

TEST REPORT

Applicant: Quectel Wireless Solutions Co., Ltd.
EUT Description: Smart LTE Module
Model: SC200V-EM
Brand: Quectel
FCC ID: XMR2025SC200VEM
Standards: FCC 47 CFR Part 15 Subpart E
Date of Receipt: 2025/04/24
Date of Test: 2025/04/24 to 2025/06/13
Date of Issue: 2025/06/13

TOWE. Tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of the model are manufactured with identical electrical and mechanical components. All sample tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise. Without written approval of TOWE, the test report shall not be reproduced except in full.



A handwritten signature in black ink, appearing to be "Huang Kun", written over a horizontal line.

Huang Kun
Approved By:

A handwritten signature in black ink, appearing to be "Chen Chengfu", written over a horizontal line.

Chen Chengfu
Reviewed By:

Revision History

| Rev. | Issue Date | Description | Revised by |
|------|------------|-------------|--------------|
| 01 | 2025/06/13 | Original | Chen Chengfu |

Summary of Test Results

| Clause | FCC Part | Test Items | Test Bands | Result |
|--------|--|----------------------------------|--|-------------------------|
| 4.1 | §15.203 | Antenna Requirement | --- | PASS |
| 4.2 | §15.407(g) | Frequency Stability | --- | --- |
| 4.3 | §15.207 | AC Power Line Conducted Emission | Section 2.2 | N/A |
| 4.4 | §15.407(a)(1)(iv) §15.407(a)(2) §15.407(a)(3)(i) | Maximum Conducted Output Power | U-NII-1 U-NII-2A U-NII-2C U-NII-3 | PASS |
| 4.5 | §KDB 789033 II.C.1 | Emission Bandwidth | U-NII-1 U-NII-2A U-NII-2C | Reporting purposes only |
| 4.6 | §15.407(e) | Minimum Emission Bandwidth | U-NII-3 | PASS |
| 4.7 | §KDB 789033 II.D | Occupied Bandwidth | U-NII-1 U-NII-2A U-NII-2C U-NII-3 | Reporting purposes only |
| 4.8 | §15.407(a)(1)(iv) §15.407(a)(2) §15.407(a)(3)(i) | Maximum Power Spectral Density | U-NII-1 U-NII-2A U-NII-2C U-NII-3 | PASS |
| 4.9 | §15.407(b) §15.209(d) | Unwanted Emissions | U-NII-1 U-NII-2A U-NII-2C U-NII-3 | PASS |

Test Method: ANSI C63.10:2020, KDB 789033 D02 General UNII Test Procedures New Rules v02r01

Remark:

1. Pass is EUT meets standard requirements.
2. The EUT is DC power supply, "N/A" denotes "not applicable".

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1 General Description

1.1 Lab Information

1.1.1 Testing Location

These measurements tests were conducted at the Sushi TOWE Wireless Testing(Shenzhen) Co., Ltd. Facility located at F401 and F101, Building E, Hongwei Industrial Zone, Liuxian 3rd Road, Bao'an District, Shenzhen, China. The measurement facility is compliant with the test site requirements specified in ANSI C63.4-2014

Tel.: +86-755-27212361

Contact Email: info@towewireless.com

1.1.2 Test Facility / Accreditations

A2LA (Certificate Number: 7088.01)

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).

FCC Designation No.: CN1353

Sushi TOWE Wireless Testing(Shenzhen) Co., Ltd. Has been recognized as an accredited testing laboratory. Designation Number: CN1353.

ISED CAB identifier: CN0152

Sushi TOWE Wireless Testing(Shenzhen) Co., Ltd. Has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0152

Company Number: 31000

1.2 Client Information

1.2.1 Applicant

| | |
|------------|---|
| Applicant: | Quectel Wireless Solutions Co., Ltd. |
| Address: | Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai, China 200233 |

1.2.2 Manufacturer

| | |
|---------------|---|
| Manufacturer: | Quectel Wireless Solutions Co., Ltd. |
| Address: | Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai, China 200233 |

1.3 Product Information

| | | | | |
|---|---|---------------------------------------|--|-------------|
| EUT Description: | Smart LTE Module | | | |
| Model: | SC200V-EM | | | |
| Brand: | Quectel | | | |
| Hardware Version: | R1.0 | | | |
| Software Version: | SC200VEMNAR01A01 | | | |
| SN: | RF Conducted | D1C25D22U000073 | | |
| | RSE | D1C25D22U000070 | | |
| Modulation Type: | 802.11a/n: | OFDM-BPSK, QPSK, 16QAM, 64QAM | | |
| | 802.11ac: | OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM | | |
| Smart System: | <input checked="" type="checkbox"/> SISO | 802.11a/n/ac | / | |
| | <input type="checkbox"/> MIMO | 802.11n/ac | ()TX()RX | |
| | <input type="checkbox"/> CDD | 802.11a | ()TX()RX | |
| EUT Function | <input checked="" type="checkbox"/> Client | <input type="checkbox"/> Outdoor AP | <input type="checkbox"/> Indoor AP <input type="checkbox"/> Fixed P2P AP | |
| DFS Function: | <input type="checkbox"/> Master <input type="checkbox"/> Slave with radar detection <input checked="" type="checkbox"/> Slave without radar detection | | | |
| Frequency Range: | U-NII-1: | 5150 ~ 5250MHz | | |
| | U-NII-2A: | 5250 ~ 5350MHz | | |
| | U-NII-2C: | 5470 ~ 5725MHz | | |
| | U-NII-3: | 5725 ~ 5850MHz | | |
| Channel Frequency: | 20M BWch.: | U-NII-1: | 5180 ~ 5240MHz | 4 Channels |
| | | U-NII-2A: | 5260 ~ 5320MHz | 4 Channels |
| | | U-NII-2C: | 5500 ~ 5700MHz | 11 Channels |
| | | U-NII-3: | 5745 ~ 5825MHz | 5 Channels |
| | 40M BWch.: | U-NII-1: | 5190 ~ 5230MHz | 2 Channels |
| | | U-NII-2A: | 5270 ~ 5310MHz | 2 Channels |
| | | U-NII-2C: | 5510 ~ 5670MHz | 5 Channels |
| | | U-NII-3: | 5755 ~ 5795MHz | 2 Channels |
| | 80M BWch.: | U-NII-1: | 5210MHz | 1 Channel |
| | | U-NII-2A: | 5290MHz | 1 Channel |
| | | U-NII-2C: | 5530 ~ 5610MHz | 2 Channels |
| | | U-NII-3: | 5775MHz | 1 Channel |
| Antenna Type: | <input checked="" type="checkbox"/> External, <input type="checkbox"/> Integrated | | | |
| Antenna Gain: | Frequency Range | Ant0 (dBi) | | |
| | U-NII-1: | -0.67 | | |
| | U-NII-2A: | -0.19 | | |
| | U-NII-2C: | 1.28 | | |
| | U-NII-3: | 1.1 | | |
| Remark: The above EUT's information was declared by applicant, please refer to the specifications or user's manual for more detailed description. | | | | |

2 Test Configuration

2.1 Test Channel

| Frequency Channels for U-NII-1 | | | | | | | |
|--|----------------------------|---------|-----------|----------------|-----------|---------|-----------|
| Channel | Frequency | Channel | Frequency | Channel | Frequency | Channel | Frequency |
| 36 | 5180MHz | 40 | 5200MHz | 44 | 5220MHz | 48 | 5240MHz |
| 38 | 5190MHz | 42 | 5210MHz | 46 | 5230MHz | / | |
| Remark: | | | | | | | |
| In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below: | | | | | | | |
| Modulation Type | Test Channel | | | Test Frequency | | | |
| 802.11a/n20 /ac20 | The Lowest channel (CH36) | | | 5180MHz | | | |
| | The Middle channel (CH40) | | | 5200MHz | | | |
| | The Highest channel (CH48) | | | 5240MHz | | | |
| Modulation Type | Test Channel | | | Test Frequency | | | |
| 802.11n40 /ac40 | The Lowest channel (CH38) | | | 5190MHz | | | |
| | The Highest channel (CH46) | | | 5230MHz | | | |
| Modulation Type | Test Channel | | | Test Frequency | | | |
| 802.11ac80 | The Middle channel (CH42) | | | 5210MHz | | | |

| Frequency Channels for U-NII-2A | | | | | | | |
|---|----------------------------|---------|-----------|----------------|-----------|---------|-----------|
| Channel | Frequency | Channel | Frequency | Channel | Frequency | Channel | Frequency |
| 52 | 5260MHz | 56 | 5280MHz | 60 | 5300MHz | 64 | 5320MHz |
| 54 | 5270MHz | 58 | 5290MHz | 62 | 5310MHz | / | |
| Remark: In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below: | | | | | | | |
| Modulation Type | Test Channel | | | Test Frequency | | | |
| 802.11a/n20 /ac20 | The Lowest channel (CH52) | | | 5260MHz | | | |
| | The Middle channel (CH60) | | | 5300MHz | | | |
| | The Highest channel (CH64) | | | 5320MHz | | | |
| Modulation Type | Test Channel | | | Test Frequency | | | |
| 802.11n40 /ac40 | The Lowest channel (CH54) | | | 5270MHz | | | |
| | The Highest channel (CH62) | | | 5310MHz | | | |
| Modulation Type | Test Channel | | | Test Frequency | | | |
| 802.11ac80 | The Middle channel (CH58) | | | 5290MHz | | | |

Frequency Channels for U-NII-2C

| Channel | Frequency | Channel | Frequency | Channel | Frequency | Channel | Frequency |
|---------|-----------|---------|-----------|---------|-----------|---------|-----------|
| 100 | 5500MHz | 110 | 5550MHz | 120 | 5600MHz | 132 | 5660MHz |
| 102 | 5510MHz | 112 | 5560MHz | 122 | 5610MHz | 134 | 5670MHz |
| 104 | 5520MHz | 114 | 5570MHz | 124 | 5620MHz | 136 | 5680MHz |
| 106 | 5530MHz | 116 | 5580MHz | 126 | 5630MHz | 140 | 5700MHz |
| 108 | 5540MHz | 118 | 5590MHz | 128 | 5640MHz | / | |

Remark:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

| Modulation Type | Test Channel | Test Frequency |
|----------------------|-----------------------------|----------------|
| 802.11a/n20 /ac20 | The Lowest channel (CH100) | 5500MHz |
| | The Middle channel (CH116) | 5580MHz |
| | The Highest channel (CH140) | 5700MHz |
| Modulation Type | Test Channel | Test Frequency |
| 802.11n40 /ac40 | The Lowest channel (CH102) | 5510MHz |
| | The Middle channel (CH118) | 5590MHz |
| | The Highest channel (CH134) | 5670MHz |
| Modulation Type | Test Channel | Test Frequency |
| 802.11ac80 | The Lowest channel (CH106) | 5530MHz |
| | The Highest channel (CH122) | 5610MHz |

Frequency Channels for U-NII-3

| Channel | Frequency | Channel | Frequency | Channel | Frequency | Channel | Frequency |
|---------|-----------|---------|-----------|---------|-----------|---------|-----------|
| 149 | 5745MHz | 153 | 5765MHz | 157 | 5785MHz | 161 | 5805MHz |
| 151 | 5755MHz | 155 | 5775MHz | 159 | 5795MHz | 165 | 5825MHz |

Remark:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

| Modulation Type | Test Channel | Test Frequency |
|----------------------|-----------------------------|----------------|
| 802.11a/n20 /ac20 | The Lowest channel (CH149) | 5745MHz |
| | The Middle channel (CH157) | 5785MHz |
| | The Highest channel (CH165) | 5825MHz |
| Modulation Type | Test Channel | Test Frequency |
| 802.11n40 /ac40 | The Lowest channel (CH151) | 5755MHz |
| | The Highest channel (CH159) | 5795MHz |
| Modulation Type | Test Channel | Test Frequency |
| 802.11ac80 | The Middle channel (CH155) | 5775MHz |

2.2 Worst-case configuration and Mode

| Modulation Type | SISO - Data Rate | MIMO - Data Rate |
|--------------------|--|------------------|
| 802.11a | 6 Mbps | NA |
| 802.11n20 | MCS0 (6.5 Mbps) | NA |
| 802.11n40 | MCS0 (13.5 Mbps) | NA |
| 802.11ac20 | MCS0 (6.5 Mbps) | NA |
| 802.11ac40 | MCS0 (13.5 Mbps) | NA |
| 802.11ac80 | MCS0 (29.3 Mbps) | NA |
| Transmitting mode: | Keep the EUT was programmed to be in continuously transmitting mode. | |
| Normal Link: | Keep the EUT operation to normal function. | |

2.3 Support Unit used in test

| Description | Manufacturer | Model | Serial Number |
|--|--------------|----------------|-----------------|
| Development Board | Quectel | SMART-EVB-G5 | MPY24F82X000102 |
| Development Board | Quectel | SC200V-EM-TE-A | E1C25D72Z000023 |
| Remark: all above the information of table are provided by client. | | | |

2.4 Test Environment

| | |
|--|------------------------|
| Temperature: | Normal: 15°C ~ 35°C |
| Humidity: | 45 ~ 56 % RH Ambient |
| Voltage: | DC 3.8V (Module Input) |
| Remark: The testing environment is within the scope of the EUT user manual and meets the requirements of the standard testing environment. | |

2.5 Test RF Cable

For all conducted test items: The offset level is set spectrum analyzer to compensate the RF cable loss and attenuator factor between RF conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level will be exactly the RF output level.

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

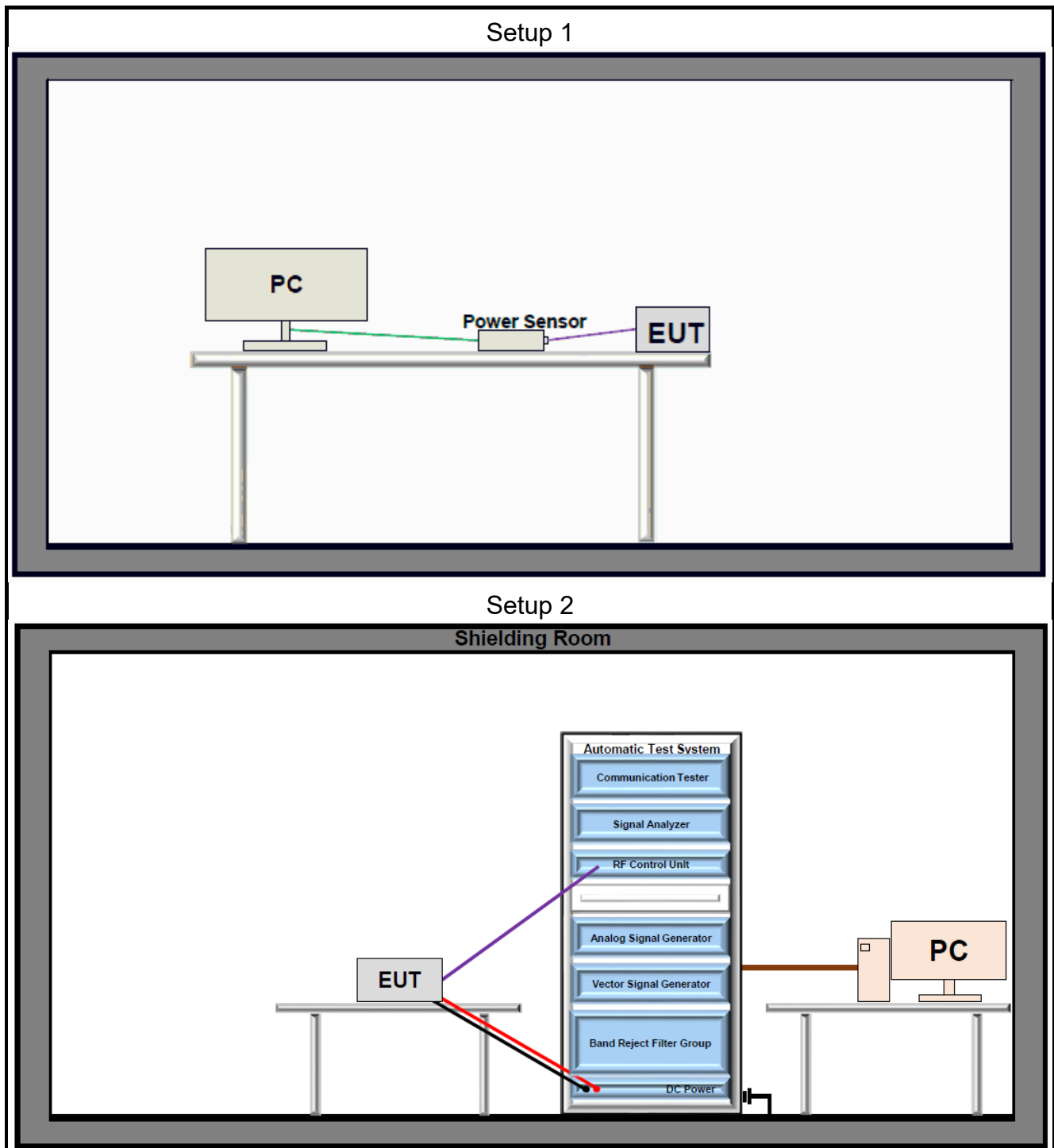
Offset = RF cable loss + attenuator factor.

2.6 Modifications

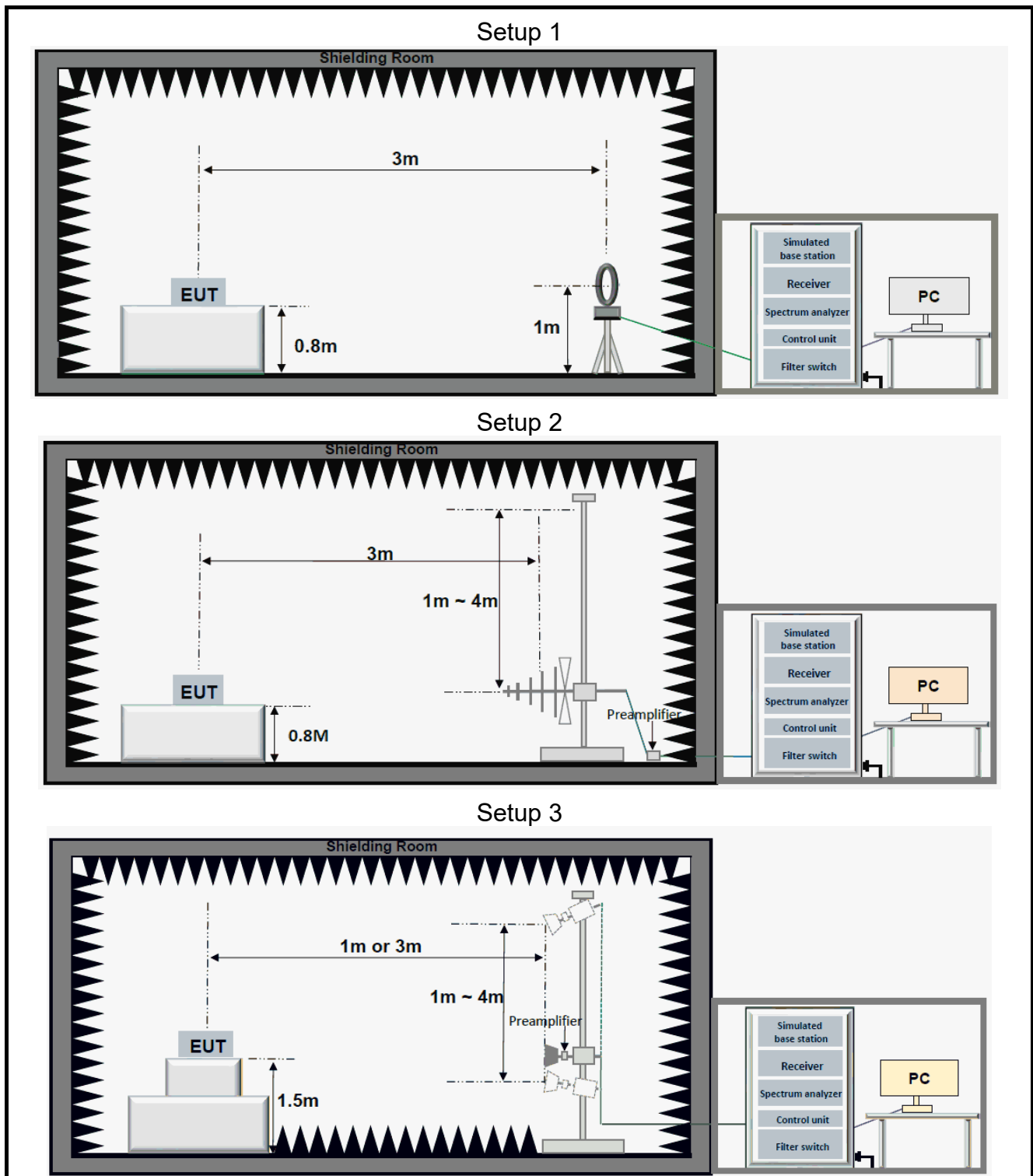
No modifications were made during testing.

2.7 Test Setup Diagram

2.7.1 Conducted Configuration



2.7.2 Radiated Configuration



3 Equipment and Measurement Uncertainty

All test and measuring equipment utilized to perform the tests documented in this report are calibrated on a regular basis, whichever is less, and where applicable is traceable to recognized national standards.

3.1 Test Equipment List

| RF Conducted | | | | | |
|----------------------------------|--------------|----------|-------------|------------|------------|
| Description | Manufacturer | Model | S.N. | Last Due | Cal Due |
| Signal Analyzer | Keysight | N9020A | US46470429 | 2025/03/14 | 2026/03/13 |
| Signal Generator | R&S | SMR20 | 101027 | 2025/03/11 | 2026/03/10 |
| Vector Signal Generator | R&S | SMM100A | 549353 | 2024/05/30 | 2025/05/29 |
| | | | | 2025/05/29 | 2026/05/28 |
| Power Sensor | Anritsu | MA24408A | 12520 | 2024/05/30 | 2025/05/29 |
| | | | | 2025/05/29 | 2026/05/28 |
| RF Control Unit | Tonscend | JS0806-2 | 23C80620671 | 2024/05/30 | 2025/05/29 |
| | | | | 2025/05/29 | 2026/05/28 |
| EXA Signal Analyzer, Multi-touch | Keysight | N9010B | MY63440541 | 2024/05/30 | 2025/05/29 |
| | | | | 2025/05/29 | 2026/05/28 |
| Measurement Software | Tonscend | TS1120-3 | 10659 | N/A | N/A |

| Radiated Emission | | | | | |
|---------------------------------------|--------------|-------------|----------------|------------|------------|
| Description | Manufacturer | Model | S.N. | Last Due | Cal Due |
| Biconic Logarithmic Periodic Antennas | Schwarzbeck | VULB9163 | 1643 | 2023/06/25 | 2025/06/24 |
| Double-Ridged Horn Antennas | Schwarzbeck | BBHA 9120D | 2809 | 2023/06/25 | 2025/06/24 |
| Broad-Band Horn Antenna | Schwarzbeck | BBHA 9170 | 1290 | 2023/06/25 | 2025/06/24 |
| Loop Antenna | Schwarzbeck | FMZB 1519C | 1519C-028 | 2023/06/29 | 2025/06/28 |
| Signal Analyzer | Keysight | N9020A | MY49100252 | 2025/03/11 | 2026/03/10 |
| EXA Signal Analyzer, Multi-touch | Keysight | N9010B | MY63440541 | 2024/05/30 | 2025/05/29 |
| | | | | 2025/05/29 | 2026/05/28 |
| Wideband Radio Communication Tester | R&S | CMW500 | 150645 | 2025/03/11 | 2026/03/10 |
| Low Noise Amplifier | Tonscend | TAP9K3G40 | AP23A8060273 | 2025/03/11 | 2027/03/10 |
| Low Noise Amplifier | Tonscend | TAP01018050 | AP22G806258 | 2025/03/11 | 2027/03/10 |
| Low Noise Amplifier | Tonscend | TAP18040048 | AP22G806247 | 2025/03/11 | 2027/03/10 |
| Hygrometer | BINGYU | HTC-1 | N/A | 2023/06/01 | 2025/05/31 |
| | | | | 2025/05/29 | 2027/05/28 |
| Band Reject Filter Group | Townshend | JS0806-F | 23A806F0652 | N/A | N/A |
| Test Software | Tonscend | TS+ | Version: 5.0.0 | N/A | N/A |

3.2 Measurement Uncertainty

| Parameter | U _{lab} |
|-----------------------------------|------------------|
| Frequency Error | 679.98Hz |
| Output Power | 0.76dB |
| Conducted Spurious Emissions | 2.22dB |
| Radiated Emissions(9kHz~30MHz) | 2.40dB |
| Radiated Emissions(30MHz~1000MHz) | 4.66dB |
| Radiated Emissions(1GHz~18GHz) | 5.42dB |
| Radiated Emissions(18GHz~40GHz) | 5.46dB |

Uncertainty figures are valid to a confidence level of 95%

4 Test Results

4.1 Antenna Requirement

| | |
|--|--------------------------------|
| Standard Applicable: | 47 CFR Part 15C Section 15.203 |
| 15.203 requirement: 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. | |
| The antenna gain and type as provided by the manufacturer are as follows: The antenna Type is External. With maximum gain is U-NII-1: -0.67dBi; U-NII-2A: -0.19dBi; U-NII-2C: 1.28dBi; U-NII-3: 1.1dBi; Antenna Anti-Replacement Construction: An embedded-in antenna design is used. | |

4.2 Frequency Stability

| | |
|--|-----------------------------------|
| Standard Applicable: | 47 CFR Part 15C Section 15.407(g) |
| Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual. | |

4.3 Maximum Conducted Output Power

Limits

For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in megahertz.

For the band 5.725-5.850 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W.

Test Procedure

KDB 789033 D02 General UNII Test Procedures New Rules v02r01 Section II.E.2.b (Other Channel)

KDB 789033 D02 General UNII Test Procedures New Rules v02r01 Section II.E.3.b(Straddle Channel)

Test Settings

1. PM-G:
Set to the maximum power setting and enable the EUT transmit continuously.
The power output was measured on the EUT antenna port using RF Cable with attenuator connected to a power meter via wideband power sensor. Peak output power was read directly from power meter.
Measure and record the results in the test report.
2. SA:
RBW = 1MHz
VBW \geq 3MHz
Span = Encompass the EBW (or, alternatively, the entire 99% occupied bandwidth)
Sweep = Auto
Detector = power averaging (rms)

Test Setup

Refer to section 2.7.1 Setup 1 for details.

Measuring Instruments

The measuring equipment is listed in the section 3.1 of this test report.

Test Result

The detailed test data see: **Appendix**.

4.4 Emission Bandwidth

Limits

None, for reporting purposes only.

Test Procedure

KDB 789033 D02 General UNII Test Procedures New Rules v02r01 Section II.C.1.

Test Settings

1. Set to the maximum power setting and enable the EUT transmit continuously.
2. The transmitter output is connected to a spectrum analyzer:
3. RBW = 1% - 5%(99%BW)
4. VBW = 3 times the RBW
5. Sweep = Auto
6. Detector = Peak
7. Trace = Max hold
8. The trace was allowed to stabilize
9. Measure and record the results in the test report.

Test Notes

The signal analyzers' automatic bandwidth measurement capability of the spectrum analyzer was used to perform the 26dB bandwidth measurement. The "X" dB bandwidth parameter was set to X= 26. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.

Test Setup

Refer to section 2.7.1 Setup 2 for details.

Measuring Instruments

The measuring equipment is listed in the section 3.1 of this test report.

Test Result

The detailed test data see: **Appendix**.

4.5 Minimum Emission Bandwidth

Limits

Within the 5.725-5.850 GHz and 5.850-5.895 GHz bands, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

Test Procedure

KDB 789033 D02 General UNII Test Procedures New Rules v02r01 Section II.C.2.

Test Settings

1. Set to the maximum power setting and enable the EUT transmit continuously.
2. The transmitter output is connected to a spectrum analyzer:
3. RBW = 100kHz(DTS)
4. VBW = 3 times the RBW
5. Sweep = Auto
6. Detector = Peak
7. Trace = Max hold
8. The trace was allowed to stabilize
9. Measure and record the results in the test report.

Test Notes

Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

Test Setup

Refer to section 2.7.1- Setup 2 for details.

Measuring Instruments

The measuring equipment is listed in the section 3.1 of this test report.

Test Result

The detailed test data see: **Appendix**.

4.6 Occupied Bandwidth

Limits

None, for reporting purposes only.

Test Procedure

KDB 789033 D02 General UNII Test Procedures New Rules v02r01 Section II.D.

Test Settings

1. Set to the maximum power setting and enable the EUT transmit continuously.
2. The transmitter output is connected to a spectrum analyzer:
3. RBW = 1% - 5%(99%BW)
4. VBW = 3 times the RBW
5. Sweep = Auto
6. Detector = Peak
7. Trace = Max hold
8. The trace was allowed to stabilize
9. Measure and record the results in the test report.

Test Setup

Refer to section 2.7.1- Setup 2 for details.

Measuring Instruments

The measuring equipment is listed in the section 3.1 of this test report.

Test Result

The detailed test data see: **Appendix**.

4.7 Maximum Power Spectral Density

Limits

For client devices in the 5.15-5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1-megahertz band.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1-megahertz band.

For the band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band.

Test Procedure

KDB 789033 D02 General UNII Test Procedures New Rules v02r01 Section II.F

Test Settings

1. Set to the maximum power setting and enable the EUT transmit continuously
2. The transmitter output is connected to a spectrum analyzer
3. RBW = 1MHz (for 5.15–5.25 GHz, 5.25–5.35 GHz, and 5.47–5.725 GHz)
4. RBW = 500kHz (for 5.725–5.85 GHz)
5. VBW \geq 3 times RBW
6. Sweep = Auto
7. Detector = Peak
8. Trace = Max hold
9. The trace was allowed to stabilize
10. Measure and record the results in the test report.

Test Setup

Refer to section 2.7.1- Setup 2 for details.

Measuring Instruments

The measuring equipment is listed in the section 3.1 of this test report.

Test Result

The detailed test data see: **Appendix**.

4.8 Unwanted Emissions

Limits

Spurious emissions are permitted in an of the frequency bands:

| MHz | MHz | MHz | MHz | GHz | GHz |
|-------------------|---------------------|-----------------------|-----------------|--------------|---------------|
| 0.090 - 0.110 | 12.29 - 12.293 | 149.9 - 150.05 | 1660 - 1710 | 4.5 - 5.15 | 14.47 - 14.5 |
| 0.495 - 0.505 | 12.51975 - 12.52025 | 156.52475 - 156.52525 | 1718.8 - 1722.2 | 5.35 - 5.46 | 15.35 - 16.2 |
| 2.1735 - 2.1905 | 12.5767 - 12.57725 | 156.7 - 156.9 | 2200 - 2300 | 7.25 - 7.75 | 17.7 - 21.4 |
| 4.125 - 128 | 13.36 - 13.41 | 162.0125 - 167.17 | 2310 - 2390 | 8.025 - 8.5 | 22.01 - 23.12 |
| 4.17725 - 4.17775 | 16.42 - 16.423 | 167.72 - 173.2 | 2483.5 - 2500 | 9.0 - 9.2 | 23.6 - 24.0 |
| 4.20725 - 4.20775 | 16.69475 - 16.69525 | 240 - 285 | 2655 - 2900 | 9.3 - 9.5 | 31.2 - 31.8 |
| 6.215 - 6.218 | 1680425 - 1680475 | 322 - 335.4 | 3260 - 3267 | 10.6 - 12.7 | 36.43 - 36.5 |
| 6.26775 - 6.26825 | 25.5 - 25.67 | 399.9 - 410 | 3332 - 3339 | 13.25 - 13.4 | |
| 6.31175 - 6.31225 | 37.5 - 38.25 | 608 - 614 | 3345.8 - 3358 | | |
| 8.291 - 8.294 | 73 - 74.6 | 960 - 1240 | 3600 - 4400 | | |
| 8.362 - 8.366 | 74.8 - 75.2 | 1300 - 1427 | | | |
| 8.37625 - 8.38675 | 108 - 121.94 | 1435 - 1626.5 | | | |
| 8.41425 - 8.41475 | 123 - 138 | 1645.5 - 1646.5 | | | |

Radiated disturbance of an intentional radiator:

| Frequency | Field strength ($\mu\text{V/m}$) | Limit (dB $\mu\text{V/m}$) | Remark | Measurement distance (m) |
|-------------------|---------------------------------------|--------------------------------|------------|-----------------------------|
| 0.009MHz-0.490MHz | 2400/F(kHz) | - | - | 300 |
| 0.490MHz-1.705MHz | 24000/F(kHz) | - | - | 30 |
| 1.705MHz-30MHz | 30 | - | - | 30 |
| 30MHz-88MHz | 100 | 40.0 | Quasi-peak | 3 |
| 88MHz-216MHz | 150 | 43.5 | Quasi-peak | 3 |
| 216MHz-960MHz | 200 | 46.0 | Quasi-peak | 3 |
| 960MHz-1GHz | 500 | 54.0 | Quasi-peak | 3 |
| Above 1GHz | 500 | 74.0 | Peak | 3 |
| | | 54.0 | Average | |

Un-restricted band emissions above 1GHz limit:

For transmitters operating in the 5.15-5.25 GHz band:

All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

For transmitters operating in the 5.25-5.35 GHz band:

All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

For transmitters operating in the 5.47-5.725 GHz band:

All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

For transmitters operating solely in the 5.725-5.850 GHz band:

All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Test Procedure

ANSI C63.10:2020 Section 6.4 & 6.5 & 6.6.

KDB 789033 D02 General UNII Test Procedures New Rules v02r01 Section II.G.3 ~ 6.

Test Settings

1. For radiated emissions measurements performed at frequencies less than or equal to 1GHz, the EUT shall be placed on a RF-transparent table or support at a nominal height of 80cm above the reference ground plane.
2. For radiated emissions measurements performed at frequencies above 1GHz, the EUT shall be placed on a RF-transparent table or support at a nominal height of 80cm above the ground plane.
3. Radiated measurements shall be made with the measurement antenna positioned in both horizontal and vertical polarization. The measurement antenna shall be varied from 1m to 4m in height above the reference ground in a search for the relative positioning that produces the maximum radiated signal level (i.e, field strength or received power), when orienting the measurement antenna in vertical polarization, the minimum height of the lowest element of the antenna shall clear the site reference ground plane by at least 25cm.
4. For each suspected emission, the EUT was ranged its worst case and then tune the antenna tower(from 1~4m) and turntable(from 0~360°) find the maximum reading. Preamplifier and a high pass filter are used for the test in order get better signal level comply with the guidelines.
5. The simulated base station was set to force the EUT to its maximum transmitting power.
6. The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.
7. spectrum analyzer setting:
Measurements Below 1000MHz: RBW = 120 kHz; VBW \geq 300 kHz; Detector = Peak
Measurements Above 1000MHz: RBW = 1 MHz; VBW \geq 3 MHz; Detector = Peak
Average Measurements Above 1000MHz:
RBW = 1 MHz, VBW \geq 1/T, with peak detector for average measurements.
8. The field strength is calculated by adding the Antenna Factor, Cable Factor. The basic equation with a sample calculation is as follows:
Level = Reading(dB μ V) + AF(dB/m) + Factor(dB):
AF = Antenna Factor(dB/m)
Factor = Cable Factor(dB) - Preamplifier gain(dB)
Margin = Limit(dB μ V/m) – Level(dB μ V/m)
9. Repeat above procedures until all frequencies measured was complete.
10. Measure and record the results in the test report.

Test Notes

1. Emissions below 18GHz were measured at a 3-meter test distance while emissions above 18GHz were measured at a 1-meter test distance with the application of a distance correction factor.
2. Radiated spurious emissions were investigated from 9kHz to 30MHz, 30MHz-1GHz and above 1GHz. the disturbance between 9kHz to 30MHz, 30MHz-1GHz and 18GHz to 40GHz was very low. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be recorded, so only the harmonics had been displayed.
3. The "-" shown in the following RSE tables are used to denote a noise floor measurement.

Test Setup

Refer to section 2.7.2 for details.

Measuring Instruments

The measuring equipment is listed in the section 3.1 of this test report.

Test Result

The detailed test data see: **Appendix**.

5 Test Setup Photos

The detailed test data see: **Appendix-A BTWIFI Setup Photos**

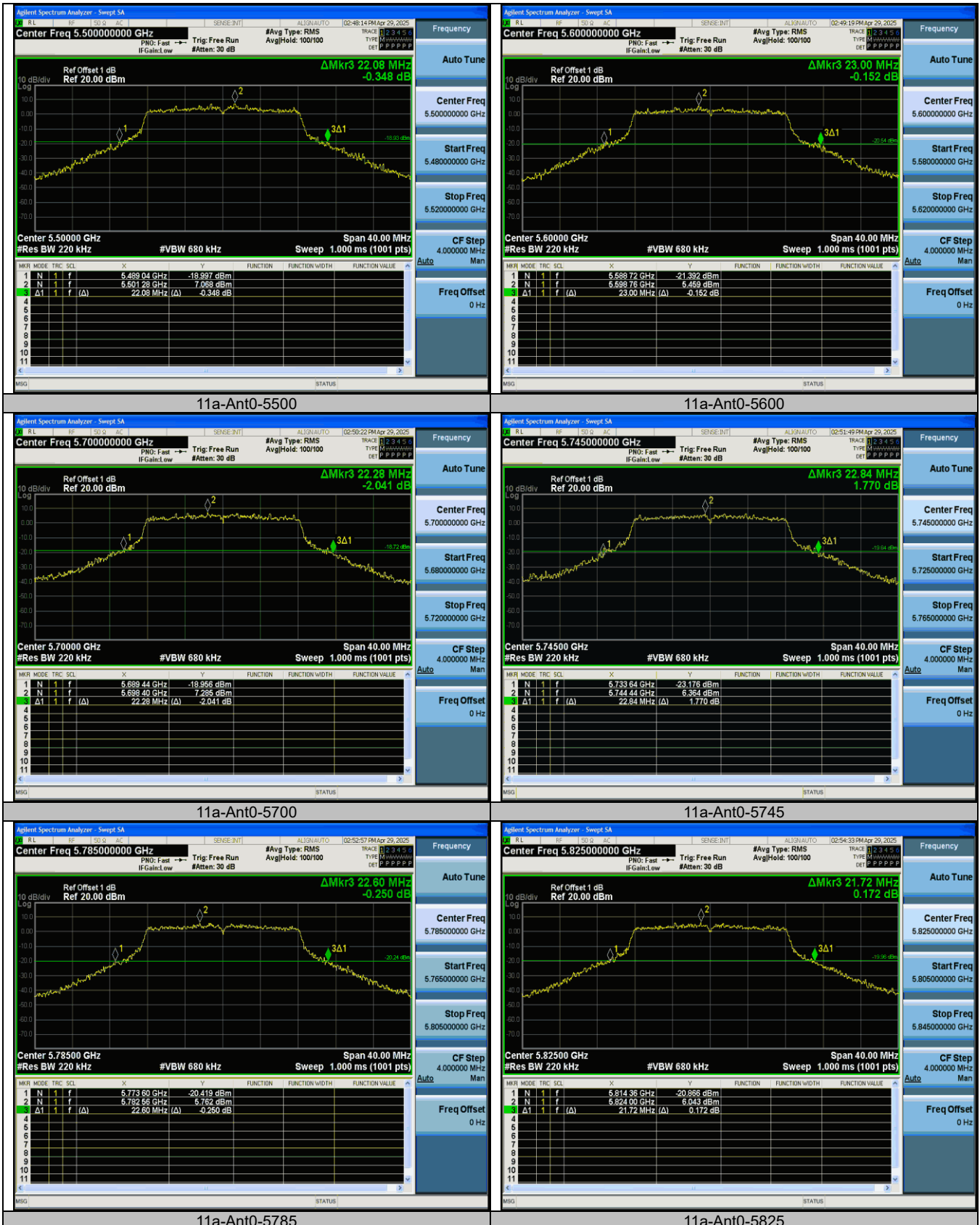
Appendix

Emission Bandwidth Test Result

| TestMode | Antenna | Frequency[MHz] | 26dB EBW [MHz] | FL[MHz] | FH[MHz] | Limit[MHz] | Verdict |
|------------|---------|----------------|----------------|----------|----------|------------|---------|
| 11a | Ant0 | 5180 | 22.080 | 5169.040 | 5191.120 | --- | --- |
| 11a | Ant0 | 5200 | 23.120 | 5188.320 | 5211.440 | --- | --- |
| 11a | Ant0 | 5240 | 23.480 | 5228.280 | 5251.760 | --- | --- |
| 11a | Ant0 | 5260 | 23.040 | 5248.240 | 5271.280 | --- | --- |
| 11a | Ant0 | 5300 | 22.960 | 5288.960 | 5311.920 | --- | --- |
| 11a | Ant0 | 5320 | 22.320 | 5308.720 | 5331.040 | --- | --- |
| 11a | Ant0 | 5500 | 22.080 | 5489.040 | 5511.120 | --- | --- |
| 11a | Ant0 | 5600 | 23.000 | 5588.720 | 5611.720 | --- | --- |
| 11a | Ant0 | 5700 | 22.280 | 5689.440 | 5711.720 | --- | --- |
| 11a | Ant0 | 5745 | 22.840 | 5733.640 | 5756.480 | --- | --- |
| 11a | Ant0 | 5785 | 22.600 | 5773.600 | 5796.200 | --- | --- |
| 11a | Ant0 | 5825 | 21.720 | 5814.360 | 5836.080 | --- | --- |
| 11n20SISO | Ant0 | 5180 | 22.600 | 5169.000 | 5191.600 | --- | --- |
| 11n20SISO | Ant0 | 5200 | 22.440 | 5188.960 | 5211.400 | --- | --- |
| 11n20SISO | Ant0 | 5240 | 22.240 | 5229.040 | 5251.280 | --- | --- |
| 11n20SISO | Ant0 | 5260 | 22.680 | 5248.840 | 5271.520 | --- | --- |
| 11n20SISO | Ant0 | 5300 | 23.960 | 5288.360 | 5312.320 | --- | --- |
| 11n20SISO | Ant0 | 5320 | 23.200 | 5308.440 | 5331.640 | --- | --- |
| 11n20SISO | Ant0 | 5500 | 22.840 | 5488.840 | 5511.680 | --- | --- |
| 11n20SISO | Ant0 | 5600 | 24.040 | 5587.800 | 5611.840 | --- | --- |
| 11n20SISO | Ant0 | 5700 | 22.600 | 5688.760 | 5711.360 | --- | --- |
| 11n20SISO | Ant0 | 5745 | 24.320 | 5733.200 | 5757.520 | --- | --- |
| 11n20SISO | Ant0 | 5785 | 21.400 | 5774.280 | 5795.680 | --- | --- |
| 11n20SISO | Ant0 | 5825 | 23.600 | 5812.960 | 5836.560 | --- | --- |
| 11n40SISO | Ant0 | 5190 | 40.880 | 5169.680 | 5210.560 | --- | --- |
| 11n40SISO | Ant0 | 5230 | 40.560 | 5209.600 | 5250.160 | --- | --- |
| 11n40SISO | Ant0 | 5270 | 40.640 | 5249.840 | 5290.480 | --- | --- |
| 11n40SISO | Ant0 | 5310 | 40.960 | 5289.680 | 5330.640 | --- | --- |
| 11n40SISO | Ant0 | 5510 | 41.120 | 5489.360 | 5530.480 | --- | --- |
| 11n40SISO | Ant0 | 5590 | 41.040 | 5569.520 | 5610.560 | --- | --- |
| 11n40SISO | Ant0 | 5670 | 40.560 | 5649.840 | 5690.400 | --- | --- |
| 11n40SISO | Ant0 | 5755 | 40.480 | 5734.760 | 5775.240 | --- | --- |
| 11n40SISO | Ant0 | 5795 | 40.720 | 5774.600 | 5815.320 | --- | --- |
| 11ac20SISO | Ant0 | 5180 | 23.200 | 5168.560 | 5191.760 | --- | --- |
| 11ac20SISO | Ant0 | 5200 | 22.720 | 5189.000 | 5211.720 | --- | --- |
| 11ac20SISO | Ant0 | 5240 | 23.400 | 5228.600 | 5252.000 | --- | --- |
| 11ac20SISO | Ant0 | 5260 | 22.520 | 5248.640 | 5271.160 | --- | --- |
| 11ac20SISO | Ant0 | 5300 | 22.160 | 5288.920 | 5311.080 | --- | --- |
| 11ac20SISO | Ant0 | 5320 | 23.200 | 5308.720 | 5331.920 | --- | --- |
| 11ac20SISO | Ant0 | 5500 | 22.680 | 5488.920 | 5511.600 | --- | --- |
| 11ac20SISO | Ant0 | 5600 | 22.920 | 5588.040 | 5610.960 | --- | --- |
| 11ac20SISO | Ant0 | 5700 | 24.040 | 5688.440 | 5712.480 | --- | --- |
| 11ac20SISO | Ant0 | 5745 | 22.840 | 5733.400 | 5756.240 | --- | --- |
| 11ac20SISO | Ant0 | 5785 | 22.760 | 5773.760 | 5796.520 | --- | --- |
| 11ac20SISO | Ant0 | 5825 | 22.200 | 5813.920 | 5836.120 | --- | --- |
| 11ac40SISO | Ant0 | 5190 | 40.640 | 5169.760 | 5210.400 | --- | --- |
| 11ac40SISO | Ant0 | 5230 | 40.960 | 5209.440 | 5250.400 | --- | --- |
| 11ac40SISO | Ant0 | 5270 | 41.360 | 5249.040 | 5290.400 | --- | --- |
| 11ac40SISO | Ant0 | 5310 | 41.040 | 5289.760 | 5330.800 | --- | --- |
| 11ac40SISO | Ant0 | 5510 | 41.120 | 5489.520 | 5530.640 | --- | --- |
| 11ac40SISO | Ant0 | 5590 | 40.640 | 5569.680 | 5610.320 | --- | --- |
| 11ac40SISO | Ant0 | 5670 | 40.480 | 5649.840 | 5690.320 | --- | --- |
| 11ac40SISO | Ant0 | 5755 | 40.960 | 5734.520 | 5775.480 | --- | --- |
| 11ac40SISO | Ant0 | 5795 | 41.360 | 5774.680 | 5816.040 | --- | --- |
| 11ac80SISO | Ant0 | 5210 | 86.400 | 5166.480 | 5252.880 | --- | --- |
| 11ac80SISO | Ant0 | 5290 | 87.680 | 5244.720 | 5332.400 | --- | --- |
| 11ac80SISO | Ant0 | 5530 | 86.720 | 5484.720 | 5571.440 | --- | --- |
| 11ac80SISO | Ant0 | 5610 | 91.200 | 5562.320 | 5653.520 | --- | --- |
| 11ac80SISO | Ant0 | 5775 | 89.120 | 5727.800 | 5816.920 | --- | --- |

Test Graphs



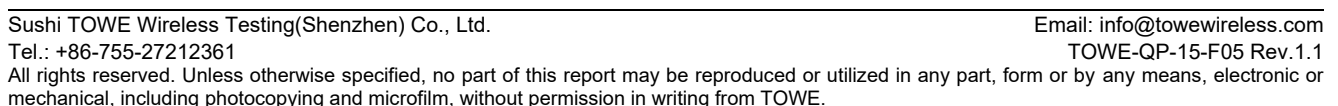






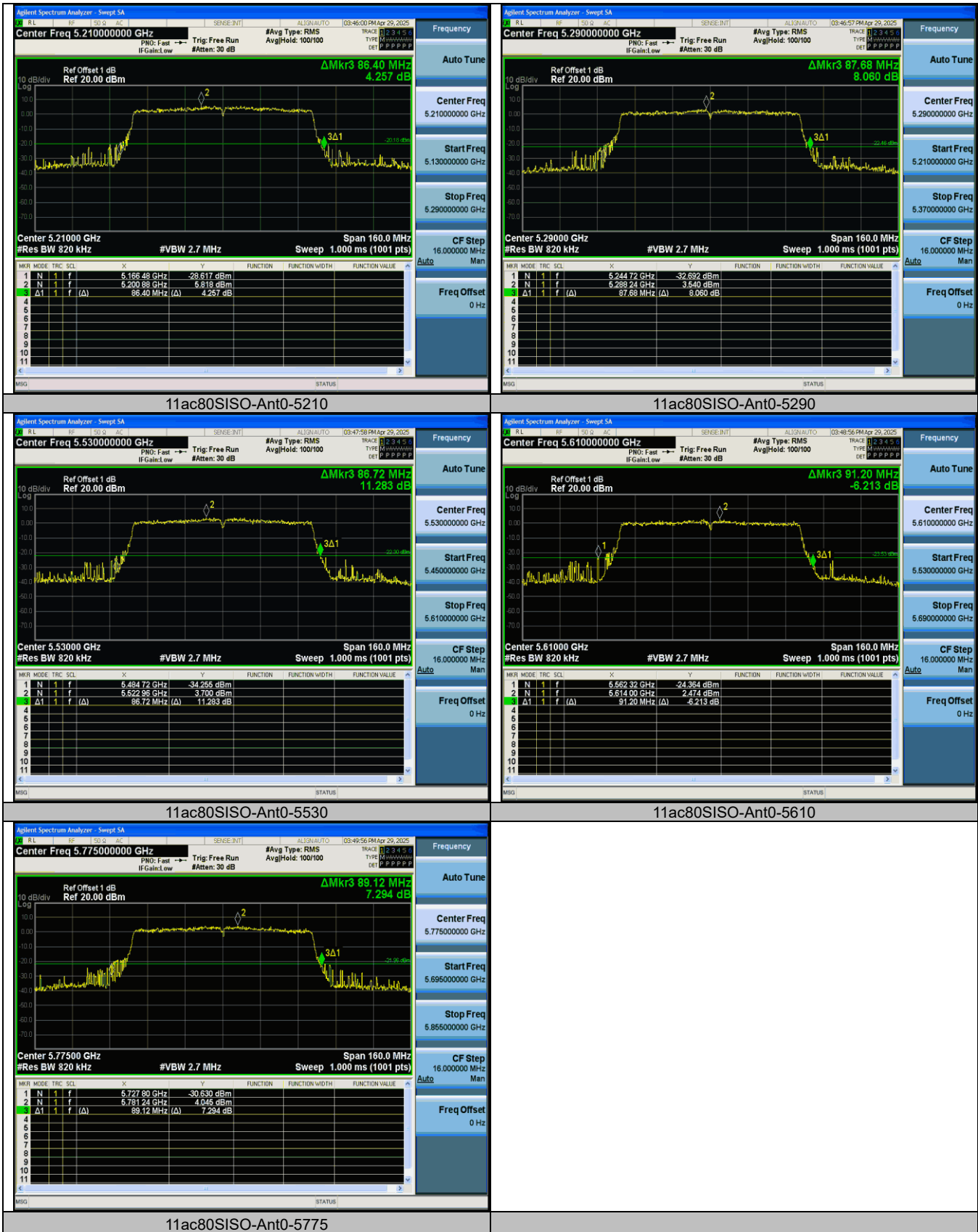












Occupied channel bandwidth

Test Result

| TestMode | Antenna | Frequency[MHz] | OCB [MHz] | FL[MHz] | FH[MHz] | Limit[MHz] | Verdict |
|------------|---------|----------------|-----------|-----------|-----------|------------|---------|
| 11a | Ant0 | 5180 | 16.985 | 5171.5300 | 5188.5150 | --- | --- |
| 11a | Ant0 | 5200 | 16.969 | 5191.5630 | 5208.5320 | --- | --- |
| 11a | Ant0 | 5240 | 16.976 | 5231.5091 | 5248.4851 | --- | --- |
| 11a | Ant0 | 5260 | 16.973 | 5251.5071 | 5268.4801 | --- | --- |
| 11a | Ant0 | 5300 | 16.947 | 5291.5596 | 5308.5066 | --- | --- |
| 11a | Ant0 | 5320 | 16.981 | 5311.5475 | 5328.5285 | --- | --- |
| 11a | Ant0 | 5500 | 16.967 | 5491.5295 | 5508.4965 | --- | --- |
| 11a | Ant0 | 5600 | 16.999 | 5591.4856 | 5608.4846 | --- | --- |
| 11a | Ant0 | 5700 | 16.948 | 5691.5232 | 5708.4712 | --- | --- |
| 11a | Ant0 | 5745 | 16.928 | 5736.5585 | 5753.4865 | --- | --- |
| 11a | Ant0 | 5785 | 16.943 | 5776.5356 | 5793.4786 | --- | --- |
| 11a | Ant0 | 5825 | 16.935 | 5816.5193 | 5833.4543 | --- | --- |
| 11n20SISO | Ant0 | 5180 | 18.067 | 5171.0145 | 5189.0815 | --- | --- |
| 11n20SISO | Ant0 | 5200 | 18.092 | 5190.9946 | 5209.0866 | --- | --- |
| 11n20SISO | Ant0 | 5240 | 18.074 | 5230.9875 | 5249.0615 | --- | --- |
| 11n20SISO | Ant0 | 5260 | 18.068 | 5250.9745 | 5269.0425 | --- | --- |
| 11n20SISO | Ant0 | 5300 | 18.154 | 5290.9683 | 5309.1223 | --- | --- |
| 11n20SISO | Ant0 | 5320 | 18.098 | 5310.9915 | 5329.0895 | --- | --- |
| 11n20SISO | Ant0 | 5500 | 18.144 | 5490.9707 | 5509.1147 | --- | --- |
| 11n20SISO | Ant0 | 5600 | 18.130 | 5590.9574 | 5609.0874 | --- | --- |
| 11n20SISO | Ant0 | 5700 | 18.074 | 5690.9856 | 5709.0596 | --- | --- |
| 11n20SISO | Ant0 | 5745 | 18.114 | 5735.9703 | 5754.0843 | --- | --- |
| 11n20SISO | Ant0 | 5785 | 18.081 | 5775.9699 | 5794.0509 | --- | --- |
| 11n20SISO | Ant0 | 5825 | 18.087 | 5815.9463 | 5834.0333 | --- | --- |
| 11n40SISO | Ant0 | 5190 | 36.512 | 5171.8008 | 5208.3128 | --- | --- |
| 11n40SISO | Ant0 | 5230 | 36.421 | 5211.8295 | 5248.2505 | --- | --- |
| 11n40SISO | Ant0 | 5270 | 36.544 | 5251.7450 | 5288.2890 | --- | --- |
| 11n40SISO | Ant0 | 5310 | 36.488 | 5291.8232 | 5328.3112 | --- | --- |
| 11n40SISO | Ant0 | 5510 | 36.456 | 5491.7936 | 5528.2496 | --- | --- |
| 11n40SISO | Ant0 | 5590 | 36.466 | 5571.7681 | 5608.2341 | --- | --- |
| 11n40SISO | Ant0 | 5670 | 36.497 | 5651.8015 | 5688.2985 | --- | --- |
| 11n40SISO | Ant0 | 5755 | 36.421 | 5736.8123 | 5773.2333 | --- | --- |
| 11n40SISO | Ant0 | 5795 | 36.459 | 5776.7789 | 5813.2379 | --- | --- |
| 11ac20SISO | Ant0 | 5180 | 18.091 | 5170.9999 | 5189.0909 | --- | --- |
| 11ac20SISO | Ant0 | 5200 | 18.123 | 5190.9638 | 5209.0868 | --- | --- |
| 11ac20SISO | Ant0 | 5240 | 18.093 | 5230.9537 | 5249.0467 | --- | --- |
| 11ac20SISO | Ant0 | 5260 | 18.091 | 5250.9639 | 5269.0549 | --- | --- |
| 11ac20SISO | Ant0 | 5300 | 18.105 | 5290.9853 | 5309.0903 | --- | --- |
| 11ac20SISO | Ant0 | 5320 | 18.113 | 5310.9755 | 5329.0885 | --- | --- |
| 11ac20SISO | Ant0 | 5500 | 18.087 | 5490.9704 | 5509.0574 | --- | --- |
| 11ac20SISO | Ant0 | 5600 | 18.101 | 5590.9468 | 5609.0478 | --- | --- |
| 11ac20SISO | Ant0 | 5700 | 18.111 | 5690.9585 | 5709.0695 | --- | --- |
| 11ac20SISO | Ant0 | 5745 | 18.109 | 5735.9439 | 5754.0529 | --- | --- |
| 11ac20SISO | Ant0 | 5785 | 18.036 | 5775.9837 | 5794.0197 | --- | --- |
| 11ac20SISO | Ant0 | 5825 | 18.102 | 5815.9346 | 5834.0366 | --- | --- |
| 11ac40SISO | Ant0 | 5190 | 36.458 | 5171.8174 | 5208.2754 | --- | --- |
| 11ac40SISO | Ant0 | 5230 | 36.451 | 5211.7978 | 5248.2488 | --- | --- |
| 11ac40SISO | Ant0 | 5270 | 36.449 | 5251.7846 | 5288.2336 | --- | --- |
| 11ac40SISO | Ant0 | 5310 | 36.423 | 5291.8609 | 5328.2839 | --- | --- |
| 11ac40SISO | Ant0 | 5510 | 36.439 | 5491.8044 | 5528.2434 | --- | --- |
| 11ac40SISO | Ant0 | 5590 | 36.428 | 5571.7717 | 5608.1997 | --- | --- |
| 11ac40SISO | Ant0 | 5670 | 36.404 | 5651.8529 | 5688.2569 | --- | --- |
| 11ac40SISO | Ant0 | 5755 | 36.443 | 5736.7931 | 5773.2361 | --- | --- |
| 11ac40SISO | Ant0 | 5795 | 36.399 | 5776.7844 | 5813.1834 | --- | --- |
| 11ac80SISO | Ant0 | 5210 | 75.842 | 5172.1638 | 5248.0058 | --- | --- |
| 11ac80SISO | Ant0 | 5290 | 76.051 | 5252.0147 | 5328.0657 | --- | --- |
| 11ac80SISO | Ant0 | 5530 | 75.838 | 5492.0674 | 5567.9054 | --- | --- |
| 11ac80SISO | Ant0 | 5610 | 76.044 | 5571.9220 | 5647.9660 | --- | --- |
| 11ac80SISO | Ant0 | 5775 | 75.935 | 5736.9776 | 5812.9126 | --- | --- |

Test Graphs





















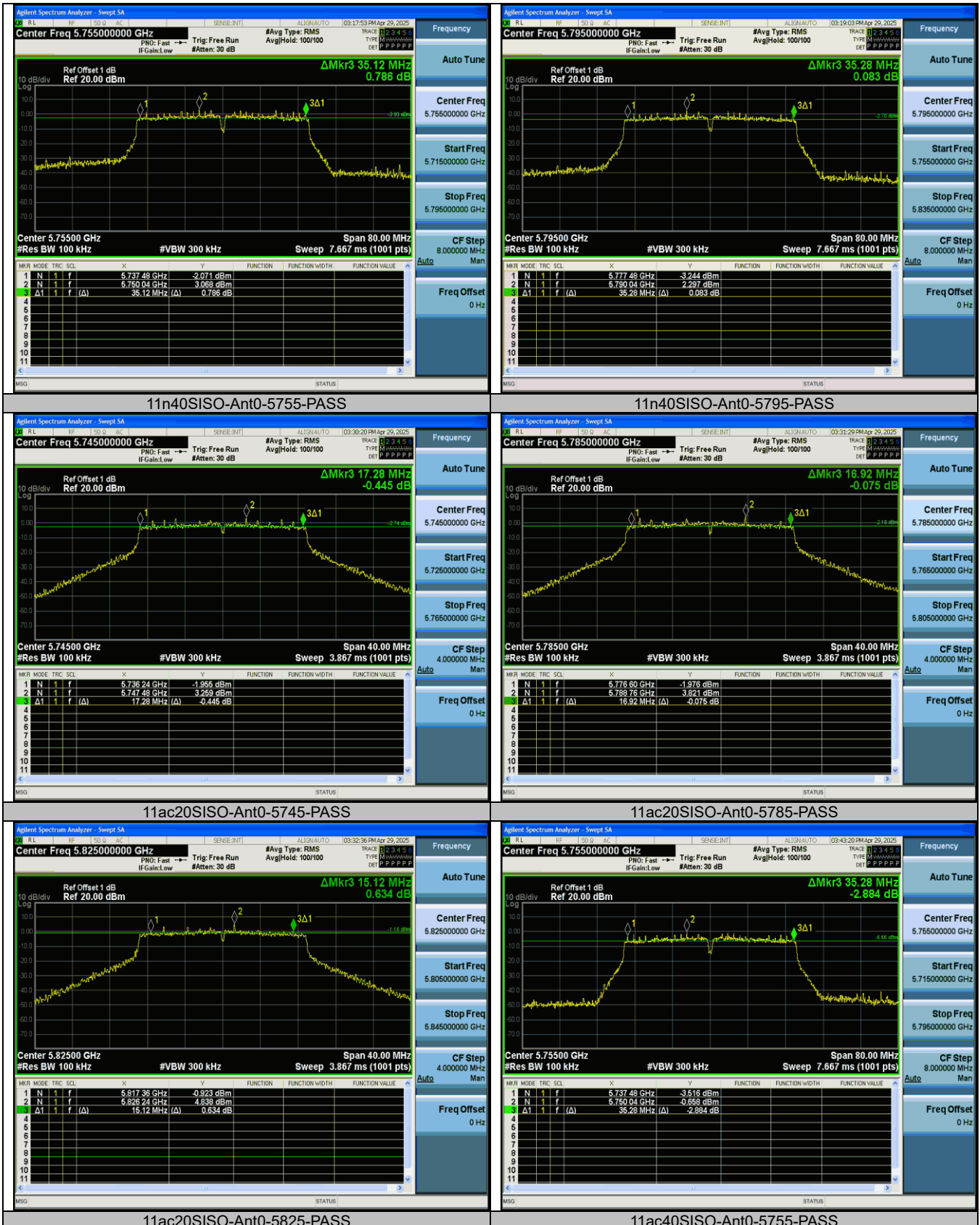
Min emission bandwidth

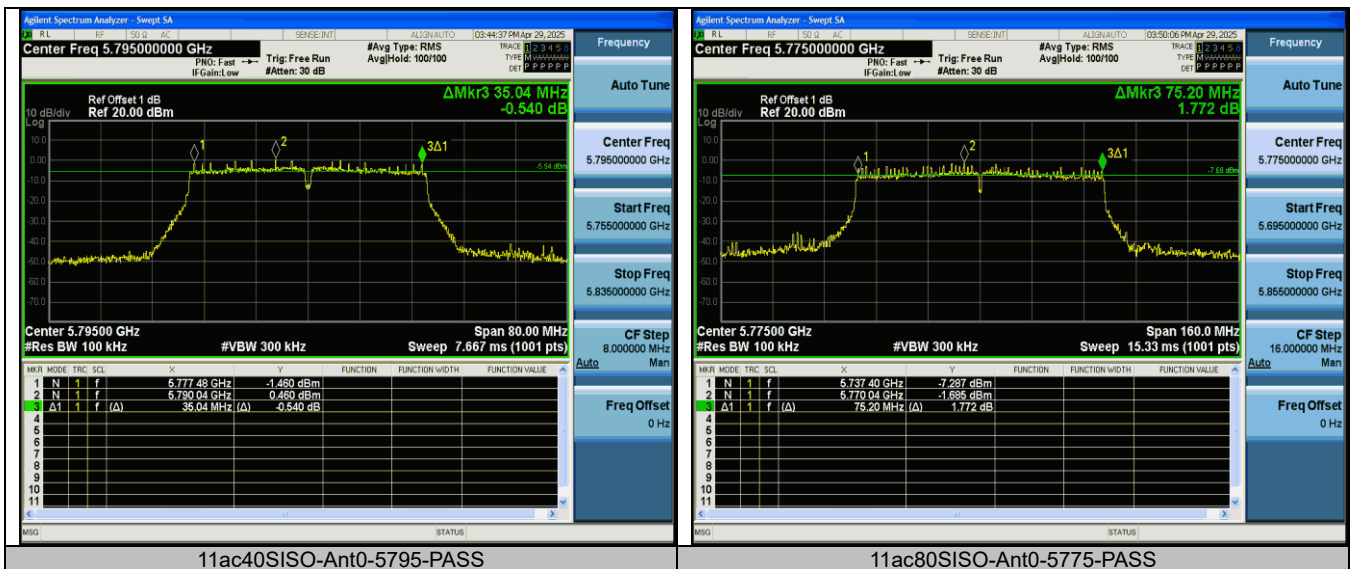
Test Result B4

| TestMode | Antenna | Frequency[MHz] | 6dB EBW [MHz] | FL[MHz] | FH[MHz] | Limit[MHz] | Verdict |
|------------|---------|----------------|---------------|----------|----------|------------|---------|
| 11a | Ant0 | 5745 | 15.680 | 5737.120 | 5752.800 | 0.5 | PASS |
| 11a | Ant0 | 5785 | 16.280 | 5776.880 | 5793.160 | 0.5 | PASS |
| 11a | Ant0 | 5825 | 14.000 | 5817.520 | 5831.520 | 0.5 | PASS |
| 11n20SISO | Ant0 | 5745 | 14.920 | 5737.600 | 5752.520 | 0.5 | PASS |
| 11n20SISO | Ant0 | 5785 | 15.000 | 5777.560 | 5792.560 | 0.5 | PASS |
| 11n20SISO | Ant0 | 5825 | 16.000 | 5816.880 | 5832.880 | 0.5 | PASS |
| 11n40SISO | Ant0 | 5755 | 35.120 | 5737.480 | 5772.600 | 0.5 | PASS |
| 11n40SISO | Ant0 | 5795 | 35.280 | 5777.480 | 5812.760 | 0.5 | PASS |
| 11ac20SISO | Ant0 | 5745 | 17.280 | 5736.240 | 5753.520 | 0.5 | PASS |
| 11ac20SISO | Ant0 | 5785 | 16.920 | 5776.600 | 5793.520 | 0.5 | PASS |
| 11ac20SISO | Ant0 | 5825 | 15.120 | 5817.360 | 5832.480 | 0.5 | PASS |
| 11ac40SISO | Ant0 | 5755 | 35.280 | 5737.480 | 5772.760 | 0.5 | PASS |
| 11ac40SISO | Ant0 | 5795 | 35.040 | 5777.480 | 5812.520 | 0.5 | PASS |
| 11ac80SISO | Ant0 | 5775 | 75.200 | 5737.400 | 5812.600 | 0.5 | PASS |

Test Graphs B4







**Duty Cycle
Test Result**

| TestMode | Antenna | Frequency[MHz] | Transmission Duration [ms] | Transmission Period [ms] | Duty Cycle [%] |
|------------|---------|----------------|----------------------------|--------------------------|----------------|
| 11a | Ant0 | 5180 | 2.05 | 2.08 | 98.56 |
| 11a | Ant0 | 5200 | 2.05 | 2.08 | 98.56 |
| 11a | Ant0 | 5240 | 2.05 | 2.08 | 98.56 |
| 11a | Ant0 | 5260 | 2.05 | 2.08 | 98.56 |
| 11a | Ant0 | 5300 | 2.05 | 2.08 | 98.56 |
| 11a | Ant0 | 5320 | 2.05 | 2.08 | 98.56 |
| 11a | Ant0 | 5500 | 2.05 | 2.08 | 98.56 |
| 11a | Ant0 | 5600 | 2.04 | 2.08 | 98.08 |
| 11a | Ant0 | 5700 | 2.05 | 2.09 | 98.09 |
| 11a | Ant0 | 5745 | 2.05 | 2.08 | 98.56 |
| 11a | Ant0 | 5785 | 2.05 | 2.09 | 98.09 |
| 11a | Ant0 | 5825 | 2.04 | 2.08 | 98.08 |
| 11n20SISO | Ant0 | 5180 | 1.91 | 1.95 | 97.95 |
| 11n20SISO | Ant0 | 5200 | 1.91 | 1.95 | 97.95 |
| 11n20SISO | Ant0 | 5240 | 1.91 | 1.94 | 98.45 |
| 11n20SISO | Ant0 | 5260 | 1.90 | 1.94 | 97.94 |
| 11n20SISO | Ant0 | 5300 | 1.91 | 1.95 | 97.95 |
| 11n20SISO | Ant0 | 5320 | 1.91 | 1.94 | 98.45 |
| 11n20SISO | Ant0 | 5500 | 1.91 | 1.95 | 97.95 |
| 11n20SISO | Ant0 | 5600 | 1.91 | 1.95 | 97.95 |
| 11n20SISO | Ant0 | 5700 | 1.91 | 1.95 | 97.95 |
| 11n20SISO | Ant0 | 5745 | 1.91 | 1.95 | 97.95 |
| 11n20SISO | Ant0 | 5785 | 1.91 | 1.95 | 97.95 |
| 11n20SISO | Ant0 | 5825 | 1.91 | 1.95 | 97.95 |
| 11n40SISO | Ant0 | 5190 | 0.94 | 0.98 | 95.92 |
| 11n40SISO | Ant0 | 5230 | 0.94 | 0.98 | 95.92 |
| 11n40SISO | Ant0 | 5270 | 0.94 | 0.98 | 95.92 |
| 11n40SISO | Ant0 | 5310 | 0.94 | 0.98 | 95.92 |
| 11n40SISO | Ant0 | 5510 | 0.94 | 0.98 | 95.92 |
| 11n40SISO | Ant0 | 5590 | 0.94 | 0.98 | 95.92 |
| 11n40SISO | Ant0 | 5670 | 0.94 | 0.97 | 96.91 |
| 11n40SISO | Ant0 | 5755 | 0.94 | 0.98 | 95.92 |
| 11n40SISO | Ant0 | 5795 | 0.94 | 0.97 | 96.91 |
| 11ac20SISO | Ant0 | 5180 | 1.92 | 1.96 | 97.96 |
| 11ac20SISO | Ant0 | 5200 | 1.92 | 1.96 | 97.96 |
| 11ac20SISO | Ant0 | 5240 | 1.92 | 1.96 | 97.96 |
| 11ac20SISO | Ant0 | 5260 | 1.92 | 1.96 | 97.96 |
| 11ac20SISO | Ant0 | 5300 | 1.92 | 1.96 | 97.96 |
| 11ac20SISO | Ant0 | 5320 | 1.92 | 1.96 | 97.96 |
| 11ac20SISO | Ant0 | 5500 | 1.92 | 1.96 | 97.96 |
| 11ac20SISO | Ant0 | 5600 | 1.92 | 1.96 | 97.96 |
| 11ac20SISO | Ant0 | 5700 | 1.92 | 1.96 | 97.96 |
| 11ac20SISO | Ant0 | 5745 | 1.92 | 1.95 | 98.46 |
| 11ac20SISO | Ant0 | 5785 | 1.92 | 1.96 | 97.96 |
| 11ac20SISO | Ant0 | 5825 | 1.92 | 1.96 | 97.96 |
| 11ac40SISO | Ant0 | 5190 | 0.94 | 0.98 | 95.92 |
| 11ac40SISO | Ant0 | 5230 | 0.94 | 0.98 | 95.92 |
| 11ac40SISO | Ant0 | 5270 | 0.94 | 0.98 | 95.92 |
| 11ac40SISO | Ant0 | 5310 | 0.94 | 0.98 | 95.92 |
| 11ac40SISO | Ant0 | 5510 | 0.95 | 0.98 | 96.94 |
| 11ac40SISO | Ant0 | 5590 | 0.95 | 0.98 | 96.94 |
| 11ac40SISO | Ant0 | 5670 | 0.95 | 0.98 | 96.94 |
| 11ac40SISO | Ant0 | 5755 | 0.95 | 0.98 | 96.94 |
| 11ac40SISO | Ant0 | 5795 | 0.94 | 0.98 | 95.92 |
| 11ac80SISO | Ant0 | 5210 | 0.46 | 0.49 | 93.88 |
| 11ac80SISO | Ant0 | 5290 | 0.46 | 0.49 | 93.88 |
| 11ac80SISO | Ant0 | 5530 | 0.46 | 0.50 | 92.00 |
| 11ac80SISO | Ant0 | 5610 | 0.46 | 0.49 | 93.88 |
| 11ac80SISO | Ant0 | 5775 | 0.46 | 0.50 | 92.00 |

Test Graphs

