

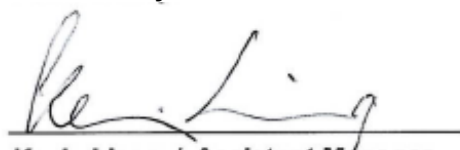
# FCC Co-location Test Report

Equipment : Mini PC  
Brand Name : **BIOSTAR**  
Model No. : RACING XXXX , IDEQ XXXX ( X=A-Z ,a-z,0-9 or BLANK )  
FCC ID : I27IZ83APBSR01000  
Standard : 47 CFR FCC Part 15  
Applicant / Manufacturer : Biostar Microtech Int'l Corp  
2F. No. 108-2 Min Chuan Road, Hsin Tien District, New  
Taipei City 231, Taiwan, R.O.C.

The product sample received on Apr. 31, 2016 and completely tested on Sep. 29, 2016. We, SPORTON, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

Reviewed by:

  
Kevin Liang / Assistant Manager



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## Revision History

[illegible]

# 1 CO-LOCATION

## 1.1 Transmitter Radiated Unwanted Emissions

### 1.1.1 Transmitter Radiated Unwanted Emissions Limit

| Restricted Band Emissions Limit |                       |                         |                      |
|---------------------------------|-----------------------|-------------------------|----------------------|
| Frequency Range (MHz)           | Field Strength (uV/m) | Field Strength (dBuV/m) | Measure Distance (m) |
| 0.009~0.490                     | 2400/F(kHz)           | 48.5 - 13.8             | 300                  |
| 0.490~1.705                     | 24000/F(kHz)          | 33.8 - 23               | 30                   |
| 1.705~30.0                      | 30                    | 29                      | 30                   |
| 30~88                           | 100                   | 40                      | 3                    |
| 88~216                          | 150                   | 43.5                    | 3                    |
| 216~960                         | 200                   | 46                      | 3                    |
| Above 960                       | 500                   | 54                      | 3                    |

Note 1: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 30 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

| Un-restricted Band Emissions Limit |            |
|------------------------------------|------------|
| RF output power procedure          | Limit (dB) |
| Peak output power procedure        | 20         |
| Average output power procedure     | 30         |

Note 1: If the peak output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum measured in-band peak PSD level.

Note 2: If the average output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the power in any 100 kHz outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum measured in-band average PSD level.

### 1.1.2 Measuring Instruments

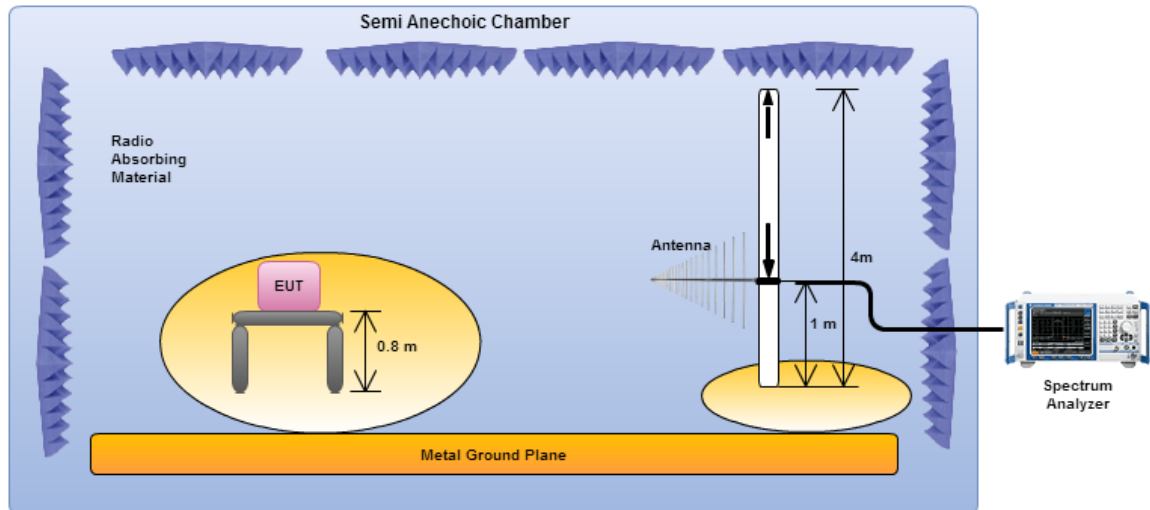
Refer a test equipment and calibration data table in this test report.

### 1.1.3 Test Procedures

| Test Method                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> | Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements). |
| <input checked="" type="checkbox"/> | The average emission levels shall be measured in [duty cycle $\geq$ 98 or duty factor].                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <input checked="" type="checkbox"/> | For the transmitter unwanted emissions shall be measured using following options below:                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <input checked="" type="checkbox"/> | Refer as FCC KDB 558074, clause 11 for unwanted emissions into non-restricted bands.                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <input checked="" type="checkbox"/> | Refer as FCC KDB 558074, clause 12 for unwanted emissions into restricted bands.                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <input type="checkbox"/>            | Refer as FCC KDB 558074, clause 12.2.5.1 and 9.2.1 Option 1 (spectral trace averaging)                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <input type="checkbox"/>            | Refer as FCC KDB 558074, clause 12.2.5.2 and 9.2.1 Option 2 (slow sweep speed).                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <input checked="" type="checkbox"/> | Refer as ANSI C63.10, clause 4.1.4.2.3 (Reduced VBW). VBW $\geq$ 1/T, where T is pulse time.                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <input type="checkbox"/>            | Refer as ANSI C63.10, clause 4.1.4.2.4 average value of pulsed emissions.                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <input checked="" type="checkbox"/> | Refer as FCC KDB 558074, clause 12.2.4 and 9.1.1 measurement procedure peak limit.                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <input type="checkbox"/>            | Refer as FCC KDB 558074, clause 12.2.3 measurement procedure Quasi-Peak limit.                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <input checked="" type="checkbox"/> | For radiated measurement, refer as FCC KDB 558074, clause 12.1.                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <input type="checkbox"/>            | Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m.                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <input checked="" type="checkbox"/> | Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m.                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <input checked="" type="checkbox"/> | Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1 GHz and test distance is 3m.                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <input type="checkbox"/>            | For conducted and cabinet radiation measurement, refer as FCC KDB 558074, clause 12.2.2.                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <input type="checkbox"/>            | For conducted unwanted emissions into non-restricted bands (relative emission limits).<br>Devices with multiple transmit chains:<br>Refer as FCC KDB 662911, when testing out-of-band and spurious emissions against relative emission limits, tests may be performed on each output individually without summing or adding 10 log(N) if the measurements are made relative to the in-band emissions on the individual outputs.                                                                                             |
| <input type="checkbox"/>            | For conducted unwanted emissions into restricted bands (absolute emission limits).<br>Devices with multiple transmit chains using options given below:<br>(1) Measure and sum the spectra across the outputs or<br>(2) Measure and add 10 log(N) dB                                                                                                                                                                                                                                                                         |

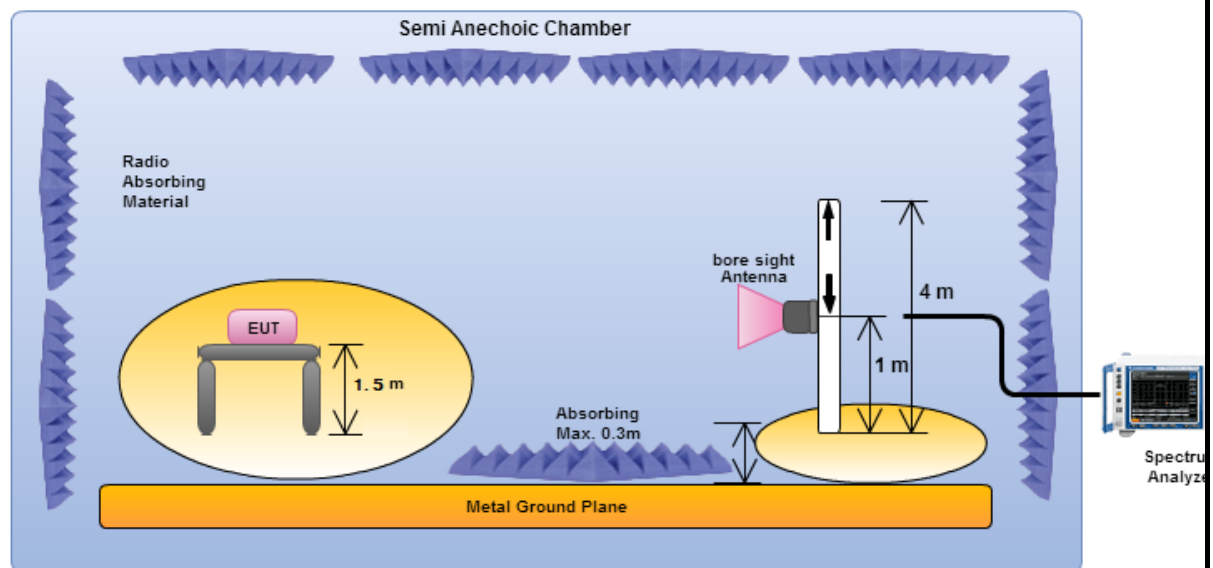
### 1.1.4 Test Setup

#### Transmitter Radiated Unwanted Emissions (below 1GHz)

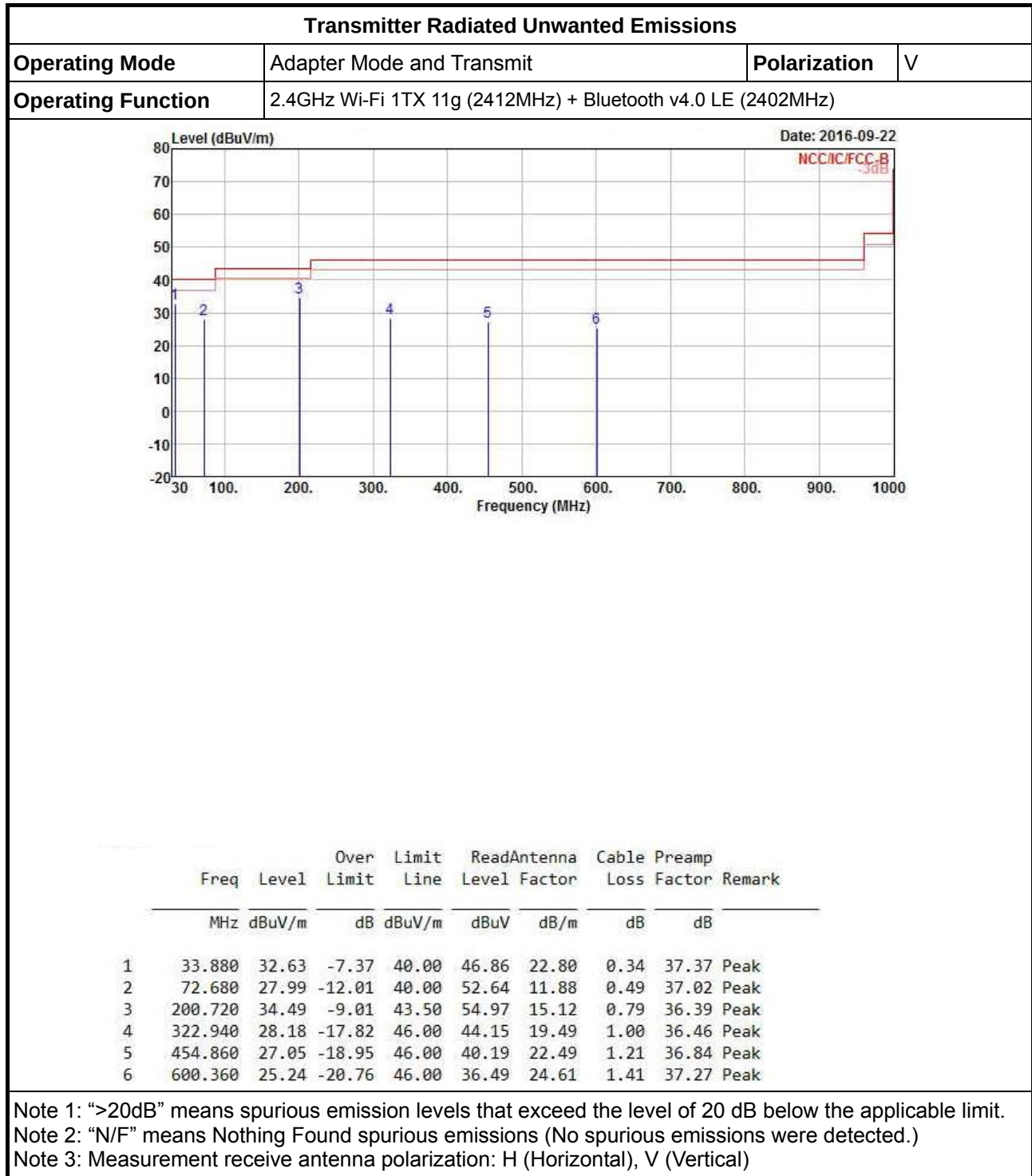


Electric field tests shall be performed in the frequency range of 30 MHz to 1000 MHz using a calibrated bi-log antenna.

#### Transmitter Radiated Unwanted Emissions (Above 1GHz)

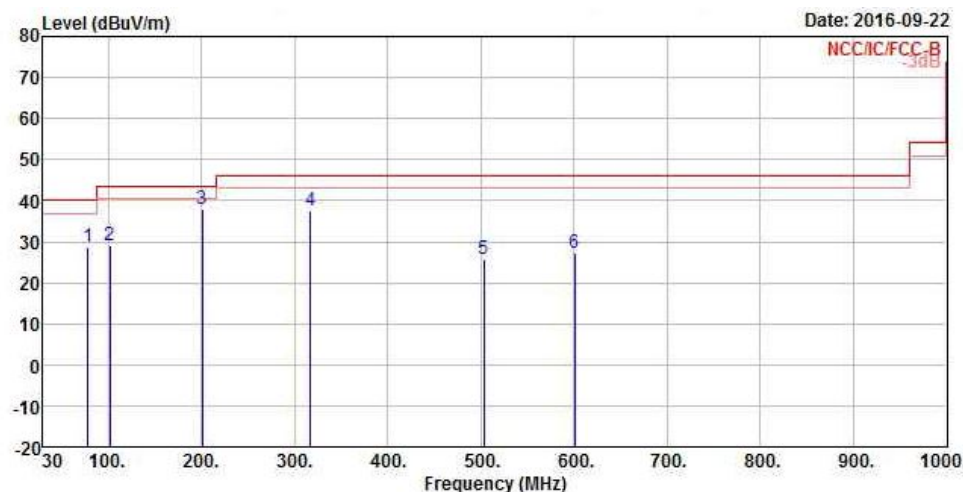


Electric field tests shall be performed in the frequency range of 1 GHz to 10th harmonic of highest fundamental frequency or 40 GHz using a calibrated horn antenna.

**1.1.5 Results of Radiated Emissions (Blow 1GHz)**


**Transmitter Radiated Unwanted Emissions**

|                           |                                                              |                     |   |
|---------------------------|--------------------------------------------------------------|---------------------|---|
| <b>Operating Mode</b>     | Adapter Mode and Transmit                                    | <b>Polarization</b> | H |
| <b>Operating Function</b> | 2.4GHz Wi-Fi 1TX 11g (2412MHz) + Bluetooth v4.0 LE (2402MHz) |                     |   |



|   | Freq    | Level  | Over Limit | Limit Line | ReadAntenna Level | Cable Preamp Loss | Factor | Remark     |
|---|---------|--------|------------|------------|-------------------|-------------------|--------|------------|
|   | MHz     | dBuV/m | dB         | dBuV/m     | dBuV              | dB/m              | dB     | dB         |
| 1 | 78.500  | 28.63  | -11.37     | 40.00      | 52.41             | 12.69             | 0.51   | 36.98 Peak |
| 2 | 101.780 | 29.08  | -14.42     | 43.50      | 49.85             | 15.48             | 0.56   | 36.81 Peak |
| 3 | 200.720 | 37.87  | -5.63      | 43.50      | 58.35             | 15.12             | 0.79   | 36.39 Peak |
| 4 | 317.120 | 37.65  | -8.35      | 46.00      | 53.78             | 19.31             | 1.00   | 36.44 Peak |
| 5 | 503.360 | 25.91  | -20.09     | 46.00      | 38.27             | 23.34             | 1.29   | 36.99 Peak |
| 6 | 600.360 | 27.31  | -18.69     | 46.00      | 38.56             | 24.61             | 1.41   | 37.27 Peak |

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

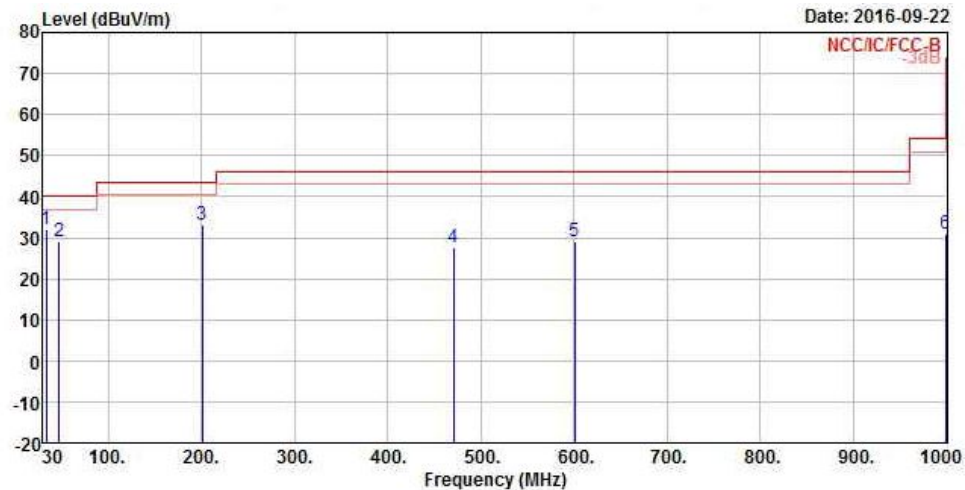
Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)



**Transmitter Radiated Unwanted Emissions**

|                           |                                                                         |                     |   |
|---------------------------|-------------------------------------------------------------------------|---------------------|---|
| <b>Operating Mode</b>     | Adapter Mode and Transmit                                               | <b>Polarization</b> | V |
| <b>Operating Function</b> | 5GHz Wi-Fi 1TX 11ac20M U-NII-2A (5300MHz) + Bluetooth v4.0 LE (2402MHz) |                     |   |



|   | Freq    | Level  | Over Limit | Limit Line | ReadAntenna Level | Cable Preamp Loss | Factor | Remark     |
|---|---------|--------|------------|------------|-------------------|-------------------|--------|------------|
|   | MHz     | dBuV/m | dB         | dBuV/m     | dBuV              | dB/m              | dB     | dB         |
| 1 | 33.880  | 31.99  | -8.01      | 40.00      | 46.22             | 22.80             | 0.34   | 37.37 Peak |
| 2 | 47.460  | 29.09  | -10.91     | 40.00      | 50.54             | 15.37             | 0.40   | 37.22 Peak |
| 3 | 200.720 | 32.97  | -10.53     | 43.50      | 53.45             | 15.12             | 0.79   | 36.39 Peak |
| 4 | 470.380 | 27.71  | -18.29     | 46.00      | 40.58             | 22.77             | 1.24   | 36.88 Peak |
| 5 | 600.360 | 29.14  | -16.86     | 46.00      | 40.39             | 24.61             | 1.41   | 37.27 Peak |
| 6 | 999.300 | 31.06  | -22.94     | 54.00      | 36.71             | 29.70             | 1.90   | 37.25 Peak |

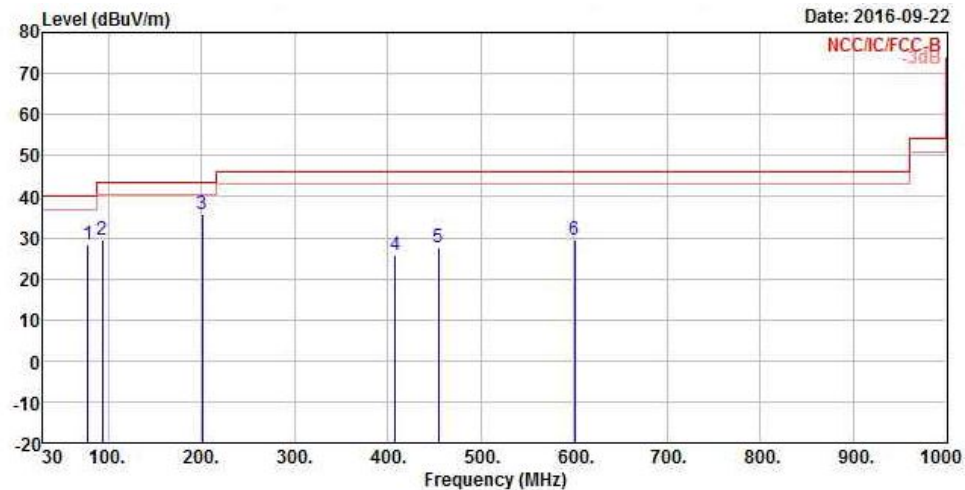
Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

**Transmitter Radiated Unwanted Emissions**

|                           |                                                                         |                     |   |
|---------------------------|-------------------------------------------------------------------------|---------------------|---|
| <b>Operating Mode</b>     | Adapter Mode and Transmit                                               | <b>Polarization</b> | H |
| <b>Operating Function</b> | 5GHz Wi-Fi 1TX 11ac20M U-NII-2A (5300MHz) + Bluetooth v4.0 LE (2402MHz) |                     |   |



|   | Freq    | Level  | Over Limit | Limit Line | ReadAntenna Level | Cable Preamp | Loss Factor | Remark     |
|---|---------|--------|------------|------------|-------------------|--------------|-------------|------------|
|   | MHz     | dBuV/m | dB         | dBuV/m     | dBuV              | dB/m         | dB          | dB         |
| 1 | 78.500  | 28.20  | -11.80     | 40.00      | 51.98             | 12.69        | 0.51        | 36.98 Peak |
| 2 | 94.020  | 29.60  | -13.90     | 43.50      | 51.33             | 14.58        | 0.55        | 36.86 Peak |
| 3 | 200.720 | 35.58  | -7.92      | 43.50      | 56.06             | 15.12        | 0.79        | 36.39 Peak |
| 4 | 408.300 | 25.65  | -20.35     | 46.00      | 39.56             | 21.65        | 1.13        | 36.69 Peak |
| 5 | 454.860 | 27.61  | -18.39     | 46.00      | 40.75             | 22.49        | 1.21        | 36.84 Peak |
| 6 | 600.360 | 29.35  | -16.65     | 46.00      | 40.60             | 24.61        | 1.41        | 37.27 Peak |

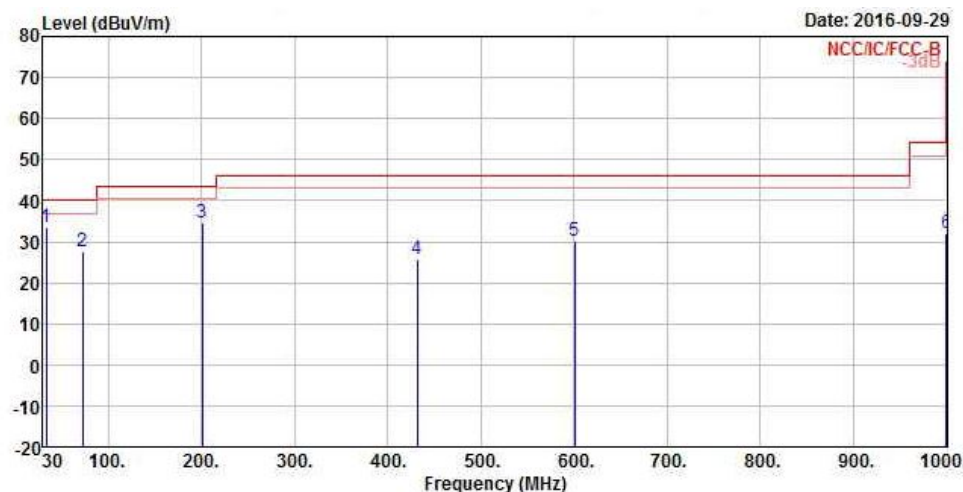
Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

**Transmitter Radiated Unwanted Emissions**

|                           |                                                                    |                     |   |
|---------------------------|--------------------------------------------------------------------|---------------------|---|
| <b>Operating Mode</b>     | Adapter Mode and Transmit                                          | <b>Polarization</b> | V |
| <b>Operating Function</b> | 5GHz Wi-Fi 1TX 11a U-NII-3 (5785MHz) + Bluetooth v4.0 LE (2402MHz) |                     |   |



|   | Freq    | Level  | Over   | Limit  | ReadAntenna | Cable | Preamp |            |
|---|---------|--------|--------|--------|-------------|-------|--------|------------|
|   | MHz     | dBuV/m | Limit  | Line   | Level       | Loss  | Factor | Remark     |
|   |         |        | dB     | dBuV/m | dBuV        | dB/m  | dB     | dB         |
| 1 | 33.880  | 33.54  | -6.46  | 40.00  | 47.77       | 22.80 | 0.34   | 37.37 Peak |
| 2 | 72.680  | 27.66  | -12.34 | 40.00  | 52.31       | 11.88 | 0.49   | 37.02 Peak |
| 3 | 200.720 | 34.69  | -8.81  | 43.50  | 55.17       | 15.12 | 0.79   | 36.39 Peak |
| 4 | 431.580 | 25.84  | -20.16 | 46.00  | 39.36       | 22.07 | 1.17   | 36.76 Peak |
| 5 | 600.360 | 30.02  | -15.98 | 46.00  | 41.27       | 24.61 | 1.41   | 37.27 Peak |
| 6 | 999.610 | 31.93  | -22.07 | 54.00  | 37.58       | 29.70 | 1.90   | 37.25 Peak |

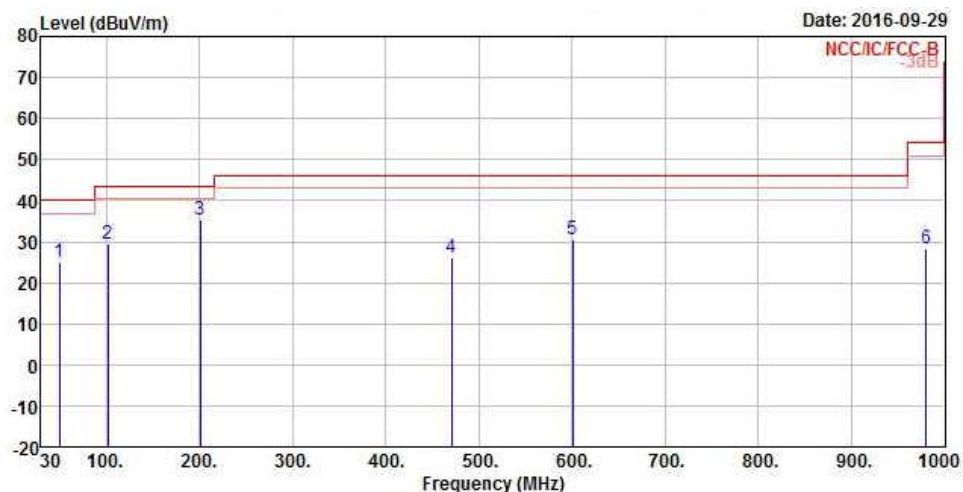
Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

**Transmitter Radiated Unwanted Emissions**

|                           |                                                                    |                     |   |
|---------------------------|--------------------------------------------------------------------|---------------------|---|
| <b>Operating Mode</b>     | Adapter Mode and Transmit                                          | <b>Polarization</b> | H |
| <b>Operating Function</b> | 5GHz Wi-Fi 1TX 11a U-NII-3 (5785MHz) + Bluetooth v4.0 LE (2402MHz) |                     |   |



|   | Freq    | Level  | Over Limit | Limit Line | ReadAntenna Level | Cable Preamp Loss | Factor | Remark     |
|---|---------|--------|------------|------------|-------------------|-------------------|--------|------------|
|   | MHz     | dBuV/m | dB         | dBuV/m     | dBuV              | dB/m              | dB     | dB         |
| 1 | 49.400  | 24.99  | -15.01     | 40.00      | 47.37             | 14.40             | 0.42   | 37.20 Peak |
| 2 | 101.780 | 29.55  | -13.95     | 43.50      | 50.32             | 15.48             | 0.56   | 36.81 Peak |
| 3 | 200.720 | 35.36  | -8.14      | 43.50      | 55.84             | 15.12             | 0.79   | 36.39 Peak |
| 4 | 470.380 | 26.05  | -19.95     | 46.00      | 38.92             | 22.77             | 1.24   | 36.88 Peak |
| 5 | 600.360 | 30.52  | -15.48     | 46.00      | 41.77             | 24.61             | 1.41   | 37.27 Peak |
| 6 | 980.600 | 28.24  | -25.76     | 54.00      | 33.84             | 29.85             | 1.88   | 37.33 Peak |

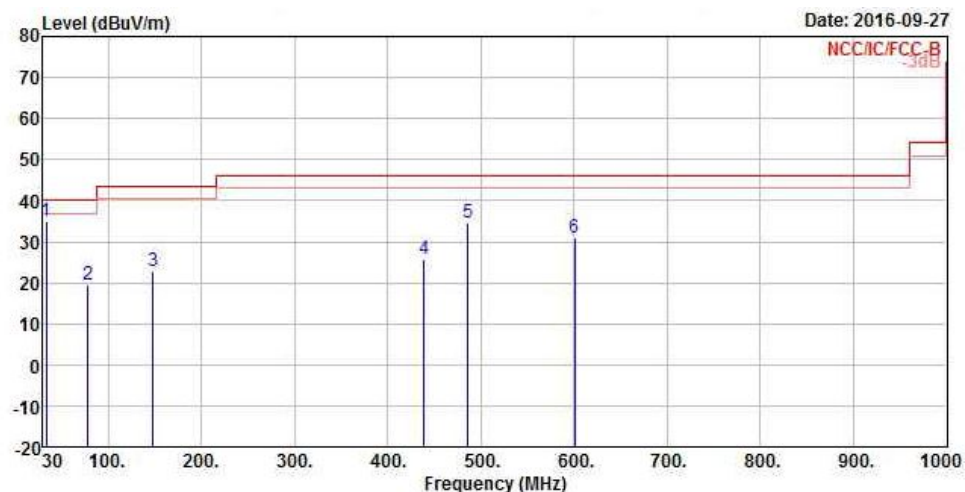
Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

**Transmitter Radiated Unwanted Emissions**

|                           |                                                                    |                     |   |
|---------------------------|--------------------------------------------------------------------|---------------------|---|
| <b>Operating Mode</b>     | Adapter Mode and Transmit                                          | <b>Polarization</b> | V |
| <b>Operating Function</b> | 2.4GHz Wi-Fi 1TX 11g (2412MHz) + Bluetooth v2.1 BR + EDR (2402MHz) |                     |   |



|   | Freq    | Level  | Over Limit | Limit Line | ReadAntenna Level | Cable Preamp Loss | Factor | Remark     |
|---|---------|--------|------------|------------|-------------------|-------------------|--------|------------|
|   | MHz     | dBuV/m | dB         | dBuV/m     | dBuV              | dB/m              | dB     | dB         |
| 1 | 33.880  | 34.96  | -5.04      | 40.00      | 49.19             | 22.80             | 0.34   | 37.37 Peak |
| 2 | 78.500  | 19.56  | -20.44     | 40.00      | 43.34             | 12.69             | 0.51   | 36.98 Peak |
| 3 | 148.340 | 22.72  | -20.78     | 43.50      | 41.98             | 16.67             | 0.68   | 36.61 Peak |
| 4 | 439.340 | 25.59  | -20.41     | 46.00      | 38.97             | 22.21             | 1.19   | 36.78 Peak |
| 5 | 485.900 | 34.78  | -11.22     | 46.00      | 47.40             | 23.05             | 1.27   | 36.94 Peak |
| 6 | 600.360 | 31.06  | -14.94     | 46.00      | 42.31             | 24.61             | 1.41   | 37.27 Peak |

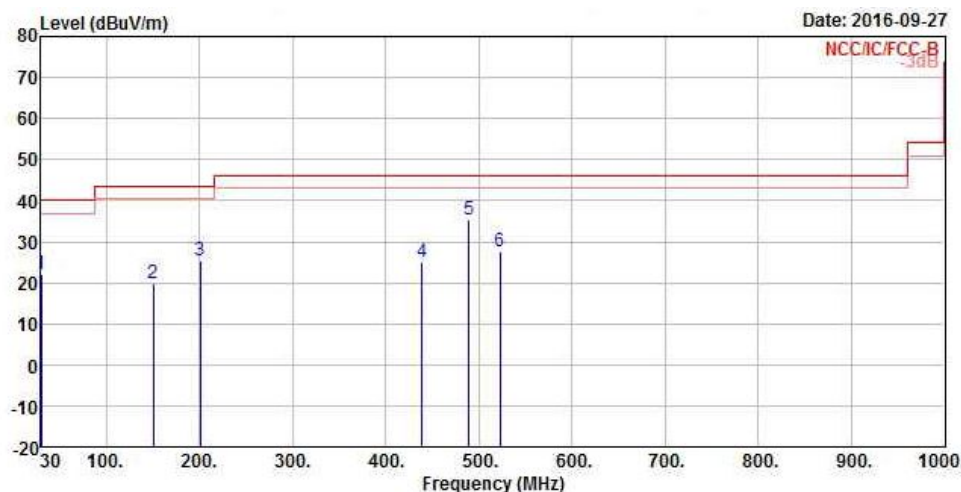
Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

**Transmitter Radiated Unwanted Emissions**

|                           |                                                                    |                     |   |
|---------------------------|--------------------------------------------------------------------|---------------------|---|
| <b>Operating Mode</b>     | Adapter Mode and Transmit                                          | <b>Polarization</b> | H |
| <b>Operating Function</b> | 2.4GHz Wi-Fi 1TX 11g (2412MHz) + Bluetooth v2.1 BR + EDR (2402MHz) |                     |   |



|   | Freq    | Level  | Over Limit | Limit Line | ReadAntenna Level | Cable Preamp Loss | Factor | Remark     |
|---|---------|--------|------------|------------|-------------------|-------------------|--------|------------|
|   | MHz     | dBuV/m | dB         | dBuV/m     | dBuV              | dB/m              | dB     | dB         |
| 1 | 30.000  | 22.22  | -17.78     | 40.00      | 34.42             | 24.90             | 0.32   | 37.42 Peak |
| 2 | 150.280 | 19.88  | -23.62     | 43.50      | 39.20             | 16.59             | 0.69   | 36.60 Peak |
| 3 | 200.720 | 25.43  | -18.07     | 43.50      | 45.91             | 15.12             | 0.79   | 36.39 Peak |
| 4 | 439.340 | 24.99  | -21.01     | 46.00      | 38.37             | 22.21             | 1.19   | 36.78 Peak |
| 5 | 489.780 | 35.23  | -10.77     | 46.00      | 47.79             | 23.12             | 1.27   | 36.95 Peak |
| 6 | 522.760 | 27.69  | -18.31     | 46.00      | 39.85             | 23.57             | 1.32   | 37.05 Peak |

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

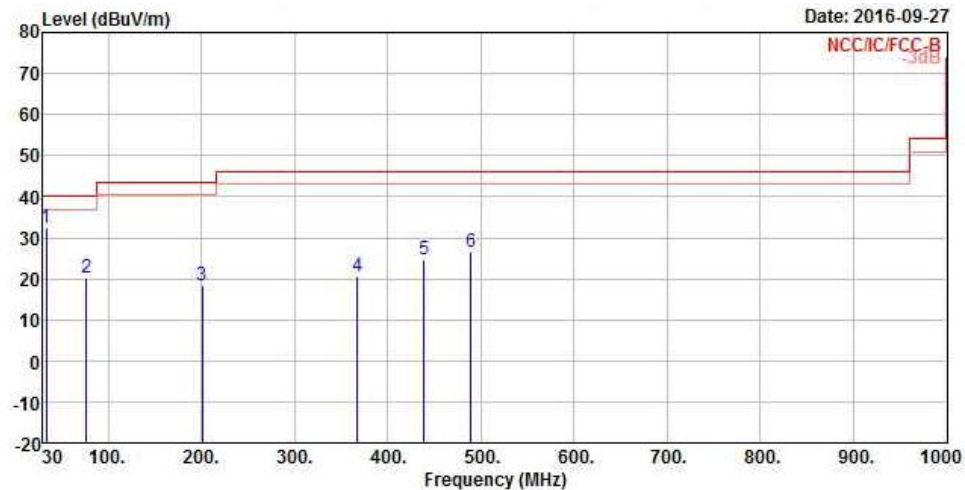
Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)



**Transmitter Radiated Unwanted Emissions**

|                           |                                                                              |                     |   |
|---------------------------|------------------------------------------------------------------------------|---------------------|---|
| <b>Operating Mode</b>     | Adapter Mode and Transmit                                                    | <b>Polarization</b> | V |
| <b>Operating Function</b> | 5GHz Wi-Fi 1TX 11ac20 U-NII-2A (5300MHz) + Bluetooth v2.1 BR + EDR (2402MHz) |                     |   |



|   | Freq    | Level  | Over Limit | Limit Line | ReadAntenna Level | Cable Factor | Preamplifier Loss | Remark     |
|---|---------|--------|------------|------------|-------------------|--------------|-------------------|------------|
|   | MHz     | dBuV/m | dB         | dBuV/m     | dBuV              | dB/m         | dB                | dB         |
| 1 | 33.880  | 32.48  | -7.52      | 40.00      | 46.71             | 22.80        | 0.34              | 37.37 Peak |
| 2 | 76.560  | 20.07  | -19.93     | 40.00      | 44.15             | 12.42        | 0.50              | 37.00 Peak |
| 3 | 200.720 | 18.48  | -25.02     | 43.50      | 38.96             | 15.12        | 0.79              | 36.39 Peak |
| 4 | 367.560 | 20.53  | -25.47     | 46.00      | 35.31             | 20.72        | 1.07              | 36.57 Peak |
| 5 | 439.340 | 24.63  | -21.37     | 46.00      | 38.01             | 22.21        | 1.19              | 36.78 Peak |
| 6 | 489.780 | 26.64  | -19.36     | 46.00      | 39.20             | 23.12        | 1.27              | 36.95 Peak |

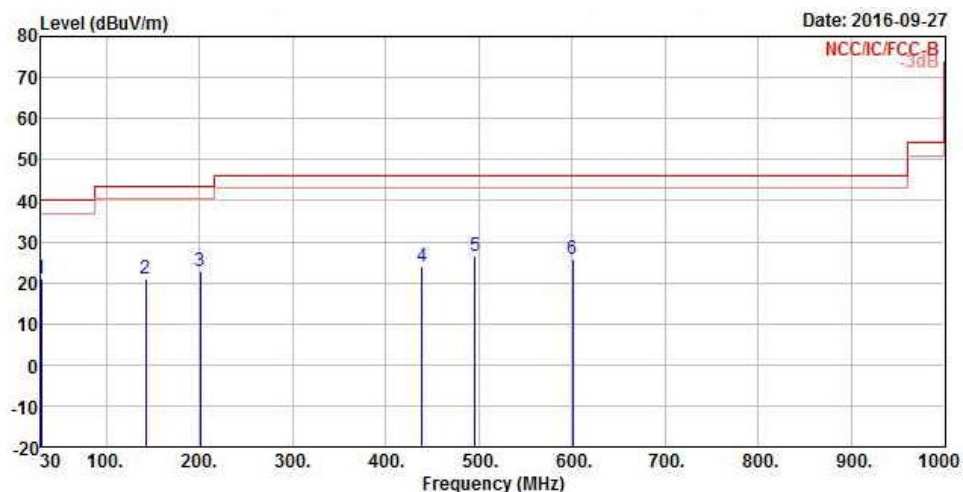
Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

**Transmitter Radiated Unwanted Emissions**

|                           |                                                                              |                     |   |
|---------------------------|------------------------------------------------------------------------------|---------------------|---|
| <b>Operating Mode</b>     | Adapter Mode and Transmit                                                    | <b>Polarization</b> | H |
| <b>Operating Function</b> | 5GHz Wi-Fi 1TX 11ac20 U-NII-2A (5300MHz) + Bluetooth v2.1 BR + EDR (2402MHz) |                     |   |



|   | Freq    | Level  | Over Limit | Limit Line | ReadAntenna Level | Cable Preamp Loss | Factor | Remark     |
|---|---------|--------|------------|------------|-------------------|-------------------|--------|------------|
|   | MHz     | dBuV/m | dB         | dBuV/m     | dBuV              | dB/m              | dB     | dB         |
| 1 | 30.000  | 21.11  | -18.89     | 40.00      | 33.31             | 24.90             | 0.32   | 37.42 Peak |
| 2 | 142.520 | 21.08  | -22.42     | 43.50      | 40.16             | 16.90             | 0.66   | 36.64 Peak |
| 3 | 200.720 | 22.83  | -20.67     | 43.50      | 43.31             | 15.12             | 0.79   | 36.39 Peak |
| 4 | 439.340 | 23.94  | -22.06     | 46.00      | 37.32             | 22.21             | 1.19   | 36.78 Peak |
| 5 | 495.600 | 26.56  | -19.44     | 46.00      | 39.03             | 23.22             | 1.28   | 36.97 Peak |
| 6 | 600.360 | 25.64  | -20.36     | 46.00      | 36.89             | 24.61             | 1.41   | 37.27 Peak |

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

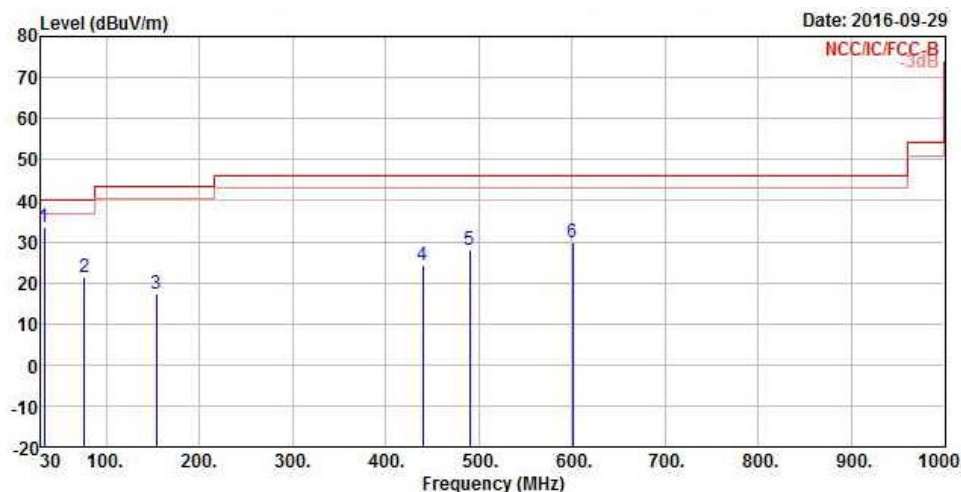
Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)



## Transmitter Radiated Unwanted Emissions

|                           |                                                                          |                     |   |
|---------------------------|--------------------------------------------------------------------------|---------------------|---|
| <b>Operating Mode</b>     | Adapter Mode and Transmit                                                | <b>Polarization</b> | V |
| <b>Operating Function</b> | 5GHz Wi-Fi 1TX 11a U-NII-3 (5785MHz) + Bluetooth v2.1 BR + EDR (2402MHz) |                     |   |



|   | Freq    | Level  | Over Limit | Limit Line | ReadAntenna Level | Factor | Cable Loss | Preamp Factor | Remark |
|---|---------|--------|------------|------------|-------------------|--------|------------|---------------|--------|
|   | MHz     | dBuV/m | dB         | dBuV/m     | dBuV              | dB/m   | dB         | dB            |        |
| 1 | 33.880  | 33.67  | -6.33      | 40.00      | 47.90             | 22.80  | 0.34       | 37.37         | Peak   |
| 2 | 76.380  | 21.15  | -18.85     | 40.00      | 45.26             | 12.39  | 0.50       | 37.00         | Peak   |
| 3 | 154.160 | 17.40  | -26.10     | 43.50      | 36.90             | 16.39  | 0.70       | 36.59         | Peak   |
| 4 | 440.030 | 24.43  | -21.57     | 46.00      | 37.81             | 22.22  | 1.19       | 36.79         | Peak   |
| 5 | 490.180 | 28.04  | -17.96     | 46.00      | 40.60             | 23.12  | 1.27       | 36.95         | Peak   |
| 6 | 600.360 | 30.00  | -16.00     | 46.00      | 41.25             | 24.61  | 1.41       | 37.27         | Peak   |

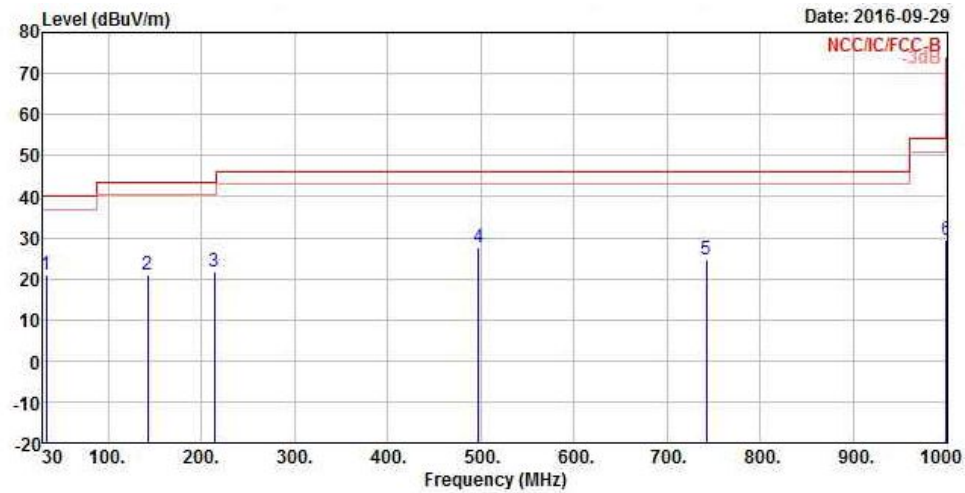
Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

**Transmitter Radiated Unwanted Emissions**

|                           |                                                                          |                     |   |
|---------------------------|--------------------------------------------------------------------------|---------------------|---|
| <b>Operating Mode</b>     | Adapter Mode and Transmit                                                | <b>Polarization</b> | H |
| <b>Operating Function</b> | 5GHz Wi-Fi 1TX 11a U-NII-3 (5785MHz) + Bluetooth v2.1 BR + EDR (2402MHz) |                     |   |

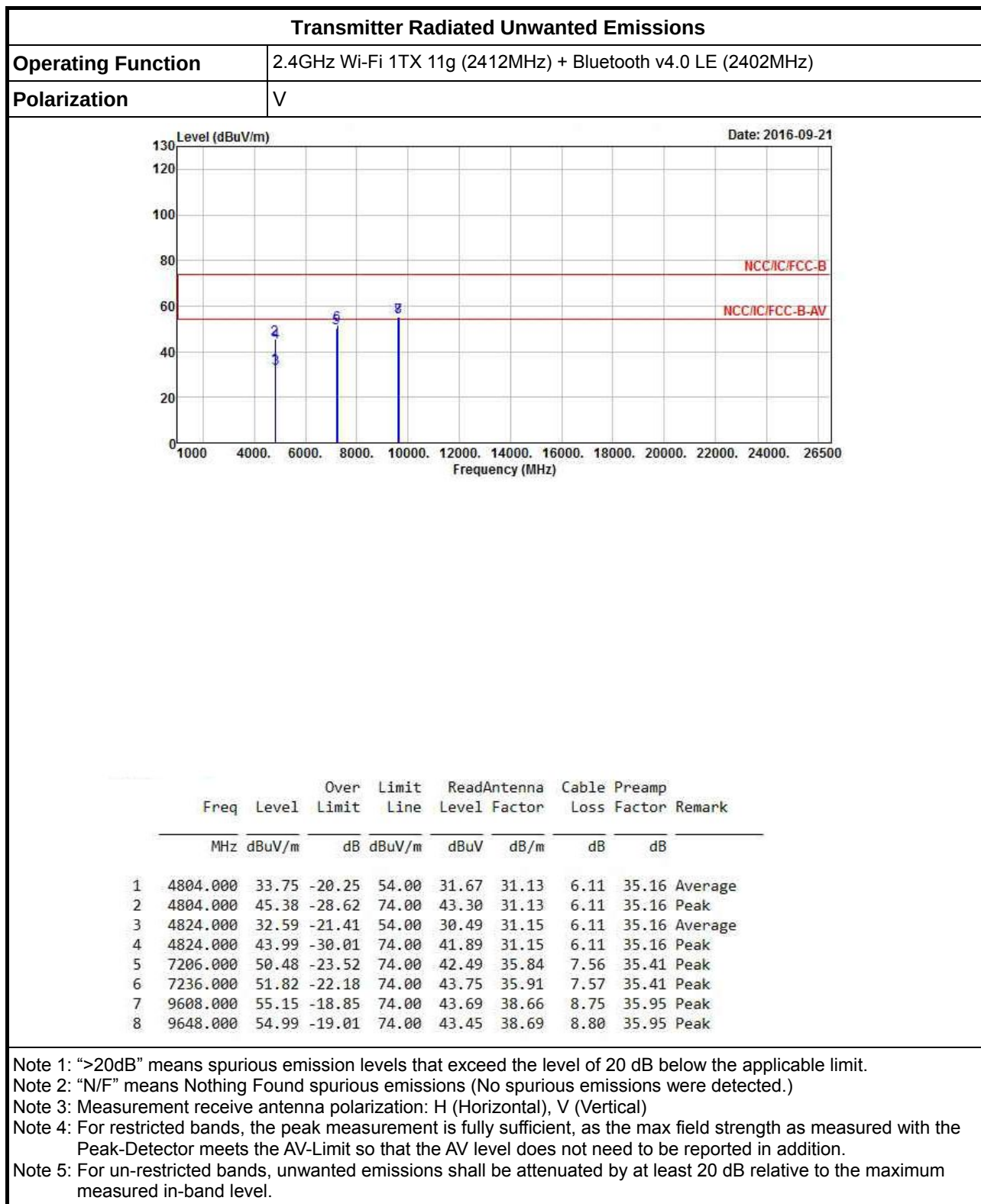


|   | Freq    | Level  | Over Limit | Limit Line | ReadAntenna Level | Cable Preamp Loss | Factor | Remark     |
|---|---------|--------|------------|------------|-------------------|-------------------|--------|------------|
|   | MHz     | dBuV/m | dB         | dBuV/m     | dBuV              | dB/m              | dB     | dB         |
| 1 | 33.880  | 20.97  | -19.03     | 40.00      | 35.20             | 22.80             | 0.34   | 37.37 Peak |
| 2 | 142.520 | 21.08  | -22.42     | 43.50      | 40.16             | 16.90             | 0.66   | 36.64 Peak |
| 3 | 214.300 | 21.82  | -21.68     | 43.50      | 42.08             | 15.31             | 0.82   | 36.39 Peak |
| 4 | 497.310 | 27.78  | -18.22     | 46.00      | 40.21             | 23.25             | 1.29   | 36.97 Peak |
| 5 | 741.980 | 24.65  | -21.35     | 46.00      | 33.81             | 26.76             | 1.59   | 37.51 Peak |
| 6 | 999.820 | 29.42  | -24.58     | 54.00      | 35.07             | 29.70             | 1.90   | 37.25 Peak |

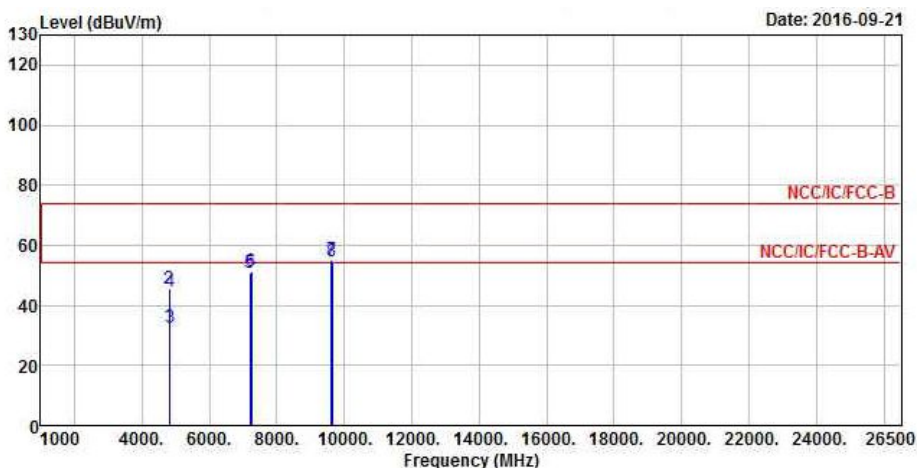
Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

**1.1.6 Results for Radiated Emissions (Above 1GHz)**


**Transmitter Radiated Unwanted Emissions**
**Operating Function** 2.4GHz Wi-Fi 1TX 11g (2412MHz) + Bluetooth v4.0 LE (2402MHz)

**Polarization** H


|   | Freq     | Level  | Over   | Limit  | ReadAntenna | Cable  | Preamp |               |
|---|----------|--------|--------|--------|-------------|--------|--------|---------------|
|   | MHz      | dBuV/m | Limit  | Line   | Level       | Factor | Loss   | Remark        |
|   |          |        | dB     | dBuV/m | dBuV        | dB/m   | dB     | dB            |
| 1 | 4804.000 | 33.13  | -20.87 | 54.00  | 31.05       | 31.13  | 6.11   | 35.16 Average |
| 2 | 4804.000 | 45.39  | -28.61 | 74.00  | 43.31       | 31.13  | 6.11   | 35.16 Peak    |
| 3 | 4824.000 | 32.78  | -21.22 | 54.00  | 30.68       | 31.15  | 6.11   | 35.16 Average |
| 4 | 4824.000 | 44.59  | -29.41 | 74.00  | 42.49       | 31.15  | 6.11   | 35.16 Peak    |
| 5 | 7206.000 | 50.83  | -23.17 | 74.00  | 42.84       | 35.84  | 7.56   | 35.41 Peak    |
| 6 | 7236.000 | 51.18  | -22.82 | 74.00  | 43.11       | 35.91  | 7.57   | 35.41 Peak    |
| 7 | 9608.000 | 55.17  | -18.83 | 74.00  | 43.71       | 38.66  | 8.75   | 35.95 Peak    |
| 8 | 9648.000 | 54.83  | -19.17 | 74.00  | 43.29       | 38.69  | 8.80   | 35.95 Peak    |

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

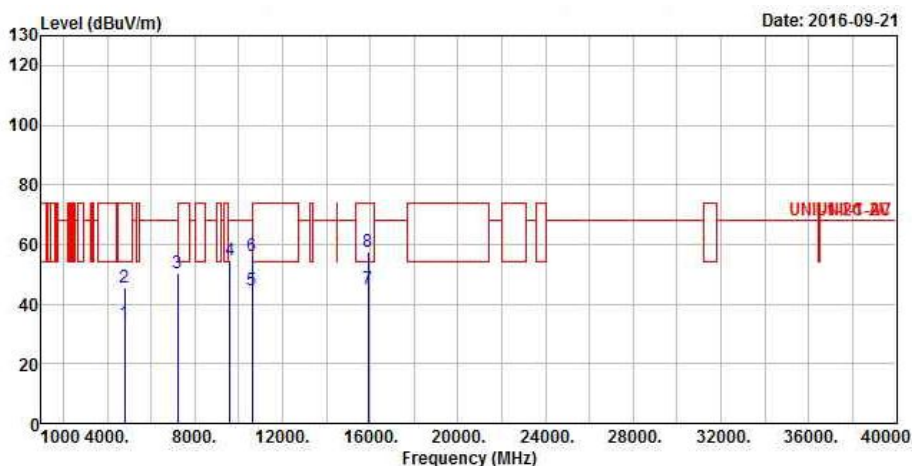
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level.

**Transmitter Radiated Unwanted Emissions**

|                           |                                                                         |
|---------------------------|-------------------------------------------------------------------------|
| <b>Operating Function</b> | 5GHz Wi-Fi 1TX 11ac20M U-NII-2A (5300MHz) + Bluetooth v4.0 LE (2402MHz) |
| <b>Polarization</b>       | V                                                                       |



|   | Freq      | Level  | Over Limit | Limit Line | ReadAntenna Level | Cable Factor | Preamp Loss | Remark        |
|---|-----------|--------|------------|------------|-------------------|--------------|-------------|---------------|
|   | MHz       | dBuV/m | dB         | dBuV/m     | dBuV              | dB/m         | dB          | dB            |
| 1 | 4804.000  | 33.77  | -20.23     | 54.00      | 31.69             | 31.13        | 6.11        | 35.16 Average |
| 2 | 4804.000  | 45.77  | -28.23     | 74.00      | 43.69             | 31.13        | 6.11        | 35.16 Peak    |
| 3 | 7206.000  | 50.29  | -18.01     | 68.30      | 42.30             | 35.84        | 7.56        | 35.41 Peak    |
| 4 | 9608.000  | 54.73  | -13.57     | 68.30      | 43.27             | 38.66        | 8.75        | 35.95 Peak    |
| 5 | 10600.000 | 44.68  | -9.32      | 54.00      | 30.79             | 39.82        | 9.52        | 35.45 Average |
| 6 | 10600.000 | 56.19  | -17.81     | 74.00      | 42.30             | 39.82        | 9.52        | 35.45 Peak    |
| 7 | 15900.000 | 45.31  | -8.69      | 54.00      | 32.29             | 37.62        | 11.23       | 35.83 Average |
| 8 | 15900.000 | 57.52  | -16.48     | 74.00      | 44.50             | 37.62        | 11.23       | 35.83 Peak    |

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

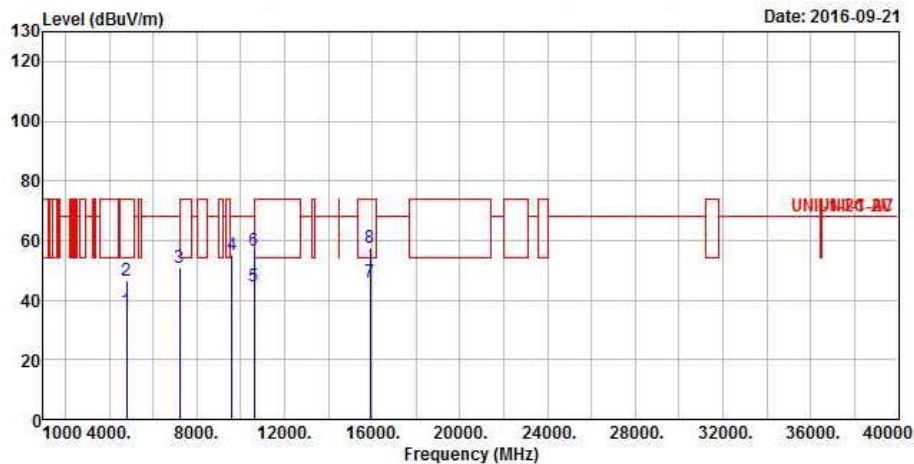
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level.



**Transmitter Radiated Unwanted Emissions**

|                           |                                                                         |
|---------------------------|-------------------------------------------------------------------------|
| <b>Operating Function</b> | 5GHz Wi-Fi 1TX 11ac20M U-NII-2A (5300MHz) + Bluetooth v4.0 LE (2402MHz) |
| <b>Polarization</b>       | H                                                                       |



|   | Freq      | Level  | Over Limit | Limit Line | ReadAntenna Level | Cable Factor | Preamp Loss | Remark        |
|---|-----------|--------|------------|------------|-------------------|--------------|-------------|---------------|
|   | MHz       | dBuV/m | dB         | dBuV/m     | dBuV              | dB/m         | dB          | dB            |
| 1 | 4804.000  | 36.57  | -17.43     | 54.00      | 34.49             | 31.13        | 6.11        | 35.16 Average |
| 2 | 4804.000  | 46.38  | -27.62     | 74.00      | 44.30             | 31.13        | 6.11        | 35.16 Peak    |
| 3 | 7206.000  | 50.71  | -17.59     | 68.30      | 42.72             | 35.84        | 7.56        | 35.41 Peak    |
| 4 | 9608.000  | 55.06  | -13.24     | 68.30      | 43.60             | 38.66        | 8.75        | 35.95 Peak    |
| 5 | 10600.000 | 44.84  | -9.16      | 54.00      | 30.95             | 39.82        | 9.52        | 35.45 Average |
| 6 | 10600.000 | 56.69  | -17.31     | 74.00      | 42.80             | 39.82        | 9.52        | 35.45 Peak    |
| 7 | 15900.000 | 45.89  | -8.11      | 54.00      | 32.87             | 37.62        | 11.23       | 35.83 Average |
| 8 | 15900.000 | 57.62  | -16.38     | 74.00      | 44.60             | 37.62        | 11.23       | 35.83 Peak    |

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

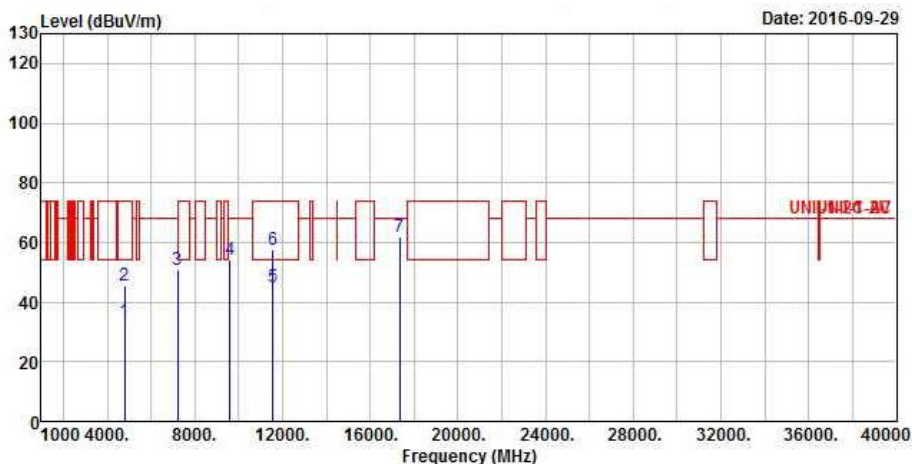
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level.

**Transmitter Radiated Unwanted Emissions**

|                           |                                                                    |
|---------------------------|--------------------------------------------------------------------|
| <b>Operating Function</b> | 5GHz Wi-Fi 1TX 11a U-NII-3 (5785MHz) + Bluetooth v4.0 LE (2402MHz) |
| <b>Polarization</b>       | V                                                                  |



|   | Freq      | Level  | Over Limit | Limit Line | ReadAntenna Level | Cable Factor | Preamp Loss | Remark        |
|---|-----------|--------|------------|------------|-------------------|--------------|-------------|---------------|
|   | MHz       | dBuV/m | dB         | dBuV/m     | dBuV              | dB/m         | dB          | dB            |
| 1 | 4804.000  | 33.56  | -20.44     | 54.00      | 31.48             | 31.13        | 6.11        | 35.16 Average |
| 2 | 4804.000  | 45.68  | -28.32     | 74.00      | 43.60             | 31.13        | 6.11        | 35.16 Peak    |
| 3 | 7206.000  | 50.66  | -17.54     | 68.20      | 42.67             | 35.84        | 7.56        | 35.41 Peak    |
| 4 | 9608.000  | 54.35  | -13.85     | 68.20      | 42.89             | 38.66        | 8.75        | 35.95 Peak    |
| 5 | 11570.000 | 45.30  | -8.70      | 54.00      | 30.89             | 39.93        | 9.79        | 35.31 Average |
| 6 | 11570.000 | 57.59  | -16.41     | 74.00      | 43.18             | 39.93        | 9.79        | 35.31 Peak    |
| 7 | 17355.000 | 61.79  | -6.41      | 68.20      | 43.57             | 41.44        | 11.92       | 35.14 Peak    |

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

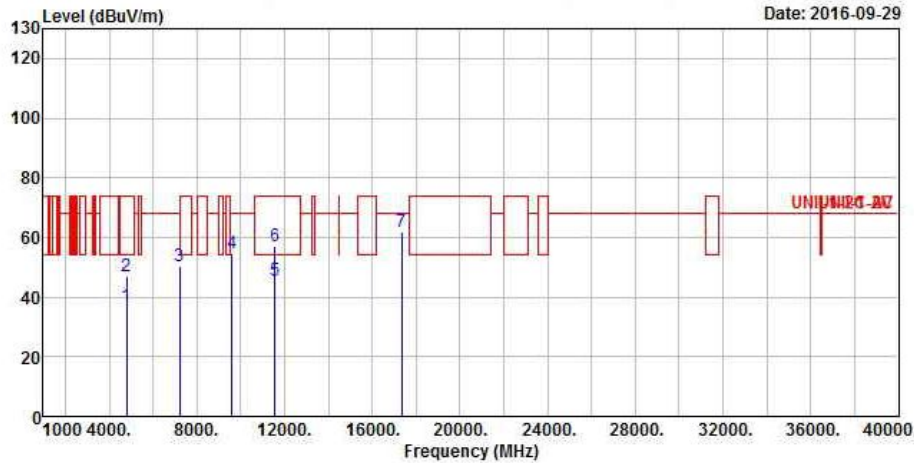
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level.



**Transmitter Radiated Unwanted Emissions**

|                           |                                                                    |
|---------------------------|--------------------------------------------------------------------|
| <b>Operating Function</b> | 5GHz Wi-Fi 1TX 11a U-NII-3 (5785MHz) + Bluetooth v4.0 LE (2402MHz) |
| <b>Polarization</b>       | H                                                                  |



|   | Freq      | Level  | Over Limit | Limit Line | ReadAntenna Level | Cable Preamp Factor | Loss Factor | Remark        |
|---|-----------|--------|------------|------------|-------------------|---------------------|-------------|---------------|
|   | MHz       | dBuV/m | dB         | dBuV/m     | dBuV              | dB/m                | dB          | dB            |
| 1 | 4804.000  | 37.08  | -16.92     | 54.00      | 35.00             | 31.13               | 6.11        | 35.16 Average |
| 2 | 4804.000  | 46.82  | -27.18     | 74.00      | 44.74             | 31.13               | 6.11        | 35.16 Peak    |
| 3 | 7206.000  | 50.44  | -17.76     | 68.20      | 42.45             | 35.84               | 7.56        | 35.41 Peak    |
| 4 | 9608.000  | 54.83  | -13.37     | 68.20      | 43.37             | 38.66               | 8.75        | 35.95 Peak    |
| 5 | 11570.000 | 45.61  | -8.39      | 54.00      | 31.20             | 39.93               | 9.79        | 35.31 Average |
| 6 | 11570.000 | 57.09  | -16.91     | 74.00      | 42.68             | 39.93               | 9.79        | 35.31 Peak    |
| 7 | 17355.000 | 61.76  | -6.44      | 68.20      | 43.54             | 41.44               | 11.92       | 35.14 Peak    |

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

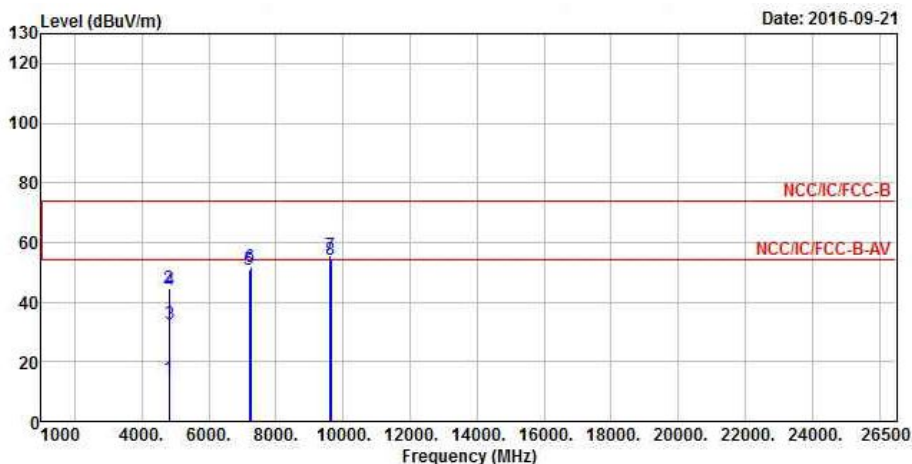
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level.

**Transmitter Radiated Unwanted Emissions**

|                           |                                                                    |
|---------------------------|--------------------------------------------------------------------|
| <b>Operating Function</b> | 2.4GHz Wi-Fi 1TX 11g (2412MHz) + Bluetooth v2.1 BR + EDR (2402MHz) |
| <b>Polarization</b>       | V                                                                  |



|   | Freq     | Level  | Over Limit | Limit Line | ReadAntenna Level | Cable Factor | Preamp Loss | Remark        |
|---|----------|--------|------------|------------|-------------------|--------------|-------------|---------------|
|   | MHz      | dBuV/m | dB         | dBuV/m     | dBuV              | dB/m         | dB          | dB            |
| 1 | 4804.000 | 14.44  | -39.56     | 54.00      | 12.36             | 31.13        | 6.11        | 35.16 Average |
| 2 | 4804.000 | 44.54  | -29.46     | 74.00      | 42.46             | 31.13        | 6.11        | 35.16 Peak    |
| 3 | 4824.000 | 32.72  | -21.28     | 54.00      | 30.62             | 31.15        | 6.11        | 35.16 Average |
| 4 | 4824.000 | 44.30  | -29.70     | 74.00      | 42.20             | 31.15        | 6.11        | 35.16 Peak    |
| 5 | 7206.000 | 50.72  | -23.28     | 74.00      | 42.73             | 35.84        | 7.56        | 35.41 Peak    |
| 6 | 7236.000 | 51.66  | -22.34     | 74.00      | 43.59             | 35.91        | 7.57        | 35.41 Peak    |
| 7 | 9608.000 | 55.53  | -18.47     | 74.00      | 44.07             | 38.66        | 8.75        | 35.95 Peak    |
| 8 | 9648.000 | 54.26  | -19.74     | 74.00      | 42.72             | 38.69        | 8.80        | 35.95 Peak    |

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

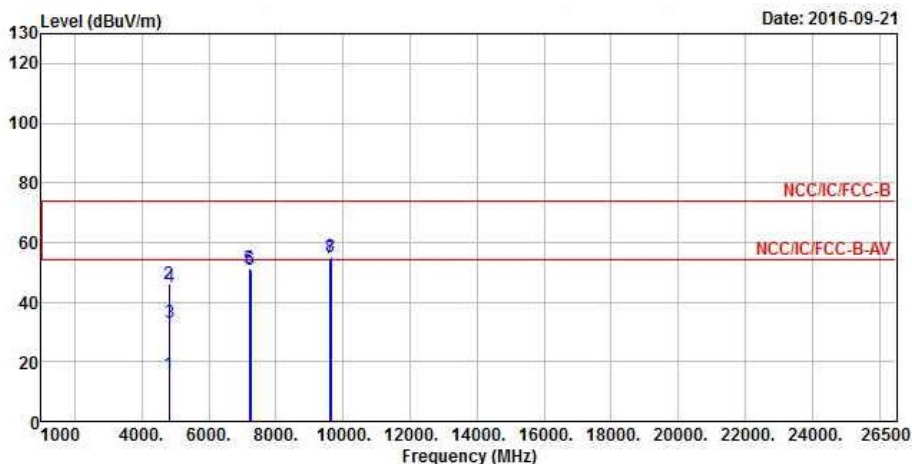
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level.

**Transmitter Radiated Unwanted Emissions**

|                           |                                                                    |
|---------------------------|--------------------------------------------------------------------|
| <b>Operating Function</b> | 2.4GHz Wi-Fi 1TX 11g (2412MHz) + Bluetooth v2.1 BR + EDR (2402MHz) |
| <b>Polarization</b>       | H                                                                  |



|   | Freq     | Level  | Over Limit | Limit Line | ReadAntenna Level | Cable Factor | Preamp Loss | Remark        |
|---|----------|--------|------------|------------|-------------------|--------------|-------------|---------------|
|   | MHz      | dBuV/m | dB         | dBuV/m     | dBuV              | dB/m         | dB          | dB            |
| 1 | 4804.000 | 15.74  | -38.26     | 54.00      | 13.66             | 31.13        | 6.11        | 35.16 Average |
| 2 | 4804.000 | 45.84  | -28.16     | 74.00      | 43.76             | 31.13        | 6.11        | 35.16 Peak    |
| 3 | 4824.000 | 33.33  | -20.67     | 54.00      | 31.23             | 31.15        | 6.11        | 35.16 Average |
| 4 | 4824.000 | 44.89  | -29.11     | 74.00      | 42.79             | 31.15        | 6.11        | 35.16 Peak    |
| 5 | 7206.000 | 51.30  | -22.70     | 74.00      | 43.31             | 35.84        | 7.56        | 35.41 Peak    |
| 6 | 7236.000 | 50.91  | -23.09     | 74.00      | 42.84             | 35.91        | 7.57        | 35.41 Peak    |
| 7 | 9608.000 | 54.71  | -19.29     | 74.00      | 43.25             | 38.66        | 8.75        | 35.95 Peak    |
| 8 | 9648.000 | 55.19  | -18.81     | 74.00      | 43.65             | 38.69        | 8.80        | 35.95 Peak    |

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

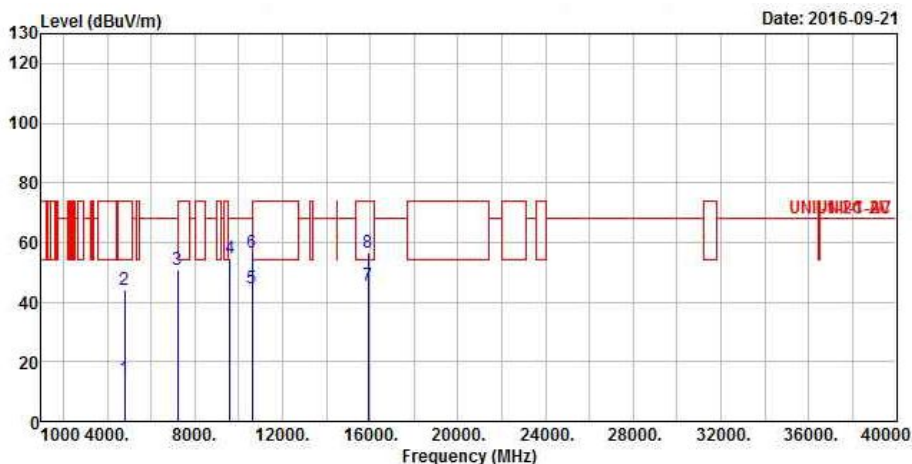
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level.

**Transmitter Radiated Unwanted Emissions**

|                           |                                                                              |
|---------------------------|------------------------------------------------------------------------------|
| <b>Operating Function</b> | 5GHz Wi-Fi 1TX 11ac20 U-NII-2A (5300MHz) + Bluetooth v2.1 BR + EDR (2402MHz) |
| <b>Polarization</b>       | V                                                                            |



|   | Freq      | Level  | Over Limit | Limit Line | ReadAntenna Level | Cable Factor | Preamp Loss | Remark        |
|---|-----------|--------|------------|------------|-------------------|--------------|-------------|---------------|
|   | MHz       | dBuV/m | dB         | dBuV/m     | dBuV              | dB/m         | dB          | dB            |
| 1 | 4804.000  | 14.23  | -39.77     | 54.00      | 12.15             | 31.13        | 6.11        | 35.16 Average |
| 2 | 4804.000  | 44.33  | -29.67     | 74.00      | 42.25             | 31.13        | 6.11        | 35.16 Peak    |
| 3 | 7206.000  | 50.61  | -17.69     | 68.30      | 42.62             | 35.84        | 7.56        | 35.41 Peak    |
| 4 | 9608.000  | 54.81  | -13.49     | 68.30      | 43.35             | 38.66        | 8.75        | 35.95 Peak    |
| 5 | 10600.000 | 44.81  | -9.19      | 54.00      | 30.92             | 39.82        | 9.52        | 35.45 Average |
| 6 | 10600.000 | 56.40  | -17.60     | 74.00      | 42.51             | 39.82        | 9.52        | 35.45 Peak    |
| 7 | 15900.000 | 45.53  | -8.47      | 54.00      | 32.51             | 37.62        | 11.23       | 35.83 Average |
| 8 | 15900.000 | 56.81  | -17.19     | 74.00      | 43.79             | 37.62        | 11.23       | 35.83 Peak    |

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

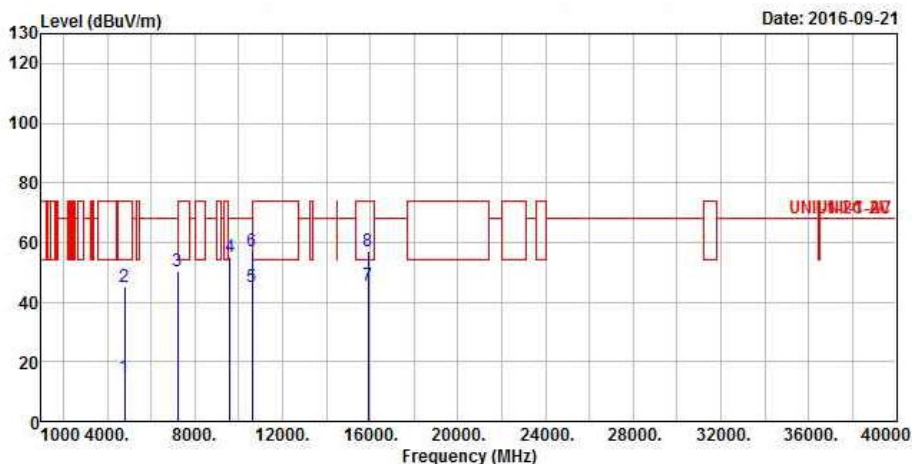
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level.

**Transmitter Radiated Unwanted Emissions**

|                           |                                                                              |
|---------------------------|------------------------------------------------------------------------------|
| <b>Operating Function</b> | 5GHz Wi-Fi 1TX 11ac20 U-NII-2A (5300MHz) + Bluetooth v2.1 BR + EDR (2402MHz) |
| <b>Polarization</b>       | H                                                                            |



|   | Freq      | Level  | Over Limit | Limit Line | ReadAntenna Level | Cable Factor | Preamp Loss | Remark        |
|---|-----------|--------|------------|------------|-------------------|--------------|-------------|---------------|
|   | MHz       | dBuV/m | dB         | dBuV/m     | dBuV              | dB/m         | dB          | dB            |
| 1 | 4804.000  | 14.94  | -39.06     | 54.00      | 12.86             | 31.13        | 6.11        | 35.16 Average |
| 2 | 4804.000  | 45.04  | -28.96     | 74.00      | 42.96             | 31.13        | 6.11        | 35.16 Peak    |
| 3 | 7206.000  | 50.36  | -17.94     | 68.30      | 42.37             | 35.84        | 7.56        | 35.41 Peak    |
| 4 | 9608.000  | 55.17  | -13.13     | 68.30      | 43.71             | 38.66        | 8.75        | 35.95 Peak    |
| 5 | 10600.000 | 44.97  | -9.03      | 54.00      | 31.08             | 39.82        | 9.52        | 35.45 Average |
| 6 | 10600.000 | 57.14  | -16.86     | 74.00      | 43.25             | 39.82        | 9.52        | 35.45 Peak    |
| 7 | 15900.000 | 45.79  | -8.21      | 54.00      | 32.77             | 37.62        | 11.23       | 35.83 Average |
| 8 | 15900.000 | 56.96  | -17.04     | 74.00      | 43.94             | 37.62        | 11.23       | 35.83 Peak    |

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

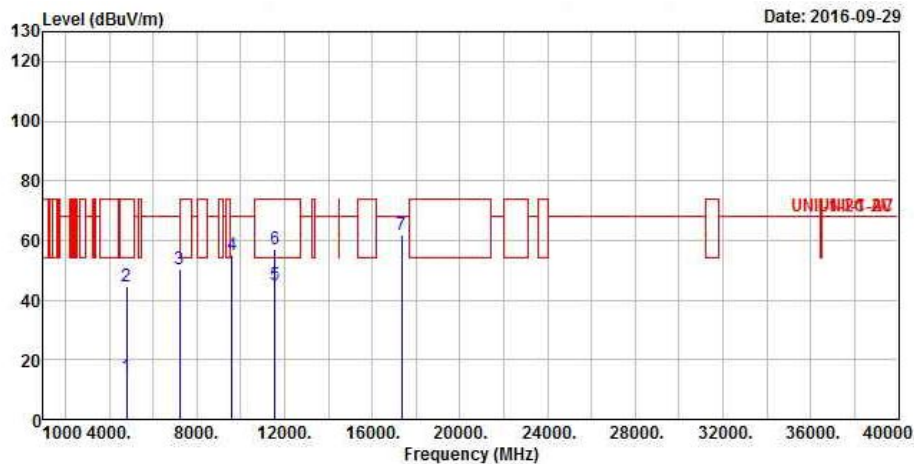
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level.



**Transmitter Radiated Unwanted Emissions**

|                           |                                                                          |
|---------------------------|--------------------------------------------------------------------------|
| <b>Operating Function</b> | 5GHz Wi-Fi 1TX 11a U-NII-3 (5785MHz) + Bluetooth v2.1 BR + EDR (2402MHz) |
| <b>Polarization</b>       | V                                                                        |



|   | Freq      | Level  | Over Limit | Limit Line | ReadAntenna Level | Cable Preamp Factor | Loss Factor | Remark        |
|---|-----------|--------|------------|------------|-------------------|---------------------|-------------|---------------|
|   | MHz       | dBuV/m | dB         | dBuV/m     | dBuV              | dB/m                | dB          | dB            |
| 1 | 4804.000  | 14.44  | -39.56     | 54.00      | 12.36             | 31.13               | 6.11        | 35.16 Average |
| 2 | 4804.000  | 44.54  | -29.46     | 74.00      | 42.46             | 31.13               | 6.11        | 35.16 Peak    |
| 3 | 7206.000  | 50.46  | -17.74     | 68.20      | 42.47             | 35.84               | 7.56        | 35.41 Peak    |
| 4 | 9608.000  | 54.97  | -13.23     | 68.20      | 43.51             | 38.66               | 8.75        | 35.95 Peak    |
| 5 | 11570.000 | 45.19  | -8.81      | 54.00      | 30.78             | 39.93               | 9.79        | 35.31 Average |
| 6 | 11570.000 | 57.12  | -16.88     | 74.00      | 42.71             | 39.93               | 9.79        | 35.31 Peak    |
| 7 | 17355.000 | 61.78  | -6.42      | 68.20      | 43.56             | 41.44               | 11.92       | 35.14 Peak    |

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

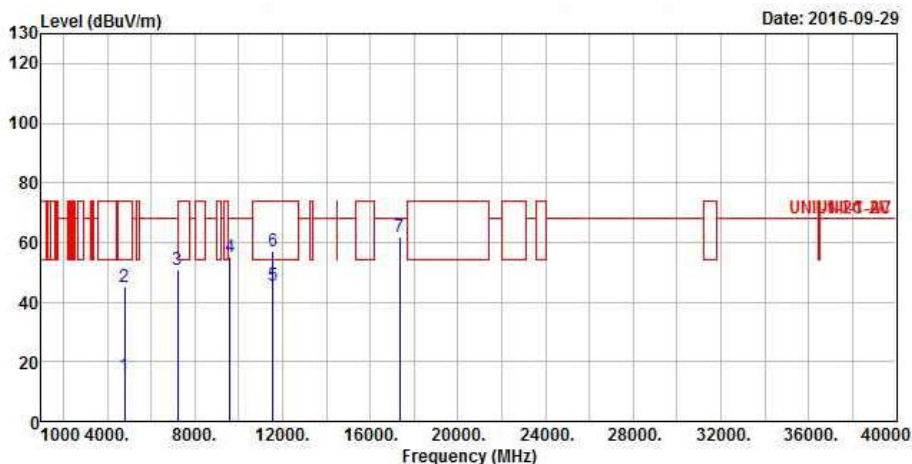
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level.



**Transmitter Radiated Unwanted Emissions**

|                           |                                                                          |
|---------------------------|--------------------------------------------------------------------------|
| <b>Operating Function</b> | 5GHz Wi-Fi 1TX 11a U-NII-3 (5785MHz) + Bluetooth v2.1 BR + EDR (2402MHz) |
| <b>Polarization</b>       | H                                                                        |



|   | Freq      | Level  | Over Limit | Limit Line | ReadAntenna Level | Cable Factor | Preamp Loss | Remark        |
|---|-----------|--------|------------|------------|-------------------|--------------|-------------|---------------|
|   | MHz       | dBuV/m | dB         | dBuV/m     | dBuV              | dB/m         | dB          | dB            |
| 1 | 4804.000  | 15.18  | -38.82     | 54.00      | 13.10             | 31.13        | 6.11        | 35.16 Average |
| 2 | 4804.000  | 45.28  | -28.72     | 74.00      | 43.20             | 31.13        | 6.11        | 35.16 Peak    |
| 3 | 7206.000  | 50.64  | -17.56     | 68.20      | 42.65             | 35.84        | 7.56        | 35.41 Peak    |
| 4 | 9608.000  | 55.10  | -13.10     | 68.20      | 43.64             | 38.66        | 8.75        | 35.95 Peak    |
| 5 | 11570.000 | 45.50  | -8.50      | 54.00      | 31.09             | 39.93        | 9.79        | 35.31 Average |
| 6 | 11570.000 | 57.18  | -16.82     | 74.00      | 42.77             | 39.93        | 9.79        | 35.31 Peak    |
| 7 | 17355.000 | 61.93  | -6.27      | 68.20      | 43.71             | 41.44        | 11.92       | 35.14 Peak    |

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level.

## 2 Test Equipment and Calibration Data

| Instrument                     | Manufacturer | Model No.           | Serial No.         | Characteristics    | Calibration Date | Calibration Due Date |
|--------------------------------|--------------|---------------------|--------------------|--------------------|------------------|----------------------|
| 3m Semi Anechoic Chamber       | TDK          | SAC-3M              | 03CH09-HY          | 30MHz ~ 1GHz<br>3m | 25/04/2016       | 24/04/2017           |
| 3m Semi Anechoic Chamber       | TDK          | SAC-3M              | 03CH09-HY          | 1GHz ~ 18GHz<br>3m | 30/06/2016       | 29/06/2017           |
| Amplifier                      | EMC          | EMC9135             | 980232             | 9kHz ~ 1.0GHz      | 29/01/2016       | 28/01/2017           |
| Amplifier                      | Agilent      | 8449B               | 3008A02096         | 1GHz ~ 26.5GHz     | 11/04/2016       | 10/04/2017           |
| Spectrum                       | KEYSIGHT     | N9010A              | MY54200885         | 10Hz ~ 44GHz       | 04/07/2016       | 03/07/2017           |
| Bilog Antenna & 5dB Attenuator | TESEQ & MTJ  | CBL 6111D & MTJ6102 | 35418              | 30MHz ~ 1GHz       | 31/03/2016       | 30/03/2017           |
| Horn Antenna                   | SCHWARZBECK  | BBHA 9120D          | BBHA 9120D<br>1534 | 1GHz ~ 18GHz       | 22/04/2016       | 21/04/2017           |
| Horn Antenna                   | SCHWARZBECK  | BBHA9170            | BBHA9170614        | 18GHz ~ 40GHz      | 04/01/2016       | 03/01/2017           |
| Amplifier                      | MITEQ        | JS44-18004000-33-8P | 1840917            | 18GHz ~ 40GHz      | 02/06/2015       | 01/06/2017           |