



FCC RADIO TEST REPORT

FCC ID : 2AEM4-FF02
Equipment : Wireless Router
Brand Name : eero
Model Name : FF02
Applicant : eero LLC
660 3rd St Fl 4, San Francisco, California, 94107, United States
Manufacturer : eero LLC
660 3rd St Fl 4, San Francisco, California, 94107, United States
Standard : FCC Part 15 Subpart E §15.407

The product was received on Feb. 11, 2026 and testing was performed from Feb. 13, 2026 to Mar. 11, 2026. 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.)



Table of Contents

History of this test report.....	3
Summary of Test Result.....	4
1 General Description	5
1.1 Product Feature of Equipment Under Test.....	5
1.2 Modification of EUT	5
1.3 Testing Location	5
1.4 Applicable Standards.....	6
2 Test Configuration of Equipment Under Test	7
2.1 Carrier Frequency and Channel	7
2.2 Test Mode.....	9
2.3 Connection Diagram of Test System.....	10
2.4 Support Unit used in test configuration and system	10
2.5 EUT Operation Test Setup	11
2.6 Measurement Results Explanation Example.....	11
3 Test Result	12
3.1 26dB & 99% Occupied Bandwidth Measurement	12
3.2 Maximum Conducted Output Power Measurement	13
3.3 Power Spectral Density Measurement	15
3.4 Unwanted Emissions Measurement.....	17
3.5 AC Conducted Emission Measurement.....	24
3.6 Antenna Requirements.....	26
4 List of Measuring Equipment.....	27
5 Measurement Uncertainty	29
Appendix A. Conducted Test Results	
Appendix B. AC Conducted Emission Test Result	
Appendix C. Radiated Spurious Emission Test Result	
Appendix D. Duty Cycle Plots	
Appendix E. Setup Photographs	



History of this test report

Report No.	Version	Description	Issue Date
FR621004D	01	Initial issue of report	May 26, 2026
FR621004D	02	Revised Test Configuration of Equipment Under Test and Appendix A2 This report is an updated version, replacing the report issued on May 26, 2026.	Jun. 12, 2026

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.403	26dB Bandwidth	Pass	-
3.1	2.1049	99% Occupied Bandwidth	Pass	-
3.2	15.407(a)	Maximum Conducted Output Power	Pass	-
3.3	15.407(a)	Power Spectral Density	Pass	-
3.4	15.407(b)	Unwanted Emissions	Pass	-
3.5	15.207	AC Conducted Emission	Pass	-
3.6	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/manufacturee 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: Alan Liu

Report Producer: Lili Lu

1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature		
General Specs Bluetooth-LE, IEEE 802.15.4, Wi-Fi 2.4GHz 802.11b/g/n/ax, Wi-Fi 5GHz 802.11a/n/ac/ax.		
Antenna Type WLAN(5GHz): <Ant 1>: Dipole Antenna <Ant 2>: Dipole Antenna		
Antenna information for Directional Gain		
5150 MHz ~ 5250 MHz	Peak Gain (dBi)	<5G_Ant1 + 5G_Ant2> Correlated: 4.94 Uncorrelated: 1.97
5250 MHz ~ 5350 MHz	Peak Gain (dBi)	<5G_Ant1 + 5G_Ant2> Correlated: 4.85 Uncorrelated: 1.87
5470 MHz ~ 5725 MHz	Peak Gain (dBi)	<5G_Ant1 + 5G_Ant2> Correlated: 5.25 Uncorrelated: 2.24

1.2 Modification of EUT

No modifications made to the EUT during the testing.

1.3 Testing Location

The test location is accredited based on TAF code 3786 designated by NCC (National Communication Commission).

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.)

FCC designation No.: TW3786

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



1.4 Applicable Standards

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

- ♦ FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
- ♦ FCC KDB 414788 D01 Radiated Test Site v01r01.
- ♦ FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
- ♦ FCC Part 15 Subpart E
- ♦ ANSI C63.10-2020 + Cor.1-2023

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.
3. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

2 Test Configuration of Equipment Under Test

- a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).
- b. AC power line Conducted Emission was tested under maximum output power.

2.1 Carrier Frequency and Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5150-5250 MHz Band 1 (U-NII-1)	36	5180	44	5220
	38*	5190	46*	5230
	40	5200	48	5240
	42#	5210		

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5250-5350 MHz Band 2 (U-NII-2A)	52	5260	60	5300
	54*	5270	62*	5310
	56	5280	64	5320
	58#	5290		

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5470-5725 MHz Band 3 (U-NII-2C)	100	5500	112	5560
	102*	5510	116	5580
	104	5520	132	5660
	106#	5530	134*	5670
	108	5540	136	5680
	110*	5550	140	5700

Frequency Band	Channel	Freq. (MHz)
5150-5350 MHz	50@	5250
5470-5725 MHz	114@	5570

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
TDWR Channel	118*	5590	124	5620
	120	5600	126*	5630
	122 [#]	5610	128	5640

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
Straddle Channel	138 [#]	5690	144	5720
	142*	5710		

Note:

1. The above Frequency and Channel with "*" are 802.11n HT40 and 802.11ac VHT40 and 802.11ax HE40.
2. The above Frequency and Channel with "[#]" are 802.11ac VHT80 and 802.11ax HE80.
3. The above Frequency and Channel with "@[#]" are 802.11ac VHT160 and 802.11ax HE160.

2.2 Test Mode

The power for 802.11ac is smaller than 802.11n mode, so all other conducted and radiated test is covered by 802.11n mode if the bandwidth is the same.

This device only supports full-tone RU; it does not support partial RU or channel puncturing.

The 20MHz channel is covered by full-tone RU, 40MHz channel is covered by full-tone RU, 80MHz channel is covered by full-tone RU, 160MHz channel is covered by full-tone RU.

This device only supports MIMO mode, it does not support SISO mode.

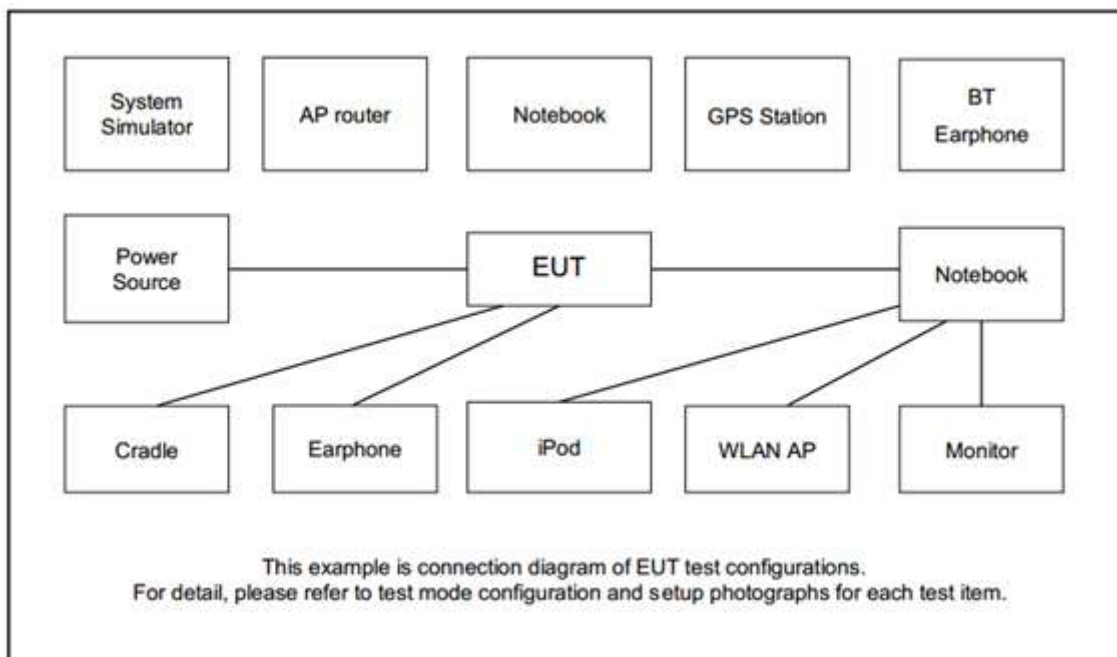
The final test modes include the worst data rates for each modulation shown in the table below.

MIMO Mode

Modulation	Data Rate
802.11a	6 Mbps
802.11n HT20	MCS0
802.11n HT40	MCS0
802.11ac VHT20 (Covered by HT20)	MCS0
802.11ac VHT40 (Covered by HT40)	MCS0
802.11ac VHT80	MCS0
802.11ac VHT160	MCS0
802.11ax HE20	MCS0
802.11ax HE40	MCS0
802.11ax HE80	MCS0
802.11ax HE160	MCS0

Test Cases	
AC Conducted Emission	Mode 1 : WLAN 5G Link + RJ-45(LAN/WAN) Link + AC Adapter(1st Generation PSU Luxshare 15W type A)(C120011)
Remark: - The detailed Radiated test modes are shown in Appendix C. - For radiation spurious emission, the modulation and the data rate picked for testing are determined by the Max. RF conducted power.	

2.3 Connection Diagram of Test System



2.4 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Notebook	Dell	Latitude 3400	FCC DoC	N/A	AC I/P : Unshielded, 1.2m DC O/P : Shielded, 1.8m
2.	Notebook	Dell	Latitude 3420	FCC DoC	N/A	AC I/P : Unshielded, 1.2m DC O/P : Shielded, 1.8m



2.5 EUT Operation Test Setup

The RF test items, utility “QSPR Version 6.00.00222.2” was installed in Notebook which was programmed in order to make the EUT get into the engineering modes to provide channel selection, power level, data rate and the application type and for continuous transmitting signals.

2.6 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example :

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 4.2 dB and 10 dB attenuator.

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

3 Test Result

3.1 26dB & 99% Occupied Bandwidth Measurement

3.1.1 Description of 26dB & 99% Occupied Bandwidth

This section is for reporting purpose only.

There is no restriction limits for bandwidth.

For Straddle Channel, according to KDB 789033 D02 General UNII Test Procedures New Rules **v02r01**, if the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

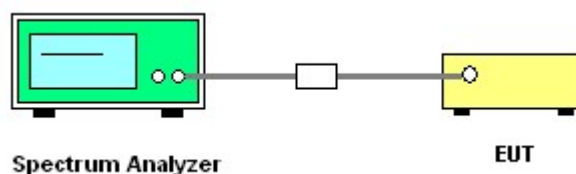
3.1.2 Measuring Instruments

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 C) Emission bandwidth
2. Set RBW = approximately 1% of the emission bandwidth.
3. Set the VBW > RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.
7. For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) is set 1-5% of the emission bandwidth and set the Video bandwidth (VBW) $\geq 3 * RBW$.
8. Measure and record the results in the test report.

3.1.4 Test Setup



3.1.5 Test Result of 26dB & 99% Occupied Bandwidth

Please refer to Appendix A.

3.2 Maximum Conducted Output Power Measurement

3.2.1 Limit of Maximum Conducted Output Power

For the 5.15–5.25 GHz bands:

■ For mobile and portable 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. 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.

For the 5.25–5.725 GHz bands:

■ The maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in megahertz.

For Straddle Channel, according to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, if the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Note that U-NII-2 band, devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

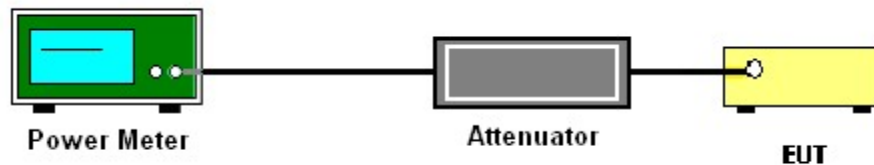
The testing follows Method PM-G of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

Method PM-G (Measurement using a gated RF average power meter):

1. Measurement is performed using a wideband RF power meter.
2. The EUT is configured to transmit at its maximum power control level.
3. Measure the average power of the transmitter.
4. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.
5. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01

For Straddle Channel, according to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, if the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

3.2.4 Test Setup



3.2.5 Test Result of Maximum Conducted Output Power

Please refer to Appendix A.



3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

For the 5.15–5.25 GHz bands:

For mobile and portable client devices in the 5.15–5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1.0 MHz band. For an indoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1.0 MHz band.

For the 5.25–5.725 GHz bands:

The maximum power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

For Straddle Channel, according to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, if the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

Section F) Maximum power spectral density.

Method SA-2

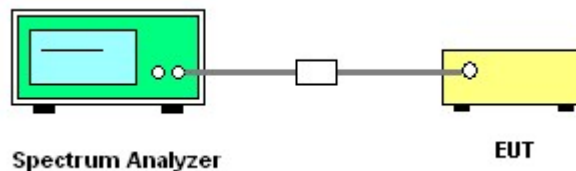
(trace averaging across on and off times of the EUT transmissions, followed by duty cycle correction).

- Measure the duty cycle.
 - Set span to encompass the entire emission bandwidth (EBW) of the signal.
 - Set RBW = 1 MHz.
 - Set VBW $\geq$ 3 MHz.
 - Number of points in sweep $\geq$ 2 Span / RBW.
 - Sweep time = auto.
 - Detector = RMS
 - Trace average at least 100 traces in power averaging mode.
 - Add $10 \log(1/x)$, where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times. For example, add $10 \log(1/0.25) = 6$ dB if the duty cycle is 25 percent.
1. The RF output of EUT is connected to the spectrum analyzer by a low loss cable.
 2. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSPD and record it.
 3. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

Method (a): Measure and sum the spectra across the outputs.

The total final Power Spectral Density is from a device with 2 transmitter outputs. The spectrum measurements of the individual outputs are all performed with the same span and number of points; the spectrum value in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 to obtain the value for the first frequency bin of the summed spectrum.

3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

3.4 Unwanted Emissions Measurement

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

3.4.1 Limit of Unwanted Emissions

- (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.

For transmitters operating in the 5250-5350 MHz band: all emissions outside of the 5150-5350 MHz band shall not exceed an EIRP of -27 dBm/MHz. Devices operating in the 5250-5350 MHz band that generate emissions in the 5150-5250 MHz band must meet all applicable technical requirements for operation in the 5150-5250 MHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5150-5250 MHz band.

For transmitters operating in the 5470-5600 MHz and 5650-5725MHz band: all emissions outside of the 5470-5600 MHz and 5650-5725MHz band shall not exceed an EIRP of -27 dBm/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.

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

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



3.4.2 Measuring Instruments

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

3.4.3 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 $\geq$ 3 MHz
- Detector = Peak
- Sweep time = auto
- Trace mode = max hold

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

Trace averaging across ON and OFF times of the EUT transmissions followed by duty cycle correction:

If continuous transmission of the EUT ($D \geq 98\%$) cannot be achieved and the duty cycle is constant (duty cycle variations are less than $\pm 2\%$), then the following procedure shall be used:

- a) The EUT shall be configured to operate at the maximum achievable duty cycle.
- b) Measure the duty cycle D of the transmitter output signal as described in 11.6.
- c) RBW = 1 MHz (unless otherwise specified).
- d) VBW $\geq [3 \times \text{RBW}]$.
- e) Detector = RMS (power averaging), if $\text{span} / (\# \text{ of points in sweep}) \leq (\text{RBW} / 2)$.
Satisfying this condition may require increasing the number of points in the sweep or reducing the span. If this condition cannot be satisfied, then the detector mode shall be set to peak.
- f) Averaging type = power (i.e., rms):
 - 1) As an alternative, the detector and averaging type may be set for linear voltage averaging.
 - 2) Some instruments require linear display mode to use linear voltage averaging. Log or dB averaging shall not be used.
- g) Sweep time = auto.
- h) Perform a trace average of at least 100 traces.
- i) A correction factor shall be added to the measurement results prior to comparing with the emission limit to compute the emission level that would have been measured had the test been performed at 100% duty cycle. The correction factor is computed as follows:
 - 1) If power averaging (rms) mode was used in step f), then the applicable correction factor is $[10 \log (1 / D)]$, where D is the duty cycle.

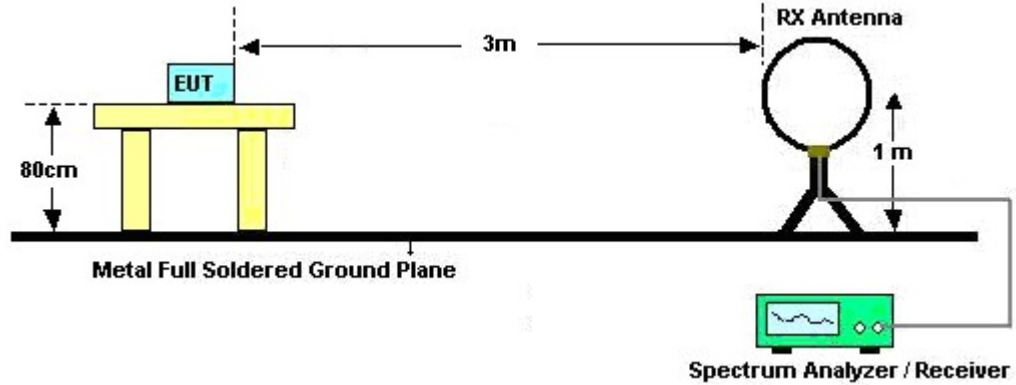
Reduction of the measured emission amplitude levels to account for operational duty cycle is not permitted. Determining compliance is based on emission levels occurring during transmission; it is not based on an average across ON and OFF times of the transmitter.



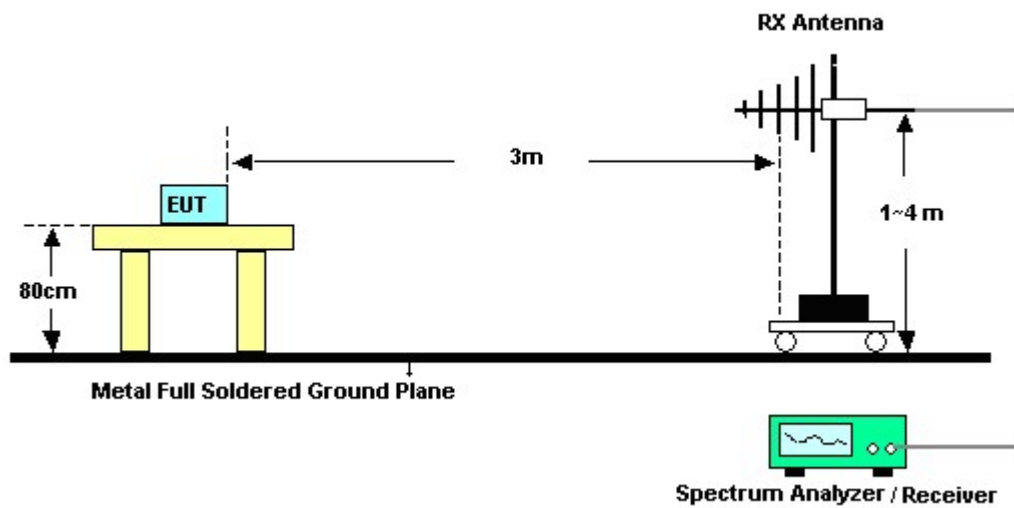
2. The EUT is placed on a turntable with 0.8 meter for frequency below 1 GHz and 1.5 meter for frequency above 1 GHz respectively above ground.
3. The EUT is set 3 meters away from the receiving antenna which is mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna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

3.4.4 Test Setup

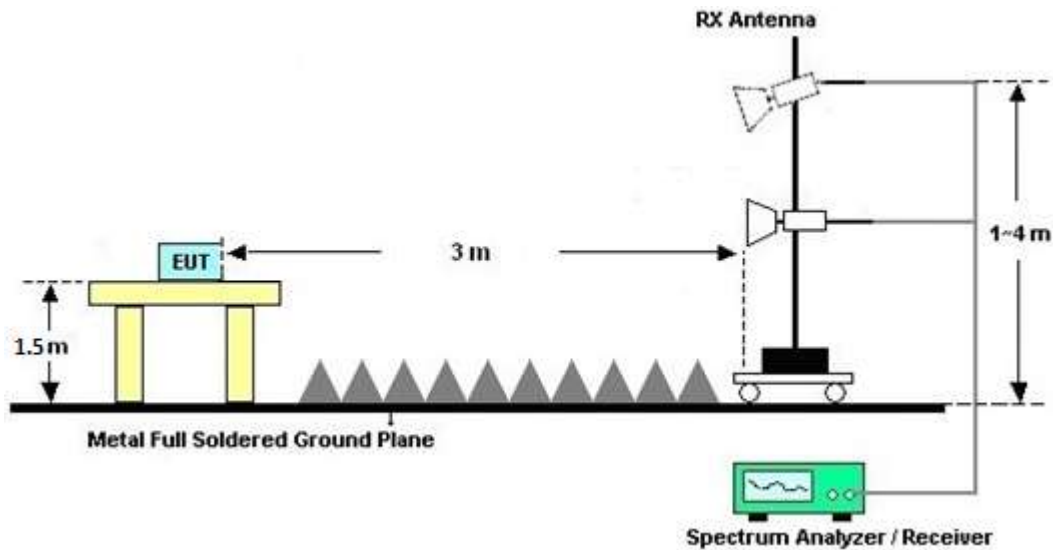
For radiated emissions below 30MHz



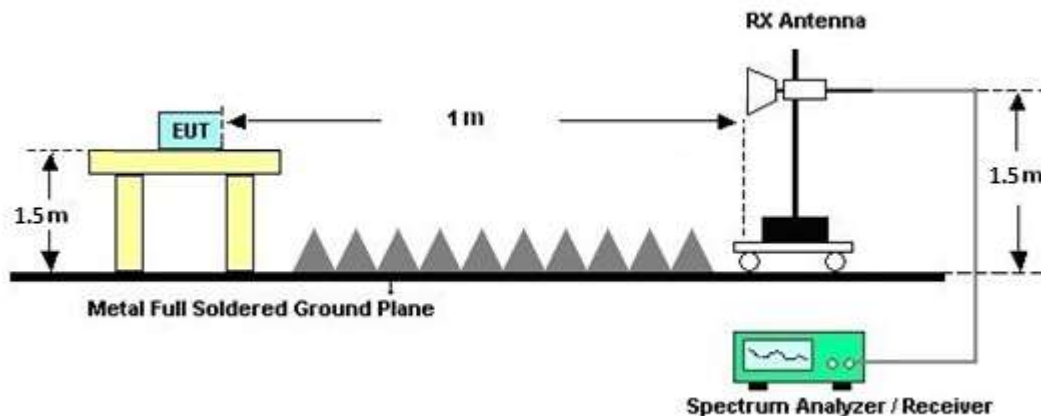
For radiated emissions from 30MHz to 1GHz



For radiated test from 1GHz to 18GHz



For radiated test above 18GHz



3.4.5 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.



3.4.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix C.

3.4.7 Duty Cycle

Please refer to Appendix D.

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

Please refer to Appendix C.

3.5 AC Conducted Emission Measurement

3.5.1 Limit of AC Conducted Emission

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

Frequency of emission (MHz)	Conducted limit (dB μ V)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

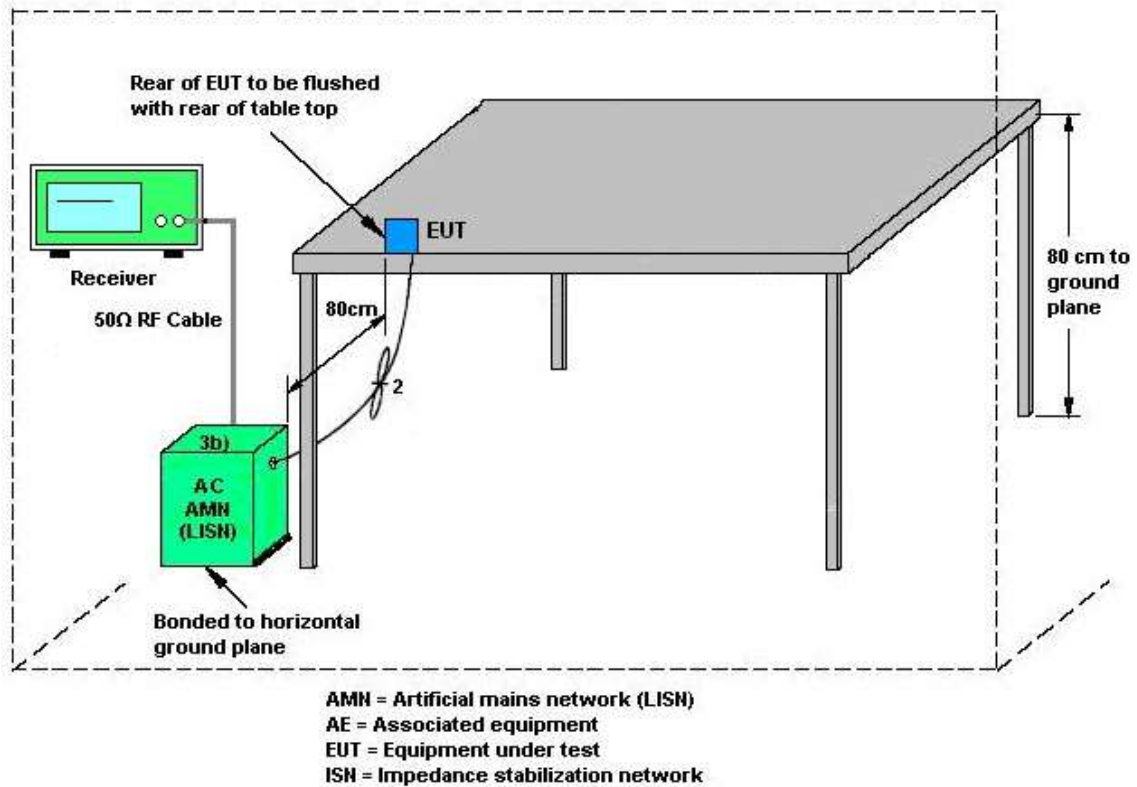
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

1. The EUT is placed 0.4 meter away from the conducting wall of the shielding room, and is kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN shall be used.
6. Both Line and Neutral shall be tested in order to find out the maximum conducted emission.
7. The frequency range from 150 kHz to 30 MHz is scanned.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

3.5.4 Test Setup



3.5.5 Test Result of AC Conducted Emission

Please refer to Appendix B.



3.6 Antenna Requirements

3.6.1 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.

3.6.2 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
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N-06	37059 & 01	30MHz~1GHz	Nov. 26, 2025	Feb. 13, 2026~ Mar. 05, 2026	Nov. 25, 2026	Radiation (03CH11-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2E	101108	9 kHz~30 MHz	Dec. 11, 2025	Feb. 13, 2026~ Mar. 05, 2026	Dec. 10, 2026	Radiation (03CH11-HY)
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-01620	1GHz~18GHz	Sep. 15, 2025	Feb. 13, 2026~ Mar. 05, 2026	Sep. 14, 2026	Radiation (03CH11-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	1224	18GHz~40GHz	Jul. 02, 2025	Feb. 13, 2026~ Mar. 05, 2026	Jul. 01, 2026	Radiation (03CH11-HY)
Amplifier	SONOMA	310N	187312	9kHz~1GHz	Dec. 06, 2025	Feb. 13, 2026~ Mar. 05, 2026	Dec. 05, 2026	Radiation (03CH11-HY)
Preamplifier	Keysight	83017A	MY53270080	1GHz~26.5GHz	Mar. 24, 2025	Feb. 13, 2026~ Mar. 05, 2026	Mar. 23, 2026	Radiation (03CH11-HY)
Preamplifier	E-INSTRUMENT TECH LTD.	ERA-100M-18 G-56-01-A70	EC1900249	1GHz~18GHz	Jan. 20, 2026	Feb. 13, 2026~ Mar. 05, 2026	Jan. 19, 2027	Radiation (03CH11-HY)
Preamplifier	EMEC	EM18G40G	060801	18GHz~40GHz	May 26, 2025	Feb. 13, 2026~ Mar. 05, 2026	May 25, 2026	Radiation (03CH11-HY)
Signal Analyzer	Keysight	N9010A	MY54200486	10Hz~44GHz	Oct. 23, 2025	Feb. 13, 2026~ Mar. 05, 2026	Oct. 22, 2026	Radiation (03CH11-HY)
EMI Test Receiver	Agilent	N9038A(MXE)	MY53290045	20Hz~8.4GHz	Apr. 21, 2025	Feb. 13, 2026~ Mar. 05, 2026	Apr. 20, 2026	Radiation (03CH11-HY)
Controller	EMEC	EM 1000	N/A	Control Turn table & Ant Mast	N/A	Feb. 13, 2026~ Mar. 05, 2026	N/A	Radiation (03CH11-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1~4m	N/A	Feb. 13, 2026~ Mar. 05, 2026	N/A	Radiation (03CH11-HY)
Turn Table	EMEC	TT 2000	N/A	0~360 Degree	N/A	Feb. 13, 2026~ Mar. 05, 2026	N/A	Radiation (03CH11-HY)
Software	Audix	E3	RK-002391	N/A	N/A	Feb. 13, 2026~ Mar. 05, 2026	N/A	Radiation (03CH11-HY)
Hygrometer	TECPEL	DTM-303B	TP210117	N/A	Oct. 02, 2025	Feb. 13, 2026~ Mar. 05, 2026	Oct. 01, 2026	Radiation (03CH11-HY)
Hygrometer	TECPEL	DTM-303B	TP200880	N/A	Aug. 26, 2025	Feb. 13, 2026~ Mar. 05, 2026	Aug. 25, 2026	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	804013/2	30M~40G	Mar. 04, 2026	Mar. 04, 2026~ Mar. 05, 2026	Mar. 03, 2027	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	803951/2	9K~30M	Mar. 04, 2026	Mar. 04, 2026~ Mar. 05, 2026	Mar. 03, 2027	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	803951/2	30M~40G	Mar. 04, 2026	Mar. 04, 2026~ Mar. 05, 2026	Mar. 03, 2027	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	805139 2	9K~30M	Mar. 04, 2026	Mar. 04, 2026~ Mar. 05, 2026	Mar. 03, 2027	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	805139 2	30M~40G	Mar. 04, 2026	Mar. 04, 2026~ Mar. 05, 2026	Mar. 03, 2027	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	804013/2	30M~40G	Mar. 05, 2025	Feb. 13, 2026~ Mar. 03, 2026	Mar. 04, 2026	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	803951/2	9K~30M	Mar. 05, 2025	Feb. 13, 2026~ Mar. 03, 2026	Mar. 04, 2026	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	803951/2	30M~40G	Mar. 05, 2025	Feb. 13, 2026~ Mar. 03, 2026	Mar. 04, 2026	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	805139 2	30M~40G	May 10, 2025	Feb. 13, 2026~ Mar. 03, 2026	May 09, 2026	Radiation (03CH11-HY)



Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Filter	Wainwright	WHKX8-5872.5-6750-18000-40SS	SN3	6.75GHz High Pass Filter	Sep. 09, 2025	Feb. 13, 2026~Mar. 05, 2026	Sep. 08, 2026	Radiation (03CH11-HY)
Filter	Wainwright	WLK4-1000-1530-8000-40SS	SN11	1.53GHz Low Pass Filter	Sep. 09, 2025	Feb. 13, 2026~Mar. 05, 2026	Sep. 08, 2026	Radiation (03CH11-HY)
AC Power Source	ACPOWER	AFC-11003G	F317040033	N/A	N/A	Mar. 06, 2026	N/A	Conduction (CO07-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	Mar. 06, 2026	N/A	Conduction (CO07-HY)
Pulse Limiter	SCHWARZBECK	VTSD 9561-FN	9561-FN00373	9kHz-200MHz	Oct. 20, 2025	Mar. 06, 2026	Oct. 19, 2026	Conduction (CO07-HY)
RF Cable	HUBER + SUHNER	RG 214/U	1358175	9kHz~30MHz	Mar. 2, 2026	Mar. 06, 2026	Mar. 1, 2027	Conduction (CO07-HY)
Two-Line V-Network	TESEQ	NNB 51	45051	N/A	Mar. 24, 2025	Mar. 06, 2026	Mar. 23, 2026	Conduction (CO07-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102317	9kHz~3.6GHz	Oct. 21, 2025	Mar. 06, 2026	Oct. 20, 2026	Conduction (CO07-HY)
Hygrometer	TECPEL	DTM-303A	TP201996	N/A	Nov. 04, 2025	Feb. 13, 2026~Mar. 11, 2026	Nov. 03, 2026	Conducted (TH05-HY)
Power Sensor	DARE	RPR3006W	17I00015SNO37 (NO:167)	10MHz~6GHz	Nov. 14, 2025	Feb. 13, 2026~Mar. 11, 2026	Nov. 13, 2026	Conducted (TH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV3044	101467	10HZ~44GHZ	Dec. 16, 2025	Feb. 13, 2026~Mar. 11, 2026	Dec. 15, 2026	Conducted (TH05-HY)
Switch Control Mainframe	E-Instument	ETF-1405-0	EC1900067 (BOX7)	N/A	Jul. 02, 2025	Feb. 13, 2026~Mar. 11, 2026	Jul. 01, 2026	Conducted (TH05-HY)
Software	Sporton	BTWIFI_Final_version_240823	N/A	Conducted Other Test Item	N/A	Feb. 13, 2026~Mar. 11, 2026	N/A	Conducted (TH05-HY)

5 Measurement Uncertainty

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.7 dB
--	--------

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	6.5 dB
--	--------

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.9 dB
--	--------

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.7 dB
--	--------

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.9 dB
--	--------

Appendix A. Test Result of Conducted Test Items

Test Engineer:	Sylvia Li	Temperature:	21~25	°C
Test Date:	2026/02/13~2026/03/11	Relative Humidity:	51~54	%

TEST RESULTS DATA
Average Power Table

FCC U-NII-1 MIMO													
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)			Pass/Fail
					Ant 2	Ant 1	SUM	Ant 2	Ant 1	Ant 2	Ant 1		
11a	6Mbps	2	36	5180	20.70	20.60	23.66	30.00		1.97			Pass
11a	6Mbps	2	44	5220	23.20	23.10	26.16	30.00		1.97			Pass
11a	6Mbps	2	48	5240	23.00	23.00	26.01	30.00		1.97			Pass
HT20	MCS0	2	36	5180	20.40	20.40	23.41	30.00		1.97			Pass
HT20	MCS0	2	44	5220	23.10	23.00	26.06	30.00		1.97			Pass
HT20	MCS0	2	48	5240	22.90	22.80	25.86	30.00		1.97			Pass
HT40	MCS0	2	38	5190	19.40	19.60	22.51	30.00		1.97			Pass
HT40	MCS0	2	46	5230	22.00	22.00	25.01	30.00		1.97			Pass
VHT20	MCS0	2	36	5180	20.30	20.30	23.31	30.00		1.97			Pass
VHT20	MCS0	2	44	5220	23.00	22.90	25.96	30.00		1.97			Pass
VHT20	MCS0	2	48	5240	22.80	22.70	25.76	30.00		1.97			Pass
VHT40	MCS0	2	38	5190	19.30	19.50	22.41	30.00		1.97			Pass
VHT40	MCS0	2	46	5230	21.90	21.90	24.91	30.00		1.97			Pass
VHT80	MCS0	2	42	5210	18.30	18.30	21.31	30.00		1.97			Pass
VHT160	MCS0	2	50	5250	18.10	18.40	21.26	30.00		1.97			Pass

TEST RESULTS DATA
26dB and 99% OBW

U-NII-1 MIMO													
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	99% Bandwidth (MHz)		26 dB Bandwidth (MHz)		IC 99% Bandwidth Power Limit (dBm)		IC 99% Bandwidth EIRP Limit (dBm)		Note
					Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	
11a	6Mbps	2	36	5180	16.64	16.59	20.70	20.10	-	-	22.20	-	
11a	6Mbps	2	44	5220	17.36	16.98	31.78	25.96	-	-	22.30	-	
11a	6Mbps	2	48	5240	17.17	17.03	26.25	26.16	-	-	22.31	-	
HT20	MCS0	2	36	5180	17.76	17.75	21.47	21.72	-	-	22.49	-	
HT20	MCS0	2	44	5220	18.24	18.02	30.99	25.87	-	-	22.56	-	
HT20	MCS0	2	48	5240	18.08	18.04	27.72	25.95	-	-	22.56	-	
HT40	MCS0	2	38	5190	36.17	36.02	41.34	40.51	-	-	23.01	-	
HT40	MCS0	2	46	5230	36.26	36.20	41.44	41.28	-	-	23.01	-	
VHT80	MCS0	2	42	5210	75.36	75.18	82.91	82.78	-	-	23.01	-	
VHT160	MCS0	2	50	5250	153.99	155.01	165.55	167.57	-	-	23.01	-	

TEST RESULTS DATA
Power Spectral Density

FCC U-NII-1 MIMO															
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Duty Factor (dB)		Average Power Density with Duty Factor (dBm/MHz)			Average PSD Limit (dBm/MHz)		DG (dBi)			Pass /Fail
					Ant 2	Ant 1	Ant 2	Ant 1	SUM	Ant 2	Ant 1	Ant 2	Ant 1		
11a	6Mbps	2	36	5180	0.23	0.23	-		11.96	17.00	4.94		-	Pass	
11a	6Mbps	2	44	5220	0.23	0.23			14.50	17.00	4.94			Pass	
11a	6Mbps	2	48	5240	0.23	0.23			14.48	17.00	4.94			Pass	
HT20	MCS0	2	36	5180	0.36	0.39			11.41	17.00	4.94			Pass	
HT20	MCS0	2	44	5220	0.36	0.39			14.09	17.00	4.94			Pass	
HT20	MCS0	2	48	5240	0.36	0.39			14.04	17.00	4.94			Pass	
HT40	MCS0	2	38	5190	0.38	0.38			7.52	17.00	4.94			Pass	
HT40	MCS0	2	46	5230	0.38	0.38			10.19	17.00	4.94			Pass	
VHT80	MCS0	2	42	5210	0.35	0.36			3.28	17.00	4.94			Pass	
VHT160	MCS0	2	50	5250	0.38	0.37			0.39	17.00	4.94			Pass	

TEST RESULTS DATA
Average Power Table

FCC U-NII-2A MIMO													
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
					Ant 2	Ant 1	SUM	Ant 2	Ant 1	Ant 2	Ant 1		
11a	6Mbps	2	52	5260	19.00	19.60	22.32	23.98		1.87		30	Pass
11a	6Mbps	2	60	5300	19.00	19.60	22.32	23.98		1.87		30	Pass
11a	6Mbps	2	64	5320	18.80	19.60	22.23	23.98		1.87		30	Pass
HT20	MCS0	2	52	5260	19.30	19.70	22.51	23.98		1.87		30	Pass
HT20	MCS0	2	60	5300	19.30	19.70	22.51	23.98		1.87		30	Pass
HT20	MCS0	2	64	5320	19.30	19.90	22.62	23.98		1.87		30	Pass
HT40	MCS0	2	54	5270	20.50	20.70	23.61	23.98		1.87		30	Pass
HT40	MCS0	2	62	5310	19.50	20.00	22.77	23.98		1.87		30	Pass
VHT20	MCS0	2	52	5260	19.20	19.60	22.41	23.98		1.87		30	Pass
VHT20	MCS0	2	60	5300	19.20	19.60	22.41	23.98		1.87		30	Pass
VHT20	MCS0	2	64	5320	19.20	19.80	22.52	23.98		1.87		30	Pass
VHT40	MCS0	2	54	5270	20.40	20.60	23.51	23.98		1.87		30	Pass
VHT40	MCS0	2	62	5310	19.40	19.90	22.67	23.98		1.87		30	Pass
VHT80	MCS0	2	58	5290	18.10	18.40	21.26	23.98		1.87		30	Pass

TEST RESULTS DATA
26dB and 99% OBW

U-NII-2A MIMO															
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	99% Bandwidth (MHz)		26 dB Bandwidth (MHz)		IC 99% Bandwidth Power Limit (dBm)		IC 99% Bandwidth EIRP Limit (dBm)		FCC 26dB Bandwidth Power Limit (dBm)		Note
					Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	
11a	6Mbps	2	52	5260	16.67	16.60	21.36	20.12	23.20		29.20		23.98		-
11a	6Mbps	2	60	5300	16.67	16.60	20.21	20.36	23.20		29.20		23.98		
11a	6Mbps	2	64	5320	16.64	16.60	20.22	20.27	23.20		29.20		23.98		
HT20	MCS0	2	52	5260	17.77	17.73	21.71	21.43	23.49		29.49		23.98		
HT20	MCS0	2	60	5300	17.75	17.75	21.27	21.51	23.49		29.49		23.98		
HT20	MCS0	2	64	5320	17.73	17.73	20.94	21.39	23.49		29.49		23.98		
HT40	MCS0	2	54	5270	36.20	36.05	40.93	40.58	23.98		30.00		23.98		
HT40	MCS0	2	62	5310	36.19	36.05	40.80	40.64	23.98		30.00		23.98		
VHT80	MCS0	2	58	5290	75.37	75.20	83.17	83.07	23.98		30.00		23.98		

TEST RESULTS DATA
Power Spectral Density

U-NII-2A MIMO															
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Duty Factor (dB)		Average Power Density with Duty Factor (dBm/MHz)			Average PSD Limit (dBm/MHz)		DG (dBi)			Pass /Fail
					Ant 2	Ant 1	Ant 2	Ant 1	SUM	Ant 2	Ant 1	Ant 2	Ant 1		
11a	6Mbps	2	52	5260	0.23	0.23	-		10.61	11.00	4.85		-	Pass	
11a	6Mbps	2	60	5300	0.23	0.23			10.67	11.00	4.85			Pass	
11a	6Mbps	2	64	5320	0.23	0.23			10.80	11.00	4.85			Pass	
HT20	MCS0	2	52	5260	0.36	0.39			10.69	11.00	4.85			Pass	
HT20	MCS0	2	60	5300	0.36	0.39			10.63	11.00	4.85			Pass	
HT20	MCS0	2	64	5320	0.36	0.39			10.73	11.00	4.85			Pass	
HT40	MCS0	2	54	5270	0.38	0.38			8.78	11.00	4.85			Pass	
HT40	MCS0	2	62	5310	0.38	0.38			7.94	11.00	4.85			Pass	
VHT80	MCS0	2	58	5290	0.35	0.36			3.30	11.00	4.85			Pass	

TEST RESULTS DATA
Average Power Table

FCC U-NII-2C MIMO													
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
					Ant 2	Ant 1	SUM	Ant 2	Ant 1	Ant 2	Ant 1		
11a	6Mbps	2	100	5500	19.00	19.60	22.32	23.98		2.24		30	Pass
11a	6Mbps	2	116	5580	18.80	19.20	22.01	23.98		2.24		30	Pass
11a	6Mbps	2	140	5700	19.40	19.80	22.61	23.98		2.24		30	Pass
HT20	MCS0	2	100	5500	19.40	19.70	22.56	23.98		2.24		30	Pass
HT20	MCS0	2	116	5580	19.20	19.30	22.26	23.98		2.24		30	Pass
HT20	MCS0	2	140	5700	19.70	19.90	22.81	23.98		2.24		30	Pass
HT40	MCS0	2	102	5510	20.70	20.80	23.76	23.98		2.24		30	Pass
HT40	MCS0	2	110	5550	20.60	21.00	23.81	23.98		2.24		30	Pass
HT40	MCS0	2	134	5670	20.70	20.40	23.56	23.98		2.24		30	Pass
VHT20	MCS0	2	100	5500	19.30	19.60	22.46	23.98		2.24		30	Pass
VHT20	MCS0	2	116	5580	19.10	19.20	22.16	23.98		2.24		30	Pass
VHT20	MCS0	2	140	5700	19.60	19.80	22.71	23.98		2.24		30	Pass
VHT40	MCS0	2	102	5510	20.60	20.70	23.66	23.98		2.24		30	Pass
VHT40	MCS0	2	110	5550	20.50	20.90	23.71	23.98		2.24		30	Pass
VHT40	MCS0	2	134	5670	20.60	20.30	23.46	23.98		2.24		30	Pass
VHT80	MCS0	2	106	5530	19.60	19.80	22.71	23.98		2.24		30	Pass
VHT80	MCS0	2	122	5610	20.80	21.00	23.91	23.98		2.24		30	Pass
VHT160	MCS0	2	114	5570	18.20	18.50	21.36	23.98		2.24		30	Pass

FCC U-NII-2C straddle channel MIMO													
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
					Ant 2	Ant 1	SUM	Ant 2	Ant 1	Ant 2	Ant 1		
11a	6Mbps	2	144	5720	19.30	19.40	22.36	23.98		2.24		30	Pass
HT20	MCS0	2	144	5720	19.90	20.00	22.96	23.98		2.24		30	Pass
HT40	MCS0	2	142	5710	20.60	20.90	23.76	23.98		2.24		30	Pass
VHT20	MCS0	2	144	5720	19.80	19.90	22.86	23.98		2.24		30	Pass
VHT40	MCS0	2	142	5710	20.50	20.80	23.66	23.98		2.24		30	Pass
VHT80	MCS0	2	138	5690	20.80	20.80	23.81	23.98		2.24		30	Pass

TEST RESULTS DATA
26dB and 99% OBW

U-NII-2C MIMO																
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	99% Bandwidth In U-NII 2C (MHz)		26 dB Bandwidth In U-NII 2C (MHz)		IC 99% Bandwidth Power Limit (dBm)		IC 99% Bandwidth EIRP Limit (dBm)		FCC 26dB Bandwidth Power Limit (dBm)		6 dB Bandwidth for Straddle Channel (MHz)	
					Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1
11a	6Mbps	2	100	5500	16.67	16.60	20.67	20.14	23.20		29.20		23.98		----	----
11a	6Mbps	2	116	5580	16.68	16.62	20.84	20.23	23.21		29.21		23.98		----	----
11a	6Mbps	2	140	5700	16.67	16.59	20.83	20.06	23.20		29.20		23.98		----	----
HT20	MCS0	2	100	5500	17.79	17.75	21.54	21.30	23.49		29.49		23.98		----	----
HT20	MCS0	2	116	5580	17.78	17.74	21.34	21.38	23.49		29.49		23.98		----	----
HT20	MCS0	2	140	5700	17.85	17.77	21.38	21.18	23.50		29.50		23.98		----	----
HT40	MCS0	2	102	5510	36.20	36.11	41.01	40.69	23.98		30.00		23.98		----	----
HT40	MCS0	2	110	5550	36.20	36.04	40.91	40.62	23.98		30.00		23.98		----	----
HT40	MCS0	2	134	5670	36.13	36.09	41.02	40.70	23.98		30.00		23.98		----	----
VHT80	MCS0	2	106	5530	75.48	75.16	83.52	82.82	23.98		30.00		23.98		----	----
VHT80	MCS0	2	122	5610	75.56	75.22	83.58	83.30	23.98		30.00		23.98		----	----
VHT160	MCS0	2	114	5570	154.23	154.90	165.31	166.85	23.98		30.00		23.98		----	----

U-NII-2C straddle channel MIMO																
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	99% Bandwidth In U-NII 2C (MHz)		26 dB Bandwidth In U-NII 2C (MHz)		IC 99% Bandwidth Power Limit (dBm)		IC 99% Bandwidth EIRP Limit (dBm)		FCC 26dB Bandwidth Power Limit (dBm)		6 dB Bandwidth for Straddle Channel (MHz)	
					Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1
11a	6Mbps	2	144	5720	13.34	13.32	15.81	15.34	23.20		29.20		23.98		2.775	2.575
HT20	MCS0	2	144	5720	13.85	13.92	15.58	15.58	23.49		29.49		23.98		3.445	3.145
HT40	MCS0	2	142	5710	33.04	33.13	35.34	35.51	23.98		30.00		23.98		3.162	2.523
VHT80	MCS0	2	138	5690	72.63	72.73	76.44	76.82	23.98		30.00		23.98		2.536	2.568
6dB Bandwidth Limit ≥ 500kHz															Pass	

TEST RESULTS DATA
Power Spectral Density

U-NII-2C MIMO															
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Duty Factor (dB)		Average Power Density with Duty Factor (dBm/MHz)			Average PSD Limit (dBm/MHz)		DG (dBi)			Pass /Fail
					Ant 2	Ant 1	Ant 2	Ant 1	SUM	Ant 2	Ant 1	Ant 2	Ant 1		
11a	6Mbps	2	100	5500	0.23	0.23	-		10.83	11.00	5.25	-		Pass	
11a	6Mbps	2	116	5580	0.23	0.23			10.64	11.00	5.25			Pass	
11a	6Mbps	2	140	5700	0.23	0.23			10.94	11.00	5.25			Pass	
HT20	MCS0	2	100	5500	0.36	0.39			10.74	11.00	5.25			Pass	
HT20	MCS0	2	116	5580	0.36	0.39			10.59	11.00	5.25			Pass	
HT20	MCS0	2	140	5700	0.36	0.39			10.99	11.00	5.25			Pass	
HT40	MCS0	2	102	5510	0.38	0.38			8.92	11.00	5.25			Pass	
HT40	MCS0	2	110	5550	0.38	0.38			8.69	11.00	5.25			Pass	
HT40	MCS0	2	134	5670	0.38	0.38			8.96	11.00	5.25			Pass	
VHT80	MCS0	2	106	5530	0.35	0.36			4.67	11.00	5.25			Pass	
VHT80	MCS0	2	122	5610	0.35	0.36			5.96	11.00	5.25			Pass	
VHT160	MCS0	2	114	5570	0.38	0.37			0.36	11.00	5.25			Pass	

U-NII-2C straddle channel MIMO														
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Duty Factor (dB)		Average Power Density (dBm/MHz)			Average PSD Limit (dBm/MHz)		DG (dBi)		Pass /Fail
					Ant 2	Ant 1	Ant 2	Ant 1	SUM	Ant 2	Ant 1	Ant 2	Ant 1	
11a	6Mbps	2	144	5720	0.23	0.23	-		10.54	11.00	5.25		-	Pass
HT20	MCS0	2	144	5720	0.36	0.39			10.98	11.00	5.25			Pass
HT40	MCS0	2	142	5710	0.38	0.38			8.67	11.00	5.25			Pass
VHT80	MCS0	2	138	5690	0.35	0.36			5.97	11.00	5.25			Pass

TEST RESULTS DATA
Average Power Table

FCC U-NII-1 MIMO														
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	RU Config	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)			Pass/Fail
						Ant 2	Ant 1	SUM	Ant 2	Ant 1	Ant 2	Ant 1		
HE20	MCS0	2	36	5180	Full	20.60	20.50	23.56	30.00		1.97			Pass
HE20	MCS0	2	44	5220	Full	23.10	23.00	26.06	30.00		1.97			Pass
HE20	MCS0	2	48	5240	Full	22.90	22.90	25.91	30.00		1.97			Pass
HE40	MCS0	2	38	5190	Full	18.80	19.00	21.91	30.00		1.97		-	Pass
HE40	MCS0	2	46	5230	Full	21.50	21.50	24.51	30.00		1.97			Pass
HE80	MCS0	2	42	5210	Full	18.20	18.20	21.21	30.00		1.97			Pass
HE160	MCS0	2	50	5250	Full	17.70	17.80	20.76	30.00		1.97			Pass

TEST RESULTS DATA
26dB and 99% OBW

U-NII-1 MIMO														
Mod.	Data Rate	N _{rx}	CH.	Freq. (MHz)	RU Config	99% Bandwidth (MHz)		26 dB Bandwidth (MHz)		IC 99% Bandwidth Power Limit (dBm)		IC 99% Bandwidth EIRP Limit (dBm)		Note
						Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	
HE20	MCS0	2	36	5180	Full	18.99	18.99	21.50	21.75	-	-	22.78	-	-
HE20	MCS0	2	44	5220	Full	19.27	19.20	31.44	26.13	-	-	22.83	-	
HE20	MCS0	2	48	5240	Full	19.19	19.20	29.30	30.02	-	-	22.83	-	
HE40	MCS0	2	38	5190	Full	37.85	37.72	41.71	41.06	-	-	23.01	-	
HE40	MCS0	2	46	5230	Full	37.99	37.88	47.09	41.26	-	-	23.01	-	
HE80	MCS0	2	42	5210	Full	77.30	77.11	84.32	84.22	-	-	23.01	-	
HE160	MCS0	2	50	5250	Full	155.53	156.65	164.78	167.28	-	-	23.01	-	

TEST RESULTS DATA
Power Spectral Density

FCC U-NII-1 MIMO																
Mod.	Data Rate	N _{rx}	CH.	Freq. (MHz)	RU Config	Duty Factor (dB)		Average Power Density with Duty Factor (dBm/MHz)			Average PSD Limit (dBm/MHz)		DG (dBi)			Pass /Fail
						Ant 2	Ant 1	Ant 2	Ant 1	SUM	Ant 2	Ant 1	Ant 2	Ant 1		
HE20	MCS0	2	36	5180	Full	0.34	0.37	-			11.25	17.00		4.94	-	Pass
HE20	MCS0	2	44	5220	Full	0.34	0.37				13.73	17.00		4.94		Pass
HE20	MCS0	2	48	5240	Full	0.34	0.37				13.75	17.00		4.94		Pass
HE40	MCS0	2	38	5190	Full	0.33	0.35				6.77	17.00		4.94		Pass
HE40	MCS0	2	46	5230	Full	0.33	0.35				9.60	17.00		4.94		Pass
HE80	MCS0	2	42	5210	Full	0.37	0.36				3.19	17.00		4.94		Pass
HE160	MCS0	2	50	5250	Full	0.36	0.38				-0.23	17.00		4.94		Pass

TEST RESULTS DATA
Average Power Table

FCC U-NII-2A MIMO														
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	RU Config	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
						Ant 2	Ant 1	SUM	Ant 2	Ant 1	Ant 2	Ant 1		
HE20	MCS0	2	52	5260	Full	19.70	20.00	22.86	23.98		1.87		30	Pass
HE20	MCS0	2	60	5300	Full	19.70	19.90	22.81	23.98		1.87		30	Pass
HE20	MCS0	2	64	5320	Full	19.50	20.10	22.82	23.98		1.87		30	Pass
HE40	MCS0	2	54	5270	Full	20.60	20.80	23.71	23.98		1.87		30	Pass
HE40	MCS0	2	62	5310	Full	19.20	19.80	22.52	23.98		1.87		30	Pass
HE80	MCS0	2	58	5290	Full	18.00	18.30	21.16	23.98		1.87		30	Pass

TEST RESULTS DATA
26dB and 99% OBW

U-NII-2A MIMO																
Mod.	Data Rate	N _{Tx}	CH.	Freq. (MHz)	RU Config	99% Bandwidth (MHz)		26 dB Bandwidth (MHz)		IC 99% Bandwidth Power Limit (dBm)		IC 99% Bandwidth EIRP Limit (dBm)		FCC 26dB Bandwidth Power Limit (dBm)		Note
						Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	
HE20	MCS0	2	52	5260	Full	18.99	18.96	21.71	22.00	23.78		29.78		23.98		
HE20	MCS0	2	60	5300	Full	18.95	18.99	21.90	21.60	23.78		29.78		23.98		
HE20	MCS0	2	64	5320	Full	18.97	18.97	22.04	21.85	23.78		29.78		23.98		
HE40	MCS0	2	54	5270	Full	37.87	37.76	41.38	41.26	23.98		30.00		23.98		
HE40	MCS0	2	62	5310	Full	37.88	37.70	41.82	41.23	23.98		30.00		23.98		
HE80	MCS0	2	58	5290	Full	77.30	77.09	84.48	84.45	23.98		30.00		23.98		

TEST RESULTS DATA
Power Spectral Density

U-NII-2A MIMO															
Mod.	Data Rate	N _{rx}	CH.	Freq. (MHz)	RU Config	Duty Factor (dB)		Average Power Density with Duty Factor (dBm/MHz)			Average PSD Limit (dBm/MHz)		DG (dBi)		Pass /Fail
						Ant 2	Ant 1	Ant 2	Ant 1	SUM	Ant 2	Ant 1	Ant 2	Ant 1	
HE20	MCS0	2	52	5260	Full	0.34	0.37	-		10.74	11.00	4.85		-	Pass
HE20	MCS0	2	60	5300	Full	0.34	0.37			10.51	11.00	4.85			Pass
HE20	MCS0	2	64	5320	Full	0.34	0.37			10.58	11.00	4.85			Pass
HE40	MCS0	2	54	5270	Full	0.33	0.35			8.55	11.00	4.85			Pass
HE40	MCS0	2	62	5310	Full	0.33	0.35			7.30	11.00	4.85			Pass
HE80	MCS0	2	58	5290	Full	0.37	0.36			3.13	11.00	4.85			Pass

TEST RESULTS DATA
Average Power Table

FCC U-NII-2C MIMO														
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	RU Config	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
						Ant 2	Ant 1	SUM	Ant 2	Ant 1	Ant 2	Ant 1		
HE20	MCS0	2	100	5500	Full	19.80	20.30	23.07	23.98		2.24		30	Pass
HE20	MCS0	2	116	5580	Full	19.70	20.00	22.86	23.98		2.24		30	Pass
HE20	MCS0	2	140	5700	Full	19.80	20.10	22.96	23.98		2.24		30	Pass
HE40	MCS0	2	102	5510	Full	19.80	20.10	22.96	23.98		2.24		30	Pass
HE40	MCS0	2	110	5550	Full	20.20	20.70	23.47	23.98		2.24		30	Pass
HE40	MCS0	2	134	5670	Full	19.20	19.00	22.11	23.98		2.24		30	Pass
HE80	MCS0	2	106	5530	Full	19.50	19.70	22.61	23.98		2.24		30	Pass
HE80	MCS0	2	122	5610	Full	20.90	21.00	23.96	23.98		2.24		30	Pass
HE160	MCS0	2	114	5570	Full	18.90	19.00	21.96	23.98		2.24		30	Pass

FCC U-NII-2C straddle channel MIMO														
Mod.	Data Rate	N _{Tx}	CH.	Freq. (MHz)	RU Config	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
						Ant 2	Ant 1	SUM	Ant 2	Ant 1	Ant 2	Ant 1		
HE20	MCS0	2	144	5720	Full	20.10	20.30	23.21	23.98		2.24		30	Pass
HE40	MCS0	2	142	5710	Full	20.40	20.70	23.56	23.98		2.24		30	Pass
HE80	MCS0	2	138	5690	Full	20.70	20.80	23.76	23.98		2.24		30	Pass

TEST RESULTS DATA
26dB and 99% OBW

U-NII-2C MIMO																	
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	RU Config	99% Bandwidth In U-NII 2C (MHz)		26 dB Bandwidth In U-NII 2C (MHz)		IC 99% Bandwidth Power Limit (dBm)		IC 99% Bandwidth EIRP Limit (dBm)		FCC 26dB Bandwidth Power Limit (dBm)		6 dB Bandwidth for Straddle Channel (MHz)	
						Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1
HE20	MCS0	2	100	5500	Full	19.00	18.98	21.43	22.02	23.78		29.78		23.98		----	----
HE20	MCS0	2	116	5580	Full	19.00	18.97	21.78	21.66	23.78		29.78		23.98		----	----
HE20	MCS0	2	140	5700	Full	19.05	19.01	21.87	21.94	23.79		29.79		23.98		----	----
HE40	MCS0	2	102	5510	Full	37.87	37.75	41.46	41.86	23.98		30.00		23.98		----	----
HE40	MCS0	2	110	5550	Full	37.86	37.70	41.46	41.38	23.98		30.00		23.98		----	----
HE40	MCS0	2	134	5670	Full	37.81	37.67	41.54	41.57	23.98		30.00		23.98		----	----
HE80	MCS0	2	106	5530	Full	77.38	77.09	84.29	84.00	23.98		30.00		23.98		----	----
HE80	MCS0	2	122	5610	Full	77.47	77.14	84.38	84.10	23.98		30.00		23.98		----	----
HE160	MCS0	2	114	5570	Full	155.85	156.55	165.26	166.32	23.98		30.00		23.98		----	----

U-NII-2C straddle channel MIMO																	
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	RU Config	99% Bandwidth In U-NII 2C (MHz)		26 dB Bandwidth In U-NII 2C (MHz)		IC 99% Bandwidth Power Limit (dBm)		IC 99% Bandwidth EIRP Limit (dBm)		FCC 26dB Bandwidth Power Limit (dBm)		6 dB Bandwidth for Straddle Channel (MHz)	
						Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1
HE20	MCS0	2	144	5720	Full	14.50	14.54	15.89	15.98	23.79		29.79		23.98		4.425	3.735
HE40	MCS0	2	142	5710	Full	33.92	33.98	35.66	35.83	23.98		30.00		23.98		3.99	2.541
HE80	MCS0	2	138	5690	Full	73.57	73.72	77.02	77.50	23.98		30.00		23.98		3.752	1.32
6dB Bandwidth Limit ≥ 500kHz																Pass	

TEST RESULTS DATA
Power Spectral Density

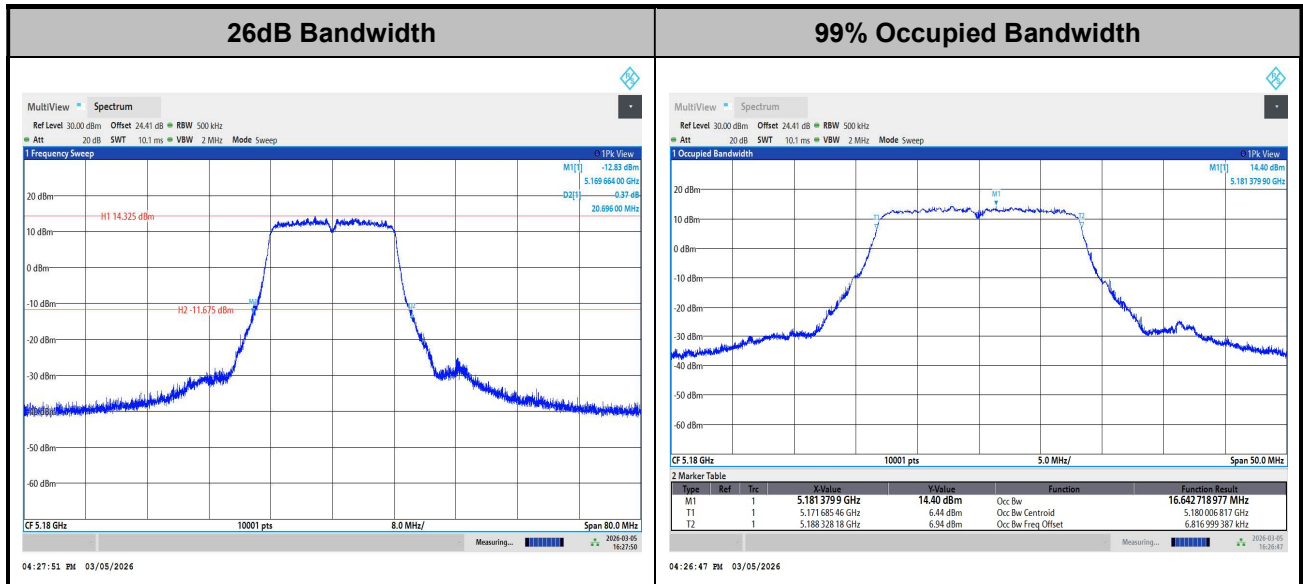
U-NII-2C MIMO															
Mod.	Data Rate	N _{Tx}	CH.	Freq. (MHz)	RU Config	Duty Factor (dB)		Average Power Density with Duty Factor (dBm/MHz)			Average PSD Limit (dBm/MHz)		DG (dBi)		Pass /Fail
						Ant 2	Ant 1	Ant 2	Ant 1	SUM	Ant 2	Ant 1	Ant 2	Ant 1	
HE20	MCS0	2	100	5500	Full	0.34	0.37	-		10.98	11.00	5.25		Pass	
HE20	MCS0	2	116	5580	Full	0.34	0.37			10.91	11.00	5.25		Pass	
HE20	MCS0	2	140	5700	Full	0.34	0.37			10.90	11.00	5.25		Pass	
HE40	MCS0	2	102	5510	Full	0.33	0.35			7.97	11.00	5.25		Pass	
HE40	MCS0	2	110	5550	Full	0.33	0.35			8.05	11.00	5.25		Pass	
HE40	MCS0	2	134	5670	Full	0.33	0.35			7.29	11.00	5.25		Pass	
HE80	MCS0	2	106	5530	Full	0.37	0.36			4.61	11.00	5.25		Pass	
HE80	MCS0	2	122	5610	Full	0.37	0.36			6.00	11.00	5.25		Pass	
HE160	MCS0	2	114	5570	Full	0.36	0.38			0.70	11.00	5.25		Pass	

U-NII-2C straddle channel MIMO																
Mod.	Data Rate	N _{rx}	CH.	Freq. (MHz)	RU Config	Duty Factor (dB)		Average Power Density (dBm/MHz)			Average PSD Limit (dBm/MHz)		DG (dBi)		Pass /Fail	
						Ant 2	Ant 1	Ant 2	Ant 1	SUM	Ant 2	Ant 1	Ant 2	Ant 1		
HE20	MCS0	2	144	5720	Full	0.34	0.37	-			10.97	11.00	5.25		-	Pass
HE40	MCS0	2	142	5710	Full	0.33	0.35				8.13	11.00	5.25			Pass
HE80	MCS0	2	138	5690	Full	0.37	0.36				5.94	11.00	5.25			Pass

**Test Result of 26dB & 99% Occupied Bandwidth**

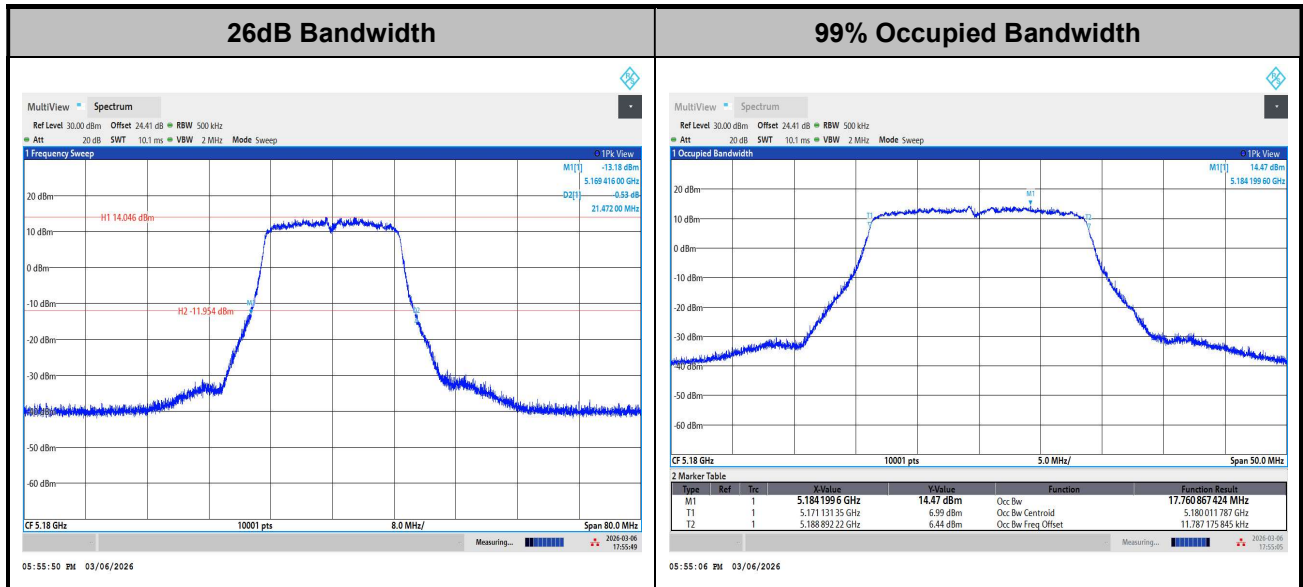
MIMO <Ant. 2+1>

<802.11a>



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

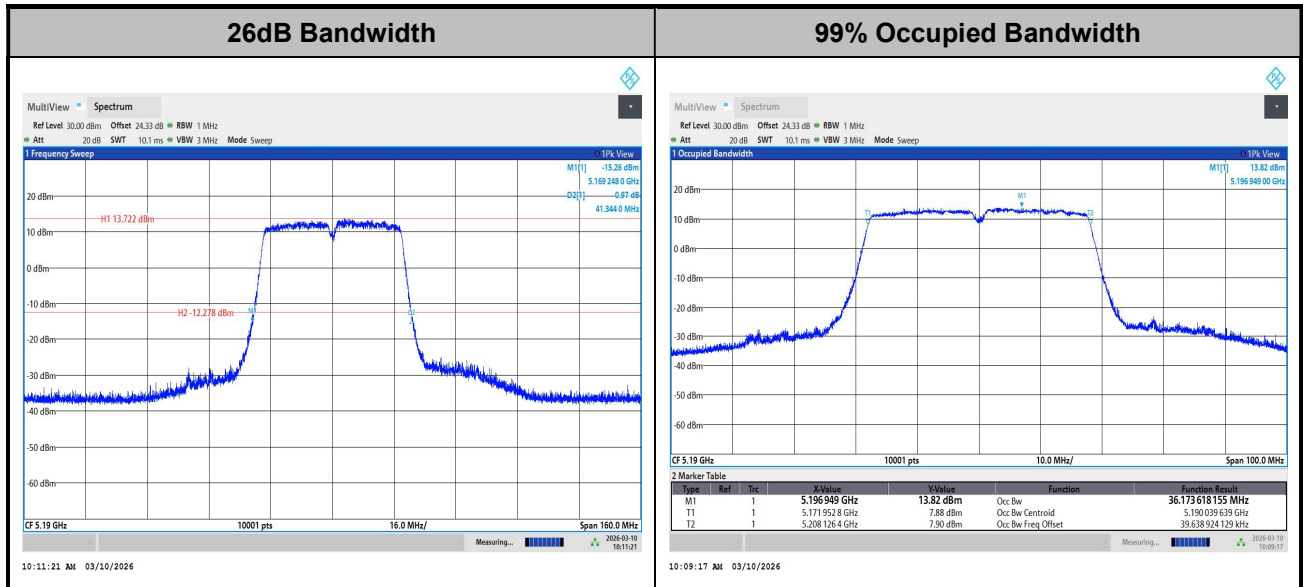
<802.11n HT20>



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



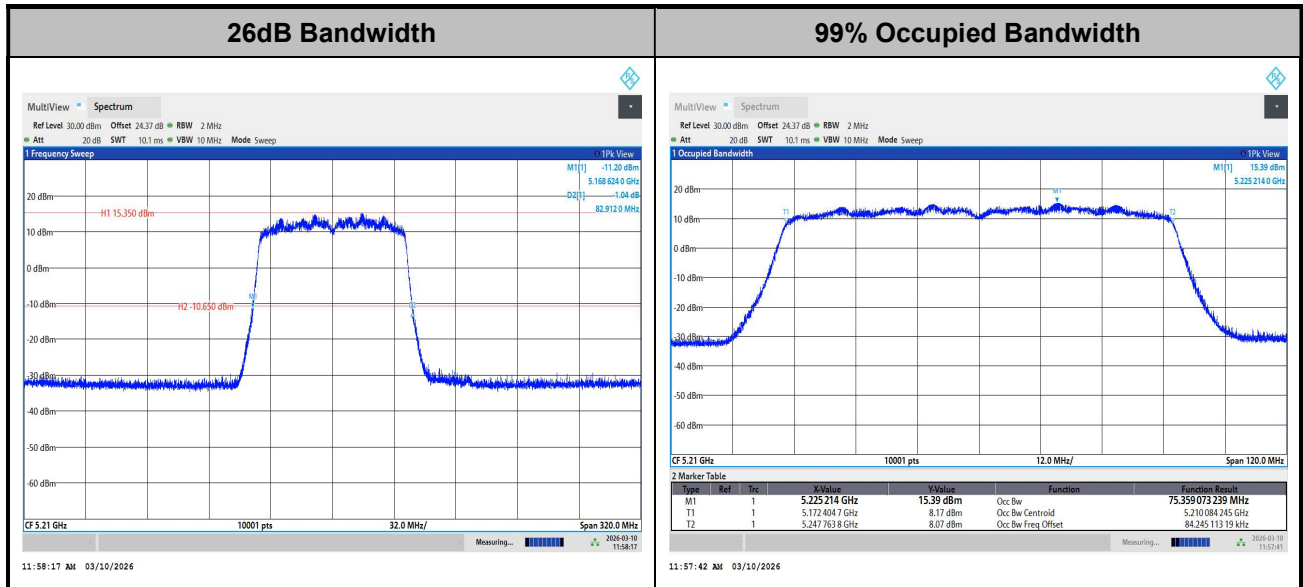
<802.11n HT40>



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



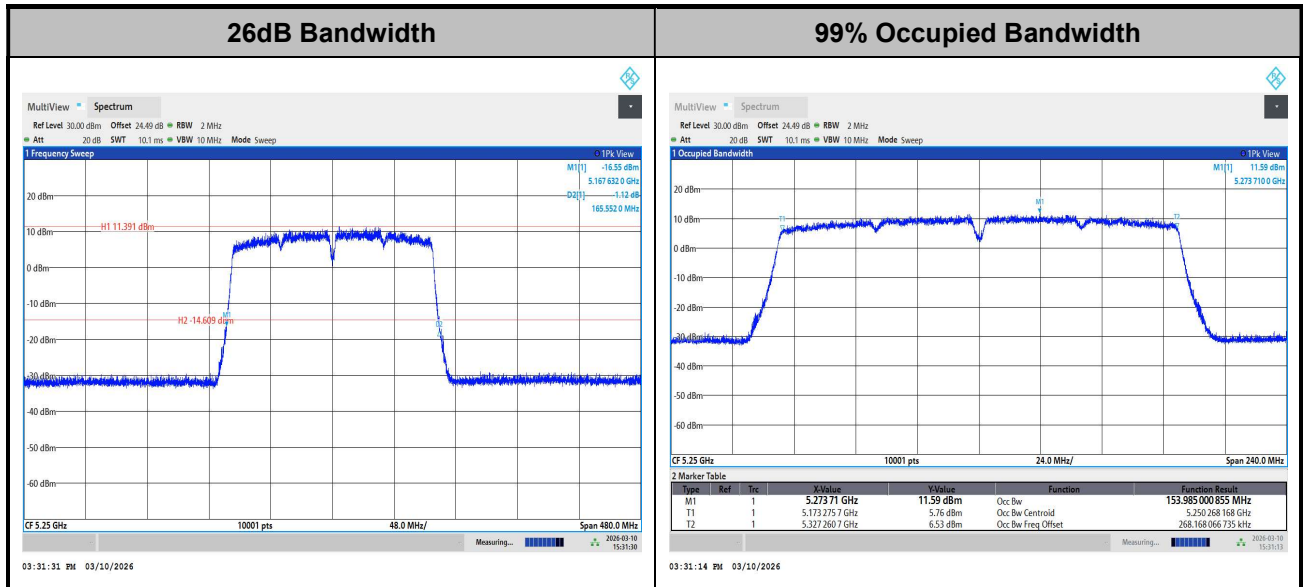
<802.11ac VHT80>



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



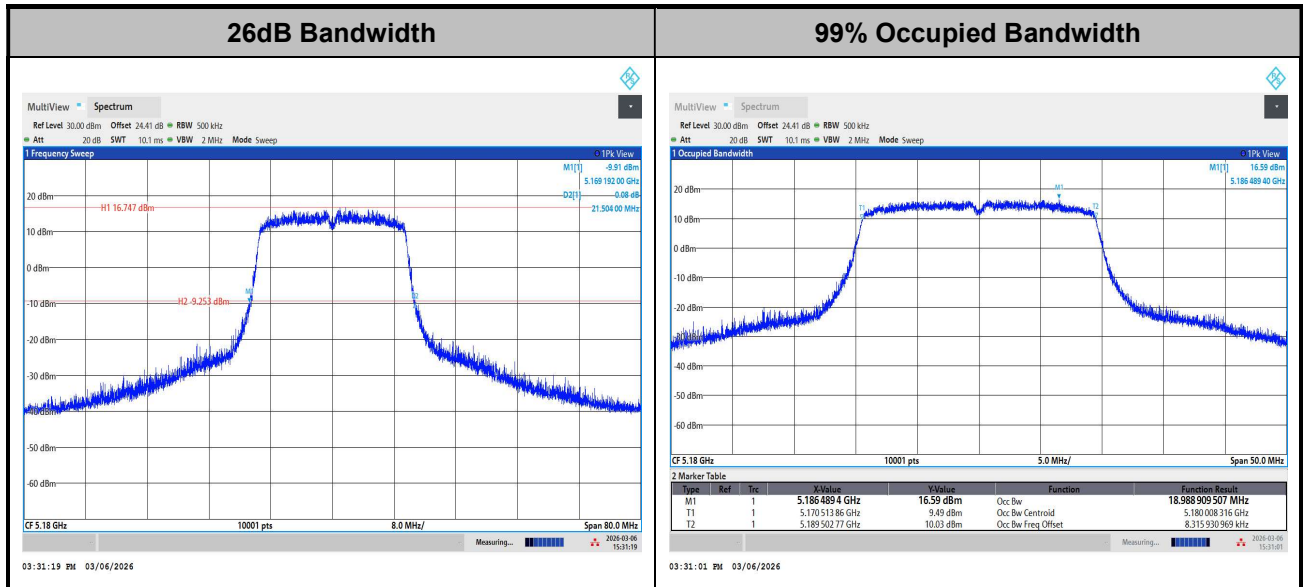
<802.11ac VHT160>



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



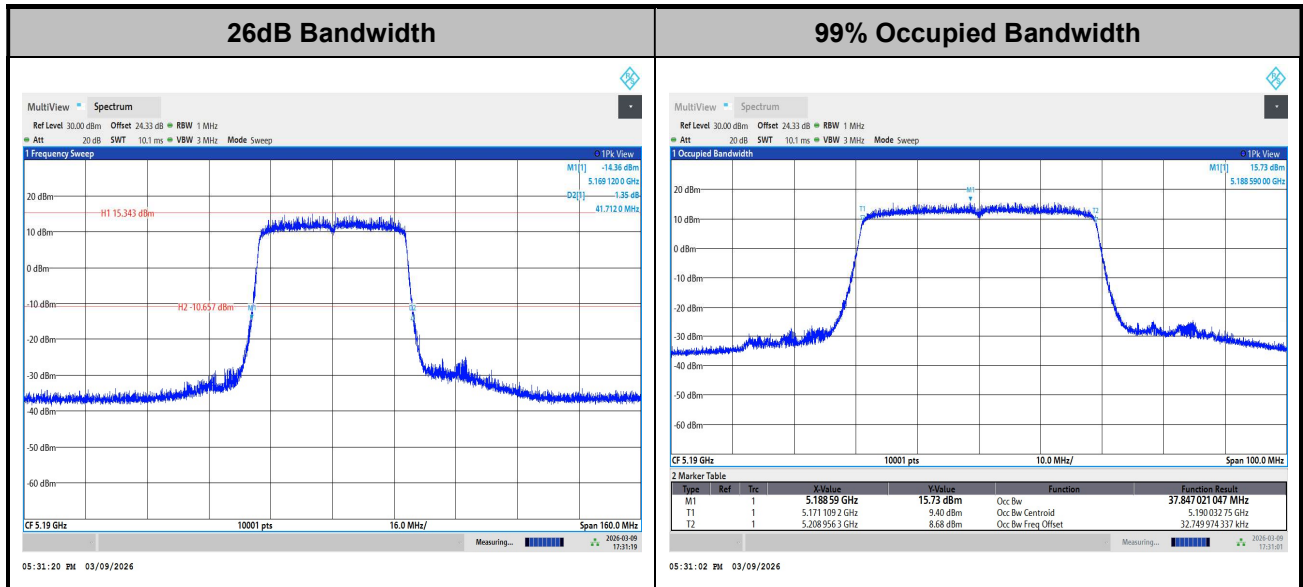
<802.11ax HE20>



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



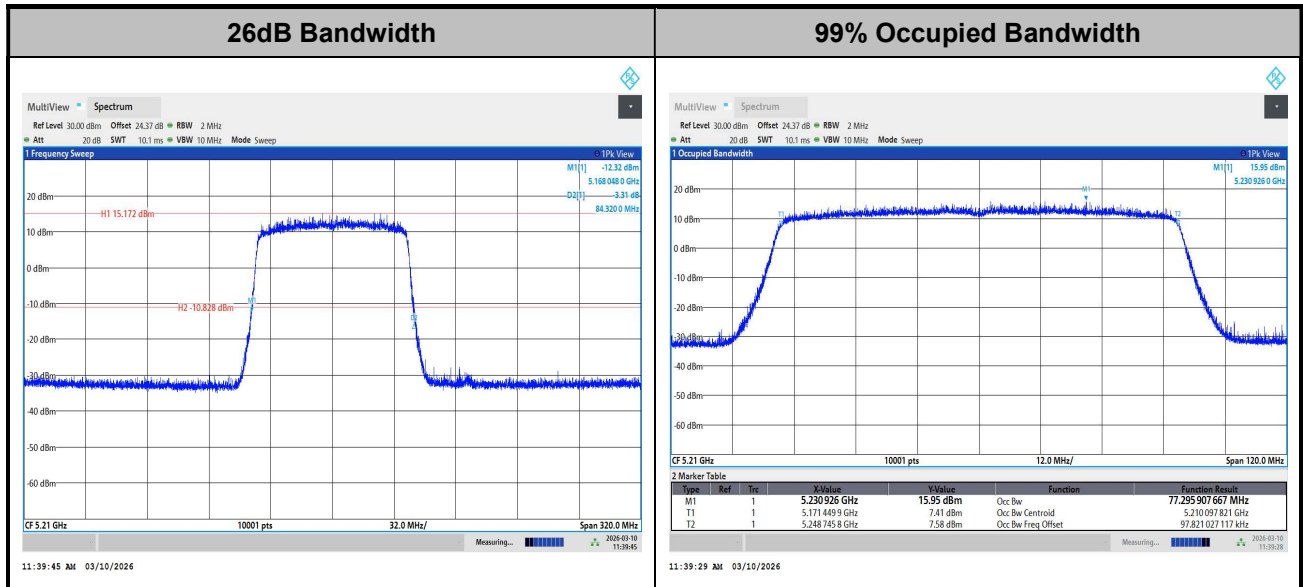
<802.11ax HE40>



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



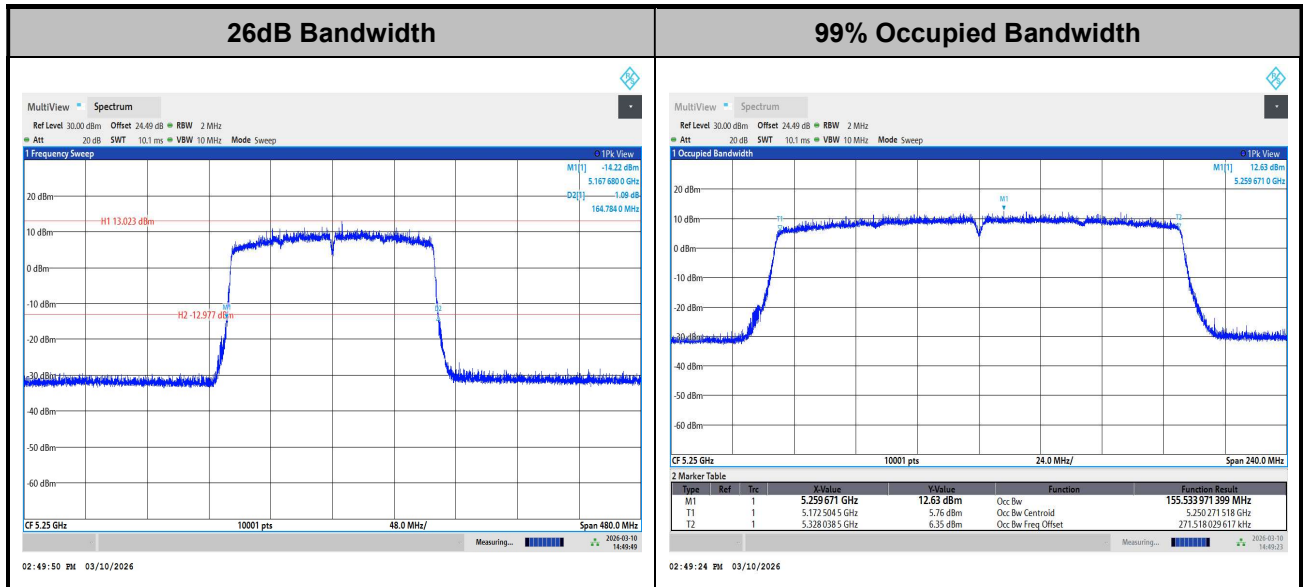
<802.11ax HE80>



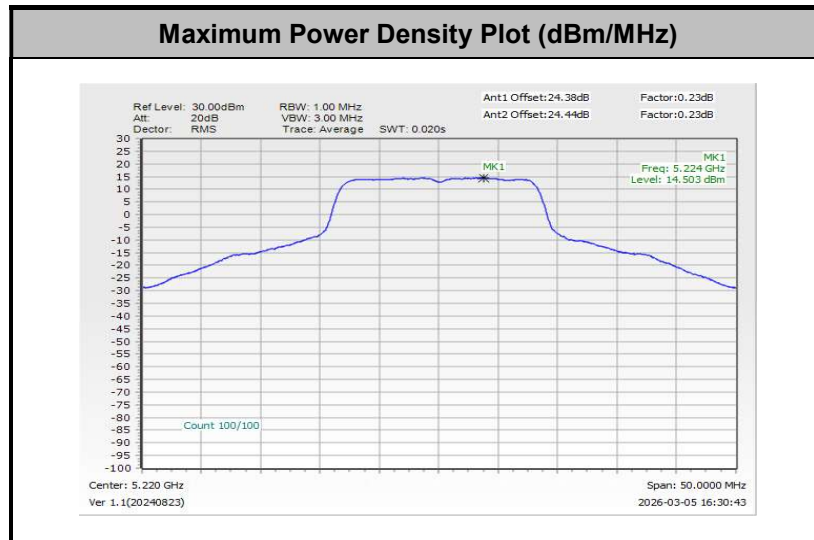
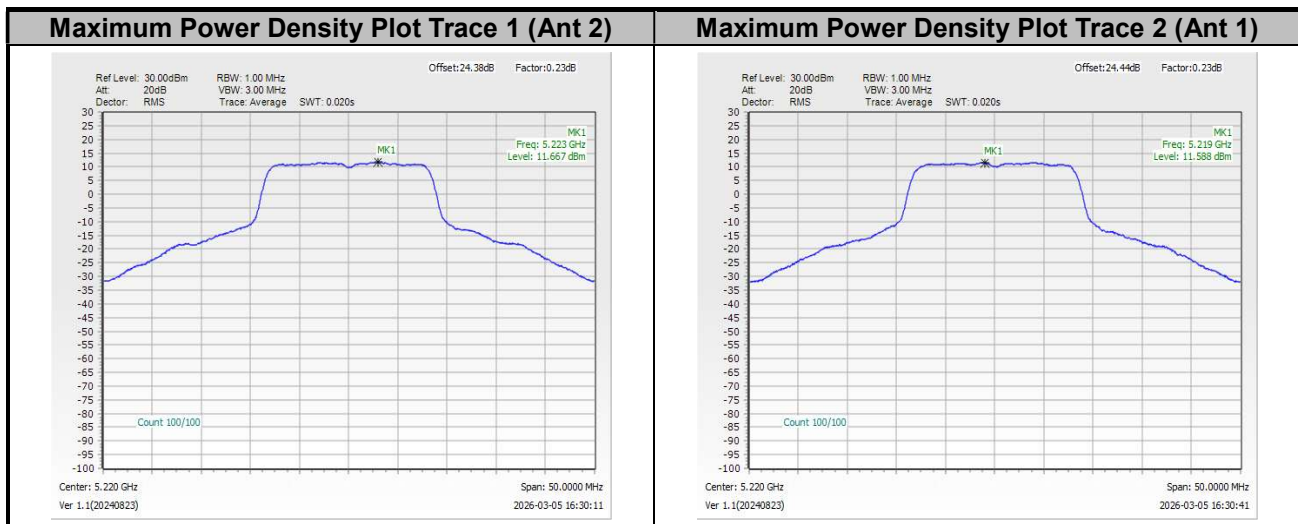
Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.



<802.11ax HE160>

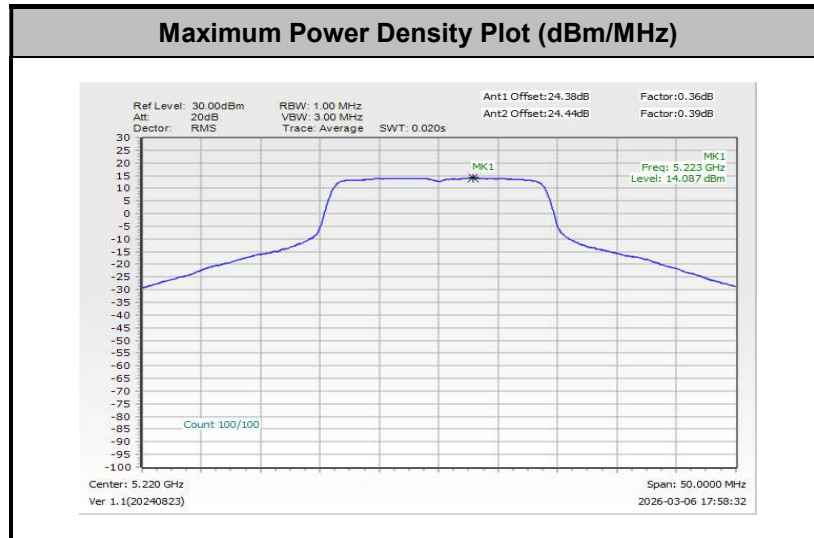


Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

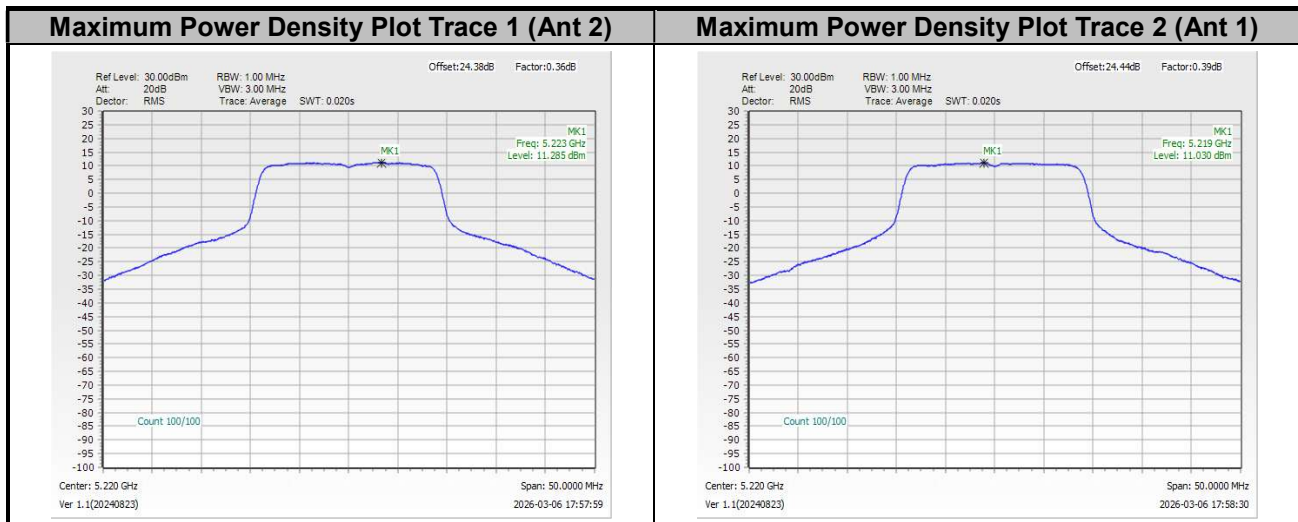
Test Result of Power Spectral Density
<802.11a>

Remark: The test plot is showing a bin by bin combined result mathematically adds two traces.




<802.11n HT20>

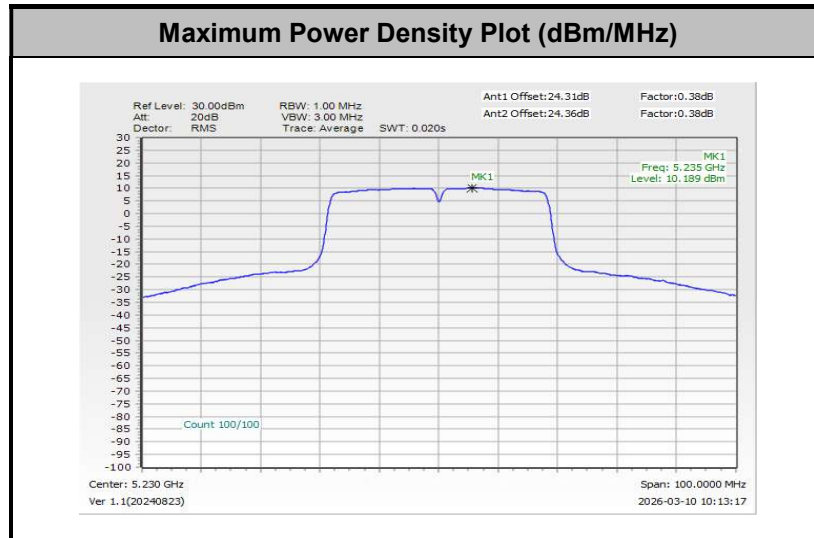


Remark: The test plot is showing a bin by bin combined result mathematically adds two traces.

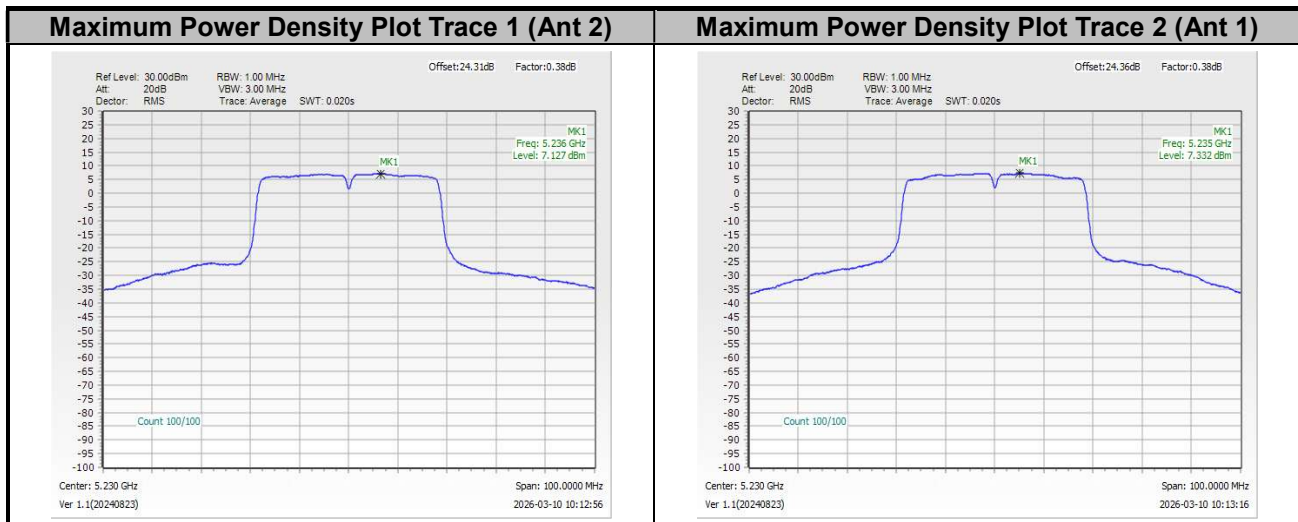




<802.11n HT40>

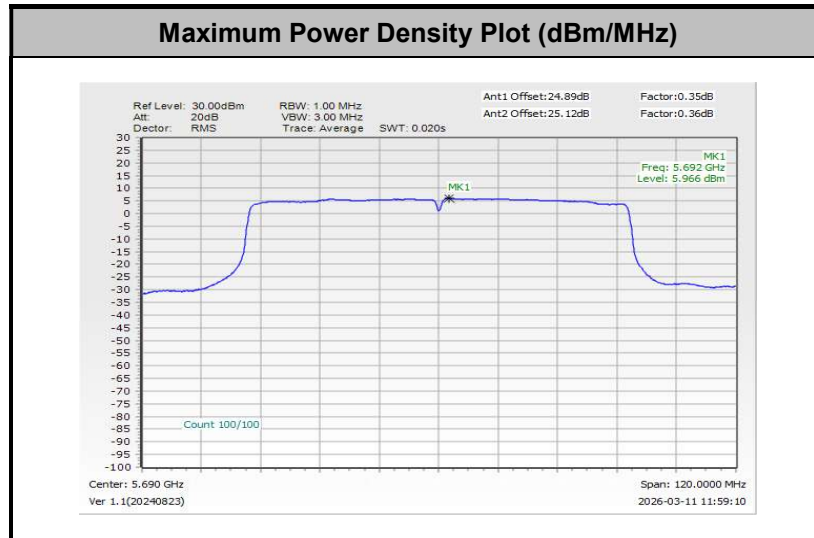


Remark: The test plot is showing a bin by bin combined result mathematically adds two traces.

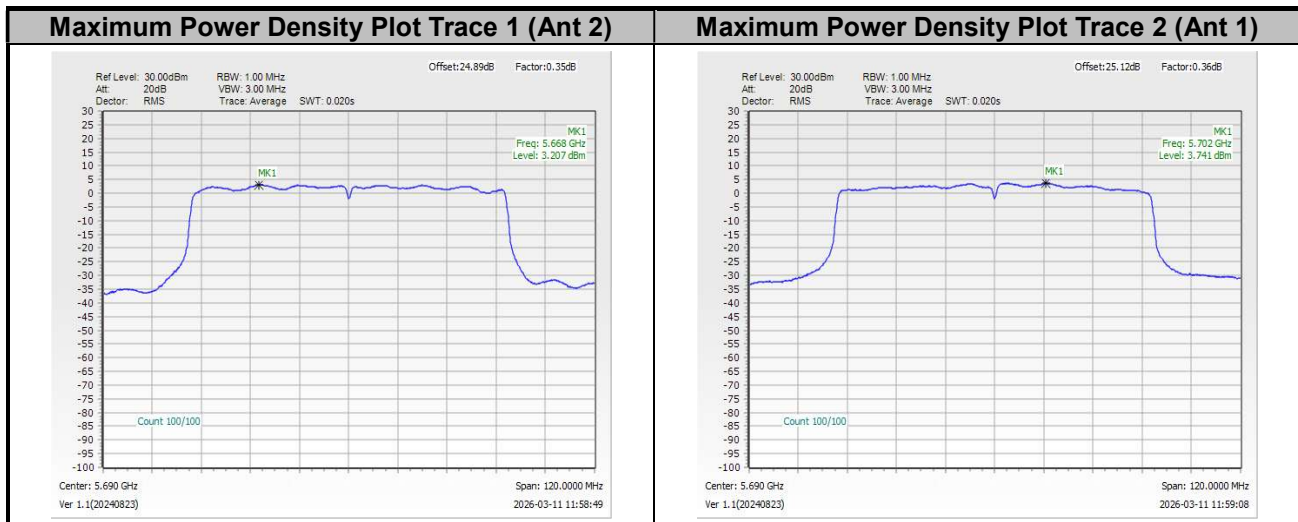




<802.11ac VHT80>

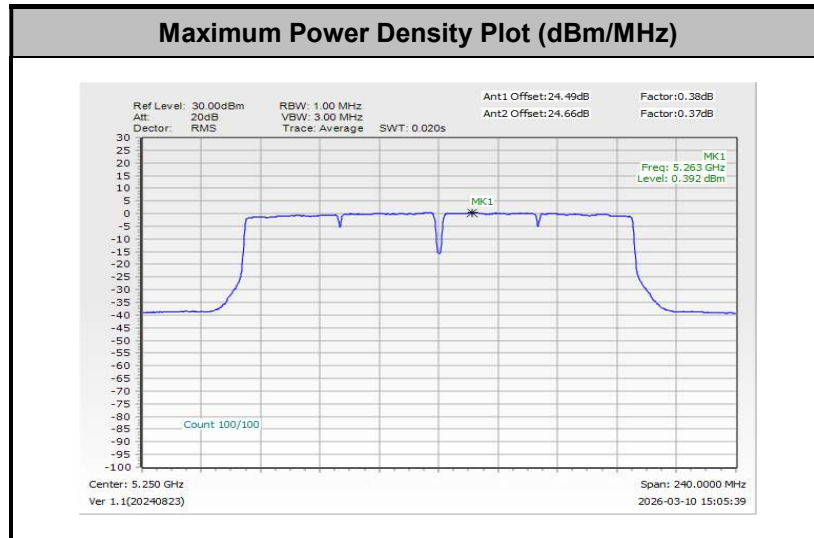


Remark: The test plot is showing a bin by bin combined result mathematically adds two traces.

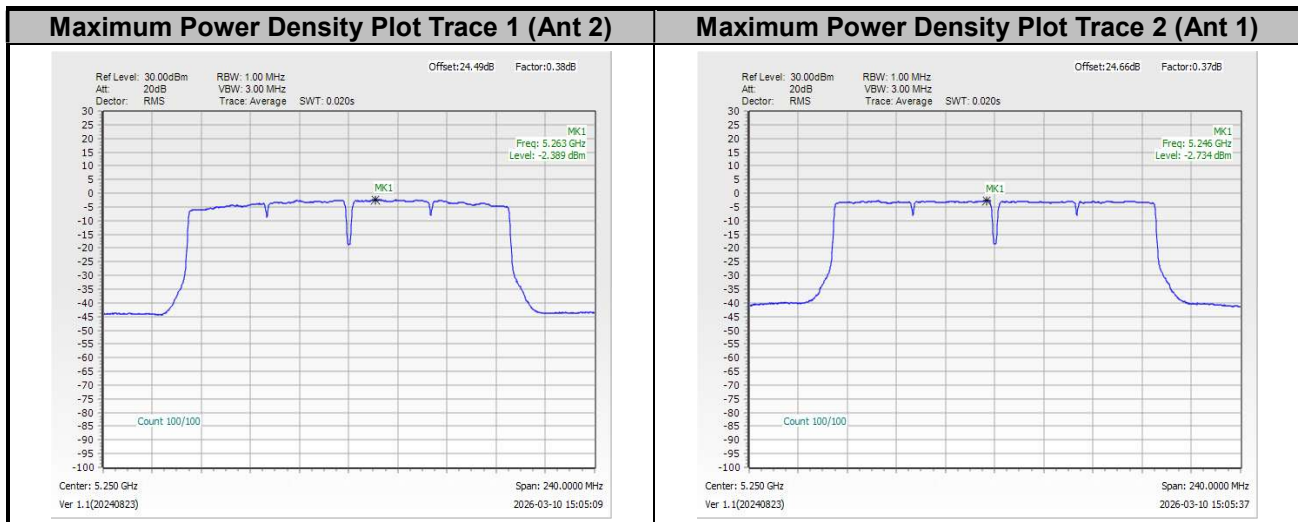




<802.11ac VHT160>

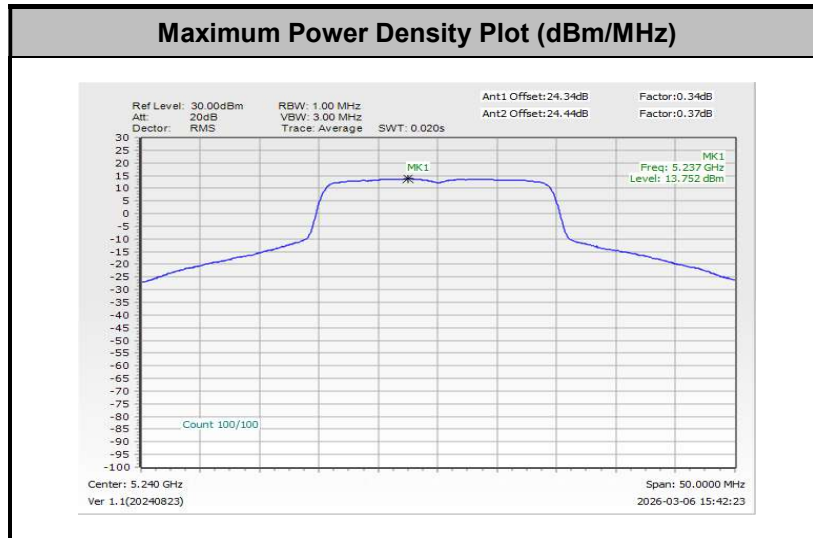


Remark: The test plot is showing a bin by bin combined result mathematically adds two traces.

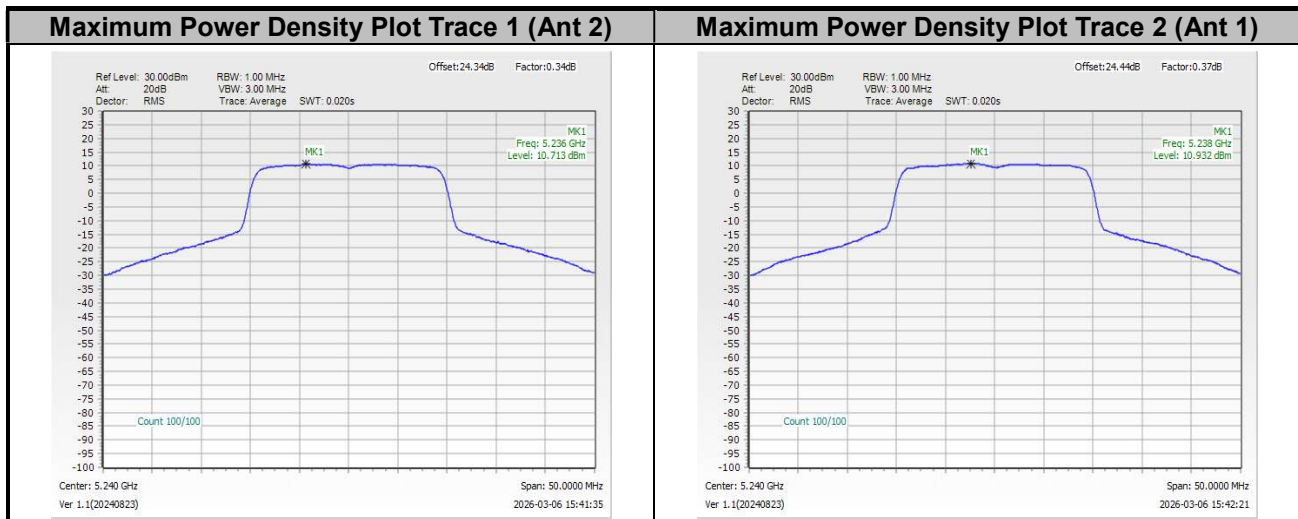




<802.11ax HE20>

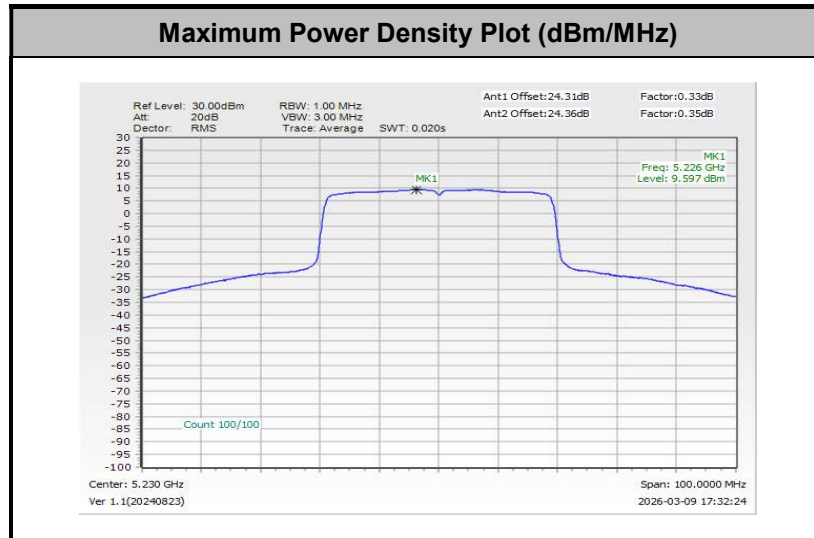


Remark: The test plot is showing a bin by bin combined result mathematically adds two traces.

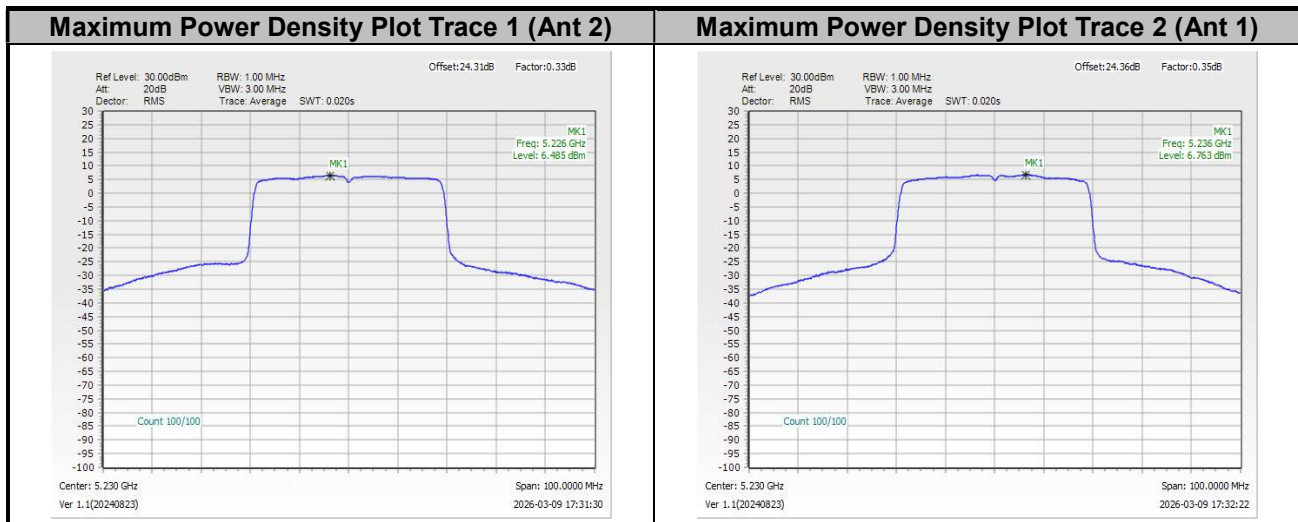




<802.11ax HE40>

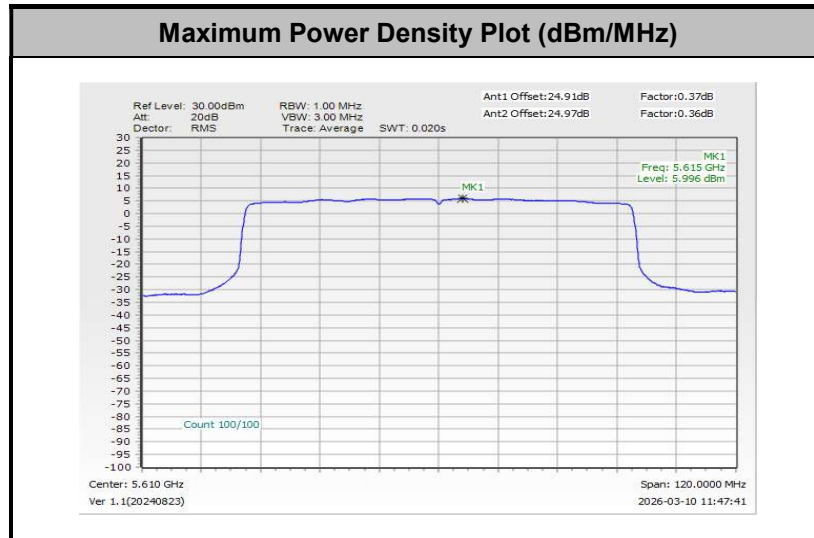


Remark: The test plot is showing a bin by bin combined result mathematically adds two traces.

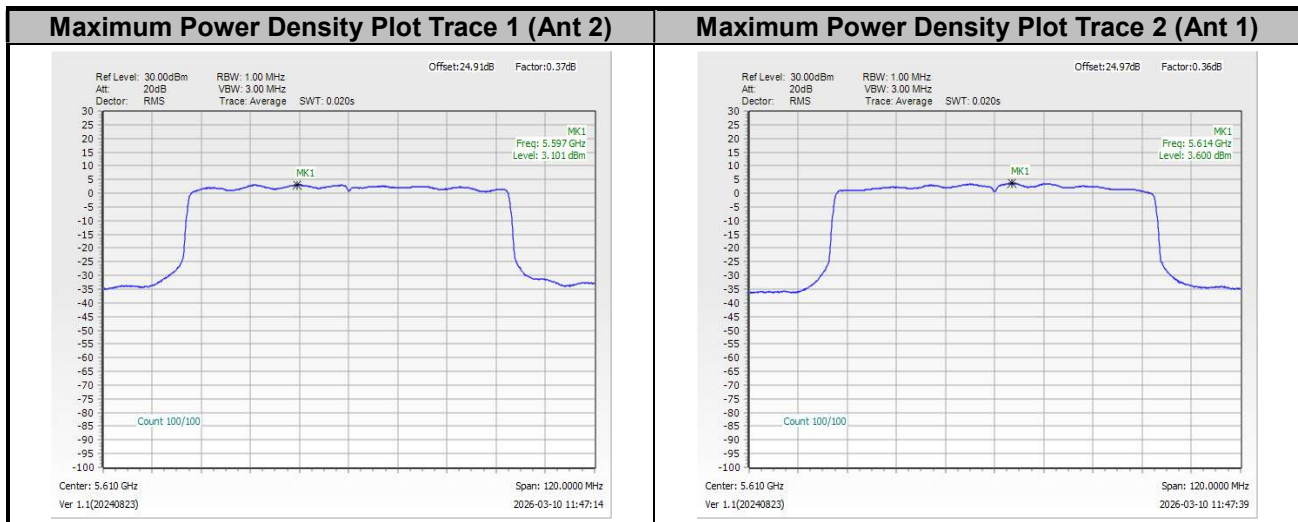




<802.11ax HE80>

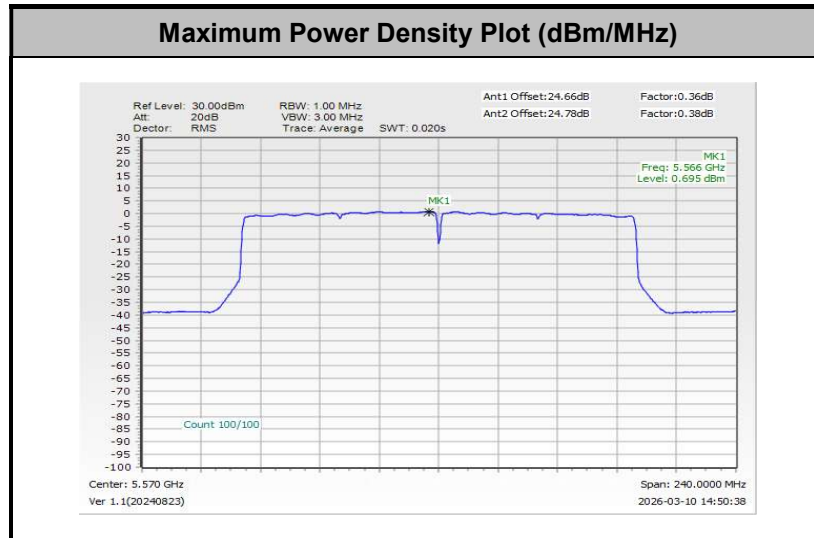


Remark: The test plot is showing a bin by bin combined result mathematically adds two traces.

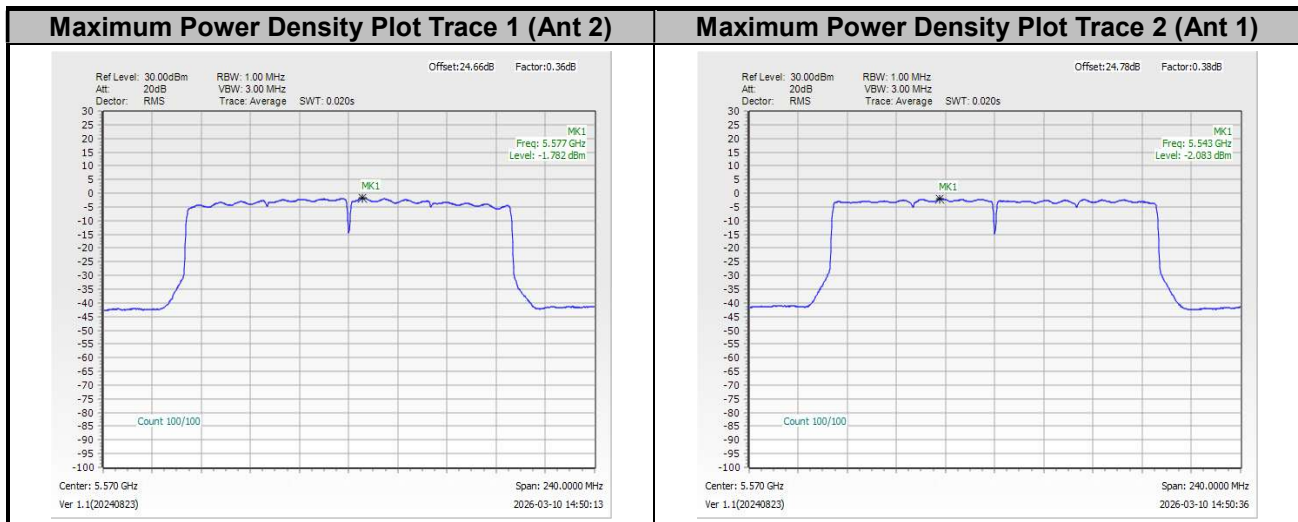




<802.11ax HE160>



Remark: The test plot is showing a bin by bin combined result mathematically adds two traces.





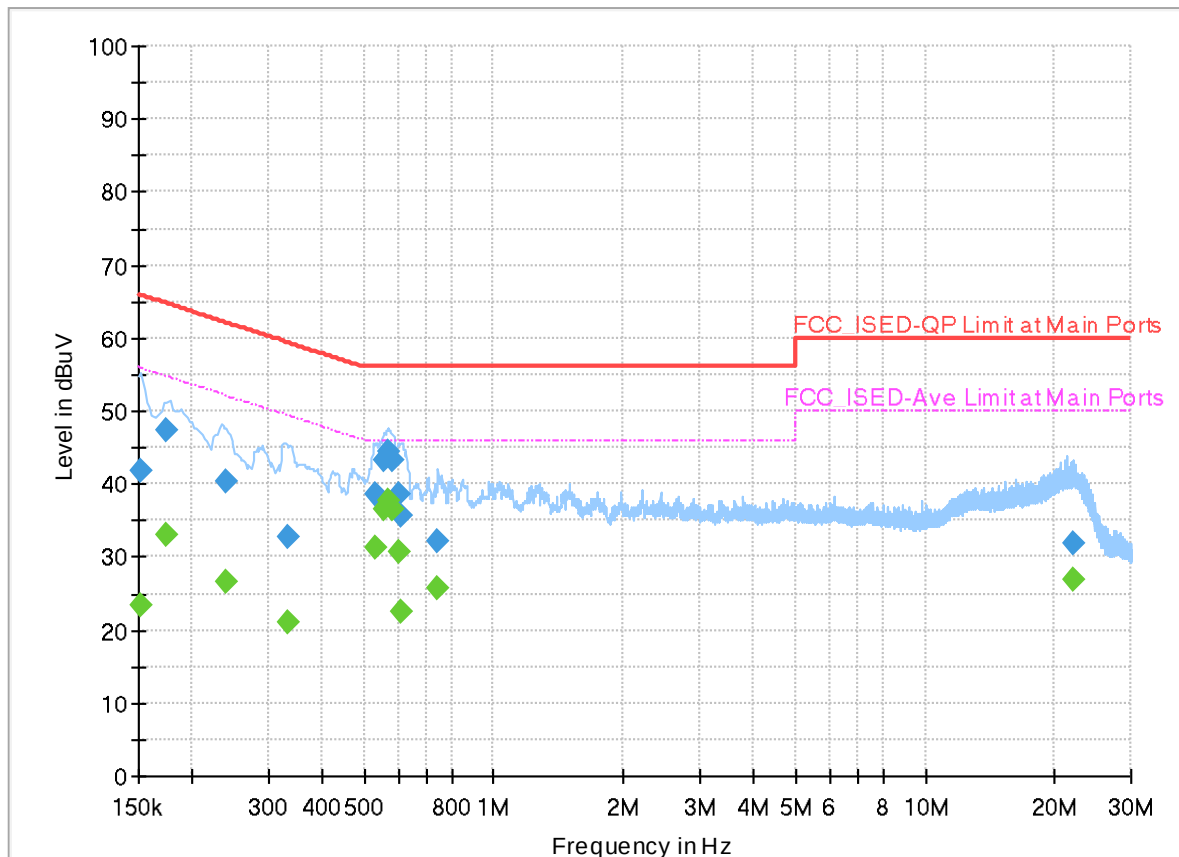
Appendix B. AC Conducted Emission Test Results

Test Engineer :	Brian Chen	Temperature :	23~26℃
		Relative Humidity :	45~55%

EUT Information

Report NO : 621004
Test Mode : Mode 1
Test Voltage : 120Vac/60Hz
Phase : Line

Full Spectrum



Final Result

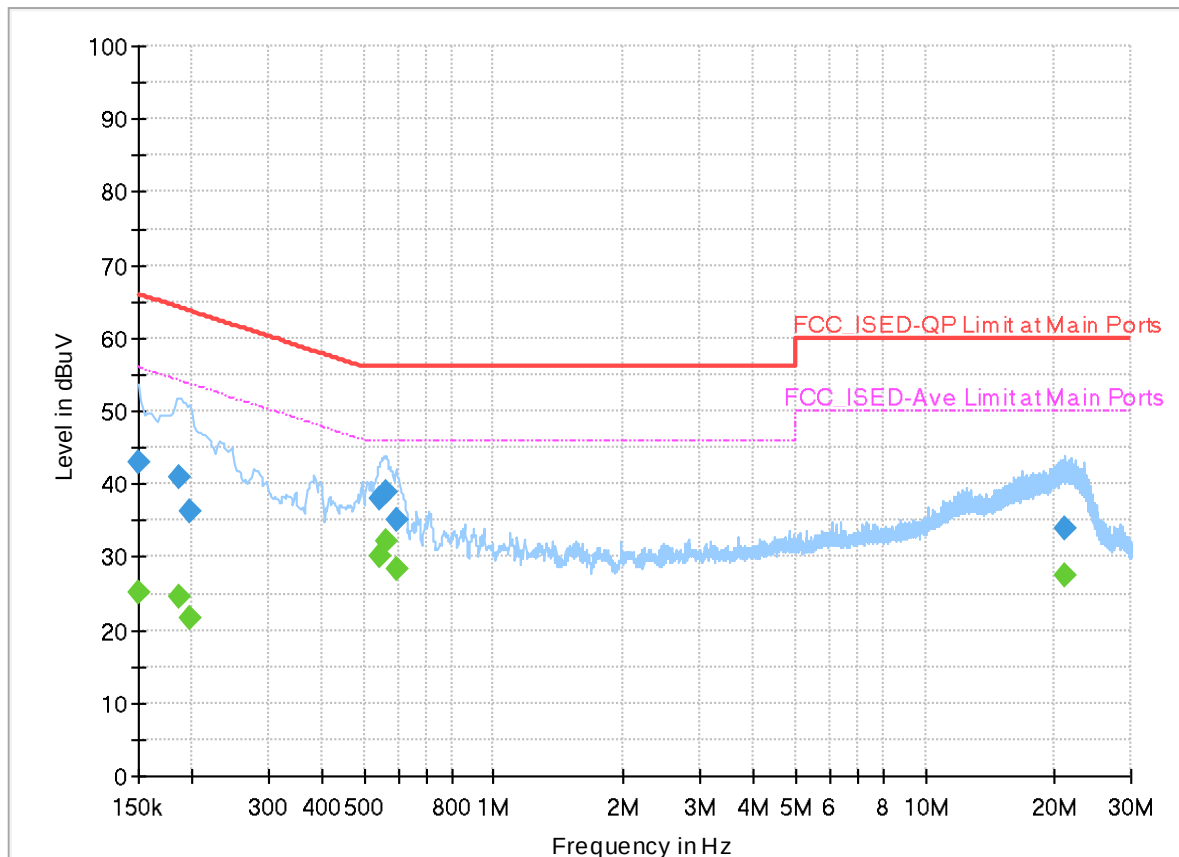
Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.152250	---	23.49	55.88	32.39	L1	ON	20.1
0.152250	41.90	---	65.88	23.98	L1	ON	20.1
0.174750	---	33.01	54.73	21.72	L1	ON	20.1
0.174750	47.41	---	64.73	17.32	L1	ON	20.1
0.240000	---	26.55	52.10	25.55	L1	ON	20.1
0.240000	40.29	---	62.10	21.81	L1	ON	20.1
0.332250	---	20.98	49.40	28.42	L1	ON	20.0
0.332250	32.81	---	59.40	26.59	L1	ON	20.0
0.530250	---	31.34	46.00	14.66	L1	ON	20.0
0.530250	38.72	---	56.00	17.28	L1	ON	20.0
0.555000	---	36.46	46.00	9.54	L1	ON	20.0
0.555000	43.29	---	56.00	12.71	L1	ON	20.0
0.568500	---	37.59	46.00	8.41	L1	ON	20.0
0.568500	44.50	---	56.00	11.50	L1	ON	20.0
0.584250	---	36.53	46.00	9.47	L1	ON	20.0
0.584250	43.21	---	56.00	12.79	L1	ON	20.0
0.600000	---	30.57	46.00	15.43	L1	ON	20.0
0.600000	38.53	---	56.00	17.47	L1	ON	20.0
0.611250	---	22.62	46.00	23.38	L1	ON	20.0

0.611250	35.68	---	56.00	20.32	L1	ON	20.0
0.741750	---	25.80	46.00	20.20	L1	ON	20.0
0.741750	32.15	---	56.00	23.85	L1	ON	20.0
21.977250	---	26.94	50.00	23.06	L1	ON	20.9
21.977250	31.93	---	60.00	28.07	L1	ON	20.9

EUT Information

Report NO : 621004
Test Mode : Mode 1
Test Voltage : 120Vac/60Hz
Phase : Neutral

Full Spectrum



Final Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.150000	---	25.05	56.00	30.95	N	ON	20.2
0.150000	42.98	---	66.00	23.02	N	ON	20.2
0.186000	---	24.44	54.21	29.77	N	ON	20.1
0.186000	40.98	---	64.21	23.23	N	ON	20.1
0.197250	---	21.60	53.73	32.13	N	ON	20.1
0.197250	36.12	---	63.73	27.61	N	ON	20.1
0.543750	---	30.06	46.00	15.94	N	ON	20.0
0.543750	38.03	---	56.00	17.97	N	ON	20.0
0.561750	---	32.19	46.00	13.81	N	ON	20.0
0.561750	38.90	---	56.00	17.10	N	ON	20.0
0.593250	---	28.33	46.00	17.67	N	ON	20.0
0.593250	35.00	---	56.00	21.00	N	ON	20.0
21.156000	---	27.57	50.00	22.43	N	ON	20.9
21.156000	33.87	---	60.00	26.13	N	ON	20.9