# TEST REPORT

of

# FCC PART 15 SUBPART E

☒ New Application; ☐ Class I PC; ☐ Class II PC

| | |
|---|---|
| **Product :** | **Wi-Fi / Bluetooth Module** |
| **Brand:** | **Zunidata** |
| **Model:** | **AP6256** |
| **Model Difference:** | **N/A** |
| **FCC ID:** | **Z28-AP6256-ZA** |
| **FCC Rule Part:** | **§15.407, Cat:NII** |
| **Applicant:** | **Zunidata Systems, Inc.** |
| **Address:** | **6F, No.945,Boai Street , Jubei City, Hsinchu, 30265 Taiwan** |

Test Performed by:

**International Standards Laboratory Corp. LT Lab.**
TEL: +886-3-263-8888 FAX: +886-3-263-8899
No. 120, Lane 180, Hsin Ho Rd., Lung-Tan Dist., Tao Yuan City 325, Taiwan

Report No.: **ISL-22LR0181FE**
Issue Date :**2022/11/15**

# VERIFICATION OF COMPLIANCE

| | |
|---|---|
| **Applicant:** | Zunidata Systems, Inc. |
| **Product Description:** | Wi-Fi / Bluetooth Module |
| **Brand Name:** | Zunidata |
| **Model No.:** | AP6256 |
| **Model Difference:** | N/A |
| **FCC ID:** | Z28-AP6256-ZA |
| **Date of test:** | 2022/10/12 ~ 2022/11/14 |
| **Date of EUT Received:** | 2022/10/12 |

## We hereby certify that:

All the tests in this report have been performed and recorded in accordance with the standards described above and performed by an independent electromagnetic compatibility consultant, International Standards Laboratory Corp.

The test results contained in this report accurately represent the measurements of the characteristics and the energy generated by sample equipment under test at the time of the test. The sample equipment tested as described in this report is in compliance with the limits of above standards.

| | | | |
|---|---|---|---|
| ***Test By:*** | Barry Lee | ***Date:*** | 2022/11/15 |
| | ***Barry Lee / Senior Engineer*** | | |
| ***Prepared By:*** | Gigi yeh | ***Date:*** | 2022/11/15 |
| | ***Gigi Yeh / Senior Engineer*** | | |
| ***Approved By:*** | Jerry Liu | ***Date:*** | 2022/11/15 |
| | ***Jerry Liu / Assistant Manager*** | | |

# Version

| Version No. | Date | Description |
|---|---|---|
| 00 | 2022/11/15 | Initial creation of document |
| | | |

# Uncertainty of Measurement

ISO/IEC 17025 requires that an estimate of measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)).

| Parameter | Uncertainty (k=2) |
|---|---|
| Conducted Emission (AC power line) | ±0.852 dB |
| Spurious emissions, radiated | ±3.46 dB |
| RF power, conducted | ±1.386 dB |
| Power Density | ±1.432 dB |
| RF Frequency | ±0.00298% |
| Time | ±0.01% |
| DC Voltage | ±0.808% |

# Table of Contents

# 1. General Information

## 1.1. Product Description

| General Information | |
|---|---|
| Product Name: | Wi-Fi / Bluetooth Module |
| Brand Name: | Zunidata |
| Model Name: | AP6256 |
| Model Difference: | N/A |
| Temperature Range | 0°C to 50°C |
| Power Supply: | 5V DC |

| WiFi Information | |
|---|---|
| WLAN Modular | AP6256 |
| Frequency Range: | WLAN 5GHz Band<br>U-NII-1 5150MHz ~ 5250MHz<br>U-NII-2A 5250MHz ~ 5350MHz<br>U-NII-2C 5470MHz ~ 5725MHz<br>U-NII-3 5725MHz ~ 5825MHz |
| Max Output Power: | 5150MHz ~ 5350MHz: 14.68dBm<br>5470MHz ~ 5725MHz: 15.45dBm<br>5725MHz ~ 5825MHz: 15.87dBm |
| Channel number: | WLAN 5GHz Band<br>802.11a U-NII-1 : 4ch<br>802.11a U-NII-2A : 4ch<br>802.11a U-NII-2C : 11ch<br>802.11a U-NII-3 : 5ch<br>802.11n(HT20) U-NII-1 : 4ch<br>802.11n(HT20) U-NII-2A : 4ch<br>802.11n(HT20) U-NII-2C : 11ch<br>802.11n(HT20) U-NII-3 : 5ch<br>802.11n(HT40) U-NII-1 : 2ch<br>802.11n(HT40) U-NII-2A : 2ch<br>802.11n(HT40) U-NII-2C : 5ch<br>802.11n(HT40) U-NII-3 : 2ch<br>802.11ac(VHT20) U-NII-1 : 4ch<br>802.11ac(VHT20) U-NII-2A : 4ch |

| | |
|---|---|
| | 802.11ac(VHT20) U-NII-2C : 11ch<br>802.11ac(VHT20) U-NII-3 : 5ch<br>802.11ac(VHT40) U-NII-1 : 2ch<br>802.11ac(VHT40) U-NII-2A : 2ch<br>802.11ac(VHT40) U-NII-2C : 5ch<br>802.11ac(VHT40) U-NII-3 : 2ch<br>802.11ac(VHT80) U-NII-1 : 1ch<br>802.11ac(VHT80) U-NII-2A : 1ch<br>802.11ac(VHT80) U-NII-2C : 2ch<br>802.11ac(VHT80) U-NII-3 : 1ch<br>802.11a Straddle 1ch<br>802.11n(HT20) Straddle : 1ch<br>802.11n(HT40) Straddle 1ch<br>802.11ac(VHT20) Straddle 1ch<br>802.11ac(VHT40) Straddle 1ch<br>802.11ac(VHT80) Straddle 1ch |
| Product HW Version: | 2147 |
| Product SW Version: | 7.45.96.90 |
| Product FW Version: | 7.45.96.90 |
| Test SW Version: | Linux Terminal |
| RF power setting: | 802.11a 52<br>802.11HT20 52<br>802.11HT40 46<br>802.11ac20 44<br>802.11ac40 44<br>802.11ac080 44 |

| | Antenna Type | Brand | Model | Peak Gain (dBi) | Frequency Range | Connector Type |
|---|---|---|---|---|---|---|
| 1 | PIFA | anjil | AJDF1J-B00 05 | 2400~2500MHz :2.46<br>5150~5350(MHz):4.93<br>5500~5700(MHz):4.57<br>5745~5825(MHz):4.66 | 2.4G&5G | i-pex |
| 2 | PIFA | ing 聯慶科技股份有限公司 | T-543-92910 42-1 | 2400~2500MHz : -1.65<br>5150~5350(MHz):-1.14<br>5500~5700(MHz):-1.46<br>5745~5825(MHz):-1.73 | 2.4G&5G | i-pex |
| 3 | PIFA | ing 聯慶科技股份有限公司 | T-543-92911 52-11 | 2400~2500MHz :-1.65<br>5150~5350(MHz):-1.14<br>5500~5700(MHz):-1.46<br>5745~5825(MHz):-1.73 | 2.4G&5G | i-pex |
| 4 | PIFA | TSKY CO., LTD. | A8-A006-00 541 | 2400~2500MHz :1.47<br>5150~5350(MHz):4.83<br>5500~5700(MHz):4.45<br>5745~5825(MHz):4.5 | 2.4G&5G | i-pex |
| 5 | PIFA | TSKY CO., LTD. | A8-A006-00 509 | 2400~2500MHz :2.7<br>5150~5350(MHz):6.63<br>5500~5700(MHz):5.78<br>5745~5825(MHz):5.55 | 2.4G&5G | i-pex |
| 6 | PIFA | TSKY CO., LTD. | A8-A006-00 543 | 2400~2500MHz :4.37<br>5150~5350(MHz):3.26<br>5500~5700(MHz):4.62<br>5745~5825(MHz):4.17 | 2.4G&5G | i-pex |
| 7 | PIFA | TSKY CO., LTD | A8-A003-00 185 | 2400~2500MHz :2.33<br>5150~5350(MHz):4.56<br>5500~5700(MHz):4.33<br>5745~5825(MHz):3.18 | 2.4G&5G | i-pex |
| 8 | Dipole | 亞驪 | RFA-25-T42 -U-M70 | 2400~2500MHz :2.9<br>5150~5350(MHz):4.5<br>5500~5700(MHz):4.5<br>5745~5825(MHz):4.5 | 2.4G&5G | SMA |
| 9 | Dipole | TSKY CO., LTD | A8-A003-00 178 | 2400~2500MHz :4.25<br>5150~5350(MHz):3.64<br>5500~5700(MHz):3.91<br>5745~5825(MHz):2.06 | 2.4G&5G | SMA |
| 10 | Dipole | TSKY CO., LTD | A8-A006-00 522 | 2400~2500MHz :5.56<br>5150~5350(MHz):4.36<br>5500~5700(MHz):4.66<br>5745~5825(MHz):4.36 | 2.4G&5G | SMA |
| 11 | PIFA | anjil | AJDF1J-B00 03 | 2400~2500MHz :2.78<br>5150~5350(MHz):2.47<br>5500~5700(MHz):2.18<br>5745~5825(MHz):1.98 | 2.4G&5G | i-pex |

| | | | | | | |
|---|---|---|---|---|---|---|
| 12 | PIFA | ing 聯慶科技股份有限公司 | T-543-92910 48-1 | 2400~2500MHz :-1.16<br>5150~5350(MHz):-1.37<br>5500~5700(MHz):-1.04<br>5745~5825(MHz):-1.68 | 2.4G&5G | i-pex |

The EUT is compliance with IEEE 802.11 a/b/g/n/ac Standard.
This report applies for Wifi frequency band 5150 MHz– 5250 MHz, 5150 MHz– 5250 MHz, 5470MHz – 5725MHz, 5725 MHz– 5850 MHz

**Remark:** The above DUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

## 1.2. Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for **FCC ID: Z28-AP6256-ZA** filing to comply with Section 15.407 of the FCC Part 15, Subpart E Rules.

## 1.3. Test Methodology

Both conducted and radiated testing were performed according to the procedures in ANSI C63.10: 2013. Radiated testing was performed at an antenna to EUT distance 3 meters.

KDB Document: 789033 D02 General U-NII Test Procedures New Rules v02r01

FCC 14-30 Revision UNII

594280 D02 U-NII Device Security v01r03

## 1.4. Test Facility

The measurement facilities used to collect the 3m Radiated Emission and AC power line conducted data are located on the address of International Standards Laboratory Corp. <LT Lab.> No. 120, Lane 180, Hsin Ho Rd., Lung-Tan Dist., Tao Yuan City 325, Taiwan which are constructed and calibrated to meet the FCC requirements in documents ANSI C63.10: 2013. FCC Registration Number is: 487532; Designation Number is: TW0997.

## 1.5. Special Accessories

Not available for this EUT intended for grant.

## 1.6. Equipment Modifications

Not available for this EUT intended for grant.

# 2. System Test Configuration

## 2.1. EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

## 2.2. EUT Exercise

The EUT (Transmitter) was operated in the engineering mode to fix the Tx frequency that was for the purpose of the measurements.

## 2.3. Test Procedure

### 2.3.1 Conducted Emissions

The EUT is a placed on as turn table which is 0.8 m above ground plane. According to the requirements in Section 6 of ANSI C63.10: 2013. Con-ducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR 16-1-1 Quasi-Peak and Average detector mode.

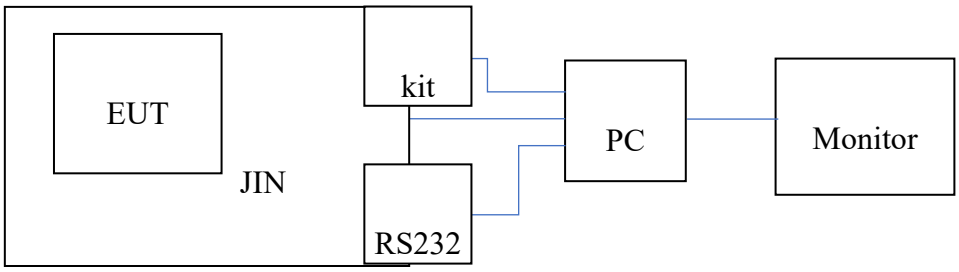
### 2.3.2 Radiated Emissions

The EUT is a placed on a turntable which is 0.8 m/1.5m (Frequency above 1GHz) above the ground plane. The turntable shall rotate 360 degrees to determine the position of maximum emission level. The EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. To find out the maximum emission, the relative positions of this hand-held transmitter (EUT) was rotated through three orthogonal axes and measurement procedures for electric field radiated emissions above 1 GHz the EUT measurement is to be made “while keeping the antenna in the ‘cone of radiation’ from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response.” is still within the 3dB illumination BW of the measurement antenna according to the requirements in Section 6, 11 and 12 of ANSI C63.10: 2013.

## 2.4. Configuration of Tested System

**Fig. 2-1 Configuration of Tested System**

**Radiated Emission**




**1. Table 1-1 Equipment Used in Tested System**

| Item | Equipment | Mfr/Brand | Model/ Type No. | Series No. | Data Cable | Power Cord |
|---|---|---|---|---|---|---|
| 1 | Monitor | DELl | P2011H | N/A | N/A | 180cm |
| 2 | PC | N/A | N/A | N/A | N/A | 180cm |
| 3 | Jin | Soliton | SCTS SD_SDEXTD-2 IN_V1.1 | N/A | 50cm | N/A |
| 4 | RS232 | AMPAK | UART_V07 | N/A | N/A | N/A |

**Note:** All the above equipment/cables were placed in worse case positions to maximize emission signals during emission test.

**Grounding:** Grounding was in accordance with the manufacturer's requirements and conditions for the intended use.

## 2.5. Duty Cycle

If duty cycle of test signal is ≥ 98 %, duty factor is not required.

If duty cycle of test signal is < 98 %, duty factor shall be considered.

The output power = measured power + duty factor.

| Mode | ON time (ms) | Total time (ms) | Duty Cycle | Duty Factor | 1/Ton (kHz) | VBW for average detector (kHz) |
|---|---|---|---|---|---|---|
| a | 1.386 | 1.507 | 92.000% | 0.36 | 0.721 | 1 |
| HT20 | 1.300 | 1.410 | 92.199% | 0.35 | 0.769 | 1 |
| HT40 | 0.648 | 0.747 | 86.747% | 0.62 | 1.543 | 13 |
| VHT20 | 1.305 | 1.425 | 91.579% | 0.38 | 0.766 | 1 |
| VHT40 | 0.648 | 0.754 | 85.932% | 0.66 | 1.544 | 1 |
| VHT80 | 0.324 | 0.430 | 75.349% | 1.23 | 3.086 | 5 |

## 3. Summary of Test Results

| FCC Rules | Description Of Test | Result |
|---|---|---|
| §15.207 | AC Power Line Conducted Emission | Compliant |
| §15.407(a)(2) | Output Power/ EIRP/ Spectral Density Measurement | Compliant |
| §15.407(a) | 26dB Emission Bandwidth | Compliant |
| §15.407(e) | 6dB Emission Bandwidth | Compliant |
| §15.407(b) | Undesirable Emission – Radiated Measurement | Compliant |
| §15.407( c) | Transmission in case of Absence of Information | Compliant |
| §15.407(a) | Antenna Requirement | Compliant |
| §15.407(d) | TPC and DFS Measurement | Compliant |
| §15.407(i) | Device Security | Compliant |

# 4. Description of Test Modes

The EUT has been tested under operating condition.
Test program used to control the EUT for staying in continuous transmitting mode is programmed.

5150MHz-5350MHz:
802.11a mode: Channel low (5180MHz), mid (5260MHz) and high (5320MHz) with 6Mbps lowest data rate are chosen for pre-test testing of radiated emissions.
802.11 n HT20: Channel low (5180MHz), mid (5260MHz) and high (5320MHz) with 6.5Mbps lowest data rate are chosen for pre-test testing of radiated emissions.
802.11 n HT40: Channel low (5190MHz), mid (5230MHz) and high (5310MHz) with 13.5Mbps lowest data rate are chosen for pre-test testing of radiated emissions.
802.11 ac VHT20: Channel low (5180MHz), mid (5260MHz) and high (5320MHz) with 6.5Mbps lowest data rate are chosen for pre-test testing of radiated emissions.
802.11 ac VHT40: Channel low (5190MHz), mid (5230MHz) and high (5310MHz) with 13.5Mbps lowest data rate are chosen for pre-test testing of radiated emissions.
802.11 ac VHT80: Channel low (5210MHz) and high (5290MHz) with 13.5Mbps lowest data rate is chosen for pre-test testing of radiated emissions.

5470MHz-5725MHz:
802.11a mode: Channel low (5500MHz), mid (5600MHz) and high (5700MHz) with 6Mbps lowest data rate are chosen for pre-test testing of radiated emissions.
802.11 n HT20: Channel low (5500MHz), mid (5600MHz) and high (5700MHz) with 6.5Mbps lowest data rate are chosen for pre-test testing of radiated emissions.
802.11 n HT40: Channel low (5510MHz), mid (5550MHz) and high (5670MHz) with 13.5Mbps lowest data rate are chosen for pre-test testing of radiated emissions.
802.11 ac VHT20: Channel low (5500MHz), mid (5600MHz) and high (5700MHz) with 6.5Mbps lowest data rate are chosen for pre-test testing of radiated emissions.
802.11 ac VHT40: Channel low (5510MHz), mid (5550MHz) and high (5670MHz) with 13.5Mbps lowest data rate are chosen for pre-test testing of radiated emissions.
802.11 ac VHT80: Channel low (5530MHz) and high (5610MHz) with 13.5Mbps lowest data rate is chosen for pre-test testing of radiated emissions.
5650MHz-5735MHz (Straddle channel) :
802.11a mode: Channel (5720MHz) with 6Mbps lowest data rate are chosen for pre-test testing of radiated emissions.
802.11 n HT20: Channel (5720MHz) with 6.5Mbps lowest data rate are chosen for pre-test testing of radiated emissions.
802.11 n HT40: Channel (5710MHz) with 13.5Mbps lowest data rate are chosen for pre-test

testing of radiated emissions.

802.11 ac VHT20: Channel (5720MHz) with 6.5Mbps lowest data rate are chosen for pre-test testing of radiated emissions.
802.11 ac VHT40: Channel (5710MHz) z) with 13.5Mbps lowest data rate are chosen for pre-test testing of radiated emissions.
802.11 ac VHT80: Channel (5690MHz) with 13.5Mbps lowest data rate is chosen for pre-test testing of radiated emissions.

5725MHz-5850MHz:
802.11a mode: Channel low (5745MHz), mid (5785MHz) and high (5825MHz) with 6Mbps lowest data rate are chosen for pre-test testing of radiated emissions.
802.11 n HT20: Channel low (5745MHz), mid (5785MHz) and high (5825MHz) with 6.5Mbps lowest data rate are chosen for pre-test testing of radiated emissions.
802.11 n HT40: Channel low (5755MHz) and high (5795MHz) with 13.5Mbps lowest data rate are chosen for pre-test testing of radiated emissions.
802.11 ac VHT20: Channel low (5745MHz), mid (5785MHz) and high (5825MHz) with 6.5Mbps lowest data rate are chosen for pre-test testing of radiated emissions.
802.11 ac VHT40: Channel low (5755MHz) and high (5795MHz) with 13.5Mbps lowest data rate are chosen for pre-test testing of radiated emissions.
802.11 ac VHT80: Channel (5775MHz) with 13.5Mbps lowest data rate is chosen for pre-test testing of radiated emissions.

# 5. Conduced Emission Test

## 5.1. Standard Applicable

According to §15.207, frequency range within 150kHz to 30MHz shall not exceed the Limit table as below.

| Frequency range MHz | Limits dB(uV) | |
|---|---|---|
| | Quasi-peak | Average |
| 0.15 to 0.50 | 66 to 56 | 56 to 46 |
| 0.50 to 5 | 56 | 46 |
| 5 to 30 | 60 | 50 |
| Note<br>1.The lower limit shall apply at the transition frequencies<br>2.The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz. | | |

## 5.2. Measurement Equipment Used:

| Location | Equipment Name | Brand | Model | S/N | Last Cal. Date | Next Cal. Date |
|---|---|---|---|---|---|---|
| Conduction 02 | EMI Receiver 14 | ROHDE& SCHWARZ | ESCI | 101034 | 05/25/2022 | 05/25/2023 |
| Conduction 02 | Conduction 02-1 Cable | WOKEN | CFD 300-NL | Conduction 02 -1 | 10/11/2022 | 10/11/2023 |
| Conduction 02 | LISN 26 | R&S | ENV216 | 102378 | 12/03/2021 | 12/03/2022 |
| Conduction 02 | LISN 21 | R&S | ENV216 | 101476 | 07/20/2022 | 07/20/2023 |
| Conduction 02 | ISN T4 07 | Teseq GmbH | ISN T400A | 30449 | 07/28/2022 | 07/28/2023 |
| Conduction 02 | ISN T8 10 | TESEQ | ISN T800 | 42773 | 08/05/2022 | 08/05/2023 |
| Conduction 02 | ISN T8 CAT6A_01 | SCHWARZ-BECK | NTFM 8158 | 8158 0123 | 01/25/2022 | 01/25/2023 |
| Conduction 02 | CDN ISN ST08A_1 | Teseq GmbH | CDN ISN ST08A | 43352 | 10/04/2022 | 10/04/2023 |
| Conduction 02 | Capacitive Voltage Probe 01 | SCHAFFNER | CVP 2200A | 18711 | 02/23/2022 | 02/23/2023 |
| Conduction 02 | Current Probe | SCHAFFNER | SMZ 11 | 18030 | 02/23/2022 | 02/23/2023 |

## 5.3. EUT Setup:

1. The conducted emission tests were performed in the test site, using the setup in accordance with the ANSI C63.10: 2013
2. The AC/DC Power adaptor of EUT was plug-in LISN. The EUT was placed flushed with the rear of the table.
3. The LISN was connected with 120Vac/60Hz power source.

## 5.4. Measurement Procedure:

1. The EUT was placed on a table which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. Repeat above procedures until all frequency measured were complete.
4. Both 120V & 240V have been verified, and 120V/60Hz was defined as the worst-case and record in the report.

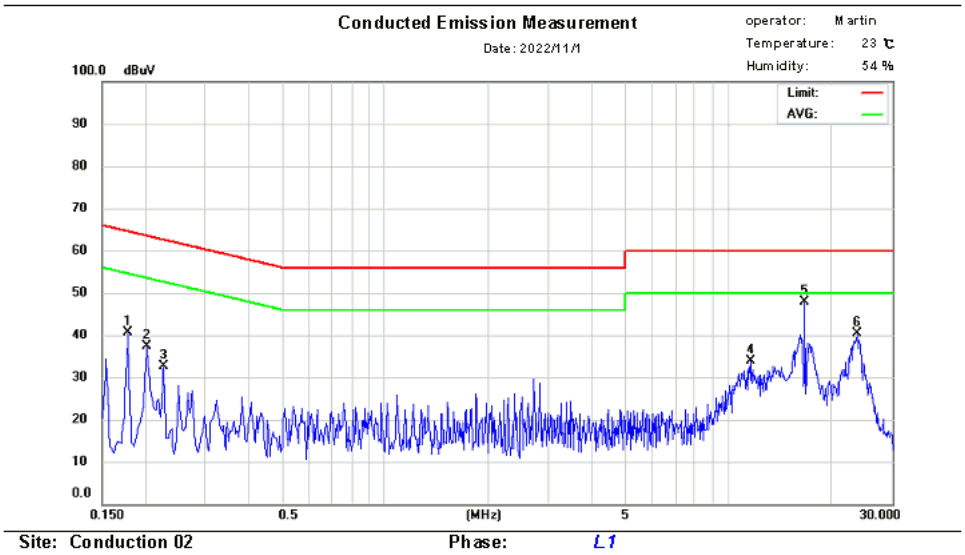
## 5.5. Measurement Result:

The initial step in collecting conducted data is a spectrum analyzer peak scan of the measurement range. Significant peaks are then marked as shown on the following data page, and these signals are then quasi-peaked.

Note: Refer to next page for measurement data and plots.

# AC POWER LINE CONDUCTED EMISSION TEST DATA

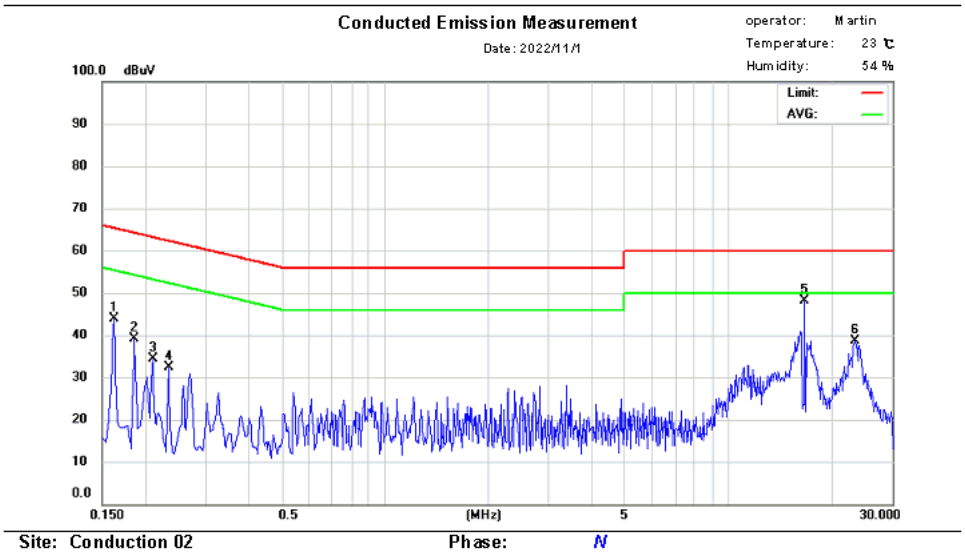
Address:No. 120, Lane 180, Hsin Ho Rd., Lung-Tan Dist.,
Tao Yuan City 325, Taiwan.
Tel:03-2638888




Site: Conduction 02 Phase: L1

| No. | Frequency (MHz) | QP_R (dBuV) | AVG_R (dBuV) | Correct Factor (dB) | QP Emission (dBuV) | QP Limit (dBuV) | QP Margin (dB) | AVG Emission (dBuV) | AVG Limit (dBuV) | AVG Margin (dB) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.178 | 24.42 | 3.91 | 9.66 | 34.08 | 64.58 | -30.50 | 13.57 | 54.58 | -41.01 |
| 2 | 0.202 | 22.52 | 19.00 | 9.66 | 32.18 | 63.53 | -31.35 | 28.66 | 53.53 | -24.87 |
| 3 | 0.226 | 16.60 | 0.97 | 9.67 | 26.27 | 62.60 | -36.33 | 10.64 | 52.60 | -41.96 |
| 4 | 11.638 | 20.18 | 12.38 | 9.92 | 30.10 | 60.00 | -29.90 | 22.30 | 50.00 | -27.70 |
| 5 | 16.666 | 29.17 | 29.15 | 9.94 | 39.11 | 60.00 | -20.89 | 39.09 | 50.00 | -10.91 |
| 6 | 23.722 | 27.50 | 13.95 | 9.93 | 37.43 | 60.00 | -22.57 | 23.88 | 50.00 | -26.12 |

Address:No. 120, Lane 180, Hsin Ho Rd., Lung-Tan Dist.,
Tao Yuan City 325, Taiwan.
Tel:03-2638888




| No. | Frequency (MHz) | QP_R (dBuV) | AVG_R (dBuV) | Correct Factor (dB) | QP Emission (dBuV) | QP Limit (dBuV) | QP Margin (dB) | AVG Emission (dBuV) | AVG Limit (dBuV) | AVG Margin (dB) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.162 | 27.43 | 2.92 | 9.66 | 37.09 | 65.36 | -28.27 | 12.58 | 55.36 | -42.78 |
| 2 | 0.186 | 22.98 | 3.37 | 9.66 | 32.64 | 64.21 | -31.57 | 13.03 | 54.21 | -41.18 |
| 3 | 0.210 | 18.85 | 4.40 | 9.66 | 28.51 | 63.21 | -34.70 | 4.06 | 53.21 | -39.15 |
| 4 | 0.234 | 15.26 | -0.45 | 9.67 | 24.93 | 62.31 | -37.38 | 9.22 | 52.31 | -43.09 |
| 5 | 16.666 | 35.01 | 35.22 | 10.01 | 45.02 | 60.00 | -14.98 | 45.23 | 50.00 | -4.77 |
| 6 | 23.314 | 25.21 | 12.37 | 10.07 | 35.28 | 60.00 | -24.72 | 22.44 | 50.00 | -27.56 |

# 6. OUTPUT POWER / EIRP /SPECTRAL DENSITY MEASUREMENT

## 6.1. Standard Applicable

According to §15.407(a) Power limits:

(1) For the band 5.15-5.25 GHz.

(i) 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. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) 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. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(iii) 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. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(iv) For mobile and portable client devices in the 5.15 – 5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(2) 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 dBm 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBiare used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(3) For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500 kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

## 6.2. Measurement Procedure

For Output Power

1. Place the EUT on the table and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the power meter
3. Record the max. reading.
4. Repeat above procedures until all frequency measured were complete.

For Power Spectral Density

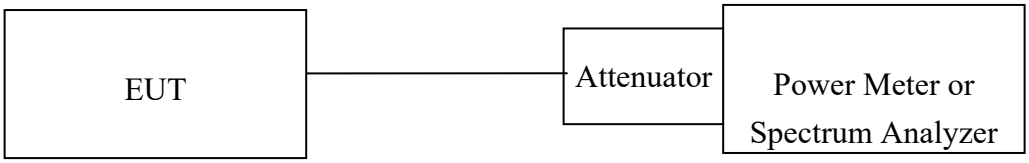
1. Place the EUT on the table and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to Spectrum.
3. Set RBW=1MHz,VBW=3MHz, Span=50MHz (Base Mode), Sweep time = Auto, traces 100 sweeps of video averaging for 5150-5725MHz;
4. Set RBW=500kHz,VBW=1.5MHz, Span=60MHz (Base Mode), Sweep time = Auto, traces 100 sweeps of video averaging for 5725-5850MHz;
5. Record the max. reading.
6. Repeat above procedures until all frequency measured were complete.

**Refer to KDB 789033 D02 General UNII Test Procedures New Rules v02r01**

## 6.3. Measurement Equipment Used:

| Location Conducted | Equipment Name | Brand | Model | S/N | Last Cal. Date | Next Cal. Date |
|---|---|---|---|---|---|---|
| Conducted | Power Meter | Anritsu | ML2495A | 1116010 | 09/29/2022 | 09/29/2023 |
| Conducted | Power Sensor | Anritsu | MA2411B | 34NKF50 | 09/29/2022 | 09/29/2023 |
| Conducted | Power Sensor | DARE | RPR3006W | 13I00030SNO33 | 01/07/2022 | 01/07/2023 |
| Conducted | Power Sensor | DARE | RPR3006W | 13I00030SNO34 | 01/07/2022 | 01/07/2023 |
| Conducted | Power Sensor | DARE | RPR3006W | 14I00889SNO35 | 06/29/2022 | 06/29/2023 |
| Conducted | Power Sensor | DARE | RPR3006W | 14I00889SNO36 | 06/29/2022 | 06/29/2023 |
| Conducted | Temperature Chamber | KSON | THS-B4H100 | 2287 | 05/20/2022 | 05/20/2023 |
| Conducted | DC Power supply | ABM | 8185D | N/A | 01/06/2022 | 01/06/2023 |
| Conducted | AC Power supply | EXTECH | CFC105W | NA | N/A | N/A |
| Conducted | Spectrum analyzer | Keysight | N9010A | MY56070257 | 09/28/2022 | 09/28/2023 |
| Conducted | Test Software | DARE | Radiation Ver:2013.1.23 | NA | NA | NA |
| Conducted | Test Software | R&S | CMUGO Ver:2.0.0 | N/A | N/A | N/A |
| Conducted | Universal Digital Radio Communication Tester | R&S | CMU200 | 111968 | 11/18/2022 | 11/18/2023 |
| Conducted | Wideband Radio Communication Tester | R&S | CMW500 | 1201.002K50108 793-JG | 10/31/2022 | 10/31/2023 |
| Conducted | BT Simulator | Agilent | N4010A | MY48100200 | NA | NA |
| Conducted | GPS Simulator | Welnavigate | GS-50 | 701523 | NA | NA |
| Conducted (TS8997) | Wideband Radio Communication Tester | R&S | CMW500 | 168811 | 09/22/2022 | 09/22/2023 |
| Conducted (TS8997) | Signal Generator | R&S | SMB100B | 101085 | 09/21/2022 | 09/21/2023 |
| Conducted (TS8997) | Vector Signal Generator | R&S | SMBV100A | 263246 | 09/21/2022 | 09/21/2023 |
| Conducted (TS8997) | Signal analyzer 40GHz | R&S | FSV40 | 101884 | 09/22/2022 | 09/22/2023 |
| Conducted (TS8997) | OSP150 extension unit CAM-BUS | R&S | OSP150 | 101107 | 09/21/2022 | 09/21/2023 |
| Conducted (TS8997) | Test Software | R&S | EMC32 Ver:11.10.00 | NA | NA | NA |

## 6.4. Measurement Equipment Used:



## 6.5. Measurement Result

According to §15.407(a)

(iv) 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.

| Band | Mode | Freq. (MHz) | Output Power (dBm) | | | | Duty Factor (dB) | Total Output Power (dBm) | Output Power Limit (dBm) |
|---|---|---|---|---|---|---|---|---|---|
| | | | Chain 0 | Chain 1 | Chain 2 | Chain 3 | | | |
| UNII-1 | 11a | 5180 | 14.050 | | | | 0.36 | 14.41 | 23.35 |
| | | 5200 | 14.310 | | | | 0.36 | 14.67 | 23.35 |
| | | 5240 | 14.000 | | | | 0.36 | 14.36 | 23.35 |
| | HT20 | 5180 | 12.860 | | | | 0.35 | 13.21 | 23.35 |
| | | 5200 | 13.510 | | | | 0.35 | 13.86 | 23.35 |
| | | 5240 | 13.040 | | | | 0.35 | 13.39 | 23.35 |
| | HT40 | 5190 | 12.200 | | | | 0.62 | 12.82 | 23.35 |
| | | 5230 | 12.360 | | | | 0.62 | 12.98 | 23.35 |
| | VHT20 | 5180 | 13.190 | | | | 0.38 | 13.57 | 23.35 |
| | | 5200 | 13.300 | | | | 0.38 | 13.68 | 23.35 |
| | | 5240 | 13.250 | | | | 0.38 | 13.63 | 23.35 |
| | VHT40 | 5190 | 11.070 | | | | 0.66 | 11.73 | 23.35 |
| | | 5230 | 11.230 | | | | 0.66 | 11.89 | 23.35 |
| | VHT80 | 5210 | 10.560 | | | | 1.23 | 11.79 | 23.35 |

| Band | Mode | Freq. (MHz) | Output Power (dBm) | | | | Duty Factor (dB) | Total Output Power (dBm) | Output Power Limit (dBm) |
|---|---|---|---|---|---|---|---|---|---|
| | | | Chain 0 | Chain 1 | Chain 2 | Chain 3 | | | |
| UNII-2A | 11a | 5260 | 13.970 | | | | 0.36 | 14.33 | 23.35 |
| | | 5300 | 14.320 | | | | 0.36 | 14.68 | 23.35 |
| | | 5320 | 14.250 | | | | 0.36 | 14.61 | 23.35 |
| | HT20 | 5260 | 12.780 | | | | 0.35 | 13.13 | 23.35 |
| | | 5300 | 13.280 | | | | 0.35 | 13.63 | 23.35 |
| | | 5320 | 13.270 | | | | 0.35 | 13.62 | 23.35 |
| | HT40 | 5270 | 12.070 | | | | 0.62 | 12.69 | 23.35 |
| | | 5310 | 12.360 | | | | 0.62 | 12.98 | 23.35 |
| | VHT20 | 5260 | 12.840 | | | | 0.38 | 13.22 | 23.35 |
| | | 5300 | 13.260 | | | | 0.38 | 13.64 | 23.35 |
| | | 5320 | 13.220 | | | | 0.38 | 13.60 | 23.35 |
| | VHT40 | 5270 | 10.960 | | | | 0.66 | 11.62 | 23.35 |
| | | 5310 | 10.990 | | | | 0.66 | 11.65 | 23.35 |
| | VHT80 | 5290 | 10.620 | | | | 1.23 | 11.85 | 23.35 |

| Band | Mode | Freq. (MHz) | Output Power (dBm) | | | | Duty Factor (dB) | Total Output Power (dBm) | Output Power Limit (dBm) |
|---|---|---|---|---|---|---|---|---|---|
| | | | Chain 0 | Chain 1 | Chain 2 | Chain 3 | | | |
| UNII-2C | 11a | 5500 | 15.090 | | | | 0.36 | 15.45 | 23.98 |
| | | 5580 | 14.940 | | | | 0.36 | 15.30 | 23.98 |
| | | 5700 | 14.510 | | | | 0.36 | 14.87 | 23.98 |
| | HT20 | 5500 | 14.840 | | | | 0.35 | 15.19 | 23.98 |
| | | 5580 | 14.720 | | | | 0.35 | 15.07 | 23.98 |
| | | 5700 | 14.780 | | | | 0.35 | 15.13 | 23.98 |
| | HT40 | 5510 | 12.070 | | | | 0.62 | 12.69 | 23.98 |
| | | 5550 | 12.170 | | | | 0.62 | 12.79 | 23.98 |
| | | 5670 | 11.870 | | | | 0.62 | 12.49 | 23.98 |
| | VHT20 | 5500 | 12.870 | | | | 0.38 | 13.25 | 23.98 |
| | | 5580 | 12.920 | | | | 0.38 | 13.30 | 23.98 |
| | | 5700 | 12.580 | | | | 0.38 | 12.96 | 23.98 |
| | VHT40 | 5510 | 12.020 | | | | 0.66 | 12.68 | 23.98 |
| | | 5550 | 12.150 | | | | 0.66 | 12.81 | 23.98 |
| | | 5670 | 12.090 | | | | 0.66 | 12.75 | 23.98 |
| | VHT80 | 5530 | 11.090 | | | | 1.23 | 12.32 | 23.98 |
| | | 5610 | 11.140 | | | | 1.23 | 12.37 | 23.98 |

| Band | Mode | Freq. (MHz) | Output Power (dBm) | | | | Duty Factor (dB) | Total Output Power (dBm) | Output Power Limit (dBm) |
|---|---|---|---|---|---|---|---|---|---|
| | | | Chain 0 | Chain 1 | Chain 2 | Chain 3 | | | |
| UNII-3 | 11a | 5745 | 15.510 | | | | 0.36 | 15.87 | 30.00 |
| | | 5785 | 15.370 | | | | 0.36 | 15.73 | 30.00 |
| | | 5825 | 15.360 | | | | 0.36 | 15.72 | 30.00 |
| | HT20 | 5745 | 15.500 | | | | 0.35 | 15.85 | 30.00 |
| | | 5785 | 15.090 | | | | 0.35 | 15.44 | 30.00 |
| | | 5825 | 15.420 | | | | 0.35 | 15.77 | 30.00 |
| | HT40 | 5755 | 12.720 | | | | 0.62 | 13.34 | 30.00 |
| | | 5795 | 12.720 | | | | 0.62 | 13.34 | 30.00 |
| | VHT20 | 5745 | 13.720 | | | | 0.38 | 14.10 | 30.00 |
| | | 5785 | 13.350 | | | | 0.38 | 13.73 | 30.00 |
| | | 5825 | 13.720 | | | | 0.38 | 14.10 | 30.00 |
| | VHT40 | 5755 | 12.680 | | | | 0.66 | 13.34 | 30.00 |
| | | 5795 | 12.640 | | | | 0.66 | 13.30 | 30.00 |
| | VHT80 | 5775 | 11.760 | | | | 1.23 | 12.99 | 30.00 |

Straddle channels

| Band | Mode | Freq. (MHz) | Output Power (dBm) | | | | Duty Factor (dB) | Total Out-put Power (dBm) | Output Power Limit (dBm) |
|---|---|---|---|---|---|---|---|---|---|
| | | | Chain 0 | Chain 1 | Chain 2 | Chain 3 | | | |
| UNII-2C | 11a | 5720 | 15.410 | | | | 0.36 | 15.77 | 23.98 |
| | HT20 | 5720 | 14.610 | | | | 0.35 | 14.96 | 23.98 |
| | HT40 | 5710 | 11.810 | | | | 0.62 | 12.43 | 23.98 |
| | VHT20 | 5720 | 12.770 | | | | 0.38 | 13.15 | 23.98 |
| | VHT40 | 5710 | 12.540 | | | | 0.66 | 13.20 | 23.98 |
| | VHT80 | 5690 | 11.050 | | | | 0.51 | 11.07 | 23.98 |

**Power Spectral Density Measurement:**

| Band | Mode | Frequency (MHz) | PSD (dBm/MHz) | | | | Duty Factor (dB) | Total PSD (dBm/MHz) | PSD Limit (dBm/MHz) |
|---|---|---|---|---|---|---|---|---|---|
| | | | Chain 0 | Chain 1 | Chain 2 | Chain 3 | | | |
| UNII-1 | 11a | 5180 | -0.478 | | | | 0.36 | -0.12 | 10.37 |
| | | 5200 | -0.078 | | | | 0.36 | 0.28 | 10.37 |
| | | 5240 | -0.077 | | | | 0.36 | 0.29 | 10.37 |
| | HT20 | 5180 | -1.608 | | | | 0.35 | -1.26 | 10.37 |
| | | 5200 | -1.289 | | | | 0.35 | -0.94 | 10.37 |
| | | 5240 | -1.550 | | | | 0.35 | -1.20 | 10.37 |
| | HT40 | 5190 | -7.048 | | | | 0.62 | -6.43 | 10.37 |
| | | 5230 | -6.992 | | | | 0.62 | -6.37 | 10.37 |
| | VHT20 | 5180 | -1.943 | | | | 0.38 | -1.56 | 10.37 |
| | | 5200 | -1.562 | | | | 0.38 | -1.18 | 10.37 |
| | | 5240 | -1.682 | | | | 0.38 | -1.30 | 10.37 |
| | VHT40 | 5190 | -6.119 | | | | 0.66 | -5.46 | 10.37 |
| | | 5230 | -5.675 | | | | 0.66 | -5.02 | 10.37 |
| | VHT80 | 5210 | -9.614 | | | | 1.23 | -8.38 | 10.37 |

| Band | Mode | Frequency (MHz) | PSD (dBm/MHz) | | | | Duty Factor (dB) | Total PSD (dBm/MHz) | PSD Limit (dBm/MHz) |
|---|---|---|---|---|---|---|---|---|---|
| | | | Chain 0 | Chain 1 | Chain 2 | Chain 3 | | | |
| UNII-2A | 11a | 5260 | -0.342 | | | | 0.36 | 0.02 | 10.37 |
| | | 5300 | -0.024 | | | | 0.36 | 0.34 | 10.37 |
| | | 5320 | 0.071 | | | | 0.36 | 0.43 | 10.37 |
| | HT20 | 5260 | -1.637 | | | | 0.35 | -1.28 | 10.37 |
| | | 5300 | -1.427 | | | | 0.35 | -1.07 | 10.37 |
| | | 5320 | -1.247 | | | | 0.35 | -0.89 | 10.37 |
| | HT40 | 5270 | -6.942 | | | | 0.62 | -6.32 | 10.37 |
| | | 5310 | -7.124 | | | | 0.62 | -6.51 | 10.37 |
| | VHT20 | 5260 | -1.911 | | | | 0.38 | -1.53 | 10.37 |
| | | 5300 | -1.526 | | | | 0.38 | -1.14 | 10.37 |
| | | 5320 | -1.258 | | | | 0.38 | -0.88 | 10.37 |
| | VHT40 | 5270 | -5.937 | | | | 0.66 | -5.28 | 10.37 |
| | | 5310 | -5.637 | | | | 0.66 | -4.98 | 10.37 |
| | VHT80 | 5290 | -9.673 | | | | 1.23 | -8.44 | 10.37 |

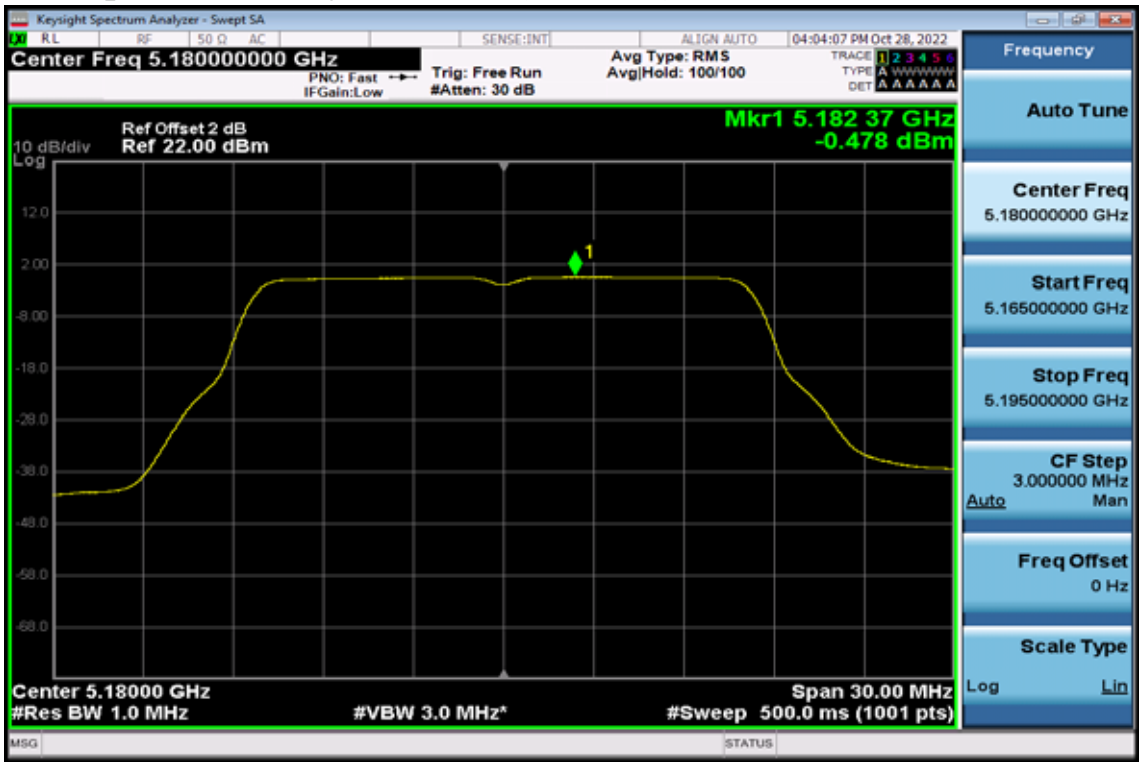
| Band | Mode | Frequency (MHz) | PSD (dBm/MHz) | | | | Duty Factor (dB) | Total PSD (dBm/MHz) | PSD Limit (dBm/MHz) |
|---|---|---|---|---|---|---|---|---|---|
| | | | Chain 0 | Chain 1 | Chain 2 | Chain 3 | | | |
| UNII-2C | 11a | 5500 | 0.407 | | | | 0.36 | 0.77 | 11.00 |
| | | 5580 | 0.616 | | | | 0.36 | 0.98 | 11.00 |
| | | 5700 | 0.100 | | | | 0.36 | 0.46 | 11.00 |
| | HT20 | 5500 | -1.877 | | | | 0.35 | -1.52 | 11.00 |
| | | 5580 | 0.180 | | | | 0.35 | 0.53 | 11.00 |
| | | 5700 | -0.167 | | | | 0.35 | 0.19 | 11.00 |
| | HT40 | 5510 | -5.333 | | | | 0.62 | -4.72 | 11.00 |
| | | 5550 | -5.267 | | | | 0.62 | -4.65 | 11.00 |
| | | 5670 | -5.583 | | | | 0.62 | -4.97 | 11.00 |
| | VHT20 | 5500 | -1.862 | | | | 0.38 | -1.48 | 11.00 |
| | | 5580 | -3.203 | | | | 0.38 | -2.82 | 11.00 |
| | | 5700 | -2.326 | | | | 0.38 | -1.94 | 11.00 |
| | VHT40 | 5510 | -5.370 | | | | 0.66 | -4.71 | 11.00 |
| | | 5550 | -5.390 | | | | 0.66 | -4.73 | 11.00 |
| | | 5670 | -5.676 | | | | 0.66 | -5.02 | 11.00 |
| | VHT80 | 5530 | -8.551 | | | | 1.23 | -7.32 | 11.00 |
| | | 5610 | -9.090 | | | | 1.23 | -7.86 | 11.00 |

| Band | Mode | Frequency (MHz) | PSD (dBm/500kHz) | | | | Duty Factor (dB) | Total PSD (dBm/500kHz) | PSD Limit (dBm/500kHz) |
|---|---|---|---|---|---|---|---|---|---|
| | | | Chain 0 | Chain 1 | Chain 2 | Chain 3 | | | |
| UNII-3 | 11a | 5745 | -1.928 | | | | 0.36 | -1.57 | 30 |
| | | 5785 | -1.939 | | | | 0.36 | -1.58 | 30 |
| | | 5825 | -1.843 | | | | 0.36 | -1.48 | 30 |
| | HT20 | 5745 | -2.233 | | | | 0.35 | -1.88 | 30 |
| | | 5785 | -2.440 | | | | 0.35 | -2.09 | 30 |
| | | 5825 | -2.161 | | | | 0.35 | -1.81 | 30 |
| | HT40 | 5755 | -8.066 | | | | 0.62 | -7.45 | 30 |
| | | 5795 | -8.008 | | | | 0.62 | -7.39 | 30 |
| | VHT20 | 5745 | -4.294 | | | | 0.38 | -3.91 | 30 |
| | | 5785 | -4.677 | | | | 0.38 | -4.29 | 30 |
| | | 5825 | -4.448 | | | | 0.38 | -4.07 | 30 |
| | VHT40 | 5755 | -7.885 | | | | 0.66 | -7.23 | 30 |
| | | 5795 | -8.093 | | | | 0.66 | -7.43 | 30 |
| | VHT80 | 5775 | -11.864 | | | | 1.23 | -10.63 | 30 |

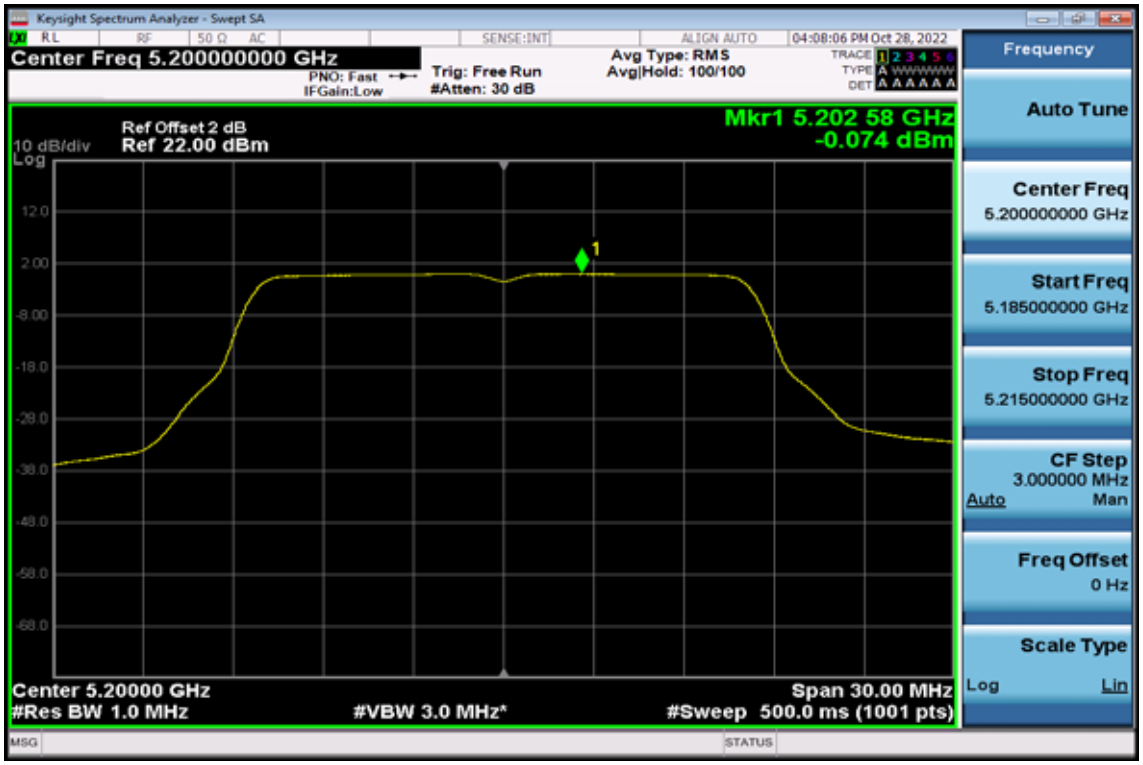
Straddle channels

| Band | Mode | Frequency (MHz) | PSD (dBm/MHz) | | | | Duty Factor (dB) | Total PSD (dBm/MHz) | PSD Limit (dBm/MHz) |
|---|---|---|---|---|---|---|---|---|---|
| | | | Chain 0 | Chain 1 | Chain 2 | Chain 3 | | | |
| UNII-2C | 11a | 5720 | 0.266 | | | | 0.36 | 0.63 | 11.00 |
| | HT20 | 5720 | -0.356 | | | | 0.35 | 0.00 | 11.00 |
| | HT40 | 5710 | -5.630 | | | | 0.62 | -5.01 | 11.00 |
| | VHT20 | 5720 | -2.159 | | | | 0.38 | -1.78 | 11.00 |
| | VHT40 | 5710 | -5.643 | | | | 0.66 | -4.98 | 11.00 |
| | VHT80 | 5690 | -9.845 | | | | 1.23 | -8.62 | 11.00 |

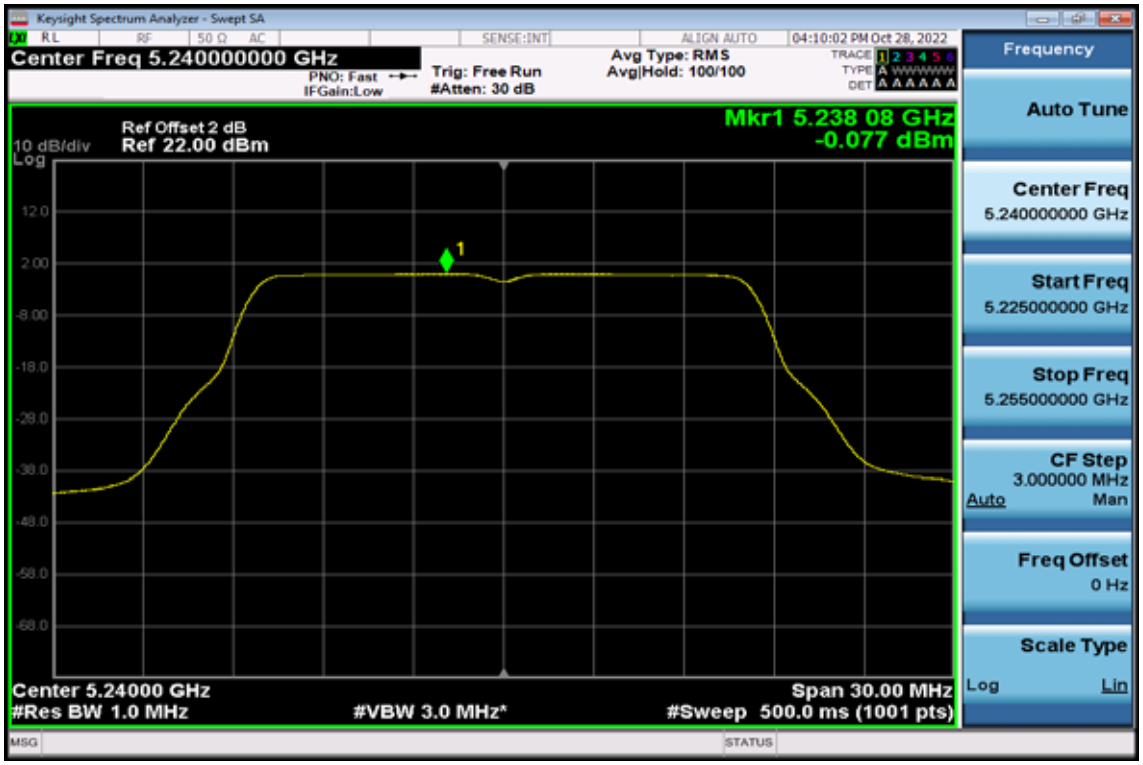
**Band UNII-1**
**802.11a**
**Power Spectral Density Data Plot (CH Low)**



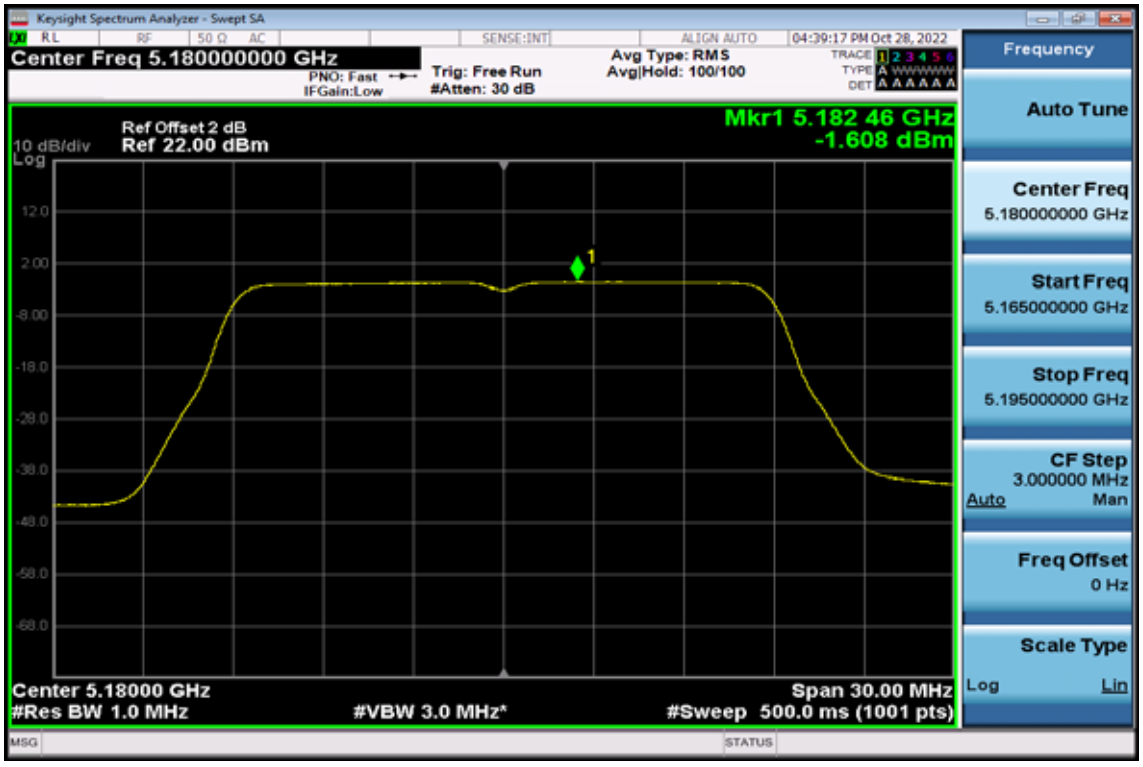

**Power Spectral Density Data Plot (CH Mid)**



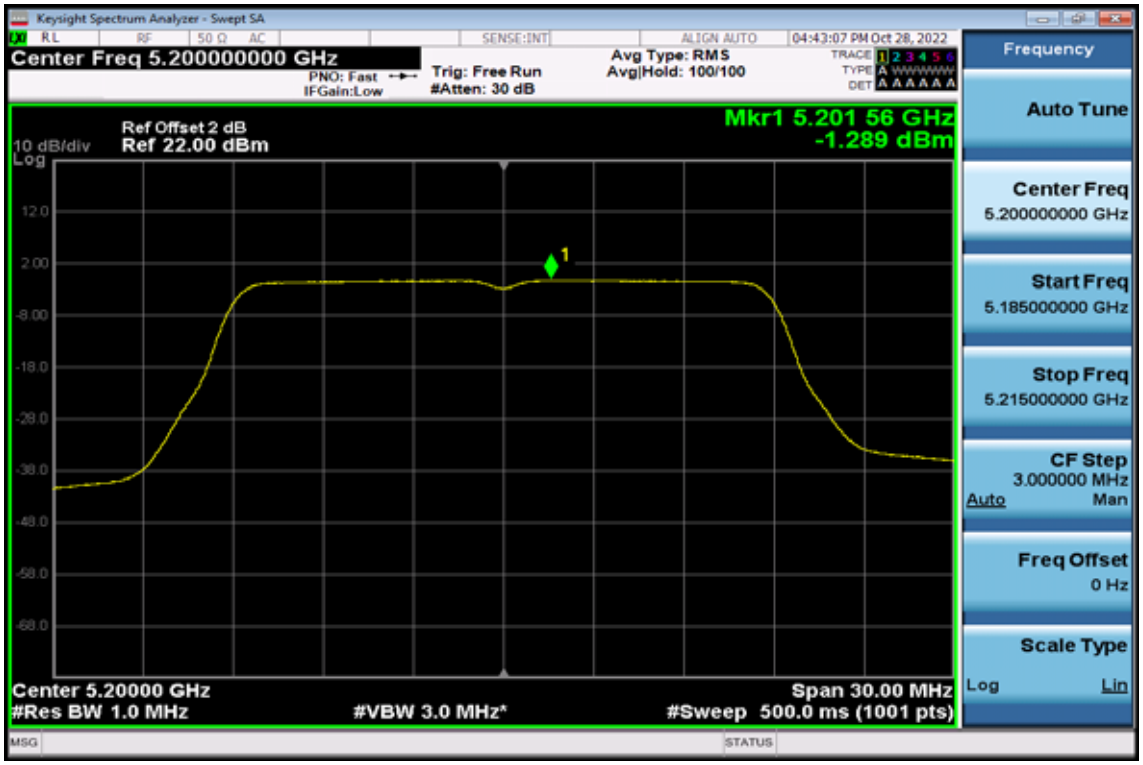
## Power Spectral Density Data Plot (CH High)



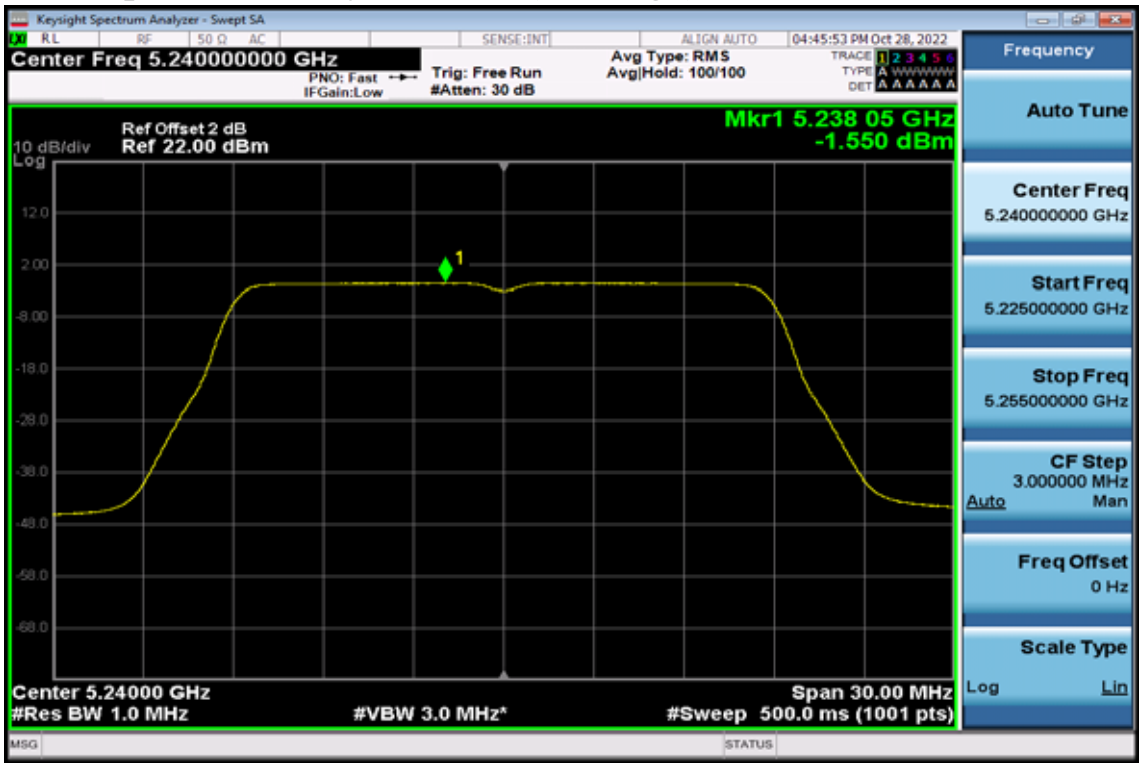

## 802.11n HT20,
## Power Spectral Density Test Plot (CH-Low)



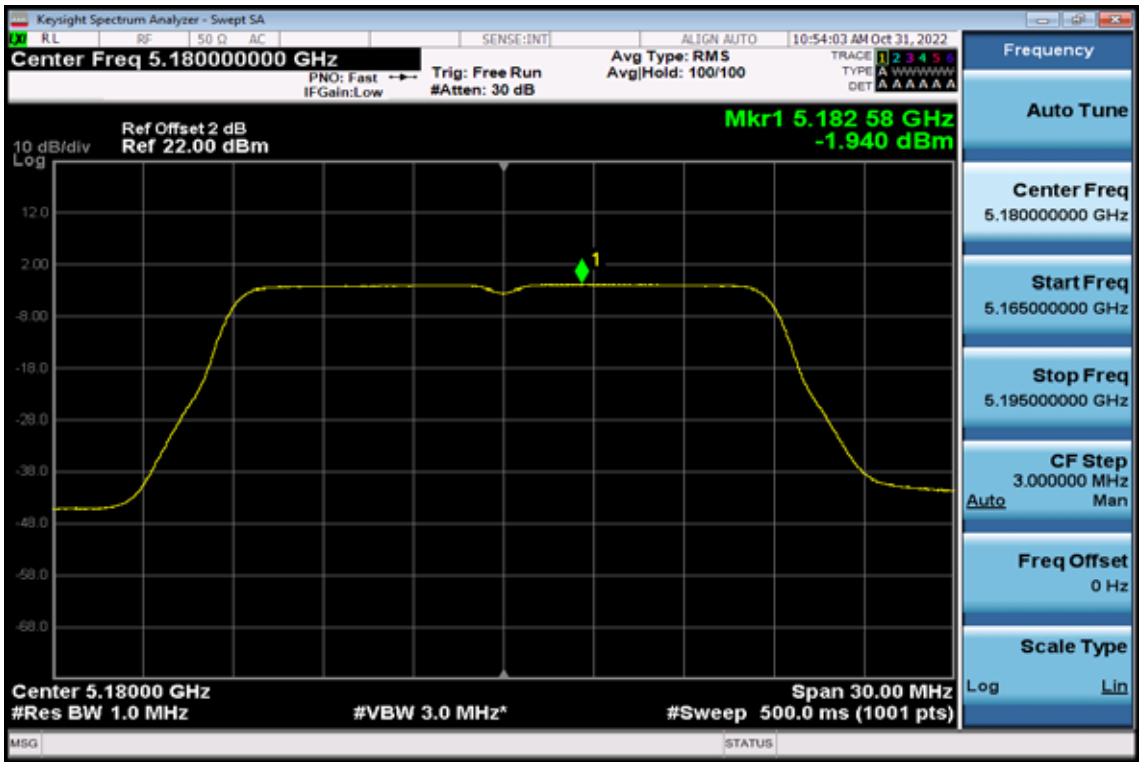
## Power Spectral Density Test Plot (CH-Mid)



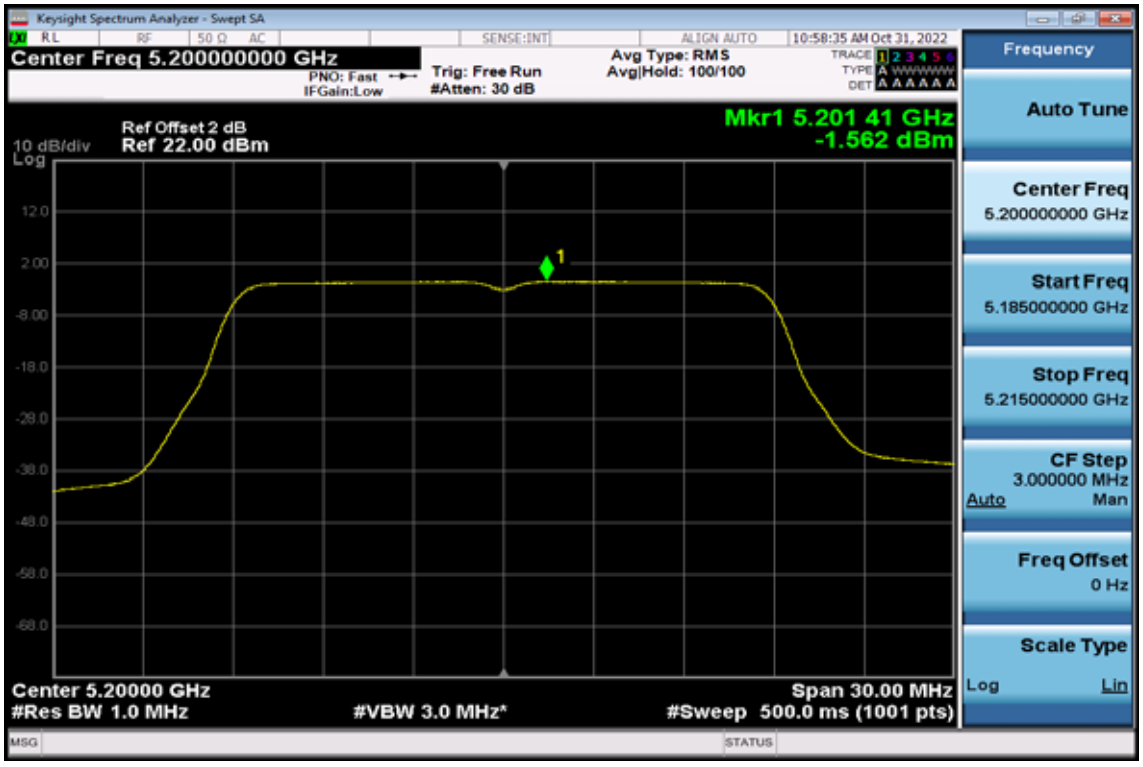

## Power Spectral Density Test Plot (CH-High)



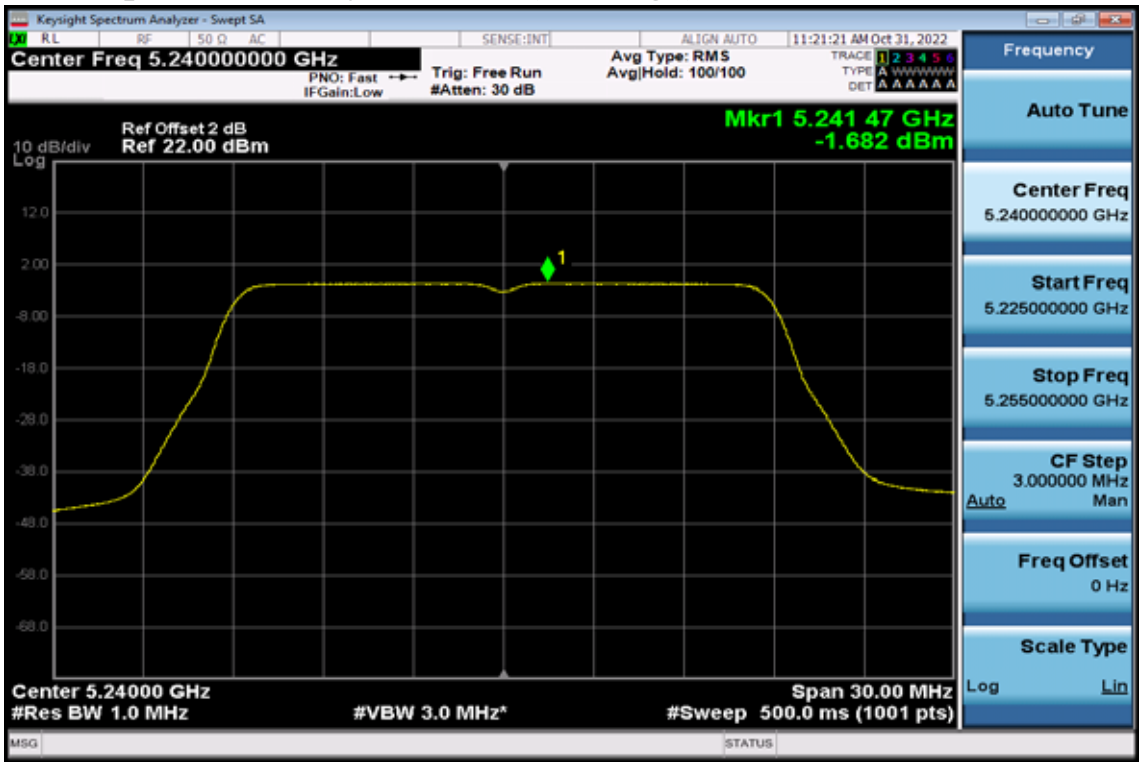
## 802.11ac VHT20,
## Power Spectral Density Test Plot (CH-Low)




## Power Spectral Density Test Plot (CH-Mid)

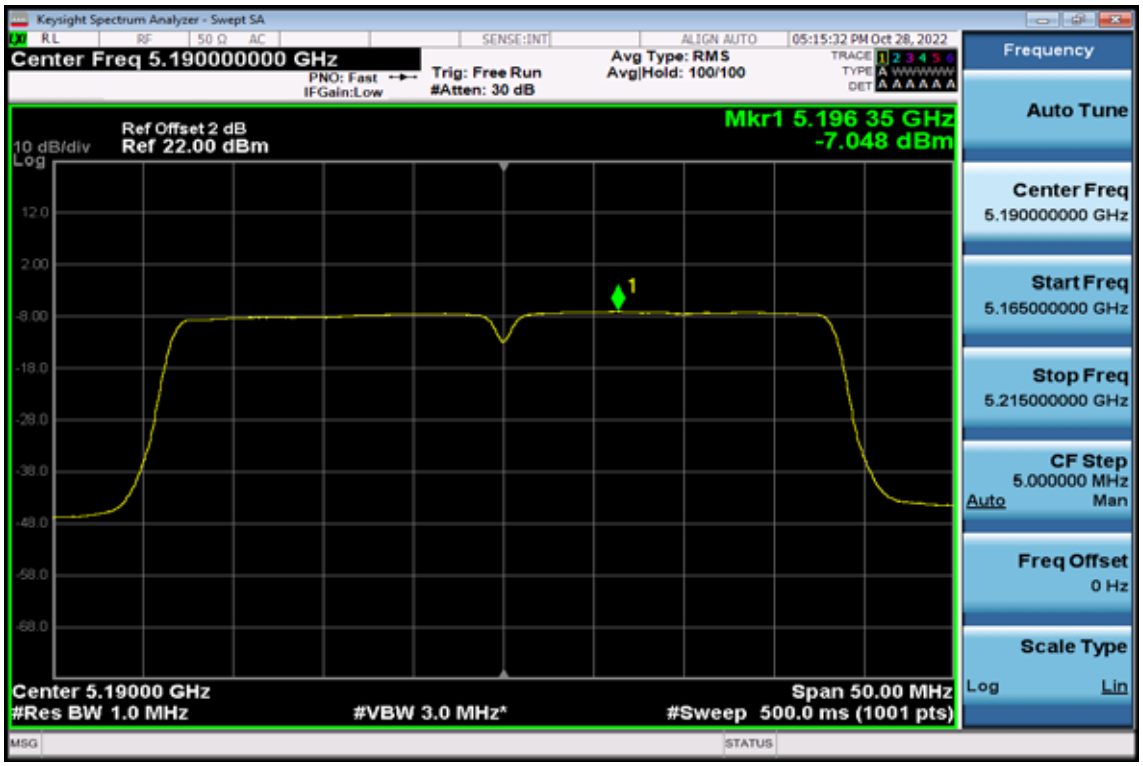


## Power Spectral Density Test Plot (CH-High)

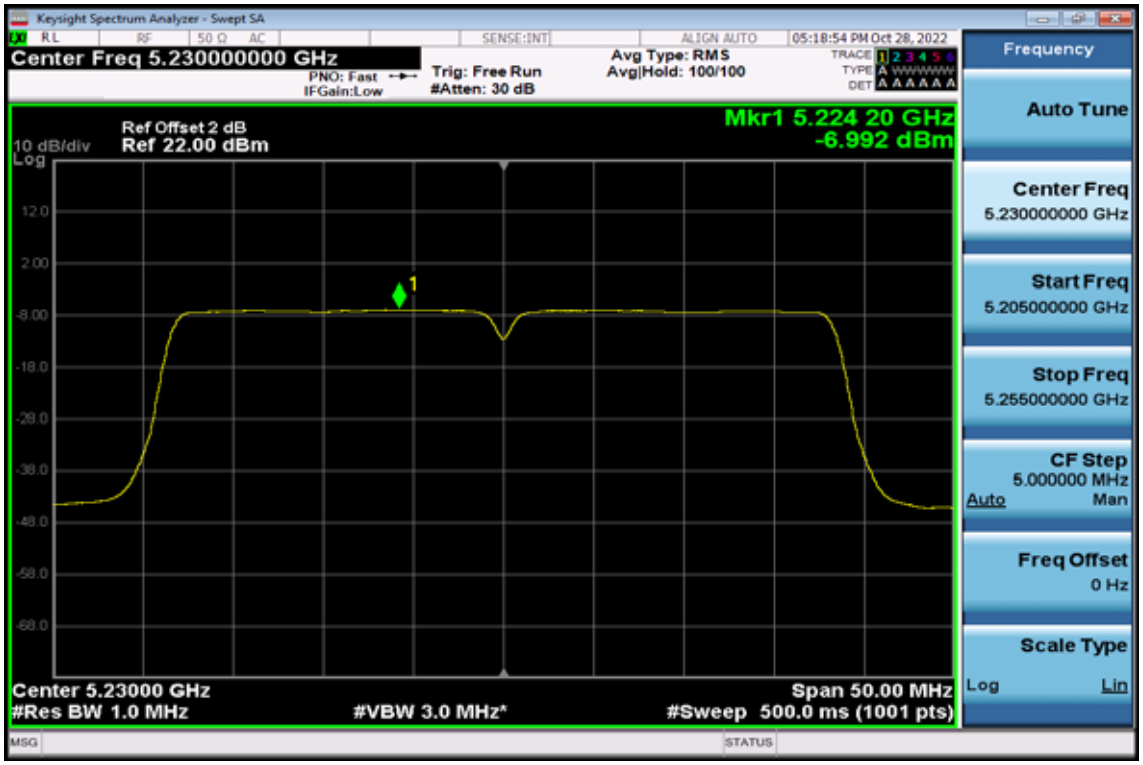



## 802.11n HT40

## Power Spectral Density Test Plot (CH-Low)

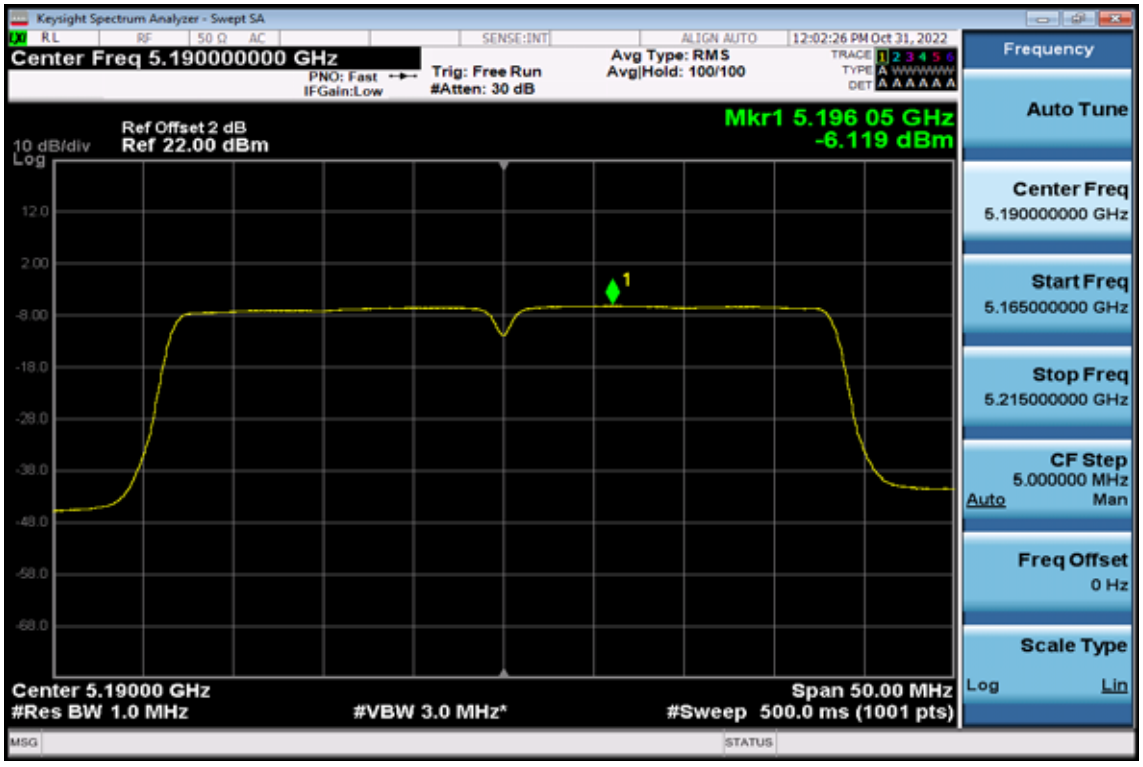


## Power Spectral Density Test Plot (CH-High)

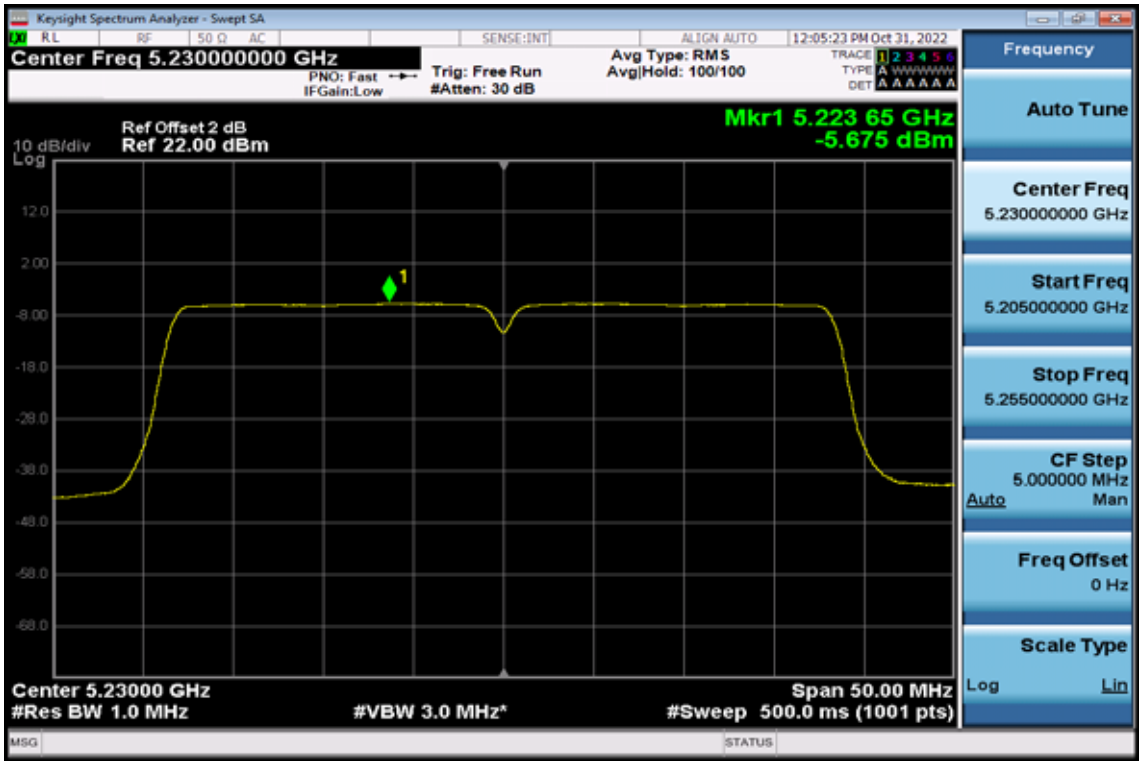



## 802.11ac VHT40

## Power Spectral Density Test Plot (CH-Low)

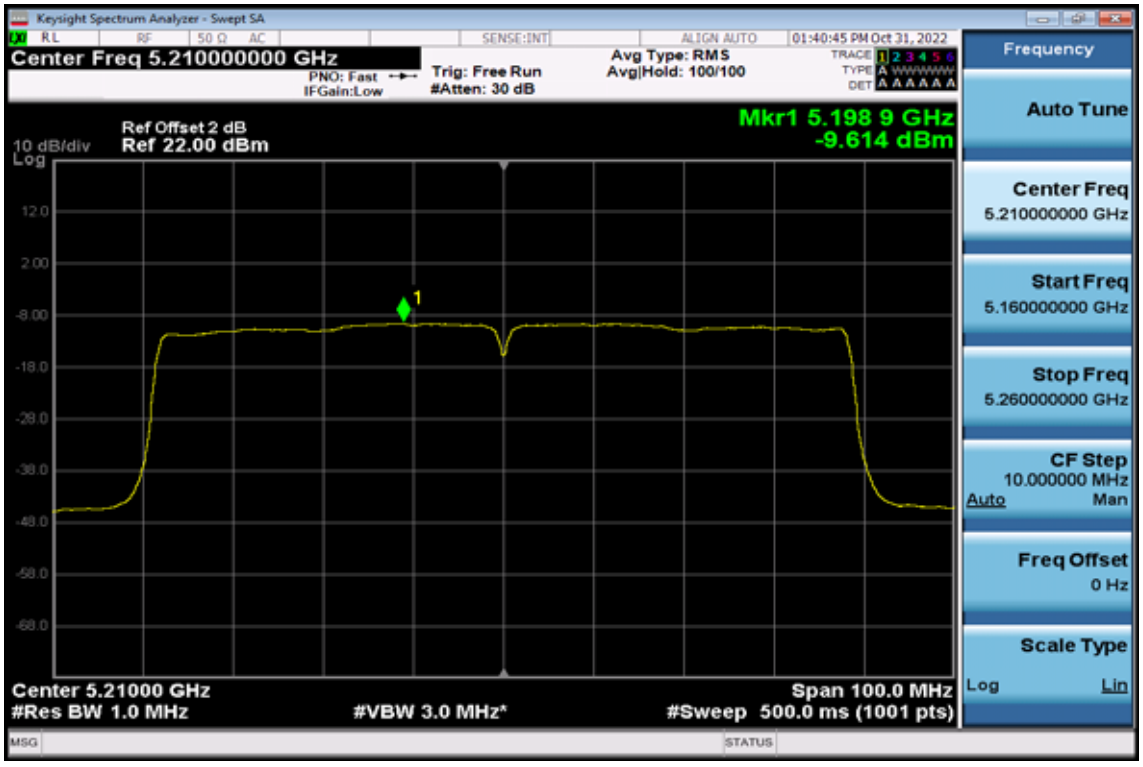


## Power Spectral Density Test Plot (CH-High)

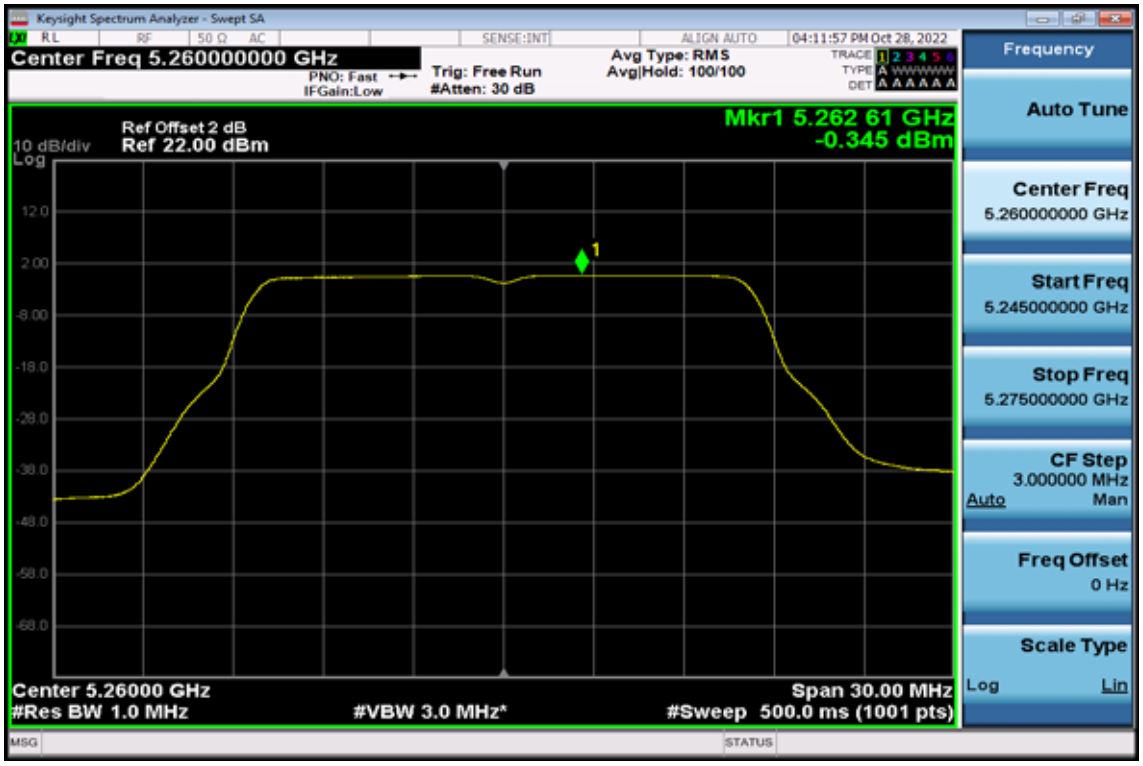



## 802.11 ac VHT80

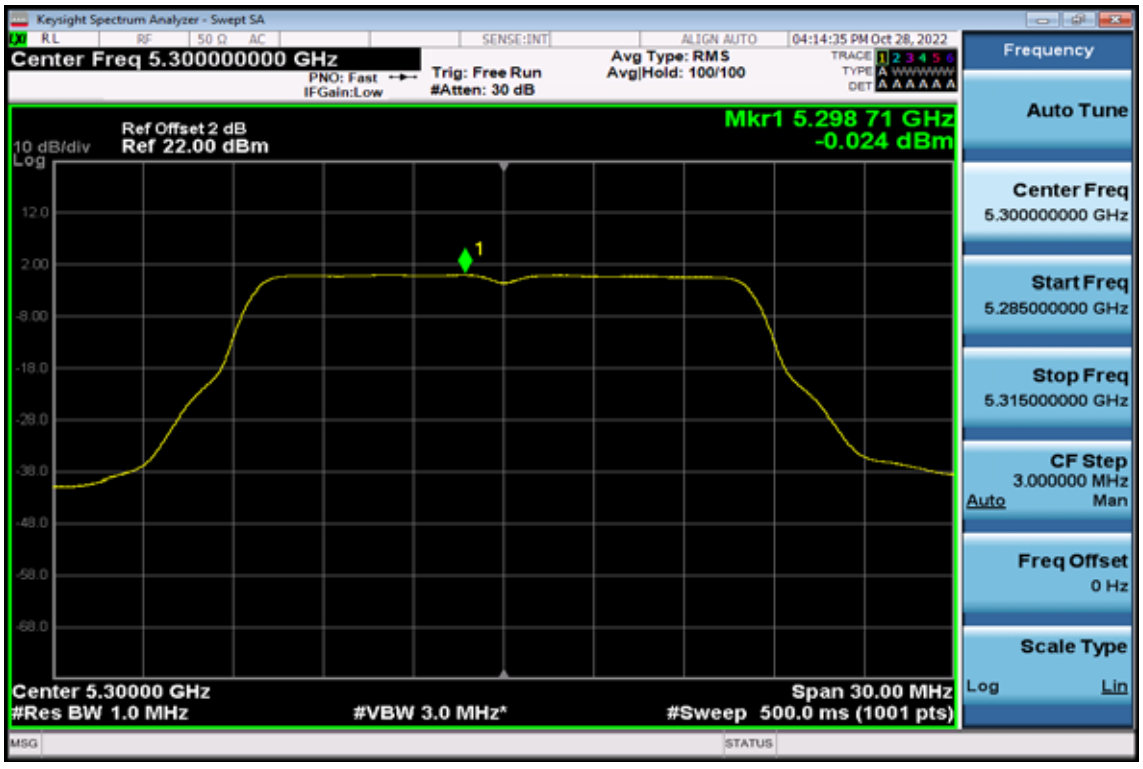
## Power Spectral Density Test Plot (CH-Low)



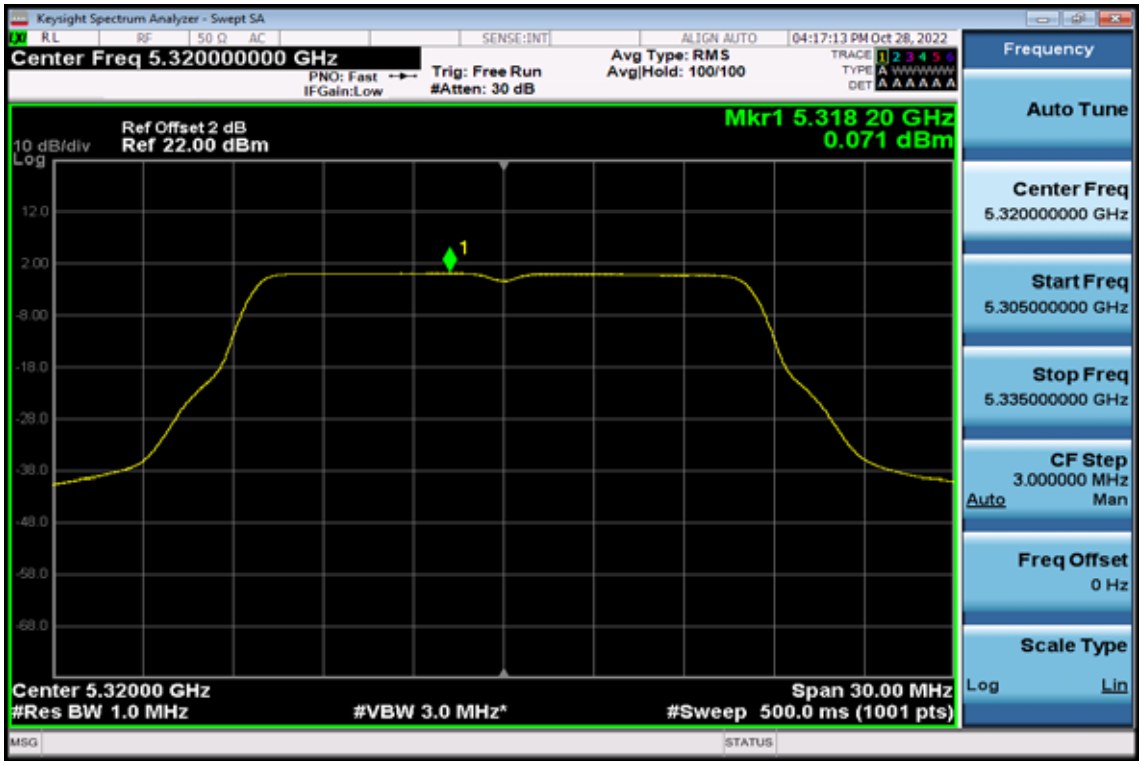
**Band UNII-2A**
**802.11a**
**Power Spectral Density Data Plot (CH Low)**



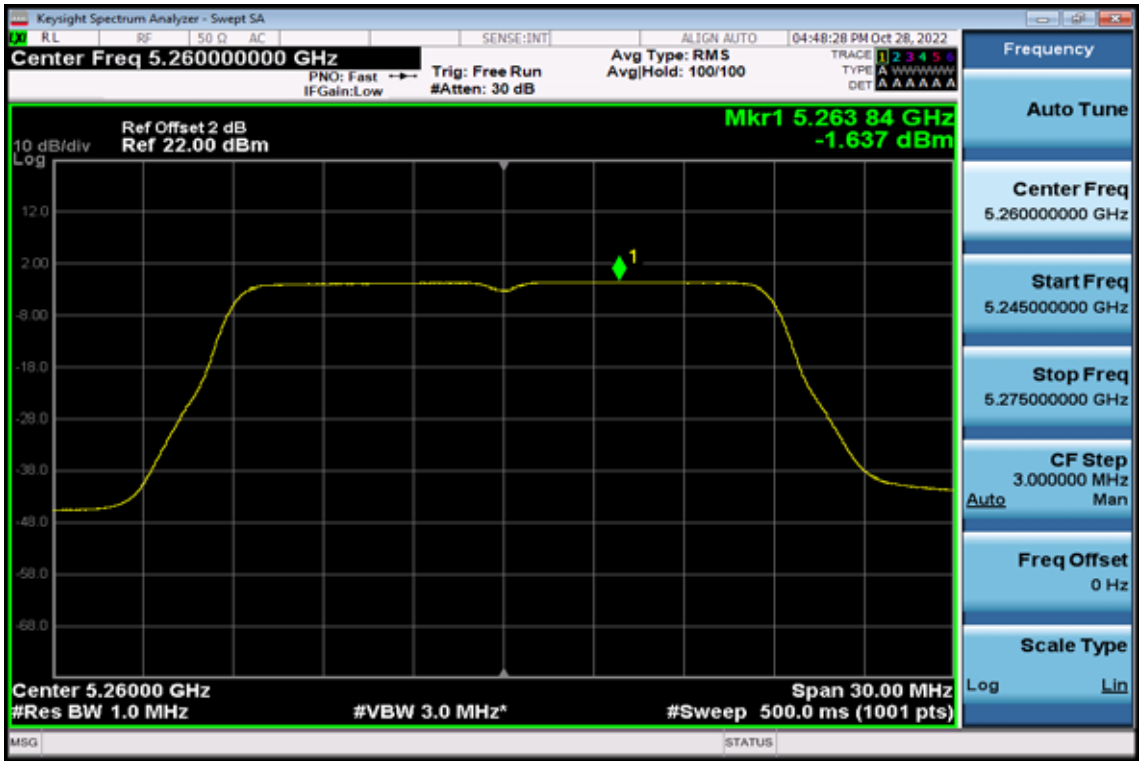

**Power Spectral Density Data Plot (CH Mid)**



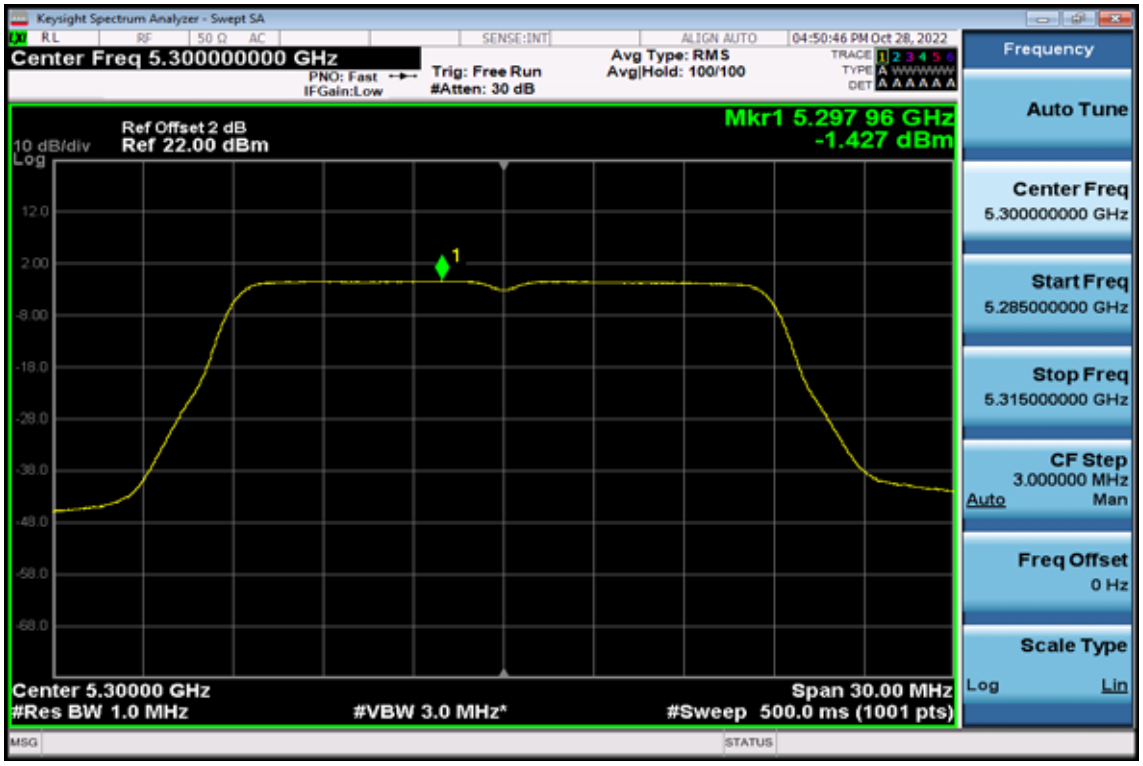
## Power Spectral Density Data Plot (CH High)



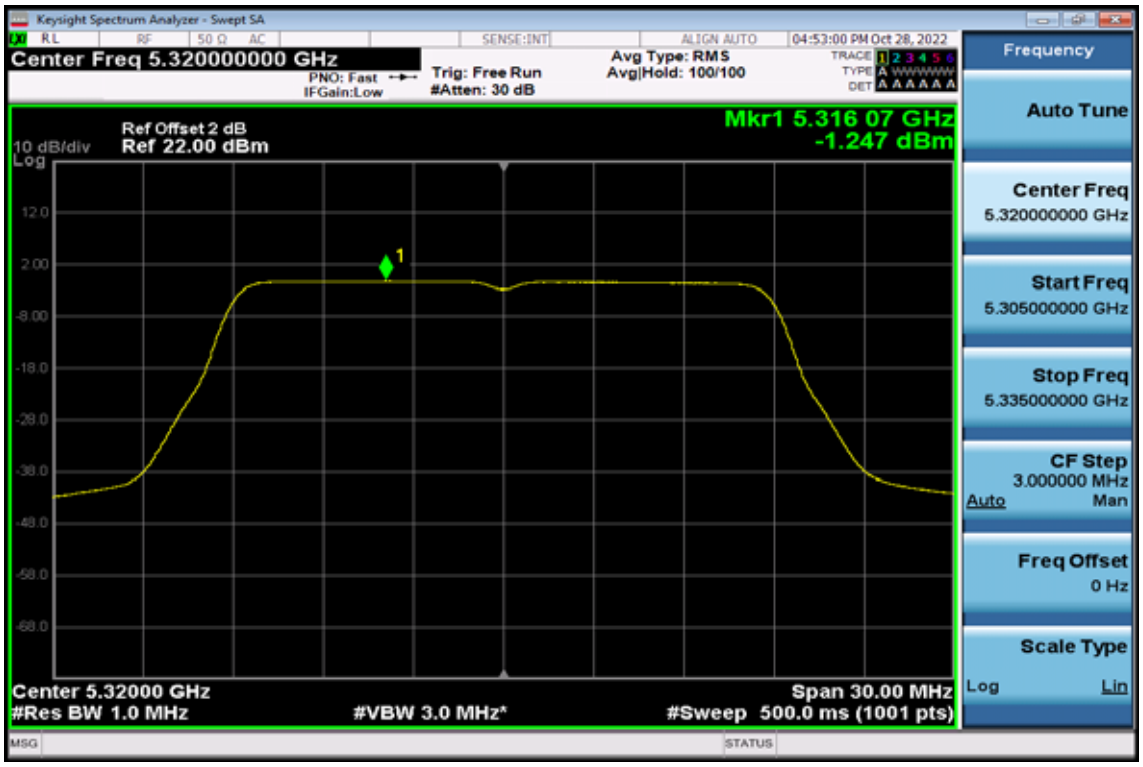

## 802.11n HT20,
## Power Spectral Density Test Plot (CH-Low)



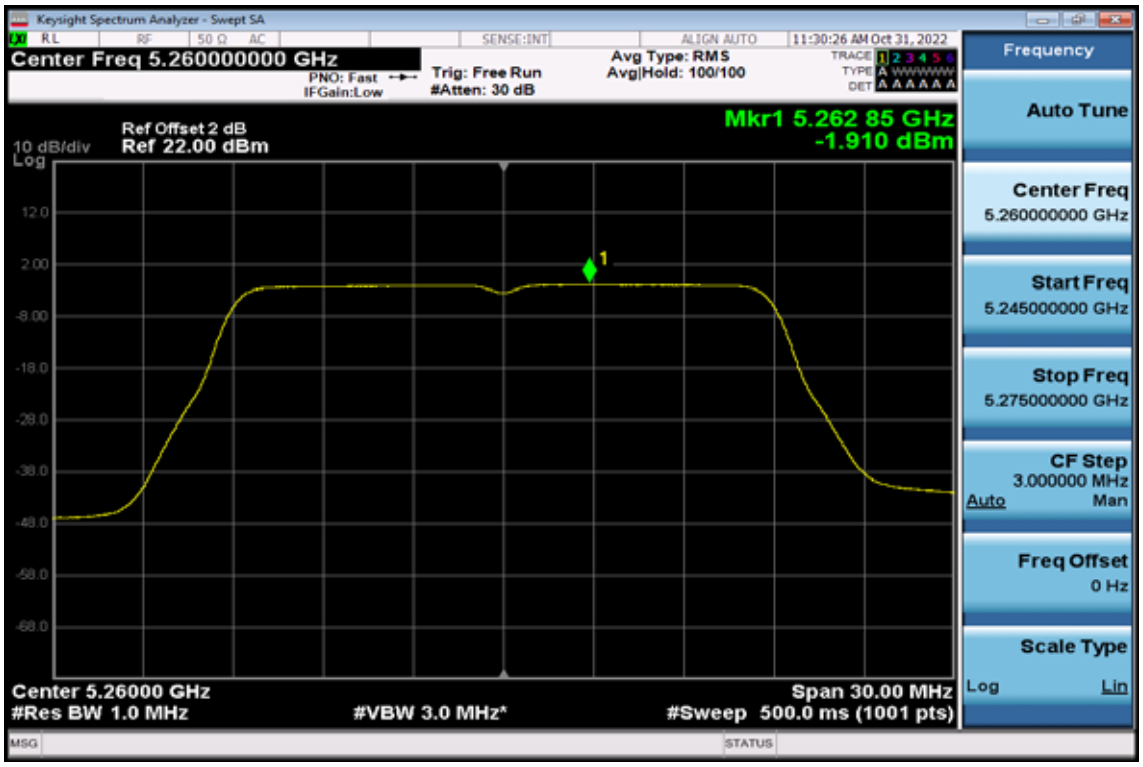
## Power Spectral Density Test Plot (CH-Mid)



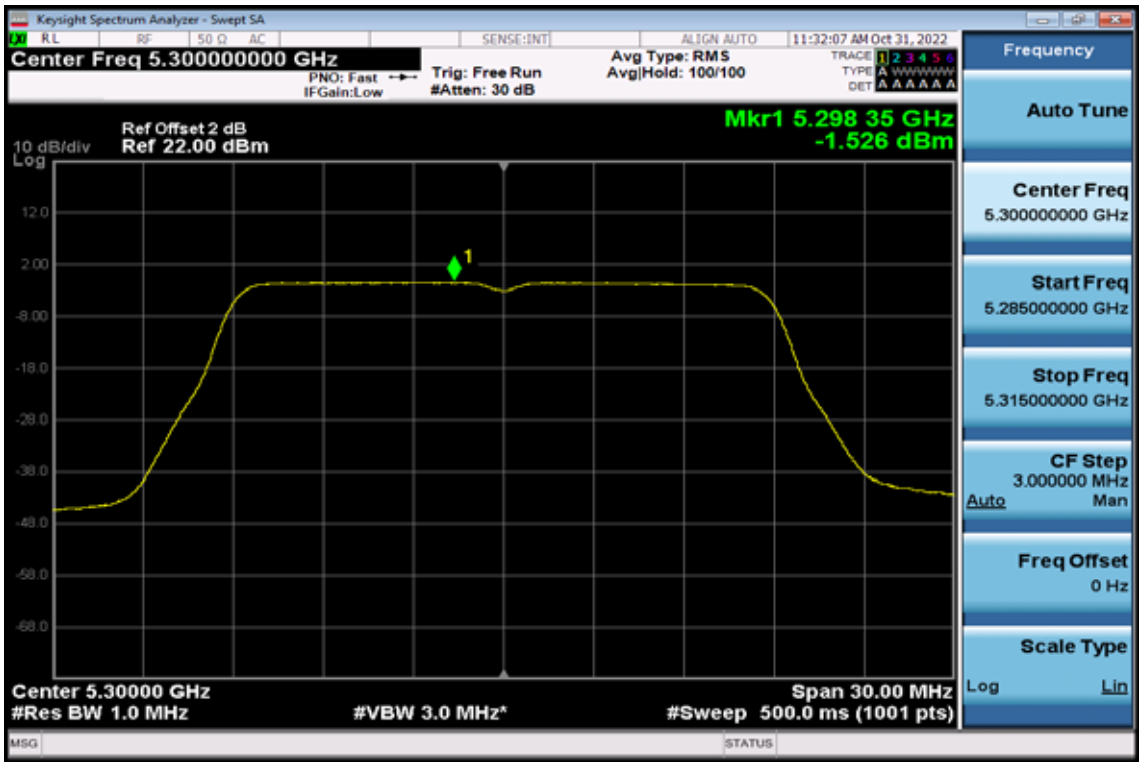

## Power Spectral Density Test Plot (CH-High)



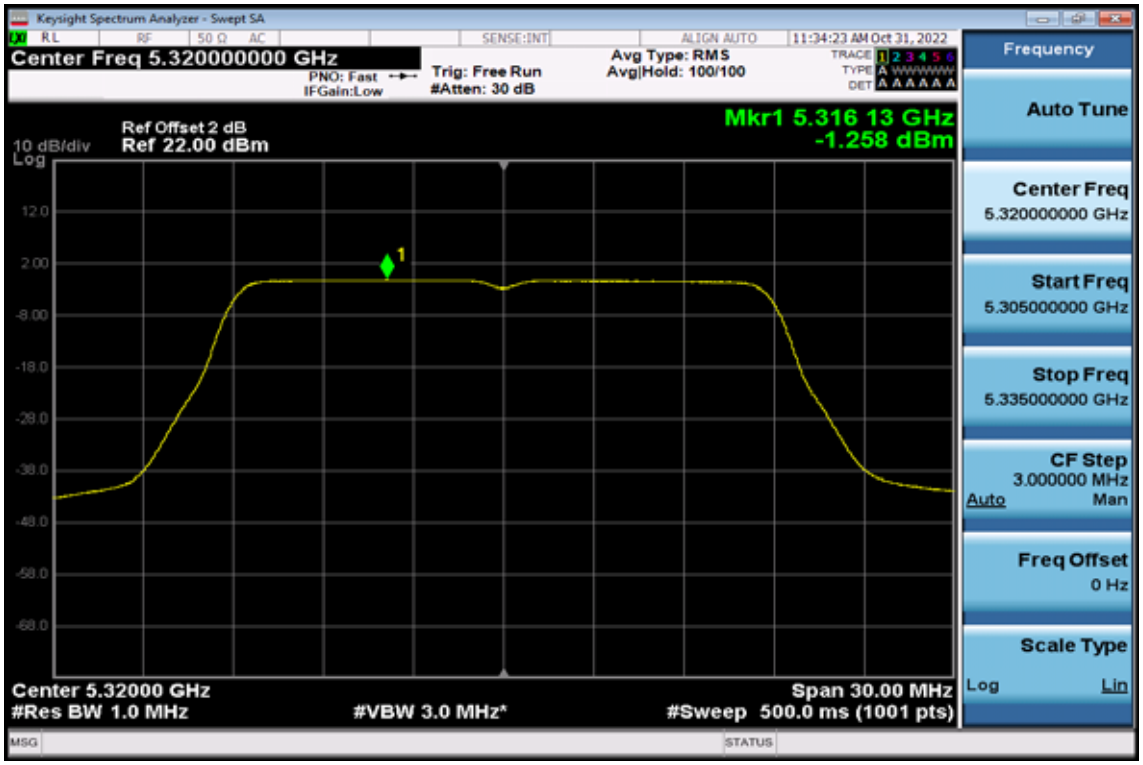
## 802.11ac VHT20,
## Power Spectral Density Test Plot (CH-Low)




## Power Spectral Density Test Plot (CH-Mid)

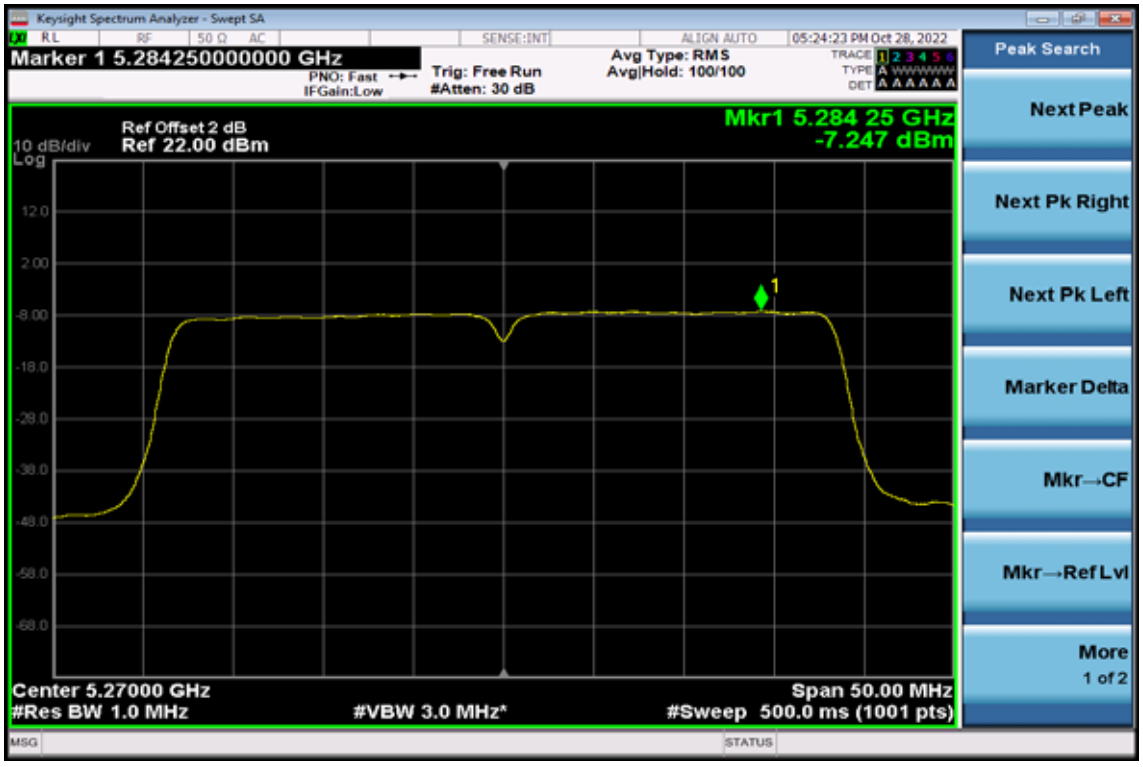


## Power Spectral Density Test Plot (CH-High)

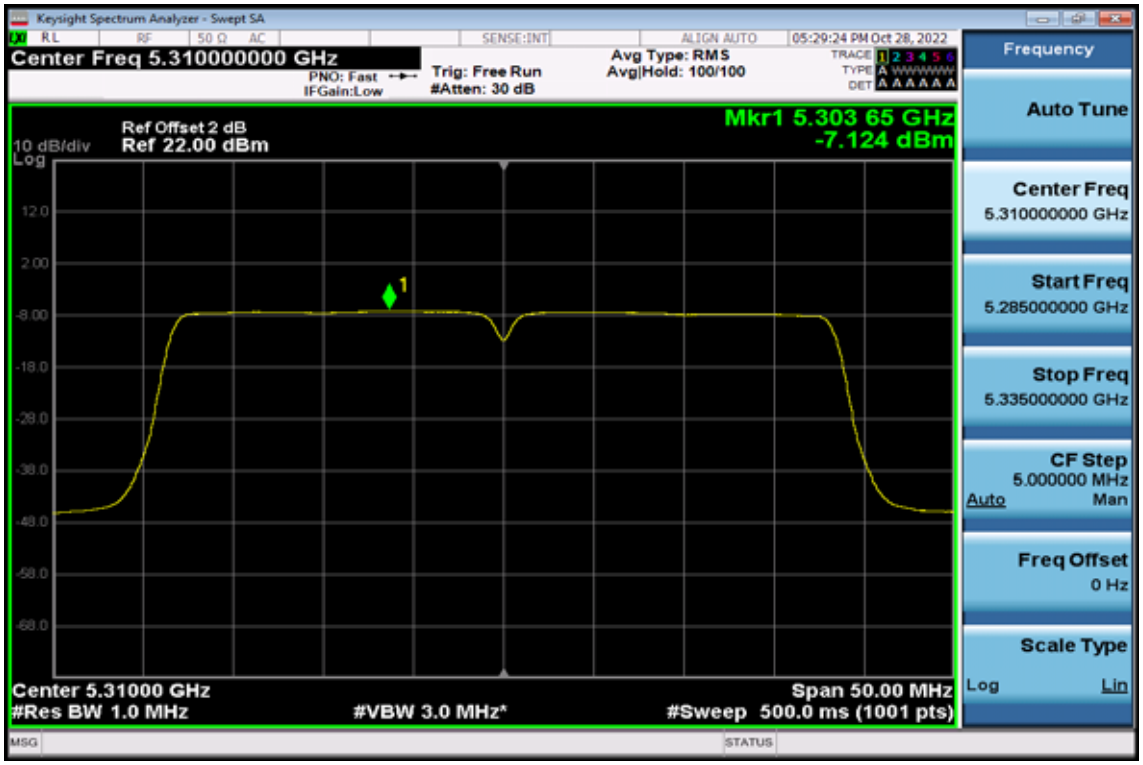



## 802.11n HT40

## Power Spectral Density Test Plot (CH-Low)

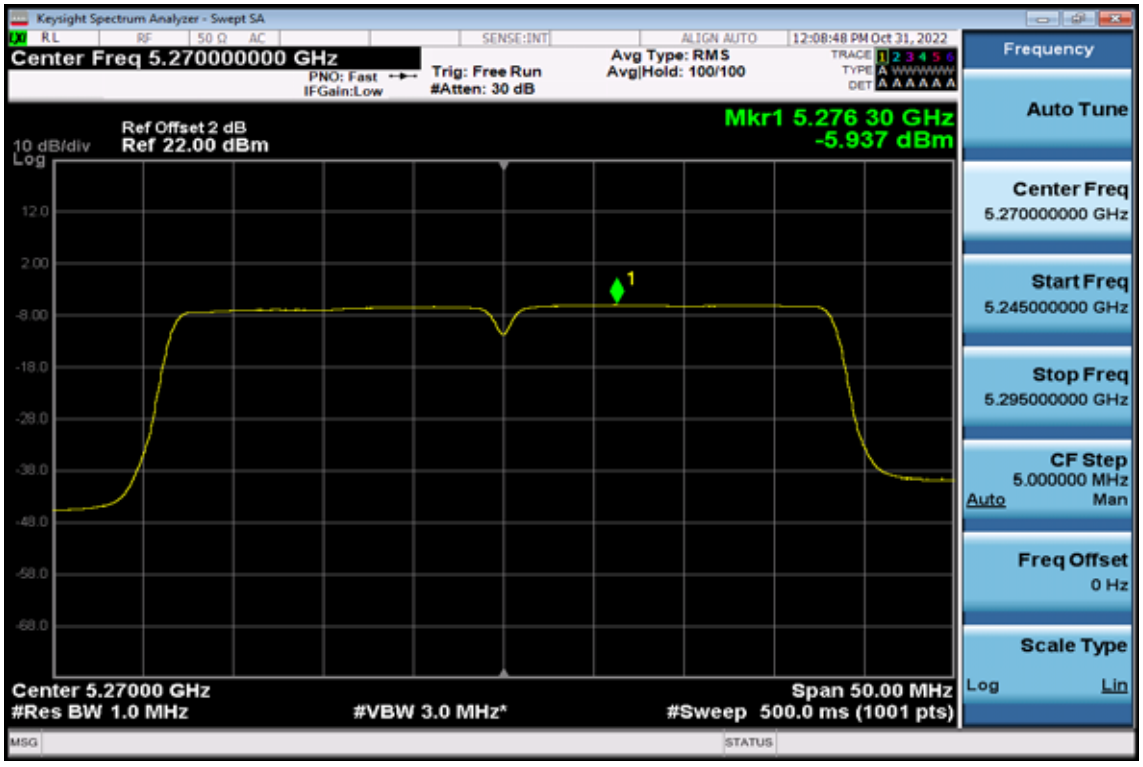


## Power Spectral Density Test Plot (CH-High)

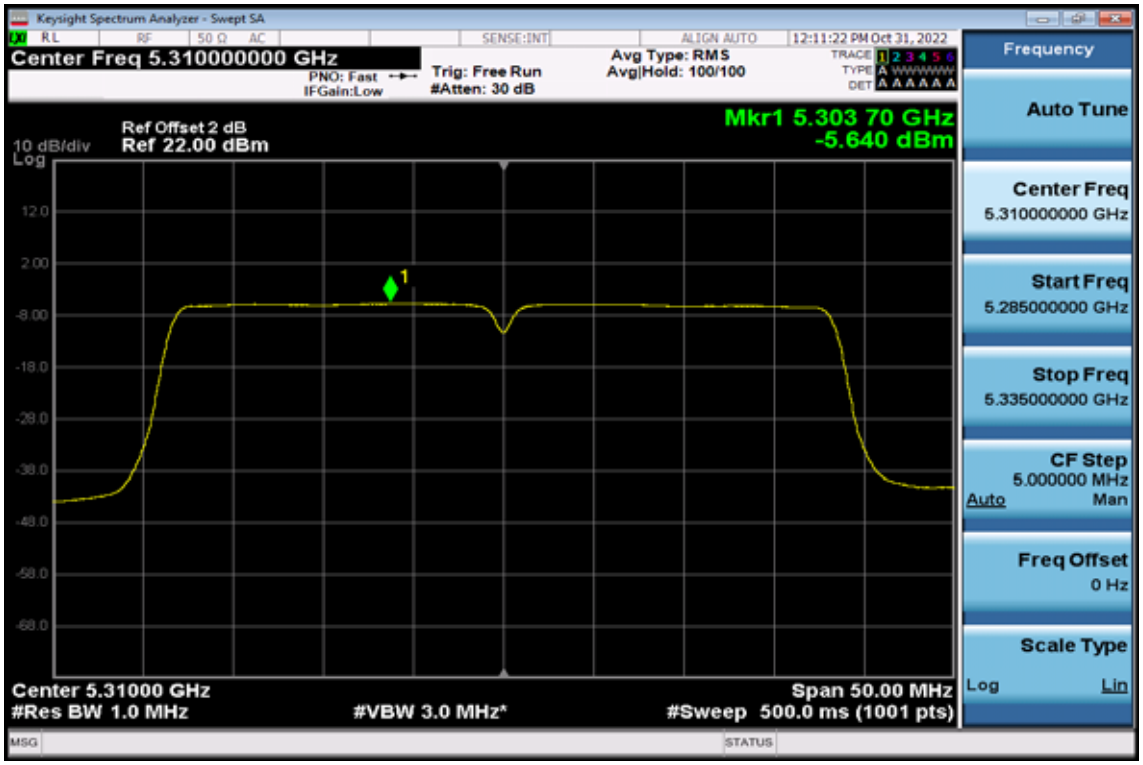



## 802.11ac VHT40

## Power Spectral Density Test Plot (CH-Low)

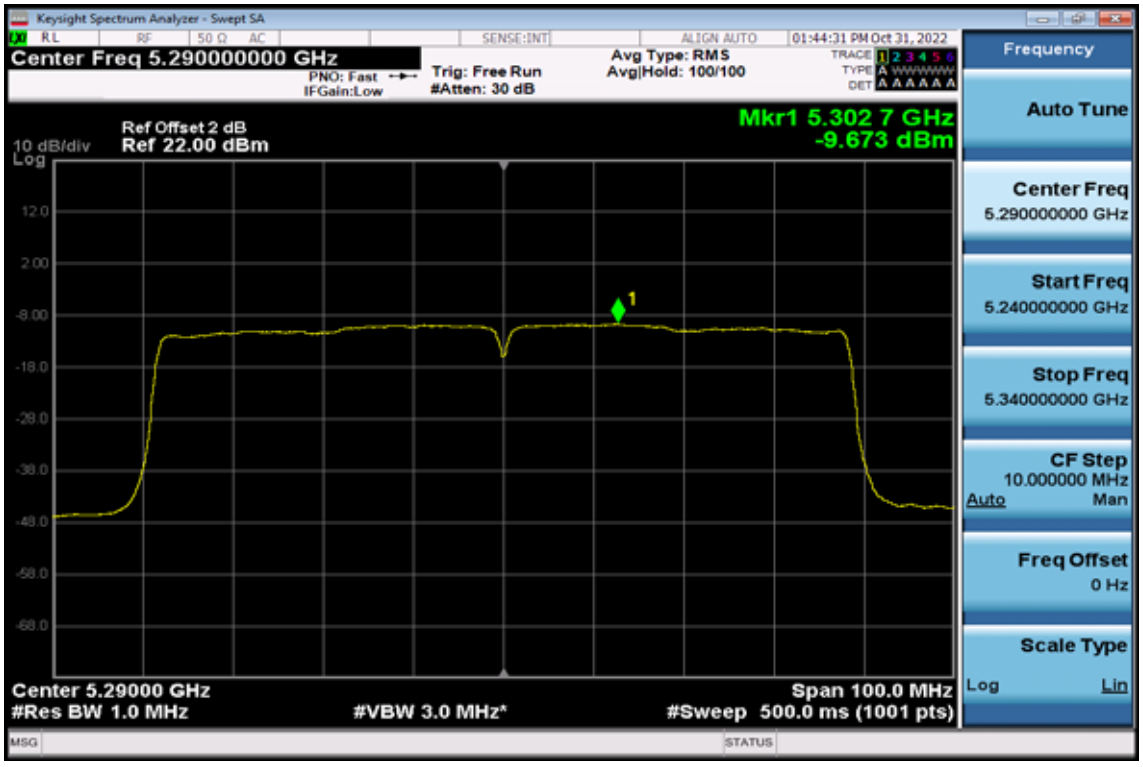


## Power Spectral Density Test Plot (CH-High)

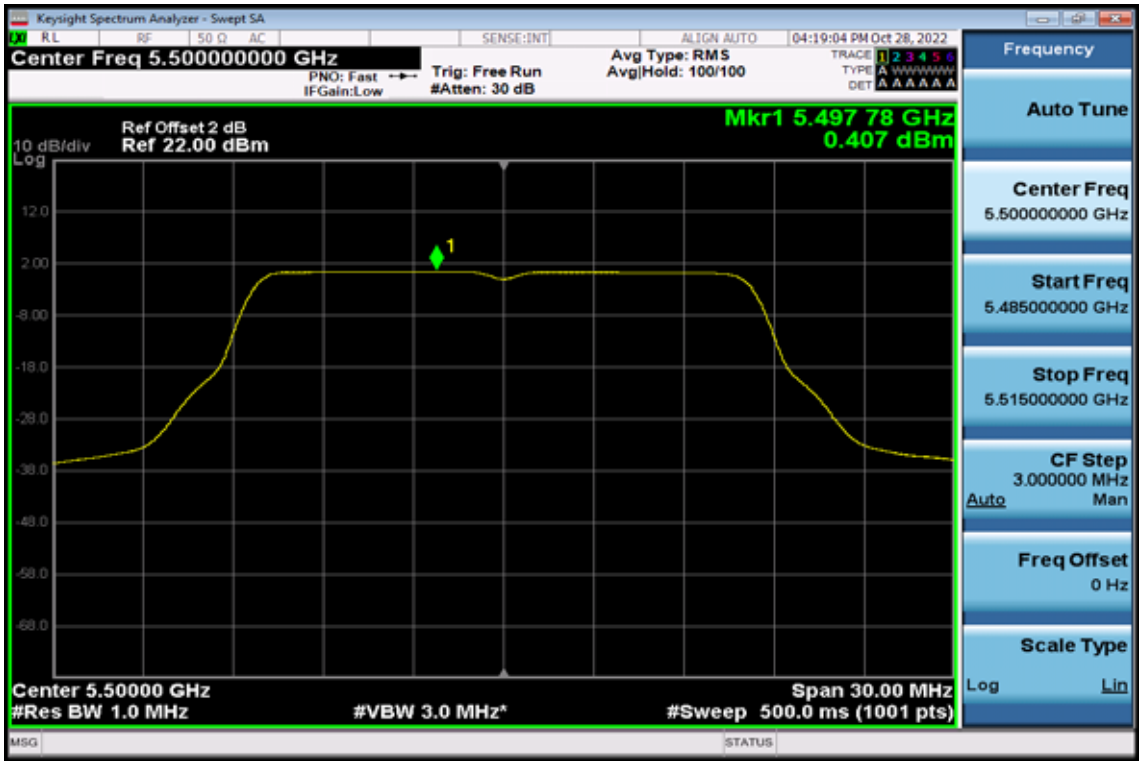



## 802.11 ac VHT80

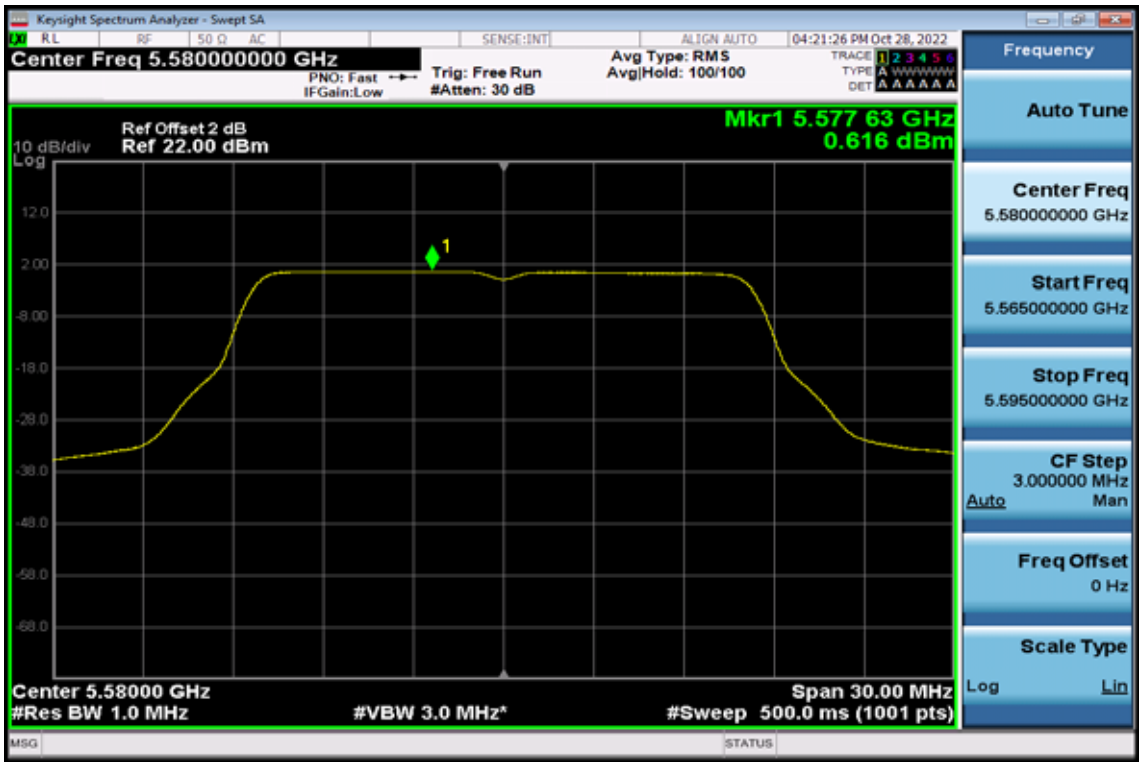
## Power Spectral Density Test Plot (CH-Low)



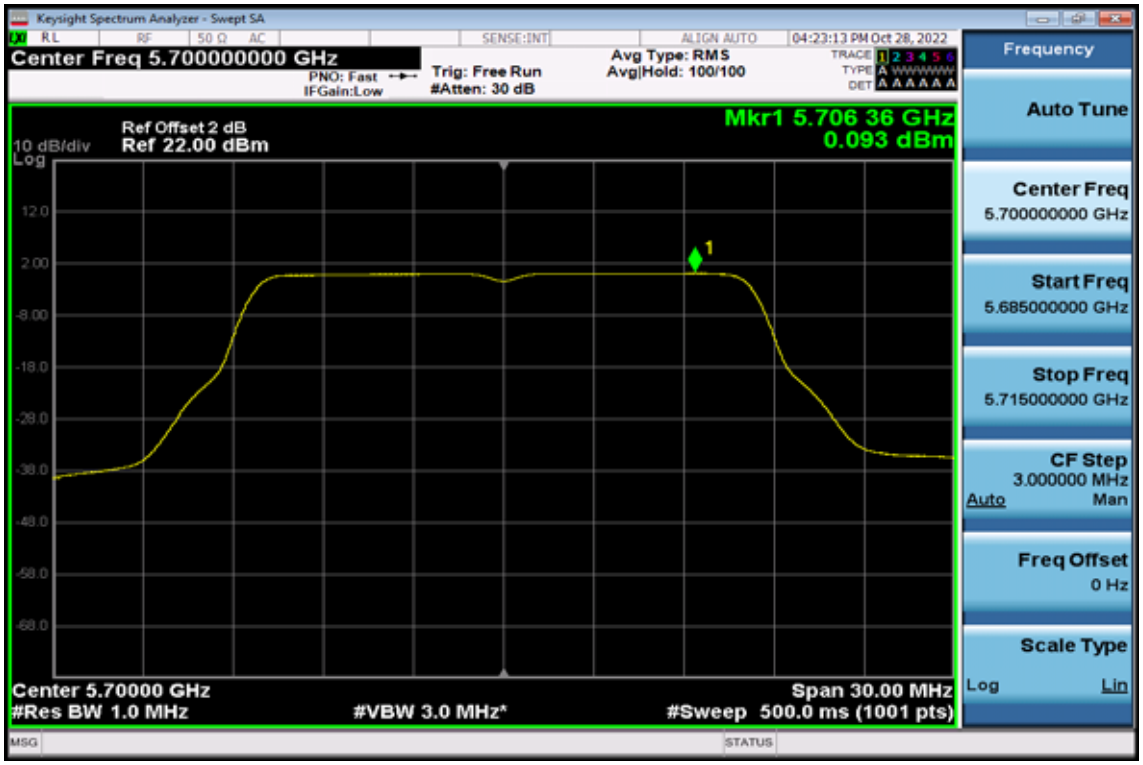
**Band UNII-2C**
**802.11a**
**Power Spectral Density Data Plot (CH Low)**




**Power Spectral Density Data Plot (CH Mid)**

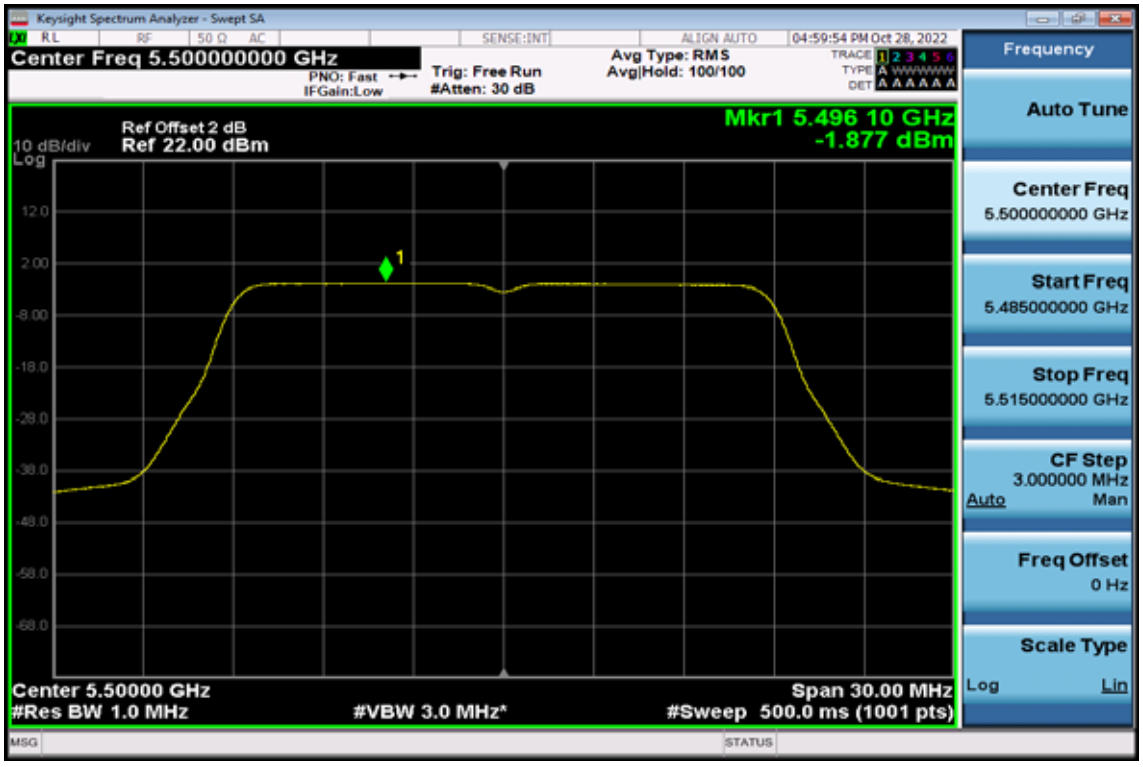


## Power Spectral Density Data Plot (CH High)

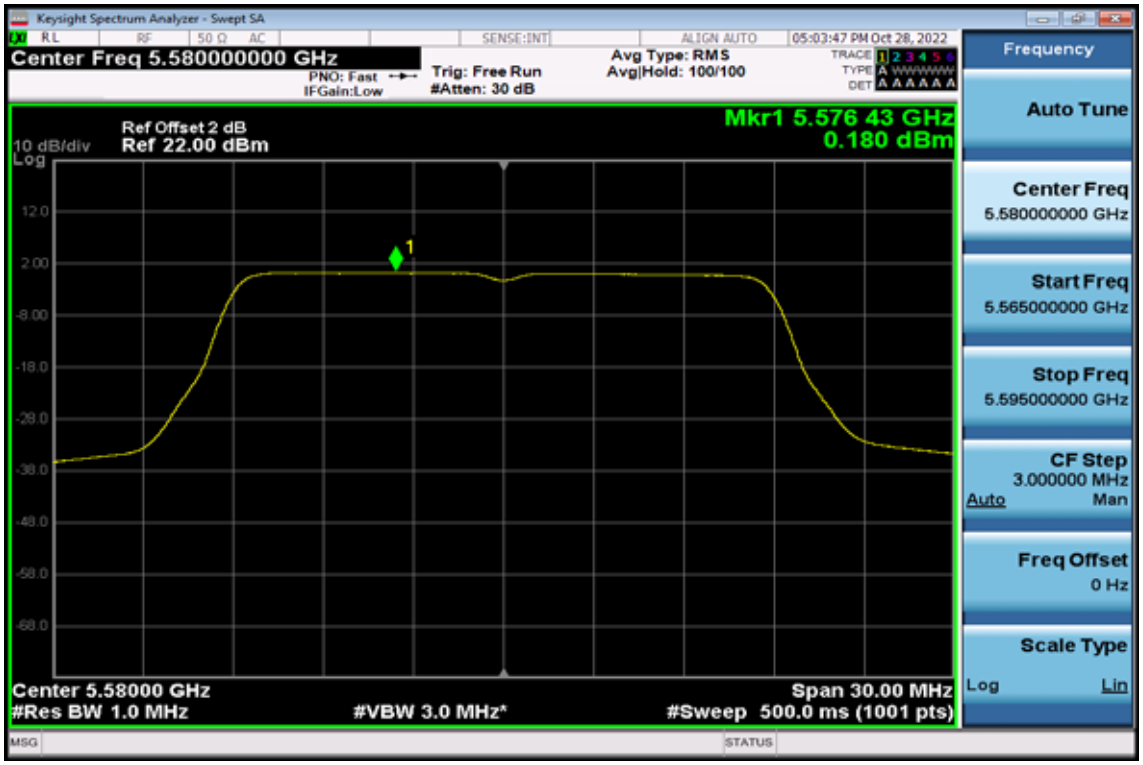



## 802.11n HT20

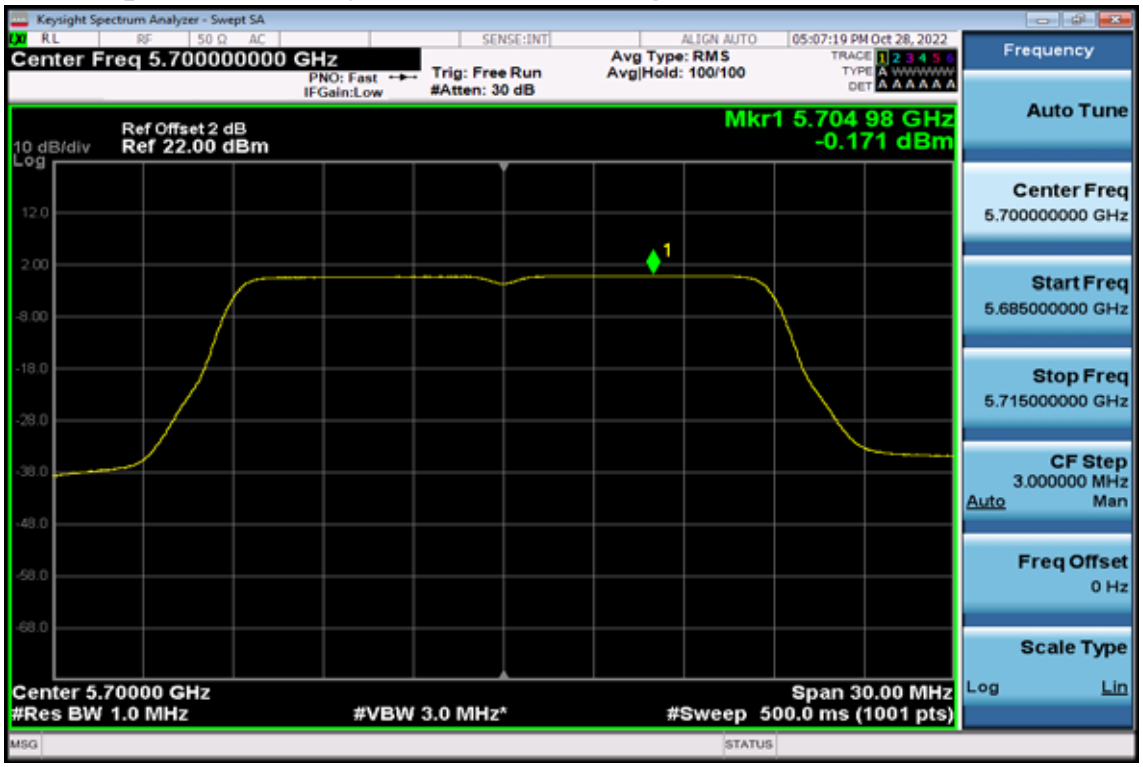
## Power Spectral Density Test Plot (CH-Low)



## Power Spectral Density Test Plot (CH-Mid)

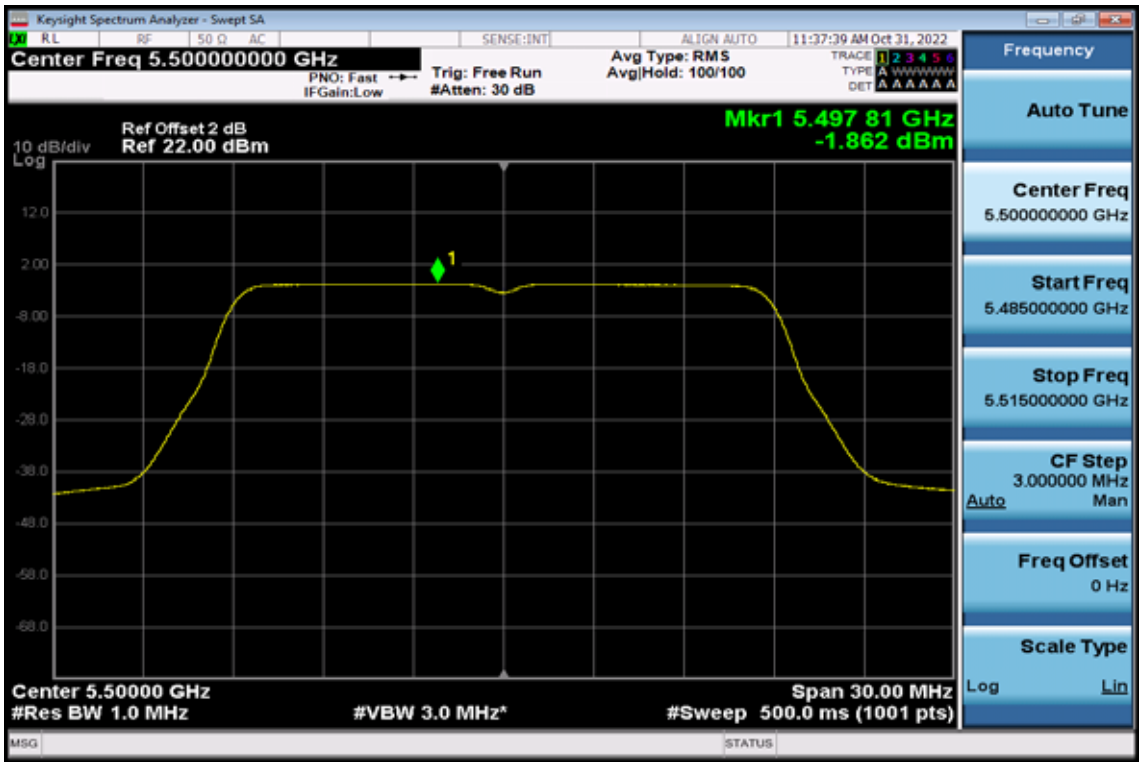



## Power Spectral Density Test Plot (CH-High)

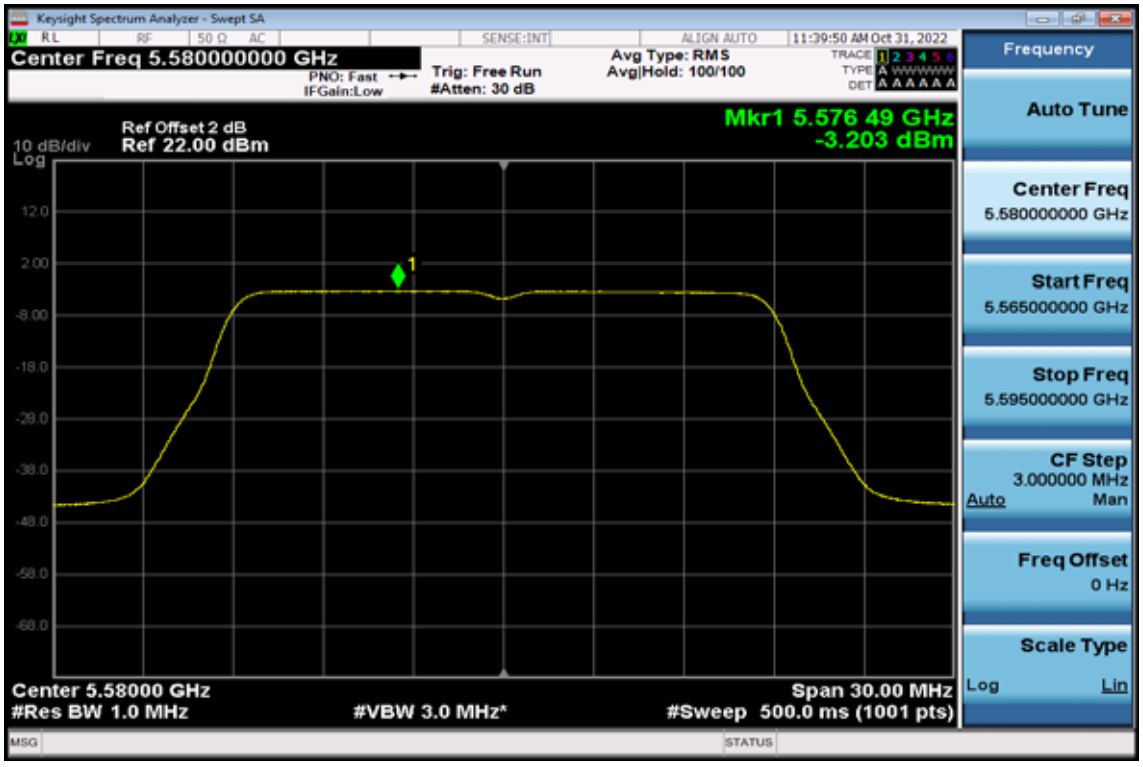


## 802.11ac VHT20

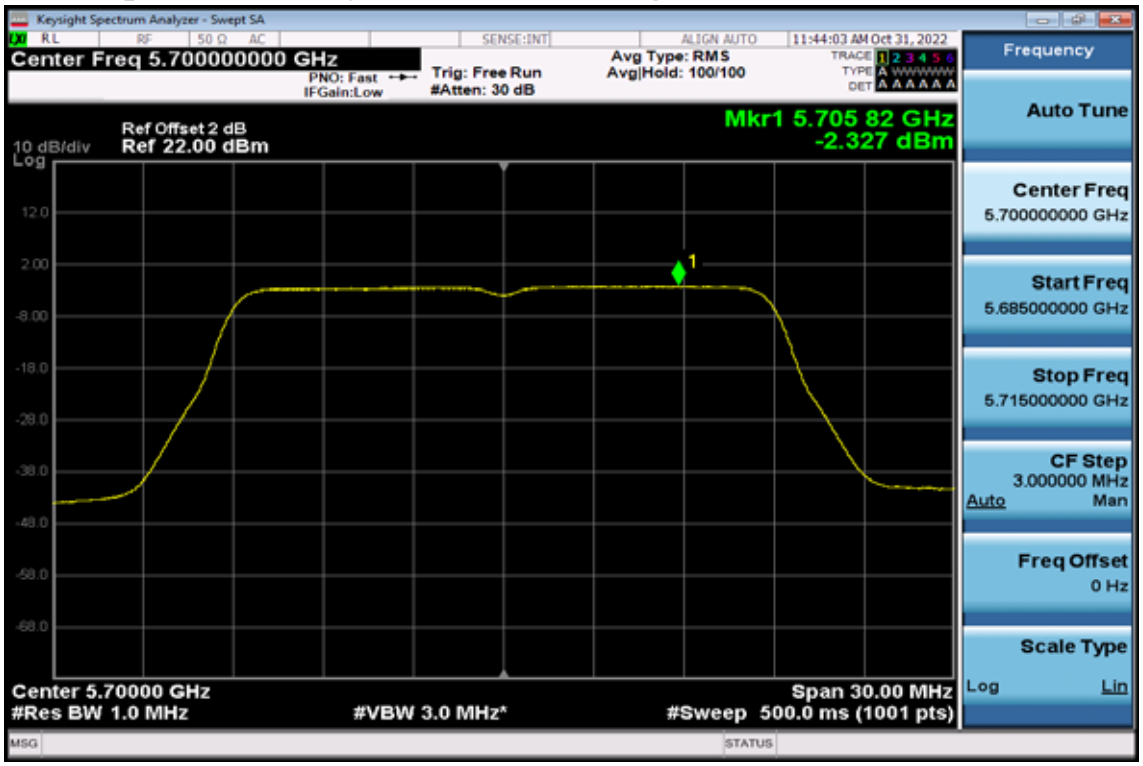
## Power Spectral Density Test Plot (CH-Low)




## Power Spectral Density Test Plot (CH-Mid)

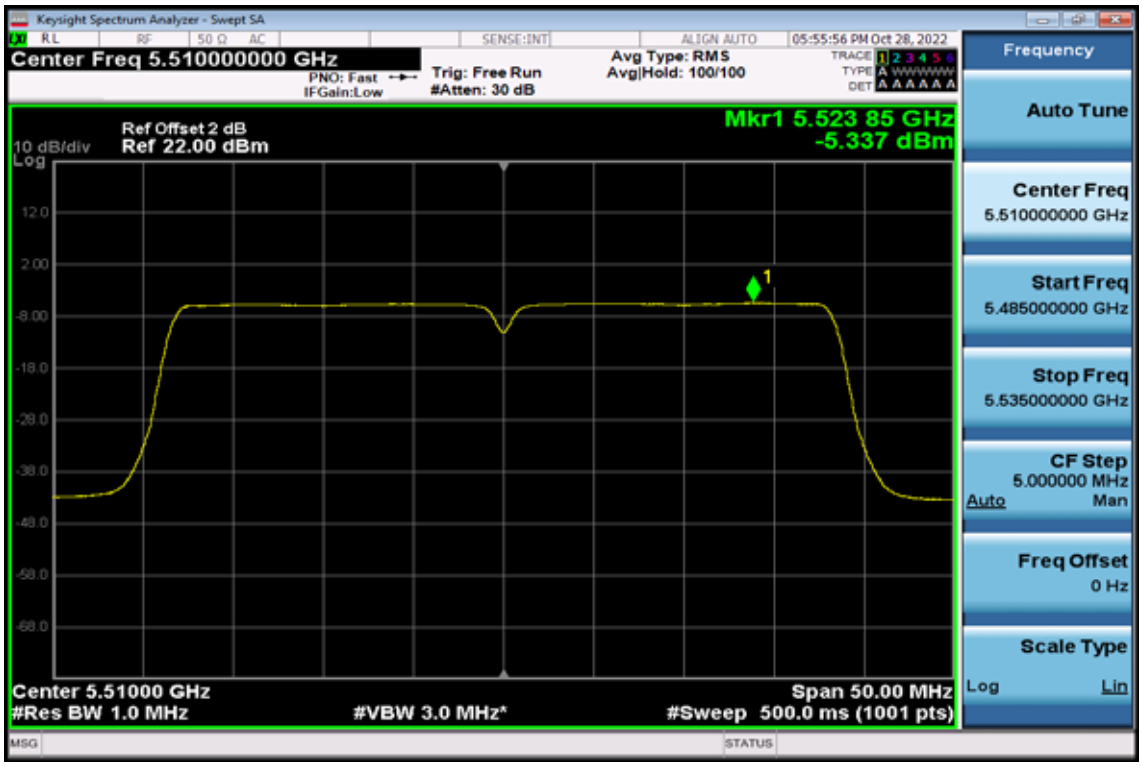


## Power Spectral Density Test Plot (CH-High)

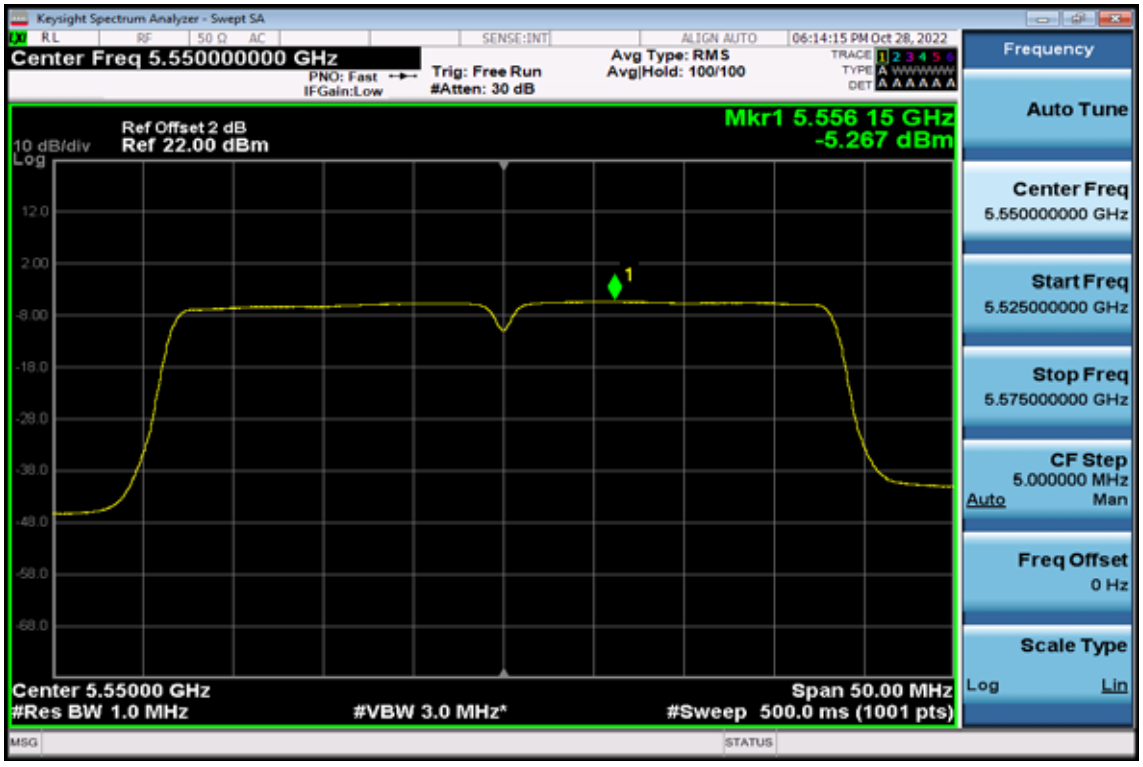



## 802.11n HT40

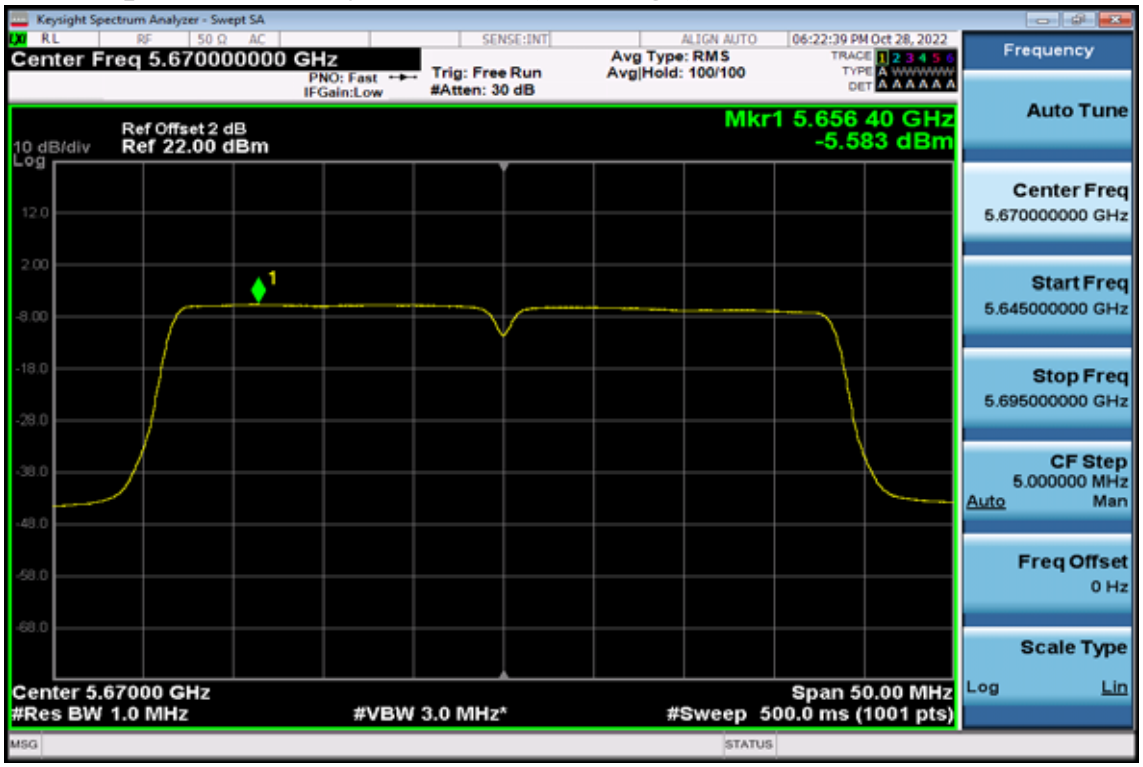
## Power Spectral Density Test Plot (CH-Low)



## Power Spectral Density Test Plot (CH-Mid)

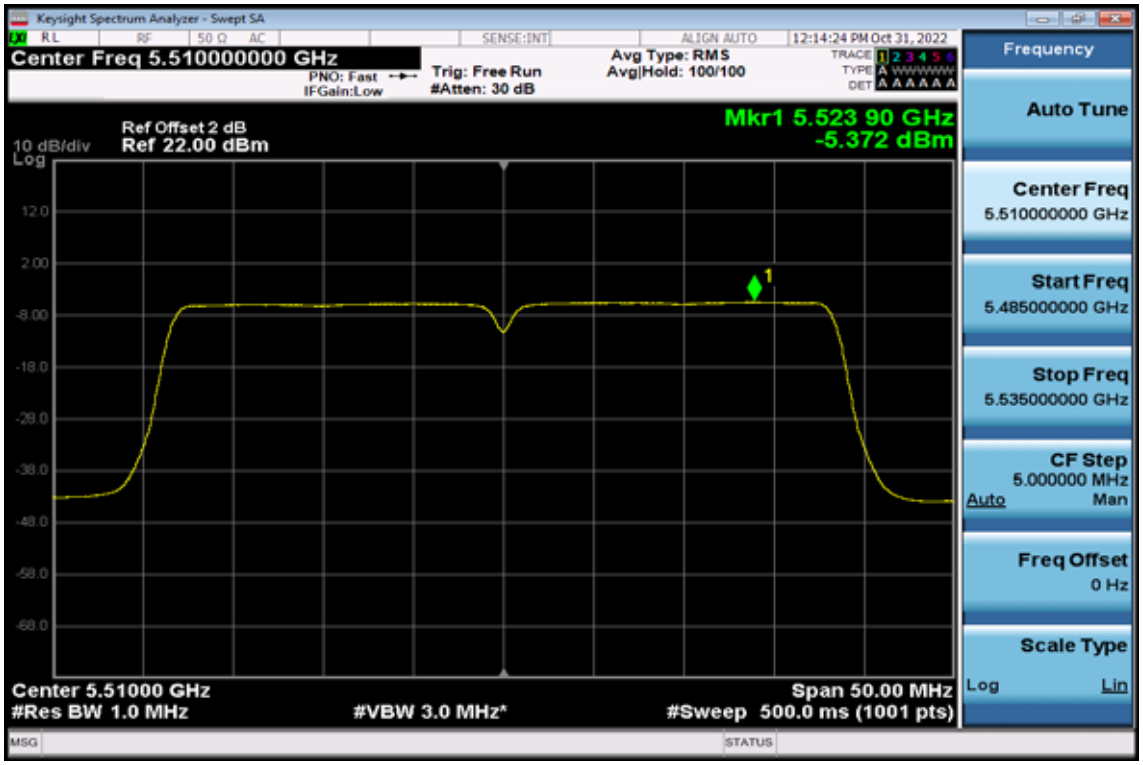



## Power Spectral Density Test Plot (CH-High)

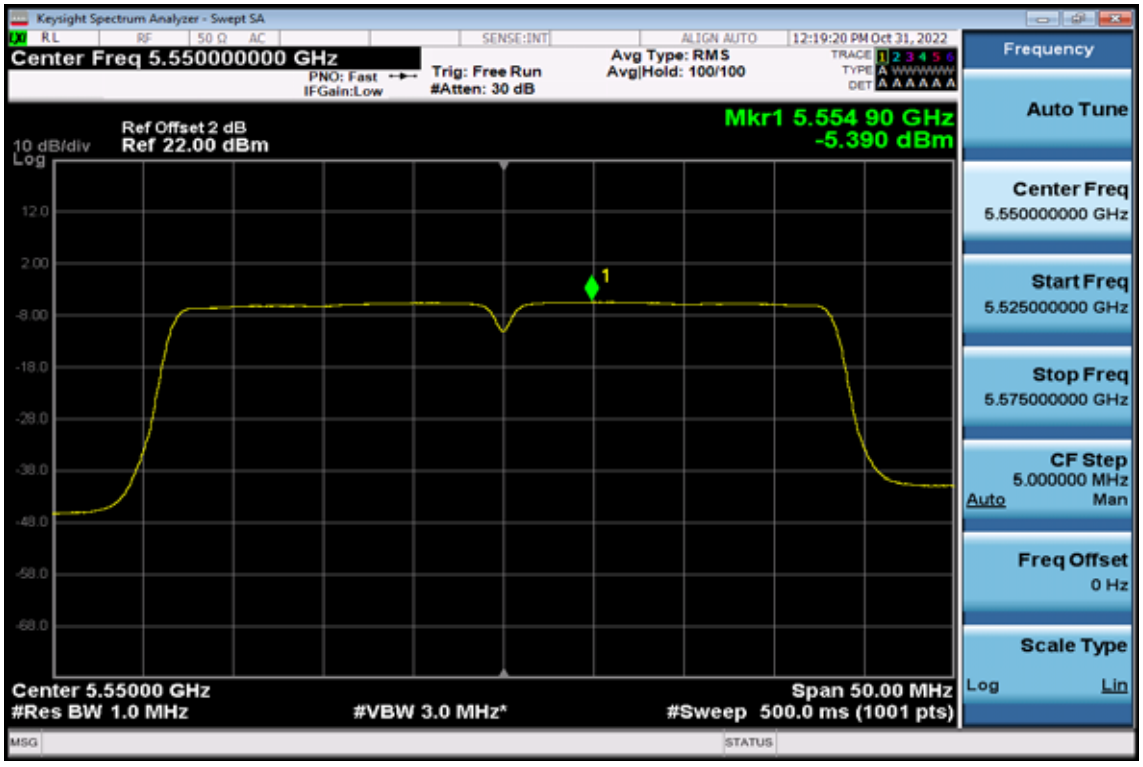


## 802.11ac VHT40

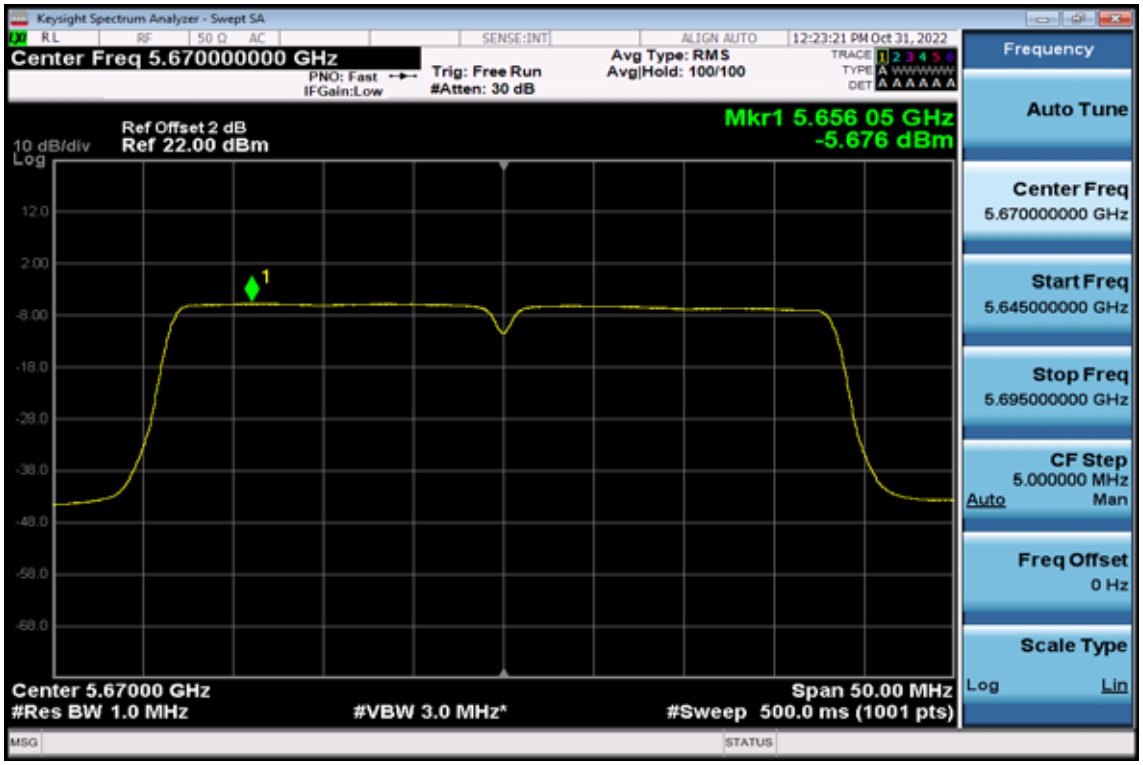
## Power Spectral Density Test Plot (CH-Low)




## Power Spectral Density Test Plot (CH-Mid)

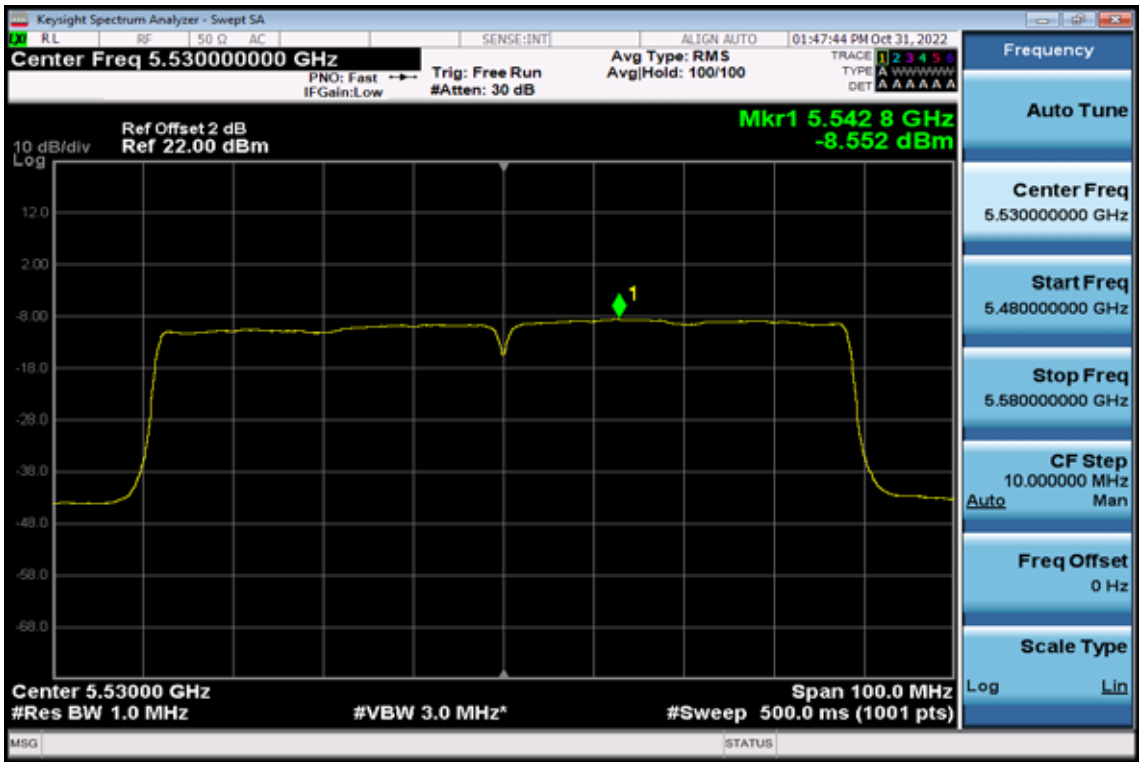


## Power Spectral Density Test Plot (CH-High)



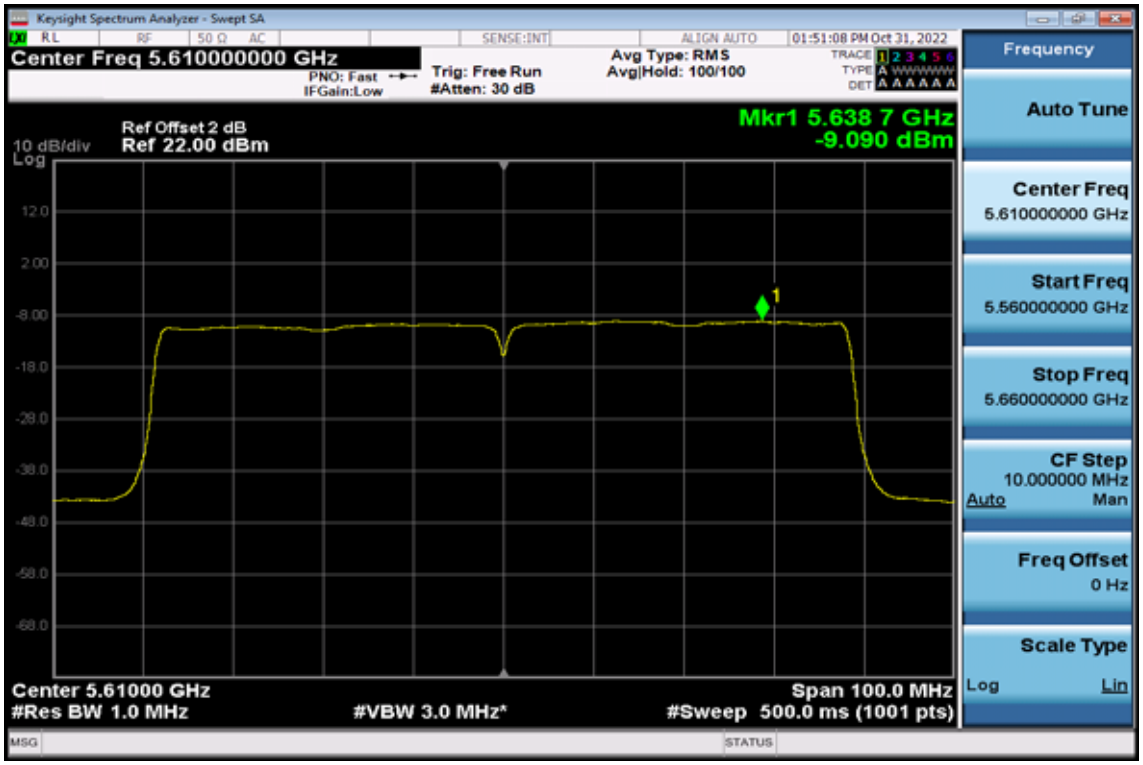

## 802.11 ac VHT80

## Power Spectral Density Test Plot (CH-Low)

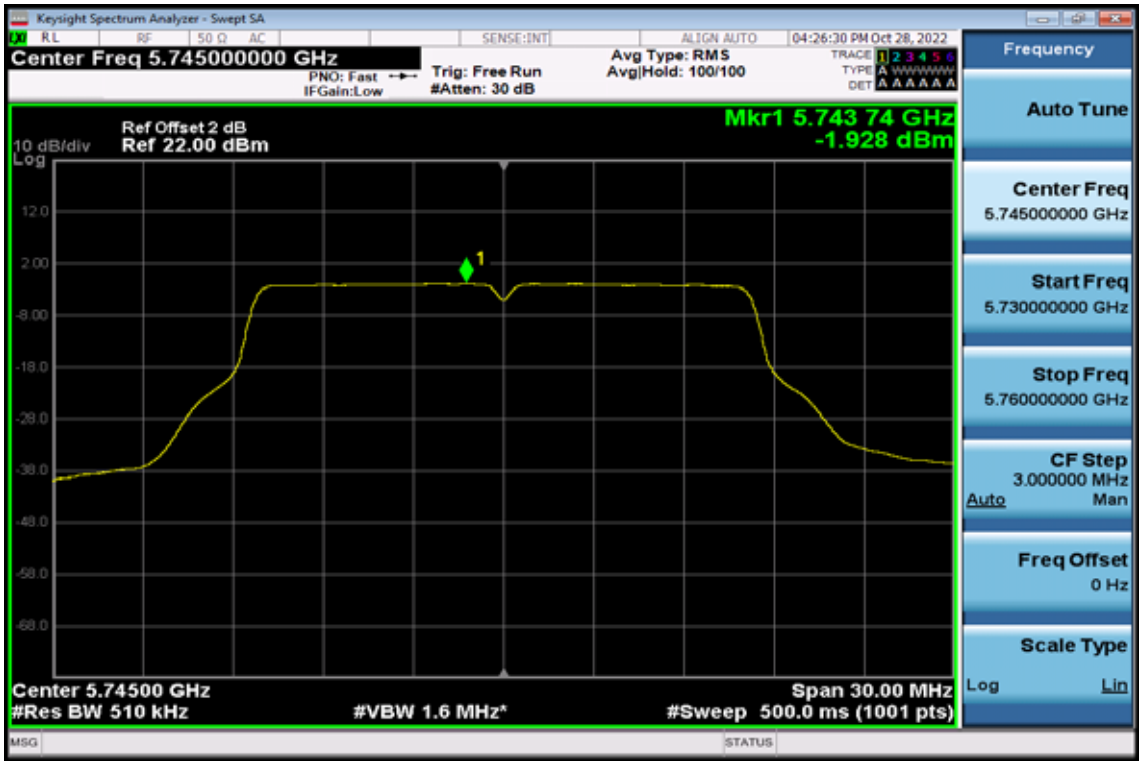


## 802.11 ac VHT80

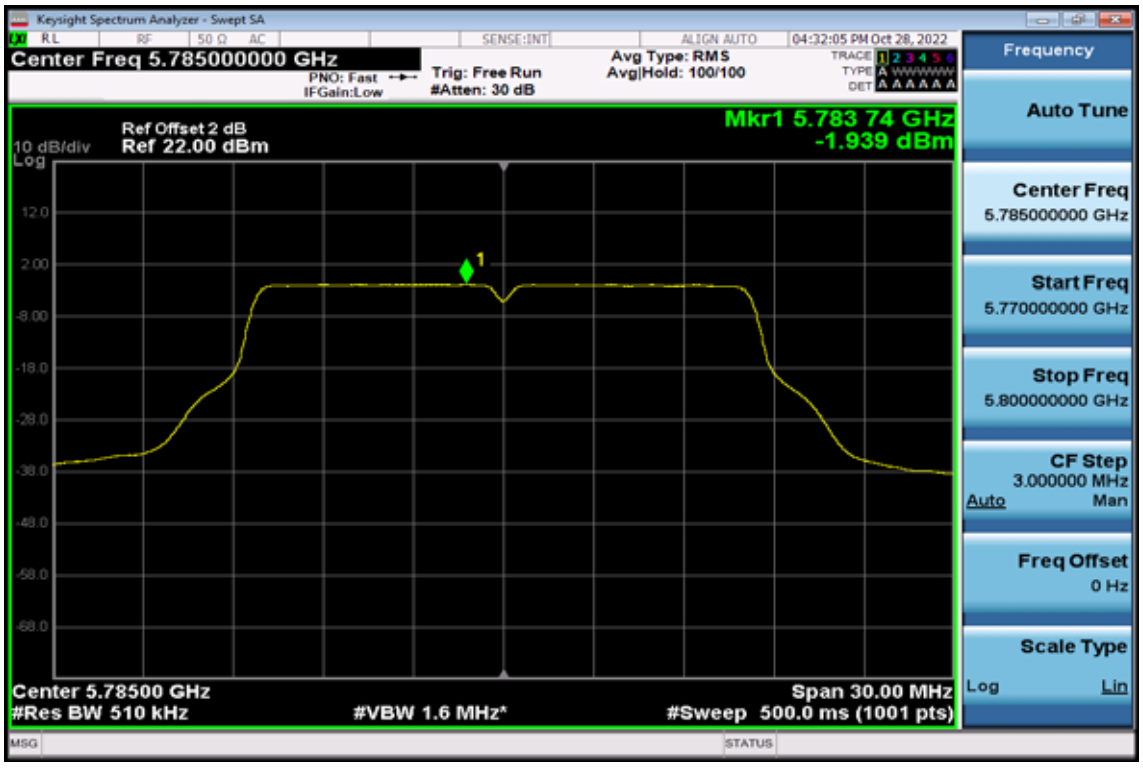
## Power Spectral Density Test Plot (CH-High)



**Band UNII-3**
**802.11a**
**Power Spectral Density Data Plot (CH Low)**



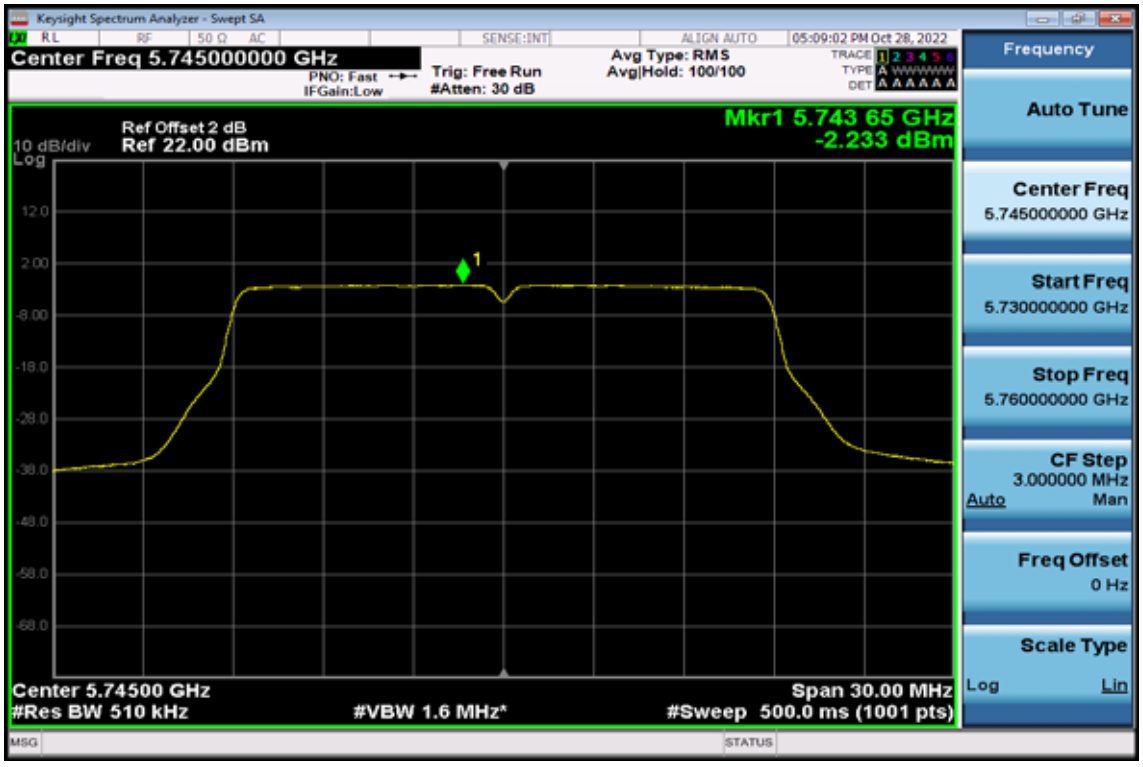

**Power Spectral Density Data Plot (CH Mid)**



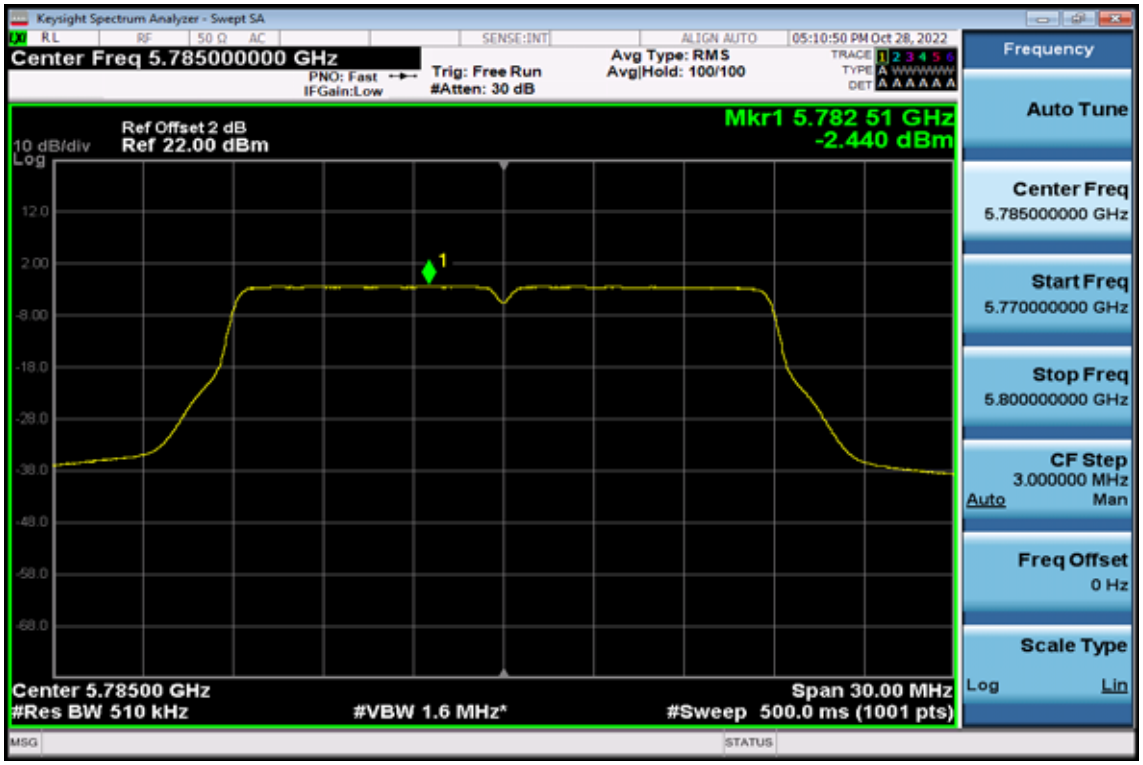
## Power Spectral Density Data Plot (CH High)


## 802.11n HT20

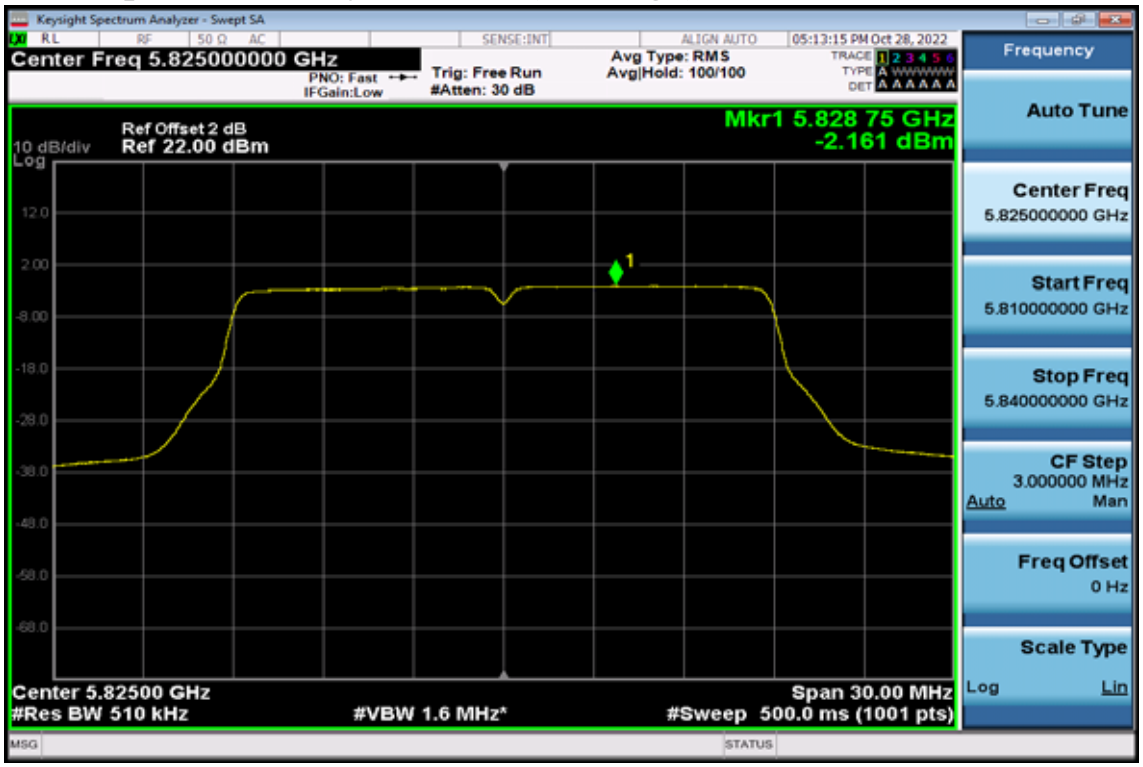
## Power Spectral Density Test Plot (CH-Low)



## Power Spectral Density Test Plot (CH-Mid)

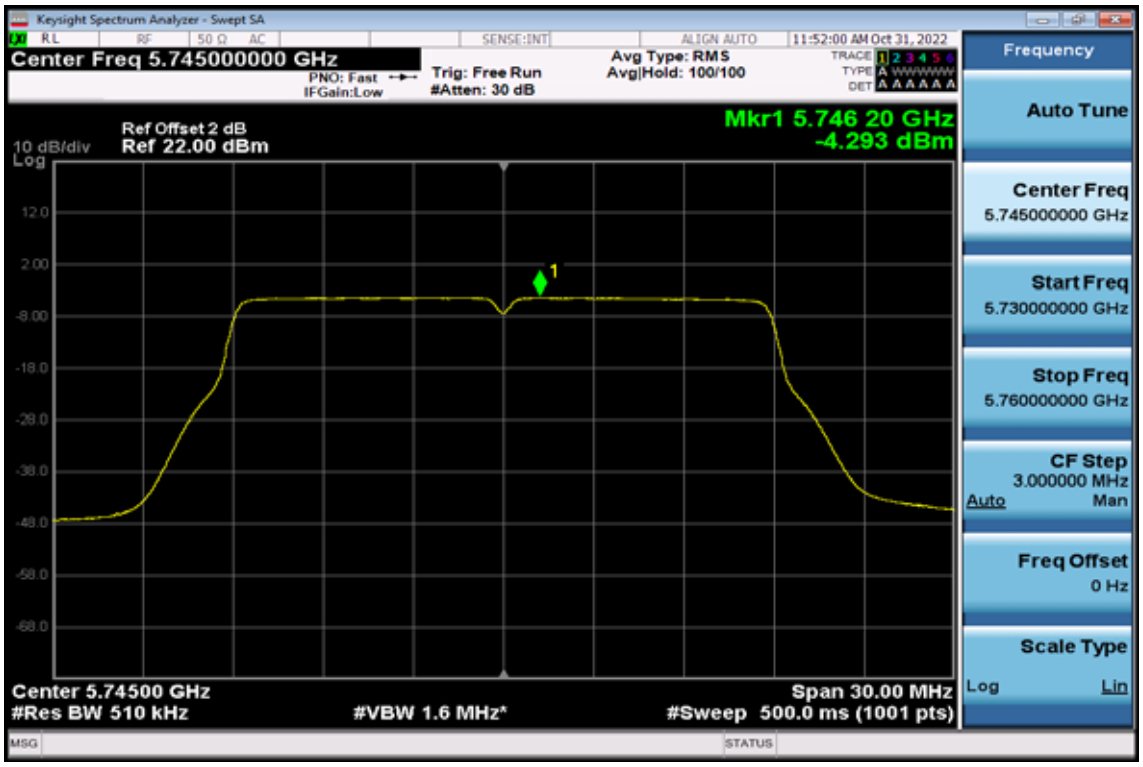



## Power Spectral Density Test Plot (CH-High)

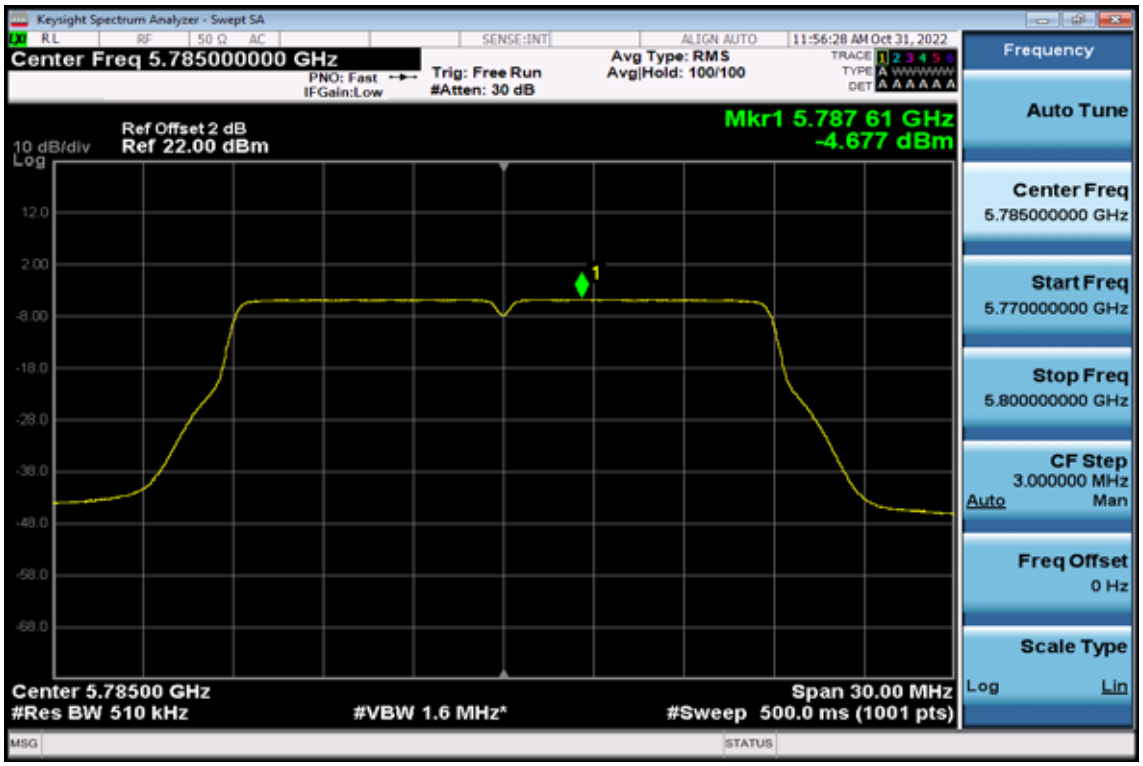


## 802.11ac VHT20

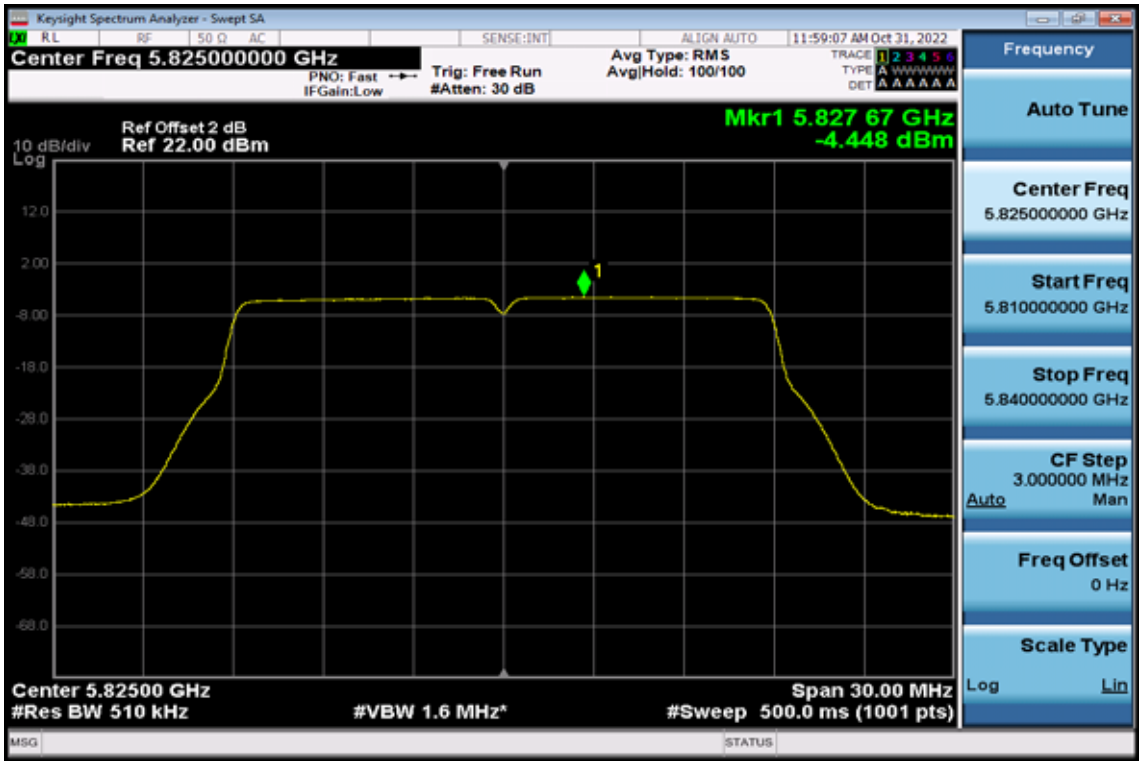
## Power Spectral Density Test Plot (CH-Low)




## Power Spectral Density Test Plot (CH-Mid)

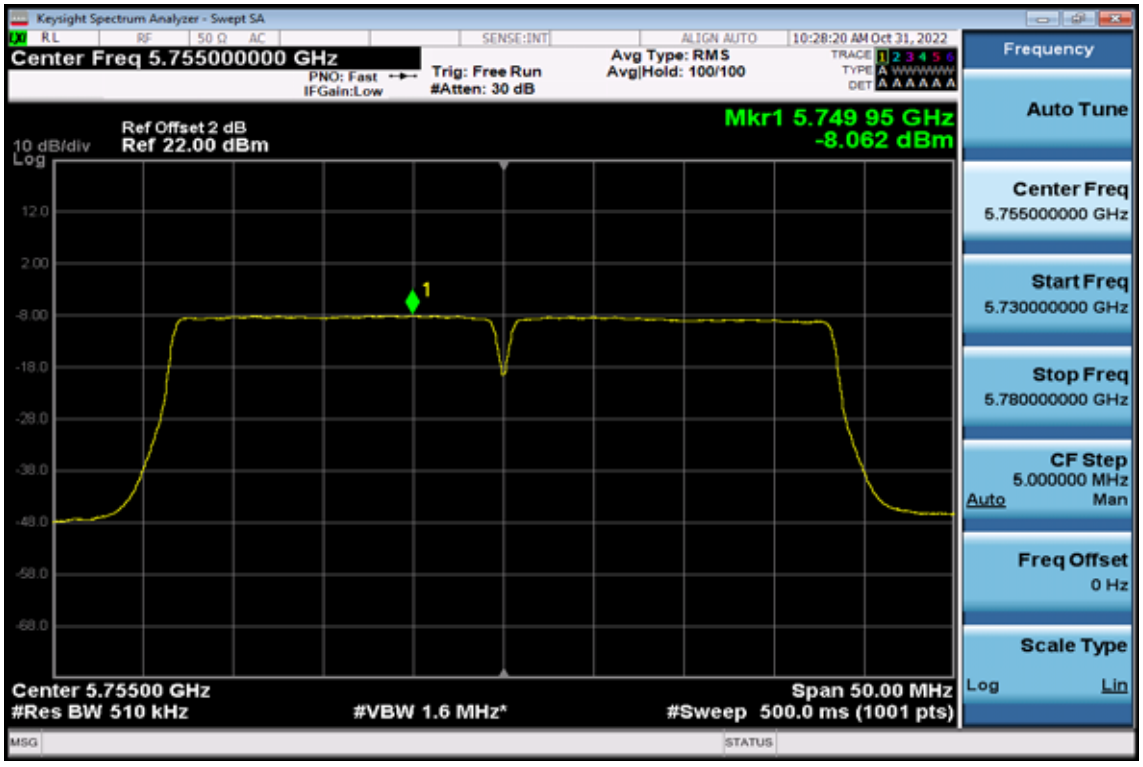


## Power Spectral Density Test Plot (CH-High)

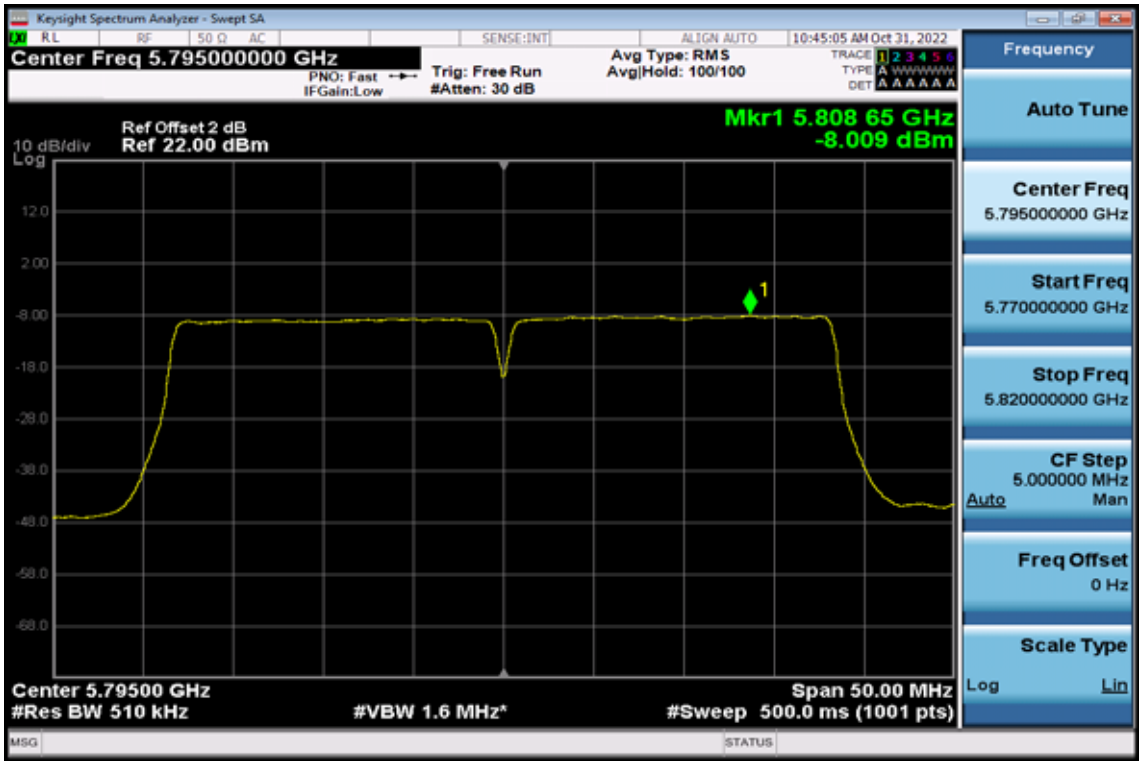



## 802.11n HT40

## Power Spectral Density Test Plot (CH-Low)

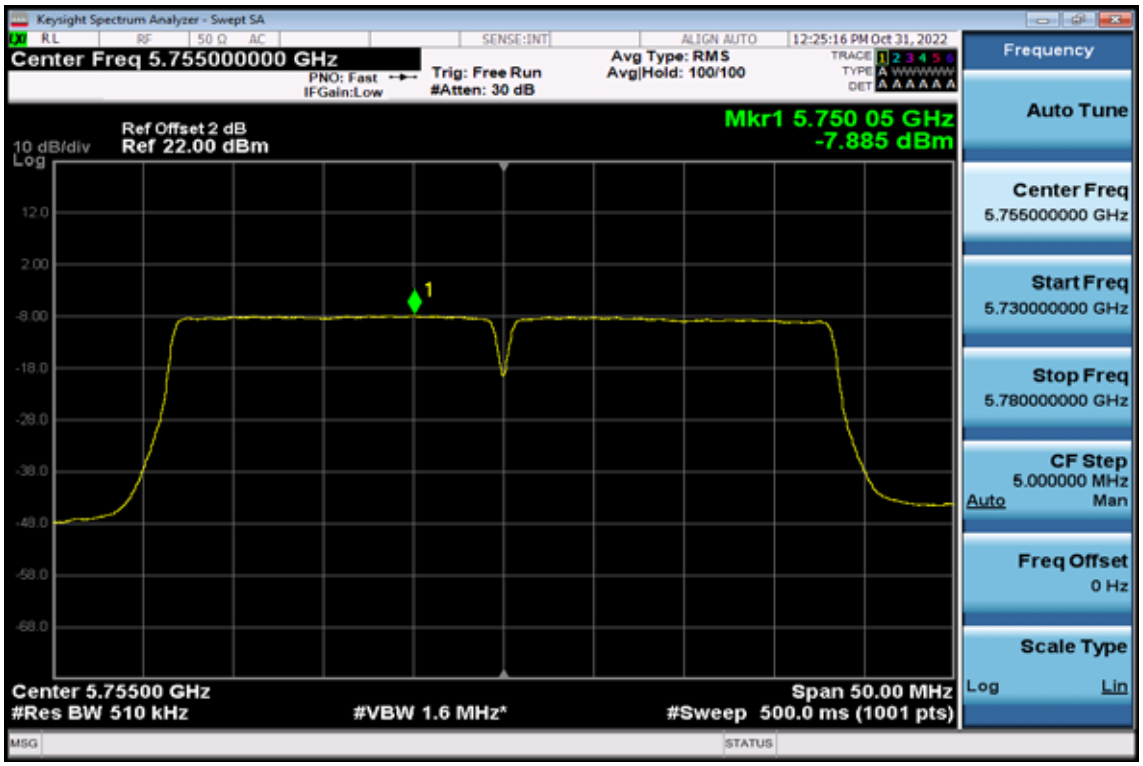


## Power Spectral Density Test Plot (CH-High)

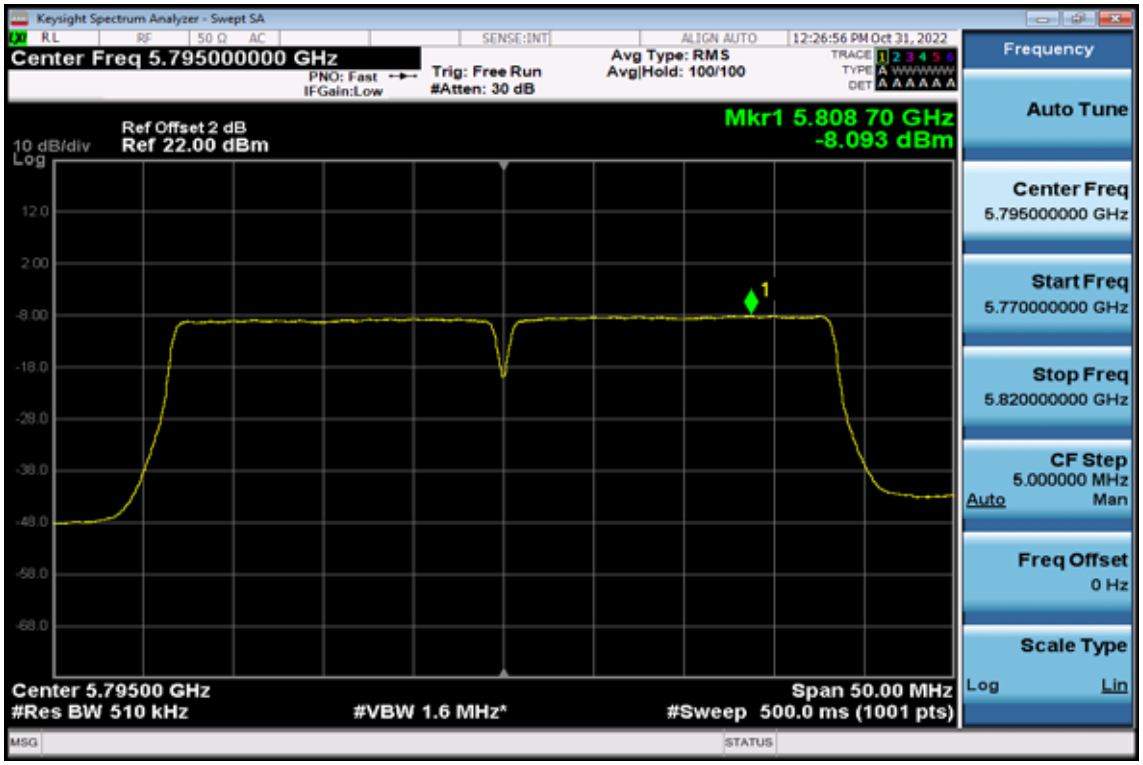



## 802.11ac VHT40

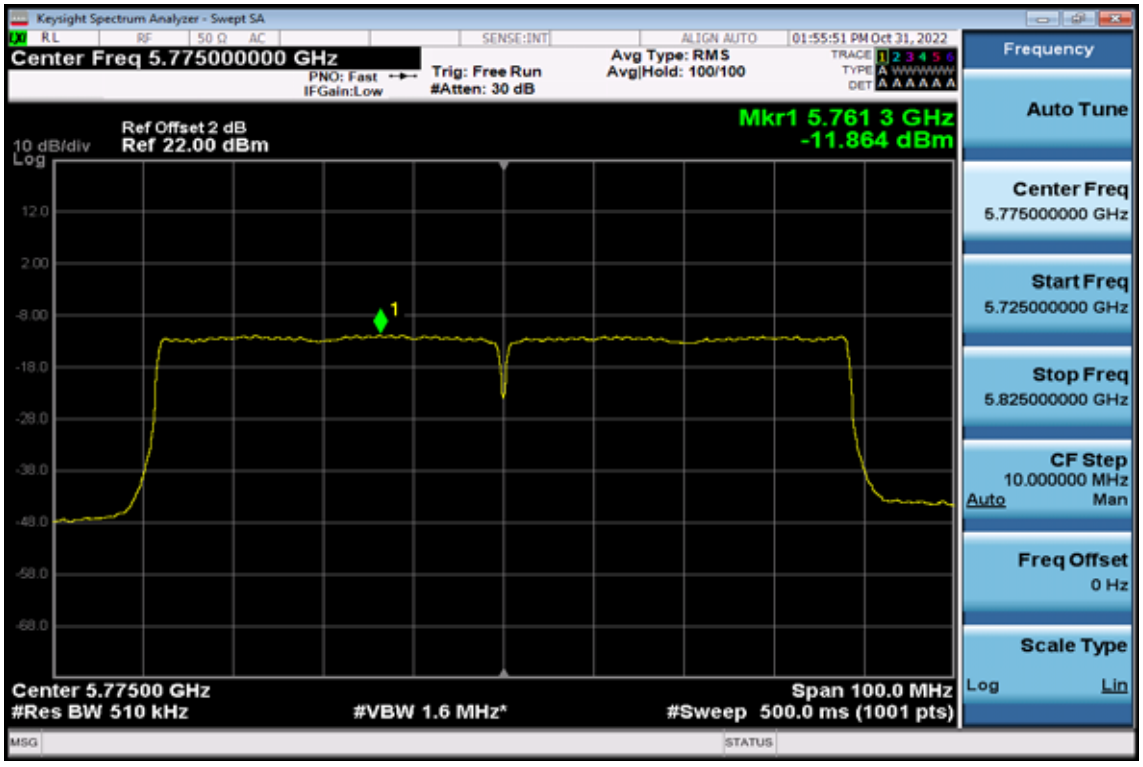
## Power Spectral Density Test Plot (CH-Low)



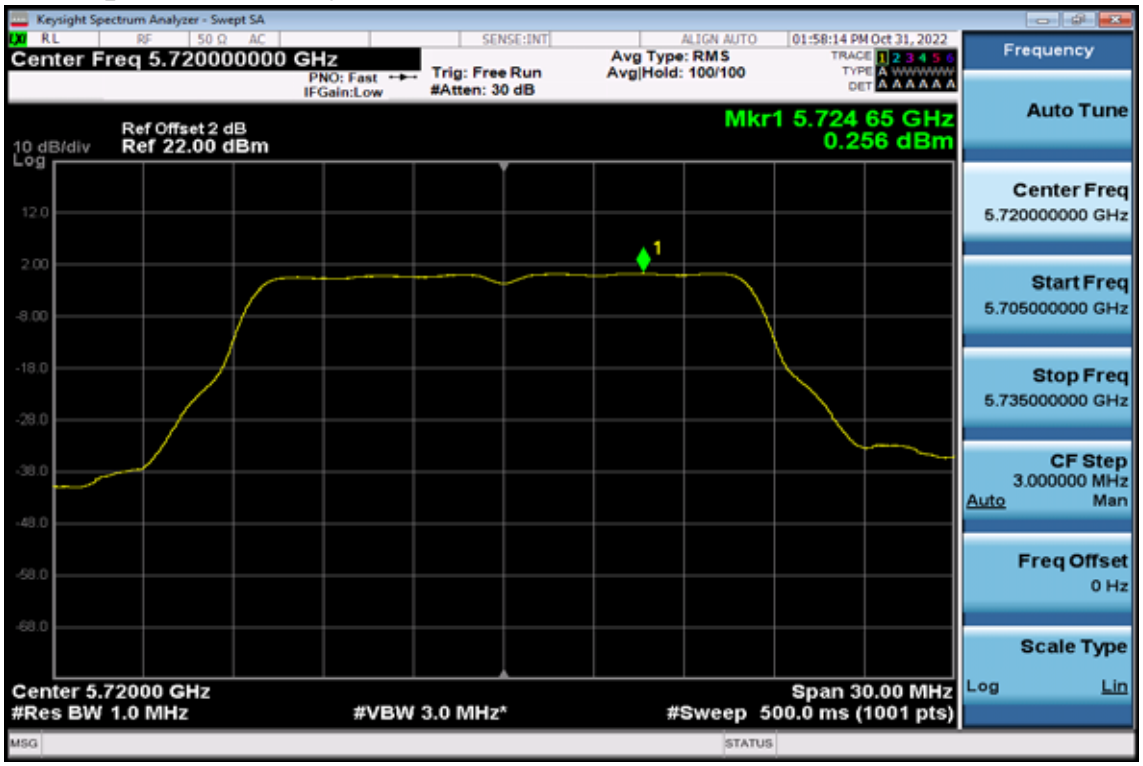
## Power Spectral Density Test Plot (CH-High)



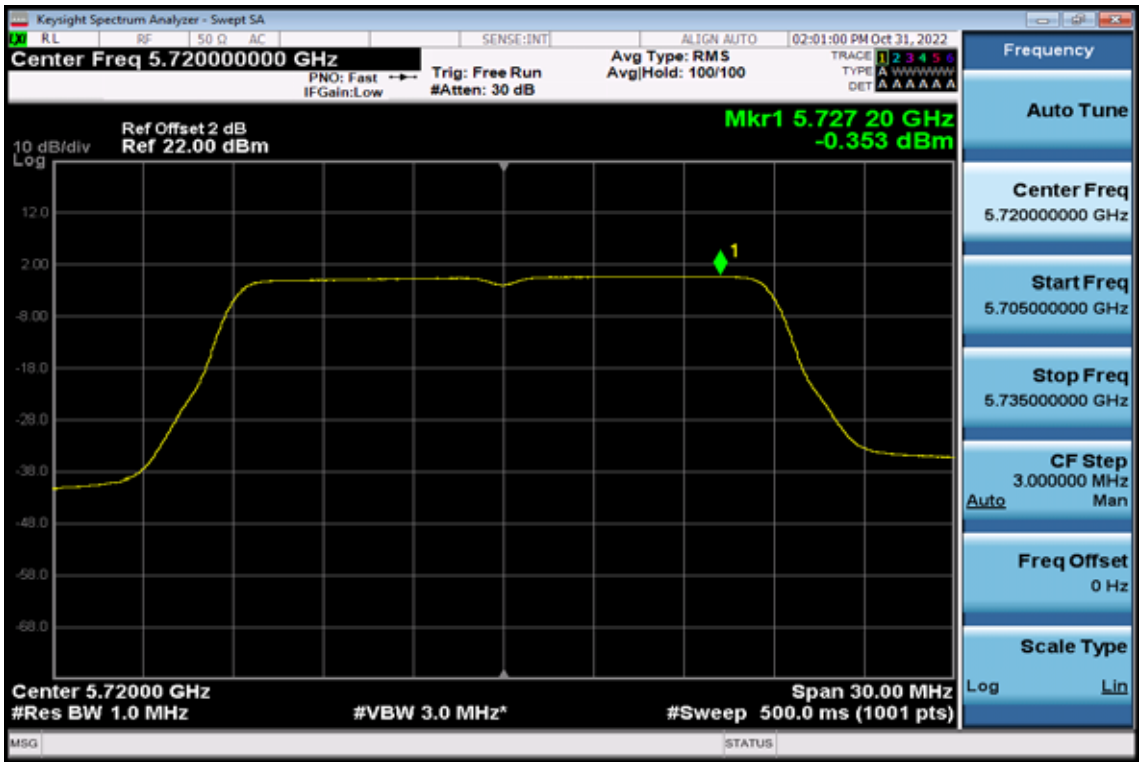

## 802.11 ac VHT80,
## Power Spectral Density Test Plot



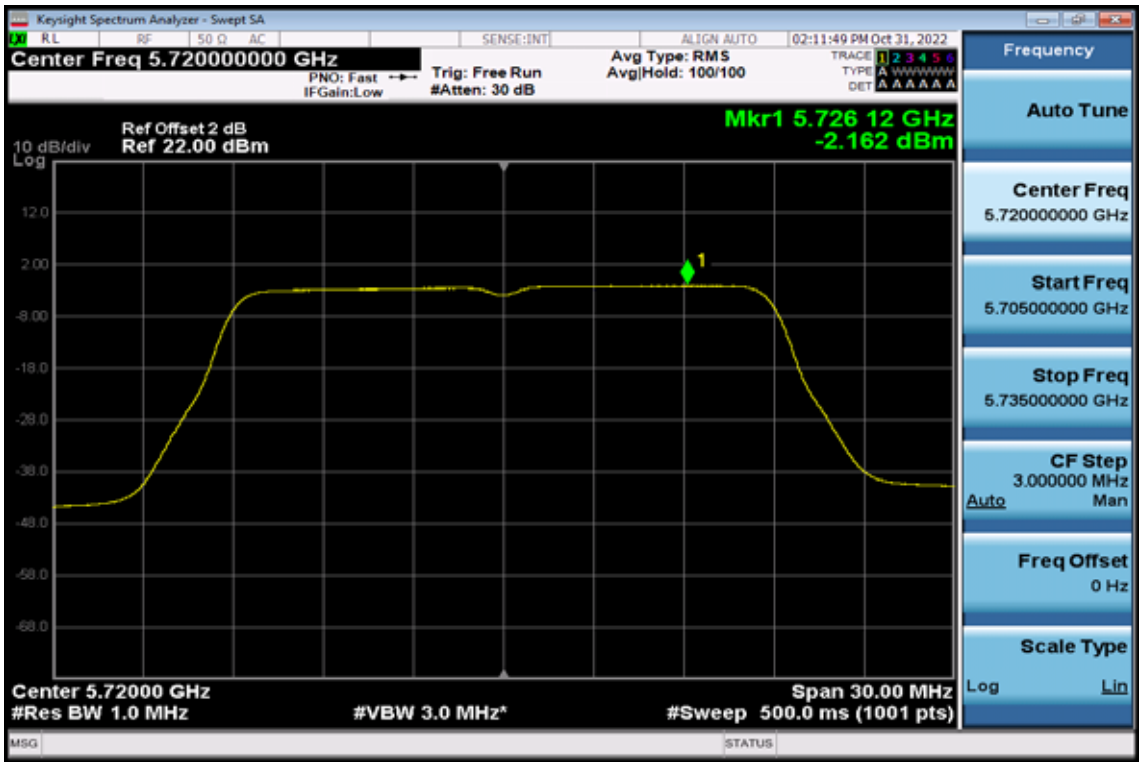
**Straddle Channels**
**Band UNII-2C**
**802.11a**
**Power Spectral Density Data Plot**



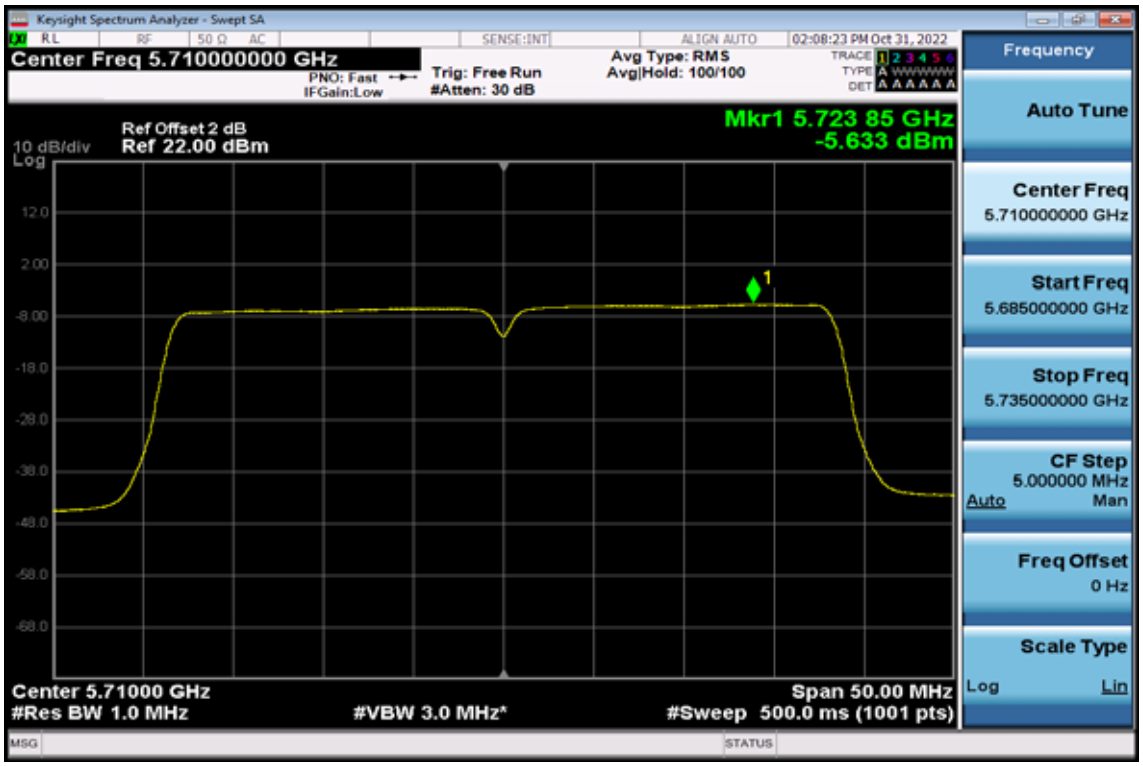

**802.11n HT20**
**Power Spectral Density Test Plot**



## 802.11ac VHT20
## Power Spectral Density Test Plot

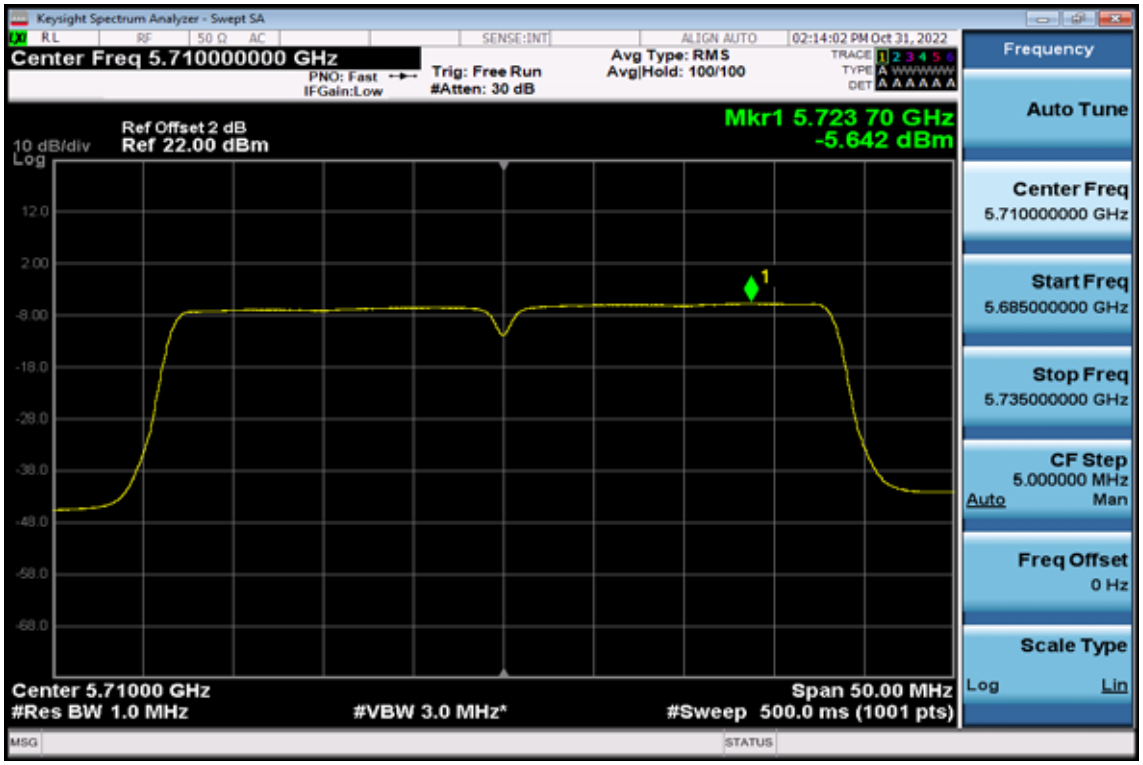



## 802.11n HT40
## Power Spectral Density Test Plot



## 802.11ac VHT40

## Power Spectral Density Test Plot




## 802.11 ac VHT80

## Power Spectral Density Test Plot