

TEST REPORT

Reference No. : WTD25D12348205W005
FCC ID..... : 2A8WB-MAS30
Applicant..... : Shenzhen Mindray Animal Medical Technology Co., Ltd.
Address..... : Room 702, Tower 4, YESUN Intelligent Community III, No.1301-88
Guanguang Road, Shenzhen, China
Manufacturer..... : Shenzhen Mindray Animal Medical Technology Co., Ltd.
Address..... : Room 702, Tower 4, YESUN Intelligent Community III, No.1301-88
Guanguang Road, Shenzhen, China
Product..... : SpO2 Module
Model(s)..... : MAS30
Brand Name..... : 
Standards..... : FCC 47CFR Part 15 Section 15.407
Date of Receipt Sample : 2025-12-29
Date of Test..... : 2025-12-29 to 2026-08-03
Date of Issue..... : 2026-09-17
Test Result..... : **Pass**

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company.

The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

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3 Revision History

Test Report No.	Date of Receipt Sample	Date of Test	Date of Issue	Purpose	Comment	Approved
WTD25D12348205W005	2025-12-29	2025-12-29 to 2026-08-03	2026-09-17	original	-	Valid

4 General Information

4.1 General Description of E.U.T.

Product:	SpO2 Module
Model(s):	MAS30
Model Description:	N/A
Test Sample No.:	1-1/1
Wi-Fi Specification:	5G-802.11a/n(HT20/40)
Hardware Version:	051-004851-00
Software Version:	110-010023-00

4.2 Details of E.U.T.

Operation Frequency:	U-NII-1: 802.11a/n(HT20): 5180~5240MHz 802.11n(HT40): 5190~ 5230MHz U-NII-2A: 802.11a/n(HT20): 5260~5320MHz 802.11n(HT40): 5270~5310MHz U-NII-2C: 802.11a/n(HT20): 5500~5700MHz 802.11n(HT40): 5510~MHz U-NII-3: 802.11a/n (HT20): 5745~5825MHz 802.11n (HT40): 5755~5795MHz
Max. RF output power:	U-NII-1: 15.69dBm U-NII-2A: 13.74dBm U-NII-2C: 14.76dBm U-NII-3: 14.92dBm
Type of Modulation:	OFDM
Antenna installation:	EP30 Wi-Fi Version 3-in-1 Antenna
Antenna Gain:	U-NII-1: 2.1dBi U-NII-2A: 2.6dBi U-NII-2C: 4.1dBi U-NII-3: 3.8dBi

Note:

#: The antenna gain is provided by the applicant, and the applicant should be responsible for its authenticity, WALTEK lab has not verified the authenticity of its information.

Ratings: DC 3.7V

4.3 Channel List

U-NII-1 (5.15-5.25GHz)			
channel	Frequency(MHz)	channel	Frequency(MHz)
36	5180	38	5190
40	5200	42	5210
44	5220	46	5230
48	5240		

U-NII-2A (5.25-5.35GHz)			
channel	Frequency(MHz)	channel	Frequency(MHz)
52	5260	54	5270
56	5280	58	5290
60	5300	62	5310
64	5320		

U-NII-2C (5.47-5.725GHz)			
channel	Frequency(MHz)	channel	Frequency(MHz)
100	5500	102	5510
104	5520	106	5530
108	5540	110	5550
112	5560	116	5580
118	5590	120	5600
122	5610	124	5620
126	5630	128	5640
132	5660	134	5670
136	5680	140	5700

U-NII-3 (5.725-5.85GHz)			
channel	Frequency(MHz)	channel	Frequency(MHz)
149	5745	151	5755
153	5765	155	5775
157	5785	159	5795
161	5805	165	5825

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

For 802.11a/n(HT20):

channel	Frequency(MHz)	channel	Frequency(MHz)
36	5180	40	5200
48	5240		

channel	Frequency(MHz)	channel	Frequency(MHz)
52	5260	56	5280
64	5320		

channel	Frequency(MHz)	channel	Frequency(MHz)
100	5500	120	5600
140	5700		

channel	Frequency(MHz)	channel	Frequency(MHz)
149	5745	157	5785
165	5825		

For 802.11n(HT40):

channel	Frequency(MHz)	channel	Frequency(MHz)
38	5190	46	5230

channel	Frequency(MHz)	channel	Frequency(MHz)
54	5270	62	5310

channel	Frequency(MHz)	channel	Frequency(MHz)
102	5510	110	5550
134	5670		

channel	Frequency(MHz)	channel	Frequency(MHz)
151	5755	159	5795

4.4 Test Mode Description

During testing, Channel and Power Controlling Software provided by the applicant was used to control the operating channel as well as the maximum output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

Transmitting duty cycle is no less 98%.

The software is TermAssist and SecureCRT tool Use together.

Test Items	Mode	Data Rate	TX/RX
Radiated Emissions	802.11a(HT20)	6 Mbps	TX
	802.11n(HT20/40)	MCS0	TX
Duty Cycle	802.11a(HT20)	6 Mbps	TX
	802.11n(HT20/40)	MCS0	TX
Band Edge	802.11a(HT20)	6 Mbps	TX
	802.11n(HT20/40)	MCS0	TX
6dB Bandwidth	802.11a(HT20)	6 Mbps	TX
	802.11n(HT20/40)	MCS0	TX
26dB Bandwidth and 99% Occupied Bandwidth	802.11a(HT20)	6 Mbps	TX
	802.11n(HT20/40)	MCS0	TX
Maximum Conducted Output Power	802.11a(HT20)	6 Mbps	TX
	802.11n(HT20/40)	MCS0	TX
Power Spectral Density	802.11a(HT20)	6 Mbps	TX
	802.11n(HT20/40)	MCS0	TX
Frequency Stability	Un-modulation	/	TX

4.5 Test Facility

The test facility has a test site registered with the following organizations:

ISED CAB identifier: CN0013. Test Firm Registration No.: 7760A.

Waltek Testing Group Co., Ltd. Has been registered and fully described in a report filed with the Industry Canada. The acceptance letter from the Industry Canada is maintained in our files.

Registration number 7760A, October 15, 2016.

FCC Designation No.: CN1201. Test Firm Registration No.: 523476.

Waltek Testing Group Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration number 523476, September 10, 2019.

5 Equipment Used during Test

5.1 Equipments List

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal. Date	Calibration Due Date
3m Semi-anechoic Chamber for Radiation Emissions 1#						
1	Spectrum Analyzer	R&S	FSP30	100091	2025-04-19 2026-04-07	2026-04-18 2027-04-06
2	Amplifier	Agilent	8447D	2944A10178	2025-07-04 2026-07-01	2026-07-03 2027-06-30
3	Tri-log Broadband Antenna	SCHWARZBECK	VULB9163	336	2025-07-20 2026-07-18	2026-07-19 2027-07-17
4	Coaxial Cable	Top	TYPE16(13M)	-	2025-04-19 2026-04-07	2026-04-18 2027-04-06
5	Broad-band Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1314	2025-08-09	2026-08-08
6	Broad-band Horn Antenna	SCHWARZBECK	BBHA 9170	335	2025-07-04 2026-07-01	2026-07-03 2027-06-30
7	Broadband Preamplifier	COMPLIANCE	PAP-1G18	2004	2025-07-04 2026-07-01	2026-07-03 2027-06-30
8	Coaxial Cable	Top	ZT26-NJ-NJ-8M/FA	-	2025-04-19 2026-04-07	2026-04-18 2027-04-06
9	Microwave Amplifier	SCHWARZBECK	BBV 9721	100472	2025-07-04 2026-07-01	2026-07-03 2027-06-30
10	Coaxial Cable	Top	ZT40-2.92J-2.92J-2.0M	17100919	2025-07-08 2026-07-01	2026-07-07 2027-06-30
3m Semi-anechoic Chamber for Radiation Emissions 2#						
1	Test Receiver	R&S	ESCI	101296	2025-04-19 2026-04-07	2026-04-18 2027-04-06
2	Trilog Broadband Antenna	SCHWARZBECK	VULB9160	9160-3325	2025-07-05 2026-07-04	2026-07-04 2027-07-03
3	Active Loop Antenna	Com-Power	AL-130R	10160007	2025-04-21 2026-04-19	2026-04-20 2027-04-18
4	Amplifier	ANRITSU	MH648A	M43381	2025-04-19 2026-04-07	2026-04-18 2027-04-06
5	Cable	HUBER+SUHNER	CBL2	525178	2025-04-19 2026-04-07	2026-04-18 2027-04-06
RF Conducting						
1	Spectrum Analyzer	R&S	FSP40	100501	2025-07-04 2026-07-01	2026-07-03 2027-06-30
2	Spectrum Analyzer	Agilent	N9020A	MY49100060	2025-07-04 2026-07-01	2026-07-03 2027-06-30
3	Power Sensor	TST	TSCB562R2	-	2025-12-05	2026-12-04

Test Software:

Test Item	Software name	Software version
Conduction disturbance Radiated Emission(3m)	EZ-EMC	EZ-EMC(RA-03A1-1)
RF Conducted Testing	TST-301	V2.0

5.2 Description of Support Units

Equipment	Manufacturer	Model No.	Series No.
/	/	/	/

5.3 Measurement Uncertainty

Parameter	Uncertainty
Radio Frequency	$\pm 1 \times 10^{-6}$
RF Power	± 1.0 dB
RF Power Density	± 2.2 dB
Radiated Spurious Emissions test	± 5.03 dB (30M~1000MHz)
	± 5.47 dB (1000M~25000MHz)
Conducted Spurious Emissions test	± 3.64 dB (AC mains 150KHz~30MHz)

6 Test Summary

Test Items	Test Requirement	Result
Conducted Emissions	15.207(a)	N/A
Radiated Emissions	15.407(b) 15.205(a) 15.209(a)	PASS
Duty Cycle	KDB 789033	PASS
6dB Bandwidth	15.407(e)	PASS
26 dB Emission Bandwidth & 99% Occupied Bandwidth	15.407(a)	PASS
Maximum Conducted Output Power	15.407(a)	PASS
Power Spectral Density	15.407(a)	PASS
Restricted bands around fundamental frequency	15.407(b)	PASS
Frequency stability	15.407(g)	PASS
Antenna Requirement	15.203	PASS
Maximum Permissible Exposure (Exposure of Humans to RF Fields)	1.1307(b)(1)	PASS

7 Duty cycle

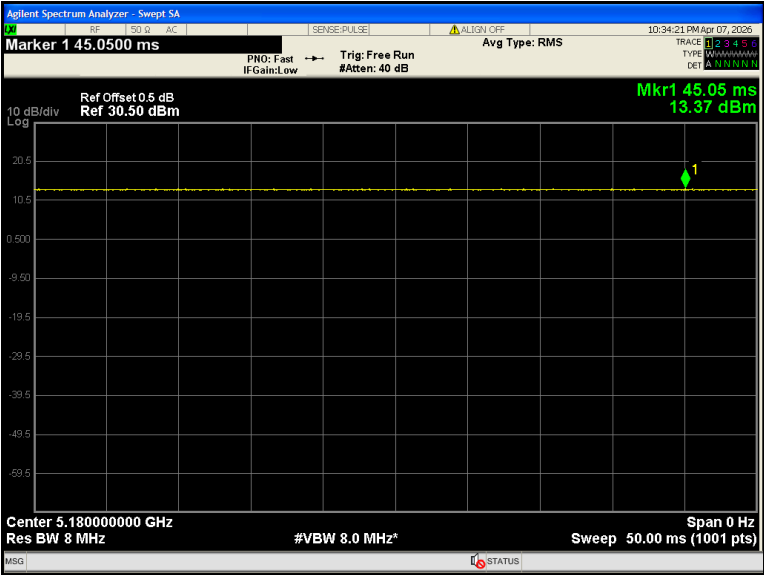
Test Requirement:	FCC 47CFR Part 15 Section 15.407 KDB789033 D02 General U-NII Test Procedures New Rules v02r01, Section (B)
Test Method:	ANSI C63.10-2020
Test Limit:	N/A
Test Result:	PASS
Remark:	Through Pre-scan, and found 802.11a at lowest channel is the worst case. Only the worst case is recorded in the report.

7.1 Summary of Test Results

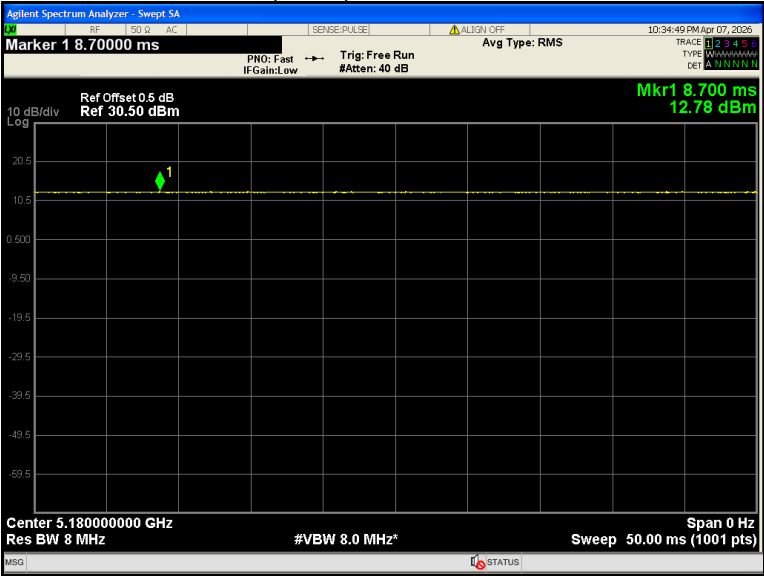
802.11a(HT20) mode			
channel	On time(ms)	Period(ms)	Duty Cycle(%)
36	50	50	100
52	50	50	100
100	50	50	100
149	50	50	100
802.11n(HT20) mode			
channel	On time(ms)	Period(ms)	Duty Cycle(%)
36	50	50	100
52	50	50	100
100	50	50	100
149	50	50	100
802.11n(HT40) mode			
channel	On time(ms)	Period(ms)	Duty Cycle(%)
38	50	50	100
54	50	50	100
102	50	50	100
151	50	50	100

Test result plots shown as follows:

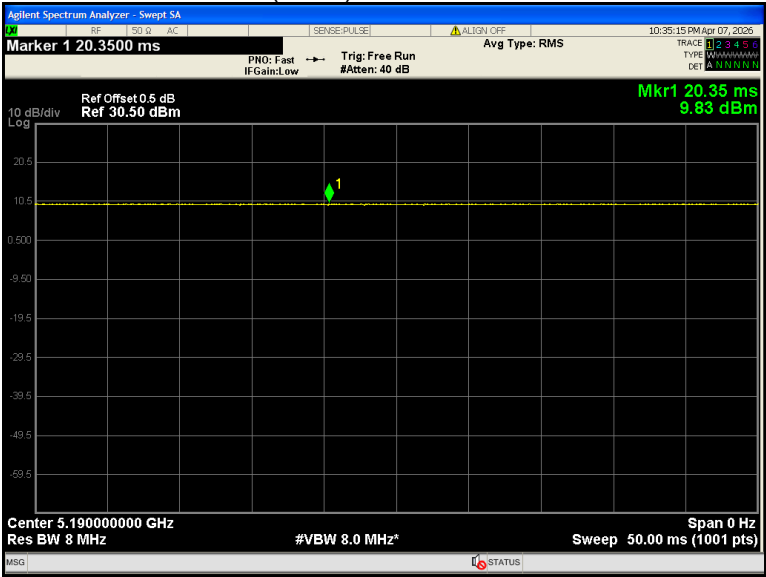
802.11a U-NII-1 Low channel



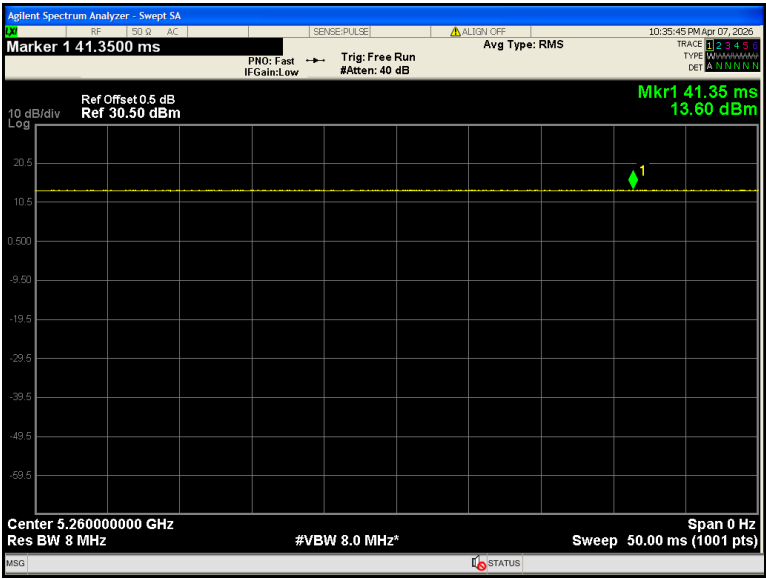
802.11n(HT20) U-NII-1 Low channel



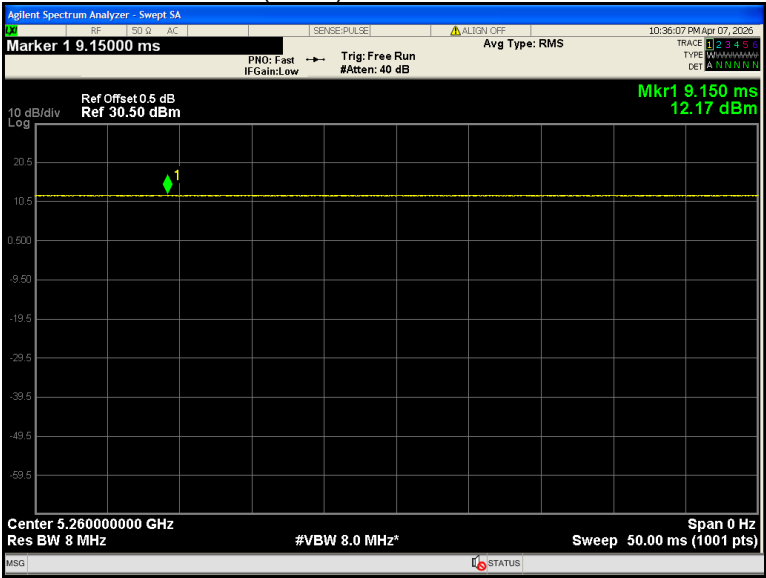
802.11n(HT40) U-NII-1 Low channel



802.11a U-NII-2A Low channel



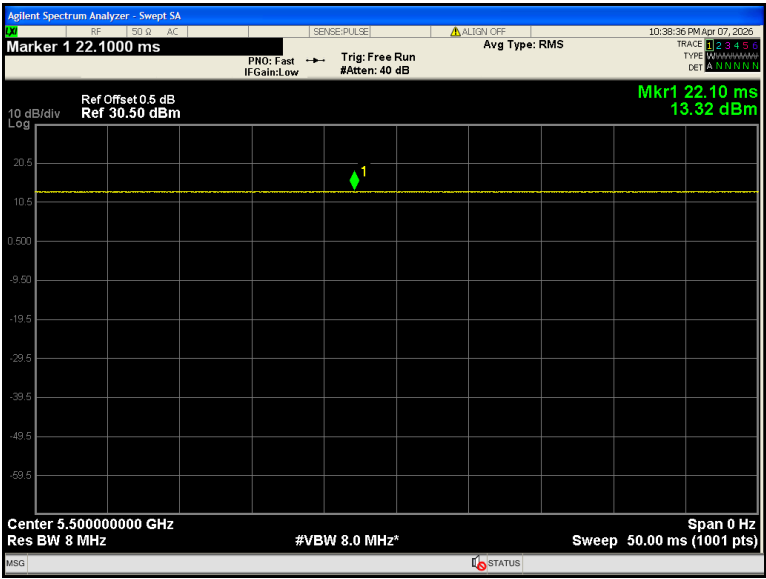
802.11n(HT20) U-NII-2A Low channel



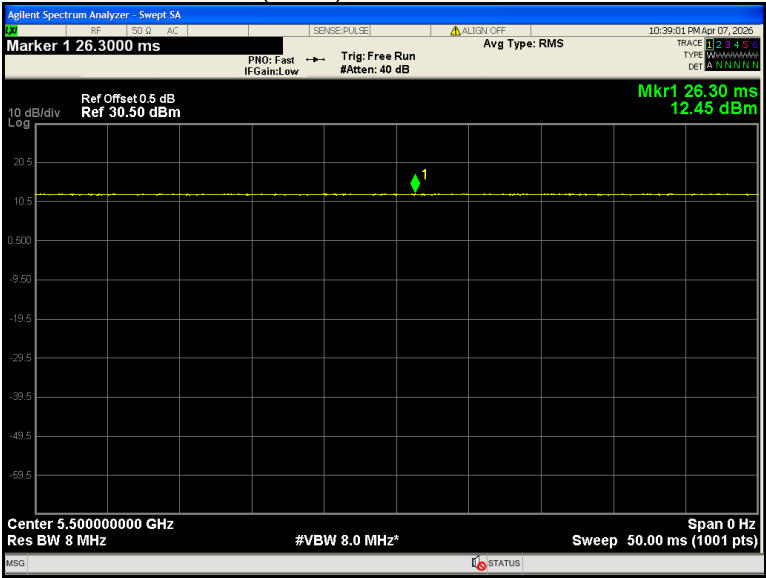
802.11n(HT40) U-NII-2A Low channel



802.11a U-NII-2C Low channel



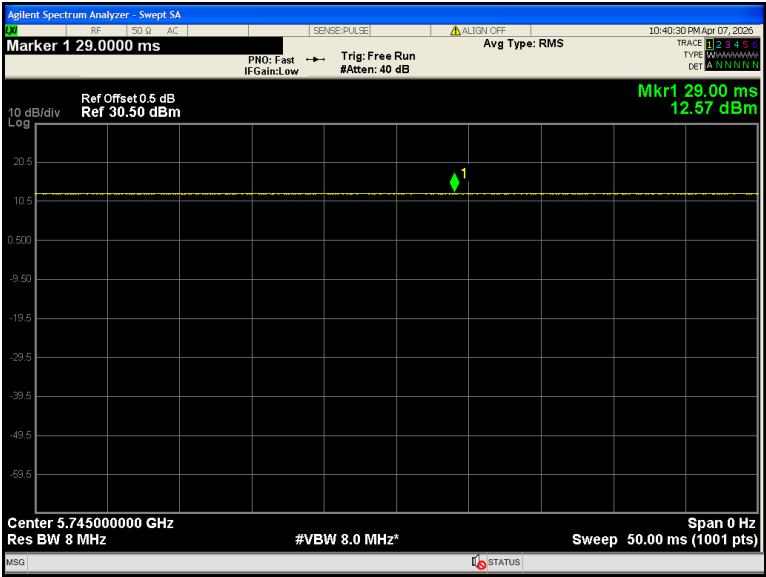
802.11n(HT20) U-NII-2C Low channel



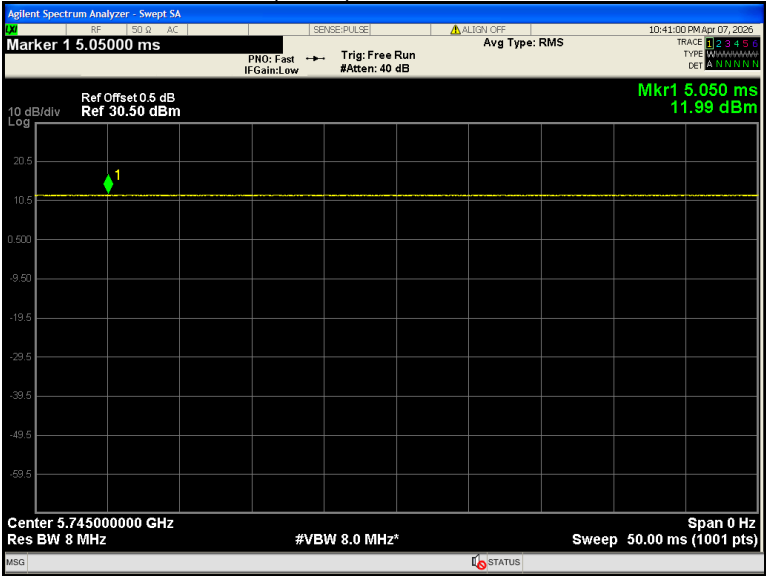
802.11n(HT40) U-NII-2C Low channel



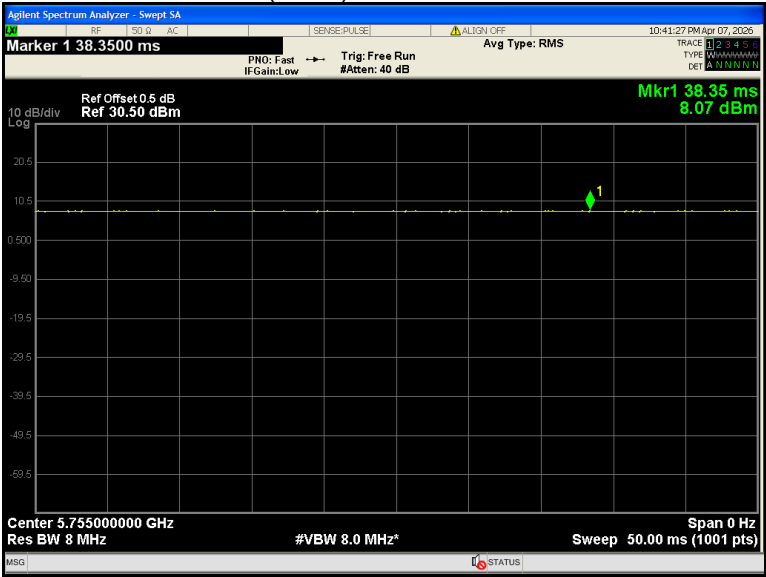
802.11a U-NII-3 Low channel



802.11n(HT20) U-NII-3 Low channel



802.11n(HT40) U-NII-3 Low channel



8 Radiated Emissions

Test Requirement: FCC 47CFR Part 15 Section 15.209 & 15.407

Test Method: ANSI C63.10-2020

Test Result: PASS

Measurement Distance: 3m

Limit:

Frequency (MHz)	Field Strength		Field Strength Limit at 3m Measurement Distance	
	uV/m	Distance (m)	uV/m	dBuV/m
0.009 ~ 0.490	$2400/F(\text{kHz})$	300	$10000 * 2400/F(\text{kHz})$	$20\log^{(2400/F(\text{kHz}))} + 80$
0.490 ~ 1.705	$24000/F(\text{kHz})$	30	$100 * 24000/F(\text{kHz})$	$20\log^{(24000/F(\text{kHz}))} + 40$
1.705 ~ 30	30	30	$100 * 30$	$20\log^{(30)} + 40$
30 ~ 88	100	3	100	$20\log^{(100)}$
88 ~ 216	150	3	150	$20\log^{(150)}$
216 ~ 960	200	3	200	$20\log^{(200)}$
Above 960	500	3	500	$20\log^{(500)}$

8.1 EUT Operation

Operating Environment :

Temperature: 25.7°C

Humidity: 56.2 % RH

Atmospheric Pressure: 101.2kPa

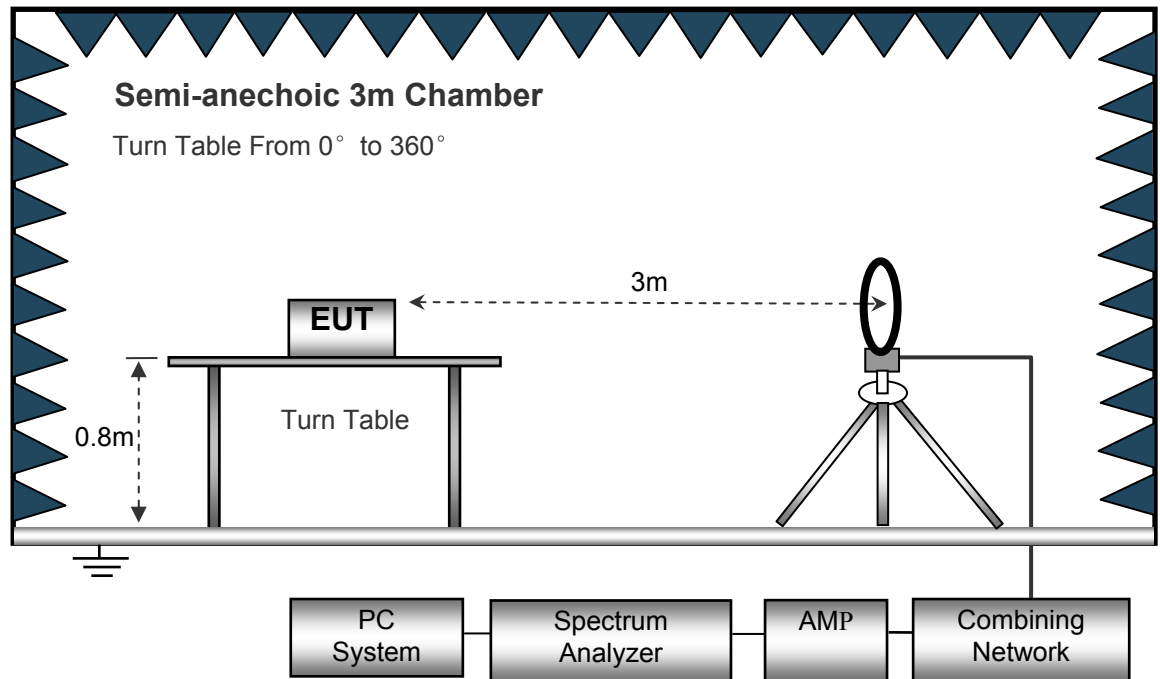
EUT Operation :

The test was performed in transmitting mode, the test data were shown in the report.

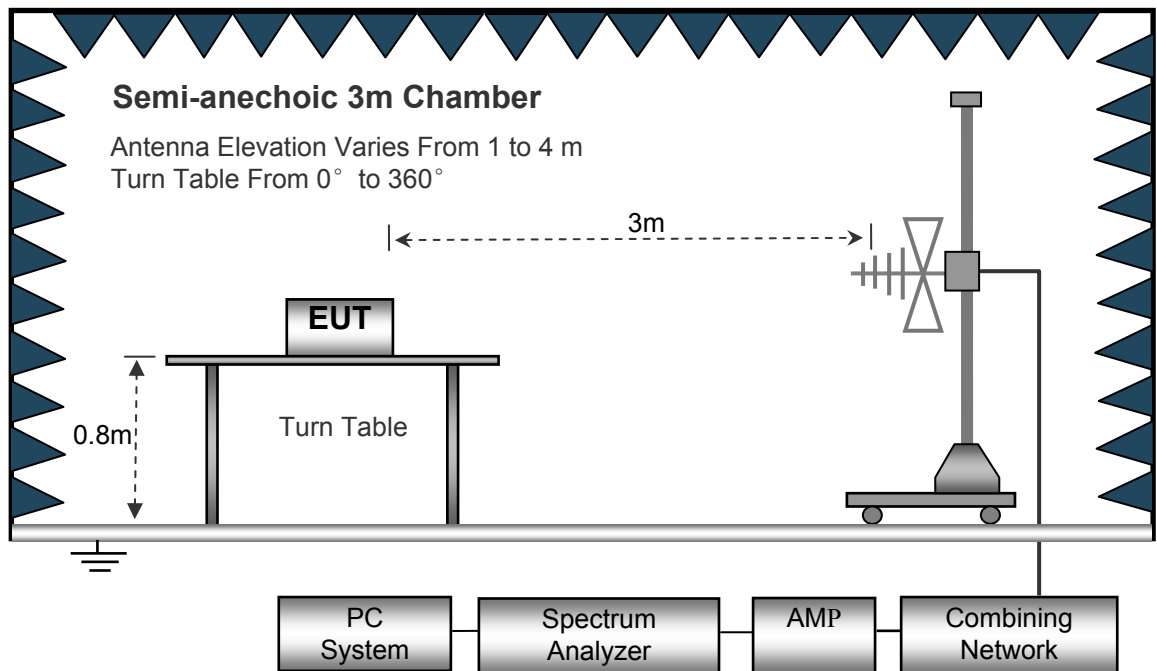
8.2 Test Setup

The radiated emission tests were performed in the 3m Semi- Anechoic Chamber test site, using the setup accordance with the ANSI C63.10-2020.

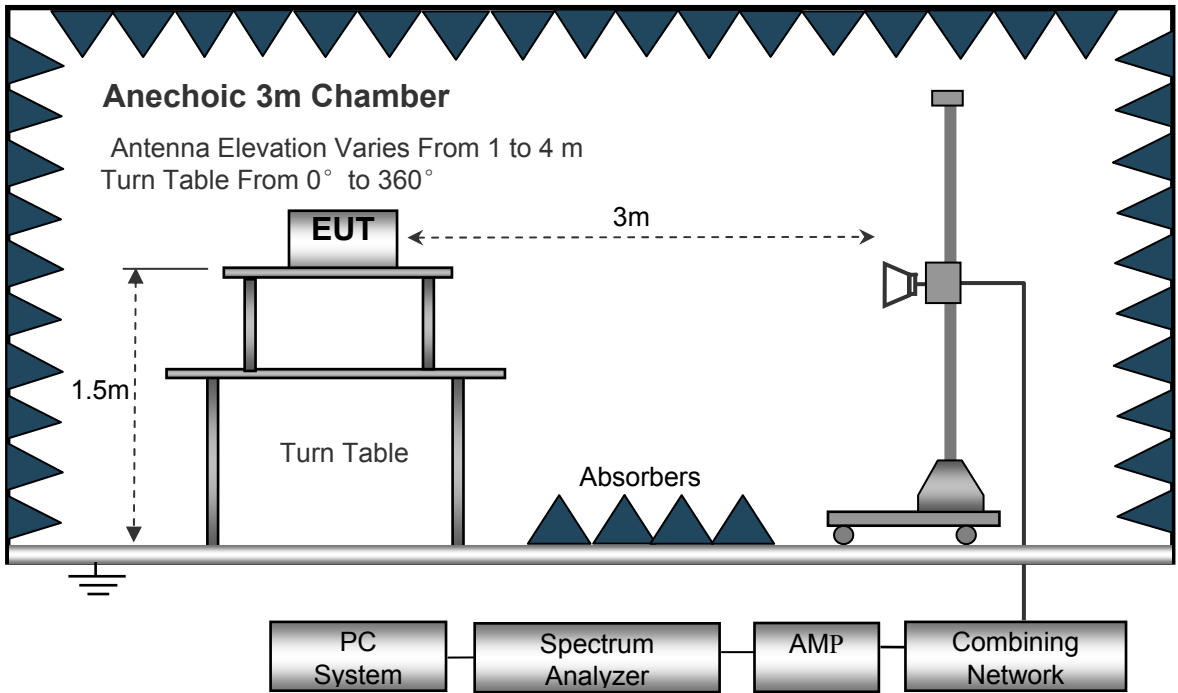
The test setup for emission measurement below 30MHz.



The test setup for emission measurement from 30 MHz to 1 GHz.



The test setup for emission measurement above 1 GHz.



8.3 Spectrum Analyzer Setup

Below 30MHz

Sweep Speed Auto
IF Bandwidth.....10kHz
Video Bandwidth.....10kHz
Resolution Bandwidth.....10kHz

30MHz ~ 1GHz

Sweep Speed Auto
Detector PK
Resolution Bandwidth.....100kHz
Video Bandwidth.....300kHz

Above 1GHz

Sweep Speed Auto
Detector PK
Resolution Bandwidth.....1MHz
Video Bandwidth.....3MHz
Detector Ave.
Resolution Bandwidth.....1MHz
Video Bandwidth.....10Hz

8.4 Test Procedure

1. The EUT is placed on a turntable, which is 0.8m above ground plane for below 1GHz and 1.5m for above 1GHz.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is moved from 1m to 4m to find out the maximum emissions.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Repeat above procedures until the measurements for all frequencies are complete.
7. The radiation measurements are performed in X,Y and Z axis positioning(X denotes lying on the table, Y denotes side stand and Z denotes vertical stand),the worst condition was tested putting the eut in X axis,so the worst data were shown as follow.
8. A 2.4GHz high –pass filter is used during radiated emissions above 1GHz measurement.

8.5 Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

$$\text{Corr. Ampl.} = \text{Indicated Reading} + \text{Antenna Factor} + \text{Cable Factor} - \text{Amplifier Gain}$$

The “Margin” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -7dB means the emission is 7dB below the maximum limit for Class B. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Corr. Ampl.} - \text{Limit}$$

8.6 Summary of Test Results

Remark: Only the worst case 802.11a mode were record in the report.

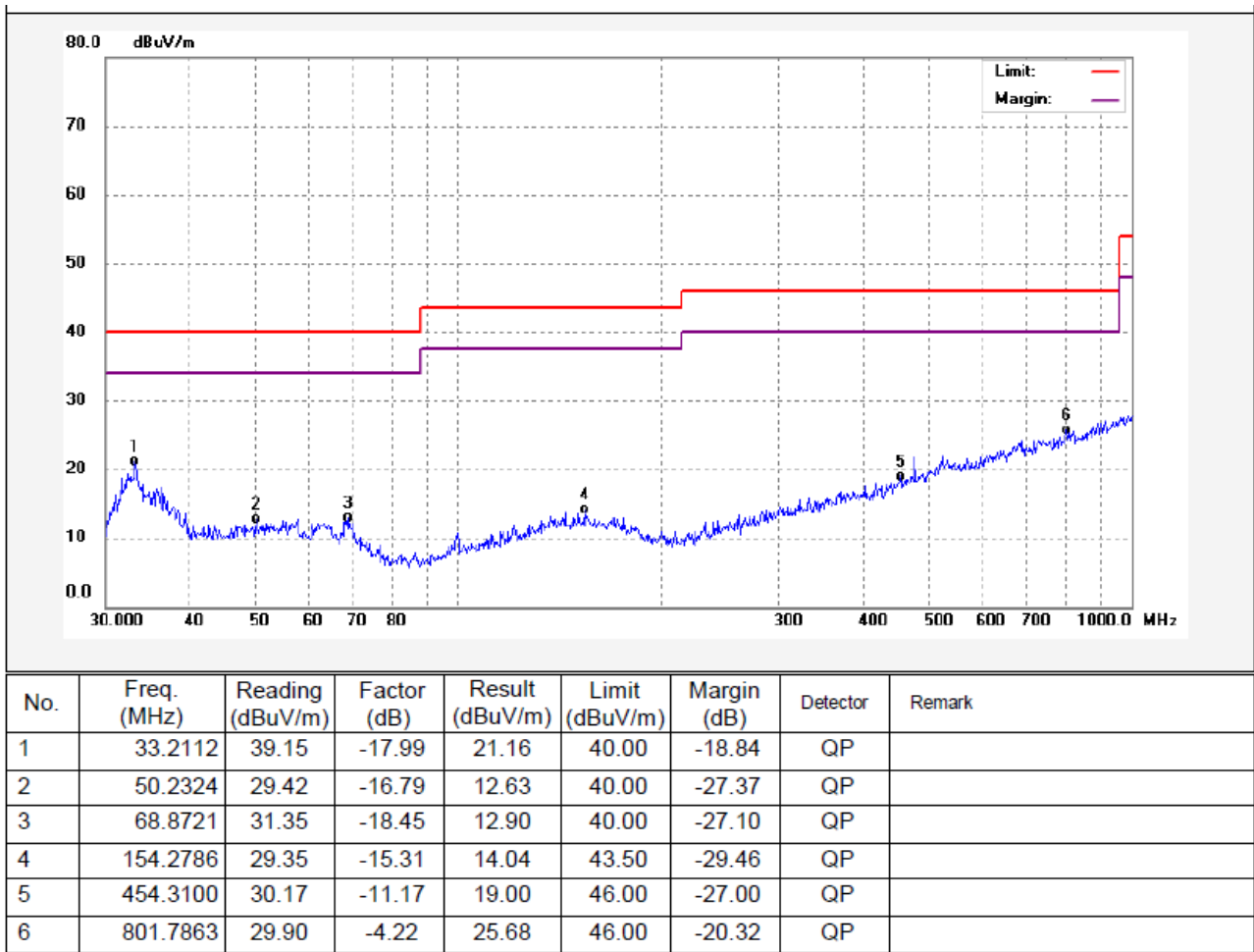
Test Frequency: 9KHz~30MHz

The measurements were more than 20 dB below the limit and not reported.

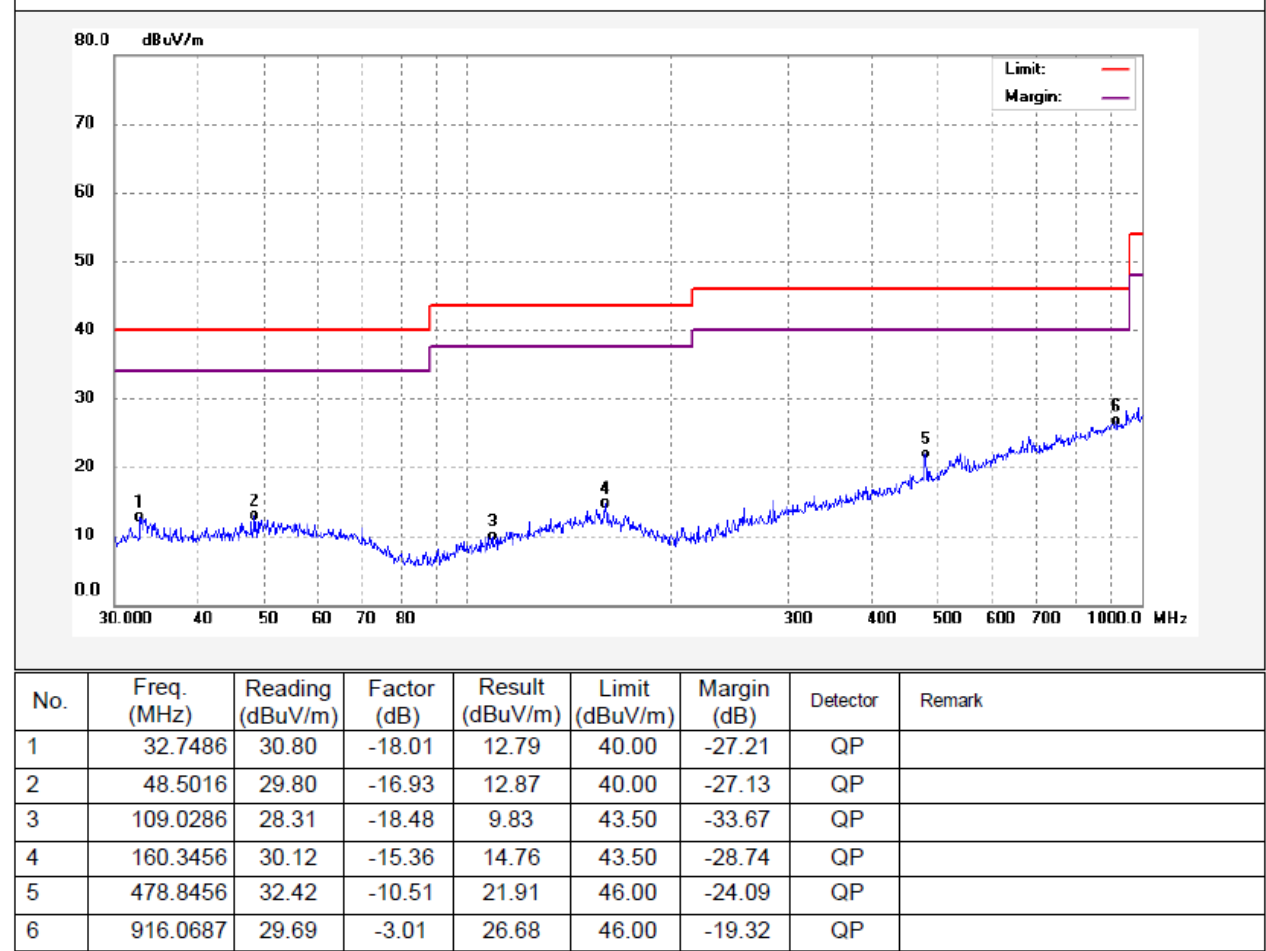
Test Frequency : 30MHz ~ 1GHz

Worst case U-NII-1-Low Channel 5180MHz:

Antenna Polarization: Vertical



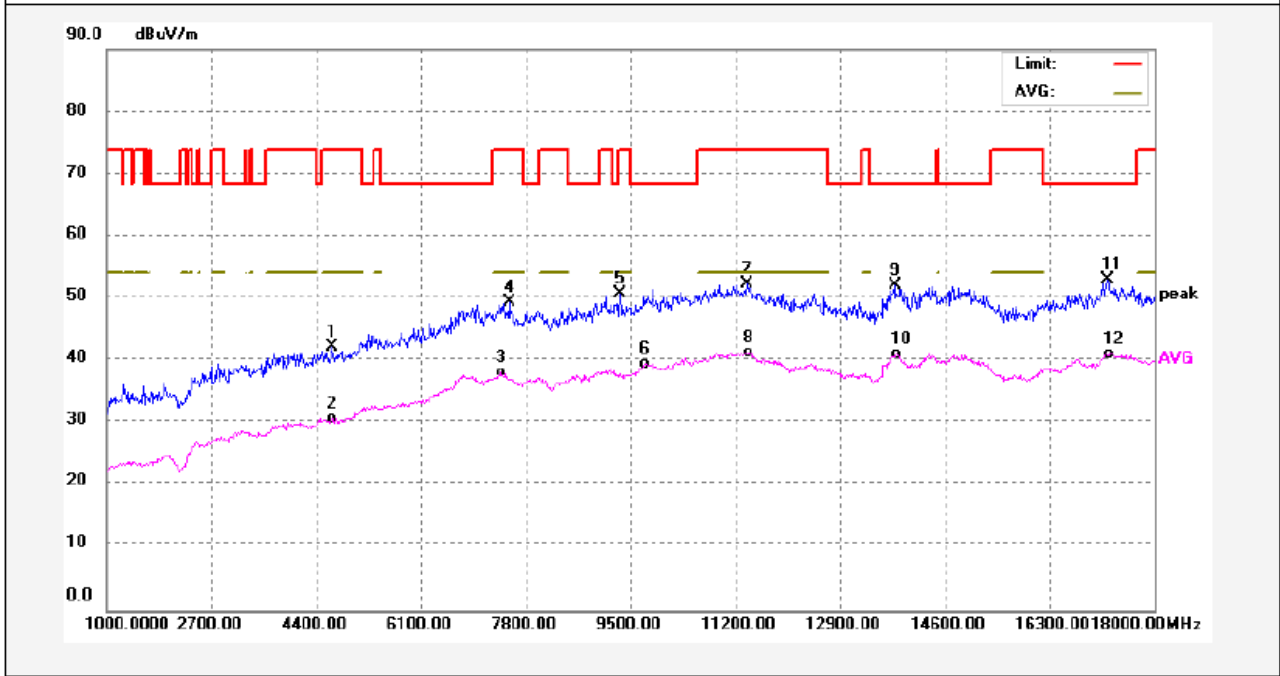
Antenna Polarization: Horizontal



Test Frequency: 1GHz ~18GHz

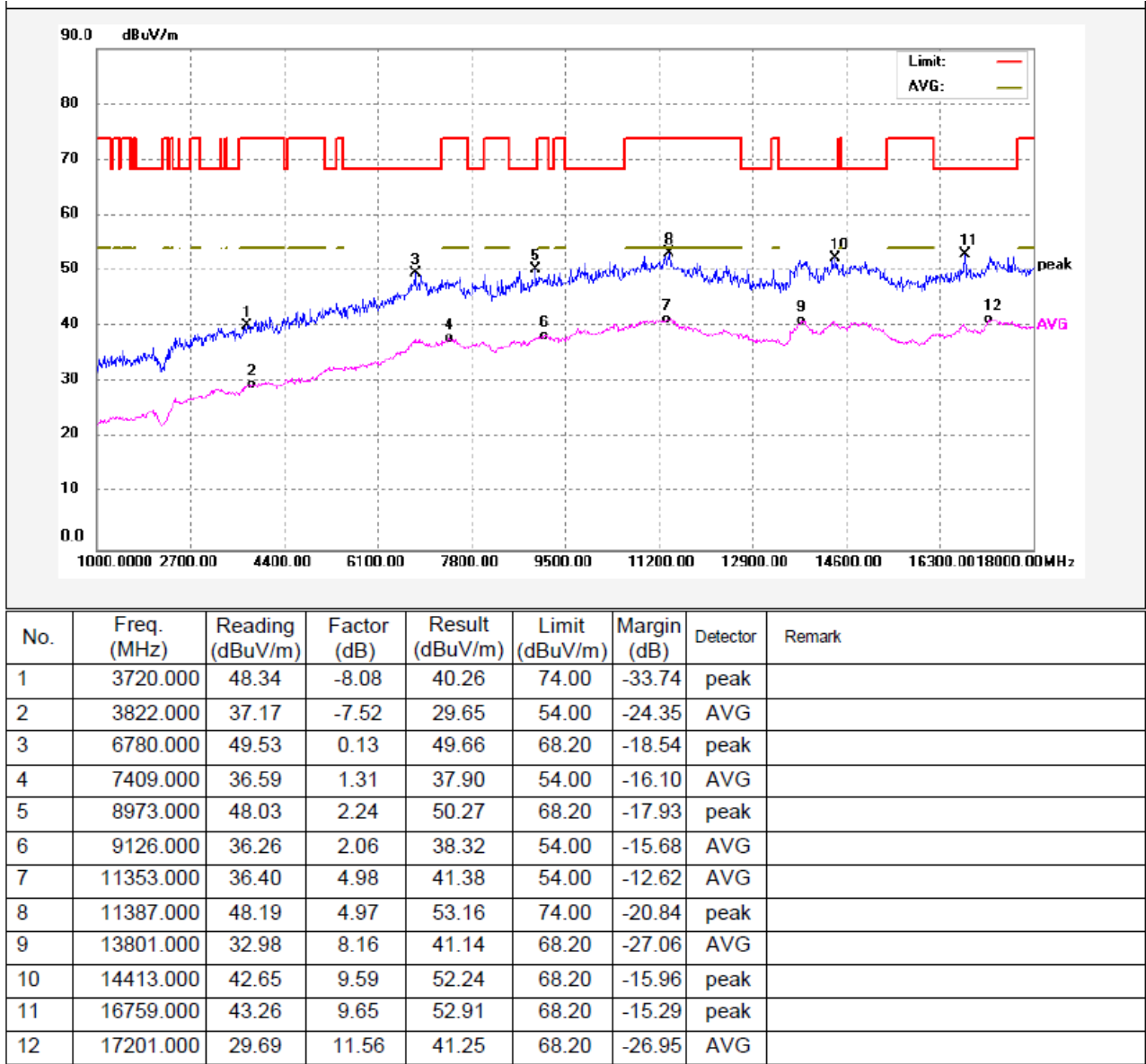
U-NII-1-Low Channel 5180MHz

Antenna Polarization: Vertical



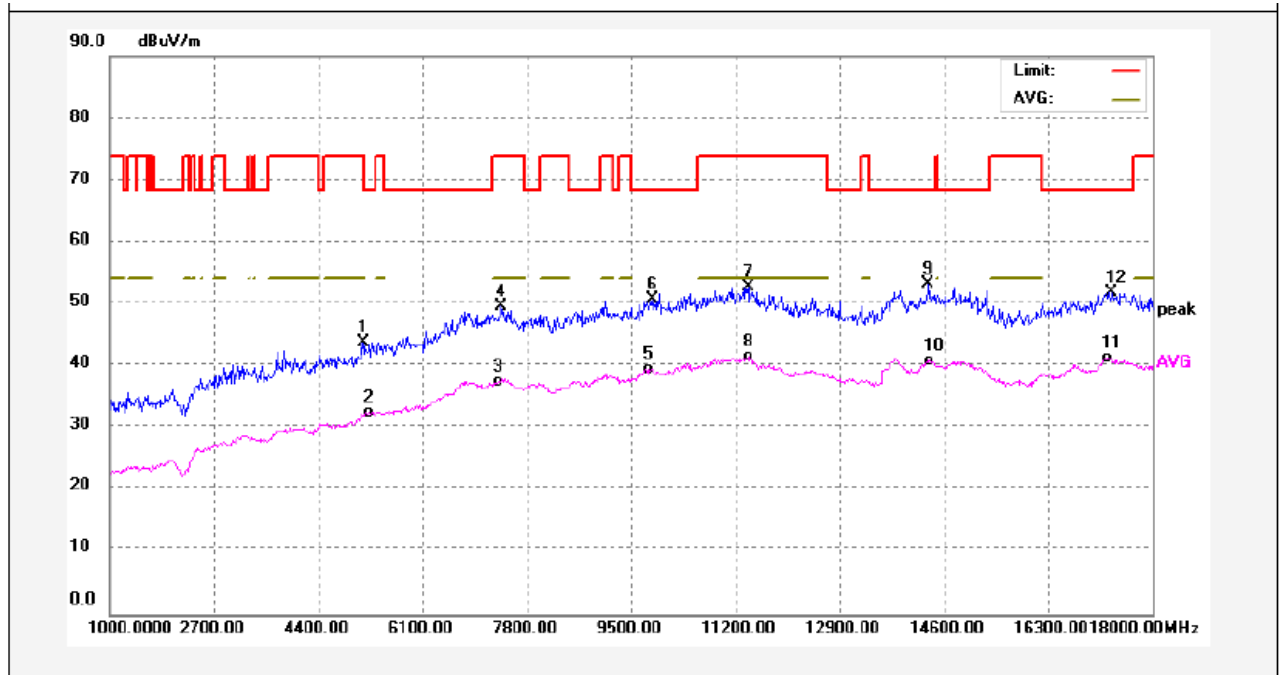
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	4655.000	48.82	-6.62	42.20	74.00	-31.80	peak	
2	4655.000	37.44	-6.62	30.82	54.00	-23.18	AVG	
3	7409.000	36.72	1.31	38.03	54.00	-15.97	AVG	
4	7528.000	48.19	1.18	49.37	74.00	-24.63	peak	
5	9330.000	49.03	1.66	50.69	74.00	-23.31	peak	
6	9738.000	36.70	2.88	39.58	68.20	-28.62	AVG	
7	11387.000	47.32	4.97	52.29	74.00	-21.71	peak	
8	11404.000	36.39	4.96	41.35	54.00	-12.65	AVG	
9	13784.000	43.93	8.10	52.03	68.20	-16.17	peak	
10	13818.000	32.90	8.22	41.12	68.20	-27.08	AVG	
11	17235.000	41.37	11.64	53.01	68.20	-15.19	peak	
12	17252.000	29.50	11.67	41.17	68.20	-27.03	AVG	

Antenna Polarization: Horizontal



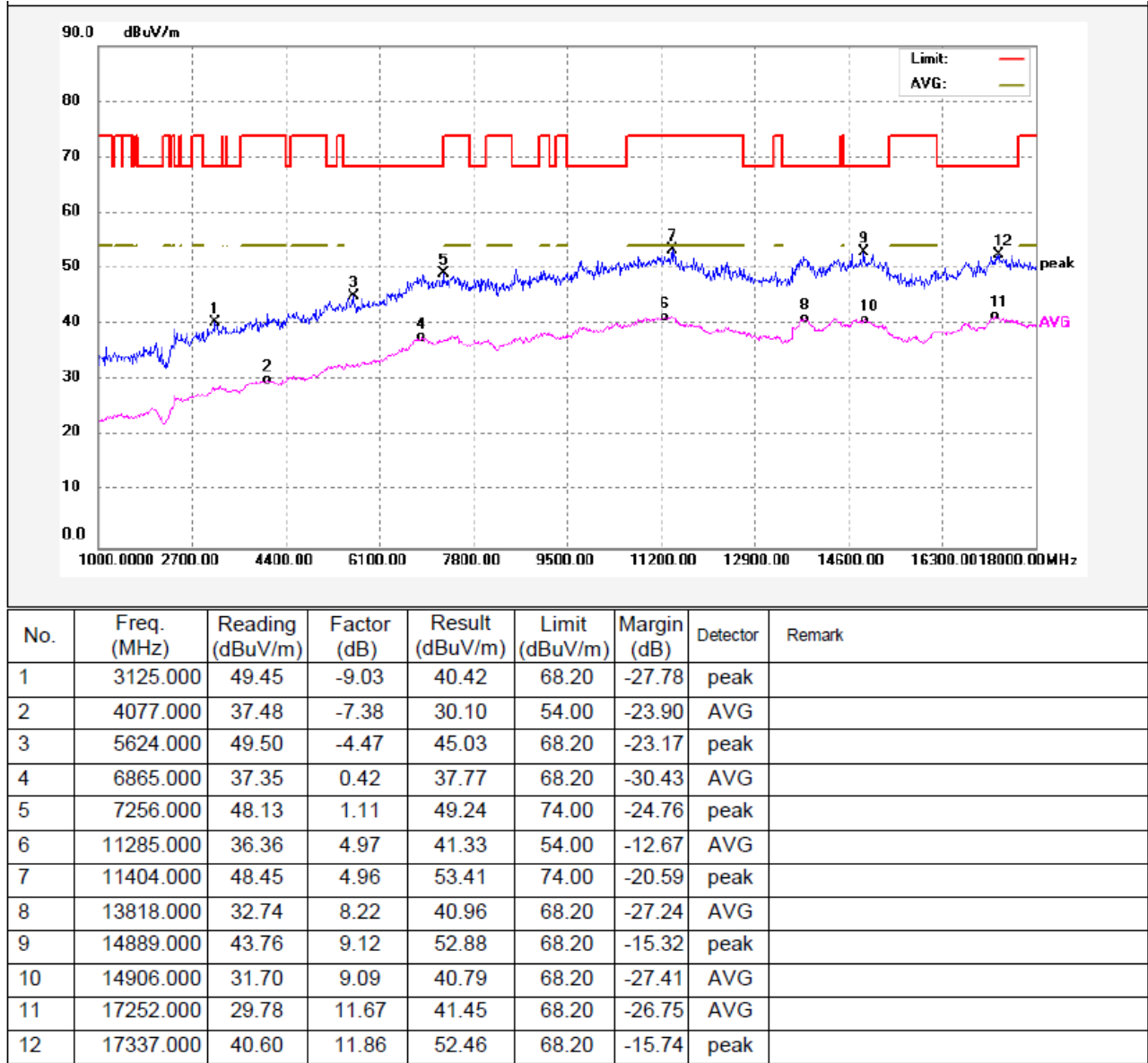
U-NII-1-Middle Channel 5200MHz

Antenna Polarization: Vertical



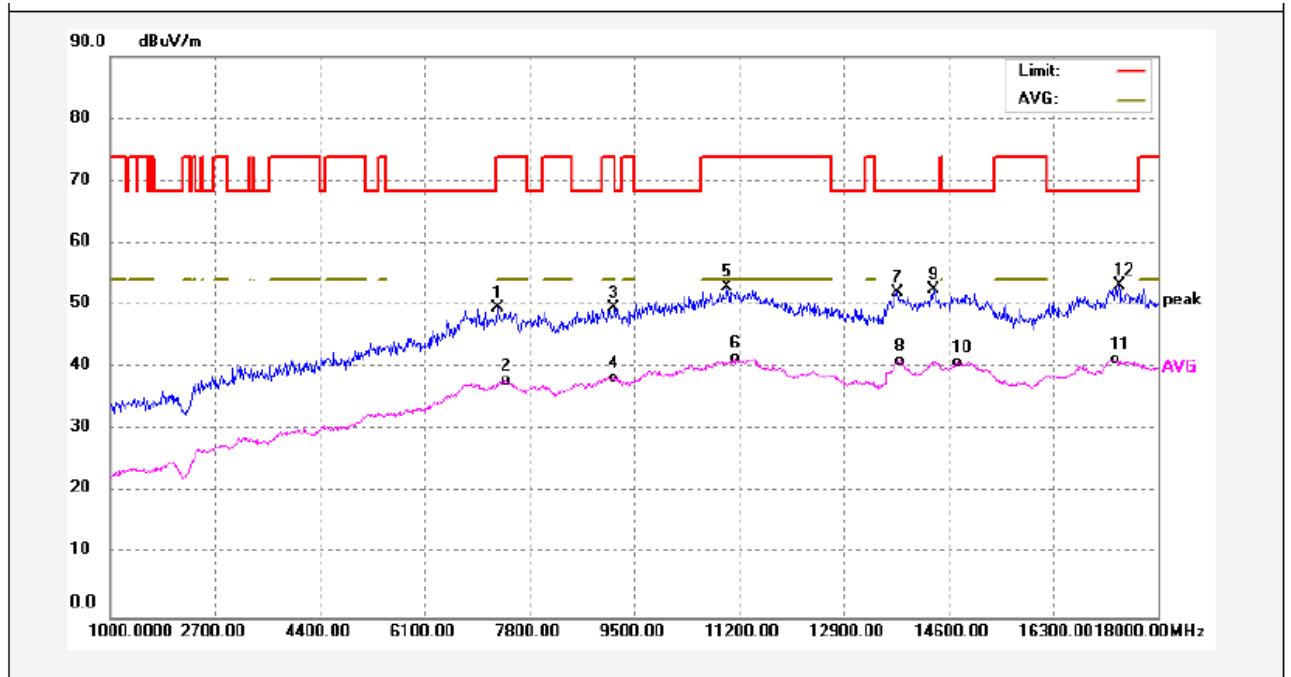
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	5131.000	48.91	-5.06	43.85	74.00	-30.15	peak	
2	5216.000	37.11	-4.56	32.55	68.20	-35.65	AVG	
3	7341.000	36.32	1.23	37.55	54.00	-16.45	AVG	
4	7375.000	48.37	1.28	49.65	74.00	-24.35	peak	
5	9789.000	36.41	3.09	39.50	68.20	-28.70	AVG	
6	9857.000	47.60	3.08	50.68	68.20	-17.52	peak	
7	11404.000	47.73	4.96	52.69	74.00	-21.31	peak	
8	11404.000	36.51	4.96	41.47	54.00	-12.53	AVG	
9	14345.000	43.72	9.47	53.19	68.20	-15.01	peak	
10	14362.000	31.42	9.50	40.92	68.20	-27.28	AVG	
11	17252.000	29.55	11.67	41.22	68.20	-26.98	AVG	
12	17337.000	40.06	11.86	51.92	68.20	-16.28	peak	

Antenna Polarization: Horizontal



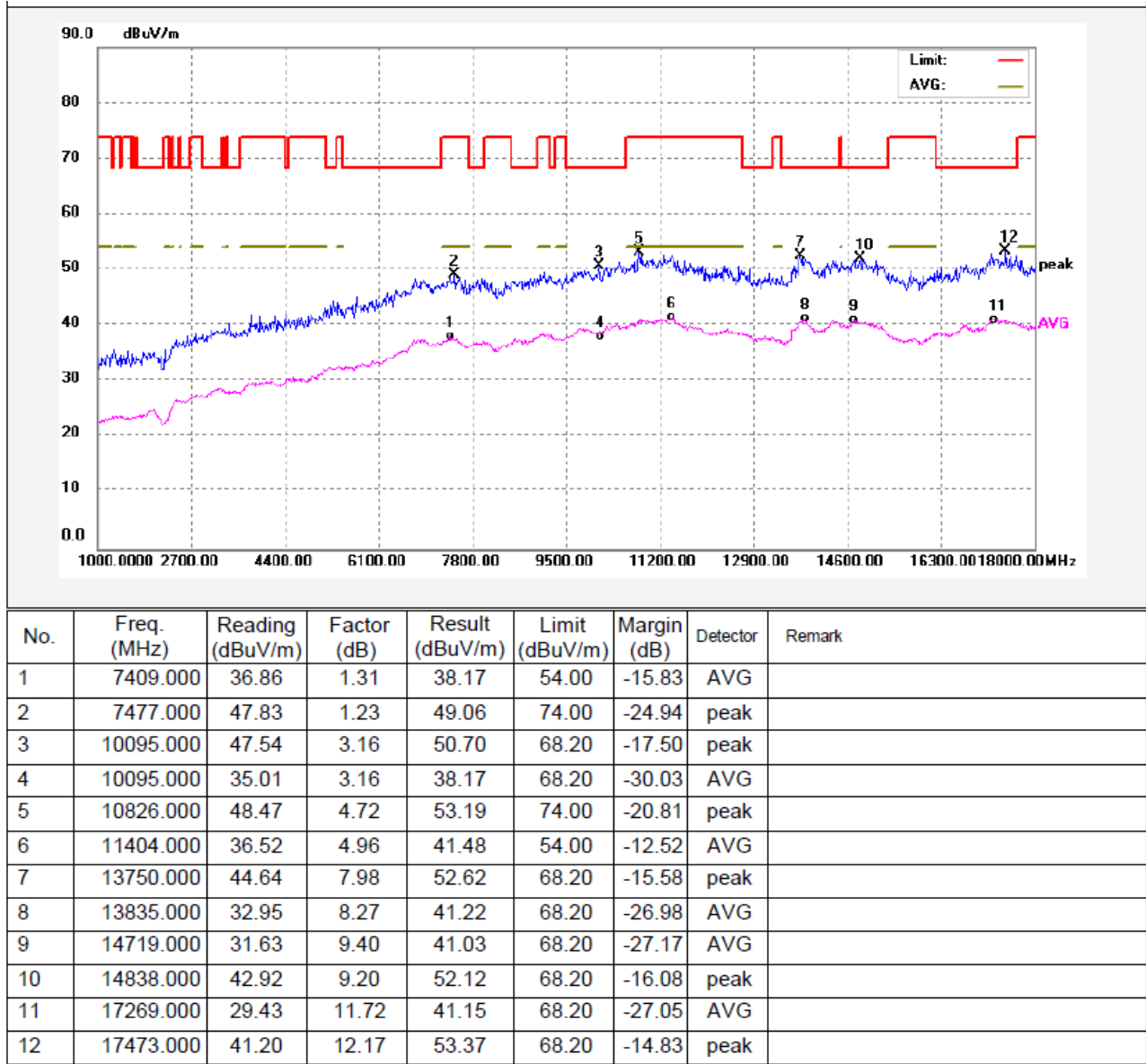
U-NII-1-High Channel 5240MHz

Antenna Polarization: Vertical



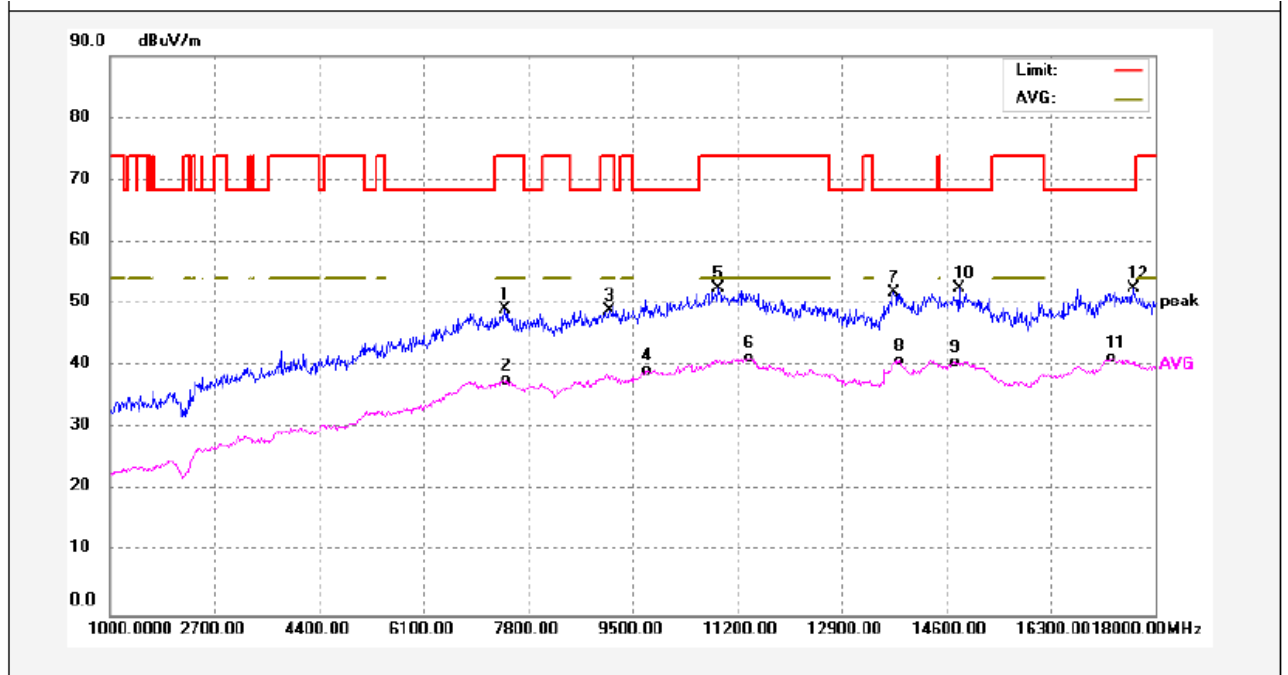
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	7290.000	48.56	1.16	49.72	74.00	-24.28	peak	
2	7426.000	36.64	1.29	37.93	54.00	-16.07	AVG	
3	9177.000	47.74	1.96	49.70	74.00	-24.30	peak	
4	9177.000	36.45	1.96	38.41	54.00	-15.59	AVG	
5	10996.000	47.87	5.02	52.89	74.00	-21.11	peak	
6	11132.000	36.43	5.00	41.43	54.00	-12.57	AVG	
7	13767.000	44.05	8.03	52.08	68.20	-16.12	peak	
8	13818.000	32.84	8.22	41.06	68.20	-27.14	AVG	
9	14362.000	43.14	9.50	52.64	68.20	-15.56	peak	
10	14736.000	31.45	9.36	40.81	68.20	-27.39	AVG	
11	17303.000	29.48	11.80	41.28	68.20	-26.92	AVG	
12	17371.000	41.26	11.94	53.20	68.20	-15.00	peak	

Antenna Polarization: Horizontal



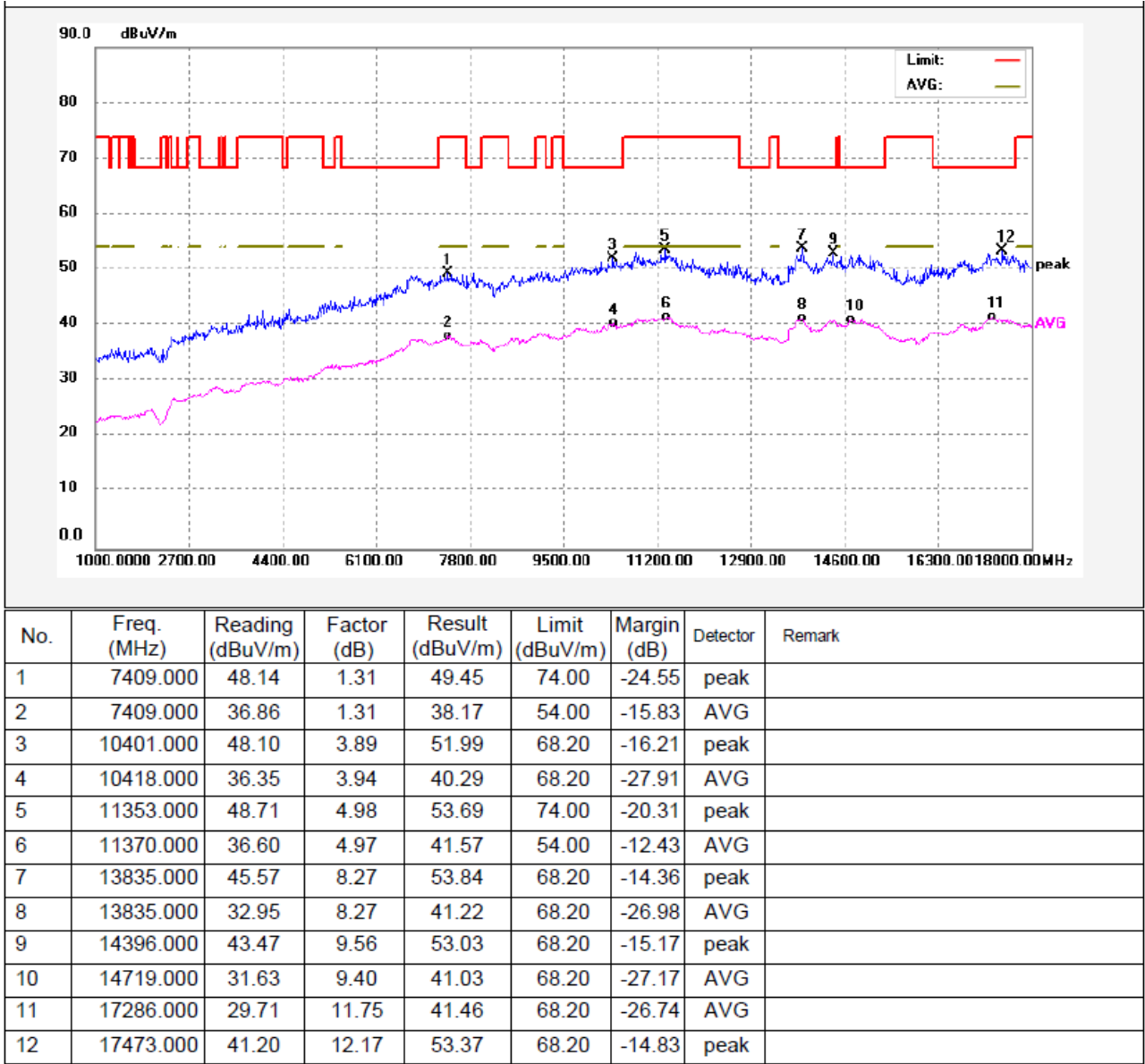
U-NII-2A-Low Channel 5260MHz

Antenna Polarization: Vertical



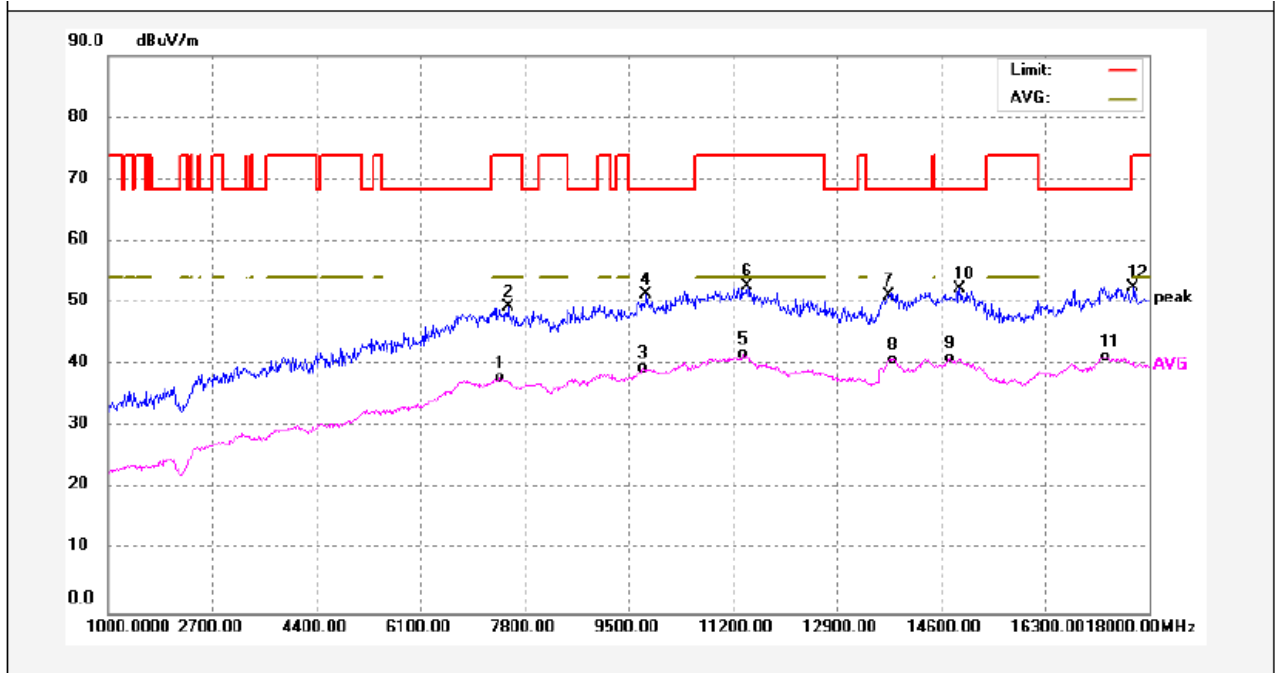
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	7426.000	47.93	1.29	49.22	74.00	-24.78	peak	
2	7443.000	36.47	1.27	37.74	54.00	-16.26	AVG	
3	9126.000	46.92	2.06	48.98	74.00	-25.02	peak	
4	9738.000	36.46	2.88	39.34	68.20	-28.86	AVG	
5	10894.000	47.61	4.84	52.45	74.00	-21.55	peak	
6	11387.000	36.42	4.97	41.39	54.00	-12.61	AVG	
7	13750.000	43.82	7.98	51.80	68.20	-16.40	peak	
8	13835.000	32.58	8.27	40.85	68.20	-27.35	AVG	
9	14736.000	31.29	9.36	40.65	68.20	-27.55	AVG	
10	14804.000	43.25	9.25	52.50	68.20	-15.70	peak	
11	17286.000	29.53	11.75	41.28	68.20	-26.92	AVG	
12	17643.000	39.46	13.02	52.48	68.20	-15.72	peak	

Antenna Polarization: Horizontal



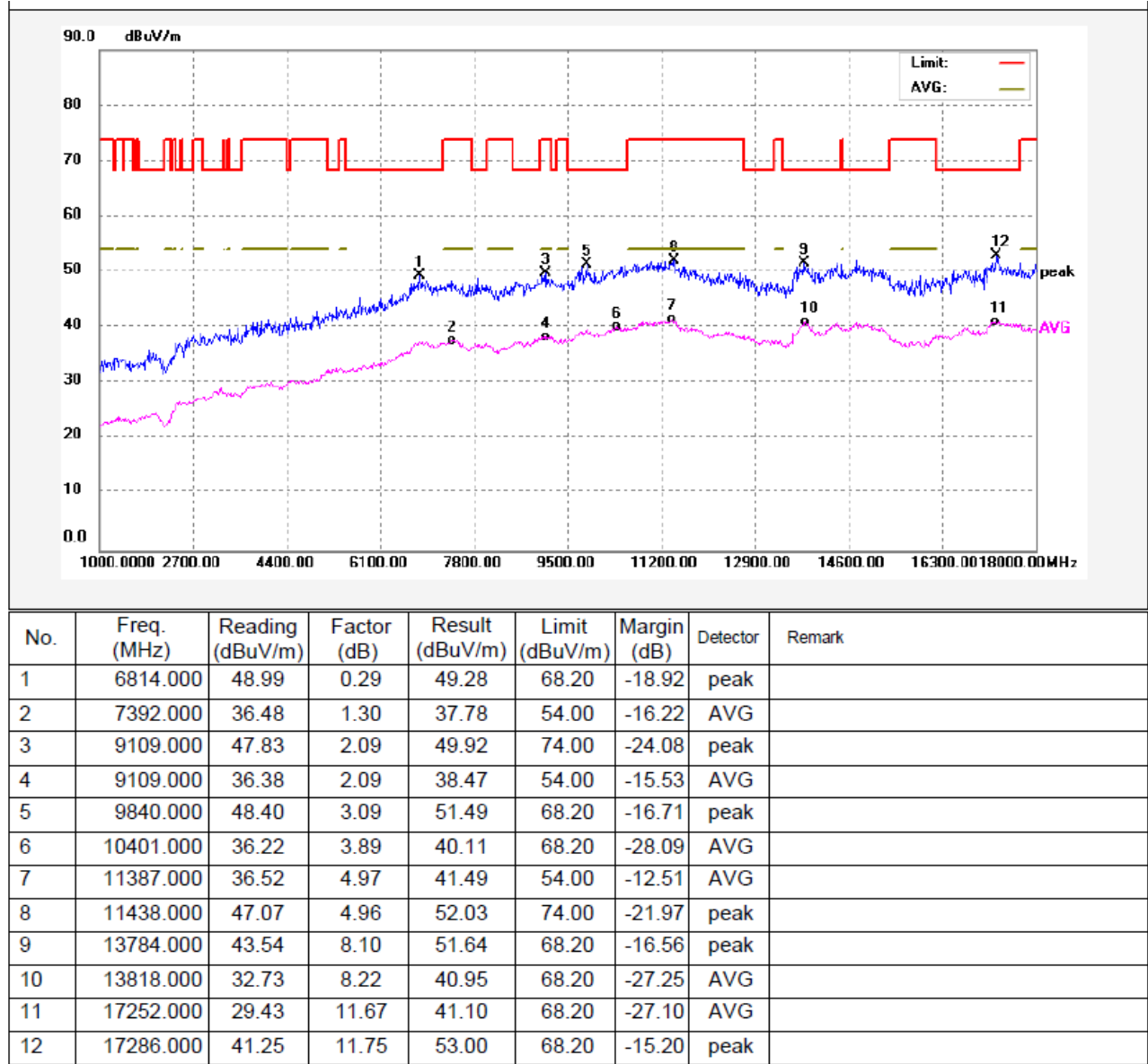
U-NII-2A-Middle Channel 5280MHz

Antenna Polarization: Vertical



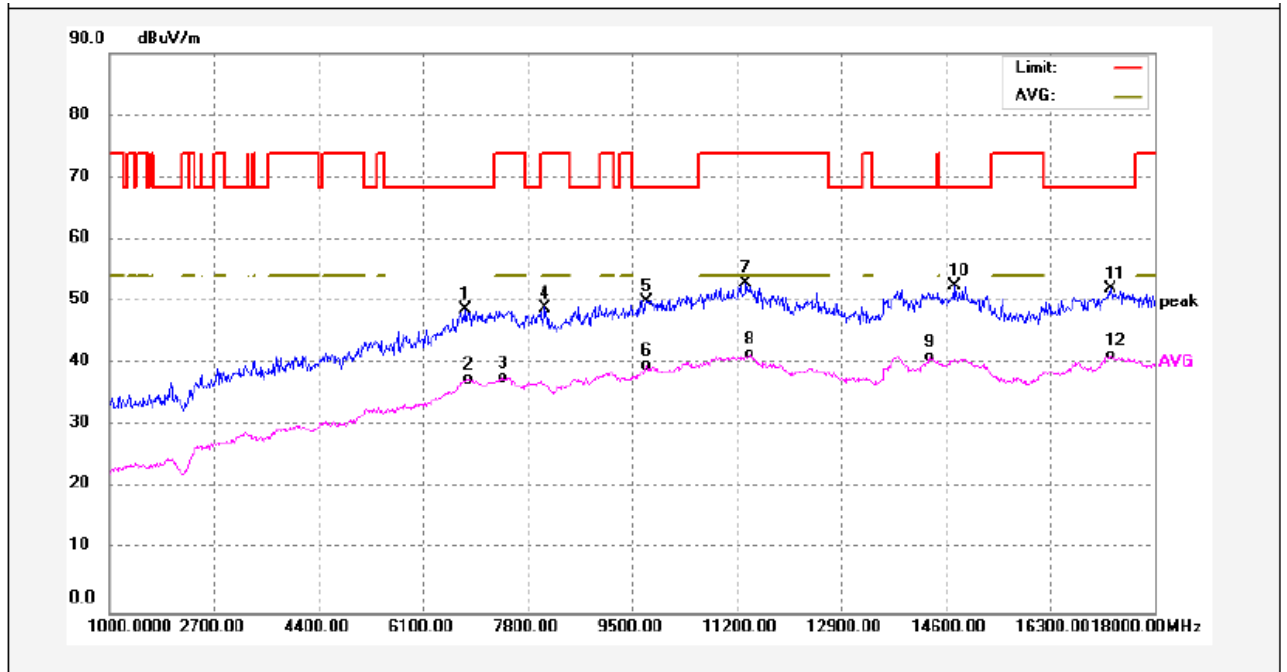
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	7409.000	36.65	1.31	37.96	54.00	-16.04	AVG	
2	7528.000	48.17	1.18	49.35	74.00	-24.65	peak	
3	9738.000	36.52	2.88	39.40	68.20	-28.80	AVG	
4	9789.000	48.24	3.09	51.33	68.20	-16.87	peak	
5	11370.000	36.73	4.97	41.70	54.00	-12.30	AVG	
6	11438.000	47.89	4.96	52.85	74.00	-21.15	peak	
7	13750.000	43.13	7.98	51.11	68.20	-17.09	peak	
8	13818.000	32.66	8.22	40.88	68.20	-27.32	AVG	
9	14736.000	31.73	9.36	41.09	68.20	-27.11	AVG	
10	14906.000	43.30	9.09	52.39	68.20	-15.81	peak	
11	17286.000	29.46	11.75	41.21	68.20	-26.99	AVG	
12	17745.000	39.03	13.59	52.62	74.00	-21.38	peak	

Antenna Polarization: Horizontal



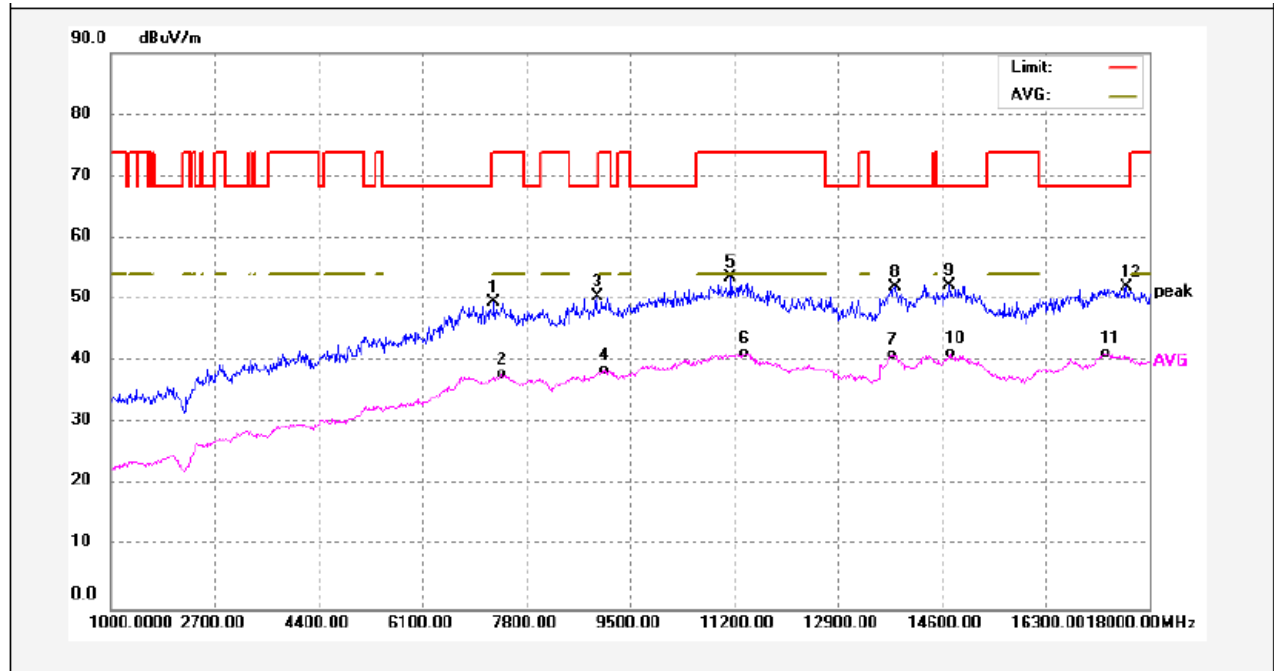
U-NII-2A-High Channel 5320MHz

Antenna Polarization: Vertical



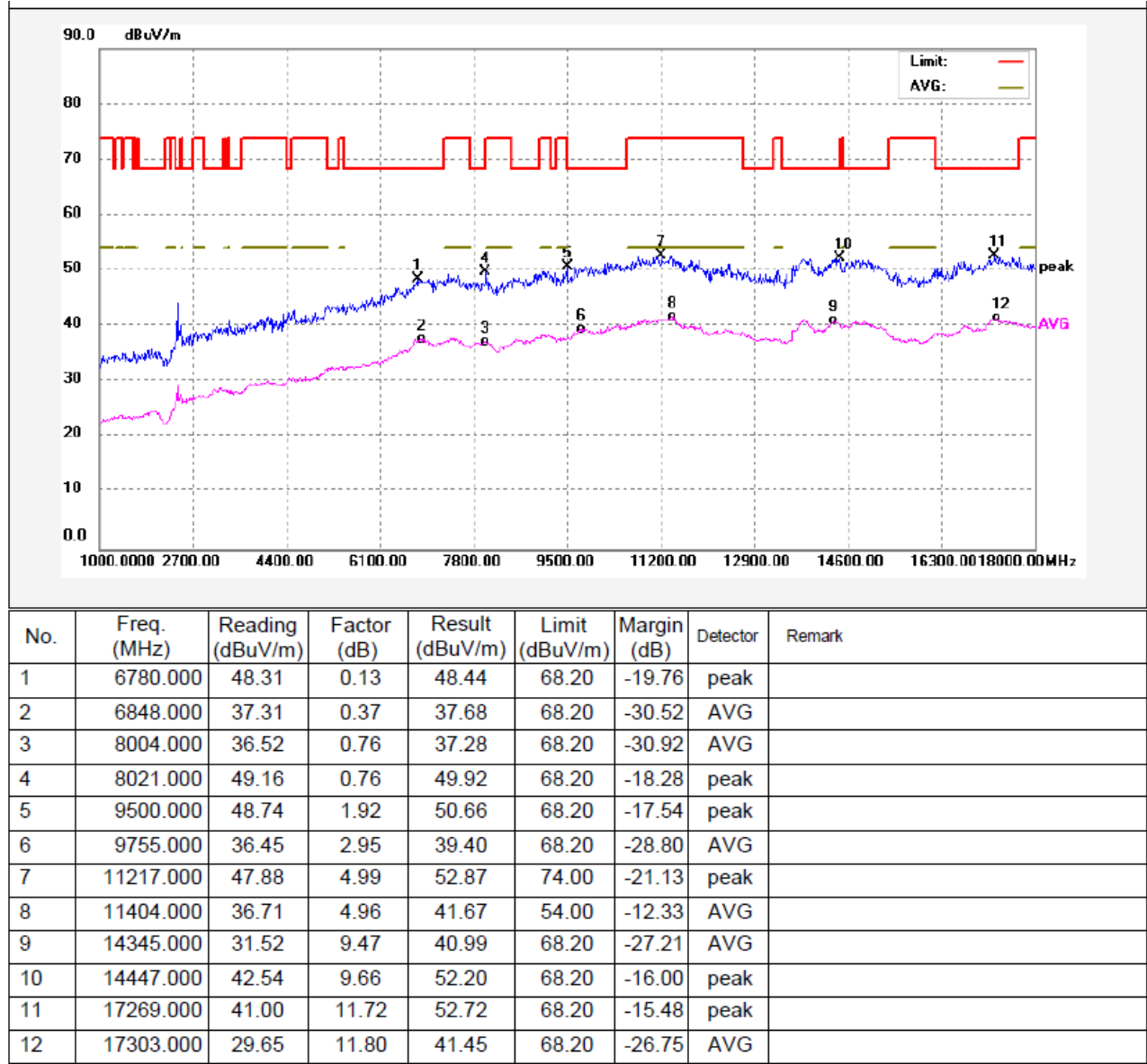
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	6780.000	48.69	0.13	48.82	68.20	-19.38	peak	
2	6831.000	37.21	0.34	37.55	68.20	-30.65	AVG	
3	7409.000	36.44	1.31	37.75	54.00	-16.25	AVG	
4	8089.000	48.29	0.76	49.05	74.00	-24.95	peak	
5	9738.000	47.23	2.88	50.11	68.20	-18.09	peak	
6	9738.000	36.80	2.88	39.68	68.20	-28.52	AVG	
7	11353.000	48.08	4.98	53.06	74.00	-20.94	peak	
8	11404.000	36.52	4.96	41.48	54.00	-12.52	AVG	
9	14328.000	31.64	9.43	41.07	68.20	-27.13	AVG	
10	14736.000	43.22	9.36	52.58	68.20	-15.62	peak	
11	17286.000	40.27	11.75	52.02	68.20	-16.18	peak	
12	17286.000	29.57	11.75	41.32	68.20	-26.88	AVG	

Antenna Polarization: Horizontal

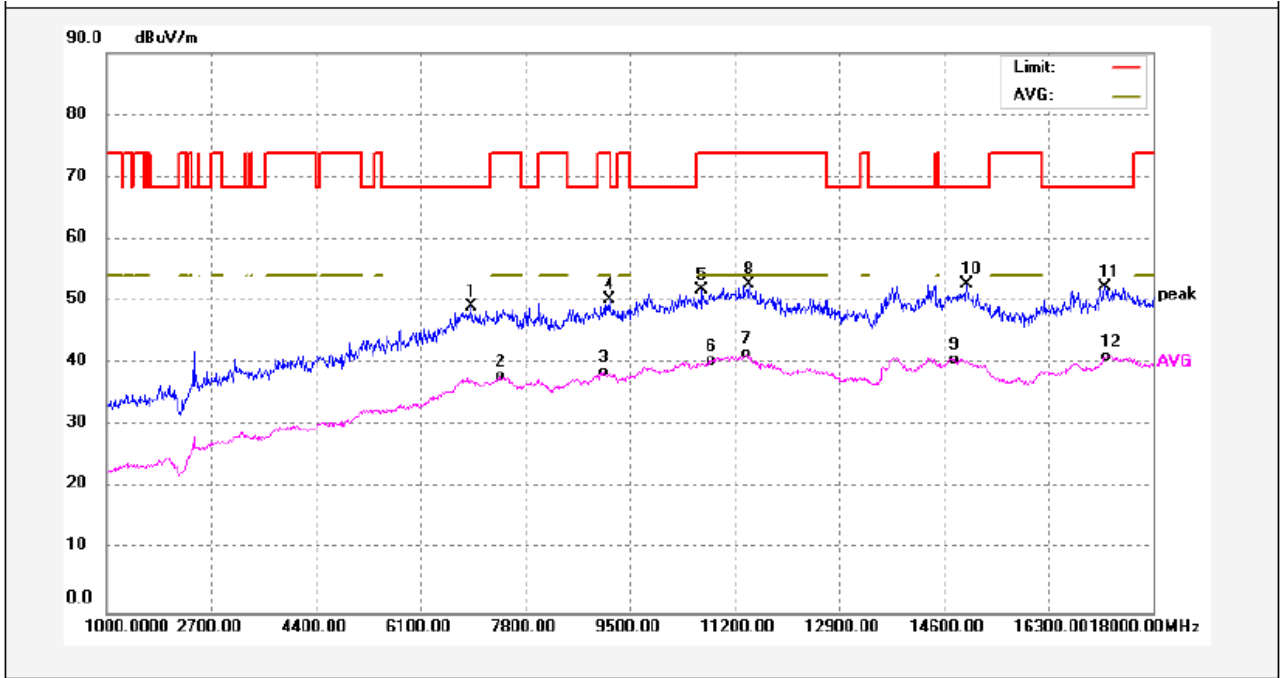


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	7273.000	48.58	1.13	49.71	74.00	-24.29	peak	
2	7409.000	36.54	1.31	37.85	54.00	-16.15	AVG	
3	8956.000	48.29	2.19	50.48	68.20	-17.72	peak	
4	9075.000	36.34	2.15	38.49	54.00	-15.51	AVG	
5	11149.000	48.58	5.00	53.58	74.00	-20.42	peak	
6	11370.000	36.39	4.97	41.36	54.00	-12.64	AVG	
7	13801.000	32.81	8.16	40.97	68.20	-27.23	AVG	
8	13835.000	43.89	8.27	52.16	68.20	-16.04	peak	
9	14719.000	42.91	9.40	52.31	68.20	-15.89	peak	
10	14736.000	31.82	9.36	41.18	68.20	-27.02	AVG	
11	17286.000	29.61	11.75	41.36	68.20	-26.84	AVG	
12	17626.000	39.10	12.92	52.02	68.20	-16.18	peak	

U-NII-2C-Low Channel 5500MHz
Antenna Polarization: Vertical



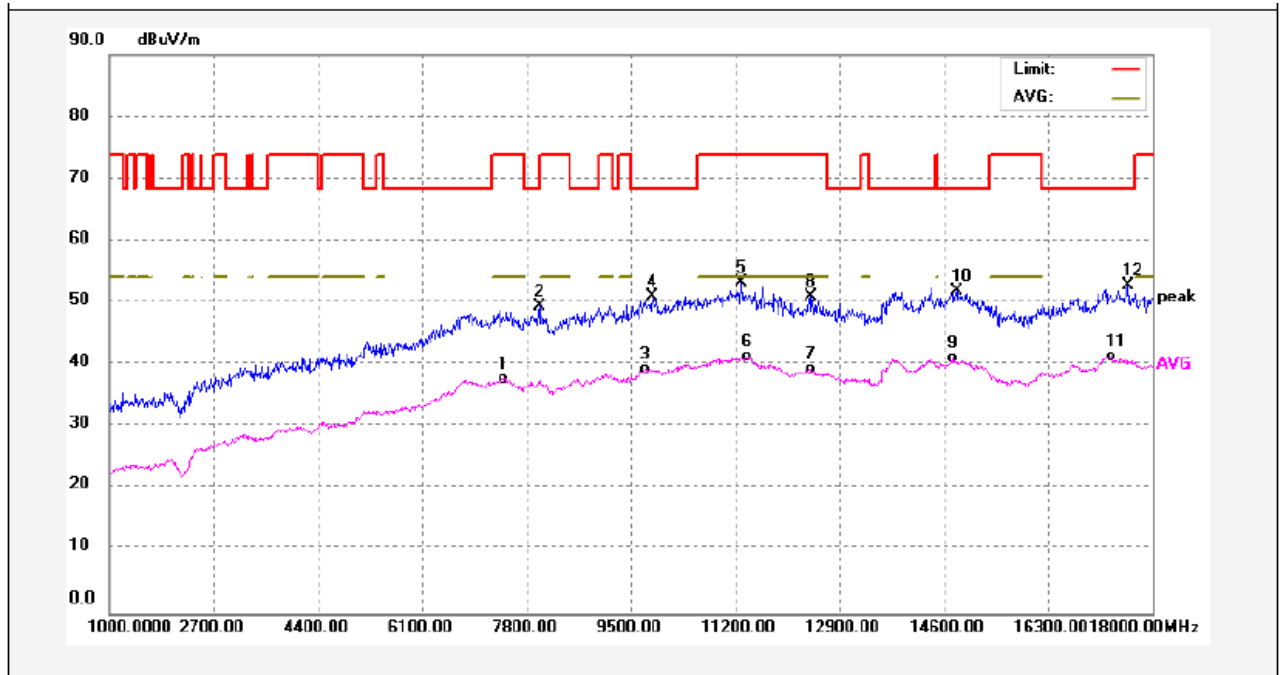
Antenna Polarization: Horizontal



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	6933.000	48.57	0.59	49.16	68.20	-19.04	peak	
2	7409.000	36.52	1.31	37.83	54.00	-16.17	AVG	
3	9075.000	36.35	2.15	38.50	54.00	-15.50	AVG	
4	9160.000	48.31	1.99	50.30	74.00	-23.70	peak	
5	10673.000	47.39	4.43	51.82	74.00	-22.18	peak	
6	10826.000	35.75	4.72	40.47	54.00	-13.53	AVG	
7	11387.000	36.62	4.97	41.59	54.00	-12.41	AVG	
8	11438.000	47.91	4.96	52.87	74.00	-21.13	peak	
9	14770.000	31.40	9.31	40.71	68.20	-27.49	AVG	
10	14974.000	43.81	8.99	52.80	68.20	-15.40	peak	
11	17218.000	40.76	11.61	52.37	68.20	-15.83	peak	
12	17235.000	29.43	11.64	41.07	68.20	-27.13	AVG	

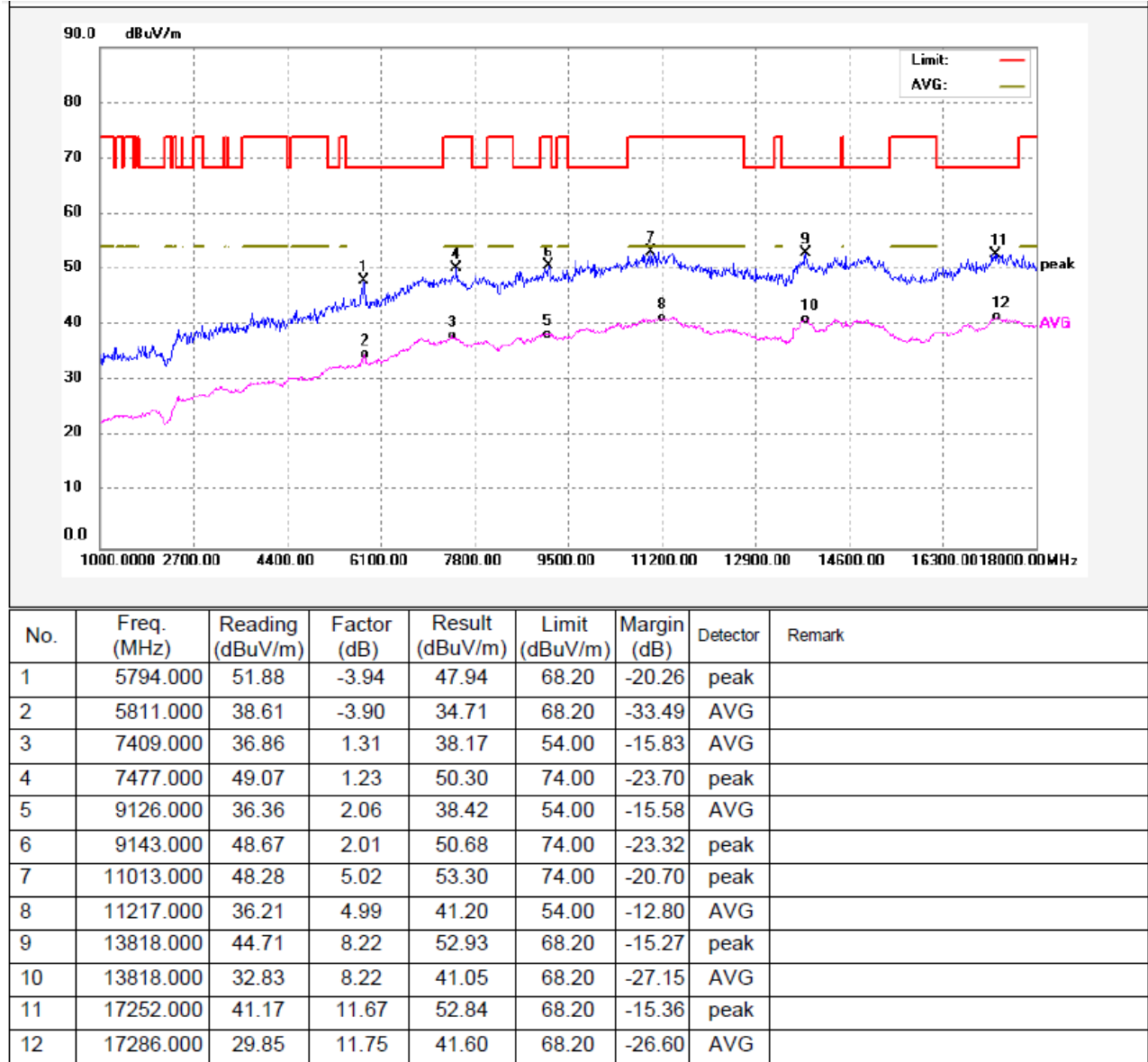
U-NII-2C-Middle Channel 5600MHz

Antenna Polarization: Vertical



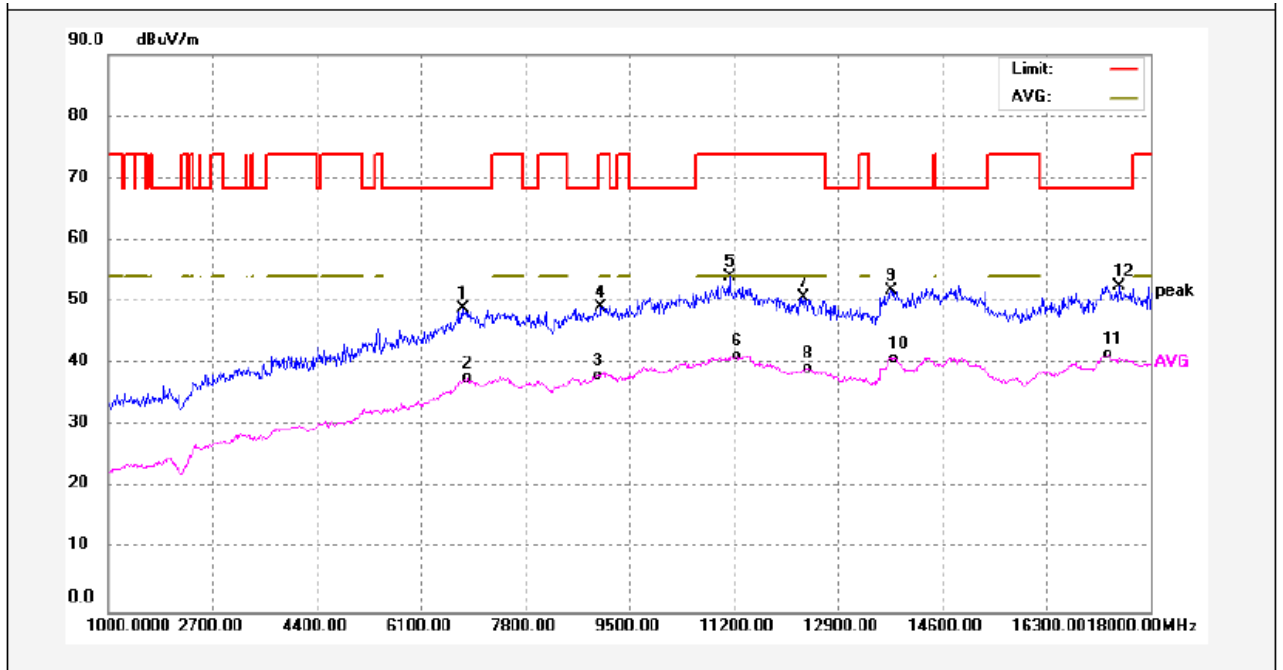
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	7426.000	36.47	1.29	37.76	54.00	-16.24	AVG	
2	8004.000	48.74	0.76	49.50	68.20	-18.70	peak	
3	9738.000	36.43	2.88	39.31	68.20	-28.89	AVG	
4	9840.000	47.85	3.09	50.94	68.20	-17.26	peak	
5	11302.000	48.30	4.98	53.28	74.00	-20.72	peak	
6	11387.000	36.42	4.97	41.39	54.00	-12.61	AVG	
7	12424.000	34.83	4.50	39.33	54.00	-14.67	AVG	
8	12441.000	46.52	4.53	51.05	74.00	-22.95	peak	
9	14736.000	31.65	9.36	41.01	68.20	-27.19	AVG	
10	14804.000	42.63	9.25	51.88	68.20	-16.32	peak	
11	17320.000	29.38	11.82	41.20	68.20	-27.00	AVG	
12	17609.000	39.92	12.82	52.74	68.20	-15.46	peak	

Antenna Polarization: Horizontal



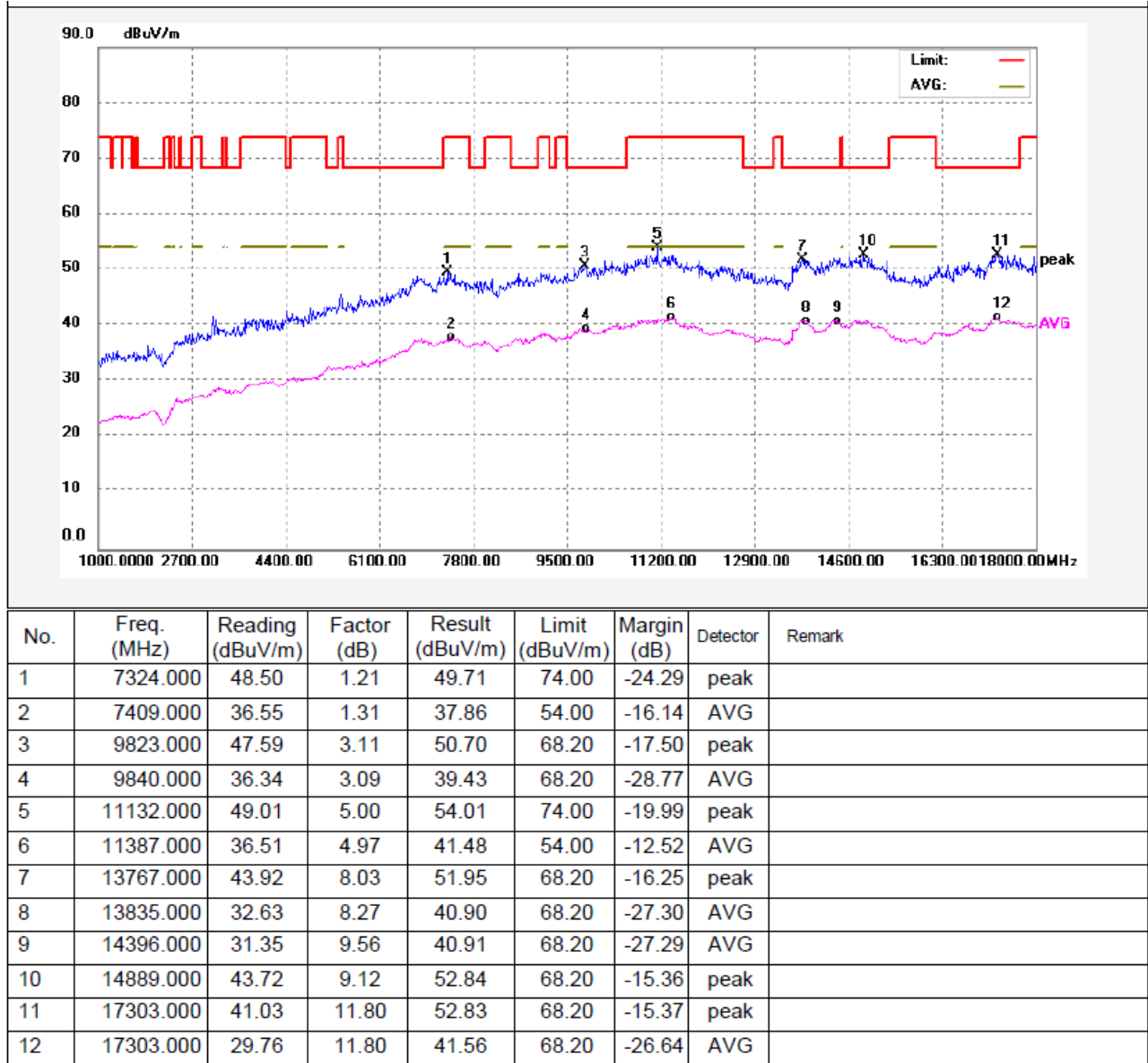
U-NII-2C-High Channel 5700MHz

Antenna Polarization: Vertical



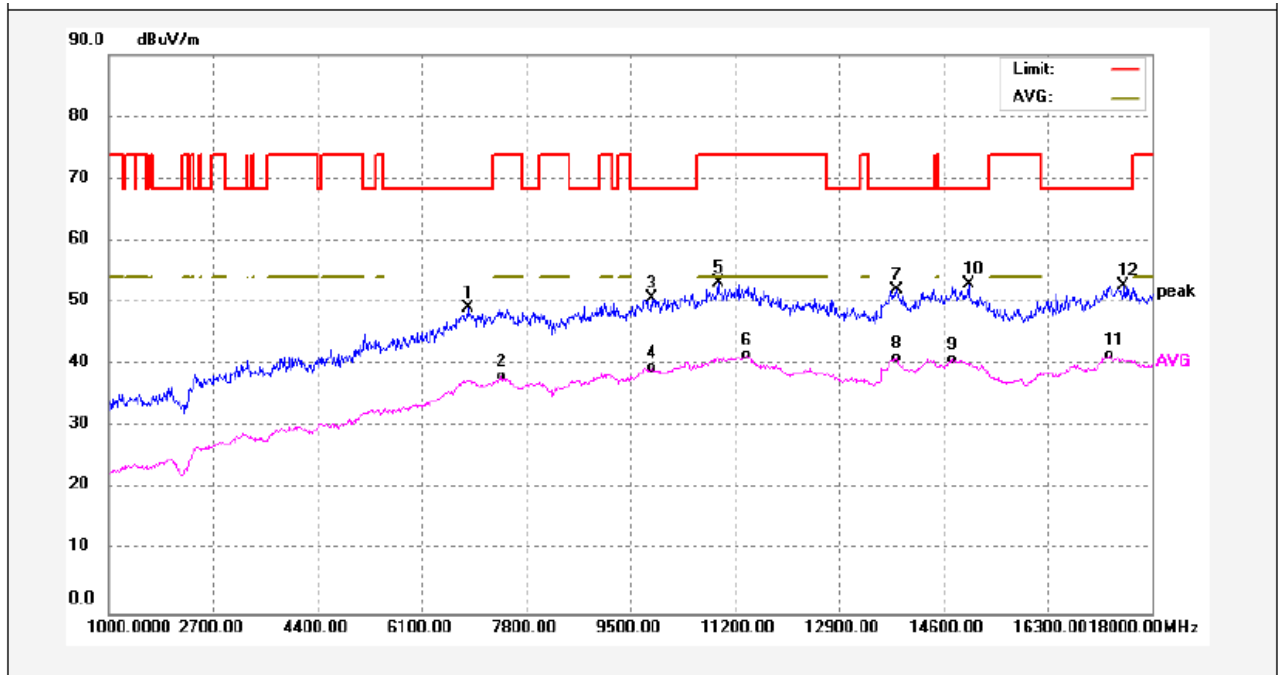
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	6780.000	48.82	0.13	48.95	68.20	-19.25	peak	
2	6865.000	37.16	0.42	37.58	68.20	-30.62	AVG	
3	8990.000	35.85	2.28	38.13	68.20	-30.07	AVG	
4	9041.000	46.93	2.23	49.16	74.00	-24.84	peak	
5	11132.000	49.01	5.00	54.01	74.00	-19.99	peak	
6	11251.000	36.25	4.98	41.23	54.00	-12.77	AVG	
7	12339.000	46.48	4.36	50.84	74.00	-23.16	peak	
8	12407.000	34.85	4.47	39.32	54.00	-14.68	AVG	
9	13767.000	43.92	8.03	51.95	68.20	-16.25	peak	
10	13818.000	32.62	8.22	40.84	68.20	-27.36	AVG	
11	17303.000	29.76	11.80	41.56	68.20	-26.64	AVG	
12	17490.000	40.27	12.21	52.48	68.20	-15.72	peak	

Antenna Polarization: Horizontal



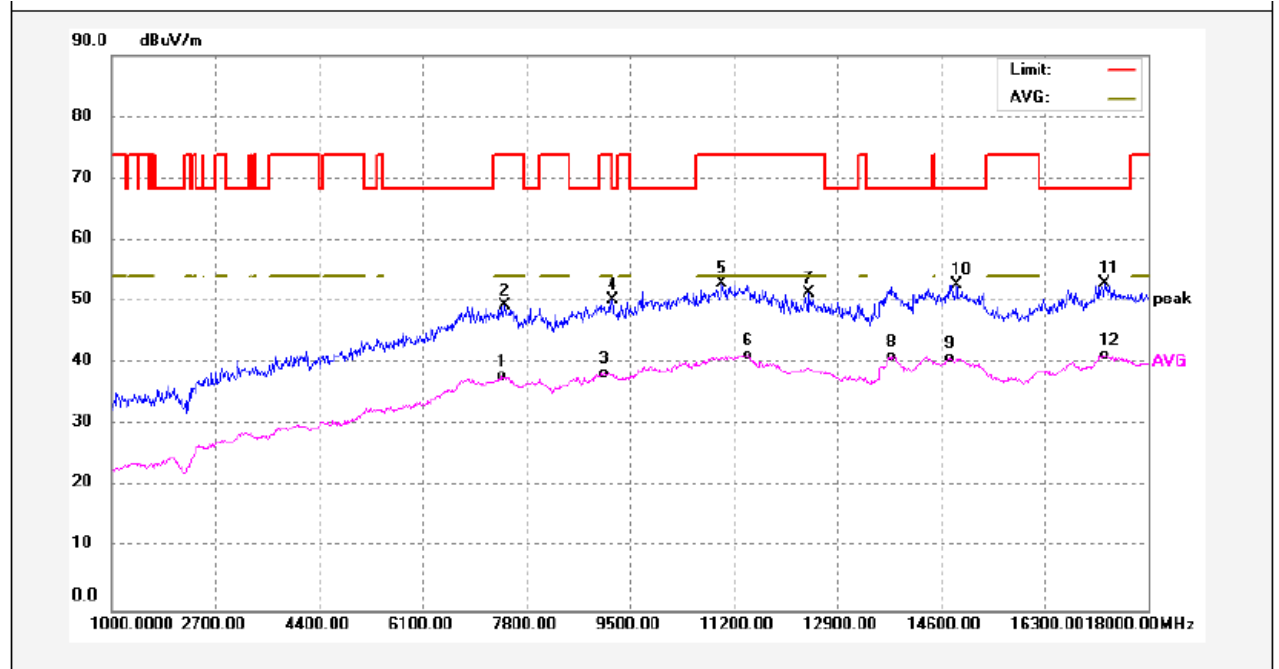
U-NII-3-Low Channel 5740MHz

Antenna Polarization: Vertical



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	6848.000	48.83	0.37	49.20	68.20	-19.00	peak	
2	7409.000	36.73	1.31	38.04	54.00	-15.96	AVG	
3	9840.000	47.65	3.09	50.74	68.20	-17.46	peak	
4	9857.000	36.34	3.08	39.42	68.20	-28.78	AVG	
5	10928.000	48.34	4.90	53.24	74.00	-20.76	peak	
6	11387.000	36.46	4.97	41.43	54.00	-12.57	AVG	
7	13835.000	43.87	8.27	52.14	68.20	-16.06	peak	
8	13835.000	32.71	8.27	40.98	68.20	-27.22	AVG	
9	14736.000	31.41	9.36	40.77	68.20	-27.43	AVG	
10	15008.000	43.97	8.91	52.88	68.20	-15.32	peak	
11	17303.000	29.79	11.80	41.59	68.20	-26.61	AVG	
12	17541.000	40.32	12.45	52.77	68.20	-15.43	peak	

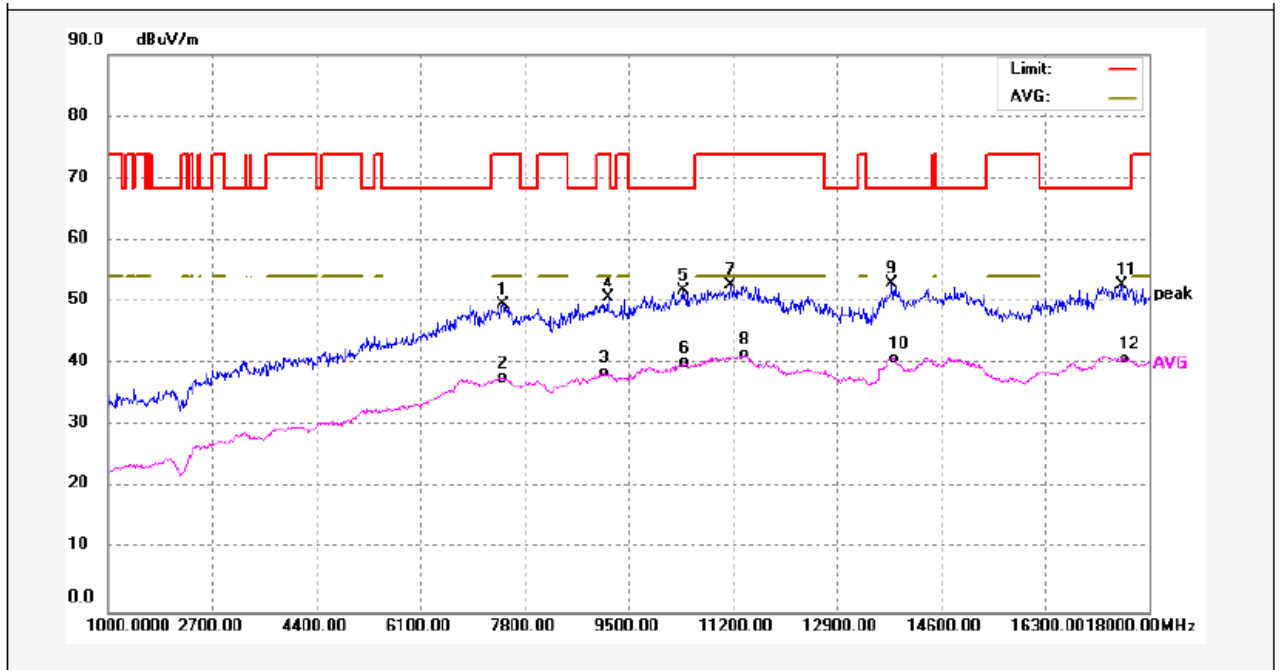
Antenna Polarization: Horizontal



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	7409.000	36.53	1.31	37.84	54.00	-16.16	AVG	
2	7443.000	48.02	1.27	49.29	74.00	-24.71	peak	
3	9075.000	36.29	2.15	38.44	54.00	-15.56	AVG	
4	9211.000	48.39	1.88	50.27	68.20	-17.93	peak	
5	11013.000	47.99	5.02	53.01	74.00	-20.99	peak	
6	11438.000	36.44	4.96	41.40	54.00	-12.60	AVG	
7	12441.000	46.91	4.53	51.44	74.00	-22.56	peak	
8	13801.000	32.99	8.16	41.15	68.20	-27.05	AVG	
9	14736.000	31.38	9.36	40.74	68.20	-27.46	AVG	
10	14855.000	43.62	9.18	52.80	68.20	-15.40	peak	
11	17286.000	41.31	11.75	53.06	68.20	-15.14	peak	
12	17286.000	29.56	11.75	41.31	68.20	-26.89	AVG	

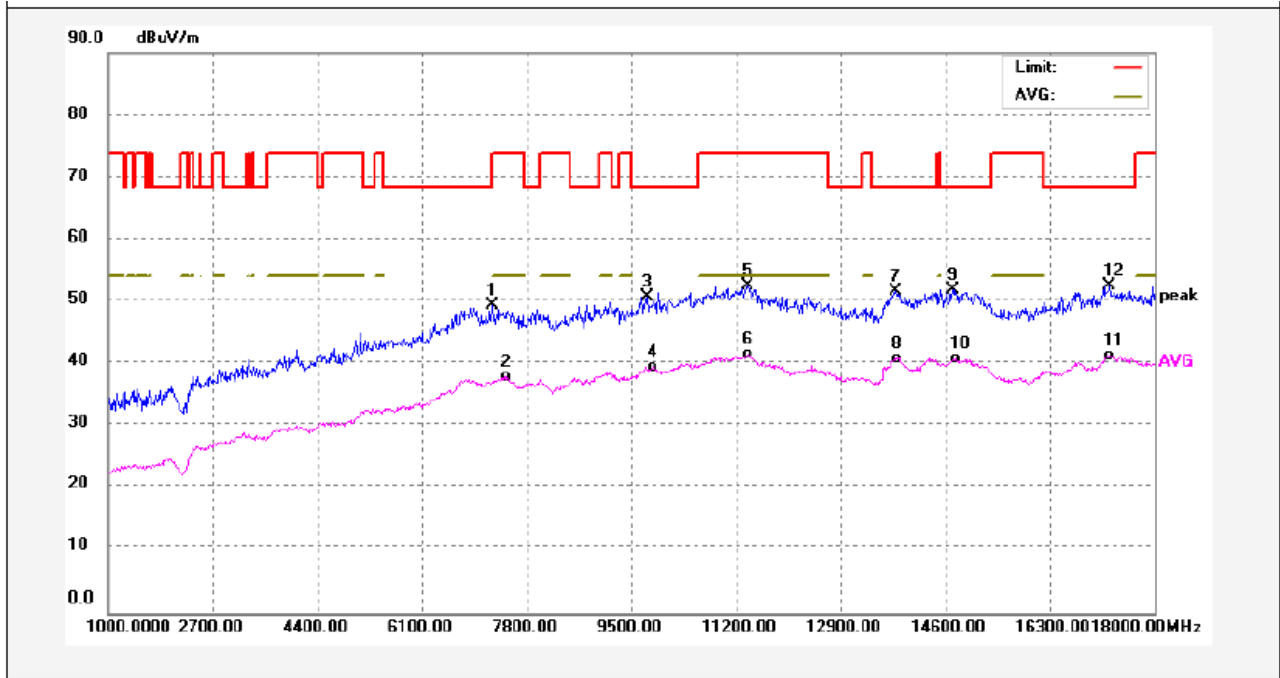
U-NII-3-Middle Channel 5785MHz

Antenna Polarization: Vertical



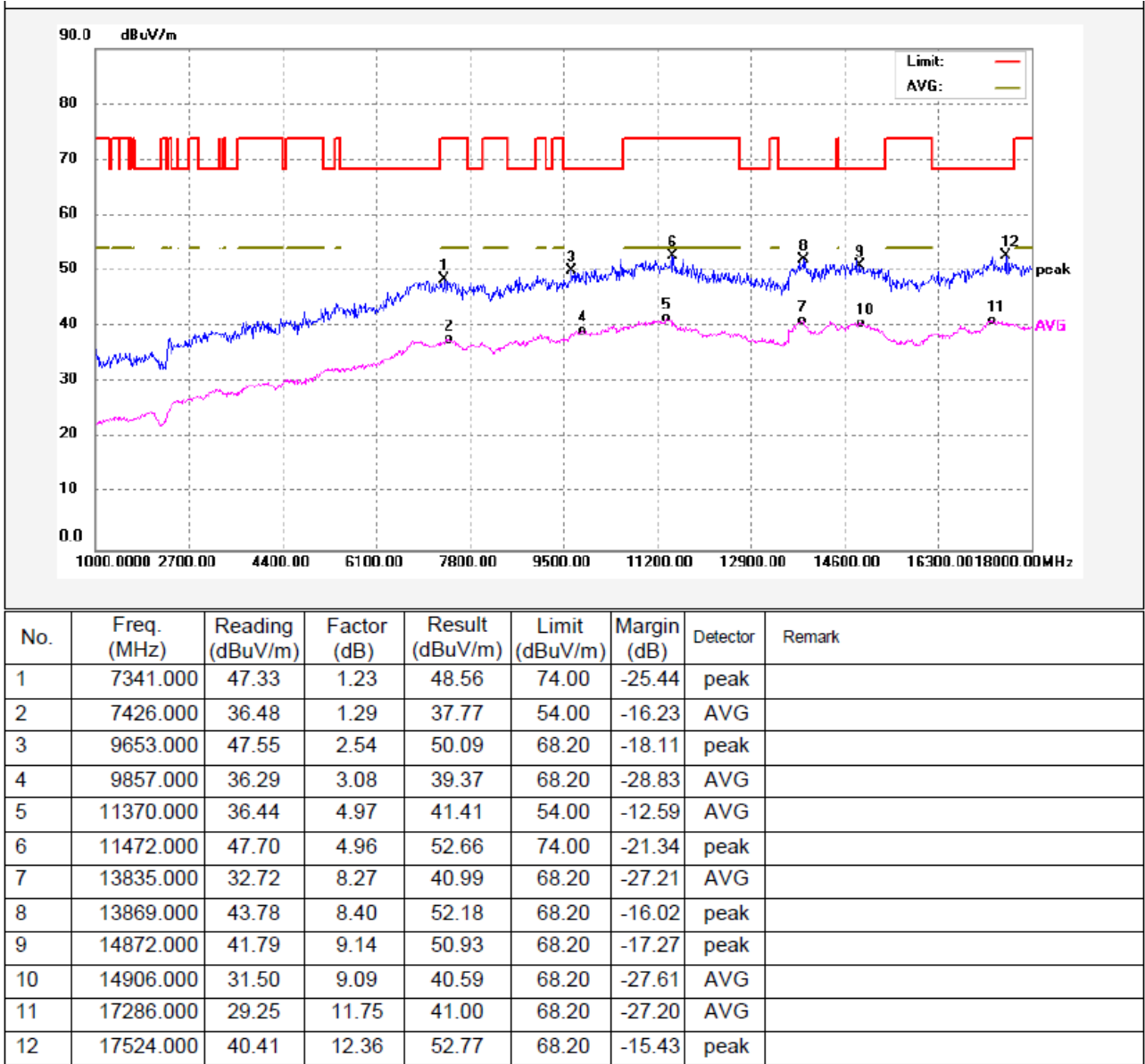
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	7443.000	48.33	1.27	49.60	74.00	-24.40	peak	
2	7443.000	36.53	1.27	37.80	54.00	-16.20	AVG	
3	9109.000	36.46	2.09	38.55	54.00	-15.45	AVG	
4	9160.000	48.74	1.99	50.73	74.00	-23.27	peak	
5	10384.000	47.99	3.85	51.84	68.20	-16.36	peak	
6	10418.000	36.30	3.94	40.24	68.20	-27.96	AVG	
7	11166.000	47.69	5.00	52.69	74.00	-21.31	peak	
8	11387.000	36.54	4.97	41.51	54.00	-12.49	AVG	
9	13801.000	44.91	8.16	53.07	68.20	-15.13	peak	
10	13835.000	32.63	8.27	40.90	68.20	-27.30	AVG	
11	17558.000	40.13	12.55	52.68	68.20	-15.52	peak	
12	17592.000	28.13	12.73	40.86	68.20	-27.34	AVG	

Antenna Polarization: Horizontal

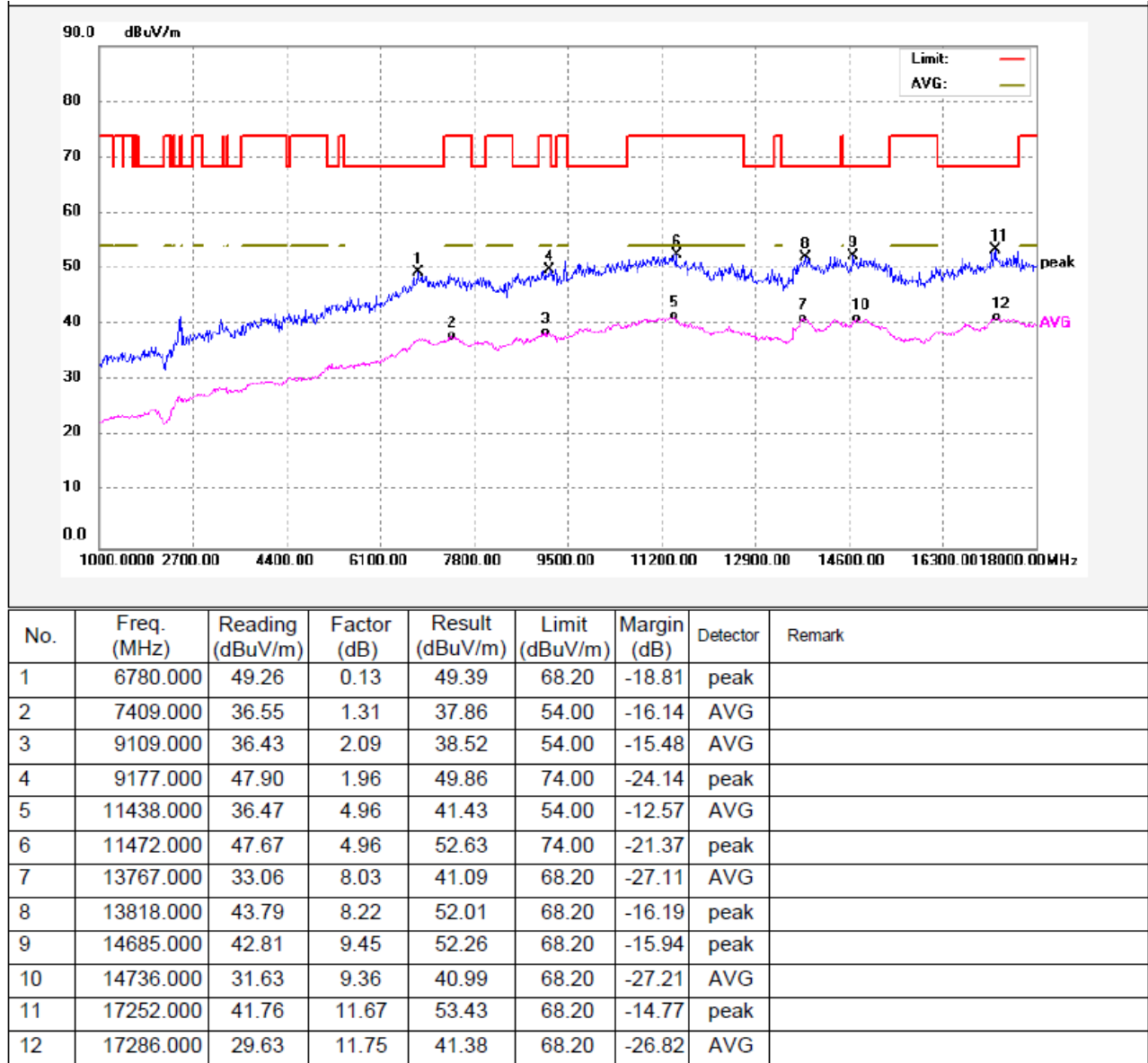


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	7239.000	48.29	1.09	49.38	68.20	-18.82	peak	
2	7477.000	36.71	1.23	37.94	54.00	-16.06	AVG	
3	9755.000	47.83	2.95	50.78	68.20	-17.42	peak	
4	9840.000	36.47	3.09	39.56	68.20	-28.64	AVG	
5	11387.000	47.47	4.97	52.44	74.00	-21.56	peak	
6	11387.000	36.58	4.97	41.55	54.00	-12.45	AVG	
7	13801.000	43.56	8.16	51.72	68.20	-16.48	peak	
8	13818.000	32.68	8.22	40.90	68.20	-27.30	AVG	
9	14719.000	42.51	9.40	51.91	68.20	-16.29	peak	
10	14770.000	31.47	9.31	40.78	68.20	-27.42	AVG	
11	17252.000	29.52	11.67	41.19	68.20	-27.01	AVG	
12	17269.000	40.79	11.72	52.51	68.20	-15.69	peak	

U-NII-3-High Channel 5820MHz
Antenna Polarization: Vertical



Antenna Polarization: Horizontal



Test Frequency: 18GHz~40GHz

The measurements were more than 20 dB below the limit and not reported.

9 Band Edge

Test Requirement:	FCC 47CFR Part 15 Section 15.407
Test Method:	ANSI C63.10-2020
Test Limit:	For transmitters with operating frequencies in the band 5150-5250 MHz, all emissions outside the band 5150-5350 MHz shall not exceed -27 dBm/MHz e.i.r.p. All emissions outside the band 5250-5350 MHz shall not exceed -27 dBm/MHz e.i.r.p.; or All emissions outside the band 5150-5350 MHz shall not exceed -27 dBm/MHz e.i.r.p. Emissions outside the band 5470-5725 MHz shall not exceed -27 dBm/MHz e.i.r.p. However, devices with bandwidth overlapping the band edge of 5725 MHz can meet the emission limit of -27 dBm/MHz e.i.r.p. at 5850 MHz instead of 5725 MHz. Devices operating in the band 5725-5850 MHz shall have e.i.r.p. of unwanted emissions comply with the following: 27 dBm/MHz at frequencies from the band edges decreasing linearly to 15.6 dBm/MHz at 5 MHz above or below the band edges; 15.6 dBm/MHz at 5 MHz above or below the band edges decreasing linearly to 10 dBm/MHz at 25 MHz above or below the band edges; 10 dBm/MHz at 25 MHz above or below the band edges decreasing linearly to -27 dBm/MHz at 75 MHz above or below the band edges; and -27 dBm/MHz at frequencies more than 75 MHz above or below the band edges.
Test Result:	PASS

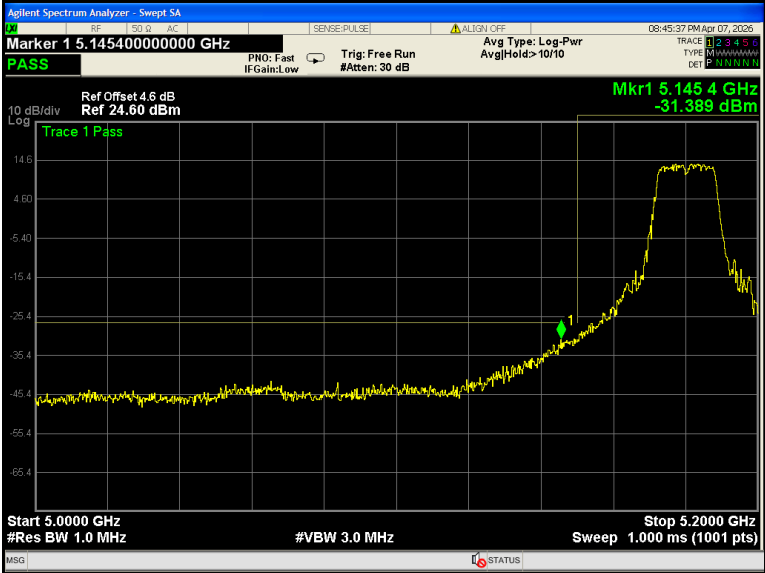
9.1 Test Produce

- Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
- Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
- To convert the conducted power to EIRP as required by FCC 15.407, calculate and apply a Reference Level Offset or Correction factor table in the spectrum analyzer:
 Path Loss: Measure the loss of the cable and any external attenuators set into Reference Level Offset.
 Antenna Gain (G): Determine the maximum directional gain of the antenna in dBi.
 MIMO/Beamforming: If the EUT supports multiple outputs, calculate the Directional Gain according to KDB 662911, set Directional Antenna Gain (dBi) into Correction factor table.
 Follow the procedures specified in KDB Publication 662911 adjusting emission levels measured on individual outputs by $10\log(N_{ANT})$, where N_{ANT} is the number of outputs, set $10\log(N_{ANT})$, into Correction factor table.
- Set RBW to 1000 kHz and VBW of spectrum analyzer to 3000 kHz with a convenient frequency span including 100 kHz bandwidth from band edge.
- Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
- Repeat above procedures until all measured frequencies were complete.

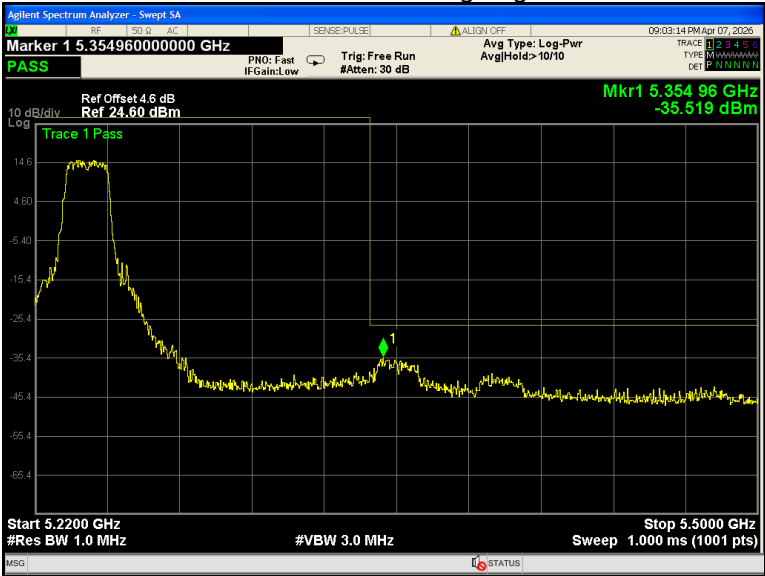
9.2 Test Result

Test result plots shown as follows:

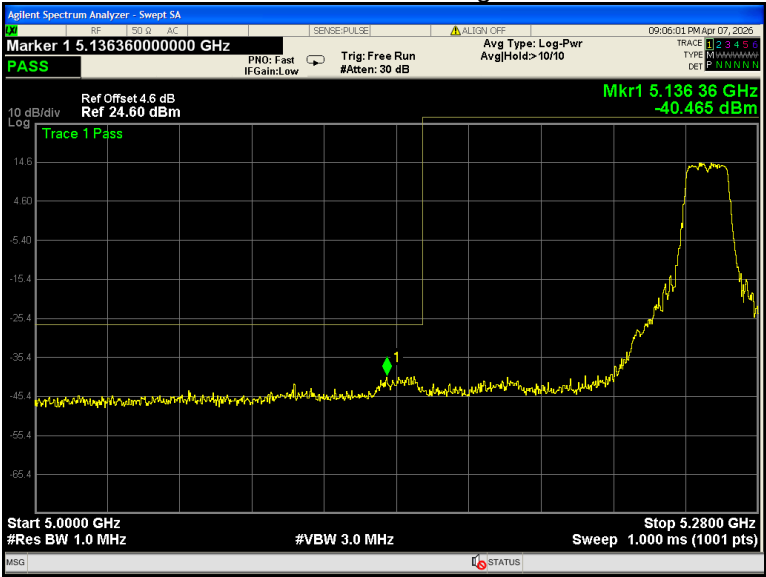
802.11a U-NII-1 Band edge-left side



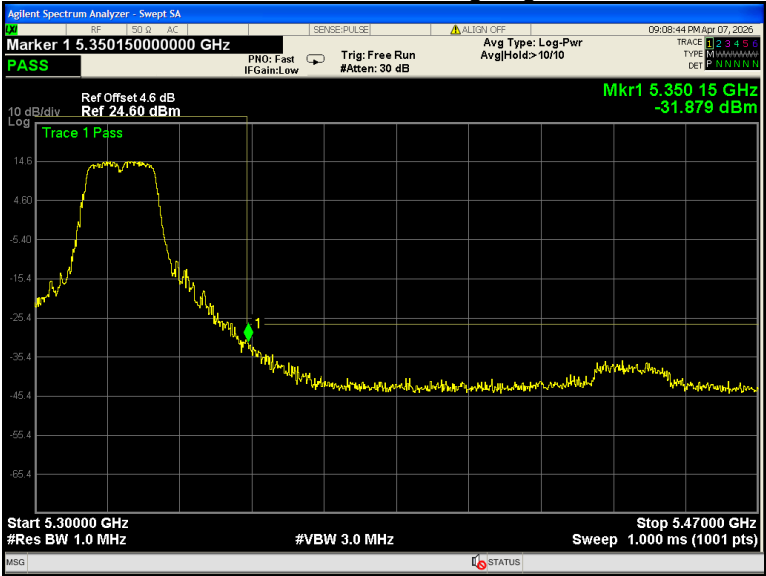
802.11a U-NII-1 Band edge-right side



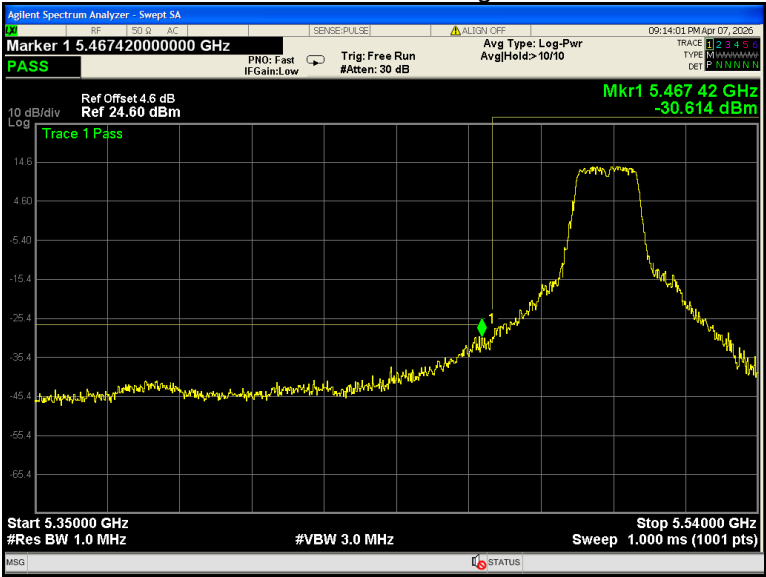
802.11a U-NII-2A Band edge-left side



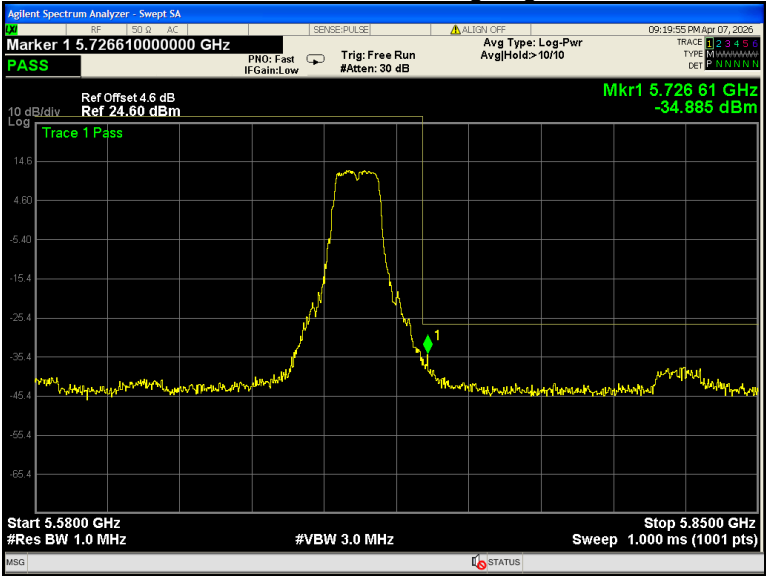
802.11a U-NII-2A Band edge-right side



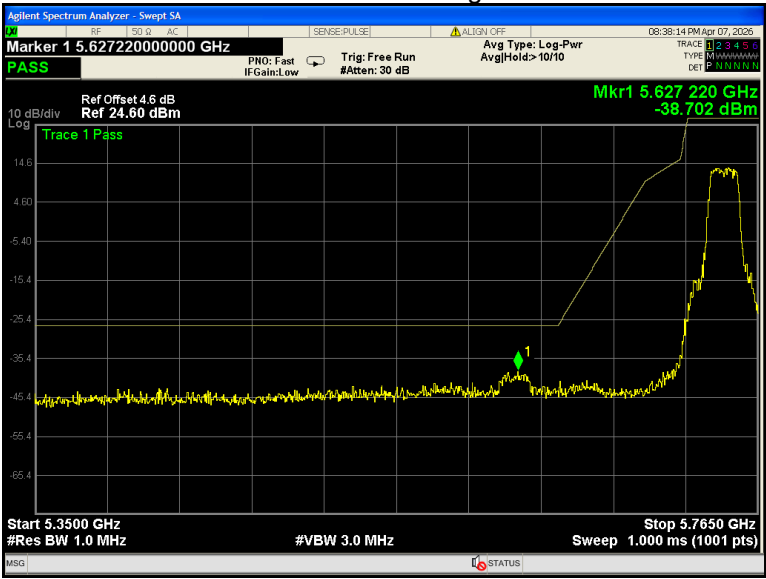
802.11a U-NII-2C Band edge-left side



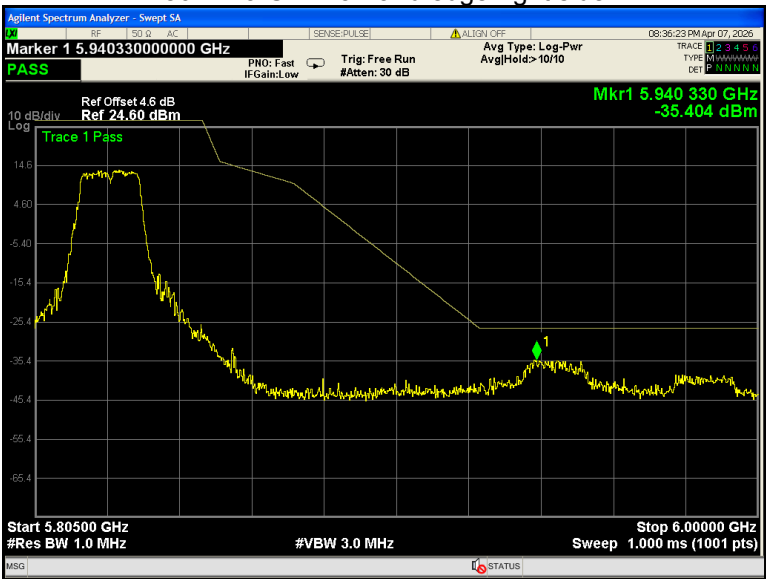
802.11a U-NII-2C Band edge-right side



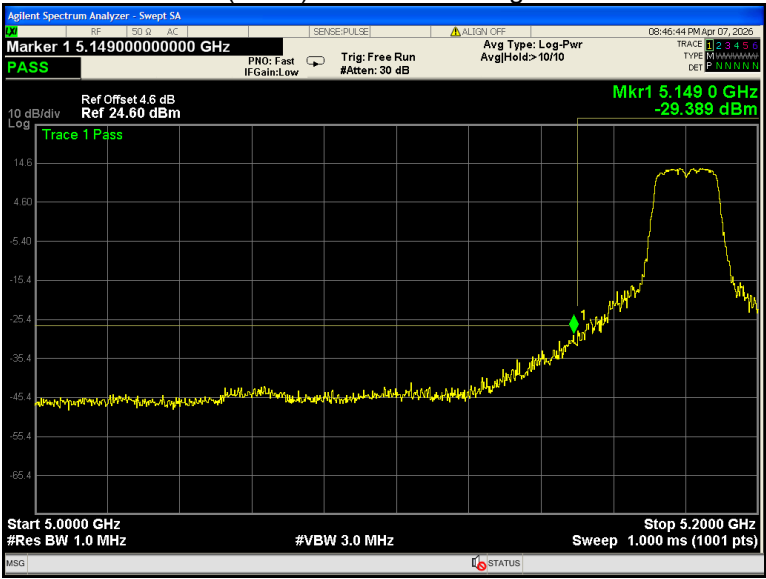
802.11a U-NII-3 Band edge-left side



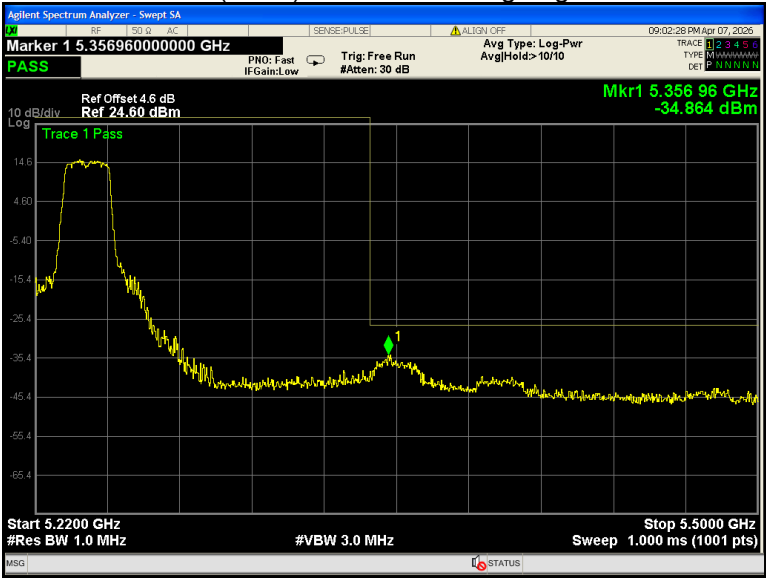
802.11a U-NII-3 Band edge-right side



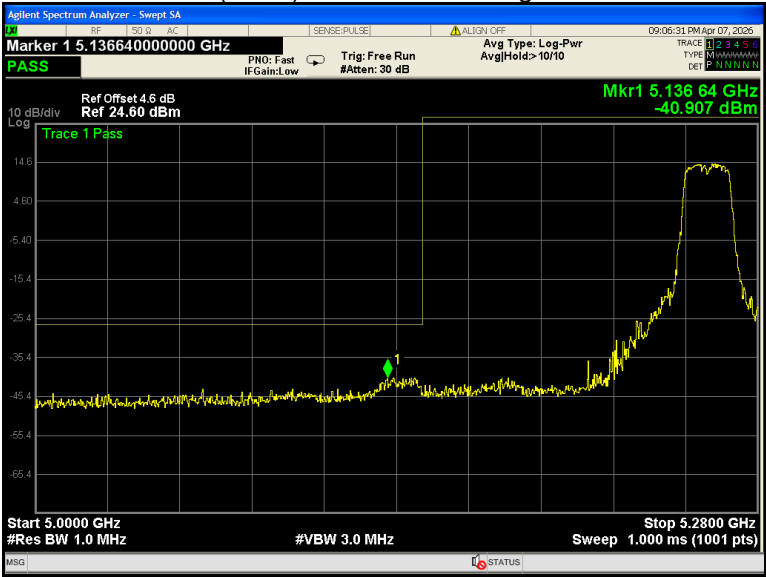
802.11n(HT20) U-NII-1 Band edge-left side



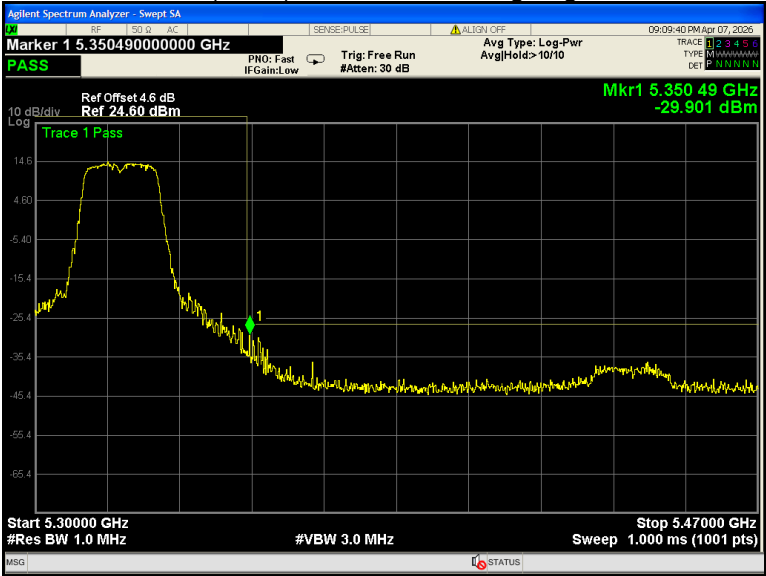
802.11n(HT20) U-NII-1 Band edge-right side



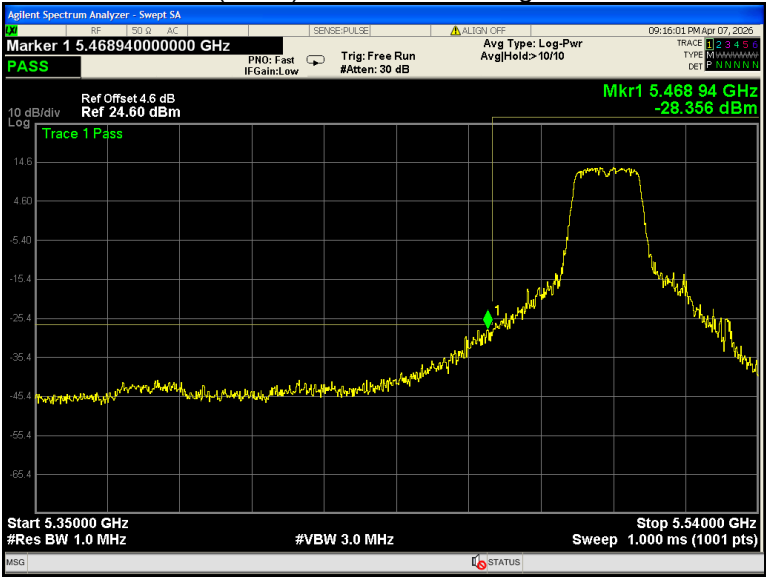
802.11n(HT20) U-NII-2A Band edge-left side



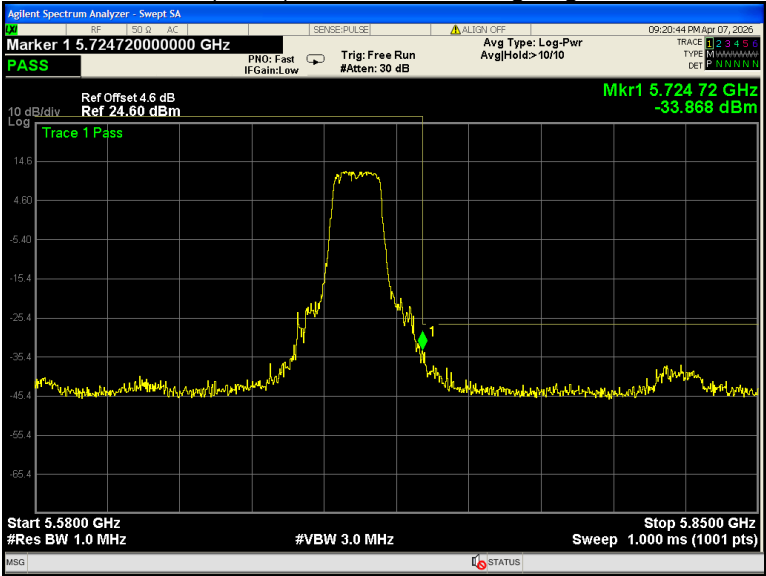
802.11n(HT20) U-NII-2A Band edge-right side



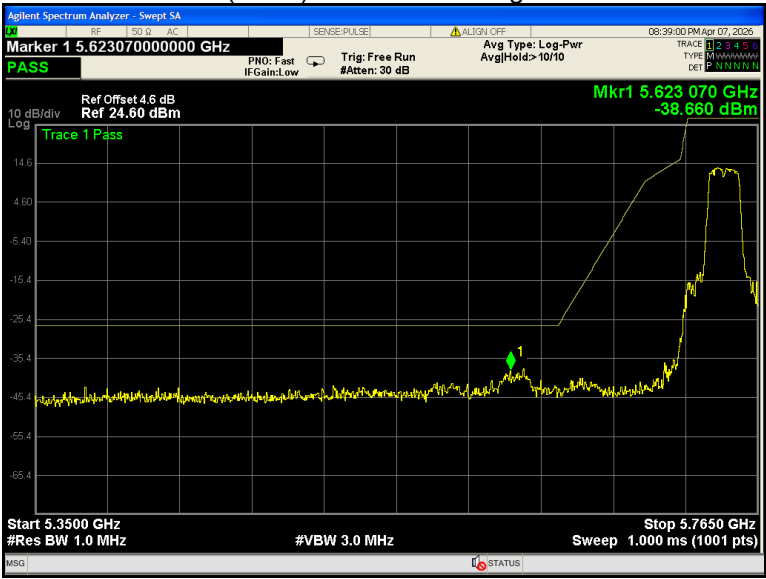
802.11n(HT20) U-NII-2C Band edge-left side



802.11n(HT20) U-NII-2C Band edge-right side



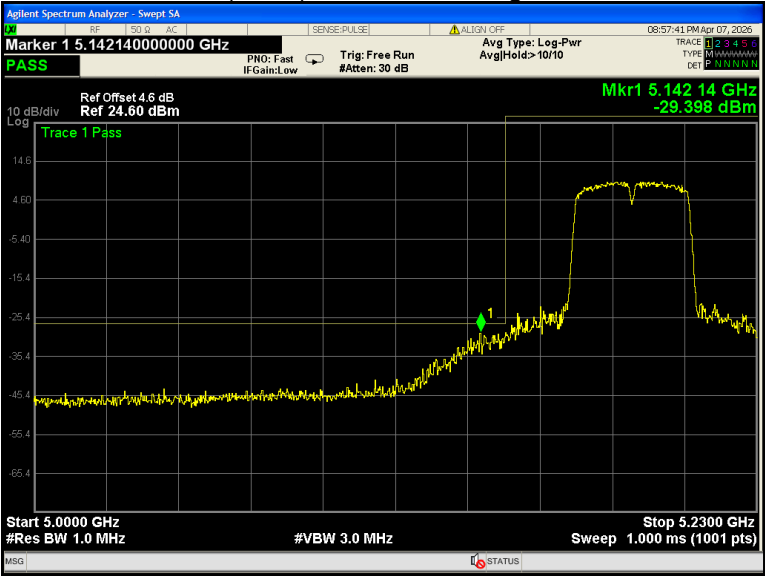
802.11n(HT20) U-NII-3 Band edge-left side



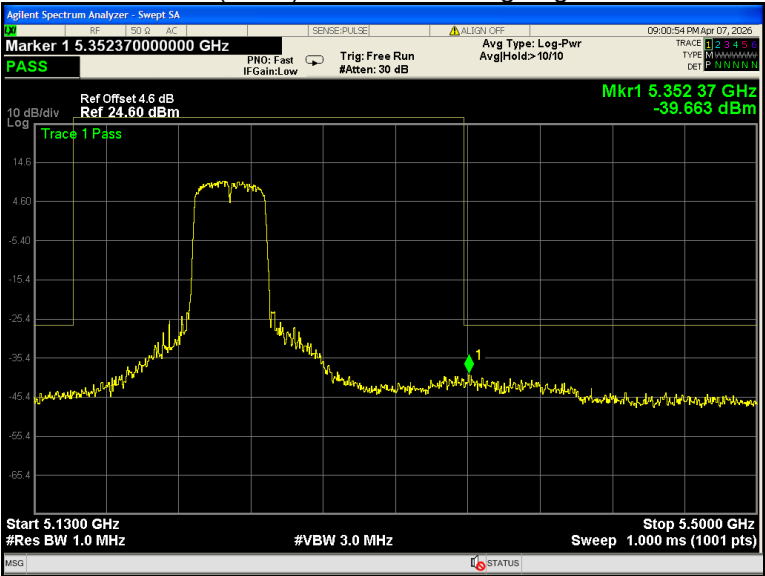
802.11n(HT20) U-NII-3 Band edge-right side



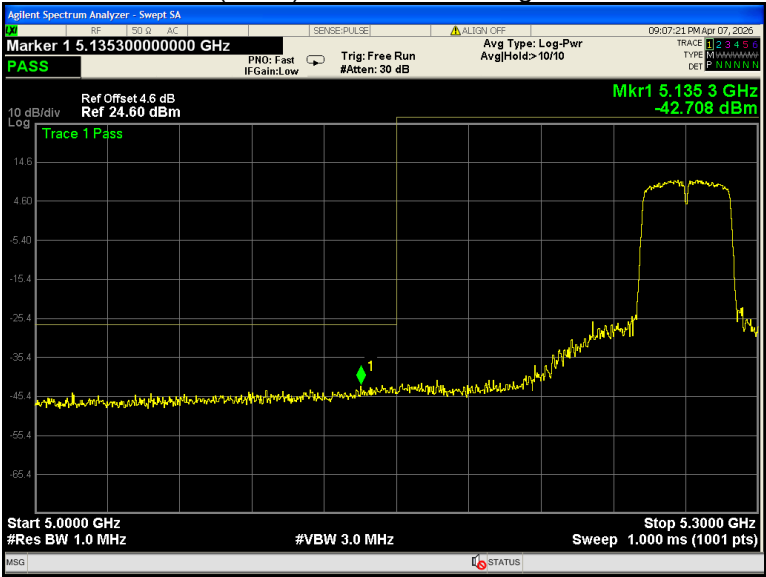
802.11n(HT40) U-NII-1 Band edge-left side



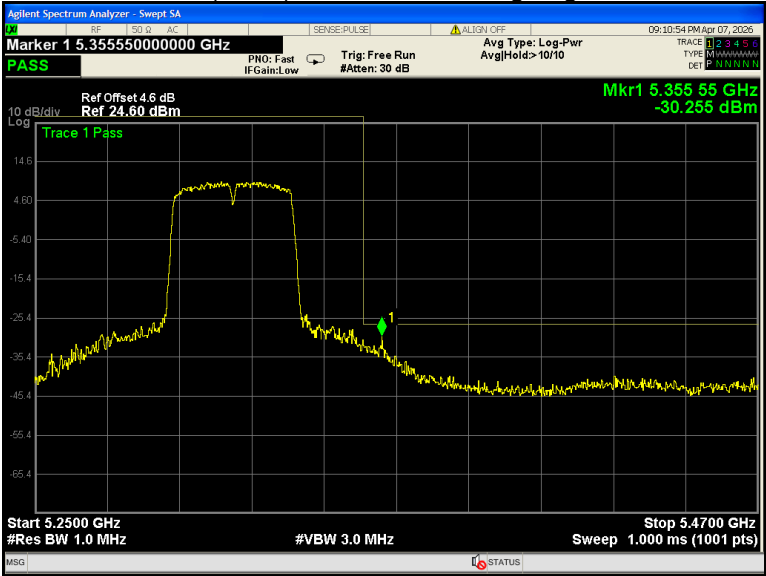
802.11n(HT40) U-NII-1 Band edge-right side



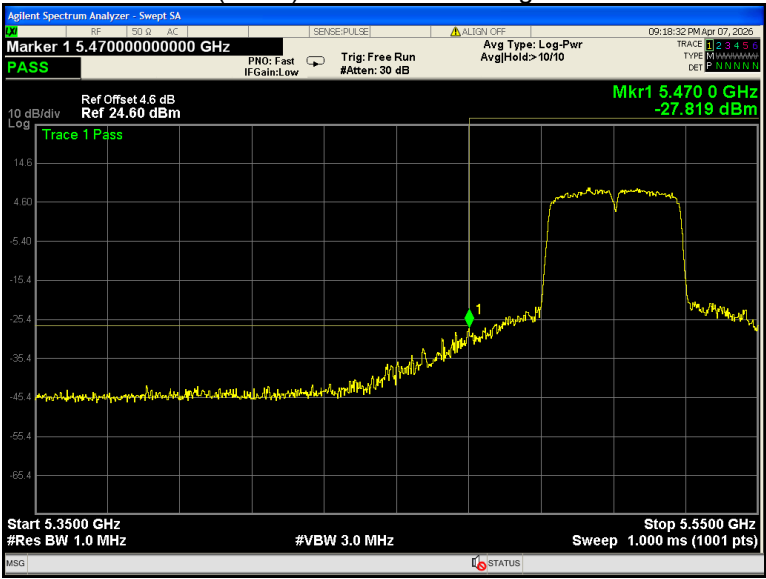
802.11n(HT40) U-NII-2A Band edge-left side



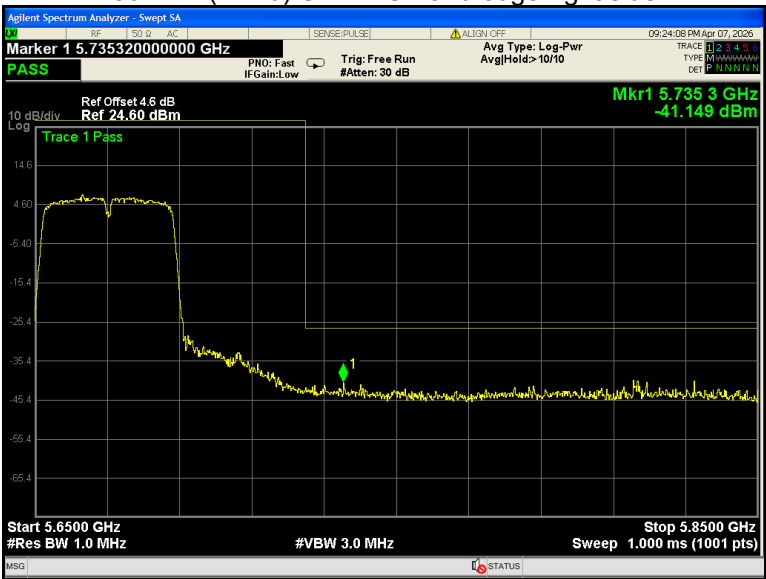
802.11n(HT40) U-NII-2A Band edge-right side



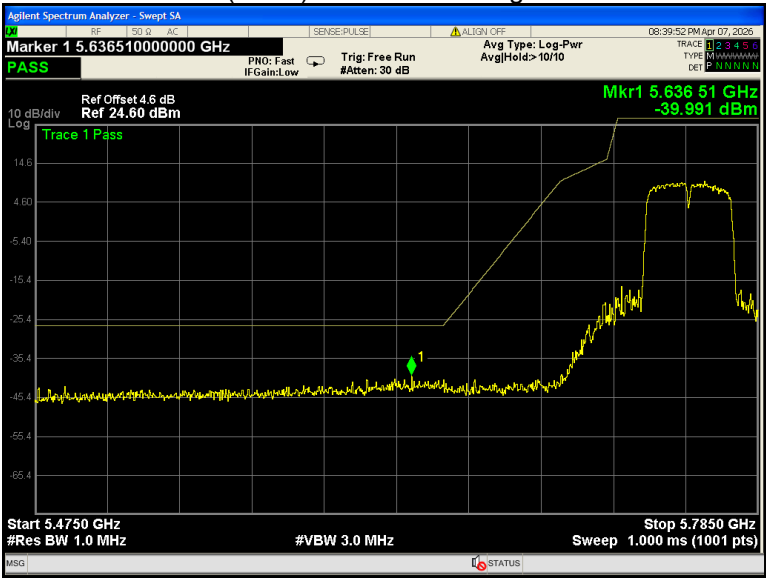
802.11n(HT40) U-NII-2C Band edge-left side



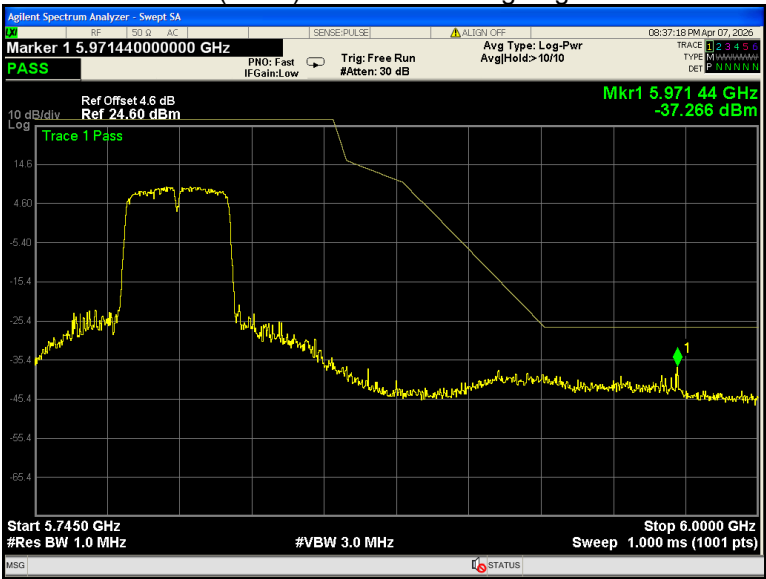
802.11n(HT40) U-NII-2C Band edge-right side



802.11n(HT40) U-NII-3 Band edge-left side



802.11n(HT40) U-NII-3 Band edge-right side



10 6 dB Bandwidth

Test Requirement: FCC 47CFR Part 15 Section 15.407(e)
 KDB662911 D01 Multiple Transmitter Output v02r01
 Test Method: KDB789033 D02 General U-NII Test Procedures New Rules v02r01
 Section C
 Test Limit: ≥ 500 kHz
 Test Result: PASS

10.1 Test Procedure

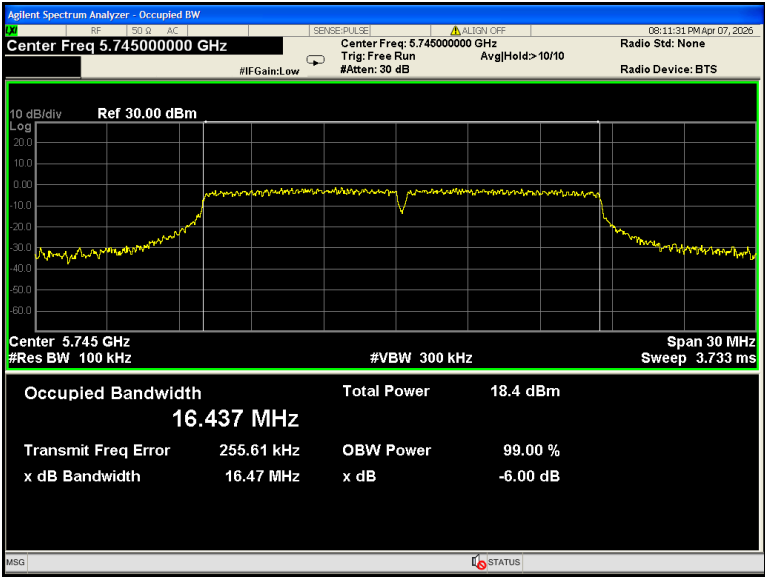
1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum;
2. Set the spectrum analyzer: 1~5% of the OBW, VBW = 3 times the RBW

10.2 Test Result

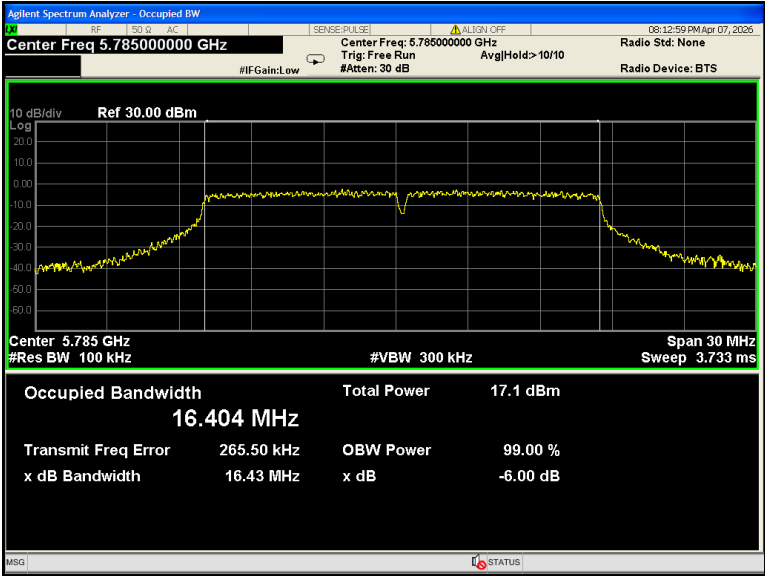
Band	Operation mode	6 dB Bandwidth (MHz)		
		Low	Middle	High
U-NII-3	802.11a	16.47	16.43	16.48
	802.11n(HT20)	17.65	17.64	17.62
	802.11n(HT40)	36.36	/	36.36

Test result plots shown as follows:

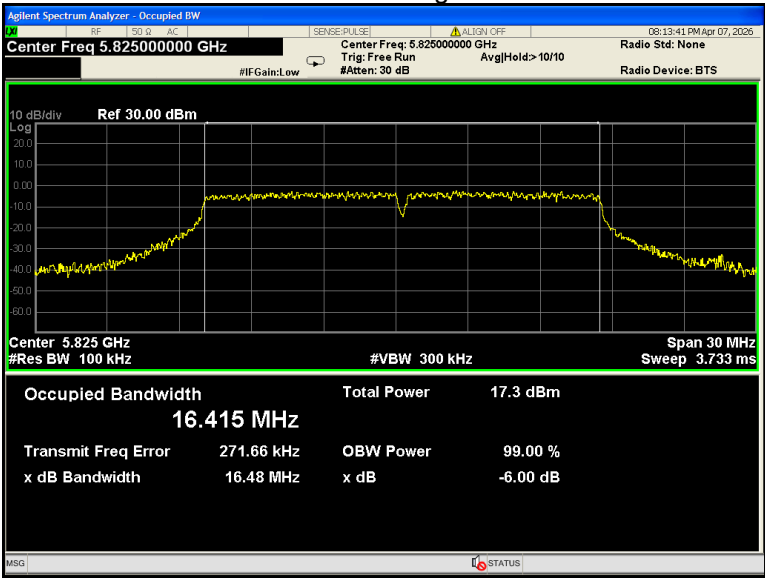
802.11a U-NII-3 Low channel



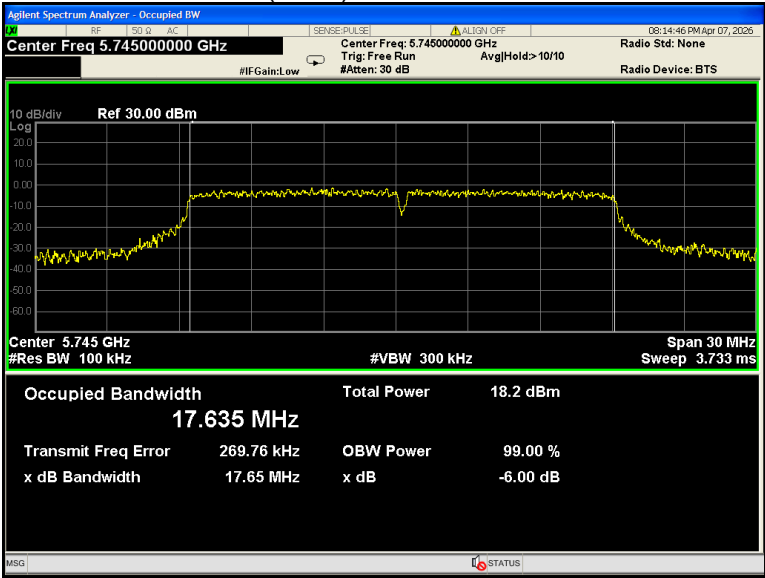
802.11a U-NII-3 Middle channel



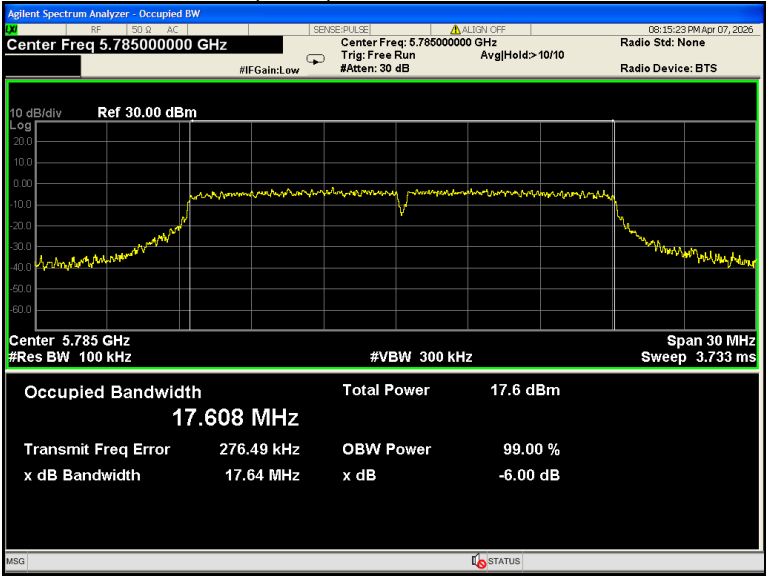
802.11a U-NII-3 High channel



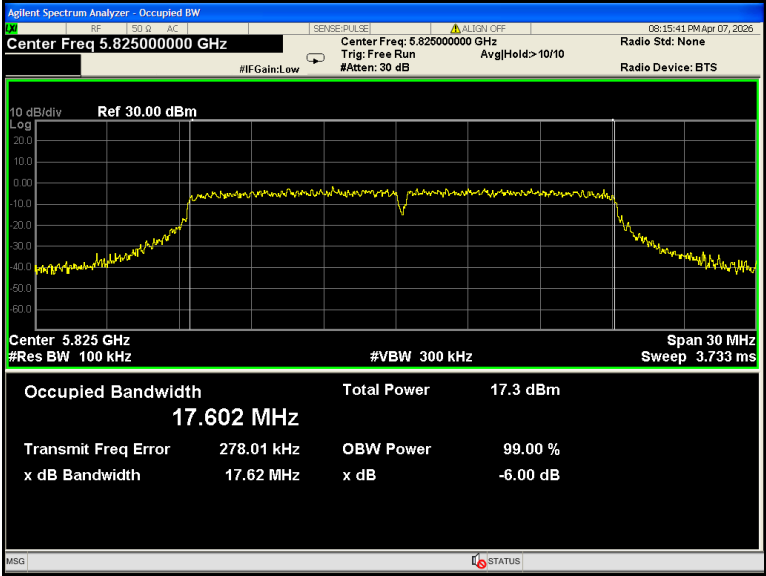
802.11n(HT20) U-NII-3 Low channel



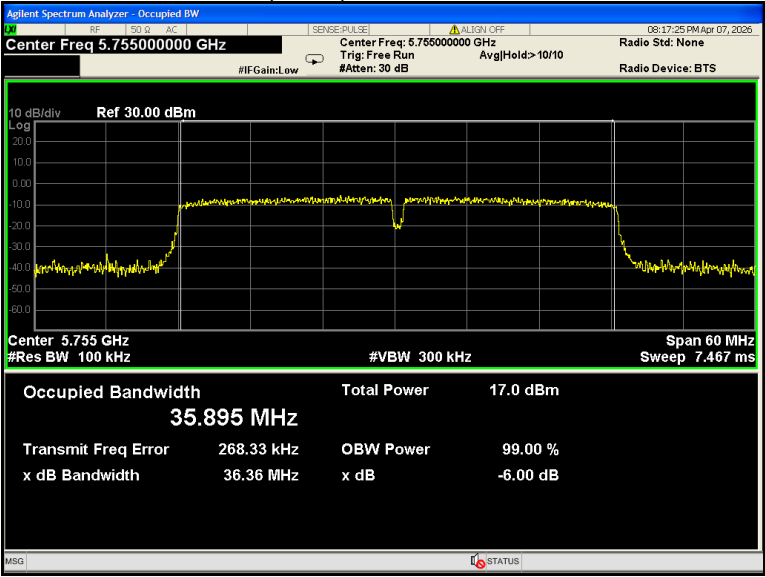
802.11n(HT20) U-NII-3 Middle channel



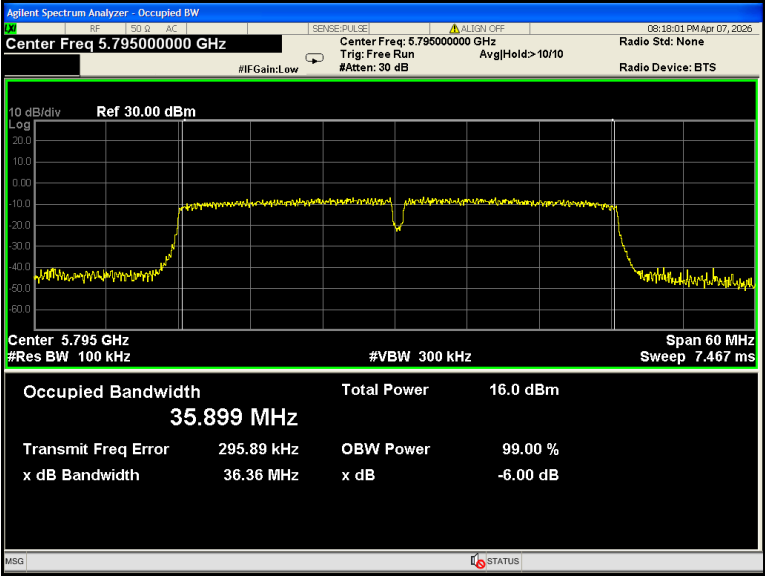
802.11n(HT20) U-NII-3 High channel



802.11n(HT40) U-NII-3 Low channel



802.11n(HT40) U-NII-3 High channel



11 26 dB Bandwidth and 99% Occupied Bandwidth

Test Requirement:	FCC 47CFR Part 15 Section 15.407 (a) KDB662911 D01 Multiple Transmitter Output v02r01
Test Method:	KDB789033 D02 General U-NII Test Procedures New Rules v02r01 Section D
Test Limit:	No restriction limits
Test Result:	PASS

11.1 Test Procedure

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum;
2. Set the spectrum analyzer: RBW = 1% to 5% of the OBW, VBW = 3x RBW

11.2 Test Result

Band	Operation mode	26 dB Bandwidth (MHz)			99% Bandwidth (MHz)		
		Low	Middle	High	Low	Middle	High
U-NII-1	802.11a	29.13	25.56	21.95	16.633	16.657	16.594
	802.11n(HT20)	28.17	25.80	23.53	17.800	17.802	17.777
	802.11n(HT40)	50.68	/	43.26	35.849	/	35.805

Band	Operation mode	26 dB Bandwidth (MHz)			99% Bandwidth (MHz)		
		Low	Middle	High	Low	Middle	High
U-NII-2A	802.11a	20.78	20.57	20.70	16.582	16.548	16.517
	802.11n(HT20)	21.70	21.35	21.50	17.661	17.694	17.696
	802.11n(HT40)	38.58	/	38.22	35.781	/	35.800

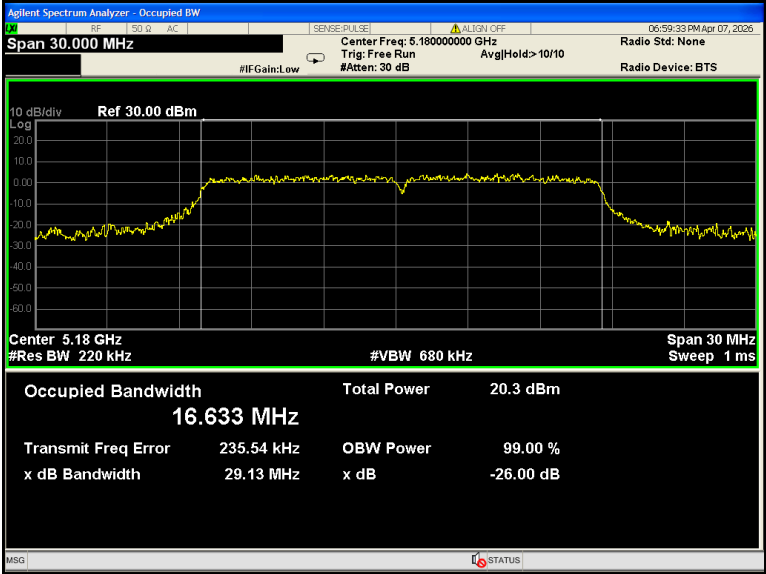
Band	Operation mode	26 dB Bandwidth (MHz)			99% Bandwidth (MHz)		
		Low	Middle	High	Low	Middle	High
U-NII-2C	802.11a	26.21	29.58	24.61	16.607	16.645	16.589
	802.11n(HT20)	27.56	28.73	21.61	17.790	17.790	17.734
	802.11n(HT40)	56.46	54.78	38.42	35.884	35.917	35.853

Band	Operation mode	99% Bandwidth (MHz)		
		Low	Middle	High
U-NII-3	802.11a	16.581	16.565	16.544
	802.11n(HT20)	17.744	17.686	17.683
	802.11n(HT40)	35.858	/	35.796

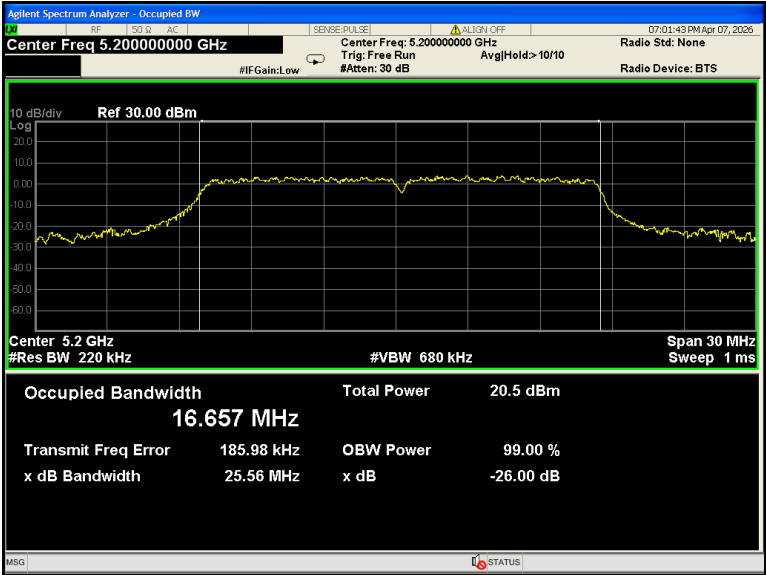
Test result plots shown as follows:

26 dB Bandwidth&99% Bandwidth

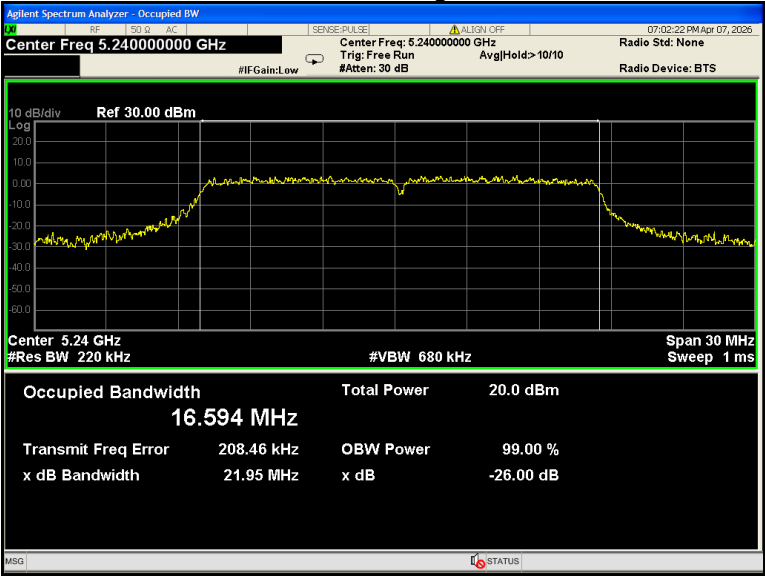
802.11a U-NII-1 Low channel



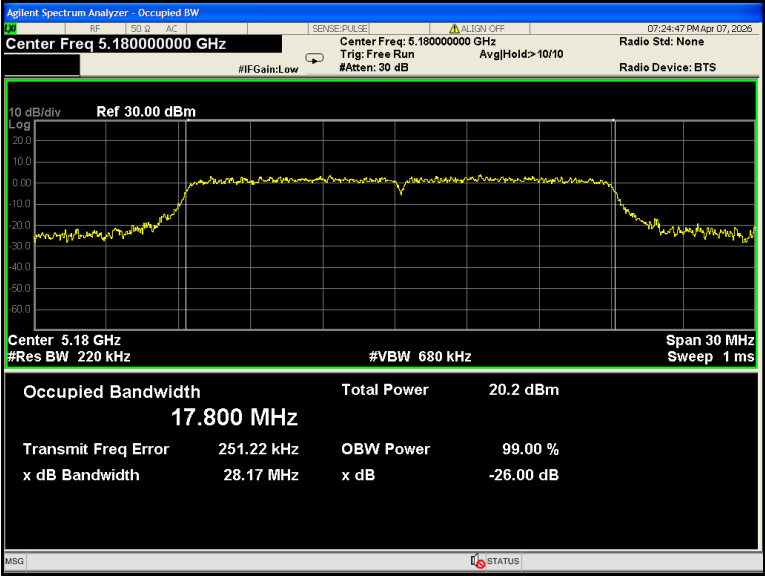
802.11a U-NII-1 Middle channel



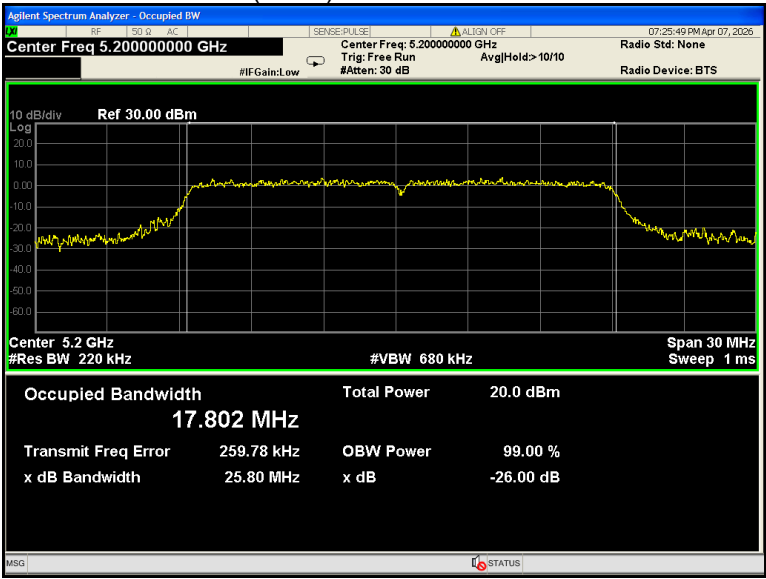
802.11a U-NII-1 High channel



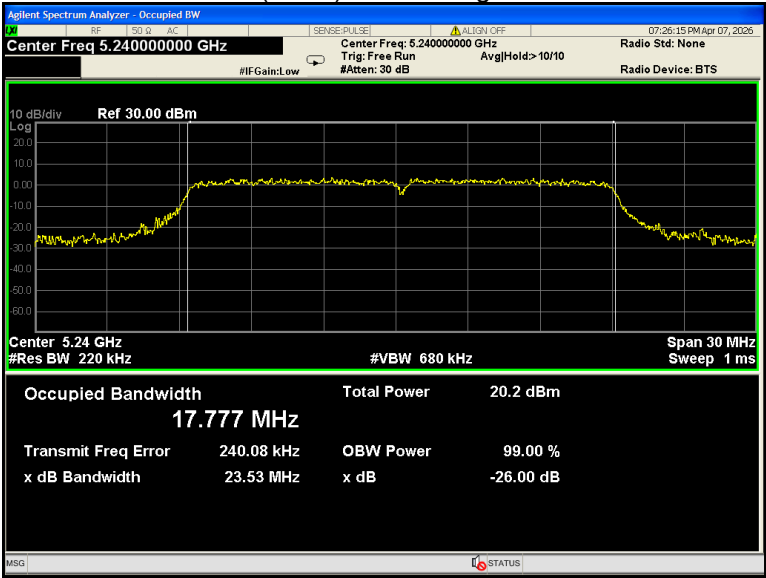
802.11n(HT20) U-NII-1 Low channel



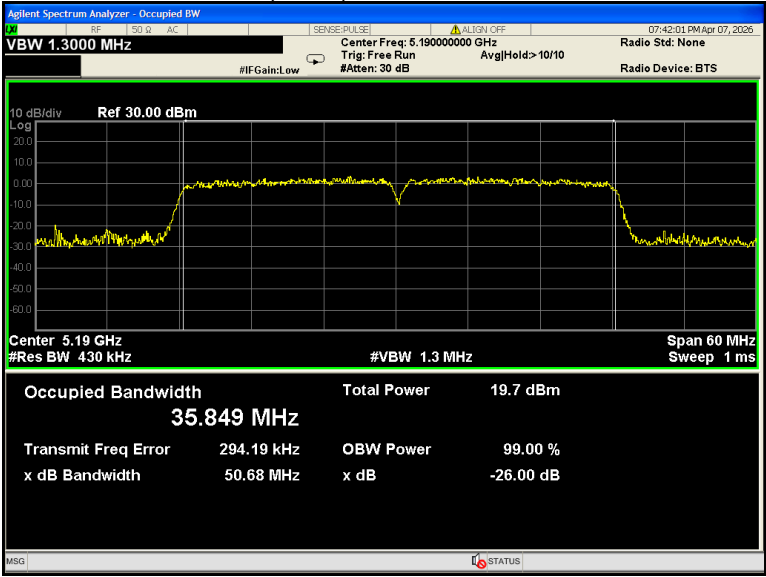
802.11n(HT20) U-NII-1 Middle channel



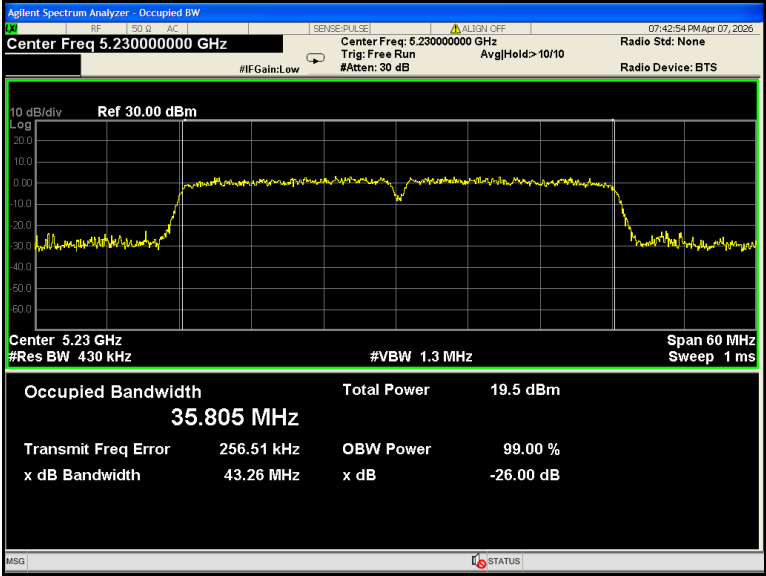
802.11n(HT20) U-NII-1 High channel



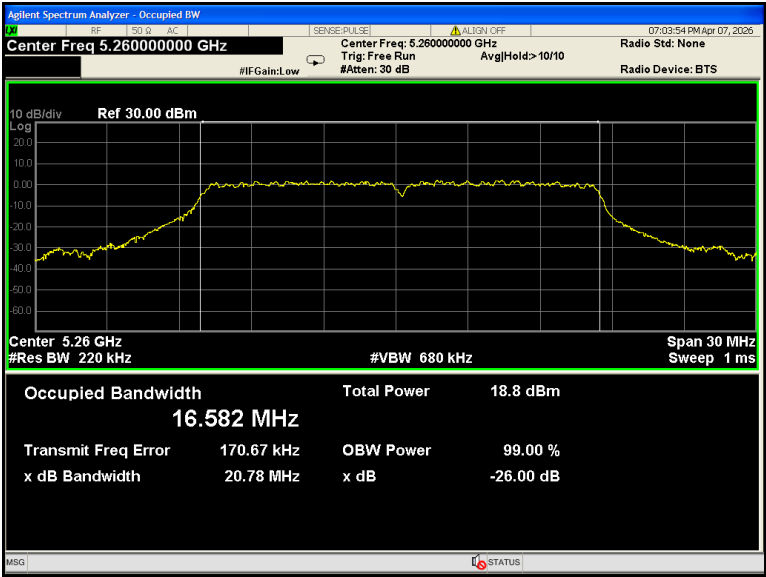
802.11n(HT40) U-NII-1 Low channel



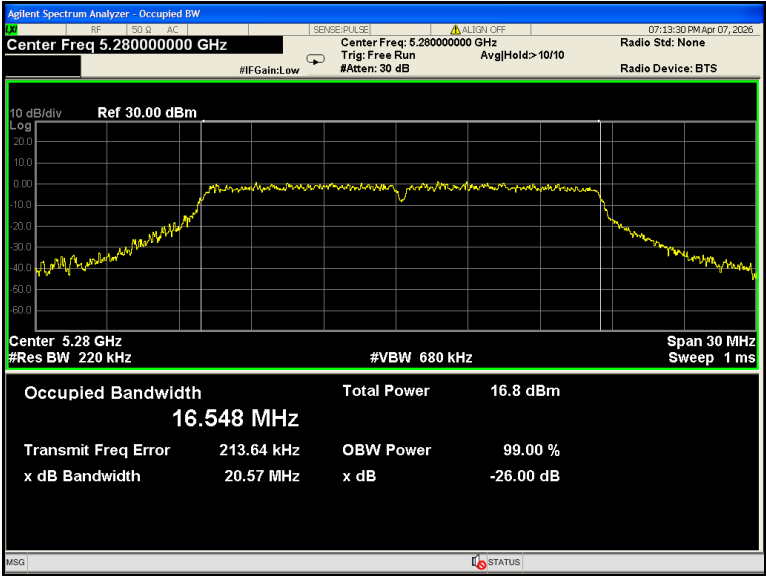
802.11n(HT40) U-NII-1 High channel



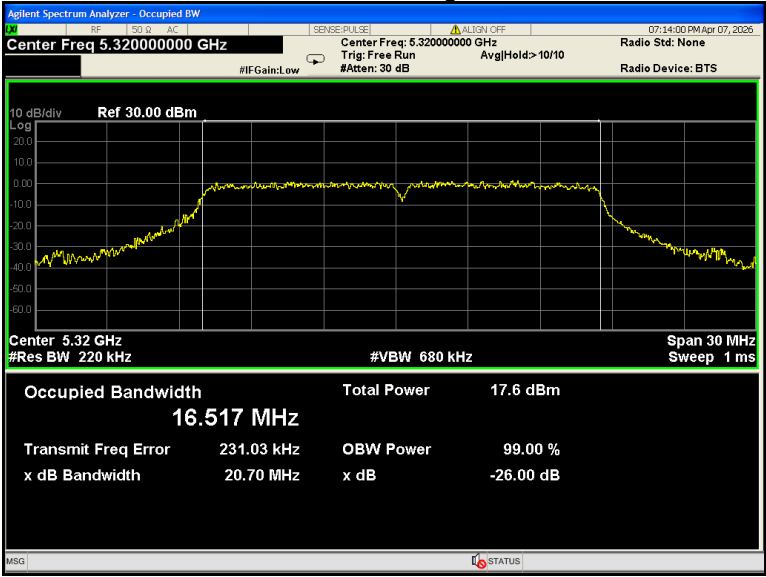
802.11a U-NII-2A Low channel



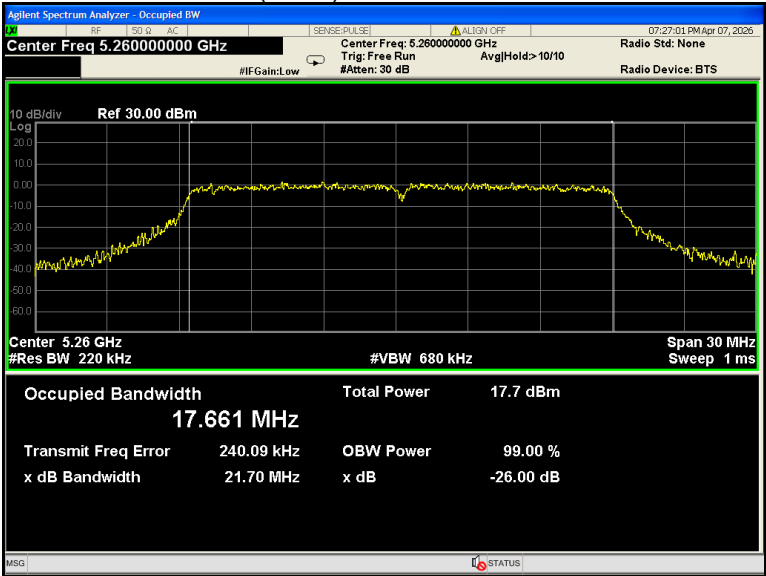
802.11a U-NII-2A Middle channel



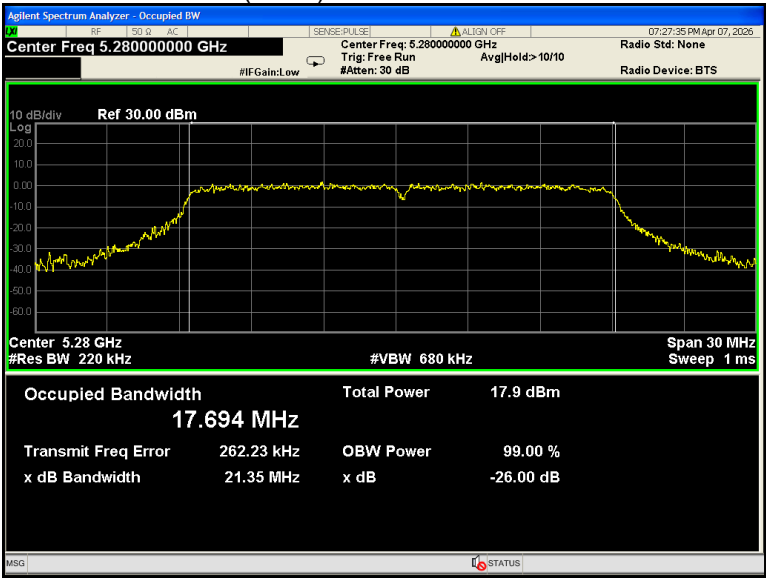
802.11a U-NII-2A High channel



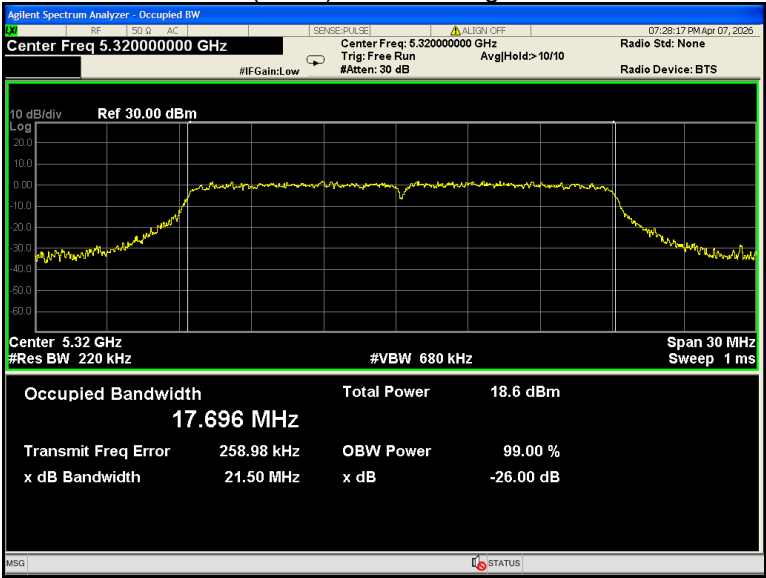
802.11n(HT20) U-NII-2A Low channel



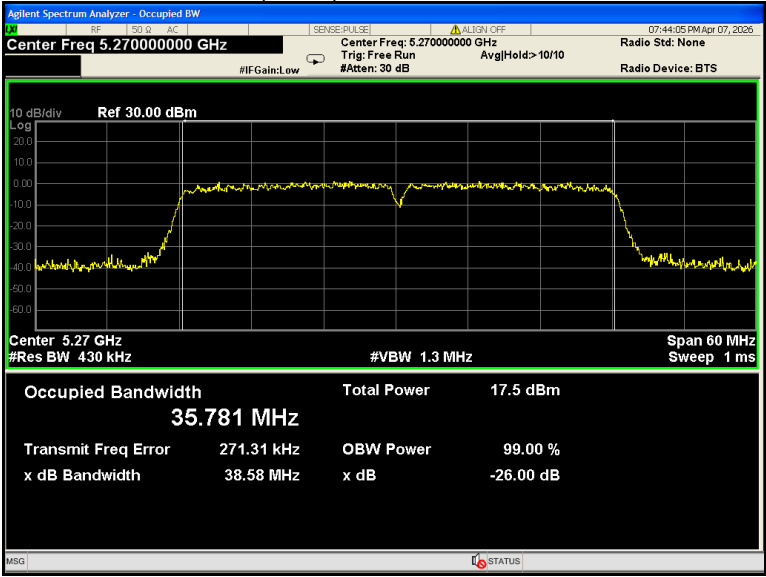
802.11n(HT20) U-NII-2A Middle channel



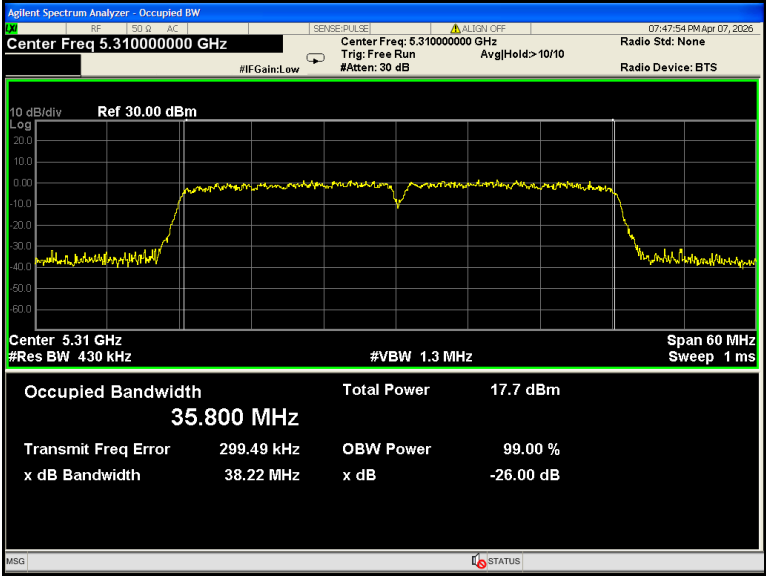
802.11n(HT20) U-NII-2A High channel



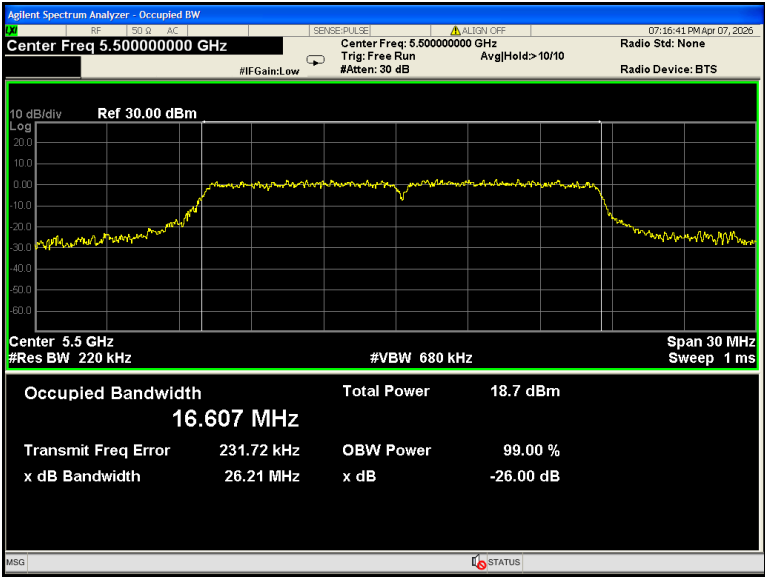
802.11n(HT40) U-NII-2A Low channel



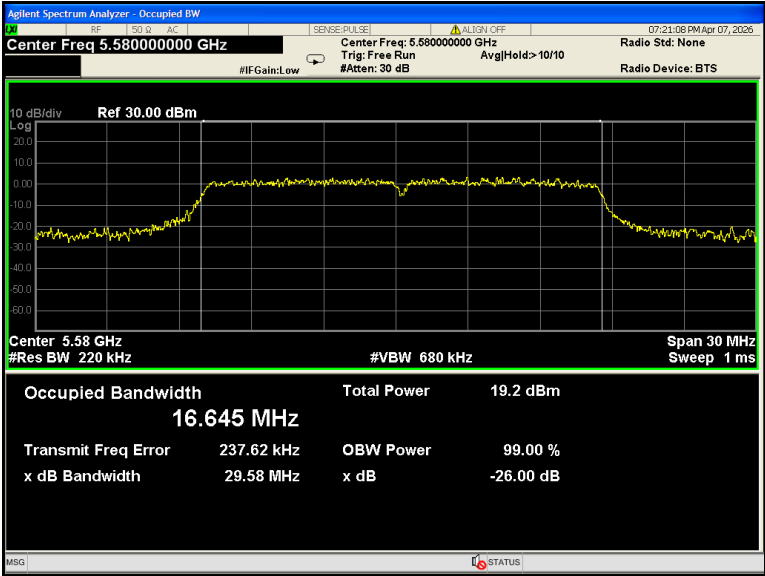
802.11n(HT40) U-NII-2A High channel



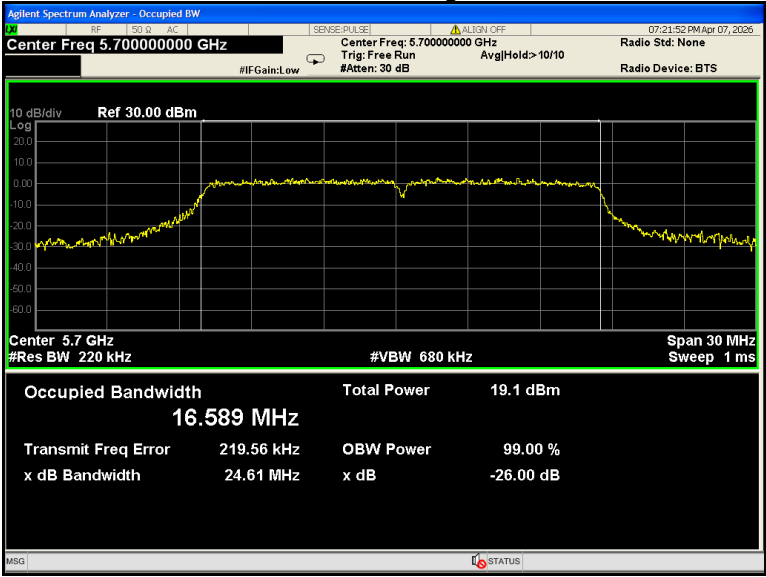
802.11a U-NII-2C Low channel



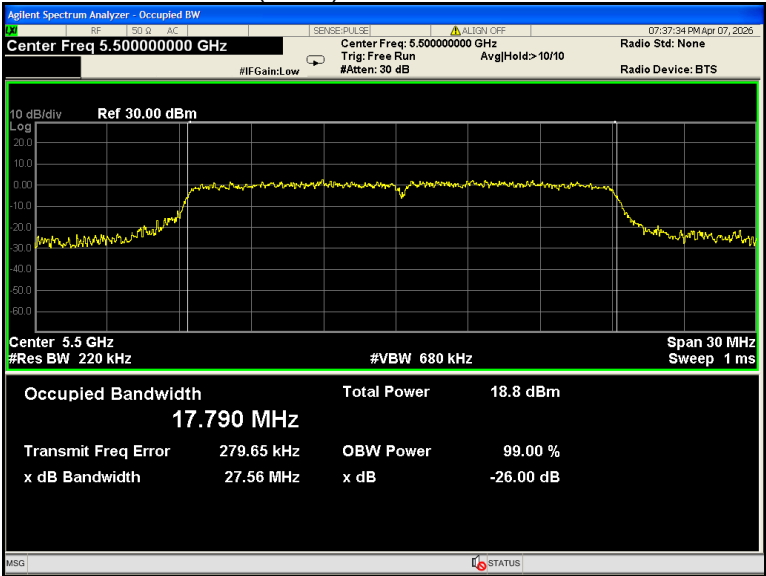
802.11a U-NII-2C Middle channel



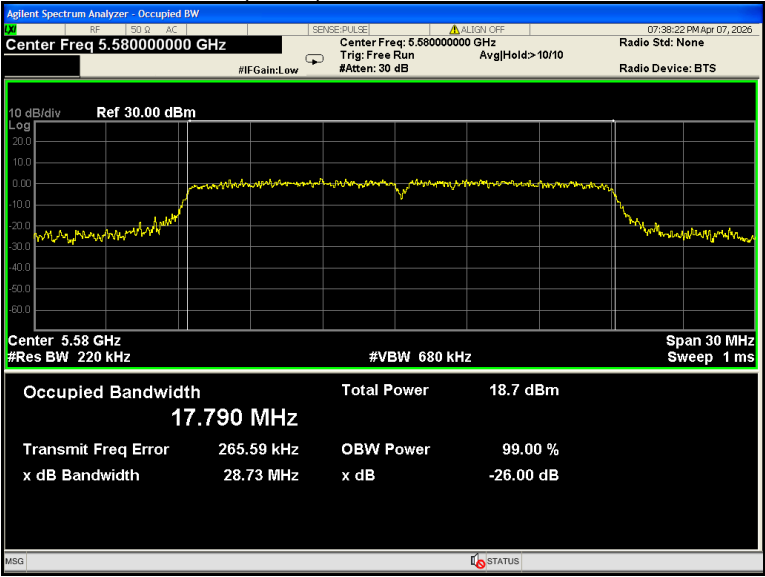
802.11a U-NII-2C High channel



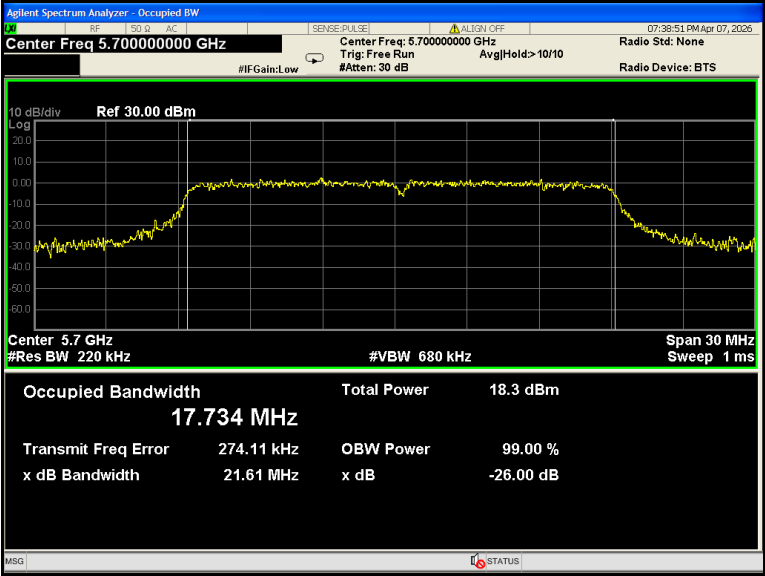
802.11n(HT20) U-NII-2C Low channel



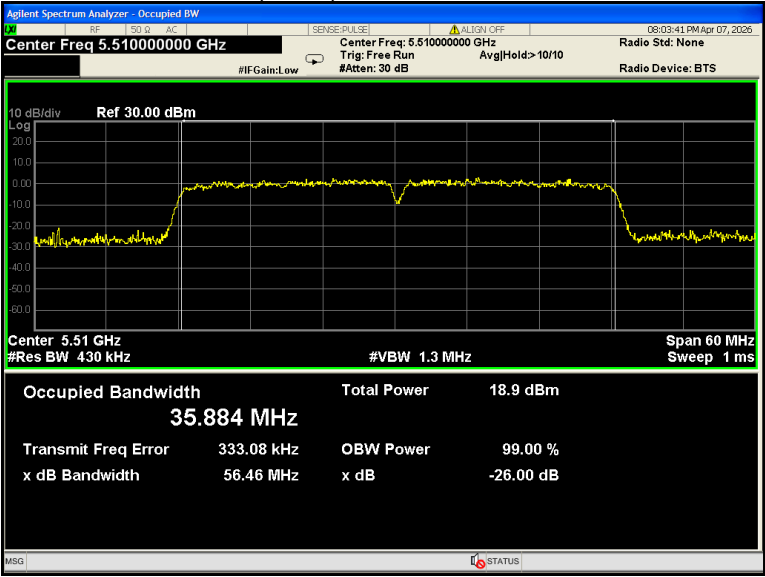
802.11n(HT20) U-NII-2C Middle channel



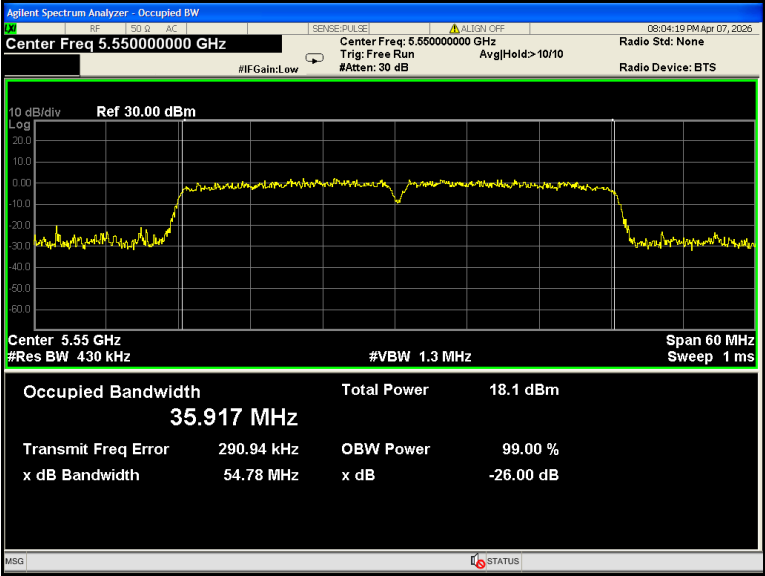
802.11n(HT20) U-NII-2C High channel

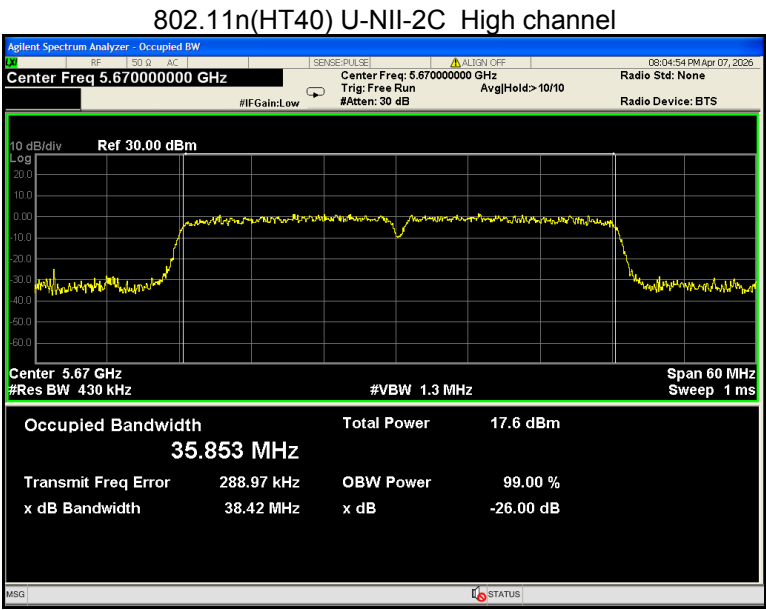


802.11n(HT40) U-NII-2C Low channel

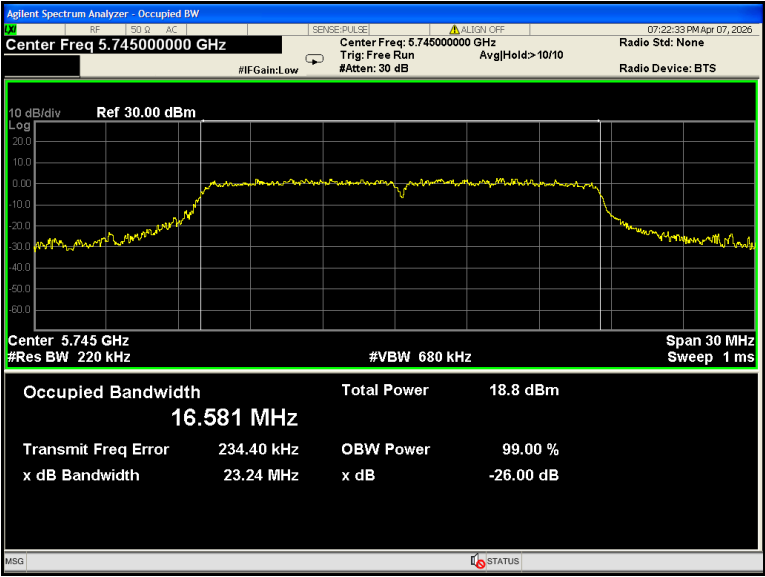


802.11n(HT40) U-NII-2C Middle channel

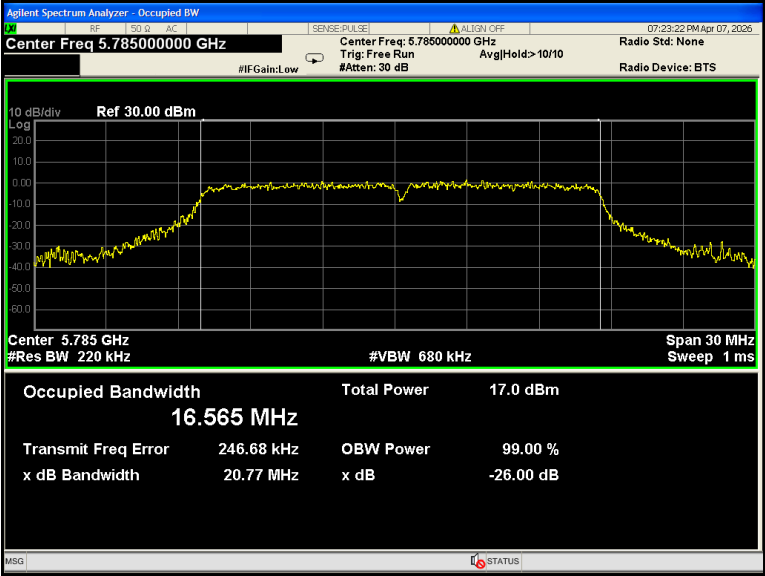




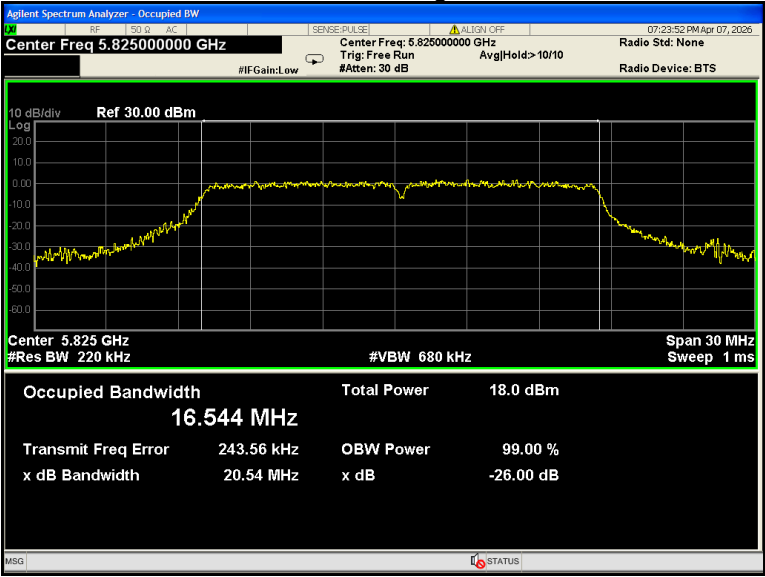
802.11a U-NII-3 Low channel



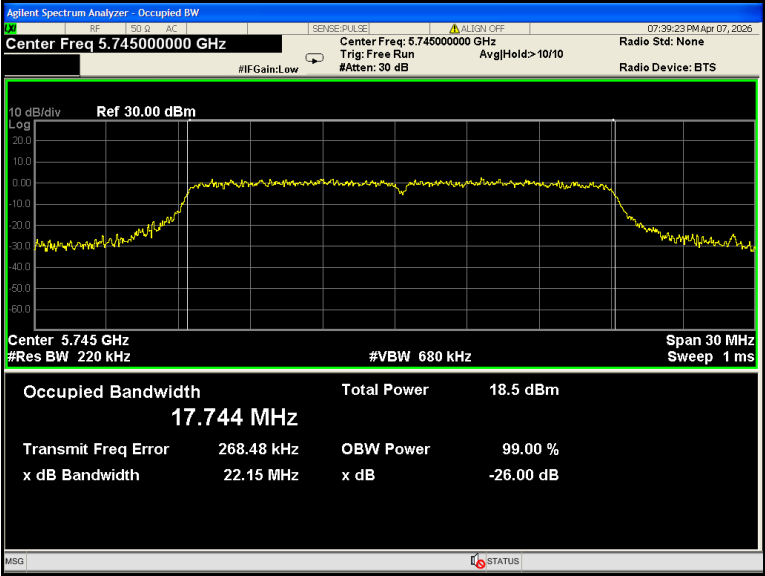
802.11a U-NII-3 Middle channel



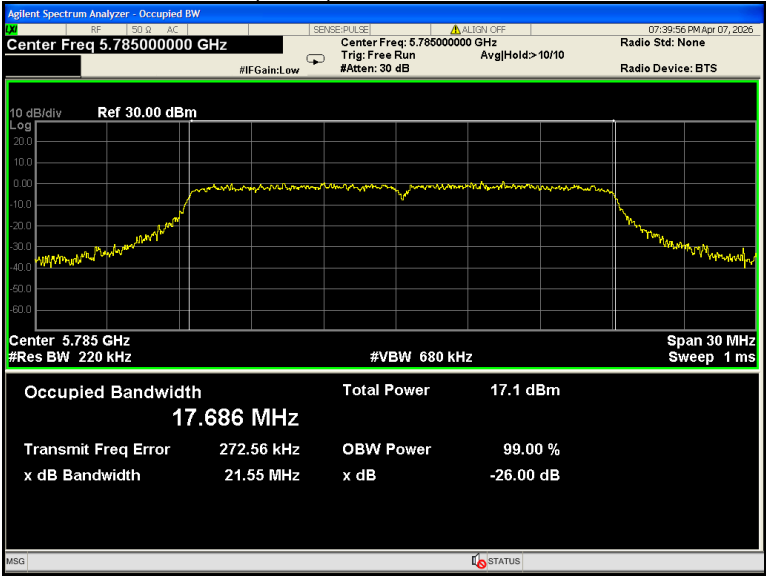
802.11a U-NII-3 High channel



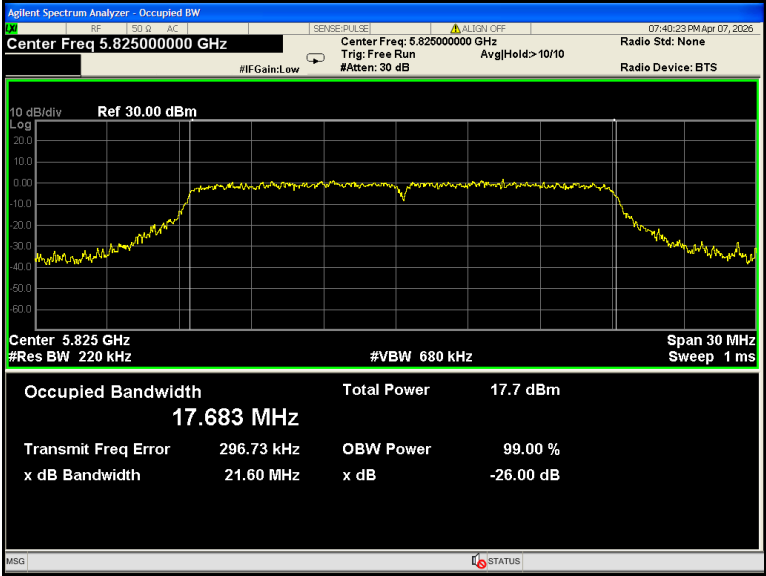
802.11n(HT20) U-NII-3 Low channel



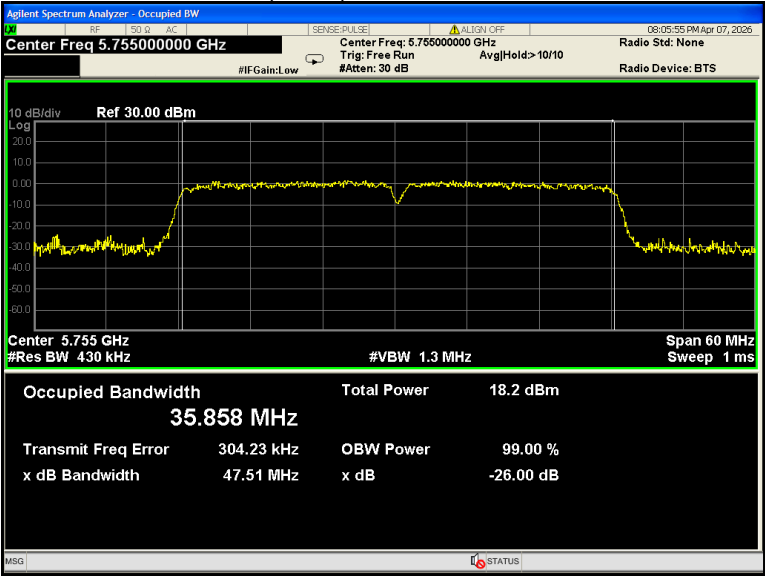
802.11n(HT20) U-NII-3 Middle channel



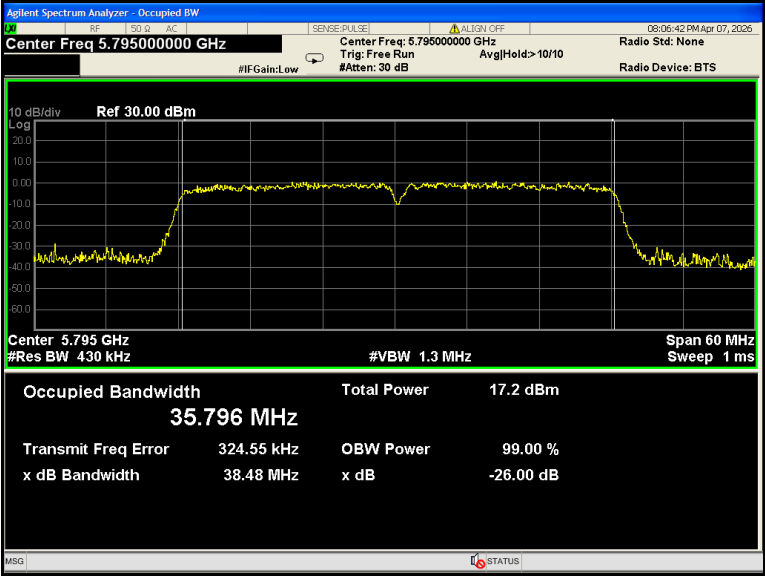
802.11n(HT20) U-NII-3 High channel



802.11n(HT40) U-NII-3 Low channel



802.11n(HT40) U-NII-3 High channel



12 Maximum Conducted Output Power

Test Requirement:	FCC 47CFR Part 15 Section 15.407(a) KDB662911 D01 Multiple Transmitter Output v02r01
Test Method:	KDB789033 D02 General U-NII Test Procedures New Rules v02r01 Section E
Test Limit:	For the band 5.15-5.25 GHz For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. For the 5.25-5.35 GHz and 5.47-5.725 GHz bands For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in megahertz. For the band 5.725-5.850 GHz For the band 5.725-5.850 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W.
Test Result:	PASS Conducted output power= measurement power+10log(1/x)
Remark:	X is duty cycle=1, so $10\log(1/1)=0$ Conducted output power= measurement power

12.1 Test Procedure

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.
2. Set the spectrum analyzer: RBW = 1 MHz. VBW = 3 MHz. Sweep = auto; Detector Function = Peak, Set the span to fully encompass the DTS bandwidth.
3. Keep the EUT in transmitting at lowest, medium and highest channel individually. Record the max value.

12.2 Test Result

Band	Operation mode	Maximum Conducted Output Power (dBm)		
		Low	Middle	High
U-NII-1	802.11a	15.24	15.69	14.97
	802.11n(HT20)	14.80	15.30	14.80
	802.11n(HT40)	14.75	/	14.82
	Limit	≤23.98dBm		

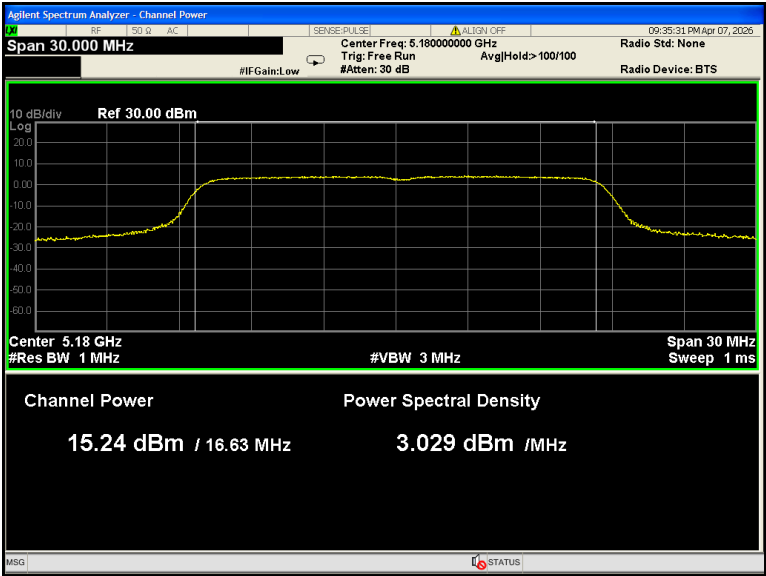
Band	Operation mode	Maximum Conducted Output Power (dBm)		
		Low	Middle	High
U-NII-2A	802.11a	13.66	13.74	13.54
	802.11n(HT20)	13.28	13.19	13.04
	802.11n(HT40)	12.93	/	13.21
	Limit	≤23.98dBm		

Band	Operation mode	Maximum Conducted Output Power (dBm)		
		Low	Middle	High
U-NII-2C	802.11a	14.76	14.21	13.93
	802.11n(HT20)	14.49	13.91	13.50
	802.11n(HT40)	14.69	14.13	14.22
	Limit	≤23.98dBm		

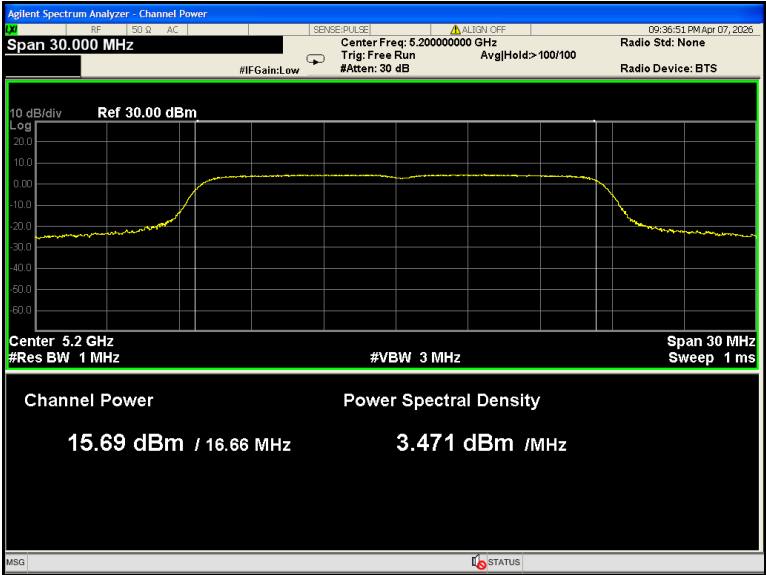
Band	Operation mode	Maximum Conducted Output Power (dBm)		
		Low	Middle	High
U-NII-3	802.11a	14.92	13.83	14.12
	802.11n(HT20)	14.41	13.68	13.69
	802.11n(HT40)	14.33	/	13.26
	Limit	≤30dBm		

Test result plots shown as follows:

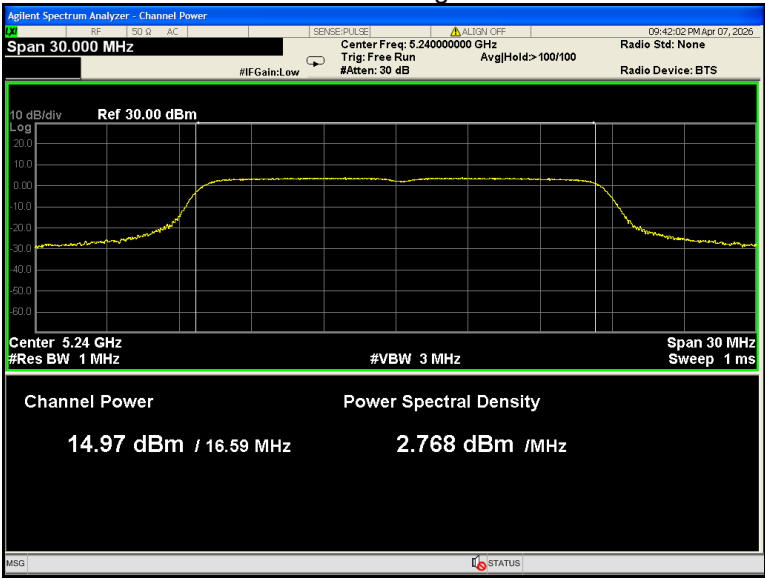
802.11a U-NII-1 Low channel



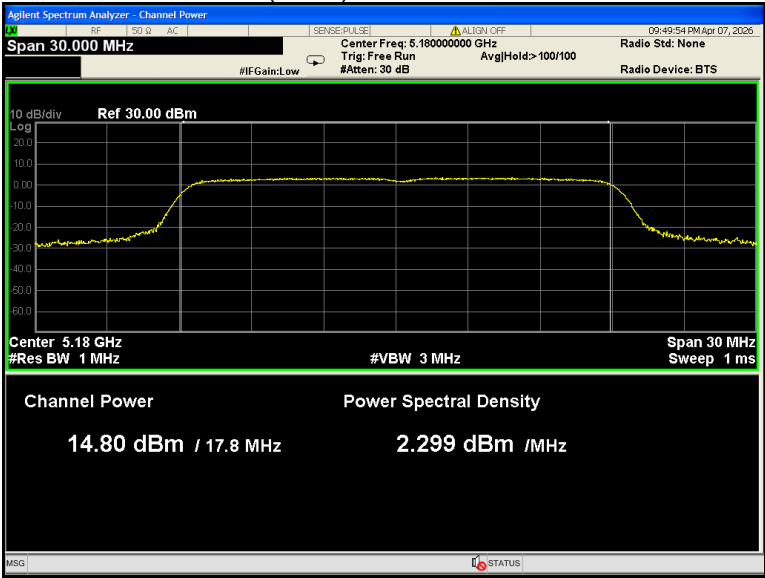
802.11a U-NII-1 Middle channel



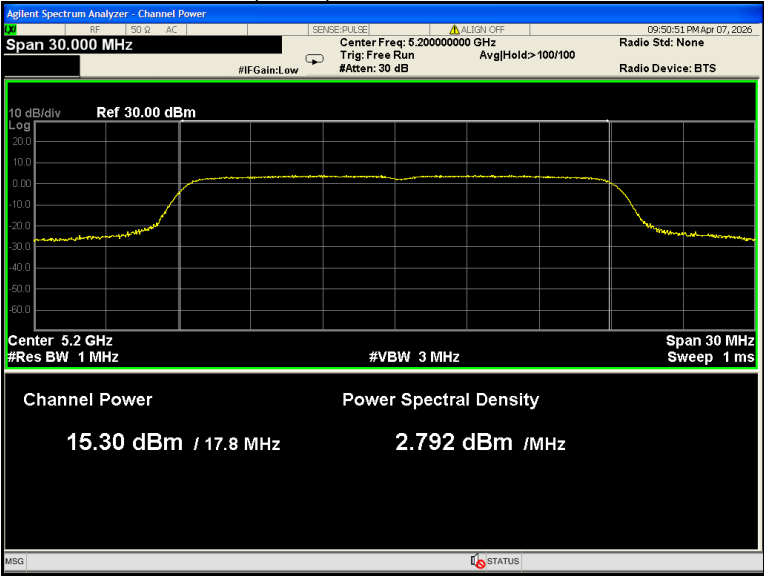
802.11a U-NII-1 High channel



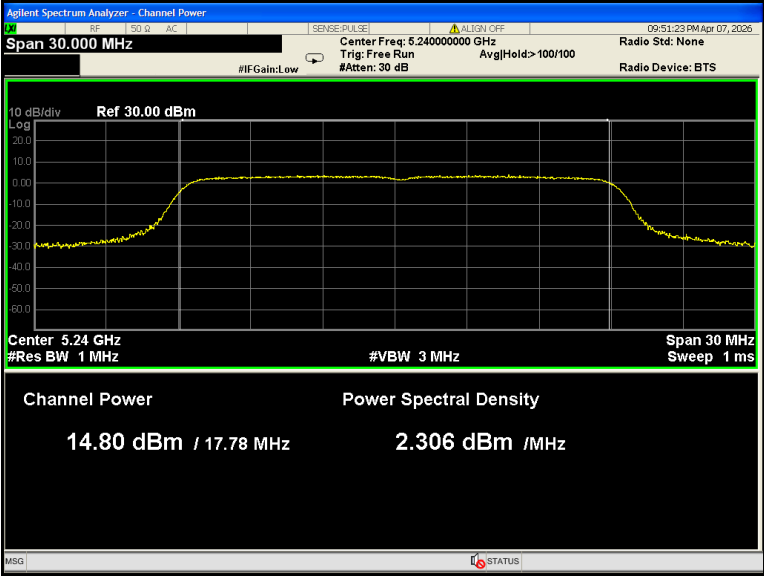
802.11n(HT20) U-NII-1 Low channel



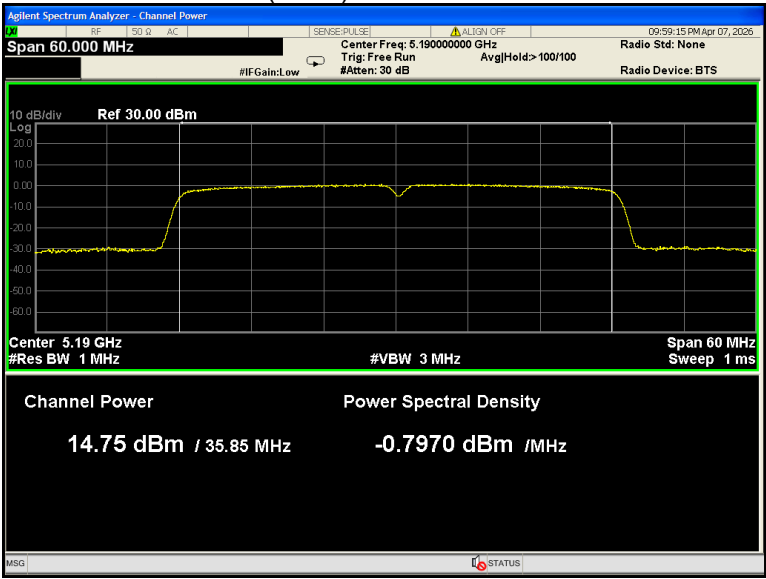
802.11n(HT20) U-NII-1 Middle channel



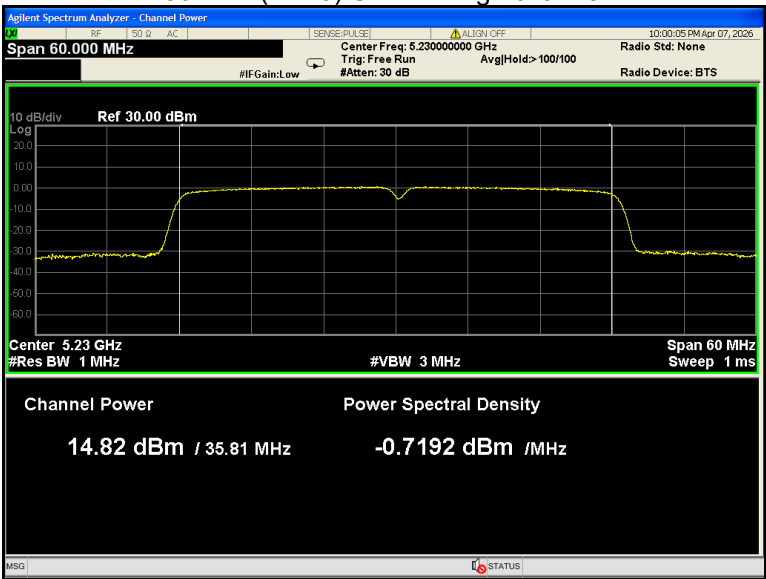
802.11n(HT20) U-NII-1 High channel



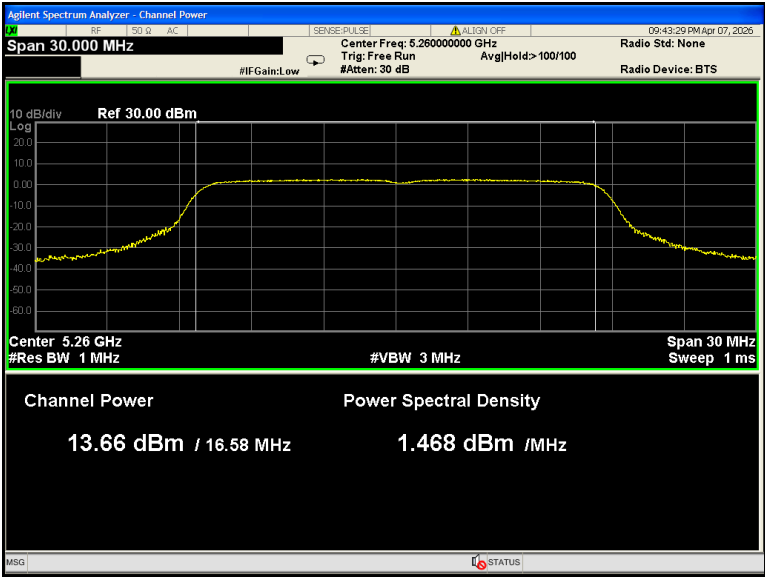
802.11n(HT40) U-NII-1 Low channel



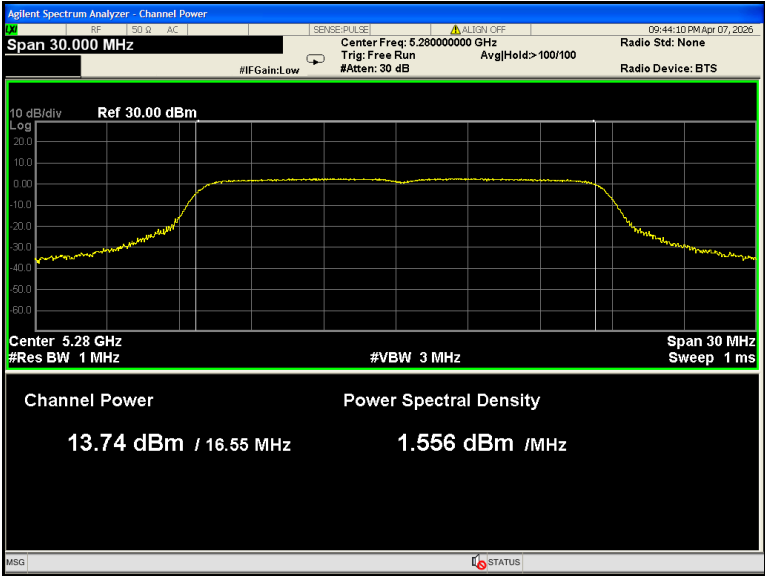
802.11n(HT40) U-NII-1 High channel



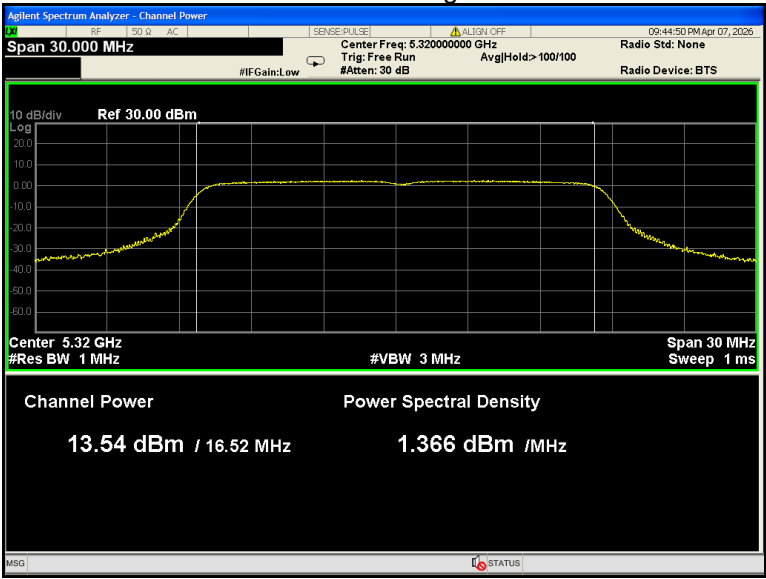
802.11a U-NII-2A Low channel



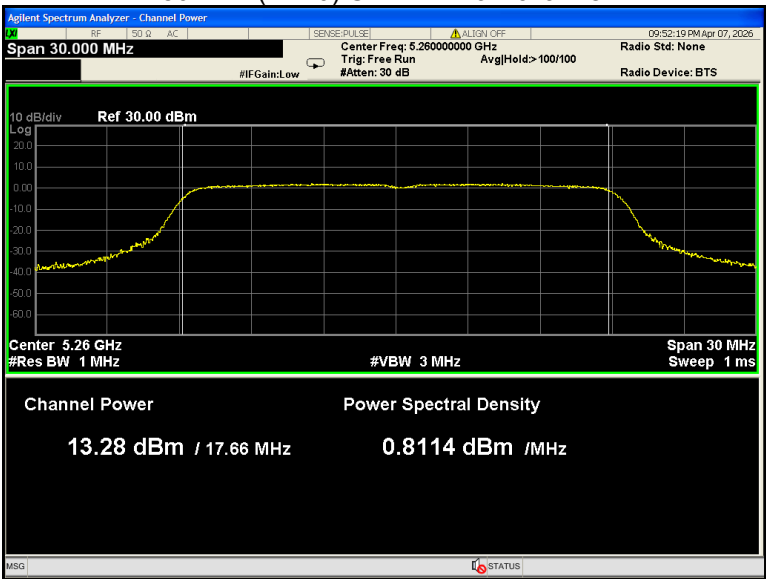
802.11a U-NII-2A Middle channel



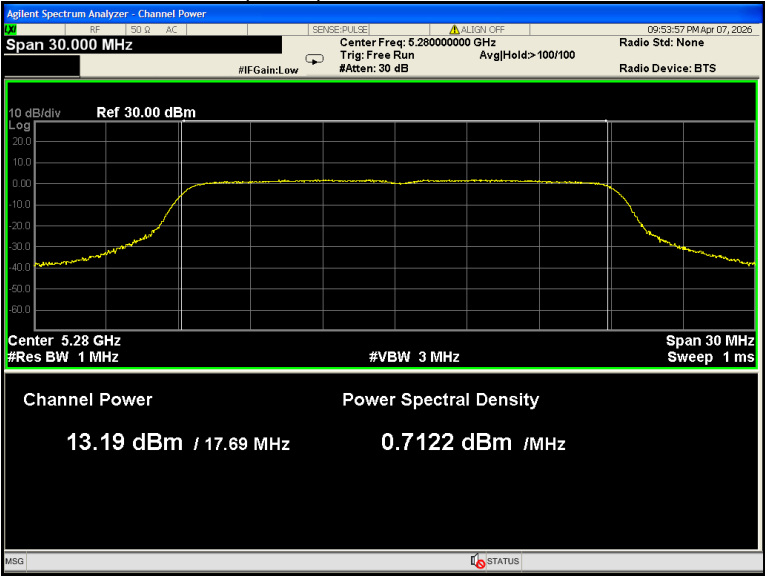
802.11a U-NII-2A High channel



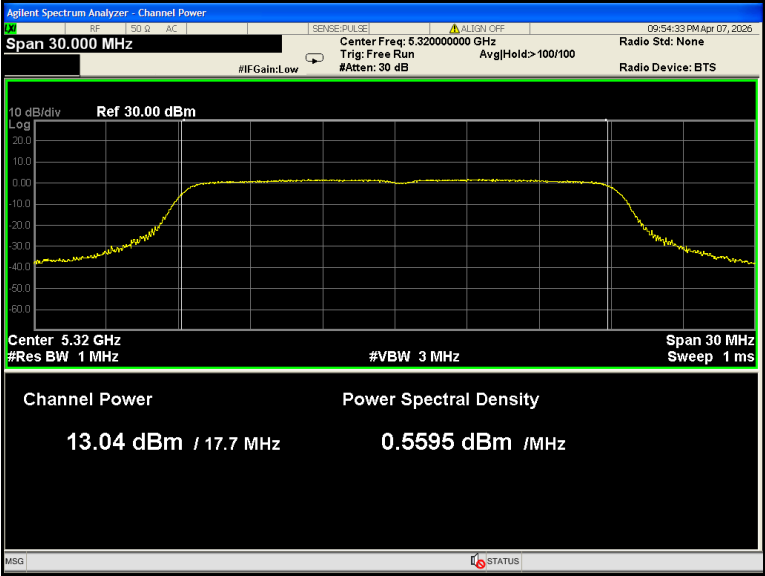
802.11n(HT20) U-NII-2A Low channel



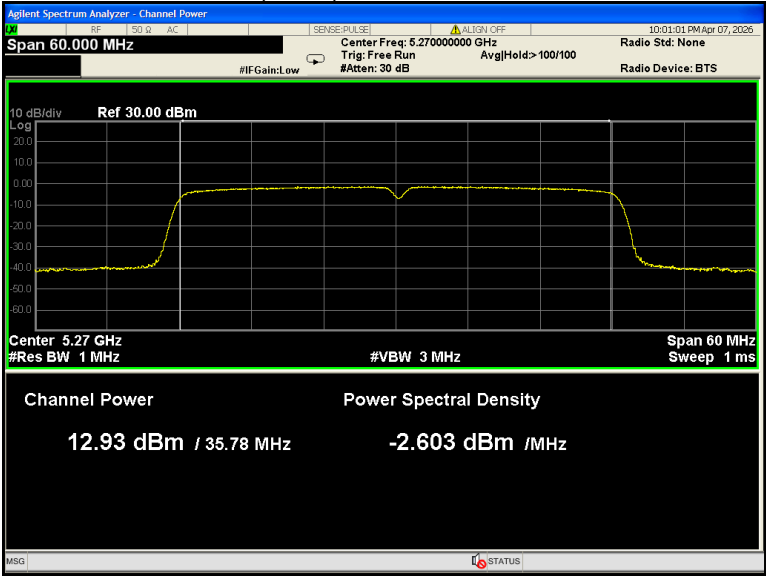
802.11n(HT20) U-NII-2A Middle channel



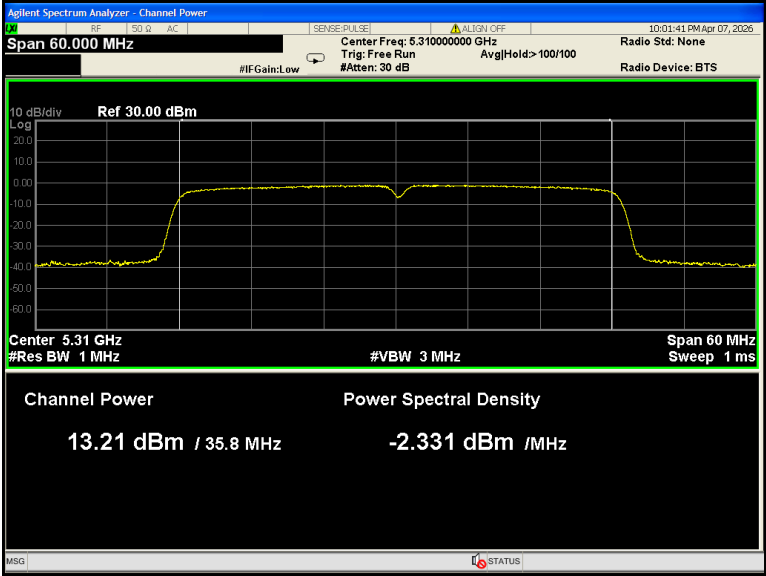
802.11n(HT20) U-NII-2A High channel



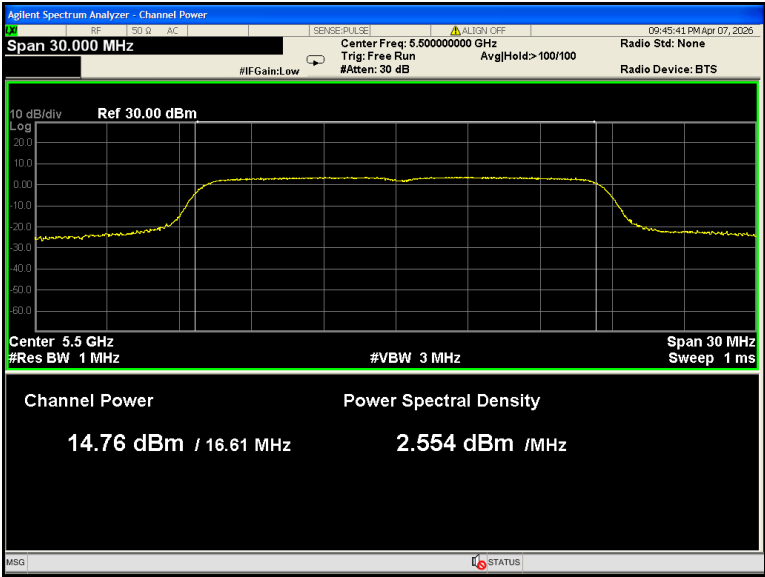
802.11n(HT40) U-NII-2A Low channel



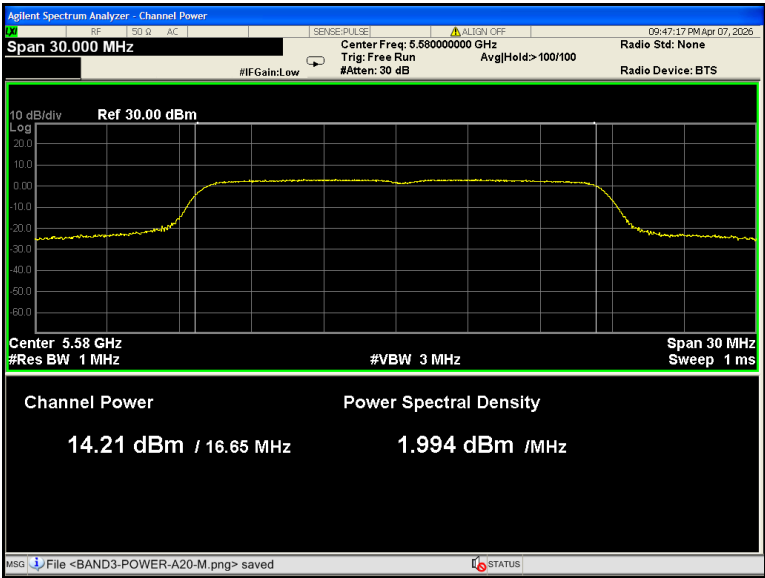
802.11n(HT40) U-NII-2A High channel



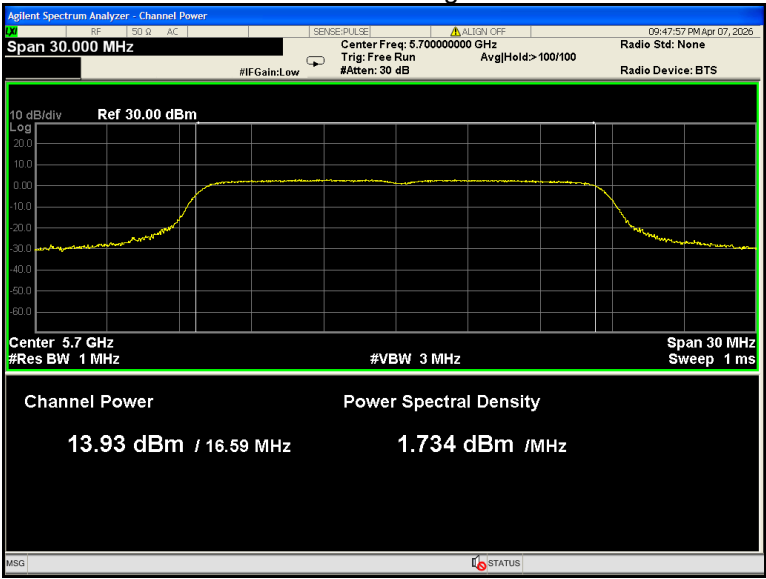
802.11a U-NII-2C Low channel



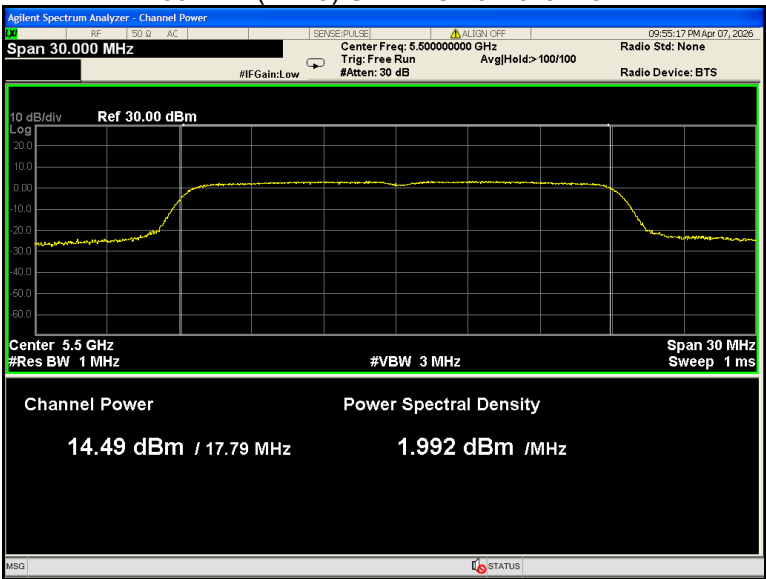
802.11a U-NII-2C Middle channel



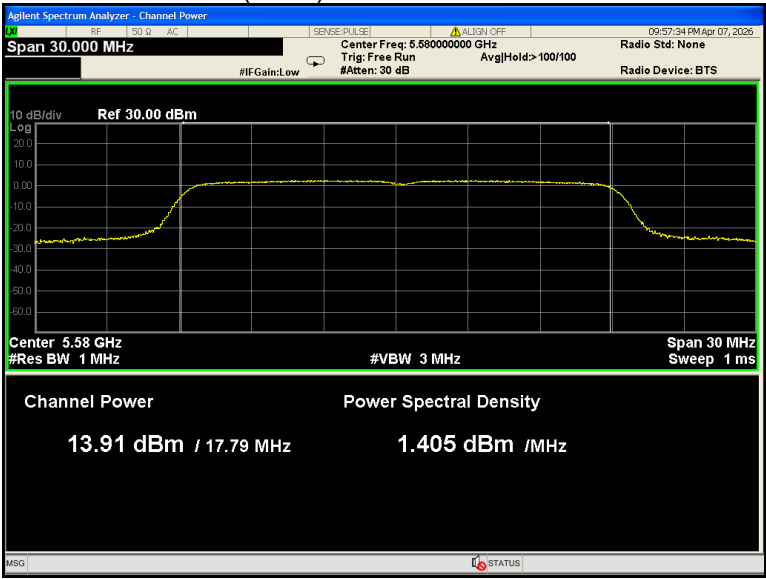
802.11a U-NII-2C High channel



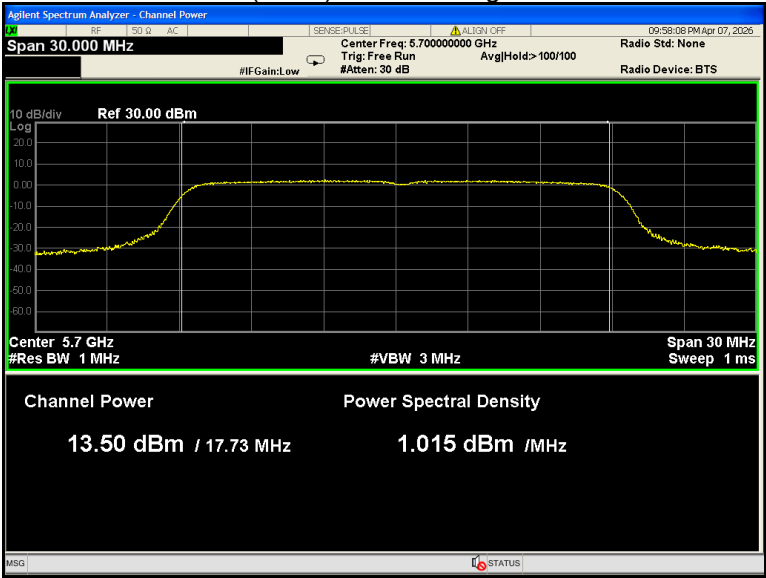
802.11n(HT20) U-NII-2C Low channel



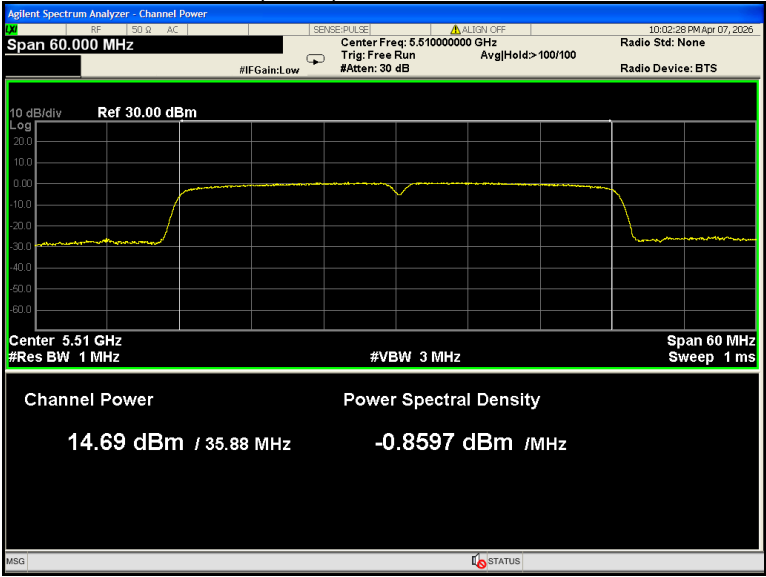
802.11n(HT20) U-NII-2C Middle channel



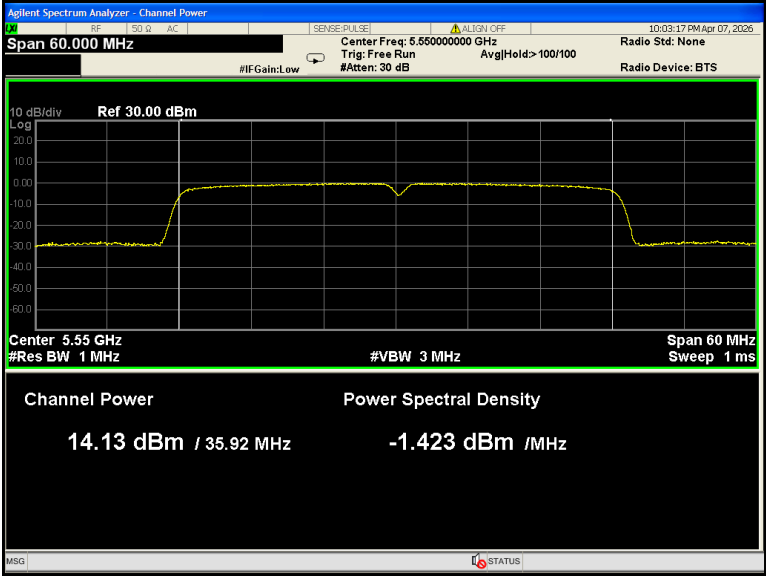
802.11n(HT20) U-NII-2C High channel

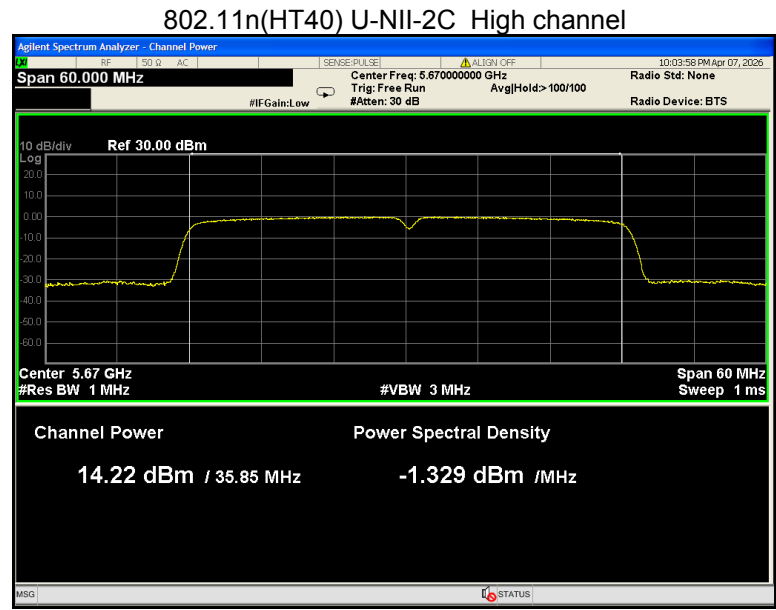


802.11n(HT40) U-NII-2C Low channel

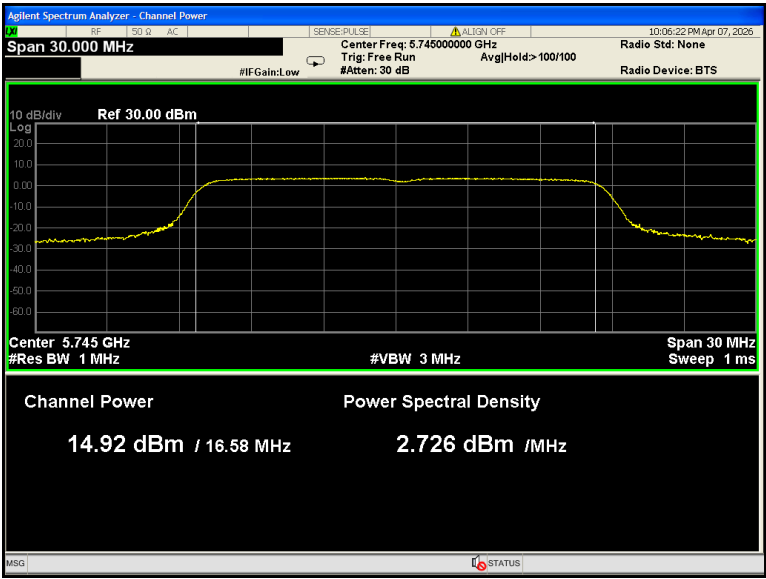


802.11n(HT40) U-NII-2C Middle channel

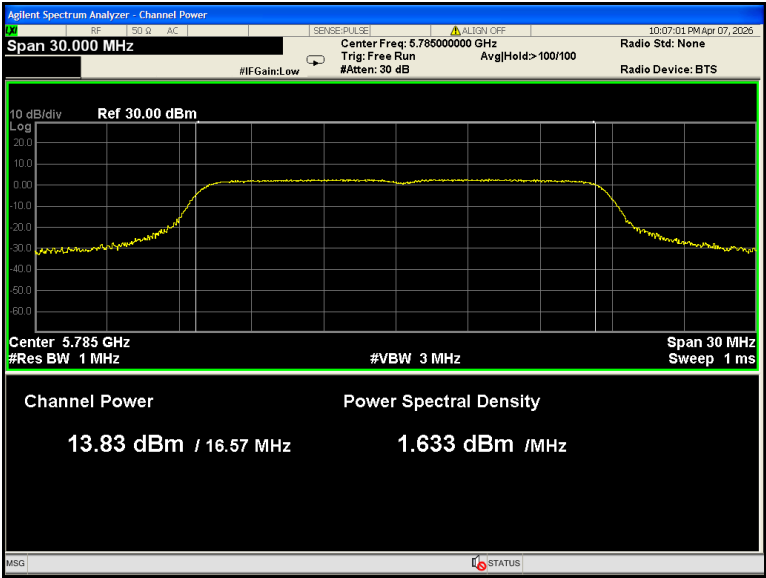




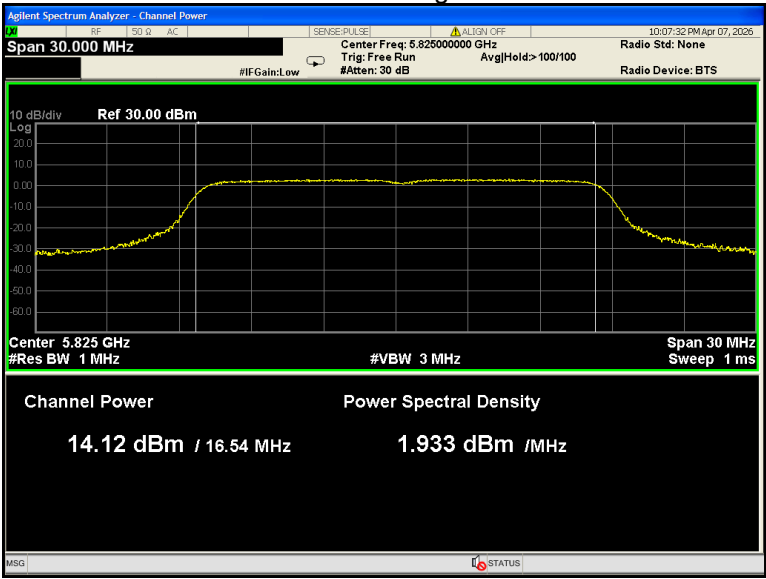
802.11a U-NII-3 Low channel



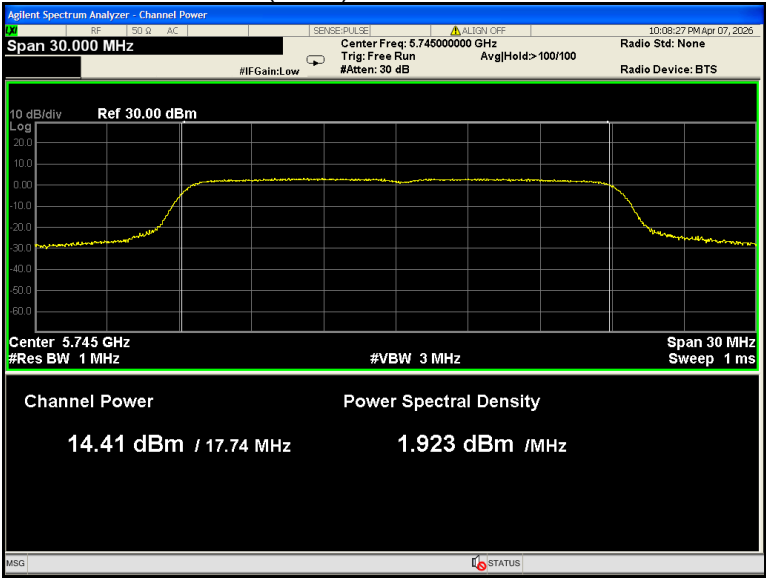
802.11a U-NII-3 Middle channel



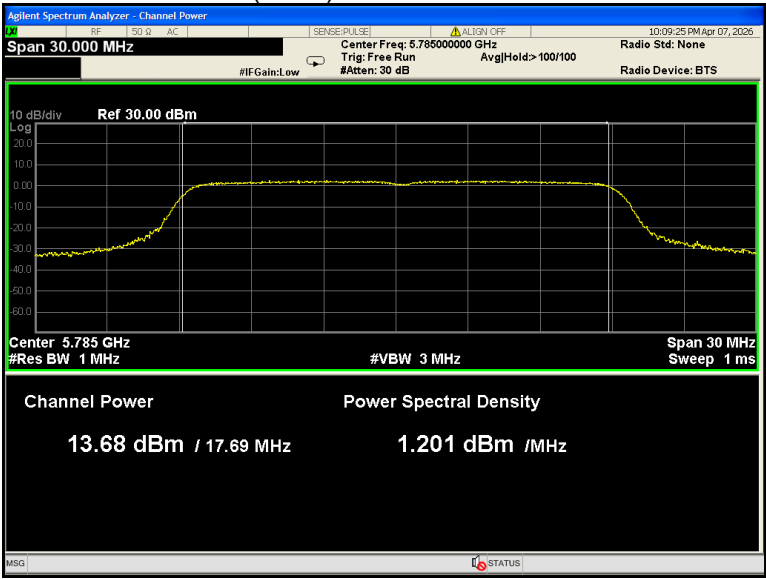
802.11a U-NII-3 High channel



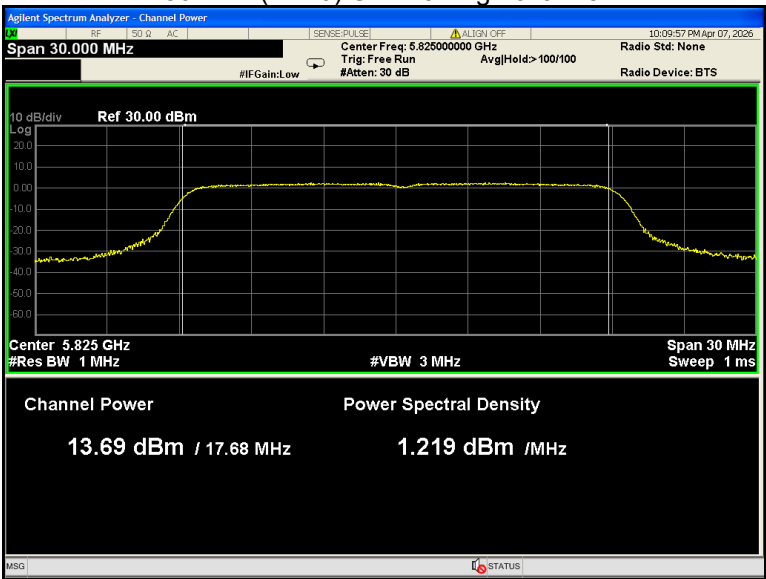
802.11n(HT20) U-NII-3 Low channel



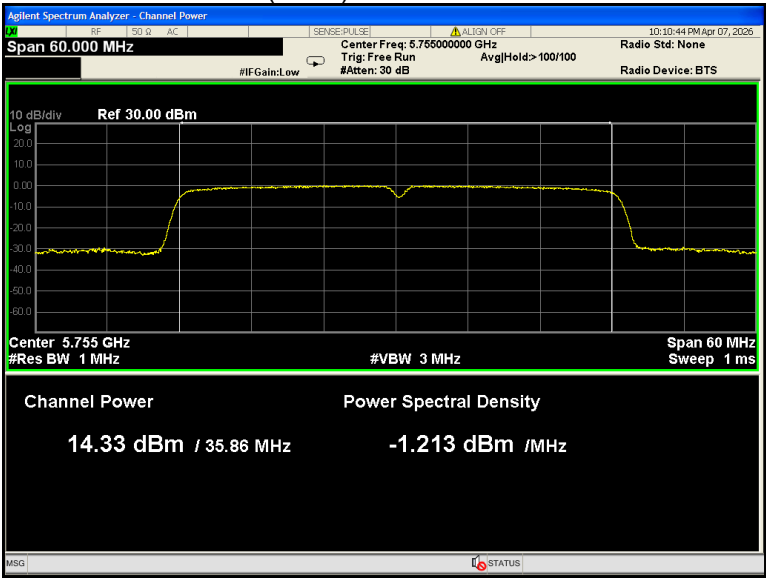
802.11n(HT20) U-NII-3 Middle channel



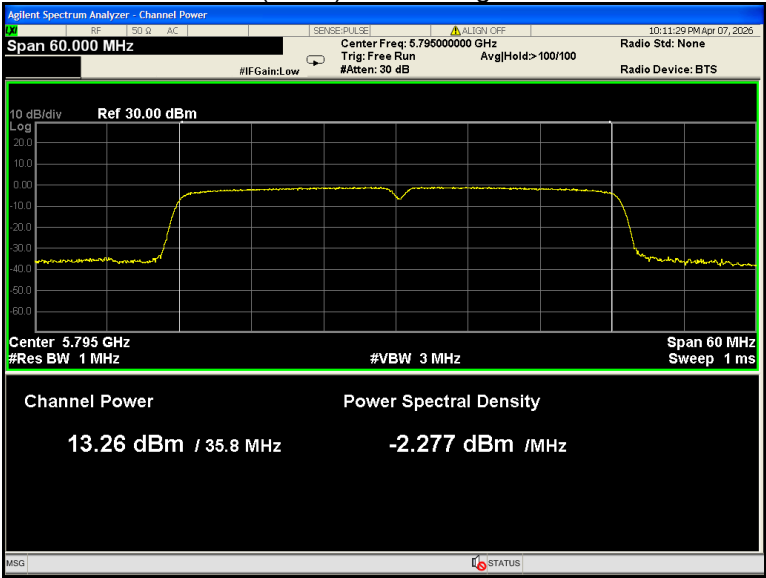
802.11n(HT20) U-NII-3 High channel



802.11n(HT40) U-NII-3 Low channel



802.11n(HT40) U-NII-3 High channel



13 Power Spectral Density

Test Requirement:	FCC 47CFR Part 15 Section 15.407(a)
Test Method:	KDB 789033 D02 General U-NII Test Procedures New Rules v02r01
Test Limit:	For the band 5.15-5.25 GHz For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. For an indoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. For client devices in the 5.15-5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. For the 5.25-5.35 GHz and 5.47-5.725 GHz bands The maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. For the band 5.725-5.850 GHz The maximum power spectral density shall not exceed 30 dBm in any 500-kHz band.
Test Result:	PASS

13.1 Test Procedure

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.
2. Set the spectrum analyzer:
U-NII-1
RBW = 1MHz, VBW $\geq 3 \times$ RBW Sweep = auto; Detector Function = Peak. Trace = Max hold.
U-NII-3
RBW = 510KHz, VBW $\geq 3 \times$ RBW Sweep = auto; Detector Function = Peak. Trace = Max hold.
3. Allow the trace to stabilize. Use the marker-delta function to determine the separation between the peaks of the adjacent channels. The limit is specified in one of the subparagraphs of this Section
Submit this plot.

13.2 Test Result

Band	Operation mode	Power Spectral Density (dBm/MHz)		
		Low	Middle	High
U-NII-1	802.11a	5.141	5.411	5.418
	802.11n(HT20)	4.898	5.188	5.132
	802.11n(HT40)	1.948	/	2.117
	Limit	≤11.00dBm/MHz		

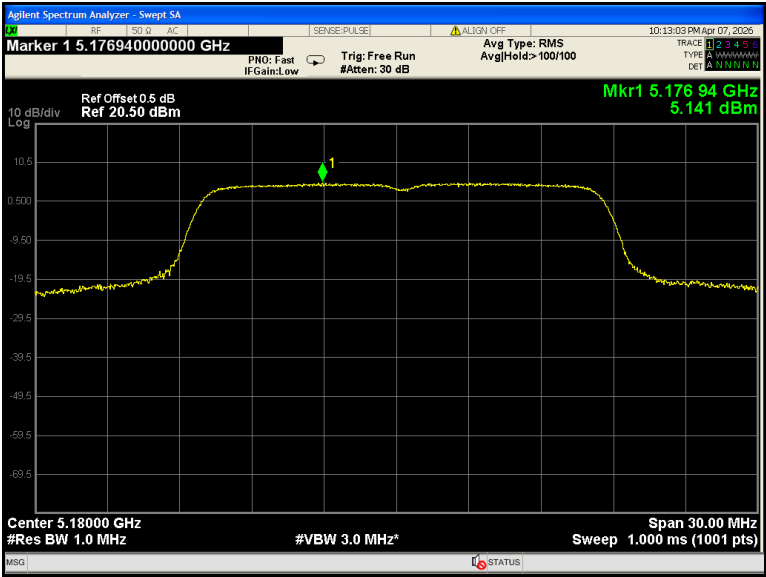
Band	Operation mode	Power Spectral Density (dBm/MHz)		
		Low	Middle	High
U-NII-2A	802.11a	3.849	3.674	3.863
	802.11n(HT20)	3.837	3.495	3.143
	802.11n(HT40)	0.322	/	0.274
	Limit	≤11.00dBm/MHz		

Band	Operation mode	Power Spectral Density (dBm/MHz)		
		Low	Middle	High
U-NII-2C	802.11a	5.099	4.542	4.008
	802.11n(HT20)	4.400	3.973	3.678
	802.11n(HT40)	1.923	1.421	1.145
	Limit	≤11.00dBm/MHz		

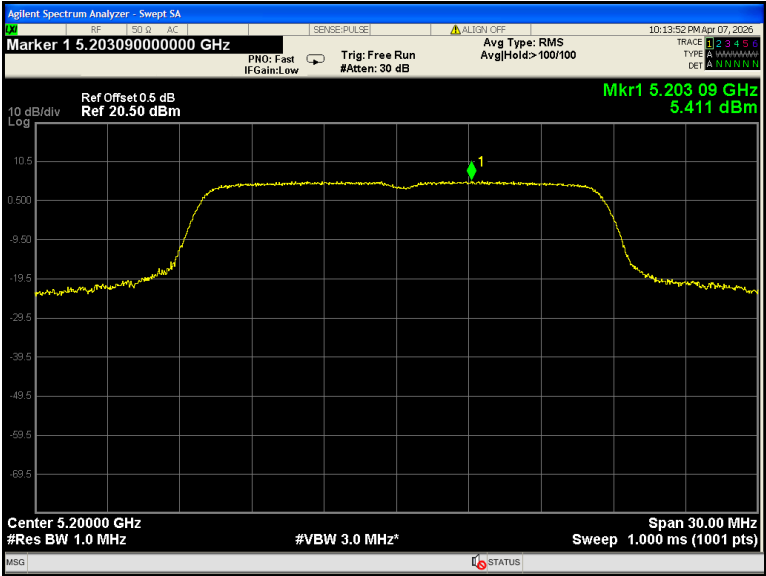
Band	Operation mode	Power Spectral Density (dBm/510kHz)		
		Low	Middle	High
U-NII-3	802.11a	1.567	0.285	0.553
	802.11n(HT20)	0.637	-0.505	-0.343
	802.11n(HT40)	-2.440	/	-3.542
	Limit	≤30.00dBm/500kHz		

Test result plots shown as follows:

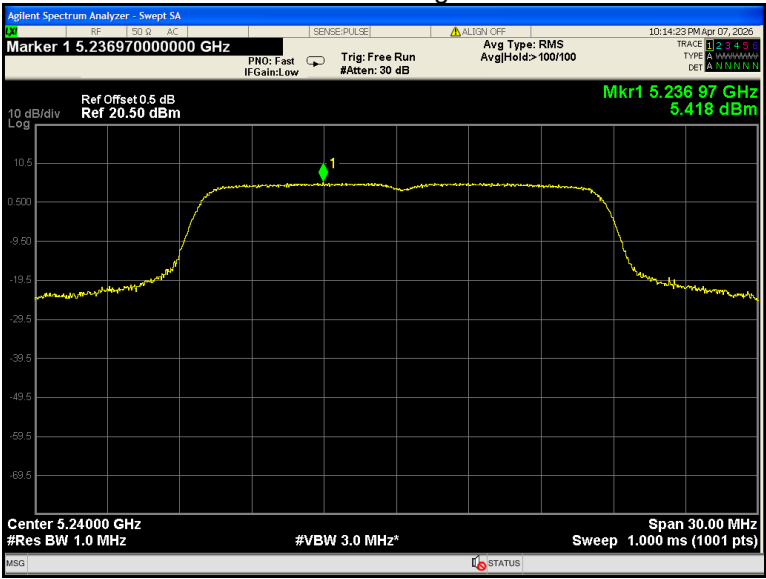
802.11a U-NII-1 Low channel



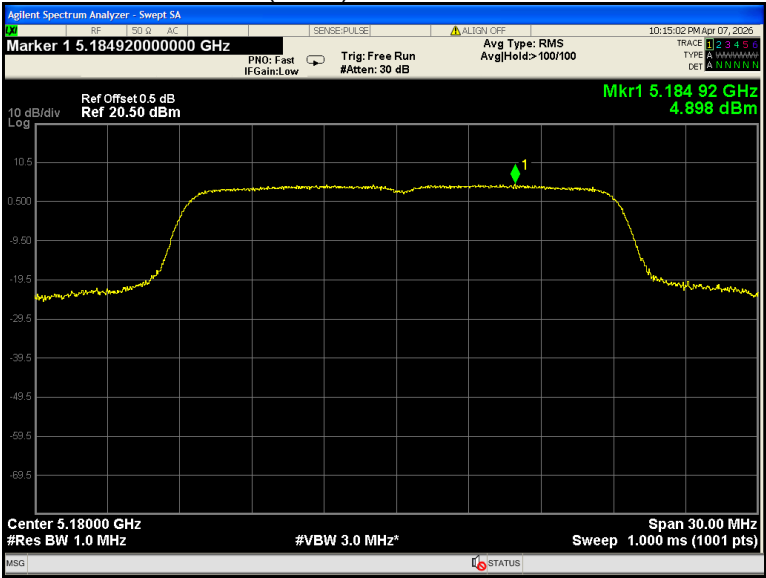
802.11a U-NII-1 Middle channel



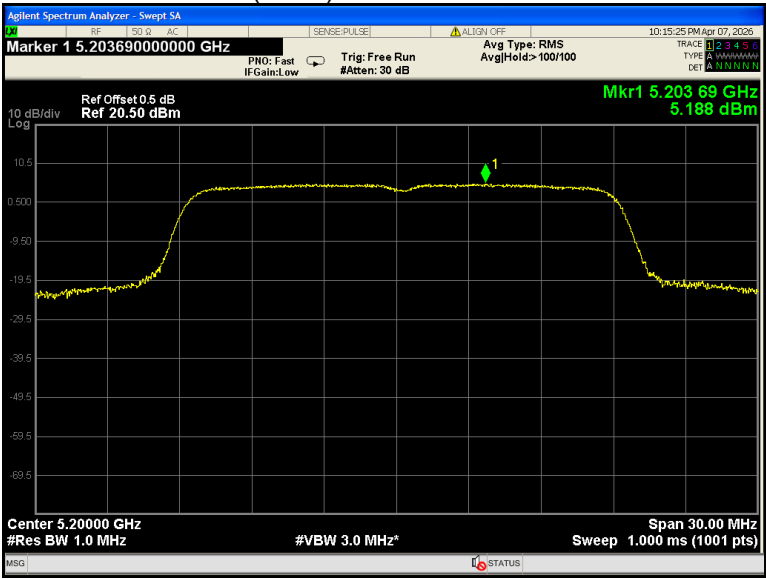
802.11a U-NII-1 High channel



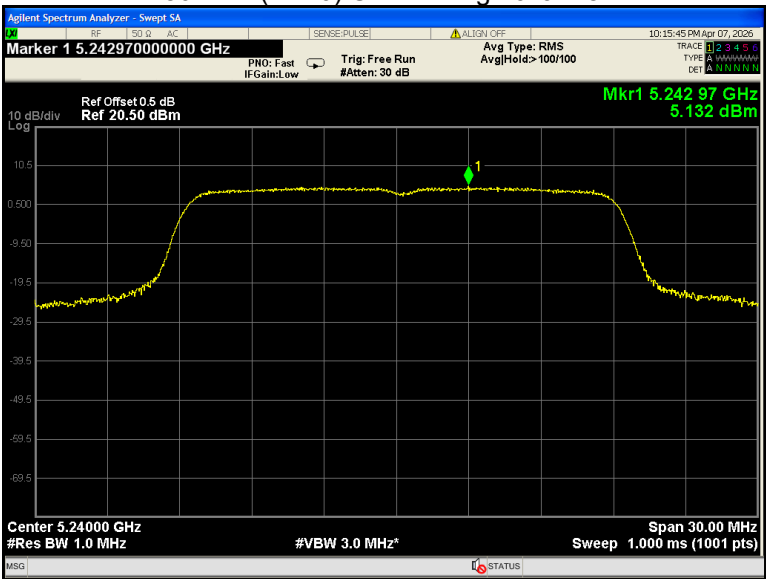
802.11n(HT20) U-NII-1 Low channel



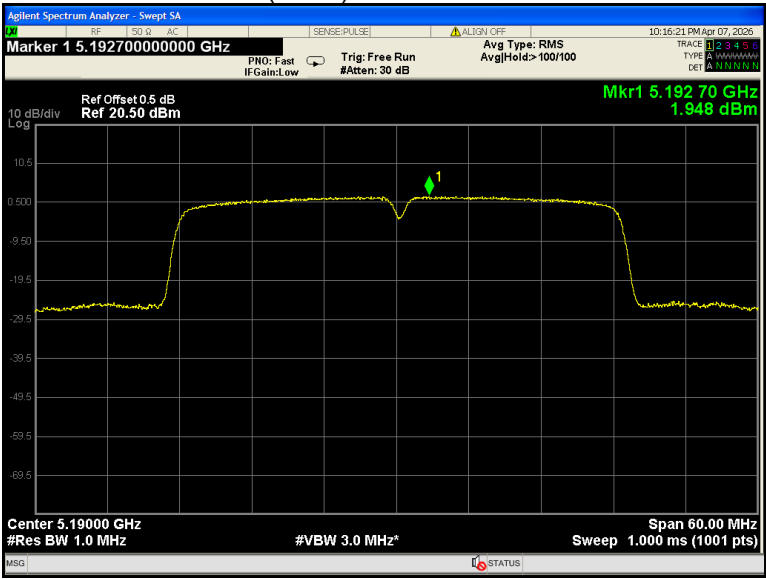
802.11n(HT20) U-NII-1 Middle channel



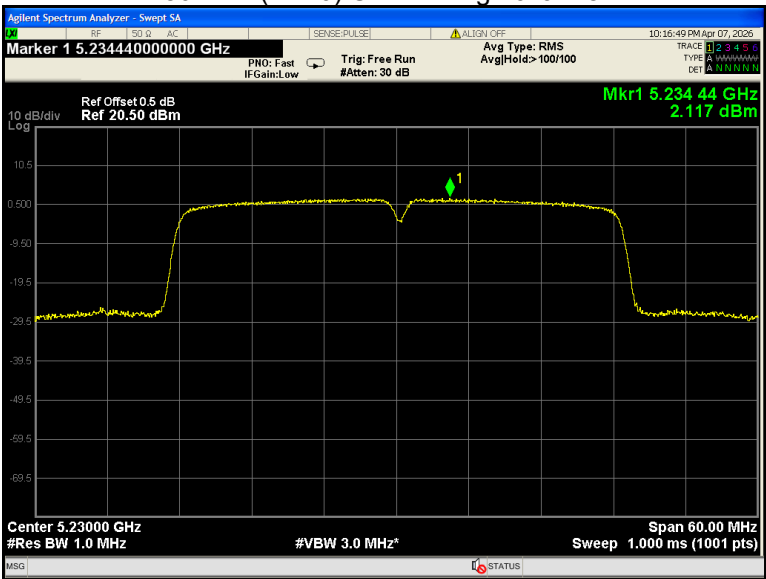
802.11n(HT20) U-NII-1 High channel



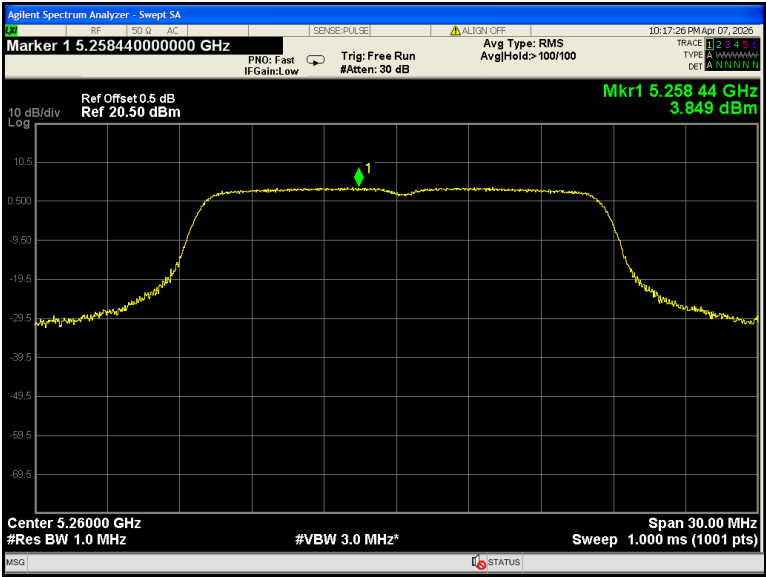
802.11n(HT40) U-NII-1 Low channel



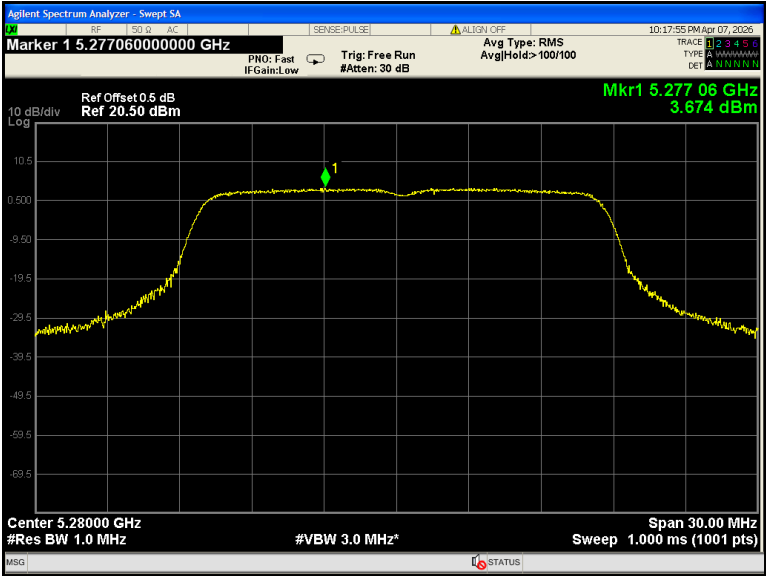
802.11n(HT40) U-NII-1 High channel



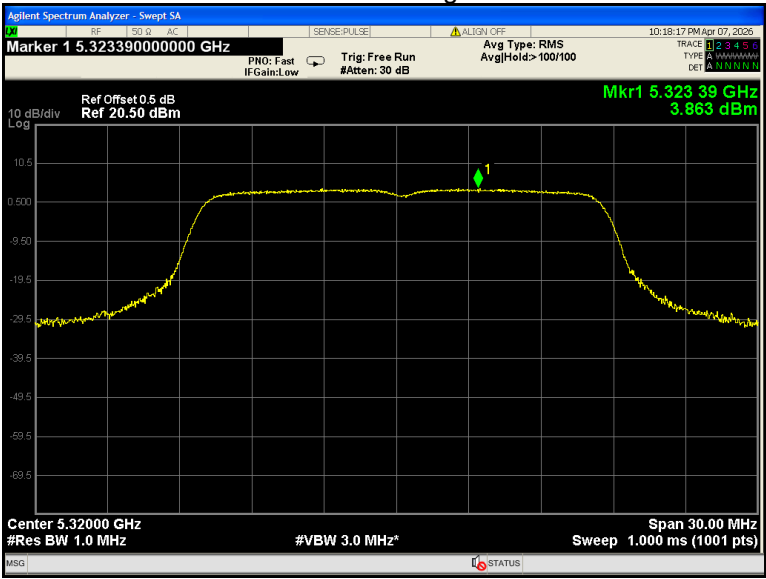
802.11a U-NII-2A Low channel



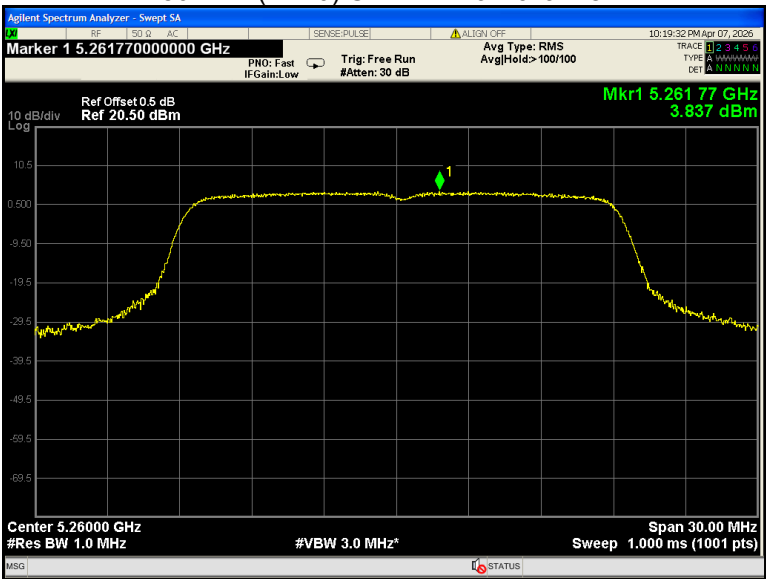
802.11a U-NII-2A Middle channel



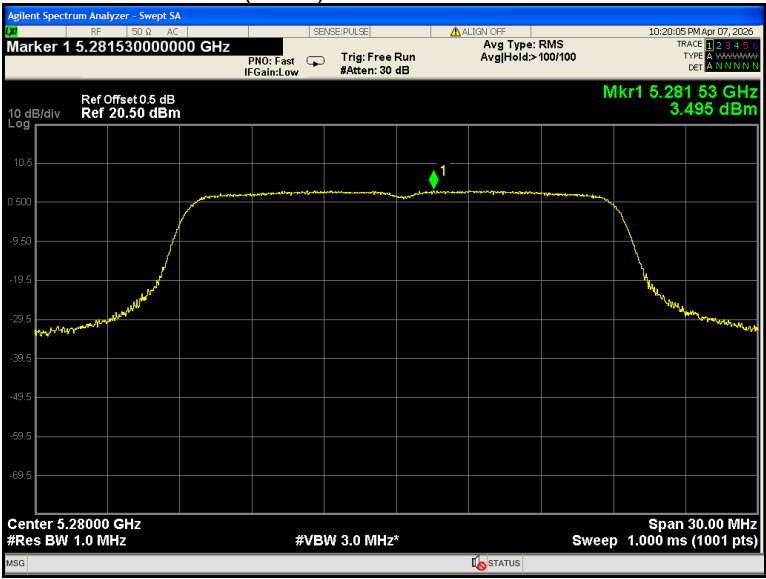
802.11a U-NII-2A High channel



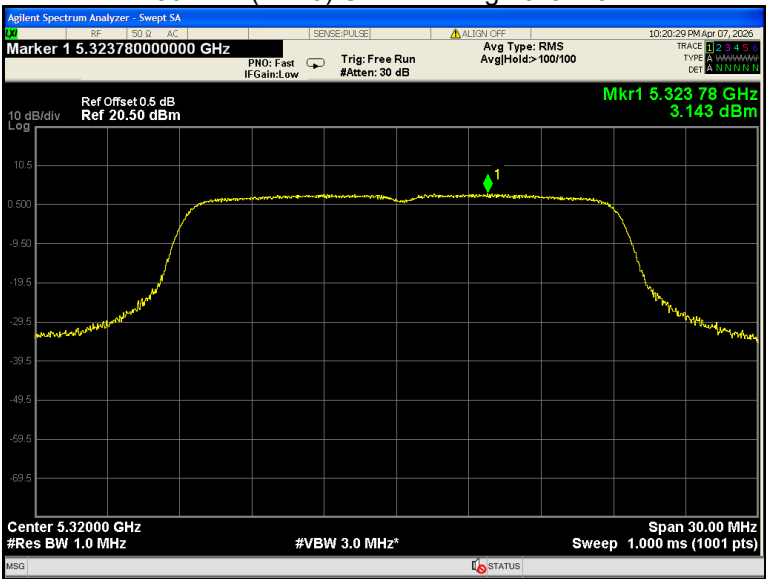
802.11n(HT20) U-NII-2A Low channel



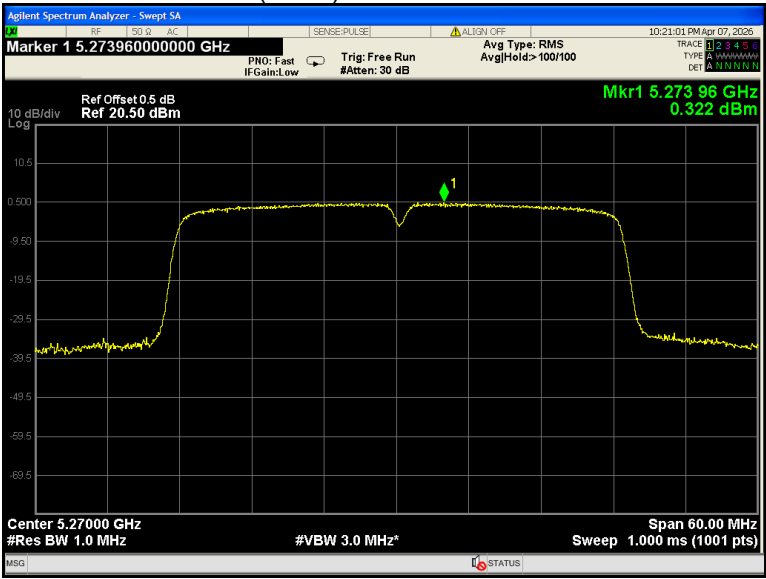
802.11n(HT20) U-NII-2A Middle channel



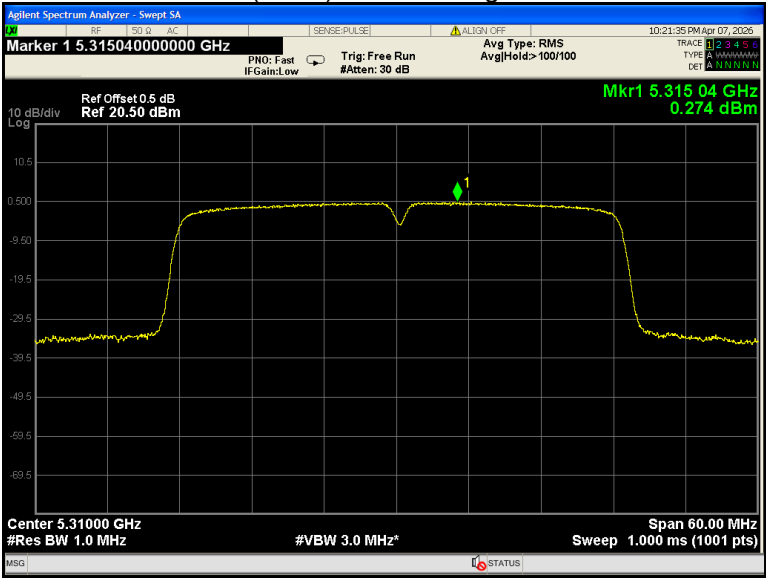
802.11n(HT20) U-NII-2A High channel



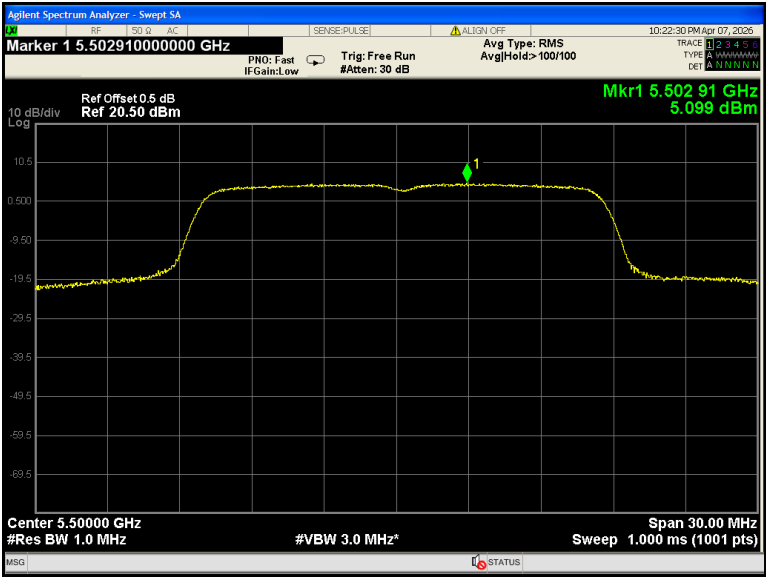
802.11n(HT40) U-NII-2A Low channel



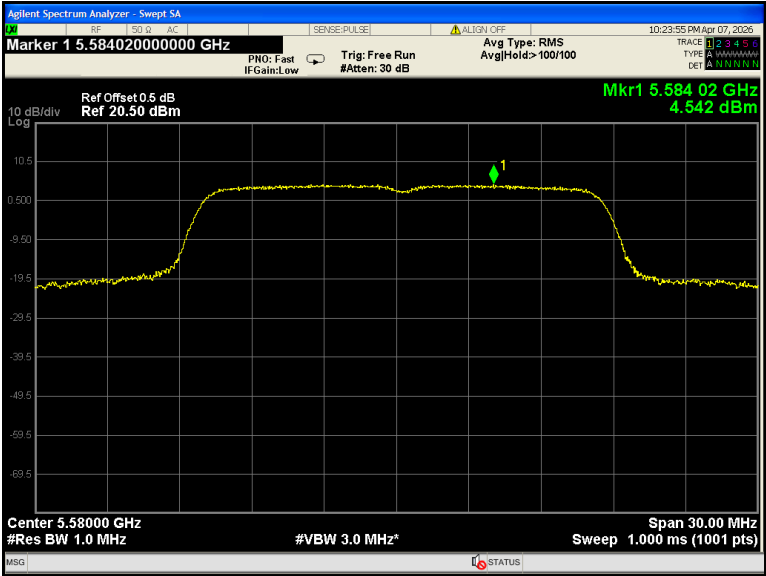
802.11n(HT40) U-NII-2A High channel



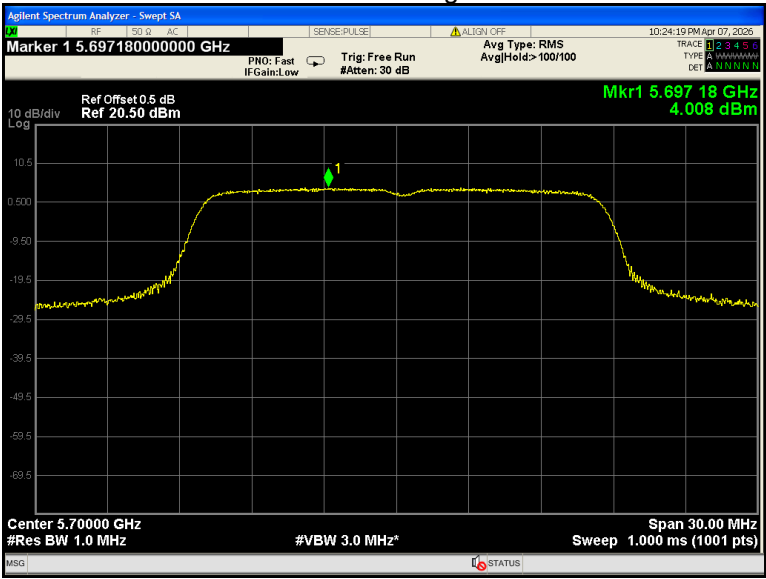
802.11a U-NII-2C Low channel



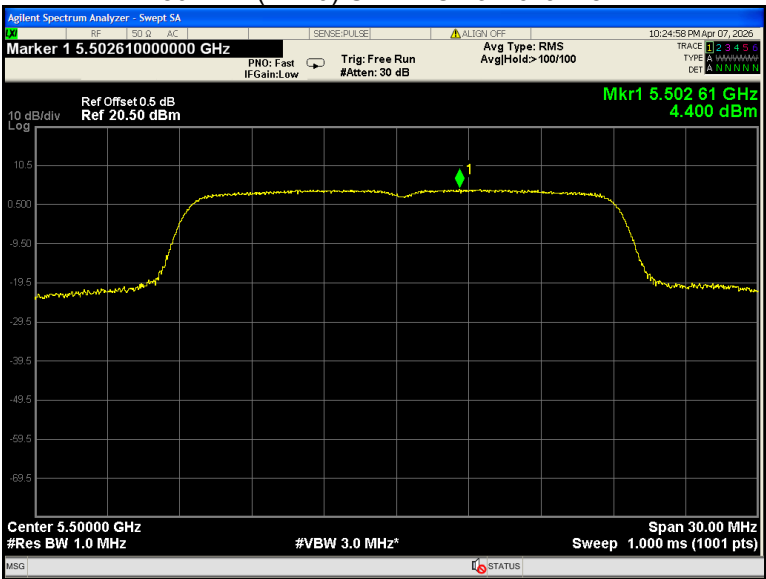
802.11a U-NII-2C Middle channel



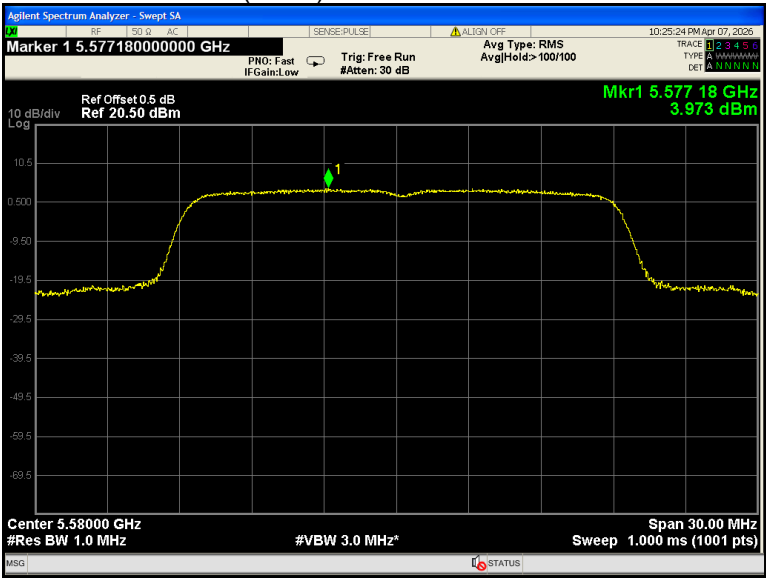
802.11a U-NII-2C High channel



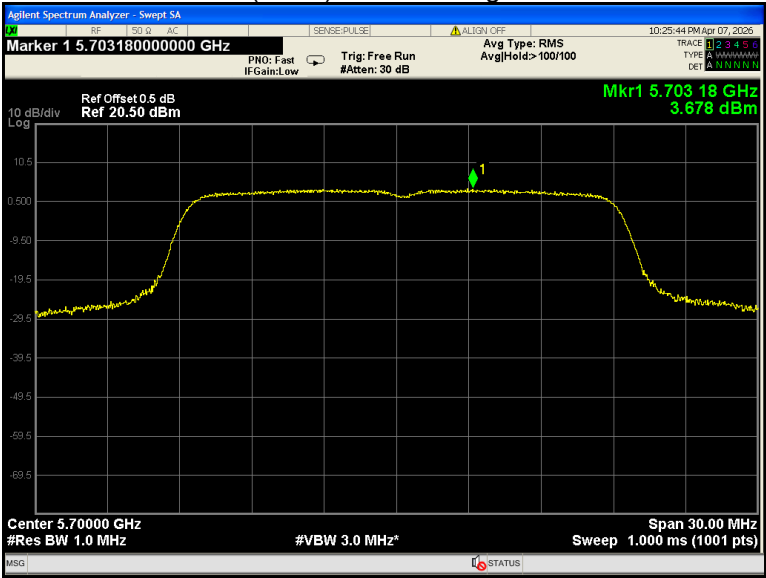
802.11n(HT20) U-NII-2C Low channel



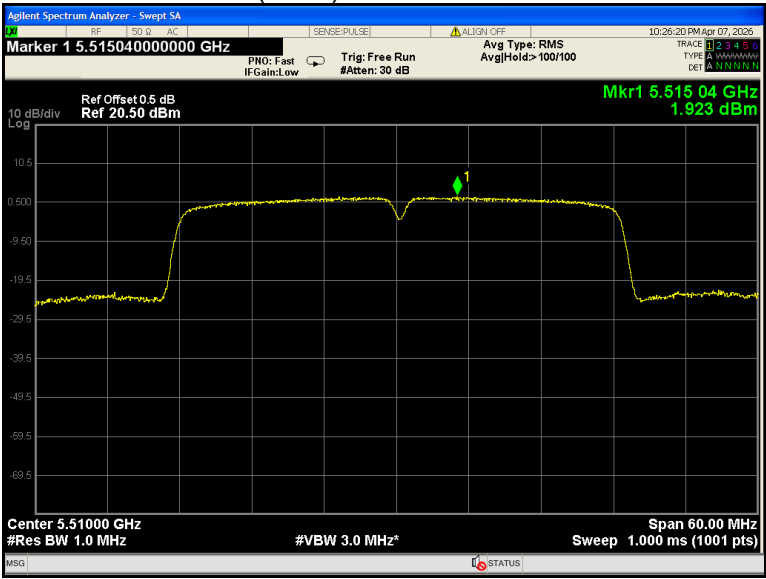
802.11n(HT20) U-NII-2C Middle channel



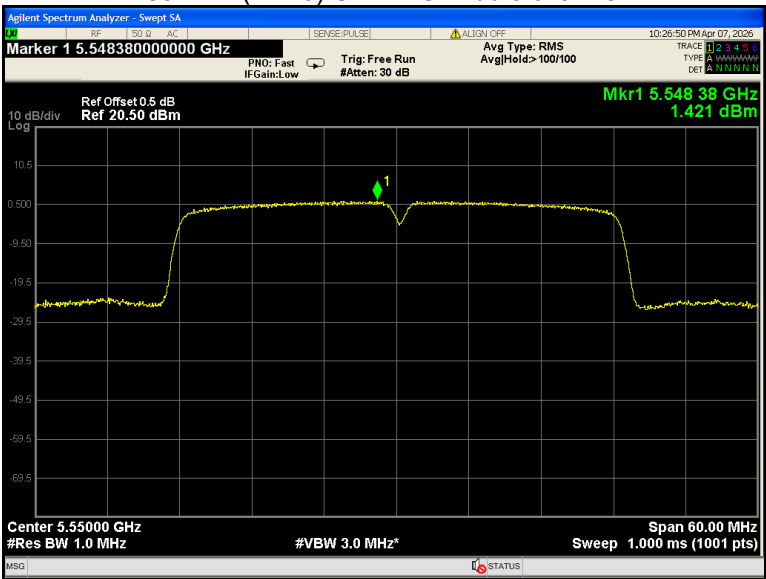
802.11n(HT20) U-NII-2C High channel

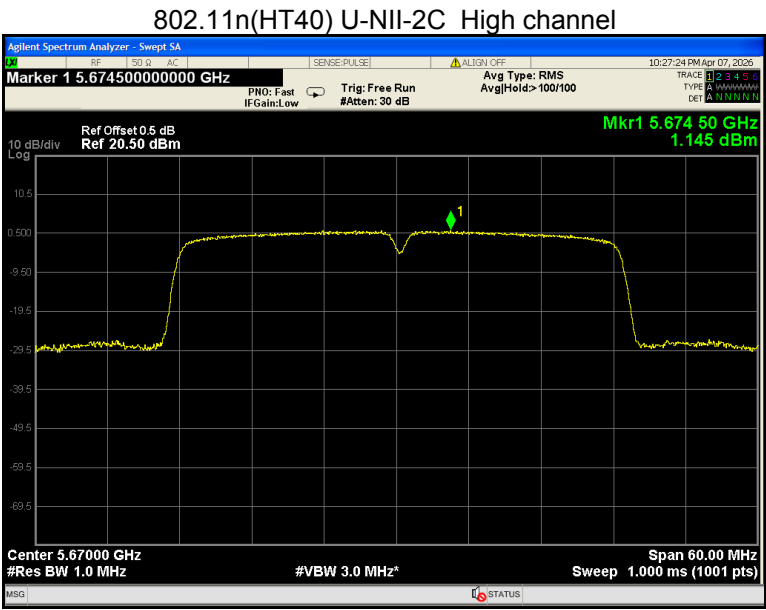


802.11n(HT40) U-NII-2C Low channel

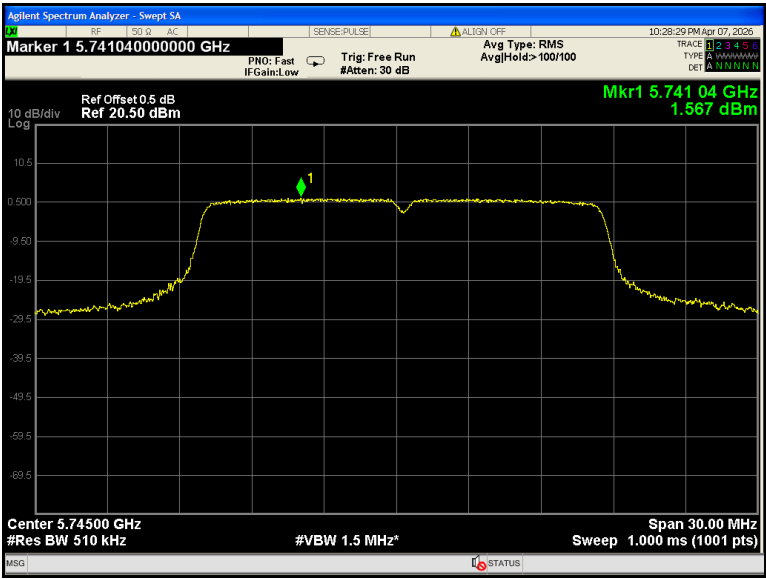


802.11n(HT40) U-NII-2C Middle channel

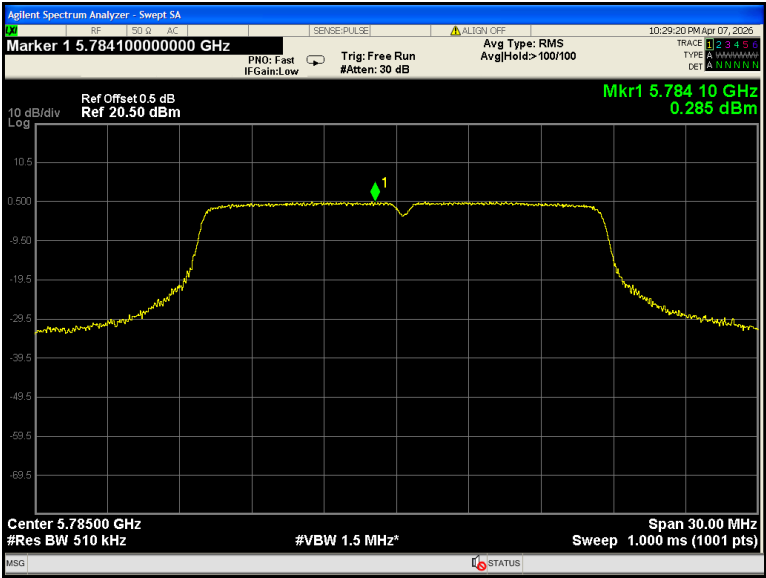




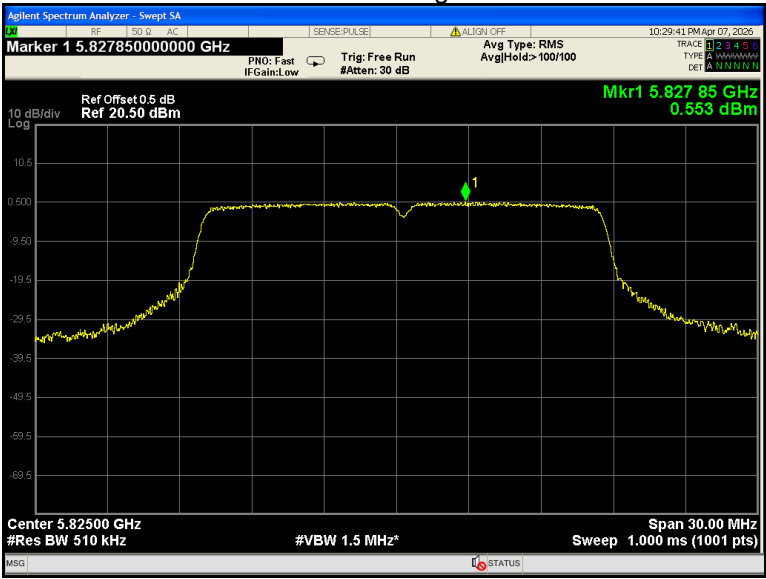
802.11a U-NII-3 Low channel



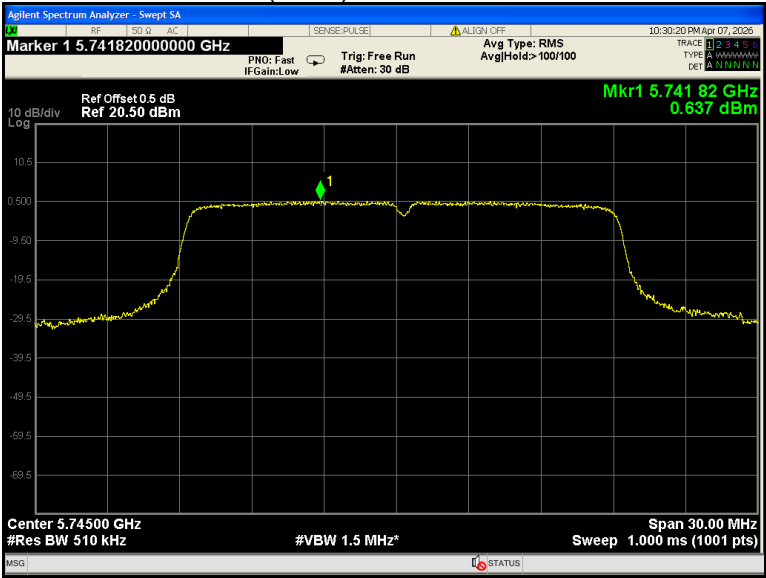
802.11a U-NII-3 Middle channel



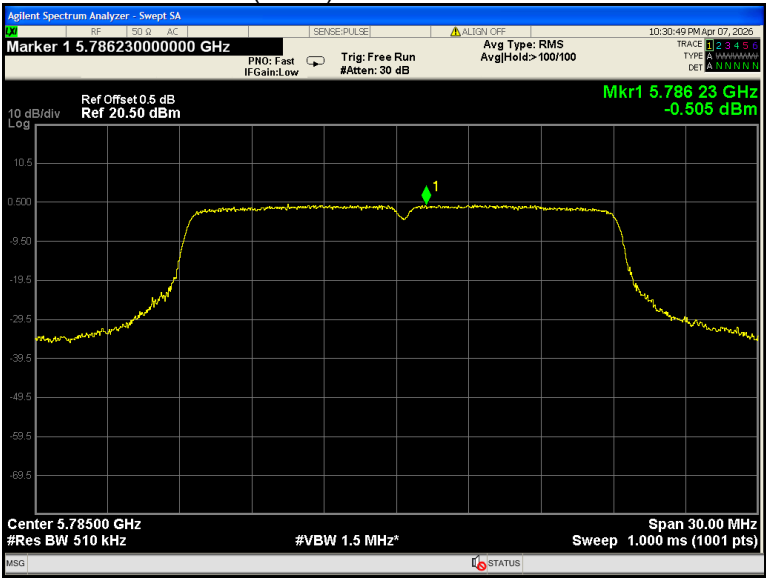
802.11a U-NII-3 High channel



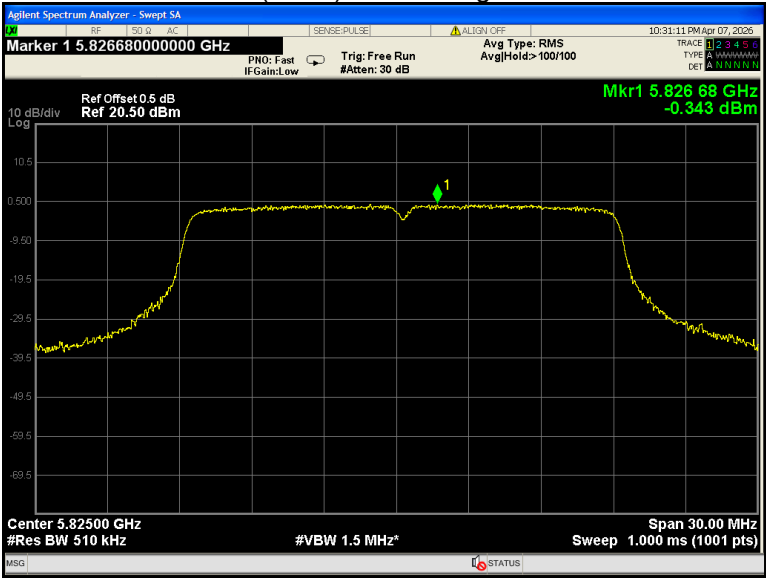
802.11n(HT20) U-NII-3 Low channel



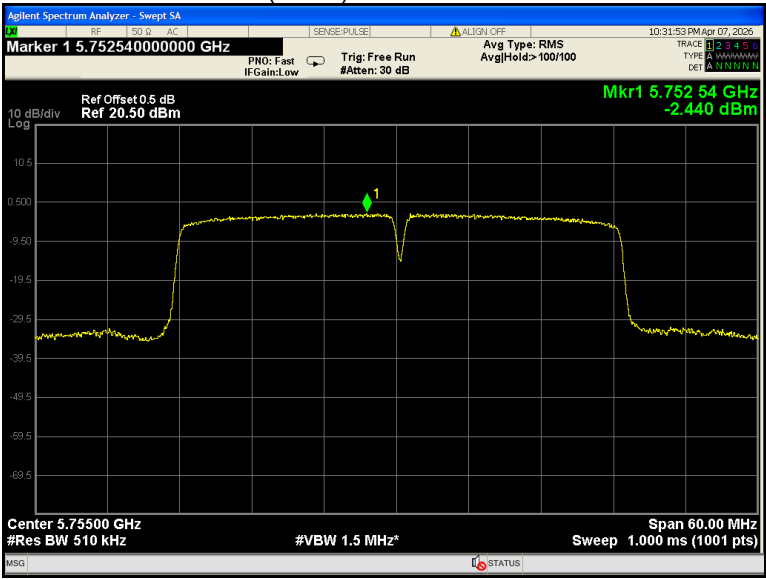
802.11n(HT20) U-NII-3 Middle channel



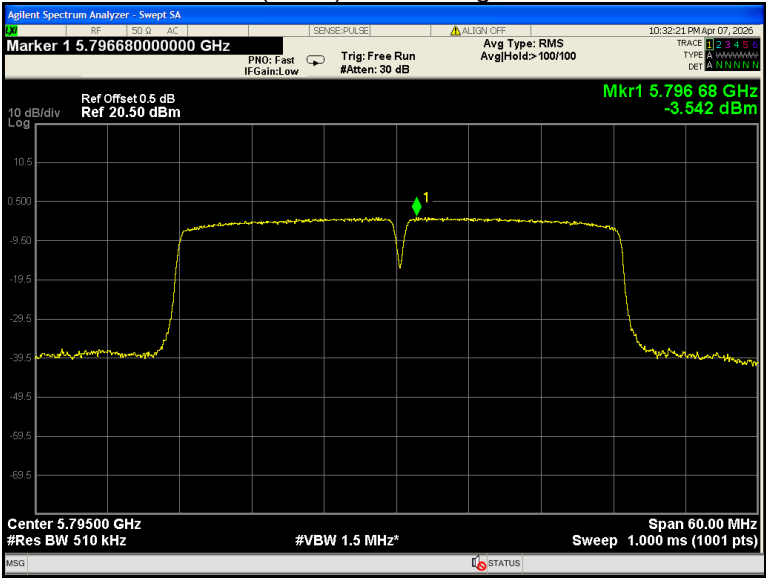
802.11n(HT20) U-NII-3 High channel



802.11n(HT40) U-NII-3 Low channel



802.11n(HT40) U-NII-3 High channel



14 Frequency Stability

Test Requirement:	FCC 47CFR Part 15 Section 15.407(g)
Test Method:	ANSI C63.10-2020
Test Limit:	Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the users manual.
Test Result:	PASS

14.1 Test Procedure

1. The transmitter output (antenna port) was connected to the spectrum analyzer.
EUT have transmitted absence of unmodulation signal and fixed channelise. Set the spectrum analyzer span to view the entire absence of modulation emissions bandwidth. Set RBW = 10 kHz, VBW = 10 kHz with peak detector and maxhold settings. f_c is declaring of channel frequency. Then the frequency error formula is $(f_c - f)/f_c \times 10^6$ ppm and the limit is less than ± 20 ppm The test extreme voltage is to change the primary supply voltage from 85 to 115 percent of the nominal value.
2. Extreme temperature rule is $-15^{\circ}\text{C} \sim 45^{\circ}\text{C}$.

14.2 Test Result

U-NII-1 Test Frequency:5180MHz				
Temperature (°C)	Power Supply (VDC)	Frequency Error (MHz)	Frequency Error (ppm)	Limit (ppm)
45	3.7	0.0080	1.55	Within the band
30		-0.0065	-1.26	Within the band
20		0.0000	0.00	Within the band
10		0.0086	1.66	Within the band
0		0.0028	0.55	Within the band
-10		-0.0011	-0.21	Within the band
-15		0.0002	0.04	Within the band
20	3.1	-0.0040	-0.78	Within the band
20	4.3	-0.0036	-0.70	Within the band

U-NII-2A Test Frequency:5260MHz				
Temperature (°C)	Power Supply (VDC)	Frequency Error (MHz)	Frequency Error (ppm)	Limit (ppm)
45	3.7	-0.0031	-0.60	Within the band
30		-0.0056	-1.07	Within the band
20		0.0000	0.00	Within the band
10		-0.0042	-0.79	Within the band
0		0.0014	0.27	Within the band
-10		0.0033	0.62	Within the band
-15		-0.0044	-0.84	Within the band
20	3.1	-0.0084	-1.60	Within the band
20	4.3	0.0022	0.41	Within the band

U-NII-2C Test Frequency:5500MHz				
Temperature (°C)	Power Supply (VDC)	Frequency Error (MHz)	Frequency Error (ppm)	Limit (ppm)
45	3.7	-0.0014	-0.25	Within the band
30		-0.0047	-0.86	Within the band
20		0.0000	0.00	Within the band
10		0.0039	0.72	Within the band
0		-0.0005	-0.10	Within the band
-10		0.0005	0.10	Within the band
-15		0.0027	0.49	Within the band
20	3.1	-0.0036	-0.66	Within the band
20	4.3	0.0078	1.42	Within the band

U-NII-3 Test Frequency:5785MHz				
Temperature (°C)	Power Supply (VDC)	Frequency Error (MHz)	Frequency Error (ppm)	Limit (ppm)
45	3.7	-0.0013	-0.23	Within the band
30		0.0032	0.55	Within the band
20		0.0000	0.00	Within the band
10		-0.0001	-0.02	Within the band
0		-0.0007	-0.13	Within the band
-10		0.0016	0.27	Within the band
-15		-0.0023	-0.41	Within the band
20	3.1	-0.0011	-0.19	Within the band
20	4.3	-0.0016	-0.27	Within the band

15 Antenna Requirement

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. 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. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, §15.213, §15.217, §15.219, or §15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

This product has an EP30 Wi-Fi Version 3-in-1 Antenna fulfil the requirement of this section.

Note: Please refer to EUT photos for more details.

16 RF Exposure

Remark: Please refer to SAR test report: WTX26X08231159W.

17 Photographs of test setup and EUT.

Note: Please refer to appendix: Appendix-MAS30-Photos

=====End of Report=====