



427 West 12800 South
Draper, UT 84020

Test Report Certification

FCC ID	SWX-U6PROR
Equipment Under Test	無線存取點
Model Number	U6-Pro
Test Report Serial Number	TR5784_04
Date of Test(s)	13, 14, 21, 27 January 2021; 2 February 2021
Report Issue Date	26 August 2021

Test Specification	Applicant	
47 CFR FCC Part 15, Subpart C RSS-247 Issue 2 LP0002 July 1 2020 Section 5.7.1	Ubiquiti Inc 685 Third Avenue New York, NY 10019	香港商優比快科技有限公司台灣分公司 台北市信義區松仁路107號12樓



NVLAP LAB CODE 600241-0

Certification of Engineering Report

This report has been prepared by Unified Compliance Laboratory (UCL) to document compliance of the device described below with the requirement of Federal Communication Commissions (FCC) Part 15, Subpart E. This report may be reproduced in full. Partial reproduction of this report may only be made with the written consent of the laboratory. The results in this report apply only to the sample tested.

Applicant	Ubiquiti Inc. / 香港商優比快科技有限公司台灣分公司
Manufacturer	Ubiquiti Inc.
Brand Name	UBIQUITI
Equipment Under Test	無線存取點
Model Number	U6-Pro
FCC ID	SWX-U6PROR
IC ID	6545A-U6PROR

On this 4th day of February 2021, I individually and for Unified Compliance Laboratory certify that the statements made in this engineering report are true, complete and correct to the best of my knowledge and are made in good faith.

Although NVLAP has accredited the Unified Compliance Laboratory testing facilities, this report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the U.S. federal government.

Unified Compliance Laboratory



Written By: Noah Vickers



Reviewed By: Alex Macon

Revision History		
Revision	Description	Date
01	Original Report Release	4 February 2021
02	Updated section 2.4, 2.6 and 5.4	16 September 2021
03	Updated power tables	20 September 2021
04	Updated 30 – 1000 MHz data	14 October 2021

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1 Client Information

1.1 Applicant

Company	Ubiquiti, Inc. 685 Third Avenue New York, NY 10017 U.S.A.	香港商優比快科技有限公 司台灣分公司 台北市信義區松仁路 107 號 12 樓
Contact Name	Mark Feil	
Title	Compliance Manager	

1.2 Manufacturer

Company	Ubiquiti Inc. 685 Third Avenue New York, NY 10017 U.S.A.
Contact Name	Mark Feil
Title	Compliance Manager

2 Equipment Under Test (EUT)

2.1 Identification of EUT

Brand Name	UBIQUITI
Model Number	U6-Pro
Antenna Brand	Ubiquiti
Antenna Model	U6-Pro
Equipment Under Test	無線存取點
Serial Number	FCECDAFFA7DA
Dimensions (cm)	19.7 x 19.7 x 3.5

2.2 Description of EUT

The U6-Pro is a WiFi 6 access point with 5.3Gbps throughput and a 300+ client capacity which utilizes MU-MIMO. The U6-Pro provides reliable wireless coverage across device-dense environments. The U6-Pro is powered from a PoE 802.3at power adapter.

Band	Modulation Bandwidth	Frequency (MHz)
UNII-1	20 MHz	5180, 5200, 5220, 5240
	40 MHz	5190, 5230
	80 MHz	5210
UNII-3	20 MHz	5745, 5765, 5785, 5805, 5825
	40 MHz	5755, 5795
	80 MHz	5775

This report covers the circuitry of the device subject to FCC Part 15, Subpart E. The circuitry of the device subject to FCC Part 15 Subpart B was found to be compliant and is covered under a separate Unified Compliance Laboratory report.

2.3 EUT and Support Equipment

The EUT and support equipment used during the test are listed below.

Brand Name Model Number Serial Number	Description	Name of Interface Ports / Interface Cables
BN: Unifi MN: U6-Pro (Note 1) SN: FCECDAFFA7DA	WiFi Access Point	See Section 2.4
BN: Ubiquiti MN: U-POE-at SN: N/A	PoE Power Adapter	Shielded or Un-Shielded Cat 5e cable (Note 2)
BN: Toshiba MN: Satellite SN: N/A	Laptop Personal Computer	Shielded or Un-Shielded Cat 5e cable (Note 2)

Notes: (1) EUT

(2) Interface port connected to EUT (See Section 2.4)

The support equipment listed above was not modified in order to achieve compliance with this standard.

2.4 Interface Ports on EUT

Name of Ports	No. of Ports Fitted to EUT	Cable Description/Length
Ethernet/PoE	1	Shielded or Un-Shielded Cat 5e cable

僅供測試用途之配件資訊 Accessories used only for supporting the tests			
名稱 Name	廠牌 Brand	型號 Model	備註 Remark
Shielded Cat 5e cable	Cable Matters	160012-BLU-8	8 meters
Shielded Cat 5e cable	Cable Matters	160012-BLU-8	8 meters
POE Power Adapter	Ubiquiti	U-POE-at	N/A
Power cord	和可	CH-1902+CHI106	N/A

2.5 Operating Environment

Power Supply	120 VAC
AC Mains Frequency	60 Hz
Temperature	21.8 – 22.9 °C
Humidity	13.65 – 25.06 %
Barometric Pressure	1015 mBar

2.6 Operating Modes

The U6-Pro was tested using test software in order to enable to constant transmission of over 98%. All emission modes of 802.11 a/n/ac/ax were investigated. All measurements are reported with the worst-case mode (802.11ax) unless otherwise stated. The product utilizes MU-MIMO. The product was tested in its highest compliant power configuration. Where applicable, all ports are summed in the tables below. This provides highest summed amplitude per channel.

2.7 EUT Exercise Software

EUT firmware version 1.0 was used to operate the transmitter using a constant transmit mode.

2.8 Block Diagram of Test Configuration

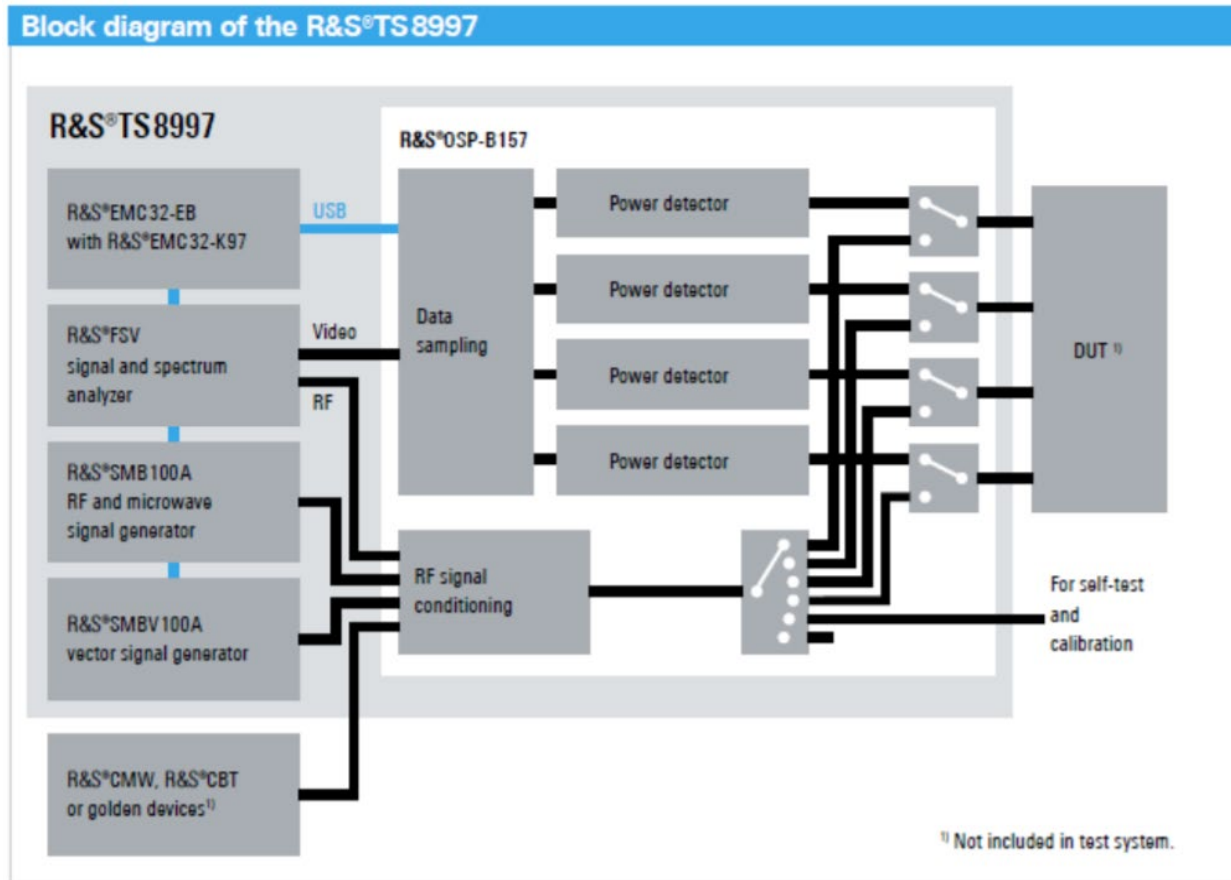


Diagram 1: Test Configuration Block Diagram

2.9 Modification Incorporated/Special Accessories on EUT

There were no modifications made to the EUT during testing to comply with the specification.

2.10 Deviation, Opinions Additional Information or Interpretations from Test Standard

There were no deviations, opinions, additional information or interpretations from the test specification.

3 Test Specification, Method and Procedures

3.1 Test Specification

Title	47 CFR FCC Part 15, Subpart E, Section 15.407, RSS-247 Limits and methods of measurement of radio interference characteristics of Unlicensed National Information Infrastructure Devices RSS-247 Issue 2 LP0002 July 1, 2020 Section 5.7.1
Purpose of Test	The tests were performed to demonstrate initial compliance

3.2 Summary of Tests

FCC Section	NCC Section	ISED Section	Environmental Phenomena	Frequency Range (MHZ)	Result
15.407(a)	5.7.3.3	SMSE-013-17	Antenna requirements	Structural Requirement	Compliant
15.407(b)	3.3	N/A	Conducted Disturbance at Mains Port	0.15 to 30	Compliant
15.407(c)	5.7.5.	N/A	Bandwidth Requirement	5150 to 5250	Compliant
15.407(e)	5.7.3.3	N/A	Peak Output Power	5150 to 5250	Compliant
15.407(f)	5.7.4	N/A	Antenna Conducted Spurious Emissions	0.009 to 40000	Compliant
15.407(g)	5.7.4, 3.6, 3.5	N/A	Radiated Spurious Emissions	0.009 to 40000	Compliant
15.407(h)	5.7.3.3(2)	N/A	Peak Power Spectral Density	5150 to 5250	Compliant
The testing was performed according to the procedures in ANSI C63.10-2013, KDB 558074, KDB 789033, KDB 662911 and 47 CFR Part 15. See test standard for details.					

3.3 Results

In the configuration tested, the EUT complied with the requirements of the specification.

3.4 Test Location

Testing was performed at the Unified Compliance Laboratory 10-Meter chamber located at 427 West 12800 South, Draper, UT 84020. Unified Compliance Laboratory is accredited by National Voluntary Laboratory Accreditation Program (NVLAP); NVLAP Code 600241-0 which is effective until 30 June 2021. This site has also been registered with Innovations, Science and Economic Development (ISED) department as was accepted under Appendix B, Phase 1 procedures of the APEC Tel MRA for Canadian recognition. ISED No.: 25346, effective until June 30, 2021. Unified Compliance Laboratory has been assigned Conformity Assessment Number US0223 by ISED.

4 Test Equipment

4.1 Conducted Emissions at Mains Ports

Type of Equipment	Manufacturer	Model Number	Asset Number	Date of Last Calibration	Due Date of Calibration
EMI Receiver	AFJ	FFT3010	UCL-2500	9/18/2020	9/18/2021
LISN	AFJ	LS16C/10	UCL-2512	5/26/2020	5/26/2021

Table 1: List of equipment used for Conducted Emissions Testing at Mains Port

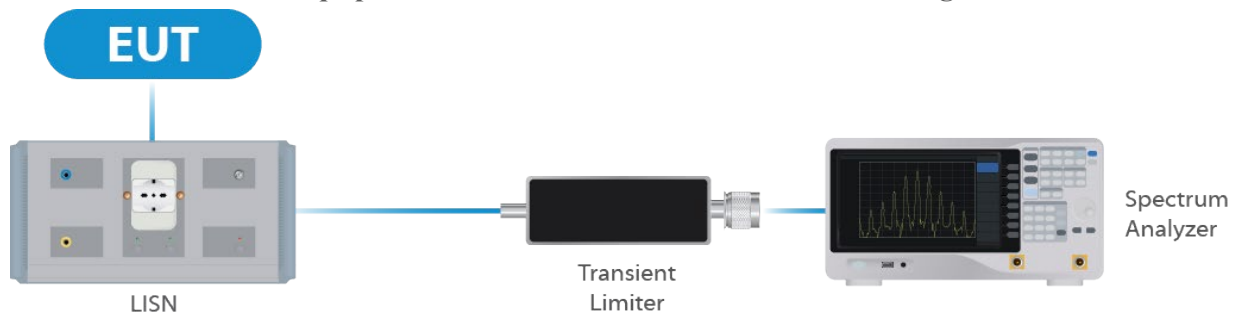


Figure 1: Conducted Emissions Test

4.2 Direct Connect at the Antenna Port Tests

Type of Equipment	Manufacturer	Model Number	Asset Number	Date of Last Calibration	Due Date of Calibration
Spectrum Analyzer	R&S	FSV40	UCL-2861	8/24/2020	8/24/2021
Signal Generator	R&S	SMB100A	UCL-2864	N/A	N/A
Vector Signal Generator	R&S	SMBV100A	UCL-2873	N/A	N/A
Switch Extension	R&S	OSP-B157WX	UCL-2867	8/25/2020	8/25/2021
Switch Extension	R&S	OSP-150W	UCL-2870	8/21/2020	8/21/2021

Table 2: List of equipment used for Direct Connect at the Antenna Port

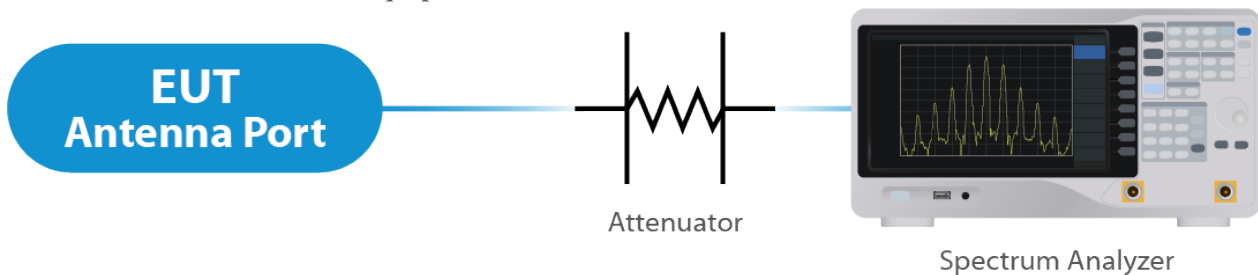


Figure 2: Direct Connect at the Antenna Port Test

4.3 Radiated Emissions

Type of Equipment	Manufacturer	Model Number	Asset Number	Date of Last Calibration	Due Date of Calibration
EMI Receiver	Keysight	N9038A	UCL-2778	6/1/2020	6/1/2021
Pre-Amplifier 9 kHz – 1 GHz	Sonoma Instruments	310N	UCL-2889	9/10/2020	9/10/2021
Double Ridge Horn Antenna	Scwarzbeck	BBHA 9120D	UCL-3065	7/8/2020	7/8/2021
Log Periodic	Scwarzbeck	STLP 9129	UCL-3068	5/20/2020	5/20/2021
15 - 40 GHz Horn Antenna	Scwarzbeck	BBHA 9170	UCL-2487	5/21/2020	5/21/2021
1 – 18 GHz Amplifier	Com-Power	PAM 118A	UCL-3833	9/29/2020	9/29/2021
Test Software	UCL	Revision 1	UCL-3108	N/A	N/A

Table 3:List of equipment used for Radiated Emissions

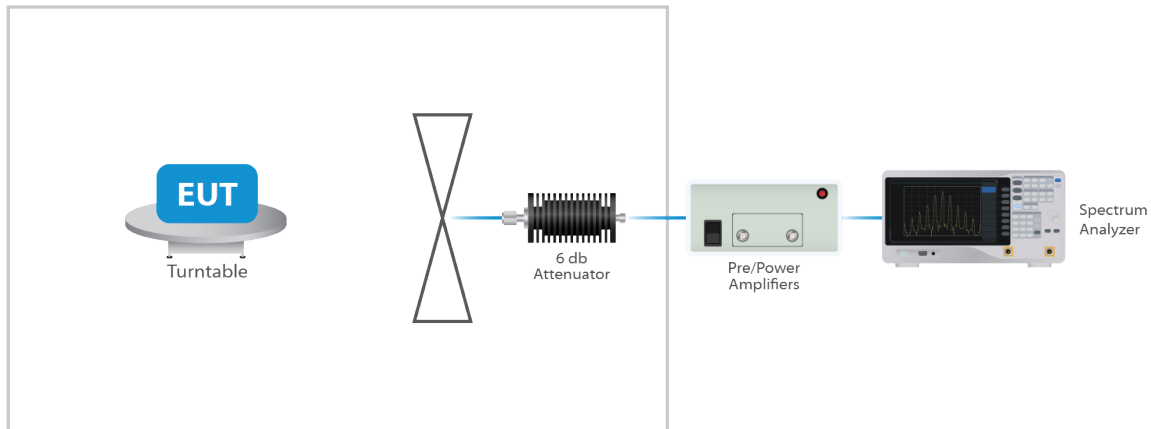


Figure 3: Radiated Emissions Test

4.4 Equipment Calibration

All applicable equipment is calibrated using either an independent calibration laboratory or Unified Compliance Laboratory personnel at intervals defined in ANSI C63.4:2014 following outlined calibration procedures. All measurement instrumentation is traceable to the National Institute of Standards and Technology (NIST). Supporting documentation relative to traceability is on file and is available for examination upon request.

4.5 Measurement Uncertainty

Test	Uncertainty ($\pm$ dB)	Confidence (%)
Conducted Emissions	1.44	95
Radiated Emissions (9 kHz to 30 MHz)	2.50	95
Radiated Emissions (30 MHz to 1 GHz)	4.38	95
Radiated Emissions (1 GHz to 18 GHz)	4.37	95
Radiated Emissions (18 GHz to 40 GHz)	3.93	95
Direct Connect Tests	K Factor	Value
Emissions Bandwidth	2	2.0%
Output Power	2	1.0 dB
Peak Power Spectral Density	2	1.3 dB
Band Edge	2	0.8 dB
Transmitter Spurious Emissions	2	1.8 dB

5 Test Results

5.1 Antenna Requirements

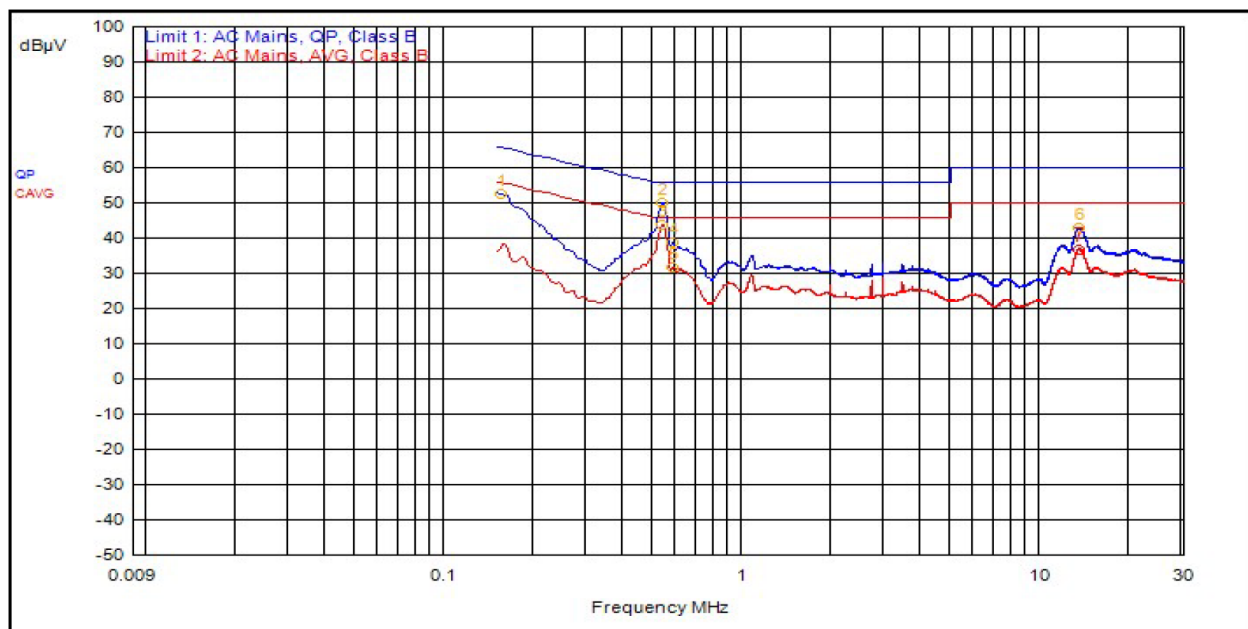
The EUT uses an integral antenna. The Maximum gain of the antenna is 6.0 dBi. The antenna is not user replaceable.

Results

The EUT complied with the specification

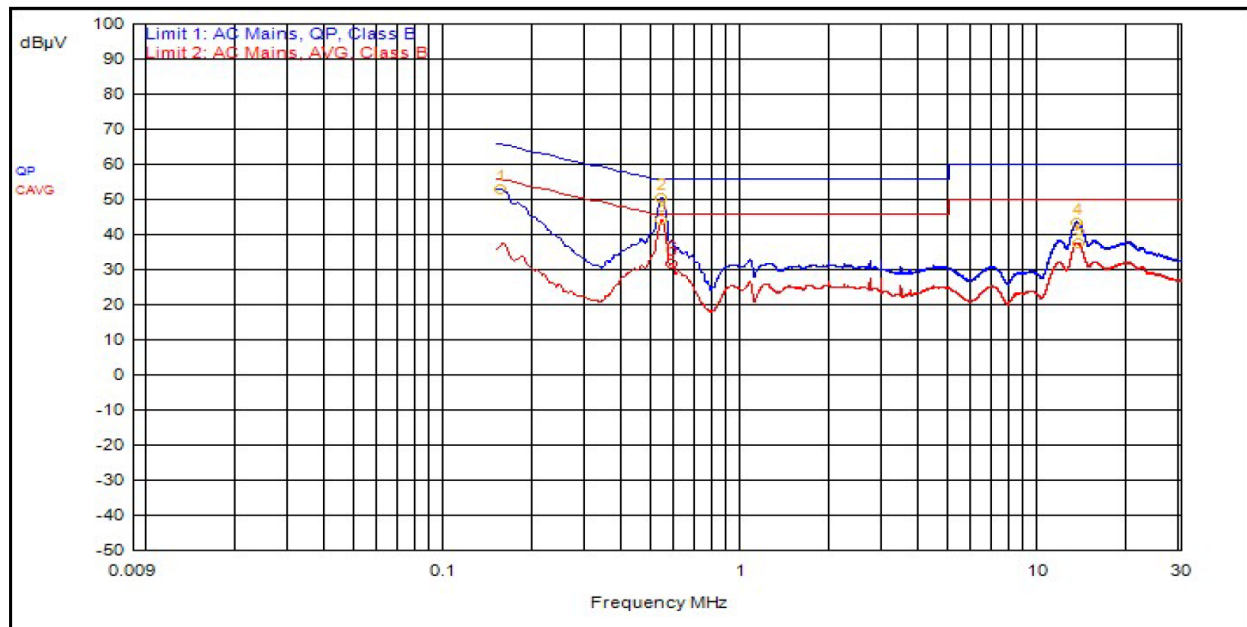
5.2 Conducted Emissions at Mains Ports Data

5.2.1 Line



ID	Frequency	Probe	Cable	Atten.	Detector	Meter Read	Meas Level	Limit	Limit Dist.
3	537.000kHz	12.4	0.0		C_AVG	31.2	43.7	46.0	-2.3
2	537.000kHz	12.4	0.0		QPeak	37.7	50.1	56.0	-5.9
1	153.000kHz	12.4	0.0		QPeak	40.3	52.6	65.8	-13.2
7	13.320MHz	12.4	0.2		C_AVG	24.1	36.8	50.0	-13.2
5	582.000kHz	12.4	0.0		C_AVG	19.4	31.8	46.0	-14.2
6	13.380MHz	12.4	0.2		QPeak	30.3	42.9	60.0	-17.1
4	579.000kHz	12.4	0.0		QPeak	26.4	38.8	56.0	-17.2

5.2.2 Neutral



ID	Frequency	Probe	Cable	Atten.	Detector	Meter Read	Meas Level	Limit	Limit Dist.
3	537.000kHz	12.4	0.0		C_AVG	31.9	44.3	46.0	-1.7
2	537.000kHz	12.4	0.0		QPeak	38.1	50.6	56.0	-5.4
5	13.440MHz	12.4	0.2		C_AVG	25.0	37.7	50.0	-12.3
1	153.000kHz	12.4	0.0		QPeak	40.7	53.1	65.8	-12.7
6	579.000kHz	12.4	0.0		C_AVG	19.4	31.8	46.0	-14.2
4	13.380MHz	12.4	0.2		QPeak	30.8	43.4	60.0	-16.6

Result

The EUT complied with the specification limit.

5.3 Emissions Bandwidth

Nominal BW (MHz)	Frequency (MHz)	99% Bandwidth (MHz)	26 dB Bandwidth (MHz)
20	5180	19.1	21.4
20	5210	19.3	24.8
20	5240	20.2	41.9
40	5190	37.8	39.9
40	5230	37.8	39.9
80	5210	77.0	83.0

Result

The bandwidths are reported for information purposes. Please see Annex for all bandwidth measurements. All chains were tested with the highest reported.

5.4 Maximum Average Output Power

The maximum average RF conducted output power measured for this device was 26.5 dBm or 446.7 mW. The limit is 30 dBm, or 1 Watt when using antennas with 6 dBi or less gain. The antenna has a gain of 6.0 dBi. The product utilizes MU-MIMO. The product was tested in its highest compliant power configuration and all ports are summed in the table below. This provides highest summed amplitude per channel.

For the band 5.15 GHz~5.25 GHz

(1) For outdoor access:

(A) The maximum conducted output power shall be less than or equal to 1 Watt.

(B) The maximum power spectral density shall be less than or equal to 17 dBm in any 1 MHz band.

(C) If transmitting antennas of directional gain greater than 6 dBi are used, both the

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maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dBi that the directional gain of the antenna exceeds 6 dBi.

(D) The maximum EIRP at any elevation angle above 30 degrees as measured from the horizon shall be less than or equal to 21 dBm.

(2) For indoor access:

(A) The maximum conducted output power over the frequency band of operation shall be less than or equal to 1 Watt.

(B) The maximum power spectral density shall be less than or equal to 17 dBm in any 1 MHz band.

(C) 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 dBi that the directional gain of the antenna exceeds 6 dBi.

(3) For fixed point-to-point access:

(A) The maximum conducted output power shall be less than or equal to 1 Watt.

(B) The maximum power spectral density shall be less than or equal to 17 dBm in any 1 MHz band.

(C) If transmitting antennas of directional gain greater than 23 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dBi that the directional gain of the antenna exceeds 23 dBi.

(D) Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information.

The conducted limit for PTP mode is 30 dBm

The conducted limit for PTMP mode is 30 dBm

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Conducted Output Power	Measured PSD
OFDM 20	5180	Mcs0	17	21.20	7.43
OFDM 20	5210	Mcs0	21	25.03	11.27
OFDM 20	5240	Mcs0	22.5	26.47	12.62
HT 20	5180	Mcs0	16.5	20.57	5.86
HT 20	5210	Mcs0	21.5	25.50	10.91
HT 20	5240	Mcs0	22.5	26.50	11.78
HT 40	5190	Mcs0	12.5	16.87	-0.80
HT 40	5230	Mcs0	18.5	22.87	5.13
VHT 20	5180	Mcs0	16.5	20.49	5.79
VHT 20	5210	Mcs0	21.5	25.50	10.95
VHT 20	5240	Mcs0	22.5	26.50	11.83
VHT 40	5190	Mcs0	12	16.36	-1.25
VHT 40	5230	Mcs0	18.5	22.85	5.16
VHT 80	5210	Mcs0	12	16.20	-4.27
HE 20	5180	Mcs0	15.5	20.04	5.11
HE 20	5210	Mcs0	20.5	24.76	9.98
HE 20	5240	Mcs0	22	26.27	11.42
HE 40	5190	Mcs0	12	16.46	-1.30
HE 40	5230	Mcs0	18	22.42	4.56
HE 80	5210	Mcs0	11.5	16.02	-4.55

Result

In the configuration tested, the maximum average RF outpower was less than 1 watt; therefore, the EUT complied with the requirements of the specification.

5.5 Radiated Spurious Emissions in the Restricted Bands

Due to the design of the EUT, radiated measurements are required.

All investigated emissions were subjected to the more stringent limits described below.

Additional regulations shall apply except for this standard, the emissions from the low-power radio-frequency devices shall be less than or equal the field strength levels specified in the following table and the level of any unwanted emissions shall not exceed the level of the fundamental emission. The tighter limit applies at the band edges. The plots below are prescan data, the tabular data is final data. Worst case mode is 802.11ac, the data below reflects worst case.

$$\text{dBuV} = 20 \log(\text{uV})$$

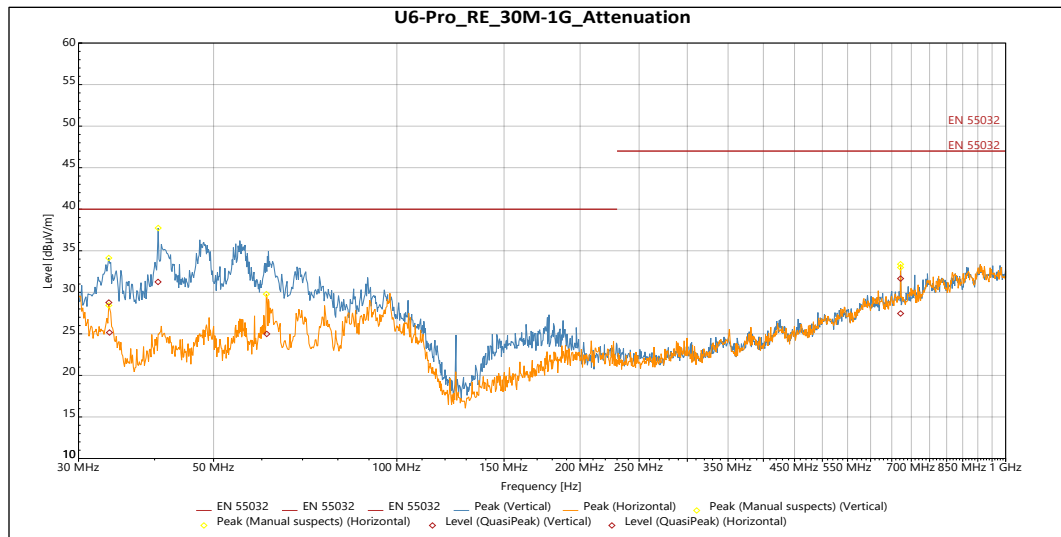
$$150\text{uV} = 43.5 \text{ dBuV}$$

Frequency (MHz)	Field strength (micro-volts/meter)	Measurement distance (meters)
0.009 – 0.490 (included)	2,400/Freq.(kHz)	300
0.490 (excluded) – 1.705 (included)	24,000/Freq. (kHz)	30
1.705 (excluded) – 30 (excluded)	30	30
30 (included) – 88 (included)	100	3
88 (excluded) – 216 (included)	150	3
216 (excluded) – 960 (included)	200	3
Above 960 (excluded)	500	3

Result

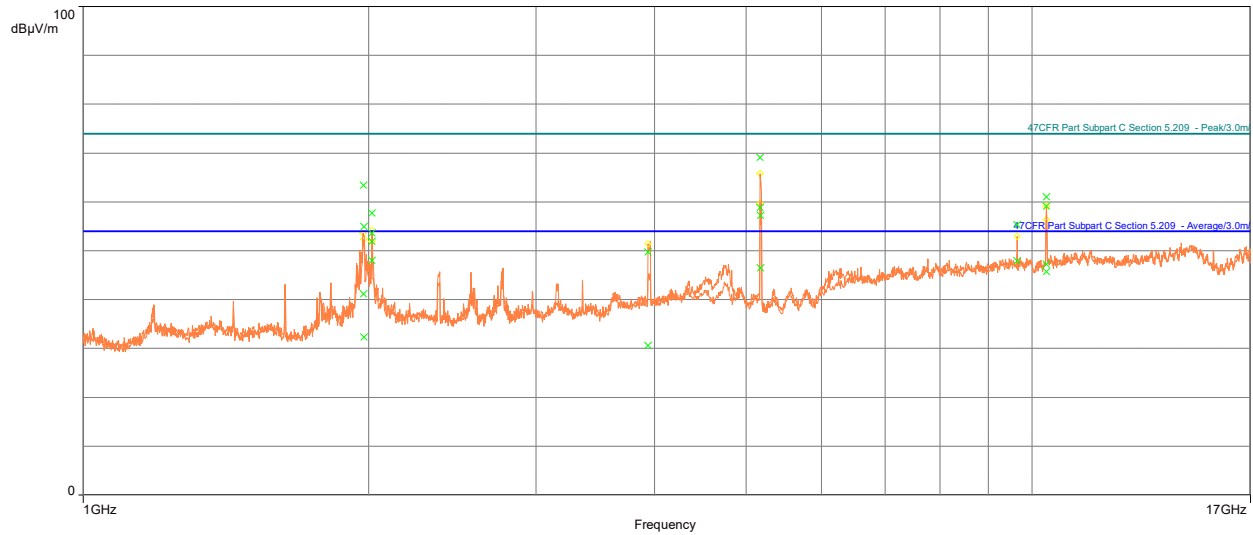
All emissions in and outside of the restricted bands of § 15.205 met the limits specified in § 15.209 and LP0002 Section 3.5 therefore, the EUT complies with the specification. See below for band edge plots. There were no spurious emissions found between the ranges of 30 MHz – 1 GHz and 16 GHz – 40 GHz

5.5.1



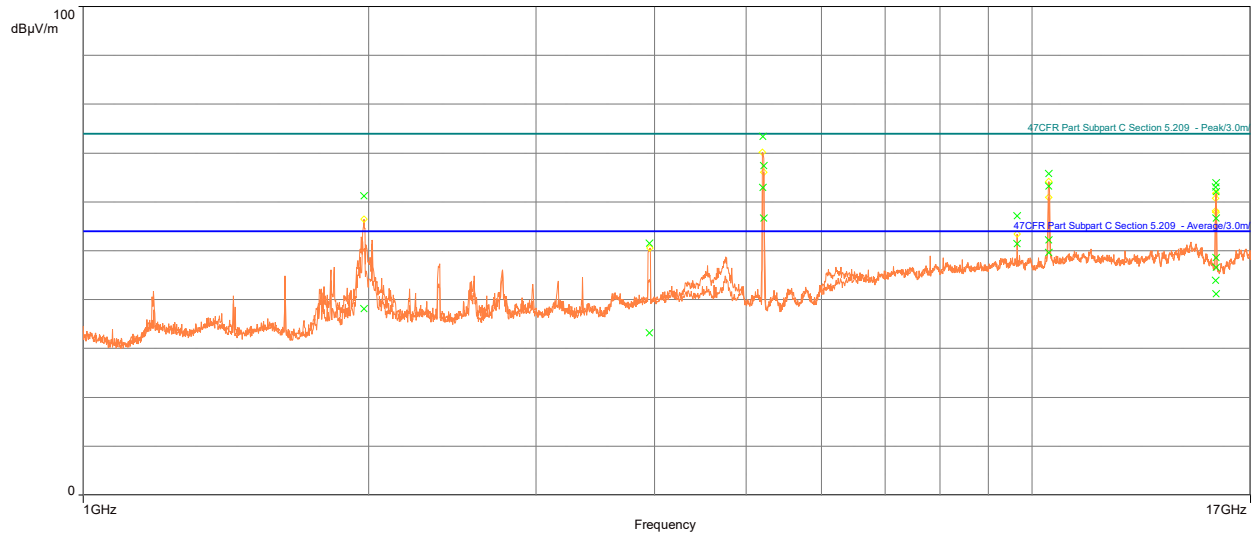
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height	Pol.	Correction (dB)
33.645	28.765	40.00	-11.235	79	2.78	Vertical	-6.924
40.526	31.25	40.00	-8.75	77	1.16	Vertical	-6.348
672.07	27.446	40.00	-19.554	141	2.034	Vertical	0.339
33.727	25.162	40.00	-14.838	271	3.319	Horizontal	-6.928
61.138	24.992	40.00	-15.008	273	3.507	Horizontal	-9.25
672.06	31.653	40.00	-15.347	258	1.164	Horizontal	0.34

Table 4: 30 to 1000 MHz



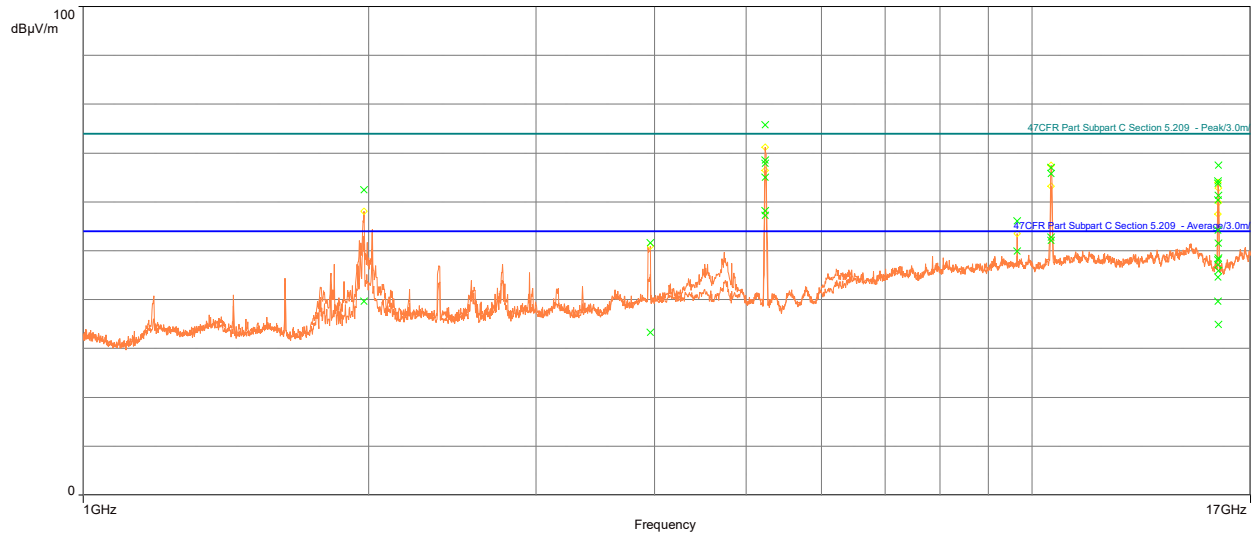
Frequency (MHz)	Det.	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Azimuth (°)	Height (m)	Polarization	Correction (dB)
1973.6	A	41.16	54.00	-12.84	162.00	3.46	Vertical	-9.67
2016.1	A	51.89	54.00	-2.11	171.00	3.21	Vertical	-9.41
3939.8	A	30.61	54.00	-23.39	95.00	3.58	Vertical	-1.82
9647.9	A	47.95	54.00	-6.05	108.00	3.58	Vertical	9.24
10357	A	45.74	54.00	-8.26	237.00	2.39	Vertical	9.67
1977.1	A	32.36	54.00	-21.64	111.00	2.70	Horizontal	-9.63
2016.1	A	48.03	54.00	-5.97	34.00	1.80	Horizontal	-9.41
10360	A	47.23	54.00	-6.77	166.00	3.73	Horizontal	9.68
1973.6	P	63.37	74.00	-10.63	162.00	3.46	Vertical	-9.67
2016.1	P	57.72	74.00	-16.28	171.00	3.21	Vertical	-9.41
3939.8	P	49.70	74.00	-24.30	95.00	3.58	Vertical	-1.82
9647.9	P	55.31	74.00	-18.69	108.00	3.58	Vertical	9.24
10357	P	61.00	74.00	-13.00	237.00	2.39	Vertical	9.67
1977.1	P	54.95	74.00	-19.05	111.00	2.70	Horizontal	-9.63
2016.1	P	53.65	74.00	-20.35	34.00	1.80	Horizontal	-9.41
10360	P	59.15	74.00	-14.85	166.00	3.73	Horizontal	9.68

Table 5: 1 to 17 GHz Transmitting on the Lowest Frequency 5180 MHz



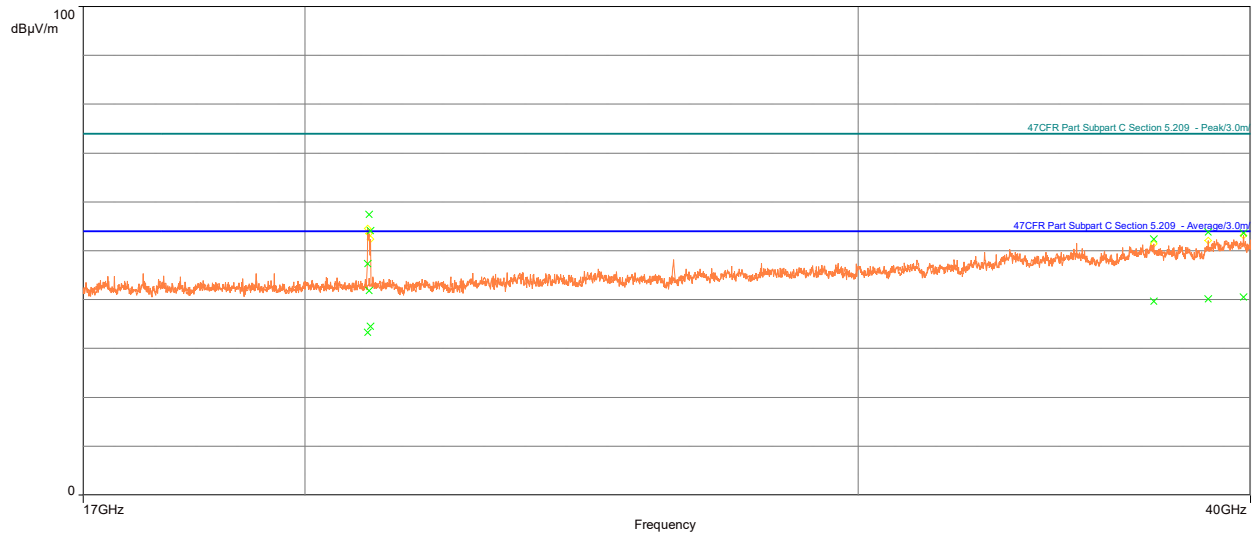
Frequency (MHz)	Det.	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Azimuth (°)	Height (m)	Polarization	Correction (dB)
1977.3	A	38.16	54.00	-15.84	136.00	4.00	Vertical	-9.62
3954.3	A	33.16	54.00	-20.84	94.00	3.11	Vertical	-1.93
9648.1	A	51.44	54.00	-2.56	177.00	2.27	Vertical	9.24
10421	A	52.17	54.00	-1.83	231.00	3.11	Vertical	9.65
15630	A	48.59	54.00	-5.41	95.00	3.34	Vertical	11.10
15638	A	46.63	54.00	-7.37	146.00	3.23	Vertical	11.14
10422	A	49.63	54.00	-4.37	163.00	3.81	Horizontal	9.66
15616	A	43.93	54.00	-10.07	122.00	3.15	Horizontal	11.10
15638	A	41.13	54.00	-12.87	124.00	3.57	Horizontal	11.14
1977.3	P	61.20	74.00	-12.80	136.00	4.00	Vertical	-9.62
3954.3	P	51.51	74.00	-22.49	94.00	3.11	Vertical	-1.93
9648.1	P	57.17	74.00	-16.83	177.00	2.27	Vertical	9.24
10421	P	65.75	74.00	-8.25	231.00	3.11	Vertical	9.65
15630	P	63.88	74.00	-10.12	95.00	3.34	Vertical	11.10
15638	P	62.10	74.00	-11.90	146.00	3.23	Vertical	11.14
10422	P	63.18	74.00	-10.82	163.00	3.81	Horizontal	9.66
15616	P	63.04	74.00	-10.96	122.00	3.15	Horizontal	11.10
15638	P	56.64	74.00	-17.36	124.00	3.57	Horizontal	11.14

Table 6: 1 to 17 GHz Transmitting on the Middle Frequency 5210 MHz



Frequency (MHz)	Det.	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Azimuth (°)	Height (m)	Polarization	Correction (dB)
1977	A	39.60	54.00	-14.40	160.00	3.46	Vertical	-9.63
3959.5	A	33.32	54.00	-20.68	94.00	3.20	Vertical	-1.95
9647.7	A	49.93	54.00	-4.07	176.00	2.48	Vertical	9.24
10474	A	52.78	54.00	-1.22	156.00	3.93	Vertical	10.33
15706	A	47.13	54.00	-6.87	180.00	2.47	Vertical	11.08
15707	A	48.08	54.00	-5.92	207.00	3.59	Vertical	11.09
15727	A	51.54	54.00	-2.46	164.00	3.47	Vertical	11.20
10480	A	52.10	54.00	-1.90	161.00	3.82	Horizontal	10.34
15708	A	44.58	54.00	-9.42	129.00	2.75	Horizontal	11.11
15730	A	45.91	54.00	-8.09	125.00	2.75	Horizontal	11.19
1977	P	62.47	74.00	-11.53	160.00	3.46	Vertical	-9.63
3959.5	P	51.65	74.00	-22.35	94.00	3.20	Vertical	-1.95
9647.7	P	56.10	74.00	-17.90	176.00	2.48	Vertical	9.24
10474	P	66.98	74.00	-7.02	156.00	3.93	Vertical	10.33
15706	P	63.77	74.00	-10.23	180.00	2.47	Vertical	11.08
15707	P	64.28	74.00	-9.72	207.00	3.59	Vertical	11.09
15726	P	48.50	74.00	-25.50	155.00	2.11	Vertical	11.20
15727	P	67.50	74.00	-6.50	164.00	3.47	Vertical	11.20
10480	P	65.83	74.00	-8.17	161.00	3.82	Horizontal	10.34
15708	P	60.38	74.00	-13.62	129.00	2.75	Horizontal	11.11
15730	P	61.32	74.00	-12.68	125.00	2.75	Horizontal	11.19

Table 7: 1 to 17 GHz Transmitting on the Highest Frequency 5240 MHz



Frequency (MHz)	Det.	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Azimuth (°)	Pol.	Correction (dB)
20945	A	33.30	54.00	-20.70	252.00	Vertical	-5.71
20966	A	41.88	54.00	-12.12	294.00	Vertical	-5.57
20987	A	34.48	54.00	-19.52	293.00	Vertical	-5.39
38775	A	40.15	54.00	-13.85	195.00	Vertical	1.88
37257	A	39.62	54.00	-14.38	34.00	Horizontal	1.66
39797	A	40.50	54.00	-13.50	111.00	Horizontal	3.28
20945	P	47.33	74.00	-26.67	252.00	Vertical	-5.71
20966	P	57.42	74.00	-16.58	294.00	Vertical	-5.57
20987	P	54.13	74.00	-19.87	293.00	Vertical	-5.39
38775	P	53.81	74.00	-20.19	195.00	Vertical	1.88
37257	P	52.39	74.00	-21.61	34.00	Horizontal	1.66
39797	P	53.66	74.00	-20.34	111.00	Horizontal	3.28

Table 8: 17 to 40 GHz Transmitting on the Highest Frequency 5240 MHz (worst case)

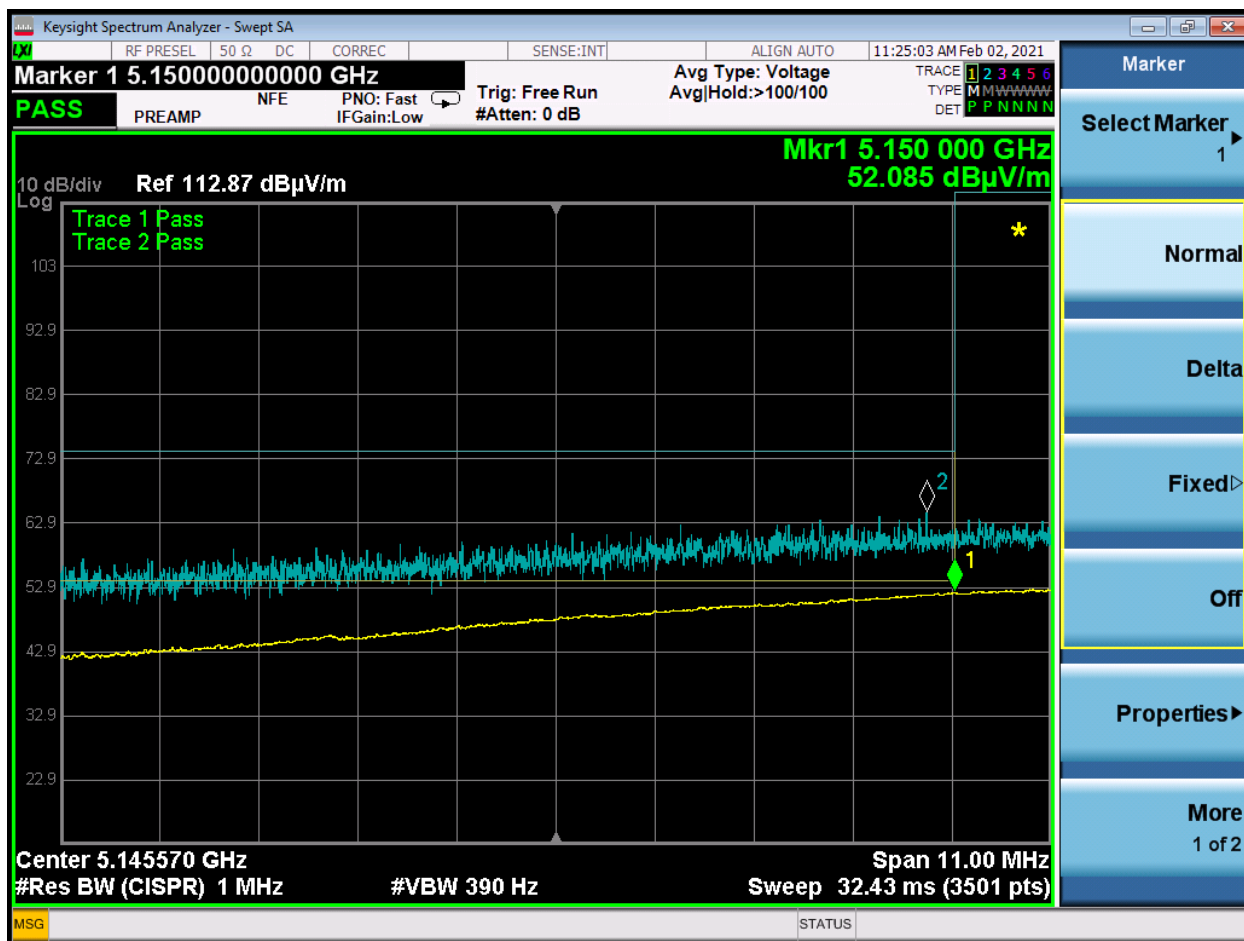


Figure 4: 20 MHz 5180 MHz Band Edge

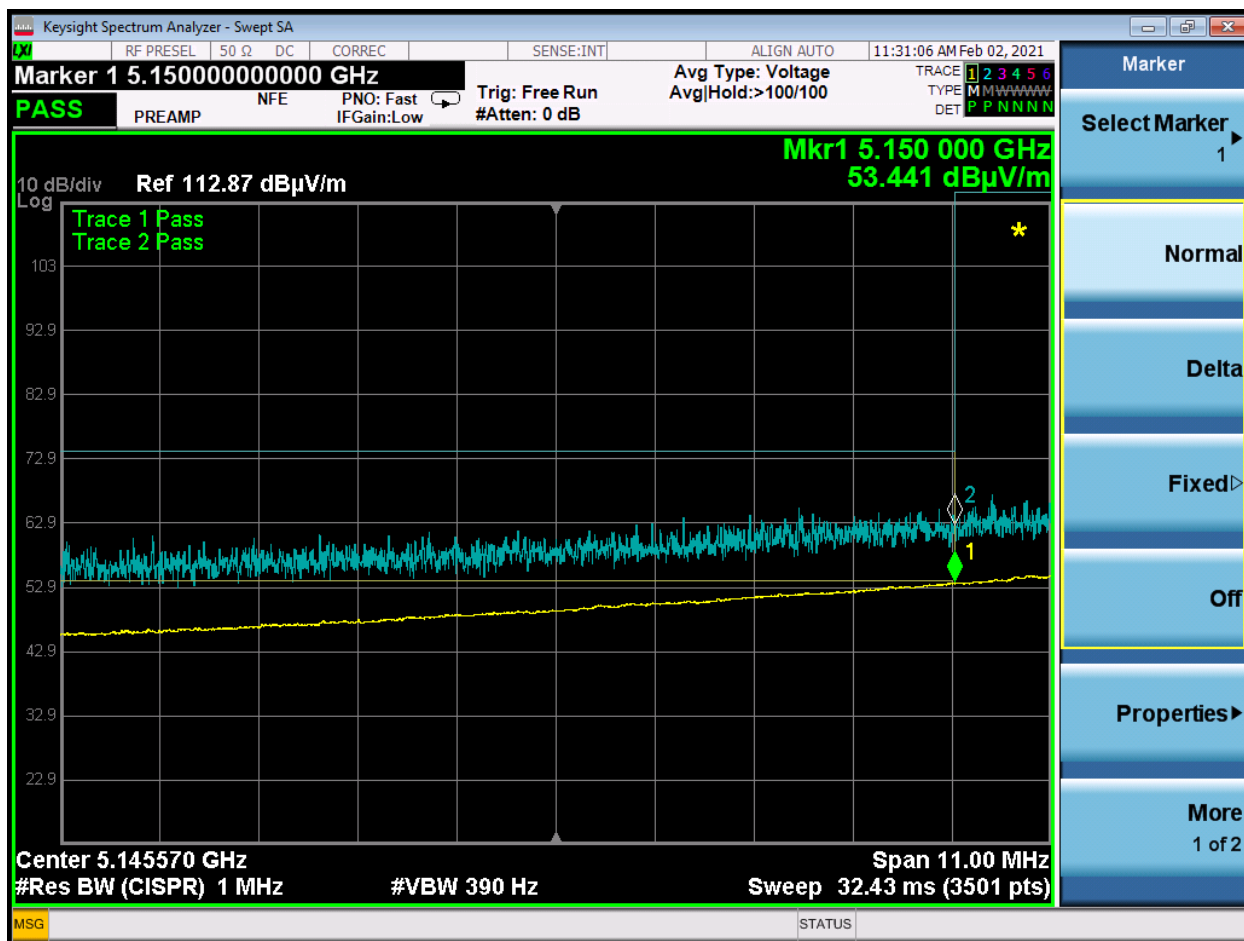


Figure 5: 20 MHz 5200 MHz Band Edge

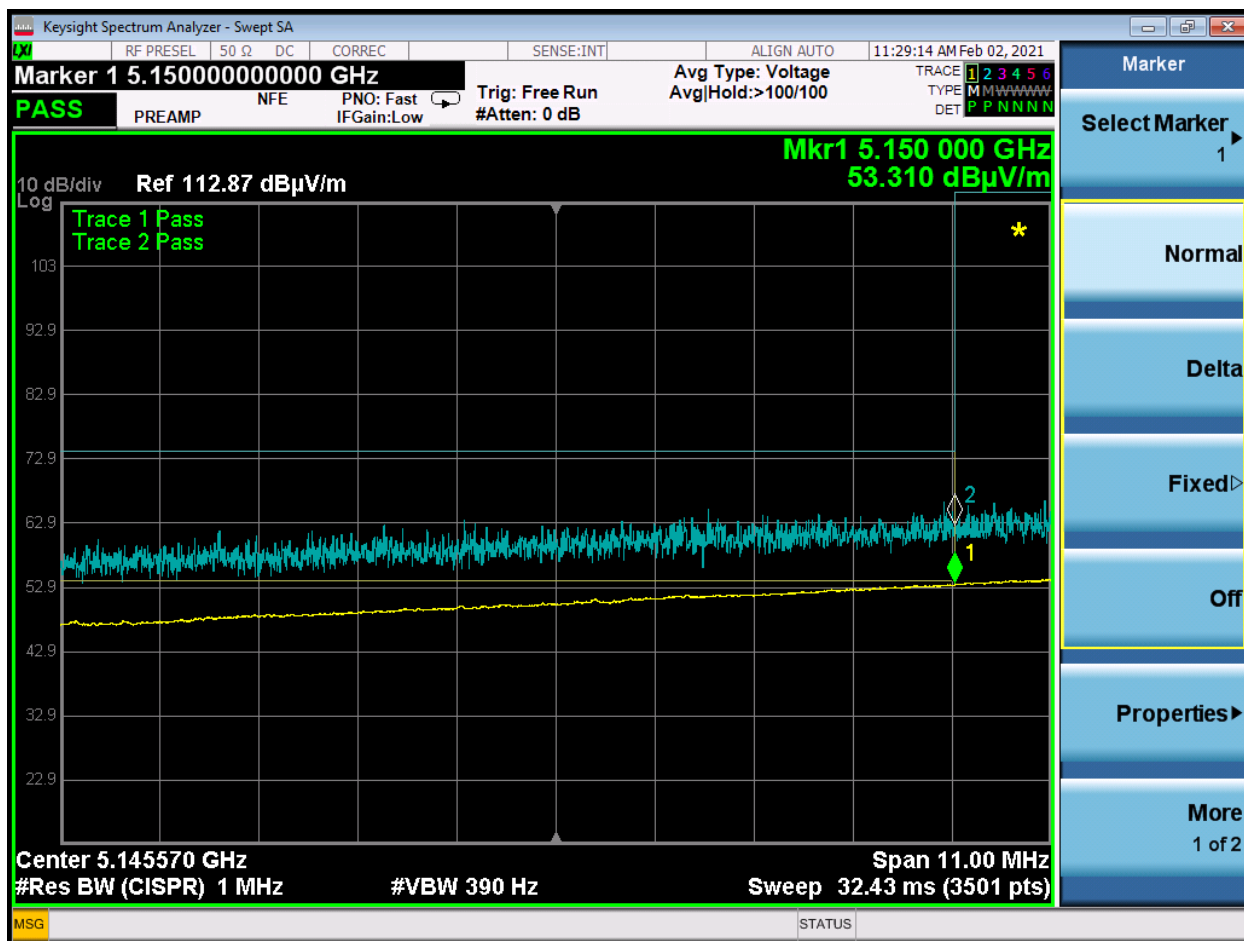


Figure 6: 20 MHz 5210 MHz Band Edge

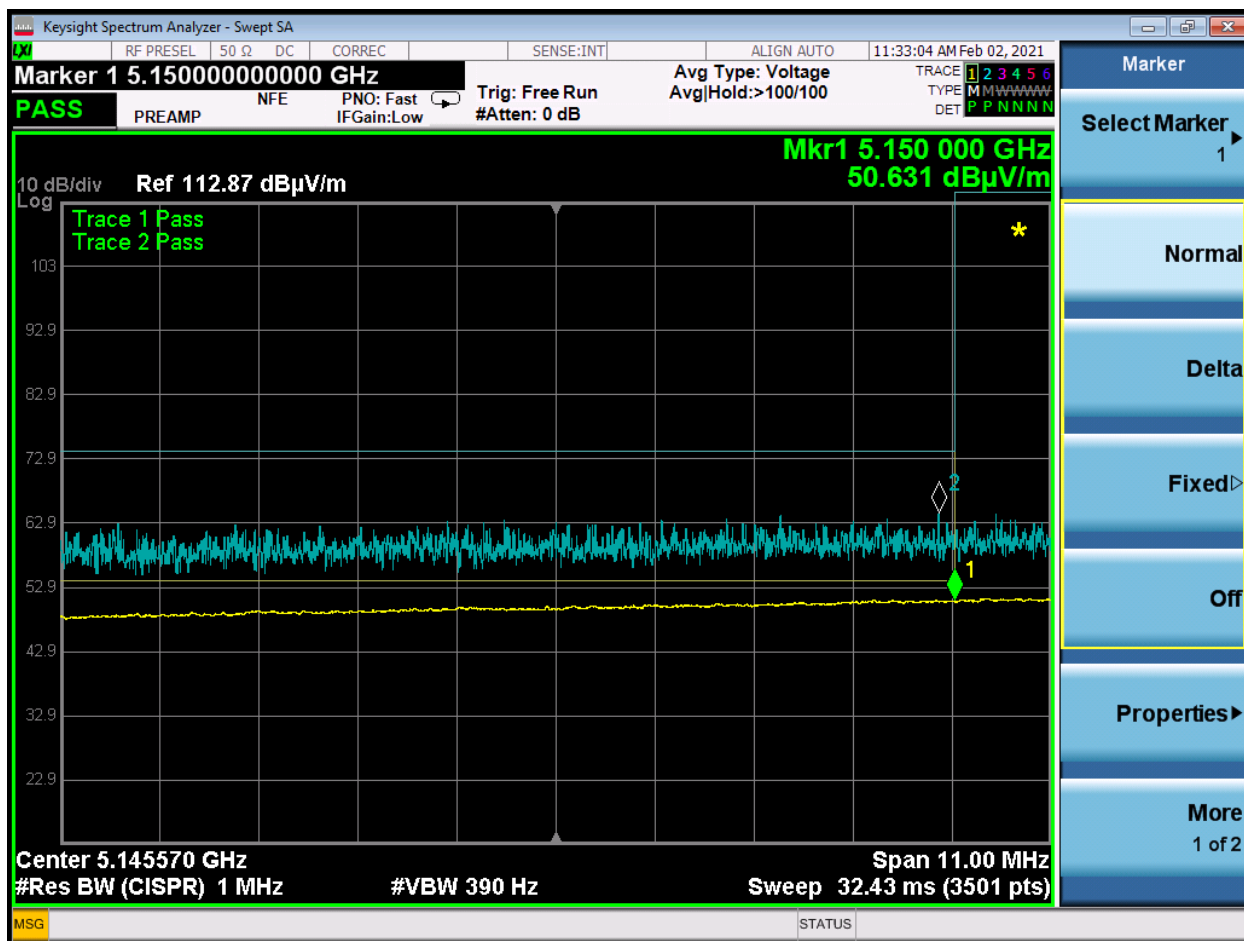


Figure 7: 20 MHz 5240 MHz Band Edge

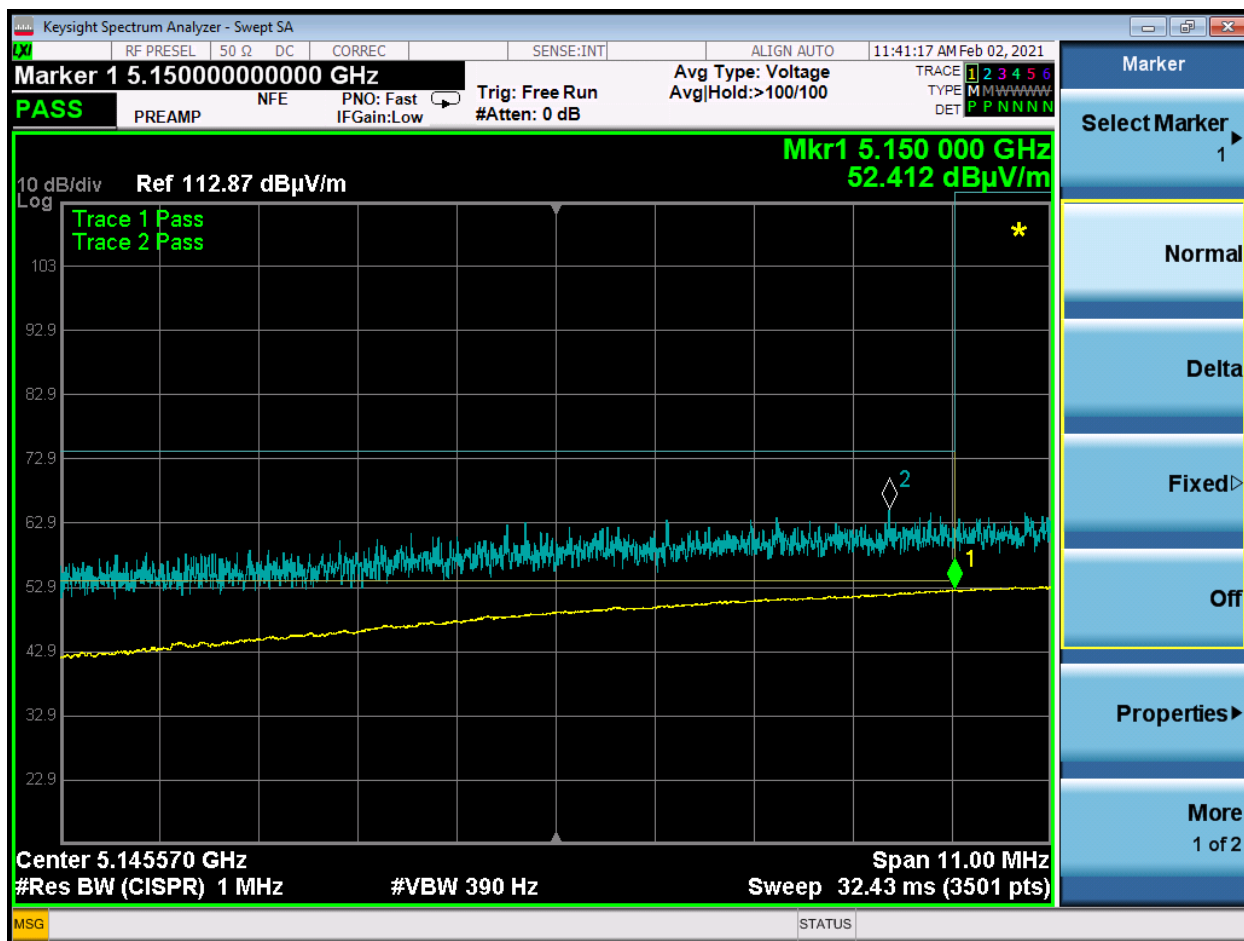


Figure 8: 40 MHz 5190 MHz Band Edge

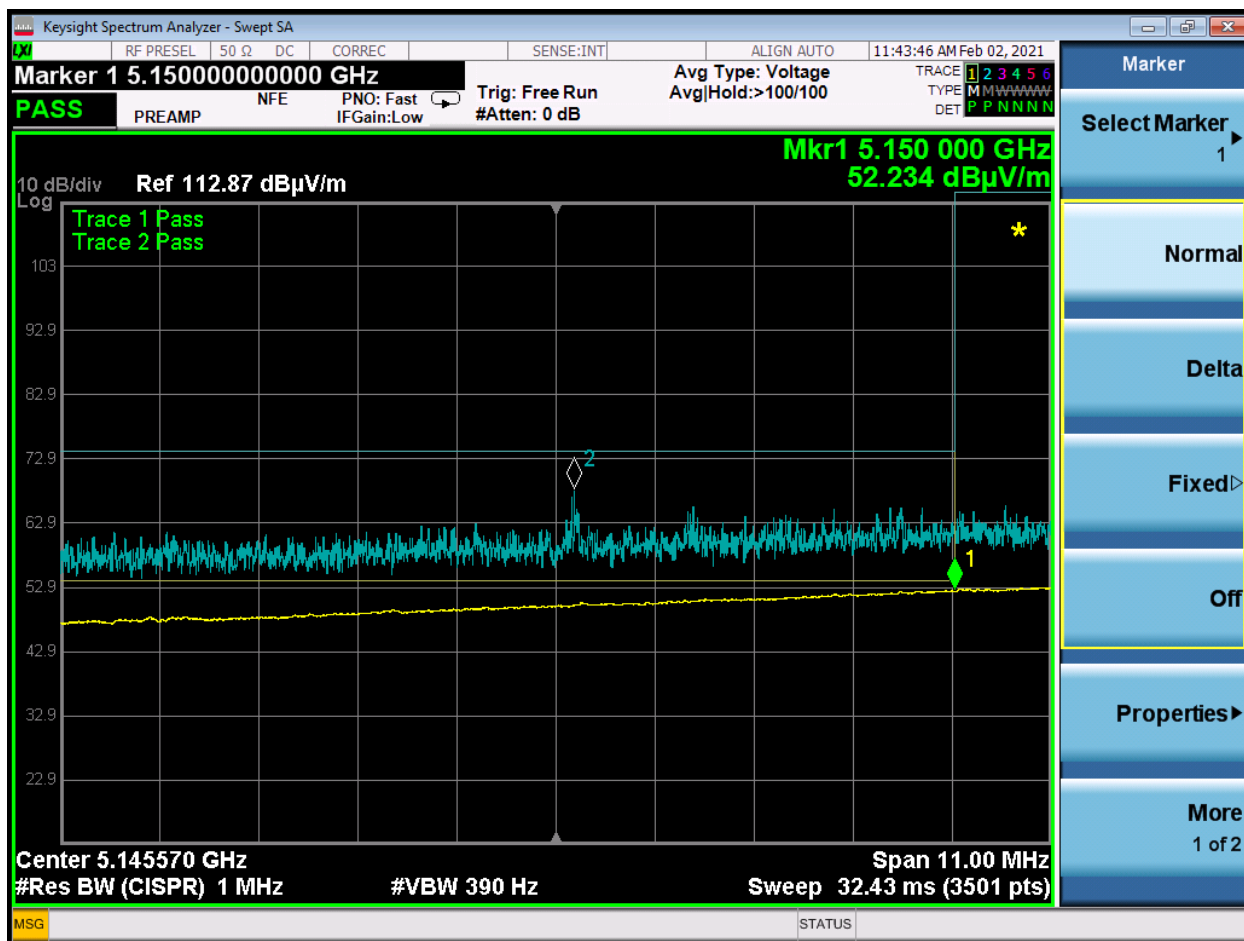


Figure 9: 40MHz 5230 MHz Band Edge

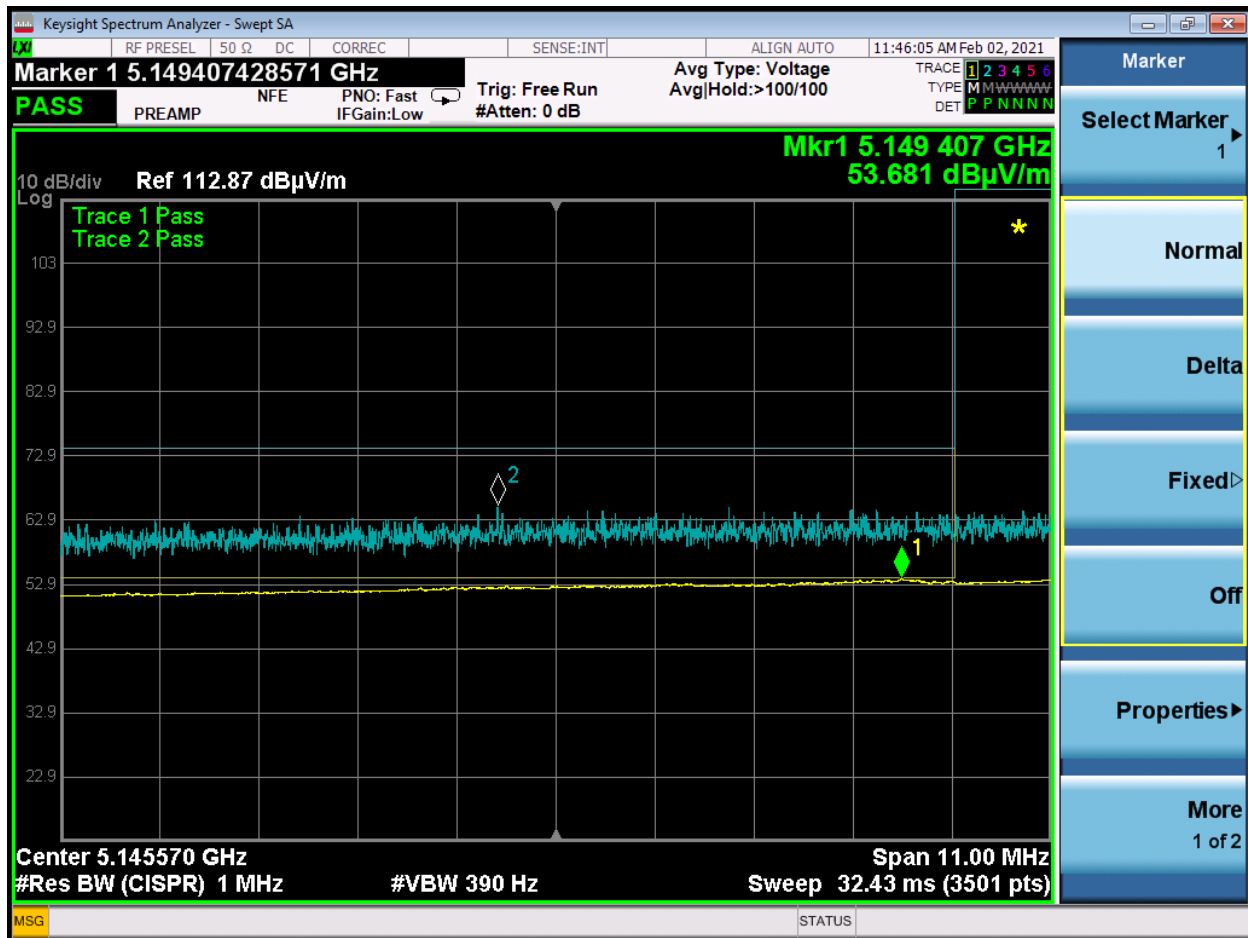


Figure 10: 80 MHz 5210 MHz Band Edge

5.6 Maximum Power Spectral Density

For the band 5.15 GHz~5.25 GHz

(1) For outdoor access:

(A) The maximum conducted output power shall be less than or equal to 1 Watt.

(B) The maximum power spectral density shall be less than or equal to 17 dBm in any 1 MHz band.

(C) If transmitting antennas of directional gain greater than 6 dBi are used, both the
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maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dBi that the directional gain of the antenna exceeds 6 dBi.

(D) The maximum EIRP at any elevation angle above 30 degrees as measured from the horizon shall be less than or equal to 21 dBm.

(2) For indoor access:

(A) The maximum conducted output power over the frequency band of operation shall be less than or equal to 1 Watt.

(B) The maximum power spectral density shall be less than or equal to 17 dBm in any 1 MHz band.

(C) 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 dBi that the directional gain of the antenna exceeds 6 dBi.

(3) For fixed point-to-point access:

(A) The maximum conducted output power shall be less than or equal to 1 Watt.

(B) The maximum power spectral density shall be less than or equal to 17 dBm in any 1 MHz band.

(C) If transmitting antennas of directional gain greater than 23 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dBi that the directional gain of the antenna exceeds 23 dBi.

(D) Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information.

The maximum average power spectral density conducted from the intentional radiator of the antenna shall not be greater than 17 dBm in any 1 MHz band during any time interval of continuous transmission.

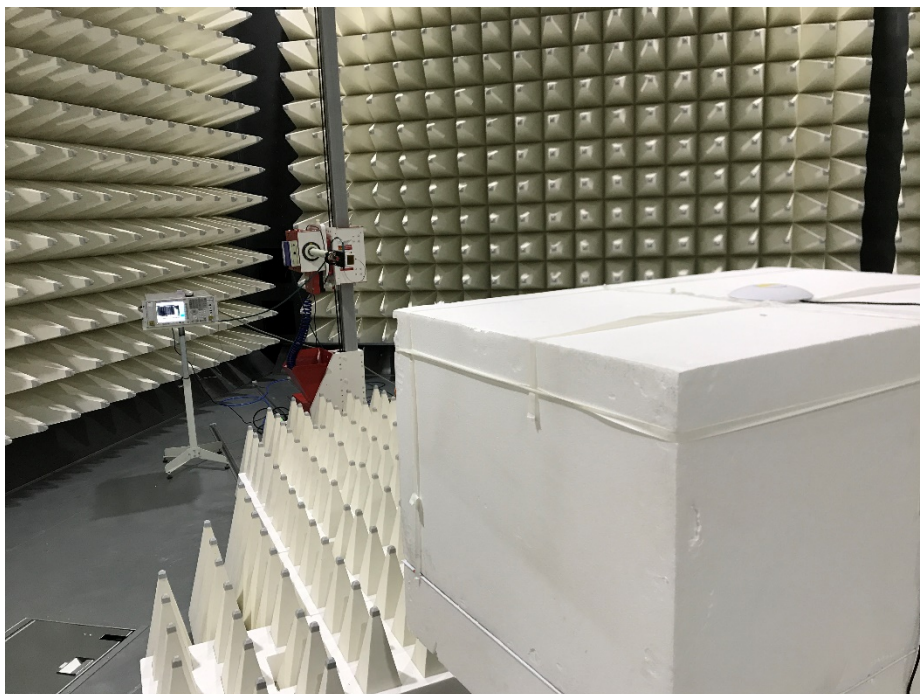
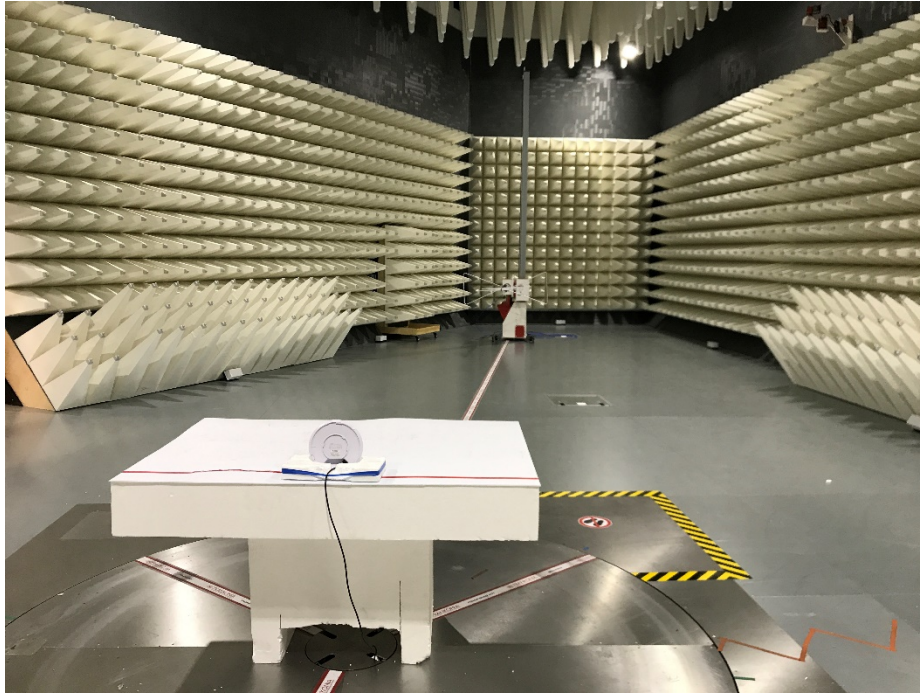
Results of this testing are summarized.

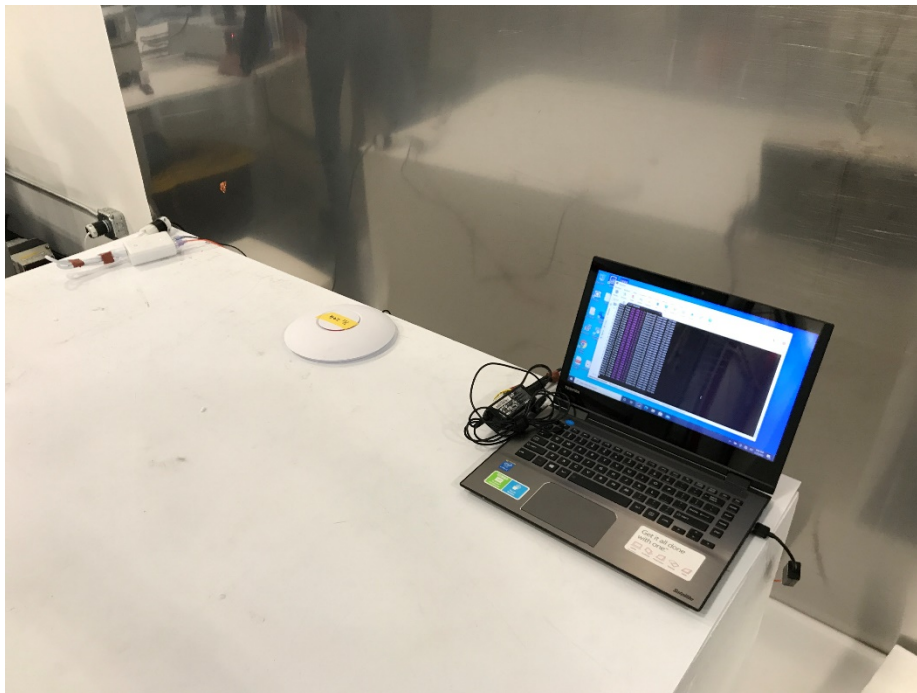
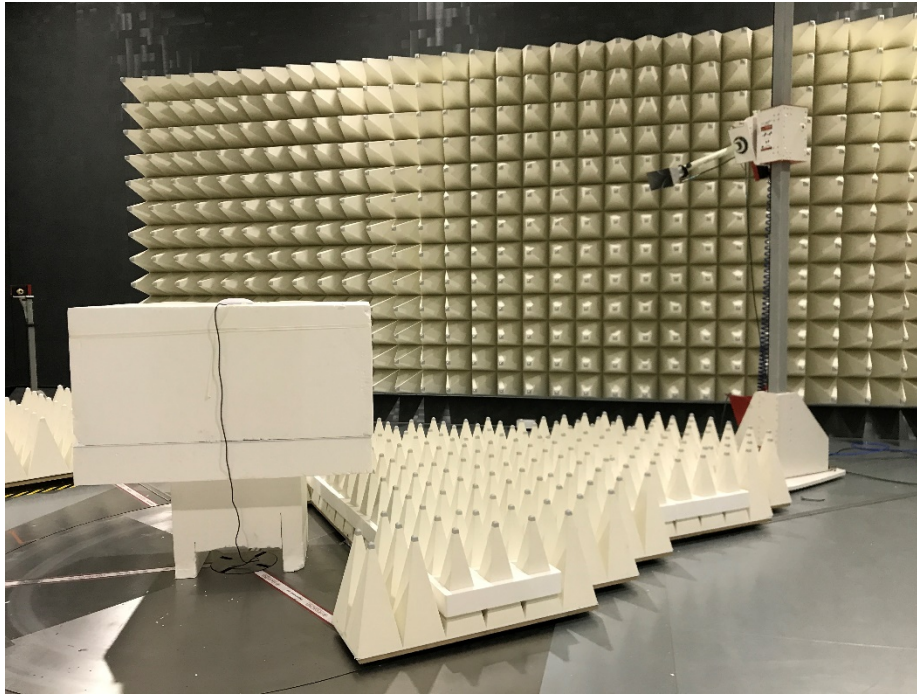
Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Measured PSD
OFDM 20	5180	Mcs0	17	7.43
OFDM 20	5210	Mcs0	21	11.27
OFDM 20	5240	Mcs0	22.5	12.62
HT 20	5180	Mcs0	16.5	5.86
HT 20	5210	Mcs0	21.5	10.91
HT 20	5240	Mcs0	22.5	11.78
HT 40	5190	Mcs0	12.5	-0.80
HT 40	5230	Mcs0	18.5	5.13
VHT 20	5180	Mcs0	16.5	5.79
VHT 20	5210	Mcs0	21.5	10.95
VHT 20	5240	Mcs0	22.5	11.83
VHT 40	5190	Mcs0	12	-1.25
VHT 40	5230	Mcs0	18.5	5.16
VHT 80	5210	Mcs0	12	-4.27
HE 20	5180	Mcs0	15.5	5.11
HE 20	5210	Mcs0	20.5	9.98
HE 20	5240	Mcs0	22	11.42
HE 40	5190	Mcs0	12	-1.30
HE 40	5230	Mcs0	18	4.56
HE 80	5210	Mcs0	11.5	-4.55

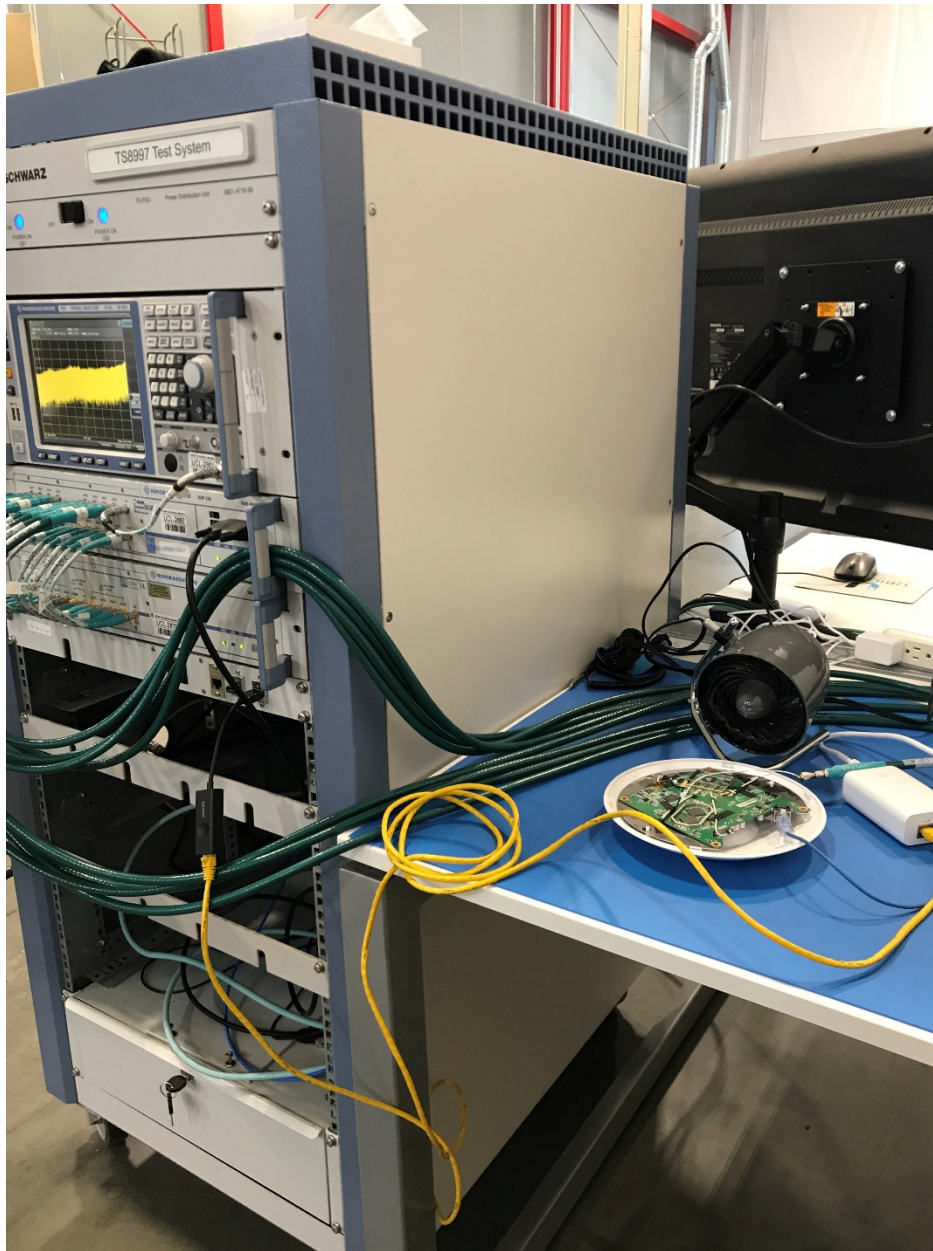
Result

The maximum summed average power spectral density was less than the limit of 17dBm; therefore, the EUT complies with the specification.

6 Test Setup Photos







-- End of Test Report --