FCC CO-LOCATION RADIO TEST REPORT

FCC ID	:	2AIMRRN12
Equipment	:	Xiaomi Wi-Fi Range Extender AX1500
Brand Name	:	xiaomi
Model Name	:	RN12
Applicant	:	Beijing Xiaomi Electronics Co., Ltd. Room 802, Floor 8, Building 5, No.15 KeChuang 10th Road, Beijing Economic and Technological Development Zone, Beijing City, China.
Manufacturer	:	Beijing Xiaomi Electronics Co., Ltd. Room 802, Floor 8, Building 5, No.15 KeChuang 10th Road, Beijing Economic and Technological Development Zone, Beijing City, China.
Standard	:	FCC Part 15 Subpart E §15.407

The product was received on May 28, 2025 and testing was performed from Jun. 06, 2025 to Jun. 06, 2025. We, Sporton International Inc. Wensan 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 from Sporton International Inc. Wensan Laboratory, the test report shall not be reproduced except in full.

Louis Wu

Approved by: Louis Wu

Sporton International Inc. Wensan Laboratory
No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)
TEL: 886-3-327-0868
FAX: 886-3-327-0855

Table of Contents

History of this test report

Report No.	Version	Description	Issue Date
FR530461D	01	Initial issue of report	Jun. 20, 2025
FR530461D	02	Revise Product Feature of Equipment Under Test This report is an updated version, replacing the report issued on Jun. 20, 2025	Jul. 02, 2025

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.247(d) 15.407(b)	Unwanted Emissions	Pass	-
3.2	15.203	Antenna Requirement	Pass	-

Conformity Assessment Condition:
1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the section “Measurement Uncertainty”.
Disclaimer:
The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

Reviewed by: Lewis Ho

Report Producer: Clio Lo

1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature
General Specs Wi-Fi 2.4GHz 802.11b/g/n and Wi-Fi 5GHz 802.11a/n/ac/ax. **Antenna Type** WLAN: PCB Antenna

Antenna information		
2400 MHz ~ 2483.5 MHz	Peak Gain (dBi)	Ant.1: 3.65 Ant.2: 3.61
5150 MHz ~ 5250 MHz	Peak Gain (dBi)	Ant.1: 4.4 Ant.2: 4.21

Remark: The EUT's information above is declared by manufacturer. Please refer to Disclaimer in report summary.

1.2 Modification of EUT

No modifications made to the EUT during the testing.

1.3 Testing Location

Test Site	Sporton International Inc. Wensan Laboratory
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	**Sporton Site No.**
	03CH21-HY

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

FCC designation No.: TW3786

1.4 Applicable Standards

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

- FCC Part 15 Subpart E
- FCC Part 15 Subpart C §15.247
- FCC KDB Publication No. 558074 D01 15.247 Meas Guidance v05r02
- FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
- FCC KDB 414788 D01 Radiated Test Site v01r01.
- ANSI C63.10-2013

Remark:

1. All the test items were validated and recorded in accordance with the standards without any modification during the testing.
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: radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, the measured emission level of the EUT was maximized by rotating the EUT on a turntable, adjusting the orientation of the EUT and EUT antenna in three orthogonal axis (X: flat, Y: portrait, Z: landscape), and adjusting the measurement antenna orientation, following C63.10 exploratory test procedures and only the worst case emissions were reported in this report.

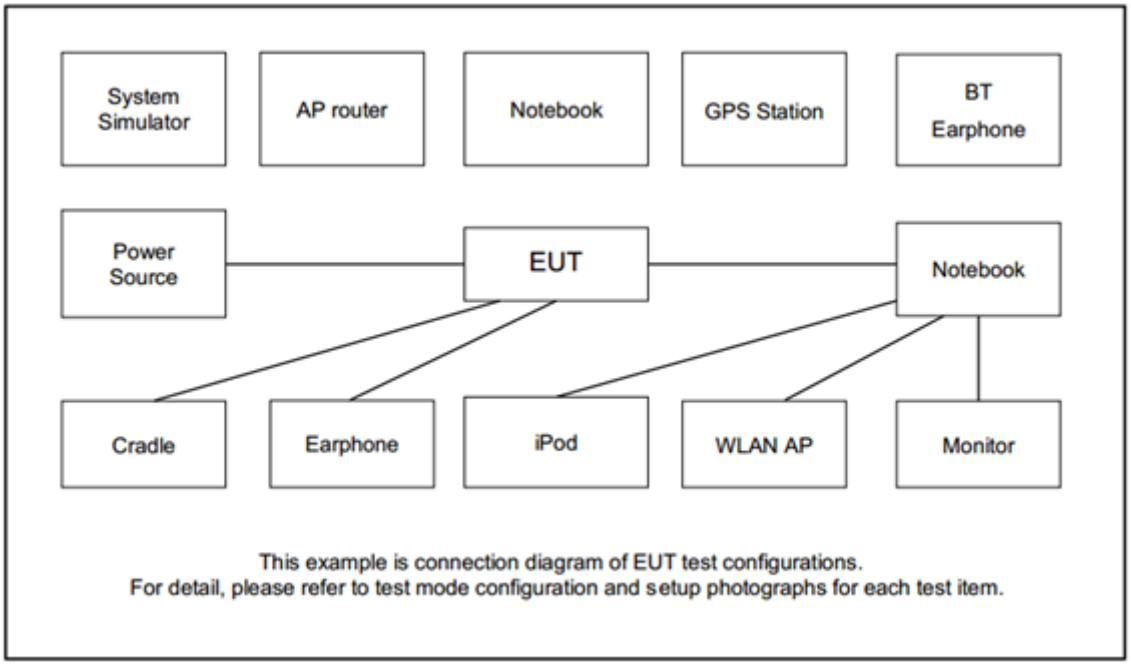
2.1 Carrier Frequency and Channel

2400-2483.5 MHz		5150-5250 MHz	
802.11b		802.11ax HE20	
Channel	Freq. (MHz)	Channel	Freq. (MHz)
11	2462	44	5220

<Co-Location>

Modulation	Data Rate	Worst Plane
2.4GHz 802.11b for MIMO <Ant. 1+2> + 5GHz 802.11ax HE20 for MIMO <Ant. 1+2>	1 Mbps + MCS0	Y Plane

2.2 Connection Diagram of Test System



2.3 EUT Operation Test Setup

The RF test items, utility “CMD” 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.

3 Test Result

3.1 Unwanted Emissions Measurement

This section is to measure unwanted emissions through radiated measurement for band edge spurious emissions and out of band emissions measurement.

3.1.1 Limit of Unwanted Emissions

<For 2402 MHz ~ 2480 MHz>

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 is measured by spectrum analyzer, the attenuation under this paragraph shall be 30 dB instead of 20 dB.

<For 5150 MHz ~ 5250 MHz>

(1) For transmitters operating in the 5150-5250 MHz band: all emissions outside of the 5150-5350 MHz band shall not exceed an EIRP of –27dBm/MHz.

(2) Unwanted spurious emissions falls in restricted bands shall comply with the general field strength limits as below table:

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

Note: The following formula is used to convert the EIRP to field strength.

$$E=\frac{1000000\sqrt{30P}}{3}$$ μV/m, where P is the eirp (Watts)

EIRP (dBm)	Field Strength at 3m (dBμV/m)
- 27	68.3

(2) KDB789033 D02 v02r01 G)2)c)

(i) Sections 15.407(b)(1-3) specifies the unwanted emissions limit for the U-NII-1 and U-NII-2 bands. As specified, emissions above 1000 MHz that are outside of the restricted bands are subject to a peak emission limit of −27 dBm/MHz.

(ii) Section 15.407(b)(4) specifies the unwanted emissions limit for the U-NII-3 band. A band emissions mask is specified in Section 15.407(b)(4)(i). The emission limits are based on the use of a peak detector.

3.1.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

3.1.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section G) Unwanted emissions measurement.

   (1) Procedure for Unwanted Emissions Measurements Below 1000 MHz

   - RBW = 120 kHz
   - VBW = 300 kHz
   - Detector = Peak
   - Trace mode = max hold

   (2) Procedure for Peak Unwanted Emissions Measurements Above 1000 MHz

   - RBW = 1 MHz
   - VBW ≥ 3 MHz
   - Detector = Peak
   - Sweep time = auto
   - Trace mode = max hold

   (3) Procedures for Average Unwanted Emissions Measurements Above 1000 MHz

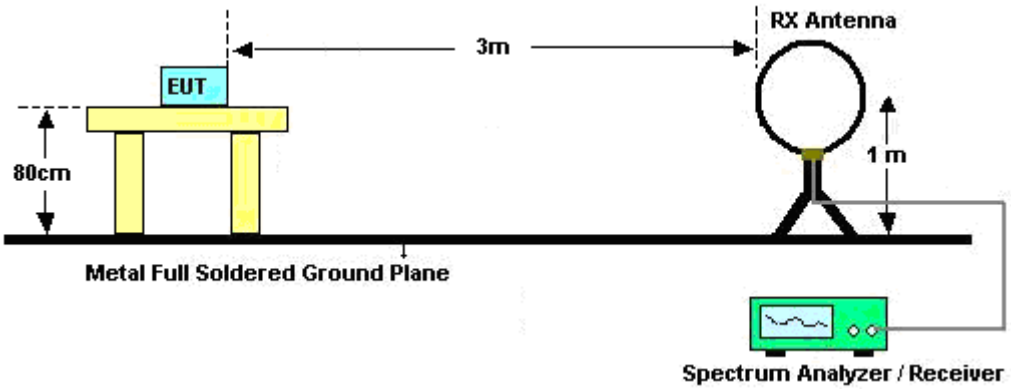
   - RBW = 1 MHz
   - VBW = 10 Hz, when duty cycle is no less than 98 percent.
   - VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

2. The EUT is placed on a turntable with 0.8 meter for frequency below 1 GHz and 1.5 meter for frequency above 1 GHz respectively above ground.
3. The EUT is set 3 meters away from the receiving antenna which is mounted on the top of a variable height antenna tower.

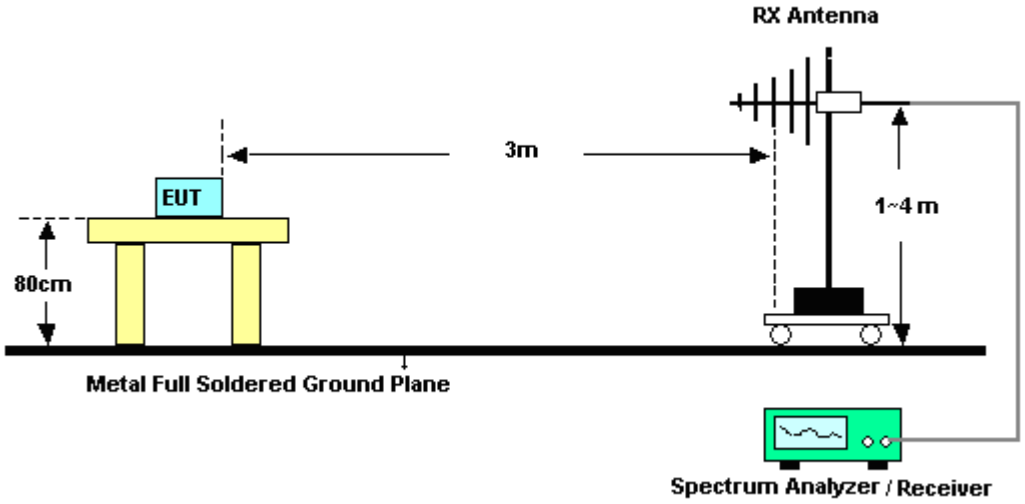
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT is arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. Radiated testing below 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading. When there is no suspected emission found and the emission level is with at least 6 dB margin against QP limit line, the position is marked as "-".
7. Radiated testing above 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading for scanning all frequencies. When there is no suspected emission found and the harmonic emission level is with at least 6 dB margin against average limit line, the position is marked as "-".

3.1.4 Test Setup

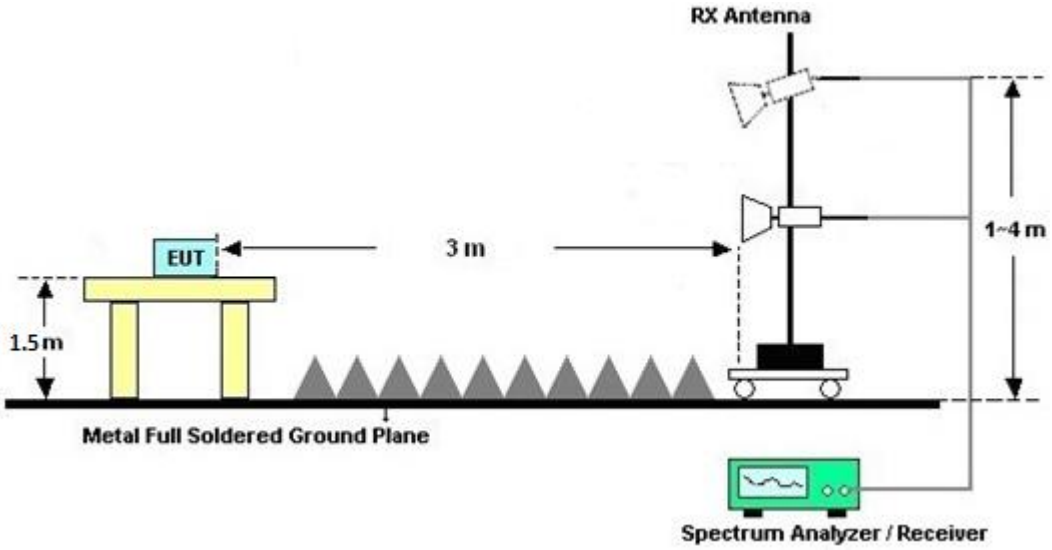
For radiated emissions below 30MHz



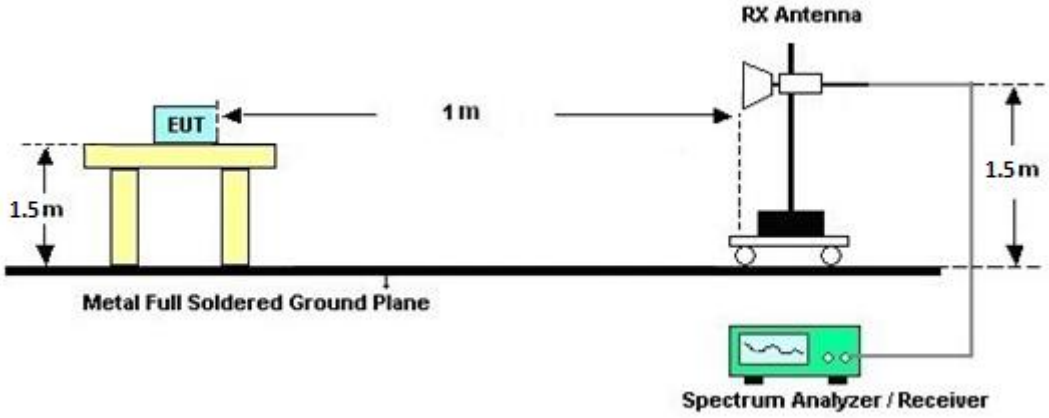
For radiated emissions from 30MHz to 1GHz



For radiated test from 1GHz to 18GHz



For radiated test above 18GHz



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

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

There is adequate comparison measurement 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.

3.1.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix A.

3.1.7 Duty Cycle

Please refer to Appendix B.

3.1.8 Test Result of Radiated Spurious Emissions (30MHz ~ 10th Harmonic)

Please refer to Appendix A.

3.2 Antenna Requirements

3.2.1 Standard Applicable

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. 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 provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of § 15.211, 15.213, 15.217, 15.219, 15.221, or § 15.236. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with § 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

3.2.2 Antenna Anti-Replacement Construction

Antenna permanently attached.

4 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
LOOP Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Aug. 29, 2024	Jun. 06, 2025	Aug. 28, 2025	Radiation (03CH21-HY)
Bilog Antenna	TESEQ & WOKEN	CBL 6111D & 00802N1D-06	63303 & 001	30MHz~1GHz	Dec. 17, 2024	Jun. 06, 2025	Dec. 16, 2025	Radiation (03CH21-HY)
Double Ridged Guide Horn Antenna	RFSPIN	DRH18-E	LE2C03A18EN	1GHz~18GHz	Jul. 11, 2024	Jun. 06, 2025	Jul. 10, 2025	Radiation (03CH21-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	1223	18GHz~40GHz	Jun. 24, 2024	Jun. 06, 2025	Jun. 23, 2025	Radiation (03CH21-HY)
Amplifier	SONOMA	310N	421580	30MHz~1GHz	Jul. 14, 2024	Jun. 06, 2025	Jul. 13, 2025	Radiation (03CH21-HY)
Amplifier	EMEC	EM01G18GA	060876	1GHz~18GHz	Sep. 27, 2024	Jun. 06, 2025	Sep. 26, 2025	Radiation (03CH21-HY)
Preamplifier	EMEC	EM18G40G	060873	18GHz~40GHz	Sep. 02, 2024	Jun. 06, 2025	Sep. 01, 2025	Radiation (03CH21-HY)
Spectrum Analyzer	Keysight	N9010B	MY62170358	10Hz~44GHz	Sep. 06, 2024	Jun. 06, 2025	Sep. 05, 2025	Radiation (03CH21-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	803951/2	9kHz~30MHz	Mar. 05, 2025	Jun. 06, 2025	Mar. 04, 2026	Radiation (03CH21-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	804397/2,804612/2,803954/2	30MHz~40GHz	Aug. 12, 2024	Jun. 06, 2025	Aug. 11, 2025	Radiation (03CH21-HY)
Hygrometer	TECPEL	DTM-303A	TP211568	N/A	Oct. 21, 2024	Jun. 06, 2025	Oct. 20, 2025	Radiation (03CH21-HY)
Controller	EMEC	EM 1000	N/A	Control Turn table & Ant Mast	N/A	Jun. 06, 2025	N/A	Radiation (03CH21-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1~4m	N/A	Jun. 06, 2025	N/A	Radiation (03CH21-HY)
Turn Table	EMEC	TT 2000	N/A	0~360 Degree	N/A	Jun. 06, 2025	N/A	Radiation (03CH21-HY)
Software	Audix	E3 6.2009-8-24	RK-001053	N/A	N/A	Jun. 06, 2025	N/A	Radiation (03CH21-HY)

5 Measurement Uncertainty

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	6.60 dB

Uncertainty of Radiated Emission Measurement (1000 MHz ~ 6000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.00 dB

Uncertainty of Radiated Emission Measurement (6000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.70 dB

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.30 dB

Appendix A. Radiated Spurious Emission Test Data

Test Engineer :	Fred Tseng, Ray Lung and Sky Chang	**Temperature :**	19~24°C
		Relative Humidity :	52~66%

Note symbol

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

A1. Radiated Spurious Emission Test Modes

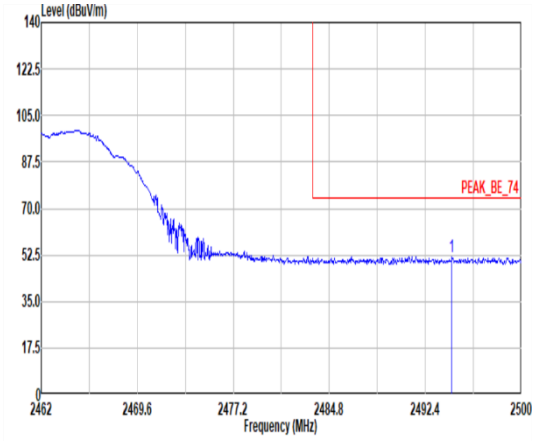
Mode	Band (MHz)	Antenna	Modulation	Channel	Frequency	Data Rate	RU	Remark
Mode 1	2400-2483.5	1+2	802.11b	11	2462	1Mbps	-	-
	5.15-5.25	1+2	802.11ax HE20	44	5220	MCS0	-	-
Mode 2	2400-2483.5	1+2	802.11b	11	2462	1Mbps		LF
	5.15-5.25	1+2	802.11ax HE20	44	5220	MCS0		
Mode 3	2400-2483.5	1+2	802.11b	11	2462	1Mbps		SHF
	5.15-5.25	1+2	802.11ax HE20	44	5220	MCS0		

A2. Summary of each worse mode

Mode	Modulation	Ch.	Freq. (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol.	Peak Avg.	Result	RU	Remark
1	802.11b + 802.11ax HE20	11 + 44	2490.69	52.37	54.00	-1.63	V	Avg.	Pass	-	Band Edge
			15660	52.96	54.00	-1.04	V	Avg.	Pass	-	Harmonic
2	802.11b + 802.11ax HE20	11 + 44	709.97	23.09	46.00	-22.91	V	QP	Pass	-	LF
3	802.11b + 802.11ax HE20	11 + 44	38834.11	41.54	54.00	-12.46	V	Avg.	Pass	-	SHF

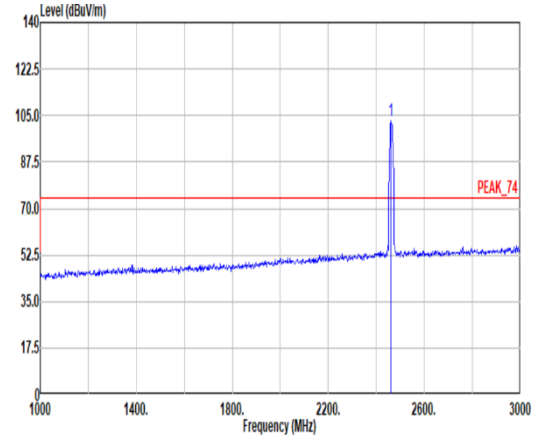
Mode	1	
	Band Edge	
	2400-2483.5_802.11b_CH11_2462MHz	
ANT	1+2	
Pol.	Horizontal	Fundamental

Peak



Site : 03CH21-HY
Condition: PEAK_BE_74 3m DRH18-E_LE2C03A18EN_240711 HORIZONTAL
: RBW:1000.000kHz VBW:3000.000kHz SWT:Auto

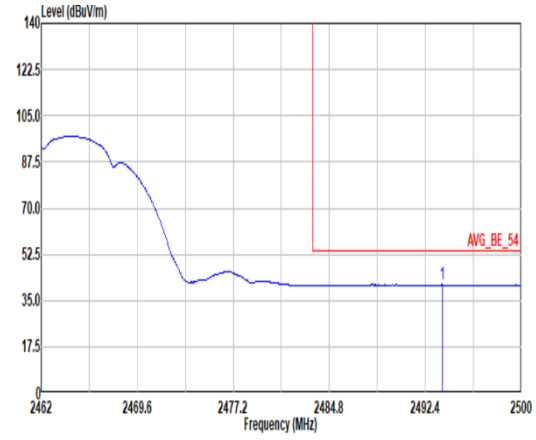
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	Aux Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	2494.49	51.78	74.00	-22.22	38.72	26.70	8.96	33.01	0.38	300	189	Peak



Site : 03CH21-HY
Condition: PEAK_74 3m DRH18-E_LE2C03A18EN_240711 HORIZONTAL
: RBW:1000.000kHz VBW:3000.000kHz SWT:Auto

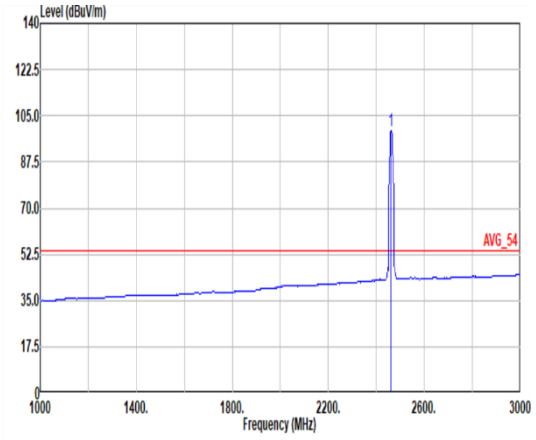
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	Aux Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	2462.00	103.28	------	------	90.46	26.50	8.89	32.98	0.38	300	189	Peak

Avg



Site : 03CH21-HY
Condition: AVG_BE_54 3m DRH18-E_LE2C03A18EN_240711 HORIZONTAL
: RBW:1000.000kHz VBW:0.120kHz SWT:Auto

	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	Aux Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	2493.73	41.01	54.00	-12.99	27.95	26.70	8.96	33.01	0.38	300	189	Average

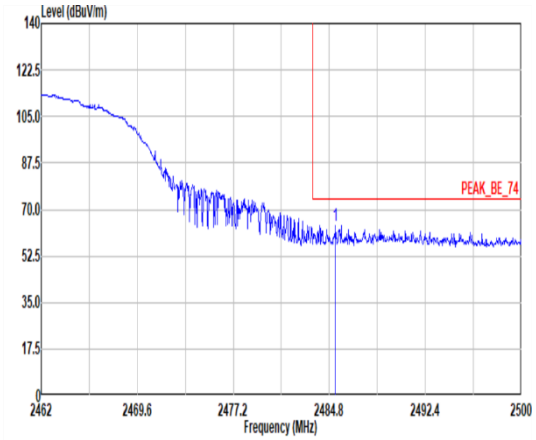


Site : 03CH21-HY
Condition: AVG_54 3m DRH18-E_LE2C03A18EN_240711 HORIZONTAL
: RBW:1000.000kHz VBW:0.120kHz SWT:Auto

	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	Aux Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	2462.00	99.45	------	------	86.63	26.50	8.89	32.98	0.38	300	189	Average

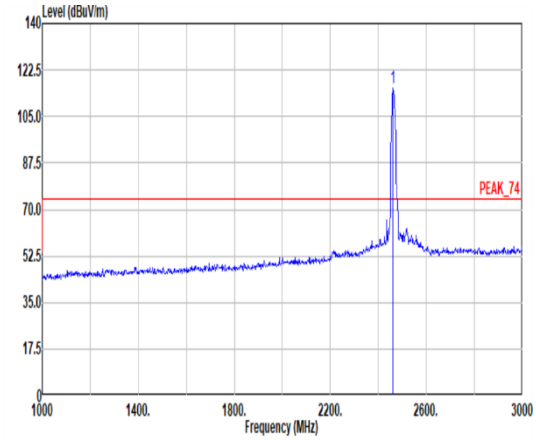
Mode	1	
	Band Edge	
	2400-2483.5_802.11b_CH11_2462MHz	
ANT	1+2	
Pol.	Vertical	Fundamental

Peak



Site : 03CH21-HY
Condition: PEAK_BE_74 3m DRH18-E_LE2C03A18EN_240711 VERTICAL
: RBW:1000.000kHz VBW:3000.000kHz SWT:Auto

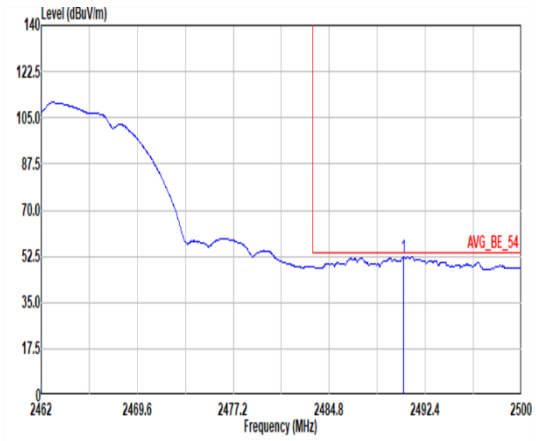
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	Aux Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	2485.29	64.16	74.00	-9.84	51.16	26.65	8.94	33.00	0.38	200	269	Peak



Site : 03CH21-HY
Condition: PEAK_74 3m DRH18-E_LE2C03A18EN_240711 VERTICAL
: RBW:1000.000kHz VBW:3000.000kHz SWT:Auto

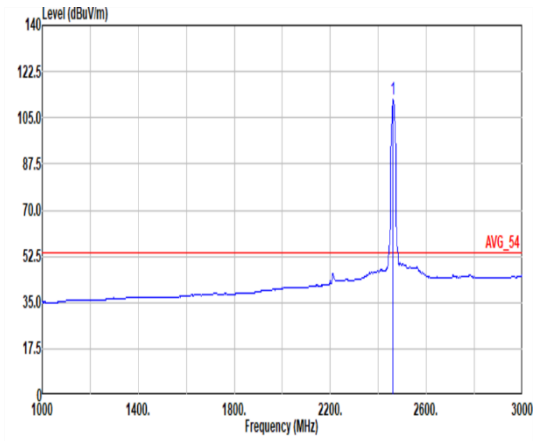
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	Aux Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	2462.00	115.60	------	------	102.77	26.50	8.90	32.98	0.38	200	269	Peak

Avg



Site : 03CH21-HY
Condition: AVG_BE_54 3m DRH18-E_LE2C03A18EN_240711 VERTICAL
: RBW:1000.000kHz VBW:0.120kHz SWT:Auto

	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	Aux Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	2490.69	52.37	54.00	-1.63	39.30	26.70	8.96	33.00	0.38	200	269	Average

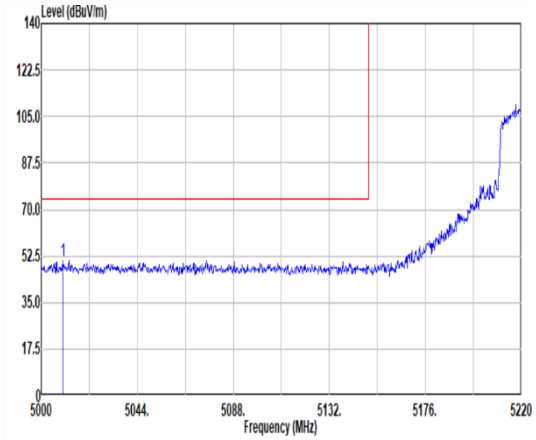


Site : 03CH21-HY
Condition: AVG_54 3m DRH18-E_LE2C03A18EN_240711 VERTICAL
: RBW:1000.000kHz VBW:0.120kHz SWT:Auto

	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	Aux Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	2462.00	111.84	------	------	99.01	26.50	8.90	32.98	0.38	200	269	Average

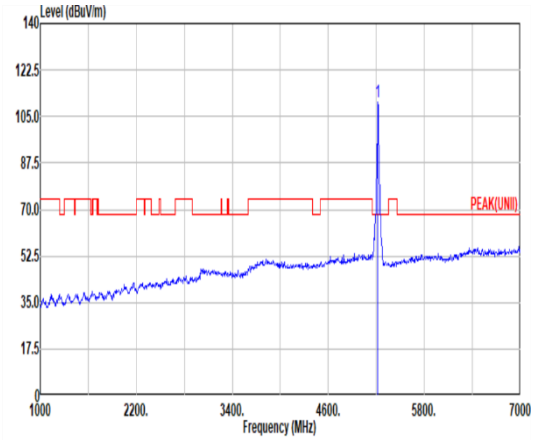
Mode	1	
	Band Edge - L	
	U-NII-1_5.15-5.25_802.11ax HE20_CH44_5220MHz	
ANT	1+2	
Pol.	Horizontal	Fundamental

Peak



Site : 03CH21-HY
Condition: PEAK_BE_74 3m DRH18-E_LE2C03A18EN_240711 HORIZONTAL
: RBW:1000.000kHz VBW:3000.000kHz SWT:Auto

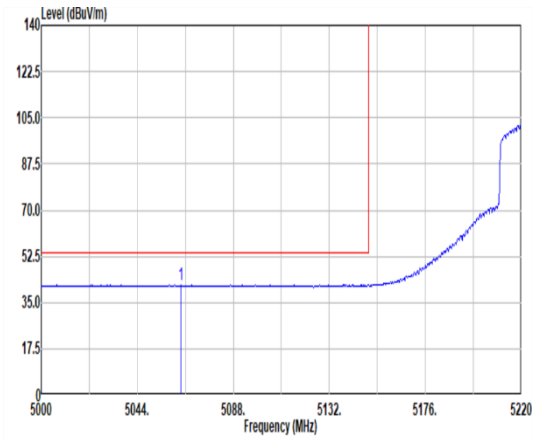
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	Aux Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	5009.90	50.59	74.00	-23.41	38.78	32.76	12.87	34.22	0.40	190	137	Peak



Site : 03CH21-HY
Condition: PEAK(UNII) 3m DRH18-E_LE2C03A18EN_240711 HORIZONTAL
: RBW:1000.000kHz VBW:3000.000kHz SWT:Auto

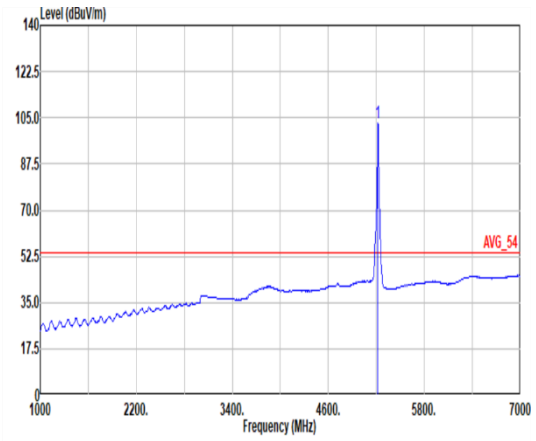
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	Aux Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	5220.00	110.34	------	------	98.96	32.53	13.11	34.66	0.40	190	137	Peak

Avg



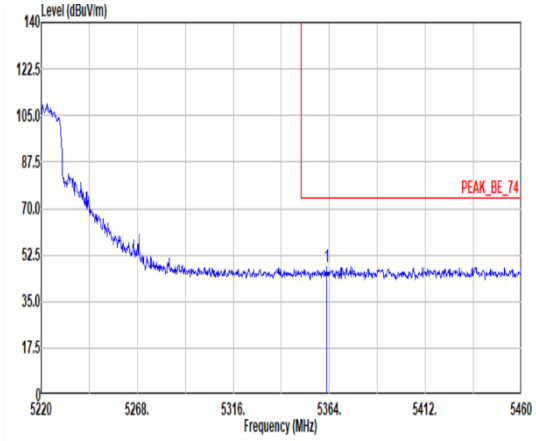
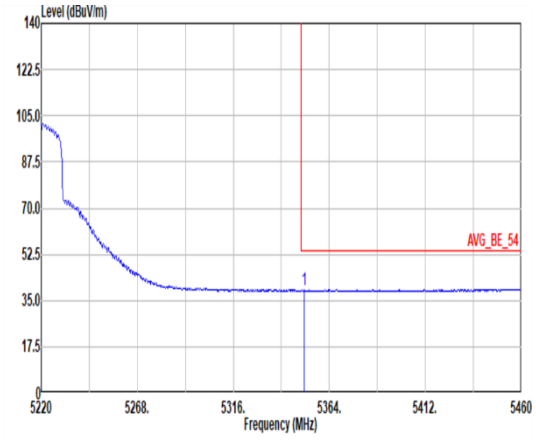
Site : 03CH21-HY
Condition: AVG_BE_54 3m DRH18-E_LE2C03A18EN_240711 HORIZONTAL
: RBW:1000.000kHz VBW:1.100kHz SWT:Auto

	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	Aux Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	5064.02	41.80	54.00	-12.20	30.20	32.60	12.93	34.33	0.40	190	137	Average



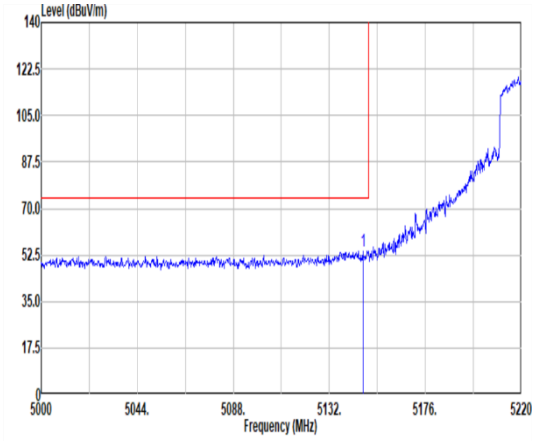
Site : 03CH21-HY
Condition: AVG_54 3m DRH18-E_LE2C03A18EN_240711 HORIZONTAL
: RBW:1000.000kHz VBW:1.100kHz SWT:Auto

	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	Aux Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	5220.00	102.89	------	------	91.51	32.53	13.11	34.66	0.40	190	137	Average

Mode	1	
	Band Edge - R	
	U-NII-1_5.15-5.25_802.11ax HE20_CH44_5220MHz	
ANT	1+2	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH21-HY Condition: PEAK_BE_74 3m DRH18-E_LE2C03A18EN_240711 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5362.80 48.31 74.00 -25.69 37.20 32.27 13.28 34.96 0.52 190 137 Peak	Blank
Avg	 Site : 03CH21-HY Condition: AVG_BE_54 3m DRH18-E_LE2C03A18EN_240711 HORIZONTAL : RBW:1000.000kHz VBW:1.100kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5351.52 39.32 54.00 -14.68 28.19 32.30 13.26 34.94 0.51 190 137 Average	Blank

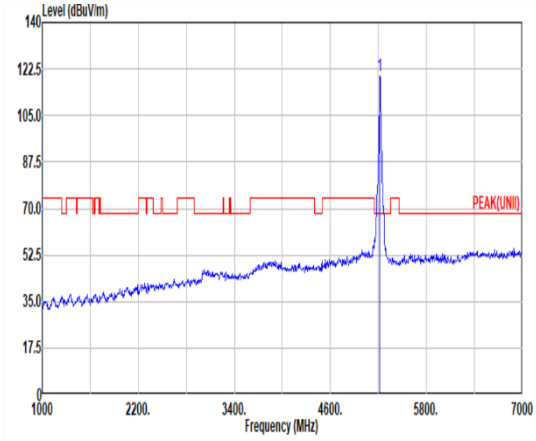
Mode	1	
	Band Edge - L	
	U-NII-1_5.15-5.25_802.11ax HE20_CH44_5220MHz	
ANT	1+2	
Pol.	Vertical	Fundamental

Peak



Site : 03CH21-HY
Condition: PEAK_BE_74 3m DRH18-E_LE2C03A18EN_240711 VERTICAL
: RBW:1000.000kHz VBW:3000.000kHz SWT:Auto

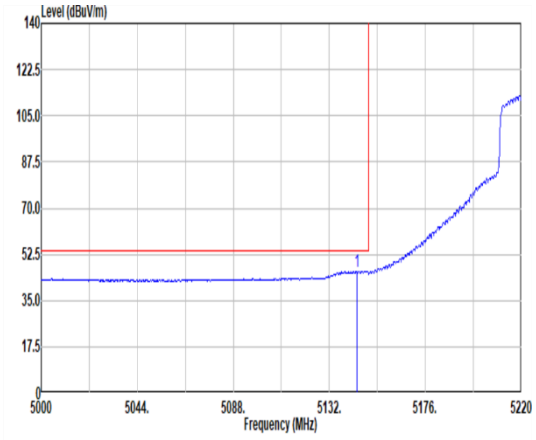
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	Aux Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	5147.40	54.14	74.00	-19.86	42.54	32.69	13.03	34.51	0.39	200	329	Peak



Site : 03CH21-HY
Condition: PEAK(UNII) 3m DRH18-E_LE2C03A18EN_240711 VERTICAL
: RBW:1000.000kHz VBW:3000.000kHz SWT:Auto

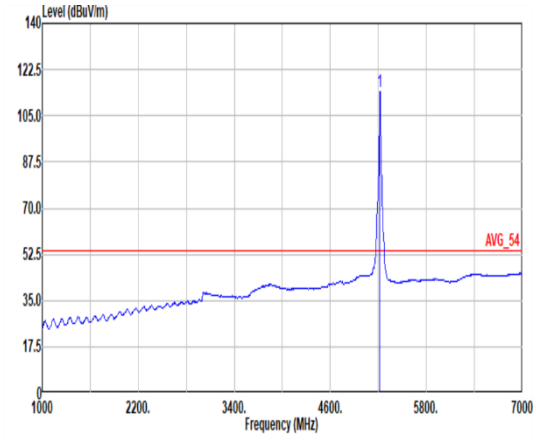
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	Aux Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	5220.00	119.72	------	------	108.34	32.53	13.11	34.66	0.40	200	329	Peak

Avg



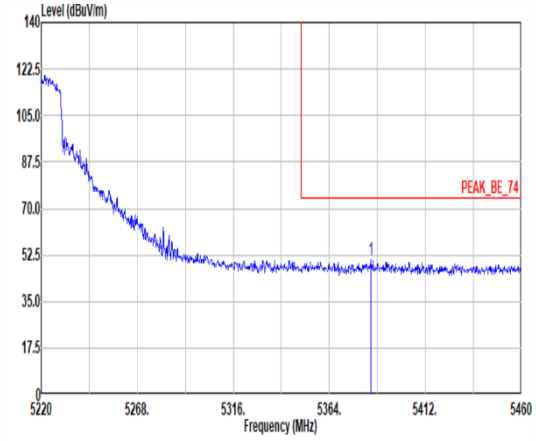
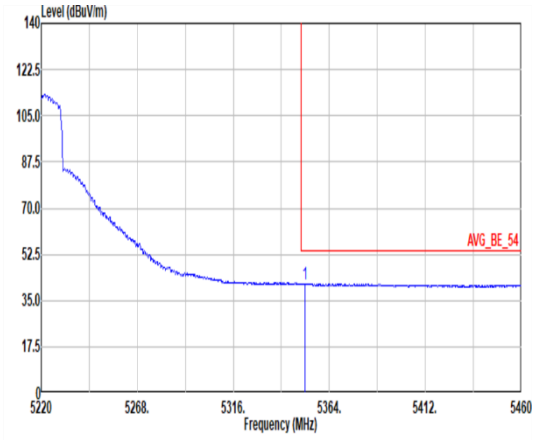
Site : 03CH21-HY
Condition: AVG_BE_54 3m DRH18-E_LE2C03A18EN_240711 VERTICAL
: RBW:1000.000kHz VBW:1.100kHz SWT:Auto

	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	Aux Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	5144.54	46.13	54.00	-7.87	34.52	32.69	13.03	34.50	0.39	200	329	Average

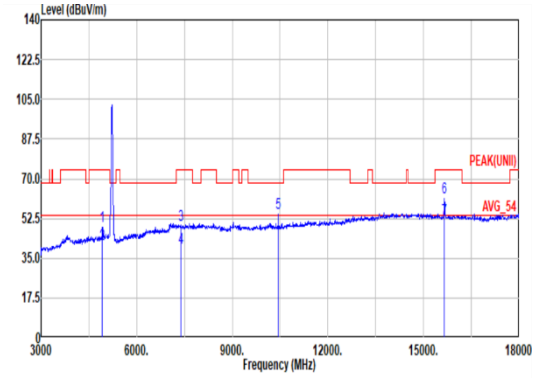
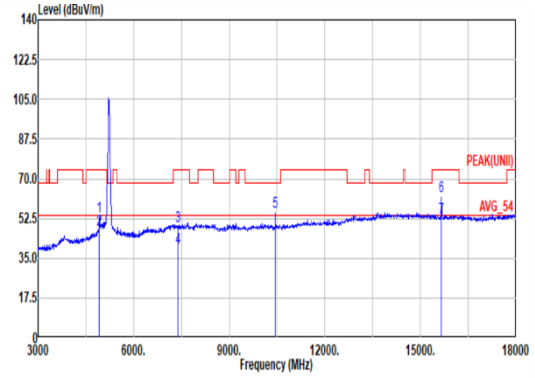


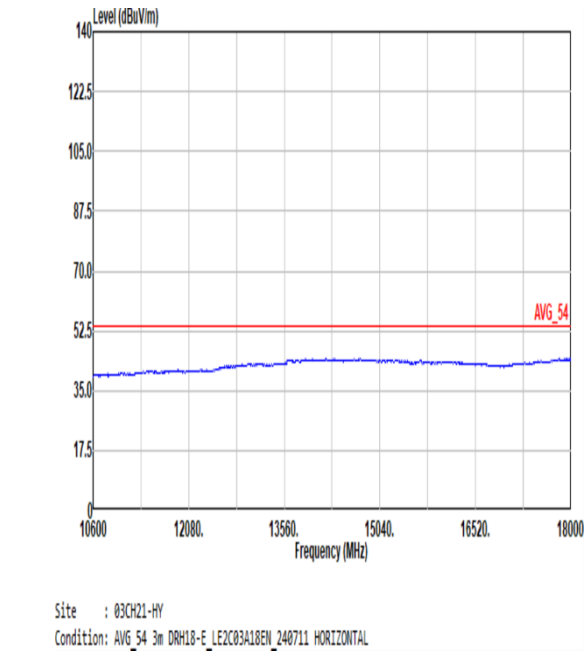
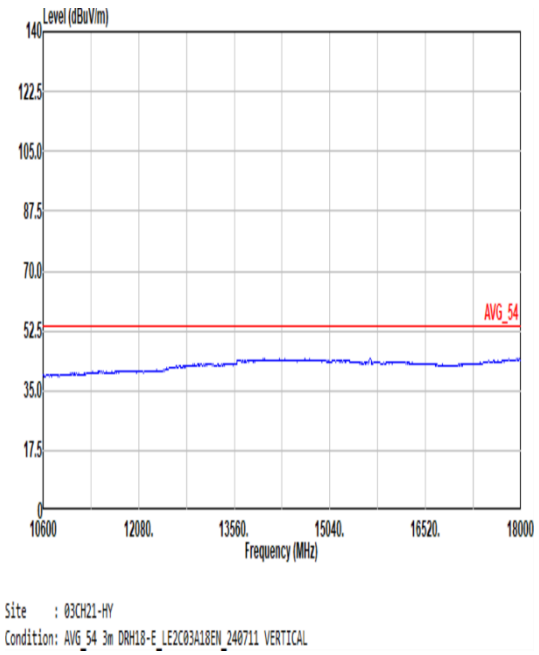
Site : 03CH21-HY
Condition: AVG_54 3m DRH18-E_LE2C03A18EN_240711 VERTICAL
: RBW:1000.000kHz VBW:1.100kHz SWT:Auto

	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	Aux Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	5220.00	114.04	------	------	102.66	32.53	13.11	34.66	0.40	200	329	Average

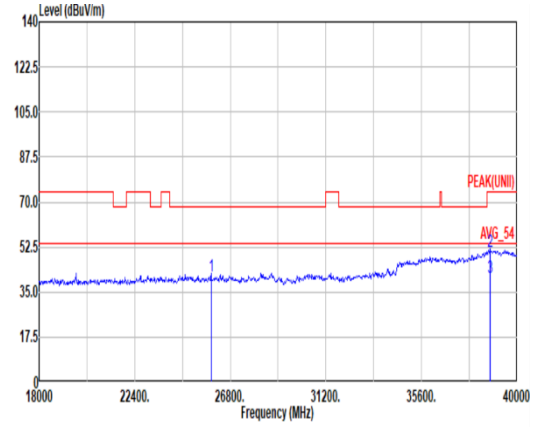
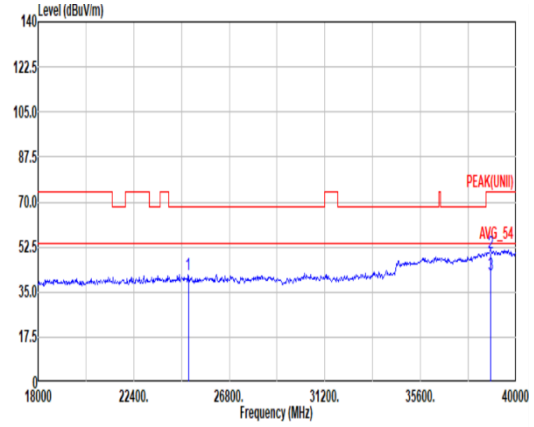
Mode	1	
	Band Edge - R	
	U-NII-1_5.15-5.25_802.11ax HE20_CH44_5220MHz	
ANT	1+2	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH21-HY Condition: PEAK_BE_74 3m DRH18-E_LE2C03A18EN_240711 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5384.88 50.56 74.00 -23.44 39.50 32.23 13.30 35.01 0.54 200 329 Peak	Blank
Avg	 Site : 03CH21-HY Condition: AVG_BE_54 3m DRH18-E_LE2C03A18EN_240711 VERTICAL : RBW:1000.000kHz VBW:1.100kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 5351.76 41.41 54.00 -12.59 30.28 32.30 13.26 34.94 0.51 200 329 Average	Blank

Mode	1
	Harmonic
	2400-2483.5_802.11b_CH11_2462MHz
	U-NII-1_5.15-5.25_802.11ax HE20_CH44_5220MHz

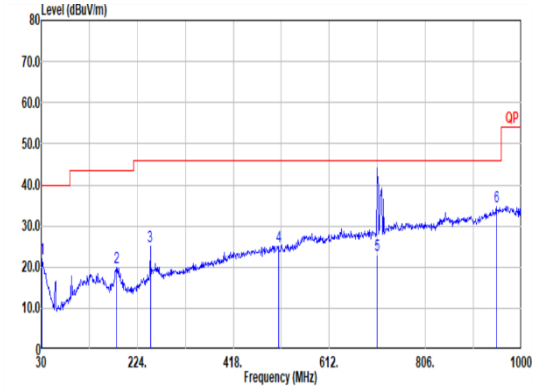
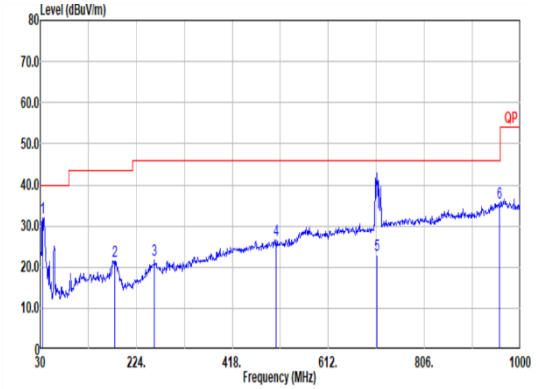
Pol.	Horizontal	Vertical
Peak Avg	 Site : 03CH21-HY Condition: PEAK(UNII) 3m DRH18-E_LE2C03A18EN_240711 HORIZONTAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 4924.00 48.91 74.00 -25.09 37.78 32.54 12.78 34.19 0.00 100 83 Peak 2 4924.00 41.26 54.00 -12.74 30.13 32.54 12.78 34.19 0.00 100 83 Average 3 7386.00 49.63 74.00 -24.37 32.34 36.80 16.04 36.77 1.22 -- -- Peak 4 7386.00 39.73 54.00 -14.27 22.44 36.80 16.04 36.77 1.22 -- -- Average 5 10440.00 54.83 68.20 -13.37 38.21 37.20 18.61 39.99 0.80 264 206 Peak 6 15660.00 61.75 74.00 -12.25 43.34 40.52 22.88 45.57 0.58 203 262 Peak 7 15660.00 52.10 54.00 -1.90 33.69 40.52 22.88 45.57 0.58 203 262 Average	 Site : 03CH21-HY Condition: PEAK(UNII) 3m DRH18-E_LE2C03A18EN_240711 VERTICAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 4924.00 53.44 74.00 -20.56 42.31 32.54 12.78 34.19 0.00 100 99 Peak 2 4924.00 47.40 54.00 -6.60 36.27 32.54 12.78 34.19 0.00 100 99 Average 3 7386.00 49.36 74.00 -24.64 32.07 36.80 16.04 36.77 1.22 -- -- Peak 4 7386.00 39.68 54.00 -14.32 22.39 36.80 16.04 36.77 1.22 -- -- Average 5 10440.00 55.55 68.20 -12.65 38.93 37.20 18.61 39.99 0.80 389 205 Peak 6 15660.00 62.40 74.00 -11.60 43.99 40.52 22.88 45.57 0.58 397 234 Peak 7 15660.00 52.96 54.00 -1.04 34.55 40.52 22.88 45.57 0.58 397 234 Average

Mode	1	
	Harmonic	
	2400-2483.5_802.11b_CH11_2462MHz	
	U-NII-1_5.15-5.25_802.11ax HE20_CH44_5220MHz	
Pol.	Horizontal	Vertical
10.6G ~18G Avg		

Mode	1
	SHF
	2400-2483.5_802.11b_CH11_2462MHz
	U-NII-1_5.15-5.25_802.11ax HE20_CH44_5220MHz

Pol.	Horizontal	Vertical
Peak Avg	 Site : 03CH21-HY Condition: PEAK(UNII) 1m BBHA9170_1224_240624 HORIZONTAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 25929.70 41.17 68.20 -27.03 42.08 39.30 29.83 60.50 -9.54 -- -- PEAK 2 38753.60 50.64 74.00 -23.36 38.98 44.21 37.49 60.50 -9.54 -- -- PEAK 3 38753.60 40.94 54.00 -13.06 29.28 44.21 37.49 60.50 -9.54 -- -- AVERAGE	 Site : 03CH21-HY Condition: PEAK(UNII) 1m BBHA9170_1224_240624 VERTICAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 24914.06 41.64 68.20 -26.56 42.97 39.30 29.18 60.27 -9.54 -- -- PEAK 2 38834.11 50.37 74.00 -23.63 38.32 44.60 37.56 60.57 -9.54 -- -- PEAK 3 38834.11 41.54 54.00 -12.46 29.49 44.60 37.56 60.57 -9.54 -- -- AVERAGE

Mode	1
	LF
	2400-2483.5_802.11b_CH11_2462MHz
	U-NII-1_5.15-5.25_802.11ax HE20_CH44_5220MHz

Pol.	Horizontal	Vertical
QP/ Peak		

Site : 03CH21-HY
Condition: QP 3m LF_63303&001_241217 HORIZONTAL

	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	Aux Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	30.97	22.11	40.00	-17.89	29.43	24.43	0.87	32.65	0.03	--	--	Peak
2	182.29	20.04	43.50	-23.46	35.43	14.80	2.34	32.62	0.09	--	--	Peak
3	250.19	25.16	46.00	-20.84	36.24	18.72	2.75	32.63	0.08	--	--	Peak
4	509.18	25.09	46.00	-20.91	29.83	24.10	3.95	32.84	0.05	--	--	Peak
5	709.00	22.91	46.00	-23.09	24.19	26.78	4.68	32.89	0.15	300	270	QP
6	949.56	34.75	46.00	-11.25	29.37	31.17	5.45	31.42	0.18	--	--	Peak

Site : 03CH21-HY
Condition: QP 3m LF_63303&001_241217 VERTICAL

	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	Aux Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	34.85	32.10	40.00	-7.90	40.93	22.84	0.94	32.64	0.03	--	--	Peak
2	180.35	21.48	43.50	-22.02	36.83	14.86	2.32	32.62	0.09	--	--	Peak
3	260.86	21.65	46.00	-24.35	31.21	20.18	2.81	32.63	0.08	--	--	Peak
4	506.27	26.57	46.00	-19.43	31.33	24.10	3.94	32.84	0.04	--	--	Peak
5	709.97	23.09	46.00	-22.91	24.34	26.80	4.68	32.88	0.15	200	32	QP
6	957.32	35.52	46.00	-10.48	29.70	31.50	5.47	31.34	0.19	--	--	Peak

Appendix B. Duty Cycle Plots

Antenna	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting
1+2	2.4GHz 802.11b	94.19	8206	0.12	120Hz
1+2	5GHz 802.11ax HE20 Full RU	90.38	987	1.01	1.1kHz

MIMO <Ant. 1+2>

2.4GHz 802.11b	5GHz 802.11ax HE20 Full RU