FCC Part 15.407

TEST REPORT

For

Cisco Systems, Inc.

West Tasman Dr, San Jose, CA 95134

FCC ID: LDKCNWLI2637

Report Type: Original Report	**Product Type:** Cisco Catalyst 9130AX Series Wi-Fi 6 Access Points

Report Producer : Coco Lin

Report Number : RXZ220722002RF03

Report Date : 2022-08-09

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Revision History

Revision	No.	Report Number	Issue Date	Description	Author/ Revised by
0.0	RXZ220722002	RXZ220722002RF03	2022-08-09	Original Report	Coco Lin

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1 General Information

1.1 Product Description for Equipment under Test (EUT)

Manufacturer	Cisco Systems, Inc.
	170 West Tasman Dr, San Jose, CA 95134
Brand(Trade) Name	CISCO
Product (Equipment)	Cisco Catalyst 9130AX Series Wi-Fi 6 Access Points
Main Model Name	C9130AXI-B
Frequency Range	5150 ~ 5250 MHz, 5250 ~ 5350 MHz, 5470 ~ 5725 MHz, 5725 ~ 5850 MHz
Modulation Technique	OFDM , OFDMA
Power Operation (Voltage Range)	55Vdc from PoE port
Received Date	2022/7/22
Date of Test	2022/7/25 ~ 2022/7/29

*All measurement and test data in this report was gathered from production sample serial number: RXZ220722002-01 (Assigned by BACL, New Taipei Laboratory).

1.2 Objective

This report is prepared on behalf of Cisco Systems, Inc. in accordance with Part 2, Subpart J, Part 15, Subparts A, C and E of the Federal Communication Commission's rules.

Wi-Fi and Chillwave leverage original test data (FCC ID: LDKAX5122118) in accordance with FCC KDB 484596 D01. Wi-Fi and Chillwave will be verified by spot checking output power and radiated spurious emissions.

1.3 Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2013, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices

1.4 Statement

Decision Rule: No, (The test results do not include MU judgment)

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Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
The determination of the test results does not require consideration of the uncertainty of the measurement, unless the assessment is required by customer agreement, regulation or standard document specification.
Bay Area Compliance Laboratories Corp. (New Taipei Laboratory) is not responsible for the authenticity of the information provided by the applicant that affects the test results.

1.5 Measurement Uncertainty

Parameter		Uncertainty
RF output power, conducted		±0.93 (dB)
Emissions, radiated	30 MHz~1GHz	±5.22(dB)
	1 GHz~18 GHz	±6.12(dB)
	18 GHz~40 GHz	±4.99(dB)
Temperature		+/- 1.27 °C
Humidity		+/- 3 %

1.6 Environmental Conditions

Test Site	Test Date	Temperature (℃)	Relative Humidity (%)	ATM Pressure (hPa)	Test Engineer
Radiation Spurious Emissions	2022/7/25~2022/7/29	21.1~27.2	47~72	1010	Jim Chen
Maximum Output Power	2022/7/25	26.7	43	1010	Andy Cheng

1.7 Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (New Taipei Laboratory) to collect test data is located on
☒70, Lane 169, Sec. 2, Datong Road, Xizhi Dist., New Taipei City 22183, Taiwan, R.O.C.

Bay Area Compliance Laboratories Corp. (New Taipei Laboratory) is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code: 3732) and the FCC designation No.TW3732 under the Mutual Recognition Agreement (MRA) in FCC Test.

2 System Test Configuration

2.1 Equipment Modifications

No modification was made to the EUT.

2.2 Test Mode

Mode 2: WIFI 2.4GHz XOR + WIFI 5GHz Regular(4TX) + WIFI 2.4GHz Aux + BLE

Mode 3: WIFI 2.4GHz XOR + WIFI 5GHz Regular(4TX) + WIFI 5GHz Aux + BLE

Mode 4: WIFI 5GHz XOR + WIFI 5GHz Regular(4TX) + WIFI 2.4GHz Aux + BLE

Mode 5: WIFI 5GHz XOR + WIFI 5GHz Regular(4TX) + WIFI 5GHz Aux + BLE

Mode 6: WIFI 2.4GHz XOR + WIFI 5GHz Regular(8TX) + WIFI 2.4GHz Aux + BLE

Mode 7: WIFI 2.4GHz XOR + WIFI 5GHz Regular(8TX) + WIFI 5GHz Aux + BLE

Radiated spurious emissions for Transmitting simultaneously test: Mode 2~7.

2.3 Support Equipment List and Details

Description	Manufacturer	Model Number	S/N
POE Adapter	CISCO	SB-PWR-INJ2	C18426663000003170
NB	DELL	E6410	8N7PXN1

2.4 External Cable List and Details

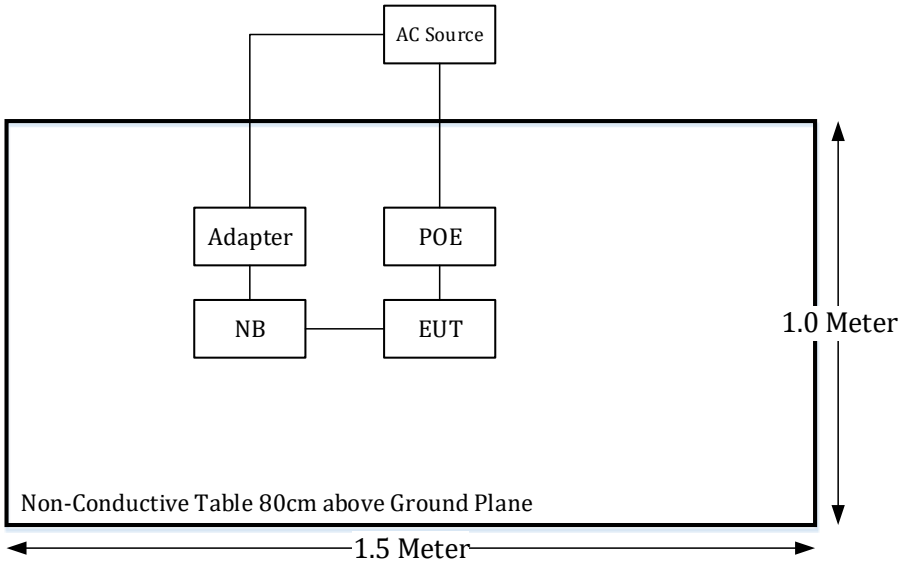
Cable Description	Length (m)	From	To
RJ-45 Cable	1	EUT	POE Adapter
RJ-45 to USB Serial Cable	2	EUT	NB

2.5 Block Diagram of Test Setup

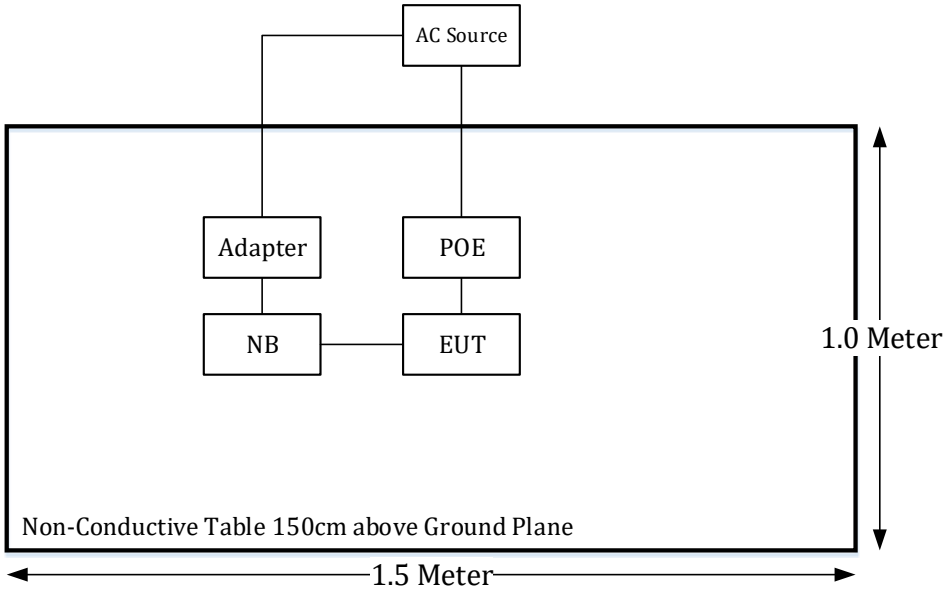
See test photographs attached in setup photos for the actual connections between EUT and support equipment.

Radiation:

Below 1GHz:



Above 1GHz:



3 Summary of Test Results

FCC Rules	Description of Test	Results
§15.407(f), §1.1307(b)(3)(i)	RF Exposure	Compliance
§15.205 & §15.209 & §15.407(b)	Unwanted Emission	Compliance
§15.407(a)(1)(3)	Conducted Transmitter Output Power	Compliance

*Note: The output power for each radio and each frequency band already verified
The test report presented the worst modes and channels

4 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due Date
Radiation 3M Room (966-A)					
Bilog Antenna with 6 dB Attenuator	SUNOL SCIENCES & MINI-CIRCUITS	JB6/UNAT-6+	A050115/15542_01	2022/02/14	2023/02/13
Horn Antenna	EMCO	3115	9809-55583	2021/8/26	2022/8/25
Horn Antenna	ETS-Lindgren	3116	62638	2021/8/11	2022/8/10
Preamplifier	Sonoma	310N	130602	2022/6/8	2023/6/7
Preamplifier	A.H. system Inc.	PAM-0118P	466	2021/11/4	2022/11/3
Microware Preamplifier	EM Electronics Corporation	EM18G40G	60656	2021/12/27	2022/12/26
Spectrum Analyzer	Rohde & Schwarz	FSV40	101435	2021/12/27	2022/12/26
EMI Test Receiver	Rohde & Schwarz	ESR7	101419	2021/11/9	2022/11/8
Micro flex Cable	UTIFLEX	UFB197C-1-2362-70U-70U	225757-001	2022/1/24	2023/1/23
Coaxial Cable	COMMATE	PEWC	8Dr	2021/12/24	2022/12/23
Coaxial Cable	UTIFLEX	UFB311A-Q-1440-300300	220490-006	2022/1/24	2023/1/23
Coaxial Cable	JUNFLON	J12J102248-00-B-5	AUG-07-15-044	2021/12/24	2022/12/23
Cable	EMC	EMC105-SM-SM-10000	201003	2022/1/24	2023/1/23
Coaxial Cable	ROSNOL	K1K50-UP0264-K1K50-450CM	160309-1	2022/1/24	2023/1/23
Coaxial Cable	ROSNOL	K1K50-UP0264-K1K50-50CM	15120-1	2022/1/18	2023/1/17
Software	Audix	e3	18621a bacl	N.C.R	N.C.R
Conducted Room					
Cable	UTIFLEX	UFA210A	9435	2021/10/5	2022/10/4
Power Sensor	KEYSIGHT	U2021XA	MY54080018	2022/01/24	2023/01/23
Attenuator	MINI-CIRCUITS	BW-S10W5+	1419	2022/2/11	2023/2/10

*Statement of Traceability: BACL Corp. attests that all of the calibrations on the equipment items listed above were traceable to the SI System of Units via the R.O.C. Center for Measurement Standards of the Electronics Testing Center, Taiwan (ETC) or to another internationally recognized National Metrology Institute (NMI), and were compliant with the current Taiwan Accreditation Foundation (TAF) requirement

5 FCC §15.407(f), § 1.1307(b)(3)(i) – RF Exposure

5.1 Applicable Standard

According to subpart 15.247(i) and subpart §1.1307(b)(3)(i), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

For single RF sources (*i.e.*, any single fixed RF source, mobile device, or portable device, as defined in paragraph (b)(2) of this section): A single RF source is exempt if:

(A) The available maximum time-averaged power is no more than 1 mW, regardless of separation distance. This exemption may not be used in conjunction with other exemption criteria other than those in paragraph (b)(3)(ii)(A) of this section. Medical implant devices may only use this exemption and that in paragraph (b)(3)(ii)(A);
(B) Or the available maximum time-averaged power or effective radiated power (ERP), whichever is greater, is less than or equal to the threshold *Pth* (mW) described in the following formula. This method shall only be used at separation distances (cm) from 0.5 centimeters to 40 centimeters and at frequencies from 0.3 GHz to 6 GHz (inclusive). *Pth* is given by:

$$P_{th}\ (\text{mW}) = \begin{cases} ERP_{20\ cm}(d/20\ \text{cm})^{x} & d \le 20\ \text{cm} \\ ERP_{20\ cm} & 20\ \text{cm} < d \le 40\ \text{cm} \end{cases}$$

Where

$$x = -\log_{10}\left(\frac{60}{ERP_{20\ cm}\sqrt{f}}\right) \text{ and } f \text{ is in GHz;}$$

and

$$ERP_{20\ cm}\ (\text{mW}) = \begin{cases} 2040f & 0.3\ \text{GHz} \le f < 1.5\ \text{GHz} \\ 3060 & 1.5\ \text{GHz} \le f \le 6\ \text{GHz} \end{cases}$$

5.2 RF Exposure Evaluation Result

The EUT can be used in the following modes, selecting the worst mode for evaluation.
Mode 2: WIFI 2.4GHz XOR + WIFI 5GHz Regular(4TX) + WIFI 2.4GHz Aux + BLE
Mode 3: WIFI 2.4GHz XOR + WIFI 5GHz Regular(4TX) + WIFI 5GHz Aux + BLE
Mode 4: WIFI 5GHz XOR + WIFI 5GHz Regular(4TX) + WIFI 2.4GHz Aux + BLE
Mode 5: WIFI 5GHz XOR + WIFI 5GHz Regular(4TX) + WIFI 5GHz Aux + BLE
Mode 6: WIFI 2.4GHz XOR + WIFI 5GHz Regular(8TX) + WIFI 2.4GHz Aux + BLE
Mode 7: WIFI 2.4GHz XOR + WIFI 5GHz Regular(8TX) + WIFI 5GHz Aux + BLE

Worst case is Mode 7 :

Project info

Band	Freq (MHz)	Tune-up Power (dBm)	Ant Gain (dBi)	Distances (mm)	Duty (%)	Tune-up Power (mW)	ERP (dBm)	ERP (mW)
BLE	2480	5	4	300	100%	3.16	6.85	4.84
WIFI 2.4G XOR	2462	24	10	300	100%	251.19	31.85	1531.09
WIFI 5G Regular(8TX)	5850	26	10.02	300	100%	398.11	33.87	2437.81
WIFI 5G AUX	5850	20.5	6	300	100%	112.20	24.35	272.27

Option A

The available maximum time-averaged power is no more than 1 mW

Band	Freq (MHz)	Result Option A
BLE	2480	not exempt
WIFI 2.4G XOR	2462	not exempt
WIFI 5G Regular(8TX)	5850	not exempt
WIFI 5G AUX	5850	not exempt

Option B

The available maximum time-averaged power or effective radiated power (ERP), whichever is greater.

This method shall only be used at separation distances (cm) from 0.5 centimeters to 40 centimeters and at frequencies from 0.3 GHz to 6 GHz (inclusive).

Band	Freq (MHz)	Pth (mW)	X	ERP 20cm (mW)	Result Option B
BLE	2480	3060.00	1.905	3060	exempt
WIFI 2.4G XOR	2462	3060.00	1.903	3060	exempt
WIFI 5G Regular(8TX)	5850	3060.00	2.091	3060	exempt
WIFI 5G AUX	5850	3060.00	2.091	3060	exempt

Simultaneous Analysis :

Band	Freq (MHz)	PSD Require	PSD (mW/cm^2)	PSD Limit (mW/cm^2)	Simultaneous TX	Ratio
BLE	2480	exempt	0.001	1	O	0.001
WIFI 2.4G XOR	2462	exempt	0.222	1	O	0.222
WIFI 5G Regular(8TX)	5850	exempt	0.353	1	O	0.353
WIFI 5G AUX	5850	exempt	0.040	1	O	0.040
Simultaneous Analysis (Limit 1)						0.62

Result: The EUT meets exemption requirement- RF exposure evaluation greater than **30cm** distance.

6 FCC §15.209, §15.205 , §15.407(b) – Spurious Emissions

6.1 Applicable Standard

As Per FCC §15.205(a) except as show in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 – 0.110	16.42 – 16.423	608 – 614	4.5 – 5.15
0.495 – 0.505	16.69475 – 16.69525	960 – 1240	5.35 – 5. 46
2.1735 – 2.1905	16.80425 – 16.80475	1300 – 1427	7.25 – 7.75
4.125 – 4.128	25.5 – 25.67	1435 – 1626.5	8.025 – 8.5
4.17725 – 4.17775	37.5 – 38.25	1645.5 – 1646.5	9.0 – 9.2
4.20725 – 4.20775	73 – 74.6	1660 – 1710	9.3 – 9.5
6.215 – 6.218	74.8 – 75.2	1718.8 – 1722.2	10.6 – 12.7
6.26775 – 6.26825	108 – 121.94	2200 – 2300	13.25 – 13.4
6.31175 – 6.31225	123 – 138	2310 – 2390	14.47 – 14.5
8.291 – 8.294	149.9 – 150.05	2483.5 – 2500	15.35 – 16.2
8.362 – 8.366	156.52475 – 156.52525	2690 – 2900	17.7 – 21.4
8.37625 – 8.38675	156.7 – 156.9	3260 – 3267	22.01 – 23.12
8.41425 – 8.41475	162.0125 –167.17	3.332 – 3.339	23.6 – 24.0
12.29 – 12.293	167.72 – 173.2	3 3458 – 3 358	31.2 – 31.8
12.51975 – 12.52025	240 – 285	3.600 – 4.400	36.43 – 36.5
12.57675 – 12.57725	322 – 335.4		Above 38.6
13.36 – 13.41	399.9 – 410		

As per FCC §15.209(a): Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (micro volts/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 1: Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

As per FCC Part 15.407 (b)

- For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.
- For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level

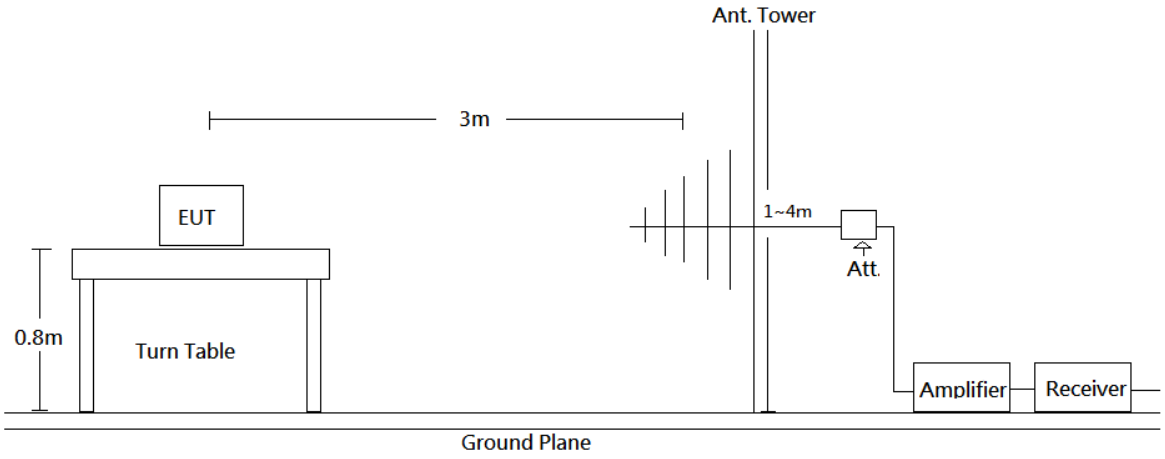
of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge..

˙The emission measurements shall be performed using a minimum resolution bandwidth of 1 MHz. A lower resolution bandwidth may be employed near the band edge, when necessary, provided the measured energy is integrated to show the total power over 1 MHz.

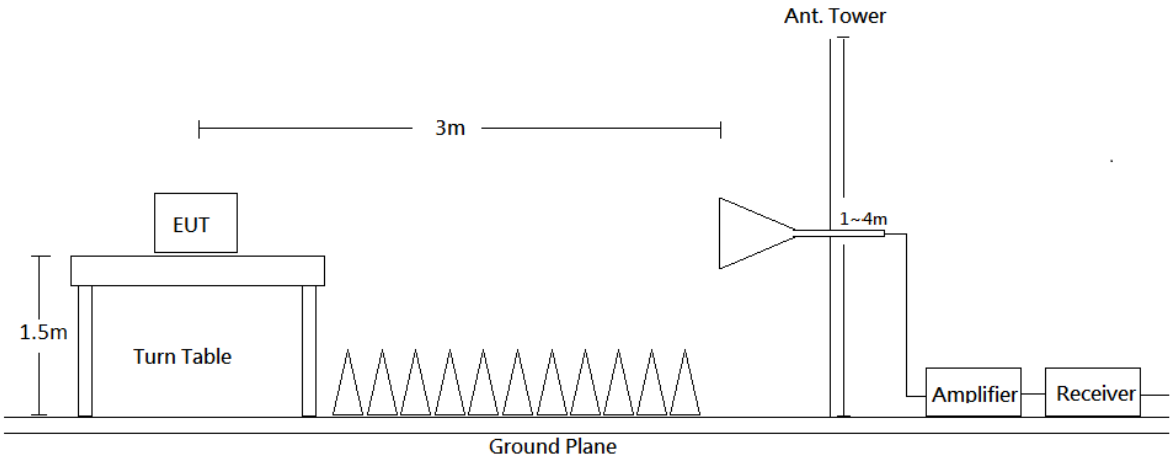
˙Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209.

6.2 EUT Setup

Below 1 GHz:



Above 1 GHz:



Radiated emission tests were performed in the 3 meters chamber test site, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC Part 15.209 and FCC 15.407 Limits.

6.3 EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 30 MHz to 40 GHz. During the radiated emission test, the EMI test receiver was set with the following configurations measurement method 6.3 in ANSI C63.10.

Frequency Range	RBW	VBW	Duty cycle	Measurement method
30-1000 MHz	120 kHz	/	/	QP
Above 1 GHz	1 MHz	3 MHz	/	PK
	1 MHz	10 Hz	>98%	Ave
	1 MHz	1/T	<98%	Ave

Note: T is minimum transmission duration

6.4 Test Procedure

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

All data was recorded in the Quasi-peak detector mode from 30 MHz to 1 GHz and PK and average detector modes for frequencies above 1 GHz.

According to C63.10, emission shall be computed as: E [dBμV/m] = EIRP[dBm] + 95.2, for d = 3 meters.

All emissions under the average limit and under the noise floor have not recorded in the report

6.5 Corrected Factor & Margin Calculation

The Correct Factor is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

Correct Factor = Antenna Factor + Cable Loss – Amplifier Gain

The “Margin” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -7 dB means the emission is 7 dB below the limit. The equation for margin calculation is as follows:

Margin = Result – Limit

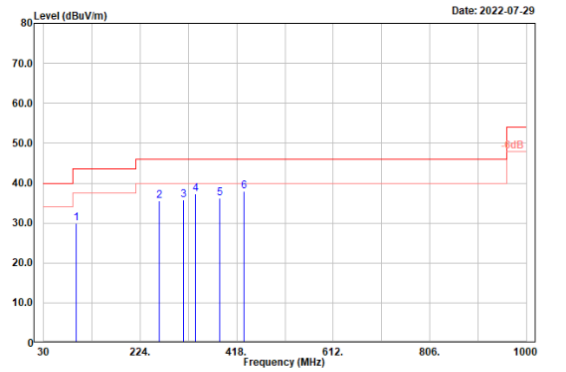
6.6 Test Results

Test Mode: Transmitting

Transmitting simultaneously test:

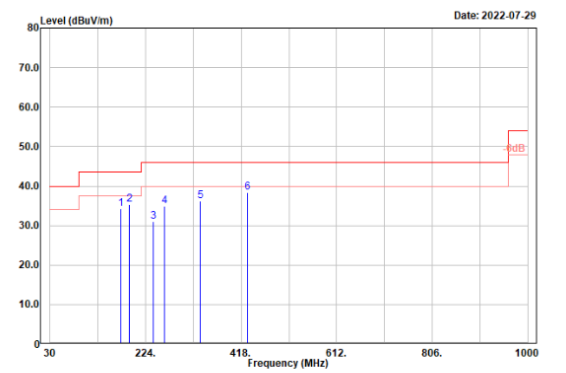
30MHz-1GHz:

Mode 2 / Horizontal



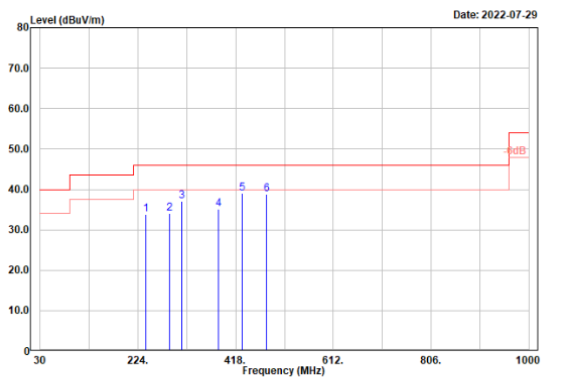
Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
95.055	43.15	-13.15	30.00	43.50	-13.50	100	35	QP
263.033	43.99	-8.41	35.58	46.00	-10.42	100	310	QP
311.582	42.46	-6.67	35.79	46.00	-10.21	100	340	QP
335.856	43.50	-6.24	37.26	46.00	-8.74	100	337	QP
383.433	41.27	-5.11	36.16	46.00	-9.84	100	237	QP
431.982	41.47	-3.45	38.02	46.00	-7.98	100	268	QP

Mode 2 / Vertical



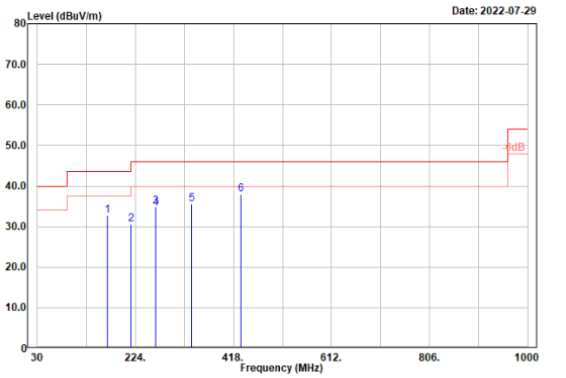
Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
174.675	44.39	-10.09	34.30	43.50	-9.20	100	343	QP
191.181	45.18	-9.91	35.27	43.50	-8.23	100	33	QP
239.730	40.38	-9.39	30.99	46.00	-15.01	100	357	QP
263.033	43.42	-8.41	35.01	46.00	-10.99	100	339	QP
335.856	42.55	-6.24	36.31	46.00	-9.69	100	288	QP
431.011	41.87	-3.50	38.37	46.00	-7.63	100	303	QP

Mode 3 / Horizontal



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
239.730	43.19	-9.39	33.80	46.00	-12.20	100	345	QP
287.307	41.40	-7.33	34.07	46.00	-11.93	100	240	QP
311.582	43.78	-6.67	37.11	46.00	-8.89	100	329	QP
383.433	40.15	-5.11	35.04	46.00	-10.96	100	232	QP
431.011	42.45	-3.50	38.95	46.00	-7.05	100	263	QP
479.560	40.81	-2.10	38.71	46.00	-7.29	100	293	QP

Mode 3 / Vertical



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
168.849	42.36	-9.69	32.67	43.50	-10.83	100	333	QP
215.456	41.24	-10.66	30.58	43.50	-12.92	100	212	QP
264.004	43.14	-8.26	34.88	46.00	-11.12	100	33	QP
264.004	42.69	-8.26	34.43	46.00	-11.57	100	33	QP
335.856	41.77	-6.24	35.53	46.00	-10.47	100	294	QP
431.982	41.29	-3.45	37.84	46.00	-8.16	100	302	QP

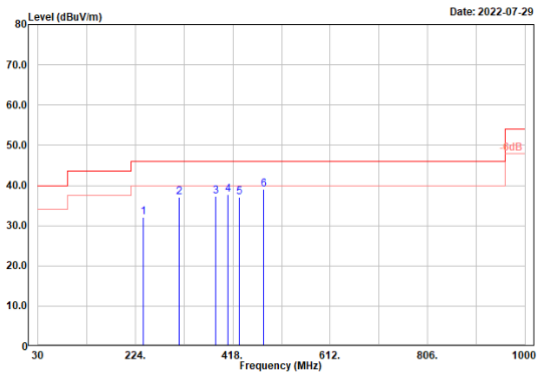
Level (Result) = Reading + Factor.

Margin = Level – Limit.

Factor = Antenna Factor + Cable Loss – Amplifier Gain.

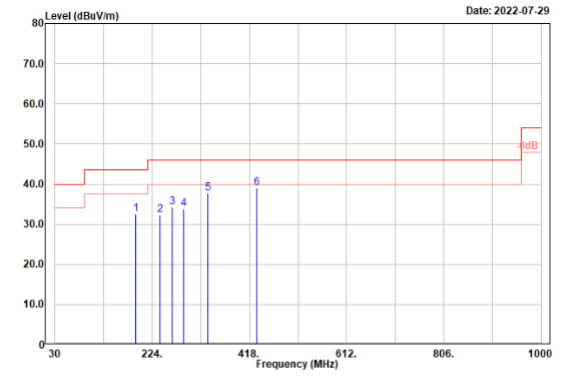
Spurious emissions more than 20 dB below the limit were not reported.

Mode 4 / Horizontal



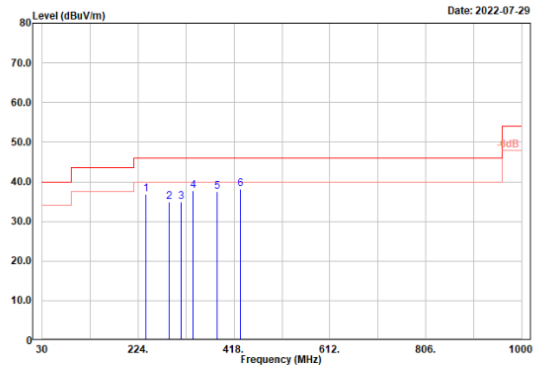
Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
239.730	41.47	-9.39	32.08	46.00	-13.92	100	319	QP
311.582	43.72	-6.67	37.05	46.00	-8.95	100	327	QP
383.433	42.38	-5.11	37.27	46.00	-8.73	100	229	QP
407.708	41.75	-4.01	37.74	46.00	-8.26	100	237	QP
431.011	40.66	-3.50	37.16	46.00	-8.84	100	264	QP
479.560	41.06	-2.10	38.96	46.00	-7.04	100	291	QP

Mode 4 / Vertical



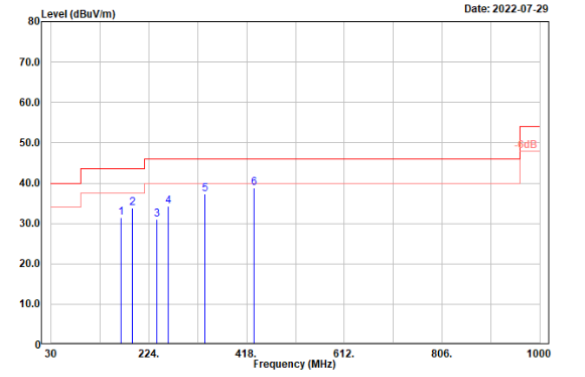
Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
191.181	42.33	-9.91	32.42	43.50	-11.08	100	310	QP
239.730	41.62	-9.39	32.23	46.00	-13.77	100	349	QP
264.004	42.43	-8.26	34.17	46.00	-11.83	100	333	QP
287.307	41.14	-7.33	33.81	46.00	-12.19	100	302	QP
335.856	43.99	-6.24	37.75	46.00	-8.25	100	287	QP
431.982	42.38	-3.45	38.93	46.00	-7.07	100	310	QP

Mode 5 / Horizontal



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
239.730	46.33	-9.39	36.94	46.00	-9.06	100	343	QP
287.307	42.32	-7.33	34.99	46.00	-11.01	100	218	QP
311.582	41.47	-6.67	34.80	46.00	-11.20	100	335	QP
335.856	43.99	-6.24	37.75	46.00	-8.25	100	339	QP
383.433	42.65	-5.11	37.54	46.00	-8.46	100	238	QP
431.011	41.72	-3.50	38.22	46.00	-7.78	100	262	QP

Mode 5 / Vertical



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
168.849	41.22	-9.69	31.53	43.50	-11.97	100	341	QP
191.181	43.64	-9.91	33.73	43.50	-9.77	100	329	QP
239.730	40.39	-9.39	31.00	46.00	-15.00	100	353	QP
263.033	42.72	-8.41	34.31	46.00	-11.69	100	341	QP
335.856	43.61	-6.24	37.37	46.00	-8.63	100	290	QP
431.982	42.34	-3.45	38.89	46.00	-7.11	100	309	QP

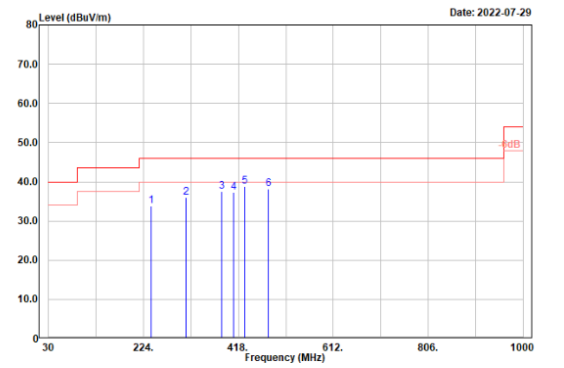
Level (Result) = Reading + Factor.

Margin = Level – Limit.

Factor = Antenna Factor + Cable Loss – Amplifier Gain.

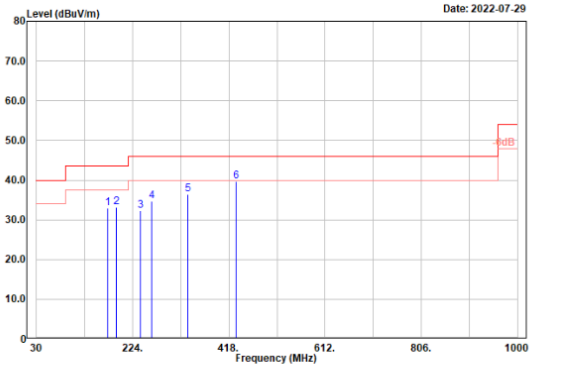
Spurious emissions more than 20 dB below the limit were not reported.

Mode 6 / Horizontal



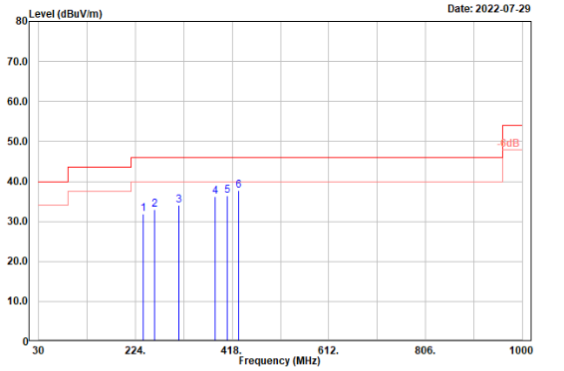
Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
239.730	43.11	-9.39	33.72	46.00	-12.28	100	347	QP
311.582	42.76	-6.67	36.09	46.00	-9.91	100	347	QP
383.433	42.59	-5.11	37.48	46.00	-8.52	100	236	QP
407.708	41.33	-4.01	37.32	46.00	-8.68	100	254	QP
431.011	42.31	-3.50	38.81	46.00	-7.19	100	267	QP
479.560	40.28	-2.10	38.18	46.00	-7.82	100	293	QP

Mode 6 / Vertical



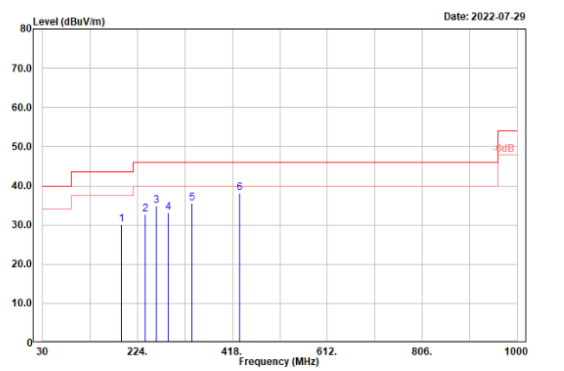
Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
173.704	42.93	-10.06	32.87	43.50	-10.63	100	351	QP
191.181	43.16	-9.91	33.25	43.50	-10.25	100	31	QP
239.730	41.62	-9.39	32.23	46.00	-13.77	100	339	QP
263.033	43.12	-8.41	34.71	46.00	-11.29	100	323	QP
335.856	42.75	-6.24	36.51	46.00	-9.49	100	288	QP
431.982	43.02	-3.45	39.57	46.00	-6.43	100	307	QP

Mode 7 / Horizontal



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
239.730	41.33	-9.39	31.94	46.00	-14.06	100	339	QP
263.033	41.38	-8.41	32.97	46.00	-13.03	100	323	QP
311.582	40.76	-6.67	34.09	46.00	-11.91	100	339	QP
383.433	41.40	-5.11	36.29	46.00	-9.71	100	233	QP
407.708	40.36	-4.01	36.35	46.00	-9.65	100	253	QP
431.011	41.31	-3.50	37.81	46.00	-8.19	100	265	QP

Mode 7 / Vertical



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
191.181	40.13	-9.91	30.22	43.50	-13.28	100	317	QP
239.730	42.09	-9.39	32.70	46.00	-13.30	100	345	QP
263.033	43.27	-8.41	34.86	46.00	-11.14	100	333	QP
287.307	40.51	-7.33	33.18	46.00	-12.82	100	321	QP
335.856	41.78	-6.24	35.54	46.00	-10.46	100	279	QP
431.982	41.66	-3.45	38.21	46.00	-7.79	100	313	QP

Level (Result) = Reading + Factor.

Margin = Level – Limit.

Factor = Antenna Factor + Cable Loss – Amplifier Gain.

Spurious emissions more than 20 dB below the limit were not reported.

Above 1GHz

Mode 2 :

Horizontal

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
4804.000	37.85	-3.47	34.38	54.00	-19.62	144	222	Average
4804.000	44.07	-3.47	40.60	74.00	-33.40	144	222	Peak
4874.000	39.13	-3.25	35.88	54.00	-18.12	188	169	Average
4874.000	43.42	-3.25	40.17	74.00	-33.83	188	169	Peak
7206.000	37.90	1.83	39.73	54.00	-14.27	179	334	Average
7206.000	41.26	1.83	43.09	74.00	-30.91	179	334	Peak
7311.000	38.23	2.46	40.69	54.00	-13.31	171	107	Average
7311.000	41.41	2.46	43.87	74.00	-30.13	171	107	Peak
10460.000	39.55	7.20	46.75	54.00	-7.25	203	273	Average
10460.000	41.62	7.20	48.82	74.00	-25.18	203	273	Peak
15690.000	38.56	7.34	45.90	54.00	-8.10	154	47	Average
15690.000	42.33	7.34	49.67	74.00	-24.33	151	47	Peak

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
19216.000	40.90	-0.57	40.33	54.00	-13.67	150	358	Average
19216.000	50.46	-0.57	49.89	74.00	-24.11	150	358	Peak
19496.000	40.71	0.25	40.96	54.00	-13.04	150	147	Average
19496.000	52.08	0.25	52.33	74.00	-21.67	150	147	Peak
20920.000	42.69	1.81	44.50	54.00	-9.50	150	329	Average
20920.000	49.40	1.81	51.21	74.00	-22.79	150	329	Peak

Level (Result) = Reading + Factor.

Margin = Level – Limit.

Factor = Antenna Factor + Cable Loss – Amplifier Gain.

Spurious emissions more than 20 dB below the limit were not reported.

Vertical

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
4804.000	38.24	-3.47	34.77	54.00	-19.23	165	32	Average
4804.000	44.27	-3.47	40.80	74.00	-33.20	165	32	Peak
4874.000	39.37	-3.25	36.12	54.00	-17.88	182	334	Average
4874.000	43.62	-3.25	40.37	74.00	-33.63	182	334	Peak
7206.000	37.51	1.83	39.34	54.00	-14.66	201	283	Average
7206.000	41.43	1.83	43.26	74.00	-30.74	201	283	Peak
7311.000	38.42	2.46	40.88	54.00	-13.12	192	71	Average
7311.000	43.41	2.46	45.87	74.00	-28.13	192	71	Peak
10460.000	39.67	7.20	46.87	54.00	-7.13	133	149	Average
10460.000	41.72	7.20	48.92	74.00	-25.08	133	149	Peak
15690.000	39.13	7.34	46.47	54.00	-7.53	148	40	Average
15690.000	43.24	7.34	50.58	74.00	-23.42	148	40	Peak

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
19216.000	41.35	-0.57	40.78	54.00	-13.22	150	39	Average
19216.000	51.32	-0.57	50.75	74.00	-23.25	150	39	Peak
19496.000	40.82	0.25	41.07	54.00	-12.93	150	182	Average
19496.000	52.10	0.25	52.35	74.00	-21.65	150	182	Peak
20920.000	42.73	1.81	44.54	54.00	-9.46	150	178	Average
20920.000	49.51	1.81	51.32	74.00	-22.68	150	178	Peak

Level (Result) = Reading + Factor.

Margin = Level – Limit.

Factor = Antenna Factor + Cable Loss – Amplifier Gain.

Spurious emissions more than 20 dB below the limit were not reported.

Mode 3:

Horizontal

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
4804.000	37.68	-3.47	34.21	54.00	-19.79	201	262	Average
4804.000	42.96	-3.47	39.49	74.00	-34.51	201	262	Peak
4874.000	38.42	-3.25	35.17	54.00	-18.83	169	166	Average
4874.000	42.46	-3.25	39.21	74.00	-34.79	169	166	Peak
7206.000	37.53	1.83	39.36	54.00	-14.64	171	19	Average
7206.000	41.11	1.83	42.94	74.00	-31.06	171	19	Peak
7311.000	39.47	2.46	41.93	54.00	-12.07	188	23	Average
7311.000	41.56	2.46	44.02	74.00	-29.98	188	23	Peak
10460.000	39.01	7.20	46.21	54.00	-7.79	161	350	Average
10460.000	41.38	7.20	48.58	74.00	-25.42	161	350	Peak
15690.000	38.70	7.34	46.04	54.00	-7.96	199	250	Average
15690.000	42.38	7.34	49.72	74.00	-24.28	199	250	Peak
Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
19216.000	40.59	-0.57	40.02	54.00	-13.98	150	294	Average
19216.000	49.38	-0.57	48.81	74.00	-25.19	150	294	Peak
19496.000	41.38	0.25	41.63	54.00	-12.37	150	360	Average
19496.000	49.78	0.25	50.03	74.00	-23.97	150	360	Peak
20920.000	40.71	1.81	42.52	54.00	-11.48	150	40	Average
20920.000	49.08	1.81	50.89	74.00	-23.11	150	40	Peak

Level (Result) = Reading + Factor.

Margin = Level – Limit.

Factor = Antenna Factor + Cable Loss – Amplifier Gain.

Spurious emissions more than 20 dB below the limit were not reported.

Vertical

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
4804.000	38.01	-3.47	34.54	54.00	-19.46	204	270	Average
4804.000	45.62	-3.47	42.15	74.00	-31.85	204	270	Peak
4874.000	39.72	-3.25	36.47	54.00	-17.53	199	360	Average
4874.000	42.95	-3.25	39.70	74.00	-34.30	199	360	Peak
7206.000	37.60	1.83	39.43	54.00	-14.57	171	126	Average
7206.000	41.93	1.83	43.76	74.00	-30.24	171	126	Peak
7311.000	39.69	2.46	42.15	54.00	-11.85	142	106	Average
7311.000	42.51	2.46	44.97	74.00	-29.03	142	106	Peak
10460.000	39.05	7.20	46.25	54.00	-7.75	173	309	Average
10460.000	42.33	7.20	49.53	74.00	-24.47	173	309	Peak
15690.000	39.69	7.34	47.03	54.00	-6.97	182	138	Average
15690.000	43.43	7.34	50.77	74.00	-23.23	182	138	Peak

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
19216.000	40.78	-0.57	40.21	54.00	-13.79	150	54	Average
19216.000	49.56	-0.57	48.99	74.00	-25.01	150	54	Peak
19496.000	41.49	0.25	41.74	54.00	-12.26	150	19	Average
19496.000	51.00	0.25	51.25	74.00	-22.75	150	19	Peak
20920.000	40.98	1.81	42.79	54.00	-11.21	150	225	Average
20920.000	49.17	1.81	50.98	74.00	-23.02	150	225	Peak

Level (Result) = Reading + Factor.

Margin = Level – Limit.

Factor = Antenna Factor + Cable Loss – Amplifier Gain.

Spurious emissions more than 20 dB below the limit were not reported.

Mode 4:

Horizontal

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
4804.000	38.42	-3.47	34.95	54.00	-19.05	142	250	Average
4804.000	42.89	-3.47	39.42	74.00	-34.58	142	250	Peak
4874.000	37.95	-3.25	34.70	54.00	-19.30	157	52	Average
4874.000	43.01	-3.25	39.76	74.00	-34.24	157	52	Peak
7206.000	38.75	1.83	40.58	54.00	-13.42	189	355	Average
7206.000	41.11	1.83	42.94	74.00	-31.06	189	355	Peak
7311.000	39.00	2.46	41.46	54.00	-12.54	193	82	Average
7311.000	41.33	2.46	43.79	74.00	-30.21	193	82	Peak
10460.000	37.17	7.20	44.37	54.00	-9.63	201	223	Average
10460.000	41.11	7.20	48.31	74.00	-25.69	201	223	Peak
11550.000	35.77	7.70	43.47	54.00	-10.53	178	55	Average
11550.000	40.92	7.70	48.62	74.00	-25.38	178	55	Peak
15690.000	37.74	7.34	45.08	54.00	-8.92	197	131	Average
15690.000	42.90	7.34	50.24	74.00	-23.76	197	131	Peak
17325.000	37.27	13.49	50.76	54.00	-3.24	151	360	Average
17325.000	40.73	13.49	54.22	74.00	-19.78	151	360	Peak

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
19216.000	42.74	-0.57	42.17	54.00	-11.83	150	106	Average
19216.000	51.58	-0.57	51.01	74.00	-22.99	150	106	Peak
19496.000	41.51	0.25	41.76	54.00	-12.24	150	25	Average
19496.000	52.08	0.25	52.33	74.00	-21.67	150	25	Peak
20920.000	41.43	1.81	43.24	54.00	-10.76	150	95	Average
20920.000	49.78	1.81	51.59	74.00	-22.41	150	95	Peak
23100.000	41.09	2.28	43.37	54.00	-10.63	150	271	Average
23100.000	48.99	2.28	51.27	74.00	-22.73	150	271	Peak

Level (Result) = Reading + Factor.

Margin = Level – Limit.

Factor = Antenna Factor + Cable Loss – Amplifier Gain.

Spurious emissions more than 20 dB below the limit were not reported.

Vertical

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
4804.000	38.59	-3.47	35.12	54.00	-18.88	192	7	Average
4804.000	44.44	-3.47	40.97	74.00	-33.03	192	7	Peak
4874.000	38.61	-3.25	35.36	54.00	-18.64	177	277	Average
4874.000	43.46	-3.25	40.21	74.00	-33.79	177	277	Peak
7206.000	39.93	1.83	41.76	54.00	-12.24	202	270	Average
7206.000	41.80	1.83	43.63	74.00	-30.37	202	270	Peak
7311.000	39.05	2.46	41.51	54.00	-12.49	171	151	Average
7311.000	42.09	2.46	44.55	74.00	-29.45	171	151	Peak
10460.000	37.41	7.20	44.61	54.00	-9.39	166	340	Average
10460.000	42.35	7.20	49.55	74.00	-24.45	166	340	Peak
11550.000	36.21	7.70	43.91	54.00	-10.09	198	170	Average
11550.000	41.26	7.70	48.96	74.00	-25.04	198	170	Peak
15690.000	38.00	7.34	45.34	54.00	-8.66	135	360	Average
15690.000	42.91	7.34	50.25	74.00	-23.75	135	360	Peak
17325.000	37.47	13.49	50.96	54.00	-3.04	147	18	Average
17325.000	41.94	13.49	55.43	74.00	-18.57	147	18	Peak

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
19216.000	42.89	-0.57	42.32	54.00	-11.68	150	2	Average
19216.000	53.92	-0.57	53.35	74.00	-20.65	150	2	Peak
19496.000	41.62	0.25	41.87	54.00	-12.13	150	317	Average
19496.000	52.21	0.25	52.46	74.00	-21.54	150	317	Peak
20920.000	41.54	1.81	43.35	54.00	-10.65	150	51	Average
20920.000	49.91	1.81	51.72	74.00	-22.28	150	51	Peak
23100.000	41.18	2.28	43.46	54.00	-10.54	150	151	Average
23100.000	50.36	2.28	52.64	74.00	-21.36	150	151	Peak

Level (Result) = Reading + Factor.

Margin = Level – Limit.

Factor = Antenna Factor + Cable Loss – Amplifier Gain.

Spurious emissions more than 20 dB below the limit were not reported.

Mode 5:

Horizontal

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
4804.000	35.75	-3.47	32.28	54.00	-21.72	200	166	Average
4804.000	42.81	-3.47	39.34	74.00	-34.66	200	166	Peak
7206.000	36.55	1.83	38.38	54.00	-15.62	197	136	Average
7206.000	40.32	1.83	42.15	74.00	-31.85	197	136	Peak
10460.000	34.99	7.20	42.19	54.00	-11.81	165	274	Average
10460.000	40.97	7.20	48.17	74.00	-25.83	165	274	Peak
10600.000	36.92	7.55	44.47	54.00	-9.53	144	47	Average
10600.000	40.75	7.55	48.30	74.00	-25.70	144	47	Peak
11550.000	35.78	7.70	43.48	54.00	-10.52	189	224	Average
11550.000	40.41	7.70	48.11	74.00	-25.89	189	224	Peak
15690.000	35.87	7.34	43.21	54.00	-10.79	201	246	Average
15690.000	42.78	7.34	50.12	74.00	-23.88	201	246	Peak
15900.000	36.62	7.30	43.92	54.00	-10.08	178	117	Average
15900.000	42.00	7.30	49.30	74.00	-24.70	178	117	Peak
17325.000	36.87	13.49	50.36	54.00	-3.64	151	86	Average
17325.000	40.81	13.49	54.30	74.00	-19.70	151	86	Peak

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
19216.000	42.62	-0.57	42.05	54.00	-11.95	150	0	Average
19216.000	51.87	-0.57	51.30	74.00	-22.70	150	0	Peak
20920.000	41.79	1.81	43.60	54.00	-10.40	150	56	Average
20920.000	49.73	1.81	51.54	74.00	-22.46	150	56	Peak
21200.000	42.55	1.85	44.40	54.00	-9.60	150	164	Average
21200.000	49.67	1.85	51.52	74.00	-22.48	150	164	Peak
23100.000	43.16	2.28	45.44	54.00	-8.56	150	133	Average
23100.000	52.60	2.28	54.88	74.00	-19.12	150	133	Peak

Level (Result) = Reading + Factor.

Margin = Level – Limit.

Factor = Antenna Factor + Cable Loss – Amplifier Gain.

Spurious emissions more than 20 dB below the limit were not reported.

Vertical

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
4804.000	36.07	-3.47	32.60	54.00	-21.40	156	59	Average
4804.000	43.42	-3.47	39.95	74.00	-34.05	156	59	Peak
7206.000	36.93	1.83	38.76	54.00	-15.24	177	127	Average
7206.000	41.32	1.83	43.15	74.00	-30.85	177	127	Peak
10460.000	35.06	7.20	42.26	54.00	-11.74	204	0	Average
10460.000	42.41	7.20	49.61	74.00	-24.39	204	0	Peak
10600.000	36.75	7.55	44.30	54.00	-9.70	192	32	Average
10600.000	41.48	7.55	49.03	74.00	-24.97	192	32	Peak
11550.000	35.91	7.70	43.61	54.00	-10.39	166	32	Average
11550.000	42.80	7.70	50.50	74.00	-23.50	166	32	Peak
15690.000	36.08	7.34	43.42	54.00	-10.58	173	1	Average
15690.000	43.75	7.34	51.09	74.00	-22.91	173	1	Peak
15900.000	36.92	7.30	44.22	54.00	-9.78	180	219	Average
15900.000	43.22	7.30	50.52	74.00	-23.48	180	219	Peak
17325.000	37.11	13.49	50.60	54.00	-3.40	183	242	Average
17325.000	41.47	13.49	54.96	74.00	-19.04	183	242	Peak

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
19216.000	42.83	-0.57	42.26	54.00	-11.74	150	322	Average
19216.000	52.45	-0.57	51.88	74.00	-22.12	150	322	Peak
20920.000	41.98	1.81	43.79	54.00	-10.21	150	29	Average
20920.000	49.99	1.81	51.80	74.00	-22.20	150	29	Peak
21200.000	42.75	1.85	44.60	54.00	-9.40	150	78	Average
21200.000	50.18	1.85	52.03	74.00	-21.97	150	78	Peak
23100.000	43.43	2.28	45.71	54.00	-8.29	150	294	Average
23100.000	53.12	2.28	55.40	74.00	-18.60	150	294	Peak

Level (Result) = Reading + Factor.

Margin = Level – Limit.

Factor = Antenna Factor + Cable Loss – Amplifier Gain.

Spurious emissions more than 20 dB below the limit were not reported.

Mode 6:

Horizontal

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
4804.000	36.10	-3.47	32.63	54.00	-21.37	199	249	Average
4804.000	43.79	-3.47	40.32	74.00	-33.68	199	249	Peak
4874.000	38.01	-3.25	34.76	54.00	-19.24	183	83	Average
4874.000	43.21	-3.25	39.96	74.00	-34.04	183	83	Peak
7206.000	37.69	1.83	39.52	54.00	-14.48	167	132	Average
7206.000	40.83	1.83	42.66	74.00	-31.34	167	132	Peak
7311.000	37.15	2.46	39.61	54.00	-14.39	169	51	Average
7311.000	41.24	2.46	43.70	74.00	-30.30	169	51	Peak
11490.000	36.13	7.50	43.63	54.00	-10.37	201	206	Average
11490.000	40.26	7.50	47.76	74.00	-26.24	201	206	Peak
17235.000	35.72	12.83	48.55	54.00	-5.45	174	83	Average
17235.000	42.17	12.83	55.00	74.00	-19.00	174	83	Peak

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
19211.590	40.81	-0.58	40.23	54.00	-13.77	150	340	Average
19211.590	51.26	-0.58	50.68	74.00	-23.32	150	340	Peak
19496.000	43.15	0.25	43.40	54.00	-10.60	150	83	Average
19496.000	52.07	0.25	52.32	74.00	-21.68	150	83	Peak
22980.000	42.47	2.57	45.04	54.00	-8.96	150	136	Average
22980.000	48.81	2.57	51.38	74.00	-22.62	150	136	Peak

Level (Result) = Reading + Factor.

Margin = Level – Limit.

Factor = Antenna Factor + Cable Loss – Amplifier Gain.

Spurious emissions more than 20 dB below the limit were not reported.

Vertical

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
4804.000	36.33	-3.47	32.86	54.00	-21.14	182	2	Average
4804.000	44.28	-3.47	40.81	74.00	-33.19	182	2	Peak
4874.000	38.15	-3.25	34.90	54.00	-19.10	134	240	Average
4874.000	43.24	-3.25	39.99	74.00	-34.01	134	240	Peak
7206.000	38.43	1.83	40.26	54.00	-13.74	198	310	Average
7206.000	42.00	1.83	43.83	74.00	-30.17	198	310	Peak
7311.000	37.33	2.46	39.79	54.00	-14.21	176	51	Average
7311.000	41.59	2.46	44.05	74.00	-29.95	176	51	Peak
11490.000	36.17	7.50	43.67	54.00	-10.33	201	39	Average
11490.000	41.46	7.50	48.96	74.00	-25.04	201	39	Peak
17235.000	36.25	12.83	49.08	54.00	-4.92	153	290	Average
17235.000	42.39	12.83	55.22	74.00	-18.78	153	290	Peak

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
19216.000	41.71	-0.57	41.14	54.00	-12.86	150	0	Average
19216.000	52.04	-0.57	51.47	74.00	-22.53	150	0	Peak
19496.000	43.37	0.25	43.62	54.00	-10.38	150	39	Average
19496.000	52.23	0.25	52.48	74.00	-21.52	150	39	Peak
22980.000	42.81	2.57	45.38	54.00	-8.62	150	80	Average
22980.000	49.29	2.57	51.86	74.00	-22.14	150	80	Peak

Level (Result) = Reading + Factor.

Margin = Level – Limit.

Factor = Antenna Factor + Cable Loss – Amplifier Gain.

Spurious emissions more than 20 dB below the limit were not reported.

Mode 7:

Horizontal

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
4804.000	36.48	-3.47	33.01	54.00	-20.99	150	274	Average
4804.000	43.88	-3.47	40.41	74.00	-33.59	150	274	Peak
4874.000	37.92	-3.25	34.67	54.00	-19.33	150	59	Average
4874.000	43.43	-3.25	40.18	74.00	-33.82	150	59	Peak
7206.000	38.15	1.83	39.98	54.00	-14.02	150	183	Average
7206.000	41.72	1.83	43.55	74.00	-30.45	150	183	Peak
7311.000	38.54	2.46	41.00	54.00	-13.00	150	109	Average
7311.000	40.92	2.46	43.38	74.00	-30.62	150	109	Peak
10600.000	38.76	7.55	46.31	54.00	-7.69	150	357	Average
10600.000	41.17	7.55	48.72	74.00	-25.28	150	357	Peak
11490.000	38.00	7.50	45.50	54.00	-8.50	150	301	Average
11490.000	40.29	7.50	47.79	74.00	-26.21	150	301	Peak
15900.000	38.11	7.30	45.41	54.00	-8.59	150	347	Average
15900.000	42.08	7.30	49.38	74.00	-24.62	150	347	Peak
17235.000	38.75	12.83	51.58	54.00	-2.42	150	59	Average
17235.000	41.81	12.83	54.64	74.00	-19.36	150	59	Peak

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
19216.000	42.19	-0.57	41.62	54.00	-12.38	150	77	Average
19216.000	52.28	-0.57	51.71	74.00	-22.29	150	77	Peak
19496.000	42.27	0.25	42.52	54.00	-11.48	150	92	Average
19496.000	52.70	0.25	52.95	74.00	-21.05	150	92	Peak
21200.000	42.01	1.85	43.86	54.00	-10.14	150	77	Average
21200.000	49.29	1.85	51.14	74.00	-22.86	150	77	Peak
22980.000	42.36	2.57	44.93	54.00	-9.07	150	360	Average
22980.000	49.21	2.57	51.78	74.00	-22.22	150	360	Peak

Level (Result) = Reading + Factor.

Margin = Level – Limit.

Factor = Antenna Factor + Cable Loss – Amplifier Gain.

Spurious emissions more than 20 dB below the limit were not reported.

Vertical

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
4804.000	37.05	-3.47	33.58	54.00	-20.42	142	321	Average
4804.000	44.27	-3.47	40.80	74.00	-33.20	142	321	Peak
4874.000	38.36	-3.25	35.11	54.00	-18.89	155	211	Average
4874.000	45.11	-3.25	41.86	74.00	-32.14	155	211	Peak
7206.000	38.23	1.83	40.06	54.00	-13.94	183	112	Average
7206.000	42.40	1.83	44.23	74.00	-29.77	183	112	Peak
7311.000	38.76	2.46	41.22	54.00	-12.78	201	180	Average
7311.000	41.07	2.46	43.53	74.00	-30.47	201	180	Peak
10600.000	38.92	7.55	46.47	54.00	-7.53	199	240	Average
10600.000	41.72	7.55	49.27	74.00	-24.73	199	240	Peak
11490.000	38.15	7.50	45.65	54.00	-8.35	178	17	Average
11490.000	41.10	7.50	48.60	74.00	-25.40	178	17	Peak
15900.000	38.44	7.30	45.74	54.00	-8.26	166	310	Average
15900.000	42.45	7.30	49.75	74.00	-24.25	166	310	Peak
17235.000	39.28	12.83	52.11	54.00	-1.89	154	9	Average
17235.000	43.66	12.83	56.49	74.00	-17.51	154	9	Peak

Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
19216.000	42.39	-0.57	41.82	54.00	-12.18	150	172	Average
19216.000	52.72	-0.57	52.15	74.00	-21.85	150	172	Peak
19496.000	42.39	0.25	42.64	54.00	-11.36	150	75	Average
19496.000	52.91	0.25	53.16	74.00	-20.84	150	75	Peak
21200.000	42.04	1.85	43.89	54.00	-10.11	150	123	Average
21200.000	49.73	1.85	51.58	74.00	-22.42	150	123	Peak
22980.000	42.49	2.57	45.06	54.00	-8.94	150	45	Average
22980.000	49.39	2.57	51.96	74.00	-22.04	150	45	Peak

Level (Result) = Reading + Factor.

Margin = Level – Limit.

Factor = Antenna Factor + Cable Loss – Amplifier Gain.

Spurious emissions more than 20 dB below the limit were not reported.

7 FCC §15.407(a) – Maximum Output Power

7.1 Applicable Standard

According to FCC §15.407(a):

For the band 5.15-5.25 GHz.

(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(iv) For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(2) For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

7.2 Test Procedure

The use Power Meter

1. Place the EUT on a bench and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to a Power sensor.

7.3 Test Results

Conducted output power for worst case :

Worst case mode		Output power (dBm)
XOR WIFI-2.4GHz	AX20 Mode, 2437MHz	23.52
XOR WIFI-5GHz	AX80 Mode, 5775MHz	22.48
Regular WIFI-5GHz(4TX)	AX40 Mode, 5230 MHz	21.62
Regular WIFI-5GHz(8TX)	AX20 Mode, 5745MHz	25.68
AUX WIFI-2.4GHz	G Mode, 2437MHz	20.01
AUX WIFI-5GHz	A Mode, 5300MHz	20.22

******* END OF REPORT *******