

RADIO TEST REPORT

Test Report No. 14724442S-C-R1

Customer	Nintendo Co., Ltd.
Description of EUT	Game console
Model Number of EUT	BEE-001
FCC ID	BKEBEE001
Test Regulation	FCC Part 15 Subpart E
Test Result	Complied
Issue Date	December 25, 2024
Remarks	WLAN (5 GHz band) part Except for DFS test

Representative Test EngineerYosuke Murakami
Engineer**Approved By**Takayuki Shimada
Leader

CERTIFICATE 1266.03

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

Report Cover Page - Form-ULID-003532 (DCS:13-EM-F0429) Issue# 24.0

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- For test report(s) referred in this report, the latest version (including any revisions) is always referred.

REVISION HISTORY

Original Test Report No. 14724442S-C

This report is a revised version of 14724442S-C. 14724442S-C is replaced with this report.

Revision	Test Report No.	Date	Page Revised Contents
- (Original)	14724442S-C	December 9, 2024	-
1	14724442S-C-R1	December 25, 2024	<u>Clause 4.2 P.14</u> Corrected test configuration from; to; <u>Clause 4.2 P.15</u> Corrected note *1) regarding test voltage. <u>APPENDIX 2 Test Instruments P.566, 567</u> Deleted note *1) regarding calibration date.

Reference: Abbreviations (Including words undescribed in this report)

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

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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
Contact Person	Yosuke Ishikawa

The information provided from the customer is as follows;

- Customer, Description of EUT, Model Number of EUT, FCC ID on the cover and other relevant pages
- Operating/Test Mode(s) (Mode(s)) on all the relevant pages
- SECTION 1: Customer Information
- SECTION 2: Equipment Under Test (EUT) other than the Receipt Date and Test Date
- SECTION 4: Operation of EUT during testing

* The laboratory is exempted from liability of any test results affected from the above information in SECTION 2 and 4.

SECTION 2: Equipment Under Test (EUT)

2.1 Identification of EUT

Description	Game console
Model Number	BEE-001
Serial Number	Refer to SECTION 4.2
Condition	Engineering prototype (Not for Sale: This sample is equivalent to mass-produced items.)
Modification	No Modification by the test lab
Receipt Date	September 11, 2023 (For Antenna Terminal Conducted Emission) September 19, 2023 (For Radiated Emission and Conducted Emission)
Test Date	September 29, 2023 to May 18, 2024

2.2 Product Description

General Specification

Rating	BEE-001 DC: 5 V to 15 V (*AC Adaptor) Internal battery: 3.78 V *AC Adaptor AC 100 V to 240 V, 50 / 60 Hz AC Adaptor output: 5 V to 20 V
Operating temperature	+5 deg. C to +35 deg. C

Radio Specification

This report contains data provided by the customer which can impact the validity of results. UL Japan, Inc. is only responsible for the validity of results after the integration of the data provided by the customer. The data provided by the customer is marked "a)" in the table below.

Bluetooth (BR / EDR / Low Energy)

Equipment Type	Transceiver
Frequency of Operation	2402 MHz to 2480 MHz
Type of Modulation	BT: FHSS (GFSK, $\pi/4$ DQPSK, 8 DPSK) BT LE: GFSK
Antenna Type	LDS Antenna
Antenna Gain	Antenna 0: -2.51 dBi Antenna 1: -1.74 dBi

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

Equipment Type	Transceiver
Frequency of Operation	2412 MHz to 2472 MHz
Type of Modulation	DSSS, OFDM OFDMA (IEEE802.11ax Only): 26/52/106/242-tone RU
Antenna Type	LDS Antenna
Antenna Gain	Antenna 0: -2.51 dBi Antenna 2: 0.21 dBi

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

Equipment Type	Transceiver	
Frequency of Operation	20 MHz Band:	5180 MHz to 5240 MHz 5260 MHz to 5320 MHz 5500 MHz to 5700 MHz 5745 MHz to 5825 MHz
	40 MHz Band	5190 MHz to 5230 MHz 5270 MHz to 5310 MHz 5510 MHz to 5670 MHz 5755 MHz to 5795 MHz
	80 MHz band	5210 MHz 5290 MHz 5530 MHz 5775 MHz
Type of Modulation	OFDM	
	OFDMA (IEEE802.11ax only)	20 MHz band: 26/52/106/242-tone RU
		40 MHz band: 26/52/106/242/484-tone RU 80 MHz band: 26/52/106/242/484/996-tone RU
Antenna Type	LDS Antenna	
Antenna Gain ^{a)}	Antenna 0 0.70 dBi (WLAN U-NII-1, U-NII-2A, U-NII-2C, U-NII-3 band)	
	Antenna 2 4.07 dBi (WLAN U-NII-1, U-NII-2A, U-NII-2C, U-NII-3 band)	

LDS: Laser Direct Structuring

* 5600 MHz to 5650 MHz band is not used.

SECTION 3: Test specification, Procedures & Results

3.1 Test Specification

Test Specification	FCC Part 15 Subpart E The latest version on the first day of the testing period
Title	FCC 47 CFR Part 15 Radio Frequency Device Subpart E Unlicensed National Information Infrastructure Devices Section 15.407 General technical requirements

* Also the EUT complies with FCC Part 15 Subpart B.

3.2 Procedures and Results

Item	Test Procedure	Specification	Worst Margin	Results	Remarks
Conducted Emission	FCC: ANSI C63.10-2013 ISED: RSS-Gen 8.8	FCC: 15.407 (b) (9) / 15.207 ISED: RSS-Gen 8.8	14.4 dB 11.44183 MHz, L1, AV Tx 11ax-20 (OFDM) (SDM) 5180 MHz	Complied	-
26 dB Emission Bandwidth	FCC: KDB Publication Number 789033 ISED: -	FCC: 15.407 (a) (1) (2) (3) ISED: -	See data	Complied	Conducted
Maximum Conducted Output Power	FCC: KDB Publication Number 789033 ISED: -	FCC: 15.407 (a) (1) (2) (3) ISED: RSS-247 6.2		Complied	Conducted
Maximum Power Spectral Density	FCC: KDB Publication Number 789033 ISED: -	FCC : 15.407 (a) (1) (2) (3) ISED: RSS-247 6.2		Complied	Conducted
Spurious Emission Restricted Band Edge	FCC: ANSI C63.10-2013 KDB Publication Number 789033 ISED: -	FCC: 15.407 (b), 15.205 and 15.209 ISED: RSS-247 6.2	3.8 dB 5150 MHz, AV, Vert, Tx 11ax-80 (OFDM) (SDM) 5210 MHz	Complied	Conducted (below 30 MHz) / Radiated (above 30 MHz) *1)
6 dB Emission Bandwidth	FCC: ANSI C63.10-2013 ISED: -	FCC: 15.407 (e) ISED: RSS-247 6.2	See data	Complied	Conducted
Note: UL Japan, Inc.'s EMI Work Procedures: Work Instructions-ULID-003591 and Work Instructions-ULID-003593. * In case any questions arise about test procedure, ANSI C63.10: 2013 is also referred.					
*1) Radiated test was selected over 30 MHz based on FCC 15.407 (b) and KDB 789033 D02 G.3.b).					

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	ISED: RSS-Gen 6.7	ISED: -	N/A	-	Conducted

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

3.4 Uncertainty

Measurement uncertainty is not taken into account when stating conformity with a specified requirement.
Note: When margins obtained from test results are less than the measurement uncertainty, the test results may exceed the limit.

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

Item	Frequency range	Uncertainty (+/-)
Conducted Emission (AC Mains) LISN	150 kHz to 30 MHz	3.2 dB
Radiated Emission (Measurement distance: 3 m)	9 kHz to 30 MHz	3.3 dB
	30 MHz to 200 MHz	4.9 dB
	200 MHz to 1 GHz	6.2 dB
	1 GHz to 6 GHz	4.7 dB
	6 GHz to 18 GHz	5.3 dB
	18 GHz to 40 GHz	5.5 dB
Radiated Emission (Measurement distance: 1 m)	1 GHz to 18 GHz	5.6 dB
	18 GHz to 40 GHz	5.8 dB

Antenna terminal test	Uncertainty (+/-)
Power Measurement above 1 GHz (Average Detector)	1.3 dB
Power Measurement above 1 GHz (Peak Detector)	1.8 dB
Spurious Emission (Conducted) below 1 GHz	0.91 dB
Conducted Emissions Power Density Measurement 1 GHz to 3 GHz	1.3 dB
Conducted Emissions Power Density Measurement 3 GHz to 18 GHz	2.5 dB
Spurious Emission (Conducted) 18 GHz to 26.5 GHz	2.8 dB
Spurious Emission (Conducted) 26.5 GHz to 40 GHz	2.6 dB
Bandwidth Measurement	0.012 %
Duty Cycle and Time Measurement	0.27 %
Temperature	2.2 deg.C.
Humidity	4.0 %
Voltage	0.74 %

3.5 Test Location

UL Japan, Inc. Shonan EMC Lab.

1-22-3, Megumigaoka, Hiratsuka-shi, Kanagawa-ken 259-1220 Japan

Telephone: +81-463-50-6400

A2LA Certificate Number: 1266.03

(FCC test firm registration number: 626366, ISED lab company number: 2973D / CAB identifier: JP0001)

Test room	Width x Depth x Height (m)	Size of reference ground plane (m) / horizontal conducting plane	Maximum measurement distance
No.1 Semi-anechoic chamber (SAC1)	20.6 x 11.3 x 7.65	20.6 x 11.3	10 m
No.2 Semi-anechoic chamber (SAC2)	20.6 x 11.3 x 7.65	20.6 x 11.3	10 m
No.3 Semi-anechoic chamber (SAC3)	12.7 x 7.7 x 5.35	12.7 x 7.7	5 m
No.4 Semi-anechoic chamber (SAC4)	8.1 x 5.1 x 3.55	8.1 x 5.1	-
Wireless anechoic chamber 1 (WAC1)	9.5 x 6.0 x 5.4	9.5 x 6.0	3 m
Wireless anechoic chamber 2 (WAC2)	9.5 x 6.0 x 5.4	9.5 x 6.0	3 m
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	-	-
No.2 Measurement room	4.5 x 3.5 x 2.5	-	-
Wireless shielded room 1	3.0 x 4.5 x 2.7	3.0 x 4.5	-
Wireless shielded room 2	3.0 x 4.5 x 2.7	3.0 x 4.5	-

3.6 Test Data, Test Instruments, and Test Set Up

Refer to APPENDIX.

SECTION 4: Operation of EUT during testing

4.1 Operating Mode(s)

Mode	Remarks*
IEEE 802.11a (11a)	12 Mbps, PN9
IEEE 802.11n SISO 20 MHz BW (11n-20 (SISO))	MCS 2 (1ss), PN9
IEEE 802.11n MIMO 20 MHz BW (11n-20 (SDM))	MCS 8 (2ss), PN9
IEEE 802.11ac SISO 20 MHz BW (11ac-20 (SISO))	MCS 2 (1ss), PN9
IEEE 802.11ac MIMO 20 MHz BW (11ac-20 (SDM))	MCS 3 (2ss), PN9
IEEE 802.11ax SISO 20 MHz BW OFDM (11ax-20 (OFDM)(SISO))	MCS 11 (1ss), PN9
IEEE 802.11ax SISO 20 MHz BW OFDMA (11ax-20 (OFDMA)(SISO))	
IEEE 802.11ax MIMO 20 MHz BW OFDM (11ax-20 (OFDM)(SDM))	MCS 11 (2ss), PN9
IEEE 802.11ax MIMO 20 MHz BW OFDMA (11ax-20 (OFDMA)(SDM))	
IEEE 802.11n SISO 40 MHz BW (11n-40 (SISO))	MCS 0 (1ss), PN9
IEEE 802.11n MIMO 40 MHz BW (11n-40 (SDM))	MCS 8 (2ss), PN9
IEEE 802.11ac SISO 40 MHz BW (11ac-40 (SISO))	MCS 1 (1ss), PN9
IEEE 802.11ac MIMO 40 MHz BW (11ac-40 (SDM))	MCS 0 (2ss), PN9
IEEE 802.11ax SISO 40 MHz BW OFDM (11ax-40 (OFDM)(SISO))	MCS 11 (1ss), PN9
IEEE 802.11ax SISO 40 MHz BW OFDMA (11ax-40 (OFDMA)(SISO))	
IEEE 802.11ax MIMO 40 MHz BW OFDM (11ax-40 (OFDM)(SDM))	MCS 10 (2ss), PN9
IEEE 802.11ax MIMO 40 MHz BW OFDMA (11ax-40 (OFDMA)(SDM))	
IEEE 802.11ac SISO 80 MHz BW (11ac-80 (SISO))	MCS 2 (1ss), PN9
IEEE 802.11ac MIMO 80 MHz BW (11ac-80 (SDM))	MCS 0 (2ss), PN9
IEEE 802.11ax SISO 80 MHz BW OFDM (11ax-80 (OFDM)(SISO))	MCS 10 (1ss), PN9
IEEE 802.11ax SISO 80 MHz BW OFDMA (11ax-80 (OFDMA)(SISO))	
IEEE 802.11ax MIMO 80 MHz BW OFDM (11ax-80 (OFDM)(SDM))	MCS 10 (2ss), PN9
IEEE 802.11ax MIMO 80 MHz BW OFDMA (11ax-80 (OFDMA)(SDM))	
*The worst condition were determined based on the test result of Maximum Conducted Output Power.	

*Power of the EUT was set by the software as follows;

Power Other than OFDMA : 7
Setting: 11a, 11n-20(SISO/SDM), 11ac-20(SISO/SDM), 11ax-20(OFDM)(SISO/SDM),
11n-40(SISO/SDM), 11ac-40(SISO/SDM), 11ax-40(SISO/SDM),
11ac-80(SISO/SDM), 11ax-80(SISO/SDM)

OFDMA :

11ax-20(OFDMA)(SISO)

	5180 MHz to 5240 MHz	5260 MHz to 5320 MHz	5500 MHz to 5700 MHz	57450MHz to 5825 MHz
26-tone RU	3.5	3.0	3.0	7.0
52-tone RU	6.5	6.0	6.0	7.0
106-tone RU	7.0	7.0	7.0	7.0
242-tone RU	7.0	7.0	7.0	7.0

11ax-40(OFDMA)(SISO)

	5190 MHz to 5230 MHz	5270 MHz to 5310 MHz	5510 MHz to 5670 MHz	5755 MHz to 5795 MHz
26-tone RU	2.5	0.0	3.0	7.0
52-tone RU	5.5	3.0	6.0	7.0
106-tone RU	7.0	6.0	7.0	7.0
242-tone RU	7.0	7.0	7.0	7.0
484-tone RU	7.0	7.0	7.0	7.0

11ax-80(OFDMA)(SISO)

	5210 MHz	5290 MHz	5530 MHz to 5610 MHz	5775 MHz
26-tone RU	-0.5	-3.0	3.0	7.0
52-tone RU	2.5	0.0	6.0	7.0
106-tone RU	5.5	3.0	7.0	7.0
242-tone RU	7.0	6.0	7.0	7.0
484-tone RU	7.0	7.0	7.0	7.0
996-tone RU	7.0	7.0	7.0	7.0

11ax-20(OFDMA)(SDM)

	5180 MHz to 5240 MHz	5260 MHz to 5320 MHz	5500 MHz to 5700 MHz	57450MHz to 5825 MHz
26-tone RU	0.5	1.5	1.5	7.0
52-tone RU	3.5	4.5	4.5	7.0
106-tone RU	6.5	7.0	7.0	7.0
242-tone RU	7.0	7.0	7.0	7.0

11ax-40(OFDMA)(SDM)

	5190 MHz to 5230 MHz	5270 MHz to 5310 MHz	5510 MHz to 5670 MHz	5755 MHz to 5795 MHz
26-tone RU	0.0	-1.5	1.5	7.0
52-tone RU	3.0	1.5	4.5	7.0
106-tone RU	6.0	4.5	7.0	7.0
242-tone RU	7.0	7.0	7.0	7.0
484-tone RU	7.0	7.0	7.0	7.0

11ax-80(OFDMA)(SDM)

	5210 MHz	5290 MHz	5530 MHz	5775 MHz
26-tone RU	-2.0	-4.5	0.0	7.0
52-tone RU	1.0	-1.5	3.0	7.0
106-tone RU	4.0	1.5	6.0	7.0
242-tone RU	7.0	4.5	7.0	7.0
484-tone RU	7.0	7.0	7.0	7.0
996-tone RU	7.0	7.0	7.0	7.0

Software: WlanBtRelayTool Version: 0358079
(Date: 2023.09.19, Storage location: Driven by connected PC)

* (1ss): 1 spatial stream, (2ss): 2 spatial stream

* 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.

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/ax mode by the pre-test.

*The Details of Operation Mode(s) (1/2)

Test Item	Operating Mode	Tested Antenna	Tested Frequency			
			Lower Band	Middle Band	Additional Band	Upper Band
Conducted emission, Radiated Spurious Emission (Below 1 GHz)	Tx 11ax-20(OFDM) (SDM) *1)	Ant 0 + Ant 2	5180 MHz	-	-	-
26 dB Emission Bandwidth *5)	(SISO) Tx 11a (SDM) Tx 11n-20 Tx 11ac-20 Tx 11ax-20(OFDM) Tx 11ax-20(OFDMA)	Ant 2 *2)	-	5260 MHz 5300 MHz 5320 MHz	5500 MHz 5580 MHz 5700 MHz	-
	(SDM) Tx 11n-40 Tx 11ac-40 Tx 11ax-40(OFDM) Tx 11ax-40(OFDMA)		-	5270 MHz 5310 MHz	5510 MHz 5550 MHz 5670 MHz	-
	(SDM) Tx 11ac-80 Tx 11ax-80(OFDM) Tx 11ax-80(OFDMA)		-	5290 MHz	5530 MHz	-
99 % Occupied Bandwidth *5)	(SISO) Tx 11a (SDM) Tx 11n-20 Tx 11ac-20 Tx 11ax-20(OFDM) Tx 11ax-20(OFDMA)	Ant 2 *2)	5180 MHz 5220 MHz 5240 MHz	5260 MHz 5300 MHz 5320 MHz	5500 MHz 5580 MHz 5700 MHz	5745 MHz 5785 MHz 5825 MHz
	(SDM) Tx 11n-40 Tx 11ac-40 Tx 11ax-40(OFDM) Tx 11ax-40(OFDMA)		5190 MHz 5230 MHz	5270 MHz 5310 MHz	5510 MHz 5550 MHz 5670 MHz	5755 MHz 5795 MHz
	(SDM) Tx 11ac-80 Tx 11ax-80(OFDM) Tx 11ax-80(OFDMA)		5210 MHz	5290 MHz	5530 MHz	5775 MHz
6 dB Bandwidth *5)	(SISO) Tx 11a (SDM) Tx 11n-20 Tx 11ac-20 Tx 11ax-20(OFDM) Tx 11ax-20(OFDMA)	Ant 2 *2)	-	-	-	5745 MHz 5785 MHz 5825 MHz
	(SDM) Tx 11n-40 Tx 11ac-40 Tx 11ax-40(OFDM) Tx 11ax-40(OFDMA)		-	-	-	5755 MHz 5795 MHz
	(SDM) Tx 11ac-80 Tx 11ax-80(OFDM) Tx 11ax-80(OFDMA)		-	-	-	5775 MHz

*The Details of Operation Mode(s) (2/2)

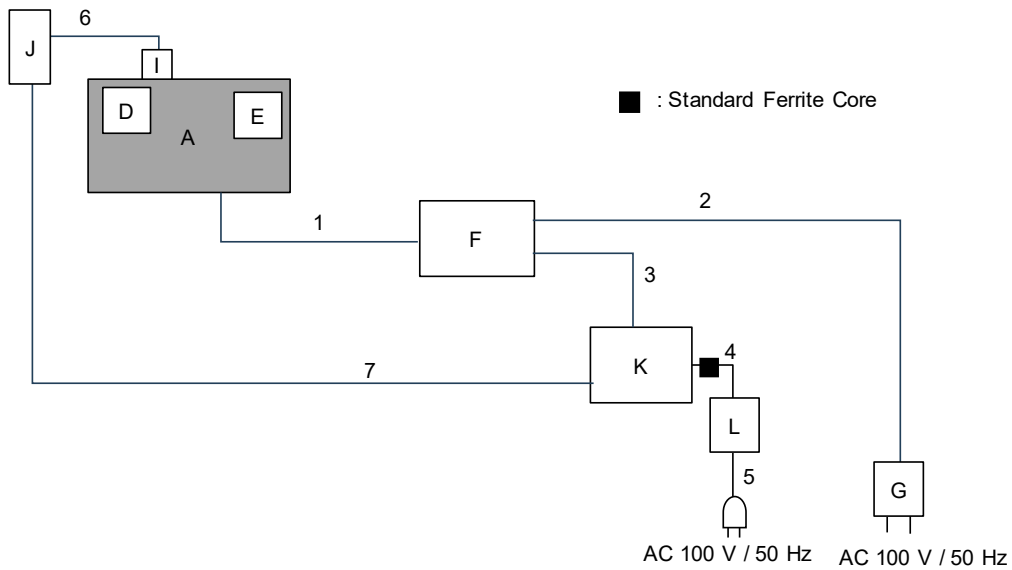
Test Item	Operating Mode	Tested Antenna	Tested Frequency			
			Lower Band	Middle Band	Additional Band	Upper Band
Maximum Conducted Output Power, Maximum Power Spectral Density	(SISO) Tx 11a (SDM) Tx 11n-20 Tx 11ac-20 Tx 11ax-20(OFDM) Tx 11ax-20(OFDMA)	(SISO) Ant 2 *2) (SDM) Ant 0 + Ant 2	5180 MHz 5220 MHz 5240 MHz	5260 MHz 5300 MHz 5320 MHz	5500 MHz 5580 MHz 5700 MHz	5745 MHz 5785 MHz 5825 MHz
	(SDM) Tx 11n-40 Tx 11ac-40 Tx 11ax-40(OFDM) Tx 11ax-40(OFDMA)		5190 MHz 5230 MHz	5270 MHz 5310 MHz	5510 MHz 5550 MHz 5670 MHz	5755 MHz 5795 MHz
	(SDM) Tx 11ac-80 Tx 11ax-80(OFDM) Tx 11ax-80(OFDMA)		5210 MHz	5290 MHz	5530 MHz	5775 MHz
Radiated Spurious Emission (Above 1 GHz) *5)	(SISO) Tx 11a (SDM) Tx 11n-20 Tx 11ac-20 Tx 11ax-20(OFDM) Tx 11ax-20(OFDM) *3)	(SISO) Ant 2 *4) (MIMO) Ant 0 + Ant 2	5180 MHz 5240 MHz	5320 MHz	5500 MHz 5580 MHz 5700 MHz	5745 MHz 5785 MHz 5825 MHz
	(SDM) Tx 11n-40 Tx 11ac-40 Tx 11ax-40(OFDM) Tx 11ax-40(OFDMA) *3)		5190 MHz 5230 MHz	5310 MHz	5510 MHz 5550 MHz	5755 MHz 5795 MHz
	(SDM) Tx 11ac-80 Tx 11ax-80(OFDM) Tx 11ax-80(OFDMA) *3)		5210 MHz	5290 MHz	5530 MHz	5775 MHz
Conducted Spurious Emission	Tx 11ax-20(OFDM) (SDM) *1)	Ant 2 *2)	5180 MHz	-	-	-
*1) The mode was tested as a representative, because it had the highest power at antenna terminal test. *2) After the comparison between Ant 0 and Ant 2, the test was performed with the antenna that had higher power as a representative. *3) OFDMA configuration tests were conducted only at the band edge and other spurious emission of worst case configuration by preliminary testing results. *4) The test was performed with the worst antenna as a representative by the results of the pre-check. *5) After the comparison between SISO and SDM, the test was performed with the antenna that had higher power as a representative.						

Simultaneous transmission

(Only Ant 0 simultaneously transmits BTC and WLAN 5 GHz on a single antenna.)

Test Item	Mode *1)	Antenna type
Radiated Spurious Emission (Below 1 GHz)	Tx 11ax-20 OFDM SDM 5180 MHz + 3DH5 Hopping	WLAN Ant 0 + Ant 2 BTC Ant 0
Radiated Spurious Emission (Above 1 GHz)	Tx 11ax-80 OFDM SDM 5210 MHz + 3DH5 Hopping	WLAN Ant 0 + Ant 2 BTC Ant 0
*1) The test was conducted on representative mode, the worst mode of GHz band at Spurious emission test for WLAN 5 GHz and the mode had the highest power at Antenna terminal conducted test for BTC.		

Antenna terminal conducted test



- * Cabling and setup(s) were taken into consideration and test data was taken under worse case conditions.
- * The carrier level and noise levels were confirmed with and without the controller (B and C) and Dock (M), and the test was made at the condition that has the maximum noise. (Only Radiated emission test)
- * The EUT is equipped with two rechargeable USB ports (top and bottom side), a pre-check was performed on the worst port (bottom side) for conducted emissions.
- *1) As a result of comparing AC 120 V and AC 240 V at pre-check, conducted emission test was performed with AC 240 V of the worst voltage as representative.

Description of EUT and Support Equipment

No.	Item	Model number	Serial Number	Manufacturer	Remarks
A	Game console	BEE-001	HAW01000023266 *1) HAW01000021934 *2)	Nintendo Co., Ltd.	EUT
B	Joy-Con (L)	BEE-012	HBL01000022108	Nintendo Co., Ltd.	-
C	Joy-Con (R)	BEE-014	HCL01000022467	Nintendo Co., Ltd.	-
D	Game Card	HAC-008	DFCAA22L000	Nintendo Co., Ltd.	-
E	Micro SD Card	-	S944	Sandisk	-
F	Relay Box	BEE-053	HYL01100004738	Nintendo Co., Ltd.	-
G	AC Adapter	NGN-01	0A0003529 *1) 0A0000165 *2)	Nintendo Co., Ltd.	-
H	Earphones	MDR-EX255AP	-	Sony	-
I	USB TypeA - Type C Adapter	-	-	-	-
J	Wired LAN Adapter	EDC-GUA3-B	16L167005977A	ELECOM	-
K	Laptop PC	CF-SV9RDQVS	0JKSC39510	Panasonic	-
L	AC Adapter	CF-AA65D2A M1	65D2AM1208002424WA	Panasonic	-
M	Dock	BEE-005	HFL0100036471	Nintendo Co., Ltd.	-

*1) Used for Antenna Terminal conducted test

*2) Used for Conducted Emission test and Radiated Emission test

List of Cables Used

No.	Name	Length (m)	Shield		Remarks
			Cable	Connector	
1	USB	1.5	Shielded	Shielded	-
2	USB	1.5	Shielded	Shielded	-
3	USB	1.5	Shielded	Shielded	-
4	DC	0.9	Unshielded	Unshielded	-
5	AC	0.8	Unshielded	Unshielded	-
6	USB	0.1	Shielded	Shielded	-
7	LAN	1.0	Unshielded	Unshielded	Cat.6
8	Earphones	1.25	Unshielded	Unshielded	-

SECTION 5: Conducted Emission

Test Procedure and Conditions

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

The rear of tabletop was located 40cm to the vertical conducting plane. The rear of EUT, including peripherals was 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).

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

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

The AC Mains Terminal Continuous disturbance Voltage has been measured with the EUT in a Shielded Room.

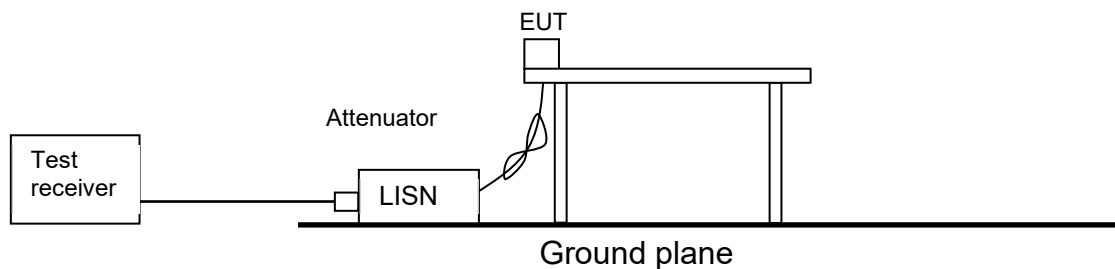
The EUT was connected to a LISN (AMN).

An overview sweep with peak detection has been performed.

Test results are rounded off and limit are rounded down, so some differences might be observed.

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

Figure 1: Test Setup



SECTION 6: Radiated Spurious Emission and Band Edge Compliance

Test Procedure

< Below 1 GHz >

EUT was placed on a urethane platform of nominal size, 1.0 m by 1.5 m, raised 0.8 m above the conducting ground plane. The Radiated Electric Field Strength has been measured in a Semi Anechoic Chamber with a ground plane.

< Above 1 GHz >

EUT was placed on a urethane platform of nominal size, 0.5 m by 0.5 m, raised 1.5 m above the conducting ground plane. The Radiated Electric Field Strength has been measured in a Semi Anechoic Chamber with absorbent materials lined on a ground plane. Test antenna was aimed at the EUT for receiving the maximum signal and always kept within the illumination area of the 3 dB beamwidth of the antenna.

The 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 1 GHz >

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

< Above 1 GHz >

Inside of restricted bands (Section 15.205):

Apply to limit in the Section 15.209 (a).

Outside of the restricted bands:

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

For W58 Bandedge

-27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge in the section 15.407(b)(4)(i).

Restricted band edge:

Apply to limit in the Section 15.209 (a).

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

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

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

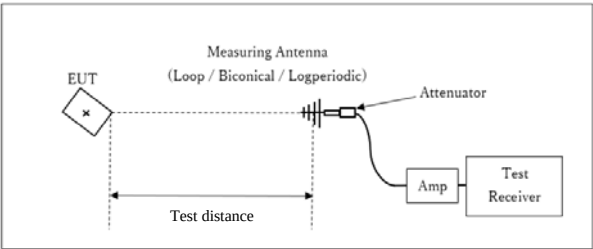
Test Antennas are used as below;

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

Frequency	Below 1 GHz	Above 1 GHz	
Instrument Used	Test Receiver	Spectrum Analyzer	
Detector	QP	Peak	Average
IF Bandwidth	BW: 120 kHz	RBW: 1 MHz VBW: 3 MHz	RBW: 1 MHz VBW: 1/T (T: burst length, refer to Burst rate confirmation sheet) Detector: Peak

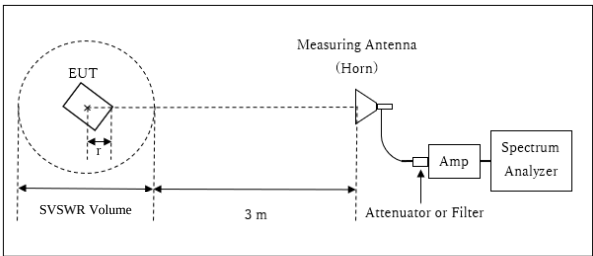
Figure 2: Test Setup

Below 1 GHz



Test Distance: 3 m

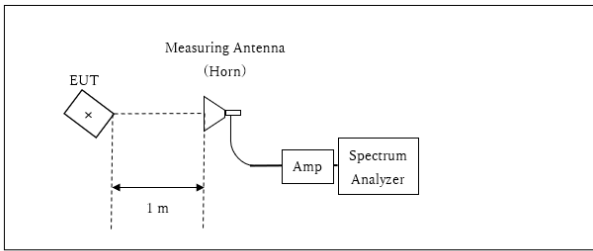
1 GHz to 10 GHz



Distance Factor: $20 \times \log (3.94 \text{ m} / 3.0 \text{ m}) = 2.37 \text{ dB}$
* Test Distance: $(3 + \text{SVSWR Volume} / 2) - r = 3.94 \text{ m}$

SVSWR Volume : 2.0 m
(SVSWR Volume has been calibrated based on CISPR 16-1-4.)
 $r = 0.06 \text{ m}$

10 GHz to 40 GHz



Distance Factor: $20 \times \log (1.0 \text{ m} / 3.0 \text{ m}) = -9.54 \text{ dB}$
*Test Distance: 1 m

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

Antenna polarization	Carrier	Spurious (30 MHz to 1 GHz)	Spurious (1 GHz to 6.4 GHz)	Spurious (6.4 GHz to 10 GHz)	Spurious (10 GHz to 18 GHz)	Spurious (18 GHz to 40 GHz)
Horizontal	<For Tx 11a> Z With controller	X With controller	<For Tx 11a> Z With controller	X With controller	Y With controller	X With controller
	<For other than Tx 11a> Y With controller		<For other than Tx 11a> Y With controller			
Vertical	Y With controller	Y With controller	Y With controller	X With controller	Z With controller	X With controller

*All conditions were performed without dock.

Test results are rounded off and limit are rounded down, so some differences might be observed.

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

SECTION 7: Antenna Terminal Conducted Tests

Test Procedure

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

Test	Span	RBW	VBW	Sweep time	Detector	Trace	Instrument used and Test method
26 dB Bandwidth	Enough to capture the emission	Close to 1 % of EBW	> RBW	Auto	Peak	Max Hold	Spectrum Analyzer
99 % Occupied Bandwidth *1)	Enough width to display emission skirts	1 % to 5 % of OBW	≥ 3 RBW	Auto	Peak	Max Hold	Spectrum Analyzer
6 dB Bandwidth	Enough to capture the emission	100 kHz	300 kHz	Auto	Peak	Max Hold	Spectrum Analyzer
Maximum Conducted Output Power	-	-	-	Auto	Average	-	Power Meter (Sensor: 160 MHz BW) (Method PM)
Maximum Power Spectral Density	Encompass the entire EBW	1 MHz or 470 kHz *2)	≥ 3 RBW	Auto	RMS Power Averaging (100 times)	Clear Write	Spectrum Analyzer
Conducted Spurious Emission*3) *4)	9 kHz to 150 kHz	200 Hz	620 Hz	Auto	Peak	Max Hold	Spectrum Analyzer
	150 kHz to 30 MHz	10 kHz	30 kHz				

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

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

*3) In the frequency range below 30 MHz, RBW was narrowed to separate the noise contents. Then, wide-band noise near the limit was checked separately, however the noise was not detected as shown in the chart. (9 kHz to 150 kHz: RBW = 200 Hz, 150 kHz to 30 MHz: RBW = 10 kHz)

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

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

Test Data : APPENDIX
Test Result : Pass

APPENDIX 1: Test Data

Conducted Emission

DATA OF CONDUCTED EMISSION TEST

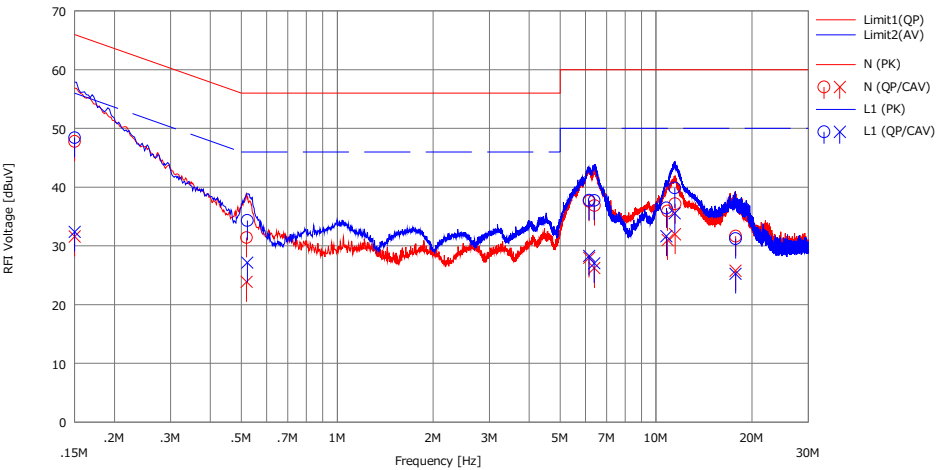
UL Japan, Inc. Shonan EMC Lab. No.2 Shielded Room
Date : 2024/05/18

Mode : Tx, 11ax-20 (OFDM)(SDM), 5180 MHz
Power : AC 240 V / 60 Hz
Temp./Humi. : 24 deg.C / 30 %RH

Remarks : -

Limit : FCC_Part 15 Subpart C(15.207)

Engineer : Yusuke Tanikawara



No.	Freq. [MHz]	Reading		C.Fac [dB]	Results		Limit		Margin		Phase	Comment
		<QP> [dBuV]	<CAV> [dBuV]		<QP> [dBuV]	<CAV> [dBuV]	<QP> [dBuV]	<AV> [dBuV]	<QP> [dB]	<AV> [dB]		
1	0.15000	35.23	19.05	12.55	47.78	31.60	66.00	56.00	18.2	24.4	N	
2	0.51928	18.80	11.25	12.62	31.42	23.87	56.00	46.00	24.5	22.1	N	
3	6.16557	24.42	14.81	13.19	37.61	28.00	60.00	50.00	22.3	22.0	N	
4	6.40823	23.65	13.00	13.21	36.86	26.21	60.00	50.00	23.1	23.7	N	
5	10.86924	22.30	17.35	13.65	35.95	31.00	60.00	50.00	24.0	19.0	N	
6	11.46718	23.46	18.29	13.70	37.16	31.99	60.00	50.00	22.8	18.0	N	
7	17.77231	17.51	11.63	14.14	31.65	25.77	60.00	50.00	28.3	24.2	N	
8	0.15000	35.85	19.84	12.57	48.42	32.41	66.00	56.00	17.5	23.5	L1	
9	0.52223	21.72	14.57	12.61	34.33	27.18	56.00	46.00	21.6	18.8	L1	
10	6.16847	24.65	15.18	13.13	37.78	28.31	60.00	50.00	22.2	21.6	L1	
11	6.40019	24.60	13.92	13.14	37.74	27.06	60.00	50.00	22.2	22.9	L1	
12	10.77823	22.98	18.18	13.47	36.45	31.65	60.00	50.00	23.5	18.3	L1	
13	11.44183	26.34	22.04	13.52	39.86	35.56	60.00	50.00	20.1	14.4	L1	
14	17.75831	17.36	11.39	13.88	31.24	25.27	60.00	50.00	28.7	24.7	L1	

Calculation:Result[dBuV]=Reading[dBuV]+C.Fac(LISN(AMN))+Cable+ATT[dB]

26 dB Emission Bandwidth and 99 % Occupied Bandwidth

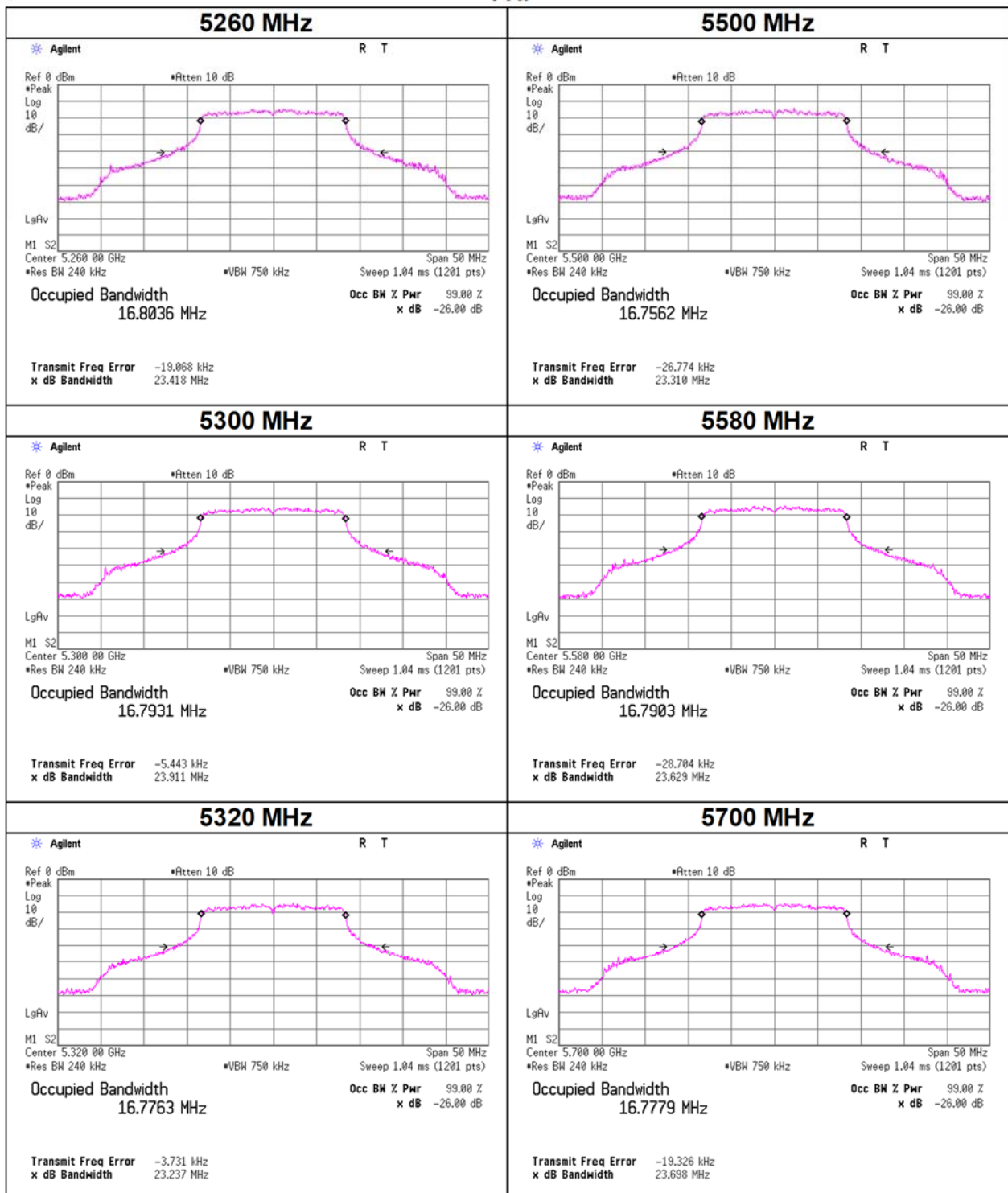
Test place	Shonan EMC Lab. Wireless shielded room 2
Date	January 26, 2024
Temperature / Humidity	24 deg. C / 20 % RH
Engineer	Miku Ikudome
Mode	Tx, (SISO)
Antenna	Ant 2

11a

Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
5180	-	17403.5
5220	-	17342.3
5240	-	16642.3
5260	23.418	17370.5
5300	23.911	17418.7
5320	23.237	17372.2
5500	23.310	17367.1
5580	23.629	17399.2
5700	23.698	17355.6
5745	-	17421.1
5785	-	17409.2
5825	-	17392.0

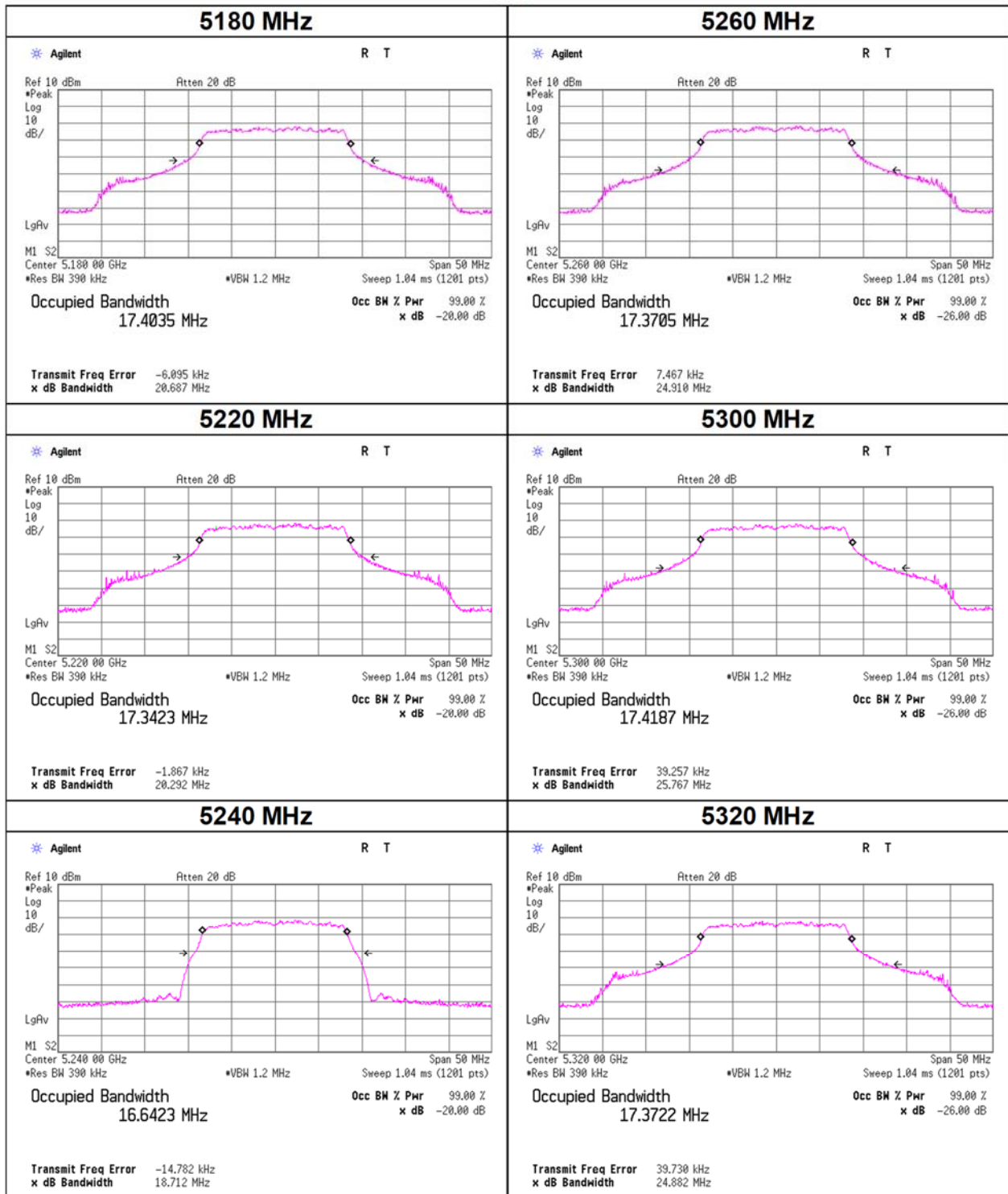
26 dB Emission Bandwidth

11a



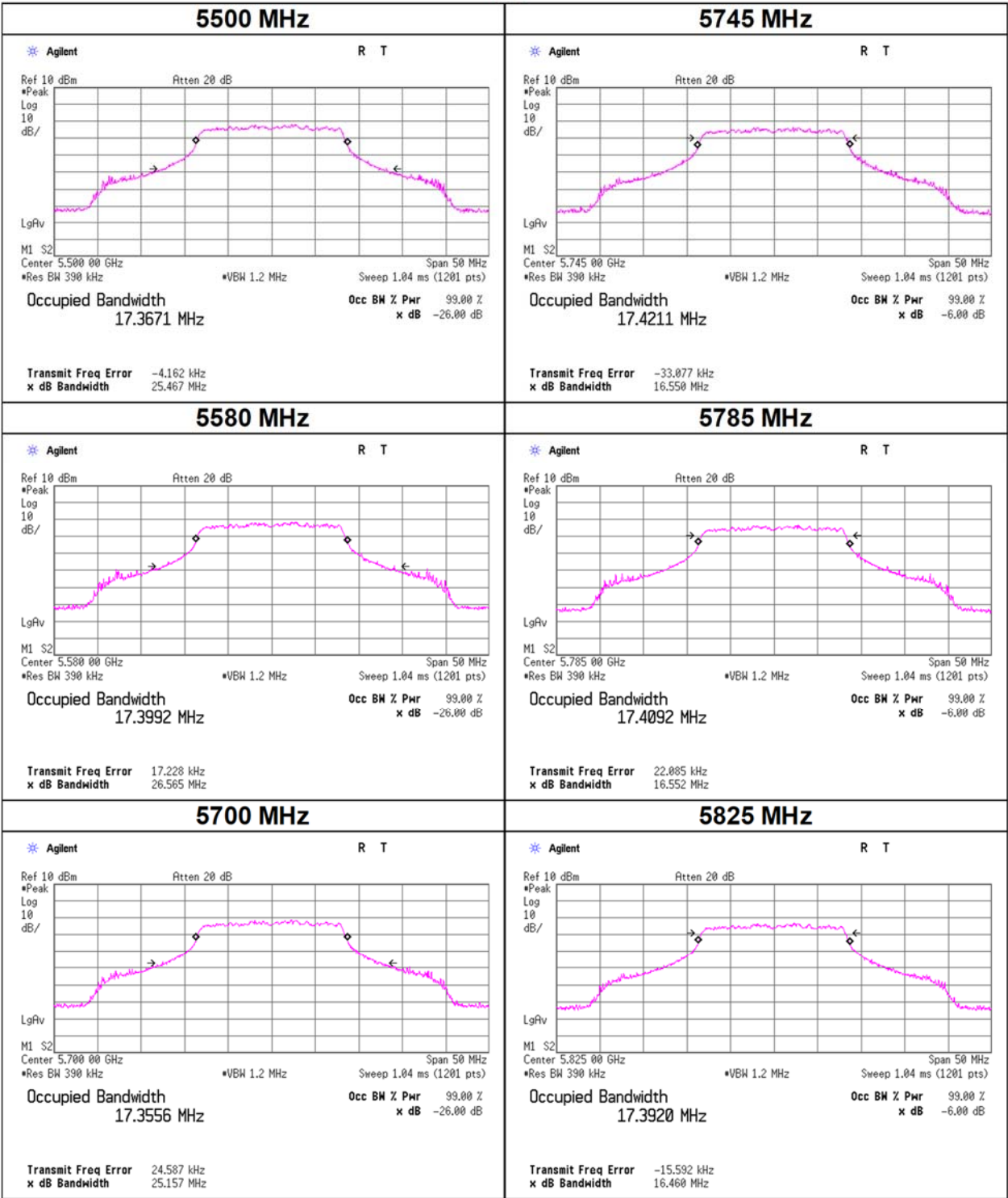
99 % Occupied Bandwidth

11a



99 % Occupied Bandwidth

11a



26 dB Emission Bandwidth and 99 % Occupied Bandwidth

Test place Shonan EMC Lab. Wireless shielded room 2
Date February 26, 2024
Temperature / Humidity 20 deg. C / 43 % RH
Engineer Miku Ikudome
Mode Tx, (SDM)
Antenna Ant 2

11n-20

Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
5180	-	18249.7
5220	-	18275.0
5240	-	17635.3
5260	24.645	18280.3
5300	24.647	18259.1
5320	25.135	18231.2
5500	24.139	18365.6
5580	25.206	18283.1
5700	23.719	18249.8
5745	-	18371.7
5785	-	18260.0
5825	-	18259.7

11ac-20

Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
5180	-	18278.6
5220	-	18227.7
5240	-	17737.4
5260	23.891	18265.6
5300	24.074	18205.6
5320	23.327	18275.4
5500	23.378	18242.4
5580	23.132	18235.1
5700	23.083	18265.6
5745	-	18298.0
5785	-	18256.4
5825	-	18244.7

11ax-20(OFDM)

Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
5180	-	19333.5
5220	-	19352.9
5240	-	18950.4
5260	29.900	19379.1
5300	30.943	19364.7
5320	32.771	19363.2
5500	31.016	19373.8
5580	30.945	19422.7
5700	32.192	19406.9
5745	-	19458.3
5785	-	19432.6
5825	-	19353.6

26 dB Emission Bandwidth and 99 % Occupied Bandwidth

Test place Shonan EMC Lab. Wireless shielded room 2
Date February 26, 2024 February 27, 2024
Temperature / Humidity 20 deg. C / 43 % RH 21 deg. C / 31 % RH
Engineer Miku Ikudome Kouki Yamada
Mode Tx, (SDM)
Antenna Ant 2

11n-40

Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
5190	-	35880.4
5230	-	35865.4
5270	39.478	35875.5
5310	39.508	35863.4
5510	39.513	35856.2
5550	39.464	35865.3
5670	39.458	35939.8
5755	-	35928.7
5795	-	35859.5

11ac-40

Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
5190	-	35900.8
5230	-	35891.6
5270	39.385	35809.4
5310	39.578	35889.7
5510	39.606	35881.2
5550	39.344	35820.5
5670	39.618	35883.5
5755	-	35854.9
5795	-	35841.6

11ax-40(OFDM)

Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
5190	-	37934.0
5230	-	37968.7
5270	39.804	37947.0
5310	39.759	37864.3
5510	39.865	37911.7
5550	39.810	37909.5
5670	39.883	37913.7
5755	-	37973.7
5795	-	37915.7

11ac-80

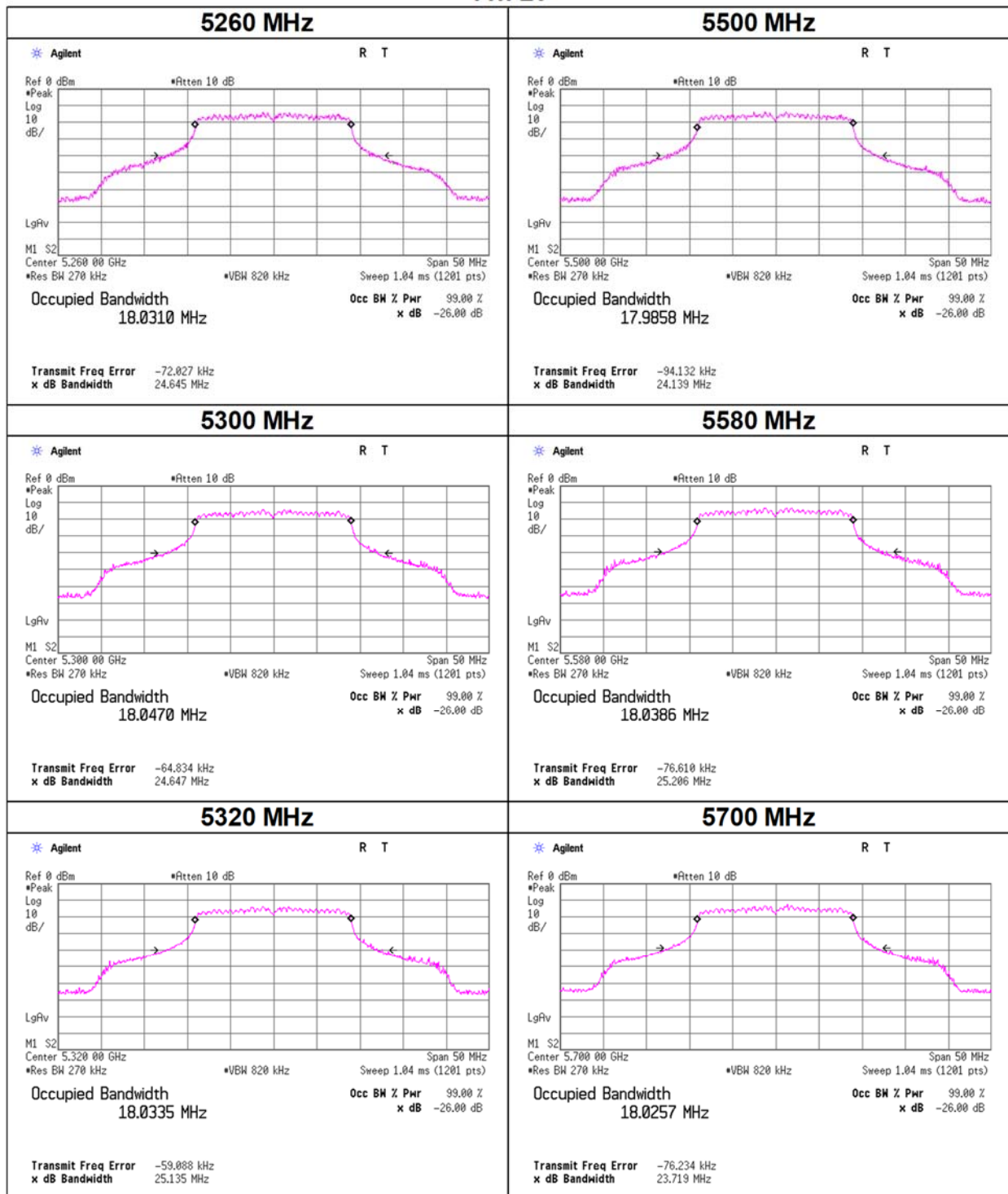
Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
5210	-	75202.9
5290	79.236	75163.9
5530	79.396	75202.4
5775	-	75162.5

11ax-80(OFDM)

Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
5210	-	77504.0
5290	80.525	77493.9
5530	80.663	77488.5
5775	-	77556.8

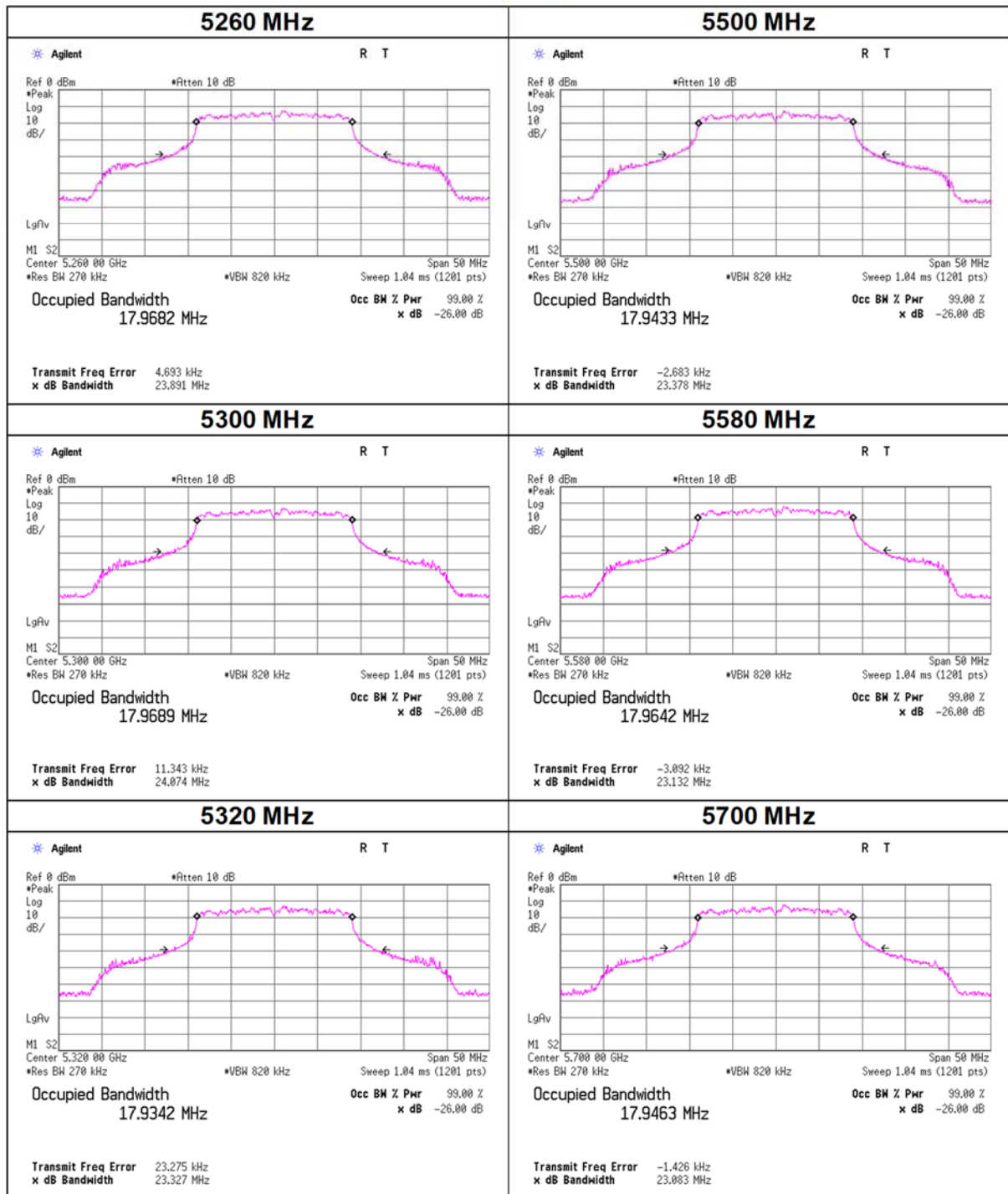
26 dB Emission Bandwidth

11n-20



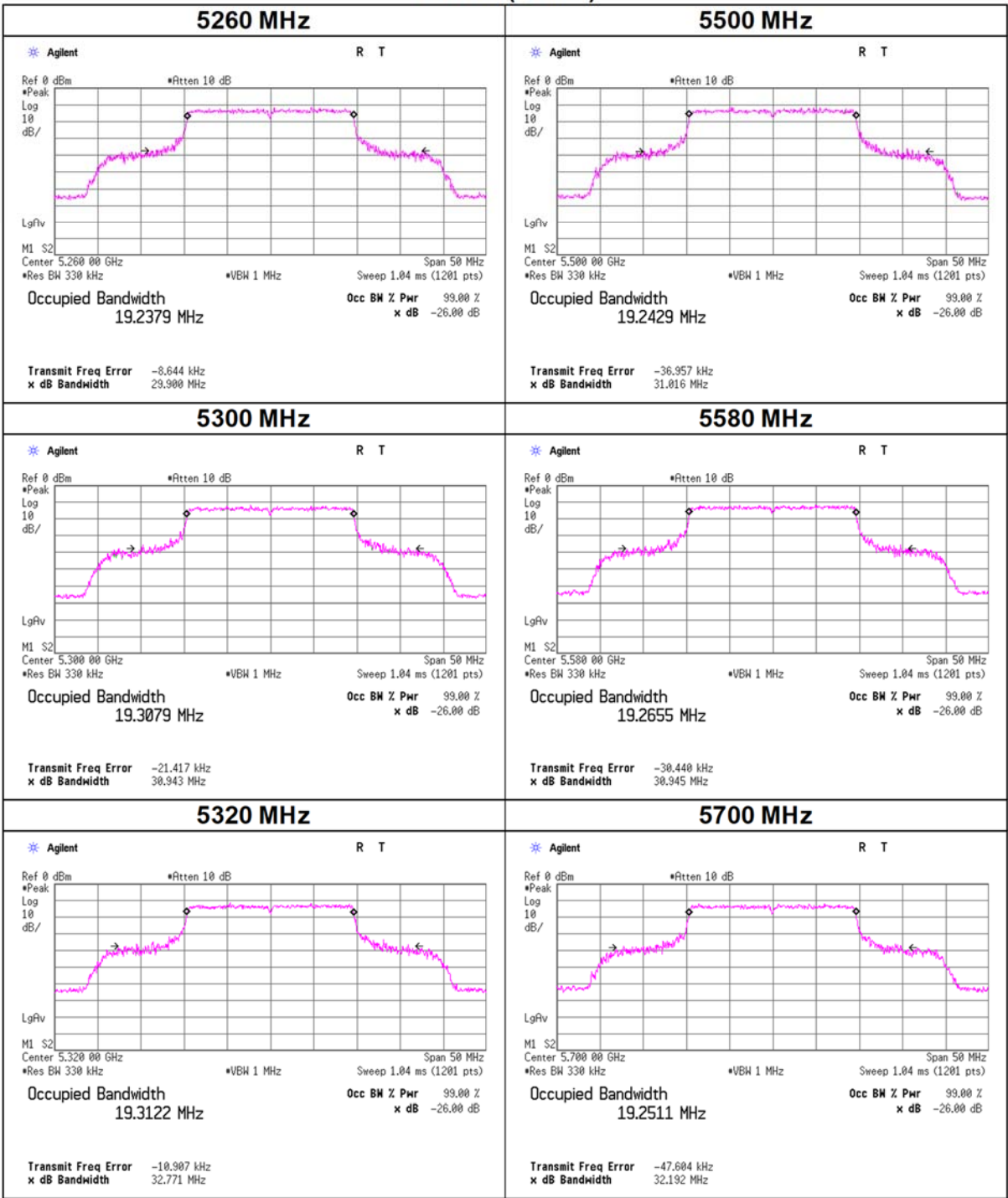
26 dB Emission Bandwidth

11ac-20



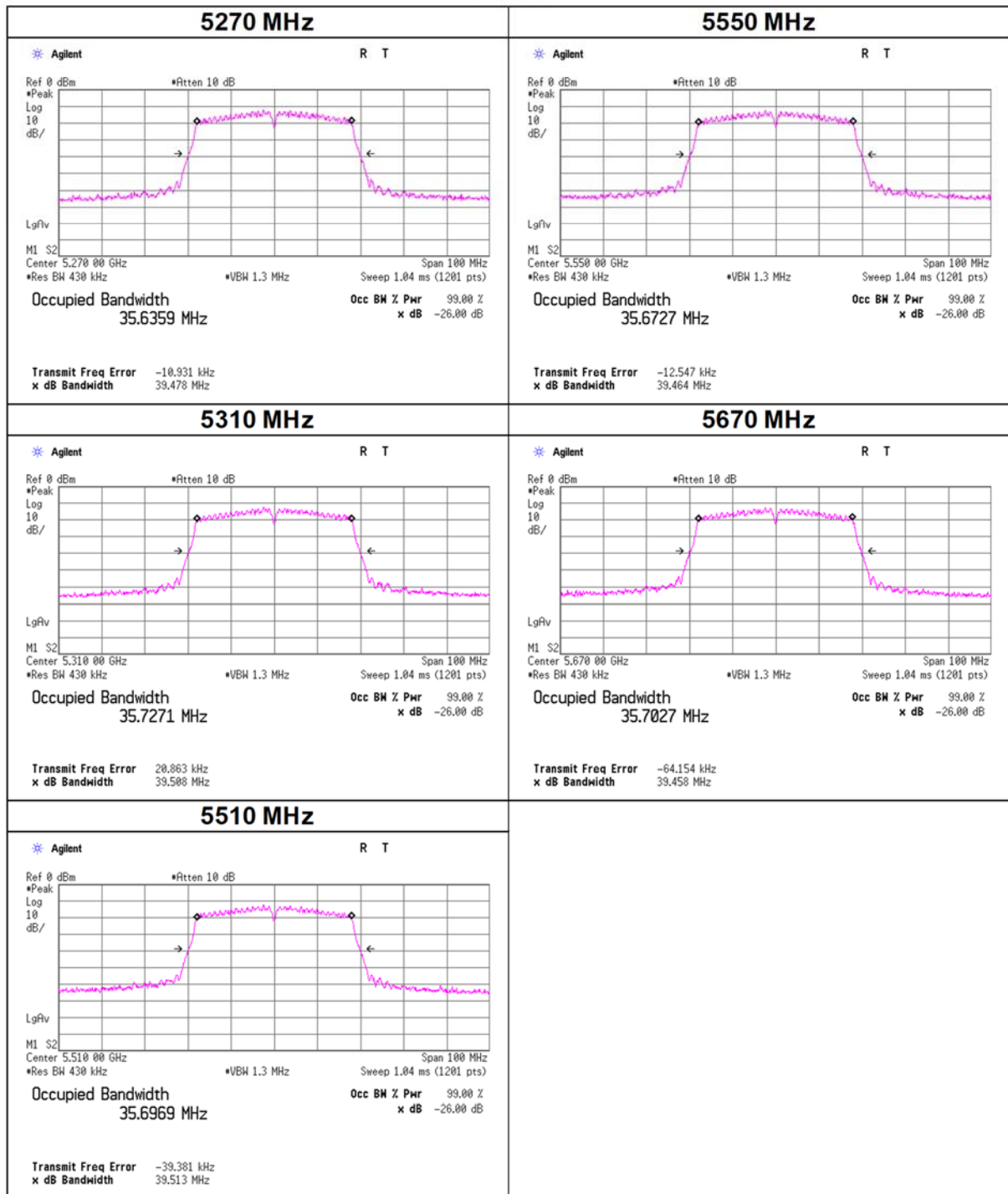
26 dB Emission Bandwidth

11ax-20(OFDM)



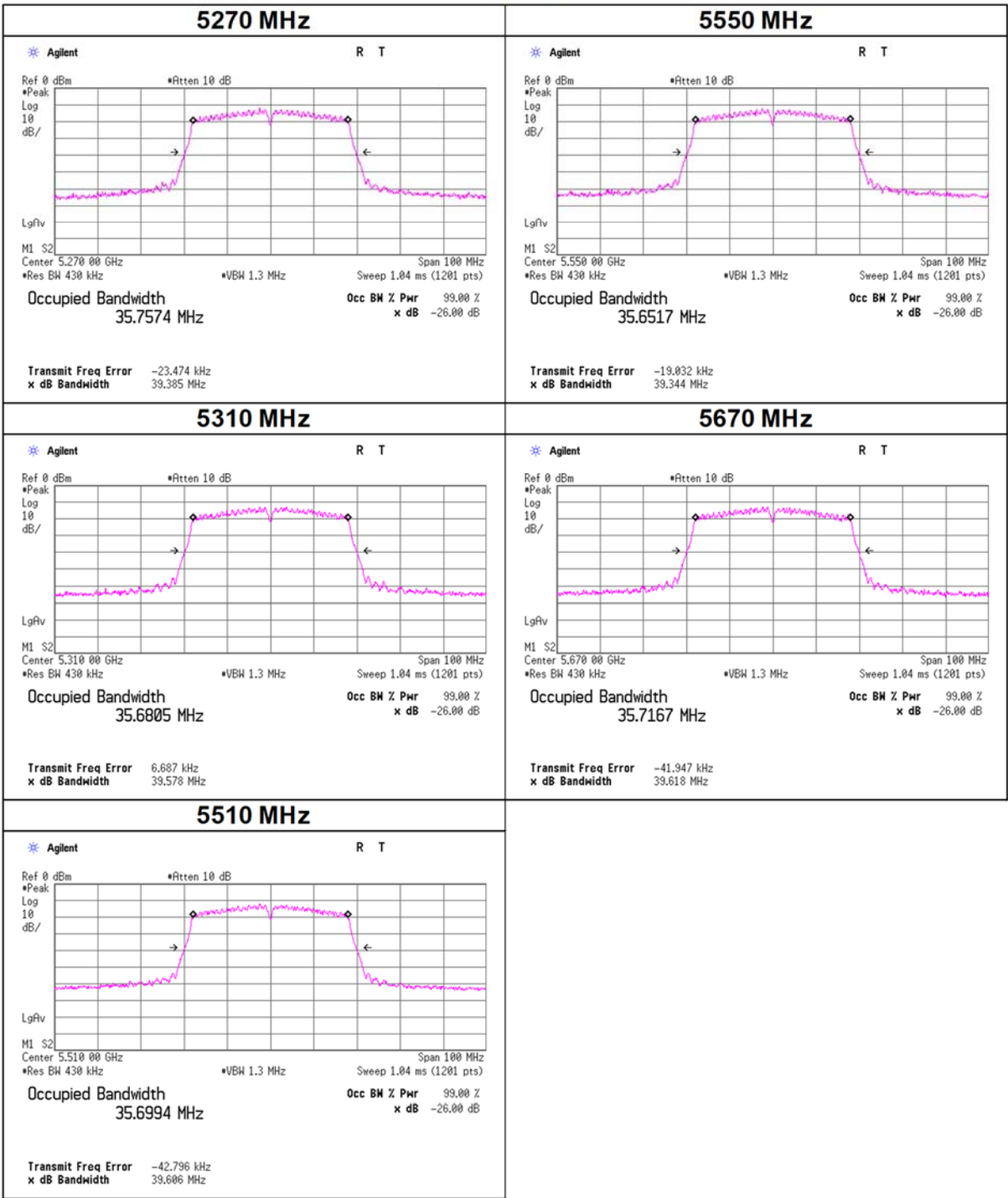
26 dB Emission Bandwidth

11n-40



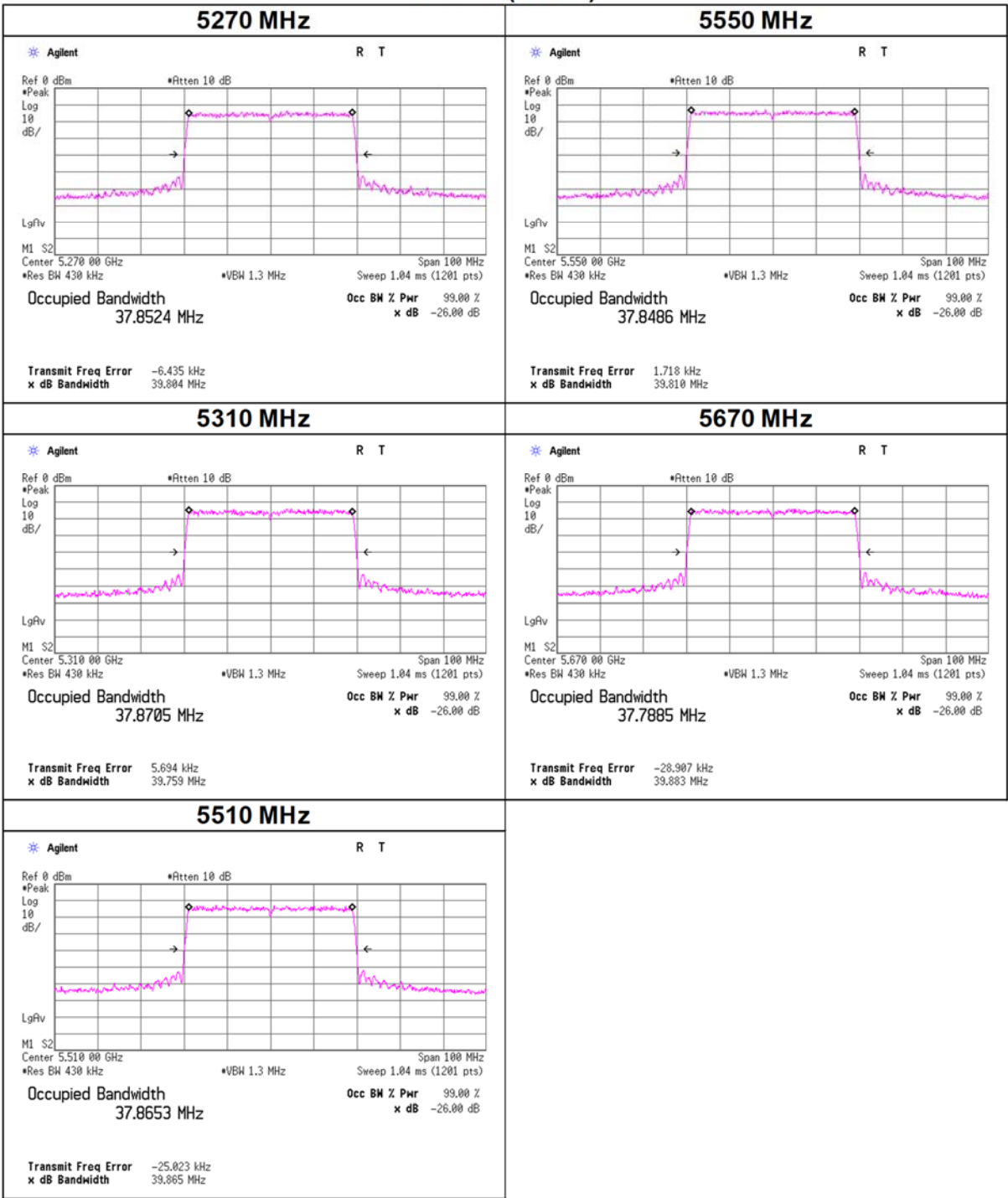
26 dB Emission Bandwidth

11ac-40

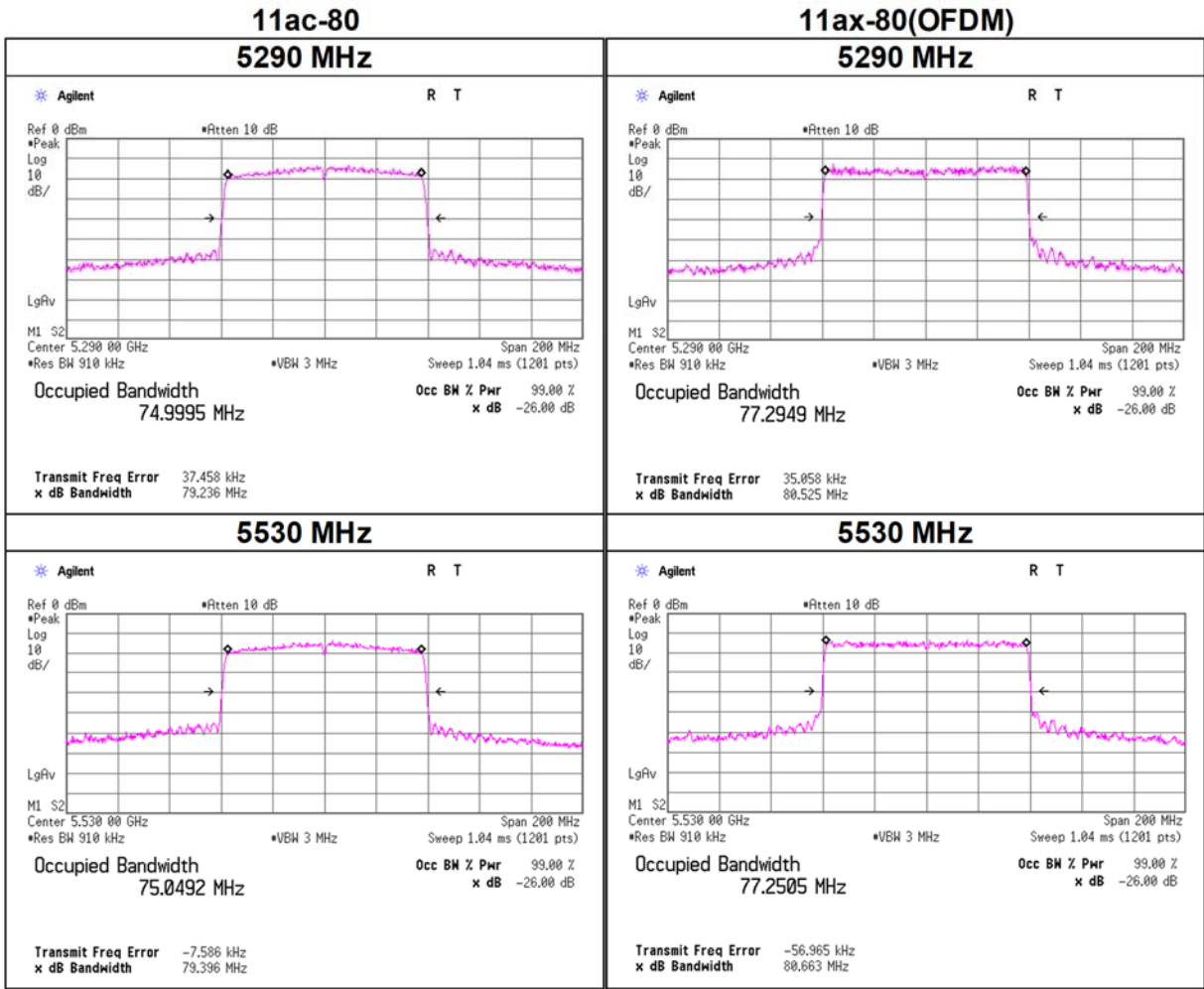


26 dB Emission Bandwidth

11ax-40(OFDM)

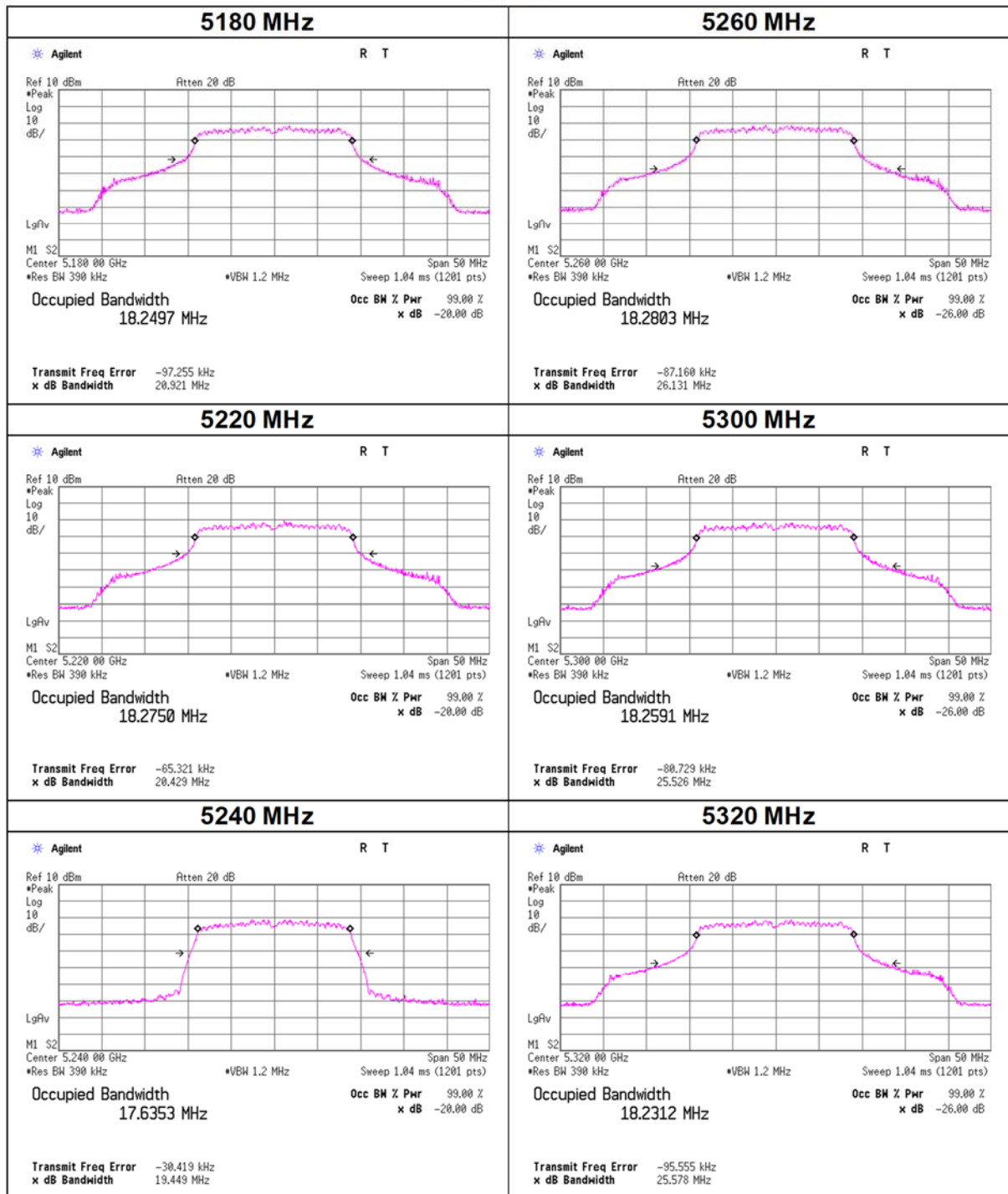


26 dB Emission Bandwidth



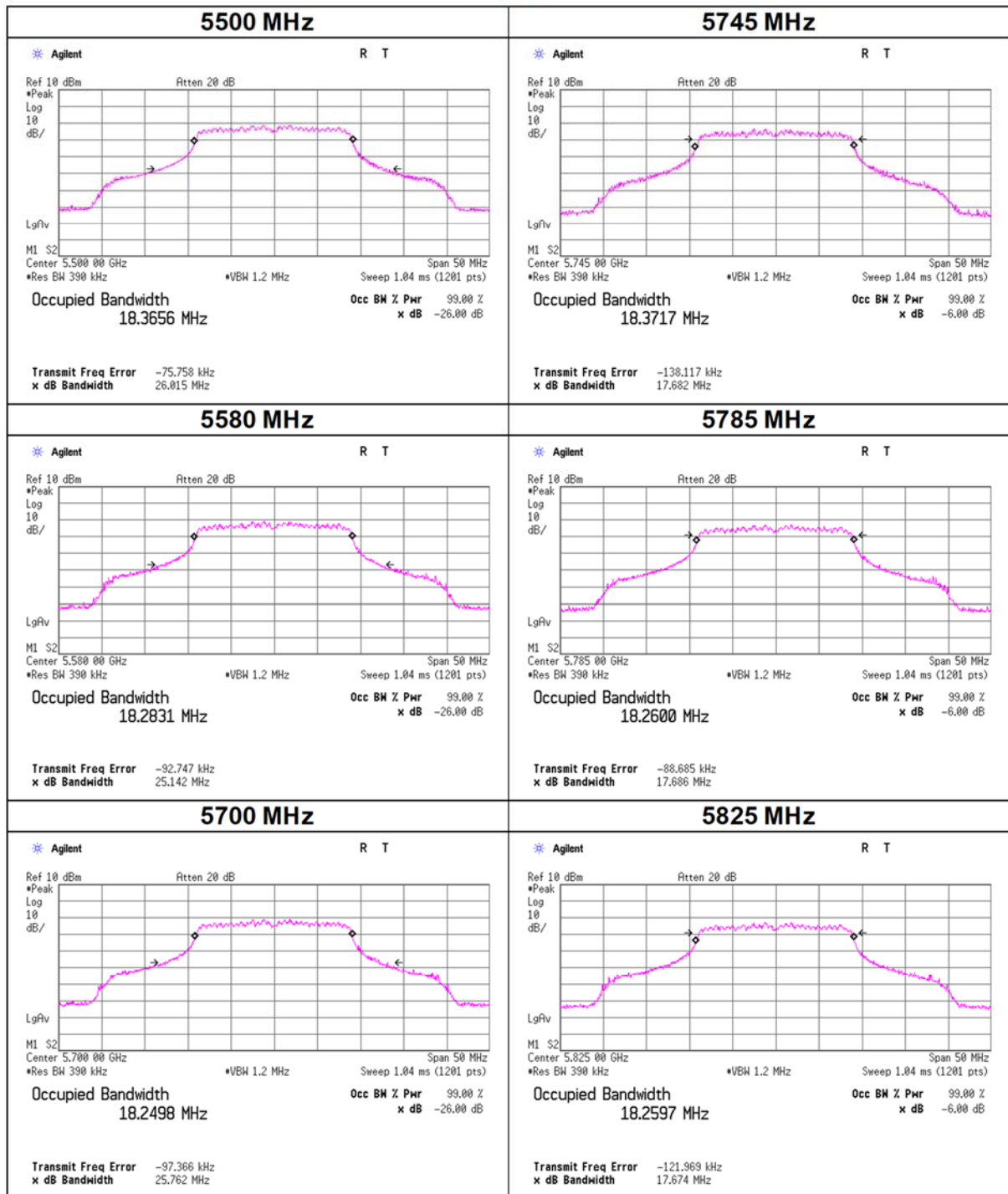
99 % Occupied Bandwidth

11n-20



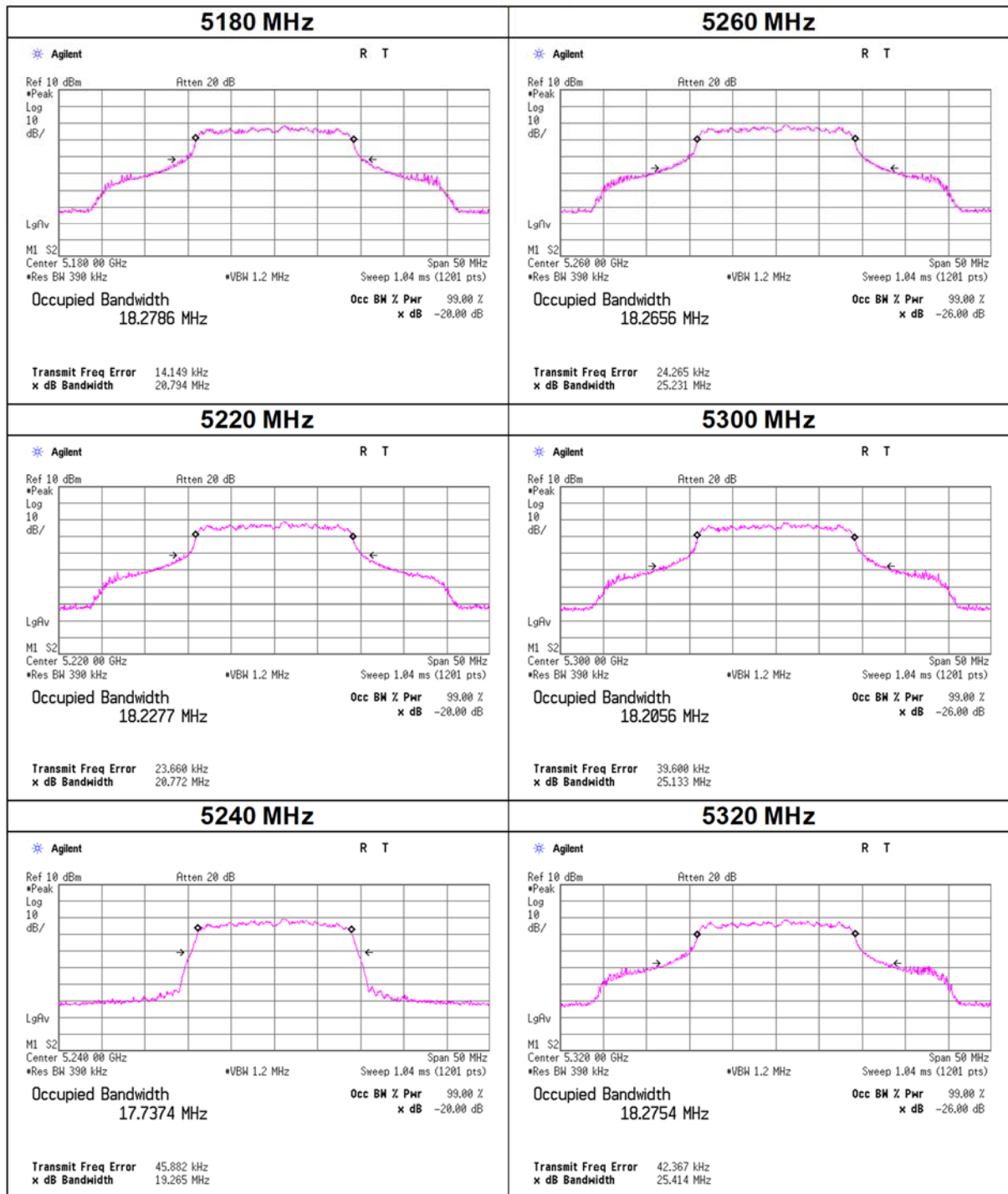
99 % Occupied Bandwidth

11n-20



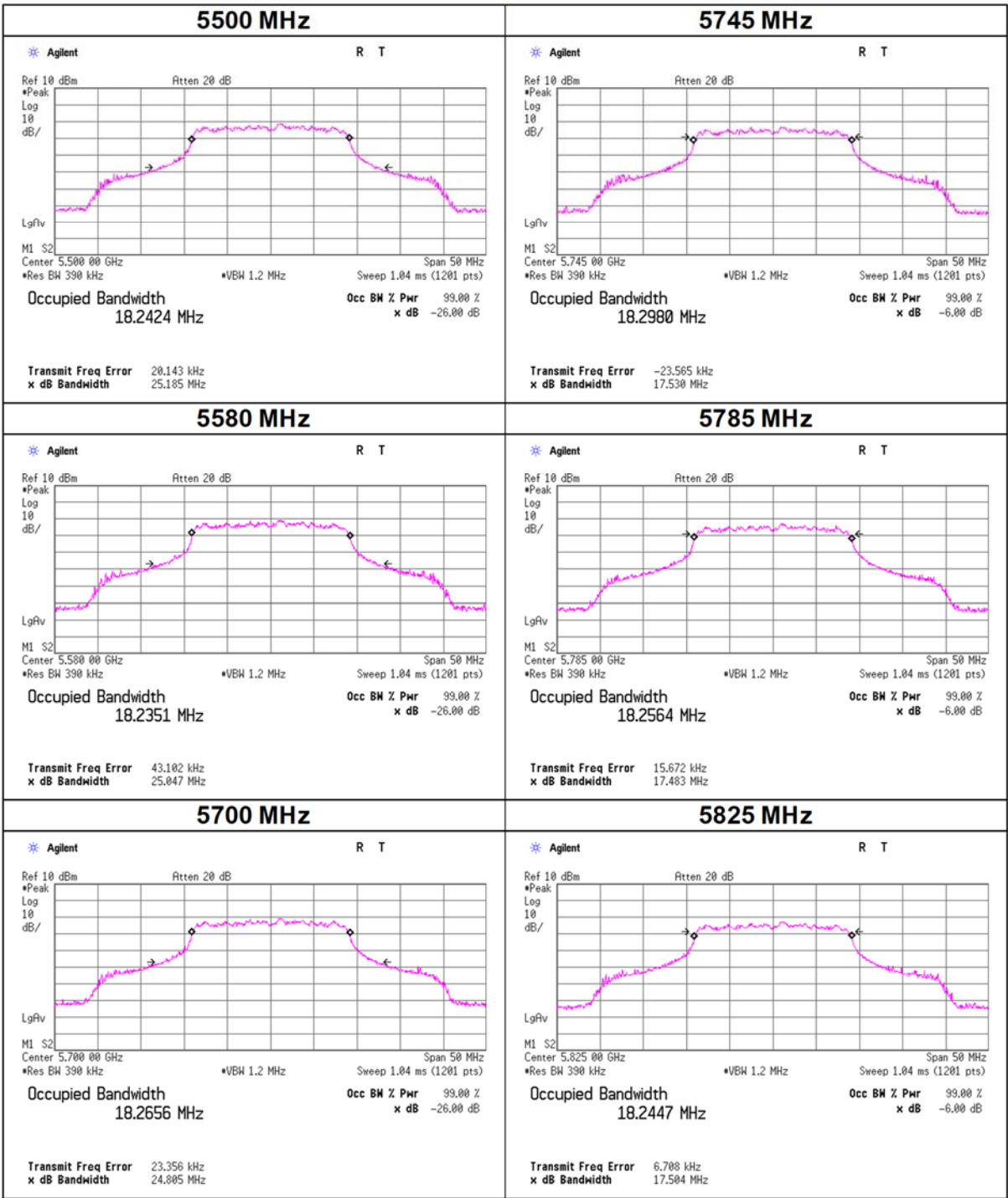
99 % Occupied Bandwidth

11ac-20



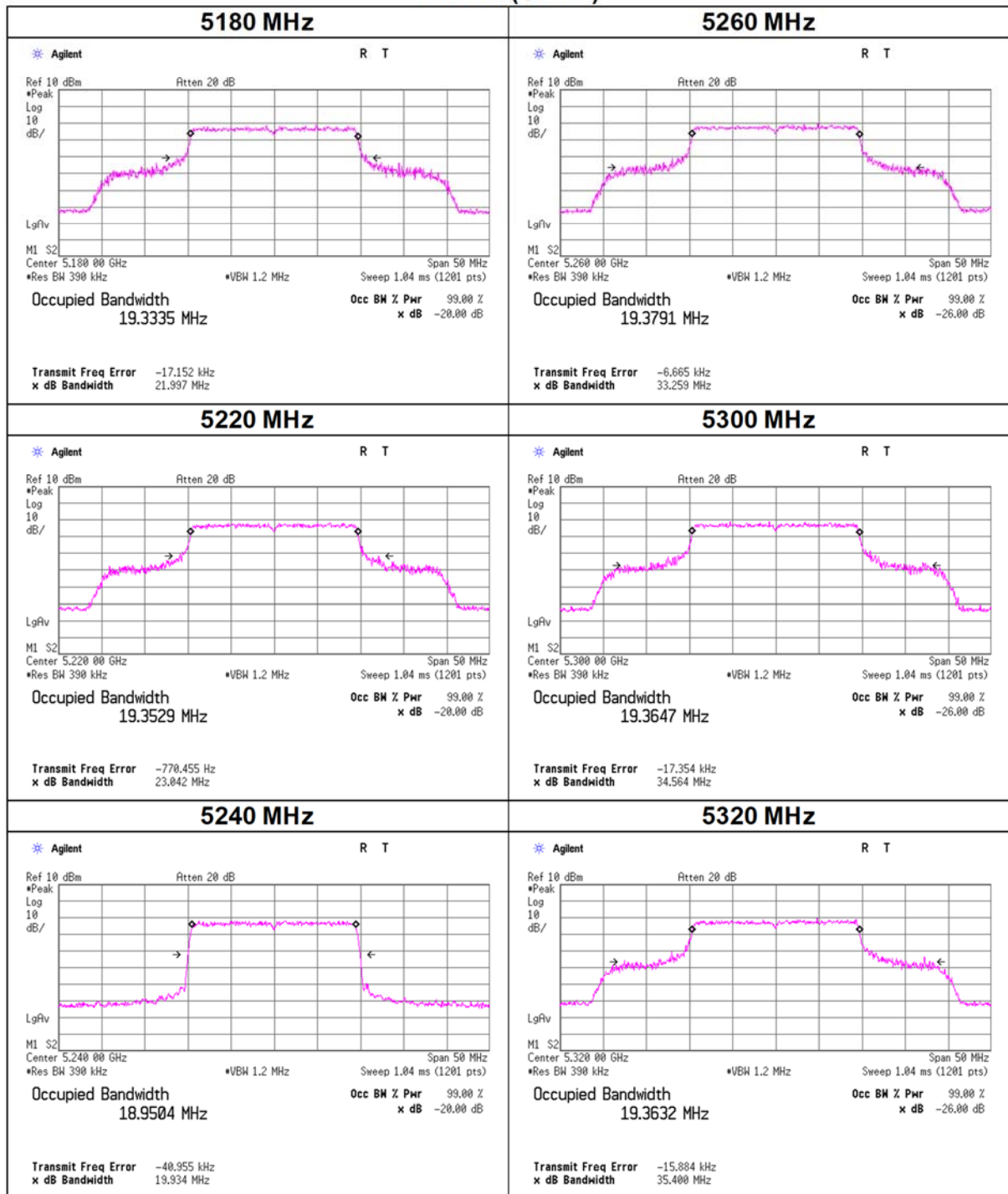
99 % Occupied Bandwidth

11ac-20



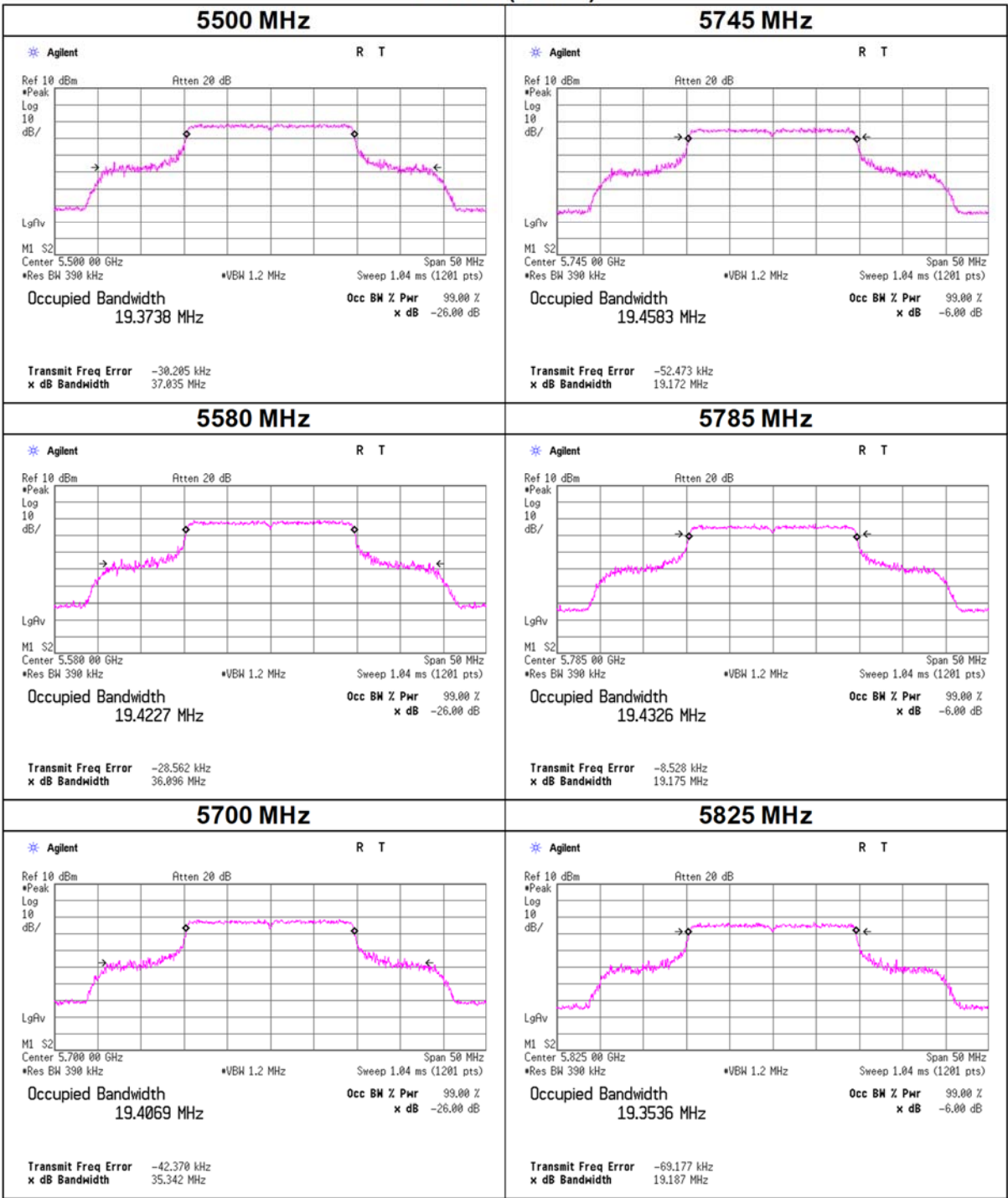
99 % Occupied Bandwidth

11ax-20(OFDM)



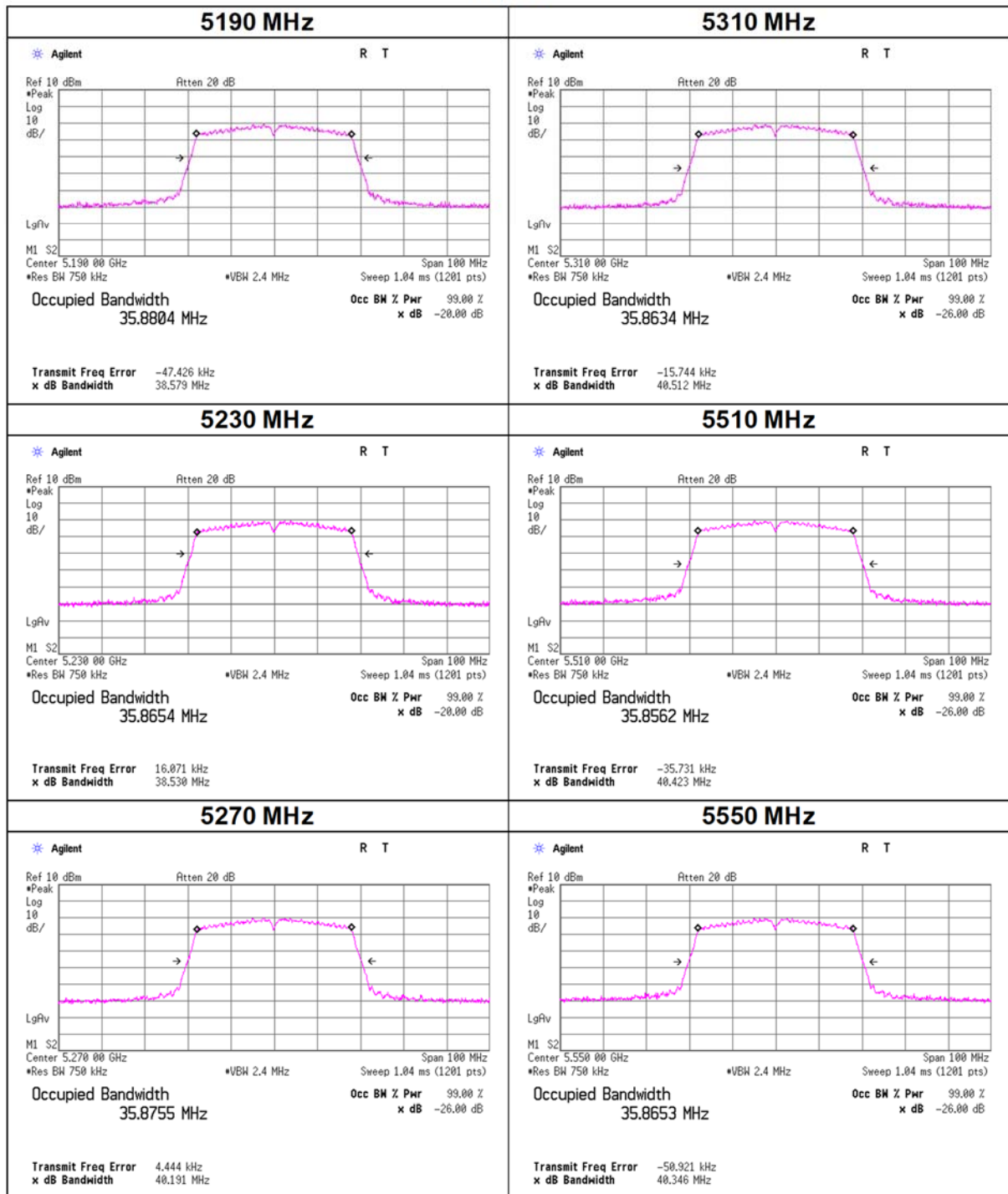
99 % Occupied Bandwidth

11ax-20(OFDM)

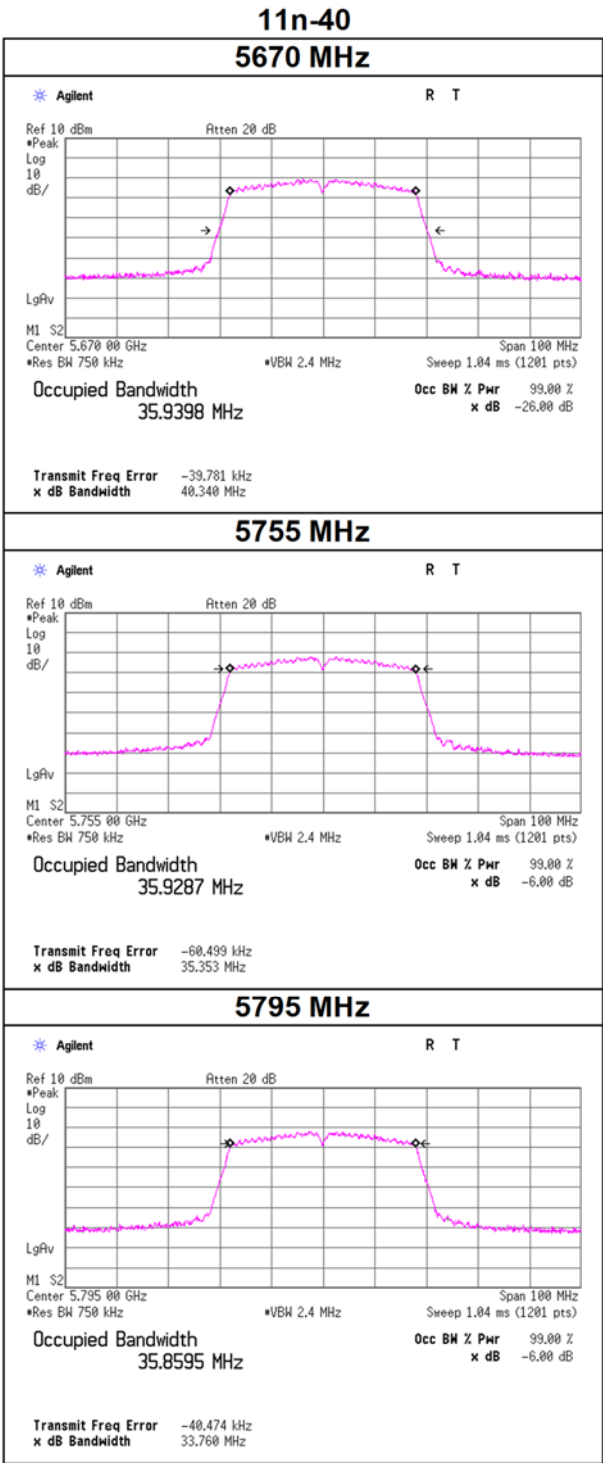


99 % Occupied Bandwidth

11n-40

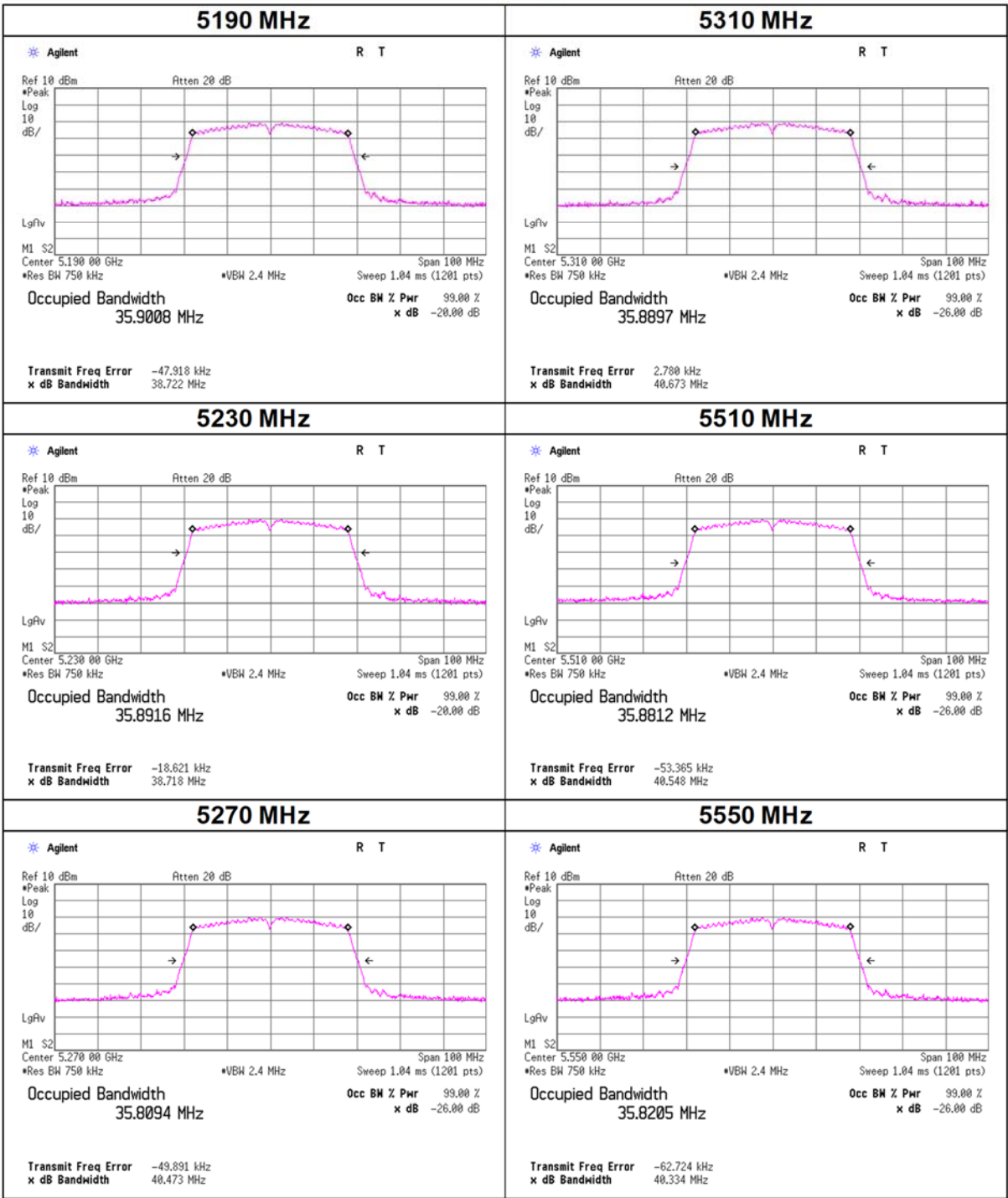


99 % Occupied Bandwidth

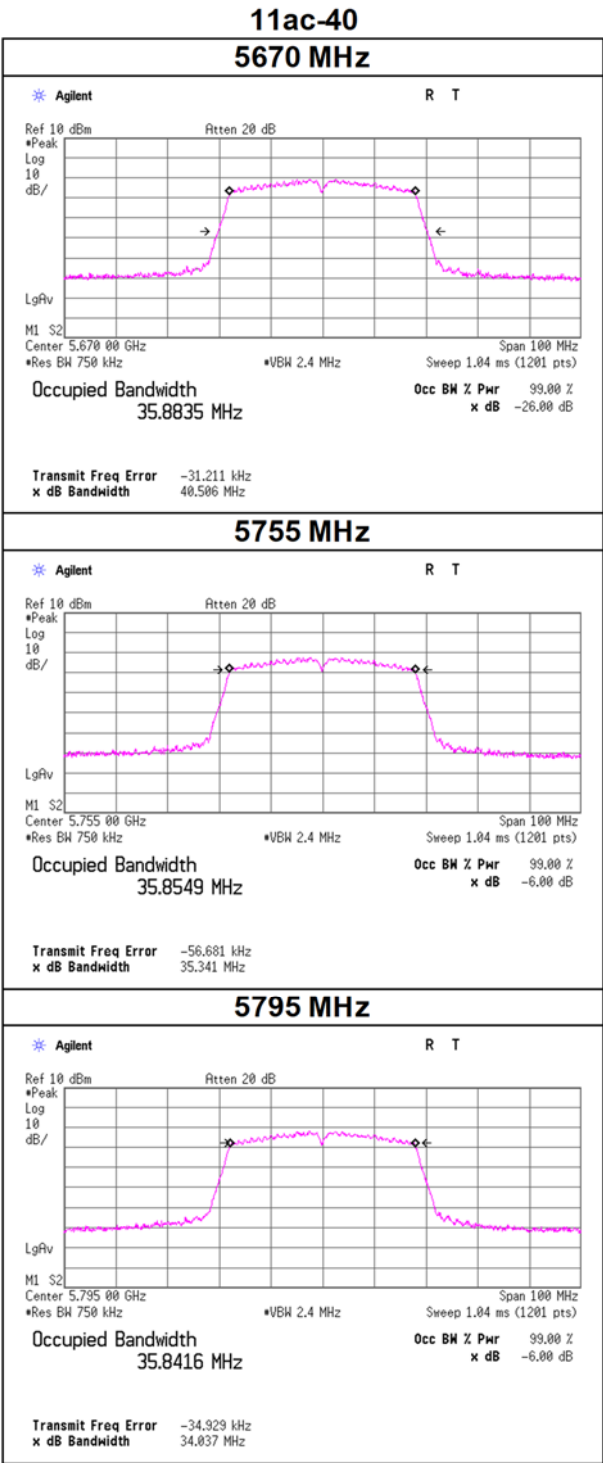


99 % Occupied Bandwidth

11ac-40

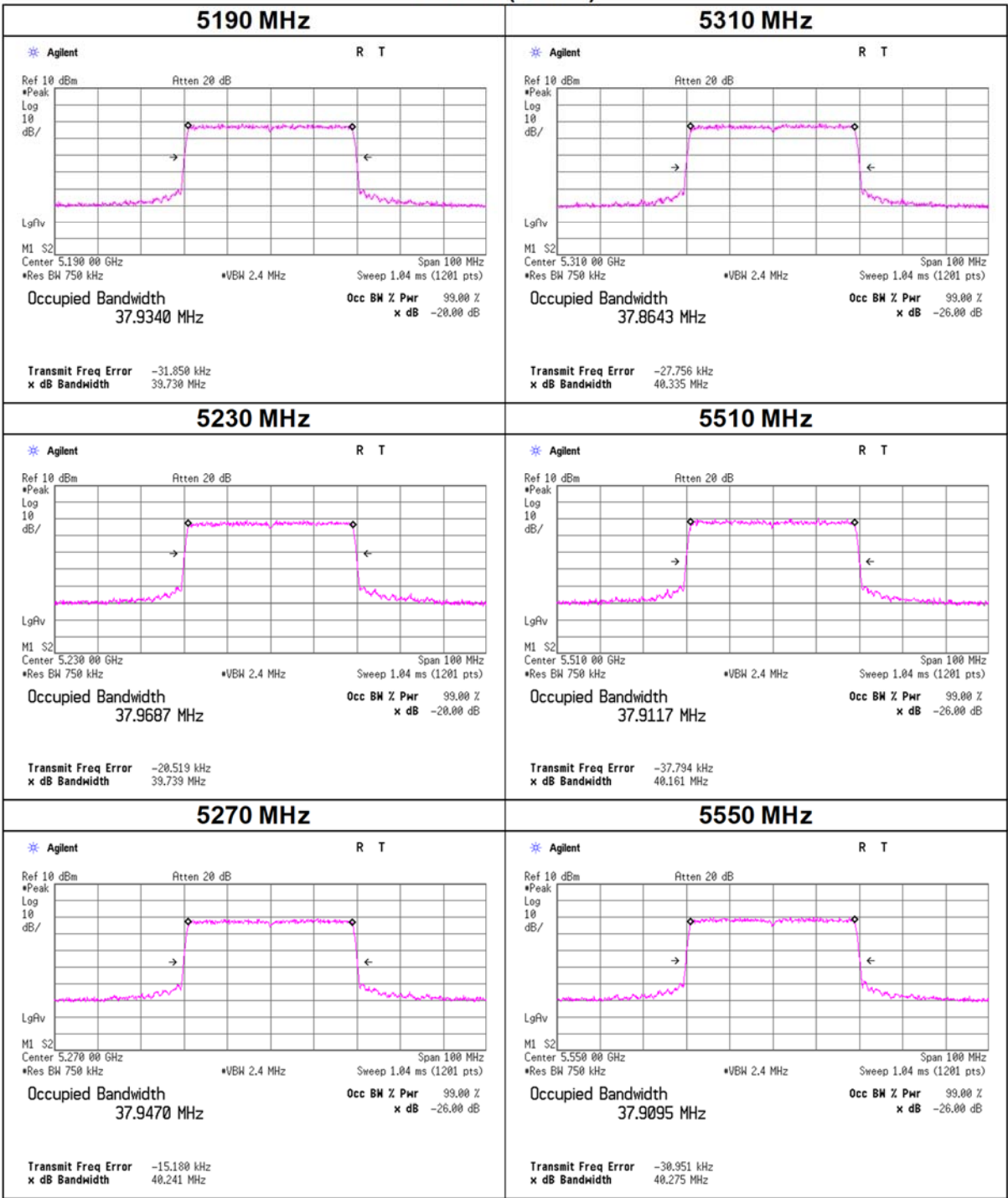


99 % Occupied Bandwidth



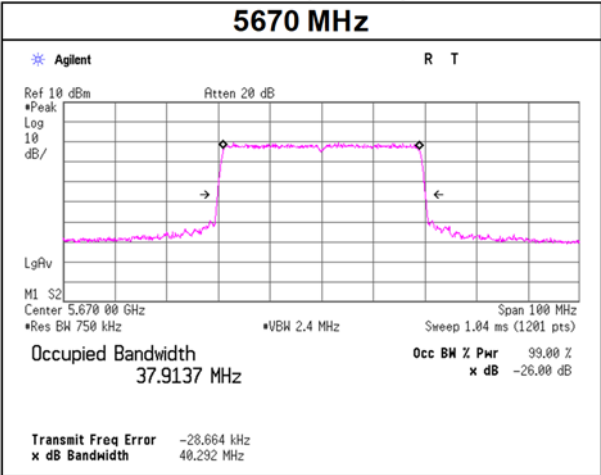
99 % Occupied Bandwidth

11ax-40(OFDM)

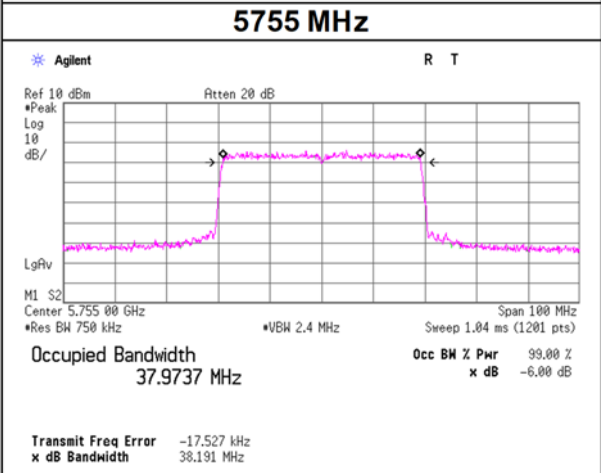


99 % Occupied Bandwidth

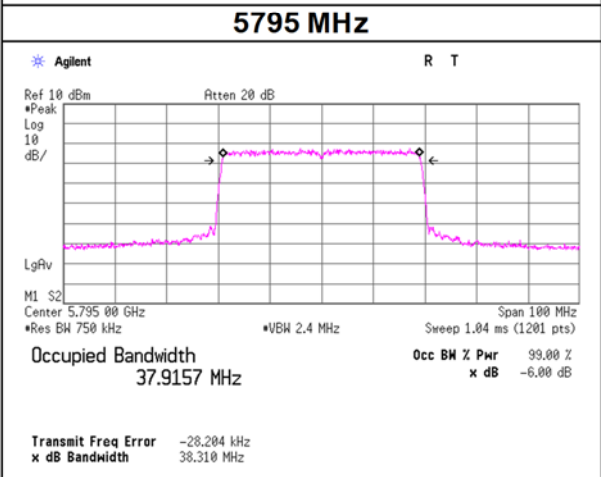
11ax-40(OFDM)
5670 MHz



5755 MHz

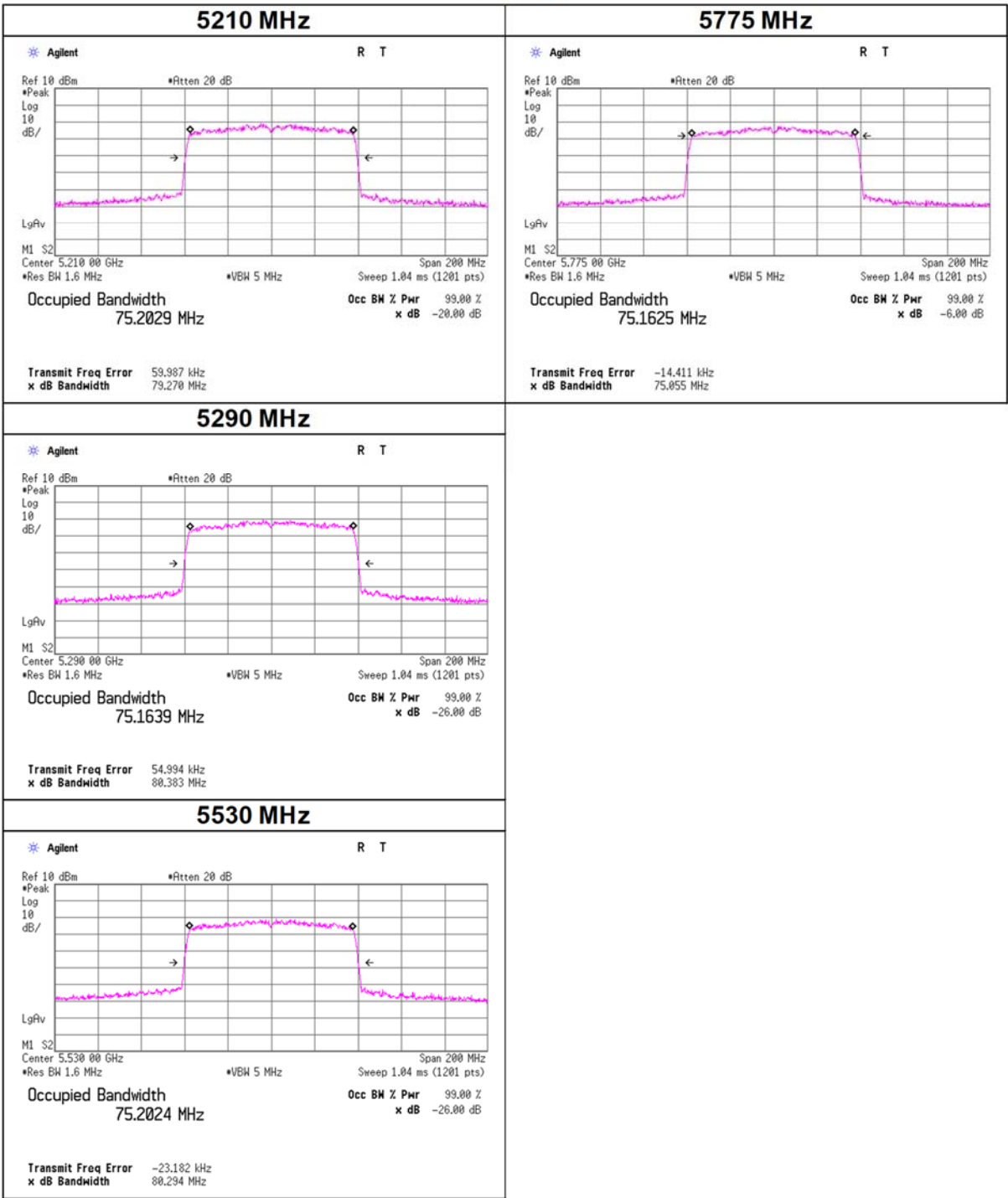


5795 MHz



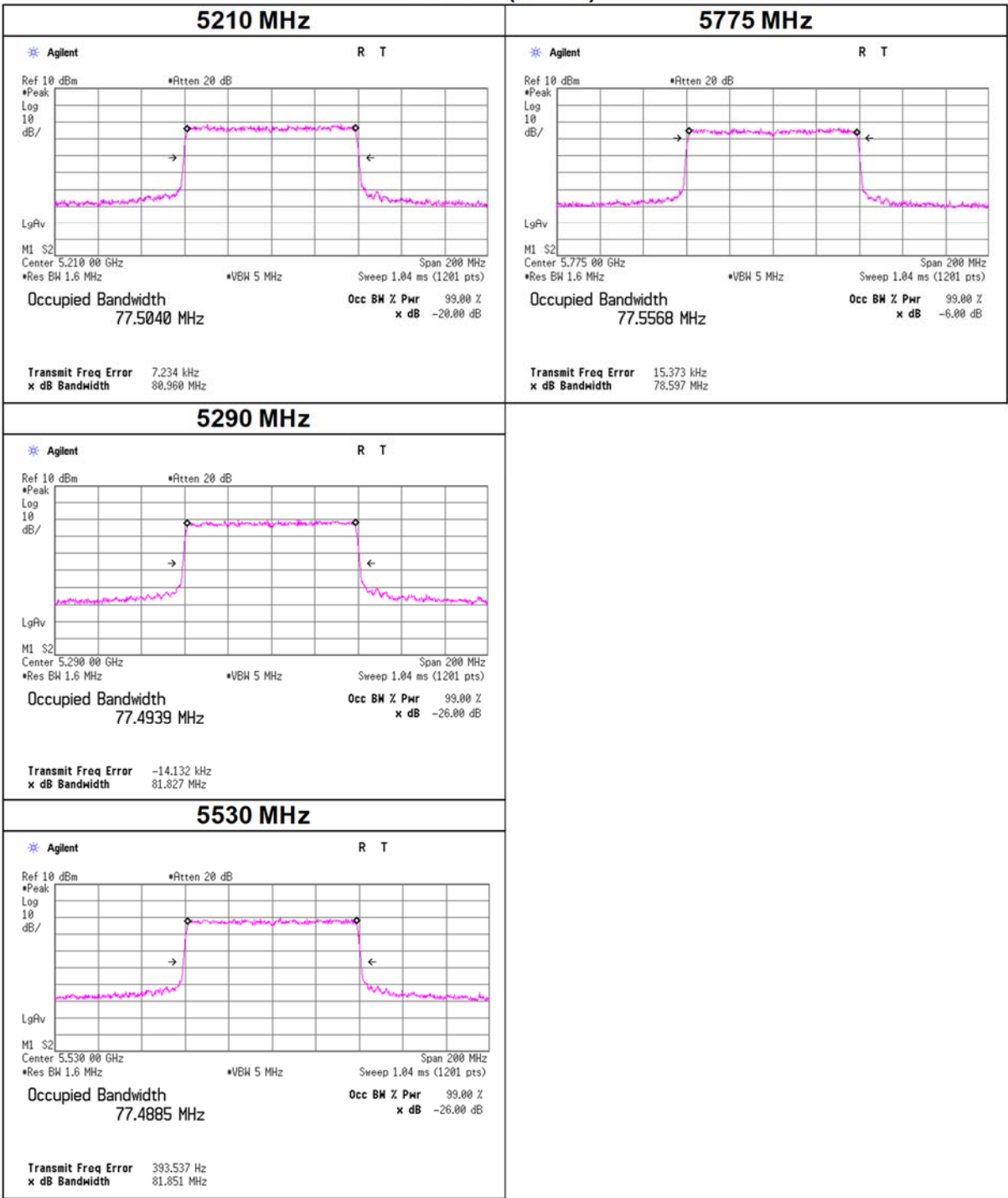
99 % Occupied Bandwidth

11ac-80



99 % Occupied Bandwidth

11ax-80(OFDM)



26 dB Emission Bandwidth and 99 % Occupied Bandwidth

Test place Shonan EMC Lab. Wireless shielded room 2
Date February 27, 2024
Temperature / Humidity 21 deg. C / 31 % RH
Engineer Kouki Yamada
Mode Tx, (SDM)
Antenna Ant 2

11ax-20(OFDMA)

RU Type	Tested Frequency [MHz]	RU Index	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
26-tone RU	5180	0	-	19148.9
		4	-	17132.7
		8	-	19248.5
	5220	0	-	19391.8
		4	-	17162.3
		8	-	19297.7
	5240	0	-	18232.2
		4	-	16959.2
		8	-	18177.2
	5260	0	20.662	19211.7
		4	18.111	17144.8
		8	21.036	19232.8
	5300	0	20.184	19089.4
		4	18.036	17127.6
		8	20.468	19192.9
	5320	0	21.832	19802.2
		4	18.095	17149.6
		8	20.793	19610.5
	5500	0	20.255	19152.8
		4	18.107	17134.3
		8	20.748	19368.7
	5580	0	20.692	19546.9
		4	18.064	17137.6
		8	20.834	19306.2
	5700	0	21.045	19465.4
		4	18.110	17130.1
		8	20.653	19288.5
	5745	0	-	19441.7
		4	-	17140.3
		8	-	19287.1
	5785	0	-	19388.8
		4	-	17145.9
		8	-	19276.0
	5825	0	-	19288.4
		4	-	17115.6
		8	-	19703.5

26 dB Emission Bandwidth and 99 % Occupied Bandwidth

Test place Shonan EMC Lab. Wireless shielded room 2
Date February 27, 2024
Temperature / Humidity 21 deg. C / 31 % RH
Engineer Kouki Yamada
Mode Tx, (SDM)
Antenna Ant 2

11ax-20(OFDMA)

RU Type	Tested Frequency [MHz]	RU Index	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
52-tone RU	5180	37	-	19196.2
		38	-	17281.2
		40	-	19124.2
	5220	37	-	19065.6
		38	-	17287.4
		40	-	19249.2
	5240	37	-	18133.2
		38	-	16979.6
		40	-	18060.8
	5260	37	20.853	19061.4
		38	18.585	17265.5
		40	21.369	19038.0
	5300	37	21.120	19198.3
		38	18.166	17270.7
		40	21.915	19113.6
	5320	37	21.298	18890.1
		38	18.453	17272.9
		40	21.663	19169.4
	5500	37	21.582	19196.9
		38	18.197	17266.8
		40	21.949	19030.1
	5580	37	21.282	19428.2
		38	18.147	17289.5
		40	21.764	19207.6
	5700	37	21.001	19126.6
		38	19.036	17261.4
		40	21.803	19077.7
	5745	37	-	18896.1
		38	-	17287.4
		40	-	19105.7
	5785	37	-	19014.3
		38	-	17252.7
		40	-	19106.1
	5825	37	-	19345.5
		38	-	17274.8
		40	-	19130.8

26 dB Emission Bandwidth and 99 % Occupied Bandwidth

Test place Shonan EMC Lab. Wireless shielded room 2
Date February 27, 2024
Temperature / Humidity 21 deg. C / 31 % RH
Engineer Kouki Yamada
Mode Tx, (SDM)
Antenna Ant 2

11ax-20(OFDMA)

RU Type	Tested Frequency [MHz]	RU Index	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
106-tone RU	5180	53	-	18363.4
		54	-	18439.0
	5220	53	-	18335.5
		54	-	18392.8
	5240	53	-	18069.9
		54	-	18020.7
	5260	53	20.278	18366.6
		54	21.516	18395.2
	5300	53	20.245	18385.7
		54	20.788	18412.7
	5320	53	19.963	18355.4
		54	20.957	18386.8
	5500	53	19.954	18343.0
		54	21.016	18405.6
	5580	53	20.987	18372.1
		54	21.065	18395.7
	5700	53	20.912	18422.6
		54	21.162	18407.4
	5745	53	-	18396.1
		54	-	18449.5
	5785	53	-	18358.7
		54	-	18363.8
	5825	53	-	18368.4
		54	-	18427.7

26 dB Emission Bandwidth and 99 % Occupied Bandwidth

Test place Shonan EMC Lab. Wireless shielded room 2
Date February 27, 2024
Temperature / Humidity 21 deg. C / 31 % RH
Engineer Kouki Yamada
Mode Tx, (SDM)
Antenna Ant 2

11ax-20(OFDMA)

RU Type	Tested Frequency [MHz]	RU Index	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
242-tone RU	5180	61	-	19544.6
	5220	61	-	19533.6
	5240	61	-	18954.2
	5260	61	32.642	19505.0
	5300	61	30.718	19496.6
	5320	61	30.926	19499.4
	5500	61	32.032	19532.9
	5580	61	31.523	19527.2
	5700	61	30.191	19522.4
	5745	61	-	19567.4
	5785	61	-	19516.1
	5825	61	-	19540.4

26 dB Emission Bandwidth and 99 % Occupied Bandwidth

Test place	Shonan EMC Lab. Wireless shielded room 2	
Date	February 27, 2024	February 27, 2024
Temperature / Humidity	21 deg. C / 31 % RH	21 deg. C / 31 % RH
Engineer	Kouki Yamada	Yusuke Tanikawara
Mode	Tx, (SDM)	
Antenna	Ant 2	

11ax-40(OFDMA)

RU Type	Tested Frequency [MHz]	RU Index	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
26-tone RU	5190	0	-	18195.7
		8	-	21783.2
		17	-	18151.8
	5230	0	-	18209.8
		8	-	21987.6
		17	-	18105.9
	5270	0	19.046	18169.9
		8	21.931	22662.4
		17	18.880	18112.3
	5310	0	19.029	18211.7
		8	21.236	22249.5
		17	18.900	18109.5
	5510	0	18.977	18130.7
		8	21.353	22146.4
		17	18.900	18162.7
	5550	0	19.115	18168.1
		8	21.510	21999.6
		17	18.941	18100.7
	5670	0	18.944	18126.6
		8	21.303	22209.3
		17	18.819	18126.1
	5755	0	-	18043.2
		8	-	22670.2
		17	-	18109.2
	5795	0	-	18126.8
		8	-	22292.0
		17	-	18133.5

26 dB Emission Bandwidth and 99 % Occupied Bandwidth

Test place Shonan EMC Lab. Wireless shielded room 2
Date February 27, 2024
Temperature / Humidity 21 deg. C / 31 % RH
Engineer Yusuke Tanikawara
Mode Tx, (SDM)
Antenna Ant 2

11ax-40(OFDMA)

RU Type	Tested Frequency [MHz]	RU Index	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
52-tone RU	5190	37	-	17971.9
		40	-	23235.0
		44	-	17983.0
	5230	37	-	18010.8
		40	-	22361.8
		44	-	17924.6
	5270	37	19.085	18011.9
		40	21.377	22547.1
		44	19.048	17951.8
	5310	37	19.054	18011.9
		40	21.921	22125.0
		44	19.026	17918.9
	5510	37	19.162	17966.1
		40	21.956	22551.9
		44	18.986	17960.5
	5550	37	19.080	17941.9
		40	21.526	23789.3
		44	18.975	17957.4
	5670	37	18.967	17962.7
		40	21.875	22403.1
		44	19.006	17928.0
	5755	37	-	17986.0
		40	-	21905.8
		44	-	17963.6
	5795	37	-	17958.1
		40	-	21950.9
		44	-	17972.7

26 dB Emission Bandwidth and 99 % Occupied Bandwidth

Test place Shonan EMC Lab. Wireless shielded room 2
Date February 27, 2024
Temperature / Humidity 21 deg. C / 31 % RH
Engineer Yusuke Tanikawara
Mode Tx, (SDM)
Antenna Ant 2

11ax-40(OFDMA)

RU Type	Tested Frequency [MHz]	RU Index	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
106-tone RU	5190	53	-	17899.2
		54	-	21530.1
		56	-	17805.7
	5230	53	-	17874.9
		54	-	21660.5
		56	-	17773.8
	5270	53	19.362	17872.8
		54	21.709	22997.7
		56	19.101	17798.7
	5310	53	19.416	17884.6
		54	21.831	22876.1
		56	19.091	17814.2
	5510	53	19.460	17833.6
		54	21.454	21909.8
		56	19.108	17804.8
	5550	53	19.340	17846.1
		54	21.283	21903.3
		56	19.090	17778.9
	5670	53	19.327	17832.5
		54	21.782	21687.9
		56	19.067	17784.8
	5755	53	-	17832.7
		54	-	21879.0
		56	-	17817.5
	5795	53	-	17859.4
		54	-	22320.3
		56	-	17805.7

26 dB Emission Bandwidth and 99 % Occupied Bandwidth

Test place	Shonan EMC Lab. Wireless shielded room 2	
Date	February 27, 2024	February 28, 2024
Temperature / Humidity	21 deg. C / 31 % RH	22deg. C / 29 RH
Engineer	Yusuke Tanikawara	Miku Ikudome
Mode	Tx, (SDM)	
Antenna	Ant 2	

11ax-40(OFDMA)

RU Type	Tested Frequency [MHz]	RU Index	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
242-tone RU	5190	61	-	29875.8
		62	-	28695.8
	5230	61	-	28870.0
		62	-	26984.5
	5270	61	39.193	27308.5
		62	38.948	25224.6
	5310	61	39.023	28223.7
		62	39.028	26388.4
	5510	61	39.104	25021.5
		62	39.152	26572.0
	5550	61	39.196	27440.9
		62	38.945	26248.8
	5670	61	39.155	28337.3
		62	39.118	26644.2
	5755	61	-	26941.0
		62	-	27941.2
	5795	61	-	27760.9
		62	-	26909.6

11ax-40(OFDMA)

RU Type	Tested Frequency [MHz]	RU Index	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
484-tone RU	5190	65	-	37755.1
	5230	65	-	37890.3
	5270	65	39.913	37887.4
	5310	65	39.885	37895.2
	5510	65	39.901	37848.2
	5550	65	39.909	37908.8
	5670	65	39.895	37895.8
	5755	65	-	37866.9
	5795	65	-	37867.4

26 dB Emission Bandwidth and 99 % Occupied Bandwidth

Test place Shonan EMC Lab. Wireless shielded room 2
Date February 28, 2024
Temperature / Humidity 22deg. C / 29 RH
Engineer Miku Ikudome
Mode Tx, (SDM)
Antenna Ant 2

11ax-80(OFDMA)

RU Type	Tested Frequency [MHz]	RU Index	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
26-tone RU	5210	0	-	18097.4
		18	-	36833.5
		36	-	18048.0
	5290	0	19.241	18085.9
		18	38.387	36890.7
		36	19.044	17987.2
	5530	0	19.175	18081.5
		18	38.374	36818.8
		36	19.013	18040.6
	5775	0	-	18085.4
		18	-	36863.2
		36	-	18085.0

11ax-80(OFDMA)

RU Type	Tested Frequency [MHz]	RU Index	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
52-tone RU	5210	37	-	17936.9
		44	-	20171.4
		52	-	17997.8
	5290	37	19.299	17979.4
		44	21.405	19580.0
		52	19.074	17941.0
	5530	37	19.356	17928.5
		44	21.178	19615.1
		52	19.177	17956.2
	5775	37	-	17960.2
		44	-	19846.6
		52	-	18002.6

26 dB Emission Bandwidth and 99 % Occupied Bandwidth

Test place Shonan EMC Lab. Wireless shielded room 2
Date February 28, 2024
Temperature / Humidity 22deg. C / 29 RH
Engineer Miku Ikudome
Mode Tx, (SDM)
Antenna Ant 2

11ax-80(OFDMA)

RU Type	Tested Frequency [MHz]	RU Index	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
106-tone RU	5210	53	-	17895.6
		56	-	18541.2
		60	-	17931.7
	5290	53	19.992	17924.9
		56	21.527	18792.6
		60	19.617	17826.7
	5530	53	19.548	17896.8
		56	21.524	18718.8
		60	19.561	17886.0
	5775	53	-	17898.6
		56	-	18802.2
		60	-	17879.7

11ax-80(OFDMA)

RU Type	Tested Frequency [MHz]	RU Index	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
242-tone RU	5210	61	-	19375.2
		62	-	39511.7
		64	-	19245.1
	5290	61	25.141	19598.6
		62	46.623	40092.9
		64	25.349	19430.8
	5530	61	24.921	19510.1
		62	47.998	39783.9
		64	24.644	19394.9
	5775	61	-	19365.7
		62	-	40242.7
		64	-	19438.2

26 dB Emission Bandwidth and 99 % Occupied Bandwidth

Test place Shonan EMC Lab. Wireless shielded room 2
Date February 28, 2024
Temperature / Humidity 22deg. C / 29 RH
Engineer Miku Ikudome
Mode Tx, (SDM)
Antenna Ant 2

11ax-80(OFDMA)

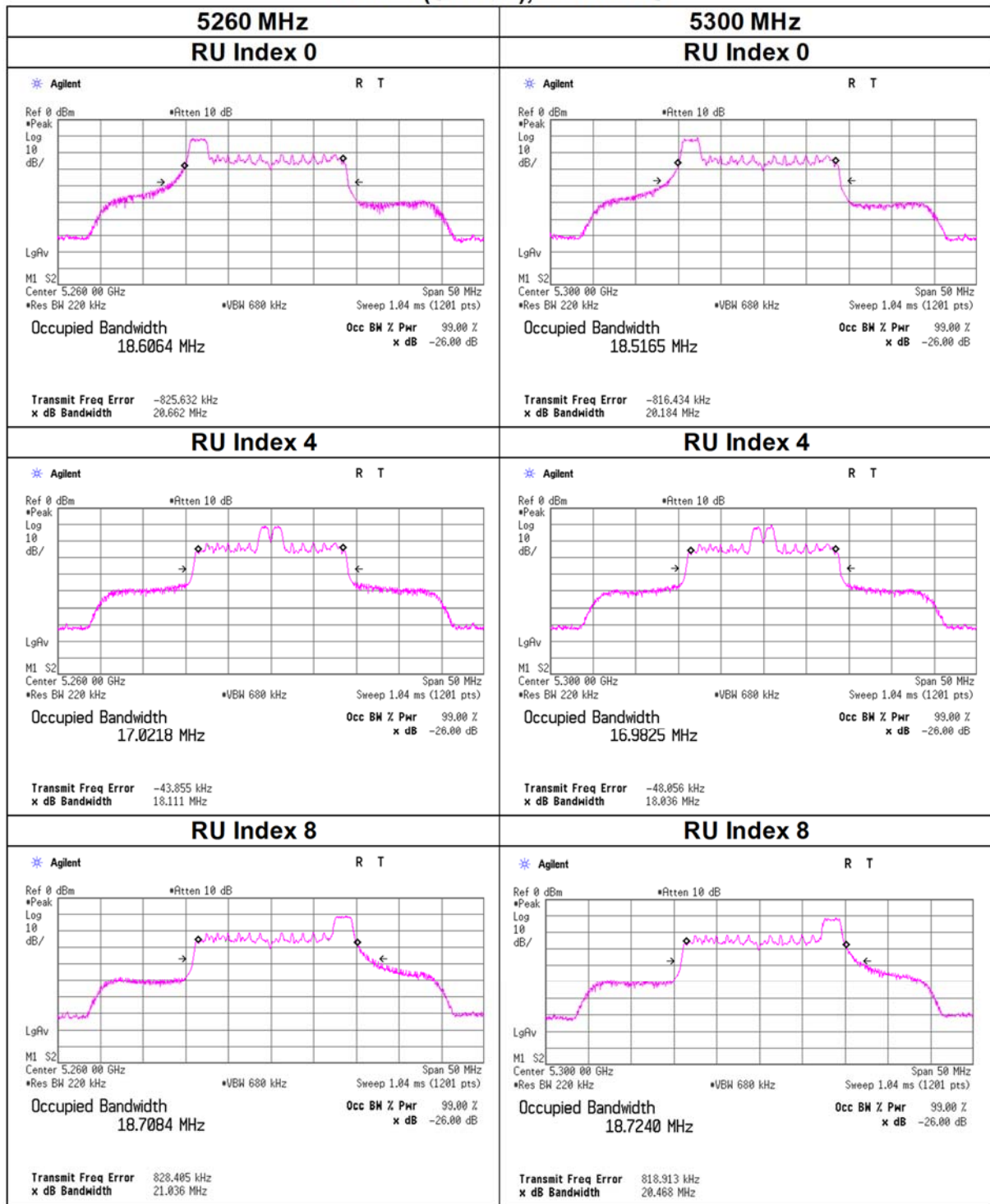
RU Type	Tested Frequency [MHz]	RU Index	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
484-tone RU	5210	65	-	68855.2
		66	-	69791.0
	5290	65	79.867	70922.6
		66	79.934	67784.0
	5530	65	79.964	67855.8
		66	79.915	71389.2
	5775	65	-	68977.1
		66	-	69411.1

11ax-80(OFDMA)

RU Type	Tested Frequency [MHz]	RU Index	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
996-tone RU	5210	67	-	77570.3
	5290	67	80.455	77709.0
	5530	67	80.372	77518.0
	5775	67	-	77424.0

26 dB Emission Bandwidth

11ax-20(OFDMA), 26-tone RU



26 dB Emission Bandwidth

11ax-20(OFDMA), 26-tone RU

