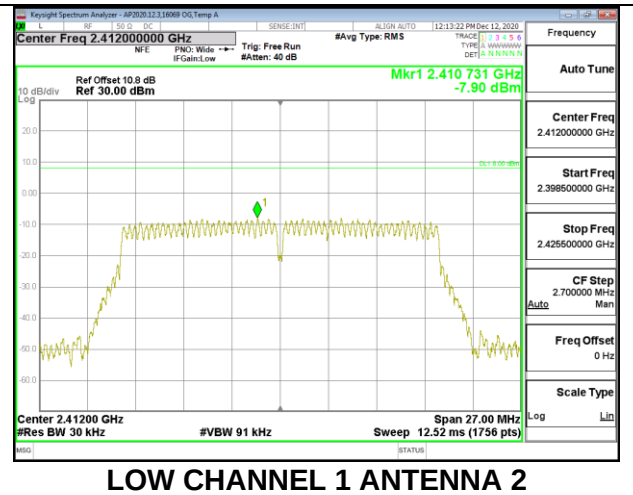
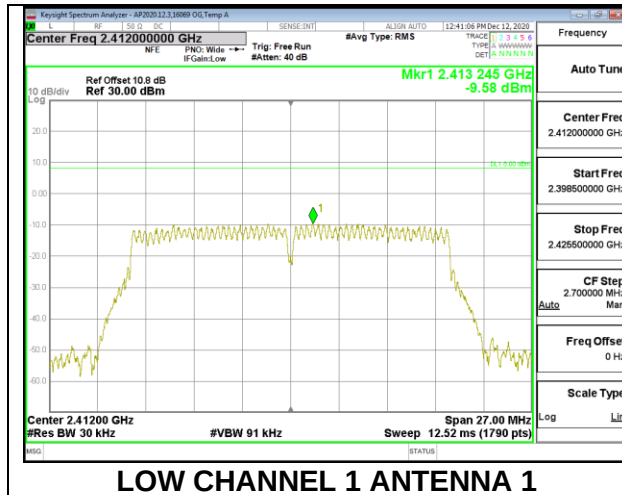
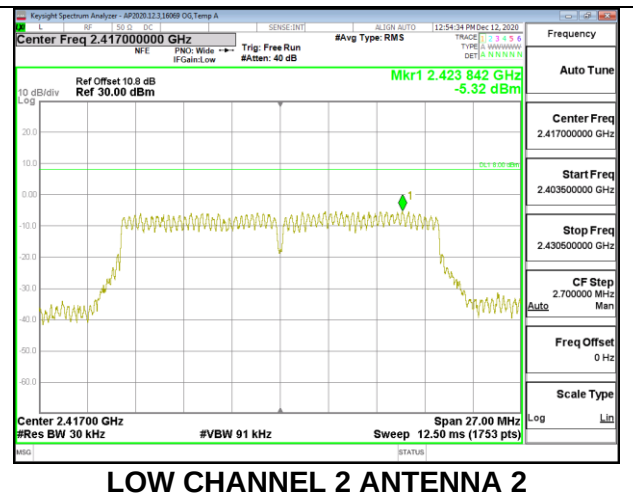
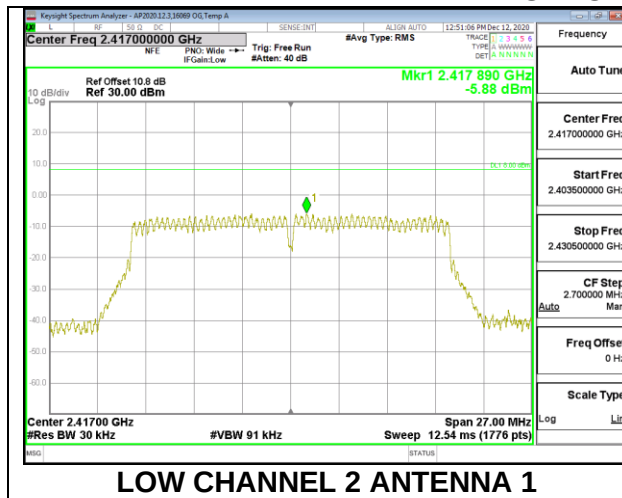


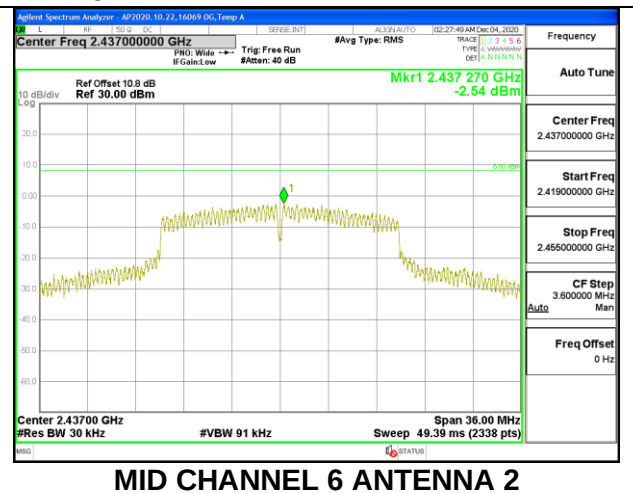
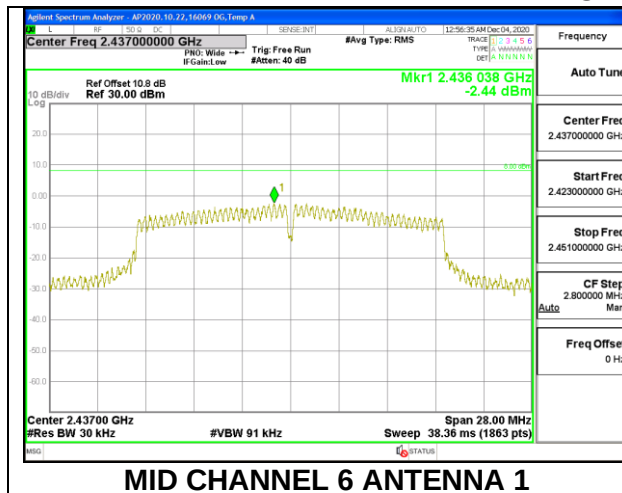
## LOW CHANNEL 1



## LOW CHANNEL 2



## MID CHANNEL 6



**Left Plot: High Channel 10 Antenna 1**

- Center Freq: 2.457000000 GHz
- Ref Offset: 10.81 dB
- Ref: 20.00 dBm
- Mkr1: 2.456 044 GHz, -6.81 dBm
- Span: 28.00 MHz
- Res BW: 30 kHz
- #VBW: 91 kHz
- Sweep: 38.42 ms (1802 pts)

**Right Plot: High Channel 10 Antenna 2**

- Center Freq: 2.457000000 GHz
- Ref Offset: 10.81 dB
- Ref: 20.00 dBm
- Mkr1: 2.455 719 GHz, -5.31 dBm
- Span: 27.00 MHz
- Res BW: 30 kHz
- #VBW: 91 kHz
- Sweep: 37.03 ms (1793 pts)

The figure consists of two side-by-side screenshots of a Spectrum Analyzer interface, labeled 'HIGH CHANNEL 11 ANTENNA 1' and 'HIGH CHANNEL 11 ANTENNA 2'. Both plots show a similar bandpass filter response with a peak around 2.46 GHz. The left plot for Antenna 1 has a peak at 2.460715 GHz with a loss of -8.91 dBm. The right plot for Antenna 2 has a peak at 2.460727 GHz with a loss of -6.84 dBm. Both plots show a span of 27.00 MHz and a resolution bandwidth of 30 kHz.

## **9.6. CONDUCTED SPURIOUS EMISSIONS**

### **LIMITS**

FCC §15.247 (d)

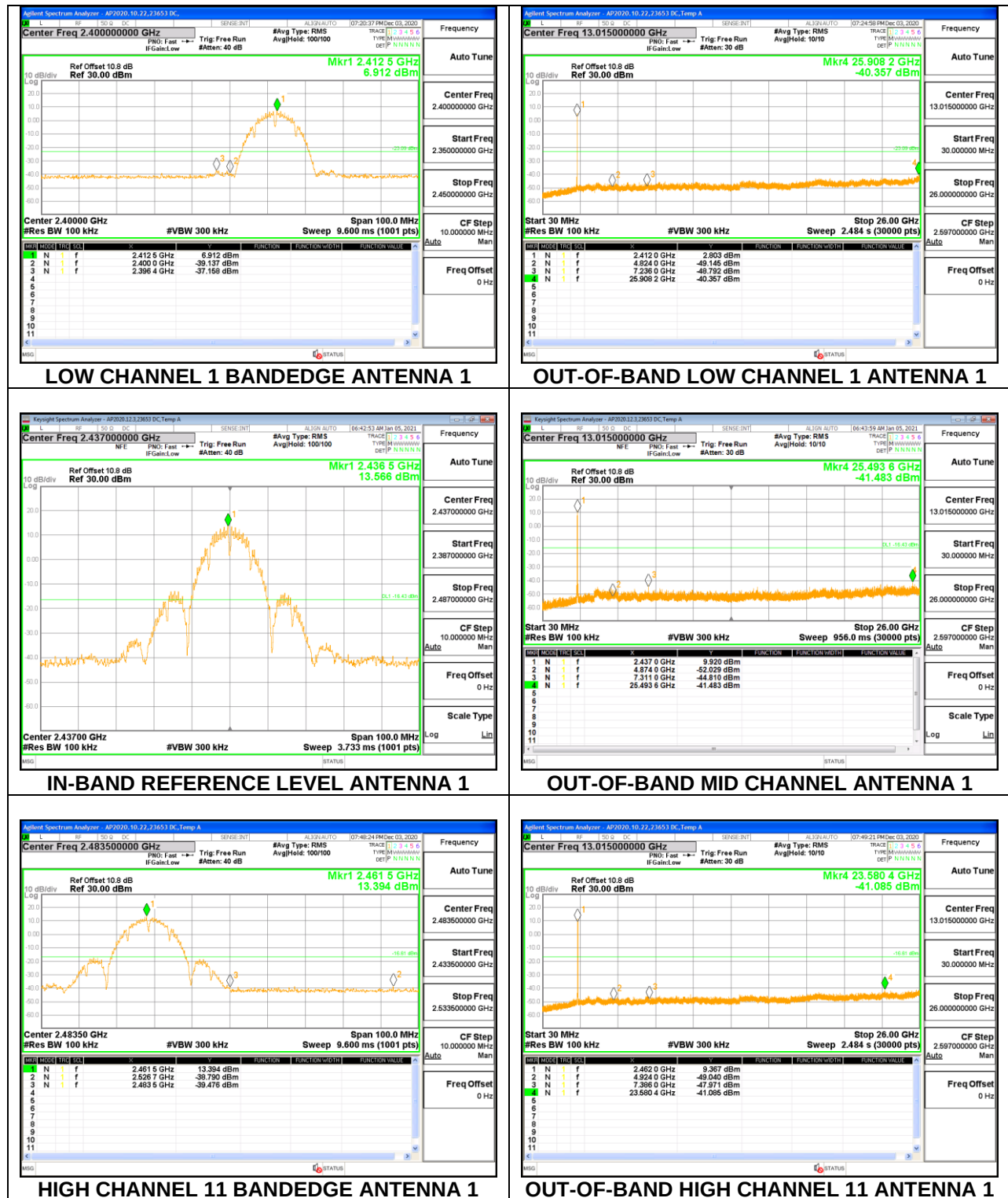
RSS-247 5.5

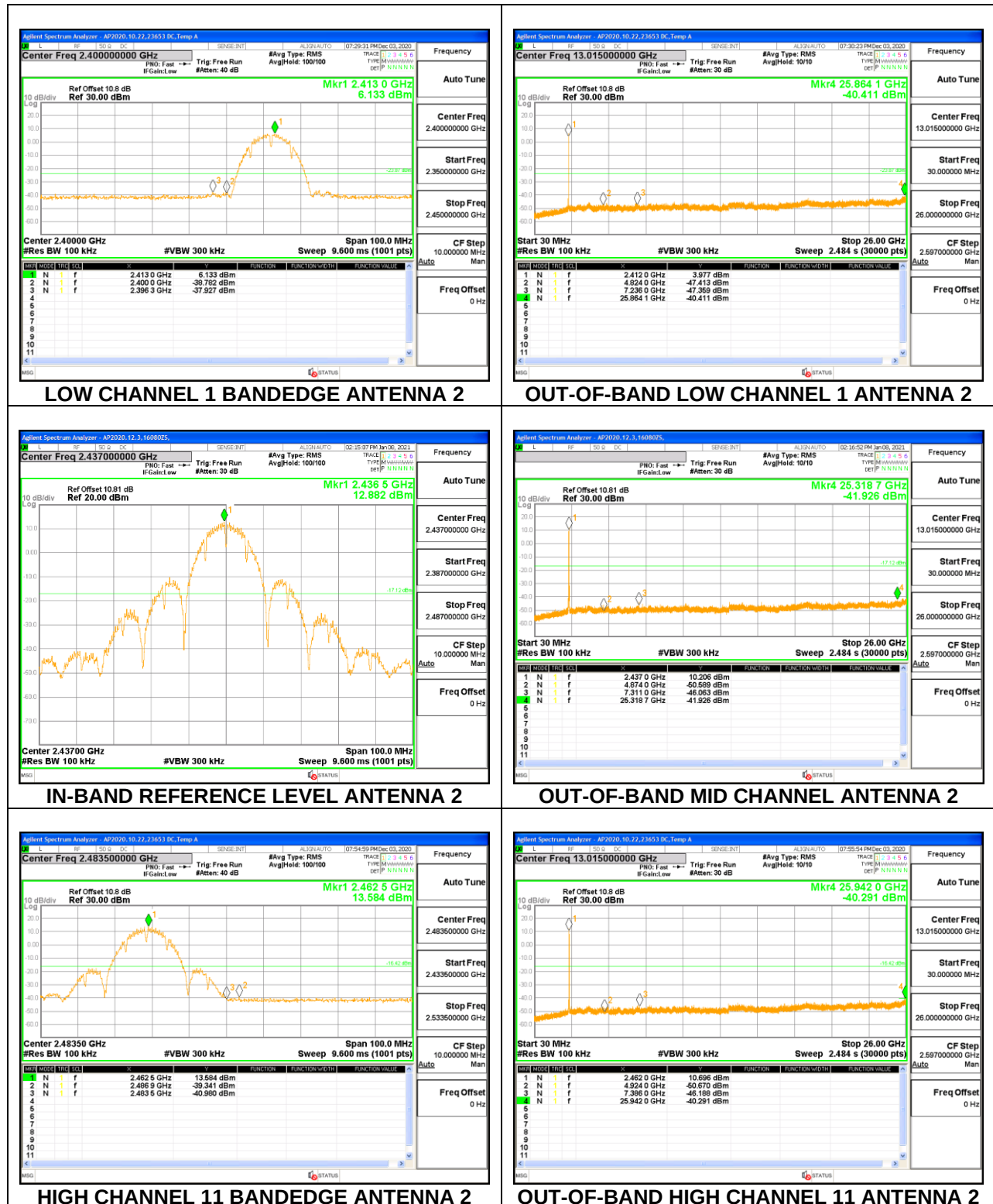
Output power was measured based on the use of a RMS averaging measurement; spurious emissions are required to be 30dBc.

### **RESULTS**

## 802.11b MODE

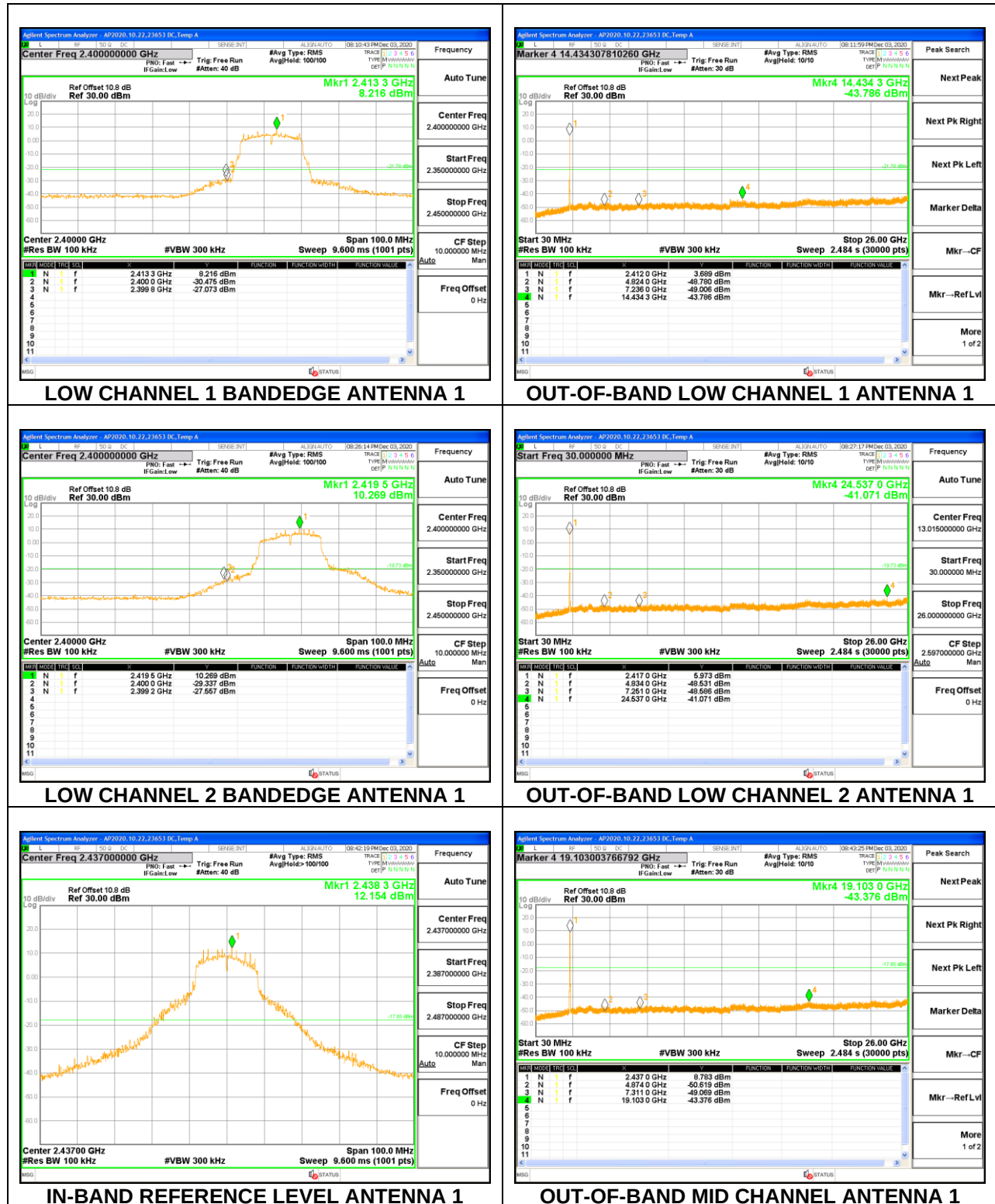
### 2TX Antenna 1 + Antenna 2 CDD MODE

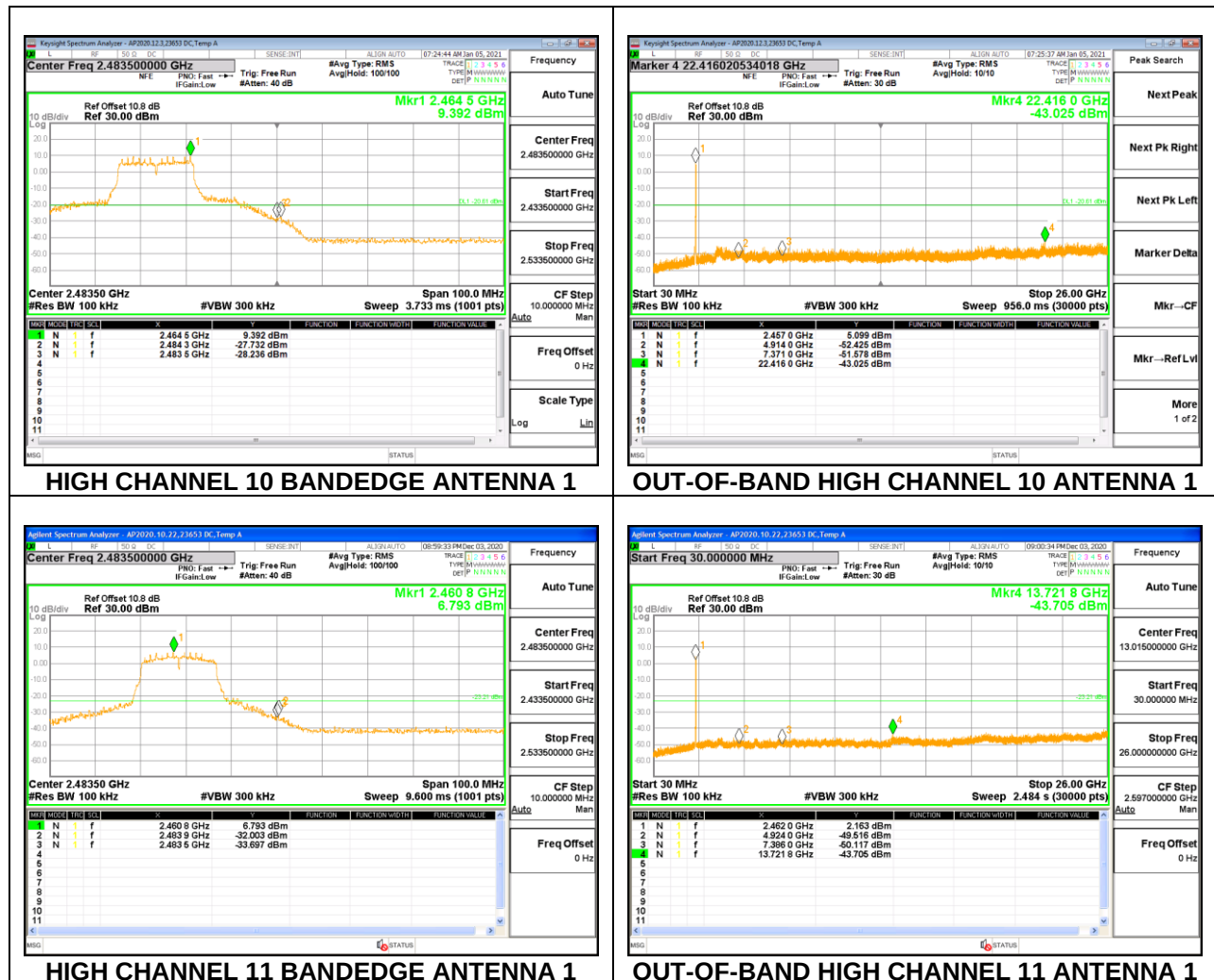




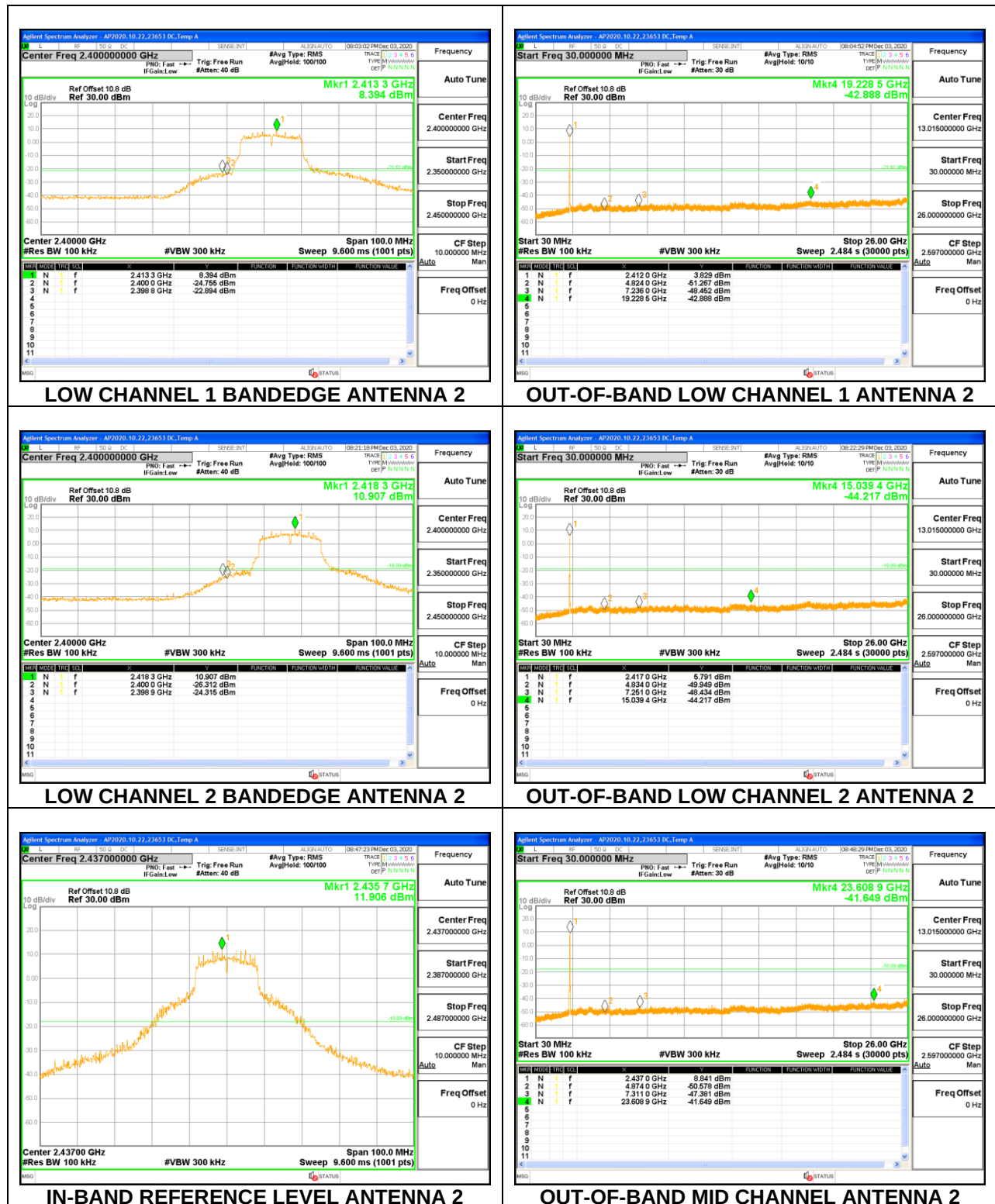
## 9.6.1. 802.11g MODE

### 2TX Antenna 1 + Antenna 2 CDD MODE

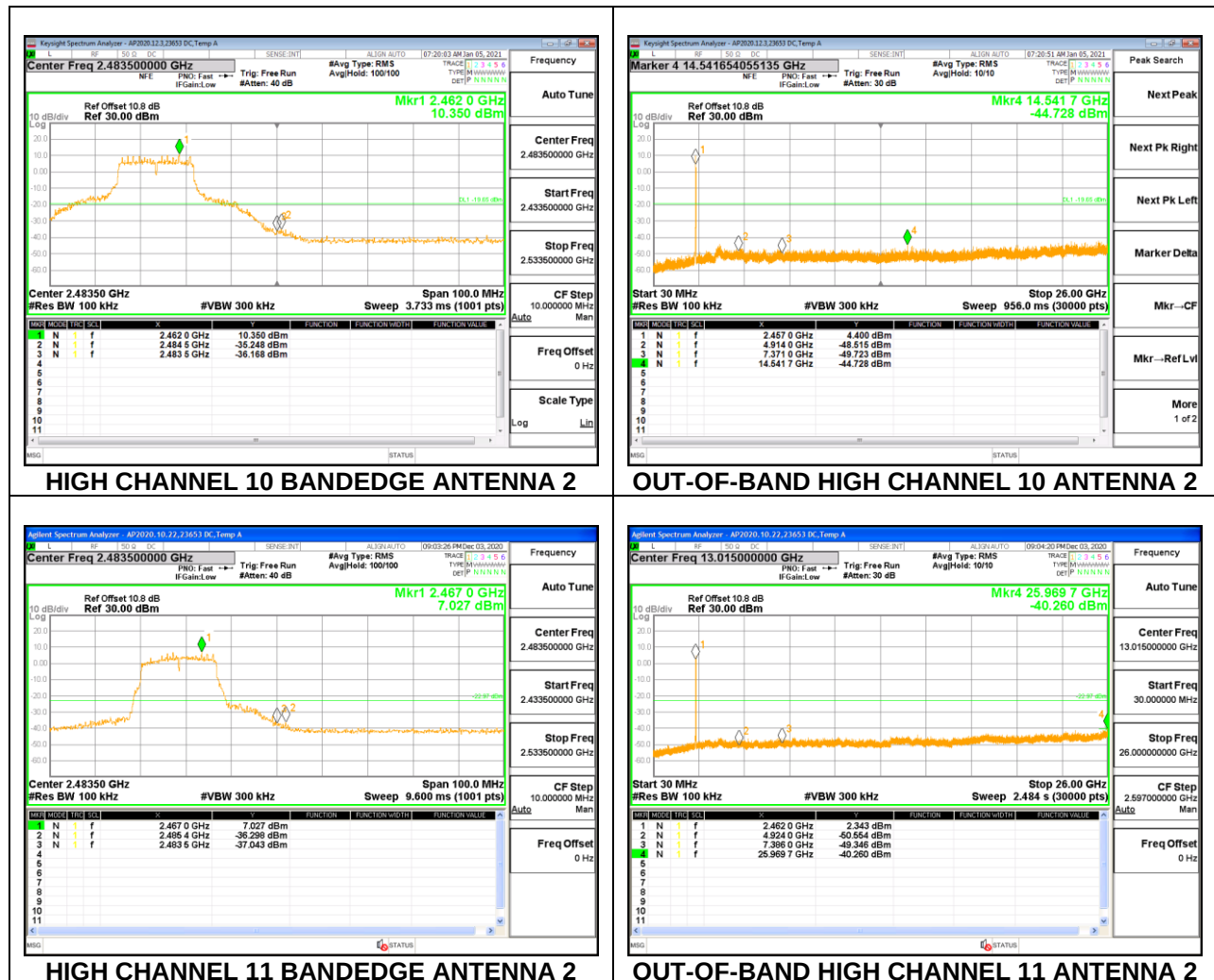






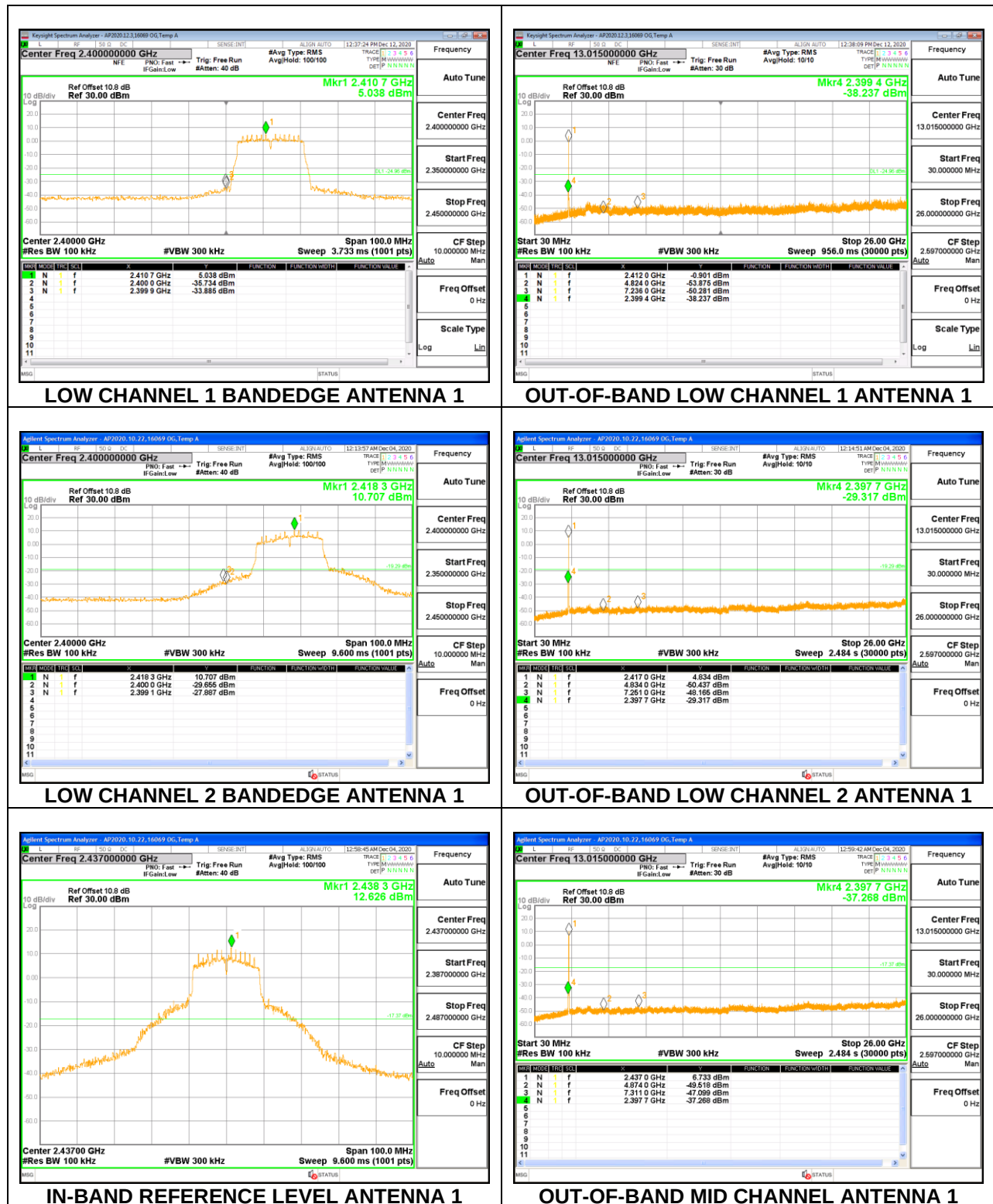


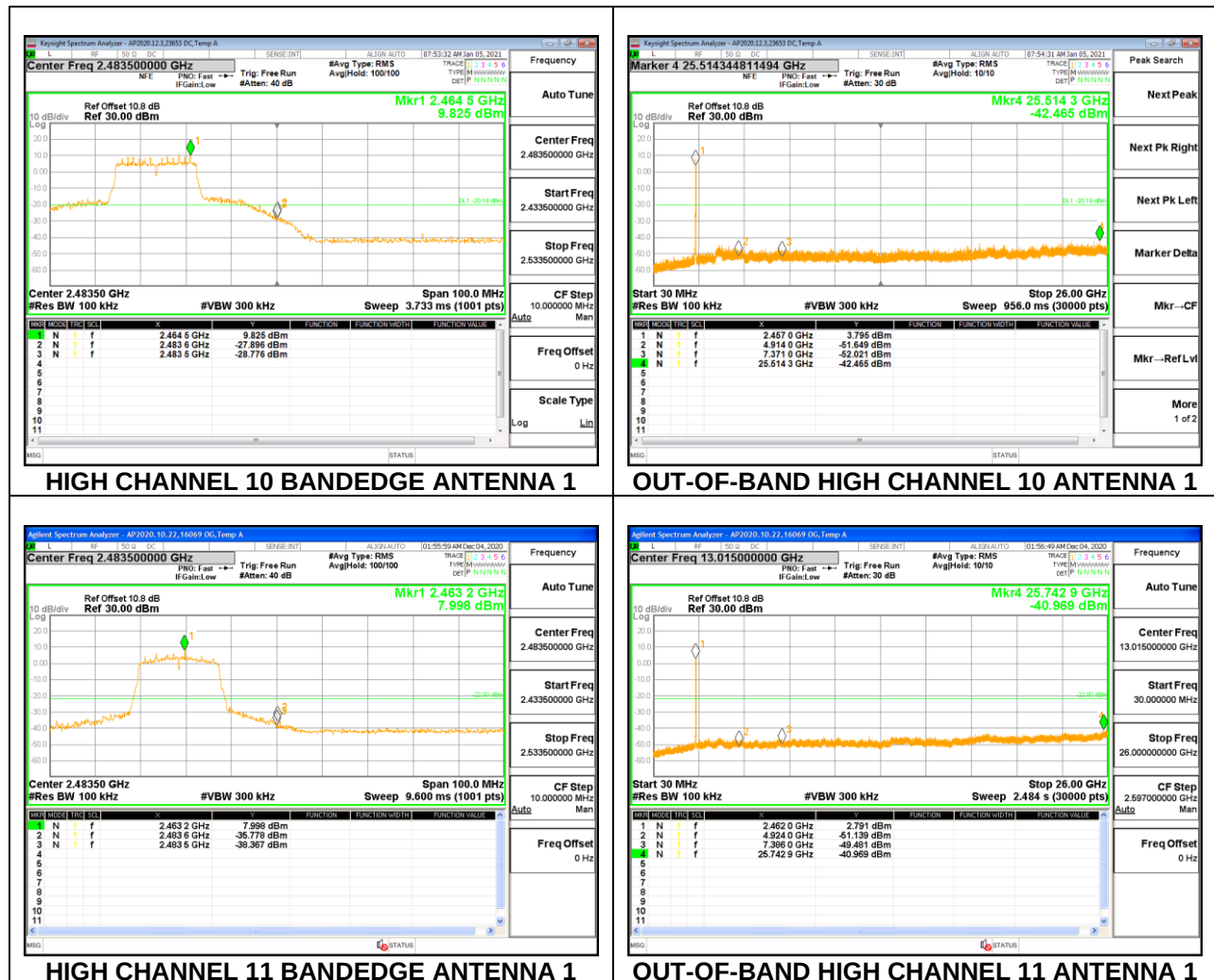


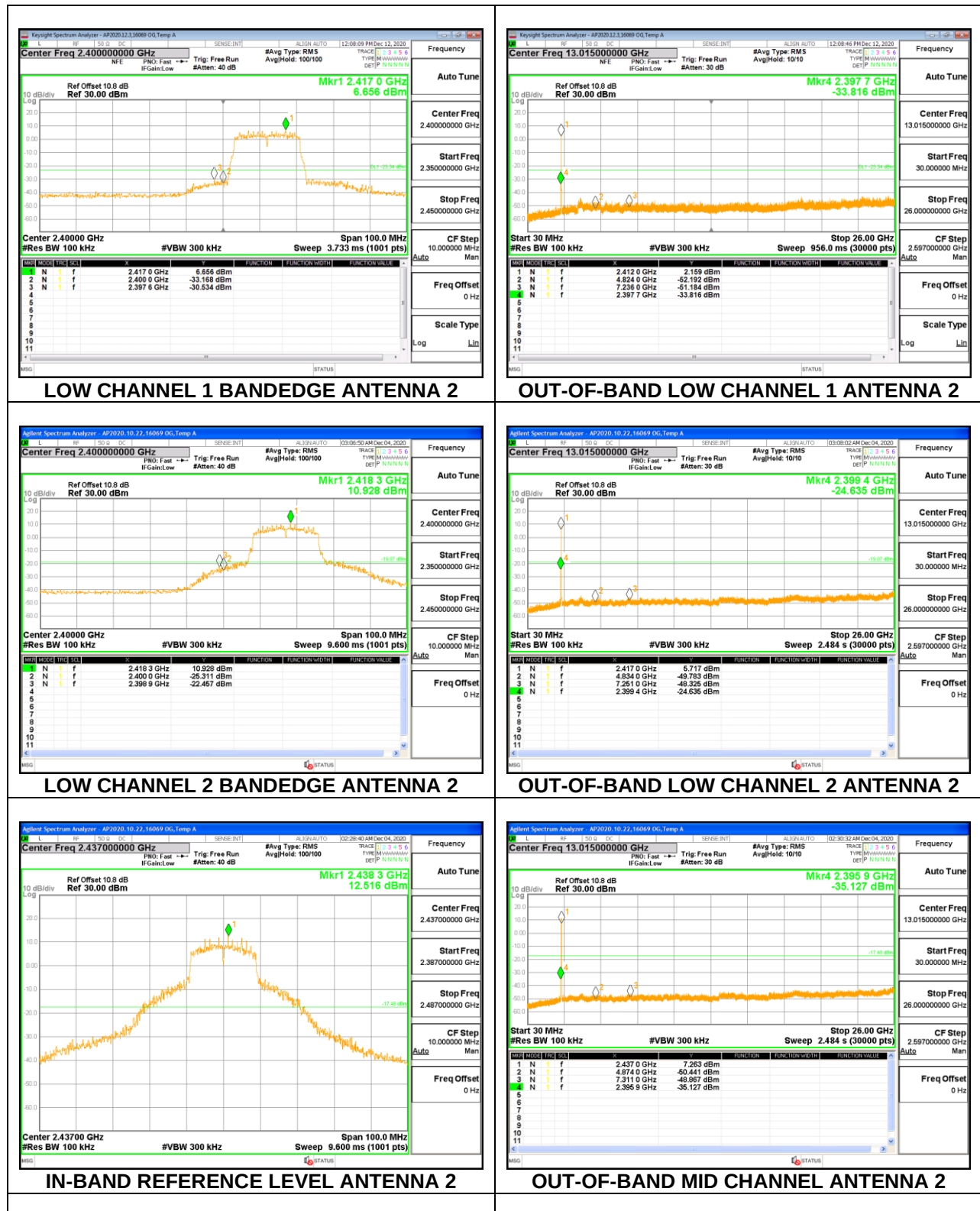


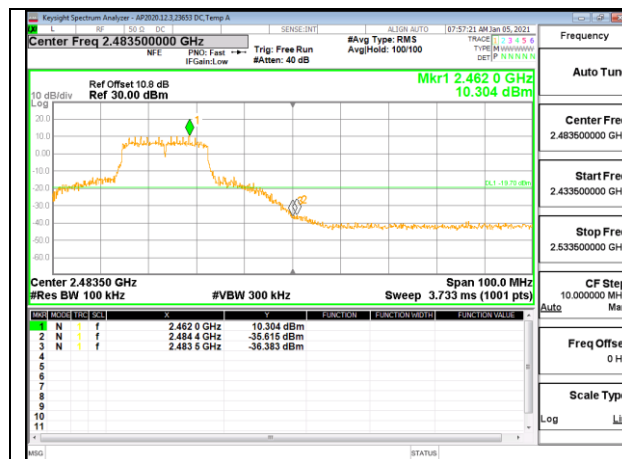
## 9.6.2. 802.11n HT20 MODE

### 2TX Antenna 1 + Antenna 2 CDD MODE

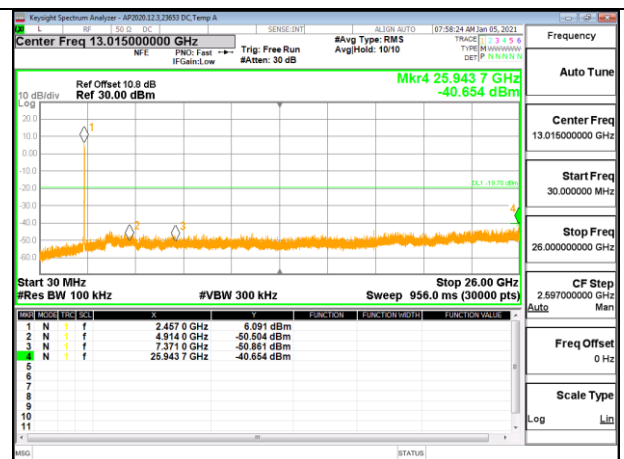




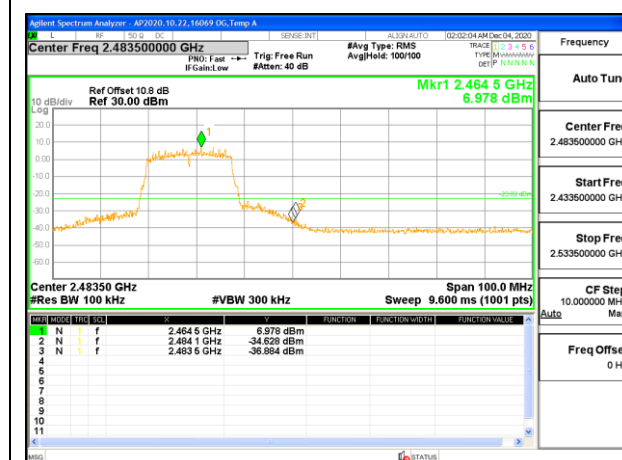




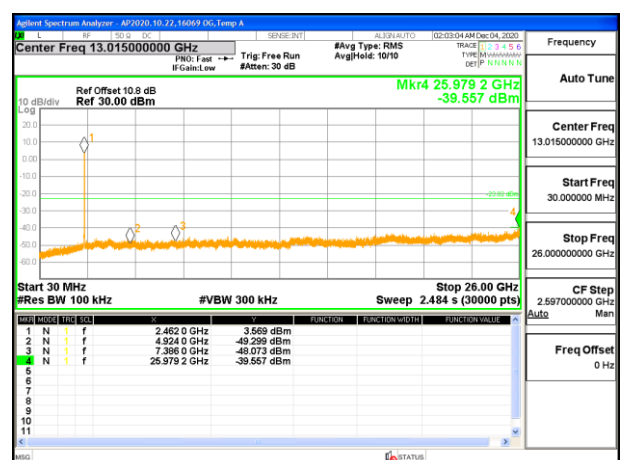
HIGH CHANNEL 10 BANDEDGE ANTENNA 2



OUT-OF-BAND HIGH CHANNEL 10 ANTENNA 2



HIGH CHANNEL 11 BANDEDGE ANTENNA 2



OUT-OF-BAND HIGH CHANNEL 11 ANTENNA 2

## 10. RADIATED TEST RESULTS - E1915 ANTENNA

### LIMITS

FCC §15.205 and §15.209

RSS-GEN, Section 8.9 and 8.10

| Frequency Range (MHz) | Field Strength Limit (uV/m) at 3 m | Field Strength Limit (dBuV/m) at 3 m |
|-----------------------|------------------------------------|--------------------------------------|
| 0.009-0.490           | 2400/F(kHz) @ 300 m                | -                                    |
| 0.490-1.705           | 24000/F(kHz) @ 30 m                | -                                    |
| 1.705 - 30            | 30 @ 30m                           | -                                    |
| 30 - 88               | 100                                | 40                                   |
| 88 - 216              | 150                                | 43.5                                 |
| 216 - 960             | 200                                | 46                                   |
| Above 960             | 500                                | 54                                   |

### TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane for measurement below 1GHz; 1.5 m above the ground plane for measurement above 1GHz. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.10. The EUT is set to transmit in a continuous mode.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For pre-scans above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 30 KHz for peak measurements.

For final measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements and as applicable for average measurements.

The spectrum from 1 GHz to 18 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band. Below 1GHz and above 18GHz emissions, the channel with the highest output power was tested.

The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

2D antenna use - For below 30MHz testing, investigation was done on three antenna orientations (parallel, perpendicular, and ground-parallel), parallel and perpendicular are the worst orientations, therefore testing was performed on these two orientations only. Blue color trace on plots: Parallel orientation. Green color trace on plots: Perpendicular orientation.

#### **KDB 414788 Open Field Site(OFS) and Chamber Correlation Justification**

Base on FCC 15.31 (f) (2): measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field.

OFS and chamber correlation testing had been performed and chamber measured test result is the worst-case test result.



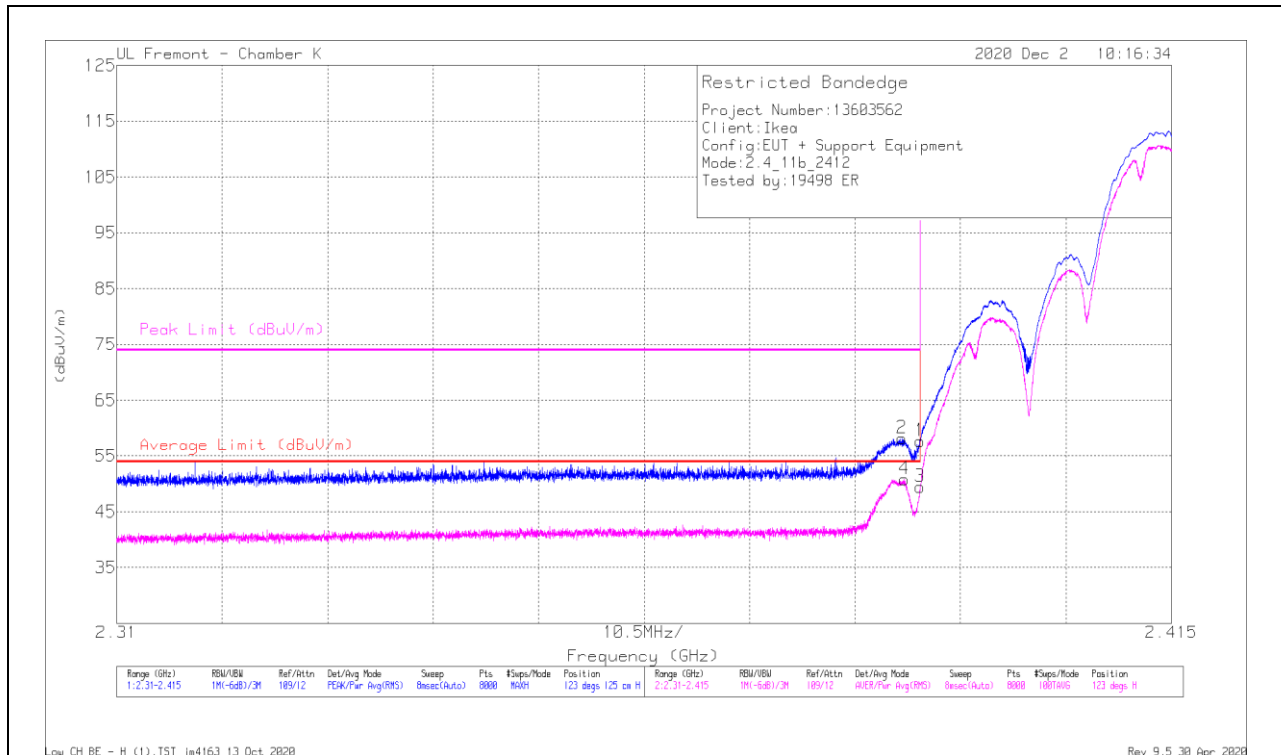
## 10.1. TRANSMITTER ABOVE 1 GHz

### 10.1.1. TX ABOVE 1 GHz 802.11b MODE IN THE 2.4 GHz BAND

#### 2TX Antenna 1 + Antenna 2 CDD MODE

#### BANDEDGE (LOW CHANNEL, CH 1)

#### HORIZONTAL RESULT



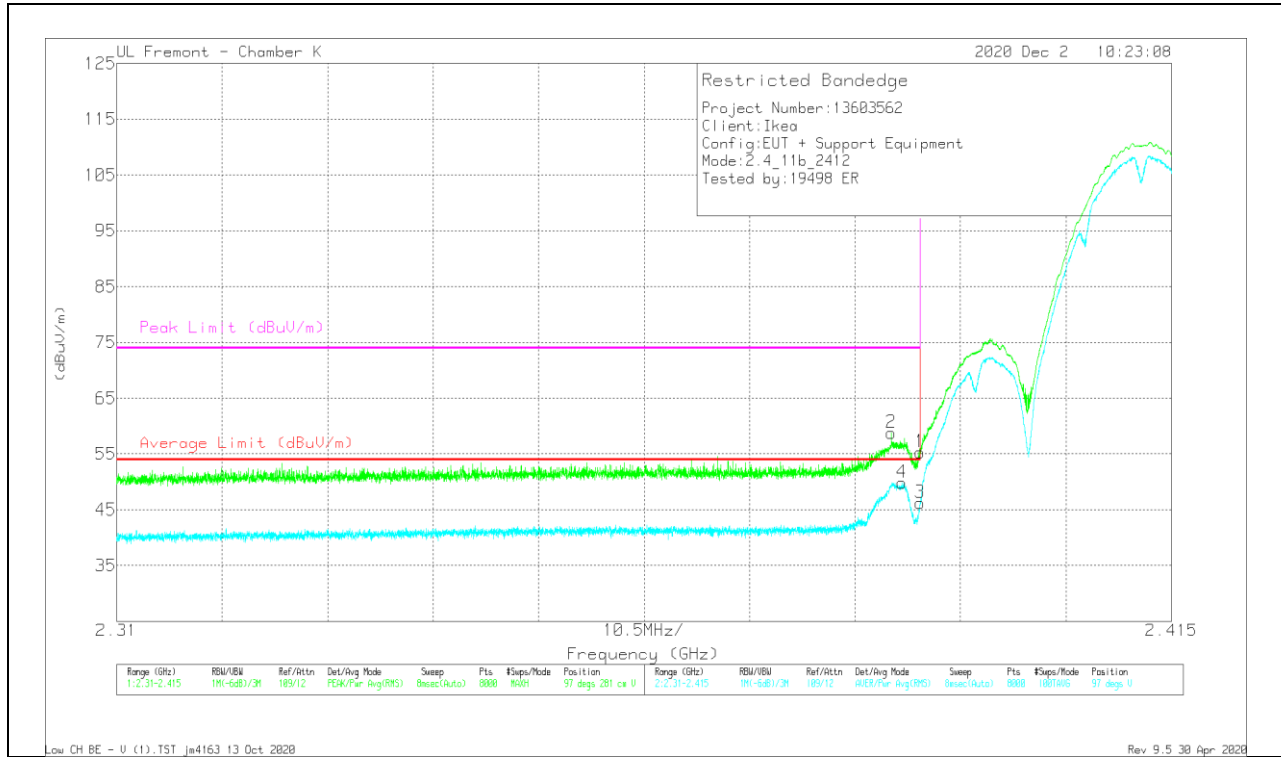
| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AF T863 (dB/m) | Ampl/Cbl/Filt/Pa d (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|----------------|-------------------------|----------------------------|------------------------|-------------|---------------------|----------------|----------------|-------------|----------|
| 1      | * 2.39          | 36.9                 | Pk  | 32.4           | -11.6                   | 57.7                       | -                      | -           | 74                  | -16.3          | 123            | 125         | H        |
| 2      | * 2.3882        | 37.34                | Pk  | 32.4           | -11.6                   | 58.14                      | -                      | -           | 74                  | -15.86         | 123            | 125         | H        |
| 3      | * 2.39          | 28.71                | RMS | 32.4           | -11.6                   | 49.51                      | 54                     | -4.49       | -                   | -              | 123            | 125         | H        |
| 4      | * 2.38841       | 30                   | RMS | 32.4           | -11.6                   | 50.8                       | 54                     | -3.2        | -                   | -              | 123            | 125         | H        |

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

## VERTICAL RESULT



| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AF T863 (dB/m) | Amp/ICbl/Filt/Pa d (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|----------------|-------------------------|----------------------------|------------------------|-------------|---------------------|----------------|----------------|-------------|----------|
| 1      | * 2.39          | 34.52                | Pk  | 32.4           | -11.6                   | 55.32                      | -                      | -           | 74                  | -18.68         | 97             | 281         | V        |
| 2      | * 2.38712       | 37.95                | Pk  | 32.4           | -11.6                   | 58.75                      | -                      | -           | 74                  | -15.25         | 97             | 281         | V        |
| 3      | * 2.39          | 25.44                | RMS | 32.4           | -11.6                   | 46.24                      | 54                     | -7.76       | -                   | -              | 97             | 281         | V        |
| 4      | * 2.38818       | 29.08                | RMS | 32.4           | -11.6                   | 49.88                      | 54                     | -4.12       | -                   | -              | 97             | 281         | V        |

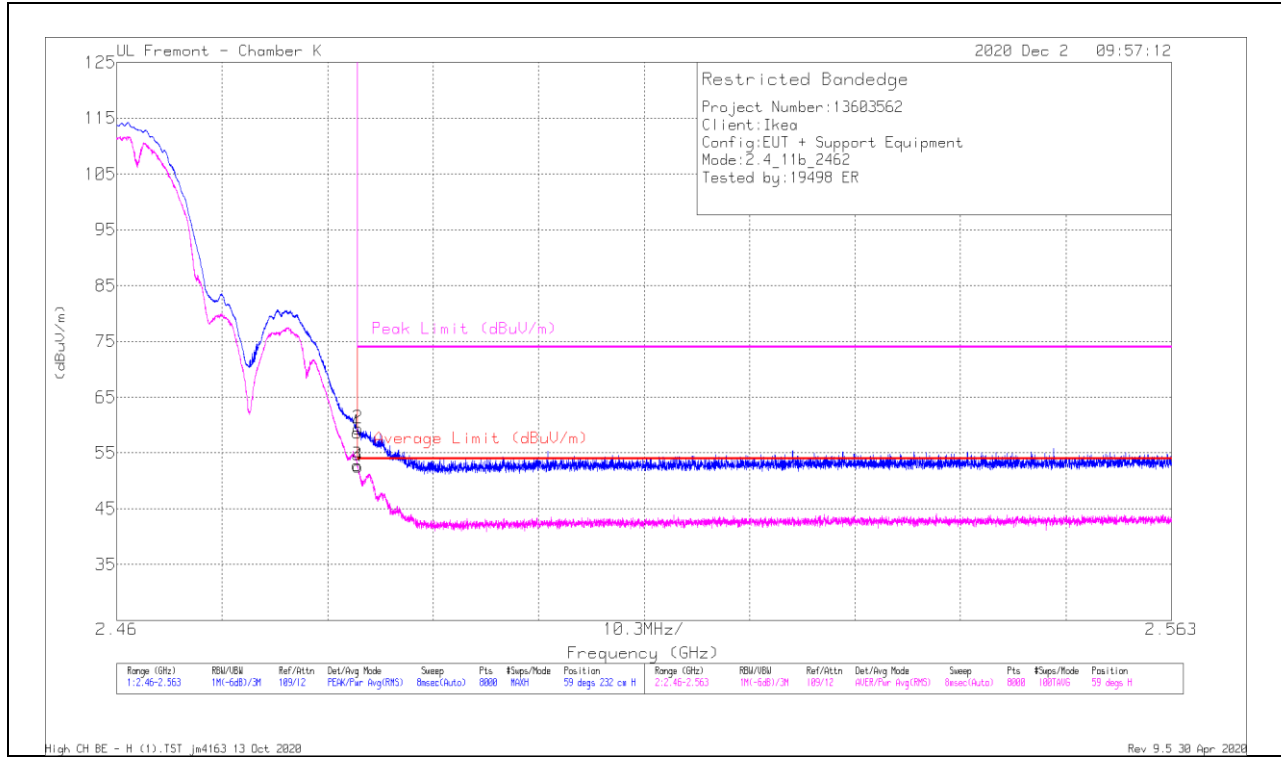
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

## BANDEDGE (HIGH CHANNEL, CH 11)

### HORIZONTAL RESULT



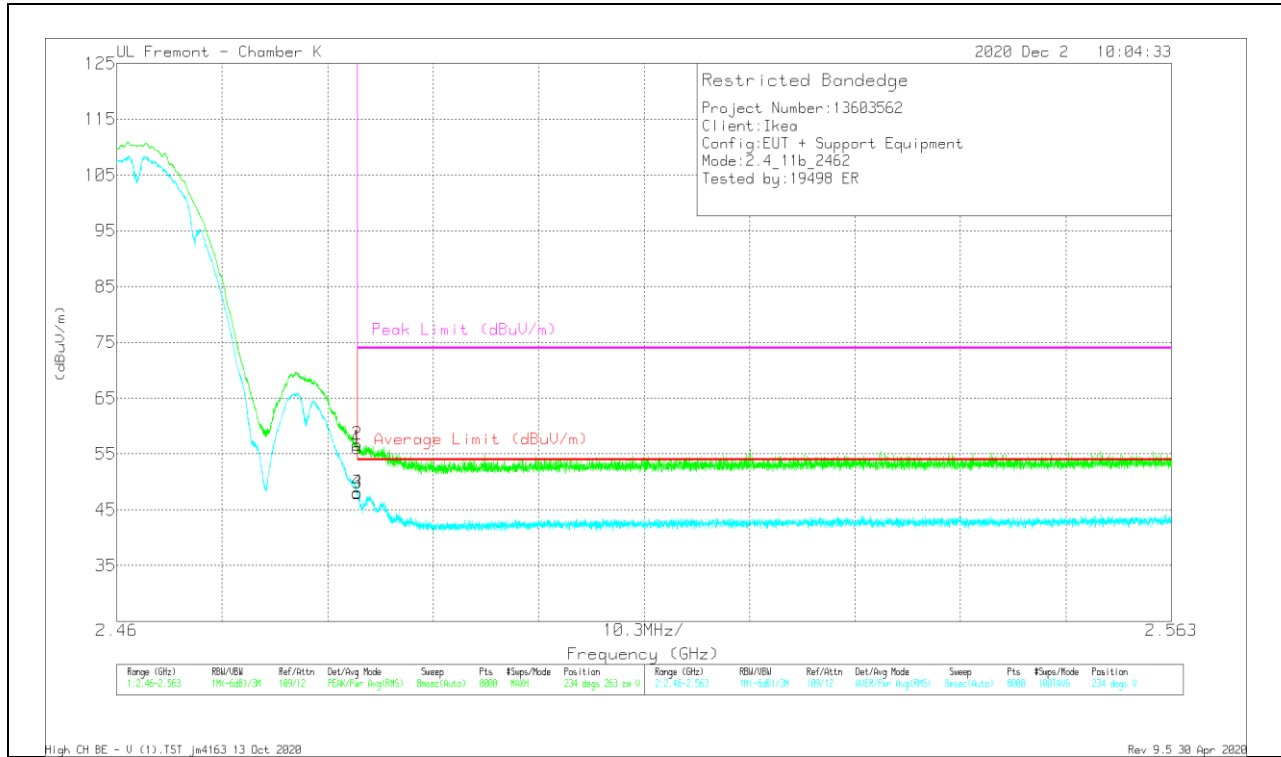
| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AF T863 (dB/m) | Amp/Cbll/Filt/Pa d (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|----------------|-------------------------|----------------------------|------------------------|-------------|---------------------|----------------|----------------|-------------|----------|
| 1      | * 2.4835        | 37.37                | Pk  | 32.5           | -11.2                   | 58.67                      | -                      | -           | 74                  | -15.33         | 59             | 232         | H        |
| 2      | * 2.48356       | 38.13                | Pk  | 32.5           | -11.2                   | 59.43                      | -                      | -           | 74                  | -14.57         | 59             | 232         | H        |
| 3      | * 2.4835        | 31.51                | RMS | 32.5           | -11.2                   | 52.81                      | 54                     | -1.19       | -                   | -              | 59             | 232         | H        |
| 4      | * 2.48354       | 31.31                | RMS | 32.5           | -11.2                   | 52.61                      | 54                     | -1.39       | -                   | -              | 59             | 232         | H        |

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

## VERTICAL RESULT



| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | AF T863 (dB/m) | Amp/ICBl/Filt/Pa d (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|----------------|-------------------------|----------------------------|------------------------|-------------|---------------------|----------------|----------------|-------------|----------|
| 1      | * 2.4835        | 34.76                | Pk  | 32.5           | -11.2                   | 56.06                      | -                      | -           | 74                  | -17.94         | 234            | 263         | V        |
| 2      | * 2.48351       | 35.32                | Pk  | 32.5           | -11.2                   | 56.62                      | -                      | -           | 74                  | -17.38         | 234            | 263         | V        |
| 3      | * 2.4835        | 26.63                | RMS | 32.5           | -11.2                   | 47.93                      | 54                     | -6.07       | -                   | -              | 234            | 263         | V        |
| 4      | * 2.48351       | 26.79                | RMS | 32.5           | -11.2                   | 48.09                      | 54                     | -5.91       | -                   | -              | 234            | 263         | V        |

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

## HARMONICS AND SPURIOUS EMISSIONS

### LOW CHANNEL, CH 1 RESULTS

