



# CFR 47 FCC PART 15 SUBPART E ISED RSS-247 ISSUE 2

#### **CERTIFICATION TEST REPORT**

For

WIFI+BT Module

**MODEL NUMBER: WCT2GM2511** 

FCC ID: 2AC23-WCT2G

IC: 12290A-WCT2G

REPORT NUMBER: 4790119556.2-4

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Page 2 of 334

## **Revision History**

| Rev. | Issue Date | Revisions     | Revised By |
|------|------------|---------------|------------|
| V0   | 10/13/2021 | Initial Issue | _          |



| Summary of Test Results |  |  |              |  |
|-------------------------|--|--|--------------|--|
| Clause                  | Test Items                                 | FCC/IC Rules   | Test Results |  |
| 1                       | 6dB/26dB Bandwidth                         | FCC 15.407 (a)&(e)<br>RSS-247 Clause 6.2   | PASS         |  |
| 2                       | 99% Occupied Bandwidth                     | RSS-Gen Clause 6.7   | PASS         |  |
| 3                       | Conducted Output Power                     | FCC 15.407 (a)<br>RSS-247 Clause 6.2   | PASS         |  |
| 4                       | Power Spectral Density                     | FCC 15.407 (a)<br>RSS-247 Clause 6.2   | PASS         |  |
| 5                       | Radiated Bandedge and Spurious<br>Emission | FCC 15.407 (b)<br>FCC 15.209<br>FCC 15.205<br>RSS-247 Clause 6.2<br>RSS-GEN Clause 8.9 | PASS         |  |
| 6                       | Conducted Emission Test for AC Power Port  | FCC 15.207<br>RSS-GEN Clause 8.8   | PASS         |  |
| 7                       | Frequency Stability                        | FCC 15.407 (g)   | PASS         |  |
| 8                       | Dynamic Frequency Selection                | FCC 15.407 (h)<br>RSS-247 Clause 6.3   | PASS         |  |
| 9                       | Antenna Requirement                        | FCC 15.203<br>RSS-GEN Clause 6.8   | PASS         |  |

#### Note:

<sup>1.</sup> This test report is only published to and used by the applicant, and it is not for evidence purpose in China.

<sup>2.</sup> The measurement result for the sample received is <Pass> according to < CFR 47 FCC PART 15 SUBPART E >< ISED RSS-247 > when <Accuracy Method> decision rule is applied.



# **TABLE OF CONTENTS**

| 1. | ATTESTATION OF TEST RESULTS7 |  |    |  |
|----|------------------------------|--|----|--|
| 2. | TE                           | ST METHODOLOGY   | 8  |  |
| 3. | FA                           | ACILITIES AND ACCREDITATION                            | 8  |  |
| 4. | CA                           | ALIBRATION AND UNCERTAINTY                             | 9  |  |
|    | 4.1.                         | MEASURING INSTRUMENT CALIBRATION                       | 9  |  |
|    | 4.2.                         | MEASUREMENT UNCERTAINTY                                | 9  |  |
| 5. | EC                           | QUIPMENT UNDER TEST                                    | 10 |  |
|    | 5.1.                         | DESCRIPTION OF EUT                                     | 10 |  |
|    | 5.2.                         | MAXIMUM OUTPUT POWER                                   | 11 |  |
|    | 5.3.                         | CHANNEL LIST   | 12 |  |
|    | 5. <i>4</i> .                | TEST CHANNEL CONFIGURATION                             | 13 |  |
|    | 5.5.                         | DESCRIPTION OF AVAILABLE ANTENNAS                      | 15 |  |
|    | 5.6.                         | THE WORSE CASE POWER SETTING PARAMETER                 | 16 |  |
|    | 5.7.                         | THE WORSE CASE CONFIGURATIONS                          | 18 |  |
|    | 5.8.                         | DESCRIPTION OF TEST SETUP                              | 19 |  |
| 6. | M                            | EASURING INSTRUMENT AND SOFTWARE USED                  | 20 |  |
| 7. | ΑN                           | NTENNA PORT TEST RESULTS                               | 22 |  |
|    | 7.1.                         | ON TIME AND DUTY CYCLE                                 | 22 |  |
|    | 7.2.                         | 6/26 dB EMISSION BANDWIDTH AND 99 % OCCUPIED BANDWIDTH | 23 |  |
|    | 7.3.                         | CONDUCTED OUTPUT POWER                                 | 25 |  |
|    | 7.4.                         | POWER SPECTRAL DENSITY                                 | 28 |  |
| 8. | R/                           | ADIATED TEST RESULTS                                   | 30 |  |
|    |                              | RESTRICTED BANDEDGE                                    |    |  |
|    | 8.′                          | 1.1. 802.11a20 SISO MODE                               | 37 |  |
|    |                              | VII-1 BAND   |    |  |
|    |                              | NII-2A BAND  |    |  |
|    |                              | VII-3 BAND   |    |  |
|    |                              | 1.2. 802.11n HT20 MIMO MODE                            |    |  |
|    | _                            | VII-1 BAND   |    |  |
|    |                              | NII-2A BAND  |    |  |
|    |                              | VII-3 BAND   |    |  |
|    | 8.1                          | 1.3. 802.11n HT40 MIMO MODE                            | 61 |  |
|    |                              | VII-1 BAND   |    |  |
|    | UN                           | NII-2A BAND  | 65 |  |



| UNII-2C BAND                                 | 67  |
|--|-----|
| UNII-3 BAND                                  |     |
| 8.1.4. 802.11ac VHT80 MIMO MODE              | 72  |
| UNII-1 BAND                                  |     |
| UNII-2A BAND                                 |     |
| UNII-2C BAND                                 |     |
| UNII-3 BAND                                  | 81  |
| 8.2. SPURIOUS EMISSIONS (1 GHz ~ 7 GHz)      | 82  |
| 8.2.1. 802.11n HT20 MIMO MODE                |     |
| UNII-1 BAND                                  |     |
| UNII-2A BAND                                 | 88  |
| UNII-2C BAND                                 |     |
| STRADDLE CHANNEL 144                         | 100 |
| UNII-3 BAND                                  | 102 |
| 8.3. SPURIOUS EMISSIONS (7 GHz ~ 18 GHz)     | 108 |
| 8.3.1. 802.11a SISO MODE                     | 108 |
| UNII-1 BAND                                  |     |
| UNII-2A BAND                                 |     |
| UNII-2C BAND                                 |     |
| STRADDLE CHANNEL 144                         |     |
| UNII-3 BAND                                  | 128 |
| 8.3.2. 802.11n HT20 MIMO MODE                |     |
| UNII-1 BAND                                  |     |
| UNII-2A BAND                                 |     |
| UNII-2C BAND                                 |     |
| STRADDLE CHANNEL 144                         |     |
| UNII-3 BAND<br>8.3.3. 802.11n HT40 MIMO MODE |     |
| 8.3.3. 802.11n HT40 MIMO MODE                |     |
| UNII-2A BAND                                 |     |
| UNII-2C BAND                                 |     |
| STRADDLE CHANNEL 142                         |     |
| UNII-3 BAND                                  |     |
| 8.3.4. 802.11ac VHT80 MIMO MODE              |     |
| UNII-1 BAND                                  | 180 |
| UNII-2A BAND                                 | 182 |
| UNII-2C BAND                                 |     |
| STRADDLE CHANNEL 138                         |     |
| UNII-3 BAND                                  | 190 |
| 8.4. SPURIOUS EMISSIONS (18 GHz ~ 26 GHz)    | 192 |
| 8.4.1. 802.11n HT40 MODE                     | 192 |
|  |     |
| 8.5. SPURIOUS EMISSIONS (26 GHz ~ 40 GHz)    | 194 |
|  |     |
| 8.6. SPURIOUS EMISSIONS (30 MHz ~ 1 GHz)     |     |
| 8.6.1. 802.11n HT40 MODE                     | 196 |
| 8.7. SPURIOUS EMISSIONS BELOW 30 MHz         | 198 |
| 8.7.1. 802.11n HT40 MODE                     |     |
|  |     |
| . AC POWER LINE CONDUCTED EMISSIONS          | 201 |



| Ś   | 9.1.1.                           | 802.11n HT40 MODE   | 202 |
|-----|----------------------------------|---|-----|
| 10. | FREC                             | QUENCY STABILITY  | 204 |
| 11. | DYN                              | AMIC FREQUENCY SELECTION  | 206 |
| 12. | ANTE                             | ENNA REQUIREMENTS   | 210 |
| 12  | .1. A                            | Appendix A1: Emission Bandwidth                                     | 211 |
|     | 12.1.1.                          | • •   |     |
| •   | 12.1.2.                          | Test Graphs   | 213 |
| 12  | .2. A                            | Appendix A2: Occupied channel bandwidth                             | 241 |
|     | 12.2.1.                          | Test Result   |     |
|     | 12.2.2.                          |   |     |
| 12  | 3 /                              | Appendix A3: Min emission bandwidth                                 | 271 |
|     | .3.<br>12.3.1.                   |   |     |
|     | 12.3.2.                          |   |     |
|     |                                  | ·   |     |
|     | . <i>4. A</i><br>12.4.1.         | Appendix B: Maximum conducted output power  Test Result             |     |
|     | 12. <del>4</del> . 1.<br>12.4.2. |   |     |
|     |                                  |   |     |
|     |                                  | Appendix C: Maximum power spectral density                          |     |
|     | 12.5.1.<br>12.5.2.               | Test Cranks   |     |
|     |                                  | •   |     |
|     |                                  | Appendix D: Duty Cycle  |     |
|     | 12.6.1.                          | Test Result   |     |
| •   | 12.6.2.                          | Test Graphs   | 325 |
| 12  | .7. A                            | Appendix E: DFS Detection Thresholds                                |     |
|     | 12.7.1.                          |   |     |
| •   | 12.7.2.                          | Test Graphs   | 328 |
| 12  | .8. A                            | Appendix F: Channel Move Time and Channel Closing Transmission Time | 329 |
|     | 12.8.1.                          |   |     |
|     | 12.8.2.                          | Test Graphs   | 330 |
| 12  | .9. A                            | Appendix G: Non-Occupancy Period                                    | 331 |
|     | . <i>3.</i><br>12.9.1.           |   |     |
|     | _                                |   |     |
|     | <i>.10. A</i><br>12.10.1         | Appendix H: Frequency Stability  Test Result                        |     |
|     | 14. IU. I                        | . Test Nesull   |     |



Page 7 of 334

## 1. ATTESTATION OF TEST RESULTS

**Applicant Information** 

Company Name: Hui Zhou Gaoshengda Technology Co.,LTD

Address: NO.75 Zhongkai Development Area, Huizhou, Guangdong, China

**Manufacturer Information** 

Company Name: Hui Zhou Gaoshengda Technology Co.,LTD

Address: NO.75 Zhongkai Development Area, Huizhou, Guangdong, China

**EUT Information** 

EUT Name: WIFI+BT Module Model: WCT2GM2511

Brand: GSD

Sample Received Date: September 23, 2021

Sample Status: Normal Sample ID: 4167750

Date of Tested: September 23, 2021~ October 12, 2021

| APPLICABLE STANDARDS         |              |  |
|------------------------------|--------------|--|
| STANDARD                     | TEST RESULTS |  |
| CFR 47 FCC PART 15 SUBPART E | PASS         |  |
| ISED RSS-247 Issue 2         | PASS         |  |
| ISED RSS-GEN Issue 5         | PASS         |  |

| Prepared By:                   | Checked By:                    |  |  |
|--------------------------------|--------------------------------|--|--|
| Kebo Zhang<br>Project Engineer | Shawn Wen<br>Laboratory Leader |  |  |
| Approved By:                   |                                |  |  |
| LephenGus                      |                                |  |  |

Stephen Guo Laboratory Manager

REPORT NO.: 4790119556.2-4 Page 8 of 334

#### 2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.10-2013, CFR 47 FCC Part 2, CFR 47 FCC Part 15, KDB 789033 D02 v02r01, RSS-GEN Issue 5, RSS-247 Issue 2, KDB414788 D01 Radiated Test Site v01r01, KDB 662911 D01 Multiple Transmitter Output v02r01, KDB 905462 D02 UNII DFS Compliance Procedures New Rules v02, KDB 905462 D03 UNII clients without radar detection New Rules v01r02, KDB 905462 D04 Operational Modes for DFS Testing New Rules v01 and KDB 905462 D06 802 11 Channel Plans New Rules v02.

#### 3. FACILITIES AND ACCREDITATION

|               | A2LA (Certificate No.: 4102.01)  |
|---------------|--|
|               | UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch.  |
|               | has been assessed and proved to be in compliance with A2LA.            |
|               | FCC (FCC Designation No.: CN1187)                                      |
|               | UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch.  |
|               | Has been recognized to perform compliance testing on equipment subject |
|               | to the Commission's Delcaration of Conformity (DoC) and Certification  |
|               | rules  |
|               | ISED (Company No.: 21320)  |
| Accreditation | UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch.  |
| Certificate   | 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.                                     |
|               | VCCI (Registration No.: G-20019, R-20004, C-20012 and T-20011)         |
|               | 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.  |
|               | Facility Name:   |
|               | Chamber D, the VCCI registration No. is G-20019 and R-20004            |
|               | Shielding Room B , the VCCI registration No. is C-20012 and T-20011    |

Note 1: All tests measurement facilities use to collect the measurement data are located at Building 10, Innovation Technology Park, Song Shan Lake Hi tech Development Zone, Dongguan, 523808, China

Note 2: 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.

Note 3: 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 recognize 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                 |
| 5   | 5.78 dB (1 GHz-18 GHz)  |
| Radiated Emission (Included Fundamental Emission) (1 GHz to 40 GHz)   | 5.23dB (18 GHz-26 GHz)  |
| (   | 5.64 dB (26 GHz-40 GHz) |

Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95 % confidence level using a coverage factor of k=2.



Page 10 of 334

# 5. EQUIPMENT UNDER TEST

#### 5.1. **DESCRIPTION OF EUT**

| EUT Name            | WIFI+BT Module   |  |  |
|---------------------|--|--|--|
| Model               | WCT2GM2511   |  |  |
| Radio Technology    | IEEE802.11a20<br>IEEE802.11n HT20/n HT40<br>IEEE802.11ac VHT20/VHT40/VHT80   |  |  |
| Operation frequency | UNII-1/ UNII-2A/ UNII-2C/UNII-3  |  |  |
| Modulation          | IEEE 802.11a: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n HT20: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n HT40: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11ac VHT20: OFDM (256QAM, 64QAM, 16QAM, QPSK, BPSK) IEEE 802.11ac VHT40: OFDM (256QAM, 64QAM, 16QAM, QPSK, BPSK) IEEE 802.11ac VHT80: OFDM (256QAM, 64QAM, 16QAM, QPSK, BPSK) |  |  |
| Power Supply        | DC 5 V   |  |  |



Page 11 of 334

#### 5.2. **MAXIMUM OUTPUT POWER**

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

| IEEE Std. 802.11 | Frequency<br>(MHz) | Maximum Average Conducted Power (dBm) | Max Average EIRP<br>(dBm) |
|------------------|--------------------|---------------------------------------|---------------------------|
| a20              |                    | 15.36                                 | 19.36                     |
| n HT20           |                    | 12.63                                 | 16.63                     |
| n HT40           | 5150 ~ 5250        | 15.57                                 | 19.57                     |
| ac VHT20         | 0100 0200          | Covered by 802.11n H                  | T20                       |
| ac VHT40         |                    | Covered by 802.11n H                  | T40                       |
| ac VHT80         |                    | 16.13                                 | 20.13                     |

#### **UNII-2A BAND(FCC&ISED)**

| IEEE Std. 802.11 | Frequency<br>(MHz) | Maximum Average Conducted Power (dBm) |
|------------------|--------------------|---------------------------------------|
| a20              | 5250 ~ 5350        | 15.46                                 |
| n HT20           |                    | 16.90                                 |
| n HT40           |                    | 17.51                                 |
| ac VHT20         |                    | Covered by 802.11n HT20               |
| ac VHT40         |                    | Covered by 802.11n HT40               |
| ac VHT80         |                    | 16.09                                 |

## UNII-2C BAND(FCC&ISED)

| IEEE Std. 802.11 | Frequency<br>(MHz) | Maximum Average Conducted Power (dBm) |
|------------------|--------------------|---------------------------------------|
| a20              |                    | 15.15                                 |
| n HT20           |                    | 17.38                                 |
| n HT40           | 5470 ~ 5725        | 17.46                                 |
| ac VHT20         | 3470 3723          | Covered by 802.11n HT20               |
| ac VHT40         |                    | Covered by 802.11n HT40               |
| ac VHT80         |                    | 16.39                                 |

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

| IEEE Std. 802.11 | Frequency<br>(MHz) | Maximum Average Conducted Power (dBm) |
|------------------|--------------------|---------------------------------------|
| a20              |                    | 14.96                                 |
| n HT20           |                    | 17.02                                 |
| n HT40           | 5725 ~ 5850        | 17.50                                 |
| ac VHT20         |                    | Covered by 802.11n HT20               |
| ac VHT40         |                    | Covered by 802.11n HT40               |
| ac VHT80         |                    | 15.84                                 |



5.3. CHANNEL LIST

| UNII-1       |                    | UNII-1                |                    | UNII-1      |                    |
|--------------|--------------------|-----------------------|--------------------|-------------|--------------------|
| (For Bandwid | dth=20MHz)         | (For Bandwidth=40MHz) |                    | (For Bandwi | dth=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-2A      |                       | UNII-2A |                       | UNII-2A |                       |  |
|--------------|-----------------------|---------|-----------------------|---------|-----------------------|--|
| (For Bandwid | (For Bandwidth=20MHz) |         | (For Bandwidth=40MHz) |         | (For Bandwidth=80MHz) |  |
| Channel      | Frequency<br>(MHz)    | Channel | Frequency<br>(MHz)    | Channel | Frequency<br>(MHz)    |  |
| 52           | 5260                  | 54      | 5270                  | 58      | 5290                  |  |
| 56           | 5280                  | 62      | 5310                  |         |                       |  |
| 60           | 5300                  |         |                       |         |                       |  |
| 64           | 5320                  |         |                       |         |                       |  |

| UNII-2C      |                    | UNII-2C     |                    | UNII-2C     |                       |  |
|--------------|--------------------|-------------|--------------------|-------------|-----------------------|--|
| (For Bandwic | ith=20MHz)         | (For Bandwi | dth=40MHz)         | (For Bandwi | (For Bandwidth=80MHz) |  |
| Channel      | Frequency<br>(MHz) | Channel     | Frequency<br>(MHz) | Channel     | Frequency<br>(MHz)    |  |
| 100          | 5500               | 102         | 5510               | 106         | 5530                  |  |
| 104          | 5520               | 110         | 5550               | 122         | 5610                  |  |
| 108          | 5540               | 118         | 5590               | 138         | 5690                  |  |
| 112          | 5560               | 126         | 5630               |             |                       |  |
| 116          | 5580               | 134         | 5670               |             |                       |  |
| 120          | 5600               | 142         | 5710               |             |                       |  |
| 124          | 5620               |             |                    |             |                       |  |
| 128          | 5640               |             |                    |             |                       |  |
| 132          | 5660               |             |                    |             |                       |  |
| 136          | 5680               |             |                    |             |                       |  |
| 140          | 5700               |             |                    |             |                       |  |
| 144          | 5720               |             |                    |             |                       |  |

| UNII-3  |                    | UNII-3  |                    | UNII-3  |                    |
|---------|--------------------|---------|--------------------|---------|--------------------|
| 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               |         |                    |         |                    |

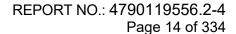


5.4. TEST CHANNEL CONFIGURATION

| UNII-1 Test Channel Configuration |  |                              |  |
|-----------------------------------|--|------------------------------|--|
| IEEE Std.                         | Test Channel Number  | Frequency                    |  |
| 802.11a                           | CH 36(Low Channel), CH 40(MID Channel),<br>CH 48(High Channel) | 5180 MHz, 5200 MHz, 5240 MHz |  |
| 802.11n HT20                      | CH 36(Low Channel), CH 40(MID Channel),<br>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<br>VHT20                 | CH 36(Low Channel), CH 40(MID Channel),<br>CH 48(High Channel) | 5180 MHz, 5200 MHz, 5240 MHz |  |
| 802.11ac<br>VHT40                 | CH 38(Low Channel), CH 46(High Channel)                        | 5190 MHz, 5230 MHz           |  |
| 802.11ac<br>VHT80                 | CH 42(Low Channel)   | 5210 MHz                     |  |

| UNII-2A Test Channel Configuration |  |                              |  |
|------------------------------------|--|------------------------------|--|
| IEEE Std.                          | Test Channel Number  | Frequency                    |  |
| 802.11a                            | CH 52(Low Channel), CH 56(MID Channel),<br>CH 64(High Channel) | 5260 MHz, 5280 MHz, 5320 MHz |  |
| 802.11n HT20                       | CH 52(Low Channel), CH 56(MID Channel),<br>CH 64(High Channel) | 5260 MHz, 5280 MHz, 5320 MHz |  |
| 802.11n HT40                       | CH 54(Low Channel), CH 62(High Channel)                        | 5270 MHz, 5310 MHz           |  |
| 802.11ac<br>VHT20                  | CH 52(Low Channel), CH 56(MID Channel),<br>CH 64(High Channel) | 5260 MHz, 5280 MHz, 5320 MHz |  |
| 802.11ac<br>VHT40                  | CH 54(Low Channel), CH 62(High Channel)                        | 5270 MHz, 5310 MHz           |  |
| 802.11ac<br>VHT80                  | CH 58(Low Channel)   | 5290 MHz                     |  |

| UNII-2C Test Channel Configuration |   |                              |  |  |
|------------------------------------|---|------------------------------|--|--|
| IEEE Std.                          | Test Channel Number   | Frequency                    |  |  |
| 802.11a                            | CH 100(Low Channel), CH 120(MID Channel), CH 140(High Channel)    | 5500 MHz, 5600 MHz, 5700 MHz |  |  |
| 802.11n VHT20                      | CH 100(Low Channel), CH 120(MID Channel), CH 140(High Channel)    | 5500 MHz, 5600 MHz, 5700 MHz |  |  |
| 802.11n VHT40                      | CH 102(Low Channel), CH 118(MID Channel), CH 134(High Channel)    | 5510 MHz, 5590 MHz, 5670 MHz |  |  |
| 802.11ac<br>VHT20                  | CH 100(Low Channel), CH 120(MID Channel),<br>CH 140(High Channel) | 5500MHz, 5600 MHz, 5700MHz   |  |  |
| 802.11ac<br>VHT40                  | CH 102(Low Channel), CH 118(MID Channel), CH 134(High Channel)    | 5510 MHz, 5590 MHz, 5670 MHz |  |  |
| 802.11ac<br>VHT80                  | CH 102(Low Channel), CH 122(High Channel)                         | 5530 MHz, 5610 MHz           |  |  |





**UNII-3 Test Channel Configuration** IEEE Std. **Test Channel Number** Frequency CH 149(Low Channel), CH 157(MID Channel), 802.11a 5745 MHz, 5785 MHz, 5825 MHz CH 165(High Channel) CH 149(Low Channel), CH 157(MID Channel). 802.11n HT20 5745 MHz, 5785 MHz, 5825 MHz CH 165(High Channel) 802.11n HT40 CH 151(Low Channel), CH 159(High Channel) 5755MHz, 5795MHz CH 149(Low Channel), CH 157(MID Channel), 802.11ac 5745 MHz, 5785 MHz, 5825 MHz VHT20 CH 165(High Channel) 802.11ac CH 151(Low Channel), CH 159(High Channel) 5755 MHz, 5795 MHz VHT40 802.11ac CH 155(Low Channel) 5775 MHz VHT80



Page 15 of 334

#### 5.5. DESCRIPTION OF AVAILABLE ANTENNAS

| Antenna No. | Frequency Band | Antenna Type | Max Antenna Gain (dBi) |
|-------------|----------------|--------------|------------------------|
| 1           | 5180~5825      | PCB          | 4                      |
| 2           | 5180~5825      | PCB          | 4                      |

The EUT support Cyclic Shift Diversity(CDD) mode.

MIMO output power port and MIMO PSD port summing was performed in accordance with KDB 662911 D01. For the CDD results the Directional Gain was calculated in accordance with the following mothed.

For output power measurements:

Directional gain= GANT + Array Gain = 4 dBi

G<sub>ANT</sub>: equal to the gain of the antenna having the highest gain

Array Gain = 0 dB (i.e., no array gain) for  $N_{ANT} \le 4$ 

For power spectral density (PSD) measurements:

Directional gain= GANT + Array Gain = 7 dBi

Array Gain = 10 log(Nant/Nss) dB. Nant : number of transmit antennas

Nss: number of spatial streams, The worst case directional gain will occur when Nss = 1

| IEE Std. 802.11 | Transmit and Receive Mode | Description  |
|-----------------|---------------------------|--|
| 802.11a20       | ⊠2TX, 2RX                 | ANT 1 and ANT 2 can be used as transmitting/receiving antenna. |
| 802.11n HT20    | ⊠2TX, 2RX                 | ANT 1 and ANT 2 can be used as transmitting/receiving antenna. |
| 802.11n HT40    | ⊠2TX, 2RX                 | ANT 1 and ANT 2 can be used as transmitting/receiving antenna. |
| 802.11ac VHT20  | ⊠2TX, 2RX                 | ANT 1 and ANT 2 can be used as transmitting/receiving antenna. |
| 802.11ac VHT40  | ⊠2TX, 2RX                 | ANT 1 and ANT 2 can be used as transmitting/receiving antenna. |
| 802.11ac VHT80  | ⊠2TX, 2RX                 | ANT 1 and ANT 2 can be used as transmitting/receiving antenna. |

#### Note:

1.BT&WLAN 2.4G, BT & WLAN 5G, WLAN 2.4G & WLAN 5G can't transmit simultaneously. (declared by client)



5.6. THE WORSE CASE POWER SETTING PARAMETER

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

#### UNII-1

| Mode       | Rate | Channel  | Soft set value |       |  |
|------------|------|----------|----------------|-------|--|
| Wode       | Nate | Cildille | ANT 1          | ANT 2 |  |
|            |      | 36       | 20             | 22    |  |
| 11a20      | 6M   | 40       | 20             | 22    |  |
|            |      | 48       | 20             | 22    |  |
|            |      | 36       | 18             | 18    |  |
| 11n HT20   | MCS0 | 40       | 18             | 18    |  |
|            |      | 48       | 18             | 18    |  |
| 11n HT40   | MCSO | 38       | 1C             | 1C    |  |
| 111111140  | MCS0 | 46       | 1C             | 1C    |  |
| 11ac VHT80 | MCS0 | 42       | 20             | 20    |  |

#### UNII-2A

|            | 5 (  | 01 1    | Soft set value |       |  |
|------------|------|---------|----------------|-------|--|
| Mode       | Rate | Channel | ANT 1          | ANT 2 |  |
|            |      | 52      | 20             | 22    |  |
| 11a        | 6M   | 56      | 20             | 22    |  |
|            |      | 64      | 20             | 22    |  |
|            |      | 52      | 20             | 20    |  |
| 11n HT20   | MCS0 | 56      | 20             | 20    |  |
|            |      | 64      | 20             | 20    |  |
| 11n UT40   | MCCO | 54      | 20             | 20    |  |
| 11n HT40   | MCS0 | 62      | 20             | 20    |  |
| 11ac VHT80 | MCS0 | 58      | 20             | 20    |  |



UNII-2C

| Mode       | Rate   | Channel | Soft set value |       |  |
|------------|--------|---------|----------------|-------|--|
| Wiode      | Nate   | Charmer | ANT 1          | ANT 2 |  |
|            |        | 100     | 20             | 20    |  |
| 11a        | 6M     | 116     | 20             | 20    |  |
| i i a      | Olvi   | 140     | 20             | 20    |  |
|            |        | 144     | 20             | 20    |  |
|            |        | 100     | 20             | 20    |  |
| 11n HT20   | MCS0   | 116     | 20             | 20    |  |
| 111111120  |        | 140     | 20             | 20    |  |
|            |        | 144     | 20             | 20    |  |
|            |        | 102     | 20             | 20    |  |
| 11n HT40   | MCS0   | 118     | 20             | 20    |  |
| 111111140  | IVICOU | 134     | 20             | 20    |  |
|            |        | 142     | 20             | 20    |  |
| 11ac VHT80 |        | 106     | 20             | 20    |  |
|            | MCS0   | 122     | 20             | 20    |  |
|            |        | 138     | 20             | 20    |  |

## UNII-3

| Mada       | Dete | Channal | Soft set value |       |  |
|------------|------|---------|----------------|-------|--|
| Mode       | Rate | Channel | ANT1           | ANT 2 |  |
|            |      | 149     | 21             | 23    |  |
| 11a        | 6M   | 157     | 21             | 23    |  |
|            |      | 165     | 21             | 23    |  |
|            |      | 149     | 21             | 21    |  |
| 11n HT20   | MCS0 | 157     | 21             | 21    |  |
|            |      | 165     | 21             | 21    |  |
| 14n UT40   | MCCO | 151     | 21             | 21    |  |
| 11n HT40   | MCS0 | 159     | 21             | 21    |  |
| 11ac VHT80 | MCS0 | 155     | 20             | 20    |  |



5.7. THE 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 5.4.

Maximum power setting referring to section 5.6.

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

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 .

802.11ac&n SISO mode and MIMO mode have the same power setting, so only the worst case power mode (MIMO) will be record in the report.

The EUT has 2 separate antennas which correspond to 2 separate antenna ports. Core 1 and Core 2 correspond to antenna 1 and antenna 2 respectively.

Antenna 1 and Antenna 2 have the same power setting, but the power test data are different. (Declared by customer.)

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

Conducted output power, power spectral density tests separately on each port with all supported SISO & MIMO port combinations.

The EUT support Cyclic Shift Diversity(CDD), Space Time Coding(STBC), Spartial Division Multiplexing(SDM) modes. They use the same conducted power per chain in any given mode, CDD mode have the maximum power setting, so we only chose the worst case mode CDD for final testing.



## 5.8. DESCRIPTION OF TEST SETUP

#### **SUPPORT EQUIPMENT**

| Item | Equipment  | Brand Name | Model Name   | Remarks   |
|------|------------|------------|--------------|---|
| 1    | Laptop     | Lenovo     | XIAOXIN 5000 | 1   |
| 2    | UART       | 1          | 1            | 1   |
| 3    | AC Adapter | Lenovo     | ADLX65YCC3D  | Input: 100-240 Vac, 50/60 Hz<br>Output: 20 Vdc, 3.25A |

#### **I/O CABLES**

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

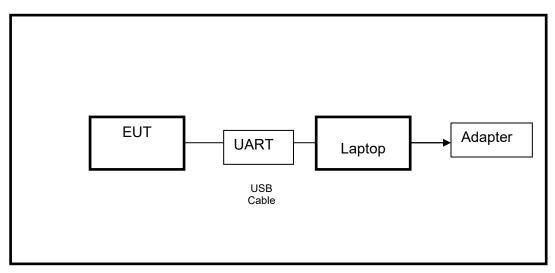
#### **ACCESSORIES**

| Item | Accessory | Brand Name | Model Name | Description |
|------|-----------|------------|------------|-------------|
| 1    | 1         | 1          | 1          | /           |

#### **TEST SETUP**

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

#### **SETUP DIAGRAM FOR TESTS**



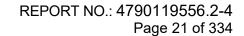
Note: AC adapter only use for AC POWER LINE CONDUCTED EMISSIONS testing.



6. MEASURING INSTRUMENT AND SOFTWARE USED

| Conducted Emissions                   |              |           |              |               |               |  |
|---------------------------------------|--------------|-----------|--------------|---------------|---------------|--|
| Equipment                             | Manufacturer | Model No. | Serial No.   | Last Cal.     | Due Date      |  |
| EMI Test<br>Receiver                  | R&S          | ESR3      | 101961       | Nov. 12, 2020 | Nov. 11, 2021 |  |
| Two-Line V-<br>Network                | R&S          | ENV216    | 101983       | Nov. 12, 2020 | Nov. 11, 2021 |  |
|                                       | 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<br>Receiver            | KESIGHT       | N9038A                                       | MY56400036        | Nov. 12, 2020  | Nov. 11, 2021  |  |
| Hybrid Log<br>Periodic Antenna | TDK           | HLP-3003C                                    | 130959            | April 24, 2020 | April 23, 2023 |  |
| Preamplifier                   | HP            | 8447D  | 2944A09099        | Nov. 12, 2020  | Nov. 11, 2021  |  |
| EMI<br>Measurement<br>Receiver | R&S           | ESR26  | 101377            | Nov. 12, 2020  | Nov. 11, 2021  |  |
| Horn Antenna                   | TDK           | HRN-0118                                     | 130940            | Jul. 20, 2021  | Jul. 19, 2024  |  |
| Preamplifier                   | TDK           | PA-02-0118                                   | TRS-305-<br>00067 | Nov. 20, 2020  | Nov. 19, 2021  |  |
| Horn Antenna                   | Schwarzbeck   | BBHA9170                                     | #697              | July 20, 2021  | July 19, 2024  |  |
| Preamplifier                   | TDK           | PA-02-2                                      | TRS-307-<br>00003 | Nov. 12, 2020  | Nov. 11, 2021  |  |
| Preamplifier                   | TDK           | PA-02-3                                      | TRS-308-<br>00002 | Nov. 12, 2020  | Nov. 11, 2021  |  |
| Loop antenna                   | Schwarzbeck   | 1519B  | 80000             | Jan.17, 2019   | Jan.17,2022    |  |
| Preamplifier                   | TDK           | PA-02-001-<br>3000                           | TRS-302-<br>00050 | Nov. 12, 2020  | Nov. 11, 2021  |  |
| Preamplifier                   | Mini-Circuits | ZX60-83LN-<br>S+                             | SUP01201941       | Nov. 20, 2020  | Nov. 19, 2021  |  |
| Highpass Filter                | Wainwright    | WHKX10-<br>5850-6500-<br>1800-40SS           | 4                 | Nov. 12, 2020  | Nov. 11, 2021  |  |
| Band Reject<br>Filter          | Wainwright    | WRCJV12-<br>5695-5725-<br>5850-5880-<br>40SS | 4                 | Nov. 12, 2020  | Nov. 11, 2021  |  |
| Band Reject<br>Filter          | Wainwright    | WRCJV20-<br>5120-5150-<br>5350-5380-         | 2                 | Nov. 12, 2020  | Nov. 11, 2021  |  |





60SS WRCJV20-**Band Reject** 5440-5470-Wainwright 1 Nov. 12, 2020 Nov. 11, 2021 Filter 5725-5755-60SS Software Description Manufacturer Name Version Test Software for Radiated Emissions Farad **EZ-EMC** Ver. UL-3A1

| Tonsend RF Test System                 |              |                   |          |                |        |        |             |
|--|--------------|-------------------|----------|----------------|--------|--------|-------------|
| Equipment                              | Manufacturer | Мс                | odel No. | Serial No.     | Last   | Cal.   | Due. Date   |
| Wideband Radio<br>Communication Tester | R&S          | CI                | MW500    | 155523         | Nov.20 | 0,2020 | Nov.19,2021 |
| PXA Signal Analyzer                    | Keysight     | N                 | 9030A    | MY55410512     | Nov.20 | 0,2020 | Nov.19,2021 |
| MXG Vector Signal<br>Generator         | Keysight     | N                 | 5182B    | MY56200284     | Nov.20 | 0,2020 | Nov.19,2021 |
| MXG Vector Signal<br>Generator         | Keysight     | N                 | 5172B    | MY56200301     | Nov.20 | 0,2020 | Nov.19,2021 |
| DC power supply                        | Keysight     | Е                 | 3642A    | MY55159130     | Nov.24 | 4,2020 | Nov.23,2021 |
| Temperature & Humidity Chamber         | SANMOOD      | ANMOOD SG-80-CC-2 |          | 2088           | Nov.20 | 0,2020 | Nov.19,2021 |
| Software                               |              |                   |          |                |        |        |             |
| Description                            | Manufactu    | Manufacturer      |          | Name           |        | ,      | Version     |
| Tonsend SRD Test Syste                 | m Tonsend    | l                 | JS1120   | -3 RF Test Sys | stem   | 2.6    | 6.77.0518   |

| Other Instruments            |              |           |            |             |            |  |
|------------------------------|--------------|-----------|------------|-------------|------------|--|
| Equipment                    | Manufacturer | Model No. | Serial No. | Last Cal.   | Next Cal.  |  |
| Power sensor,<br>Power Meter | R&S          | OSP120    | 100921     | Mar.23,2021 | Mar.2,2022 |  |

REPORT NO.: 4790119556.2-4 Page 22 of 334

# 7. ANTENNA PORT TEST RESULTS

## 7.1. ON TIME AND DUTY CYCLE

#### **LIMITS**

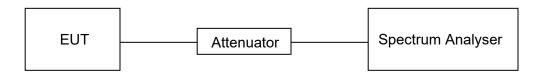
None; for reporting purposes only.

#### **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         | 26 °C   | Relative Humidity | 55.8 % |
|---------------------|---------|-------------------|--------|
| Atmosphere Pressure | 101 kPa | Test Voltage      | DC 5 V |

#### **RESULTS**

Please refer to appendix D.



7.2. 6/26 dB EMISSION BANDWIDTH AND 99 % OCCUPIED BANDWIDTH

#### **LIMITS**

| CFR 47 FCC Part15, Subpart E<br>ISED RSS-247 ISSUE 2 |   |   |  |
|--|---|---|--|
| Test Item  | Limit   | Frequency Range<br>(MHz)  |  |
| 26 dB Emission Bandwidth                             | For reporting purposes only.                          | 5150 ~ 5250   |  |
| 26 dB Emission Bandwidth                             | For reporting purposes only.                          | 5250 ~ 5350   |  |
| 26 dB Emission Bandwidth                             | For reporting purposes only.                          | 5470 ~ 5725 (For FCC)<br>5470 ~ 5600 (For ISED)<br>5650 ~ 5725 (For ISED) |  |
| 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 ISED)  |  |

#### **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 For 26 dB Emission bandwidth: approximately 1 % of the EBW. For 99 % Occupied Bandwidth: approximately 1 % ~ 5 % of the OBW. |
| VBW              | For 6 dB Bandwidth: ≥ 3*RBW For 26 dB Bandwidth: >3*RBW For 99 % Bandwidth: >3*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.

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

For Example: Fundamental Frequency: 5720 MHz

99 % OBW: 21.00 MHz

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.

REPORT NO.: 4790119556.2-4 Page 24 of 334

Turning Frequency: 5725 MHz

99 % Bandwidth of UNII-2C Band Portion = (5725-(5720-(21.00/2)) = 15.50 MHz

99 % Bandwidth of UNII-3 Band Portion = (5720+(21.00/2)-5725) = 5.50 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:

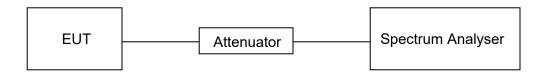
For Example: Fundamental frequency: 5720 MHz

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         | 26 °C   | Relative Humidity | 55.8 % |
|---------------------|---------|-------------------|--------|
| Atmosphere Pressure | 101 kPa | Test Voltage      | DC 5 V |

#### **RESULTS**

Please refer to Appendix A1&A2&A3.

Page 25 of 334

## 7.3. CONDUCTED OUTPUT POWER

#### **LIMITS**

| CFR 47 FCC Part15, Subpart E |   |                            |
|------------------------------|---|----------------------------|
| Test Item                    | Limit   | Frequency Range<br>(MHz)   |
| Conducted                    | ☐ Outdoor Access Point: 1 W (30 dBm) ☐ Indoor Access Point: 1 W (30 dBm) ☐ Fixed Point-To-Point Access Points: 1 W (30 dBm) ☐ Client Devices: 250 mW (24 dBm) | 5150 ~ 5250                |
|                              | Shall not exceed the lesser of 250 mW (24dBm) or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz.                                     | 5250 ~ 5350<br>5470 ~ 5725 |
|                              | Shall not exceed 1 Watt (30 dBm).   | 5725 ~ 5850                |

| ISED RSS-247 ISSUE 2                           |  |   |  |
|--|--|---|--|
| Test Item                                      | Limit  | Frequency Range<br>(MHz)                  |  |
|  | The maximum e.i.r.p. shall not exceed 200 mW (23 dBm) or 10 + 10 log <sub>10</sub> B, dBm, whichever power is less. B is the 99 % emission bandwidth in megahertz.   | 5150 ~ 5250                               |  |
| Conducted<br>Output<br>Power<br>or<br>e.i.r.p. | a. The maximum conducted output power shall not exceed 250 mW (24 dBm) or 11 + 10 log <sub>10</sub> B dBm, whichever is less.  b. The maximum e.i.r.p. shall not exceed 1.0 W (30 dBm) or 17 + 10 log <sub>10</sub> B dBm, whichever is less. B is the 99 % emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W. | 5250 ~ 5350<br>5470 ~ 5600<br>5650 ~ 5725 |  |
|  | Shall not exceed 1 Watt (30 dBm). The e.i.r.p. shall not exceed 4 W  | 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.

Page 26 of 334

#### **TEST PROCEDURE**

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

# Method SA-1 (trace averaging with the EUT transmitting at full power throughout each sweep):

- (i) Set span to encompass the entire emission bandwidth (EBW) (or, alternatively, the entire 99% occupied bandwidth) of the signal.
- (ii) Set RBW = 1 MHz.
- (iii) Set VBW ≥ 3 MHz.
- (iv) Number of points in sweep  $\geq$  2 × span / RBW. (This ensures that bin-to-bin spacing is  $\leq$  RBW/2, so that narrowband signals are not lost between frequency bins.)
- (v) Sweep time = auto.
- (vi) Detector = power averaging (rms), if available. Otherwise, use sample detector mode.
- (vii) If transmit duty cycle < 98 %, use a video trigger with the trigger level set to enable triggering only on full power pulses. Transmitter must operate at maximum power control level for the entire duration of every sweep. If the EUT transmits continuously (i.e., with no off intervals) or at duty cycle ≥ 98 %, and if each transmission is entirely at the maximum power control level, then the trigger shall be set to "free run."
- (viii) Trace average at least 100 traces in power averaging (rms) mode.
- (ix) Compute power by integrating the spectrum across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal using the instrument's band power measurement function with band limits set equal to the EBW (or occupied bandwidth) band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at 1 MHz intervals extending across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the spectrum.

#### 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 %).

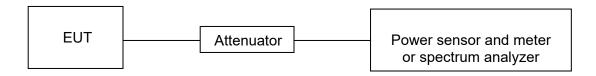
#### Method PM-G (Measurement using a gated RF average power meter):

Measurements may be performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

Straddle channel power was measured using spectrum analyzer.



**TEST SETUP** 



## **TEST ENVIRONMENT**

| Temperature         | 26 °C   | Relative Humidity | 55.8 % |
|---------------------|---------|-------------------|--------|
| Atmosphere Pressure | 101 kPa | Test Voltage      | DC 5 V |

#### **RESULTS**

Please refer to Appendix B.

Page 28 of 334

#### 7.4. POWER SPECTRAL DENSITY

#### **LIMITS**

| CFR 47 FCC Part15, Subpart E |  |                            |
|------------------------------|--|----------------------------|
| Test Item                    | Limit  | Frequency Range<br>(MHz)   |
| Power Spectral<br>Density    | ☐ Outdoor Access Point: 17 dBm/MHz ☐ Indoor Access Point: 17 dBm/MHz ☐ Fixed Point-To-Point Access Points: 17 dBm/MHz ☐ Client Devices: 11 dBm/MHz | 5150 ~ 5250                |
| Density                      | 11 dBm/MHz   | 5250 ~ 5350<br>5470 ~ 5725 |
|                              | 30 dBm/500kHz  | 5725 ~ 5850                |

| ISED RSS-247 ISSUE 2      |  |   |  |
|---------------------------|--|---|--|
| Test Item                 | Limit  | Frequency Range<br>(MHz)                  |  |
|                           | The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band. | 5150 ~ 5250                               |  |
| Power Spectral<br>Density | The power spectral density shall not exceed 11 dBm inany 1.0 MHz band.     | 5250 ~ 5350<br>5470 ~ 5600<br>5650 ~ 5725 |  |
|                           | 30 dBm / 500 kHz   | 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.



Page 29 of 334

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              | ≥3 × 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              | ≥3 × 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         | 26 °C   | Relative Humidity | 55.8 % |
|---------------------|---------|-------------------|--------|
| Atmosphere Pressure | 101 kPa | Test Voltage      | DC 5 V |

## **RESULTS**

Please refer to Appendix C.



8. RADIATED TEST RESULTS

#### **LIMITS**

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

Refer to ISED RSS-GEN Clause 8.9, Clause 8.10 and ISED RSS-247 6.2.

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  | Field Strength Limit | Field Stren                 | ·       |
| (MHz)  | (uV/m) at 3 m        | (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)  | z) 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  |  |  |

## ISED General field strength limits at frequencies below 30 MHz

| Table 6 – General field strength limits at frequencies below 30 MHz |  |                          |  |
|---|--|--------------------------|--|
| Frequency   | Magnetic field strength (H-Field) (μA/m) | Measurement distance (m) |  |
| 9 - 490 kHz <sup>Note 1</sup>                                       | 6.37/F (F in kHz)                        | 300                      |  |
| 490 - 1705 kHz  | 63.7/F (F in kHz)                        | 30                       |  |
| 1.705 - 30 MHz  | 0.08                                     | 30                       |  |

**Note 1:** The emission limits for the ranges 9-90 kHz and 110-490 kHz are based on measurements employing a linear average detector.



#### ISED Restricted bands refer to ISED RSS-GEN Clause 8.10

| MHz                 | MHz  | GHz           |
|---------------------|--|---------------|
| 0.090 - 0.110       | 149.9 - 150.05                               | 9.0 - 9.2     |
| 0.495 - 0.505       | 156.52475 - 156.52525                        | 9.3 - 9.5     |
| 2.1735 - 2.1905     | 156.7 - 156.9                                | 10.6 - 12.7   |
| 3.020 - 3.028       | 162.0125 - 167.17                            | 13.25 - 13.4  |
| 4.125 - 4.128       | 167.72 - 173.2                               | 14.47 - 14.5  |
| 4.17725 - 4.17775   | 240 – 285                                    | 15.35 - 16.2  |
| 4.20725 - 4.20775   | 322 - 335.4                                  | 17.7 - 21.4   |
| 5.677 - 5.683       | 399.9 - 410                                  | 22.01 - 23.12 |
| 6.215 - 6.218       | 608 - 614                                    | 23.6 - 24.0   |
| 6.26775 - 6.26825   | 980 - 1427                                   | 31.2 - 31.8   |
| 8.31175 - 6.31225   | 1435 - 1626.5                                | 36.43 - 36.5  |
| 8.291 - 8.294       | 1845.5 - 1848.5                              | Above 38.6    |
| 8.362 - 8.366       | 1880 - 1710                                  |               |
| 8.37625 - 8.38675   | 1718.8 - 1722.2                              |               |
| 8.41425 - 8.41475   | 2200 - 2300                                  |               |
| 12.29 - 12.293      | 2310 - 2390                                  |               |
| 12.51975 - 12.52025 | 2483.5 - 2500                                |               |
| 12.57675 - 12.57725 | 2655 - 2900                                  |               |
| 13.36 - 13.41       | 3260 – 3267                                  |               |
| 16.42 - 16.423      | 3332 - 3339                                  |               |
| 16.69475 - 16.69525 | 3345.8 - 3358                                |               |
| 16.80425 - 16.80475 | 3500 - 4400                                  |               |
| 25.5 - 25.67        | 4500 - 5150                                  |               |
| 37.5 - 38.25        | 5350 - 5460                                  |               |
| 73 - 74.6           | 7250 - 7750                                  |               |
| 74.8 - 75.2         | 8025 - 8500                                  |               |
| 108 – 138           |  |               |
|                     | ds listed in table 7 and in bands above 38.6 |               |

## 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



Page 32 of 334

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

| LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1GHz) |                       |                       |  |
|--|-----------------------|-----------------------|--|
| Frequency Range                                      | CIDD Limit            | Field Strength Limit  |  |
| (MHz)  | EIRP Limit            | (dBuV/m) at 3 m       |  |
| 5150~5250 MHz  |                       |                       |  |
| 5250~5350 MHz  | PK: -27 (dBm/MHz)     | PK:68.2(dBµV/m)       |  |
| 5470~5725 MHz  |                       |                       |  |
|  | PK: -27 (dBm/MHz) *1  | PK: 68.2(dBµV/m) *1   |  |
| 5725~5850 MHz  | PK: 10 (dBm/MHz) *2   | PK: 105.2 (dBµV/m) *2 |  |
| 3725~5650 WHZ  | PK: 15.6 (dBm/MHz) *3 | PK: 110.8(dBµV/m) *3  |  |
|  | PK: 27 (dBm/MHz) *4   | PK: 122.2 (dBµV/m) *4 |  |

#### Note:

<sup>\*1</sup> beyond 75 MHz or more above of the band edge.

<sup>\*2</sup> below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above.

<sup>\*3</sup> below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above.

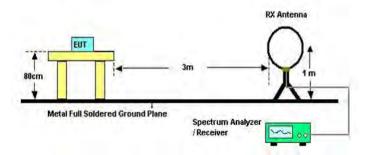
<sup>\*4</sup> from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.



Page 33 of 334

#### **TEST SETUP AND PROCEDURE**

Below 30 MHz



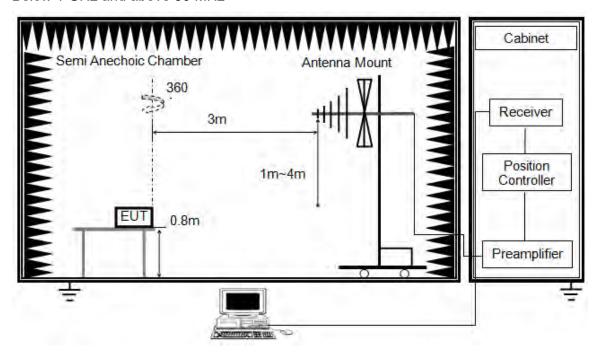
#### The setting of the spectrum analyser

| 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 remeasured. 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 guasi-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 377Ω. 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



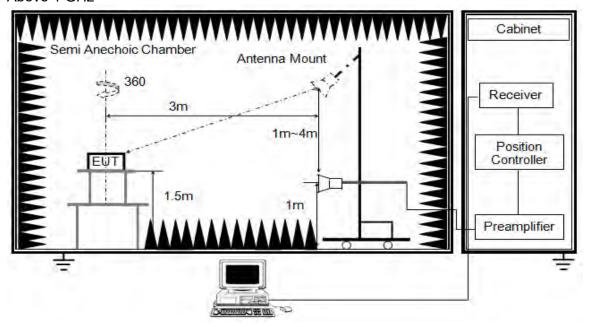
The setting of the spectrum analyser

| 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



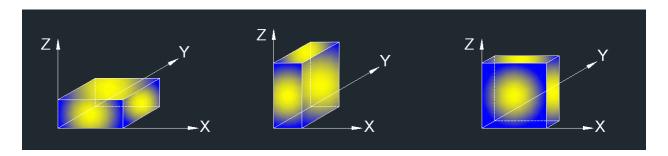
The setting of the spectrum analyser

| RBW      | 1 MHz                          |
|----------|--------------------------------|
| IV/RW    | 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.

#### **TEST ENVIRONMENT**

| Temperature         | 23.3 °C | Relative Humidity | 61 %   |
|---------------------|---------|-------------------|--------|
| Atmosphere Pressure | 101 kPa | Test Voltage      | DC 5 V |

## **RESULTS**



## 8.1. RESTRICTED BANDEDGE

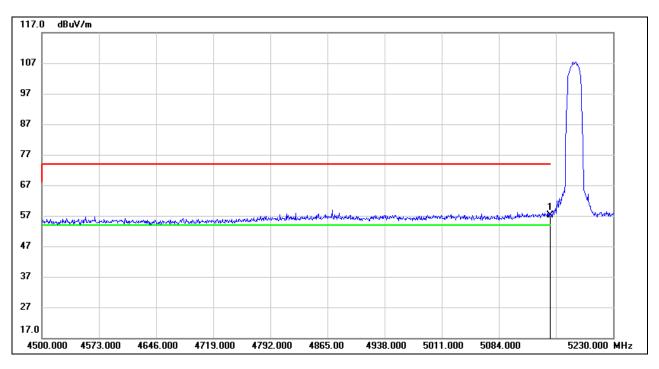
#### 8.1.1. 802.11a20 SISO MODE

#### **UNII-1 BAND**

# ANTENNA 1 TEST RESULTS (WORST CASE)

#### RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)

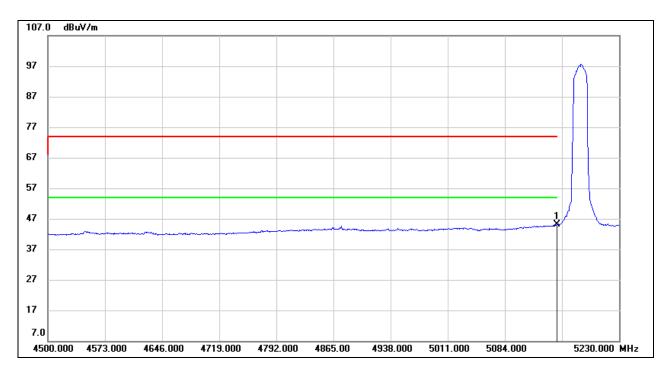
#### **PEAK**



| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5150.000  | 15.90   | 41.19   | 57.09    | 74.00    | -16.91 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



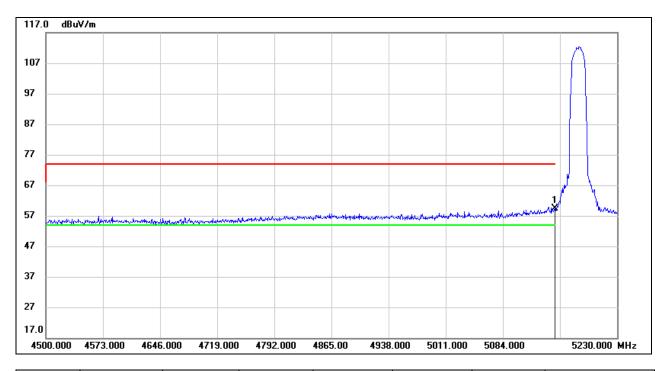


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5150.000  | 3.90    | 41.19   | 45.09    | 54.00    | -8.91  | AVG    |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
- 4. For the transmitting duration, please refer to clause 7.1.
- 5. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



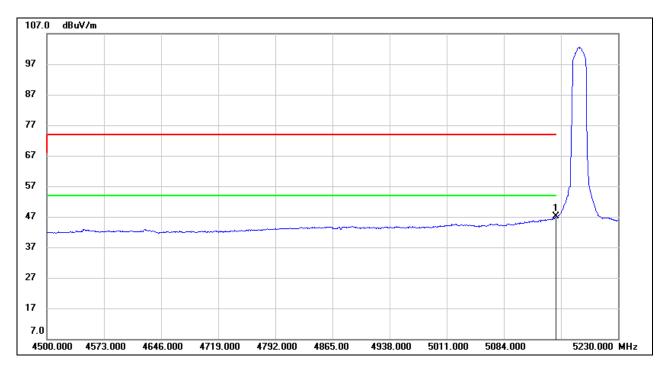
#### **PEAK**



| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5150.000  | 18.12   | 41.19   | 59.31    | 74.00    | -14.69 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



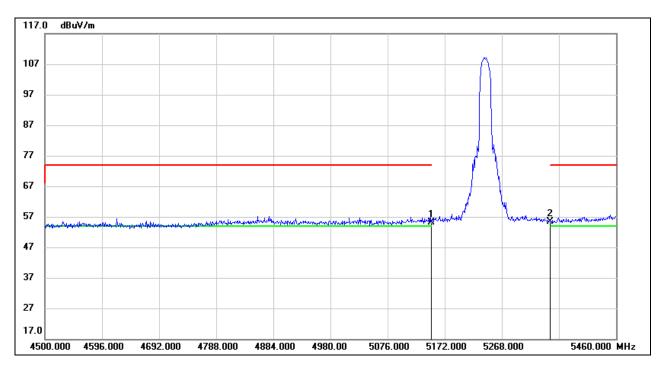


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5150.000  | 5.82    | 41.19   | 47.01    | 54.00    | -6.99  | AVG    |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
- 4. For the transmitting duration, please refer to clause 7.1.
- 5. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



#### **PEAK**

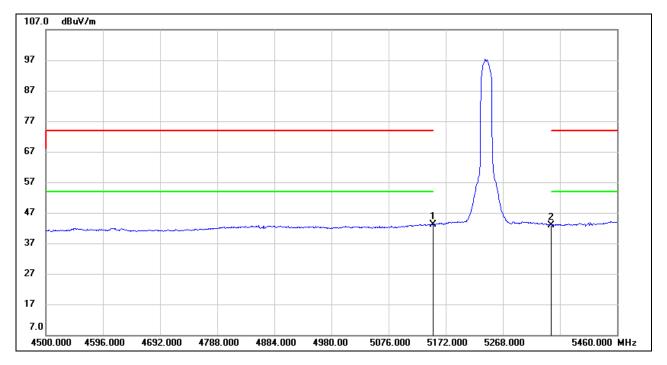


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5150.000  | 15.19   | 39.91   | 55.10    | 74.00    | -18.90 | peak   |
| 2   | 5350.000  | 15.23   | 40.08   | 55.31    | 74.00    | -18.69 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



#### **AVG**



| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5150.000  | 3.28    | 39.91   | 43.19    | 54.00    | -10.81 | AVG    |
| 2   | 5350.000  | 2.88    | 40.08   | 42.96    | 54.00    | -11.04 | AVG    |

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. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
- 4. For the transmitting duration, please refer to clause 7.1.
- 5. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.
- 6. For transmitters with operating frequencies in the band 5150-5250 MHz, all emissions outside the band 5150-5350 MHz shall not exceed -27 dBm/MHz e.i.r.p. The worst setting has been used for investigation during the measurement.

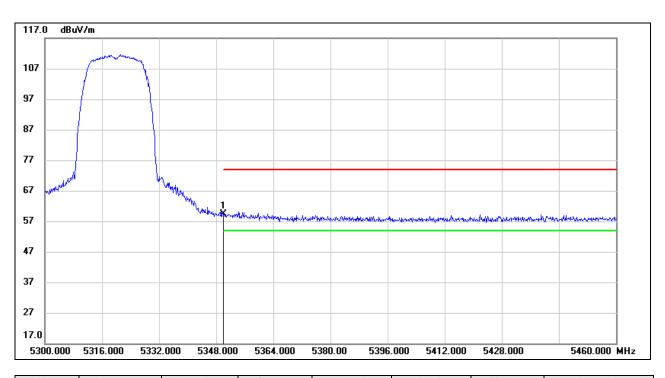


#### **UNII-2A BAND**

# **ANTENNA 1 TEST RESULTS (WORST CASE)**

# **RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)**

#### **PEAK**

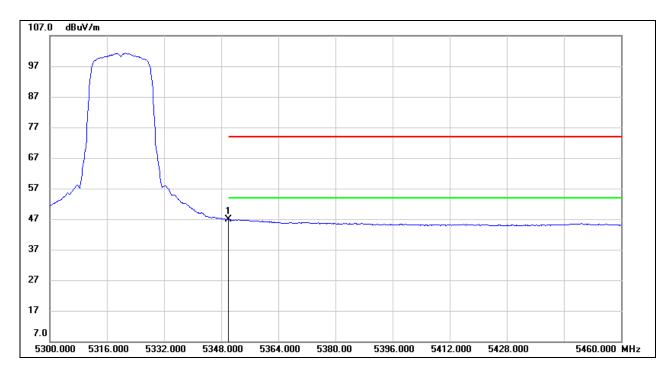


|   | No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|---|-----|-----------|---------|---------|----------|----------|--------|--------|
| I |     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
|   | 1   | 5350.000  | 18.15   | 41.20   | 59.35    | 74.00    | -14.65 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



#### AVG



| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5350.000  | 5.62    | 41.20   | 46.82    | 54.00    | -7.18  | AVG    |

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. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
- 4. For the transmitting duration, please refer to clause 7.1.
- 5. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

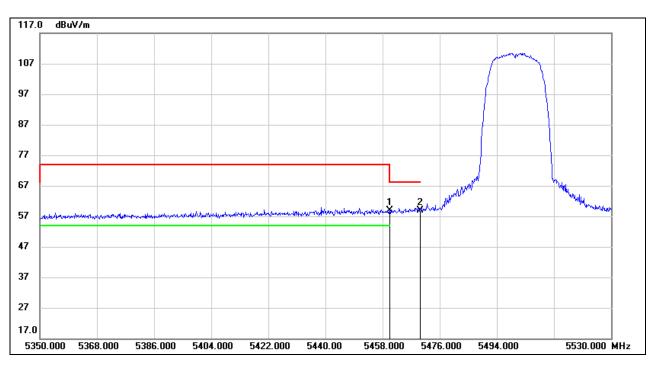


#### **UNII-2C BAND**

### **ANTENNA 1 TEST RESULTS (WORST CASE)**

### RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)

#### **PEAK**

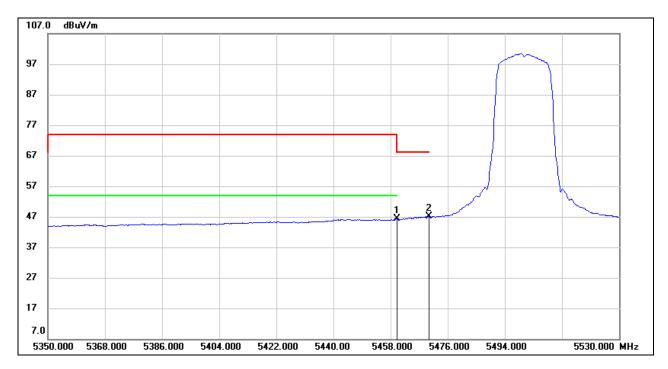


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5460.000  | 16.98   | 41.82   | 58.80    | 68.20    | -9.40  | peak   |
| 2   | 5470.000  | 16.94   | 41.87   | 58.81    | 68.20    | -9.39  | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



#### AVG

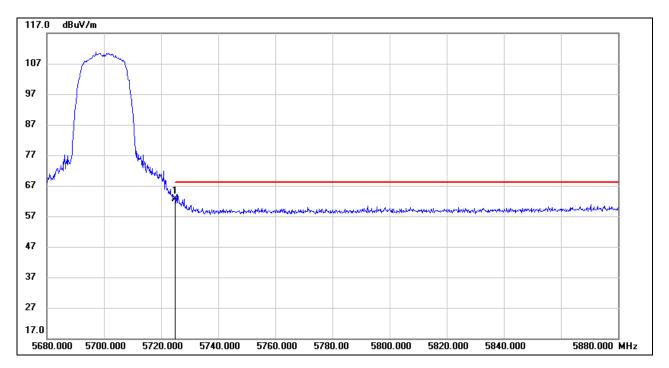


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5460.000  | 4.55    | 41.82   | 46.37    | 54.00    | -7.63  | AVG    |
| 2   | 5470.000  | 5.38    | 41.87   | 47.25    | /        | /      | AVG    |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
- 4. For the transmitting duration, please refer to clause 7.1.
- 5. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



#### **PEAK**



| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5725.000  | 20.86   | 41.67   | 62.53    | 68.20    | -5.67  | peak   |

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. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

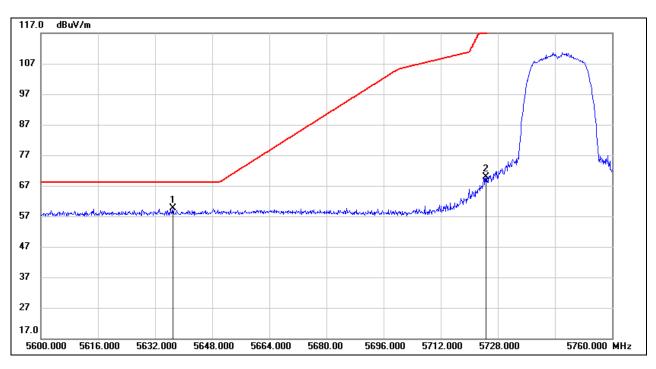


#### **UNII-3 BAND**

# **ANTENNA 1 TEST RESULTS (WORST CASE)**

### RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)

# **PEAK**

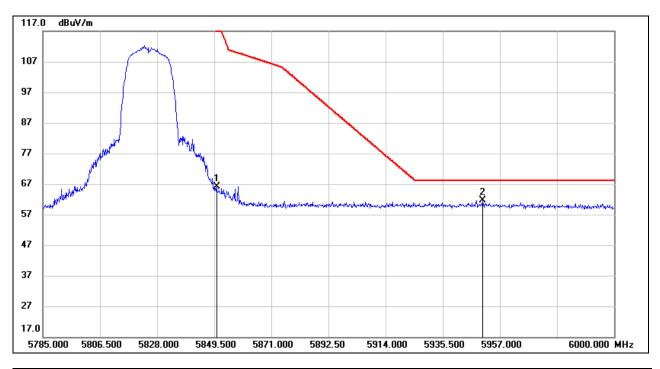


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5636.960  | 18.06   | 41.66   | 59.72    | 68.20    | -8.48  | peak   |
| 2   | 5724.640  | 28.31   | 41.67   | 69.98    | 121.38   | -51.40 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



#### **PEAK**



| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5850.360  | 23.53   | 42.53   | 66.06    | 121.38   | -55.32 | peak   |
| 2   | 5950.550  | 18.89   | 42.79   | 61.68    | 68.20    | -6.52  | peak   |

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. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

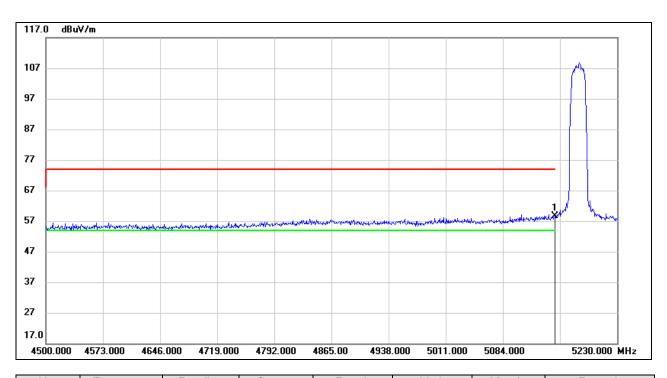


8.1.2. 802.11n HT20 MIMO MODE

## **UNII-1 BAND**

## RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)

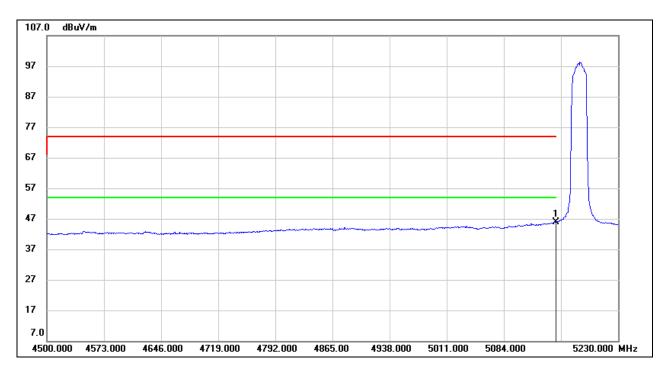
#### **PEAK**



| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5150.000  | 17.36   | 41.19   | 58.55    | 74.00    | -15.45 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



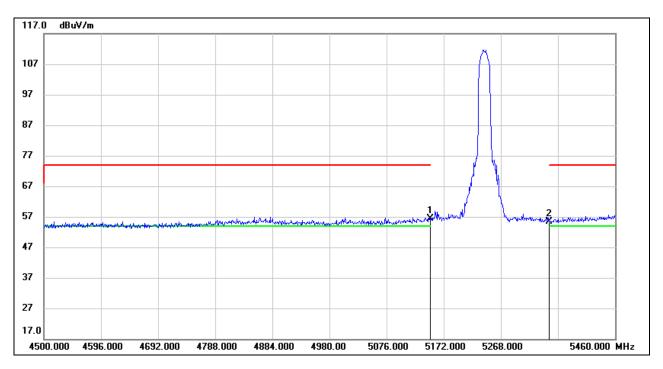


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5150.000  | 4.68    | 41.19   | 45.87    | 54.00    | -8.13  | AVG    |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
- 4. For the transmitting duration, please refer to clause 7.1.
- 5. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



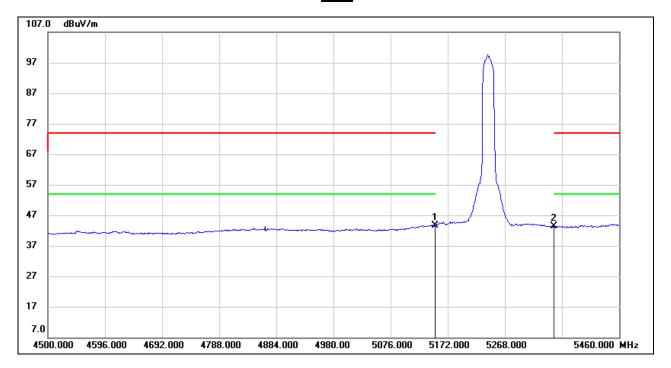
#### **PEAK**



| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5150.000  | 16.39   | 39.91   | 56.30    | 74.00    | -17.70 | peak   |
| 2   | 5350.000  | 15.29   | 40.08   | 55.37    | 74.00    | -18.63 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.





| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5150.000  | 3.68    | 39.91   | 43.59    | 54.00    | -10.41 | AVG    |
| 2   | 5350.000  | 3.24    | 40.08   | 43.32    | 54.00    | -10.68 | AVG    |

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

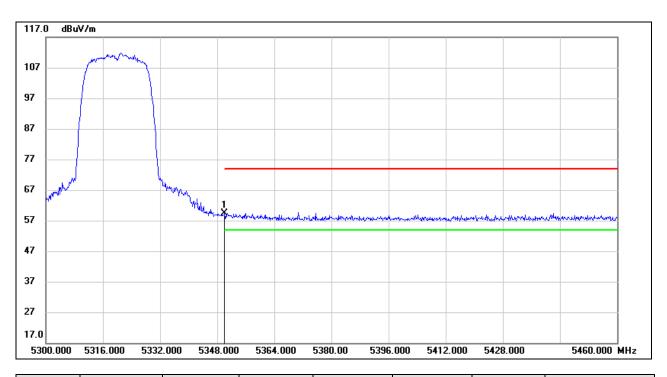
- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
- 4. For the transmitting duration, please refer to clause 7.1.
- 5. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.
- 6. For transmitters with operating frequencies in the band 5150-5250 MHz, all emissions outside the band 5150-5350 MHz shall not exceed -27 dBm/MHz e.i.r.p. The worst setting has been used for investigation during the measurement.



#### **UNII-2A BAND**

# RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)

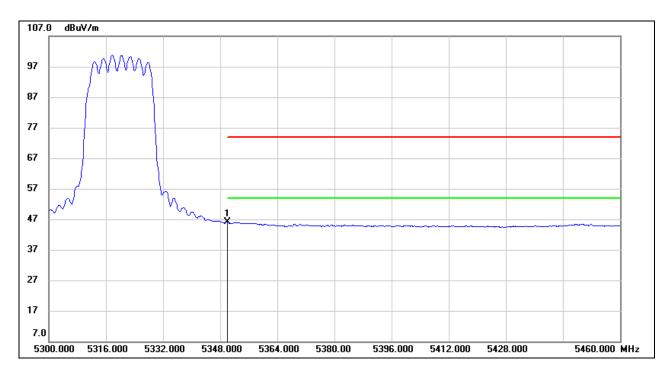
# **PEAK**



| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5350.000  | 18.07   | 41.20   | 59.27    | 74.00    | -14.73 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.





| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5350.000  | 4.94    | 41.20   | 46.14    | 54.00    | -7.86  | AVG    |

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

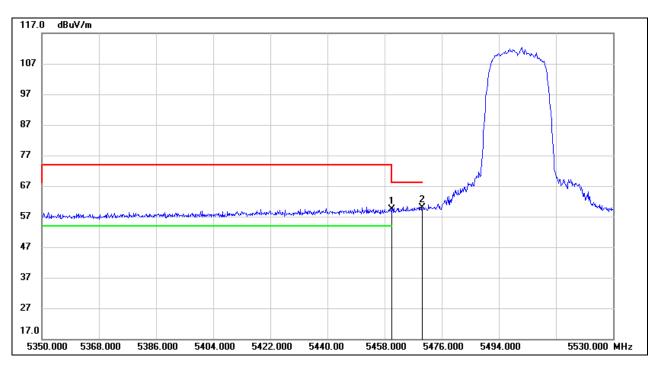
- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
- 4. For the transmitting duration, please refer to clause 7.1.
- 5. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



**UNII-2C BAND** 

# RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)

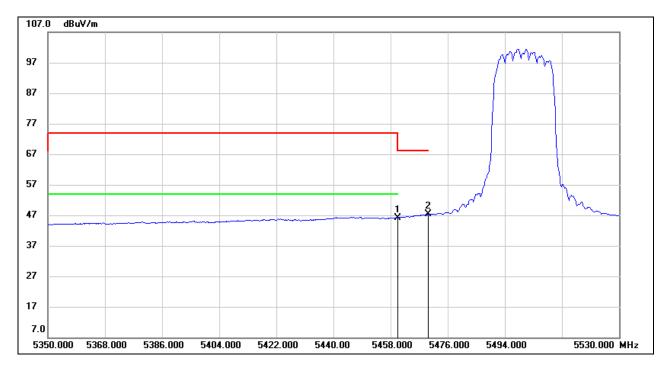
#### **PEAK**



| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5460.000  | 17.60   | 41.82   | 59.42    | 68.20    | -8.78  | peak   |
| 2   | 5470.000  | 18.07   | 41.87   | 59.94    | 68.20    | -8.26  | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



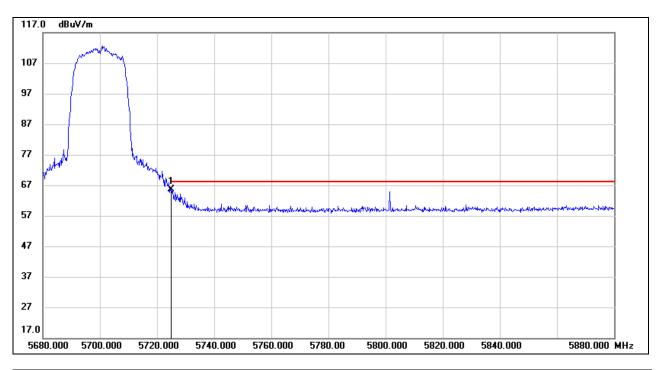


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5460.000  | 4.36    | 41.82   | 46.18    | 54.00    | -7.82  | AVG    |
| 2   | 5470.000  | 5.50    | 41.87   | 47.37    | /        | 1      | AVG    |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
- 4. For the transmitting duration, please refer to clause 7.1.
- 5. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



#### **PEAK**



| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5725.000  | 23.91   | 41.67   | 65.58    | 68.20    | -2.62  | peak   |

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

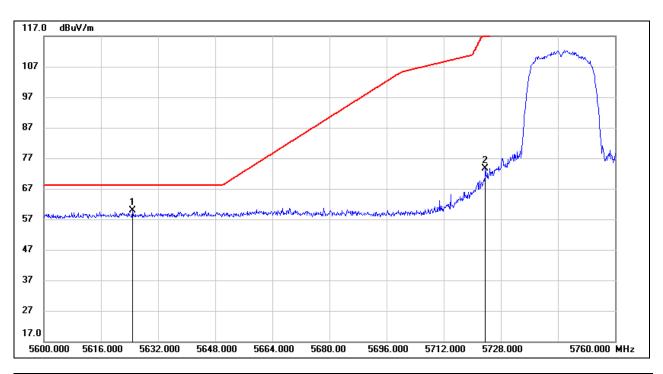
- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



#### **UNII-3 BAND**

# RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)

#### **PEAK**

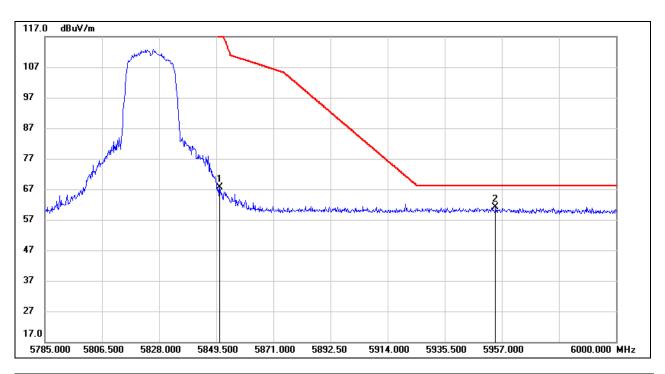


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5624.800  | 18.08   | 41.69   | 59.77    | 68.20    | -8.43  | peak   |
| 2   | 5723.680  | 31.87   | 41.66   | 73.53    | 119.19   | -45.66 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



#### **PEAK**



| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5850.790  | 25.16   | 42.53   | 67.69    | 120.40   | -52.71 | peak   |
| 2   | 5954.635  | 18.34   | 42.78   | 61.12    | 68.20    | -7.08  | peak   |

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. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

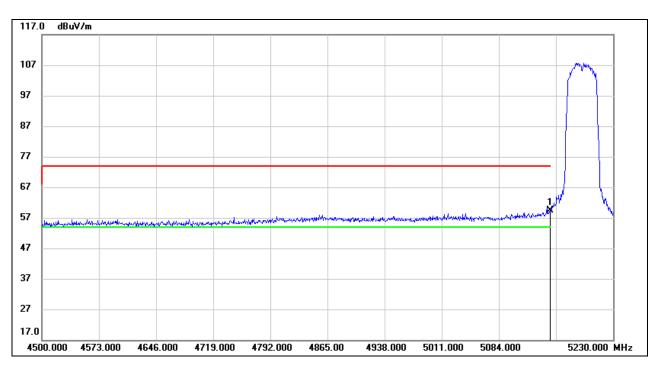


# 8.1.3. 802.11n HT40 MIMO MODE

#### **UNII-1 BAND**

## RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)

#### **PEAK**

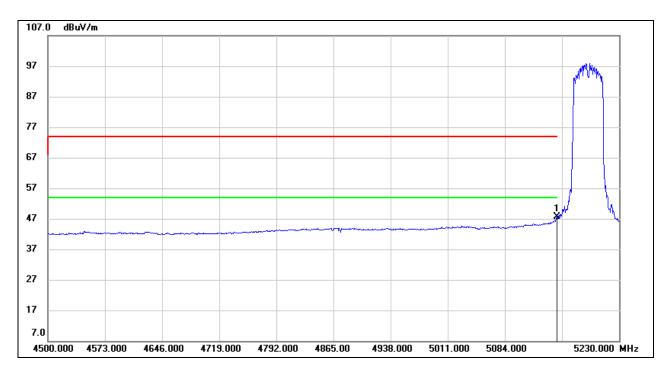


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5150.000  | 18.22   | 41.19   | 59.41    | 74.00    | -14.59 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



#### AVG

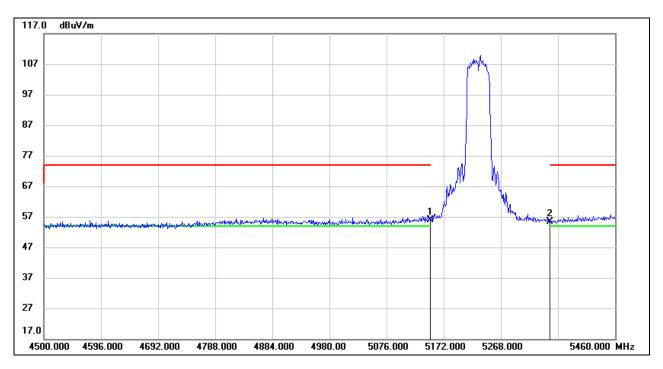


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5150.000  | 6.40    | 41.19   | 47.59    | 54.00    | -6.41  | AVG    |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
- 4. For the transmitting duration, please refer to clause 7.1.
- 5. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



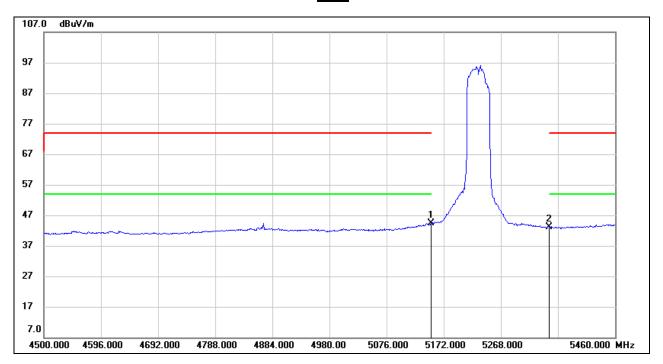
## **PEAK**



| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5150.000  | 15.94   | 39.91   | 55.85    | 74.00    | -18.15 | peak   |
| 2   | 5350.000  | 15.32   | 40.08   | 55.40    | 74.00    | -18.60 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.





| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5150.000  | 4.40    | 39.91   | 44.31    | 54.00    | -9.69  | AVG    |
| 2   | 5350.000  | 3.11    | 40.08   | 43.19    | 54.00    | -10.81 | AVG    |

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

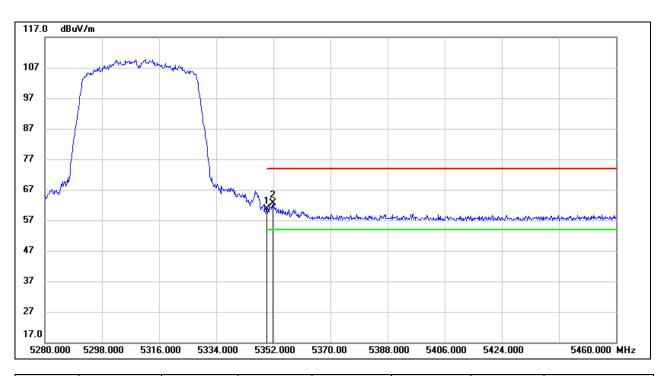
- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
- 4. For the transmitting duration, please refer to clause 7.1.
- 5. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.
- 6. For transmitters with operating frequencies in the band 5150-5250 MHz, all emissions outside the band 5150-5350 MHz shall not exceed -27 dBm/MHz e.i.r.p. The worst setting has been used for investigation during the measurement.



**UNII-2A BAND** 

#### RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)

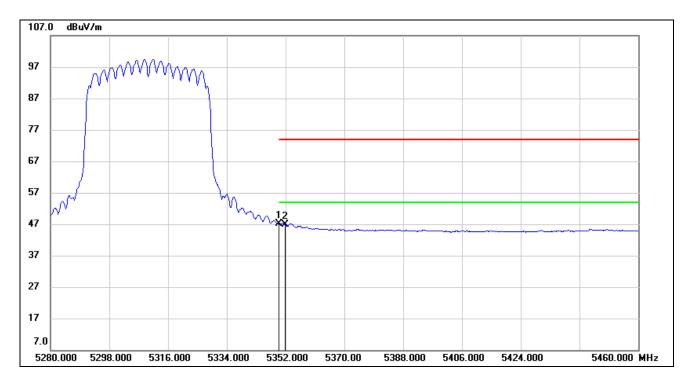
#### **PEAK**



| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5350.000  | 19.55   | 41.20   | 60.75    | 74.00    | -13.25 | peak   |
| 2   | 5351.820  | 21.53   | 41.21   | 62.74    | 74.00    | -11.26 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.





| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5350.000  | 5.87    | 41.20   | 47.07    | 54.00    | -6.93  | AVG    |
| 2   | 5351.820  | 5.65    | 41.21   | 46.86    | 54.00    | -7.14  | AVG    |

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

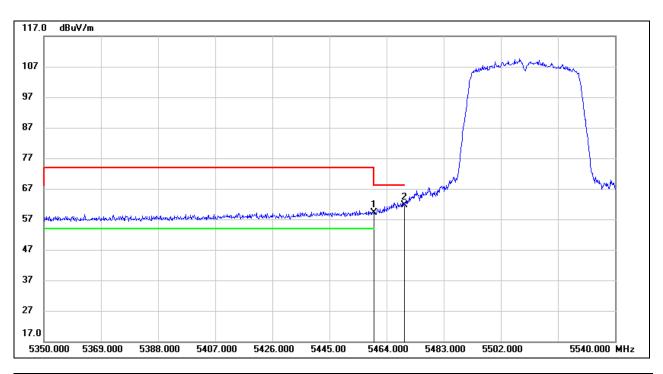
- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
- 4. For the transmitting duration, please refer to clause 7.1.
- 5. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



#### **UNII-2C BAND**

# RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)

#### **PEAK**

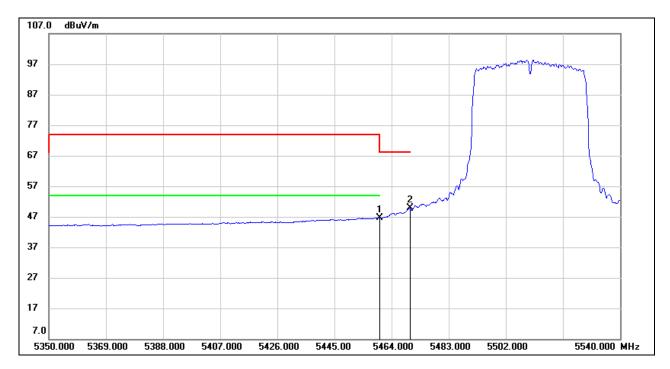


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5460.000  | 17.25   | 41.82   | 59.07    | 68.20    | -9.13  | peak   |
| 2   | 5470.000  | 19.81   | 41.87   | 61.68    | 68.20    | -6.52  | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



#### **AVG**

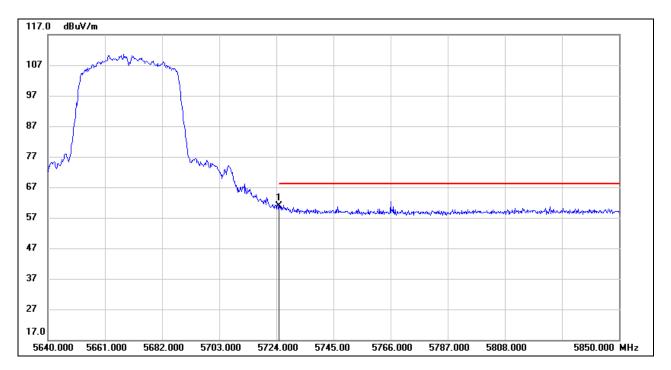


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5460.000  | 4.70    | 41.82   | 46.52    | 54.00    | -7.48  | AVG    |
| 2   | 5470.000  | 7.89    | 41.87   | 49.76    | /        | /      | AVG    |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
- 4. For the transmitting duration, please refer to clause 7.1.
- 5. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



#### **PEAK**



| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5725.000  | 19.25   | 41.67   | 60.92    | 68.20    | -7.28  | peak   |

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

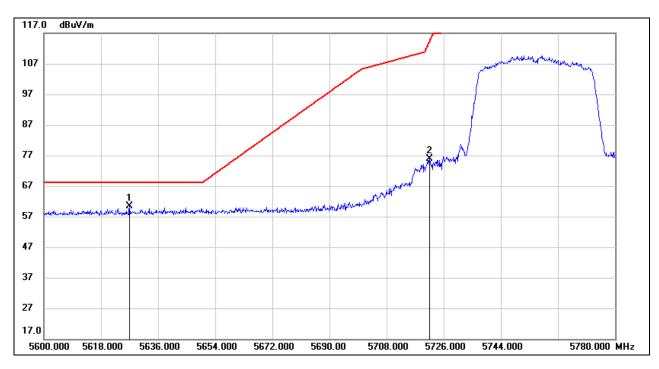
- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



#### **UNII-3 BAND**

# RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)

#### **PEAK**

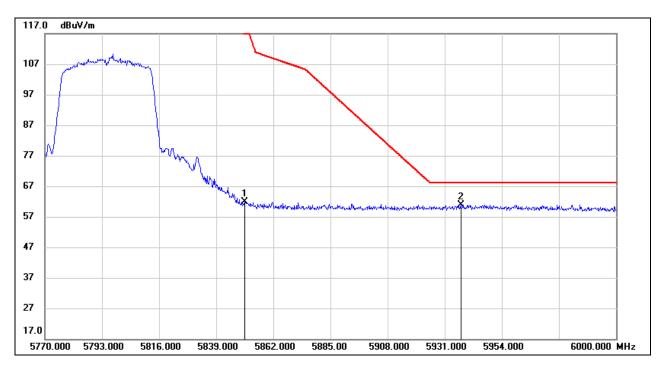


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5627.000  | 18.82   | 41.68   | 60.50    | 68.20    | -7.70  | peak   |
| 2   | 5721.500  | 34.15   | 41.66   | 75.81    | 114.22   | -38.41 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



#### **PEAK**



| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5850.500  | 19.38   | 42.53   | 61.91    | 121.06   | -59.15 | peak   |
| 2   | 5937.440  | 18.15   | 42.85   | 61.00    | 68.20    | -7.20  | peak   |

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. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

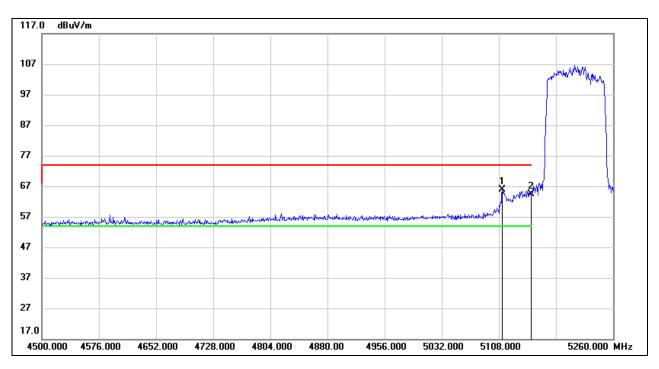


#### 8.1.4. 802.11ac VHT80 MIMO MODE

#### **UNII-1 BAND**

# RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)

#### **PEAK**

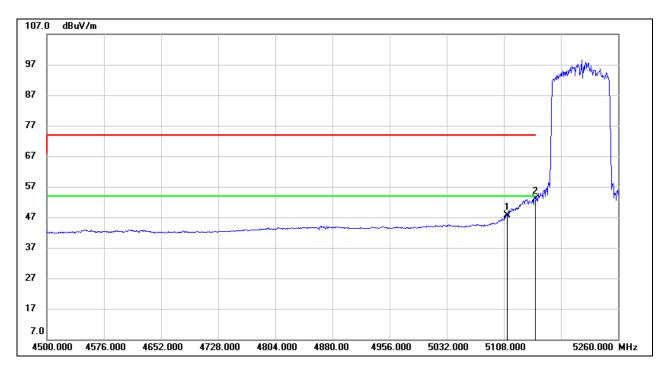


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5112.560  | 24.93   | 40.86   | 65.79    | 74.00    | -8.21  | peak   |
| 2   | 5150.000  | 23.17   | 41.19   | 64.36    | 74.00    | -9.64  | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



## <u>AVG</u>



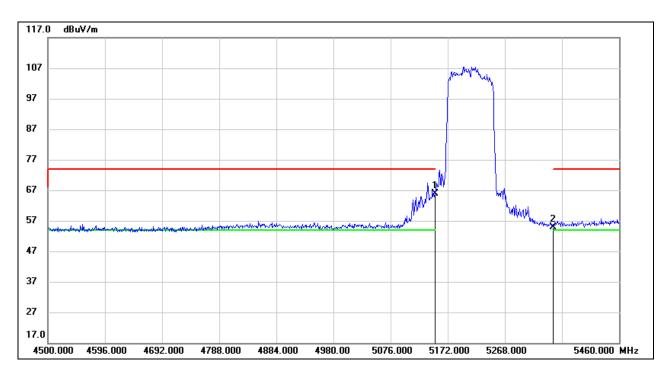
| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5112.560  | 6.71    | 40.86   | 47.57    | 54.00    | -6.43  | AVG    |
| 2   | 5150.000  | 11.81   | 41.19   | 53.00    | 54.00    | -1.00  | AVG    |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
- 4. For the transmitting duration, please refer to clause 7.1.
- 5. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)

#### **PEAK**

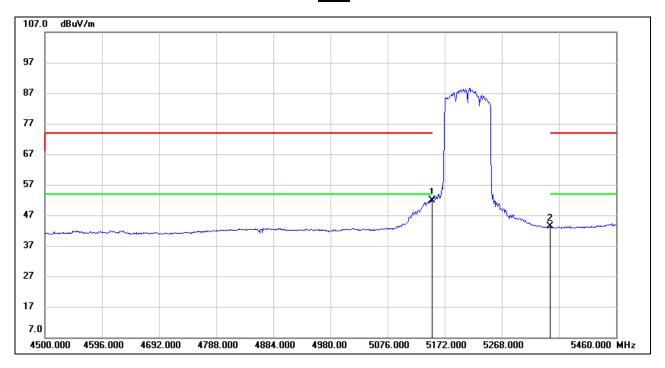


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5150.000  | 25.85   | 39.91   | 65.76    | 74.00    | -8.24  | peak   |
| 2   | 5350.000  | 14.85   | 40.08   | 54.93    | 74.00    | -19.07 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



## <u>AVG</u>



| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5150.000  | 11.96   | 39.91   | 51.87    | 54.00    | -2.13  | AVG    |
| 2   | 5350.000  | 3.28    | 40.08   | 43.36    | 54.00    | -10.64 | AVG    |

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. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
- 4. For the transmitting duration, please refer to clause 7.1.
- 5. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.
- 6. For transmitters with operating frequencies in the band 5150-5250 MHz, all emissions outside the band 5150-5350 MHz shall not exceed -27 dBm/MHz e.i.r.p. The worst setting has been used for investigation during the measurement.

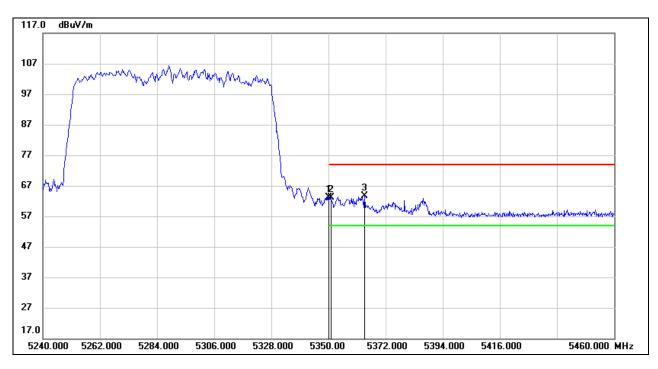
Note: All the polarities (Vertical & Horizontal) and Antennas had been tested, only the worst data was recorded in the report.



## **UNII-2A BAND**

#### RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)

#### **PEAK**

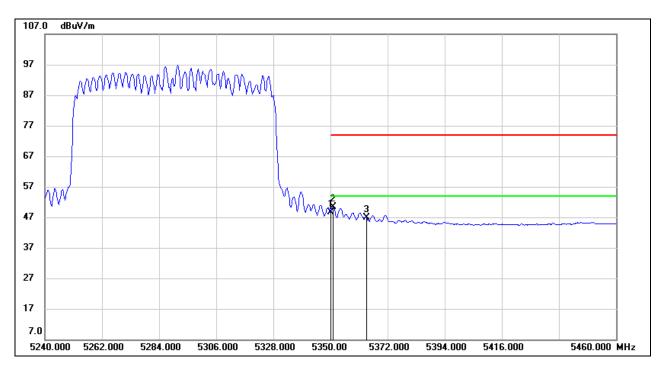


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5350.000  | 22.00   | 41.20   | 63.20    | 74.00    | -10.80 | peak   |
| 2   | 5350.880  | 22.02   | 41.21   | 63.23    | 74.00    | -10.77 | peak   |
| 3   | 5363.860  | 22.23   | 41.28   | 63.51    | 74.00    | -10.49 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



## <u>AVG</u>



| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5350.000  | 7.34    | 41.20   | 48.54    | 54.00    | -5.46  | AVG    |
| 2   | 5350.880  | 9.13    | 41.21   | 50.34    | 54.00    | -3.66  | AVG    |
| 3   | 5363.860  | 5.70    | 41.28   | 46.98    | 54.00    | -7.02  | AVG    |

Note: 1. Measurement = Reading Level + Correct Factor

- 2. AVG: VBW=1/Ton where: ton is transmit duration.
- 3. For duty cycle, please refer to clause 7.1.
- 4. Only the worst case emission will be recorder, if it complies with the limit, the other emissions deemed to comply with the limit.

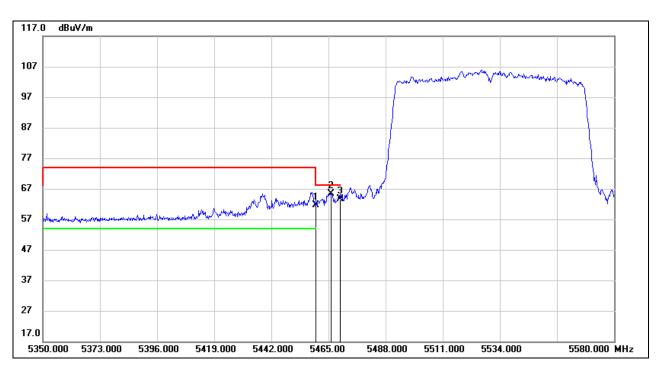
Note: All the polarities (Vertical & Horizontal) and Antennas had been tested, only the worst data was recorded in the report.



#### **UNII-2C BAND**

## RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)

#### **PEAK**

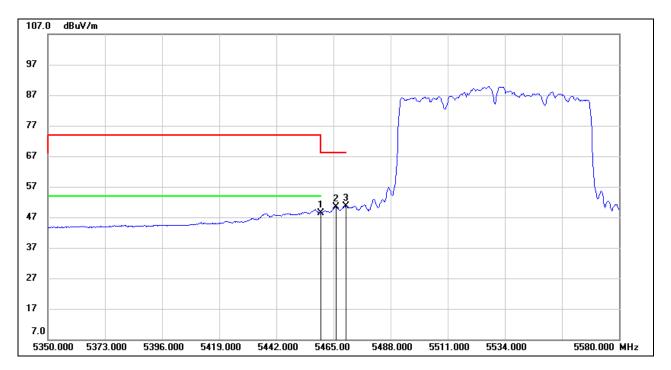


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5460.000  | 19.80   | 41.82   | 61.62    | 68.20    | -6.58  | peak   |
| 2   | 5466.150  | 23.44   | 41.86   | 65.30    | 68.20    | -2.90  | peak   |
| 3   | 5470.000  | 21.81   | 41.87   | 63.68    | 68.20    | -4.52  | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



#### AVG



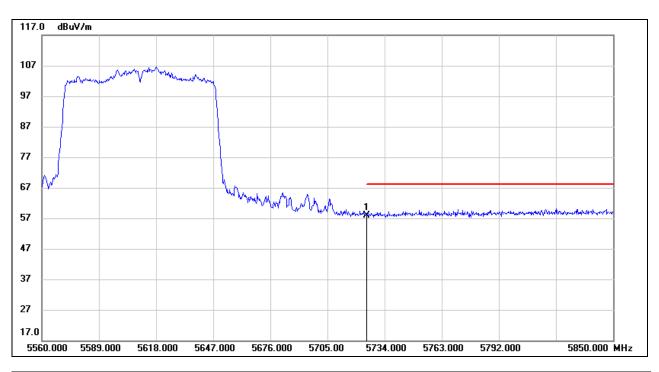
| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5460.000  | 6.44    | 41.82   | 48.26    | 54.00    | -5.74  | AVG    |
| 2   | 5466.150  | 8.61    | 41.86   | 50.47    | 1        | /      | AVG    |
| 3   | 5470.000  | 8.72    | 41.87   | 50.59    | /        | /      | AVG    |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
- 4. For the transmitting duration, please refer to clause 7.1.
- 5. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



## RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)

#### **PEAK**



| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5725.000  | 16.17   | 41.67   | 57.84    | 68.20    | -10.36 | peak   |

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

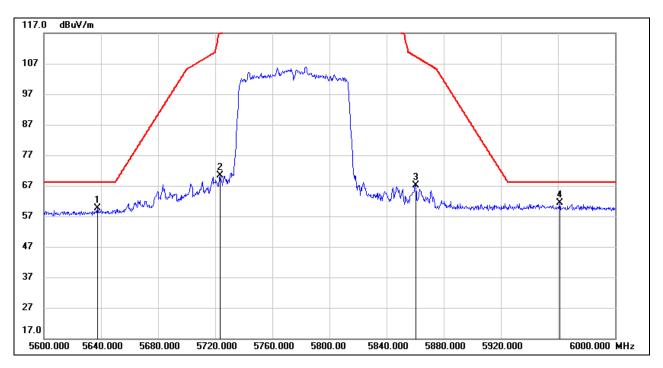
- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Note: All the polarities (Vertical & Horizontal) and Antennas had been tested, only the worst data was recorded in the report.



## **UNII-3 BAND**

## RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)



| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5637.600  | 18.00   | 41.67   | 59.67    | 68.20    | -8.53  | peak   |
| 2   | 5723.200  | 28.60   | 41.66   | 70.26    | 118.10   | -47.84 | peak   |
| 3   | 5860.400  | 24.40   | 42.63   | 67.03    | 109.29   | -42.26 | peak   |
| 4   | 5961.200  | 18.73   | 42.74   | 61.47    | 68.20    | -6.73  | peak   |

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. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

Note: All the polarities (Vertical & Horizontal) and Antennas had been tested, only the worst data was recorded in the report.



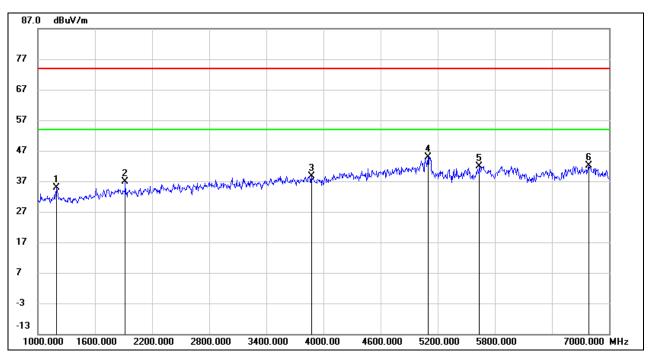
# 8.2. SPURIOUS EMISSIONS (1 GHz ~ 7 GHz)

## 8.2.1. 802.11n HT20 MIMO MODE

#### **UNII-1 BAND**

## MIMO MODE TEST RESULTS (WORST CASE)

## HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)

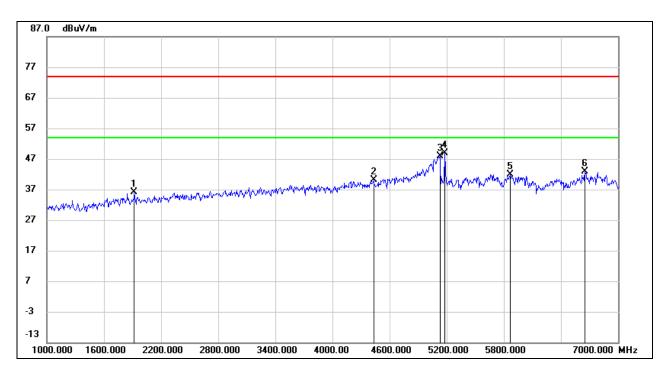


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 1192.000  | 47.82   | -13.03  | 34.79    | 74.00    | -39.21 | peak   |
| 2   | 1918.000  | 47.07   | -10.13  | 36.94    | 74.00    | -37.06 | peak   |
| 3   | 3874.000  | 42.05   | -3.38   | 38.67    | 74.00    | -35.33 | peak   |
| 4   | 5098.000  | 43.39   | 1.49    | 44.88    | 74.00    | -29.12 | peak   |
| 5   | 5638.000  | 39.41   | 2.47    | 41.88    | 74.00    | -32.12 | peak   |
| 6   | 6784.000  | 36.55   | 5.56    | 42.11    | 74.00    | -31.89 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
  - 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
- 6. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.



## HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)

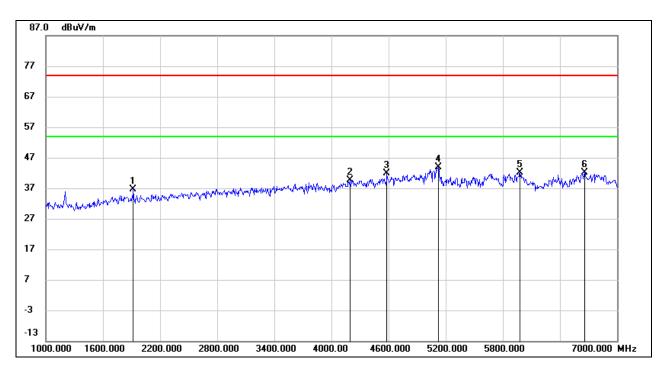


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 1918.000  | 46.31   | -10.13  | 36.18    | 74.00    | -37.82 | peak   |
| 2   | 4432.000  | 41.68   | -1.66   | 40.02    | 74.00    | -33.98 | peak   |
| 3   | 5128.000  | 46.17   | 1.67    | 47.84    | 74.00    | -26.16 | peak   |
| 4   | 5182.000  | 46.80   | 2.00    | 48.80    | 74.00    | -25.20 | peak   |
| 5   | 5866.000  | 39.21   | 2.77    | 41.98    | 74.00    | -32.02 | peak   |
| 6   | 6652.000  | 37.30   | 5.52    | 42.82    | 74.00    | -31.18 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
  - 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
- 6. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.



## HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)

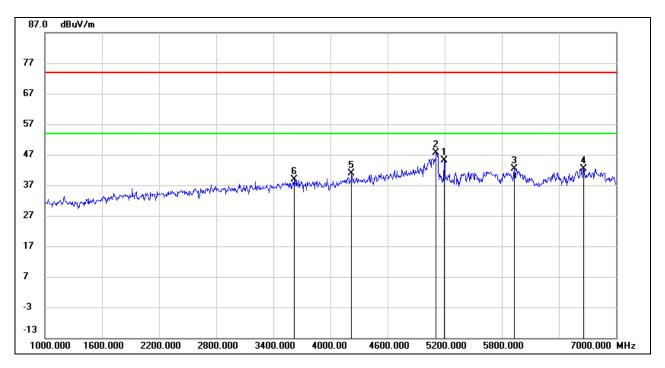


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 1918.000  | 46.88   | -10.13  | 36.75    | 74.00    | -37.25 | peak   |
| 2   | 4192.000  | 41.40   | -1.74   | 39.66    | 74.00    | -34.34 | peak   |
| 3   | 4582.000  | 42.58   | -0.69   | 41.89    | 74.00    | -32.11 | peak   |
| 4   | 5122.000  | 42.13   | 1.64    | 43.77    | 74.00    | -30.23 | peak   |
| 5   | 5980.000  | 38.79   | 3.22    | 42.01    | 74.00    | -31.99 | peak   |
| 6   | 6658.000  | 36.66   | 5.51    | 42.17    | 74.00    | -31.83 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
  - 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
- 6. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.



<u>HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)</u>

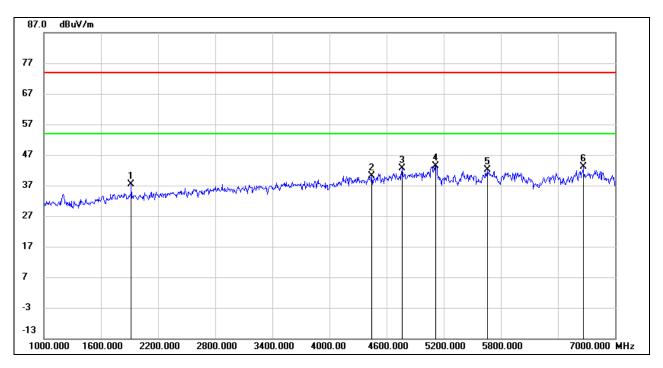


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 5194.000  | 43.13   | 2.06    | 45.19    | 74.00    | -28.81 | peak   |
| 2   | 5110.000  | 46.05   | 1.55    | 47.60    | 74.00    | -26.40 | peak   |
| 3   | 5932.000  | 39.27   | 3.03    | 42.30    | 74.00    | -31.70 | peak   |
| 4   | 6658.000  | 36.94   | 5.51    | 42.45    | 74.00    | -31.55 | peak   |
| 5   | 4222.000  | 42.49   | -1.69   | 40.80    | 74.00    | -33.20 | peak   |
| 6   | 3616.000  | 43.02   | -4.12   | 38.90    | 74.00    | -35.10 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
  - 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
- 6. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.



HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)

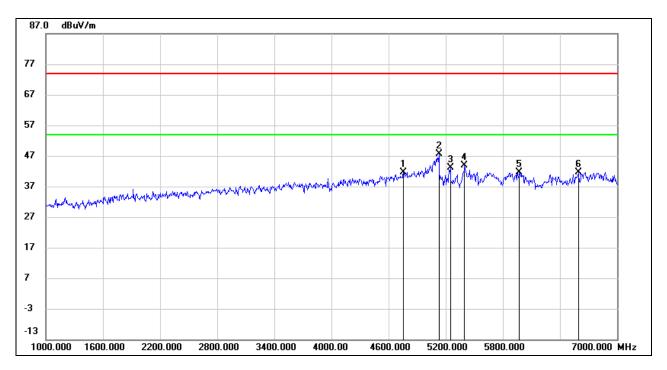


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 1918.000  | 47.52   | -10.13  | 37.39    | 74.00    | -36.61 | peak   |
| 2   | 4444.000  | 41.83   | -1.59   | 40.24    | 74.00    | -33.76 | peak   |
| 3   | 4762.000  | 42.33   | 0.38    | 42.71    | 74.00    | -31.29 | peak   |
| 4   | 5116.000  | 41.79   | 1.60    | 43.39    | 74.00    | -30.61 | peak   |
| 5   | 5656.000  | 39.60   | 2.47    | 42.07    | 74.00    | -31.93 | peak   |
| 6   | 6664.000  | 37.66   | 5.53    | 43.19    | 74.00    | -30.81 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
  - 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
- 6. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.



#### HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)



| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 4756.000  | 41.32   | 0.33    | 41.65    | 74.00    | -32.35 | peak   |
| 2   | 5128.000  | 45.89   | 1.67    | 47.56    | 74.00    | -26.44 | peak   |
| 3   | 5248.000  | 41.13   | 2.05    | 43.18    | 74.00    | -30.82 | peak   |
| 4   | 5398.000  | 41.96   | 1.88    | 43.84    | 74.00    | -30.16 | peak   |
| 5   | 5974.000  | 38.34   | 3.20    | 41.54    | 74.00    | -32.46 | peak   |
| 6   | 6592.000  | 36.29   | 5.45    | 41.74    | 74.00    | -32.26 | peak   |

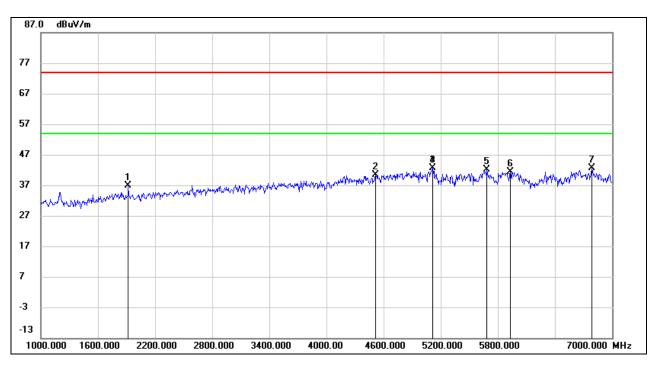
- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
  - 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
- 6. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.



#### UNII-2A BAND

#### MIMO MODE TEST RESULTS (WORST CASE)

## HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)

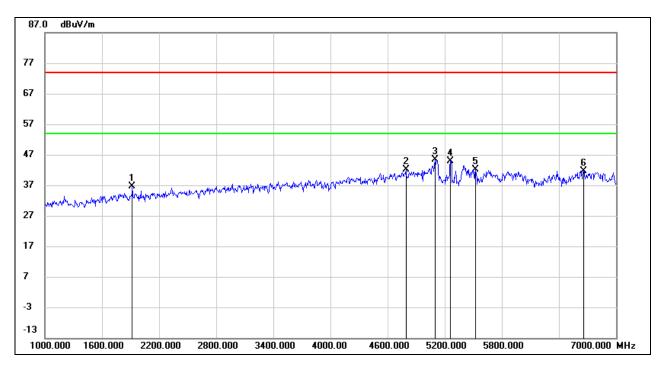


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 1918.000  | 47.09   | -10.13  | 36.96    | 74.00    | -37.04 | peak   |
| 2   | 4516.000  | 41.59   | -1.12   | 40.47    | 74.00    | -33.53 | peak   |
| 3   | 5116.000  | 40.98   | 1.60    | 42.58    | 74.00    | -31.42 | peak   |
| 4   | 5116.000  | 40.98   | 1.60    | 42.58    | 74.00    | -31.42 | peak   |
| 5   | 5686.000  | 39.73   | 2.47    | 42.20    | 74.00    | -31.80 | peak   |
| 6   | 5932.000  | 38.42   | 3.03    | 41.45    | 74.00    | -32.55 | peak   |
| 7   | 6784.000  | 36.99   | 5.56    | 42.55    | 74.00    | -31.45 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
  - 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
- 6. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.



HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)

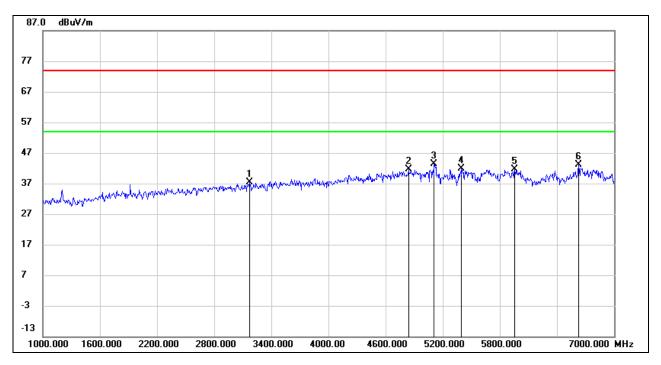


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 1918.000  | 46.70   | -10.13  | 36.57    | 74.00    | -37.43 | peak   |
| 2   | 4792.000  | 41.59   | 0.54    | 42.13    | 74.00    | -31.87 | peak   |
| 3   | 5098.000  | 44.00   | 1.49    | 45.49    | 74.00    | -28.51 | peak   |
| 4   | 5260.000  | 42.75   | 2.03    | 44.78    | 74.00    | -29.22 | peak   |
| 5   | 5524.000  | 39.99   | 2.23    | 42.22    | 74.00    | -31.78 | peak   |
| 6   | 6658.000  | 36.15   | 5.51    | 41.66    | 74.00    | -32.34 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
  - 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
- 6. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.



## HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)

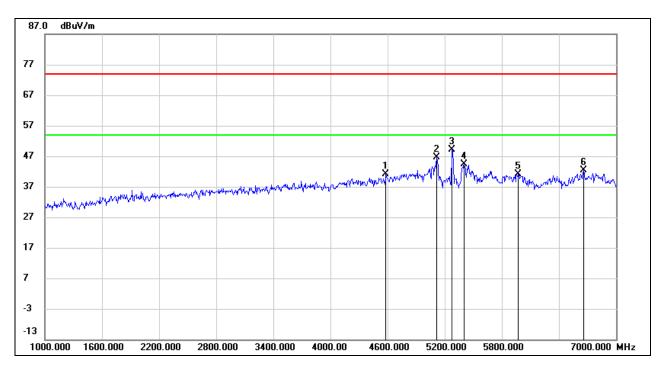


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 3172.000  | 42.57   | -5.30   | 37.27    | 74.00    | -36.73 | peak   |
| 2   | 4840.000  | 40.87   | 0.65    | 41.52    | 74.00    | -32.48 | peak   |
| 3   | 5110.000  | 41.76   | 1.55    | 43.31    | 74.00    | -30.69 | peak   |
| 4   | 5398.000  | 39.89   | 1.88    | 41.77    | 74.00    | -32.23 | peak   |
| 5   | 5956.000  | 38.41   | 3.13    | 41.54    | 74.00    | -32.46 | peak   |
| 6   | 6628.000  | 37.71   | 5.50    | 43.21    | 74.00    | -30.79 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
  - 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
- 6. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.



## HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)

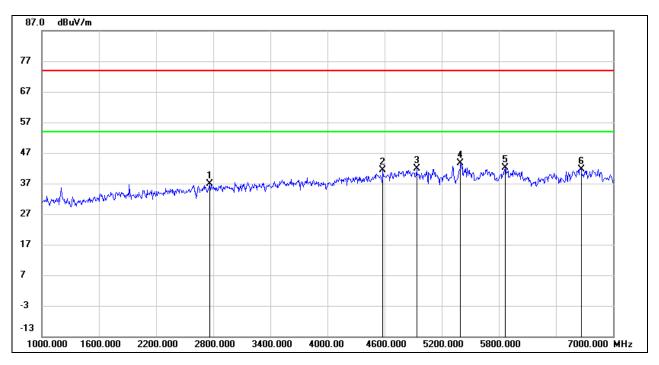


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 4582.000  | 41.77   | -0.69   | 41.08    | 74.00    | -32.92 | peak   |
| 2   | 5116.000  | 45.15   | 1.60    | 46.75    | 74.00    | -27.25 | peak   |
| 3   | 5280.000  | 47.15   | 2.02    | 49.17    | 74.00    | -24.83 | peak   |
| 4   | 5404.000  | 42.46   | 1.89    | 44.35    | 74.00    | -29.65 | peak   |
| 5   | 5974.000  | 37.90   | 3.20    | 41.10    | 74.00    | -32.90 | peak   |
| 6   | 6658.000  | 36.79   | 5.51    | 42.30    | 74.00    | -31.70 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
  - 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
- 6. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.



HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)

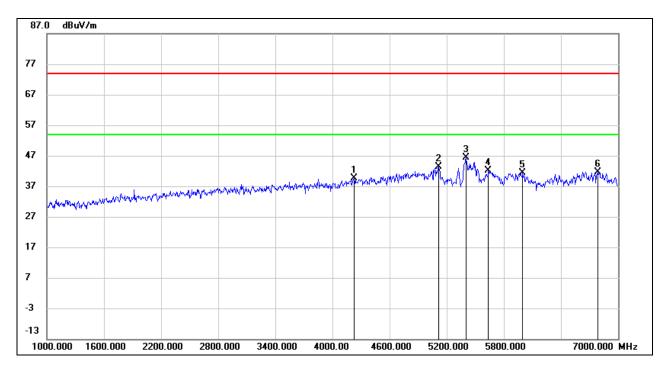


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 2764.000  | 43.56   | -6.79   | 36.77    | 74.00    | -37.23 | peak   |
| 2   | 4582.000  | 41.97   | -0.69   | 41.28    | 74.00    | -32.72 | peak   |
| 3   | 4936.000  | 41.04   | 0.80    | 41.84    | 74.00    | -32.16 | peak   |
| 4   | 5398.000  | 41.81   | 1.88    | 43.69    | 74.00    | -30.31 | peak   |
| 5   | 5866.000  | 39.43   | 2.77    | 42.20    | 74.00    | -31.80 | peak   |
| 6   | 6664.000  | 36.19   | 5.53    | 41.72    | 74.00    | -32.28 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
  - 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
- 6. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.



#### HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)



| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 4228.000  | 41.34   | -1.70   | 39.64    | 74.00    | -34.36 | peak   |
| 2   | 5116.000  | 41.83   | 1.60    | 43.43    | 74.00    | -30.57 | peak   |
| 3   | 5404.000  | 44.39   | 1.89    | 46.28    | 74.00    | -27.72 | peak   |
| 4   | 5638.000  | 39.55   | 2.47    | 42.02    | 74.00    | -31.98 | peak   |
| 5   | 5998.000  | 37.99   | 3.30    | 41.29    | 74.00    | -32.71 | peak   |
| 6   | 6784.000  | 36.15   | 5.56    | 41.71    | 74.00    | -32.29 | peak   |

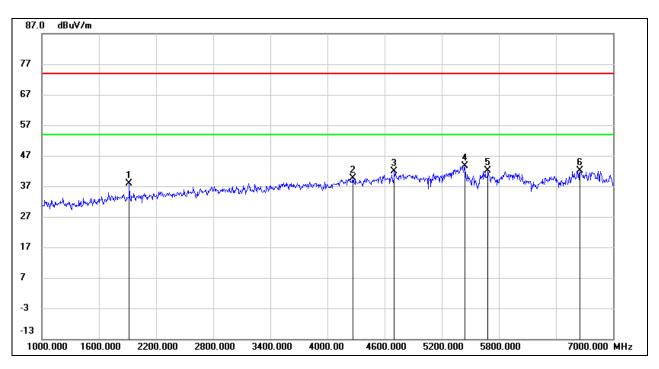
- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
  - 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
- 6. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.



## **UNII-2C BAND**

## MIMO MODE TEST RESULTS (WORST CASE)

## HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)

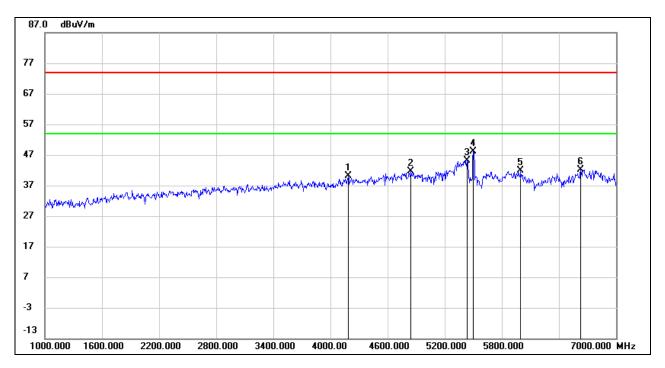


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 1918.000  | 48.13   | -10.13  | 38.00    | 74.00    | -36.00 | peak   |
| 2   | 4264.000  | 41.31   | -1.73   | 39.58    | 74.00    | -34.42 | peak   |
| 3   | 4702.000  | 41.97   | 0.01    | 41.98    | 74.00    | -32.02 | peak   |
| 4   | 5440.000  | 41.52   | 2.00    | 43.52    | 74.00    | -30.48 | peak   |
| 5   | 5686.000  | 39.65   | 2.47    | 42.12    | 74.00    | -31.88 | peak   |
| 6   | 6652.000  | 36.70   | 5.52    | 42.22    | 74.00    | -31.78 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
  - 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
- 6. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.



## HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)

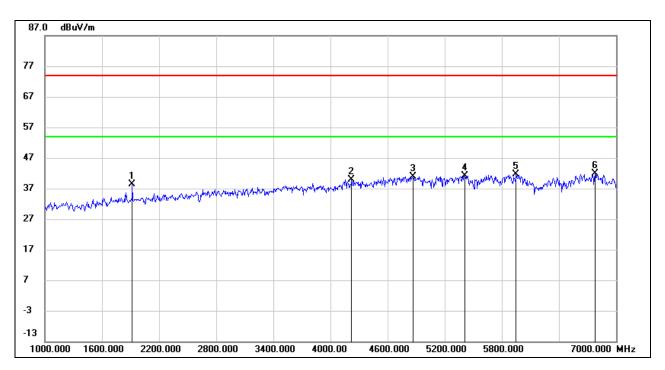


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 4186.000  | 41.94   | -1.81   | 40.13    | 74.00    | -33.87 | peak   |
| 2   | 4846.000  | 41.06   | 0.66    | 41.72    | 74.00    | -32.28 | peak   |
| 3   | 5434.000  | 43.23   | 1.97    | 45.20    | 74.00    | -28.80 | peak   |
| 4   | 5500.000  | 45.89   | 2.17    | 48.06    | 74.00    | -25.94 | peak   |
| 5   | 5998.000  | 38.50   | 3.30    | 41.80    | 74.00    | -32.20 | peak   |
| 6   | 6628.000  | 36.72   | 5.50    | 42.22    | 74.00    | -31.78 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
  - 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
- 6. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.



## HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)

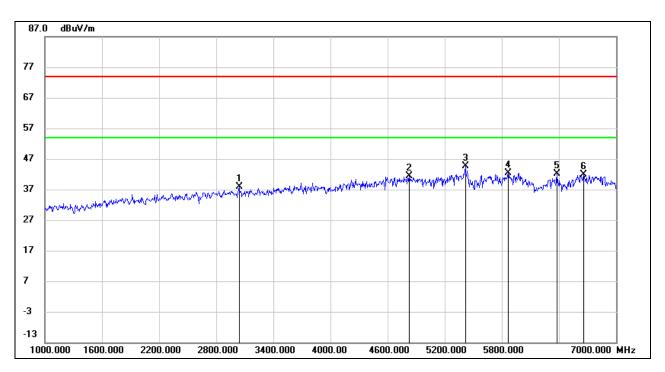


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 1918.000  | 48.56   | -10.13  | 38.43    | 74.00    | -35.57 | peak   |
| 2   | 4222.000  | 41.65   | -1.69   | 39.96    | 74.00    | -34.04 | peak   |
| 3   | 4864.000  | 40.24   | 0.69    | 40.93    | 74.00    | -33.07 | peak   |
| 4   | 5410.000  | 39.15   | 1.90    | 41.05    | 74.00    | -32.95 | peak   |
| 5   | 5950.000  | 38.50   | 3.10    | 41.60    | 74.00    | -32.40 | peak   |
| 6   | 6778.000  | 36.21   | 5.56    | 41.77    | 74.00    | -32.23 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
  - 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
- 6. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.



HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)

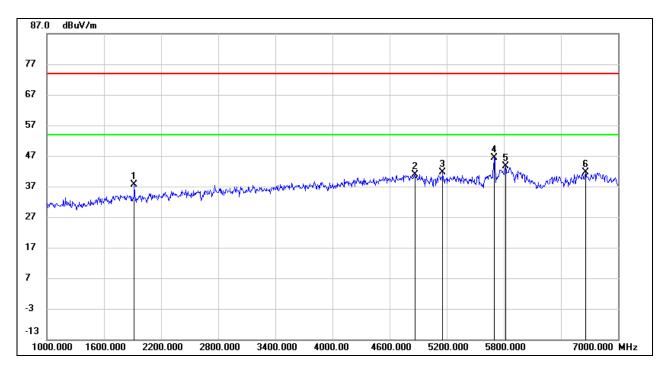


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 3040.000  | 43.28   | -5.52   | 37.76    | 74.00    | -36.24 | peak   |
| 2   | 4828.000  | 40.78   | 0.63    | 41.41    | 74.00    | -32.59 | peak   |
| 3   | 5416.000  | 42.80   | 1.92    | 44.72    | 74.00    | -29.28 | peak   |
| 4   | 5866.000  | 39.73   | 2.77    | 42.50    | 74.00    | -31.50 | peak   |
| 5   | 6376.000  | 37.93   | 4.24    | 42.17    | 74.00    | -31.83 | peak   |
| 6   | 6658.000  | 36.29   | 5.51    | 41.80    | 74.00    | -32.20 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
  - 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
- 6. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.



## HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)

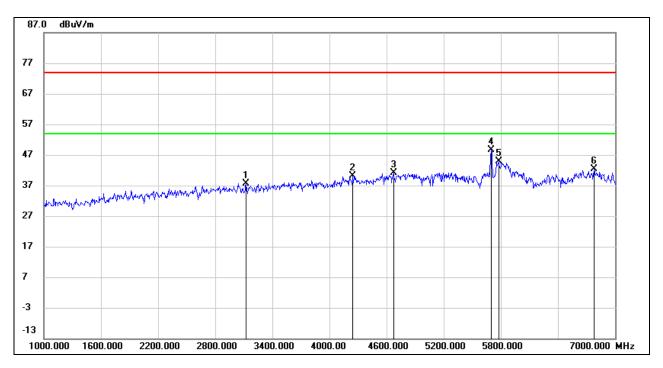


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 1918.000  | 47.65   | -10.13  | 37.52    | 74.00    | -36.48 | peak   |
| 2   | 4864.000  | 40.09   | 0.69    | 40.78    | 74.00    | -33.22 | peak   |
| 3   | 5158.000  | 39.69   | 1.85    | 41.54    | 74.00    | -32.46 | peak   |
| 4   | 5698.000  | 43.89   | 2.49    | 46.38    | 74.00    | -27.62 | peak   |
| 5   | 5818.000  | 41.12   | 2.57    | 43.69    | 74.00    | -30.31 | peak   |
| 6   | 6658.000  | 36.01   | 5.51    | 41.52    | 74.00    | -32.48 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
  - 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
- 6. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.



#### HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)



| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 3124.000  | 43.08   | -5.38   | 37.70    | 74.00    | -36.30 | peak   |
| 2   | 4246.000  | 41.87   | -1.72   | 40.15    | 74.00    | -33.85 | peak   |
| 3   | 4672.000  | 41.20   | -0.15   | 41.05    | 74.00    | -32.95 | peak   |
| 4   | 5698.000  | 46.04   | 2.49    | 48.53    | 74.00    | -25.47 | peak   |
| 5   | 5776.000  | 42.28   | 2.50    | 44.78    | 74.00    | -29.22 | peak   |
| 6   | 6778.000  | 36.79   | 5.56    | 42.35    | 74.00    | -31.65 | peak   |

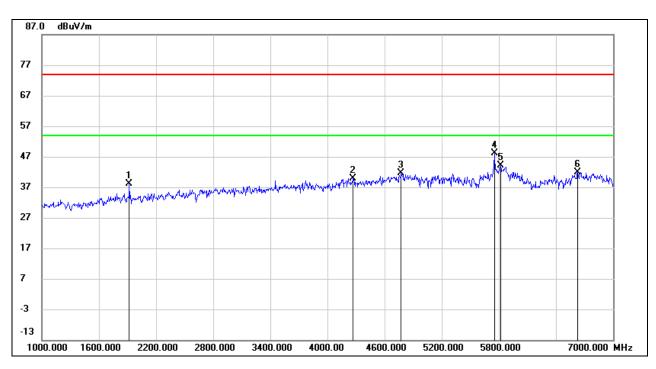
- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
  - 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
- 6. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.



**STRADDLE CHANNEL 144** 

## MIMO MODE TEST RESULTS (WORST CASE)

#### HARMONICS AND SPURIOUS EMISSIONS (HORIZONTAL)

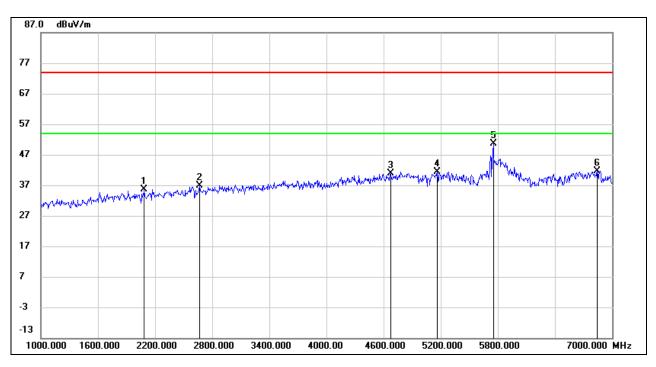


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 1918.000  | 48.36   | -10.13  | 38.23    | 74.00    | -35.77 | peak   |
| 2   | 4270.000  | 41.67   | -1.73   | 39.94    | 74.00    | -34.06 | peak   |
| 3   | 4774.000  | 41.08   | 0.43    | 41.51    | 74.00    | -32.49 | peak   |
| 4   | 5752.000  | 45.72   | 2.49    | 48.21    | 74.00    | -25.79 | peak   |
| 5   | 5818.000  | 41.52   | 2.57    | 44.09    | 74.00    | -29.91 | peak   |
| 6   | 6628.000  | 36.46   | 5.50    | 41.96    | 74.00    | -32.04 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
  - 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
- 6. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27 dBm/MHz (68.2dBuV/m) limit.



## **HARMONICS AND SPURIOUS EMISSIONS (VERTICAL)**



| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 2086.000  | 45.46   | -9.71   | 35.75    | 74.00    | -38.25 | peak   |
| 2   | 2668.000  | 44.31   | -7.42   | 36.89    | 74.00    | -37.11 | peak   |
| 3   | 4672.000  | 41.14   | -0.15   | 40.99    | 74.00    | -33.01 | peak   |
| 4   | 5164.000  | 39.60   | 1.89    | 41.49    | 74.00    | -32.51 | peak   |
| 5   | 5752.000  | 48.10   | 2.49    | 50.59    | 74.00    | -23.41 | peak   |
| 6   | 6844.000  | 36.03   | 5.70    | 41.73    | 74.00    | -32.27 | peak   |

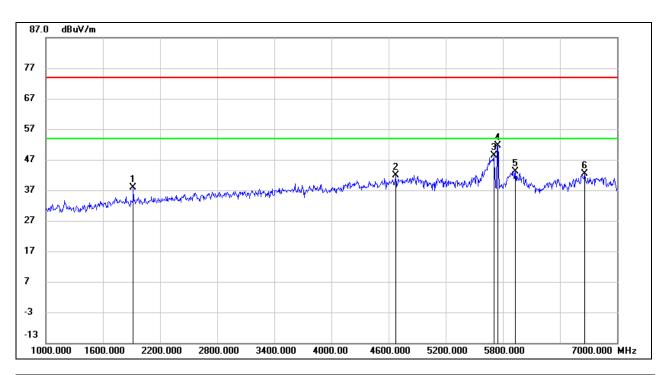
- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
  - 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
- 6. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.



## **UNII-3 BAND**

## MIMO MODE TEST RESULTS (WORST CASE)

## HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)

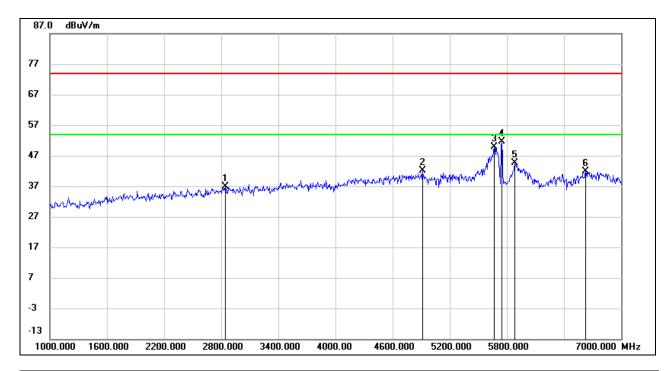


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 1918.000  | 48.10   | -10.13  | 37.97    | 74.00    | -36.03 | peak   |
| 2   | 4678.000  | 41.99   | -0.12   | 41.87    | 74.00    | -32.13 | peak   |
| 3   | 5704.000  | 45.91   | 2.48    | 48.39    | 74.00    | -25.61 | peak   |
| 4   | 5746.000  | 49.20   | 2.50    | 51.70    | 74.00    | -22.30 | peak   |
| 5   | 5932.000  | 40.08   | 3.03    | 43.11    | 74.00    | -30.89 | peak   |
| 6   | 6658.000  | 36.81   | 5.51    | 42.32    | 74.00    | -31.68 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
  - 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
- 6. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.



## HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)

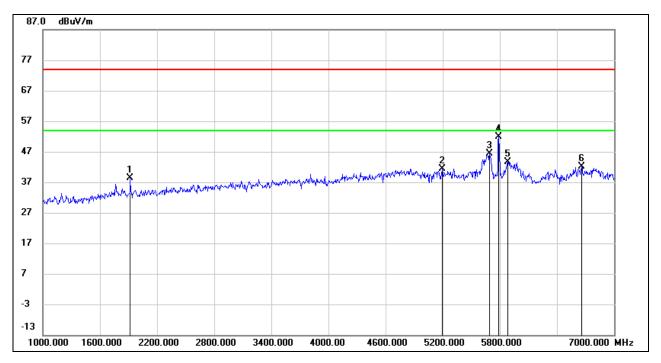


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 2842.000  | 43.15   | -6.35   | 36.80    | 74.00    | -37.20 | peak   |
| 2   | 4912.000  | 41.31   | 0.77    | 42.08    | 74.00    | -31.92 | peak   |
| 3   | 5668.000  | 47.44   | 2.47    | 49.91    | 74.00    | -24.09 | peak   |
| 4   | 5746.000  | 49.14   | 2.50    | 51.64    | 74.00    | -22.36 | peak   |
| 5   | 5884.000  | 41.72   | 2.84    | 44.56    | 74.00    | -29.44 | peak   |
| 6   | 6628.000  | 36.38   | 5.50    | 41.88    | 74.00    | -32.12 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
  - 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
- 6. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.



## HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)

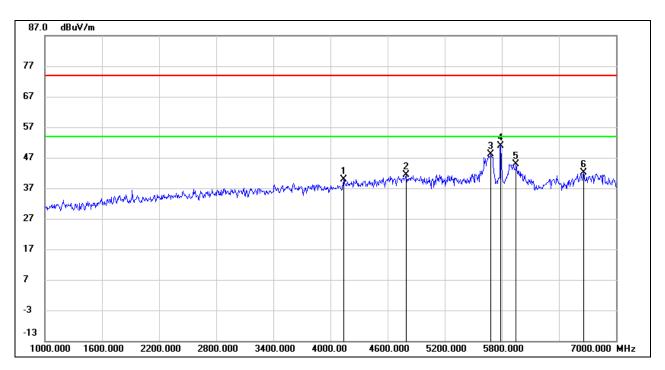


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 1918.000  | 48.55   | -10.13  | 38.42    | 74.00    | -35.58 | peak   |
| 2   | 5194.000  | 39.44   | 2.06    | 41.50    | 74.00    | -32.50 | peak   |
| 3   | 5692.000  | 43.94   | 2.47    | 46.41    | 74.00    | -27.59 | peak   |
| 4   | 5788.000  | 49.33   | 2.50    | 51.83    | 74.00    | -22.17 | peak   |
| 5   | 5884.000  | 40.83   | 2.84    | 43.67    | 74.00    | -30.33 | peak   |
| 6   | 6658.000  | 36.52   | 5.51    | 42.03    | 74.00    | -31.97 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
  - 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
- 6. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27 dBm/MHz (68.2dBuV/m) limit.



## HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)

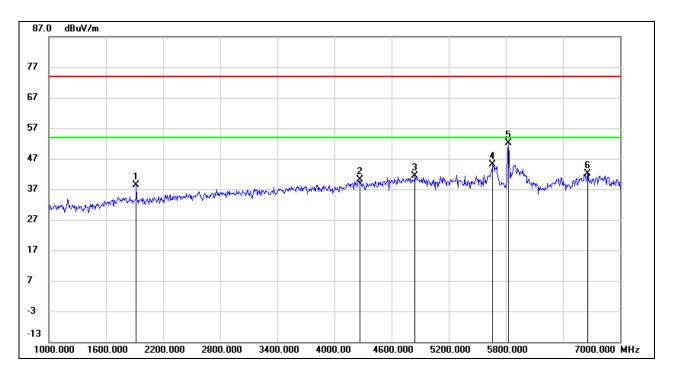


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 4138.000  | 42.20   | -2.27   | 39.93    | 74.00    | -34.07 | peak   |
| 2   | 4792.000  | 40.93   | 0.54    | 41.47    | 74.00    | -32.53 | peak   |
| 3   | 5686.000  | 45.72   | 2.47    | 48.19    | 74.00    | -25.81 | peak   |
| 4   | 5788.000  | 48.39   | 2.50    | 50.89    | 74.00    | -23.11 | peak   |
| 5   | 5950.000  | 41.76   | 3.10    | 44.86    | 74.00    | -29.14 | peak   |
| 6   | 6658.000  | 36.59   | 5.51    | 42.10    | 74.00    | -31.90 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
  - 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
- 6. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.



## HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)

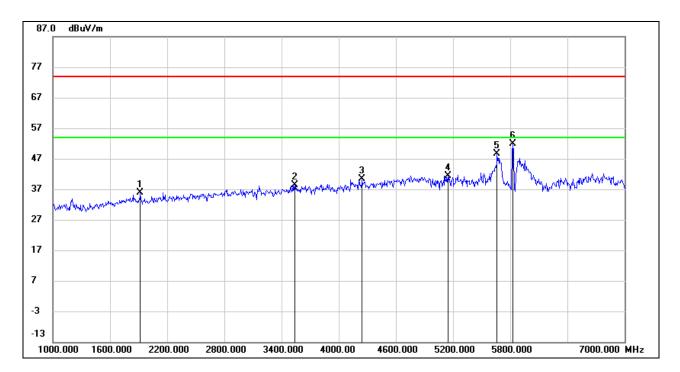


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 1918.000  | 48.44   | -10.13  | 38.31    | 74.00    | -35.69 | peak   |
| 2   | 4264.000  | 41.78   | -1.73   | 40.05    | 74.00    | -33.95 | peak   |
| 3   | 4846.000  | 40.69   | 0.66    | 41.35    | 74.00    | -32.65 | peak   |
| 4   | 5662.000  | 42.65   | 2.47    | 45.12    | 74.00    | -28.88 | peak   |
| 5   | 5830.000  | 49.56   | 2.63    | 52.19    | 74.00    | -21.81 | peak   |
| 6   | 6658.000  | 36.74   | 5.51    | 42.25    | 74.00    | -31.75 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
  - 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
- 6. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.



#### HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)



| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 1918.000  | 46.12   | -10.13  | 35.99    | 74.00    | -38.01 | peak   |
| 2   | 3538.000  | 42.99   | -4.51   | 38.48    | 74.00    | -35.52 | peak   |
| 3   | 4246.000  | 42.07   | -1.72   | 40.35    | 74.00    | -33.65 | peak   |
| 4   | 5146.000  | 39.62   | 1.79    | 41.41    | 74.00    | -32.59 | peak   |
| 5   | 5662.000  | 46.21   | 2.47    | 48.68    | 74.00    | -25.32 | peak   |
| 6   | 5830.000  | 49.34   | 2.63    | 51.97    | 74.00    | -22.03 | peak   |

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. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
  - 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
- 6. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27 dBm/MHz (68.2dBuV/m) limit.

Note: All the modes, bands and antennas had been tested, but only the worst data was recorded in the report.



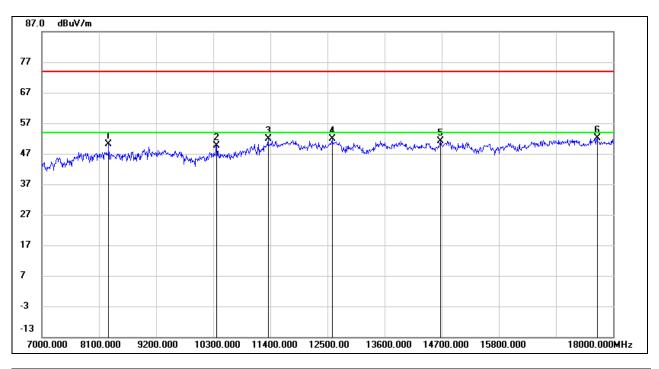
# 8.3. SPURIOUS EMISSIONS (7 GHz ~ 18 GHz)

#### 8.3.1. 802.11a SISO MODE

#### **UNII-1 BAND**

## **ANTENNA 1 TEST RESULTS (WORST CASE)**

#### HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)

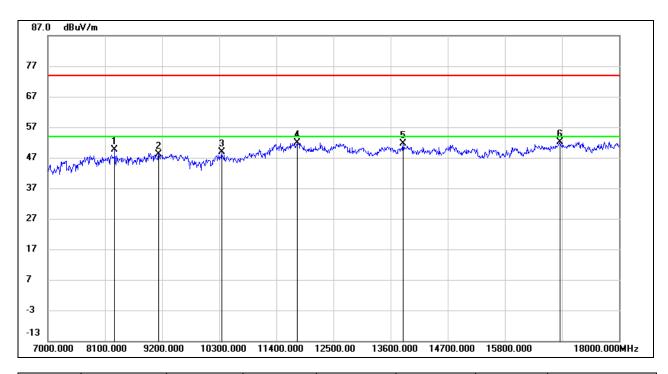


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 8287.000  | 39.91   | 10.21   | 50.12    | 74.00    | -23.88 | peak   |
| 2   | 10366.000 | 37.26   | 12.48   | 49.74    | 74.00    | -24.26 | peak   |
| 3   | 11356.000 | 36.47   | 15.31   | 51.78    | 74.00    | -22.22 | peak   |
| 4   | 12588.000 | 35.00   | 16.81   | 51.81    | 74.00    | -22.19 | peak   |
| 5   | 14678.000 | 33.56   | 17.67   | 51.23    | 74.00    | -22.77 | peak   |
| 6   | 17692.000 | 29.00   | 23.19   | 52.19    | 74.00    | -21.81 | peak   |

- 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.



HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)

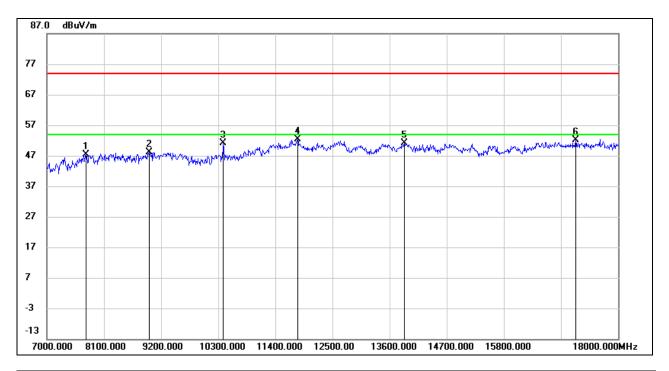


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 8287.000  | 39.44   | 10.21   | 49.65    | 74.00    | -24.35 | peak   |
| 2   | 9134.000  | 37.28   | 10.95   | 48.23    | 74.00    | -25.77 | peak   |
| 3   | 10344.000 | 36.50   | 12.38   | 48.88    | 74.00    | -25.12 | peak   |
| 4   | 11807.000 | 35.18   | 16.70   | 51.88    | 74.00    | -22.12 | peak   |
| 5   | 13842.000 | 33.46   | 18.07   | 51.53    | 74.00    | -22.47 | peak   |
| 6   | 16856.000 | 31.02   | 21.10   | 52.12    | 74.00    | -21.88 | peak   |

- 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.



## HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)

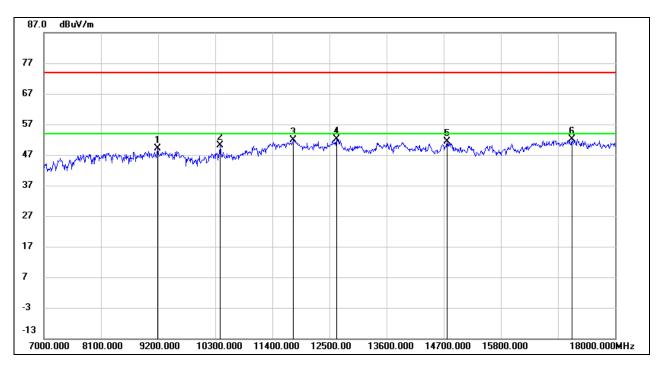


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 7748.000  | 38.19   | 9.29    | 47.48    | 74.00    | -26.52 | peak   |
| 2   | 8969.000  | 36.79   | 11.42   | 48.21    | 74.00    | -25.79 | peak   |
| 3   | 10399.000 | 38.54   | 12.62   | 51.16    | 74.00    | -22.84 | peak   |
| 4   | 11829.000 | 35.74   | 16.67   | 52.41    | 74.00    | -21.59 | peak   |
| 5   | 13886.000 | 33.08   | 18.02   | 51.10    | 74.00    | -22.90 | peak   |
| 6   | 17186.000 | 29.79   | 22.39   | 52.18    | 74.00    | -21.82 | peak   |

- 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.



#### <u>HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)</u>

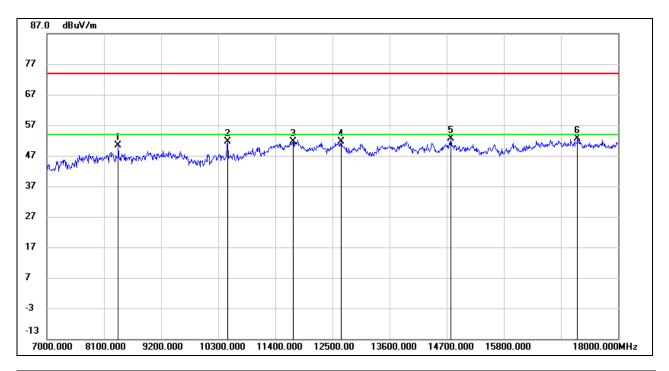


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 9189.000  | 38.52   | 10.63   | 49.15    | 74.00    | -24.85 | peak   |
| 2   | 10399.000 | 37.49   | 12.62   | 50.11    | 74.00    | -23.89 | peak   |
| 3   | 11807.000 | 35.11   | 16.70   | 51.81    | 74.00    | -22.19 | peak   |
| 4   | 12632.000 | 35.24   | 16.82   | 52.06    | 74.00    | -21.94 | peak   |
| 5   | 14766.000 | 33.67   | 17.78   | 51.45    | 74.00    | -22.55 | peak   |
| 6   | 17164.000 | 29.96   | 22.27   | 52.23    | 74.00    | -21.77 | peak   |

- 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 -27 dBm/MHz (68.2dBuV/m) limit.



# HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)

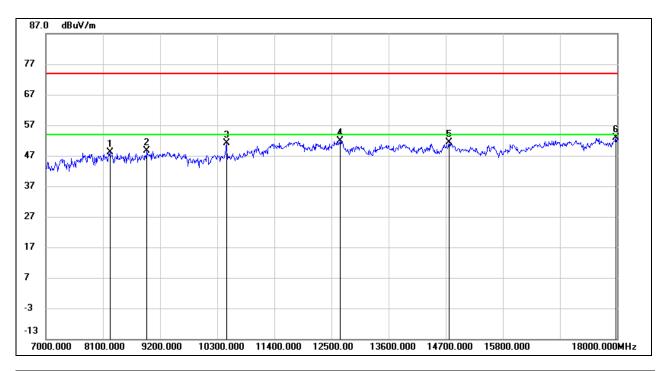


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 8375.000  | 40.39   | 9.89    | 50.28    | 74.00    | -23.72 | peak   |
| 2   | 10487.000 | 38.53   | 13.03   | 51.56    | 74.00    | -22.44 | peak   |
| 3   | 11741.000 | 35.15   | 16.43   | 51.58    | 74.00    | -22.42 | peak   |
| 4   | 12665.000 | 34.74   | 16.82   | 51.56    | 74.00    | -22.44 | peak   |
| 5   | 14777.000 | 34.78   | 17.79   | 52.57    | 74.00    | -21.43 | peak   |
| 6   | 17219.000 | 30.25   | 22.41   | 52.66    | 74.00    | -21.34 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
  - 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
- 6. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.



# HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)



| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 8232.000  | 37.74   | 10.41   | 48.15    | 74.00    | -25.85 | peak   |
| 2   | 8947.000  | 37.48   | 11.21   | 48.69    | 74.00    | -25.31 | peak   |
| 3   | 10476.000 | 38.03   | 12.98   | 51.01    | 74.00    | -22.99 | peak   |
| 4   | 12665.000 | 35.15   | 16.82   | 51.97    | 74.00    | -22.03 | peak   |
| 5   | 14766.000 | 33.50   | 17.78   | 51.28    | 74.00    | -22.72 | peak   |
| 6   | 17978.000 | 28.80   | 24.01   | 52.81    | 74.00    | -21.19 | peak   |

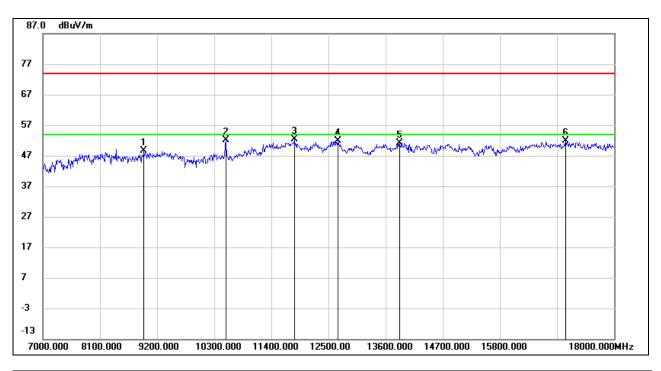
- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
- 5. For the transmitting duration, please refer to clause 7.1.
- 6. Filter losses were only considered in the spurious frequency 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.



## **UNII-2A BAND**

## ANTENNA 1 TEST RESULTS (WORST CASE)

# HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)

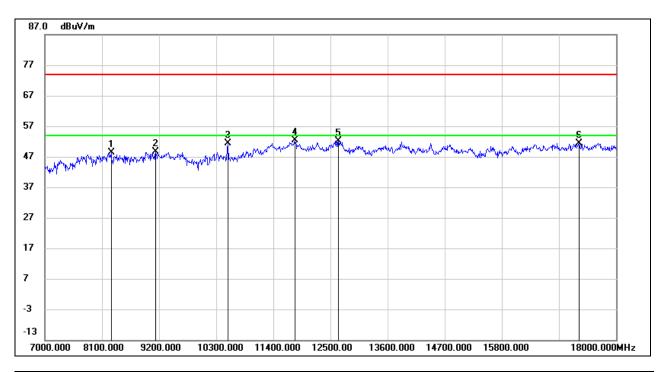


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 8947.000  | 37.33   | 11.21   | 48.54    | 74.00    | -25.46 | peak   |
| 2   | 10520.000 | 38.89   | 13.17   | 52.06    | 74.00    | -21.94 | peak   |
| 3   | 11840.000 | 35.78   | 16.66   | 52.44    | 74.00    | -21.56 | peak   |
| 4   | 12676.000 | 34.95   | 16.81   | 51.76    | 74.00    | -22.24 | peak   |
| 5   | 13864.000 | 33.09   | 18.03   | 51.12    | 74.00    | -22.88 | peak   |
| 6   | 17065.000 | 30.11   | 21.73   | 51.84    | 74.00    | -22.16 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
  - 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
- 6. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.



# HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)

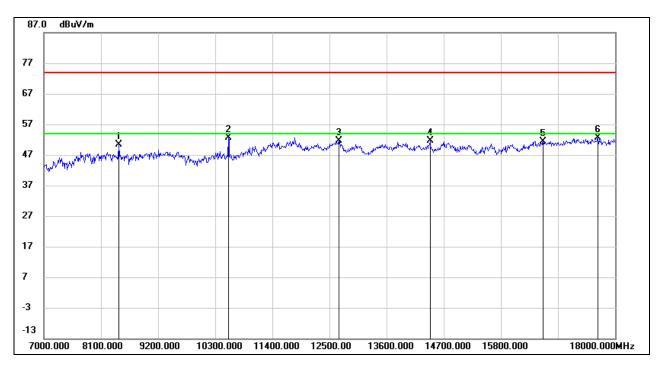


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 8276.000  | 38.09   | 10.25   | 48.34    | 74.00    | -25.66 | peak   |
| 2   | 9134.000  | 37.63   | 10.95   | 48.58    | 74.00    | -25.42 | peak   |
| 3   | 10520.000 | 38.21   | 13.17   | 51.38    | 74.00    | -22.62 | peak   |
| 4   | 11818.000 | 35.62   | 16.68   | 52.30    | 74.00    | -21.70 | peak   |
| 5   | 12654.000 | 35.38   | 16.81   | 52.19    | 74.00    | -21.81 | peak   |
| 6   | 17285.000 | 29.14   | 22.21   | 51.35    | 74.00    | -22.65 | peak   |

- 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.



## HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)

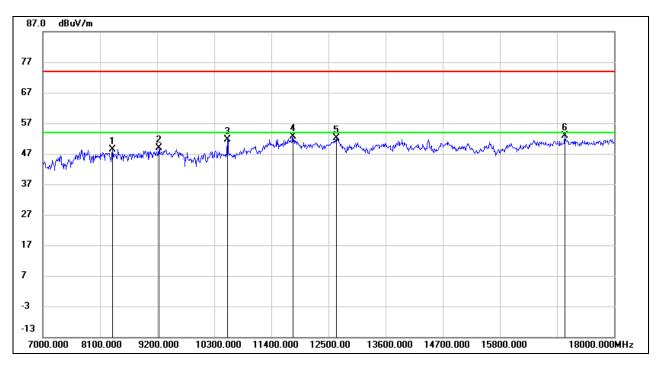


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 8441.000  | 40.73   | 9.77    | 50.50    | 74.00    | -23.50 | peak   |
| 2   | 10553.000 | 39.31   | 13.28   | 52.59    | 74.00    | -21.41 | peak   |
| 3   | 12676.000 | 34.89   | 16.81   | 51.70    | 74.00    | -22.30 | peak   |
| 4   | 14436.000 | 33.83   | 17.88   | 51.71    | 74.00    | -22.29 | peak   |
| 5   | 16614.000 | 30.61   | 20.80   | 51.41    | 74.00    | -22.59 | peak   |
| 6   | 17670.000 | 29.58   | 23.04   | 52.62    | 74.00    | -21.38 | peak   |

- 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.



## HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)

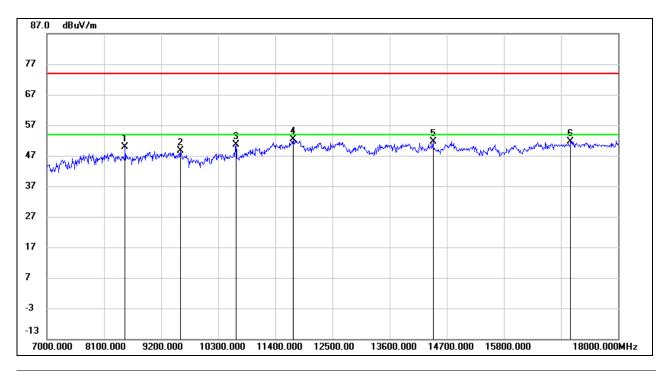


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 8342.000  | 38.33   | 10.02   | 48.35    | 74.00    | -25.65 | peak   |
| 2   | 9233.000  | 38.24   | 10.72   | 48.96    | 74.00    | -25.04 | peak   |
| 3   | 10553.000 | 38.30   | 13.28   | 51.58    | 74.00    | -22.42 | peak   |
| 4   | 11818.000 | 35.96   | 16.68   | 52.64    | 74.00    | -21.36 | peak   |
| 5   | 12654.000 | 35.20   | 16.81   | 52.01    | 74.00    | -21.99 | peak   |
| 6   | 17054.000 | 31.16   | 21.66   | 52.82    | 74.00    | -21.18 | peak   |

- 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 -27 dBm/MHz (68.2dBuV/m) limit.



# HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)

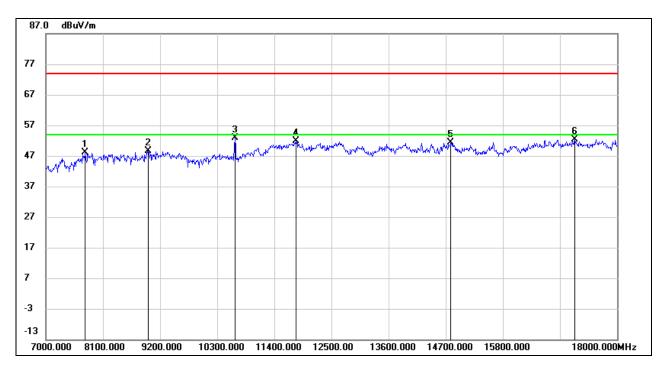


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 8507.000  | 40.18   | 9.72    | 49.90    | 74.00    | -24.10 | peak   |
| 2   | 9574.000  | 36.65   | 11.90   | 48.55    | 74.00    | -25.45 | peak   |
| 3   | 10641.000 | 37.17   | 13.53   | 50.70    | 74.00    | -23.30 | peak   |
| 4   | 11741.000 | 36.02   | 16.43   | 52.45    | 74.00    | -21.55 | peak   |
| 5   | 14436.000 | 33.74   | 17.88   | 51.62    | 74.00    | -22.38 | peak   |
| 6   | 17087.000 | 29.68   | 21.85   | 51.53    | 74.00    | -22.47 | peak   |

- 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.



## HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)



| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 7759.000  | 38.71   | 9.33    | 48.04    | 74.00    | -25.96 | peak   |
| 2   | 8969.000  | 37.27   | 11.42   | 48.69    | 74.00    | -25.31 | peak   |
| 3   | 10641.000 | 39.25   | 13.53   | 52.78    | 74.00    | -21.22 | peak   |
| 4   | 11818.000 | 35.08   | 16.68   | 51.76    | 74.00    | -22.24 | peak   |
| 5   | 14799.000 | 33.53   | 17.82   | 51.35    | 74.00    | -22.65 | peak   |
| 6   | 17186.000 | 30.04   | 22.39   | 52.43    | 74.00    | -21.57 | peak   |

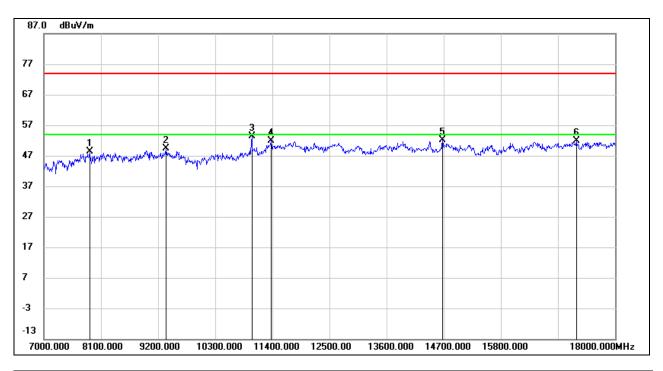
- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
- 5. For the transmitting duration, please refer to clause 7.1.
- 6. Filter losses were only considered in the spurious frequency 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.



**UNII-2C BAND** 

## ANTENNA 1 TEST RESULTS (WORST CASE)

## HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)

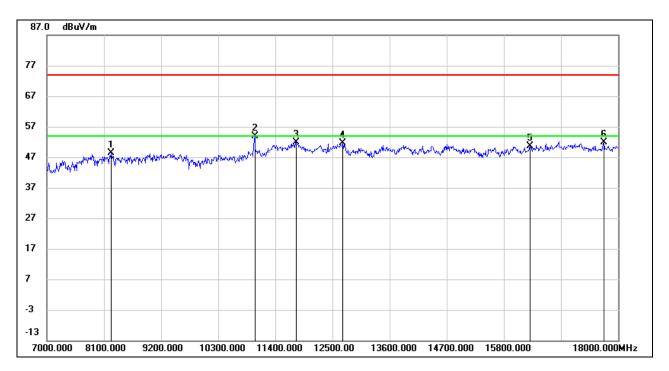


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 7880.000  | 39.13   | 9.26    | 48.39    | 74.00    | -25.61 | peak   |
| 2   | 9354.000  | 38.08   | 11.23   | 49.31    | 74.00    | -24.69 | peak   |
| 3   | 11004.000 | 39.00   | 14.41   | 53.41    | 74.00    | -20.59 | peak   |
| 4   | 11378.000 | 36.51   | 15.37   | 51.88    | 74.00    | -22.12 | peak   |
| 5   | 14678.000 | 34.49   | 17.67   | 52.16    | 74.00    | -21.84 | peak   |
| 6   | 17252.000 | 29.52   | 22.31   | 51.83    | 74.00    | -22.17 | peak   |

- 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.



# HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)

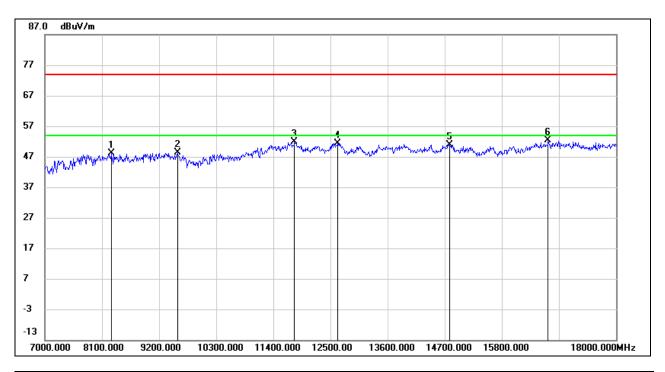


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 8243.000  | 37.90   | 10.37   | 48.27    | 74.00    | -25.73 | peak   |
| 2   | 11004.000 | 39.55   | 14.41   | 53.96    | 74.00    | -20.04 | peak   |
| 3   | 11807.000 | 35.28   | 16.70   | 51.98    | 74.00    | -22.02 | peak   |
| 4   | 12698.000 | 34.94   | 16.81   | 51.75    | 74.00    | -22.25 | peak   |
| 5   | 16306.000 | 31.24   | 19.39   | 50.63    | 74.00    | -23.37 | peak   |
| 6   | 17725.000 | 28.49   | 23.42   | 51.91    | 74.00    | -22.09 | peak   |

- 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.



#### <u>HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)</u>

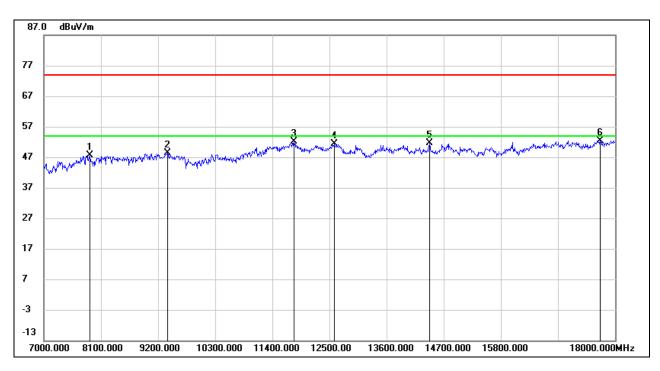


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 8276.000  | 37.93   | 10.25   | 48.18    | 74.00    | -25.82 | peak   |
| 2   | 9552.000  | 36.48   | 11.86   | 48.34    | 74.00    | -25.66 | peak   |
| 3   | 11807.000 | 35.27   | 16.70   | 51.97    | 74.00    | -22.03 | peak   |
| 4   | 12643.000 | 34.62   | 16.82   | 51.44    | 74.00    | -22.56 | peak   |
| 5   | 14788.000 | 33.19   | 17.80   | 50.99    | 74.00    | -23.01 | peak   |
| 6   | 16691.000 | 31.44   | 20.88   | 52.32    | 74.00    | -21.68 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
  - 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
- 6. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.



## HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)

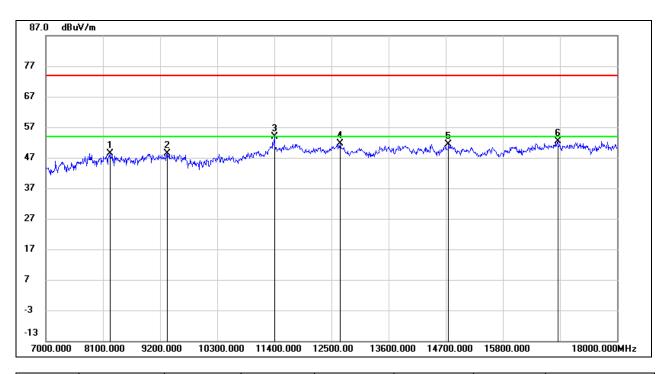


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 7880.000  | 38.44   | 9.26    | 47.70    | 74.00    | -26.30 | peak   |
| 2   | 9387.000  | 37.04   | 11.38   | 48.42    | 74.00    | -25.58 | peak   |
| 3   | 11818.000 | 35.48   | 16.68   | 52.16    | 74.00    | -21.84 | peak   |
| 4   | 12588.000 | 34.46   | 16.81   | 51.27    | 74.00    | -22.73 | peak   |
| 5   | 14425.000 | 33.70   | 17.89   | 51.59    | 74.00    | -22.41 | peak   |
| 6   | 17714.000 | 29.14   | 23.34   | 52.48    | 74.00    | -21.52 | peak   |

- 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.



HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)

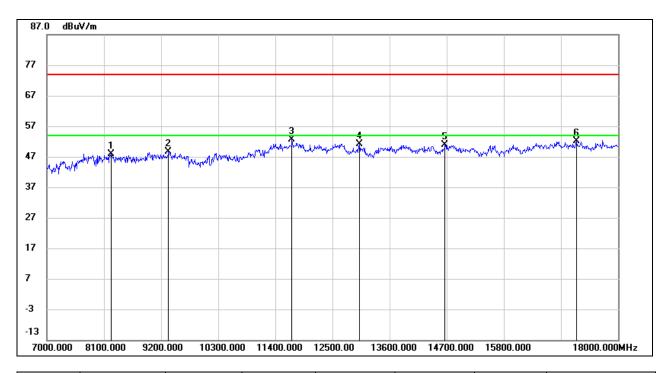


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 8232.000  | 37.88   | 10.41   | 48.29    | 74.00    | -25.71 | peak   |
| 2   | 9332.000  | 37.14   | 11.15   | 48.29    | 74.00    | -25.71 | peak   |
| 3   | 11400.000 | 38.37   | 15.43   | 53.80    | 74.00    | -20.20 | peak   |
| 4   | 12665.000 | 34.90   | 16.82   | 51.72    | 74.00    | -22.28 | peak   |
| 5   | 14755.000 | 33.55   | 17.77   | 51.32    | 74.00    | -22.68 | peak   |
| 6   | 16856.000 | 31.23   | 21.10   | 52.33    | 74.00    | -21.67 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
  - 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
- 6. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.



## HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)



| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 8232.000  | 37.37   | 10.41   | 47.78    | 74.00    | -26.22 | peak   |
| 2   | 9343.000  | 37.36   | 11.19   | 48.55    | 74.00    | -25.45 | peak   |
| 3   | 11719.000 | 36.39   | 16.34   | 52.73    | 74.00    | -21.27 | peak   |
| 4   | 13017.000 | 34.23   | 16.86   | 51.09    | 74.00    | -22.91 | peak   |
| 5   | 14667.000 | 33.20   | 17.66   | 50.86    | 74.00    | -23.14 | peak   |
| 6   | 17197.000 | 29.68   | 22.46   | 52.14    | 74.00    | -21.86 | peak   |

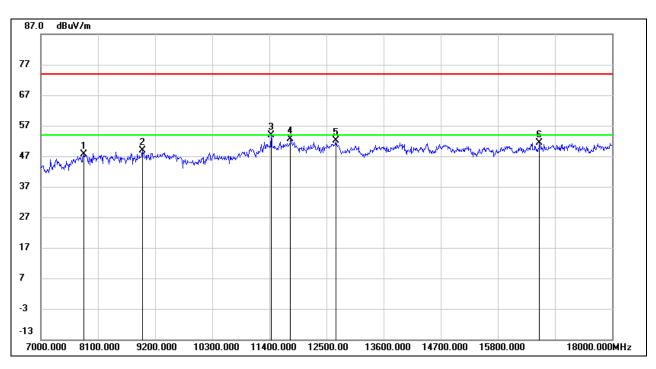
- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
- 5. For the transmitting duration, please refer to clause 7.1.
- 6. Filter losses were only considered in the spurious frequency 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 -27 dBm/MHz (68.2dBuV/m) limit.



# **STRADDLE CHANNEL 144**

# ANTENNA 1 TEST RESULTS (WORST CASE)

# <u>HARMONICS AND SPURIOUS EMISSIONS (HORIZONTAL)</u>

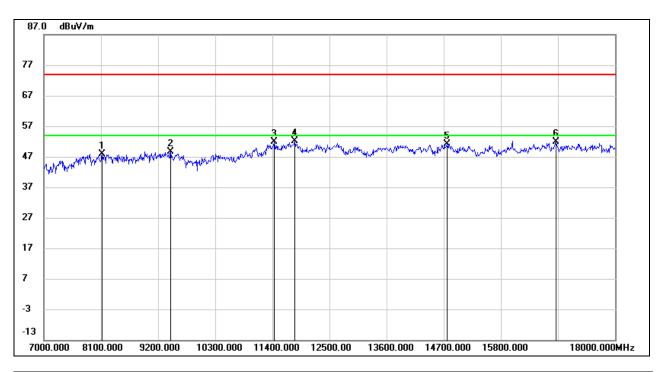


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 7825.000  | 38.23   | 9.41    | 47.64    | 74.00    | -26.36 | peak   |
| 2   | 8958.000  | 37.62   | 11.31   | 48.93    | 74.00    | -25.07 | peak   |
| 3   | 11433.000 | 38.46   | 15.49   | 53.95    | 74.00    | -20.05 | peak   |
| 4   | 11807.000 | 35.85   | 16.70   | 52.55    | 74.00    | -21.45 | peak   |
| 5   | 12676.000 | 35.34   | 16.81   | 52.15    | 74.00    | -21.85 | peak   |
| 6   | 16603.000 | 30.58   | 20.80   | 51.38    | 74.00    | -22.62 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
  - 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
- 6. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.



**HARMONICS AND SPURIOUS EMISSIONS (VERTICAL)** 



| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 8122.000  | 38.02   | 9.92    | 47.94    | 74.00    | -26.06 | peak   |
| 2   | 9442.000  | 36.95   | 11.57   | 48.52    | 74.00    | -25.48 | peak   |
| 3   | 11433.000 | 36.34   | 15.49   | 51.83    | 74.00    | -22.17 | peak   |
| 4   | 11829.000 | 35.51   | 16.67   | 52.18    | 74.00    | -21.82 | peak   |
| 5   | 14766.000 | 33.44   | 17.78   | 51.22    | 74.00    | -22.78 | peak   |
| 6   | 16856.000 | 30.89   | 21.10   | 51.99    | 74.00    | -22.01 | peak   |

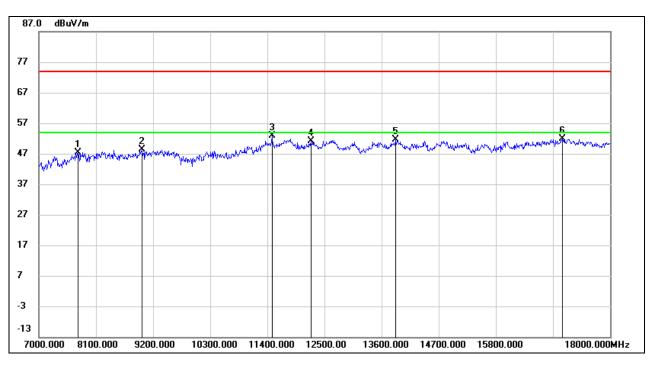
- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
  - 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
- 6. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.



## **UNII-3 BAND**

# ANTENNA 1 TEST RESULTS (WORST CASE)

# HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)

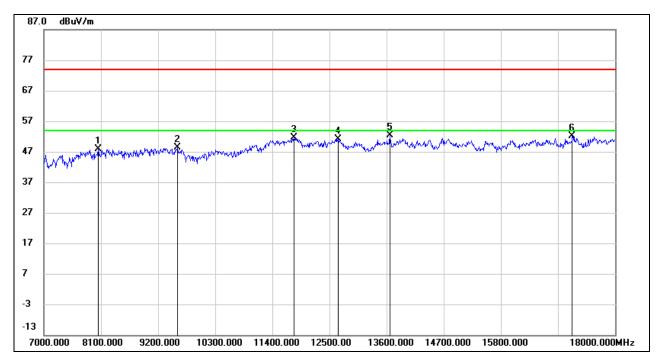


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 7748.000  | 38.08   | 9.29    | 47.37    | 74.00    | -26.63 | peak   |
| 2   | 8991.000  | 36.77   | 11.63   | 48.40    | 74.00    | -25.60 | peak   |
| 3   | 11488.000 | 37.23   | 15.58   | 52.81    | 74.00    | -21.19 | peak   |
| 4   | 12236.000 | 34.74   | 16.43   | 51.17    | 74.00    | -22.83 | peak   |
| 5   | 13864.000 | 33.65   | 18.03   | 51.68    | 74.00    | -22.32 | peak   |
| 6   | 17087.000 | 29.93   | 21.85   | 51.78    | 74.00    | -22.22 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
  - 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
- 6. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.



# HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)

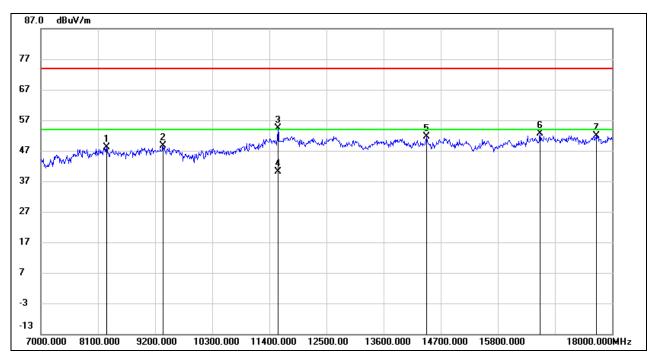


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 8045.000  | 38.56   | 9.31    | 47.87    | 74.00    | -26.13 | peak   |
| 2   | 9574.000  | 36.55   | 11.90   | 48.45    | 74.00    | -25.55 | peak   |
| 3   | 11818.000 | 35.07   | 16.68   | 51.75    | 74.00    | -22.25 | peak   |
| 4   | 12665.000 | 34.29   | 16.82   | 51.11    | 74.00    | -22.89 | peak   |
| 5   | 13666.000 | 34.79   | 17.65   | 52.44    | 74.00    | -21.56 | peak   |
| 6   | 17175.000 | 29.70   | 22.33   | 52.03    | 74.00    | -21.97 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
  - 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
- 6. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.



HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)

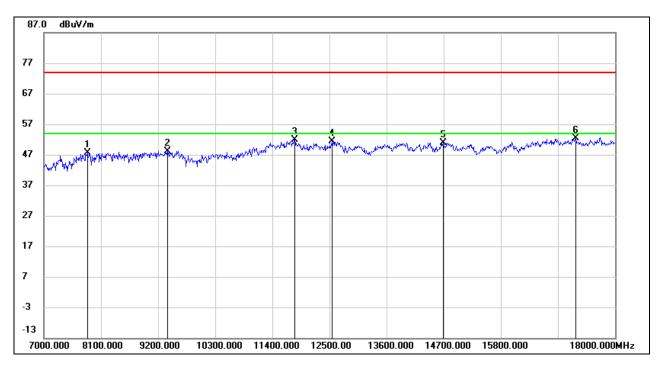


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 8265.000  | 37.75   | 10.30   | 48.05    | 74.00    | -25.95 | peak   |
| 2   | 9354.000  | 37.44   | 11.23   | 48.67    | 74.00    | -25.33 | peak   |
| 3   | 11565.000 | 38.55   | 15.72   | 54.27    | 74.00    | -19.73 | peak   |
| 4   | 11565.000 | 24.40   | 15.72   | 40.12    | 54.00    | -13.88 | AVG    |
| 5   | 14425.000 | 33.85   | 17.89   | 51.74    | 74.00    | -22.26 | peak   |
| 6   | 16614.000 | 31.90   | 20.80   | 52.70    | 74.00    | -21.30 | peak   |
| 7   | 17692.000 | 28.73   | 23.19   | 51.92    | 74.00    | -22.08 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
  - 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
- 6. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.



## HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)

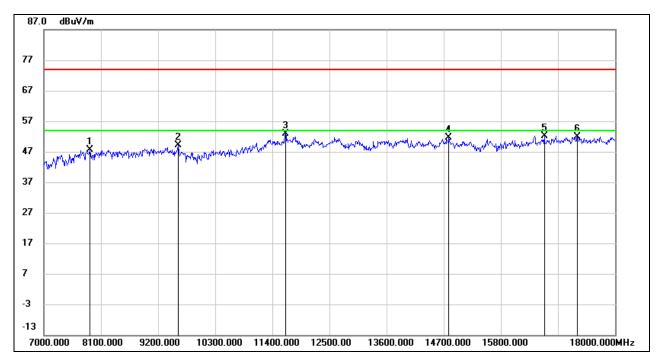


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 7836.000  | 38.26   | 9.38    | 47.64    | 74.00    | -26.36 | peak   |
| 2   | 9376.000  | 36.90   | 11.34   | 48.24    | 74.00    | -25.76 | peak   |
| 3   | 11829.000 | 35.27   | 16.67   | 51.94    | 74.00    | -22.06 | peak   |
| 4   | 12555.000 | 34.51   | 16.78   | 51.29    | 74.00    | -22.71 | peak   |
| 5   | 14689.000 | 33.27   | 17.69   | 50.96    | 74.00    | -23.04 | peak   |
| 6   | 17241.000 | 29.96   | 22.34   | 52.30    | 74.00    | -21.70 | peak   |

- 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.



## HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)

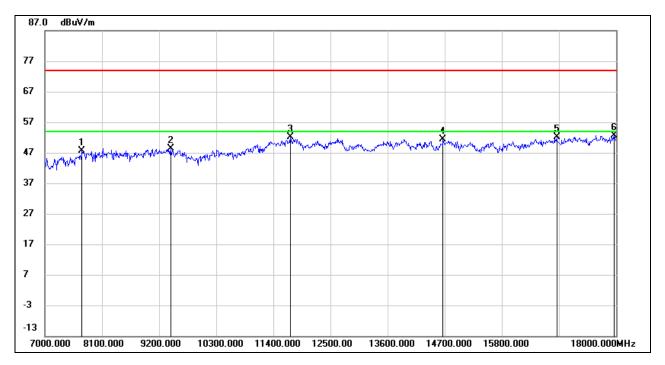


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 7891.000  | 38.44   | 9.24    | 47.68    | 74.00    | -26.32 | peak   |
| 2   | 9585.000  | 37.12   | 11.92   | 49.04    | 74.00    | -24.96 | peak   |
| 3   | 11653.000 | 36.88   | 16.03   | 52.91    | 74.00    | -21.09 | peak   |
| 4   | 14799.000 | 33.92   | 17.82   | 51.74    | 74.00    | -22.26 | peak   |
| 5   | 16636.000 | 31.34   | 20.83   | 52.17    | 74.00    | -21.83 | peak   |
| 6   | 17274.000 | 29.63   | 22.24   | 51.87    | 74.00    | -22.13 | peak   |

- 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.



#### <u>HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)</u>



| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 7715.000  | 38.45   | 9.17    | 47.62    | 74.00    | -26.38 | peak   |
| 2   | 9420.000  | 36.80   | 11.50   | 48.30    | 74.00    | -25.70 | peak   |
| 3   | 11730.000 | 35.81   | 16.39   | 52.20    | 74.00    | -21.80 | peak   |
| 4   | 14667.000 | 33.79   | 17.66   | 51.45    | 74.00    | -22.55 | peak   |
| 5   | 16856.000 | 31.08   | 21.10   | 52.18    | 74.00    | -21.82 | peak   |
| 6   | 17956.000 | 28.66   | 24.00   | 52.66    | 74.00    | -21.34 | peak   |

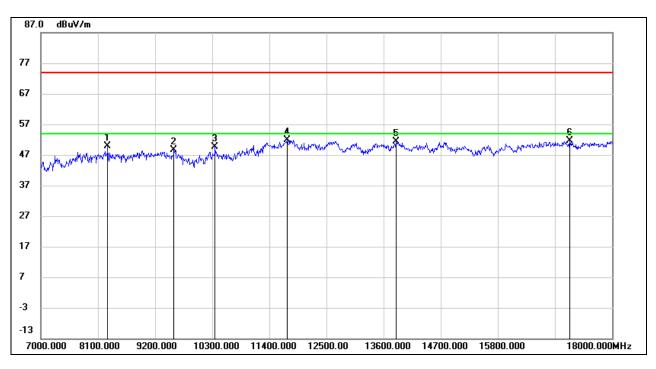
- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
- 5. For the transmitting duration, please refer to clause 7.1.
- 6. Filter losses were only considered in the spurious frequency 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 -27 dBm/MHz (68.2dBuV/m) limit.



#### 8.3.2. 802.11n HT20 MIMO MODE

#### **UNII-1 BAND**

## HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)

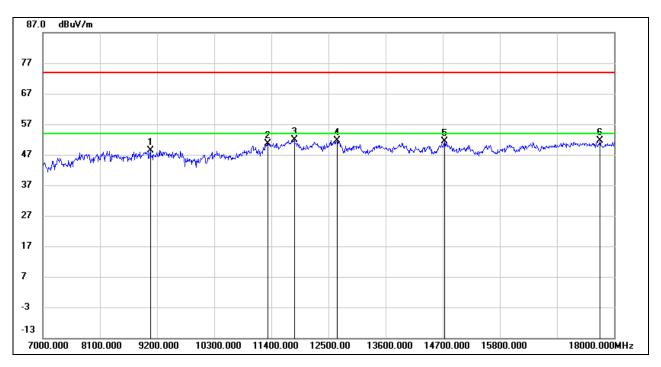


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 8287.000  | 39.70   | 10.21   | 49.91    | 74.00    | -24.09 | peak   |
| 2   | 9563.000  | 36.75   | 11.87   | 48.62    | 74.00    | -25.38 | peak   |
| 3   | 10355.000 | 37.11   | 12.43   | 49.54    | 74.00    | -24.46 | peak   |
| 4   | 11741.000 | 35.44   | 16.43   | 51.87    | 74.00    | -22.13 | peak   |
| 5   | 13842.000 | 33.26   | 18.07   | 51.33    | 74.00    | -22.67 | peak   |
| 6   | 17186.000 | 29.31   | 22.39   | 51.70    | 74.00    | -22.30 | peak   |

- 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.



#### HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)

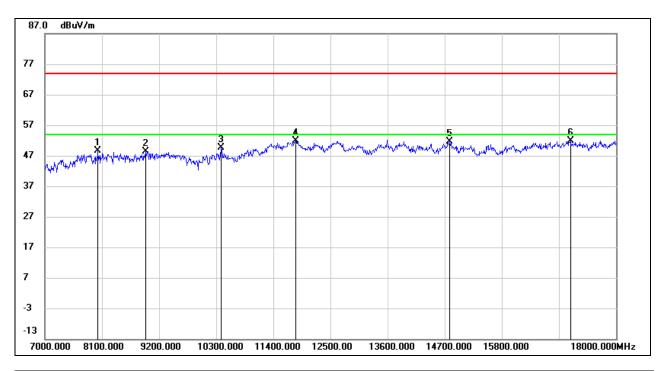


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 9068.000  | 36.95   | 11.32   | 48.27    | 74.00    | -25.73 | peak   |
| 2   | 11334.000 | 35.49   | 15.26   | 50.75    | 74.00    | -23.25 | peak   |
| 3   | 11840.000 | 35.21   | 16.66   | 51.87    | 74.00    | -22.13 | peak   |
| 4   | 12665.000 | 34.80   | 16.82   | 51.62    | 74.00    | -22.38 | peak   |
| 5   | 14733.000 | 33.60   | 17.74   | 51.34    | 74.00    | -22.66 | peak   |
| 6   | 17725.000 | 28.28   | 23.42   | 51.70    | 74.00    | -22.30 | peak   |

- 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.



HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)

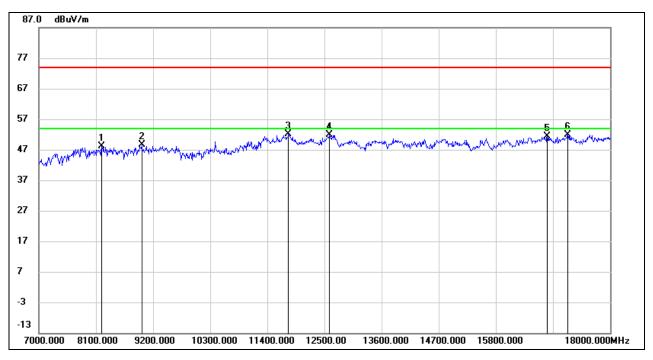


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 8023.000  | 39.58   | 9.15    | 48.73    | 74.00    | -25.27 | peak   |
| 2   | 8936.000  | 37.36   | 11.10   | 48.46    | 74.00    | -25.54 | peak   |
| 3   | 10399.000 | 36.99   | 12.62   | 49.61    | 74.00    | -24.39 | peak   |
| 4   | 11829.000 | 35.12   | 16.67   | 51.79    | 74.00    | -22.21 | peak   |
| 5   | 14799.000 | 33.69   | 17.82   | 51.51    | 74.00    | -22.49 | peak   |
| 6   | 17120.000 | 29.94   | 22.03   | 51.97    | 74.00    | -22.03 | peak   |

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
  - 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.
- 6. Since non-restricted band peak emissions are less than the average limit, they also comply with the -27dBm/MHz (68.2dBuV/m) limit.



#### <u>HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)</u>

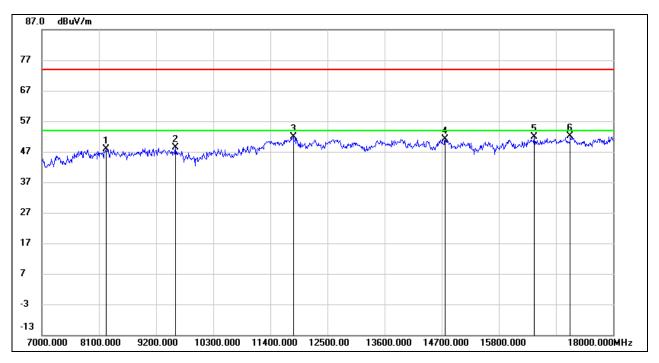


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 8210.000  | 37.52   | 10.50   | 48.02    | 74.00    | -25.98 | peak   |
| 2   | 8980.000  | 37.08   | 11.52   | 48.60    | 74.00    | -25.40 | peak   |
| 3   | 11807.000 | 35.55   | 16.70   | 52.25    | 74.00    | -21.75 | peak   |
| 4   | 12599.000 | 34.97   | 16.83   | 51.80    | 74.00    | -22.20 | peak   |
| 5   | 16790.000 | 30.28   | 20.99   | 51.27    | 74.00    | -22.73 | peak   |
| 6   | 17186.000 | 29.50   | 22.39   | 51.89    | 74.00    | -22.11 | peak   |

- 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.



HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)

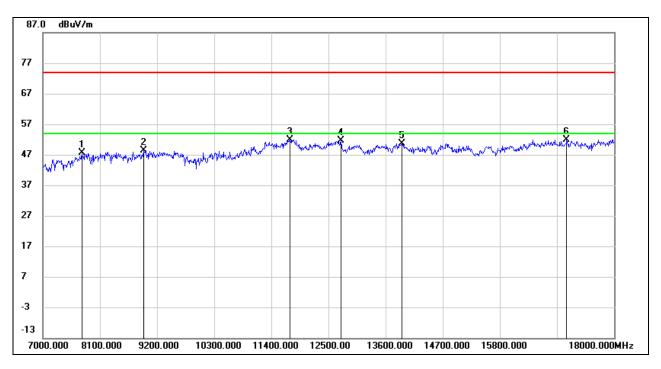


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 8232.000  | 37.41   | 10.41   | 47.82    | 74.00    | -26.18 | peak   |
| 2   | 9574.000  | 36.49   | 11.90   | 48.39    | 74.00    | -25.61 | peak   |
| 3   | 11840.000 | 35.34   | 16.66   | 52.00    | 74.00    | -22.00 | peak   |
| 4   | 14766.000 | 33.43   | 17.78   | 51.21    | 74.00    | -22.79 | peak   |
| 5   | 16482.000 | 31.73   | 20.20   | 51.93    | 74.00    | -22.07 | peak   |
| 6   | 17175.000 | 29.68   | 22.33   | 52.01    | 74.00    | -21.99 | peak   |

- 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.



<u>HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)</u>



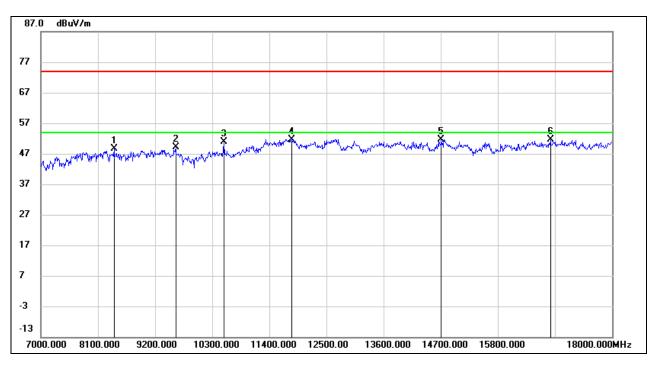
| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 7748.000  | 38.26   | 9.29    | 47.55    | 74.00    | -26.45 | peak   |
| 2   | 8936.000  | 37.31   | 11.10   | 48.41    | 74.00    | -25.59 | peak   |
| 3   | 11752.000 | 35.46   | 16.48   | 51.94    | 74.00    | -22.06 | peak   |
| 4   | 12742.000 | 34.76   | 16.80   | 51.56    | 74.00    | -22.44 | peak   |
| 5   | 13908.000 | 32.76   | 17.99   | 50.75    | 74.00    | -23.25 | peak   |
| 6   | 17087.000 | 30.11   | 21.85   | 51.96    | 74.00    | -22.04 | peak   |

- 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.



#### UNII-2A BAND

# HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)

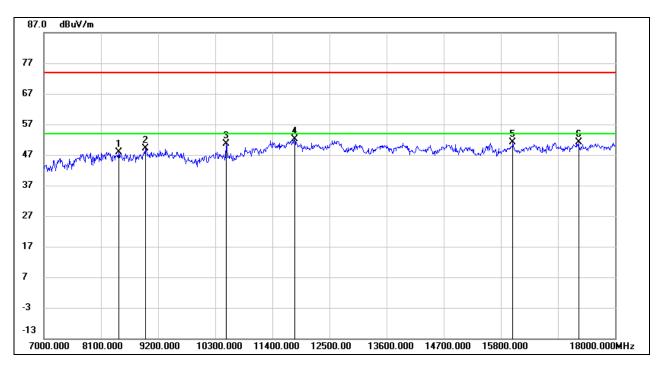


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 8408.000  | 38.93   | 9.80    | 48.73    | 74.00    | -25.27 | peak   |
| 2   | 9596.000  | 37.09   | 11.94   | 49.03    | 74.00    | -24.97 | peak   |
| 3   | 10520.000 | 37.68   | 13.17   | 50.85    | 74.00    | -23.15 | peak   |
| 4   | 11829.000 | 35.06   | 16.67   | 51.73    | 74.00    | -22.27 | peak   |
| 5   | 14711.000 | 34.02   | 17.71   | 51.73    | 74.00    | -22.27 | peak   |
| 6   | 16812.000 | 30.49   | 21.02   | 51.51    | 74.00    | -22.49 | peak   |

- 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.



# HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)

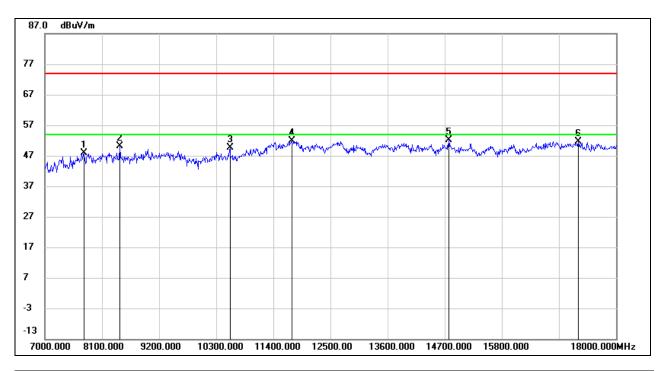


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 8441.000  | 38.13   | 9.77    | 47.90    | 74.00    | -26.10 | peak   |
| 2   | 8958.000  | 37.81   | 11.31   | 49.12    | 74.00    | -24.88 | peak   |
| 3   | 10509.000 | 37.58   | 13.12   | 50.70    | 74.00    | -23.30 | peak   |
| 4   | 11829.000 | 35.49   | 16.67   | 52.16    | 74.00    | -21.84 | peak   |
| 5   | 16031.000 | 32.64   | 18.58   | 51.22    | 74.00    | -22.78 | peak   |
| 6   | 17296.000 | 28.97   | 22.18   | 51.15    | 74.00    | -22.85 | peak   |

- 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.



# HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)

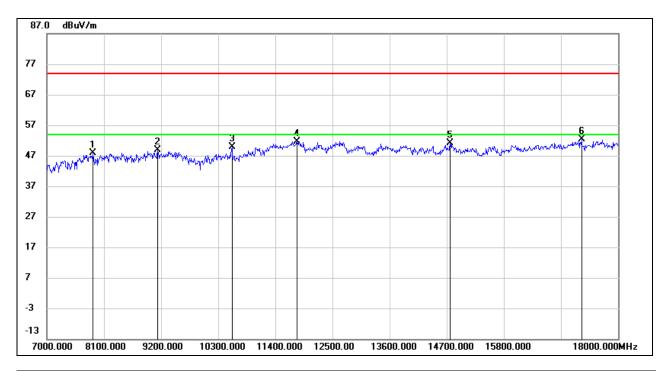


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 7748.000  | 38.49   | 9.29    | 47.78    | 74.00    | -26.22 | peak   |
| 2   | 8441.000  | 40.37   | 9.77    | 50.14    | 74.00    | -23.86 | peak   |
| 3   | 10564.000 | 36.29   | 13.33   | 49.62    | 74.00    | -24.38 | peak   |
| 4   | 11752.000 | 35.33   | 16.48   | 51.81    | 74.00    | -22.19 | peak   |
| 5   | 14777.000 | 34.25   | 17.79   | 52.04    | 74.00    | -21.96 | peak   |
| 6   | 17274.000 | 29.41   | 22.24   | 51.65    | 74.00    | -22.35 | peak   |

- 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.



#### <u>HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)</u>

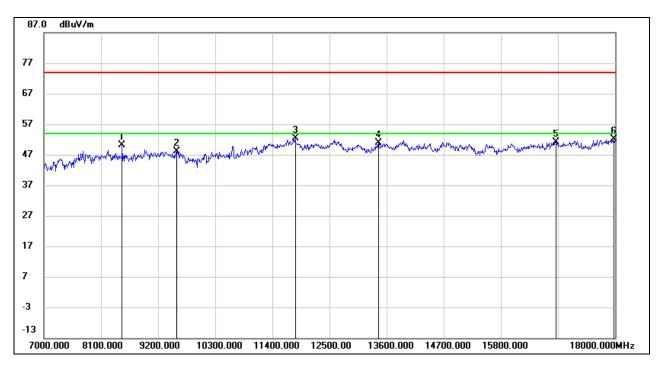


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 7891.000  | 38.69   | 9.24    | 47.93    | 74.00    | -26.07 | peak   |
| 2   | 9134.000  | 38.02   | 10.95   | 48.97    | 74.00    | -25.03 | peak   |
| 3   | 10564.000 | 36.56   | 13.33   | 49.89    | 74.00    | -24.11 | peak   |
| 4   | 11818.000 | 35.00   | 16.68   | 51.68    | 74.00    | -22.32 | peak   |
| 5   | 14766.000 | 33.36   | 17.78   | 51.14    | 74.00    | -22.86 | peak   |
| 6   | 17296.000 | 30.26   | 22.18   | 52.44    | 74.00    | -21.56 | peak   |

- 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.



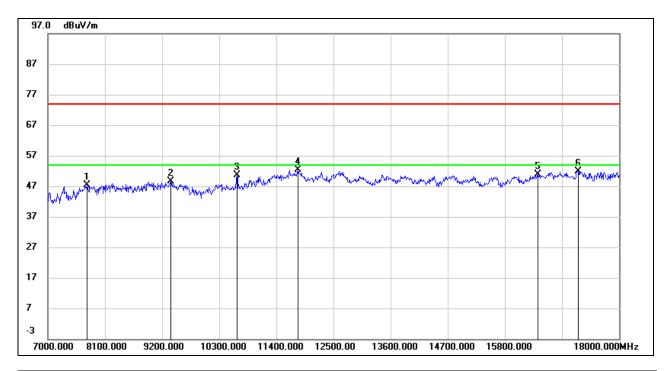
## HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)



| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 8507.000  | 40.36   | 9.72    | 50.08    | 74.00    | -23.92 | peak   |
| 2   | 9563.000  | 36.32   | 11.87   | 48.19    | 74.00    | -25.81 | peak   |
| 3   | 11840.000 | 35.73   | 16.66   | 52.39    | 74.00    | -21.61 | peak   |
| 4   | 13446.000 | 33.33   | 17.45   | 50.78    | 74.00    | -23.22 | peak   |
| 5   | 16867.000 | 30.01   | 21.12   | 51.13    | 74.00    | -22.87 | peak   |
| 6   | 17978.000 | 28.12   | 24.01   | 52.13    | 74.00    | -21.87 | peak   |

- 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.





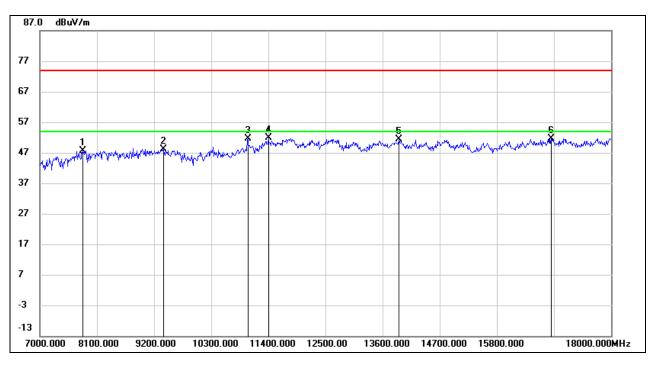
| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 7759.000  | 38.05   | 9.33    | 47.38    | 74.00    | -26.62 | peak   |
| 2   | 9365.000  | 37.36   | 11.29   | 48.65    | 74.00    | -25.35 | peak   |
| 3   | 10641.000 | 37.07   | 13.53   | 50.60    | 74.00    | -23.40 | peak   |
| 4   | 11818.000 | 35.71   | 16.68   | 52.39    | 74.00    | -21.61 | peak   |
| 5   | 16438.000 | 31.02   | 19.98   | 51.00    | 74.00    | -23.00 | peak   |
| 6   | 17208.000 | 29.51   | 22.45   | 51.96    | 74.00    | -22.04 | peak   |

- 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.



## **UNII-2C BAND**

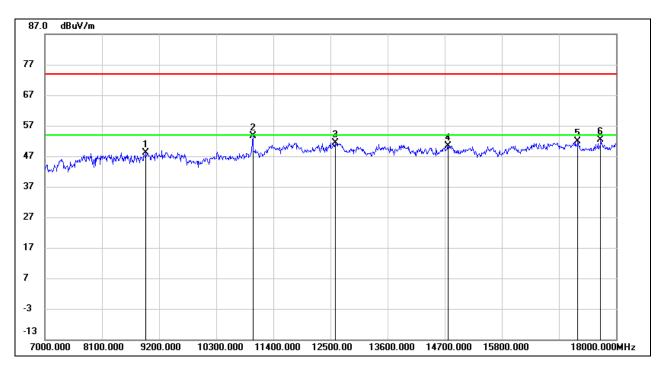
# HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 7825.000  | 38.34   | 9.41    | 47.75    | 74.00    | -26.25 | peak   |
| 2   | 9376.000  | 36.82   | 11.34   | 48.16    | 74.00    | -25.84 | peak   |
| 3   | 11004.000 | 37.30   | 14.41   | 51.71    | 74.00    | -22.29 | peak   |
| 4   | 11400.000 | 36.55   | 15.43   | 51.98    | 74.00    | -22.02 | peak   |
| 5   | 13919.000 | 33.36   | 17.97   | 51.33    | 74.00    | -22.67 | peak   |
| 6   | 16845.000 | 30.57   | 21.09   | 51.66    | 74.00    | -22.34 | peak   |

- 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.



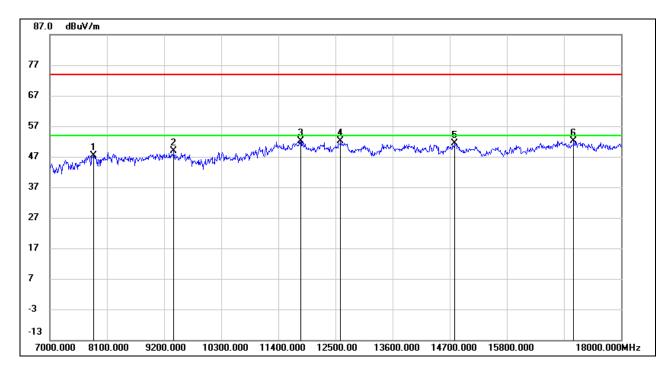


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 8947.000  | 36.91   | 11.21   | 48.12    | 74.00    | -25.88 | peak   |
| 2   | 11004.000 | 39.21   | 14.41   | 53.62    | 74.00    | -20.38 | peak   |
| 3   | 12588.000 | 34.58   | 16.81   | 51.39    | 74.00    | -22.61 | peak   |
| 4   | 14766.000 | 32.70   | 17.78   | 50.48    | 74.00    | -23.52 | peak   |
| 5   | 17263.000 | 29.54   | 22.28   | 51.82    | 74.00    | -22.18 | peak   |
| 6   | 17703.000 | 29.05   | 23.27   | 52.32    | 74.00    | -21.68 | peak   |

- 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.



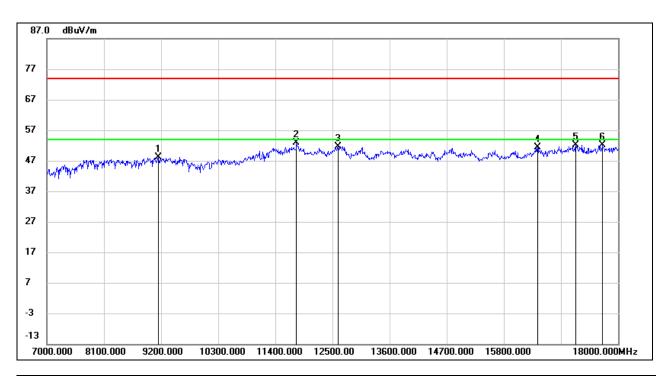
### <u>HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)</u>



| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 7836.000  | 37.97   | 9.38    | 47.35    | 74.00    | -26.65 | peak   |
| 2   | 9387.000  | 37.51   | 11.38   | 48.89    | 74.00    | -25.11 | peak   |
| 3   | 11829.000 | 35.51   | 16.67   | 52.18    | 74.00    | -21.82 | peak   |
| 4   | 12599.000 | 35.42   | 16.83   | 52.25    | 74.00    | -21.75 | peak   |
| 5   | 14799.000 | 33.44   | 17.82   | 51.26    | 74.00    | -22.74 | peak   |
| 6   | 17087.000 | 30.38   | 21.85   | 52.23    | 74.00    | -21.77 | peak   |

- 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.



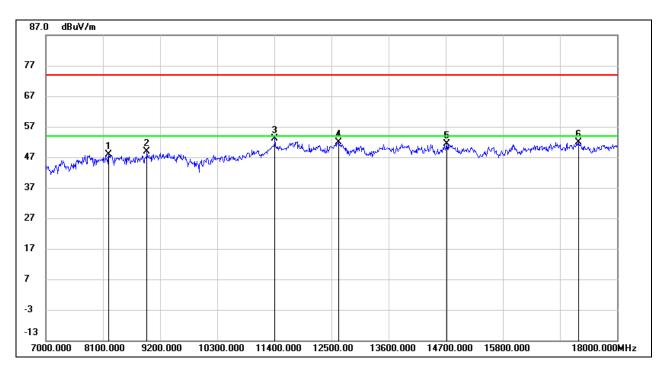


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 9145.000  | 37.36   | 10.89   | 48.25    | 74.00    | -25.75 | peak   |
| 2   | 11807.000 | 36.20   | 16.70   | 52.90    | 74.00    | -21.10 | peak   |
| 3   | 12610.000 | 34.93   | 16.82   | 51.75    | 74.00    | -22.25 | peak   |
| 4   | 16449.000 | 31.30   | 20.04   | 51.34    | 74.00    | -22.66 | peak   |
| 5   | 17186.000 | 29.74   | 22.39   | 52.13    | 74.00    | -21.87 | peak   |
| 6   | 17692.000 | 28.91   | 23.19   | 52.10    | 74.00    | -21.90 | peak   |

- 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.



## HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)

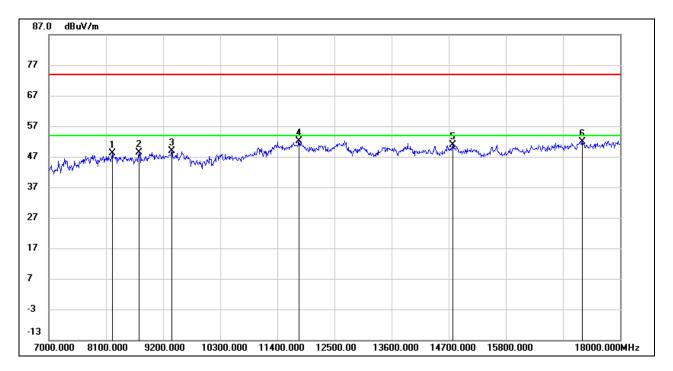


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 8210.000  | 37.29   | 10.50   | 47.79    | 74.00    | -26.21 | peak   |
| 2   | 8947.000  | 37.74   | 11.21   | 48.95    | 74.00    | -25.05 | peak   |
| 3   | 11411.000 | 37.60   | 15.44   | 53.04    | 74.00    | -20.96 | peak   |
| 4   | 12643.000 | 34.98   | 16.82   | 51.80    | 74.00    | -22.20 | peak   |
| 5   | 14722.000 | 33.53   | 17.73   | 51.26    | 74.00    | -22.74 | peak   |
| 6   | 17263.000 | 29.71   | 22.28   | 51.99    | 74.00    | -22.01 | peak   |

- 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.



### <u>HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)</u>



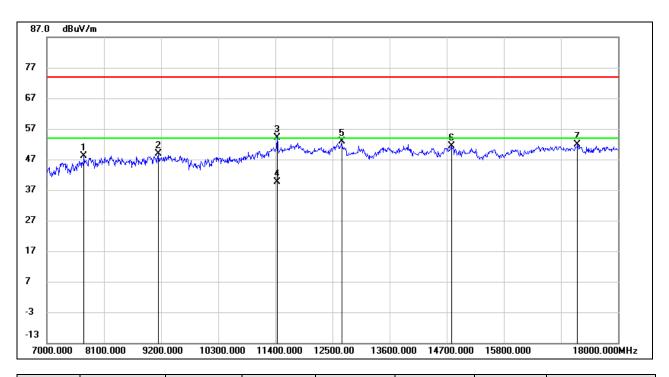
| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 8221.000  | 37.61   | 10.46   | 48.07    | 74.00    | -25.93 | peak   |
| 2   | 8738.000  | 38.75   | 9.75    | 48.50    | 74.00    | -25.50 | peak   |
| 3   | 9365.000  | 37.58   | 11.29   | 48.87    | 74.00    | -25.13 | peak   |
| 4   | 11818.000 | 35.34   | 16.68   | 52.02    | 74.00    | -21.98 | peak   |
| 5   | 14777.000 | 33.11   | 17.79   | 50.90    | 74.00    | -23.10 | peak   |
| 6   | 17274.000 | 29.57   | 22.24   | 51.81    | 74.00    | -22.19 | peak   |

- 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.



**STRADDLE CHANNEL 144** 

# <u>HARMONICS AND SPURIOUS EMISSIONS (HORIZONTAL)</u>

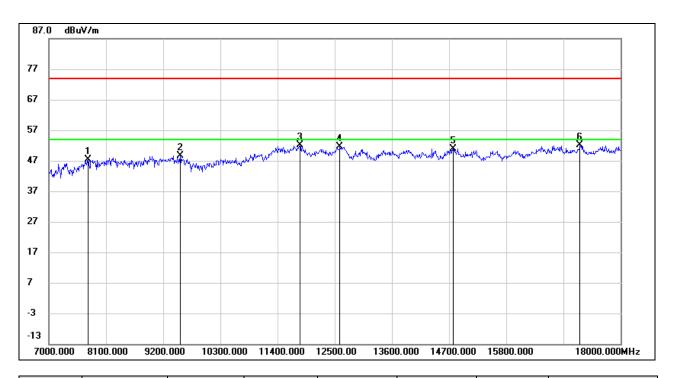


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 7715.000  | 38.88   | 9.17    | 48.05    | 74.00    | -25.95 | peak   |
| 2   | 9145.000  | 37.96   | 10.89   | 48.85    | 74.00    | -25.15 | peak   |
| 3   | 11433.000 | 38.70   | 15.49   | 54.19    | 74.00    | -19.81 | peak   |
| 4   | 11433.000 | 24.23   | 15.49   | 39.72    | 54.00    | -14.28 | AVG    |
| 5   | 12676.000 | 35.98   | 16.81   | 52.79    | 74.00    | -21.21 | peak   |
| 6   | 14788.000 | 33.56   | 17.80   | 51.36    | 74.00    | -22.64 | peak   |
| 7   | 17219.000 | 29.59   | 22.41   | 52.00    | 74.00    | -22.00 | peak   |

- 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.



## **HARMONICS AND SPURIOUS EMISSIONS (VERTICAL)**



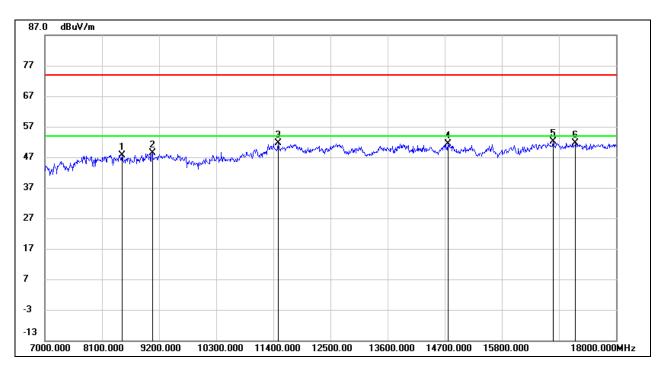
| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 7748.000  | 38.14   | 9.29    | 47.43    | 74.00    | -26.57 | peak   |
| 2   | 9530.000  | 36.77   | 11.81   | 48.58    | 74.00    | -25.42 | peak   |
| 3   | 11829.000 | 35.43   | 16.67   | 52.10    | 74.00    | -21.90 | peak   |
| 4   | 12599.000 | 34.68   | 16.83   | 51.51    | 74.00    | -22.49 | peak   |
| 5   | 14777.000 | 32.98   | 17.79   | 50.77    | 74.00    | -23.23 | peak   |
| 6   | 17219.000 | 29.67   | 22.41   | 52.08    | 74.00    | -21.92 | peak   |

- 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.



#### **UNII-3 BAND**

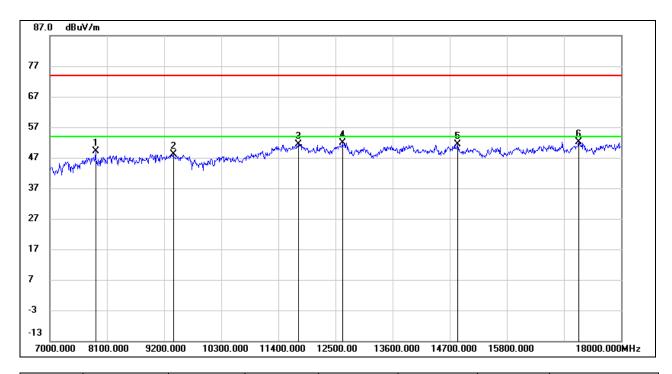
## HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 8485.000  | 37.88   | 9.73    | 47.61    | 74.00    | -26.39 | peak   |
| 2   | 9068.000  | 37.02   | 11.32   | 48.34    | 74.00    | -25.66 | peak   |
| 3   | 11499.000 | 35.95   | 15.60   | 51.55    | 74.00    | -22.45 | peak   |
| 4   | 14766.000 | 33.68   | 17.78   | 51.46    | 74.00    | -22.54 | peak   |
| 5   | 16790.000 | 31.16   | 20.99   | 52.15    | 74.00    | -21.85 | peak   |
| 6   | 17219.000 | 29.13   | 22.41   | 51.54    | 74.00    | -22.46 | peak   |

- 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.



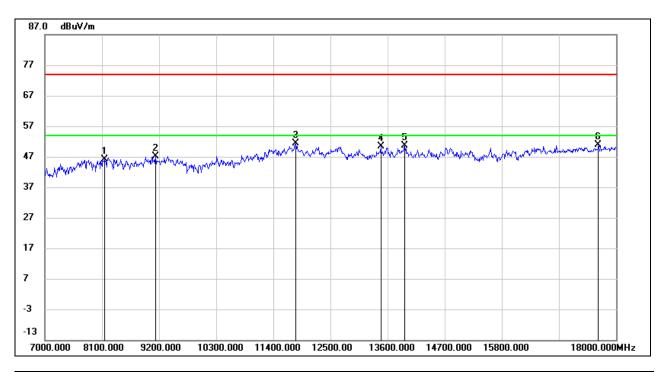


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 7880.000  | 39.95   | 9.26    | 49.21    | 74.00    | -24.79 | peak   |
| 2   | 9376.000  | 36.82   | 11.34   | 48.16    | 74.00    | -25.84 | peak   |
| 3   | 11785.000 | 34.83   | 16.63   | 51.46    | 74.00    | -22.54 | peak   |
| 4   | 12632.000 | 35.15   | 16.82   | 51.97    | 74.00    | -22.03 | peak   |
| 5   | 14854.000 | 33.47   | 17.83   | 51.30    | 74.00    | -22.70 | peak   |
| 6   | 17186.000 | 29.67   | 22.39   | 52.06    | 74.00    | -21.94 | peak   |

- 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.



### <u>HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)</u>

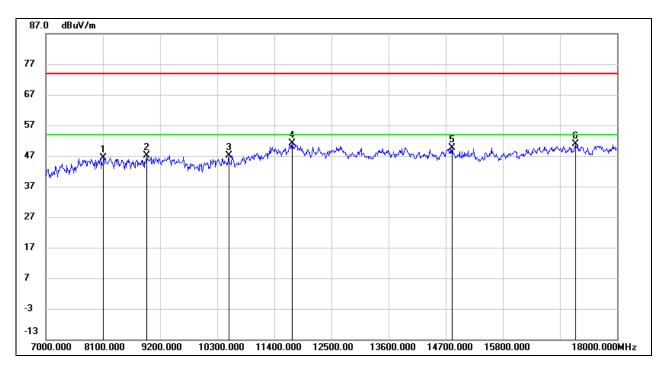


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 8155.000  | 37.27   | 8.98    | 46.25    | 74.00    | -27.75 | peak   |
| 2   | 9134.000  | 37.44   | 9.73    | 47.17    | 74.00    | -26.83 | peak   |
| 3   | 11829.000 | 35.82   | 15.57   | 51.39    | 74.00    | -22.61 | peak   |
| 4   | 13468.000 | 34.05   | 16.38   | 50.43    | 74.00    | -23.57 | peak   |
| 5   | 13930.000 | 33.82   | 16.89   | 50.71    | 74.00    | -23.29 | peak   |
| 6   | 17659.000 | 29.31   | 21.63   | 50.94    | 74.00    | -23.06 | peak   |

- 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.



### <u>HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)</u>

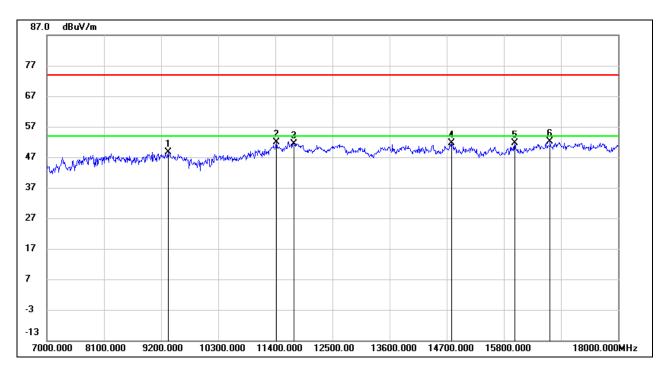


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 8111.000  | 37.66   | 8.61    | 46.27    | 74.00    | -27.73 | peak   |
| 2   | 8947.000  | 37.09   | 10.07   | 47.16    | 74.00    | -26.84 | peak   |
| 3   | 10520.000 | 35.20   | 12.04   | 47.24    | 74.00    | -26.76 | peak   |
| 4   | 11741.000 | 35.91   | 15.28   | 51.19    | 74.00    | -22.81 | peak   |
| 5   | 14821.000 | 32.82   | 16.81   | 49.63    | 74.00    | -24.37 | peak   |
| 6   | 17197.000 | 29.81   | 21.03   | 50.84    | 74.00    | -23.16 | peak   |

- 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.



# HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)

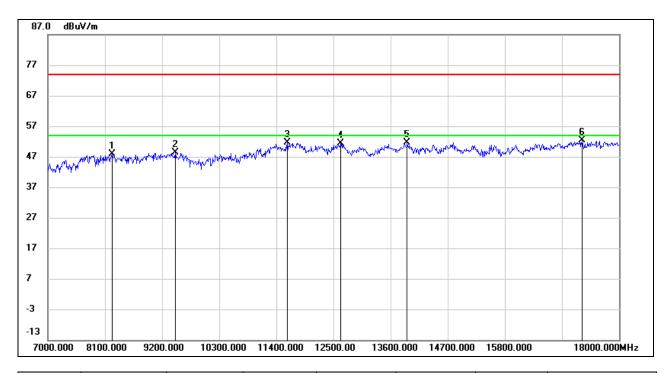


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 9332.000  | 37.48   | 11.15   | 48.63    | 74.00    | -25.37 | peak   |
| 2   | 11422.000 | 36.31   | 15.47   | 51.78    | 74.00    | -22.22 | peak   |
| 3   | 11752.000 | 34.92   | 16.48   | 51.40    | 74.00    | -22.60 | peak   |
| 4   | 14788.000 | 33.72   | 17.80   | 51.52    | 74.00    | -22.48 | peak   |
| 5   | 16009.000 | 33.20   | 18.53   | 51.73    | 74.00    | -22.27 | peak   |
| 6   | 16691.000 | 31.21   | 20.88   | 52.09    | 74.00    | -21.91 | peak   |

- 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.



### <u>HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)</u>



| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 8232.000  | 37.51   | 10.41   | 47.92    | 74.00    | -26.08 | peak   |
| 2   | 9453.000  | 36.71   | 11.61   | 48.32    | 74.00    | -25.68 | peak   |
| 3   | 11609.000 | 35.75   | 15.84   | 51.59    | 74.00    | -22.41 | peak   |
| 4   | 12632.000 | 34.67   | 16.82   | 51.49    | 74.00    | -22.51 | peak   |
| 5   | 13919.000 | 33.73   | 17.97   | 51.70    | 74.00    | -22.30 | peak   |
| 6   | 17285.000 | 30.06   | 22.21   | 52.27    | 74.00    | -21.73 | peak   |

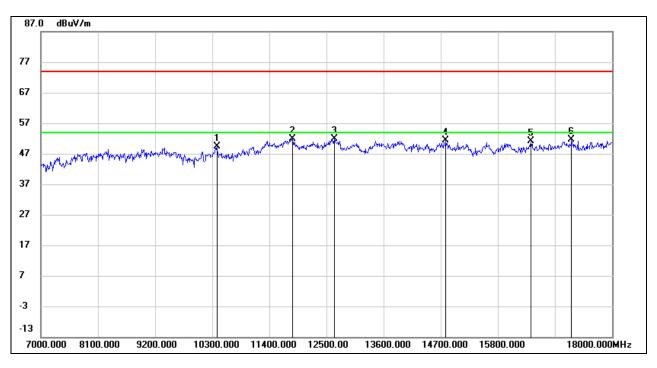
- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
- 5. For the transmitting duration, please refer to clause 7.1.
- 6. Filter losses were only considered in the spurious frequency 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.



#### 8.3.3. 802.11n HT40 MIMO MODE

#### **UNII-1 BAND**

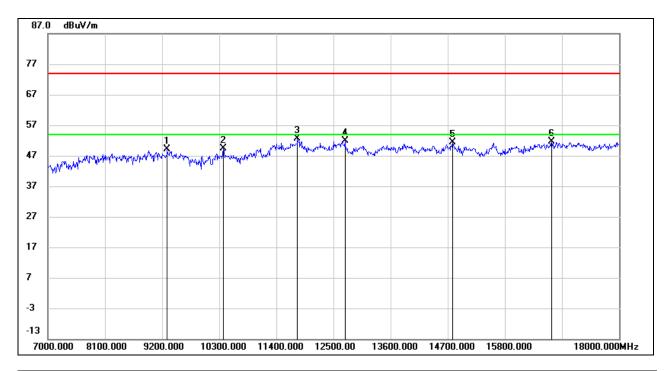
### HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 10388.000 | 36.77   | 12.57   | 49.34    | 74.00    | -24.66 | peak   |
| 2   | 11840.000 | 35.26   | 16.66   | 51.92    | 74.00    | -22.08 | peak   |
| 3   | 12654.000 | 35.12   | 16.81   | 51.93    | 74.00    | -22.07 | peak   |
| 4   | 14799.000 | 33.49   | 17.82   | 51.31    | 74.00    | -22.69 | peak   |
| 5   | 16438.000 | 31.13   | 19.98   | 51.11    | 74.00    | -22.89 | peak   |
| 6   | 17219.000 | 29.17   | 22.41   | 51.58    | 74.00    | -22.42 | peak   |

- 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.



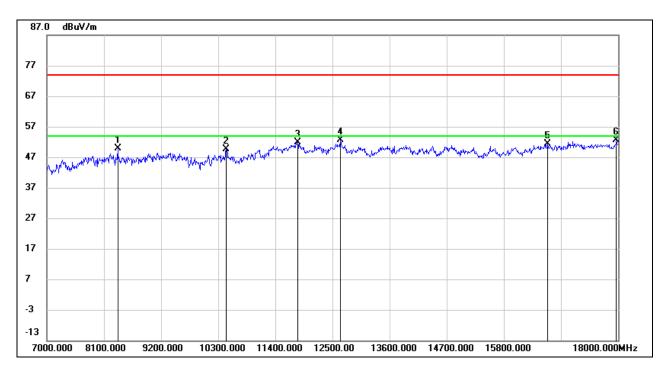


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 9299.000  | 38.12   | 11.00   | 49.12    | 74.00    | -24.88 | peak   |
| 2   | 10377.000 | 36.88   | 12.52   | 49.40    | 74.00    | -24.60 | peak   |
| 3   | 11807.000 | 36.05   | 16.70   | 52.75    | 74.00    | -21.25 | peak   |
| 4   | 12720.000 | 35.07   | 16.81   | 51.88    | 74.00    | -22.12 | peak   |
| 5   | 14788.000 | 33.60   | 17.80   | 51.40    | 74.00    | -22.60 | peak   |
| 6   | 16702.000 | 30.74   | 20.89   | 51.63    | 74.00    | -22.37 | peak   |

- 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.



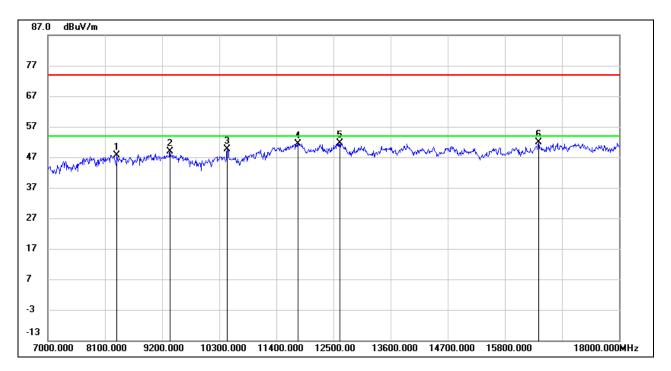
### HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)



| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 8364.000  | 39.84   | 9.94    | 49.78    | 74.00    | -24.22 | peak   |
| 2   | 10454.000 | 36.81   | 12.88   | 49.69    | 74.00    | -24.31 | peak   |
| 3   | 11829.000 | 35.31   | 16.67   | 51.98    | 74.00    | -22.02 | peak   |
| 4   | 12654.000 | 35.76   | 16.81   | 52.57    | 74.00    | -21.43 | peak   |
| 5   | 16647.000 | 30.46   | 20.83   | 51.29    | 74.00    | -22.71 | peak   |
| 6   | 17967.000 | 28.60   | 24.00   | 52.60    | 74.00    | -21.40 | peak   |

- 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.





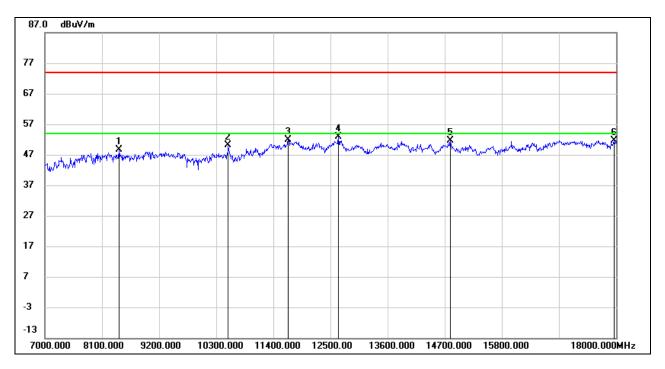
| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 8331.000  | 37.62   | 10.05   | 47.67    | 74.00    | -26.33 | peak   |
| 2   | 9354.000  | 37.73   | 11.23   | 48.96    | 74.00    | -25.04 | peak   |
| 3   | 10454.000 | 36.77   | 12.88   | 49.65    | 74.00    | -24.35 | peak   |
| 4   | 11818.000 | 34.81   | 16.68   | 51.49    | 74.00    | -22.51 | peak   |
| 5   | 12621.000 | 34.76   | 16.83   | 51.59    | 74.00    | -22.41 | peak   |
| 6   | 16449.000 | 31.77   | 20.04   | 51.81    | 74.00    | -22.19 | peak   |

- 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.



#### UNII-2A BAND

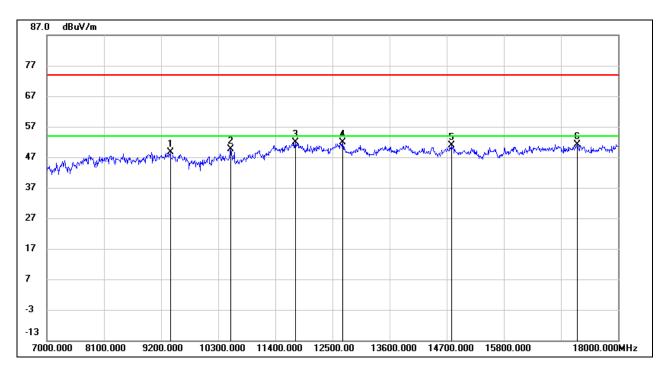
# HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 8430.000  | 38.94   | 9.78    | 48.72    | 74.00    | -25.28 | peak   |
| 2   | 10531.000 | 36.92   | 13.21   | 50.13    | 74.00    | -23.87 | peak   |
| 3   | 11686.000 | 35.63   | 16.19   | 51.82    | 74.00    | -22.18 | peak   |
| 4   | 12654.000 | 35.97   | 16.81   | 52.78    | 74.00    | -21.22 | peak   |
| 5   | 14810.000 | 33.76   | 17.82   | 51.58    | 74.00    | -22.42 | peak   |
| 6   | 17967.000 | 27.64   | 24.00   | 51.64    | 74.00    | -22.36 | peak   |

- 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.



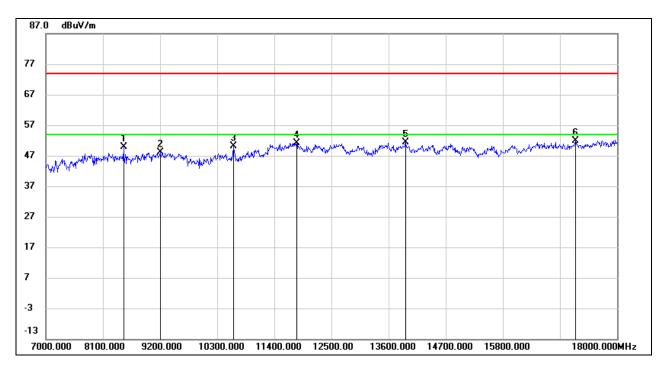


| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 9376.000  | 37.29   | 11.34   | 48.63    | 74.00    | -25.37 | peak   |
| 2   | 10542.000 | 36.35   | 13.25   | 49.60    | 74.00    | -24.40 | peak   |
| 3   | 11785.000 | 35.14   | 16.63   | 51.77    | 74.00    | -22.23 | peak   |
| 4   | 12698.000 | 35.08   | 16.81   | 51.89    | 74.00    | -22.11 | peak   |
| 5   | 14788.000 | 33.16   | 17.80   | 50.96    | 74.00    | -23.04 | peak   |
| 6   | 17208.000 | 28.77   | 22.45   | 51.22    | 74.00    | -22.78 | peak   |

- 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.



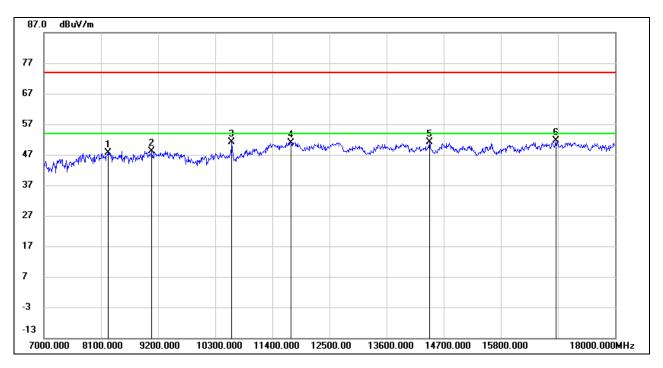
# HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)



| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 8496.000  | 40.27   | 9.72    | 49.99    | 74.00    | -24.01 | peak   |
| 2   | 9200.000  | 37.50   | 10.57   | 48.07    | 74.00    | -25.93 | peak   |
| 3   | 10619.000 | 36.59   | 13.50   | 50.09    | 74.00    | -23.91 | peak   |
| 4   | 11829.000 | 34.40   | 16.67   | 51.07    | 74.00    | -22.93 | peak   |
| 5   | 13930.000 | 33.31   | 17.97   | 51.28    | 74.00    | -22.72 | peak   |
| 6   | 17197.000 | 29.45   | 22.46   | 51.91    | 74.00    | -22.09 | peak   |

- 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.





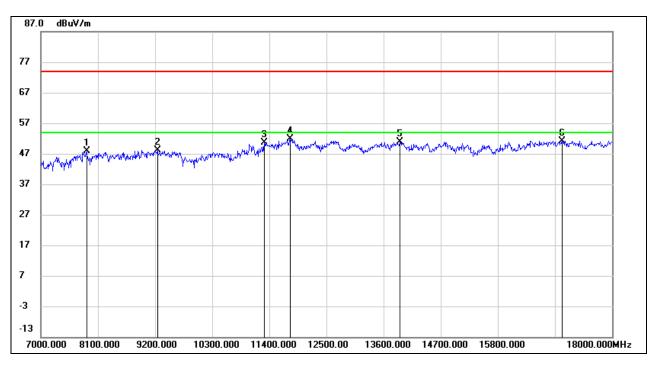
| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 8232.000  | 37.32   | 10.41   | 47.73    | 74.00    | -26.27 | peak   |
| 2   | 9079.000  | 36.96   | 11.26   | 48.22    | 74.00    | -25.78 | peak   |
| 3   | 10619.000 | 37.52   | 13.50   | 51.02    | 74.00    | -22.98 | peak   |
| 4   | 11752.000 | 34.51   | 16.48   | 50.99    | 74.00    | -23.01 | peak   |
| 5   | 14425.000 | 33.25   | 17.89   | 51.14    | 74.00    | -22.86 | peak   |
| 6   | 16856.000 | 30.41   | 21.10   | 51.51    | 74.00    | -22.49 | peak   |

- 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.



## **UNII-2C BAND**

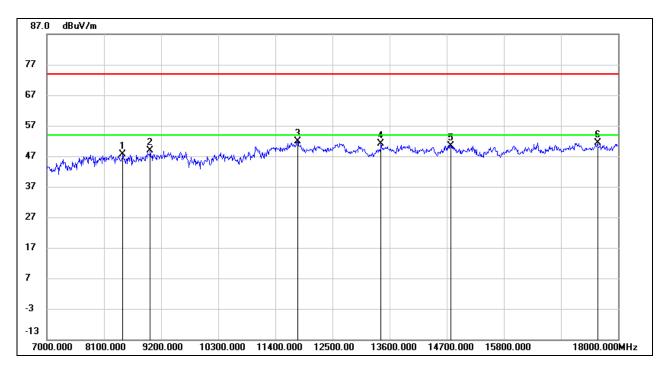
# HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 7880.000  | 38.51   | 9.26    | 47.77    | 74.00    | -26.23 | peak   |
| 2   | 9244.000  | 37.39   | 10.76   | 48.15    | 74.00    | -25.85 | peak   |
| 3   | 11301.000 | 35.58   | 15.17   | 50.75    | 74.00    | -23.25 | peak   |
| 4   | 11807.000 | 35.10   | 16.70   | 51.80    | 74.00    | -22.20 | peak   |
| 5   | 13908.000 | 32.96   | 17.99   | 50.95    | 74.00    | -23.05 | peak   |
| 6   | 17032.000 | 29.70   | 21.55   | 51.25    | 74.00    | -22.75 | peak   |

- 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.





| No. | Frequency | Reading | Correct | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|---------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | (dB/m)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 8463.000  | 37.98   | 9.75    | 47.73    | 74.00    | -26.27 | peak   |
| 2   | 8991.000  | 37.18   | 11.63   | 48.81    | 74.00    | -25.19 | peak   |
| 3   | 11829.000 | 35.15   | 16.67   | 51.82    | 74.00    | -22.18 | peak   |
| 4   | 13435.000 | 33.69   | 17.43   | 51.12    | 74.00    | -22.88 | peak   |
| 5   | 14777.000 | 32.58   | 17.79   | 50.37    | 74.00    | -23.63 | peak   |
| 6   | 17604.000 | 28.69   | 22.59   | 51.28    | 74.00    | -22.72 | peak   |

- 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.