32.47	18.11	35.45	103	43	P	H
		2483.52	49.97	-4.03	54	34.84	32.47	18.11	35.45	103	43	A	H
	*	2467	103.38	-	-	88.4	32.33	18.1	35.45	355	80	P	V
	*	2467	95.43	-	-	80.45	32.33	18.1	35.45	355	80	A	V
		2483.52	65.02	-8.98	74	49.89	32.47	18.11	35.45	355	80	P	V
		2483.52	50.78	-3.22	54	35.65	32.47	18.11	35.45	355	80	A	V
802.11n HT20 CH 13 2472MHz	*	2472	100.17	-	-	85.05	32.47	18.1	35.45	293	346	P	H
	*	2472	92.43	-	-	77.31	32.47	18.1	35.45	293	346	A	H
		2485.4	65.25	-8.75	74	50.12	32.47	18.11	35.45	293	346	P	H
		2483.56	50.91	-3.09	54	35.78	32.47	18.11	35.45	293	346	P	H
	*	2472	100.69	-	-	85.57	32.47	18.1	35.45	355	79	P	V
	*	2472	93.16	-	-	78.04	32.47	18.1	35.45	355	79	A	V
		2484	61.85	-12.15	74	46.72	32.47	18.11	35.45	355	79	P	V
		2483.52	50.07	-3.93	54	34.94	32.47	18.11	35.45	355	79	A	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	41.03	-32.97	74	54	34.05	11.87	58.89	100	0	P	H
		4824	42.98	-31.02	74	55.95	34.05	11.87	58.89	100	0	P	V
802.11n HT20 CH 06 2437MHz		4874	40.21	-33.79	74	52.86	34.1	12.01	58.76	100	0	P	H
		7311	40.86	-33.14	74	48.27	35.6	14.46	57.47	100	0	P	H
		4874	41.17	-32.83	74	53.82	34.1	12.01	58.76	100	0	P	V
		7311	41.29	-32.71	74	48.7	35.6	14.46	57.47	100	0	P	V
802.11n HT20 CH 11 2462MHz		4924	42.37	-31.63	74	54.7	34.17	12.14	58.64	100	0	P	H
		7386	40.3	-33.7	74	47.69	35.6	14.55	57.54	100	0	P	H
		4924	44.11	-29.89	74	56.44	34.17	12.14	58.64	100	0	P	V
		7386	40.6	-33.4	74	47.99	35.6	14.55	57.54	100	0	P	V
802.11n HT20 CH 12 2467MHz		4934	40.79	-33.21	74	53.07	34.17	12.17	58.62	100	0	P	H
		7401	40.14	-33.86	74	47.53	35.6	14.56	57.55	100	0	P	H
		4934	41.46	-32.54	74	53.74	34.17	12.17	58.62	100	0	P	V
		7401	41.21	-32.79	74	48.6	35.6	14.56	57.55	100	0	P	V
802.11n HT20 CH 13 2472MHz		4944	39.37	-34.63	74	51.56	34.2	12.2	58.59	100	0	P	H
		7416	40.67	-33.33	74	48.06	35.6	14.58	57.57	100	0	P	H
		4944	39.68	-34.32	74	51.87	34.2	12.2	58.59	100	0	P	V
		7416	39.7	-34.3	74	47.09	35.6	14.58	57.57	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**Emission above 18GHz****2.4GHz WIFI 802.11g (SHF)**

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 802.11g SHF		18763	35.89	-38.11	74	48.15	38.05	4.93	55.24	150	0	P	H
		24944	35.98	-38.02	74	42.98	38.96	6.97	52.93	150	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



Emission below 1GHz

2.4GHz WIFI 802.11g (LF)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
2.4GHz 802.11g LF		30	27.43	-12.57	40	32.15	24.32	0.97	30.01	-	-	P	H
		45.39	29.22	-10.78	40	41.7	16.29	1.22	29.99	100	0	P	H
		138.54	30.82	-12.68	43.5	41.15	17.51	2.11	29.95	-	-	P	H
		745.2	29.86	-16.14	46	26.81	27.77	4.85	29.57	-	-	P	H
		872.6	32.08	-13.92	46	27.01	28.85	5.34	29.12	-	-	P	H
		958	34.35	-11.65	46	26.91	30.44	5.65	28.65	-	-	P	H
		30	33.32	-6.68	40	38.04	24.32	0.97	30.01	100	0	P	V
		49.17	29.1	-10.9	40	43.03	14.78	1.28	29.99	-	-	P	V
		131.52	25.72	-17.78	43.5	36.05	17.57	2.06	29.96	-	-	P	V
		741	29.97	-16.03	46	27.11	27.61	4.83	29.58	-	-	P	V
		851.6	32.4	-13.6	46	27.64	28.76	5.21	29.21	-	-	P	V
		951	33.47	-12.53	46	26.27	30.26	5.63	28.69	-	-	P	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	Peak or Average
H/V	Horizontal or Vertical



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

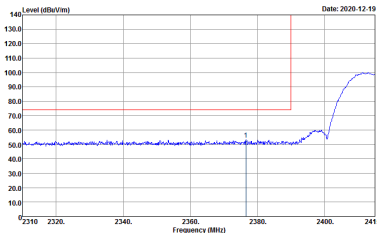
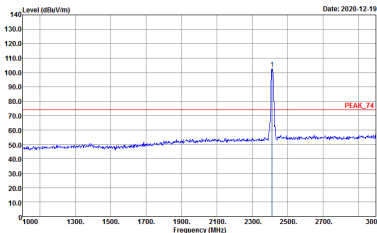
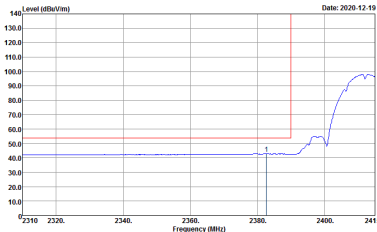
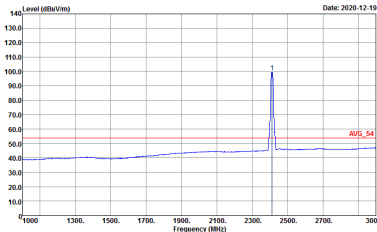
Test Engineer :	Jesse Wang, Stan Hsieh, Ken Wu and James Chiu	Temperature :	23~25°C
		Relative Humidity :	51~58%

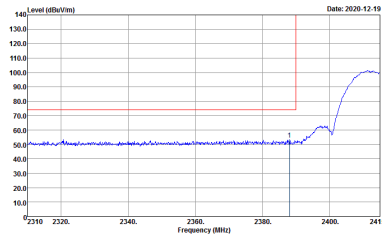
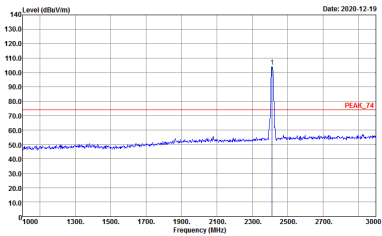
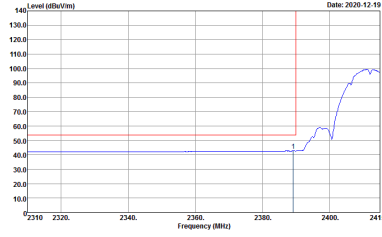
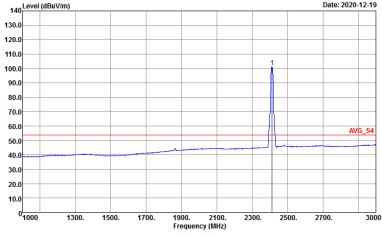
Note symbol

-L	Low channel location
-R	High channel location

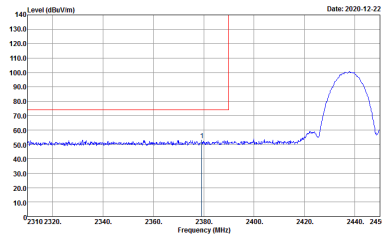
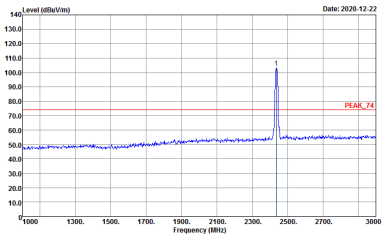
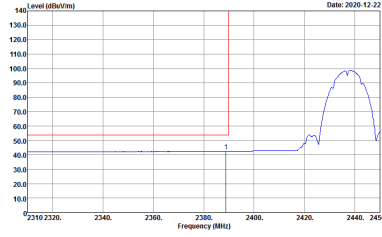
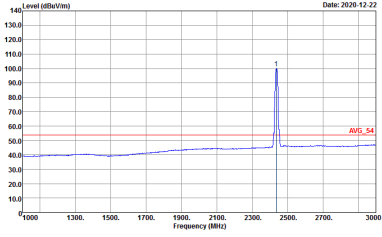


2.4GHz 2400~2483.5MHz
WIFI 802.11b (Band Edge @ 3m)

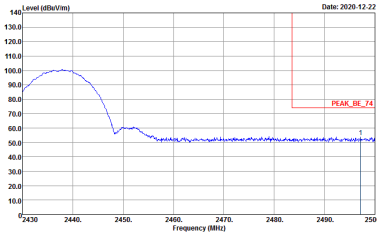
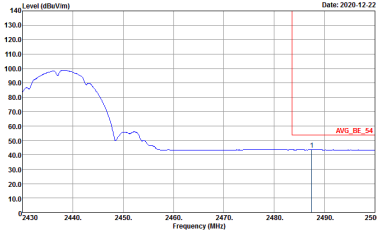
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWTAuto	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWTAuto
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWTAuto	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWTAuto

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
1	Vertical	Fundamental
Peak	 Site Condition : 03CH07-HY : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site Condition : 03CH07-HY : PEAK_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site Condition : 03CH07-HY : AVG_BE_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site Condition : 03CH07-HY : AVG_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto
Avg.		



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

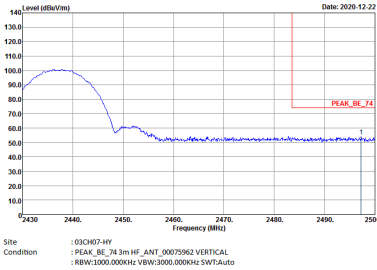
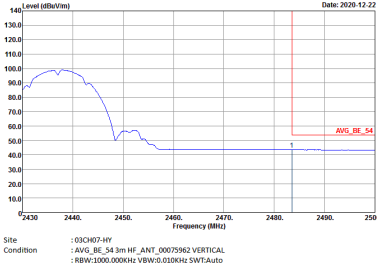


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Left blank

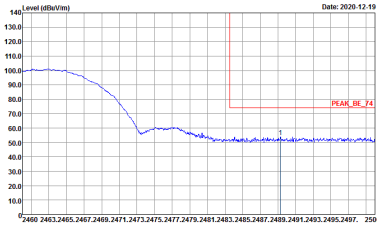
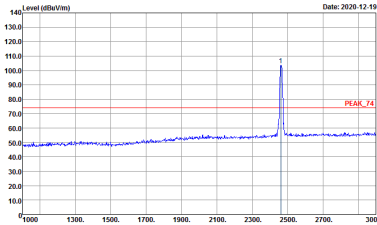
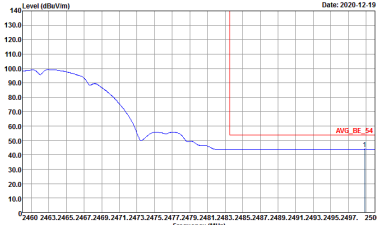
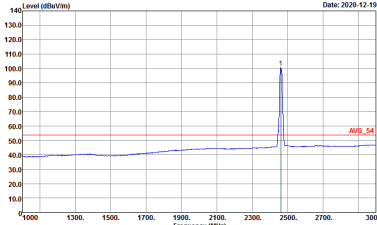


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
1	Vertical	Fundamental
Peak	Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto



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

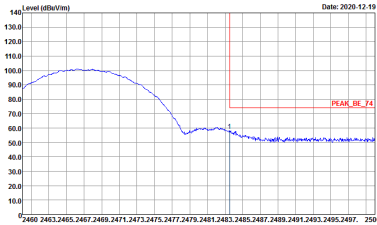
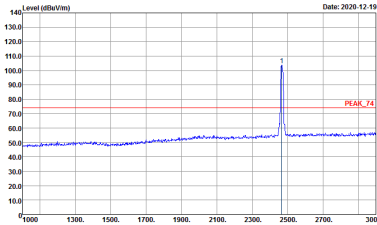
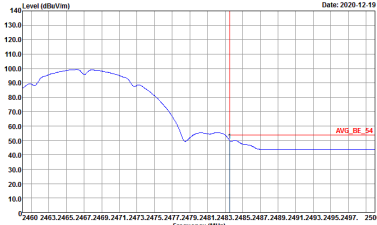
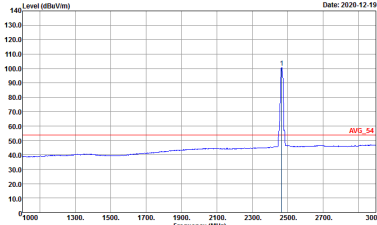


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
1	Horizontal	Fundamental
Peak	 Site Condition : 03CH07-HY : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site Condition : 03CH07-HY : PEAK_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site Condition : 03CH07-HY : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site Condition : 03CH07-HY : AVG_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

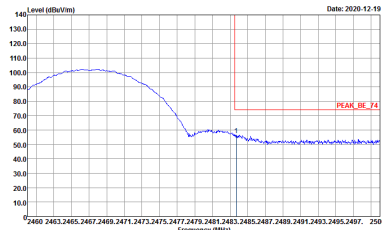
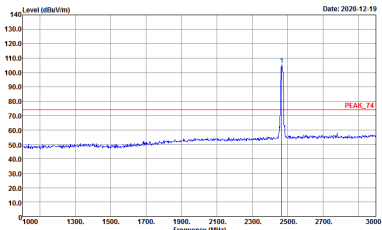
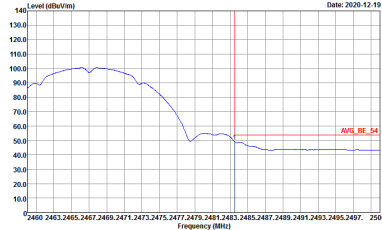
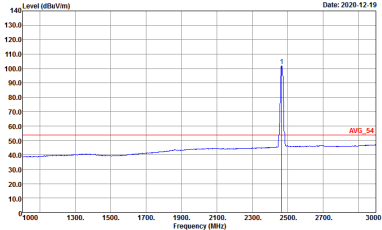


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
1	Vertical	Fundamental
Peak	Site Condition : 03CH07-HY : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site Condition : 03CH07-HY : PEAK_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	Site Condition : 03CH07-HY : AVG_BE_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Site Condition : 03CH07-HY : AVG_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

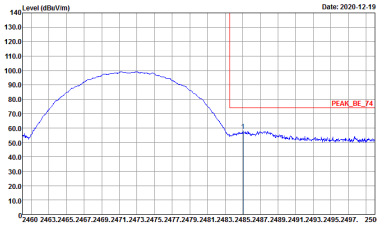
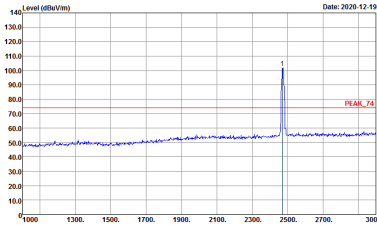
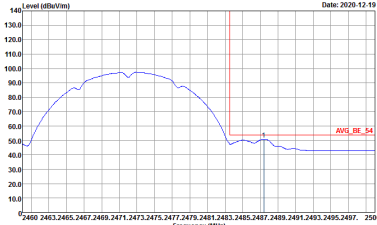
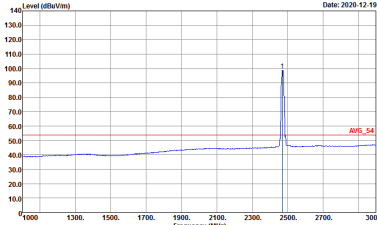


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH12 2467MHz	
1	Horizontal	Fundamental
Peak	 Site Condition : 03CH07-HY : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site Condition : 03CH07-HY : PEAK_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site Condition : 03CH07-HY : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site Condition : 03CH07-HY : AVG_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

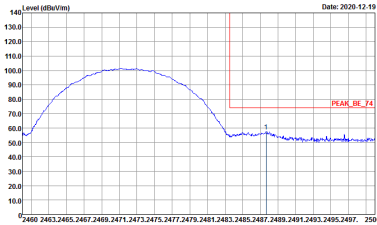
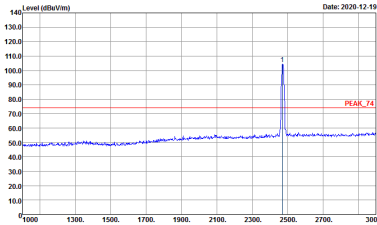
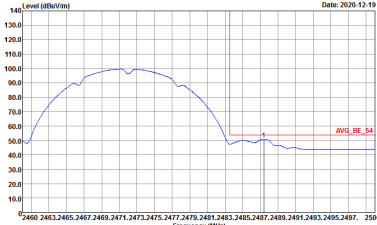
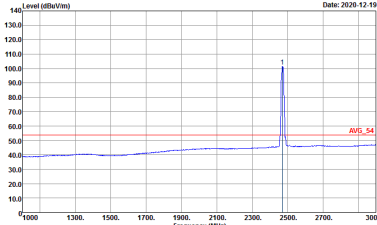


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH12 2467MHz	
1	Vertical	Fundamental
Peak	 Site Condition : 03CH07-HY : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site Condition : 03CH07-HY : PEAK_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site Condition : 03CH07-HY : AVG_BE_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site Condition : 03CH07-HY : AVG_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH13 2472MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

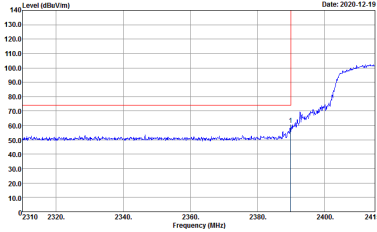
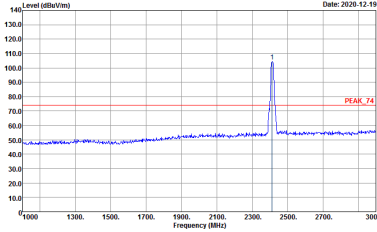
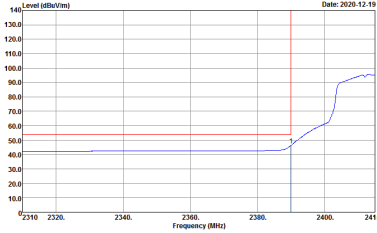
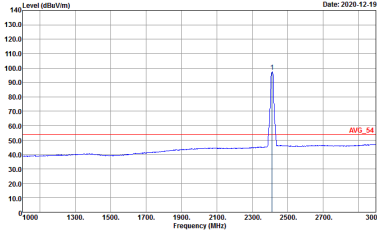


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH13 2472MHz	
1	Vertical	Fundamental
Peak	 Site Condition : 03CH07-HY : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site Condition : 03CH07-HY : PEAK_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site Condition : 03CH07-HY : AVG_BE_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site Condition : 03CH07-HY : AVG_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

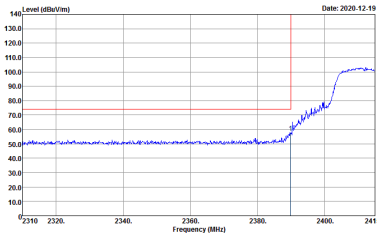
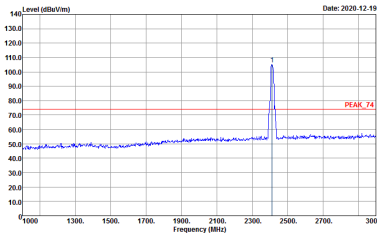
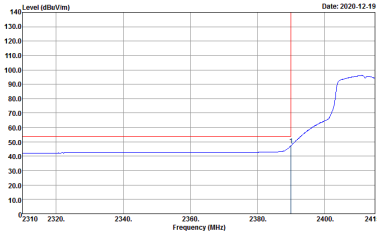
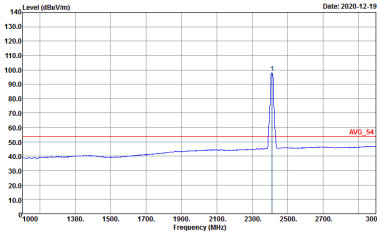


2.4GHz 2400~2483.5MHz

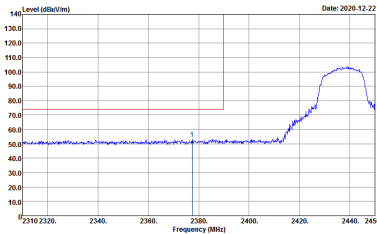
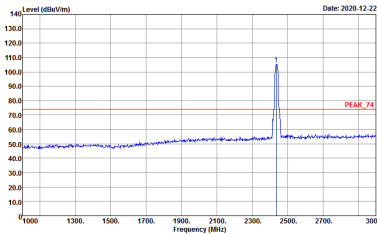
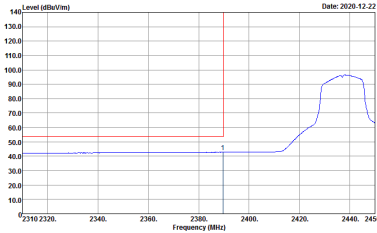
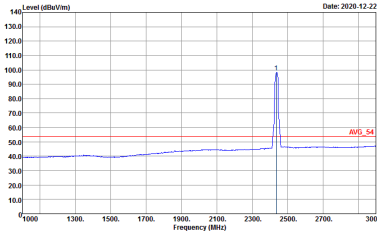
WIFI 802.11g (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK, BE, 74 3m HF, ANT_00075962 HORIZONTAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : Peak Mode : 000710-01 Date: 2020-12-19	 Site : 03CH07-HY Condition : PEAK, 74 3m HF, ANT_00075962 HORIZONTAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : Peak Mode : 000710-01 Date: 2020-12-19
Avg.	 Site : 03CH07-HY Condition : AVG, BE, 54 3m HF, ANT_00075962 HORIZONTAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : Peak Mode : 000710-01 Date: 2020-12-19	 Site : 03CH07-HY Condition : AVG, 54 3m HF, ANT_00075962 HORIZONTAL Detector : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Project : Peak Mode : 000710-01 Date: 2020-12-19

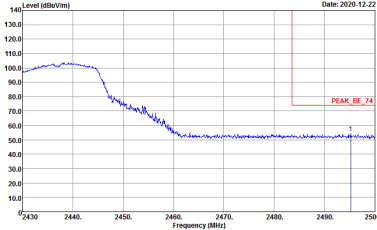
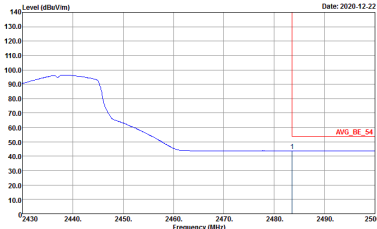


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL Detector : REW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : 000710-01 Mode : 9	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL Detector : REW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : 000710-01 Mode : 9
	 Site : 03CH07-HY Condition : AVG_BE_34 3m HF_ANT_00075962 VERTICAL Detector : REW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : 000710-01 Mode : 9	 Site : 03CH07-HY Condition : AVG_34 3m HF_ANT_00075962 VERTICAL Detector : REW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : 000710-01 Mode : 9

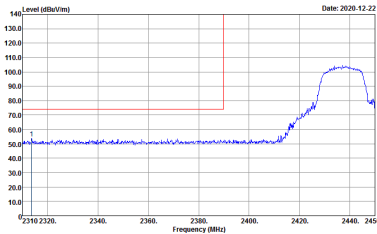
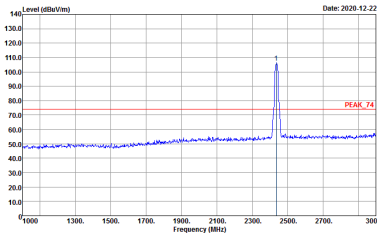
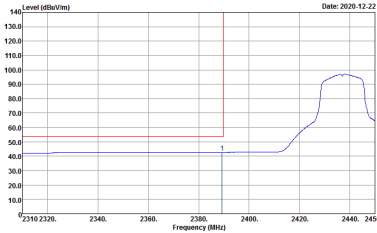
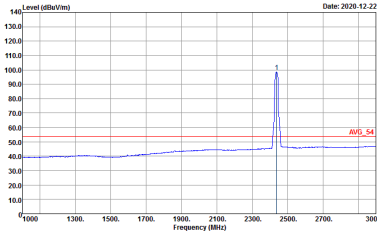


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL Detector : REW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : 000710-01 Mode : 10	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL Detector : REW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : 000710-01 Mode : 10
Avg.	 Site : 03CH07-HY Condition : AVG_BE_34 3m HF_ANT_00075962 HORIZONTAL Detector : REW:1000.000kHz VBW:0.000kHz SWT:Auto Detector : Peak Project : 000710-01 Mode : 10	 Site : 03CH07-HY Condition : AVG_34 3m HF_ANT_00075962 HORIZONTAL Detector : REW:1000.000kHz VBW:0.000kHz SWT:Auto Detector : Peak Project : 000710-01 Mode : 10

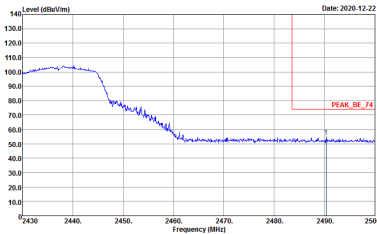
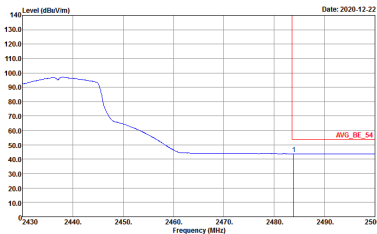


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00070962 HORIZONTAL Detector : Peak Project : 000710-01 Mode : 10	Left blank
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00070962 HORIZONTAL Detector : Peak Project : 000710-01 Mode : 10	Left blank

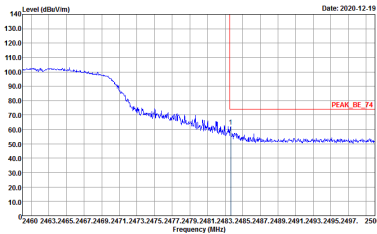
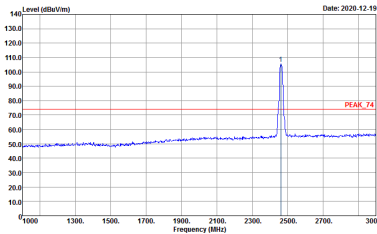
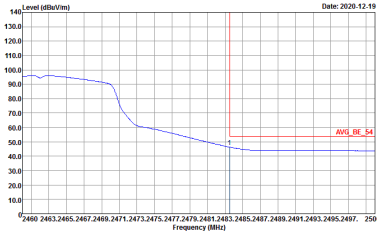
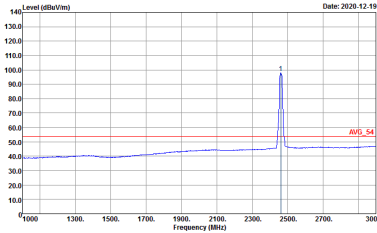


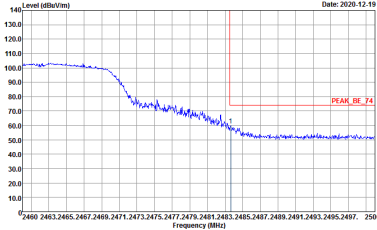
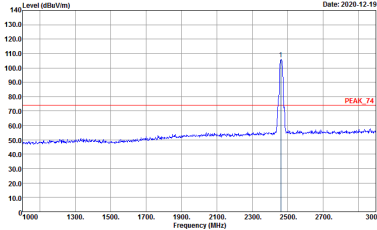
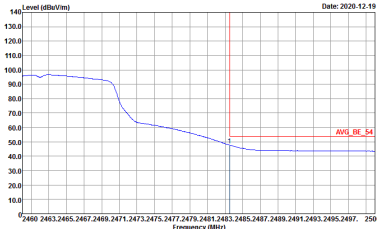
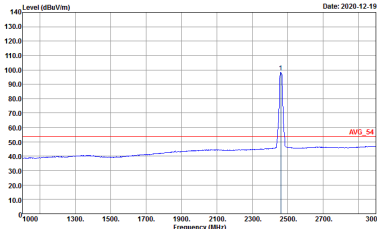
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
1	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 000710-01 Mode : 10	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 000710-01 Mode : 10
	 Site : 03CH07-HY Condition : AVG_BE_34 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 000710-01 Mode : 10	 Site : 03CH07-HY Condition : AVG_34 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 000710-01 Mode : 10



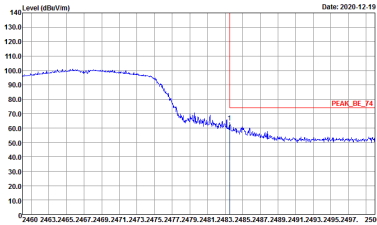
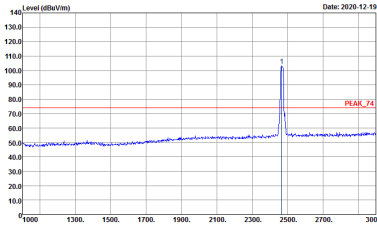
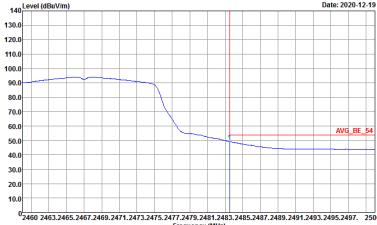
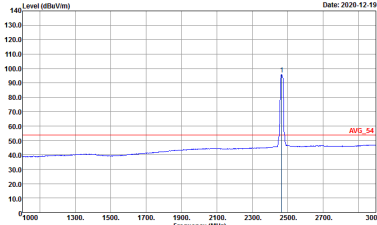
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
1	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00070962 VERTICAL Detector : Peak Project : 000710-01 Mode : 10	Left Blank
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00070962 VERTICAL Detector : Peak Project : 000710-01 Mode : 10	Left Blank



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL Detector : REW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : Peak Mode : 000710-01 : 11	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL Detector : REW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : Peak Mode : 000710-01 : 11
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL Detector : REW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : Peak Mode : 000710-01 : 11	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 HORIZONTAL Detector : REW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : Peak Mode : 000710-01 : 11

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 000710-01 Mode : 11	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 000710-01 Mode : 11
	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 000710-01 Mode : 11	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 VERTICAL Detector : Peak Project : 000710-01 Mode : 11



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH12 2467MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH12 2467MHz	
1	Vertical	Fundamental
Peak	Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH13 2472MHz	
1	Horizontal	Fundamental
Peak	Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

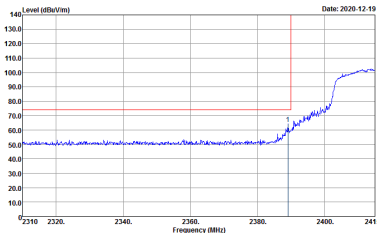
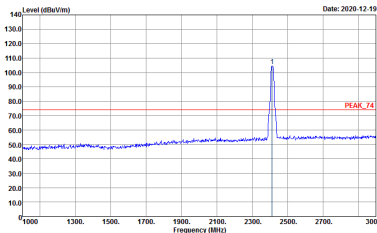
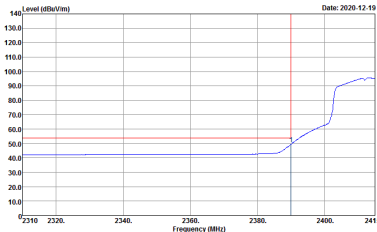
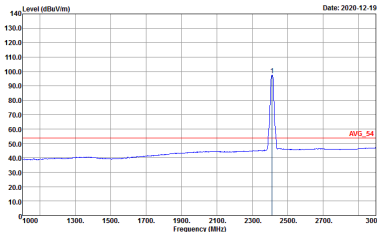


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH13 2472MHz	
1	Vertical	Fundamental
Peak	Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

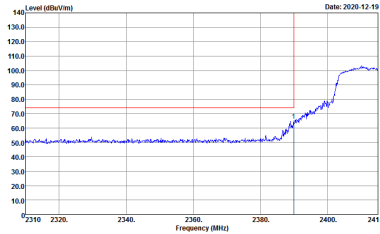
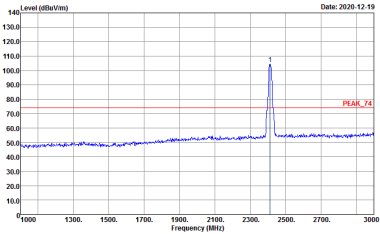
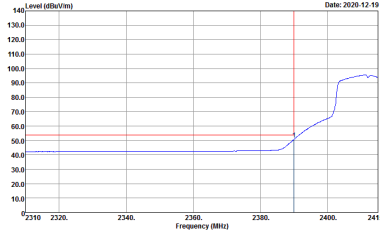
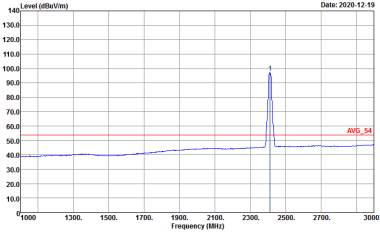


2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

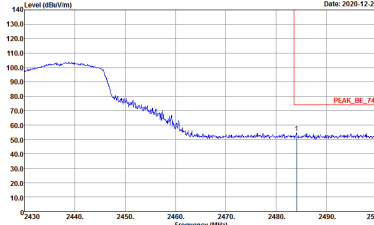
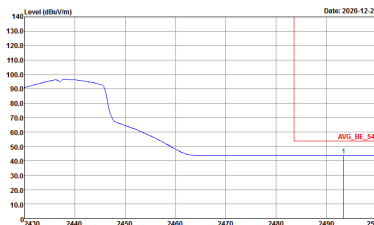
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1	Horizontal	Fundamental
Peak	 Site Condition : 03CH07-HY : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWTAuto	 Site Condition : 03CH07-HY : PEAK_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWTAuto
Avg.	 Site Condition : 03CH07-HY : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWTAuto	 Site Condition : 03CH07-HY : AVG_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWTAuto



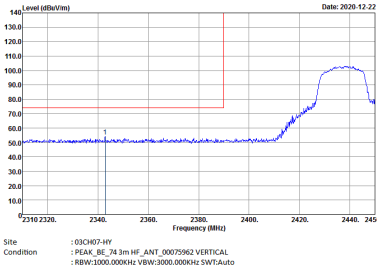
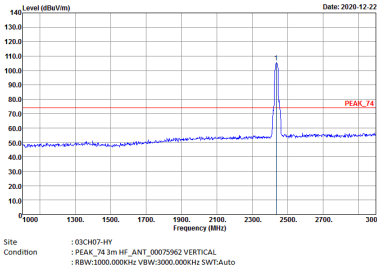
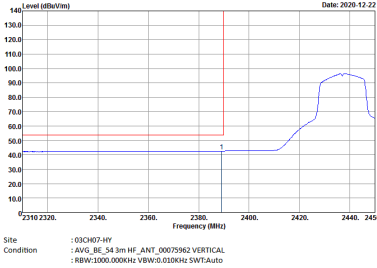
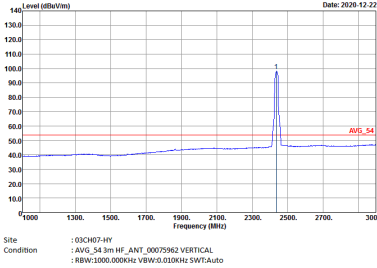
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto



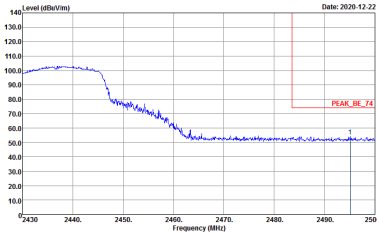
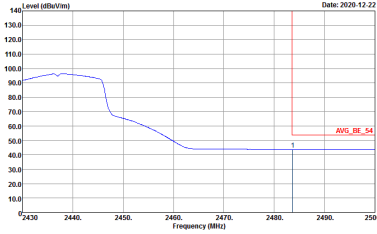
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - L	
1	Horizontal	Fundamental
Peak	Site Condition : 03CH07-HY : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site Condition : 03CH07-HY : PEAK_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	Site Condition : 03CH07-HY : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Site Condition : 03CH07-HY : AVG_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

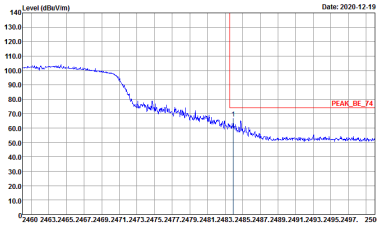
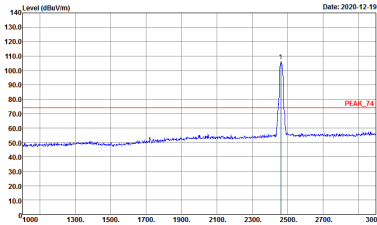
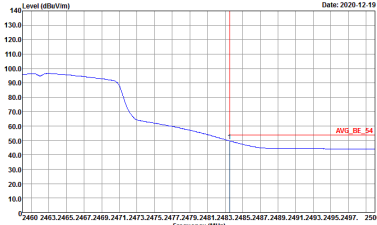
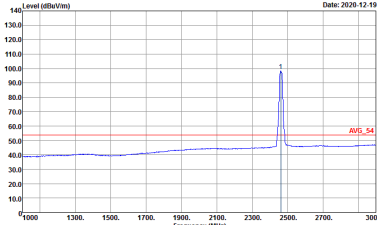
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - R	
1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Left blank



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



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - R	
1	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left Blank
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Left Blank

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
1	Horizontal	Fundamental
Peak	 Site Condition : 03CH07-HY : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site Condition : 03CH07-HY : PEAK_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site Condition : 03CH07-HY : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site Condition : 03CH07-HY : AVG_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

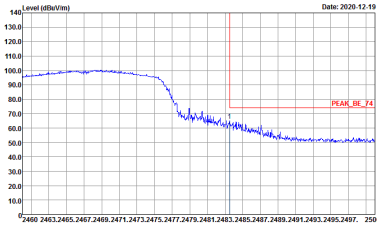
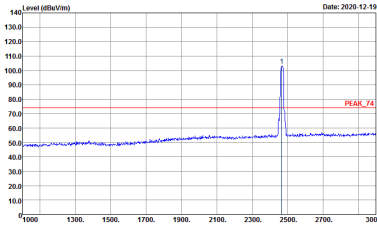
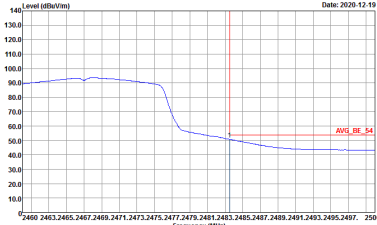
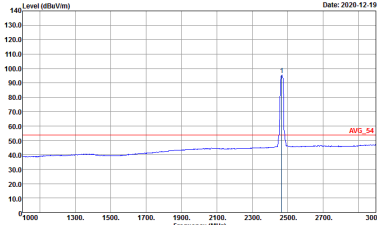


WIFI	2.4GHz 2400~2483.5MHz Fundamental @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
1	Vertical	Fundamental
Peak	Site Condition : 03CH07-HY : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site Condition : 03CH07-HY : PEAK_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	Site Condition : 03CH07-HY : AVG_BE_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Site Condition : 03CH07-HY : AVG_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto
Avg.		



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH12 2467MHz	
1	Horizontal	Fundamental
Peak	Site Condition : 03CH07-HY : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site Condition : 03CH07-HY : PEAK_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	Site Condition : 03CH07-HY : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Site Condition : 03CH07-HY : AVG_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

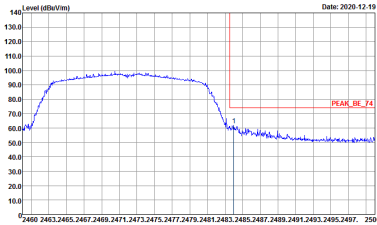
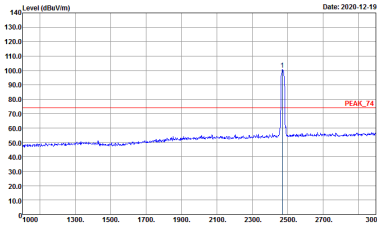
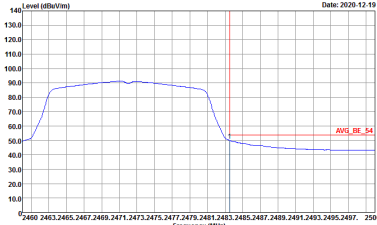
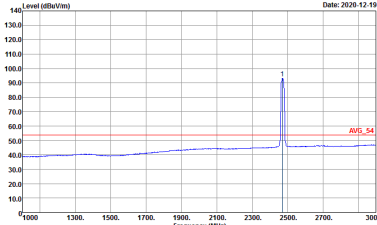


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH12 2467MHz	
1	Vertical	Fundamental
Peak	 Site Condition : 03CH07-HY : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site Condition : 03CH07-HY : PEAK_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site Condition : 03CH07-HY : AVG_BE_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site Condition : 03CH07-HY : AVG_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH13 2472MHz	
1	Horizontal	Fundamental
Peak	Site Condition : 03CH07-HY : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site Condition : 03CH07-HY : PEAK_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	Site Condition : 03CH07-HY : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Site Condition : 03CH07-HY : AVG_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

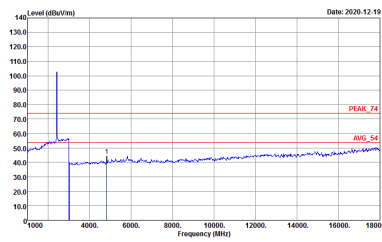
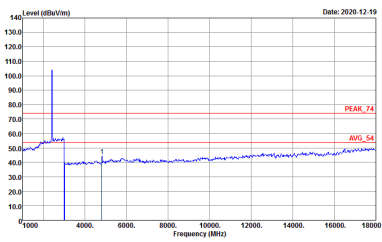


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH13 2472MHz	
1	Vertical	Fundamental
Peak	 Site Condition : 03CH07-HY : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site Condition : 03CH07-HY : PEAK_F4 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site Condition : 03CH07-HY : AVG_BE_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site Condition : 03CH07-HY : AVG_F4 3m HF_ANT_00075962 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

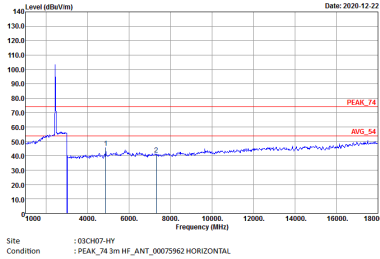
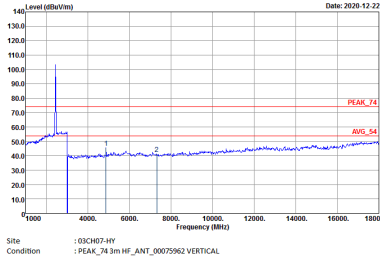


2.4GHz 2400~2483.5MHz

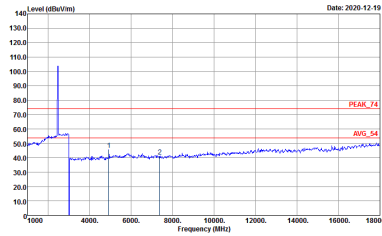
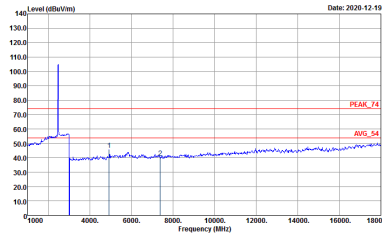
WIFI 802.11b (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH01 2412MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH07-4H Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL	 Site : 03CH07-4H Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL

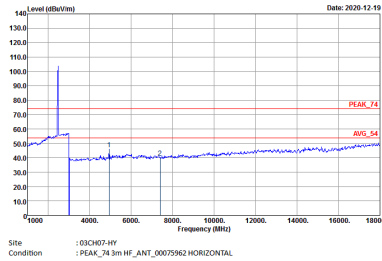
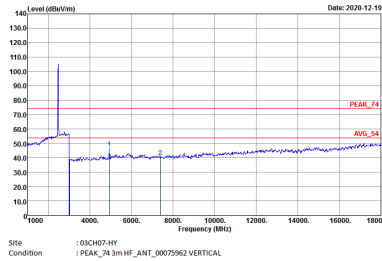


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH06 2437MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH11 2462MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL



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

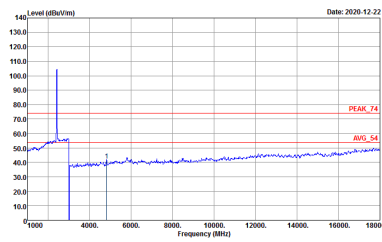
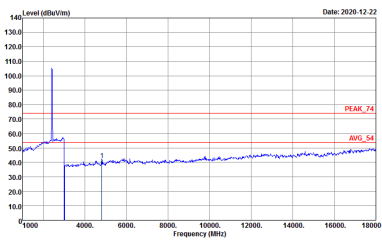


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH13 2472MHz	
1	Horizontal	Vertical
Peak Avg.	Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL	Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL



2.4GHz 2400~2483.5MHz

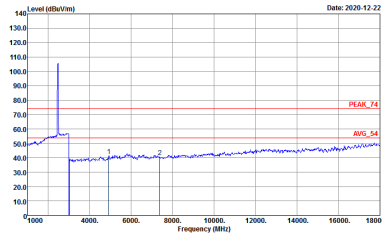
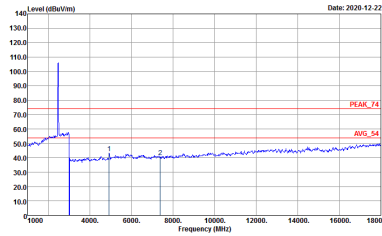
WIFI 802.11g (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH01 2412MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH07-4H Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL	 Site : 03CH07-4H Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL

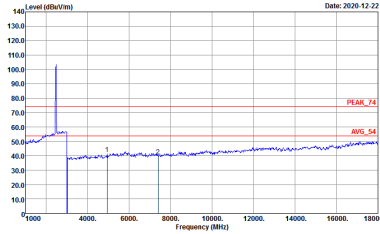
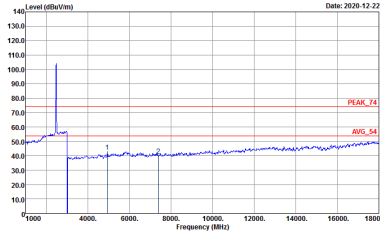


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH06 2437MHz	
1	Horizontal	Vertical
Peak Avg.	Level (dBuV/m) Date: 2020-12-22 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL	Level (dBuV/m) Date: 2020-12-22 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL

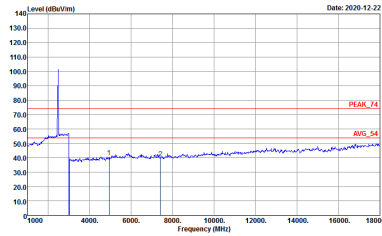
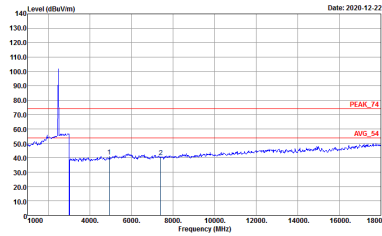


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH11 2462MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH12 2467MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL

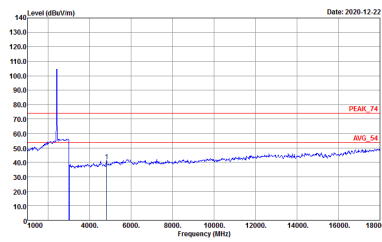
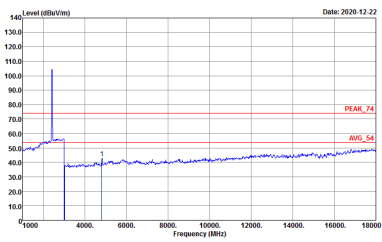


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH13 2472MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL

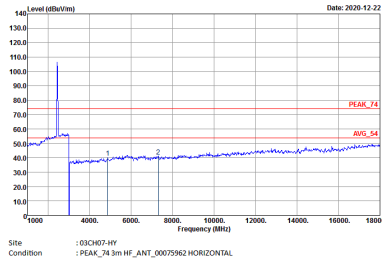
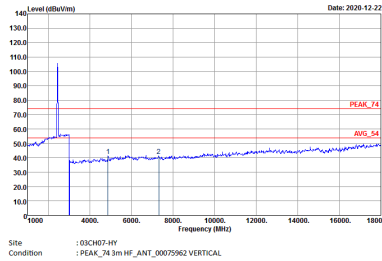


2.4GHz 2400~2483.5MHz

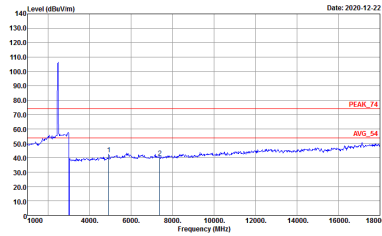
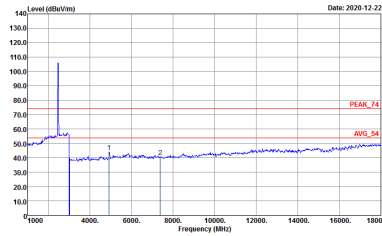
WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH07-4H Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL	 Site : 03CH07-4H Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL

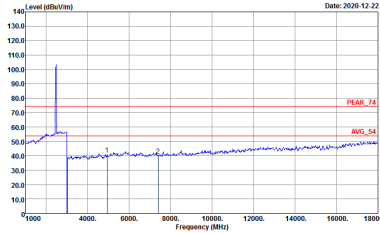
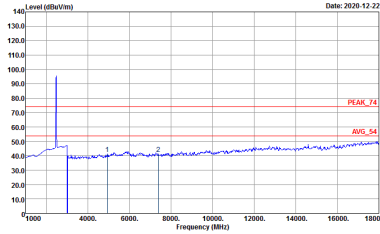


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH06 2437MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL

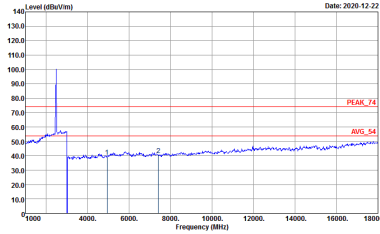
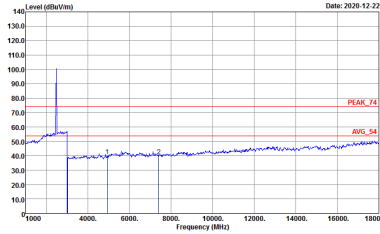


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL



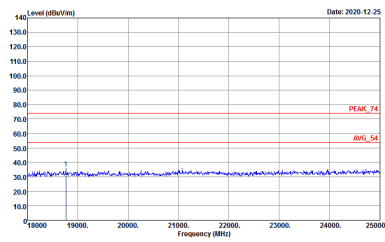
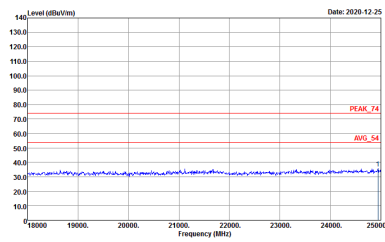
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH12 2462MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL



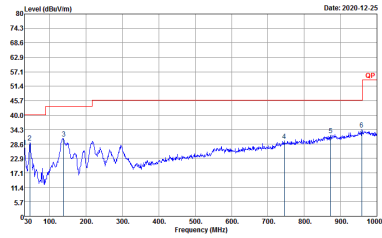
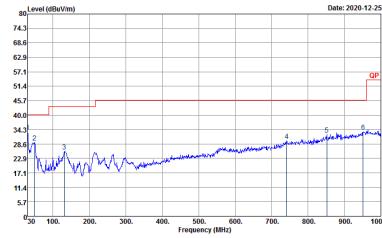
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH13 2472MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL



Emission above 18GHz
2.4GHz WIFI 802.11g (SHF)

WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11g SHF	
1	Horizontal	Vertical
QP / Peak	 Site : 03CH07-4H Condition : PEAK_74 1m SHF-EHF_5170251 HORIZONTAL	 Site : 03CH07-4H Condition : PEAK_74 1m SHF-EHF_5170251 VERTICAL

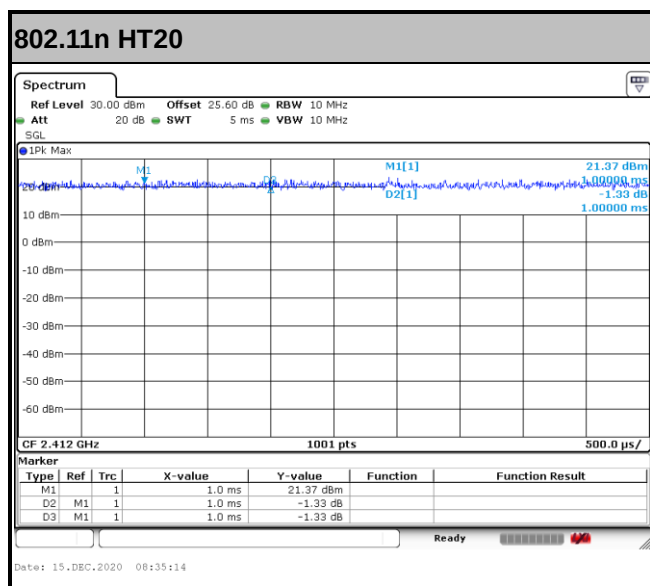
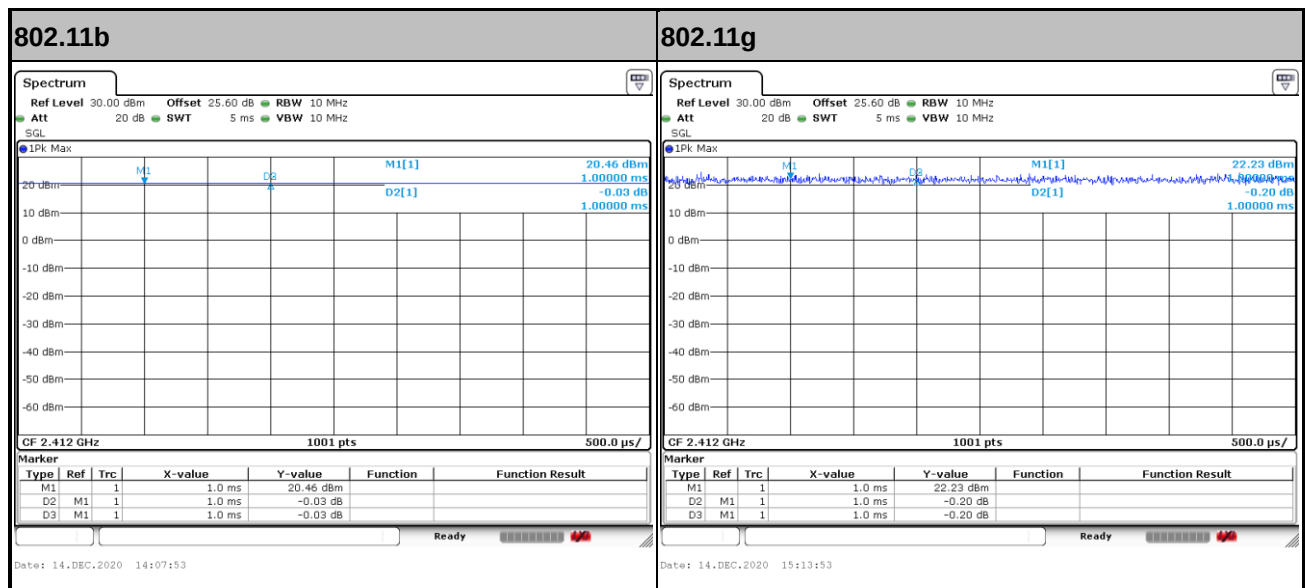
Emission below 1GHz
2.4GHz WIFI 802.11g (LF)

WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11g LF	
1	Horizontal	Vertical
QP / Peak	 Site : 03CH07-HY Condition : QP 3m LF-ANT-35419(6) HORIZONTAL	 Site : 03CH07-HY Condition : QP 3m LF-ANT-35419(6) VERTICAL



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	100.00	-	-	10Hz	0.00
2.4GHz 802.11n HT20	100.00	-	-	10Hz	0.00



—THE END—