



**CFR 47 FCC PART 15 SUBPART E**

**TEST REPORT**

*For*

**Tablet**

**MODEL NUMBER: M081**

**REPORT NUMBER: 4790607923-RF-4**

**ISSUE DATE: October 28, 2022**

**FCC ID:2AAGE5081WNC**

*Prepared for*

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*Prepared by*

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Revision History

| Rev. | Issue Date          | Revisions     | Revised By |
|------|---------------------|---------------|------------|
| V0   | October 28,<br>2022 | Initial Issue |            |



### Summary of Test Results

| Test Item                                                  | Clause                                               | Limit/Requirement                            | Result |
|------------------------------------------------------------|------------------------------------------------------|----------------------------------------------|--------|
| ON TIME AND DUTY CYCLE                                     | ANSI C63.10-2013, Clause 12.2                        | None; for reporting purposes only.           | Pass   |
| 6dB AND 26dB EMISSION BANDWIDTH AND 99% OCCUPIED BANDWIDTH | KDB 789033 D02 v02r01 Section C.1                    | FCC Part 15.407 (a)/(e),                     | Pass   |
| CONDUCTED OUTPUT POWER                                     | KDB 789033 D02 v02r01 Section E.3.a (Method PM)      | FCC 15.407 (a)                               | Pass   |
| POWER SPECTRAL DENSITY                                     | KDB 789033 D02 v02r01 Section F                      | FCC 15.407 (a)                               | Pass   |
| AC Power Line Conducted Emission                           | ANSI C63.10-2013, Clause 6.2.                        | FCC 15.207                                   | Pass   |
| Radiated Emissions and Band Edge Measurement               | KDB 789033 D02 v02r01 Section G.3, G.4, G.5, and G.6 | FCC 15.407 (b)<br>FCC 15.209<br>FCC 15.205   | Pass   |
| FREQUENCY STABILITY                                        | N/A                                                  | FCC 15.407 (g)                               | Pass   |
| Antenna Requirement                                        | N/A                                                  | FCC 47 CFR Part 15.203/<br>15.407(a)(1) (2), | Pass   |

\*This test report is only published to and used by the applicant, and it is not for evidence purpose in China.

\*The measurement result for the sample received is <Pass> according to <CFR 47 FCC PART 15 SUBPART E > when <Accuracy Method> decision rule is applied.



## CONTENTS

|                                                                     |            |
|---------------------------------------------------------------------|------------|
| <b>1. ATTESTATION OF TEST RESULTS.....</b>                          | <b>6</b>   |
| <b>2. TEST METHODOLOGY.....</b>                                     | <b>7</b>   |
| <b>3. FACILITIES AND ACCREDITATION.....</b>                         | <b>7</b>   |
| <b>4. CALIBRATION AND UNCERTAINTY .....</b>                         | <b>8</b>   |
| 4.1. MEASURING INSTRUMENT CALIBRATION .....                         | 8          |
| 4.2. MEASUREMENT UNCERTAINTY.....                                   | 8          |
| <b>5. EQUIPMENT UNDER TEST .....</b>                                | <b>9</b>   |
| 5.1. DESCRIPTION OF EUT .....                                       | 9          |
| 5.2. CHANNEL LIST .....                                             | 9          |
| 5.3. MAXIMUM EIRP .....                                             | 10         |
| 5.4. TEST CHANNEL CONFIGURATION.....                                | 10         |
| 5.5. THE WORSE CASE POWER SETTING PARAMETER .....                   | 11         |
| 5.6. DESCRIPTION OF AVAILABLE ANTENNAS .....                        | 13         |
| 5.7. SUPPORT UNITS FOR SYSTEM TEST.....                             | 14         |
| <b>6. MEASURING EQUIPMENT AND SOFTWARE USED.....</b>                | <b>15</b>  |
| <b>7. ANTENNA PORT TEST RESULTS .....</b>                           | <b>18</b>  |
| 7.1. ON TIME AND DUTY CYCLE .....                                   | 18         |
| 7.2. 6DB AND 26DB EMISSION BANDWIDTH AND 99% OCCUPIED BANDWIDTH ... | 19         |
| 7.3. CONDUCTED OUTPUT POWER .....                                   | 21         |
| 7.4. POWER SPECTRAL DENSITY .....                                   | 23         |
| 7.5. FREQUENCY STABILITY.....                                       | 25         |
| <b>8. RADIATED TEST RESULTS.....</b>                                | <b>27</b>  |
| 8.1. RESTRICTED BANDEDGE .....                                      | 36         |
| 8.2. SPURIOUS EMISSIONS(1 GHZ~7 GHZ) .....                          | 57         |
| 8.3. SPURIOUS EMISSIONS(7 GHZ~18 GHZ) .....                         | 69         |
| 8.4. SPURIOUS EMISSIONS(9 KHZ~30 MHZ) .....                         | 105        |
| 8.5. SPURIOUS EMISSIONS(18 GHZ~26 GHZ) .....                        | 108        |
| 8.6. SPURIOUS EMISSIONS(26 GHZ~40 GHZ) .....                        | 110        |
| 8.7. SPURIOUS EMISSIONS(30 MHZ~1 GHZ).....                          | 112        |
| <b>9. AC POWER LINE CONDUCTED EMISSION .....</b>                    | <b>114</b> |
| <b>10. ANTENNA REQUIREMENTS.....</b>                                | <b>117</b> |
| <b>11. TEST DATA.....</b>                                           | <b>118</b> |



|         |                                                 |     |
|---------|-------------------------------------------------|-----|
| 11.1.   | APPENDIX A1: EMISSION BANDWIDTH.....            | 118 |
| 11.1.1. | Test Result.....                                | 118 |
| 11.1.2. | Test Graphs .....                               | 119 |
| 11.2.   | APPENDIX A2: OCCUPIED CHANNEL BANDWIDTH.....    | 125 |
| 11.2.1. | Test Result.....                                | 125 |
| 11.2.2. | Test Graphs .....                               | 126 |
| 11.3.   | APPENDIX A3: MIN EMISSION BANDWIDTH .....       | 132 |
| 11.3.1. | Test Result.....                                | 132 |
| 11.3.2. | Test Graphs .....                               | 133 |
| 11.4.   | APPENDIX B: MAXIMUM CONDUCTED OUTPUT POWER..... | 136 |
| 11.4.1. | Test Result.....                                | 136 |
| 11.5.   | APPENDIX C: MAXIMUM POWER SPECTRAL DENSITY..... | 137 |
| 11.5.1. | Test Result.....                                | 137 |
| 11.5.2. | Test Graphs .....                               | 138 |
| 11.6.   | APPENDIX D: FREQUENCY STABILITY .....           | 144 |
| 11.6.1. | Test Result.....                                | 144 |
| 11.7.   | APPENDIX H: DUTY CYCLE.....                     | 146 |
| 11.7.1. | Test Result.....                                | 146 |
| 11.7.2. | Test Graphs .....                               | 147 |



## 1. ATTESTATION OF TEST RESULTS

### Applicant Information

Company Name: Chengdu Vantron Technology Co., Ltd.  
Address: No.5 GaoPeng Road, Hi-Tech Zone, Chengdu, SiChuan, ChengDu, China

### Manufacturer Information

Company Name: Chengdu Vantron Technology Co., Ltd.  
Address: No.5 GaoPeng Road, Hi-Tech Zone, Chengdu, SiChuan, ChengDu, China

### EUT Information

EUT Name: Tablet  
Model: M081  
Sample Received Date: September 21, 2022  
Sample Status: Normal  
Sample ID: NA  
Date of Tested: September 21, 2022 to October 28, 2022

| APPLICABLE STANDARDS         |              |
|------------------------------|--------------|
| STANDARD                     | TEST RESULTS |
| CFR 47 FCC PART 15 SUBPART E | Pass         |

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Operations Manager



## 2. TEST METHODOLOGY

All tests were performed in accordance with the standard CFR 47 FCC PART 15 SUBPART E , ANSI C63.10-2013, CFR 47 FCC Part 2, CFR 47 FCC Part 15, KDB 789033 D02 v02r01, KDB414788 D01 Radiated Test Site v01, and KDB 905462 D06 802 11 Channel Plans New Rules v02.

## 3. FACILITIES AND ACCREDITATION

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Accreditation Certificate | <p><b>A2LA (Certificate No.: 4102.01)</b><br/>UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with A2LA.</p> <p><b>FCC (FCC Designation No.: CN1187)</b><br/>UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. Has been recognized to perform compliance testing on equipment subject to the Commission's Declaration of Conformity (DoC) and Certification rules</p> <p><b>ISED (Company No.: 21320)</b><br/>UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been registered and fully described in a report filed with ISED. The Company Number is 21320 and the test lab Conformity Assessment Body Identifier (CABID) is CN0046.</p> <p><b>VCCI (Registration No.: G-20019, R-20004, C-20012 and T-20011)</b><br/>UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with VCCI, the Membership No. is 3793.<br/>Facility Name:<br/>Chamber D, the VCCI registration No. is G-20019 and R-20004<br/>Shielding Room B , the VCCI registration No. is C-20012 and T-20011</p> |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Note1:

All tests measurement facilities use to collect the measurement data are located at Building 10, Innovation Technology Park, No. 1, Li Bin Road, Song Shan Lake Hi-Tech Development Zone Dongguan, 523808, People's Republic of China.

### Note2:

The test anechoic chamber in UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch had been calibrated and compared to the open field sites and the test anechoic chamber is shown to be equivalent to or worst case from the open field site.

### Note3:

For below 30 MHz, lab had performed measurements at test anechoic chamber and comparing to measurements obtained on an open field site. And these measurements below 30 MHz had been correlated to measurements performed on an OFS.



## 4. CALIBRATION AND UNCERTAINTY

### 4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations and is traceable to recognized national standards.

### 4.2. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

| Test Item                                                                                                                                     | Uncertainty               |
|-----------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| Conduction emission                                                                                                                           | 3.62 dB                   |
| Radiated Emission<br>(Included Fundamental Emission) (9 kHz ~ 30 MHz)                                                                         | 2.2 dB                    |
| Radiated Emission<br>(Included Fundamental Emission) (30 MHz ~ 1 GHz)                                                                         | 4.00 dB                   |
| Radiated Emission<br>(Included Fundamental Emission) (1 GHz to 26 GHz)                                                                        | 5.78 dB (1 GHz ~ 18 GHz)  |
|                                                                                                                                               | 5.23 dB (18 GHz ~ 26 GHz) |
| Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2. |                           |



## 5. EQUIPMENT UNDER TEST

### 5.1. DESCRIPTION OF EUT

|          |        |
|----------|--------|
| EUT Name | Tablet |
| Model    | M081   |

|                      |                                                                                                                                                       |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Frequency Range:     | 5180 MHz to 5240 MHz<br>5 745 MHz to 5 825 MHz                                                                                                        |
| Radio Technology     | IEEE802.11a20<br>IEEE802.11n HT20/n HT40<br>IEEE802.11ac VHT20/VHT40/VHT80                                                                            |
| Type of Modulation:  | IEEE 802.11a: OFDM(64QAM, 16QAM, QPSK, BPSK)<br>IEEE 802.11n: OFDM(64QAM, 16QAM, QPSK, BPSK)<br>IEEE 802.11ac: OFDM(256QAM, 64QAM, 16QAM, QPSK, BPSK) |
| Normal Test Voltage: | AC 120 V, 60 Hz                                                                                                                                       |

### 5.2. CHANNEL LIST

| UNII-1<br>(For Bandwidth=20MHz) |                    | UNII-1<br>(For Bandwidth=40MHz) |                    | UNII-1<br>(For Bandwidth=80MHz) |                    |
|---------------------------------|--------------------|---------------------------------|--------------------|---------------------------------|--------------------|
| Channel                         | Frequency<br>(MHz) | Channel                         | Frequency<br>(MHz) | Channel                         | Frequency<br>(MHz) |
| 36                              | 5180               | 38                              | 5190               | 42                              | 5210               |
| 40                              | 5200               | 46                              | 5230               |                                 |                    |
| 44                              | 5220               |                                 |                    |                                 |                    |
| 48                              | 5240               |                                 |                    |                                 |                    |

| UNII-3<br>(For Bandwidth=20MHz) |                    | UNII-3<br>(For Bandwidth=40MHz) |                    | UNII-3<br>(For Bandwidth=80MHz) |                    |
|---------------------------------|--------------------|---------------------------------|--------------------|---------------------------------|--------------------|
| Channel                         | Frequency<br>(MHz) | Channel                         | Frequency<br>(MHz) | Channel                         | Frequency<br>(MHz) |
| 149                             | 5745               | 151                             | 5755               | 155                             | 5775               |
| 153                             | 5765               | 159                             | 5795               |                                 |                    |
| 157                             | 5785               |                                 |                    |                                 |                    |
| 161                             | 5805               |                                 |                    |                                 |                    |
| 165                             | 5825               |                                 |                    |                                 |                    |



### 5.3. MAXIMUM EIRP

#### UNII-1 BAND(FCC&ISED)

| IEEE Std. 802.11 | Frequency (MHz) | Maximum Average Conducted Power (dBm) | Max Average EIRP (dBm) |
|------------------|-----------------|---------------------------------------|------------------------|
| a                | 5150 ~ 5250     | 16.98                                 | 18.63                  |
| n HT20           |                 | 16.21                                 | 17.86                  |
| n HT40           |                 | 13.80                                 | 15.45                  |
| ac VHT80         |                 | 12.48                                 | 14.13                  |

#### UNII-3 BAND(FCC&ISED)

| IEEE Std. 802.11 | Frequency (MHz) | Maximum Average Conducted Power (dBm) |
|------------------|-----------------|---------------------------------------|
| a                | 5725 ~ 5850     | 15.48                                 |
| n HT20           |                 | 14.84                                 |
| n HT40           |                 | 14.25                                 |
| ac VHT80         |                 | 11.95                                 |

### 5.4. TEST CHANNEL CONFIGURATION

#### UNII-1 Test Channel Configuration

| IEEE Std.      | Test Channel Number                                         | Frequency                    |
|----------------|-------------------------------------------------------------|------------------------------|
| 802.11a        | CH 36(Low Channel), CH 40(MID Channel), CH 48(High Channel) | 5180 MHz, 5200 MHz, 5240 MHz |
| 802.11n HT20   | CH 36(Low Channel), CH 40(MID Channel), CH 48(High Channel) | 5180 MHz, 5200 MHz, 5240 MHz |
| 802.11n HT40   | CH 38(Low Channel), CH 46(High Channel)                     | 5190 MHz, 5230 MHz           |
| 802.11ac VHT80 | CH 42(Low Channel)                                          | 5210 MHz                     |

#### UNII-3 Test Channel Configuration

| IEEE Std.      | Test Channel Number                                            | Frequency                    |
|----------------|----------------------------------------------------------------|------------------------------|
| 802.11a        | CH 149(Low Channel), CH 157(MID Channel), CH 165(High Channel) | 5745 MHz, 5785 MHz, 5825 MHz |
| 802.11n HT20   | CH 149(Low Channel), CH 157(MID Channel), CH 165(High Channel) | 5745 MHz, 5785 MHz, 5825 MHz |
| 802.11n HT40   | CH 151(Low Channel), CH 159(High Channel)                      | 5755MHz, 5795MHz             |
| 802.11ac VHT80 | CH 155(Low Channel)                                            | 5775 MHz                     |



## 5.5. THE WORSE CASE POWER SETTING PARAMETER

| The Worse Case Power Setting Parameter |              |
|----------------------------------------|--------------|
| Test Software                          | RF Test Tool |

### UNII-1

| Mode       | Rate | Channel | Soft set value    |
|------------|------|---------|-------------------|
|            |      |         | ANT 1             |
| 11a        | 6M   | 36      | 63                |
|            |      | 40      | 62                |
|            |      | 48      | 64                |
| 11n HT20   | MCS0 | 36      | 61                |
|            |      | 40      | 62                |
|            |      | 48      | 64                |
| 11n HT40   | MCS0 | 38      | 56                |
|            |      | 46      | 60                |
| 11ac VHT20 | MCS0 | 36      | Cover by 11n HT20 |
|            |      | 40      |                   |
|            |      | 48      |                   |
| 11ac VHT40 | MCS0 | 38      | Cover by 11n HT40 |
|            |      | 46      |                   |
| 11ac VHT80 | MCS0 | 42      | 56                |

### UNII-3

| Mode       | Rate | Channel | Soft set value    |
|------------|------|---------|-------------------|
|            |      |         | ANT1              |
| 11a        | 6M   | 149     | 61                |
|            |      | 157     | 60                |
|            |      | 165     | 58                |
| 11n HT20   | MCS0 | 149     | 57                |
|            |      | 157     | 57                |
|            |      | 165     | 57                |
| 11n HT40   | MCS0 | 151     | 60                |
|            |      | 159     | 60                |
| 11ac VHT20 | MCS0 | 149     | Cover by 11n HT20 |
|            |      | 157     |                   |
|            |      | 165     |                   |
| 11ac VHT40 | MCS0 | 151     | Cover by 11n HT40 |
|            |      | 159     |                   |
| 11ac VHT80 | MCS0 | 155     | 52                |



## WORSE CASE CONFIGURATIONS

The EUT was tested in the following configuration(s):

Controlled in test mode using a software application on the EUT supplied by customer. The application was used to enable a continuous transmission and to select the mode, test channels, bandwidth, data rates as required.

Test channels referring to section 5.3.

Maximum power setting referring to section 5.5.

Worst case Data Rates declared by the customer:

802.11a 20 mode: 6 Mbps

802.11n HT20 mode: MCS0

802.11n HT40 mode: MCS0

802.11ac VHT20 mode: MCS0

802.11ac VHT40 mode: MCS0

802.11ac VHT80 mode: MCS0

The measured additional path loss was included in any path loss calculations for all RF cable used during tested.

802.11ac VHT20 and VHT40 mode are different from 802.11nHT20 and HT40 only in control messages, so for these 4 modes, only 802.11n HT20 and 802.11n HT40 worst case power modes radiated emission test data are recorded in the report.



## 5.6. DESCRIPTION OF AVAILABLE ANTENNAS

| Antenna No. | Frequency Band | Antenna Type | Max Antenna Gain (dBi) |
|-------------|----------------|--------------|------------------------|
| 1           | 5150-5250      | FPC Antenna  | 1.65                   |
| 1           | 5725-5875      | FPC Antenna  | 2.32                   |

| IEE Std. 802.11                                                                                                   | Transmit and Receive Mode                    | Description                                          |
|-------------------------------------------------------------------------------------------------------------------|----------------------------------------------|------------------------------------------------------|
| 802.11a                                                                                                           | <input checked="" type="checkbox"/> 1TX, 1RX | ANT 1 can be used as transmitting/receiving antenna. |
| 802.11n HT20                                                                                                      | <input checked="" type="checkbox"/> 1TX, 1RX | ANT 1 can be used as transmitting/receiving antenna. |
| 802.11n HT40                                                                                                      | <input checked="" type="checkbox"/> 1TX, 1RX | ANT 1 can be used as transmitting/receiving antenna. |
| 802.11ac VHT20                                                                                                    | <input checked="" type="checkbox"/> 1TX, 1RX | ANT 1 can be used as transmitting/receiving antenna. |
| 802.11ac VHT40                                                                                                    | <input checked="" type="checkbox"/> 1TX, 1RX | ANT 1 can be used as transmitting/receiving antenna. |
| 802.11ac VHT80                                                                                                    | <input checked="" type="checkbox"/> 1TX, 1RX | ANT 1 can be used as transmitting/receiving antenna. |
| Note:<br>1. BT&WLAN 2.4G, BT & WLAN 5G, WLAN 2.4G & WLAN 5G can't transmit simultaneously<br>(Declared by client) |                                              |                                                      |

Note: The value of the antenna gain was declared by customer.

## 5.7. SUPPORT UNITS FOR SYSTEM TEST

### SUPPORT EQUIPMENT

| Item | Equipment | Brand Name | Model Name | Remark |
|------|-----------|------------|------------|--------|
| 1    | Earphone  | Apple      | /          | /      |

### I/O CABLES

| Cable No | Port | Connector Type | Cable Type | Cable Length(m) | Remarks |
|----------|------|----------------|------------|-----------------|---------|
| 1        | USB  | /              | /          | 1.0             | /       |

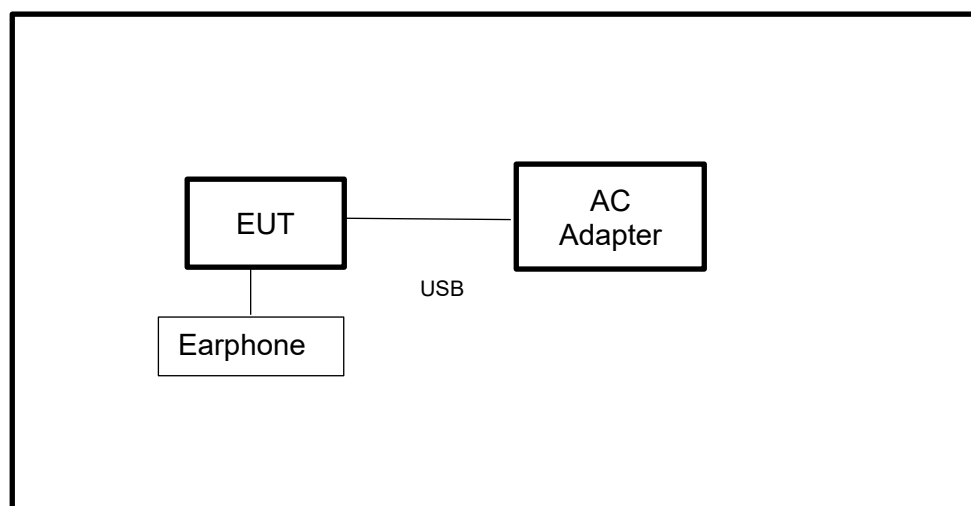
### ACCESSORIES

| Item | Accessory  | Brand Name | Model Name      | Description                                                 |
|------|------------|------------|-----------------|-------------------------------------------------------------|
| 1    | AC Adapter | TEKA       | TEKA-TC050300US | Input: 100-240V~, 50/60Hz, 0.5A<br>Max<br>Output: DC 5V, 3A |

### TEST SETUP

The EUT can work in engineering mode with a software through a Laptop.

### SETUP DIAGRAM FOR TESTS





## 6. MEASURING EQUIPMENT AND SOFTWARE USED

| R&S TS 8997 Test System             |                 |                         |            |              |              |
|-------------------------------------|-----------------|-------------------------|------------|--------------|--------------|
| Equipment                           | Manufacturer    | Model No.               | Serial No. | Last Cal.    | Due. Date    |
| Power sensor, Power Meter           | R&S             | OSP120                  | 100921     | Apr.02,2022  | Apr.01,2023  |
| Vector Signal Generator             | R&S             | SMBV100A                | 261637     | Oct.30, 2021 | Oct.29, 2022 |
| Signal Generator                    | R&S             | SMB100A                 | 178553     | Oct.30, 2021 | Oct.29, 2022 |
| Signal Analyzer                     | R&S             | FSV40                   | 101118     | Oct.30, 2021 | Oct.29, 2022 |
| Software                            |                 |                         |            |              |              |
| Description                         | Manufacturer    |                         | Name       | Version      |              |
| For R&S TS 8997 Test System         | Rohde & Schwarz |                         | EMC 32     | 10.60.10     |              |
| Tonsend RF Test System              |                 |                         |            |              |              |
| Equipment                           | Manufacturer    | Model No.               | Serial No. | Last Cal.    | Due. Date    |
| Wideband Radio Communication Tester | R&S             | CMW500                  | 155523     | Oct.30, 2021 | Oct.29, 2022 |
| PXA Signal Analyzer                 | Keysight        | N9030A                  | MY55410512 | Oct.30, 2021 | Oct.29, 2022 |
| MXG Vector Signal Generator         | Keysight        | N5182B                  | MY56200284 | Oct.30, 2021 | Oct.29, 2022 |
| MXG Vector Signal Generator         | Keysight        | N5172B                  | MY56200301 | Oct.30, 2021 | Oct.29, 2022 |
| DC power supply                     | Keysight        | E3642A                  | MY55159130 | Oct.30, 2021 | Oct.29, 2022 |
| Temperature & Humidity Chamber      | SANMOOD         | SG-80-CC-2              | 2088       | Nov.20,2020  | Nov.19,2022  |
| Software                            |                 |                         |            |              |              |
| Description                         | Manufacturer    | Name                    |            | Version      |              |
| Tonsend SRD Test System             | Tonsend         | JS1120-3 RF Test System |            | 2.6.77.0518  |              |



| Conducted Emissions                   |              |           |              |              |              |
|---------------------------------------|--------------|-----------|--------------|--------------|--------------|
| Equipment                             | Manufacturer | Model No. | Serial No.   | Last Cal.    | Due Date     |
| EMI Test Receiver                     | R&S          | ESR3      | 101961       | Oct.30, 2021 | Oct.29, 2022 |
| Two-Line V-Network                    | R&S          | ENV216    | 101983       | Oct.30, 2021 | Oct.29, 2022 |
| Artificial Mains Networks             | Schwarzbeck  | NSLK 8126 | 8126465      | Oct.30, 2021 | Oct.29, 2022 |
| Software                              |              |           |              |              |              |
| Description                           |              |           | Manufacturer | Name         | Version      |
| Test Software for Conducted Emissions |              |           | Farad        | EZ-EMC       | Ver. UL-3A1  |

| Radiated Emissions          |               |                                  |               |               |               |
|-----------------------------|---------------|----------------------------------|---------------|---------------|---------------|
| Equipment                   | Manufacturer  | Model No.                        | Serial No.    | Last Cal.     | Due Date      |
| MXE EMI Receiver            | KESIGHT       | N9038A                           | MY56400036    | Oct.30, 2021  | Oct.29, 2022  |
| Hybrid Log Periodic Antenna | TDK           | HLP-3003C                        | 130959        | Aug.02, 2021  | Aug.01, 2024  |
| Preamplifier                | HP            | 8447D                            | 2944A09099    | Oct.30, 2021  | Oct.29, 2022  |
| EMI Measurement Receiver    | R&S           | ESR26                            | 101377        | Oct.30, 2021  | Oct.29, 2022  |
| Horn Antenna                | TDK           | HRN-0118                         | 130940        | July 20, 2021 | July 19, 2024 |
| Preamplifier                | TDK           | PA-02-0118                       | TRS-305-00067 | Oct.30, 2021  | Oct.29, 2022  |
| Horn Antenna                | Schwarzbeck   | BBHA9170                         | 697           | July 20, 2021 | July 19, 2024 |
| Preamplifier                | TDK           | PA-02-2                          | TRS-307-00003 | Oct.31, 2021  | Oct.30, 2022  |
| Preamplifier                | TDK           | PA-02-3                          | TRS-308-00002 | Oct.31, 2021  | Oct.30, 2022  |
| Loop antenna                | Schwarzbeck   | 1519B                            | 00008         | Dec.14, 2021  | Dec.13, 2024  |
| Preamplifier                | TDK           | PA-02-001-3000                   | TRS-302-00050 | Oct.31, 2021  | Oct.30, 2022  |
| Preamplifier                | Mini-Circuits | ZX60-83LN-S+                     | SUP01201941   | Oct.31, 2021  | Oct.30, 2022  |
| High Pass Filter            | Wi            | WHKX10-2700-3000-18000-40SS      | 23            | Oct.31, 2021  | Oct.30, 2022  |
| Highpass Filter             | Wainwright    | WHKX10-5850-6500-1800-40SS       | 4             | Oct.31, 2021  | Oct.30, 2022  |
| Band Reject Filter          | Wainwright    | WRCJV12-5695-5725-5850-5880-40SS | 4             | Oct.31, 2021  | Oct.30, 2022  |
| Band Reject Filter          | Wainwright    | WRCJV20-5120-5150-               | 2             | Oct.31, 2021  | Oct.30, 2022  |





|                                      |            |                                      |              |              |              |
|--------------------------------------|------------|--------------------------------------|--------------|--------------|--------------|
|                                      |            | 5350-5380-60SS                       |              |              |              |
| Band Reject Filter                   | Wainwright | WRCJV20-5440-5470-5725-5755-60SS     | 1            | Oct.31, 2021 | Oct.30, 2022 |
| Band Reject Filter                   | Wainwright | WRCJV8-2350-2400-2483.5-2533.5-40SS  | 4            | Oct.31, 2021 | Oct.30, 2022 |
| Band Reject Filter                   | Wainwright | WRCD5-1879-1879.85-1880.15-1881-40SS | 1            | Oct.31, 2021 | Oct.30, 2022 |
| Notch Filter                         | Wainwright | WHJ10-882-980-7000-40SS              | 1            | Oct.31, 2021 | Oct.30, 2022 |
| Software                             |            |                                      |              |              |              |
| Description                          |            |                                      | Manufacturer | Name         | Version      |
| Test Software for Radiated Emissions |            |                                      | Farad        | EZ-EMC       | Ver. UL-3A1  |

| Other Instrument           |              |           |            |               |               |
|----------------------------|--------------|-----------|------------|---------------|---------------|
| Equipment                  | Manufacturer | Model No. | Serial No. | Last Cal.     | Due Date      |
| Temperature humidity probe | OMEGA        | ITHX-SD-5 | 18470007   | Nov. 4, 2021  | Nov. 3, 2022  |
| Barometer                  | Yiyi         | Baro      | N/A        | Nov. 15, 2021 | Nov. 14, 2022 |
| Attenuator                 | Agilent      | 8495B     | 2814a12853 | Oct.31, 2021  | Oct.30, 2022  |

## 7. ANTENNA PORT TEST RESULTS

### 7.1. ON TIME AND DUTY CYCLE

#### LIMITS

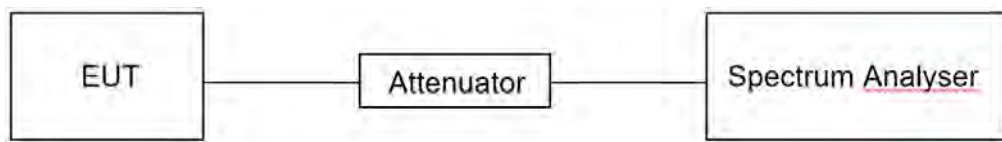
None; for reporting purposes only.

#### TEST PROCEDURE

Refer to KDB 789033 D02 General U-NII Test Procedures New Rules v02r01 section II.B.

The zero-span mode on a spectrum analyzer or EMI receiver, if the response time and spacing between bins on the sweep are sufficient to permit accurate measurements of the on and off times of the transmitted signal. Set the center frequency of the instrument to the center frequency of the transmission. Set  $RBW \geq EBW$  if possible; otherwise, set RBW to the largest available value. Set  $VBW \geq RBW$ . Set detector = peak or average. The zero-span measurement method shall not be used unless both RBW and VBW are  $> 50/T$ , where T is defined in II.B.1.a), and the number of sweep points across duration T exceeds 100. (For example, if VBW and/or RBW are limited to 3 MHz, then the zero-span method of measuring duty cycle shall not be used if  $T \leq 16.7$  microseconds.)

#### TEST SETUP



#### TEST ENVIRONMENT

|                     |        |                   |              |
|---------------------|--------|-------------------|--------------|
| Temperature         | 25°C   | Relative Humidity | 50%          |
| Atmosphere Pressure | 101kPa | Test Voltage      | AC 120V 60Hz |

#### TEST RESULTS

Please refer to section "Test Data" - Appendix H

## 7.2. 6DB AND 26DB EMISSION BANDWIDTH AND 99% OCCUPIED BANDWIDTH

### LIMITS

| CFR 47 FCC Part15, Subpart E |                                                       |                         |
|------------------------------|-------------------------------------------------------|-------------------------|
| Test Item                    | Limit                                                 | Frequency Range (MHz)   |
| 26 dB Emission Bandwidth     | For reporting purposes only.                          | 5150 ~ 5250             |
| 6 dB Emission Bandwidth      | The minimum 6 dB emission bandwidth shall be 500 kHz. | 5725 ~ 5850             |
| 99 % Occupied Bandwidth      | For reporting purposes only.                          | 5150 ~ 5825 (For ISSED) |

### TEST PROCEDURE

Refer to KDB 789033 D02 General U-NII Test Procedures New Rules v02r01 section II.C1. for 26 dB Emission Bandwidth; section II.C2. for 6 dB Emission Bandwidth; section II.D. for 99 % Occupied Bandwidth.

Connect the EUT to the spectrum analyser and use the following settings:

|                  |                                                                                                                                                                             |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Center Frequency | The center frequency of the channel under test                                                                                                                              |
| Detector         | Peak                                                                                                                                                                        |
| RBW              | For 6 dB Emission Bandwidth: RBW=100 kHz<br>For 26 dB Emission bandwidth: approximately 1 % of the EBW.<br>For 99 % Occupied Bandwidth: approximately 1 % ~ 5 % of the OBW. |
| VBW              | For 6 dB Bandwidth: $\geq 3 \times \text{RBW}$<br>For 26 dB Bandwidth: $> 3 \times \text{RBW}$<br>For 99 % Bandwidth: $> 3 \times \text{RBW}$                               |
| Trace            | Max hold                                                                                                                                                                    |
| Sweep            | Auto couple                                                                                                                                                                 |

a) Use the 99 % power bandwidth function of the instrument, allow the trace to stabilize and report the measured bandwidth.

b) Allow the trace to stabilize and measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6/26 dB relative to the maximum level measured in the fundamental emission.

### Calculation for 99 % Bandwidth of UNII-2C and UNII-3 Straddle Channel:

For Example: Fundamental Frequency: 5720 MHz

99 % OBW: 21.00 MHz

Turning Frequency: 5725 MHz

99 % Bandwidth of UNII-2C Band Portion =  $(5725 - (5720 - (21.00/2))) = 15.50 \text{ MHz}$

99 % Bandwidth of UNII-3 Band Portion =  $(5720 + (21.00/2) - 5725) = 5.50 \text{ MHz}$

### Calculation for 26 dB Bandwidth of UNII-2C Straddle Channel:

For Example: Fundamental frequency: 5720 MHz

26 dB BW: 20.00 MHz

FL: 5710.16 MHz

FH: 5730.16 MHz

Turning Frequency: 5725 MHz

26 dB Bandwidth of UNII-2C Band Portion =  $5725 - 5710.16 = 14.84$  MHz

#### Calculation for 6dB Bandwidth of UNII-3 Straddle Channel:

For Example: Fundamental frequency: 5720 MHz

6 dB BW: 16.44 MHz

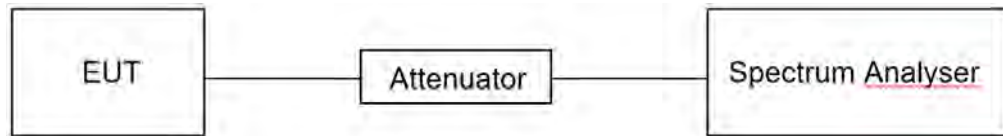
FL: 5711.76 MHz

FH: 5728.2 MHz

Turning Frequency: 5725 MHz

6 dB Bandwidth of UNII-3 band Portion =  $5728.2 - 5725 = 3.2$  MHz

#### TEST SETUP



#### TEST ENVIRONMENT

|                     |        |                   |              |
|---------------------|--------|-------------------|--------------|
| Temperature         | 25°C   | Relative Humidity | 50%          |
| Atmosphere Pressure | 101kPa | Test Voltage      | AC 120V 60Hz |

#### TEST RESULTS

Please refer to section "Test Data" - Appendix A1&A2&A3

### 7.3. CONDUCTED OUTPUT POWER

#### LIMITS

| CFR 47 FCC Part15, Subpart E |                                                                                                                                                                                                                                                                               |                       |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| Test Item                    | Limit                                                                                                                                                                                                                                                                         | Frequency Range (MHz) |
| Conducted Output Power       | <input type="checkbox"/> Outdoor Access Point: 1 W (30 dBm)<br><input type="checkbox"/> Indoor Access Point: 1 W (30 dBm)<br><input type="checkbox"/> Fixed Point-To-Point Access Points: 1 W (30 dBm)<br><input checked="" type="checkbox"/> Client Devices: 250 mW (24 dBm) | 5150 ~ 5250           |
|                              | Shall not exceed 1 Watt (30 dBm).                                                                                                                                                                                                                                             | 5725 ~ 5850           |

Note:

The above limits are based upon the maximum antenna gain does not exceed 6 dBi.

If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

#### TEST PROCEDURE

Refer to KDB 789033 D02 General U-NII Test Procedures New Rules v02r01 section II.E.

##### **Method PM (Measurement using an RF average power meter):**

(i) Measurements may be performed using a wideband RF power meter with a thermocouple detector or equivalent if all of the following conditions are satisfied:

a. The EUT is configured to transmit continuously or to transmit with a constant duty cycle.  
 b. At all times when the EUT is transmitting, it must be transmitting at its maximum power control level.

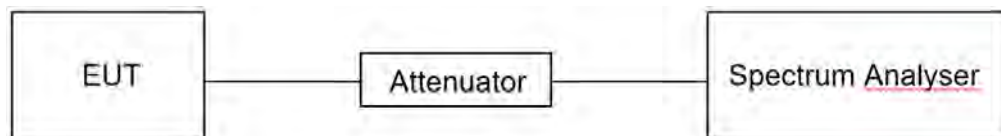
c. The integration period of the power meter exceeds the repetition period of the transmitted signal by at least a factor of five.

(ii) If the transmitter does not transmit continuously, measure the duty cycle, x, of the transmitter output signal as described in II.B.

(iii) Measure the average power of the transmitter. This measurement is an average over both the on and off periods of the transmitter.

(iv) Adjust the measurement in dBm by adding  $10 \log (1/x)$  where x is the duty cycle (e.g.,  $10 \log (1/0.25)$  if the duty cycle is 25 %).

#### TEST SETUP



#### TEST ENVIRONMENT

|                     |        |                   |              |
|---------------------|--------|-------------------|--------------|
| Temperature         | 25°C   | Relative Humidity | 50%          |
| Atmosphere Pressure | 101kPa | Test Voltage      | AC 120V 60Hz |



**TEST RESULTS**

Please refer to section "Test Data" - Appendix B



## 7.4. POWER SPECTRAL DENSITY

### LIMITS

| CFR 47 FCC Part15, Subpart E |                                                                                                                                                                                                                                                                    |                       |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| Test Item                    | Limit                                                                                                                                                                                                                                                              | Frequency Range (MHz) |
| Power Spectral Density       | <input type="checkbox"/> Outdoor Access Point: 17 dBm/MHz<br><input type="checkbox"/> Indoor Access Point: 17 dBm/MHz<br><input type="checkbox"/> Fixed Point-To-Point Access Points: 17 dBm/MHz<br><input checked="" type="checkbox"/> Client Devices: 11 dBm/MHz | 5150 ~ 5250           |
|                              | 30 dBm/500kHz                                                                                                                                                                                                                                                      | 5725 ~ 5850           |

Note:

The above limits are based upon the maximum antenna gain does not exceed 6 dBi.

If transmitting antennas of directional gain greater than 6 dBi are used, maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

### TEST PROCEDURE

Refer to KDB 789033 D02 General U-NII Test Procedures New Rules v02r01 section II.F.

Connect the EUT to the spectrum analyser and use the following settings:

For U-NII-1, U-NII-2A and U-NII-2C band:

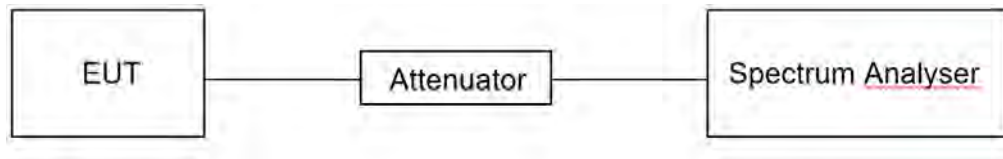
|                  |                                                              |
|------------------|--------------------------------------------------------------|
| Center Frequency | The center frequency of the channel under test               |
| Detector         | RMS                                                          |
| RBW              | 1 MHz                                                        |
| VBW              | $\geq 3 \times \text{RBW}$                                   |
| Span             | Encompass the entire emissions bandwidth (EBW) of the signal |
| Trace            | Max hold                                                     |
| Sweep time       | Auto                                                         |

For U-NII-3:

|                  |                                                              |
|------------------|--------------------------------------------------------------|
| Center Frequency | The center frequency of the channel under test               |
| Detector         | RMS                                                          |
| RBW              | 500 kHz                                                      |
| VBW              | $\geq 3 \times \text{RBW}$                                   |
| Span             | Encompass the entire emissions bandwidth (EBW) of the signal |
| Trace            | Max hold                                                     |
| Sweep time       | Auto                                                         |

Allow trace to fully stabilize and Use the peak search function on the instrument to find the peak of the spectrum and record its value.

Add  $10 \log (1/x)$ , where  $x$  is the duty cycle, to the peak of the spectrum, the result is the Maximum PSD over 1 MHz / 500 kHz reference bandwidth.

**TEST SETUP****TEST ENVIRONMENT**

|                     |        |                   |              |
|---------------------|--------|-------------------|--------------|
| Temperature         | 25°C   | Relative Humidity | 50%          |
| Atmosphere Pressure | 101kPa | Test Voltage      | AC 120V 60Hz |

**TEST RESULTS**

Please refer to section "Test Data" - Appendix C





## 7.5. FREQUENCY STABILITY

### LIMITS

The frequency of the carrier signal shall be maintained within band of operation.

### TEST PROCEDURE

1. The EUT was placed inside an environmental chamber as the temperature in the chamber was varied between 0 °C ~ 40 °C (declared by customer).
2. The temperature was incremented by 10 °C intervals and the unit allowed to stabilize at each temperature before each measurement. The center frequency of the transmitting channel was evaluated at each temperature and the frequency deviation from the channel's center frequency was recorded.
3. The primary supply voltage is varied from 85 % to 115 % of the nominal value for non hand-carried battery and AC powered equipment. For hand-carried, battery-powered equipment, primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacturer.

Connect the EUT to the spectrum analyser and use the following settings:

|                  |                                                              |
|------------------|--------------------------------------------------------------|
| Center Frequency | The center frequency of the channel under test               |
| Detector         | Peak                                                         |
| RBW              | 10 kHz                                                       |
| VBW              | $\geq 3 \times \text{RBW}$                                   |
| Span             | Encompass the entire emissions bandwidth (EBW) of the signal |
| Trace            | Max hold                                                     |
| Sweep time       | Auto                                                         |

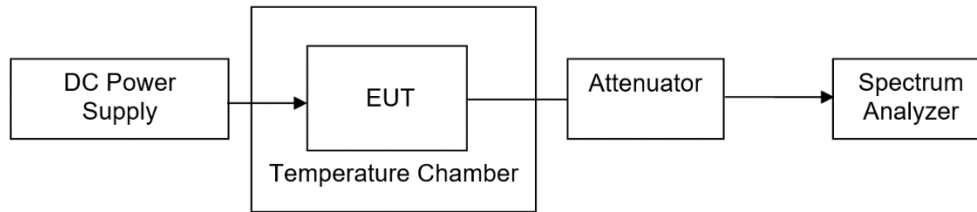
4. While maintaining a constant temperature inside the environmental chamber, turn the EUT on and record the operating frequency at startup, and at 2 minutes, 5 minutes, and 10 minutes after the EUT is energized.
5. Allow the trace to stabilize, find the peak value of the power envelope and record the frequency, then calculated the frequency drift.

### TEST ENVIRONMENT

|                      | Normal Test Conditions                  | Extreme Test Conditions         |
|----------------------|-----------------------------------------|---------------------------------|
| Relative Humidity    | 20 % - 75 %                             | /                               |
| Atmospheric Pressure | 100 kPa ~102 kPa                        | /                               |
| Temperature          | $T_N$ (Normal Temperature):<br>25.1 °C  | $T_L$ (Low Temperature): 0 °C   |
|                      |                                         | $T_H$ (High Temperature): 40 °C |
| Supply Voltage       | $V_N$ (Normal Voltage): AC 120 V, 60 Hz | $V_L$ (Low Voltage): AC 102 V   |
|                      |                                         | $V_H$ (High Voltage): AC 138 V  |



### TEST SETUP



### TEST ENVIRONMENT

|                     |        |                   |              |
|---------------------|--------|-------------------|--------------|
| Temperature         | 25°C   | Relative Humidity | 50%          |
| Atmosphere Pressure | 101kPa | Test Voltage      | AC 120V 60Hz |

### TEST RESULTS

Please refer to section "Test Data" - Appendix D



## 8. RADIATED TEST RESULTS

### LIMITS

Refer to CFR 47 FCC §15.205, §15.209 and §15.407 (b).

Radiation Disturbance Test Limit for FCC (Class B) (9 kHz ~ 1 GHz)

| Emissions radiated outside of the specified frequency bands above 30 MHz |                                       |                                         |         |
|--------------------------------------------------------------------------|---------------------------------------|-----------------------------------------|---------|
| Frequency Range<br>(MHz)                                                 | Field Strength Limit<br>(uV/m) at 3 m | Field Strength Limit<br>(dBuV/m) at 3 m |         |
|                                                                          |                                       | Quasi-Peak                              |         |
| 30 - 88                                                                  | 100                                   | 40                                      |         |
| 88 - 216                                                                 | 150                                   | 43.5                                    |         |
| 216 - 960                                                                | 200                                   | 46                                      |         |
| Above 960                                                                | 500                                   | 54                                      |         |
| Above 1000                                                               | 500                                   | Peak                                    | Average |
|                                                                          |                                       | 74                                      | 54      |

| FCC Emissions radiated outside of the specified frequency bands below 30 MHz |                                   |                               |
|------------------------------------------------------------------------------|-----------------------------------|-------------------------------|
| Frequency (MHz)                                                              | Field strength (microvolts/meter) | Measurement distance (meters) |
| 0.009-0.490                                                                  | 2400/F(kHz)                       | 300                           |
| 0.490-1.705                                                                  | 24000/F(kHz)                      | 30                            |
| 1.705-30.0                                                                   | 30                                | 30                            |

FCC Restricted bands of operation refer to FCC §15.205 (a):

| MHz                      | MHz                 | MHz           | GHz              |
|--------------------------|---------------------|---------------|------------------|
| 0.090-0.110              | 16.42-16.423        | 399.9-410     | 4.5-5.15         |
| <sup>1</sup> 0.495-0.505 | 16.69475-16.69525   | 608-614       | 5.35-5.46        |
| 2.1735-2.1905            | 16.80425-16.80475   | 960-1240      | 7.25-7.75        |
| 4.125-4.128              | 25.5-25.67          | 1300-1427     | 8.025-8.5        |
| 4.17725-4.17775          | 37.5-38.25          | 1435-1626.5   | 9.0-9.2          |
| 4.20725-4.20775          | 73-74.6             | 1645.5-1646.5 | 9.3-9.5          |
| 6.215-6.218              | 74.8-75.2           | 1660-1710     | 10.6-12.7        |
| 6.26775-6.26825          | 108-121.94          | 1718.8-1722.2 | 13.25-13.4       |
| 6.31175-6.31225          | 123-138             | 2200-2300     | 14.47-14.5       |
| 8.291-8.294              | 149.9-150.05        | 2310-2390     | 15.35-16.2       |
| 8.362-8.366              | 156.52475-156.52525 | 2483.5-2500   | 17.7-21.4        |
| 8.37625-8.38675          | 156.7-156.9         | 2690-2900     | 22.01-23.12      |
| 8.41425-8.41475          | 162.0125-167.17     | 3260-3267     | 23.6-24.0        |
| 12.29-12.293             | 167.72-173.2        | 3332-3339     | 31.2-31.8        |
| 12.51975-12.52025        | 240-285             | 3345.8-3358   | 36.43-36.5       |
| 12.57675-12.57725        | 322-335.4           | 3600-4400     | ( <sup>2</sup> ) |
| 13.36-13.41              |                     |               |                  |

Note: <sup>1</sup>Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

<sup>2</sup>Above 38.6c

Limits of unwanted/undesirable emission out of the restricted bands refer to CFR 47 FCC §15.407 (b) and ISSED RSS-247 6.2.

| LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1GHz)                                                                                                                                                                                                                                                                                         |                                                                                             |                                                                                               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| Frequency Range (MHz)                                                                                                                                                                                                                                                                                                                        | EIRP Limit                                                                                  | Field Strength Limit (dBuV/m) at 3 m                                                          |
| 5150~5250 MHz                                                                                                                                                                                                                                                                                                                                | PK: -27 (dBm/MHz)                                                                           | PK:68.2(dBμV/m)                                                                               |
| 5725~5850 MHz                                                                                                                                                                                                                                                                                                                                | PK: -27 (dBm/MHz) *1<br>PK: 10 (dBm/MHz) *2<br>PK: 15.6 (dBm/MHz) *3<br>PK: 27 (dBm/MHz) *4 | PK: 68.2(dBμV/m) *1<br>PK: 105.2 (dBμV/m) *2<br>PK: 110.8(dBμV/m) *3<br>PK: 122.2 (dBμV/m) *4 |
| Note:<br>*1 beyond 75 MHz or more above of the band edge.<br>*2 below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above.<br>*3 below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above.<br>*4 from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge. |                                                                                             |                                                                                               |

## TEST PROCEDURE

Below 30 MHz

The setting of the spectrum analyser

|       |                                                                  |
|-------|------------------------------------------------------------------|
| RBW   | 200 Hz (From 9 kHz to 0.15 MHz)/ 9 kHz (From 0.15 MHz to 30 MHz) |
| VBW   | 200 Hz (From 9 kHz to 0.15 MHz)/ 9 kHz (From 0.15 MHz to 30 MHz) |
| Sweep | Auto                                                             |

1. The testing follows the guidelines in ANSI C63.10-2013 clause 6.4.



2. The EUT was arranged to its worst case and then turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both Horizontal, Face-on and Face-off polarizations of the antenna are set to make the measurement.
3. The EUT was placed on a turntable with 80 cm above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a 1 m height antenna tower.
5. The radiated emission limits are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz Radiated emission limits in these three bands are based on measurements employing an average detector.
6. For measurement below 1 GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak and average detector mode re-measured. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak and average detector and reported.
7. Although these tests were performed other than open field site, adequate comparison measurements were confirmed against 30m open field site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field site based on KDB 414788.
8. The limits in CFR 47, Part 15, Subpart C, paragraph 15.209 (a), are identical to those in RSS-GEN Section 8.9, Table 6, since the measurements are performed in terms of magnetic field strength and converted to electric field strength levels (as reported in the table) using the free space impedance of  $377\Omega$ . For example, the measurement frequency X KHz resulted in a level of Y dBuV/m, which is equivalent to  $Y-51.5 = Z$  dBuA/m, which has the same margin, W dB, to the corresponding RSS-GEN Table 6 limit as it has to be 15.209(a) limit.



Below 1 GHz and above 30 MHz

The setting of the spectrum analyser

|          |          |
|----------|----------|
| RBW      | 120 kHz  |
| VBW      | 300 kHz  |
| Sweep    | Auto     |
| Detector | Peak/QP  |
| Trace    | Max hold |

1. The testing follows the guidelines in ANSI C63.10-2013 clause 6.5.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
3. The EUT was placed on a turntable with 80 cm above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. For measurement below 1 GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

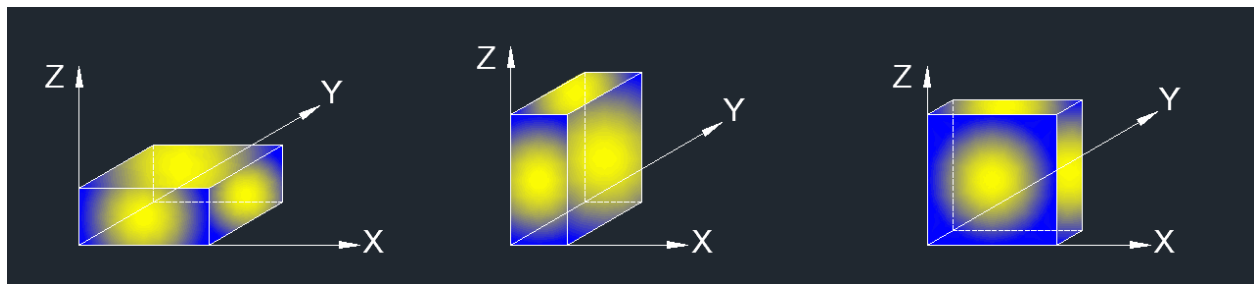
Above 1 GHz

The setting of the spectrum analyser

|          |                                |
|----------|--------------------------------|
| RBW      | 1 MHz                          |
| VBW      | PEAK: 3 MHz<br>AVG: see note 6 |
| Sweep    | Auto                           |
| Detector | Peak                           |
| Trace    | Max hold                       |

1. The testing follows the guidelines in KDB 789033 D02 General U-NII Test Procedures New Rules v02r01 section II.G.3 ~ II.G.6.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
3. The EUT was placed on a turntable with 1.5 m above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. For measurement above 1 GHz, the emission measurement will be measured by the peak detector. This peak level, once corrected, must comply with the limit specified in Section 15.209.
6. For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 3 MHz for peak measurements and 1 MHz resolution bandwidth with 1/T video bandwidth with peak detector for average measurements. For the Duty Cycle please refer to clause 7.1.ON TIME AND DUTY CYCLE.

X axis, Y axis, Z axis positions:



Note 1: For all radiated test, EUT in each of three orthogonal axis emissions had been tested, but only the worst case (X axis) data recorded in the report.

Note 2: The EUT was fully exercised with external accessories during the test. In the case of multiple accessory external ports, an external accessory shall be connected to one of each type of port.

For Band edge note:

1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
5. For the transmitting duration, please refer to clause 7.1.
6. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.
7. Horizontal and Vertical have been tested, only the worst data was recorded in the report.
8. All modes and channels have been tested, only the worst data was recorded in the report.

For Radiate Spurious emission 1GHz-7GHz note:

- Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
  3. Peak: Peak detector.
  4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
  5. For the transmitting duration, please refer to clause 7.1.
  6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
  7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
  8. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.
  9. All modes and channels have been tested, only the worst data was recorded in the report.

For Radiate Spurious emission 7GHz-18GHz note:

- Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
  3. Peak: Peak detector.
  4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
  5. For the transmitting duration, please refer to clause 7.1.
  6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
  7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
  8. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.
  9. All modes and channels have been tested, only the worst data was recorded in the report.





For Radiate Spurious emission 9kHz-30MHz note:

Note: 1. Measurement = Reading Level + Correct Factor (dBuA/m= dBuV/m- 20Log10[120π] = dBuV/m- 51.5).

2. If Peak Result complies with AV and QP limit, AV and QP Result are deemed to comply with AV limit.

3. All 3 polarizations (Horizontal, Face-on and Face-off) of the loop antenna had been tested, but only the worst data recorded in the report.

4. All modes and channels have been tested, only the worst data was recorded in the report.

For Radiate Spurious emission 18GHz-26GHz note:

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

4. All modes and channels have been tested, only the worst data was recorded in the report.

For Radiate Spurious emission 26GHz-40GHz note:

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

4. All modes and channels have been tested, only the worst data was recorded in the report.

For Radiate Spurious emission 30MHz-1GHz note:

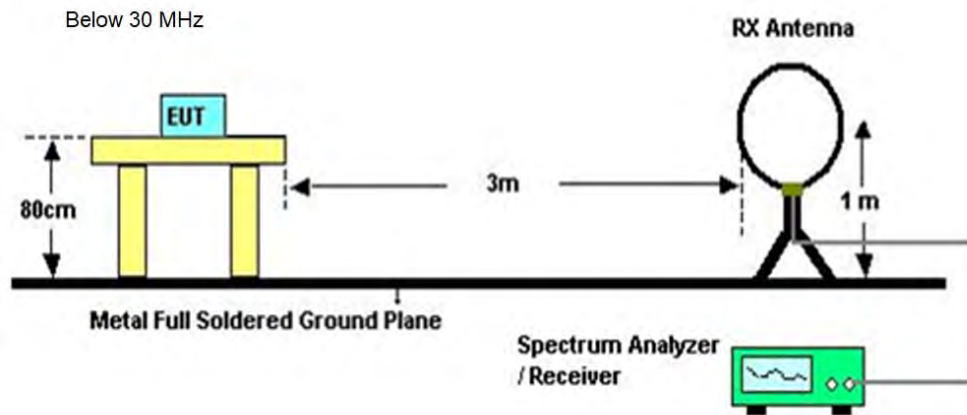
1. Result Level = Read Level + Correct Factor.

2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.

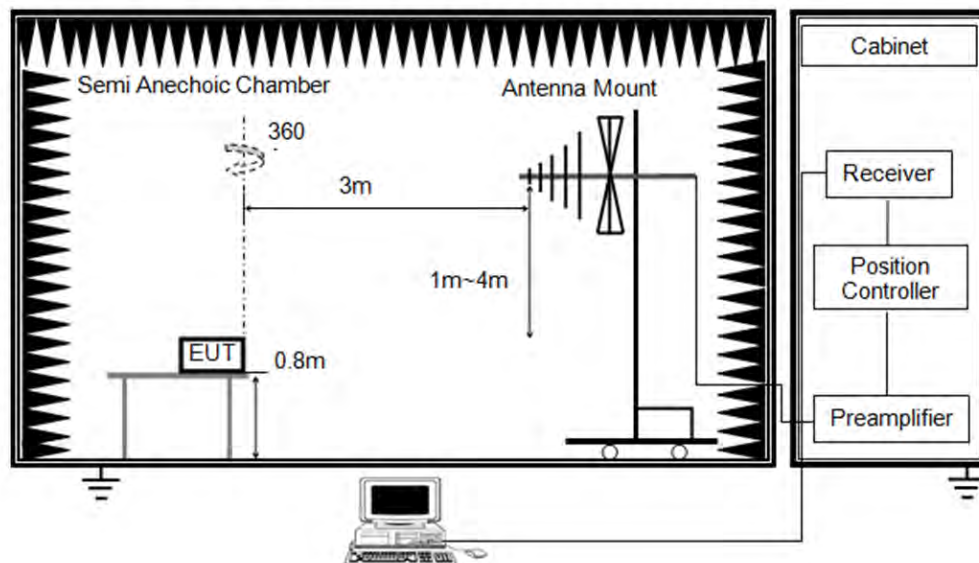
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

4. All modes and channels have been tested, only the worst data was recorded in the report.

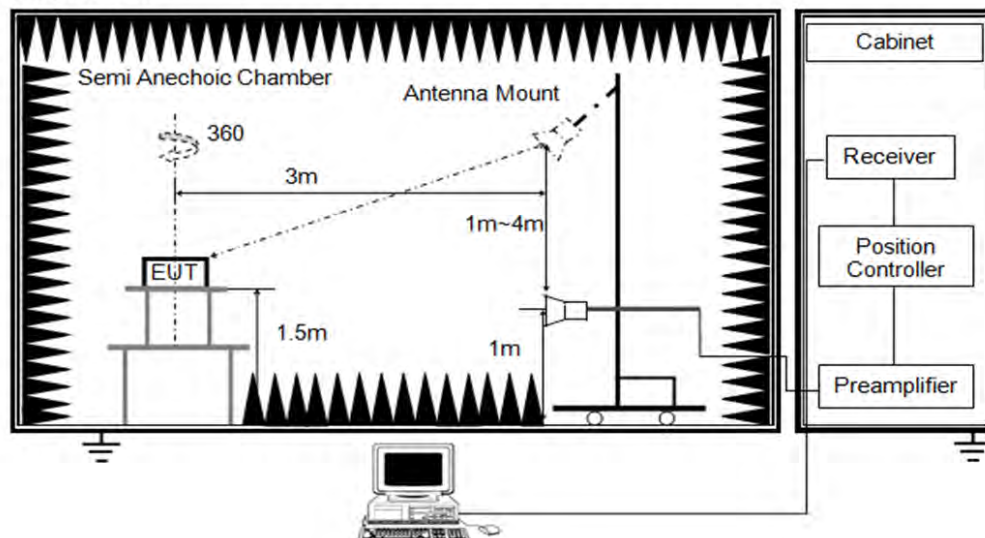
## TEST SETUP



Below 1 GHz and above 30 MHz



Above 1 GHz





**TEST ENVIRONMENT**

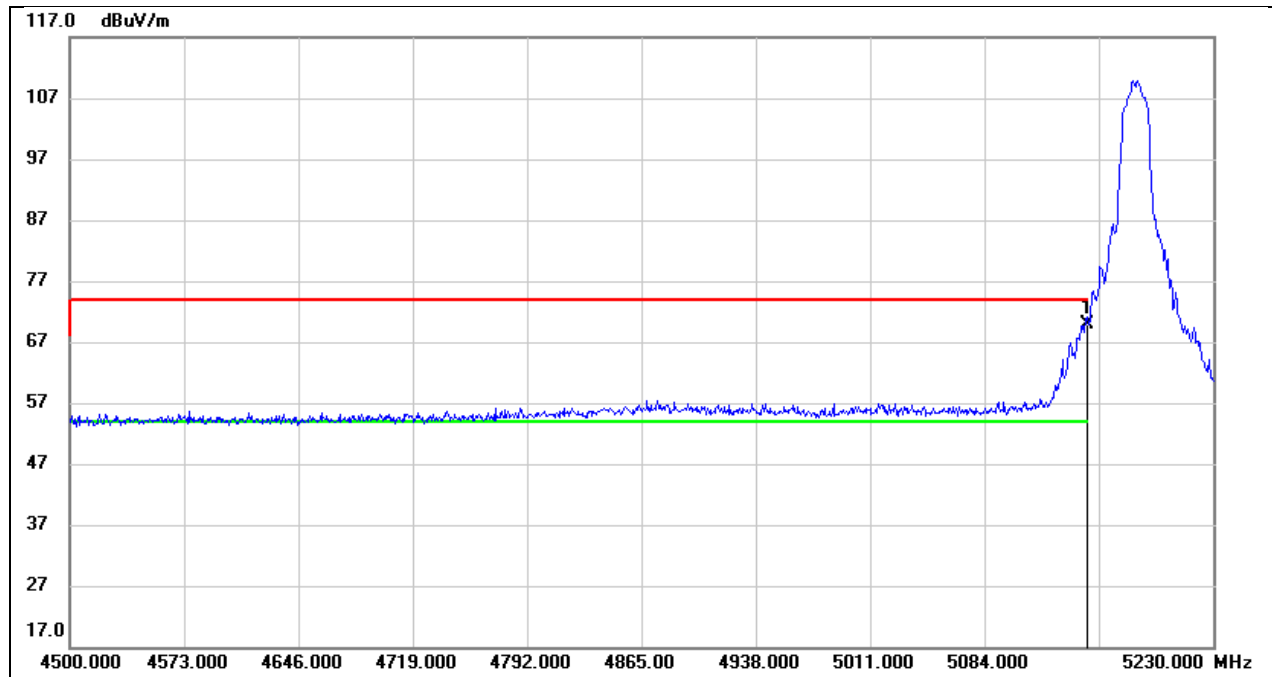
|                     |        |                   |              |
|---------------------|--------|-------------------|--------------|
| Temperature         | 25.3°C | Relative Humidity | 61%          |
| Atmosphere Pressure | 101kPa | Test Voltage      | AC 120V 60Hz |

**TEST RESULTS**



## 8.1. RESTRICTED BANDEDGE

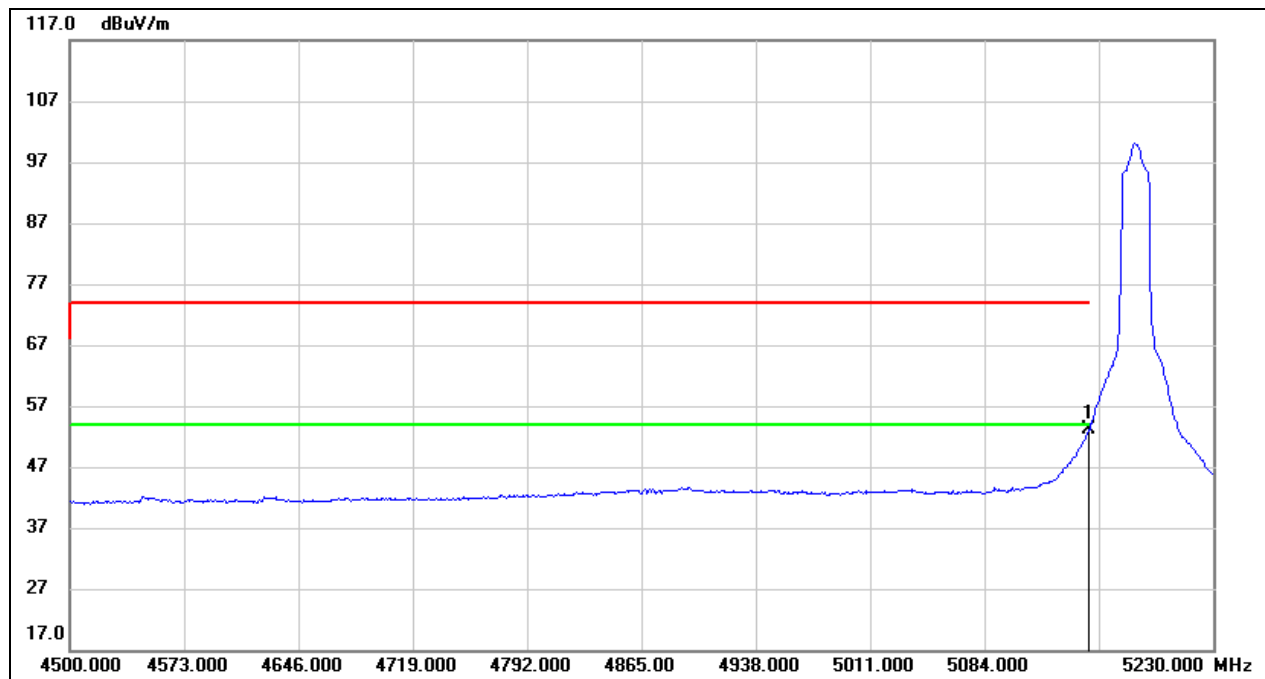
|            |               |               |              |
|------------|---------------|---------------|--------------|
| Test Mode: | 802.11a 20 PK | Channel:      | 5180         |
| Polarity:  | Horizontal    | Test Voltage: | AC 120V_60Hz |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------|--------------------|-------------------|----------------|--------|
| 1   | 5150.000           | 29.65             | 40.27             | 69.92              | 74.00             | -4.08          | peak   |



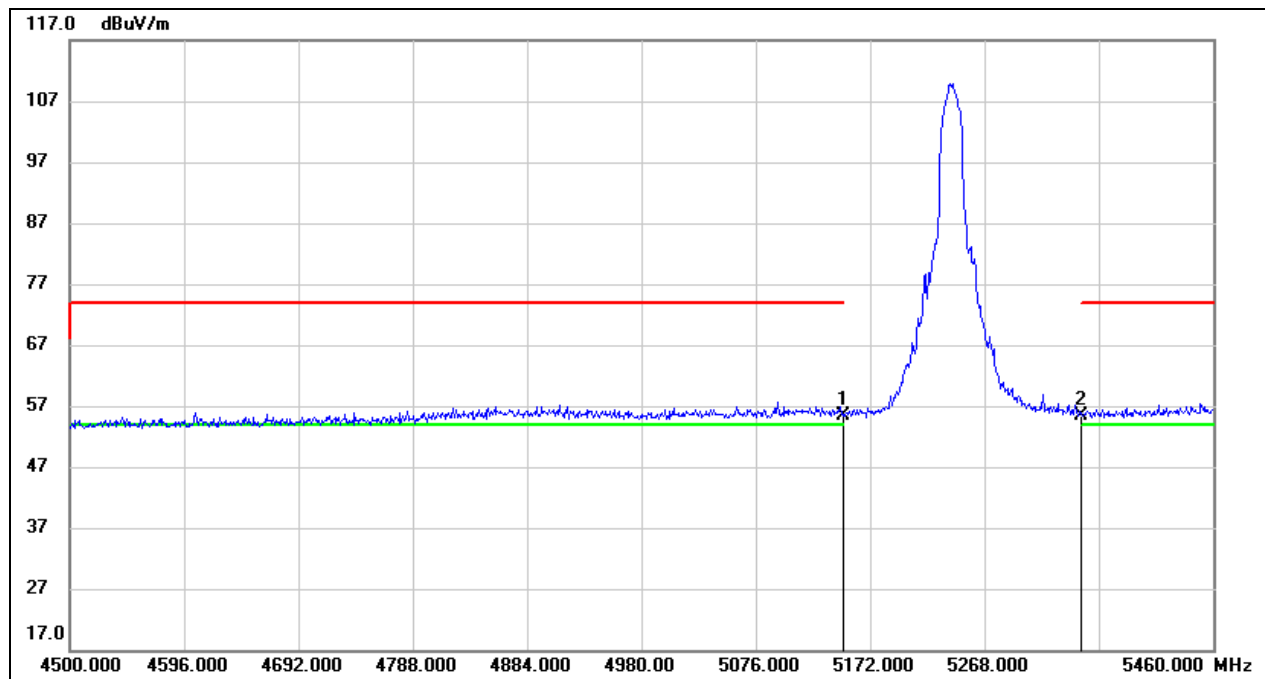
|            |               |               |              |
|------------|---------------|---------------|--------------|
| Test Mode: | 802.11a 20 AV | Channel:      | 5180         |
| Polarity:  | Horizontal    | Test Voltage: | AC 120V_60Hz |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------|--------------------|-------------------|----------------|--------|
| 1   | 5150.000           | 12.76             | 40.27             | 53.03              | 54.00             | -0.97          | AVG    |



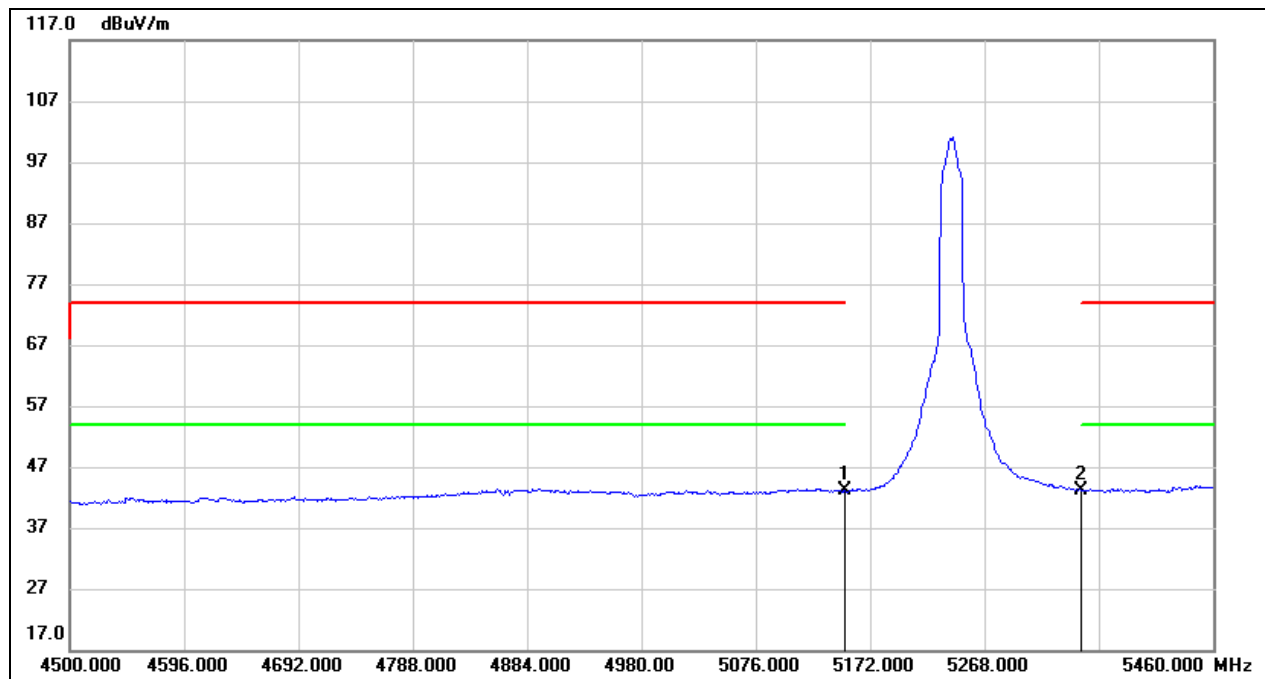
|            |               |               |              |
|------------|---------------|---------------|--------------|
| Test Mode: | 802.11a 20 PK | Channel:      | 5240         |
| Polarity:  | Horizontal    | Test Voltage: | AC 120V_60Hz |



| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------|-----------------|----------------|-------------|--------|
| 1   | 5150.000        | 15.13          | 40.27          | 55.40           | 74.00          | -18.60      | peak   |
| 2   | 5350.000        | 14.96          | 40.49          | 55.45           | 74.00          | -18.55      | peak   |



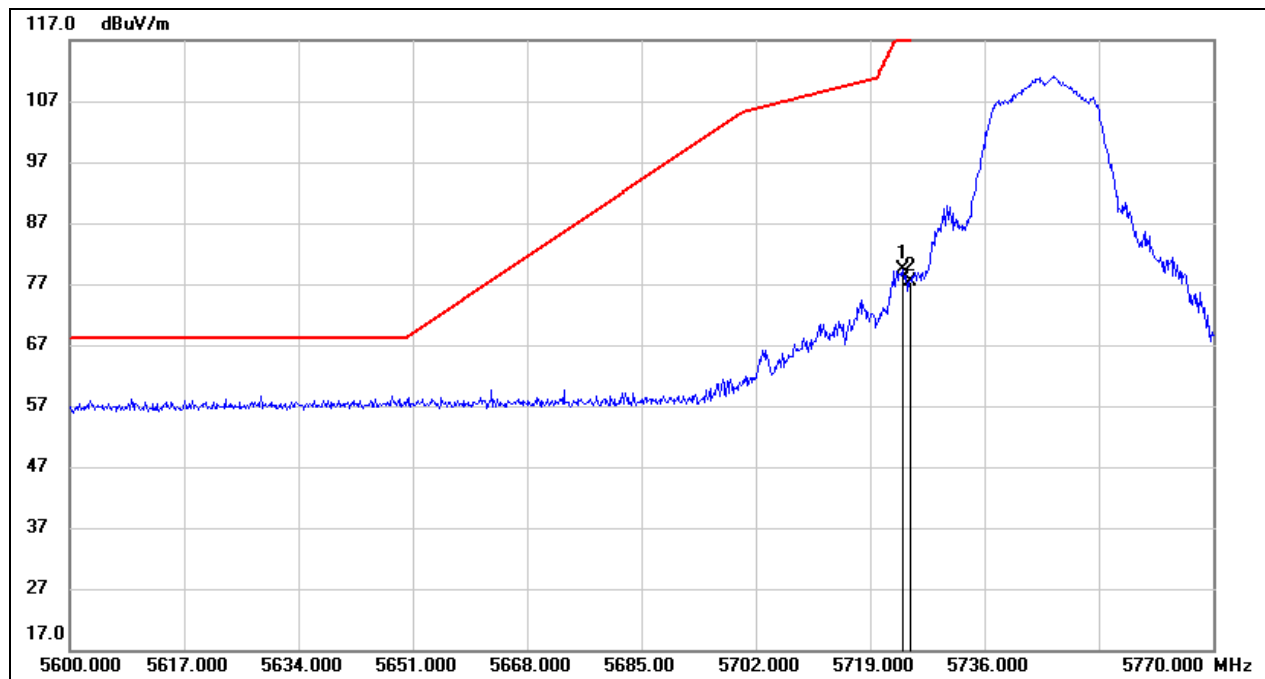
|            |               |               |              |
|------------|---------------|---------------|--------------|
| Test Mode: | 802.11a 20 AV | Channel:      | 5240         |
| Polarity:  | Horizontal    | Test Voltage: | AC 120V_60Hz |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------|--------------------|-------------------|----------------|--------|
| 1   | 5150.000           | 2.80              | 40.27             | 43.07              | 54.00             | -10.93         | AVG    |
| 2   | 5350.000           | 2.65              | 40.49             | 43.14              | 54.00             | -10.86         | AVG    |



|            |               |               |              |
|------------|---------------|---------------|--------------|
| Test Mode: | 802.11a 20 PK | Channel:      | 5745         |
| Polarity:  | Horizontal    | Test Voltage: | AC 120V_60Hz |

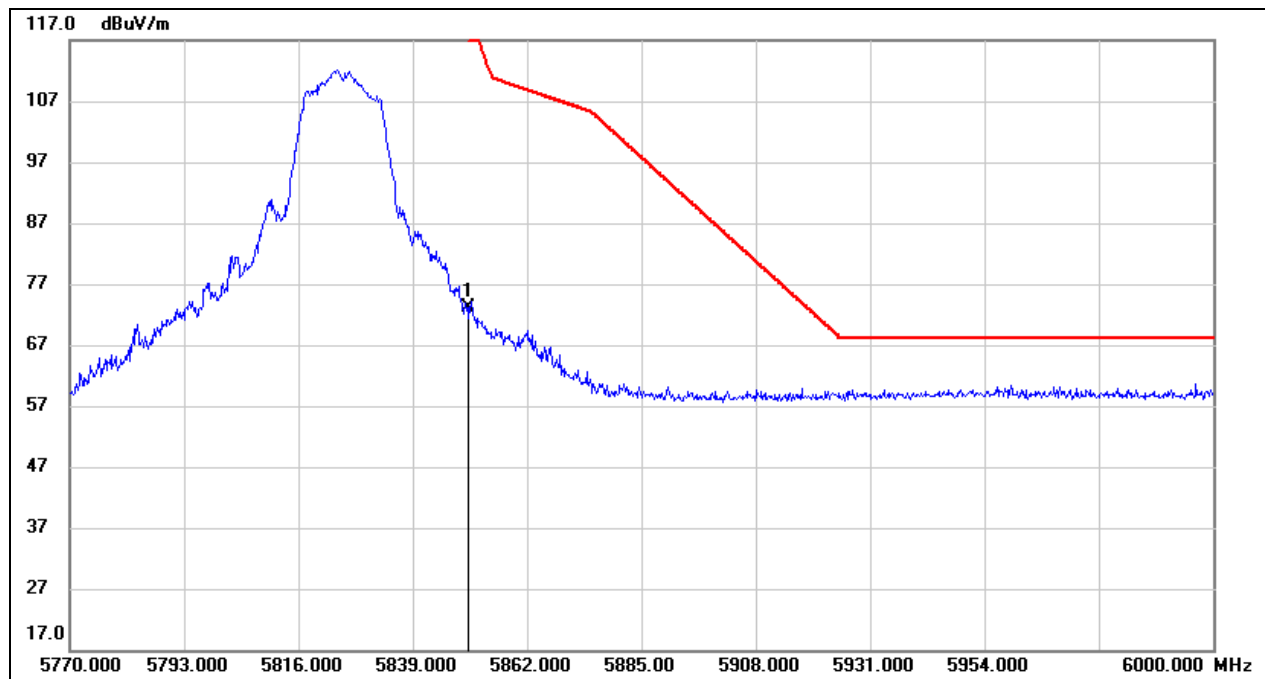


| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------|-----------------|----------------|-------------|--------|
| 1   | 5723.760        | 38.19          | 41.26          | 79.45           | 119.37         | -39.92      | peak   |
| 2   | 5725.000        | 36.10          | 41.27          | 77.37           | 122.20         | -44.83      | peak   |





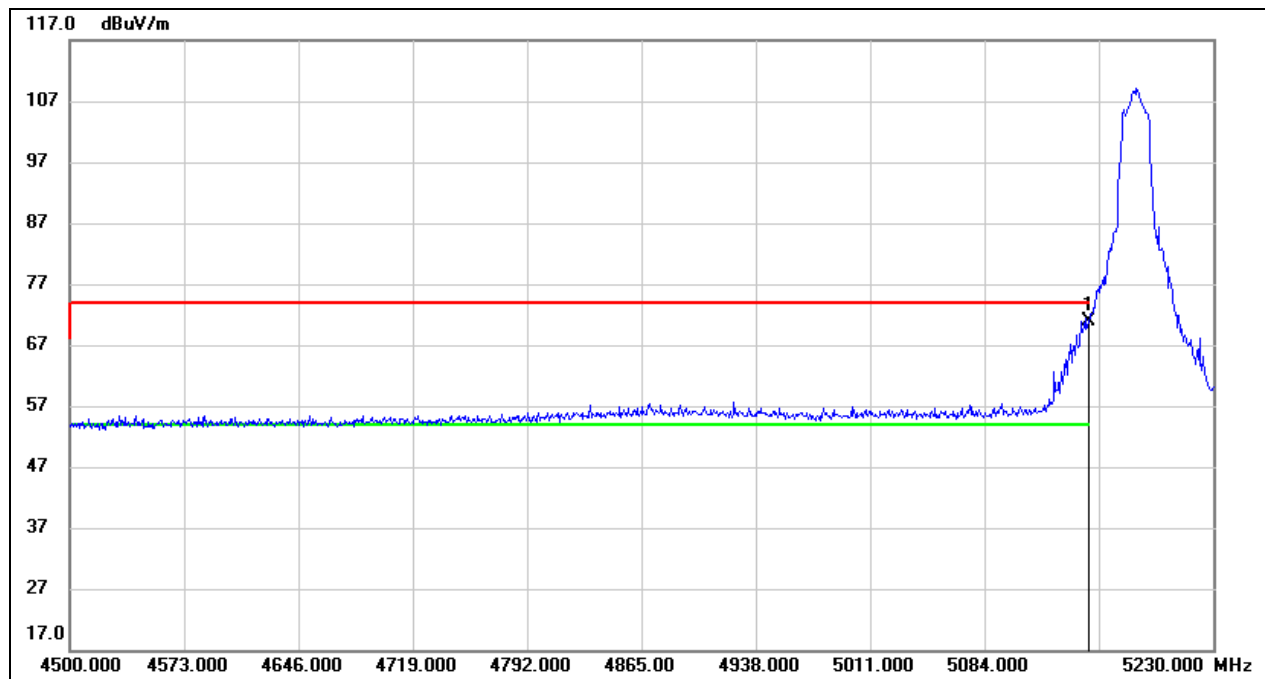
|            |               |               |              |
|------------|---------------|---------------|--------------|
| Test Mode: | 802.11a 20 PK | Channel:      | 5825         |
| Polarity:  | Horizontal    | Test Voltage: | AC 120V_60Hz |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------|--------------------|-------------------|----------------|--------|
| 1   | 5850.000           | 31.41             | 41.60             | 73.01              | 122.20            | -49.19         | peak   |



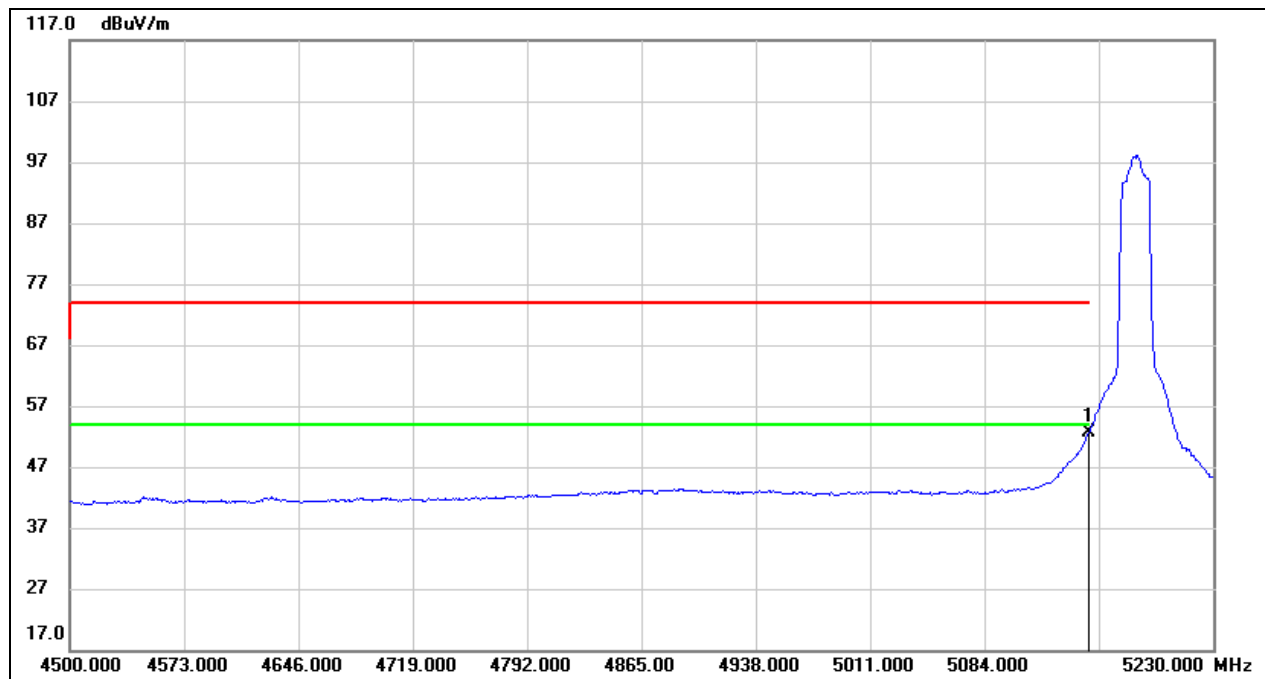
|            |                 |               |              |
|------------|-----------------|---------------|--------------|
| Test Mode: | 802.11n HT20 PK | Channel:      | 5180         |
| Polarity:  | Horizontal      | Test Voltage: | AC 120V_60Hz |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------|--------------------|-------------------|----------------|--------|
| 1   | 5150.000           | 30.67             | 40.27             | 70.94              | 74.00             | -3.06          | peak   |



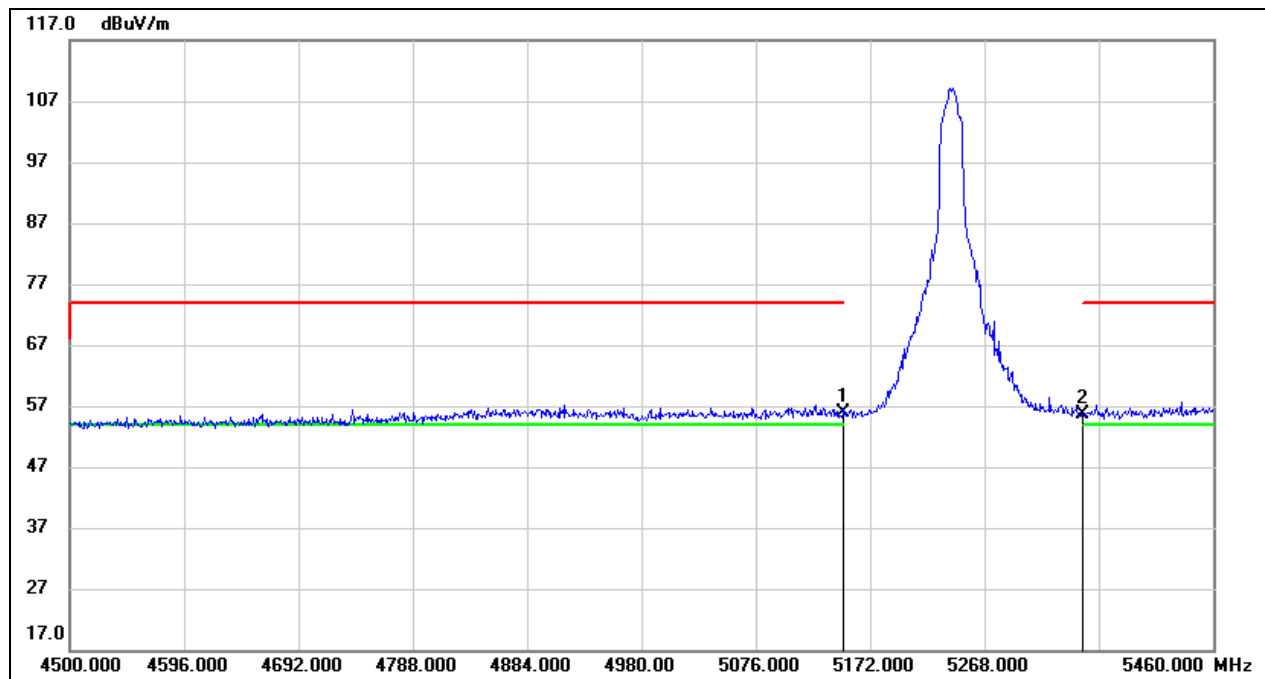
|            |                 |               |              |
|------------|-----------------|---------------|--------------|
| Test Mode: | 802.11n HT20 AV | Channel:      | 5180         |
| Polarity:  | Horizontal      | Test Voltage: | AC 120V_60Hz |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------|--------------------|-------------------|----------------|--------|
| 1   | 5150.000           | 12.39             | 40.27             | 52.66              | 54.00             | -1.34          | AVG    |



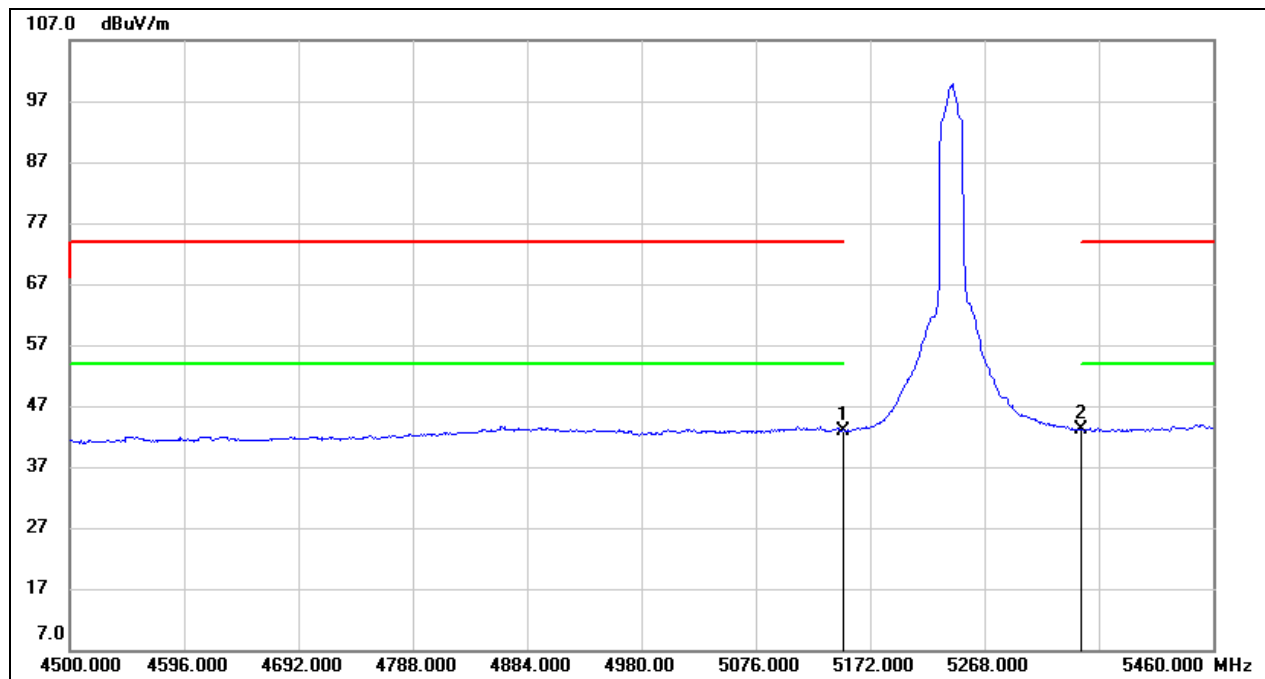
|            |                 |               |              |
|------------|-----------------|---------------|--------------|
| Test Mode: | 802.11n HT20 PK | Channel:      | 5240         |
| Polarity:  | Horizontal      | Test Voltage: | AC 120V_60Hz |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------|--------------------|-------------------|----------------|--------|
| 1   | 5150.000           | 15.51             | 40.27             | 55.78              | 74.00             | -18.22         | peak   |
| 2   | 5350.000           | 15.15             | 40.49             | 55.64              | 74.00             | -18.36         | peak   |



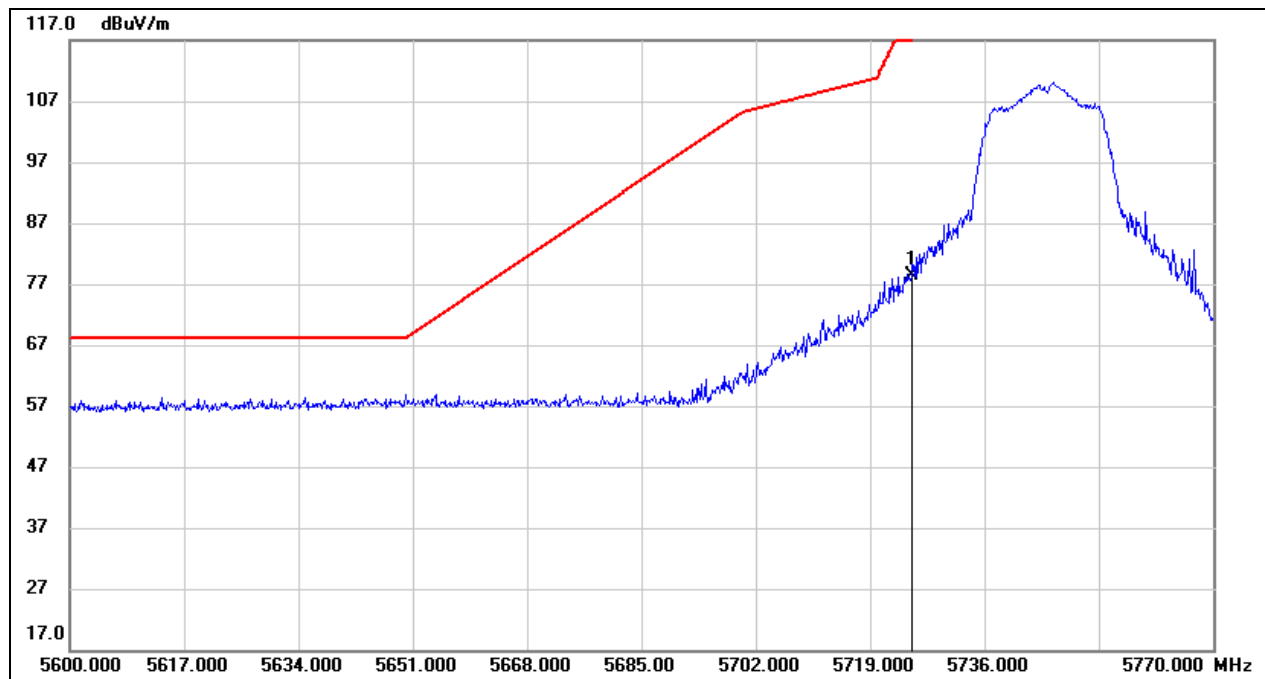
|            |                 |               |              |
|------------|-----------------|---------------|--------------|
| Test Mode: | 802.11n HT20 AV | Channel:      | 5240         |
| Polarity:  | Horizontal      | Test Voltage: | AC 120V_60Hz |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------|--------------------|-------------------|----------------|--------|
| 1   | 5150.000           | 2.71              | 40.27             | 42.98              | 54.00             | -11.02         | AVG    |
| 2   | 5350.000           | 2.64              | 40.49             | 43.13              | 54.00             | -10.87         | AVG    |



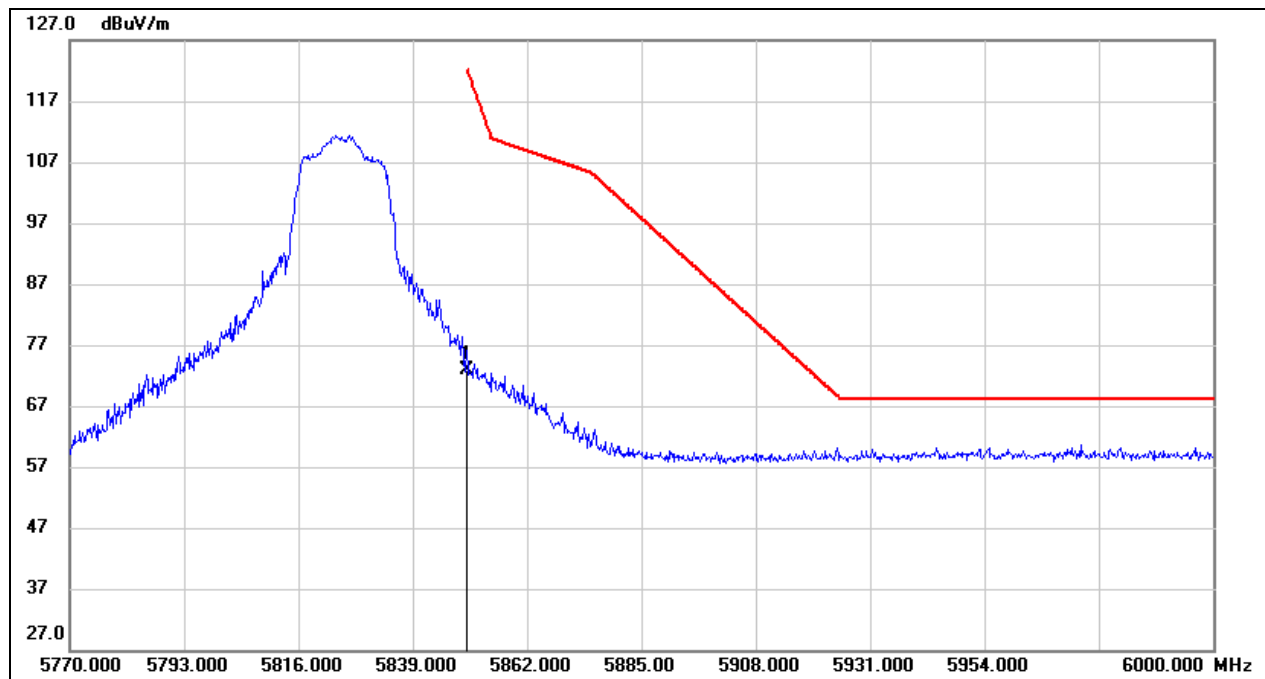
|            |                 |               |              |
|------------|-----------------|---------------|--------------|
| Test Mode: | 802.11n HT20 PK | Channel:      | 5745         |
| Polarity:  | Horizontal      | Test Voltage: | AC 120V_60Hz |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------|--------------------|-------------------|----------------|--------|
| 1   | 5725.000           | 37.13             | 41.27             | 78.40              | 122.20            | -43.80         | peak   |



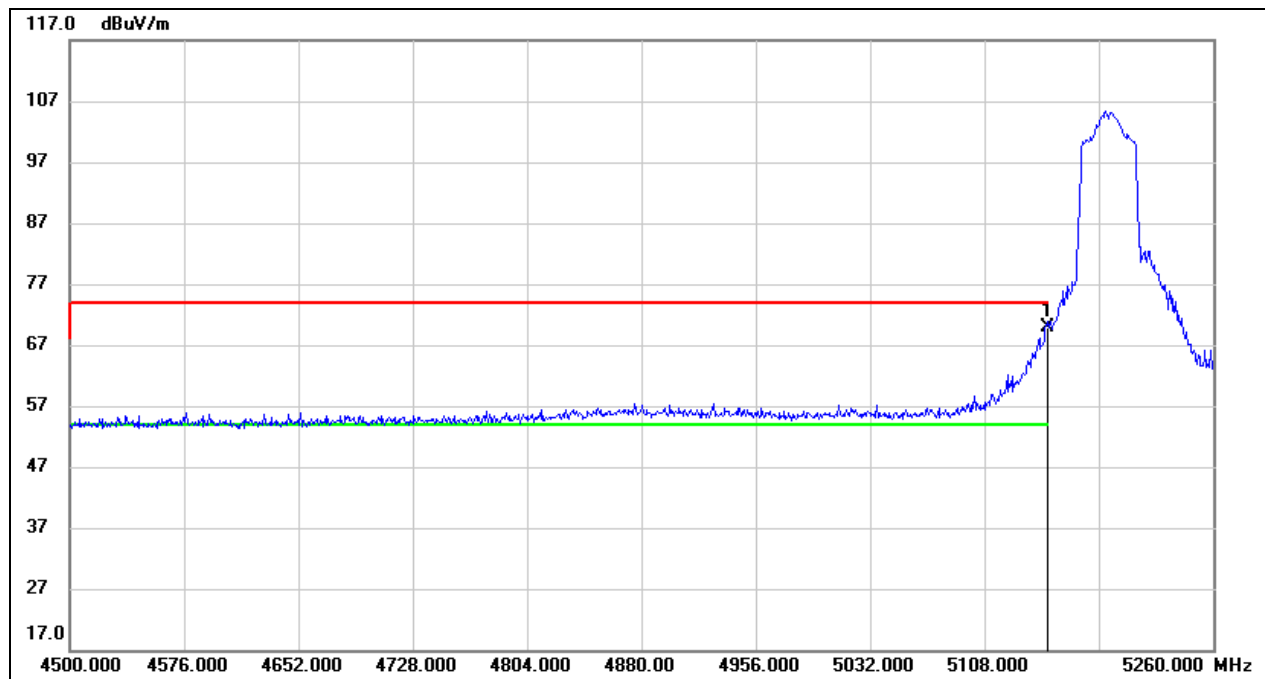
|            |                 |               |              |
|------------|-----------------|---------------|--------------|
| Test Mode: | 802.11n HT20 AV | Channel:      | 5825         |
| Polarity:  | Horizontal      | Test Voltage: | AC 120V_60Hz |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------|--------------------|-------------------|----------------|--------|
| 1   | 5850.000           | 31.17             | 41.60             | 72.77              | 122.20            | -49.43         | peak   |



|            |                 |               |              |
|------------|-----------------|---------------|--------------|
| Test Mode: | 802.11n HT40 PK | Channel:      | 5190         |
| Polarity:  | Horizontal      | Test Voltage: | AC 120V_60Hz |

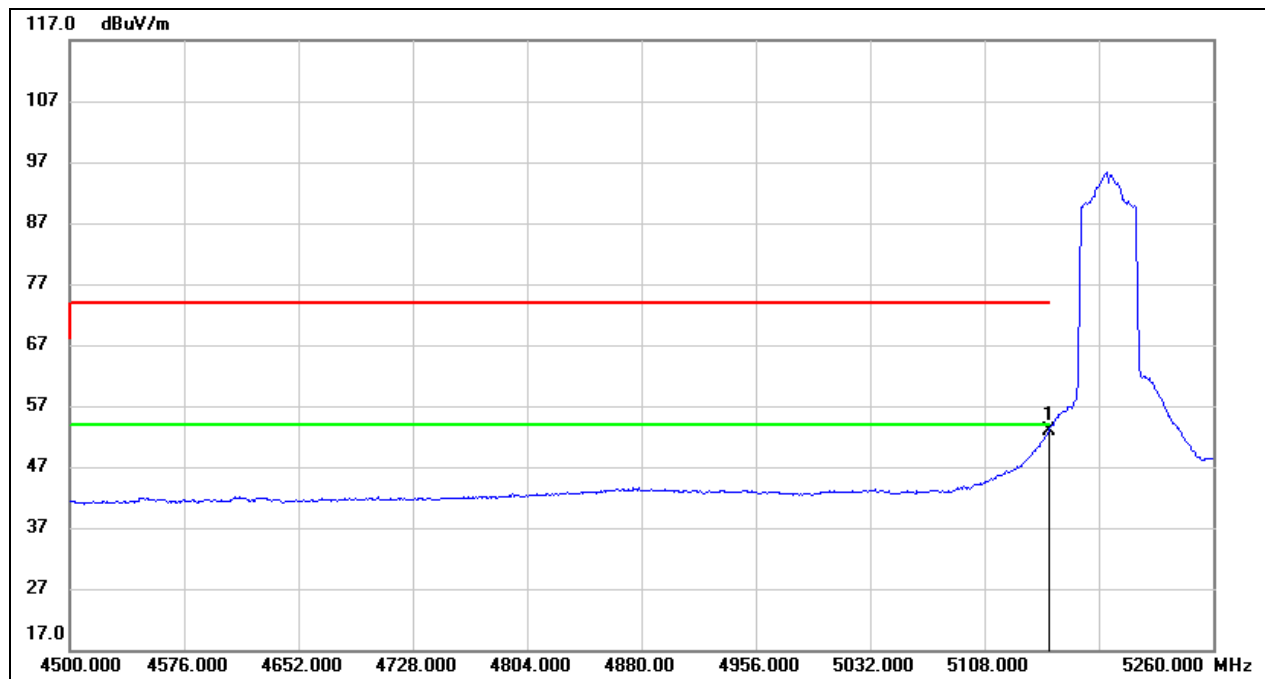


| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------|--------------------|-------------------|----------------|--------|
| 1   | 5150.000           | 29.53             | 40.27             | 69.80              | 74.00             | -4.20          | peak   |





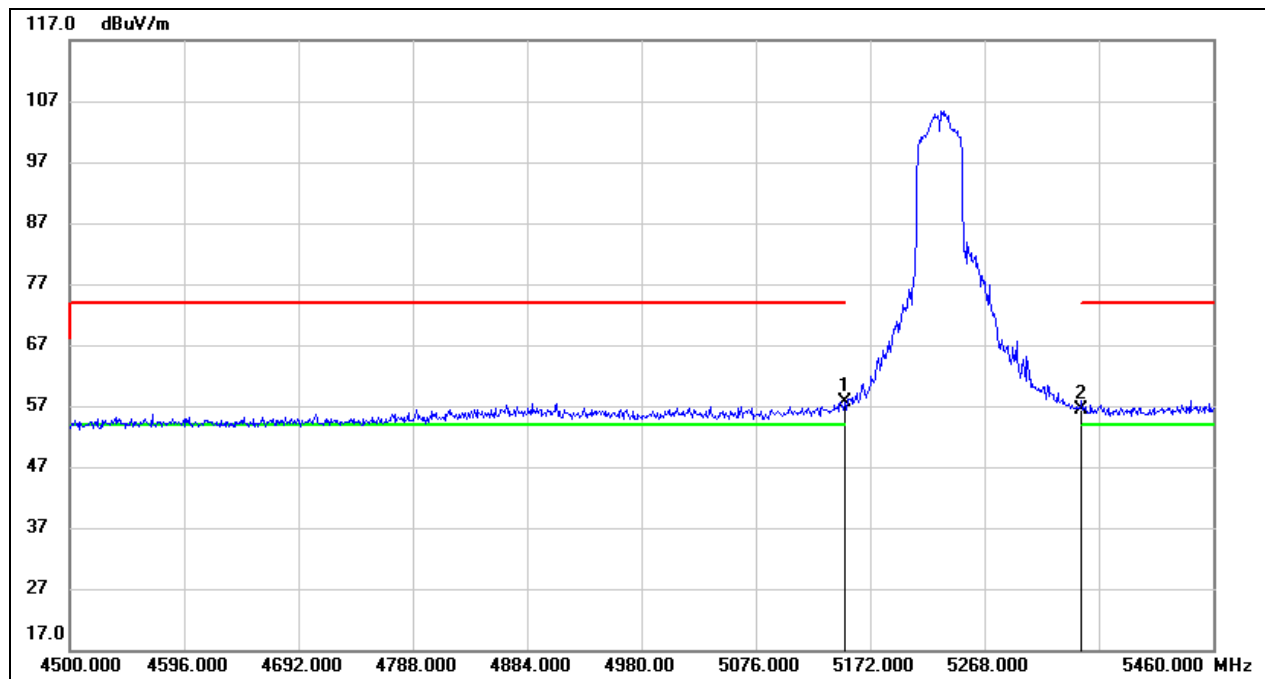
|            |                 |               |              |
|------------|-----------------|---------------|--------------|
| Test Mode: | 802.11n HT40 AV | Channel:      | 5190         |
| Polarity:  | Horizontal      | Test Voltage: | AC 120V_60Hz |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------|--------------------|-------------------|----------------|--------|
| 1   | 5150.000           | 12.49             | 40.27             | 52.76              | 54.00             | -1.24          | AVG    |



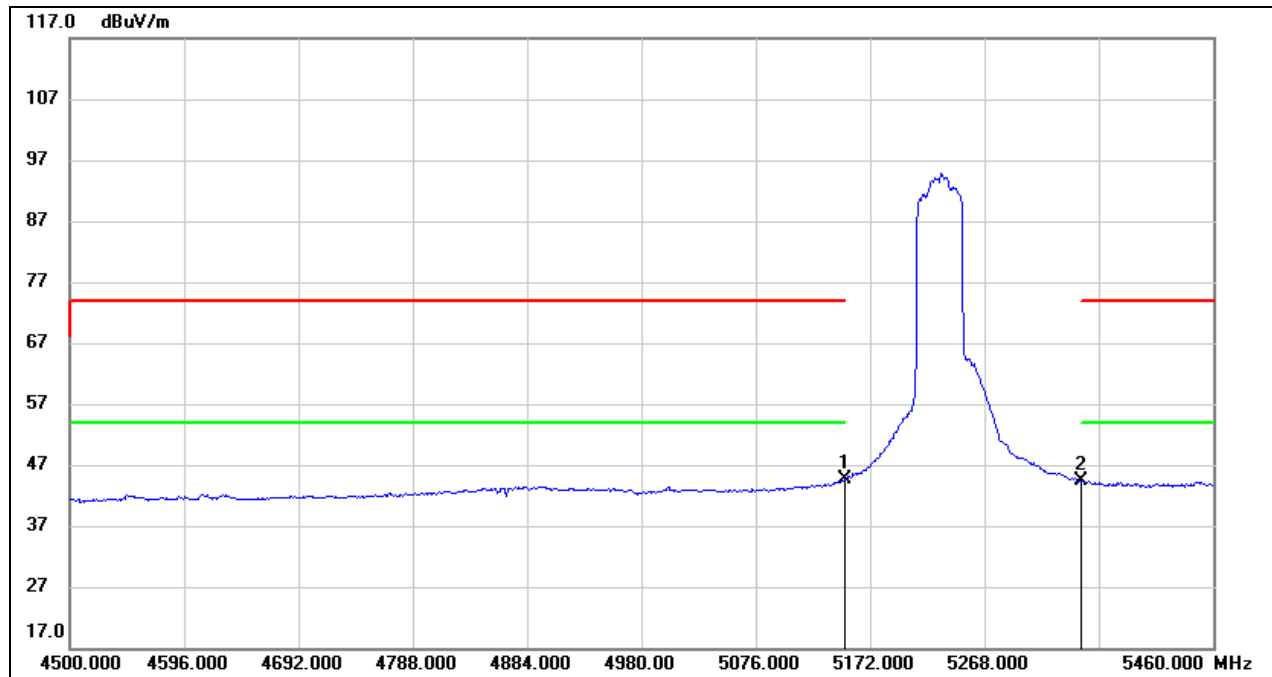
|            |                 |               |              |
|------------|-----------------|---------------|--------------|
| Test Mode: | 802.11n HT40 PK | Channel:      | 5230         |
| Polarity:  | Horizontal      | Test Voltage: | AC 120V_60Hz |



| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------|-----------------|----------------|-------------|--------|
| 1   | 5150.000        | 17.32          | 40.27          | 57.59           | 74.00          | -16.41      | peak   |
| 2   | 5350.000        | 15.98          | 40.49          | 56.47           | 74.00          | -17.53      | peak   |



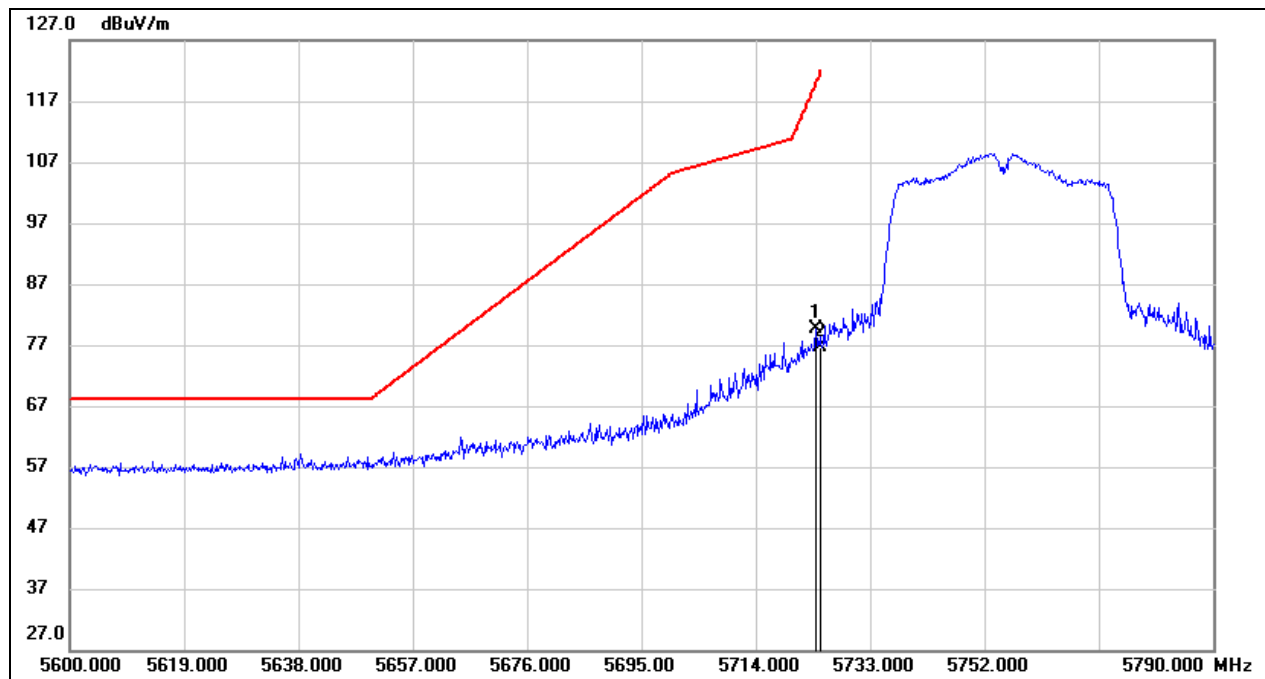
|            |                 |               |              |
|------------|-----------------|---------------|--------------|
| Test Mode: | 802.11n HT40 AV | Channel:      | 5230         |
| Polarity:  | Horizontal      | Test Voltage: | AC 120V_60Hz |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------|--------------------|-------------------|----------------|--------|
| 1   | 5150.000           | 4.41              | 40.27             | 44.68              | 54.00             | -9.32          | AVG    |
| 2   | 5350.000           | 3.84              | 40.49             | 44.33              | 54.00             | -9.67          | AVG    |



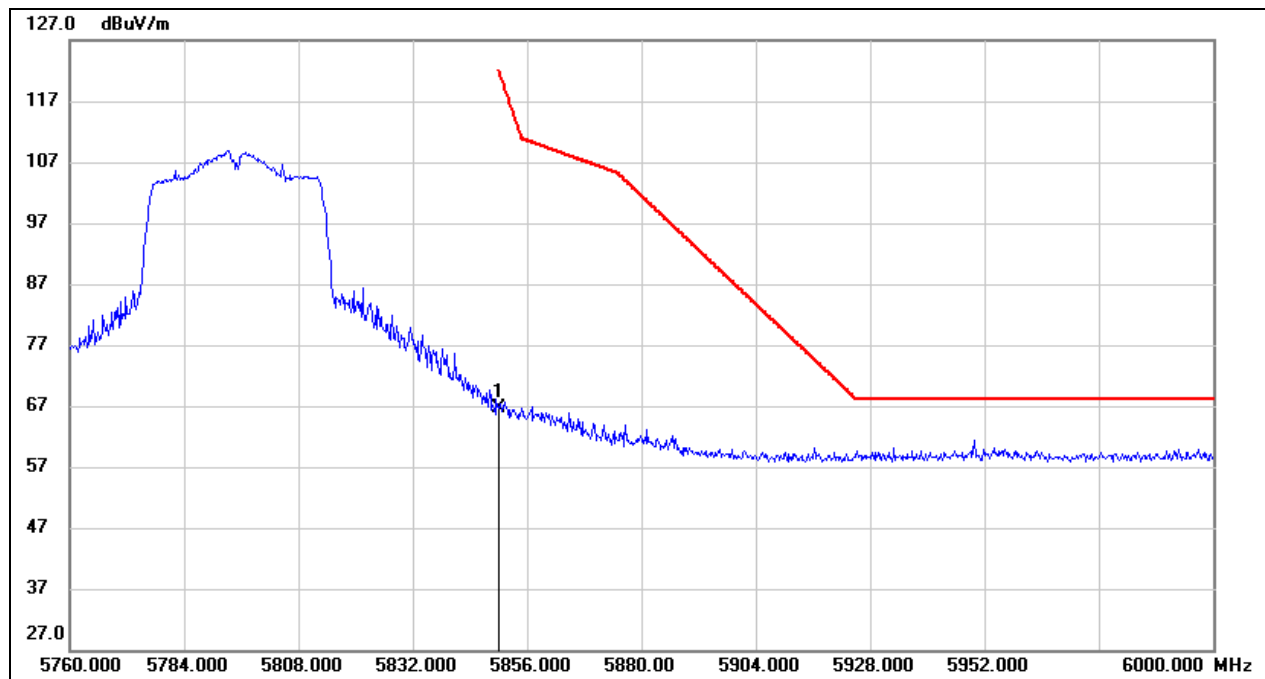
|            |                 |               |              |
|------------|-----------------|---------------|--------------|
| Test Mode: | 802.11n HT40 PK | Channel:      | 5230         |
| Polarity:  | Horizontal      | Test Voltage: | AC 120V_60Hz |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------|--------------------|-------------------|----------------|--------|
| 1   | 5723.880           | 38.45             | 41.26             | 79.71              | 119.65            | -39.94         | peak   |
| 2   | 5725.000           | 35.27             | 41.27             | 76.54              | 122.20            | -45.66         | peak   |



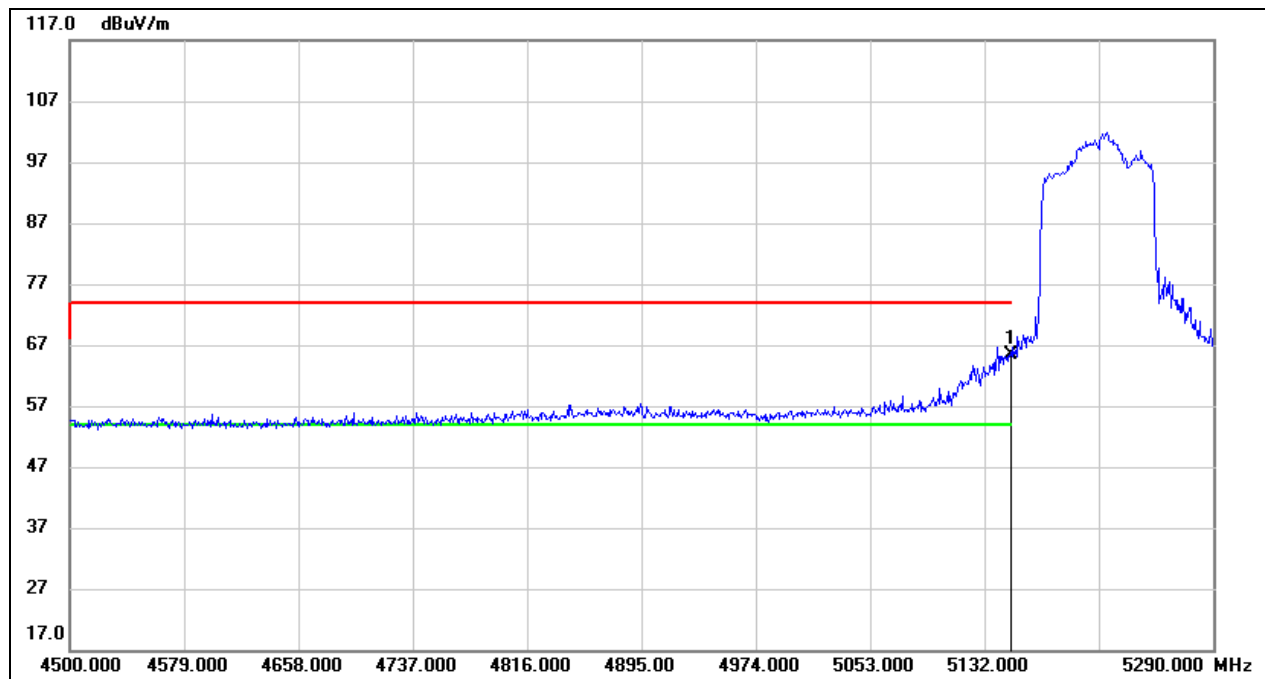
|            |                 |               |              |
|------------|-----------------|---------------|--------------|
| Test Mode: | 802.11n HT40 PK | Channel:      | 5795         |
| Polarity:  | Horizontal      | Test Voltage: | AC 120V_60Hz |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------|--------------------|-------------------|----------------|--------|
| 1   | 5850.000           | 25.08             | 41.60             | 66.68              | 122.20            | -55.52         | peak   |



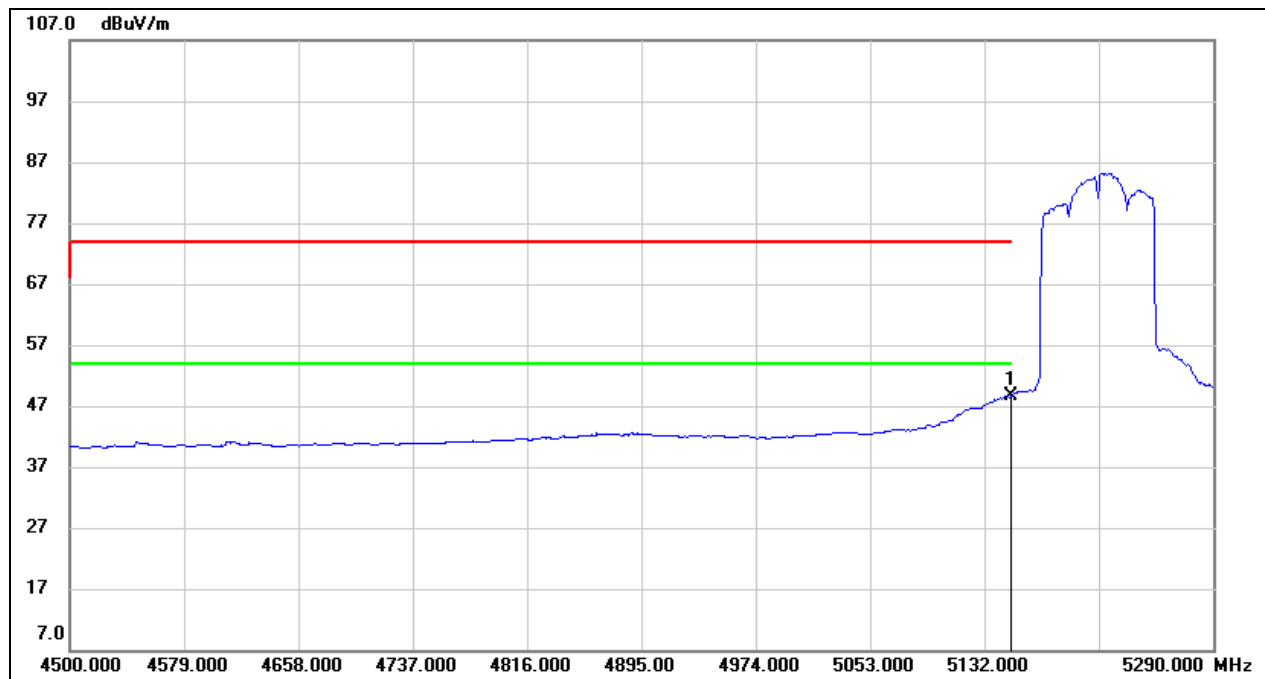
|            |                   |               |              |
|------------|-------------------|---------------|--------------|
| Test Mode: | 802.11ac VHT80 PK | Channel:      | 5210         |
| Polarity:  | Horizontal        | Test Voltage: | AC 120V_60Hz |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------|--------------------|-------------------|----------------|--------|
| 1   | 5150.000           | 25.20             | 40.27             | 65.47              | 74.00             | -8.53          | peak   |



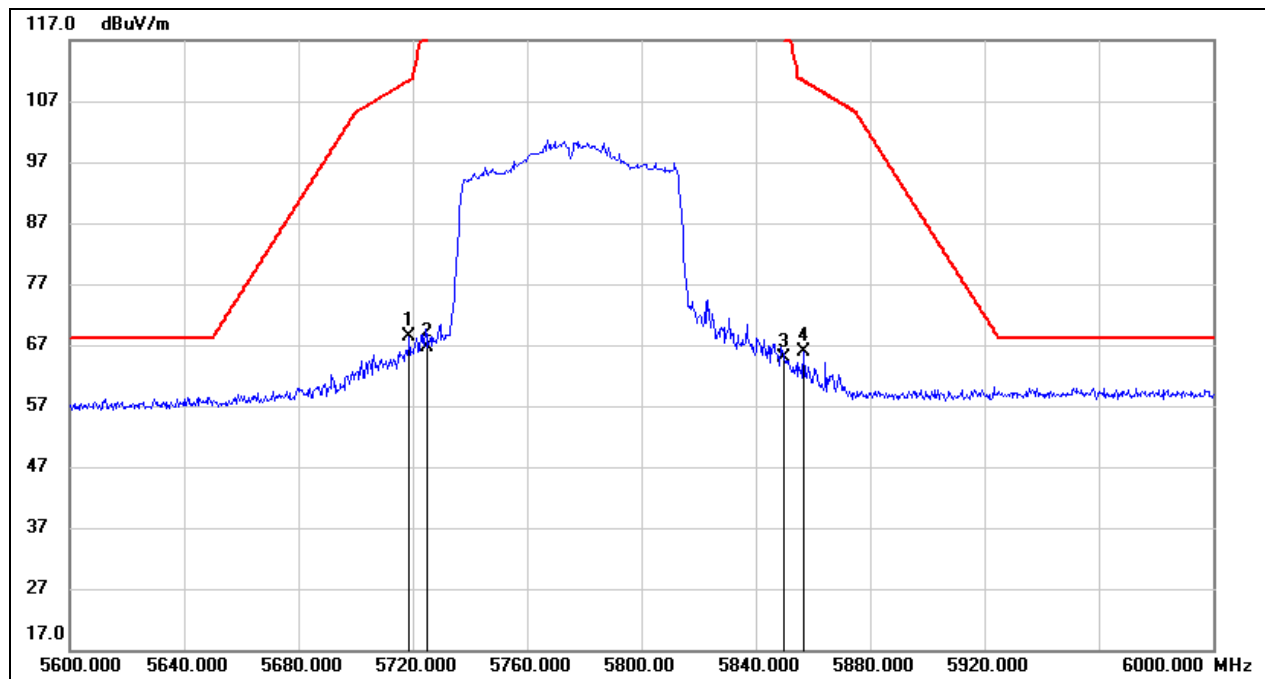
|            |                   |               |              |
|------------|-------------------|---------------|--------------|
| Test Mode: | 802.11ac VHT80 AV | Channel:      | 5210         |
| Polarity:  | Horizontal        | Test Voltage: | AC 120V_60Hz |



| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------|-----------------|----------------|-------------|--------|
| 1   | 5150.000        | 8.29           | 40.27          | 48.56           | 54.00          | -5.44       | AVG    |



|            |                   |               |              |
|------------|-------------------|---------------|--------------|
| Test Mode: | 802.11ac VHT80 PK | Channel:      | 5775         |
| Polarity:  | Horizontal        | Test Voltage: | AC 120V_60Hz |



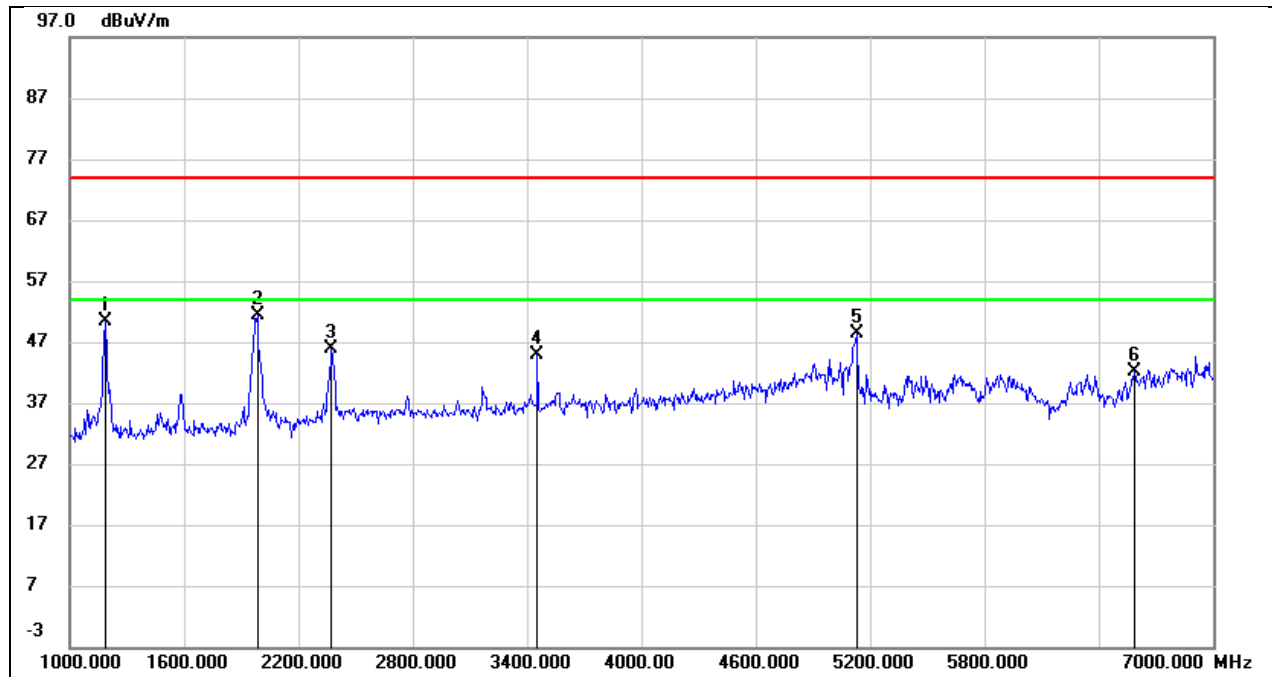
| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------|--------------------|-------------------|----------------|--------|
| 1   | 5718.800           | 27.12             | 41.25             | 68.37              | 110.46            | -42.09         | peak   |
| 2   | 5725.000           | 25.37             | 41.27             | 66.64              | 122.20            | -55.56         | peak   |
| 3   | 5850.000           | 23.28             | 41.60             | 64.88              | 122.20            | -57.32         | peak   |
| 4   | 5856.800           | 24.22             | 41.62             | 65.84              | 110.30            | -44.46         | peak   |





## 8.2. SPURIOUS EMISSIONS(1 GHZ~7 GHZ)

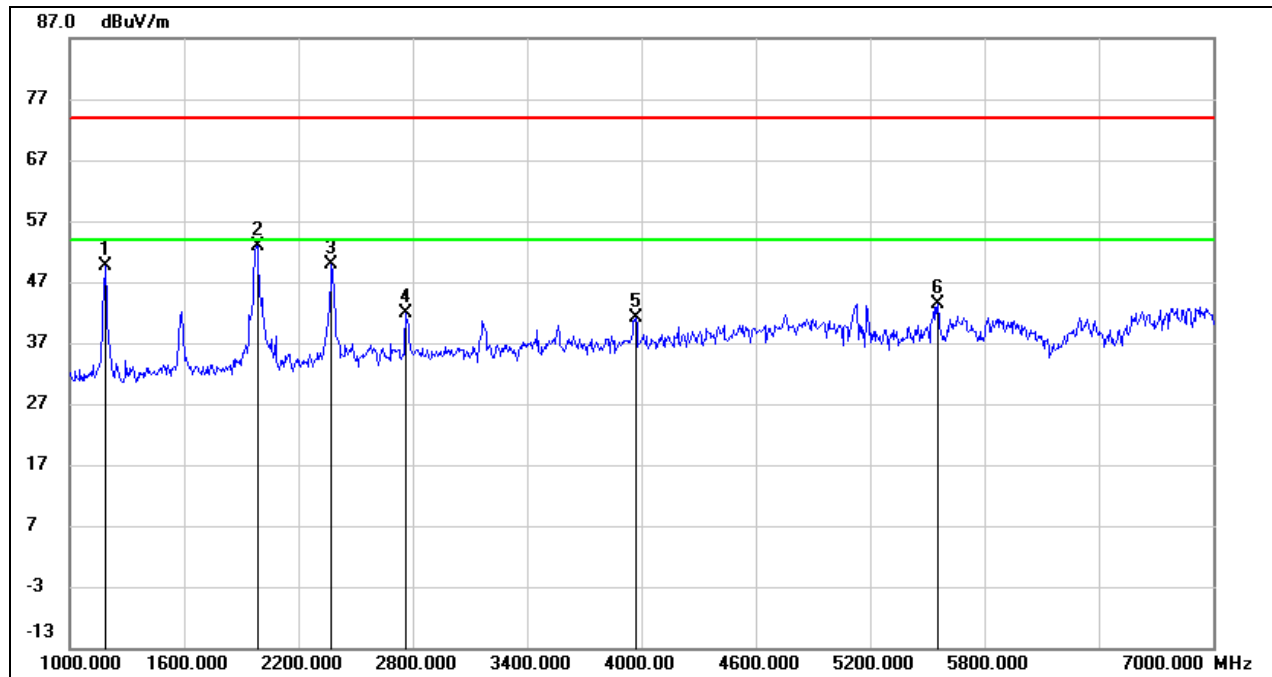
|            |            |               |              |
|------------|------------|---------------|--------------|
| Test Mode: | 802.11a 20 | Channel:      | 5180         |
| Polarity:  | Horizontal | Test Voltage: | AC 120V_60Hz |



| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------|-----------------|----------------|-------------|--------|
| 1   | 1186.000        | 63.41          | -13.11         | 50.30           | 74.00          | -23.70      | peak   |
| 2   | 1984.000        | 62.13          | -10.74         | 51.39           | 74.00          | -22.61      | peak   |
| 3   | 2374.000        | 54.41          | -8.62          | 45.79           | 74.00          | -28.21      | peak   |
| 4   | 3454.000        | 50.22          | -5.41          | 44.81           | 74.00          | -29.19      | peak   |
| 5   | 5128.000        | 47.82          | 0.50           | 48.32           | 74.00          | -25.68      | peak   |
| 6   | 6586.000        | 37.36          | 4.66           | 42.02           | 74.00          | -31.98      | peak   |



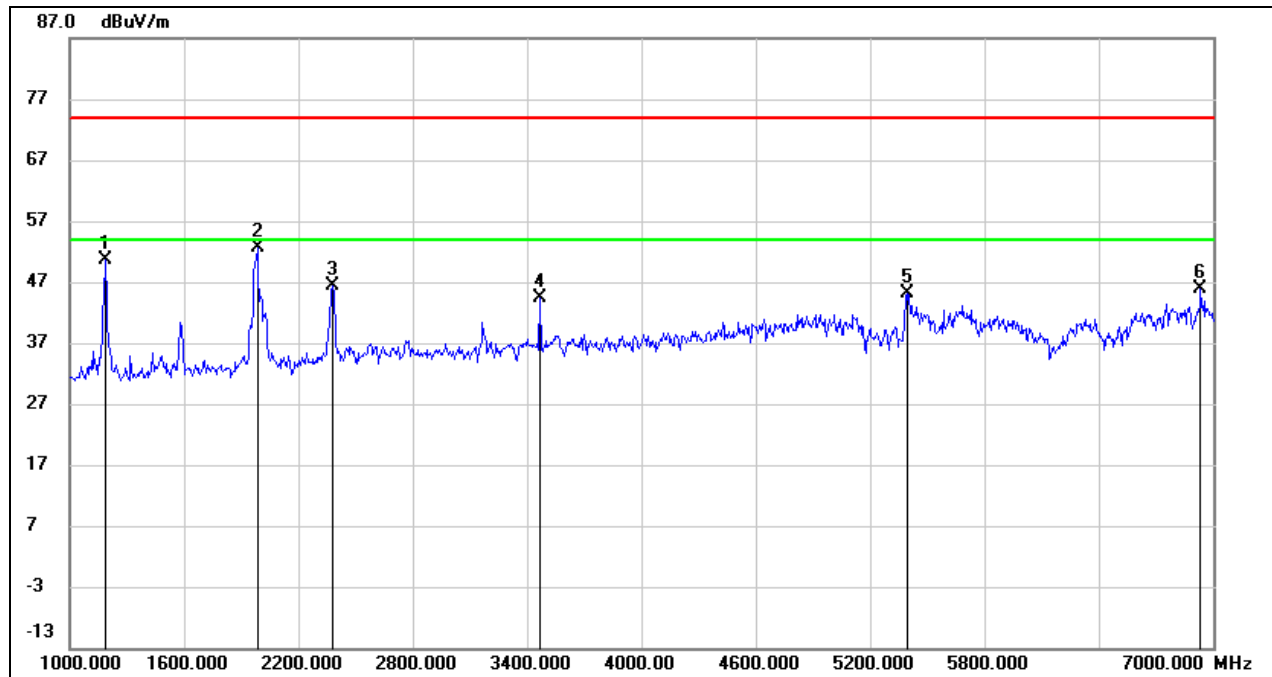
|            |            |               |              |
|------------|------------|---------------|--------------|
| Test Mode: | 802.11a 20 | Channel:      | 5180         |
| Polarity:  | Vertical   | Test Voltage: | AC 120V_60Hz |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------|--------------------|-------------------|----------------|--------|
| 1   | 1186.000           | 62.78             | -13.11            | 49.67              | 74.00             | -24.33         | peak   |
| 2   | 1984.000           | 63.56             | -10.74            | 52.82              | 74.00             | -21.18         | peak   |
| 3   | 2374.000           | 58.52             | -8.62             | 49.90              | 74.00             | -24.10         | peak   |
| 4   | 2764.000           | 49.09             | -7.21             | 41.88              | 74.00             | -32.12         | peak   |
| 5   | 3970.000           | 45.39             | -4.18             | 41.21              | 74.00             | -32.79         | peak   |
| 6   | 5554.000           | 42.36             | 0.97              | 43.33              | 74.00             | -30.67         | peak   |



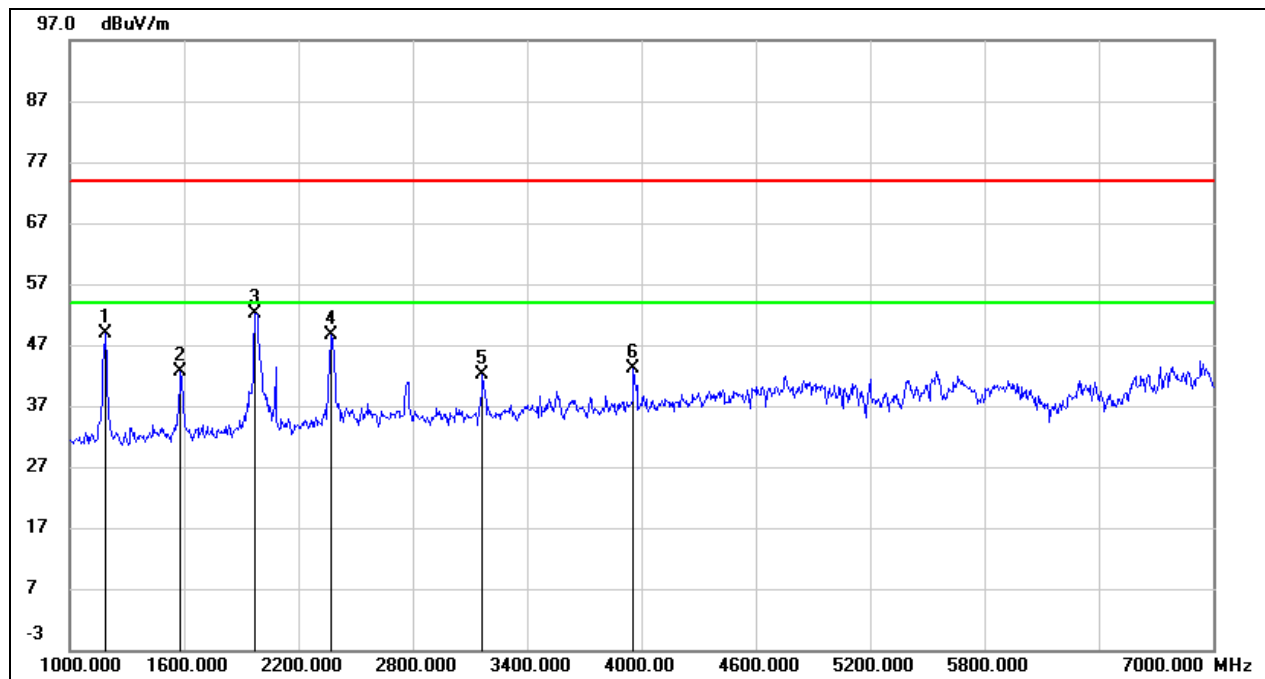
|            |            |               |              |
|------------|------------|---------------|--------------|
| Test Mode: | 802.11a 20 | Channel:      | 5200         |
| Polarity:  | Horizontal | Test Voltage: | AC 120V_60Hz |



| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------|-----------------|----------------|-------------|--------|
| 1   | 1186.000        | 63.74          | -13.11         | 50.63           | 74.00          | -23.37      | peak   |
| 2   | 1984.000        | 63.29          | -10.74         | 52.55           | 74.00          | -21.45      | peak   |
| 3   | 2380.000        | 55.02          | -8.58          | 46.44           | 74.00          | -27.56      | peak   |
| 4   | 3466.000        | 49.66          | -5.38          | 44.28           | 74.00          | -29.72      | peak   |
| 5   | 5392.000        | 44.49          | 0.71           | 45.20           | 74.00          | -28.80      | peak   |
| 6   | 6934.000        | 39.16          | 6.60           | 45.76           | 74.00          | -28.24      | peak   |



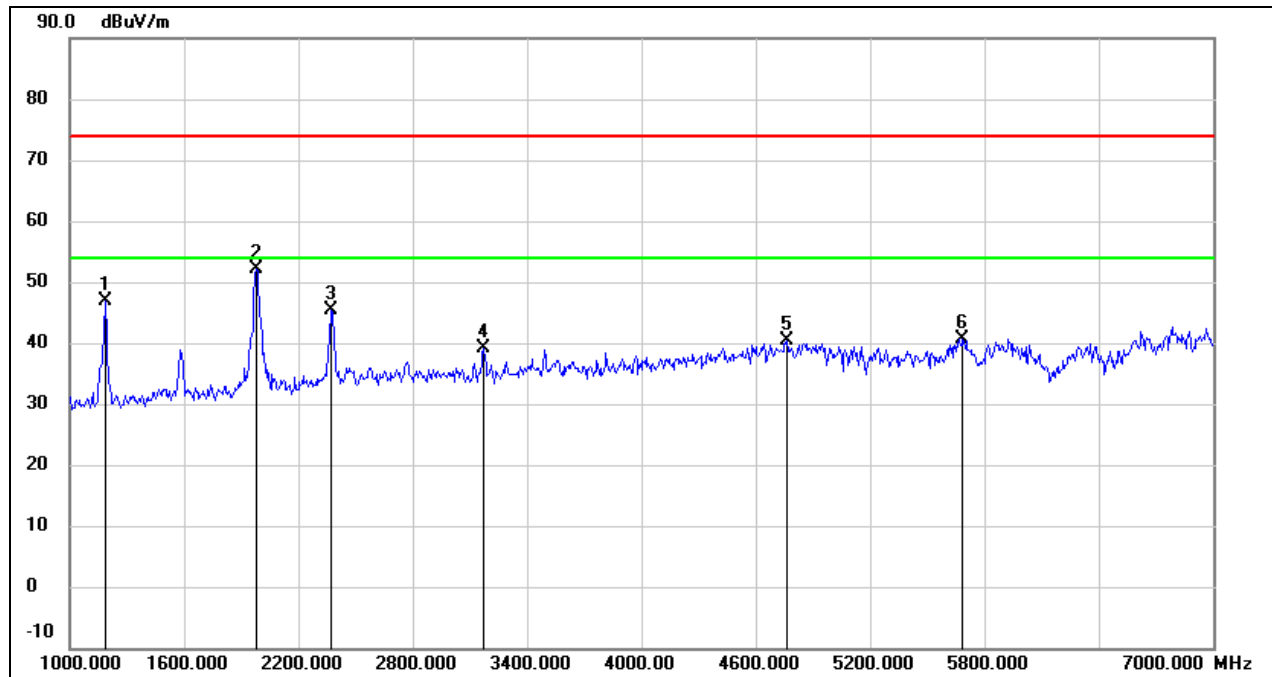
|            |            |               |              |
|------------|------------|---------------|--------------|
| Test Mode: | 802.11a 20 | Channel:      | 5200         |
| Polarity:  | Vertical   | Test Voltage: | AC 120V_60Hz |



| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------|-----------------|----------------|-------------|--------|
| 1   | 1186.000        | 62.09          | -13.11         | 48.98           | 74.00          | -25.02      | peak   |
| 2   | 1582.000        | 54.47          | -11.77         | 42.70           | 74.00          | -31.30      | peak   |
| 3   | 1972.000        | 63.01          | -10.77         | 52.24           | 74.00          | -21.76      | peak   |
| 4   | 2374.000        | 57.22          | -8.62          | 48.60           | 74.00          | -25.40      | peak   |
| 5   | 3166.000        | 48.35          | -6.15          | 42.20           | 74.00          | -31.80      | peak   |
| 6   | 3958.000        | 47.36          | -4.21          | 43.15           | 74.00          | -30.85      | peak   |



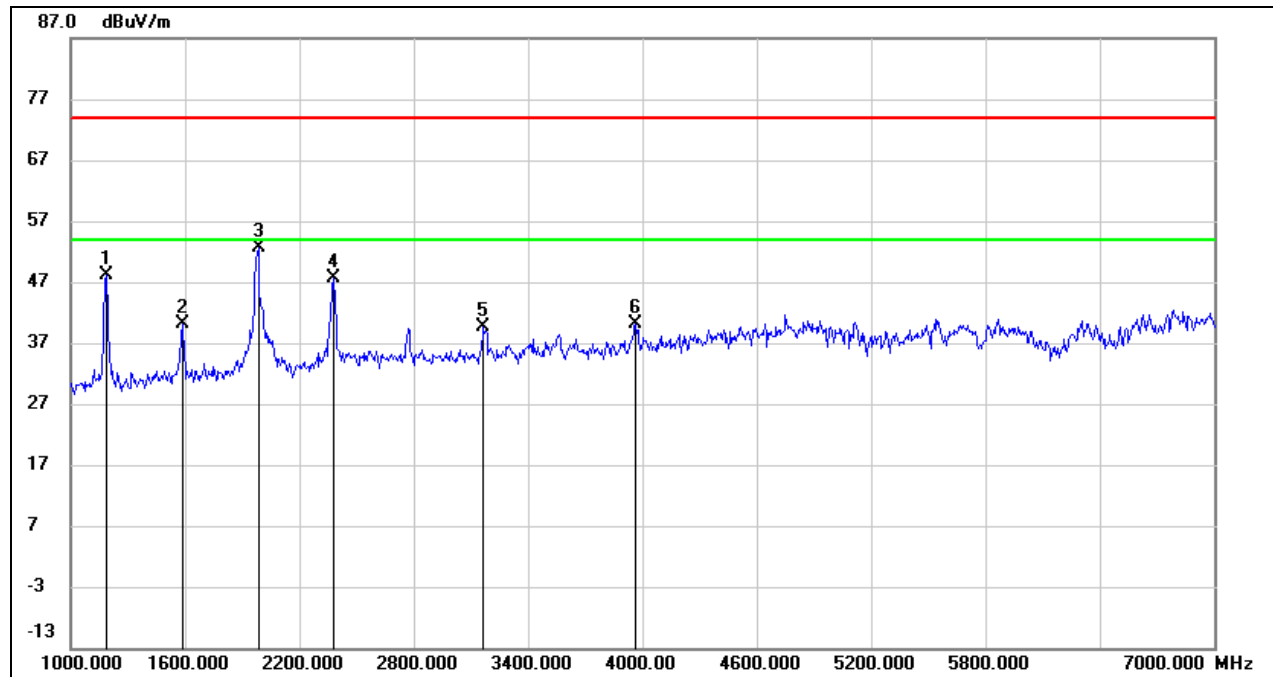
|            |            |               |              |
|------------|------------|---------------|--------------|
| Test Mode: | 802.11a 20 | Channel:      | 5240         |
| Polarity:  | Horizontal | Test Voltage: | AC 120V_60Hz |



| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------|-----------------|----------------|-------------|--------|
| 1   | 1186.000        | 61.10          | -14.17         | 46.93           | 74.00          | -27.07      | peak   |
| 2   | 1978.000        | 63.25          | -11.13         | 52.12           | 74.00          | -21.88      | peak   |
| 3   | 2368.000        | 54.55          | -9.16          | 45.39           | 74.00          | -28.61      | peak   |
| 4   | 3172.000        | 45.80          | -6.59          | 39.21           | 74.00          | -34.79      | peak   |
| 5   | 4762.000        | 41.42          | -1.10          | 40.32           | 74.00          | -33.68      | peak   |
| 6   | 5686.000        | 39.74          | 0.96           | 40.70           | 74.00          | -33.30      | peak   |



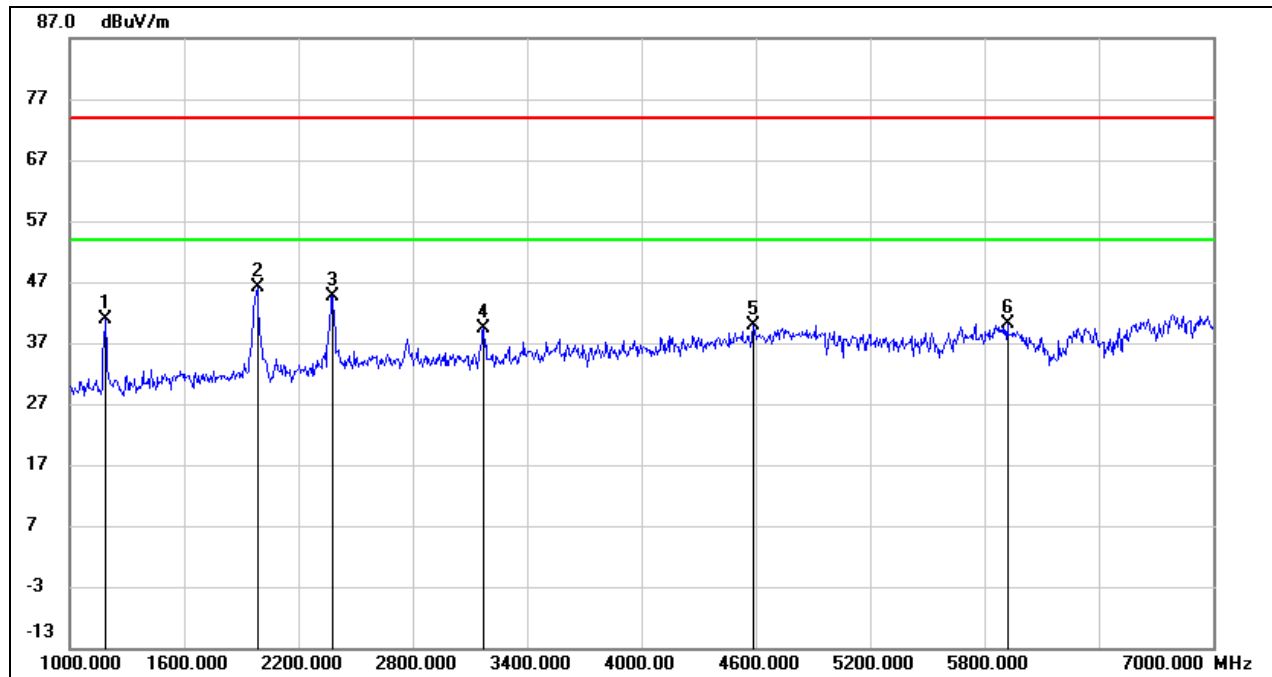
|            |            |               |              |
|------------|------------|---------------|--------------|
| Test Mode: | 802.11a 20 | Channel:      | 5240         |
| Polarity:  | Vertical   | Test Voltage: | AC 120V_60Hz |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------|--------------------|-------------------|----------------|--------|
| 1   | 1186.000           | 62.41             | -14.17            | 48.24              | 74.00             | -25.76         | peak   |
| 2   | 1588.000           | 52.43             | -12.42            | 40.01              | 74.00             | -33.99         | peak   |
| 3   | 1984.000           | 63.73             | -11.11            | 52.62              | 74.00             | -21.38         | peak   |
| 4   | 2380.000           | 56.69             | -9.10             | 47.59              | 74.00             | -26.41         | peak   |
| 5   | 3166.000           | 46.11             | -6.60             | 39.51              | 74.00             | -34.49         | peak   |
| 6   | 3964.000           | 44.63             | -4.58             | 40.05              | 74.00             | -33.95         | peak   |



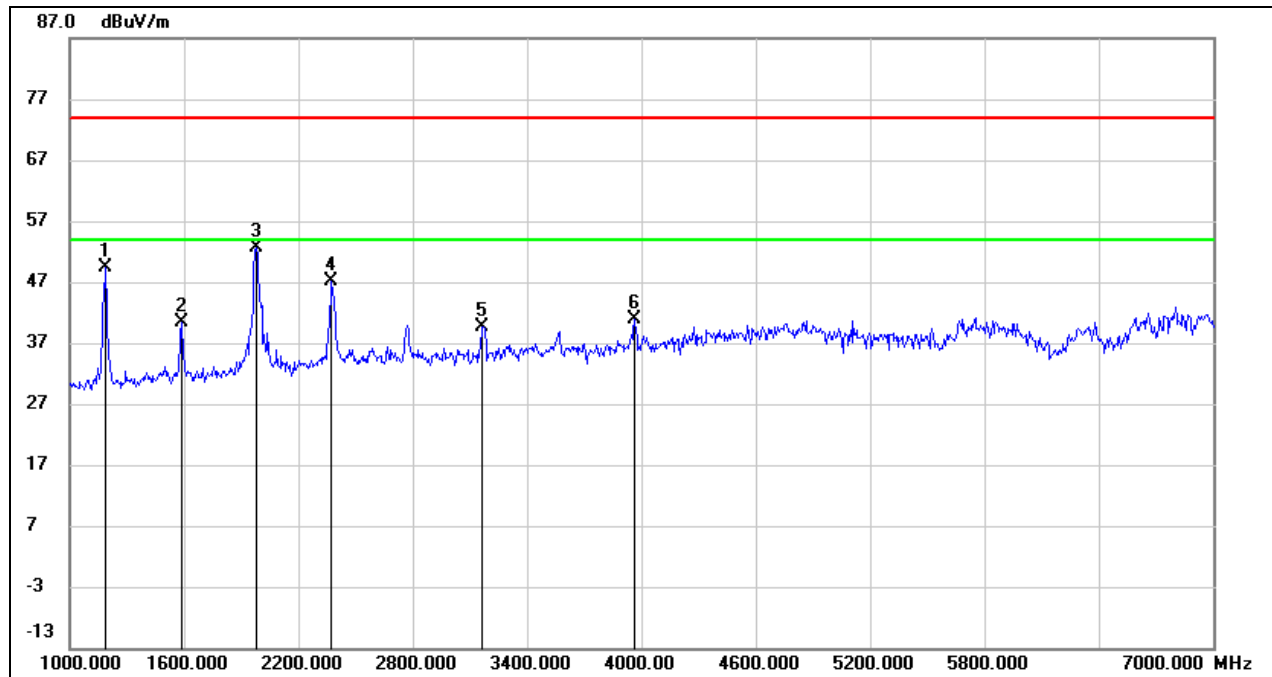
|            |            |               |              |
|------------|------------|---------------|--------------|
| Test Mode: | 802.11a 20 | Channel:      | 5745         |
| Polarity:  | Horizontal | Test Voltage: | AC 120V_60Hz |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------|--------------------|-------------------|----------------|--------|
| 1   | 1186.000           | 55.09             | -14.17            | 40.92              | 74.00             | -33.08         | peak   |
| 2   | 1984.000           | 57.29             | -11.11            | 46.18              | 74.00             | -27.82         | peak   |
| 3   | 2380.000           | 53.81             | -9.10             | 44.71              | 74.00             | -29.29         | peak   |
| 4   | 3172.000           | 46.00             | -6.59             | 39.41              | 74.00             | -34.59         | peak   |
| 5   | 4588.000           | 41.69             | -1.79             | 39.90              | 74.00             | -34.10         | peak   |
| 6   | 5920.000           | 38.62             | 1.62              | 40.24              | 74.00             | -33.76         | peak   |



|            |            |               |              |
|------------|------------|---------------|--------------|
| Test Mode: | 802.11a 20 | Channel:      | 5745         |
| Polarity:  | Vertical   | Test Voltage: | AC 120V_60Hz |

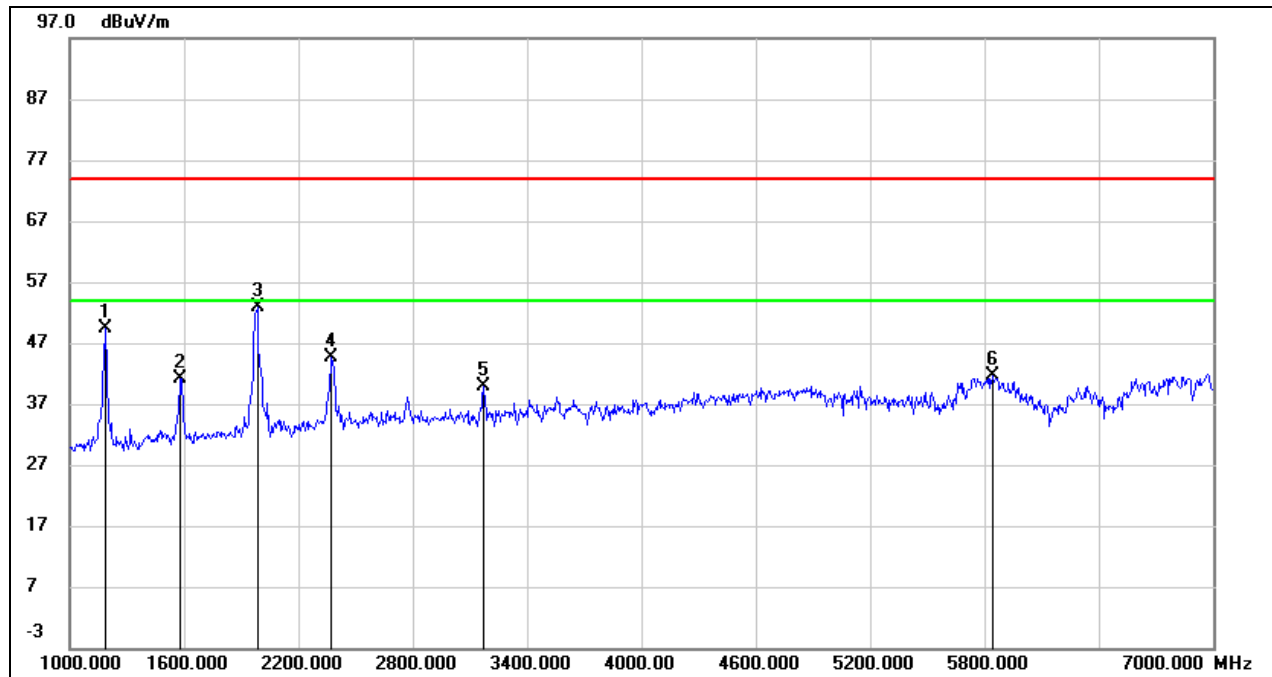


| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------|-----------------|----------------|-------------|--------|
| 1   | 1186.000        | 63.66          | -14.17         | 49.49           | 74.00          | -24.51      | peak   |
| 2   | 1588.000        | 52.80          | -12.42         | 40.38           | 74.00          | -33.62      | peak   |
| 3   | 1978.000        | 63.80          | -11.13         | 52.67           | 74.00          | -21.33      | peak   |
| 4   | 2374.000        | 56.34          | -9.14          | 47.20           | 74.00          | -26.80      | peak   |
| 5   | 3166.000        | 46.34          | -6.60          | 39.74           | 74.00          | -34.26      | peak   |
| 6   | 3964.000        | 45.58          | -4.58          | 41.00           | 74.00          | -33.00      | peak   |





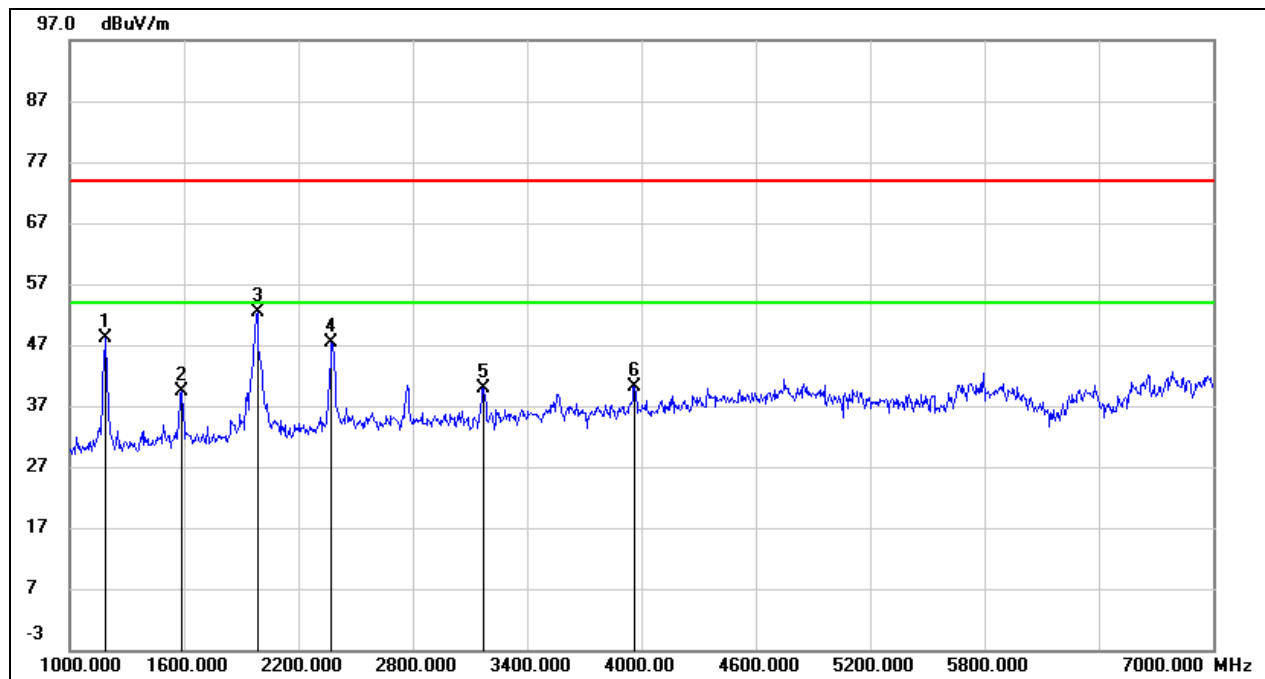
|            |            |               |              |
|------------|------------|---------------|--------------|
| Test Mode: | 802.11a 20 | Channel:      | 5785         |
| Polarity:  | Horizontal | Test Voltage: | AC 120V_60Hz |



| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------|-----------------|----------------|-------------|--------|
| 1   | 1186.000        | 63.47          | -14.17         | 49.30           | 74.00          | -24.70      | peak   |
| 2   | 1576.000        | 53.69          | -12.46         | 41.23           | 74.00          | -32.77      | peak   |
| 3   | 1984.000        | 63.98          | -11.11         | 52.87           | 74.00          | -21.13      | peak   |
| 4   | 2374.000        | 53.88          | -9.14          | 44.74           | 74.00          | -29.26      | peak   |
| 5   | 3172.000        | 46.40          | -6.59          | 39.81           | 74.00          | -34.19      | peak   |
| 6   | 5842.000        | 40.19          | 1.39           | 41.58           | 74.00          | -32.42      | peak   |



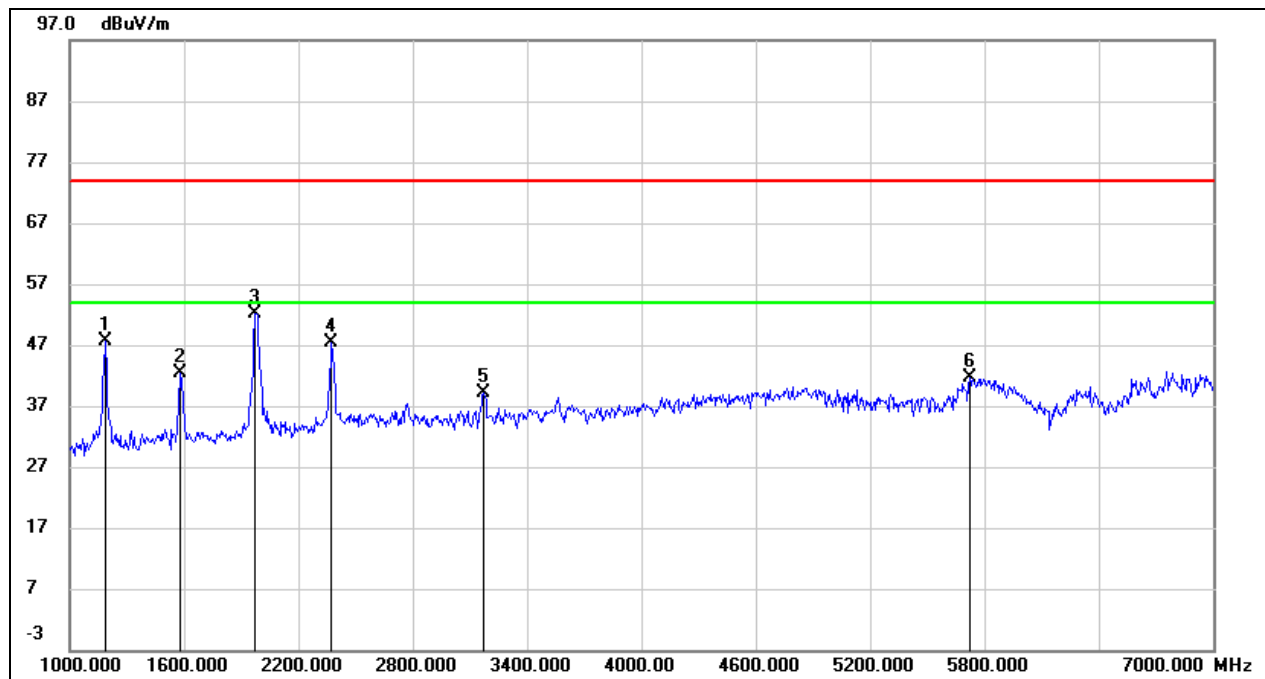
|            |            |               |              |
|------------|------------|---------------|--------------|
| Test Mode: | 802.11a 20 | Channel:      | 5785         |
| Polarity:  | Vertical   | Test Voltage: | AC 120V_60Hz |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------|--------------------|-------------------|----------------|--------|
| 1   | 1186.000           | 62.25             | -14.17            | 48.08              | 74.00             | -25.92         | peak   |
| 2   | 1588.000           | 51.87             | -12.42            | 39.45              | 74.00             | -34.55         | peak   |
| 3   | 1984.000           | 63.53             | -11.11            | 52.42              | 74.00             | -21.58         | peak   |
| 4   | 2374.000           | 56.50             | -9.14             | 47.36              | 74.00             | -26.64         | peak   |
| 5   | 3172.000           | 46.56             | -6.59             | 39.97              | 74.00             | -34.03         | peak   |
| 6   | 3964.000           | 44.77             | -4.58             | 40.19              | 74.00             | -33.81         | peak   |



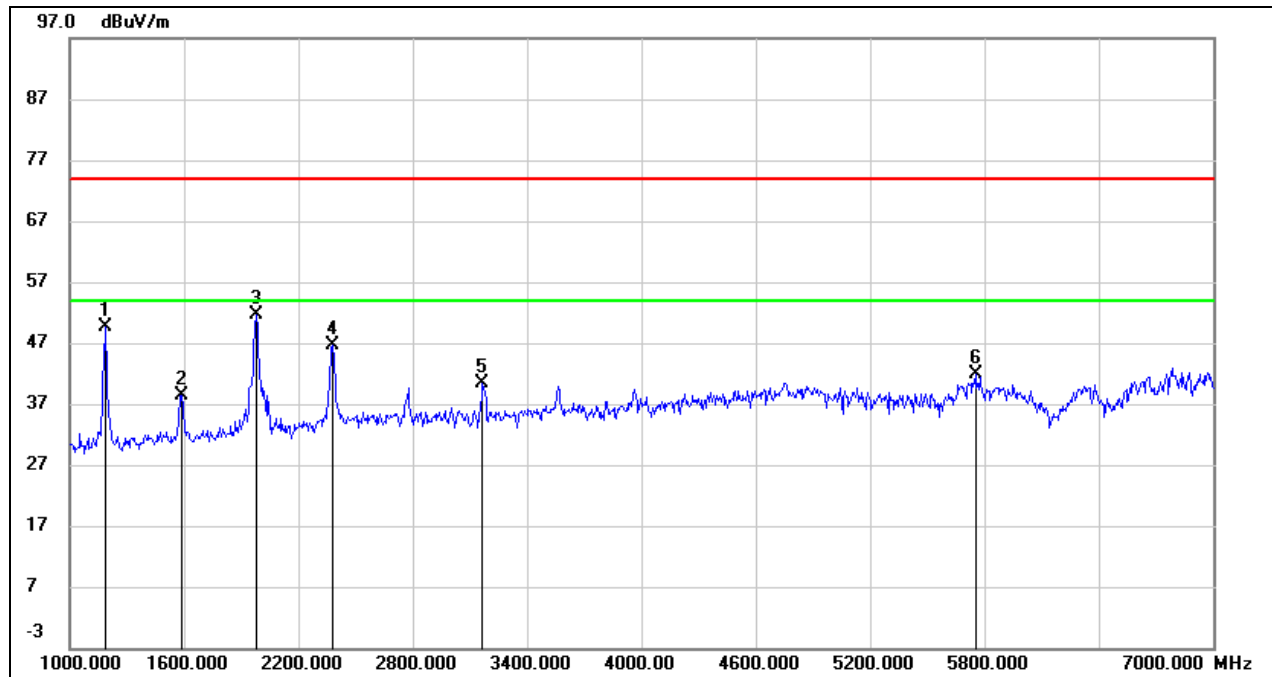
|            |            |               |              |
|------------|------------|---------------|--------------|
| Test Mode: | 802.11a 20 | Channel:      | 5825         |
| Polarity:  | Horizontal | Test Voltage: | AC 120V_60Hz |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------|--------------------|-------------------|----------------|--------|
| 1   | 1186.000           | 61.82             | -14.17            | 47.65              | 74.00             | -26.35         | peak   |
| 2   | 1576.000           | 54.94             | -12.46            | 42.48              | 74.00             | -31.52         | peak   |
| 3   | 1972.000           | 63.31             | -11.16            | 52.15              | 74.00             | -21.85         | peak   |
| 4   | 2374.000           | 56.54             | -9.14             | 47.40              | 74.00             | -26.60         | peak   |
| 5   | 3172.000           | 45.70             | -6.59             | 39.11              | 74.00             | -34.89         | peak   |
| 6   | 5722.000           | 40.49             | 1.05              | 41.54              | 74.00             | -32.46         | peak   |



|            |            |               |              |
|------------|------------|---------------|--------------|
| Test Mode: | 802.11a 20 | Channel:      | 5825         |
| Polarity:  | Vertical   | Test Voltage: | AC 120V_60Hz |

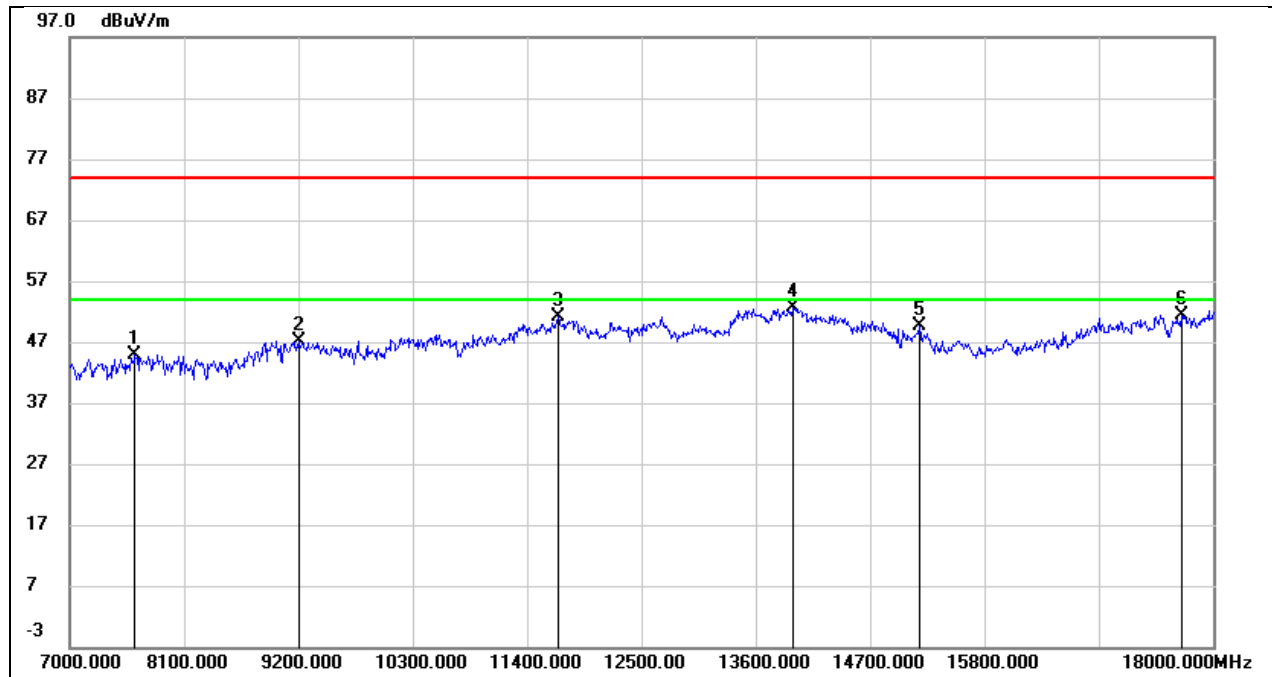


| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------|-----------------|----------------|-------------|--------|
| 1   | 1186.000        | 63.69          | -14.17         | 49.52           | 74.00          | -24.48      | peak   |
| 2   | 1588.000        | 50.90          | -12.42         | 38.48           | 74.00          | -35.52      | peak   |
| 3   | 1978.000        | 62.66          | -11.13         | 51.53           | 74.00          | -22.47      | peak   |
| 4   | 2380.000        | 55.62          | -9.10          | 46.52           | 74.00          | -27.48      | peak   |
| 5   | 3166.000        | 46.92          | -6.60          | 40.32           | 74.00          | -33.68      | peak   |
| 6   | 5752.000        | 40.74          | 1.14           | 41.88           | 74.00          | -32.12      | peak   |



### 8.3. SPURIOUS EMISSIONS(7 GHZ~18 GHZ)

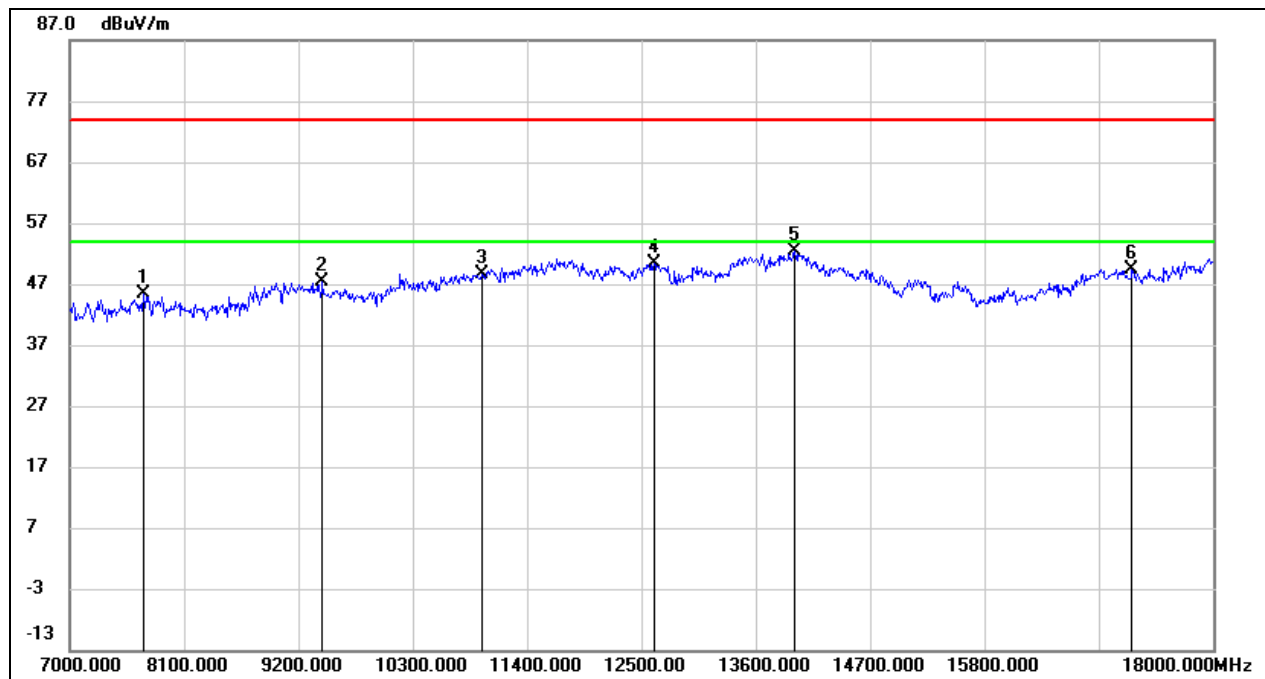
|            |            |               |              |
|------------|------------|---------------|--------------|
| Test Mode: | 802.11a 20 | Channel:      | 5180         |
| Polarity:  | Horizontal | Test Voltage: | AC 120V_60Hz |



| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------|-----------------|----------------|-------------|--------|
| 1   | 7627.000        | 38.18          | 6.76           | 44.94           | 74.00          | -29.06      | peak   |
| 2   | 9200.000        | 36.67          | 10.46          | 47.13           | 74.00          | -26.87      | peak   |
| 3   | 11697.000       | 34.11          | 17.13          | 51.24           | 74.00          | -22.76      | peak   |
| 4   | 13963.000       | 30.96          | 21.78          | 52.74           | 74.00          | -21.26      | peak   |
| 5   | 15173.000       | 32.31          | 17.33          | 49.64           | 74.00          | -24.36      | peak   |
| 6   | 17692.000       | 27.27          | 24.01          | 51.28           | 74.00          | -22.72      | peak   |



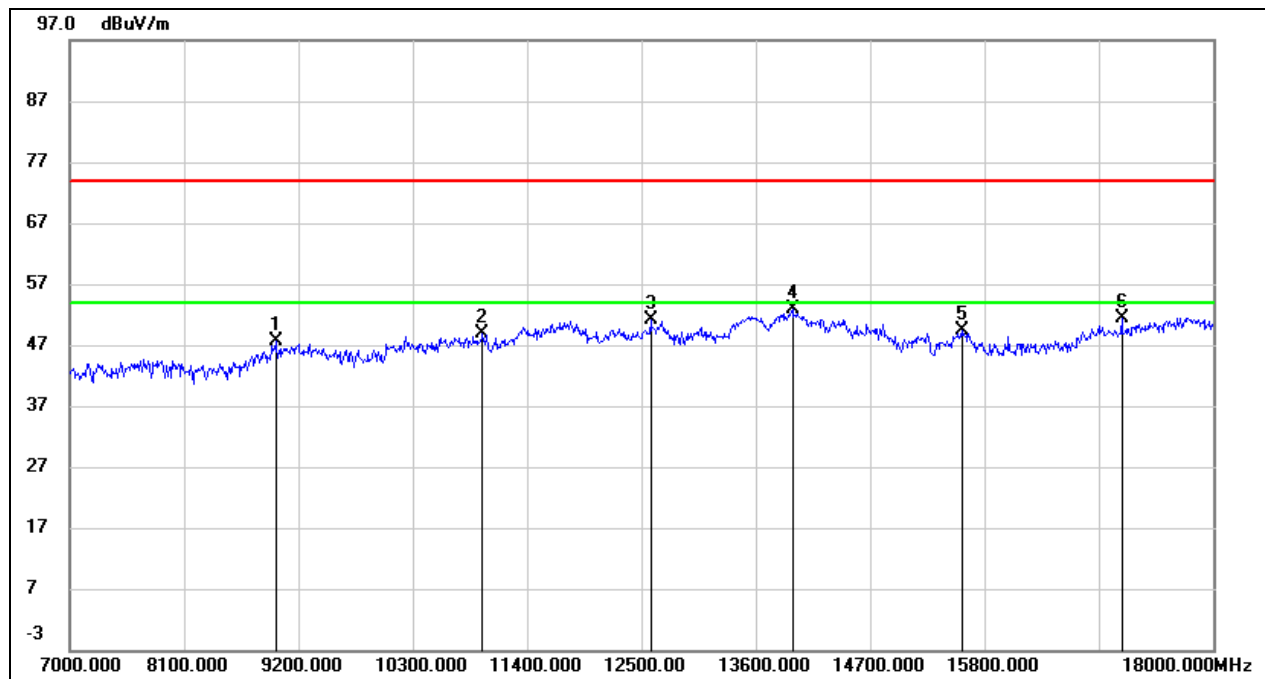
|            |            |               |              |
|------------|------------|---------------|--------------|
| Test Mode: | 802.11a 20 | Channel:      | 5180         |
| Polarity:  | Vertical   | Test Voltage: | AC 120V_60Hz |



| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------|-----------------|----------------|-------------|--------|
| 1   | 7715.000        | 38.59          | 6.68           | 45.27           | 74.00          | -28.73      | peak   |
| 2   | 9431.000        | 36.82          | 10.61          | 47.43           | 74.00          | -26.57      | peak   |
| 3   | 10960.000       | 34.17          | 14.57          | 48.74           | 74.00          | -25.26      | peak   |
| 4   | 12621.000       | 32.38          | 17.98          | 50.36           | 74.00          | -23.64      | peak   |
| 5   | 13974.000       | 30.66          | 21.82          | 52.48           | 74.00          | -21.52      | peak   |
| 6   | 17219.000       | 27.88          | 21.52          | 49.40           | 74.00          | -24.60      | peak   |



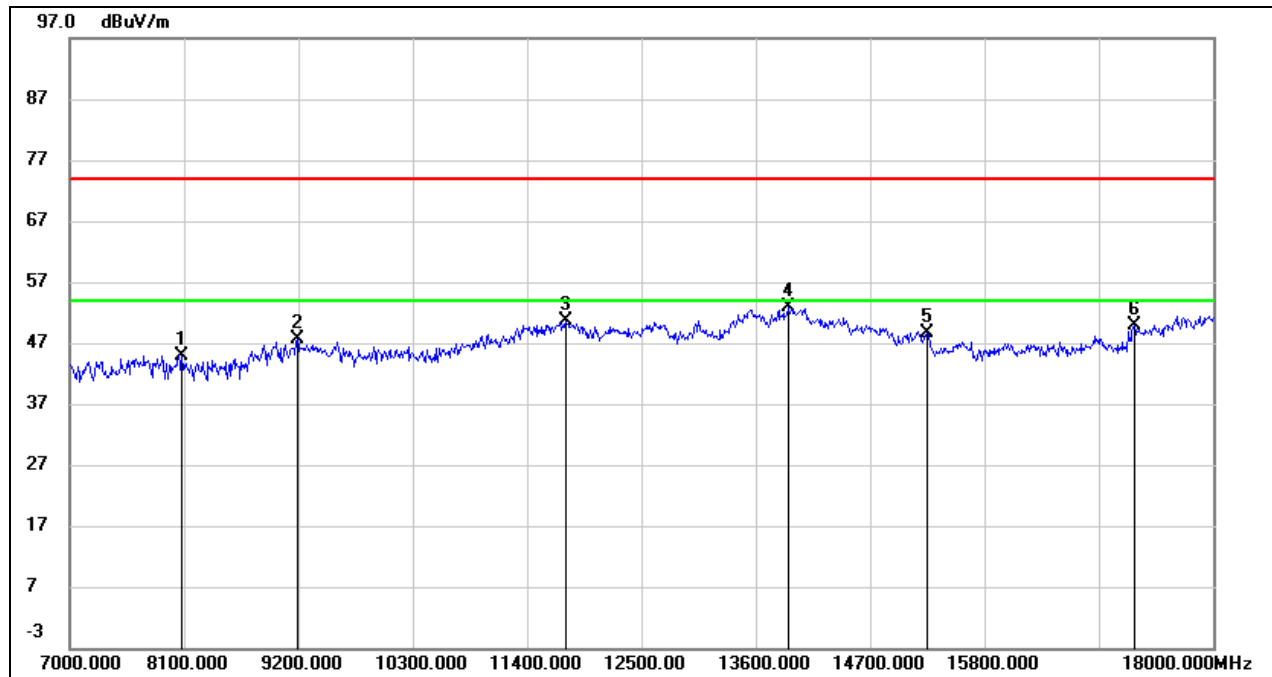
|            |            |               |              |
|------------|------------|---------------|--------------|
| Test Mode: | 802.11a 20 | Channel:      | 5200         |
| Polarity:  | Horizontal | Test Voltage: | AC 120V_60Hz |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------|--------------------|-------------------|----------------|--------|
| 1   | 8980.000           | 37.41             | 10.21             | 47.62              | 74.00             | -26.38         | peak   |
| 2   | 10971.000          | 34.23             | 14.61             | 48.84              | 74.00             | -25.16         | peak   |
| 3   | 12588.000          | 33.10             | 17.94             | 51.04              | 74.00             | -22.96         | peak   |
| 4   | 13952.000          | 31.23             | 21.76             | 52.99              | 74.00             | -21.01         | peak   |
| 5   | 15580.000          | 32.59             | 16.75             | 49.34              | 74.00             | -24.66         | peak   |
| 6   | 17120.000          | 30.26             | 21.12             | 51.38              | 74.00             | -22.62         | peak   |



|            |            |               |              |
|------------|------------|---------------|--------------|
| Test Mode: | 802.11a 20 | Channel:      | 5200         |
| Polarity:  | Vertical   | Test Voltage: | AC 120V_60Hz |

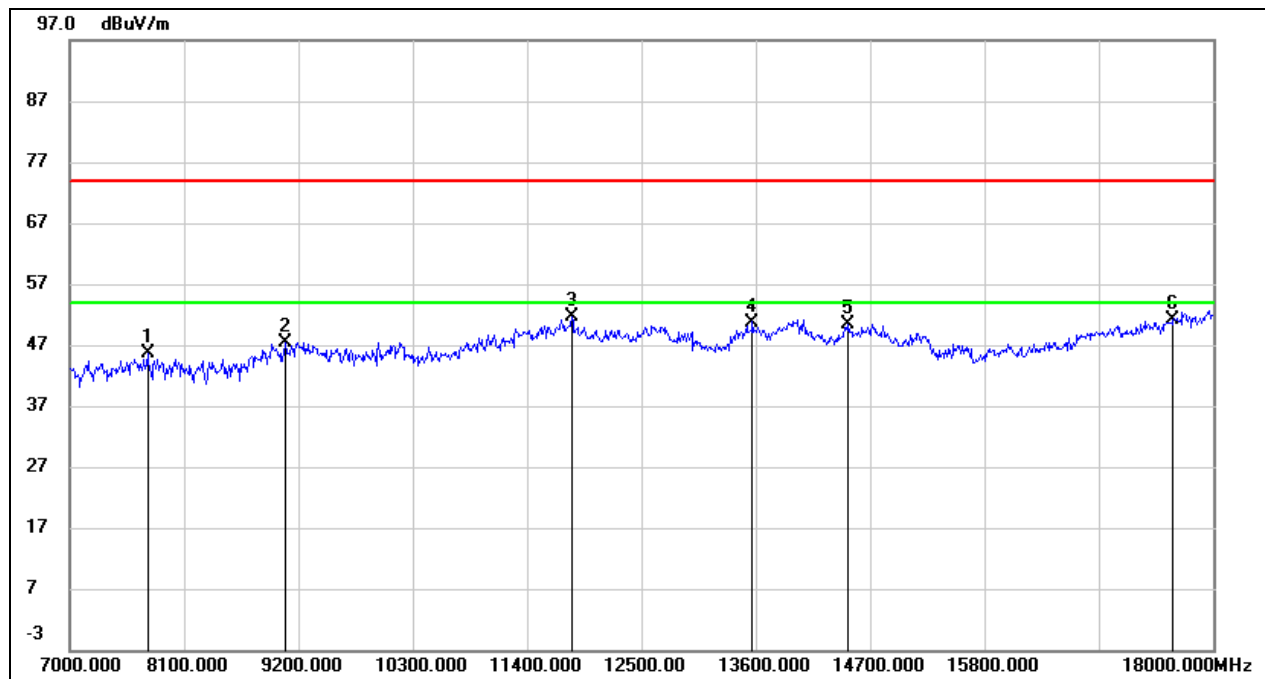


| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------|--------------------|-------------------|----------------|--------|
| 1   | 8078.000           | 38.40             | 6.51              | 44.91              | 74.00             | -29.09         | peak   |
| 2   | 9189.000           | 37.27             | 10.46             | 47.73              | 74.00             | -26.27         | peak   |
| 3   | 11774.000          | 33.25             | 17.28             | 50.53              | 74.00             | -23.47         | peak   |
| 4   | 13908.000          | 31.10             | 21.66             | 52.76              | 74.00             | -21.24         | peak   |
| 5   | 15250.000          | 31.48             | 17.19             | 48.67              | 74.00             | -25.33         | peak   |
| 6   | 17241.000          | 28.34             | 21.62             | 49.96              | 74.00             | -24.04         | peak   |





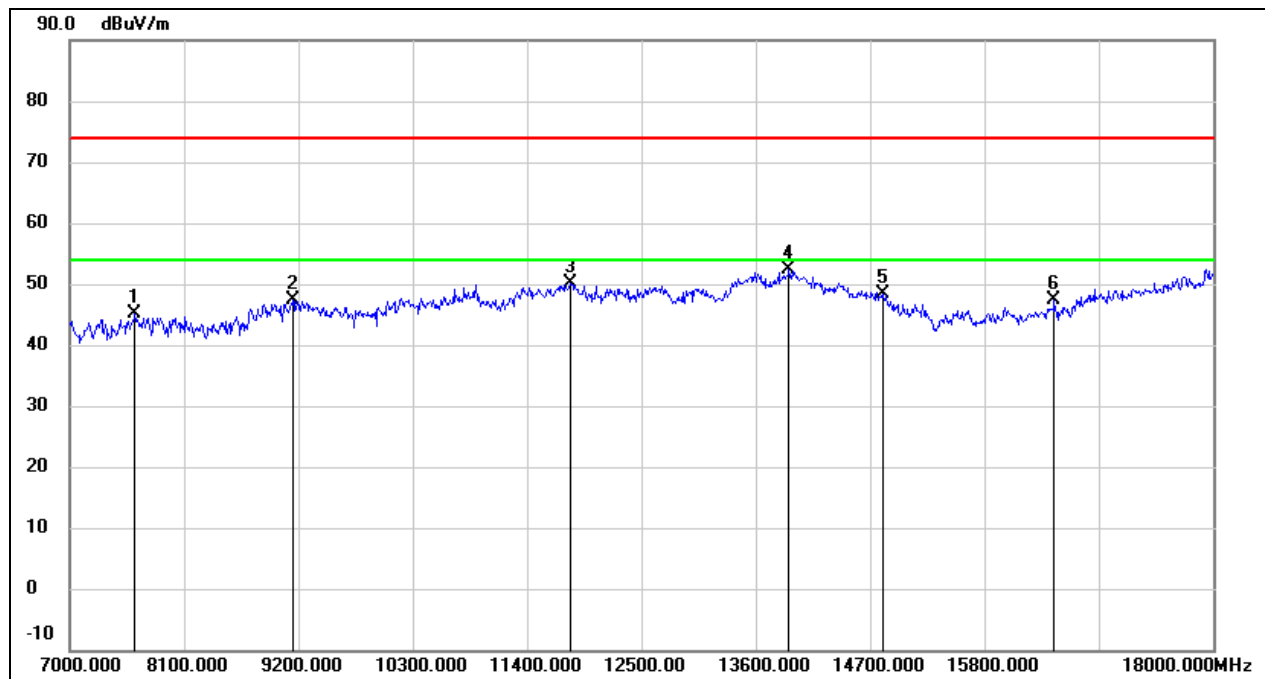
|            |            |               |              |
|------------|------------|---------------|--------------|
| Test Mode: | 802.11a 20 | Channel:      | 5240         |
| Polarity:  | Horizontal | Test Voltage: | AC 120V_60Hz |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------|--------------------|-------------------|----------------|--------|
| 1   | 7748.000           | 39.07             | 6.66              | 45.73              | 74.00             | -28.27         | peak   |
| 2   | 9079.000           | 37.10             | 10.39             | 47.49              | 74.00             | -26.51         | peak   |
| 3   | 11829.000          | 34.18             | 17.38             | 51.56              | 74.00             | -22.44         | peak   |
| 4   | 13567.000          | 29.95             | 20.80             | 50.75              | 74.00             | -23.25         | peak   |
| 5   | 14491.000          | 30.67             | 19.81             | 50.48              | 74.00             | -23.52         | peak   |
| 6   | 17615.000          | 27.60             | 23.49             | 51.09              | 74.00             | -22.91         | peak   |



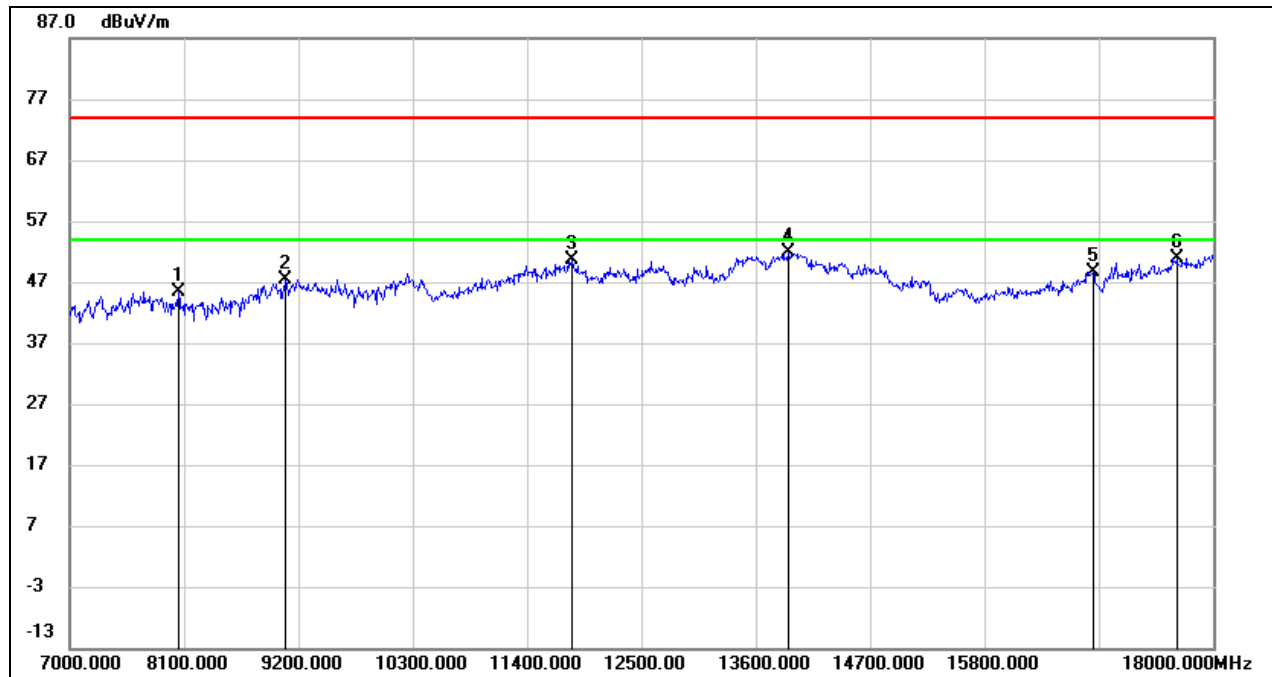
|            |            |               |              |
|------------|------------|---------------|--------------|
| Test Mode: | 802.11a 20 | Channel:      | 5240         |
| Polarity:  | Vertical   | Test Voltage: | AC 120V_60Hz |



| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------|-----------------|----------------|-------------|--------|
| 1   | 7627.000        | 38.47          | 6.76           | 45.23           | 74.00          | -28.77      | peak   |
| 2   | 9145.000        | 37.07          | 10.43          | 47.50           | 74.00          | -26.50      | peak   |
| 3   | 11818.000       | 32.86          | 17.36          | 50.22           | 74.00          | -23.78      | peak   |
| 4   | 13919.000       | 30.68          | 21.68          | 52.36           | 74.00          | -21.64      | peak   |
| 5   | 14821.000       | 30.05          | 18.42          | 48.47           | 74.00          | -25.53      | peak   |
| 6   | 16471.000       | 29.09          | 18.26          | 47.35           | 74.00          | -26.65      | peak   |



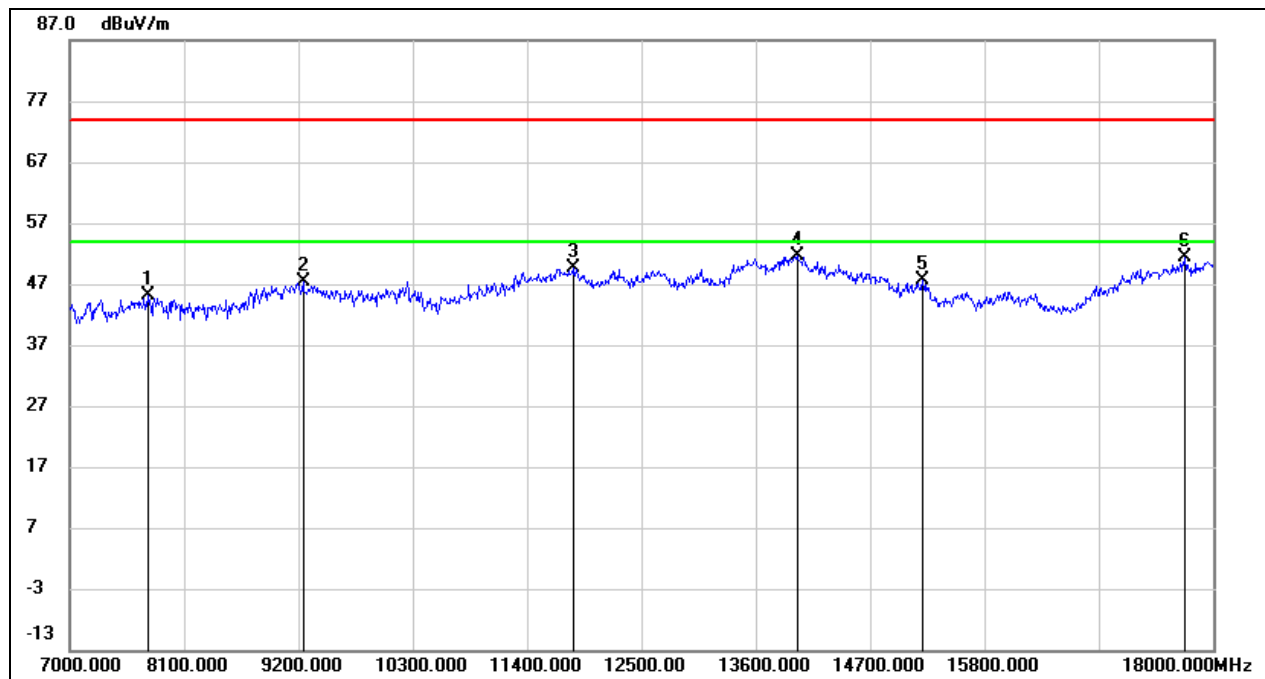
|            |            |               |              |
|------------|------------|---------------|--------------|
| Test Mode: | 802.11a 20 | Channel:      | 5745         |
| Polarity:  | Horizontal | Test Voltage: | AC 120V_60Hz |



| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------|-----------------|----------------|-------------|--------|
| 1   | 8045.000        | 38.91          | 6.47           | 45.38           | 74.00          | -28.62      | peak   |
| 2   | 9079.000        | 36.96          | 10.39          | 47.35           | 74.00          | -26.65      | peak   |
| 3   | 11829.000       | 33.20          | 17.38          | 50.58           | 74.00          | -23.42      | peak   |
| 4   | 13919.000       | 30.09          | 21.68          | 51.77           | 74.00          | -22.23      | peak   |
| 5   | 16845.000       | 28.81          | 19.90          | 48.71           | 74.00          | -25.29      | peak   |
| 6   | 17648.000       | 27.19          | 23.72          | 50.91           | 74.00          | -23.09      | peak   |



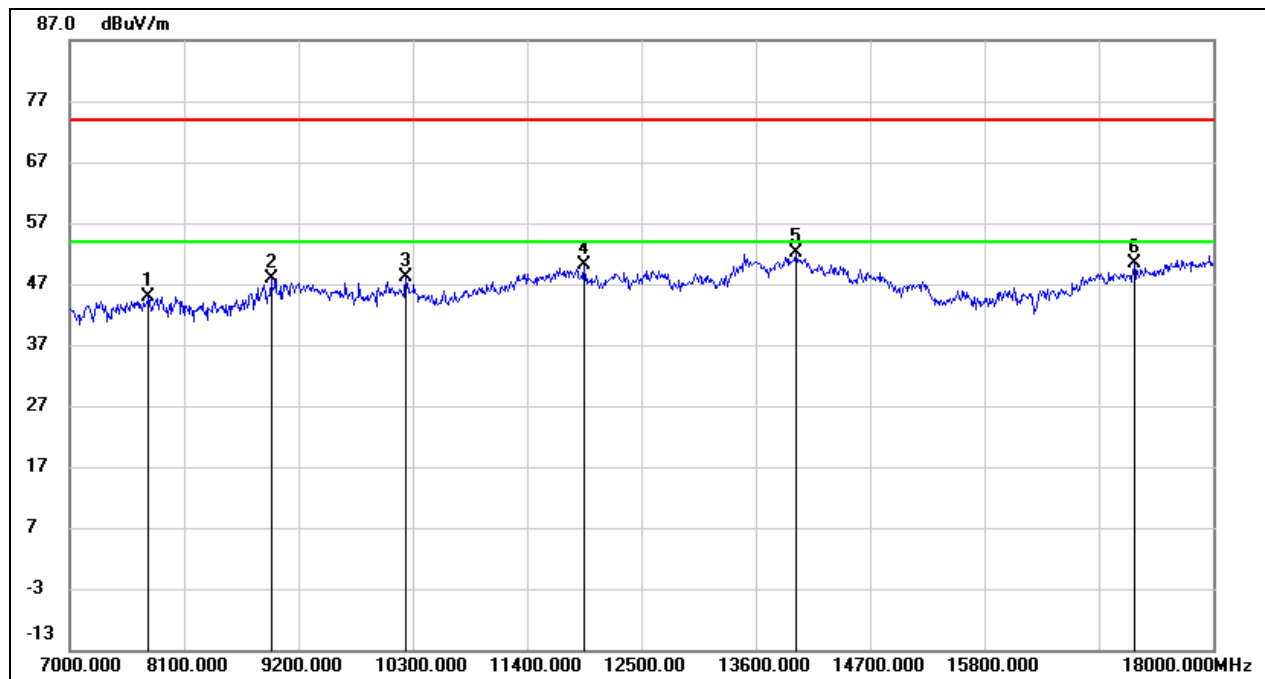
|            |            |               |              |
|------------|------------|---------------|--------------|
| Test Mode: | 802.11a 20 | Channel:      | 5745         |
| Polarity:  | Vertical   | Test Voltage: | AC 120V_60Hz |



| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------|-----------------|----------------|-------------|--------|
| 1   | 7748.000        | 38.48          | 6.66           | 45.14           | 74.00          | -28.86      | peak   |
| 2   | 9244.000        | 36.79          | 10.49          | 47.28           | 74.00          | -26.72      | peak   |
| 3   | 11840.000       | 32.27          | 17.40          | 49.67           | 74.00          | -24.33      | peak   |
| 4   | 13996.000       | 29.64          | 21.87          | 51.51           | 74.00          | -22.49      | peak   |
| 5   | 15206.000       | 30.35          | 17.28          | 47.63           | 74.00          | -26.37      | peak   |
| 6   | 17725.000       | 27.14          | 24.24          | 51.38           | 74.00          | -22.62      | peak   |



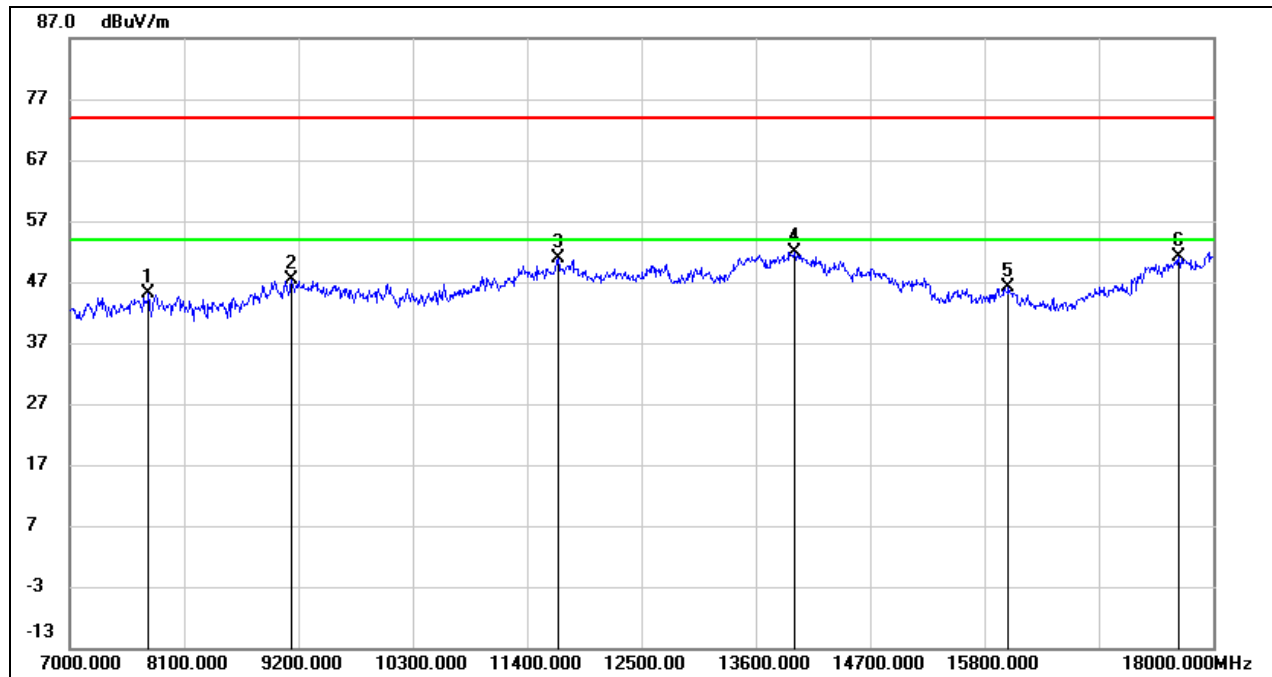
|            |            |               |              |
|------------|------------|---------------|--------------|
| Test Mode: | 802.11a 20 | Channel:      | 5785         |
| Polarity:  | Horizontal | Test Voltage: | AC 120V_60Hz |



| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------|-----------------|----------------|-------------|--------|
| 1   | 7759.000        | 38.36          | 6.64           | 45.00           | 74.00          | -29.00      | peak   |
| 2   | 8936.000        | 37.89          | 9.90           | 47.79           | 74.00          | -26.21      | peak   |
| 3   | 10234.000       | 35.78          | 12.26          | 48.04           | 74.00          | -25.96      | peak   |
| 4   | 11950.000       | 32.41          | 17.61          | 50.02           | 74.00          | -23.98      | peak   |
| 5   | 13985.000       | 30.25          | 21.85          | 52.10           | 74.00          | -21.90      | peak   |
| 6   | 17241.000       | 28.74          | 21.62          | 50.36           | 74.00          | -23.64      | peak   |



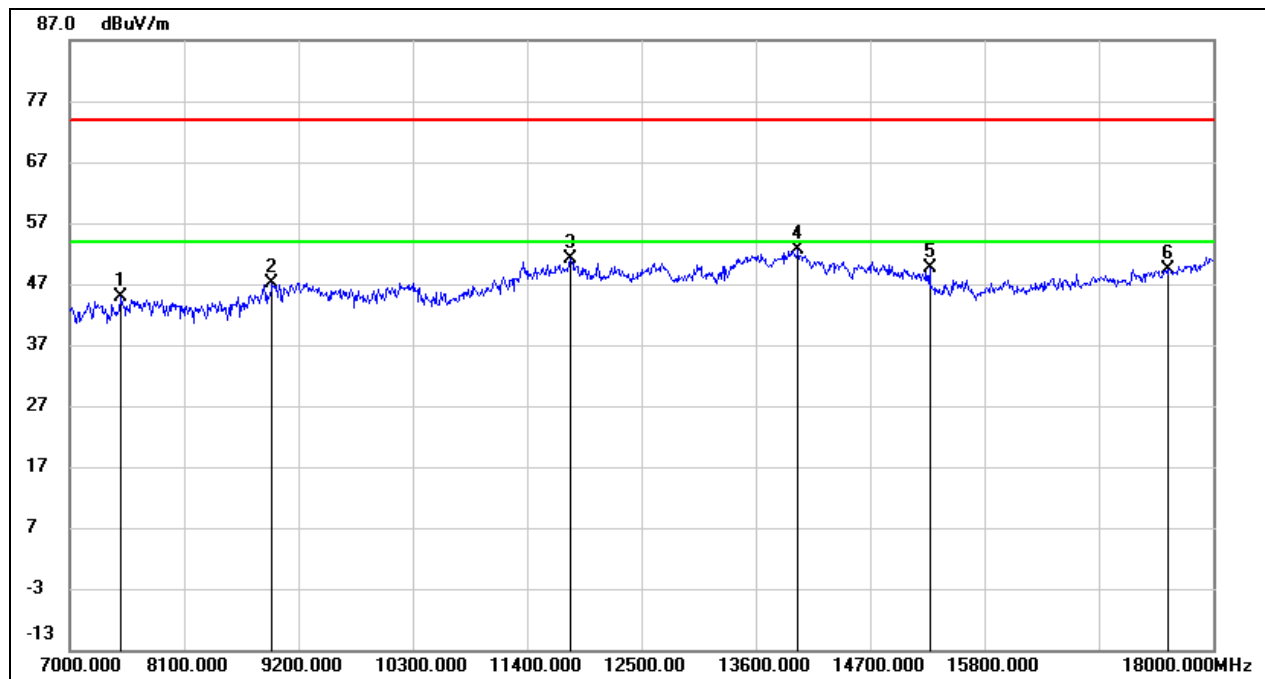
|            |            |               |              |
|------------|------------|---------------|--------------|
| Test Mode: | 802.11a 20 | Channel:      | 5785         |
| Polarity:  | Vertical   | Test Voltage: | AC 120V_60Hz |



| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------|-----------------|----------------|-------------|--------|
| 1   | 7759.000        | 38.47          | 6.64           | 45.11           | 74.00          | -28.89      | peak   |
| 2   | 9134.000        | 36.98          | 10.41          | 47.39           | 74.00          | -26.61      | peak   |
| 3   | 11697.000       | 33.74          | 17.13          | 50.87           | 74.00          | -23.13      | peak   |
| 4   | 13974.000       | 30.04          | 21.82          | 51.86           | 74.00          | -22.14      | peak   |
| 5   | 16031.000       | 29.00          | 17.02          | 46.02           | 74.00          | -27.98      | peak   |
| 6   | 17670.000       | 27.28          | 23.86          | 51.14           | 74.00          | -22.86      | peak   |



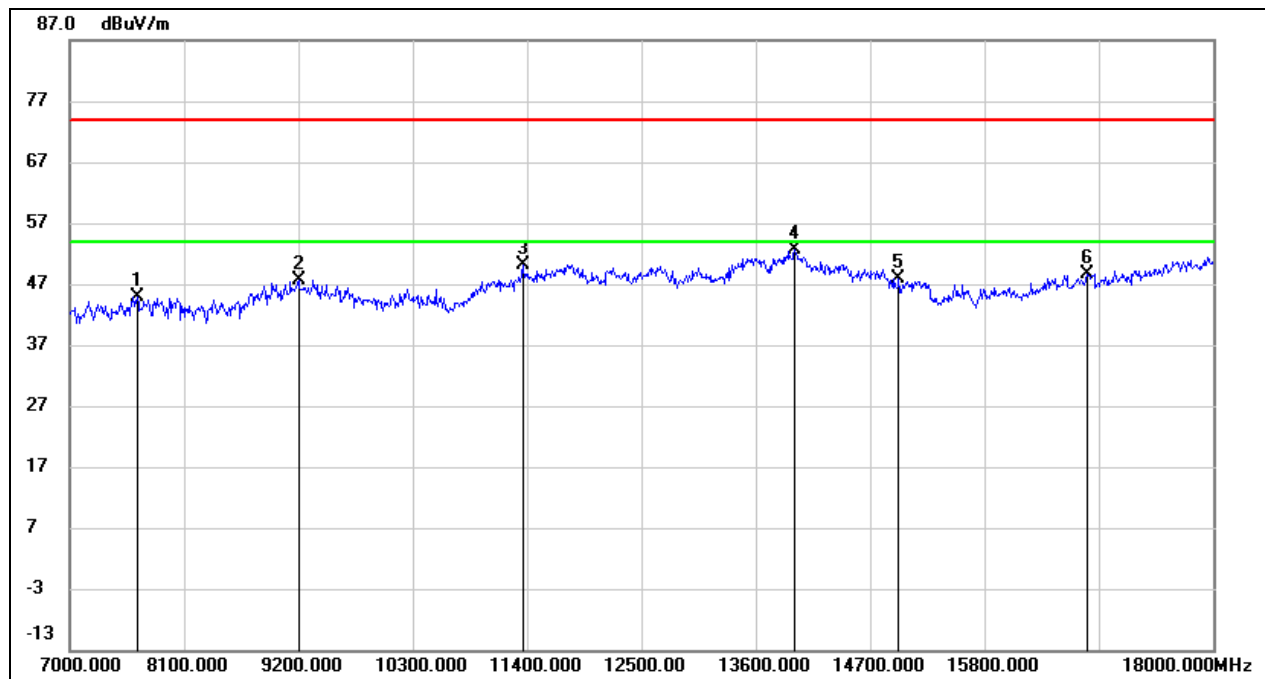
|            |            |               |              |
|------------|------------|---------------|--------------|
| Test Mode: | 802.11a 20 | Channel:      | 5825         |
| Polarity:  | Horizontal | Test Voltage: | AC 120V_60Hz |



| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------|-----------------|----------------|-------------|--------|
| 1   | 7495.000        | 38.08          | 6.87           | 44.95           | 74.00          | -29.05      | peak   |
| 2   | 8947.000        | 37.23          | 9.98           | 47.21           | 74.00          | -26.79      | peak   |
| 3   | 11818.000       | 33.72          | 17.36          | 51.08           | 74.00          | -22.92      | peak   |
| 4   | 14007.000       | 30.86          | 21.85          | 52.71           | 74.00          | -21.29      | peak   |
| 5   | 15272.000       | 32.40          | 17.15          | 49.55           | 74.00          | -24.45      | peak   |
| 6   | 17571.000       | 26.22          | 23.19          | 49.41           | 74.00          | -24.59      | peak   |



|            |            |               |              |
|------------|------------|---------------|--------------|
| Test Mode: | 802.11a 20 | Channel:      | 5825         |
| Polarity:  | Vertical   | Test Voltage: | AC 120V_60Hz |

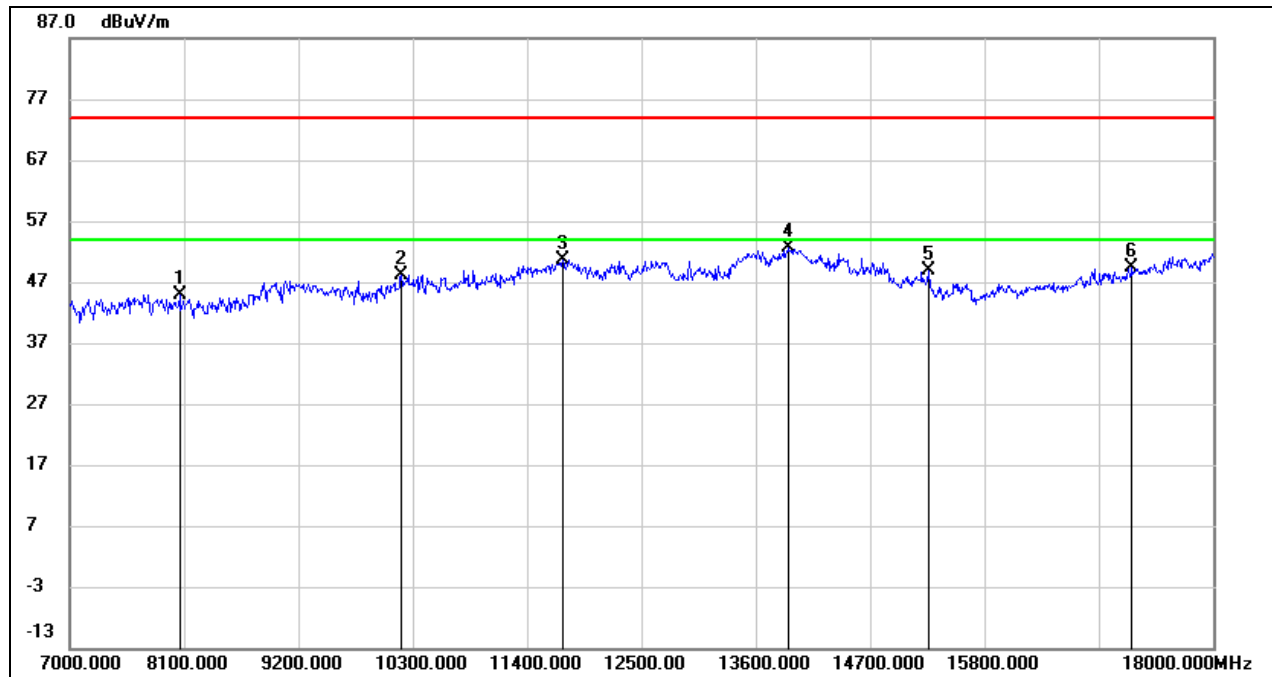


| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------|-----------------|----------------|-------------|--------|
| 1   | 7649.000        | 38.24          | 6.74           | 44.98           | 74.00          | -29.02      | peak   |
| 2   | 9200.000        | 37.15          | 10.46          | 47.61           | 74.00          | -26.39      | peak   |
| 3   | 11356.000       | 33.97          | 16.19          | 50.16           | 74.00          | -23.84      | peak   |
| 4   | 13974.000       | 30.79          | 21.82          | 52.61           | 74.00          | -21.39      | peak   |
| 5   | 14975.000       | 30.12          | 17.77          | 47.89           | 74.00          | -26.11      | peak   |
| 6   | 16790.000       | 29.01          | 19.65          | 48.66           | 74.00          | -25.34      | peak   |





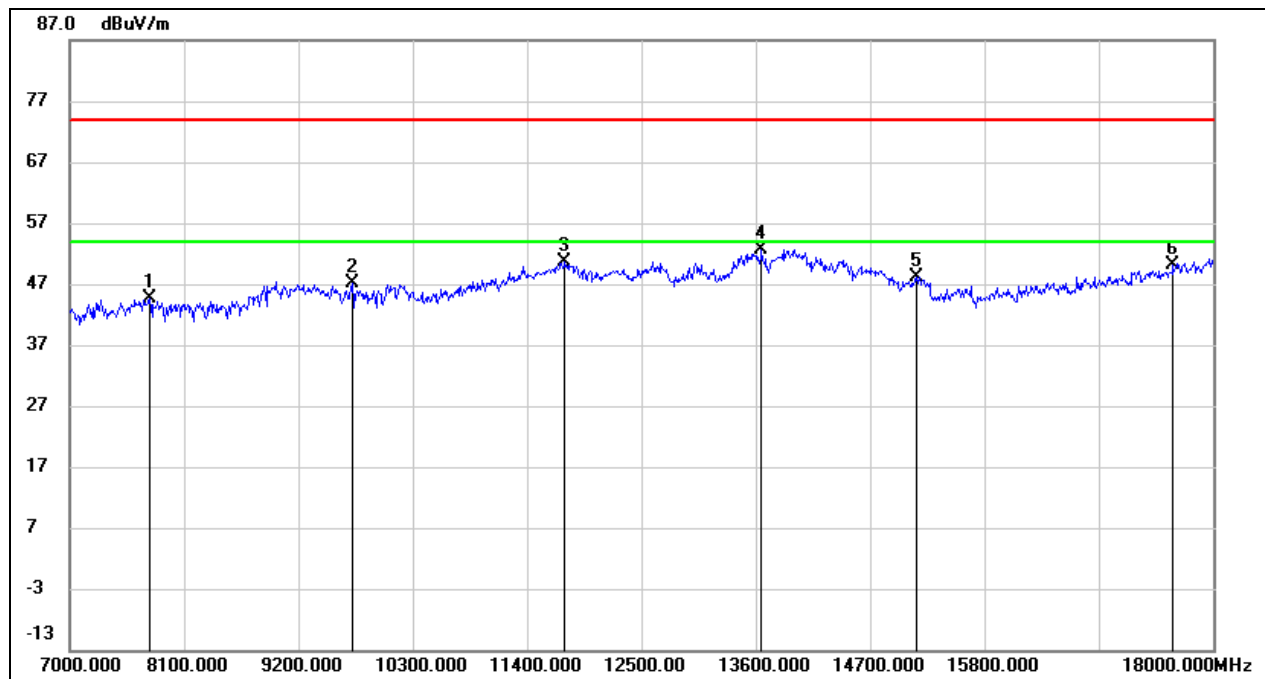
|            |              |               |              |
|------------|--------------|---------------|--------------|
| Test Mode: | 802.11n HT20 | Channel:      | 5180         |
| Polarity:  | Horizontal   | Test Voltage: | AC 120V_60Hz |



| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------|-----------------|----------------|-------------|--------|
| 1   | 8056.000        | 38.48          | 6.48           | 44.96           | 74.00          | -29.04      | peak   |
| 2   | 10190.000       | 36.02          | 12.18          | 48.20           | 74.00          | -25.80      | peak   |
| 3   | 11741.000       | 33.42          | 17.22          | 50.64           | 74.00          | -23.36      | peak   |
| 4   | 13919.000       | 30.89          | 21.68          | 52.57           | 74.00          | -21.43      | peak   |
| 5   | 15261.000       | 31.66          | 17.16          | 48.82           | 74.00          | -25.18      | peak   |
| 6   | 17219.000       | 27.92          | 21.52          | 49.44           | 74.00          | -24.56      | peak   |



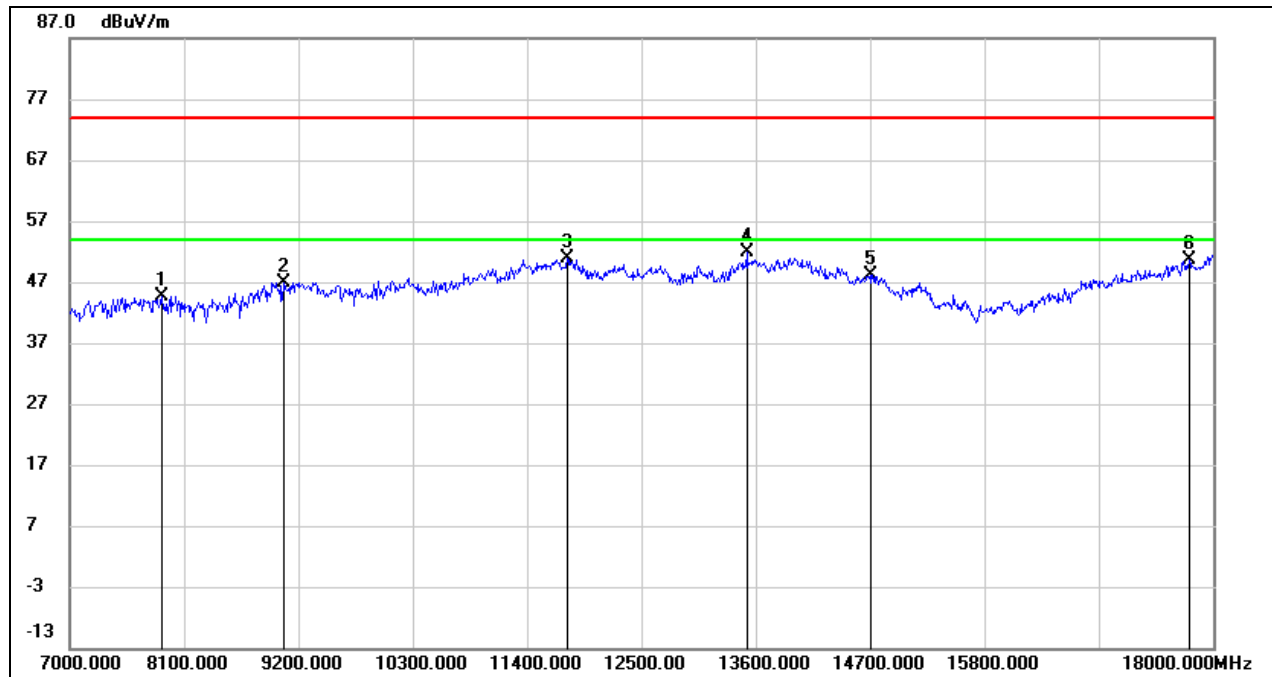
|            |              |               |              |
|------------|--------------|---------------|--------------|
| Test Mode: | 802.11n HT20 | Channel:      | 5180         |
| Polarity:  | Vertical     | Test Voltage: | AC 120V_60Hz |



| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------|-----------------|----------------|-------------|--------|
| 1   | 7770.000        | 37.93          | 6.63           | 44.56           | 74.00          | -29.44      | peak   |
| 2   | 9717.000        | 35.90          | 11.14          | 47.04           | 74.00          | -26.96      | peak   |
| 3   | 11763.000       | 33.38          | 17.26          | 50.64           | 74.00          | -23.36      | peak   |
| 4   | 13655.000       | 31.60          | 21.03          | 52.63           | 74.00          | -21.37      | peak   |
| 5   | 15140.000       | 30.79          | 17.40          | 48.19           | 74.00          | -25.81      | peak   |
| 6   | 17615.000       | 26.59          | 23.49          | 50.08           | 74.00          | -23.92      | peak   |



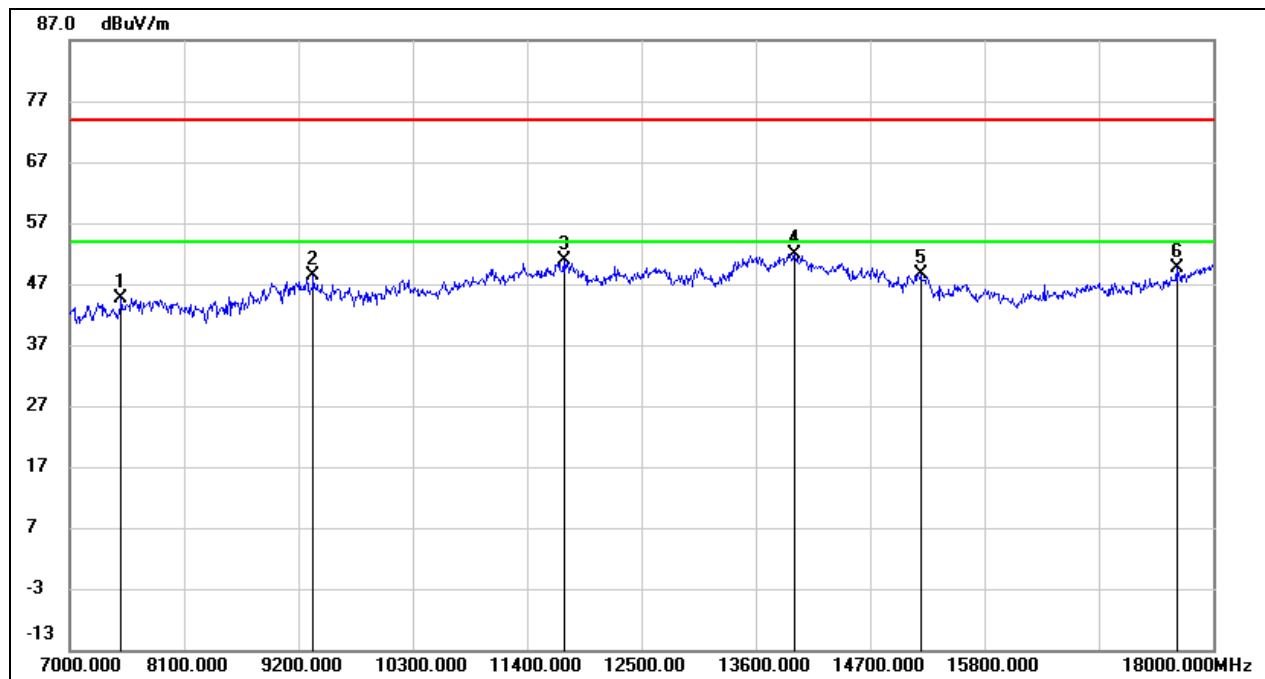
|            |              |               |              |
|------------|--------------|---------------|--------------|
| Test Mode: | 802.11n HT20 | Channel:      | 5200         |
| Polarity:  | Horizontal   | Test Voltage: | AC 120V_60Hz |



| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------|-----------------|----------------|-------------|--------|
| 1   | 7880.000        | 37.99          | 6.54           | 44.53           | 74.00          | -29.47      | peak   |
| 2   | 9057.000        | 36.62          | 10.38          | 47.00           | 74.00          | -27.00      | peak   |
| 3   | 11785.000       | 33.65          | 17.30          | 50.95           | 74.00          | -23.05      | peak   |
| 4   | 13512.000       | 31.13          | 20.68          | 51.81           | 74.00          | -22.19      | peak   |
| 5   | 14700.000       | 29.30          | 18.94          | 48.24           | 74.00          | -25.76      | peak   |
| 6   | 17769.000       | 26.14          | 24.53          | 50.67           | 74.00          | -23.33      | peak   |



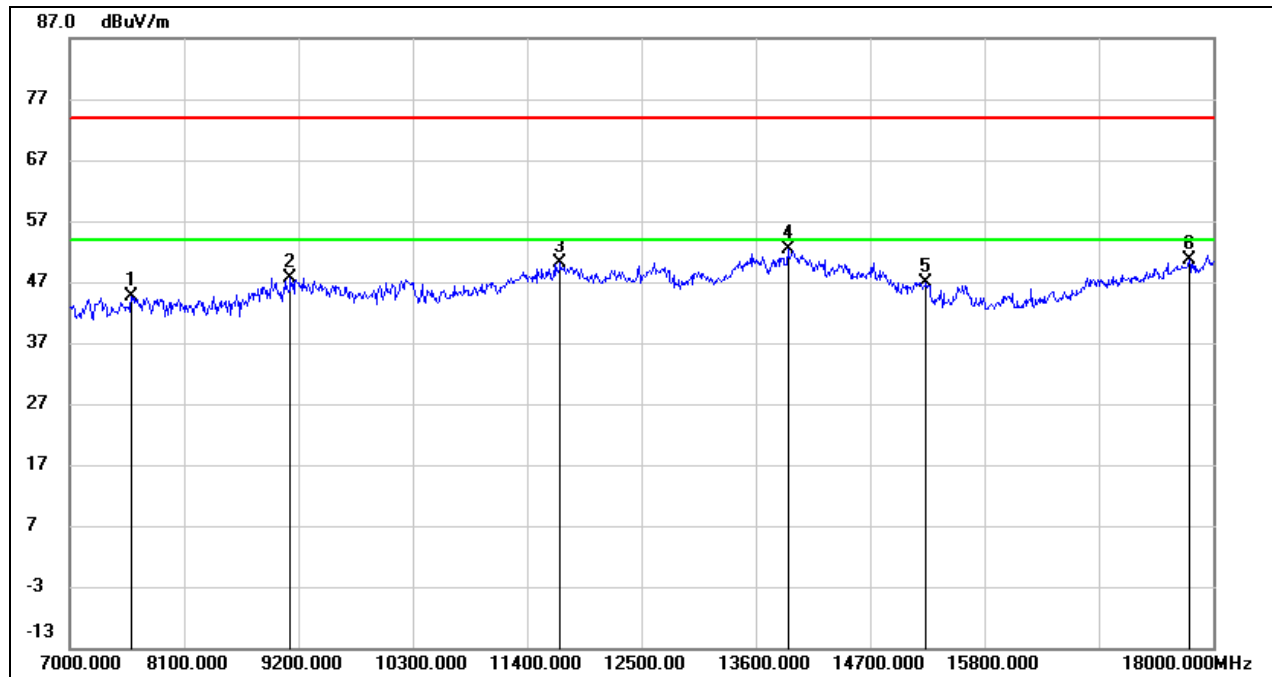
|            |              |               |              |
|------------|--------------|---------------|--------------|
| Test Mode: | 802.11n HT20 | Channel:      | 5200         |
| Polarity:  | Vertical     | Test Voltage: | AC 120V_60Hz |



| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------|-----------------|----------------|-------------|--------|
| 1   | 7495.000        | 37.86          | 6.87           | 44.73           | 74.00          | -29.27      | peak   |
| 2   | 9343.000        | 37.77          | 10.55          | 48.32           | 74.00          | -25.68      | peak   |
| 3   | 11752.000       | 33.60          | 17.24          | 50.84           | 74.00          | -23.16      | peak   |
| 4   | 13974.000       | 30.13          | 21.82          | 51.95           | 74.00          | -22.05      | peak   |
| 5   | 15184.000       | 31.28          | 17.32          | 48.60           | 74.00          | -25.40      | peak   |
| 6   | 17648.000       | 25.81          | 23.72          | 49.53           | 74.00          | -24.47      | peak   |



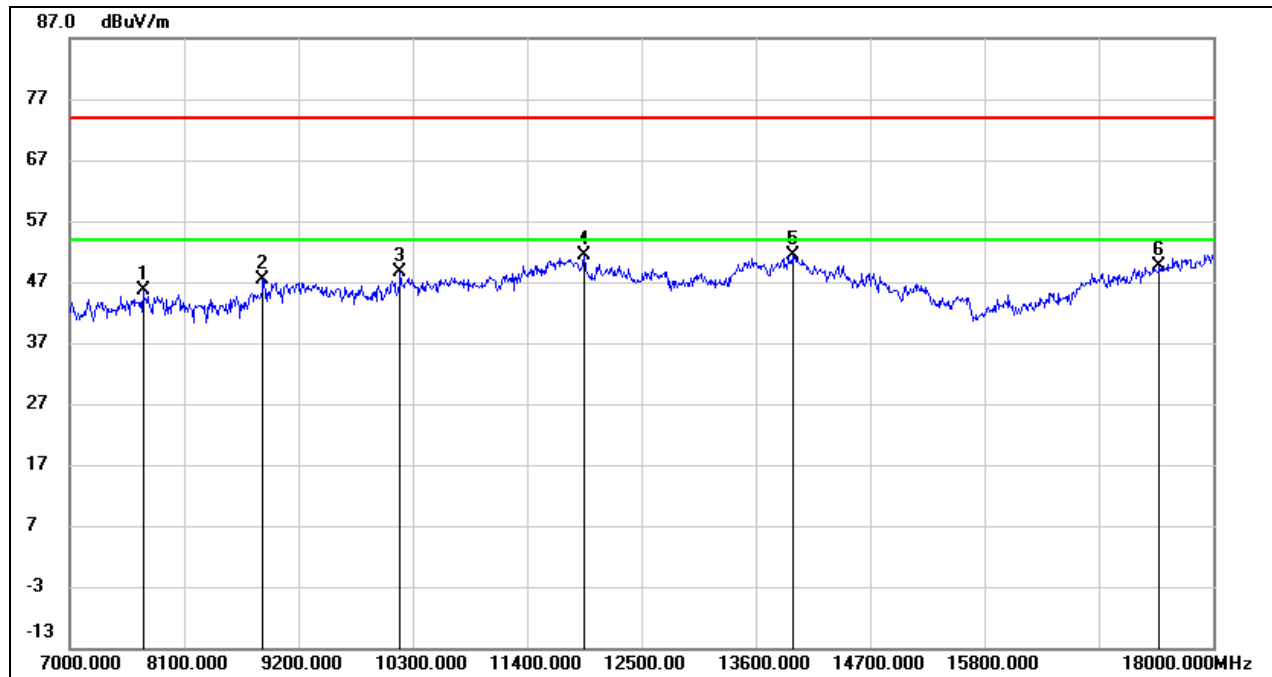
|            |              |               |              |
|------------|--------------|---------------|--------------|
| Test Mode: | 802.11n HT20 | Channel:      | 5240         |
| Polarity:  | Horizontal   | Test Voltage: | AC 120V_60Hz |



| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------|-----------------|----------------|-------------|--------|
| 1   | 7594.000        | 37.74          | 6.79           | 44.53           | 74.00          | -29.47      | peak   |
| 2   | 9123.000        | 37.23          | 10.42          | 47.65           | 74.00          | -26.35      | peak   |
| 3   | 11719.000       | 32.88          | 17.18          | 50.06           | 74.00          | -23.94      | peak   |
| 4   | 13908.000       | 30.67          | 21.66          | 52.33           | 74.00          | -21.67      | peak   |
| 5   | 15239.000       | 29.72          | 17.22          | 46.94           | 74.00          | -27.06      | peak   |
| 6   | 17769.000       | 26.06          | 24.53          | 50.59           | 74.00          | -23.41      | peak   |



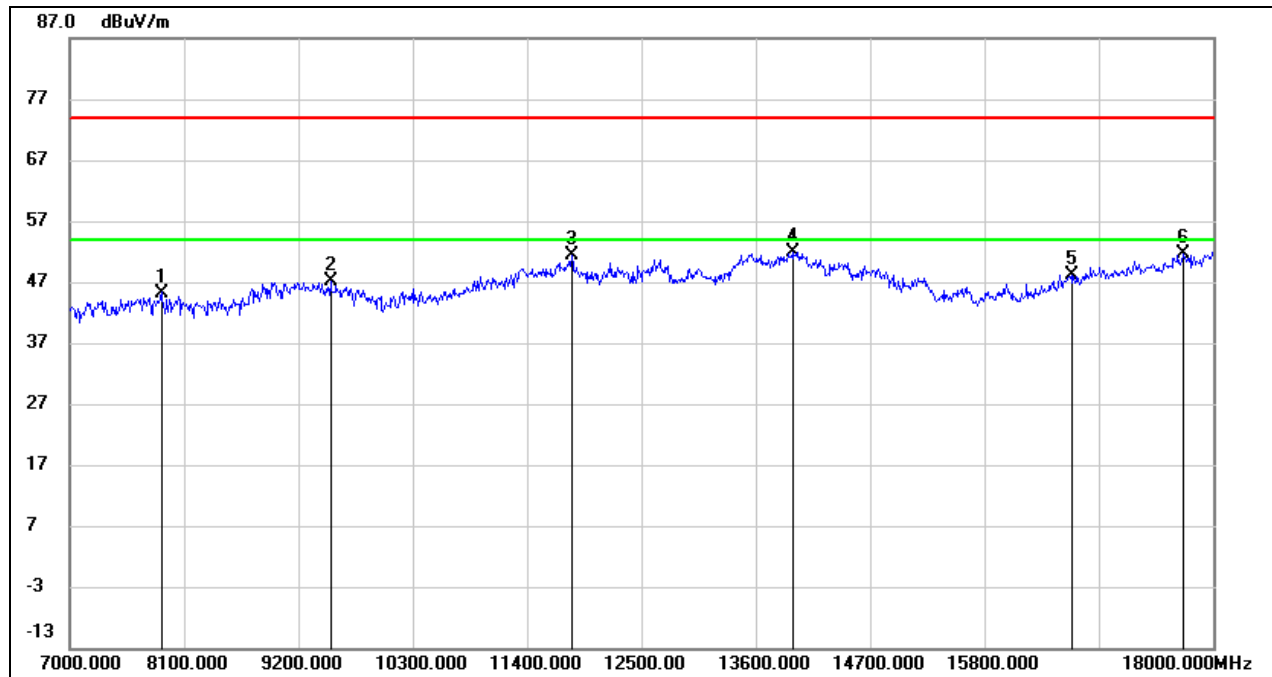
|            |              |               |              |
|------------|--------------|---------------|--------------|
| Test Mode: | 802.11n HT20 | Channel:      | 5240         |
| Polarity:  | Vertical     | Test Voltage: | AC 120V_60Hz |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------|--------------------|-------------------|----------------|--------|
| 1   | 7704.000           | 38.83             | 6.69              | 45.52              | 74.00             | -28.48         | peak   |
| 2   | 8859.000           | 38.02             | 9.36              | 47.38              | 74.00             | -26.62         | peak   |
| 3   | 10179.000          | 36.51             | 12.14             | 48.65              | 74.00             | -25.35         | peak   |
| 4   | 11950.000          | 33.74             | 17.61             | 51.35              | 74.00             | -22.65         | peak   |
| 5   | 13952.000          | 29.58             | 21.76             | 51.34              | 74.00             | -22.66         | peak   |
| 6   | 17483.000          | 27.02             | 22.62             | 49.64              | 74.00             | -24.36         | peak   |



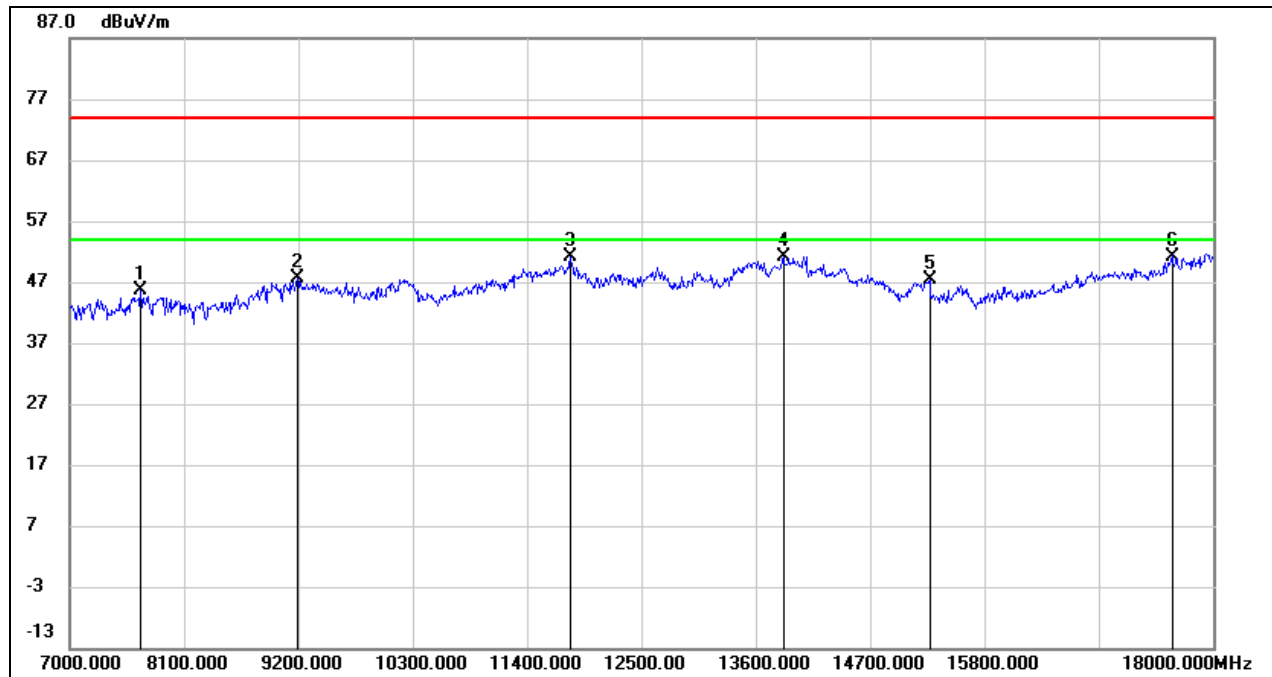
|            |              |               |              |
|------------|--------------|---------------|--------------|
| Test Mode: | 802.11n HT20 | Channel:      | 5745         |
| Polarity:  | Horizontal   | Test Voltage: | AC 120V_60Hz |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------|--------------------|-------------------|----------------|--------|
| 1   | 7880.000           | 38.71             | 6.54              | 45.25              | 74.00             | -28.75         | peak   |
| 2   | 9508.000           | 36.41             | 10.67             | 47.08              | 74.00             | -26.92         | peak   |
| 3   | 11829.000          | 34.02             | 17.38             | 51.40              | 74.00             | -22.60         | peak   |
| 4   | 13952.000          | 30.01             | 21.76             | 51.77              | 74.00             | -22.23         | peak   |
| 5   | 16636.000          | 29.12             | 18.97             | 48.09              | 74.00             | -25.91         | peak   |
| 6   | 17714.000          | 27.54             | 24.16             | 51.70              | 74.00             | -22.30         | peak   |



|            |              |               |              |
|------------|--------------|---------------|--------------|
| Test Mode: | 802.11n HT20 | Channel:      | 5745         |
| Polarity:  | Vertical     | Test Voltage: | AC 120V_60Hz |

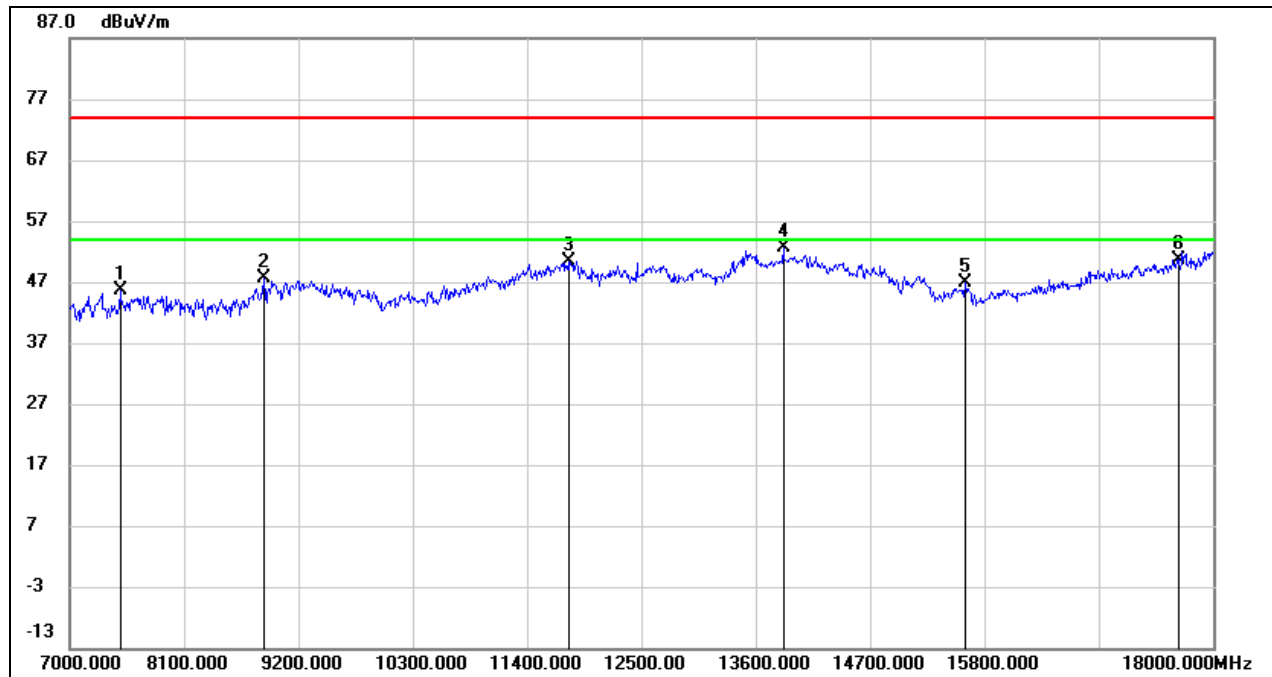


| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------|-----------------|----------------|-------------|--------|
| 1   | 7682.000        | 38.89          | 6.71           | 45.60           | 74.00          | -28.40      | peak   |
| 2   | 9189.000        | 37.27          | 10.46          | 47.73           | 74.00          | -26.27      | peak   |
| 3   | 11818.000       | 33.67          | 17.36          | 51.03           | 74.00          | -22.97      | peak   |
| 4   | 13864.000       | 29.58          | 21.53          | 51.11           | 74.00          | -22.89      | peak   |
| 5   | 15272.000       | 30.18          | 17.15          | 47.33           | 74.00          | -26.67      | peak   |
| 6   | 17604.000       | 27.84          | 23.41          | 51.25           | 74.00          | -22.75      | peak   |





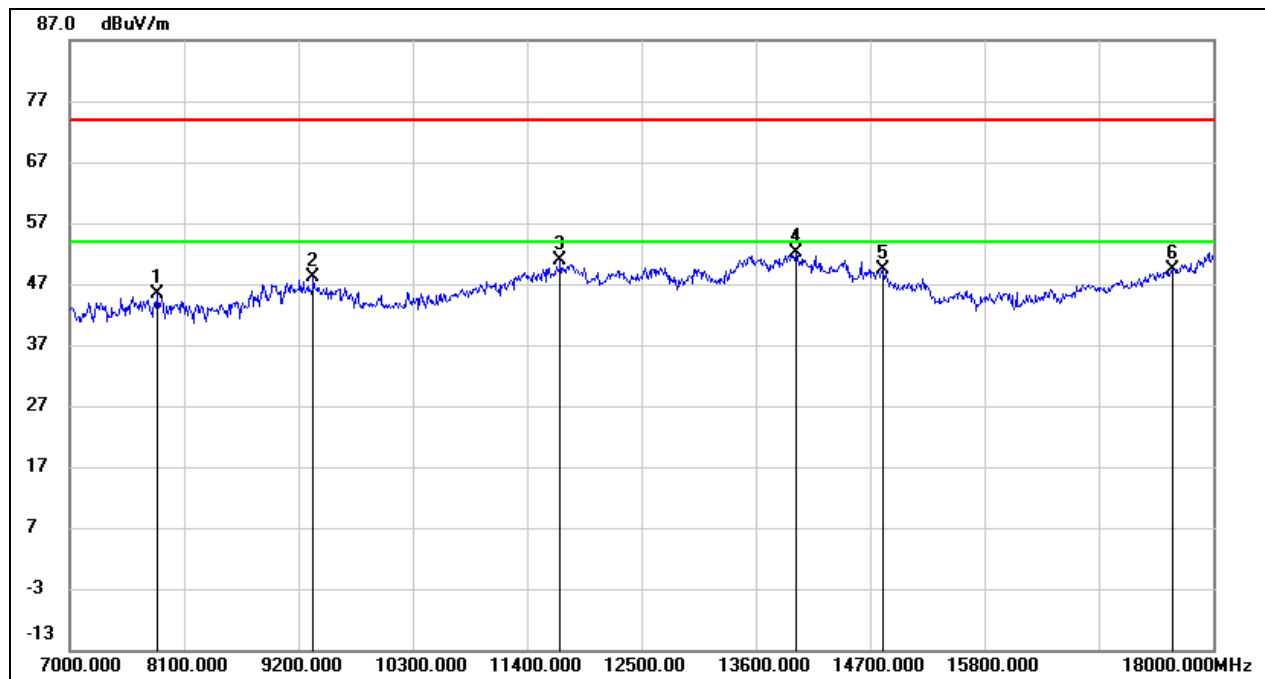
|            |              |               |              |
|------------|--------------|---------------|--------------|
| Test Mode: | 802.11n HT20 | Channel:      | 5785         |
| Polarity:  | Horizontal   | Test Voltage: | AC 120V_60Hz |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------|--------------------|-------------------|----------------|--------|
| 1   | 7484.000           | 38.66             | 6.87              | 45.53              | 74.00             | -28.47         | peak   |
| 2   | 8870.000           | 38.21             | 9.44              | 47.65              | 74.00             | -26.35         | peak   |
| 3   | 11796.000          | 33.14             | 17.32             | 50.46              | 74.00             | -23.54         | peak   |
| 4   | 13864.000          | 31.17             | 21.53             | 52.70              | 74.00             | -21.30         | peak   |
| 5   | 15613.000          | 30.02             | 16.76             | 46.78              | 74.00             | -27.22         | peak   |
| 6   | 17670.000          | 26.77             | 23.86             | 50.63              | 74.00             | -23.37         | peak   |



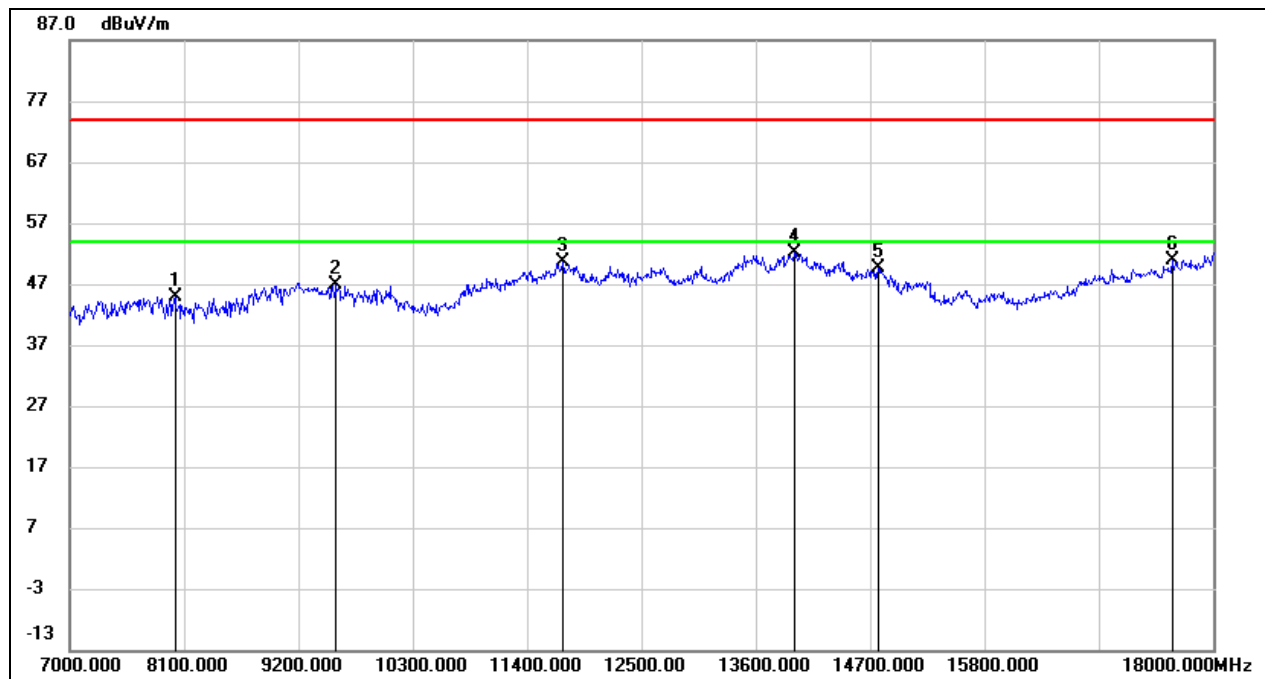
|            |              |               |              |
|------------|--------------|---------------|--------------|
| Test Mode: | 802.11n HT20 | Channel:      | 5785         |
| Polarity:  | Vertical     | Test Voltage: | AC 120V_60Hz |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------|--------------------|-------------------|----------------|--------|
| 1   | 7836.000           | 38.75             | 6.58              | 45.33              | 74.00             | -28.67         | peak   |
| 2   | 9343.000           | 37.58             | 10.55             | 48.13              | 74.00             | -25.87         | peak   |
| 3   | 11719.000          | 33.58             | 17.18             | 50.76              | 74.00             | -23.24         | peak   |
| 4   | 13985.000          | 30.34             | 21.85             | 52.19              | 74.00             | -21.81         | peak   |
| 5   | 14821.000          | 31.03             | 18.42             | 49.45              | 74.00             | -24.55         | peak   |
| 6   | 17615.000          | 25.93             | 23.49             | 49.42              | 74.00             | -24.58         | peak   |



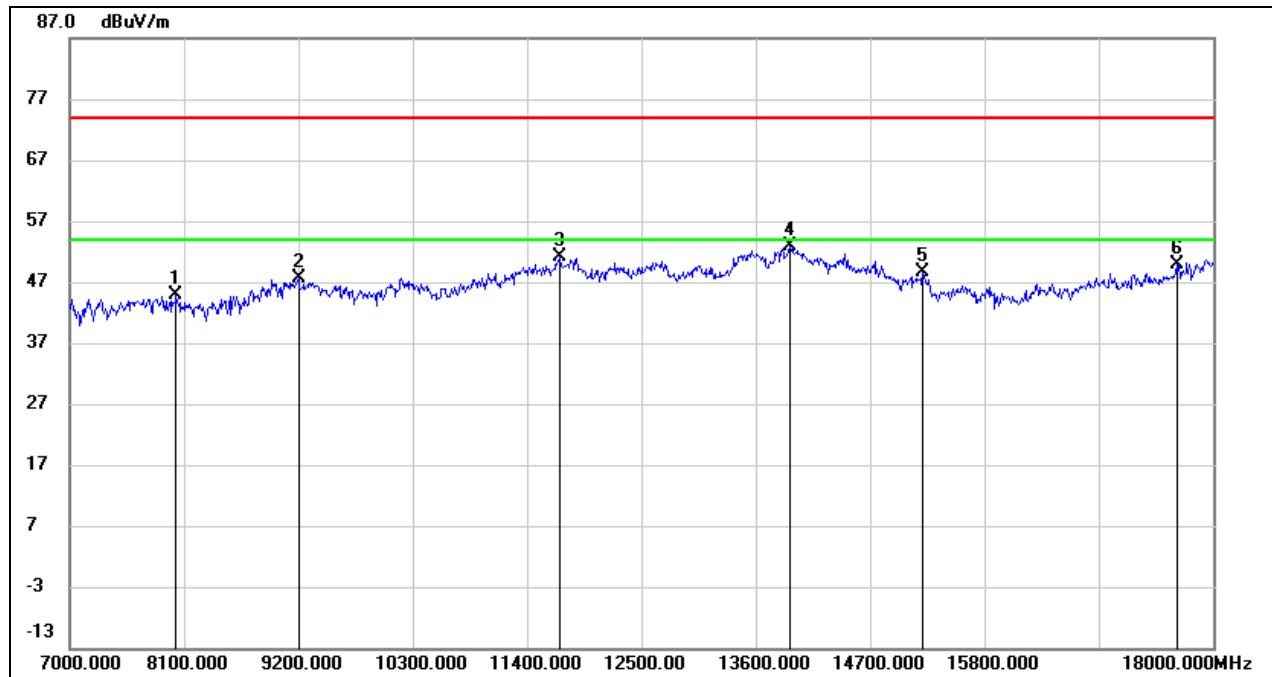
|            |              |               |              |
|------------|--------------|---------------|--------------|
| Test Mode: | 802.11n HT20 | Channel:      | 5825         |
| Polarity:  | Horizontal   | Test Voltage: | AC 120V_60Hz |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------|--------------------|-------------------|----------------|--------|
| 1   | 8012.000           | 38.51             | 6.44              | 44.95              | 74.00             | -29.05         | peak   |
| 2   | 9563.000           | 36.03             | 10.79             | 46.82              | 74.00             | -27.18         | peak   |
| 3   | 11741.000          | 33.42             | 17.22             | 50.64              | 74.00             | -23.36         | peak   |
| 4   | 13974.000          | 30.29             | 21.82             | 52.11              | 74.00             | -21.89         | peak   |
| 5   | 14777.000          | 31.07             | 18.61             | 49.68              | 74.00             | -24.32         | peak   |
| 6   | 17604.000          | 27.58             | 23.41             | 50.99              | 74.00             | -23.01         | peak   |



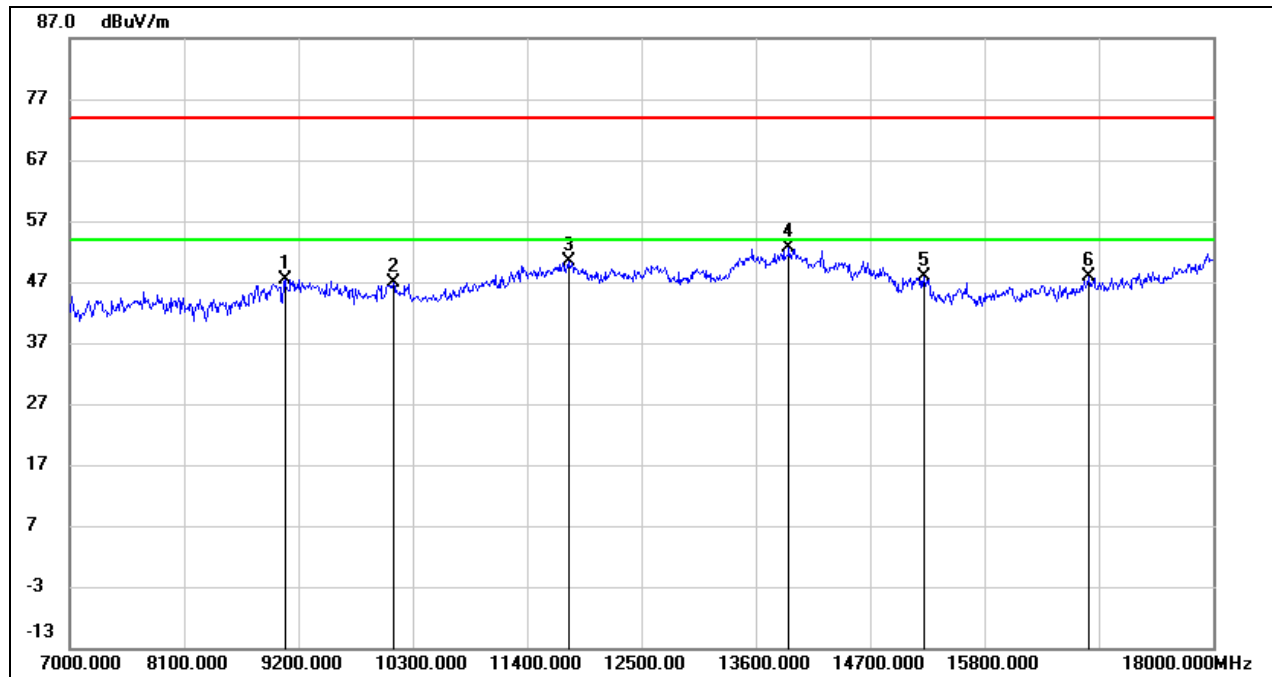
|            |              |               |              |
|------------|--------------|---------------|--------------|
| Test Mode: | 802.11n HT20 | Channel:      | 5825         |
| Polarity:  | Vertical     | Test Voltage: | AC 120V_60Hz |



| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------|-----------------|----------------|-------------|--------|
| 1   | 8023.000        | 38.49          | 6.45           | 44.94           | 74.00          | -29.06      | peak   |
| 2   | 9200.000        | 37.17          | 10.46          | 47.63           | 74.00          | -26.37      | peak   |
| 3   | 11719.000       | 33.96          | 17.18          | 51.14           | 74.00          | -22.86      | peak   |
| 4   | 13930.000       | 31.09          | 21.71          | 52.80           | 74.00          | -21.20      | peak   |
| 5   | 15206.000       | 31.34          | 17.28          | 48.62           | 74.00          | -25.38      | peak   |
| 6   | 17648.000       | 26.16          | 23.72          | 49.88           | 74.00          | -24.12      | peak   |



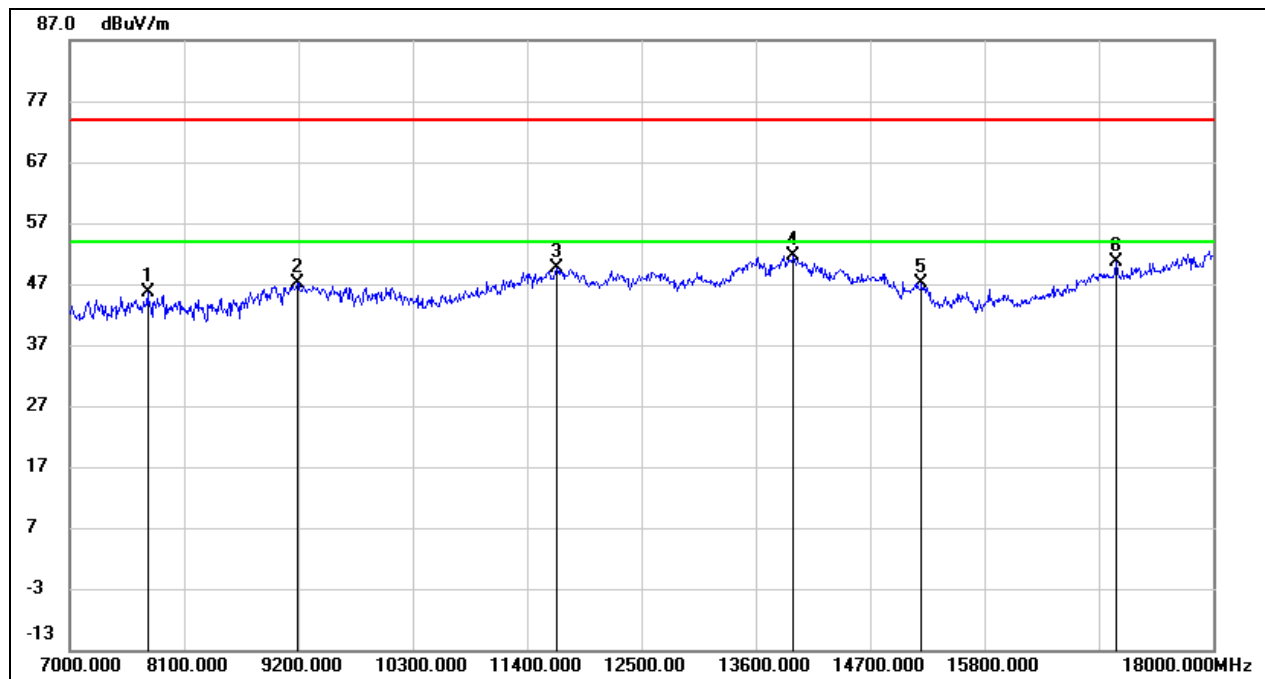
|            |              |               |              |
|------------|--------------|---------------|--------------|
| Test Mode: | 802.11n HT40 | Channel:      | 5190         |
| Polarity:  | Horizontal   | Test Voltage: | AC 120V_60Hz |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------|--------------------|-------------------|----------------|--------|
| 1   | 9068.000           | 36.98             | 10.39             | 47.37              | 74.00             | -26.63         | peak   |
| 2   | 10113.000          | 34.83             | 12.01             | 46.84              | 74.00             | -27.16         | peak   |
| 3   | 11796.000          | 33.13             | 17.32             | 50.45              | 74.00             | -23.55         | peak   |
| 4   | 13919.000          | 30.91             | 21.68             | 52.59              | 74.00             | -21.41         | peak   |
| 5   | 15217.000          | 30.59             | 17.25             | 47.84              | 74.00             | -26.16         | peak   |
| 6   | 16801.000          | 28.27             | 19.70             | 47.97              | 74.00             | -26.03         | peak   |



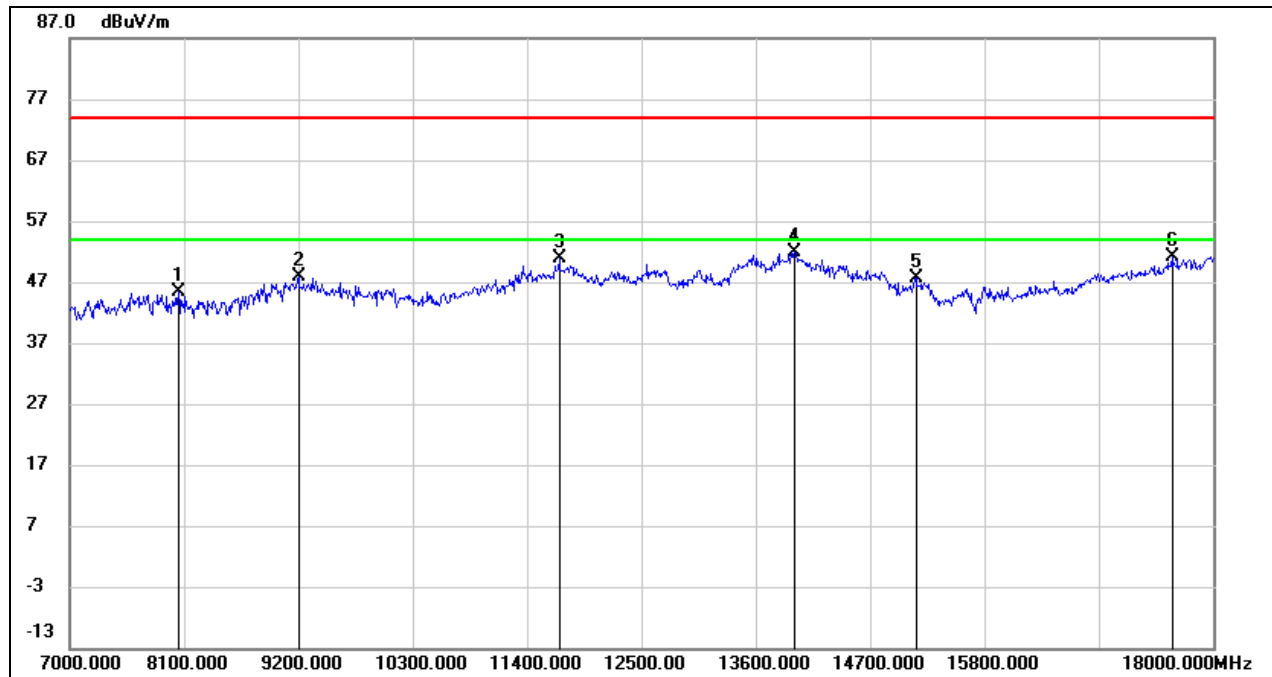
|            |              |               |              |
|------------|--------------|---------------|--------------|
| Test Mode: | 802.11n HT40 | Channel:      | 5190         |
| Polarity:  | Vertical     | Test Voltage: | AC 120V_60Hz |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------|--------------------|-------------------|----------------|--------|
| 1   | 7748.000           | 38.97             | 6.66              | 45.63              | 74.00             | -28.37         | peak   |
| 2   | 9189.000           | 36.66             | 10.46             | 47.12              | 74.00             | -26.88         | peak   |
| 3   | 11686.000          | 32.47             | 17.12             | 49.59              | 74.00             | -24.41         | peak   |
| 4   | 13963.000          | 29.87             | 21.78             | 51.65              | 74.00             | -22.35         | peak   |
| 5   | 15195.000          | 29.94             | 17.29             | 47.23              | 74.00             | -26.77         | peak   |
| 6   | 17065.000          | 29.68             | 20.88             | 50.56              | 74.00             | -23.44         | peak   |



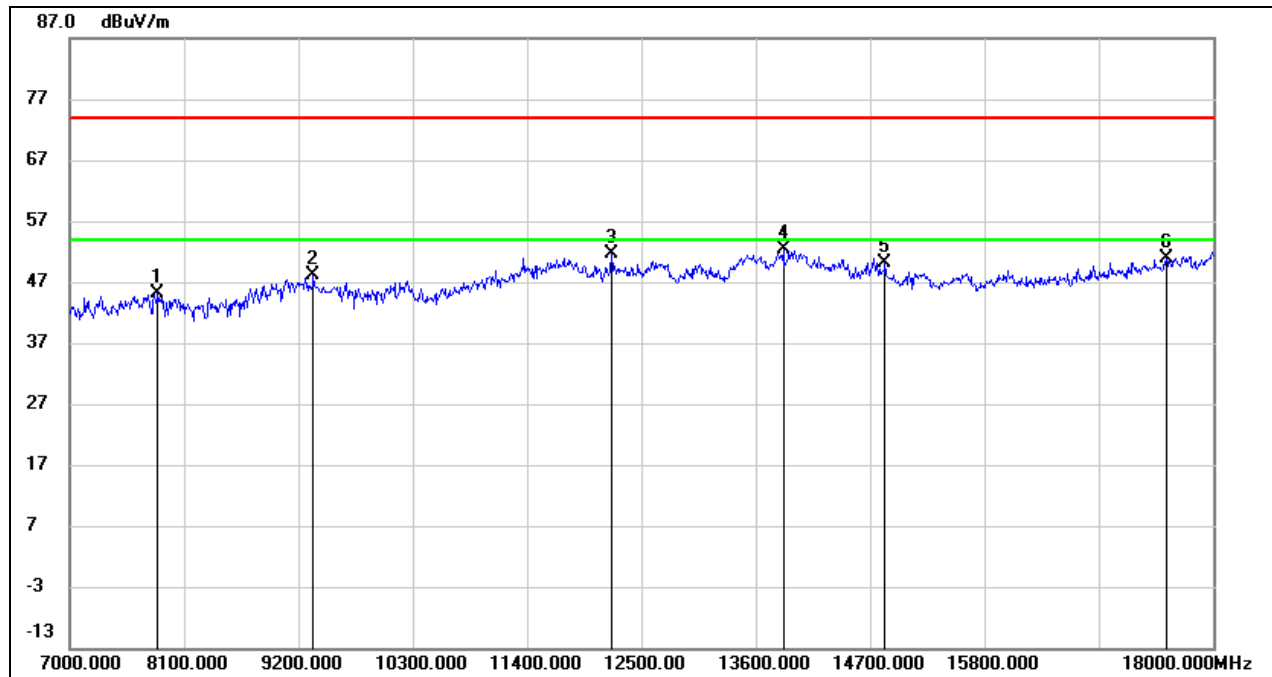
|            |              |               |              |
|------------|--------------|---------------|--------------|
| Test Mode: | 802.11n HT40 | Channel:      | 5230         |
| Polarity:  | Horizontal   | Test Voltage: | AC 120V_60Hz |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------|--------------------|-------------------|----------------|--------|
| 1   | 8045.000           | 38.97             | 6.47              | 45.44              | 74.00             | -28.56         | peak   |
| 2   | 9200.000           | 37.52             | 10.46             | 47.98              | 74.00             | -26.02         | peak   |
| 3   | 11708.000          | 33.84             | 17.16             | 51.00              | 74.00             | -23.00         | peak   |
| 4   | 13974.000          | 30.02             | 21.82             | 51.84              | 74.00             | -22.16         | peak   |
| 5   | 15140.000          | 30.23             | 17.40             | 47.63              | 74.00             | -26.37         | peak   |
| 6   | 17604.000          | 27.64             | 23.41             | 51.05              | 74.00             | -22.95         | peak   |



|            |              |               |              |
|------------|--------------|---------------|--------------|
| Test Mode: | 802.11n HT40 | Channel:      | 5230         |
| Polarity:  | Vertical     | Test Voltage: | AC 120V_60Hz |

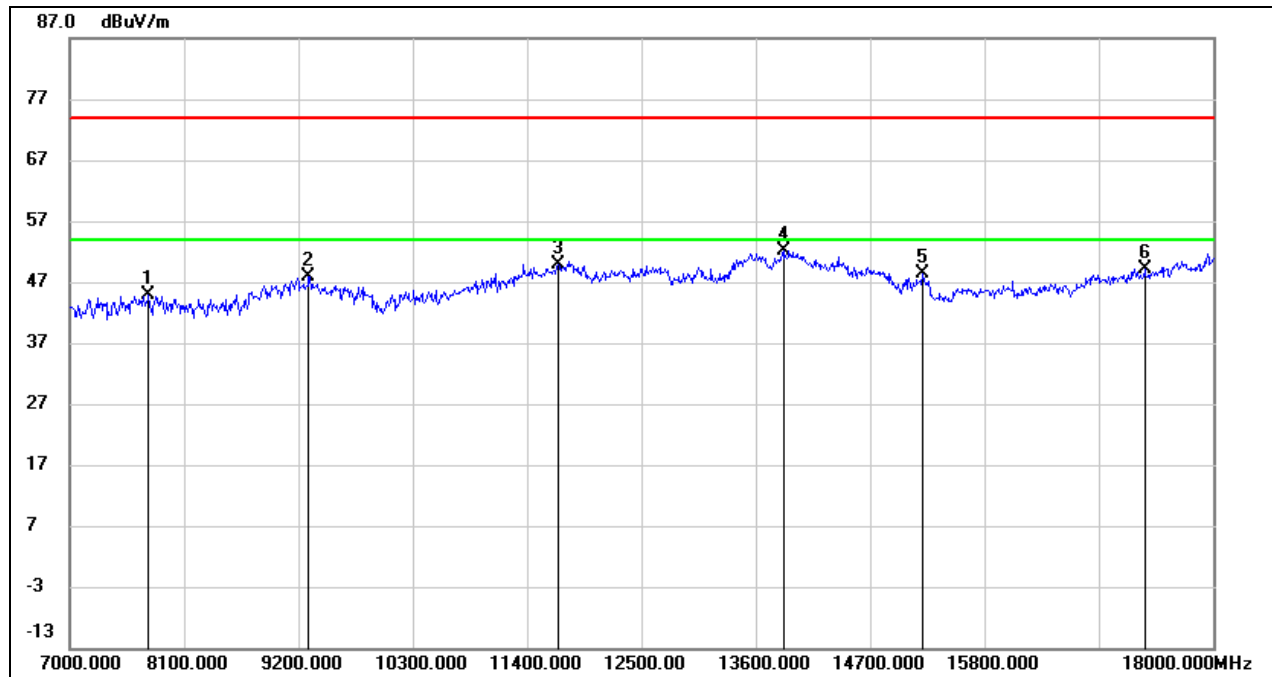


| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------|--------------------|-------------------|----------------|--------|
| 1   | 7847.000           | 38.49             | 6.57              | 45.06              | 74.00             | -28.94         | peak   |
| 2   | 9343.000           | 37.55             | 10.55             | 48.10              | 74.00             | -25.90         | peak   |
| 3   | 12214.000          | 33.78             | 17.76             | 51.54              | 74.00             | -22.46         | peak   |
| 4   | 13864.000          | 30.82             | 21.53             | 52.35              | 74.00             | -21.65         | peak   |
| 5   | 14843.000          | 31.85             | 18.34             | 50.19              | 74.00             | -23.81         | peak   |
| 6   | 17549.000          | 27.91             | 23.04             | 50.95              | 74.00             | -23.05         | peak   |





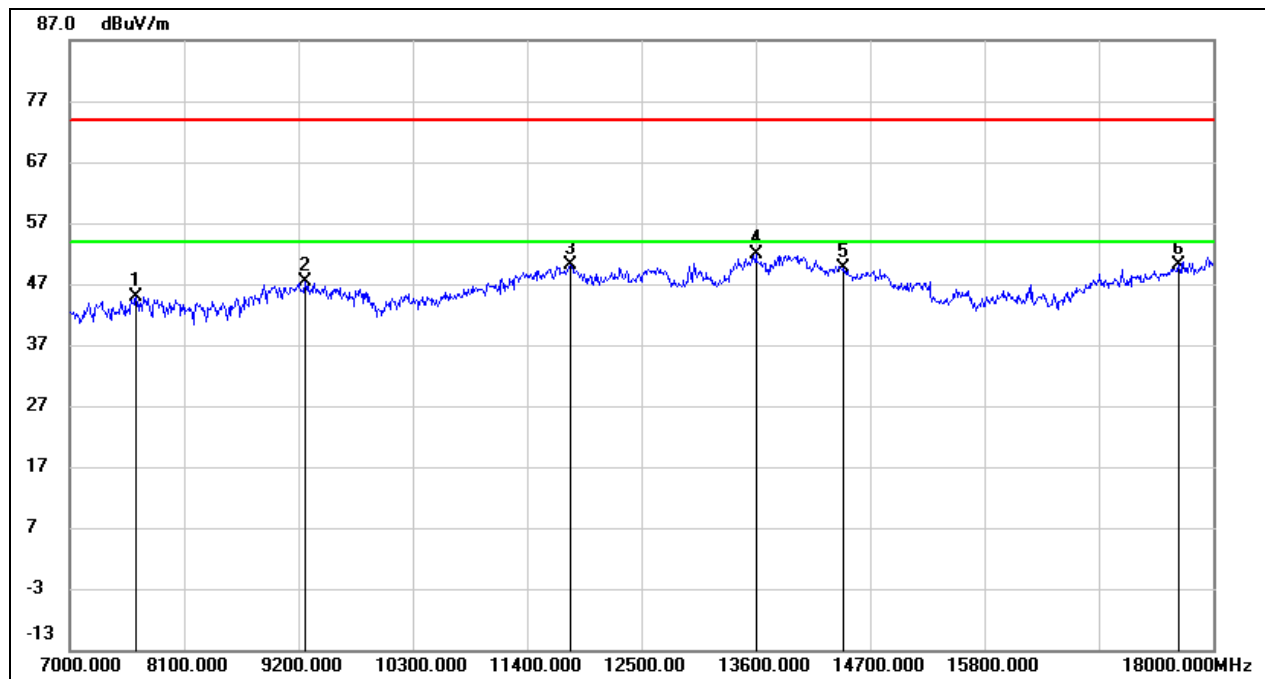
|            |              |               |              |
|------------|--------------|---------------|--------------|
| Test Mode: | 802.11n HT40 | Channel:      | 5755         |
| Polarity:  | Horizontal   | Test Voltage: | AC 120V_60Hz |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------|--------------------|-------------------|----------------|--------|
| 1   | 7759.000           | 38.35             | 6.64              | 44.99              | 74.00             | -29.01         | peak   |
| 2   | 9299.000           | 37.41             | 10.53             | 47.94              | 74.00             | -26.06         | peak   |
| 3   | 11697.000          | 32.86             | 17.13             | 49.99              | 74.00             | -24.01         | peak   |
| 4   | 13864.000          | 30.67             | 21.53             | 52.20              | 74.00             | -21.80         | peak   |
| 5   | 15206.000          | 31.11             | 17.28             | 48.39              | 74.00             | -25.61         | peak   |
| 6   | 17340.000          | 27.11             | 22.03             | 49.14              | 74.00             | -24.86         | peak   |



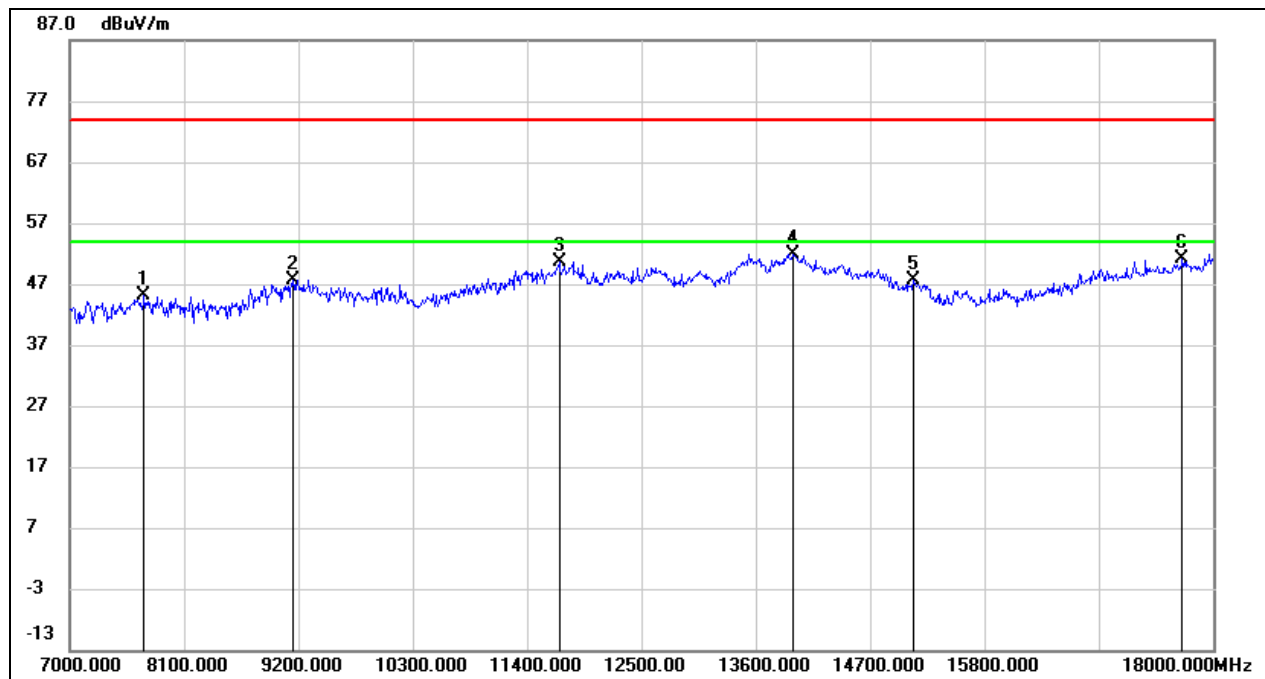
|            |              |               |              |
|------------|--------------|---------------|--------------|
| Test Mode: | 802.11n HT40 | Channel:      | 5755         |
| Polarity:  | Vertical     | Test Voltage: | AC 120V_60Hz |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------|--------------------|-------------------|----------------|--------|
| 1   | 7638.000           | 38.07             | 6.75              | 44.82              | 74.00             | -29.18         | peak   |
| 2   | 9266.000           | 36.80             | 10.51             | 47.31              | 74.00             | -26.69         | peak   |
| 3   | 11818.000          | 32.81             | 17.36             | 50.17              | 74.00             | -23.83         | peak   |
| 4   | 13600.000          | 31.07             | 20.89             | 51.96              | 74.00             | -22.04         | peak   |
| 5   | 14436.000          | 29.64             | 20.05             | 49.69              | 74.00             | -24.31         | peak   |
| 6   | 17670.000          | 26.25             | 23.86             | 50.11              | 74.00             | -23.89         | peak   |



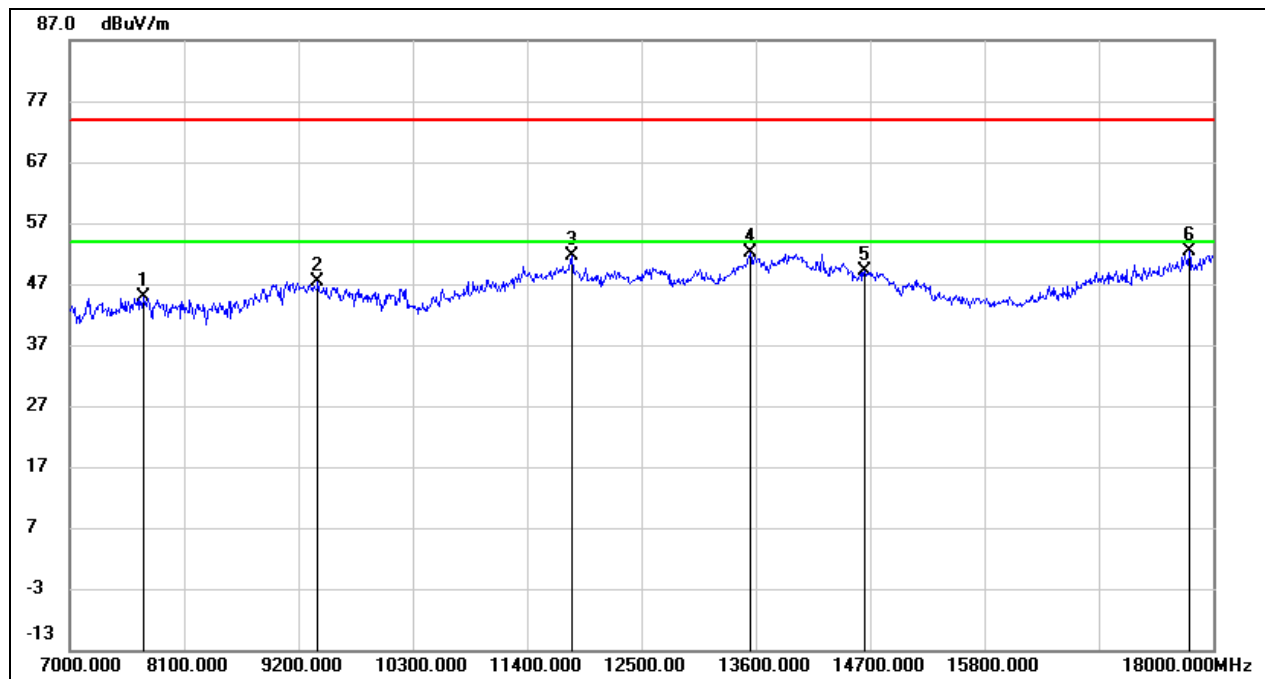
|            |              |               |              |
|------------|--------------|---------------|--------------|
| Test Mode: | 802.11n HT40 | Channel:      | 5795         |
| Polarity:  | Horizontal   | Test Voltage: | AC 120V_60Hz |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------|--------------------|-------------------|----------------|--------|
| 1   | 7715.000           | 38.52             | 6.68              | 45.20              | 74.00             | -28.80         | peak   |
| 2   | 9145.000           | 37.24             | 10.43             | 47.67              | 74.00             | -26.33         | peak   |
| 3   | 11708.000          | 33.58             | 17.16             | 50.74              | 74.00             | -23.26         | peak   |
| 4   | 13952.000          | 30.08             | 21.76             | 51.84              | 74.00             | -22.16         | peak   |
| 5   | 15118.000          | 30.26             | 17.44             | 47.70              | 74.00             | -26.30         | peak   |
| 6   | 17703.000          | 27.11             | 24.09             | 51.20              | 74.00             | -22.80         | peak   |



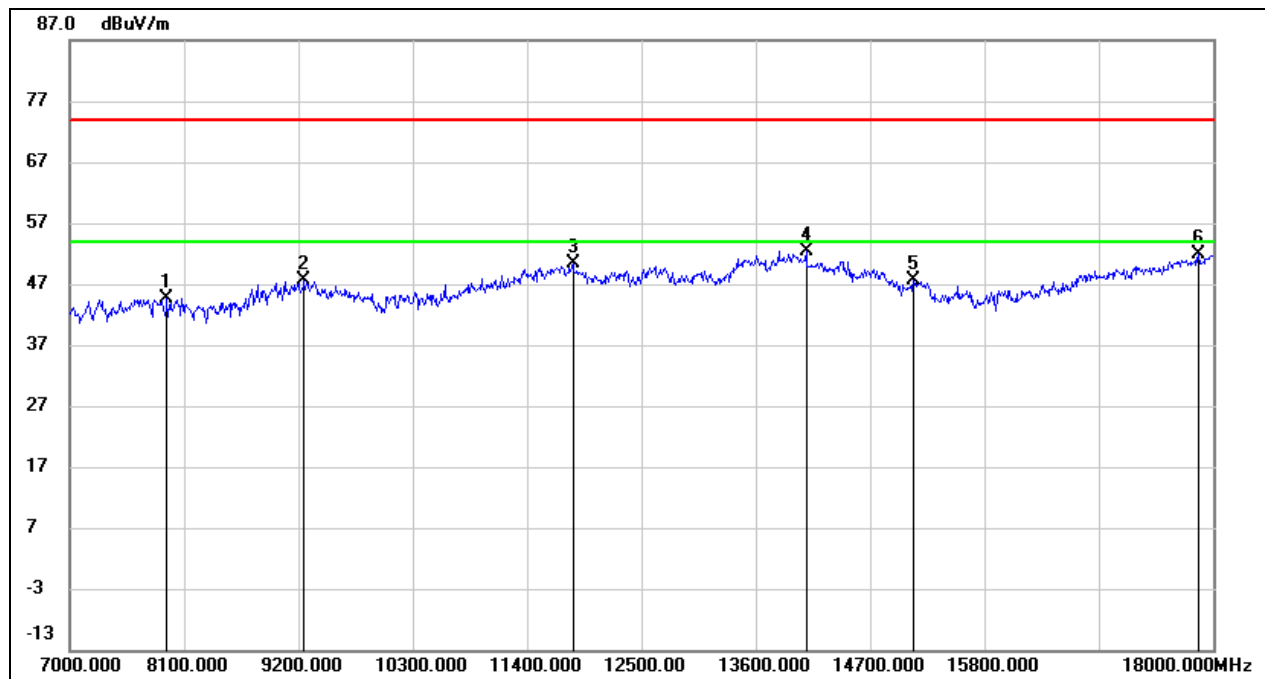
|            |              |               |              |
|------------|--------------|---------------|--------------|
| Test Mode: | 802.11n HT40 | Channel:      | 5795         |
| Polarity:  | Vertical     | Test Voltage: | AC 120V_60Hz |



| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------|-----------------|----------------|-------------|--------|
| 1   | 7715.000        | 38.13          | 6.68           | 44.81           | 74.00          | -29.19      | peak   |
| 2   | 9387.000        | 36.84          | 10.58          | 47.42           | 74.00          | -26.58      | peak   |
| 3   | 11829.000       | 34.18          | 17.38          | 51.56           | 74.00          | -22.44      | peak   |
| 4   | 13545.000       | 31.48          | 20.75          | 52.23           | 74.00          | -21.77      | peak   |
| 5   | 14645.000       | 30.07          | 19.17          | 49.24           | 74.00          | -24.76      | peak   |
| 6   | 17769.000       | 27.85          | 24.53          | 52.38           | 74.00          | -21.62      | peak   |



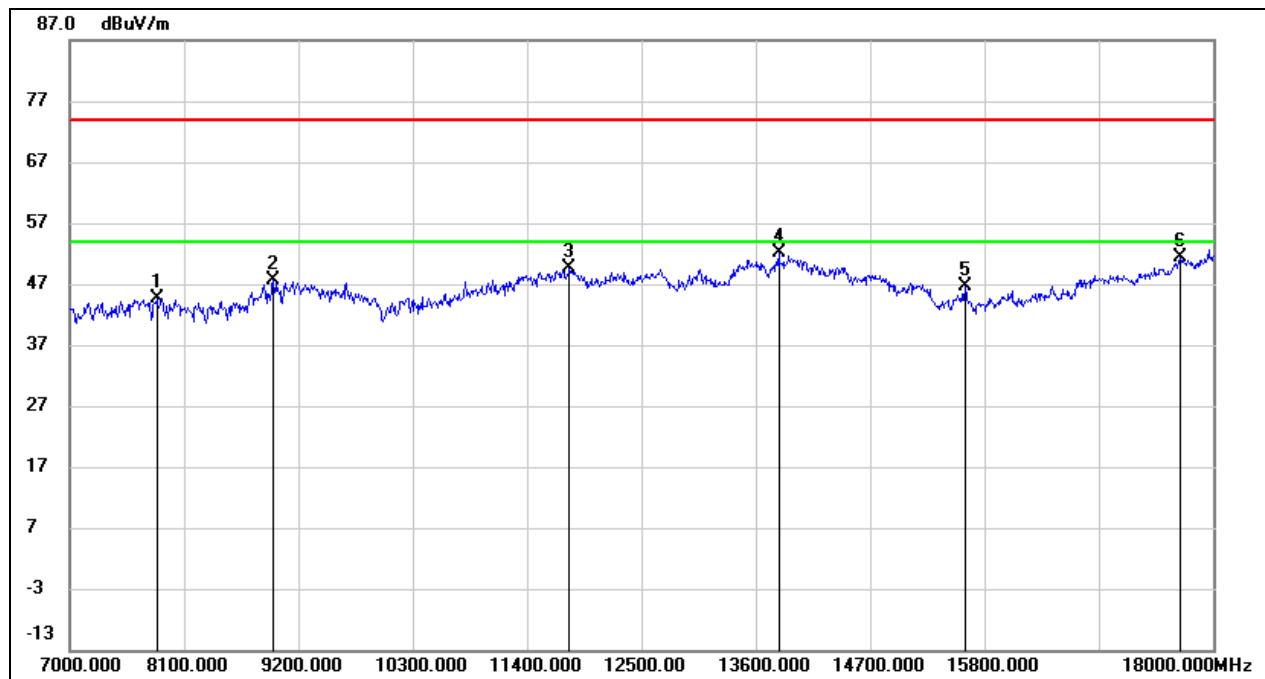
|            |                |               |              |
|------------|----------------|---------------|--------------|
| Test Mode: | 802.11ac VHT80 | Channel:      | 5210         |
| Polarity:  | Horizontal     | Test Voltage: | AC 120V_60Hz |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------|--------------------|-------------------|----------------|--------|
| 1   | 7935.000           | 38.13             | 6.49              | 44.62              | 74.00             | -29.38         | peak   |
| 2   | 9255.000           | 37.15             | 10.51             | 47.66              | 74.00             | -26.34         | peak   |
| 3   | 11840.000          | 32.98             | 17.40             | 50.38              | 74.00             | -23.62         | peak   |
| 4   | 14084.000          | 30.79             | 21.52             | 52.31              | 74.00             | -21.69         | peak   |
| 5   | 15118.000          | 30.27             | 17.44             | 47.71              | 74.00             | -26.29         | peak   |
| 6   | 17857.000          | 26.64             | 25.14             | 51.78              | 74.00             | -22.22         | peak   |



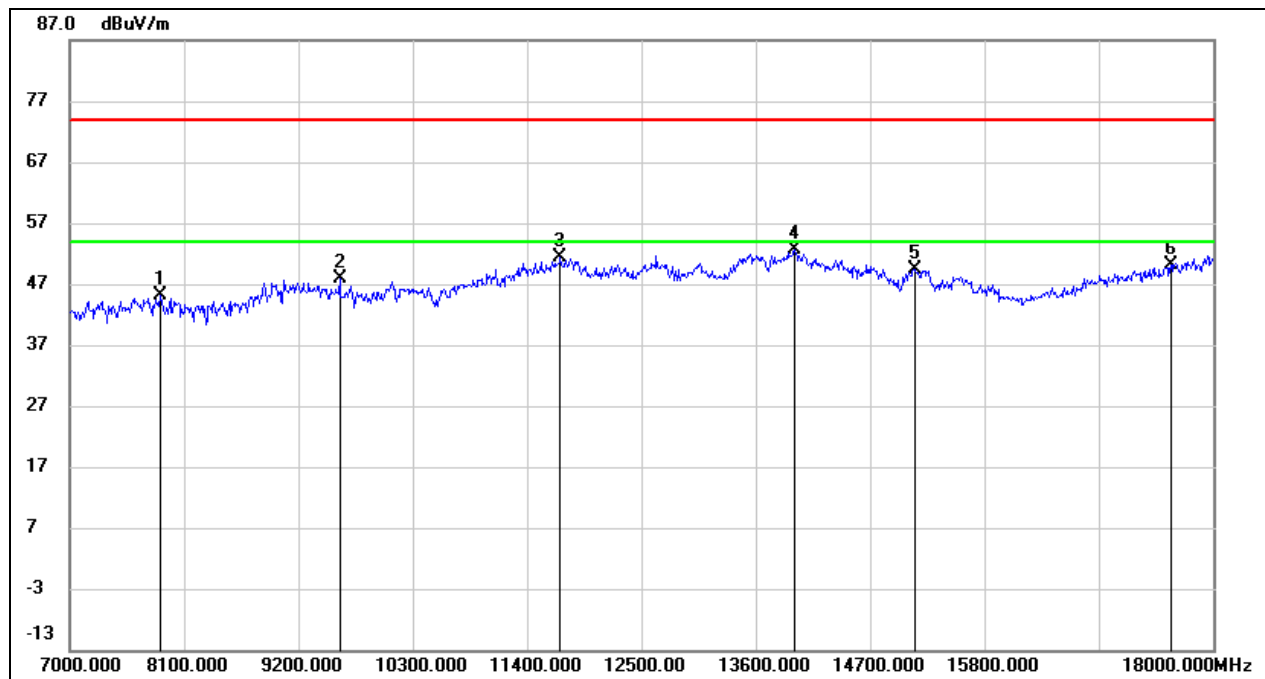
|            |                |               |              |
|------------|----------------|---------------|--------------|
| Test Mode: | 802.11ac VHT80 | Channel:      | 5210         |
| Polarity:  | Vertical       | Test Voltage: | AC 120V_60Hz |



| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------|-----------------|----------------|-------------|--------|
| 1   | 7836.000        | 38.17          | 6.58           | 44.75           | 74.00          | -29.25      | peak   |
| 2   | 8958.000        | 37.58          | 10.05          | 47.63           | 74.00          | -26.37      | peak   |
| 3   | 11807.000       | 32.17          | 17.34          | 49.51           | 74.00          | -24.49      | peak   |
| 4   | 13820.000       | 30.58          | 21.43          | 52.01           | 74.00          | -21.99      | peak   |
| 5   | 15613.000       | 29.76          | 16.76          | 46.52           | 74.00          | -27.48      | peak   |
| 6   | 17681.000       | 27.48          | 23.94          | 51.42           | 74.00          | -22.58      | peak   |



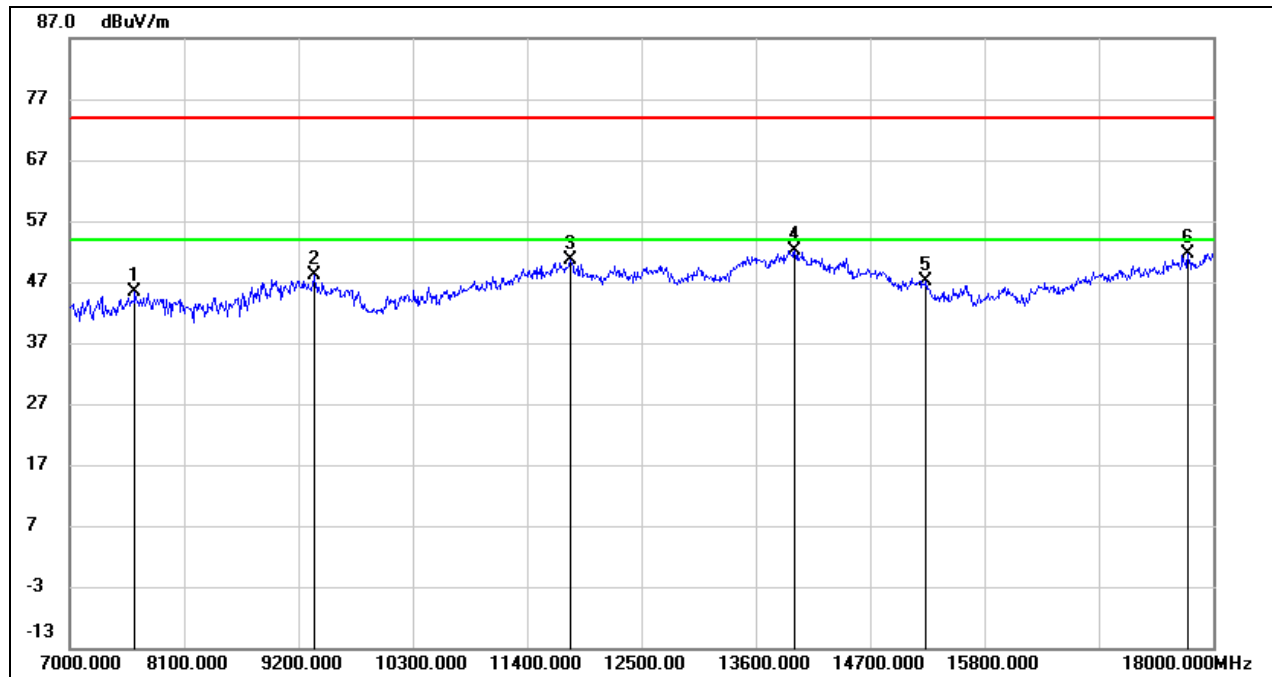
|            |                |               |              |
|------------|----------------|---------------|--------------|
| Test Mode: | 802.11ac VHT80 | Channel:      | 5775         |
| Polarity:  | Horizontal     | Test Voltage: | AC 120V_60Hz |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------|--------------------|-------------------|----------------|--------|
| 1   | 7869.000           | 38.56             | 6.54              | 45.10              | 74.00             | -28.90         | peak   |
| 2   | 9596.000           | 36.91             | 10.87             | 47.78              | 74.00             | -26.22         | peak   |
| 3   | 11719.000          | 34.17             | 17.18             | 51.35              | 74.00             | -22.65         | peak   |
| 4   | 13974.000          | 30.71             | 21.82             | 52.53              | 74.00             | -21.47         | peak   |
| 5   | 15129.000          | 32.06             | 17.43             | 49.49              | 74.00             | -24.51         | peak   |
| 6   | 17593.000          | 26.78             | 23.34             | 50.12              | 74.00             | -23.88         | peak   |



|            |                |               |              |
|------------|----------------|---------------|--------------|
| Test Mode: | 802.11ac VHT80 | Channel:      | 5775         |
| Polarity:  | Vertical       | Test Voltage: | AC 120V_60Hz |



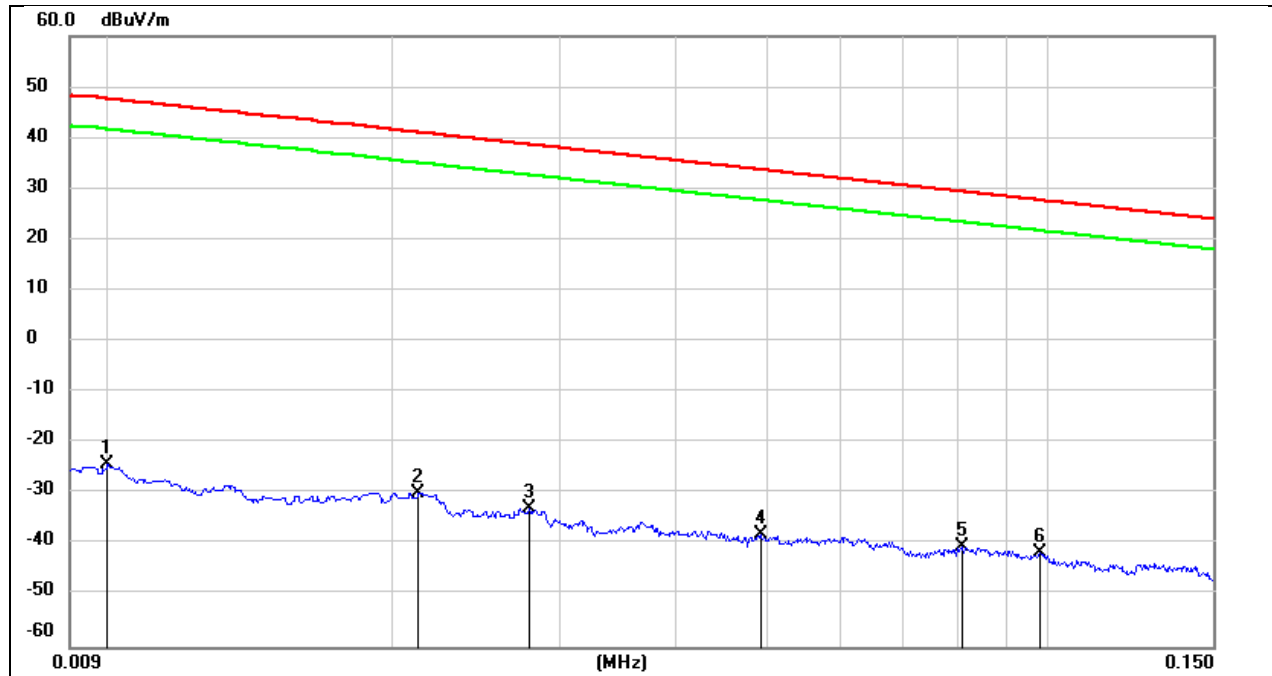
| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------|--------------------|-------------------|----------------|--------|
| 1   | 7627.000           | 38.68             | 6.76              | 45.44              | 74.00             | -28.56         | peak   |
| 2   | 9354.000           | 37.53             | 10.56             | 48.09              | 74.00             | -25.91         | peak   |
| 3   | 11818.000          | 33.27             | 17.36             | 50.63              | 74.00             | -23.37         | peak   |
| 4   | 13974.000          | 30.37             | 21.82             | 52.19              | 74.00             | -21.81         | peak   |
| 5   | 15239.000          | 29.86             | 17.22             | 47.08              | 74.00             | -26.92         | peak   |
| 6   | 17758.000          | 27.13             | 24.46             | 51.59              | 74.00             | -22.41         | peak   |





#### 8.4. SPURIOUS EMISSIONS(9 KHZ~30 MHZ)

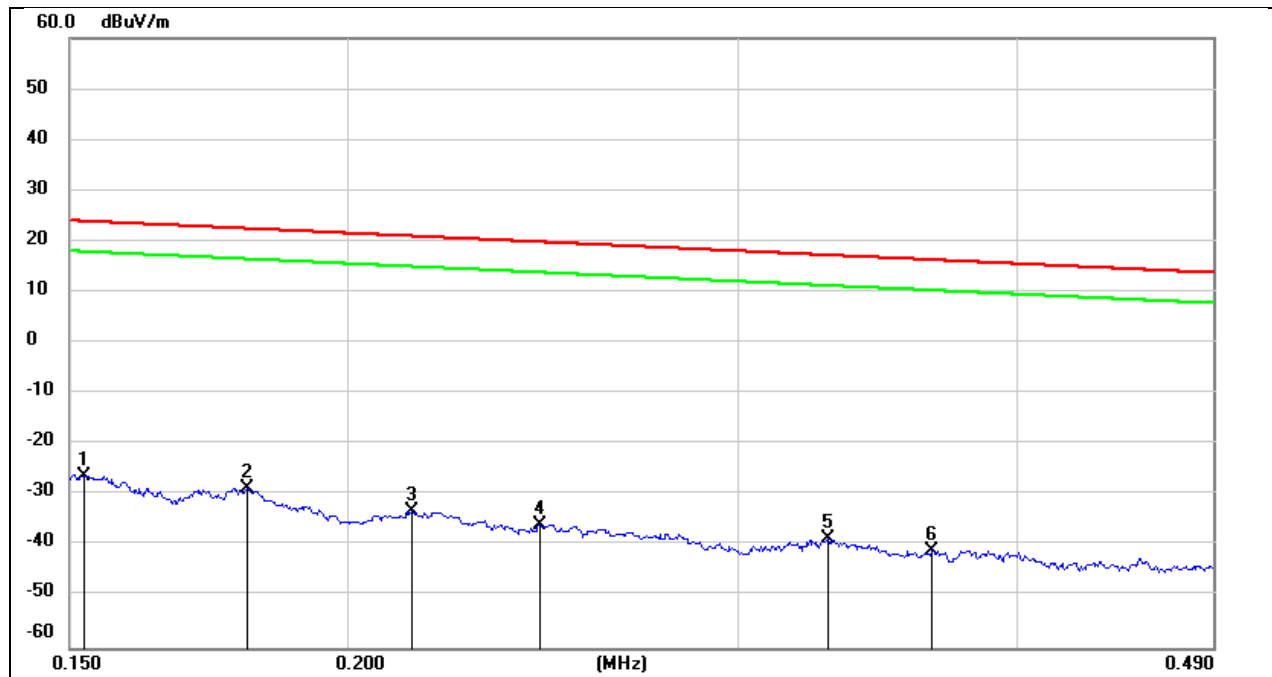
|            |                    |               |              |
|------------|--------------------|---------------|--------------|
| Test Mode: | 802.11a20          | Channel:      | 5180         |
| Polarity:  | FACE ON TO THE EUT | Test Voltage: | AC 120V_60Hz |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------|--------------------|-------------------|----------------|--------|
| 1   | 0.0100             | 77.22             | -101.40           | -24.18             | 47.60             | -71.78         | peak   |
| 2   | 0.0212             | 71.54             | -101.35           | -29.81             | 41.07             | -70.88         | peak   |
| 3   | 0.0279             | 68.67             | -101.38           | -32.71             | 38.69             | -71.40         | peak   |
| 4   | 0.0492             | 63.55             | -101.47           | -37.92             | 33.76             | -71.68         | peak   |
| 5   | 0.0806             | 61.18             | -101.63           | -40.45             | 29.47             | -69.92         | peak   |
| 6   | 0.0981             | 60.27             | -101.78           | -41.51             | 27.77             | -69.28         | peak   |



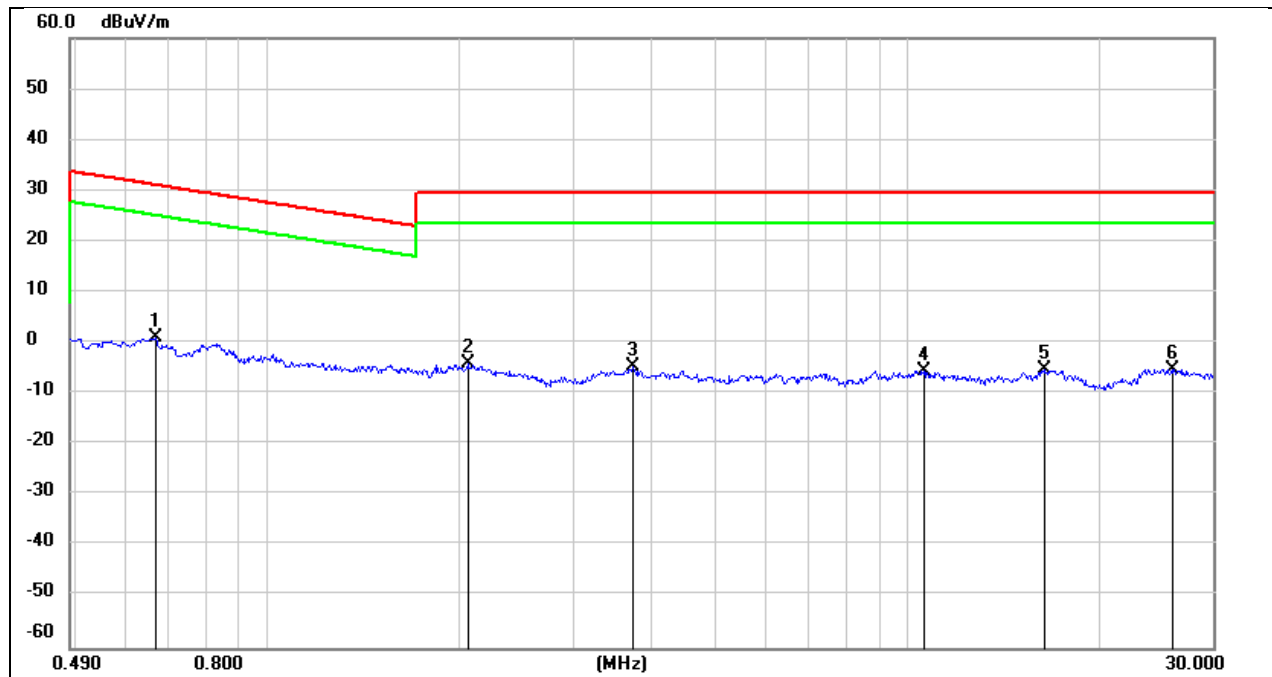
|            |                    |               |              |
|------------|--------------------|---------------|--------------|
| Test Mode: | 802.11a20          | Channel:      | 5180         |
| Polarity:  | FACE ON TO THE EUT | Test Voltage: | AC 120V_60Hz |



| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------|-----------------|----------------|-------------|--------|
| 1   | 0.1524          | 75.30          | -101.63        | -26.33          | 23.94          | -50.27      | peak   |
| 2   | 0.1801          | 73.03          | -101.68        | -28.65          | 22.50          | -51.15      | peak   |
| 3   | 0.2139          | 68.68          | -101.74        | -33.06          | 21.00          | -54.06      | peak   |
| 4   | 0.2442          | 66.03          | -101.79        | -35.76          | 19.85          | -55.61      | peak   |
| 5   | 0.3286          | 63.21          | -101.88        | -38.67          | 17.27          | -55.94      | peak   |
| 6   | 0.3662          | 61.08          | -101.93        | -40.85          | 16.33          | -57.18      | peak   |



|            |                    |               |              |
|------------|--------------------|---------------|--------------|
| Test Mode: | 802.11a20          | Channel:      | 5180         |
| Polarity:  | FACE ON TO THE EUT | Test Voltage: | AC 120V_60Hz |

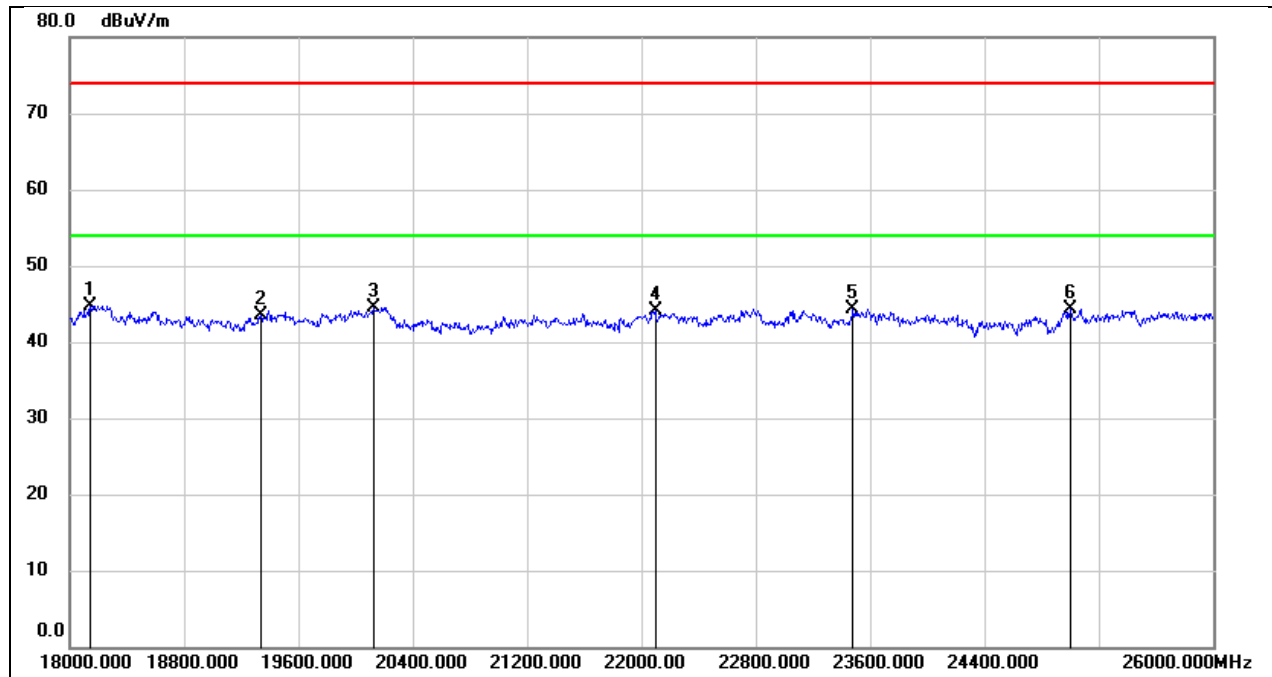


| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------|-----------------|----------------|-------------|--------|
| 1   | 0.6671          | 63.25          | -62.10         | 1.15            | 31.12          | -29.97      | peak   |
| 2   | 2.0539          | 57.70          | -61.81         | -4.11           | 29.54          | -33.65      | peak   |
| 3   | 3.7100          | 56.70          | -61.41         | -4.71           | 29.54          | -34.25      | peak   |
| 4   | 10.6119         | 55.32          | -60.82         | -5.50           | 29.54          | -35.04      | peak   |
| 5   | 16.3959         | 55.67          | -60.96         | -5.29           | 29.54          | -34.83      | peak   |
| 6   | 25.8978         | 55.26          | -60.36         | -5.10           | 29.54          | -34.64      | peak   |



### 8.5. SPURIOUS EMISSIONS(18 GHZ~26 GHZ)

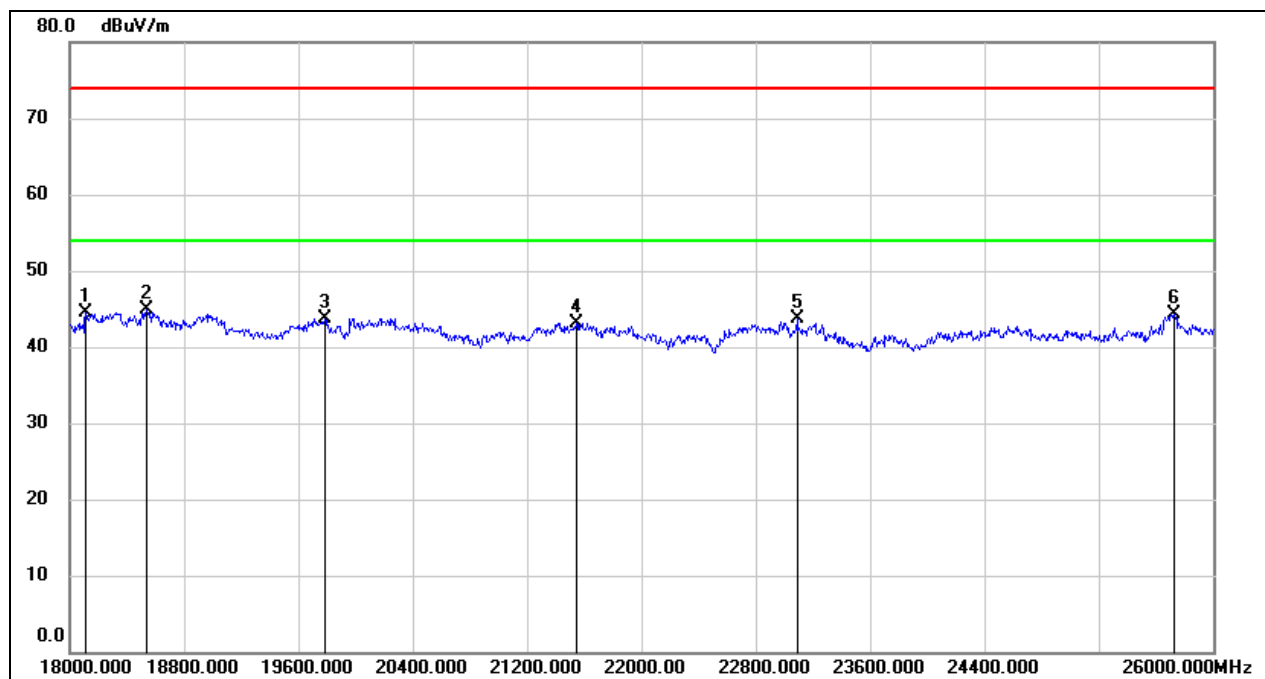
|            |            |               |              |
|------------|------------|---------------|--------------|
| Test Mode: | 802.11a 20 | Channel:      | 5180         |
| Polarity:  | Horizontal | Test Voltage: | AC 120V_60Hz |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------|--------------------|-------------------|----------------|--------|
| 1   | 18144.000          | 50.27             | -5.48             | 44.79              | 74.00             | -29.21         | peak   |
| 2   | 19336.000          | 49.04             | -5.58             | 43.46              | 74.00             | -30.54         | peak   |
| 3   | 20128.000          | 50.12             | -5.53             | 44.59              | 74.00             | -29.41         | peak   |
| 4   | 22096.000          | 48.54             | -4.38             | 44.16              | 74.00             | -29.84         | peak   |
| 5   | 23480.000          | 47.54             | -3.16             | 44.38              | 74.00             | -29.62         | peak   |
| 6   | 25000.000          | 46.36             | -2.10             | 44.26              | 74.00             | -29.74         | peak   |



|            |            |               |              |
|------------|------------|---------------|--------------|
| Test Mode: | 802.11a 20 | Channel:      | 5180         |
| Polarity:  | Vertical   | Test Voltage: | AC 120V_60Hz |

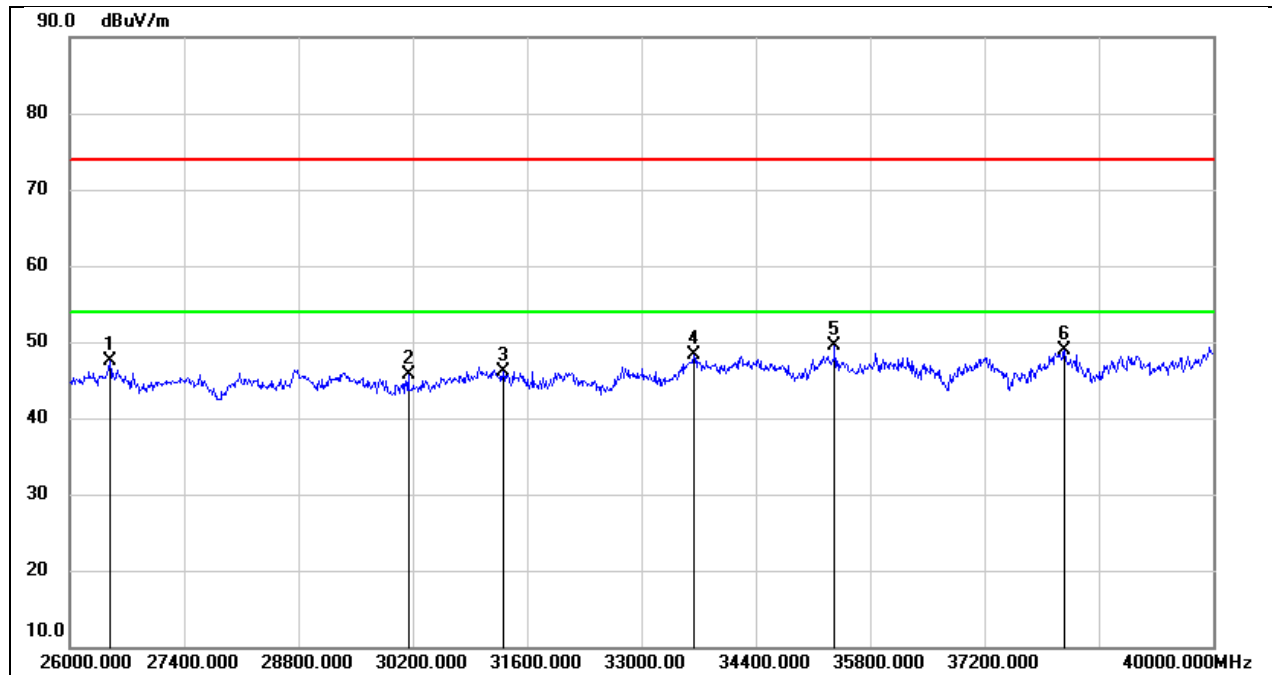


| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------|-----------------|----------------|-------------|--------|
| 1   | 18112.000       | 49.96          | -5.47          | 44.49           | 74.00          | -29.51      | peak   |
| 2   | 18536.000       | 50.10          | -5.27          | 44.83           | 74.00          | -29.17      | peak   |
| 3   | 19784.000       | 49.07          | -5.28          | 43.79           | 74.00          | -30.21      | peak   |
| 4   | 21544.000       | 47.76          | -4.63          | 43.13           | 74.00          | -30.87      | peak   |
| 5   | 23088.000       | 47.02          | -3.41          | 43.61           | 74.00          | -30.39      | peak   |
| 6   | 25728.000       | 45.11          | -0.72          | 44.39           | 74.00          | -29.61      | peak   |



## 8.6. SPURIOUS EMISSIONS(26 GHZ~40 GHZ)

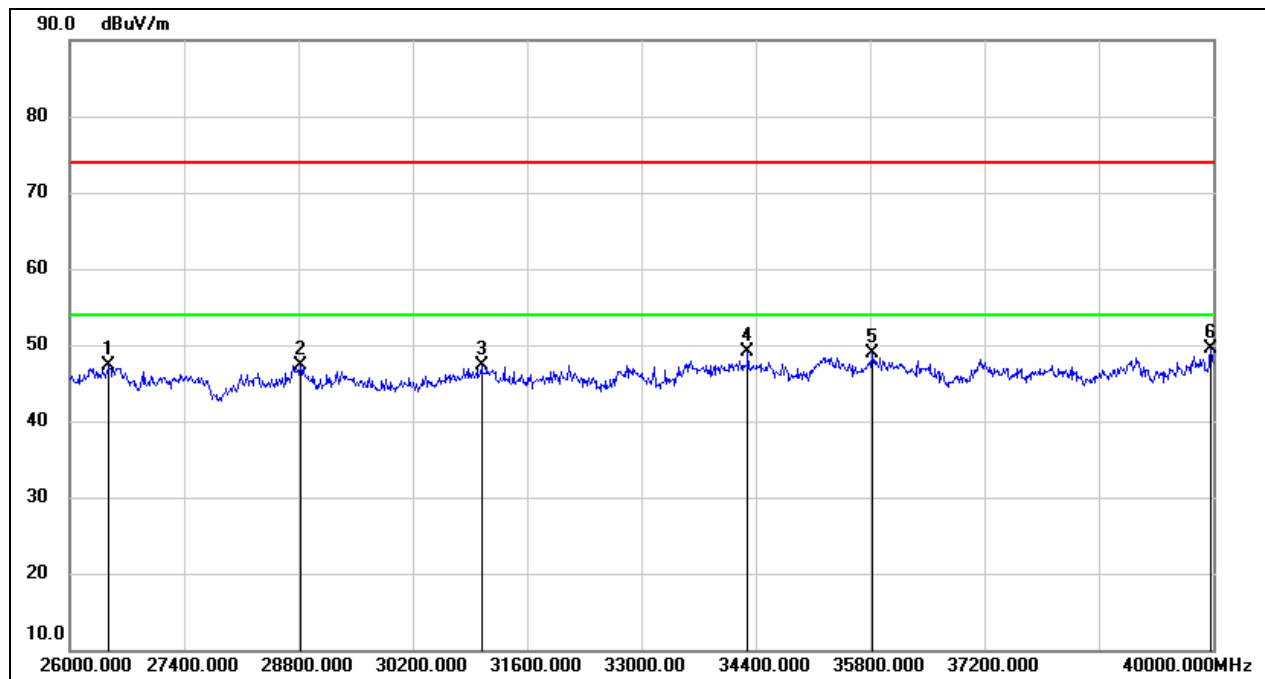
|            |            |               |              |
|------------|------------|---------------|--------------|
| Test Mode: | 802.11a 20 | Channel:      | 5180         |
| Polarity:  | Horizontal | Test Voltage: | AC 120V_60Hz |



| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------|-----------------|----------------|-------------|--------|
| 1   | 26490.000       | 52.29          | -4.74          | 47.55           | 74.00          | -26.45      | peak   |
| 2   | 30144.000       | 46.96          | -1.30          | 45.66           | 74.00          | -28.34      | peak   |
| 3   | 31306.000       | 47.09          | -0.90          | 46.19           | 74.00          | -27.81      | peak   |
| 4   | 33644.000       | 47.81          | 0.42           | 48.23           | 74.00          | -25.77      | peak   |
| 5   | 35366.000       | 46.90          | 2.59           | 49.49           | 74.00          | -24.51      | peak   |
| 6   | 38180.000       | 45.14          | 3.69           | 48.83           | 74.00          | -25.17      | peak   |



|            |            |               |              |
|------------|------------|---------------|--------------|
| Test Mode: | 802.11a 20 | Channel:      | 5180         |
| Polarity:  | Vertical   | Test Voltage: | AC 120V_60Hz |

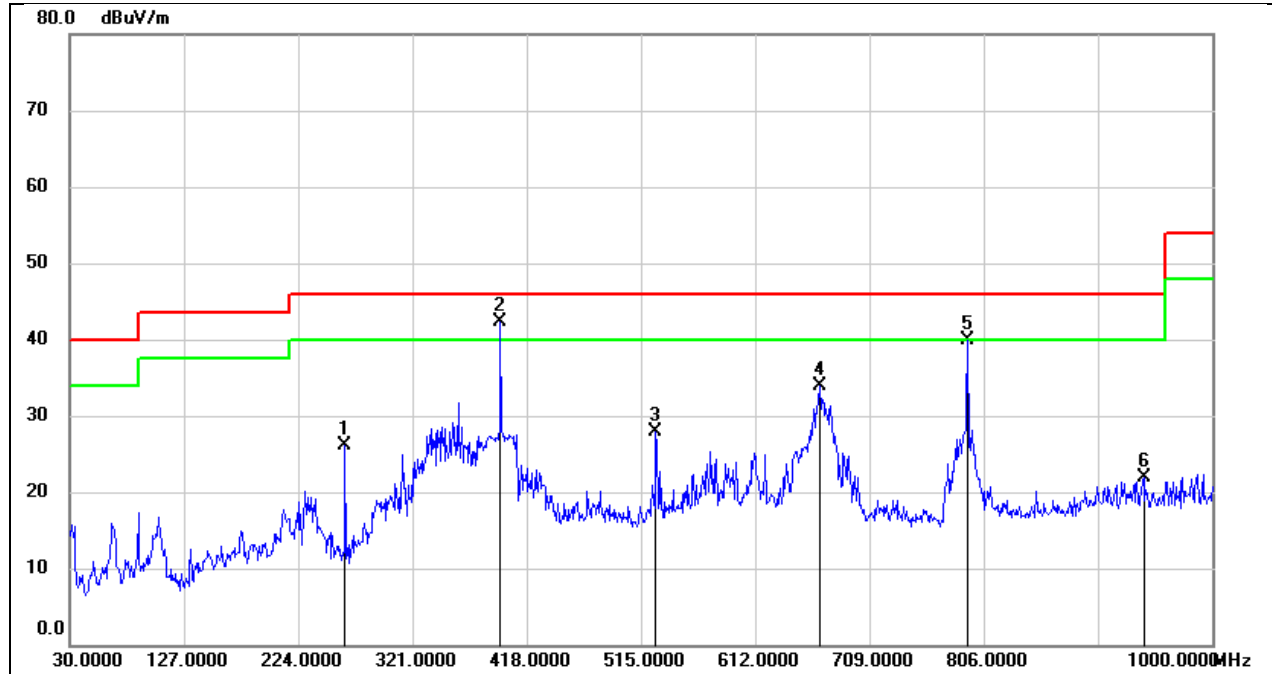


| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------|-----------------|----------------|-------------|--------|
| 1   | 26476.000       | 52.03          | -4.78          | 47.25           | 74.00          | -26.75      | peak   |
| 2   | 28828.000       | 48.13          | -0.79          | 47.34           | 74.00          | -26.66      | peak   |
| 3   | 31040.000       | 47.95          | -0.72          | 47.23           | 74.00          | -26.77      | peak   |
| 4   | 34302.000       | 47.95          | 1.10           | 49.05           | 74.00          | -24.95      | peak   |
| 5   | 35828.000       | 45.25          | 3.67           | 48.92           | 74.00          | -25.08      | peak   |
| 6   | 39972.000       | 44.45          | 5.13           | 49.58           | 74.00          | -24.42      | peak   |



## 8.7. SPURIOUS EMISSIONS(30 MHZ~1 GHZ)

|            |            |               |             |
|------------|------------|---------------|-------------|
| Test Mode: | 802.11a 20 | Channel:      | 5180        |
| Polarity:  | Horizontal | Test Voltage: | AC120V_60Hz |

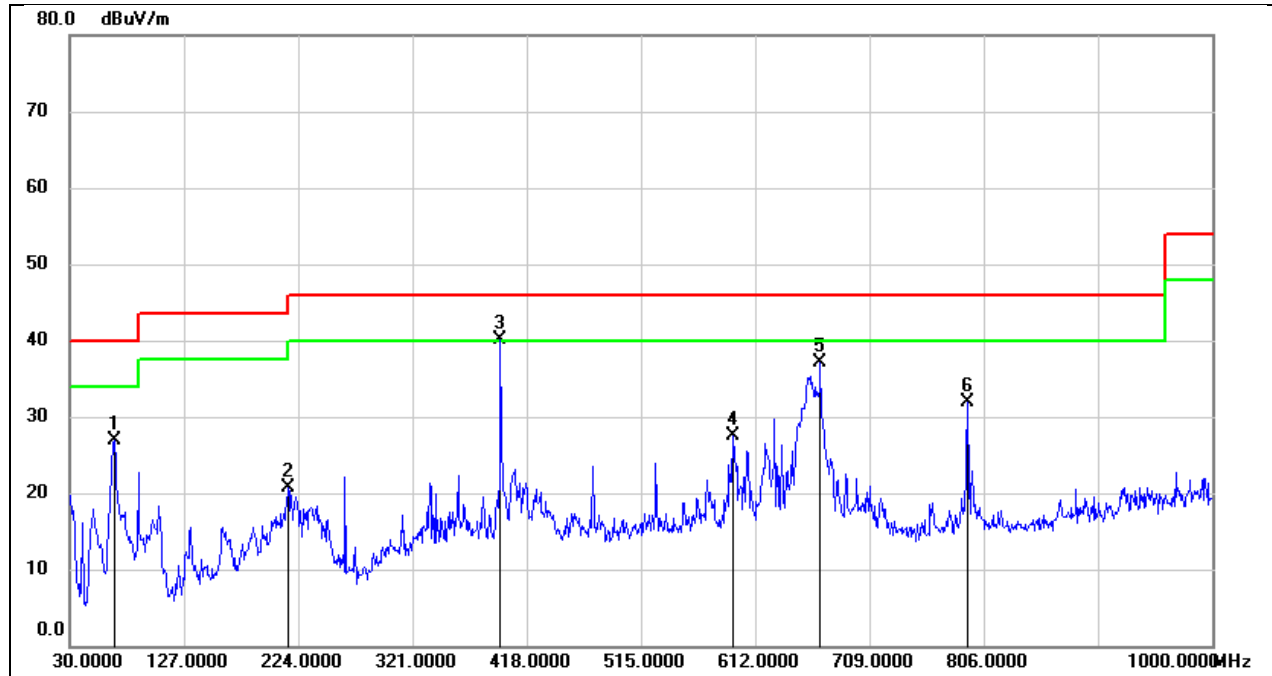


| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------|-----------------|----------------|-------------|--------|
| 1   | 263.7700        | 44.33          | -18.25         | 26.08           | 46.00          | -19.92      | QP     |
| 2   | 395.6900        | 55.80          | -13.41         | 42.39           | 46.00          | -3.61       | QP     |
| 3   | 527.6100        | 38.79          | -10.88         | 27.91           | 46.00          | -18.09      | QP     |
| 4   | 667.2900        | 42.53          | -8.65          | 33.88           | 46.00          | -12.12      | QP     |
| 5   | 792.4200        | 47.20          | -7.37          | 39.83           | 46.00          | -6.17       | QP     |
| 6   | 941.8000        | 26.47          | -4.47          | 22.00           | 46.00          | -24.00      | QP     |





|            |            |               |             |
|------------|------------|---------------|-------------|
| Test Mode: | 802.11a 20 | Channel:      | 5180        |
| Polarity:  | Vertical   | Test Voltage: | AC120V_60Hz |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------|--------------------|-------------------|----------------|--------|
| 1   | 67.8300            | 47.41             | -20.55            | 26.86              | 40.00             | -13.14         | QP     |
| 2   | 215.2700           | 38.39             | -17.76            | 20.63              | 43.50             | -22.87         | QP     |
| 3   | 395.6900           | 53.51             | -13.41            | 40.10              | 46.00             | -5.90          | QP     |
| 4   | 592.6000           | 37.21             | -9.75             | 27.46              | 46.00             | -18.54         | QP     |
| 5   | 667.2900           | 45.68             | -8.65             | 37.03              | 46.00             | -8.97          | QP     |
| 6   | 792.4200           | 39.28             | -7.37             | 31.91              | 46.00             | -14.09         | QP     |

## 9. AC POWER LINE CONDUCTED EMISSION

### LIMITS

Please refer to CFR 47 FCC §15.207 (a).

| FREQUENCY (MHz) | Quasi-peak | Average   |
|-----------------|------------|-----------|
| 0.15 -0.5       | 66 - 56 *  | 56 - 46 * |
| 0.50 -5.0       | 56.00      | 46.00     |
| 5.0 -30.0       | 60.00      | 50.00     |

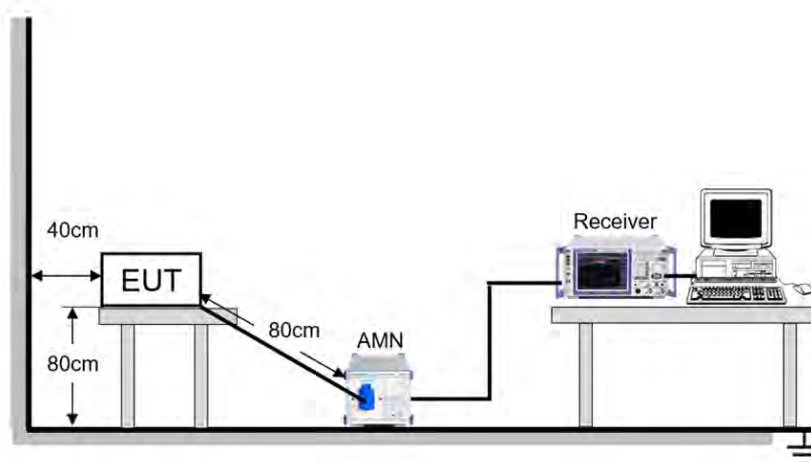
### TEST PROCEDURE

Refer to ANSI C63.10-2013 clause 6.2.

The EUT is put on a table of non-conducting material that is 80 cm high. The vertical conducting wall of shielding is located 40 cm to the rear of the EUT. The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.). A EMI Measurement Receiver (R&S Test Receiver ESR3) is used to test the emissions from both sides of AC line. According to the requirements in Section 6.2 of ANSI C63.10-2013. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30 MHz using CISPR Quasi-Peak and average detector mode. The bandwidth of EMI test receiver is set at 9 kHz.

The arrangement of the equipment is installed to meet the standards and operating in a manner, which tends to maximize its emission characteristics in a normal application.

### TEST SETUP

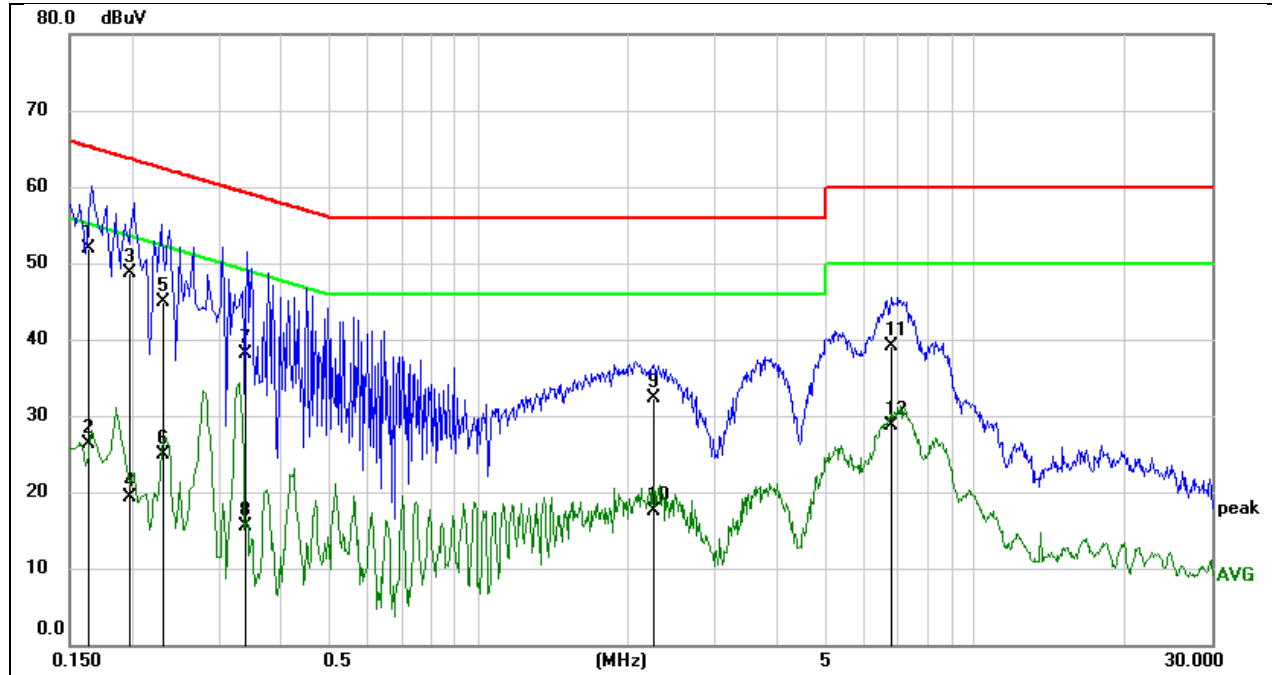


### TEST ENVIRONMENT

|                     |        |                   |                 |
|---------------------|--------|-------------------|-----------------|
| Temperature         | 24.2°C | Relative Humidity | 59.4%           |
| Atmosphere Pressure | 101kPa | Test Voltage      | AC 120 V, 60 Hz |

## TEST RESULTS

|            |            |               |             |
|------------|------------|---------------|-------------|
| Test Mode: | 802.11a 20 | Channel:      | 5180        |
| Line:      | Line       | Test Voltage: | AC120V_60Hz |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>(dB) | Result<br>(dBuV) | Limit<br>(dBuV) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-----------------|------------------|-----------------|----------------|--------|
| 1   | 0.1630             | 42.31             | 9.59            | 51.90            | 65.31           | -13.41         | QP     |
| 2   | 0.1630             | 16.65             | 9.59            | 26.24            | 55.31           | -29.07         | AVG    |
| 3   | 0.1982             | 39.08             | 9.59            | 48.67            | 63.69           | -15.02         | QP     |
| 4   | 0.1982             | 9.62              | 9.59            | 19.21            | 53.69           | -34.48         | AVG    |
| 5   | 0.2336             | 35.41             | 9.56            | 44.97            | 62.32           | -17.35         | QP     |
| 6   | 0.2336             | 15.25             | 9.56            | 24.81            | 52.32           | -27.51         | AVG    |
| 7   | 0.3388             | 28.66             | 9.45            | 38.11            | 59.23           | -21.12         | QP     |
| 8   | 0.3388             | 6.12              | 9.45            | 15.57            | 49.23           | -33.66         | AVG    |
| 9   | 2.2650             | 22.60             | 9.63            | 32.23            | 56.00           | -23.77         | QP     |
| 10  | 2.2650             | 7.93              | 9.63            | 17.56            | 46.00           | -28.44         | AVG    |
| 11  | 6.7937             | 29.43             | 9.63            | 39.06            | 60.00           | -20.94         | QP     |
| 12  | 6.7937             | 19.04             | 9.63            | 28.67            | 50.00           | -21.33         | AVG    |

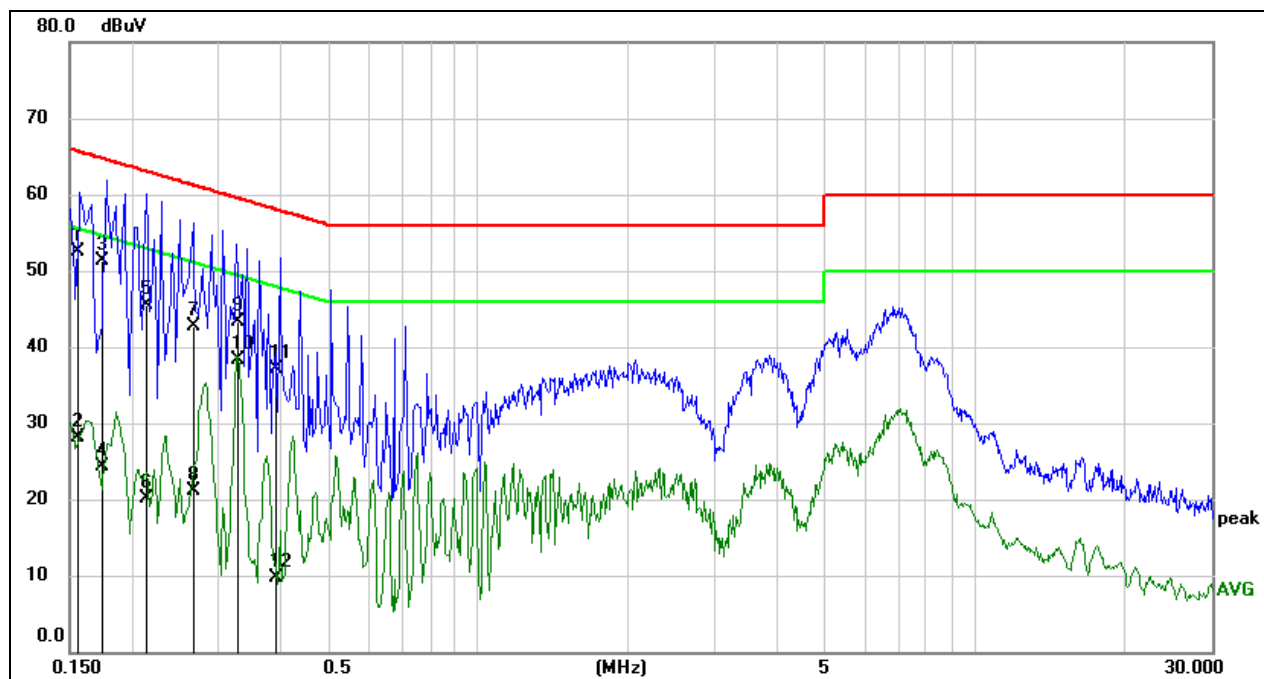
Note:

1. Result = Reading + Correct Factor.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz ~ 150 kHz), 9 kHz (150 kHz ~ 30 MHz).
4. Step size: 80 Hz (0.009 MHz ~ 0.15 MHz), 4 kHz (0.15 MHz ~ 30 MHz), Scan time: auto.

Note: All the modes have been tested, only the worst data was recorded in the report.



|            |            |               |             |
|------------|------------|---------------|-------------|
| Test Mode: | 802.11a 20 | Channel:      | 5180        |
| Line:      | Neutral    | Test Voltage: | AC120V_60Hz |



| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB) | Result (dBuV) | Limit (dBuV) | Margin (dB) | Remark |
|-----|-----------------|----------------|--------------|---------------|--------------|-------------|--------|
| 1   | 0.1556          | 43.00          | 9.50         | 52.50         | 65.70        | -13.20      | QP     |
| 2   | 0.1556          | 18.69          | 9.50         | 28.19         | 55.70        | -27.51      | AVG    |
| 3   | 0.1739          | 41.74          | 9.54         | 51.28         | 64.77        | -13.49      | QP     |
| 4   | 0.1739          | 14.77          | 9.54         | 24.31         | 54.77        | -30.46      | AVG    |
| 5   | 0.2132          | 36.00          | 9.59         | 45.59         | 63.08        | -17.49      | QP     |
| 6   | 0.2132          | 10.55          | 9.59         | 20.14         | 53.08        | -32.94      | AVG    |
| 7   | 0.2648          | 33.12          | 9.57         | 42.69         | 61.28        | -18.59      | QP     |
| 8   | 0.2648          | 11.58          | 9.57         | 21.15         | 51.28        | -30.13      | AVG    |
| 9   | 0.3271          | 33.70          | 9.55         | 43.25         | 59.52        | -16.27      | QP     |
| 10  | 0.3271          | 28.78          | 9.55         | 38.33         | 49.52        | -11.19      | AVG    |
| 11  | 0.3933          | 27.51          | 9.53         | 37.04         | 57.99        | -20.95      | QP     |
| 12  | 0.3933          | 0.25           | 9.53         | 9.78          | 47.99        | -38.21      | AVG    |

Note:

1. Result = Reading + Correct Factor.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz ~ 150 kHz), 9 kHz (150 kHz ~ 30 MHz).
4. Step size: 80 Hz (0.009 MHz ~ 0.15 MHz), 4 kHz (0.15 MHz ~ 30 MHz), Scan time: auto.

Note: All the modes have been tested, only the worst data was recorded in the report.



## 10. ANTENNA REQUIREMENTS

### APPLICABLE REQUIREMENTS

Please refer to FCC §15.203

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

Please refer to FCC §15.247(b)(4)

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

### RESULTS

Complies



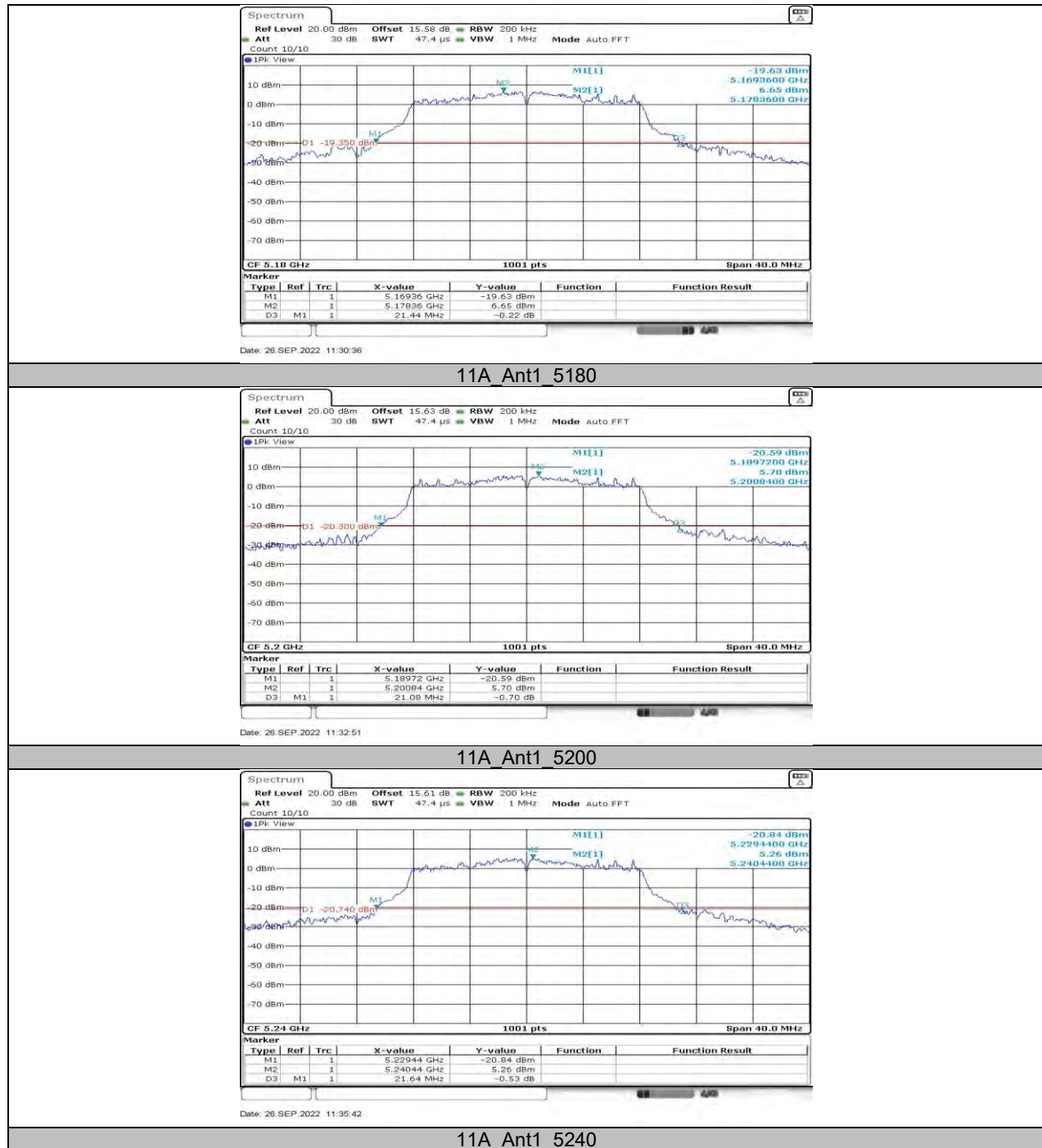
## 11. TEST DATA

### 11.1. APPENDIX A1: EMISSION BANDWIDTH

#### 11.1.1. Test Result

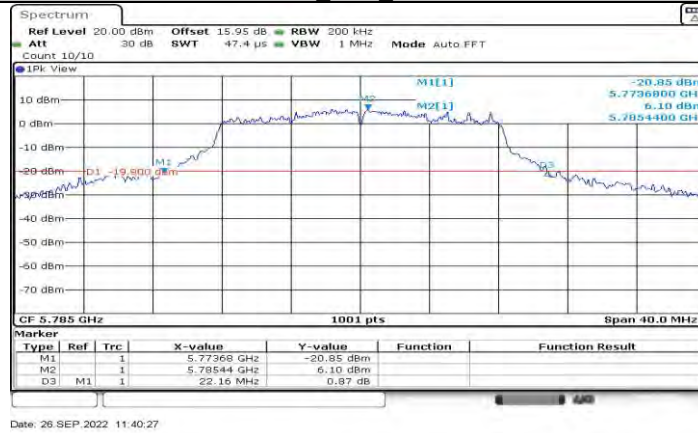
| Test Mode  | Antenna | Channel | 26db EBW [MHz] | FL[MHz] | FH[MHz] | Verdict |
|------------|---------|---------|----------------|---------|---------|---------|
| 11A        | Ant1    | 5180    | 21.44          | 5169.36 | 5190.80 | PASS    |
|            |         | 5200    | 21.08          | 5189.72 | 5210.80 | PASS    |
|            |         | 5240    | 21.64          | 5229.44 | 5251.08 | PASS    |
|            |         | 5745    | 22.68          | 5733.76 | 5756.44 | PASS    |
|            |         | 5785    | 22.16          | 5773.68 | 5795.84 | PASS    |
|            |         | 5825    | 21.84          | 5814.08 | 5835.92 | PASS    |
| 11N20SISO  | Ant1    | 5180    | 20.96          | 5169.56 | 5190.52 | PASS    |
|            |         | 5200    | 21.96          | 5188.80 | 5210.76 | PASS    |
|            |         | 5240    | 21.60          | 5229.40 | 5251.00 | PASS    |
|            |         | 5745    | 22.76          | 5733.28 | 5756.04 | PASS    |
|            |         | 5785    | 21.48          | 5774.24 | 5795.72 | PASS    |
|            |         | 5825    | 21.60          | 5814.28 | 5835.88 | PASS    |
| 11N40SISO  | Ant1    | 5190    | 40.00          | 5170.16 | 5210.16 | PASS    |
|            |         | 5230    | 40.00          | 5210.16 | 5250.16 | PASS    |
|            |         | 5755    | 40.00          | 5735.16 | 5775.16 | PASS    |
|            |         | 5795    | 39.84          | 5775.16 | 5815.00 | PASS    |
| 11AC80SISO | Ant1    | 5210    | 82.40          | 5169.36 | 5251.76 | PASS    |
|            |         | 5775    | 81.28          | 5734.68 | 5815.96 | PASS    |

## 11.1.2. Test Graphs





11A Ant1 5745

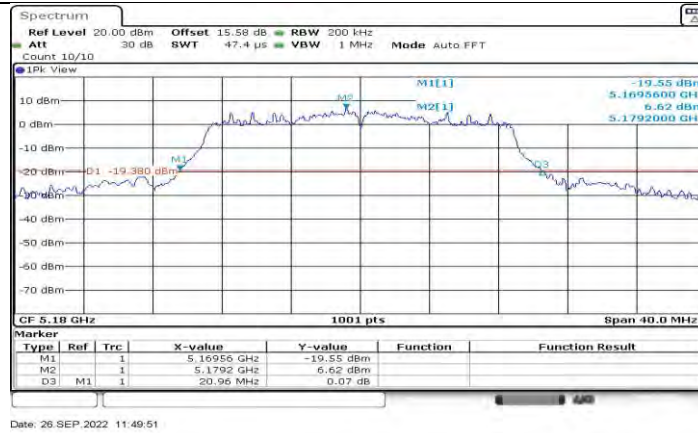


11A Ant1 5785



11A Ant1 5825





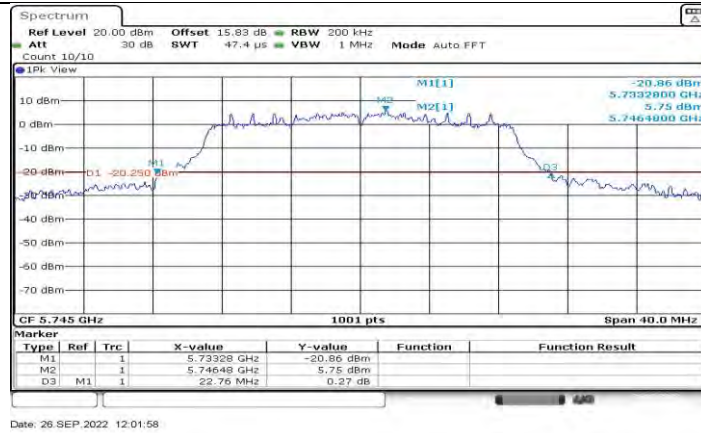
11N20SISO\_Ant1\_5180



11N20SISO\_Ant1\_5200



11N20SISO\_Ant1\_5240



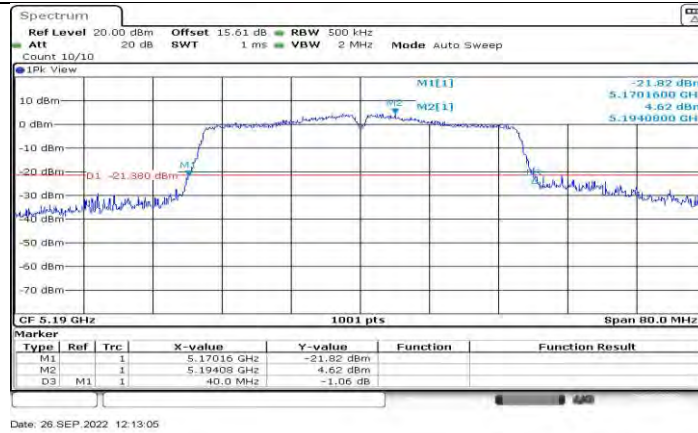
11N20SISO\_Ant1\_5745



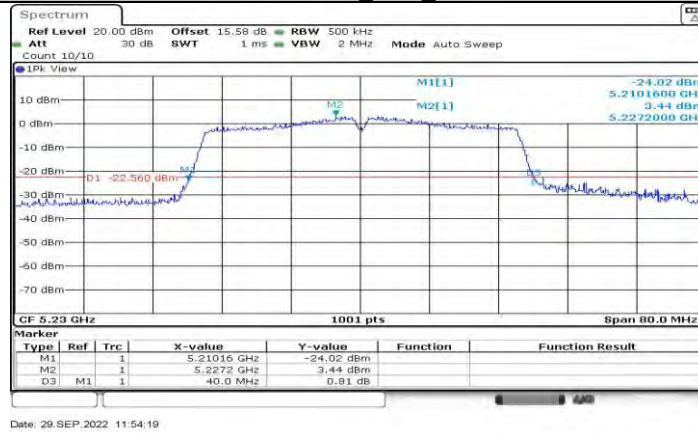
11N20SISO\_Ant1\_5785



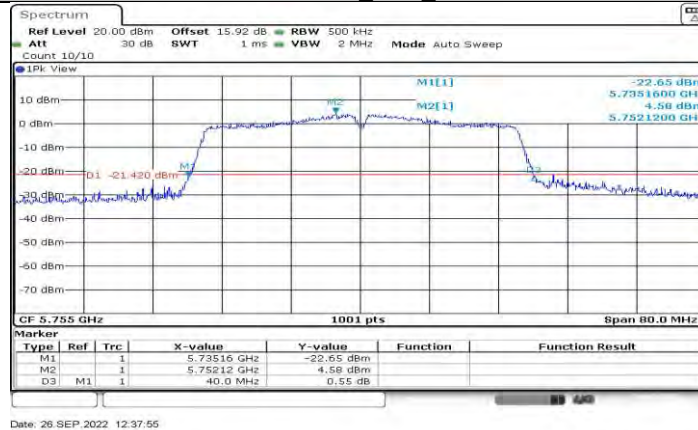
11N20SISO\_Ant1\_5825



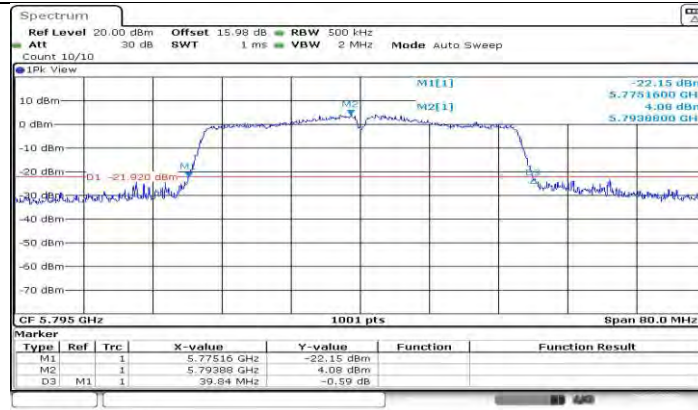
11N40SISO Ant1 5190



11N40SISO Ant1 5230

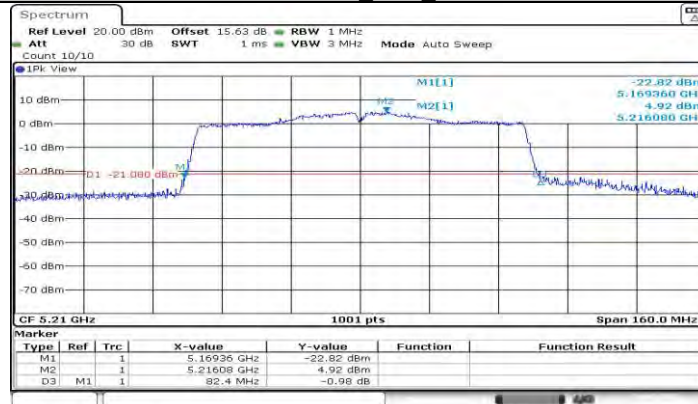


11N40SISO Ant1 5755



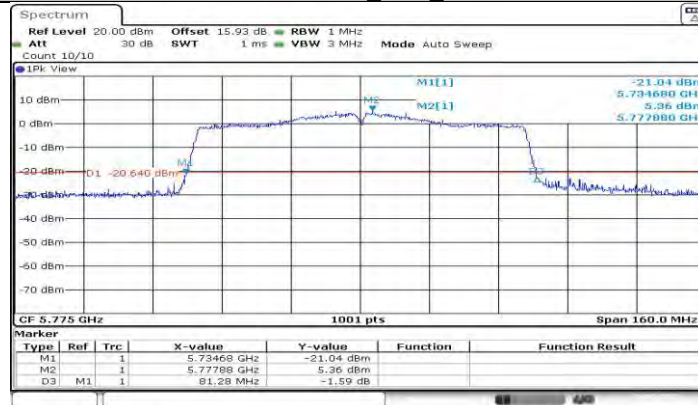
Date: 26 SEP. 2022 12:39:55

## 11N40SISO\_Ant1\_5795



Date: 26 SEP. 2022 12:44:48

## 11AC80SISO\_Ant1\_5210



Date: 26 SEP. 2022 12:47:03

## 11AC80SISO\_Ant1\_5775



## 11.2. APPENDIX A2: OCCUPIED CHANNEL BANDWIDTH

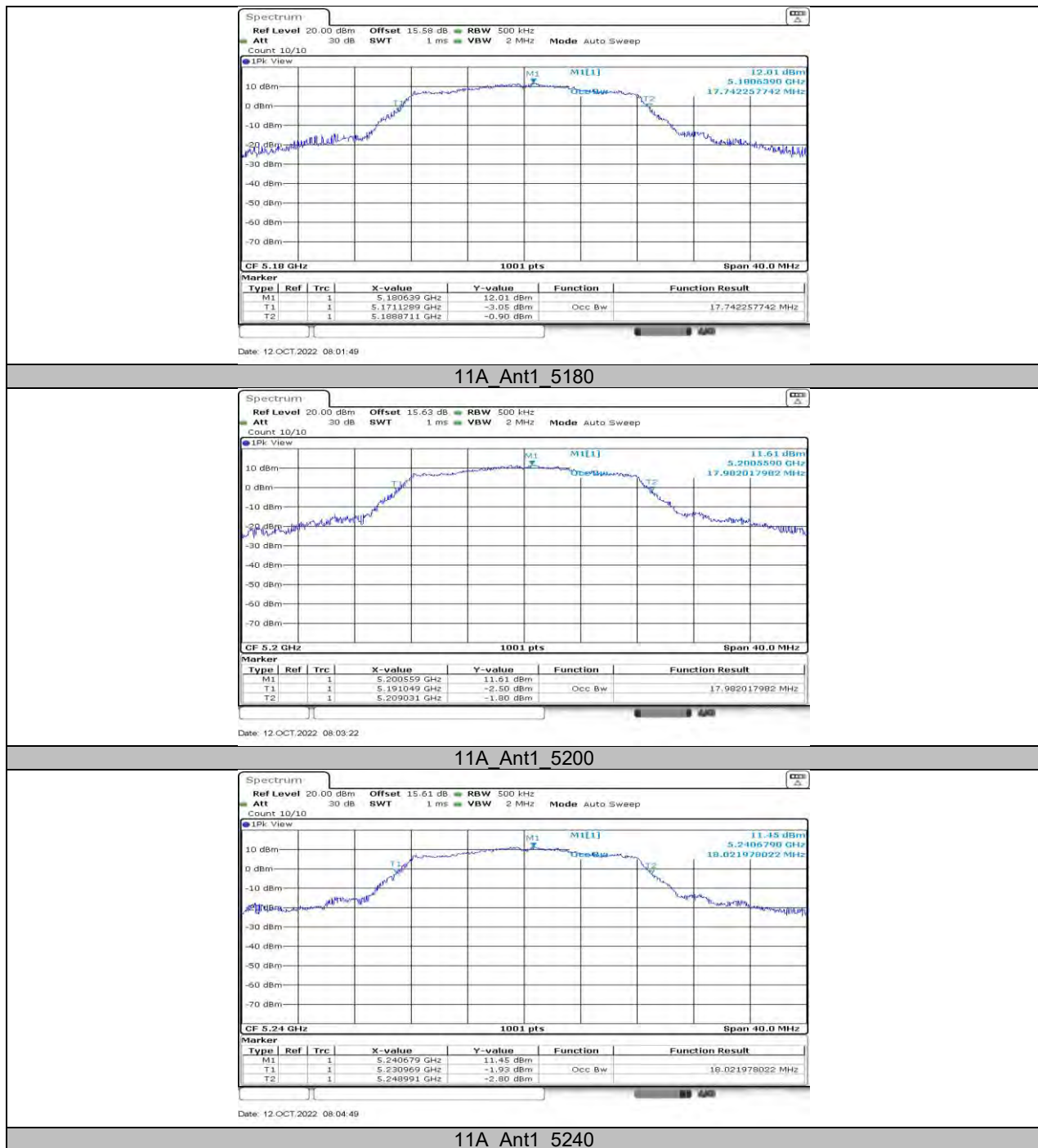
### 11.2.1. Test Result

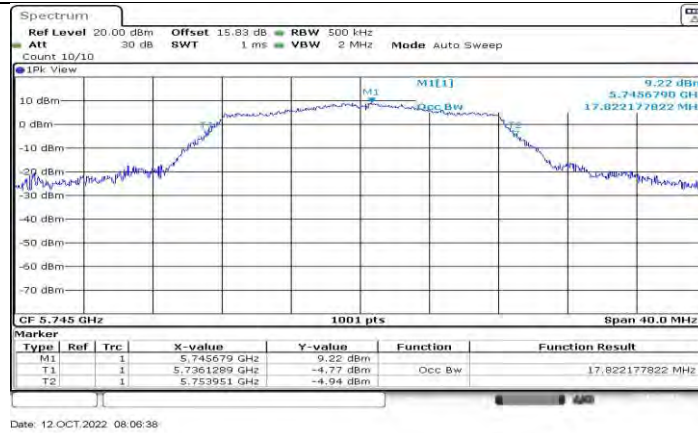
| Test Mode  | Antenna | Channel | OCB [MHz] | FL[MHz]   | FH[MHz]   | Verdict |
|------------|---------|---------|-----------|-----------|-----------|---------|
| 11A        | Ant1    | 5180    | 17.742    | 5171.1289 | 5188.8711 | PASS    |
|            |         | 5200    | 17.982    | 5191.0490 | 5209.0310 | PASS    |
|            |         | 5240    | 18.022    | 5230.9690 | 5248.9910 | PASS    |
|            |         | 5745    | 17.822    | 5736.1289 | 5753.9510 | PASS    |
|            |         | 5785    | 17.702    | 5776.1289 | 5793.8312 | PASS    |
|            |         | 5825    | 17.782    | 5816.0889 | 5833.8711 | PASS    |
| 11N20SISO  | Ant1    | 5180    | 18.501    | 5170.8092 | 5189.3107 | PASS    |
|            |         | 5200    | 18.741    | 5190.7293 | 5209.4705 | PASS    |
|            |         | 5240    | 18.941    | 5230.6494 | 5249.5904 | PASS    |
|            |         | 5745    | 18.661    | 5735.7692 | 5754.4306 | PASS    |
|            |         | 5785    | 18.581    | 5775.7293 | 5794.3107 | PASS    |
|            |         | 5825    | 18.701    | 5815.6893 | 5834.3906 | PASS    |
| 11N40SISO  | Ant1    | 5190    | 36.364    | 5171.9381 | 5208.3017 | PASS    |
|            |         | 5230    | 36.364    | 5212.0180 | 5248.3816 | PASS    |
|            |         | 5755    | 36.923    | 5736.8581 | 5773.7812 | PASS    |
|            |         | 5795    | 36.683    | 5776.7782 | 5813.4615 | PASS    |
| 11AC80SISO | Ant1    | 5210    | 75.764    | 5172.4376 | 5248.2018 | PASS    |
|            |         | 5775    | 75.604    | 5737.4376 | 5813.0420 | PASS    |



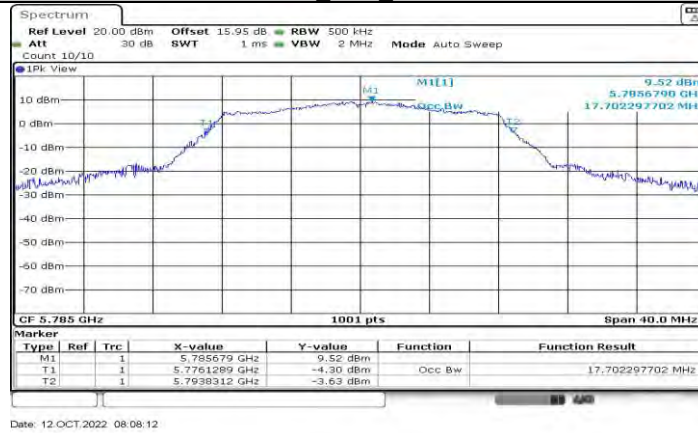


## 11.2.2. Test Graphs





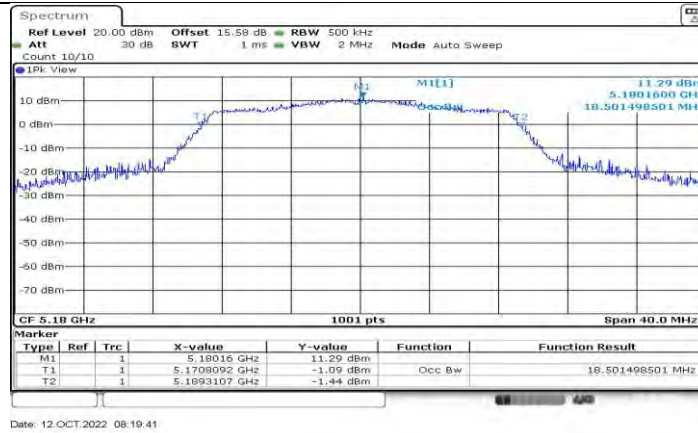
11A\_Ant1\_5745



11A\_Ant1\_5785



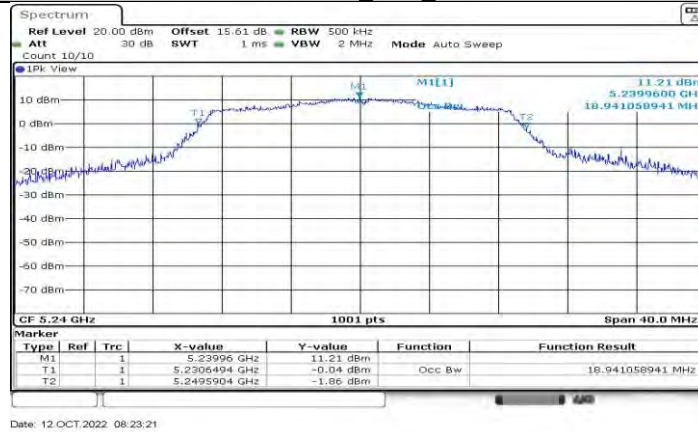
11A\_Ant1\_5825



11N20SISO Ant1 5180

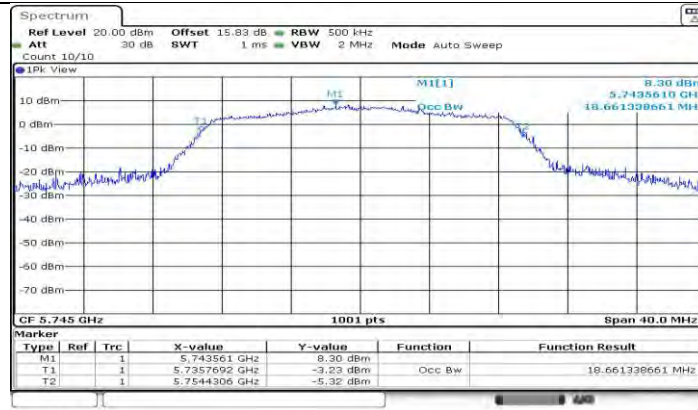


11N20SISO Ant1 5200

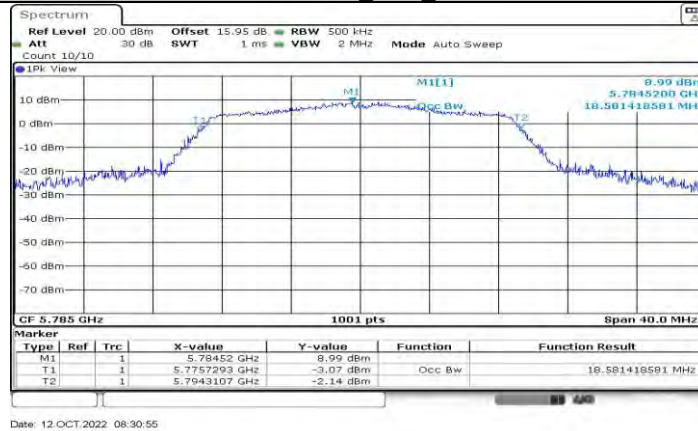


11N20SISO Ant1 5240

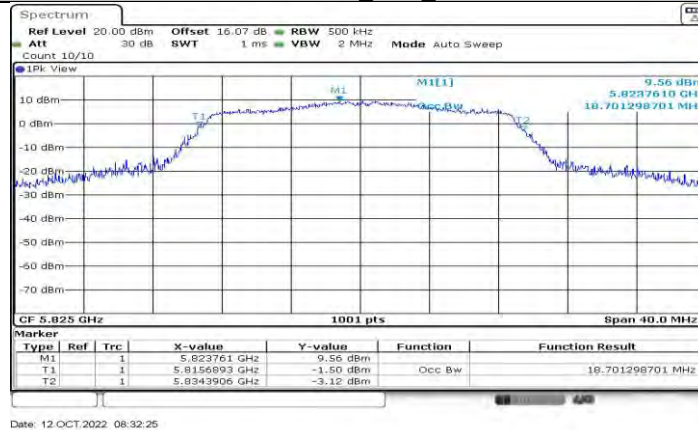




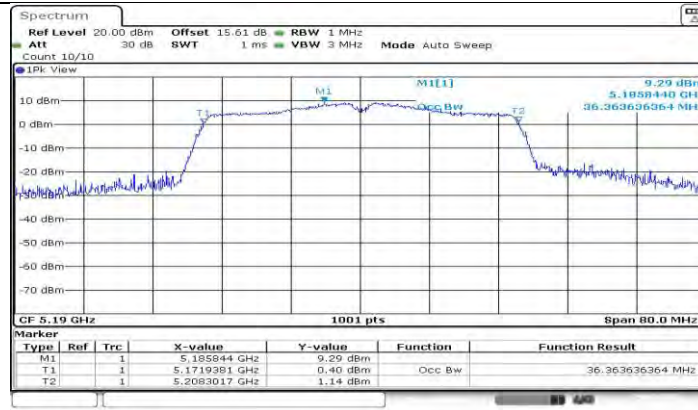
11N20SISO Ant1 5745



11N20SISO Ant1 5785

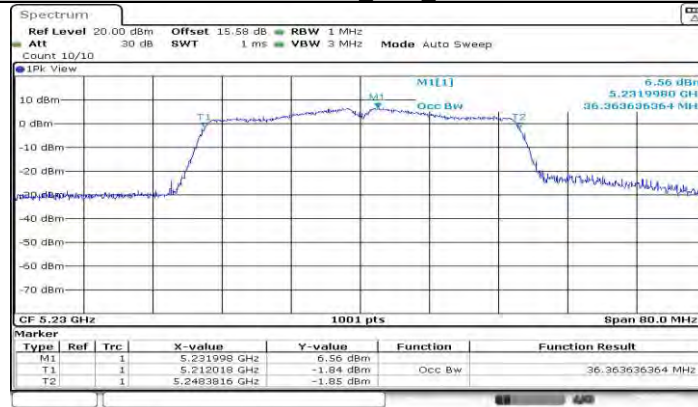


11N20SISO Ant1 5825



Date: 29 SEP 2022 12:01:17

## 11N40SISO Ant1 5190



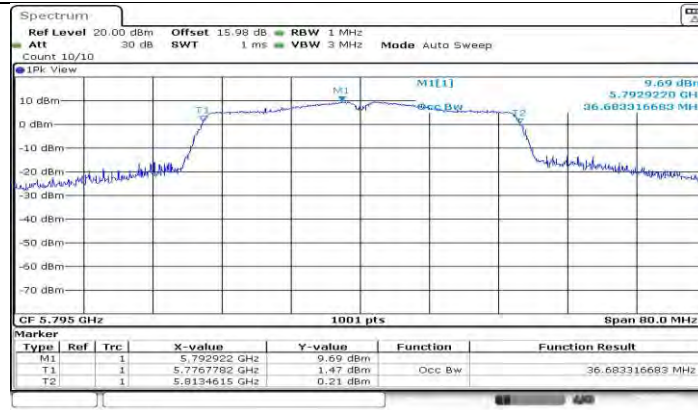
Date: 29 SEP 2022 11:54:25

## 11N40SISO Ant1 5230

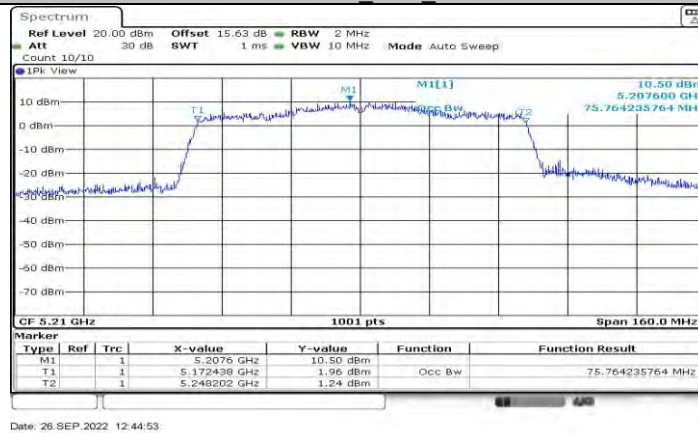


Date: 29 SEP 2022 11:58:36

## 11N40SISO Ant1 5755



11N40SISO\_Ant1\_5795



11AC80SISO\_Ant1\_5210



11AC80SISO\_Ant1\_5775

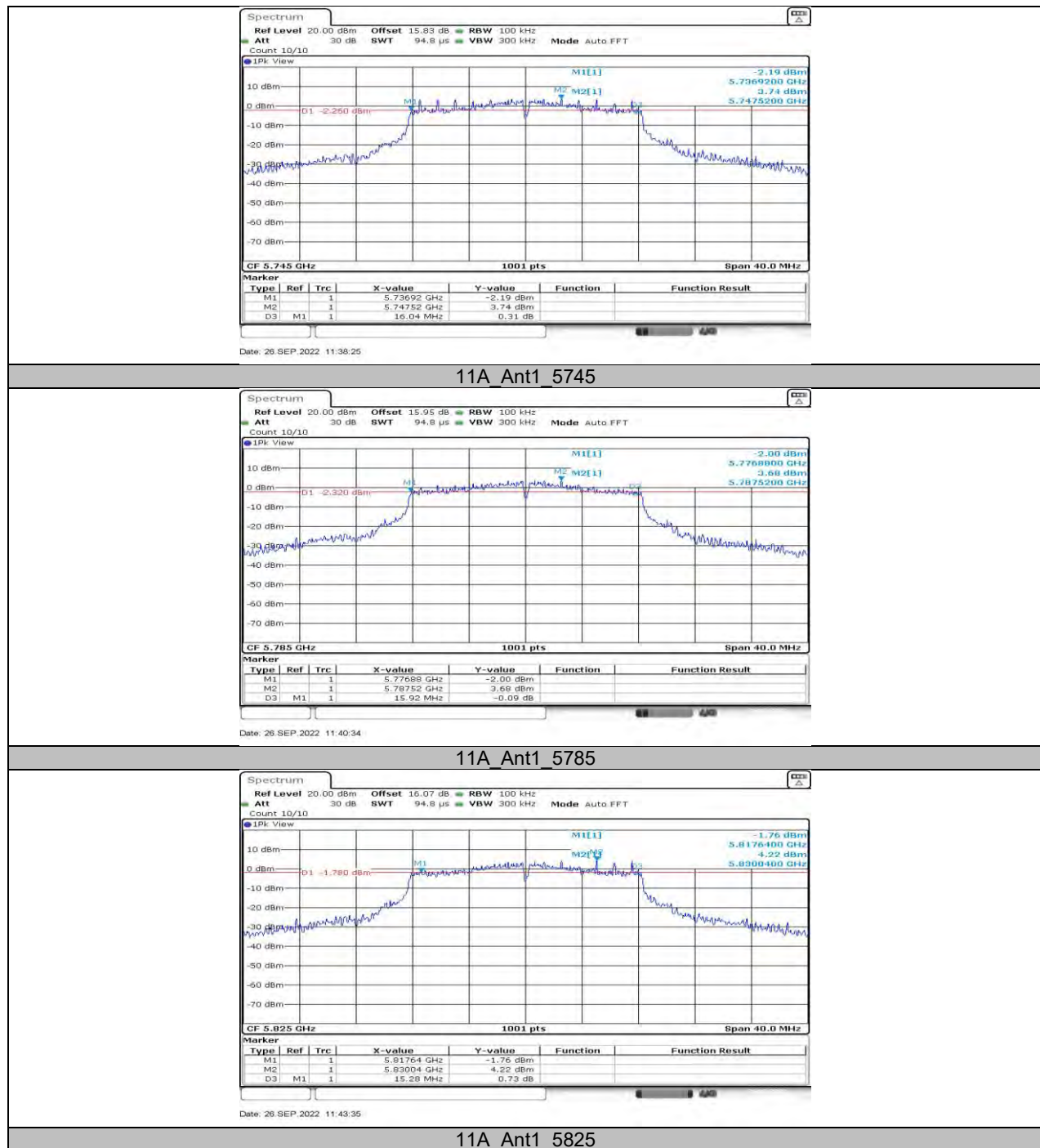


### 11.3. APPENDIX A3: MIN EMISSION BANDWIDTH

#### 11.3.1. Test Result

| Test Mode  | Antenna | Channel | 6db EBW [MHz] | FL[MHz] | FH[MHz] | Limit[MHz] | Verdict |
|------------|---------|---------|---------------|---------|---------|------------|---------|
| 11A        | Ant1    | 5745    | 16.04         | 5736.92 | 5752.96 | 0.5        | PASS    |
|            |         | 5785    | 15.92         | 5776.88 | 5792.80 | 0.5        | PASS    |
|            |         | 5825    | 15.28         | 5817.64 | 5832.92 | 0.5        | PASS    |
| 11N20SISO  | Ant1    | 5745    | 15.88         | 5737.52 | 5753.40 | 0.5        | PASS    |
|            |         | 5785    | 16.44         | 5776.48 | 5792.92 | 0.5        | PASS    |
|            |         | 5825    | 15.16         | 5817.44 | 5832.60 | 0.5        | PASS    |
| 11N40SISO  | Ant1    | 5755    | 35.12         | 5737.48 | 5772.60 | 0.5        | PASS    |
|            |         | 5795    | 35.76         | 5777.24 | 5813.00 | 0.5        | PASS    |
| 11AC80SISO | Ant1    | 5775    | 75.20         | 5737.40 | 5812.60 | 0.5        | PASS    |

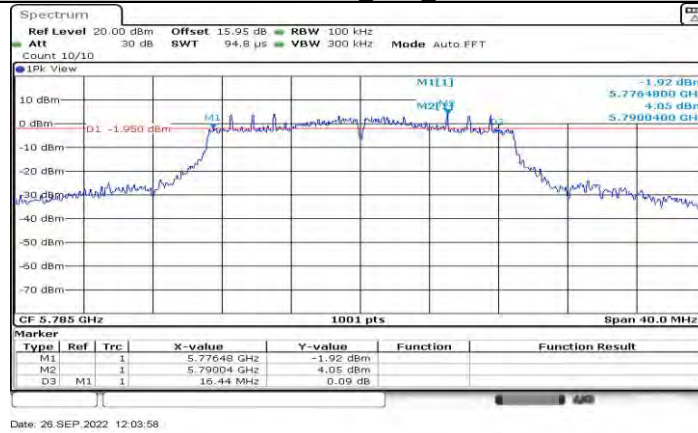
### 11.3.2. Test Graphs



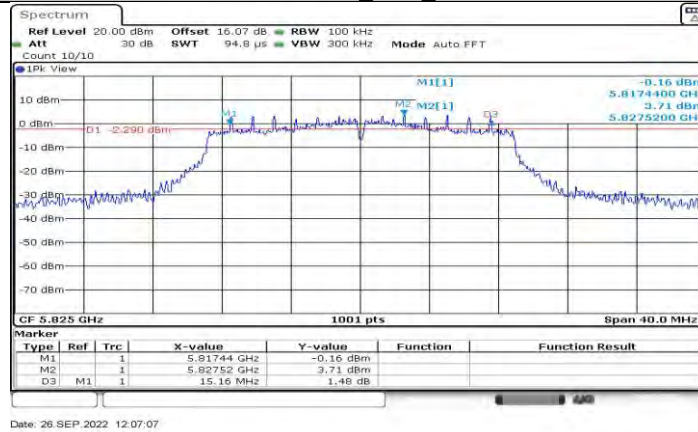




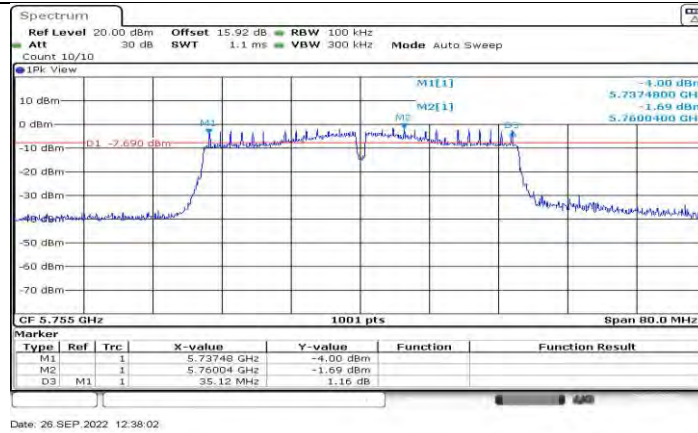
11N20SISO\_Ant1\_5745



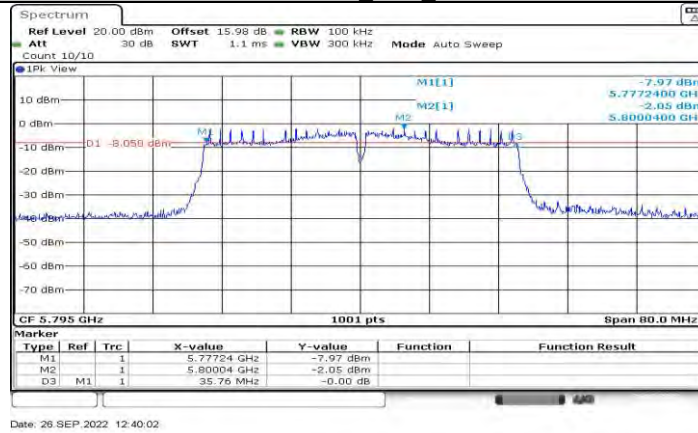
11N20SISO\_Ant1\_5785



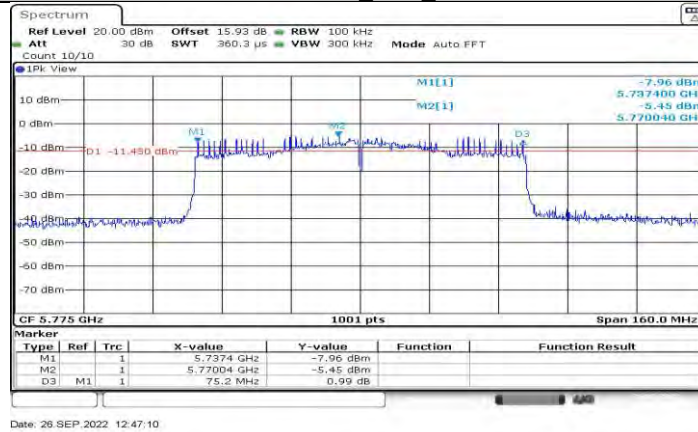
11N20SISO\_Ant1\_5825



11N40SISO\_Ant1\_5755



11N40SISO\_Ant1\_5795



11AC80SISO\_Ant1\_5775



## 11.4. APPENDIX B: MAXIMUM CONDUCTED OUTPUT POWER

### 11.4.1. Test Result

| Test Mode  | Antenna | Channel | Result[dBm] | Limit[dBm] | Verdict |
|------------|---------|---------|-------------|------------|---------|
| 11A        | Ant1    | 5180    | 16.98       | ≤23.98     | PASS    |
|            |         | 5200    | 16.71       | ≤23.98     | PASS    |
|            |         | 5240    | 16.44       | ≤23.98     | PASS    |
|            |         | 5745    | 15.27       | ≤30.00     | PASS    |
|            |         | 5785    | 15.15       | ≤30.00     | PASS    |
|            |         | 5825    | 15.48       | ≤30.00     | PASS    |
| 11N20SISO  | Ant1    | 5180    | 16.20       | ≤23.98     | PASS    |
|            |         | 5200    | 16.21       | ≤23.98     | PASS    |
|            |         | 5240    | 16.03       | ≤23.98     | PASS    |
|            |         | 5745    | 13.27       | ≤30.00     | PASS    |
|            |         | 5785    | 13.97       | ≤30.00     | PASS    |
|            |         | 5825    | 14.84       | ≤30.00     | PASS    |
| 11N40SISO  | Ant1    | 5190    | 13.80       | ≤23.98     | PASS    |
|            |         | 5230    | 13.58       | ≤23.98     | PASS    |
|            |         | 5755    | 13.39       | ≤30.00     | PASS    |
|            |         | 5795    | 14.25       | ≤30.00     | PASS    |
| 11AC80SISO | Ant1    | 5210    | 12.48       | ≤23.98     | PASS    |
|            |         | 5775    | 11.95       | ≤30.00     | PASS    |

Note: 1. Conducted Power=Meas. Level+ Correction Factor

2. The Duty Cycle Factor (refer to section 7.1) had already compensated to the test data.





## 11.5. APPENDIX C: MAXIMUM POWER SPECTRAL DENSITY

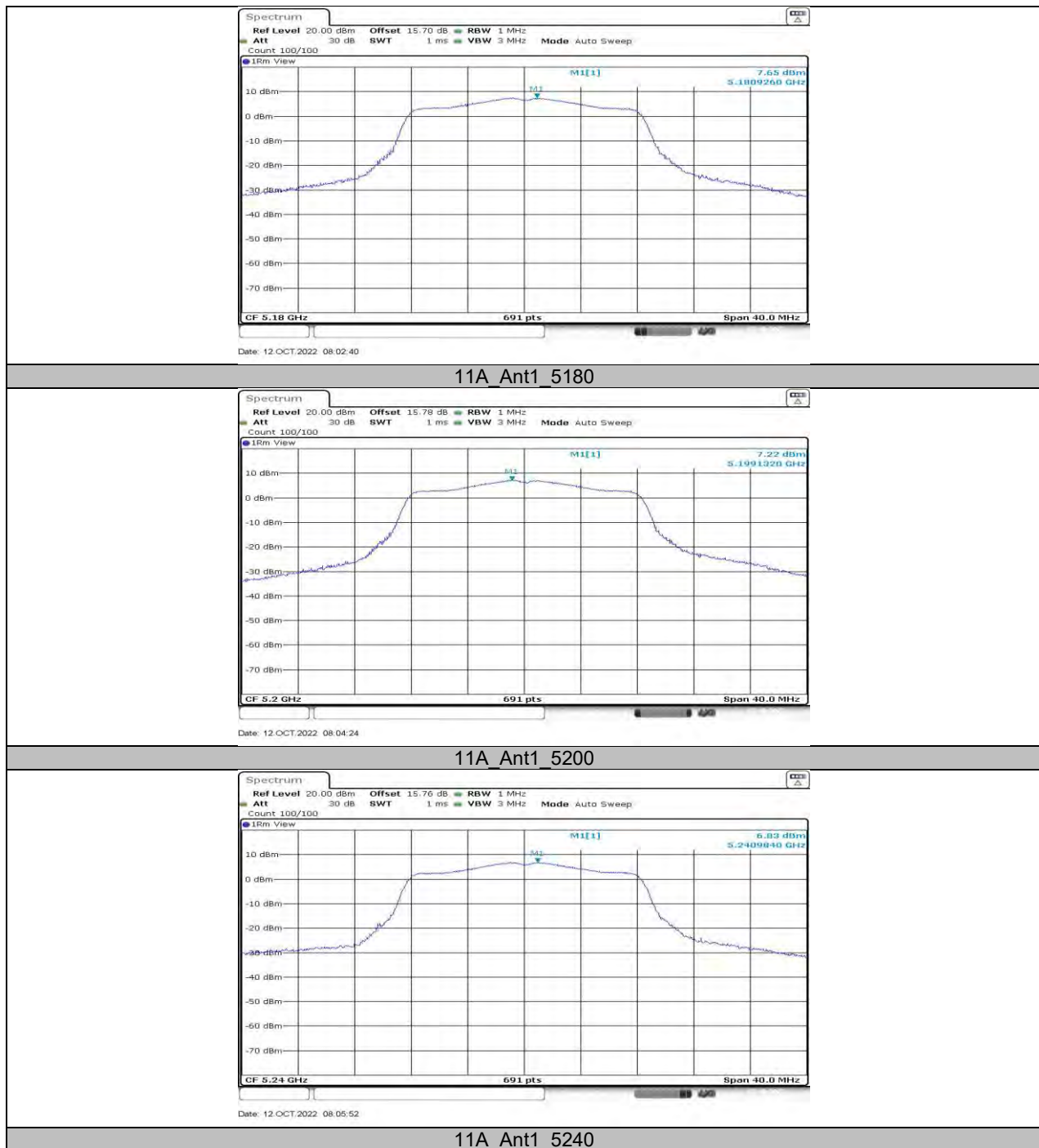
### 11.5.1. Test Result

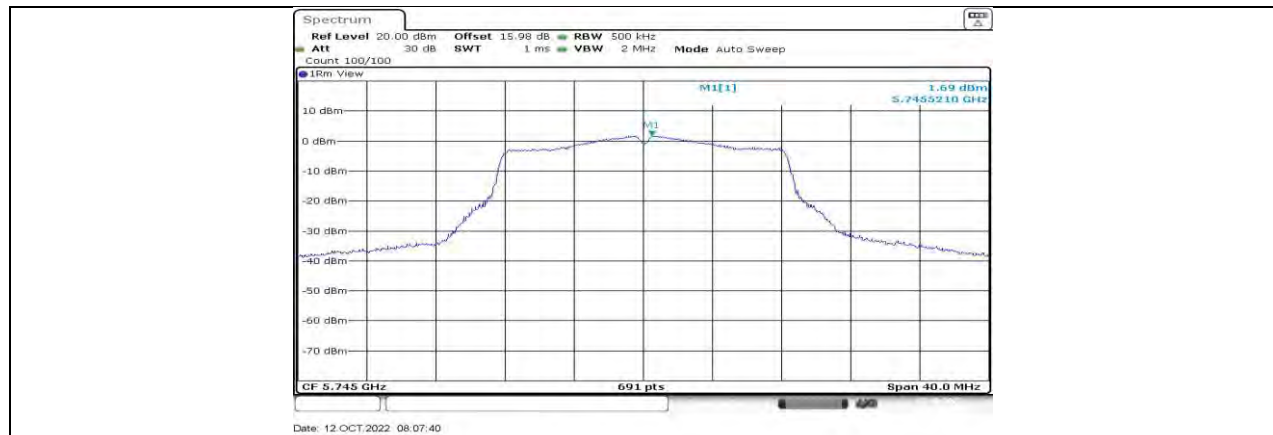
| Test Mode  | Antenna | Channel | Result [dBm/MHz] | Limit[dBm/MHz] | Verdict |
|------------|---------|---------|------------------|----------------|---------|
| 11A        | Ant1    | 5180    | 7.65             | ≤11.00         | PASS    |
|            |         | 5200    | 7.22             | ≤11.00         | PASS    |
|            |         | 5240    | 6.83             | ≤11.00         | PASS    |
|            |         | 5745    | 1.69             | ≤30.00         | PASS    |
|            |         | 5785    | 2.36             | ≤30.00         | PASS    |
|            |         | 5825    | 3.33             | ≤30.00         | PASS    |
| 11N20SISO  | Ant1    | 5180    | 6.45             | ≤11.00         | PASS    |
|            |         | 5200    | 6.51             | ≤11.00         | PASS    |
|            |         | 5240    | 6.38             | ≤11.00         | PASS    |
|            |         | 5745    | 0.89             | ≤30.00         | PASS    |
|            |         | 5785    | 1.57             | ≤30.00         | PASS    |
|            |         | 5825    | 2.36             | ≤30.00         | PASS    |
| 11N40SISO  | Ant1    | 5190    | 1.19             | ≤11.00         | PASS    |
|            |         | 5230    | 0.99             | ≤11.00         | PASS    |
|            |         | 5755    | -2.14            | ≤30.00         | PASS    |
|            |         | 5795    | -1.26            | ≤30.00         | PASS    |
| 11AC80SISO | Ant1    | 5210    | -2.97            | ≤11.00         | PASS    |
|            |         | 5775    | -6.26            | ≤30.00         | PASS    |

Note: 1.The Result and Limit Unit is dBm/500 kHz in the band 5.725–5.85 GHz.

2.The Duty Cycle Factor and RBW Factor is compensated in the graph.

## 11.5.2. Test Graphs





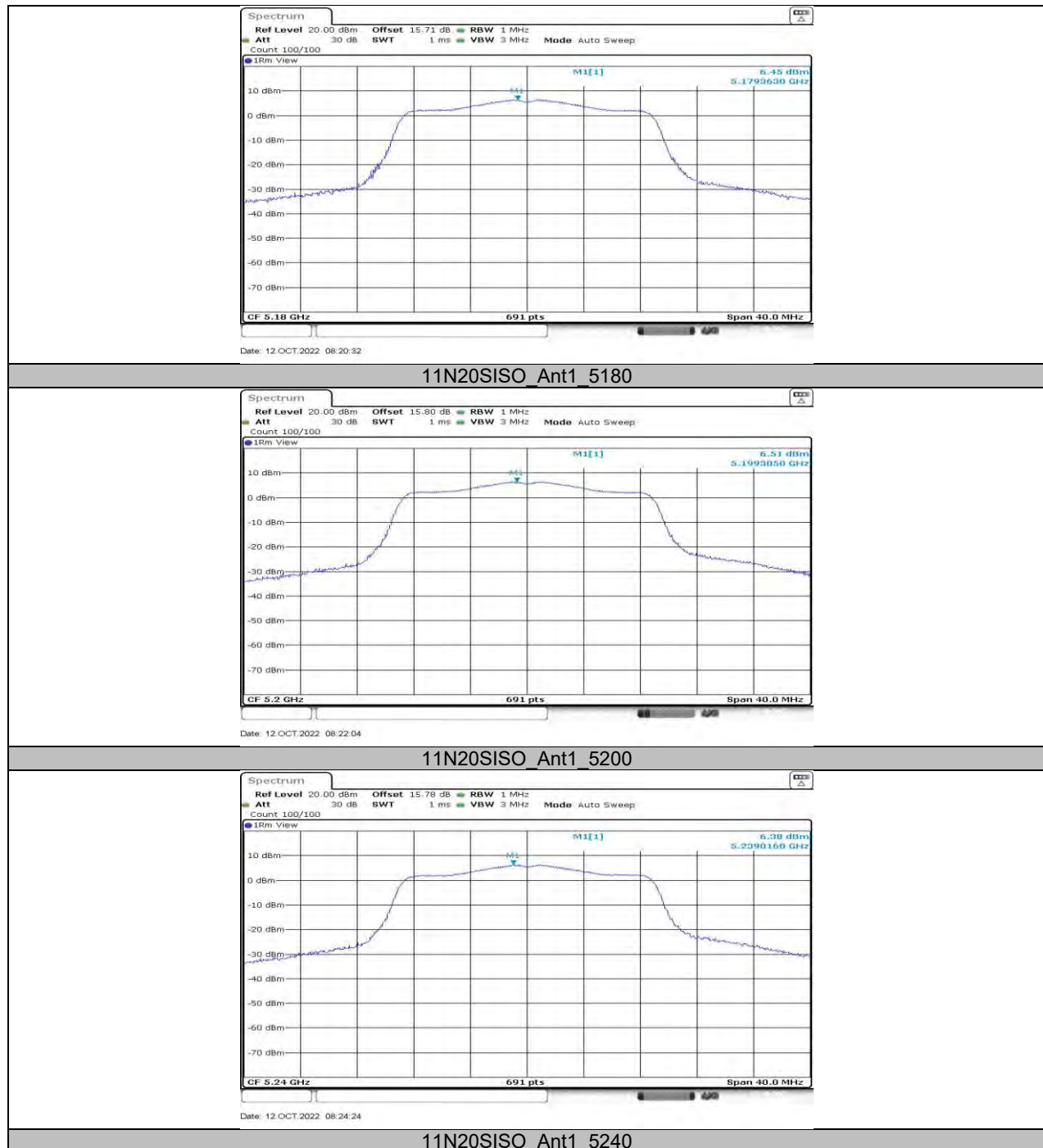
11A\_Ant1\_5745

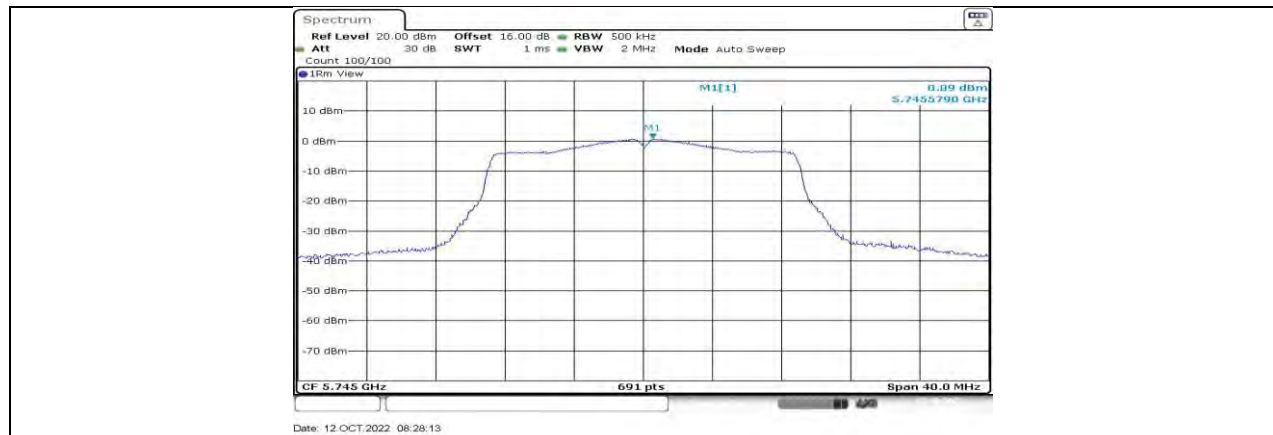


11A\_Ant1\_5785



11A\_Ant1\_5825





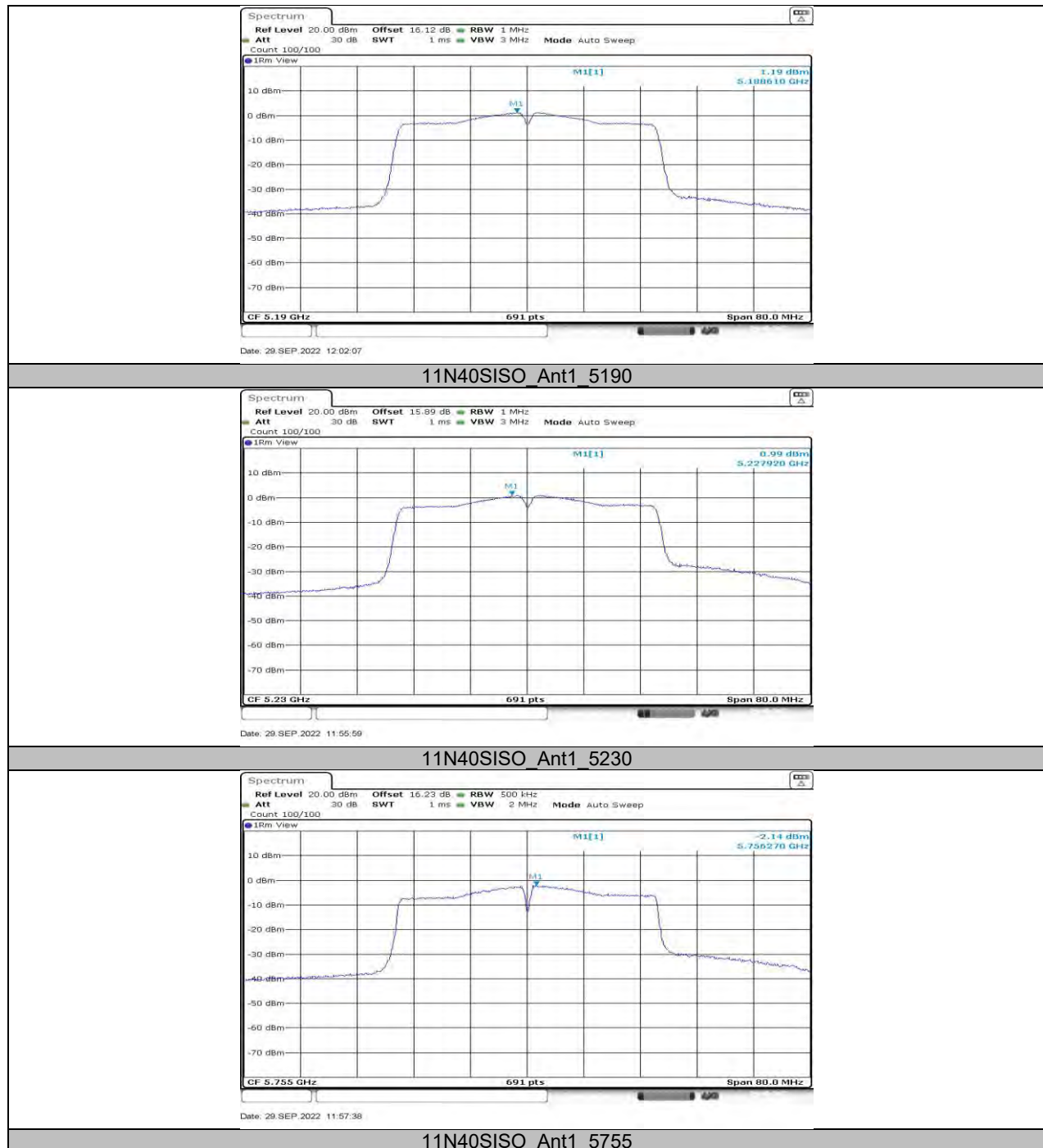
11N20SISO\_Ant1\_5745



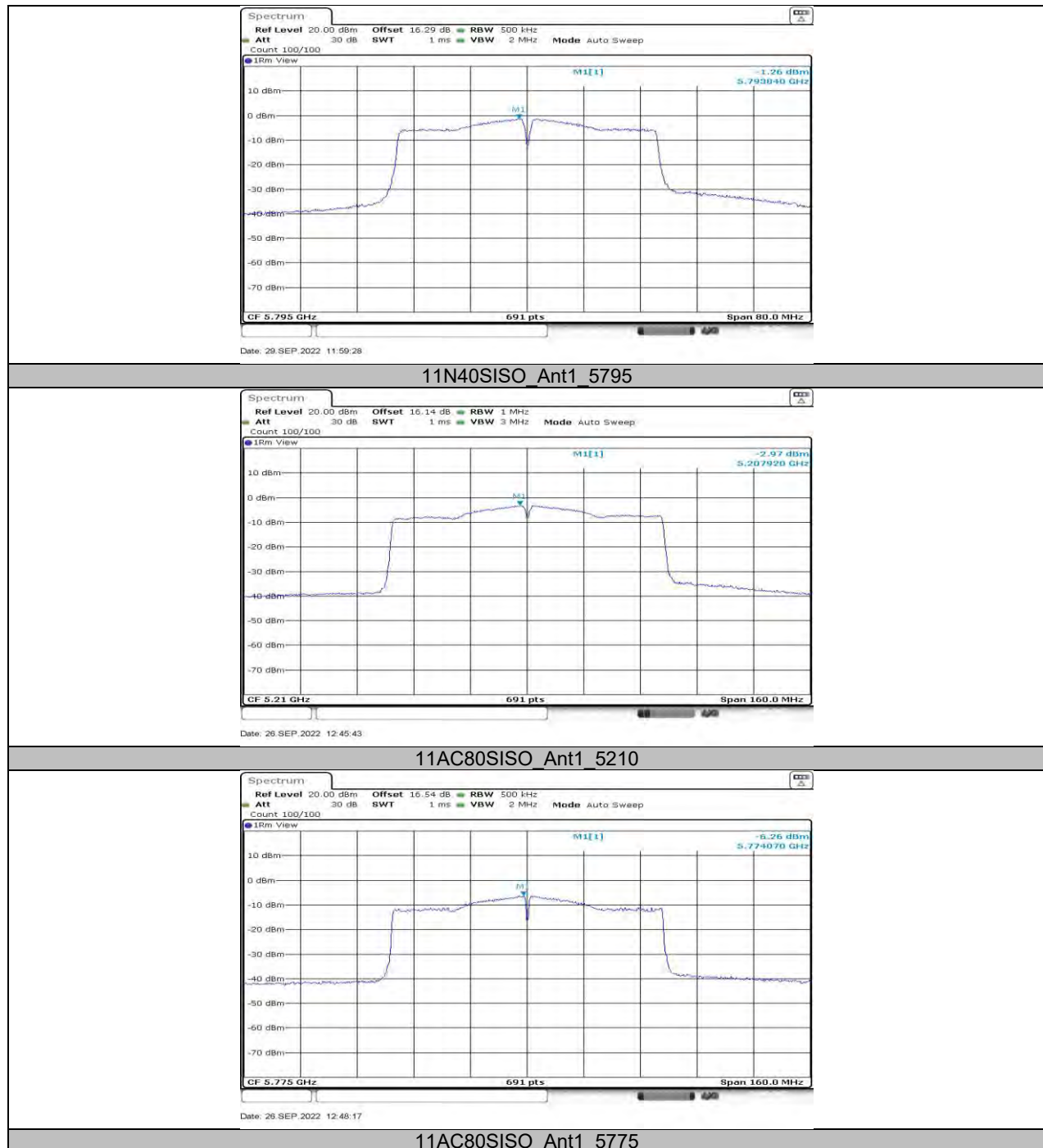
11N20SISO\_Ant1\_5785



11N20SISO\_Ant1\_5825







**11.6. APPENDIX D: FREQUENCY STABILITY****11.6.1. Test Result**

| Frequency Error vs. Voltage     |       |                  |                 |                  |                 |                  |                 |                  |                 |
|---------------------------------|-------|------------------|-----------------|------------------|-----------------|------------------|-----------------|------------------|-----------------|
| 802.11a20:5200MHz               |       |                  |                 |                  |                 |                  |                 |                  |                 |
| Temp.                           | Volt. | 0 Minute         |                 | 2 Minute         |                 | 5 Minute         |                 | 10 Minute        |                 |
|                                 |       | Freq.Error (MHz) | Tolerance (ppm) | Freq.Error (MHz) | Tolerance (ppm) | Freq.Error (MHz) | Tolerance (ppm) | Freq.Error (MHz) | Tolerance (ppm) |
| TN                              | VL    | 5199.9800        | -3.86           | 5199.9928        | -1.39           | 5200.0229        | 4.41            | 5200.0234        | 4.50            |
| TN                              | VN    | 5199.9751        | -4.80           | 5199.9784        | -4.16           | 5199.9829        | -3.29           | 5200.0160        | 3.07            |
| TN                              | VH    | 5200.0040        | 0.77            | 5200.0079        | 1.52            | 5200.0034        | 0.65            | 5200.0191        | 3.68            |
| Frequency Error vs. Temperature |       |                  |                 |                  |                 |                  |                 |                  |                 |
| 802.11a:5200MHz                 |       |                  |                 |                  |                 |                  |                 |                  |                 |
| Temp.                           | Volt. | 0 Minute         |                 | 2 Minute         |                 | 5 Minute         |                 | 10 Minute        |                 |
|                                 |       | Freq.Error (MHz) | Tolerance (ppm) | Freq.Error (MHz) | Tolerance (ppm) | Freq.Error (MHz) | Tolerance (ppm) | Freq.Error (MHz) | Tolerance (ppm) |
| 40                              | VN    | 5199.9968        | -0.62           | 5199.9953        | -0.91           | 5200.0199        | 3.83            | 5199.9848        | -2.93           |
| 30                              | VN    | 5199.9779        | -4.25           | 5200.0086        | 1.65            | 5199.9954        | -0.88           | 5200.0196        | 3.77            |
| 20                              | VN    | 5200.0121        | 2.33            | 5199.9872        | -2.46           | 5200.0086        | 1.64            | 5199.9889        | -2.14           |
| 10                              | VN    | 5199.9906        | -1.80           | 5199.9822        | -3.41           | 5200.0049        | 0.95            | 5200.0078        | 1.50            |
| 0                               | VN    | 5200.0135        | 2.60            | 5200.0044        | 0.85            | 5199.9905        | -1.84           | 5200.0188        | 3.61            |





| Frequency Error vs. Voltage     |       |                  |                 |                  |                 |                  |                 |                  |                 |
|---------------------------------|-------|------------------|-----------------|------------------|-----------------|------------------|-----------------|------------------|-----------------|
| 802.11a:5825MHz                 |       |                  |                 |                  |                 |                  |                 |                  |                 |
| Temp.                           | Volt. | 0 Minute         |                 | 2 Minute         |                 | 5 Minute         |                 | 10 Minute        |                 |
|                                 |       | Freq.Error (MHz) | Tolerance (ppm) | Freq.Error (MHz) | Tolerance (ppm) | Freq.Error (MHz) | Tolerance (ppm) | Freq.Error (MHz) | Tolerance (ppm) |
| TN                              | VL    | 5825.0052        | 0.90            | 5825.0064        | 1.11            | 5824.9772        | -3.91           | 5825.0247        | 4.24            |
| TN                              | VN    | 5825.0100        | 1.71            | 5825.0096        | 1.64            | 5824.9918        | -1.41           | 5824.9897        | -1.76           |
| TN                              | VH    | 5825.0221        | 3.79            | 5825.0024        | 0.41            | 5825.0217        | 3.72            | 5824.9812        | -3.22           |
| Frequency Error vs. Temperature |       |                  |                 |                  |                 |                  |                 |                  |                 |
| 802.11a:5825MHz                 |       |                  |                 |                  |                 |                  |                 |                  |                 |
| Temp.                           | Volt. | 0 Minute         |                 | 2 Minute         |                 | 5 Minute         |                 | 10 Minute        |                 |
|                                 |       | Freq.Error (MHz) | Tolerance (ppm) | Freq.Error (MHz) | Tolerance (ppm) | Freq.Error (MHz) | Tolerance (ppm) | Freq.Error (MHz) | Tolerance (ppm) |
| 40                              | VN    | 5824.9922        | -1.33           | 5824.9990        | -0.17           | 5824.9786        | -3.67           | 5824.9893        | -1.84           |
| 30                              | VN    | 5824.9992        | -0.13           | 5824.9875        | -2.14           | 5824.9996        | -0.07           | 5824.9908        | -1.59           |
| 20                              | VN    | 5825.0083        | 1.43            | 5824.9767        | -3.99           | 5824.9877        | -2.11           | 5825.0194        | 3.33            |
| 10                              | VN    | 5824.9920        | -1.37           | 5824.9859        | -2.42           | 5824.9849        | -2.59           | 5825.0061        | 1.05            |
| 0                               | VN    | 5825.0028        | 0.49            | 5824.9947        | -0.90           | 5825.0107        | 1.83            | 5825.0217        | 3.72            |

## Note:

1. All antennas, test modes and test channels have been tested, only the worst data record in the report.
2. For the detail Test Conditions, please refer to section 10 TEST ENVIRONMENT.



## 11.7. APPENDIX H: DUTY CYCLE

### 11.7.1. Test Result

| Test Mode  | On Time (msec) | Period (msec) | Duty Cycle x (Linear) | Duty Cycle (%) | Duty Cycle Correction Factor (dB) | 1/T Minimum VBW (kHz) | Final setting For VBW (kHz) |
|------------|----------------|---------------|-----------------------|----------------|-----------------------------------|-----------------------|-----------------------------|
| 11A        | 1.38           | 1.42          | 0.9718                | 97.18          | 0.12                              | 0.72                  | 1                           |
| 11N20SISO  | 1.3            | 1.34          | 0.9701                | 97.01          | 0.13                              | 0.77                  | 1                           |
| 11N40SISO  | 0.64           | 0.68          | 0.9412                | 94.12          | 0.26                              | 1.56                  | 2                           |
| 11AC80SISO | 0.33           | 0.37          | 0.8919                | 89.19          | 0.50                              | 3.03                  | 4                           |

Note:

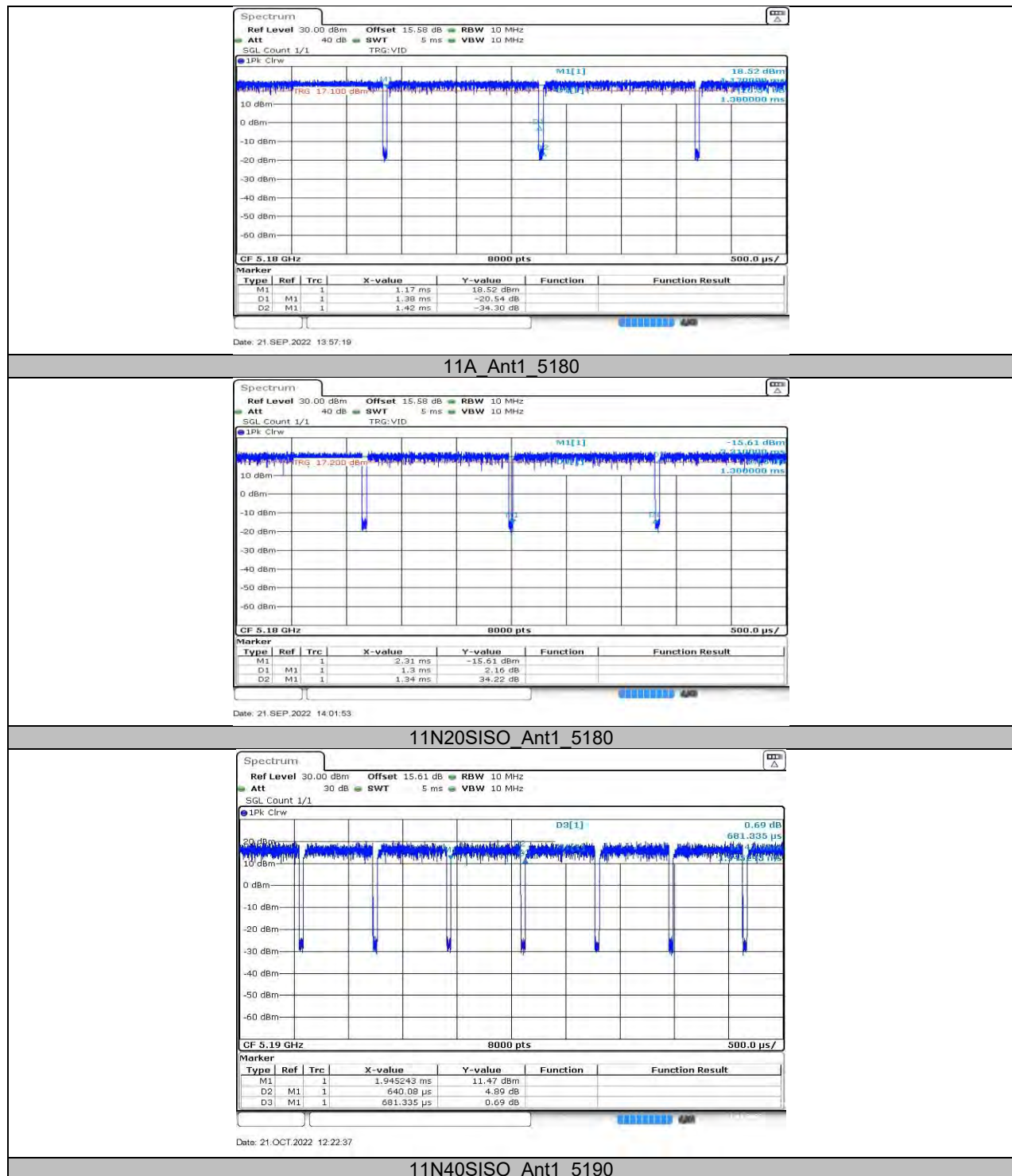
Duty Cycle Correction Factor =  $10 \log (1/x)$ .

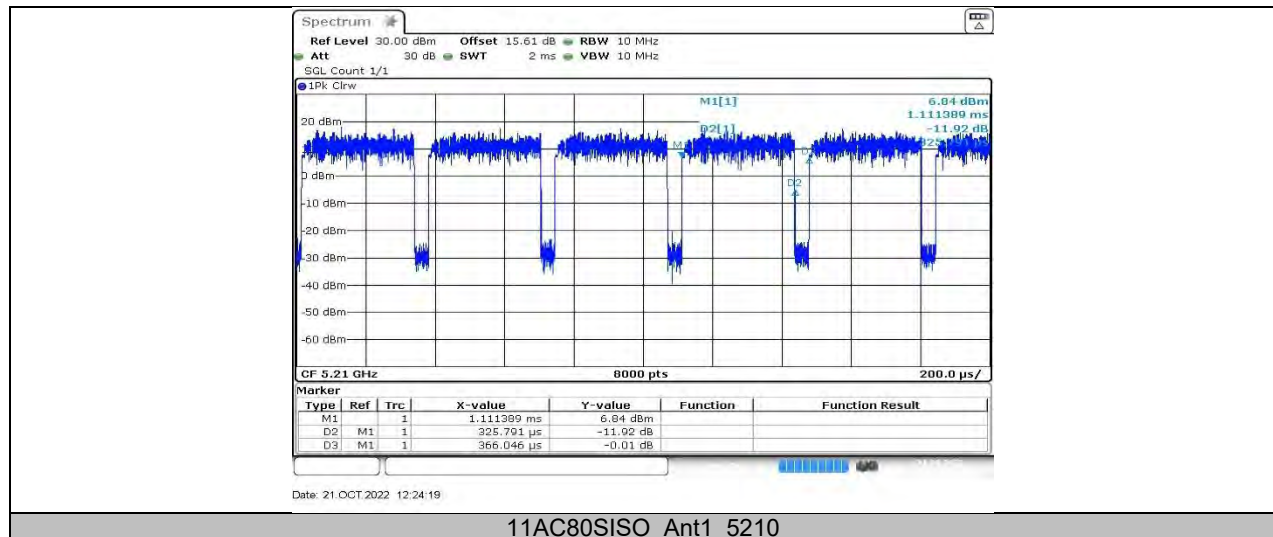
Where: x is Duty Cycle (Linear)

Where: T is On Time

If that calculated VBW is not available on the analyzer then the next higher value should be used.

## 11.7.2. Test Graphs





END OF REPORT