

FCC Test Report

Report No.: RWAZ202300121D
Applicant: Shenzhen Youmi Intelligent Technology Co., Ltd.
Address: 406-407 Jinqi Zhigu Building, 4/F, 1 Tangling Road, Nanshan District, Shenzhen City, China
Product Name: Smart Tablet
Product Model: TG3DBG1MA
Multiple Models: TG3DBG2MA, TG2405GBA, TG4JBG2PA
Trade Mark: UMIDIGI
FCC ID: 2ATZ4-G1TABMINI
Standards: FCC CFR Title 47 Part 15E (§15.407)
Test Date: 2024-01-16~2024-01-28
Test Result: Complied
Issue Date: 2024-01-29

Reviewed by:

Frank Yin

Approved by:

Jacob Kong

Frank Yin
Project Engineer

Jacob Kong
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Prepared by:

World Alliance Testing and Certification (Shenzhen) Co., Ltd

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Revision History

Version No.	Issued Date	Description
00	2024-01-29	Original

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1 General Information

1.1 Client Information

Applicant:	Shenzhen Youmi Intelligent Technology Co., Ltd.
Address:	406-407 Jinqi Zhigu Building, 4/F, 1 Tangling Road, Nanshan District, Shenzhen City, China
Manufacturer:	Shenzhen Youmi Intelligent Technology Co., Ltd.
Address:	406-407 Jinqi Zhigu Building, 4/F, 1 Tangling Road, Nanshan District, Shenzhen City, China

1.2 Product Description of EUT

The EUT is Smart Tablet that contains Classic Bluetooth(BDR/EDR), BLE, 2.4G and 5G WLAN radios, this report covers the full testing of the 5G WLAN radio.

Sample Serial number	38-2 for CE&RE test, 38-1 for RF test conducted test (assigned by WATC)
Sample Received Date	2024/1/16
Sample Status	Good Condition
Frequency Range	5150 MHz - 5250MHz 5725 MHz - 5850MHz
Maximum Conducted Output Power	5150 MHz - 5250MHz: 9.09dBm 5725 MHz - 5850MHz: 12.42dBm
Modulation Technology	OFDM
Spatial Streams	SISO (1TX, 1RX)
Antenna Gain [#]	5150 MHz - 5250MHz: 3.84dBi 5725 MHz - 5850MHz: 3.64dBi
Power Supply	DC 3.8V from Lithium_ion polymer Battery or DC 5V from Adapter
Adapter Information	Model: HJ-0502000W2-US Input: AC100-240V~ 50/60Hz 0.3A Output: DC 5.0V 2.0A
Modification	Sample No Modification by the test lab

1.3 Antenna information

<p>15.203 requirement:</p> <p>An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.</p>	
Device Antenna information:	
<p>The Wi-Fi antenna is an internal antenna which cannot replace by end-user. Please see the product internal photos for details.</p>	

1.4 Related Submittal(s)/Grant(s)

FCC Part 15, Subpart C, Equipment Class: DTS, FCC ID: 2ATZ4-G1TABMINI
FCC Part 15, Subpart C, Equipment Class: DSS, FCC ID: 2ATZ4-G1TABMINI

1.5 Measurement Uncertainty

Parameter	Expanded Uncertainty (Confidence of 95%(U = 2Uc(y)))	
AC Power Lines Conducted Emissions	±3.14dB	
Emissions, Radiated	Below 30MHz	±2.78dB
	Below 1GHz	±4.84dB
	Above 1GHz	±5.44dB
Conducted Power	0.74dB	
Frequency Error	150Hz	
Bandwidth	0.34%	
Power Spectral Density	0.74dB	

Note 1: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

Note 2: The Decision Rule is based on simple acceptance with ISO Guide 98-4:2012 Clause 8.2 (Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

1.6 Laboratory Location

World Alliance Testing and Certification (Shenzhen) Co., Ltd

No. 1002, East Block, Laobing Building, Xingye Road 3012, Xixiang street, Bao'an District, Shenzhen, Guangdong, People's Republic of China

Tel: +86-755-29691511, Email: qa@watc.com.cn

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 463912, the FCC Designation No. : CN5040.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0160.

1.7 Test Methodology

FCC CFR 47 Part 2

FCC CFR 47 Part 15

KDB 789033 D02 General UNII Test Procedures New Rules v02r01

ANSI C63.10-2020

2 Description of Measurement

2.1 Test Configuration

Operating channels: (5150-5250MHz)					
Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
36	5180	42	5210	48	5240
38	5190	44	5220	/	/
40	5200	46	5230	/	/
According to ANSI C63.10-2020 chapter 5.6.1 Table 11 requirement, select lowest channel, middle channel, and highest channel in the frequency range in which device operates for testing. The detailed frequency points are as follows:					
802.11a, 802.11n-HT20, 802.11ac-VHT20, 802.11 AX20					
Lowest channel		Middle channel		Highest channel	
Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
36	5180	40	5200	48	5240
802.11n-HT40, 802.11ac-VHT40, 802.11 AX40					
Lowest channel		Middle channel		Highest channel	
Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
38	5190	/	/	46	5230
802.11ac-VHT80, 802.11 AX80					
Lowest channel		Middle channel		Highest channel	
Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
/	/	42	5210	/	/

Operating channels: (5725-5850MHz)					
Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
149	5745	155	5775	161	5805
151	5755	157	5785	165	5825
153	5765	159	5795	/	/
According to ANSI C63.10-2020 chapter 5.6.1 Table 11 requirement, select lowest channel, middle channel, and highest channel in the frequency range in which device operates for testing. The detailed frequency points are as follows:					
802.11a, 802.11n-HT20, 802.11ac-VHT20, 802.11 AX20					
Lowest channel		Middle channel		Highest channel	
Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)

149	5745	157	5785	165	5825
802.11n-HT40, 802.11ac-VHT40, 802.11 AX20					
Lowest channel		Middle channel		Highest channel	
Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
151	5755	/	/	159	5795
802.11ac-VHT80, 802.11 AX20					
Lowest channel		Middle channel		Highest channel	
Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
/	/	155	5775	/	/

Test Mode:					
Transmitting mode:		Keep the EUT in continuous transmitting with modulation			
Exercise software#:		QA-tool 0.0.1.38			
5150-5250MHz Band					
Mode	Data rate	Powel Level Setting#			
		Low Channel	Middle Channel	High Channel	
802.11a	6Mbps	11	11	11	
802.11ac-HT20	MCS0	10	10	10	
802.11ac-HT40	MCS0	9.5	9.5	9.5	
802.11ac-VHT80	MCS0	10	10	10	
802.11ax-20	MCS0	10	10	10	
802.11ax-40	MCS0	9	9	9	
802.11ax-80	MCS0	10	10	10	
5725-5850MHz Band					
Mode	Data rate	Powel Level Setting#			
		Low Channel	Middle Channel	High Channel	
802.11a	6Mbps	18	18	18	
802.11ac-HT20	MCS0	18	18	18	
802.11ac-HT40	MCS0	18	18	18	
802.11ac-VHT80	MCS0	14	14	14	
802.11ax-20	MCS0	20	20	20	
802.11ax-40	MCS0	18	18	18	
802.11ax-80	MCS0	14	14	14	
The exercise software and the maximum power setting that provided by manufacturer.					

Worst-Case Configuration:
For radiated emissions, EUT was investigated in three orthogonal orientation, the worst-case orientation was recorded in report
For AC power line conducted emission and radiated emission 9kHz-1GHz and above 18GHz were performed with the EUT transmits at the channel with highest output power as worst-case scenario.
The ac vht20/ac vht40 were reduced test since the identical parameters with n-ht20/n-ht40.

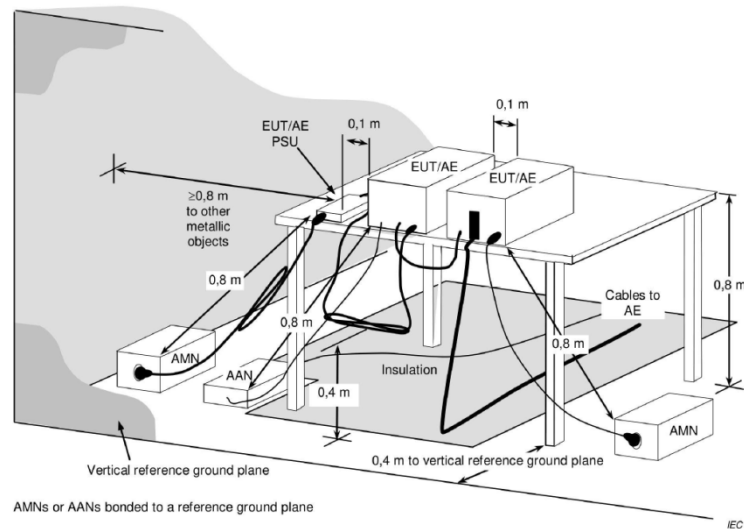
For 802.11ax mode, the device only support full RU mode, not support partial RU mode.

2.2 Test Auxiliary Equipment

Manufacturer	Description	Model	Serial Number
/	/	/	/

2.3 Test Setup

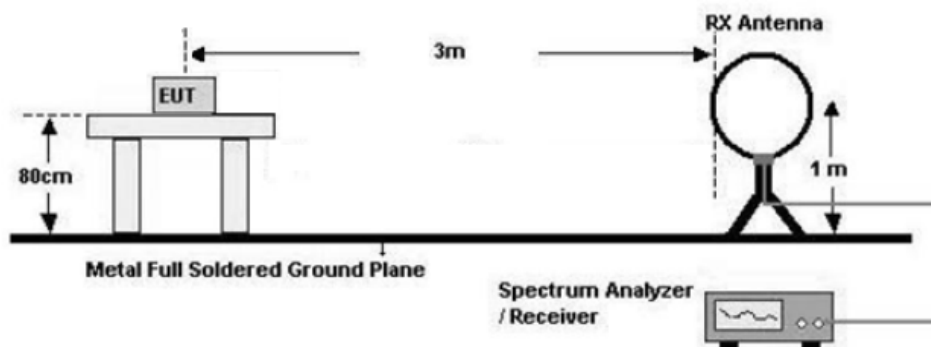
1) Conducted emission measurement:



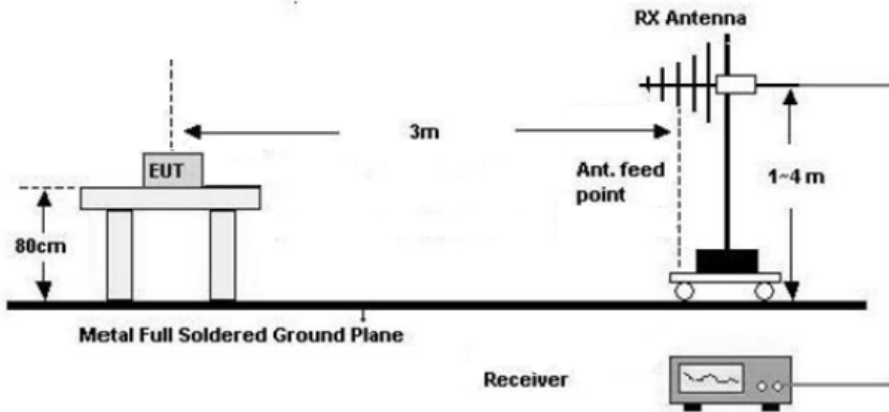
Note: The 0.8 m distance specified between EUT/AE/PSU and AMN/AAN, is applicable only to the EUT being measured. If the device is AE then it shall be >0.8 m.

2) Radiated emission measurement:

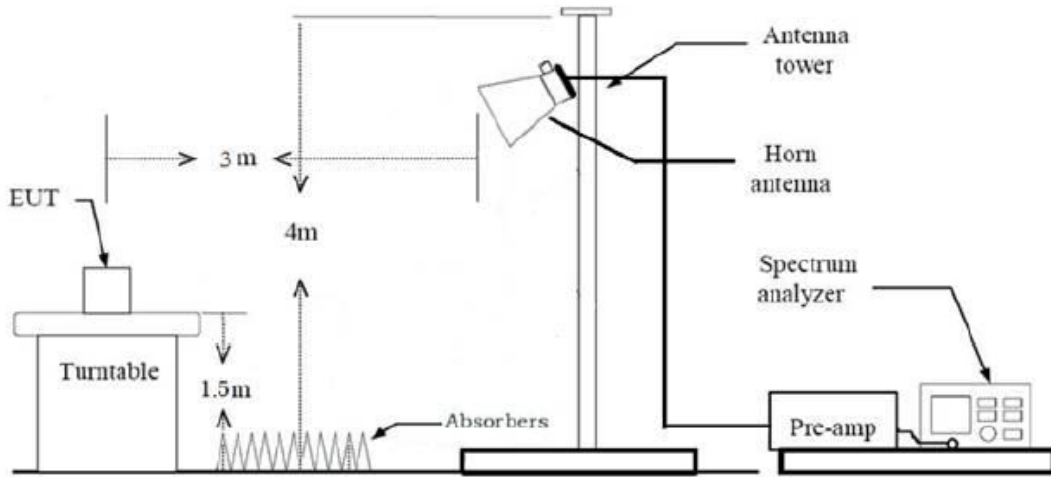
Below 30MHz (3m SAC)



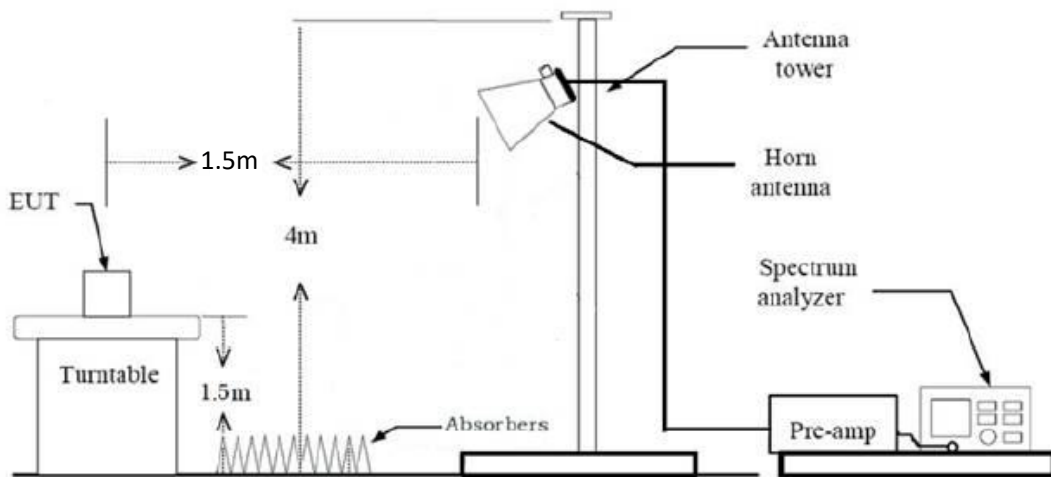
0MHz-1GHz (3m SAC)



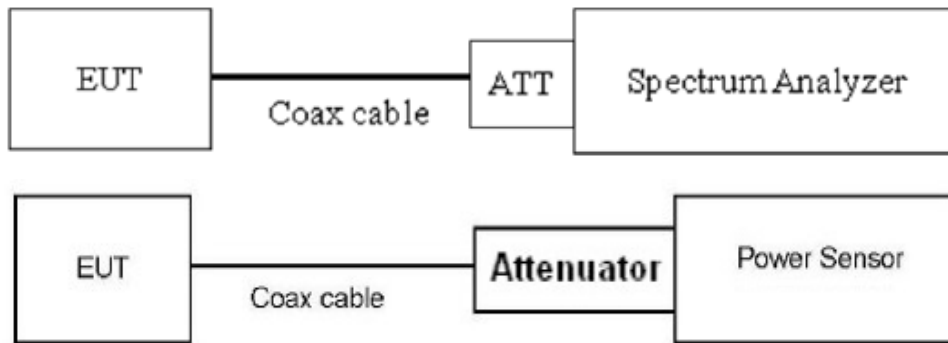
1GHz-18GHz(3m FAC)



Above 18GHz (3m FAC)



3) RF Conducted Test



2.4 Test Procedure

Conducted emission:

1. The E.U.T is placed on a non-conducting table 40cm from the vertical ground plane and 80cm above the horizontal ground plane (Please refer to the block diagram of the test setup and photographs).
2. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.
3. Line conducted data is recorded for both Line and Neutral

Radiated Emission Procedure:

a) For below 30MHz

1. All measurements were made at a test distance of 3 m. The measured data was extrapolated from the test distance (3m) to the specification distance (300 m from 9-490 kHz and 30 m from 490 kHz- 30 MHz) to clearly show the relative levels of fundamental and spurious emissions and demonstrate compliance with the requirement that the level of any spurious emissions be below the level of the intentionally transmitted signal. The extrapolation factor for the limits were $40 \cdot \log(\text{test distance} / \text{specification distance})$.
2. Loop antenna use, investigation was done on the three antenna orientations (parallel, perpendicular, ground-parallel)

b) For 30MHz-1GHz:

1. The EUT was placed on the tabletop of a rotating table 0.8 m the ground at a 3 m semi anechoic chamber. The measurement distance from the EUT to the receiving antenna is 3 m.
2. EUT works in each mode of operation that needs to be tested. The highest signal levels relative to the limit shall be determined by rotating the EUT from 0° to 360° and with varying the measurement antenna height between 1 m and 4 m in vertical and horizontal polarizations.

c) For above 1GHz:

1. The EUT was placed on the tabletop of a rotating table 1.5 m the ground at a 3 m fully anechoic room. The measurement distance from the EUT to the receiving antenna is 3 m (1-18GHz) and 1.5 m (above

18GHz).

2. EUT works in each mode of operation that needs to be tested, and having the EUT continuously working. The highest signal levels relative to the limit shall be determined by rotating the EUT from 0° to 360° and with varying the measurement antenna height between 1 m and 4 m in vertical and horizontal polarizations.
3. Open the test software to control the test antenna and test turntable. Perform the test, save the test results, and export the test data.
4. Base on FCC 15.31 (f) (2): measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field.

RF Conducted Test:

1. The antenna port of EUT was connected to the RF port of the test equipment (Power Meter or Spectrum analyzer) through Attenuator and RF cable.
2. The cable assembly insertion loss of 10.0dB (including 10.0 dB Attenuator and 1.0 dB cable) was entered as an offset in the power meter. Note: Actual cable loss was unavailable at the time of testing, therefore a loss of 1.0dB was assumed as worst case. This was later verified to be true by laboratory. (if the RF cable provided by client, the cable loss declared by client)
3. The EUT is keeping in continuous transmission mode and tested in all modulation modes.

2.5 Measurement Method

Description of Test	Measurement Method
AC Line Conducted Emissions	ANSI C63.10-2020 Section 6.2
Maximum Conducted Output Power	KDB 789033 D02 v02r01 section E.3. b)
Power Spectral Density	KDB 789033 D02 v02r01 section F
26 dB Emission Bandwidth	KDB 789033 D02 v02r01 section C.1
6 dB Emission Bandwidth	KDB 789033 D02 v02r01 section C.2
99% Occupied Bandwidth	KDB 789033 D02 v02r01 section D.
Unwanted Emissions	KDB 789033 D02 v02r01 section G.
Duty Cycle	KDB 789033 D02 v02r01 section B.

2.6 Measurement Equipment

Manufacturer	Description	Model	Management No.	Calibration Date	Calibration Due Date
AC Line Conducted Emission Test					
ROHDE& SCHWARZ	EMI TEST RECEIVER	ESR	101817	2023/7/3	2024/7/2
R&S	LISN	ENV216	101748	2023/8/1	2024/7/30
N/A	Coaxial Cable	NO.12	N/A	2023/7/3	2024/7/2
Farad	Test Software	EZ-EMC	Ver. EMEC-3A1	/	/
Radiated Emission Test					
R&S	EMI test receiver	ESR3	102758	2023/7/3	2024/7/2
ROHDE& SCHWARZ	SPECTRUM ANALYZER	FSV40-N	101608	2023/7/3	2024/7/2
SONOMA INSTRUMENT	Low frequency amplifier	310	186014	2023/7/12	2024/7/11
COM-POWER	preamplifier	PAM-118A	18040152	2023/8/21	2024/8/20
COM-POWER	Amplifier	PAM-840A	461306	2023/8/8	2024/8/7
ETS	Passive Loop Antenna	6512	29604	2023/7/7	2024/7/6
SCHWARZBECK	Log - periodic wideband antenna	VULB 9163	9163-872	2023/7/7	2024/7/6
Astro Antenna Ltd	Horn antenna	AHA-118S	3015	2023/7/6	2024/7/5
Ducommun technologies	Horn Antenna	ARH-4223-02	1007726-03	2023/7/10	2024/7/9
Ducommun technologies	Horn Antenna	ARH-2823-02	1007726-03	2023/7/10	2024/7/9
Oulitong	Band Reject Filter	OBSF-5150-585 0-S	OE02104371	2023/9/15	2024/9/14
N/A	Coaxial Cable	N/A	NO.9	2023/8/8	2024/8/7
N/A	Coaxial Cable	N/A	NO.10	2023/8/8	2024/8/7
N/A	Coaxial Cable	N/A	NO.11	2023/8/8	2024/8/7
Audix	Test Software	E3	191218 V9	/	/
RF Conducted Test					
ROHDE& SCHWARZ	SPECTRUM ANALYZER	FSU-26	200680/026	2023/7/12	2024/7/11
ROHDE& SCHWARZ	SPECTRUM ANALYZER	FSV40-N	101608	2023/7/3	2024/7/2
ANRITSU	USB Power Sensor	MA24418A	12620	2023/7/12	2024/7/11
narda	6dB attenuator	603-06-1	N/A	2023/7/26	2024/7/25

Note: All equipment is calibrated with valid calibrations. Each measurement data is traceable to the national or International standards.

3 Test Results

3.1 Test Summary

FCC Rules	Description of Test	Result
§15.203	Antenna Requirement	Compliance
§15.207 (a) §15.407 (b)(9)	AC Line Conducted Emissions	Compliance
§15.407 (a)(1)(iv),(3)(i)	Conducted Peak Output Power Power Spectral Density	Compliance
§15.407 (a)(12)	99% Occupied Bandwidth	Compliance
§15.407 (a)	26 dB Emission Bandwidth	Compliance
§15.407 (e)	6 dB Emission Bandwidth	Compliance
§15.205, §15.209, §15.407 (b)(1), (4), (9), (10)	Unwanted Emissions	Compliance
/	Duty Cycle	Report only

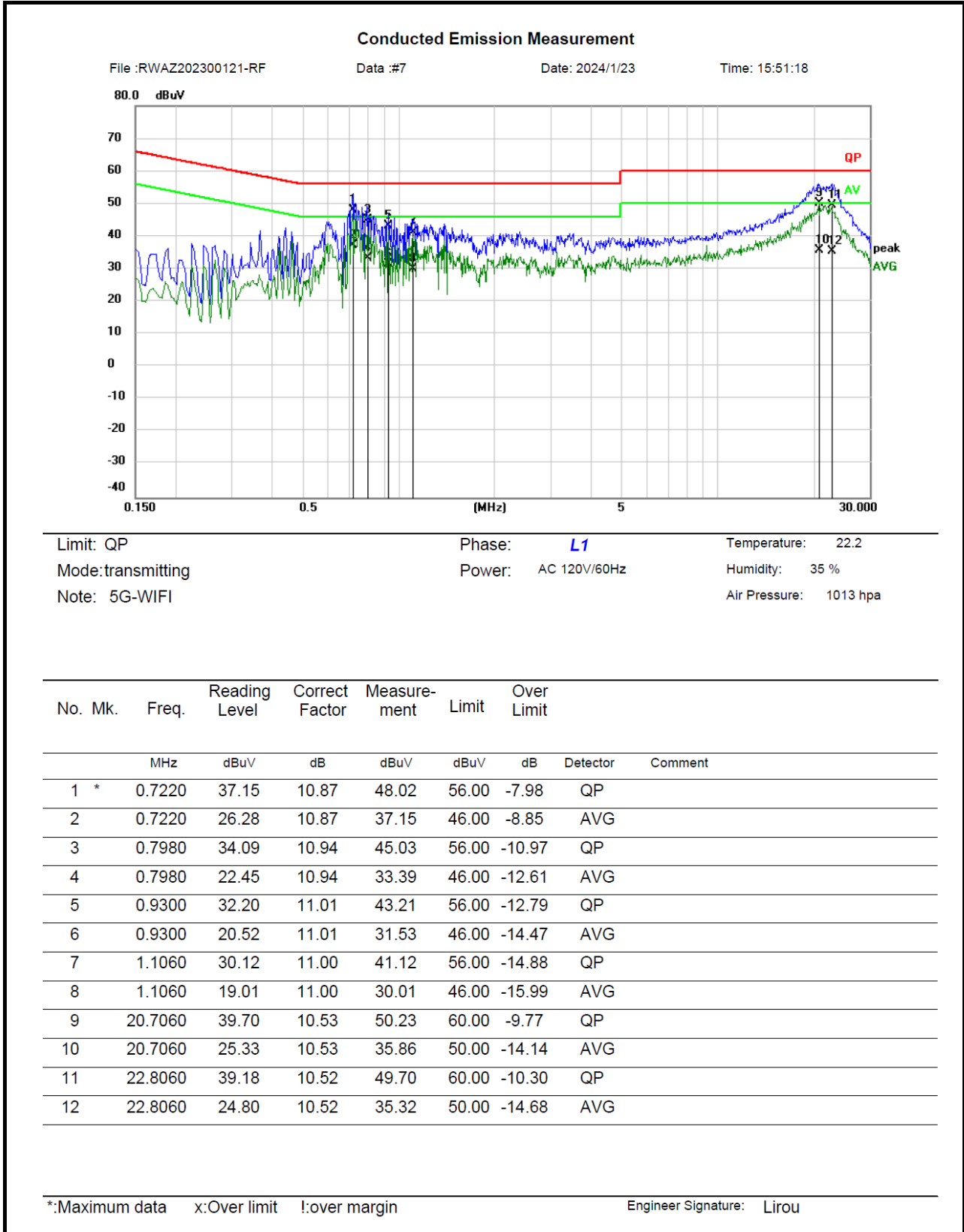
3.2 Limit

Test items	Limit
AC Power Line Conducted Emission	See details §15.207 (a)
<p>Conducted Peak Output Power</p> <p>Power Spectral Density</p>	<p>For the band 5.150-5.250 GHz Band:</p> <p>For client devices in the 5.15–5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.</p> <p>For the band 5.725-5.895 GHz Band:</p> <p>For the band 5.725-5.850 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, Fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.</p>
26dB Emission Bandwidth 99% Occupied Bandwidth	N/A
6dB Emission Bandwidth	Within the 5.725-5.850 GHz and 5.850-5.895 GHz bands, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

Unwanted Emissions	<p>Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in § 15.209</p> <p>For the band 5.150-5.250 GHz Band:</p> <p>All emissions outside of the 5.15–5.35 GHz band shall not exceed an e.i.r.p. of –27 dBm/MHz.</p> <p>For the band 5.725-5.895 GHz Band:</p> <p>All emissions shall be limited to a level of –27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.</p>
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3.3 AC Line Conducted Emissions Test Data

Test Date:	2024-1-23	Test By:	Lirou Li
Environment condition:	Temperature: 22.2°C; Relative Humidity:35%; ATM Pressure: 101.3kPa		



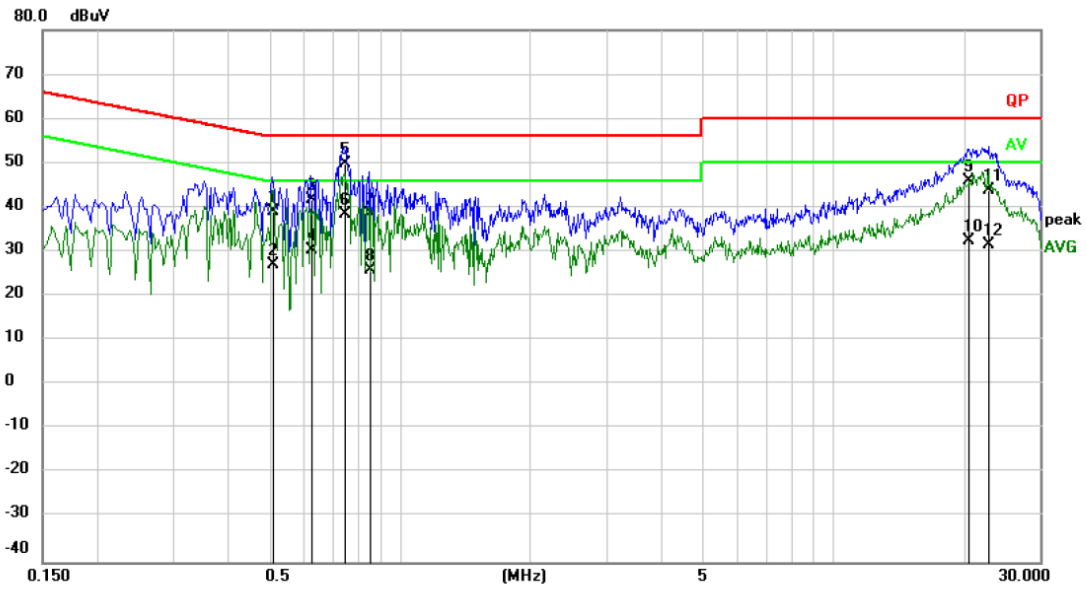
Conducted Emission Measurement

File :RWAZ202300121-RF

Data :#8

Date: 2024/1/23

Time: 15:58:27



Limit: QP

Phase: N

Temperature: 22.2

Mode:transmitting

Power: AC 120V/60Hz

Humidity: 35 %

Note: 5G-WIFI

Air Pressure: 1013 hpa

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over Limit		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.5100	28.26	10.70	38.96	56.00	-17.04	QP	
2		0.5100	16.22	10.70	26.92	46.00	-19.08	AVG	
3		0.6260	31.08	10.61	41.69	56.00	-14.31	QP	
4		0.6260	19.69	10.61	30.30	46.00	-15.70	AVG	
5	*	0.7460	39.29	10.58	49.87	56.00	-6.13	QP	
6		0.7460	27.95	10.58	38.53	46.00	-7.47	AVG	
7		0.8500	27.74	10.62	38.36	56.00	-17.64	QP	
8		0.8500	15.35	10.62	25.97	46.00	-20.03	AVG	
9		20.5419	35.20	10.65	45.85	60.00	-14.15	QP	
10		20.5419	21.92	10.65	32.57	50.00	-17.43	AVG	
11		22.8540	33.09	10.71	43.80	60.00	-16.20	QP	
12		22.8540	20.73	10.71	31.44	50.00	-18.56	AVG	

*:Maximum data x:Over limit !:over margin

Engineer Signature: Lirou

Remark:

Measurement (dBuV)= Reading Level (dBuV) + Correct Factor(dB)

Correct Factor(dB)= LISN Voltage Division Factor (dB)+ Cable loss(dB)

Over Limit = Measurement – Limit

3.4 Radiated emission Test Data

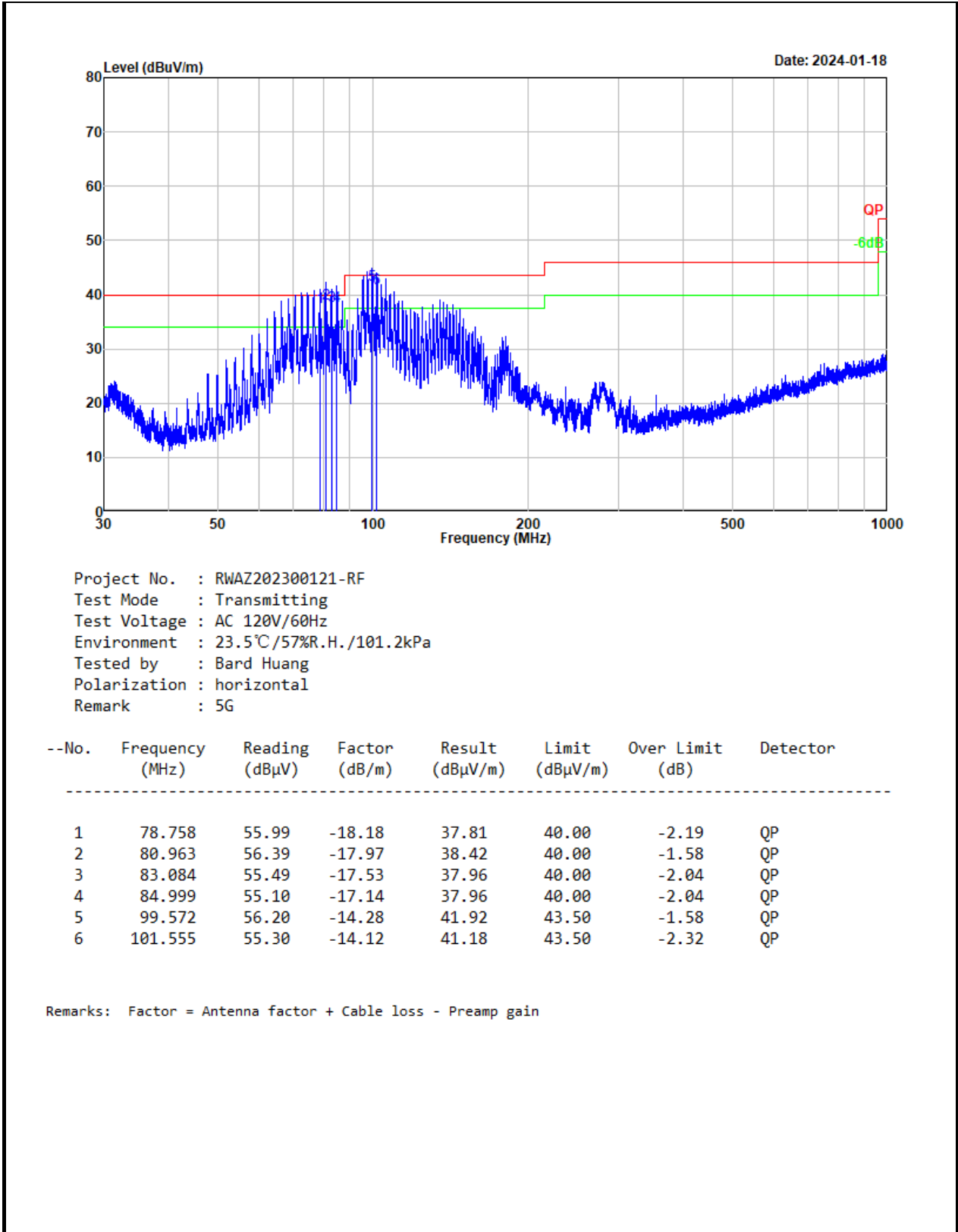
9 kHz-30MHz:

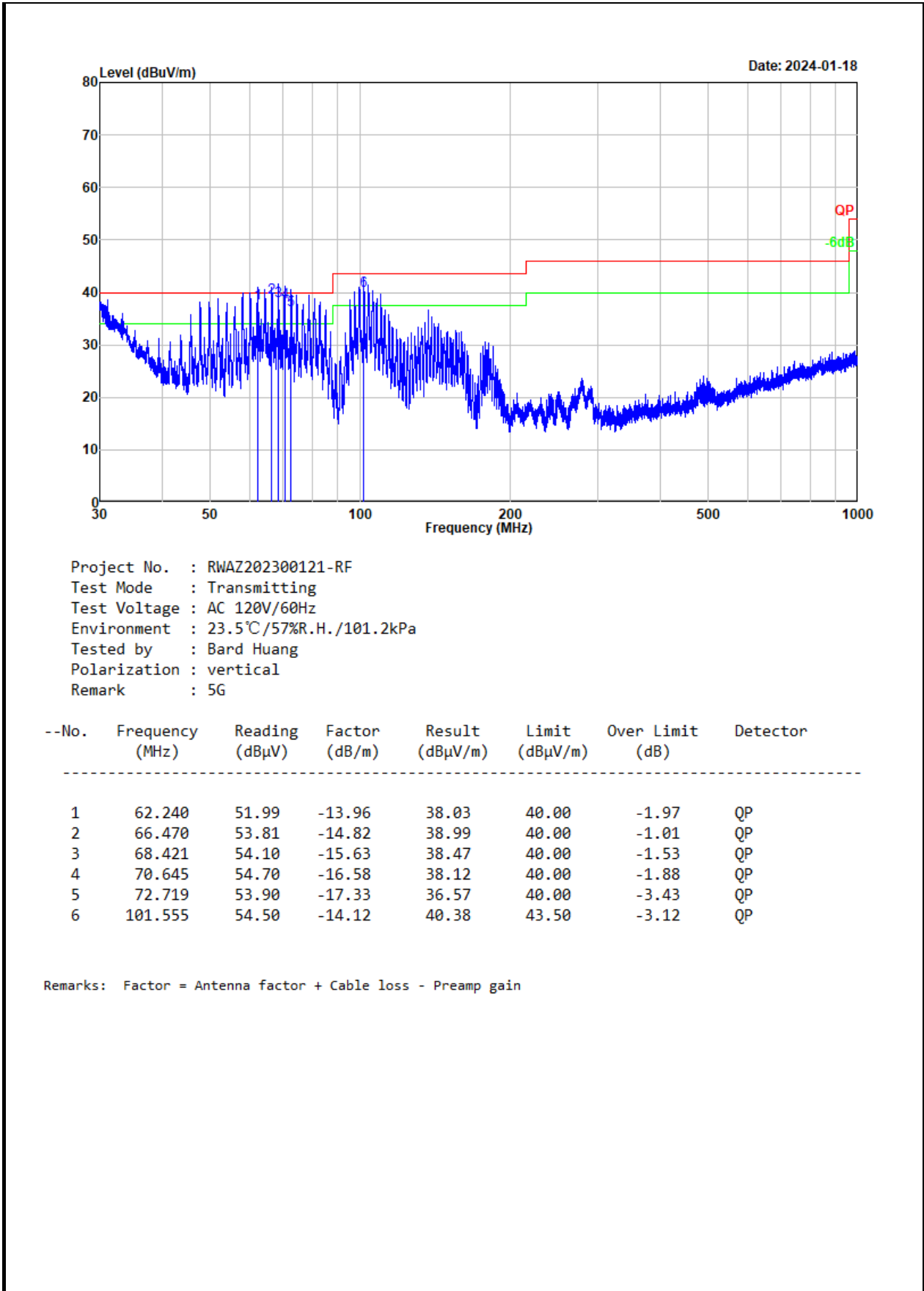
Test Date:	2024-01-18	Test By:	Bard Huang
Environment condition:	Temperature: 23.5°C; Relative Humidity:57%; ATM Pressure: 101.2kPa		

For radiated emissions below 30MHz, there were no emissions found within 20dB of limit.

30MHz-1GHz:

Test Date:	2024-01-18	Test By:	Bard Huang
Environment condition:	Temperature: 23.5°C; Relative Humidity:57%; ATM Pressure: 101.2kPa		





Remark:

Result = Reading + Factor

Factor = Antenna factor + Cable loss – Amplifier gain

Over Limit = Level – Limit

Above 1GHz:

Test Date:	2024-01-19	Test By:	Bard Huang
Environment condition:	Temperature: 24.1°C; Relative Humidity:60%; ATM Pressure: 100.9kPa		

5150-5250MHz Band:

Frequency (MHz)	Reading level (dBμV)	Polar (H/V)	Corrected Factor (dB/m)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Remark
802.11a							
Low Channel							
5150	58.07	Horizontal	11.57	69.64	74	-4.36	Peak
5150	39.21	Horizontal	11.57	50.78	54	-3.22	Average
5150	57.05	Vertical	11.57	68.62	74	-5.38	Peak
5150	38.86	Vertical	11.57	50.43	54	-3.57	Average
10360	52.43	Horizontal	5.5	57.93	68.2	-10.27	Peak
10360	52.1	Vertical	5.5	57.6	68.2	-10.60	Peak
Middle Channel							
10400	52.38	Horizontal	5.7	58.08	68.2	-10.12	Peak
10400	52.43	Vertical	5.7	58.13	68.2	-10.07	Peak
High Channel							
5350	48.69	Horizontal	11.57	60.26	74	-14.74	Peak
5350	38.95	Horizontal	11.57	50.52	54	-3.48	Average
5350	48.68	Vertical	11.57	60.25	74	-14.75	Peak
5350	38.49	Vertical	11.57	50.06	54	-3.94	Average
10480	53.09	Horizontal	5.74	58.83	68.2	-9.37	Peak
10480	53.75	Vertical	5.74	59.49	68.2	-8.71	Average
802.11n-HT20							
Low Channel							
5150	58.24	Horizontal	11.57	69.81	74	-4.19	Peak
5150	38.55	Horizontal	11.57	50.12	54	-3.88	Average
5150	57.85	Vertical	11.57	69.42	74	-4.58	Peak
5150	38.27	Vertical	11.57	49.84	54	-4.16	Average
10360	52.47	Horizontal	5.50	57.97	68.2	-10.23	Peak
10360	52.70	Vertical	5.50	58.20	68.2	-10	Peak
Middle Channel							
10400	52.40	Horizontal	5.7	58.10	68.2	-10.10	Peak
10400	52.85	Vertical	5.7	58.55	68.2	-9.65	Peak

High Channel							
5350	49.03	Vertical	11.57	60.60	74	-13.40	Peak
5350	38.44	Vertical	11.57	50.01	54	-3.99	Average
5350	48.74	Horizontal	11.57	60.31	74	-13.69	Peak
5350	38.81	Horizontal	11.57	50.38	54	-3.62	Average
10480	52.39	Horizontal	5.74	58.13	68.2	-10.07	Peak
10480	52.68	Vertical	5.74	58.42	68.2	-9.78	Peak
802.11 n-HT40							
Low Channel							
5150	59.05	Horizontal	11.57	70.62	74	-3.38	Peak
5150	39.06	Horizontal	11.57	50.63	54	-3.37	Average
5150	58.77	Vertical	11.57	70.34	74	-3.66	Peak
5150	38.40	Vertical	11.57	49.97	54	-4.03	Average
10380	51.92	Horizontal	5.60	57.52	68.2	-10.68	Peak
10380	52.56	Vertical	5.60	58.16	68.2	-10.04	Peak
High Channel							
5350	48.21	Horizontal	11.57	59.78	74	-14.22	Peak
5350	38.03	Horizontal	11.57	49.6	54	-4.40	Average
5350	48.59	Vertical	11.57	60.16	74	-13.84	Peak
5350	38.93	Vertical	11.57	50.5	54	-3.50	Average
10460	53.25	Horizontal	5.73	58.98	68.2	-9.22	Peak
10460	54.21	Vertical	5.73	59.94	68.2	-8.26	Peak
802.11 AX20							
Low Channel							
5150	57.75	Horizontal	11.57	69.32	74	-4.68	Peak
5150	39.08	Horizontal	11.57	50.65	54	-3.35	Average
5150	57.72	Vertical	11.57	69.29	74	-4.71	Peak
5150	39.02	Vertical	11.57	50.59	54	-3.41	Average
10360	52.20	Horizontal	5.5	57.7	68.2	-10.50	Peak
10360	53.17	Vertical	5.5	58.67	68.2	-9.53	Peak
Middle Channel							
10400	52.63	Horizontal	5.7	58.33	68.2	-9.87	Peak
10400	54.19	Vertical	5.7	59.89	68.2	-8.31	Peak
High Channel							
5350	48.35	Horizontal	11.57	59.92	74	-14.74	Peak
5350	38.78	Horizontal	11.57	50.35	54	-3.48	Average
5350	48.02	Vertical	11.57	59.59	74	-14.75	Peak
5350	38.58	Vertical	11.57	50.15	54	-3.94	Average

10480	52.73	Horizontal	5.74	58.47	68.2	-9.73	Peak
10480	54.36	Vertical	5.74	60.1	68.2	-8.10	Peak
802.11AX40							
Low Channel							
5150	56.41	Horizontal	11.57	67.98	74	-6.02	Peak
5150	39.21	Horizontal	11.57	50.78	54	-3.22	Average
5150	56.24	Vertical	11.57	67.81	74	-6.19	Peak
5150	38.87	Vertical	11.57	50.44	54	-3.56	Average
10380	52.49	Horizontal	5.60	58.09	68.2	-10.11	Peak
10380	52.9	Vertical	5.60	58.5	68.2	-9.7	Peak
High Channel							
5350	48.3	Horizontal	11.57	59.87	74	-14.13	Peak
5350	39.29	Horizontal	11.57	50.86	54	-3.14	Average
5350	48.91	Vertical	11.57	60.48	74	-13.52	Peak
5350	39.32	Vertical	11.57	50.89	54	-3.11	Average
10460	52.65	Horizontal	5.73	58.38	68.2	-9.82	Peak
10460	53.17	Vertical	5.73	58.9	68.2	-9.3	Average
802.11ac80							
4500	49.62	Horizontal	7.83	57.45	74	-16.55	Peak
4500	39.34	Horizontal	7.83	47.17	54	-6.83	Average
4500	48.27	Vertical	7.83	56.10	74	-17.90	Peak
4500	38.5	Vertical	7.83	46.33	54	-7.67	Average
5150	47.62	Horizontal	11.57	59.19	74	-14.81	Peak
5150	38.88	Horizontal	11.57	50.45	54	-3.55	Average
5150	48.95	Vertical	11.57	60.52	74	-13.48	Peak
5150	38.5	Vertical	11.57	50.07	54	-3.93	Average
5350	46.27	Horizontal	11.57	57.84	74	-16.16	Peak
5350	38.34	Horizontal	11.57	49.91	54	-4.09	Average
5350	48.75	Vertical	11.57	60.32	74	-13.68	Peak
5350	38.87	Vertical	11.57	50.44	54	-3.56	Average
10420	54.01	Horizontal	5.71	59.72	68.2	-8.48	Peak
10420	54.26	Vertical	5.71	59.97	68.2	-8.23	Peak
802.11AX80							
Low Channel							
4500	51.22	Horizontal	7.83	59.05	74	-14.95	Peak
4500	39.58	Horizontal	7.83	47.41	54	-6.59	Average
4500	51.04	Vertical	7.83	58.87	74	-15.13	Peak
4500	39.42	Vertical	7.83	47.25	54	-6.75	Average

5150	49.61	Horizontal	11.57	61.18	74	-12.82	Peak
5150	38.57	Horizontal	11.57	50.14	54	-3.86	Average
5150	49.42	Vertical	11.57	60.99	74	-13.01	Peak
5150	38.43	Vertical	11.57	50	54	-4	Average
5350	46.48	Horizontal	11.57	58.05	74	-15.95	Peak
5350	39.02	Horizontal	11.57	50.59	54	-3.41	Average
5350	45.76	Vertical	11.57	57.33	74	-16.67	Peak
5350	38.39	Vertical	11.57	49.96	54	-4.04	Average
10420	54.09	Horizontal	5.71	59.80	68.2	-8.40	Peak
10420	54.36	Vertical	5.71	60.07	68.2	-8.13	Peak

Remark:

Corrected Amplitude= Reading level + corrected Factor

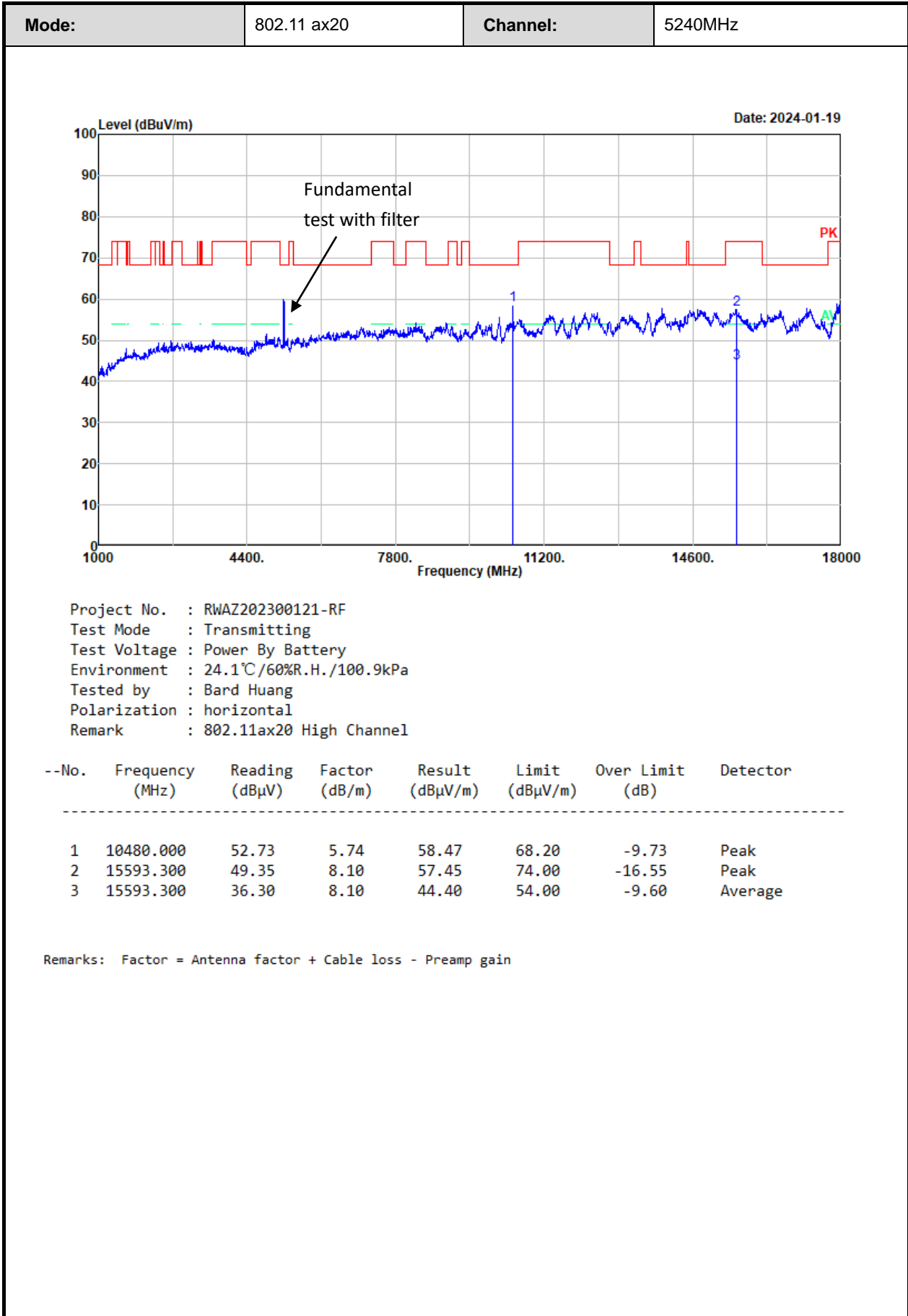
Corrected Factor = Antenna factor + Cable loss – Amplifier gain

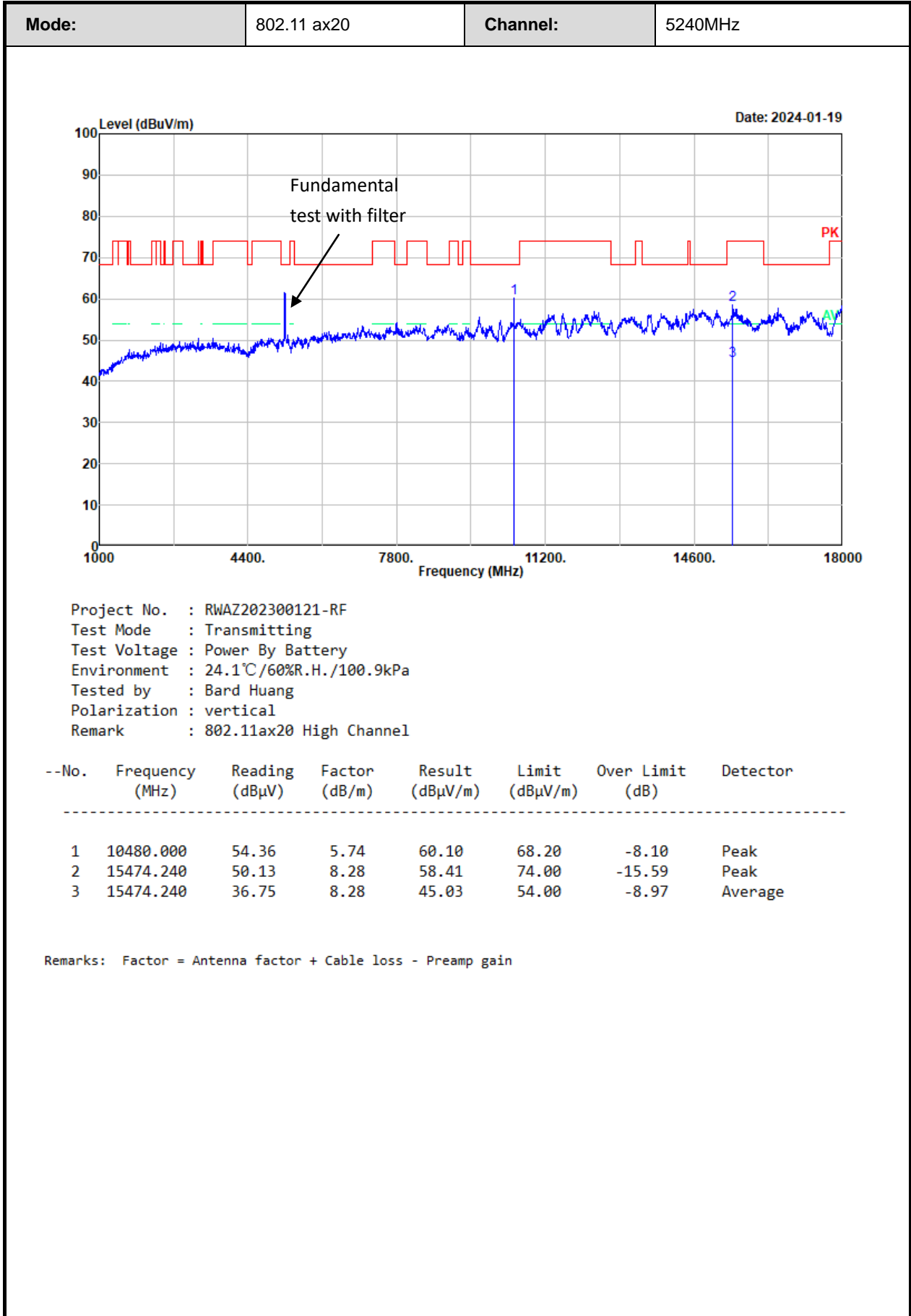
Margin = Corrected Amplitude – Limit

The emission levels of other frequencies that were lower than the limit 20dB, not show in test report.

For emissions in 18GHz-40GHz range, all emissions were investigated and in the noise floor level.

Test plot for example as below:





5725-5850MHz Band:

Frequency (MHz)	Reading level (dBµV)	Polar (H/V)	Corrected Factor (dB/m)	Corrected Amplitude (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Remark
802.11a							
Low Channel							
5650	47.42	Horizontal	11.9	59.32	68.2	-8.88	Peak
5700	51.16	Horizontal	12.00	63.16	105.2	-42.04	Peak
5720	59.67	Vertical	12.03	71.70	110.8	-39.10	Peak
5725	63.34	Vertical	12.03	75.37	122.2	-46.83	Peak
5650	47.39	Horizontal	11.90	59.29	68.2	-8.91	Peak
5700	49.70	Horizontal	12.00	61.70	105.2	-43.50	Peak
5720	60.92	Vertical	12.03	72.95	110.8	-37.85	Peak
5725	63.80	Vertical	12.03	75.83	122.2	-46.37	Peak
11490	55.10	horizontal	6.46	61.56	74	-12.44	Peak
11490	40.24	horizontal	6.46	46.70	54	-7.30	Average
11490	55.19	vertical	6.46	61.65	74	-12.35	Peak
11490	40.26	vertical	6.46	46.72	54	-7.28	Average
Middle Channel							
11570	54.94	horizontal	6.52	61.46	74	-12.54	Peak
11570	41.02	horizontal	6.52	47.54	54	-6.46	Average
11570	54.48	vertical	6.52	61.00	74	-13.00	Peak
11570	40.68	vertical	6.52	47.20	54	-6.80	Average
High Channel							
5850	61.77	Horizontal	12.31	74.08	122.2	-48.12	Peak
5855	59.14	Horizontal	12.32	71.46	110.8	-39.34	Peak
5875	49.94	Vertical	12.39	62.33	105.2	-42.87	Peak
5925	47.91	Vertical	12.43	60.34	68.2	-7.86	Peak
5850	60.72	Horizontal	12.31	73.03	122.2	-49.17	Peak
5855	58.19	Horizontal	12.32	70.51	110.8	-40.29	Peak
5875	59.45	Vertical	12.39	71.84	105.2	-33.36	Peak
5925	46.94	Vertical	12.43	59.37	68.2	-8.83	Peak
11650	54.61	horizontal	6.55	61.16	74	-12.84	Peak
11650	41.19	horizontal	6.55	47.74	54	-6.26	Average
11650	54.73	vertical	6.55	61.28	74	-12.72	Peak
11650	41.10	vertical	6.55	47.65	54	-6.35	Average
802.11 n-HT20							
Low Channel							

5650	47.15	Horizontal	11.9	59.05	68.2	-9.15	Peak
5700	51.42	Horizontal	12.00	63.42	105.2	-41.78	Peak
5720	59.77	Vertical	12.03	71.80	110.8	-39.00	Peak
5725	68.97	Vertical	12.03	81.00	122.2	-41.20	Peak
5650	47.28	Horizontal	11.9	59.18	68.2	-9.02	Peak
5700	48.87	Horizontal	12.00	60.87	105.2	-44.33	Peak
5720	57.21	Vertical	12.03	69.24	110.8	-41.56	Peak
5725	62.23	Vertical	12.03	74.26	122.2	-47.94	Peak
11490	54.43	horizontal	6.46	60.89	74	-13.11	Peak
11490	40.64	horizontal	6.46	47.10	54	-6.9	Average
11490	54.37	vertical	6.46	60.83	74	-13.17	Peak
11490	40.47	vertical	6.46	46.93	54	-7.07	Average
Middle Channel							
11570	55.00	horizontal	6.52	61.52	74	-12.48	Peak
11570	41.02	horizontal	6.52	47.54	54	-6.46	Average
11570	55.09	vertical	6.52	61.61	74	-12.39	Peak
11570	40.37	vertical	6.52	46.89	54	-7.11	Average
High Channel							
5850	62.39	Horizontal	12.31	74.70	122.2	-47.50	Peak
5855	59.11	Horizontal	12.32	71.43	110.8	-39.37	Peak
5875	49.76	Vertical	12.39	62.15	105.2	-43.05	Peak
5925	47.39	Vertical	12.43	59.82	68.2	-8.38	Peak
5850	59.39	Horizontal	12.31	71.70	122.2	-50.50	Peak
5855	56.88	Horizontal	12.32	69.2	110.8	-41.60	Peak
5875	48.06	Vertical	12.39	60.45	105.2	-44.75	Peak
5925	46.99	Vertical	12.43	59.42	68.2	-8.78	Peak
11650	54.03	horizontal	6.55	60.58	74	-13.42	Peak
11650	41.04	horizontal	6.55	47.59	54	-6.41	Average
11650	53.30	vertical	6.55	59.85	74	-14.15	Peak
11650	40.41	vertical	6.55	46.96	54	-7.04	Average
802.11 n-HT40							
Low Channel							
5648.534	47.62	Horizontal	11.9	59.52	68.20	-8.68	Peak
5697.969	52.81	Horizontal	12	64.81	105.2	-40.39	Peak
5718.319	69.87	Vertical	12.03	81.9	110.8	-28.90	Peak
5724.982	76.98	Vertical	12.03	89.01	122.2	-33.19	Peak
5642.321	47.54	Horizontal	11.9	59.44	68.2	-8.76	Peak
5697.339	55.07	Horizontal	12	67.07	105.2	-38.13	Peak

5718.589	69.07	Vertical	12.03	81.10	110.8	-29.70	Peak
5724.712	75.28	Vertical	12.03	87.31	122.2	-34.89	Peak
11510.000	54.87	horizontal	6.48	61.35	74	-12.65	Peak
11510.000	40.98	horizontal	6.48	47.46	54	-6.54	Average
11510.000	54.72	vertical	6.48	61.20	74	-12.80	Peak
11510.000	41.15	vertical	6.48	47.63	54	-6.37	Average
High Channel							
5850	57.21	Horizontal	12.31	69.52	122.2	-52.68	Peak
5855	57.09	Horizontal	12.32	69.41	110.8	-41.39	Peak
5875	54.80	Vertical	12.39	67.19	105.2	-38.01	Peak
5925	47.08	Vertical	12.43	59.51	68.2	-8.69	Peak
5850	55.37	Horizontal	12.31	67.68	122.2	-54.52	Peak
5855	55.28	Horizontal	12.32	67.6	110.8	-43.20	Peak
5875	51.48	Vertical	12.39	63.87	105.2	-41.33	Peak
5925	46.99	Vertical	12.43	59.42	68.2	-8.78	Peak
11590	56.21	horizontal	6.53	62.74	74	-11.26	Peak
11590	41.64	horizontal	6.53	48.17	54	-5.83	Average
11590	55.59	vertical	6.53	62.12	74	-11.88	Peak
11590	41.23	vertical	6.53	47.76	54	-6.24	Average
802.11 AX20							
Low Channel							
5650	47.62	Horizontal	11.9	59.52	68.2	-8.68	Peak
5700	52.81	Horizontal	12	64.81	105.2	-40.39	Peak
5720	69.87	Vertical	12.03	81.90	110.8	-28.9	Peak
5725	76.98	Vertical	12.03	89.01	122.2	-33.19	Peak
5650	47.54	Horizontal	11.9	59.44	68.2	-8.76	Peak
5700	55.07	Horizontal	12	67.07	105.2	-38.13	Peak
5720	69.07	Vertical	12.03	81.10	110.8	-29.70	Peak
5725	75.28	Vertical	12.03	87.31	122.2	-34.89	Peak
11490	54.55	horizontal	6.46	61.01	74	-12.99	Peak
11490	40.36	horizontal	6.46	46.82	54	-7.18	Average
11490	54.68	vertical	6.46	61.14	74	-12.86	Peak
11490	39.93	vertical	6.46	46.39	54	-7.61	Average
Middle Channel							
11570	55.08	horizontal	6.52	61.60	74	-12.40	Peak
11570	41.19	horizontal	6.52	47.71	54	-6.29	Average
11570	54.56	vertical	6.52	61.08	74	-12.92	Peak
11570	40.78	vertical	6.52	47.30	54	-6.70	Average

High Channel							
5850	71.51	Horizontal	12.31	83.82	122.2	-38.38	Peak
5855	62.08	Horizontal	12.32	74.40	110.8	-36.40	Peak
5875	54.10	Vertical	12.39	66.49	105.2	-38.71	Peak
5925	47.08	Vertical	12.43	59.51	68.2	-8.69	Peak
5850	68.53	Horizontal	12.31	80.84	122.2	-41.36	Peak
5855	62.26	Horizontal	12.32	74.58	110.8	-36.22	Peak
5875	54.26	Vertical	12.39	66.65	105.2	-38.55	Peak
5925	47.29	Vertical	12.43	59.72	68.2	-8.48	Peak
11650	54.76	horizontal	6.55	61.31	74	-12.69	Peak
11650	41.19	horizontal	6.55	47.74	54	-6.26	Average
11650	54.06	vertical	6.55	60.61	74	-13.39	Peak
11650	41.20	vertical	6.55	47.75	54	-6.25	Average
802.11AX40							
Low Channel							
5650	48.23	Horizontal	11.9	60.13	68.2	-8.07	Peak
5700	54.50	Horizontal	12	66.50	105.2	-38.70	Peak
5720	67.08	Vertical	12.03	79.11	110.8	-31.69	Peak
5725	68.68	Vertical	12.03	80.71	122.2	-41.49	Peak
5650	47.30	Horizontal	11.9	59.20	68.2	-9.00	Peak
5700	54.85	Horizontal	12	66.85	105.2	-38.35	Peak
5720	66.55	Vertical	12.03	78.58	110.8	-32.22	Peak
5725	68.29	Vertical	12.03	80.32	122.2	-41.88	Peak
11510	55.22	horizontal	6.48	61.70	74	-12.30	Peak
11510	40.99	horizontal	6.48	47.47	54	-6.53	Average
11510	55.19	vertical	6.48	61.67	74	-12.33	Peak
11510	40.29	vertical	6.48	46.77	54	-7.23	Average
High Channel							
5850	61.43	Horizontal	12.31	73.74	122.2	-48.46	Peak
5855	57.62	Horizontal	12.32	69.94	110.8	-40.86	Peak
5875	52.45	Vertical	12.39	64.84	105.2	-40.36	Peak
5925	46.88	Vertical	12.43	59.31	68.2	-8.89	Peak
5850	59.44	Horizontal	12.31	71.75	122.2	-50.45	Peak
5855	57.53	Horizontal	12.32	69.85	110.8	-40.95	Peak
5875	52.01	Vertical	12.39	64.40	105.2	-40.80	Peak
5925	47.27	Vertical	12.43	59.70	68.2	-8.50	Peak
11590	55.04	horizontal	6.53	61.57	74	-12.43	Peak
11590	41.64	horizontal	6.53	48.17	54	-5.83	Average

11590	54.93	vertical	6.53	61.46	74	-12.54	Peak
11590	41.01	vertical	6.53	47.54	54	-6.46	Average
802.11ac80							
5650	47.38	Horizontal	11.9	59.28	68.2	-8.92	Peak
5700	52.71	Horizontal	12	64.71	105.2	-40.49	Peak
5720	55.41	Vertical	12.03	67.44	110.8	-43.36	Peak
5725	54.82	Vertical	12.03	66.85	122.2	-55.35	Peak
5650	46.95	Horizontal	11.9	58.85	68.20	-9.35	Peak
5700	51.24	Horizontal	12	63.24	105.2	-41.96	Peak
5720	56.42	Vertical	12.03	68.45	110.8	-42.35	Peak
5725	55.92	Vertical	12.03	67.95	122.2	-54.25	Peak
5850	50.27	Horizontal	12.31	62.58	122.2	-59.62	Peak
5855	50.21	Horizontal	12.32	62.53	110.8	-48.27	Peak
5875	49.51	Vertical	12.39	61.90	105.2	-43.30	Peak
5925	46.52	Vertical	12.43	58.95	68.2	-9.25	Peak
5850	49.15	Horizontal	12.31	61.46	122.2	-60.74	Peak
5855	48.26	Horizontal	12.32	60.58	110.8	-50.22	Peak
5875	47.14	Vertical	12.39	59.53	105.2	-45.67	Peak
5925	46.97	Vertical	12.43	59.40	68.2	-8.80	Peak
11550	54.89	horizontal	6.5	61.39	74	-12.61	Peak
11550	39.15	horizontal	6.5	45.65	54	-8.35	Average
11550	54.52	vertical	6.5	61.02	74	-12.98	Peak
11550	39.32	vertical	6.5	45.82	54	-8.18	Average
802.11AX80							
Low Channel							
5650	46.54	Horizontal	11.9	58.44	68.2	-9.76	Peak
5700	48.33	Horizontal	12	60.33	105.2	-44.87	Peak
5720	50.37	Vertical	12.03	62.40	110.8	-48.40	Peak
5725	49.31	Vertical	12.03	61.34	122.2	-60.86	Peak
5650	47.01	Horizontal	11.9	58.91	68.2	-9.29	Peak
5700	46.78	Horizontal	12	58.78	105.2	-46.42	Peak
5720	47.97	Vertical	12.03	60.00	110.8	-50.80	Peak
5725	46.73	Vertical	12.03	58.76	122.2	-63.44	Peak
5850	47.95	Horizontal	12.31	60.26	122.2	-61.94	Peak
5855	47.39	Horizontal	12.32	59.71	110.8	-51.09	Peak
5875	47.40	Vertical	12.39	59.79	105.2	-45.41	Peak
5925	46.71	Vertical	12.43	59.14	68.2	-9.06	Peak
5850	47.10	Horizontal	12.31	59.41	122.2	-62.79	Peak

5855	46.46	Horizontal	12.32	58.78	110.8	-52.02	Peak
5875	47.71	Vertical	12.39	60.10	105.2	-45.10	Peak
5925	46.93	Vertical	12.43	59.36	68.2	-8.84	Peak
11550	55.10	horizontal	6.5	61.60	74	-12.40	Peak
11550	38.57	horizontal	6.5	45.07	54	-8.93	Average
11550	54.28	vertical	6.5	60.78	74	-13.22	Peak
11550	39.07	vertical	6.5	45.57	54	-8.43	Average

Remark:

Corrected Amplitude= Reading level + corrected Factor

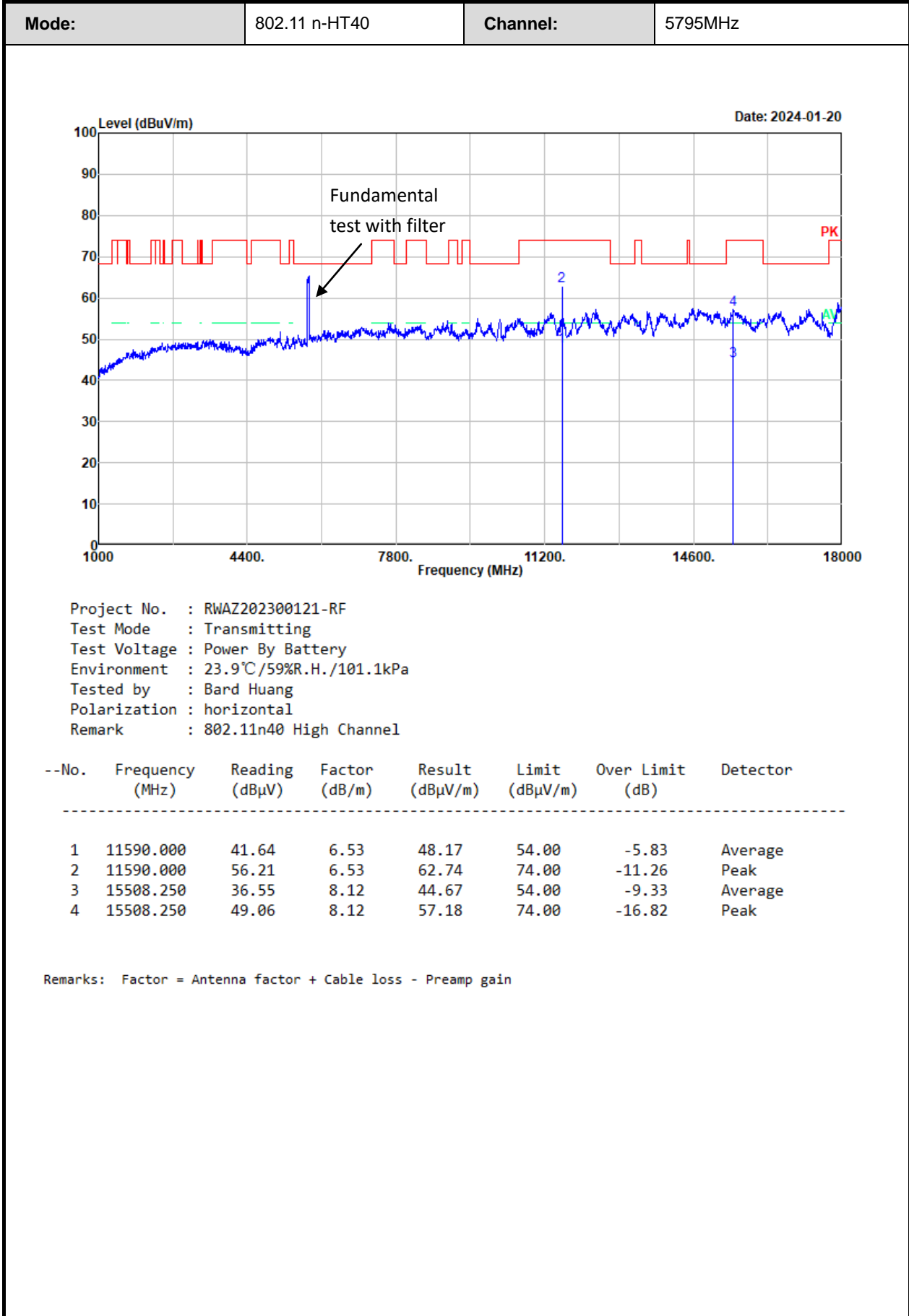
Corrected Factor = Antenna factor + Cable loss – Amplifier gain

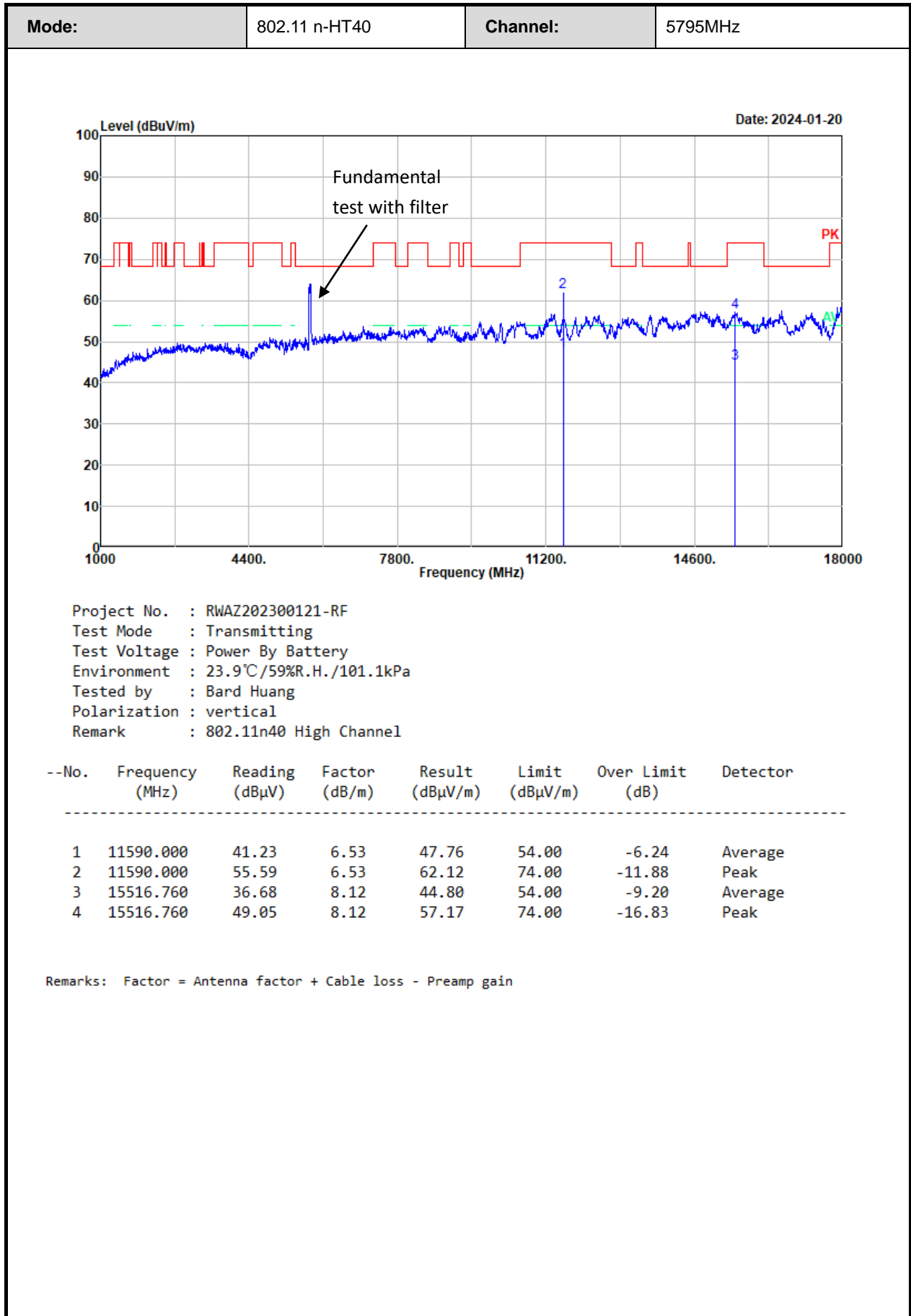
Margin = Corrected Amplitude – Limit

The emission levels of other frequencies that were lower than the limit 20dB, not show in test report.

For emissions in 18GHz-40GHz range, all emissions were investigated and in the noise floor level.

Test plot for example as below:





3.5 RF Conducted Test Data

Test Date:	2024-01-16~2024-01-28	Test By:	Baylor Li
Environment condition:	Temperature: 23.9~24.5°C; Relative Humidity: 55~68%; ATM Pressure: 99~102kPa		

3.5.1 26dB/6dB Emission Bandwidth and 99% Occupied Bandwidth

5150-5250MHz

Test Modes	Antenna	Test Frequency (MHz)	26 dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11a	Ant1	5180	22.52	17.68
		5200	22.45	17.72
		5240	22.48	17.68
802.11n ht20	Ant1	5180	22.84	18.52
		5200	22.68	18.52
		5240	22.60	18.52
802.11n ht40	Ant1	5190	41.68	36.88
		5230	42.56	36.88
802.11ac80	Ant1	5210	88.21	76.4
802.11ax hew20	Ant1	5180	22.92	19.40
		5200	22.84	19.40
		5240	23.04	19.40
802.11ax hew40	Ant1	5190	40.13	38.00
		5230	41.76	38.00
802.11ax hew80	Ant1	5210	81.44	75.76

Note: the device not operate with any part of OBW fall within U-NII 2A Band.

5725-5850MHz

Test Modes	Antenna	Test Frequency (MHz)	6 dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	6dB BW Limit (MHz)	Verdict
802.11a	Ant1	5745	16.44	17.60	0.5	pass
		5785	16.48	17.72	0.5	pass
		5825	16.44	17.60	0.5	pass
802.11n ht20	Ant1	5745	17.68	18.48	0.5	pass
		5785	17.76	18.48	0.5	pass
		5825	17.68	18.48	0.5	pass
802.11n ht40	Ant1	5755	36.48	36.96	0.5	pass
		5795	36.48	36.96	0.5	pass
802.11n ht80	Ant1	5775	75.36	75.44	0.5	pass
802.11ax hew20	Ant1	5745	19.16	19.40	0.5	pass
		5785	19.16	19.40	0.5	pass

		5825	19.16	19.40	0.5	pass
802.11ax hew40	Ant1	5755	38.16	38.00	0.5	pass
		5795	38.24	38.00	0.5	pass
802.11ax hew80	Ant1	5775	77.88	77.69	0.5	pass

Note: the device not operate with any part of OBW fall within U-NII 2C Band.

3.5.2 Maximum conducted output power

5150-5250MHz

Test Modes	Test Frequency (MHz)	Max. Conducted Average Output Power (dBm)		Verdict
		Result	Limit	
802.11a	5180	8.87	24	pass
	5200	8.45	24	pass
	5240	8.39	24	pass
802.11n ht20	5180	7.98	24	pass
	5200	7.61	24	pass
	5240	7.48	24	pass
802.11n ht40	5190	6.72	24	pass
	5230	6.72	24	pass
802.11ac80	5210	9.09	24	pass
802.11ax hew20	5180	7.99	24	pass
	5200	7.63	24	pass
	5240	7.58	24	pass
802.11ax hew40	5190	6.5	24	pass
	5230	6.44	24	pass
802.11ax hew80	5210	8.69	24	pass

5725-5850MHz

Test Modes	Test Frequency (MHz)	Max. Conducted Average Output Power (dBm)		Verdict
		Result	Limit	
802.11a	5745	11.35	30	pass
	5785	12.33	30	pass
	5825	11.00	30	pass
802.11n ht20	5745	11.39	30	pass
	5785	12.42	30	pass
	5825	11.08	30	pass
802.11n ht40	5755	11.96	30	pass
	5795	12.12	30	pass

802.11n ht80	5775	8.69	30	pass
802.11ax hew20	5745	11.79	30	pass
	5785	12.34	30	pass
	5825	11.51	30	pass
802.11ax hew40	5755	12.16	30	pass
	5795	12.34	30	pass
802.11ax hew80	5775	7.07	30	pass

3.5.3 Power Spectral Density

5150-5250MHz

Test Modes	Test Frequency (MHz)	Reading (dBm/MHz)	Duty Cycle Factor (dB)	Maximum Power Spectral Density (dBm/MHz)		Verdict
				Result	Limit	
802.11a	5180	-4.94	2.76	-2.18	11	pass
	5200	-5.39	2.76	-2.63	11	pass
	5240	-5.06	2.76	-2.3	11	pass
802.11n ht20	5180	-6.12	2.85	-3.27	11	pass
	5200	-6.54	2.85	-3.69	11	pass
	5240	-6.87	2.85	-4.02	11	pass
802.11n ht40	5190	-10.18	3.03	-7.15	11	pass
	5230	-10.32	3.03	-7.29	11	pass
802.11ac80	5210	-6.66	3.38	-3.28	11	pass
802.11ax hew20	5180	-7.06	3.47	-3.59	11	pass
	5200	-7.49	3.47	-4.02	11	pass
	5240	-7.71	3.47	-4.24	11	pass
802.11ax hew40	5190	-11.24	3.49	-7.75	11	pass
	5230	-11.34	3.49	-7.85	11	pass
802.11ax hew80	5210	-10.61	3.38	-7.23	11	pass

5725-5850 MHz

Test Modes	Test Frequency (MHz)	Reading (dBm/500kHz)	Duty Cycle Factor (dB)	Maximum Power Spectral Density (dBm/500kHz)		Verdict
				Result	Limit	
802.11a	5745	-5.55	2.76	-2.79	30	pass
	5785	-4.49	2.76	-1.73	30	pass
	5825	-5.39	2.76	-2.63	30	pass
802.11n ht20	5745	-5.69	2.85	-2.84	30	pass
	5785	-4.85	2.85	-2.00	30	pass
	5825	-5.72	2.85	-2.87	30	pass
802.11n ht40	5755	-7.77	3.03	-4.74	30	pass
	5795	-8.16	3.03	-5.13	30	pass

802.11n ht80	5775	-14.84	3.38	-11.46	30	pass
802.11ax hew20	5745	-4.38	3.47	-0.91	30	pass
	5785	-3.46	3.47	0.01	30	pass
	5825	-4.49	3.47	-1.02	30	pass
802.11ax hew40	5755	-8.63	3.49	-5.14	30	pass
	5795	-8.70	3.49	-5.21	30	pass
802.11ax hew80	5775	-15.62	3.38	-12.24	30	pass

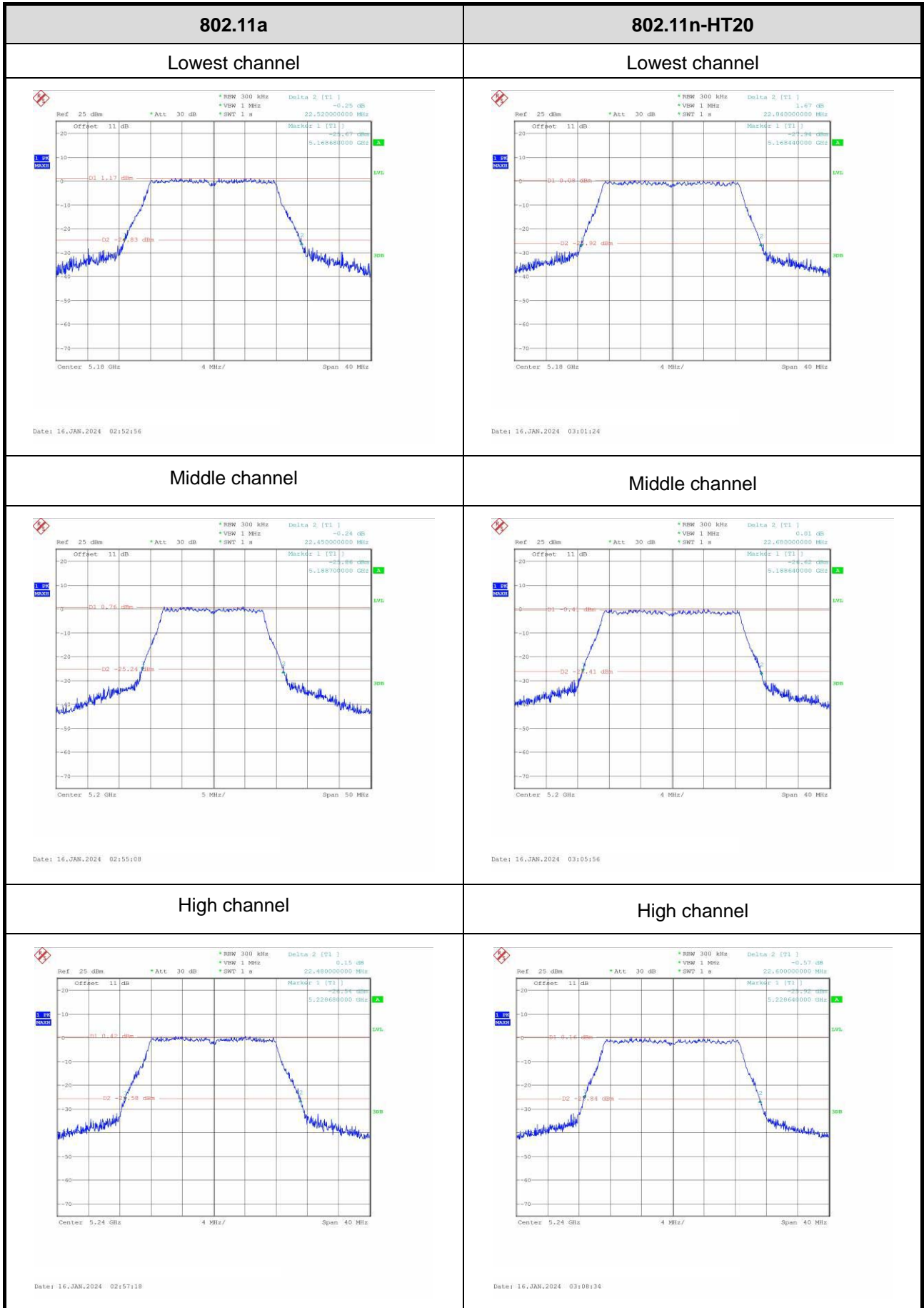
3.5.4 Duty Cycle

Test Mode	Antenna	Ton (ms)	Ton+off (ms)	Duty Cycle [%]	Duty Cycle Factor[%]	1/T [Hz]	VBW setting* [kHz]
802.11a	Ant1	5.5	10.39	52.94	2.76	182	0.2
802.11n HT20	Ant1	5.39	10.38	51.93	2.85	186	0.2
802.11n HT40	Ant1	5.17	10.39	49.76	3.03	193	0.2
802.11ac VHT80	Ant1	4.762	10.375	45.90	3.38	210	0.3
802.11ax hew20	Ant1	4.67	10.39	44.95	3.47	214	0.3
802.11ax hew40	Ant1	4.65	10.39	44.75	3.49	215	0.3
802.11ax hew80	Ant1	4.75	10.35	45.89	3.38	211	0.3

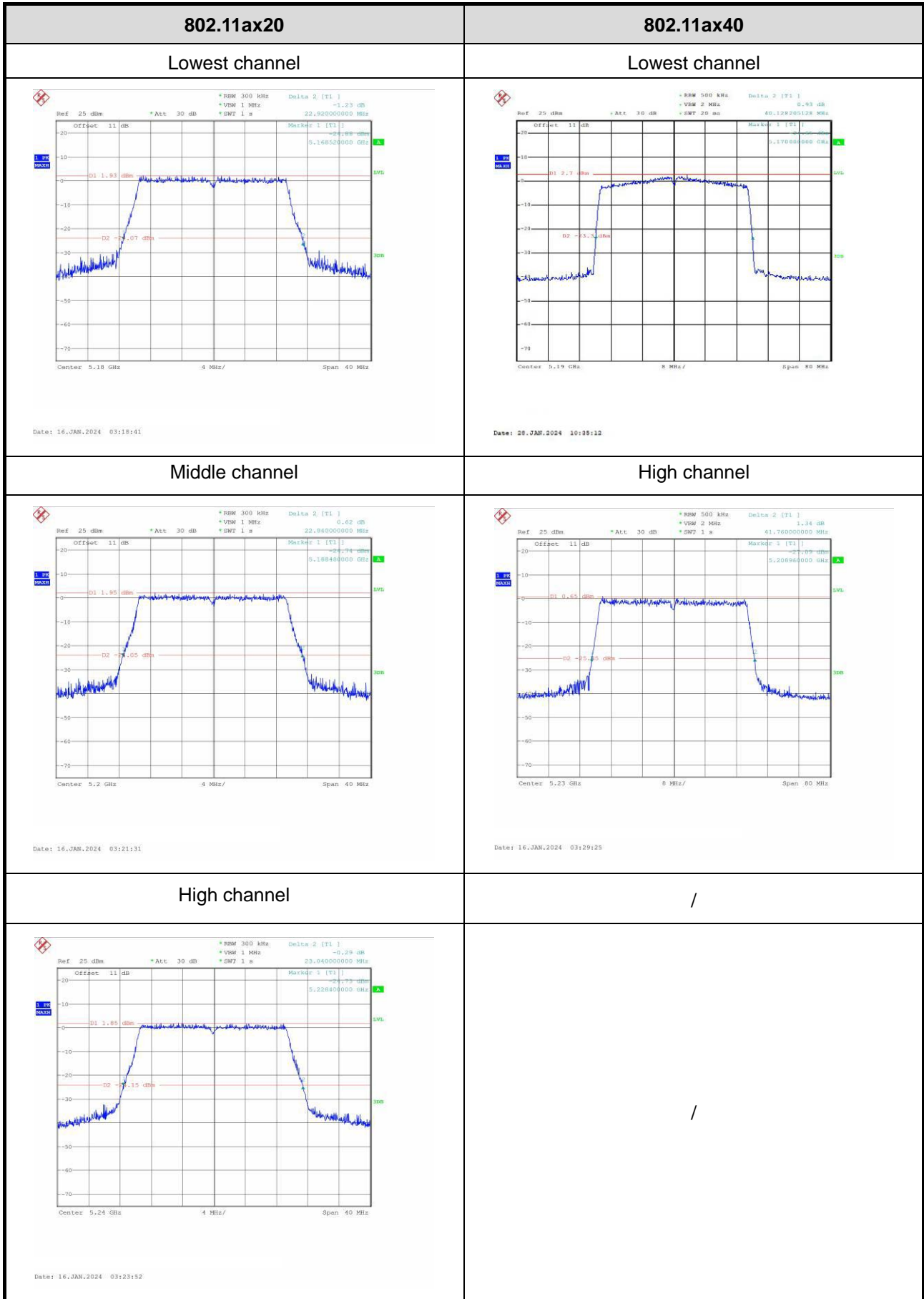
Note*: Radiated emission test with average value, the Spectrum analyzer VBW setting information.

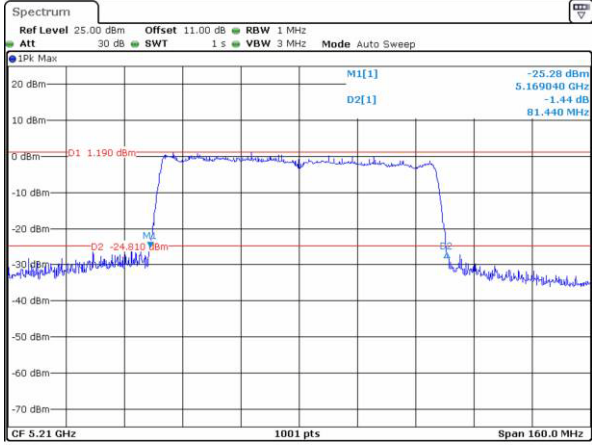
Test Plots:

26dB Emission Bandwidth



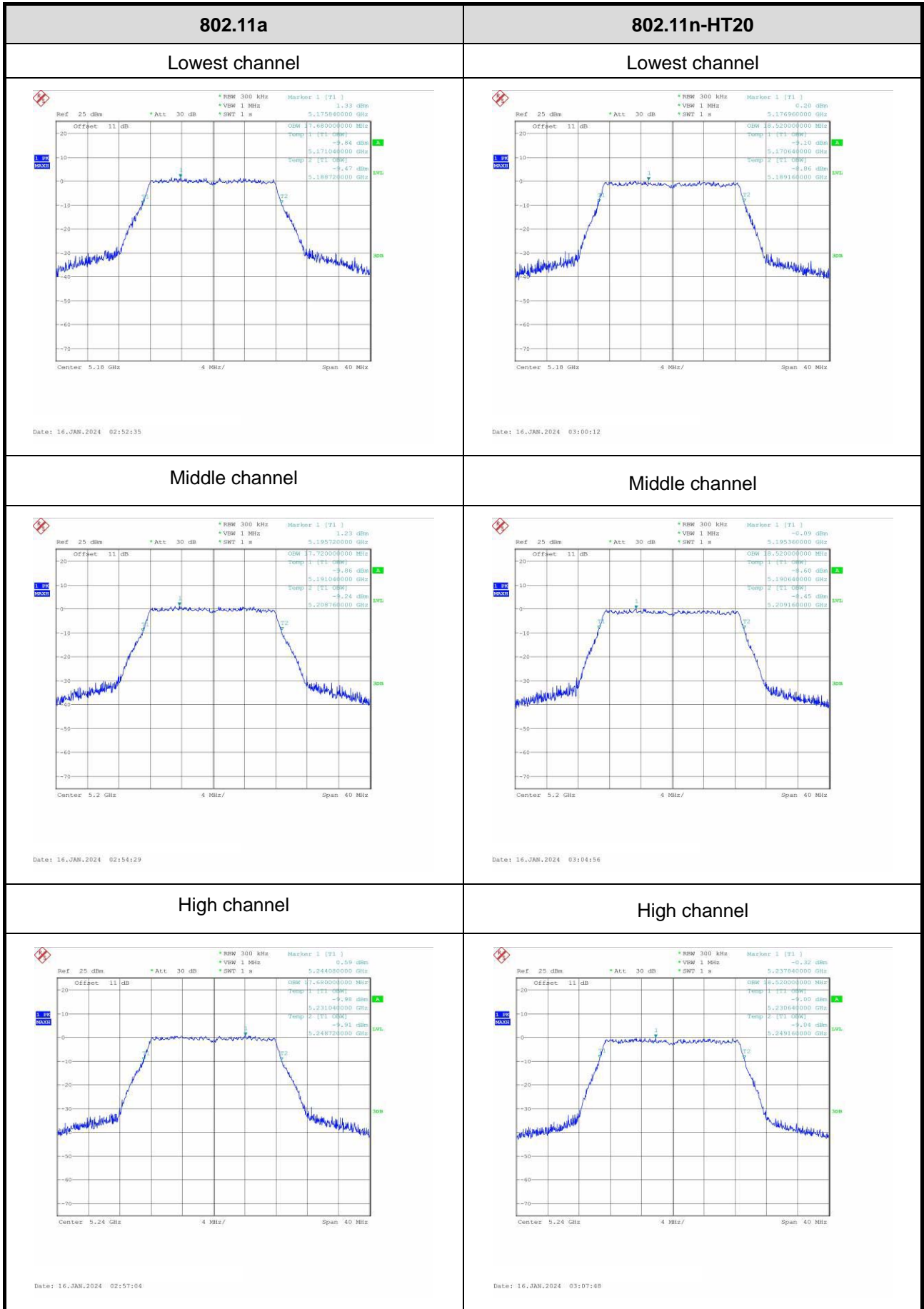
802.11n-HT40	802.11ac-VHT80
Lowest channel	Middle channel
<p>Ref: 25 dBm *Att: 30 dB *RBW 500 kHz Delta: 2 [T1] 3.66 dB *VBW 2 MHz *SWT 1 s 41.68000000 MHz Offset: 11 dB Mask: 1 [T1] -30.65 dBm 5.16880000 GHz D1: -0.77 dBm D2: -16.78 dBm Center: 5.19 GHz 8 MHz/ Span: 80 MHz Date: 16.JAN.2024 03:12:53</p>	<p>Ref: 25 dBm *Att: 30 dB *RBW 1 MHz Delta: 2 [T1] 0.76 dB *VBW 3 MHz *SWT 20 ms 88.200128205 MHz Offset: 13 dB Mask: 1 [T1] -30.65 dBm 5.16880000 GHz D1: 5.2 MHz Center: 5.21 GHz 16 MHz/ Span: 160 MHz Date: 28.JAN.2024 10:52:03</p>
High channel	/
<p>Ref: 25 dBm *Att: 30 dB *RBW 500 kHz Delta: 2 [T1] 2.34 dB *VBW 2 MHz *SWT 1 s 42.56000000 MHz Offset: 11 dB Mask: 1 [T1] -30.65 dBm 5.20880000 GHz D1: -1.14 dBm D2: -27.14 dBm Center: 5.23 GHz 8 MHz/ Span: 80 MHz Date: 16.JAN.2024 03:15:23</p>	/

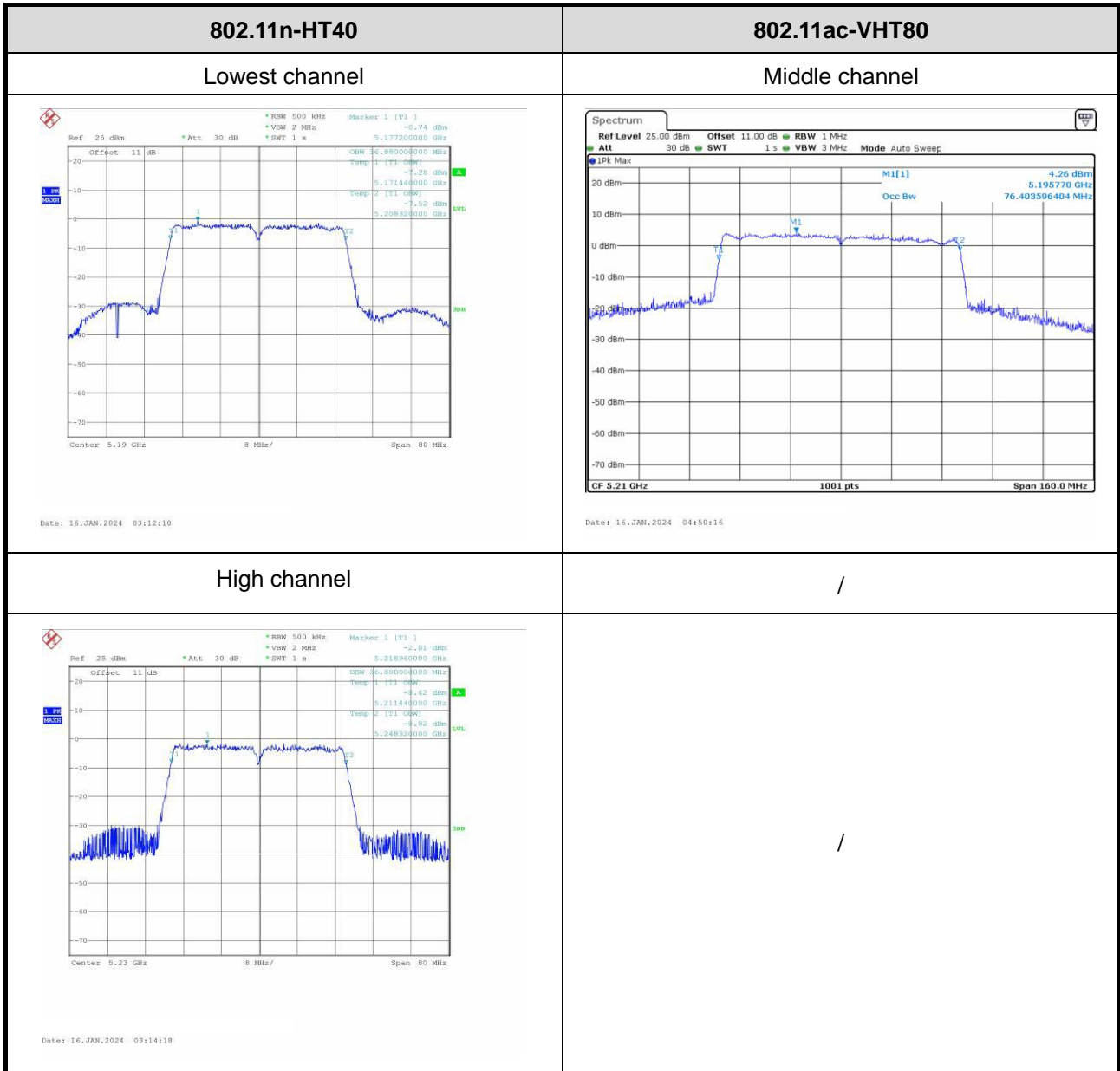


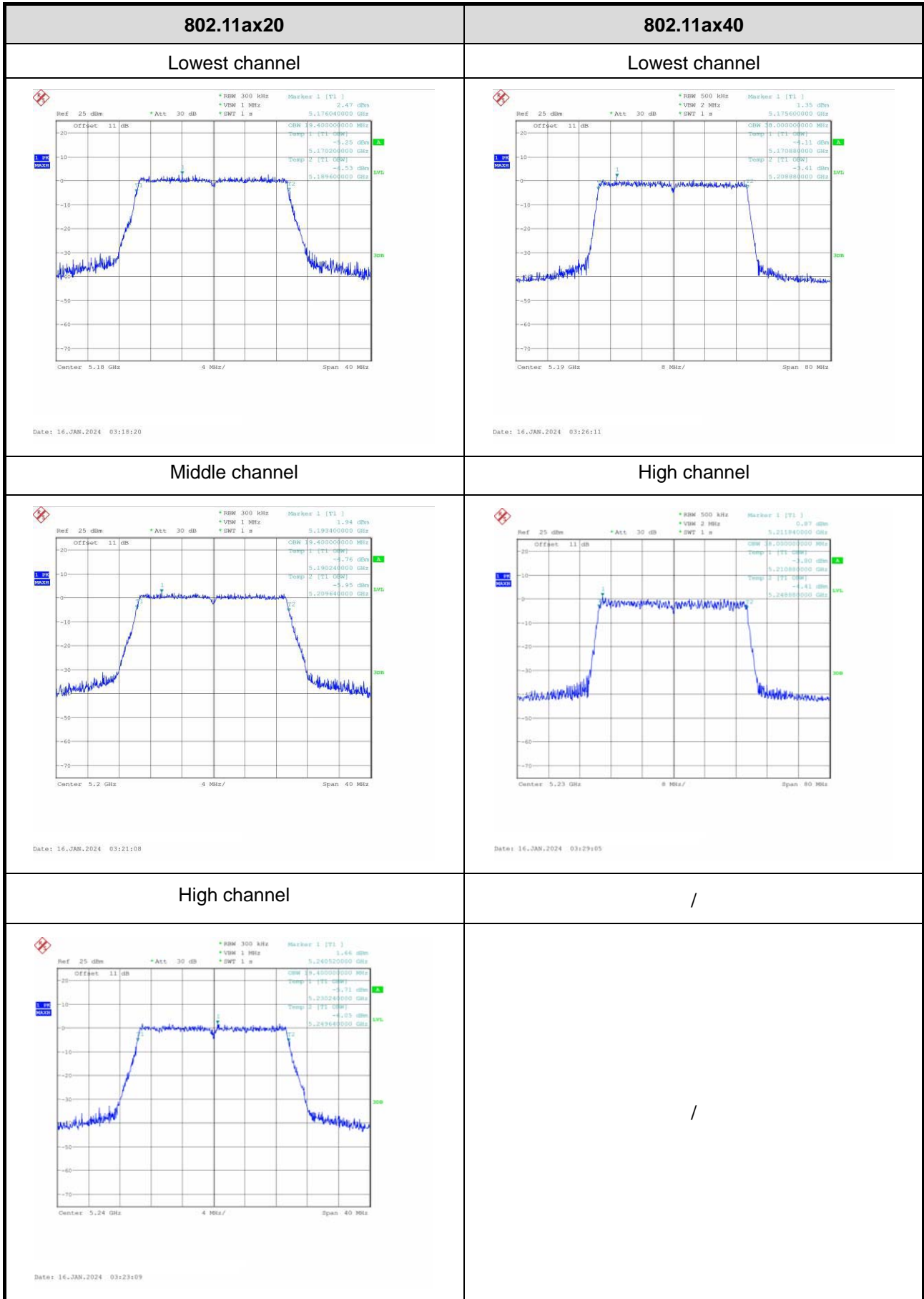
802.11ax80	/
Middle channel	/
 <p>Spectrum</p> <p>Ref Level 25.00 dBm Offset 11.00 dB RBW 1 MHz</p> <p>Att 30 dB SWT 1 s VBW 3 MHz Mode Auto Sweep</p> <p>1Pk Max</p> <p>M1[1] -25.28 dBm 5.169040 GHz</p> <p>D2[1] -24.81 dBm 81.440 MHz</p> <p>D1 1.190 dBm</p> <p>D2 -24.81 dBm</p> <p>CF 5.21 GHz 1001 pts Span 160.0 MHz</p> <p>Date: 16.JAN.2024 09:10:04</p>	/

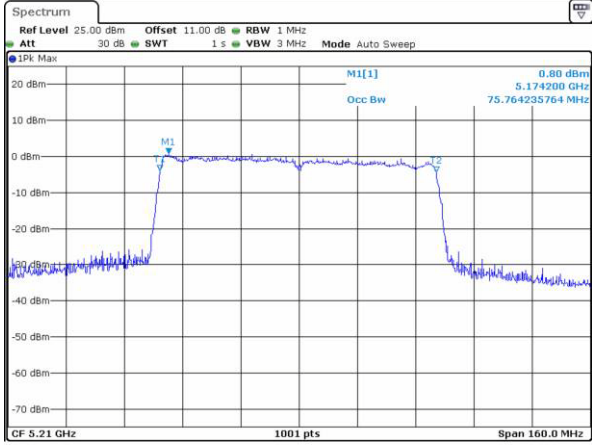
99% Occupied Bandwidth

5150-5250MHz Band:

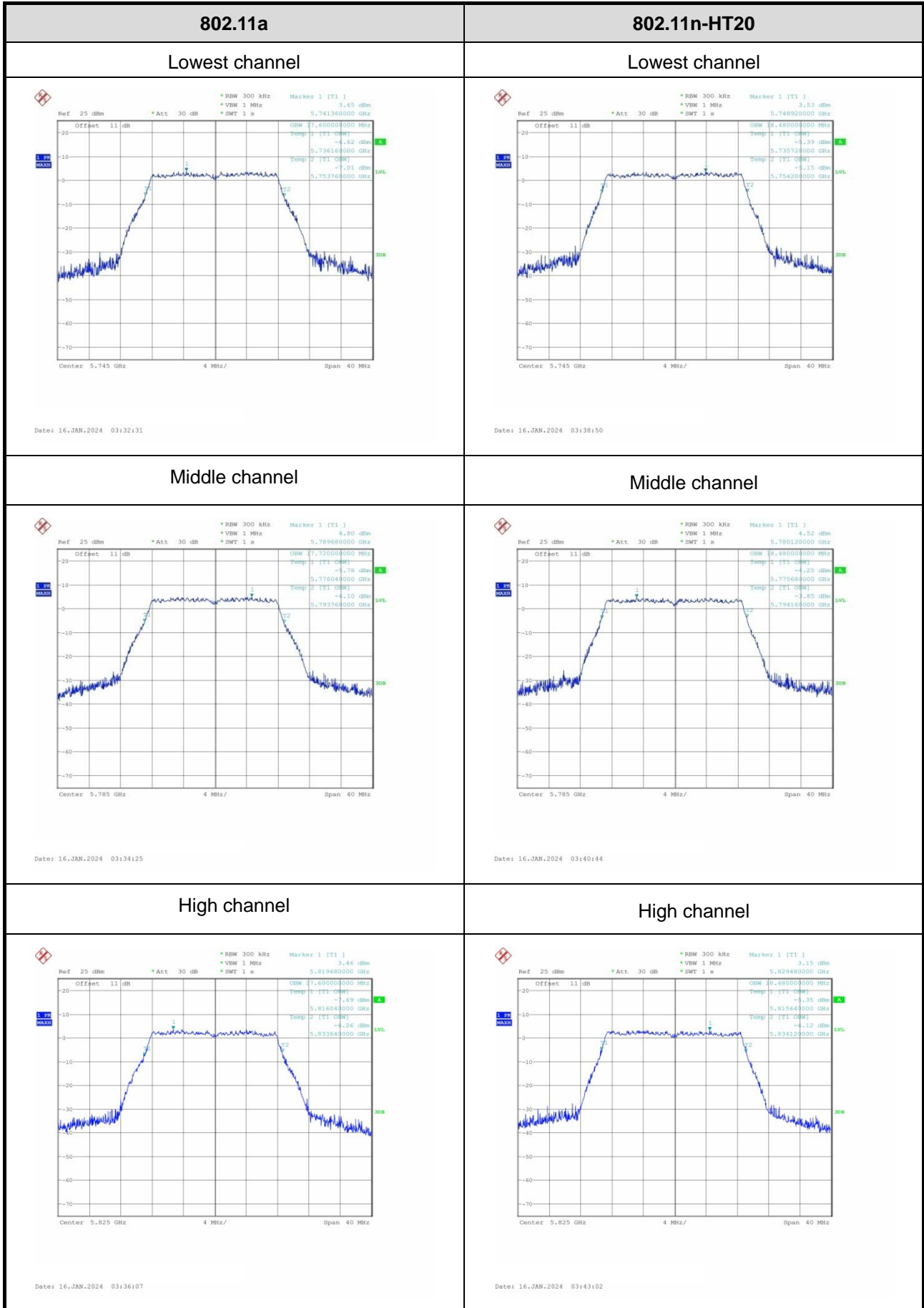


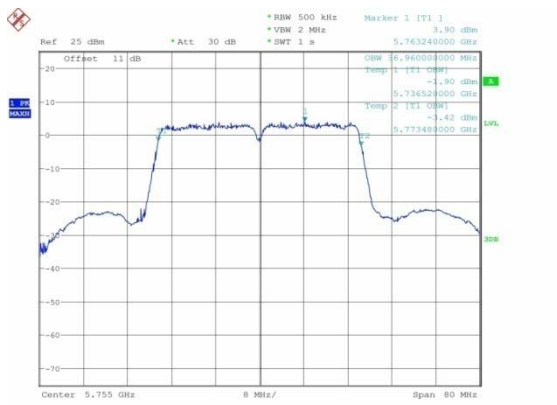
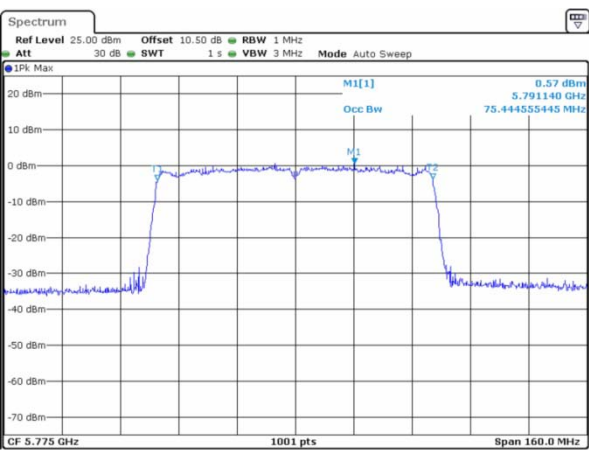
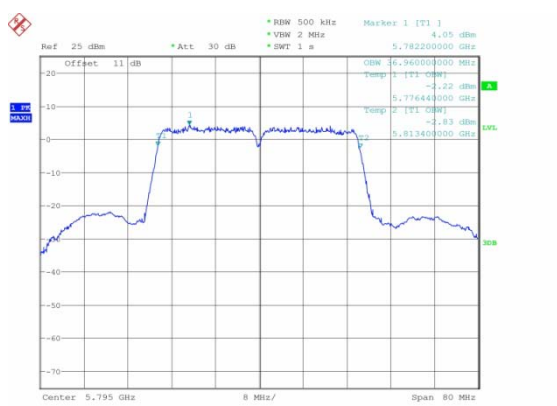


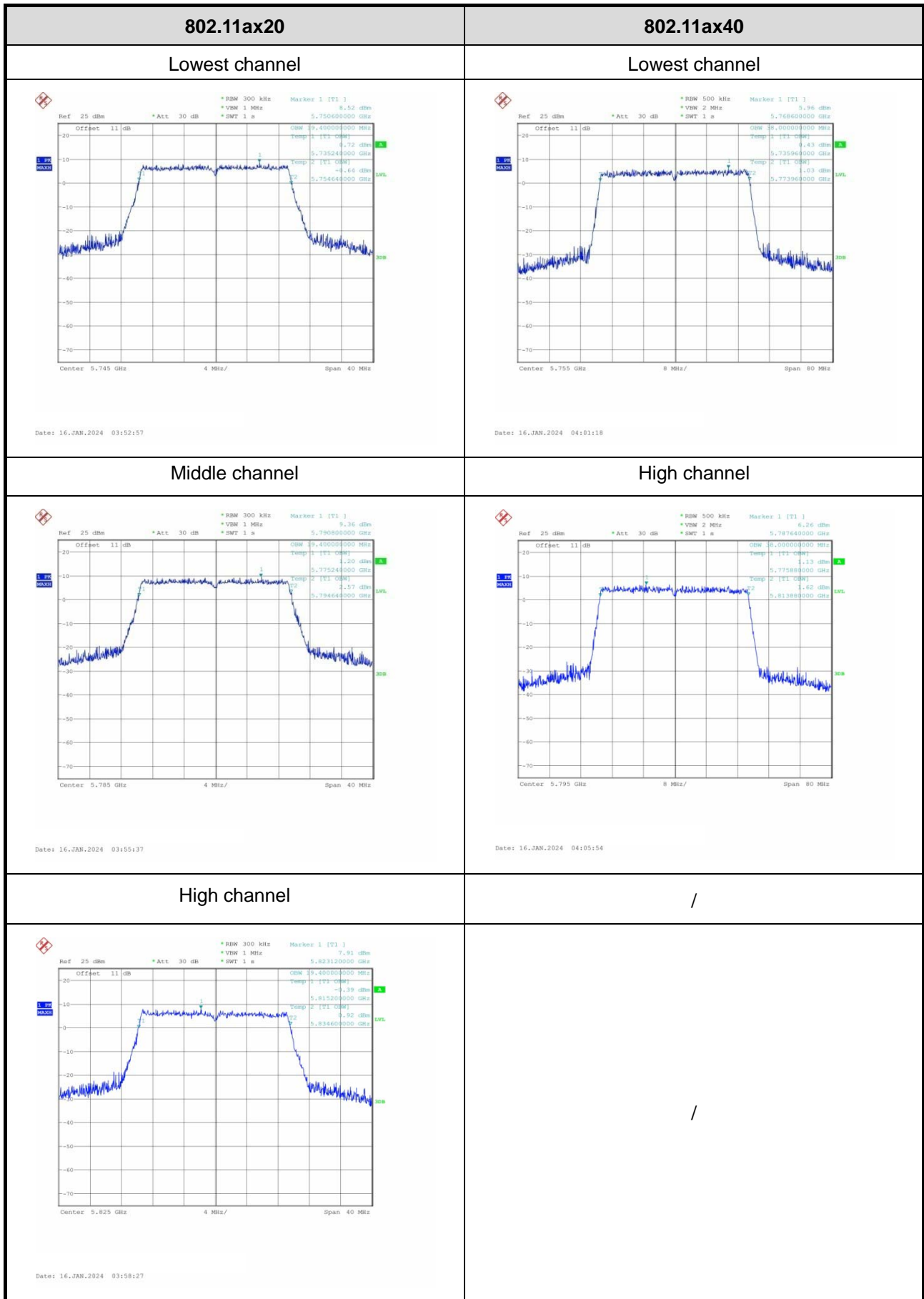


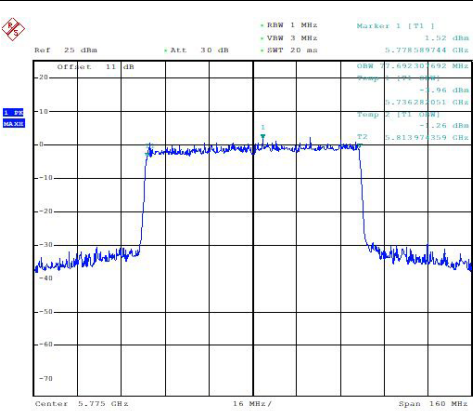
802.11ax80	/
Middle channel	/
 <p> Spectrum Ref Level 25.00 dBm Offset 11.00 dB RBW 1 MHz Att 30 dB SWT 1 s VBW 3 MHz Mode Auto Sweep 1Pk Max M1[1] 0.80 dBm 5.174280 GHz Occ BW 75.764235764 MHz CF 5.21 GHz 1001 pts Span 160.0 MHz Date: 16, JAN, 2024 05:09:43 </p>	/

5725-5850MHz Band:

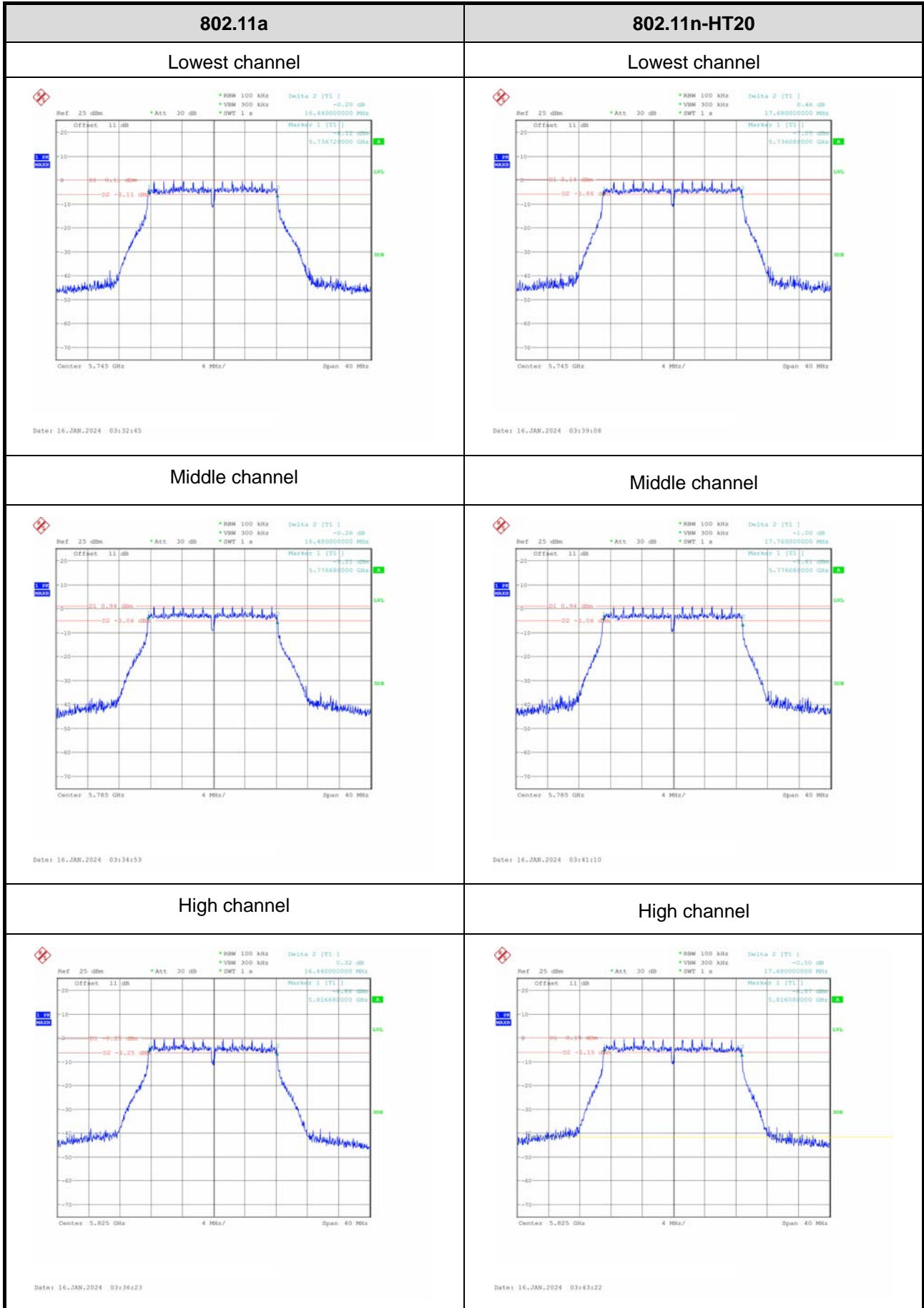


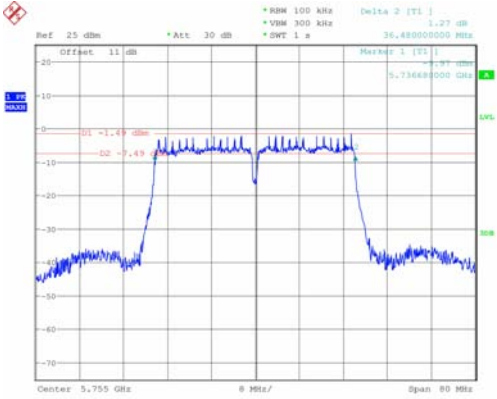
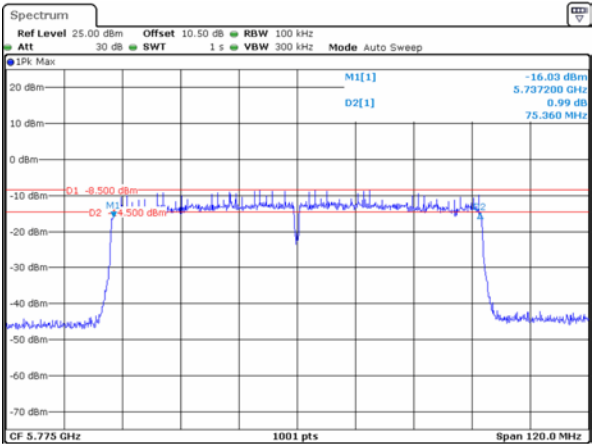
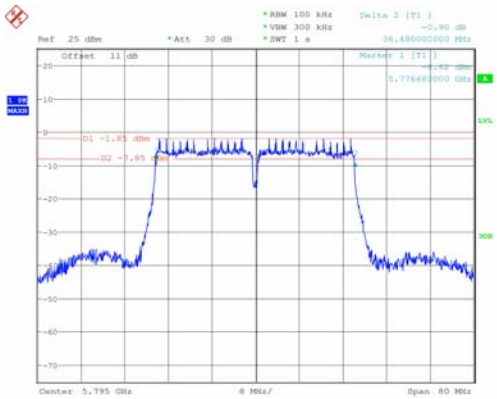
802.11n-HT40	802.11ac-VHT80
Lowest channel	Middle channel
 <p>Date: 16.JAN.2024 03:46:22</p>	 <p>Date: 16.JAN.2024 04:53:44</p>
High channel	/
 <p>Date: 16.JAN.2024 03:49:43</p>	/



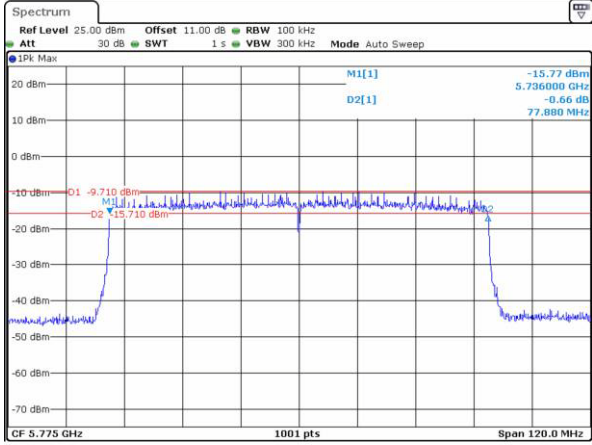
802.11ax80	/
Middle channel	/
 <p>Ref: 25 dBm Att: 30 dB BW: 1 MHz Span: 160 MHz View: 3 MHz SWT: 20 ms MaxHz: 1 [F1] 1.32 dBm Center: 5.775 GHz 16 MHz/</p>	/

6dB Emission Bandwidth



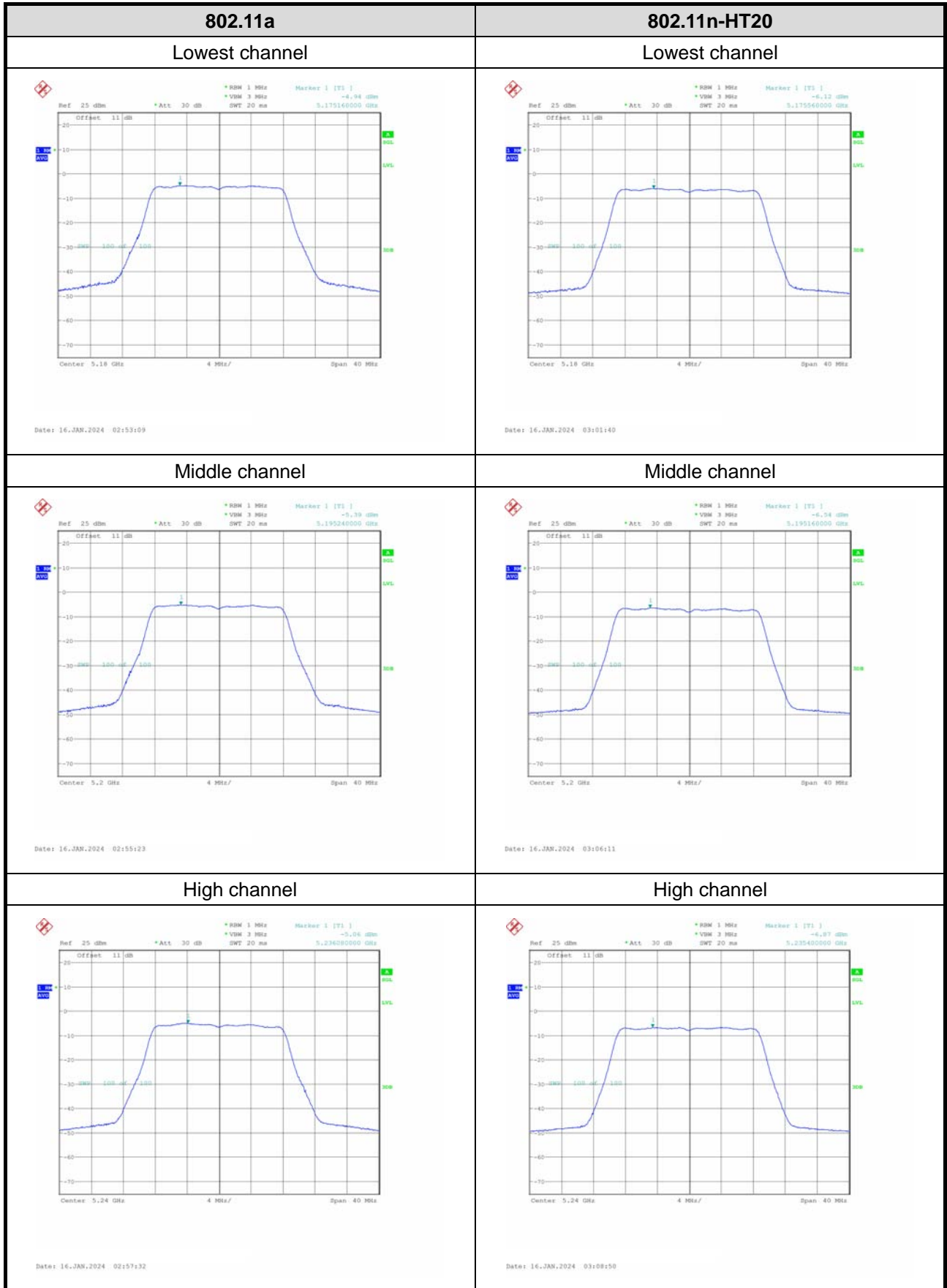
802.11n-HT40	802.11ac-VHT80
Lowest channel	Middle channel
 <p>Date: 16.JAN.2024 03:47:08</p>	 <p>Date: 16.JAN.2024 04:54:05</p>
High channel	/
 <p>Date: 16.JAN.2024 03:50:42</p>	/

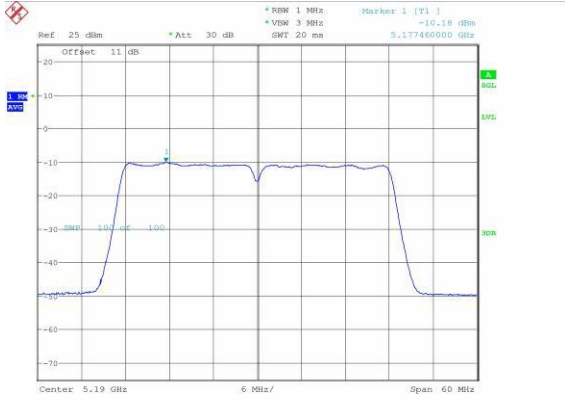
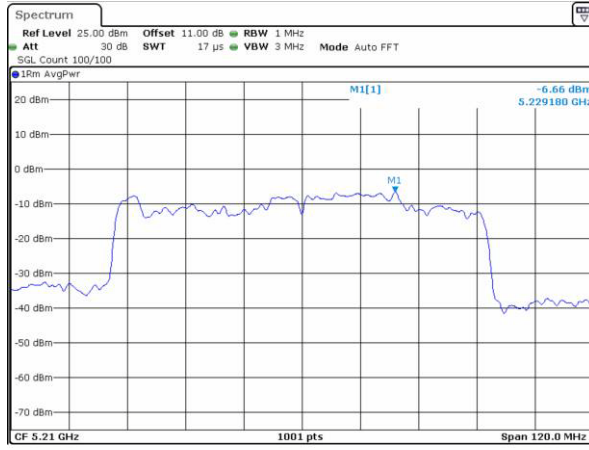
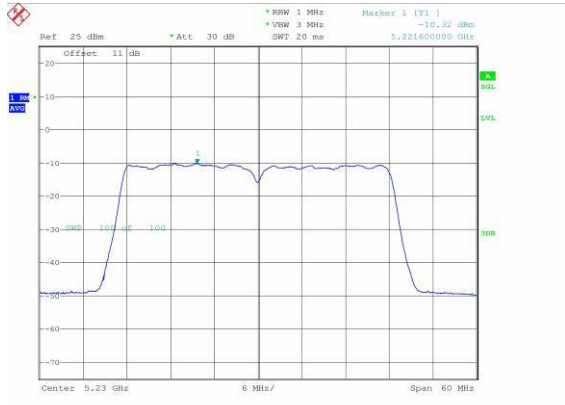
802.11ax20	802.11ax40
<p style="text-align: center;">Lowest channel</p> <p style="text-align: center;">Date: 16.JAN.2024 03:53:34</p>	<p style="text-align: center;">Lowest channel</p> <p style="text-align: center;">Date: 16.JAN.2024 04:01:39</p>
<p style="text-align: center;">Middle channel</p> <p style="text-align: center;">Date: 16.JAN.2024 03:56:12</p>	<p style="text-align: center;">High channel</p> <p style="text-align: center;">Date: 16.JAN.2024 04:06:16</p>
<p style="text-align: center;">High channel</p>	<p style="text-align: center;">/</p>
<p style="text-align: center;">Date: 16.JAN.2024 03:59:14</p>	<p style="text-align: center;">/</p>

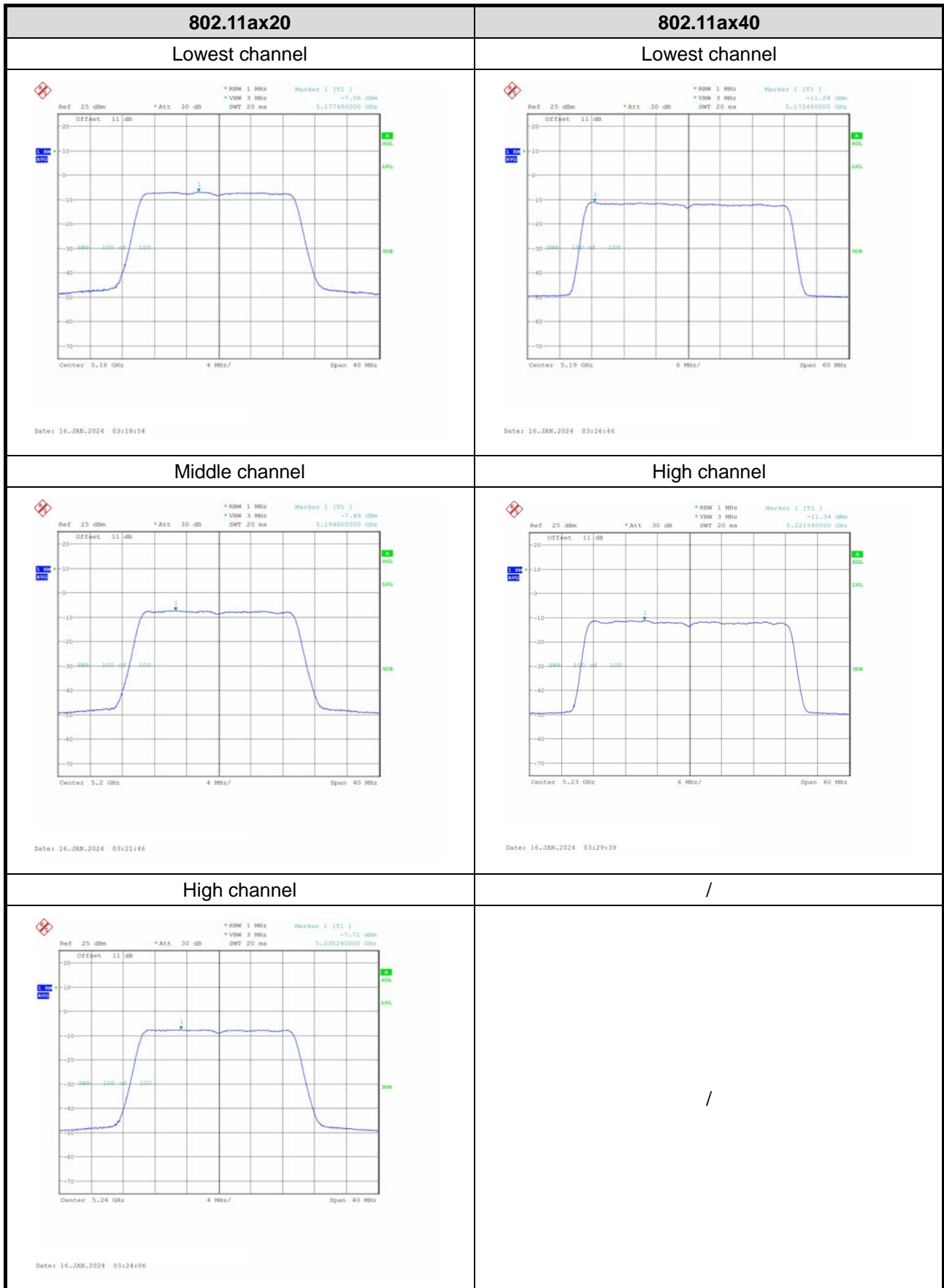
802.11ax80	/						
Middle channel	/						
 <p>Spectrum</p> <p>Ref Level 25.00 dBm Offset 11.00 dB RBW 100 kHz Att 30 dB SWT 1 s VBW 300 kHz Mode Auto Sweep</p> <p>1Pk Max</p> <table border="1"> <tr> <td>M1[1]</td> <td>-15.77 dBm</td> <td>5.736000 GHz</td> </tr> <tr> <td>D2[1]</td> <td>-0.66 dB</td> <td>77.880 MHz</td> </tr> </table> <p>O1 -9.710 dBm O2 -15.710 dBm</p> <p>CF 5.775 GHz 1001 pts Span 120.0 MHz</p> <p>Date: 16.JAN.2024 09:18:41</p>	M1[1]	-15.77 dBm	5.736000 GHz	D2[1]	-0.66 dB	77.880 MHz	/
M1[1]	-15.77 dBm	5.736000 GHz					
D2[1]	-0.66 dB	77.880 MHz					

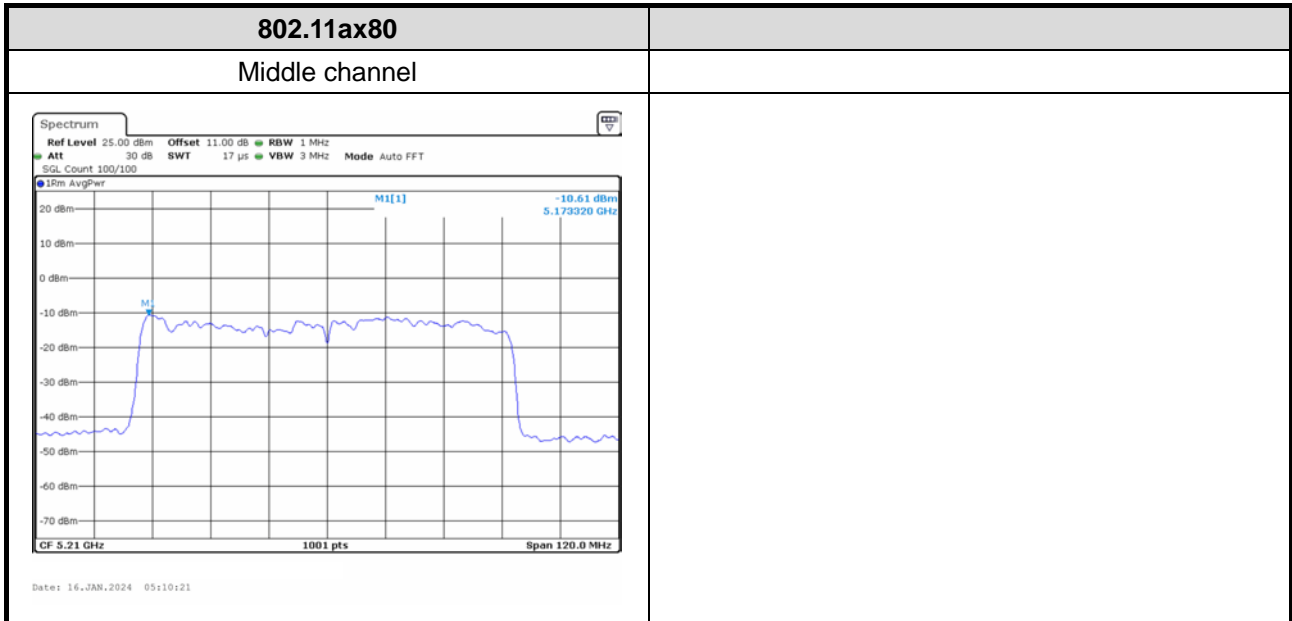
Power Spectral Density

5150-5250MHz Band:

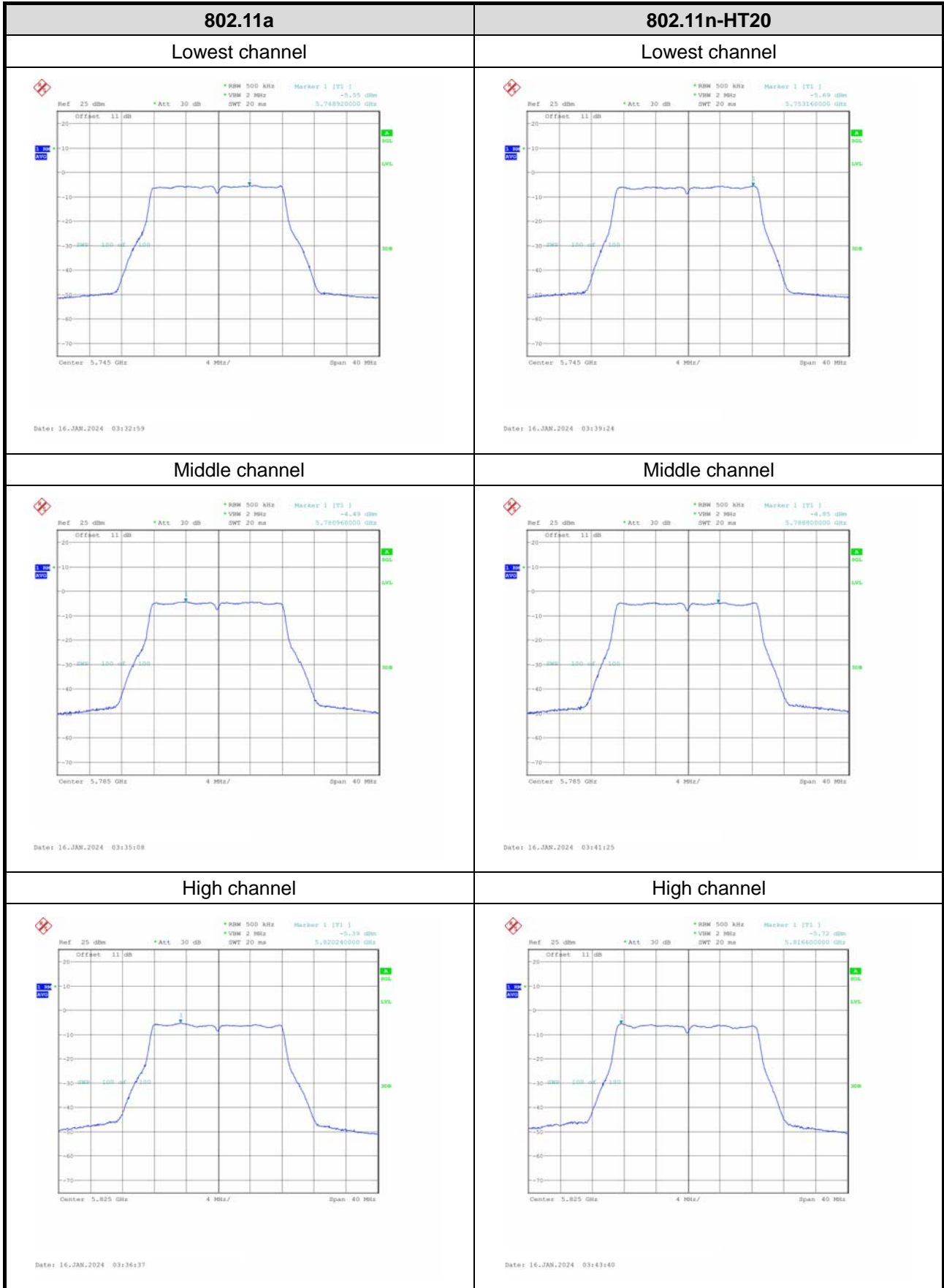


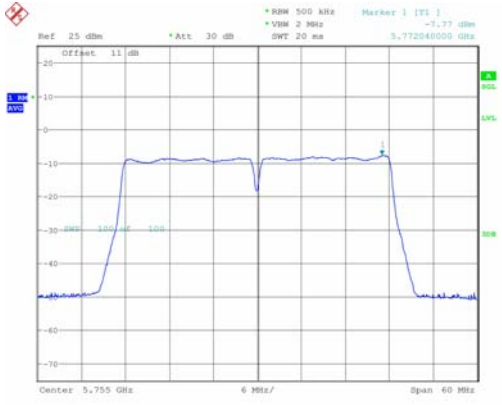
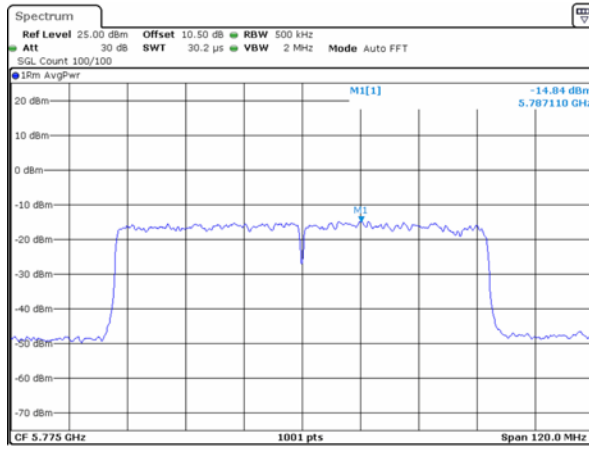
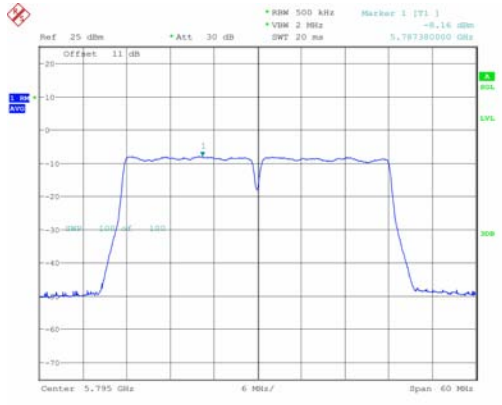
802.11n-HT40	802.11ac-VHT80
<p style="text-align: center;">Lowest channel</p>  <p>Date: 16.JAN.2024 03:13:09</p>	<p style="text-align: center;">/</p>  <p>Date: 16.JAN.2024 04:50:53</p>
<p style="text-align: center;">High channel</p>  <p>Date: 16.JAN.2024 03:15:39</p>	<p style="text-align: center;">/</p>

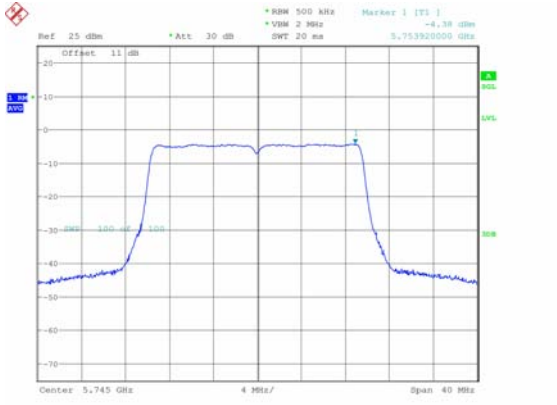
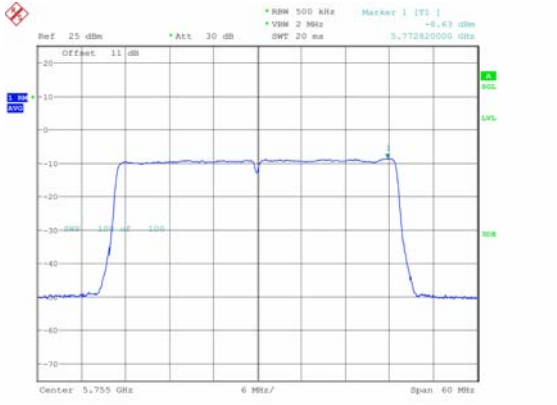
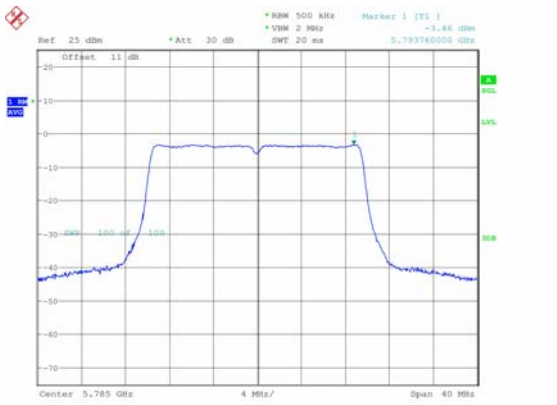
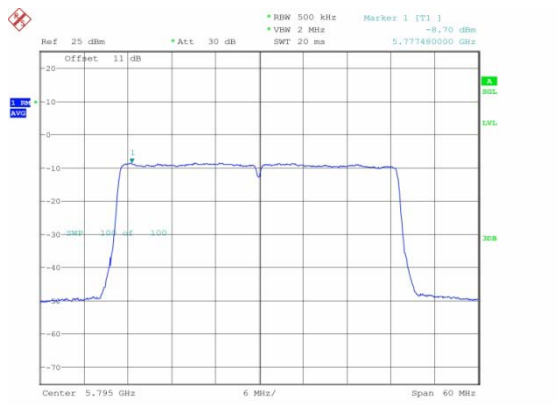
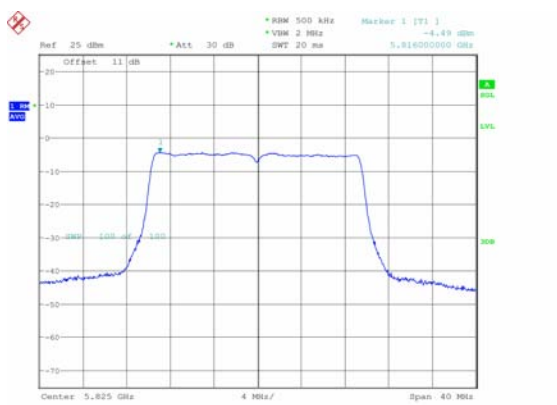


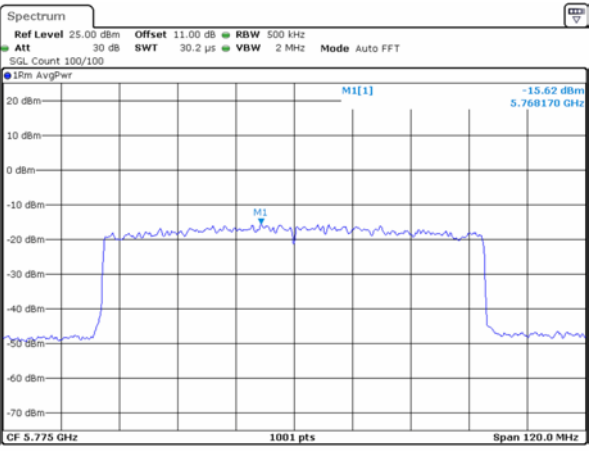


5725-5850MHz Band:

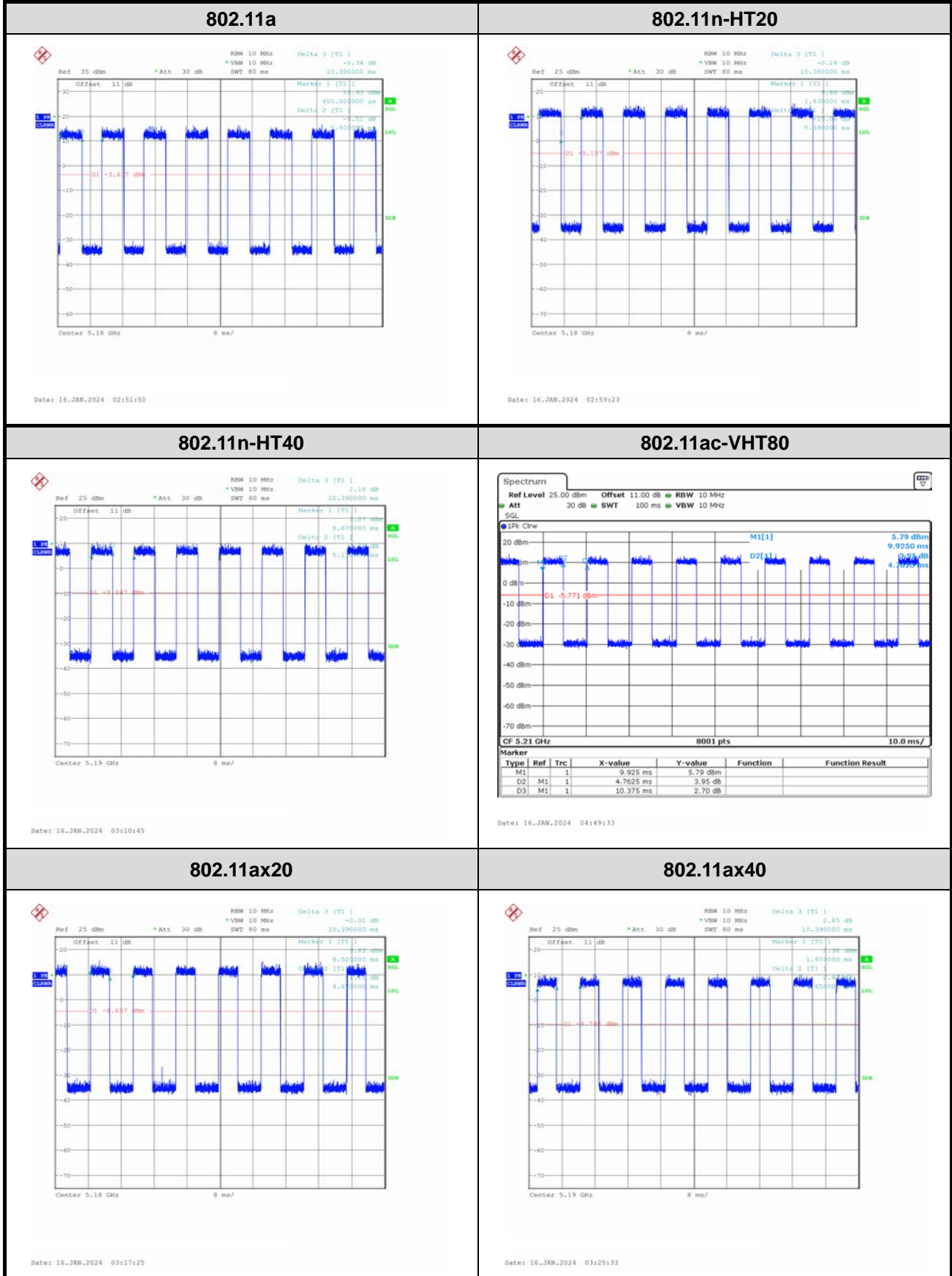


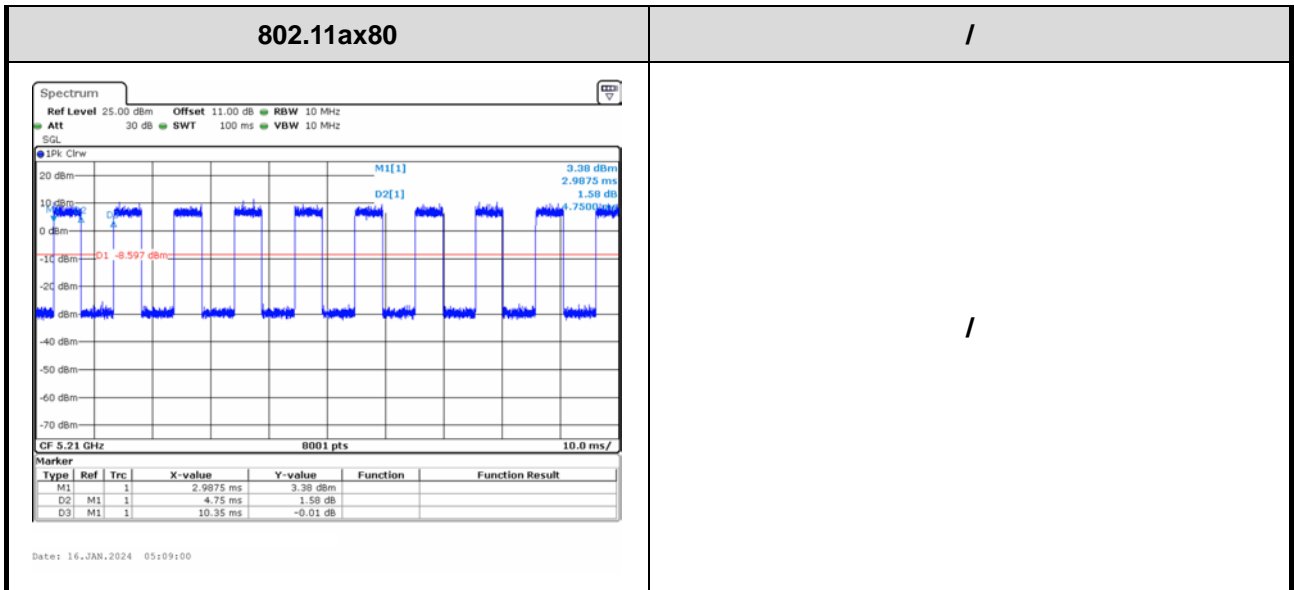
802.11n-HT40	802.11ac-VHT80
<p style="text-align: center;">Lowest channel</p>  <p>Date: 16.JAN.2024 03:47:24</p>	<p style="text-align: center;">/</p>  <p>Date: 16.JAN.2024 04:54:22</p>
<p style="text-align: center;">High channel</p>  <p>Date: 16.JAN.2024 03:50:58</p>	<p style="text-align: center;">/</p>

802.11ax20	802.11ax40
<p style="text-align: center;">Lowest channel</p>  <p>Ref: 25 dBm, Att: 30 dB, RBW: 500 kHz, VBW: 2 MHz, SWT: 20 ms. Marker 1 [T1]: -8.38 dBm, 5.753920000 GHz.</p> <p>Date: 16.JAN.2024 03:53:47</p>	<p style="text-align: center;">Lowest channel</p>  <p>Ref: 25 dBm, Att: 30 dB, RBW: 500 kHz, VBW: 2 MHz, SWT: 20 ms. Marker 1 [T1]: -8.43 dBm, 5.772820000 GHz.</p> <p>Date: 16.JAN.2024 04:01:52</p>
<p style="text-align: center;">Middle channel</p>  <p>Ref: 25 dBm, Att: 30 dB, RBW: 500 kHz, VBW: 2 MHz, SWT: 20 ms. Marker 1 [T1]: -3.46 dBm, 5.793760000 GHz.</p> <p>Date: 16.JAN.2024 03:56:26</p>	<p style="text-align: center;">High channel</p>  <p>Ref: 25 dBm, Att: 30 dB, RBW: 500 kHz, VBW: 2 MHz, SWT: 20 ms. Marker 1 [T1]: -8.70 dBm, 5.777480000 GHz.</p> <p>Date: 16.JAN.2024 04:06:32</p>
<p style="text-align: center;">High channel</p>  <p>Ref: 25 dBm, Att: 30 dB, RBW: 500 kHz, VBW: 2 MHz, SWT: 20 ms. Marker 1 [T1]: -4.49 dBm, 5.816000000 GHz.</p> <p>Date: 16.JAN.2024 03:59:28</p>	<p style="text-align: center;">/</p> <p style="text-align: center;">/</p>

<p align="center">802.11ax80</p>	<p align="center">/</p>
<p align="center">Middle channel</p>	<p align="center">/</p>
 <p> Spectrum Ref Level 25.00 dBm Offset 11.00 dB RBW 500 kHz Att 30 dB SWT 30.2 μs VBW 2 MHz Mode Auto FFT SGL Count 100/100 1Pm AvgPwr M1[1] -15.62 dBm 5.768170 GHz CF 5.775 GHz 1001 pts Span 120.0 MHz Date: 16.JAN.2024 05:18:57 </p>	<p align="center">/</p>

Duty Cycle





4 Test Setup Photo

Please refer to the attachment RWAZ202300121 Test Setup photo.

5 E.U.T Photo

Please refer to the attachment RWAZ202300121 External photo and RWAZ202300121 Internal photo.

---End of Report---