



RADIO TEST REPORT

Test Report No. 14173126H-C

| | |
|----------------------------|---|
| Customer | Sony Interactive Entertainment Inc. |
| Description of EUT | Wireless communication module |
| Model Number of EUT | J20H104 |
| FCC ID | AK8M21DFD1 |
| Test Regulation | FCC Part 15 Subpart E: 2021 |
| Test Result | Complied (Refer to SECTION 3) |
| Issue Date | March 11, 2022 |
| Remarks | WLAN (5 GHz band) part Except for DFS test |

Representative Test Engineer

Hiroki Numata
Engineer

Approved By

Takayuki Shimada
Leader



CERTIFICATE 5107.02

- The testing in which "Non-accreditation" is displayed is outside the accreditation scopes in UL Japan, Inc.
 There is no testing item of "Non-accreditation".

Report Cover Page - Form-ULID-003532 (DCS:13-EM-F0429) Issue# 20.0

ANNOUNCEMENT

- This test report shall not be reproduced in full or partial, without the written approval of UL Japan, Inc.
- The results in this report apply only to the sample tested.
- This sample tested is in compliance with the limits of the above regulation.
- The test results in this test report are traceable to the national or international standards.
- This test report must not be used by the customer to claim product certification, approval, or endorsement by the A2LA accreditation body.
- This test report covers Radio technical requirements.
It does not cover administrative issues such as Manual or non-Radio test related Requirements. (if applicable)
- The all test items in this test report are conducted by UL Japan, Inc. Ise EMC Lab.
- The opinions and the interpretations to the result of the description in this report are outside scopes where UL Japan, Inc. has been accredited.
- The information provided from the applicant for this report is identified in Section 1.
- For test report(s) referred in this report, the latest version (including any revisions) is always referred.

REVISION HISTORY

Original Test Report No.: 14173126H-C

| Revision | Test Report No. | Date | Page Revised Contents |
|-----------------|-----------------|----------------|-----------------------|
| - (Original) | 14173126H-C | March 11, 2022 | - |

Reference: Abbreviations (Including words undescribed in this report)

| | | | |
|----------------|---|---------|---|
| A2LA | The American Association for Laboratory Accreditation | ICES | Interference-Causing Equipment Standard |
| AC | Alternating Current | IEC | International Electrotechnical Commission |
| AFH | Adaptive Frequency Hopping | IEEE | Institute of Electrical and Electronics Engineers |
| AM | Amplitude Modulation | IF | Intermediate Frequency |
| Amp, AMP | Amplifier | ILAC | International Laboratory Accreditation Conference |
| ANSI | American National Standards Institute | ISED | Innovation, Science and Economic Development Canada |
| Ant, ANT | Antenna | ISO | International Organization for Standardization |
| AP | Access Point | JAB | Japan Accreditation Board |
| ASK | Amplitude Shift Keying | LAN | Local Area Network |
| Atten., ATT | Attenuator | LIMS | Laboratory Information Management System |
| AV | Average | MCS | Modulation and Coding Scheme |
| BPSK | Binary Phase-Shift Keying | MRA | Mutual Recognition Arrangement |
| BR | Bluetooth Basic Rate | N/A | Not Applicable |
| BT | Bluetooth | NIST | National Institute of Standards and Technology |
| BT LE | Bluetooth Low Energy | NS | No signal detect. |
| BW | BandWidth | NSA | Normalized Site Attenuation |
| Cal Int | Calibration Interval | NVLAP | National Voluntary Laboratory Accreditation Program |
| CCK | Complementary Code Keying | OBW | Occupied Band Width |
| Ch., CH | Channel | OFDM | Orthogonal Frequency Division Multiplexing |
| CISPR | Comite International Special des Perturbations Radioelectriques | P/M | Power meter |
| CW | Continuous Wave | PCB | Printed Circuit Board |
| DBPSK | Differential BPSK | PER | Packet Error Rate |
| DC | Direct Current | PHY | Physical Layer |
| D-factor | Distance factor | PK | Peak |
| DFS | Dynamic Frequency Selection | PN | Pseudo random Noise |
| DQPSK | Differential QPSK | PRBS | Pseudo-Random Bit Sequence |
| DSSS | Direct Sequence Spread Spectrum | PSD | Power Spectral Density |
| EDR | Enhanced Data Rate | QAM | Quadrature Amplitude Modulation |
| EIRP, e.i.r.p. | Equivalent Isotropically Radiated Power | QP | Quasi-Peak |
| EMC | ElectroMagnetic Compatibility | QPSK | Quadri-Phase Shift Keying |
| EMI | ElectroMagnetic Interference | RBW | Resolution Band Width |
| EN | European Norm | RDS | Radio Data System |
| ERP, e.r.p. | Effective Radiated Power | RE | Radio Equipment |
| EU | European Union | RF | Radio Frequency |
| EUT | Equipment Under Test | RMS | Root Mean Square |
| Fac. | Factor | RSS | Radio Standards Specifications |
| FCC | Federal Communications Commission | Rx | Receiving |
| FHSS | Frequency Hopping Spread Spectrum | SA, S/A | Spectrum Analyzer |
| FM | Frequency Modulation | SG | Signal Generator |
| Freq. | Frequency | SVSWR | Site-Voltage Standing Wave Ratio |
| FSK | Frequency Shift Keying | TR | Test Receiver |
| GFSK | Gaussian Frequency-Shift Keying | Tx | Transmitting |
| GNSS | Global Navigation Satellite System | VBW | Video BandWidth |
| GPS | Global Positioning System | Vert. | Vertical |
| Hori. | Horizontal | WLAN | Wireless LAN |

| CONTENTS | PAGE |
|--|-------------|
| SECTION 1: Customer Information | 5 |
| SECTION 2: Equipment Under Test (EUT)..... | 5 |
| SECTION 3: Test specification, Procedures & Results | 8 |
| SECTION 4: Operation of EUT during testing..... | 11 |
| SECTION 5: Conducted Emission | 15 |
| SECTION 6: Radiated Spurious Emission and Band Edge Compliance..... | 16 |
| SECTION 7: Antenna Terminal Conducted Tests..... | 19 |
| APPENDIX 1: Test data | 20 |
| Conducted Emission | 20 |
| 26 dB Emission Bandwidth and 99 % Occupied Bandwidth..... | 21 |
| 99 % Occupied Bandwidth | 91 |
| 6 dB Bandwidth | 174 |
| Maximum Conducted Output Power | 200 |
| Average Output Power..... | 239 |
| Burst rate confirmation | 251 |
| Maximum Power Spectral Density | 259 |
| Radiated Spurious Emission | 454 |
| Conducted Spurious Emission | 675 |
| APPENDIX 2: Test Instruments..... | 676 |
| APPENDIX 3: Photographs of Test Setup..... | 678 |
| Conducted Emission | 678 |
| Radiated Spurious Emission | 679 |
| Worst Case Position..... | 680 |
| Antenna Terminal Conducted Tests..... | 682 |
| Test Configuration and peripherals..... | 683 |

SECTION 1: Customer Information

| | |
|------------------|---|
| Company Name | Sony Interactive Entertainment Inc. |
| Brand Name | SONY |
| Address | 1-7-1 Konan, Minato-ku, Tokyo, 108-0075 Japan |
| Telephone Number | +81-50-3807-5639 |
| Contact Person | Miho Nakamura |

The information provided from the customer is as follows;

- Customer, Description of EUT, Model Number of EUT, FCC ID on the cover and other relevant pages
 - Operating/Test Mode(s) (Mode(s)) on all the relevant pages
 - SECTION 1: Customer Information
 - SECTION 2: Equipment Under Test (EUT) other than the Receipt Date and Test Date
 - SECTION 4: Operation of EUT during testing
- * The laboratory is exempted from liability of any test results affected from the above information in SECTION 2 and 4.

SECTION 2: Equipment Under Test (EUT)

2.1 Identification of EUT

| | |
|---------------|---|
| Description | Wireless communication module |
| Model Number | J20H104 |
| Serial Number | Refer to SECTION 4.2 |
| Condition | Production prototype (Not for Sale: This sample is equivalent to mass-produced items.) |
| Modification | No Modification by the test lab |
| Receipt Date | January 17, 2022 |
| Test Date | January 21 to February 15, 2022 |

2.2 Product Description

General Specification

| | |
|--------|----------|
| Rating | DC 3.3 V |
|--------|----------|

Radio Specification

WLAN (IEEE802.11b/11g/11n-20/11ax-20)

| | | |
|--------------------------------|--|-------------------------------|
| Equipment Type | Transceiver | |
| Frequency of Operation | 2412 MHz to 2462 MHz | |
| Type of Modulation | DSSS, OFDM | |
| | OFDMA (IEEE802.11ax only) | 20 MHz: 26/52/106/242-tone RU |
| Bandwidth & Channel spacing | Less than 20 MHz & 5 MHz | |
| Method of frequency generation | Synthesizer | |
| Antenna Type | PIFA | |
| Antenna Gain: G_{ANT} | Antenna 1: 5.0 dBi Antenna 2: 5.0 dBi | |
| Directional Gain *1) | 8.01 dBi | |
| Maximum clock frequency | 640 MHz | |

WLAN (IEEE802.11a/11n-20/11ac-20/11ax-20/11n-40/11ac-40/11ax-40/11ac-80/11ax-80)

| | | |
|---------------------------------------|---|-----------------------------------|
| Equipment Type | Transceiver | |
| Frequency of Operation | 20 M Band: 5180 MHz to 5240 MHz 5260 MHz to 5320 MHz 5500 MHz to 5720 MHz 5745 MHz to 5825 MHz | |
| | 40 M Band: 5190 MHz to 5230 MHz 5270 MHz to 5310 MHz 5510 MHz to 5710 MHz 5755 MHz to 5795 MHz | |
| | 80 M Band: 5210 MHz 5290 MHz 5530 MHz to 5690 MHz 5775 MHz | |
| Type of Modulation | OFDM | |
| | OFDMA (IEEE802.11ax only) | 20 MHz: 26/52/106/242-tone RU |
| | | 40 MHz: 26/52/106/242/484-tone RU |
| 80 MHz: 26/52/106/242/484/996-tone RU | | |
| Bandwidth & Channel spacing | Less than 20 MHz / 40 MHz / 80 MHz & 20 MHz / 40 MHz / 80 MHz | |
| Method of frequency generation | Synthesizer | |
| Antenna Type | PIFA | |
| Antenna Gain: G_{ANT} | Antenna 1: 6.4 dBi Antenna 3: 5.0 dBi | |
| Directional Gain *1) | 8.74 dBi | |
| Maximum clock frequency | 640 MHz | |

BT1: Bluetooth (BR / EDR / Low Energy)

| | |
|--------------------------------|--|
| Equipment Type | Transceiver |
| Frequency of Operation | 2402 MHz to 2480 MHz |
| Type of Modulation | BT: FHSS (GFSK, $\pi/4$ DQPSK, 8DPSK) BT LE: GFSK |
| Bandwidth / Channel spacing | BT: 79 MHz / 1 MHz BT LE: 1 MHz & 2 MHz / 2 MHz |
| Method of frequency generation | Synthesizer |
| Antenna Type | PIFA |
| Antenna Gain | Antenna 3: 5.8 dBi |
| Maximum clock frequency | 640 MHz |

BT2: Bluetooth (BR / EDR / Low Energy)

| | |
|--------------------------------|--|
| Equipment Type | Transceiver |
| Frequency of Operation | 2402 MHz to 2480 MHz |
| Type of Modulation | BT: FHSS (GFSK, $\pi/4$ DQPSK, 8DPSK) BT LE: GFSK |
| Bandwidth / Channel spacing | BT: 79 MHz / 1 MHz BT LE: 1 MHz & 2 MHz / 2 MHz |
| Method of frequency generation | Synthesizer |
| Antenna Type | PIFA |
| Antenna Gain | Antenna 4: 5.8 dBi |
| Maximum clock frequency | 640 MHz |

*1) Directional antenna gain = $10 \log \left(\frac{G_{ANT1}}{(10^{20} + 10^{20})} \right) / 2$

*This test report applies to Wireless LAN (5 GHz Band) part.

SECTION 3: Test specification, Procedures & Results

3.1 Test Specification

| | |
|--------------------|--|
| Test Specification | FCC Part 15 Subpart E FCC Part 15 final revised on May 3, 2021 and effective July 2, 2021 |
| Title | FCC 47 CFR Part 15 Radio Frequency Device Subpart E Unlicensed National Information Infrastructure Devices Section 15.407 General technical requirements |

3.2 Procedures and Results

| Item | Test Procedure | Specification | Worst Margin | Results | Remarks |
|--|--|---|---|----------------------|---|
| Conducted Emission | FCC: ANSI C63.10-2013 ISED: RSS-Gen 8.8 | FCC: 15.407 (b) (6) / 15.207 ISED: RSS-Gen 8.8 | 20.13 dB 22.99664 MHz AV, N | Complied a) | - |
| 26 dB Emission Bandwidth | FCC: KDB Publication Number 789033 ISED: - | FCC: 15.407 (a) (1) (2) (3) ISED: - | See data | Complied b) | Conducted |
| Maximum Conducted Output Power | FCC: KDB Publication Number 789033 ISED: - | FCC: 15.407 (a) (1) (2) (3) ISED: RSS-247 6.2.1.1 6.2.2.1 6.2.3.1 6.2.4.1 | | Complied c) | Conducted |
| Maximum Power Spectral Density | FCC: KDB Publication Number 789033 ISED: - | FCC : 15.407 (a) (1) (2) (3) ISED: RSS-247 6.2.1.1 6.2.2.1 6.2.3.1 6.2.4.1 | | Complied d) | Conducted |
| Spurious Emission Restricted Band Edge | FCC: ANSI C63.10-2013 KDB Publication Number 789033 ISED: - | FCC: 15.407 (b), 15.205 and 15.209 ISED: RSS-247 6.2.1.2 6.2.2.2 6.2.3.2 6.2.4.2 | 4.7 dB 5350.0 MHz / 5460.0 MHz, AV, Horizontal | Complied# e) / f) | Conducted (< 30 MHz) / Radiated (> 30 MHz) *1) |
| 6 dB Emission Bandwidth | FCC: ANSI C63.10-2013 ISED: - | FCC: 15.407 (e) ISED: RSS-247 6.2.4.1 | See data | Complied g) | Conducted |

Note: UL Japan, Inc.'s EMI Work Procedures: Work Instructions-ULID-003591 and Work Instructions-ULID-003593.

* In case any questions arise about test procedure, ANSI C63.10: 2013 is also referred.

*1) Radiated test was selected over 30 MHz based on FCC 15.407 (b) and KDB 789033 D02 G.3.b).

- a) Refer to APPENDIX 1 (data of Conducted Emission)
- b) Refer to APPENDIX 1 (data of 26 dB Emission Bandwidth and 99 % Occupied Bandwidth)
- c) Refer to APPENDIX 1 (data of Maximum Conducted Output Power)
- d) Refer to APPENDIX 1 (data of Maximum Power Spectral Density)
- e) Refer to APPENDIX 1 (data of Radiated Spurious Emission)
- f) Refer to APPENDIX 1 (data of Conducted Spurious Emission)
- g) Refer to APPENDIX 1 (data of 6 dB Bandwidth)

Symbols:

Complied The data of this test item has enough margin, more than the measurement uncertainty.

Complied# The data of this test item meets the limits unless the measurement uncertainty is taken into consideration

FCC Part 15.31 (e)

The stable voltage will be supplied by the end product, which will be required to have a power supply regulator. Therefore, the EUT complies with the requirement.

FCC Part 15.203/212 Antenna requirement

The EUT has a unique coupling/antenna connector (U.FL).

Therefore, the equipment complies with the antenna requirement of Section 15.203.

3.3 Addition to Standard

| Item | Test Procedure | Specification | Worst Margin | Results | Remarks |
|--------------------------|-------------------|---------------|--------------|---------|-----------|
| 99 % Occupied Band Width | ISED: RSS-Gen 6.7 | ISED: - | N/A | - a) | Conducted |

a) Refer to APPENDIX 1 (data of 26 dB Emission Bandwidth and 99 % Occupied Bandwidth)

Other than above, no addition, exclusion nor deviation has been made from the standard.

3.4 Uncertainty

There is no applicable rule of uncertainty in this applied standard. Therefore, the following results are derived depending on whether or not laboratory uncertainty is applied.

The following uncertainties have been calculated to provide a confidence level of 95 % using a coverage factor $k=2$.

Conducted emission

| Using Item | Frequency range | Uncertainty (+/-) |
|------------|-----------------------|-------------------|
| AMN (LISN) | 0.009 MHz to 0.15 MHz | 3.7 dB |
| | 0.15 MHz to 30 MHz | 3.3 dB |

Radiated emission

| Measurement distance | Frequency range | Uncertainty (+/-) |
|----------------------|---------------------|---------------------|
| 3 m | 9 kHz to 30 MHz | 3.2 dB |
| 10 m | | 3.0 dB |
| 3 m | 30 MHz to 200 MHz | (Horizontal) 4.8 dB |
| | | (Vertical) 5.0 dB |
| | 200 MHz to 1000 MHz | (Horizontal) 5.1 dB |
| | | (Vertical) 6.2 dB |
| 10 m | 30 MHz to 200 MHz | (Horizontal) 4.8 dB |
| | | (Vertical) 4.8 dB |
| | 200 MHz to 1000 MHz | (Horizontal) 5.0 dB |
| | | (Vertical) 5.0 dB |
| 3 m | 1 GHz to 6 GHz | 4.9 dB |
| | 6 GHz to 18 GHz | 5.2 dB |
| 1 m | 10 GHz to 26.5 GHz | 5.4 dB |
| | 26.5 GHz to 40 GHz | 5.4 dB |
| 0.5 m | 26.5 GHz to 40 GHz | 5.4 dB |
| 10 m | 1 GHz to 18 GHz | 5.4 dB |

Antenna Terminal test

| Test Item | Uncertainty (+/-) |
|--|-------------------|
| 26 dB Emission Bandwidth / 6 dB Emission Bandwidth / 99 % Occupied Bandwidth | 0.96 % |
| Maximum Conducted Output Power / Average Output Power | 1.5 dB |
| Burst Rate | 0.10 % |
| Maximum Power Spectral Density | 2.7 dB |
| Conducted Spurious Emission | 2.7 dB |

3.5 Test Location

UL Japan, Inc. Ise EMC Lab.

*A2LA Certificate Number: 5107.02 / FCC Test Firm Registration Number: 884919

ISED Lab Company Number: 2973C / CAB identifier: JP0002

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone: +81 596 24 8999, Facsimile: +81 596 24 8124

| Test site | Width x Depth x Height (m) | Size of reference ground plane (m) / horizontal conducting plane | Other rooms | Maximum measurement distance |
|----------------------------|----------------------------|--|------------------------|------------------------------|
| No.1 semi-anechoic chamber | 19.2 x 11.2 x 7.7 | 7.0 x 6.0 | No.1 Power source room | 10 m |
| No.2 semi-anechoic chamber | 7.5 x 5.8 x 5.2 | 4.0 x 4.0 | - | 3 m |
| No.3 semi-anechoic chamber | 12.0 x 8.5 x 5.9 | 6.8 x 5.75 | No.3 Preparation room | 3 m |
| No.3 shielded room | 4.0 x 6.0 x 2.7 | N/A | - | - |
| No.4 semi-anechoic chamber | 12.0 x 8.5 x 5.9 | 6.8 x 5.75 | No.4 Preparation room | 3 m |
| No.4 shielded room | 4.0 x 6.0 x 2.7 | N/A | - | - |
| No.5 semi-anechoic chamber | 6.0 x 6.0 x 3.9 | 6.0 x 6.0 | - | - |
| No.5 measurement room | 6.4 x 6.4 x 3.0 | 6.4 x 6.4 | - | - |
| No.6 shielded room | 4.0 x 4.5 x 2.7 | 4.0 x 4.5 | - | - |
| No.6 measurement room | 4.75 x 5.4 x 3.0 | 4.75 x 4.15 | - | - |
| No.7 shielded room | 4.7 x 7.5 x 2.7 | 4.7 x 7.5 | - | - |
| No.8 measurement room | 3.1 x 5.0 x 2.7 | 3.1 x 5.0 | - | - |
| No.9 measurement room | 8.8 x 4.6 x 2.8 | 2.4 x 2.4 | - | - |
| No.10 shielded room | 3.8 x 2.8 x 2.8 | 3.8 x 2.8 | - | - |
| No.11 measurement room | 4.0 x 3.4 x 2.5 | N/A | - | - |
| No.12 measurement room | 2.6 x 3.4 x 2.5 | N/A | - | - |
| Large Chamber | 16.9 x 22.1 x 10.17 | 16.9 x 22.1 | - | 10 m |
| Small Chamber | 5.3 x 6.69 x 3.59 | 5.3 x 6.69 | - | - |

* Size of vertical conducting plane (for Conducted Emission test) : 2.0 x 2.0 m for No.1, No.2, No.3, and No.4 semi-anechoic chambers and No.3 and No.4 shielded rooms.

3.6 Test Data, Test Instruments, and Test Set Up

Refer to APPENDIX.

SECTION 4: Operation of EUT during testing

4.1 Operating Mode(s)

Test operating mode was determined as follows according to “Section 1 of 6 802.11 a/b/g/n testing - Managing Complex Regulatory Approvals -” of TCB Council Workshop October 2009 and also was judged the necessity of 802.11ac mode by the pre-test.

| Mode | Remarks* |
|--|------------------|
| IEEE 802.11a (11a) | 6 Mbps, PN9 |
| IEEE 802.11n MIMO 20 MHz BW (11n-20) | MCS 0, PN9 |
| IEEE 802.11ac MIMO 20 MHz BW (11ac-20) | MCS 0 (1TX), PN9 |
| IEEE 802.11ax MIMO 20 MHz BW (11ax-20) | MCS 0 (1TX), PN9 |
| IEEE 802.11n MIMO 40 MHz BW (11n-40) | MCS 0, PN9 |
| IEEE 802.11ac MIMO 40 MHz BW (11ac-40) | MCS 0 (1TX), PN9 |
| IEEE 802.11ax MIMO 40 MHz BW (11ax-40) | MCS 0 (1TX), PN9 |
| IEEE 802.11ac MIMO 80 MHz BW (11ac-80) | MCS 0 (1TX), PN9 |
| IEEE 802.11ax MIMO 80 MHz BW (11ax-80) | MCS 0 (1TX), PN9 |
| *The worst antenna and condition was determined based on the test result of Maximum Conducted Output Power. | |
| *Power of the EUT was set by the software as follows; Power Setting: See the table below Software: autotest_for-ULJ.sh (Date: January 19, 2022, Storage location: Driven by connected PC) | |
| *This setting of software is the worst case. Any conditions under the normal use do not exceed the condition of setting. In addition, end users cannot change the settings of the output power of the product. | |

Power Setting

| | | W52 | | | W53/W56/W58 | | |
|-------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | | 20 MHz BW | 40 MHz BW | 80 MHz BW | 20 MHz BW | 40 MHz BW | 80 MHz BW |
| OFDM | | 6.5 | | | 8.0 | | |
| OFDMA | 26-tone RU | -2.0 | | | -0.5 | | |
| | 52-tone RU | 1.0 | | | 2.5 | | |
| | 106-tone RU | 4.0 | | | 5.5 | | |
| | 242-tone RU | 6.5 | | | 8.0 | | |
| | 484-tone RU | - | 6.5 | | - | 8.0 | |
| | 996-tone RU | - | - | 6.5 | - | - | 8.0 |

(dBm)

*The details of Operation mode(s) (1/2)

| Test Item | Operating Mode | Tested Antenna | Tested Frequency | | | |
|--|--|---|----------------------------------|----------------------------------|--|----------------------------------|
| | | | Lower Band | Middle Band | Additional Band | Upper Band |
| Conducted emission, Radiated Spurious Emission (Below 1 GHz) | Tx 11ax-20 OFDM *1) | Antenna 3 | - | - | 5500 MHz | - |
| 26 dB Emission Bandwidth | Tx 11a Tx 11n-20 Tx 11ac-20 Tx 11ax-20 OFDM Tx 11ax-20 OFDMA | Antenna 3 *2) | - | 5260 MHz 5300 MHz 5320 MHz | 5500 MHz 5580 MHz 5700 MHz 5720 MHz | - |
| | Tx 11n-40 Tx 11ac-40 Tx 11ax-40 OFDM Tx 11ax-40 OFDMA | | - | 5270 MHz 5310 MHz | 5510 MHz 5550 MHz 5670 MHz 5710 MHz | - |
| | Tx 11ac-80 Tx 11ax-80 OFDM Tx 11ax-80 OFDMA | | - | 5290 MHz | 5530 MHz 5610 MHz 5690 MHz | - |
| 99 % Occupied Bandwidth | Tx 11a Tx 11n-20 Tx 11ac-20 Tx 11ax-20 OFDM Tx 11ax-20 OFDMA | Antenna 3 *2) | 5180 MHz 5220 MHz 5240 MHz | 5260 MHz 5300 MHz 5320 MHz | 5500 MHz 5580 MHz 5700 MHz 5720 MHz | 5745 MHz 5785 MHz 5825 MHz |
| | Tx 11n-40 Tx 11ac-40 Tx 11ax-40 OFDM Tx 11ax-40 OFDMA | | 5190 MHz 5230 MHz | 5270 MHz 5310 MHz | 5510 MHz 5550 MHz 5670 MHz 5710 MHz | 5755 MHz 5795 MHz |
| | Tx 11ac-80 Tx 11ax-80 OFDM Tx 11ax-80 OFDMA | | 5210 MHz | 5290 MHz | 5530 MHz 5610 MHz 5690 MHz | 5775 MHz |
| Maximum Conducted Output Power, Maximum Power Spectral Density | Tx 11a Tx 11n-20 Tx 11ac-20 Tx 11ax-20 OFDM Tx 11ax-20 OFDMA | Antenna 1 Antenna 3 Antenna 1 + 3 | 5180 MHz 5220 MHz 5240 MHz | 5260 MHz 5300 MHz 5320 MHz | 5500 MHz 5580 MHz 5700 MHz 5720 MHz | 5745 MHz 5785 MHz 5825 MHz |
| | Tx 11n-40 Tx 11ac-40 Tx 11ax-40 OFDM Tx 11ax-40 OFDMA | | 5190 MHz 5230 MHz | 5270 MHz 5310 MHz | 5510 MHz 5550 MHz 5670 MHz 5710 MHz | 5755 MHz 5795 MHz |
| | Tx 11ac-80 Tx 11ax-80 OFDM Tx 11ax-80 OFDMA | | 5210 MHz | 5290 MHz | 5530 MHz 5610 MHz 5690 MHz | 5775 MHz |

*The details of Operation mode(s) (2/2)

| Test Item | Operating Mode | Tested Antenna | Tested Frequency | | | |
|---|--|----------------|------------------|----------------------|----------------------------------|----------------------------------|
| | | | Lower Band | Middle Band | Additional Band | Upper Band |
| 6 dB Bandwidth | Tx 11a Tx 11n-20 Tx 11ac-20 Tx 11ax-20 OFDM Tx 11ax-20 OFDMA | Antenna 3 *2) | - | - | - | 5745 MHz 5785 MHz 5825 MHz |
| | Tx 11n-40 Tx 11ac-40 Tx 11ax-40 OFDM Tx 11ax-40 OFDMA | | - | - | - | 5755 MHz 5795 MHz |
| | Tx 11ac-80 Tx 11ax-80 OFDM Tx 11ax-80 OFDMA | | - | - | - | 5775 MHz |
| Radiated Spurious Emission (Above 1 GHz) | Tx 11ax-20 OFDM *3) Tx 11ax-20 OFDMA *4) | Antenna 1 + 3 | 5180 MHz | 5260 MHz 5320 MHz | 5500 MHz 5580 MHz 5700 MHz | 5745 MHz 5785 MHz 5825 MHz |
| | Tx 11ax-40 OFDM *3) Tx 11ax-40 OFDMA *4) | | 5190 MHz | 5270 MHz 5310 MHz | 5510 MHz 5550 MHz 5670 MHz | 5755 MHz 5795 MHz |
| | Tx 11ax-80 OFDM *3) Tx 11ax-80 OFDMA *4) | | 5210 MHz | 5290 MHz | 5530 MHz 5610 MHz 5690 MHz | 5775 MHz |
| Conducted Spurious Emission | Tx 11ax-20 OFDM *1) | Antenna 3 | - | - | 5500 MHz | - |

*1) The mode was tested as a representative, because it had the highest power at antenna terminal test.
*2) After the comparison between Antenna 1 and Antenna 3, the test was performed with the antenna that had higher power as a representative.
*3) Since each of 20 MHz BW (11n-20 / 11ac-20 / 11ax-20), 40 MHz BW (11n-40 / 11ac-40 / 11ax-40) and 80 MHz BW (11ac-80 / 11ax-80) have the same modulation method and no differences in transmitting specification, the test was performed on the representative mode that had the highest output power.
*4) OFDMA configuration tests were conducted only at the band edge since preliminary testing indicated that the other spurious emission was lower than OFDM.

Simultaneous transmission (Only Antenna 3 simultaneously transmits BT1 and WLAN 5 GHz on a single antenna.)

| Test Item | Mode *1) | Tested Antenna |
|----------------------------|---|----------------|
| Radiated Spurious Emission | Tx 11ax-80 5290 MHz (OFDM) + BT1 3DH5 Hopping | Antenna 3 |

*1) The test was performed on the mode as a representative, because it had the highest power of BT1 at antenna terminal test.

4.2 Configuration and Peripherals

This page has been submitted for a separate exhibit.

SECTION 5: Conducted Emission

Test Procedure and Conditions

EUT was placed on a urethane platform of nominal size, 1.0 m by 1.5 m, raised 0.8 m above the conducting ground plane.

The rear of tabletop was located 40cm to the vertical conducting plane. The rear of EUT, including peripherals aligned and flushed with rear of tabletop. All other surfaces of tabletop were at least 80cm from any other grounded conducting surface. EUT was located 80cm from a Line Impedance Stabilization Network (LISN) / Artificial mains Network (AMN) and excess AC cable was bundled in center.

For the tests on EUT with other peripherals (as a whole system)

I/O cables that were connected to the peripherals were bundled in center. They were folded back and forth forming a bundle 30 cm to 40 cm long and were hanged at a 40 cm height to the ground plane. All unused 50 ohm connectors of the LISN (AMN) were resistivity terminated in 50 ohm when not connected to the measuring equipment.

The AC Mains Terminal Continuous disturbance Voltage has been measured with the EUT in a Semi Anechoic Chamber.

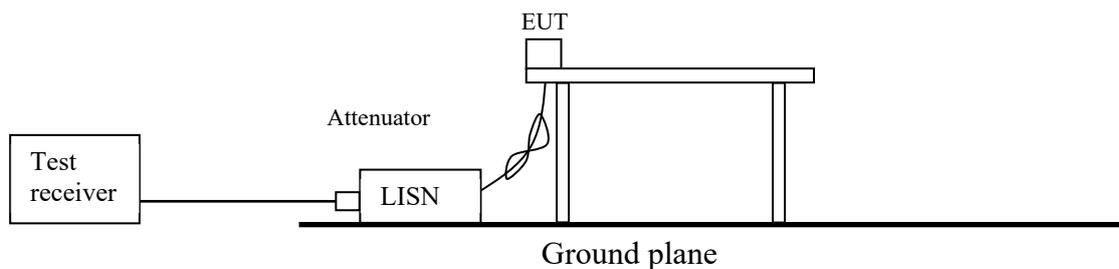
The EUT was connected to a LISN (AMN).

An overview sweep with peak detection has been performed.

The test results and limit are rounded off to one decimal place, so some differences might be observed.

| | |
|--------------------------|-------------------------------|
| Detector | : QP and CISPR Average |
| Measurement Range | : 0.15 MHz to 30 MHz |
| Test Data | : APPENDIX |
| Test Result | : Pass |

Figure 1: Test Setup



SECTION 6: Radiated Spurious Emission and Band Edge Compliance

Test Procedure

< Below 1GHz >

EUT was placed on a urethane platform of nominal size, 0.5 m by 1.0 m, raised 0.8 m above the conducting ground plane. The Radiated Electric Field Strength has been measured in a Semi Anechoic Chamber with a ground plane.

< Above 1GHz >

EUT was placed on a urethane platform of nominal size, 0.5 m by 1.0 m, raised 1.5 m above the conducting ground plane.

The Radiated Electric Field Strength has been measured in a Semi Anechoic Chamber with absorbent materials lined on a ground plane.

The height of the measuring antenna varied between 1 m and 4 m and EUT was rotated a full revolution in order to obtain the maximum value of the electric field strength.

Test antenna was aimed at the EUT for receiving the maximum signal and always kept within the illumination area of the 3 dB beamwidth of the antenna.

The measurements were performed for both vertical and horizontal antenna polarization with the Test Receiver, or the Spectrum Analyzer.

The measurements were made with the following detector function of the test receiver and the Spectrum analyzer (in linear mode).

The test was made with the detector (RBW/VBW) in the following table.

When using Spectrum analyzer, the test was made with adjusting span to zero by using peak hold.

< Below 1GHz >

The result also satisfied with the general limits specified in section 15.209 (a).

< Above 1GHz >

Inside of restricted bands (Section 15.205):

Apply to limit in the Section 15.209 (a).

Outside of the restricted bands:

Apply to limit 68.2 dBuV/m, 3 m (-27 dBm e.i.r.p.*) in the Section 15.407 (b) (1) (2) (3).

For W58 Bandedge

-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 in the section 15.407(b)(4)(i).

Restricted band edge:

Apply to limit in the Section 15.209 (a).

Since this limit is severer than the limit of the inside of restricted bands.

*Electric field strength to e.i.r.p. conversion:

$$E = \frac{1000000 \sqrt{30P}}{3} \text{ (uV/m)} \quad :P \text{ is the e.i.r.p. (Watts)}$$

Test Antennas are used as below;

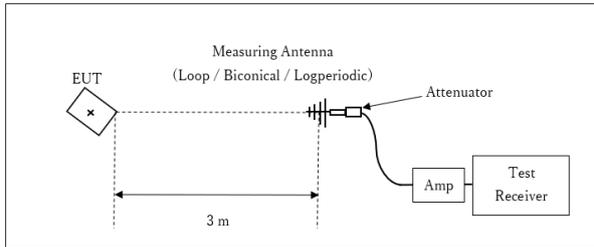
| | | | |
|--------------|-------------------|------------------|-------------|
| Frequency | 30 MHz to 200 MHz | 200 MHz to 1 GHz | Above 1 GHz |
| Antenna Type | Biconical | Logperiodic | Horn |

| | | | |
|-----------------|---------------|--------------------------|--|
| Frequency | Below 1 GHz | Above 1 GHz | |
| Instrument Used | Test Receiver | Spectrum Analyzer | |
| Detector | QP | Peak | Average |
| IF Bandwidth | BW: 120 kHz | RBW: 1 MHz VBW: 3 MHz | Method AD *1) RBW: 1 MHz VBW: 3 MHz Detector: Power Averaging (RMS) Trace: ≥ 100 traces If duty cycle was less than 98%, a duty factor was added to the results. |

*1) The test method was also referred to KDB 789033 D02 General UNII Test Procedures New Rules v02r01 "Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices Part 15, Subpart E".

Figure 2: Test Setup

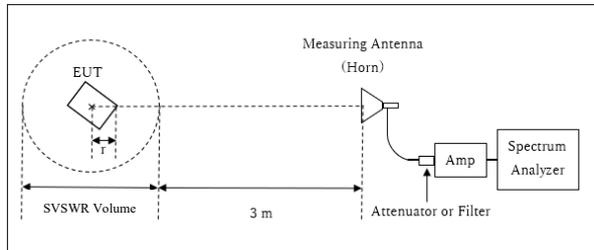
Below 1 GHz



× : Center of turn table

Test Distance: 3 m

1 GHz to 10 GHz

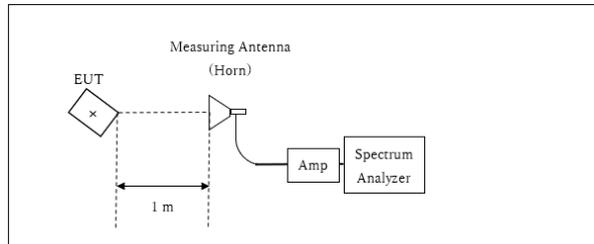


r : Radius of an outer periphery of EUT
× : Center of turn table

Distance Factor: $20 \times \log(3.9 \text{ m} / 3.0 \text{ m}) = 2.28 \text{ dB}$
* Test Distance: $(3 + \text{SVSWR Volume} / 2) - r = 3.9 \text{ m}$

SVSWR Volume : 2.0 m
(SVSWR Volume has been calibrated based on CISPR 16-1-4.)
 $r = 0.1 \text{ m}$

10 GHz to 40 GHz



× : Center of turn table

Distance Factor: $20 \times \log(1.0 \text{ m} / 3.0 \text{ m}) = -9.5 \text{ dB}$
* Test Distance: 1 m

- The carrier level and noise levels were confirmed at each position of X, Y and Z axes of EUT to see the position of maximum noise, and the test was made at the position that has the maximum noise.

The test results and limit are rounded off to one decimal place, so some differences might be observed.

Measurement Range : 30 MHz to 40 GHz
Test Data : APPENDIX
Test Result : Pass

SECTION 7: Antenna Terminal Conducted Tests

Test Procedure

The tests were made with below setting connected to the antenna port.

| Test | Span | RBW | VBW | Sweep time | Detector | Trace | Instrument used and Test method |
|------------------------------------|---|----------------------|--------------|------------|---------------------------------|-------------|---|
| 26 dB Bandwidth | Enough to capture the emission | Close to 1 % of EBW | > RBW | Auto | Peak | Max Hold | Spectrum Analyzer |
| 99 % Occupied Bandwidth *1) | Enough width to display emission skirts | 1 % to 5 % of OBW | ≥ 3 RBW | Auto | Peak | Max Hold | Spectrum Analyzer |
| 6 dB Bandwidth | Enough to capture the emission | 100 kHz | 300 kHz | Auto | Peak | Max Hold | Spectrum Analyzer |
| Maximum Conducted Output Power | - | - | - | Auto | Average | - | Power Meter (Sensor: 80 MHz BW) (Method PM-G) |
| Maximum Power Spectral Density | Encompass the entire EBW | 1 MHz or 470 kHz *2) | ≥ 3 RBW | Auto | RMS Power Averaging (200 times) | Clear Write | Spectrum Analyzer |
| Conducted Spurious Emission*3) *4) | 9 kHz to 150 kHz | 200 Hz | 620 Hz | Auto | Peak | Max Hold | Spectrum Analyzer |
| | 150 kHz to 30 MHz | 9.1 kHz | 27 kHz | | | | |

* The test method was also referred to KDB 789033 D02 General UNII Test Procedures New Rules v02r01 "Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices Part 15, Subpart E".

*1) Peak hold was applied as Worst-case measurement.

*2) KDB 789033 D02 says that RBW is set to be 500 kHz for 5.725 GHz to 5.850 GHz, but it is not possible with spectrum analyzer, so RBW Correction Factor ($10 \log(500 \text{ kHz} / 470 \text{ kHz})$) was added to the test result.

*3) In the frequency range below 30 MHz, RBW was narrowed to separate the noise contents.

Then, wide-band noise near the limit was checked separately, however the noise was low enough as shown in the chart. (9 kHz to 150 kHz: RBW = 200 Hz, 150 kHz to 30 MHz: RBW = 9.1 kHz).

*4) The limits in CFR 47, Part 15, Subpart C, paragraph 15.209(a), are identical to those in RSS-Gen section 8.9, Table 6, since the measurements are performed in terms of magnetic field strength and converted to electric field strength levels (as reported in the table) using the free space impedance of 377 Ohms. For example, the measurement at frequency 9 kHz resulted in a level of 45.5 dBuV/m, which is equivalent to $45.5 - 51.5 = -6.0$ dBuA/m, which has the same margin, 3 dB, to the corresponding RSS-Gen Table 6 limit as it has to 15.209(a) limit.

The test results and limit are rounded off to two decimals place, so some differences might be observed. The equipment and cables were not used for factor 0 dB of the data sheets.

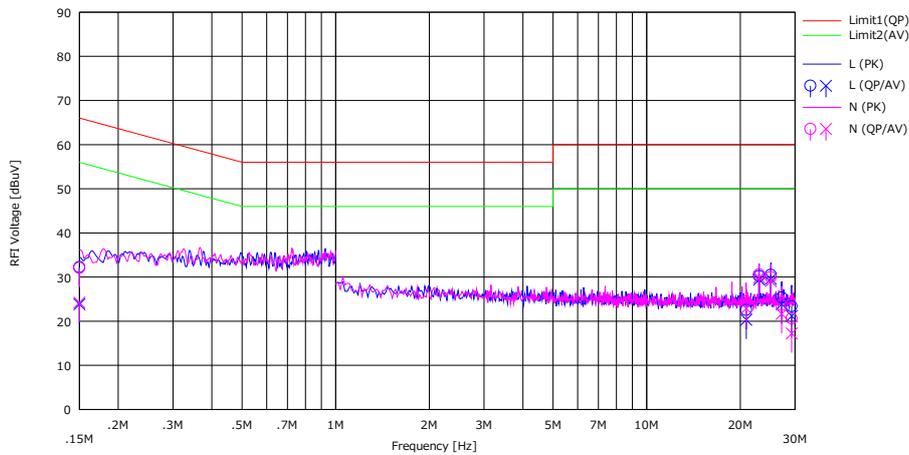
Test Data : APPENDIX
Test Result : Pass

APPENDIX 1: Test data

Conducted Emission

Test place Ise EMC Lab. No.3 Semi Anechoic Chamber
 Date February 15, 2022
 Temperature / Humidity 20 deg. C / 40 % RH
 Engineer Junya Okuno
 Mode Tx 11ax-20 5500 MHz (OFDM)

Limit : FCC_Part 15 Subpart E(15.207)



| No. | Freq. [MHz] | Reading | | LISN [dB] | LOSS [dB] | Results | | Limit | | Margin | | Phase | Comment |
|-----|----------------|----------------|----------------|--------------|--------------|----------------|----------------|----------------|----------------|--------------|--------------|-------|---------|
| | | <QP> [dBuV] | <AV> [dBuV] | | | <QP> [dBuV] | <AV> [dBuV] | <QP> [dBuV] | <AV> [dBuV] | <QP> [dB] | <AV> [dB] | | |
| 1 | 0.15000 | 19.00 | 10.60 | 0.06 | 13.18 | 32.24 | 23.84 | 66.00 | 56.00 | 33.76 | 32.16 | L | |
| 2 | 20.90520 | 8.20 | 6.00 | 0.43 | 13.90 | 22.53 | 20.33 | 60.00 | 50.00 | 37.47 | 29.67 | L | |
| 3 | 22.99510 | 15.80 | 15.00 | 0.47 | 13.94 | 30.21 | 29.41 | 60.00 | 50.00 | 29.79 | 20.59 | L | |
| 4 | 25.08598 | 16.00 | 15.10 | 0.51 | 13.98 | 30.49 | 29.59 | 60.00 | 50.00 | 29.51 | 20.41 | L | |
| 5 | 27.17780 | 10.80 | 9.30 | 0.55 | 14.02 | 25.37 | 23.87 | 60.00 | 50.00 | 34.63 | 26.13 | L | |
| 6 | 29.26652 | 8.70 | 6.50 | 0.60 | 14.06 | 23.36 | 21.16 | 60.00 | 50.00 | 36.64 | 28.84 | L | |
| 7 | 0.15000 | 18.80 | 11.00 | 0.06 | 13.18 | 32.04 | 24.24 | 66.00 | 56.00 | 33.96 | 31.76 | N | |
| 8 | 20.90660 | 10.20 | 8.60 | 0.39 | 13.90 | 24.49 | 22.89 | 60.00 | 50.00 | 35.51 | 27.11 | N | |
| 9 | 22.99664 | 16.20 | 15.50 | 0.43 | 13.94 | 30.57 | 29.87 | 60.00 | 50.00 | 29.43 | 20.13 | N | |
| 10 | 25.08824 | 15.50 | 14.60 | 0.48 | 13.98 | 29.96 | 29.06 | 60.00 | 50.00 | 30.04 | 20.94 | N | |
| 11 | 27.17920 | 9.10 | 7.10 | 0.52 | 14.02 | 23.64 | 21.64 | 60.00 | 50.00 | 36.36 | 28.36 | N | |
| 12 | 29.26690 | 6.00 | 2.60 | 0.56 | 14.06 | 20.62 | 17.22 | 60.00 | 50.00 | 39.38 | 32.78 | N | |

CHART: WITH FACTOR Peak hold data. CALCULATION : RESULT = READING + C.F (LISN + CABLE + ATT)
 Except for the above table: adequate margin data below the limits.

26 dB Emission Bandwidth and 99 % Occupied Bandwidth

Test place Ise EMC Lab. No.8 Measurement Room
Date February 2, 2022
Temperature / Humidity 25 deg. C / 40 % RH
Engineer Kiyoshiro Okazaki
Mode Tx

11a

| Antenna | Tested Frequency [MHz] | 26 dB Emission Bandwidth [MHz] | 99 % Occupied Bandwidth [kHz] |
|-----------|------------------------|--------------------------------|-------------------------------|
| Antenna 3 | 5180 | - | 17277.5 |
| | 5220 | - | 17301.0 |
| | 5240 | - | 16573.2 |
| | 5260 | 23.710 | 17287.1 |
| | 5300 | 23.794 | 17374.9 |
| | 5320 | 25.772 | 17416.5 |
| | 5500 | 24.547 | 17372.8 |
| | 5580 | 23.337 | 17269.6 |
| | 5700 | 24.129 | 17385.0 |
| | 5720 | 23.040 | 17307.7 |
| | 5745 | - | 17298.0 |
| | 5785 | - | 17305.2 |
| | 5825 | - | 17300.8 |

11n-20

| Antenna | Tested Frequency [MHz] | 26 dB Emission Bandwidth [MHz] | 99 % Occupied Bandwidth [kHz] |
|-----------|------------------------|--------------------------------|-------------------------------|
| Antenna 3 | 5180 | - | 17978.3 |
| | 5220 | - | 18041.7 |
| | 5240 | - | 17547.0 |
| | 5260 | 23.018 | 18023.3 |
| | 5300 | 23.244 | 18032.4 |
| | 5320 | 23.953 | 18041.1 |
| | 5500 | 23.635 | 18040.9 |
| | 5580 | 23.609 | 17965.8 |
| | 5700 | 23.210 | 18064.3 |
| | 5720 | 23.660 | 17958.3 |
| | 5745 | - | 17951.3 |
| | 5785 | - | 17992.6 |
| | 5825 | - | 17999.9 |

26 dB Emission Bandwidth and 99 % Occupied Bandwidth

| | |
|------------------------|------------------------------------|
| Test place | Ise EMC Lab. No.8 Measurement Room |
| Date | February 2, 2022 |
| Temperature / Humidity | 25 deg. C / 40 % RH |
| Engineer | Kiyoshiro Okazaki |
| Mode | Tx |

11ac-20

| Antenna | Tested Frequency [MHz] | 26 dB Emission Bandwidth [MHz] | 99 % Occupied Bandwidth [kHz] |
|-----------|------------------------|--------------------------------|-------------------------------|
| Antenna 3 | 5180 | - | 17994.1 |
| | 5220 | - | 17999.9 |
| | 5240 | - | 17610.4 |
| | 5260 | 23.603 | 18044.8 |
| | 5300 | 23.321 | 18019.2 |
| | 5320 | 23.668 | 17999.4 |
| | 5500 | 23.392 | 18014.7 |
| | 5580 | 23.750 | 17986.5 |
| | 5700 | 23.698 | 18047.2 |
| | 5720 | 23.171 | 17920.8 |
| | 5745 | - | 17989.5 |
| | 5785 | - | 17962.4 |
| | 5825 | - | 17972.7 |

11ax-20(OFDM)

| Antenna | Tested Frequency [MHz] | 26 dB Emission Bandwidth [MHz] | 99 % Occupied Bandwidth [kHz] |
|-----------|------------------------|--------------------------------|-------------------------------|
| Antenna 3 | 5180 | - | 19203.7 |
| | 5220 | - | 19180.5 |
| | 5240 | - | 18826.3 |
| | 5260 | 23.794 | 19173.6 |
| | 5300 | 23.888 | 19218.9 |
| | 5320 | 24.850 | 19266.4 |
| | 5500 | 23.187 | 19226.9 |
| | 5580 | 24.341 | 19207.0 |
| | 5700 | 23.795 | 19247.8 |
| | 5720 | 22.513 | 19198.1 |
| | 5745 | - | 19188.5 |
| | 5785 | - | 19215.3 |
| | 5825 | - | 19200.6 |

26 dB Emission Bandwidth and 99 % Occupied Bandwidth

| | |
|------------------------|------------------------------------|
| Test place | Ise EMC Lab. No.8 Measurement Room |
| Date | February 3, 2022 |
| Temperature / Humidity | 24 deg. C / 41 % RH |
| Engineer | Kiyoshiro Okazaki |
| Mode | Tx |

11ax-20 (OFDMA)

| Antenna | RU Type | Tested Frequency [MHz] | RU Index | 26 dB Emission Bandwidth [MHz] | 99 % Occupied Bandwidth [kHz] |
|-----------|------------|------------------------|----------|--------------------------------|-------------------------------|
| Antenna 3 | 26-tone RU | 5180 | 0 | - | 19111.4 |
| | | | 4 | - | 16996.2 |
| | | | 8 | - | 19231.2 |
| | | 5220 | 0 | - | 19044.2 |
| | | | 4 | - | 17059.6 |
| | | | 8 | - | 19141.0 |
| | | 5240 | 0 | - | 18169.1 |
| | | | 4 | - | 16853.7 |
| | | | 8 | - | 18153.5 |
| | | 5260 | 0 | 20.415 | 19167.8 |
| | | | 4 | 18.038 | 17025.8 |
| | | | 8 | 20.595 | 19122.0 |
| | | 5300 | 0 | 20.634 | 19181.8 |
| | | | 4 | 18.017 | 17033.3 |
| | | | 8 | 20.284 | 19158.7 |
| | | 5320 | 0 | 20.427 | 19078.4 |
| | | | 4 | 18.046 | 17040.3 |
| | | | 8 | 20.467 | 19145.8 |
| | | 5500 | 0 | 20.888 | 19131.2 |
| | | | 4 | 18.015 | 17048.0 |
| | | | 8 | 20.634 | 19097.7 |
| | | 5580 | 0 | 20.995 | 19223.8 |
| | | | 4 | 18.079 | 17017.5 |
| | | | 8 | 20.818 | 19118.3 |
| | | 5700 | 0 | 20.208 | 19152.7 |
| | | | 4 | 18.037 | 17057.7 |
| | | | 8 | 20.938 | 19097.2 |
| | | 5720 | 0 | 20.492 | 19139.9 |
| | | | 4 | 18.068 | 17061.0 |
| | | | 8 | 21.415 | 19178.4 |
| | | 5745 | 0 | - | 19079.0 |
| | | | 4 | - | 17036.5 |
| | | | 8 | - | 19111.1 |
| | | 5785 | 0 | - | 19006.2 |
| | | | 4 | - | 17034.3 |
| | | | 8 | - | 19179.0 |
| | | 5825 | 0 | - | 19040.3 |
| | | | 4 | - | 17048.1 |
| | | | 8 | - | 19096.8 |

26 dB Emission Bandwidth and 99 % Occupied Bandwidth

| | |
|------------------------|------------------------------------|
| Test place | Ise EMC Lab. No.8 Measurement Room |
| Date | February 3, 2022 |
| Temperature / Humidity | 24 deg. C / 41 % RH |
| Engineer | Kiyoshiro Okazaki |
| Mode | Tx |

11ax-20 (OFDMA)

| Antenna | RU Type | Tested Frequency [MHz] | RU Index | 26 dB Emission Bandwidth [MHz] | 99 % Occupied Bandwidth [kHz] |
|-----------|------------|------------------------|----------|--------------------------------|-------------------------------|
| Antenna 3 | 52-tone RU | 5180 | 37 | - | 18635.2 |
| | | | 38 | - | 17088.2 |
| | | | 40 | - | 18655.2 |
| | | 5220 | 37 | - | 18717.1 |
| | | | 38 | - | 17093.2 |
| | | | 40 | - | 18669.0 |
| | | 5240 | 37 | - | 18066.8 |
| | | | 38 | - | 16872.8 |
| | | | 40 | - | 18057.0 |
| | | 5260 | 37 | 20.759 | 18732.1 |
| | | | 38 | 18.208 | 17090.6 |
| | | | 40 | 20.464 | 18651.1 |
| | | 5300 | 37 | 21.074 | 18662.6 |
| | | | 38 | 18.189 | 17096.9 |
| | | | 40 | 20.196 | 18726.4 |
| | | 5320 | 37 | 20.773 | 18730.9 |
| | | | 38 | 18.188 | 17084.8 |
| | | | 40 | 21.215 | 18667.1 |
| | | 5500 | 37 | 20.706 | 18715.7 |
| | | | 38 | 18.178 | 17102.6 |
| | | | 40 | 21.115 | 18702.7 |
| | | 5580 | 37 | 20.561 | 18646.2 |
| | | | 38 | 18.215 | 17071.2 |
| | | | 40 | 20.873 | 18681.3 |
| | | 5700 | 37 | 20.716 | 18651.7 |
| | | | 38 | 18.165 | 17063.2 |
| | | | 40 | 21.951 | 18654.2 |
| | | 5720 | 37 | 20.706 | 18715.4 |
| | | | 38 | 18.206 | 17091.3 |
| | | | 40 | 21.116 | 18718.6 |
| | | 5745 | 37 | - | 18666.7 |
| | | | 38 | - | 17072.0 |
| | | | 40 | - | 18740.1 |
| | | 5785 | 37 | - | 18640.3 |
| | | | 38 | - | 17083.9 |
| | | | 40 | - | 18699.4 |
| | | 5825 | 37 | - | 18927.5 |
| | | | 38 | - | 17082.8 |
| | | | 40 | - | 18711.4 |

26 dB Emission Bandwidth and 99 % Occupied Bandwidth

| | |
|------------------------|------------------------------------|
| Test place | Ise EMC Lab. No.8 Measurement Room |
| Date | February 4, 2022 |
| Temperature / Humidity | 20 deg. C / 38 % RH |
| Engineer | Ken Fujita |
| Mode | Tx |

11ax-20 (OFDMA)

| Antenna | RU Type | Tested Frequency [MHz] | RU Index | 26 dB Emission Bandwidth [MHz] | 99 % Occupied Bandwidth [kHz] |
|-----------|-------------|------------------------|----------|--------------------------------|-------------------------------|
| Antenna 3 | 106-tone RU | 5180 | 53 | - | 18498.2 |
| | | | 54 | - | 18424.5 |
| | | 5220 | 53 | - | 18446.1 |
| | | | 54 | - | 18415.0 |
| | | 5240 | 53 | - | 18087.7 |
| | | | 54 | - | 18039.4 |
| | | 5260 | 53 | 22.294 | 18484.7 |
| | | | 54 | 21.409 | 18469.8 |
| | | 5300 | 53 | 21.948 | 18494.1 |
| | | | 54 | 21.289 | 18462.2 |
| | | 5320 | 53 | 22.185 | 18484.5 |
| | | | 54 | 21.325 | 18449.8 |
| | | 5500 | 53 | 21.022 | 18432.9 |
| | | | 54 | 23.131 | 18462.0 |
| | | 5580 | 53 | 22.688 | 18483.8 |
| | | | 54 | 20.906 | 18443.4 |
| | | 5700 | 53 | 22.114 | 18478.8 |
| | | | 54 | 21.414 | 18471.6 |
| | | 5720 | 53 | 21.321 | 18458.6 |
| | | | 54 | 21.377 | 18523.0 |
| | | 5745 | 53 | - | 18456.4 |
| | | | 54 | - | 18481.3 |
| | | 5785 | 53 | - | 18515.0 |
| | | | 54 | - | 18463.8 |
| 5825 | 53 | - | 18486.6 | | |
| | 54 | - | 18400.2 | | |

26 dB Emission Bandwidth and 99 % Occupied Bandwidth

Test place Ise EMC Lab. No.8 Measurement Room
Date February 4, 2022
Temperature / Humidity 20 deg. C / 38 % RH
Engineer Ken Fujita
Mode Tx

11ax-20 (OFDMA)

| Antenna | RU Type | Tested Frequency [MHz] | 26 dB Emission Bandwidth [MHz] | 99 % Occupied Bandwidth [kHz] |
|-----------|-------------|------------------------|--------------------------------|-------------------------------|
| Antenna 3 | 242-tone RU | 5180 | - | 19189.0 |
| | | 5220 | - | 19264.8 |
| | | 5240 | - | 18842.1 |
| | | 5260 | 24.575 | 19228.3 |
| | | 5300 | 24.053 | 19324.3 |
| | | 5320 | 23.187 | 19206.9 |
| | | 5500 | 22.288 | 19199.7 |
| | | 5580 | 26.339 | 19242.8 |
| | | 5700 | 22.837 | 19210.4 |
| | | 5720 | 25.450 | 19236.3 |
| | | 5745 | - | 19255.5 |
| | | 5785 | - | 19184.5 |
| | | 5825 | - | 19230.7 |

26 dB Emission Bandwidth and 99 % Occupied Bandwidth

Test place Ise EMC Lab. No.8 Measurement Room
 Date February 2, 2022
 Temperature / Humidity 25 deg. C / 40 % RH
 Engineer Kiyoshiro Okazaki
 Mode Tx

11n-40

| Antenna | Tested Frequency [MHz] | 26 dB Emission Bandwidth [MHz] | 99 % Occupied Bandwidth [kHz] |
|-----------|------------------------|--------------------------------|-------------------------------|
| Antenna 3 | 5190 | - | 35996.9 |
| | 5230 | - | 35795.3 |
| | 5270 | 39.234 | 35964.4 |
| | 5310 | 39.020 | 35981.9 |
| | 5510 | 39.197 | 35941.1 |
| | 5550 | 39.138 | 35852.2 |
| | 5670 | 39.191 | 35963.3 |
| | 5710 | 39.015 | 36032.7 |
| | 5755 | - | 35945.6 |
| | 5795 | - | 35844.9 |

11ac-40

| Antenna | Tested Frequency [MHz] | 26 dB Emission Bandwidth [MHz] | 99 % Occupied Bandwidth [kHz] |
|-----------|------------------------|--------------------------------|-------------------------------|
| Antenna 3 | 5190 | - | 35800.0 |
| | 5230 | - | 35873.7 |
| | 5270 | 39.328 | 35960.5 |
| | 5310 | 38.858 | 35955.7 |
| | 5510 | 38.976 | 35996.4 |
| | 5550 | 39.177 | 35900.6 |
| | 5670 | 38.950 | 35988.8 |
| | 5710 | 39.002 | 35926.6 |
| | 5755 | - | 35895.3 |
| | 5795 | - | 36019.1 |

11ax-40 (OFDM)

| Antenna | Tested Frequency [MHz] | 26 dB Emission Bandwidth [MHz] | 99 % Occupied Bandwidth [kHz] |
|-----------|------------------------|--------------------------------|-------------------------------|
| Antenna 3 | 5190 | - | 37497.0 |
| | 5230 | - | 37475.5 |
| | 5270 | 39.559 | 37500.5 |
| | 5310 | 39.518 | 37479.0 |
| | 5510 | 39.495 | 37545.5 |
| | 5550 | 39.492 | 37468.1 |
| | 5670 | 39.543 | 37458.1 |
| | 5710 | 39.519 | 37506.7 |
| | 5755 | - | 37467.0 |
| | 5795 | - | 37515.1 |

26 dB Emission Bandwidth and 99 % Occupied Bandwidth

| | |
|------------------------|------------------------------------|
| Test place | Ise EMC Lab. No.8 Measurement Room |
| Date | February 4, 2022 |
| Temperature / Humidity | 20 deg. C / 38 % RH |
| Engineer | Ken Fujita |
| Mode | Tx |

11ax-40 (OFDMA)

| Antenna | RU Type | Tested Frequency [MHz] | RU Index | 26 dB Emission Bandwidth [MHz] | 99 % Occupied Bandwidth [kHz] |
|-----------|------------|------------------------|----------|--------------------------------|-------------------------------|
| Antenna 3 | 26-tone RU | 5190 | 0 | - | 18099.9 |
| | | | 8 | - | 21848.1 |
| | | | 17 | - | 18010.4 |
| | | 5230 | 0 | - | 18047.8 |
| | | | 8 | - | 21679.4 |
| | | | 17 | - | 18007.7 |
| | | 5270 | 0 | 19.083 | 18082.9 |
| | | | 8 | 22.257 | 21674.1 |
| | | | 17 | 19.057 | 18080.9 |
| | | 5310 | 0 | 19.153 | 18083.7 |
| | | | 8 | 21.818 | 21256.3 |
| | | | 17 | 19.065 | 18091.7 |
| | | 5510 | 0 | 19.071 | 18098.3 |
| | | | 8 | 21.924 | 21510.0 |
| | | | 17 | 19.029 | 18097.3 |
| | | 5550 | 0 | 19.112 | 18099.8 |
| | | | 8 | 22.162 | 21321.5 |
| | | | 17 | 19.058 | 18075.8 |
| | | 5670 | 0 | 19.120 | 18035.3 |
| | | | 8 | 21.697 | 21181.4 |
| | | | 17 | 19.102 | 18114.8 |
| | | 5710 | 0 | 19.109 | 18056.6 |
| | | | 8 | 22.008 | 21273.3 |
| | | | 17 | 19.072 | 18034.5 |
| | | 5755 | 0 | - | 18045.3 |
| | | | 8 | - | 21524.9 |
| | | | 17 | - | 18119.0 |
| | | 5795 | 0 | - | 18068.9 |
| | | | 8 | - | 21426.2 |
| | | | 17 | - | 18135.6 |

26 dB Emission Bandwidth and 99 % Occupied Bandwidth

| | |
|------------------------|------------------------------------|
| Test place | Ise EMC Lab. No.8 Measurement Room |
| Date | February 13, 2022 |
| Temperature / Humidity | 23 deg. C / 39 % RH |
| Engineer | Hiroki Numata |
| Mode | Tx |

11ax-40 (OFDMA)

| Antenna | RU Type | Tested Frequency [MHz] | RU Index | 26 dB Emission Bandwidth [MHz] | 99 % Occupied Bandwidth [kHz] |
|-----------|------------|------------------------|----------|--------------------------------|-------------------------------|
| Antenna 3 | 52-tone RU | 5190 | 37 | - | 18028.7 |
| | | | 40 | - | 22102.0 |
| | | | 44 | - | 17940.1 |
| | | 5230 | 37 | - | 18030.4 |
| | | | 40 | - | 22571.6 |
| | | | 44 | - | 17972.7 |
| | | 5270 | 37 | 19.195 | 17995.2 |
| | | | 40 | 25.381 | 22072.2 |
| | | | 44 | 19.327 | 17938.6 |
| | | 5310 | 37 | 19.250 | 17976.4 |
| | | | 40 | 23.483 | 23477.2 |
| | | | 44 | 19.327 | 18003.7 |
| | | 5510 | 37 | 19.262 | 17938.5 |
| | | | 40 | 23.993 | 22657.8 |
| | | | 44 | 19.381 | 17899.4 |
| | | 5550 | 37 | 19.189 | 17987.0 |
| | | | 40 | 24.273 | 22938.8 |
| | | | 44 | 19.343 | 17959.6 |
| | | 5670 | 37 | 19.224 | 17951.2 |
| | | | 40 | 23.381 | 22143.7 |
| | | | 44 | 19.311 | 17915.7 |
| | | 5710 | 37 | 19.223 | 17956.5 |
| | | | 40 | 24.165 | 22139.8 |
| | | | 44 | 19.368 | 17991.8 |
| | | 5755 | 37 | - | 17909.1 |
| | | | 40 | - | 22125.8 |
| | | | 44 | - | 17960.8 |
| | | 5795 | 37 | - | 17937.4 |
| | | | 40 | - | 21054.5 |
| | | | 44 | - | 17960.0 |

26 dB Emission Bandwidth and 99 % Occupied Bandwidth

| | |
|------------------------|------------------------------------|
| Test place | Ise EMC Lab. No.8 Measurement Room |
| Date | February 14, 2022 |
| Temperature / Humidity | 23 deg. C / 38 % RH |
| Engineer | Hiroki Numata |
| Mode | Tx |

11ax-40 (OFDMA)

| Antenna | RU Type | Tested Frequency [MHz] | RU Index | 26 dB Emission Bandwidth [MHz] | 99 % Occupied Bandwidth [kHz] |
|-----------|-------------|------------------------|----------|--------------------------------|-------------------------------|
| Antenna 3 | 106-tone RU | 5190 | 53 | - | 17757.3 |
| | | | 54 | - | 20558.0 |
| | | | 56 | - | 17728.4 |
| | | 5230 | 53 | - | 17751.2 |
| | | | 54 | - | 21630.7 |
| | | | 56 | - | 17653.9 |
| | | 5270 | 53 | 19.496 | 17684.0 |
| | | | 54 | 23.322 | 20534.4 |
| | | | 56 | 19.341 | 17688.3 |
| | | 5310 | 53 | 19.495 | 17742.5 |
| | | | 54 | 24.292 | 20670.7 |
| | | | 56 | 19.409 | 17676.7 |
| | | 5510 | 53 | 19.411 | 17767.3 |
| | | | 54 | 26.386 | 20742.8 |
| | | | 56 | 19.331 | 17672.0 |
| | | 5550 | 53 | 19.468 | 17815.2 |
| | | | 54 | 23.945 | 20672.2 |
| | | | 56 | 19.369 | 17673.1 |
| | | 5670 | 53 | 19.374 | 17723.9 |
| | | | 54 | 24.698 | 20466.5 |
| | | | 56 | 19.352 | 17655.1 |
| | | 5710 | 53 | 19.364 | 17737.2 |
| | | | 54 | 25.113 | 20781.4 |
| | | | 56 | 19.278 | 17738.2 |
| | | 5755 | 53 | - | 17758.6 |
| | | | 54 | - | 21340.0 |
| | | | 56 | - | 17673.6 |
| | | 5795 | 53 | - | 17748.7 |
| | | | 54 | - | 20632.7 |
| | | | 56 | - | 17729.2 |

26 dB Emission Bandwidth and 99 % Occupied Bandwidth

| | |
|------------------------|------------------------------------|
| Test place | Ise EMC Lab. No.8 Measurement Room |
| Date | February 6, 2022 |
| Temperature / Humidity | 21 deg. C / 36 % RH |
| Engineer | Hiroki Numata |
| Mode | Tx |

11ax-40 (OFDMA)

| Antenna | RU Type | Tested Frequency [MHz] | RU Index | 26 dB Emission Bandwidth [MHz] | 99 % Occupied Bandwidth [kHz] |
|-----------|-------------|------------------------|----------|--------------------------------|-------------------------------|
| Antenna 3 | 242-tone RU | 5190 | 61 | - | 23431.1 |
| | | | 62 | - | 23017.6 |
| | | 5230 | 61 | - | 23671.9 |
| | | | 62 | - | 23711.2 |
| | | 5270 | 61 | 39.304 | 24005.3 |
| | | | 62 | 39.294 | 23501.5 |
| | | 5310 | 61 | 39.431 | 27711.8 |
| | | | 62 | 39.414 | 22785.6 |
| | | 5510 | 61 | 39.441 | 25901.8 |
| | | | 62 | 39.272 | 23890.8 |
| | | 5550 | 61 | 39.419 | 27961.6 |
| | | | 62 | 39.374 | 23076.9 |
| | | 5670 | 61 | 39.225 | 26670.9 |
| | | | 62 | 39.209 | 27779.7 |
| | | 5710 | 61 | 39.329 | 25594.5 |
| | | | 62 | 39.068 | 23296.3 |
| | | 5755 | 61 | - | 25922.2 |
| | | | 62 | - | 25514.7 |
| | | 5795 | 61 | - | 25469.0 |
| | | | 62 | - | 22612.4 |

26 dB Emission Bandwidth and 99 % Occupied Bandwidth

Test place Ise EMC Lab. No.8 Measurement Room
Date February 6, 2022
Temperature / Humidity 21 deg. C / 36 % RH
Engineer Hiroki Numata
Mode Tx

11ax-40 (OFDMA)

| Antenna | RU Type | Tested Frequency [MHz] | 26 dB Emission Bandwidth [MHz] | 99 % Occupied Bandwidth [kHz] |
|-----------|-------------|------------------------|--------------------------------|-------------------------------|
| Antenna 3 | 484-tone RU | 5190 | - | 37389.4 |
| | | 5230 | - | 37373.8 |
| | | 5270 | 39.546 | 37406.5 |
| | | 5310 | 39.509 | 37379.1 |
| | | 5510 | 39.400 | 37501.1 |
| | | 5550 | 39.307 | 37384.1 |
| | | 5670 | 39.541 | 37376.7 |
| | | 5710 | 39.580 | 37474.4 |
| | | 5755 | - | 37434.5 |
| | | 5795 | - | 37416.4 |

26 dB Emission Bandwidth and 99 % Occupied Bandwidth

Test place Ise EMC Lab. No.8 Measurement Room
Date February 2, 2022
Temperature / Humidity 25 deg. C / 40 % RH
Engineer Kiyoshiro Okazaki
Mode Tx

11ac-80

| Antenna | Tested Frequency [MHz] | 26 dB Emission Bandwidth [MHz] | 99 % Occupied Bandwidth [kHz] |
|-----------|------------------------|--------------------------------|-------------------------------|
| Antenna 3 | 5210 | - | 74976.6 |
| | 5290 | 79.012 | 75037.5 |
| | 5530 | 78.751 | 75065.8 |
| | 5610 | 79.069 | 75056.9 |
| | 5690 | 78.997 | 75042.2 |
| | 5775 | - | 75056.2 |

11ax-80 (OFDM)

| Antenna | Tested Frequency [MHz] | 26 dB Emission Bandwidth [MHz] | 99 % Occupied Bandwidth [kHz] |
|-----------|------------------------|--------------------------------|-------------------------------|
| Antenna 3 | 5210 | - | 76818.1 |
| | 5290 | 80.163 | 76793.7 |
| | 5530 | 80.184 | 76799.4 |
| | 5610 | 80.177 | 76825.0 |
| | 5690 | 80.183 | 76766.9 |
| | 5775 | - | 76849.6 |

26 dB Emission Bandwidth and 99 % Occupied Bandwidth

| | |
|------------------------|------------------------------------|
| Test place | Ise EMC Lab. No.8 Measurement Room |
| Date | February 15, 2022 |
| Temperature / Humidity | 21 deg. C / 38 % RH |
| Engineer | Hiroki Numata |
| Mode | Tx |

11ax-80 (OFDMA)

| Antenna | RU Type | Tested Frequency [MHz] | RU Index | 26 dB Emission Bandwidth [MHz] | 99 % Occupied Bandwidth [kHz] |
|-----------|------------|------------------------|----------|--------------------------------|-------------------------------|
| Antenna 3 | 26-tone RU | 5210 | 0 | - | 19569.9 |
| | | | 18 | - | 37085.8 |
| | | | 36 | - | 19470.4 |
| | | 5290 | 0 | 19.739 | 19476.9 |
| | | | 18 | 38.748 | 37023.2 |
| | | | 36 | 19.866 | 19500.6 |
| | | 5530 | 0 | 19.805 | 19483.7 |
| | | | 18 | 38.828 | 37121.5 |
| | | | 36 | 19.760 | 19391.6 |
| | | 5610 | 0 | 19.772 | 19380.1 |
| | | | 18 | 38.651 | 37057.4 |
| | | | 36 | 19.747 | 19354.7 |
| | | 5690 | 0 | 19.778 | 19354.7 |
| | | | 18 | 38.565 | 37141.2 |
| | | | 36 | 19.863 | 19459.6 |
| | | 5775 | 0 | - | 19439.9 |
| | | | 18 | - | 37035.7 |
| | | | 36 | - | 19346.5 |

26 dB Emission Bandwidth and 99 % Occupied Bandwidth

| | |
|------------------------|------------------------------------|
| Test place | Ise EMC Lab. No.8 Measurement Room |
| Date | February 15, 2022 |
| Temperature / Humidity | 21 deg. C / 38 % RH |
| Engineer | Hiroki Numata |
| Mode | Tx |

11ax-80 (OFDMA)

| Antenna | RU Type | Tested Frequency [MHz] | RU Index | 26 dB Emission Bandwidth [MHz] | 99 % Occupied Bandwidth [kHz] |
|-----------|------------|------------------------|----------|--------------------------------|-------------------------------|
| Antenna 3 | 52-tone RU | 5210 | 37 | - | 20150.7 |
| | | | 44 | - | 26629.2 |
| | | | 52 | - | 19286.1 |
| | | 5290 | 37 | 20.382 | 20128.6 |
| | | | 44 | 24.112 | 26096.3 |
| | | | 52 | 20.243 | 19360.3 |
| | | 5530 | 37 | 21.181 | 19983.4 |
| | | | 44 | 25.667 | 27175.7 |
| | | | 52 | 20.168 | 19253.4 |
| | | 5610 | 37 | 20.914 | 19979.9 |
| | | | 44 | 25.354 | 27430.8 |
| | | | 52 | 20.139 | 19190.2 |
| | | 5690 | 37 | 20.826 | 19965.8 |
| | | | 44 | 25.621 | 26403.4 |
| | | | 52 | 20.154 | 19221.8 |
| | | 5775 | 37 | - | 20032.3 |
| | | | 44 | - | 27286.0 |
| | | | 52 | - | 19236.1 |

26 dB Emission Bandwidth and 99 % Occupied Bandwidth

| | |
|------------------------|------------------------------------|
| Test place | Ise EMC Lab. No.8 Measurement Room |
| Date | February 6, 2022 |
| Temperature / Humidity | 20 deg. C / 37 % RH |
| Engineer | Ken Fujita |
| Mode | Tx |

11ax-80 (OFDMA)

| Antenna | RU Type | Tested Frequency [MHz] | RU Index | 26 dB Emission Bandwidth [MHz] | 99 % Occupied Bandwidth [kHz] |
|-----------|-------------|------------------------|----------|--------------------------------|-------------------------------|
| Antenna 3 | 106-tone RU | 5210 | 53 | - | 19977.9 |
| | | | 56 | - | 23688.0 |
| | | | 60 | - | 19244.2 |
| | | 5290 | 53 | 21.183 | 20008.1 |
| | | | 56 | 26.366 | 24555.5 |
| | | | 60 | 20.701 | 19166.7 |
| | | 5530 | 53 | 22.233 | 19904.9 |
| | | | 56 | 26.278 | 24031.7 |
| | | | 60 | 21.318 | 19170.1 |
| | | 5610 | 53 | 21.712 | 19634.5 |
| | | | 56 | 25.661 | 24106.5 |
| | | | 60 | 20.718 | 19082.1 |
| | | 5690 | 53 | 22.203 | 19980.7 |
| | | | 56 | 27.417 | 23734.2 |
| | | | 60 | 20.482 | 19124.0 |
| | | 5775 | 53 | - | 19572.2 |
| | | | 56 | - | 24291.3 |
| | | | 60 | - | 19129.0 |

26 dB Emission Bandwidth and 99 % Occupied Bandwidth

| | |
|------------------------|------------------------------------|
| Test place | Ise EMC Lab. No.8 Measurement Room |
| Date | February 6, 2022 |
| Temperature / Humidity | 20 deg. C / 37 % RH |
| Engineer | Ken Fujita |
| Mode | Tx |

11ax-80 (OFDMA)

| Antenna | RU Type | Tested Frequency [MHz] | RU Index | 26 dB Emission Bandwidth [MHz] | 99 % Occupied Bandwidth [kHz] |
|-----------|-------------|------------------------|----------|--------------------------------|-------------------------------|
| Antenna 3 | 242-tone RU | 5210 | 61 | - | 23096.2 |
| | | | 62 | - | 40993.8 |
| | | | 64 | - | 22319.5 |
| | | 5290 | 61 | 28.165 | 22396.1 |
| | | | 62 | 48.077 | 41256.2 |
| | | | 64 | 26.645 | 22362.1 |
| | | 5530 | 61 | 30.249 | 22518.8 |
| | | | 62 | 51.193 | 41903.7 |
| | | | 64 | 28.646 | 22563.8 |
| | | 5610 | 61 | 28.146 | 22398.8 |
| | | | 62 | 43.721 | 40435.4 |
| | | | 64 | 28.675 | 22242.4 |
| | | 5690 | 61 | 29.877 | 22639.8 |
| | | | 62 | 45.068 | 41281.7 |
| | | | 64 | 29.347 | 22256.1 |
| | | 5775 | 61 | - | 22363.2 |
| | | | 62 | - | 40567.8 |
| | | | 64 | - | 22525.9 |

26 dB Emission Bandwidth and 99 % Occupied Bandwidth

| | |
|------------------------|------------------------------------|
| Test place | Ise EMC Lab. No.8 Measurement Room |
| Date | February 7, 2022 |
| Temperature / Humidity | 23 deg. C / 32 % RH |
| Engineer | Junki Nagatomi |
| Mode | Tx |

11ax-80 (OFDMA)

| Antenna | RU Type | Tested Frequency [MHz] | RU Index | 26 dB Emission Bandwidth [MHz] | 99 % Occupied Bandwidth [kHz] |
|-----------|-------------|------------------------|----------|--------------------------------|-------------------------------|
| Antenna 3 | 484-tone RU | 5210 | 65 | - | 67604.6 |
| | | | 66 | - | 60258.8 |
| | | 5290 | 65 | 79.638 | 62445.0 |
| | | | 66 | 79.852 | 60520.9 |
| | | 5530 | 65 | 79.696 | 67637.3 |
| | | | 66 | 79.653 | 61589.6 |
| | | 5610 | 65 | 80.012 | 63735.0 |
| | | | 66 | 79.840 | 60566.7 |
| | | 5690 | 65 | 79.742 | 65022.8 |
| | | | 66 | 79.943 | 67731.0 |
| | | 5775 | 65 | - | 66157.6 |
| | | | 66 | - | 66212.5 |

26 dB Emission Bandwidth and 99 % Occupied Bandwidth

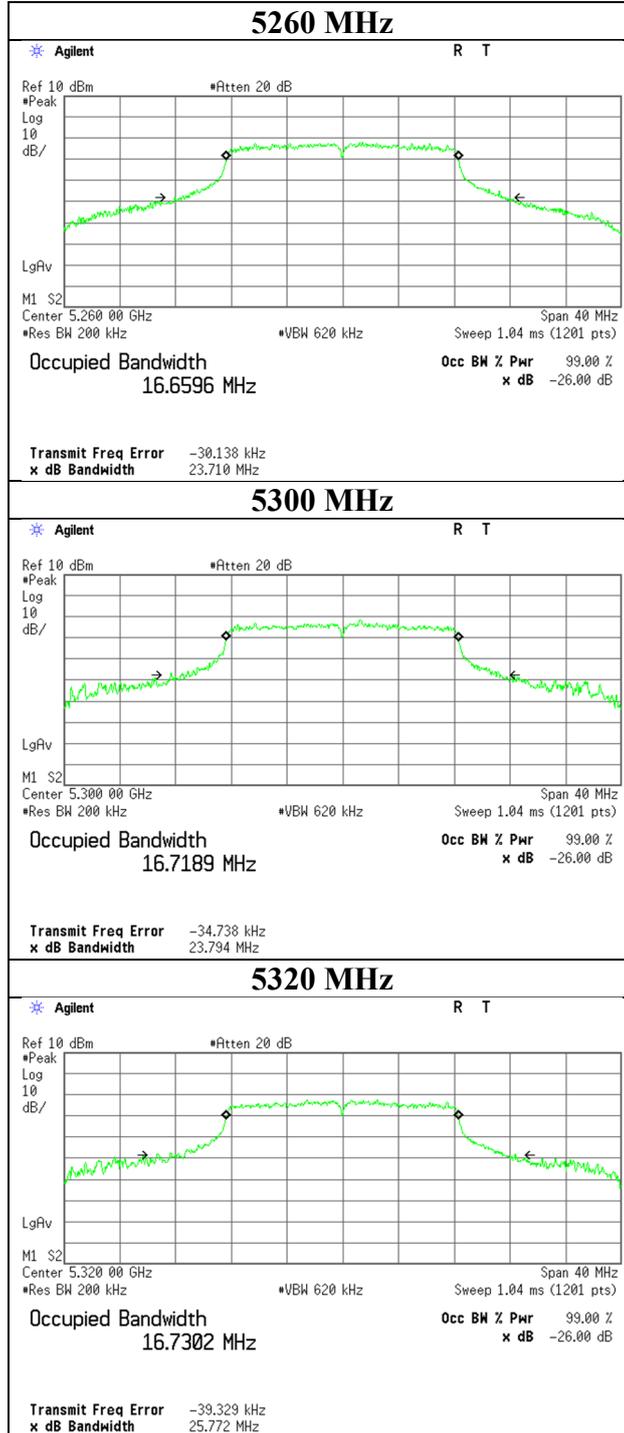
Test place Ise EMC Lab. No.8 Measurement Room
Date February 7, 2022
Temperature / Humidity 23 deg. C / 32 % RH
Engineer Junki Nagatomi
Mode Tx

11ax-80 (OFDMA)

| Antenna | RU Type | Tested Frequency [MHz] | 26 dB Emission Bandwidth [MHz] | 99 % Occupied Bandwidth [kHz] |
|-----------|-------------|------------------------|--------------------------------|-------------------------------|
| Antenna 3 | 996-tone RU | 5210 | - | 76801.9 |
| | | 5290 | 79.745 | 76547.5 |
| | | 5530 | 80.130 | 76768.0 |
| | | 5610 | 80.084 | 76801.6 |
| | | 5690 | 79.820 | 76758.2 |
| | | 5775 | - | 76970.9 |

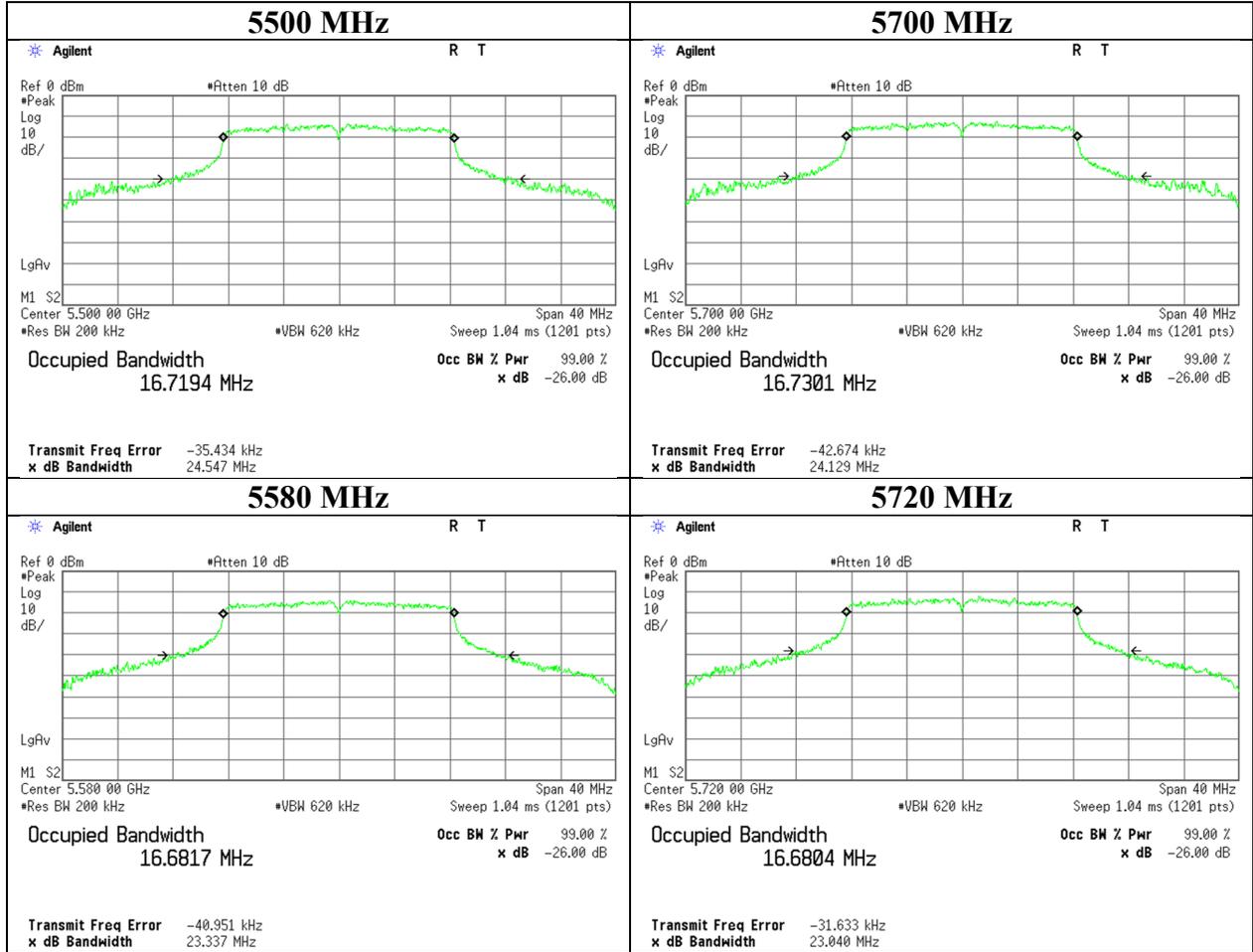
26 dB Emission Bandwidth

11a



26 dB Emission Bandwidth

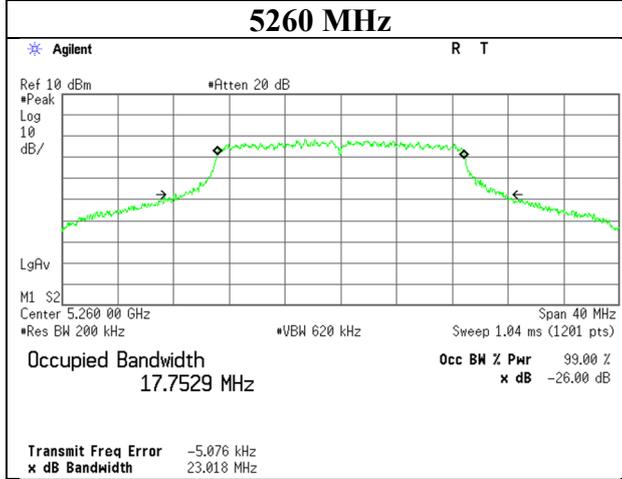
11a



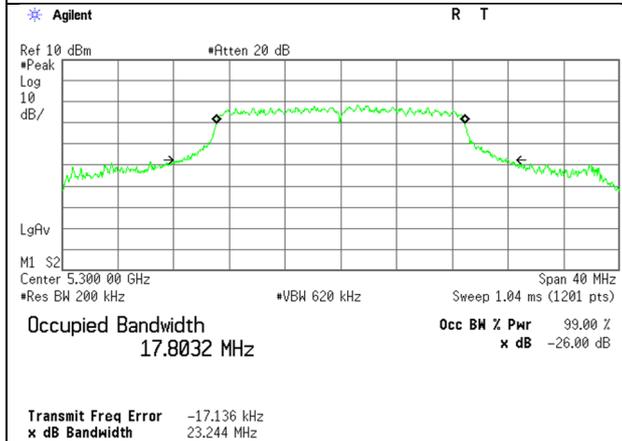
26 dB Emission Bandwidth

11n-20

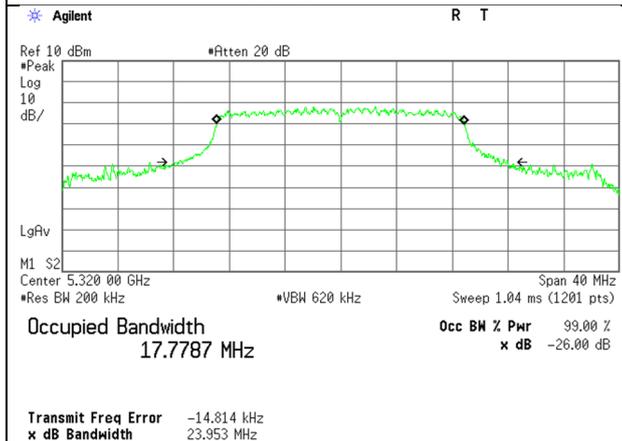
5260 MHz



5300 MHz

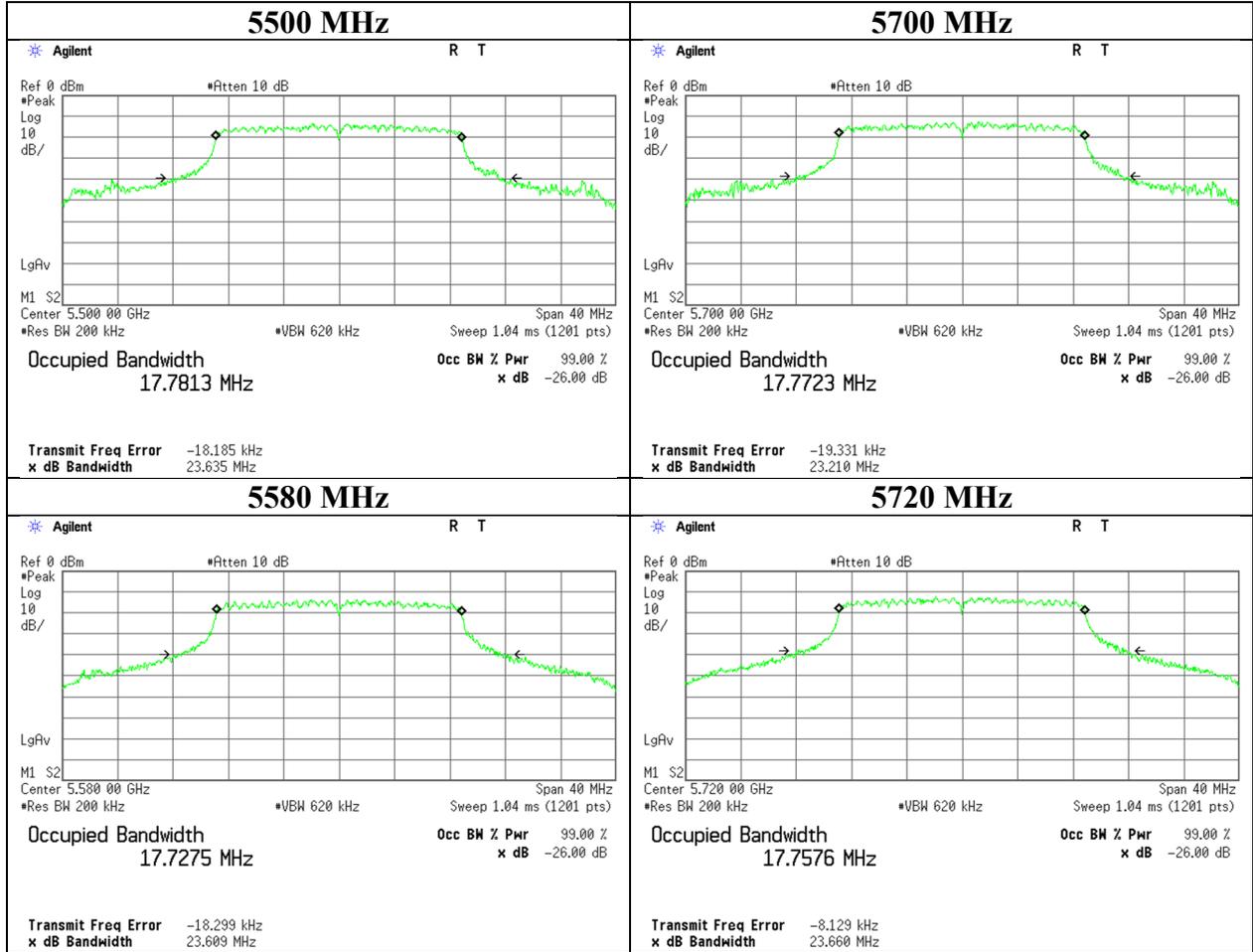


5320 MHz



26 dB Emission Bandwidth

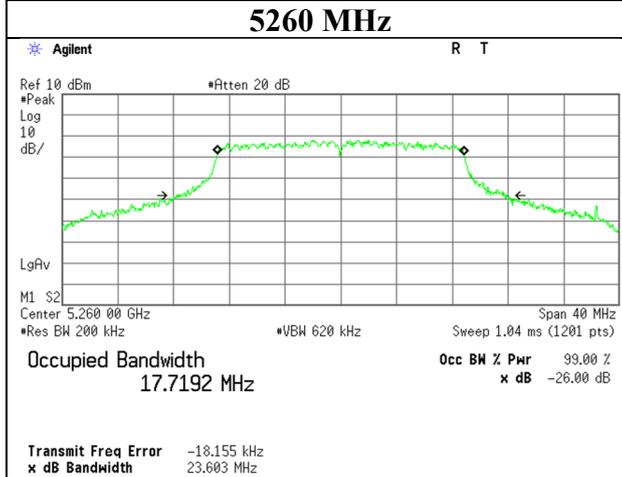
11n-20



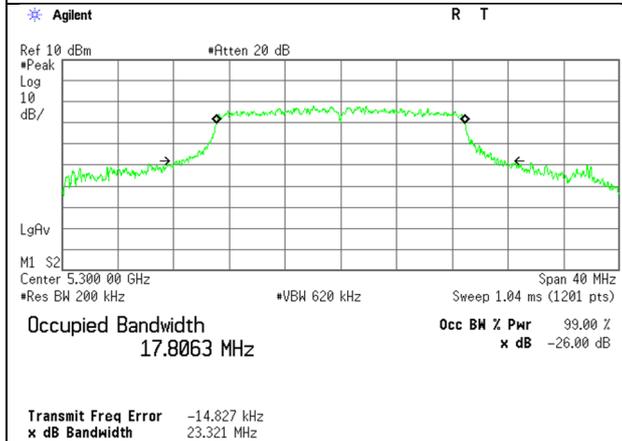
26 dB Emission Bandwidth

11ac-20

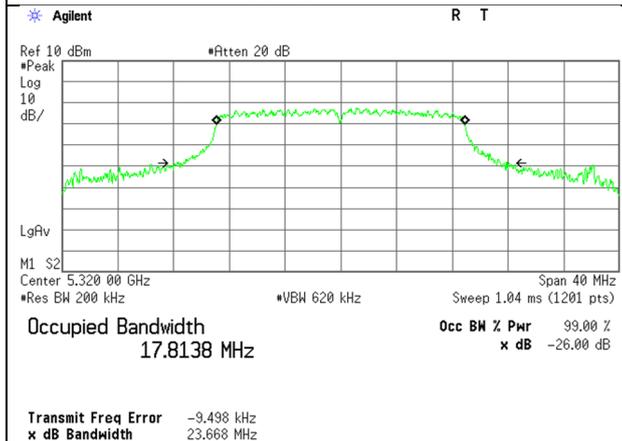
5260 MHz



5300 MHz

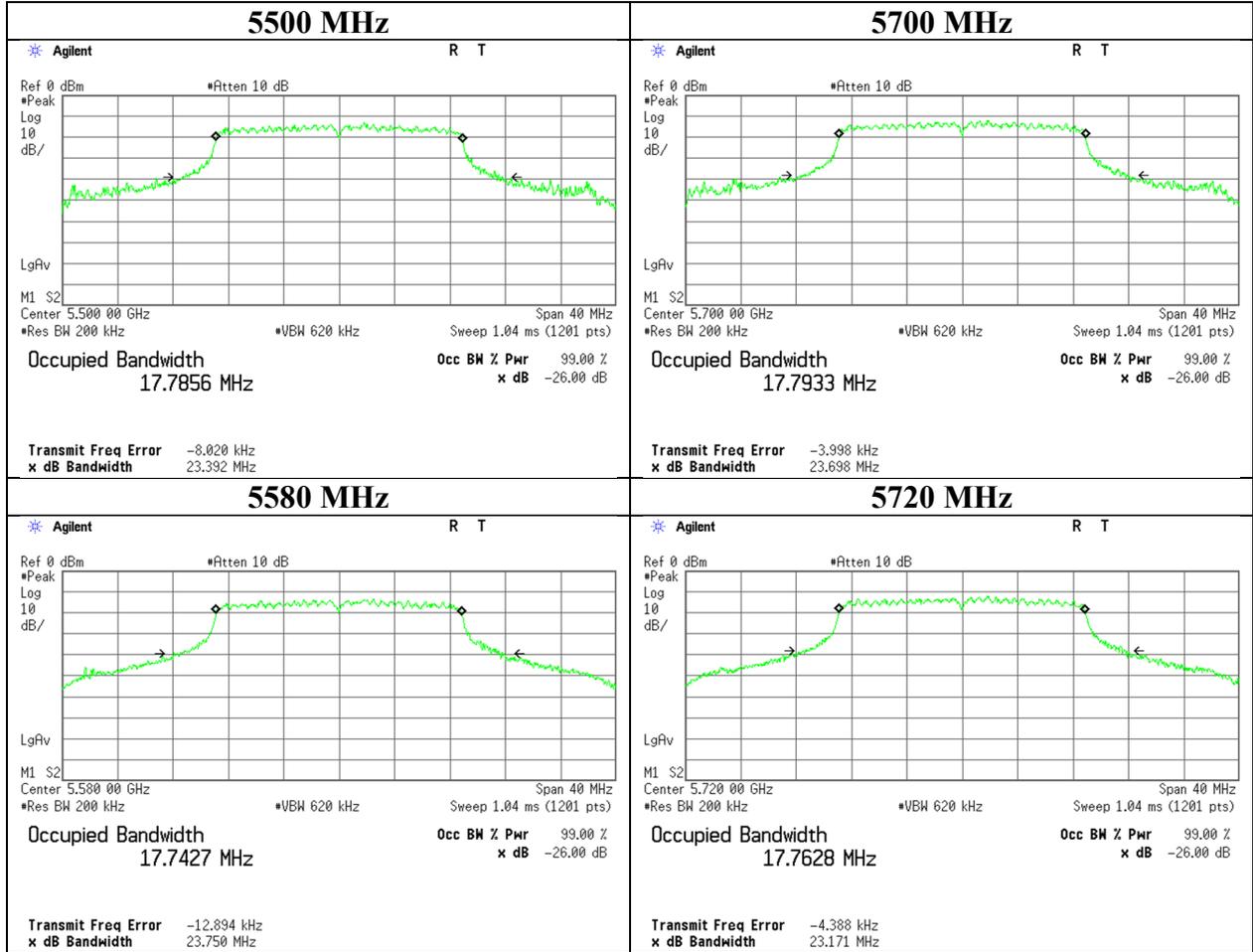


5320 MHz



26 dB Emission Bandwidth

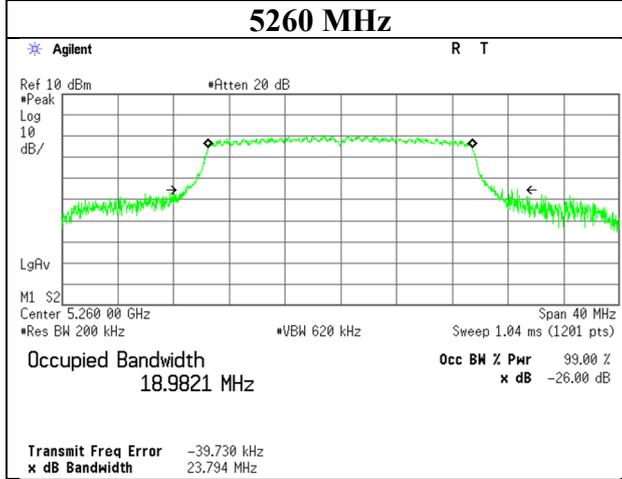
11ac-20



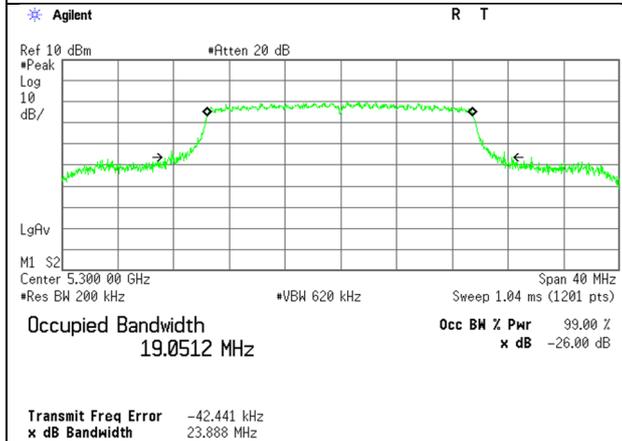
26 dB Emission Bandwidth

11ax-20 (OFDM)

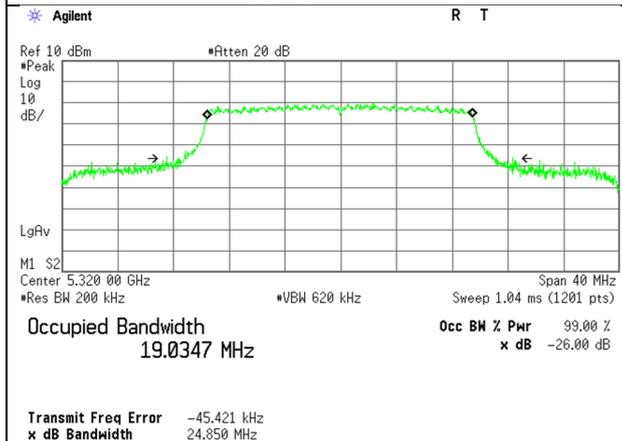
5260 MHz



5300 MHz

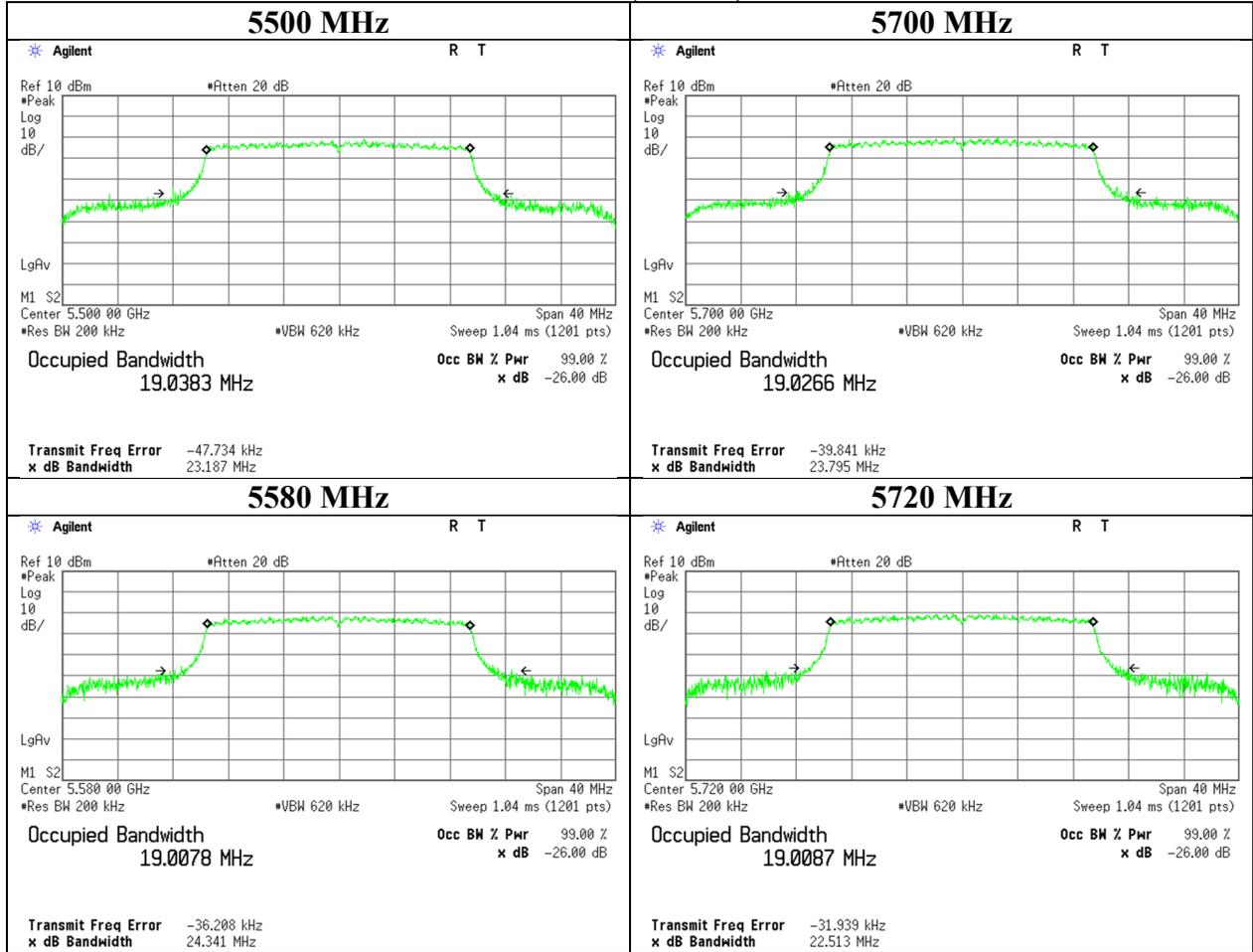


5320 MHz



26 dB Emission Bandwidth

11ax-20 (OFDM)

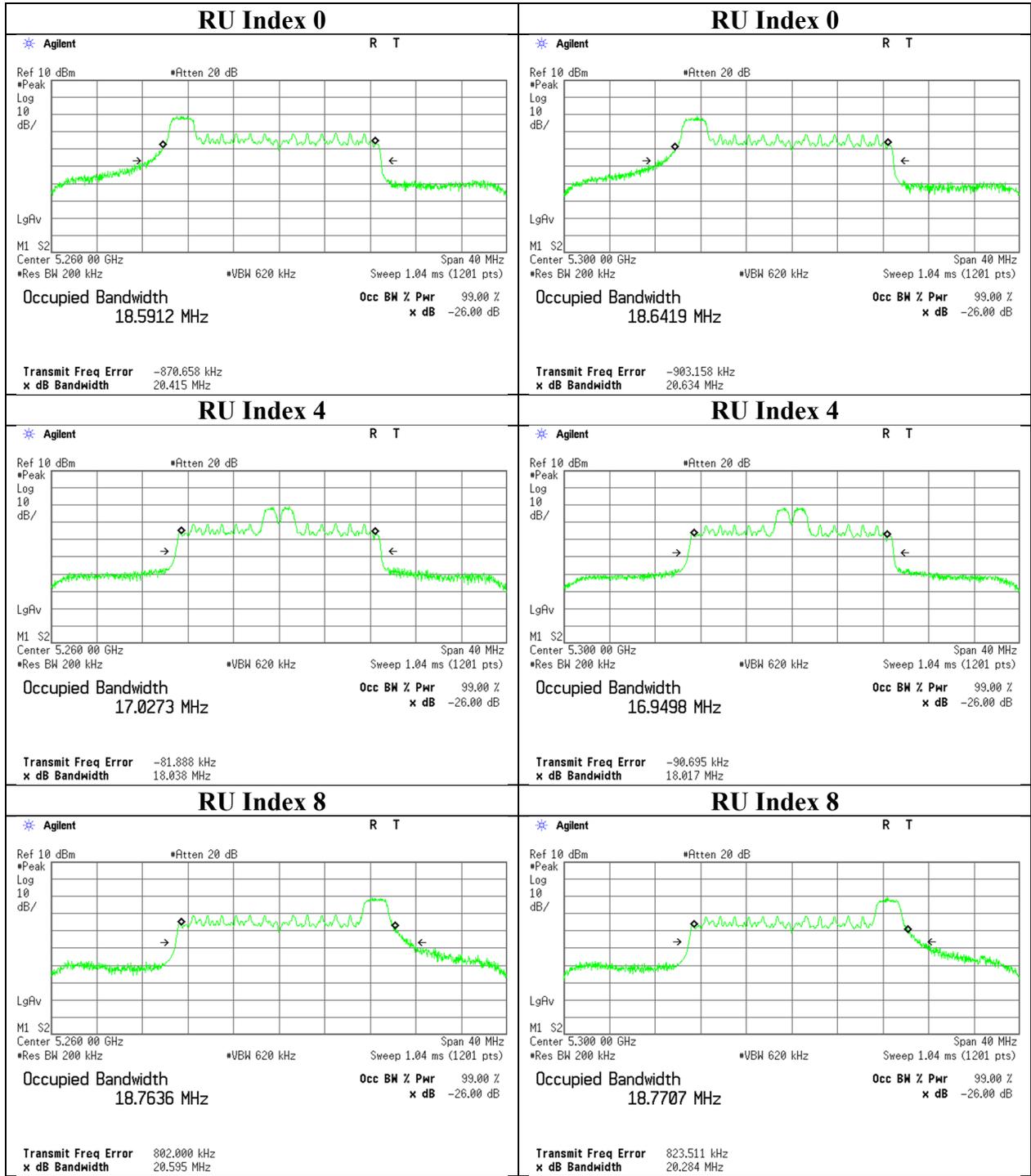


26 dB Emission Bandwidth

11ax-20 (OFDMA)

26-tone RU 5260 MHz

26-tone RU 5300 MHz

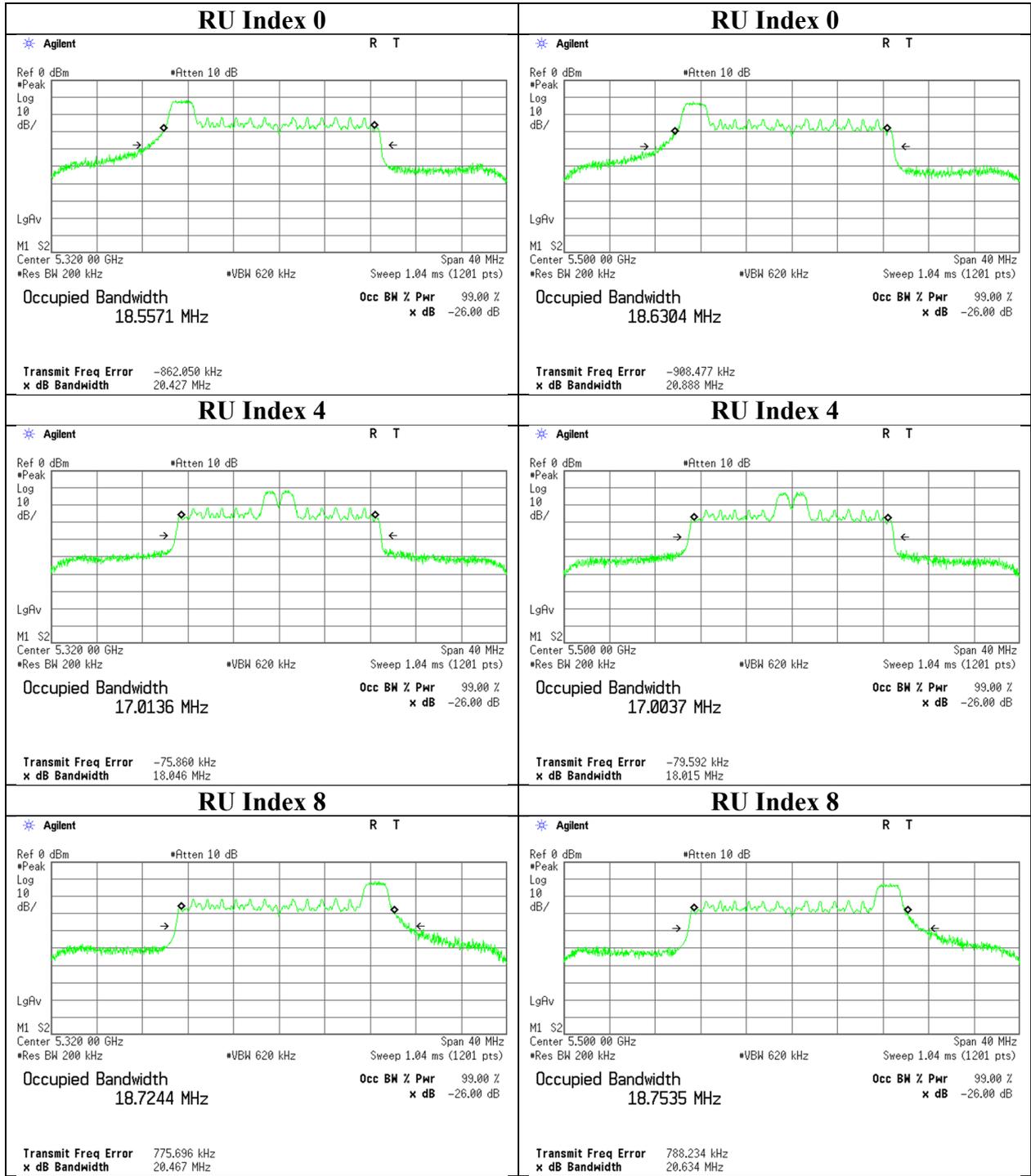


26 dB Emission Bandwidth

11ax-20 (OFDMA)

26-tone RU 5320 MHz

26-tone RU 5500 MHz

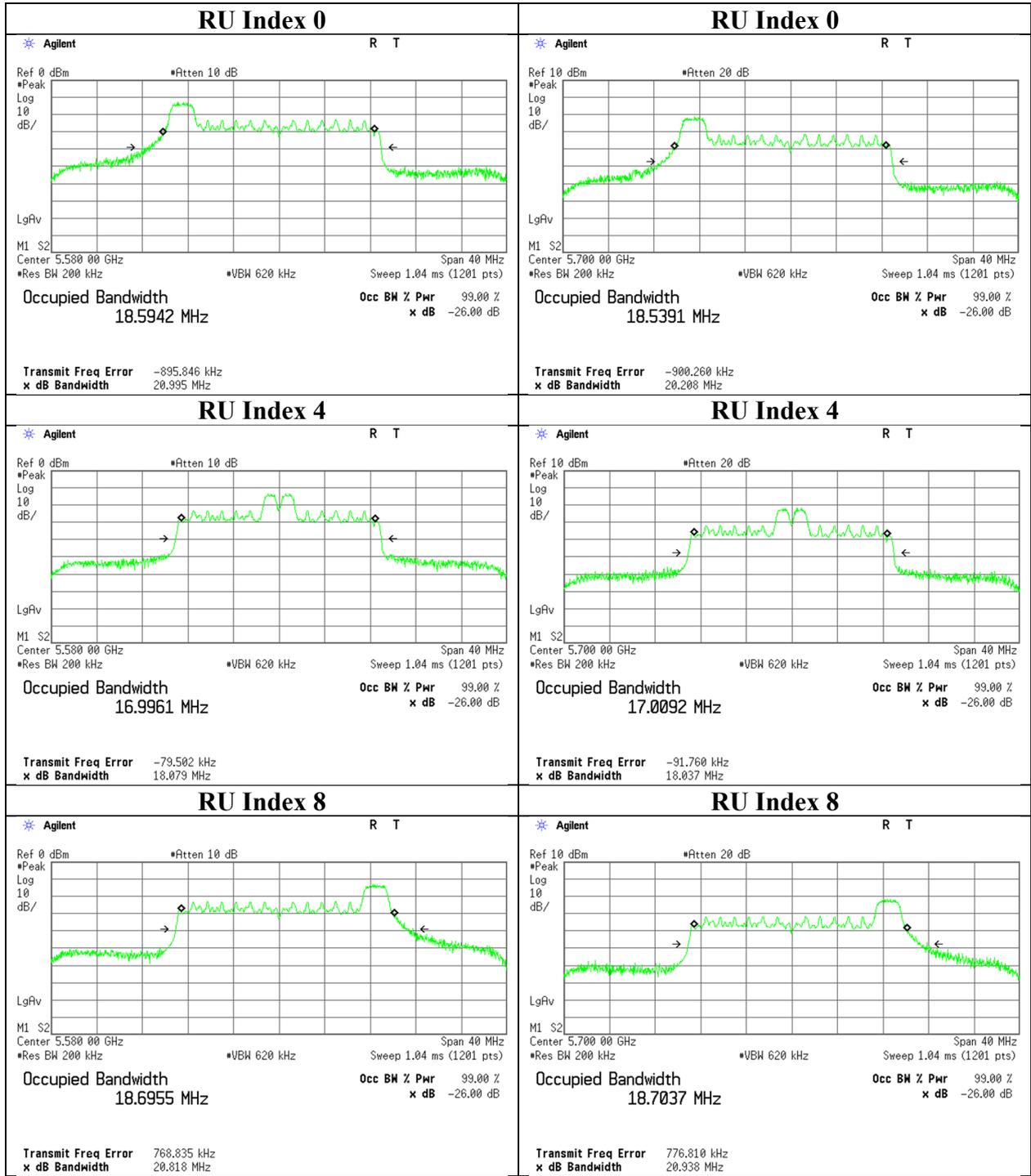


26 dB Emission Bandwidth

11ax-20 (OFDMA)

26-tone RU 5580 MHz

26-tone RU 5700 MHz



26 dB Emission Bandwidth

11ax-20 (OFDMA) 26-tone RU 5720 MHz

