

**Japan - TEST REPORT**Report Number : **6895025110401** Date of Issue: **2026-03-27**Model : **PF004-P**

Product Name : X2D

Applicant : Shenzhen Tuozhu Technology Co., Ltd.

Address : 903, West Zone, Hengchang Science and Technology Building,  
No.2228 Linhai Avenue, Nanshan Street, Qianhai Shengang  
Cooperation Zone, 518052 Shenzhen, PEOPLE'S REPUBLIC OF  
CHINA

Manufacturer : Shenzhen Tuozhu Technology Co., Ltd.

Address : 903, West Zone, Hengchang Science and Technology Building,  
No.2228 Linhai Avenue, Nanshan Street, Qianhai Shengang  
Cooperation Zone, 518052 Shenzhen, PEOPLE'S REPUBLIC OF  
CHINA

Factory : Shenzhen Zhusu Technology Co., Ltd.

Address : Building D, Zhongshenglixin Industrial Park, No.4, Lixin Road,  
Qiaotou Community, Fuhai Street, Bao'an District, Shenzhen City,  
Guangdong ProvinceTest Result : ☒ **Positive** ☐ **Negative**Total pages including  
Appendices : **163**

*Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question. It does not imply a general statement regarding the quality of products from regular production. For further details please see Testing, Certification, Validation and Verification Regulations, chapter A-3.3. For details, please see clause 2.1 of this report.*

## **Table of Content**

|      |                                                               |     |
|------|---------------------------------------------------------------|-----|
| 1    | General Information .....                                     | 3   |
| 1.1  | Notes .....                                                   | 3   |
| 1.2  | Testing Laboratory .....                                      | 4   |
| 1.3  | Details of Applicant .....                                    | 4   |
| 1.4  | Application Details .....                                     | 4   |
| 1.5  | Test Item .....                                               | 4   |
| 1.6  | Applied Standard .....                                        | 5   |
| 1.7  | Test Summary .....                                            | 5   |
| 2    | Equipment Specification .....                                 | 6   |
| 2.1  | General Description .....                                     | 6   |
| 2.2  | Technical Data .....                                          | 6   |
| 2.3  | Test Conditions and Test Connections .....                    | 7   |
| 2.4  | Auxiliary Equipment Used during Test .....                    | 7   |
| 2.5  | Lists of Test Instruments .....                               | 8   |
| 2.6  | Measurement Uncertainty (95% confidence levels, k=2) .....    | 8   |
| 3    | Measurements Result .....                                     | 9   |
| 3.1  | Antenna Power .....                                           | 9   |
| 3.2  | Effective Isotropic Radiated Power (EIRP) .....               | 40  |
| 3.3  | Antenna Power Error .....                                     | 44  |
| 3.4  | Frequency Tolerance .....                                     | 45  |
| 3.5  | Occupied Frequency Bandwidth .....                            | 57  |
| 3.6  | Unwanted Emission Intensity and Leakage Power Out-band .....  | 69  |
| 3.7  | Secondary Radiated Emissions (Conducted) (For Receiver) ..... | 99  |
| 3.8  | Adjacent Channel Leakage Power .....                          | 122 |
| 3.9  | Burst Length of Transmission .....                            | 141 |
| 3.10 | Interference Prevention Function .....                        | 153 |
| 3.11 | Carrier Sense Function .....                                  | 155 |
| 3.12 | Dynamic Frequency Selection (DFS) .....                       | 159 |
| 4    | Photographs of Test Set-ups .....                             | 163 |

# 1 General Information

## 1.1 Notes

Results of conformity assessment activities (such as test reports\* or audit reports), which have not been issued in the form of a certificate or attestation of conformity, may not be used by the client for advertising purposes and may not be reproduced either in part or in full. References to reports of results or names of TSC (TÜV SÜD Company) for promotional purposes are not permitted.

Exceptions to this are cases in which the responsible CAB of TSC has expressly approved this in advance in text form\*, or the respective conformity assessment provides for the report's use, or disclosure is required due to statutory, regulatory or accreditation requirements. If reports of results of conformity assessment activities are used for advertising purposes with TSC's approval, the client shall not attach to the reports any statements or interpretations that go beyond their actual content, in particular no falsifying or misleading statements or interpretations that could cast doubt on TÜV SÜD's neutrality. The client shall at all times ensure that TSC's results are reproduced correctly and without distortion. This applies in particular to all communication activities, advertisements, notices, sales documents, etc., in digital media, audio features or print media initiated by the client. If TSC reports of results may be used as set out above, their wording shall be unchanged and complete and their date of preparation stated. Under no circumstances, however, shall TSC reports of results be used to state or imply that TSC specifically recommends the client, its product or system.

Prepared By  
Project Engineer

2026-03-27  
Date

Hayden Hu  
Name

*Hayden Hu*

Signature

Approved by  
Project Manager

2026-03-27  
Date

John Zhi  
Name

*John Zhi*



Signature

## 1.2 Testing Laboratory

### Site 1:

TÜV SÜD Certification and Testing (China) Co., Ltd. – Shenzhen Branch  
Address: Building 12&13, Zhiheng Wisdomland Business Park,  
Nantou Checkpoint Road 2, Nanshan District,  
Shenzhen City, 518052,  
P. R. China

Phone: +86-755-8828 6998  
Fax: +86-755-8828 5299

## 1.3 Details of Applicant

|                      |                                                                                                                                                            |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Client:              | Shenzhen Tuozhu Technology Co., Ltd.                                                                                                                       |
| Address:             | 903, West Zone, Hengchang Science and Technology Building,<br>No.2228 Linhai Avenue, Nanshan Street, Qianhai Shengang<br>Cooperation Zone, 518052 Shenzhen |
| Product Name:        | PEOPLE'S REPUBLIC OF CHINA<br>X2D                                                                                                                          |
| Submitted Model No.: | PF004-P                                                                                                                                                    |

## 1.4 Application Details

|                               |                         |
|-------------------------------|-------------------------|
| Date of receipt of order:     | 2025-07-15              |
| Date of receipt of test item: | 2025-07-15              |
| Date of test:                 | 2025-07-20 – 2026-02-08 |

## 1.5 Test Item

Refer to table 1.

## 1.6 Applied Standard

### APPLIED PRODUCT STANDARD

Article 2 Paragraph 1 Item 19-3 of the Certification,  
Article 49.20 of Ordinance Regulating Radio Equipment  
MIC Notice No.88 Appendix No.45

## 1.7 Test Summary

**Table 1. Summary of results**

| Part                       | Description of Test                                    | Result   | Test Site |
|----------------------------|--------------------------------------------------------|----------|-----------|
| Article 5                  | Frequency Error                                        | Complies | 1         |
| Article 6                  | Occupied Bandwidth                                     | Complies | 1         |
| Article 7                  | Unwanted Emission Intensity and leakage power out-band | Complies | 1         |
| Article 49-20 & Article 14 | Antenna Power                                          | Complies | 1         |
| Article 24.2               | Secondary radiated emissions                           | Complies | 1         |
| Article 49-20              | Equivalent isotropically radiated power (EIRP)         | Complies | 1         |
| Article 49-20              | Adjacent channel power tolerance                       | Complies | 1         |
| Article 49-20              | Transmission Burst Length                              | Complies | 1         |
| Article 9-4.8              | Radio Interference Prevention Capability               | Complies | 1         |
| Article 49-20              | Carrier sense Capability                               | Complies | 1         |

NOTE 1: Measurement taken is within the measurement uncertainty of measurement system.

NOTE 2: “\*” N/A is an abbreviation for Not Applicable.

NOTE 3:

(1) TPC feature available: ☒ Yes ☐ No

(2) The TPC power range of manufacturer declaration.

20MHz systems: 1.2~2.4mW/MHZ EIRP

40MHz systems: 0.65~1.3mW/MHZ EIRP

## 2 Equipment Specification

### 2.1 General Description

The EUT is a 3D Printer, it supports 2.4G Wi-Fi and 5GWi-Fi functions.  
This report is for 5GWi-Fi.

There are three kinds of power supply unit and two configurations( based on configuration 1, configuration 2 removes two Y capacitors, changes the input terminal from 3 pins to 2 pins, removes the ground branch on the power supply to the AC board connection.), detailed information see below table, Output To RF Module is always 3.3VDC for four kinds of Power Supply unit, Voltage Variation(%) is 0, So RF full test was applied on the model PF004-P with Main Power Supply Unit, model PF004-P with another three kinds of Alternative Power Supply Unit was deemed to fulfil the relevant requirement without further testing.

| Power Supply Unit      | Manufacturer                                             | Model               | Ratings                                                              |
|------------------------|----------------------------------------------------------|---------------------|----------------------------------------------------------------------|
| Main Power Supply Unit | ChangZhou Chuanglian Power Supply Technology Corporation | A-150FGZ-24-C0      | Input:100-240~, 3A, 50/60Hz<br>Output:24V=6.5A                       |
| (Alternative)1         | SHENZHN MEGMEET ELECTRICAL CO., LTD.                     | MPT150-24V-TZ-B     | Input:100-240~, 2A, 50/60Hz,<br>4.0A Max<br>Output:24V=6.5A          |
| (Alternative)2         | MOSO POWER SUPPLY TECHNOLOGY CO., LTD.                   | T30-T6250J240-150B0 | Input:100-240~, 2A, 50/60Hz,<br>3.0A Max<br>Output:24V=6.25A, 150.0W |

### 2.2 Technical Data

| EUT Description        |                                                                                                                                                                          |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Name           | X2D                                                                                                                                                                      |
| Model                  | PF004-P                                                                                                                                                                  |
| Operation Frequency    | 802.11a 20MHz, 802.11n 20MHz<br>5180MHz – 5240MHz, 5260MHz – 5320MHz,<br>5500MHz – 5720MHz<br>802.11n 40MHz<br>5190MHz – 5230MHz, 5270MHz – 5310MHz<br>5510MHz – 5710MHz |
| BT Antenna type        | FPC Antenna                                                                                                                                                              |
| Smart Antenna System   | SISO                                                                                                                                                                     |
| TX Power Control (TPC) | <input type="checkbox"/> Supported, <input checked="" type="checkbox"/> Not Supported                                                                                    |
| DFS Operational mode   | <input type="checkbox"/> Master, <input checked="" type="checkbox"/> Slave without radar detection,<br><input type="checkbox"/> Slave with radar detection               |
| Modulation             | DSSS, OFDM                                                                                                                                                               |
| Rating                 | 100-120VAC, 7A, 50/60Hz                                                                                                                                                  |

#### Power Supply Voltage Fluctuation Test

| Voltage Fluctuation Test | Normal Voltage | High Voltage +10% of Normal Voltage | Low Voltage -10% of Normal Voltage |
|--------------------------|----------------|-------------------------------------|------------------------------------|
| Input To EUT             | DC 100V        | DC 110V                             | DC 90V                             |
| Output To RF Module      | DC 3.3V        | DC 3.3V                             | DC 3.3V                            |
| Voltage Variation (%)    | 0              | 0                                   | 0                                  |

Note: Voltage Variation (%) = (Output high or Low Voltage - Output Normal Voltage) / Output Normal Voltage \* 100. For extreme voltage test, we have tested the relationship between the external power supply and RF IC power supply. Based on the test results, only the normal voltage was selected to perform all items.

## 2.3 Test Conditions and Test Connections

### 2.3.1 Test Conditions

The EUT will be connected to test system in order to simulate normal operating conditions (with reference to the guidance given in the standard for this type of equipment).

| Channel List      |                 |         |                 |         |                 |         |                 |
|-------------------|-----------------|---------|-----------------|---------|-----------------|---------|-----------------|
| 802.11a/n (20MHz) |                 |         |                 |         |                 |         |                 |
| Channel           | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) |
| 36                | 5180            | 40      | 5200            | 44      | 5220            | 48      | 5240            |
| 52                | 5260            | 56      | 5280            | 60      | 5300            | 64      | 5320            |
| 100               | 5500            | 104     | 5520            | 108     | 5540            | 112     | 5560            |
| 116               | 5580            | 120     | 5600            | 124     | 5620            | 128     | 5640            |
| 132               | 5660            | 136     | 5680            | 140     | 5700            |         |                 |
| 802.11n (40MHz)   |                 |         |                 |         |                 |         |                 |
| Channel           | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) |
| 38                | 5190            | 46      | 5230            | 54      | 5270            | 62      | 5310            |
| 102               | 5510            | 110     | 5550            | 118     | 5590            | 126     | 5630            |
| 134               | 5670            |         | --              | --      | --              | --      | --              |

### 2.3.2 Test Connections

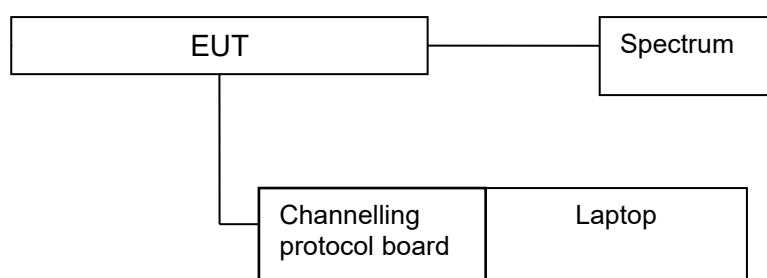


Figure 2. Test Configuration

## 2.4 Auxiliary Equipment Used during Test

Table 3. Auxiliary Equipment Used during Test

| Description | Manufacturer | Model NO.          | S/N          |
|-------------|--------------|--------------------|--------------|
| Laptop      | HP Inc       | HP ProBook 445 G10 | /            |
| Router      | ZTE          | ZXHN F670          | ZTEGC83987BB |

## 2.5 Lists of Test Instruments

Table 4. Lists of Test Instruments

| Description                     | Manufacturer    | Model no.        | Equipment ID       | Serial no.    | cal interval (year) | cal. due date |
|---------------------------------|-----------------|------------------|--------------------|---------------|---------------------|---------------|
| Signal Generator                | Rohde & Schwarz | SMBV100A         | 68-4-48-18-001     | 262825        | 1                   | 2026-4-18     |
| Signal Analyzer                 | Rohde & Schwarz | FSV40            | 68-4-74-14-004     | 101030        | 1                   | 2026-4-18     |
| RF Switch Module                | Rohde & Schwarz | OSP120/OSP-B157W | 68-4-93-14-003     | 101226/100929 | 1                   | 2026-4-18     |
| Power Splitter                  | Weinschel       | 1580             | 68-4-85-14-001     | SC319         | 1                   | 2026-4-18     |
| 10dB Attenuator                 | R&S             | DNF              | 68-4-81-14-004     | DNF-001       | 1                   | 2026-4-19     |
| RF Meas. and Switch Matrix Unit | TST PASS        | TSCB3023R2       | 68-4-93-23-001     | 2811685c      | 1                   | 2026-4-18     |
| Test software                   | TST PASS        | TST PASS         | 68-4-93-23-001-A03 | Version 2.0   | N/A                 | N/A           |
| Shielding Room                  | TDK             | TS8997           | 68-4-90-19-003     | ----          | 3                   | 2027-10-07    |
| Cable                           | JUNFLON         | J12J103539       | 68-4-90-19-003-A20 | ----          | ----                | ----          |
| Cable                           | JUNFLON         | J12J103539       | 68-4-90-19-003-A21 | ----          | ----                | ----          |
| Cable                           | JUNFLON         | J12J103539       | 68-4-90-19-003-A22 | ----          | ----                | ----          |

Calibration Method:

- a) Calibration conducted by the National Institute of Information and Communications Technology (NICT) (hereinafter referred to as "NICT") or a designated calibration agency under Article 102-18 paragraph (1)
- b) Correction conducted pursuant to the provisions of Article 135 or Article 144 of the Measurement Law (Law No. 51 of 1992)
- c) Calibration conducted in foreign countries, which shall be equivalent to the calibration conducted by the NICT or a designated calibration agency under Article 102-18 paragraph (1)
- d) Calibration conducted by using measuring instruments and other equipment listed in the right column of Table No. 3 attached hereto, which shall have been given any of calibration, etc. listed above from a) to d)

Remark: The above test experimental equipment is applied to method c) for calibration.

Calibration company: CHINA CEPREI LABORATORY CALIBRATION & TESTING CENTRE

From JRL Article 24-2, paragraph 4, Item 2

## 2.6 Measurement Uncertainty (95% confidence levels, k=2)

| Parameter                         | Uncertainty             |
|-----------------------------------|-------------------------|
| Radio Frequency                   | $\pm 1 \times 10^{-5}$  |
| Uncertainty for Output power test | $\pm 0.83\text{dB}$     |
| Conducted Emissions Test          | $\pm 2.0\text{dB}$      |
| Radiated Emission Test            | $\pm 2.0\text{dB}$      |
| Occupied Bandwidth Test           | $\pm 1.0\text{dB}$      |
| Power density test                | $\pm 1.85\text{dB}$     |
| All emission, radiated            | $\pm 3\text{dB}$        |
| Antenna Port Emission             | $\pm 3\text{dB}$        |
| Temperature                       | $\pm 0.5^\circ\text{C}$ |
| Humidity                          | $\pm 3\%$               |

Measurement Uncertainty Decision Rule:

Determination of conformity with the specification limits is based on the decision rule according to IEC Guide 115: 2023, clause 4.4.3 and 4.5.1.

### 3 Measurements Result

#### 3.1 Antenna Power

##### 3.1.1 Test Condition

|                      |              |
|----------------------|--------------|
| Test Position:       | Transmitting |
| Ambient Temperature: | 24.1°C       |
| Relative Humidity:   | 48.6%        |
| Atmosphere Pressure: | 101.2KPa     |

##### 3.1.2 Limit

| Item                  | Limits                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Antenna Power Density | $\leq 10\text{mW/MHz}$ (20MHz System: OBW $\leq 18\text{MHz}$ , DSSS, etc.)<br>$\leq 10\text{mW/MHz}$ (20MHz System: $18\text{MHz} \leq \text{OBW} \leq 20\text{MHz}$ , OFDM)<br>$\leq 5\text{mW/MHz}$ (40MHz System: $20\text{MHz} \leq \text{OBW} \leq 40\text{MHz}$ , OFDM)<br>$\leq 2.5\text{mW/MHz}$ (80MHz System: $40\text{MHz} \leq \text{OBW} \leq 80\text{MHz}$ , OFDM) |
| Antenna Power Error   | +20%, -80% (Base on manufacturer declare antenna power density)                                                                                                                                                                                                                                                                                                                   |

##### 3.1.3 Measuring Instruments and Setting

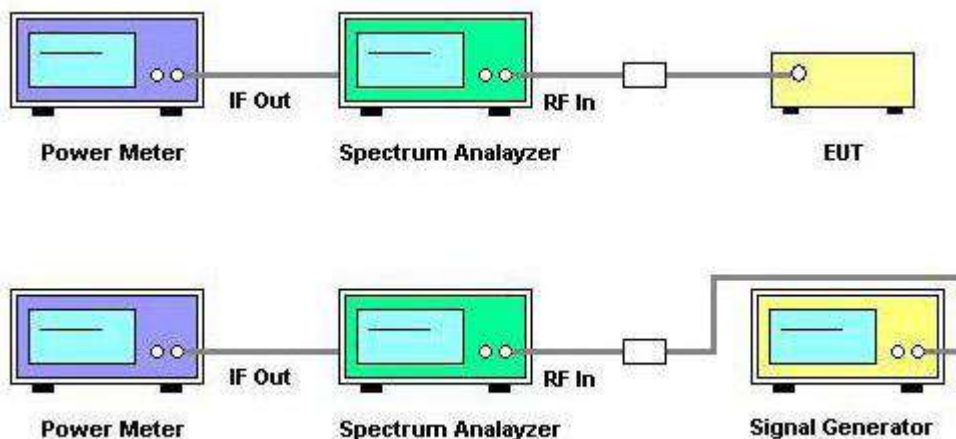
The following table is the setting of spectrum analyzer.

| Spectrum Parameter | Setting  |
|--------------------|----------|
| Attenuation        | Auto     |
| RBW / VBW          | 1 MHz    |
| Detector           | Peak     |
| Trace              | Max Hold |
| Sweep Time         | Auto     |

### 3.1.4 Test Procedures

1. A power meter is connected on the IF output port of the spectrum analyzer.
2. Adjust the spectrum analyzer to have the center frequency the same with the measured carrier. RBW=VBW=1MHz, detector mode is positive peak. Turn off the averaging function and use zero span.
3. The calibrating signal power shall be reduced to 0 dBm and it shall be verified that the power meter reading also reduces by 10 dB.
4. Connect the equipment to be measured. Using the following settings of the spectrum analyzer in combination with "max hold" function, find the frequency of highest power output in the power envelope: center frequency equal to operating frequency; RBW & VBW: 1 MHz; detector mode: positive peak; averaging: off; span: 3 times the spectrum width; amplitude: adjust for middle of the instrument' range. The frequency found shall be recorded.
5. Set the center frequency of the spectrum analyzer to the found frequency and switch to zero span. The power meter indicates the measured power density "E".
6. Remove the EUT and put the replacing standard signal generator (SSG). Set the standard signal generator (SSG) at same frequency and transmit on, then set SSG output power at  $P_t$  to give the equivalent output level of "E".
7. Calculate antenna power density by the formula below  $PD = P_t + 10 \cdot \log(1/x)$ .  
 $x$ : The duty cycle of the EUT in continuously transmitting mode  
 $P_t$ : Output power of the SSG
8. Antenna Power Error is definition that actual measure antenna power tolerance between + 20% to - 80% power range that base on manufacturer declare the conducted power density.

### 3.1.5 Test Setup Diagram

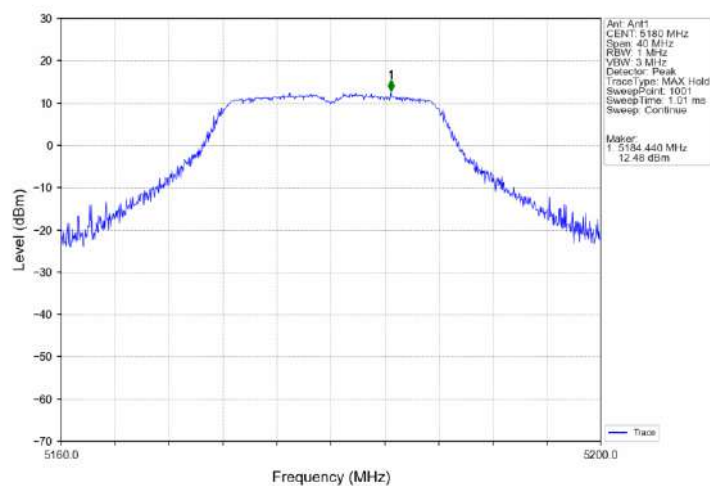


### 3.1.6 Test Result

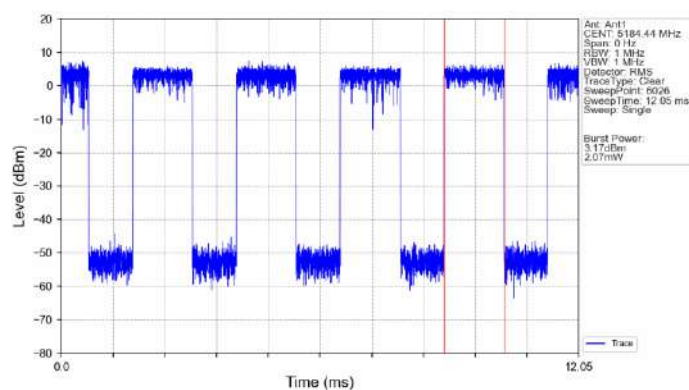
| ENV  | Mode           | TX Type | Frequency (MHz) | ANT | Antenna Power (mW/MHz) |         | Nominal Power (mW/MHz) | Tolerance (%) |           | Verdict |
|------|----------------|---------|-----------------|-----|------------------------|---------|------------------------|---------------|-----------|---------|
|      |                |         |                 |     | Measured               | Limit   |                        | Measured      | Limit     |         |
| NTNV | 802.11a        | SISO    | 5180            | 1   | 2.074                  | <=10.00 | 4.400                  | -52.86        | -80 to 20 | Pass    |
|      |                |         | 5200            | 1   | 3.570                  | <=10.00 | 4.400                  | -18.86        | -80 to 20 | Pass    |
|      |                |         | 5240            | 1   | 3.281                  | <=10.00 | 4.400                  | -25.43        | -80 to 20 | Pass    |
|      |                |         | 5260            | 1   | 3.385                  | <=10.00 | 3.400                  | -0.44         | -80 to 20 | Pass    |
|      |                |         | 5300            | 1   | 3.501                  | <=10.00 | 3.400                  | 2.97          | -80 to 20 | Pass    |
|      |                |         | 5320            | 1   | 2.939                  | <=10.00 | 3.400                  | -13.56        | -80 to 20 | Pass    |
|      |                |         | 5500            | 1   | 2.011                  | <=10.00 | 2.000                  | 0.55          | -50 to 50 | Pass    |
|      |                |         | 5600            | 1   | 1.320                  | <=10.00 | 2.000                  | -34.00        | -50 to 50 | Pass    |
|      |                |         | 5700            | 1   | 1.145                  | <=10.00 | 2.000                  | -42.75        | -50 to 50 | Pass    |
|      |                |         | 5720            | 1   | 1.210                  | <=10.00 | 2.000                  | -39.50        | -50 to 50 | Pass    |
|      | 802.11n (HT20) | SISO    | 5180            | 1   | 1.693                  | <=10.00 | 3.200                  | -47.09        | -80 to 20 | Pass    |
|      |                |         | 5200            | 1   | 2.294                  | <=10.00 | 3.200                  | -28.31        | -80 to 20 | Pass    |
|      |                |         | 5240            | 1   | 2.191                  | <=10.00 | 3.200                  | -31.53        | -80 to 20 | Pass    |
|      |                |         | 5260            | 1   | 2.004                  | <=10.00 | 2.000                  | 0.20          | -80 to 20 | Pass    |
|      |                |         | 5300            | 1   | 2.066                  | <=10.00 | 2.000                  | 3.30          | -80 to 20 | Pass    |
|      |                |         | 5320            | 1   | 1.748                  | <=10.00 | 2.000                  | -12.60        | -80 to 20 | Pass    |
|      |                |         | 5500            | 1   | 1.514                  | <=10.00 | 1.500                  | 0.93          | -50 to 50 | Pass    |
|      |                |         | 5600            | 1   | 0.947                  | <=10.00 | 1.500                  | -36.87        | -50 to 50 | Pass    |
|      |                |         | 5700            | 1   | 0.859                  | <=10.00 | 1.500                  | -42.73        | -50 to 50 | Pass    |
|      |                |         | 5720            | 1   | 0.857                  | <=10.00 | 1.500                  | -42.87        | -50 to 50 | Pass    |
|      | 802.11n (HT40) | SISO    | 5190            | 1   | 0.938                  | <=5.00  | 0.940                  | -0.21         | -80 to 20 | Pass    |
|      |                |         | 5230            | 1   | 1.103                  | <=5.00  | 0.940                  | 17.34         | -80 to 20 | Pass    |
|      |                |         | 5270            | 1   | 1.152                  | <=5.00  | 1.200                  | -4.00         | -80 to 20 | Pass    |
|      |                |         | 5310            | 1   | 1.041                  | <=5.00  | 1.200                  | -13.25        | -80 to 20 | Pass    |
|      |                |         | 5510            | 1   | 0.901                  | <=5.00  | 0.660                  | 36.52         | -50 to 50 | Pass    |
|      |                |         | 5590            | 1   | 0.520                  | <=5.00  | 0.660                  | -21.21        | -50 to 50 | Pass    |
|      |                |         | 5670            | 1   | 0.441                  | <=5.00  | 0.660                  | -33.18        | -50 to 50 | Pass    |
|      |                |         | 5710            | 1   | 0.447                  | <=5.00  | 0.660                  | -32.27        | -50 to 50 | Pass    |

### 3.1.7 Test Graphs

802.11a\_LCH\_5180MHz\_Ant1\_NTNV

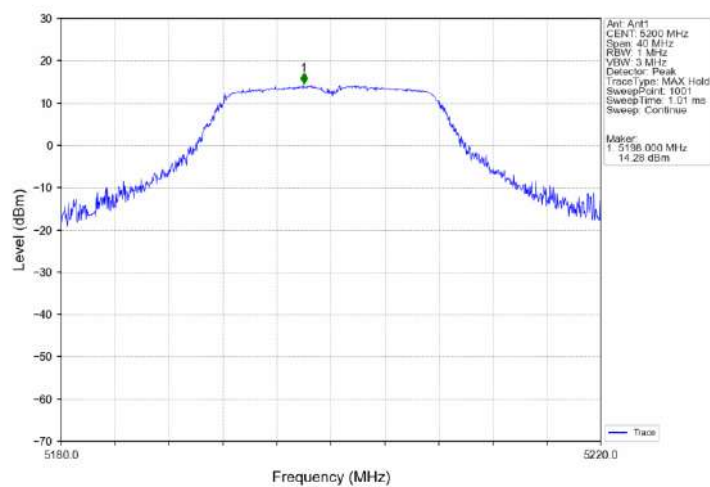


802.11a\_LCH\_5180MHz\_Ant1\_NTNV

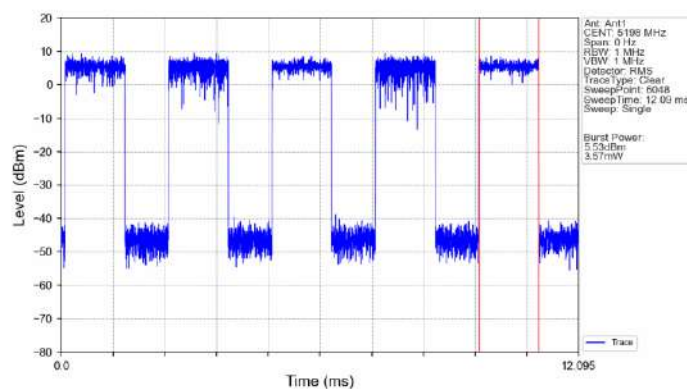


| Burst No    | 1     | 2     | 3     | 4     |
|-------------|-------|-------|-------|-------|
| Length (ms) | 1.398 | 1.396 | 1.398 | 1.396 |
| Power (dBm) | 3.13  | 3.14  | 3.09  | 3.17  |
| Power (mW)  | 2.056 | 2.060 | 2.038 | 2.074 |
| Remark      | /     | /     | /     | Max   |

## 802.11a\_MCH\_5200MHz\_Ant1\_NTNV

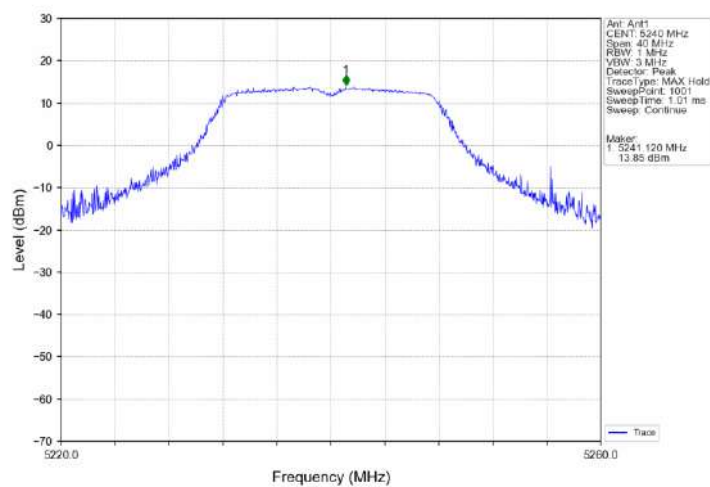


## 802.11a\_MCH\_5200MHz\_Ant1\_NTNV

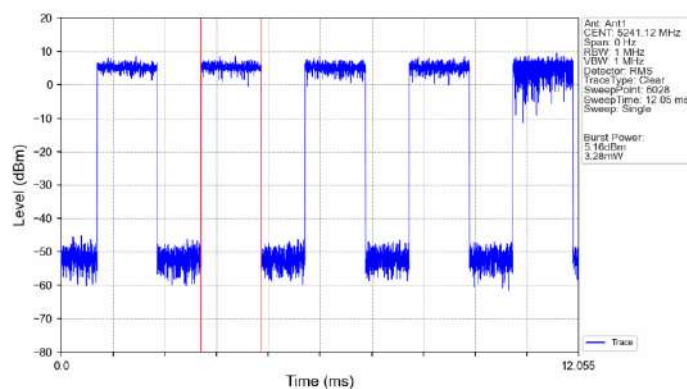


| Burst No    | 1     | 2     | 3     | 4     | 5     |
|-------------|-------|-------|-------|-------|-------|
| Length (ms) | 1.396 | 1.398 | 1.396 | 1.398 | 1.396 |
| Power(dBm)  | 5.47  | 5.44  | 5.49  | 5.45  | 5.53  |
| Power(mW)   | 3.522 | 3.501 | 3.537 | 3.511 | 3.570 |
| Remark      | /     | /     | /     | /     | Max   |

## 802.11a\_HCH\_5240MHz\_Ant1\_NTNV

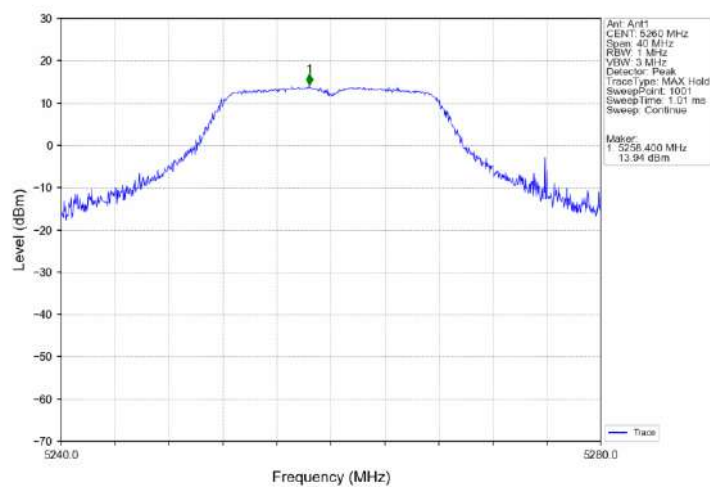


## 802.11a\_HCH\_5240MHz\_Ant1\_NTNV

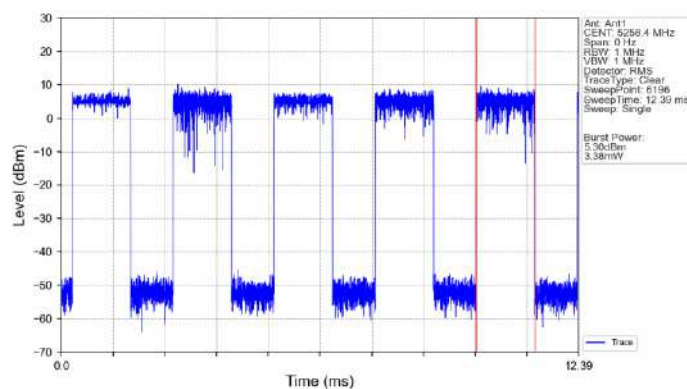


| Burst No    | 1     | 2     | 3     | 4     | 5     |
|-------------|-------|-------|-------|-------|-------|
| Length (ms) | 1.412 | 1.412 | 1.414 | 1.412 | 1.412 |
| Power(dBm)  | 5.13  | 5.16  | 5.13  | 5.14  | 5.16  |
| Power(mW)   | 3.255 | 3.281 | 3.258 | 3.263 | 3.278 |
| Remark      | /     | Max   | /     | /     | /     |

## 802.11a\_LCH\_5260MHz\_Ant1\_NTNV

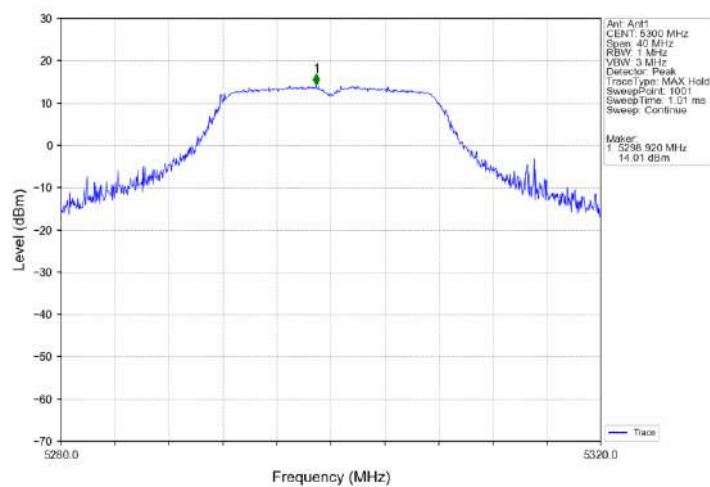


## 802.11a\_LCH\_5260MHz\_Ant1\_NTNV

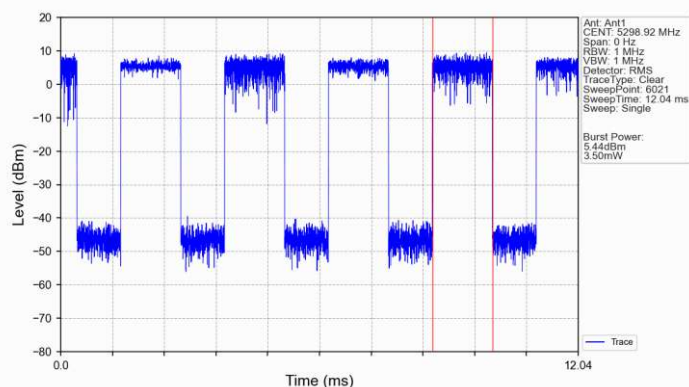


| Burst No    | 1     | 2     | 3     | 4     | 5     |
|-------------|-------|-------|-------|-------|-------|
| Length (ms) | 1.398 | 1.396 | 1.398 | 1.396 | 1.398 |
| Power(dBm)  | 5.26  | 5.25  | 5.22  | 5.20  | 5.30  |
| Power(mW)   | 3.356 | 3.348 | 3.330 | 3.311 | 3.385 |
| Remark      | /     | /     | /     | /     | Max   |

## 802.11a\_MCH\_5300MHz\_Ant1\_NTNV

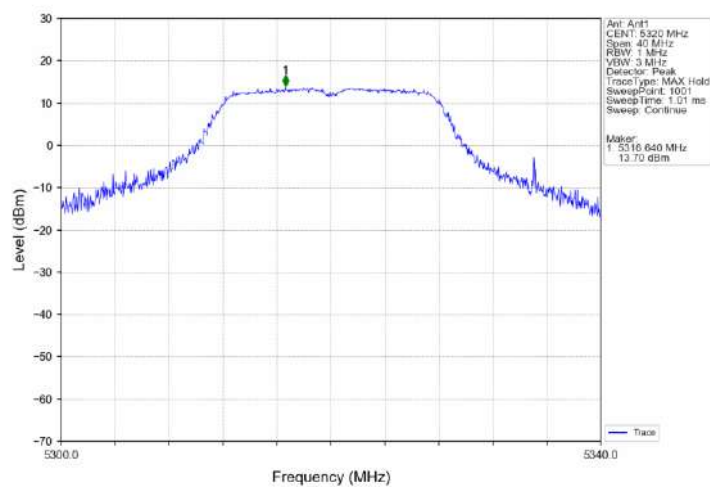


## 802.11a\_MCH\_5300MHz\_Ant1\_NTNV

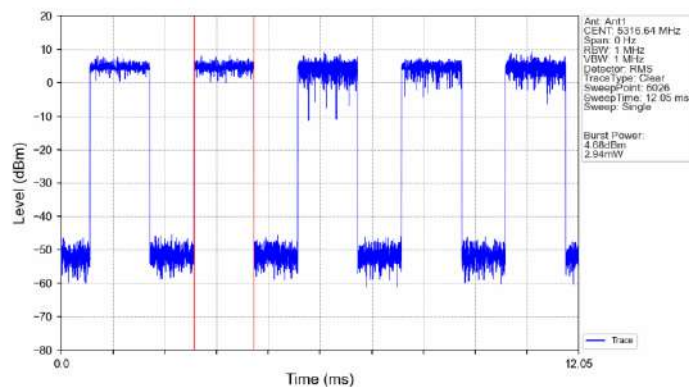


| Burst No.   | 1     | 2     | 3     | 4     |
|-------------|-------|-------|-------|-------|
| Length (ms) | 1.398 | 1.396 | 1.398 | 1.396 |
| Power(dBm)  | 5.44  | 5.40  | 5.41  | 5.44  |
| Power(mW)   | 3.501 | 3.469 | 3.475 | 3.501 |
| Remark      | /     | /     | /     | Max   |

## 802.11a\_HCH\_5320MHz\_Ant1\_NTNV

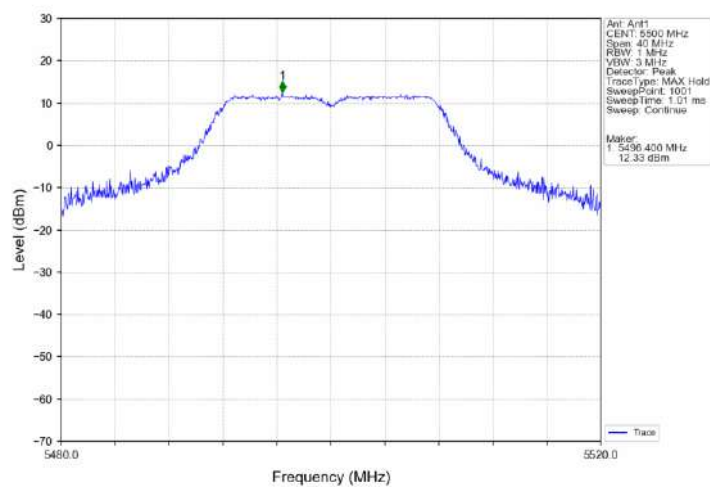


## 802.11a\_HCH\_5320MHz\_Ant1\_NTNV

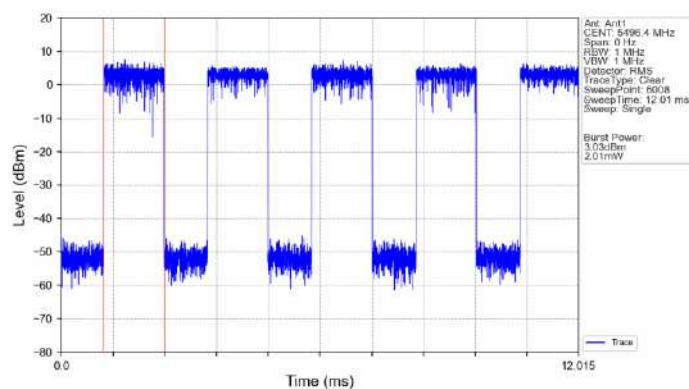


| Burst No    | 1     | 2     | 3     | 4     | 5     |
|-------------|-------|-------|-------|-------|-------|
| Length (ms) | 1.396 | 1.396 | 1.396 | 1.396 | 1.396 |
| Power(dBm)  | 4.67  | 4.68  | 4.58  | 4.58  | 4.59  |
| Power(mW)   | 2.928 | 2.939 | 2.874 | 2.869 | 2.875 |
| Remark      | /     | Max   | /     | /     | /     |

## 802.11a\_LCH\_5500MHz\_Ant1\_NTNV

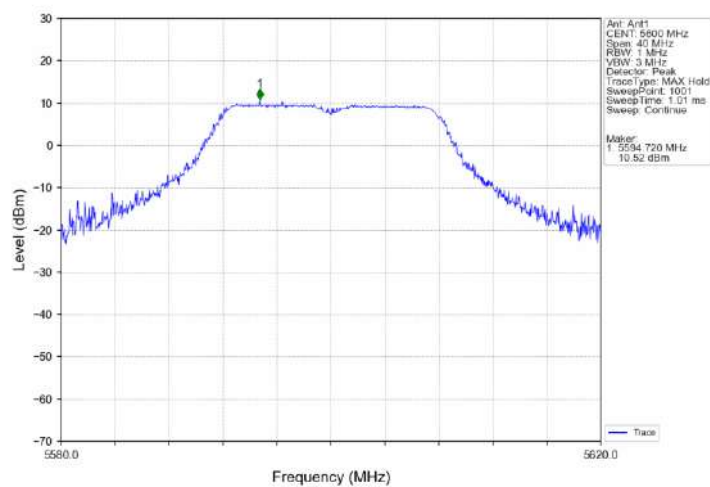


## 802.11a\_LCH\_5500MHz\_Ant1\_NTNV

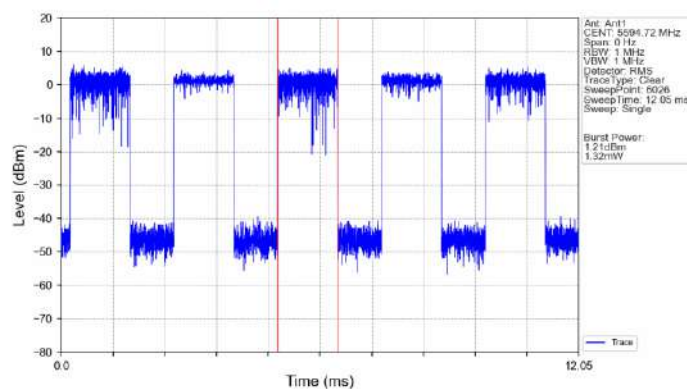


| Burst No    | 1     | 2     | 3     | 4     |
|-------------|-------|-------|-------|-------|
| Length (ms) | 1.396 | 1.398 | 1.396 | 1.398 |
| Power(dBm)  | 3.03  | 3.00  | 2.98  | 2.97  |
| Power(mW)   | 2.011 | 1.994 | 1.984 | 1.982 |
| Remark      | Max   | /     | /     | /     |

## 802.11a\_MCH\_5600MHz\_Ant1\_NTNV

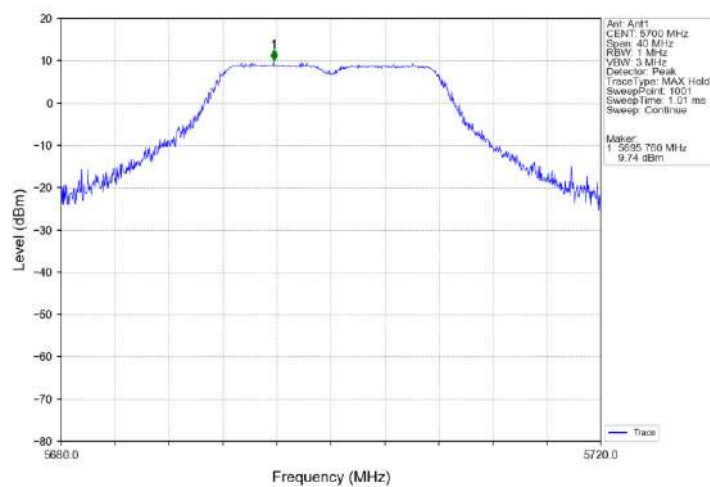


## 802.11a\_MCH\_5600MHz\_Ant1\_NTNV

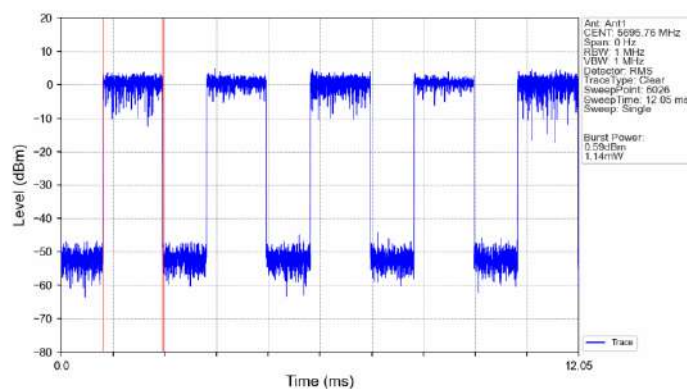


| Burst No    | 1     | 2     | 3     | 4     | 5     |
|-------------|-------|-------|-------|-------|-------|
| Length (ms) | 1.396 | 1.398 | 1.396 | 1.396 | 1.396 |
| Power(dBm)  | 1.19  | 1.17  | 1.21  | 1.18  | 1.13  |
| Power(mW)   | 1.317 | 1.309 | 1.320 | 1.313 | 1.297 |
| Remark      | /     | /     | Max   | /     | /     |

## 802.11a\_HCH\_5700MHz\_Ant1\_NTNV

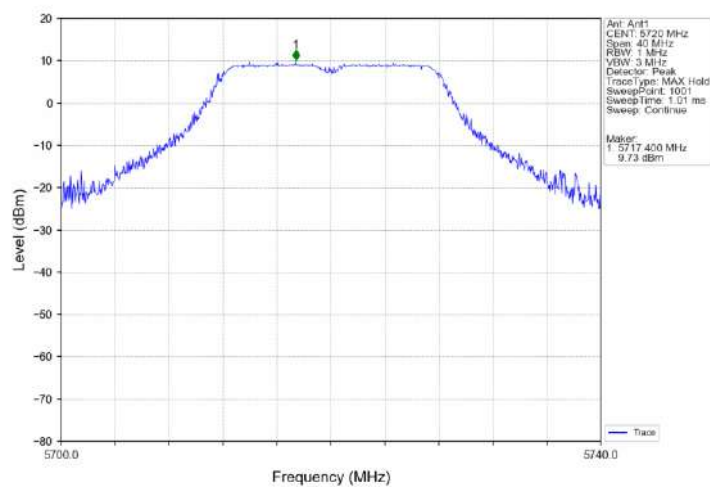


## 802.11a\_HCH\_5700MHz\_Ant1\_NTNV

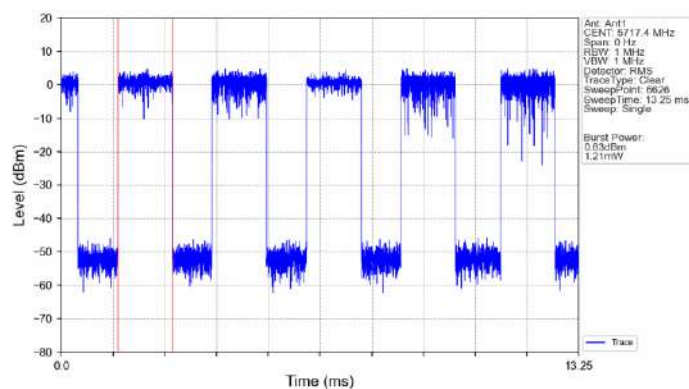


| Burst No    | 1     | 2     | 3     | 4     |
|-------------|-------|-------|-------|-------|
| Length (ms) | 1.402 | 1.404 | 1.402 | 1.402 |
| Power(dBm)  | 0.59  | 0.54  | 0.56  | 0.55  |
| Power(mW)   | 1.145 | 1.134 | 1.138 | 1.135 |
| Remark      | Max   | /     | /     | /     |

## 802.11a\_HHCH\_5720MHz\_Ant1\_NTNV

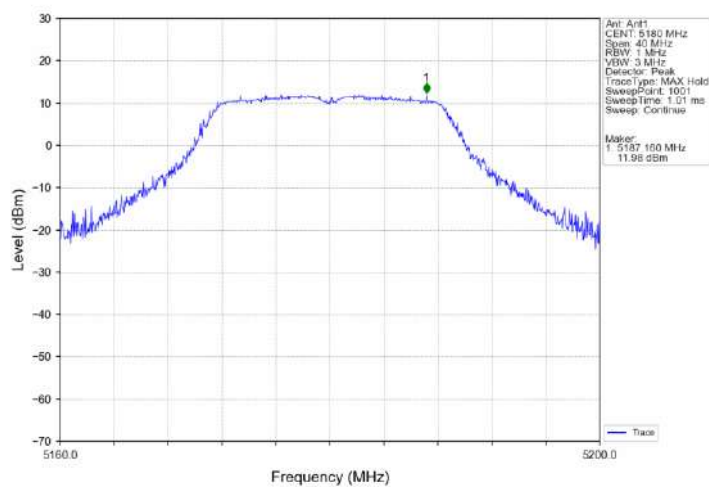


## 802.11a\_HHCH\_5720MHz\_Ant1\_NTNV

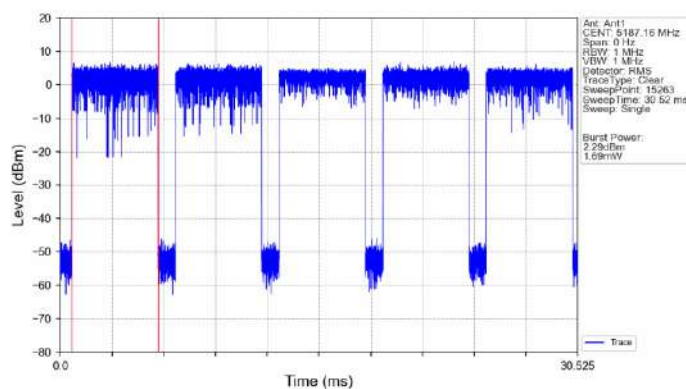


| Burst No    | 1     | 2     | 3     | 4     | 5     |
|-------------|-------|-------|-------|-------|-------|
| Length (ms) | 1.396 | 1.398 | 1.396 | 1.398 | 1.396 |
| Power(dBm)  | 0.83  | 0.82  | 0.65  | 0.76  | 0.74  |
| Power(mW)   | 1.210 | 1.208 | 1.163 | 1.191 | 1.185 |
| Remark      | Max   | /     | /     | /     | /     |

## 802.11n(HT20)\_LCH\_5180MHz\_Ant1\_NTNV

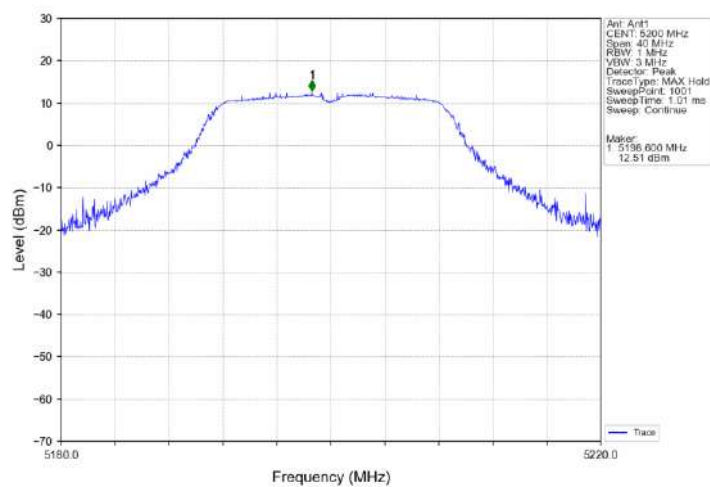


## 802.11n(HT20)\_LCH\_5180MHz\_Ant1\_NTNV

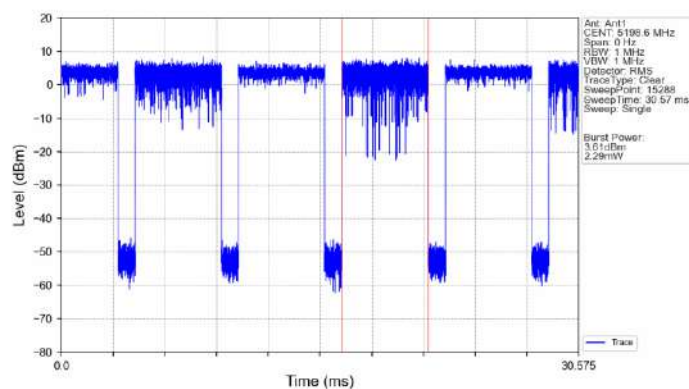


|             |       |       |       |       |       |
|-------------|-------|-------|-------|-------|-------|
| Burst No    | 1     | 2     | 3     | 4     | 5     |
| Length (ms) | 5.088 | 5.068 | 5.090 | 5.088 | 5.090 |
| Power(dBm)  | 2.29  | 2.25  | 2.24  | 2.25  | 2.25  |
| Power(mW)   | 1.693 | 1.678 | 1.675 | 1.680 | 1.677 |
| Remark      | Max   | /     | /     | /     | /     |

## 802.11n(HT20)\_MCH\_5200MHz\_Ant1\_NTNV

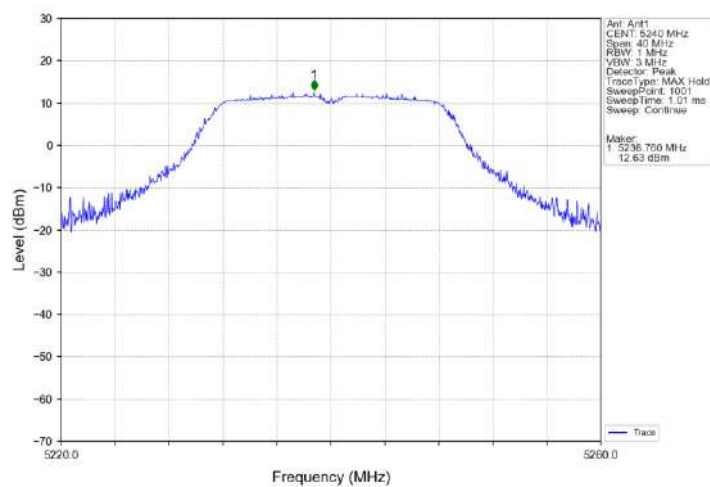


## 802.11n(HT20)\_MCH\_5200MHz\_Ant1\_NTNV

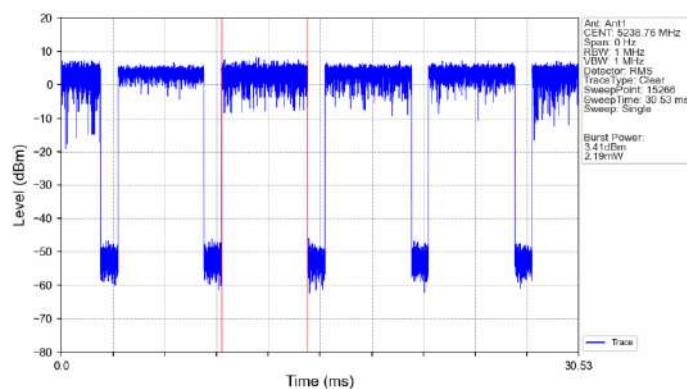


| Burst No    | 1     | 2     | 3     | 4     |
|-------------|-------|-------|-------|-------|
| Length (ms) | 5.090 | 5.088 | 5.088 | 5.090 |
| Power(dBm)  | 3.54  | 3.56  | 3.61  | 3.58  |
| Power(mW)   | 2.258 | 2.269 | 2.294 | 2.279 |
| Remark      | /     | /     | Max   | /     |

## 802.11n(HT20)\_HCH\_5240MHz\_Ant1\_NTNV

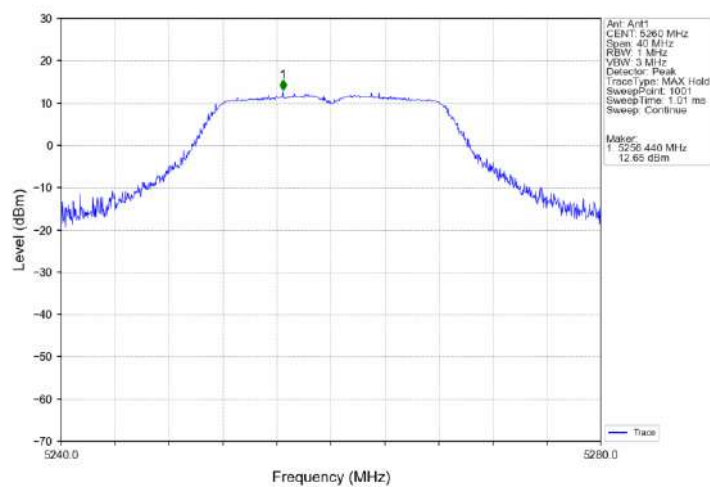


## 802.11n(HT20)\_HCH\_5240MHz\_Ant1\_NTNV

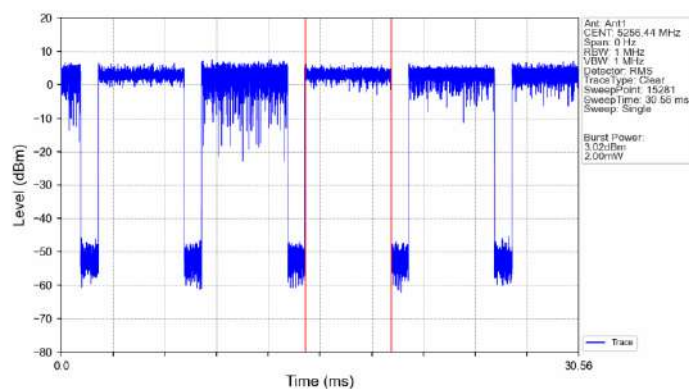


|             |       |       |       |       |
|-------------|-------|-------|-------|-------|
| Burst No    | 1     | 2     | 3     | 4     |
| Length (ms) | 5.090 | 5.088 | 5.090 | 5.088 |
| Power(dBm)  | 3.39  | 3.41  | 3.38  | 3.38  |
| Power(mW)   | 2.184 | 2.191 | 2.176 | 2.176 |
| Remark      | /     | Max   | /     | /     |

## 802.11n(HT20)\_LCH\_5260MHz\_Ant1\_NTNV

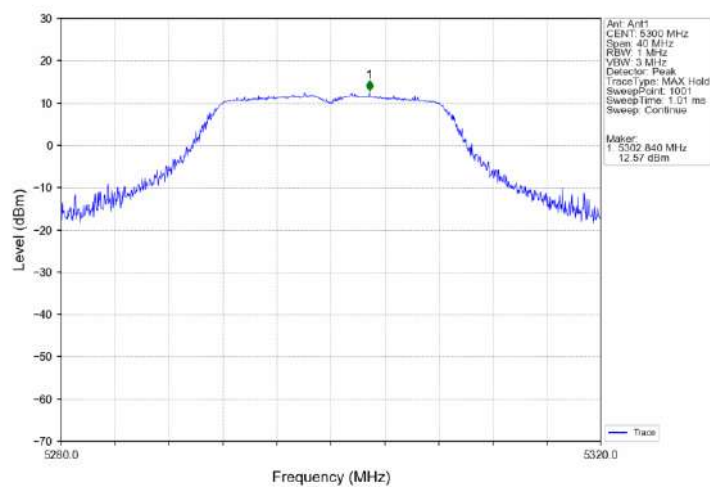


## 802.11n(HT20)\_LCH\_5260MHz\_Ant1\_NTNV

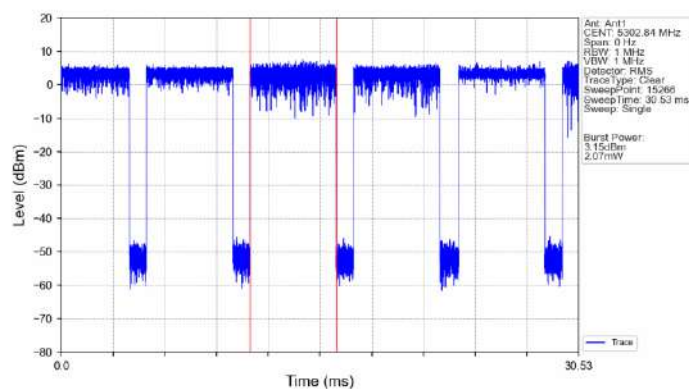


| Burst No    | 1     | 2     | 3     | 4     |
|-------------|-------|-------|-------|-------|
| Length (ms) | 5.090 | 5.088 | 5.090 | 5.090 |
| Power(dBm)  | 3.00  | 3.02  | 3.02  | 2.99  |
| Power(mW)   | 1.994 | 2.003 | 2.004 | 1.989 |
| Remark      | /     | /     | Max   | /     |

## 802.11n(HT20)\_MCH\_5300MHz\_Ant1\_NTNV



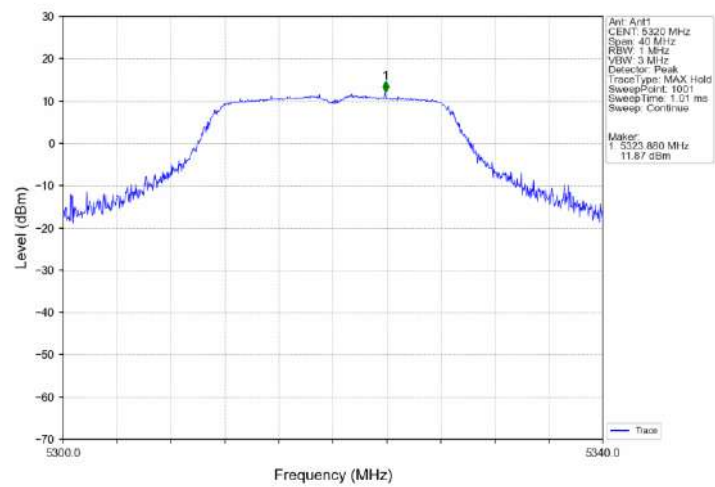
## 802.11n(HT20)\_MCH\_5300MHz\_Ant1\_NTNV



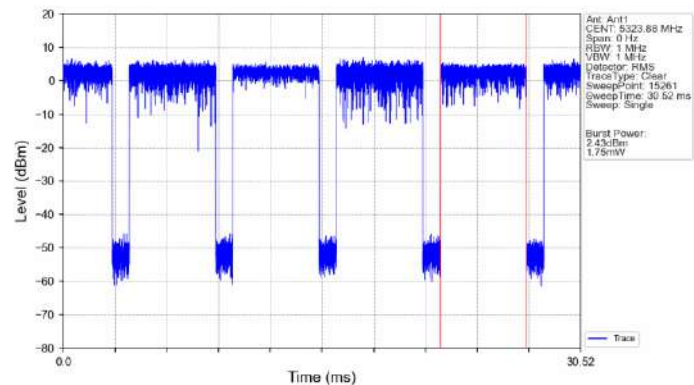
| Burst No    | 1     | 2     | 3     | 4     |
|-------------|-------|-------|-------|-------|
| Length (ms) | 5.090 | 5.088 | 5.090 | 5.088 |
| Power(dBm)  | 3.15  | 3.15  | 3.14  | 3.15  |
| Power(mW)   | 2.065 | 2.066 | 2.059 | 2.063 |
| Remark      | /     | Max   | /     | /     |



802.11n(HT20)\_HCH\_5320MHz\_Ant1\_NTNV

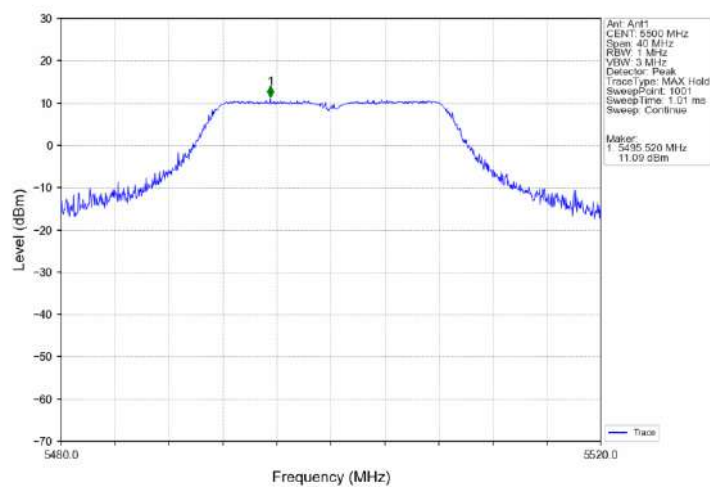


802.11n(HT20)\_HCH\_5320MHz\_Ant1\_NTNV

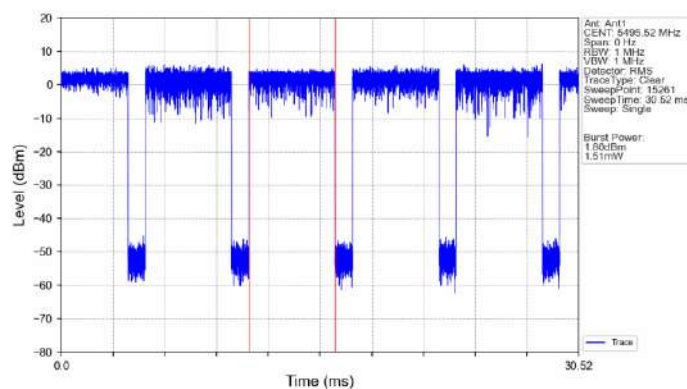


|             |       |       |       |       |
|-------------|-------|-------|-------|-------|
| Burst No    | 1     | 2     | 3     | 4     |
| Length (ms) | 5.090 | 5.090 | 5.088 | 5.090 |
| Power(dBm)  | 2.41  | 2.42  | 2.42  | 2.43  |
| Power(mW)   | 1.741 | 1.745 | 1.744 | 1.748 |
| Remark      | /     | /     | /     | Max   |

## 802.11n(HT20)\_LCH\_5500MHz\_Ant1\_NTNV

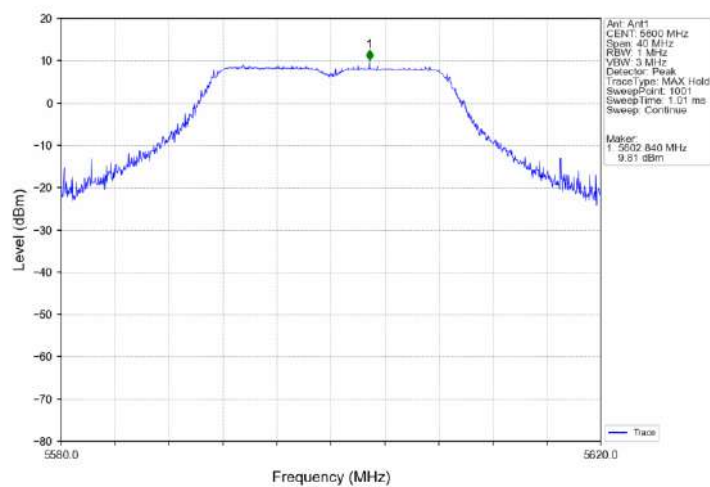


## 802.11n(HT20)\_LCH\_5500MHz\_Ant1\_NTNV

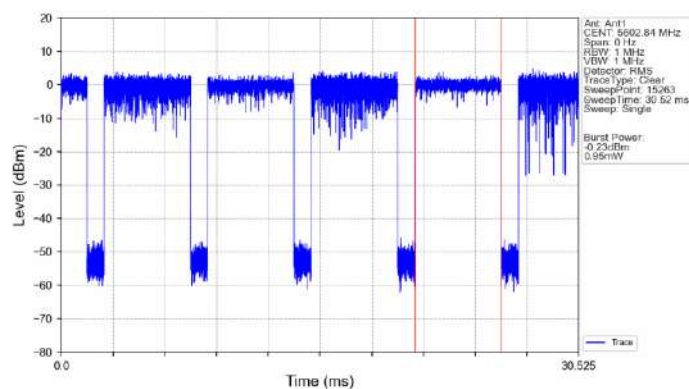


| Burst No    | 1     | 2     | 3     | 4     |
|-------------|-------|-------|-------|-------|
| Length (ms) | 5.088 | 5.090 | 5.088 | 5.090 |
| Power(dBm)  | 1.78  | 1.80  | 1.76  | 1.76  |
| Power(mW)   | 1.507 | 1.514 | 1.500 | 1.507 |
| Remark      | /     | Max   | /     | /     |

## 802.11n(HT20)\_MCH\_5600MHz\_Ant1\_NTNV

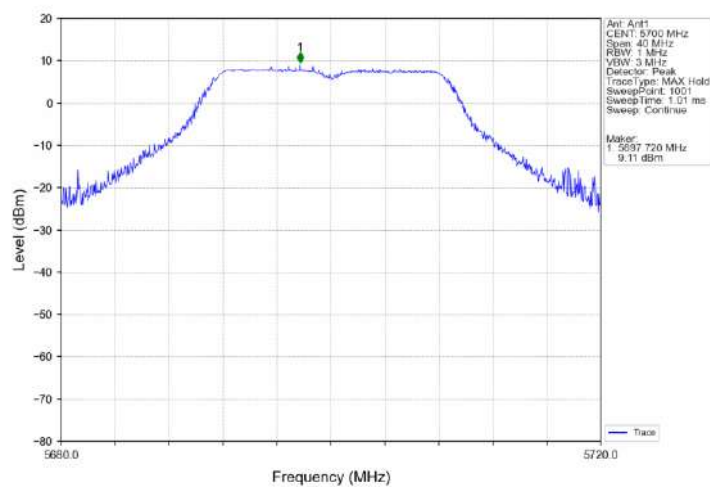


## 802.11n(HT20)\_MCH\_5600MHz\_Ant1\_NTNV

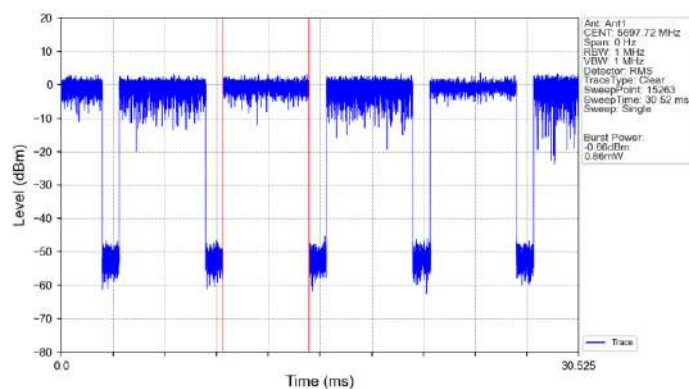


| Burst No    | 1     | 2     | 3     | 4     |
|-------------|-------|-------|-------|-------|
| Length (ms) | 5.090 | 5.088 | 5.090 | 5.090 |
| Power(dBm)  | -0.23 | -0.28 | -0.26 | -0.23 |
| Power(mW)   | 0.947 | 0.938 | 0.941 | 0.947 |
| Remark      | /     | /     | /     | Max   |

## 802.11n(HT20)\_HCH\_5700MHz\_Ant1\_NTNV

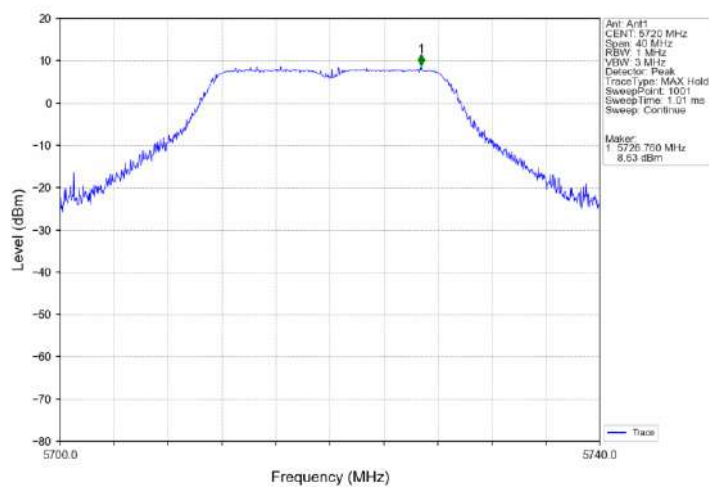


## 802.11n(HT20)\_HCH\_5700MHz\_Ant1\_NTNV

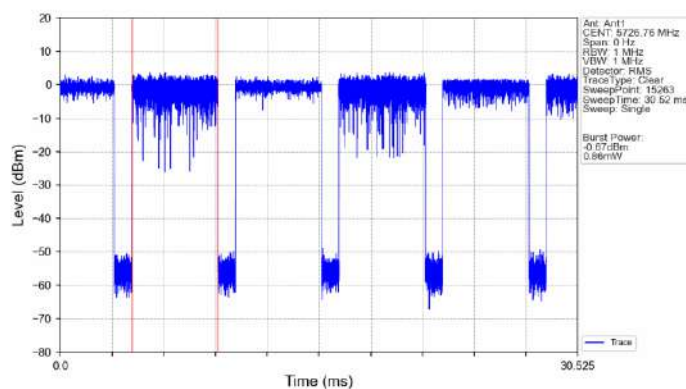


| Burst No    | 1     | 2     | 3     | 4     |
|-------------|-------|-------|-------|-------|
| Length (ms) | 5.090 | 5.088 | 5.090 | 5.088 |
| Power(dBm)  | -0.67 | -0.66 | -0.68 | -0.68 |
| Power(mW)   | 0.857 | 0.859 | 0.855 | 0.856 |
| Remark      | /     | Max   | /     | /     |

## 802.11n(HT20)\_HHCH\_5720MHz\_Ant1\_NTNV

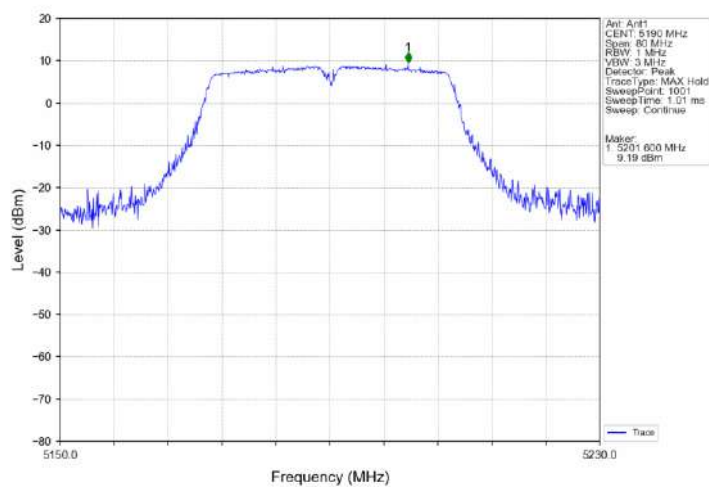


## 802.11n(HT20)\_HHCH\_5720MHz\_Ant1\_NTNV

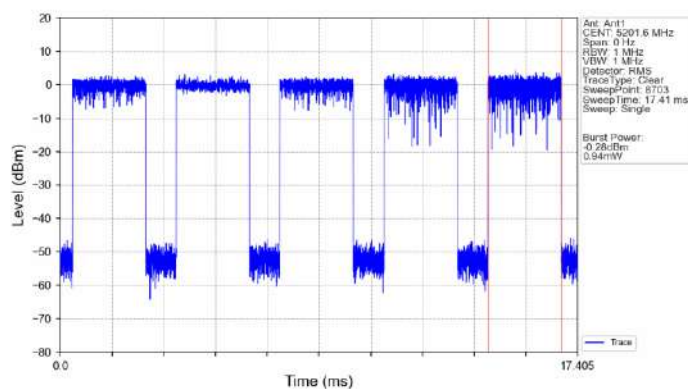


| Burst No    | 1     | 2     | 3     | 4     |
|-------------|-------|-------|-------|-------|
| Length (ms) | 5.090 | 5.090 | 5.088 | 5.090 |
| Power(dBm)  | -0.67 | -0.71 | -0.69 | -0.70 |
| Power(mW)   | 0.857 | 0.850 | 0.853 | 0.851 |
| Remark      | Max   | /     | /     | /     |

## 802.11n(HT40)\_LCH\_5190MHz\_Ant1\_NTNV

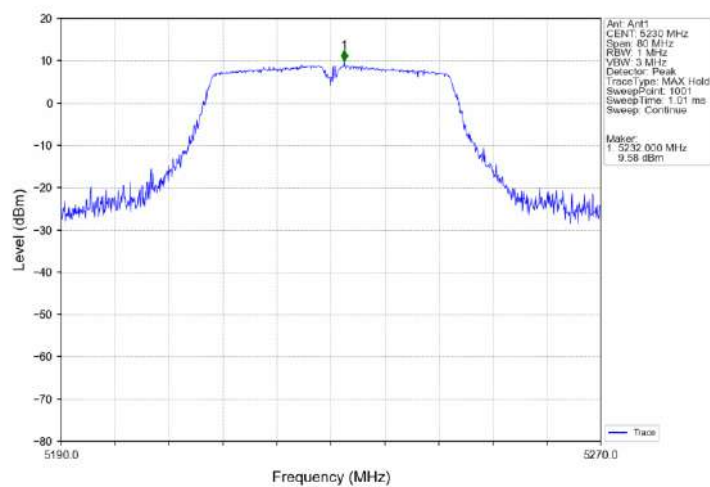


## 802.11n(HT40)\_LCH\_5190MHz\_Ant1\_NTNV

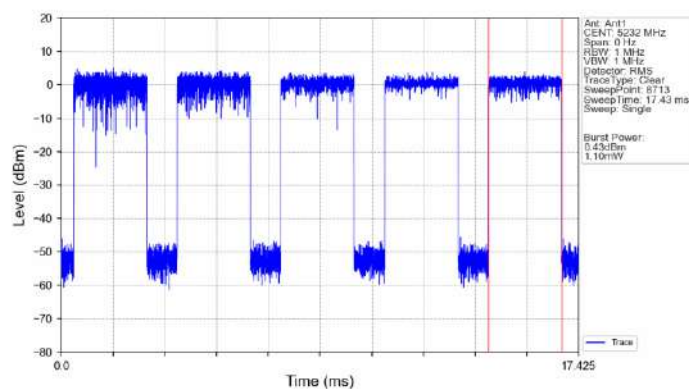


| Burst No    | 1     | 2     | 3     | 4     | 5     |
|-------------|-------|-------|-------|-------|-------|
| Length (ms) | 2.408 | 2.470 | 2.470 | 2.470 | 2.470 |
| Power(dBm)  | -0.36 | -0.31 | -0.29 | -0.30 | -0.28 |
| Power(mW)   | 0.921 | 0.932 | 0.936 | 0.934 | 0.938 |
| Remark      | /     | /     | /     | /     | Max   |

## 802.11n(HT40)\_HCH\_5230MHz\_Ant1\_NTNV

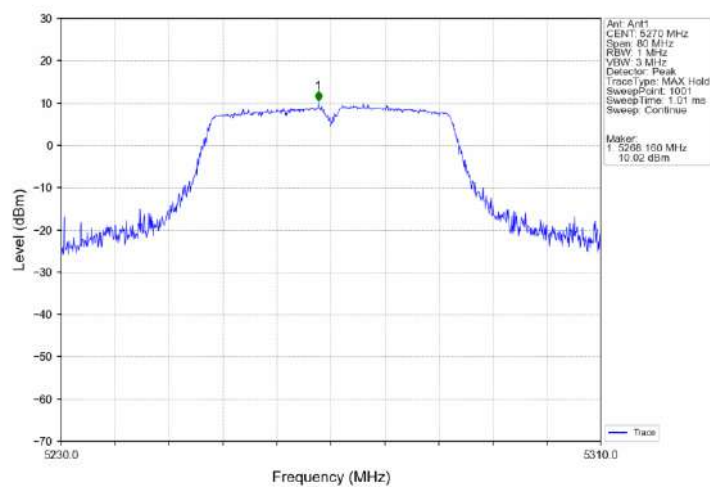


## 802.11n(HT40)\_HCH\_5230MHz\_Ant1\_NTNV

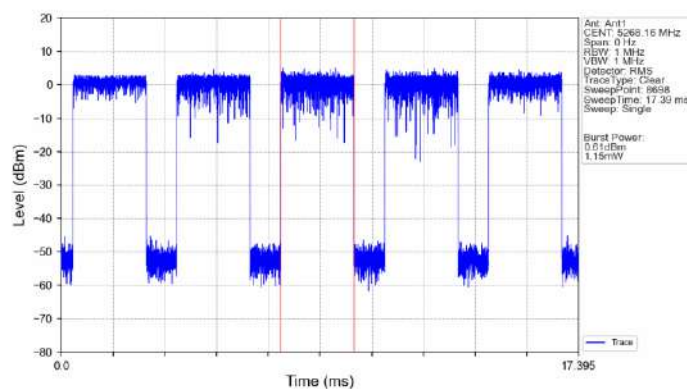


| Burst No    | 1     | 2     | 3     | 4     | 5     |
|-------------|-------|-------|-------|-------|-------|
| Length (ms) | 2.468 | 2.468 | 2.468 | 2.470 | 2.470 |
| Power(dBm)  | 0.41  | 0.40  | 0.38  | 0.40  | 0.43  |
| Power(mW)   | 1.100 | 1.096 | 1.091 | 1.097 | 1.103 |
| Remark      | /     | /     | /     | /     | Max   |

## 802.11n(HT40)\_LCH\_5270MHz\_Ant1\_NTNV

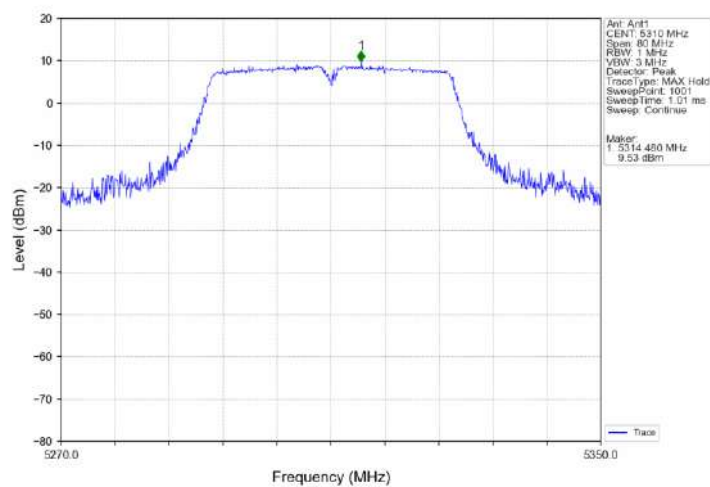


## 802.11n(HT40)\_LCH\_5270MHz\_Ant1\_NTNV

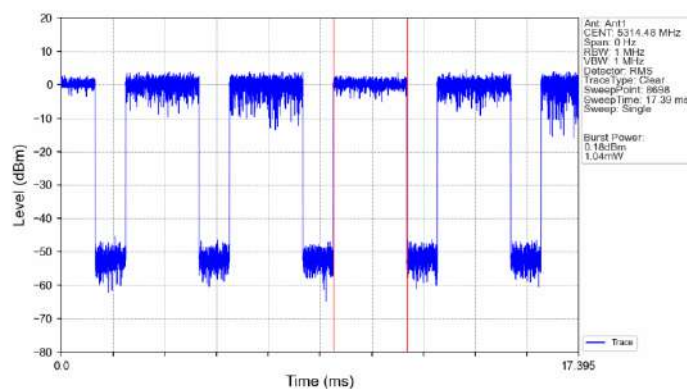


| Burst No    | 1     | 2     | 3     | 4     | 5     |
|-------------|-------|-------|-------|-------|-------|
| Length (ms) | 2.470 | 2.470 | 2.470 | 2.468 | 2.468 |
| Power(dBm)  | 0.57  | 0.58  | 0.61  | 0.59  | 0.58  |
| Power(mW)   | 1.141 | 1.144 | 1.152 | 1.146 | 1.142 |
| Remark      | /     | /     | Max   | /     | /     |

## 802.11n(HT40)\_HCH\_5310MHz\_Ant1\_NTNV

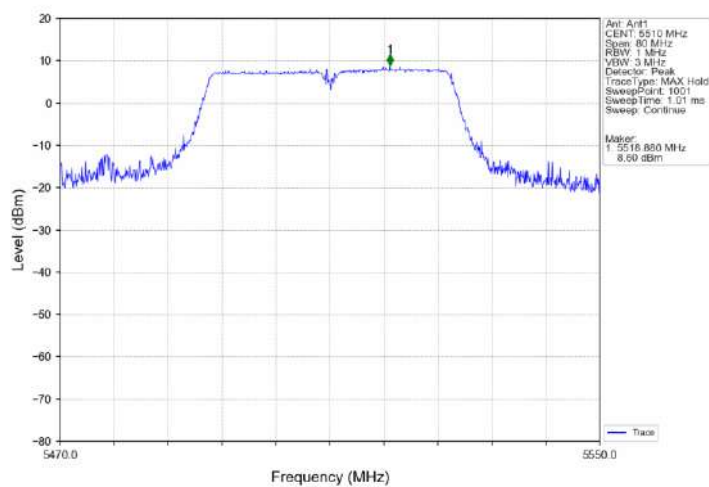


## 802.11n(HT40)\_HCH\_5310MHz\_Ant1\_NTNV

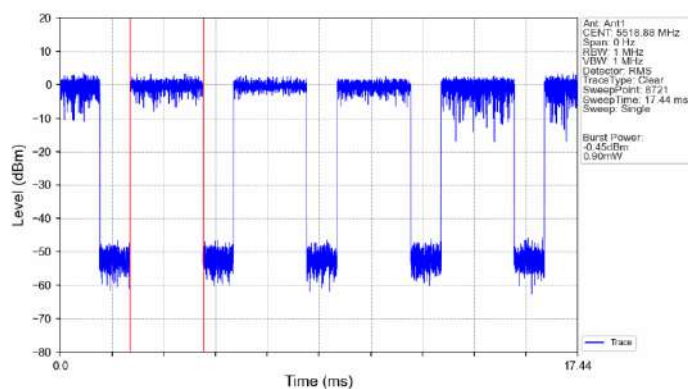


| Burst No    | 1     | 2     | 3     | 4     |
|-------------|-------|-------|-------|-------|
| Length (ms) | 2.468 | 2.470 | 2.470 | 2.468 |
| Power(dBm)  | 0.15  | 0.14  | 0.18  | 0.09  |
| Power(mW)   | 1.036 | 1.033 | 1.041 | 1.021 |
| Remark      | /     | /     | Max   | /     |

## 802.11n(HT40)\_LCH\_5510MHz\_Ant1\_NTNV

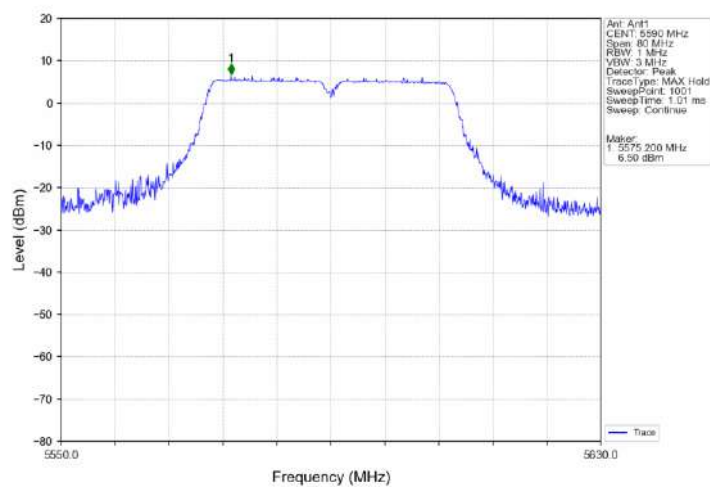


## 802.11n(HT40)\_LCH\_5510MHz\_Ant1\_NTNV

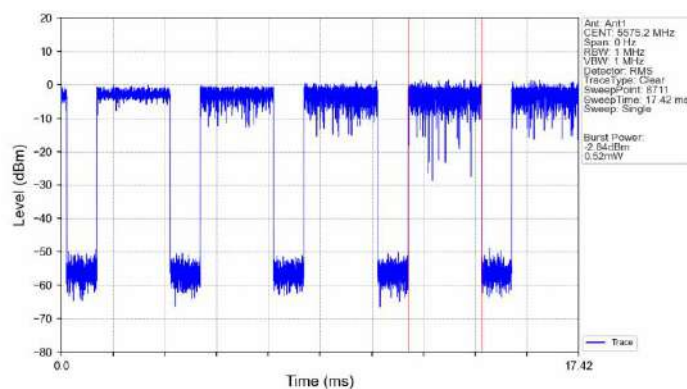


| Burst No    | 1     | 2     | 3     | 4     |
|-------------|-------|-------|-------|-------|
| Length (ms) | 2.468 | 2.468 | 2.470 | 2.470 |
| Power(dBm)  | -0.45 | -0.45 | -0.48 | -0.54 |
| Power(mW)   | 0.901 | 0.901 | 0.896 | 0.882 |
| Remark      | Max   | /     | /     | /     |

## 802.11n(HT40)\_MCH\_5590MHz\_Ant1\_NTNV

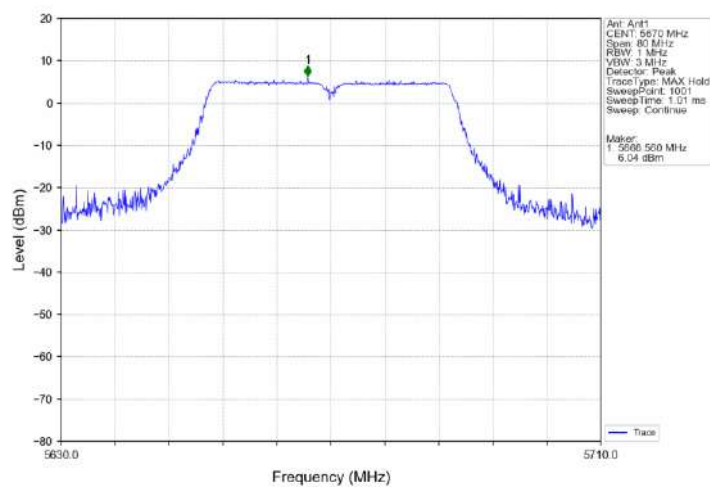


## 802.11n(HT40)\_MCH\_5590MHz\_Ant1\_NTNV

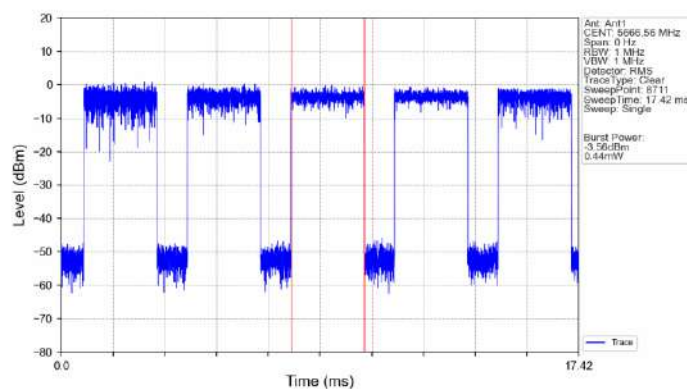


| Burst No    | 1     | 2     | 3     | 4     |
|-------------|-------|-------|-------|-------|
| Length (ms) | 2.470 | 2.470 | 2.470 | 2.468 |
| Power(dBm)  | -2.85 | -2.88 | -2.86 | -2.84 |
| Power(mW)   | 0.519 | 0.515 | 0.518 | 0.520 |
| Remark      | /     | /     | /     | Max   |

## 802.11n(HT40)\_HCH\_5670MHz\_Ant1\_NTNV

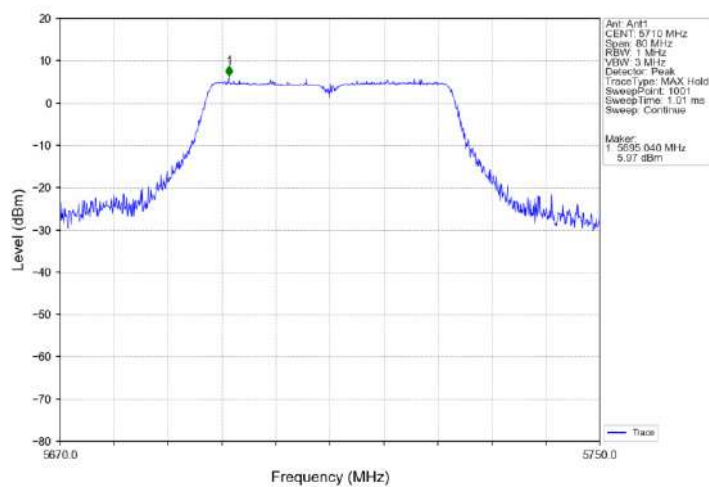


## 802.11n(HT40)\_HCH\_5670MHz\_Ant1\_NTNV

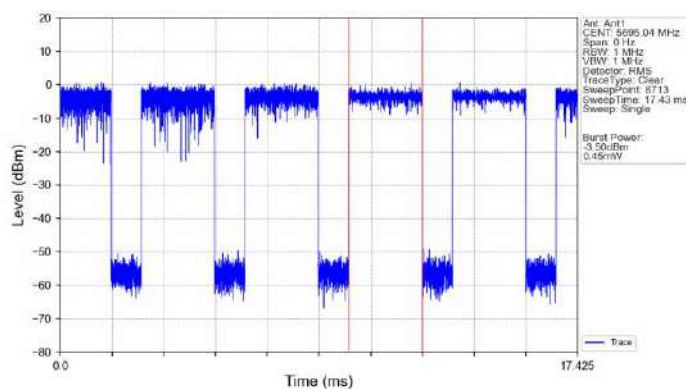


| Burst No    | 1     | 2     | 3     | 4     | 5     |
|-------------|-------|-------|-------|-------|-------|
| Length (ms) | 2.468 | 2.468 | 2.468 | 2.470 | 2.470 |
| Power(dBm)  | -3.63 | -3.62 | -3.56 | -3.59 | -3.59 |
| Power(mW)   | 0.433 | 0.435 | 0.441 | 0.438 | 0.437 |
| Remark      | /     | /     | Max   | /     | /     |

## 802.11n(HT40)\_HHCH\_5710MHz\_Ant1\_NTNV



## 802.11n(HT40)\_HHCH\_5710MHz\_Ant1\_NTNV



| Burst No    | 1     | 2     | 3     | 4     |
|-------------|-------|-------|-------|-------|
| Length (ms) | 2.468 | 2.468 | 2.468 | 2.470 |
| Power(dBm)  | -3.55 | -3.50 | -3.50 | -3.52 |
| Power(mW)   | 0.442 | 0.446 | 0.447 | 0.444 |
| Remark      | /     | /     | Max   | /     |

## 3.2 Effective Isotropic Radiated Power (EIRP)

### 3.2.1 Test Condition

|                      |              |
|----------------------|--------------|
| Test Position:       | Transmitting |
| Ambient Temperature: | 23.1 °C      |
| Relative Humidity:   | 52.6 %       |
| Atmosphere Pressure: | 100.7 KPa    |

### 3.2.2 Limit

| Operation Band | item |     | 20MHz system                                | 40MHz system                                  | 80MHz system                                    | 160MHz system                                    |
|----------------|------|-----|---------------------------------------------|-----------------------------------------------|-------------------------------------------------|--------------------------------------------------|
|                |      |     | DSSS,etc   OFDM                             | OFDM                                          | OFDM                                            | OFDM                                             |
| W52&W53        | EIRP | W52 | 10mW/MHz                                    | 5mW/MHz                                       | 2.5mW/MHz                                       | 1.25mW/MHz                                       |
|                |      | W53 | 10mW/MHz: with TPC<br>5mW/MHz: without TPC  | 5mW/MHz: with TPC<br>2.5mW/MHz: without TPC   | 2.5mW/MHz: with TPC<br>1.25mW/MHz: without TPC  | 1.25mW/MHz: with TPC<br>0.625mW/MHz: without TPC |
| W56            | EIRP |     | 50mW/MHz: with TPC<br>25mW/MHz: without TPC | 25mW/MHz: with TPC<br>12.5mW/MHz: without TPC | 12.5mW/MHz: with TPC<br>6.25mW/MHz: without TPC | 1.25mW/MHz: with TPC<br>0.625mW/MHz: without TPC |

### 3.2.3 Measuring Instruments and Setting

The following table is the setting of spectrum analyzer.

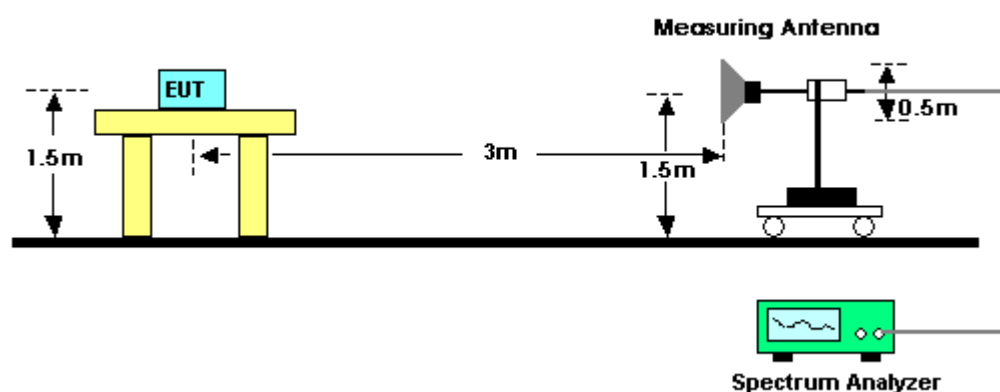
| Spectrum Parameter | Setting  |
|--------------------|----------|
| Attenuation        | Auto     |
| RB/VB              | 1 MHz    |
| Detector           | Peak     |
| Trace              | Max Hold |
| Sweep Time         | Auto     |

### 3.2.4 Test Procedures

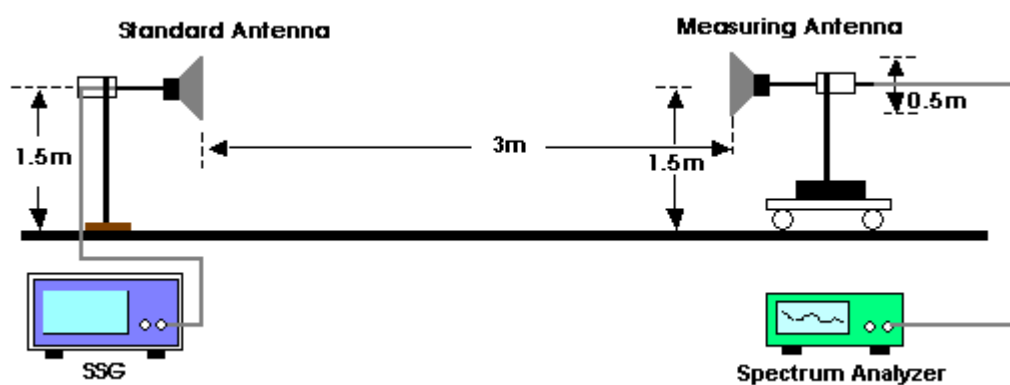
1. Set EUT and measuring antenna at the same height and roughly facing each other.
2. Move the measuring antenna height up and down within  $\pm 50\text{cm}$  of EUT height and swing it to find the maximum output of the measuring antenna. The output level at the spectrum analyzer is read as "E".
3. Remove the EUT from the turn table and put the replacing antenna facing to measuring antenna at same height. Set the standard signal generator (SSG) at same frequency and transmit on then receive the signal
4. Swing the replacing antenna give a maximum receiving level.
5. Move the measuring antenna height up and down within  $\pm 50\text{cm}$  of replacing antenna height and swing it to find the maximum receiving level.
6. Set SSG output power at  $P_t$  to give the equivalent output level of "E" or calculate  $P_t$  with SSG output which gives the nearest of "E" and difference ( $\pm 1\text{dB}$ ). Record the  $P_t$ .
7. Calculate EIRP by the formula below  $EIRP = G_t - L + P_t$ .  
G<sub>t</sub>: gain of replacing antenna (dBi)  
L: feeder loss between SSG and replacing antenna  
P<sub>t</sub>: Output power of the SSG
8. If the antenna for the EUT has circular polarization, sum of V-field and H-field will be result if measuring antenna is linear polarization.

### 3.2.5 Test Setup Diagram

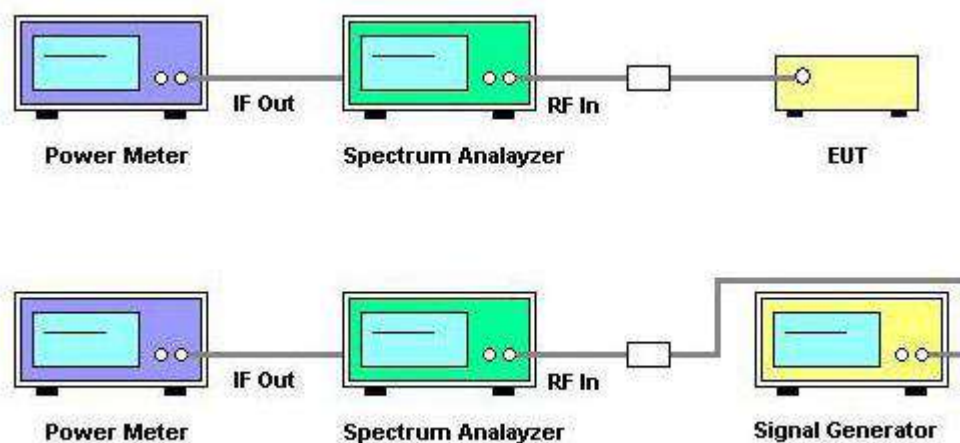
For EUT radiation measurement



For standard antenna measurement



For Conducted measurement



### 3.2.6 Test Result

| NTNV           |         |                 |     |            |               |       |         |
|----------------|---------|-----------------|-----|------------|---------------|-------|---------|
| Mode           | TX Type | Frequency (MHz) | ANT | Gain (dBi) | EIRP (mW/MHz) |       | Verdict |
|                |         |                 |     |            | Result        | Limit |         |
| 802.11a        | SISO    | 5180            | 1   | 1.61       | 3.00          | <=10  | Pass    |
|                |         | 5200            | 1   | 1.61       | 5.17          | <=10  | Pass    |
|                |         | 5240            | 1   | 1.61       | 4.75          | <=10  | Pass    |
|                |         | 5260            | 1   | 1.50       | 4.78          | <=10  | Pass    |
|                |         | 5300            | 1   | 1.50       | 4.95          | <=10  | Pass    |
|                |         | 5320            | 1   | 1.50       | 4.15          | <=10  | Pass    |
|                |         | 5500            | 1   | -0.21      | 1.92          | <=50  | Pass    |
|                |         | 5600            | 1   | -0.21      | 1.26          | <=50  | Pass    |
|                |         | 5700            | 1   | -0.21      | 1.09          | <=50  | Pass    |
| 802.11n (HT20) | SISO    | 5720            | 1   | -0.21      | 1.15          | <=50  | Pass    |
|                |         | 5180            | 1   | 1.61       | 2.45          | <=10  | Pass    |
|                |         | 5200            | 1   | 1.61       | 3.32          | <=10  | Pass    |
|                |         | 5240            | 1   | 1.61       | 3.17          | <=10  | Pass    |
|                |         | 5260            | 1   | 1.50       | 2.83          | <=10  | Pass    |
|                |         | 5300            | 1   | 1.50       | 2.92          | <=10  | Pass    |
|                |         | 5320            | 1   | 1.50       | 2.47          | <=10  | Pass    |
|                |         | 5500            | 1   | -0.21      | 1.44          | <=50  | Pass    |
|                |         | 5600            | 1   | -0.21      | 0.90          | <=50  | Pass    |
| 802.11n (HT40) | SISO    | 5700            | 1   | -0.21      | 0.82          | <=50  | Pass    |
|                |         | 5720            | 1   | -0.21      | 0.82          | <=50  | Pass    |
|                |         | 5190            | 1   | 1.61       | 1.36          | <=5   | Pass    |
|                |         | 5230            | 1   | 1.61       | 1.60          | <=5   | Pass    |
|                |         | 5270            | 1   | 1.50       | 1.63          | <=5   | Pass    |
|                |         | 5310            | 1   | 1.50       | 1.47          | <=5   | Pass    |
|                |         | 5510            | 1   | -0.21      | 0.86          | <=25  | Pass    |
|                |         | 5590            | 1   | -0.21      | 0.50          | <=25  | Pass    |
|                |         | 5670            | 1   | -0.21      | 0.42          | <=25  | Pass    |
|                |         | 5710            | 1   | -0.21      | 0.43          | <=25  | Pass    |

### 3.3 Antenna Power Error

#### 3.3.1 Test Condition

|                      |              |
|----------------------|--------------|
| Test Position:       | Transmitting |
| Ambient Temperature: | 23.1 °C      |
| Relative Humidity:   | 52.6 %       |
| Atmosphere Pressure: | 100.7 KPa    |

#### 3.3.2 Limit

+20% to 80% for 5.2/5.3GHz

+50% to 50% for 5.6GHz

#### 3.3.3 Test Result

| ENV  | Mode           | TX Type | Frequency (MHz) | ANT | Antenna Power (mW/MHz) |         | Nominal Power (mW/MHz) | Tolerance (%) |           | Verdict |
|------|----------------|---------|-----------------|-----|------------------------|---------|------------------------|---------------|-----------|---------|
|      |                |         |                 |     | Measured               | Limit   |                        | Measured      | Limit     |         |
| NTNV | 802.11a        | SISO    | 5180            | 1   | 2.074                  | <=10.00 | 4.400                  | -52.86        | -80 to 20 | Pass    |
|      |                |         | 5200            | 1   | 3.570                  | <=10.00 | 4.400                  | -18.86        | -80 to 20 | Pass    |
|      |                |         | 5240            | 1   | 3.281                  | <=10.00 | 4.400                  | -25.43        | -80 to 20 | Pass    |
|      |                |         | 5260            | 1   | 3.385                  | <=10.00 | 3.400                  | -0.44         | -80 to 20 | Pass    |
|      |                |         | 5300            | 1   | 3.501                  | <=10.00 | 3.400                  | 2.97          | -80 to 20 | Pass    |
|      |                |         | 5320            | 1   | 2.939                  | <=10.00 | 3.400                  | -13.56        | -80 to 20 | Pass    |
|      |                |         | 5500            | 1   | 2.011                  | <=10.00 | 2.000                  | 0.55          | -50 to 50 | Pass    |
|      |                |         | 5600            | 1   | 1.320                  | <=10.00 | 2.000                  | -34.00        | -50 to 50 | Pass    |
|      |                |         | 5700            | 1   | 1.145                  | <=10.00 | 2.000                  | -42.75        | -50 to 50 | Pass    |
|      |                |         | 5720            | 1   | 1.210                  | <=10.00 | 2.000                  | -39.50        | -50 to 50 | Pass    |
|      | 802.11n (HT20) | SISO    | 5180            | 1   | 1.693                  | <=10.00 | 3.200                  | -47.09        | -80 to 20 | Pass    |
|      |                |         | 5200            | 1   | 2.294                  | <=10.00 | 3.200                  | -28.31        | -80 to 20 | Pass    |
|      |                |         | 5240            | 1   | 2.191                  | <=10.00 | 3.200                  | -31.53        | -80 to 20 | Pass    |
|      |                |         | 5260            | 1   | 2.004                  | <=10.00 | 2.000                  | 0.20          | -80 to 20 | Pass    |
|      |                |         | 5300            | 1   | 2.066                  | <=10.00 | 2.000                  | 3.30          | -80 to 20 | Pass    |
|      |                |         | 5320            | 1   | 1.748                  | <=10.00 | 2.000                  | -12.60        | -80 to 20 | Pass    |
|      |                |         | 5500            | 1   | 1.514                  | <=10.00 | 1.500                  | 0.93          | -50 to 50 | Pass    |
|      |                |         | 5600            | 1   | 0.947                  | <=10.00 | 1.500                  | -36.87        | -50 to 50 | Pass    |
|      |                |         | 5700            | 1   | 0.859                  | <=10.00 | 1.500                  | -42.73        | -50 to 50 | Pass    |
|      |                |         | 5720            | 1   | 0.857                  | <=10.00 | 1.500                  | -42.87        | -50 to 50 | Pass    |
|      | 802.11n (HT40) | SISO    | 5190            | 1   | 0.938                  | <=5.00  | 0.940                  | -0.21         | -80 to 20 | Pass    |
|      |                |         | 5230            | 1   | 1.103                  | <=5.00  | 0.940                  | 17.34         | -80 to 20 | Pass    |
|      |                |         | 5270            | 1   | 1.152                  | <=5.00  | 1.200                  | -4.00         | -80 to 20 | Pass    |
|      |                |         | 5310            | 1   | 1.041                  | <=5.00  | 1.200                  | -13.25        | -80 to 20 | Pass    |
|      |                |         | 5510            | 1   | 0.901                  | <=5.00  | 0.660                  | 36.52         | -50 to 50 | Pass    |
|      |                |         | 5590            | 1   | 0.520                  | <=5.00  | 0.660                  | -21.21        | -50 to 50 | Pass    |
|      |                |         | 5670            | 1   | 0.441                  | <=5.00  | 0.660                  | -33.18        | -50 to 50 | Pass    |
|      |                |         | 5710            | 1   | 0.447                  | <=5.00  | 0.660                  | -32.27        | -50 to 50 | Pass    |

Note: Deviation = (Output power – Declared Output Power) / Declared Output Power \* 100%

#### 3.3.4 Result

The equipment met the requirement of this clause.

### 3.4 Frequency Tolerance

#### 3.4.1 Test Condition

|                      |              |
|----------------------|--------------|
| Test Position:       | Transmitting |
| Ambient Temperature: | 22.8 °C      |
| Relative Humidity:   | 53.6 %       |
| Atmosphere Pressure: | 100.9 KPa    |

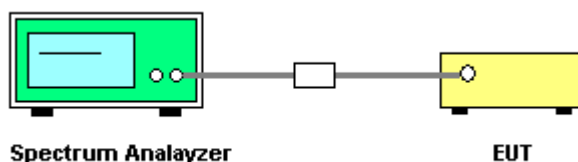
#### 3.4.2 Limit

| Item                | Limits                                                        |
|---------------------|---------------------------------------------------------------|
| Frequency Tolerance | $-20\text{ppm} \leq \text{Frequency Error} \leq 20\text{ppm}$ |

#### 3.4.3 Test Procedure

1. Frequency accuracy of SA shall be less than 10% of limits tolerance (2ppm)
2. Setting of SA is following as: RB: 9kHz / VB:30kHz / SPAN: 1MHz /  
AT: 10dB / Ref: 0dBm
3. Center Frequency: The center frequency of testing for EUT
4. Sweep time: Auto
5. Sweep mode: Continuous sweep
6. Detect mode: Positive peak
7. Mark function: Frequency Counter (Resolution 100Hz)
8. EUT have transmitted absence of modulation signal and fixed channelize. "f" is using the mark cursor to mark the peak frequency value, "fc" is declaring of channel frequency.  
Then the frequency error formula is  $(f_c - f) / f_c \times 10^6$  ppm and the limit is less than  $\pm 50\text{ppm}$

#### 3.4.4 Test setup Diagram

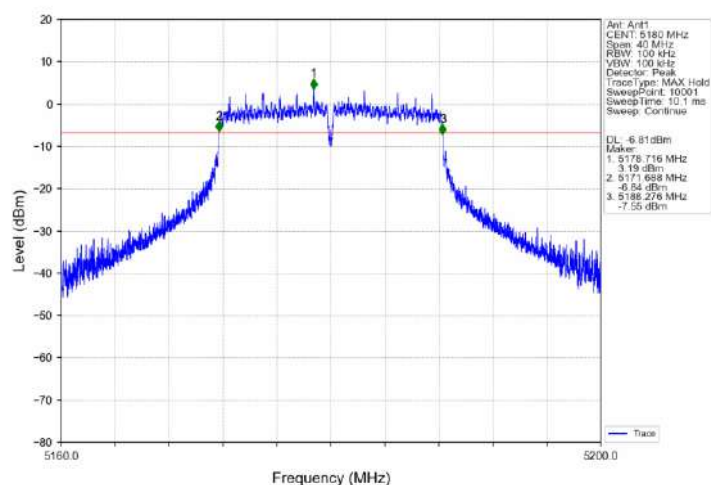


### 3.4.5 Test Result

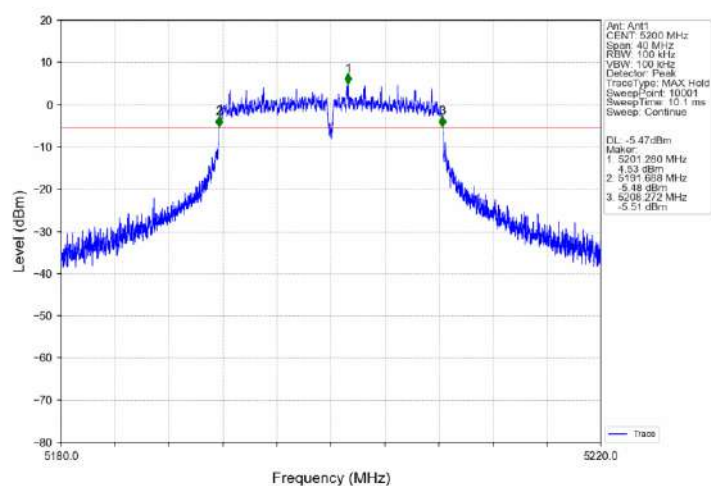
| ENV  | Mode           | TX Type | Frequency (MHz) | Measured Frequency (MHz) | Tolerance (ppm) |           | Verdict |
|------|----------------|---------|-----------------|--------------------------|-----------------|-----------|---------|
|      |                |         |                 |                          | Result          | Limit     |         |
| NTNV | 802.11a        | SISO    | 5180            | 5179.982                 | -3.47           | -20 to 20 | Pass    |
|      |                |         | 5200            | 5199.980                 | -3.85           | -20 to 20 | Pass    |
|      |                |         | 5240            | 5239.968                 | -6.11           | -20 to 20 | Pass    |
|      |                |         | 5260            | 5259.974                 | -4.94           | -20 to 20 | Pass    |
|      |                |         | 5300            | 5299.978                 | -4.15           | -20 to 20 | Pass    |
|      |                |         | 5320            | 5319.980                 | -3.76           | -20 to 20 | Pass    |
|      |                |         | 5500            | 5499.982                 | -3.27           | -20 to 20 | Pass    |
|      |                |         | 5600            | 5599.974                 | -4.64           | -20 to 20 | Pass    |
|      |                |         | 5700            | 5699.978                 | -3.86           | -20 to 20 | Pass    |
|      |                |         | 5720            | 5719.972                 | -4.90           | -20 to 20 | Pass    |
|      | 802.11n (HT20) | SISO    | 5180            | 5179.976                 | -4.63           | -20 to 20 | Pass    |
|      |                |         | 5200            | 5199.982                 | -3.46           | -20 to 20 | Pass    |
|      |                |         | 5240            | 5239.980                 | -3.82           | -20 to 20 | Pass    |
|      |                |         | 5260            | 5259.978                 | -4.18           | -20 to 20 | Pass    |
|      |                |         | 5300            | 5299.980                 | -3.77           | -20 to 20 | Pass    |
|      |                |         | 5320            | 5319.984                 | -3.01           | -20 to 20 | Pass    |
|      |                |         | 5500            | 5499.990                 | -1.82           | -20 to 20 | Pass    |
|      |                |         | 5600            | 5599.980                 | -3.57           | -20 to 20 | Pass    |
|      |                |         | 5700            | 5699.980                 | -3.51           | -20 to 20 | Pass    |
|      |                |         | 5720            | 5719.980                 | -3.50           | -20 to 20 | Pass    |
|      | 802.11n (HT40) | SISO    | 5190            | 5189.996                 | -0.77           | -20 to 20 | Pass    |
|      |                |         | 5230            | 5230.000                 | 0.00            | -20 to 20 | Pass    |
|      |                |         | 5270            | 5269.992                 | -1.52           | -20 to 20 | Pass    |
|      |                |         | 5310            | 5309.996                 | -0.75           | -20 to 20 | Pass    |
|      |                |         | 5510            | 5509.984                 | -2.90           | -20 to 20 | Pass    |
|      |                |         | 5590            | 5589.980                 | -3.58           | -20 to 20 | Pass    |
|      |                |         | 5670            | 5669.976                 | -4.23           | -20 to 20 | Pass    |
|      |                |         | 5710            | 5709.984                 | -2.80           | -20 to 20 | Pass    |

### 3.4.6 Test Graphs

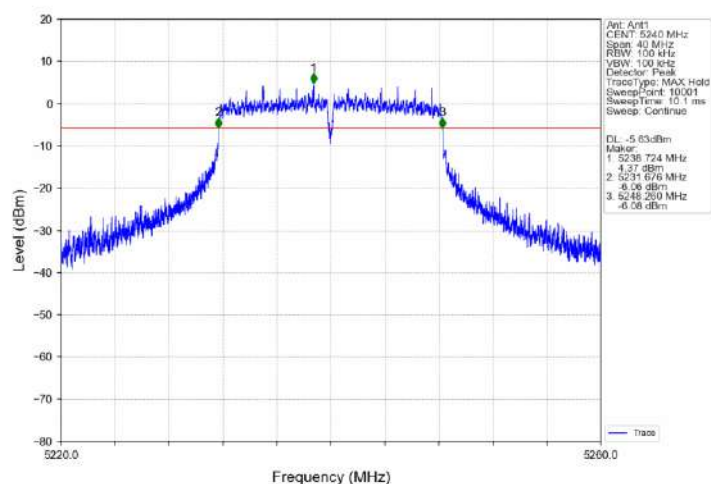
802.11a\_LCH\_5180MHz\_Ant1\_NTNV



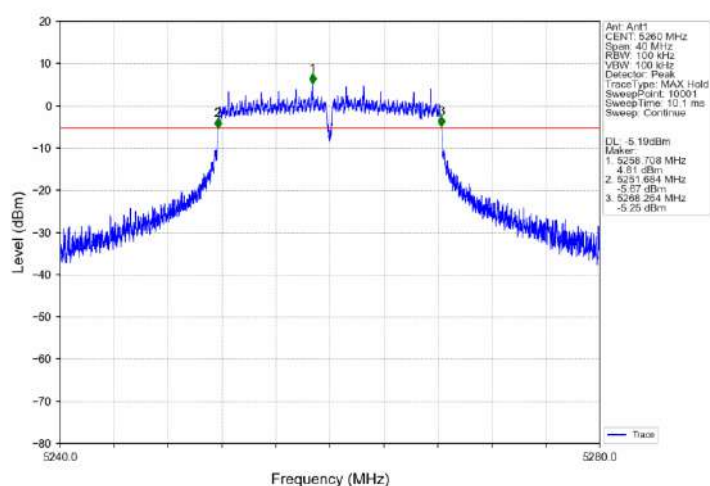
802.11a\_MCH\_5200MHz\_Ant1\_NTNV



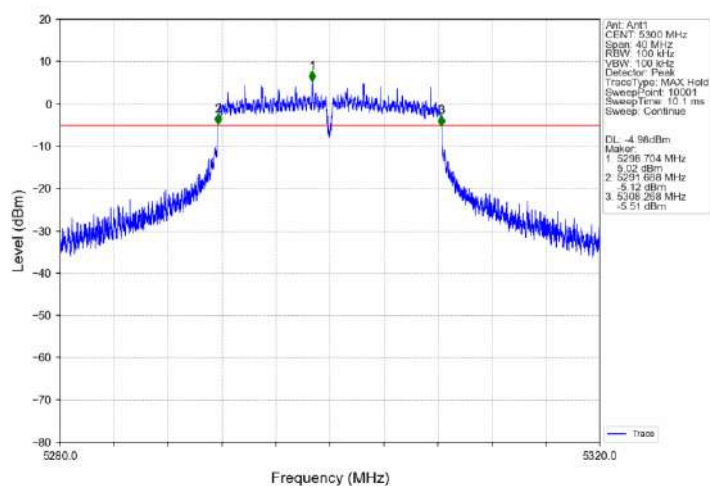
802.11a\_HCH\_5240MHz\_Ant1\_NTNV



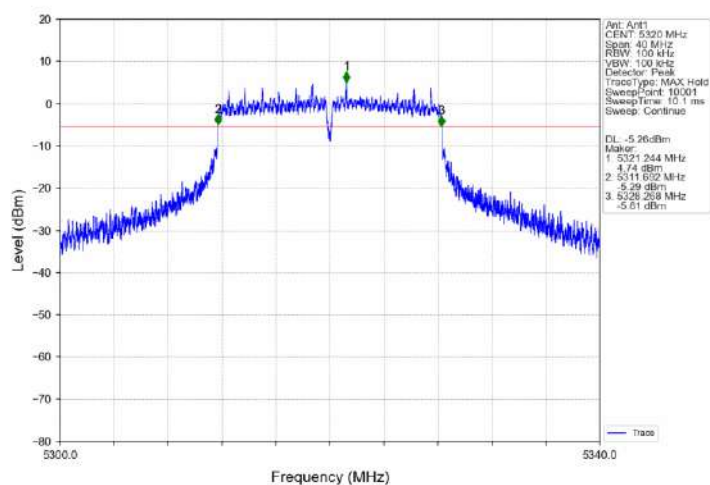
## 802.11a LCH 5260MHz Ant1 NTNV



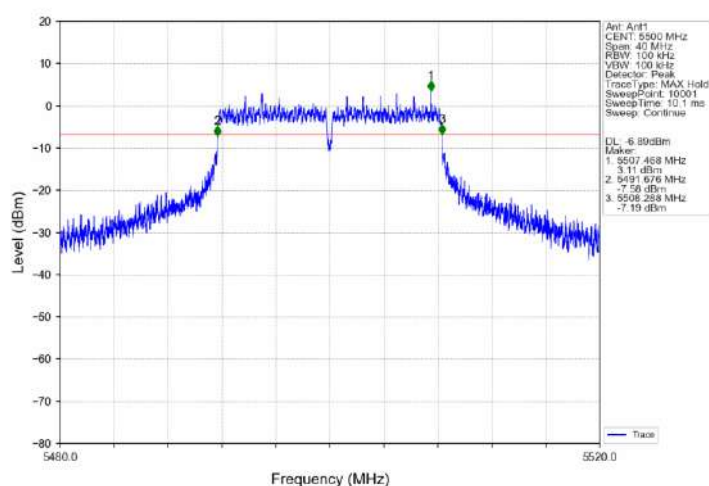
## 802.11a MCH 5300MHz Ant1 NTNV



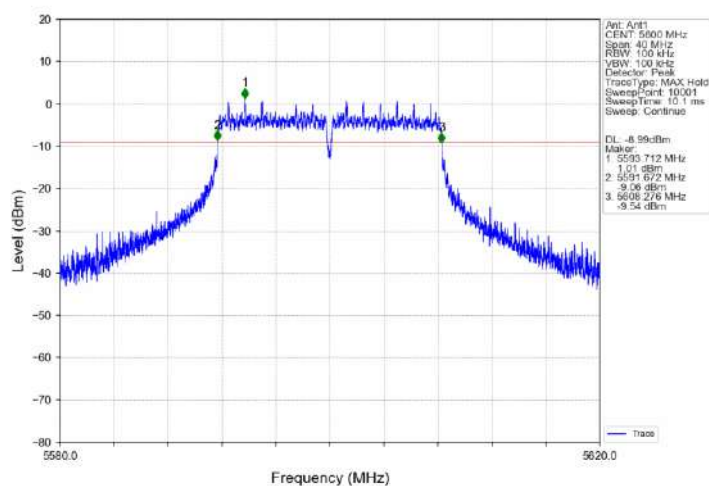
## 802.11a HCH 5320MHz Ant1 NTNV



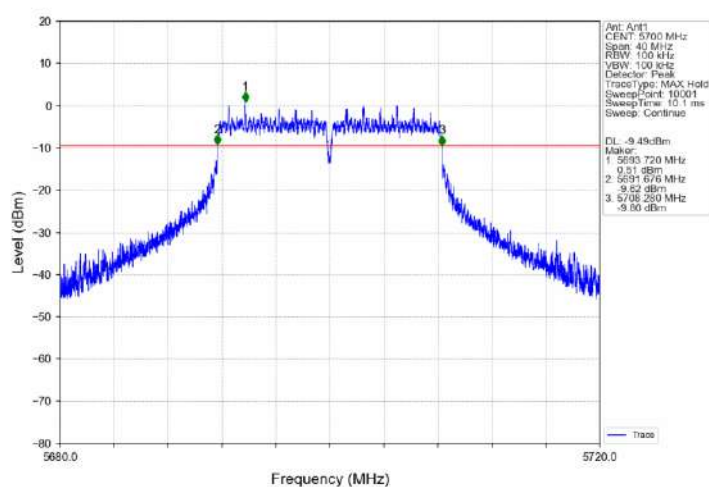
## 802.11a LCH 5500MHz Ant1\_NTNV



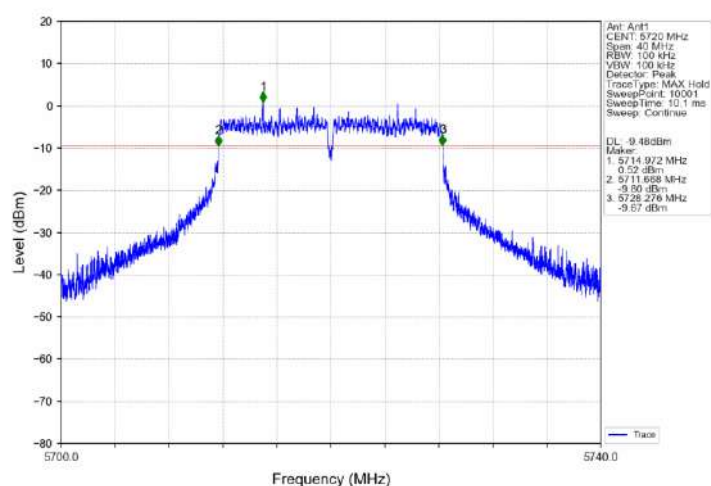
## 802.11a MCH 5600MHz Ant1\_NTNV



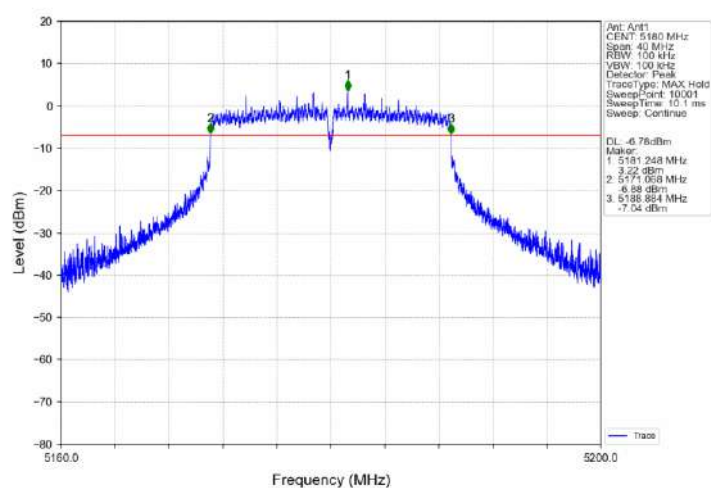
## 802.11a HCH 5700MHz Ant1\_NTNV



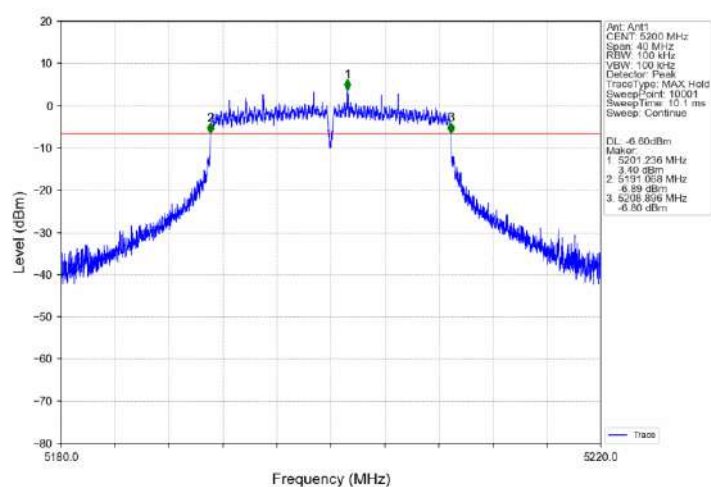
## 802.11a\_HHCH\_5720MHz\_Ant1\_NTNV



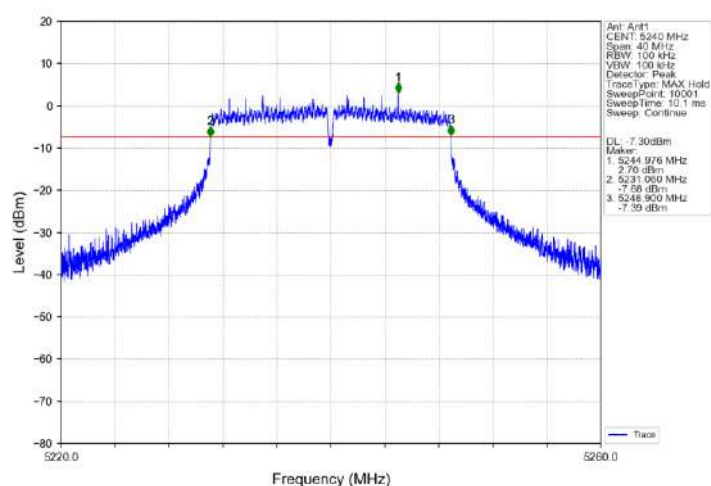
## 802.11n(HT20)\_LCH\_5180MHz\_Ant1\_NTNV



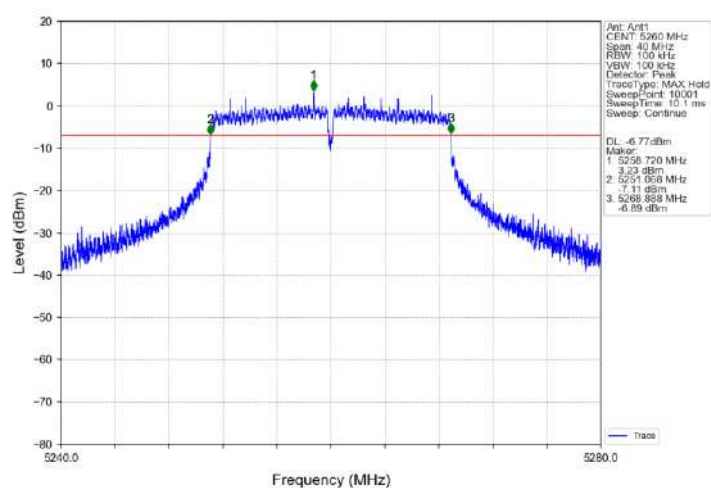
## 802.11n(HT20)\_MCH\_5200MHz\_Ant1\_NTNV



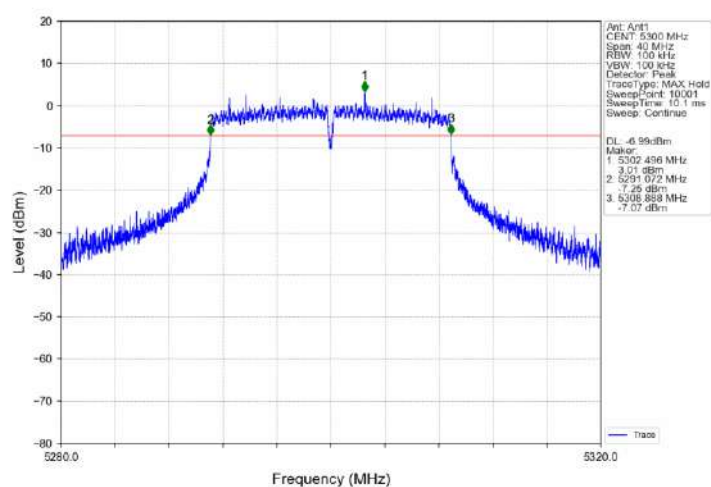
## 802.11n(HT20) HCH 5240MHz Ant1\_NTNV



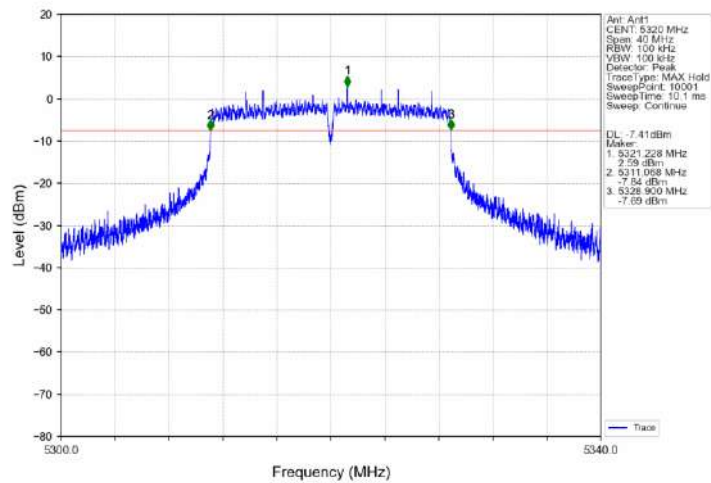
## 802.11n(HT20) LCH 5260MHz Ant1\_NTNV



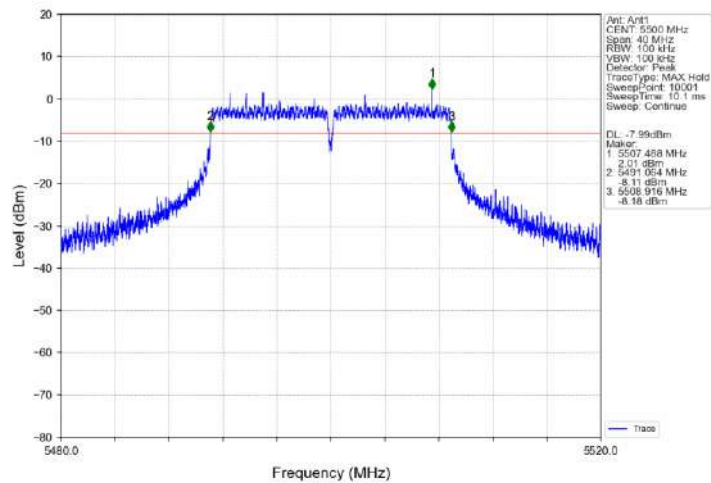
## 802.11n(HT20) MCH 5300MHz Ant1\_NTNV



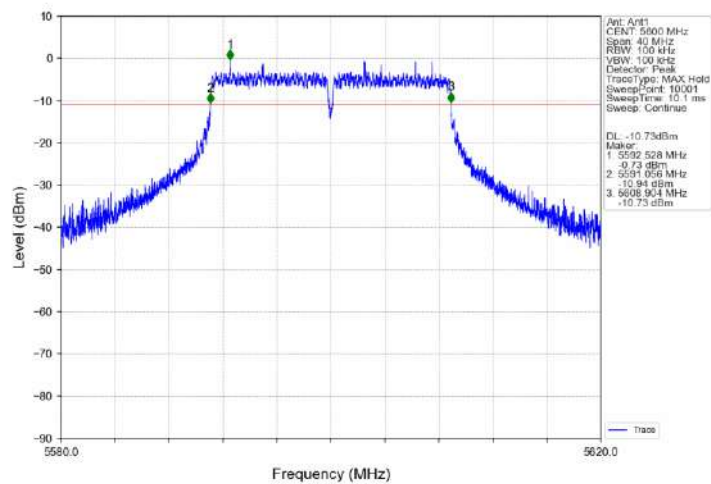
## 802.11n(HT20) HCH 5320MHz Ant1\_NTNV



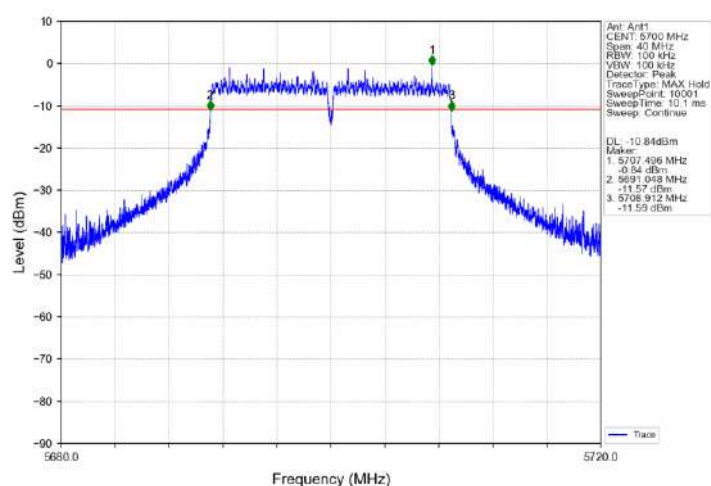
## 802.11n(HT20) LCH 5500MHz Ant1\_NTNV



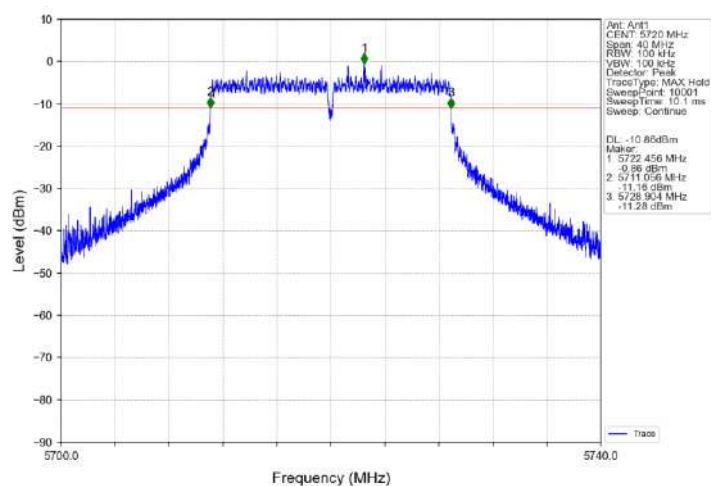
## 802.11n(HT20) MCH 5600MHz Ant1\_NTNV



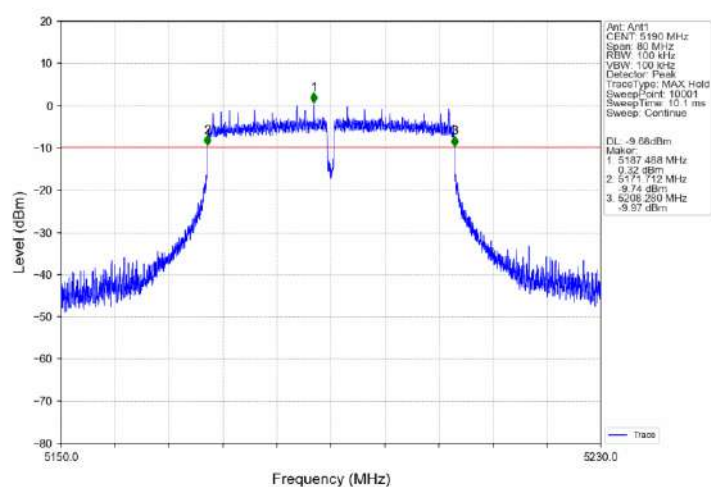
## 802.11n(HT20) HCH\_5700MHz\_Ant1\_NTNV



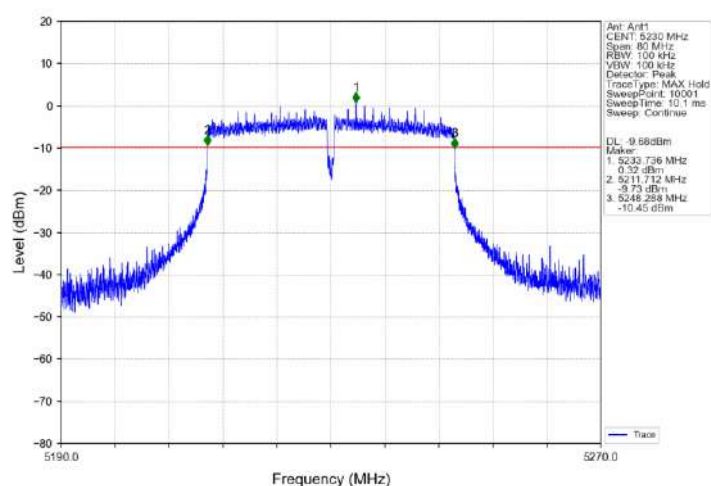
## 802.11n(HT20) HHCH\_5720MHz\_Ant1\_NTNV



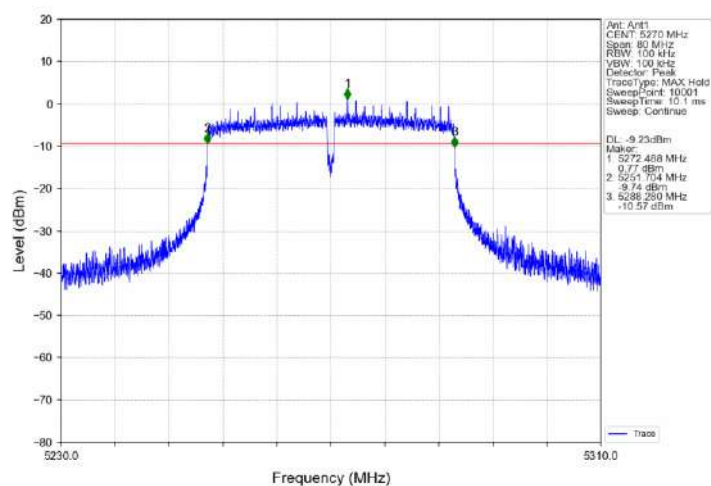
## 802.11n(HT40) LCH\_5190MHz\_Ant1\_NTNV



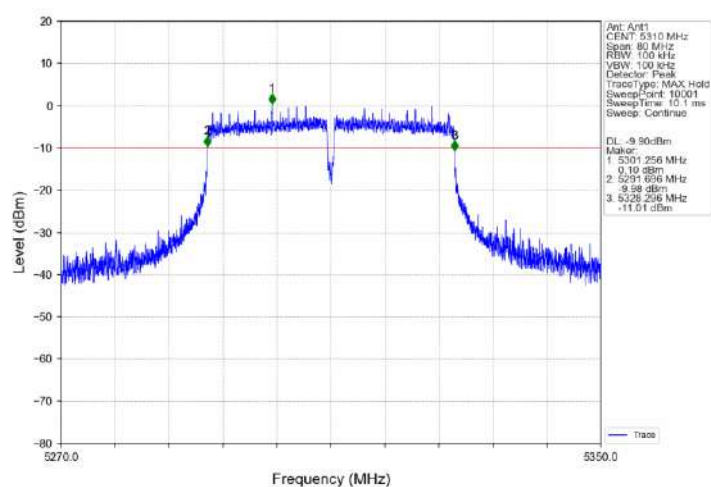
## 802.11n(HT40) HCH 5230MHz Ant1\_NTNV



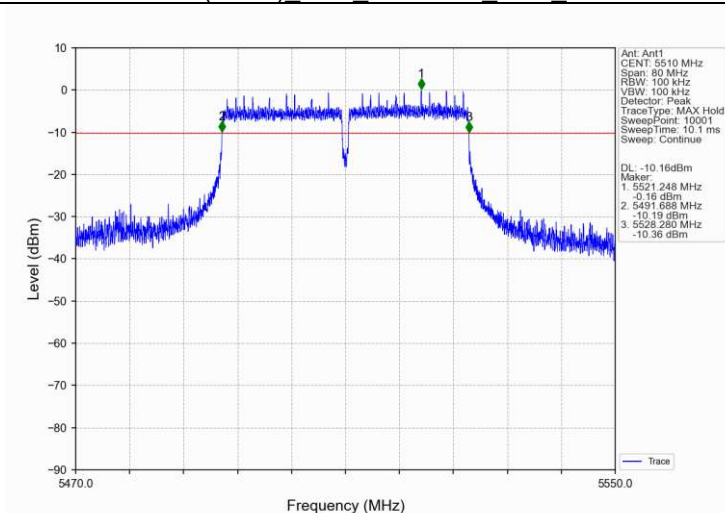
## 802.11n(HT40) LCH 5270MHz Ant1\_NTNV



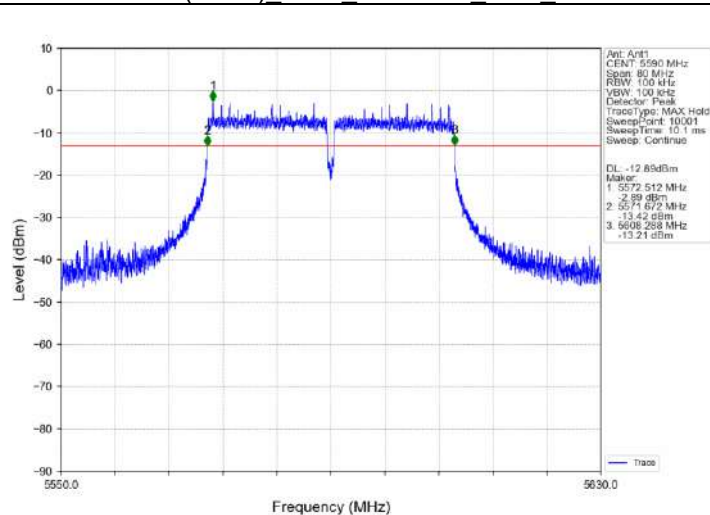
## 802.11n(HT40) HCH 5310MHz Ant1\_NTNV



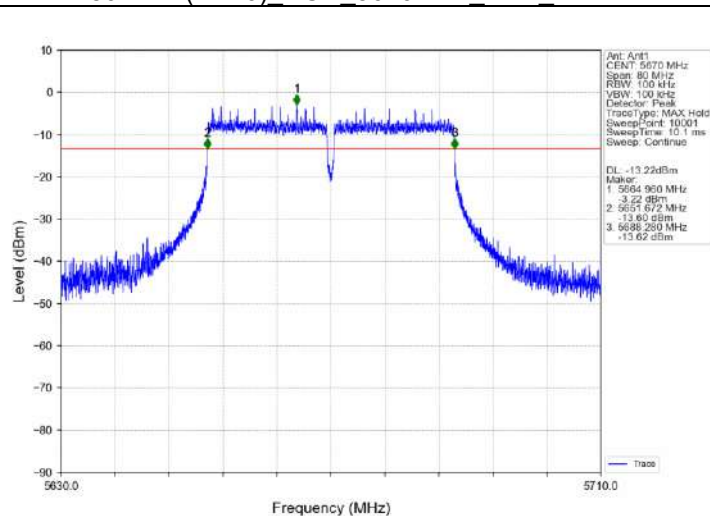
## 802.11n(HT40) LCH\_5510MHz\_Ant1\_NTNV



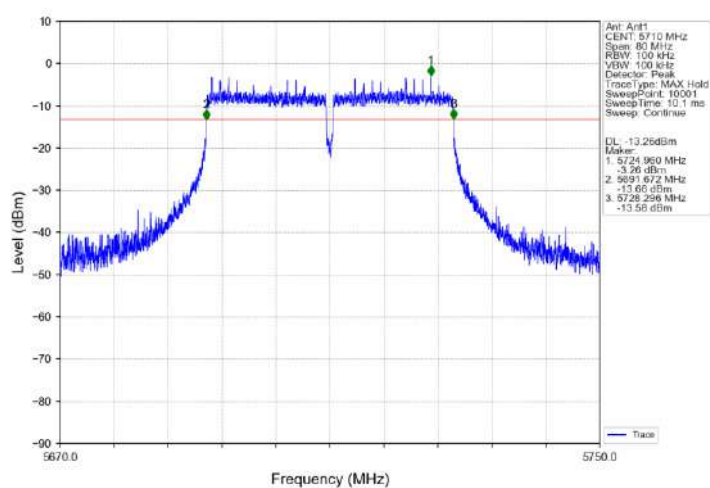
## 802.11n(HT40) MCH\_5590MHz\_Ant1\_NTNV



## 802.11n(HT40) HCH\_5670MHz\_Ant1\_NTNV



## 802.11n(HT40)\_HHCH\_5710MHz\_Ant1\_NTNV



### 3.5 Occupied Frequency Bandwidth

#### 3.5.1 Test Condition

|                      |              |
|----------------------|--------------|
| Test Position:       | Transmitting |
| Ambient Temperature: | 23.6°C       |
| Relative Humidity:   | 48.2%        |
| Atmosphere Pressure: | 101.5KPa     |

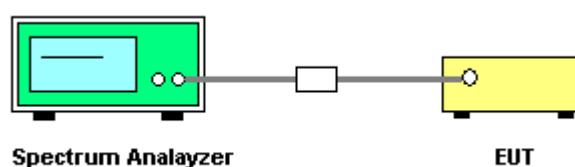
#### 3.5.2 Limit

| Item                 | Limits                                                                                                              |
|----------------------|---------------------------------------------------------------------------------------------------------------------|
| Occupied Band Width: | $\leq 20$ MHz (20MHz System for OFDM)<br>$\leq 40$ MHz (40MHz mode for OFDM)<br>$\leq 80$ MHz (80MHz mode for OFDM) |

#### 3.5.3 Test Procedure

- Setting of SA is following as: RB: Auto / VB: Auto / AT: 30dB Ref:  
20dBm / Sweep time: Auto / Sweep Mode: Continuous sweep / Detect mode: Positive peak / Trace mode: Max hold
- EUT have transmitted the maximum modulation signal and fixed channelize (For DSSS or OFDM Device). SA set to 99% of occupied bandwidth to measure occupied bandwidth.

#### 3.5.4 Test Setup Diagram

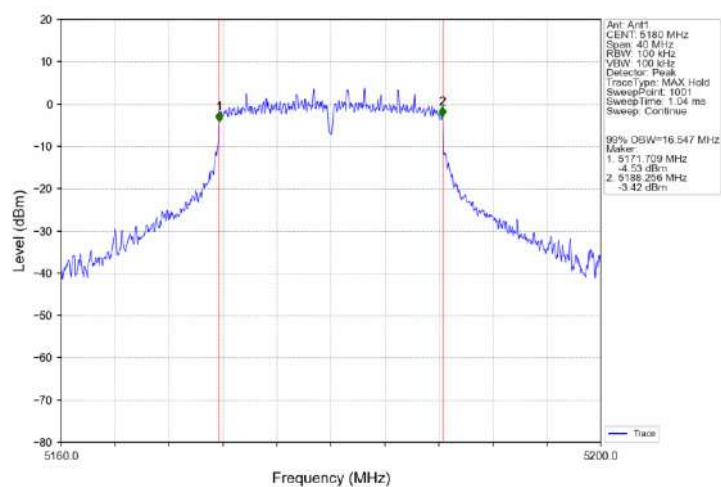


### 3.5.5 Test Result

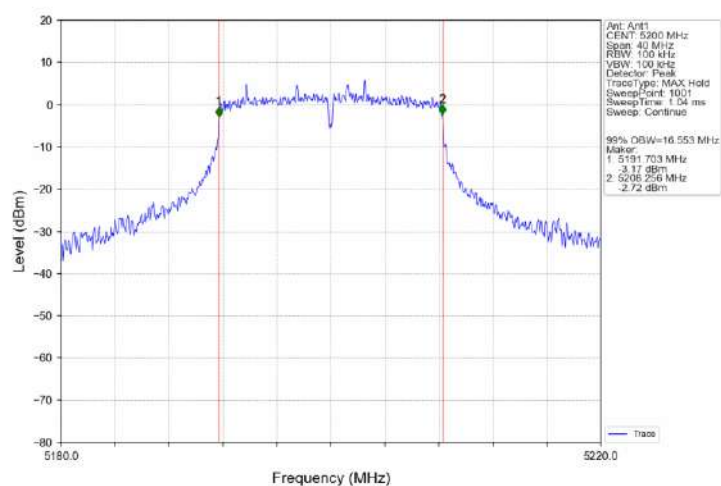
| ENV  | Mode           | TX Type | Frequency (MHz) | 99% Occupied Bandwidth (MHz) |       | Verdict |
|------|----------------|---------|-----------------|------------------------------|-------|---------|
|      |                |         |                 | ANT1                         | Limit |         |
| NTNV | 802.11a        | SISO    | 5180            | 16.547                       | <=20  | Pass    |
|      |                |         | 5200            | 16.553                       | <=20  | Pass    |
|      |                |         | 5240            | 16.556                       | <=20  | Pass    |
|      |                |         | 5260            | 16.580                       | <=20  | Pass    |
|      |                |         | 5300            | 16.608                       | <=20  | Pass    |
|      |                |         | 5320            | 16.616                       | <=20  | Pass    |
|      |                |         | 5500            | 16.920                       | <=20  | Pass    |
|      |                |         | 5600            | 16.578                       | <=20  | Pass    |
|      |                |         | 5700            | 16.608                       | <=20  | Pass    |
|      |                |         | 5720            | 16.588                       | <=20  | Pass    |
|      | 802.11n (HT20) | SISO    | 5180            | 17.774                       | <=20  | Pass    |
|      |                |         | 5200            | 17.720                       | <=20  | Pass    |
|      |                |         | 5240            | 17.779                       | <=20  | Pass    |
|      |                |         | 5260            | 17.769                       | <=20  | Pass    |
|      |                |         | 5300            | 17.782                       | <=20  | Pass    |
|      |                |         | 5320            | 17.783                       | <=20  | Pass    |
|      |                |         | 5500            | 17.907                       | <=20  | Pass    |
|      |                |         | 5600            | 17.826                       | <=20  | Pass    |
|      |                |         | 5700            | 17.834                       | <=20  | Pass    |
|      |                |         | 5720            | 17.826                       | <=20  | Pass    |
|      | 802.11n (HT40) | SISO    | 5190            | 36.333                       | <=40  | Pass    |
|      |                |         | 5230            | 36.328                       | <=40  | Pass    |
|      |                |         | 5270            | 36.347                       | <=40  | Pass    |
|      |                |         | 5310            | 36.390                       | <=40  | Pass    |
|      |                |         | 5510            | 36.622                       | <=40  | Pass    |
|      |                |         | 5590            | 36.490                       | <=40  | Pass    |
|      |                |         | 5670            | 36.513                       | <=40  | Pass    |
|      |                |         | 5710            | 36.481                       | <=40  | Pass    |

### 3.5.6 Test Graphs

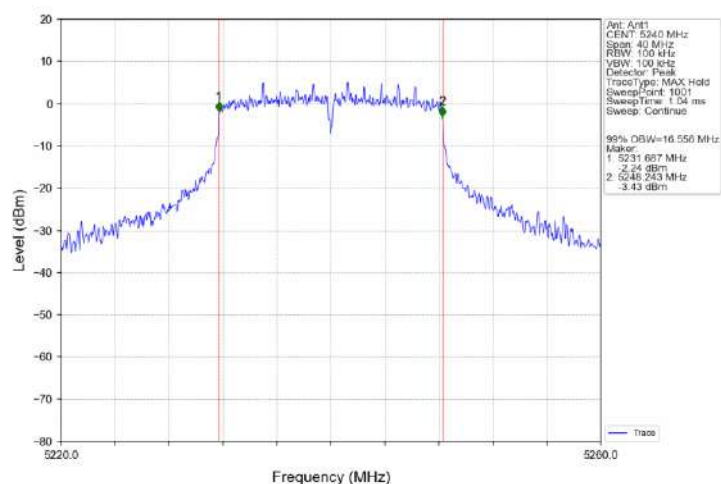
802.11a\_LCH\_5180MHz\_Ant1\_NTNV



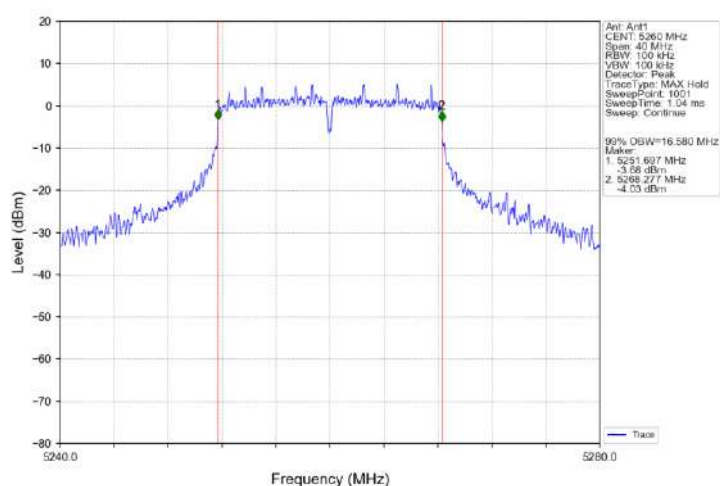
802.11a\_MCH\_5200MHz\_Ant1\_NTNV



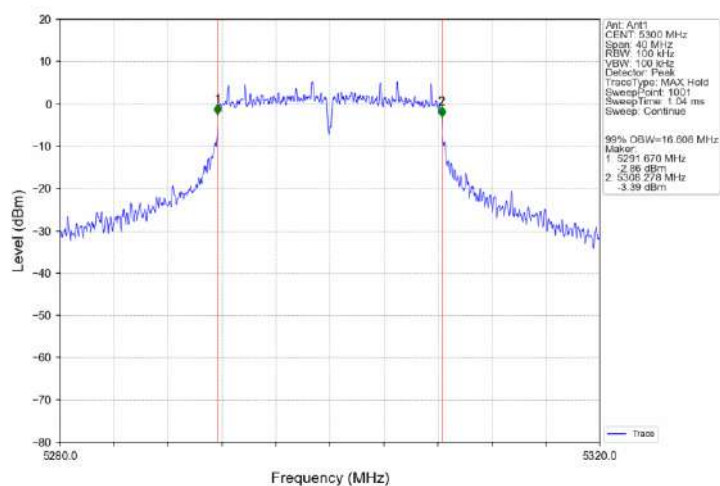
802.11a\_HCH\_5240MHz\_Ant1\_NTNV



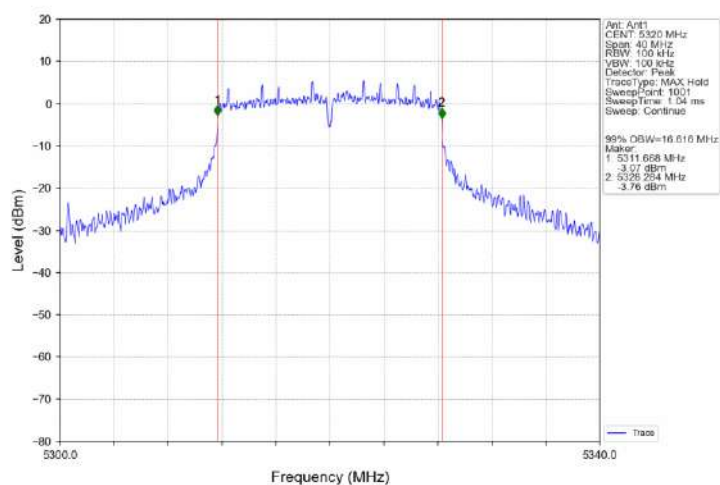
## 802.11a LCH 5260MHz Ant1\_NTNV



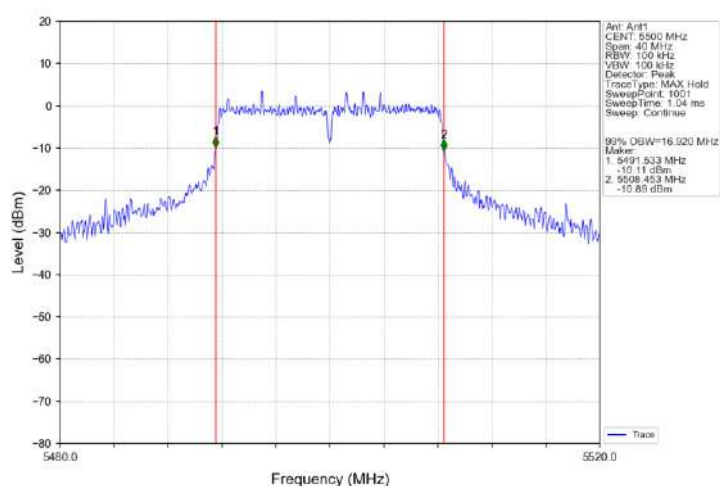
## 802.11a MCH 5300MHz Ant1\_NTNV



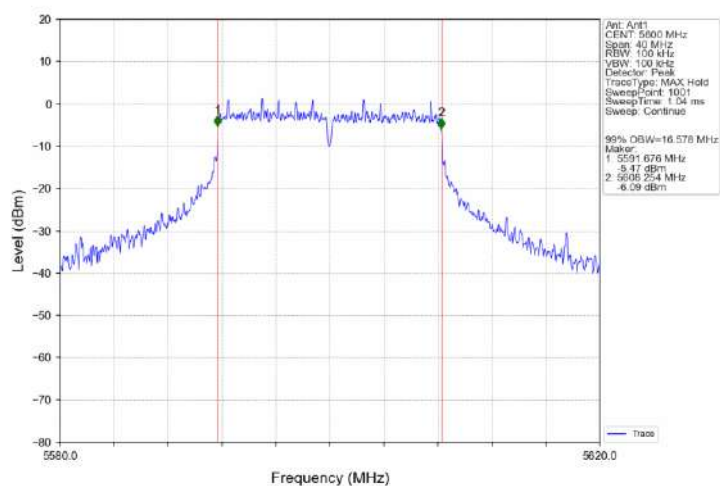
## 802.11a HCH 5320MHz Ant1\_NTNV



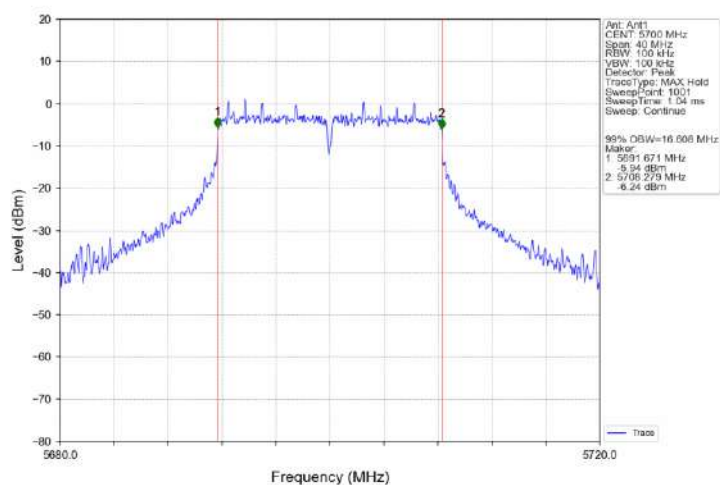
## 802.11a LCH 5500MHz Ant1\_NTNV



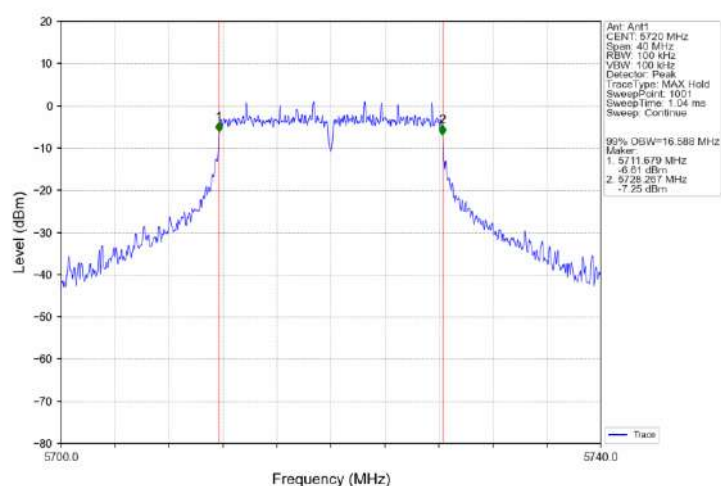
## 802.11a MCH 5600MHz Ant1\_NTNV



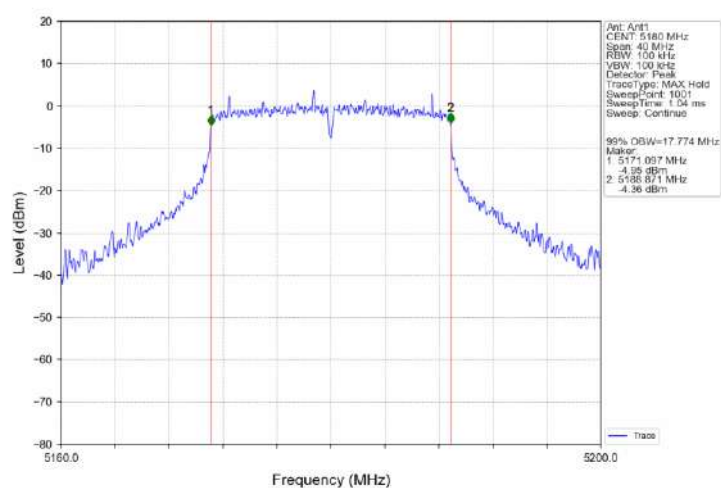
## 802.11a HCH 5700MHz Ant1\_NTNV



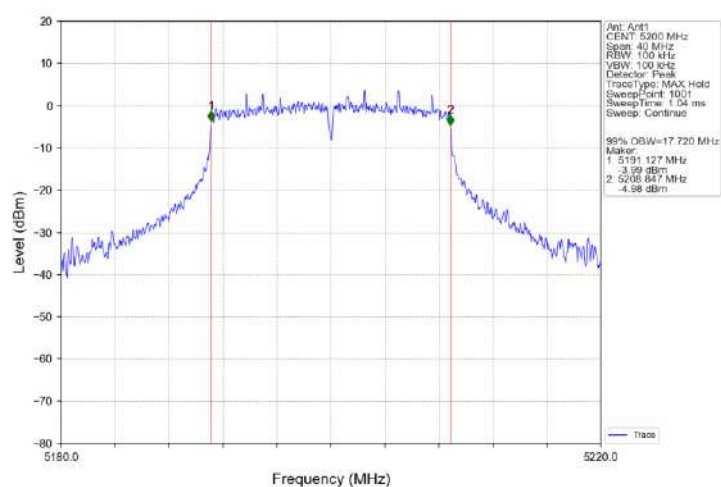
## 802.11a\_HHCH\_5720MHz\_Ant1\_NTNV



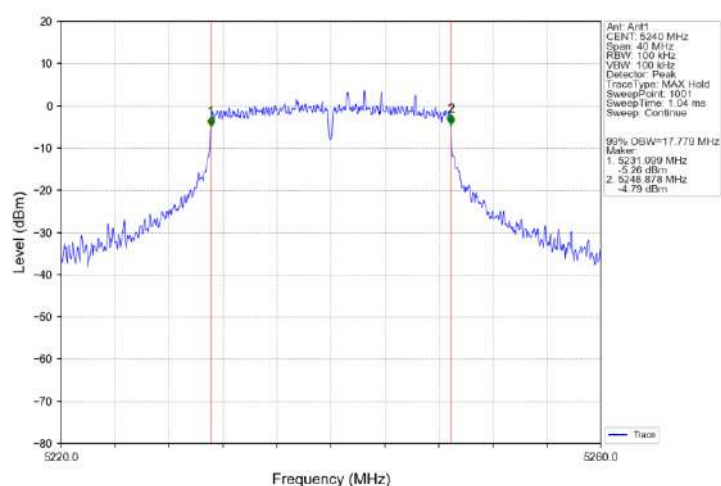
## 802.11n(HT20)\_LCH\_5180MHz\_Ant1\_NTNV



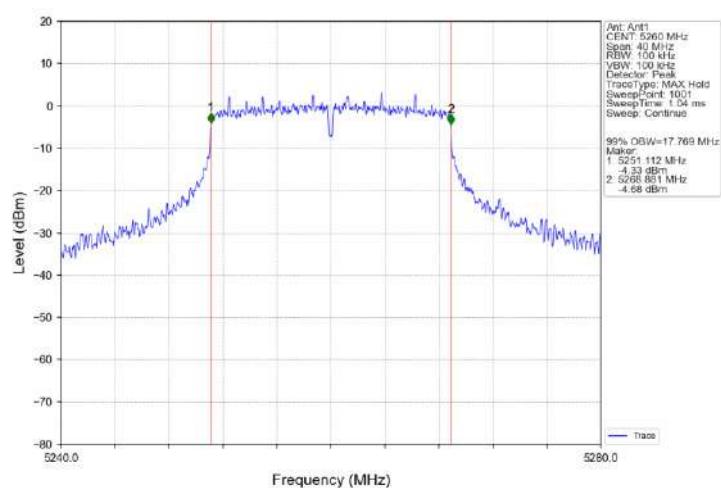
## 802.11n(HT20)\_MCH\_5200MHz\_Ant1\_NTNV



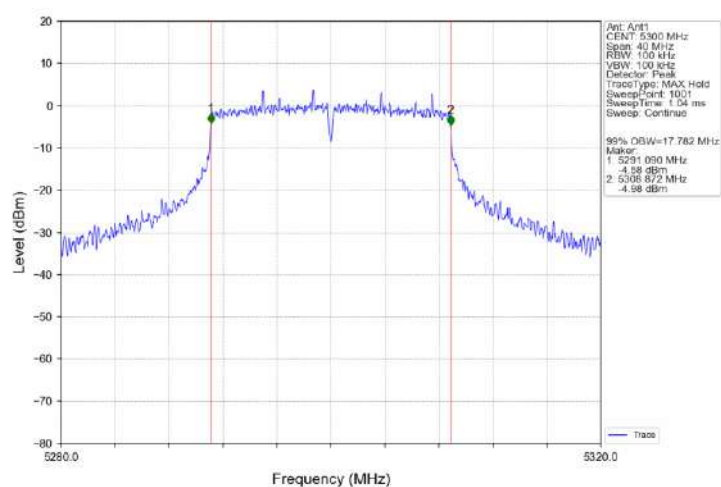
## 802.11n(HT20) HCH 5240MHz Ant1\_NTNV



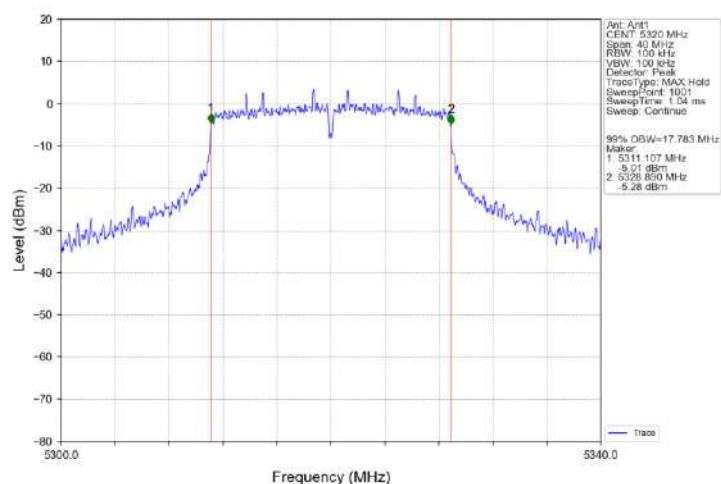
## 802.11n(HT20) LCH 5260MHz Ant1\_NTNV



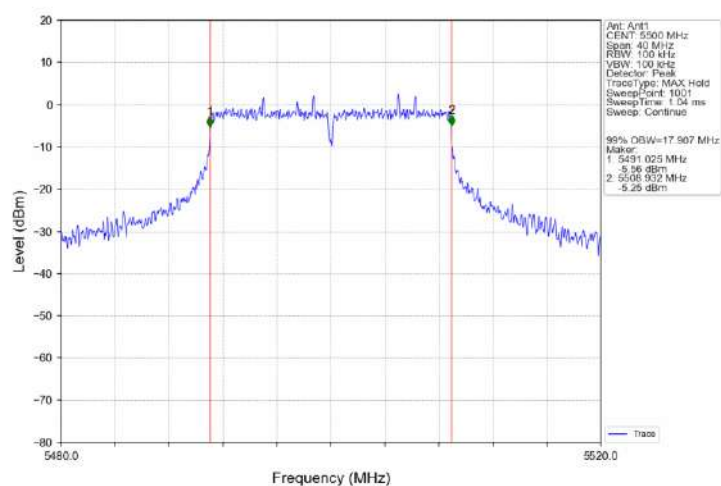
## 802.11n(HT20) MCH 5300MHz Ant1\_NTNV



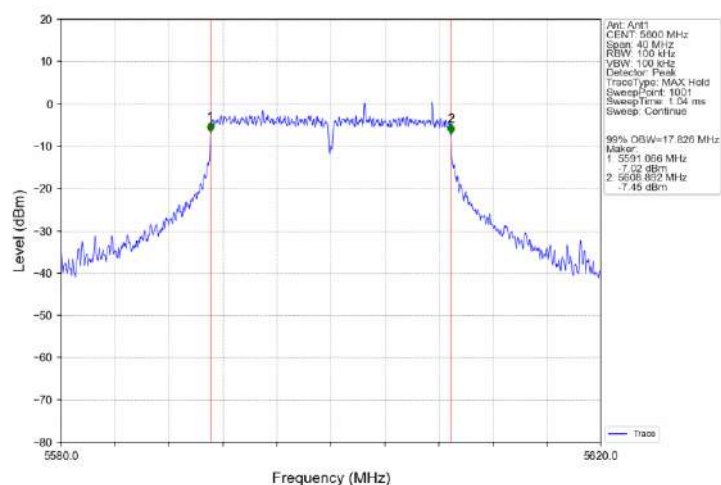
## 802.11n(HT20) HCH 5320MHz Ant1\_NTNV



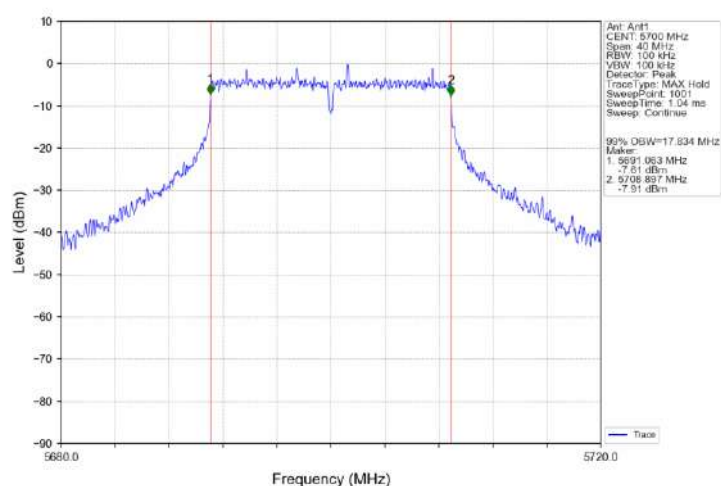
## 802.11n(HT20) LCH 5500MHz Ant1\_NTNV



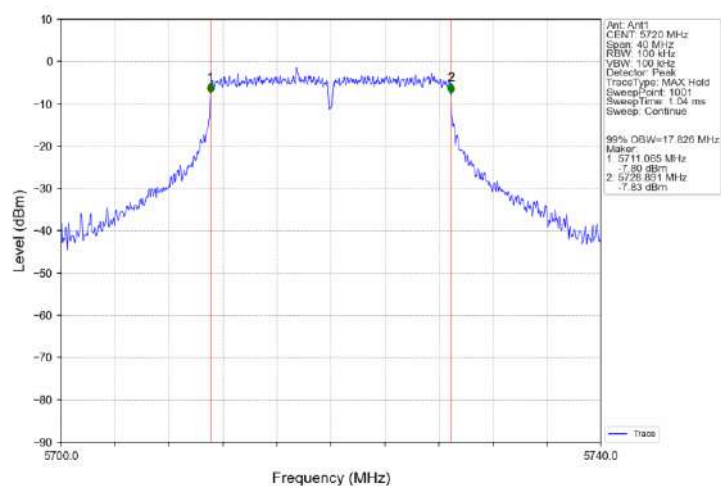
## 802.11n(HT20) MCH 5600MHz Ant1\_NTNV



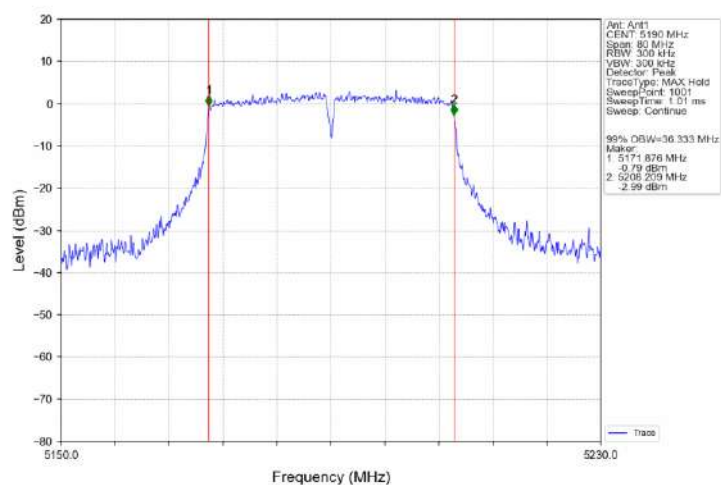
## 802.11n(HT20) HCH\_5700MHz\_Ant1\_NTNV



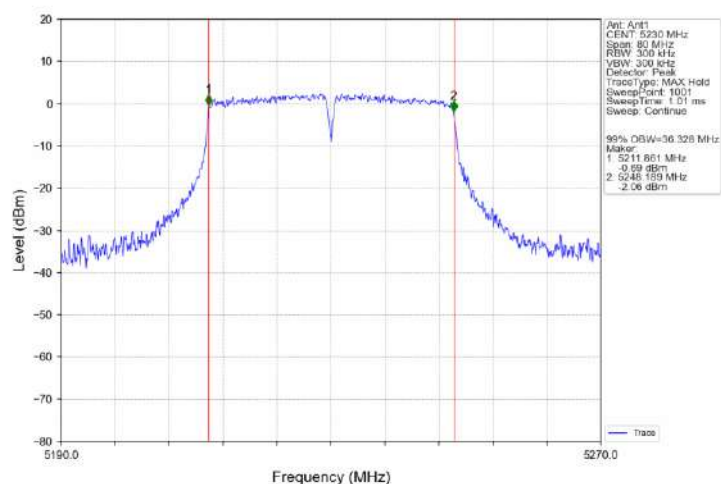
## 802.11n(HT20) HHCH\_5720MHz\_Ant1\_NTNV



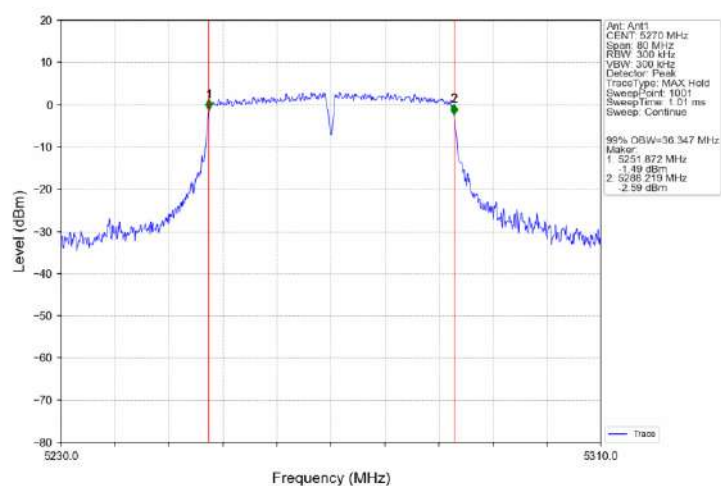
## 802.11n(HT40) LCH\_5190MHz\_Ant1\_NTNV



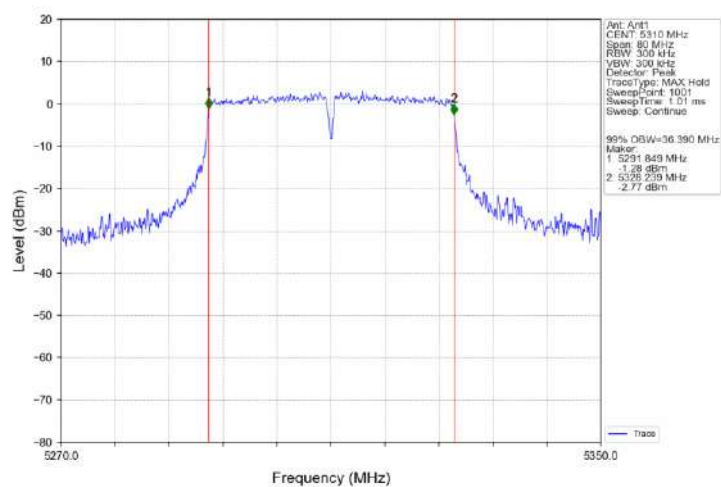
## 802.11n(HT40) HCH 5230MHz Ant1\_NTNV



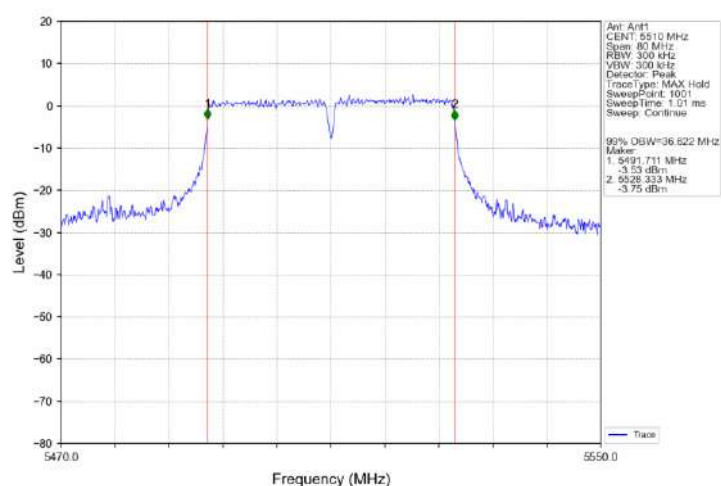
## 802.11n(HT40) LCH 5270MHz Ant1\_NTNV



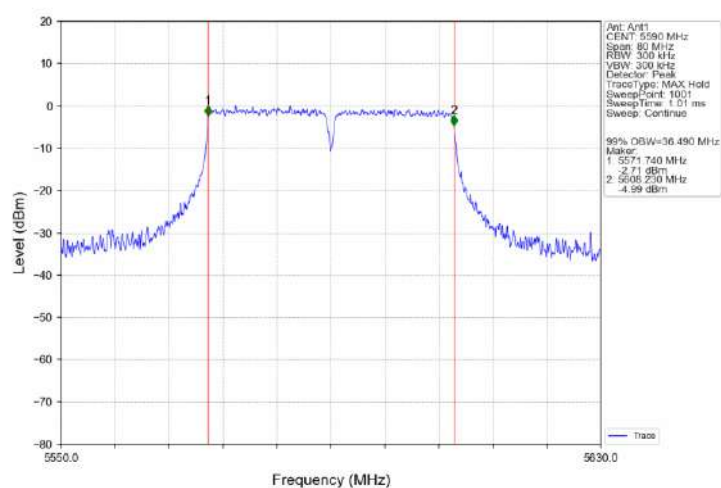
## 802.11n(HT40) HCH 5310MHz Ant1\_NTNV



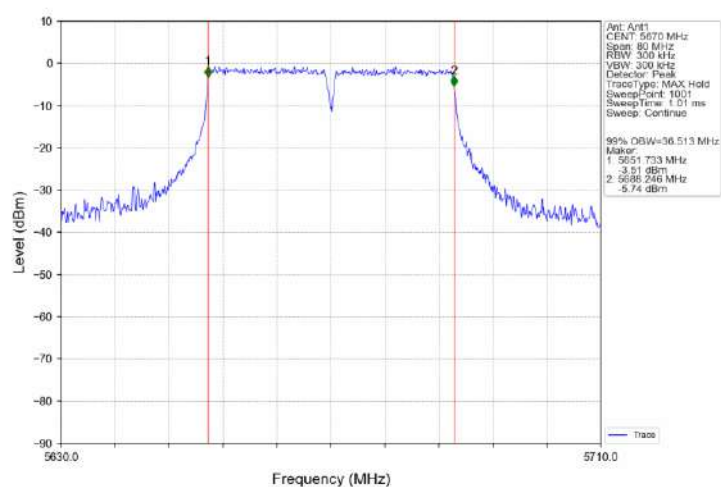
## 802.11n(HT40) LCH\_5510MHz\_Ant1\_NTNV



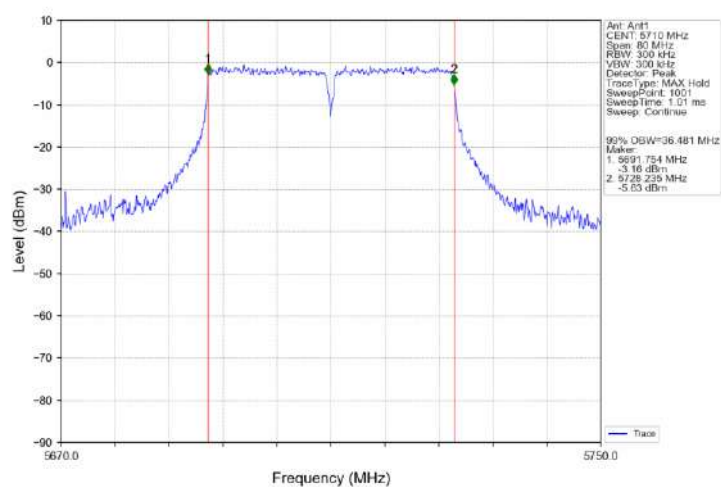
## 802.11n(HT40) MCH\_5590MHz\_Ant1\_NTNV



## 802.11n(HT40) HCH\_5670MHz\_Ant1\_NTNV



## 802.11n(HT40)\_HHCH\_5710MHz\_Ant1\_NTNV



### 3.6 Unwanted Emission Intensity and Leakage Power Out-band

#### 3.6.1 Test Condition

|                      |              |
|----------------------|--------------|
| Test Position:       | Transmitting |
| Ambient Temperature: | 24.8°C       |
| Relative Humidity:   | 49.7%        |
| Atmosphere Pressure: | 101.6KPa     |

#### 3.6.2 Limit

| Item                        | Frequency Band                            | Limits                                              |
|-----------------------------|-------------------------------------------|-----------------------------------------------------|
| Unwanted Emission Intensity | $30\text{MHz} \leq f \leq 5140\text{MHz}$ | Less than 2.5 $\mu\text{W}/\text{MHz}$ (-26dBm/MHz) |
|                             | $5360\text{MHz} < f \leq 26000\text{MHz}$ | Less than 2.5 $\mu\text{W}/\text{MHz}$ (-26dBm/MHz) |

For W52

| 20MHz system                                                       |                                                                    |
|--------------------------------------------------------------------|--------------------------------------------------------------------|
| OBW : 18MHz or less                                                | OBW : 18 - 20 MHz                                                  |
| 5,142 MHz or less : 2.5 $\mu\text{W}/\text{MHz}$                   | 5,142 MHz or less : 2.5 $\mu\text{W}/\text{MHz}$                   |
| 5,142 - 5,150 MHz : 15 $\mu\text{W}/\text{MHz}$                    | 5,142 - 5,150 MHz : 15 $\mu\text{W}/\text{MHz}$                    |
|                                                                    | 5,250 - 5,250.2 MHz : $10^{1-(8/3)(f-9.75)}\text{mW}/\text{MHz}$   |
| 5,250 - 5,251 MHz : $10^{1-(f-9)}\text{mW}/\text{MHz}$             | 5,250.2 - 5,251 MHz : $10^{1-(f-9)}\text{mW}/\text{MHz}$           |
| 5,251 - 5,260 MHz : $10^{-1-(8/90)(f-11)}\text{mW}/\text{MHz}$     | 5,251 - 5,260 MHz : $10^{-1-(8/90)(f-11)}\text{mW}/\text{MHz}$     |
| 5,260 - 5,266.7 MHz : $10^{-1.8-(6/50)(f-20)}\text{mW}/\text{MHz}$ | 5,260 - 5,266.7 MHz : $10^{-1.8-(6/50)(f-20)}\text{mW}/\text{MHz}$ |
| 5,266.7 MHz or more : 2.5 $\mu\text{W}/\text{MHz}$                 | 5,266.7 MHz or more : 2.5 $\mu\text{W}/\text{MHz}$                 |
| f = MHz, Difference from 5240 (MHz)                                | f = MHz, Difference from 5240 (MHz)                                |

| 40MHz system                                                                 | 80MHz system                                                                  |
|------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| 5,141.6 MHz or less : 2.5 $\mu\text{W}/\text{MHz}$                           | 5,123.2 MHz or less : 2.5 $\mu\text{W}/\text{MHz}$                            |
| 5,141.6 - 5,150 MHz : 15 $\mu\text{W}/\text{MHz}$                            | 5,123.2 - 5,150 MHz : 15 $\mu\text{W}/\text{MHz}$                             |
|                                                                              |                                                                               |
| 5,250 - 5,251 MHz : $10^{-(f-20)+\log(1/2)}\text{mW}/\text{MHz}$             | 5,250 - 5,251 MHz : $10^{-(f-40)+\log(1/4)}\text{mW}/\text{MHz}$              |
| 5,251 - 5,270 MHz : $10^{-(8/190)(f-21)-1+\log(1/2)}\text{mW}/\text{MHz}$    | 5,251 - 5,290 MHz : $10^{-(8/390)(f-41)-1+\log(1/4)}\text{mW}/\text{MHz}$     |
| 5,270 - 5,278.4 MHz : $10^{-(3/90)(f-40)-1.8+\log(1/2)}\text{mW}/\text{MHz}$ | 5,290 - 5,296.7 MHz : $10^{-(3/100)(f-80)-1.8+\log(1/4)}\text{mW}/\text{MHz}$ |
| 5,278.4 MHz or more : 2.5 $\mu\text{W}/\text{MHz}$                           | 5,296.7 MHz or more : 2.5 $\mu\text{W}/\text{MHz}$                            |
| f = MHz, Difference from 5230 (MHz)                                          | f = MHz, Difference from 5210 (MHz)                                           |

## For W53

| 20MHz system                                          |                                                       |
|-------------------------------------------------------|-------------------------------------------------------|
| OBW : 18MHz or less                                   | OBW : 18 - 20 MHz                                     |
| 5,233.3 MHz or less : 2.5 $\mu$ W/MHz                 | 5,233.3 MHz or less : 2.5 $\mu$ W/MHz                 |
| 5,233.3 - 5,240 MHz : $10^{-1.8-(6/50)(f-20)}$ mW/MHz | 5,233.3 - 5,240 MHz : $10^{-1.8-(6/50)(f-20)}$ mW/MHz |
| 5,240 - 5,249 MHz : $10^{-1-(8/90)(f-11)}$ mW/MHz     | 5,240 - 5,249 MHz : $10^{-1-(8/90)(f-11)}$ mW/MHz     |
| 5,249 - 5,250 MHz : $10^{1-(f-9)}$ mW/MHz             | 5,249 - 5,249.8 MHz : $10^{1-(f-9)}$ mW/MHz           |
| 5,350 MHz or more : 2.5 $\mu$ W/MHz                   | 5,249.8 - 5,250 MHz : $10^{1-(8/3)(f-9.75)}$ mW/MHz   |
|                                                       | 5,350 MHz or more : 2.5 $\mu$ W/MHz                   |
| f = MHz, Difference from 5260 (MHz)                   | f = MHz, Difference from 5260 (MHz)                   |

| 40MHz system                                                    | 80MHz system                                                     |
|-----------------------------------------------------------------|------------------------------------------------------------------|
| 5,221.6 MHz or less : 2.5 $\mu$ W/MHz                           | 5,203.3 MHz or less : 2.5 $\mu$ W/MHz                            |
| 5,221.6 - 5,230 MHz : $10^{-(3/50)(f-40)-1.8+\log(1/2)}$ mW/MHz | 5,203.3 - 5,210 MHz : $10^{-(3/100)(f-80)-1.8+\log(1/4)}$ mW/MHz |
| 5,230 - 5,249 MHz : $10^{-(8/190)(f-21)-1+\log(1/2)}$ mW/MHz    | 5,210 - 5,249 MHz : $10^{-(8/390)(f-41)-1+\log(1/4)}$ mW/MHz     |
| 5,249 - 5,250 MHz : $10^{-(f-20)+\log(1/2)}$ mW/MHz             | 5,249 - 5,250 MHz : $10^{-(f-40)+\log(1/4)}$ mW/MHz              |
| 5,350 - 5,358.4 MHz : 15 $\mu$ W/MHz                            | 5,350 - 5,376.8 MHz : 15 $\mu$ W/MHz                             |
| 5,358.4 MHz or more : 2.5 $\mu$ W/MHz                           | 5,376.8 MHz or more : 2.5 $\mu$ W/MHz                            |
| f = MHz, Difference from 5270 (MHz)                             | f = MHz, Difference from 5290 (MHz)                              |

## For W56

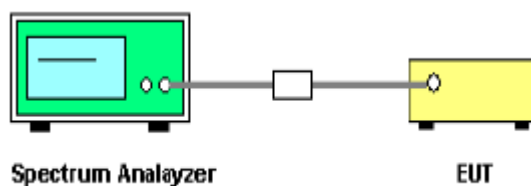
| 20MHz system                         |                                      |
|--------------------------------------|--------------------------------------|
| DSSS, etc.                           | OFDM                                 |
| 5,470 MHz or less : 12.5 $\mu$ W/MHz | 5,460 MHz or less : 2.5 $\mu$ W/MHz  |
|                                      | 5,460 - 5,470 MHz : 12.5 $\mu$ W/MHz |
| 5,730 MHz or more : 12.5 $\mu$ W/MHz | 5,745 - 5,765 MHz : 12.5 $\mu$ W/MHz |
|                                      | Over 5,765 MHz : 2.5 $\mu$ W/MHz     |

| 40MHz system                         | 80MHz system                           |
|--------------------------------------|----------------------------------------|
| 5,460 MHz or less : 12.5 $\mu$ W/MHz | 5,460 MHz or less : 12.5 $\mu$ W/MHz   |
| 5,460 - 5,470 MHz : 50 $\mu$ W/MHz   | 5,460 - 5,469.5 MHz : 50 $\mu$ W/MHz   |
| 5,770 MHz or more : 12.5 $\mu$ W/MHz | 5,469.5 - 5,470 MHz : 51.2 $\mu$ W/MHz |
|                                      | 5,770 MHz or more : 12.5 $\mu$ W/MHz   |

### 3.6.3 Test Procedure

1. EUT have transmitted the maximum modulation signal and fixed channelize.
2. Setting of SA is following as: RB:1MHz / VB:1MHz / AT: 10dB Ref: 0dBm / Sweep time: Auto  
Sweep Mode: Continuous sweep / Detect mode: Positive peak / Trace mode: Max hold
3. Setting of SA is following as 30MHz and stop frequency 5140MHz Then to mark peak reading value + cable loss shall be less than limit.
4. Setting of SA is following as 5140MHz and stop frequency 5142MHz Then to mark peak reading value + cable loss shall be less than limit.
5. SA adjusted to start frequency 5142MHz and stop frequency 5150MHz. Then to mark peak reading value + cable loss shall be less than limit.
6. SA adjusted to start frequency 5250MHz and stop frequency 5251MHz Then to mark peak reading value + cable loss shall be less than limit.
7. SA adjusted to start frequency 5251MHz and stop frequency 5260MHz Then to mark peak reading value + cable loss shall be less than limit.
8. SA adjusted to start frequency 5260MHz and stop frequency 5266.7MHz Then to mark peak reading value + cable loss shall be less than limit.
9. Setting of SA is following as 5266.7MHz and stop frequency 5360MHz Then to mark peak reading value + cable loss shall be less than limit.
10. Setting of SA is following as 5360MHz and stop frequency 26000MHz Then to mark peak reading value + cable loss shall be less than limit.

### 3.6.4 Test Setup Diagram



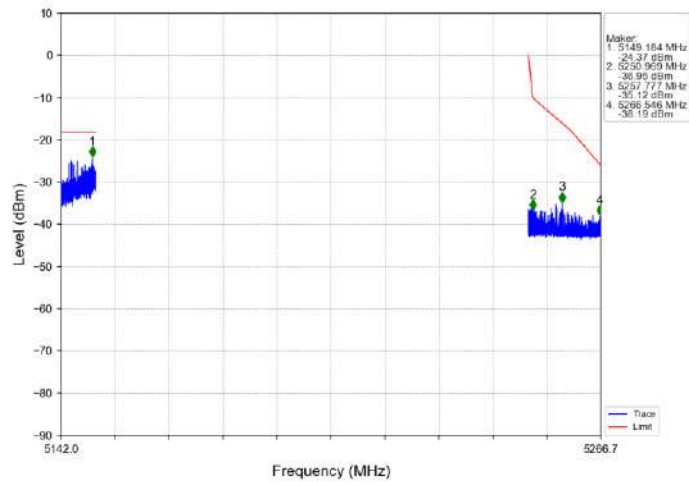
### 3.6.5 Test Result

| NTNV           |         |             |     |             |            |             |                    |                   |                    |                   |                 |         |
|----------------|---------|-------------|-----|-------------|------------|-------------|--------------------|-------------------|--------------------|-------------------|-----------------|---------|
| Mode           | TX Type | Freq. (MHz) | ANT | Freq. Range |            | Marker      |                    |                   |                    |                   | Limit (uW /MHz) | Verdict |
|                |         |             |     | Start (MHz) | Stop (MHz) | Freq. (MHz) | PK EIRP (dBm /MHz) | PK EIRP (uW /MHz) | AV EIRP (dBm /MHz) | AV EIRP (uW /MHz) |                 |         |
| 802.11a        | SISO    | 5180        | 1   | 5142        | 5150       | 5149.184    | -24.07             | 3.917             | /                  | /                 | 15              | Pass    |
|                |         |             |     | 5250        | 5251       | 5250.969    | -36.65             | 0.216             | /                  | /                 | 107.391         | Pass    |
|                |         |             |     | 5251        | 5260       | 5257.777    | -34.82             | 0.330             | /                  | /                 | 24.969          | Pass    |
|                |         |             |     | 5260        | 5266.7     | 5266.546    | -37.89             | 0.163             | /                  | /                 | 2.597           | Pass    |
|                |         | 5200        | 1   | 5142        | 5150       | 5146.576    | -26.26             | 2.366             | /                  | /                 | 15              | Pass    |
|                |         |             |     | 5250        | 5251       | 5250.976    | -27.54             | 1.762             | /                  | /                 | 105.676         | Pass    |
|                |         |             |     | 5251        | 5260       | 5259.118    | -27.19             | 1.910             | /                  | /                 | 18.981          | Pass    |
|                |         |             |     | 5260        | 5266.7     | 5266.399    | -29.89             | 1.026             | /                  | /                 | 2.705           | Pass    |
|                |         | 5240        | 1   | 5142        | 5150       | 5147.856    | -34.62             | 0.345             | /                  | /                 | 15              | Pass    |
|                |         |             |     | 5250        | 5251       | 5250.988    | -3.01              | 500.035           | -20.28             | 9.376             | 102.799         | Pass    |
|                |         |             |     | 5251        | 5260       | 5256.355    | -6.31              | 233.884           | -29.46             | 1.132             | 33.395          | Pass    |
|                |         |             |     | 5260        | 5266.7     | 5265.635    | -17.57             | 17.498            | -37.64             | 0.172             | 3.34            | Pass    |
|                |         | 5260        | 1   | 5233.3      | 5240       | 5234.017    | -18.20             | 15.136            | -35.97             | 0.253             | 3.039           | Pass    |
|                |         |             |     | 5240        | 5249       | 5242.655    | -7.62              | 172.982           | -29.05             | 1.245             | 27.325          | Pass    |
|                |         |             |     | 5249        | 5250       | 5249.012    | -2.35              | 582.103           | -19.54             | 11.117            | 103.036         | Pass    |
|                |         | 5300        | 1   | 5233.3      | 5240       | 5233.796    | -28.00             | 1.585             | /                  | /                 | 2.859           | Pass    |
|                |         |             |     | 5240        | 5249       | 5240.747    | -25.98             | 2.523             | /                  | /                 | 18.498          | Pass    |
|                |         |             |     | 5249        | 5250       | 5249.024    | -25.48             | 2.831             | /                  | /                 | 105.919         | Pass    |
|                |         | 5320        | 1   | 5233.3      | 5240       | 5234.198    | -34.36             | 0.366             | /                  | /                 | 3.195           | Pass    |
|                |         |             |     | 5240        | 5249       | 5240.243    | -33.32             | 0.466             | /                  | /                 | 16.687          | Pass    |
|                |         |             |     | 5249        | 5250       | 5249.096    | -30.00             | 1.000             | /                  | /                 | 124.998         | Pass    |
|                |         | 5500        | 1   | 5460        | 5470       | 5469.82     | -19.40             | 11.482            | /                  | /                 | 12.5            | Pass    |
|                |         |             |     | 5745        | 5765       | 5755.08     | -40.01             | 0.100             | /                  | /                 | 12.5            | Pass    |
|                |         | 5600        | 1   | 5460        | 5470       | 5466.59     | -34.82             | 0.330             | /                  | /                 | 12.5            | Pass    |
|                |         |             |     | 5745        | 5765       | 5749.36     | -33.24             | 0.474             | /                  | /                 | 12.5            | Pass    |
|                |         | 5700        | 1   | 5460        | 5470       | 5461.65     | -38.15             | 0.153             | /                  | /                 | 12.5            | Pass    |
|                |         |             |     | 5745        | 5765       | 5745.68     | -32.29             | 0.590             | /                  | /                 | 12.5            | Pass    |
|                |         | 5720        | 1   | 5460        | 5470       | 5468.4      | -39.90             | 0.102             | /                  | /                 | 12.5            | Pass    |
|                |         |             |     | 5745        | 5765       | 5745.14     | -20.72             | 8.472             | /                  | /                 | 12.5            | Pass    |
| 802.11n (HT20) | SISO    | 5180        | 1   | 5142        | 5150       | 5149.688    | -24.25             | 3.758             | /                  | /                 | 15              | Pass    |
|                |         |             |     | 5250        | 5251       | 5250.925    | -37.38             | 0.183             | /                  | /                 | 118.83          | Pass    |
|                |         |             |     | 5251        | 5260       | 5257.417    | -34.95             | 0.320             | /                  | /                 | 26.876          | Pass    |
|                |         |             |     | 5260        | 5266.7     | 5265.956    | -39.42             | 0.114             | /                  | /                 | 3.056           | Pass    |
|                |         | 5200        | 1   | 5142        | 5150       | 5149.68     | -31.17             | 0.764             | /                  | /                 | 15              | Pass    |
|                |         |             |     | 5250        | 5251       | 5250.841    | -31.73             | 0.671             | /                  | /                 | 144.159         | Pass    |
|                |         |             |     | 5251        | 5260       | 5257.822    | -33.10             | 0.490             | /                  | /                 | 24.74           | Pass    |
|                |         |             |     | 5260        | 5266.7     | 5264.911    | -34.87             | 0.326             | /                  | /                 | 4.078           | Pass    |
|                |         | 5240        | 1   | 5142        | 5150       | 5145.84     | -38.33             | 0.147             | /                  | /                 | 15              | Pass    |
|                |         |             |     | 5250        | 5251       | 5250.975    | -2.98              | 503.501           | -20.98             | 7.980             | 105.919         | Pass    |
|                |         |             |     | 5251        | 5260       | 5251.018    | -3.77              | 419.759           | -21.10             | 7.762             | 99.449          | Pass    |
|                |         |             |     | 5260        | 5266.7     | 5263.658    | -15.88             | 25.823            | -39.87             | 0.103             | 5.763           | Pass    |
|                |         | 5260        | 1   | 5233.3      | 5240       | 5238.352    | -12.44             | 57.016            | -35.46             | 0.284             | 10.056          | Pass    |
|                |         |             |     | 5240        | 5249       | 5248.829    | -3.41              | 456.037           | -20.70             | 8.511             | 96.564          | Pass    |
|                |         |             |     | 5249        | 5250       | 5249.022    | -1.23              | 753.356           | -20.17             | 9.616             | 105.433         | Pass    |
|                |         | 5300        | 1   | 5233.3      | 5240       | 5233.441    | -36.26             | 0.237             | /                  | /                 | 2.592           | Pass    |
|                |         |             |     | 5240        | 5249       | 5240.108    | -33.28             | 0.470             | /                  | /                 | 16.233          | Pass    |
|                |         |             |     | 5249        | 5250       | 5249.102    | -28.96             | 1.271             | /                  | /                 | 126.735         | Pass    |
|                |         | 5320        | 1   | 5233.3      | 5240       | 5233.93     | -39.00             | 0.126             | /                  | /                 | 2.967           | Pass    |
|                |         |             |     | 5240        | 5249       | 5240.423    | -38.69             | 0.135             | /                  | /                 | 17.313          | Pass    |

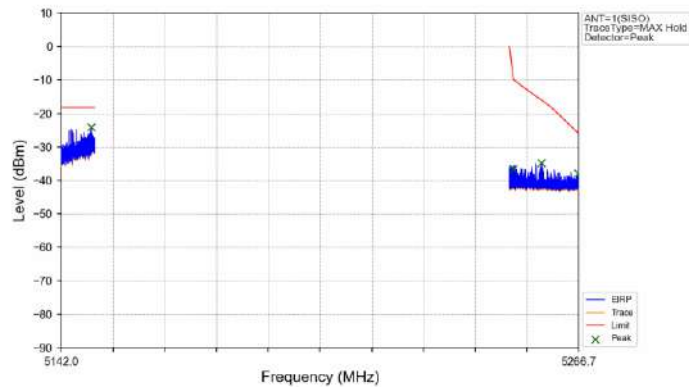
|                   |      |      |   |        |        |          |        |         |        |       |         |      |
|-------------------|------|------|---|--------|--------|----------|--------|---------|--------|-------|---------|------|
| 802.11n<br>(HT40) | SISO | 5500 | 1 | 5249   | 5250   | 5249.155 | -36.08 | 0.247   | /      | /     | 143.167 | Pass |
|                   |      |      |   | 5460   | 5470   | 5464.54  | -19.56 | 11.066  | /      | /     | 12.5    | Pass |
|                   |      |      |   | 5745   | 5765   | 5745.86  | -39.94 | 0.101   | /      | /     | 12.5    | Pass |
|                   |      | 5600 | 1 | 5460   | 5470   | 5469.06  | -38.84 | 0.131   | /      | /     | 12.5    | Pass |
|                   |      |      |   | 5745   | 5765   | 5755.6   | -39.71 | 0.107   | /      | /     | 12.5    | Pass |
|                   |      | 5700 | 1 | 5460   | 5470   | 5462.06  | -39.08 | 0.124   | /      | /     | 12.5    | Pass |
|                   |      |      |   | 5745   | 5765   | 5745.06  | -34.79 | 0.332   | /      | /     | 12.5    | Pass |
|                   |      | 5720 | 1 | 5460   | 5470   | 5465.92  | -43.20 | 0.048   | /      | /     | 12.5    | Pass |
|                   |      |      |   | 5745   | 5765   | 5745.16  | -24.36 | 3.664   | /      | /     | 12.5    | Pass |
|                   |      | 5190 | 1 | 5141.6 | 5150   | 5147.648 | -23.03 | 4.977   | /      | /     | 15      | Pass |
|                   |      |      |   | 5250   | 5251   | 5250.939 | -27.96 | 1.600   | /      | /     | 57.532  | Pass |
|                   |      |      |   | 5251   | 5270   | 5269.734 | -32.16 | 0.608   | /      | /     | 8.131   | Pass |
|                   |      |      |   | 5270   | 5278.4 | 5277.006 | -31.73 | 0.671   | /      | /     | 3.01    | Pass |
|                   |      | 5230 | 1 | 5141.6 | 5150   | 5144.607 | -32.92 | 0.511   | /      | /     | 15      | Pass |
|                   |      |      |   | 5250   | 5251   | 5250.977 | -8.02  | 157.761 | -25.91 | 2.564 | 52.717  | Pass |
|                   |      |      |   | 5251   | 5270   | 5251.019 | -8.67  | 135.831 | -26.27 | 2.360 | 49.816  | Pass |
|                   |      |      |   | 5270   | 5278.4 | 5277.82  | -23.61 | 4.355   | -43.63 | 0.043 | 2.69    | Pass |
|                   |      | 5270 | 1 | 5221.6 | 5230   | 5221.608 | -21.44 | 7.178   | -41.37 | 0.073 | 2.489   | Pass |
|                   |      |      |   | 5230   | 5249   | 5248.943 | -8.54  | 139.959 | -25.53 | 2.799 | 49.725  | Pass |
|                   |      |      |   | 5249   | 5250   | 5249.006 | -7.48  | 178.649 | -25.28 | 2.965 | 50.812  | Pass |
|                   |      |      |   | 5350   | 5358.4 | 5355.342 | -29.97 | 1.007   | /      | /     | 15      | Pass |
|                   |      | 5310 | 1 | 5221.6 | 5230   | 5221.743 | -31.08 | 0.780   | /      | /     | 2.535   | Pass |
|                   |      |      |   | 5230   | 5249   | 5230.19  | -30.17 | 0.962   | /      | /     | 8.086   | Pass |
|                   |      |      |   | 5249   | 5250   | 5249.03  | -25.29 | 2.958   | /      | /     | 53.696  | Pass |
|                   |      |      |   | 5350   | 5358.4 | 5351.369 | -16.26 | 23.659  | -37.51 | 0.177 | 15      | Pass |
|                   |      | 5510 | 1 | 5460   | 5470   | 5467.52  | -13.77 | 41.976  | /      | /     | 50      | Pass |
|                   |      | 5590 | 1 | 5460   | 5470   | 5460.35  | -38.77 | 0.133   | /      | /     | 50      | Pass |
|                   |      | 5670 | 1 | 5460   | 5470   | 5469.94  | -40.21 | 0.095   | /      | /     | 50      | Pass |
|                   |      | 5710 | 1 | 5460   | 5470   | 5462.53  | -42.60 | 0.055   | /      | /     | 50      | Pass |

### 3.6.6 Test Graphs

802.11a\_LCH\_5180MHz\_Ant1\_NTNV

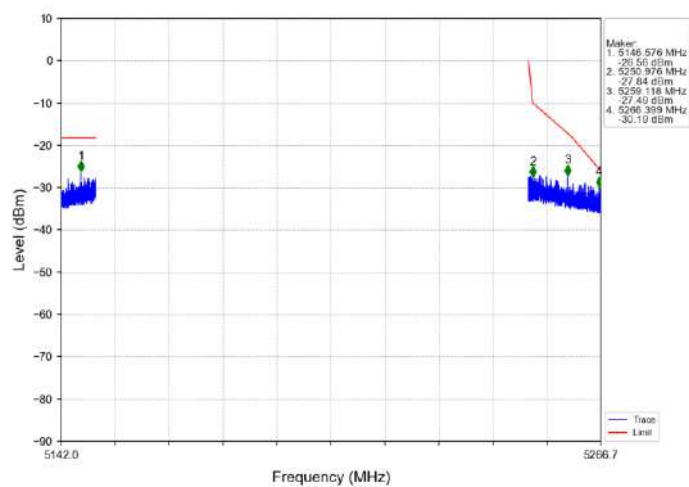


802.11a\_LCH\_5180MHz\_Ant1\_NTNV

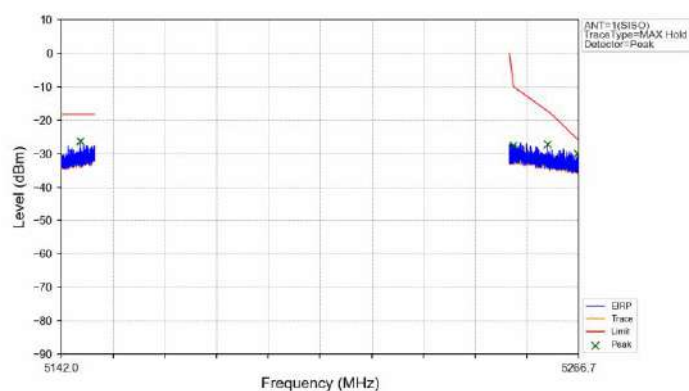


| Start (MHz) | Stop (MHz) | REZ (MHz) | VIEW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Gain (dB) | PK EIRP (dBm) | AV EIRP (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|------------|------------|----------------|----------------|-----------|---------------|---------------|-------------|--------|
| 5142        | 5150       | 1         | 1          | 5149.164   | -24.37         | /              | 0.30      | -24.07        | /             | -18.24      | Pass   |
| 5250        | 5251       | 1         | 1          | 5250.969   | -36.95         | /              | 0.30      | -36.65        | /             | -8.69       | Pass   |
| 5251        | 5260       | 1         | 1          | 5257.777   | -35.12         | /              | 0.30      | -34.82        | /             | -16.03      | Pass   |
| 5250        | 5260       | 1         | 1          | 5266.546   | -38.19         | /              | 0.30      | -37.89        | /             | -25.96      | Pass   |

802.11a\_MCH\_5200MHz\_Ant1\_NTNV

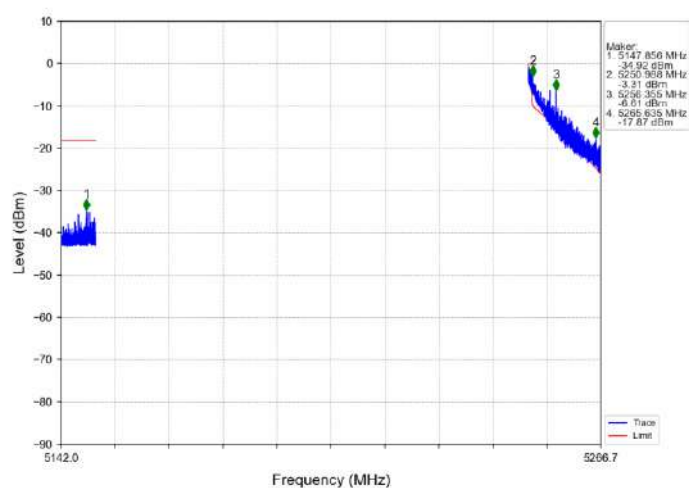


## 802.11a\_MCH\_5200MHz\_Ant1\_NTNV

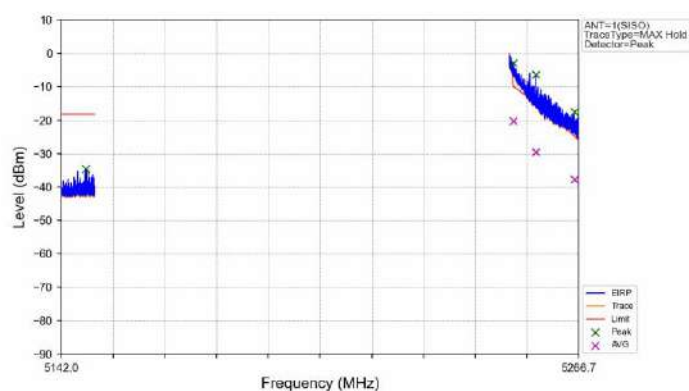


| Start (MHz) | Stop (MHz) | REW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Gain (dB) | PK ERP (dBm) | AV ERP (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|------------|----------------|----------------|-----------|--------------|--------------|-------------|--------|
| 5142        | 5150       | 1         | 1         | 5146.576   | -26.56         | /              | 0.30      | -26.26       | /            | -18.24      | Pass   |
| 5250        | 5251       | 1         | 1         | 5250.976   | -27.84         | /              | 0.30      | -27.54       | /            | -17.22      | Pass   |
| 5251        | 5260       | 1         | 1         | 5259.116   | -27.49         | /              | 0.30      | -27.19       | /            | -17.22      | Pass   |
| 5260        | 5266.7     | 1         | 1         | 5266.390   | -20.19         | /              | 0.30      | -29.90       | /            | -18.24      | Pass   |

## 802.11a\_HCH\_5240MHz\_Ant1\_NTNV

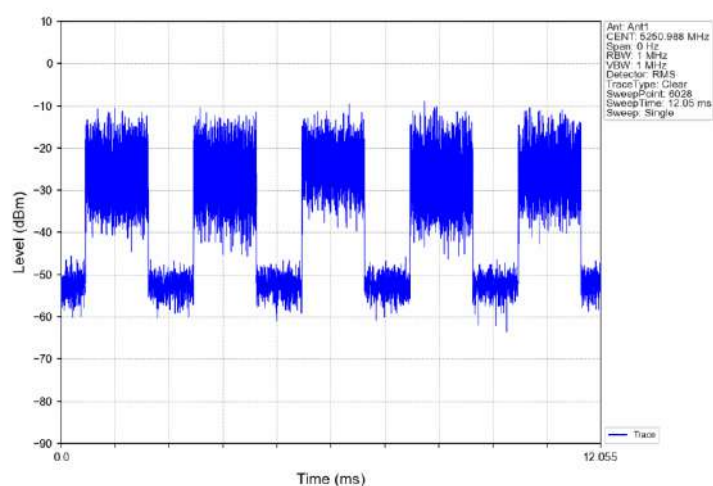


## 802.11a\_HCH\_5240MHz\_Ant1\_NTNV

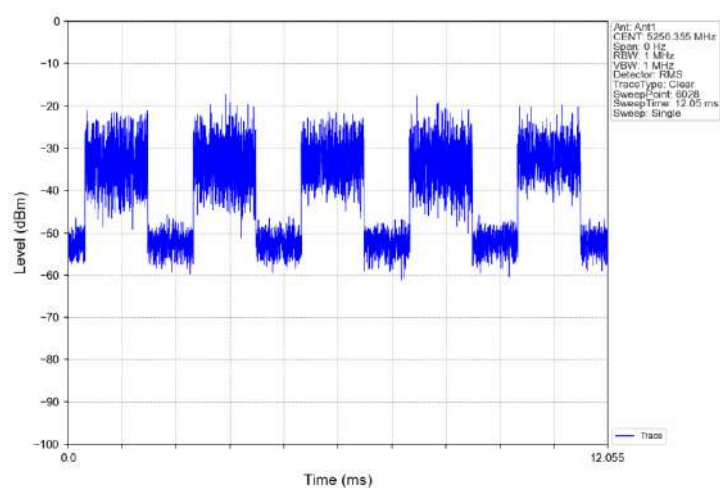


| Start (MHz) | Stop (MHz) | REW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Gain (dB) | PK ERP (dBm) | AV ERP (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|------------|----------------|----------------|-----------|--------------|--------------|-------------|--------|
| 5142        | 5150       | 1         | 1         | 5147.856   | -34.92         | /              | 0.30      | -34.62       | /            | -18.24      | Pass   |
| 5250        | 5251       | 1         | 1         | 5250.976   | -3.31          | -20.50         | 0.30      | -3.01        | -20.26       | -18.24      | Pass   |
| 5251        | 5260       | 1         | 1         | 5259.116   | -6.61          | -29.76         | 0.30      | -6.31        | -29.46       | -18.24      | Pass   |
| 5260        | 5266.7     | 1         | 1         | 5266.390   | -17.87         | -37.94         | 0.30      | -17.57       | -37.64       | -18.24      | Pass   |

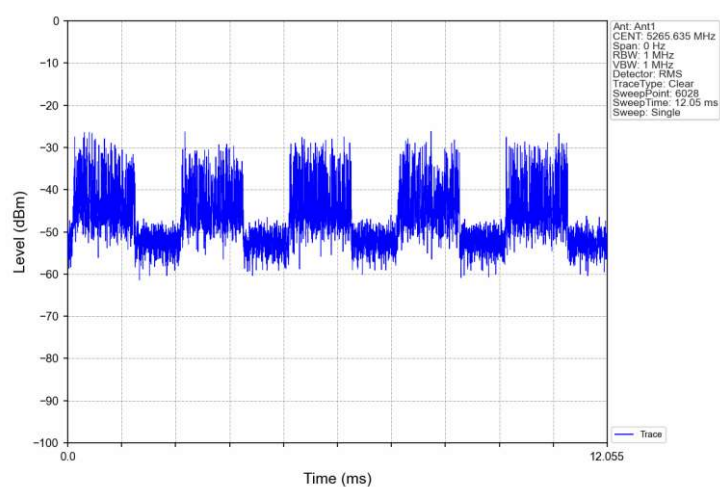
## 802.11a\_HCH\_5240MHz\_Ant1\_NTNV



## 802.11a\_HCH\_5240MHz\_Ant1\_NTNV

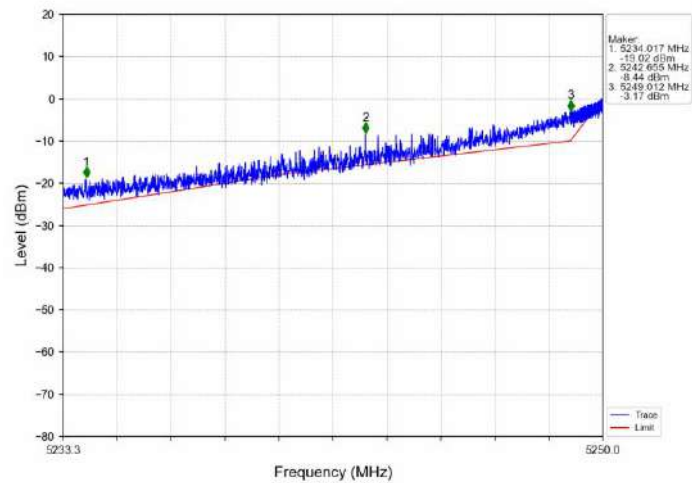


## 802.11a\_HCH\_5240MHz\_Ant1\_NTNV

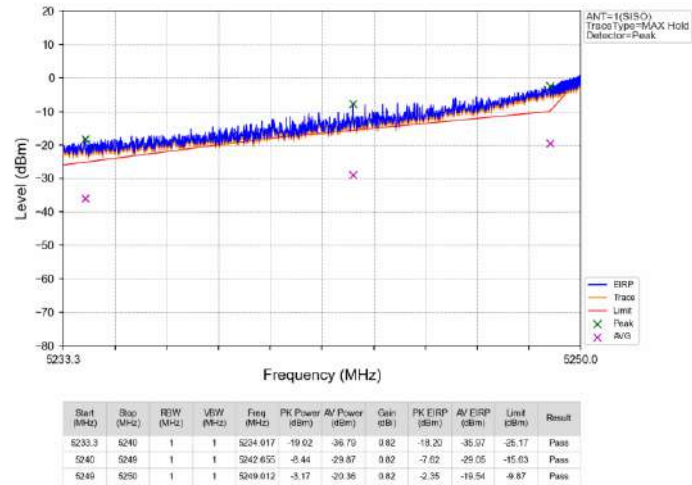




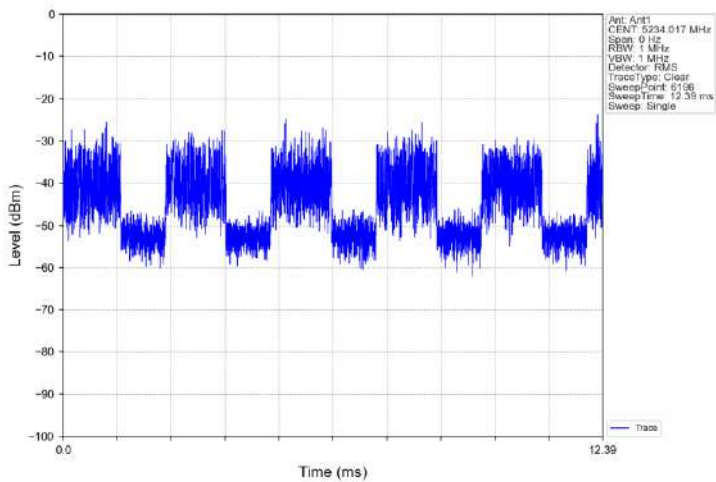
802.11a LCH 5260MHz Ant1 NTNV



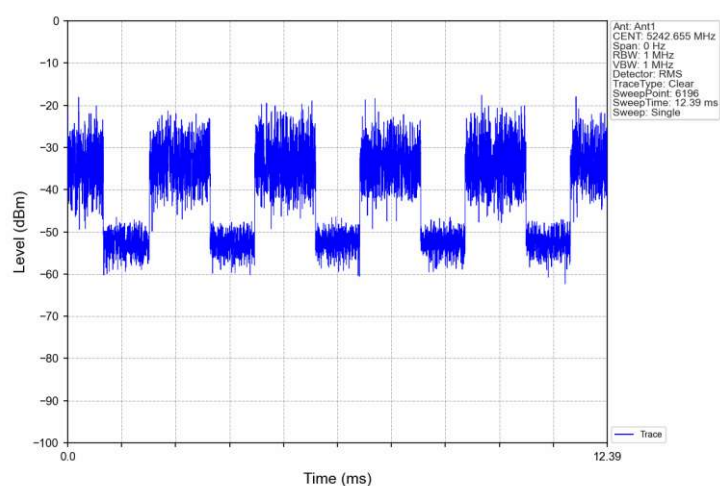
802.11a LCH 5260MHz Ant1 NTNV



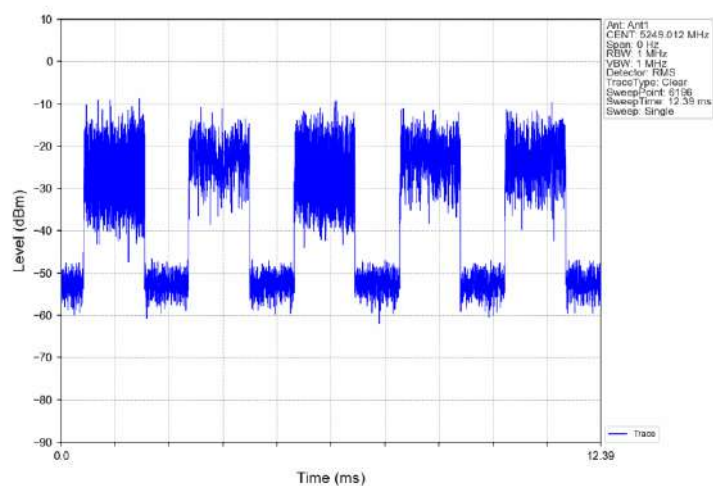
802.11a LCH 5260MHz Ant1 NTNV



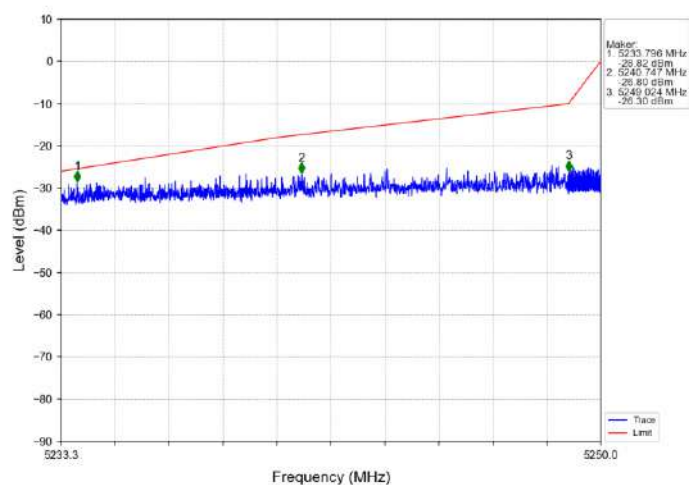
## 802.11a\_LCH\_5260MHz\_Ant1\_NTNV



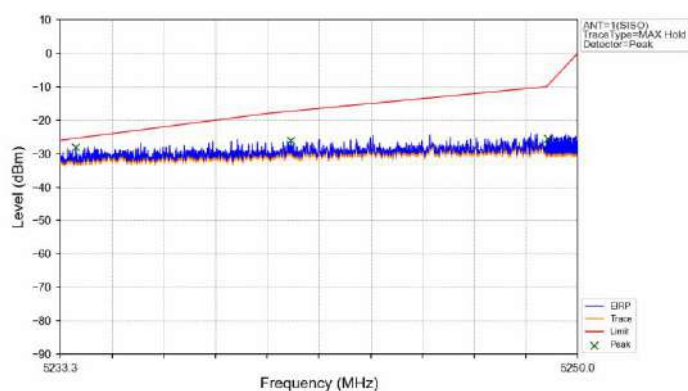
## 802.11a\_LCH\_5260MHz\_Ant1\_NTNV



## 802.11a\_MCH\_5300MHz\_Ant1\_NTNV

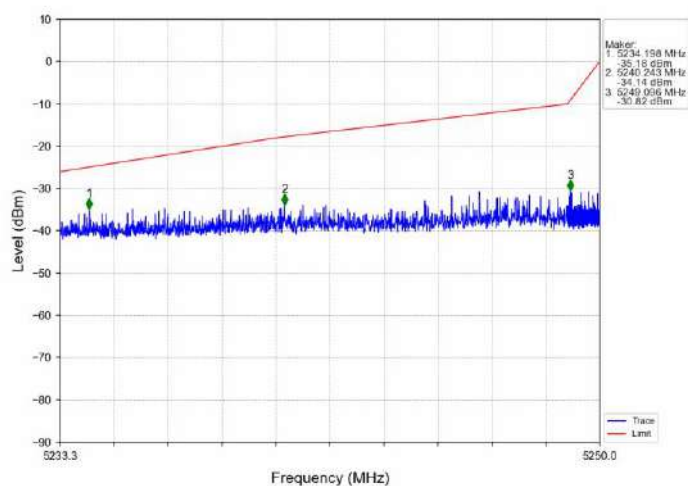


## 802.11a\_MCH\_5300MHz\_Ant1\_NTNV

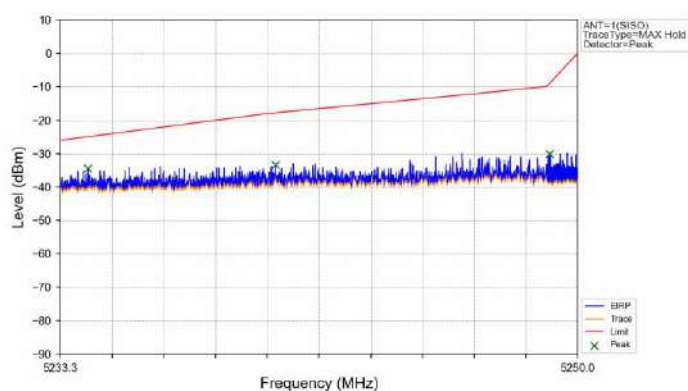


| Start (MHz) | Stop (MHz) | REW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Gain (dB) | PK ERP (dBm) | AV ERP (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|------------|----------------|----------------|-----------|--------------|--------------|-------------|--------|
| 5233.3      | 5240       | 1         | 1         | 5233.796   | -24.82         | /              | 0.82      | -28.00       | /            | -25.64      | Pass   |
| 5240        | 5245       | 1         | 1         | 5240.747   | -26.80         | /              | 0.82      | -25.98       | /            | -17.33      | Pass   |
| 5245        | 5250       | 1         | 1         | 5249.024   | -26.30         | /              | 0.82      | -25.45       | /            | -9.75       | Pass   |

## 802.11a\_HCH\_5320MHz\_Ant1\_NTNV

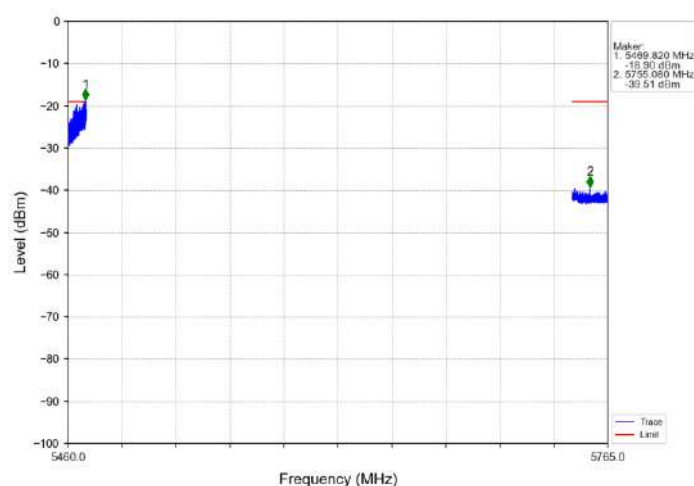


## 802.11a\_HCH\_5320MHz\_Ant1\_NTNV

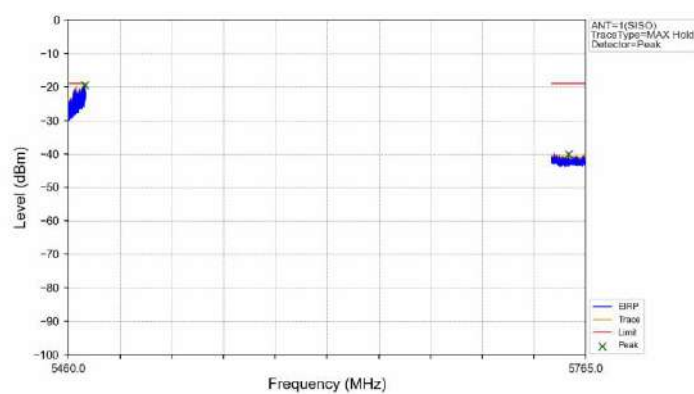


| Start (MHz) | Stop (MHz) | REW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Gain (dB) | PK ERP (dBm) | AV ERP (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|------------|----------------|----------------|-----------|--------------|--------------|-------------|--------|
| 5233.3      | 5240       | 1         | 1         | 5234.198   | -35.19         | /              | 0.82      | -34.36       | /            | -24.96      | Pass   |
| 5240        | 5245       | 1         | 1         | 5240.243   | -34.14         | /              | 0.82      | -33.32       | /            | -17.78      | Pass   |
| 5245        | 5250       | 1         | 1         | 5249.096   | -30.82         | /              | 0.82      | -30.00       | /            | -6.63       | Pass   |

## 802.11a\_LCH\_5500MHz\_Ant1\_NTNV

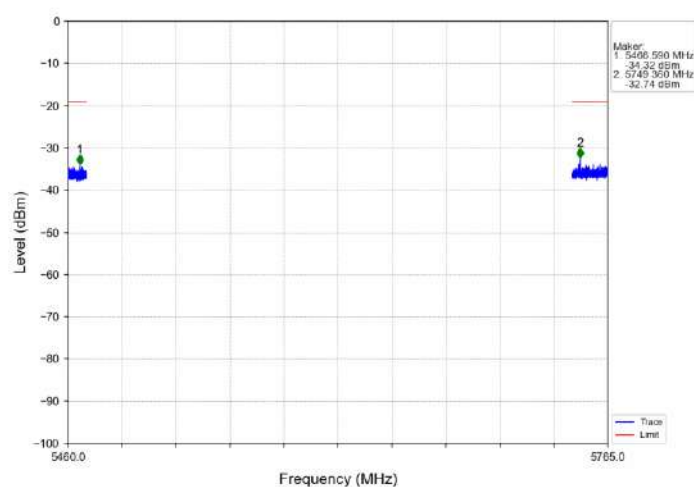


## 802.11a\_LCH\_5500MHz\_Ant1\_NTNV

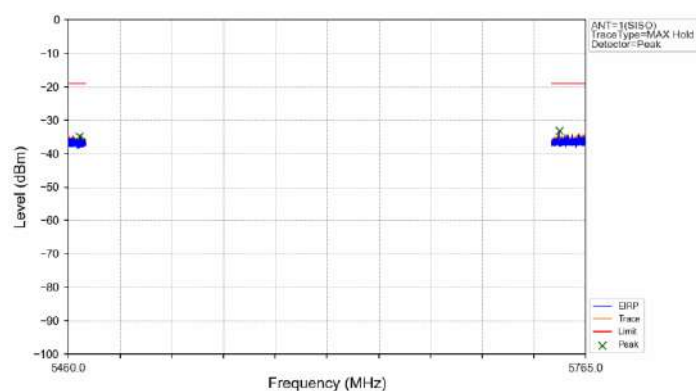


| Start (MHz) | Stop (MHz) | FEW (MHz) | VSW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Gain (dB) | PK ERP (dBm) | AV ERP (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|------------|----------------|----------------|-----------|--------------|--------------|-------------|--------|
| 5460        | 5470       | 1         | 1         | 5699.820   | -19.90         | /              | -0.56     | -19.43       | /            | -19.93      | Pass   |
| 5745        | 5755       | 1         | 1         | 5755.080   | -39.51         | /              | -0.56     | -40.07       | /            | -40.03      | Pass   |

## 802.11a\_MCH\_5600MHz\_Ant1\_NTNV

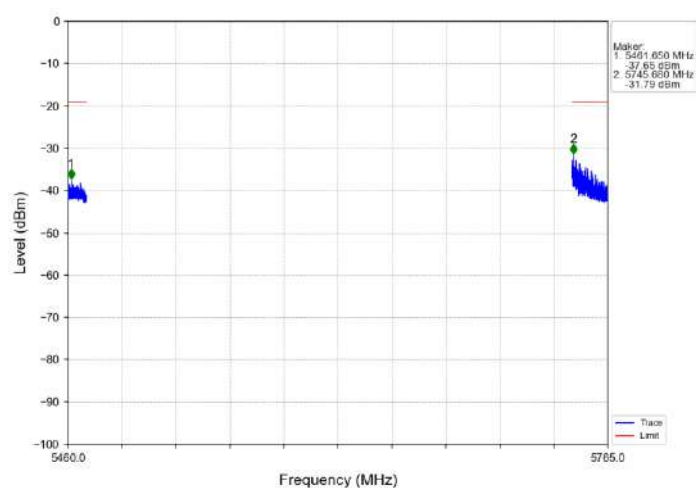


## 802.11a\_MCH\_5600MHz\_Ant1\_NTNV

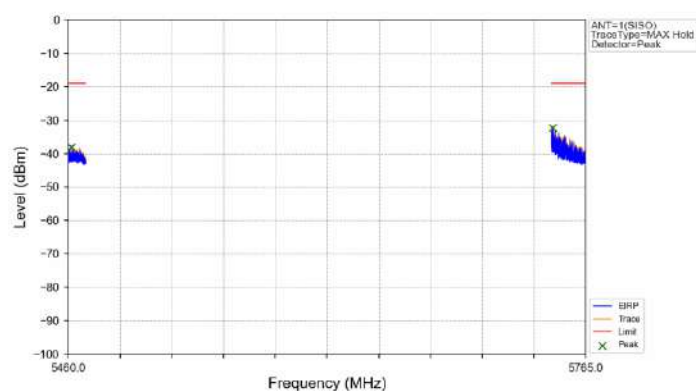


| Start (MHz) | Stop (MHz) | REBW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Gain (dB) | PK ERP (dBm) | AV ERP (dBm) | Limit (dBm) | Result |
|-------------|------------|------------|-----------|------------|----------------|----------------|-----------|--------------|--------------|-------------|--------|
| 5450        | 5470       | 1          | 1         | 5466.590   | -34.32         | /              | -0.50     | -34.82       | /            | -19.03      | Pass   |
| 5745        | 5765       | 1          | 1         | 5749.350   | -32.74         | /              | -0.50     | -33.24       | /            | -19.03      | Pass   |

## 802.11a\_HCH\_5700MHz\_Ant1\_NTNV

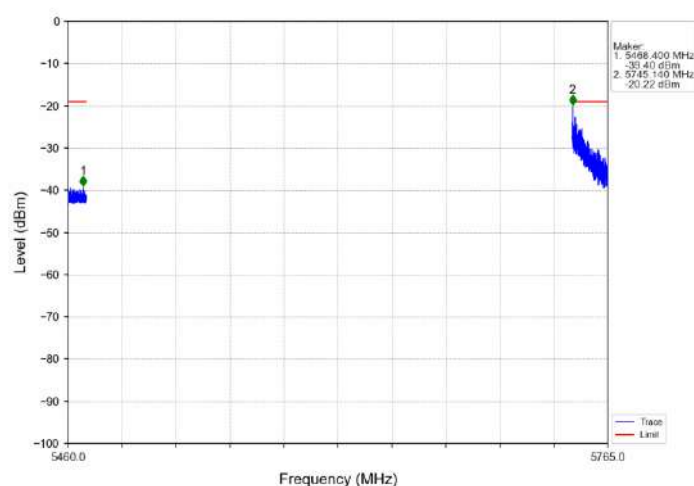


## 802.11a\_HCH\_5700MHz\_Ant1\_NTNV

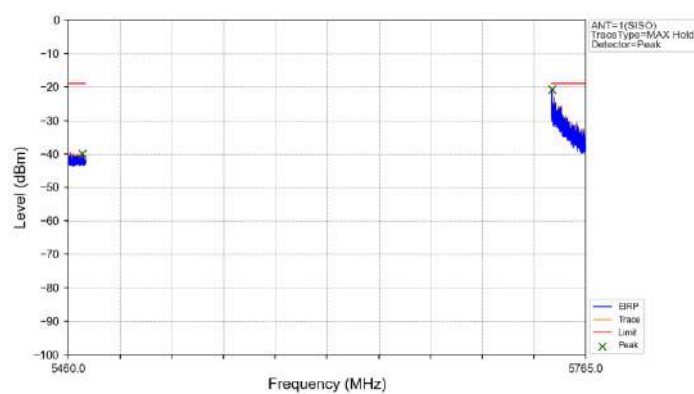


| Start (MHz) | Stop (MHz) | REBW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Gain (dB) | PK ERP (dBm) | AV ERP (dBm) | Limit (dBm) | Result |
|-------------|------------|------------|-----------|------------|----------------|----------------|-----------|--------------|--------------|-------------|--------|
| 5450        | 5470       | 1          | 1         | 5461.650   | -37.65         | /              | -0.50     | -38.15       | /            | -19.03      | Pass   |
| 5745        | 5765       | 1          | 1         | 5745.680   | -31.79         | /              | -0.50     | -32.29       | /            | -19.03      | Pass   |

## 802.11a\_HHCH\_5720MHz\_Ant1\_NTNV

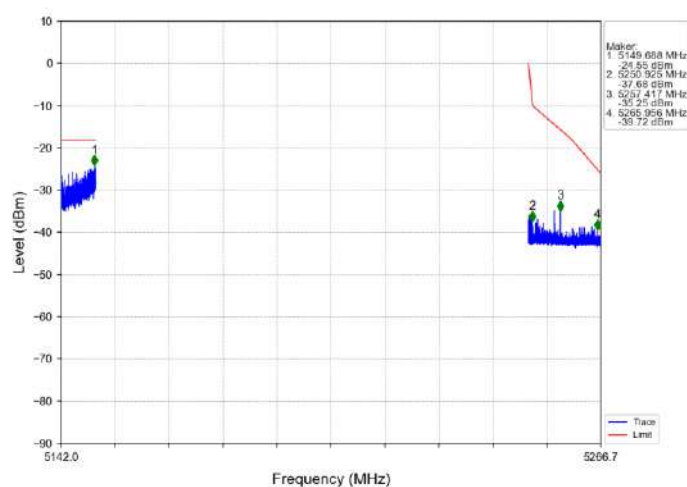


## 802.11a\_HHCH\_5720MHz\_Ant1\_NTNV

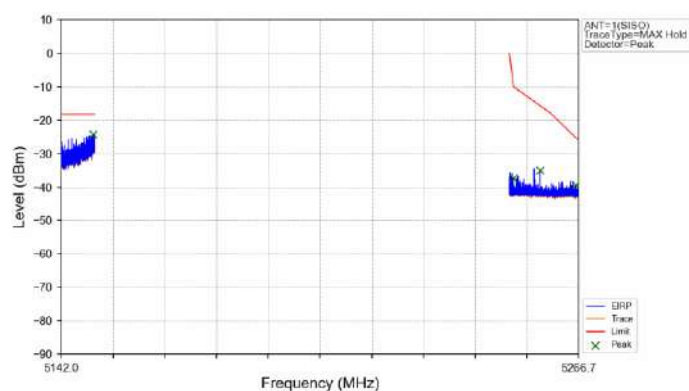


| Start (MHz) | Stop (MHz) | FEW (MHz) | VIEW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Gain (dB) | PK ERP (dBm) | AV ERP (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|------------|------------|----------------|----------------|-----------|--------------|--------------|-------------|--------|
| 5460        | 5470       | 1         | 1          | 5468.400   | -39.40         | /              | -0.56     | -39.90       | /            | -19.03      | Pass   |
| 5745        | 5755       | 1         | 1          | 5745.140   | -20.22         | /              | -0.56     | -20.72       | /            | -19.03      | Pass   |

## 802.11n(HT20)\_LCH\_5180MHz\_Ant1\_NTNV

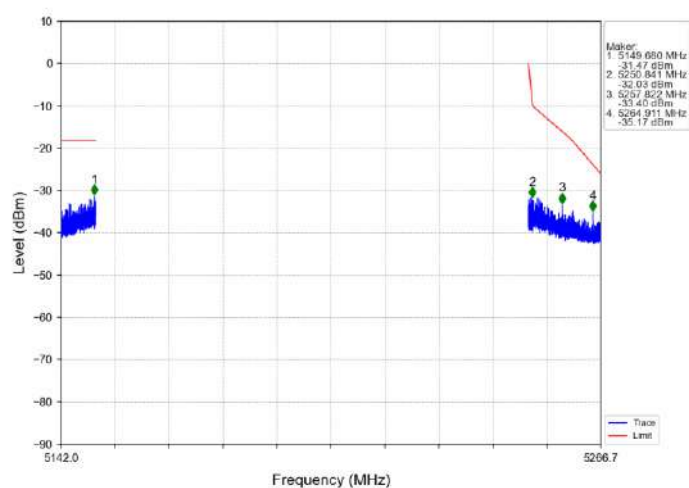


## 802.11n(HT20) LCH 5180MHz Ant1 NTV

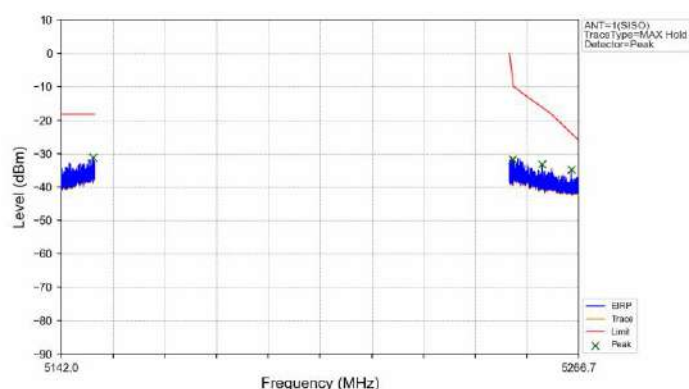


| Start (MHz) | Stop (MHz) | REW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Gain (dB) | PK ERP (dBm) | AV ERP (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|------------|----------------|----------------|-----------|--------------|--------------|-------------|--------|
| 5142        | 5150       | 1         | 1         | 5149.680   | -24.55         | /              | 0.30      | -24.25       | /            | -18.24      | Pass   |
| 5250        | 5251       | 1         | 1         | 5250.841   | -37.68         | /              | 0.30      | -37.38       | /            | -9.25       | Pass   |
| 5251        | 5260       | 1         | 1         | 5257.822   | -35.25         | /              | 0.30      | -34.95       | /            | -15.71      | Pass   |
| 5260        | 5266.7     | 1         | 1         | 5264.911   | -39.72         | /              | 0.30      | -39.42       | /            | -25.15      | Pass   |

## 802.11n(HT20) MCH 5200MHz Ant1 NTV

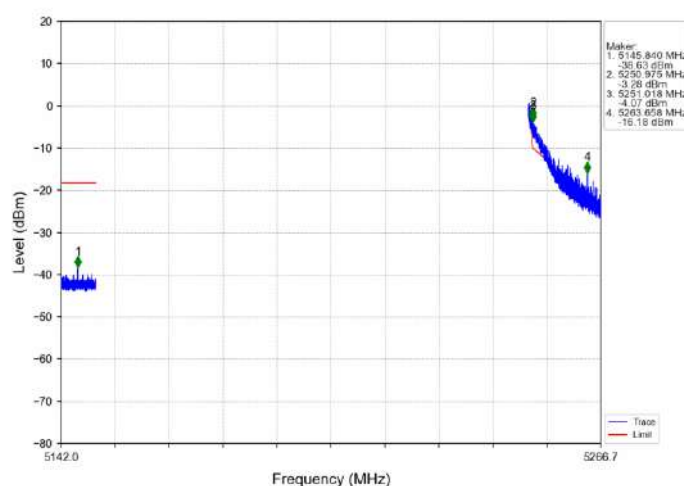


## 802.11n(HT20) MCH 5200MHz Ant1 NTV

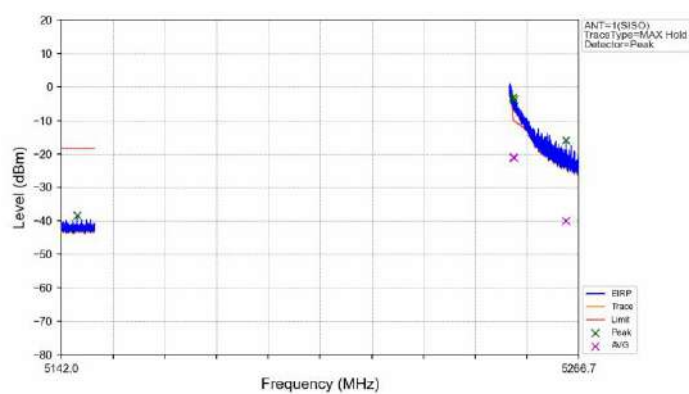


| Start (MHz) | Stop (MHz) | REW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Gain (dB) | PK ERP (dBm) | AV ERP (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|------------|----------------|----------------|-----------|--------------|--------------|-------------|--------|
| 5142        | 5150       | 1         | 1         | 5149.680   | -31.47         | /              | 0.30      | -31.17       | /            | -18.24      | Pass   |
| 5250        | 5251       | 1         | 1         | 5250.841   | -32.03         | /              | 0.30      | -31.73       | /            | -8.41       | Pass   |
| 5251        | 5260       | 1         | 1         | 5257.822   | -33.40         | /              | 0.30      | -33.10       | /            | -16.07      | Pass   |
| 5260        | 5266.7     | 1         | 1         | 5264.911   | -35.17         | /              | 0.30      | -34.87       | /            | -23.9       | Pass   |

## 802.11n(HT20) HCH\_5240MHz\_Ant1\_NTNV

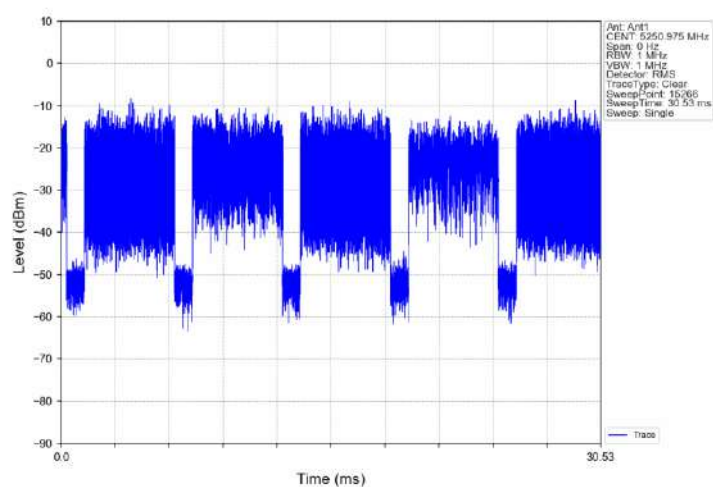


## 802.11n(HT20) HCH\_5240MHz\_Ant1\_NTNV

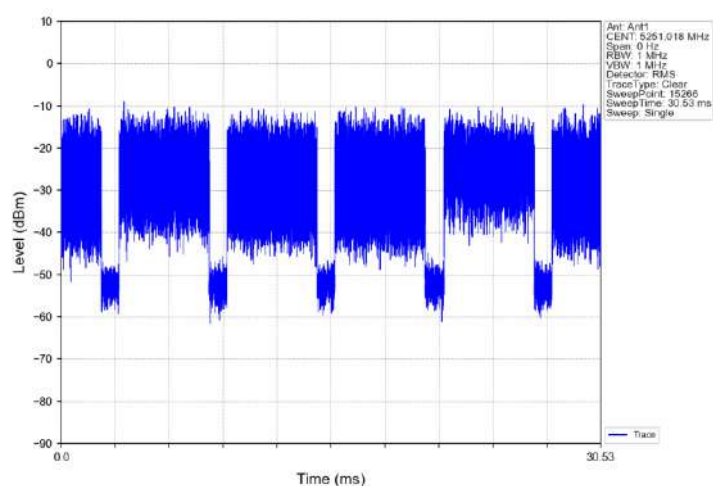


| Start (MHz) | Stop (MHz) | RBW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Gain (dB) | PK ERP (dBm) | AV ERP (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|------------|----------------|----------------|-----------|--------------|--------------|-------------|--------|
| 5142        | 5150       | 1         | 1         | 5145.840   | -38.63         | -              | 0.30      | -38.33       | -            | -18.24      | Pass   |
| 5250        | 5251       | 1         | 1         | 5250.975   | -3.28          | -21.20         | 0.30      | -2.98        | -20.90       | -9.75       | Pass   |
| 5251        | 5260       | 1         | 1         | 5251.018   | -4.07          | -21.40         | 0.30      | -3.77        | -21.10       | -10.02      | Pass   |
| 5260        | 5266.7     | 1         | 1         | 5263.658   | -15.18         | -40.17         | 0.30      | -15.88       | -35.97       | -22.39      | Pass   |

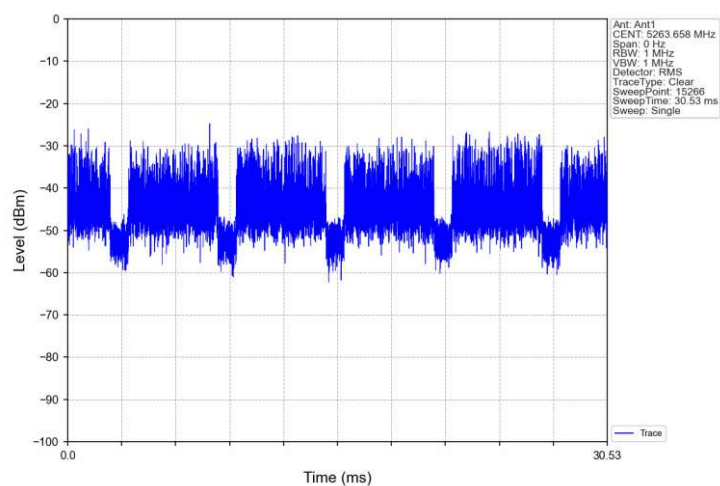
## 802.11n(HT20) HCH\_5240MHz\_Ant1\_NTNV



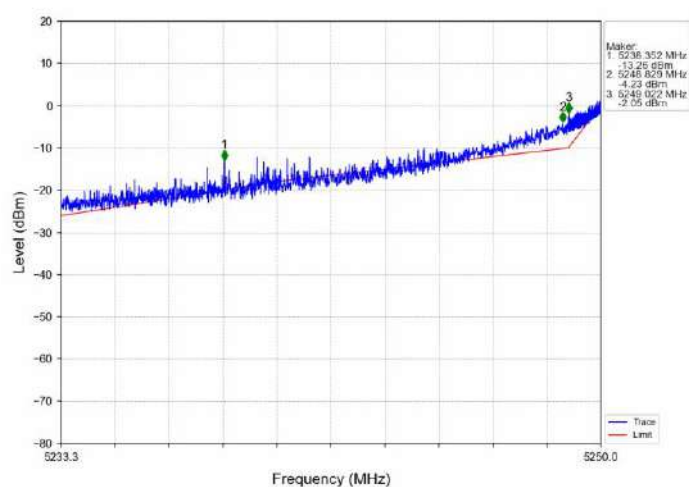
## 802.11n(HT20) HCH 5240MHz Ant1 NTV



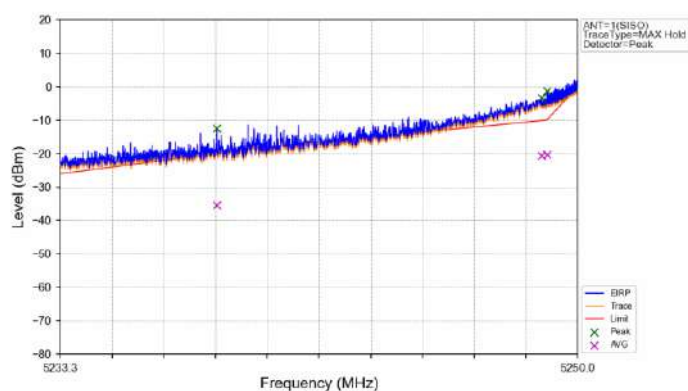
## 802.11n(HT20) HCH 5240MHz Ant1 NTV



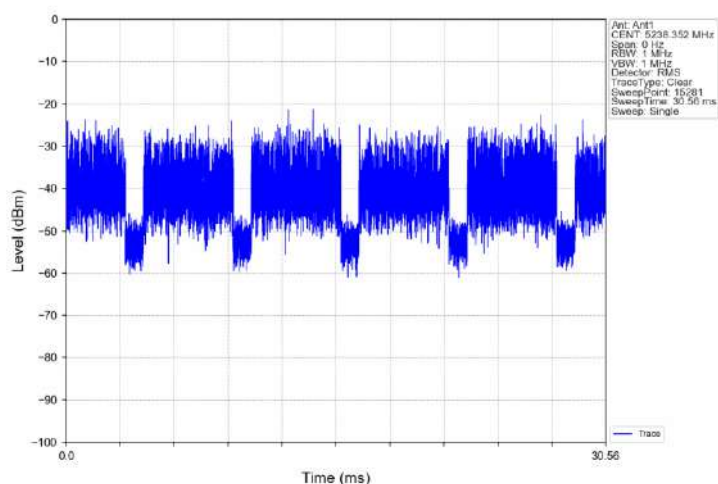
## 802.11n(HT20) LCH 5260MHz Ant1 NTV



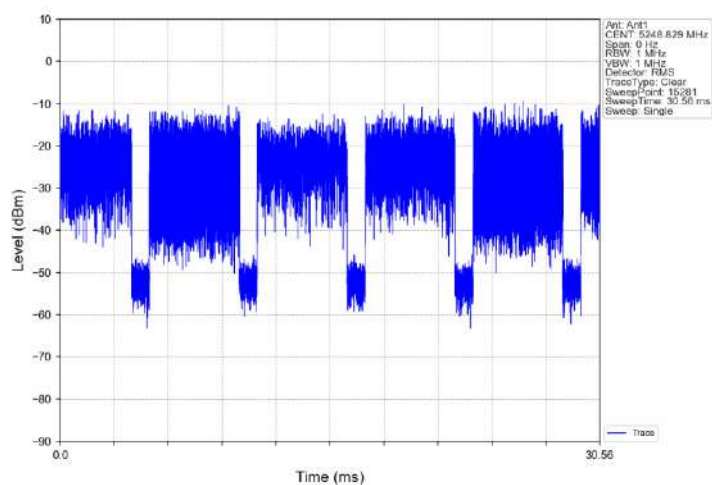
## 802.11n(HT20) LCH\_5260MHz\_Ant1\_NTNV



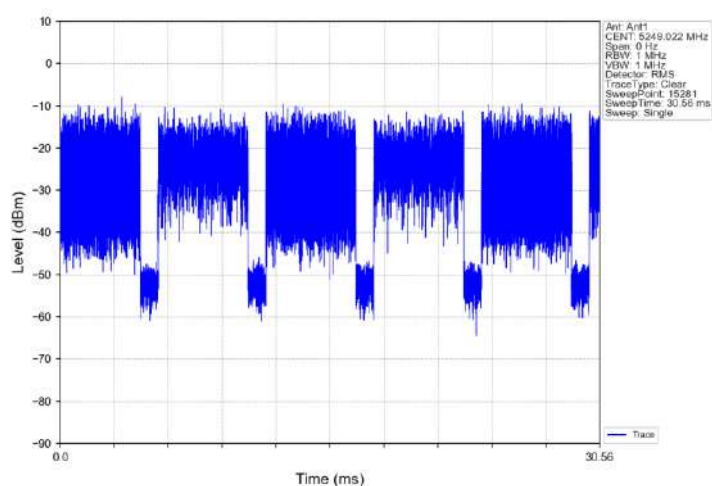
## 802.11n(HT20) LCH\_5260MHz\_Ant1\_NTNV



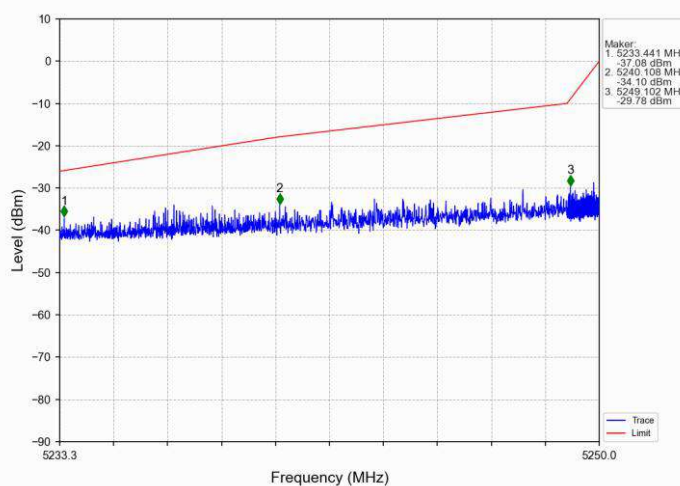
## 802.11n(HT20) LCH\_5260MHz\_Ant1\_NTNV



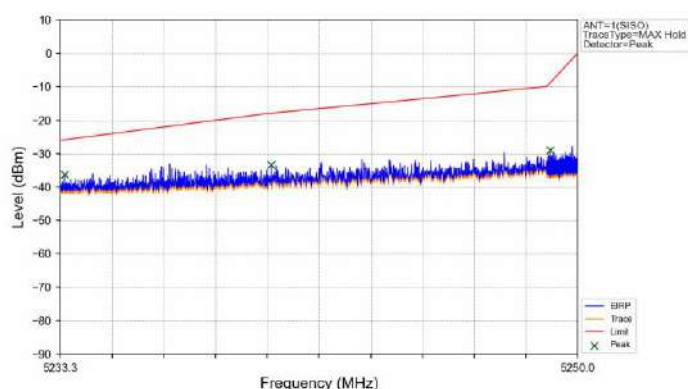
## 802.11n(HT20) LCH 5260MHz Ant1\_NTNV



## 802.11n(HT20) MCH 5300MHz Ant1\_NTNV

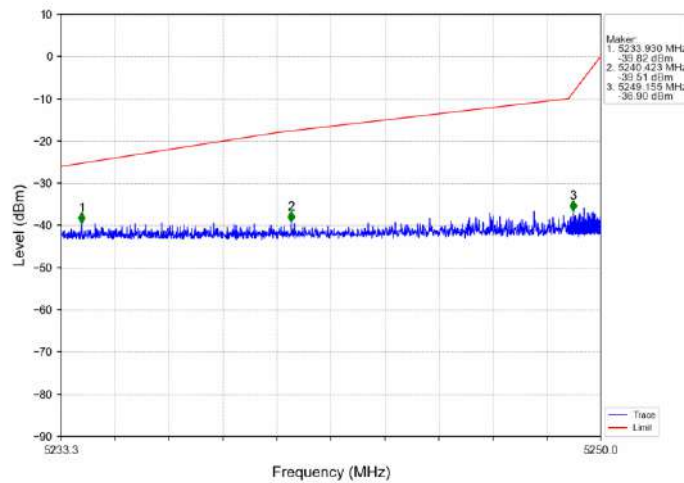


## 802.11n(HT20) MCH 5300MHz Ant1\_NTNV

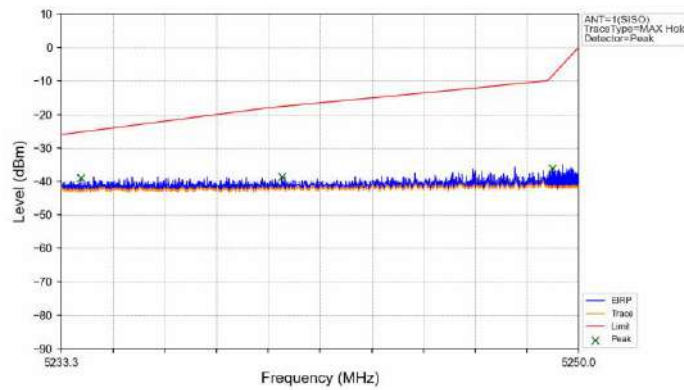


| Start (MHz) | Stop (MHz) | RBW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Gain (dB) | PK ERP (dBm) | AV ERP (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|------------|----------------|----------------|-----------|--------------|--------------|-------------|--------|
| 5233.3      | 5240       | 1         | 1         | 5233.441   | -37.08         | /              | 0.82      | -36.26       | /            | -25.96      | Pass   |
| 5240        | 5249       | 1         | 1         | 5240.108   | -34.10         | /              | 0.82      | -33.28       | /            | -17.9       | Pass   |
| 5249        | 5250       | 1         | 1         | 5249.102   | -29.78         | /              | 0.82      | -28.96       | /            | -8.97       | Pass   |

## 802.11n(HT20) HCH\_5320MHz\_Ant1\_NTNV

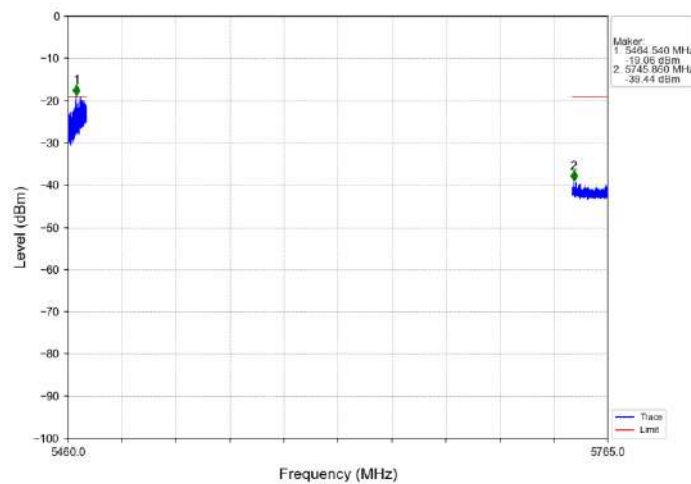


## 802.11n(HT20) HCH\_5320MHz\_Ant1\_NTNV

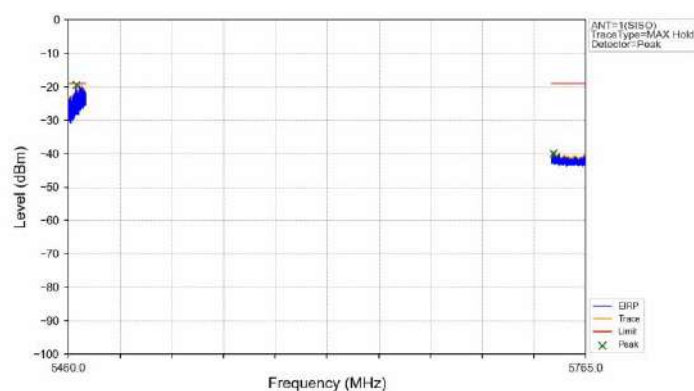


| Start (MHz) | Stop (MHz) | FEW (MHz) | VIEW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Gain (dB) | PK EIRP (dBm) | AV EIRP (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|------------|------------|----------------|----------------|-----------|---------------|---------------|-------------|--------|
| 5233.3      | 5240       | 1         | 1          | 5233.930   | -39.82         | /              | 0.82      | -39.00        | /             | -26.28      | Pass   |
| 5240        | 5249       | 1         | 1          | 5240.423   | -39.51         | /              | 0.82      | -38.69        | /             | -17.62      | Pass   |
| 5249        | 5250       | 1         | 1          | 5249.155   | -36.90         | /              | 0.82      | -36.08        | /             | -8.44       | Pass   |

## 802.11n(HT20) LCH\_5500MHz\_Ant1\_NTNV

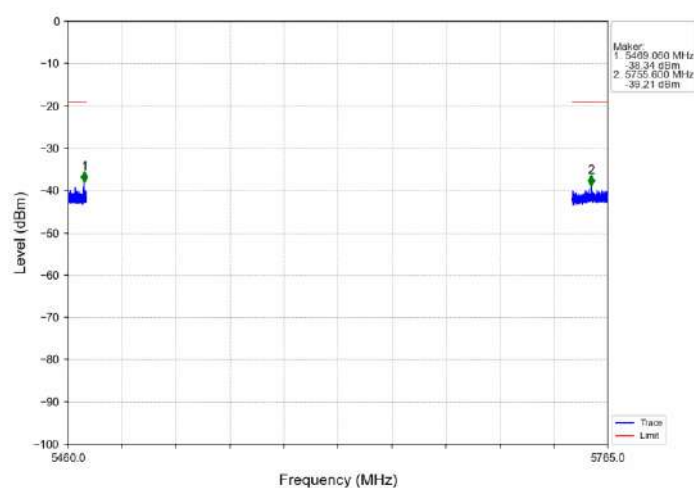


## 802.11n(HT20) LCH\_5500MHz\_Ant1\_NTNV

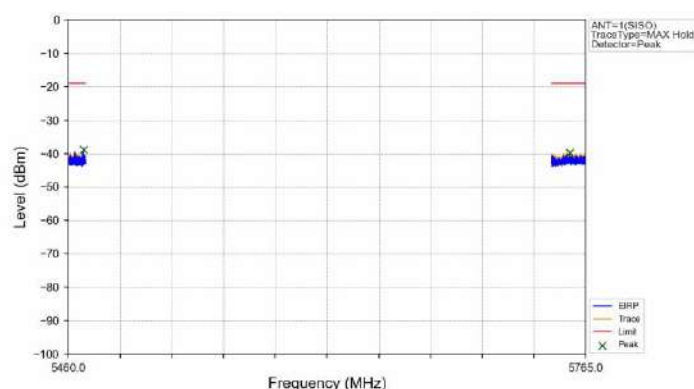


| Start (MHz) | Stop (MHz) | REW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Gain (dB) | PK ERP (dBm) | AV ERP (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|------------|----------------|----------------|-----------|--------------|--------------|-------------|--------|
| 5460        | 5470       | 1         | 1         | 5464.540   | -19.06         | /              | -0.50     | -19.56       | /            | -18.03      | Pass   |
| 5745        | 5755       | 1         | 1         | 5745.650   | -39.44         | /              | -0.50     | -39.94       | /            | -18.03      | Pass   |

## 802.11n(HT20) MCH\_5600MHz\_Ant1\_NTNV

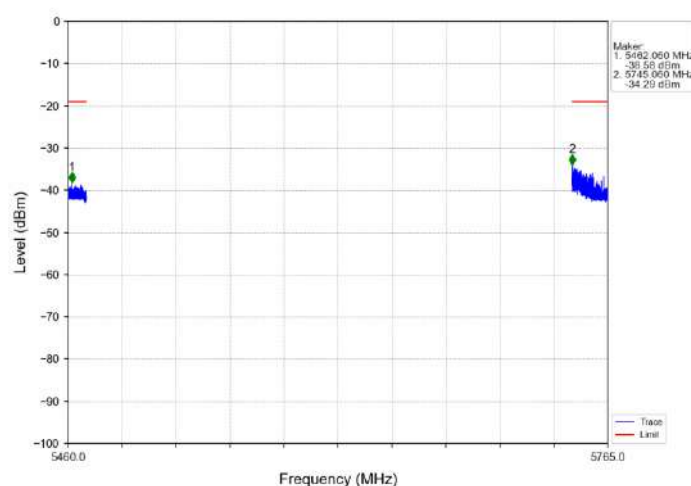


## 802.11n(HT20) MCH\_5600MHz\_Ant1\_NTNV

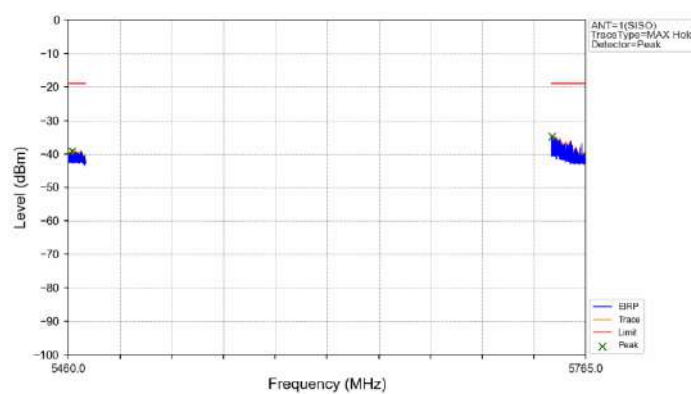


| Start (MHz) | Stop (MHz) | REW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Gain (dB) | PK ERP (dBm) | AV ERP (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|------------|----------------|----------------|-----------|--------------|--------------|-------------|--------|
| 5460        | 5470       | 1         | 1         | 5469.060   | -38.34         | /              | -0.50     | -38.84       | /            | -18.03      | Pass   |
| 5745        | 5755       | 1         | 1         | 5755.600   | -39.21         | /              | -0.50     | -39.71       | /            | -18.03      | Pass   |

## 802.11n(HT20) HCH 5700MHz Ant1 NTNV

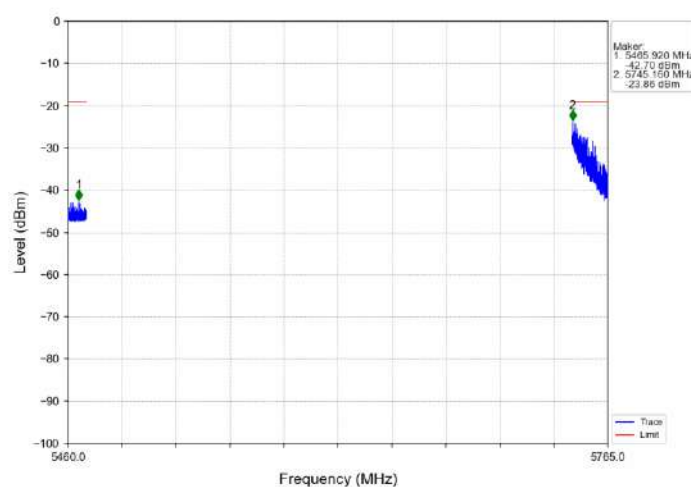


## 802.11n(HT20) HCH 5700MHz Ant1 NTNV

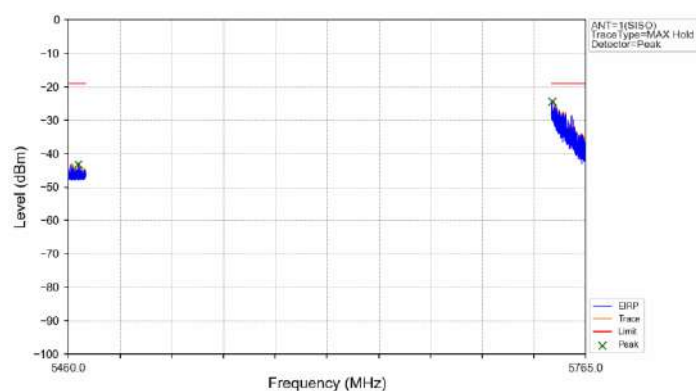


| Start (MHz) | Stop (MHz) | FEW (MHz) | VIEW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Gain (dB) | PK ERP (dBm) | AV ERP (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|------------|------------|----------------|----------------|-----------|--------------|--------------|-------------|--------|
| 5460        | 5470       | 1         | 1          | 5462.060   | -38.58         | /              | -0.56     | -39.08       | /            | -19.03      | Pass   |
| 5745        | 5755       | 1         | 1          | 5745.060   | -34.29         | /              | -0.56     | -34.79       | /            | -19.03      | Pass   |

## 802.11n(HT20) HHCH 5720MHz Ant1 NTNV

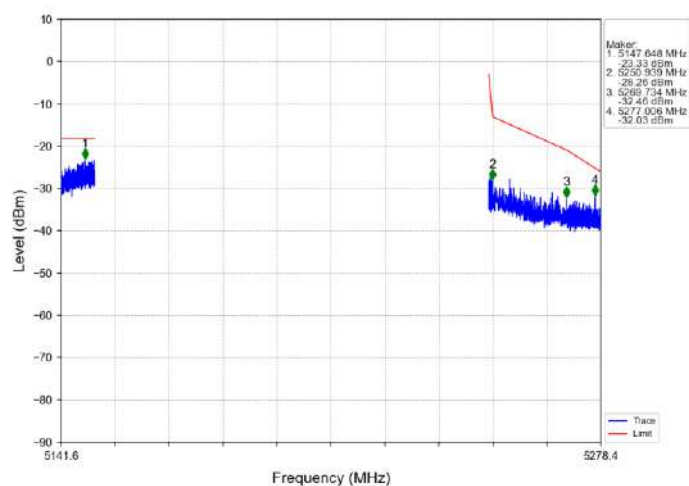


## 802.11n(HT20)\_HHCH\_5720MHz\_Ant1\_NTNV

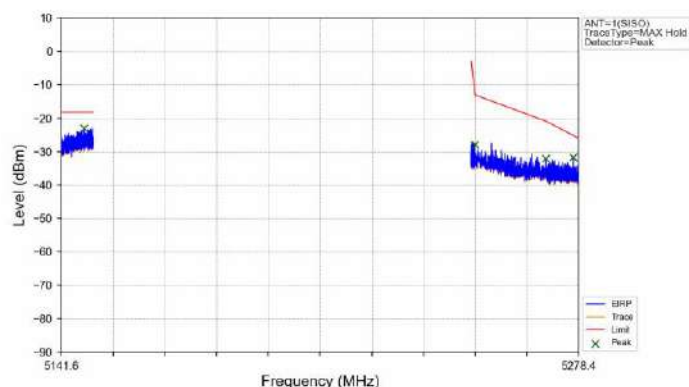


| Start (MHz) | Stop (MHz) | REW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Gain (dB) | PK ERP (dBm) | AV ERP (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|------------|----------------|----------------|-----------|--------------|--------------|-------------|--------|
| 5450        | 5470       | 1         | 1         | 5465.920   | -42.70         | /              | -0.50     | -43.20       | /            | -19.03      | Pass   |
| 5745        | 5755       | 1         | 1         | 5745.190   | -23.86         | /              | -0.50     | -24.36       | /            | -19.03      | Pass   |

## 802.11n(HT40)\_LCH\_5190MHz\_Ant1\_NTNV

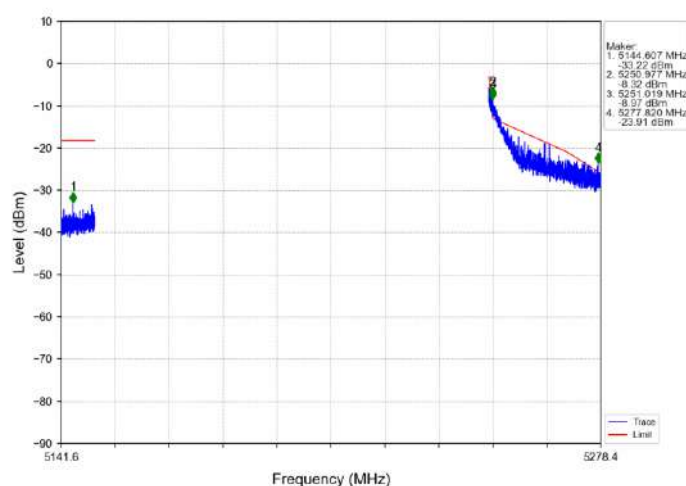


## 802.11n(HT40)\_LCH\_5190MHz\_Ant1\_NTNV

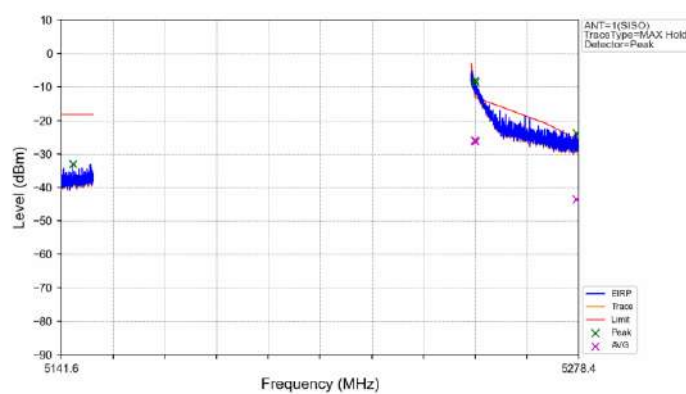


| Start (MHz) | Stop (MHz) | REW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Gain (dB) | PK ERP (dBm) | AV ERP (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|------------|----------------|----------------|-----------|--------------|--------------|-------------|--------|
| 5141.6      | 5150       | 1         | 1         | 5147.648   | -23.33         | /              | 0.30      | -23.03       | /            | -19.24      | Pass   |
| 5250        | 5251       | 1         | 1         | 5250.935   | -26.26         | /              | 0.30      | -27.90       | /            | -12.4       | Pass   |
| 5251        | 5270       | 1         | 1         | 5269.734   | -32.46         | /              | 0.30      | -32.16       | /            | -20.9       | Pass   |
| 5270        | 5278.4     | 1         | 1         | 5277.006   | -32.03         | /              | 0.30      | -31.73       | /            | -25.21      | Pass   |

## 802.11n(HT40) HCH 5230MHz Ant1 NTNV

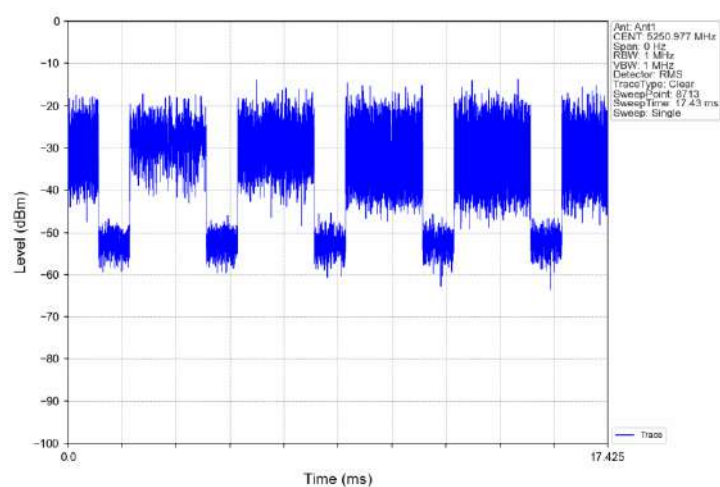


## 802.11n(HT40) HCH 5230MHz Ant1 NTNV

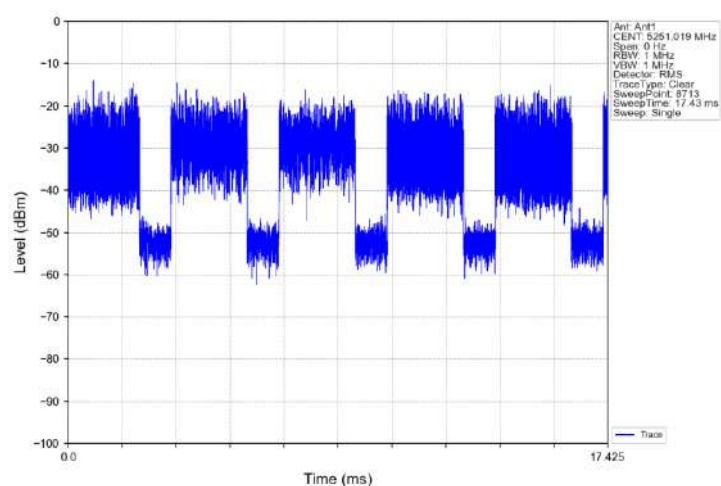


| Start (MHz) | Stop (MHz) | RBW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Gain (dB) | PK ERP (dBm) | AV ERP (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|------------|----------------|----------------|-----------|--------------|--------------|-------------|--------|
| 5141.6      | 5150       | 1         | 1         | 5144.607   | -33.22         | -              | 0.30      | -32.92       | -            | -16.24      | Pass   |
| 5250        | 5251       | 1         | 1         | 5250.977   | -8.32          | -28.21         | 0.30      | -8.02        | -25.91       | -42.78      | Pass   |
| 5251        | 5270       | 1         | 1         | 5251.019   | -8.97          | -28.57         | 0.30      | -8.67        | -26.27       | -43.03      | Pass   |
| 5270        | 5278.4     | 1         | 1         | 5277.820   | -23.91         | -43.93         | 0.30      | -23.61       | -43.93       | 25.7        | Pass   |

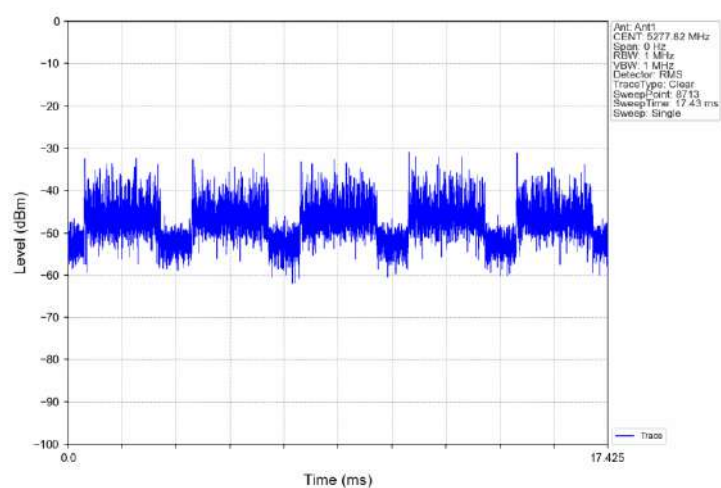
## 802.11n(HT40) HCH 5230MHz Ant1 NTNV



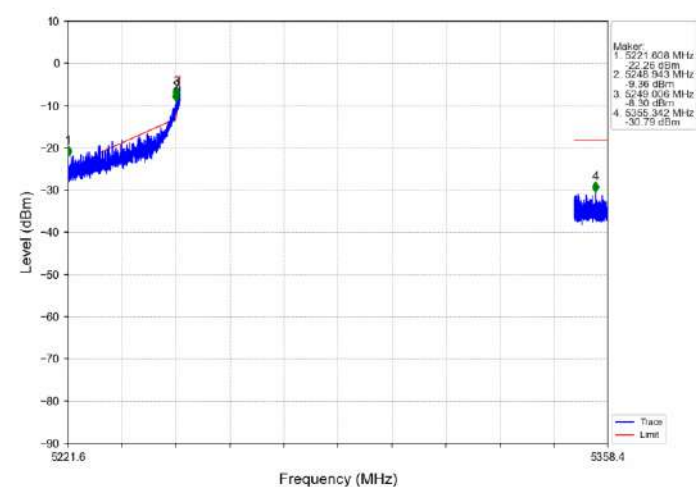
## 802.11n(HT40) HCH 5230MHz Ant1 NTV



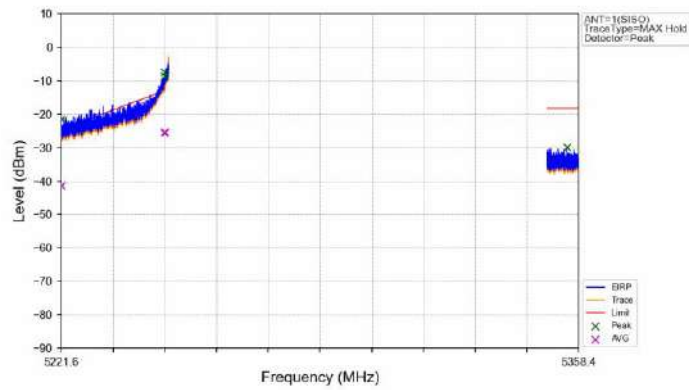
## 802.11n(HT40) HCH 5230MHz Ant1 NTV



## 802.11n(HT40) LCH 5270MHz Ant1 NTV

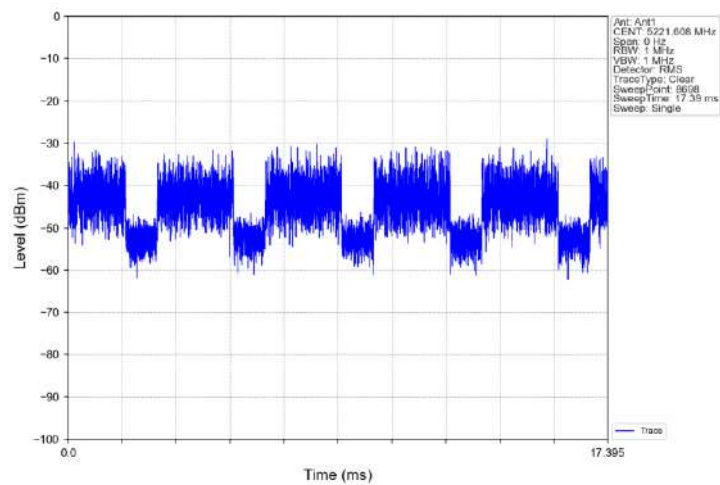


## 802.11n(HT40) LCH\_5270MHz\_Ant1\_NTNV

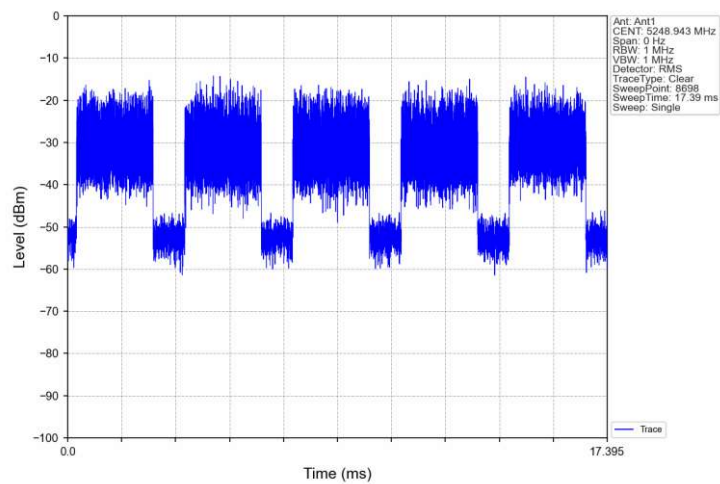


| Start (MHz) | Stop (MHz) | RBW (MHz) | VBW (MHz) | Freq. (MHz) | PK Power (dBm) | AV Power (dBm) | Gain (dB) | PK EIRP (dBm) | AV EIRP (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|-------------|----------------|----------------|-----------|---------------|---------------|-------------|--------|
| 5221.6      | 5230       | 1         | 1         | 5221.606    | -22.26         | -22.19         | 0.82      | -21.44        | -41.37        | -26.04      | Pass   |
| 5230        | 5240       | 1         | 1         | 5248.943    | -0.36          | -26.35         | 0.82      | -6.54         | -25.53        | -13.03      | Pass   |
| 5240        | 5250       | 1         | 1         | 5249.006    | -0.30          | -26.10         | 0.82      | -7.48         | -25.28        | -12.94      | Pass   |
| 5350        | 5358.4     | 1         | 1         | 5355.342    | -30.79         | -              | 0.82      | -29.97        | -             | -18.24      | Pass   |

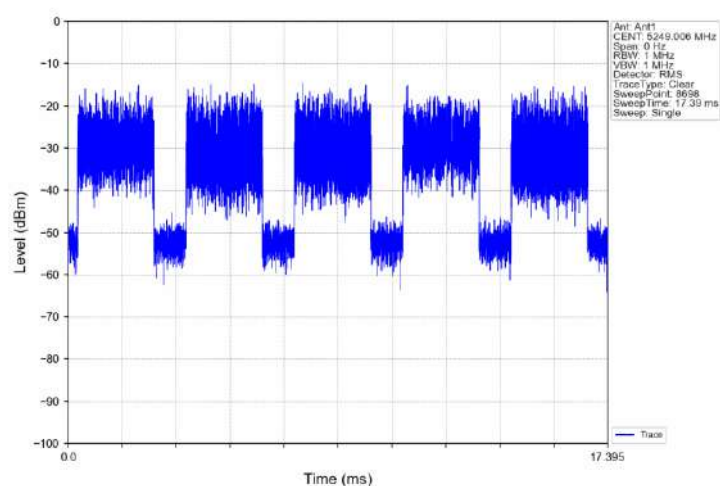
## 802.11n(HT40) LCH\_5270MHz\_Ant1\_NTNV



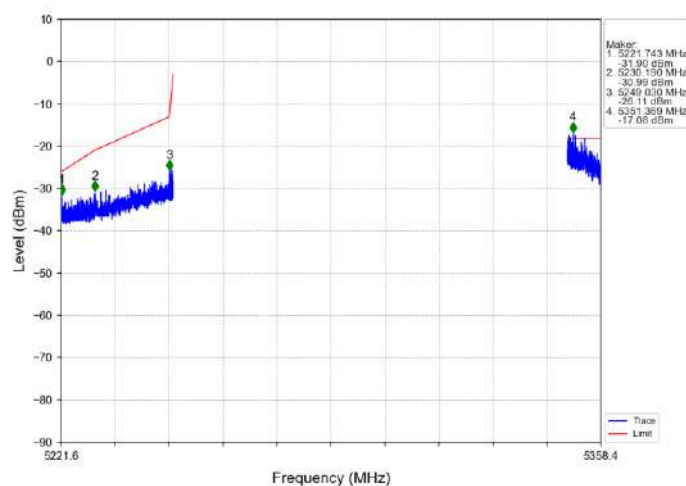
## 802.11n(HT40) LCH\_5270MHz\_Ant1\_NTNV



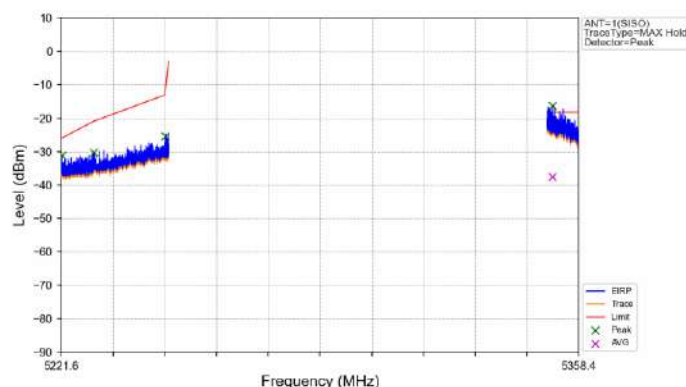
## 802.11n(HT40) LCH\_5270MHz\_Ant1\_NTNV



## 802.11n(HT40) HCH\_5310MHz\_Ant1\_NTNV

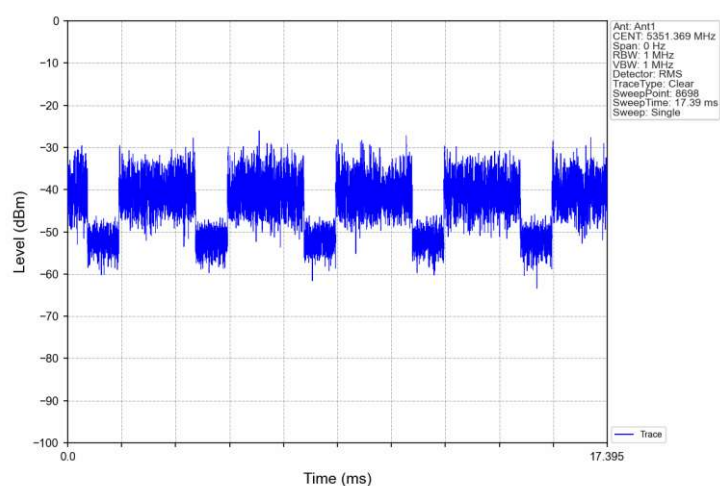


## 802.11n(HT40) HCH\_5310MHz\_Ant1\_NTNV

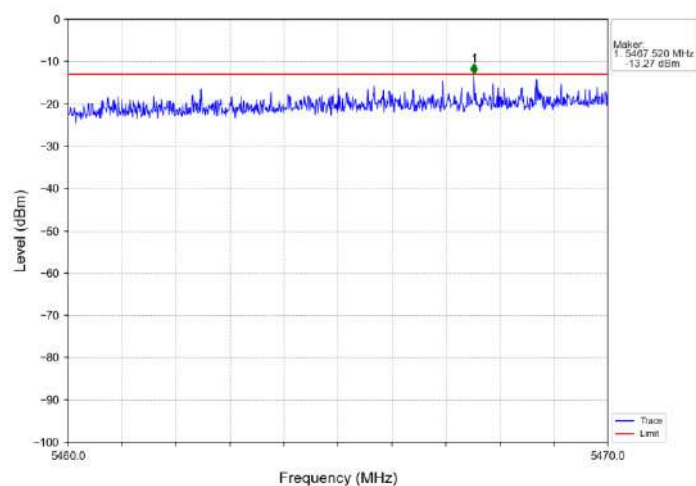


| Start (MHz) | Stop (MHz) | RBW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Gain (dB) | PK ERP (dBm) | AV ERP (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|------------|----------------|----------------|-----------|--------------|--------------|-------------|--------|
| 5221.6      | 5230       | 1         | 1         | 5221.743   | -31.90         | /              | 0.82      | -31.08       | /            | -25.06      | Pass   |
| 5230        | 5240       | 1         | 1         | 5230.190   | -30.99         | /              | 0.82      | -30.17       | /            | -20.52      | Pass   |
| 5240        | 5250       | 1         | 1         | 5249.000   | -26.11         | /              | 0.82      | -25.29       | /            | -12.7       | Pass   |
| 5350        | 5358.4     | 1         | 1         | 5351.369   | -17.08         | -38.33         | 0.82      | -16.26       | -37.51       | -18.24      | Pass   |

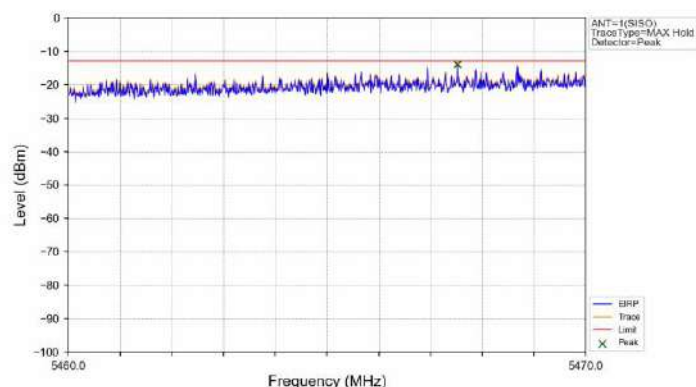
### 802.11n(HT40) HCH\_5310MHz\_Ant1\_NTNV



### 802.11n(HT40) LCH\_5510MHz\_Ant1\_NTNV

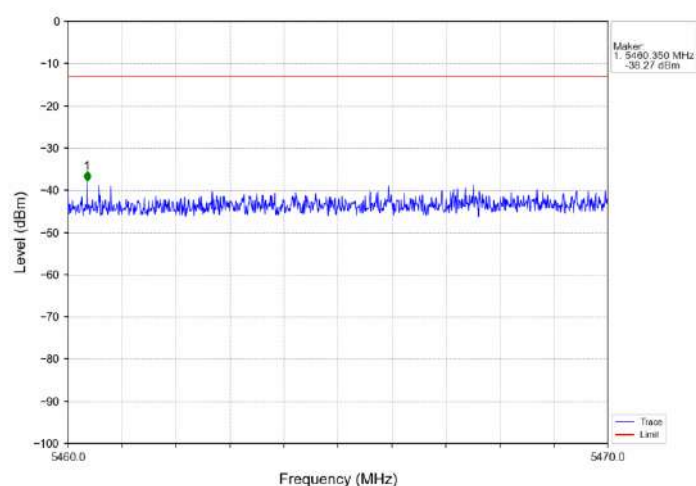


### 802.11n(HT40) LCH\_5510MHz\_Ant1\_NTNV

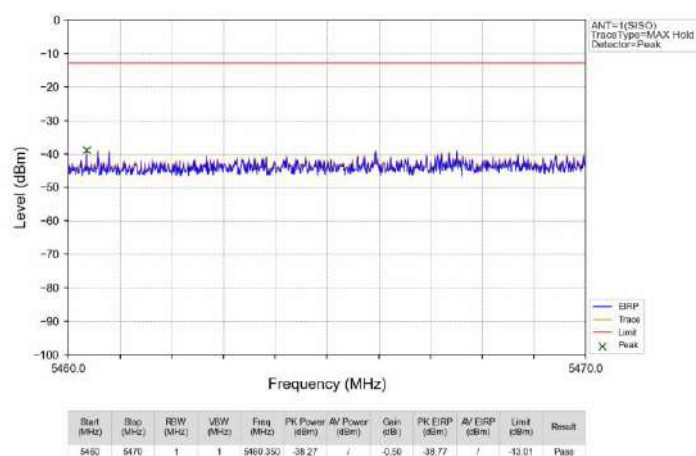


| Start (MHz) | Stop (MHz) | RBW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Gain (dB) | PK ERP (dBm) | AV ERP (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|------------|----------------|----------------|-----------|--------------|--------------|-------------|--------|
| 5460        | 5470       | 1         | 1         | 5467.520   | -13.27         | /              | -0.50     | -13.77       | /            | -13.01      | Pass   |

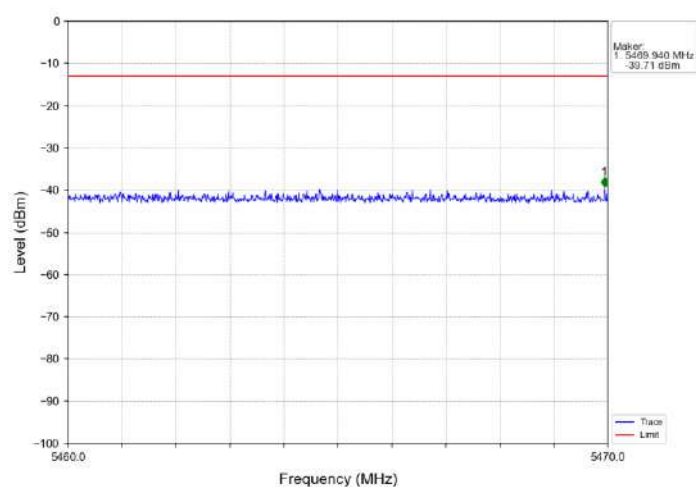
### 802.11n(HT40) MCH\_5590MHz\_Ant1\_NTNV



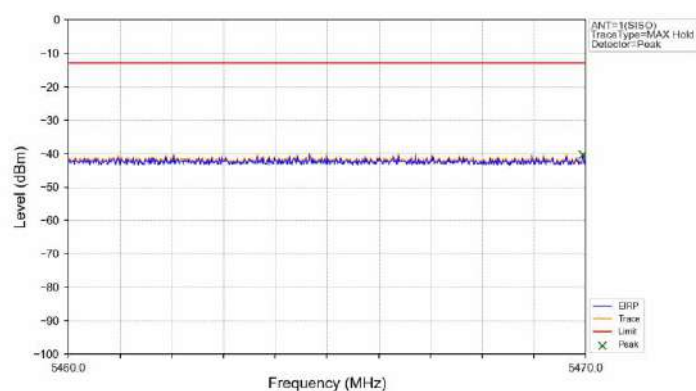
### 802.11n(HT40) MCH\_5590MHz\_Ant1\_NTNV



### 802.11n(HT40) HCH\_5670MHz\_Ant1\_NTNV

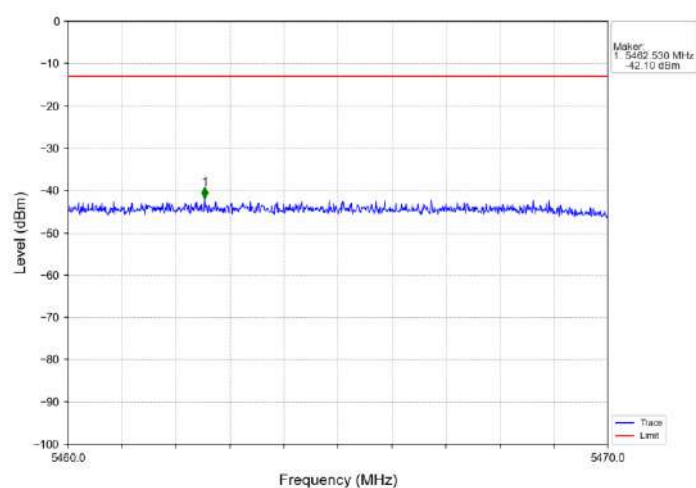


## 802.11n(HT40) HCH 5670MHz Ant1\_NTNV

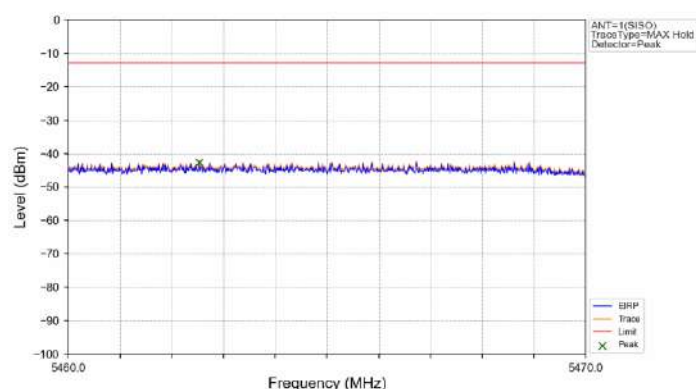


| Start (MHz) | Stop (MHz) | REW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Gain (dB) | PK ERP (dBm) | AV ERP (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|------------|----------------|----------------|-----------|--------------|--------------|-------------|--------|
| 5450        | 5470       | 1         | 1         | 5462.530   | -39.71         | /              | -0.50     | -40.21       | /            | -13.01      | Pass   |

## 802.11n(HT40) HHCH 5710MHz Ant1\_NTNV



## 802.11n(HT40) HHCH 5710MHz Ant1\_NTNV



| Start (MHz) | Stop (MHz) | REW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Gain (dB) | PK ERP (dBm) | AV ERP (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|------------|----------------|----------------|-----------|--------------|--------------|-------------|--------|
| 5450        | 5470       | 1         | 1         | 5462.530   | -42.10         | /              | -0.50     | -42.60       | /            | -13.01      | Pass   |

### 3.7 Secondary Radiated Emissions (Conducted) (For Receiver)

#### 3.7.1 Test Condition

|                      |           |
|----------------------|-----------|
| Test Position:       | Receiving |
| Ambient Temperature: | 24.8°C    |
| Relative Humidity:   | 49.2%     |
| Atmosphere Pressure: | 101.6 KPa |

#### 3.7.2 Limit

| Item        | Limits                                      |
|-------------|---------------------------------------------|
| RX Spurious | $\leq 4\text{nW}$ ( $f < 1\text{GHz}$ )     |
| Emission:   | $\leq 20\text{nW}$ ( $1\text{GHz} \leq f$ ) |

#### 3.7.3 Measuring Instruments and Setting

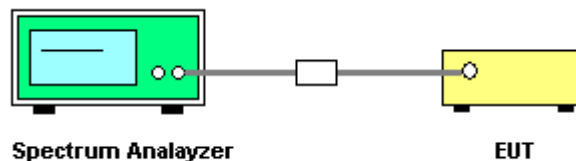
The following table is the setting of Spectrum Analyzer.

| Spectrum Parameter | Setting                                                        |
|--------------------|----------------------------------------------------------------|
| Attenuation        | Auto                                                           |
| RB                 | 100 kHz (below 1GHz emissions)<br>1 MHz (above 1GHz emissions) |
| VB                 | 100 kHz (below 1GHz emissions)<br>1 MHz (above 1GHz emissions) |
| Detector           | Peak                                                           |
| Trace              | Max Hold                                                       |
| Sweep Time         | Auto                                                           |

### 3.7.4 Test Procedure

1. EUT have the continuous reception mode and fixed only one channelize.
2. Setting of SA is following as RB / VB: 100 kHz (below 1GHz emissions) / 1 MHz (above 1GHz emissions) / Sweep time: Auto / Sweep Mode: Continuous sweep / Detect mode: Positive peak / Trace mode: Max hold
3. SA set RB: 100kHz and VB: 100kHz. Then adjust to start frequency 30MHz and stop frequency 1000MHz. Search to mark peak reading value + cable loss shall be less than 4nW
4. SA set RB: 1MHz and VB: 1MHz. Then adjust to start frequency 1000MHz and stop frequency 12500MHz. Search to mark peak reading value + cable loss shall be less than 20nW
5. If power level of lower emissions are more than 1/10 of limit (.0.4nW for  $f < 1\text{GHz}$ , 2nW for  $f \geq 1\text{GHz}$ ), all those are to be indicated in the 2nd and 3rd lines. If others are 1/10 or less more of the limit, no necessary to be indicated.

### 3.7.5 Test Setup Diagram



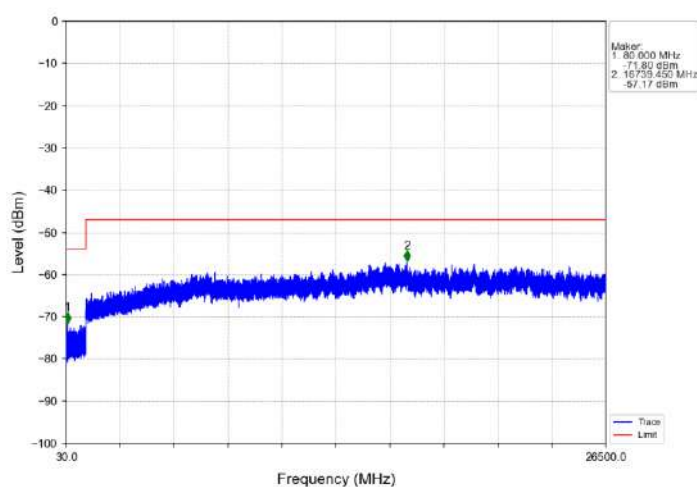
## 3.7.6 Test Result

| NTNV           |         |             |     |             |            |             |                |               |                |               |            |         |
|----------------|---------|-------------|-----|-------------|------------|-------------|----------------|---------------|----------------|---------------|------------|---------|
| Mode           | TX Type | Freq. (MHz) | ANT | Freq. Range |            | Marker      |                |               |                |               | Limit (nW) | Verdict |
|                |         |             |     | Start (MHz) | Stop (MHz) | Freq. (MHz) | PK Power (dBm) | PK Power (nW) | AV Power (dBm) | AV Power (nW) |            |         |
| 802.11a        | SISO    | 5180        | 1   | 30          | 1000       | 80          | -71.80         | 0.066         | /              | /             | 4          | Pass    |
|                |         |             |     | 1000        | 26500      | 16739.45    | -57.17         | 1.919         | /              | /             | 20         | Pass    |
|                |         | 5200        | 1   | 30          | 1000       | 80          | -71.98         | 0.063         | /              | /             | 4          | Pass    |
|                |         |             |     | 1000        | 26500      | 15190.75    | -56.74         | 2.118         | /              | /             | 20         | Pass    |
|                |         | 5240        | 1   | 30          | 1000       | 80          | -70.96         | 0.080         | /              | /             | 4          | Pass    |
|                |         |             |     | 1000        | 26500      | 16648.5     | -57.34         | 1.845         | /              | /             | 20         | Pass    |
|                |         | 5260        | 1   | 30          | 1000       | 80          | -71.06         | 0.078         | /              | /             | 4          | Pass    |
|                |         |             |     | 1000        | 26500      | 19995.8     | -56.91         | 2.037         | /              | /             | 20         | Pass    |
|                |         | 5300        | 1   | 30          | 1000       | 80          | -71.61         | 0.069         | /              | /             | 4          | Pass    |
|                |         |             |     | 1000        | 26500      | 14974.85    | -56.48         | 2.249         | /              | /             | 20         | Pass    |
|                |         | 5320        | 1   | 30          | 1000       | 80          | -71.82         | 0.066         | /              | /             | 4          | Pass    |
|                |         |             |     | 1000        | 26500      | 16719.9     | -55.33         | 2.931         | /              | /             | 20         | Pass    |
|                |         | 5500        | 1   | 30          | 1000       | 80          | -70.62         | 0.087         | /              | /             | 4          | Pass    |
|                |         |             |     | 1000        | 26500      | 14968.9     | -55.87         | 2.588         | /              | /             | 20         | Pass    |
|                |         | 5600        | 1   | 30          | 1000       | 80          | -71.11         | 0.077         | /              | /             | 4          | Pass    |
|                |         |             |     | 1000        | 26500      | 14927.25    | -56.22         | 2.388         | /              | /             | 20         | Pass    |
| 802.11n (HT20) | SISO    | 5180        | 1   | 30          | 1000       | 80          | -71.37         | 0.073         | /              | /             | 4          | Pass    |
|                |         |             |     | 1000        | 26500      | 15927.7     | -56.02         | 2.500         | /              | /             | 20         | Pass    |
|                |         | 5200        | 1   | 30          | 1000       | 338.05      | -71.31         | 0.074         | /              | /             | 4          | Pass    |
|                |         |             |     | 1000        | 26500      | 16335.7     | -56.92         | 2.032         | /              | /             | 20         | Pass    |
|                |         | 5240        | 1   | 30          | 1000       | 994.4       | -71.79         | 0.066         | /              | /             | 4          | Pass    |
|                |         |             |     | 1000        | 26500      | 22436.15    | -56.96         | 2.014         | /              | /             | 20         | Pass    |
|                |         | 5260        | 1   | 30          | 1000       | 970.1       | -72.44         | 0.057         | /              | /             | 4          | Pass    |
|                |         |             |     | 1000        | 26500      | 20017.9     | -56.15         | 2.427         | /              | /             | 20         | Pass    |
|                |         | 5300        | 1   | 30          | 1000       | 885.5       | -72.08         | 0.062         | /              | /             | 4          | Pass    |
|                |         |             |     | 1000        | 26500      | 15629.35    | -57.03         | 1.982         | /              | /             | 20         | Pass    |
|                |         | 5320        | 1   | 30          | 1000       | 868.7       | -71.86         | 0.065         | /              | /             | 4          | Pass    |
|                |         |             |     | 1000        | 26500      | 15886.05    | -56.44         | 2.270         | /              | /             | 20         | Pass    |
|                |         | 5500        | 1   | 30          | 1000       | 916.8       | -71.99         | 0.063         | /              | /             | 4          | Pass    |
|                |         |             |     | 1000        | 26500      | 16028.85    | -57.09         | 1.954         | /              | /             | 20         | Pass    |
|                |         | 5600        | 1   | 30          | 1000       | 594.85      | -72.12         | 0.061         | /              | /             | 4          | Pass    |
|                |         |             |     | 1000        | 26500      | 20060.4     | -56.91         | 2.037         | /              | /             | 20         | Pass    |
| 802.11n (HT40) | SISO    | 5190        | 1   | 30          | 1000       | 80          | -71.47         | 0.071         | /              | /             | 4          | Pass    |
|                |         |             |     | 1000        | 26500      | 22741.3     | -56.73         | 2.123         | /              | /             | 20         | Pass    |
|                |         | 5230        | 1   | 30          | 1000       | 963.95      | -71.84         | 0.065         | /              | /             | 4          | Pass    |
|                |         |             |     | 1000        | 26500      | 15862.25    | -56.79         | 2.094         | /              | /             | 20         | Pass    |
|                |         | 5270        | 1   | 30          | 1000       | 872.2       | -72.08         | 0.062         | /              | /             | 4          | Pass    |
|                |         |             |     | 1000        | 26500      | 16283       | -55.91         | 2.564         | /              | /             | 20         | Pass    |
|                |         | 5310        | 1   | 30          | 1000       | 770.95      | -72.25         | 0.060         | /              | /             | 4          | Pass    |
|                |         |             |     | 1000        | 26500      | 21975.45    | -57.07         | 1.963         | /              | /             | 20         | Pass    |
|                |         | 5510        | 1   | 30          | 1000       | 240         | -72.06         | 0.062         | /              | /             | 4          | Pass    |
|                |         |             |     | 1000        | 26500      | 16691       | -56.82         | 2.080         | /              | /             | 20         | Pass    |

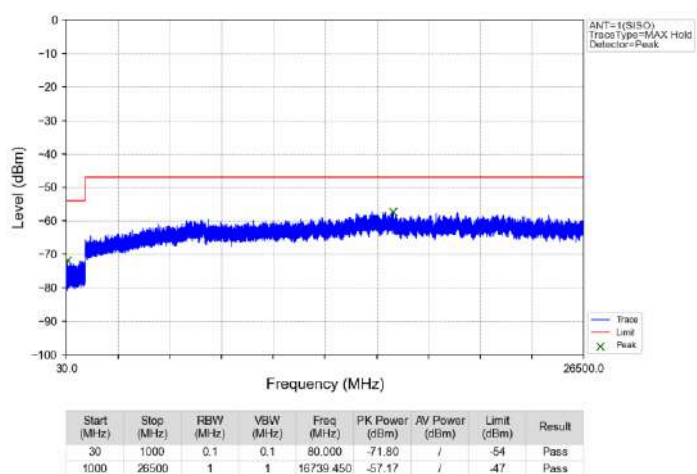
|  |  |      |   |      |       |          |        |       |   |   |    |      |
|--|--|------|---|------|-------|----------|--------|-------|---|---|----|------|
|  |  | 5590 | 1 | 30   | 1000  | 367.4    | -71.61 | 0.069 | / | / | 4  | Pass |
|  |  |      |   | 1000 | 26500 | 17994.05 | -55.78 | 2.642 | / | / | 20 | Pass |
|  |  | 5670 | 1 | 30   | 1000  | 240      | -72.30 | 0.059 | / | / | 4  | Pass |
|  |  |      |   | 1000 | 26500 | 16379.9  | -55.66 | 2.716 | / | / | 20 | Pass |
|  |  | 5710 | 1 | 30   | 1000  | 571.35   | -71.45 | 0.072 | / | / | 4  | Pass |
|  |  |      |   | 1000 | 26500 | 16603.45 | -56.97 | 2.009 | / | / | 20 | Pass |

### 3.7.7 Test Graphs

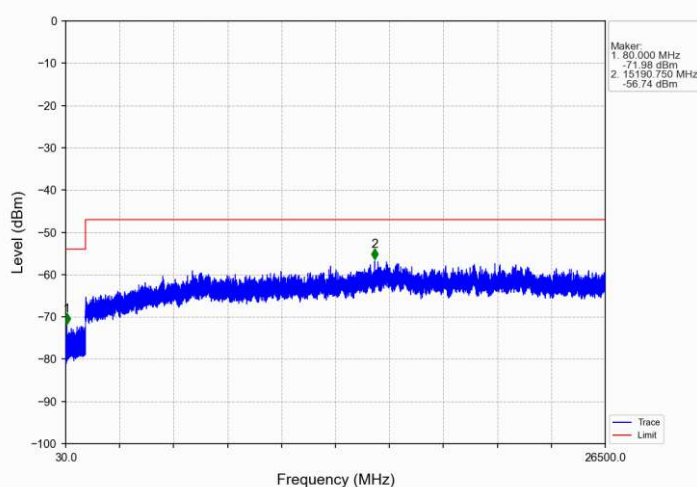
802.11a\_LCH\_5180MHz\_Ant1\_NTNV



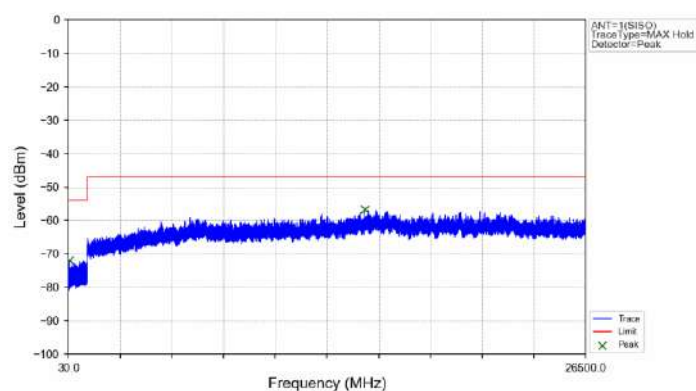
802.11a\_LCH\_5180MHz\_Ant1\_NTNV



802.11a\_MCH\_5200MHz\_Ant1\_NTNV

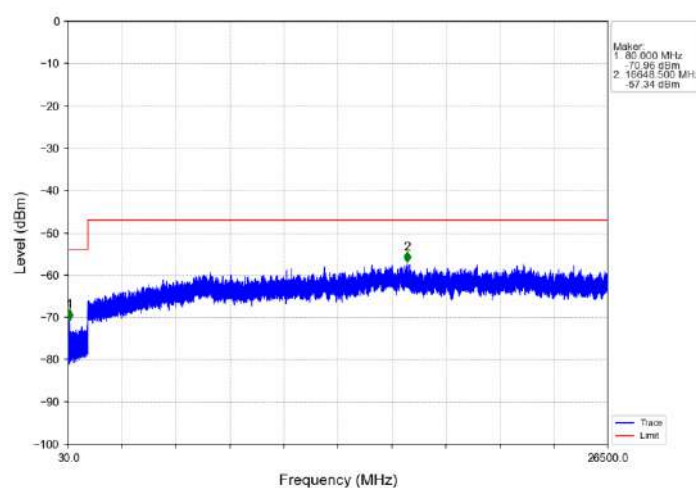


## 802.11a\_MCH\_5200MHz\_Ant1\_NTNV

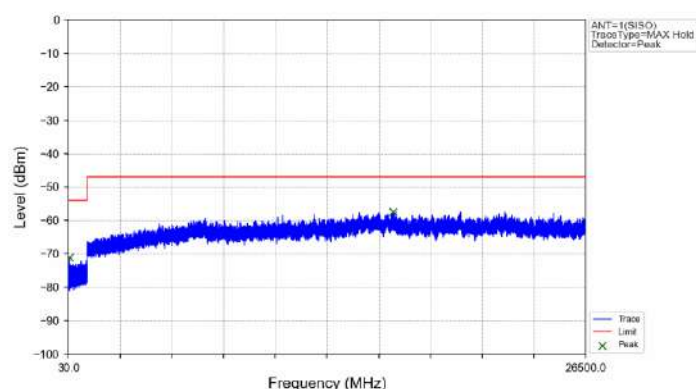


| Start (MHz) | Stop (MHz) | RBW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|------------|----------------|----------------|-------------|--------|
| 30          | 1000       | 0.1       | 0.1       | 80.000     | -71.98         | /              | -54         | Pass   |
| 1000        | 26500      | 1         | 1         | 15190.750  | -56.74         | /              | -47         | Pass   |

## 802.11a\_HCH\_5240MHz\_Ant1\_NTNV



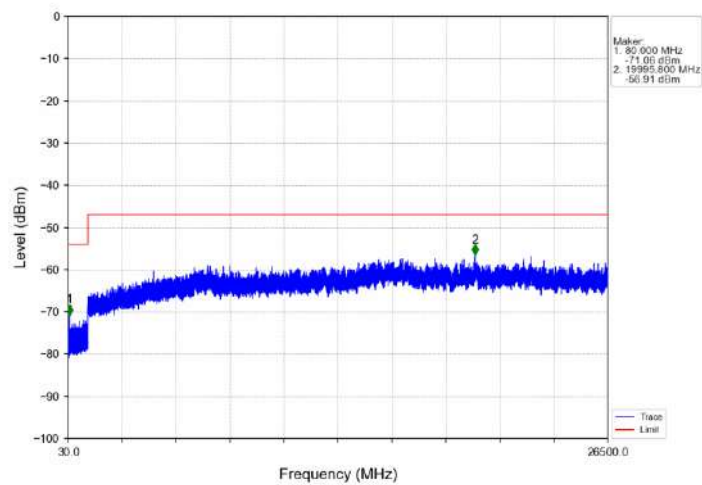
## 802.11a\_HCH\_5240MHz\_Ant1\_NTNV



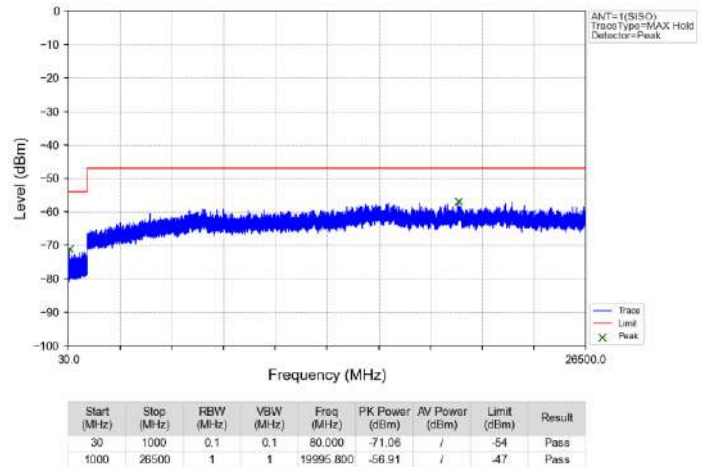
| Start (MHz) | Stop (MHz) | RBW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|------------|----------------|----------------|-------------|--------|
| 30          | 1000       | 0.1       | 0.1       | 80.000     | -70.96         | /              | -54         | Pass   |
| 1000        | 26500      | 1         | 1         | 16648.500  | -57.34         | /              | -47         | Pass   |



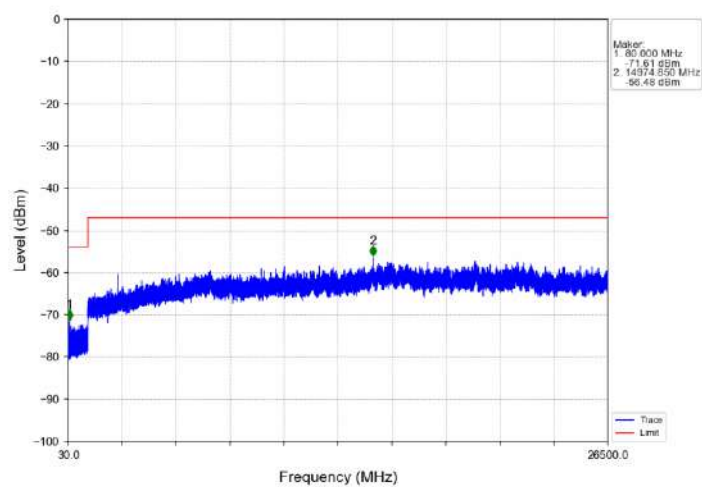
802.11a\_LCH\_5260MHz\_Ant1\_NTNV



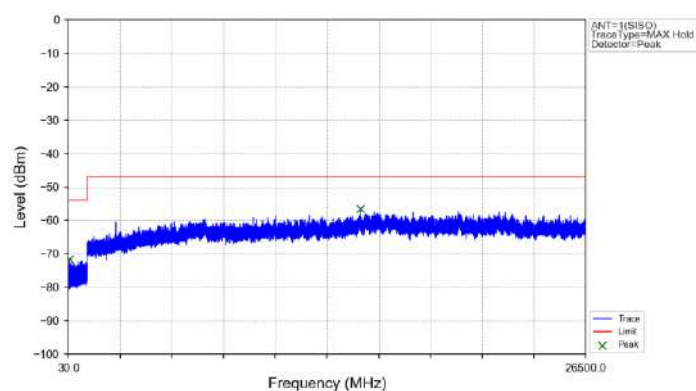
802.11a\_LCH\_5260MHz\_Ant1\_NTNV



802.11a\_MCH\_5300MHz\_Ant1\_NTNV

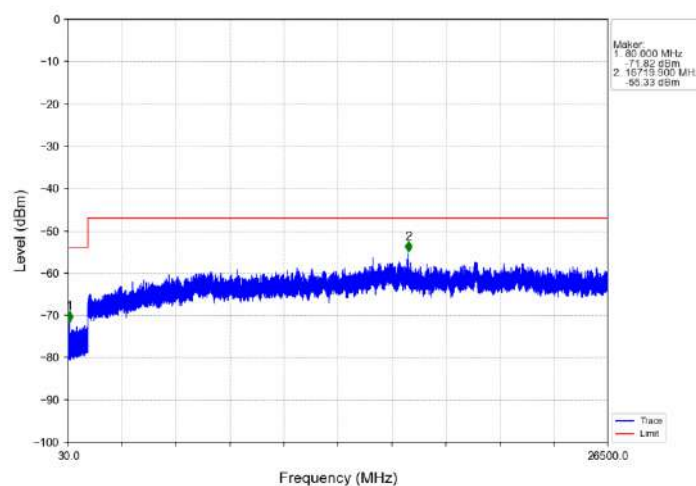


## 802.11a\_MCH\_5300MHz\_Ant1\_NTNV

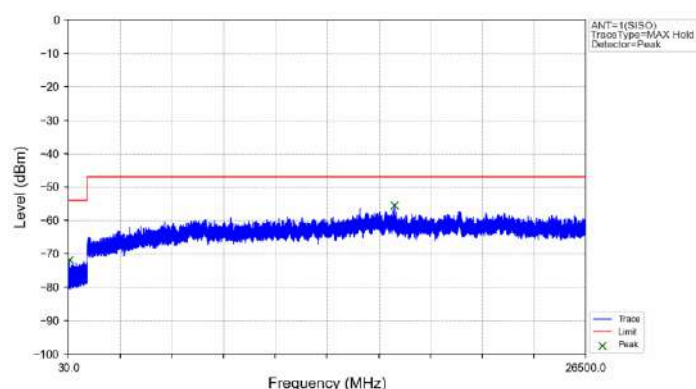


| Start (MHz) | Stop (MHz) | RBW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|------------|----------------|----------------|-------------|--------|
| 30          | 1000       | 0.1       | 0.1       | 80.000     | -71.61         | /              | -54         | Pass   |
| 1000        | 26500      | 1         | 1         | 14974.850  | -56.48         | /              | -47         | Pass   |

## 802.11a\_HCH\_5320MHz\_Ant1\_NTNV

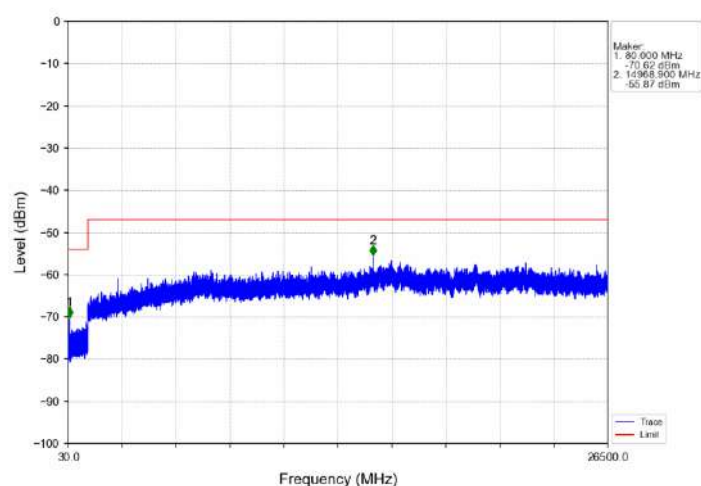


## 802.11a\_HCH\_5320MHz\_Ant1\_NTNV

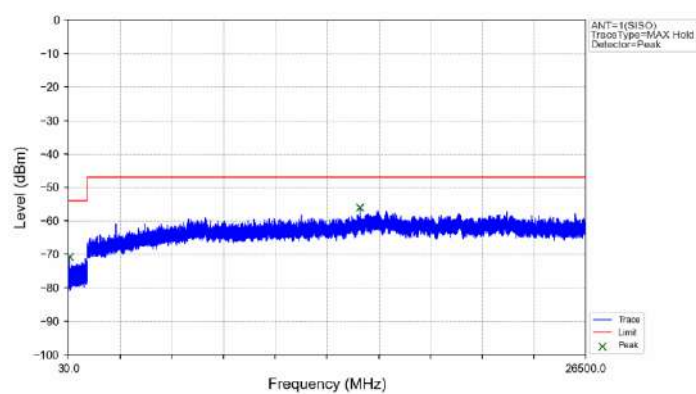


| Start (MHz) | Stop (MHz) | RBW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|------------|----------------|----------------|-------------|--------|
| 30          | 1000       | 0.1       | 0.1       | 80.000     | -71.82         | /              | -54         | Pass   |
| 1000        | 26500      | 1         | 1         | 16719.900  | -55.33         | /              | -47         | Pass   |

## 802.11a\_LCH\_5500MHz\_Ant1\_NTNV

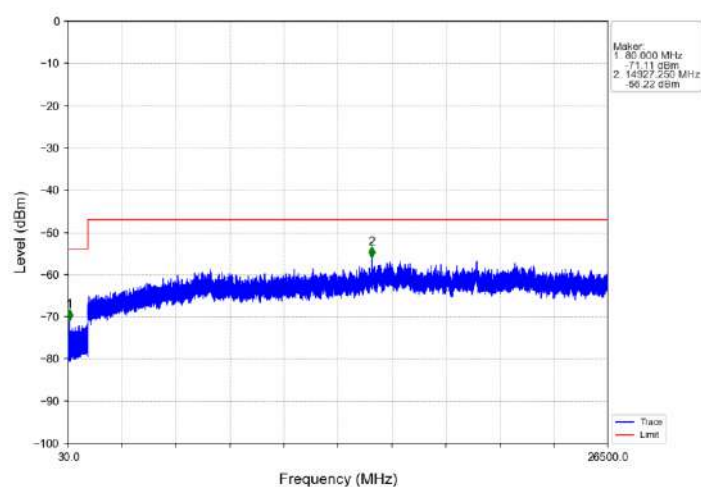


## 802.11a\_LCH\_5500MHz\_Ant1\_NTNV

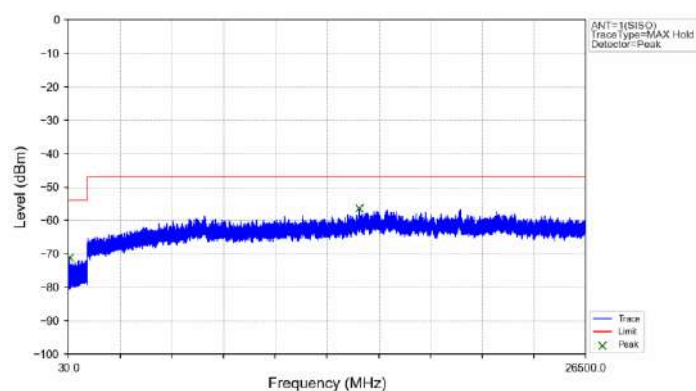


| Start (MHz) | Stop (MHz) | RBW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|------------|----------------|----------------|-------------|--------|
| 30          | 1000       | 0.1       | 0.1       | 80.000     | -70.62         | /              | -54         | Pass   |
| 1000        | 26500      | 1         | 1         | 14968.900  | -55.87         | /              | -47         | Pass   |

## 802.11a\_MCH\_5600MHz\_Ant1\_NTNV

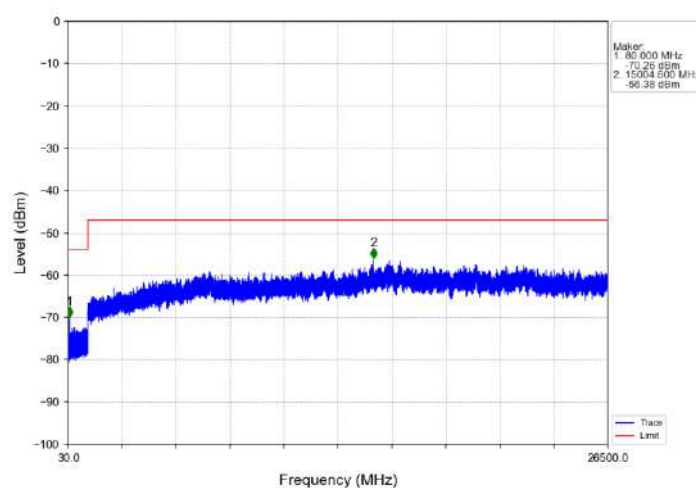


## 802.11a\_MCH\_5600MHz\_Ant1\_NTNV

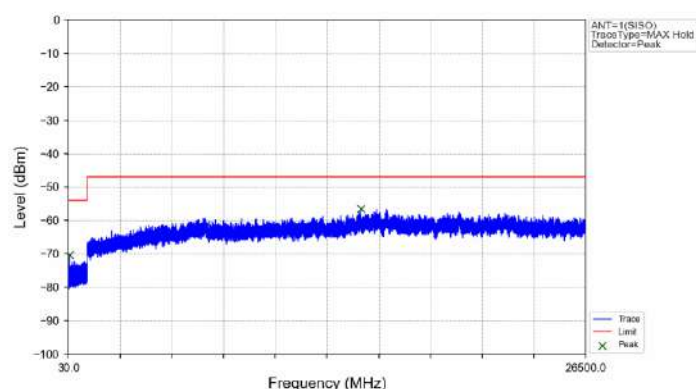


| Start (MHz) | Stop (MHz) | RBW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|------------|----------------|----------------|-------------|--------|
| 30          | 1000       | 0.1       | 0.1       | 80.000     | -71.11         | /              | -54         | Pass   |
| 1000        | 26500      | 1         | 1         | 14927.250  | -56.22         | /              | -47         | Pass   |

## 802.11a\_HCH\_5700MHz\_Ant1\_NTNV

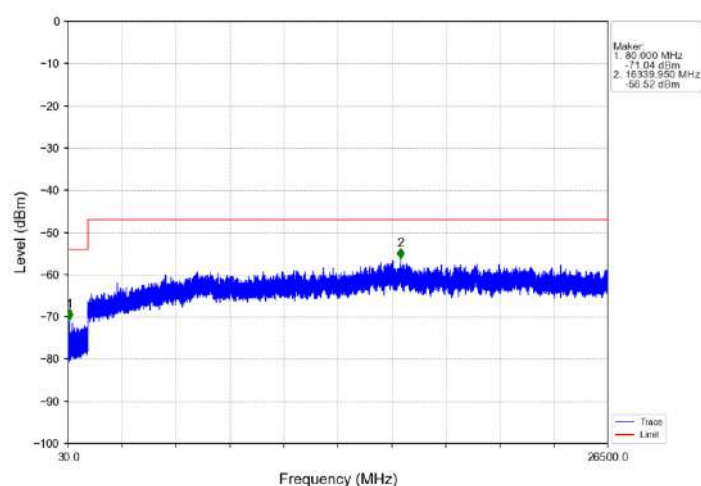


## 802.11a\_HCH\_5700MHz\_Ant1\_NTNV

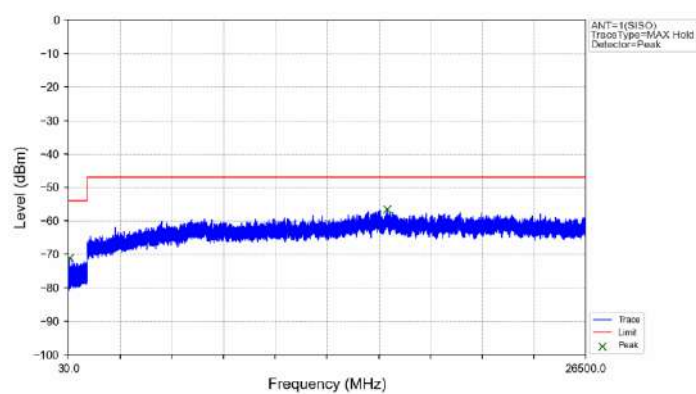


| Start (MHz) | Stop (MHz) | RBW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|------------|----------------|----------------|-------------|--------|
| 30          | 1000       | 0.1       | 0.1       | 80.000     | -70.26         | /              | -54         | Pass   |
| 1000        | 26500      | 1         | 1         | 15004.600  | -56.38         | /              | -47         | Pass   |

## 802.11a\_HHCH\_5720MHz\_Ant1\_NTNV

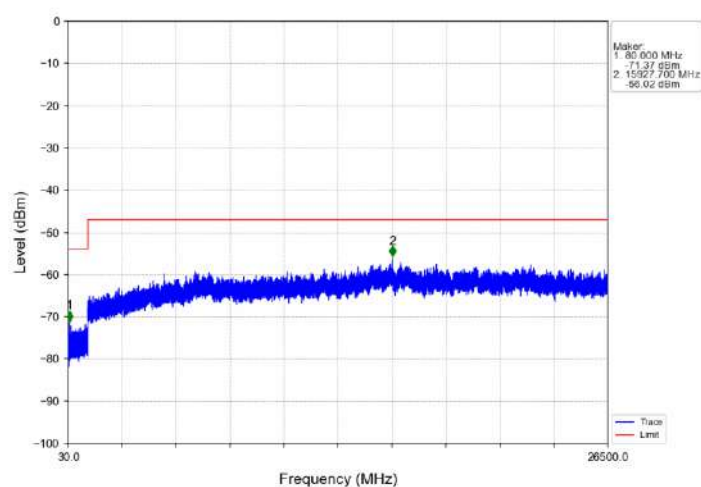


## 802.11a\_HHCH\_5720MHz\_Ant1\_NTNV

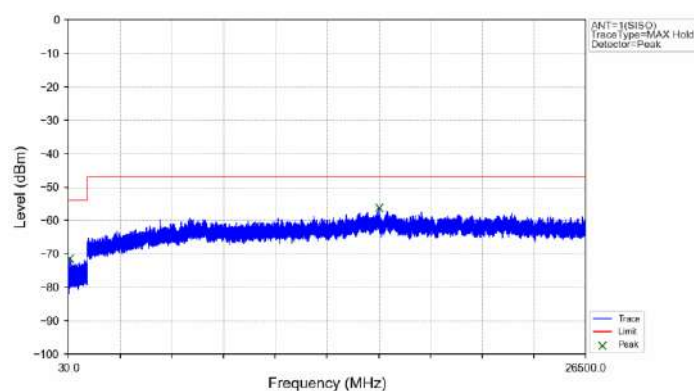


| Start (MHz) | Stop (MHz) | RBW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|------------|----------------|----------------|-------------|--------|
| 30          | 1000       | 0.1       | 0.1       | 80.000     | -71.04         | /              | -54         | Pass   |
| 1000        | 26500      | 1         | 1         | 16339.950  | -56.52         | /              | -47         | Pass   |

## 802.11n(HT20)\_LCH\_5180MHz\_Ant1\_NTNV

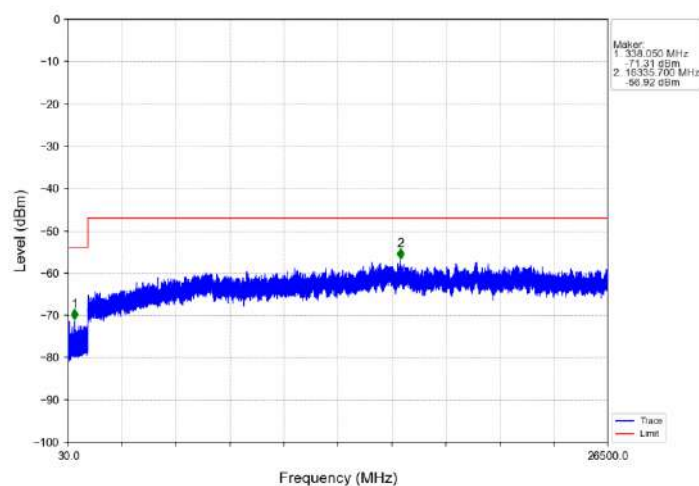


## 802.11n(HT20) LCH 5180MHz Ant1\_NTNV

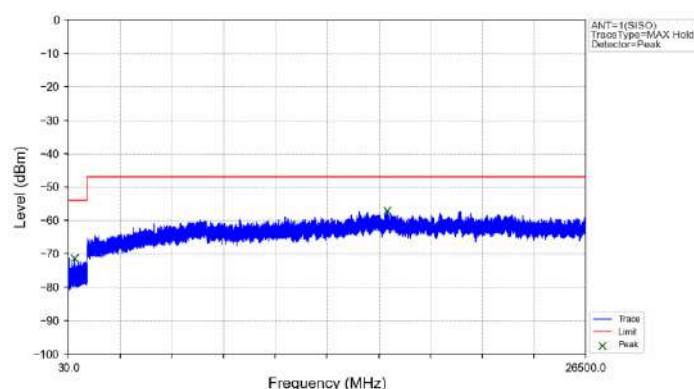


| Start (MHz) | Stop (MHz) | RBW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|------------|----------------|----------------|-------------|--------|
| 30          | 1000       | 0.1       | 0.1       | 80.000     | -71.37         | /              | -54         | Pass   |
| 1000        | 26500      | 1         | 1         | 15927.700  | -56.02         | /              | -47         | Pass   |

## 802.11n(HT20) MCH 5200MHz Ant1\_NTNV



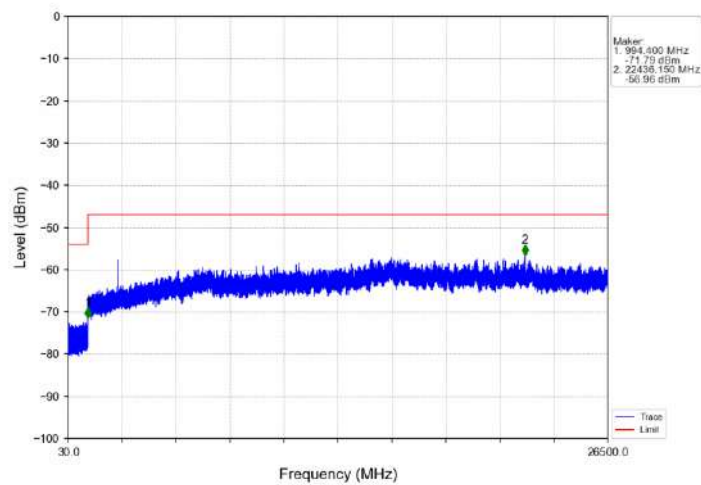
## 802.11n(HT20) MCH 5200MHz Ant1\_NTNV



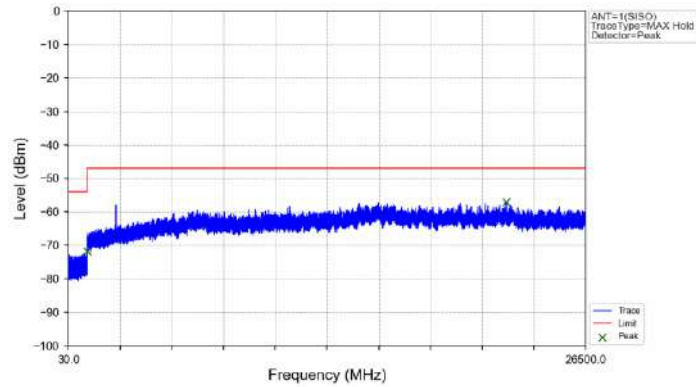
| Start (MHz) | Stop (MHz) | RBW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|------------|----------------|----------------|-------------|--------|
| 30          | 1000       | 0.1       | 0.1       | 338.050    | -71.31         | /              | -54         | Pass   |
| 1000        | 26500      | 1         | 1         | 16335.700  | -56.92         | /              | -47         | Pass   |



802.11n(HT20) HCH\_5240MHz\_Ant1\_NTNV

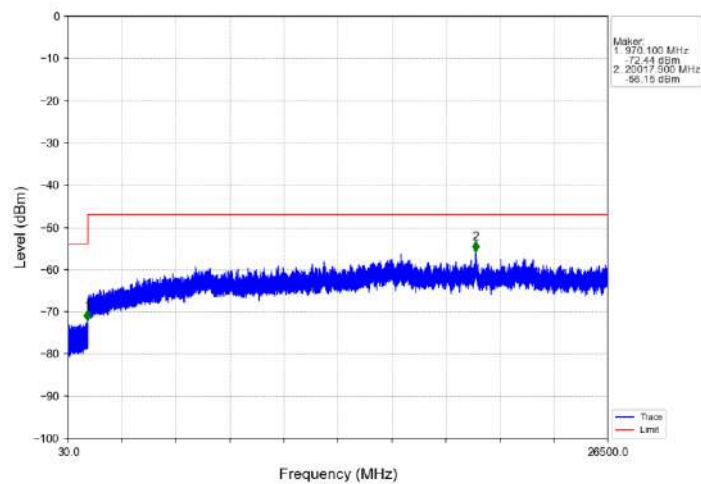


802.11n(HT20) HCH\_5240MHz\_Ant1\_NTNV

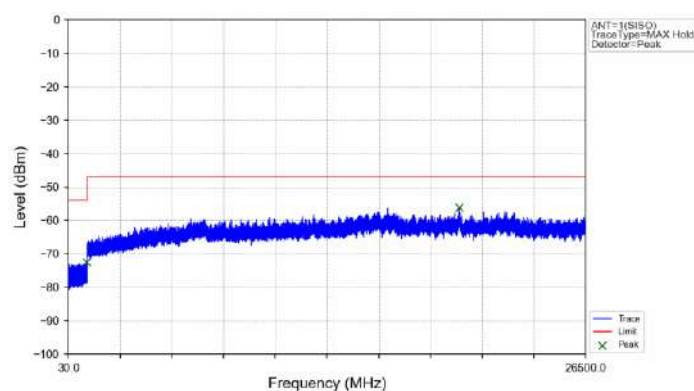


| Start (MHz) | Stop (MHz) | RBW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|------------|----------------|----------------|-------------|--------|
| 30          | 1000       | 0.1       | 0.1       | 994.400    | -71.73         | /              | -54         | Pass   |
| 1000        | 26500      | 1         | 1         | 22438.150  | -56.96         | /              | -47         | Pass   |

802.11n(HT20) LCH\_5260MHz\_Ant1\_NTNV

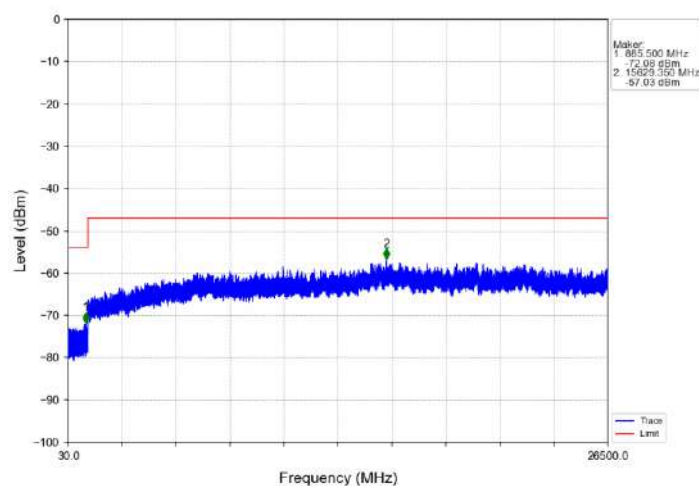


## 802.11n(HT20) LCH\_5260MHz\_Ant1\_NTNV

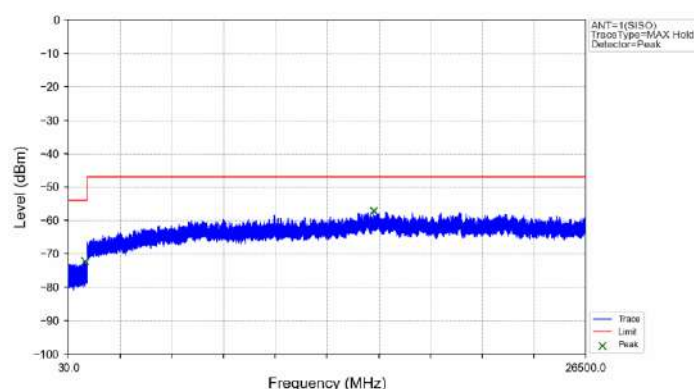


| Start (MHz) | Stop (MHz) | RBW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|------------|----------------|----------------|-------------|--------|
| 30          | 1000       | 0.1       | 0.1       | 970.100    | -72.44         | /              | -54         | Pass   |
| 1000        | 26500      | 1         | 1         | 20017.900  | -56.15         | /              | -47         | Pass   |

## 802.11n(HT20) MCH\_5300MHz\_Ant1\_NTNV

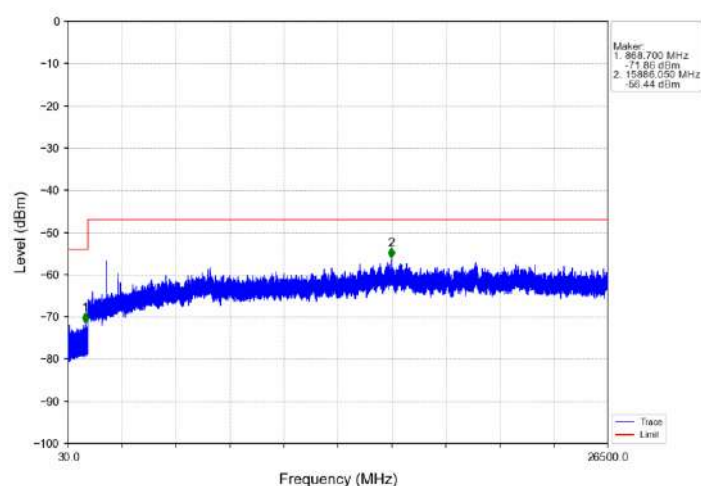


## 802.11n(HT20) MCH\_5300MHz\_Ant1\_NTNV

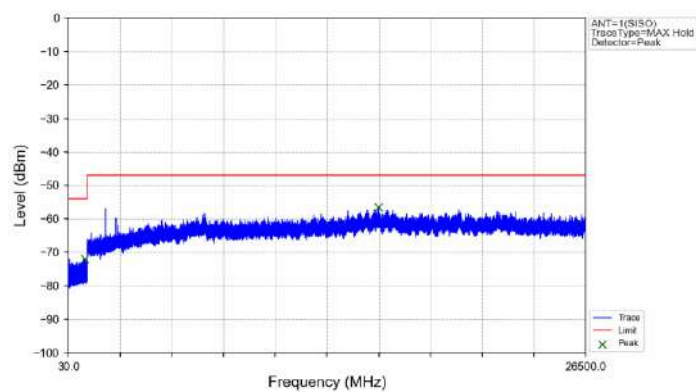


| Start (MHz) | Stop (MHz) | RBW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|------------|----------------|----------------|-------------|--------|
| 30          | 1000       | 0.1       | 0.1       | 885.500    | -72.08         | /              | -54         | Pass   |
| 1000        | 26500      | 1         | 1         | 15629.350  | -57.03         | /              | -47         | Pass   |

### 802.11n(HT20) HCH\_5320MHz\_Ant1\_NTNV

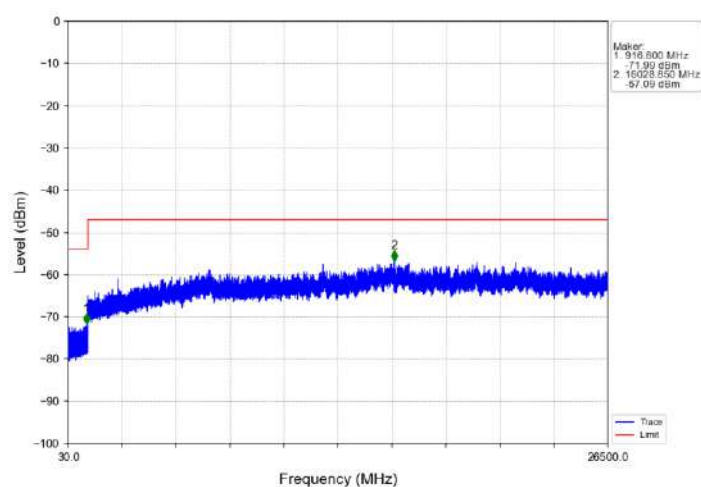


### 802.11n(HT20) HCH\_5320MHz\_Ant1\_NTNV

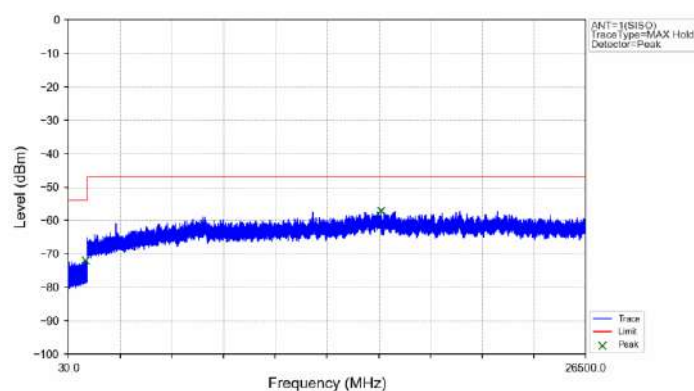


| Start (MHz) | Stop (MHz) | RBW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|------------|----------------|----------------|-------------|--------|
| 30          | 1000       | 0.1       | 0.1       | 868.700    | -71.86         | /              | -54         | Pass   |
| 1000        | 26500      | 1         | 1         | 15886.050  | -56.44         | /              | -47         | Pass   |

### 802.11n(HT20) LCH\_5500MHz\_Ant1\_NTNV

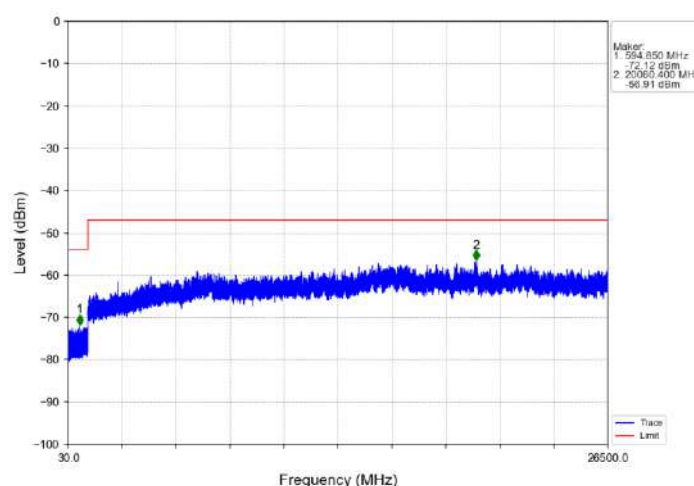


## 802.11n(HT20) LCH\_5500MHz\_Ant1\_NTNV

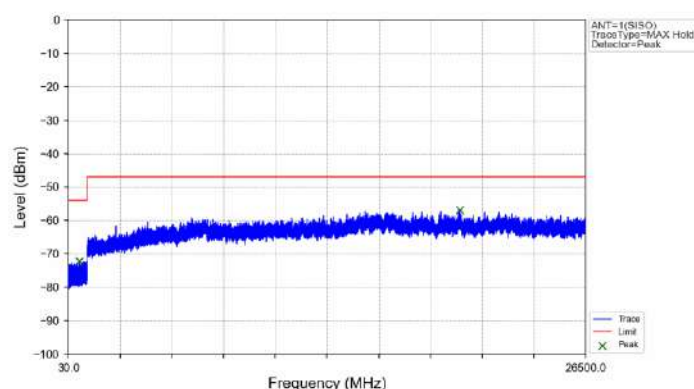


| Start (MHz) | Stop (MHz) | RBW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|------------|----------------|----------------|-------------|--------|
| 30          | 1000       | 0.1       | 0.1       | 916.800    | -71.99         | /              | -54         | Pass   |
| 1000        | 26500      | 1         | 1         | 16028.850  | -57.09         | /              | -47         | Pass   |

## 802.11n(HT20) MCH\_5600MHz\_Ant1\_NTNV



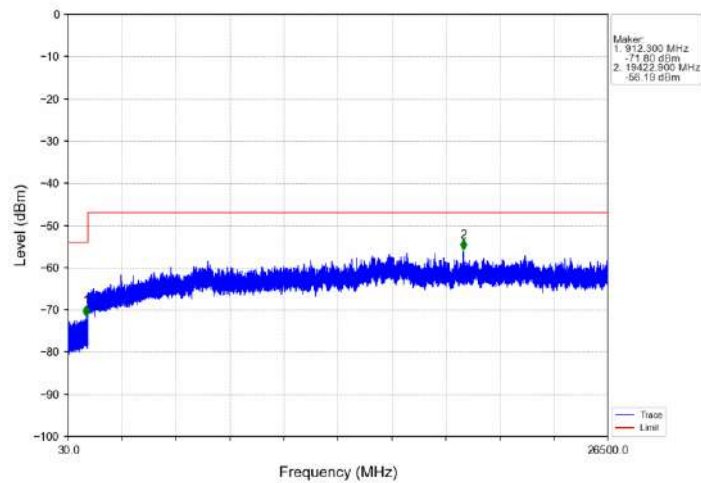
## 802.11n(HT20) MCH\_5600MHz\_Ant1\_NTNV



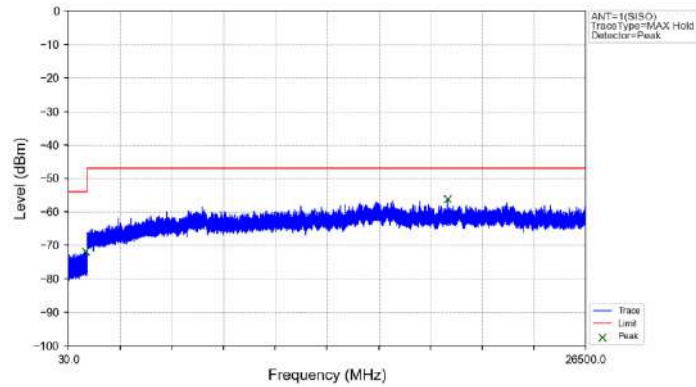
| Start (MHz) | Stop (MHz) | RBW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|------------|----------------|----------------|-------------|--------|
| 30          | 1000       | 0.1       | 0.1       | 594.850    | -72.12         | /              | -54         | Pass   |
| 1000        | 26500      | 1         | 1         | 20060.400  | -56.91         | /              | -47         | Pass   |



802.11n(HT20) HCH\_5700MHz\_Ant1\_NTNV

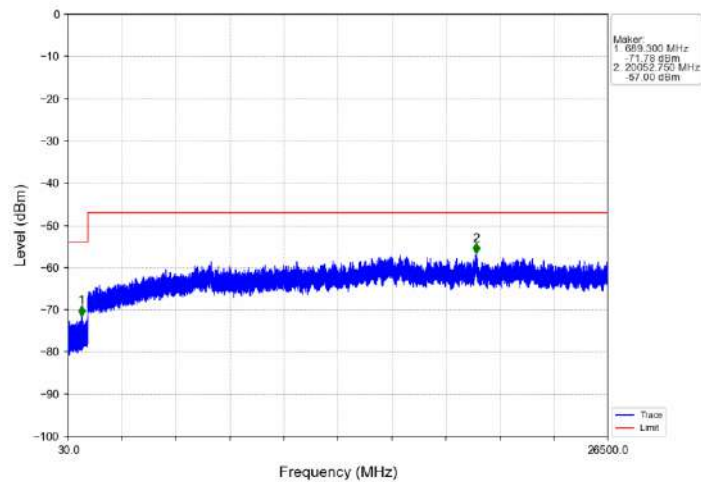


802.11n(HT20) HCH\_5700MHz\_Ant1\_NTNV

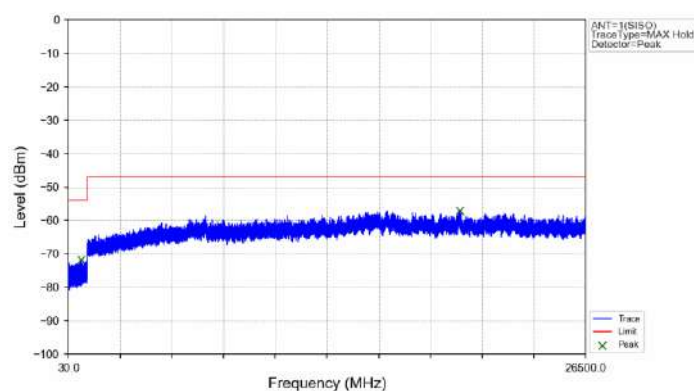


| Start (MHz) | Stop (MHz) | RBW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|------------|----------------|----------------|-------------|--------|
| 30          | 1000       | 0.1       | 0.1       | 912.300    | -71.80         | /              | -54         | Pass   |
| 1000        | 26500      | 1         | 1         | 19422.900  | -56.19         | /              | -47         | Pass   |

802.11n(HT20) HHCH\_5720MHz\_Ant1\_NTNV

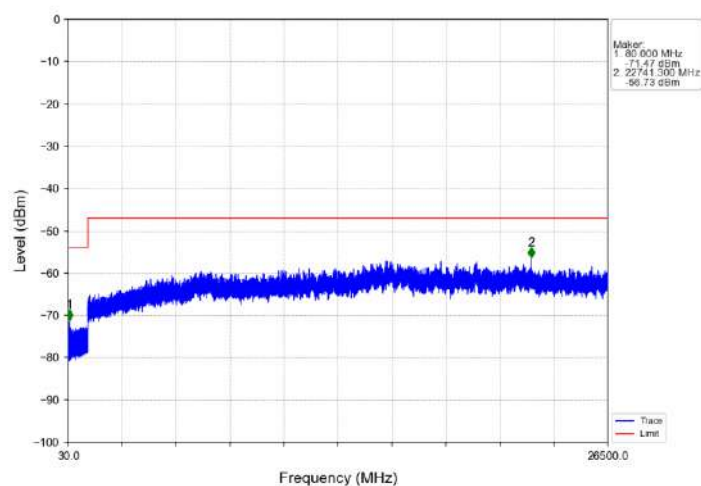


## 802.11n(HT20)\_HHCH\_5720MHz\_Ant1\_NTNV

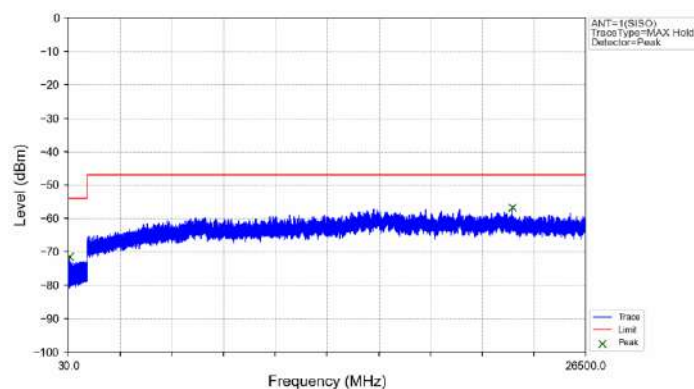


| Start (MHz) | Stop (MHz) | RBW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|------------|----------------|----------------|-------------|--------|
| 30          | 1000       | 0.1       | 0.1       | 689.300    | -71.78         | /              | -54         | Pass   |
| 1000        | 26500      | 1         | 1         | 20062.750  | -57.00         | /              | -47         | Pass   |

## 802.11n(HT40)\_LCH\_5190MHz\_Ant1\_NTNV

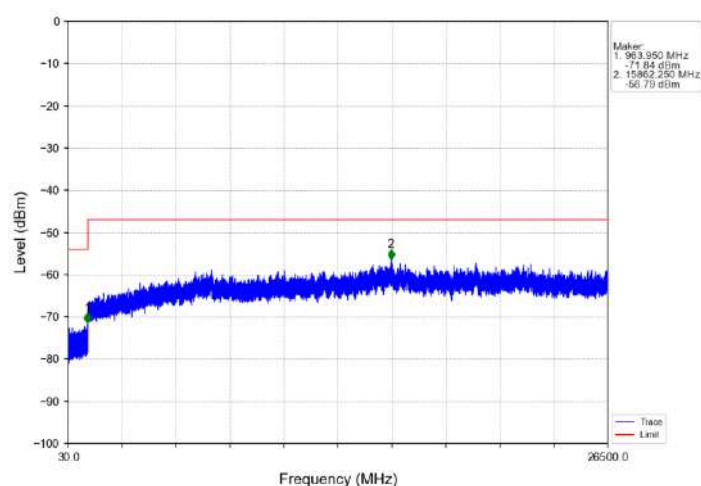


## 802.11n(HT40)\_LCH\_5190MHz\_Ant1\_NTNV

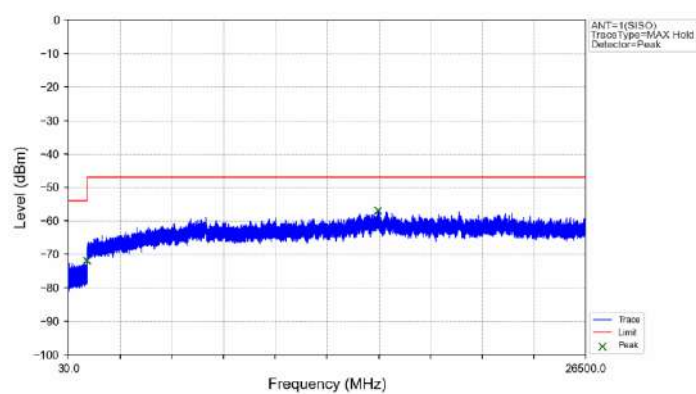


| Start (MHz) | Stop (MHz) | RBW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|------------|----------------|----------------|-------------|--------|
| 30          | 1000       | 0.1       | 0.1       | 80.000     | -71.47         | /              | -54         | Pass   |
| 1000        | 26500      | 1         | 1         | 22741.300  | -56.73         | /              | -47         | Pass   |

## 802.11n(HT40) HCH 5230MHz Ant1\_NTNV

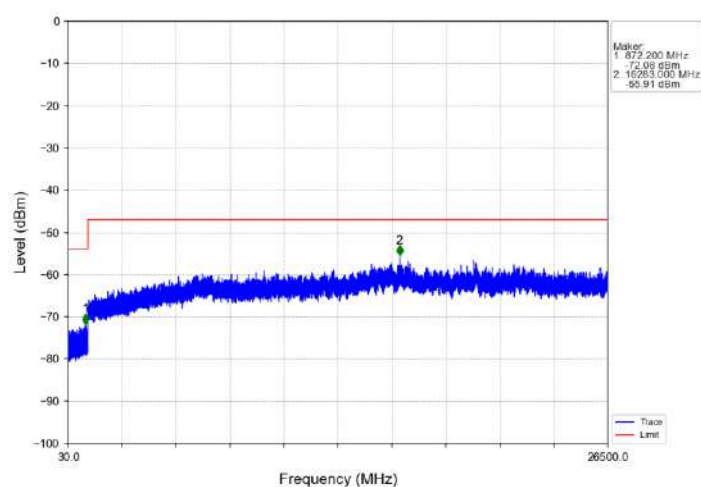


## 802.11n(HT40) HCH 5230MHz Ant1\_NTNV

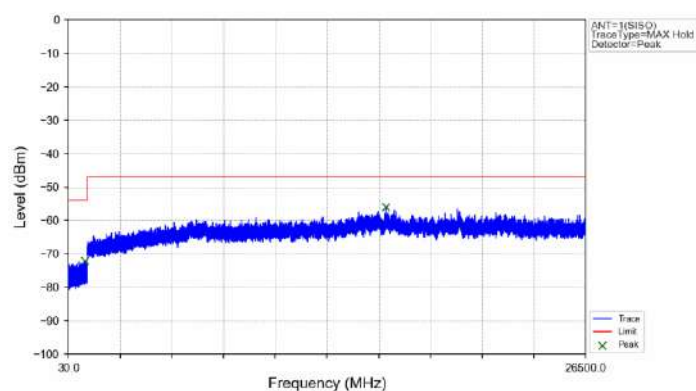


| Start (MHz) | Stop (MHz) | RBW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|------------|----------------|----------------|-------------|--------|
| 30          | 1000       | 0.1       | 0.1       | 963.950    | -71.84         | /              | -54         | Pass   |
| 1000        | 26500      | 1         | 1         | 15862.250  | -56.79         | /              | -47         | Pass   |

## 802.11n(HT40) LCH 5270MHz Ant1\_NTNV

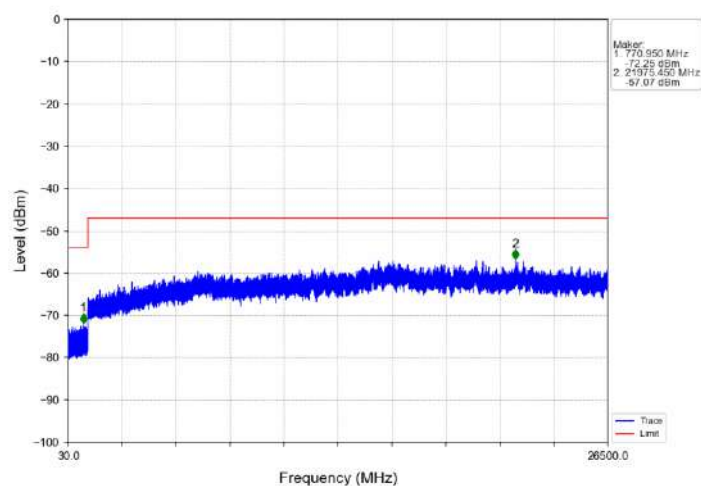


## 802.11n(HT40) LCH\_5270MHz\_Ant1\_NTNV

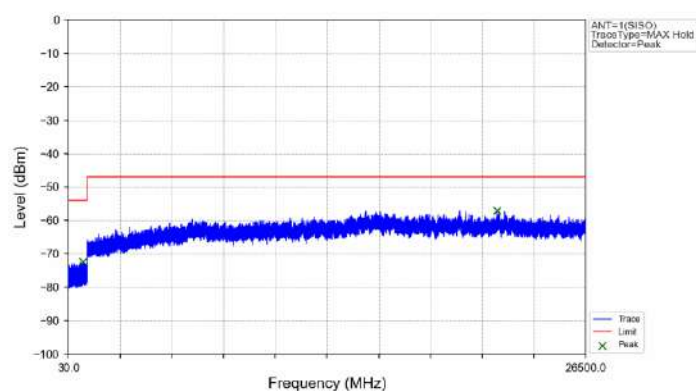


| Start (MHz) | Stop (MHz) | RBW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|------------|----------------|----------------|-------------|--------|
| 30          | 1000       | 0.1       | 0.1       | 872.200    | -72.08         | /              | -54         | Pass   |
| 1000        | 26500      | 1         | 1         | 16283.000  | -55.91         | /              | -47         | Pass   |

## 802.11n(HT40) HCH\_5310MHz\_Ant1\_NTNV

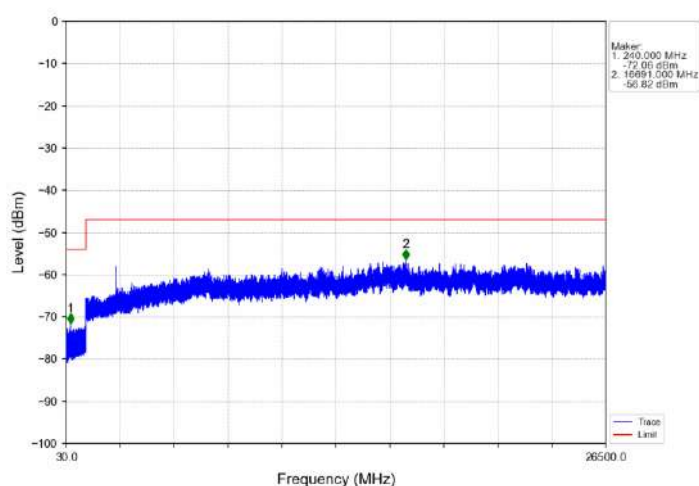


## 802.11n(HT40) HCH\_5310MHz\_Ant1\_NTNV

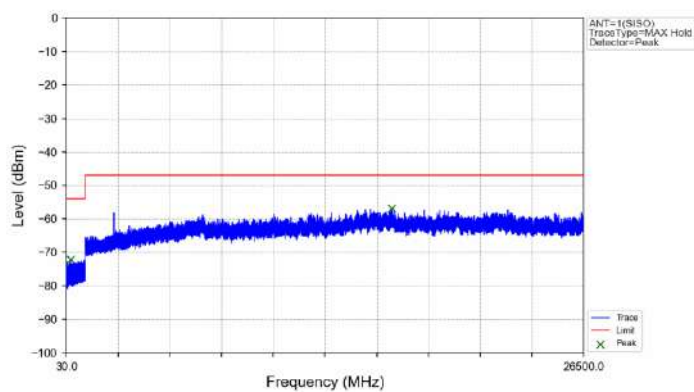


| Start (MHz) | Stop (MHz) | RBW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|------------|----------------|----------------|-------------|--------|
| 30          | 1000       | 0.1       | 0.1       | 770.950    | -72.25         | /              | -54         | Pass   |
| 1000        | 26500      | 1         | 1         | 21975.450  | -57.07         | /              | -47         | Pass   |

### 802.11n(HT40) LCH\_5510MHz\_Ant1\_NTNV

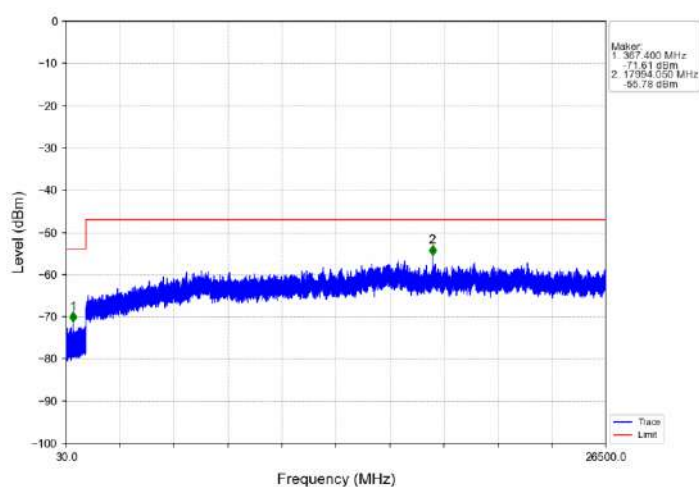


### 802.11n(HT40) LCH\_5510MHz\_Ant1\_NTNV

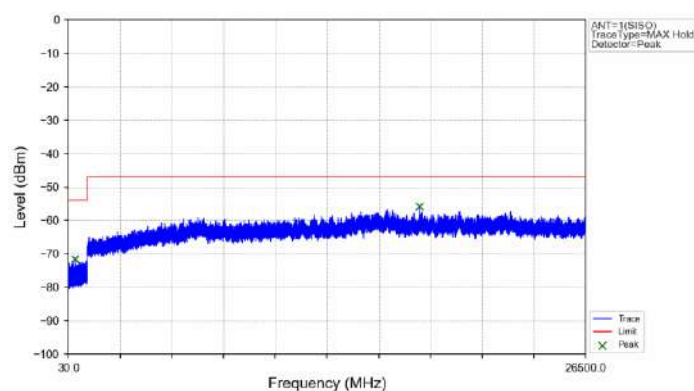


| Start (MHz) | Stop (MHz) | RBW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|------------|----------------|----------------|-------------|--------|
| 30          | 1000       | 0.1       | 0.1       | 240.000    | -72.06         | /              | -54         | Pass   |
| 1000        | 26500      | 1         | 1         | 16991.000  | -56.82         | /              | -47         | Pass   |

### 802.11n(HT40) MCH\_5590MHz\_Ant1\_NTNV

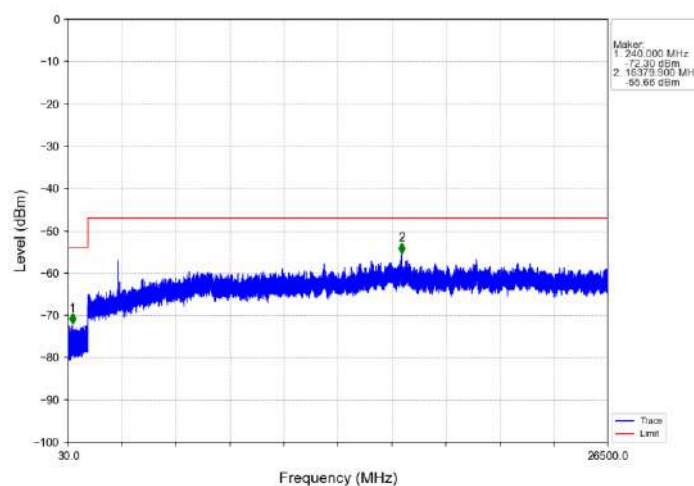


## 802.11n(HT40) MCH\_5590MHz\_Ant1\_NTNV

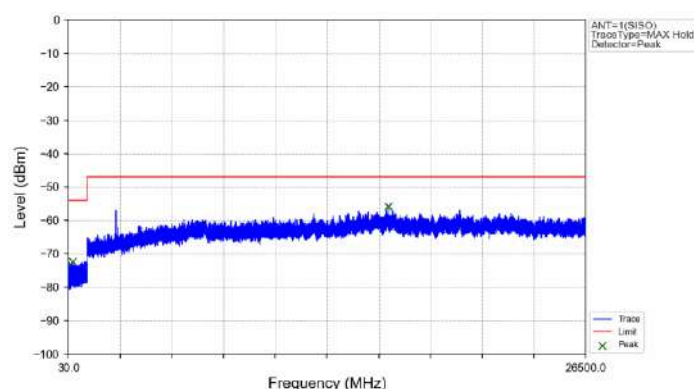


| Start (MHz) | Stop (MHz) | RBW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|------------|----------------|----------------|-------------|--------|
| 30          | 1000       | 0.1       | 0.1       | 367.400    | -71.61         | /              | -54         | Pass   |
| 1000        | 26500      | 1         | 1         | 17994.050  | -55.78         | /              | -47         | Pass   |

## 802.11n(HT40) HCH\_5670MHz\_Ant1\_NTNV

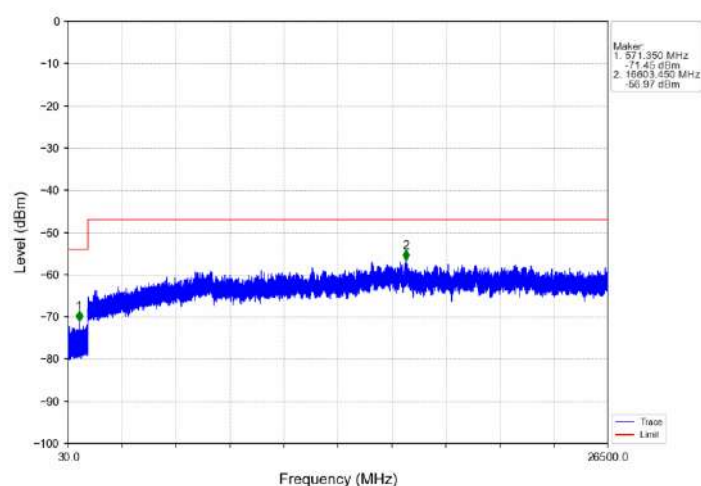


## 802.11n(HT40) HCH\_5670MHz\_Ant1\_NTNV

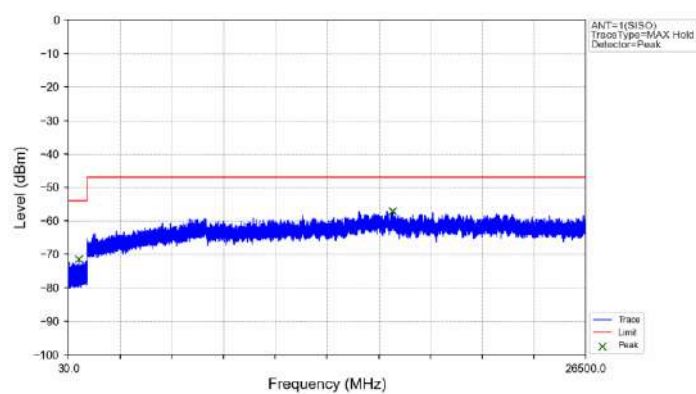


| Start (MHz) | Stop (MHz) | RBW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|------------|----------------|----------------|-------------|--------|
| 30          | 1000       | 0.1       | 0.1       | 240.000    | -72.30         | /              | -54         | Pass   |
| 1000        | 26500      | 1         | 1         | 16379.900  | -55.66         | /              | -47         | Pass   |

## 802.11n(HT40)\_HHCH\_5710MHz\_Ant1\_NTNV



## 802.11n(HT40)\_HHCH\_5710MHz\_Ant1\_NTNV



| Start (MHz) | Stop (MHz) | RBW (MHz) | VBW (MHz) | Freq (MHz) | PK Power (dBm) | AV Power (dBm) | Limit (dBm) | Result |
|-------------|------------|-----------|-----------|------------|----------------|----------------|-------------|--------|
| 30          | 1000       | 0.1       | 0.1       | 571.350    | -71.45         | /              | -54         | Pass   |
| 1000        | 26500      | 1         | 1         | 16603.450  | -56.97         | /              | -47         | Pass   |

### 3.8 Adjacent Channel Leakage Power

#### 3.8.1 Test Condition

|                      |              |
|----------------------|--------------|
| Test Position:       | Transmitting |
| Ambient Temperature: | 23.1°C       |
| Relative Humidity:   | 52.6 %       |
| Atmosphere Pressure: | 100.7 KPa    |

#### 3.8.2 Limit

| Item                           | Limits                                                                                                                            |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| Adjacent channel leakage power | $\leq -25\text{dBc}$ (within $\pm 10\text{MHz}$ band at $\pm 20\text{MHz}$ spacing) $\text{OBW} \leq 20\text{MHz}$                |
|                                | $\leq -40\text{dBc}$ (within $\pm 10\text{MHz}$ band at $\pm 40\text{MHz}$ spacing) $\text{OBW} \leq 20\text{MHz}$                |
|                                | $\leq -25\text{dBc}$ (within $\pm 20\text{MHz}$ band at $\pm 40\text{MHz}$ spacing) $20\text{MHz} < \text{OBW} \leq 40\text{MHz}$ |
|                                | $\leq -40\text{dBc}$ (within $\pm 20\text{MHz}$ band at $\pm 80\text{MHz}$ spacing) $20\text{MHz} < \text{OBW} \leq 40\text{MHz}$ |
|                                | $\leq -25\text{dBc}$ (within $\pm 40\text{MHz}$ band at $\pm 80\text{MHz}$ spacing) $40\text{MHz} < \text{OBW} \leq 80\text{MHz}$ |

#### 3.8.3 Measuring Instruments and Setting

| Spectrum Parameter | Setting  |
|--------------------|----------|
| Attenuation        | Auto     |
| RBW/VBW            | 300kHz   |
| Detector           | Peak     |
| Trace              | Max Hold |
| Sweep Time         | Auto     |

### 3.8.4 Test procedures

1.Power meter or Spectrum Analyzer is used for measurement.

2.EUT conditions:

Modulation/Spread

For equipment using diffusion code, set to the test diffusion code and modulate with standard coding test signal.

3.Spectrum Analyzer conditions:

Frequency: Test Frequency

RBW 300KHz, VBW 300KHz

Span 104 MHz for 802.11a/n(HT20);

208 MHz for 802.11n(HT40);

For 802.11 a/n(HT20):

Adjacent channel bandwidth 20MHz, Channel spacing 20MHz

Alternate channel bandwidth 20MHz, Channel spacing 40MHz

For 802.11 n(HT40):

Adjacent channel bandwidth 40MHz, Channel spacing 40MHz

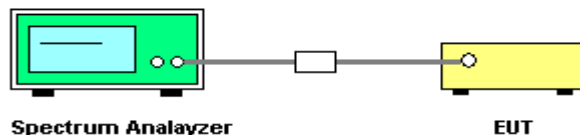
Alternate channel bandwidth 40MHz, Channel spacing 80MHz

Sweep Time Auto

detector mode Sample

Indication mode Max hold

### 3.8.5 Test Setup diagram



## 3.8.6 Test Result

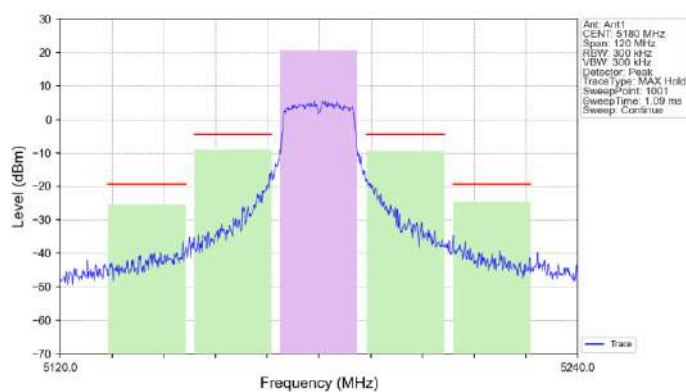
| NTNV           |         |                 |     |              |                |             |              |             |         |
|----------------|---------|-----------------|-----|--------------|----------------|-------------|--------------|-------------|---------|
| Mode           | TX Type | Frequency (MHz) | ANT | Offset (MHz) | Integ BW (MHz) | Power (dBm) | Result (dBc) | Limit (dBc) | Verdict |
| 802.11a        | SISO    | 5180            | 1   | -40          | 18             | -25.41      | -45.99       | <=-40       | Pass    |
|                |         |                 |     | -20          | 18             | -8.95       | -29.53       | <=-25       | Pass    |
|                |         |                 |     | 0            | 18             | 20.58       | /            | /           | /       |
|                |         |                 |     | 20           | 18             | -9.30       | -29.88       | <=-25       | Pass    |
|                |         |                 |     | 40           | 18             | -24.49      | -45.07       | <=-40       | Pass    |
|                |         | 5200            | 1   | -40          | 18             | -20.22      | -42.70       | <=-40       | Pass    |
|                |         |                 |     | -20          | 18             | -6.24       | -28.72       | <=-25       | Pass    |
|                |         |                 |     | 0            | 18             | 22.48       | /            | /           | /       |
|                |         |                 |     | 20           | 18             | -6.39       | -28.87       | <=-25       | Pass    |
|                |         |                 |     | 40           | 18             | -19.61      | -42.09       | <=-40       | Pass    |
|                |         | 5240            | 1   | -40          | 18             | -20.66      | -42.78       | <=-40       | Pass    |
|                |         |                 |     | -20          | 18             | -6.09       | -28.21       | <=-25       | Pass    |
|                |         |                 |     | 0            | 18             | 22.12       | /            | /           | /       |
|                |         |                 |     | 20           | 18             | -6.33       | -28.45       | <=-25       | Pass    |
|                |         |                 |     | 40           | 18             | -20.51      | -42.63       | <=-40       | Pass    |
|                |         | 5260            | 1   | -40          | 18             | -20.03      | -42.23       | <=-40       | Pass    |
|                |         |                 |     | -20          | 18             | -5.32       | -27.52       | <=-25       | Pass    |
|                |         |                 |     | 0            | 18             | 22.20       | /            | /           | /       |
|                |         |                 |     | 20           | 18             | -5.12       | -27.32       | <=-25       | Pass    |
|                |         |                 |     | 40           | 18             | -20.83      | -43.03       | <=-40       | Pass    |
|                |         | 5300            | 1   | -40          | 18             | -28.27      | -47.10       | <=-40       | Pass    |
|                |         |                 |     | -20          | 18             | -10.39      | -29.22       | <=-25       | Pass    |
|                |         |                 |     | 0            | 18             | 18.83       | /            | /           | /       |
|                |         |                 |     | 20           | 18             | -11.39      | -30.22       | <=-25       | Pass    |
|                |         |                 |     | 40           | 18             | -28.63      | -47.46       | <=-40       | Pass    |
|                |         | 5320            | 1   | -40          | 18             | -17.97      | -40.03       | <=-40       | Pass    |
|                |         |                 |     | -20          | 18             | -4.82       | -26.88       | <=-25       | Pass    |
|                |         |                 |     | 0            | 18             | 22.06       | /            | /           | /       |
|                |         |                 |     | 20           | 18             | -4.41       | -26.47       | <=-25       | Pass    |
|                |         |                 |     | 40           | 18             | -19.69      | -41.75       | <=-40       | Pass    |
|                |         | 5500            | 1   | -40          | 20             | -23.38      | -41.80       | <=-40       | Pass    |
|                |         |                 |     | -20          | 20             | -7.51       | -25.93       | <=-25       | Pass    |
|                |         |                 |     | 0            | 20             | 18.42       | /            | /           | /       |
|                |         |                 |     | 20           | 20             | -7.73       | -26.15       | <=-25       | Pass    |
|                |         |                 |     | 40           | 20             | -23.76      | -42.18       | <=-40       | Pass    |
|                |         | 5600            | 1   | -40          | 20             | -22.67      | -41.39       | <=-40       | Pass    |
|                |         |                 |     | -20          | 20             | -6.93       | -25.65       | <=-25       | Pass    |
|                |         |                 |     | 0            | 20             | 18.72       | /            | /           | /       |
|                |         |                 |     | 20           | 20             | -8.01       | -26.73       | <=-25       | Pass    |
|                |         |                 |     | 40           | 20             | -21.88      | -40.60       | <=-40       | Pass    |
|                |         | 5700            | 1   | -40          | 20             | -26.74      | -44.96       | <=-40       | Pass    |
|                |         |                 |     | -20          | 20             | -7.71       | -25.93       | <=-25       | Pass    |
|                |         |                 |     | 0            | 20             | 18.22       | /            | /           | /       |
|                |         |                 |     | 20           | 20             | -8.68       | -26.90       | <=-25       | Pass    |
|                |         |                 |     | 40           | 20             | -24.40      | -42.62       | <=-40       | Pass    |
|                |         | 5720            | 1   | -40          | 20             | -26.25      | -44.68       | <=-40       | Pass    |
|                |         |                 |     | -20          | 20             | -8.24       | -26.67       | <=-25       | Pass    |
|                |         |                 |     | 0            | 20             | 18.43       | /            | /           | /       |
|                |         |                 |     | 20           | 20             | -8.58       | -27.01       | <=-25       | Pass    |
|                |         |                 |     | 40           | 20             | -24.80      | -43.23       | <=-40       | Pass    |
| 802.11n (HT20) | SISO    | 5180            | 1   | -40          | 18             | -24.66      | -45.25       | <=-40       | Pass    |
|                |         |                 |     | -20          | 18             | -8.10       | -28.69       | <=-25       | Pass    |

|                   |      |      |   |     |    |        |        |       |      |
|-------------------|------|------|---|-----|----|--------|--------|-------|------|
|                   |      |      |   | 0   | 18 | 20.59  | /      | /     | /    |
|                   |      |      |   | 20  | 18 | -7.76  | -28.35 | <=-25 | Pass |
|                   |      |      |   | 40  | 18 | -24.09 | -44.68 | <=-40 | Pass |
|                   |      | 5200 | 1 | -40 | 18 | -24.57 | -45.27 | <=-40 | Pass |
|                   |      |      |   | -20 | 18 | -7.84  | -28.54 | <=-25 | Pass |
|                   |      |      |   | 0   | 18 | 20.70  | /      | /     | /    |
|                   |      |      |   | 20  | 18 | -7.83  | -28.53 | <=-25 | Pass |
|                   |      |      |   | 40  | 18 | -24.56 | -45.26 | <=-40 | Pass |
|                   |      | 5240 | 1 | -40 | 18 | -21.79 | -42.53 | <=-40 | Pass |
|                   |      |      |   | -20 | 18 | -7.02  | -27.76 | <=-25 | Pass |
|                   |      |      |   | 0   | 18 | 20.74  | /      | /     | /    |
|                   |      |      |   | 20  | 18 | -7.71  | -28.45 | <=-25 | Pass |
|                   |      |      |   | 40  | 18 | -22.37 | -43.11 | <=-40 | Pass |
|                   |      | 5260 | 1 | -40 | 18 | -20.97 | -41.66 | <=-40 | Pass |
|                   |      |      |   | -20 | 18 | -6.78  | -27.47 | <=-25 | Pass |
|                   |      |      |   | 0   | 18 | 20.69  | /      | /     | /    |
|                   |      |      |   | 20  | 18 | -7.00  | -27.69 | <=-25 | Pass |
|                   |      |      |   | 40  | 18 | -21.90 | -42.59 | <=-40 | Pass |
|                   |      | 5300 | 1 | -40 | 18 | -21.49 | -42.23 | <=-40 | Pass |
|                   |      |      |   | -20 | 18 | -6.29  | -27.03 | <=-25 | Pass |
|                   |      |      |   | 0   | 18 | 20.74  | /      | /     | /    |
|                   |      |      |   | 20  | 18 | -6.54  | -27.28 | <=-25 | Pass |
|                   |      |      |   | 40  | 18 | -22.54 | -43.28 | <=-40 | Pass |
|                   |      | 5320 | 1 | -40 | 18 | -20.38 | -40.49 | <=-40 | Pass |
|                   |      |      |   | -20 | 18 | -6.83  | -26.94 | <=-25 | Pass |
|                   |      |      |   | 0   | 18 | 20.11  | /      | /     | /    |
|                   |      |      |   | 20  | 18 | -6.51  | -26.62 | <=-25 | Pass |
|                   |      |      |   | 40  | 18 | -21.85 | -41.96 | <=-40 | Pass |
|                   |      | 5500 | 1 | -40 | 20 | -28.27 | -44.34 | <=-40 | Pass |
|                   |      |      |   | -20 | 20 | -9.28  | -25.35 | <=-25 | Pass |
|                   |      |      |   | 0   | 20 | 16.07  | /      | /     | /    |
|                   |      |      |   | 20  | 20 | -9.20  | -25.27 | <=-25 | Pass |
|                   |      |      |   | 40  | 20 | -27.61 | -43.68 | <=-40 | Pass |
|                   |      | 5600 | 1 | -40 | 20 | -32.69 | -46.62 | <=-40 | Pass |
|                   |      |      |   | -20 | 20 | -11.81 | -25.74 | <=-25 | Pass |
|                   |      |      |   | 0   | 20 | 13.93  | /      | /     | /    |
|                   |      |      |   | 20  | 20 | -12.35 | -26.28 | <=-25 | Pass |
|                   |      |      |   | 40  | 20 | -33.32 | -47.25 | <=-40 | Pass |
|                   |      | 5700 | 1 | -40 | 20 | -27.12 | -44.55 | <=-40 | Pass |
|                   |      |      |   | -20 | 20 | -7.61  | -25.04 | <=-25 | Pass |
|                   |      |      |   | 0   | 20 | 17.43  | /      | /     | /    |
|                   |      |      |   | 20  | 20 | -8.15  | -25.58 | <=-25 | Pass |
|                   |      |      |   | 40  | 20 | -24.69 | -42.12 | <=-40 | Pass |
|                   |      | 5720 | 1 | -40 | 20 | -27.68 | -45.28 | <=-40 | Pass |
|                   |      |      |   | -20 | 20 | -7.99  | -25.59 | <=-25 | Pass |
|                   |      |      |   | 0   | 20 | 17.60  | /      | /     | /    |
|                   |      |      |   | 20  | 20 | -8.11  | -25.71 | <=-25 | Pass |
|                   |      |      |   | 40  | 20 | -26.45 | -44.05 | <=-40 | Pass |
| 802.11n<br>(HT40) | SISO | 5190 | 1 | -80 | 40 | -26.25 | -46.37 | <=-40 | Pass |
|                   |      |      |   | -40 | 40 | -13.53 | -33.65 | <=-25 | Pass |
|                   |      |      |   | 0   | 40 | 20.12  | /      | /     | /    |
|                   |      |      |   | 40  | 40 | -13.23 | -33.35 | <=-25 | Pass |
|                   |      |      |   | 80  | 40 | -27.54 | -47.66 | <=-40 | Pass |
|                   |      | 5230 | 1 | -80 | 40 | -24.86 | -45.74 | <=-40 | Pass |
|                   |      |      |   | -40 | 40 | -9.84  | -30.72 | <=-25 | Pass |
|                   |      |      |   | 0   | 40 | 20.88  | /      | /     | /    |
|                   |      |      |   | 40  | 40 | -9.75  | -30.63 | <=-25 | Pass |
|                   |      |      |   | 80  | 40 | -24.45 | -45.33 | <=-40 | Pass |
|                   |      | 5270 | 1 | -80 | 40 | -22.17 | -43.43 | <=-40 | Pass |

|  |  |      |   |     |    |        |        |       |      |
|--|--|------|---|-----|----|--------|--------|-------|------|
|  |  |      |   | -40 | 40 | -8.68  | -29.94 | <=-25 | Pass |
|  |  |      |   | 0   | 40 | 21.26  | /      | /     | /    |
|  |  |      |   | 40  | 40 | -8.74  | -30.00 | <=-25 | Pass |
|  |  | 5310 | 1 | 80  | 40 | -22.50 | -43.76 | <=-40 | Pass |
|  |  |      |   | -80 | 40 | -22.06 | -43.17 | <=-40 | Pass |
|  |  |      |   | -40 | 40 | -7.89  | -29.00 | <=-25 | Pass |
|  |  |      |   | 0   | 40 | 21.11  | /      | /     | /    |
|  |  |      |   | 40  | 40 | -7.29  | -28.40 | <=-25 | Pass |
|  |  |      |   | 80  | 40 | -22.61 | -43.72 | <=-40 | Pass |
|  |  | 5510 | 1 | -80 | 40 | -22.58 | -41.04 | <=-40 | Pass |
|  |  |      |   | -40 | 40 | -10.18 | -28.64 | <=-25 | Pass |
|  |  |      |   | 0   | 40 | 18.46  | /      | /     | /    |
|  |  |      |   | 40  | 40 | -10.36 | -28.82 | <=-25 | Pass |
|  |  |      |   | 80  | 40 | -24.45 | -42.91 | <=-40 | Pass |
|  |  | 5590 | 1 | -80 | 40 | -23.75 | -41.87 | <=-40 | Pass |
|  |  |      |   | -40 | 40 | -10.60 | -28.72 | <=-25 | Pass |
|  |  |      |   | 0   | 40 | 18.12  | /      | /     | /    |
|  |  |      |   | 40  | 40 | -11.16 | -29.28 | <=-25 | Pass |
|  |  |      |   | 80  | 40 | -25.48 | -43.60 | <=-40 | Pass |
|  |  | 5670 | 1 | -80 | 40 | -26.38 | -44.18 | <=-40 | Pass |
|  |  |      |   | -40 | 40 | -11.12 | -28.92 | <=-25 | Pass |
|  |  |      |   | 0   | 40 | 17.80  | /      | /     | /    |
|  |  |      |   | 40  | 40 | -12.01 | -29.81 | <=-25 | Pass |
|  |  |      |   | 80  | 40 | -25.64 | -43.44 | <=-40 | Pass |
|  |  | 5710 | 1 | -80 | 40 | -29.37 | -47.03 | <=-40 | Pass |
|  |  |      |   | -40 | 40 | -11.66 | -29.32 | <=-25 | Pass |
|  |  |      |   | 0   | 40 | 17.66  | /      | /     | /    |
|  |  |      |   | 40  | 40 | -12.27 | -29.93 | <=-25 | Pass |
|  |  |      |   | 80  | 40 | -28.65 | -46.31 | <=-40 | Pass |

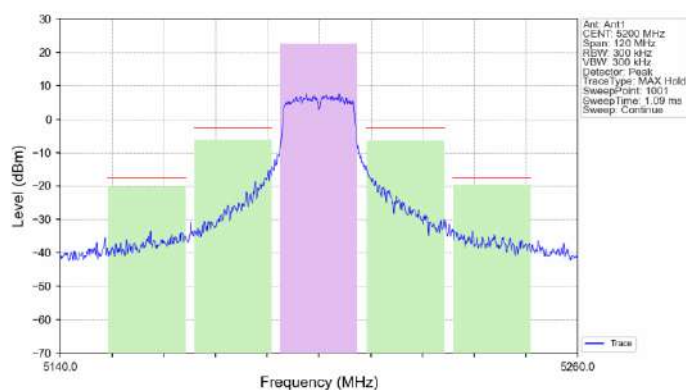
### 3.8.7 Test Graphs

802.11a LCH 5180MHz Ant1 NTN



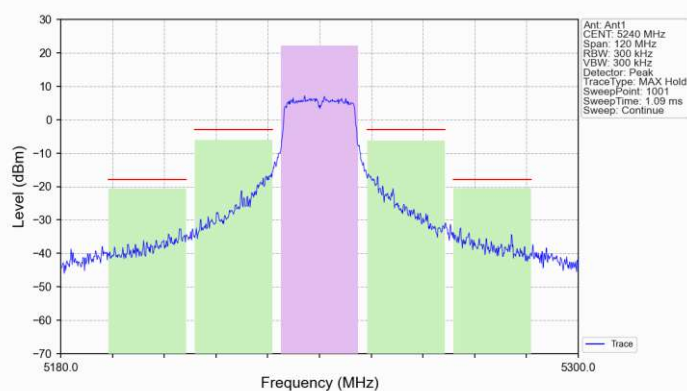
| Channel   | Offset (MHz) | Integ BW (MHz) | Power (dBm) | dBc    | Limit (dBc) | Margin (dB) | Status |
|-----------|--------------|----------------|-------------|--------|-------------|-------------|--------|
| Alternate | -40          | 18.00          | -25.41      | -45.99 | -40         | 5.99        | Pass   |
| Adjacent  | -20          | 18.00          | -8.95       | -29.53 | -25         | 4.53        | Pass   |
| Carrier   | /            | 18.00          | 20.58       | /      | /           | /           | /      |
| Adjacent  | 20           | 18.00          | -9.30       | -29.88 | -25         | 4.88        | Pass   |
| Alternate | 40           | 18.00          | -24.49      | -45.07 | -40         | 5.07        | Pass   |

802.11a MCH 5200MHz Ant1 NTN



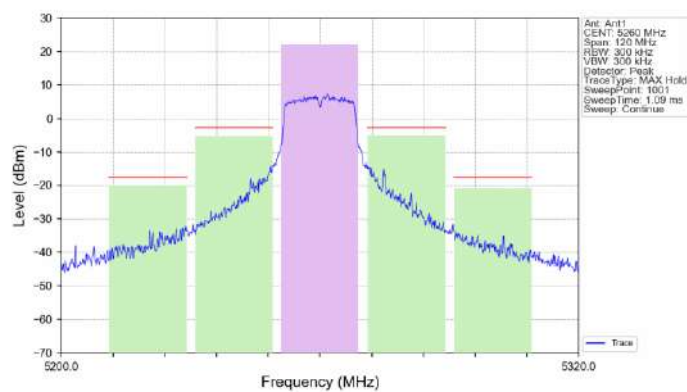
| Channel   | Offset (MHz) | Integ BW (MHz) | Power (dBm) | dBc    | Limit (dBc) | Margin (dB) | Status |
|-----------|--------------|----------------|-------------|--------|-------------|-------------|--------|
| Alternate | -40          | 18.00          | -20.22      | -42.70 | -40         | 2.70        | Pass   |
| Adjacent  | -20          | 18.00          | -6.24       | -28.72 | -25         | 3.72        | Pass   |
| Carrier   | /            | 18.00          | 22.48       | /      | /           | /           | /      |
| Adjacent  | 20           | 18.00          | -6.39       | -28.87 | -25         | 3.87        | Pass   |
| Alternate | 40           | 18.00          | -19.61      | -42.09 | -40         | 2.09        | Pass   |

## 802.11a\_HCH\_5240MHz\_Ant1\_NTNV



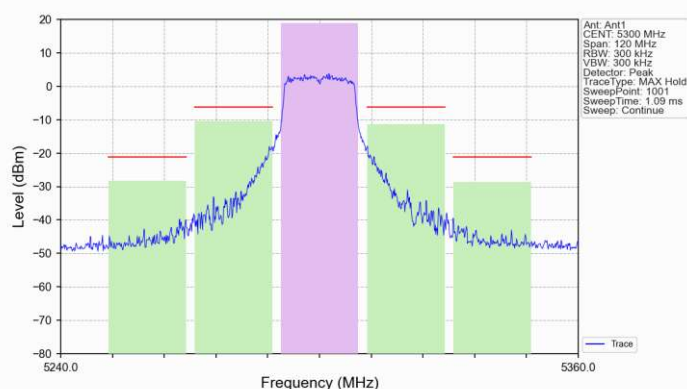
| Channel   | Offset (MHz) | Integ BW (MHz) | Power (dBm) | dBc    | Limit (dBc) | Margin (dB) | Status |
|-----------|--------------|----------------|-------------|--------|-------------|-------------|--------|
| Alternate | -40          | 18.00          | -20.66      | -42.78 | -40         | 2.78        | Pass   |
| Adjacent  | -20          | 18.00          | -6.09       | -28.21 | -25         | 3.21        | Pass   |
| Carrier   | /            | 18.00          | 22.12       | /      | /           | /           | /      |
| Adjacent  | 20           | 18.00          | -6.33       | -28.45 | -25         | 3.45        | Pass   |
| Alternate | 40           | 18.00          | -20.51      | -42.63 | -40         | 2.63        | Pass   |

## 802.11a\_LCH\_5260MHz\_Ant1\_NTNV



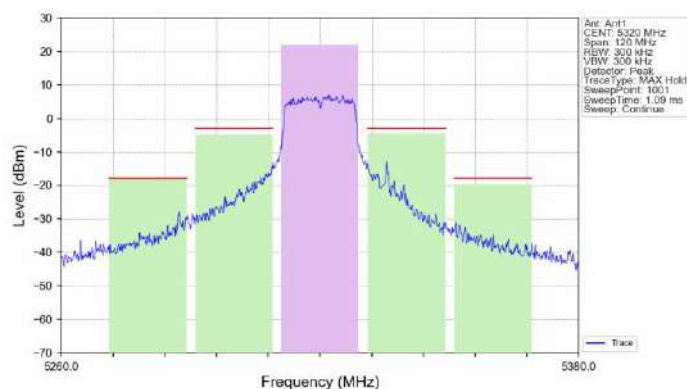
| Channel   | Offset (MHz) | Integ BW (MHz) | Power (dBm) | dBc    | Limit (dBc) | Margin (dB) | Status |
|-----------|--------------|----------------|-------------|--------|-------------|-------------|--------|
| Alternate | -40          | 18.00          | -20.03      | -42.23 | -40         | 2.23        | Pass   |
| Adjacent  | -20          | 18.00          | -5.32       | -27.52 | -25         | 2.52        | Pass   |
| Carrier   | /            | 18.00          | 22.20       | /      | /           | /           | /      |
| Adjacent  | 20           | 18.00          | -5.12       | -27.32 | -25         | 2.32        | Pass   |
| Alternate | 40           | 18.00          | -20.03      | -43.03 | -40         | 3.03        | Pass   |

## 802.11a\_MCH\_5300MHz\_Ant1\_NTNV



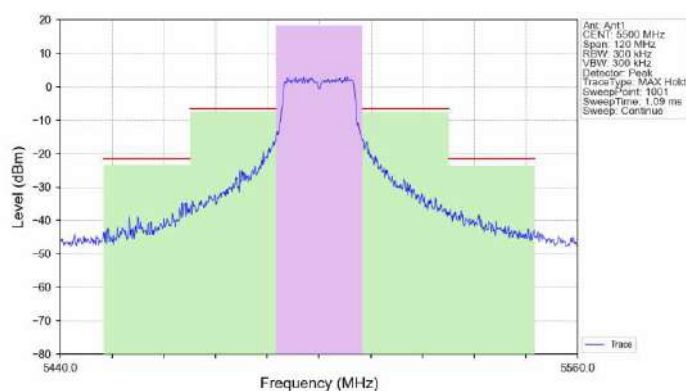
| Channel   | Offset (MHz) | Integ BW (MHz) | Power (dBm) | dBc    | Limit (dBc) | Margin (dB) | Status |
|-----------|--------------|----------------|-------------|--------|-------------|-------------|--------|
| Alternate | -40          | 18.00          | -28.27      | -47.10 | -40         | 7.10        | Pass   |
| Adjacent  | -20          | 18.00          | -10.39      | -29.22 | -25         | 4.22        | Pass   |
| Carrier   | /            | 18.00          | 18.83       | /      | /           | /           | /      |
| Adjacent  | 20           | 18.00          | -11.39      | -30.22 | -25         | 5.22        | Pass   |
| Alternate | 40           | 18.00          | -28.63      | -47.46 | -40         | 7.46        | Pass   |

## 802.11a\_HCH\_5320MHz\_Ant1\_NTNV



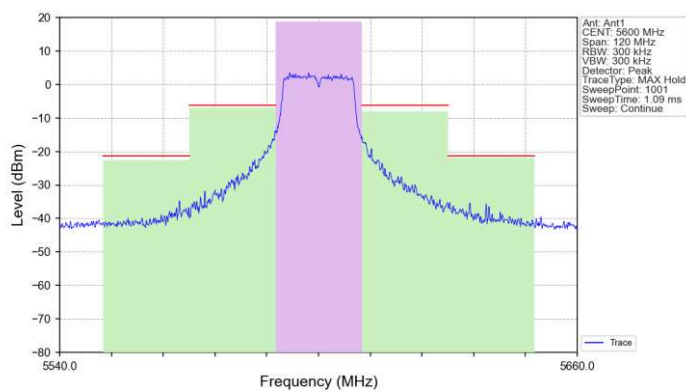
| Channel   | Offset (MHz) | Integ BW (MHz) | Power (dBm) | dBc    | Limit (dBc) | Margin (dB) | Status |
|-----------|--------------|----------------|-------------|--------|-------------|-------------|--------|
| Alternate | -40          | 18.00          | -17.97      | -40.03 | -40         | 0.03        | Pass   |
| Adjacent  | -20          | 18.00          | -4.82       | -26.88 | -25         | 1.88        | Pass   |
| Carrier   | /            | 18.00          | 22.06       | /      | /           | /           | /      |
| Adjacent  | 20           | 18.00          | -4.41       | -26.47 | -25         | 1.47        | Pass   |
| Alternate | 40           | 18.00          | -19.09      | -41.75 | -40         | 1.75        | Pass   |

## 802.11a LCH 5500MHz Ant1 NTNv



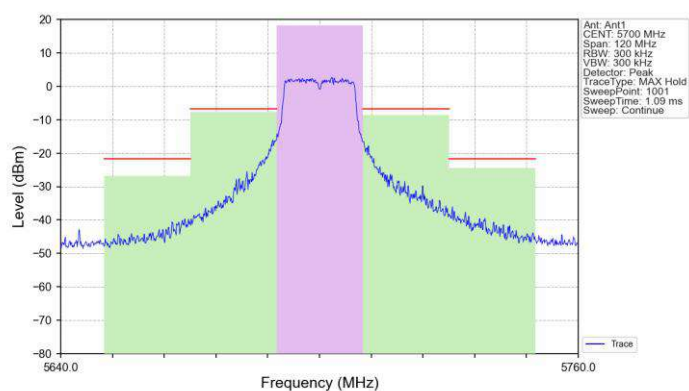
| Channel   | Offset (MHz) | Integ BW (MHz) | Power (dBm) | dBc    | Limit (dBc) | Margin (dB) | Status |
|-----------|--------------|----------------|-------------|--------|-------------|-------------|--------|
| Alternate | -40          | 20.00          | -23.38      | -41.80 | -40         | 1.80        | Pass   |
| Adjacent  | -20          | 20.00          | -7.51       | -25.93 | -25         | 0.93        | Pass   |
| Carrier   | /            | 20.00          | 18.42       | /      | /           | /           | /      |
| Adjacent  | 20           | 20.00          | -7.73       | -26.15 | -25         | 1.15        | Pass   |
| Alternate | 40           | 20.00          | -23.76      | -42.18 | -40         | 2.18        | Pass   |

## 802.11a MCH 5600MHz Ant1 NTNv



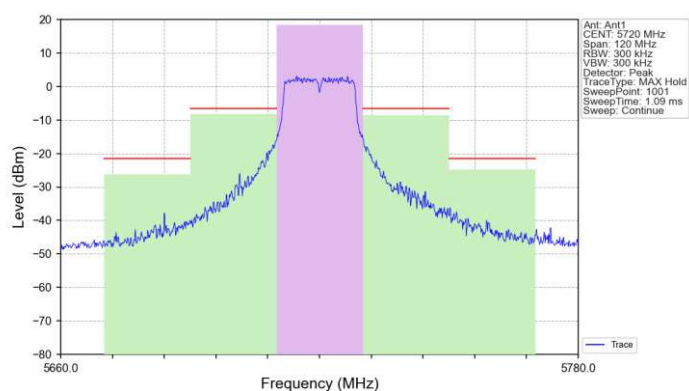
| Channel   | Offset (MHz) | Integ BW (MHz) | Power (dBm) | dBc    | Limit (dBc) | Margin (dB) | Status |
|-----------|--------------|----------------|-------------|--------|-------------|-------------|--------|
| Alternate | -40          | 20.00          | -22.67      | -41.39 | -40         | 1.39        | Pass   |
| Adjacent  | -20          | 20.00          | -6.93       | -25.65 | -25         | 0.65        | Pass   |
| Carrier   | /            | 20.00          | 18.72       | /      | /           | /           | /      |
| Adjacent  | 20           | 20.00          | -8.01       | -26.73 | -25         | 1.73        | Pass   |
| Alternate | 40           | 20.00          | -21.88      | -40.60 | -40         | 0.60        | Pass   |

## 802.11a\_HCH\_5700MHz\_Ant1\_NTNV



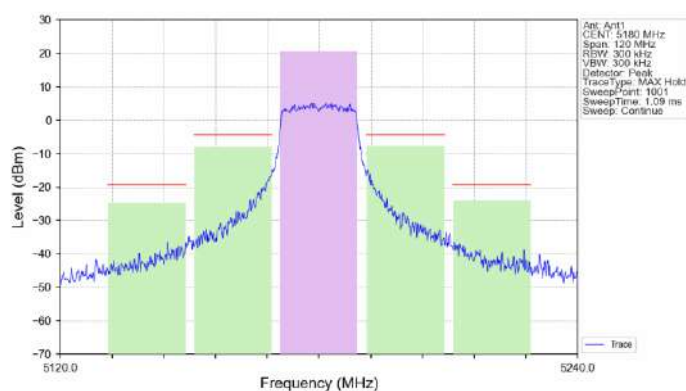
| Channel   | OffSet (MHz) | Integ BW (MHz) | Power (dBm) | dBc    | Limit (dBc) | Margin (dB) | Status |
|-----------|--------------|----------------|-------------|--------|-------------|-------------|--------|
| Alternate | -40          | 20.00          | -26.74      | -44.96 | -40         | 4.96        | Pass   |
| Adjacent  | -20          | 20.00          | -7.71       | -25.93 | -25         | 0.93        | Pass   |
| Carrier   | /            | 20.00          | 18.22       | /      | /           | /           | /      |
| Adjacent  | 20           | 20.00          | -8.68       | -26.90 | -25         | 1.90        | Pass   |
| Alternate | 40           | 20.00          | -24.40      | -42.62 | -40         | 2.62        | Pass   |

## 802.11a\_HHCH\_5720MHz\_Ant1\_NTNV



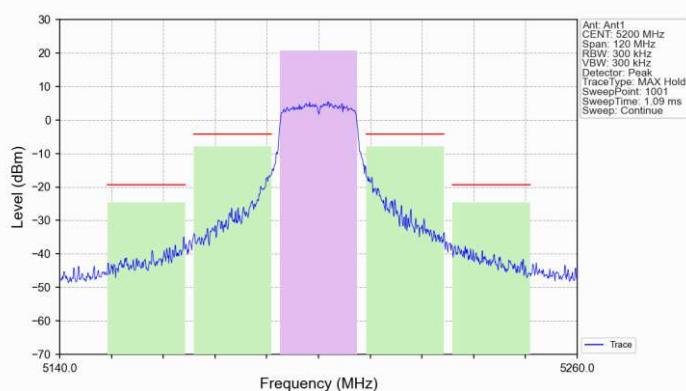
| Channel   | OffSet (MHz) | Integ BW (MHz) | Power (dBm) | dBc    | Limit (dBc) | Margin (dB) | Status |
|-----------|--------------|----------------|-------------|--------|-------------|-------------|--------|
| Alternate | -40          | 20.00          | -26.25      | -44.68 | -40         | 4.68        | Pass   |
| Adjacent  | -20          | 20.00          | -8.24       | -26.67 | -25         | 1.67        | Pass   |
| Carrier   | /            | 20.00          | 18.43       | /      | /           | /           | /      |
| Adjacent  | 20           | 20.00          | -8.58       | -27.01 | -25         | 2.01        | Pass   |
| Alternate | 40           | 20.00          | -24.80      | -43.23 | -40         | 3.23        | Pass   |

## 802.11n(HT20) LCH 5180MHz Ant1\_NTNV



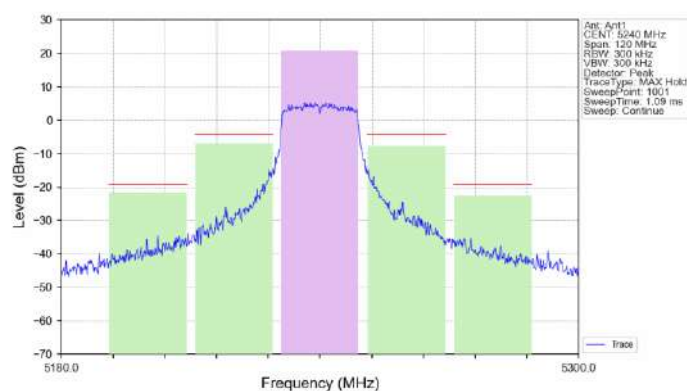
| Channel   | OffSet (MHz) | Integ BW (MHz) | Power (dBm) | dBc    | Limit (dBc) | Margin (dB) | Status |
|-----------|--------------|----------------|-------------|--------|-------------|-------------|--------|
| Alternate | -40          | 18.00          | -24.66      | -45.25 | -40         | 5.25        | Pass   |
| Adjacent  | -20          | 18.00          | -8.10       | -28.69 | -25         | 3.69        | Pass   |
| Carrier   | /            | 18.00          | 20.59       | /      | /           | /           | /      |
| Adjacent  | 20           | 18.00          | -7.76       | -28.35 | -25         | 3.35        | Pass   |
| Alternate | 40           | 18.00          | -24.09      | -44.68 | -40         | 4.68        | Pass   |

## 802.11n(HT20) MCH 5200MHz Ant1\_NTNV



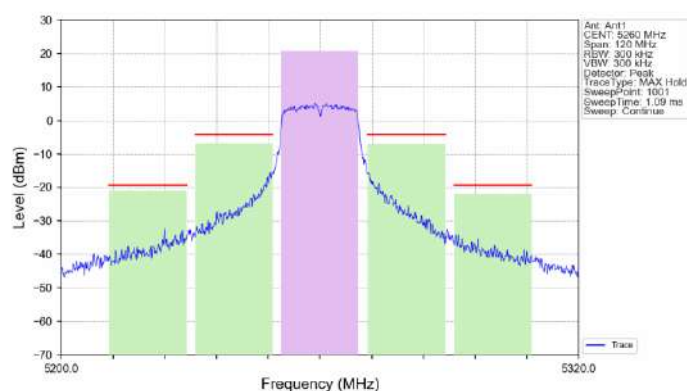
| Channel   | OffSet (MHz) | Integ BW (MHz) | Power (dBm) | dBc    | Limit (dBc) | Margin (dB) | Status |
|-----------|--------------|----------------|-------------|--------|-------------|-------------|--------|
| Alternate | -40          | 18.00          | -24.57      | -45.27 | -40         | 5.27        | Pass   |
| Adjacent  | -20          | 18.00          | -7.84       | -28.54 | -25         | 3.54        | Pass   |
| Carrier   | /            | 18.00          | 20.70       | /      | /           | /           | /      |
| Adjacent  | 20           | 18.00          | -7.83       | -28.53 | -25         | 3.53        | Pass   |
| Alternate | 40           | 18.00          | -24.56      | -45.26 | -40         | 5.26        | Pass   |

## 802.11n(HT20) HCH 5240MHz Ant1\_NTNV



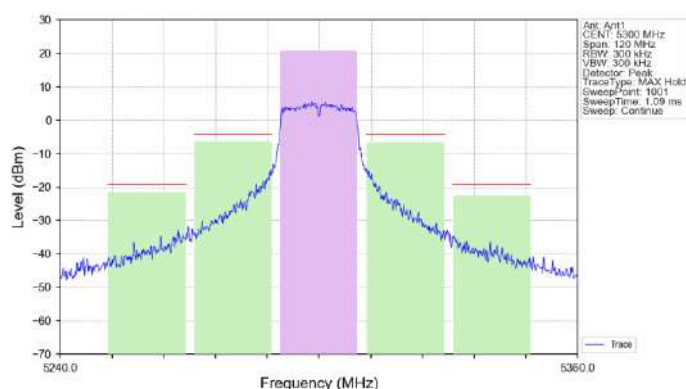
| Channel   | Offset (MHz) | Integ BW (MHz) | Power (dBm) | dBc    | Limit (dBc) | Margin (dB) | Status |
|-----------|--------------|----------------|-------------|--------|-------------|-------------|--------|
| Alternate | -40          | 18.00          | -21.79      | -42.53 | -40         | 2.53        | Pass   |
| Adjacent  | -20          | 18.00          | -7.02       | -27.76 | -25         | 2.76        | Pass   |
| Carrier   | /            | 18.00          | 20.74       | /      | /           | /           | /      |
| Adjacent  | 20           | 18.00          | -7.71       | -28.45 | -25         | 3.45        | Pass   |
| Alternate | 40           | 18.00          | -22.37      | -43.11 | -40         | 3.11        | Pass   |

## 802.11n(HT20) LCH 5260MHz Ant1\_NTNV



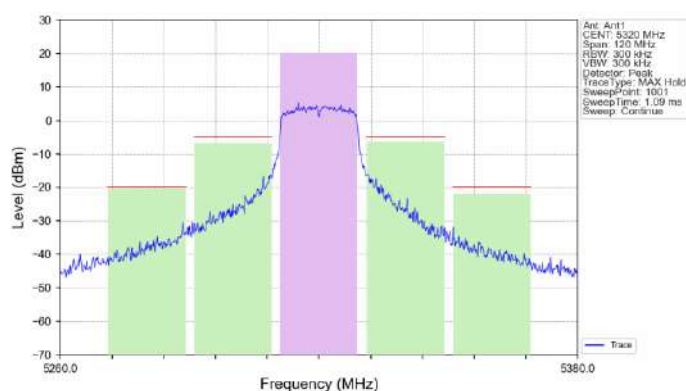
| Channel   | Offset (MHz) | Integ BW (MHz) | Power (dBm) | dBc    | Limit (dBc) | Margin (dB) | Status |
|-----------|--------------|----------------|-------------|--------|-------------|-------------|--------|
| Alternate | -40          | 18.00          | -20.97      | -41.66 | -40         | 1.66        | Pass   |
| Adjacent  | -20          | 18.00          | -6.78       | -27.47 | -25         | 2.47        | Pass   |
| Carrier   | /            | 18.00          | 20.69       | /      | /           | /           | /      |
| Adjacent  | 20           | 18.00          | -7.00       | -27.69 | -25         | 2.69        | Pass   |
| Alternate | 40           | 18.00          | -21.90      | -42.59 | -40         | 2.59        | Pass   |

## 802.11n(HT20) MCH 5300MHz Ant1\_NTNV



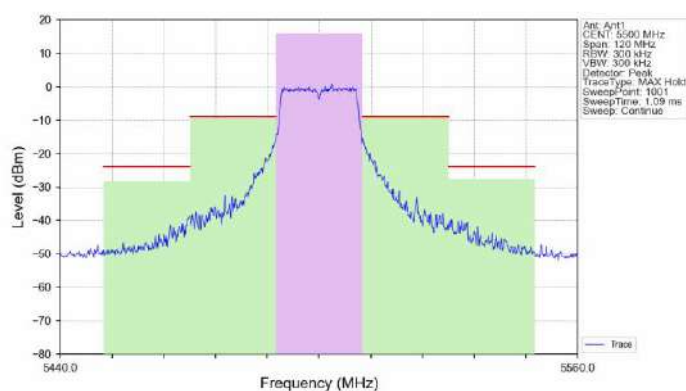
| Channel   | Offset (MHz) | Integ BW (MHz) | Power (dBm) | dBc    | Limit (dBc) | Margin (dB) | Status |
|-----------|--------------|----------------|-------------|--------|-------------|-------------|--------|
| Alternate | -40          | 18.00          | -21.49      | -42.23 | -40         | 2.23        | Pass   |
| Adjacent  | -20          | 18.00          | -6.29       | -27.03 | -25         | 2.03        | Pass   |
| Carrier   | /            | 18.00          | 20.74       | /      | /           | /           | /      |
| Adjacent  | 20           | 18.00          | -6.54       | -27.28 | -25         | 2.28        | Pass   |
| Alternate | 40           | 18.00          | -22.54      | -43.28 | -40         | 3.28        | Pass   |

## 802.11n(HT20) HCH 5320MHz Ant1\_NTNV



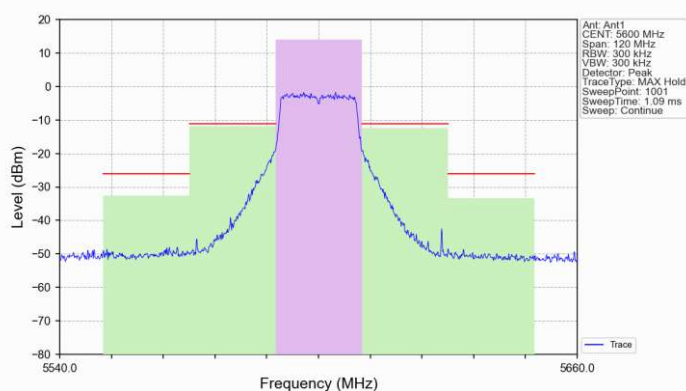
| Channel   | Offset (MHz) | Integ BW (MHz) | Power (dBm) | dBc    | Limit (dBc) | Margin (dB) | Status |
|-----------|--------------|----------------|-------------|--------|-------------|-------------|--------|
| Alternate | -40          | 18.00          | -20.38      | -40.49 | -40         | 0.49        | Pass   |
| Adjacent  | -20          | 18.00          | -6.83       | -26.94 | -25         | 1.94        | Pass   |
| Carrier   | /            | 18.00          | 20.11       | /      | /           | /           | /      |
| Adjacent  | 20           | 18.00          | -6.51       | -26.62 | -25         | 1.62        | Pass   |
| Alternate | 40           | 18.00          | -21.85      | -41.96 | -40         | 1.96        | Pass   |

## 802.11n(HT20) LCH\_5500MHz\_Ant1\_NTNV



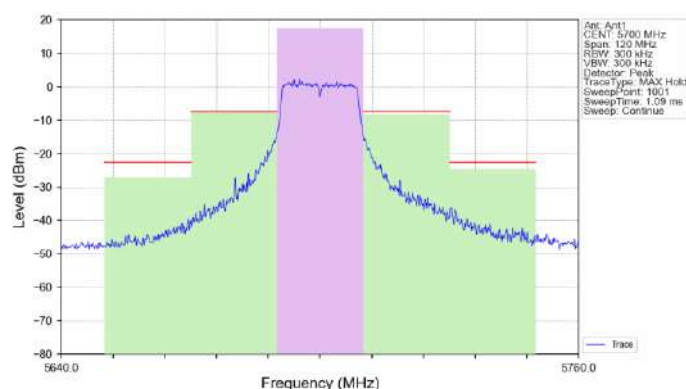
| Channel   | OffSet (MHz) | Integ BW (MHz) | Power (dBm) | dBc    | Limit (dBc) | Margin (dB) | Status |
|-----------|--------------|----------------|-------------|--------|-------------|-------------|--------|
| Alternate | -40          | 20.00          | -28.27      | -44.34 | -40         | 4.34        | Pass   |
| Adjacent  | -20          | 20.00          | -9.28       | -25.35 | -25         | 0.35        | Pass   |
| Carrier   | /            | 20.00          | 16.07       | /      | /           | /           | /      |
| Adjacent  | 20           | 20.00          | -9.20       | -25.27 | -25         | 0.27        | Pass   |
| Alternate | 40           | 20.00          | -27.51      | -43.68 | -40         | 3.68        | Pass   |

## 802.11n(HT20) MCH\_5600MHz\_Ant1\_NTNV



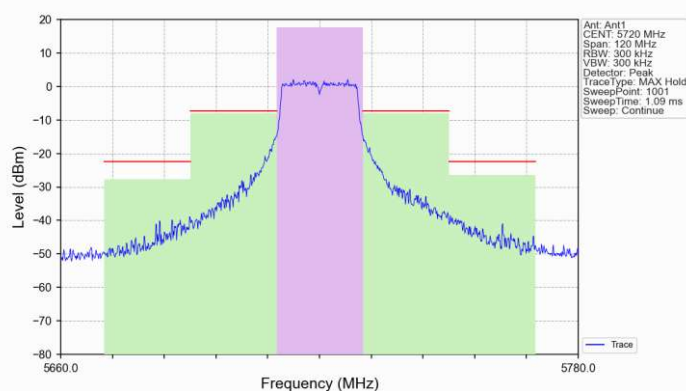
| Channel   | OffSet (MHz) | Integ BW (MHz) | Power (dBm) | dBc    | Limit (dBc) | Margin (dB) | Status |
|-----------|--------------|----------------|-------------|--------|-------------|-------------|--------|
| Alternate | -40          | 20.00          | -32.69      | -46.62 | -40         | 6.62        | Pass   |
| Adjacent  | -20          | 20.00          | -11.81      | -25.74 | -25         | 0.74        | Pass   |
| Carrier   | /            | 20.00          | 13.93       | /      | /           | /           | /      |
| Adjacent  | 20           | 20.00          | -12.35      | -26.28 | -25         | 1.28        | Pass   |
| Alternate | 40           | 20.00          | -33.32      | -47.25 | -40         | 7.25        | Pass   |

## 802.11n(HT20) HCH 5700MHz Ant1\_NTNV



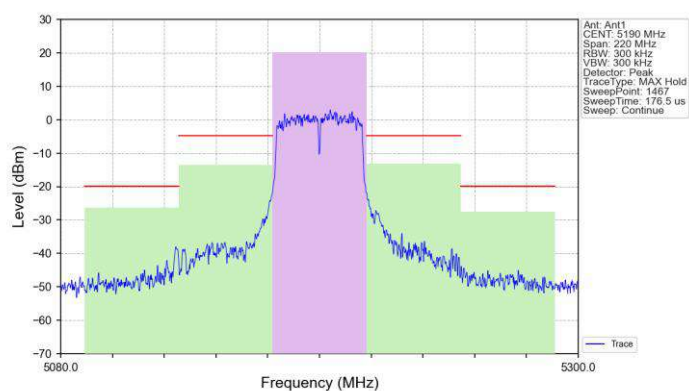
| Channel   | OffSet (MHz) | Integ BW (MHz) | Power (dBm) | dBc    | Limit (dBc) | Margin (dB) | Status |
|-----------|--------------|----------------|-------------|--------|-------------|-------------|--------|
| Alternate | -40          | 20.00          | -27.12      | -44.55 | -40         | 4.55        | Pass   |
| Adjacent  | -20          | 20.00          | -7.61       | -25.04 | -25         | 0.04        | Pass   |
| Carrier   | /            | 20.00          | 17.43       | /      | /           | /           | /      |
| Adjacent  | 20           | 20.00          | -8.15       | -25.58 | -25         | 0.58        | Pass   |
| Alternate | 40           | 20.00          | -24.69      | -42.12 | -40         | 2.12        | Pass   |

## 802.11n(HT20) HHCH 5720MHz Ant1\_NTNV



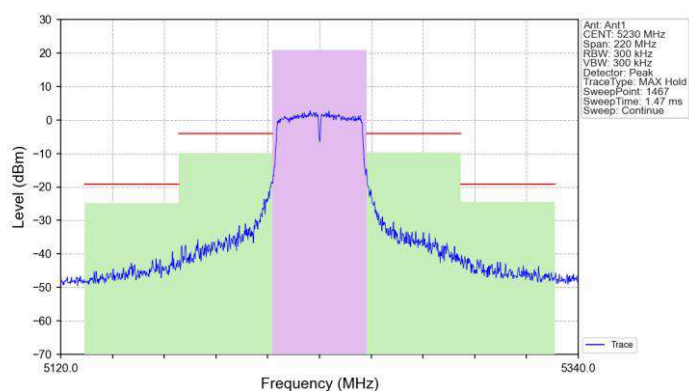
| Channel   | OffSet (MHz) | Integ BW (MHz) | Power (dBm) | dBc    | Limit (dBc) | Margin (dB) | Status |
|-----------|--------------|----------------|-------------|--------|-------------|-------------|--------|
| Alternate | -40          | 20.00          | -27.68      | -45.28 | -40         | 5.28        | Pass   |
| Adjacent  | -20          | 20.00          | -7.99       | -25.59 | -25         | 0.59        | Pass   |
| Carrier   | /            | 20.00          | 17.60       | /      | /           | /           | /      |
| Adjacent  | 20           | 20.00          | -8.11       | -25.71 | -25         | 0.71        | Pass   |
| Alternate | 40           | 20.00          | -26.45      | -44.05 | -40         | 4.05        | Pass   |

## 802.11n(HT40) LCH 5190MHz Ant1\_NTNV



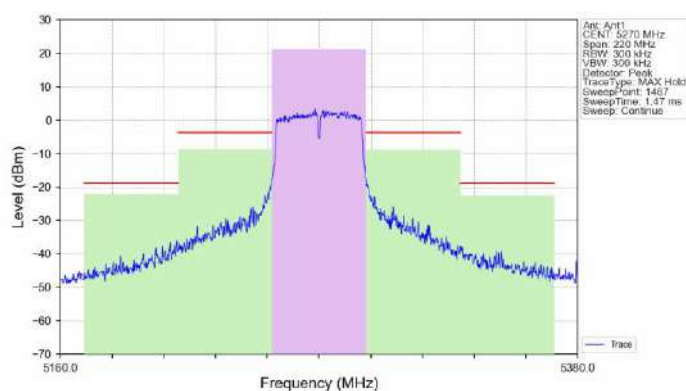
| Channel   | OffSet (MHz) | Integ BW (MHz) | Power (dBm) | dBc    | Limit (dBc) | Margin (dB) | Status |
|-----------|--------------|----------------|-------------|--------|-------------|-------------|--------|
| Alternate | -80          | 40.00          | -26.25      | -46.37 | -40         | 6.37        | Pass   |
| Adjacent  | -40          | 40.00          | -13.53      | -33.65 | -25         | 8.65        | Pass   |
| Carrier   | /            | 40.00          | 20.12       | /      | /           | /           | /      |
| Adjacent  | 40           | 40.00          | -13.23      | -33.35 | -25         | 8.35        | Pass   |
| Alternate | 80           | 40.00          | -27.54      | -47.66 | -40         | 7.66        | Pass   |

## 802.11n(HT40) HCH 5230MHz Ant1\_NTNV



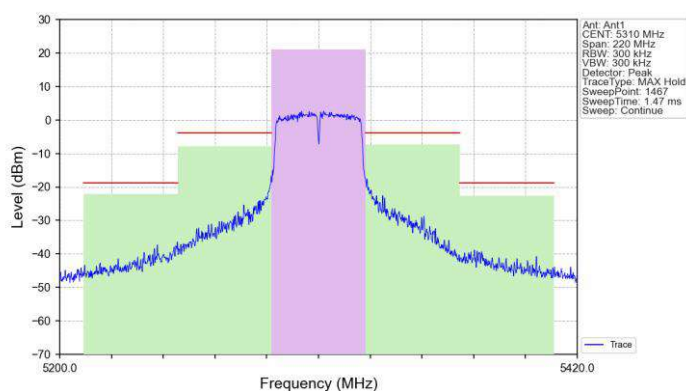
| Channel   | OffSet (MHz) | Integ BW (MHz) | Power (dBm) | dBc    | Limit (dBc) | Margin (dB) | Status |
|-----------|--------------|----------------|-------------|--------|-------------|-------------|--------|
| Alternate | -80          | 40.00          | -24.86      | -45.74 | -40         | 5.74        | Pass   |
| Adjacent  | -40          | 40.00          | -9.84       | -30.72 | -25         | 5.72        | Pass   |
| Carrier   | /            | 40.00          | 20.88       | /      | /           | /           | /      |
| Adjacent  | 40           | 40.00          | -9.75       | -30.63 | -25         | 5.63        | Pass   |
| Alternate | 80           | 40.00          | -24.45      | -45.33 | -40         | 5.33        | Pass   |

## 802.11n(HT40) LCH 5270MHz Ant1\_NTNV



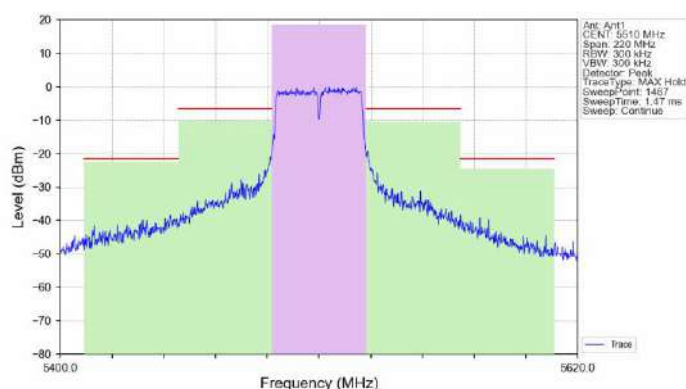
| Channel   | Offset (MHz) | Integ BW (MHz) | Power (dBm) | dBc    | Limit (dBc) | Margin (dB) | Status |
|-----------|--------------|----------------|-------------|--------|-------------|-------------|--------|
| Alternate | -80          | 40.00          | -22.17      | -43.43 | -40         | 3.43        | Pass   |
| Adjacent  | -40          | 40.00          | -8.68       | -29.94 | -25         | 4.94        | Pass   |
| Carrier   | /            | 40.00          | 21.26       | /      | /           | /           | /      |
| Adjacent  | 40           | 40.00          | -8.74       | -30.00 | -25         | 5.00        | Pass   |
| Alternate | 80           | 40.00          | -22.50      | -43.76 | -40         | 3.76        | Pass   |

## 802.11n(HT40) HCH 5310MHz Ant1\_NTNV



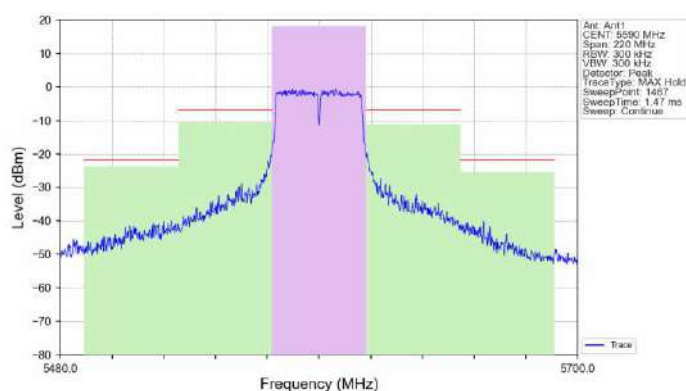
| Channel   | Offset (MHz) | Integ BW (MHz) | Power (dBm) | dBc    | Limit (dBc) | Margin (dB) | Status |
|-----------|--------------|----------------|-------------|--------|-------------|-------------|--------|
| Alternate | -80          | 40.00          | -22.06      | -43.17 | -40         | 3.17        | Pass   |
| Adjacent  | -40          | 40.00          | -7.89       | -29.00 | -25         | 4.00        | Pass   |
| Carrier   | /            | 40.00          | 21.11       | /      | /           | /           | /      |
| Adjacent  | 40           | 40.00          | -7.29       | -28.40 | -25         | 3.40        | Pass   |
| Alternate | 80           | 40.00          | -22.61      | -43.72 | -40         | 3.72        | Pass   |

## 802.11n(HT40) LCH\_5510MHz\_Ant1\_NTNV



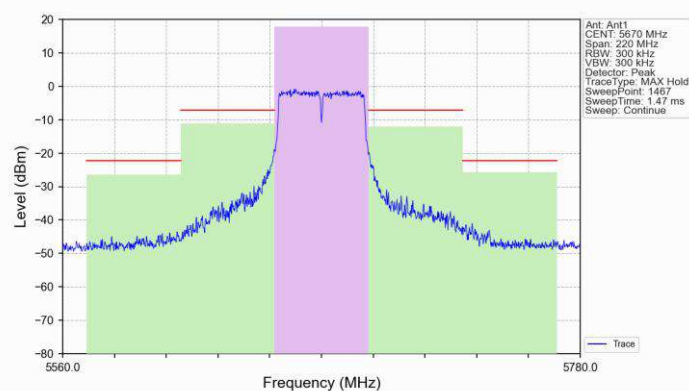
| Channel   | Offset (MHz) | Integ BW (MHz) | Power (dBm) | dBc    | Limit (dBc) | Margin (dB) | Status |
|-----------|--------------|----------------|-------------|--------|-------------|-------------|--------|
| Alternate | -80          | 40.00          | -22.58      | -41.04 | -40         | 1.04        | Pass   |
| Adjacent  | -40          | 40.00          | -10.18      | -28.64 | -25         | 3.64        | Pass   |
| Carrier   | /            | 40.00          | 18.46       | /      | /           | /           | /      |
| Adjacent  | 40           | 40.00          | -10.36      | -28.82 | -25         | 3.82        | Pass   |
| Alternate | 80           | 40.00          | -24.45      | -42.91 | -40         | 2.91        | Pass   |

## 802.11n(HT40) MCH\_5590MHz\_Ant1\_NTNV



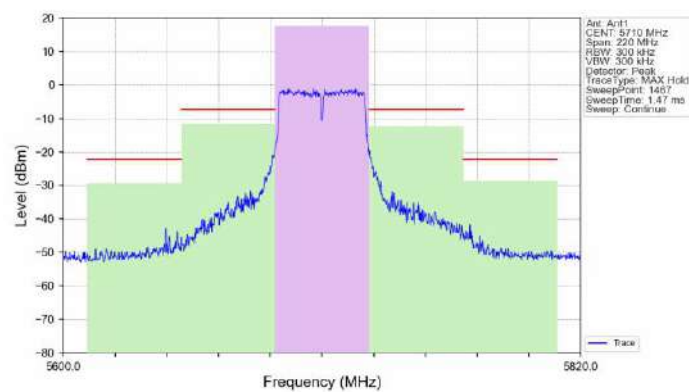
| Channel   | Offset (MHz) | Integ BW (MHz) | Power (dBm) | dBc    | Limit (dBc) | Margin (dB) | Status |
|-----------|--------------|----------------|-------------|--------|-------------|-------------|--------|
| Alternate | -80          | 40.00          | -23.75      | -41.87 | -40         | 1.87        | Pass   |
| Adjacent  | -40          | 40.00          | -10.60      | -28.72 | -25         | 3.72        | Pass   |
| Carrier   | /            | 40.00          | 18.12       | /      | /           | /           | /      |
| Adjacent  | 40           | 40.00          | -11.16      | -29.28 | -25         | 4.28        | Pass   |
| Alternate | 80           | 40.00          | -25.48      | -43.60 | -40         | 3.60        | Pass   |

## 802.11n(HT40) HCH 5670MHz Ant1\_NTNV



| Channel   | Offset (MHz) | Integ BW (MHz) | Power (dBm) | dBc    | Limit (dBc) | Margin (dB) | Status |
|-----------|--------------|----------------|-------------|--------|-------------|-------------|--------|
| Alternate | -80          | 40.00          | -26.38      | -44.18 | -40         | 4.18        | Pass   |
| Adjacent  | -40          | 40.00          | -11.12      | -28.92 | -25         | 3.92        | Pass   |
| Carrier   | /            | 40.00          | 17.80       | /      | /           | /           | /      |
| Adjacent  | 40           | 40.00          | -12.01      | -29.81 | -25         | 4.81        | Pass   |
| Alternate | 80           | 40.00          | -25.64      | -43.44 | -40         | 3.44        | Pass   |

## 802.11n(HT40) HHCH 5710MHz Ant1\_NTNV



| Channel   | Offset (MHz) | Integ BW (MHz) | Power (dBm) | dBc    | Limit (dBc) | Margin (dB) | Status |
|-----------|--------------|----------------|-------------|--------|-------------|-------------|--------|
| Alternate | -80          | 40.00          | -29.37      | -47.03 | -40         | 7.03        | Pass   |
| Adjacent  | -40          | 40.00          | -11.66      | -29.32 | -25         | 4.32        | Pass   |
| Carrier   | /            | 40.00          | 17.66       | /      | /           | /           | /      |
| Adjacent  | 40           | 40.00          | -12.27      | -29.93 | -25         | 4.93        | Pass   |
| Alternate | 80           | 40.00          | -28.65      | -46.31 | -40         | 6.31        | Pass   |

### 3.9 Burst Length of Transmission

#### 3.9.1 Test Condition

|                      |              |
|----------------------|--------------|
| Test Position:       | Transmitting |
| Ambient Temperature: | 23.1°C       |
| Relative Humidity:   | 52.6 %       |
| Atmosphere Pressure: | 100.7 KPa    |

#### 3.9.2 Limit

| Item                      | Limits |
|---------------------------|--------|
| Transmission burst length | ≤8 ms  |

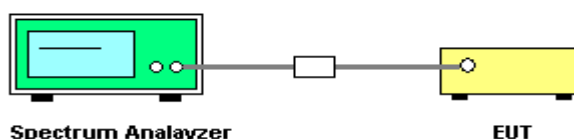
#### 3.9.3 Measuring Instruments and Setting

| Spectrum Parameter | Setting                   |
|--------------------|---------------------------|
| Attenuation        | Auto                      |
| Span Frequency     | 0 MHz                     |
| RBW                | 1 MHz                     |
| VBW                | 3 MHz                     |
| Detector           | Peak                      |
| Trace              | Max Hold                  |
| Sweep Time         | More than once pulse time |

#### 3.9.4 Test Procedures

1. The transmitter output (antenna port) was connected to the spectrum analyzer.
2. Set RBW of spectrum analyzer to 1MHz and VBW to 3MHz.
3. Use a video trigger with the trigger level set to enable triggering only on full pulses.
4. Sweep Time is more than once pulse time.
5. Set the center frequency on any frequency would be measure and set the frequency span to zero span.
6. Measure the maximum time duration of one single pulse.

#### 3.9.5 Test Setup Diagram

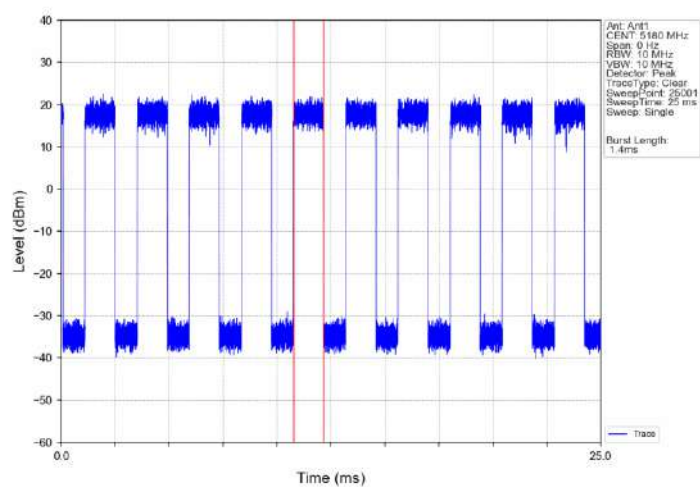


### 3.9.6 Test Result

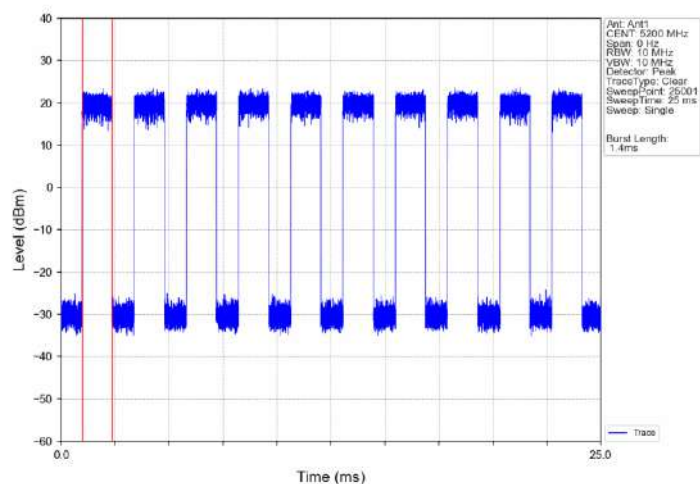
| Ant1 |                |         |                 |                   |       |         |
|------|----------------|---------|-----------------|-------------------|-------|---------|
| ENV  | Mode           | TX Type | Frequency (MHz) | Burst Length (ms) |       | Verdict |
|      |                |         |                 | Result            | Limit |         |
| NTNV | 802.11a        | SISO    | 5180            | 1.400             | <=8   | Pass    |
|      |                |         | 5200            | 1.399             | <=8   | Pass    |
|      |                |         | 5240            | 1.399             | <=8   | Pass    |
|      |                |         | 5260            | 1.399             | <=8   | Pass    |
|      |                |         | 5300            | 1.396             | <=8   | Pass    |
|      |                |         | 5320            | 1.399             | <=8   | Pass    |
|      |                |         | 5500            | 1.400             | <=8   | Pass    |
|      |                |         | 5600            | 1.398             | <=8   | Pass    |
|      |                |         | 5700            | 1.400             | <=8   | Pass    |
|      |                |         | 5720            | 1.399             | <=8   | Pass    |
|      | 802.11n (HT20) | SISO    | 5180            | 5.078             | <=8   | Pass    |
|      |                |         | 5200            | 5.085             | <=8   | Pass    |
|      |                |         | 5240            | 5.081             | <=8   | Pass    |
|      |                |         | 5260            | 5.078             | <=8   | Pass    |
|      |                |         | 5300            | 5.078             | <=8   | Pass    |
|      |                |         | 5320            | 5.078             | <=8   | Pass    |
|      |                |         | 5500            | 5.088             | <=8   | Pass    |
|      |                |         | 5600            | 5.085             | <=8   | Pass    |
|      |                |         | 5700            | 5.085             | <=8   | Pass    |
|      |                |         | 5720            | 5.078             | <=8   | Pass    |
|      | 802.11n (HT40) | SISO    | 5190            | 2.462             | <=8   | Pass    |
|      |                |         | 5230            | 2.464             | <=8   | Pass    |
|      |                |         | 5270            | 2.462             | <=8   | Pass    |
|      |                |         | 5310            | 2.464             | <=8   | Pass    |
|      |                |         | 5510            | 2.464             | <=8   | Pass    |
|      |                |         | 5590            | 2.464             | <=8   | Pass    |
|      |                |         | 5670            | 2.462             | <=8   | Pass    |
|      |                |         | 5710            | 2.462             | <=8   | Pass    |

### 3.9.7 Test Graphs

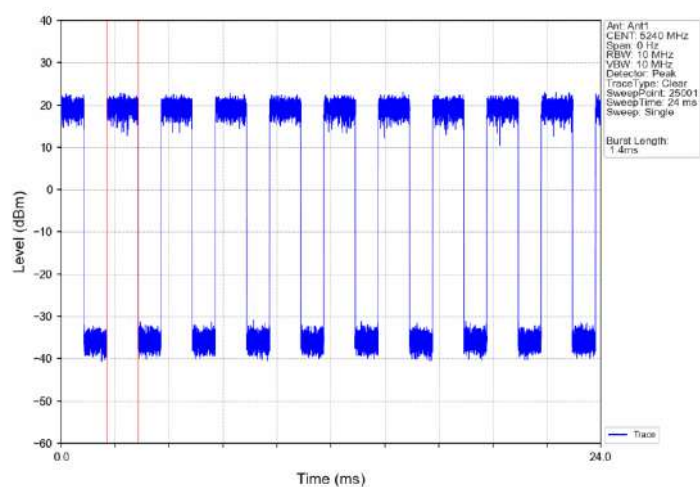
802.11a\_LCH 5180MHz\_Ant1\_NTNV



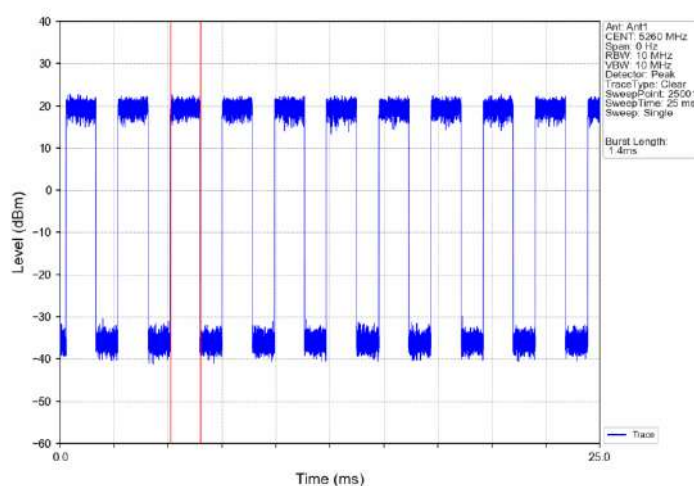
802.11a\_MCH 5200MHz\_Ant1\_NTNV



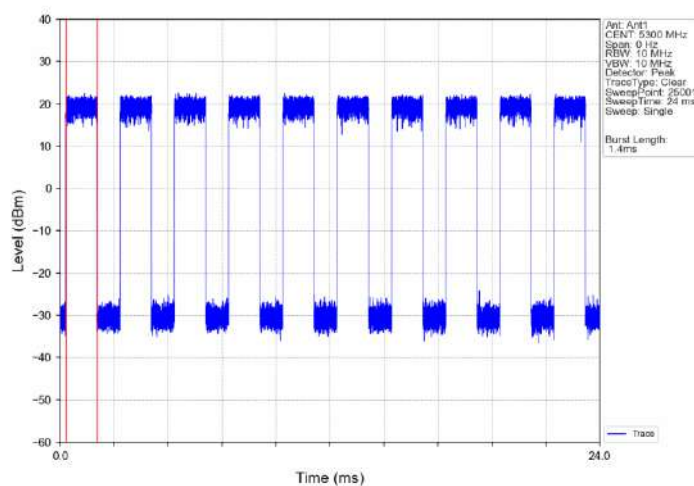
802.11a\_HCH 5240MHz\_Ant1\_NTNV



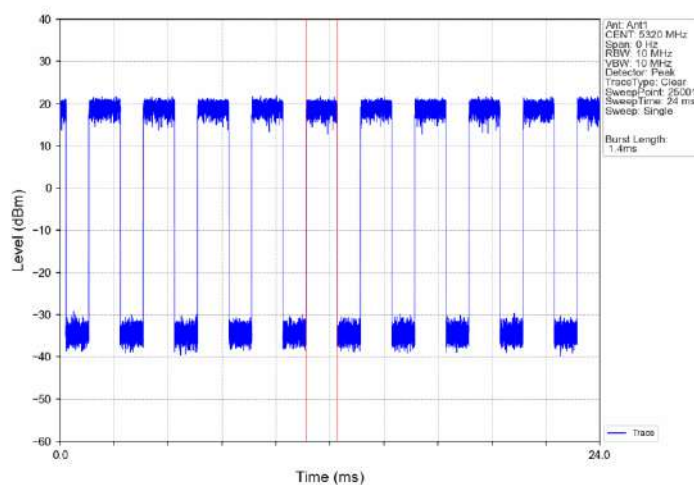
## 802.11a LCH 5260MHz Ant1\_NTNV



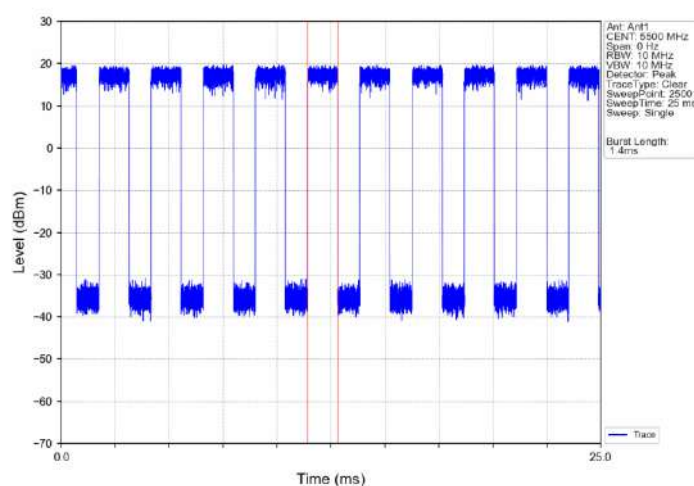
## 802.11a MCH 5300MHz Ant1\_NTNV



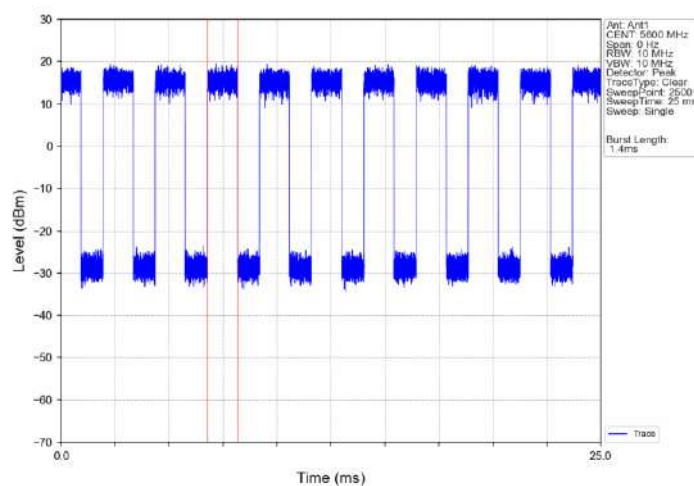
## 802.11a HCH 5320MHz Ant1\_NTNV



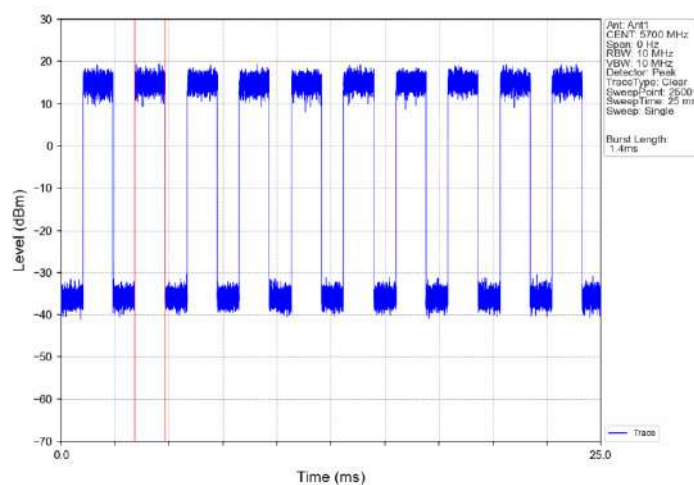
## 802.11a LCH 5500MHz Ant1 NTV



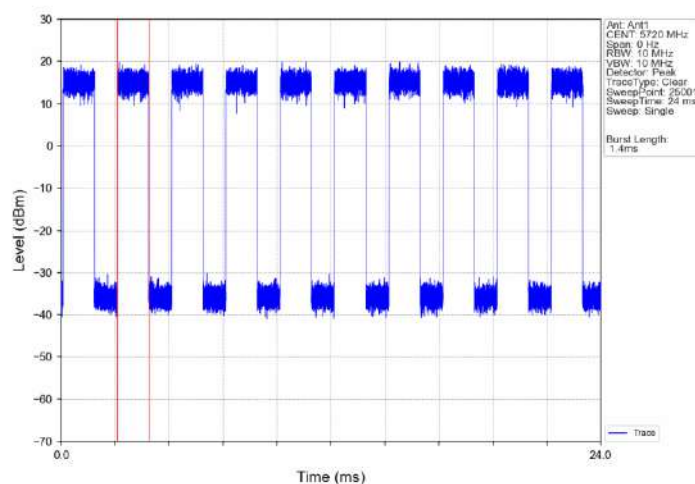
## 802.11a MCH 5600MHz Ant1 NTV



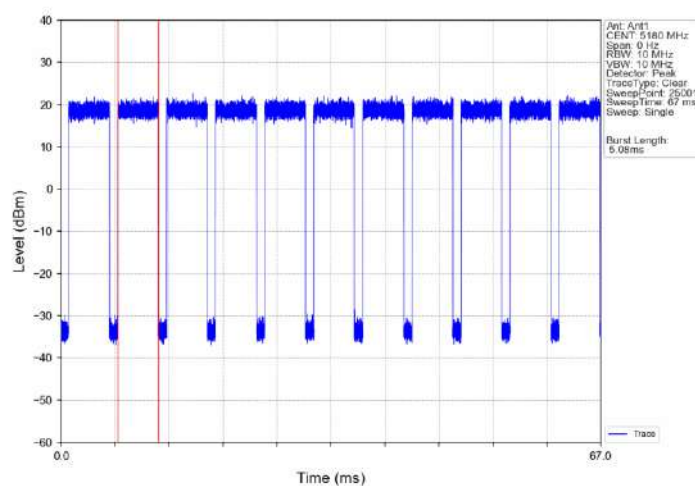
## 802.11a HCH 5700MHz Ant1 NTV



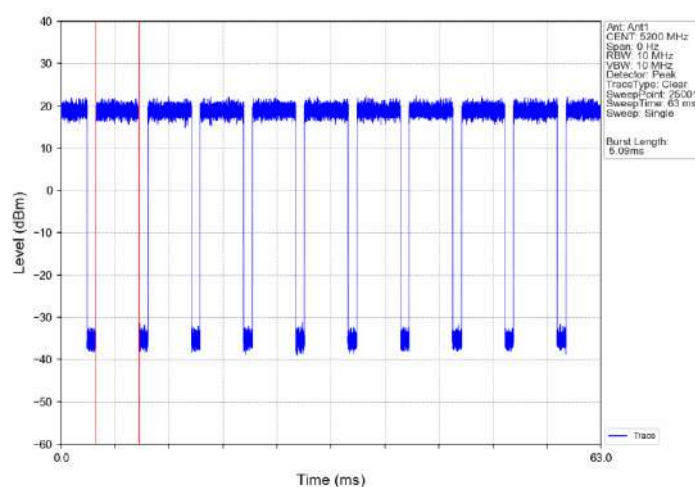
## 802.11a HHCH 5720MHz Ant1 NTV



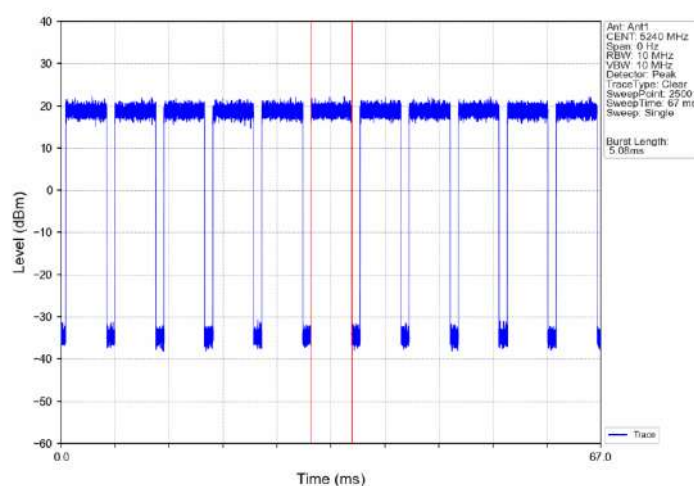
## 802.11n(HT20) LCH 5180MHz Ant1 NTV



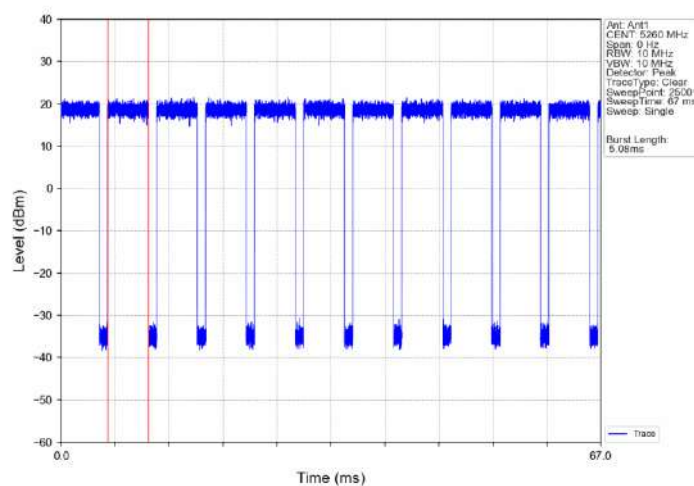
## 802.11n(HT20) MCH 5200MHz Ant1 NTV



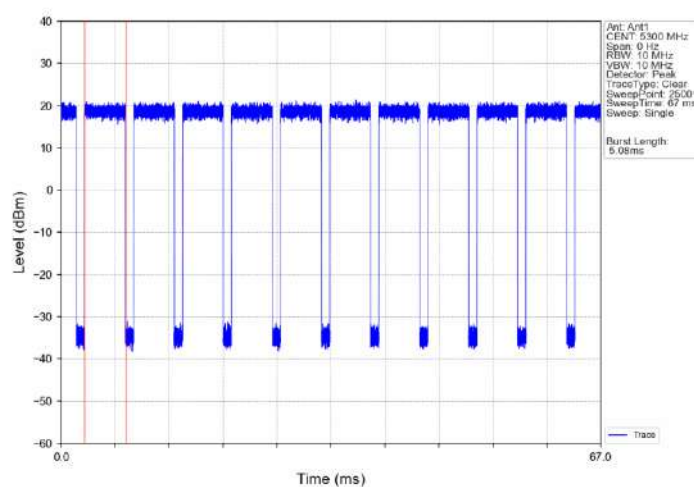
## 802.11n(HT20) HCH 5240MHz Ant1\_NTNV



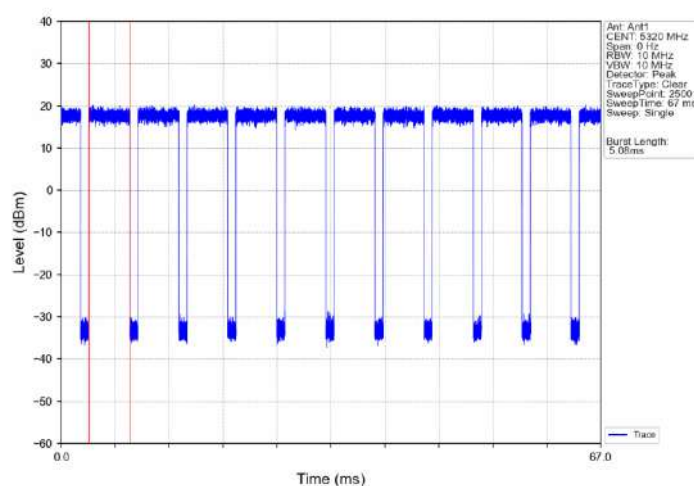
## 802.11n(HT20) LCH 5260MHz Ant1\_NTNV



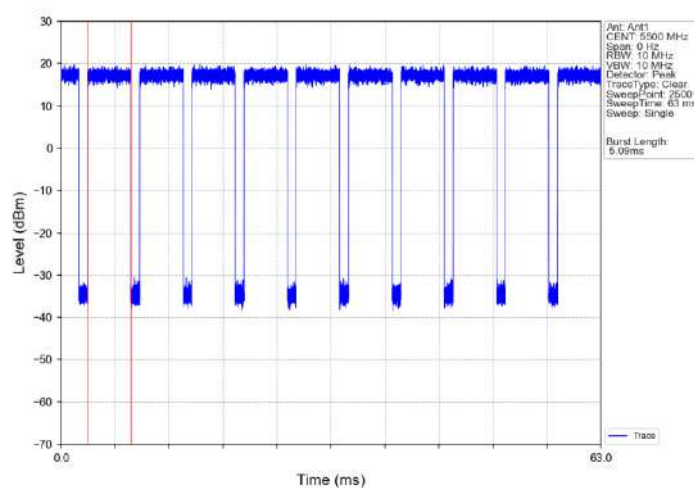
## 802.11n(HT20) MCH 5300MHz Ant1\_NTNV



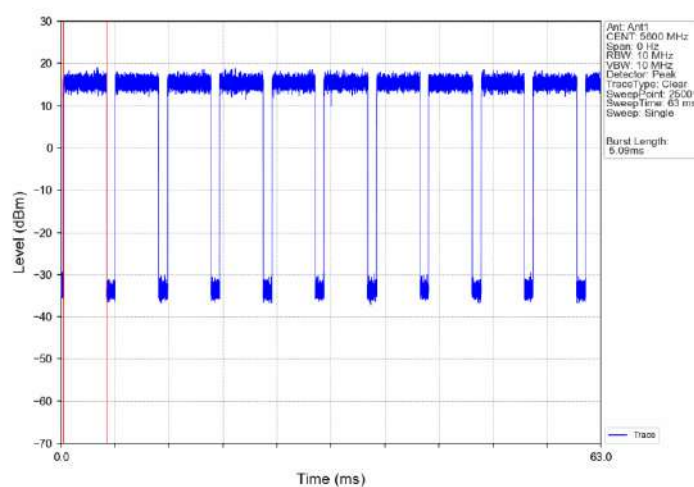
## 802.11n(HT20) HCH 5320MHz Ant1\_NTNV



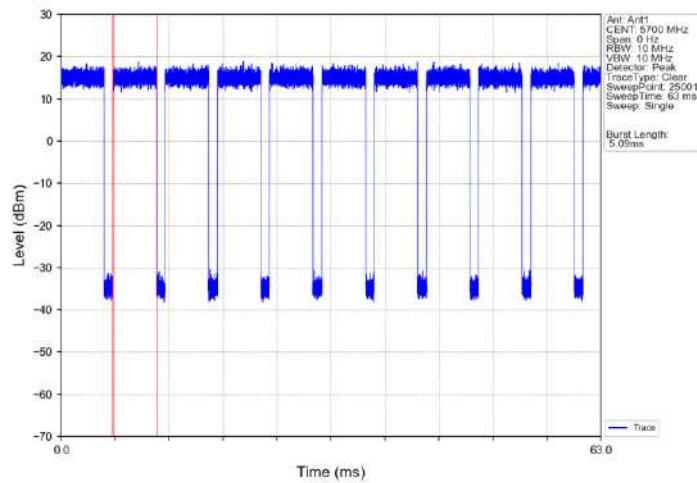
## 802.11n(HT20) LCH 5500MHz Ant1\_NTNV



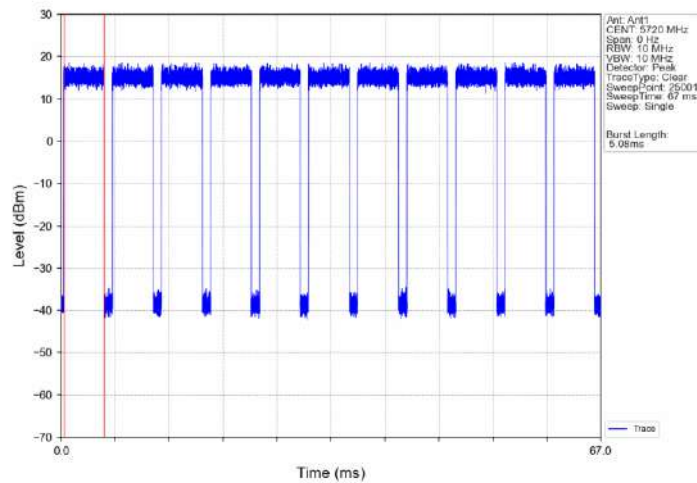
## 802.11n(HT20) MCH 5600MHz Ant1\_NTNV



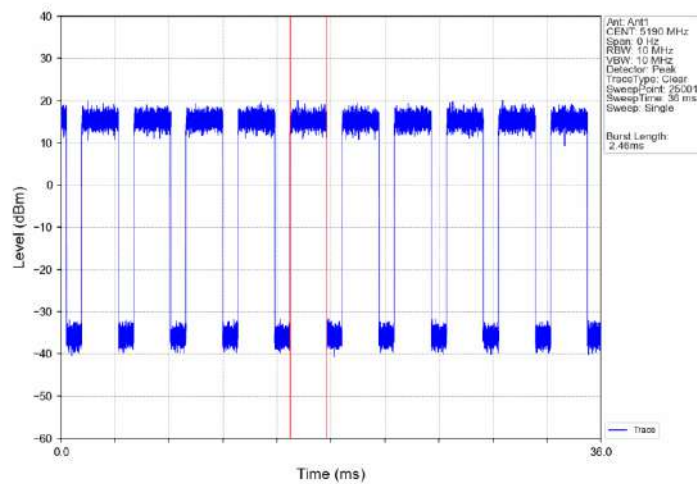
## 802.11n(HT20) HCH\_5700MHz\_Ant1\_NTNV



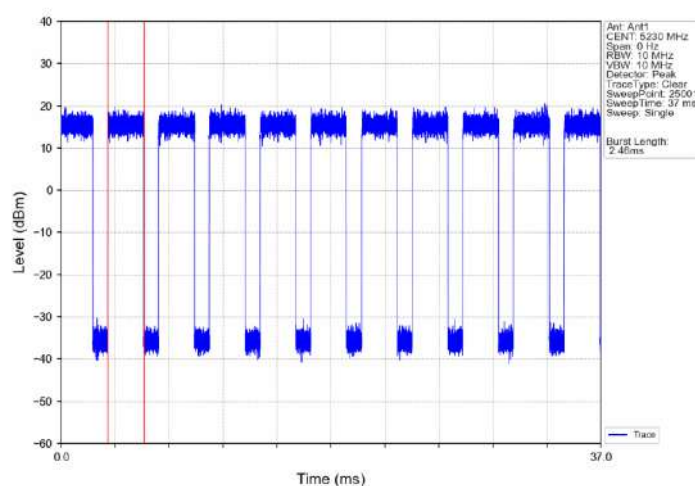
## 802.11n(HT20) HHCH\_5720MHz\_Ant1\_NTNV



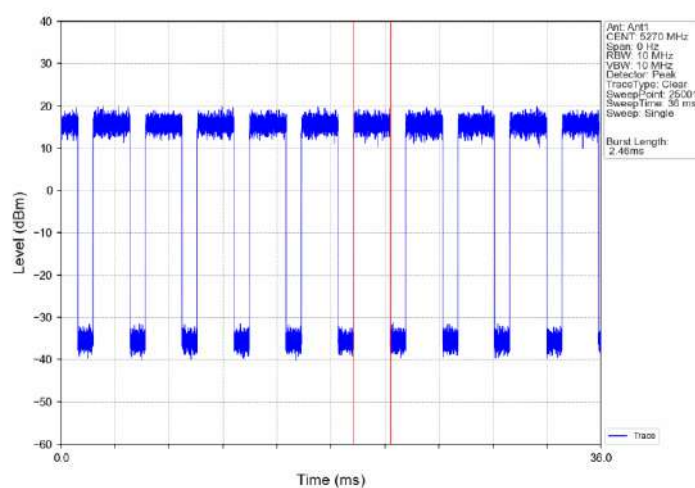
## 802.11n(HT40) LCH\_5190MHz\_Ant1\_NTNV



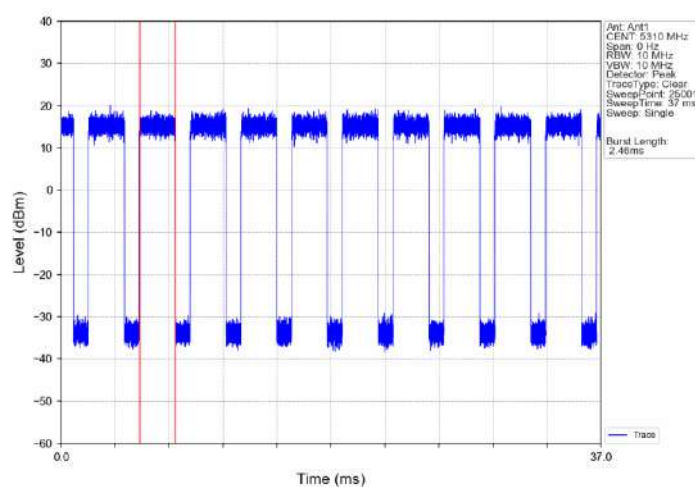
## 802.11n(HT40) HCH 5230MHz Ant1\_NTNV



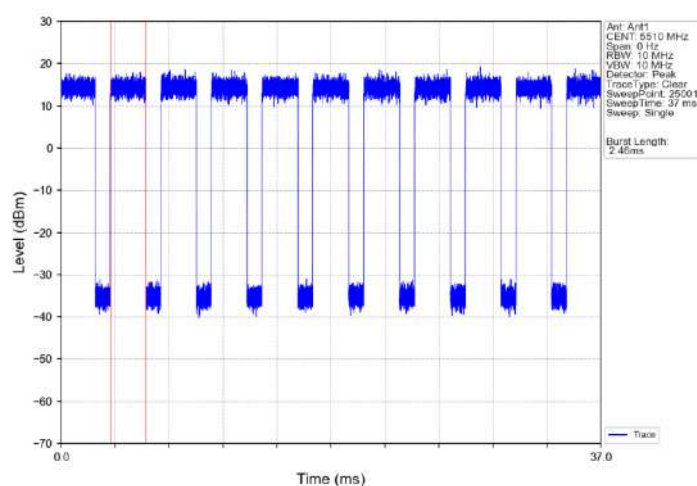
## 802.11n(HT40) LCH 5270MHz Ant1\_NTNV



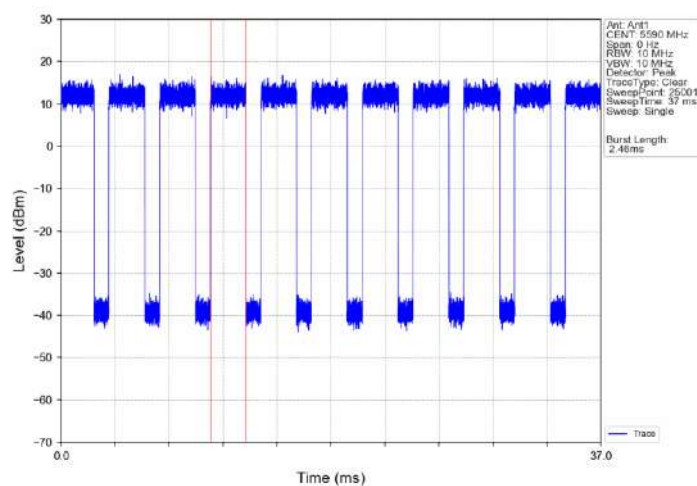
## 802.11n(HT40) HCH 5310MHz Ant1\_NTNV



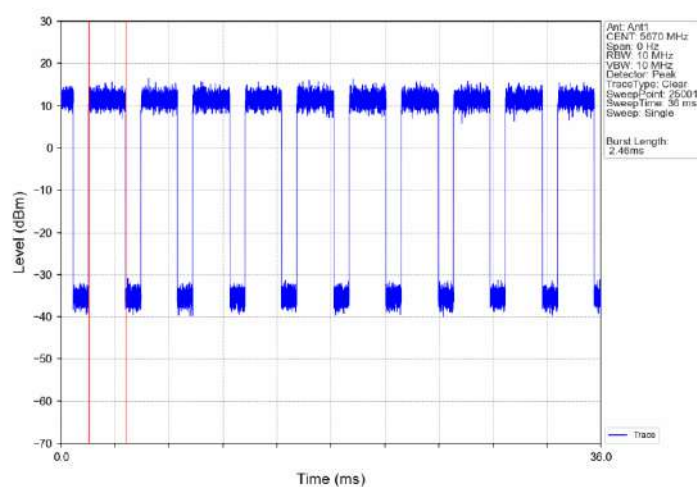
## 802.11n(HT40) LCH\_5510MHz\_Ant1\_NTNV



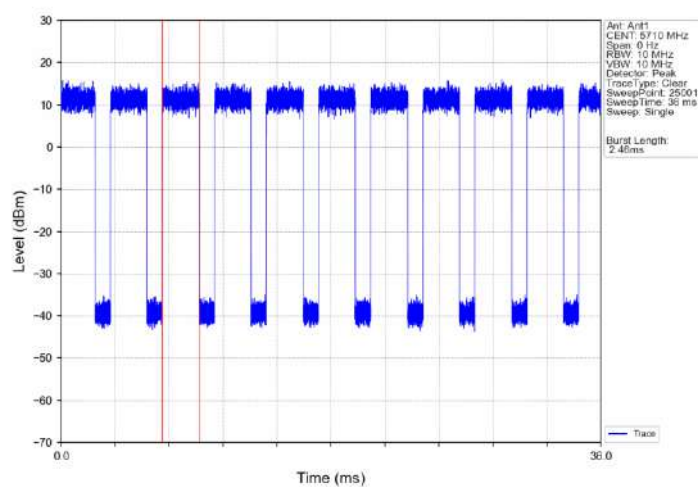
## 802.11n(HT40) MCH\_5590MHz\_Ant1\_NTNV



## 802.11n(HT40) HCH\_5670MHz\_Ant1\_NTNV



## 802.11n(HT40)\_HHCH\_5710MHz\_Ant1\_NTNV



### 3.10 Interference Prevention Function

#### 3.10.1 Test Condition

|                      |           |
|----------------------|-----------|
| Test Position:       | Receiving |
| Ambient Temperature: | 24.6°C    |
| Relative Humidity:   | 48.7%     |
| Atmosphere Pressure: | 101.2 KPa |

#### 3.10.2 Limit

| Item                | Limits         |
|---------------------|----------------|
| Identification code | $\geq 48$ bits |

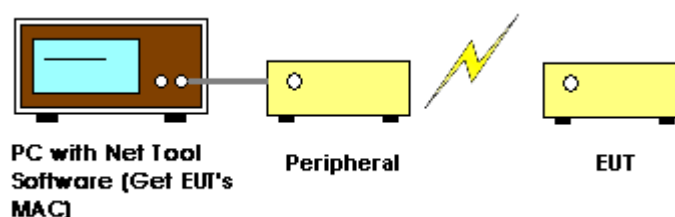
#### 3.10.3 Measuring ID Code Software

| Item        | Limits   |
|-------------|----------|
| MAC IP List | MAC Scan |

#### 3.10.4 Test Procedures

1. In the case that the EUT has the function of automatically transmitting the identification code: a. Transmit the predetermined identification codes from EUT. b. Check the transmitted identification codes with the demodulator.
2. In the case of receiving the identification code: a. Transmit the predetermined identification codes from the counterpart. b. Check if communication is normal. c. Transmit the signals other than predetermined ID codes from the counterpart. d. Check if the EUT stops the transmission, or if it displays that identification codes are different from the predetermined ones.

#### 3.10.5 Test Setup Diagram



### 3.10.6 Test Result

| Test Condition | Test Mode | Result | Limit | Verdict |
|----------------|-----------|--------|-------|---------|
| NTNV           | 11A       | 48     | ≥48   | PASS    |
|                | 11N20     | 48     | ≥48   | PASS    |
|                | 11N40     | 48     | ≥48   | PASS    |

### 3.11 Carrier Sense Function

#### 3.11.1 Test Condition

|                      |              |
|----------------------|--------------|
| Test Position:       | Transmitting |
| Ambient Temperature: | 24.3°C       |
| Relative Humidity:   | 49.2 %       |
| Atmosphere Pressure: | 101.7KPa     |

#### 3.11.2 Limit

Conform the carrier sense function for OFDM mode

#### 3.11.3 Measuring Instruments and Setting

Condition of equipment of same type of radio equipment to be tested is as follows. It shall be able to perform communication with the radio equipment to be tested.

Standard signal generator set-up

| Spectrum Parameter | Setting                                                                                                                                                         |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Carrier frequency  | Center frequency of occupied bandwidth of the equipment to be tested                                                                                            |
| Modulation         | No Modulation                                                                                                                                                   |
| Output Level       | Value enough to confirm interference detecting function<br>Less than $(22.79 + \text{Gain} - 20 \cdot \log(f))[\text{dBm}]$ or 100mW/m<br>Gain is dBi, f is MHz |

Spectrum analyzer set-up

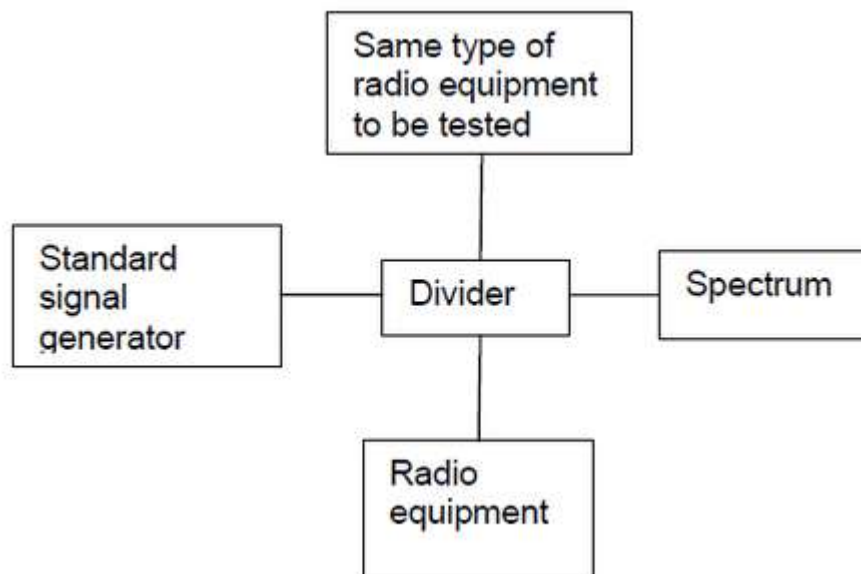
| Spectrum Parameter | Setting                                                              |
|--------------------|----------------------------------------------------------------------|
| Carrier frequency  | Center frequency of occupied bandwidth of the equipment to be tested |
| Sweep bandwidth    | More than occupied bandwidth of the equipment to be tested           |
| RBW                | 1MHz                                                                 |
| VBW                | 1MHz                                                                 |
| Trigger condition  | Free run                                                             |
| Detection mode     | Positive peak                                                        |

Set the radio equipment and the same type to be equipment into communication condition.

### 3.11.4 Test Procedures

1. Under OFF condition at output the standard signal generator, confirm transmission condition of radio equipment to be tested by means of the spectrum analyzer with its marker point.
2. Set the carrier frequency to center frequency of occupied bandwidth of the equipment to be tested, then put ON condition at output the standard signal generator, confirm no transmission condition of radio equipment to be tested by means of the spectrum analyzer with its marker point.

### 3.11.5 Test Setup Diagram



### 3.11.6 Test Result

| Test Mode:              |         | IEEE 802.11a   |      |      |                                                                          |
|-------------------------|---------|----------------|------|------|--------------------------------------------------------------------------|
| Test Voltage            |         | Normal Voltage |      |      | Remarks                                                                  |
| Test Frequency          | MHz     | 5180           | 5200 | 5240 | Low/Mid/High of test level                                               |
| Carrier Sense (100mV/m) | OK / NG | OK             | OK   | OK   | $\text{Pin} = 22.79 + \text{Gr} - 20 \cdot \log(\text{freq\_MHz})$ [dBm] |
| Test Frequency          | MHz     | 5260           | 5300 | 5320 | Low/Mid/High of test level                                               |
| Carrier Sense (100mV/m) | OK / NG | OK             | OK   | OK   | $\text{Pin} = 22.79 + \text{Gr} - 20 \cdot \log(\text{freq\_MHz})$ [dBm] |
| Test Frequency          | MHz     | 5500           | 5600 | 5720 | Low/High of test level                                                   |
| Carrier Sense (100mV/m) | OK / NG | OK             | OK   | --   | $\text{Pin} = 22.79 + \text{Gr} - 20 \cdot \log(\text{freq\_MHz})$ [dBm] |

| Test Mode:              |         | IEEE 802.11n20 |      |      |                                                                          |
|-------------------------|---------|----------------|------|------|--------------------------------------------------------------------------|
| Test Voltage            |         | Normal Voltage |      |      | Remarks                                                                  |
| Test Frequency          | MHz     | 5180           | 5200 | 5240 | Low/Mid/High of test level                                               |
| Carrier Sense (100mV/m) | OK / NG | OK             | OK   | OK   | $\text{Pin} = 22.79 + \text{Gr} - 20 \cdot \log(\text{freq\_MHz})$ [dBm] |
| Test Frequency          | MHz     | 5260           | 5300 | 5320 | Low/Mid/High of test level                                               |
| Carrier Sense (100mV/m) | OK / NG | OK             | OK   | OK   | $\text{Pin} = 22.79 + \text{Gr} - 20 \cdot \log(\text{freq\_MHz})$ [dBm] |
| Test Frequency          | MHz     | 5500           | 5600 | 5720 | Low/High of test level                                                   |
| Carrier Sense (100mV/m) | OK / NG | OK             | OK   | --   | $\text{Pin} = 22.79 + \text{Gr} - 20 \cdot \log(\text{freq\_MHz})$ [dBm] |

| Test Mode:                 |         | IEEE 802.11 n40 |      |      |                                                                             |
|----------------------------|---------|-----------------|------|------|-----------------------------------------------------------------------------|
| Test Voltage               |         | Normal Voltage  |      |      | Remarks                                                                     |
| Test Frequency             | MHz     | 5190            | 5230 | --   | Low/d/High of test level                                                    |
| Carrier Sense<br>(100mV/m) | OK / NG | OK              | OK   | --   | $\text{Pin} = 22.79 + \text{Gr} - 20 \cdot \log(\text{freq\_MHz})$<br>[dBm] |
| Test Frequency             | MHz     | 5270            | 5310 | --   | Low/High of test level                                                      |
| Carrier Sense<br>(100mV/m) | OK / NG | OK              | OK   | --   | $\text{Pin} = 22.79 + \text{Gr} - 20 \cdot \log(\text{freq\_MHz})$<br>[dBm] |
| Test Frequency             | MHz     | 5510            | 5590 | 5710 | Low/High of test level                                                      |
| Carrier Sense<br>(100mV/m) | OK / NG | OK              | OK   | --   | $\text{Pin} = 22.79 + \text{Gr} - 20 \cdot \log(\text{freq\_MHz})$<br>[dBm] |

### 3.12 Dynamic Frequency Selection (DFS)

#### 3.12.1 Test Condition

|                      |              |
|----------------------|--------------|
| Test Position:       | Transmitting |
| Ambient Temperature: | 23.1°C       |
| Relative Humidity:   | 52.6 %       |
| Atmosphere Pressure: | 100.7 KPa    |

#### 3.12.2 Limit

##### Standard Applicable

##### Parameters and applicability of DFS requirement

| Parameter                         | Value              | Operational Mode |                 |
|-----------------------------------|--------------------|------------------|-----------------|
|                                   |                    | Master           | Slave           |
| Non-Occupancy period              | Minimum 30 minutes | √                | Not requirement |
| Channel Availability Check Time   | 60 Seconds         | √                | Not requirement |
| Channel Move Time                 | 10 Seconds         | √                | √               |
| Channel Closing Transmission Time | 260ms              | √                | √               |

##### DFS Detection Thresholds for Masters Devices

| Maximum E.I.R.P | Receive power(average) |
|-----------------|------------------------|
| Less than 0.2W  | -62dBm                 |
| 0.2W or more    | -64dBm                 |

Note: This is the level at the input of the receiver as assuming a 0 dBi receive antenna.

##### Radar type & detection probability W53

| Type              | Pulse width | Repetition frequency | Numbers of continuous pulses | Detection Probability* |
|-------------------|-------------|----------------------|------------------------------|------------------------|
| W53 Fixed Pulse 1 | 1μs         | 700Hz                | 18                           | 60% or more            |
| W56 Fixed Pulse 2 | 2.5μs       | 260Hz                | 18                           | 60% or more            |

\*In the transmission of the 50% of maximum signal access speed (an error correction and control signal are not included), when the master station is transmitting to the slave station

##### W56 Un-modulated pulse radio wave

| Type              | Pulse width | Repetition frequency | Numbers of continuous pulses | Detection Probability* |
|-------------------|-------------|----------------------|------------------------------|------------------------|
| W56 Fixed Pulse 1 | 1μs         | 720Hz                | 18                           | 60% or more            |
| W56 Fixed Pulse 2 | 2.5μs       | 700Hz                | 18                           | 60% or more            |

|                      |                                                                                                                                 |                                                             |                                                   |                            |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|---------------------------------------------------|----------------------------|
| W56 Fixed Pulse 3    | 2.0 $\mu$ s                                                                                                                     | 250Hz                                                       | 18                                                | 60% or more<br>60% or more |
| W56 Variable Pulse 4 | 1 $\mu$ s $\leq$ X $\leq$ 5 $\mu$ s<br>("1 $\mu$ s" or" width which added the integral multiple of 1 $\mu$ s to 1 $\mu$ s")     | 4347Hz $\leq$ X $\leq$ 6667Hz<br>(arbitrary frequency of 1) | 23 $\leq$ X $\leq$ 29<br>(arbitrary integer of 1) | 60% or more                |
| W56 Variable Pulse 5 | 6 $\mu$ s $\leq$ X $\leq$ 11 $\mu$ s<br>("6 $\mu$ s" or" width which added the integral multiple of 1 $\mu$ s to 6 $\mu$ s")    | 2000Hz $\leq$ X $\leq$ 5000Hz<br>(arbitrary frequency of 1) | 16 $\leq$ X $\leq$ 18<br>(arbitrary integer of 1) | 60% or more                |
| W56 Variable Pulse 6 | 11 $\mu$ s $\leq$ X $\leq$ 20 $\mu$ s<br>("11 $\mu$ s" or" width which added the integral multiple of 1 $\mu$ s to 11 $\mu$ s") | 2000Hz $\leq$ X $\leq$ 5000Hz<br>(arbitrary frequency of 1) | 12 $\leq$ X $\leq$ 16<br>(arbitrary integer of 1) | 60% or more                |

\*1. In the transmission of the 50% of maximum signal access speed (an error correction and control signal are not included), when the master station is transmitting to the slave station

\*2. The average value of the "detection probability" for every classification of the radio wave which radar transmits shall be "80% or more".

#### W56 modulated pulse (Chirp radar)

| Type      | Pulse width                                                                                                                      | Repetition frequency                                       | Numbers of continuous pulses                    | Detection Probability* |
|-----------|----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|-------------------------------------------------|------------------------|
| W56 Chirp | 50 $\mu$ s $\leq$ X $\leq$ 100 $\mu$ s<br>("50 $\mu$ s" or" width which added the integral multiple of 1 $\mu$ s to 50 $\mu$ s") | 500Hz $\leq$ X $\leq$ 1000Hz<br>(arbitrary frequency of 1) | 1 $\leq$ X $\leq$ 3<br>(arbitrary integer of 1) | 80% or more            |

\*1. In the transmission of the 17% of maximum signal access speed (an error correction and control signal are not included), when the master station is transmitting to the slave station.

\*2. A mass of member of continuous pluses (burst) shall be radiated for 12 Seconds.

\*3. Deviation width of the frequency for performing linearly frequency modulation during the pulse(Chirp width):5MHz $\leq$ X $\leq$ 20MHz ("5MHz" or" width which added the integral multiple of 1MHz to 5MHz") In this case, "Chirp width" is arbitrary to each burst, "Chirp width" in the same burst shall be an equal thing.

\*4. Number of burst": 8 $\leq$ X $\leq$ 20(arbitrary integer), Burst interval: Time which divided 12 seconds by the number of burst.

\*5. When there are two or more pluses within the burst of 1, the pulse width shall be an equal thing.

\*6. When there are two or more pluses within the burst of 1, the "repetition frequency" must not have relevance between the "repetition frequency" of the pulse of 1, and the "repetition frequency" of the pulse of next 1.

#### W56 modulated pulse (hopping radar)

| Type        | Pulse width | Repetition frequency | Numbers of continuous pulses | Detection Probability* |
|-------------|-------------|----------------------|------------------------------|------------------------|
| W56 Hopping | 1 $\mu$ s   | 3000Hz               | 9                            | 70% or more            |

\*1. In the transmission of the 17% of maximum signal access speed (an error correction and control signal are not included), when the master station is transmitting to the slave station

\*2. Burst: one mass of the number of continuous pulses.

\*3. Hopping Frequency:5250MHz $\leq$ X $\leq$ 5724MHz ("5250MHz" or" the arbitrary frequency which added the integral multiple of 1MHz to 5250MHz")

\*4. Switching interval of the hopping frequency: "3ms", Total switch interval of the all hopping frequency: "300ms".

\*5. Burst interval: "3ms".

### 3.12.3 Test Procedures

A spectrum analyzer is used as a monitor to verify that the UUT has vacated the Channel within the (Channel Closing Transmission Time and Channel Move Time, and does not transmit on a Channel during the Non-Occupancy Period after the detection and Channel move. It is also used to monitor UUT transmissions during the Channel Availability Check Time.

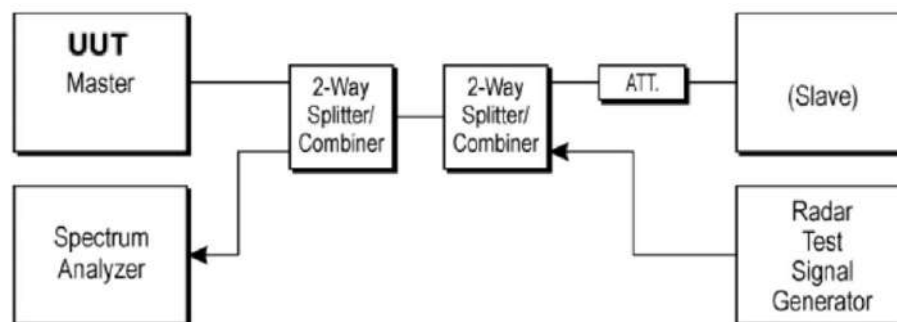
#### (i) Confirming available channels

- A. Set the standard signal generator to be in non-transmission state.
- B. Set EUT to be in state of available channel checking by initializing EUT and confirm with the spectrum analyzer that EUT does not radiate emissions.
- C. In a time slot selected randomly from the time period of available channel checking, set the standard signal input generator to be in transmission state and apply quasi radar pulses at the prescribed level to EUT.
- D. Confirm with the spectrum analyzer that EUT does not radiate emissions when quasi radar pulses are input to EUT.
- E. Repeat Steps A to D four times and record each time whether EUT radiates emissions or not. If EUT does not radiate emissions, assume that a quasi radar pulse has been detected and find how many times it has been detected.

#### (ii) Monitoring of operating channel

- A. Set the standard signal generator to be in non-transmission state.
- B. Set EUT to be in state of operating channel monitoring by initializing it and transmit waves at the test frequency.
- C. Establish communications with the external test device.
- D. Set the standard signal generator to be in transmission state and apply quasi radar pulses at the prescribed input level to EUT.
- E. Confirm with the spectrum analyzer that EUT stops radiating emissions when quasi radar pulses are input to EUT.
- F. Repeat Steps A to E 20 times and record each time whether EUT radiates emissions or not. If EUT does not radiate emissions, assume that a quasi radar pulse has been detected and find how many times it has been detected.

### 3.12.4 Test Setup





### 3.12.5 Test Result

No requirements. The device is an Slaver device without DFS detection

## 4 Photographs of Test Set-ups



---THE END OF REPORT---