# TEST REPORT

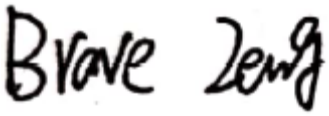
| | |
|---|---|
| Report No.: | BCTC2412844393-6E |
| Applicant: | MICRO COMPUTER (HK) TECH LIMITED |
| Product Name: | MINI PC |
| Test Model: | UM870 Plus |
| Tested Date: | 2024-12-05 to 2025-01-14 |
| Issued Date: | 2025-03-06 |

**Shenzhen BCTC Testing Co., Ltd.**

# FCC ID: 2A49R-UMP

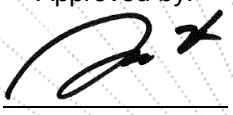
| | |
|---|---|
| Product Name: | MINI PC |
| Trademark: | N/A |
| Model/Type reference: | UM870 Plus<br>UM*** ******(“*” = "0-9", "A-Z", "-", “Space") |
| Prepared For: | MICRO COMPUTER (HK) TECH LIMITED |
| Address: | RM 18, 28/F, Shui On Centre, 6-8 Harbour Road, WaterfRont, Wan Chai, HK |
| Manufacturer: | MICRO COMPUTER (HK) TECH LIMITED |
| Address: | RM 18, 28/F, Shui On Centre, 6-8 Harbour Road, WaterfRont, Wan Chai, HK |
| Prepared By: | Shenzhen BCTC Testing Co., Ltd. |
| Address: | 1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China |
| Sample Received Date: | 2024-12-05 |
| Sample tested Date: | 2024-12-05 to 2025-01-14 |
| Report No.: | 2025-03-06 |
| Test Standards: | FCC Part15 15.407<br>ANSI C63.10-2013<br>KDB 789033 D02 v02r01<br>KDB 987594 D02 v02r01 |
| Test Results: | PASS |

Tested by:



Brave Zeng/ Project Handler

Approved by:



Zero Zhou/Reviewer

The test report is effective only with both signature and specialized stamp. This result(s) shown in this report refer only to the sample(s) tested. Without written approval of Shenzhen BCTC Testing Co., Ltd, this report can’t be reproduced except in full. The tested sample(s) and the sample information are provided by the client.

Table of Content

## 1. Version

| Report No. | Issue Date | Description | Approved |
|---|---|---|---|
| BCTC2412844393-6E | 2025-03-06 | Original | Valid |
| | | | |

## 2. Test Summary

The Product has been tested according to the following specifications:

| No. | Test Parameter | Clause No. | Results |
|---|---|---|---|
| 1 | Spurious Radiated Emissions | 15.209(a), 15.407 (b) | PASS |
| 2 | Conducted Emission | 15.207 | PASS |
| 3 | 26 dB and 99% Emission Bandwidth | 15.407 (a) | PASS |
| 4 | Maximum Conducted Output Power | 15.407 (a) | PASS |
| 5 | In-band Emission | 15.407(b) | PASS |
| 6 | Power Spectral Density | 15.407 (a) | PASS |
| 7 | Spurious Emissions at Antenna Terminals | 15.407(b) | PASS |
| 8 | Frequency Stability | 15.407(g) | PASS |
| 9 | Contention Based Protocol | 15.407(d) | PASS |
| 10 | Antenna Requirement | 15.203 | PASS |
| NOTE: N/A (Not Applicable) | | | |

## 3. Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

| No. | Item | Uncertainty |
|---|---|---|
| 1 | 3m chamber Radiated spurious emission(9kHz-30MHz) | U=3.7dB |
| 2 | 3m chamber Radiated spurious emission(30MHz-1GHz) | U=4.3dB |
| 3 | 3m chamber Radiated spurious emission(1GHz-18GHz) | U=4.5dB |
| 4 | 3m chamber Radiated spurious emission(18GHz-40GHz) | U=3.34dB |
| 5 | Conducted Emission(150kHz-30MHz) | U=3.20dB |
| 6 | Conducted Adjacent channel power | U=1.38dB |
| 7 | Conducted output power uncertainty Above 1G | U=1.576dB |
| 8 | Conducted output power uncertainty below 1G | U=1.28dB |
| 9 | humidity uncertainty | U=5.3% |
| 10 | Temperature uncertainty | U=0.59℃ |

# 4. Product Information and Test Setup

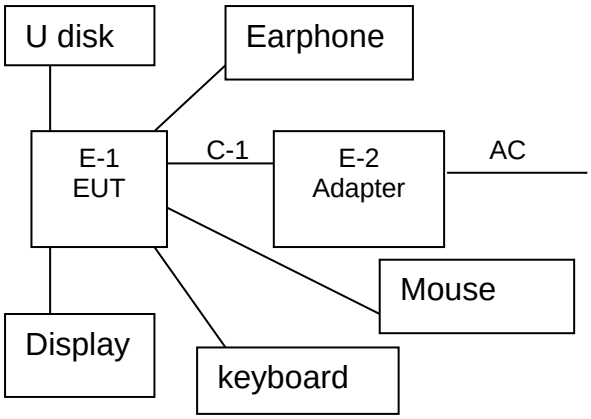
## 4.1 Product Information

| | |
|---|---|
| Model/Type reference: | UM870 Plus<br>UM*** ******(“*” = "0-9", "A-Z", "-", “Space") |
| Model differences: | All models are the same circuit and RF modules, the differences between models are only due to the model name and different sales regions, as well as the model of the CPU. |
| Hardware Version: | N/A |
| Software Version: | N/A |
| IEEE 802.11 WLAN Mode Supported | 802.11ax20: 20MHz<br>802.11ax40: 40MHz<br>802.11ax80: 80MHz<br>802.11ax160: 160MHz |
| Operation Frequency: | U-NII-5: 5955-6415MHz<br>U-NII-6: 6435-6515MHz<br>U-NII-7: 6535-6855MHz<br>U-NII-8: 6875-7115MHz |
| Type of Modulation: | 802.11ax: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM) |
| Transmit Power: | U-NII-5: 10.92 dBm<br>U-NII-6: 9.32 dBm<br>U-NII-7: 9.36 dBm<br>U-NII-8: 9.68 dBm |
| Antenna installation: | Internal antenna |
| Antenna Gain: | U-NII-5: 2.64 dBi<br>U-NII-6: 1.79 dBi<br>U-NII-7: 1.79 dBi<br>U-NII-8: 1.93 dBi<br>Remark:<br>☒ The antenna gain of the product comes from the antenna report provided by the customer, and the test data is affected by the customer information.<br>☐ The antenna gain of the product is provided by the customer, and the test data is affected by the customer information. |
| Ratings: | DC 19V from adapter |
| Adapter 1 Information: | Model No.: hyleton-120W-1906320<br>AC Input: 100-240V~50/60Hz, 2A Max<br>DC Output: DC 19.0V 6.32A 120.0W |
| Adapter 2 Information: | MODEL: DSA-120PFG-19 3 190632<br>INPUT: 100-240V~50/60Hz 2.0A<br>OUTPUT: +DC 19.0V 6.32A, 120.08W |

## 4.2 Test Setup Configuration

See test photographs attached in *EUT TEST SETUP PHOTOGRAPHS* for the actual connections between Product and support equipment.

Conducted Emission and Radiated Spurious Emission:




## 4.3 Support Equipment

| No. | Device Type | Brand | Model | Series No. | Note |
|---|---|---|---|---|---|
| E-1 | MINI PC | N/A | UM870 Plus | N/A | EUT |
| E-2 | U disk | SanDisk | 32G | --- | auxiliary |
| E-3 | Earphone | IHIP | SBGE1 | --- | auxiliary |
| E-4 | Display | Xiaomi | L43M7-ES | --- | auxiliary |
| E-5 | HDMI Cable | Belkin | HDMI 4k/8k | --- | auxiliary |
| E-6 | DP cable | Hwasung | 20276 | --- | auxiliary |
| E-7 | Display | ChangHong | 55DBK | --- | auxiliary |
| E-8 | keyboard | Logitech | 1641MG01DLZ8 | --- | auxiliary |
| E-9 | Mouse | Logitech | M-U0026 | --- | auxiliary |
| E-10 | Adapter | / | Hyleton-120W-1 906320 | --- | auxiliary |
| E-11 | Router | ASUS | GT-AXE11000 | --- | auxiliary |

***FCC ID: MSQ-RTAXJF00***

| Item | Shielded Type | Ferrite Core | Length | Note |
|---|---|---|---|---|
| C-1 | N/A | N/A | 0M | DC cable unshielded |

Notes:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

## 4.4 Channel List

**U-NII-5: 5955-6415MHz**

| 802.11ax20 Carrier Frequency Channel | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) |
| 1 | 5955 | 25 | 6075 | 49 | 6195 | 73 | 6315 |
| 5 | 5975 | 29 | 6095 | 53 | 6215 | 77 | 6335 |
| 9 | 5995 | 33 | 6115 | 57 | 6235 | 81 | 6355 |
| 13 | 6015 | 37 | 6135 | 61 | 6255 | 85 | 6375 |
| 17 | 6035 | 41 | 6155 | 65 | 6275 | 89 | 6395 |
| 21 | 6055 | 45 | 6175 | 69 | 6295 | 93 | 6415 |

| 802.11ax40 Carrier Frequency Channel | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) |
| 3 | 5965 | 27 | 6085 | 51 | 6205 | 75 | 6325 |
| 11 | 6005 | 35 | 6125 | 59 | 6245 | 83 | 6365 |
| 19 | 6045 | 43 | 6165 | 67 | 6285 | 91 | 6405 |

| 802.11ax80 Carrier Frequency Channel | | | | | |
|---|---|---|---|---|---|
| Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) |
| 7 | 5985 | 39 | 6145 | 71 | 6305 |
| 23 | 6065 | 55 | 6225 | 87 | 6385 |

| 802.11ax160 Carrier Frequency Channel | | | | | |
|---|---|---|---|---|---|
| Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) |
| 15 | 6025 | 47 | 6185 | 79 | 6345 |

**U-NII-6: 6435-6515MHz**

| 802.11ax20 Carrier Frequency Channel | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) |
| 97 | 6435 | 105 | 6475 | 113 | 6515 | | |
| 101 | 6455 | 109 | 6495 | | | | |

| 802.11ax40 Carrier Frequency Channel | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) |
| 99 | 6445 | 107 | 6485 | 115 | 6525(Straddle) | | |

| 802.11ax80 Carrier Frequency Channel | | | | | |
|---|---|---|---|---|---|
| Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) |
| 103 | 6465 | 119 | 6545(Straddle) | | |

| 802.11ax160 Carrier Frequency Channel | | | | | |
|---|---|---|---|---|---|
| Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) |
| 111 | 6505(Straddle) | | | | |

**U-NII-7: 6535-6855MHz**

| 802.11ax20 Carrier Frequency Channel | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) |
| 117 | 6535 | 137 | 6635 | 157 | 6735 | 177 | 6835 |
| 121 | 6555 | 141 | 6655 | 161 | 6755 | 181 | 6855 |
| 125 | 6575 | 145 | 6675 | 165 | 6775 | 185 | |
| 129 | 6595 | 149 | 6695 | 169 | 6795 | | |
| 133 | 6615 | 153 | 6715 | 173 | 6815 | | |

| 802.11ax40 Carrier Frequency Channel | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) |
| 123 | 6565 | 147 | 6685 | 171 | 6805 | | |
| 131 | 6605 | 155 | 6725 | 179 | 6845 | | |
| 139 | 6645 | 163 | 6765 | 187 | | | |

| 802.11ax80 Carrier Frequency Channel | | | | | |
|---|---|---|---|---|---|
| Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) |
| 135 | 6625 | 167 | 6785 | | |
| 151 | 6705 | 183 | | | |

| 802.11ax160 Carrier Frequency Channel | | | | | |
|---|---|---|---|---|---|
| Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) |
| 143 | 6665 | 175 | 6825(Straddle) | | |

**U-NII-8: 6875-7115MHz**

| 802.11ax20 Carrier Frequency Channel | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Channel** | **Frequency (MHz)** | **Channel** | **Frequency (MHz)** | **Channel** | **Frequency (MHz)** | **Channel** | **Frequency (MHz)** |
| 189 | 6895 | 201 | 6955 | 213 | 7015 | 225 | 7075 |
| 193 | 6915 | 205 | 6975 | 217 | 7035 | 229 | 7095 |
| 197 | 6935 | 209 | 6995 | 221 | 7055 | 233 | 7115 |

| 802.11ax40 Carrier Frequency Channel | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Channel** | **Frequency (MHz)** | **Channel** | **Frequency (MHz)** | **Channel** | **Frequency (MHz)** | **Channel** | **Frequency (MHz)** |
| 195 | 6925 | 211 | 7005 | 227 | 7085 | | |
| 203 | 6965 | 219 | 7045 | | | | |

| 802.11ax80 Carrier Frequency Channel | | | | | |
|---|---|---|---|---|---|
| **Channel** | **Frequency (MHz)** | **Channel** | **Frequency (MHz)** | **Channel** | **Frequency (MHz)** |
| 199 | 6945 | 215 | 7025 | | |

| 802.11ax160 Carrier Frequency Channel | | | | | |
|---|---|---|---|---|---|
| **Channel** | **Frequency (MHz)** | **Channel** | **Frequency (MHz)** | **Channel** | **Frequency (MHz)** |
| 207 | 6985 | | | | |

## 4.5 Test Mode

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

| Pretest Mode | Description |
|---|---|
| Mode 1 | 802.11ax20 CH1/ CH45/ CH 93<br>802.11ax20 CH97/ CH105/ CH113<br>802.11ax20 CH117/ CH149/ CH181<br>802.11ax20 CH189/ CH209/ CH233 |
| Mode 2 | 802.11ax40 CH3/ CH 43/ CH 91<br>802.11ax40 CH99/ CH 107/ CH115（Straddle）<br>802.11ax40 CH123/ CH 147/ CH 179<br>802.11ax40 CH195/ CH 203/ CH 227 |
| Mode 3 | 802.11ax80 CH 7/CH 39/ CH 87<br>802.11ax80 CH 103/CH 119（Straddle）<br>802.11ax80 CH 135/CH 151/ CH 167<br>802.11ax80 CH 199/CH 215 |
| Mode 4 | 802.11ax160 CH 15/CH 47/ CH 79<br>802.11ax160 CH 111<br>802.11ax160 CH 143<br>802.11ax160 CH 207 |
| Mode 5 | Transmitting (Conducted emission & Radiated emission) |

## 4.6 Test Environment

1. Normal Test Conditions:

| | |
|---|---|
| Humidity(%): | 54 |
| Atmospheric Pressure(kPa): | 101 |
| Temperature(℃): | 26 |
| Test Voltage(AC): | 120V |

2.Extreme Test Conditions:
For tests at extreme voltages, measurements shall be made over the extremes of the power source voltage range as declared by the manufacturer.

| Test Conditions | LV | NV | HV |
|---|---|---|---|
| Test Voltage (AC) | 108 | 120 | 132 |

## 4.7 Table Of Parameters Of Text Software Setting

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters

| 5955MHz-7115MHz 1T1R (Antenna 1) | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Test Software Version** | **QRCT** | | | | | | |
| Frequency (MHz) | 5955 | 6175 | 6415 | 6435 | 6475 | 6515 | 6535 |
| 802.11ax20 Mode | 8 | 8 | 7 | 7 | 7 | 7 | 7 |
| Frequency (MHz) | 6695 | 6855 | 6875 | 6895 | 6695 | 7115 | |
| 802.11ax20 Mode | 8 | 7 | 7 | 7 | 8 | 8 | |
| Frequency (MHz) | 5965 | 6165 | 6405 | 6445 | 6485 | 6525 | 6565 |
| 802.11ax40 Mode | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| Frequency (MHz) | 6685 | 6845 | 6885 | 6925 | 6965 | 7085 | |
| 802.11ax40 Mode | 8 | 7 | 8 | 8 | 8 | 8 | |
| Frequency (MHz) | 5985 | 6145 | 6385 | 6465 | 6545 | 6625 | 6705 |
| 802.11ax80 Mode | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Frequency (MHz) | 6785 | 6865 | 6945 | 7025 | | | |
| 802.11ax80 Mode | 10 | 10 | 10 | 10 | | | |
| Frequency (MHz) | 6025 | 6185 | 6345 | 6505 | 6665 | 6825 | 6985 |
| 802.11ax160 Mode | 12 | 12 | 12 | 12 | 12 | 10 | 12 |

# 5. Test Facility And Test Instrument Used

## 5.1 Test Facility

All measurement facilities used to collect the measurement data are located at
Shenzhen BCTC Testing Co., Ltd.
Address:1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng, Fuhai Subdi strict, Bao'an District, Shenzhen, Guangdong, China.
The site and apparatus are constructed in conformance with the requirements of ANSI C63.4 and CISPR 16-1-1 other equivalent standards.

## 5.2 Test Instrument Used

| Conducted Emissions Test | | | | | |
|---|---|---|---|---|---|
| **Equipment** | **Manufacturer** | **Model#** | **Serial#** | **Last Cal.** | **Next Cal.** |
| Receiver | R&S | ESR3 | 102075 | May 16, 2024 | May 15, 2025 |
| LISN | R&S | ENV216 | 101375 | May 16, 2024 | May 15, 2025 |
| Software | Frad | EZ-EMC | EMC-CON 3A1 | \ | \ |
| Pulse limiter | Schwarzbeck | VTSD9561-F | 01323 | May 16, 2024 | May 15, 2025 |

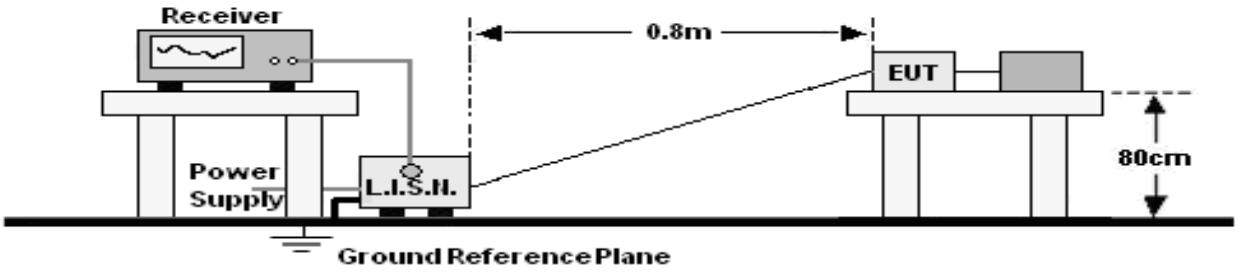
| RF Conducted Test | | | | | |
|---|---|---|---|---|---|
| **Equipment** | **Manufacturer** | **Model#** | **Serial#** | **Last Cal.** | **Next Cal.** |
| Power meter | Keysight | E4419 | \ | May 16, 2024 | May 15, 2025 |
| Power Sensor (AV) | Keysight | E9300A | \ | May 16, 2024 | May 15, 2025 |
| Signal Analyzer20kHz-26.5GHz | Keysight | N9020A | MY49100060 | May 16, 2024 | May 15, 2025 |
| Spectrum Analyzer9kHz-40GHz | R&S | FSP40 | 100363 | May 16, 2024 | May 15, 2025 |
| Radio frequency control box | MAIWEI | MW100-RFCB | \ | \ | \ |
| Software | MAIWEI | MTS 8310 | \ | \ | \ |
| Router | ASUS | GT-AXE11000 | / | / | / |
| Signal Generator | Keysight | N5182B | MY56200519 | May 16, 2024 | May 15, 2025 |
| Signal Generator | Keysight | 83711B | US37100131 | May 16, 2024 | May 15, 2025 |

FCC ID: MSQ-RTAXJF00

| Radiated Emissions Test (966 Chamber02) | | | | | |
|---|---|---|---|---|---|
| **Equipment** | **Manufacturer** | **Model#** | **Serial#** | **Last Cal.** | **Next Cal.** |
| 966 chamber | SKET | 966 Room | 966 | Oct. 31. 2024 | Oct. 30. 2027 |
| Receiver | R&S | ESR3 | 102075 | May 16, 2024 | May 15, 2025 |
| Receiver | R&S | ESRI7 | 100010 | Oct. 31. 2024 | Oct. 30. 2025 |
| Amplifier | SKET | LNPA-30M01G-30 | SK2021082004 | Oct. 31. 2024 | Oct. 30. 2025 |
| TRILOG Broadband Antenna | Schwarzbeck | VULB9168 | 1323 | May 21, 2024 | May 20, 2025 |
| Loop Antenna(9KHz-30MHz) | Schwarzbeck | FMZB1519B | 00014 | May 21, 2024 | May 20, 2025 |
| Amplifier | SKET | LAPA_01G18G-45dB | SK2021040901 | May 16, 2024 | May 15, 2025 |
| Horn Antenna | Schwarzbeck | BBHA9120D | 1541 | May 21, 2024 | May 20, 2025 |
| Amplifier(18GHz-40GHz) | MITEQ | TTA1840-35-HG | 2034381 | May 16, 2024 | May 15, 2025 |
| Horn Antenna(18GHz-40GHz) | Schwarzbeck | BBHA9170 | 00822 | May 21, 2024 | May 20, 2025 |
| Spectrum Analyzer9kHz-40GHz | R&S | FSP40 | 100363 | May 16, 2024 | May 15, 2025 |
| Software | Frad | EZ-EMC | FA-03A2 RE | \ | \ |

# 6. Conducted Emissions

## 6.1 Block Diagram Of Test Setup




## 6.2 Limit

| Frequency (MHz) | Limit (dBuV) | |
|---|---|---|
| | Quas-peak | Average |
| 0.15 -0.5 | 66 - 56 * | 56 - 46 * |
| 0.50 -5.0 | 56.00 | 46.00 |
| 5.0 -30.0 | 60.00 | 50.00 |
| Notes:<br>1. *Decreasing linearly with logarithm of frequency.<br>2. The lower limit shall apply at the transition frequencies. | | |

## 6.3 Test Procedure

| Receiver Parameters | Setting |
|---|---|
| Attenuation | 10 dB |
| Start Frequency | 0.15 MHz |
| Stop Frequency | 30 MHz |
| IF Bandwidth | 9 kHz |

a. The Product was placed on a nonconductive table 0.8 m above the horizontal ground reference plane, and 0.4 m from the vertical ground reference plane, and connected to the main through Line Impedance Stability Network (L.I.S.N).
b. The RBW of the receiver was set at 9 kHz in 150 kHz ~ 30MHz with Peak and AVG detector in Max Hold mode. Run the receiver's pre-scan to record the maximum disturbance generated from Product in all power lines in the full band.
c. For each frequency whose maximum record was higher or close to limit, measure its QP and AVG values and record.

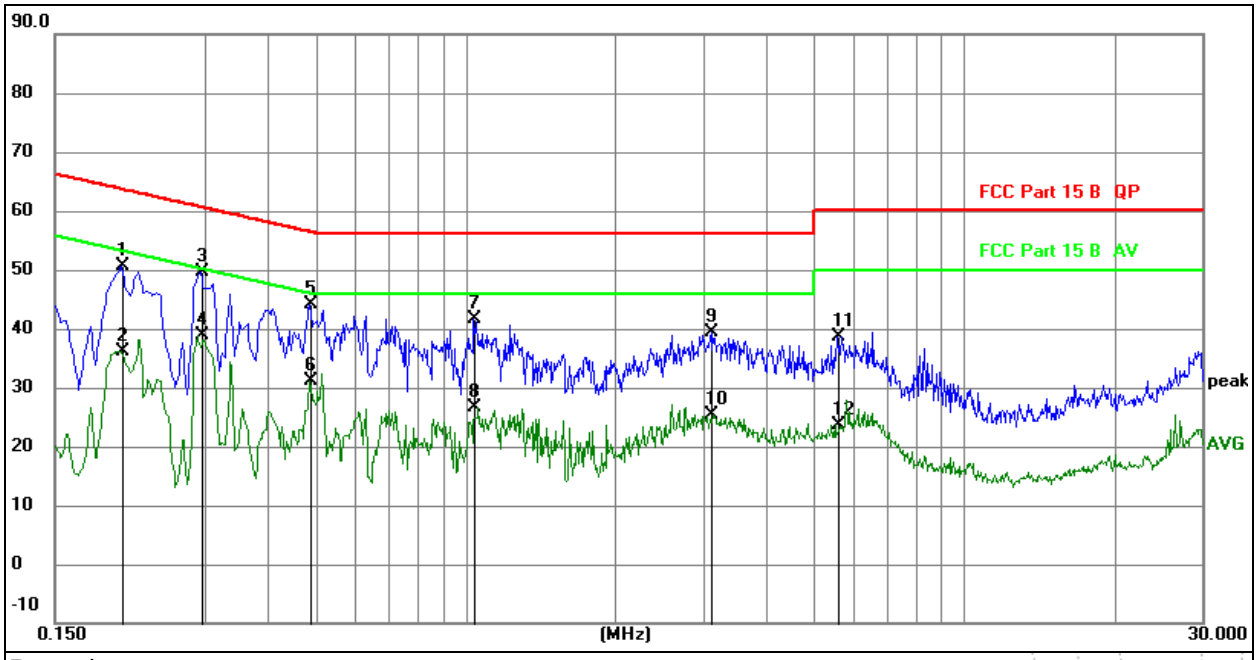
## 6.4 EUT Operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

## 6.5 Test Result

Adapter 1

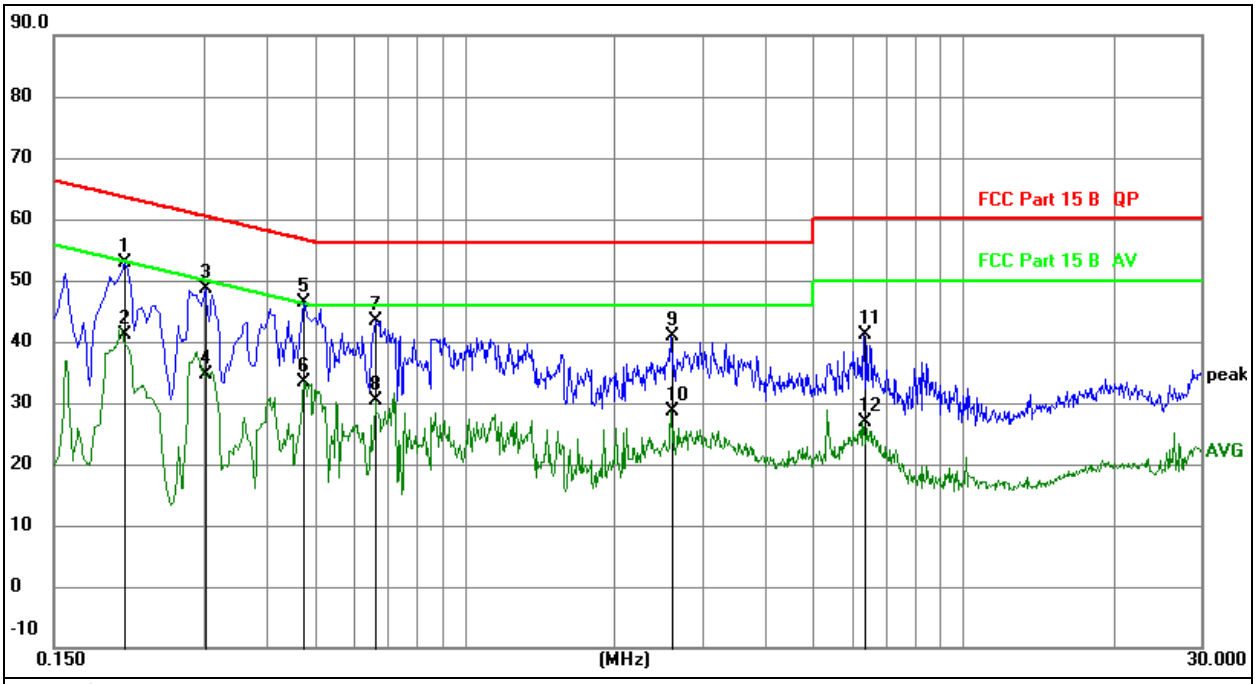
| | | | |
|---|---|---|---|
| Temperature: | 26 ℃ | Relative Humidity: | 54% |
| Pressure: | 101KPa | Phase : | L |
| Test Mode: | Mode 5 | Test Voltage : | AC120V/60Hz |




Remark:
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. Measurement=Reading Level+ Correct Factor
4. Over=Measurement-Limit

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | |
|---|---|---|---|---|---|---|---|---|
| | | MHz | | dB | dBuV | dBuV | dB | Detector |
| 1 | | 0.2040 | 30.56 | 20.07 | 50.63 | 63.45 | -12.82 | QP |
| 2 | | 0.2040 | 16.11 | 20.07 | 36.18 | 53.45 | -17.27 | AVG |
| 3 | * | 0.2940 | 29.60 | 20.07 | 49.67 | 60.41 | -10.74 | QP |
| 4 | | 0.2940 | 18.73 | 20.07 | 38.80 | 50.41 | -11.61 | AVG |
| 5 | | 0.4875 | 23.97 | 20.08 | 44.05 | 56.21 | -12.16 | QP |
| 6 | | 0.4875 | 10.99 | 20.08 | 31.07 | 46.21 | -15.14 | AVG |
| 7 | | 1.0410 | 21.60 | 20.09 | 41.69 | 56.00 | -14.31 | QP |
| 8 | | 1.0410 | 6.50 | 20.09 | 26.59 | 46.00 | -19.41 | AVG |
| 9 | | 3.1199 | 19.36 | 20.12 | 39.48 | 56.00 | -16.52 | QP |
| 10 | | 3.1199 | 5.23 | 20.12 | 25.35 | 46.00 | -20.65 | AVG |
| 11 | | 5.5905 | 18.59 | 20.15 | 38.74 | 60.00 | -21.26 | QP |
| 12 | | 5.5905 | 3.49 | 20.15 | 23.64 | 50.00 | -26.36 | AVG |

| Temperature: | 26 ℃ | Relative Humidity: | 54% |
|---|---|---|---|
| Pressure: | 101KPa | Phase : | N |
| Test Mode: | Mode 5 | Test Voltage : | AC120V/60Hz |

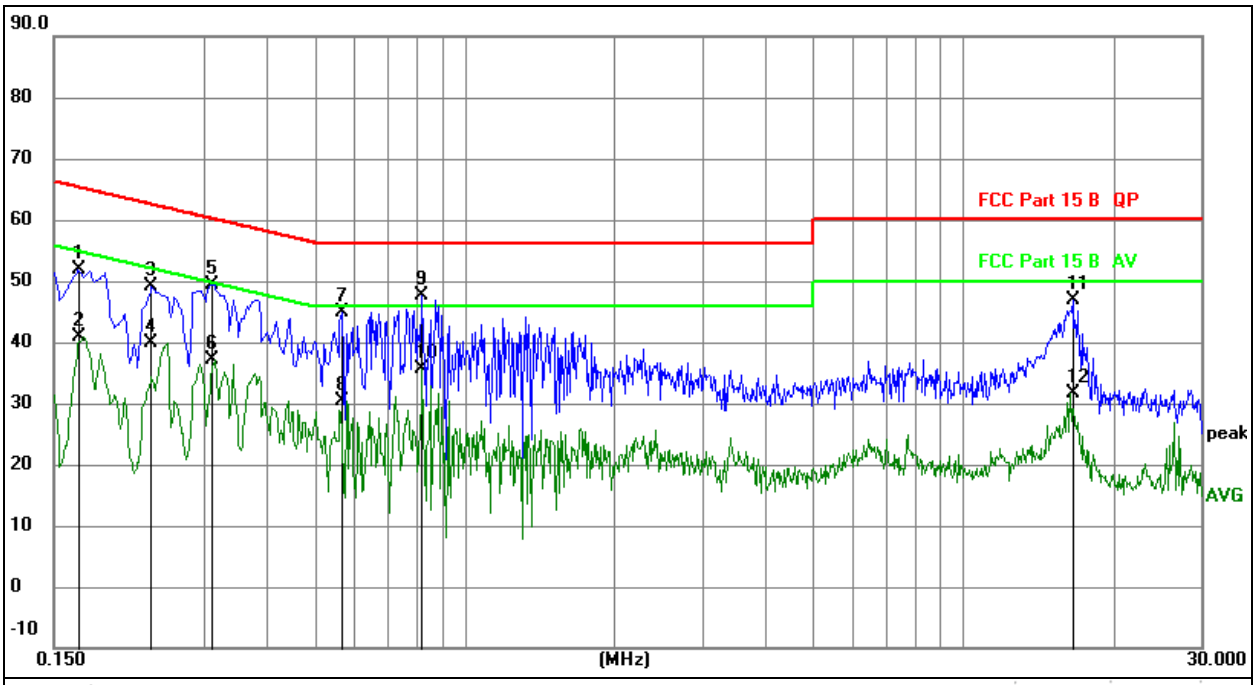



Remark:
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. Measurement=Reading Level+ Correct Factor
4. Over=Measurement-Limit

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | |
|---|---|---|---|---|---|---|---|---|
| | | MHz | | dB | dBuV | dBuV | dB | Detector |
| 1 | | 0.2083 | 32.88 | 20.07 | 52.95 | 63.27 | -10.32 | QP |
| 2 | | 0.2083 | 20.98 | 20.07 | 41.05 | 53.27 | -12.22 | AVG |
| 3 | | 0.3019 | 28.51 | 20.07 | 48.58 | 60.19 | -11.61 | QP |
| 4 | | 0.3019 | 14.64 | 20.07 | 34.71 | 50.19 | -15.48 | AVG |
| 5 | * | 0.4761 | 26.39 | 20.08 | 46.47 | 56.41 | -9.94 | QP |
| 6 | | 0.4761 | 13.25 | 20.08 | 33.33 | 46.41 | -13.08 | AVG |
| 7 | | 0.6613 | 23.34 | 20.09 | 43.43 | 56.00 | -12.57 | QP |
| 8 | | 0.6613 | 10.20 | 20.09 | 30.29 | 46.00 | -15.71 | AVG |
| 9 | | 2.5945 | 20.71 | 20.11 | 40.82 | 56.00 | -15.18 | QP |
| 10 | | 2.5945 | 8.42 | 20.11 | 28.53 | 46.00 | -17.47 | AVG |
| 11 | | 6.3186 | 20.95 | 20.16 | 41.11 | 60.00 | -18.89 | QP |
| 12 | | 6.3186 | 6.82 | 20.16 | 26.98 | 50.00 | -23.02 | AVG |

Adapter 2

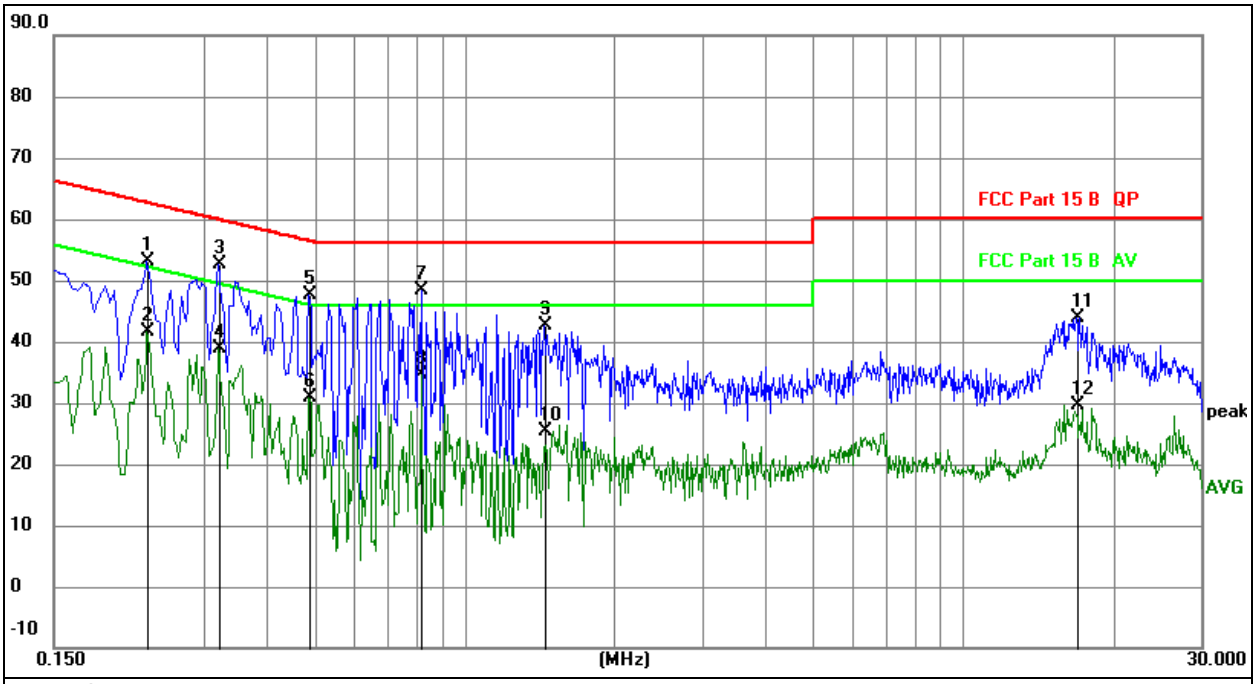
| | | | |
|---|---|---|---|
| Temperature: | 26 ℃ | Relative Humidity: | 54% |
| Pressure: | 101KPa | Phase : | L |
| Test Mode: | Mode 5 | Test Voltage : | AC120V/60Hz |




Remark:
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. Measurement=Reading Level+ Correct Factor
4. Over=Measurement-Limit

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | |
|---|---|---|---|---|---|---|---|---|
| | | MHz | | dB | dBuV | dBuV | dB | Detector |
| 1 | | 0.1677 | 31.72 | 20.07 | 51.79 | 65.07 | -13.28 | QP |
| 2 | | 0.1677 | 20.78 | 20.07 | 40.85 | 55.07 | -14.22 | AVG |
| 3 | | 0.2353 | 28.97 | 20.07 | 49.04 | 62.26 | -13.22 | QP |
| 4 | | 0.2353 | 19.81 | 20.07 | 39.88 | 52.26 | -12.38 | AVG |
| 5 | | 0.3116 | 29.42 | 20.07 | 49.49 | 59.93 | -10.44 | QP |
| 6 | | 0.3116 | 17.16 | 20.07 | 37.23 | 49.93 | -12.70 | AVG |
| 7 | | 0.5670 | 24.81 | 20.08 | 44.89 | 56.00 | -11.11 | QP |
| 8 | | 0.5670 | 10.39 | 20.08 | 30.47 | 46.00 | -15.53 | AVG |
| 9 | * | 0.8217 | 27.58 | 20.09 | 47.67 | 56.00 | -8.33 | QP |
| 10 | | 0.8217 | 15.64 | 20.09 | 35.73 | 46.00 | -10.27 | AVG |
| 11 | | 16.5732 | 26.54 | 20.32 | 46.86 | 60.00 | -13.14 | QP |
| 12 | | 16.5732 | 11.36 | 20.32 | 31.68 | 50.00 | -18.32 | AVG |

| Temperature: | 26 ℃ | Relative Humidity: | 54% |
|---|---|---|---|
| Pressure: | 101KPa | Phase : | N |
| Test Mode: | Mode 5 | Test Voltage : | AC120V/60Hz |




Remark:
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. Measurement=Reading Level+ Correct Factor
4. Over=Measurement-Limit

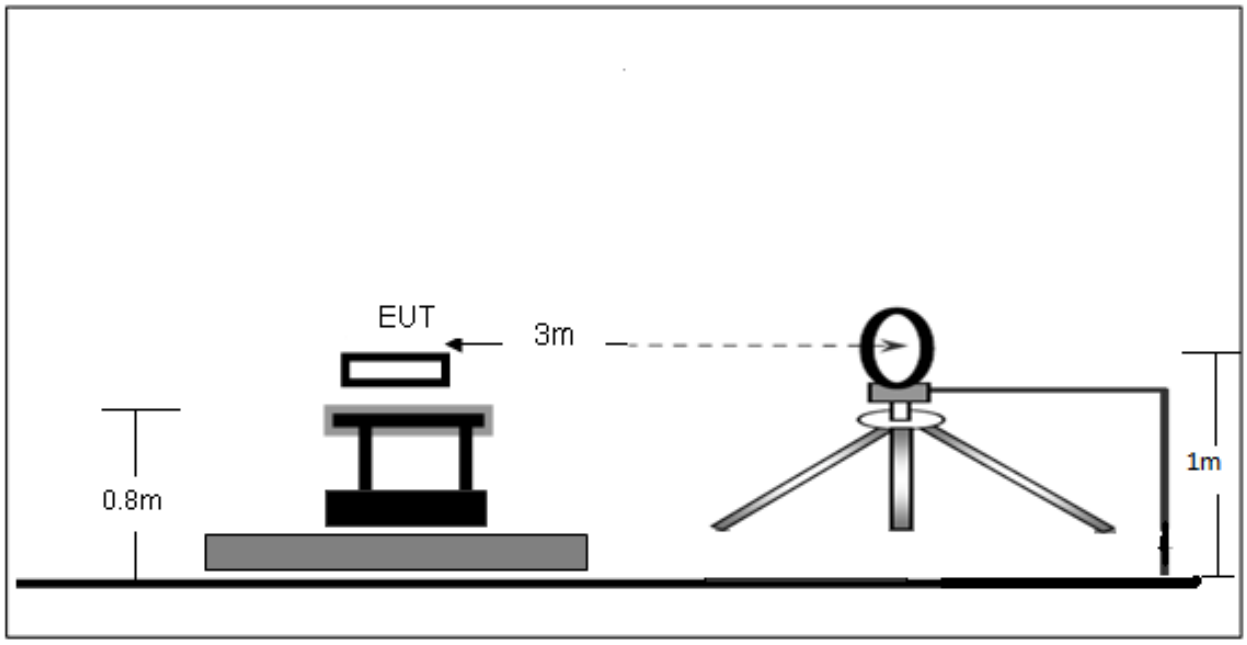
| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | |
|---|---|---|---|---|---|---|---|---|
| | | MHz | | dB | dBuV | dBuV | dB | Detector |
| 1 | | 0.2310 | 33.13 | 20.07 | 53.20 | 62.41 | -9.21 | QP |
| 2 | | 0.2310 | 21.65 | 20.07 | 41.72 | 52.41 | -10.69 | AVG |
| 3 | * | 0.3209 | 32.52 | 20.07 | 52.59 | 59.68 | -7.09 | QP |
| 4 | | 0.3209 | 18.87 | 20.07 | 38.94 | 49.68 | -10.74 | AVG |
| 5 | | 0.4875 | 27.62 | 20.08 | 47.70 | 56.21 | -8.51 | QP |
| 6 | | 0.4875 | 10.83 | 20.08 | 30.91 | 46.21 | -15.30 | AVG |
| 7 | | 0.8204 | 28.25 | 20.09 | 48.34 | 56.00 | -7.66 | QP |
| 8 | | 0.8204 | 14.48 | 20.09 | 34.57 | 46.00 | -11.43 | AVG |
| 9 | | 1.4459 | 22.60 | 20.09 | 42.69 | 56.00 | -13.31 | QP |
| 10 | | 1.4459 | 5.20 | 20.09 | 25.29 | 46.00 | -20.71 | AVG |
| 11 | | 16.8405 | 23.68 | 20.32 | 44.00 | 60.00 | -16.00 | QP |
| 12 | | 16.8405 | 9.28 | 20.32 | 29.60 | 50.00 | -20.40 | AVG |

Note: Two different CPU models, R7-8745H and R5-7640HS, were tested, with the worst mode being the R7-8745H model CPU.

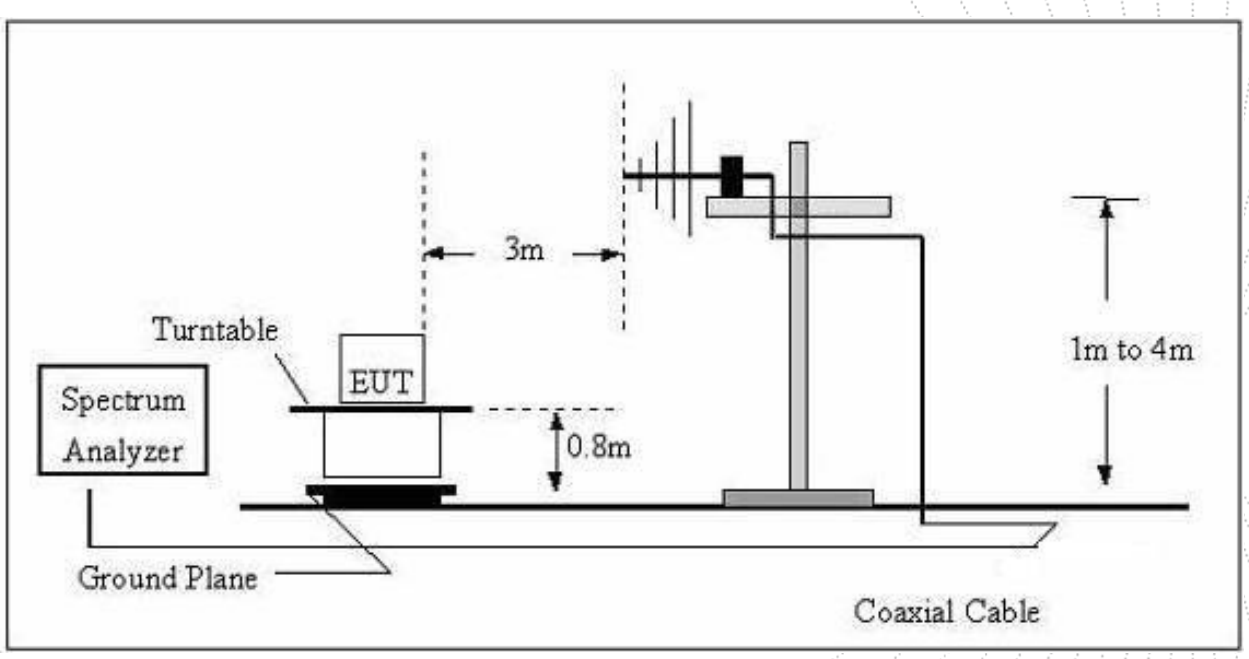
# 7. Radiated Emissions

## 7.1 Block Diagram Of Test Setup

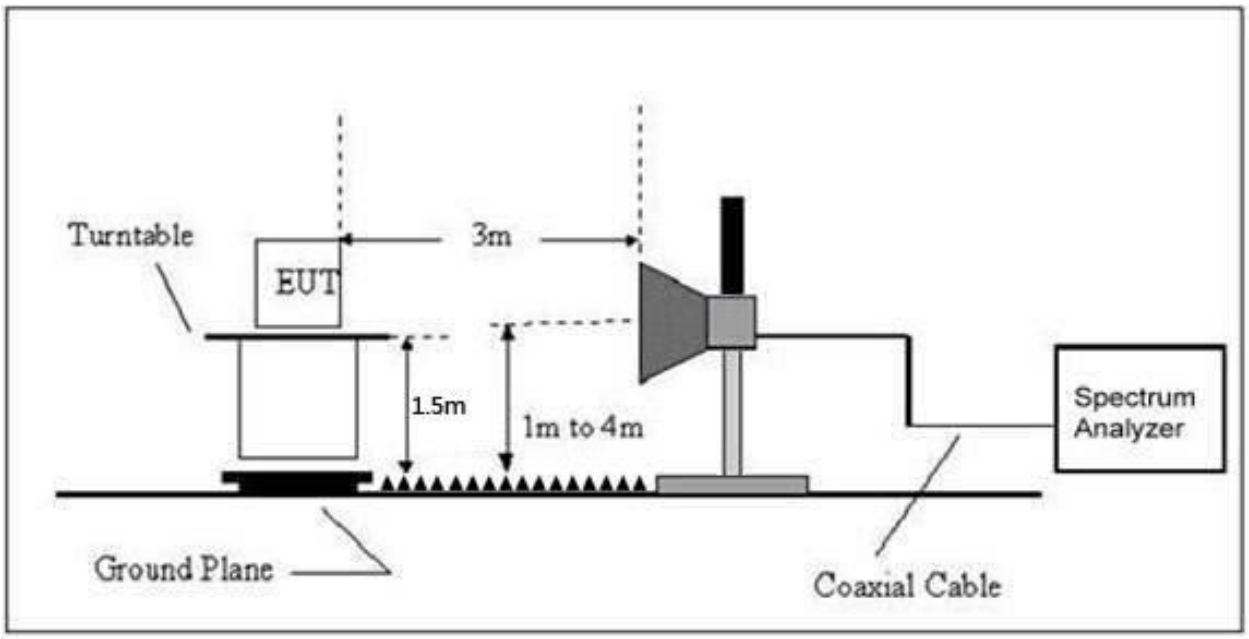
(A)Radiated Emission Test-Up Frequency Below 30MHz




(B)Radiated Emission Test-Up Frequency 30MHz~1GHz



(C)Radiated Emission Test-Up Frequency Above 1GHz




## 7.2 Limit

FCC Part15 C Section 15.209 and 15.205

(a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

| MHz | MHz | MHz | GHz |
|---|---|---|---|
| 0.090-0.110 | 16.42-16.423 | 399.9-410 | 4.5-5.15 |
| [1]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 | ([2]) |
| 13.36-13.41 | | | |

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

| Frequency | Field Strength | Distance | Field Strength Limit at 3m Distance | |
|---|---|---|---|---|
| (MHz) | uV/m | (m) | uV/m | dBuV/m |
| 0.009 ~ 0.490 | 2400/F(kHz) | 300 | 10000 * 2400/F(kHz) | $20\log^{(2400/F(kHz))}$ + 80 |
| 0.490 ~ 1.705 | 24000/F(kHz) | 30 | 100 * 24000/F(kHz) | $20\log^{(24000/F(kHz))}$ + 40 |
| 1.705 ~ 30 | 30 | 30 | 100 * 30 | $20\log^{(30)}$ + 40 |
| 30 ~ 88 | 100 | 3 | 100 | $20\log^{(100)}$ |
| 88 ~ 216 | 150 | 3 | 150 | $20\log^{(150)}$ |
| 216 ~ 960 | 200 | 3 | 200 | $20\log^{(200)}$ |
| Above 960 | 500 | 3 | 500 | $20\log^{(500)}$ |

For transmitters operating within the 5.925–7.125 GHz band: Any emissions outside of the 5.925–7.125 GHz band must not exceed an e.i.r.p. of −27 dBm/MHz.

According 987594 D02 U-NII 6GHz EMC Measurement section G:
Use guidance in KDB 789033 for measurements below 1000 MHz and above 1000 MHz. Unwanted emissions outside of restricted bands are measured with a RMS detector. In addition, 15.35(b) applies where the peak emissions must be limited to no more than 20 dB above the average limit

Limits Of Radiated Emission Measurement (Above 1000MHz)

| Frequency (MHz) | Limit (dBuV/m) (at 3M) | |
|---|---|---|
| | Peak | Average |
| Above 1000 | 74 | 54 |

Notes:
(1)The limit for radiated test was performed according to FCC PART 15C.
(2)The tighter limit applies at the band edges.
(3) Emission level (dBuV/m)=20log Emission level (uV/m).

## 7.3 Test Procedure

The test site semi-anechoic chamber has met the requirement of NSA tolerance 4 dB according to the standards: ANSI C63.10-2013. The test distance is 3m.The setup is according to the requirements in Section 13.1.4.1 of ANSI C63.10-2013 and CAN/CSA-CEI/IEC CISPR 22.
This test is required for any spurious emission that falls in a Restricted Band, as defined in Section 15.205. It must be performed with the highest gain of each type of antenna proposed for use with the EUT.
Use the following spectrum analyzer settings:

| Spectrum Parameter | Setting |
|---|---|
| Attenuation | Auto |
| Start Frequency | 1000 MHz |
| Stop Frequency | 10th carrier harmonic |
| RB / VB (emission in restricted band) | 1 MHz / 1 MHz for Peak, 1 MHz / 10Hz for Average |

| Receiver Parameter | Setting |
|---|---|
| Attenuation | Auto |
| Start ~ Stop Frequency | 9kHz~150kHz / RB 200Hz for QP |
| Start ~ Stop Frequency | 150kHz~30MHz / RB 9kHz for QP |
| Start ~ Stop Frequency | 30MHz~1000MHz / RB 120kHz for QP |

a. The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
b. The EUT was placed on the top of a rotating table 0.8 m for below 1GHz and 1.5m for above 1GHz the ground at a 3 meter. The table was rotated 360 degrees to determine the position of the highest radiation.
c. The height of the equipment or of the substitution antenna shall be 0.8 m for below 1GHz and 1.5m for above 1GHz; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. 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.
e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

Both horizontal and vertical antenna polarities were tested
and performed pretest to three orthogonal axis. The worst case emissions were reported

During the radiated emission test, the Spectrum Analyzer was set with the following configurations:

| Frequency Band (MHz) | Function | Resolution bandwidth | Video Bandwidth |
|---|---|---|---|
| 30 to 1000 | QP | 120 kHz | 300 kHz |
| Above 1000 | Peak | 1 MHz | 1 MHz |
| | Average | 1 MHz | 10 Hz |

Note: for the frequency ranges below 30 MHz, a narrower RBW is used for these ranges but the measured value should add a RBW correction factor (RBWCF) where RBWCF [dB] =10*lg(100 [kHz]/narrower RBW [kHz]). , the narrower RBW is 1 kHz and RBWCF is 20 dB for the frequency 9 kHz to 150 kHz, and the narrower RBW is 10 kHz and RBWCF is 10 dB for the frequency 150 kHz to 30 MHz.

## 7.4 EUT Operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

## 7.5 Test Result

Below 30MHz

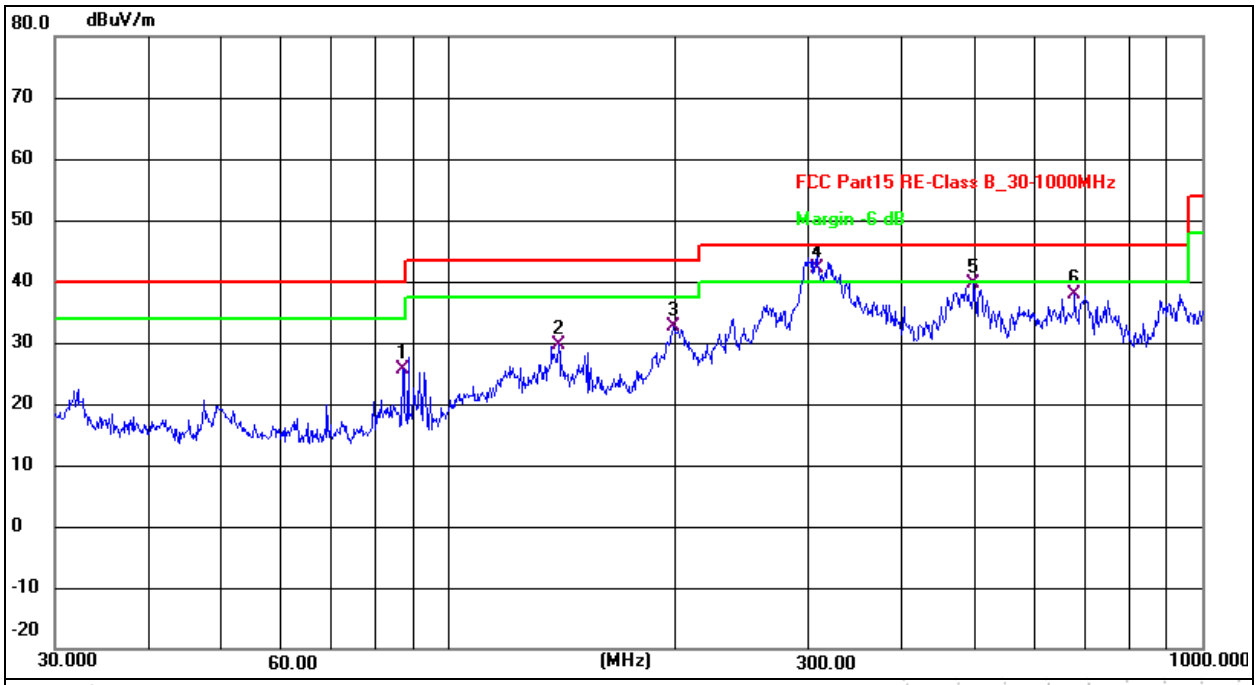
| | | | |
|---|---|---|---|
| Temperature: | 26℃ | Relative Humidity: | 24% |
| Pressure: | 101 kPa | Test Voltage : | AC 120V/60Hz |
| Test Mode: | Mode 5 | Polarization: | -- |

| Freq. | Reading | Limit | Margin | State |
|---|---|---|---|---|
| (MHz) | (dBuV/m) | (dBuV/m) | (dB) | P/F |
| -- | -- | -- | -- | PASS |
| -- | -- | -- | -- | PASS |

Note:
The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
Distance extrapolation factor =40 log (specific distance/test distance)(dB);
Limit line = specific limits(dBuv) + distance extrapolation factor.

Adapter 1
Between 30MHz – 1GHz

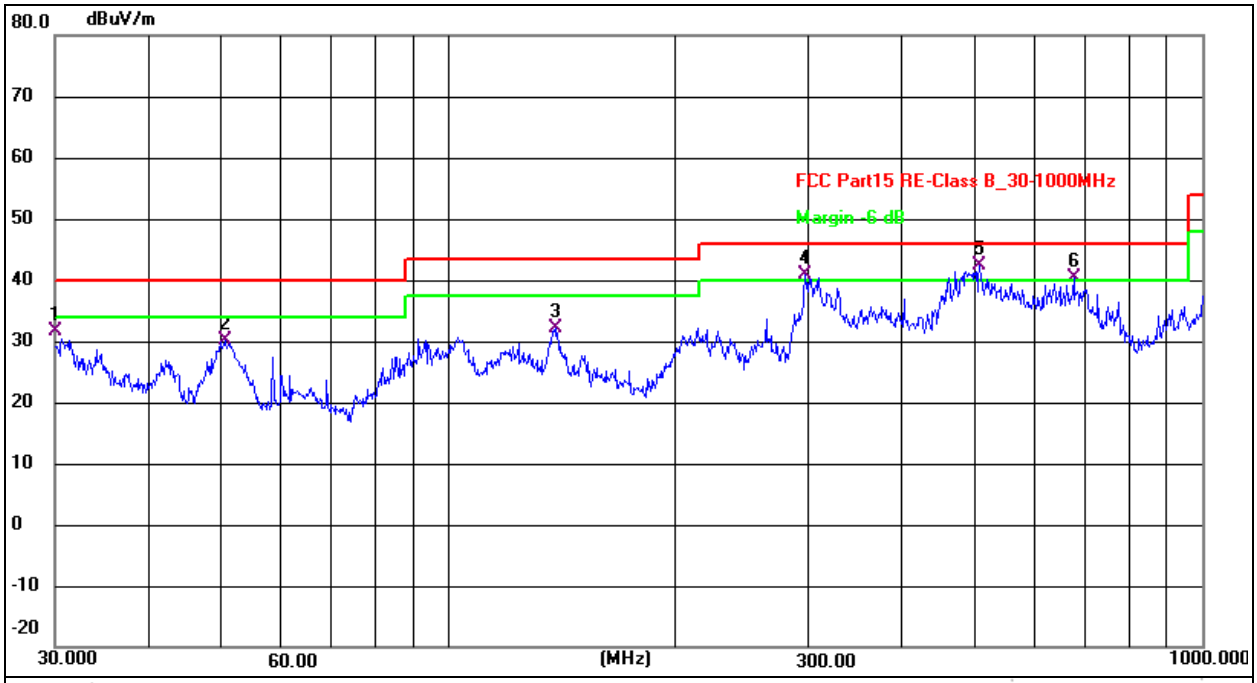
| | | | |
|---|---|---|---|
| Temperature: | 26 ℃ | Relative Humidity: | 54% |
| Pressure: | 101KPa | Phase : | Horizontal |
| Test Mode: | Mode 5 | Test Voltage: | AC120V/60Hz |




Remark:
1.Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. Measurement=Reading Level+ Correct Factor
3. Over=Measurement-Limit

| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector |
|---|---|---|---|---|---|---|---|
| 1 | 86.8067 | 41.61 | -15.90 | 25.71 | 40.00 | -14.29 | QP |
| 2 | 139.8508 | 41.47 | -11.77 | 29.70 | 43.50 | -13.80 | QP |
| 3 | 198.5879 | 47.05 | -14.50 | 32.55 | 43.50 | -10.95 | QP |
| 4 * | 307.8312 | 52.44 | -10.36 | 42.08 | 46.00 | -3.92 | QP |
| 5 | 497.6764 | 44.83 | -5.26 | 39.57 | 46.00 | -6.43 | QP |
| 6 | 677.5798 | 38.83 | -0.89 | 37.94 | 46.00 | -8.06 | QP |

| Temperature: | 26 ℃ | Relative Humidity: | 54% |
|---|---|---|---|
| Pressure: | 101KPa | Phase : | Vertical |
| Test Mode: | Mode 5 | Test Voltage: | AC120V/60Hz |

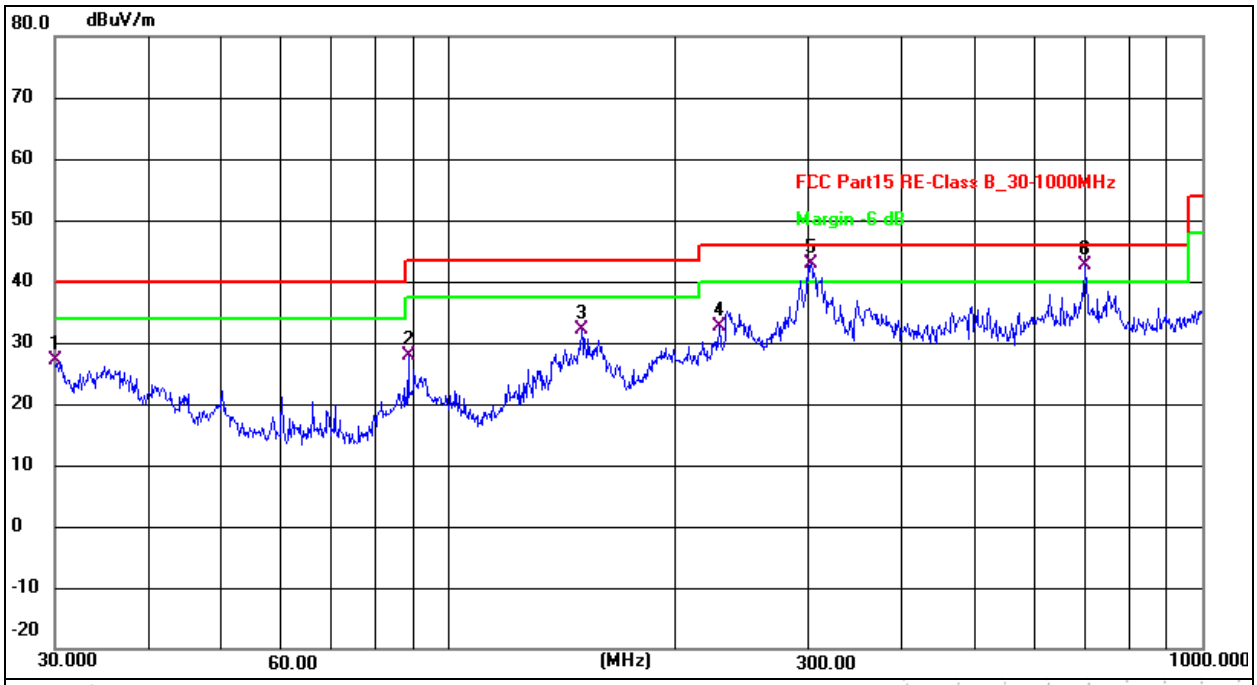



Remark:
1.Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. Measurement=Reading Level+ Correct Factor
3. Over=Measurement-Limit

| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector |
|---|---|---|---|---|---|---|---|
| 1 | 30.0000 | 43.79 | -12.20 | 31.59 | 40.00 | -8.41 | QP |
| 2 | 50.4089 | 43.80 | -13.68 | 30.12 | 40.00 | -9.88 | QP |
| 3 | 138.3873 | 44.02 | -11.90 | 32.12 | 43.50 | -11.38 | QP |
| 4 ! | 297.2241 | 51.50 | -10.71 | 40.79 | 46.00 | -5.21 | QP |
| 5 * | 506.4791 | 47.48 | -5.03 | 42.45 | 46.00 | -3.55 | QP |
| 6 ! | 675.2080 | 41.29 | -0.95 | 40.34 | 46.00 | -5.66 | QP |

Adapter 2
Between 30MHz – 1GHz

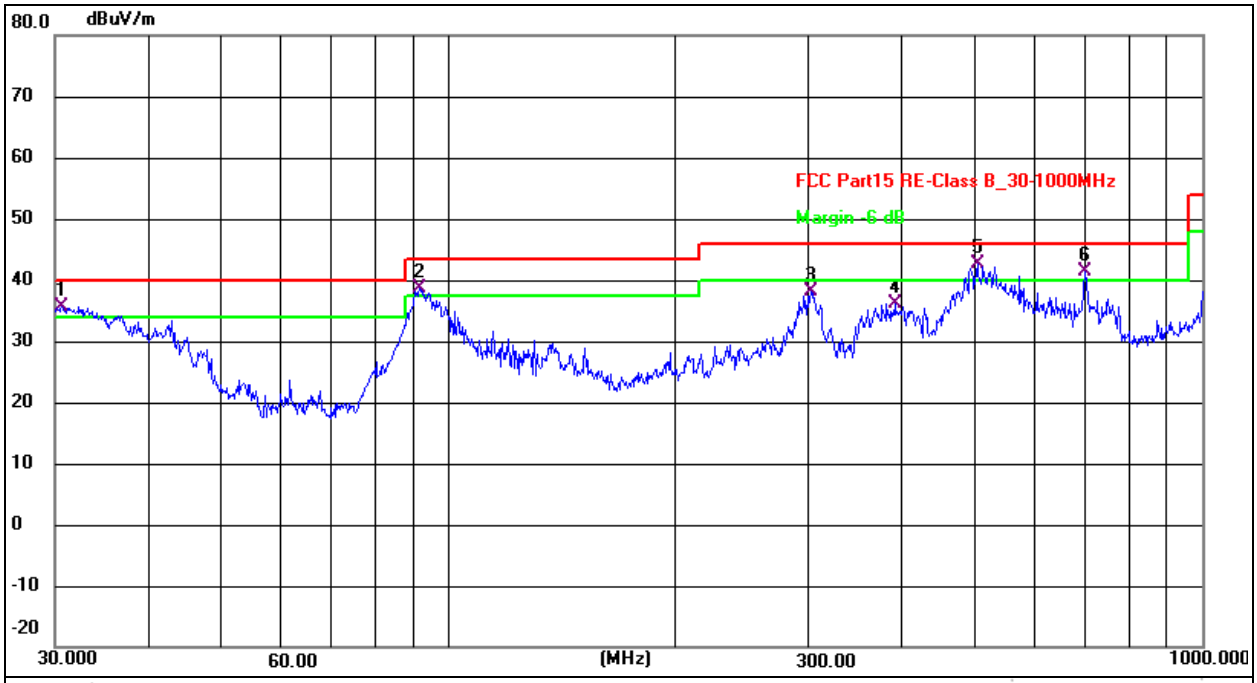
| | | | |
|---|---|---|---|
| Temperature: | 26 ℃ | Relative Humidity: | 54% |
| Pressure: | 101KPa | Phase : | Horizontal |
| Test Mode: | Mode 5 | Test Voltage: | AC120V/60Hz |




Remark:
1.Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. Measurement=Reading Level+ Correct Factor
3. Over=Measurement-Limit

| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector |
|---|---|---|---|---|---|---|---|
| 1 | 30.0000 | 39.39 | -12.20 | 27.19 | 40.00 | -12.81 | QP |
| 2 | 88.3421 | 43.73 | -15.85 | 27.88 | 43.50 | -15.62 | QP |
| 3 | 150.0108 | 43.06 | -10.90 | 32.16 | 43.50 | -11.34 | QP |
| 4 | 228.4904 | 46.10 | -13.46 | 32.64 | 46.00 | -13.36 | QP |
| 5 * | 302.4812 | 53.48 | -10.53 | 42.95 | 46.00 | -3.05 | QP |
| 6 ! | 699.3045 | 43.16 | -0.42 | 42.74 | 46.00 | -3.26 | QP |

| | | | |
|---|---|---|---|
| Temperature: | 26 ℃ | Relative Humidity: | 54% |
| Pressure: | 101KPa | Phase : | Vertical |
| Test Mode: | Mode 5 | Test Voltage: | AC120V/60Hz |




Remark:
1.Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. Measurement=Reading Level+ Correct Factor
3. Over=Measurement-Limit

| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector |
|---|---|---|---|---|---|---|---|
| 1 ! | 30.6377 | 47.88 | -12.25 | 35.63 | 40.00 | -4.37 | QP |
| 2 ! | 91.4949 | 54.35 | -15.71 | 38.64 | 43.50 | -4.86 | QP |
| 3 | 302.4812 | 48.76 | -10.53 | 38.23 | 46.00 | -7.77 | QP |
| 4 | 390.7226 | 44.06 | -7.88 | 36.18 | 46.00 | -9.82 | QP |
| 5 * | 502.9395 | 47.76 | -5.12 | 42.64 | 46.00 | -3.36 | QP |
| 6 ! | 699.3046 | 41.79 | -0.42 | 41.37 | 46.00 | -4.63 | QP |

Note: Two different CPU models, R7-8745H and R5-7640HS, were tested, with the worst mode being the R7-8745H model CPU.

Between 1GHz – 40GHz

**U-NII-5: 5955-6415MHz**

| Test Mode : | TX(U-NII-5: 5955-6415MHz) - 802.11ax20 |
|---|---|

| Polar | Frequency | Reading Level | Correct Factor | Measure-ment | Limits | Over | Detector Type |
|---|---|---|---|---|---|---|---|
| (H/V) | (MHz) | (dBuV/m) | (dB) | (dBuV/m) | (dBuV/m) | (dB) | |
| Low Channel (5955 MHz)-Above 1G | | | | | | | |
| Vertical | 4683.397 | 73.44 | -20.23 | 53.21 | 74 | -20.79 | PK |
| Vertical | 4683.397 | 59.68 | -20.23 | 39.45 | 54 | -14.55 | AV |
| Vertical | 11910.119 | 62.40 | -8.63 | 53.77 | 68.2 | -14.43 | PK |
| Vertical | 11910.119 | 49.12 | -8.63 | 40.49 | 54 | -13.51 | AV |
| Vertical | 17865.123 | 58.07 | -1.57 | 56.50 | 68.2 | -11.70 | PK |
| Vertical | 17865.123 | 44.17 | -1.57 | 42.60 | 54 | -11.40 | AV |
| Horizontal | 4679.162 | 72.53 | -20.73 | 51.80 | 74 | -22.20 | PK |
| Horizontal | 4679.162 | 59.69 | -20.73 | 38.96 | 54 | -15.04 | AV |
| Horizontal | 11910.165 | 63.88 | -8.63 | 55.25 | 68.2 | -12.95 | PK |
| Horizontal | 11910.165 | 49.17 | -8.63 | 40.54 | 54 | -13.46 | AV |
| Horizontal | 17865.031 | 57.63 | -1.57 | 56.06 | 68.2 | -12.14 | PK |
| Horizontal | 17865.031 | 44.24 | -1.57 | 42.67 | 54 | -11.33 | AV |
| middle Channel (6175 MHz)-Above 1G | | | | | | | |
| Vertical | 4592.181 | 70.32 | -20.42 | 49.90 | 74 | -24.10 | PK |
| Vertical | 4592.181 | 59.89 | -20.42 | 39.47 | 54 | -14.53 | AV |
| Vertical | 12350.088 | 61.71 | -9.16 | 52.55 | 68.2 | -15.65 | PK |
| Vertical | 12350.088 | 49.58 | -9.16 | 40.42 | 54 | -13.58 | AV |
| Vertical | 18525.118 | 48.46 | 6.65 | 55.11 | 68.2 | -13.09 | PK |
| Vertical | 18525.118 | 34.40 | 6.65 | 41.05 | 54 | -12.95 | AV |
| Horizontal | 4592.063 | 73.67 | -20.42 | 53.25 | 74 | -20.75 | PK |
| Horizontal | 4592.063 | 59.64 | -20.42 | 39.23 | 54 | -14.77 | AV |
| Horizontal | 12350.188 | 64.23 | -9.16 | 55.07 | 68.2 | -13.13 | PK |
| Horizontal | 12350.188 | 49.22 | -9.16 | 40.06 | 54 | -13.94 | AV |
| Horizontal | 18525.162 | 46.45 | 6.65 | 53.10 | 68.2 | -15.10 | PK |
| Horizontal | 18525.162 | 34.29 | 6.65 | 40.94 | 54 | -13.06 | AV |
| High Channel (6415 MHz)-Above 1G | | | | | | | |
| Vertical | 6039.003 | 74.44 | -18.93 | 55.51 | 68.2 | -12.69 | PK |
| Vertical | 6039.003 | 59.82 | -18.93 | 40.88 | 54 | -13.12 | AV |
| Vertical | 12830.029 | 64.22 | -8.92 | 55.30 | 74 | -18.70 | PK |
| Vertical | 12830.029 | 49.62 | -8.92 | 40.70 | 54 | -13.30 | AV |
| Vertical | 19245.149 | 45.21 | 7.78 | 52.99 | 68.2 | -15.21 | PK |
| Vertical | 19245.149 | 34.31 | 7.78 | 42.09 | 54 | -11.91 | AV |
| Horizontal | 6039.045 | 71.42 | -18.93 | 52.48 | 68.2 | -15.72 | PK |
| Horizontal | 6039.045 | 59.52 | -18.93 | 40.59 | 54 | -13.41 | AV |
| Horizontal | 12830.136 | 64.95 | -8.92 | 56.03 | 74 | -17.97 | PK |
| Horizontal | 12830.136 | 49.18 | -8.92 | 40.26 | 54 | -13.74 | AV |
| Horizontal | 19245.068 | 45.98 | 7.78 | 53.76 | 68.2 | -14.44 | PK |
| Horizontal | 19245.068 | 34.44 | 7.78 | 42.22 | 54 | -11.78 | AV |

Note: The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

| Test Mode : | TX(U-NII-5: 5955-6415MHz) - 802.11ax40 |
|---|---|

| Polar (H/V) | Frequency (MHz) | Reading Level (dBuV/m) | Correct Factor (dB) | Measure-ment (dBuV/m) | Limits (dBuV/m) | Over (dB) | Detector Type |
|---|---|---|---|---|---|---|---|
| Low Channel (5965 MHz)-Above 1G | | | | | | | |
| Vertical | 4679.060 | 74.21 | -20.24 | 53.96 | 74 | -20.04 | PK |
| Vertical | 4679.060 | 59.72 | -20.24 | 39.48 | 54 | -14.52 | AV |
| Vertical | 11930.036 | 64.57 | -8.51 | 56.06 | 74 | -17.94 | PK |
| Vertical | 11930.036 | 49.23 | -8.51 | 40.72 | 54 | -13.28 | AV |
| Vertical | 17895.105 | 56.92 | -1.43 | 55.49 | 68.2 | -12.71 | PK |
| Vertical | 17895.105 | 44.60 | -1.43 | 43.17 | 54 | -10.83 | AV |
| Horizontal | 4679.053 | 72.31 | -20.24 | 52.07 | 74 | -21.93 | PK |
| Horizontal | 4679.053 | 59.05 | -20.24 | 38.81 | 54 | -15.19 | AV |
| Horizontal | 11930.087 | 63.03 | -8.51 | 54.52 | 74 | -19.48 | PK |
| Horizontal | 11930.087 | 49.76 | -8.51 | 41.25 | 54 | -12.75 | AV |
| Horizontal | 17895.096 | 55.87 | -1.43 | 54.44 | 68.2 | -13.76 | PK |
| Horizontal | 17895.096 | 44.20 | -1.43 | 42.77 | 54 | -11.23 | AV |
| middle Channel (6165 MHz)-Above 1G | | | | | | | |
| Vertical | 6039.005 | 72.72 | -18.93 | 53.79 | 68.2 | -14.41 | PK |
| Vertical | 6039.005 | 59.76 | -18.93 | 40.83 | 54 | -13.17 | AV |
| Vertical | 12330.080 | 63.54 | -9.16 | 54.38 | 74 | -19.62 | PK |
| Vertical | 12330.080 | 49.51 | -9.16 | 40.35 | 54 | -13.65 | AV |
| Vertical | 18495.132 | 48.81 | 6.65 | 55.46 | 68.2 | -12.74 | PK |
| Vertical | 18495.132 | 34.15 | 6.65 | 40.80 | 54 | -13.20 | AV |
| Horizontal | 6039.176 | 74.39 | -18.93 | 55.46 | 68.2 | -12.74 | PK |
| Horizontal | 6039.176 | 59.03 | -18.93 | 40.10 | 54 | -13.90 | AV |
| Horizontal | 12330.128 | 62.51 | -9.16 | 53.35 | 74 | -20.65 | PK |
| Horizontal | 12330.128 | 49.15 | -9.16 | 39.99 | 54 | -14.01 | AV |
| Horizontal | 18495.143 | 49.61 | 6.65 | 56.26 | 68.2 | -11.94 | PK |
| Horizontal | 18495.143 | 34.58 | 6.65 | 41.23 | 54 | -12.77 | AV |
| High Channel (6405 MHz)-Above 1G | | | | | | | |
| Vertical | 6039.093 | 70.90 | -18.93 | 51.97 | 68.2 | -16.23 | PK |
| Vertical | 6039.093 | 59.67 | -18.93 | 40.74 | 54 | -13.26 | AV |
| Vertical | 12810.153 | 63.17 | -8.92 | 54.25 | 74 | -19.75 | PK |
| Vertical | 12810.153 | 49.84 | -8.92 | 40.92 | 54 | -13.08 | AV |
| Vertical | 19215.012 | 49.92 | 7.78 | 57.70 | 68.2 | -10.50 | PK |
| Vertical | 19215.012 | 34.05 | 7.78 | 41.83 | 54 | -12.17 | AV |
| Horizontal | 6039.188 | 71.09 | -18.93 | 52.16 | 68.2 | -16.04 | PK |
| Horizontal | 6039.188 | 59.51 | -18.93 | 40.58 | 54 | -13.42 | AV |
| Horizontal | 12810.044 | 63.98 | -8.92 | 55.06 | 74 | -18.94 | PK |
| Horizontal | 12810.044 | 49.70 | -8.92 | 40.78 | 54 | -13.22 | AV |
| Horizontal | 19215.019 | 46.39 | 7.78 | 54.17 | 68.2 | -14.03 | PK |
| Horizontal | 19215.019 | 34.21 | 7.78 | 41.99 | 54 | -12.01 | AV |

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

| Test Mode : | TX(U-NII-5: 5955-6415MHz)- 802.11ax80 |
|---|---|

| Polar | Frequency | Reading Level | Correct Factor | Measure-ment | Limits | Over | Detector Type |
|---|---|---|---|---|---|---|---|
| (H/V) | (MHz) | (dBuV/m) | (dB) | (dBuV/m) | (dBuV/m) | (dB) | |
| Low Channel (5985 MHz)-Above 1G | | | | | | | |
| Vertical | 4679.099 | 73.05 | -20.24 | 52.81 | 74 | -21.19 | PK |
| Vertical | 4679.099 | 59.48 | -20.24 | 39.24 | 54 | -14.76 | AV |
| Vertical | 11970.002 | 64.37 | -8.51 | 55.86 | 74 | -18.14 | PK |
| Vertical | 11970.002 | 49.56 | -8.51 | 41.05 | 54 | -12.95 | AV |
| Vertical | 17955.196 | 58.01 | -1.41 | 56.60 | 68.2 | -11.60 | PK |
| Vertical | 17955.196 | 44.25 | -1.41 | 42.84 | 54 | -11.16 | AV |
| Horizontal | 4679.033 | 73.72 | -20.24 | 53.47 | 74 | -20.53 | PK |
| Horizontal | 4679.033 | 59.46 | -20.24 | 39.22 | 54 | -14.78 | AV |
| Horizontal | 11970.176 | 63.59 | -8.51 | 55.08 | 74 | -18.92 | PK |
| Horizontal | 11970.176 | 50.00 | -8.51 | 41.49 | 54 | -12.51 | AV |
| Horizontal | 17955.069 | 55.72 | -1.41 | 54.31 | 68.2 | -13.89 | PK |
| Horizontal | 17955.069 | 44.82 | -1.41 | 43.41 | 54 | -10.59 | AV |
| Middle Channel (6145 MHz)-Above 1G | | | | | | | |
| Vertical | 6039.077 | 70.31 | -18.93 | 51.37 | 68.2 | -16.83 | PK |
| Vertical | 6039.077 | 59.74 | -18.93 | 40.81 | 54 | -13.19 | AV |
| Vertical | 12290.084 | 62.86 | -9.21 | 53.65 | 74 | -20.35 | PK |
| Vertical | 12290.084 | 49.21 | -9.21 | 40.00 | 54 | -14.00 | AV |
| Vertical | 18435.049 | 47.73 | 6.57 | 54.30 | 68.2 | -13.90 | PK |
| Vertical | 18435.049 | 34.81 | 6.57 | 41.38 | 54 | -12.62 | AV |
| Horizontal | 6039.068 | 72.56 | -18.93 | 53.63 | 68.2 | -14.57 | PK |
| Horizontal | 6039.068 | 59.59 | -18.93 | 40.65 | 54 | -13.35 | AV |
| Horizontal | 12290.077 | 64.79 | -9.21 | 55.58 | 74 | -18.42 | PK |
| Horizontal | 12290.077 | 49.46 | -9.21 | 40.25 | 54 | -13.75 | AV |
| Horizontal | 18435.194 | 46.73 | 6.57 | 53.30 | 68.2 | -14.90 | PK |
| Horizontal | 18435.194 | 34.84 | 6.57 | 41.41 | 54 | -12.59 | AV |
| High Channel (6385 MHz)-Above 1G | | | | | | | |
| Vertical | 6039.022 | 72.69 | -18.93 | 53.76 | 68.2 | -14.44 | PK |
| Vertical | 6039.022 | 59.49 | -18.93 | 40.56 | 54 | -13.44 | AV |
| Vertical | 12770.071 | 63.28 | -8.97 | 54.31 | 74 | -19.69 | PK |
| Vertical | 12770.071 | 49.04 | -8.97 | 40.07 | 54 | -13.93 | AV |
| Vertical | 19155.040 | 47.82 | 7.83 | 55.65 | 68.2 | -12.55 | PK |
| Vertical | 19155.040 | 34.91 | 7.83 | 42.74 | 54 | -11.26 | AV |
| Horizontal | 6039.152 | 73.36 | -18.93 | 54.43 | 68.2 | -13.77 | PK |
| Horizontal | 6039.152 | 59.21 | -18.93 | 40.28 | 54 | -13.72 | AV |
| Horizontal | 12770.080 | 62.66 | -8.97 | 53.69 | 74 | -20.31 | PK |
| Horizontal | 12770.080 | 49.51 | -8.97 | 40.54 | 54 | -13.46 | AV |
| Horizontal | 19155.144 | 48.27 | 7.83 | 56.10 | 68.2 | -12.10 | PK |
| Horizontal | 19155.144 | 34.52 | 7.83 | 42.35 | 54 | -11.65 | AV |

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

| Test Mode: | TX(U-NII-5: 5955-6415MHz) - 802.11ax160 |
|---|---|

| Polar (H/V) | Frequency (MHz) | Reading Level (dBuV/m) | Correct Factor (dB) | Measure-ment (dBuV/m) | Limits (dBuV/m) | Over (dB) | Detector Type |
|---|---|---|---|---|---|---|---|
| Low Channel (6025 MHz)-Above 1G | | | | | | | |
| Vertical | 4679.034 | 74.06 | -20.24 | 53.82 | 74 | -20.18 | PK |
| Vertical | 4679.034 | 59.64 | -20.24 | 39.40 | 54 | -14.60 | AV |
| Vertical | 12050.028 | 62.93 | -8.45 | 54.48 | 74 | -19.52 | PK |
| Vertical | 12050.028 | 49.24 | -8.45 | 40.79 | 54 | -13.21 | AV |
| Vertical | 18075.059 | 56.65 | -1.31 | 55.34 | 68.2 | -12.86 | PK |
| Vertical | 18075.059 | 44.39 | -1.31 | 43.08 | 54 | -10.92 | AV |
| Horizontal | 4679.198 | 70.40 | -20.24 | 50.16 | 74 | -23.84 | PK |
| Horizontal | 4679.198 | 59.59 | -20.24 | 39.35 | 54 | -14.65 | AV |
| Horizontal | 12050.052 | 64.39 | -8.45 | 55.94 | 74 | -18.06 | PK |
| Horizontal | 12050.052 | 49.89 | -8.45 | 41.44 | 54 | -12.56 | AV |
| Horizontal | 18075.007 | 57.32 | -1.31 | 56.01 | 68.2 | -12.19 | PK |
| Horizontal | 18075.007 | 44.21 | -1.31 | 42.90 | 54 | -11.10 | AV |
| middle Channel (6185 MHz)-Above 1G | | | | | | | |
| Vertical | 6039.022 | 72.35 | -18.93 | 53.42 | 68.2 | -14.78 | PK |
| Vertical | 6039.022 | 59.34 | -18.93 | 40.41 | 54 | -13.59 | AV |
| Vertical | 12370.033 | 60.21 | -9.03 | 51.18 | 74 | -22.82 | PK |
| Vertical | 12370.033 | 49.95 | -9.03 | 40.92 | 54 | -13.08 | AV |
| Vertical | 18555.123 | 49.66 | 6.68 | 56.34 | 68.2 | -11.86 | PK |
| Vertical | 18555.123 | 34.24 | 6.68 | 40.92 | 54 | -13.08 | AV |
| Horizontal | 6039.006 | 70.62 | -18.93 | 51.69 | 68.2 | -16.51 | PK |
| Horizontal | 6039.006 | 59.64 | -18.93 | 40.70 | 54 | -13.30 | AV |
| Horizontal | 12370.073 | 62.16 | -9.03 | 53.13 | 74 | -20.87 | PK |
| Horizontal | 12370.073 | 49.58 | -9.03 | 40.55 | 54 | -13.45 | AV |
| Horizontal | 18555.142 | 46.94 | 6.68 | 53.62 | 68.2 | -14.58 | PK |
| Horizontal | 18555.142 | 34.22 | 6.68 | 40.90 | 54 | -13.10 | AV |
| High Channel (6345 MHz)-Above 1G | | | | | | | |
| Vertical | 6039.027 | 74.26 | -18.93 | 55.32 | 68.2 | -12.88 | PK |
| Vertical | 6039.027 | 59.09 | -18.93 | 40.16 | 54 | -13.84 | AV |
| Vertical | 12690.078 | 62.39 | -8.97 | 53.42 | 74 | -20.58 | PK |
| Vertical | 12690.078 | 49.90 | -8.97 | 40.93 | 54 | -13.07 | AV |
| Vertical | 19035.124 | 47.91 | 7.68 | 55.59 | 68.2 | -12.61 | PK |
| Vertical | 19035.124 | 34.29 | 7.68 | 41.97 | 54 | -12.03 | AV |
| Horizontal | 6039.108 | 74.36 | -18.93 | 55.42 | 68.2 | -12.78 | PK |
| Horizontal | 6039.108 | 59.87 | -18.93 | 40.94 | 54 | -13.06 | AV |
| Horizontal | 12690.190 | 60.69 | -8.97 | 51.72 | 74 | -22.28 | PK |
| Horizontal | 12690.190 | 49.37 | -8.97 | 40.40 | 54 | -13.60 | AV |
| Horizontal | 19035.053 | 47.80 | 7.68 | 55.48 | 68.2 | -12.72 | PK |
| Horizontal | 19035.053 | 34.80 | 7.68 | 42.48 | 54 | -11.52 | AV |

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

**U-NII-6: 6435-6515MHz**

| Test Mode : | TX(U-NII-6: 6435-6515MHz) - 802.11ax20 |
|---|---|

| Polar | Frequency | Reading Level | Correct Factor | Measure-ment | Limits | Over | Detector Type |
|---|---|---|---|---|---|---|---|
| (H/V) | (MHz) | (dBuV/m) | (dB) | (dBuV/m) | (dBuV/m) | (dB) | |
| Low Channel (6435 MHz)-Above 1G | | | | | | | |
| Vertical | 4683.204 | 71.38 | -20.23 | 51.15 | 74 | -22.85 | PK |
| Vertical | 4683.204 | 59.18 | -20.23 | 38.95 | 54 | -15.05 | AV |
| Vertical | 12870.160 | 62.25 | -7.95 | 54.30 | 68.2 | -13.90 | PK |
| Vertical | 12870.160 | 49.45 | -7.95 | 41.50 | 54 | -12.50 | AV |
| Vertical | 19305.010 | 48.68 | 7.76 | 56.44 | 68.2 | -11.76 | PK |
| Vertical | 19305.010 | 34.63 | 7.76 | 42.39 | 54 | -11.61 | AV |
| Horizontal | 4679.002 | 72.47 | -20.73 | 51.74 | 74 | -22.26 | PK |
| Horizontal | 4679.002 | 59.48 | -20.73 | 38.75 | 54 | -15.25 | AV |
| Horizontal | 12870.155 | 64.94 | -7.95 | 56.99 | 68.2 | -11.21 | PK |
| Horizontal | 12870.155 | 49.06 | -7.95 | 41.11 | 54 | -12.89 | AV |
| Horizontal | 19305.124 | 47.50 | 7.76 | 55.26 | 68.2 | -12.94 | PK |
| Horizontal | 19305.124 | 34.66 | 7.76 | 42.42 | 54 | -11.58 | AV |
| middle Channel (6475 MHz)-Above 1G | | | | | | | |
| Vertical | 4592.016 | 74.27 | -20.42 | 53.86 | 74 | -20.14 | PK |
| Vertical | 4592.016 | 59.18 | -20.42 | 38.76 | 54 | -15.24 | AV |
| Vertical | 12950.014 | 61.69 | -7.89 | 53.80 | 68.2 | -14.40 | PK |
| Vertical | 12950.014 | 49.34 | -7.89 | 41.45 | 54 | -12.55 | AV |
| Vertical | 19425.112 | 48.13 | 7.78 | 55.91 | 68.2 | -12.29 | PK |
| Vertical | 19425.112 | 34.96 | 7.78 | 42.74 | 54 | -11.26 | AV |
| Horizontal | 4592.199 | 71.20 | -20.42 | 50.78 | 74 | -23.22 | PK |
| Horizontal | 4592.199 | 59.11 | -20.42 | 38.69 | 54 | -15.31 | AV |
| Horizontal | 12950.090 | 62.19 | -7.89 | 54.30 | 68.2 | -13.90 | PK |
| Horizontal | 12950.090 | 49.11 | -7.89 | 41.22 | 54 | -12.78 | AV |
| Horizontal | 19425.194 | 45.90 | 7.78 | 53.68 | 68.2 | -14.52 | PK |
| Horizontal | 19425.194 | 34.29 | 7.78 | 42.07 | 54 | -11.93 | AV |
| High Channel (6515 MHz)-Above 1G | | | | | | | |
| Vertical | 6039.080 | 73.26 | -18.93 | 54.33 | 68.2 | -13.87 | PK |
| Vertical | 6039.080 | 59.89 | -18.93 | 40.96 | 54 | -13.04 | AV |
| Vertical | 13030.156 | 62.16 | -7.80 | 54.36 | 74 | -19.64 | PK |
| Vertical | 13030.156 | 49.16 | -7.80 | 41.36 | 54 | -12.64 | AV |
| Vertical | 19545.110 | 46.82 | 7.78 | 54.60 | 68.2 | -13.60 | PK |
| Vertical | 19545.110 | 34.81 | 7.78 | 42.59 | 54 | -11.41 | AV |
| Horizontal | 6039.011 | 70.07 | -18.93 | 51.14 | 68.2 | -17.06 | PK |
| Horizontal | 6039.011 | 59.76 | -18.93 | 40.83 | 54 | -13.17 | AV |
| Horizontal | 13030.185 | 63.38 | -7.80 | 55.58 | 74 | -18.42 | PK |
| Horizontal | 13030.185 | 49.11 | -7.80 | 41.31 | 54 | -12.69 | AV |
| Horizontal | 19545.020 | 46.87 | 7.78 | 54.65 | 68.2 | -13.55 | PK |
| Horizontal | 19545.020 | 34.47 | 7.78 | 42.25 | 54 | -11.75 | AV |

Note: The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

| Test Mode : | TX(U-NII-6: 6435-6515MHz) - 802.11ax40 |
|---|---|

| Polar | Frequency | Reading Level | Correct Factor | Measure-ment | Limits | Over | Detector Type |
|---|---|---|---|---|---|---|---|
| (H/V) | (MHz) | (dBuV/m) | (dB) | (dBuV/m) | (dBuV/m) | (dB) | |
| Low Channel (6445 MHz)-Above 1G | | | | | | | |
| Vertical | 4679.048 | 71.07 | -20.24 | 50.83 | 74 | -23.17 | PK |
| Vertical | 4679.048 | 59.83 | -20.24 | 39.59 | 54 | -14.41 | AV |
| Vertical | 12890.114 | 63.42 | -7.95 | 55.47 | 74 | -18.53 | PK |
| Vertical | 12890.114 | 49.97 | -7.95 | 42.02 | 54 | -11.98 | AV |
| Vertical | 19335.027 | 45.44 | 7.76 | 53.20 | 68.2 | -15.00 | PK |
| Vertical | 19335.027 | 34.30 | 7.76 | 42.06 | 54 | -11.94 | AV |
| Horizontal | 4679.073 | 74.58 | -20.24 | 54.34 | 74 | -19.66 | PK |
| Horizontal | 4679.073 | 59.94 | -20.24 | 39.70 | 54 | -14.30 | AV |
| Horizontal | 12890.100 | 61.12 | -7.95 | 53.17 | 74 | -20.83 | PK |
| Horizontal | 12890.100 | 49.90 | -7.95 | 41.95 | 54 | -12.05 | AV |
| Horizontal | 19335.080 | 46.49 | 7.76 | 54.25 | 68.2 | -13.95 | PK |
| Horizontal | 19335.080 | 34.37 | 7.76 | 42.13 | 54 | -11.87 | AV |
| middle Channel (6485 MHz)-Above 1G | | | | | | | |
| Vertical | 6039.142 | 74.48 | -18.93 | 55.55 | 68.2 | -12.65 | PK |
| Vertical | 6039.142 | 59.24 | -18.93 | 40.31 | 54 | -13.69 | AV |
| Vertical | 12970.153 | 60.92 | -7.85 | 53.07 | 74 | -20.93 | PK |
| Vertical | 12970.153 | 49.09 | -7.85 | 41.24 | 54 | -12.76 | AV |
| Vertical | 19455.149 | 48.00 | 7.78 | 55.78 | 68.2 | -12.42 | PK |
| Vertical | 19455.149 | 34.53 | 7.78 | 42.31 | 54 | -11.69 | AV |
| Horizontal | 6039.172 | 70.88 | -18.93 | 51.95 | 68.2 | -16.25 | PK |
| Horizontal | 6039.172 | 59.25 | -18.93 | 40.32 | 54 | -13.68 | AV |
| Horizontal | 12970.140 | 63.90 | -7.85 | 56.05 | 74 | -17.95 | PK |
| Horizontal | 12970.140 | 49.29 | -7.85 | 41.44 | 54 | -12.56 | AV |
| Horizontal | 19455.036 | 45.55 | 7.78 | 53.33 | 68.2 | -14.87 | PK |
| Horizontal | 19455.036 | 34.85 | 7.78 | 42.63 | 54 | -11.37 | AV |
| High Channel (6525 MHz)-Above 1G | | | | | | | |
| Vertical | 6039.109 | 74.69 | -18.93 | 55.76 | 68.2 | -12.44 | PK |
| Vertical | 6039.109 | 59.23 | -18.93 | 40.30 | 54 | -13.70 | AV |
| Vertical | 13050.142 | 64.89 | -7.8 | 57.09 | 74 | -16.91 | PK |
| Vertical | 13050.142 | 49.23 | -7.8 | 41.43 | 54 | -12.57 | AV |
| Vertical | 19575.200 | 48.41 | 7.78 | 56.19 | 68.2 | -12.01 | PK |
| Vertical | 19575.200 | 34.88 | 7.78 | 42.66 | 54 | -11.34 | AV |
| Horizontal | 6039.025 | 74.86 | -18.93 | 55.93 | 68.2 | -12.27 | PK |
| Horizontal | 6039.025 | 59.63 | -18.93 | 40.70 | 54 | -13.30 | AV |
| Horizontal | 13050.113 | 63.27 | -7.8 | 55.47 | 74 | -18.53 | PK |
| Horizontal | 13050.113 | 49.30 | -7.8 | 41.50 | 54 | -12.50 | AV |
| Horizontal | 19575.071 | 46.81 | 7.78 | 54.59 | 68.2 | -13.61 | PK |
| Horizontal | 19575.071 | 34.42 | 7.78 | 42.20 | 54 | -11.80 | AV |

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

| Test Mode : | TX(U-NII-6: 6435-6515MHz)- 802.11ax80 |
|---|---|

| Polar | Frequency | Reading Level | Correct Factor | Measure-ment | Limits | Over | Detector Type |
|---|---|---|---|---|---|---|---|
| (H/V) | (MHz) | (dBuV/m) | (dB) | (dBuV/m) | (dBuV/m) | (dB) | |
| Low Channel (6465 MHz)-Above 1G | | | | | | | |
| Vertical | 4679.191 | 72.25 | -20.24 | 52.00 | 74 | -22.00 | PK |
| Vertical | 4679.191 | 59.13 | -20.24 | 38.89 | 54 | -15.11 | AV |
| Vertical | 12930.085 | 62.08 | -7.85 | 54.23 | 74 | -19.77 | PK |
| Vertical | 12930.085 | 49.26 | -7.85 | 41.41 | 54 | -12.59 | AV |
| Vertical | 19395.092 | 49.15 | 7.76 | 56.91 | 68.2 | -11.29 | PK |
| Vertical | 19395.092 | 34.77 | 7.76 | 42.53 | 54 | -11.47 | AV |
| Horizontal | 4679.076 | 74.49 | -20.24 | 54.25 | 74 | -19.75 | PK |
| Horizontal | 4679.076 | 59.89 | -20.24 | 39.65 | 54 | -14.35 | AV |
| Horizontal | 12930.186 | 63.18 | -7.85 | 55.33 | 74 | -18.67 | PK |
| Horizontal | 12930.186 | 49.88 | -7.85 | 42.03 | 54 | -11.97 | AV |
| Horizontal | 19395.079 | 47.77 | 7.76 | 55.53 | 68.2 | -12.67 | PK |
| Horizontal | 19395.079 | 34.42 | 7.76 | 42.18 | 54 | -11.82 | AV |
| High Channel (6545 MHz)-Above 1G | | | | | | | |
| Vertical | 6039.077 | 71.72 | -18.93 | 52.79 | 68.2 | -15.41 | PK |
| Vertical | 6039.077 | 59.84 | -18.93 | 40.91 | 54 | -13.09 | AV |
| Vertical | 13090.140 | 64.56 | -7.8 | 56.76 | 74 | -17.24 | PK |
| Vertical | 13090.140 | 49.09 | -7.8 | 41.29 | 54 | -12.71 | AV |
| Vertical | 19635.047 | 49.24 | 7.78 | 57.02 | 68.2 | -11.18 | PK |
| Vertical | 19635.047 | 34.05 | 7.78 | 41.83 | 54 | -12.17 | AV |
| Horizontal | 6039.087 | 74.30 | -18.93 | 55.37 | 68.2 | -12.83 | PK |
| Horizontal | 6039.087 | 59.92 | -18.93 | 40.99 | 54 | -13.01 | AV |
| Horizontal | 13090.050 | 64.68 | -7.8 | 56.88 | 74 | -17.12 | PK |
| Horizontal | 13090.050 | 49.47 | -7.8 | 41.67 | 54 | -12.33 | AV |
| Horizontal | 19635.065 | 47.52 | 7.78 | 55.30 | 68.2 | -12.90 | PK |
| Horizontal | 19635.065 | 34.59 | 7.78 | 42.37 | 54 | -11.63 | AV |

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

| Test Mode: | TX(U-NII-6: 6435-6515MHz)- 802.11ax160 |
|---|---|

| Polar | Frequency | Reading Level | Correct Factor | Measure-ment | Limits | Over | Detector Type |
|---|---|---|---|---|---|---|---|
| (H/V) | (MHz) | (dBuV/m) | (dB) | (dBuV/m) | (dBuV/m) | (dB) | |
| Low Channel (6505 MHz)-Above 1G | | | | | | | |
| Vertical | 4679.159 | 72.85 | -20.24 | 52.61 | 74 | -21.39 | PK |
| Vertical | 4679.159 | 59.14 | -20.24 | 38.90 | 54 | -15.10 | AV |
| Vertical | 13010.124 | 63.70 | -7.8 | 55.90 | 74 | -18.10 | PK |
| Vertical | 13010.124 | 49.68 | -7.8 | 41.88 | 54 | -12.12 | AV |
| Vertical | 19515.177 | 49.98 | 7.78 | 57.76 | 68.2 | -10.44 | PK |
| Vertical | 19515.177 | 34.65 | 7.78 | 42.43 | 54 | -11.57 | AV |
| Horizontal | 4679.040 | 74.59 | -20.24 | 54.35 | 74 | -19.65 | PK |
| Horizontal | 4679.040 | 59.97 | -20.24 | 39.73 | 54 | -14.27 | AV |
| Horizontal | 13010.096 | 62.03 | -7.8 | 54.23 | 74 | -19.77 | PK |
| Horizontal | 13010.096 | 49.89 | -7.8 | 42.09 | 54 | -11.91 | AV |
| Horizontal | 19515.072 | 47.69 | 7.78 | 55.47 | 68.2 | -12.73 | PK |
| Horizontal | 19515.072 | 34.18 | 7.78 | 41.96 | 54 | -12.04 | AV |

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

**U-NII-7: 6535-6865MHz**

| Test Mode : | TX(U-NII-7: 6535-6865MHz) - 802.11ax20 |
|---|---|

| Polar | Frequency | Reading Level | Correct Factor | Measure-ment | Limits | Over | Detector Type |
|---|---|---|---|---|---|---|---|
| (H/V) | (MHz) | (dBuV/m) | (dB) | (dBuV/m) | (dBuV/m) | (dB) | |
| Low Channel (6535 MHz)-Above 1G | | | | | | | |
| Vertical | 4680.135 | 73.79 | -20.24 | 53.55 | 74 | -20.45 | PK |
| Vertical | 4680.135 | 59.88 | -20.24 | 39.64 | 54 | -14.36 | AV |
| Vertical | 13070.105 | 61.34 | -7.8 | 53.54 | 68.2 | -14.66 | PK |
| Vertical | 13070.105 | 49.69 | -7.8 | 41.89 | 54 | -12.11 | AV |
| Vertical | 19605.156 | 46.91 | 7.78 | 54.69 | 68.2 | -13.51 | PK |
| Vertical | 19605.156 | 34.66 | 7.78 | 42.44 | 54 | -11.56 | AV |
| Horizontal | 4679.168 | 74.61 | -20.73 | 53.88 | 74 | -20.12 | PK |
| Horizontal | 4679.168 | 59.05 | -20.73 | 38.32 | 54 | -15.68 | AV |
| Horizontal | 13070.149 | 63.58 | -7.8 | 55.78 | 68.2 | -12.42 | PK |
| Horizontal | 13070.149 | 49.04 | -7.8 | 41.24 | 54 | -12.76 | AV |
| Horizontal | 19605.182 | 49.62 | 7.78 | 57.40 | 68.2 | -10.80 | PK |
| Horizontal | 19605.182 | 34.31 | 7.78 | 42.09 | 54 | -11.91 | AV |
| Middle Channel (6695 MHz)-Above 1G | | | | | | | |
| Vertical | 4592.178 | 74.99 | -20.42 | 54.57 | 74 | -19.43 | PK |
| Vertical | 4592.178 | 59.21 | -20.42 | 38.79 | 54 | -15.21 | AV |
| Vertical | 13390.196 | 61.04 | -7.53 | 53.51 | 68.2 | -14.69 | PK |
| Vertical | 13390.196 | 49.01 | -7.53 | 41.48 | 54 | -12.52 | AV |
| Vertical | 20085.180 | 45.72 | 8.00 | 53.72 | 68.2 | -14.48 | PK |
| Vertical | 20085.180 | 34.67 | 8.00 | 42.67 | 54 | -11.33 | AV |
| Horizontal | 4592.119 | 73.06 | -20.42 | 52.64 | 74 | -21.36 | PK |
| Horizontal | 4592.119 | 59.40 | -20.42 | 38.98 | 54 | -15.02 | AV |
| Horizontal | 13390.177 | 64.01 | -7.53 | 56.48 | 68.2 | -11.72 | PK |
| Horizontal | 13390.177 | 49.26 | -7.53 | 41.73 | 54 | -12.27 | AV |
| Horizontal | 20085.139 | 45.71 | 8.00 | 53.71 | 68.2 | -14.49 | PK |
| Horizontal | 20085.139 | 34.62 | 8.00 | 42.62 | 54 | -11.38 | AV |
| High Channel (6855 MHz)-Above 1G | | | | | | | |
| Vertical | 6039.100 | 74.29 | -18.93 | 55.35 | 68.2 | -12.85 | PK |
| Vertical | 6039.100 | 59.99 | -18.93 | 41.06 | 54 | -12.94 | AV |
| Vertical | 13710.192 | 61.40 | -7.31 | 54.09 | 74 | -19.91 | PK |
| Vertical | 13710.192 | 49.71 | -7.31 | 42.40 | 54 | -11.60 | AV |
| Vertical | 20565.001 | 46.87 | 3.72 | 50.59 | 68.2 | -17.61 | PK |
| Vertical | 20565.001 | 34.47 | 3.72 | 38.19 | 54 | -15.81 | AV |
| Horizontal | 6039.072 | 70.97 | -18.93 | 52.04 | 68.2 | -16.16 | PK |
| Horizontal | 6039.072 | 59.98 | -18.93 | 41.05 | 54 | -12.95 | AV |
| Horizontal | 13710.182 | 62.38 | -7.31 | 55.07 | 74 | -18.93 | PK |
| Horizontal | 13710.182 | 49.79 | -7.31 | 42.48 | 54 | -11.52 | AV |
| Horizontal | 20565.096 | 45.30 | 3.72 | 49.02 | 68.2 | -19.18 | PK |
| Horizontal | 20565.096 | 34.64 | 3.72 | 38.36 | 54 | -15.64 | AV |
| High Channel (6875 MHz)-Above 1G | | | | | | | |
| Vertical | 6039.103 | 71.01 | -18.93 | 52.08 | 68.2 | -16.12 | PK |
| Vertical | 6039.103 | 59.67 | -18.93 | 40.74 | 54 | -13.26 | AV |
| Vertical | 13750.130 | 61.42 | -7.31 | 54.11 | 74 | -19.89 | PK |
| Vertical | 13750.130 | 49.71 | -7.31 | 42.40 | 54 | -11.60 | AV |
| Vertical | 20625.186 | 45.09 | 3.71 | 48.80 | 68.2 | -19.40 | PK |
| Vertical | 20625.186 | 34.65 | 3.71 | 38.36 | 54 | -15.64 | AV |
| Horizontal | 6039.062 | 74.67 | -18.93 | 55.74 | 68.2 | -12.46 | PK |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Horizontal | 6039.062 | 59.37 | -18.93 | 40.43 | 54 | -13.57 | AV |
| Horizontal | 13750.073 | 62.94 | -7.31 | 55.63 | 74 | -18.37 | PK |
| Horizontal | 13750.073 | 49.49 | -7.31 | 42.18 | 54 | -11.82 | AV |
| Horizontal | 20625.092 | 47.19 | 3.71 | 50.90 | 68.2 | -17.30 | PK |
| Horizontal | 20625.092 | 34.01 | 3.71 | 37.72 | 54 | -16.28 | AV |

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

| Test Mode : | TX(U-NII-7: 6535-6865MHz) - 802.11ax40 |
|---|---|

| Polar | Frequency | Reading Level | Correct Factor | Measure-ment | Limits | Over | Detector Type |
|---|---|---|---|---|---|---|---|
| (H/V) | (MHz) | (dBuV/m) | (dB) | (dBuV/m) | (dBuV/m) | (dB) | |
| Low Channel (6565 MHz)-Above 1G | | | | | | | |
| Vertical | 4679.057 | 73.00 | -20.24 | 52.76 | 74 | -21.24 | PK |
| Vertical | 4679.057 | 59.19 | -20.24 | 38.94 | 54 | -15.06 | AV |
| Vertical | 13130.038 | 62.03 | -7.65 | 54.38 | 74 | -19.62 | PK |
| Vertical | 13130.038 | 49.90 | -7.65 | 42.25 | 54 | -11.75 | AV |
| Vertical | 19695.037 | 49.48 | 7.78 | 57.26 | 68.2 | -10.94 | PK |
| Vertical | 19695.037 | 34.66 | 7.78 | 42.44 | 54 | -11.56 | AV |
| Horizontal | 4679.054 | 70.99 | -20.24 | 50.75 | 74 | -23.25 | PK |
| Horizontal | 4679.054 | 59.98 | -20.24 | 39.74 | 54 | -14.26 | AV |
| Horizontal | 13130.061 | 62.25 | -7.65 | 54.60 | 74 | -19.40 | PK |
| Horizontal | 13130.061 | 49.47 | -7.65 | 41.82 | 54 | -12.18 | AV |
| Horizontal | 19695.098 | 47.49 | 7.78 | 55.27 | 68.2 | -12.93 | PK |
| Horizontal | 19695.098 | 34.75 | 7.78 | 42.53 | 54 | -11.47 | AV |
| middle Channel (6685 MHz)-Above 1G | | | | | | | |
| Vertical | 6039.028 | 70.08 | -18.93 | 51.15 | 68.2 | -17.05 | PK |
| Vertical | 6039.028 | 59.95 | -18.93 | 41.01 | 54 | -12.99 | AV |
| Vertical | 13370.185 | 64.65 | -7.53 | 57.12 | 74 | -16.88 | PK |
| Vertical | 13370.185 | 49.01 | -7.53 | 41.48 | 54 | -12.52 | AV |
| Vertical | 20055.168 | 49.23 | 8 | 57.23 | 68.2 | -10.97 | PK |
| Vertical | 20055.168 | 34.16 | 8 | 42.16 | 54 | -11.84 | AV |
| Horizontal | 6039.135 | 74.19 | -18.93 | 55.26 | 68.2 | -12.94 | PK |
| Horizontal | 6039.135 | 59.53 | -18.93 | 40.60 | 54 | -13.40 | AV |
| Horizontal | 13370.136 | 60.00 | -7.53 | 52.47 | 74 | -21.53 | PK |
| Horizontal | 13370.136 | 49.99 | -7.53 | 42.46 | 54 | -11.54 | AV |
| Horizontal | 20055.006 | 45.68 | 8 | 53.68 | 68.2 | -14.52 | PK |
| Horizontal | 20055.006 | 34.65 | 8 | 42.65 | 54 | -11.35 | AV |
| High Channel (6845 MHz)-Above 1G | | | | | | | |
| Vertical | 6039.181 | 74.68 | -18.93 | 55.75 | 68.2 | -12.45 | PK |
| Vertical | 6039.181 | 59.94 | -18.93 | 41.01 | 54 | -12.99 | AV |
| Vertical | 13690.053 | 64.46 | -7.31 | 57.15 | 74 | -16.85 | PK |
| Vertical | 13690.053 | 49.26 | -7.31 | 41.95 | 54 | -12.05 | AV |
| Vertical | 20535.033 | 46.39 | 3.72 | 50.11 | 68.2 | -18.09 | PK |
| Vertical | 20535.033 | 34.27 | 3.72 | 37.99 | 54 | -16.01 | AV |
| Horizontal | 6039.046 | 73.65 | -18.93 | 54.72 | 68.2 | -13.48 | PK |
| Horizontal | 6039.046 | 59.92 | -18.93 | 40.99 | 54 | -13.01 | AV |
| Horizontal | 13690.108 | 60.23 | -7.31 | 52.92 | 74 | -21.08 | PK |
| Horizontal | 13690.108 | 49.94 | -7.31 | 42.63 | 54 | -11.37 | AV |
| Horizontal | 20535.180 | 49.19 | 3.72 | 52.91 | 68.2 | -15.29 | PK |
| Horizontal | 20535.180 | 34.13 | 3.72 | 37.85 | 54 | -16.15 | AV |
| High Channel (6885 MHz)-Above 1G | | | | | | | |
| Vertical | 6039.073 | 71.13 | -18.93 | 52.20 | 68.2 | -16.00 | PK |
| Vertical | 6039.073 | 59.85 | -18.93 | 40.92 | 54 | -13.08 | AV |
| Vertical | 13770.064 | 60.66 | -7.31 | 53.35 | 74 | -20.65 | PK |
| Vertical | 13770.064 | 49.80 | -7.31 | 42.49 | 54 | -11.51 | AV |
| Vertical | 20655.191 | 46.37 | 3.71 | 50.08 | 68.2 | -18.12 | PK |
| Vertical | 20655.191 | 34.74 | 3.71 | 38.45 | 54 | -15.55 | AV |
| Horizontal | 6039.127 | 70.77 | -18.93 | 51.84 | 68.2 | -16.36 | PK |
| Horizontal | 6039.127 | 59.26 | -18.93 | 40.33 | 54 | -13.67 | AV |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Horizontal | 13770.052 | 62.55 | -7.31 | 55.24 | 74 | -18.76 | PK |
| Horizontal | 13770.052 | 49.06 | -7.31 | 41.75 | 54 | -12.25 | AV |
| Horizontal | 20655.126 | 46.28 | 3.71 | 49.99 | 68.2 | -18.21 | PK |
| Horizontal | 20655.126 | 34.53 | 3.71 | 38.24 | 54 | -15.76 | AV |

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

| Test Mode : | TX(U-NII-7: 6535-6865MHz)- 802.11ax80 |
|---|---|

| Polar | Frequency | Reading Level | Correct Factor | Measure-ment | Limits | Over | Detector Type |
|---|---|---|---|---|---|---|---|
| (H/V) | (MHz) | (dBuV/m) | (dB) | (dBuV/m) | (dBuV/m) | (dB) | |
| Low Channel (6625 MHz)-Above 1G | | | | | | | |
| Vertical | 4679.071 | 74.00 | -20.24 | 53.76 | 74 | -20.24 | PK |
| Vertical | 4679.071 | 59.06 | -20.24 | 38.82 | 54 | -15.18 | AV |
| Vertical | 13250.110 | 64.76 | -7.61 | 57.15 | 74 | -16.85 | PK |
| Vertical | 13250.110 | 50.00 | -7.61 | 42.39 | 54 | -11.61 | AV |
| Vertical | 19875.054 | 49.02 | 7.78 | 56.80 | 68.2 | -11.40 | PK |
| Vertical | 19875.054 | 34.85 | 7.78 | 42.63 | 54 | -11.37 | AV |
| Horizontal | 4679.052 | 74.67 | -20.24 | 54.42 | 74 | -19.58 | PK |
| Horizontal | 4679.052 | 59.65 | -20.24 | 39.41 | 54 | -14.59 | AV |
| Horizontal | 13250.143 | 64.30 | -7.61 | 56.69 | 74 | -17.31 | PK |
| Horizontal | 13250.143 | 49.22 | -7.61 | 41.61 | 54 | -12.39 | AV |
| Horizontal | 19875.038 | 47.53 | 7.78 | 55.31 | 68.2 | -12.89 | PK |
| Horizontal | 19875.038 | 34.79 | 7.78 | 42.57 | 54 | -11.43 | AV |
| Middle Channel (6705 MHz)-Above 1G | | | | | | | |
| Vertical | 6039.084 | 71.14 | -18.93 | 52.21 | 68.2 | -15.99 | PK |
| Vertical | 6039.084 | 59.56 | -18.93 | 40.63 | 54 | -13.37 | AV |
| Vertical | 13410.126 | 64.85 | -7.4 | 57.45 | 74 | -16.55 | PK |
| Vertical | 13410.126 | 49.06 | -7.4 | 41.66 | 54 | -12.34 | AV |
| Vertical | 20115.117 | 46.27 | 6.35 | 52.62 | 68.2 | -15.58 | PK |
| Vertical | 20115.117 | 34.36 | 6.35 | 40.71 | 54 | -13.29 | AV |
| Horizontal | 6039.060 | 70.27 | -18.93 | 51.34 | 68.2 | -16.86 | PK |
| Horizontal | 6039.060 | 59.94 | -18.93 | 41.01 | 54 | -12.99 | AV |
| Horizontal | 13410.089 | 63.52 | -7.4 | 56.12 | 74 | -17.88 | PK |
| Horizontal | 13410.089 | 49.95 | -7.4 | 42.55 | 54 | -11.45 | AV |
| Horizontal | 20115.157 | 48.39 | 6.35 | 54.74 | 68.2 | -13.46 | PK |
| Horizontal | 20115.157 | 34.71 | 6.35 | 41.06 | 54 | -12.94 | AV |
| High Channel (6785 MHz)-Above 1G | | | | | | | |
| Vertical | 6039.174 | 74.33 | -18.93 | 55.40 | 68.2 | -12.80 | PK |
| Vertical | 6039.174 | 59.00 | -18.93 | 40.07 | 54 | -13.93 | AV |
| Vertical | 13570.184 | 61.32 | -7.39 | 53.93 | 74 | -20.07 | PK |
| Vertical | 13570.184 | 49.27 | -7.39 | 41.88 | 54 | -12.12 | AV |
| Vertical | 20355.132 | 47.81 | 5.82 | 53.63 | 68.2 | -14.57 | PK |
| Vertical | 20355.132 | 34.84 | 5.82 | 40.66 | 54 | -13.34 | AV |
| Horizontal | 6039.068 | 71.20 | -18.93 | 52.27 | 68.2 | -15.93 | PK |
| Horizontal | 6039.068 | 59.08 | -18.93 | 40.15 | 54 | -13.85 | AV |
| Horizontal | 13570.044 | 63.29 | -7.39 | 55.90 | 74 | -18.10 | PK |
| Horizontal | 13570.044 | 49.18 | -7.39 | 41.79 | 54 | -12.21 | AV |
| Horizontal | 20355.021 | 48.71 | 5.82 | 54.53 | 68.2 | -13.67 | PK |
| Horizontal | 20355.021 | 34.59 | 5.82 | 40.41 | 54 | -13.59 | AV |
| High Channel (6865 MHz)-Above 1G | | | | | | | |
| Vertical | 6039.104 | 71.09 | -18.93 | 52.16 | 68.2 | -16.04 | PK |
| Vertical | 6039.104 | 59.10 | -18.93 | 40.17 | 54 | -13.83 | AV |
| Vertical | 13730.024 | 62.61 | -7.23 | 55.38 | 74 | -18.62 | PK |
| Vertical | 13730.024 | 49.46 | -7.23 | 42.23 | 54 | -11.77 | AV |
| Vertical | 20595.038 | 45.84 | 3.51 | 49.35 | 68.2 | -18.85 | PK |
| Vertical | 20595.038 | 34.53 | 3.51 | 38.04 | 54 | -15.96 | AV |
| Horizontal | 6039.092 | 70.92 | -18.93 | 51.98 | 68.2 | -16.22 | PK |
| Horizontal | 6039.092 | 59.03 | -18.93 | 40.09 | 54 | -13.91 | AV |
| Horizontal | 13730.088 | 64.48 | -7.23 | 57.25 | 74 | -16.75 | PK |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Horizontal | 13730.088 | 49.85 | -7.23 | 42.62 | 54 | -11.38 | AV |
| Horizontal | 20595.015 | 48.88 | 3.51 | 52.39 | 68.2 | -15.81 | PK |
| Horizontal | 20595.015 | 34.17 | 3.51 | 37.68 | 54 | -16.32 | AV |

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

| Test Mode: | TX(U-NII-7: 6535-6865MHz)- 802.11ax160 |
|---|---|

| Polar (H/V) | Frequency (MHz) | Reading Level (dBuV/m) | Correct Factor (dB) | Measure-ment (dBuV/m) | Limits (dBuV/m) | Over (dB) | Detector Type |
|---|---|---|---|---|---|---|---|
| Low Channel (6665 MHz)-Above 1G | | | | | | | |
| Vertical | 4679.155 | 70.67 | -20.24 | 50.43 | 74 | -23.57 | PK |
| Vertical | 4679.155 | 59.25 | -20.24 | 39.01 | 54 | -14.99 | AV |
| Vertical | 13330.180 | 61.86 | -7.5 | 54.36 | 74 | -19.64 | PK |
| Vertical | 13330.180 | 49.34 | -7.5 | 41.84 | 54 | -12.16 | AV |
| Vertical | 19995.171 | 49.72 | 8 | 57.72 | 68.2 | -10.48 | PK |
| Vertical | 19995.171 | 34.59 | 8 | 42.59 | 54 | -11.41 | AV |
| Horizontal | 4679.042 | 70.30 | -20.24 | 50.06 | 74 | -23.94 | PK |
| Horizontal | 4679.042 | 59.30 | -20.24 | 39.06 | 54 | -14.94 | AV |
| Horizontal | 13330.172 | 64.93 | -7.5 | 57.43 | 74 | -16.57 | PK |
| Horizontal | 13330.172 | 49.43 | -7.5 | 41.93 | 54 | -12.07 | AV |
| Horizontal | 19995.160 | 45.22 | 8 | 53.22 | 68.2 | -14.98 | PK |
| Horizontal | 19995.160 | 34.44 | 8 | 42.44 | 54 | -11.56 | AV |
| High Channel (6825 MHz)-Above 1G | | | | | | | |
| Vertical | 6039.002 | 70.42 | -18.93 | 51.48 | 68.2 | -16.72 | PK |
| Vertical | 6039.002 | 59.89 | -18.93 | 40.95 | 54 | -13.05 | AV |
| Vertical | 13650.025 | 60.84 | -7.3 | 53.54 | 74 | -20.46 | PK |
| Vertical | 13650.025 | 49.81 | -7.3 | 42.51 | 54 | -11.49 | AV |
| Vertical | 20475.077 | 46.60 | 4.27 | 50.87 | 68.2 | -17.33 | PK |
| Vertical | 20475.077 | 34.40 | 4.27 | 38.67 | 54 | -15.33 | AV |
| Horizontal | 6039.007 | 71.35 | -18.93 | 52.41 | 68.2 | -15.79 | PK |
| Horizontal | 6039.007 | 59.51 | -18.93 | 40.58 | 54 | -13.42 | AV |
| Horizontal | 13650.098 | 64.56 | -7.3 | 57.26 | 74 | -16.74 | PK |
| Horizontal | 13650.098 | 49.61 | -7.3 | 42.31 | 54 | -11.69 | AV |
| Horizontal | 20475.079 | 48.03 | 4.27 | 52.30 | 68.2 | -15.90 | PK |
| Horizontal | 20475.079 | 34.60 | 4.27 | 38.87 | 54 | -15.13 | AV |

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

**U-NII-8: 6885-7115MHz**

| Test Mode : | TX(U-NII-8: 6885-7115MHz) - 802.11ax20 |
|---|---|

| Polar | Frequency | Reading Level | Correct Factor | Measure-ment | Limits | Over | Detector Type |
|---|---|---|---|---|---|---|---|
| (H/V) | (MHz) | (dBuV/m) | (dB) | (dBuV/m) | (dBuV/m) | (dB) | |
| Low Channel (6895 MHz)-Above 1G | | | | | | | |
| Vertical | 4679.868 | 70.56 | -20.24 | 50.32 | 74 | -23.68 | PK |
| Vertical | 4679.868 | 59.90 | -20.24 | 39.66 | 54 | -14.34 | AV |
| Vertical | 13790.127 | 63.63 | -7.23 | 56.40 | 68.2 | -11.80 | PK |
| Vertical | 13790.127 | 49.72 | -7.23 | 42.49 | 54 | -11.51 | AV |
| Vertical | 20685.082 | 48.39 | 3.51 | 51.90 | 68.2 | -16.30 | PK |
| Vertical | 20685.082 | 34.68 | 3.51 | 38.19 | 54 | -15.81 | AV |
| Horizontal | 4679.090 | 70.54 | -20.73 | 49.81 | 74 | -24.19 | PK |
| Horizontal | 4679.090 | 59.20 | -20.73 | 38.47 | 54 | -15.53 | AV |
| Horizontal | 13790.057 | 62.96 | -7.23 | 55.73 | 68.2 | -12.47 | PK |
| Horizontal | 13790.057 | 49.69 | -7.23 | 42.46 | 54 | -11.54 | AV |
| Horizontal | 20685.157 | 47.06 | 3.51 | 50.57 | 68.2 | -17.63 | PK |
| Horizontal | 20685.157 | 34.52 | 3.51 | 38.03 | 54 | -15.97 | AV |
| middle Channel (6995 MHz)-Above 1G | | | | | | | |
| Vertical | 4592.147 | 72.88 | -20.42 | 52.46 | 74 | -21.54 | PK |
| Vertical | 4592.147 | 59.90 | -20.42 | 39.48 | 54 | -14.52 | AV |
| Vertical | 13990.151 | 62.39 | -6.83 | 55.56 | 68.2 | -12.64 | PK |
| Vertical | 13990.151 | 49.50 | -6.83 | 42.67 | 54 | -11.33 | AV |
| Vertical | 20985.016 | 55.24 | -1.95 | 53.29 | 68.2 | -14.91 | PK |
| Vertical | 20985.016 | 44.17 | -1.95 | 42.22 | 54 | -11.78 | AV |
| Horizontal | 4592.019 | 73.06 | -20.42 | 52.65 | 74 | -21.35 | PK |
| Horizontal | 4592.019 | 59.39 | -20.42 | 38.97 | 54 | -15.03 | AV |
| Horizontal | 13990.020 | 60.61 | -6.83 | 53.78 | 68.2 | -14.42 | PK |
| Horizontal | 13990.020 | 49.03 | -6.83 | 42.20 | 54 | -11.80 | AV |
| Horizontal | 20985.060 | 55.54 | -1.95 | 53.59 | 68.2 | -14.61 | PK |
| Horizontal | 20985.060 | 44.77 | -1.95 | 42.82 | 54 | -11.18 | AV |
| High Channel (7115 MHz)-Above 1G | | | | | | | |
| Vertical | 4592.018 | 71.09 | -20.42 | 50.67 | 68.2 | -17.53 | PK |
| Vertical | 4592.018 | 59.66 | -20.42 | 39.24 | 54 | -14.76 | AV |
| Vertical | 14230.136 | 61.76 | -7.12 | 54.64 | 74 | -19.36 | PK |
| Vertical | 14230.136 | 49.00 | -7.12 | 41.88 | 54 | -12.12 | AV |
| Vertical | 21345.006 | 58.92 | -1.91 | 57.01 | 68.2 | -11.19 | PK |
| Vertical | 21345.006 | 44.86 | -1.91 | 42.95 | 54 | -11.05 | AV |
| Horizontal | 6039.020 | 73.78 | -18.93 | 54.85 | 68.2 | -13.35 | PK |
| Horizontal | 6039.020 | 59.82 | -18.93 | 40.89 | 54 | -13.11 | AV |
| Horizontal | 14230.033 | 62.00 | -7.12 | 54.88 | 74 | -19.12 | PK |
| Horizontal | 14230.033 | 49.77 | -7.12 | 42.65 | 54 | -11.35 | AV |
| Horizontal | 21345.082 | 57.21 | -1.91 | 55.30 | 68.2 | -12.90 | PK |
| Horizontal | 21345.082 | 44.63 | -1.91 | 42.72 | 54 | -11.28 | AV |

Note: The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

| Test Mode : | TX(U-NII-8: 6885-7115MHz) - 802.11ax40 |
|---|---|

| Polar (H/V) | Frequency (MHz) | Reading Level (dBuV/m) | Correct Factor (dB) | Measure-ment (dBuV/m) | Limits (dBuV/m) | Over (dB) | Detector Type |
|---|---|---|---|---|---|---|---|
| Low Channel (6925 MHz)-Above 1G | | | | | | | |
| Vertical | 4679.053 | 73.92 | -20.24 | 53.68 | 74 | -20.32 | PK |
| Vertical | 4679.053 | 59.95 | -20.24 | 39.70 | 54 | -14.30 | AV |
| Vertical | 13850.090 | 62.43 | -7.23 | 55.20 | 74 | -18.80 | PK |
| Vertical | 13850.090 | 49.73 | -7.23 | 42.50 | 54 | -11.50 | AV |
| Vertical | 20775.038 | 47.92 | 3.51 | 51.43 | 68.2 | -16.77 | PK |
| Vertical | 20775.038 | 34.12 | 3.51 | 37.63 | 54 | -16.37 | AV |
| Horizontal | 4679.042 | 74.14 | -20.24 | 53.90 | 74 | -20.10 | PK |
| Horizontal | 4679.042 | 59.95 | -20.24 | 39.71 | 54 | -14.29 | AV |
| Horizontal | 13850.129 | 60.88 | -7.23 | 53.65 | 74 | -20.35 | PK |
| Horizontal | 13850.129 | 49.37 | -7.23 | 42.14 | 54 | -11.86 | AV |
| Horizontal | 20775.027 | 46.74 | 3.51 | 50.25 | 68.2 | -17.95 | PK |
| Horizontal | 20775.027 | 34.74 | 3.51 | 38.25 | 54 | -15.75 | AV |
| middle Channel (6965 MHz)-Above 1G | | | | | | | |
| Vertical | 6039.183 | 70.13 | -18.93 | 51.19 | 68.2 | -17.01 | PK |
| Vertical | 6039.183 | 59.44 | -18.93 | 40.51 | 54 | -13.49 | AV |
| Vertical | 13930.102 | 63.27 | -6.83 | 56.44 | 74 | -17.56 | PK |
| Vertical | 13930.102 | 49.71 | -6.83 | 42.88 | 54 | -11.12 | AV |
| Vertical | 20895.157 | 58.46 | -1.95 | 56.51 | 68.2 | -11.69 | PK |
| Vertical | 20895.157 | 44.45 | -1.95 | 42.50 | 54 | -11.50 | AV |
| Horizontal | 6039.115 | 74.81 | -18.93 | 55.88 | 68.2 | -12.32 | PK |
| Horizontal | 6039.115 | 59.85 | -18.93 | 40.91 | 54 | -13.09 | AV |
| Horizontal | 13930.052 | 61.54 | -6.83 | 54.71 | 74 | -19.29 | PK |
| Horizontal | 13930.052 | 49.87 | -6.83 | 43.04 | 54 | -10.96 | AV |
| Horizontal | 20895.068 | 56.45 | -1.95 | 54.50 | 68.2 | -13.70 | PK |
| Horizontal | 20895.068 | 44.92 | -1.95 | 42.97 | 54 | -11.03 | AV |
| High Channel (7085 MHz)-Above 1G | | | | | | | |
| Vertical | 6039.155 | 72.75 | -18.93 | 53.82 | 68.2 | -14.38 | PK |
| Vertical | 6039.155 | 59.69 | -18.93 | 40.76 | 54 | -13.24 | AV |
| Vertical | 14170.086 | 62.12 | -7.12 | 55.00 | 74 | -19.00 | PK |
| Vertical | 14170.086 | 49.39 | -7.12 | 42.27 | 54 | -11.73 | AV |
| Vertical | 21255.148 | 55.12 | -1.91 | 53.21 | 68.2 | -14.99 | PK |
| Vertical | 21255.148 | 44.86 | -1.91 | 42.95 | 54 | -11.05 | AV |
| Horizontal | 6039.174 | 71.56 | -18.93 | 52.63 | 68.2 | -15.57 | PK |
| Horizontal | 6039.174 | 59.99 | -18.93 | 41.06 | 54 | -12.94 | AV |
| Horizontal | 14170.127 | 60.67 | -7.12 | 53.55 | 74 | -20.45 | PK |
| Horizontal | 14170.127 | 49.04 | -7.12 | 41.92 | 54 | -12.08 | AV |
| Horizontal | 21255.183 | 57.05 | -1.91 | 55.14 | 68.2 | -13.06 | PK |
| Horizontal | 21255.183 | 44.21 | -1.91 | 42.30 | 54 | -11.70 | AV |

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

| Test Mode : | TX(U-NII-8: 6885-7115MHz) - 802.11ax80 |
|---|---|

| Polar | Frequency | Reading Level | Correct Factor | Measure-ment | Limits | Over | Detector Type |
|---|---|---|---|---|---|---|---|
| (H/V) | (MHz) | (dBuV/m) | (dB) | (dBuV/m) | (dBuV/m) | (dB) | |
| Low Channel (6945 MHz)-Above 1G | | | | | | | |
| Vertical | 4679.147 | 70.58 | -20.24 | 50.33 | 74 | -23.67 | PK |
| Vertical | 4679.147 | 59.15 | -20.24 | 38.91 | 54 | -15.09 | AV |
| Vertical | 13890.060 | 60.46 | -7.23 | 53.23 | 74 | -20.77 | PK |
| Vertical | 13890.060 | 49.81 | -7.23 | 42.58 | 54 | -11.42 | AV |
| Vertical | 20835.134 | 45.68 | 3.51 | 49.19 | 68.2 | -19.01 | PK |
| Vertical | 20835.134 | 34.34 | 3.51 | 37.85 | 54 | -16.15 | AV |
| Horizontal | 4679.101 | 72.66 | -20.24 | 52.42 | 74 | -21.58 | PK |
| Horizontal | 4679.101 | 59.22 | -20.24 | 38.97 | 54 | -15.03 | AV |
| Horizontal | 13890.173 | 61.30 | -7.23 | 54.07 | 74 | -19.93 | PK |
| Horizontal | 13890.173 | 49.64 | -7.23 | 42.41 | 54 | -11.59 | AV |
| Horizontal | 20835.176 | 47.64 | 3.51 | 51.15 | 68.2 | -17.05 | PK |
| Horizontal | 20835.176 | 34.35 | 3.51 | 37.86 | 54 | -16.14 | AV |
| High Channel (7025 MHz)-Above 1G | | | | | | | |
| Vertical | 6039.059 | 72.02 | -18.93 | 53.09 | 68.2 | -15.11 | PK |
| Vertical | 6039.059 | 59.08 | -18.93 | 40.15 | 54 | -13.85 | AV |
| Vertical | 14050.159 | 60.16 | -6.83 | 53.33 | 74 | -20.67 | PK |
| Vertical | 14050.159 | 49.94 | -6.83 | 43.11 | 54 | -10.89 | AV |
| Vertical | 21075.114 | 55.39 | -1.95 | 53.44 | 68.2 | -14.76 | PK |
| Vertical | 21075.114 | 44.00 | -1.95 | 42.05 | 54 | -11.95 | AV |
| Horizontal | 6039.046 | 71.01 | -18.93 | 52.08 | 68.2 | -16.12 | PK |
| Horizontal | 6039.046 | 59.90 | -18.93 | 40.97 | 54 | -13.03 | AV |
| Horizontal | 14050.024 | 62.75 | -6.83 | 55.92 | 74 | -18.08 | PK |
| Horizontal | 14050.024 | 49.67 | -6.83 | 42.84 | 54 | -11.16 | AV |
| Horizontal | 21075.125 | 55.77 | -1.95 | 53.82 | 68.2 | -14.38 | PK |
| Horizontal | 21075.125 | 44.68 | -1.95 | 42.73 | 54 | -11.27 | AV |

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

| Test Mode: | TX(U-NII-8: 6885-7115MHz) - 802.11ax160 |
|---|---|

| Polar | Frequency | Reading Level | Correct Factor | Measure-ment | Limits | Over | Detector Type |
|---|---|---|---|---|---|---|---|
| (H/V) | (MHz) | (dBuV/m) | (dB) | (dBuV/m) | (dBuV/m) | (dB) | |
| Low Channel (6985 MHz)-Above 1G | | | | | | | |
| Vertical | 4679.116 | 71.43 | -20.24 | 51.19 | 74 | -22.81 | PK |
| Vertical | 4679.116 | 59.91 | -20.24 | 39.67 | 54 | -14.33 | AV |
| Vertical | 13970.146 | 62.05 | -6.83 | 55.22 | 74 | -18.78 | PK |
| Vertical | 13970.146 | 49.51 | -6.83 | 42.68 | 54 | -11.32 | AV |
| Vertical | 20955.005 | 57.68 | -1.95 | 55.73 | 68.2 | -12.47 | PK |
| Vertical | 20955.005 | 44.82 | -1.95 | 42.87 | 54 | -11.13 | AV |
| Horizontal | 4679.171 | 74.56 | -20.24 | 54.32 | 74 | -19.68 | PK |
| Horizontal | 4679.171 | 59.83 | -20.24 | 39.59 | 54 | -14.41 | AV |
| Horizontal | 13970.111 | 60.67 | -6.83 | 53.84 | 74 | -20.16 | PK |
| Horizontal | 13970.111 | 49.90 | -6.83 | 43.07 | 54 | -10.93 | AV |
| Horizontal | 20955.103 | 55.97 | -1.95 | 54.02 | 68.2 | -14.18 | PK |
| Horizontal | 20955.103 | 44.99 | -1.95 | 43.04 | 54 | -10.96 | AV |

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

- ☒Undesirable radiated Undesirable radiated Spurious Emission in Band Edge

Test mode: 802.11AX 20 Frequency(MHz): 5955

| Frequency (MHz) | Polarity | PK(dBuV/m) (VBW=3MHz) | Limit 3m (dBuV/m) |
|---|---|---|---|
| 5892.750 | V | 47.95 | 68.20 |
| 5925.000 | V | 44.93 | 68.20 |

| Frequency (MHz) | Polarity | PK(dBuV/m) (VBW=3MHz) | Limit 3m (dBuV/m) |
|---|---|---|---|
| 5902.375 | H | 47.27 | 68.20 |
| 5925.00 | H | 46.27 | 68.20 |

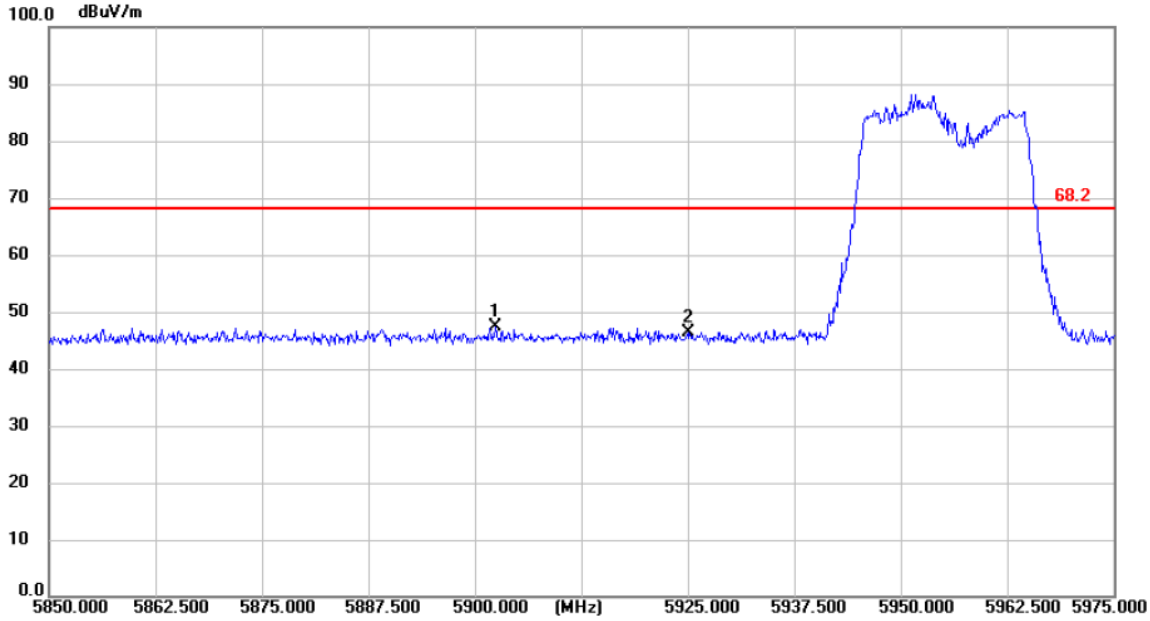
**Note:**
(1) All Readings are Peak Value (VBW=3MHz) and Average Value (VBW=10Hz).
(2) Emission Level= Reading Level+Correct Factor.
(3) Correct Factor= Ant_F + Cab_L – Preamp

U-NII - 5

Test Model Undesirable radiated Spurious Emission in Restricted Band (5925-6425MHz)

☒802.11AX 20

☒5955 Ant.Pol H

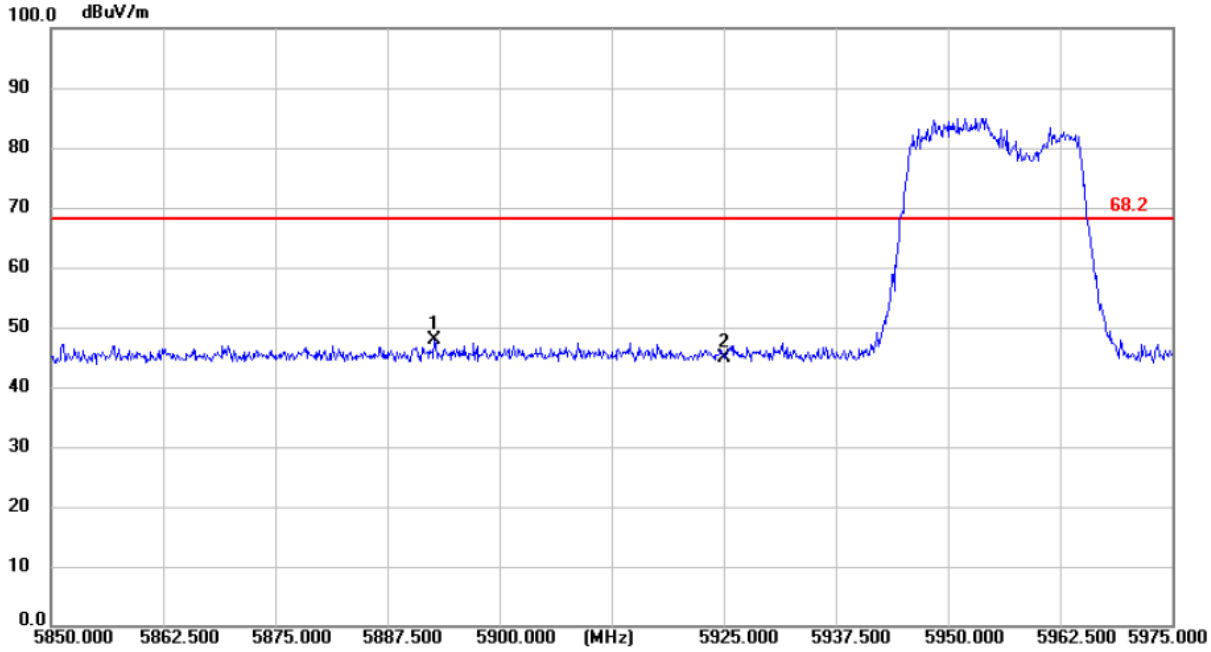



U-NII - 5

Test Model Undesirable radiated Spurious Emission in Restricted Band (5925-6425MHz)

☒802.11AX 20

☒5955 Ant.Pol V



- ☒Undesirable radiated Undesirable radiated Spurious Emission in Band Edge

Test mode: 802.11AX 40 Frequency(MHz): 5965

| Frequency (MHz) | Polarity | PK(dBuV/m) (VBW=3MHz) | Limit 3m (dBuV/m) |
|---|---|---|---|
| 5876.700 | V | 51.08 | 68.20 |
| 5925.000 | V | 45.22 | 68.20 |

| Frequency (MHz) | Polarity | PK(dBuV/m) (VBW=3MHz) | Limit 3m (dBuV/m) |
|---|---|---|---|
| 5911.800 | H | 47.65 | 68.20 |
| 5925.000 | H | 45.12 | 68.20 |

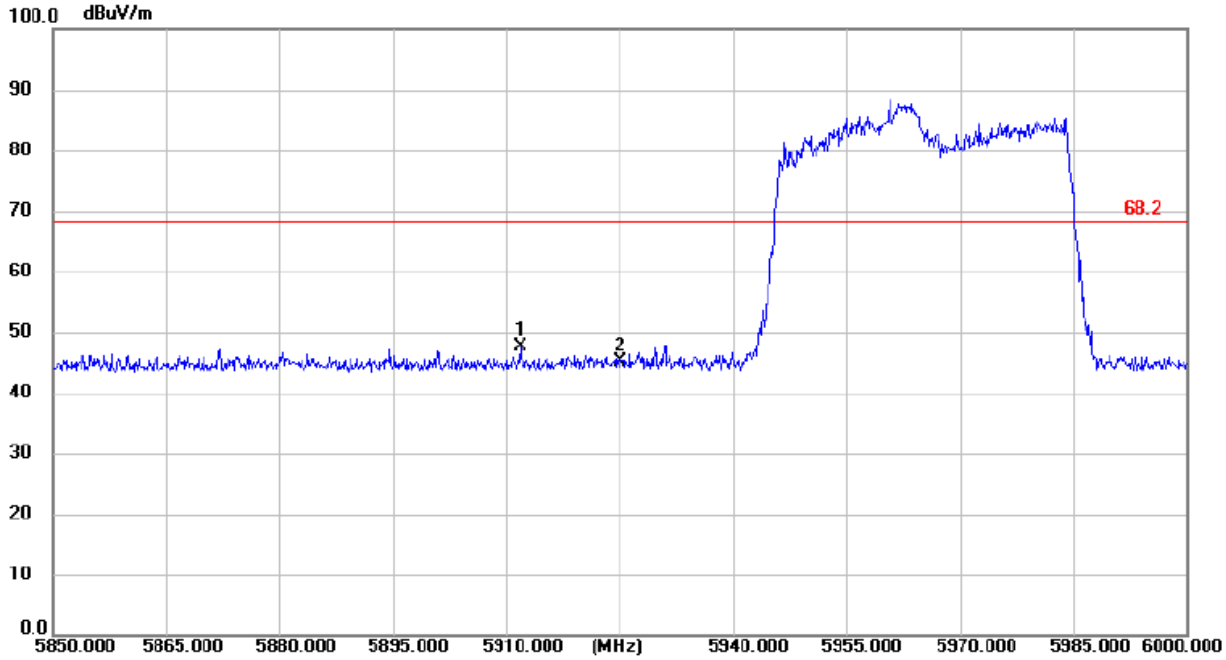
**Note:**
(1) All Readings are Peak Value (VBW=3MHz) and Average Value (VBW=10Hz).
(2) Emission Level= Reading Level+Correct Factor.
(3) Correct Factor= Ant_F + Cab_L - Preamp

U-NII - 5

Test Model Undesirable radiated Spurious Emission in Restricted Band (5925-6425MHz)

☒802.11AX 40

☒5965 Ant.Pol H

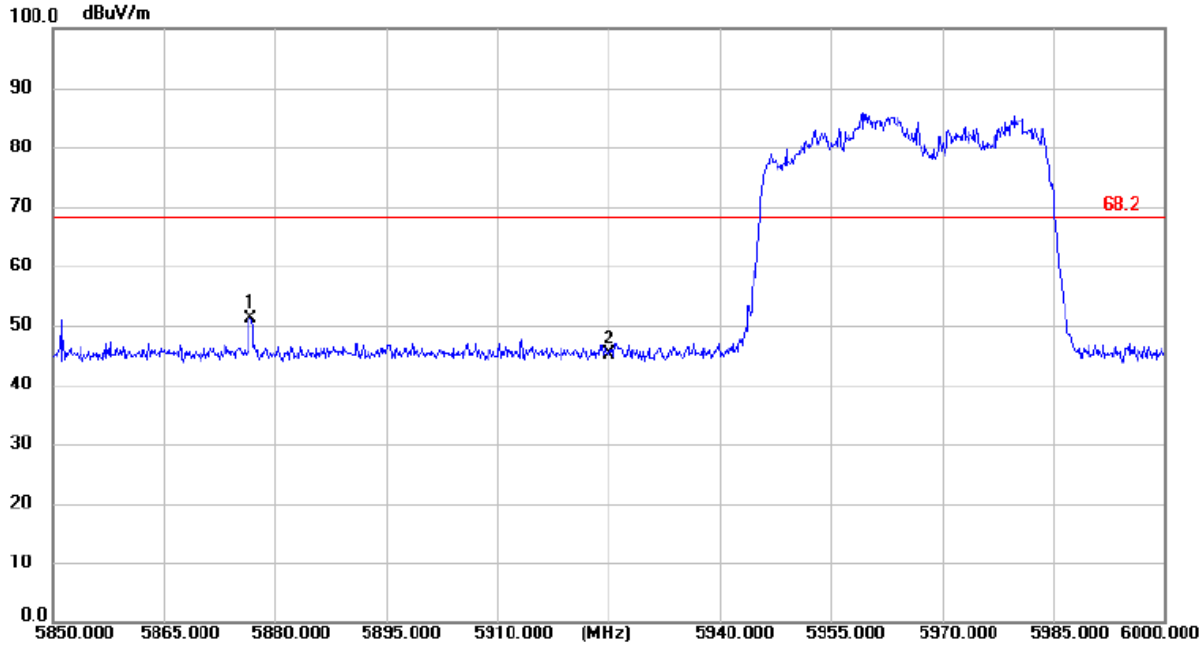



U-NII - 5

Test Model Undesirable radiated Spurious Emission in Restricted Band (5925-6425MHz)

☒802.11AX 40

☒5965 Ant.Pol V



- ☒Undesirable radiated Undesirable radiated Spurious Emission in Band Edge

Test mode: 802.11AX 80 Frequency(MHz): 5985

| Frequency (MHz) | Polarity | PK(dBuV/m) (VBW=3MHz) | Limit 3m (dBuV/m) |
|---|---|---|---|
| 5856.200 | V | 47.22 | 68.20 |
| 5925.000 | V | 45.02 | 68.20 |

| Frequency (MHz) | Polarity | PK(dBuV/m) (VBW=3MHz) | Limit 3m (dBuV/m) |
|---|---|---|---|
| 5862.200 | H | 47.12 | 68.20 |
| 5925.000 | H | 45.27 | 68.20 |

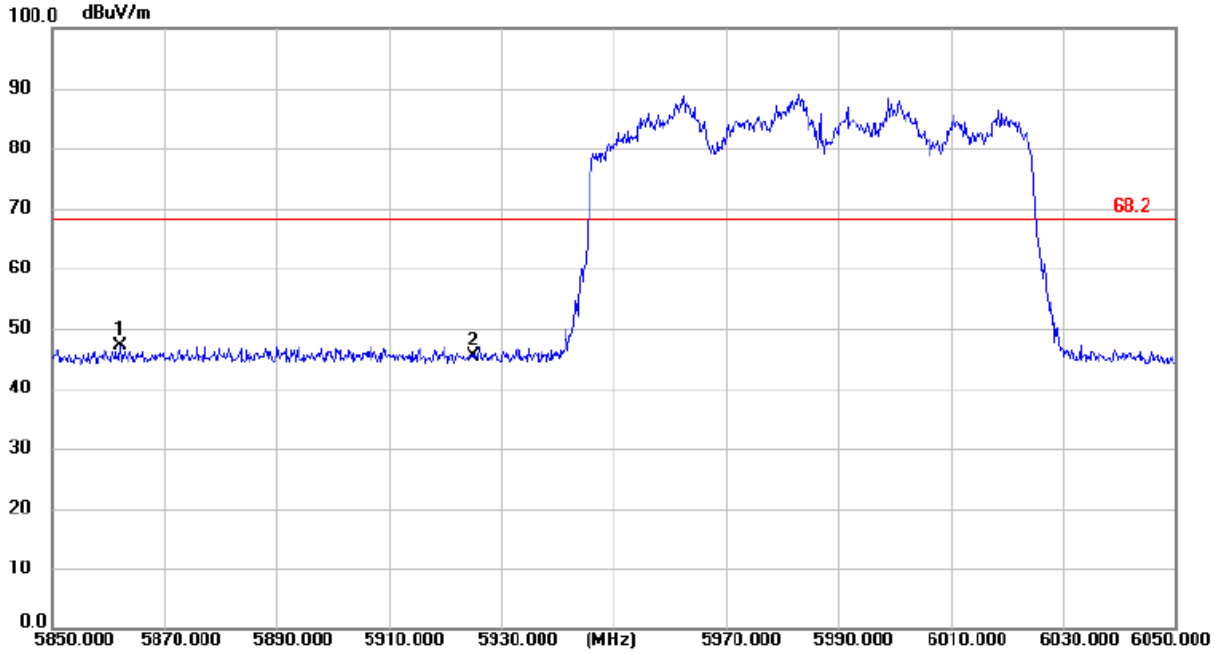
**Note:**
(1) All Readings are Peak Value (VBW=3MHz) and Average Value (VBW=10Hz).
(2) Emission Level= Reading Level+Correct Factor.
(3) Correct Factor= Ant_F + Cab_L - Preamp

U-NII - 5

Test Model Undesirable radiated Spurious Emission in Restricted Band (5925-6425MHz)

☒802.11AX 80

☒5985 Ant.Pol H

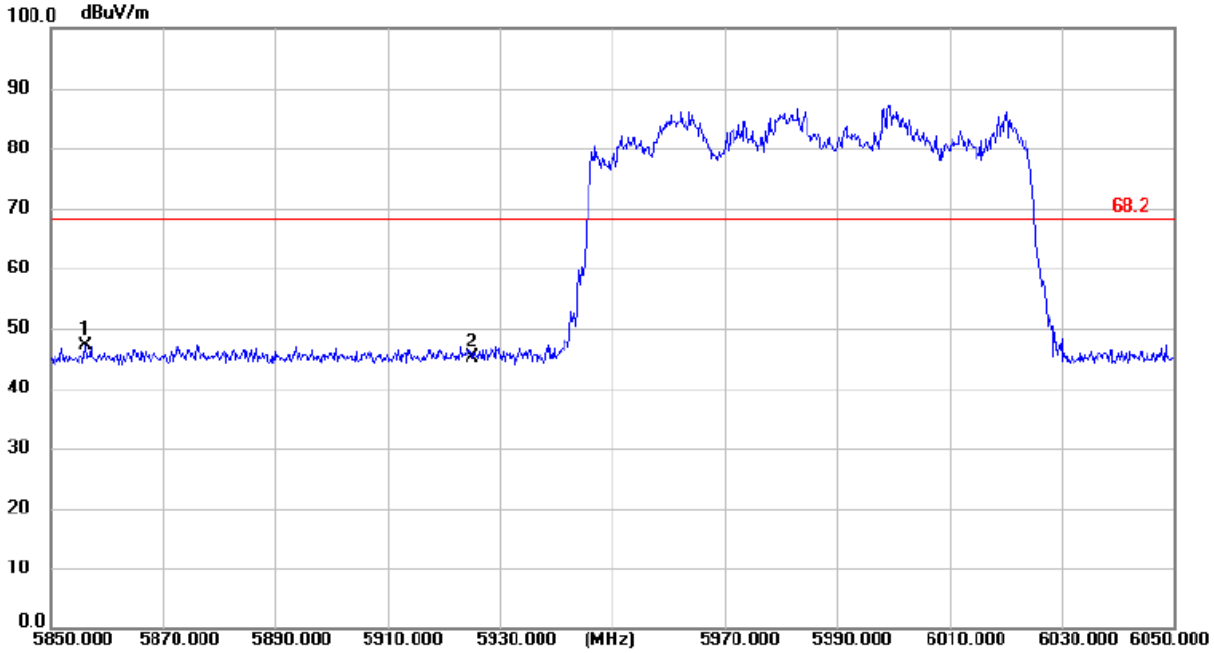



U-NII - 5

Test Model Undesirable radiated Spurious Emission in Restricted Band (5925-6425MHz)

☒802.11AX 80

☒5985 Ant.Pol V



- ☒Undesirable radiated Undesirable radiated Spurious Emission in Band Edge

Test mode: 802.11AX 160 Frequency(MHz): 6025

| Frequency (MHz) | Polarity | PK(dBuV/m) (VBW=3MHz) | Limit 3m (dBuV/m) |
|---|---|---|---|
| 5907.000 | V | 47.02 | 68.20 |
| 5925.000 | V | 44.66 | 68.20 |

| Frequency (MHz) | Polarity | PK(dBuV/m) (VBW=3MHz) | Limit 3m (dBuV/m) |
|---|---|---|---|
| 5864.400 | H | 46.84 | 68.20 |
| 5925.000 | H | 44.37 | 68.20 |

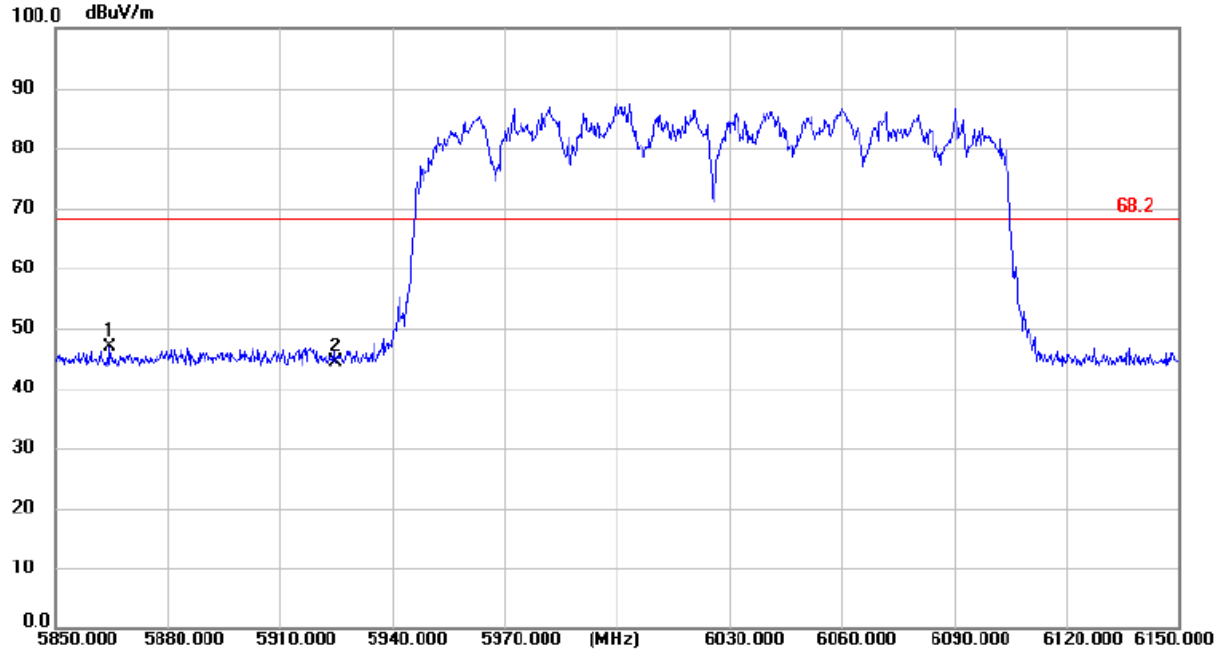
**Note:**
(1) All Readings are Peak Value (VBW=3MHz) and Average Value (VBW=10Hz).
(2) Emission Level= Reading Level+Correct Factor.
(3) Correct Factor= Ant_F + Cab_L - Preamp

U-NII - 5

Test Model Undesirable radiated Spurious Emission in Restricted Band (5925-6425MHz)

☒802.11AX 160

☒6025 Ant.Pol H

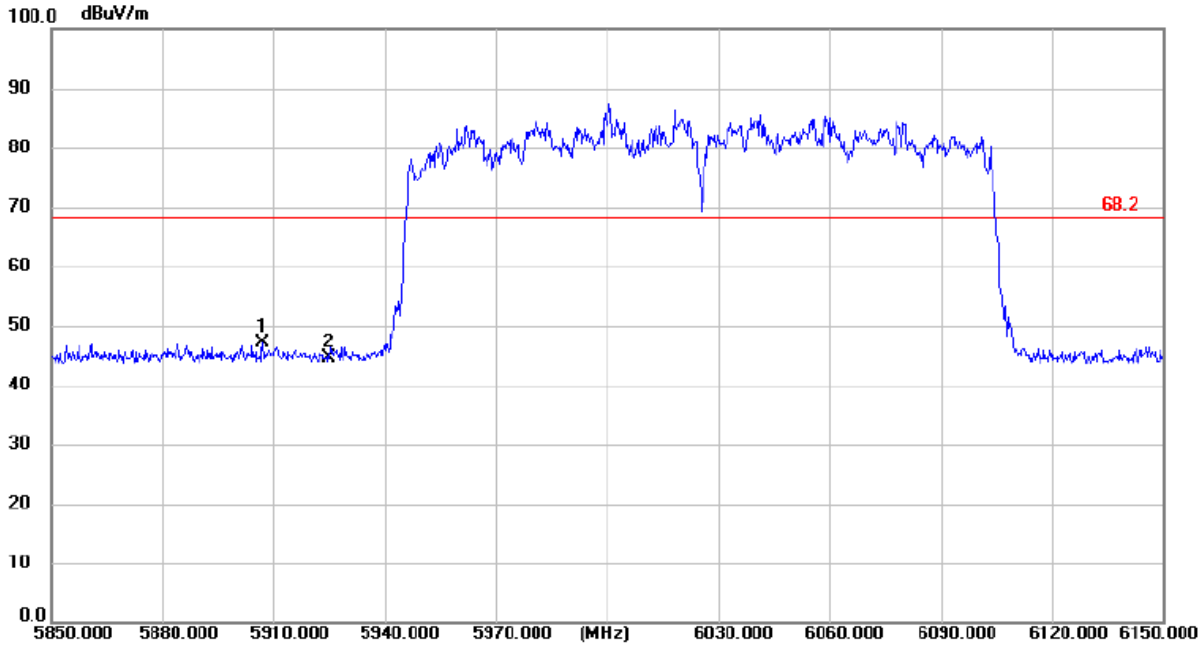



U-NII - 5

Test Model Undesirable radiated Spurious Emission in Restricted Band (5925-6425MHz)

☒802.11AX 160

☒6025 Ant.Pol V



- ☒Undesirable radiated Undesirable radiated Spurious Emission in Band Edge

Test mode: 802.11AX 20 Frequency(MHz): 7115

| Frequency (MHz) | Polarity | PK(dBuV/m) (VBW=3MHz) | Limit 3m (dBuV/m) |
|---|---|---|---|
| 7125.000 | V | 67.66 | 68.20 |
| 7160.000 | V | 49.71 | 68.20 |

| Frequency (MHz) | Polarity | PK(dBuV/m) (VBW=3MHz) | Limit 3m (dBuV/m) |
|---|---|---|---|
| 7125.000 | H | 67.24 | 68.20 |
| 7228.400 | H | 49.28 | 68.20 |

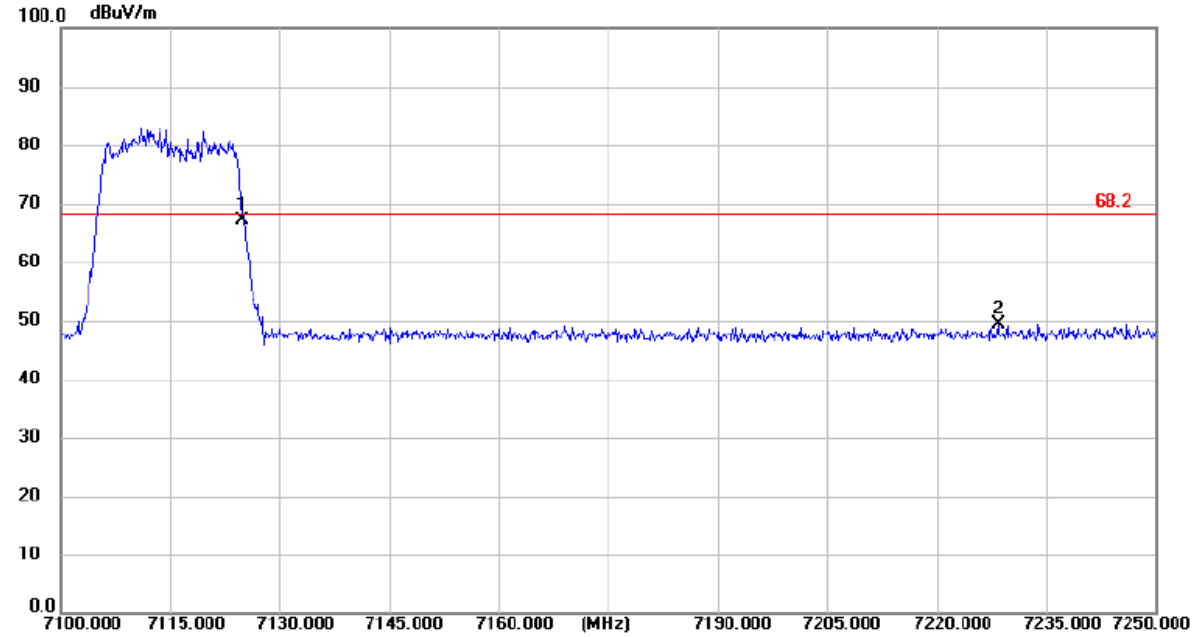
**Note:**
(1) All Readings are Peak Value (VBW=3MHz) and Average Value (VBW=10Hz).
(2) Emission Level= Reading Level+Correct Factor.
(3) Correct Factor= Ant_F + Cab_L - Preamp

U-NII - 8

Test Model Undesirable radiated Spurious Emission in Restricted Band (6885-7115MHz)

☒802.11AX 20

☒7115 Ant.Pol H

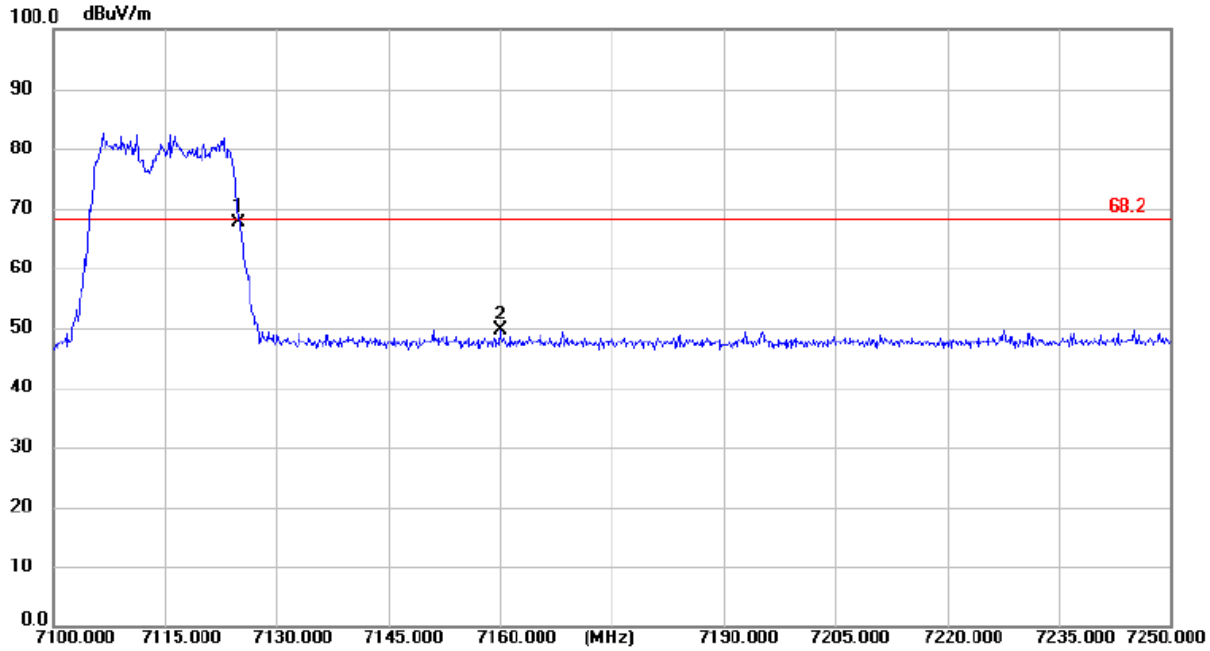



U-NII - 8

Test Model Undesirable radiated Spurious Emission in Restricted Band (6885-7115MHz)

☒802.11AX 20

☒7115 Ant.Pol V



- ☒Undesirable radiated Undesirable radiated Spurious Emission in Band Edge

Test mode: 802.11AX 40 Frequency(MHz): 7085

| Frequency (MHz) | Polarity | PK(dBuV/m) (VBW=3MHz) | Limit 3m (dBuV/m) |
|---|---|---|---|
| 7125.000 | V | 47.48 | 68.20 |
| 7212.400 | V | 49.61 | 68.20 |

| Frequency (MHz) | Polarity | PK(dBuV/m) (VBW=3MHz) | Limit 3m (dBuV/m) |
|---|---|---|---|
| 7125.000 | H | 47.28 | 68.20 |
| 7199.000 | H | 49.62 | 68.20 |

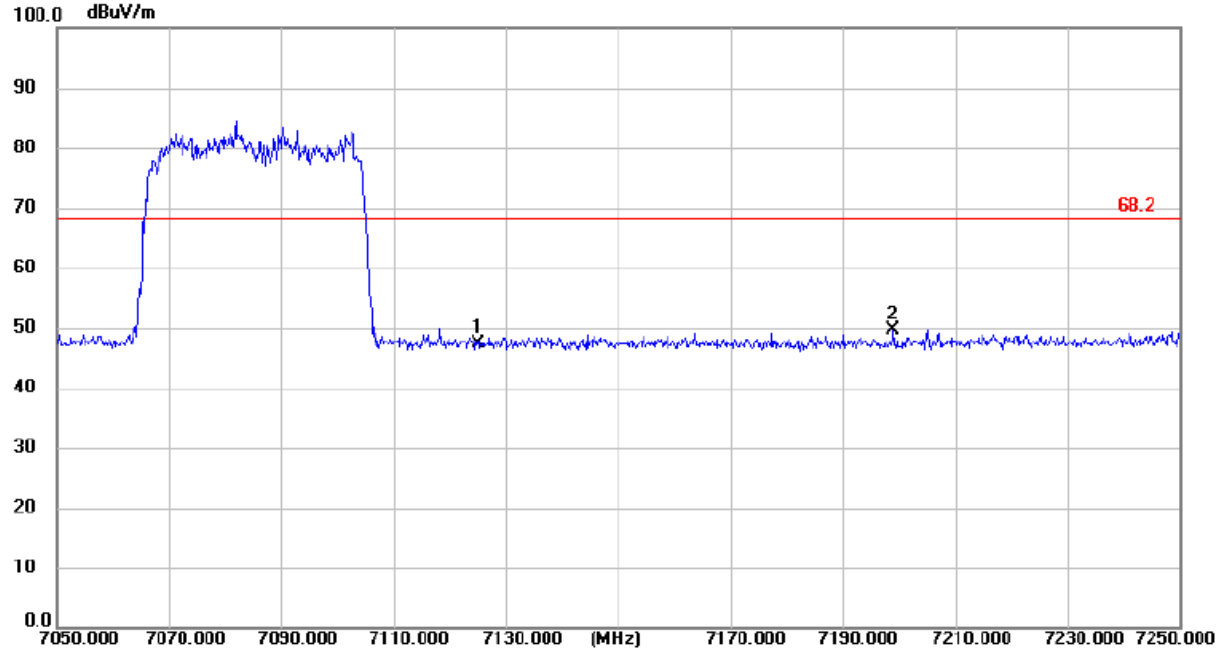
**Note:**
(1) All Readings are Peak Value (VBW=3MHz) and Average Value (VBW=10Hz).
(2) Emission Level= Reading Level+Correct Factor.
(3) Correct Factor= Ant_F + Cab_L - Preamp

U-NII - 8

Test Model Undesirable radiated Spurious Emission in Restricted Band (6885-7115MHz)

☒802.11AX 40

☒7085 Ant.Pol H

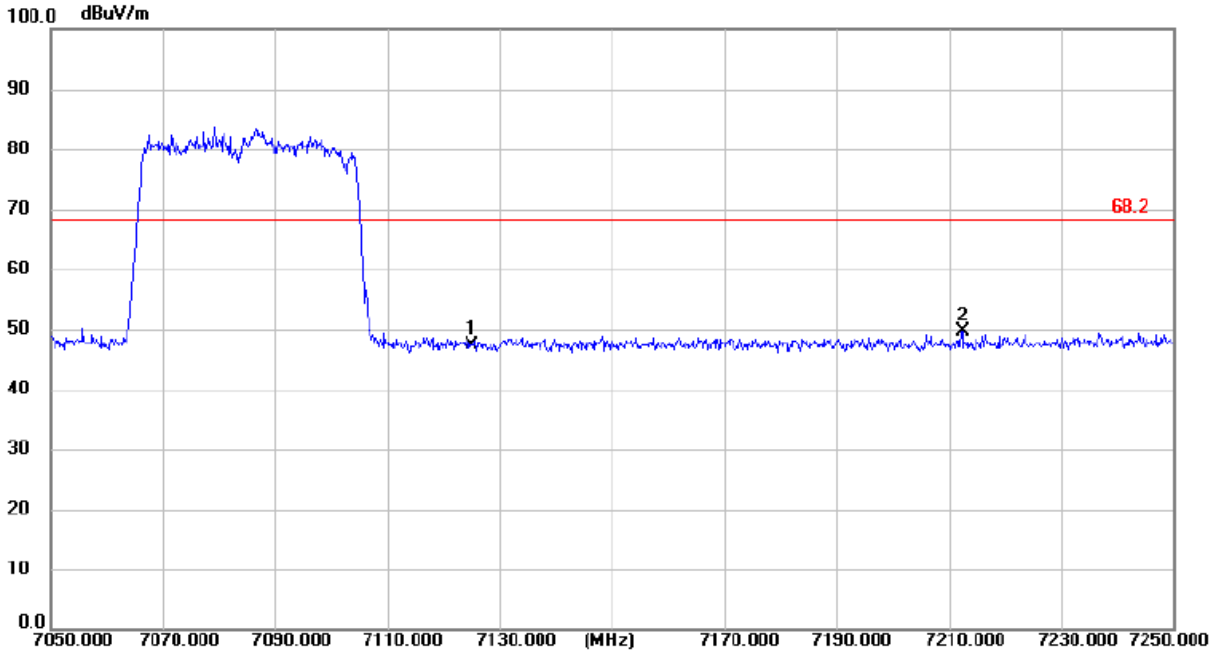



U-NII - 8

Test Model Undesirable radiated Spurious Emission in Restricted Band (6885-7115MHz)

☒802.11AX 40

☒7085 Ant.Pol V



- ☒Undesirable radiated Undesirable radiated Spurious Emission in Band Edge

Test mode: 802.11AX 80 Frequency(MHz): 7025

| Frequency (MHz) | Polarity | PK(dBuV/m) (VBW=3MHz) | Limit 3m (dBuV/m) |
|---|---|---|---|
| 7085.000 | V | 48.05 | 68.20 |
| 7153.200 | V | 49.00 | 68.20 |

| Frequency (MHz) | Polarity | PK(dBuV/m) (VBW=3MHz) | Limit 3m (dBuV/m) |
|---|---|---|---|
| 7085.000 | H | 47.69 | 68.20 |
| 7135.200 | H | 49.66 | 68.20 |

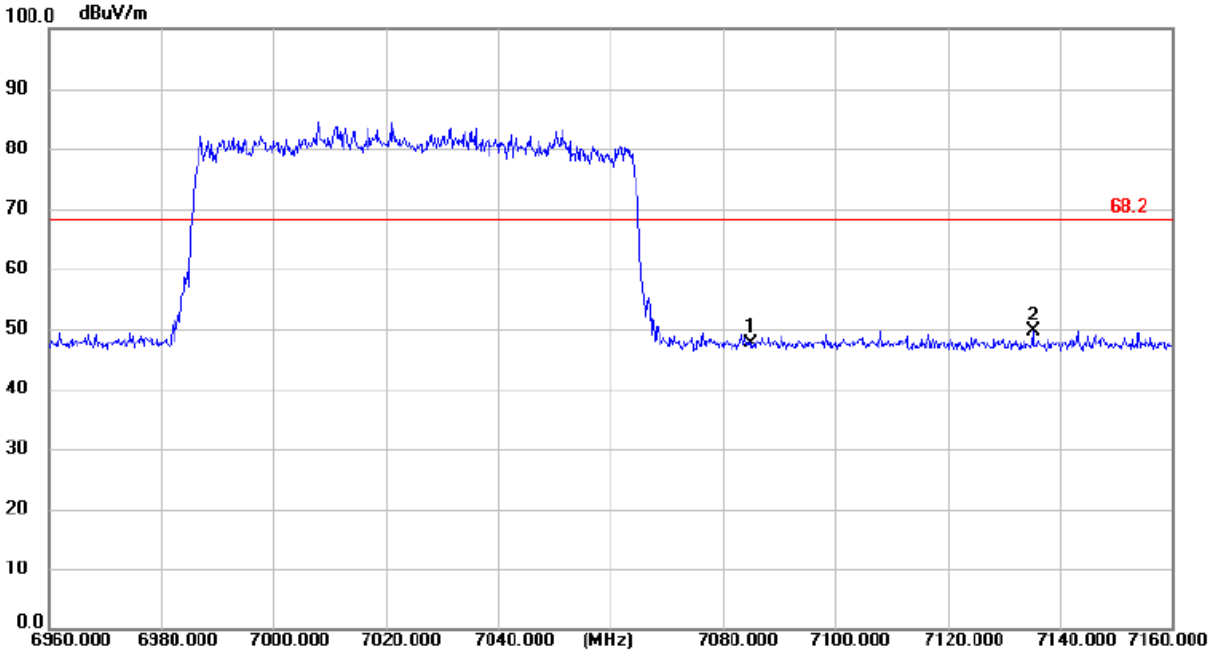
**Note:**
(1) All Readings are Peak Value (VBW=3MHz) and Average Value (VBW=10Hz).
(2) Emission Level= Reading Level+Correct Factor.
(3) Correct Factor= Ant_F + Cab_L - Preamp

U-NII - 8

Test Model Undesirable radiated Spurious Emission in Restricted Band (6885-7115MHz)

☒802.11AX 80

☒7025 Ant.Pol H

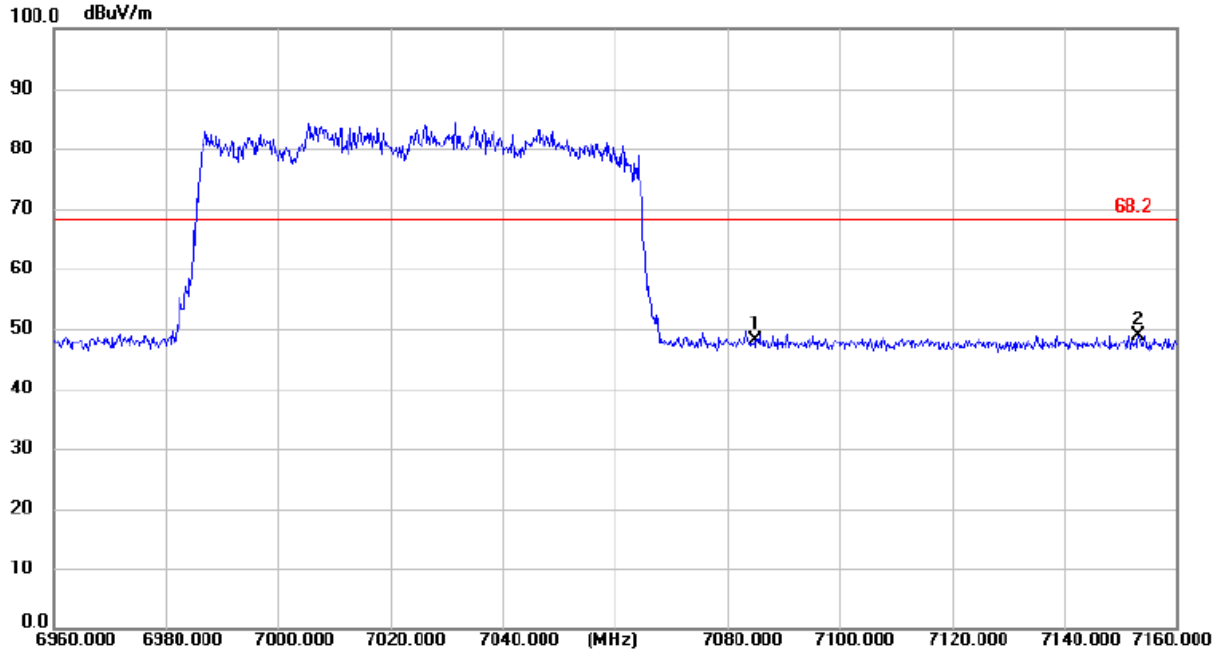



U-NII - 8

Test Model Undesirable radiated Spurious Emission in Restricted Band (6885-7115MHz)

☒802.11AX 80

☒7025 Ant.Pol V



- ☒Undesirable radiated Undesirable radiated Spurious Emission in Band Edge

Test mode: 802.11AX 160 Frequency(MHz): 6985

| Frequency (MHz) | Polarity | PK(dBuV/m) (VBW=3MHz) | Limit 3m (dBuV/m) |
|---|---|---|---|
| 7125.000 | V | 46.49 | 68.20 |
| 7172.860 | V | 48.98 | 68.20 |

| Frequency (MHz) | Polarity | PK(dBuV/m) (VBW=3MHz) | Limit 3m (dBuV/m) |
|---|---|---|---|
| 7125.000 | H | 46.21 | 68.20 |
| 7188.820 | H | 48.57 | 68.20 |

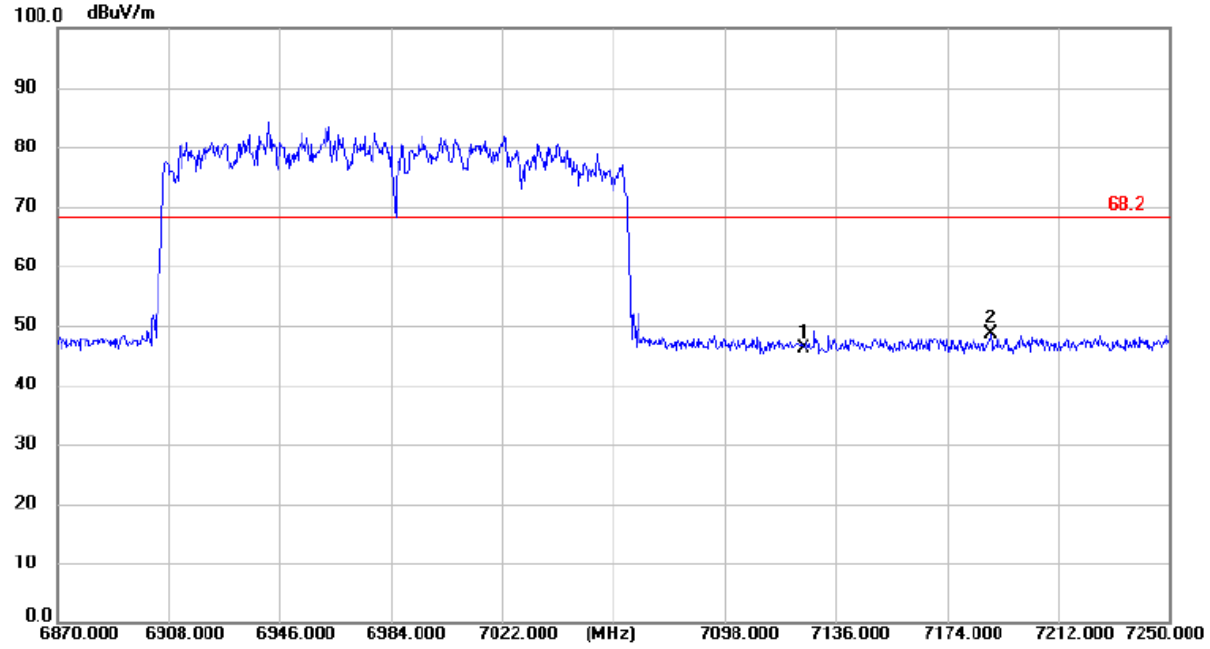
**Note:**
(1) All Readings are Peak Value (VBW=3MHz) and Average Value (VBW=10Hz).
(2) Emission Level= Reading Level+Correct Factor.
(3) Correct Factor= Ant_F + Cab_L - Preamp

U-NII - 8

Test Model Undesirable radiated Spurious Emission in Restricted Band (6885-7115MHz)

☒802.11AX 160

☒6985 Ant.Pol H

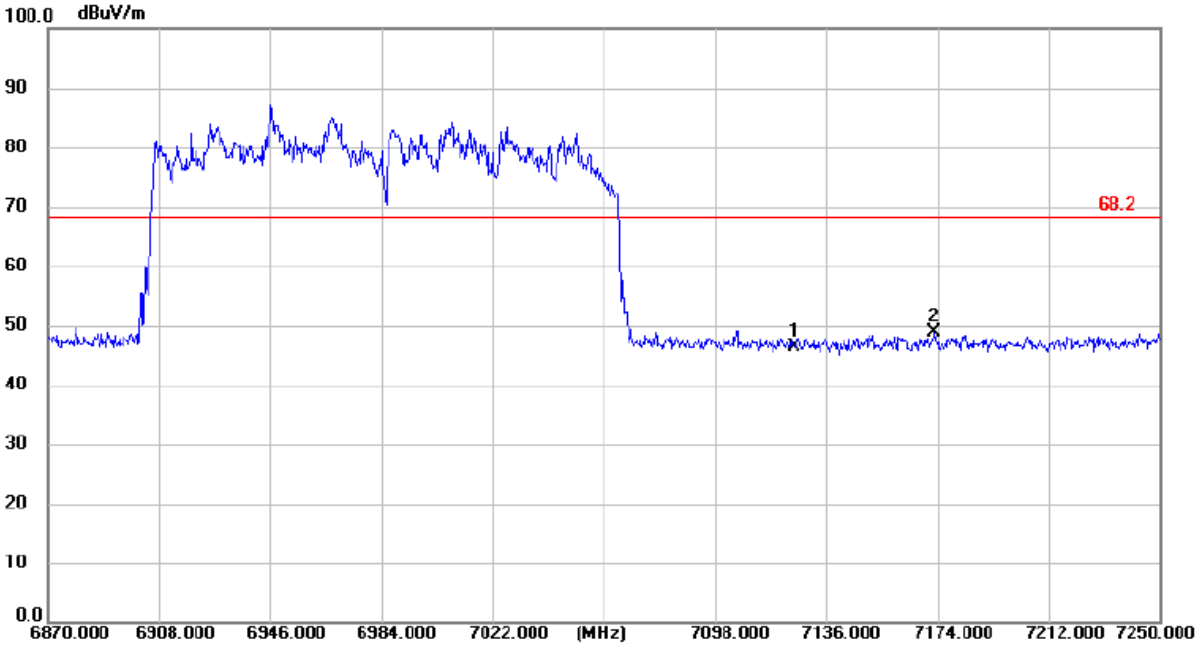



U-NII - 8

Test Model Undesirable radiated Spurious Emission in Restricted Band (6885-7115MHz)

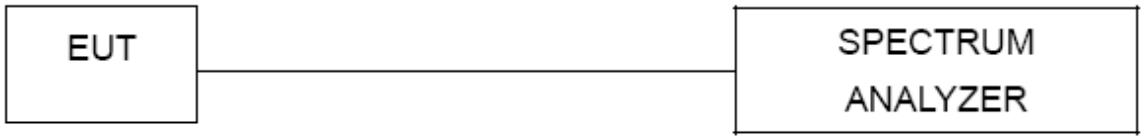
☒802.11AX 160

☒6985 Ant.Pol V



# 8. Power Spectral Density Test

## 8.1 Block Diagram Of Test Setup




## 8.2 Limit

For a standard power access point (6SD) and fixed client (6FC) device operating in the 5.925–6.425 GHz and 6.525–6.875 GHz bands, the maximum power spectral density must not exceed 23 dBm e.i.r.p in any 1-megahertz band. In addition, the maximum e.i.r.p. over the frequency band of operation must not exceed 36 dBm. For outdoor devices, the maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

For an indoor access point (6ID) operating in the 5.925–7.125 GHz band, the maximum power spectral density must not exceed 5 dBm e.i.r.p. in any 1-megahertz band. In addition, the maximum e.i.r.p. over the frequency band of operation must not exceed 30 dBm.

For a subordinate device (6PP) operating under the control of an indoor access point in the 5.925–7.125 GHz band, the maximum power spectral density must not exceed 5 dBm e.i.r.p in any 1-megahertz band, and the maximum e.i.r.p. over the frequency band of operation must not exceed 30 dBm.

For client devices(6FX), except for fixed client devices as defined in this subpart, operating under the control of a standard power access point in 5.925–6.425 GHz and 6.525–6.875 GHz bands, the maximum power spectral density must not exceed 17 dBm e.i.r.p. in any 1-megahertz band, and the maximum e.i.r.p. over the frequency band of operation must not exceed 30 dBm and the device must limit its power to no more than 6 dB below its associated standard power access point's authorized transmit power.

For client devices(6XD) operating under the control of an indoor access point in the 5.925–7.125 GHz bands, the maximum power spectral density must not exceed −1 dBm e.i.r.p. in any 1-megahertz band, and the maximum e.i.r.p. over the frequency band of operation must not exceed 24 dBm.

## 8.3 Test Procedure

For devices operating in the bands 5.925–7.125 GHz, the above procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in § 15.407(a)(5). For devices operating in the band 5.725-5.85 GHz, the rules specify a measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus a narrower RBW may need to be used. The rules permit the use of a RBWs less than 1 MHz, or 500 kHz, “provided that the measured power is integrated over the full reference bandwidth” to show the total power over the specified measurement bandwidth (i.e., 1 MHz, or 500 kHz). If measurements are performed using a reduced resolution bandwidth (< 1 MHz, or < 500 kHz) and integrated over 1 MHz, or 500 KHz bandwidth, the following adjustments to the procedures apply:
a) Set RBW ≥ 1/T, where T is defined in section II.B.l.a).
b) Set VBW ≥ 3 RBW.
c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add 10log(500kHz/RBW) to the measured result, whereas RBW (< 500 KHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.
d) If measurement bandwidth of Maximum PSD is specified in 1 MHz, add 10log(1MHz/RBW) to the measured result, whereas RBW (< 1 MHz) is the reduced resolution bandwidth of spectrum analyzer set during measurement.
e) Care must be taken to ensure that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.

Note: As a practical matter, it is recommended to use reduced RBW of 100 KHz for the sections 5.c) and 5.d) above, since RBW=100 KHZ is available on nearly all spectrum analyzers.

## 8.4 EUT Operating Conditions

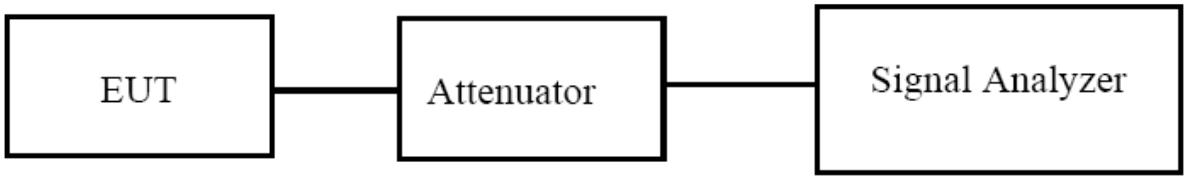
The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

## 8.5 Test Result

Please refer to Appendix E
Test Result: Pass

# 9. 26dB & 99% Emission Bandwidth

## 9.1 Block Diagram Of Test Setup




## 9.2 Limit

The maximum transmitter channel bandwidth for U–NII devices in the 5.925–7.125 GHz band is 320 megahertz.

## 9.3 Test Procedure

a) Set RBW = approximately 1% of the emission bandwidth.
b) Set the VBW > RBW.
c) Detector = Peak.
d) Trace mode = max hold.
e) Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.
The following procedure shall be used for measuring (99 %) power bandwidth:
1. Set center frequency to the nominal EUT channel center frequency.
2. Set span = 1.5 times to 5.0 times the OBW.
3. Set RBW = 1 % to 5 % of the OBW
4. Set VBW ≥ 3 · RBW
5. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
6. Use the 99 % power bandwidth function of the instrument (if available).
7. If the instrument does not have a 99 % power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.

## 9.4 EUT Operating Conditions

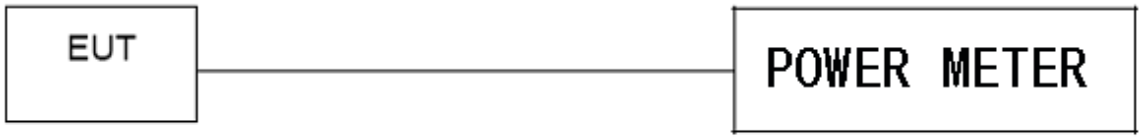
The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

## 9.5 Test Result

Please refer to Appendix C and Appendix D
Test Result: Pass

# 10. Maximum Conducted Output Power and Maximum EIRP

## 10.1 Block Diagram Of Test Setup




## 10.2 Limit

**According to FCC §15.407**

For a standard power access point (6SD) and fixed client (6FC) device operating in the 5.925–6.425 GHz and 6.525–6.875 GHz bands, the maximum power spectral density must not exceed 23 dBm e.i.r.p in any 1-megahertz band. In addition, the maximum e.i.r.p. over the frequency band of operation must not exceed 36 dBm. For outdoor devices, the maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

For an indoor access point (6ID) operating in the 5.925–7.125 GHz band, the maximum power spectral density must not exceed 5 dBm e.i.r.p. in any 1-megahertz band. In addition, the maximum e.i.r.p. over the frequency band of operation must not exceed 30 dBm.

For a subordinate device (6PP) operating under the control of an indoor access point in the 5.925–7.125 GHz band, the maximum power spectral density must not exceed 5 dBm e.i.r.p in any 1-megahertz band, and the maximum e.i.r.p. over the frequency band of operation must not exceed 30 dBm.

For client devices(6FX), except for fixed client devices as defined in this subpart, operating under the control of a standard power access point in 5.925–6.425 GHz and 6.525–6.875 GHz bands, the maximum power spectral density must not exceed 17 dBm e.i.r.p. in any 1-megahertz band, and the maximum e.i.r.p. over the frequency band of operation must not exceed 30 dBm and the device must limit its power to no more than 6 dB below its associated standard power access point's authorized transmit power.

For client devices(6XD) operating under the control of an indoor access point in the 5.925–7.125 GHz bands, the maximum power spectral density must not exceed −1 dBm e.i.r.p. in any 1-megahertz band, and the maximum e.i.r.p. over the frequency band of operation must not exceed 24 dBm.

## 10.3 Test Procedure

Maximum conducted output power may be measured using a spectrum analyzer/EMI receiver or an RF power meter.
1. Device Configuration
If possible, configure or modify the operation of the EUT so that it transmits continuously at its maximum power control level (see section II.B.).
a) The intent is to test at 100 percent duty cycle; however a small reduction in duty cycle (to no lower than 98 percent) is permitted if required by the EUT for amplitude control purposes. Manufacturers are expected to provide software to the test lab to permit such continuous operation.

b) If continuous transmission (or at least 98 percent duty cycle) cannot be achieved due to hardware limitations (e.g., overheating), the EUT shall be operated at its maximum power control level with the transmit duration as long as possible and the duty cycle as high as possible.

2. Measurement using a Spectrum Analyzer or EMI Receiver (SA)
Measurement of maximum conducted output power using a spectrum analyzer requires integrating the spectrum across a frequency span that encompasses, at a minimum, either the EBW or the 99-percent occupied bandwidth of the signal.1 However, the EBW must be used to determine bandwidth dependent limits on maximum conducted output power in accordance with § 15.407(a).
a) The test method shall be selected as follows: (i) Method SA-1 or SA-1 Alternative (averaging with the EUT transmitting at full power throughout each sweep) shall be applied if either of the following conditions can be satisfied:
• The EUT transmits continuously (or with a duty cycle ≥ 98 percent).
• Sweep triggering or gating can be implemented in a way that the device transmits at the maximum power control level throughout the duration of each of the instrument sweeps to be averaged. This condition can generally be achieved by triggering the instrument's sweep if the duration of the sweep (with the analyzer configured as in Method SA-1, below) is equal to or shorter than the duration T of each transmission from the EUT and if those transmissions exhibit full power throughout their durations.
(ii) Method SA-2 or SA-2 Alternative (averaging across on and off times of the EUT transmissions, followed by duty cycle correction) shall be applied if the conditions of (i) cannot be achieved and the transmissions exhibit a constant duty cycle during the measurement duration. Duty cycle will be considered to be constant if variations are less than ± 2 percent.
(iii) Method SA-3 (RMS detection with max hold) or SA-3 Alternative (reduced VBW with max hold) shall be applied if the conditions of (i) and (ii) cannot be achieved.
b) 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 ≥ 2 Span / RBW. (This ensures that bin-to-bin spacing is ≤ RBW/2, so that narrowband signals are not lost between frequency bins.)
(v) Sweep time = auto.
(vi) Detector = RMS (i.e., power averaging), if available. Otherwise, use sample detector mode.
(vii) If transmit duty cycle < 98 percent, 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 percent, 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 (i.e., 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

## 10.4 EUT Operating Conditions

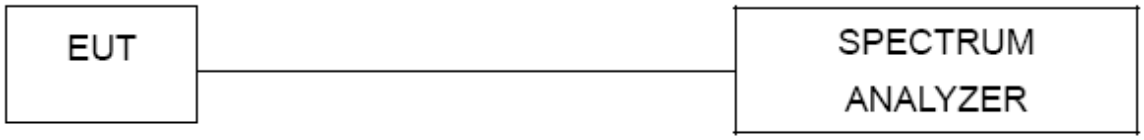
The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

## 10.5 Test Result

Please refer to Appendix B:
Test Result: Pass

# 11. In-Band Emission (Emission Mask)

## 11.1 Block Diagram Of Test Setup




## 11.2 Limit

According to FCC §15.407(b)
For transmitters operating within the 5.925–7.125 GHz band: Any emissions outside of the 5.925–7.125 GHz band must not exceed an e.i.r.p. of −27 dBm/MHz.
(7) For transmitters operating within the 5.925–7.125 GHz bands: Power spectral density must be suppressed by 20 dB at 1 MHz outside of channel edge, by 28 dB at one channel bandwidth from the channel center, and by 40 dB at one- and one-half times the channel bandwidth away from channel center. At frequencies between one megahertz outside an unlicensed device's channel edge and one channel bandwidth from the center of the channel, the limits must be linearly interpolated between 20 dB and 28 dB suppression, and at frequencies between one and one- and one-half times an unlicensed device's channel bandwidth, the limits must be linearly interpolated between 28 dB and 40 dB suppression. Emissions removed from the channel center by more than one- and one-half times the channel bandwidth must be suppressed by at least 40 dB.

## 11.3 Test Procedure

1. Connect output of the antenna port to a spectrum analyzer or EMI receiver, with appropriate attenuation, as to
not damage the instrumentation.
2. Set the reference level of the measuring equipment in accordance with procedure 4.1.5.2 of ANSI C63.10-2013.
3. Measure the 26 dB EBW using the test procedure 12.4.1 of ANSI C63.10-2013. (This will be used to determine the channel edge.)
4. Measure the power spectral density (which will be used for emissions mask reference) using the following procedure:
a) Set the span to encompass the entire 26 dB EBW of the signal.
b) Set RBW = same RBW used for 26 dB EBW measurement.
c) Set VBW ≥ 3 X RBW
d) Number of points in sweep ≥ [2 X span / RBW].
e) Sweep time = auto.
f) Detector = RMS (i.e., power averaging)
g) Trace average at least 100 traces in power averaging (rms) mode.
h) Use the peak search function on the instrument to find the peak of the spectrum.
5. For the purposes of developing the emission mask, the channel bandwidth is defined as the 26 dB EBW or 99% of the occupied bandwidth.
6. Using the measuring equipment limit line function, develop the emissions mask based on the following requirements. The emissions power spectral density must be reduced below the peak power spectral density

(in dB) as follows:
a) Suppressed by 20 dB at 1 MHz outside of the channel edge. (The channel edge is defined as the 26-dB point on either side of the carrier center frequency.)
b) Suppressed by 28 dB at one channel bandwidth from the channel center.
c) Suppressed by 40 dB at one- and one-half times the channel bandwidth from the channel center.

7. Adjust the span to encompass the entire mask as necessary.
8. Clear trace.
9. Trace average at least 100 traces in power averaging (rms) mode.
10. Adjust the reference level as necessary so that the crest of the channel touches the top of the emission mask

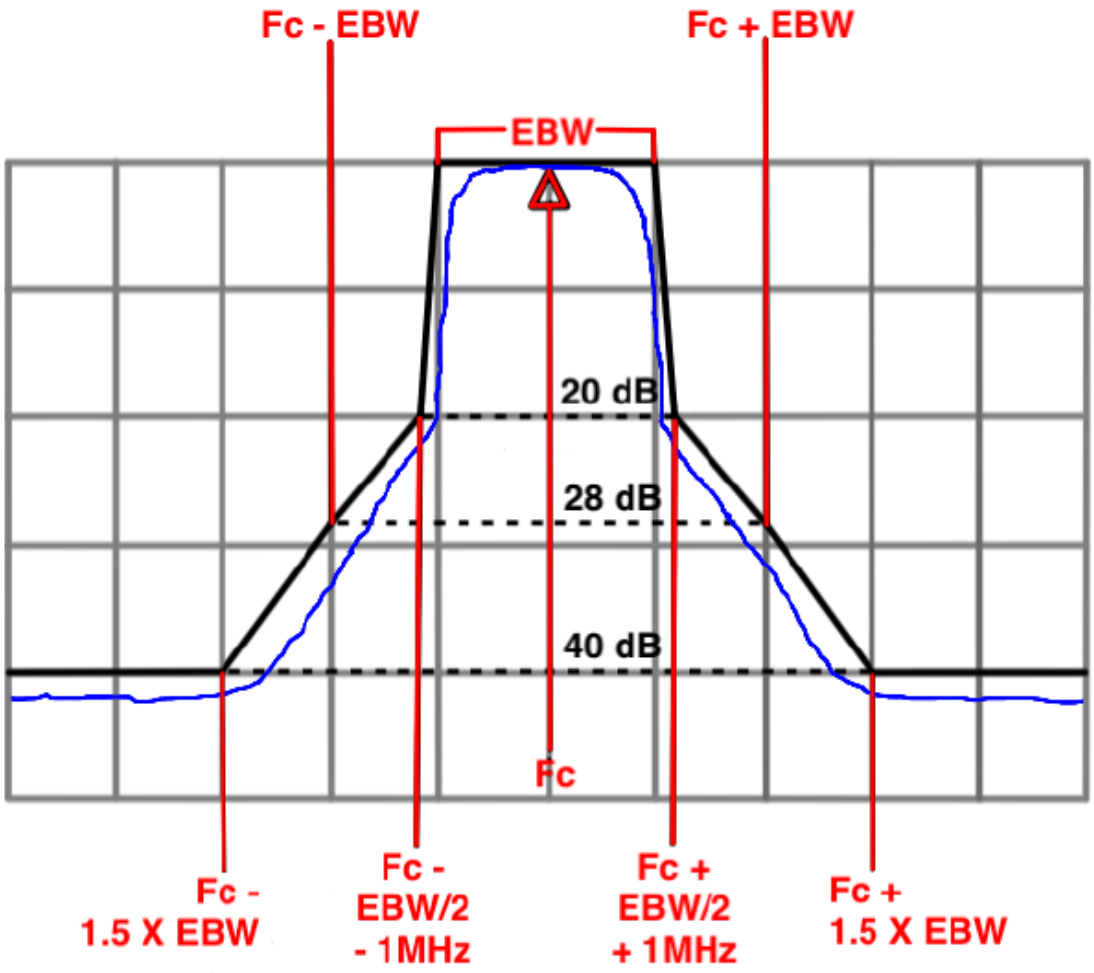



Figure 5. Generic Emission Mask

If a device utilizes channel puncturing the following additional requirements shall be met.

1. Standard Power Devices:
a. The device shall meet the FCC mask for the full nominal bandwidth regardless of whether the punctured channel portion is at the channel edge or internal to the channel. As an example, if a 40 megahertz sub-channel is punctured from a 160 megahertz channel, this new configuration shall still meet the FCC mask based on a 160 megahertz nominal bandwidth; i.e., at the edges of the nominal channel. Nominal bandwidth as defined here refers to 20, 40, 80, 160 & 320 megahertz bandwidths. Test data shall be provided for each nominal bandwidth capable of puncturing with at least one configuration where the puncturing is at the outer edge of the nominal bandwidth and several configurations where the puncturing is internal to the nominal bandwidth (puncturing using 20*N subchannels, where N is an integer). The mask is constructed based on 26 dB bandwidth; and

b. The device, when deployed must comply with all the AFC requirements; i.e., the power transmitted within the punctured region must be at or below the power that an AFC would permit for transmitting across the punctured channels' bandwidth.
2. Low Power Indoor Devices: Channel puncturing is not permitted because, unlike standard power devices which receive channel/power information from the AFC, LPI devices have no such mechanism for ascertaining the level of suppression needed in the punctured region to protect incumbent operations

## 11.4 EUT Operating Conditions

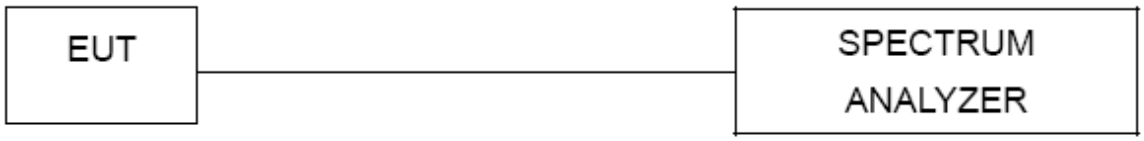
The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data

## 11.5 Test Result

Please refer to Appendix G
Test Result: Pass

# 12. Spurious RF Conducted Emissions

## 12.1 Block Diagram Of Test Setup




## 12.2 Limit

For transmitters operating within the 5.925–7.125 GHz band: Any emissions outside of the 5.925–7.125 GHz band must not exceed an e.i.r.p. of −27 dBm/MHz.
For transmitters operating within the 5.925–7.125 GHz bands: Power spectral density must be suppressed by 20 dB at 1 MHz outside of channel edge, by 28 dB at one channel bandwidth from the channel center, and by 40 dB at one- and one-half times the channel bandwidth away from channel center. At frequencies between one megahertz outside an unlicensed device's channel edge and one channel bandwidth from the center of the channel, the limits must be linearly interpolated between 20 dB and 28 dB suppression, and at frequencies between one and one- and one-half times an unlicensed device's channel bandwidth, the limits must be linearly interpolated between 28 dB and 40 dB suppression. Emissions removed from the channel center by more than one- and one-half times the channel bandwidth must be suppressed by at least 40 dB.

## 12.3 Test Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
3. Set RBW of spectrum analyzer to 1 MHz with a convenient frequency span.
4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
5. Repeat above procedures until all measured frequencies were complete.

## 12.4 Test Result

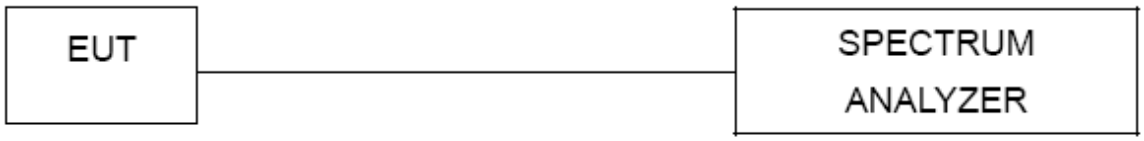
Remark: The measurement frequency range is from 9KHz to the 10th harmonic of the fundamental frequency. The lowest, middle and highest channels are tested to verify the spurious emissions and bandege measurement data.

About:26.5GHz-40GHz, The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

Please refer to Appendix F
Test Result: Pass

# 13. Frequency Stability Measurement

## 13.1 Block Diagram Of Test Setup




## 13.2 Limit

Manufactures of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.
The transmitter center frequency tolerance shall be ± 20 ppm maximum for the 5 GHz band (IEEE 802.11n specification)..

## 13.3 Test Procedure

1. The transmitter output (antenna port) was connected to the spectrum analyzer.
2. EUT have transmitted absence of modulation signal and fixed channelize.
3. Set the spectrum analyzer span to view the entire absence of modulation emissions bandwidth.
4. Set RBW = 10 kHz, VBW = 10 kHz with peak detector and maxhold settings.
5. fc is declaring of channel frequency. Then the frequency error formula is (fc-f)/fc × 106 ppm and he limit is less than ±20ppm (IEEE 802.11nspecification).
6. The test extreme voltage is to change the primary supply voltage from 85 to 115 percent of the nominal value
7. Extreme temperature is -20°C~70°C.

## 13.4 Test Result

Please refer to Appendix H
Test Result: Pass

# 14. Contention Based Protocol

## 14.1 Block Diagram Of Test Setup

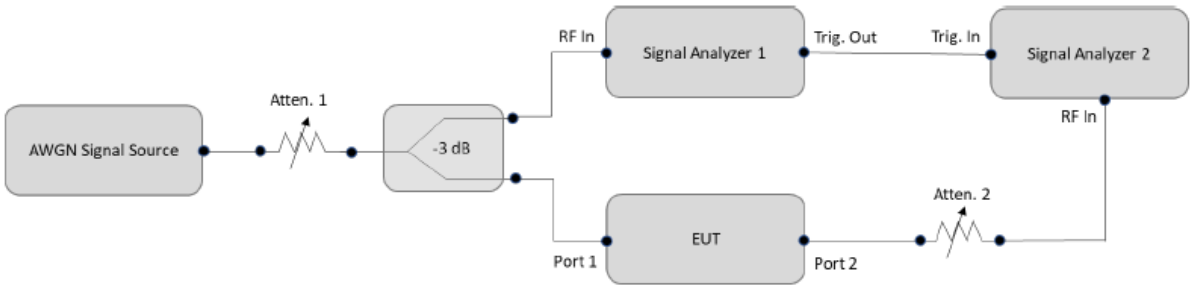



**Figure 2. Contention-based protocol test setup, conducted method**

## 14.2 Limit

Unlicensed low-power indoor devices must detect co-channel radio frequency power that is at least -62 dBm or lower. Upon detection of energy in the band, unlicensed low power indoor devices must vacate the channel (in which incumbent signal is transmitted) and stay off the incumbent channel as long as detected radio frequency power is equal to or greater than the threshold (-62 dBm)1. The -62 dBm (or lower) threshold is referenced to a 0 dBi antenna gain.
To ensure incumbent operations are reliably detected in the band, low power indoor devices must detect RF
energy throughout their intended operating channel. For example, an 802.11 device that plans to transmit a 40 MHz- wide signal (on a primary 20 MHz channel and a secondary 20 MHz channel) must detect energy throughout the entire 40 MHz channel. Additionally, low-power indoor devices must detect co-channel energy with 90% or greater certainty.

Required number of tests
Incumbent and EUT (access point, subordinate or client) signals may occupy different portions of the channel. Depending on the EUT transmission bandwidth and incumbent signal center frequency (simulated by a 10 MHz wide AWGN signal), the center frequency of the EUT signal $F_{C1}$ may fall within the incumbent's occupied bandwidth (Figure 1.a), or outside of it (Figure 1.b).

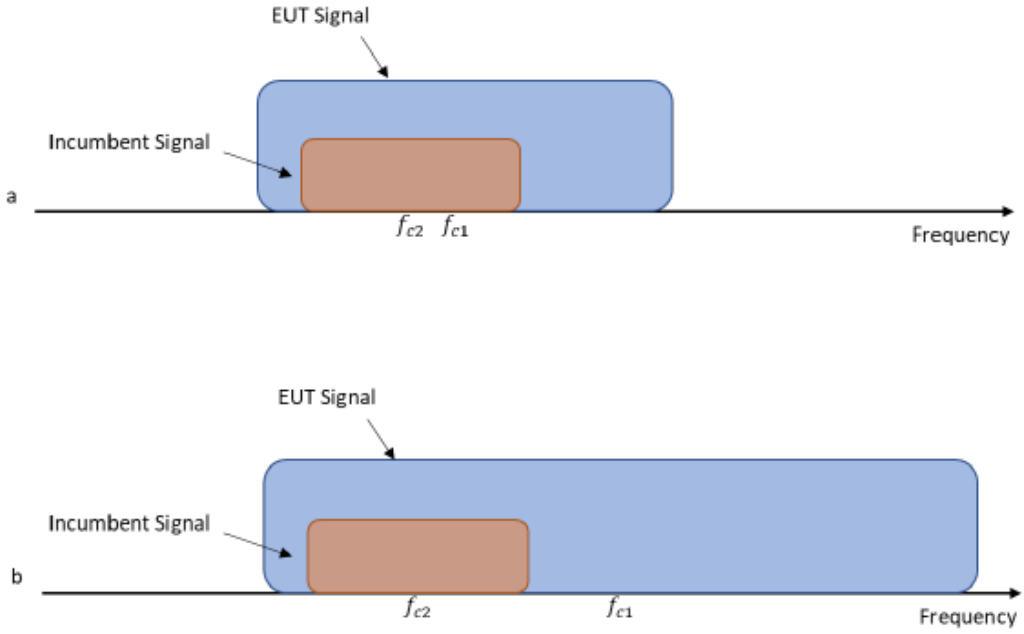



**Figure 1. Two possible scenarios where a) center frequency of EUT transmission falls within incumbent's bandwidth, or b) outside of it**

To ensure EUT reliably detects an incumbent signal in both scenarios shown in Figure 1, the detection threshold test may be repeated more than once with the incumbent signal (having center frequency $F_{C2}$) tuned to different center frequencies within the UT transmission bandwidth. The criteria specified in Table 1 determines how many times the detection threshold test must be performed;

**Table 1. Criteria to determine number of times detection threshold test may be performed**

| If | Number of Tests | Placement of Incumbent Transmission |
|---|---|---|
| $BW_{EUT} \leq BW_{Inc}$ | Once | Tune incumbent and EUT transmissions ($f_{c1} = f_{c2}$) |
| $BW_{Inc} < BW_{EUT} \leq 2BW_{Inc}$ | Once | Incumbent transmission is contained within $BW_{EUT}$ |
| $2BW_{Inc} < BW_{EUT} \leq 4BW_{Inc}$ | Twice. Incumbent transmission is contained within $BW_{EUT}$ | Incumbent transmission is located as closely as possible to the lower edge and upper edge, respectively, of the EUT channel |
| $BW_{EUT} > 4BW_{Inc}$ | Three times | Incumbent transmission is located as closely as possible to the lower edge of the EUT channel, in the middle of EUT channel, and as closely as possible to the upper edge of the EUT channel |

where:
$BW_{EUT}$: Transmission bandwidth of EUT signal
$BW_{1nc}$: Transmission bandwidth of the simulated incumbent signal (10 MHz wide AWGN signal)
$F_{C1}$: Center frequency of EUT transmission
$F_{C2}$: Center frequency of simulated incumbent signal

## 14.3 Test Procedure

To ensure the EUT is capable of detecting co-channel energy, the first step is to configure the EUT to transmit with a constant duty cycle.2 To simulate an incumbent signal, a signal generator (or similar source) that is capable of generating band-limited additive white Gaussian noise (AWGN) is required. Depending on the EUT antenna configuration, the AWGN signal can be provided to the EUT receiver via a conducted method (Figure 2) or a radiated method (Figure 3). Figure 2 shows the conducted test setup where a band-limited AWGN signal is generated at a very low power level and injected into the EUT's antenna port. The AWGN signal power level is then incrementally increased while the EUT transmission is monitored on a signal analyzer 2 to verify if the EUT can sense the AWGN signal and can subsequently cease its transmission. A triggered measurement, as shown in Figure 2, is optional, and assists with determining the time it takes the EUT to cease transmission (or vacate the channel) upon detecting RF energy. If the EUT has only one antenna port, then an AWGN signal source can be connected to the same antenna port.

1. Configure the EUT to transmit with a constant duty cycle.
2. Set the operating parameters of the EUT including power level, operating frequency, modulation and bandwidth.
3. Set the signal analyzer center frequency to the nominal EEUT channel center frequency. The span range of the signal analyzer shall be between two times and five times the OBW of the EUT. Connect the output port of the EUT to the signal analyzer 2, as shown in Figure 2. Ensure that the attenuator 2 provides enough
attenuation to not overload the signal analyzer 2 receiver.
4. Monitoring the signal analyzer 2, verify the EUT is operating and transmitting with the parameters set at step two.
5. Using an AWGN signal source, generate (but do not transmit, i.e., RF OFF) a 10 MHz-wide AWGN signal.
Use Table 1 to determine the center frequency of the 10 MHz AWGN signal relative to the EUT's channel bandwidth and center frequency.
6. Set the AWGN signal power to an extremely low level (more than 20 dB below the -62 dBm threshold). Connect the AWGN signal source, via a 3-dB splitter, to the signal analyzer 1 and the EUT as shown in Figure 2.
7. Transmit the AWGN signal (RF ON) and verify its characteristics on the signal analyzer 1.
8. Monitor the signal analyzer 2 to verify if the AWGN signal has been detected and the EUT has ceased transmission. If the EUT continues to transmit, then incrementally increase the AWGN signal power level until the EUT stops transmitting.
9. (Including all losses in the RF paths) Determine and record the AWGN signal power level (at the EUT's antenna port) at which the EUT ceased transmission. Repeat the procedure at least 10 times to verify the EUT can detect an AWGN signal with 90% (or better) level of certainty.
10. Refer to Table 1 to determine number of times the detection threshold testing needs to be repeated. If testing is required more than once, then go back to step 5, choose a different center frequency for the AWGN signal and repeat the process.