RADIO TEST REPORT

Test Report No. : 12656071S-J-R1

Applicant	:	**Nintendo Co., Ltd.**
Type of Equipment	:	**Game Console**
Model No.	:	**HDH-001**
FCC ID	:	**BKEHDH001**
Test regulation	:	**FCC Part 15 Subpart E: 2019**
Test result	:	**Complied (Refer to SECTION 3.2)**

Based on the manufacturer's declaration, Model HDH-001 can be regarded as equivalent to Model HDH-002 for the radio characteristics related to this application. (Refer Theory of Operation-Differences)

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2. The results in this report apply only to the sample tested.
3. This sample tested is in compliance with the limits of the above regulation.
4. The test results in this test report are traceable to the national or international standards.
5. This test report must not be used by the customer to claim product certification, approval, or endorsement by any agency of the Federal Government.
6. This test report covers Radio technical requirements.
   It does not cover administrative issues such as Manual or non-Radio test related Requirements. (if applicable)
7. The all test items in this test report are conducted by UL Japan, Inc. Shonan EMC Lab.
8. The opinions and the interpretations to the result of the description in this report are outside scopes where UL Japan has been accredited.
9. The information provided from the customer for this report is identified in SECTION 1.
10. This report is a revised version of 12656071S-J. 12656071S-J is replaced with this report.

Date of test: January 8 to April 6, 2019

Representative test engineer:
Makoto Hosaka
Engineer
Consumer Technology Division

Approved by:
Akio Hayashi
Leader
Consumer Technology Division

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

RTL02610

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REVISION HISTORY

Original Test Report No.: 12656071S-J

Revision	Test report No.	Date	Page revised	Contents
- (Original)	12656071S-J	July 19, 2019	-	-
R1	12656071S-J-R1	July 26, 2019	6	Revision of comment from * The revision on June 4, 2019, does not affect the test specification applied to the EUT. to * The revision on June 4 and 19, 2019, does not affect the test specification applied to the EUT.
R1	12656071S-J-R1	July 26, 2019	305	Addition of 2nd harmonics data (11550 MHz, Peak and Average).
R1	12656071S-J-R1	July 26, 2019	313	Addition of comment for SSA-02 as below. *1) This test equipment was used for the tests before the expiration date of the calibration.

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SECTION 1: Customer information

Company Name	:	Nintendo Co., Ltd.
Address	:	11-1 Hokotate-cho, Kamitoba, Minami-ku, Kyoto 601-8501, Japan
Telephone Number	:	+ 81 75 662 9600
Facsimile Number	:	+ 81 75 662 9624
Contact Person	:	Kazuya Kuramoto

The information provided from the customer is as follows;
- Applicant, Type of Equipment, Model No., 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 (E.U.T.)
- SECTION 4: Operation of E.U.T. 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 (E.U.T.)

2.1 Identification of E.U.T.

Type of Equipment	:	Game Console
Model No.	:	HDH-001
Serial No.	:	Refer to SECTION 4.2
Rating	:	DC 3.8 V (battery), AC Adapter input: AC 100 V - 240 V, 50 Hz / 60 Hz, 1 A, AC Adapter output: DC 5 V - DC 15 V, 2.6 A
Receipt Date of Sample (Information from test lab.)	:	December 27, 2018
Country of Mass-production	:	China
Condition of EUT	:	Engineering prototype (Not for Sale: This sample is equivalent to mass-produced items.)
Modification of EUT	:	No Modification by the test lab.

2.2 Product Description

Model: HDH-001 (referred to as the EUT in this report) is a Game Console.

Radio Specification

Wireless LAN, Bluetooth part:

Equipment type	:	Transmitter
Frequency of operation	:	Wireless LAN part: (2.4 GHz): 2412 MHz - 2472 MHz, (U-NII-1): 5180 MHz - 5240 MHz, (U-NII-2A): 5260 MHz - 5320 MHz, (U-NII-2C): 5500 MHz - 5700 MHz, (U-NII-3): 5745 MHz - 5825 MHz, Bluetooth (BDR/EDR/BTLE) part: 2402 MHz - 2480 MHz
Radio part clock frequency	:	37.4 MHz
Channel spacing	:	Wireless LAN part: (2.4 GHz): 5 MHz, (5 GHz): 20 MHz, Bluetooth part: (BDR/EDR): 1 MHz, (BT LE): 2 MHz
Type of modulation	:	Wireless LAN part: 2.4 GHz bands: DBPSK, DQPSK, CCK, OFDM, 5 GHz bands: OFDM Bluetooth (BT) part: BDR (Basic Data Rate): GFSK, EDR (Enhanced Data Rate): π/4-DQPSK, 8DPSK, BT LE (Low Energy mode): GFSK
Antenna type	:	Sheet metal antenna
Antenna connector type	:	(Ant: 0): MHF2, (Ant: 1): MHF2
Antenna gain	:	2.4 GHz bands: (Ant: 0): -0.904 dBi, (Ant: 1): -0.730 dBi 5 GHz bands: (Ant: 0): 2.949 dBi, (Ant: 1): 1.994 dBi
Power Supply (radio part input)	:	DC 1.8 V, DC 3.3 V
Operation temperature range	:	+5 deg.C to +35 deg.C

Remarks: This wireless module consists of 1 chip each of 5 GHz bands and 2.4 GHz bands.

NFC part:

Equipment type	:	Transmitter
Frequency of operation	:	13.56 MHz
Radio part clock frequency	:	27.12 MHz
Type of modulation	:	ASK
Power Supply (radio part input)	:	DC 1.8 V, DC 5.0 V
Antenna type	:	Ferrite Chip Antenna
Operation temperature range	:	+5 deg.C to +35 deg.C

SECTION 3: Test specification, procedures & results

3.1 Test Specification

Test Specification : FCC Part 15 Subpart E
FCC Part 15 final revised on June 4, 2019 and effective July 5, 2019 except 15.258
Title : FCC 47CFR Part15 Radio Frequency Device Subpart E
Unlicensed National Information Infrastructure Devices
Section 15.407 General technical requirements

* The revision on June 4 and 19, 2019, does not affect the test specification applied to the EUT.

* Also the EUT complies with FCC Part 15 Subpart B.(Refer to test report No.12656081S-C.)

3.2 Procedures and results

Item	Test Procedure	Specification	Worst margin	Results	Remarks
Conducted Emission	**FCC:** ANSI C63.10-2013	**FCC:** 15.407 (b) (6) / 15.207	**12.0 dB** Freq.: 0.48834 MHz Detector: Average Phase: L1 Mode: Tx, IEEE802.11ac VHT 20(SISO), 5320 MHz	Complied a)	-
	IC: RSS-Gen 8.8	**IC:** RSS-Gen 8.8			
26 dB Emission Bandwidth	**FCC:** KDB Publication Number 789033	**FCC:** 15.407 (a) (1) (2) (3)	See data	N/A b)	Conducted
	IC: -	**IC:** -			
Maximum Conducted Output Power	**FCC:** KDB Publication Number 789033	**FCC:** 15.407 (a) (1) (2) (3)		Complied c)	Conducted
	IC: -	**IC:** RSS-247 6.2.1.1 6.2.2.1 6.2.3.1 6.2.4.1			
Maximum Power Spectral Density	**FCC:** KDB Publication Number 789033	**FCC :** 15.407 (a) (1) (2) (3)		Complied d)	Conducted
	IC: -	**IC:** RSS-247 6.2.1.1 6.2.2.1 6.2.3.1 6.2.4.1			
Spurious Emission Restricted Band Edge	**FCC:** ANSI C63.10-2013 KDB Publication Number 789033	**FCC:** 15.407 (b), 15.205 and 15.209	**2.0 dB** Freq.: 5470 MHz Detector: Peak Polarization: Horizontal Mode: Tx, IEEE802.11n HT40 (SISO), 5510 MHz	Complied # e) / f)	Conducted (< 30 MHz) / Radiated (> 30 MHz) *1)
	IC: -	**IC:** RSS-247 6.2.1.2 6.2.2.2 6.2.3.2 6.2.4.2			
6 dB Emission Bandwidth	**FCC:** ANSI C63.10-2013	**FCC:** 15.407 (e)	See data	Complied g)	Conducted
	IC: -	**IC:** RSS-247 6.2.4.1			

Note: UL Japan, Inc.'s EMI Work Procedures No. 13-EM-W0420 and 13-EM-W0422.
* For DFS tests, please see the test report number 12656071S-L issued by UL Japan, Inc.
*1) Radiated test was selected over 30 MHz based on section 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 Emission)
f) Refer to APPENDIX 1 (data of Spurious Emission (Conducted))
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.

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

FCC Part 15.31 (e)
This EUT provides the stable voltage constantly to RF Module regardless of input voltage. Therefore, this EUT complies with the requirement.

FCC Part 15.203 Antenna requirement
It is impossible for end users to replace the antenna, because the antenna is mounted inside of the EUT. 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	RSS-Gen 6.7	**IC:** -	N/A	- b)	Conducted
b) 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.

Item	Frequency range	Uncertainty (+/-)				
		No. 1 SAC / SR	No. 2 SAC / SR	No. 3 SAC / SR	No. 4 SAC / SR	No. 5,6,8 SR
Conducted emission (AC Mains) LISN	150 kHz-30 MHz	2.9 dB	2.8 dB	2.9 dB	2.9 dB	2.9 dB
Radiated emission (Measurement distance: 3 m)	9 kHz-30 MHz	3.0 dB	3.0 dB	3.1 dB	-	-
	30 MHz-200 MHz	4.6 dB	4.6 dB	4.7 dB	-	-
	200 MHz-1 GHz	6.0 dB	6.0 dB	6.1 dB	-	-
	1 GHz-6 GHz	4.8 dB	4.8 dB	4.8 dB	-	-
	6 GHz-18 GHz	5.4 dB	5.4 dB	5.4 dB	-	-
	18 GHz-40 GHz	5.6 dB	5.6 dB	5.6 dB	-	-
Radiated emission (Measurement distance: 1 m)	1 GHz-18 GHz	5.7 dB	5.7 dB	5.7 dB	-	-
	18 GHz-40 GHz	5.9 dB	5.9 dB	5.9 dB	-	-

SAC=Semi-Anechoic Chamber
SR= Shielded Room is applied besides radiated emission

Antenna terminal test	Uncertainty (+/-)
Power Measurement above 1 GHz (Average Detector)_SPM-06	0.81 dB
Power Measurement above 1 GHz (Peak Detector)_SPM-06	1.53 dB
Power Measurement above 1 GHz (Average Detector)_SPM-07	0.95 dB
Power Measurement above 1 GHz (Peak Detector)_SPM-07	1.21 dB
Power Measurement above 1 GHz (Average Detector)_SPM-13	0.90 dB
Power Measurement above 1 GHz (Peak Detector)_SPM-13	1.04 dB
Spurious emission (Conducted) below 1GHz	1.8 dB
Spurious emission (Conducted) 1 GHz-3 GHz	1.7 dB
Spurious emission (Conducted) 3 GHz-18 GHz	2.3 dB
Spurious emission (Conducted) 18 GHz-26.5 GHz	2.4 dB
Spurious emission (Conducted) 26.5 GHz-40 GHz	2.4 dB
Bandwidth Measurement	0.61 %
Duty cycle and Time Measurement	0.012 %

3.5 Test Location

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JAB Accreditation No. : RTL02610
FCC Test Firm Registration Number: 626366

Test site	IC Registration Number	Width x Depth x Height (m)	Size of reference ground plane (m) / horizontal conducting plane	Maximum measurement distance
No.1 Semi-anechoic chamber	2973D-1	20.6 x 11.3 x 7.65	20.6 x 11.3	10 m
No.2 Semi-anechoic chamber	2973D-2	20.6 x 11.3 x 7.65	20.6 x 11.3	10 m
No.3 Semi-anechoic chamber	2973D-3	12.7 x 7.7 x 5.35	12.7 x 7.7	5 m
No.4 Semi-anechoic chamber	-	8.1 x 5.1 x 3.55	8.1 x 5.1	-
No.1 Shielded room	-	6.8 x 4.1 x 2.7	6.8 x 4.1	-
No.2 Shielded room	-	6.8 x 4.1 x 2.7	6.8 x 4.1	-
No.3 Shielded room	-	6.3 x 4.7 x 2.7	6.3 x 4.7	-
No.4 Shielded room	-	4.4 x 4.7 x 2.7	4.4 x 4.7	-
No.5 Shielded room	-	7.8 x 6.4 x 2.7	7.8 x 6.4	-
No.6 Shielded room	-	7.8 x 6.4 x 2.7	7.8 x 6.4	-
No.8 shielded room	-	3.45 x 5.5 x 2.4	3.45 x 5.5	-
No.1 Measurement room	-	2.55 x 4.1 x 2.5	-	-

3.6 Test data, Test instruments, and Test set up

Refer to APPENDIX.

SECTION 4: Operation of E.U.T. 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 *)
Transmitting (Tx), IEEE 802.11a (11a)	48 Mbps, PN9
Transmitting (Tx), IEEE 802.11n HT20 (11n-20), SISO	MCS 6, PN9
Transmitting (Tx), IEEE 802.11ac VHT20 (11ac-20), SISO	MCS 3, PN9
Transmitting (Tx), IEEE 802.11n HT20 (11n-20), MIMO	MCS 15, PN9
Transmitting (Tx), IEEE 802.11ac VHT20 (11ac-20), MIMO	MCS 4, PN9
Transmitting (Tx), IEEE 802.11n HT40 (11n-40), SISO	MCS 3 (5190 MHz for Radiated Emission), MCS 5 (5190 MHz for other testing), MCS 3 (Other than 5190 MHz), PN9
Transmitting (Tx), IEEE 802.11ac VHT40 (11ac-40), SISO	MCS 9 (5190 MHz for Radiated Emission), MCS 4 (5190 MHz for other testing), MCS 2 (Other than 5190 MHz), PN9
Transmitting (Tx), IEEE 802.11n HT40 (11n-40), MIMO	MCS 15(U-NII-1 Band only), MCS 11(Other than U-NII-1 Band) PN9
Transmitting (Tx), IEEE 802.11ac VHT40 (11ac-40), MIMO	MCS 4(U-NII-1 Band only), MCS 6(Other than U-NII-1 Band), PN9
Transmitting (Tx), IEEE 802.11ac VHT80 (11ac-80), SISO	MCS 5, PN9
Transmitting (Tx), IEEE 802.11ac VHT80 (11ac-80), MIMO	MCS 5(U-NII-1 Band, U-NII-2A Band), MCS 6(U-NII-2C Band, Upper Band), PN9

*Power of the EUT was set by the software as follows;
Power settings: Fixed (refer to power setting (target power) table)
Software: cmd.exe version 6.1.7601.23403

*Worst rate is determined by antenna terminal power for Antenna terminated testing and EIRP for Radiated Emission testing.
*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.

*The details of Operation mode(s)

Test Item	Operating Mode	Tested Antenna *2)	Tested Frequency			
			U-NII-1 Band	U-NII-2A Band	U-NII-2C Band	U-NII-3 Band
Conducted emission, Radiated Spurious Emission (Below 1 GHz), Conducted Spurious Emission *1)	Transmitting (Tx), IEEE 802.11ac VHT20 (11ac-20), SISO	0	-	5320 MHz	-	-
26 dB Emission Bandwidth	Transmitting (Tx), IEEE 802.11a (11a) Transmitting (Tx), IEEE 802.11n HT20 (11n-20), SISO Transmitting (Tx), IEEE 802.11ac VHT20 (11ac-20), SISO	0	-	5260 MHz 5300 MHz 5320 MHz	5500 MHz 5580 MHz 5700 MHz	-
	Transmitting (Tx), IEEE 802.11n HT20 (11n-20), MIMO Transmitting (Tx), IEEE 802.11ac VHT20 (11ac-20), MIMO	0 & 1				
	Transmitting (Tx), IEEE 802.11n HT40 (11n-40), SISO Transmitting (Tx), IEEE 802.11ac VHT40 (11ac-40), SISO Transmitting (Tx), IEEE 802.11n	0	-	5270 MHz 5310 MHz	5510 MHz 5550 MHz 5670 MHz	-
	Transmitting (Tx), IEEE 802.11n HT40 (11n-40), MIMO Transmitting (Tx), IEEE 802.11ac VHT40 (11ac-40), MIMO	0 & 1				
	Transmitting (Tx), IEEE 802.11ac VHT80 (11ac-80), SISO	1	-	5290 MHz	5530 MHz	-
	Transmitting (Tx), IEEE 802.11ac VHT80 (11ac-80), MIMO	0 & 1				
99 % Occupied Bandwidth, Maximum Conducted Output Power, Maximum Power Spectral Density	Transmitting (Tx), IEEE 802.11a (11a) Transmitting (Tx), IEEE 802.11n HT20 (11n-20), SISO Transmitting (Tx), IEEE 802.11ac VHT20 (11ac-20), SISO	0	5180 MHz 5220 MHz 5240 MHz	5260 MHz 5300 MHz 5320 MHz	5500 MHz 5580 MHz 5700 MHz	5745 MHz 5785 MHz 5825 MHz
	Transmitting (Tx), IEEE 802.11n HT20 (11n-20), MIMO Transmitting (Tx), IEEE 802.11ac VHT20 (11ac-20), MIMO	0 & 1				
	Transmitting (Tx), IEEE 802.11n HT40 (11n-40), SISO Transmitting (Tx), IEEE 802.11ac VHT40 (11ac-40), SISO	0, 1 (Only U-NII-1 Band)	5190 MHz 5230 MHz	5270 MHz 5310 MHz	5510 MHz 5550 MHz 5670 MHz	5755 MHz 5795 MHz
	Transmitting (Tx), IEEE 802.11n HT40 (11n-40), MIMO Transmitting (Tx), IEEE 802.11ac VHT40 (11ac-40), MIMO	0 & 1				
	Transmitting (Tx), IEEE 802.11ac VHT80 (11ac-80), SISO	1, 0 (Only U-NII-3 Band)	5210 MHz	5290 MHz	5530 MHz	5775 MHz
	Transmitting (Tx), IEEE 802.11ac VHT80 (11ac-80), MIMO	0 & 1				

20 dB Bandwidth	Transmitting (Tx), IEEE 802.11a (11a) Transmitting (Tx), IEEE 802.11n HT20 (11n-20), SISO Transmitting (Tx), IEEE 802.11ac VHT20 (11ac-20), SISO	0	5180 MHz 5220 MHz 5240 MHz	5260 MHz 5300 MHz 5320 MHz	-	-
	Transmitting (Tx), IEEE 802.11n HT20 (11n-20), MIMO Transmitting (Tx), IEEE 802.11ac VHT20 (11ac-20), MIMO	0 & 1				
	Transmitting (Tx), IEEE 802.11n HT40 (11n-40), SISO Transmitting (Tx), IEEE 802.11ac VHT40 (11ac-40), SISO	0, 1 (Only U-NII-1 Band)	5190 MHz	5230 MHz 5270 MHz 5310 MHz	-	-
	Transmitting (Tx), IEEE 802.11n HT40 (11n-40), MIMO Transmitting (Tx), IEEE 802.11ac VHT40 (11ac-40), MIMO	0 & 1				
	Transmitting (Tx), IEEE 802.11ac VHT80 (11ac-80), SISO	1	5210 MHz	5290 MHz	-	-
	Transmitting (Tx), IEEE 802.11ac VHT80 (11ac-80), MIMO	0 & 1				
6 dB Bandwidth	Transmitting (Tx), IEEE 802.11a (11a) Transmitting (Tx), IEEE 802.11n HT20 (11n-20), SISO Transmitting (Tx), IEEE 802.11ac VHT20 (11ac-20), SISO	0	-	-	-	5745 MHz 5785 MHz 5825 MHz
	Transmitting (Tx), IEEE 802.11n HT20 (11n-20), MIMO Transmitting (Tx), IEEE 802.11ac VHT20 (11ac-20), MIMO	0 & 1				
	Transmitting (Tx), IEEE 802.11n HT40 (11n-40), SISO Transmitting (Tx), IEEE 802.11ac VHT40 (11ac-40), SISO	0	-	-	-	5755 MHz 5795 MHz
	Transmitting (Tx), IEEE 802.11n HT40 (11n-40), MIMO Transmitting (Tx), IEEE 802.11ac VHT40 (11ac-40), MIMO	0 & 1				
	Transmitting (Tx), IEEE 802.11ac VHT80 (11ac-80), SISO	0	-	-	-	5775 MHz
	Transmitting (Tx), IEEE 802.11ac VHT80 (11ac-80), MIMO	0 & 1				
Radiated Spurious Emission (Above 1 GHz) *3)	Transmitting (Tx), IEEE 802.11ac VHT20 (11ac-20), SISO	0	5180 MHz 5240 MHz	5320 MHz	5500 MHz 5580 MHz 5700 MHz	5745 MHz 5785 MHz 5825 MHz
	Transmitting (Tx), IEEE 802.11n HT20 (11n-20), MIMO *4)	0 & 1	5180 MHz	5320 MHz	5500 MHz 5700 MHz	5745 MHz 5825 MHz
	Transmitting (Tx), IEEE 802.11n HT40 (11n-40), SISO	0	5190 MHz 5230 MHz	5310 MHz	5510 MHz 5550 MHz 5670 MHz	5755 MHz 5795 MHz
	Transmitting (Tx), IEEE 802.11ac VHT40 (11ac-40), MIMO *4)	0 & 1	5190 MHz	5310 MHz	5510 MHz 5670 MHz	5755 MHz 5795 MHz
	Transmitting (Tx), IEEE 802.11ac VHT80 (11ac-80), SISO	0	5210 MHz	5290 MHz	5530 MHz	5775 MHz
	Transmitting (Tx), IEEE 802.11ac VHT80 (11ac-80), MIMO *4)	0 & 1				

*1) The mode was tested as a representative, because it had the highest power at antenna terminal test.
*2) The test was performed with the antenna that had higher power as a representative.
*3) Since 11a, 11n and 11ac mode have the same modulation method and no differences in transmitting specification, test was performed on the representative mode that had the highest radiated carrier power.
*4) This mode wasn't worst, but only band edge of spurious emissions were measured for confirmation.

Power setting (target power) table) (1/2)

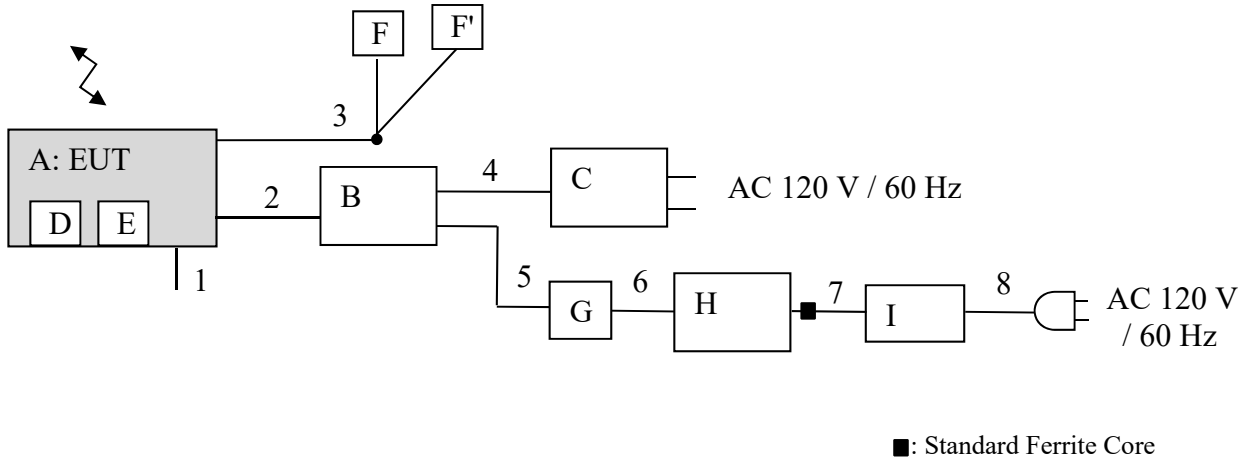
Bandwidth	Channel frequency	Mode	Rate / MCS mode [dBm]									
20 MHz			6 M	9 M	12 M	18 M	24 M	36 M	48 M	54 M	-	-
	5180 MHz – 5240 MHz	11a	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	-	-
			MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	-	-
	5180 MHz – 5240 MHz	11n-HT20 (SISO)	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	-	-
			MCS 8	MCS 9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15	-	-
	5180 MHz – 5240 MHz	11n-HT20 (MIMO)	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	-	-
			MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	-
	5180 MHz – 5240 MHz	11ac-VHT20 (SISO)	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.0	-
			MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	-
	5180 MHz – 5240 MHz	11ac-VHT20 (MIMO)	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	-
40 MHz			MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	-	-
	5190 MHz	11n-HT40 (SISO)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	-	-
			MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	-	-
	5230 MHz		13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	-	-
			MCS 8	MCS 9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15	-	-
	5190 MHz	11n-HT40 (MIMO)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	-	-
			MCS 8	MCS 9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15	-	-
	5230 MHz		10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	-	-
			MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	MCS 9
	5190 MHz	11ac-VHT40 (SISO)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
			MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	MCS 9
	5230 MHz		13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.0	13.0
			MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	MCS 9
	5190 MHz	11ac-VHT40 (MIMO)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
			MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	MCS 9
	5230 MHz		10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5
80 MHz			MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	MCS 9
	5210 MHz *1)	11ac-VHT80 (SISO)	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5
			MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	MCS 9
	5210 MHz *2)	11ac-VHT80 (MIMO)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
20 MHz			6 M	9 M	12 M	18 M	24 M	36 M	48 M	54 M	-	-
	5260 MHz – 5320 MHz	11a	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	-	-
			MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	-	-
	5260 MHz – 5320 MHz	11n-HT20 (SISO)	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	-	-
			MCS 8	MCS 9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15	-	-
	5260 MHz – 5320 MHz	11n-HT20 (MIMO)	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	-	-
			MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	-
	5260 MHz – 5320 MHz	11ac-VHT20 (SISO)	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.0	-
			MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	-
	5260 MHz – 5320 MHz	11ac-VHT20 (MIMO)	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	-
40 MHz			MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	-	-
	5270 MHz – 5310 MHz	11n-HT40 (SISO)	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	-	-
			MCS 8	MCS 9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15	-	-
	5270 MHz – 5310 MHz	11n-HT40 (MIMO)	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	-	-
			MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	MCS 9
	5270 MHz – 5310 MHz	11ac-VHT40 (SISO)	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.0	13.0
			MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	MCS 9
	5270 MHz – 5310 MHz	11ac-VHT40 (MIMO)	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5
80 MHz			MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	MCS 9
	5290 MHz *1)	11ac-VHT80 (SISO)	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5
			MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	MCS 9
	5290 MHz *2)	11ac-VHT80 (MIMO)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5

*1) All tests are carried out with 9.5 dBm setting regarding worst case although typical power setting is 9.0 dBm.
*2) All tests are carried out with 6.5 dBm setting regarding worst case although typical power setting is 6.0 dBm.

Power setting (target power) table) (2/2)

Bandwidth	Channel frequency	Mode	Rate / MCS mode [dBm]									
20 MHz			6 M	9 M	12 M	18 M	24 M	36 M	48 M	54 M	-	-
	5500 MHz – 5700 MHz	11a	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	-	-
			MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	-	-
	5500 MHz – 5700 MHz	11n-HT20 (SISO)	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	-	-
			MCS 8	MCS 9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15	-	-
	5500 MHz – 5700 MHz	11n-HT20 (MIMO)	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	-	-
			MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	-
	5500 MHz – 5700 MHz	11ac-VHT20 (SISO)	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	11.0	-
			MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	-
	5500 MHz – 5700 MHz	11ac-VHT20 (MIMO)	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	-
40 MHz			MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	-	-
	5510 MHz – 5670 MHz	11n-HT40 (SISO)	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	-	-
			MCS 8	MCS 9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15	-	-
	5510 MHz – 5670 MHz	11n-HT40 (MIMO)	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	-	-
			MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	MCS 9
	5510 MHz – 5670 MHz	11ac-VHT40 (SISO)	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	12.0	12.0
			MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	MCS 9
	5510 MHz – 5670 MHz	11ac-VHT40 (MIMO)	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5
80 MHz			MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	MCS 9
	5530 MHz,	11ac-VHT80 (SISO)	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5
			MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	MCS 9
	5530 MHz,	11ac-VHT80 (MIMO)	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
20 MHz			6 M	9 M	12 M	18 M	24 M	36 M	48 M	54 M	-	-
	5745 MHz – 5825 MHz	11a	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	-	-
			MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	-	-
	5745 MHz – 5825 MHz	11n-HT20 (SISO)	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	-	-
			MCS 8	MCS 9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15	-	-
	5745 MHz – 5825 MHz	11n-HT20 (MIMO)	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	-	-
			MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	-
	5745 MHz – 5825 MHz	11ac-VHT20 (SISO)	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	11.0	-
			MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	-
	5745 MHz – 5825 MHz	11ac-VHT20 (MIMO)	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	-
40 MHz			MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	-	-
	5755 MHz – 5795 MHz	11n-HT40 (SISO)	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	-	-
			MCS 8	MCS 9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15	-	-
	5755 MHz – 5795 MHz	11n-HT40 (MIMO)	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	-	-
			MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	MCS 9
	5755 MHz – 5795 MHz	11ac-VHT40 (SISO)	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.0	12.0
			MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	MCS 9
	5755 MHz – 5795 MHz	11ac-VHT40 (MIMO)	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5
80 MHz			MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	MCS 9
	5775MHz	11ac-VHT80 (SISO)	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	10.5	10.5
			MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	MCS 9
	5775MHz	11ac-VHT80 (MIMO)	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5

4.2 Configuration and peripherals



■: Standard Ferrite Core

* Cabling and setup(s) were taken into consideration and test data was taken under worse case conditions.

Description of EUT and Support equipment

No.	Item	Model number	Serial number	Manufacturer	Remarks
A	Game Console	HDH-001	XJW01000021026 *1) XJW01000029787 *2) XJW01000021040 *3)	Nintendo Co., Ltd.	EUT
B	SDEV Cradle	HAT-003	XZL0100007151	Nintendo Co., Ltd.	-
C	AC Adapter	HAC-002	-	Nintendo Co., Ltd.	-
D	Game Card	HAC-008	DFCAA22L000	Nintendo Co., Ltd.	-
E	Micro SD Card	-	-	Transcend	-
F, F'	Headphone	-	-	Nintendo Co., Ltd.	-
G	GIGA Ethernet Adapter	LAN-GTJU3	3495DB2BF5CA	Logitec	-
H	Laptop PC	CF-S10AWNDS	2BKSA58270	Panasonic	-
I	AC Adapter	CF-AA6402A M1	6402AM111Z03016A	Panasonic	-

*1) Used for Antenna Terminal conducted test
*2) Used for Maximum Conducted Output Power test and Maximum Power Spectral Density test at 11n HT40(MIMO) and 11ac VHT40(MIMO) mode.
*3) Used for Conducted Emission test and Radiated Emission test

List of cables used

No.	Cable Name	Length (m)	Shield		Remarks
			Cable	Connector	
1	Signal	0.1	Unshielded	Unshieided	*4)
2	USB	0.4	Shielded	Shielded	-
3	Headphone	0.5 + 0.3	Unshielded	Unshieided	-
4	USB	1.8	Shielded	Shielded	-
5	USB	0.15	Shielded	Shielded	-
6	LAN	0.5	Unshielded	Unshieided	-
7	DC	1.8	Unshielded	Unshieided	-
8	AC	1.0	Unshielded	Unshieided	-

*4) This signal cable is used only for the settings of Bluetooth test mode, not used for the product.

SECTION 5: Conducted Emission

Test Procedure and conditions

EUT was placed on a platform of nominal size, 1.0 m by 2.0 m, raised 0.8 m above the conducting ground plane. The table is made of expanded polystyrol and expanded polypropylene and the table top is covered with The table is made of Styrofoam and covered with polyvinyl chloride. That has very low permittivity.
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.

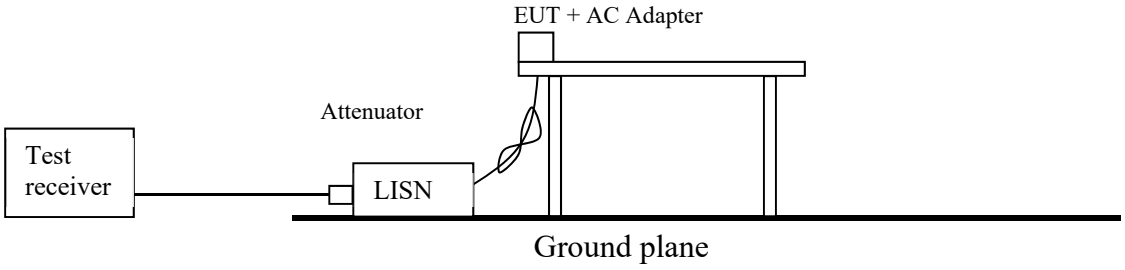
I/O cables that were connected to the peripherals were bundled in center. They were folded back and forth forming a bundle 30 cm to 40 cm long and were hanged at a 40 cm height to the ground plane. All unused 50 ohm connectors of the LISN (AMN) were resistivity terminated in 50 ohm when not connected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

The AC Mains Terminal Continuous disturbance Voltage had been measured with the EUT via AC adaptor within a Shielded room.
The EUT via AC adaptor was connected to a Line Impedance Stabilization Network (LISN).
An overview sweep with peak detection has been performed.
The measurements had been performed with a quasi-peak detector and if required, an average detector.
The conducted emission measurements were made with the following detection of the test receiver.

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 - 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 >

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

< Above 1GHz >
EUT was placed on a platform of nominal size, 1.0 m by 1.5 m, raised 0.8 m above the conducting ground plane.
The table is made of expanded polystyrol and expanded polypropylene and the table top is covered with polycarbonate. That has very low permittivity.
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.
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 U-NII-3 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:

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

Test Antennas are used as below;

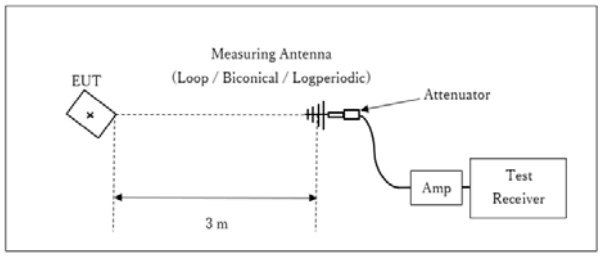
Frequency	30 MHz to 200 MHz	200 MHz to 1 GHz	Above 1 GHz
Antenna Type	Biconical	Logperiodic	Horn

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 VB *1) RBW: 1 MHz VBW: 1/T MHz (T: burst length, refer to APPENDIX) Detector: Peak Trace: Max hold

*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

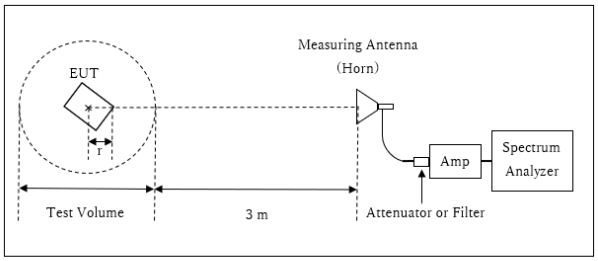
Below 1 GHz



× : Center of turn table

Test Distance: 3 m

1 GHz - 13 GHz

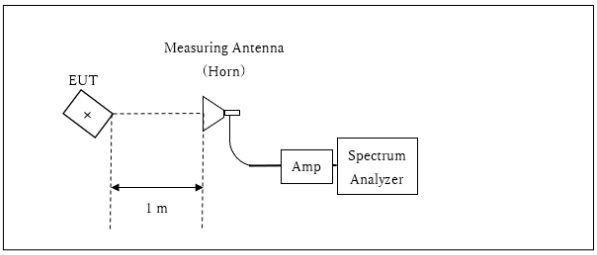


r : Radius of an outer periphery of EUT
× : Center of turn table

Distance Factor: 20 x log (3.89 m / 3.0 m) = 2.26 dB
* Test Distance: (3 + Test Volume /2) - r = 3.89 m

Test Volume : 2.0 m
(Test Volume has been calibrated based on CISPR 16-1-4.)
r = 0.11 m

13 GHz - 40 GHz



× : Center of turn table

Distance Factor: 20 x log (1.0 m / 3.0 m) = -9.54 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.

Mode	Frequency / Test Antenna	Carrier	Below 1 GHz	1 GHz - 6.4 GHz	6.4 GHz - 13 GHz	13 GHz - 18 GHz	18 GHz - 26.5 GHz	26.5 GHz - 40 GHz
SISO	Horizontal	X	X	X	X	Y	X	X
	Vertical	Y	X	Y	X	Y	X	X
MIMO	Horizontal	Z	-	Z	X	Y	X	X
	Vertical	Z	-	Z	X	Y	X	X

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

Measurement range : 30 MHz - 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
20 dB Bandwidth	Enough to capture the emission	100 kHz	300 kHz	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: 160 MHz BW) (Method PM)
Maximum Power Spectral Density	Encompass the entire EBW	1 MHz or 100 kHz *2)	≥ 3 RBW	Auto	RMS Power Averaging (100 times)	Clear Write	Spectrum Analyzer
Conducted Spurious Emission*3)	9 kHz – 150 kHz	200 Hz	620 Hz	Auto	Peak	Max Hold	Spectrum Analyzer
	150 kHz – 30 MHz	10 kHz	30 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-5.850 GHz, but it is not possible with spectrum analyzer, so RBW Correction Factor (10 log(500 kHz / 100 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 not detected as shown in the chart. (9 kHz-150 kHz: RBW = 200 Hz, 150 kHz-30 MHz: RBW = 10 kHz)

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

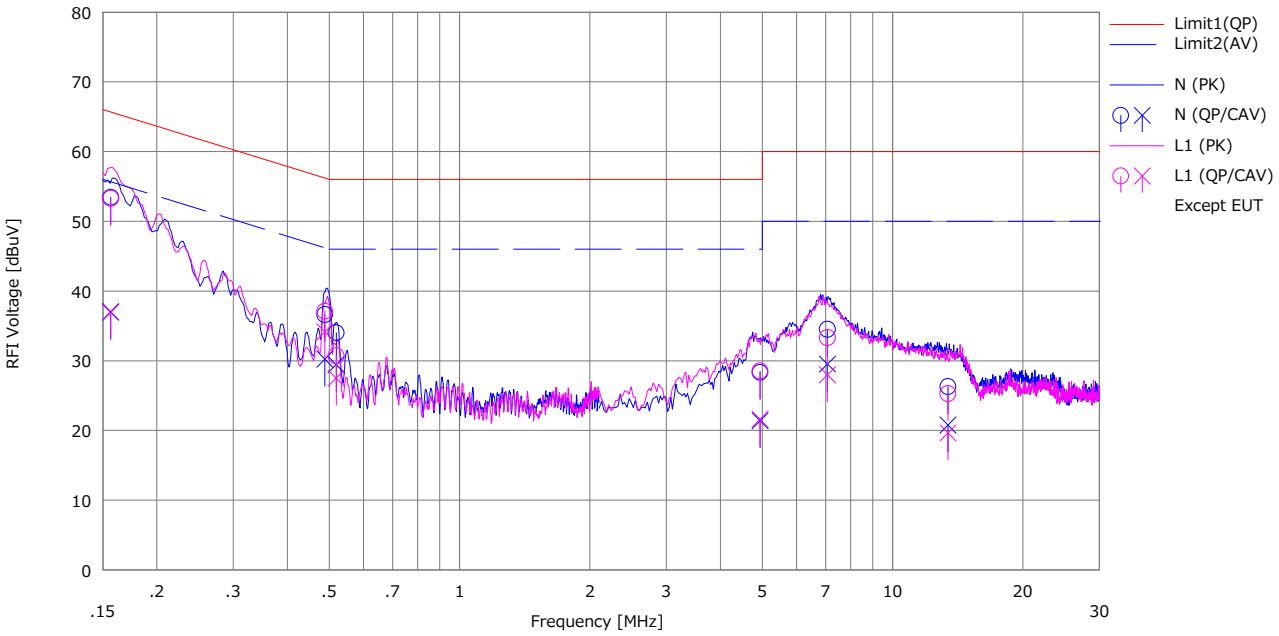
DATA OF CONDUCTED EMISSION TEST

UL Japan,Inc. Shonan EMC Lab. No.3 Shielded Room
Date : 2019/03/11

Company	: Nintendo Co., Ltd.	Mode	: Tx, 11ac-20, SISO, 5320 MHz
Kind of EUT	: Game console	Order No.	: 12656071S
Model No.	: HDH-001	Power	: AC 120 V / 60 Hz(AC adapter input)
Serial No.	: XJW01000021040	Temp./Humi.	: 25 deg.C / 36 %RH
Remarks	: -		

Limit : FCC_Part 15 Subpart C(15.207)

Engineer : Kenichi Adachi



No.	Freq.	Reading		C.Fac	Results		Limit		Margin		Phase	Comment
		〈QP〉	〈CAV〉		〈QP〉	〈CAV〉	〈QP〉	〈AV〉	〈QP〉	〈AV〉		
	[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dB]	[dB]		
1	0.15646	40.89	24.47	12.55	53.44	37.02	65.65	55.65	12.2	18.6	N	
2	0.48834	24.04	17.65	12.58	36.62	30.23	56.20	46.20	19.5	15.9	N	
3	0.51884	21.44	16.86	12.58	34.02	29.44	56.00	46.00	21.9	16.5	N	
4	4.93946	15.23	8.28	13.10	28.33	21.38	56.00	46.00	27.6	24.6	N	
5	7.07345	21.11	16.12	13.39	34.50	29.51	60.00	50.00	25.5	20.4	N	
6	13.41335	12.06	6.54	14.22	26.28	20.76	60.00	50.00	33.7	29.2	N	
7	0.15646	40.75	24.36	12.55	53.30	36.91	65.65	55.65	12.3	18.7	L1	
8	0.48834	24.52	21.55	12.58	37.10	34.13	56.20	46.20	19.1	12.0	L1	
9	0.51884	18.11	14.92	12.58	30.69	27.50	56.00	46.00	25.3	18.5	L1	
10	4.93946	15.42	8.51	13.10	28.52	21.61	56.00	46.00	27.4	24.3	L1	
11	7.07345	19.92	14.59	13.39	33.31	27.98	60.00	50.00	26.6	22.0	L1	
12	13.41335	11.06	5.43	14.22	25.28	19.65	60.00	50.00	34.7	30.3	L1	

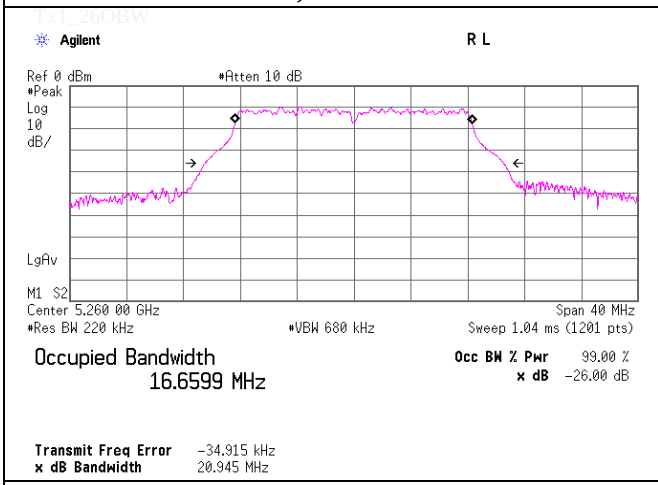
Calculation:Result[dBuV]=Reading[dBuV]+C.Fac(LISN+Cable+ATT)[dB]
LISN: SLS-02 with Extention cable

-26 dB Bandwidth

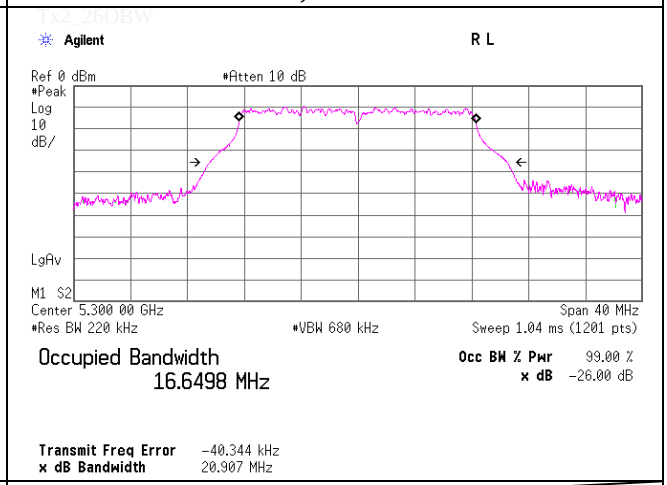
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 13, 2019	
Temperature / Humidity	24 deg.C , 57 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE802.11a, PN9, worst antenna port 0, worst data mode 48 Mbps	

Freq. [MHz]	-26 dB Bandwidth [MHz]	Limit [MHz]
5260.0000	20.945	-
5300.0000	20.907	-
5320.0000	20.931	-

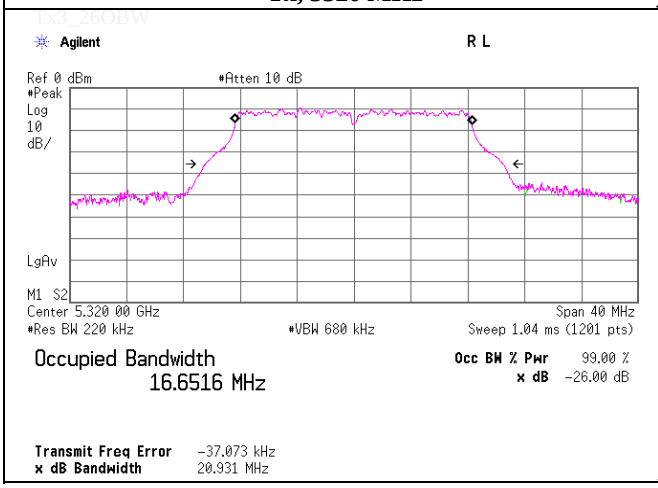
Tx, 5260 MHz

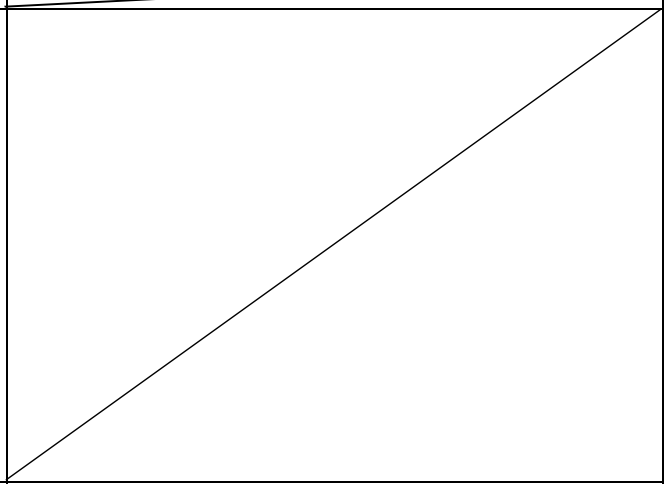


Tx, 5300 MHz



Tx, 5320 MHz



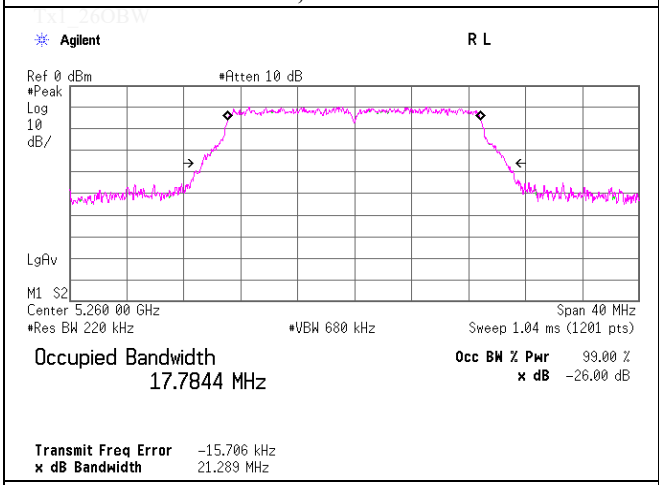


-26 dB Bandwidth

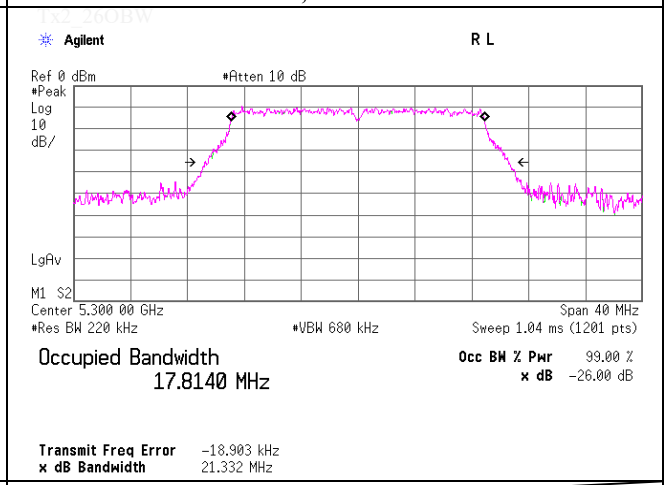
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 13, 2019	
Temperature / Humidity	24 deg.C , 57 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE802.11n HT20 (SISO), PN9, worst antenna port 0, worst data mode 6 (MCS)	

Freq. [MHz]	-26 dB Bandwidth [MHz]	Limit [MHz]
5260.0000	21.289	-
5300.0000	21.332	-
5320.0000	21.284	-

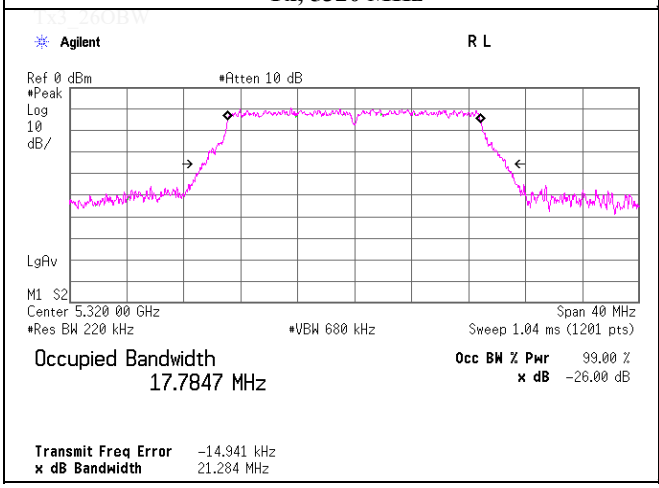
Tx, 5260 MHz



Tx, 5300 MHz



Tx, 5320 MHz

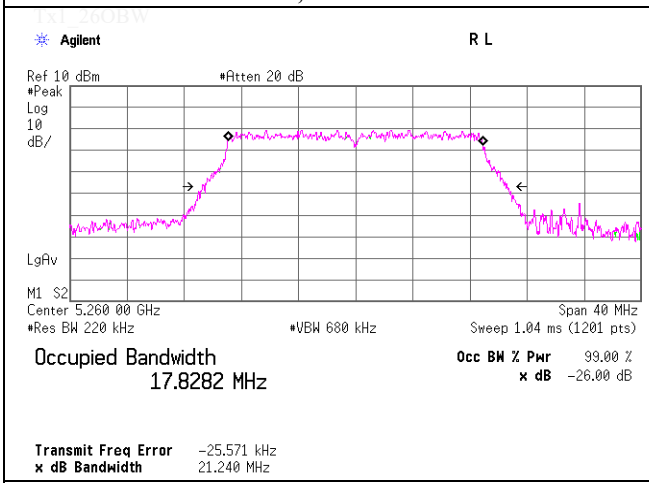


-26 dB Bandwidth

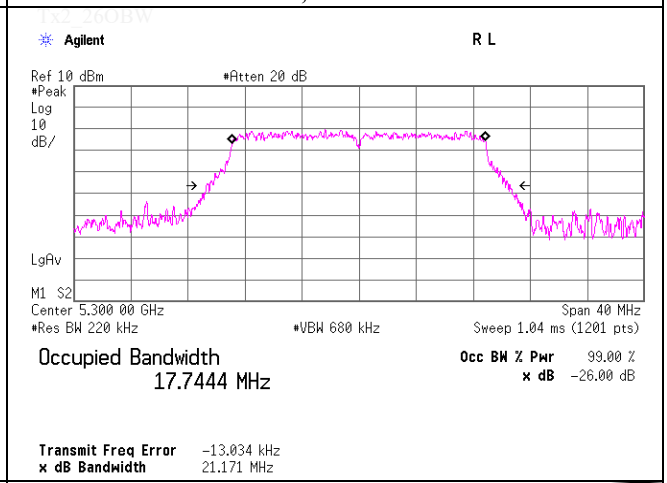
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 15, 2019	
Temperature / Humidity	24 deg.C , 35 %RH	
Engineer	Makoto Hosaka	
Mode	Tx, IEEE802.11ac VHT20 (SISO), PN9, worst antenna port 0, worst data mode 3 (MCS)	

Freq. [MHz]	-26 dB Bandwidth [MHz]	Limit [MHz]
5260.0000	21.240	-
5300.0000	21.171	-
5320.0000	21.003	-

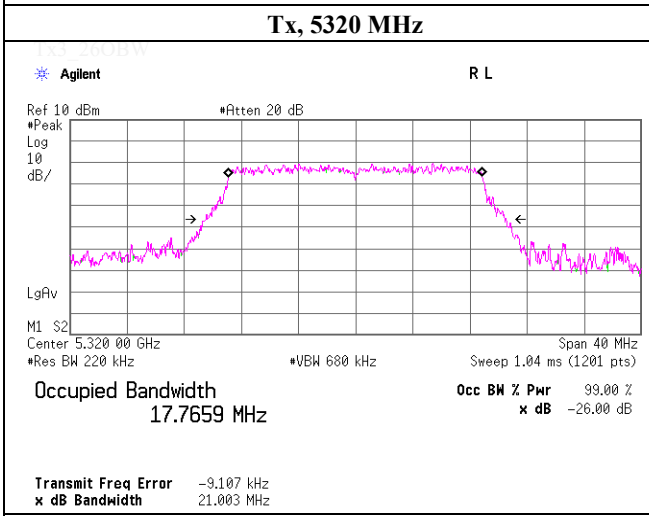
Tx, 5260 MHz



Tx, 5300 MHz



Tx, 5320 MHz

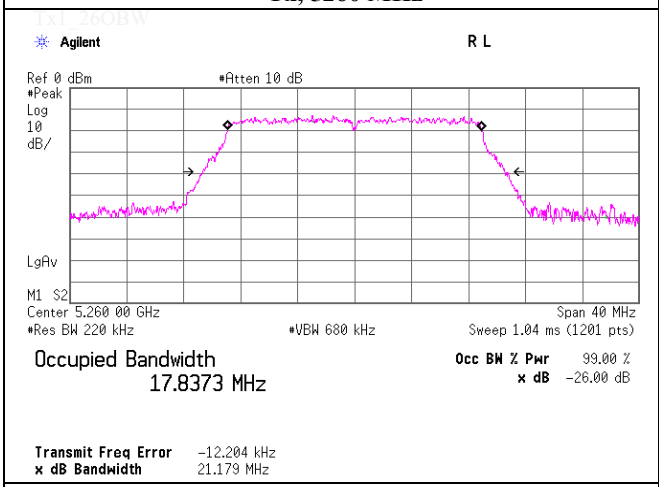


-26 dB Bandwidth

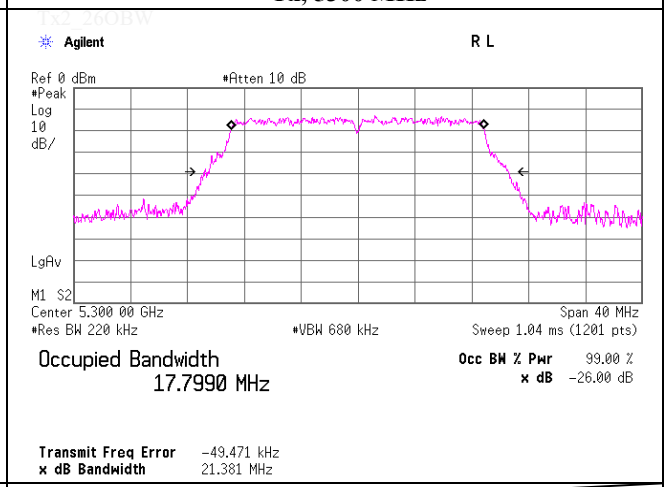
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 19, 2019	
Temperature / Humidity	21 deg.C , 41 %RH	
Engineer	Yosuke Ishikawa	
Mode	Tx, IEEE802.11n HT20 (MIMO), PN9, worst data mode 15 (MCS)	

Freq. [MHz]	-26 dB Bandwidth [MHz]	Limit [MHz]
5260.0000	21.179	-
5300.0000	21.381	-
5320.0000	21.238	-

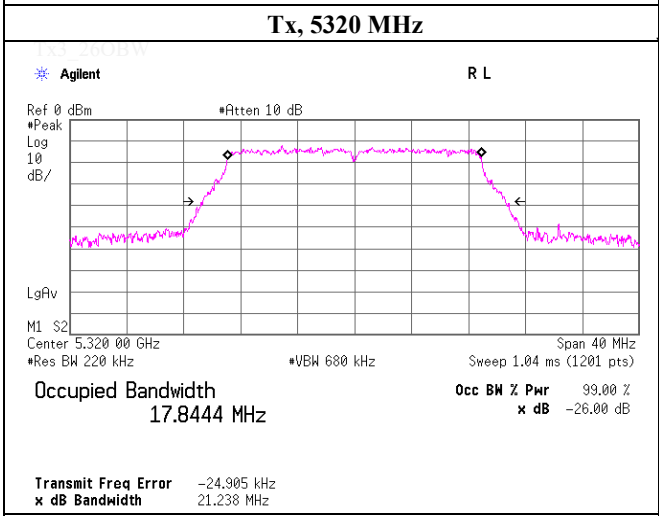
Tx, 5260 MHz



Tx, 5300 MHz



Tx, 5320 MHz



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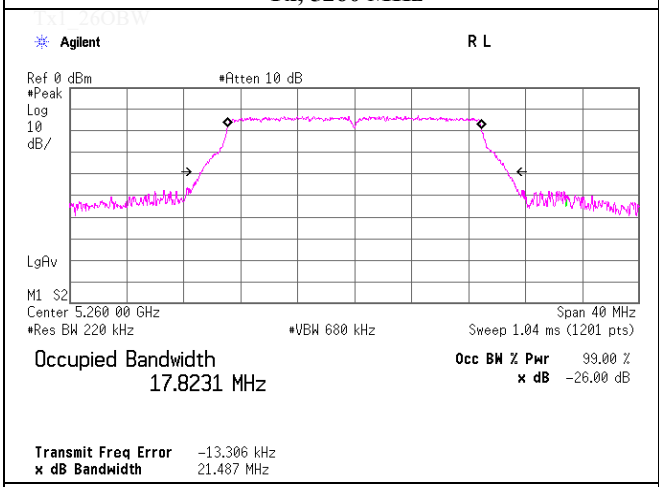
-26 dB Bandwidth

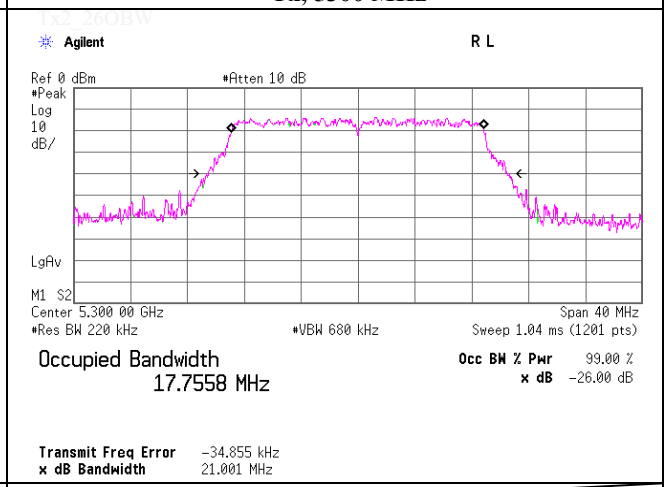
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 19, 2019	
Temperature / Humidity	21 deg.C , 41 %RH	
Engineer	Yosuke Ishikawa	
Mode	Tx, IEEE802.11ac VHT20 (MIMO), PN9, worst data mode 4 (MCS)	

Freq. [MHz]	-26 dB Bandwidth [MHz]	Limit [MHz]
5260.0000	21.487	-
5300.0000	21.001	-
5320.0000	21.053	-

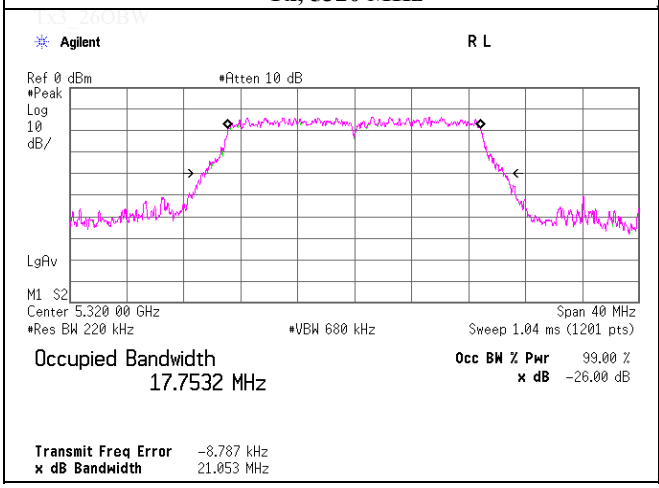
Tx, 5260 MHz



Tx, 5300 MHz



Tx, 5320 MHz

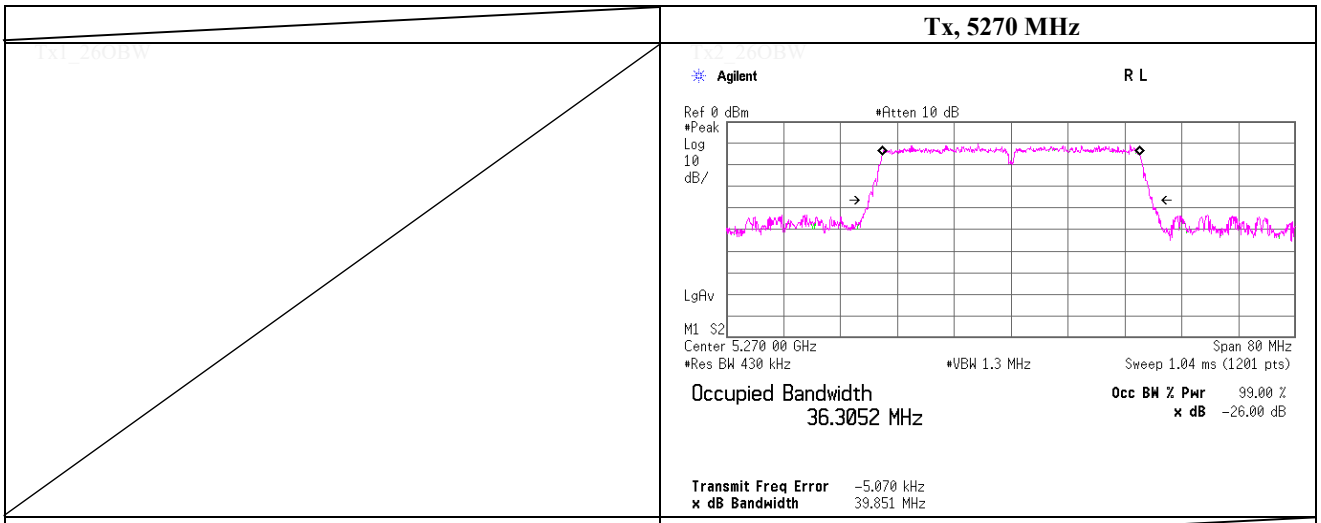


-26 dB Bandwidth

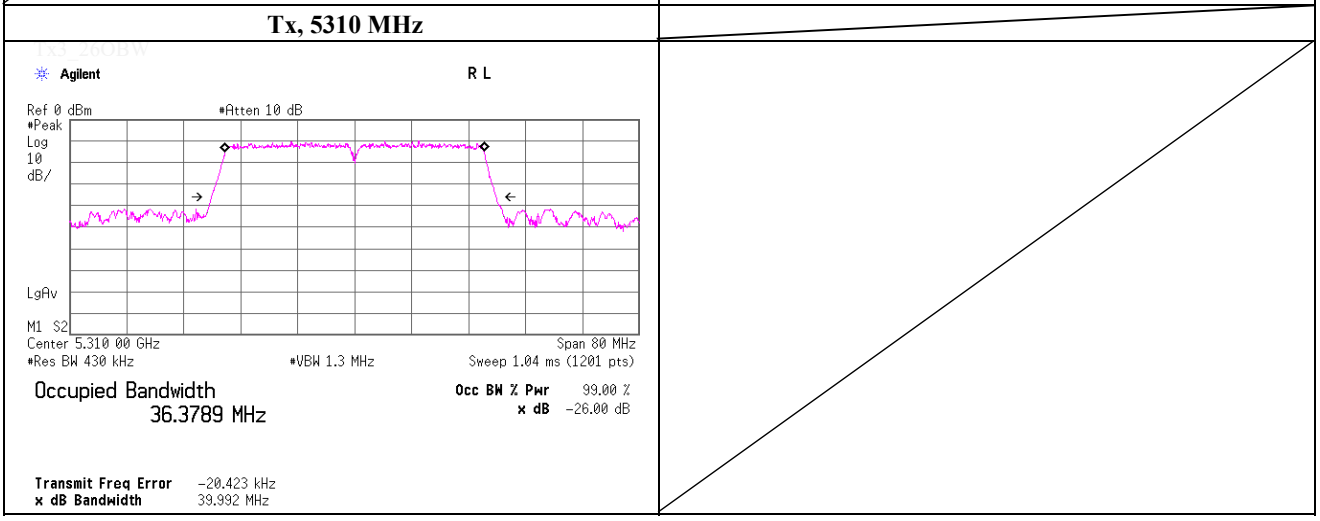
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 18, 2019	
Temperature / Humidity	22 deg.C , 54 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE802.11n HT40 (SISO), PN9, worst antenna port 0, worst data mode 3 (MCS)	

Freq. [MHz]	-26 dB Bandwidth [MHz]	Limit [MHz]
		-
5270.0000	39.851	-
5310.0000	39.992	-

Tx, 5270 MHz



Tx, 5310 MHz

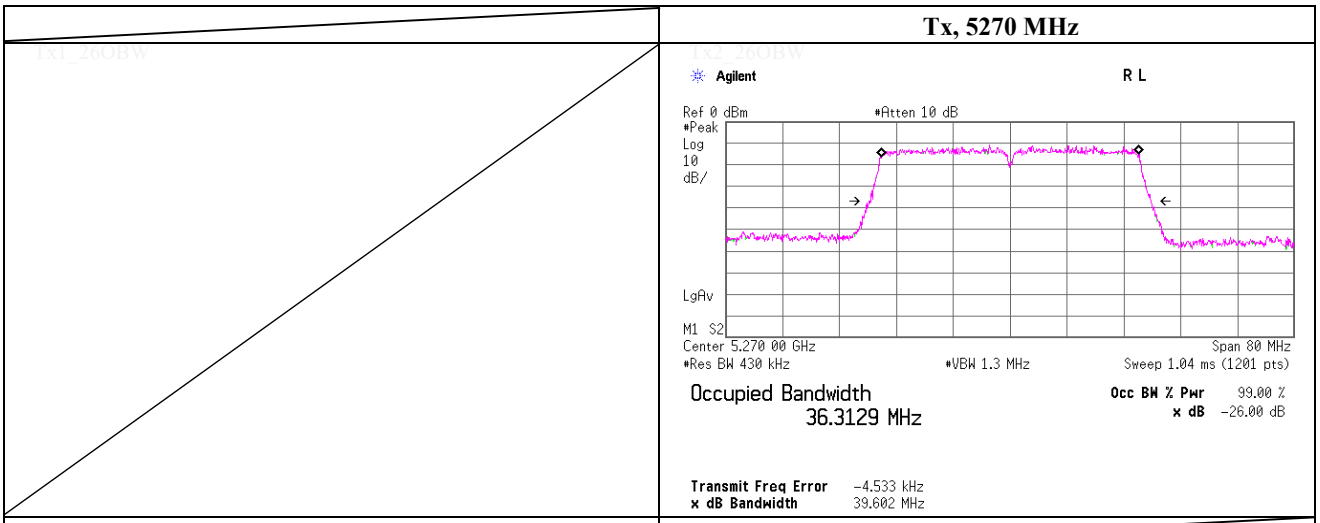


-26 dB Bandwidth

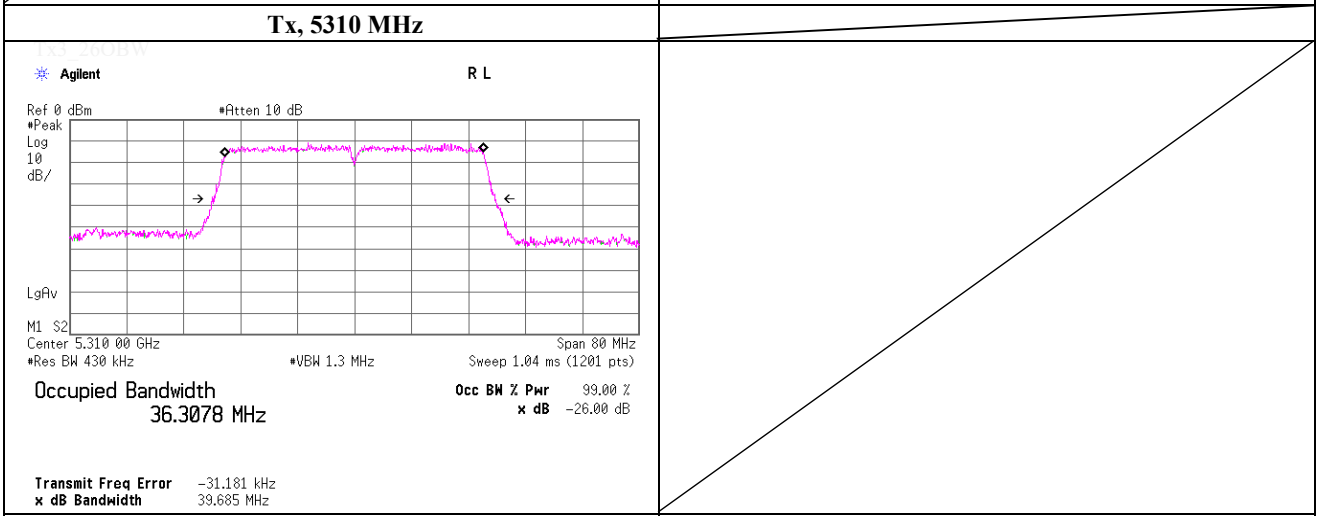
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 19, 2019	
Temperature / Humidity	21 deg.C , 41 %RH	
Engineer	Yosuke Ishikawa	
Mode	Tx, IEEE802.11ac VHT40 (SISO), PN9, worst antenna port 0, worst data mode 2(MCS)	

Freq. [MHz]	-26 dB Bandwidth [MHz]	Limit [MHz]
		-
5270.0000	39.602	-
5310.0000	39.685	-

Tx, 5270 MHz



Tx, 5310 MHz



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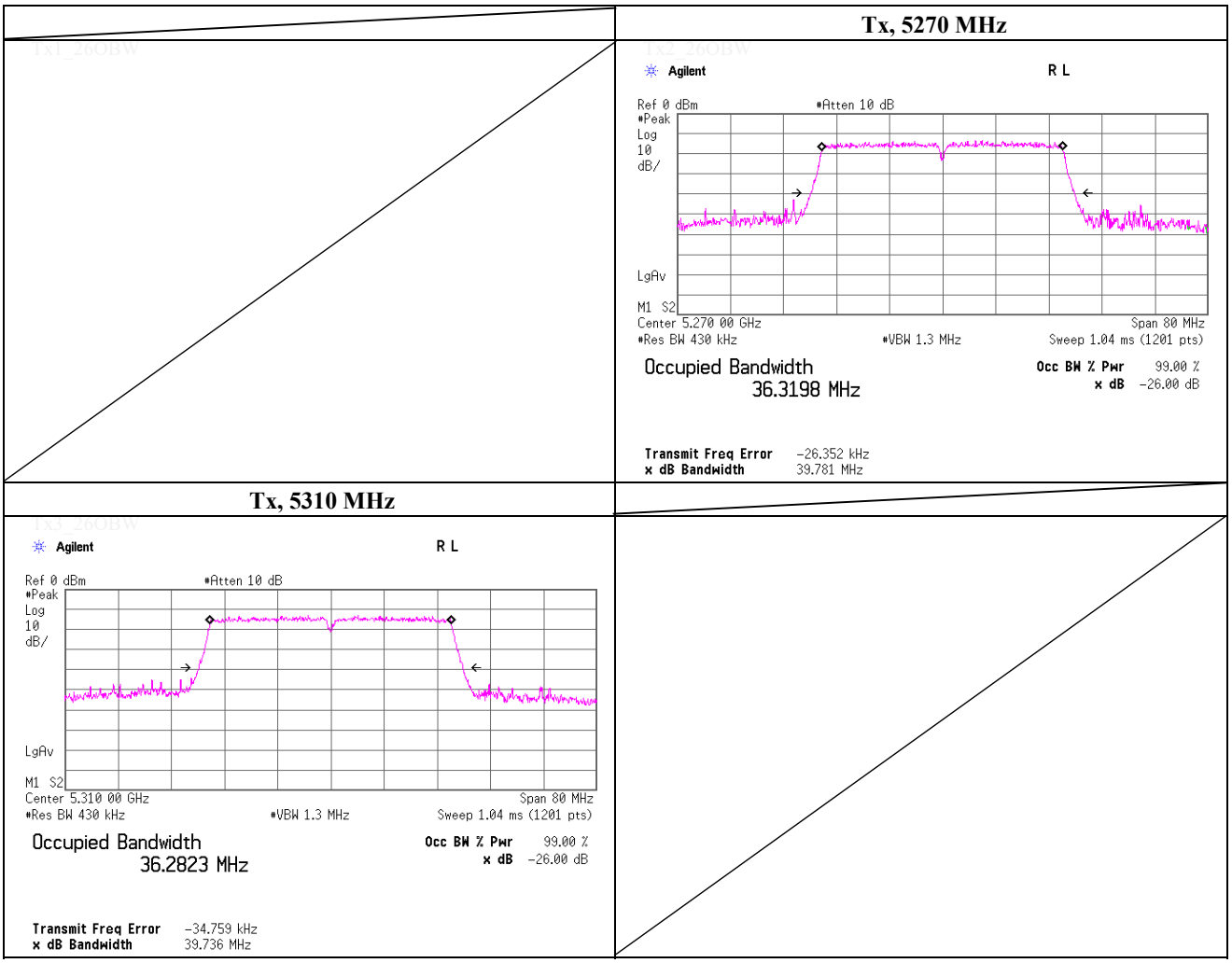
-26 dB Bandwidth

Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 25, 2019	
Temperature / Humidity	20 deg.C , 59 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE 802.11n HT40 (MIMO), PN9, worst data mode 11 (MCS)	

Freq. [MHz]	-26 dB Bandwidth [MHz]	Limit [MHz]
		-
5270.0000	39.781	-
5310.0000	39.736	-

Tx, 5270 MHz



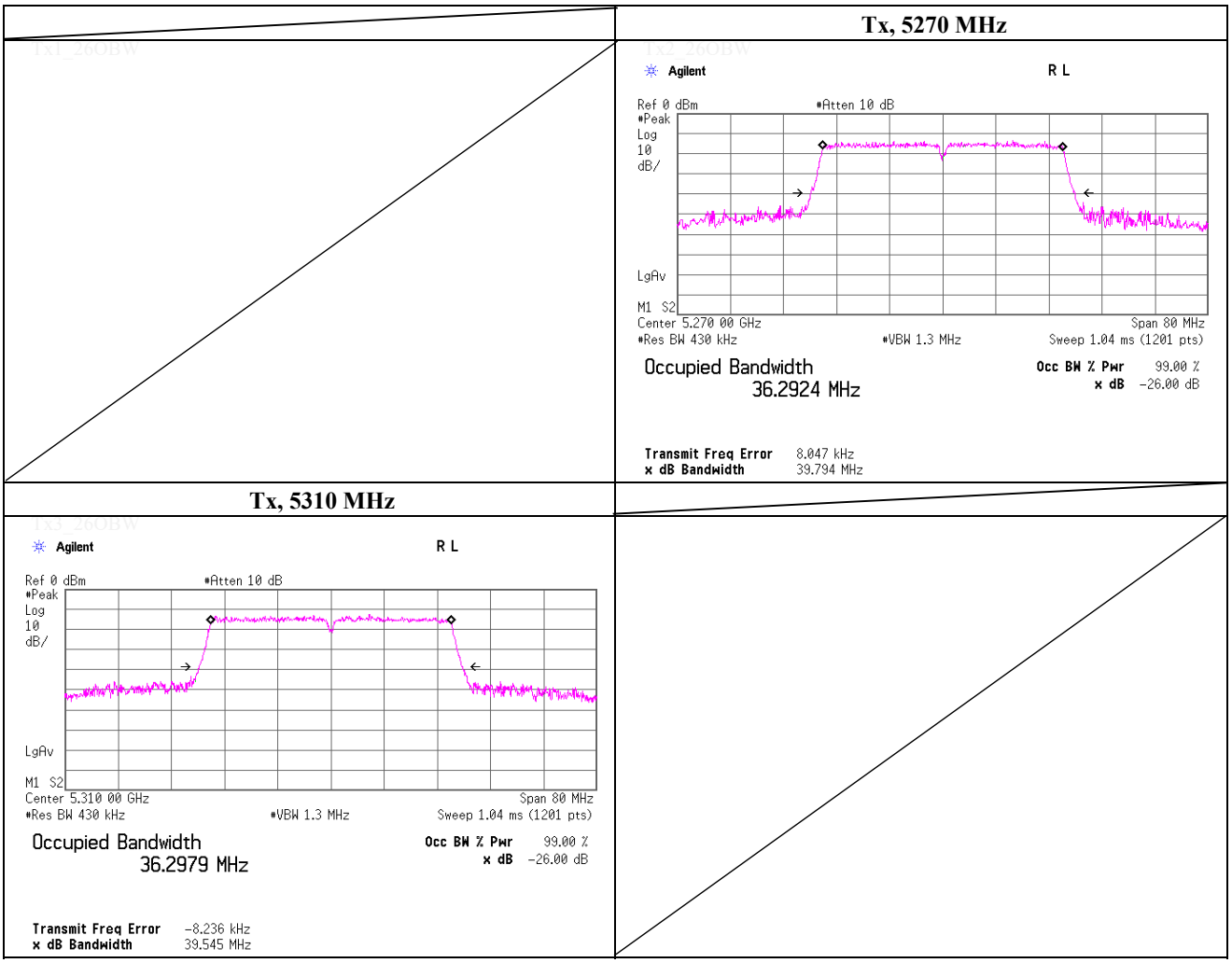
Tx, 5310 MHz

-26 dB Bandwidth

Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 26, 2019	
Temperature / Humidity	21 deg.C , 51 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE 802.11ac VHT40 (MIMO), PN9, worst data mode 6 (MCS)	

Freq. [MHz]	-26 dB Bandwidth [MHz]	Limit [MHz]
		-
5270.0000	39.794	-
5310.0000	39.545	-

Tx, 5270 MHz



Tx, 5310 MHz

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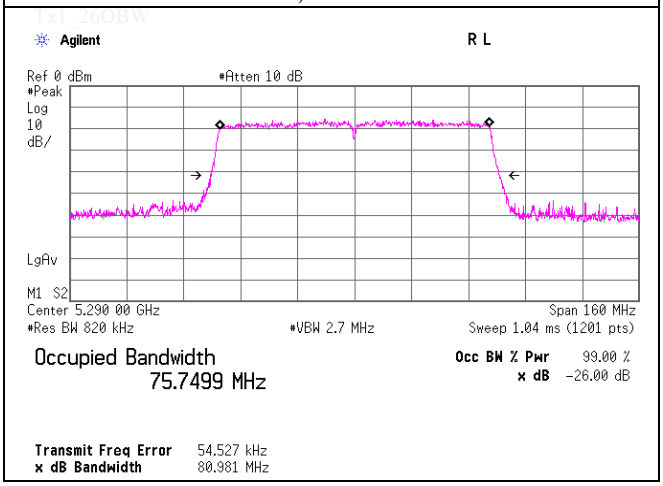
-26 dB Bandwidth

Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 22, 2019	
Temperature / Humidity	24 deg.C , 47 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE802.11ac VHT80 (SISO), PN9, worst antenna port 1, worst data mode 5(MCS)	

Freq. [MHz]	-26 dB Bandwidth [MHz]	Limit [MHz]
5290.0000	80.981	-
		-
		-

Tx, 5290 MHz



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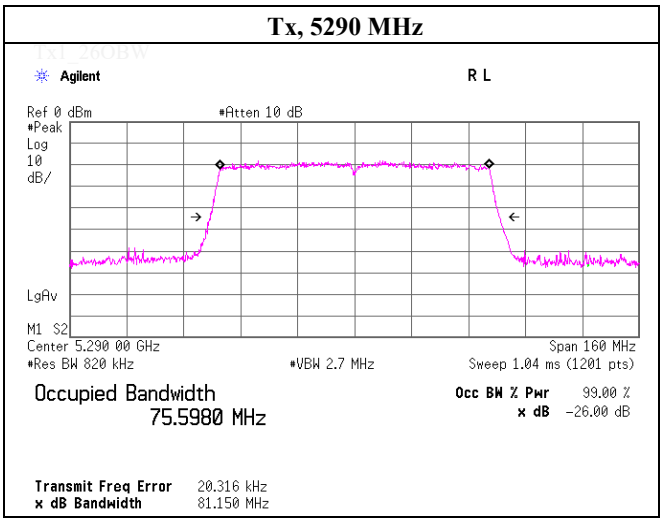
-26 dB Bandwidth

Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 26, 2019	
Temperature / Humidity	21 deg.C , 51 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE 802.11ac VHT80 (MIMO), PN9, worst data mode 5 (MCS)	

Freq. [MHz]	-26 dB Bandwidth [MHz]	Limit [MHz]
5290.0000	81.150	-
		-
		-

Tx, 5290 MHz

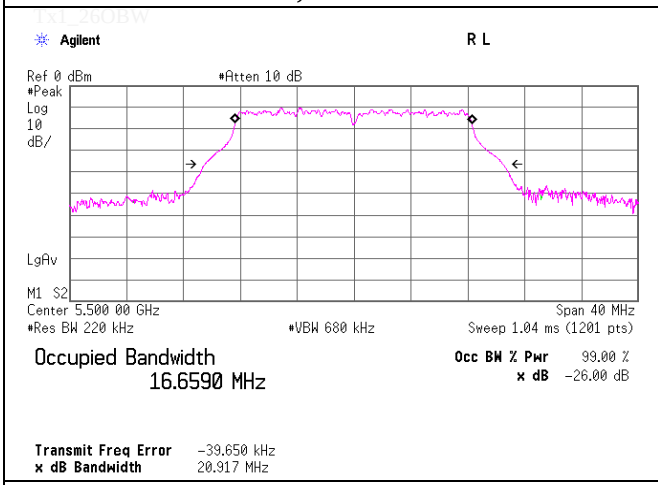


-26 dB Bandwidth

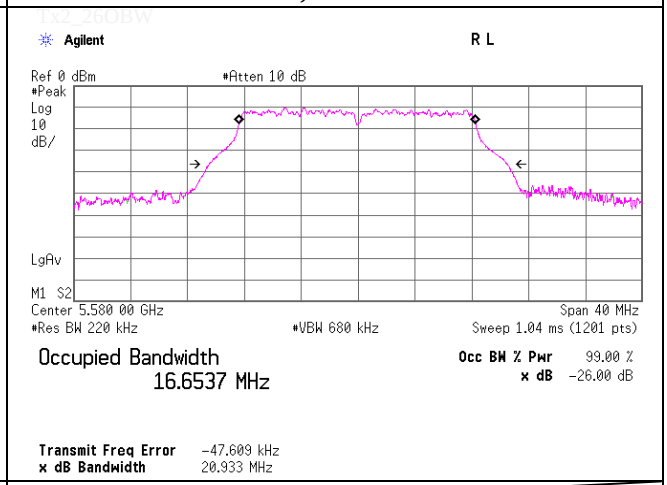
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 13, 2019	
Temperature / Humidity	24 deg.C , 57 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE802.11a, PN9, worst antenna port 0, worst data mode 48 Mbps	

Freq. [MHz]	-26 dB Bandwidth [MHz]	Limit [MHz]
5500.0000	20.917	-
5580.0000	20.933	-
5700.0000	20.911	-

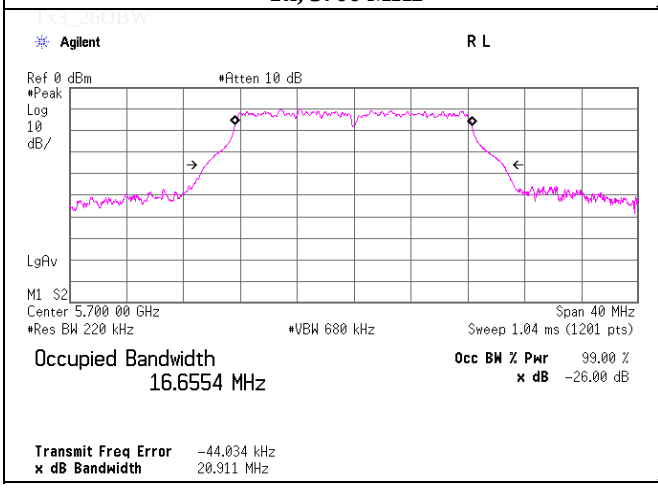
Tx, 5500 MHz



Tx, 5580 MHz



Tx, 5700 MHz

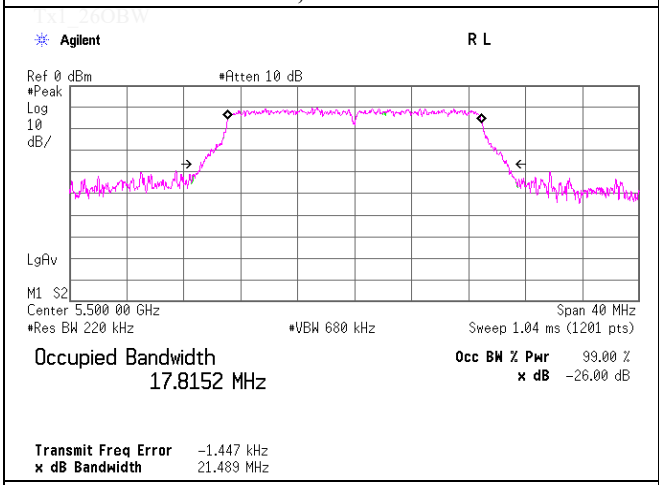


-26 dB Bandwidth

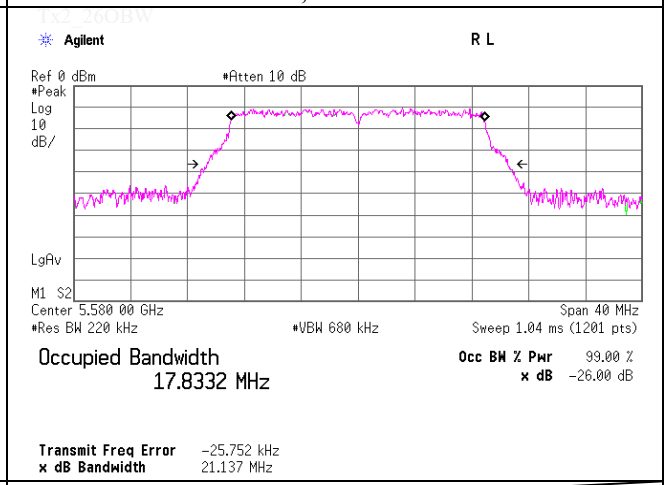
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 13, 2019	
Temperature / Humidity	24 deg.C , 57 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE802.11n HT20 (SISO), PN9, worst antenna port 0, worst data mode 6 (MCS)	

Freq. [MHz]	-26 dB Bandwidth [MHz]	Limit [MHz]
5500.0000	21.489	-
5580.0000	21.137	-
5700.0000	21.247	-

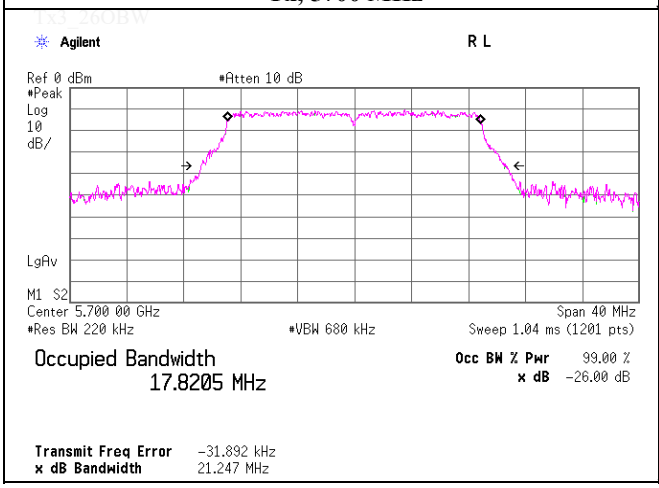
Tx, 5500 MHz



Tx, 5580 MHz



Tx, 5700 MHz

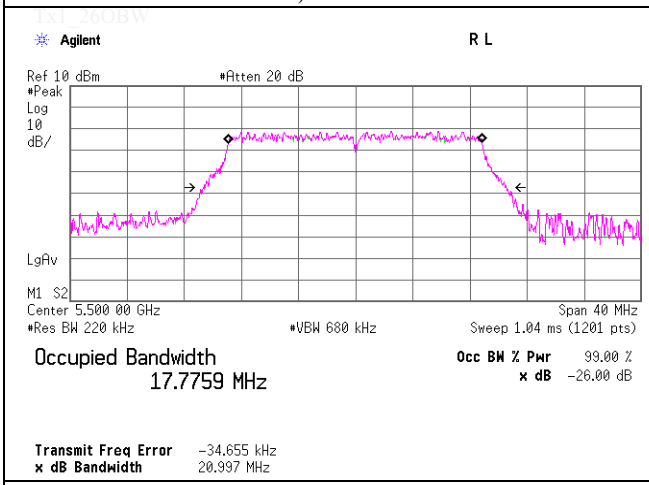


-26 dB Bandwidth

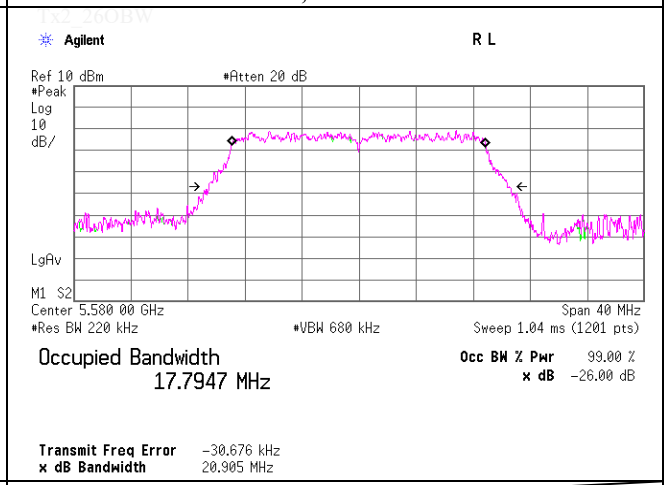
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 15, 2019	
Temperature / Humidity	24 deg.C , 35 %RH	
Engineer	Makoto Hosaka	
Mode	Tx, IEEE802.11ac VHT20 (SISO), PN9, worst antenna port 0, worst data mode 3 (MCS)	

Freq. [MHz]	-26 dB Bandwidth [MHz]	Limit [MHz]
5500.0000	20.997	-
5580.0000	20.905	-
5700.0000	21.069	-

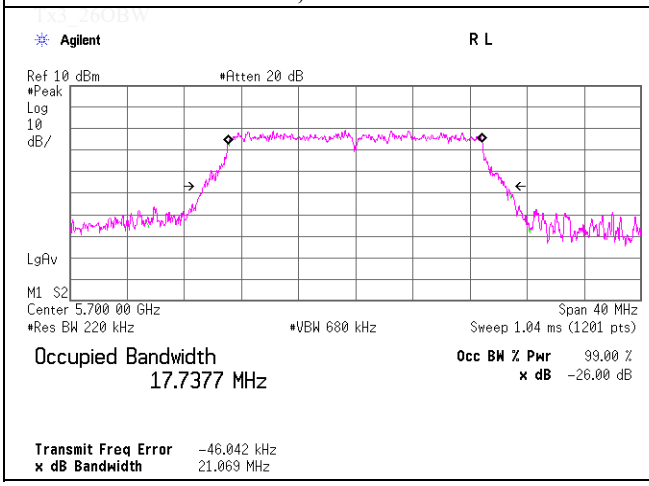
Tx, 5500 MHz



Tx, 5580 MHz



Tx, 5700 MHz



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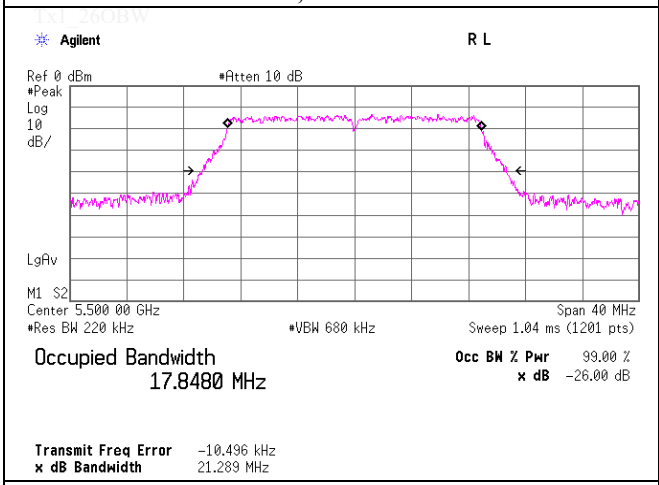
-26 dB Bandwidth

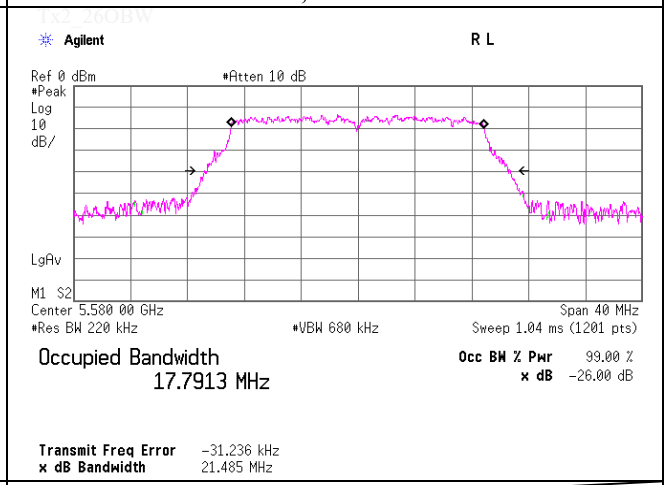
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 19, 2019	
Temperature / Humidity	21 deg.C , 41 %RH	
Engineer	Yosuke Ishikawa	
Mode	Tx, IEEE802.11n HT20 (MIMO), PN9, worst data mode 15 (MCS)	

Freq. [MHz]	-26 dB Bandwidth [MHz]	Limit [MHz]
5500.0000	21.289	-
5580.0000	21.485	-
5700.0000	21.527	-

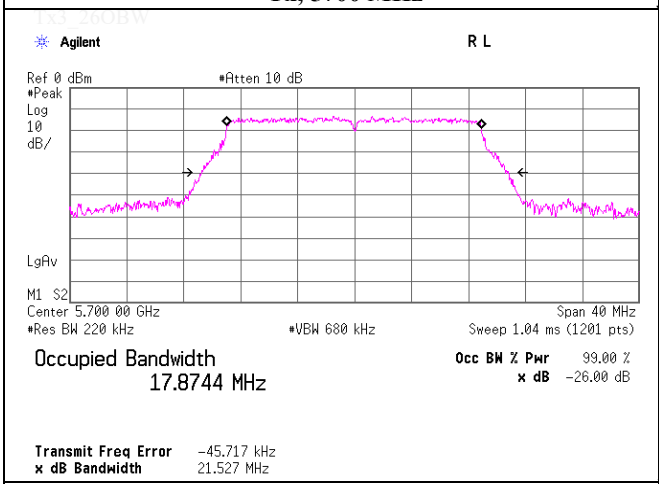
Tx, 5500 MHz



Tx, 5580 MHz



Tx, 5700 MHz

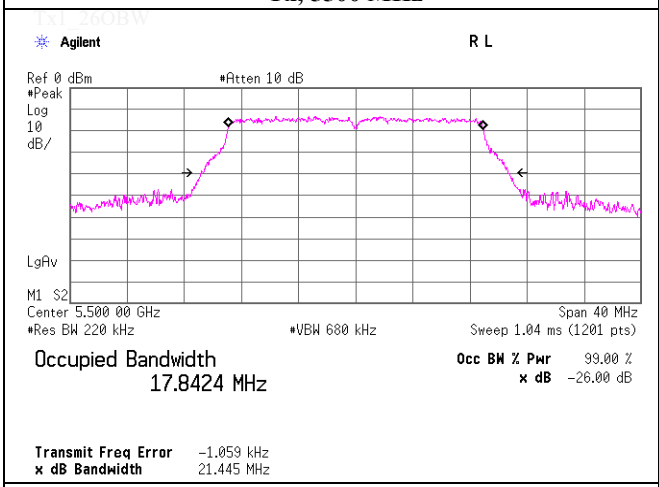


-26 dB Bandwidth

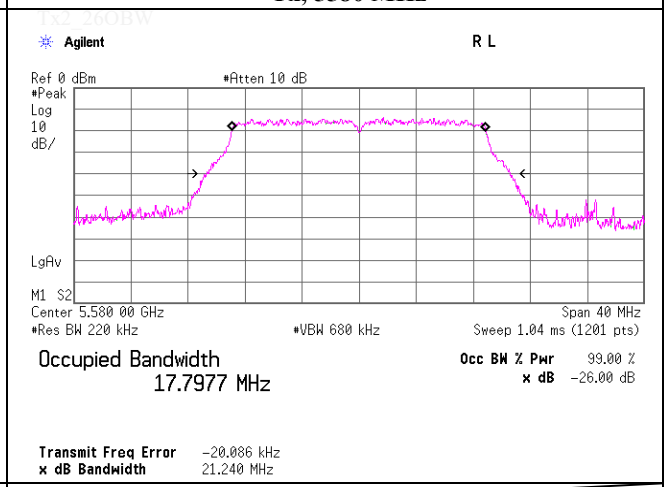
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 19, 2019	
Temperature / Humidity	21 deg.C , 41 %RH	
Engineer	Yosuke Ishikawa	
Mode	Tx, IEEE802.11ac VHT20 (MIMO), PN9, worst data mode 4 (MCS)	

Freq. [MHz]	-26 dB Bandwidth [MHz]	Limit [MHz]
5500.0000	21.445	-
5580.0000	21.240	-
5700.0000	21.325	-

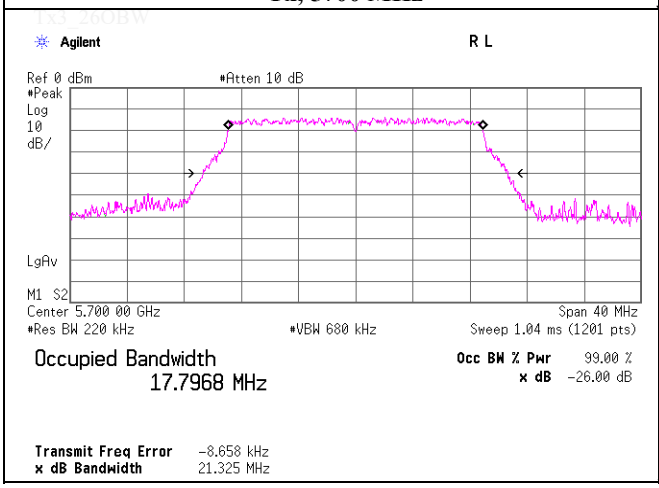
Tx, 5500 MHz



Tx, 5580 MHz



Tx, 5700 MHz



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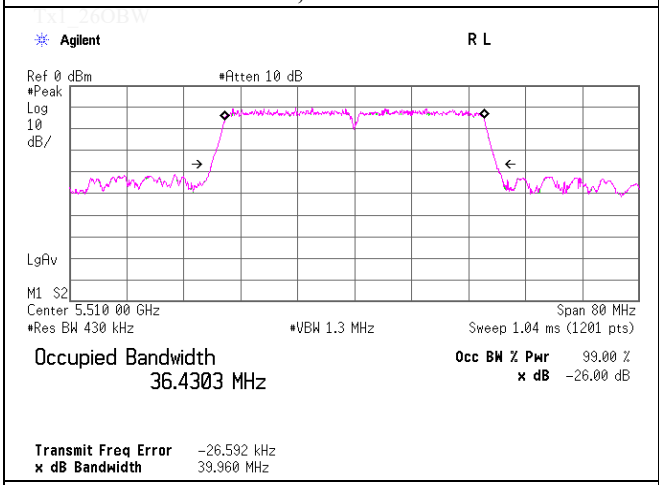
-26 dB Bandwidth

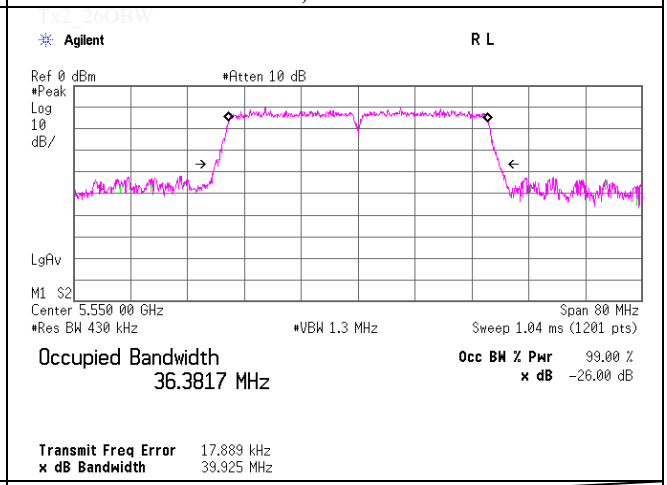
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 18, 2019	
Temperature / Humidity	22 deg.C , 54 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE802.11n HT40 (SISO), PN9, worst antenna port 0, worst data mode 3(MCS)	

Freq. [MHz]	-26 dB Bandwidth [MHz]	Limit [MHz]
5510.0000	39.960	-
5550.0000	39.925	-
5670.0000	39.870	-

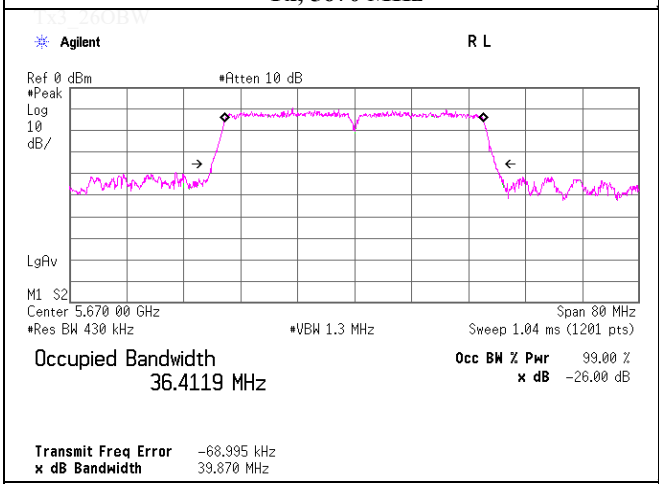
Tx, 5510 MHz



Tx, 5550 MHz



Tx, 5670 MHz

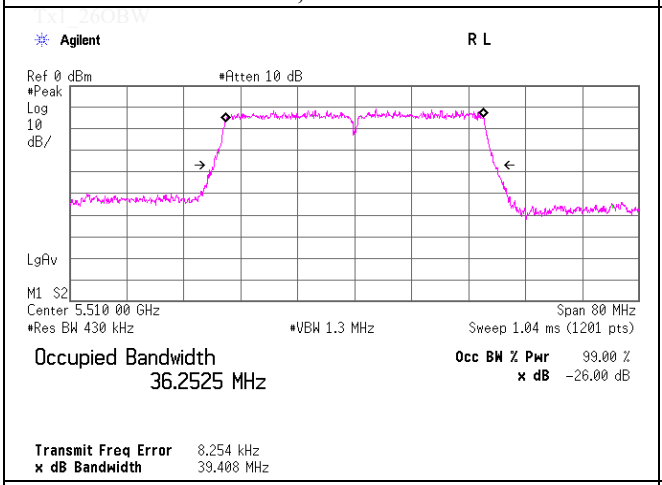


-26 dB Bandwidth

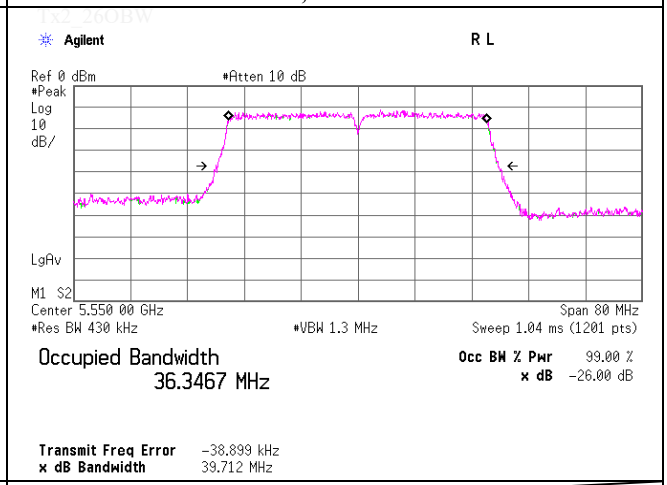
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 19, 2019	
Temperature / Humidity	21 deg.C , 41 %RH	
Engineer	Yosuke Ishikawa	
Mode	Tx, IEEE802.11ac VHT40 (SISO), PN9, worst antenna port 0, worst data mode 2(MCS)	

Freq. [MHz]	-26 dB Bandwidth [MHz]	Limit [MHz]
5510.0000	39.408	-
5550.0000	39.712	-
5670.0000	39.520	-

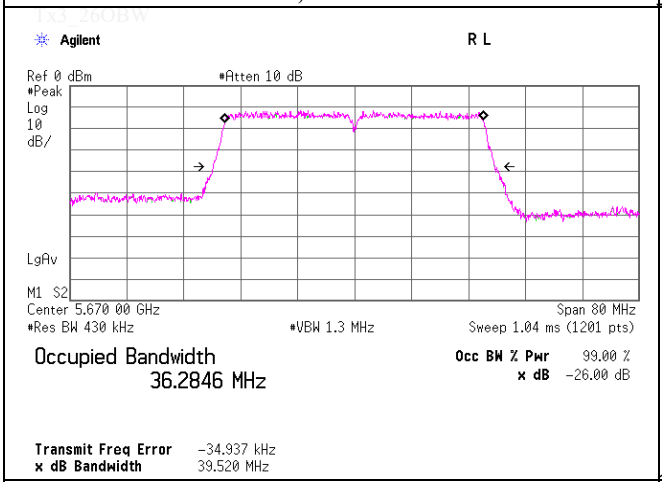
Tx, 5510 MHz



Tx, 5550 MHz



Tx, 5670 MHz

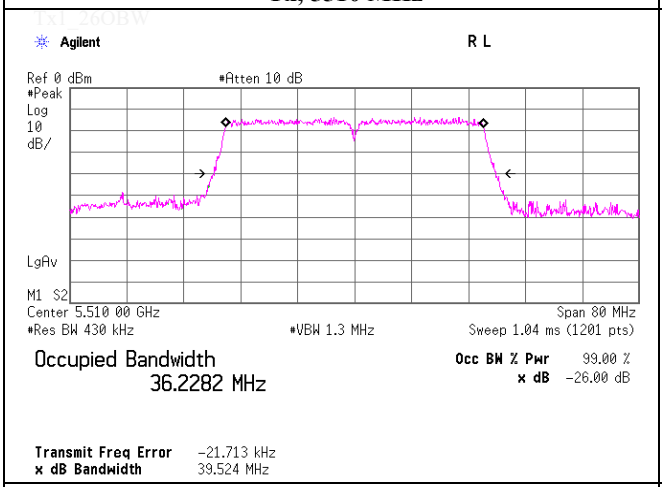


-26 dB Bandwidth

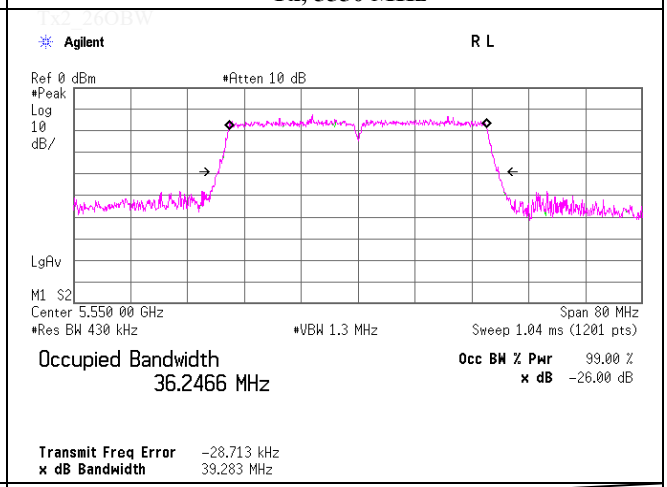
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 25, 2019	
Temperature / Humidity	20 deg.C , 59 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE 802.11n HT40 (MIMO), PN9, worst data mode 11 (MCS)	

Freq. [MHz]	-26 dB Bandwidth [MHz]	Limit [MHz]
5510.0000	39.524	-
5550.0000	39.283	-
5670.0000	39.807	-

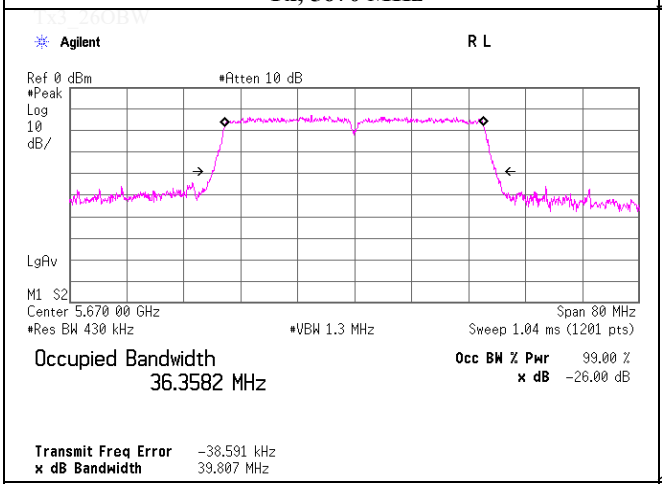
Tx, 5510 MHz



Tx, 5550 MHz



Tx, 5670 MHz

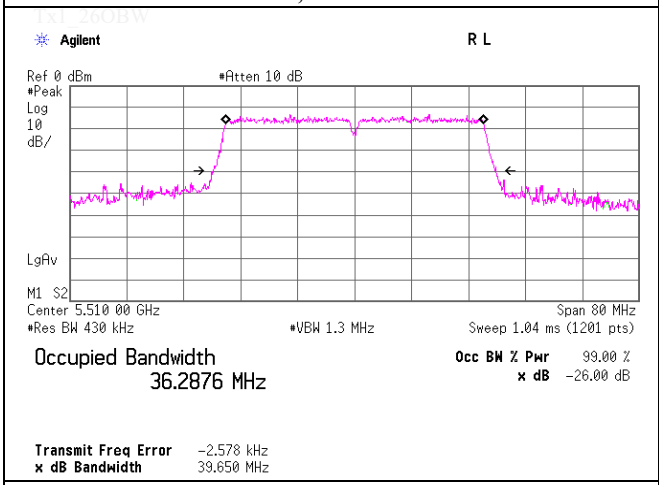


-26 dB Bandwidth

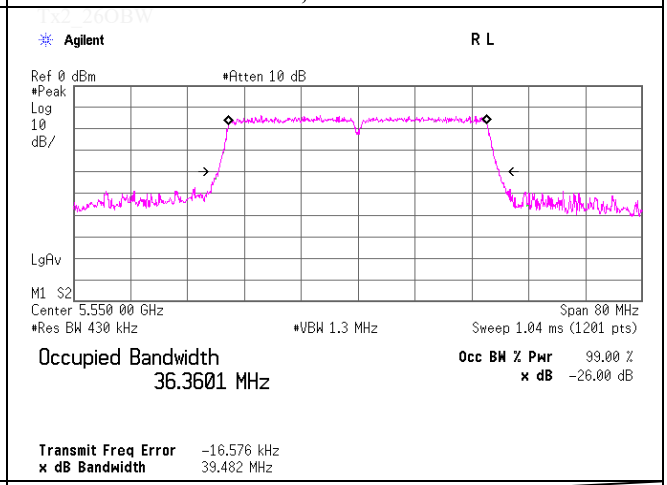
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 26, 2019	
Temperature / Humidity	21 deg.C , 51 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE 802.11ac VHT40 (MIMO), PN9, worst data mode 6 (MCS)	

Freq. [MHz]	-26 dB Bandwidth [MHz]	Limit [MHz]
5510.0000	39.650	-
5550.0000	39.482	-
5670.0000	39.637	-

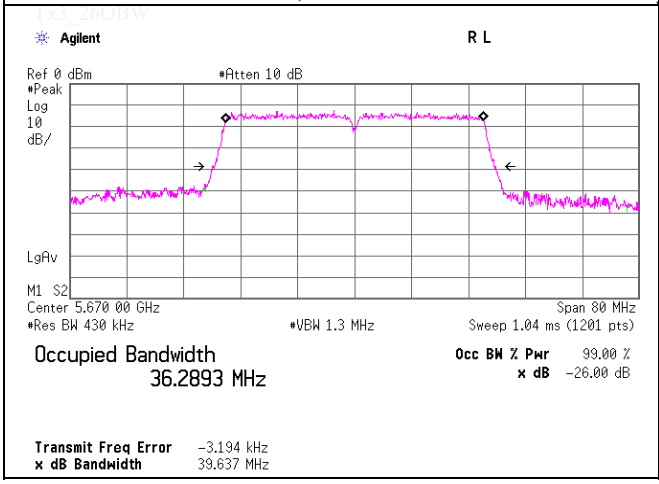
Tx, 5510 MHz



Tx, 5550 MHz



Tx, 5670 MHz



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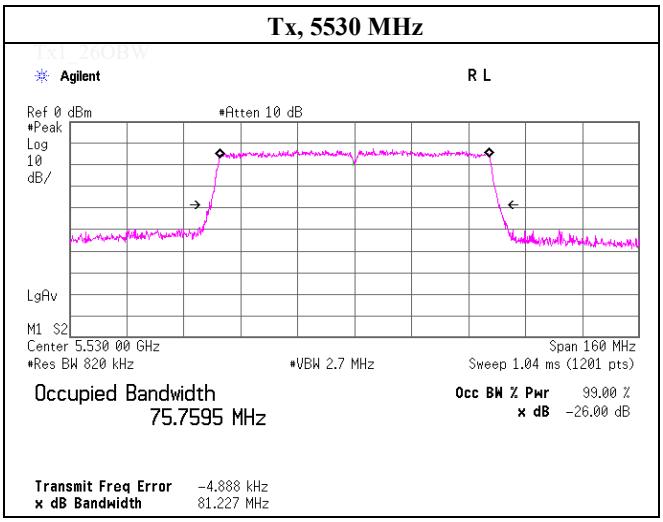
-26 dB Bandwidth

Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 22, 2019	
Temperature / Humidity	24 deg.C , 47 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE802.11ac VHT80 (SISO), PN9, worst antenna port 1, worst data mode 5(MCS)	

Freq. [MHz]	-26 dB Bandwidth [MHz]	Limit [MHz]
5530.0000	81.227	-
		-
		-

Tx, 5530 MHz

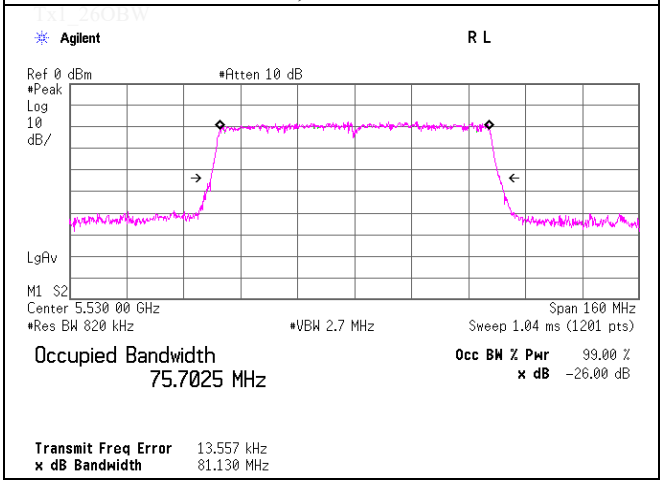


-26 dB Bandwidth

Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 26, 2019	
Temperature / Humidity	21 deg.C , 51 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE 802.11ac VHT80 (MIMO), PN9, worst data mode 6 (MCS)	

Freq. [MHz]	-26 dB Bandwidth [MHz]	Limit [MHz]
5530.0000	81.130	-
		-
		-

Tx, 5530 MHz



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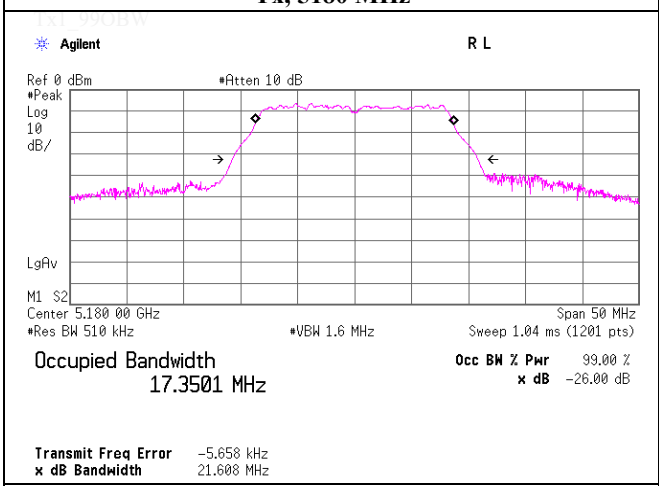
99 % Occupied Bandwidth

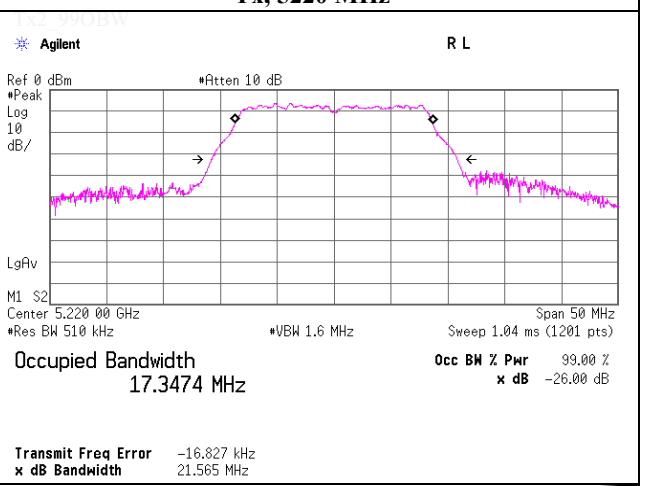
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 13, 2019	
Temperature / Humidity	24 deg.C , 57 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE802.11a, PN9, worst antenna port 0, worst data mode 48 Mbps	

Freq. [MHz]	99 % Occupied Bandwidth [kHz]
5180.0000	17350.1
5220.0000	17347.4
5240.0000	17346.6

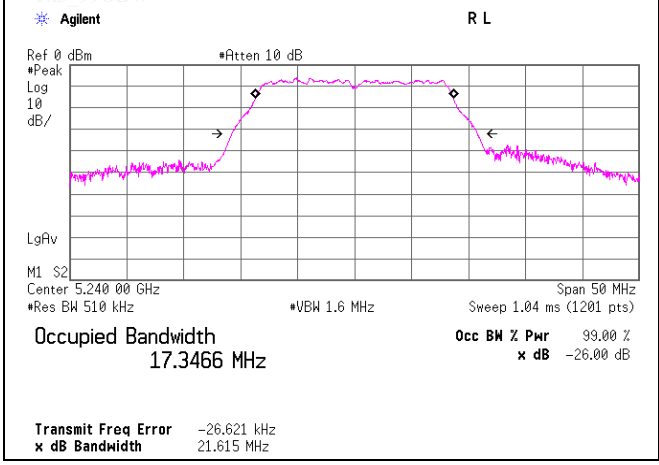
Tx, 5180 MHz



Tx, 5220 MHz



Tx, 5240 MHz



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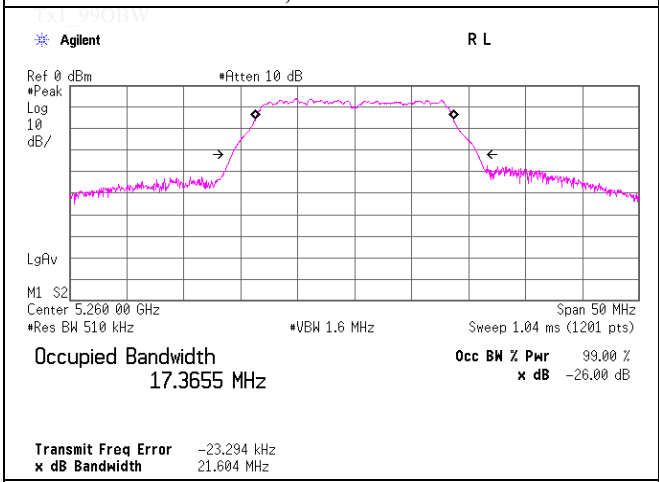
99 % Occupied Bandwidth

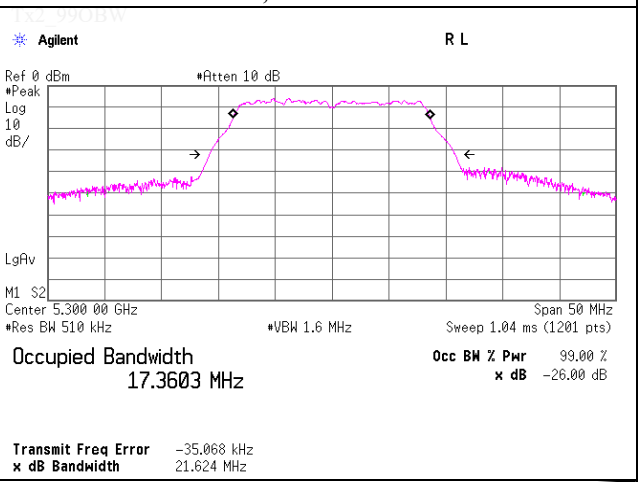
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 13, 2019	
Temperature / Humidity	24 deg.C , 57 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE802.11a, PN9, worst antenna port 0, worst data mode 48 Mbps	

Freq. [MHz]	99 % Occupied Bandwidth [kHz]
5260.0000	17365.5
5300.0000	17360.3
5320.0000	17365.2

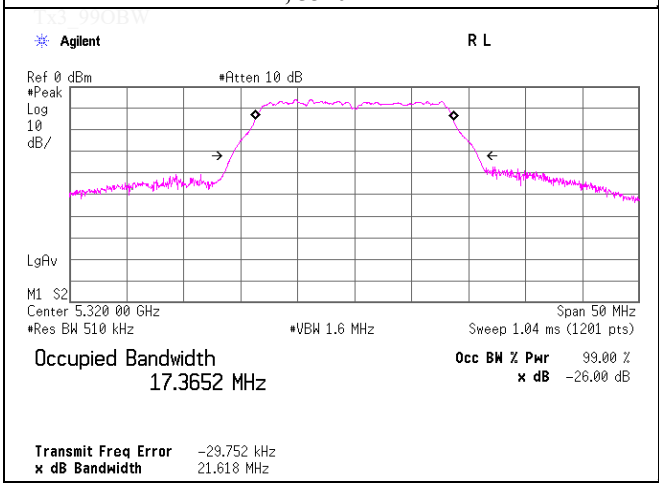
Tx, 5260 MHz



Tx, 5300 MHz



Tx, 5320 MHz



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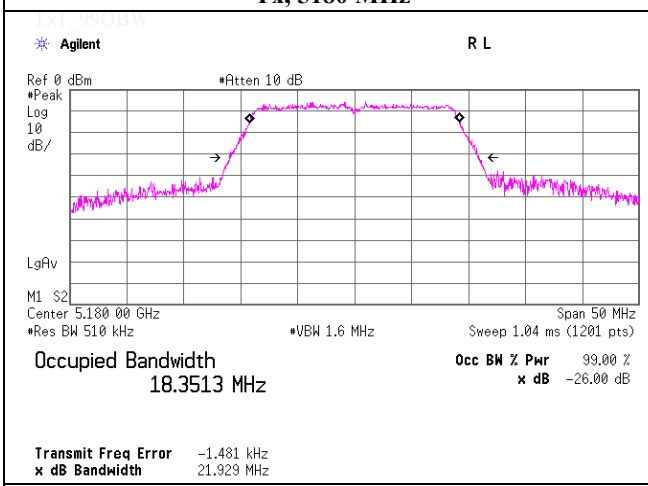
99 % Occupied Bandwidth

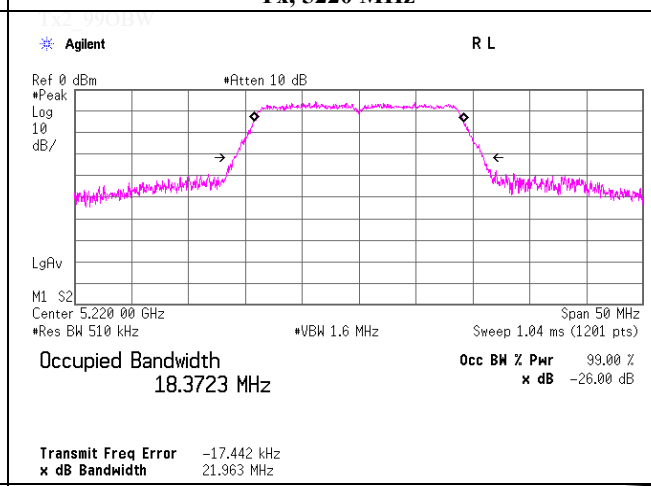
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 13, 2019	
Temperature / Humidity	24 deg.C , 57 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE802.11n HT20 (SISO), PN9, worst antenna port 0, worst data mode 6 (MCS)	

Freq. [MHz]	99 % Occupied Bandwidth [kHz]
5180.0000	18351.3
5220.0000	18372.3
5240.0000	18388.4

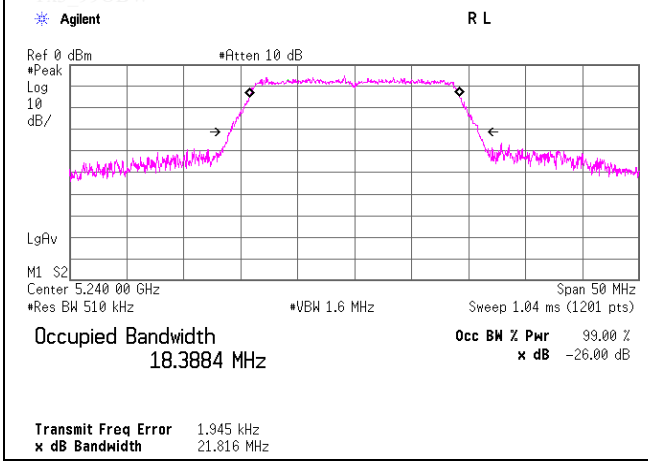
Tx, 5180 MHz



Tx, 5220 MHz



Tx, 5240 MHz



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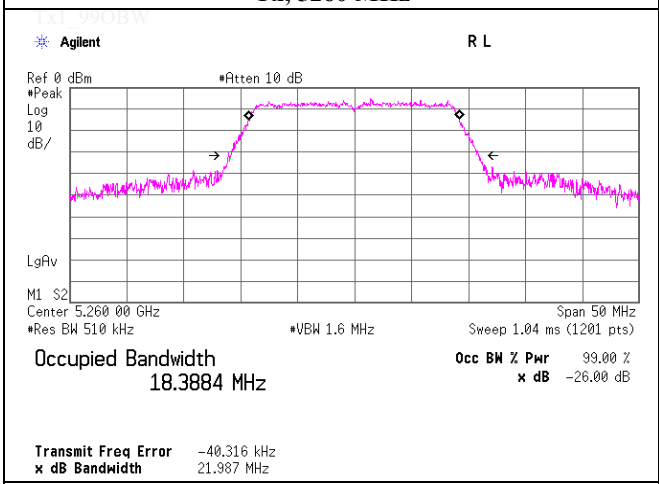
99 % Occupied Bandwidth

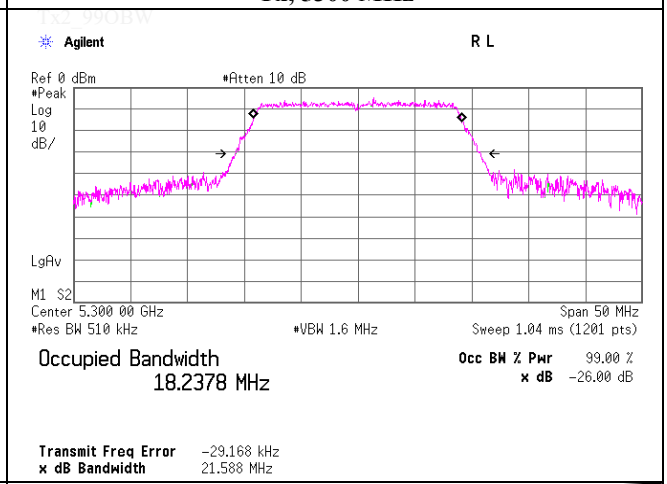
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 13, 2019	
Temperature / Humidity	24 deg.C , 57 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE802.11n HT20 (SISO), PN9, worst antenna port 0, worst data mode 6 (MCS)	

Freq. [MHz]	99 % Occupied Bandwidth [kHz]
5260.0000	18388.4
5300.0000	18237.8
5320.0000	18379.9

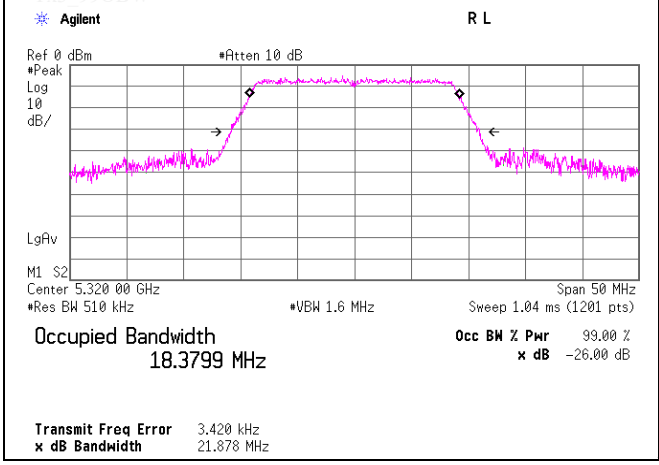
Tx, 5260 MHz



Tx, 5300 MHz



Tx, 5320 MHz



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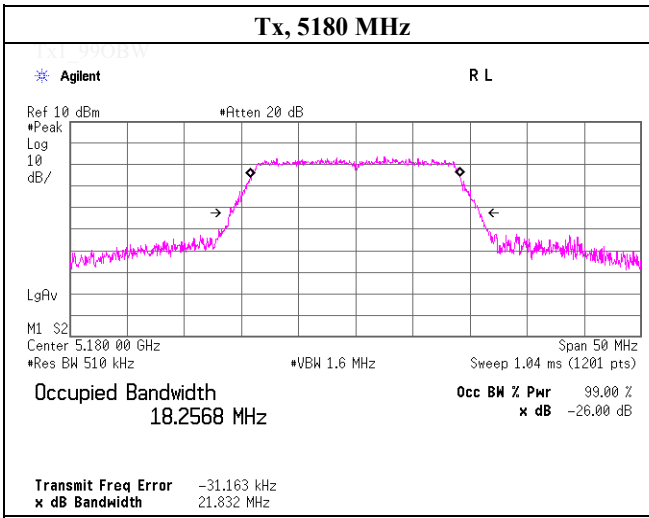
99 % Occupied Bandwidth

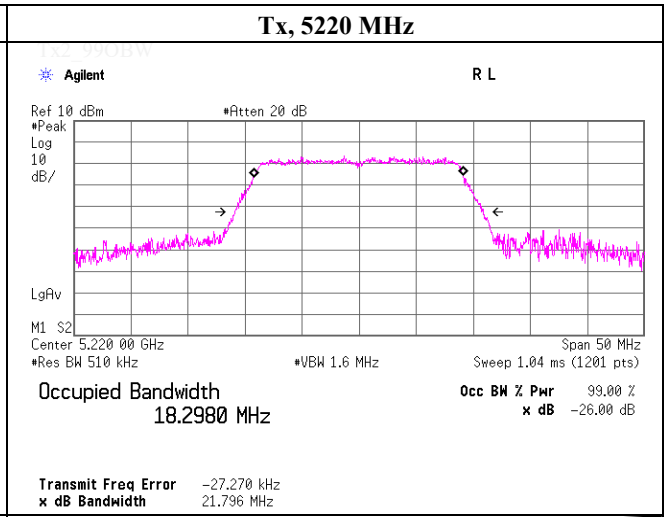
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 15, 2019	
Temperature / Humidity	24 deg.C , 35 %RH	
Engineer	Makoto Hosaka	
Mode	Tx, IEEE802.11ac VHT20 (SISO), PN9, worst antenna port 0, worst data mode 3 (MCS)	

Freq. [MHz]	99 % Occupied Bandwidth [kHz]
5180.0000	18256.8
5220.0000	18298.0
5240.0000	18340.6

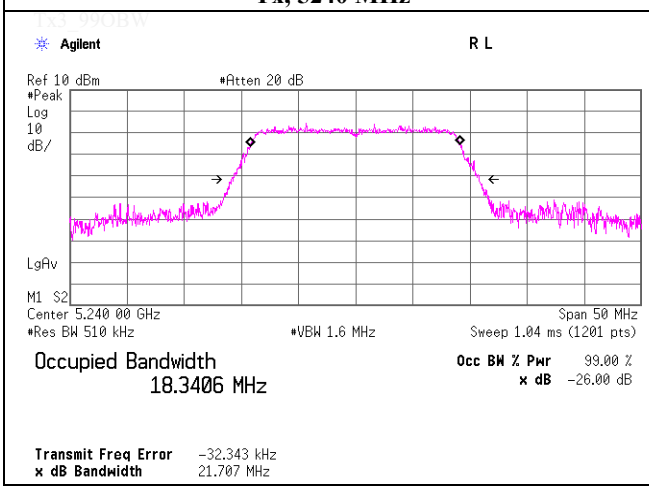
Tx, 5180 MHz



Tx, 5220 MHz



Tx, 5240 MHz



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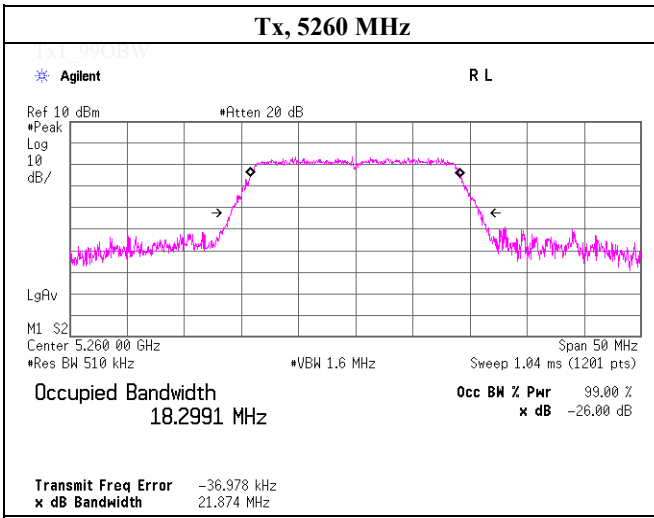
99 % Occupied Bandwidth

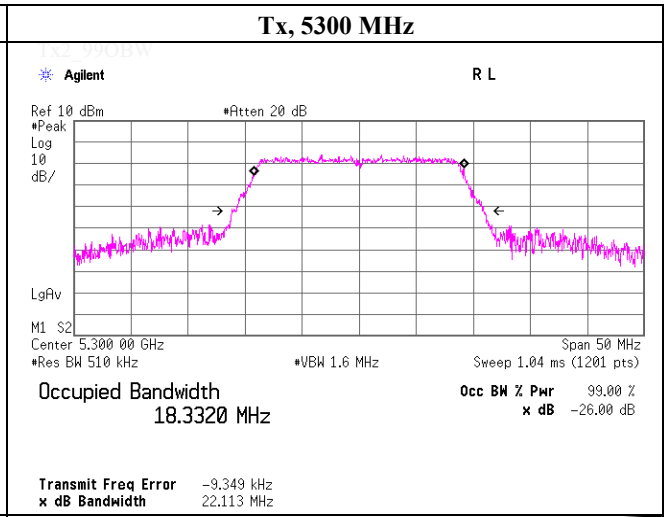
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 15, 2019	
Temperature / Humidity	24 deg.C , 35 %RH	
Engineer	Makoto Hosaka	
Mode	Tx, IEEE802.11ac VHT20 (SISO), PN9, worst antenna port 0, worst data mode 3 (MCS)	

Freq. [MHz]	99 % Occupied Bandwidth [kHz]
5260.0000	18299.1
5300.0000	18332.0
5320.0000	18268.3

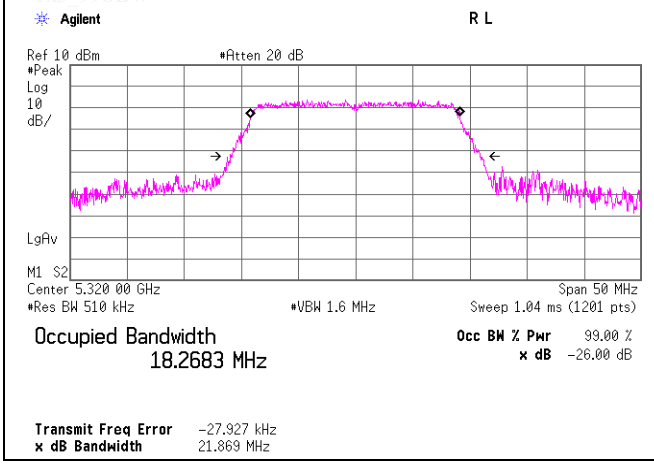
Tx, 5260 MHz



Tx, 5300 MHz



Tx, 5320 MHz



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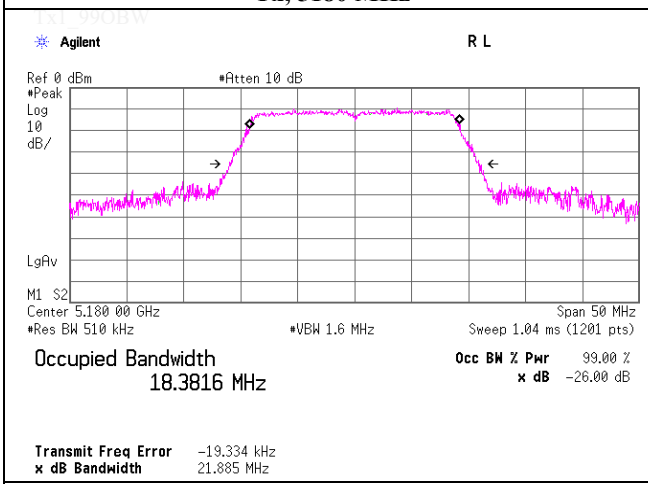
99 % Occupied Bandwidth

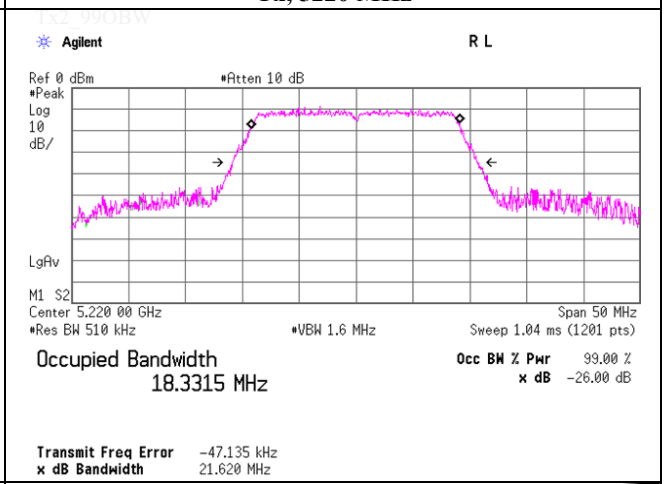
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 19, 2019	
Temperature / Humidity	21 deg.C , 41 %RH	
Engineer	Yosuke Ishikawa	
Mode	Tx, IEEE802.11n HT20 (MIMO), PN9, worst data mode 15 (MCS)	

Freq. [MHz]	99 % Occupied Bandwidth [kHz]
5180.0000	18381.6
5220.0000	18331.5
5240.0000	18336.0

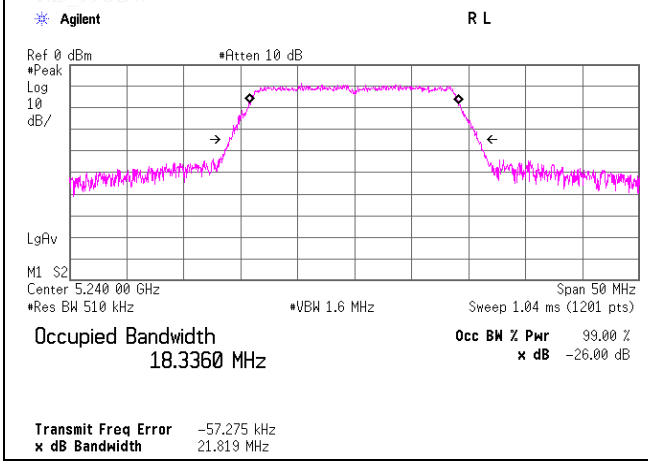
Tx, 5180 MHz



Tx, 5220 MHz



Tx, 5240 MHz



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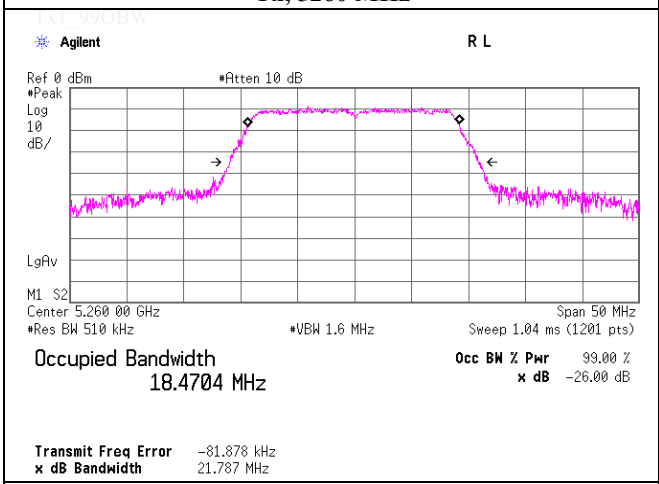
99 % Occupied Bandwidth

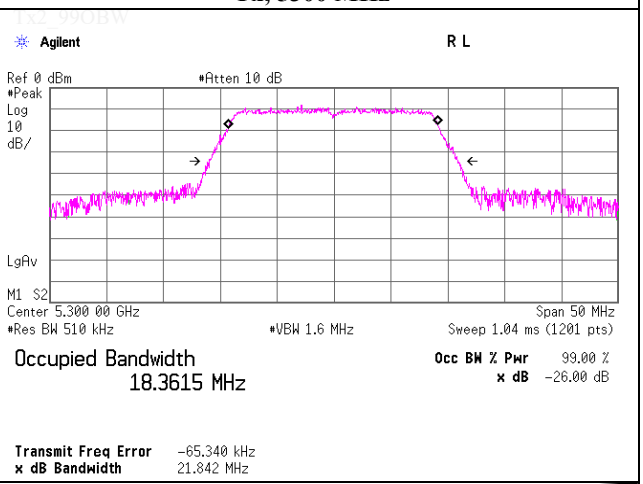
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 19, 2019	
Temperature / Humidity	21 deg.C , 41 %RH	
Engineer	Yosuke Ishikawa	
Mode	Tx, IEEE802.11n HT20 (MIMO), PN9, worst data mode 15 (MCS)	

Freq. [MHz]	99 % Occupied Bandwidth [kHz]
5260.0000	18470.4
5300.0000	18361.5
5320.0000	18391.1

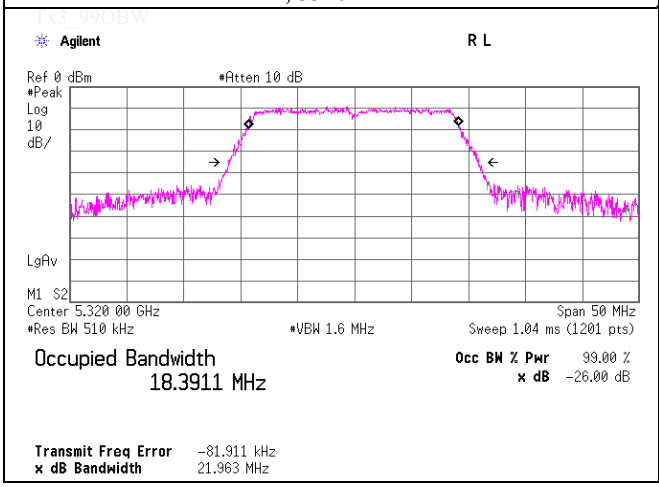
Tx, 5260 MHz



Tx, 5300 MHz



Tx, 5320 MHz



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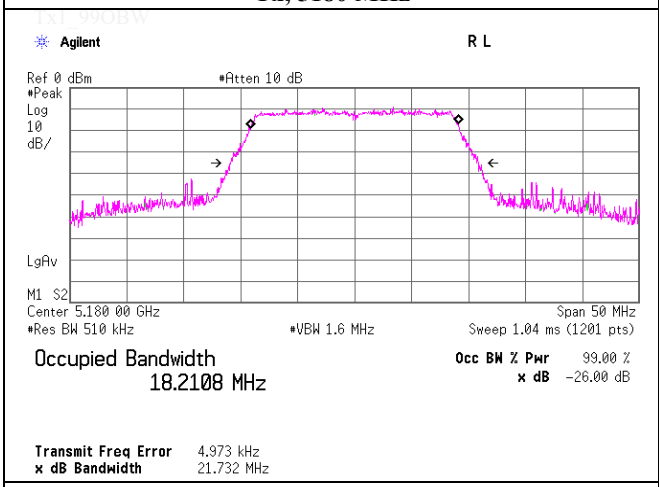
99 % Occupied Bandwidth

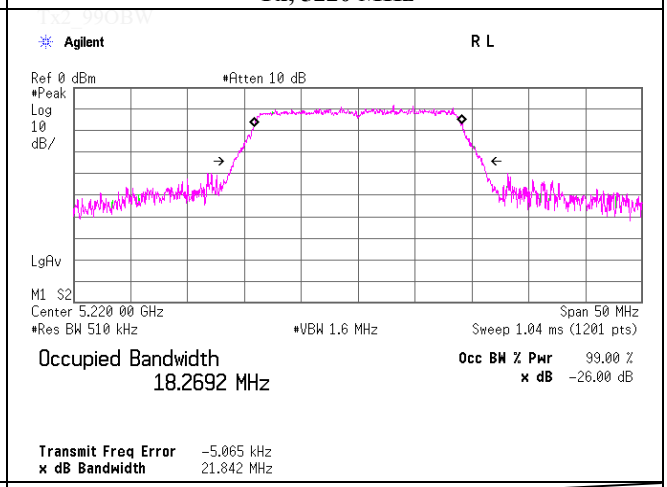
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 19, 2019	
Temperature / Humidity	21 deg.C , 41 %RH	
Engineer	Yosuke Ishikawa	
Mode	Tx, IEEE802.11ac VHT20 (MIMO), PN9, worst data mode 4 (MCS)	

Freq. [MHz]	99 % Occupied Bandwidth [kHz]
5180.0000	18210.8
5220.0000	18269.2
5240.0000	18256.0

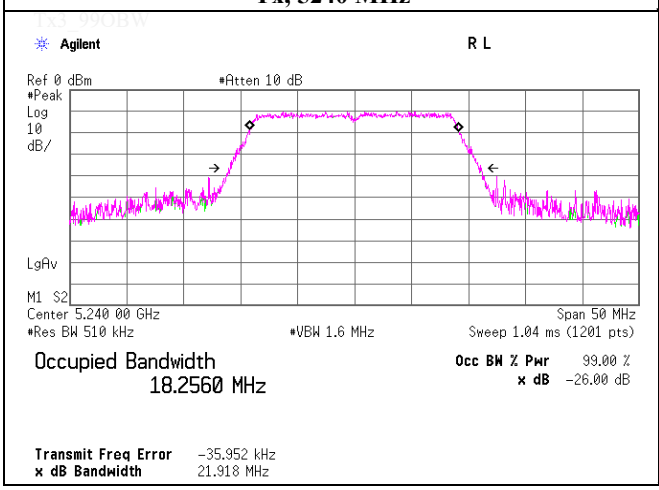
Tx, 5180 MHz



Tx, 5220 MHz



Tx, 5240 MHz



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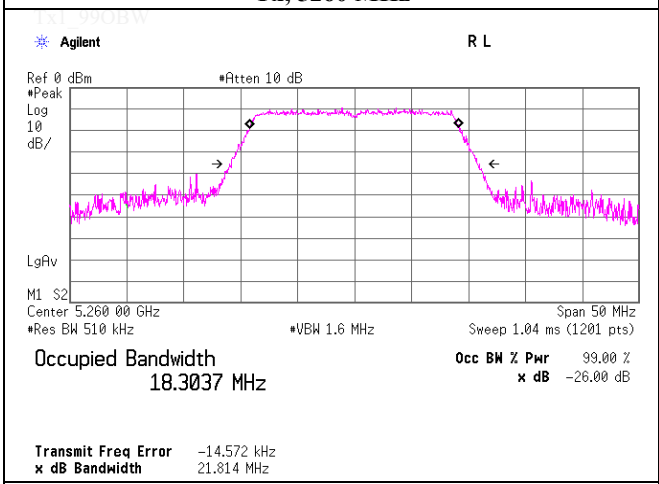
99 % Occupied Bandwidth

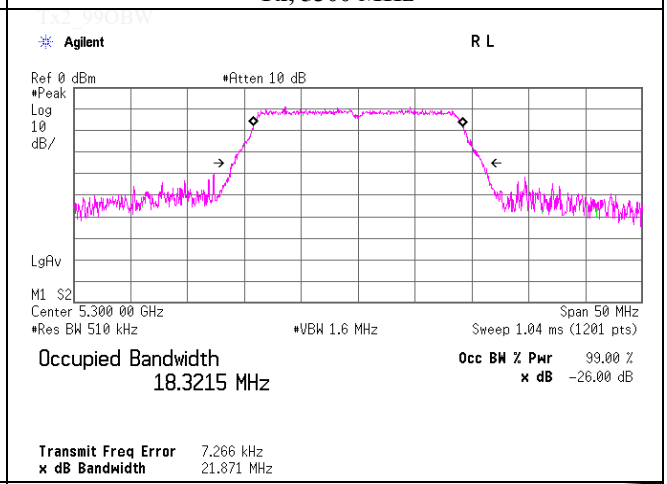
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 19, 2019	
Temperature / Humidity	21 deg.C , 41 %RH	
Engineer	Yosuke Ishikawa	
Mode	Tx, IEEE802.11ac VHT20 (MIMO), PN9, worst data mode 4 (MCS)	

Freq. [MHz]	99 % Occupied Bandwidth [kHz]
5260.0000	18303.7
5300.0000	18321.5
5320.0000	18275.7

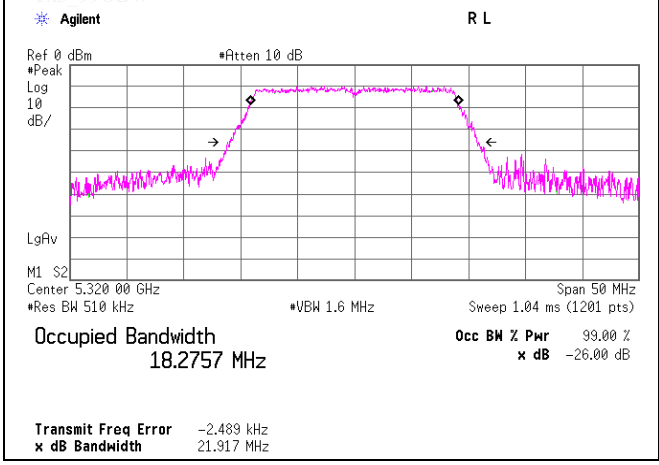
Tx, 5260 MHz



Tx, 5300 MHz



Tx, 5320 MHz



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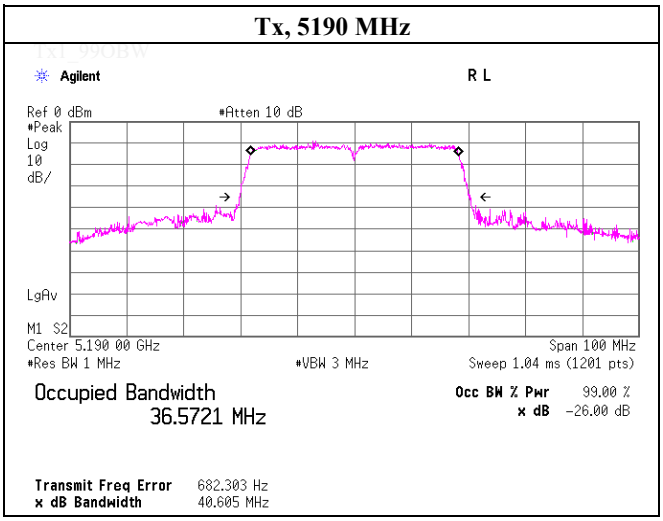
99 % Occupied Bandwidth

Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 18, 2019	
Temperature / Humidity	22 deg.C , 54 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE802.11n HT40 (SISO), PN9, worst antenna port 1, worst data mode 5 (MCS)	

Freq. [MHz]	99 % Occupied Bandwidth [kHz]
5190.0000	36572.1

Tx, 5190 MHz

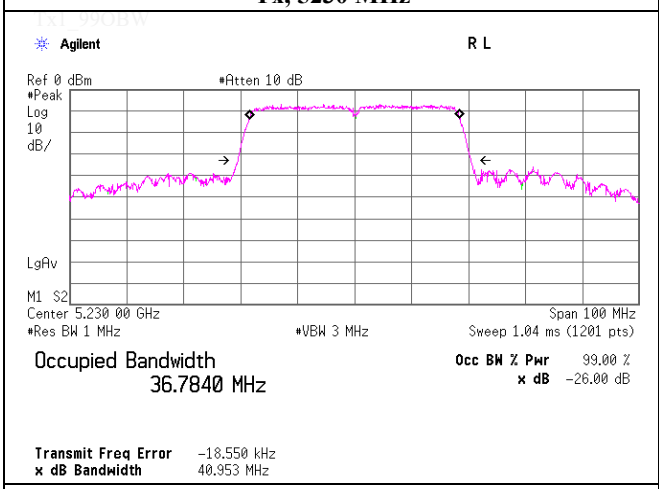


99 % Occupied Bandwidth

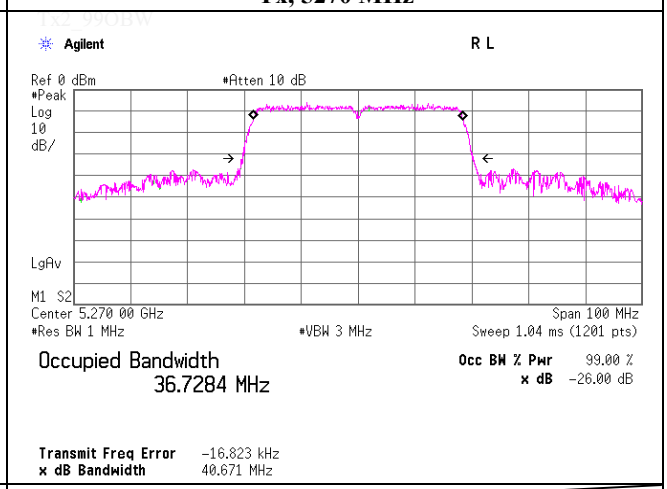
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 18, 2019	
Temperature / Humidity	22 deg.C , 54 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE802.11n HT40 (SISO), PN9, worst antenna port 0, worst data mode 3 (MCS)	

Freq. [MHz]	99 % Occupied Bandwidth [kHz]
5230.0000	36784.0
5270.0000	36728.4
5310.0000	36722.3

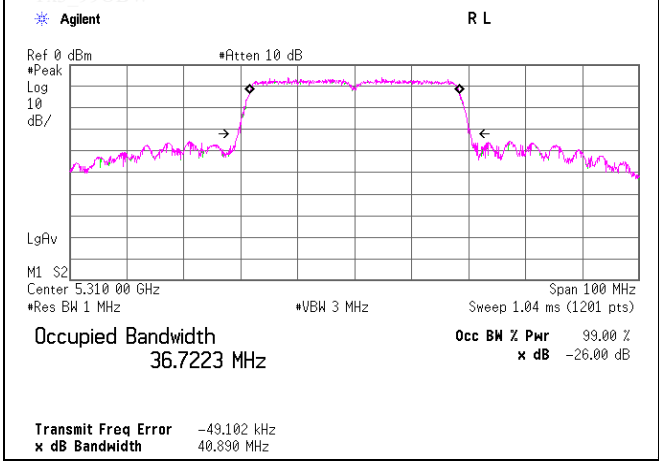
Tx, 5230 MHz



Tx, 5270 MHz



Tx, 5310 MHz



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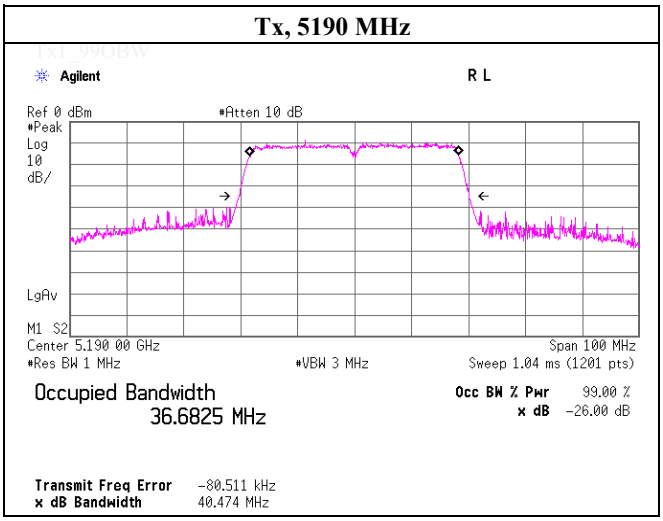
99 % Occupied Bandwidth

Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 19, 2019	
Temperature / Humidity	21 deg.C , 41 %RH	
Engineer	Yosuke Ishikawa	
Mode	Tx, IEEE802.11ac VHT40 (SISO), PN9, worst antenna port 1, worst data mode 4(MCS)	

Freq. [MHz]	99 % Occupied Bandwidth [kHz]
5190.0000	36682.5

Tx, 5190 MHz

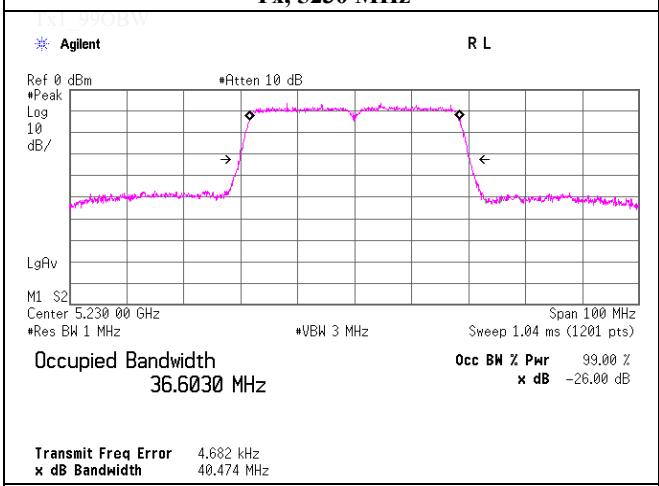


99 % Occupied Bandwidth

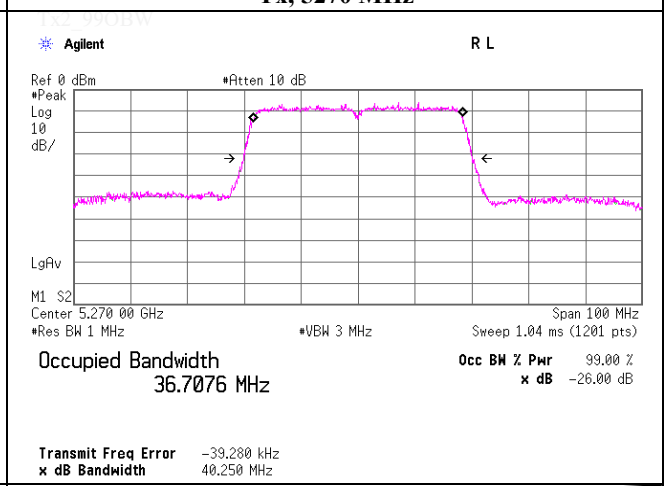
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 19, 2019	
Temperature / Humidity	21 deg.C , 41 %RH	
Engineer	Yosuke Ishikawa	
Mode	Tx, IEEE802.11ac VHT40 (SISO), PN9, worst antenna port 0, worst data mode 2(MCS)	

Freq. [MHz]	99 % Occupied Bandwidth [kHz]
5230.0000	36603.0
5270.0000	36707.6
5310.0000	36530.1

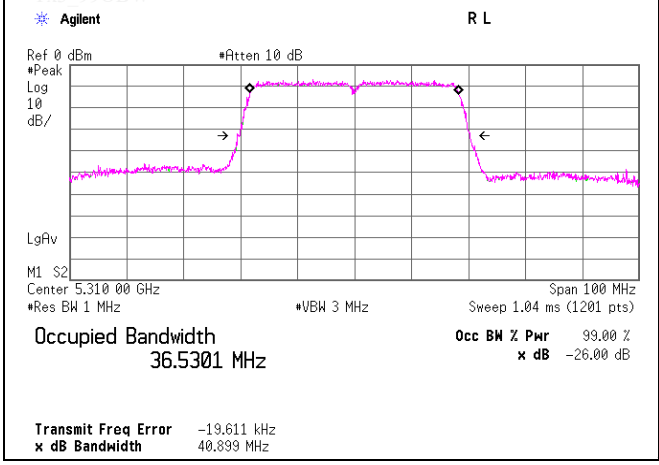
Tx, 5230 MHz



Tx, 5270 MHz



Tx, 5310 MHz



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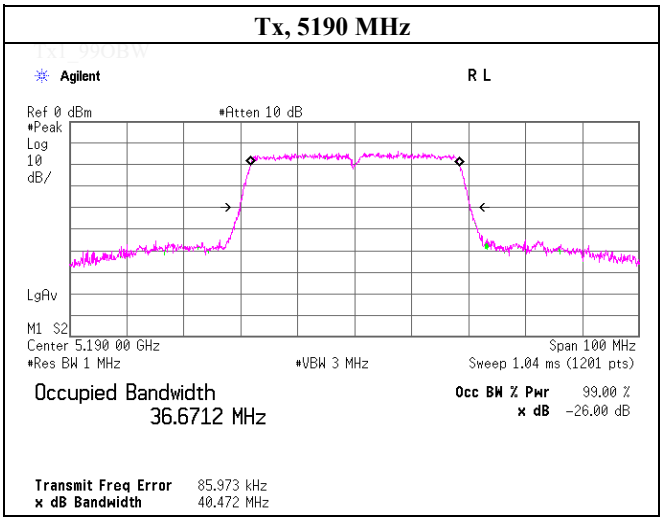
99 % Occupied Bandwidth

Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 25, 2019	
Temperature / Humidity	20 deg.C , 59 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE 802.11n HT40 (MIMO), PN9, worst data mode 15 (MCS)	

Freq. [MHz]	99 % Occupied Bandwidth [kHz]
5190.0000	36671.2

Tx, 5190 MHz

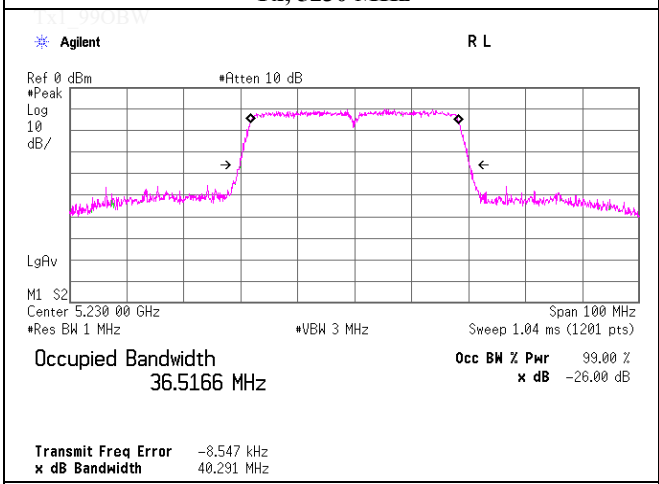


99 % Occupied Bandwidth

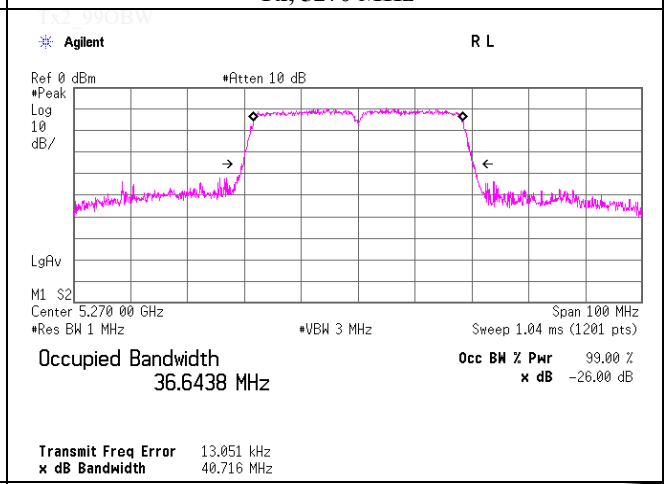
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 25, 2019	
Temperature / Humidity	20 deg.C , 59 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE 802.11n HT40 (MIMO), PN9, worst data mode 11 (MCS)	

Freq. [MHz]	99 % Occupied Bandwidth [kHz]
5230.0000	36516.6
5270.0000	36643.8
5310.0000	36584.5

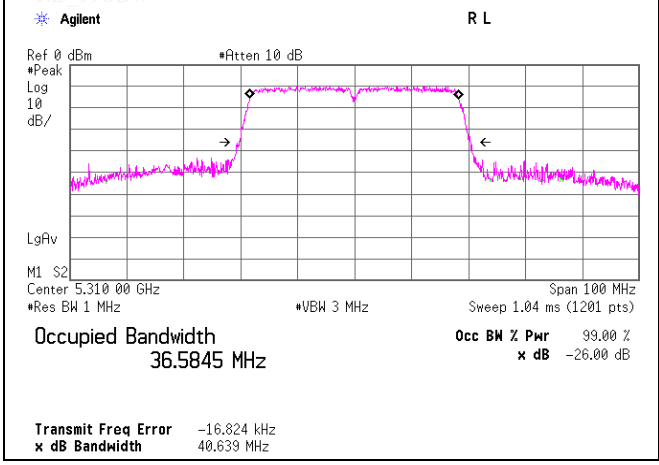
Tx, 5230 MHz



Tx, 5270 MHz



Tx, 5310 MHz



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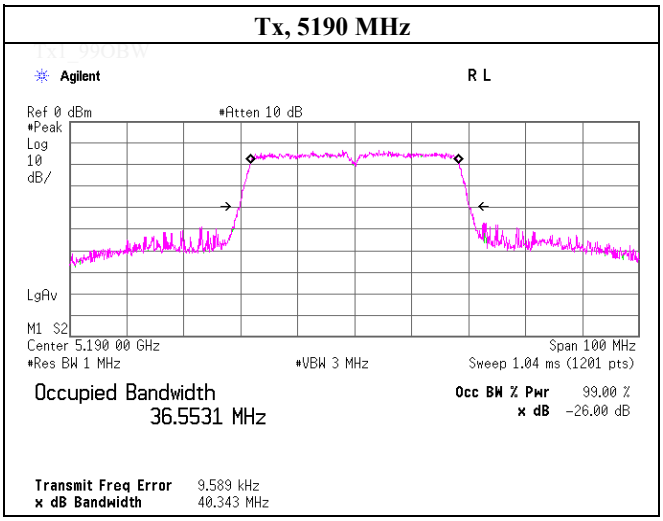
99 % Occupied Bandwidth

Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 25, 2019	
Temperature / Humidity	20 deg.C , 59 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE 802.11ac VHT40 (MIMO), PN9, worst data mode 4 (MCS)	

Freq. [MHz]	99 % Occupied Bandwidth [kHz]
5190.0000	36553.1

Tx, 5190 MHz

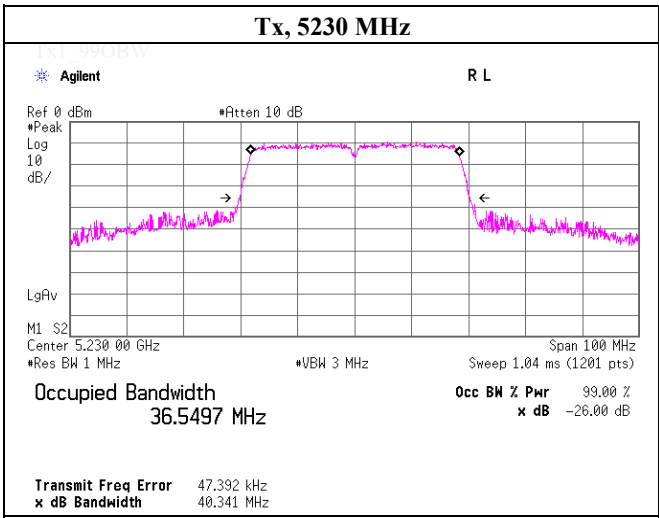


99 % Occupied Bandwidth

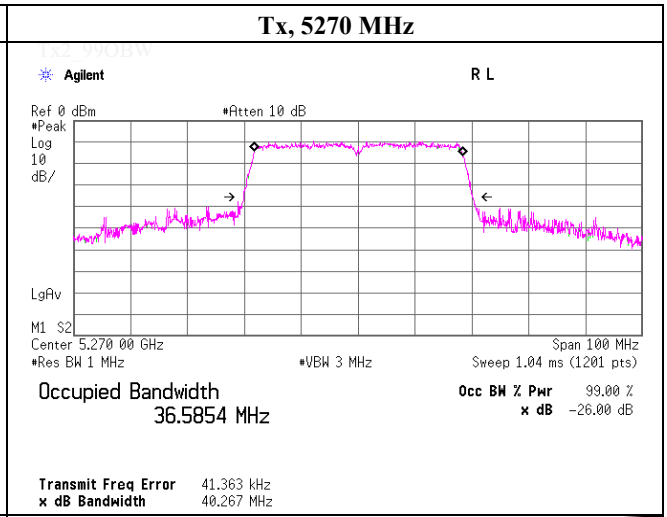
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 26, 2019	
Temperature / Humidity	21 deg.C , 51 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE 802.11ac VHT40 (MIMO), PN9, worst data mode 6 (MCS)	

Freq. [MHz]	99 % Occupied Bandwidth [kHz]
5230.0000	36549.7
5270.0000	36585.4
5310.0000	36660.8

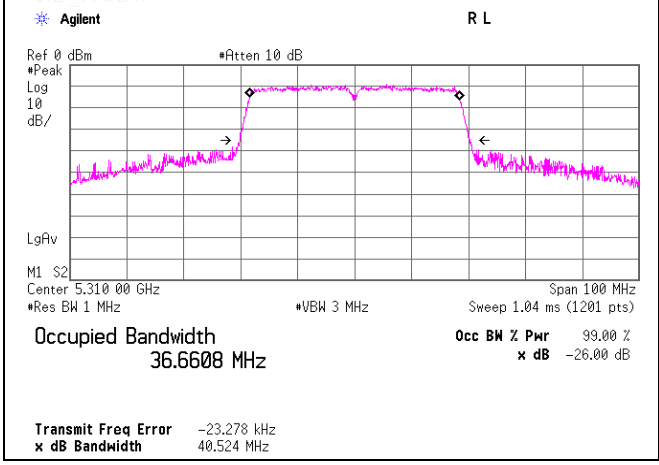
Tx, 5230 MHz



Tx, 5270 MHz



Tx, 5310 MHz



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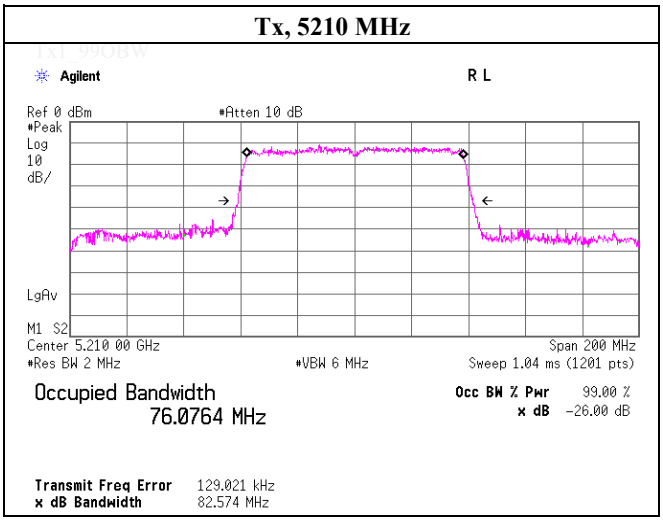
99 % Occupied Bandwidth

Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 22, 2019	
Temperature / Humidity	24 deg.C , 47 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE802.11ac VHT80 (SISO), PN9, worst antenna port 1, worst data mode 5(MCS)	

Freq. [MHz]	99 % Occupied Bandwidth [kHz]
5210.0000	76076.4

Tx, 5210 MHz

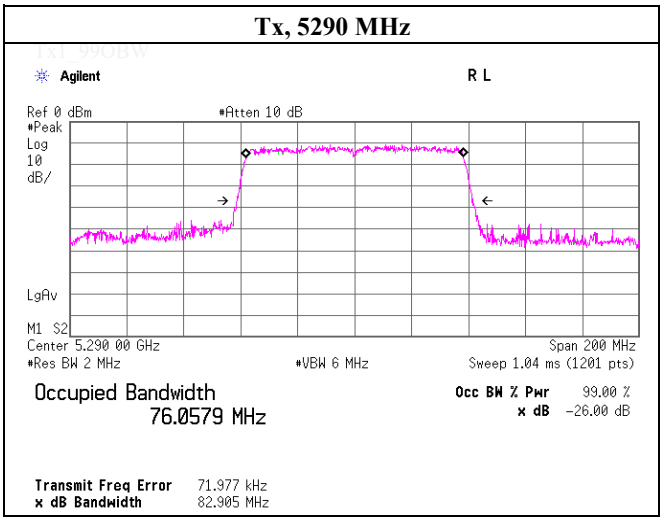


99 % Occupied Bandwidth

Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 22, 2019	
Temperature / Humidity	24 deg.C , 47 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE802.11ac VHT80 (SISO), PN9, worst antenna port 1, worst data mode 5(MCS)	

Freq. [MHz]	99 % Occupied Bandwidth [kHz]
5290.0000	76057.9

Tx, 5290 MHz

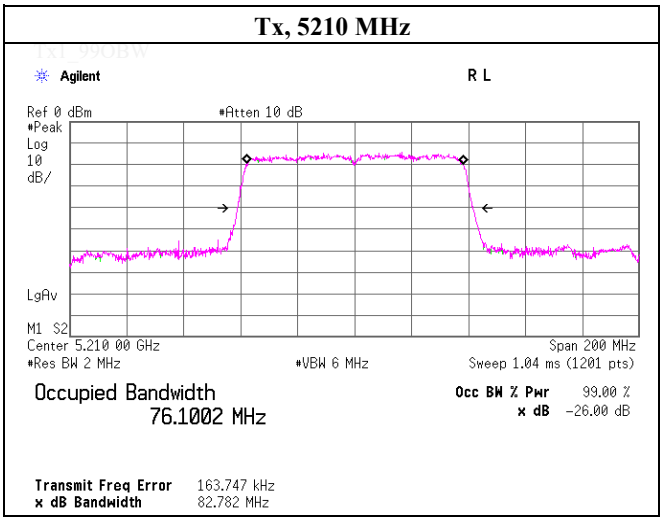


99 % Occupied Bandwidth

Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 26, 2019	
Temperature / Humidity	21 deg.C , 51 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE 802.11ac VHT80 (MIMO), PN9, worst data mode 5 (MCS)	

Freq. [MHz]	99 % Occupied Bandwidth [kHz]
5210.0000	76100.2

Tx, 5210 MHz

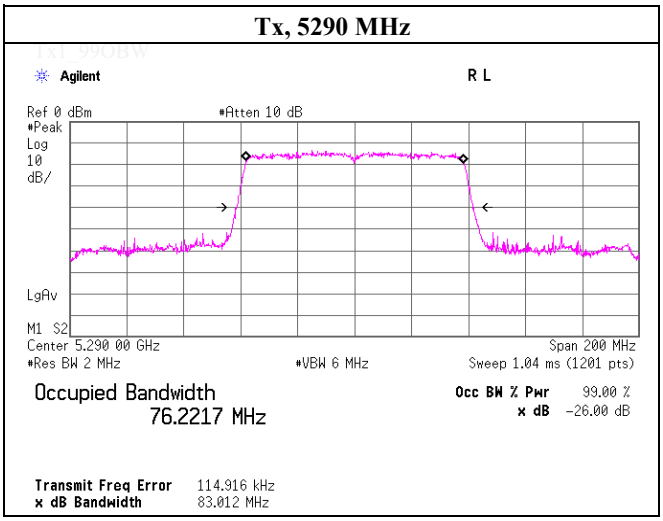


99 % Occupied Bandwidth

Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 26, 2019	
Temperature / Humidity	21 deg.C , 51 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE 802.11ac VHT80 (MIMO), PN9, worst data mode 5 (MCS)	

Freq. [MHz]	99 % Occupied Bandwidth [kHz]
5290.0000	76221.7

Tx, 5290 MHz

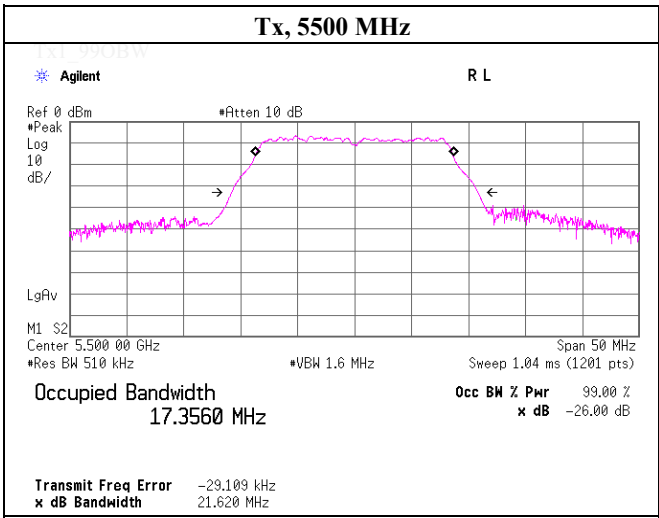


99 % Occupied Bandwidth

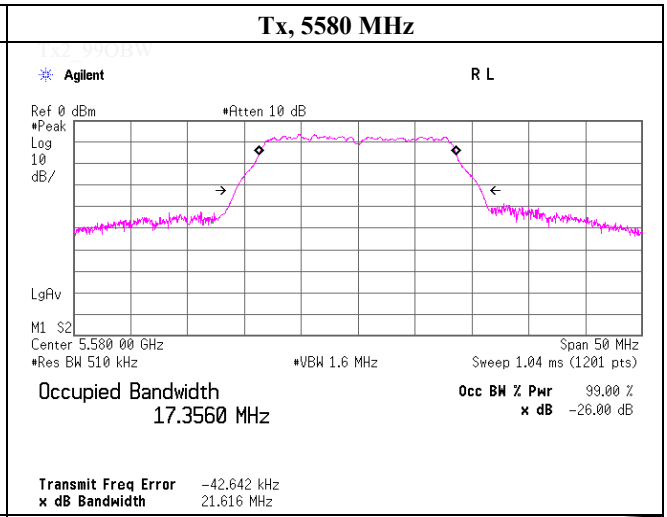
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 13, 2019	
Temperature / Humidity	24 deg.C , 57 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE802.11a, PN9, worst antenna port 0, worst data mode 48 Mbps	

Freq. [MHz]	99 % Occupied Bandwidth [kHz]
5500.0000	17356.0
5580.0000	17356.0
5700.0000	17355.5

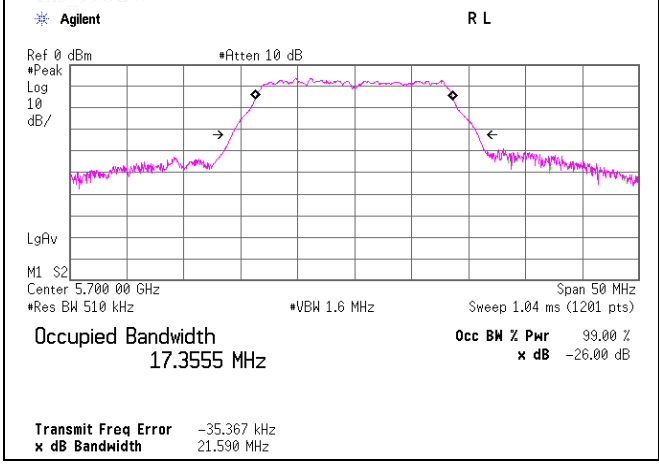
Tx, 5500 MHz



Tx, 5580 MHz



Tx, 5700 MHz



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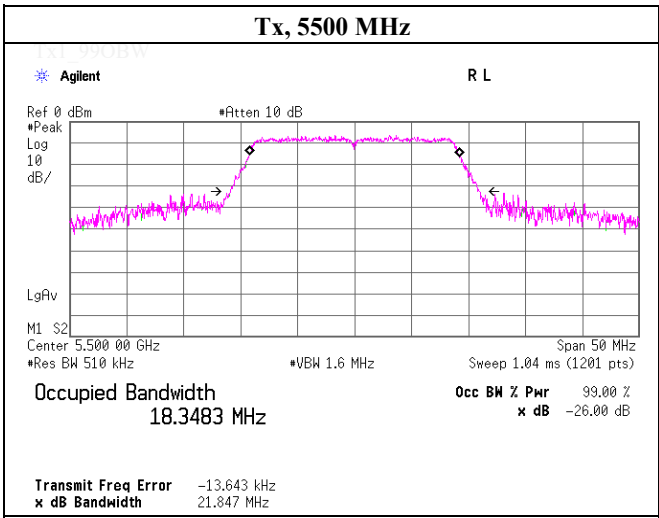
99 % Occupied Bandwidth

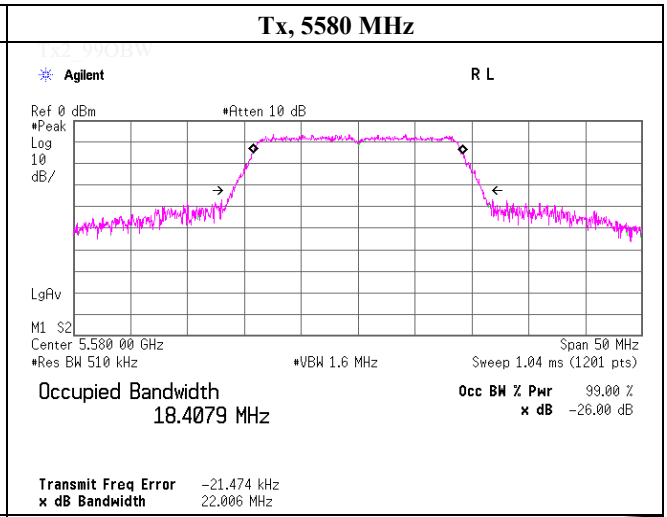
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 13, 2019	
Temperature / Humidity	24 deg.C , 57 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE802.11n HT20 (SISO), PN9, worst antenna port 0, worst data mode 6 (MCS)	

Freq. [MHz]	99 % Occupied Bandwidth [kHz]
5500.0000	18348.3
5580.0000	18407.9
5700.0000	18329.6

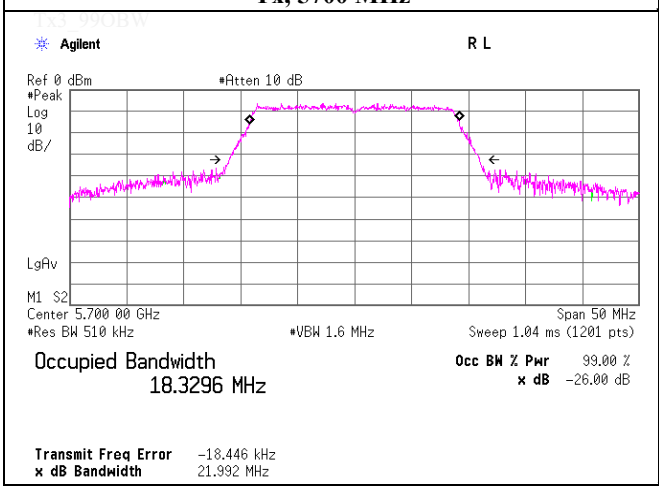
Tx, 5500 MHz



Tx, 5580 MHz



Tx, 5700 MHz



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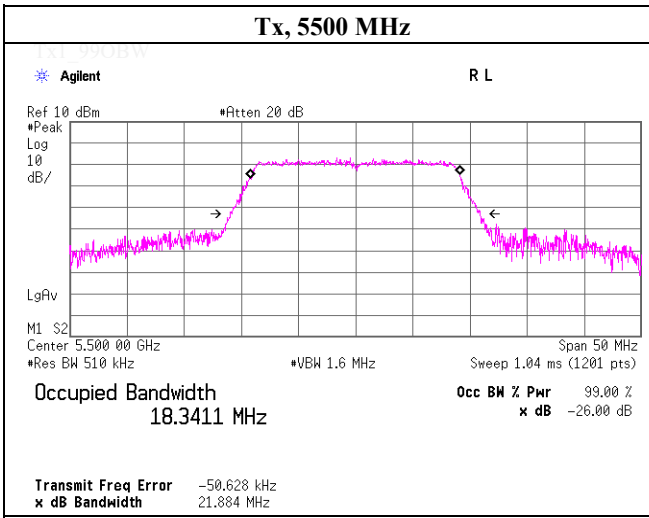
99 % Occupied Bandwidth

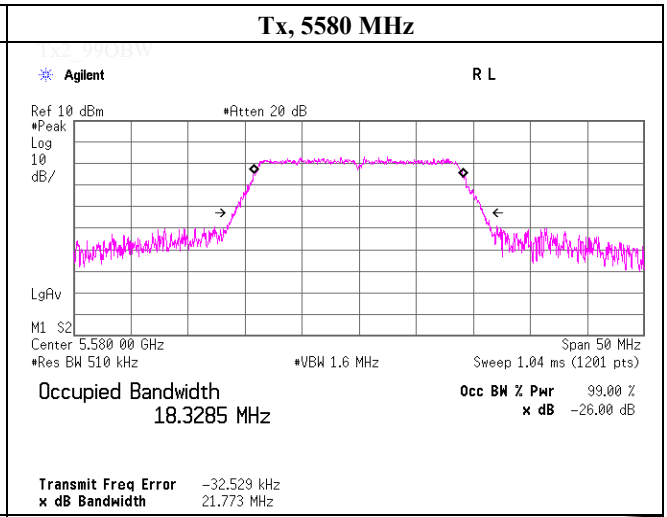
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 15, 2019	
Temperature / Humidity	24 deg.C , 35 %RH	
Engineer	Makoto Hosaka	
Mode	Tx, IEEE802.11ac VHT20 (SISO), PN9, worst antenna port 0, worst data mode 3 (MCS)	

Freq. [MHz]	99 % Occupied Bandwidth [kHz]
5500.0000	18341.1
5580.0000	18328.5
5700.0000	18309.6

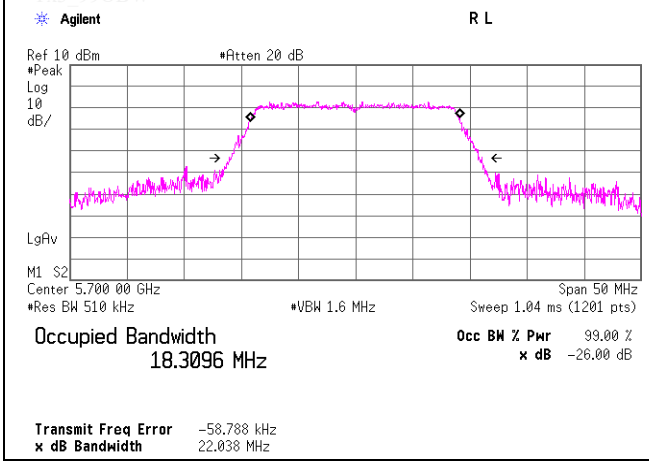
Tx, 5500 MHz



Tx, 5580 MHz



Tx, 5700 MHz



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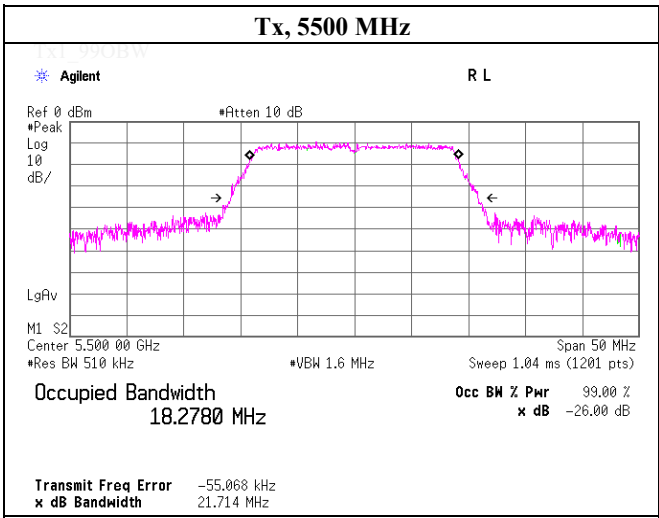
99 % Occupied Bandwidth

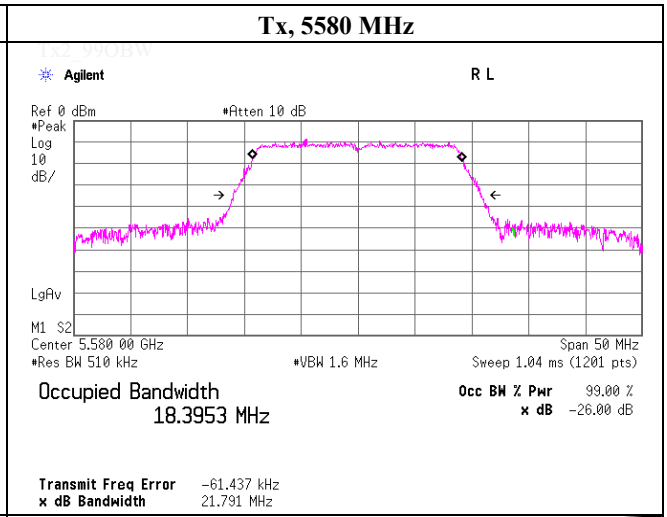
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 19, 2019	
Temperature / Humidity	21 deg.C , 41 %RH	
Engineer	Yosuke Ishikawa	
Mode	Tx, IEEE802.11n HT20 (MIMO), PN9, worst data mode 15 (MCS)	

Freq. [MHz]	99 % Occupied Bandwidth [kHz]
5500.0000	18278.0
5580.0000	18395.3
5700.0000	18281.6

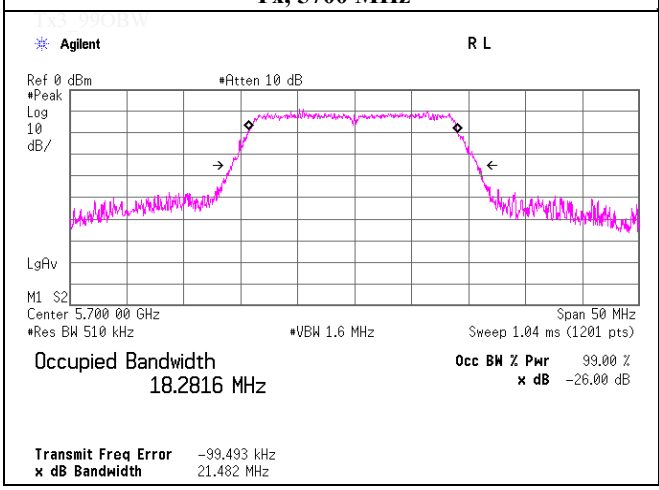
Tx, 5500 MHz



Tx, 5580 MHz



Tx, 5700 MHz



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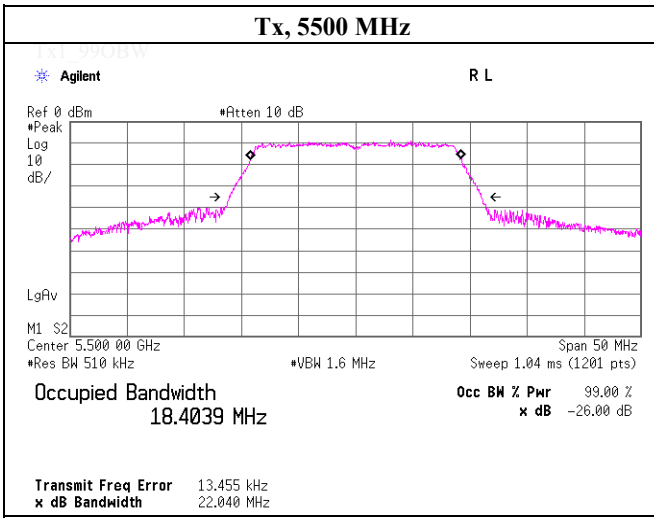
99 % Occupied Bandwidth

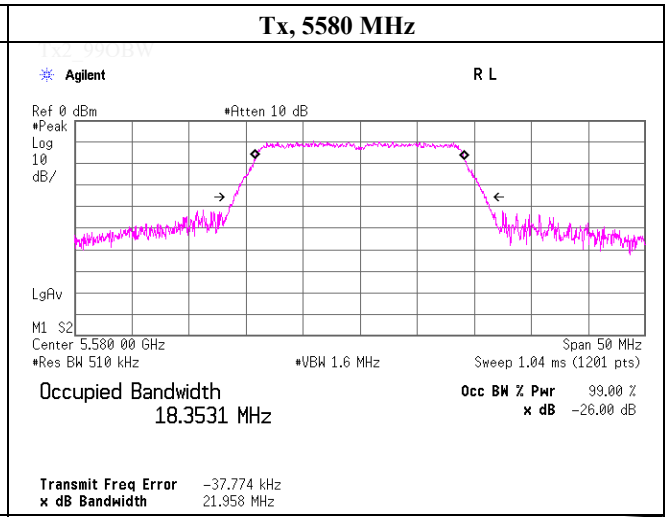
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 19, 2019	
Temperature / Humidity	21 deg.C , 41 %RH	
Engineer	Yosuke Ishikawa	
Mode	Tx, IEEE802.11ac VHT20 (MIMO), PN9, worst data mode 4 (MCS)	

Freq. [MHz]	99 % Occupied Bandwidth [kHz]
5500.0000	18403.9
5580.0000	18353.1
5700.0000	18341.4

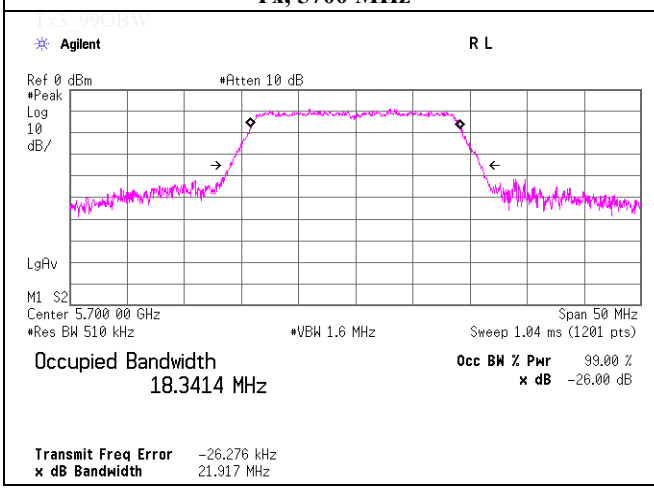
Tx, 5500 MHz



Tx, 5580 MHz



Tx, 5700 MHz



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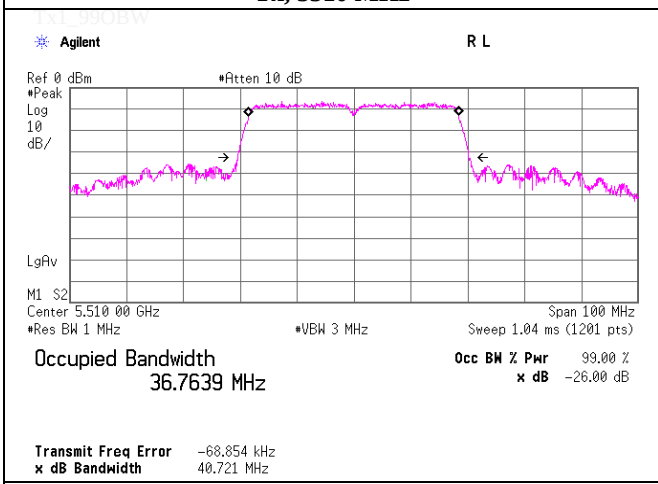
99 % Occupied Bandwidth

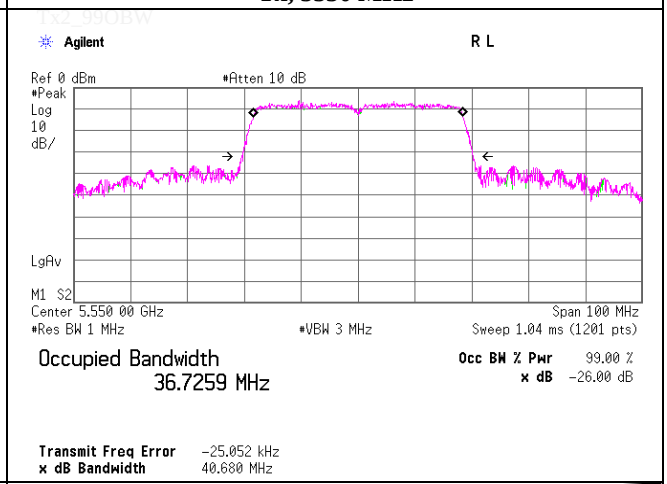
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 18, 2019	
Temperature / Humidity	22 deg.C , 54 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE802.11n HT40 (SISO), PN9, worst antenna port 0, worst data mode 3(MCS)	

Freq. [MHz]	99 % Occupied Bandwidth [kHz]
5510.0000	36763.9
5550.0000	36725.9
5670.0000	36820.4

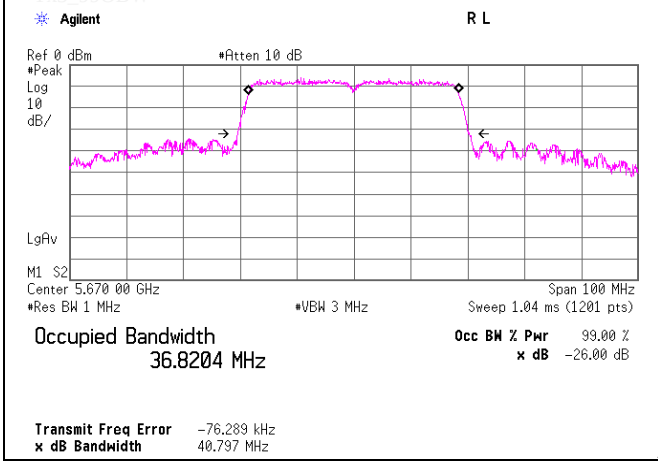
Tx, 5510 MHz



Tx, 5550 MHz



Tx, 5670 MHz



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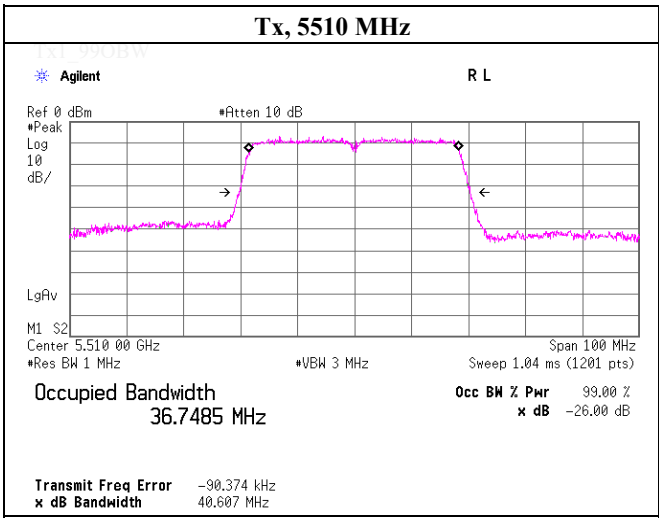
99 % Occupied Bandwidth

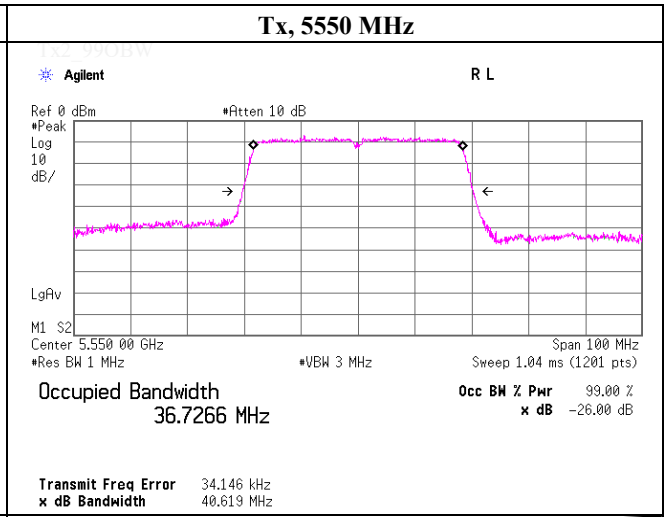
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 19, 2019	
Temperature / Humidity	21 deg.C , 41 %RH	
Engineer	Yosuke Ishikawa	
Mode	Tx, IEEE802.11ac VHT40 (SISO), PN9, worst antenna port 0, worst data mode 2(MCS)	

Freq. [MHz]	99 % Occupied Bandwidth [kHz]
5510.0000	36748.5
5550.0000	36726.6
5670.0000	36619.4

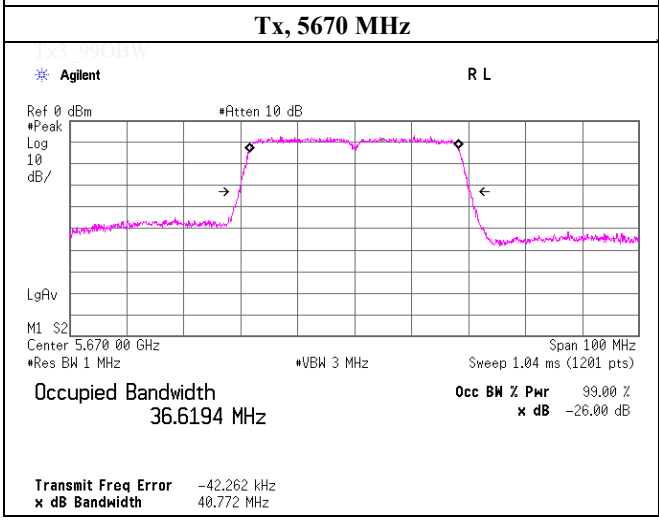
Tx, 5510 MHz



Tx, 5550 MHz



Tx, 5670 MHz



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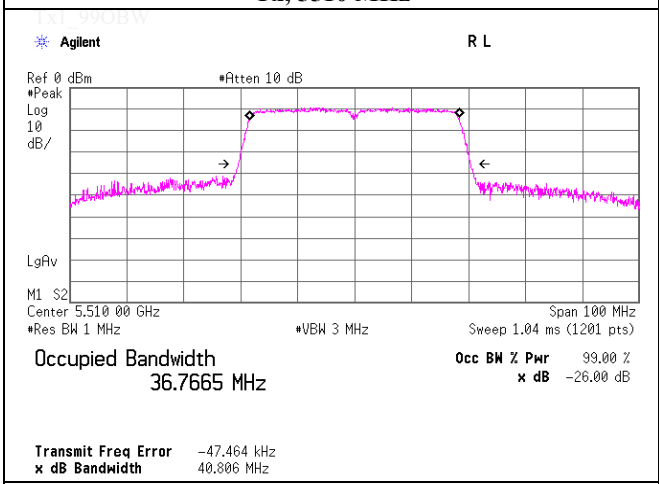
99 % Occupied Bandwidth

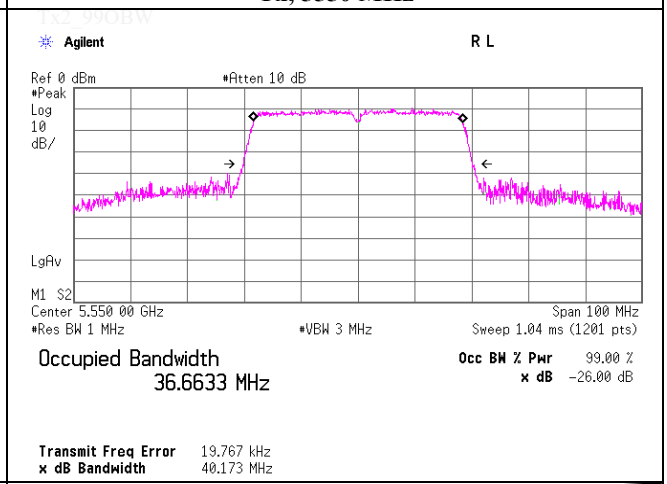
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 25, 2019	
Temperature / Humidity	20 deg.C , 59 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE 802.11n HT40 (MIMO), PN9, worst data mode 11 (MCS)	

Freq. [MHz]	99 % Occupied Bandwidth [kHz]
5510.0000	36766.5
5550.0000	36663.3
5670.0000	36742.3

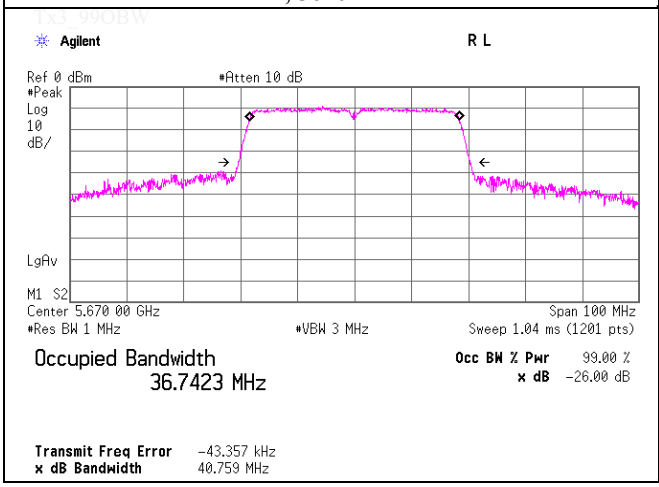
Tx, 5510 MHz



Tx, 5550 MHz



Tx, 5670 MHz



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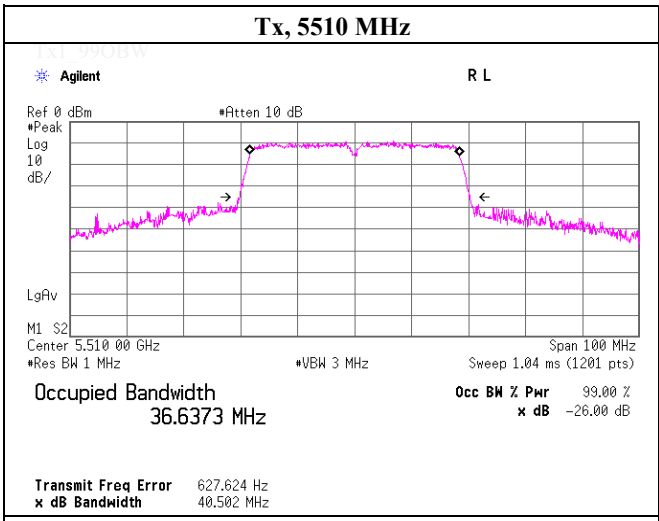
99 % Occupied Bandwidth

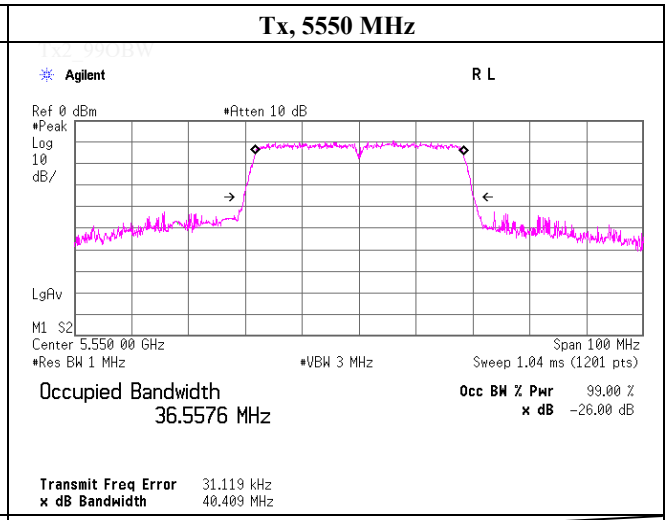
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 26, 2019	
Temperature / Humidity	21 deg.C , 51 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE 802.11ac VHT40 (MIMO), PN9, worst data mode 6 (MCS)	

Freq. [MHz]	99 % Occupied Bandwidth [kHz]
5510.0000	36637.3
5550.0000	36557.6
5670.0000	36535.6

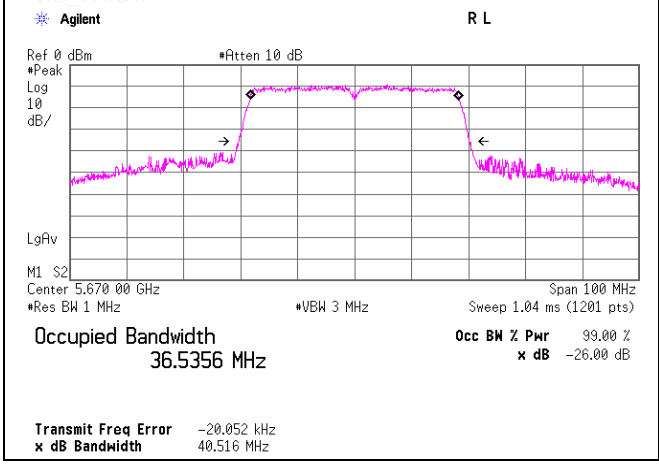
Tx, 5510 MHz



Tx, 5550 MHz



Tx, 5670 MHz



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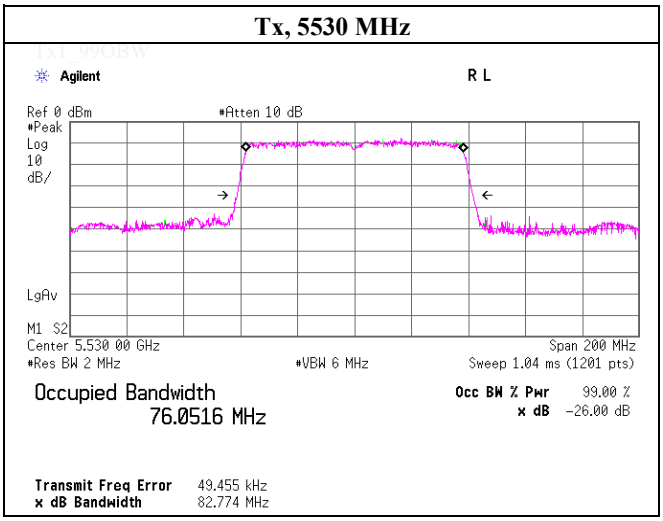
99 % Occupied Bandwidth

Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 22, 2019	
Temperature / Humidity	24 deg.C , 47 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE802.11ac VHT80 (SISO), PN9, worst antenna port 1, worst data mode 5(MCS)	

Freq. [MHz]	99 % Occupied Bandwidth [kHz]
5530.0000	76051.6

Tx, 5530 MHz

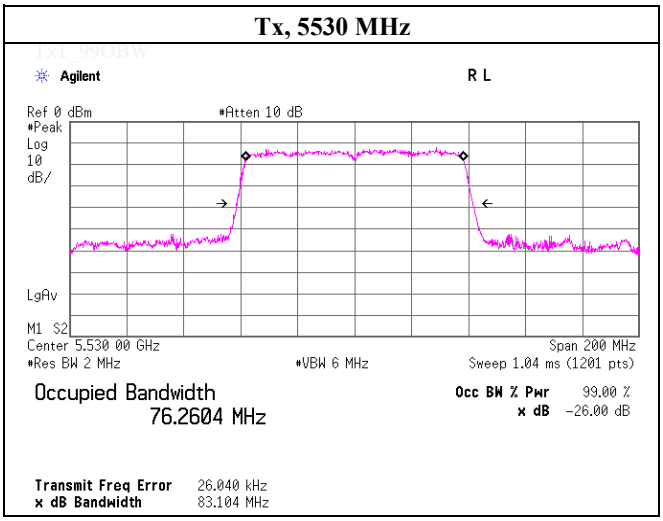


99 % Occupied Bandwidth

Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 26, 2019	
Temperature / Humidity	21 deg.C , 51 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE 802.11ac VHT80 (MIMO), PN9, worst data mode 6 (MCS)	

Freq. [MHz]	99 % Occupied Bandwidth [kHz]
5530.0000	76260.4

Tx, 5530 MHz

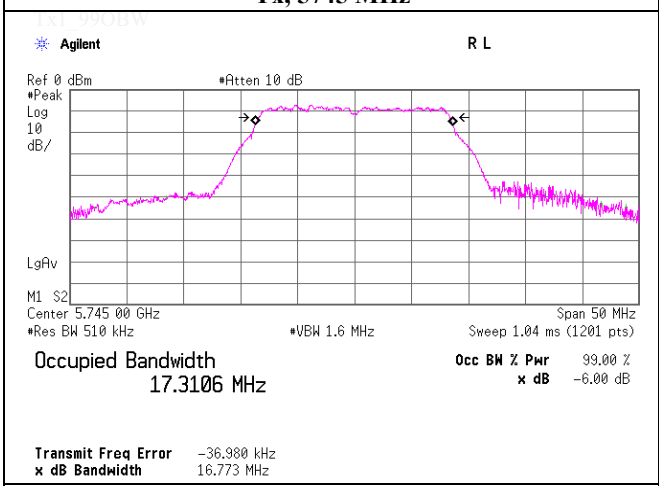


99 % Occupied Bandwidth

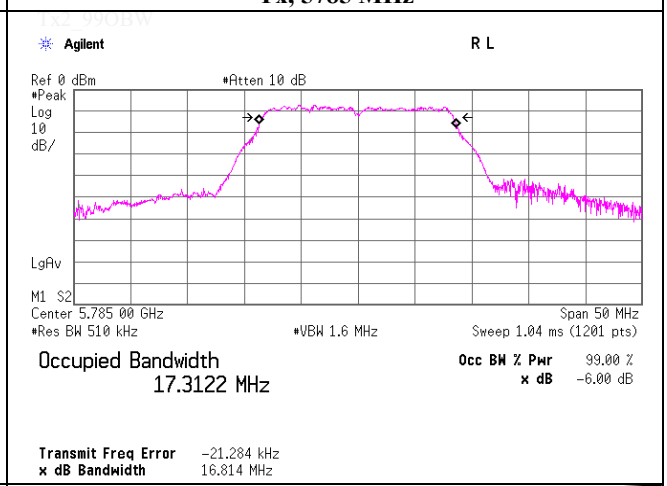
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 13, 2019	
Temperature / Humidity	24 deg.C , 57 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE802.11a, PN9, worst antenna port 0, worst data mode 48 Mbps	

Freq. [MHz]	99 % Occupied Bandwidth [kHz]
5745.0000	17310.6
5785.0000	17312.2
5825.0000	17338.5

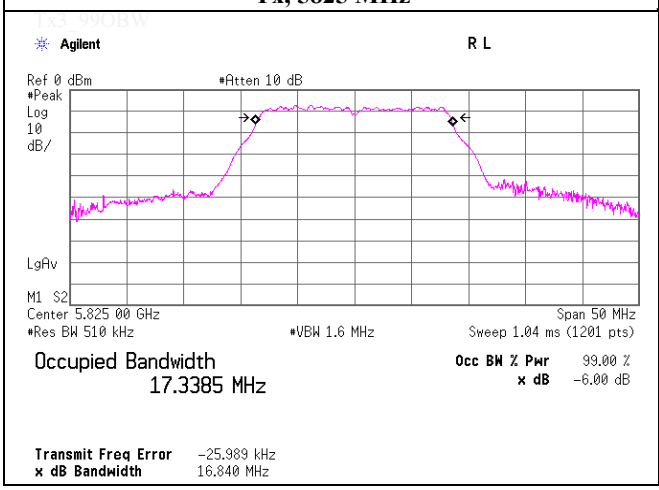
Tx, 5745 MHz



Tx, 5785 MHz



Tx, 5825 MHz



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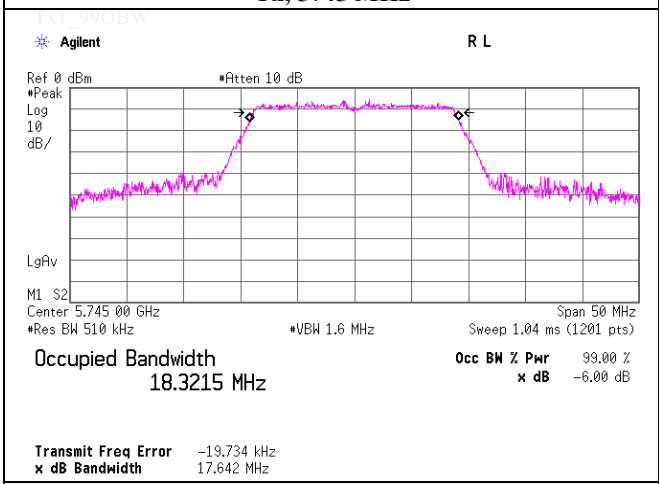
99 % Occupied Bandwidth

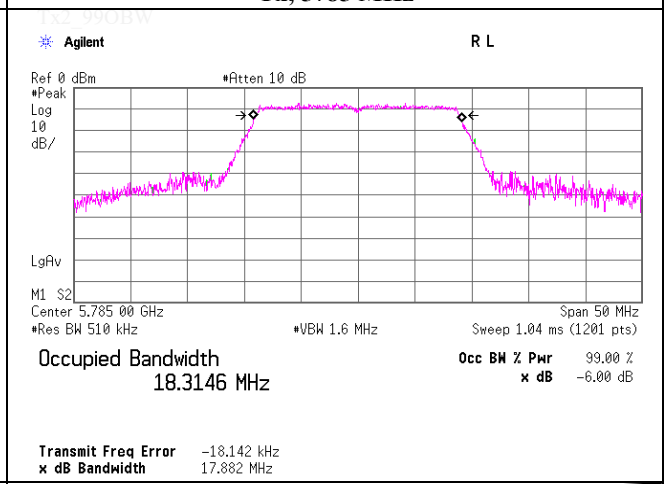
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 13, 2019	
Temperature / Humidity	24 deg.C , 57 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE802.11n HT20 (SISO), PN9, worst antenna port 0, worst data mode 6 (MCS)	

Freq. [MHz]	99 % Occupied Bandwidth [kHz]
5745.0000	18321.5
5785.0000	18314.6
5825.0000	18330.7

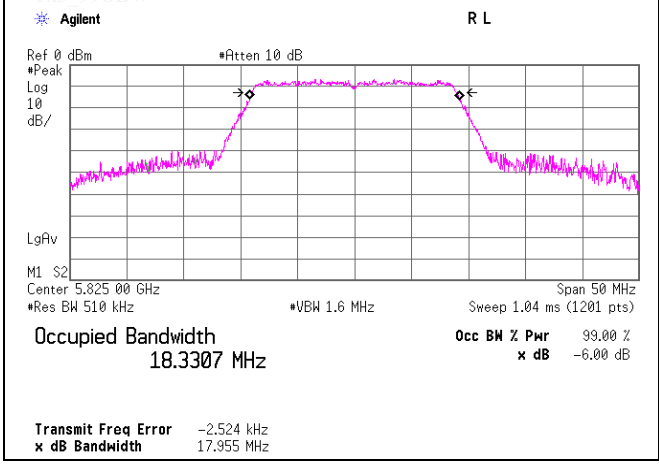
Tx, 5745 MHz



Tx, 5785 MHz



Tx, 5825 MHz



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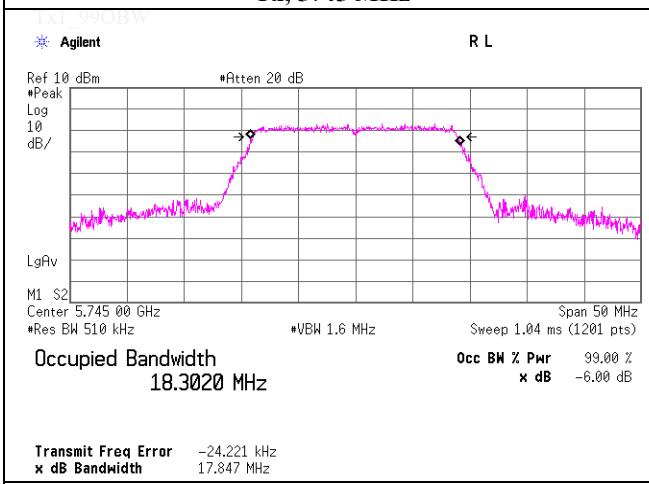
99 % Occupied Bandwidth

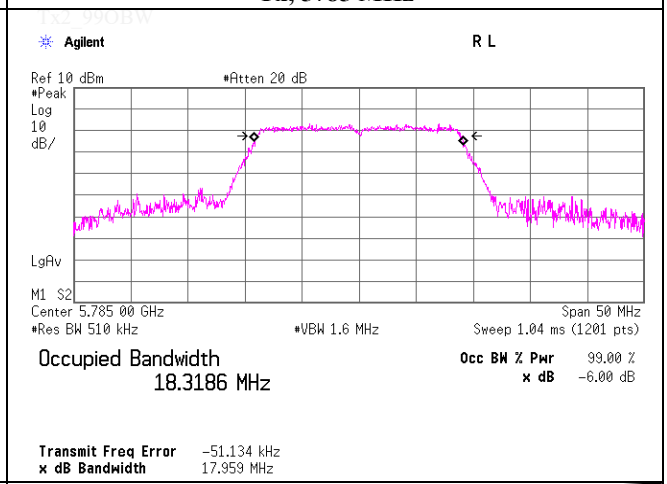
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 15, 2019	
Temperature / Humidity	24 deg.C , 35 %RH	
Engineer	Makoto Hosaka	
Mode	Tx, IEEE802.11ac VHT20 (SISO), PN9, worst antenna port 0, worst data mode 3 (MCS)	

Freq. [MHz]	99 % Occupied Bandwidth [kHz]
5745.0000	18302.0
5785.0000	18318.6
5825.0000	18234.7

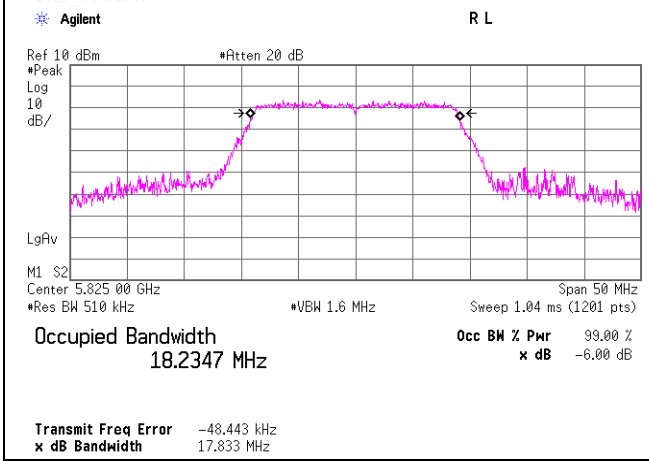
Tx, 5745 MHz



Tx, 5785 MHz



Tx, 5825 MHz



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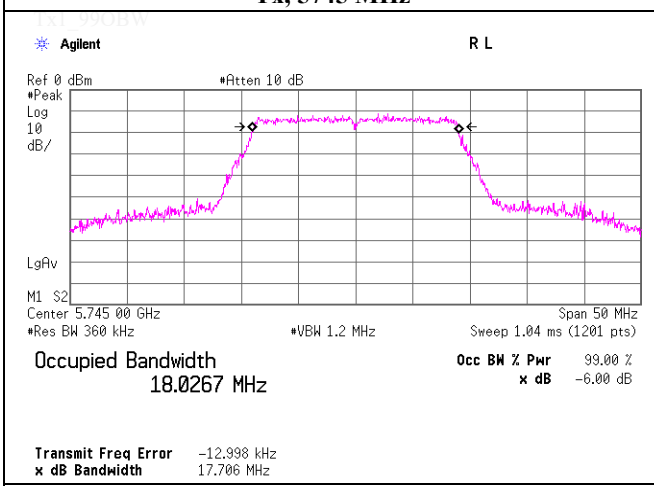
99 % Occupied Bandwidth

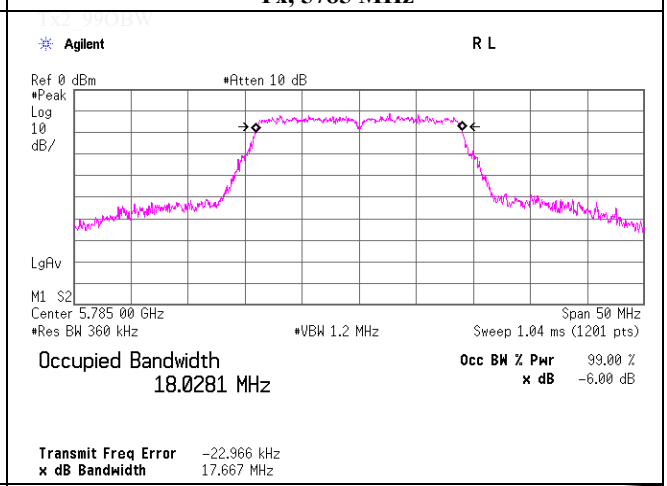
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 19, 2019	
Temperature / Humidity	21 deg.C , 41 %RH	
Engineer	Yosuke Ishikawa	
Mode	Tx, IEEE802.11n HT20 (MIMO), PN9, worst data mode 15 (MCS)	

Freq. [MHz]	99 % Occupied Bandwidth [kHz]
5745.0000	18026.7
5785.0000	18028.1
5825.0000	17993.5

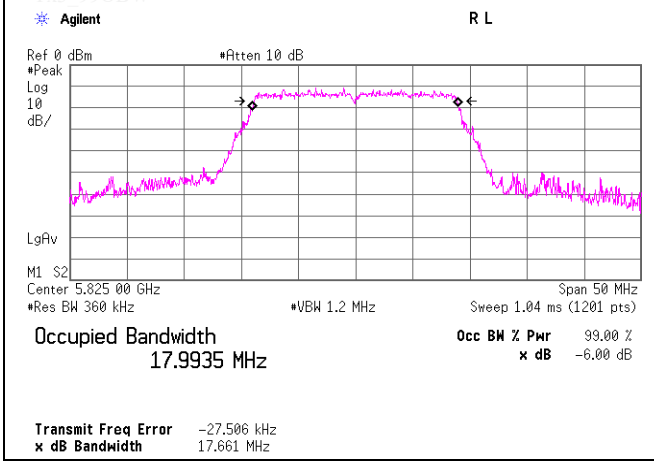
Tx, 5745 MHz



Tx, 5785 MHz



Tx, 5825 MHz



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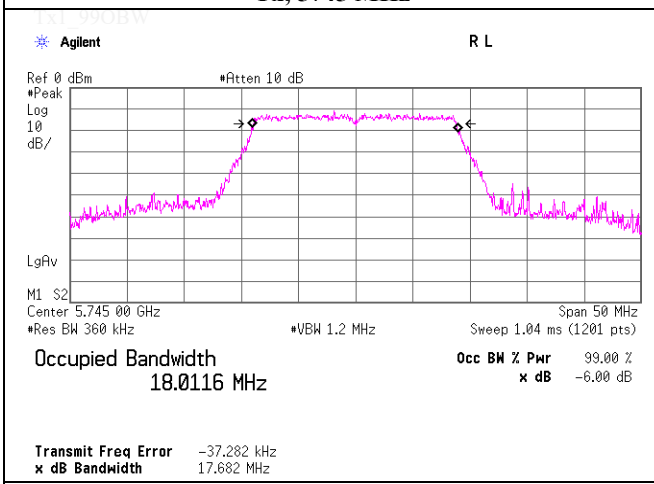
99 % Occupied Bandwidth

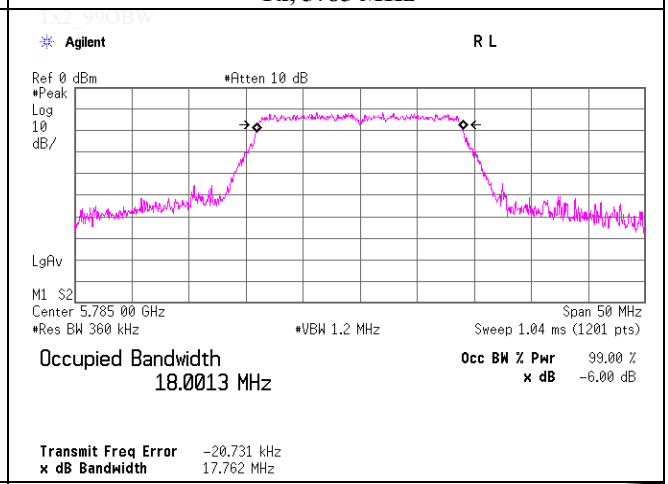
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 19, 2019	
Temperature / Humidity	21 deg.C , 41 %RH	
Engineer	Yosuke Ishikawa	
Mode	Tx, IEEE802.11ac VHT20 (MIMO), PN9, worst data mode 4 (MCS)	

Freq. [MHz]	99 % Occupied Bandwidth [kHz]
5745.0000	18011.6
5785.0000	18001.3
5825.0000	18015.8

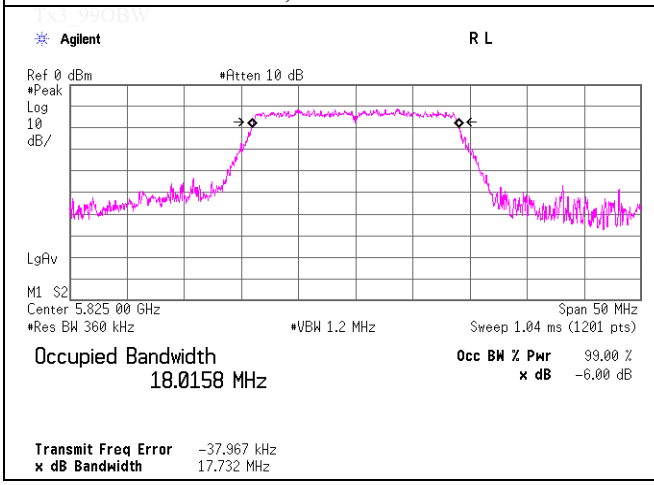
Tx, 5745 MHz



Tx, 5785 MHz



Tx, 5825 MHz



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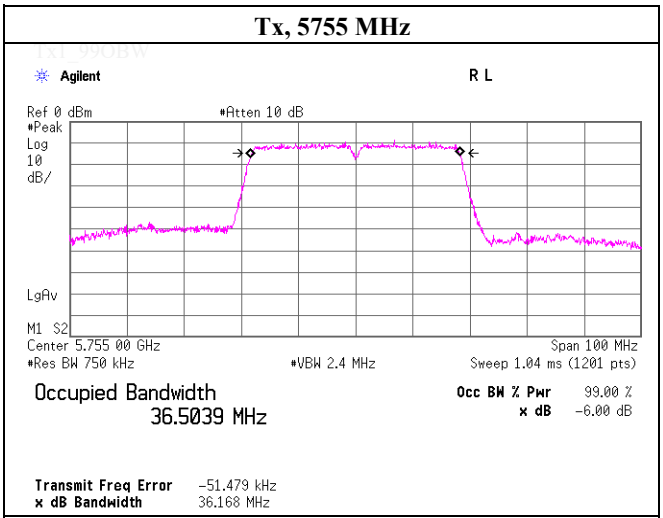
99 % Occupied Bandwidth

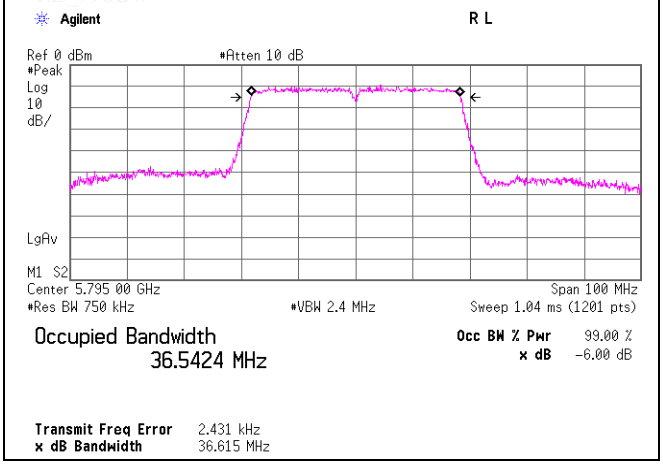
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 19, 2019	
Temperature / Humidity	21 deg.C , 41 %RH	
Engineer	Yosuke Ishikawa	
Mode	Tx, IEEE802.11n HT40 (SISO), PN9, worst antenna port 0, worst data mode 3(MCS)	

Freq. [MHz]	99 % Occupied Bandwidth [kHz]
5755.0000	36503.9
5795.0000	36542.4

Tx, 5755 MHz



Tx, 5795 MHz

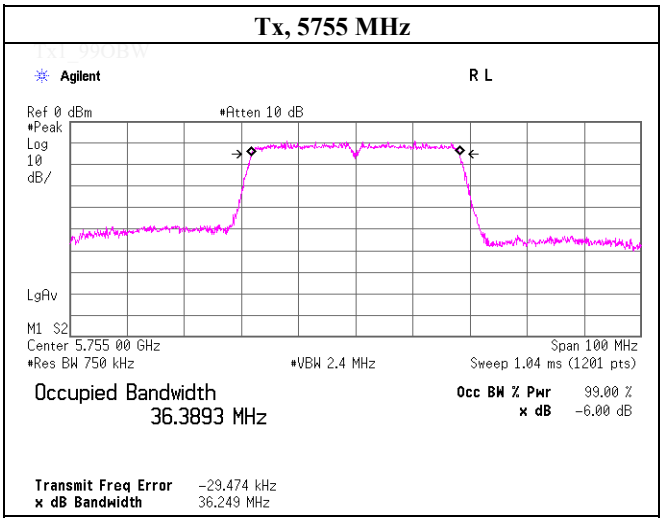


99 % Occupied Bandwidth

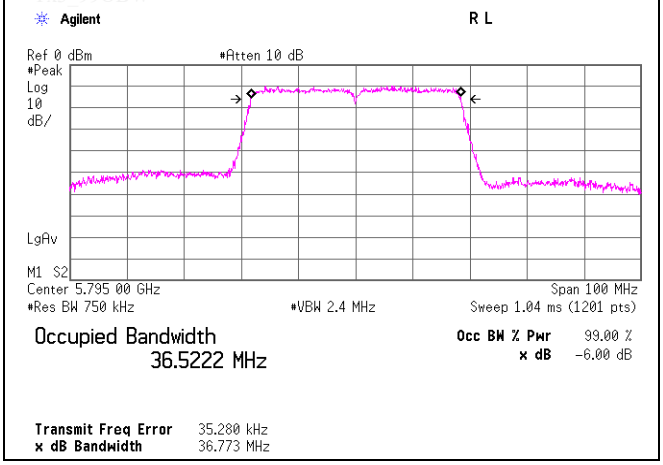
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 19, 2019	
Temperature / Humidity	21 deg.C , 41 %RH	
Engineer	Yosuke Ishikawa	
Mode	Tx, IEEE802.11ac VHT40 (SISO), PN9, worst antenna port 0, worst data mode 2(MCS)	

Freq. [MHz]	99 % Occupied Bandwidth [kHz]
5755.0000	36389.3
5795.0000	36522.2

Tx, 5755 MHz



Tx, 5795 MHz

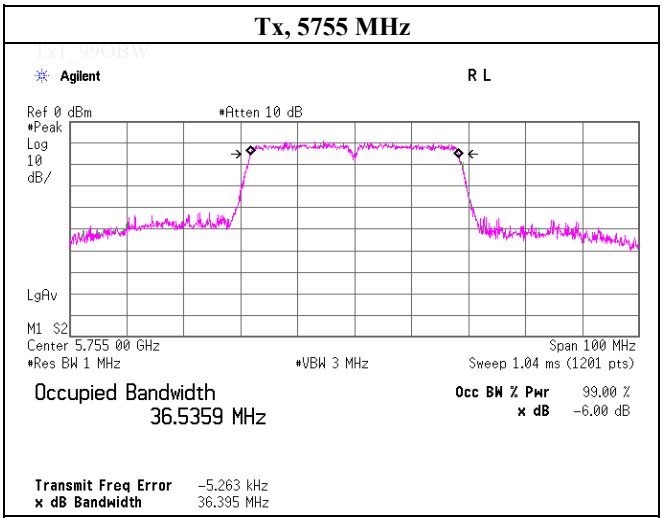


99 % Occupied Bandwidth

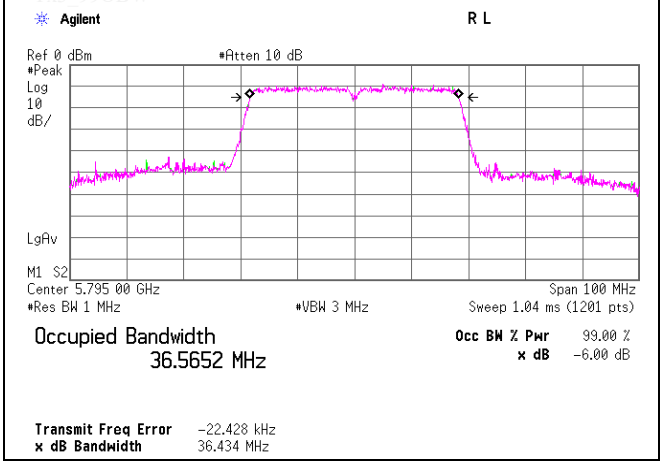
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 25, 2019	
Temperature / Humidity	20 deg.C , 59 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE 802.11n HT40 (MIMO), PN9, worst data mode 11 (MCS)	

Freq. [MHz]	99 % Occupied Bandwidth [kHz]
5755.0000	36535.9
5795.0000	36565.2

Tx, 5755 MHz



Tx, 5795 MHz

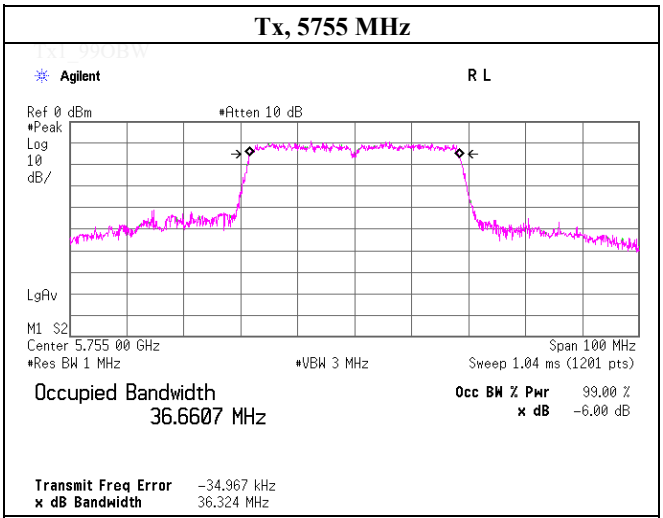


99 % Occupied Bandwidth

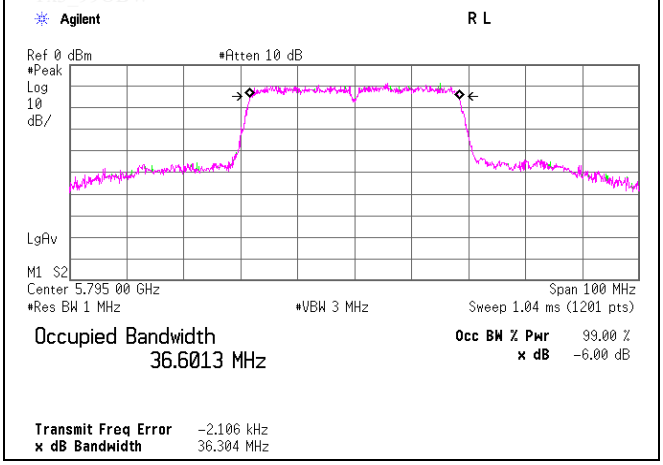
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 26, 2019	
Temperature / Humidity	21 deg.C , 51 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE 802.11ac VHT40 (MIMO), PN9, worst data mode 6 (MCS)	

Freq. [MHz]	99 % Occupied Bandwidth [kHz]
5755.0000	36660.7
5795.0000	36601.3

Tx, 5755 MHz



Tx, 5795 MHz

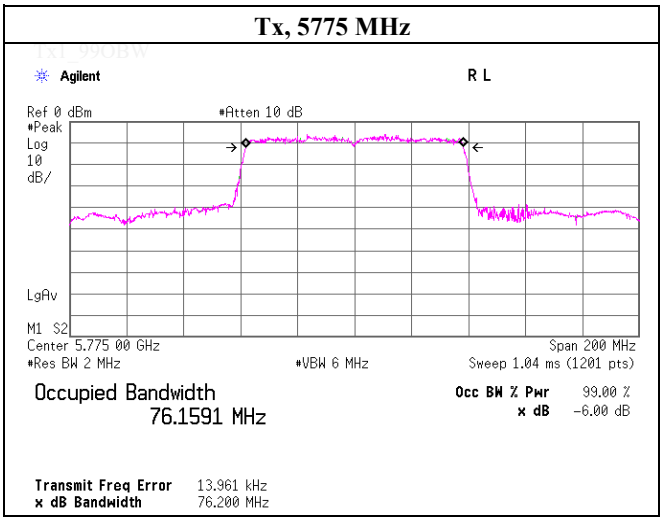


99 % Occupied Bandwidth

Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 22, 2019	
Temperature / Humidity	24 deg.C , 47 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE802.11ac VHT80 (SISO), PN9, worst antenna port 0, worst data mode 5(MCS)	

Freq. [MHz]	99 % Occupied Bandwidth [kHz]
5775.0000	76159.1

Tx, 5775 MHz

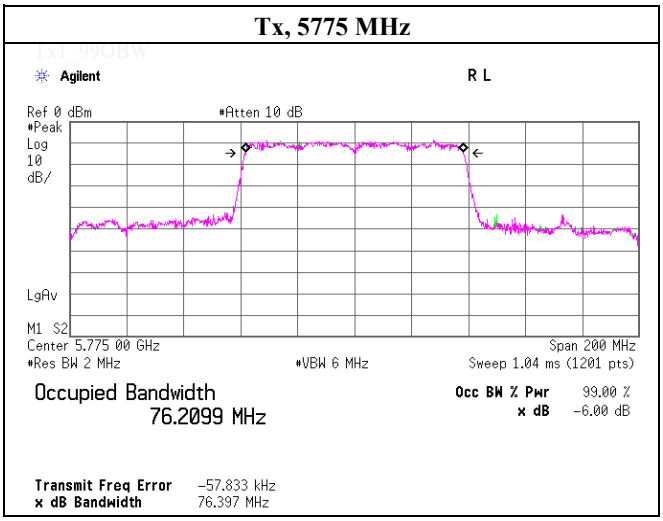


99 % Occupied Bandwidth

Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 26, 2019	
Temperature / Humidity	21 deg.C , 51 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE 802.11ac VHT80 (MIMO), PN9, worst data mode 6 (MCS)	

Freq. [MHz]	99 % Occupied Bandwidth [kHz]
5775.0000	76209.9

Tx, 5775 MHz



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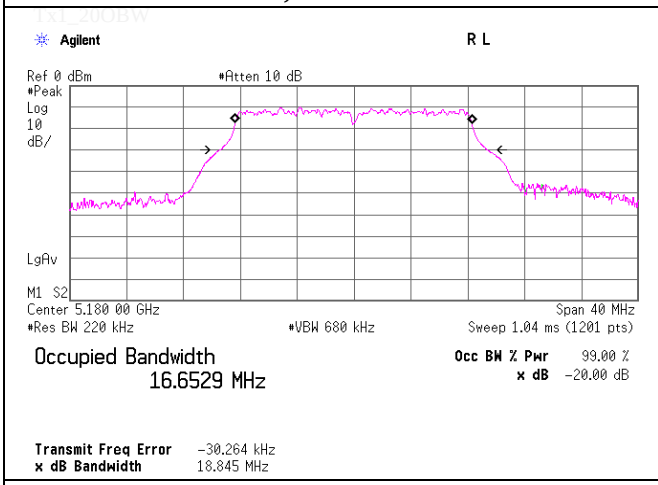
-20 dB Bandwidth

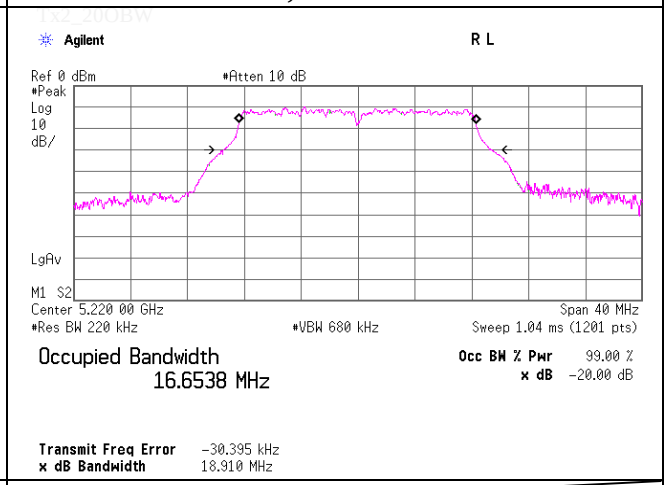
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 13, 2019	
Temperature / Humidity	24 deg.C , 57 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE802.11a, PN9, worst antenna port 0, worst data mode 48 Mbps	

Freq. [MHz]	-20 dB Bandwidth [MHz]
5180.0000	18.845
5220.0000	18.910
5240.0000	18.960

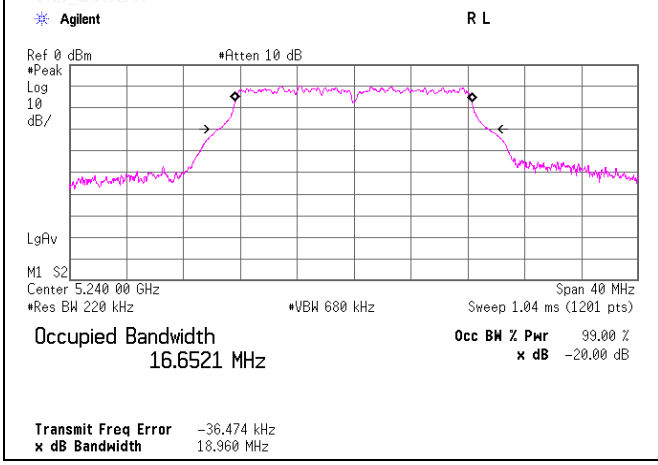
Tx, 5180 MHz



Tx, 5220 MHz



Tx, 5240 MHz



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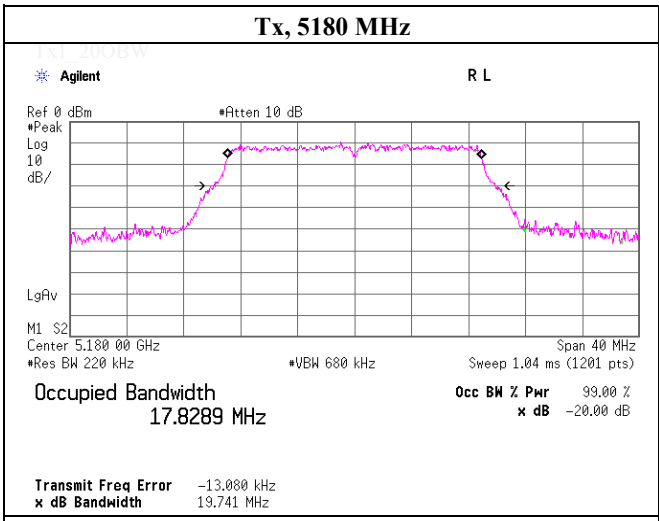
-20 dB Bandwidth

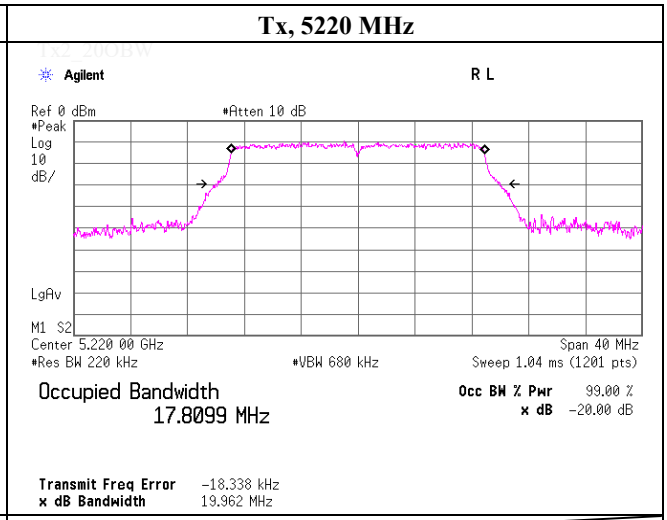
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 13, 2019	
Temperature / Humidity	24 deg.C , 57 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE802.11n HT20 (SISO), PN9, worst antenna port 0, worst data mode 6 (MCS)	

Freq. [MHz]	-20 dB Bandwidth [MHz]
5180.0000	19.741
5220.0000	19.962
5240.0000	19.860

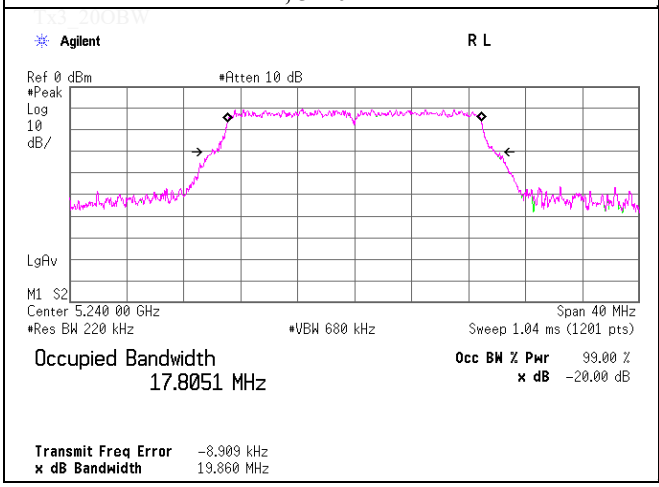
Tx, 5180 MHz



Tx, 5220 MHz



Tx, 5240 MHz



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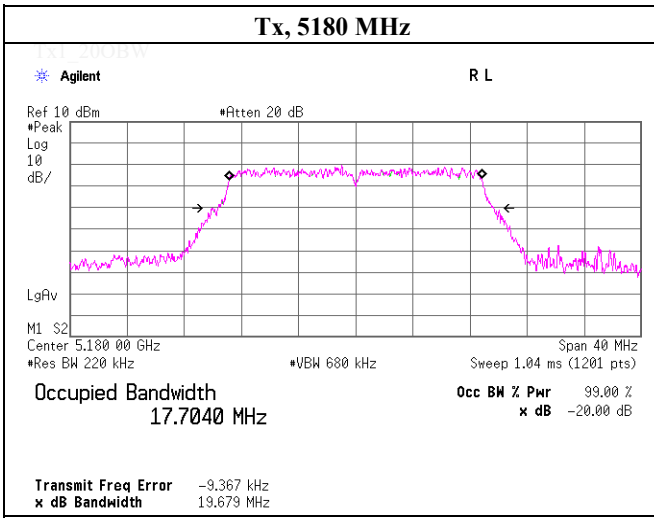
-20 dB Bandwidth

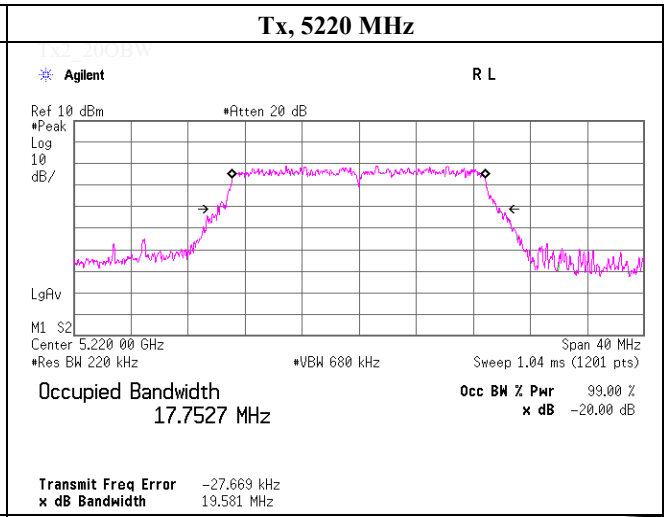
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 15, 2019	
Temperature / Humidity	24 deg.C , 35 %RH	
Engineer	Makoto Hosaka	
Mode	Tx, IEEE802.11ac VHT20 (SISO), PN9, worst antenna port 0, worst data mode 3 (MCS)	

Freq. [MHz]	-20 dB Bandwidth [MHz]
5180.0000	19.679
5220.0000	19.581
5240.0000	19.912

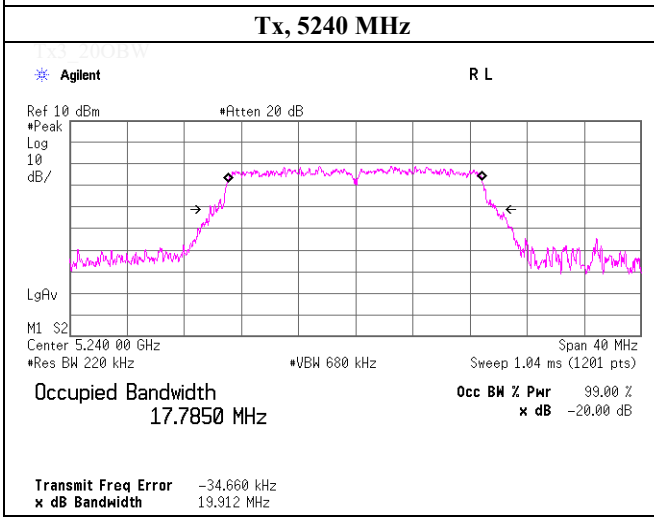
Tx, 5180 MHz



Tx, 5220 MHz



Tx, 5240 MHz



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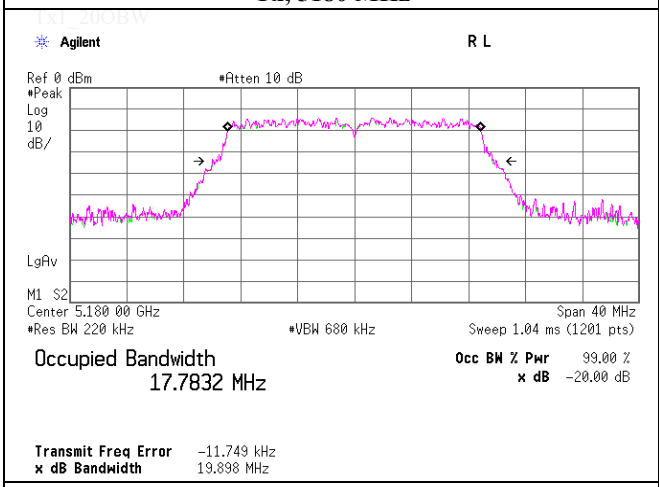
-20 dB Bandwidth

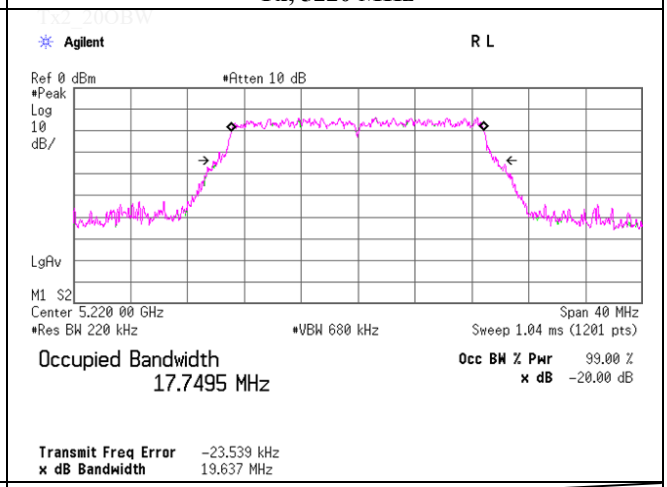
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 19, 2019	
Temperature / Humidity	21 deg.C , 41 %RH	
Engineer	Yosuke Ishikawa	
Mode	Tx, IEEE802.11n HT20 (MIMO), PN9, worst data mode 15 (MCS)	

Freq. [MHz]	-20 dB Bandwidth [MHz]
5180.0000	19.898
5220.0000	19.637
5240.0000	19.821

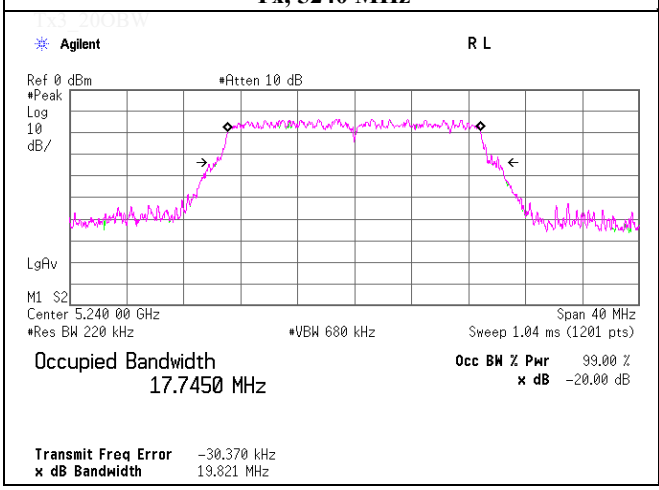
Tx, 5180 MHz



Tx, 5220 MHz



Tx, 5240 MHz



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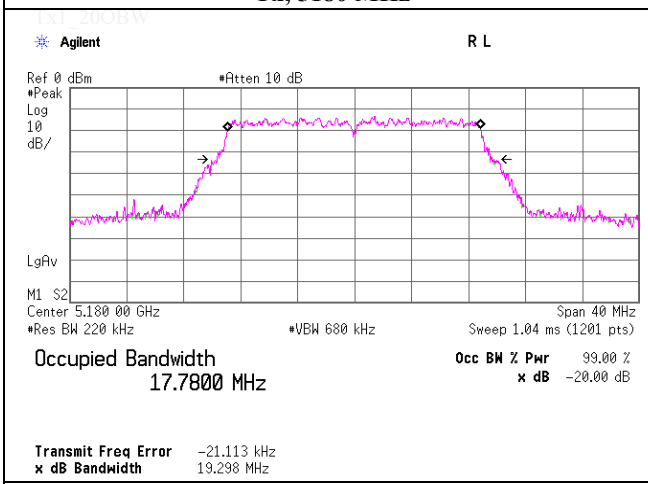
-20 dB Bandwidth

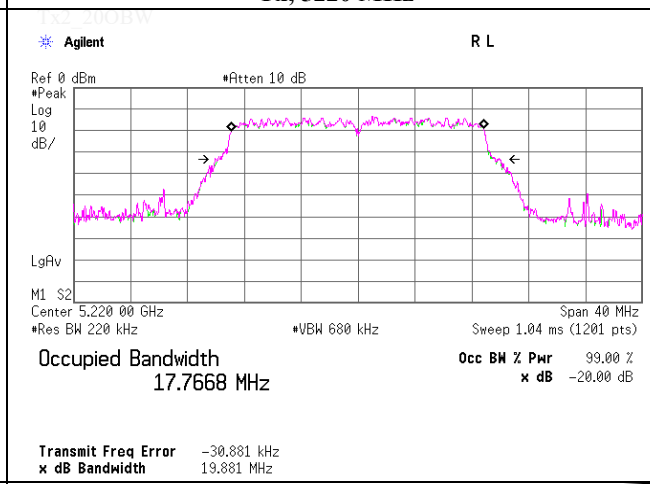
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 19, 2019	
Temperature / Humidity	21 deg.C , 41 %RH	
Engineer	Yosuke Ishikawa	
Mode	Tx, IEEE802.11ac VHT20 (MIMO), PN9, worst data mode 4 (MCS)	

Freq. [MHz]	-20 dB Bandwidth [MHz]
5180.0000	19.298
5220.0000	19.881
5240.0000	19.771

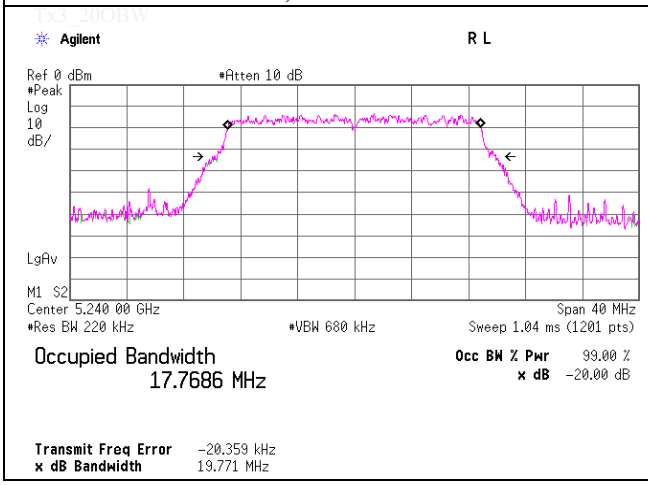
Tx, 5180 MHz



Tx, 5220 MHz



Tx, 5240 MHz



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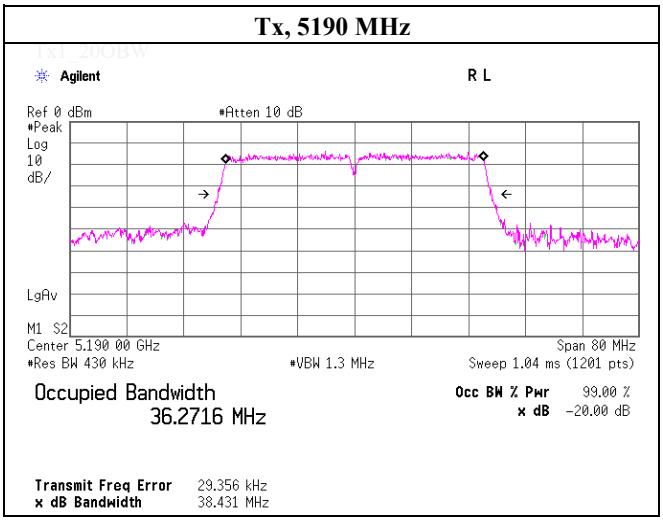
-20 dB Bandwidth

Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 18, 2019	
Temperature / Humidity	22 deg.C , 54 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE802.11n HT40 (SISO), PN9, worst antenna port 1, worst data mode 5 (MCS)	

Freq. [MHz]	-20 dB Bandwidth [MHz]
5190.0000	38.431

Tx, 5190 MHz



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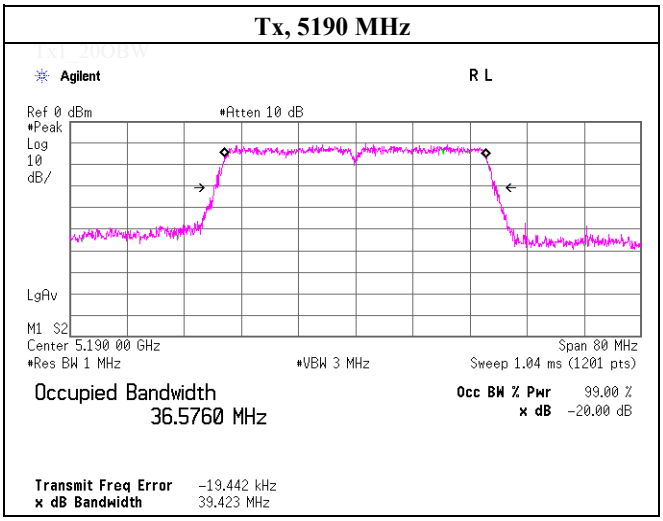
-20 dB Bandwidth

Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 19, 2019	
Temperature / Humidity	21 deg.C , 41 %RH	
Engineer	Yosuke Ishikawa	
Mode	Tx, IEEE802.11ac VHT40 (SISO), PN9, worst antenna port 1, worst data mode 4(MCS)	

Freq. [MHz]	-20 dB Bandwidth [MHz]
5190.0000	39.423

Tx, 5190 MHz

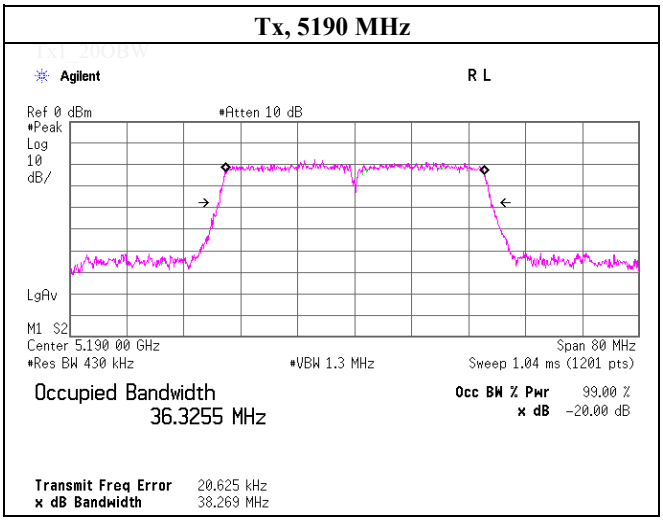


-20 dB Bandwidth

Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 25, 2019	
Temperature / Humidity	20 deg.C , 59 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE 802.11n HT40 (MIMO), PN9, worst data mode 15 (MCS)	

Freq. [MHz]	-20 dB Bandwidth [MHz]
5190.0000	38.269

Tx, 5190 MHz



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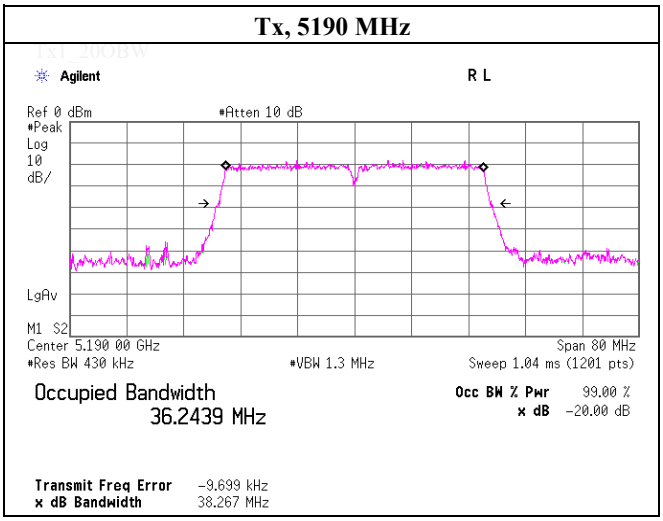
-20 dB Bandwidth

Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 25, 2019	
Temperature / Humidity	20 deg.C , 59 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE 802.11ac VHT40 (MIMO), PN9, worst data mode 4 (MCS)	

Freq. [MHz]	-20 dB Bandwidth [MHz]
5190.0000	38.267

Tx, 5190 MHz

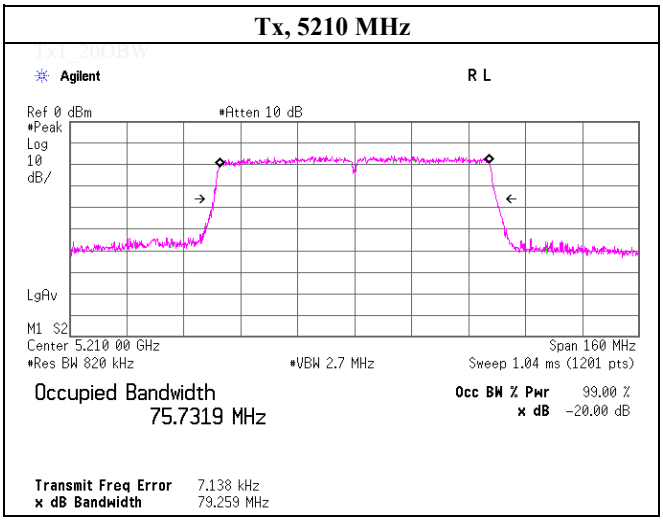


-20 dB Bandwidth

Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 22, 2019	
Temperature / Humidity	24 deg.C , 47 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE802.11ac VHT80 (SISO), PN9, worst antenna port 1, worst data mode 5(MCS)	

Freq. [MHz]	-20 dB Bandwidth [MHz]
5210.0000	79.259

Tx, 5210 MHz



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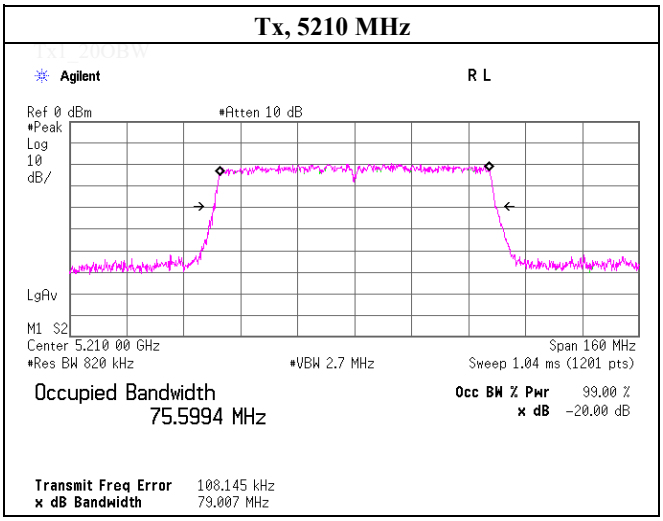
-20 dB Bandwidth

Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 26, 2019	
Temperature / Humidity	21 deg.C , 51 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE 802.11ac VHT80 (MIMO), PN9, worst data mode 5 (MCS)	

Freq. [MHz]	-20 dB Bandwidth [MHz]
5210.0000	79.007

Tx, 5210 MHz



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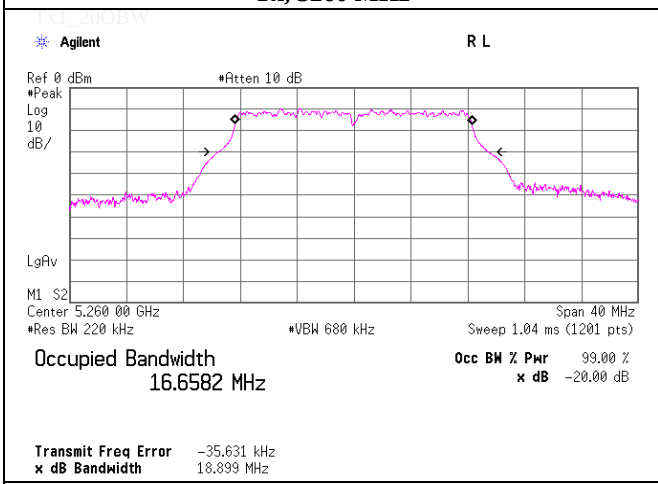
-20 dB Bandwidth

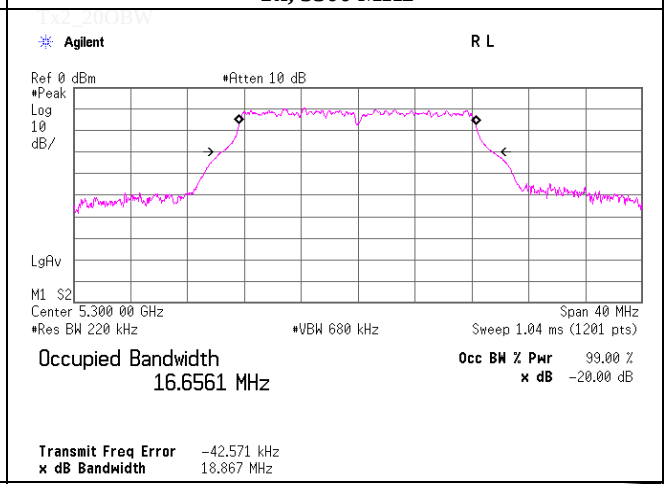
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 13, 2019	
Temperature / Humidity	24 deg.C , 57 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE802.11a, PN9, worst antenna port 0, worst data mode 48 Mbps	

Freq. [MHz]	-20 dB Bandwidth [MHz]
5260.0000	18.899
5300.0000	18.867
5320.0000	18.867

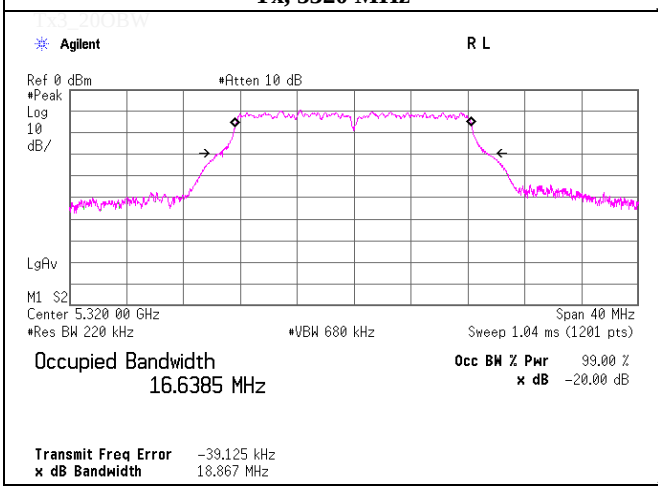
Tx, 5260 MHz



Tx, 5300 MHz



Tx, 5320 MHz



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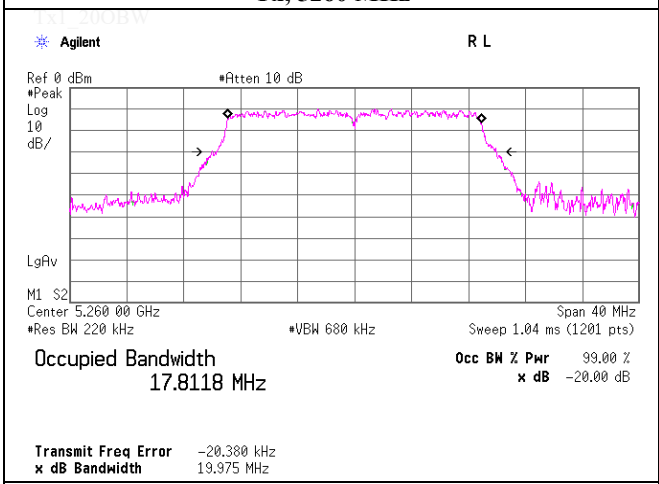
-20 dB Bandwidth

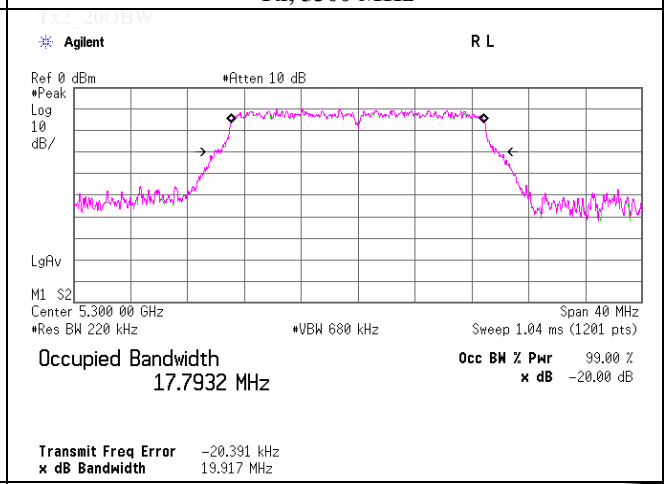
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 13, 2019	
Temperature / Humidity	24 deg.C , 57 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE802.11n HT20 (SISO), PN9, worst antenna port 0, worst data mode 6 (MCS)	

Freq. [MHz]	-20 dB Bandwidth [MHz]
5260.0000	19.975
5300.0000	19.917
5320.0000	19.667

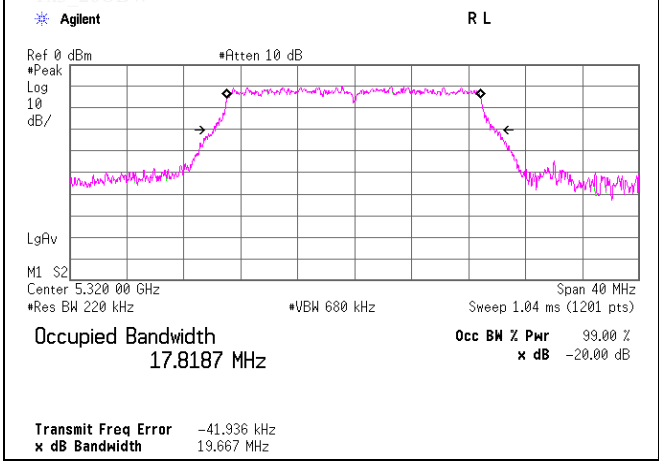
Tx, 5260 MHz



Tx, 5300 MHz



Tx, 5320 MHz



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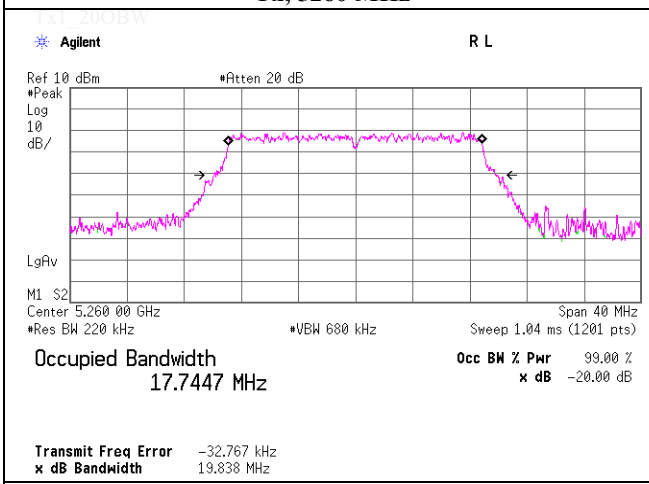
-20 dB Bandwidth

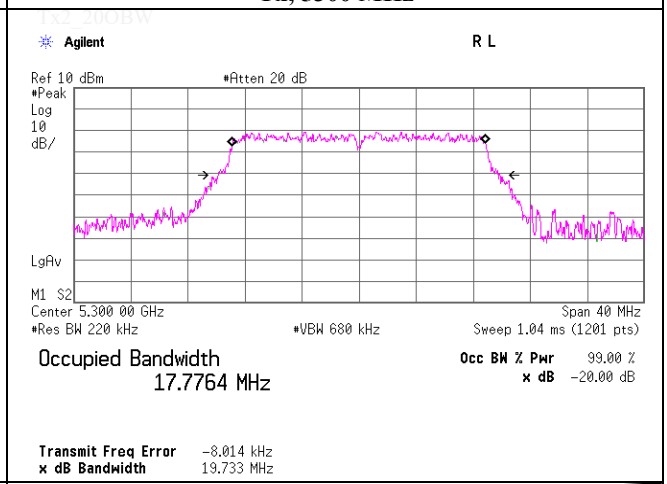
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 15, 2019	
Temperature / Humidity	24 deg.C , 35 %RH	
Engineer	Makoto Hosaka	
Mode	Tx, IEEE802.11ac VHT20 (SISO), PN9, worst antenna port 0, worst data mode 3 (MCS)	

Freq. [MHz]	-20 dB Bandwidth [MHz]
5260.0000	19.838
5300.0000	19.733
5320.0000	19.911

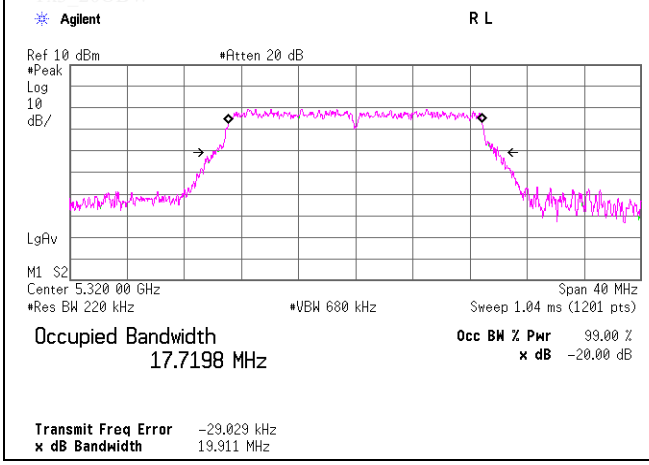
Tx, 5260 MHz



Tx, 5300 MHz



Tx, 5320 MHz



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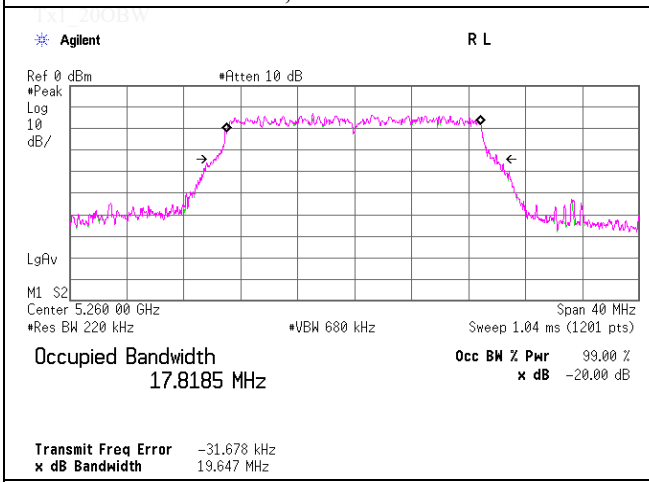
-20 dB Bandwidth

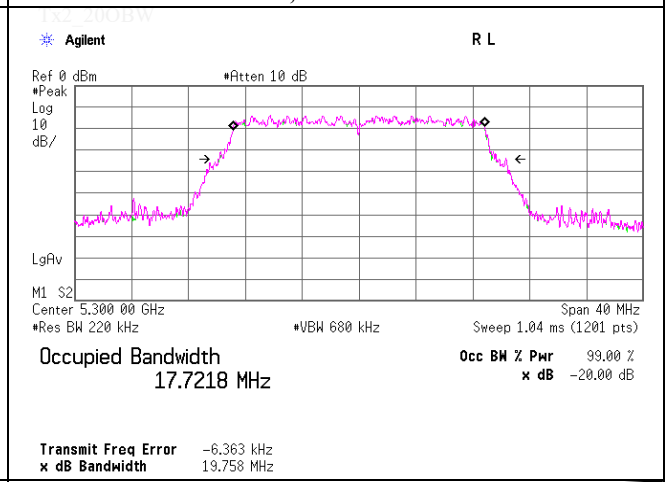
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 19, 2019	
Temperature / Humidity	21 deg.C , 41 %RH	
Engineer	Yosuke Ishikawa	
Mode	Tx, IEEE802.11n HT20 (MIMO), PN9, worst data mode 15 (MCS)	

Freq. [MHz]	-20 dB Bandwidth [MHz]
5260.0000	19.647
5300.0000	19.758
5320.0000	19.416

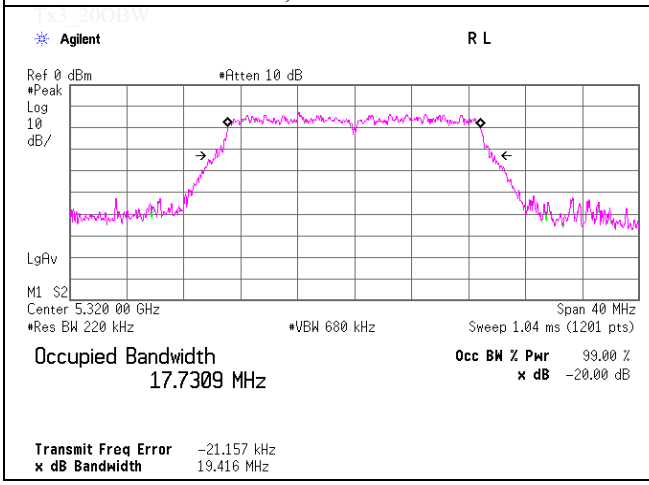
Tx, 5260 MHz



Tx, 5300 MHz



Tx, 5320 MHz



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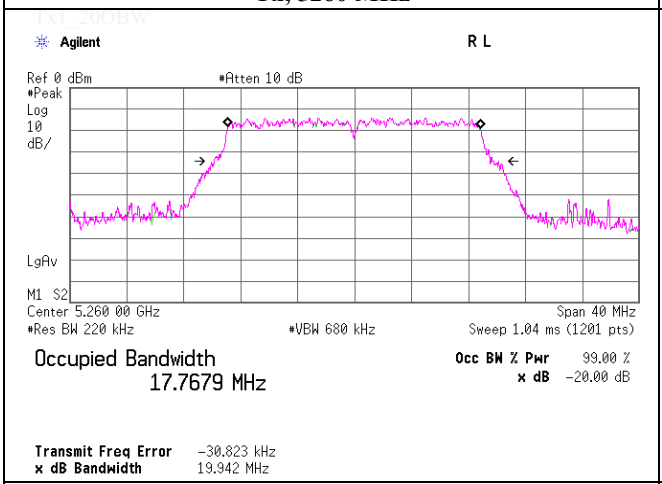
-20 dB Bandwidth

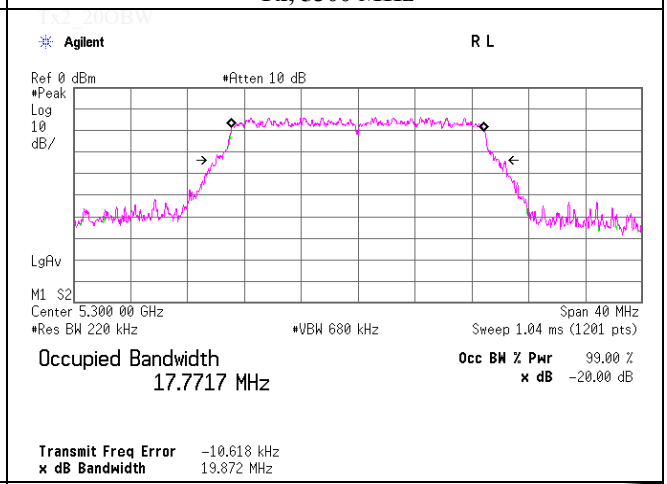
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 19, 2019	
Temperature / Humidity	21 deg.C , 41 %RH	
Engineer	Yosuke Ishikawa	
Mode	Tx, IEEE802.11ac VHT20 (MIMO), PN9, worst data mode 4 (MCS)	

Freq. [MHz]	-20 dB Bandwidth [MHz]
5260.0000	19.942
5300.0000	19.872
5320.0000	19.606

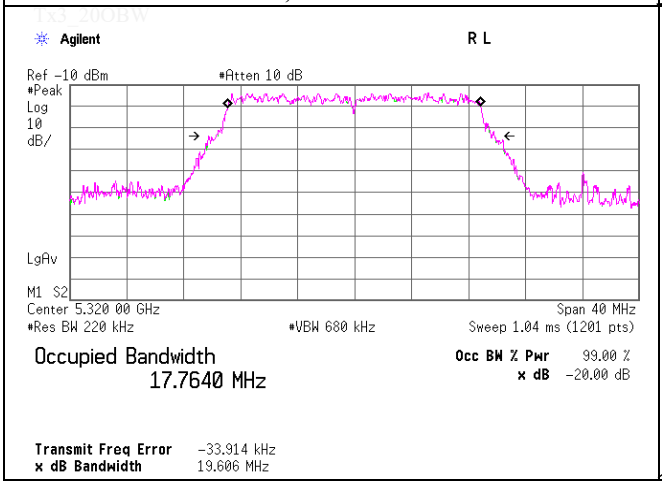
Tx, 5260 MHz



Tx, 5300 MHz



Tx, 5320 MHz



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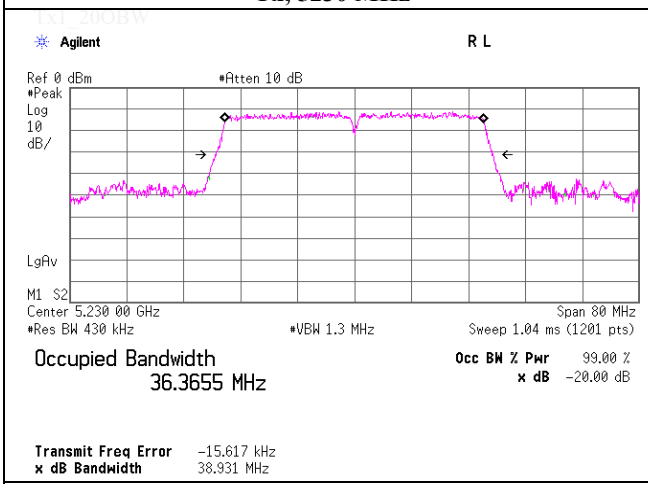
-20 dB Bandwidth

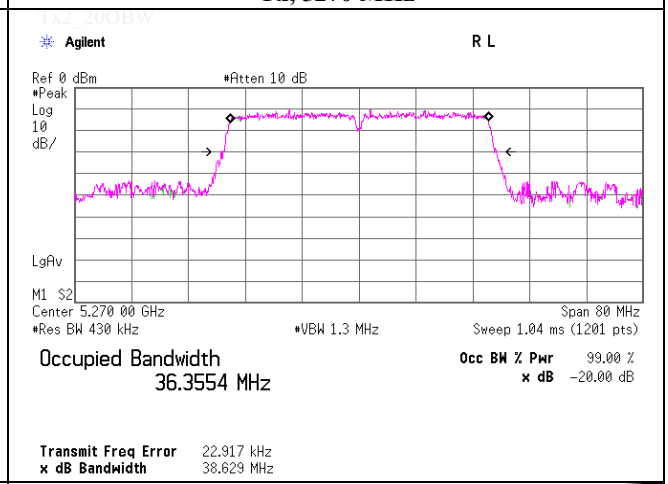
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 18, 2019	
Temperature / Humidity	22 deg.C , 54 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE802.11n HT40 (SISO), PN9, worst antenna port 0, worst data mode 3 (MCS)	

Freq. [MHz]	-20 dB Bandwidth [MHz]
5230.0000	38.931
5270.0000	38.629
5310.0000	38.803

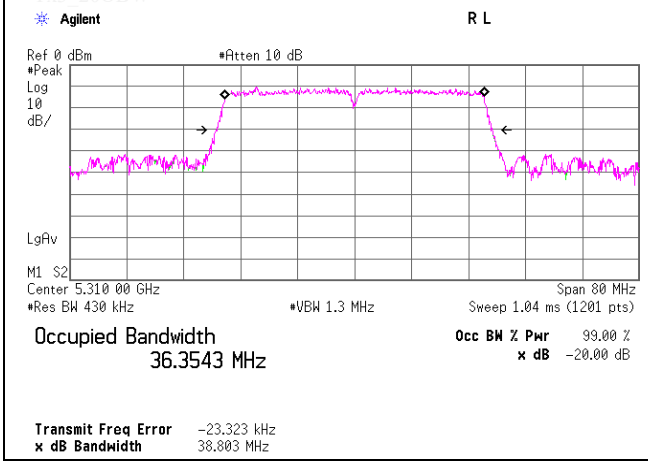
Tx, 5230 MHz



Tx, 5270 MHz



Tx, 5310 MHz



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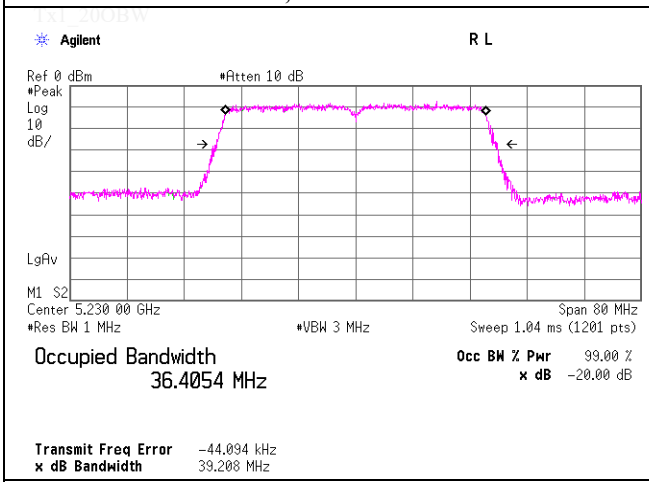
-20 dB Bandwidth

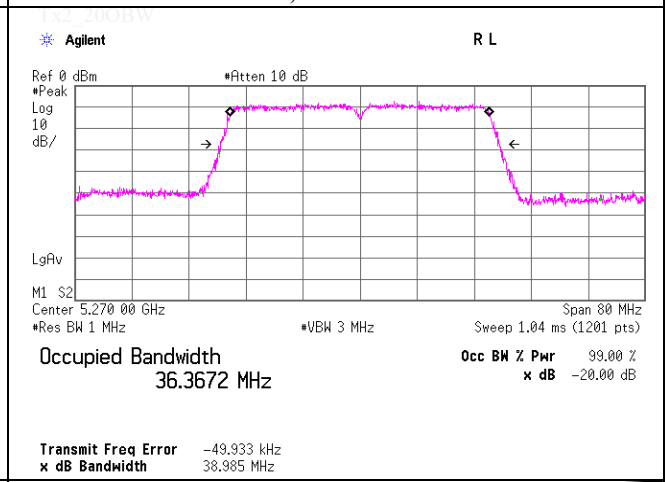
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 19, 2019	
Temperature / Humidity	21 deg.C , 41 %RH	
Engineer	Yosuke Ishikawa	
Mode	Tx, IEEE802.11ac VHT40 (SISO), PN9, worst antenna port 0, worst data mode 2(MCS)	

Freq. [MHz]	-20 dB Bandwidth [MHz]
5230.0000	39.208
5270.0000	38.985
5310.0000	39.412

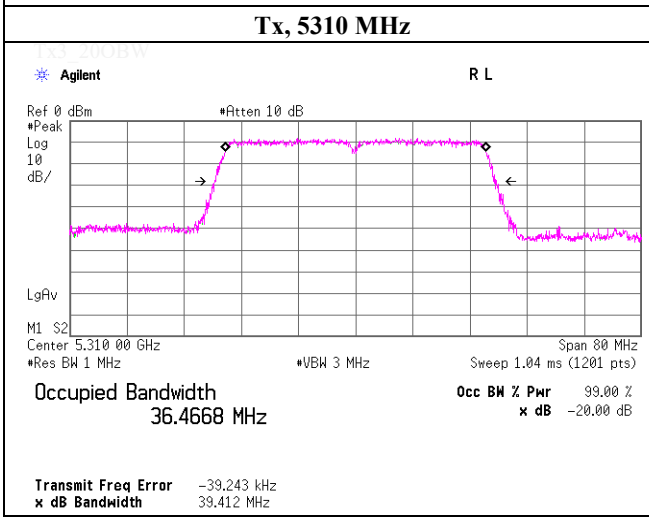
Tx, 5230 MHz



Tx, 5270 MHz



Tx, 5310 MHz



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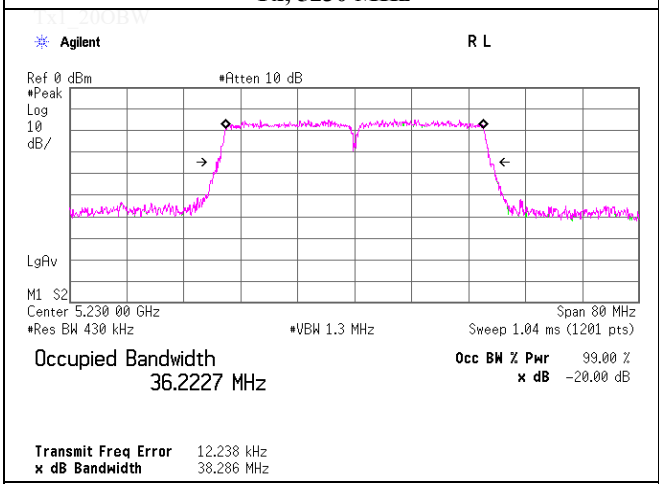
-20 dB Bandwidth

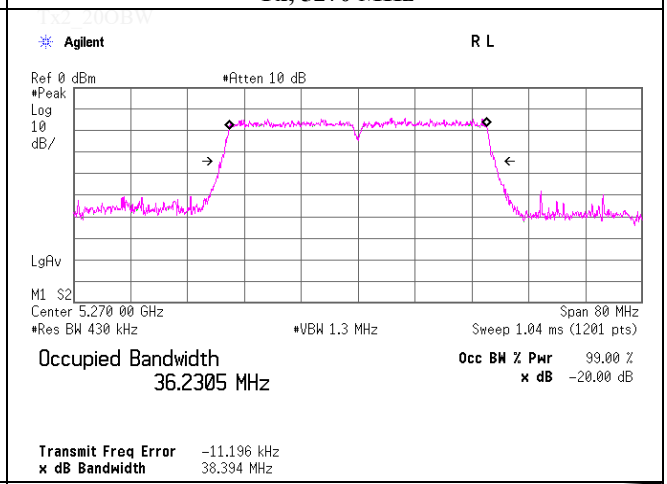
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 25, 2019	
Temperature / Humidity	20 deg.C , 59 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE 802.11n HT40 (MIMO), PN9, worst data mode 11 (MCS)	

Freq. [MHz]	-20 dB Bandwidth [MHz]
5230.0000	38.286
5270.0000	38.394
5310.0000	38.425

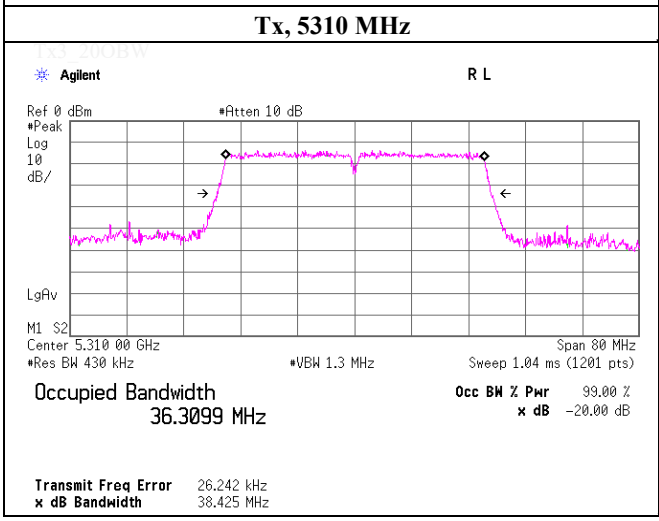
Tx, 5230 MHz



Tx, 5270 MHz



Tx, 5310 MHz



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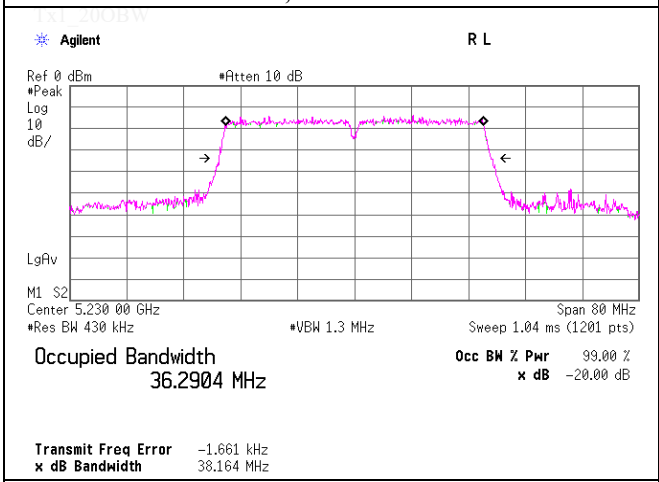
-20 dB Bandwidth

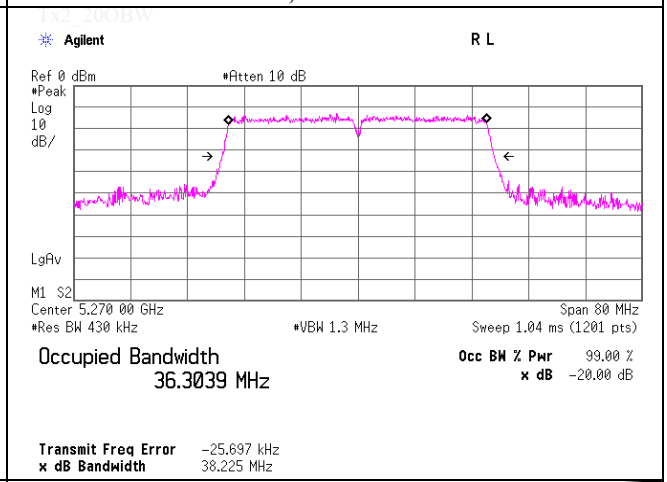
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 26, 2019	
Temperature / Humidity	21 deg.C , 51 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE 802.11ac VHT40 (MIMO), PN9, worst data mode 6 (MCS)	

Freq. [MHz]	-20 dB Bandwidth [MHz]
5230.0000	38.164
5270.0000	38.225
5310.0000	38.377

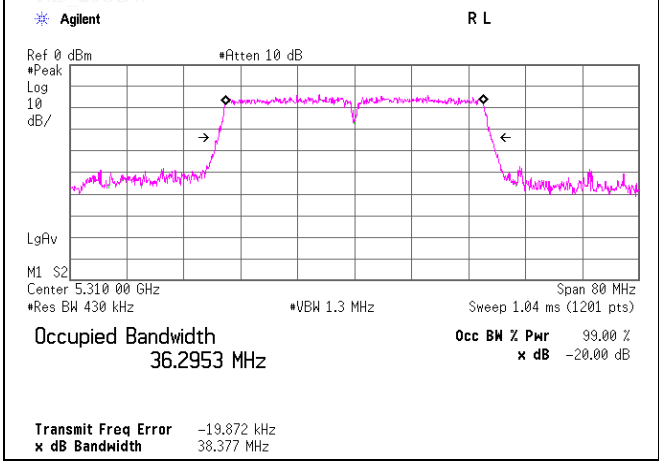
Tx, 5230 MHz



Tx, 5270 MHz



Tx, 5310 MHz



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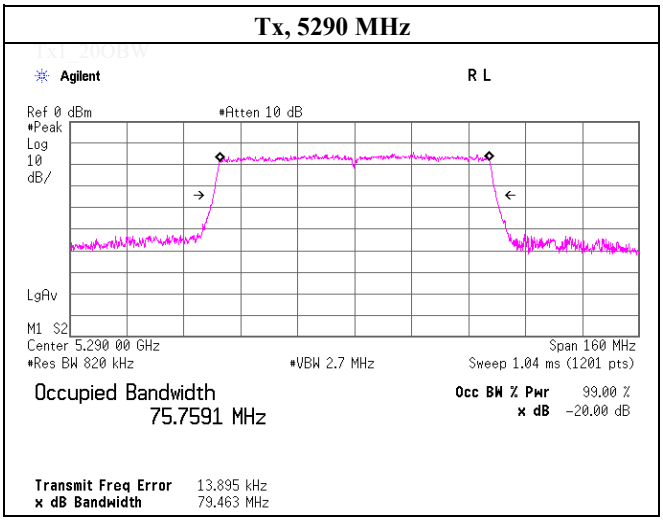
-20 dB Bandwidth

Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 22, 2019	
Temperature / Humidity	24 deg.C , 47 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE802.11ac VHT80 (SISO), PN9, worst antenna port 1, worst data mode 5(MCS)	

Freq. [MHz]	-20 dB Bandwidth [MHz]
5290.0000	79.463

Tx, 5290 MHz

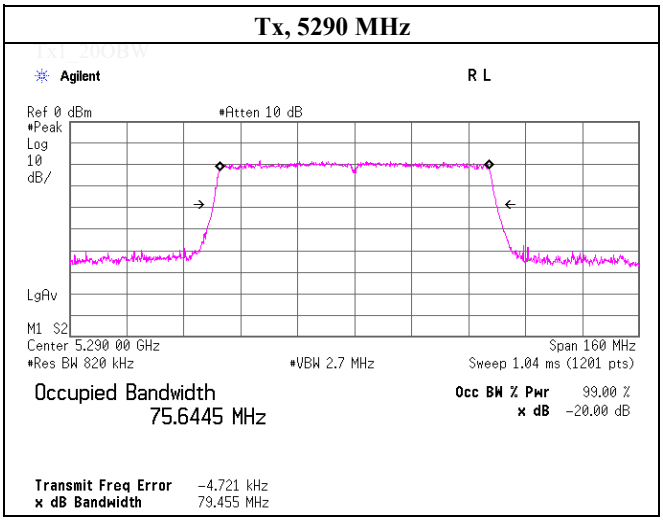


-20 dB Bandwidth

Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 26, 2019	
Temperature / Humidity	21 deg.C , 51 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE 802.11ac VHT80 (MIMO), PN9, worst data mode 5 (MCS)	

Freq. [MHz]	-20 dB Bandwidth [MHz]
5290.0000	79.455

Tx, 5290 MHz



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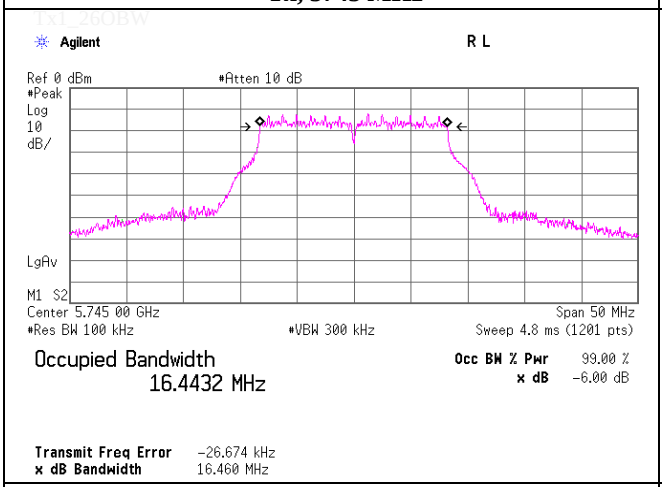
-6 dB Bandwidth

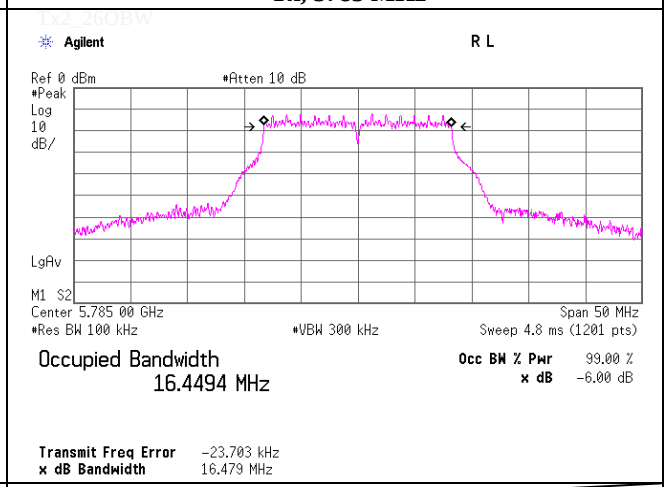
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 13, 2019	
Temperature / Humidity	24 deg.C , 57 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE802.11a, PN9, worst antenna port 0, worst data mode 48 Mbps	

Freq. [MHz]	-6 dB Bandwidth [MHz]	Limit [MHz]
5745.0000	16.460	> 0.500
5785.0000	16.479	> 0.500
5825.0000	16.476	> 0.500

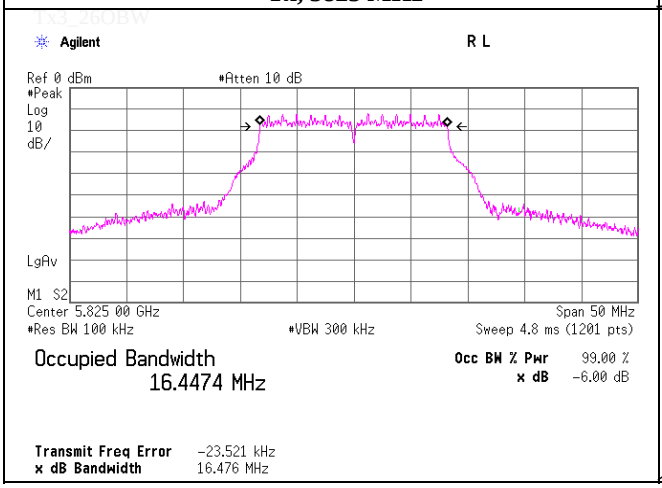
Tx, 5745 MHz



Tx, 5785 MHz



Tx, 5825 MHz

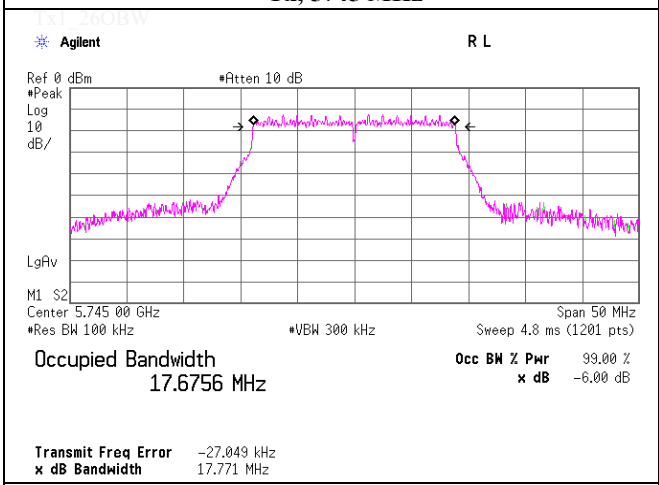


-6 dB Bandwidth

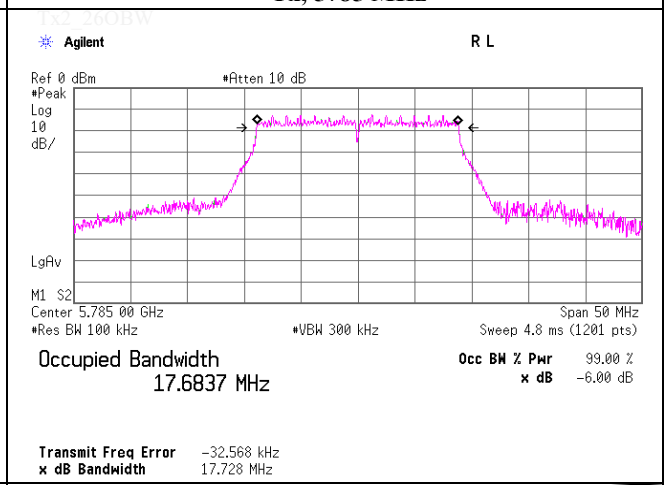
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 13, 2019	
Temperature / Humidity	24 deg.C , 57 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE802.11n HT20 (SISO), PN9, worst antenna port 0, worst data mode 6 (MCS)	

Freq. [MHz]	-6 dB Bandwidth [MHz]	Limit [MHz]
5745.0000	17.771	> 0.500
5785.0000	17.728	> 0.500
5825.0000	17.753	> 0.500

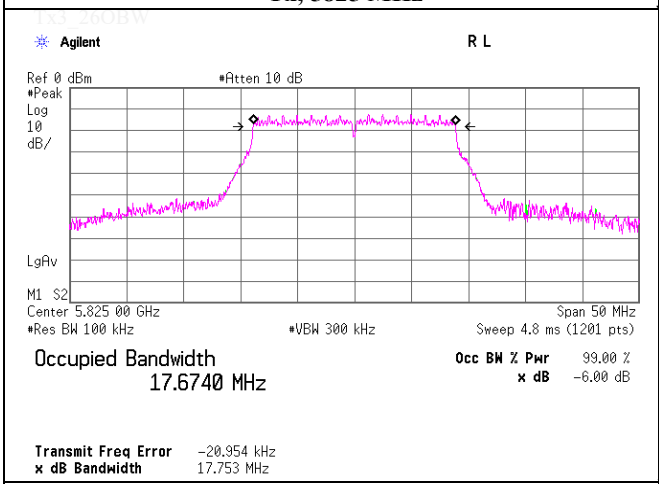
Tx, 5745 MHz



Tx, 5785 MHz



Tx, 5825 MHz

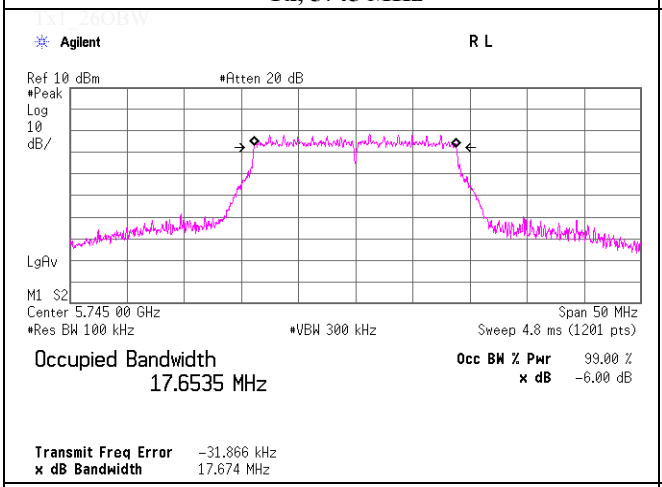


-6 dB Bandwidth

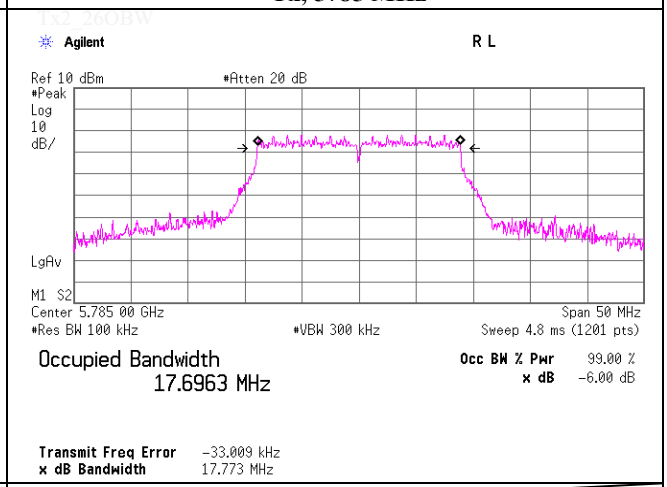
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 15, 2019	
Temperature / Humidity	24 deg.C , 35 %RH	
Engineer	Makoto Hosaka	
Mode	Tx, IEEE802.11ac VHT20 (SISO), PN9, worst antenna port 0, worst data mode 3 (MCS)	

Freq. [MHz]	-6 dB Bandwidth [MHz]	Limit [MHz]
5745.0000	17.674	> 0.500
5785.0000	17.773	> 0.500
5825.0000	17.764	> 0.500

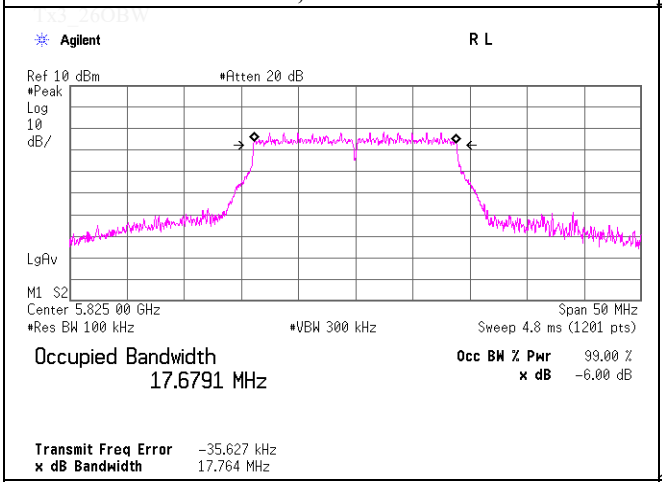
Tx, 5745 MHz



Tx, 5785 MHz



Tx, 5825 MHz

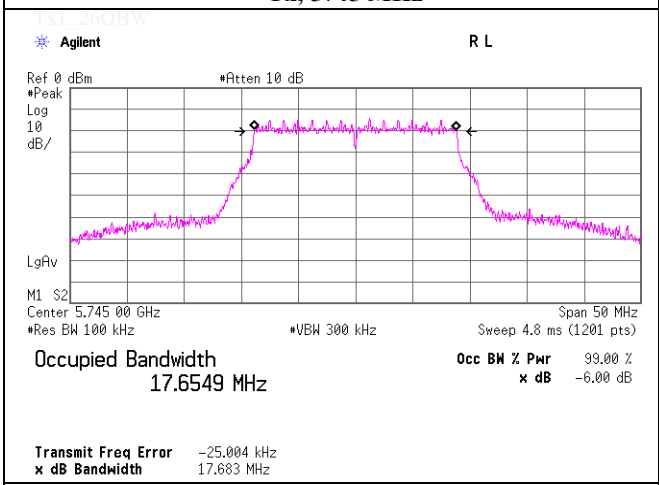


-6 dB Bandwidth

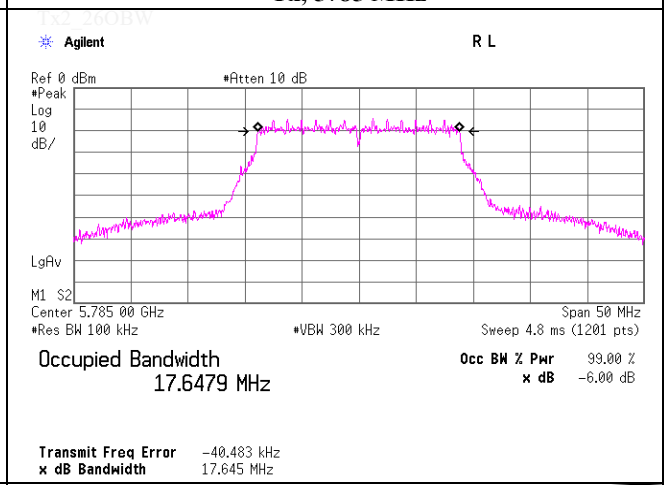
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 19, 2019	
Temperature / Humidity	21 deg.C , 41 %RH	
Engineer	Yosuke Ishikawa	
Mode	Tx, IEEE802.11n HT20 (MIMO), PN9, worst data mode 15 (MCS)	

Freq. [MHz]	-6 dB Bandwidth [MHz]	Limit [MHz]
5745.0000	17.683	> 0.500
5785.0000	17.645	> 0.500
5825.0000	17.736	> 0.500

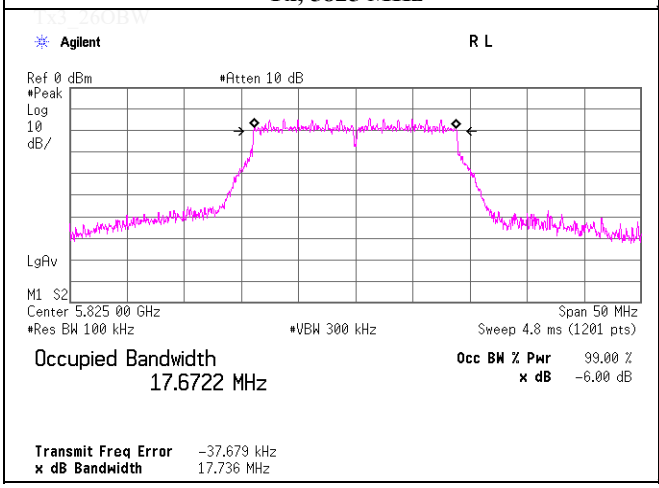
Tx, 5745 MHz



Tx, 5785 MHz



Tx, 5825 MHz

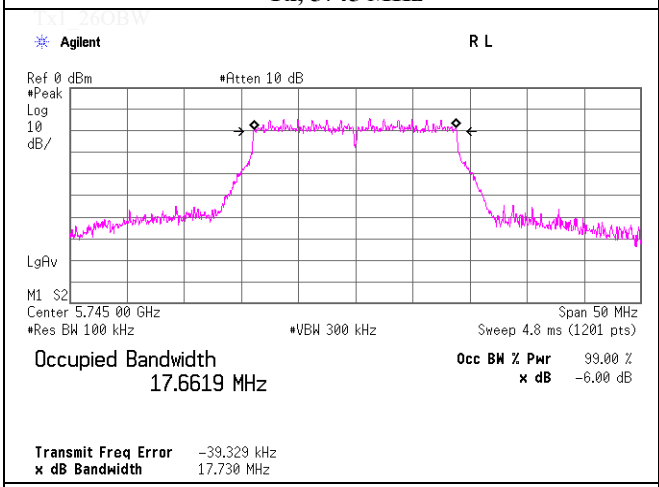


-6 dB Bandwidth

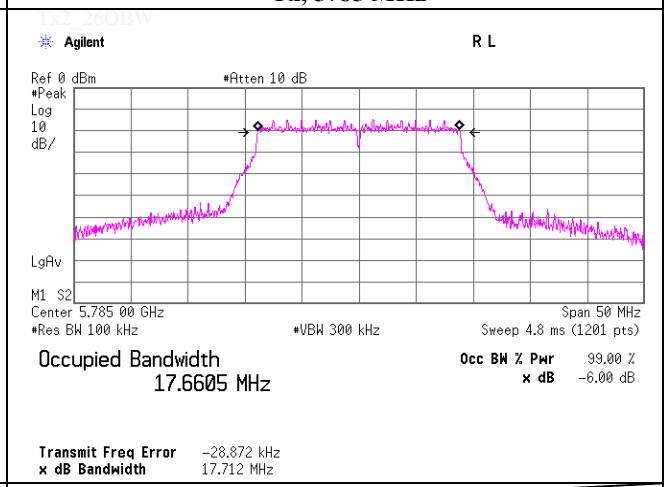
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 19, 2019	
Temperature / Humidity	21 deg.C , 41 %RH	
Engineer	Yosuke Ishikawa	
Mode	Tx, IEEE802.11ac VHT20 (MIMO), PN9, worst data mode 4 (MCS)	

Freq. [MHz]	-6 dB Bandwidth [MHz]	Limit [MHz]
5745.0000	17.730	> 0.500
5785.0000	17.712	> 0.500
5825.0000	17.716	> 0.500

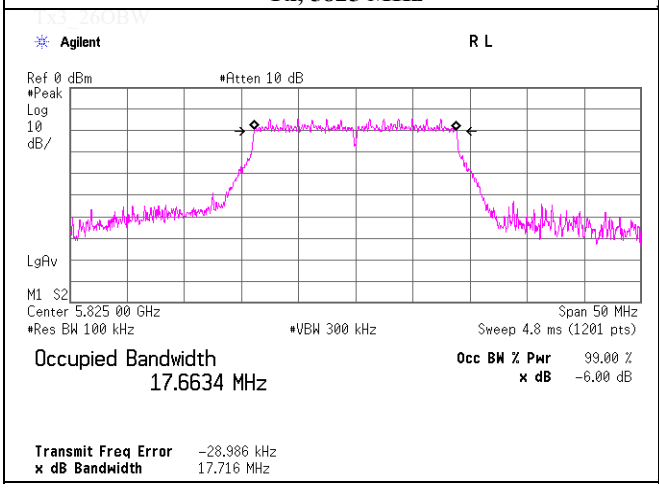
Tx, 5745 MHz



Tx, 5785 MHz



Tx, 5825 MHz

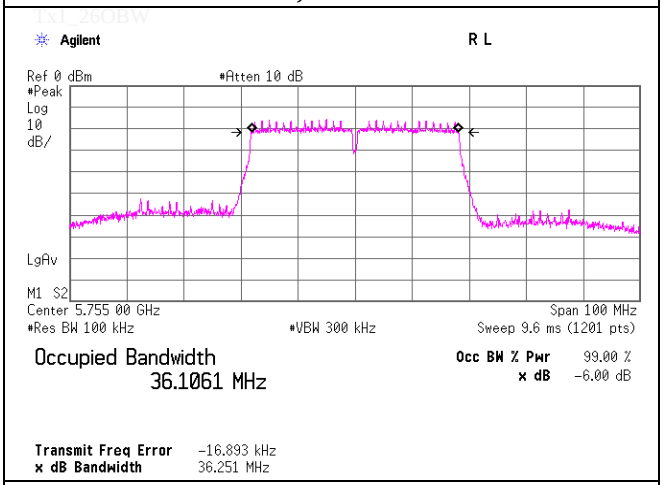


-6 dB Bandwidth

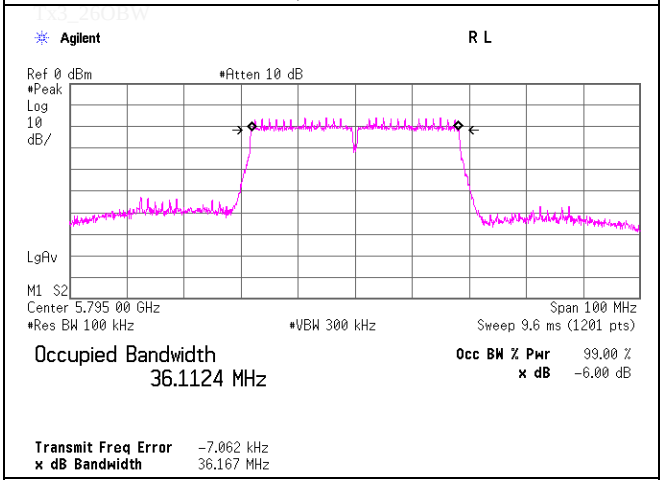
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 19, 2019	
Temperature / Humidity	21 deg.C , 41 %RH	
Engineer	Yosuke Ishikawa	
Mode	Tx, IEEE802.11n HT40 (SISO), PN9, worst antenna port 0, worst data mode 3(MCS)	

Freq. [MHz]	-6 dB Bandwidth [MHz]	Limit [MHz]
5755.0000	36.251	> 0.500
5795.0000	36.167	> 0.500

Tx, 5755 MHz



Tx, 5795 MHz

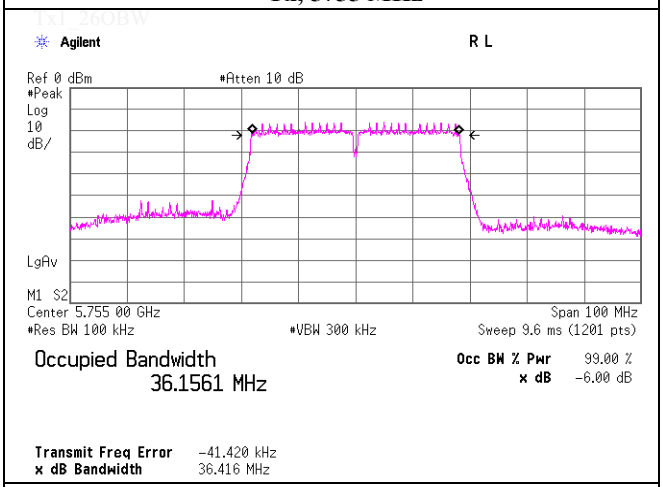


-6 dB Bandwidth

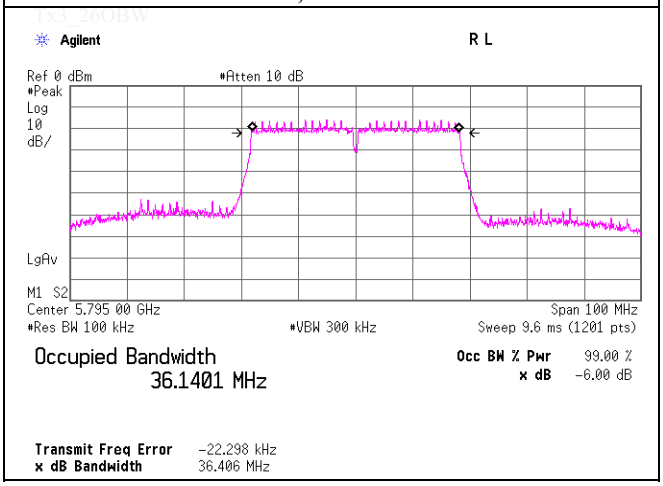
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 19, 2019	
Temperature / Humidity	21 deg.C , 41 %RH	
Engineer	Yosuke Ishikawa	
Mode	Tx, IEEE802.11ac VHT40 (SISO), PN9, worst antenna port 0, worst data mode 2(MCS)	

Freq. [MHz]	-6 dB Bandwidth [MHz]	Limit [MHz]
5755.0000	36.416	> 0.500
5795.0000	36.406	> 0.500

Tx, 5755 MHz



Tx, 5795 MHz

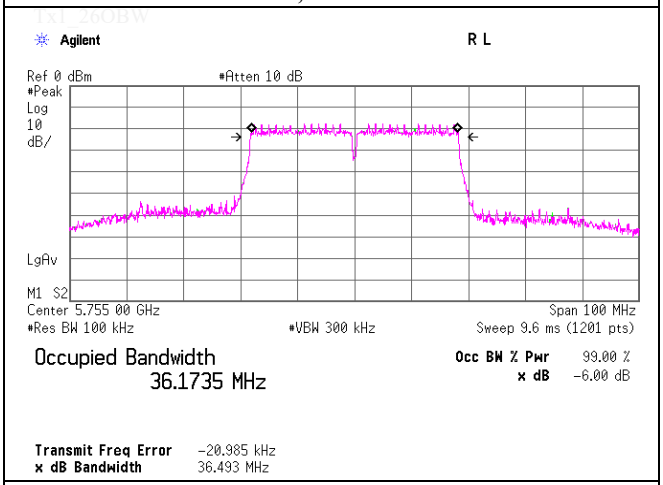


-6 dB Bandwidth

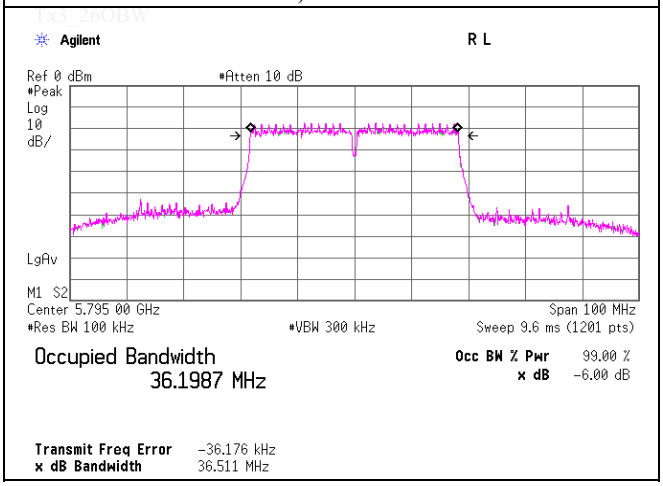
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 25, 2019	
Temperature / Humidity	20 deg.C , 59 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE 802.11n HT40 (MIMO), PN9, worst data mode 11 (MCS)	

Freq. [MHz]	-6 dB Bandwidth [MHz]	Limit [MHz]
5755.0000	36.493	> 0.500
		> 0.500
5795.0000	36.511	> 0.500

Tx, 5755 MHz



Tx, 5795 MHz

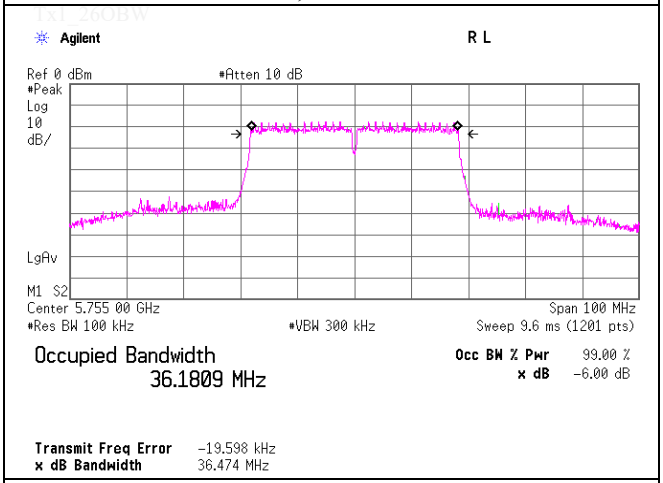


-6 dB Bandwidth

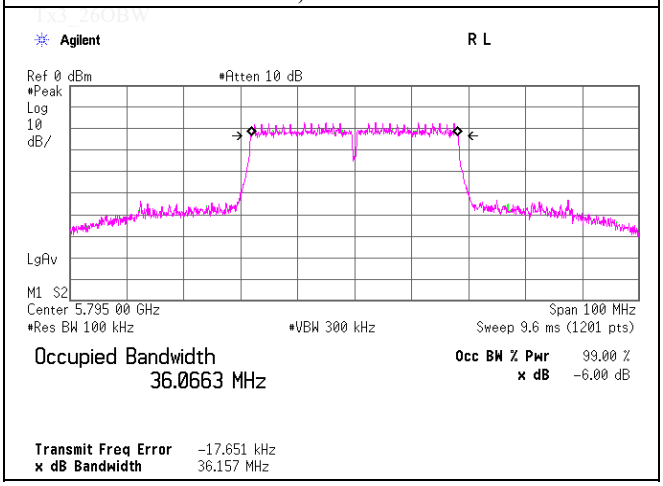
Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 26, 2019	
Temperature / Humidity	21 deg.C , 51 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE 802.11ac VHT40 (MIMO), PN9, worst data mode 6 (MCS)	

Freq. [MHz]	-6 dB Bandwidth [MHz]	Limit [MHz]
5755.0000	36.474	> 0.500
		> 0.500
5795.0000	36.157	> 0.500

Tx, 5755 MHz



Tx, 5795 MHz

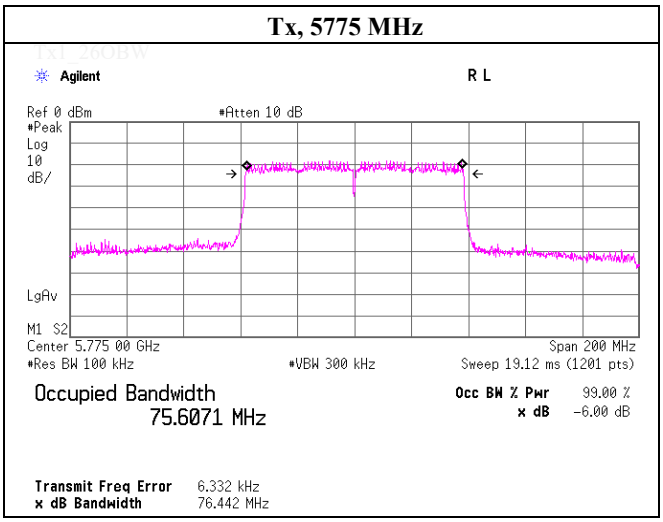


-6 dB Bandwidth

Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 22, 2019	
Temperature / Humidity	24 deg.C , 47 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE802.11ac VHT80 (SISO), PN9, worst antenna port 0, worst data mode 5(MCS)	

Freq. [MHz]	-6 dB Bandwidth [MHz]	Limit [MHz]
5775.0000	76.442	> 0.500
		> 0.500
		> 0.500

Tx, 5775 MHz



-6 dB Bandwidth

Test place	UL Japan, Inc. Shonan EMC Lab.	No.1 Measurement Room
Date	March 26, 2019	
Temperature / Humidity	21 deg.C , 51 %RH	
Engineer	Kenichi Adachi	
Mode	Tx, IEEE 802.11ac VHT80 (MIMO), PN9, worst data mode 6 (MCS)	

Freq. [MHz]	-6 dB Bandwidth [MHz]	Limit [MHz]
5775.0000	75.995	> 0.500
		> 0.500
		> 0.500

Tx, 5775 MHz