

TEST REPORT

Applicant: Technity Solutions Inc.
Address of Applicant: 500 Cochrane Dr. Unit 1 Markham ON L3R 8E2 Canada
Manufacturer: Technity Solutions Inc.
Address of Manufacturer: 500 Cochrane Dr. Unit 1 Markham ON L3R 8E2 Canada
Equipment Under Test (EUT)
Product Name: Intelligent Wireless Access Point
Model No.: TS-MWI3000CPRO, 1LAN-WAP-6
Trade Mark: 
FCC ID: 2ATAZ-MWI3000CPRO
Applicable standards: FCC CFR Title 47 Part 15 Subpart E Section 15.407
Date of sample receipt: 2023.04.24
Date of Test: 2023.05.15~2023.06.17
Date of report issue: 2023.06.20
Test Result : PASS *

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:



Robinson Luo

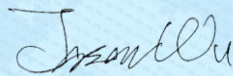
Laboratory Manager

This results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

2 Version

| Version No. | Date | Description |
|-------------|------------|-------------|
| 00 | 2023.06.20 | Original |
| | | |
| | | |
| | | |
| | | |

Prepared By:

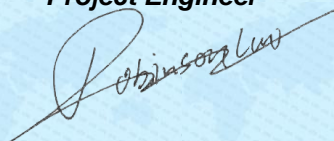


Date:

2023.06.20

Project Engineer

Check By:



Date:

2023.06.20

Reviewer

3 Contents

| | Page |
|--|------------|
| 1 COVER PAGE | 1 |
| 2 VERSION | 2 |
| 3 CONTENTS | 3 |
| 4 TEST SUMMARY | 4 |
| 4.1 MEASUREMENT UNCERTAINTY..... | 4 |
| 5 GENERAL INFORMATION | 5 |
| 5.1 GENERAL DESCRIPTION OF EUT..... | 5 |
| 5.2 TEST MODE..... | 6 |
| 5.3 TEST FACILITY..... | 6 |
| 5.4 TEST LOCATION..... | 6 |
| 5.5 DESCRIPTION OF SUPPORT UNITS..... | 6 |
| 5.6 DEVIATION FROM STANDARDS..... | 6 |
| 5.7 ADDITIONAL INSTRUCTIONS..... | 7 |
| 6 TEST INSTRUMENTS LIST | 8 |
| 7 TEST RESULTS AND MEASUREMENT DATA | 10 |
| 7.1 ANTENNA REQUIREMENT:..... | 10 |
| 7.2 CONDUCTED EMISSIONS..... | 11 |
| 7.3 EMISSION BANDWIDTH..... | 14 |
| 7.4 MAXIMUM CONDUCTED OUTPUT POWER..... | 152 |
| 7.5 POWER SPECTRAL DENSITY..... | 163 |
| 7.6 RADIATED EMISSION..... | 228 |
| 8 TEST SETUP PHOTO | 367 |
| 9 EUT CONSTRUCTIONAL DETAILS | 367 |

4 Test Summary

| Test Item | Section | Result |
|----------------------------------|-----------------------------------|--------|
| Antenna requirement | FCC part 15.203 | PASS |
| AC Power Line Conducted Emission | FCC part 15.207 | PASS |
| Emission Bandwidth | FCC part 15.407 | PASS |
| Maximum Conducted Output Power | FCC part 15.407(a)(1)(2) | PASS |
| Power Spectral Density | FCC part 15.407(a)(1)(2) | PASS |
| Undesirable Emission | FCC part 15.407(b), 15.205/15.209 | PASS |
| Radiated Emission | FCC part 15.205/15.209 | PASS |
| Band Edge | FCC part 15.407(b)(1)(2)(3) | PASS |

Remark:

Pass: The EUT complies with the essential requirements in the standard.

4.1 Measurement Uncertainty

| Test Item | Measurement Uncertainty | Notes |
|----------------------------------|-------------------------|-------|
| Radiated Emission | 3.1dB(9kHz-30MHz) | (1) |
| Radiated Emission | 3.8039dB(30MHz-200MHz) | (1) |
| Radiated Emission | 3.9679dB(200MHz-1GHz) | (1) |
| Radiated Emission | 4.29dB(1GHz-18GHz) | (1) |
| Radiated Emission | 3.30dB(18GHz-40GHz) | (1) |
| AC Power Line Conducted Emission | 3.44dB(0.15MHz ~ 30MHz) | (1) |
| Occupied Bandwidth | ±3% | (1) |
| RF conducted power | ±0.75dB | (1) |
| RF power density | ±3dB | (1) |
| Conducted Spurious emissions | ±2.58dB | (1) |

Note (1): The measurement uncertainty is for coverage factor of k=2 and a level of confidence of 95%.

5 General Information

5.1 General Description of EUT

| | |
|------------------------|--|
| Product Name: | Intelligent Wireless Access Point |
| Model No.: | TS-MWI3000CPRO, 1LAN-WAP-6 |
| Test Model No.: | TS-MWI3000CPRO |
| Model difference | Only the model name is different |
| Test sample(s) ID: | GTSL2023060415-1 |
| Sample(s) Status: | Engineer sample |
| S/N: | N/A |
| Operation Frequency: | 5150MHz ~5250MHz 5250MHz ~5350MHz 5470MHz ~5725MHz 5725MHz ~5850MHz |
| Modulation technology: | OFDM, OFDMA |
| Antenna Type: | Internal Antenna |
| Antenna gain: | Ant1: 3.62dBi, Ant2: 4.67dBi |
| Power supply: | DC 57V from adapter or POE 48V |

| Channel Information | | | |
|-----------------------|-------------------------------|---------------------|----------------|
| Frequency Range (MHz) | IEEE Std. 802.11 | Ch. Frequency (MHz) | Channel Number |
| 5150-5250 | 802.11a /n /ac /ax (20MHz) | 5180-5240 | 36-48 |
| 5250-5350 | | 5260-5320 | 52-64 |
| 5470-5725 | | 5500-5700 | 100-140 |
| 5725-5850 | | 5745-5825 | 149-165 |
| 5150-5250 | 802.11n /ac /ax (40MHz) | 5190-5230 | 38-46 |
| 5250-5350 | | 5270-5310 | 54-62 |
| 5470-5725 | | 5510-5670 | 102-134 |
| 5725-5850 | | 5755-5795 | 151-159 |
| 5150-5250 | 802.11ac /ax (80MHz) | 5210 | 42 |
| 5250-5350 | | 5290 | 58 |
| 5470-5725 | | 5530-5610 | 106-122 |
| 5725-5850 | | 5775 | 155 |
| 5150-5350 | 802.11 ax (160MHz) | 5250 | 50 |
| 5470-5725 | | 5570 | 114 |

Note: For 802.11ax mode only support full RU mode.

5.2 Test mode

| | | | |
|--|--|---------------|-----------|
| Transmitting mode | Keep the EUT in transmitting with modulation.. | | |
| We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows: | | | |
| Pre-scan all kind of data rate in lowest channel, and found the follow list which it was worst case. | | | |
| Mode | Data rate | Mode | Data rate |
| 802.11a | 6 Mbps | 802.11n/ac/ax | MCS0 |

5.3 Test Facility

| |
|---|
| <p>The test facility is recognized, certified, or accredited by the following organizations:</p> <ul style="list-style-type: none"> ● FCC —Registration No.: 381383 Designation Number: CN5029 Global United Technology Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in files. ● IC —Registration No.: 9079A CAB identifier: CN0091 The 3m Semi-anechoic chamber of Global United Technology Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing . ● NVLAP (LAB CODE:600179-0) Global United Technology Services Co., Ltd., is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP). |
|---|

5.4 Test Location

| |
|---|
| All tests were performed at: |
| <p>Global United Technology Services Co., Ltd. Address: No. 123-128, Tower A, Jinyuan Business Building, No.2, Laodong Industrial Zone, Xixiang Road, Baoan District, Shenzhen, Guangdong, China 518102 Tel: 0755-27798480 Fax: 0755-27798960</p> |

5.5 Description of Support Units

| No. | Equipment | Manufacturer | Model | Series No |
|-----|---------------|--------------|--------------|-----------|
| 1 | Power adapter | Ruijie | RG-DC4805-BA | / |
| 2 | Microcomputer | TY510S-07IAB | LENOVO | YLX2QPM7 |
| 3 | Notebook | L450 | Think | / |

5.6 Deviation from Standards

| |
|-------|
| None. |
|-------|

5.7 Additional Instructions

Power Setting value

No beamforming

| Test Mode | Power Level Setting defined by Manufacturer | | | | | | | |
|-------------|---|-------|----------|-------|----------|-------|---------|-------|
| | Test Software: QDART | | | | | | | |
| | Band | Value | Band | Value | Band | Value | Band | Value |
| 11A-CDD | U-NII-1 | 15 | U-NII-2A | 15 | U-NII-2C | 15 | U-NII-3 | 15 |
| 11N20MIMO | U-NII-1 | 15 | U-NII-2A | 15 | U-NII-2C | 15 | U-NII-3 | 15 |
| 11N40MIMO | U-NII-1 | 15 | U-NII-2A | 15 | U-NII-2C | 15 | U-NII-3 | 15 |
| 11AC20MIMO | U-NII-1 | 15 | U-NII-2A | 15 | U-NII-2C | 15 | U-NII-3 | 15 |
| 11AC40MIMO | U-NII-1 | 15 | U-NII-2A | 15 | U-NII-2C | 15 | U-NII-3 | 15 |
| 11AC80MIMO | U-NII-1 | 15 | U-NII-2A | 15 | U-NII-2C | 15 | U-NII-3 | 15 |
| 11AX20MIMO | U-NII-1 | 15 | U-NII-2A | 15 | U-NII-2C | 15 | U-NII-3 | 15 |
| 11AX40MIMO | U-NII-1 | 15 | U-NII-2A | 15 | U-NII-2C | 15 | U-NII-3 | 15 |
| 11AX80MIMO | U-NII-1 | 15 | U-NII-2A | 15 | U-NII-2C | 15 | U-NII-3 | 15 |
| 11AX160MIMO | U-NII-1 | 15 | U-NII-2A | 15 | U-NII-2C | 15 | U-NII-3 | 15 |

Beamforming

| Test Mode | Power Level Setting defined by Manufacturer | | | | | | | |
|-------------|---|-------|----------|-------|----------|-------|---------|-------|
| | Test Software: QDART | | | | | | | |
| | Band | Value | Band | Value | Band | Value | Band | Value |
| 11A-CDD | U-NII-1 | 12 | U-NII-2A | 12 | U-NII-2C | 12 | U-NII-3 | 12 |
| 11N20MIMO | U-NII-1 | 12 | U-NII-2A | 12 | U-NII-2C | 12 | U-NII-3 | 12 |
| 11N40MIMO | U-NII-1 | 12 | U-NII-2A | 12 | U-NII-2C | 12 | U-NII-3 | 12 |
| 11AC20MIMO | U-NII-1 | 12 | U-NII-2A | 12 | U-NII-2C | 12 | U-NII-3 | 12 |
| 11AC40MIMO | U-NII-1 | 12 | U-NII-2A | 12 | U-NII-2C | 12 | U-NII-3 | 12 |
| 11AC80MIMO | U-NII-1 | 12 | U-NII-2A | 12 | U-NII-2C | 12 | U-NII-3 | 12 |
| 11AX20MIMO | U-NII-1 | 12 | U-NII-2A | 12 | U-NII-2C | 12 | U-NII-3 | 12 |
| 11AX40MIMO | U-NII-1 | 12 | U-NII-2A | 12 | U-NII-2C | 12 | U-NII-3 | 12 |
| 11AX80MIMO | U-NII-1 | 12 | U-NII-2A | 12 | U-NII-2C | 12 | U-NII-3 | 12 |
| 11AX160MIMO | U-NII-1 | 12 | U-NII-2A | 12 | U-NII-2C | 12 | U-NII-3 | 12 |

6 Test Instruments list

| Radiated Emission: | | | | | | |
|--------------------|-------------------------------------|--------------------------------|-----------------------|---------------|---------------------|-------------------------|
| Item | Test Equipment | Manufacturer | Model No. | Inventory No. | Cal.Date (mm-dd-yy) | Cal.Due date (mm-dd-yy) |
| 1 | 3m Semi- Anechoic Chamber | ZhongYu Electron | 9.2(L)*6.2(W)* 6.4(H) | GTS250 | June 23, 2021 | June 22, 2024 |
| 2 | Control Room | ZhongYu Electron | 6.2(L)*2.5(W)* 2.4(H) | GTS251 | N/A | N/A |
| 3 | EMI Test Receiver | Rohde & Schwarz | ESU26 | GTS203 | April 14, 2023 | April 13, 2024 |
| 4 | BiConiLog Antenna | SCHWARZBECK MESS-ELEKTRONIK | VULB9168 | GTS640 | March 19, 2023 | March 18, 2025 |
| 5 | Double -ridged waveguide horn | SCHWARZBECK MESS-ELEKTRONIK | BBHA 9120 D | GTS208 | April 17, 2023 | April 16, 2025 |
| 6 | EMI Test Software | AUDIX | E3 | N/A | N/A | N/A |
| 7 | Coaxial Cable | GTS | N/A | GTS213 | April 21, 2023 | April 20, 2024 |
| 8 | Coaxial Cable | GTS | N/A | GTS211 | April 21, 2023 | April 20, 2024 |
| 9 | Coaxial cable | GTS | N/A | GTS210 | April 21, 2023 | April 20, 2024 |
| 10 | Coaxial Cable | GTS | N/A | GTS212 | April 21, 2023 | April 20, 2024 |
| 11 | Wideband Radio Communication Tester | Rohde & Schwarz | CMW500 | GTS575 | April 14, 2023 | April 13, 2024 |
| 12 | Loop Antenna | ZHINAN | ZN30900A | GTS534 | Nov. 29, 2022 | Nov. 28, 2023 |
| 13 | Broadband Preamplifier | SCHWARZBECK | BBV9718 | GTS535 | April 14, 2023 | April 13, 2024 |
| 14 | Amplifier(1GHz-26.5GHz) | HP | 8449B | GTS601 | April 14, 2023 | April 13, 2024 |
| 15 | Horn Antenna (18-26.5GHz) | / | UG-598A/U | GTS664 | Oct. 30, 2022 | Oct. 29, 2023 |
| 16 | Horn Antenna (26.5-40GHz) | A.H Systems | SAS-573 | GTS665 | Oct. 30, 2022 | Oct. 29, 2023 |
| 17 | FSV·Signal Analyzer (10Hz-40GHz) | Keysight | FSV-40-N | GTS666 | March 13, 2023 | March 12, 2024 |
| 18 | Amplifier | / | LNA-1000-30S | GTS650 | April 14, 2023 | April 13, 2024 |
| 19 | CDNE M2+M3-16A | HCT | 30MHz-300MHz | GTS668 | Dec. 20, 2022 | Dec.19, 2023 |
| 20 | Thermo meter | JINCHUANG | GSP-8A | GTS643 | April 19, 2023 | April 18, 2024 |

| Conducted Emission | | | | | | |
|--------------------|----------------------|-------------------------|----------------------|---------------|---------------------|-------------------------|
| Item | Test Equipment | Manufacturer | Model No. | Inventory No. | Cal.Date (mm-dd-yy) | Cal.Due date (mm-dd-yy) |
| 1 | Shielding Room | ZhongYu Electron | 7.3(L)x3.1(W)x2.9(H) | GTS252 | July 12, 2022 | July 11, 2027 |
| 2 | EMI Test Receiver | R&S | ESCI 7 | GTS552 | April 14, 2023 | April 13, 2024 |
| 3 | LISN | ROHDE & SCHWARZ | ENV216 | GTS226 | April 14, 2023 | April 13, 2024 |
| 4 | Coaxial Cable | GTS | N/A | GTS227 | N/A | N/A |
| 5 | EMI Test Software | AUDIX | E3 | N/A | N/A | N/A |
| 6 | Thermo meter | JINCHUANG | GSP-8A | GTS642 | April 19, 2023 | April 18, 2024 |
| 7 | Absorbing clamp | Elektronik-Feinmechanik | MDS21 | GTS229 | April 14, 2023 | April 13, 2024 |
| 8 | ISN | SCHWARZBECK | NTFM 8158 | GTS565 | April 14, 2023 | April 13, 2024 |
| 9 | High voltage probe | SCHWARZBECK | TK9420 | GTS537 | April 14, 2023 | April 13, 2024 |
| 10 | Antenna end assembly | Weinschel | 1870A | GTS560 | April 14, 2023 | April 13, 2024 |

| RF Conducted Test: | | | | | | |
|--------------------|--|--------------|------------------|------------|---------------------|-------------------------|
| Item | Test Equipment | Manufacturer | Model No. | Serial No. | Cal.Date (mm-dd-yy) | Cal.Due date (mm-dd-yy) |
| 1 | MXA Signal Analyzer | Agilent | N9020A | GTS566 | April 14, 2023 | April 13, 2024 |
| 2 | EMI Test Receiver | R&S | ESCI 7 | GTS552 | April 14, 2023 | April 13, 2024 |
| 3 | PSA Series Spectrum Analyzer | Agilent | E4440A | GTS536 | April 14, 2023 | April 13, 2024 |
| 4 | MXG vector Signal Generator | Agilent | N5182A | GTS567 | April 14, 2023 | April 13, 2024 |
| 5 | ESG Analog Signal Generator | Agilent | E4428C | GTS568 | April 14, 2023 | April 13, 2024 |
| 6 | USB RF Power Sensor | DARE | RPR3006W | GTS569 | April 14, 2023 | April 13, 2024 |
| 7 | RF Switch Box | Shongyi | RFSW3003328 | GTS571 | April 14, 2023 | April 13, 2024 |
| 8 | Programmable Constant Temp & Humi Test Chamber | WEWON | WHTH-150L-40-880 | GTS572 | April 14, 2023 | April 13, 2024 |
| 9 | Thermo meter | JINCHUANG | GSP-8A | GTS641 | April 19, 2023 | April 18, 2024 |

| General used equipment: | | | | | | |
|-------------------------|----------------|--------------|-----------|---------------|---------------------|-------------------------|
| Item | Test Equipment | Manufacturer | Model No. | Inventory No. | Cal.Date (mm-dd-yy) | Cal.Due date (mm-dd-yy) |
| 1 | Barometer | KUMAO | SF132 | GTS647 | April 19, 2023 | April 18, 2024 |

7 Test results and Measurement Data

7.1 Antenna requirement:

| | |
|--|-----------------------------|
| Standard requirement: | FCC Part15 C Section 15.203 |
| <i>15.203 requirement:</i> 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, 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. | |
| E.U.T Antenna: | |
| The antenna is Internal antenna, reference to the appendix II for details | |

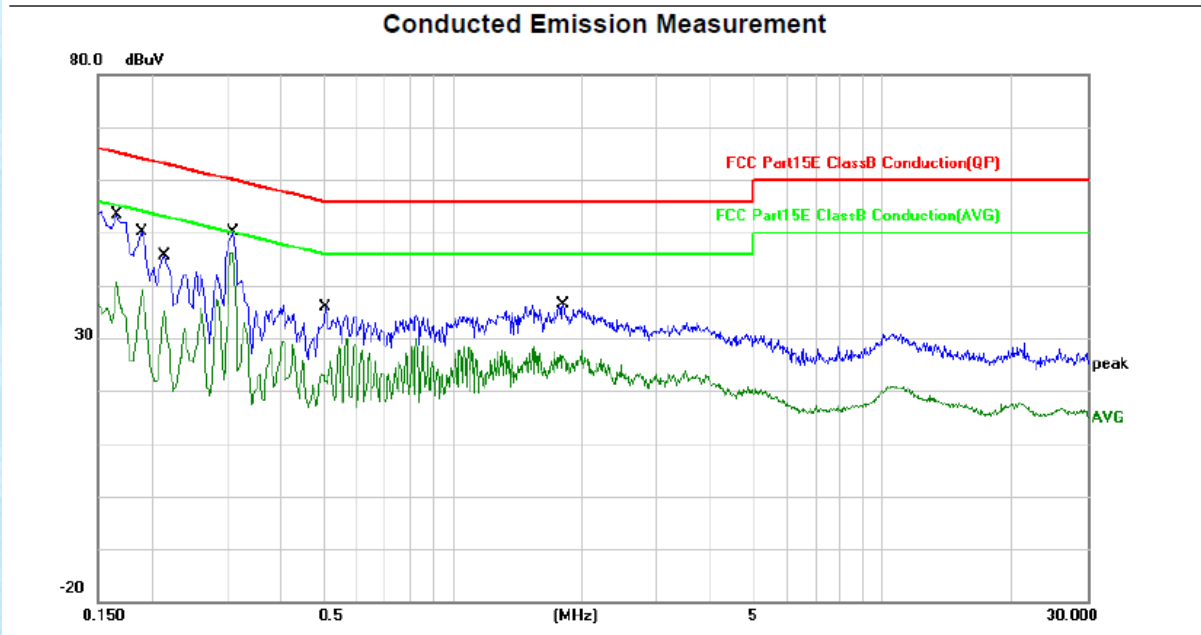
7.2 Conducted Emissions

| | | | | | | |
|--|--|--------------|-----------|-----|---------|----------|
| Test Requirement: | FCC Part15 C Section 15.207 | | | | | |
| Test Method: | ANSI C63.10:2013 | | | | | |
| Test Frequency Range: | 150KHz to 30MHz | | | | | |
| Class / Severity: | Class B | | | | | |
| Receiver setup: | RBW=9KHz, VBW=30KHz | | | | | |
| Limit: | Frequency range (MHz) | Limit (dBuV) | | | | |
| | | 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. | | | | | | |
| Test procedure | <p>The E.U.T and simulators are connected to the main power through a line impedance stabilization network(L.I.S.N.). The provide a 50ohm/50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs). Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10:2013 on conducted measurement.</p> | | | | | |
| Test setup: | <p><i>Remark:</i> E.U.T: Equipment Under Test LISN: Line Impedance Stabilization Network Test table height=0.8m</p> | | | | | |
| Test Instruments: | Refer to section 6.0 for details | | | | | |
| Test mode: | Refer to section 5.2 for details | | | | | |
| Test environment: | Temp.: | 23.3 °C | Humid.: | 50% | Press.: | 1011mbar |
| Test voltage: | AC 120V, 60Hz | | | | | |
| Test results: | Pass | | | | | |

Measurement data:

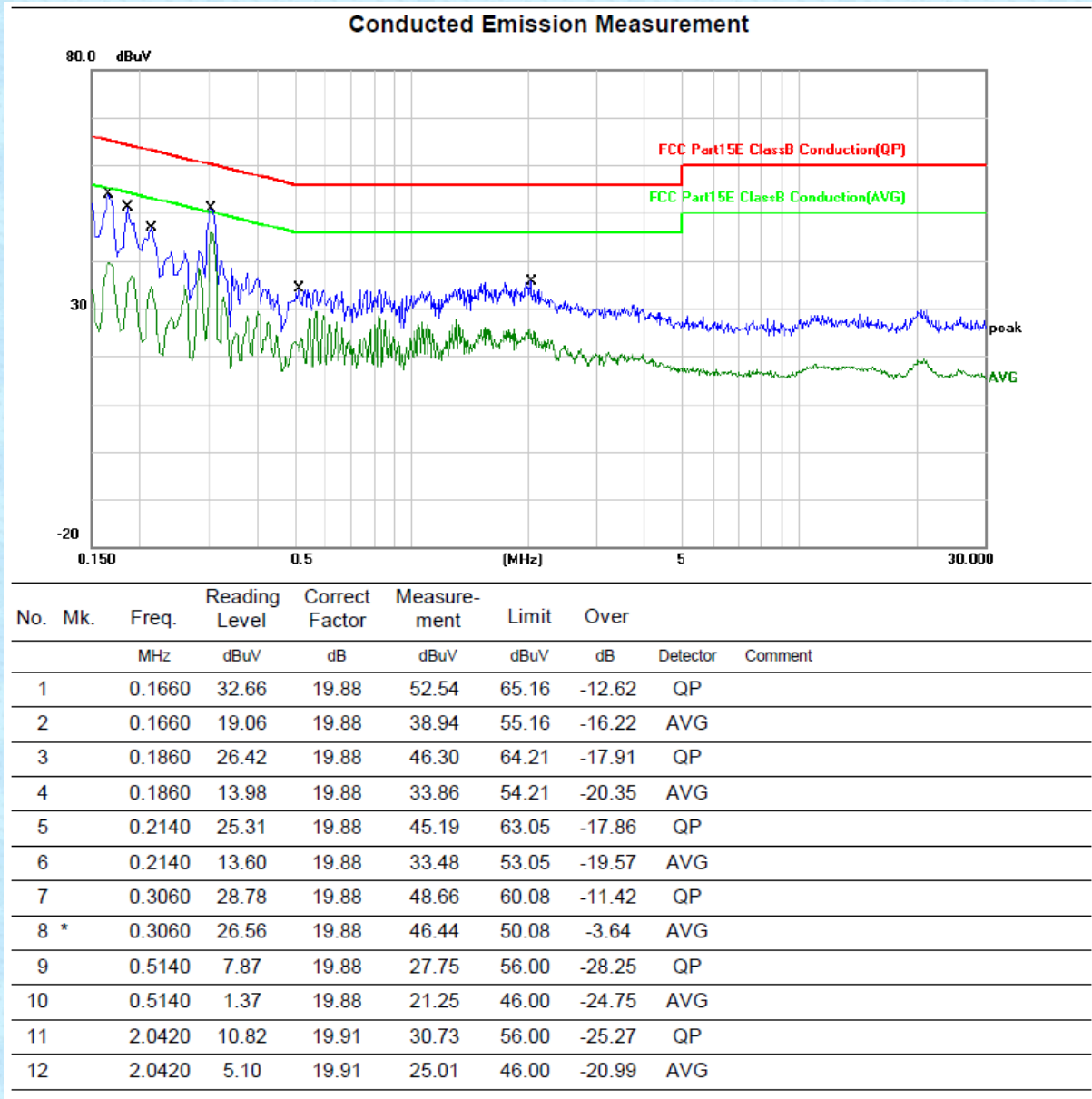
We only recorded the data of the worst mode. Please see the following:

Line:



| No. | Mk. | Freq. | Reading Level | Correct Factor | Measurement | Limit | Over | Detector | Comment |
|-----|-----|--------|---------------|----------------|-------------|-------|--------|----------|---------|
| | | MHz | dBuV | dB | dBuV | dBuV | dB | | |
| 1 | | 0.3100 | 28.26 | 19.88 | 48.14 | 59.97 | -11.83 | QP | |
| 2 | * | 0.3100 | 25.57 | 19.88 | 45.45 | 49.97 | -4.52 | AVG | |
| 3 | | 0.1900 | 28.72 | 19.88 | 48.60 | 64.04 | -15.44 | QP | |
| 4 | | 0.1900 | 16.55 | 19.88 | 36.43 | 54.04 | -17.61 | AVG | |
| 5 | | 0.1660 | 32.19 | 19.88 | 52.07 | 65.16 | -13.09 | QP | |
| 6 | | 0.1660 | 18.18 | 19.88 | 38.06 | 55.16 | -17.10 | AVG | |
| 7 | | 0.2140 | 24.17 | 19.88 | 44.05 | 63.05 | -19.00 | QP | |
| 8 | | 0.2140 | 13.14 | 19.88 | 33.02 | 53.05 | -20.03 | AVG | |
| 9 | | 0.5100 | 9.42 | 19.88 | 29.30 | 56.00 | -26.70 | QP | |
| 10 | | 0.5100 | 2.02 | 19.88 | 21.90 | 46.00 | -24.10 | AVG | |
| 11 | | 1.8100 | 11.16 | 19.90 | 31.06 | 56.00 | -24.94 | QP | |
| 12 | | 1.8100 | 4.66 | 19.90 | 24.56 | 46.00 | -21.44 | AVG | |

Neutral:



Note:

Correct Factor = LISN Factor + Cable Loss + Pulse Limiter Factor, the value was added to Original Receiver

Reading by the software automatically.

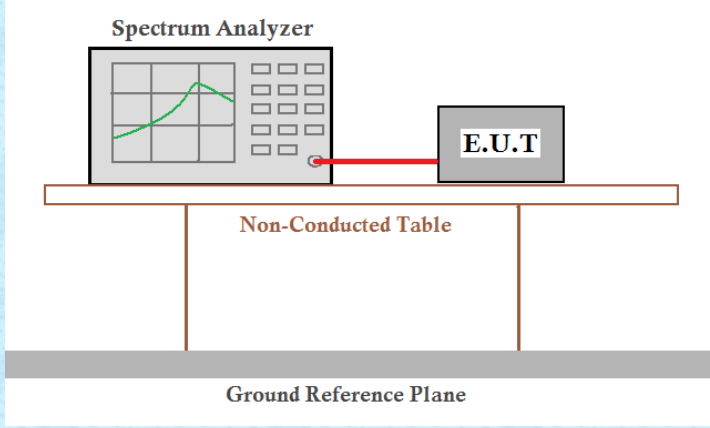
Measurement = Reading + Correct Factor.

Over = Measurement – Limit

Simultaneous transmitting: 2.4G Wifi transmitting + 5G Wifi transmitting

Worst Case Operating Mode: Simultaneous transmitting

7.3 Emission Bandwidth

| | |
|--------------------|--|
| Test Requirement : | FCC Part15 E Section 15.407 |
| Test Method : | ANSI C63.10:2013 & KDB 789033 D02 v02r01 |
| Limit: | N/A |
| Test setup: |  |
| Test procedure: | According to KDB 789033 D02 General U-NII Test Procedures New Rules v02r01. |
| Test Instruments: | Refer to section 6.0 for details |
| Test mode: | Refer to section 5.2 for details |
| Test results: | Pass |

Measurement Data:

26 dB Bandwidth

| Test Mode | Antenna | Freq(MHz) | 26db EBW [MHz] | FL[MHz] | FH[MHz] | Limit[MHz] | Verdict |
|-----------|---------|-----------|----------------|----------|----------|------------|---------|
| 11A-CDD | Ant1 | 5180 | 18.640 | 5170.840 | 5189.480 | --- | --- |
| | Ant2 | 5180 | 19.120 | 5170.320 | 5189.440 | --- | --- |
| | Ant1 | 5200 | 18.400 | 5190.960 | 5209.360 | --- | --- |
| | Ant2 | 5200 | 18.920 | 5190.240 | 5209.160 | --- | --- |
| | Ant1 | 5240 | 18.400 | 5230.680 | 5249.080 | --- | --- |
| | Ant2 | 5240 | 19.160 | 5230.880 | 5250.040 | --- | --- |
| | Ant1 | 5260 | 18.720 | 5250.560 | 5269.280 | --- | --- |
| | Ant2 | 5260 | 18.480 | 5250.560 | 5269.040 | --- | --- |
| | Ant1 | 5280 | 18.400 | 5270.920 | 5289.320 | --- | --- |
| | Ant2 | 5280 | 18.720 | 5270.560 | 5289.280 | --- | --- |
| | Ant1 | 5320 | 18.640 | 5310.760 | 5329.400 | --- | --- |
| | Ant2 | 5320 | 18.280 | 5310.880 | 5329.160 | --- | --- |
| | Ant1 | 5500 | 18.400 | 5490.880 | 5509.280 | --- | --- |
| | Ant2 | 5500 | 18.720 | 5490.480 | 5509.200 | --- | --- |
| | Ant1 | 5580 | 18.520 | 5570.720 | 5589.240 | --- | --- |
| | Ant2 | 5580 | 18.200 | 5570.520 | 5588.720 | --- | --- |
| | Ant1 | 5700 | 18.720 | 5690.600 | 5709.320 | --- | --- |
| | Ant2 | 5700 | 19.000 | 5690.520 | 5709.520 | --- | --- |
| | Ant1 | 5745 | 18.360 | 5735.840 | 5754.200 | --- | --- |
| | Ant2 | 5745 | 18.480 | 5735.880 | 5754.360 | --- | --- |
| Ant1 | 5785 | 19.640 | 5774.840 | 5794.480 | --- | --- | |
| Ant2 | 5785 | 18.520 | 5775.960 | 5794.480 | --- | --- | |
| Ant1 | 5825 | 18.520 | 5815.840 | 5834.360 | --- | --- | |
| Ant2 | 5825 | 18.600 | 5815.760 | 5834.360 | --- | --- | |
| 11N20MIMO | Ant1 | 5180 | 19.240 | 5170.400 | 5189.640 | --- | --- |

| | | | | | | | |
|------------|------|--------|----------|----------|----------|-----|-----|
| | Ant2 | 5180 | 19.840 | 5169.960 | 5189.800 | --- | --- |
| | Ant1 | 5200 | 19.760 | 5190.080 | 5209.840 | --- | --- |
| | Ant2 | 5200 | 19.200 | 5190.320 | 5209.520 | --- | --- |
| | Ant1 | 5240 | 19.560 | 5230.440 | 5250.000 | --- | --- |
| | Ant2 | 5240 | 19.480 | 5230.320 | 5249.800 | --- | --- |
| | Ant1 | 5260 | 19.520 | 5250.400 | 5269.920 | --- | --- |
| | Ant2 | 5260 | 19.840 | 5249.640 | 5269.480 | --- | --- |
| | Ant1 | 5280 | 19.720 | 5270.160 | 5289.880 | --- | --- |
| | Ant2 | 5280 | 19.600 | 5270.200 | 5289.800 | --- | --- |
| | Ant1 | 5320 | 19.440 | 5310.280 | 5329.720 | --- | --- |
| | Ant2 | 5320 | 19.920 | 5309.920 | 5329.840 | --- | --- |
| | Ant1 | 5500 | 19.840 | 5490.000 | 5509.840 | --- | --- |
| | Ant2 | 5500 | 19.240 | 5490.320 | 5509.560 | --- | --- |
| | Ant1 | 5580 | 20.320 | 5569.880 | 5590.200 | --- | --- |
| | Ant2 | 5580 | 19.640 | 5570.160 | 5589.800 | --- | --- |
| | Ant1 | 5700 | 20.440 | 5689.960 | 5710.400 | --- | --- |
| | Ant2 | 5700 | 20.520 | 5689.360 | 5709.880 | --- | --- |
| | Ant1 | 5745 | 19.200 | 5735.320 | 5754.520 | --- | --- |
| | Ant2 | 5745 | 20.320 | 5734.920 | 5755.240 | --- | --- |
| | Ant1 | 5785 | 20.280 | 5775.160 | 5795.440 | --- | --- |
| Ant2 | 5785 | 19.880 | 5774.840 | 5794.720 | --- | --- | |
| Ant1 | 5825 | 19.640 | 5815.040 | 5834.680 | --- | --- | |
| Ant2 | 5825 | 20.480 | 5814.920 | 5835.400 | --- | --- | |
| 11N40MIMO | Ant1 | 5190 | 39.440 | 5170.160 | 5209.600 | --- | --- |
| | Ant2 | 5190 | 38.960 | 5170.400 | 5209.360 | --- | --- |
| | Ant1 | 5230 | 39.120 | 5210.320 | 5249.440 | --- | --- |
| | Ant2 | 5230 | 38.640 | 5210.880 | 5249.520 | --- | --- |
| | Ant1 | 5270 | 38.560 | 5250.720 | 5289.280 | --- | --- |
| | Ant2 | 5270 | 38.960 | 5250.720 | 5289.680 | --- | --- |
| | Ant1 | 5310 | 39.120 | 5290.160 | 5329.280 | --- | --- |
| | Ant2 | 5310 | 38.480 | 5290.720 | 5329.200 | --- | --- |
| | Ant1 | 5510 | 39.280 | 5490.160 | 5529.440 | --- | --- |
| | Ant2 | 5510 | 39.120 | 5490.240 | 5529.360 | --- | --- |
| | Ant1 | 5550 | 38.480 | 5530.720 | 5569.200 | --- | --- |
| | Ant2 | 5550 | 38.880 | 5530.560 | 5569.440 | --- | --- |
| | Ant1 | 5670 | 38.800 | 5650.400 | 5689.200 | --- | --- |
| | Ant2 | 5670 | 38.080 | 5651.120 | 5689.200 | --- | --- |
| | Ant1 | 5755 | 38.880 | 5735.640 | 5774.520 | --- | --- |
| | Ant2 | 5755 | 38.560 | 5735.720 | 5774.280 | --- | --- |
| Ant1 | 5795 | 38.960 | 5775.320 | 5814.280 | --- | --- | |
| Ant2 | 5795 | 38.560 | 5775.560 | 5814.120 | --- | --- | |
| 11AC20MIMO | Ant1 | 5180 | 19.920 | 5169.920 | 5189.840 | --- | --- |
| | Ant2 | 5180 | 19.280 | 5170.400 | 5189.680 | --- | --- |
| | Ant1 | 5200 | 19.720 | 5190.200 | 5209.920 | --- | --- |
| | Ant2 | 5200 | 19.680 | 5190.360 | 5210.040 | --- | --- |
| | Ant1 | 5240 | 20.280 | 5229.560 | 5249.840 | --- | --- |
| | Ant2 | 5240 | 19.960 | 5230.000 | 5249.960 | --- | --- |
| | Ant1 | 5260 | 19.760 | 5250.120 | 5269.880 | --- | --- |
| | Ant2 | 5260 | 19.280 | 5250.320 | 5269.600 | --- | --- |
| | Ant1 | 5280 | 19.720 | 5270.000 | 5289.720 | --- | --- |
| | Ant2 | 5280 | 19.520 | 5270.160 | 5289.680 | --- | --- |
| | Ant1 | 5320 | 19.840 | 5310.000 | 5329.840 | --- | --- |
| | Ant2 | 5320 | 19.240 | 5310.520 | 5329.760 | --- | --- |
| | Ant1 | 5500 | 19.760 | 5489.960 | 5509.720 | --- | --- |
| | Ant2 | 5500 | 20.080 | 5490.040 | 5510.120 | --- | --- |
| | Ant1 | 5580 | 19.120 | 5570.560 | 5589.680 | --- | --- |
| | Ant2 | 5580 | 19.560 | 5570.160 | 5589.720 | --- | --- |
| | Ant1 | 5700 | 20.240 | 5689.520 | 5709.760 | --- | --- |
| | Ant2 | 5700 | 20.080 | 5689.880 | 5709.960 | --- | --- |
| | Ant1 | 5745 | 20.040 | 5735.000 | 5755.040 | --- | --- |
| | Ant2 | 5745 | 19.800 | 5735.320 | 5755.120 | --- | --- |
| Ant1 | 5785 | 19.840 | 5775.200 | 5795.040 | --- | --- | |
| Ant2 | 5785 | 19.640 | 5775.160 | 5794.800 | --- | --- | |

| | | | | | | | | |
|------------|------------|--------|----------|----------|----------|----------|-----|-----|
| | Ant1 | 5825 | 19.880 | 5815.080 | 5834.960 | --- | --- | |
| | Ant2 | 5825 | 19.720 | 5815.280 | 5835.000 | --- | --- | |
| 11AC40MIMO | Ant1 | 5190 | 39.040 | 5170.480 | 5209.520 | --- | --- | |
| | Ant2 | 5190 | 38.800 | 5170.480 | 5209.280 | --- | --- | |
| | Ant1 | 5230 | 38.960 | 5210.560 | 5249.520 | --- | --- | |
| | Ant2 | 5230 | 38.880 | 5210.400 | 5249.280 | --- | --- | |
| | Ant1 | 5270 | 39.200 | 5250.080 | 5289.280 | --- | --- | |
| | Ant2 | 5270 | 38.320 | 5250.720 | 5289.040 | --- | --- | |
| | Ant1 | 5310 | 38.640 | 5290.720 | 5329.360 | --- | --- | |
| | Ant2 | 5310 | 38.880 | 5290.800 | 5329.680 | --- | --- | |
| | Ant1 | 5510 | 39.120 | 5490.320 | 5529.440 | --- | --- | |
| | Ant2 | 5510 | 38.240 | 5490.720 | 5528.960 | --- | --- | |
| | Ant1 | 5550 | 38.800 | 5530.480 | 5569.280 | --- | --- | |
| | Ant2 | 5550 | 38.320 | 5530.880 | 5569.200 | --- | --- | |
| | Ant1 | 5670 | 39.280 | 5650.000 | 5689.280 | --- | --- | |
| | Ant2 | 5670 | 38.560 | 5650.560 | 5689.120 | --- | --- | |
| | Ant1 | 5755 | 39.280 | 5735.480 | 5774.760 | --- | --- | |
| | Ant2 | 5755 | 38.160 | 5735.880 | 5774.040 | --- | --- | |
| | 11AC80MIMO | Ant1 | 5795 | 38.880 | 5775.640 | 5814.520 | --- | --- |
| | | Ant2 | 5795 | 39.360 | 5774.920 | 5814.280 | --- | --- |
| Ant1 | | 5210 | 79.200 | 5170.480 | 5249.680 | --- | --- | |
| Ant2 | | 5210 | 79.200 | 5170.640 | 5249.840 | --- | --- | |
| Ant1 | | 5290 | 80.000 | 5250.160 | 5330.160 | --- | --- | |
| Ant2 | | 5290 | 79.360 | 5250.160 | 5329.520 | --- | --- | |
| Ant1 | | 5530 | 79.520 | 5490.160 | 5569.680 | --- | --- | |
| Ant2 | | 5530 | 79.520 | 5490.320 | 5569.840 | --- | --- | |
| 11AX20MIMO | Ant1 | 5610 | 80.320 | 5569.520 | 5649.840 | --- | --- | |
| | Ant2 | 5610 | 80.160 | 5569.840 | 5650.000 | --- | --- | |
| | Ant1 | 5775 | 79.360 | 5735.320 | 5814.680 | --- | --- | |
| | Ant2 | 5775 | 79.360 | 5735.000 | 5814.360 | --- | --- | |
| | Ant1 | 5180 | 20.040 | 5170.040 | 5190.080 | --- | --- | |
| | Ant2 | 5180 | 19.560 | 5170.200 | 5189.760 | --- | --- | |
| | Ant1 | 5200 | 19.800 | 5190.160 | 5209.960 | --- | --- | |
| | Ant2 | 5200 | 20.600 | 5189.320 | 5209.920 | --- | --- | |
| | Ant1 | 5240 | 20.280 | 5229.760 | 5250.040 | --- | --- | |
| | Ant2 | 5240 | 20.640 | 5229.680 | 5250.320 | --- | --- | |
| | Ant1 | 5260 | 20.280 | 5250.040 | 5270.320 | --- | --- | |
| | Ant2 | 5260 | 19.960 | 5250.000 | 5269.960 | --- | --- | |
| | Ant1 | 5280 | 20.280 | 5269.960 | 5290.240 | --- | --- | |
| | Ant2 | 5280 | 20.120 | 5269.760 | 5289.880 | --- | --- | |
| | Ant1 | 5320 | 20.280 | 5309.680 | 5329.960 | --- | --- | |
| | Ant2 | 5320 | 20.240 | 5309.960 | 5330.200 | --- | --- | |
| | Ant1 | 5500 | 20.240 | 5489.920 | 5510.160 | --- | --- | |
| | Ant2 | 5500 | 20.560 | 5489.400 | 5509.960 | --- | --- | |
| | Ant1 | 5580 | 20.440 | 5569.960 | 5590.400 | --- | --- | |
| | Ant2 | 5580 | 19.920 | 5569.960 | 5589.880 | --- | --- | |
| | Ant1 | 5700 | 20.760 | 5689.640 | 5710.400 | --- | --- | |
| | Ant2 | 5700 | 20.440 | 5689.640 | 5710.080 | --- | --- | |
| | Ant1 | 5745 | 19.920 | 5735.000 | 5754.920 | --- | --- | |
| | Ant2 | 5745 | 20.160 | 5734.880 | 5755.040 | --- | --- | |
| Ant1 | 5785 | 20.360 | 5774.760 | 5795.120 | --- | --- | | |
| Ant2 | 5785 | 19.880 | 5775.080 | 5794.960 | --- | --- | | |
| Ant1 | 5825 | 19.880 | 5814.880 | 5834.760 | --- | --- | | |
| Ant2 | 5825 | 19.960 | 5815.040 | 5835.000 | --- | --- | | |
| 11AX40MIMO | Ant1 | 5190 | 39.520 | 5170.240 | 5209.760 | --- | --- | |
| | Ant2 | 5190 | 39.520 | 5170.240 | 5209.760 | --- | --- | |
| | Ant1 | 5230 | 39.360 | 5210.160 | 5249.520 | --- | --- | |
| | Ant2 | 5230 | 39.520 | 5210.000 | 5249.520 | --- | --- | |
| | Ant1 | 5270 | 39.280 | 5250.400 | 5289.680 | --- | --- | |
| | Ant2 | 5270 | 39.600 | 5250.240 | 5289.840 | --- | --- | |
| | Ant1 | 5310 | 40.160 | 5289.680 | 5329.840 | --- | --- | |
| | Ant2 | 5310 | 39.760 | 5289.760 | 5329.520 | --- | --- | |
| Ant1 | 5510 | 39.440 | 5490.240 | 5529.680 | --- | --- | | |

| | | | | | | | |
|-------------|------|--------------|----------|----------|----------|-----|-----|
| | Ant2 | 5510 | 39.840 | 5489.760 | 5529.600 | --- | --- |
| | Ant1 | 5550 | 39.520 | 5530.320 | 5569.840 | --- | --- |
| | Ant2 | 5550 | 39.840 | 5529.760 | 5569.600 | --- | --- |
| | Ant1 | 5670 | 39.760 | 5650.080 | 5689.840 | --- | --- |
| | Ant2 | 5670 | 39.520 | 5650.080 | 5689.600 | --- | --- |
| | Ant1 | 5755 | 39.200 | 5735.320 | 5774.520 | --- | --- |
| | Ant2 | 5755 | 39.680 | 5735.320 | 5775.000 | --- | --- |
| | Ant1 | 5795 | 39.920 | 5775.000 | 5814.920 | --- | --- |
| | Ant2 | 5795 | 39.920 | 5775.000 | 5814.920 | --- | --- |
| 11AX80MIMO | Ant1 | 5210 | 79.840 | 5170.160 | 5250.000 | --- | --- |
| | Ant2 | 5210 | 80.640 | 5169.200 | 5249.840 | --- | --- |
| | Ant1 | 5290 | 80.800 | 5249.520 | 5330.320 | --- | --- |
| | Ant2 | 5290 | 80.160 | 5249.680 | 5329.840 | --- | --- |
| | Ant1 | 5530 | 80.320 | 5489.520 | 5569.840 | --- | --- |
| | Ant2 | 5530 | 80.160 | 5489.840 | 5570.000 | --- | --- |
| | Ant1 | 5610 | 80.320 | 5569.520 | 5649.840 | --- | --- |
| | Ant2 | 5610 | 80.320 | 5569.680 | 5650.000 | --- | --- |
| | Ant1 | 5775 | 79.840 | 5735.000 | 5814.840 | --- | --- |
| 11AX160MIMO | Ant2 | 5775 | 80.160 | 5735.000 | 5815.160 | --- | --- |
| | Ant1 | 5250 | 163.520 | 5167.440 | 5330.960 | --- | --- |
| | Ant1 | 5250_UNII-1 | 82.56 | 5167.440 | 5250 | --- | --- |
| | Ant1 | 5250_UNII-2A | 80.96 | 5250 | 5330.960 | --- | --- |
| | Ant2 | 5250 | 161.920 | 5169.360 | 5331.280 | --- | --- |
| | Ant2 | 5250_UNII-1 | 80.64 | 5169.360 | 5250 | --- | --- |
| | Ant2 | 5250_UNII-2A | 81.28 | 5250 | 5331.280 | --- | --- |
| | Ant1 | 5570 | 161.600 | 5489.040 | 5650.640 | --- | --- |
| Ant2 | 5570 | 161.600 | 5489.040 | 5650.640 | --- | --- | |