



427 West 12800 South
Draper, UT 84020

Test Report Certification

| | |
|----------------------------------|--|
| FCC ID | SWX-WAVENANO |
| ISED ID | 6545A-WAVENANO |
| Equipment Under Test | Wave-Nano |
| Test Report Serial Number | TR7131_01 |
| Date of Tests | 16 February; 1, 15 March; 20-22 April 2022 |
| Report Issue Date | 11 May 2022 |

| Test Specification | Applicant |
|-------------------------------|---|
| 47 CFR FCC Part 15, Subpart E | Ubiquiti Inc. 685 Third Avenue New York, NY 10017 U.S.A. |



NVLAP LAB CODE 600241-0

Certification of Engineering Report

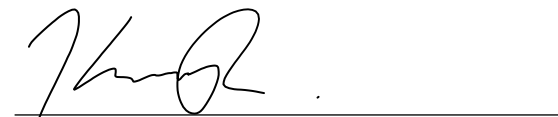
This report has been prepared by Unified Compliance Laboratory (UCL) to document compliance of the device described below with the requirement of Federal Communication Commissions (FCC) Part 15, Subpart E. This report may be reproduced in full. Partial reproduction of this report may only be made with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

| | |
|---------------------|----------------|
| Applicant | Ubiquiti Inc. |
| Manufacturer | Ubiquiti Inc. |
| Brand Name | airFiber |
| Model Number | Wave-Nano |
| FCC ID | SWX-WAVENANO |
| ISED ID | 6545A-WAVENANO |

On this 11th day of May 2022, 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: Kimberly Rodriguez



Reviewed By: Richard L. Winter

| Revision History | | |
|-------------------------|-------------------------|-------------|
| Revision | Description | Date |
| 01 | Original Report Release | 11 May 2022 |

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1 Client Information

1.1 Applicant

| | |
|---------------------|---|
| Company | Ubiquiti Inc. 685 Third Avenue New York, NY 10017 U.S.A. |
| 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 | airFiber |
| Model Number | Wave-Nano |
| Serial Number | 245A4CF99E6C |
| Dimensions (cm) | 25.7 x 25.7 x 11.4 |

2.2 Description of EUT

The 60 GHz Wave Nano (Wave Nano) is a CPE device that connects to a Wave AP functioning as a base station. The Wave Nano has a 1.2+ Gbps throughput rate and can sustain its connection over 5 kilometers. The Wave Nano is also equipped with a 5 GHz WiFi 6 backup radio to sustain connectivity during 60 GHz link disruptions. This easy-to-deploy CPE device can be set up in minutes with the UISP™ application using Bluetooth-powered setup and tracked from anywhere with its built-in GPS antenna.

| Band | WiFi Mode | Modulation Bandwidth | Modulation Type | Frequency (MHz) |
|--------|-----------|----------------------|-----------------|--|
| UNII-1 | ax | 20 MHz | HE | 5165, 5175, 5185, 5200, 5210, 5220, 5230, 5240 |
| | ax | 40 MHz | HE | 5175, 5185, 5200, 5215, 5230 |
| | ax | 80 MHz | HE | 5195, 5200, 5205, 5210 |

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 test 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: airFiber MN: Wave-Nano SN: 245A4CF99E6C | Wireless Access Point | See Section 2.4 |
| BN: Ubiquiti, Inc. MN: U-POE-at SN: N/A | PoE Injector Power Supply | Shielded or Un-shielded Cat 5e cable (Note 2) |

| | | |
|-----------------------------------|-----------------|---|
| BN: Dell MN: XPS 13 SN: N/A | Laptop 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 |

2.5 Operating Environment

| | |
|----------------------------|------------------------------|
| Power Supply | 120 Volts AC to 48 Volts PoE |
| AC Mains Frequency | 60 Hz |
| Temperature | 22.1-22.8 °C |
| Humidity | 19.3-23.9 % |
| Barometric Pressure | 1009 mBar |

2.6 Operating Modes

The Wave-Nano was tested using test software in order to enable a constant transmission. The measurements within this report are corrected to reference a 100% duty cycle. All emission modes of 802.11 ax were investigated.

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

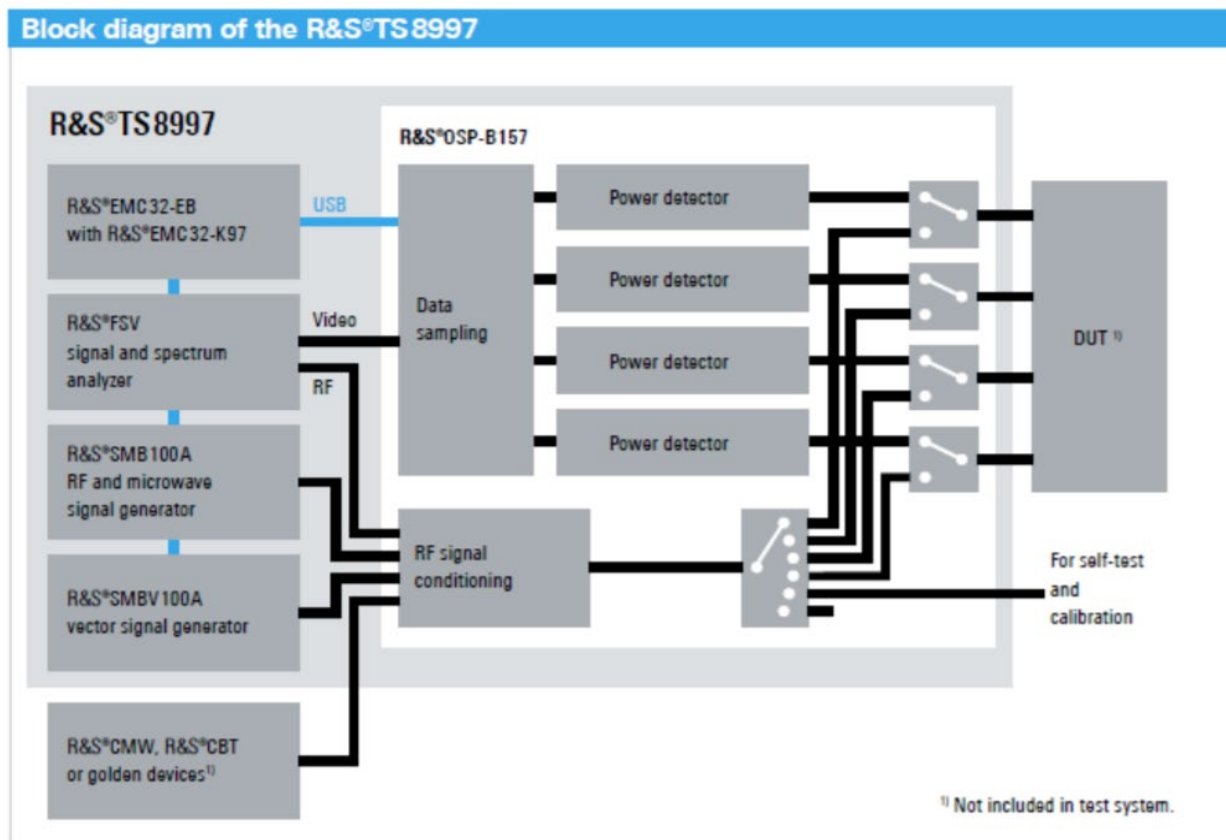


Diagram 1: Test Configuration Block Diagram

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 Limits and methods of measurement of radio interference characteristics of Unlicensed National Information Infrastructure Devices |
| Purpose of Test | The tests were performed to demonstrate initial compliance |

3.2 Methods & Procedures

3.2.1 47 CFR FCC Part 15 Section 15.407

See test standard for details.

3.3 FCC Part 15, Subpart E

3.3.1 Summary of Tests

| FCC Section | ISED Section | Environmental Phenomena | Frequency Range (MHZ) | Result |
|---|------------------------|--------------------------------------|------------------------|-----------|
| 15.407(a) | N/A | Antenna requirements | Structural Requirement | Compliant |
| 15.407(b) | RSS-Gen | Conducted Disturbance at Mains Port | 0.15 to 30 | Compliant |
| 15.407(c) | RSS-247 §6.2.2, §6.2.3 | Bandwidth Requirement | 5165 to 5240 | Compliant |
| 15.407(e) | RSS-247 §6.2.2, §6.2.3 | Peak Output Power | 5165 to 5240 | Compliant |
| 15.407(f) | RSS-247 §6.2.2, §6.2.3 | Antenna Conducted Spurious Emissions | 0.009 to 40000 | N/A |
| 15.407(g) | RSS-247 §6.2.2, §6.2.3 | Radiated Spurious Emissions | 30 to 40000 | Compliant |
| 15.407(h) | RSS-247 §6.2.2, §6.2.3 | Peak Power Spectral Density | 5165 to 5240 | Compliant |
| The testing was performed according to the procedures in ANSI C63.10-2013, KDB 789033 and 47 CFR Part 15. Where applicable, KDB 662911 was followed to sum required measurements. | | | | |

3.4 Results

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

3.5 Test Location

Testing was performed at the Unified Compliance Laboratory 3-meter and 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 2022. 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 30 June 2022. 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-6754 | 12/8/2021 | 12/8/2022 |
| LISN | AFJ | LS16C/10 | UCL-6749 | 12/6/2021 | 12/6/2023 |
| Cat6 ISN | Teseq | ISN T8-Cat6 | UCL-2971 | 1/30/2022 | 1/30/2023 |
| ISN | Teseq | ISN T800 | UCL-2974 | 6/4/2021 | 6/4/2022 |
| LISN | Com-Power | LIN-120C | UCL-2612 | 1/6/2022 | 1/6/2023 |
| AC Power Source | Laplace Instruments | AC1000A | UCL-2857 | N/A | N/A |
| Test Software | UCL | Revision 1 | UCL-3107 | N/A | N/A |

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

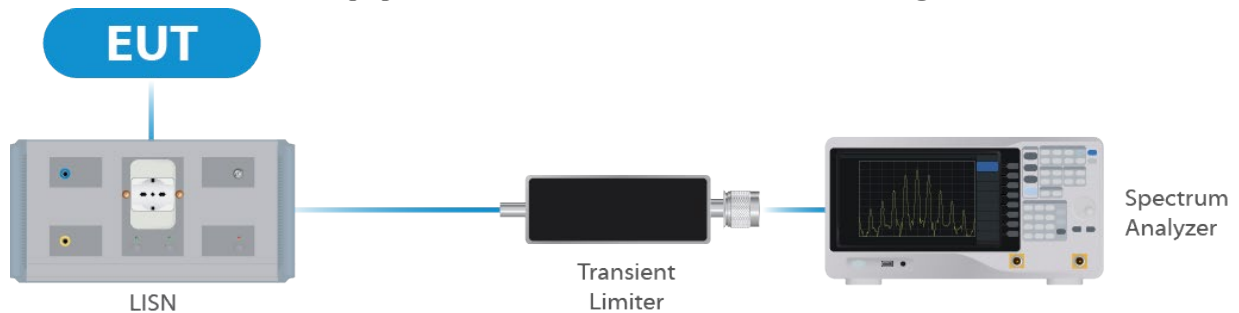


Figure 1: Conducted Emissions Test

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 | 1/03/2022 | 1/03/2023 |
| 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 | 1/03/2022 | 1/03/2023 |
| Switch Extension | R&S | OSP-150W | UCL-2870 | 1/03/2022 | 1/03/2023 |

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

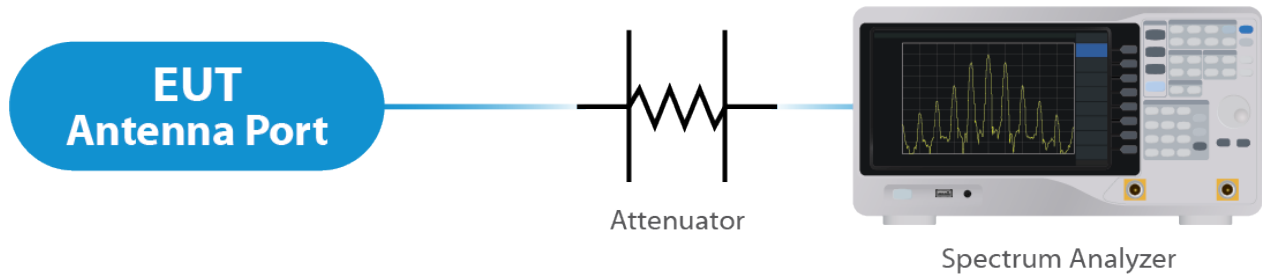


Figure 2: Direct Connect at the Antenna Port Test

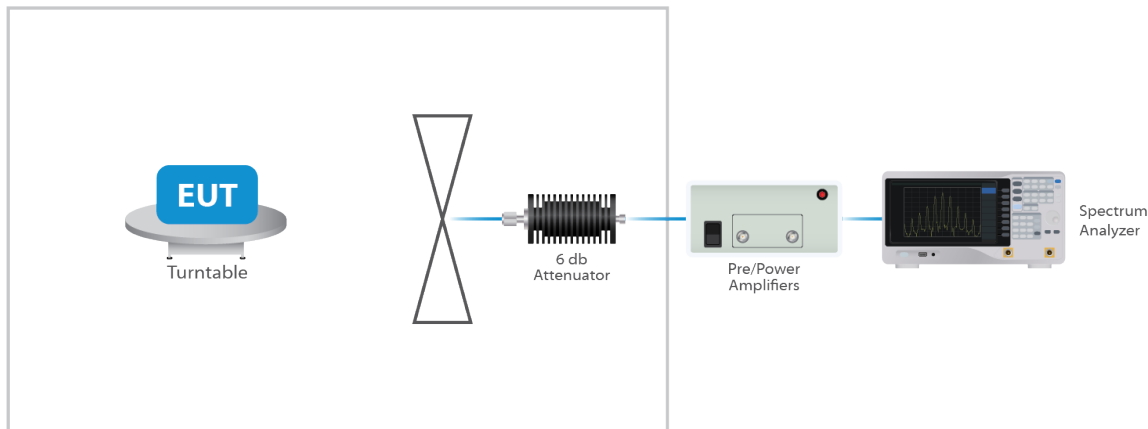


Figure 3: Output Power Measurement

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 | 6/21/2021 | 6/21/2022 |
| Pre-Amplifier 9 kHz – 1 GHz | Sonoma Instruments | 310N | UCL-2889 | 10/7/2021 | 10/7/2022 |
| Broadband Antenna | Scwarzbeck | VULB 9163 | UCL-3062 | 8/28/2020 | 8/27/2022 |
| Broadband Antenna | Scwarzbeck | VULB 9163 | UCL-3071 | 5/19/2020 | 5/19/2022 |
| Double Ridge Horn Antenna | Scwarzbeck | BBHA 9120D | UCL-3065 | 7/8/2021 | 7/8/2022 |
| Log Periodic | Scwarzbeck | STLP 9129 | UCL-3068 | 11/16/2020 | 11/16/2022 |
| 15 - 40 GHz Horn Antenna | Scwarzbeck | BBHA 9170 | UCL-2487 | 5/21/2020 | 5/21/2022 |
| 1 – 18 GHz Amplifier | Com-Power | PAM 118A | UCL-3833 | 10/7/2021 | 10/7/2022 |
| Test Software | UCL | Revision 1 | UCL-3108 | N/A | N/A |

Table 3: List of equipment used for Radiated Emissions


Figure 4: 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 §15.203 Antenna Requirements

The EUT uses an integral folding antenna structure. The maximum gain of the antenna per chain is 18.2 dBi. This is an 802.11 device and utilizes CDD as described in KDB 662911 D01. The antenna is not user replaceable.

For power measurements on IEEE 802.11 devices, Array Gain = 0 dB for NANT ≤ 4;

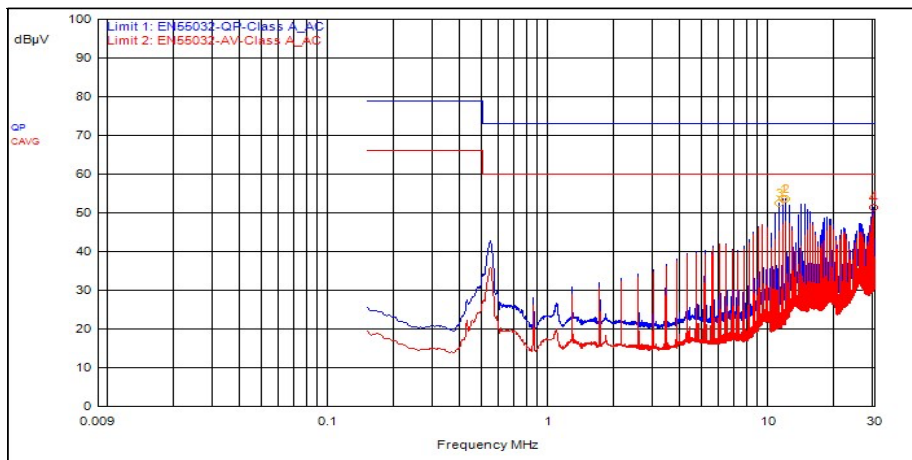
For PSD measurements when Nss=1: Array Gain = $10 \log(N_{ant}/N_{ss})$ dB = 6.02dB

Results

The EUT complied with the specification

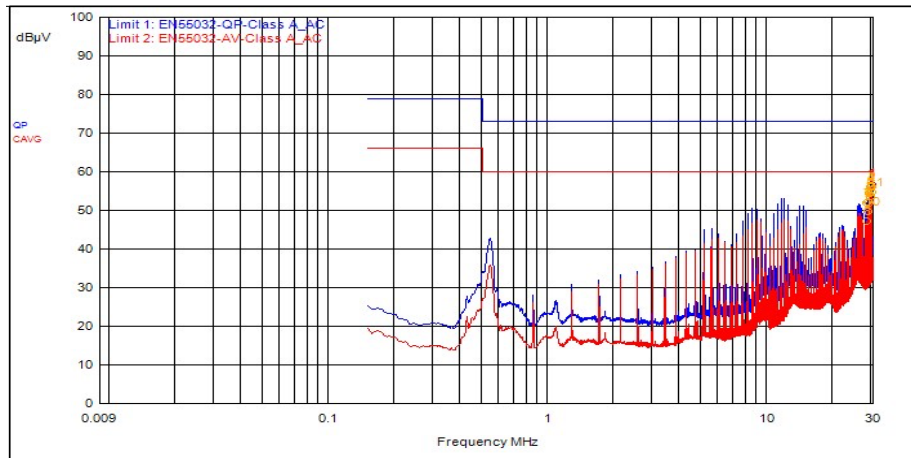
5.2 Conducted Emissions at Mains Ports Data

5.2.1 Line



| ID | Frequency | Probe | Cable | Atten. | Detector | Meter Read | Meas Level | Limit 1 | Limit 1 Dist. | Limit 2 | Limit 2 Dist. |
|----|-----------|-------|-------|--------|----------|------------|------------|---------|---------------|---------|---------------|
| 1 | 11.427MHz | 9.6 | 0.3 | | QPeak | 43.8 | 53.7 | 73.0 | -19.3 | | |
| 2 | 11.850MHz | 9.6 | 0.3 | | QPeak | 43.8 | 53.7 | 73.0 | -19.3 | | |
| 3 | 11.004MHz | 9.6 | 0.3 | | QPeak | 42.6 | 52.5 | 73.0 | -20.5 | | |
| 4 | 29.613MHz | 10.1 | 0.3 | | QPeak | 41.1 | 51.5 | 73.0 | -21.5 | | |

5.2.2 Neutral



| ID | Frequency | Probe | Cable | Atten. | Detector | Meter Read | Meas Level | Limit 1 | Limit 1 Dist. | Limit 2 | Limit 2 Dist. |
|----|-----------|-------|-------|--------|----------|------------|------------|---------|---------------|---------|---------------|
| 1 | 29.613MHz | 9.9 | 0.3 | | QPeak | 46.6 | 56.7 | 73.0 | -16.3 | | |
| 2 | 29.610MHz | 9.9 | 0.3 | | QPeak | 45.9 | 56.1 | 73.0 | -16.9 | | |
| 4 | 29.190MHz | 9.9 | 0.3 | | QPeak | 45.9 | 56.0 | 73.0 | -17.0 | | |
| 5 | 28.767MHz | 9.9 | 0.3 | | QPeak | 44.3 | 54.5 | 73.0 | -18.5 | | |
| 9 | 28.359MHz | 9.8 | 0.3 | | QPeak | 42.2 | 52.3 | 73.0 | -20.7 | | |
| 7 | 27.933MHz | 9.8 | 0.3 | | QPeak | 41.8 | 52.0 | 73.0 | -21.0 | | |
| 3 | 29.190MHz | 9.9 | 0.3 | | C_AVG | 43.5 | 53.7 | | | 60.0 | -6.3 |
| 6 | 28.767MHz | 9.9 | 0.3 | | C_AVG | 41.8 | 52.0 | | | 60.0 | -8.0 |
| 8 | 27.921MHz | 9.8 | 0.3 | | C_AVG | 37.2 | 47.3 | | | 60.0 | -12.7 |
| 10 | 28.344MHz | 9.8 | 0.3 | | C_AVG | 39.5 | 49.7 | | | 60.0 | -10.3 |
| 11 | 29.613MHz | 9.9 | 0.3 | | C_AVG | 44.4 | 54.6 | | | 60.0 | -5.4 |

Result

The EUT complied with the specification limit.

5.3 §15.403(i) 26 dB Emissions Bandwidth

All chains were measured under the guidance of KDB 789033 Section II.C. and KDB 66291 D01. Please see associated annex for details on instrument settings.

| Nominal BW (MHz) | Frequency (MHz) | 99% Bandwidth (MHz) | Emissions 26 dB Bandwidth (MHz) |
|------------------|-----------------|---------------------|---------------------------------|
| HE20 | 5165 | 18.90 | 20.90 |
| HE20 | 5200 | 18.90 | 21.20 |
| HE20 | 5240 | 18.90 | 21.30 |
| HE40 | 5175 | 37.25 | 39.75 |
| HE40 | 5200 | 37.50 | 40.05 |
| HE40 | 5230 | 37.75 | 39.90 |
| HE80 | 5195 | 77.00 | 81.00 |
| HE80 | 5200 | 77.00 | 82.00 |
| HE80 | 5210 | 76.50 | 82.50 |

Result

All chains were tested and the highest bandwidth per chain is reported above.

The 26 dB bandwidths are reported for information purposes. Please see Annex for all bandwidth measurements.

5.4 §15.407(a)(2) Maximum Average Output Power

All chains were measured and summed under the guidance of KDB 789033 Section II. E.2. and KDB 66291 D01. Please see associated annex for details on instrument settings.

The maximum average RF conducted output power measured for this device was 22.70 dBm or 186.21 mW. The limit is 30 dBm, or 1 Watt when using an antenna with 23 dBi or less gain. The antenna has a gain of 18.2 dBi.

| Modulation (BW) | Frequency (MHz) | Data Rate | TP Setting | Conducted Output Power | Measured EIRP | Measured PSD |
|-----------------|-----------------|-----------|------------|------------------------|---------------|--------------|
| HE 20 | 5165 | Mcs0 | 28 | 16.70 | 34.90 | 3.09 |
| HE 20 | 5200 | Mcs0 | 38 | 22.20 | 40.40 | 8.79 |
| HE 20 | 5240 | Mcs0 | 39 | 22.60 | 40.80 | 9.12 |
| HE 40 | 5175 | Mcs0 | 30 | 18.00 | 36.20 | 1.94 |
| HE 40 | 5200 | Mcs0 | 32 | 19.20 | 37.40 | 3.20 |
| HE 40 | 5230 | Mcs0 | 37 | 21.90 | 40.10 | 5.79 |
| HE 80 | 5195 | Mcs0 | 21 | 12.90 | 31.10 | -5.43 |
| HE 80 | 5200 | Mcs0 | 31 | 18.50 | 36.70 | 0.11 |
| HE 80 | 5210 | Mcs0 | 31 | 18.50 | 36.70 | 0.32 |

Result

In the configuration tested, the maximum summed average RF output power was less than 1 watt; therefore, the EUT complied with the requirements of the specification (see spectrum analyzer plots in attached Annex).

5.5 §15.407(b) Spurious Emissions

5.5.1 Conducted Spurious Emissions

The frequency range from the lowest frequency generated or used in the device to the tenth harmonic of the highest fundamental frequency was investigated to measure any antenna-conducted emissions. The graphs show the measurement data from spurious emissions noted across the frequency range when transmitting at the lowest frequency, middle frequency and upper frequency. Shown below are plots with the EUT turned to the upper and lower channels with the antenna gain of 18.2 dBi accounted for. These demonstrate compliance with the provisions of this section at the band edges.

The emissions must be remain below -27 dBm EIRP.

Result

Conducted spurious emissions were below -27 dBm; therefore, the EUT complies with the specification.

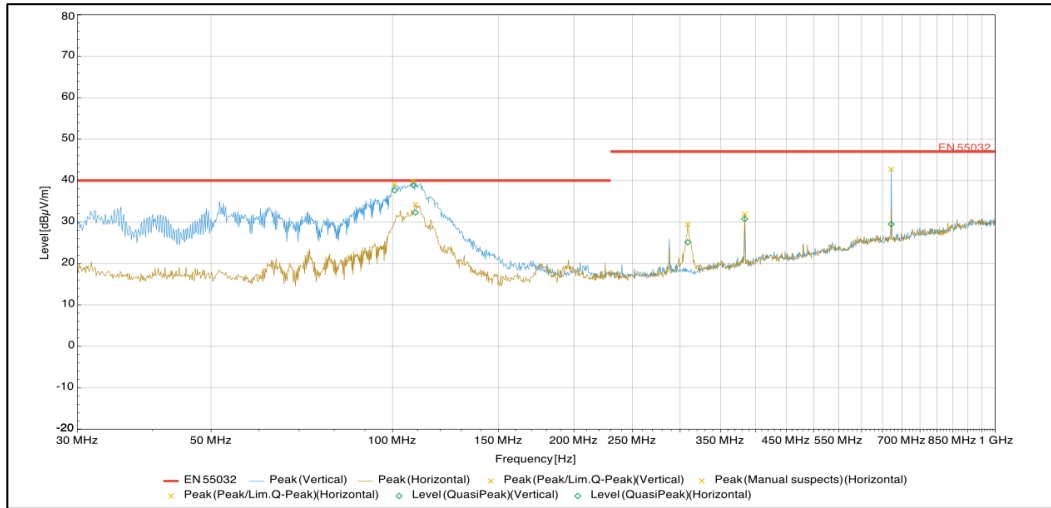
5.5.2 Radiated Spurious Emissions in the Restricted Bands of § 15.205

The EUT uses various power settings based on the channel in use. In order to reduce test time, the radiated spurious emissions at the lowest, middle, and highest channel were measured at the maximum power of TP39, as this setting was found to be worst case for spurious emissions. Power was subsequently reduced during in-band and band edge testing. The band edge at the restricted band ending at 5150 MHz was measured using radiated measurement. All emissions modes were tested, and the worst-case measurement are shown below. For frequencies above 1 GHz, a measurement of 3 meters was used. For frequencies below 1 GHz, a measurement distance of 10 meters was used.

Correction Factor = Antenna Factor + Cable Loss - Pre-Amplifier Gain, and is added to the Receiver reading.

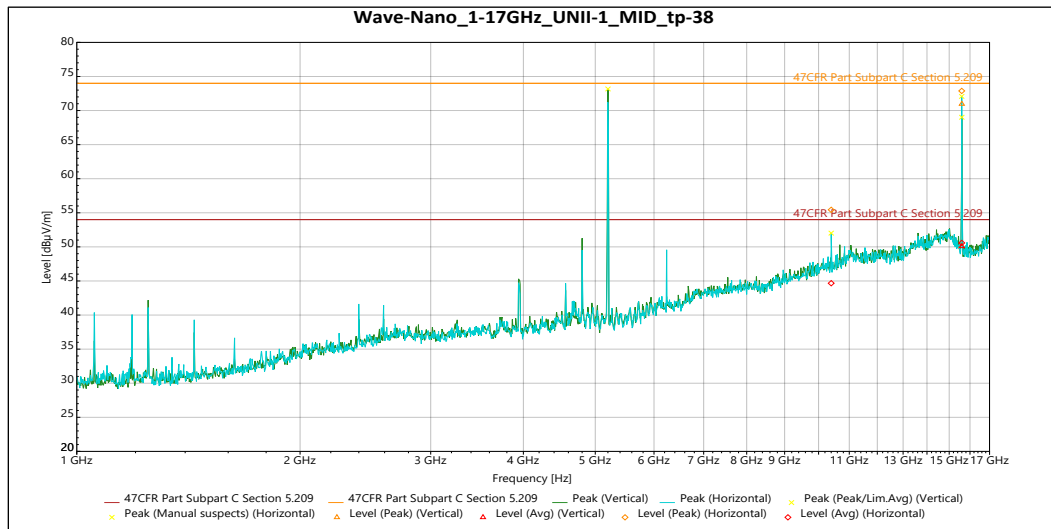
Result

All emissions in the restricted bands of § 15.205 met the limits specified in § 15.209; therefore, the EUT complies with the specification. All emissions me the limits specified in § 15.407(b). Representative band edge plots are included in this report.



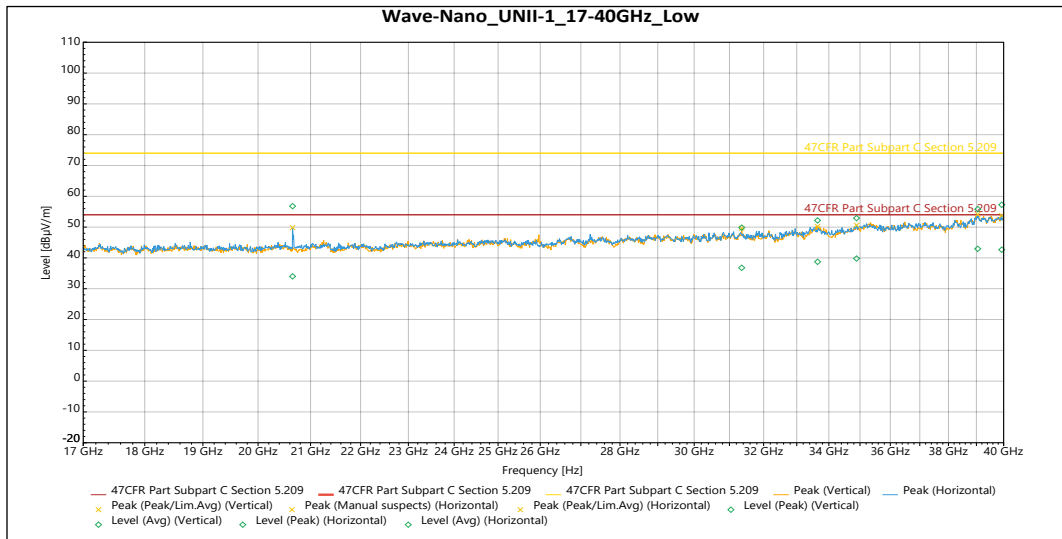
| Frequency | SR # | Level (dBµV/m) | Limit (dBµV/m) | Margin | Azimuth (°) | Height | Pol. | RBW (Hz) | Correction (dB) |
|------------|-------|----------------|----------------|---------|-------------|--------|------------|----------|-----------------|
| 100.83 MHz | QPeak | 37.627 | 40 | -2.373 | 340 | 1.378 | Vertical | 120000 | -12.8 |
| 108.29 MHz | QPeak | 38.899 | 40 | -1.101 | 102 | 1.053 | Vertical | 120000 | -13.591 |
| 671.94 MHz | QPeak | 29.487 | 47 | -17.513 | 301 | 2.656 | Vertical | 120000 | -4.084 |
| 109.13 MHz | QPeak | 32.305 | 40 | -7.695 | 56 | 3.826 | Horizontal | 120000 | -13.784 |
| 308.98 MHz | QPeak | 25.1 | 47 | -21.9 | 183 | 2.535 | Horizontal | 120000 | -11.098 |
| 383.97 MHz | QPeak | 30.743 | 47 | -16.257 | 163 | 1.791 | Horizontal | 120000 | -9.171 |

Table 4: Radiated Emissions within 30MHz-1GHz



| Frequency | SR # | Level (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Azimuth (°) | Height (m) | Pol. | Correction (dB) |
|------------|------|----------------|----------------|-------------|-------------|------------|------------|-----------------|
| 15.6 GHz | 1 | 70.968 | 74 | -3.032 | 97 | 2.751 | Vertical | 13.668 |
| 15.6 GHz | 1 | 50.089 | 54 | -3.911 | 97 | 2.751 | Vertical | 13.668 |
| 10.4 GHz | 2 | 55.44 | 74 | -18.56 | 56 | 1.841 | Horizontal | 12.01 |
| 15.595 GHz | 2 | 72.876 | 74 | -1.124 | 116 | 3.114 | Horizontal | 13.69 |
| 10.4 GHz | 2 | 44.674 | 54 | -9.326 | 56 | 1.841 | Horizontal | 12.01 |
| 15.595 GHz | 2 | 50.58 | 54 | -3.42 | 116 | 3.114 | Horizontal | 13.69 |

Table 5: Transmitting on the Middle Frequency 5200 MHz



| Frequency | SR # | Level (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Azimuth (°) | Pol. | Correction (dB) |
|------------|------|----------------|----------------|-------------|-------------|------------|-----------------|
| 31.354 GHz | Peak | 49.818 | 74 | -24.182 | 225 | Vertical | -0.719 |
| 33.645 GHz | Peak | 52.168 | 74 | -21.832 | 39 | Vertical | 1.149 |
| 39.047 GHz | Peak | 55.826 | 74 | -18.174 | 191 | Vertical | 3.145 |
| 31.354 GHz | AVG | 36.793 | 54 | -17.207 | 225 | Vertical | -0.719 |
| 33.645 GHz | AVG | 38.739 | 54 | -15.261 | 39 | Vertical | 1.149 |
| 39.047 GHz | AVG | 42.946 | 54 | -11.054 | 191 | Vertical | 3.145 |
| 20.652 GHz | Peak | 56.802 | 74 | -17.198 | 224 | Horizontal | -5.585 |
| 34.887 GHz | Peak | 52.906 | 74 | -21.094 | 212 | Horizontal | 1.078 |
| 39.93 GHz | Peak | 57.243 | 74 | -16.757 | 56 | Horizontal | 3.797 |
| 20.652 GHz | AVG | 34.011 | 54 | -19.989 | 224 | Horizontal | -5.585 |
| 34.887 GHz | AVG | 39.801 | 54 | -14.199 | 212 | Horizontal | 1.078 |
| 39.93 GHz | AVG | 42.66 | 54 | -11.34 | 56 | Horizontal | 3.797 |

Table 6: Radiated Emissions within 17-40GHz Transmitting on Middle Frequency

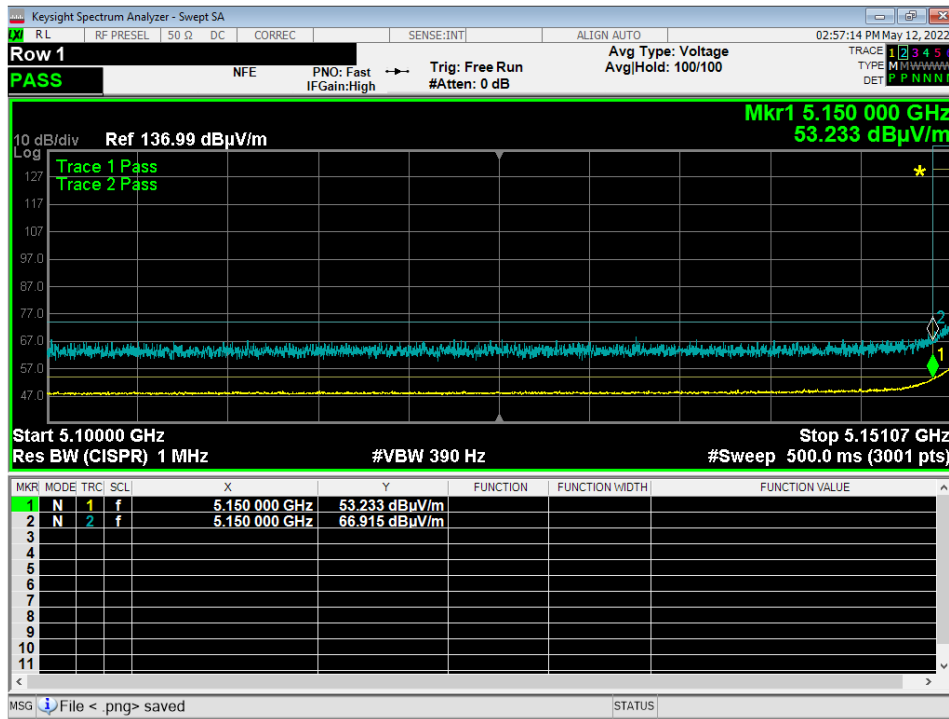


Figure 5: Band Edge HE20 5165MHz

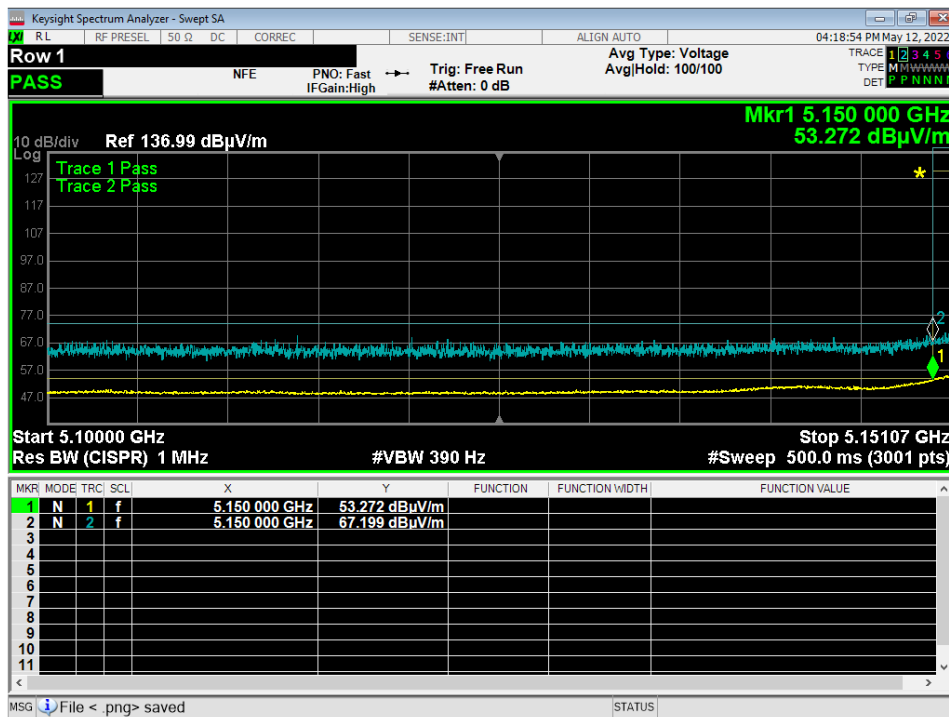


Figure 6: Band Edge HE20 5200MHz

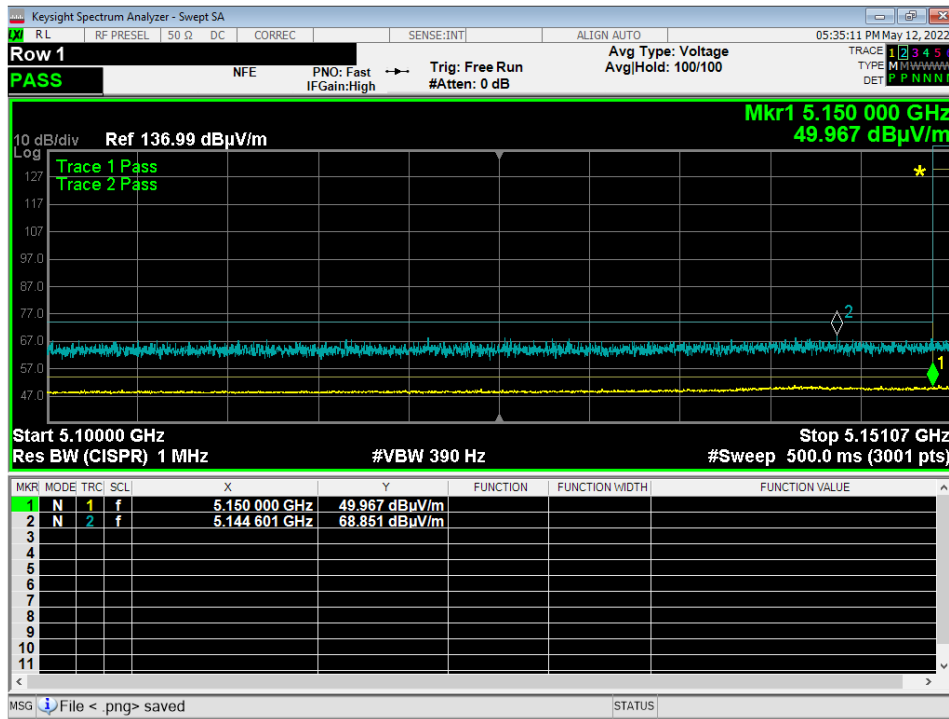


Figure 7: Band Edge HE20 5240MHz

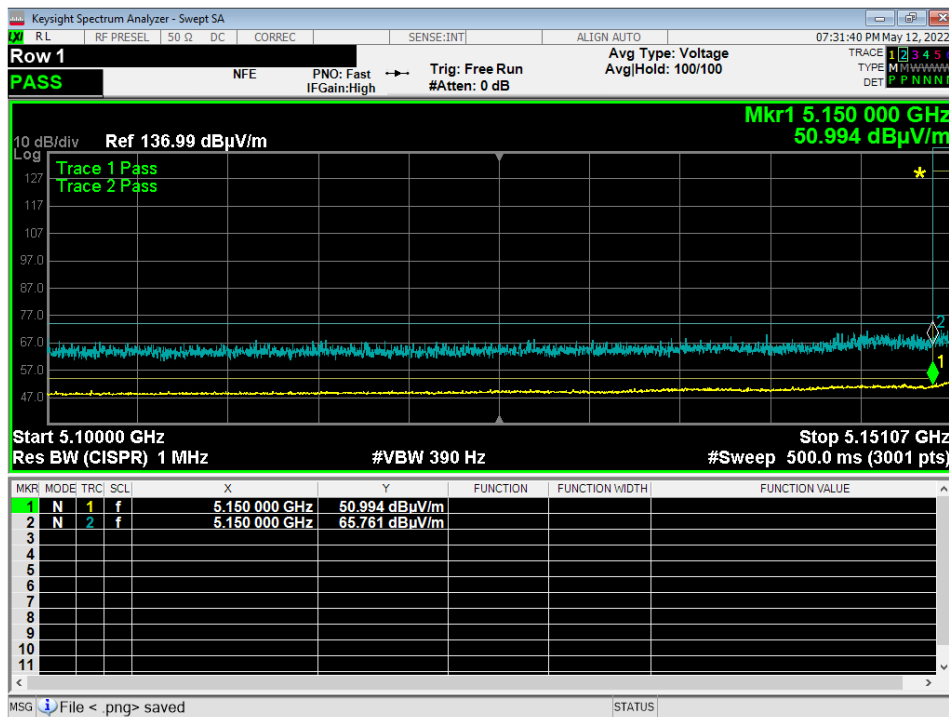


Figure 8: Band Edge HE40 5175MHz

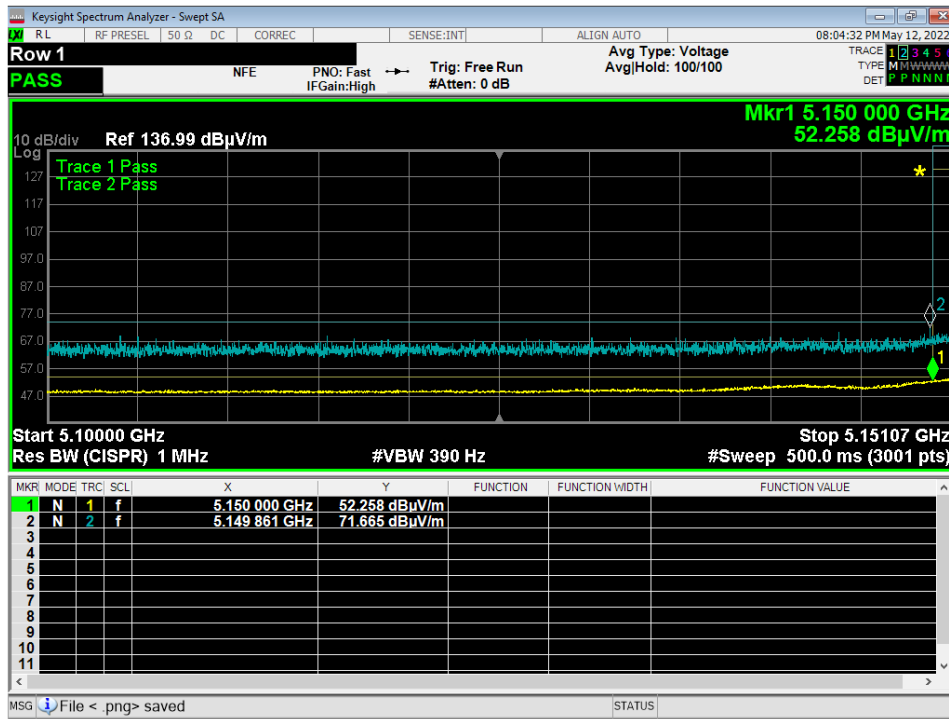


Figure 9: Band Edge HE40 5200MHz

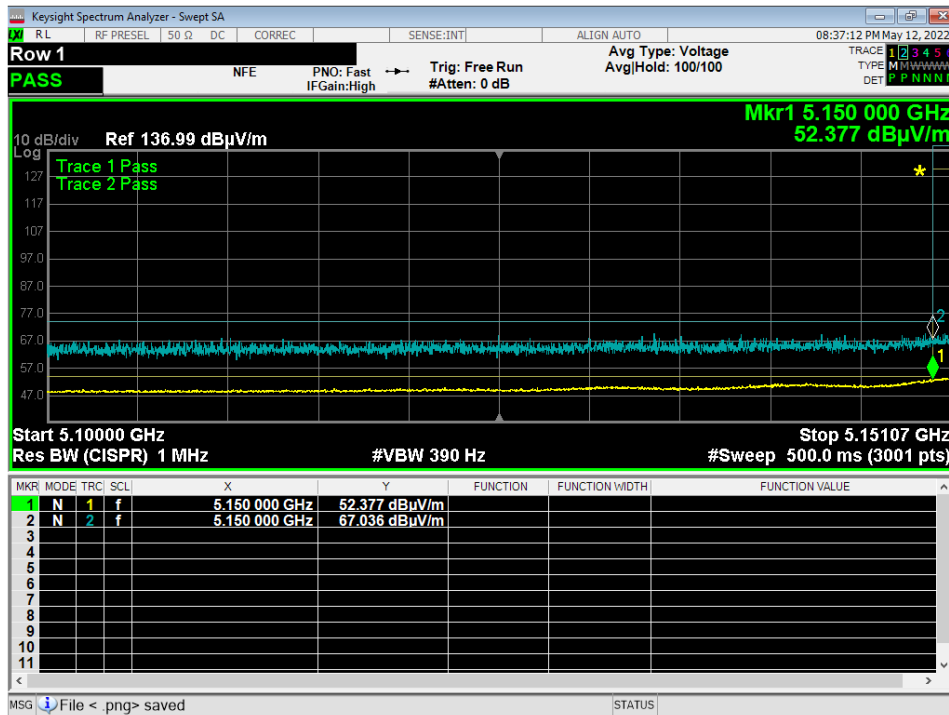


Figure 10: Band Edge HE40 5230MHz

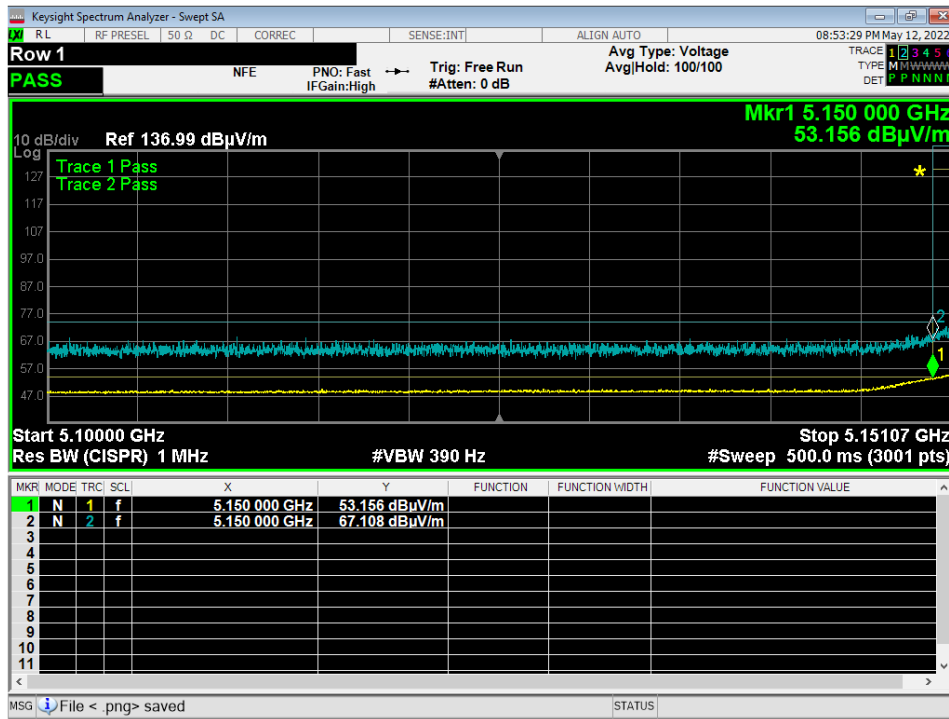


Figure 11: Band Edge HE80 5195MHz

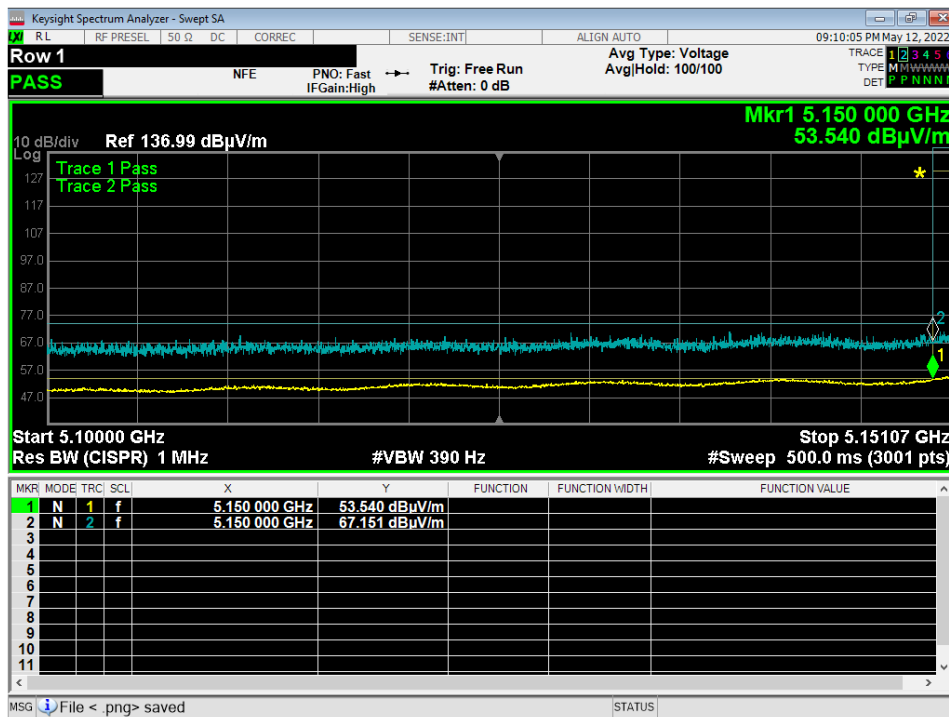


Figure 12: Band Edge HE80 5200MHz

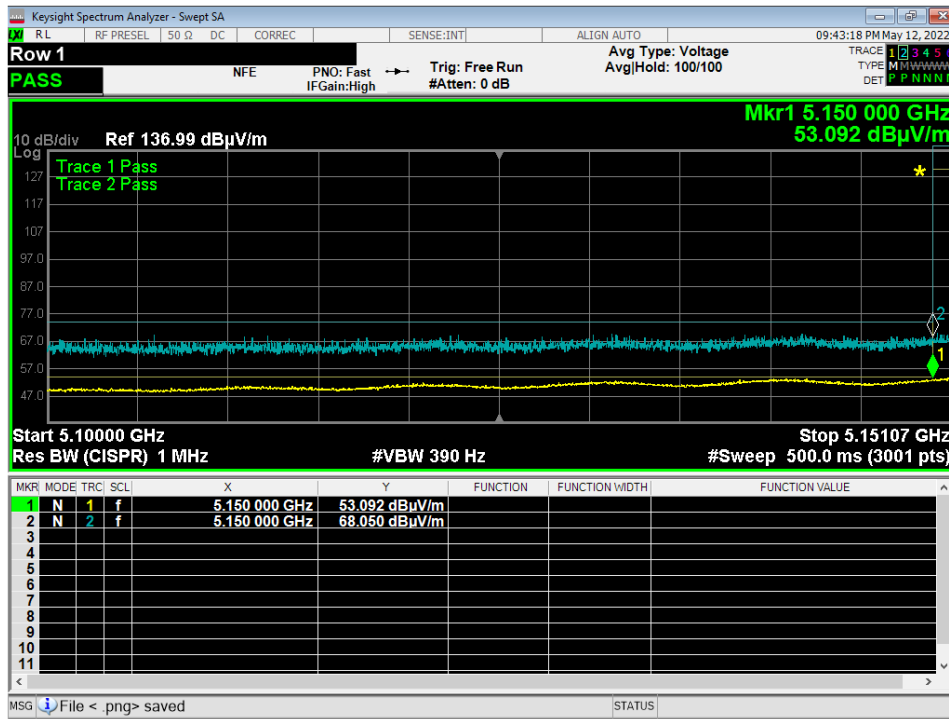


Figure 13: Band Edge HE80 5210MHz

5.6 §15.407(a) Maximum Power Spectral Density

All chains were measured and summed under the guidance of KDB 789033 Section II. F. and KDB 66291 D01. Please see associated annex for details on instrument settings.

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 |
|-----------------|-----------------|-----------|------------|--------------|
| HE 20 | 5165 | Mcs0 | 28 | 3.09 |
| HE 20 | 5200 | Mcs0 | 38 | 8.79 |
| HE 20 | 5240 | Mcs0 | 39 | 9.12 |
| HE 40 | 5175 | Mcs0 | 30 | 1.94 |
| HE 40 | 5200 | Mcs0 | 32 | 3.20 |
| HE 40 | 5230 | Mcs0 | 37 | 5.79 |
| HE 80 | 5195 | Mcs0 | 21 | -5.43 |
| HE 80 | 5200 | Mcs0 | 31 | 0.11 |
| HE 80 | 5210 | Mcs0 | 31 | 0.32 |

Result

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

-- End of Test Report --