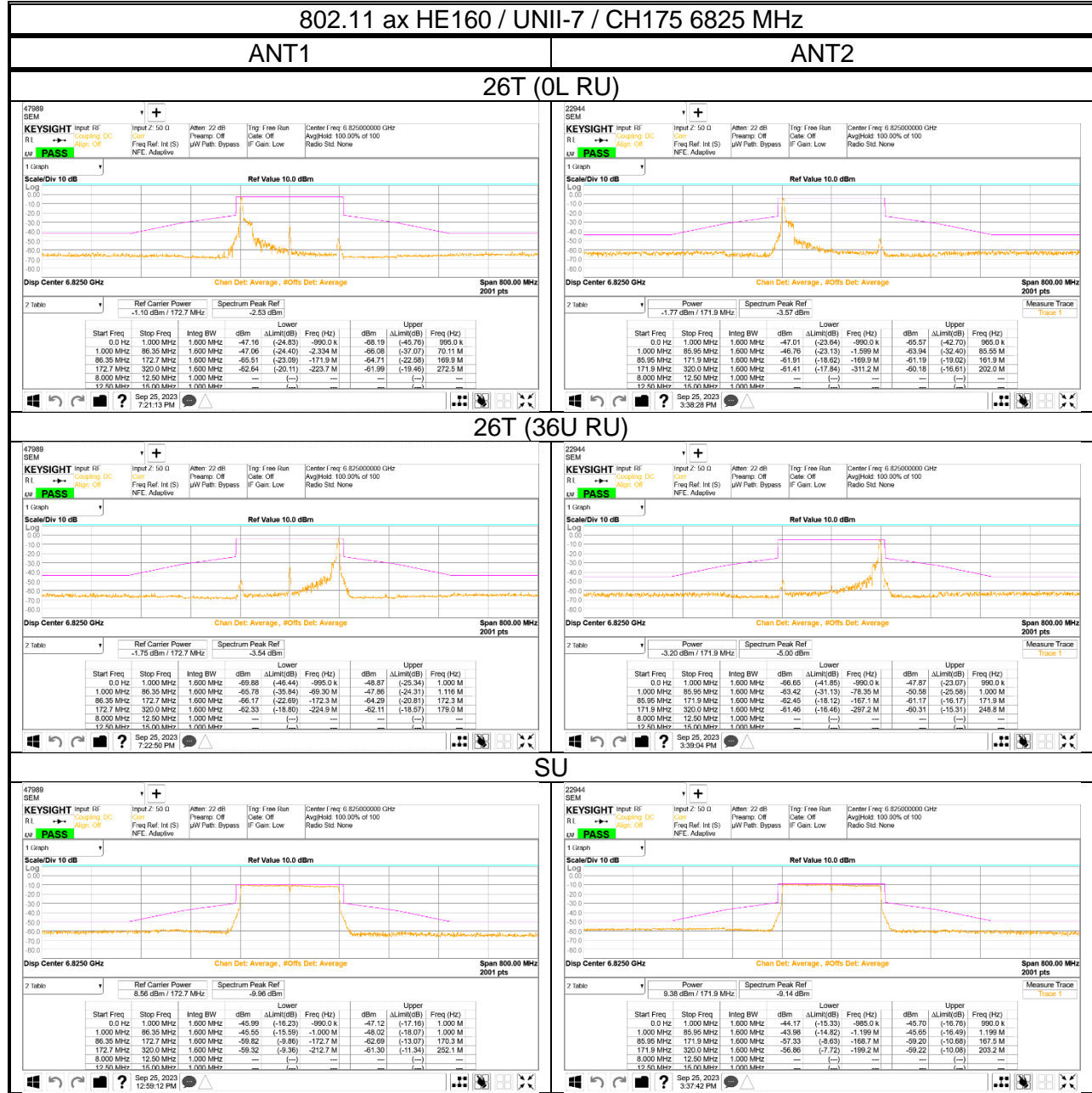
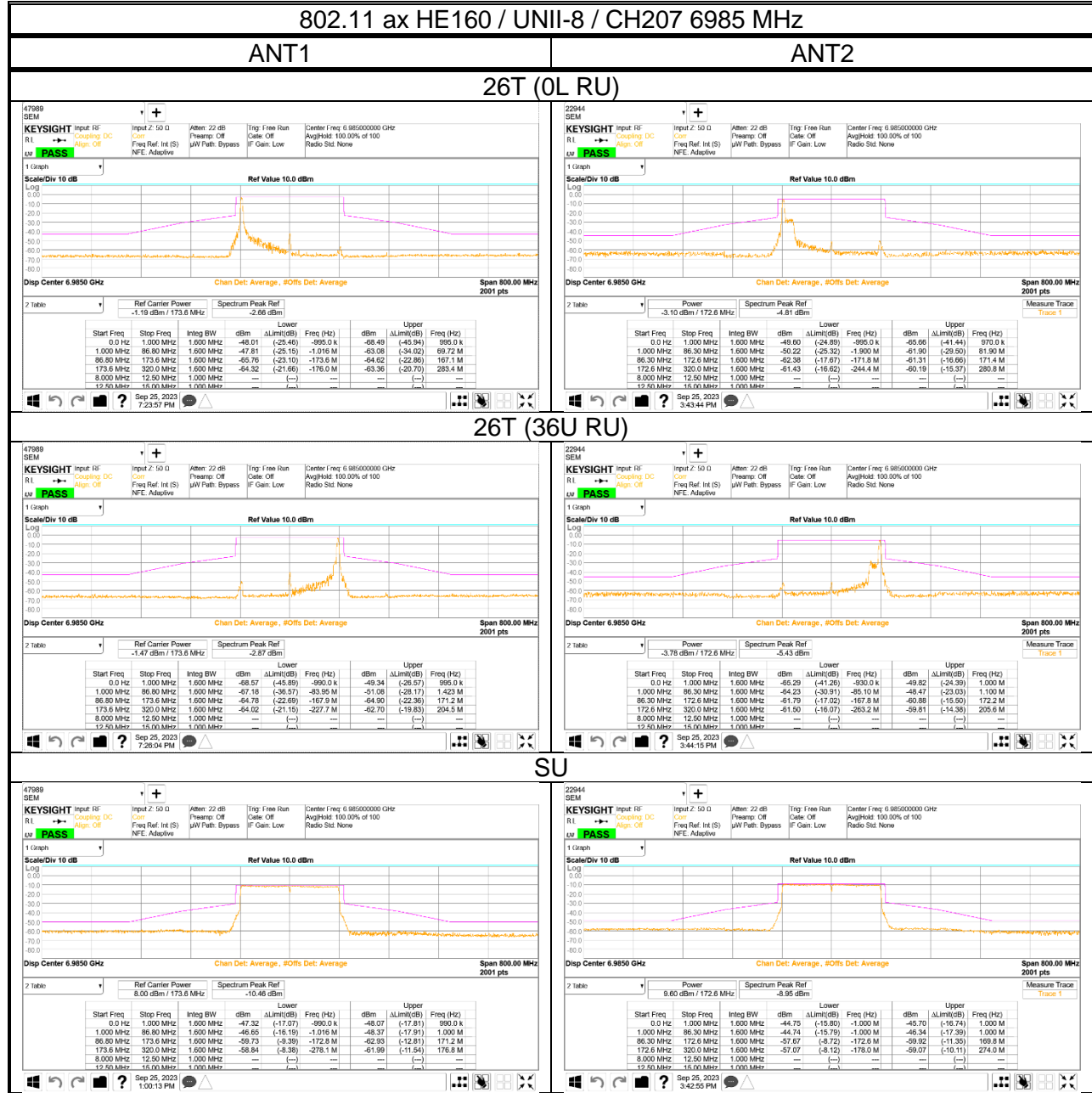


- LP



- LP



11. TRANSMITTER ABOVE 1 GHz

LIMITS

FCC §15.205 and §15.209

| Limits for radiated disturbance of an intentional radiator | | |
|--|-----------------|--------------------------|
| Frequency range (MHz) | Limits (µV/m) | Measurement Distance (m) |
| 0.009 – 0.490 | 2400 / F (kHz) | 300 |
| 0.490 – 1.705 | 24000 / F (kHz) | 30 |
| 1.705 – 30.0 | 30 | 30 |
| 30 – 88 | 100** | 3 |
| 88 - 216 | 150** | 3 |
| 216 – 960 | 200** | 3 |
| Above 960 | 500 | 3 |

** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g. §§ 15.231 and 15.241.

FCC Part 15.205 (a) : Only spurious emissions are permitted in any of the frequency bands listed below :

| MHz | MHz | MHz | MHz | GHz | GHz |
|-------------------|---------------------|-----------------------|------------------------------|--------------|---------------|
| 0.009 ~ 0.110 | 8.41425 ~ 8.41475 | 108 ~ 121.94 | 1300 ~ 1427 | 4.5 ~ 5.15 | 14.47 ~ 14.5 |
| 0.495 ~ 0.505 | 12.29 ~ 12.293 | 123 ~ 138 | 1435 ~ 1626.5 | 5.35 ~ 5.46 | 15.35 ~ 16.2 |
| 2.1735 ~ 2.1905 | 12.51975 ~ 12.52025 | 149.9 ~ 150.05 | 1645.5 ~ 1646.5 | 7.25 ~ 7.75 | 17.7 ~ 21.4 |
| 4.125 ~ 4.128 | 12.57675 ~ 12.57725 | 156.52475 ~ 156.52525 | 1660 ~ 1710 | 8.025 ~ 8.5 | 22.01 ~ 23.12 |
| 4.17725 ~ 4.17775 | 13.36 ~ 13.41 | 156.7 ~ 156.9 | 1718.8 ~ 1722.2 | 9.0 ~ 9.2 | 23.6 ~ 24.0 |
| 4.20725 ~ 4.20775 | 16.42 ~ 16.423 | 162.0125 ~ 167.17 | 2200 ~ 2300 | 9.3 ~ 9.5 | 31.2 ~ 31.8 |
| 6.215 ~ 6.218 | 16.69475 ~ 16.69525 | 167.72 ~ 173.2 | 2310 ~ 2390 | 10.6 ~ 12.7 | 36.43 ~ 36.5 |
| 6.26775 ~ 6.26825 | 16.80425 ~ 16.80475 | 240 ~ 285 | 2483.5 ~ 2500 | 13.25 ~ 13.4 | Above 38.6 |
| 6.31175 ~ 6.31225 | 25.5 ~ 25.67 | 322 ~ 335.4 | 2655 ~ 2900 | | |
| 8.291 ~ 8.294 | 37.5 ~ 38.25 | 399.90 ~ 410 | 3260 ~ 3267 | | |
| 8.362 ~ 8.366 | 73 ~ 74.6 | 608 ~ 614 | 3332 ~ 3339 | | |
| 8.37625 ~ 8.38675 | 74.8 ~ 75.2 | 960 ~ 1240 | 3345.8 ~ 3358 3600 ~ 4400 | | |

▪ FCC Part 15.205(b) : The field strength of emissions appearing within these frequency bands shall not exceed the limits shown in §15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in §15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in §15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in §15.35 apply to these measurements.

FCC §15.407 (b)

(6) 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.

(8) The emission measurements shall be performed using a minimum resolution bandwidth of 1 MHz. A lower resolution bandwidth may be employed near the band edge, when necessary, provided the measured energy is integrated to show the total power over 1 MHz.

(9) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209. Further, any U-NII devices using an AC power line are required to comply also with the conducted limits set forth in §15.207.

(10) The provisions of §15.205 apply to intentional radiators operating under this section.

(11) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the upper and lower frequency band edges as the design of the equipment permits.

Note

- Limit translation to field strength level (FCC §15.407)

$$E[\text{dBuV/m}] = \text{EIRP}[\text{dBm}] + 95.2 = -27\text{dBm} + 95.2 = 68.2\text{dBuV/m}$$

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane for below 1GHz and 100 cm for above 1GHz. EUT is set 3 meters away from the receiving antenna and scan from 1m to 4m to find out the highest emission.

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.

Reference to KDB 789033 D02 v02r01 UNII part G) 6) c) Method AD:

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements and add duty cycle factor to the reading offset for average measurements.

Pre-scans to detect harmonic and spurious emissions, the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 30 kHz for peak measurements.

Radiated harmonics spurious 1~18 GHz Low/Mid/High channels, 18-40GHz were performed with the EUT set at the 2TX MIMO mode.

(From 30MHz to 1GHz, test was performed with the EUT set to transmit at the channel with highest output power)

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.

Note : Emission was pre-scanned from 9kHz to 30MHz; No emissions were detected which was at least 20dB below the specification limit (consider distance correction factor).

Per FCC part 15.31(o), test results were not reported.

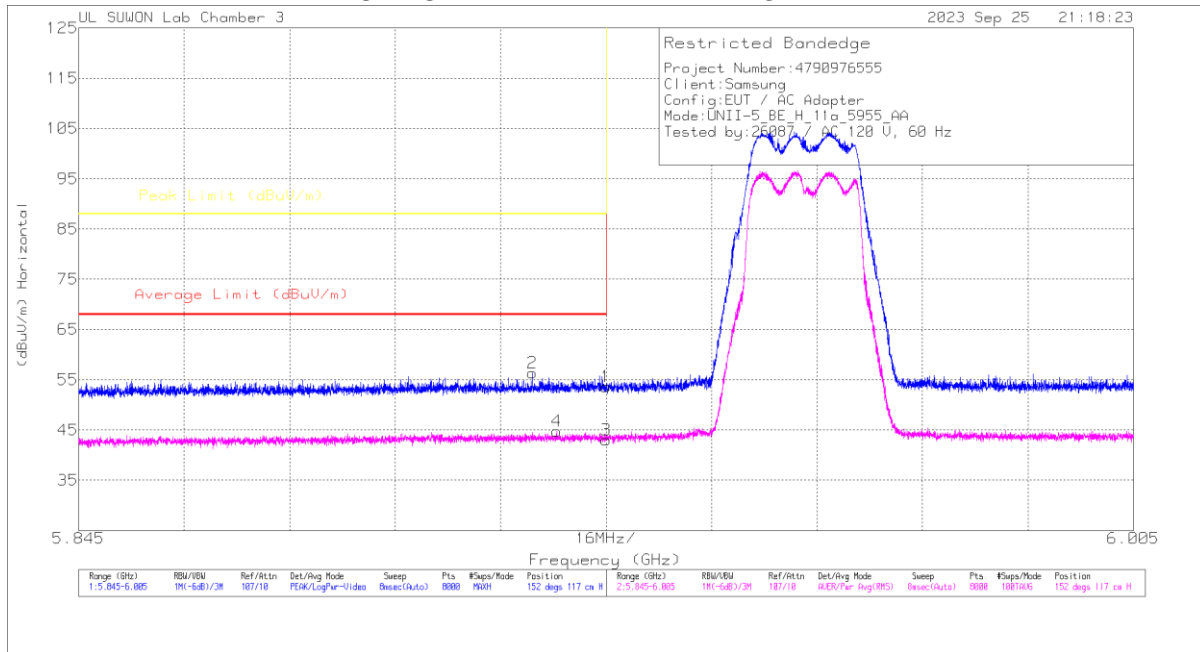
Although these tests were performed other than open field test site, adequate comparison measurements were confirmed against 30 m open area test site.

Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the one of tests made in an open field based on KDB 414788.

11.1. TX ABOVE 1GHz 2Tx MODE IN U-NII-5 BAND

BANDEDGE (WORST CASE: 802.11a / 5955 MHz)

HORIZONTAL PEAK AND AVERAGE DATA



Trace Markers

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | Antenna Correction Factor(dB[1m]) | Path Loss(dB) | DC Corr (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | Pk Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|-----------------------------------|---------------|--------------|----------------------------|------------------------|-------------|---------------------|----------------|----------------|-------------|----------|
| 1 | 5.92499 | 37.51 | Pk | 35.5 | -19.4 | 0 | 53.61 | - | - | 88 | -34.39 | 152 | 117 | H |
| 2 | 5.91381 | 40.22 | Pk | 35.5 | -19.4 | 0 | 56.32 | - | - | 88 | -31.68 | 152 | 117 | H |
| 3 | 5.92499 | 26.81 | RMS | 35.5 | -19.4 | .15 | 43.06 | 68 | -24.94 | - | - | 152 | 117 | H |
| 4 | 5.91749 | 28.51 | RMS | 35.5 | -19.4 | .15 | 44.76 | 68 | -23.24 | - | - | 152 | 117 | H |

PK - Peak detector
 RMS - RMS detection

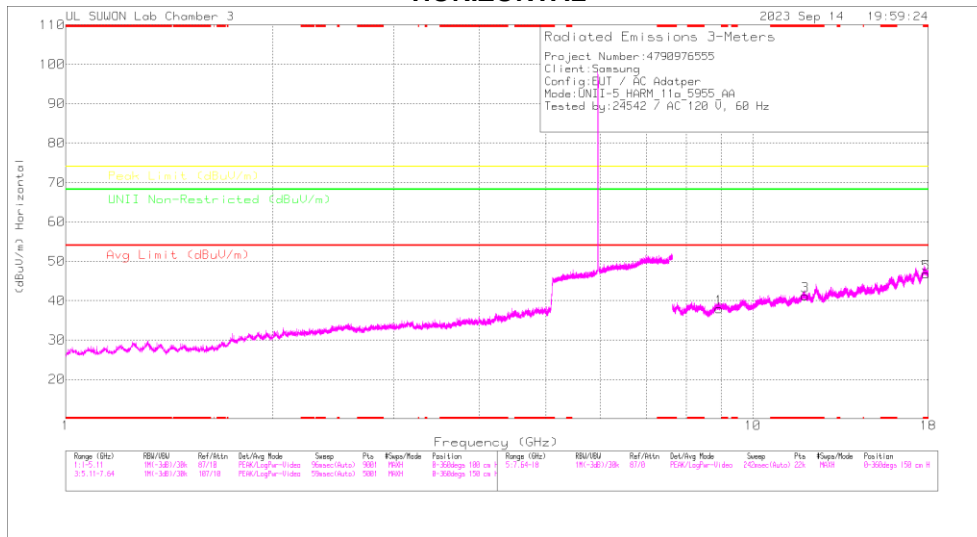
BANDEDGE TEST DATA

| Mode | Freq. [MHz] | Antenna | Frequency [GHz] | Reading [dBuV] | Detector Mode | ANT Factor [dB(1/m)] | Loss [dB] | DC Corr [dB] | Result dBuV/m | AV Limit dBuV/m | AV Margin [dB] | PK Limit dBuV/m | PK Margin [dB] | Azimuth [Degs] | Height [cm] | Polarity |
|--------------------------|-------------|---------|-----------------|----------------|---------------|----------------------|-----------|--------------|---------------|-----------------|----------------|-----------------|----------------|----------------|-------------|----------|
| 802.11a | 5955 | MIMO | 5.92499 | 37.51 | Pk | 35.50 | -19.40 | 0.00 | 53.61 | - | - | 88.00 | -34.39 | 152 | 117 | H |
| | | | 5.91381 | 40.22 | Pk | 35.50 | -19.40 | 0.00 | 56.32 | - | - | 88.00 | -31.68 | 152 | 117 | H |
| | | | 5.92499 | 26.81 | RMS | 35.50 | -19.40 | 0.15 | 43.06 | 68.00 | -24.94 | - | - | 152 | 117 | H |
| | | | 5.91749 | 28.51 | RMS | 35.50 | -19.40 | 0.15 | 44.76 | 68.00 | -23.24 | - | - | 152 | 117 | H |
| | | | 5.92499 | 37.34 | Pk | 35.50 | -19.40 | 0.00 | 53.44 | - | - | 88.00 | -34.56 | 210 | 103 | V |
| | | | 5.89935 | 40.44 | Pk | 35.40 | -19.40 | 0.00 | 56.44 | - | - | 88.00 | -31.56 | 210 | 103 | V |
| | | | 5.92499 | 27.19 | RMS | 35.50 | -19.40 | 0.15 | 43.44 | 68.00 | -24.56 | - | - | 210 | 103 | V |
| | | | 5.91667 | 27.96 | RMS | 35.50 | -19.40 | 0.15 | 44.21 | 68.00 | -23.79 | - | - | 210 | 103 | V |
| 802.11ax (HE20) SU | 5955 | MIMO | 5.92499 | 36.68 | Pk | 35.50 | -19.40 | 0.00 | 52.78 | - | - | 88.00 | -35.22 | 151 | 114 | H |
| | | | 5.90777 | 40.16 | Pk | 35.40 | -19.40 | 0.00 | 56.16 | - | - | 88.00 | -31.84 | 151 | 114 | H |
| | | | 5.92499 | 26.78 | RMS | 35.50 | -19.40 | 0.00 | 42.88 | 68.00 | -25.12 | - | - | 151 | 114 | H |
| | | | 5.91373 | 27.78 | RMS | 35.50 | -19.40 | 0.00 | 43.88 | 68.00 | -24.12 | - | - | 151 | 114 | H |
| | | | 5.92499 | 36.89 | Pk | 35.50 | -19.40 | 0.00 | 52.99 | - | - | 88.00 | -35.01 | 208 | 103 | V |
| | | | 5.87738 | 40.58 | Pk | 35.30 | -19.50 | 0.00 | 56.38 | - | - | 88.00 | -31.62 | 208 | 103 | V |
| | | | 5.92499 | 26.99 | RMS | 35.50 | -19.40 | 0.00 | 43.09 | 68.00 | -24.91 | - | - | 208 | 103 | V |
| | | | 5.91791 | 27.58 | RMS | 35.50 | -19.40 | 0.00 | 43.68 | 68.00 | -24.32 | - | - | 208 | 103 | V |
| 802.11ax (HE40) SU mode | 5965 | MIMO | 5.92499 | 37.39 | Pk | 35.50 | -19.40 | 0.00 | 53.49 | - | - | 88.00 | -34.51 | 151 | 119 | H |
| | | | 5.91793 | 39.81 | Pk | 35.50 | -19.40 | 0.00 | 55.91 | - | - | 88.00 | -32.09 | 151 | 119 | H |
| | | | 5.92499 | 26.85 | RMS | 35.50 | -19.40 | 0.00 | 42.95 | 68.00 | -25.05 | - | - | 151 | 119 | H |
| | | | 5.91619 | 28.01 | RMS | 35.50 | -19.40 | 0.00 | 44.11 | 68.00 | -23.89 | - | - | 151 | 119 | H |
| | | | 5.92499 | 36.53 | Pk | 35.50 | -19.40 | 0.00 | 52.63 | - | - | 88.00 | -35.37 | 216 | 100 | V |
| | | | 5.90179 | 39.26 | Pk | 35.40 | -19.50 | 0.00 | 55.16 | - | - | 88.00 | -32.84 | 216 | 100 | V |
| | | | 5.92499 | 27.04 | RMS | 35.50 | -19.40 | 0.00 | 43.14 | 68.00 | -24.86 | - | - | 216 | 100 | V |
| | | | 5.92245 | 27.86 | RMS | 35.50 | -19.30 | 0.00 | 44.06 | 68.00 | -23.94 | - | - | 216 | 100 | V |
| 802.11ax (HE80) SU mode | 5985 | MIMO | 5.92499 | 36.80 | Pk | 35.50 | -19.40 | 0.00 | 52.90 | - | - | 88.00 | -35.10 | 151 | 119 | H |
| | | | 5.90969 | 39.92 | Pk | 35.40 | -19.50 | 0.00 | 55.82 | - | - | 88.00 | -32.18 | 151 | 119 | H |
| | | | 5.92499 | 27.37 | RMS | 35.50 | -19.40 | 0.00 | 43.47 | 68.00 | -24.53 | - | - | 151 | 119 | H |
| | | | 5.92199 | 28.27 | RMS | 35.50 | -19.30 | 0.00 | 44.47 | 68.00 | -23.53 | - | - | 151 | 119 | H |
| | | | 5.92499 | 36.63 | Pk | 35.50 | -19.40 | 0.00 | 52.73 | - | - | 88.00 | -35.27 | 216 | 100 | V |
| | | | 5.91519 | 40.90 | Pk | 35.50 | -19.40 | 0.00 | 57.00 | - | - | 88.00 | -31.00 | 216 | 100 | V |
| | | | 5.92499 | 26.76 | RMS | 35.50 | -19.40 | 0.00 | 42.86 | 68.00 | -25.14 | - | - | 216 | 100 | V |
| | | | 5.91589 | 28.30 | RMS | 35.50 | -19.40 | 0.00 | 44.40 | 68.00 | -23.60 | - | - | 216 | 100 | V |
| 802.11ax (HE160) SU mode | 6025 | MIMO | 5.92499 | 45.11 | Pk | 35.50 | -19.40 | 0.00 | 61.21 | - | - | 88.00 | -26.79 | 150 | 100 | H |
| | | | 5.92161 | 45.84 | Pk | 35.50 | -19.30 | 0.00 | 62.04 | - | - | 88.00 | -25.96 | 150 | 100 | H |
| | | | 5.92499 | 26.46 | RMS | 35.50 | -19.40 | 0.00 | 42.56 | 68.00 | -25.44 | - | - | 150 | 100 | H |
| | | | 5.92265 | 28.41 | RMS | 35.50 | -19.40 | 0.00 | 44.51 | 68.00 | -23.49 | - | - | 150 | 100 | H |
| | | | 5.92499 | 40.56 | Pk | 35.50 | -19.40 | 0.00 | 56.66 | - | - | 88.00 | -31.34 | 195 | 338 | V |
| | | | 5.92471 | 45.04 | Pk | 35.50 | -19.40 | 0.00 | 61.14 | - | - | 88.00 | -26.86 | 195 | 338 | V |
| | | | 5.92499 | 26.71 | RMS | 35.50 | -19.40 | 0.00 | 42.81 | 68.00 | -25.19 | - | - | 195 | 338 | V |
| | | | 5.92303 | 28.02 | RMS | 35.50 | -19.40 | 0.00 | 44.12 | 68.00 | -23.88 | - | - | 195 | 338 | V |

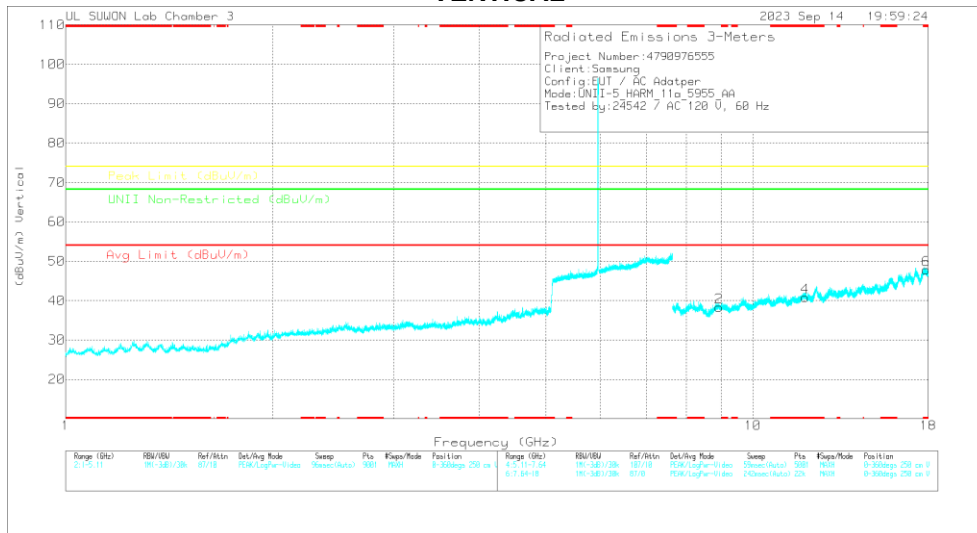
Note1. Pk - Peak detector, RMS - RMS detector
 Note2. * - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

HARMONICS AND SPURIOUS EMISSIONS(WORST CASE: 802.11a 5955 MHz)

HORIZONTAL



VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

Radiated Emissions

| Frequency (GHz) | Meter Reading (dBuV) | Det | Antenna Correction Factor(dB(m)) | Path Loss(dB) | DC Corr (dB) | Corrected Reading (dBuV(m)) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | Margin (dB) | UNII Non-Restricted (dBuV/m) | Margin (dB) | Asymch (Digits) | Height (cm) | Polarity |
|-----------------|----------------------|------|----------------------------------|---------------|--------------|-----------------------------|--------------------|-------------|---------------------|-------------|------------------------------|-------------|-----------------|-------------|----------|
| 8.93002 | 34.94 | PK-U | 36.2 | -22.5 | 0 | 48.64 | - | - | - | - | 68.2 | -19.56 | 0 | 100 | H |
| 8.92978 | 35.27 | PK-U | 36.2 | -22.5 | 0 | 48.97 | - | - | - | - | 68.2 | -19.23 | 0 | 100 | V |
| *11.91367 | 34.17 | PK-U | 38.6 | -22 | 0 | 50.77 | - | - | 74 | -23.23 | - | - | 0 | 100 | H |
| *11.91119 | 33.93 | PK-U | 38.6 | -22 | 0 | 50.53 | - | - | 74 | -23.47 | - | - | 0 | 100 | V |
| *17.86762 | 32.17 | PK-U | 41.5 | -16 | 0 | 57.67 | - | - | 74 | -16.33 | - | - | 0 | 100 | H |
| *17.86798 | 32.23 | PK-U | 41.5 | -15.9 | 0 | 57.83 | - | - | 74 | -16.17 | - | - | 0 | 100 | V |
| *17.86762 | 20.09 | ADR | 41.5 | -16 | -15 | 45.73 | 54 | -8.27 | - | - | - | - | 0 | 100 | H |
| *17.86798 | 20.11 | ADR | 41.5 | -15.9 | -15 | 45.96 | 54 | -8.14 | - | - | - | - | 0 | 100 | V |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 PK-U - U-NII: Maximum Peak
 ADR - U-NII AD primary method, RMS average

HARMONICS AND SPURIOUS EMISSIONS TEST DATA

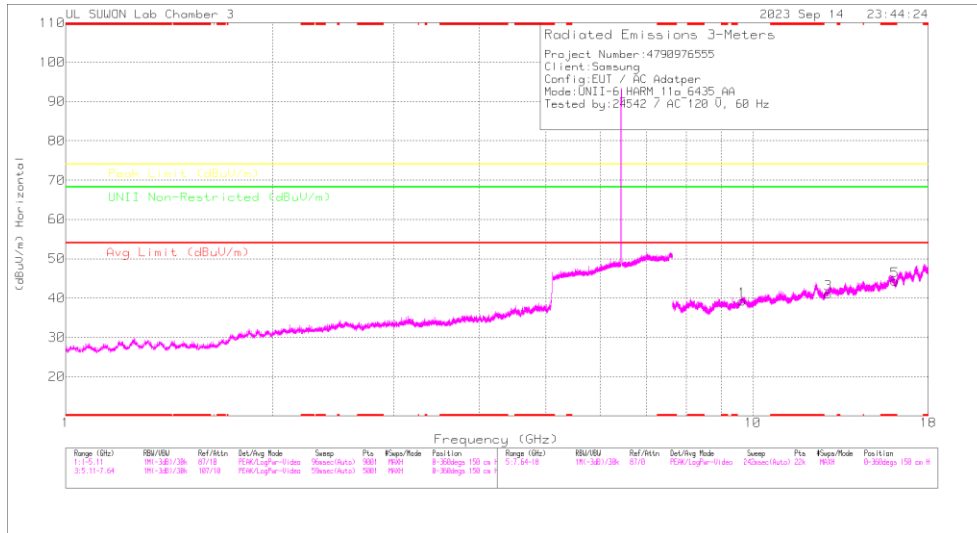
| Mode | Freq. [MHz] | Antenna | Frequency [GHz] | Reading [dBuV] | Detector Mode | ANT Factor [dB(1/m)] | Loss [dB] | DC Corr [dB] | Result [dBuV/m] | AV Limit [dBuV/m] | AV Margin [dB] | PK Limit [dBuV/m] | PK Margin [dB] | Non-Restricted [dBuV/m] | Margin [dB] | Azimuth [Degs] | Height [cm] | Polarity | |
|--|-------------|---------|-----------------|----------------|---------------|----------------------|-----------|--------------|-----------------|-------------------|----------------|-------------------|----------------|-------------------------|-------------|----------------|-------------|----------|---|
| 802.11a | 5955 | MIMO | 8.93002 | 34.94 | PK-U | 36.20 | -22.50 | 0.00 | 48.64 | - | - | - | - | 68.20 | -19.56 | 0 | 100 | H | |
| | | | 8.92978 | 35.27 | PK-U | 36.20 | -22.50 | 0.00 | 48.97 | - | - | - | - | 68.20 | -19.23 | 0 | 100 | V | |
| | | | *11.91367 | 34.17 | PK-U | 38.60 | -22.00 | 0.00 | 50.77 | - | - | 74.00 | -23.23 | - | - | - | 0 | 100 | H |
| | | | *11.91119 | 33.93 | PK-U | 38.60 | -22.00 | 0.00 | 50.53 | - | - | 74.00 | -23.47 | - | - | - | 0 | 100 | V |
| | | | *17.86762 | 32.17 | PK-U | 41.50 | -16.00 | 0.00 | 57.67 | - | - | 74.00 | -16.33 | - | - | - | 0 | 100 | H |
| | | | *17.86798 | 32.23 | PK-U | 41.50 | -15.90 | 0.00 | 57.83 | - | - | 74.00 | -16.17 | - | - | - | 0 | 100 | V |
| | *17.86762 | 20.08 | ADR | 41.50 | -16.00 | 0.15 | 45.73 | 54.00 | -8.27 | - | - | - | - | - | - | 0 | 100 | H | |
| | *17.86798 | 20.11 | ADR | 41.50 | -15.90 | 0.15 | 45.86 | 54.00 | -8.14 | - | - | - | - | - | - | 0 | 100 | V | |
| | 6175 | MIMO | 9.25946 | 33.91 | PK-U | 36.50 | -22.00 | 0.00 | 48.41 | - | - | - | - | 68.20 | -19.79 | 0 | 100 | H | |
| | | | 9.26076 | 33.73 | PK-U | 36.50 | -22.00 | 0.00 | 48.23 | - | - | - | - | 68.20 | -19.97 | 0 | 100 | V | |
| | | | *12.35098 | 34.87 | PK-U | 39.20 | -21.70 | 0.00 | 52.37 | - | - | 74.00 | -21.63 | - | - | - | 0 | 100 | H |
| | | | *12.35086 | 34.59 | PK-U | 39.20 | -21.70 | 0.00 | 52.09 | - | - | 74.00 | -21.91 | - | - | - | 0 | 100 | V |
| | | | *15.44108 | 34.85 | PK-U | 40.00 | -21.50 | 0.00 | 53.35 | - | - | 74.00 | -20.65 | - | - | - | 0 | 100 | H |
| | | | *15.44164 | 34.45 | PK-U | 40.00 | -21.50 | 0.00 | 52.95 | - | - | 74.00 | -21.05 | - | - | - | 0 | 100 | V |
| | *15.44108 | 22.14 | ADR | 40.00 | -21.50 | 0.15 | 40.79 | 54.00 | -13.21 | - | - | - | - | - | - | 0 | 100 | H | |
| | *15.44164 | 22.31 | ADR | 40.00 | -21.50 | 0.15 | 40.96 | 54.00 | -13.04 | - | - | - | - | - | - | 0 | 100 | V | |
| | 6415 | MIMO | 9.62542 | 34.73 | PK-U | 36.80 | -21.80 | 0.00 | 49.73 | - | - | - | - | 68.20 | -18.47 | 0 | 100 | H | |
| | | | 9.62352 | 34.46 | PK-U | 36.70 | -21.70 | 0.00 | 49.46 | - | - | - | - | 68.20 | -18.74 | 0 | 100 | V | |
| 12.83018 | | | 34.66 | PK-U | 39.30 | -22.60 | 0.00 | 51.36 | - | - | - | - | 68.20 | -16.84 | 0 | 100 | H | | |
| 12.83231 | | | 34.60 | PK-U | 39.30 | -22.70 | 0.00 | 51.20 | - | - | - | - | 68.20 | -17.00 | 0 | 100 | V | | |
| *16.03282 | | | 33.74 | PK-U | 41.10 | -19.80 | 0.00 | 55.04 | - | - | 74.00 | -18.96 | - | - | - | 0 | 100 | H | |
| *16.03366 | | | 33.48 | PK-U | 41.10 | -19.80 | 0.00 | 54.78 | - | - | 74.00 | -19.22 | - | - | - | 0 | 100 | V | |
| *16.03282 | 21.09 | ADR | 41.10 | -19.80 | 0.15 | 42.54 | 54.00 | -11.46 | - | - | - | - | - | - | 0 | 100 | H | | |
| *16.03366 | 21.35 | ADR | 41.10 | -19.80 | 0.15 | 42.80 | 54.00 | -11.20 | - | - | - | - | - | - | 0 | 100 | V | | |
| 802.11ax (HE20) RU mode offset 0 Spot-Check | 6175 | MIMO | 9.26244 | 33.56 | PK-U | 36.50 | -22.00 | 0.00 | 48.06 | - | - | - | - | 68.20 | -20.14 | 0 | 100 | H | |
| | | | 9.25940 | 33.40 | PK-U | 36.50 | -22.00 | 0.00 | 47.90 | - | - | - | - | 68.20 | -20.30 | 0 | 100 | V | |
| | | | *12.35019 | 34.78 | PK-U | 39.20 | -21.70 | 0.00 | 52.28 | - | - | 74.00 | -21.72 | - | - | - | 0 | 100 | H |
| | | | *12.34725 | 34.50 | PK-U | 39.20 | -21.70 | 0.00 | 52.00 | - | - | 74.00 | -22.00 | - | - | - | 0 | 100 | V |
| | | | *15.43853 | 33.86 | PK-U | 40.00 | -21.50 | 0.00 | 52.36 | - | - | 74.00 | -21.64 | - | - | - | 0 | 100 | H |
| | | | *15.43829 | 34.22 | PK-U | 40.00 | -21.50 | 0.00 | 52.72 | - | - | 74.00 | -21.28 | - | - | - | 0 | 100 | V |
| *15.43853 | 22.32 | ADR | 40.00 | -21.50 | 0.00 | 40.82 | 54.00 | -13.18 | - | - | - | - | - | - | 0 | 100 | H | | |
| *15.43829 | 22.38 | ADR | 40.00 | -21.50 | 0.00 | 40.85 | 54.00 | -13.12 | - | - | - | - | - | - | 0 | 100 | V | | |
| 802.11ax (HE40) RU mode offset 0 Spot-Check | 5955 | MIMO | 8.94704 | 35.74 | PK-U | 36.20 | -22.50 | 0.00 | 49.44 | - | - | - | - | 68.20 | -18.76 | 1 | 100 | H | |
| | | | 8.94715 | 35.40 | PK-U | 36.20 | -22.50 | 0.00 | 49.10 | - | - | - | - | 68.20 | -19.10 | 1 | 100 | V | |
| | | | *11.93016 | 35.33 | PK-U | 38.70 | -21.90 | 0.00 | 52.13 | - | - | 74.00 | -21.67 | - | - | - | 1 | 100 | H |
| | | | *11.93034 | 35.10 | PK-U | 38.70 | -21.90 | 0.00 | 51.90 | - | - | 74.00 | -22.10 | - | - | - | 1 | 100 | V |
| | | | 14.91303 | 35.04 | PK-U | 39.80 | -22.10 | 0.00 | 52.74 | - | - | - | - | - | 68.20 | -15.46 | 1 | 100 | H |
| | | | 14.91306 | 34.86 | PK-U | 39.80 | -22.10 | 0.00 | 52.56 | - | - | - | - | - | 68.20 | -15.64 | 1 | 100 | V |
| 802.11ax (HE80) RU mode offset 18 Spot-Check | 6145 | MIMO | 9.21534 | 34.44 | PK-U | 36.50 | -22.30 | 0.00 | 48.64 | - | - | - | - | 68.20 | -19.56 | 0 | 100 | H | |
| | | | 9.22241 | 34.45 | PK-U | 36.50 | -22.30 | 0.00 | 48.65 | - | - | - | - | 68.20 | -19.55 | 0 | 100 | V | |
| | | | *12.28978 | 33.94 | PK-U | 39.10 | -21.70 | 0.00 | 51.34 | - | - | 74.00 | -22.66 | - | - | - | 0 | 100 | H |
| | | | *12.2873 | 33.59 | PK-U | 39.10 | -21.70 | 0.00 | 50.99 | - | - | 74.00 | -23.01 | - | - | - | 0 | 100 | V |
| | | | *15.36567 | 34.30 | PK-U | 39.80 | -21.00 | 0.00 | 53.10 | - | - | 74.00 | -20.90 | - | - | - | 0 | 100 | H |
| | | | *15.36485 | 34.38 | PK-U | 39.80 | -21.00 | 0.00 | 53.18 | - | - | 74.00 | -20.82 | - | - | - | 0 | 100 | V |
| *15.36567 | 22.51 | ADR | 39.80 | -21.00 | 0.00 | 41.31 | 54.00 | -12.69 | - | - | - | - | - | - | 0 | 100 | H | | |
| *15.36485 | 22.36 | ADR | 39.80 | -21.00 | 0.00 | 41.16 | 54.00 | -12.84 | - | - | - | - | - | - | 0 | 100 | V | | |
| 802.11ax (HE160) RU mode offset 0 Spot-Check | 6345 | MIMO | 9.51439 | 33.66 | PK-U | 36.70 | -21.70 | 0.00 | 48.86 | - | - | - | - | 68.20 | -19.34 | 0 | 100 | H | |
| | | | 9.52241 | 33.96 | PK-U | 36.70 | -21.80 | 0.00 | 48.86 | - | - | - | - | 68.20 | -19.34 | 0 | 100 | V | |
| | | | *12.68695 | 34.40 | PK-U | 39.20 | -22.70 | 0.00 | 50.90 | - | - | 74.00 | -23.10 | - | - | - | 0 | 100 | H |
| | | | *12.68933 | 34.87 | PK-U | 39.20 | -22.70 | 0.00 | 51.37 | - | - | 74.00 | -22.63 | - | - | - | 0 | 100 | V |
| | | | *15.86196 | 34.33 | PK-U | 40.70 | -20.60 | 0.00 | 54.43 | - | - | 74.00 | -19.57 | - | - | - | 0 | 100 | H |
| | | | *15.86259 | 34.42 | PK-U | 40.70 | -20.60 | 0.00 | 54.52 | - | - | 74.00 | -19.46 | - | - | - | 0 | 100 | V |
| *15.86196 | 22.26 | ADR | 40.70 | -20.60 | 0.00 | 42.36 | 54.00 | -11.64 | - | - | - | - | - | - | 0 | 100 | H | | |
| *15.86259 | 22.34 | ADR | 40.70 | -20.60 | 0.00 | 42.44 | 54.00 | -11.56 | - | - | - | - | - | - | 0 | 100 | V | | |

Note1. PK-U - U-NII: Maximum Peak, ADR - U-NII AD primary method, RMS average
Note2. * - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

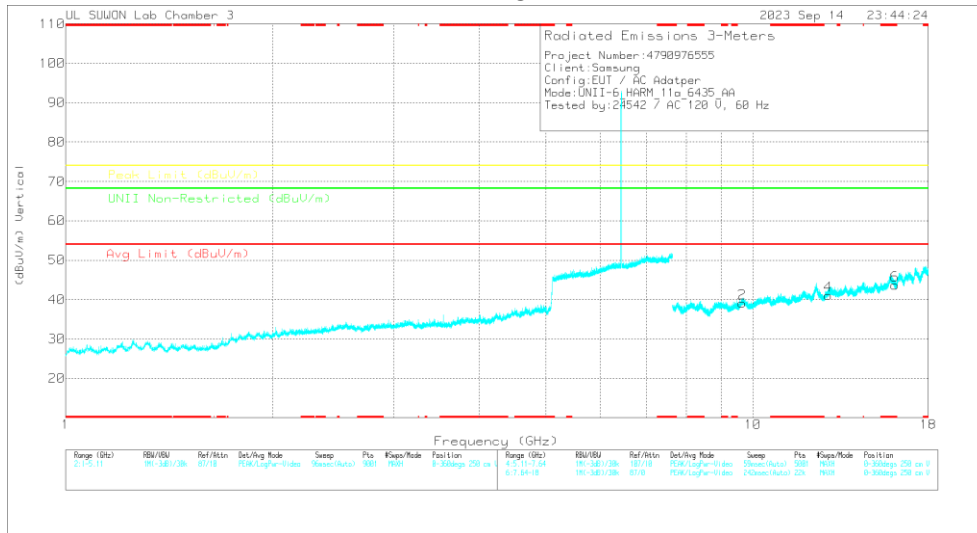
11.2. TX ABOVE 1GHz 2Tx MODE IN U-NII-6 BAND

HARMONICS AND SPURIOUS EMISSIONS(WORST CASE: 802.11a / 6435 MHz)

HORIZONTAL



VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

Radiated Emissions

| Frequency (GHz) | Main Reading (dBuV) | Det | Antenna Correction Factor(dB)(ref) | Path Loss(dB) | DC Corr (dB) | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | Margin (dB) | UNII Non-Restricted (dBuV/m) | Margin (dB) | Asmth (Deg) | Height (m) | Polarity |
|-----------------|---------------------|------|------------------------------------|---------------|--------------|----------------------------|--------------------|-------------|---------------------|-------------|------------------------------|-------------|-------------|------------|----------|
| 9.85271 | 34.34 | PK-U | 36.8 | -21.7 | 0 | 49.44 | - | - | - | - | 68.2 | -18.76 | 0 | 100 | H |
| 9.85221 | 34.59 | PK-U | 36.8 | -21.7 | 0 | 49.69 | - | - | - | - | 68.2 | -18.51 | 0 | 100 | V |
| 12.86628 | 34.59 | PK-U | 39.3 | -22.5 | 0 | 51.39 | - | - | - | - | 68.2 | -16.81 | 0 | 100 | H |
| 12.86684 | 34.22 | PK-U | 39.3 | -22.5 | 0 | 51.02 | - | - | - | - | 68.2 | -17.18 | 0 | 100 | V |
| * 16.08618 | 33.78 | PK-U | 41.1 | -19.9 | 0 | 54.58 | - | - | 74 | -19.02 | - | - | 0 | 100 | H |
| * 16.09193 | 33.4 | PK-U | 41.1 | -19.8 | 0 | 54.7 | - | - | 74 | -19.3 | - | - | 0 | 100 | V |
| * 16.08618 | 21.42 | ADR | 41.1 | -19.9 | -15 | 42.77 | 54 | -11.23 | - | - | - | - | 0 | 100 | H |
| * 16.09193 | 21.40 | ADR | 41.1 | -19.8 | -15 | 42.85 | 54 | -11.15 | - | - | - | - | 0 | 100 | V |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 PK-U - U-NII: Maximum Peak
 ADR - U-NII AD primary method, RMS average

HARMONICS AND SPURIOUS EMISSIONS TEST DATA

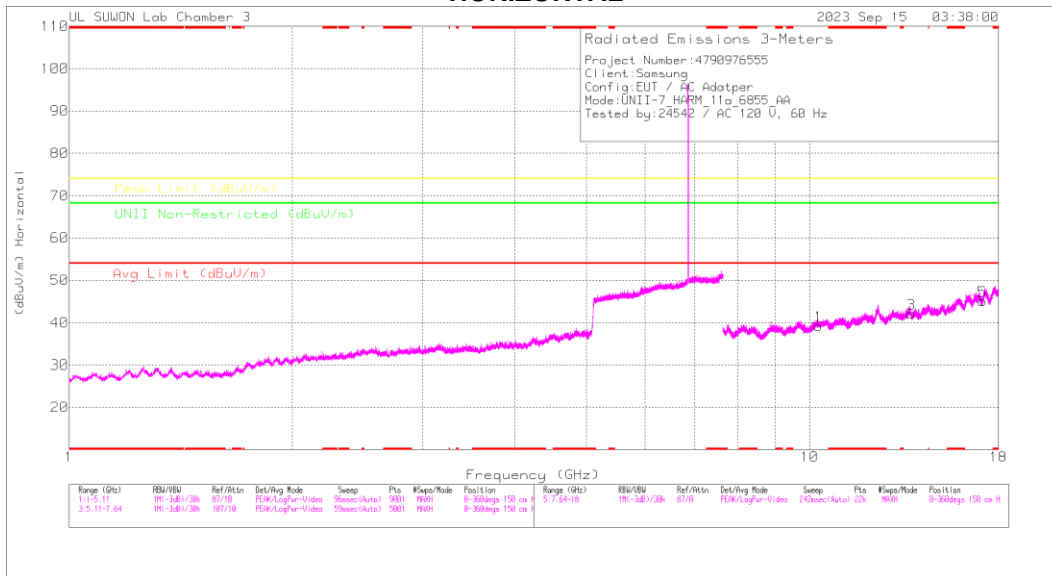
| Mode | Freq. [MHz] | Antenna | Frequency [GHz] | Reading [dBuV] | Detector Mode | ANT Factor [dB(1/m)] | Loss [dB] | DC Corr [dB] | Result [dBuV/m] | AV Limit [dBuV/m] | AV Margin [dB] | PK Limit [dBuV/m] | PK Margin [dB] | Non-Restricted [dBuV/m] | Margin [dB] | Azimuth [Degs] | Height [cm] | Polarity | |
|-----------|---|---------|-----------------|----------------|---------------|----------------------|-----------|--------------|-----------------|-------------------|----------------|-------------------|----------------|-------------------------|-------------|----------------|-------------|----------|---|
| 802.11a | 6435 | MIMO | 9.65271 | 34.34 | PK-U | 36.80 | -21.70 | 0.00 | 49.44 | - | - | - | - | 68.20 | -18.76 | 0 | 100 | H | |
| | | | 9.65221 | 34.59 | PK-U | 36.80 | -21.70 | 0.00 | 49.69 | - | - | - | - | 68.20 | -18.51 | 0 | 100 | V | |
| | | | 12.86628 | 34.59 | PK-U | 39.30 | -22.50 | 0.00 | 51.39 | - | - | - | - | 68.20 | -16.81 | 0 | 100 | H | |
| | | | 12.86684 | 34.22 | PK-U | 39.30 | -22.50 | 0.00 | 51.02 | - | - | - | - | 68.20 | -17.18 | 0 | 100 | V | |
| | | | *16.08618 | 33.78 | PK-U | 41.10 | -19.90 | 0.00 | 54.98 | - | - | 74.00 | -19.02 | - | - | 0 | 100 | H | |
| | | | *16.09193 | 33.40 | PK-U | 41.10 | -19.80 | 0.00 | 54.70 | - | - | 74.00 | -19.30 | - | - | 0 | 100 | V | |
| | | | *16.08618 | 21.42 | ADR | 41.10 | -19.90 | 0.15 | 42.77 | 54.00 | -11.23 | - | - | - | - | 0 | 100 | H | |
| | | | *16.09193 | 21.40 | ADR | 41.10 | -19.80 | 0.15 | 42.85 | 54.00 | -11.15 | - | - | - | - | 0 | 100 | V | |
| | | | 9.71044 | 34.48 | PK-U | 36.90 | -21.60 | 0.00 | 49.78 | - | - | - | - | - | 68.20 | -18.42 | 0 | 100 | H |
| | 9.71620 | 34.57 | PK-U | 36.90 | -21.60 | 0.00 | 49.87 | - | - | - | - | - | 68.20 | -18.33 | 0 | 100 | V | | |
| | 12.95098 | 34.37 | PK-U | 39.30 | -22.10 | 0.00 | 51.57 | - | - | - | - | - | 68.20 | -16.63 | 0 | 100 | H | | |
| | 12.94654 | 34.76 | PK-U | 39.30 | -22.00 | 0.00 | 52.06 | - | - | - | - | - | 68.20 | -16.14 | 0 | 100 | V | | |
| | *16.18944 | 32.92 | PK-U | 41.20 | -19.90 | 0.00 | 54.22 | - | - | 74.00 | -19.78 | - | - | 0 | 100 | H | | | |
| | *16.19066 | 32.94 | PK-U | 41.20 | -19.90 | 0.00 | 54.24 | - | - | 74.00 | -19.76 | - | - | 0 | 100 | V | | | |
| | *16.18944 | 20.15 | ADR | 41.20 | -19.90 | 0.15 | 41.60 | 54.00 | -12.40 | - | - | - | - | 0 | 100 | H | | | |
| | *16.19066 | 20.42 | ADR | 41.20 | -19.90 | 0.15 | 41.87 | 54.00 | -12.13 | - | - | - | - | 0 | 100 | V | | | |
| | 9.77237 | 33.95 | PK-U | 36.90 | -21.60 | 0.00 | 49.25 | - | - | - | - | - | 68.20 | -18.95 | 0 | 100 | H | | |
| | 9.76826 | 33.83 | PK-U | 36.90 | -21.60 | 0.00 | 49.13 | - | - | - | - | - | 68.20 | -19.07 | 0 | 100 | V | | |
| | 13.03372 | 34.94 | PK-U | 39.20 | -22.30 | 0.00 | 51.84 | - | - | - | - | - | 68.20 | -16.36 | 0 | 100 | H | | |
| | 13.02819 | 34.97 | PK-U | 39.20 | -22.30 | 0.00 | 51.87 | - | - | - | - | - | 68.20 | -16.33 | 0 | 100 | V | | |
| | 16.29182 | 32.99 | PK-U | 41.30 | -19.40 | 0.00 | 54.89 | - | - | - | - | - | 68.20 | -13.31 | 0 | 100 | H | | |
| | 16.28499 | 33.55 | PK-U | 41.30 | -19.50 | 0.00 | 55.35 | - | - | - | - | - | 68.20 | -12.85 | 0 | 100 | V | | |
| | 802.11ax (HE20) RU mode offset 0 Spot-Check | 6435 | MIMO | 9.65068 | 34.06 | PK-U | 36.80 | -21.70 | 0.00 | 49.16 | - | - | - | - | 68.20 | -19.04 | 0 | 100 | H |
| | | | | 9.64874 | 34.19 | PK-U | 36.80 | -21.70 | 0.00 | 49.23 | - | - | - | - | 68.20 | -18.91 | 0 | 100 | V |
| | | | | 12.87033 | 34.70 | PK-U | 39.30 | -22.40 | 0.00 | 51.60 | - | - | - | - | 68.20 | -16.60 | 0 | 100 | H |
| | | | | 12.87472 | 34.44 | PK-U | 39.30 | -22.40 | 0.00 | 51.34 | - | - | - | - | 68.20 | -16.86 | 0 | 100 | V |
| | | | | *16.08643 | 33.57 | PK-U | 41.10 | -19.90 | 0.00 | 54.77 | - | - | 74.00 | -19.23 | - | - | 0 | 100 | H |
| *16.08456 | | | | 33.67 | PK-U | 41.10 | -19.80 | 0.00 | 54.97 | - | - | 74.00 | -19.03 | - | - | 0 | 100 | V | |
| *16.08643 | | | | 21.15 | ADR | 41.10 | -19.90 | 0.00 | 42.35 | 54.00 | -11.65 | - | - | - | - | 0 | 100 | H | |
| *16.08456 | | | | 21.38 | ADR | 41.10 | -19.80 | 0.00 | 42.68 | 54.00 | -11.32 | - | - | - | - | 0 | 100 | V | |

Note1. PK-U - U-NII: Maximum Peak / ADR - U-NII AD primary method, RMS average
 Note2. * - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

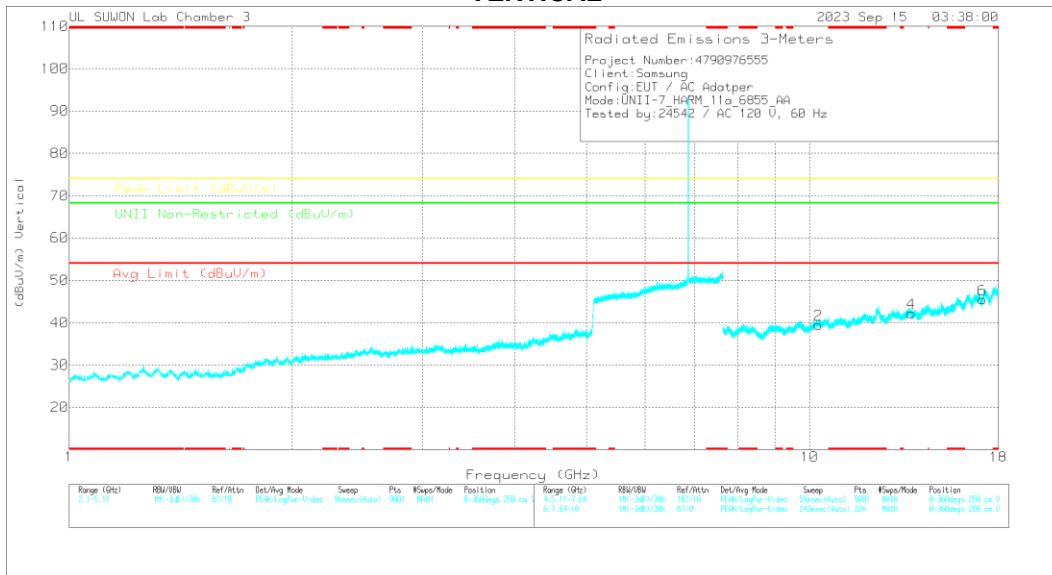
11.3. TX ABOVE 1GHz 2Tx MODE IN U-NII-7 BAND

HARMONICS AND SPURIOUS EMISSIONS(WORST CASE: 802.11a / 6855 MHz)

HORIZONTAL



VERTICAL



Note. Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

Radiated Emissions

| Frequency (GHz) | Max Reading (dBuV) | Dir | Antenna Correction Factor(dB(m)) | Path Loss(dB) | DC Corr (dB) | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | Margin (dB) | UNII Non-Restricted (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|-----------------|--------------------|------|----------------------------------|---------------|--------------|----------------------------|--------------------|-------------|---------------------|-------------|------------------------------|-------------|----------------|-------------|----------|
| 10.28199 | 34.05 | PK-U | 37.5 | -21.2 | 0 | 50.35 | - | - | - | - | 68.2 | -17.85 | 0 | 100 | H |
| 10.27992 | 34.08 | PK-U | 37.5 | -21.2 | 0 | 50.38 | - | - | - | - | 68.2 | -17.82 | 0 | 100 | V |
| 13.7076 | 36.83 | PK-U | 38.7 | -23.1 | 0 | 52.43 | - | - | - | - | 68.2 | -15.77 | 0 | 100 | H |
| 13.71318 | 36.53 | PK-U | 38.7 | -23.2 | 0 | 52.13 | - | - | - | - | 68.2 | -16.07 | 0 | 100 | V |
| 17.14093 | 32.46 | PK-U | 41.3 | -17.5 | 0 | 55.25 | - | - | - | - | 68.2 | -11.94 | 0 | 100 | H |
| 17.13654 | 32.75 | PK-U | 41.3 | -17.5 | 0 | 56.55 | - | - | - | - | 68.2 | -11.65 | 0 | 100 | V |

PK-U - U-NII: Maximum Peak

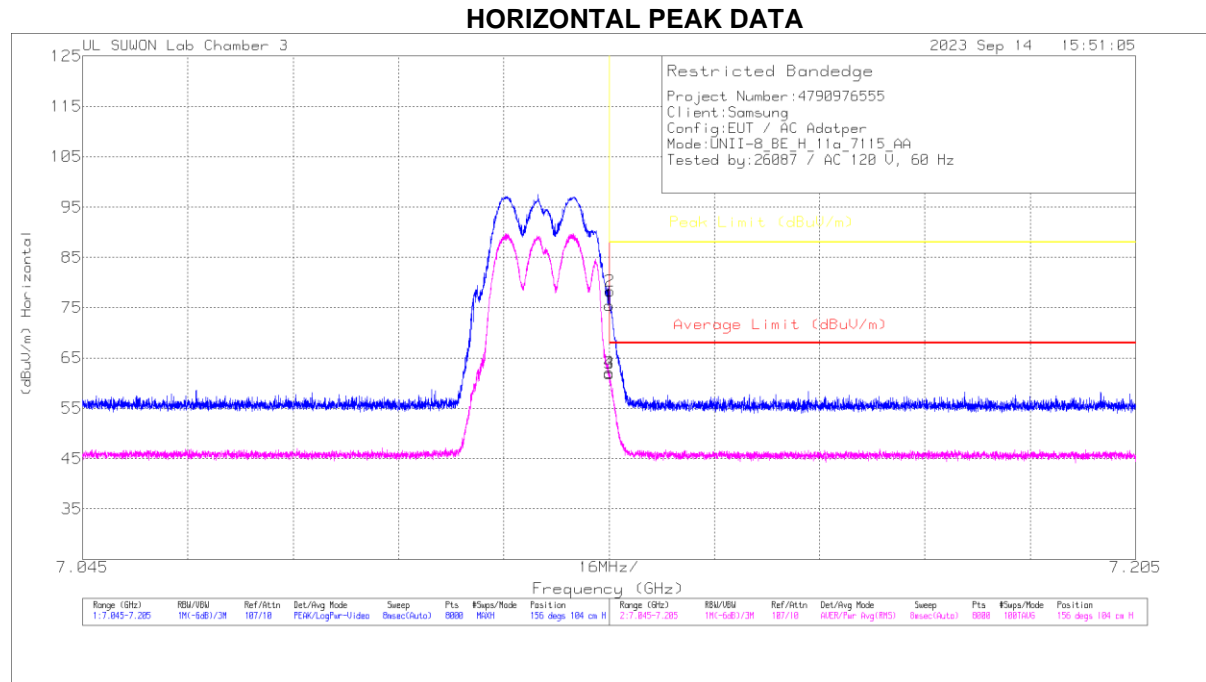
HARMONICS AND SPURIOUS EMISSIONS TEST DATA

| Mode | Freq. [MHz] | Antenna | Frequency [GHz] | Reading [dBuV] | Detector Mode | ANT Factor [dB(1/m)] | Loss [dB] | DC Corr [dB] | Result [dBuV/m] | AV Limit [dBuV/m] | AV Margin [dB] | PK Limit [dBuV/m] | PK Margin [dB] | Non-Restricted [dBuV/m] | Margin [dB] | Azimuth [Degs] | Height [cm] | Polarity | |
|---------|---|---------|-----------------|----------------|---------------|----------------------|-----------|--------------|-----------------|-------------------|----------------|-------------------|----------------|-------------------------|-------------|----------------|-------------|----------|---|
| 802.11a | 6535 | MIMO | 9.79962 | 33.59 | PK-U | 37.00 | -21.60 | 0.00 | 48.99 | - | - | - | - | 68.20 | -19.21 | 0 | 100 | H | |
| | | | 9.80453 | 33.55 | PK-U | 37.00 | -21.60 | 0.00 | 48.95 | - | - | - | - | 68.20 | -19.25 | 0 | 100 | V | |
| | | | 13.06793 | 35.05 | PK-U | 39.20 | -22.40 | 0.00 | 51.85 | - | - | - | - | 68.20 | -16.35 | 0 | 100 | H | |
| | | | 13.07074 | 35.13 | PK-U | 39.20 | -22.40 | 0.00 | 51.93 | - | - | - | - | 68.20 | -16.27 | 0 | 100 | V | |
| | | | 16.34069 | 33.73 | PK-U | 41.30 | -19.00 | 0.00 | 56.03 | - | - | - | - | 68.20 | -12.17 | 0 | 100 | H | |
| | | | 16.33840 | 33.91 | PK-U | 41.30 | -19.10 | 0.00 | 56.11 | - | - | - | - | 68.20 | -12.09 | 0 | 100 | V | |
| | 6895 | MIMO | 10.04240 | 32.99 | PK-U | 37.30 | -21.30 | 0.00 | 48.99 | - | - | - | - | 68.20 | -19.21 | 0 | 100 | H | |
| | | | 10.04373 | 32.70 | PK-U | 37.30 | -21.30 | 0.00 | 48.70 | - | - | - | - | 68.20 | -19.50 | 0 | 100 | V | |
| | | | * 13.39397 | 33.40 | PK-U | 39.10 | -22.00 | 0.00 | 50.50 | - | - | 74.00 | -23.50 | - | - | 0 | 100 | H | |
| | | | * 13.3945 | 33.87 | PK-U | 39.10 | -22.00 | 0.00 | 50.97 | - | - | 74.00 | -23.03 | - | - | 0 | 100 | V | |
| | | | 16.73791 | 32.42 | PK-U | 41.80 | -18.30 | 0.00 | 55.92 | - | - | - | - | 68.20 | -12.28 | 0 | 100 | H | |
| | | | 16.73452 | 32.38 | PK-U | 41.80 | -18.30 | 0.00 | 55.88 | - | - | - | - | 68.20 | -12.32 | 0 | 100 | V | |
| | 6855 | MIMO | 10.28199 | 34.05 | PK-U | 37.50 | -21.20 | 0.00 | 50.35 | - | - | - | - | 68.20 | -17.85 | 0 | 100 | H | |
| | | | 10.27992 | 34.08 | PK-U | 37.50 | -21.20 | 0.00 | 50.38 | - | - | - | - | 68.20 | -17.82 | 0 | 100 | V | |
| | | | 13.70760 | 36.83 | PK-U | 38.70 | -23.10 | 0.00 | 52.43 | - | - | - | - | 68.20 | -15.77 | 0 | 100 | H | |
| | | | 13.71318 | 36.63 | PK-U | 38.70 | -23.20 | 0.00 | 52.13 | - | - | - | - | 68.20 | -16.07 | 0 | 100 | V | |
| | | | 17.14093 | 32.46 | PK-U | 41.30 | -17.50 | 0.00 | 56.26 | - | - | - | - | 68.20 | -11.94 | 0 | 100 | H | |
| | | | 17.13654 | 32.75 | PK-U | 41.30 | -17.50 | 0.00 | 56.55 | - | - | - | - | 68.20 | -11.65 | 0 | 100 | V | |
| | 802.11ax (HE40) RU mode offset 9 Spot-Check | 6845 | MIMO | 10.28340 | 34.11 | PK-U | 37.40 | -21.20 | 0.00 | 50.31 | - | - | - | - | 68.20 | -17.89 | 0 | 100 | H |
| | | | | 10.28971 | 33.65 | PK-U | 37.40 | -21.20 | 0.00 | 49.86 | - | - | - | - | 68.20 | -18.34 | 0 | 100 | V |
| | | | | 13.69016 | 36.48 | PK-U | 38.70 | -22.90 | 0.00 | 52.28 | - | - | - | - | 68.20 | -15.92 | 0 | 100 | H |
| | | | | 13.69004 | 36.61 | PK-U | 38.70 | -22.90 | 0.00 | 52.41 | - | - | - | - | 68.20 | -15.79 | 0 | 100 | V |
| | | | | 17.11616 | 31.84 | PK-U | 41.40 | -17.50 | 0.00 | 55.74 | - | - | - | - | 68.20 | -12.46 | 0 | 100 | H |
| | | | | 17.11464 | 31.61 | PK-U | 41.40 | -17.50 | 0.00 | 55.51 | - | - | - | - | 68.20 | -12.69 | 0 | 100 | V |

Note1. PK-U - U-NII: Maximum Peak / ADR - U-NII AD primary method, RMS average
 Note2. * - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

11.4. TX ABOVE 1GHz 2Tx MODE IN U-NII-8 BAND

BANDEDGE (WORST CASE: 802.11a / 7115 MHz)



Trace Markers

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | Antenna Correction Factor(dB/1m) | Path Loss(dB) | DC Corr (dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|----------------------------------|---------------|--------------|----------------------------|------------------------|-------------|---------------------|----------------|----------------|-------------|----------|
| 1 | 7.12501 | 56.14 | Pk | 35.9 | -16.6 | 0 | 75.44 | - | - | 88 | -12.56 | 156 | 104 | H |
| 2 | 7.12509 | 59 | Pk | 35.9 | -16.6 | 0 | 78.3 | - | - | 88 | -9.7 | 156 | 104 | H |
| 3 | 7.12501 | 42.46 | RMS | 35.9 | -16.6 | .15 | 61.91 | 68 | -6.09 | - | - | 156 | 104 | H |
| 4 | 7.12505 | 42.7 | RMS | 35.9 | -16.6 | .15 | 62.15 | 68 | -5.85 | - | - | 156 | 104 | H |

Pk - Peak detector
 RMS - RMS detection

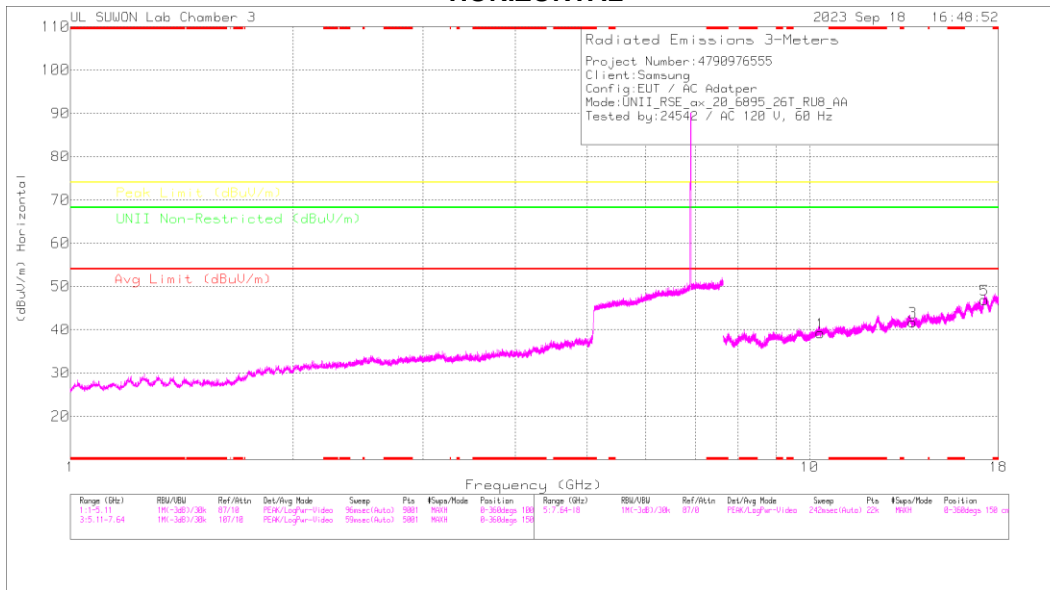
BANDEDGE TEST DATA

| Mode | Freq. [MHz] | Antenna | Frequency [GHz] | Reading [dBuV] | Detector Mode | ANT Factor [dB(1/m)] | Loss [dB] | DC Corr [dB] | Result dBuV/m | AV Limit dBuV/m | AV Margin [dB] | PK Limit dBuV/m | PK Margin [dB] | Azimuth [Degs] | Height [cm] | Polarity |
|--------------------------|-------------|---------|-----------------|----------------|---------------|----------------------|-----------|--------------|---------------|-----------------|----------------|-----------------|----------------|----------------|-------------|----------|
| 802.11a | 7115 | MIMO | 7.12501 | 56.14 | Pk | 35.90 | -16.60 | 0.00 | 75.44 | - | - | 88.00 | -12.56 | 156 | 104 | H |
| | | | 7.12509 | 59.00 | Pk | 35.90 | -16.60 | 0.00 | 78.30 | - | - | 88.00 | -9.70 | 156 | 104 | H |
| | | | 7.12501 | 42.46 | RMS | 35.90 | -16.60 | 0.15 | 61.91 | 68.00 | -6.09 | - | - | 156 | 104 | H |
| | | | 7.12505 | 42.70 | RMS | 35.90 | -16.60 | 0.15 | 62.15 | 68.00 | -5.85 | - | - | 156 | 104 | H |
| | | | 7.12501 | 50.20 | Pk | 35.90 | -16.60 | 0.00 | 69.50 | - | - | 88.00 | -18.50 | 243 | 100 | V |
| | | | 7.12527 | 52.84 | Pk | 35.90 | -16.70 | 0.00 | 72.04 | - | - | 88.00 | -15.96 | 243 | 100 | V |
| | | | 7.12501 | 36.47 | RMS | 35.90 | -16.60 | 0.15 | 55.92 | 68.00 | -12.08 | - | - | 243 | 100 | V |
| | | | 7.12503 | 38.00 | RMS | 35.90 | -16.60 | 0.15 | 57.45 | 68.00 | -10.55 | - | - | 243 | 100 | V |
| | | | 7.12551 | 59.96 | Pk | 35.90 | -16.70 | 0.00 | 79.16 | - | - | 88.00 | -8.84 | 158 | 110 | H |
| 802.11ax (HE20) SU mode | 7115 | MIMO | 7.12569 | 58.37 | Pk | 35.90 | -16.70 | 0.00 | 77.57 | - | - | 88.00 | -10.43 | 158 | 110 | H |
| | | | 7.12551 | 39.08 | RMS | 35.90 | -16.70 | 0.00 | 58.28 | 68.00 | -9.72 | - | - | 158 | 110 | H |
| | | | 7.12557 | 40.14 | RMS | 35.90 | -16.70 | 0.00 | 59.34 | 68.00 | -8.66 | - | - | 158 | 110 | H |
| | | | 7.12551 | 54.94 | Pk | 35.90 | -16.70 | 0.00 | 74.14 | - | - | 88.00 | -13.86 | 124 | 100 | V |
| | | | 7.12559 | 54.97 | Pk | 35.90 | -16.70 | 0.00 | 74.17 | - | - | 88.00 | -13.83 | 124 | 100 | V |
| | | | 7.12551 | 37.57 | RMS | 35.90 | -16.70 | 0.00 | 56.77 | 68.00 | -11.23 | - | - | 124 | 100 | V |
| | | | 7.12565 | 37.10 | RMS | 35.90 | -16.70 | 0.00 | 56.30 | 68.00 | -11.70 | - | - | 124 | 100 | V |
| | | | 7.12501 | 36.15 | Pk | 35.90 | -16.60 | 0.00 | 55.45 | - | - | 88.00 | -32.55 | 155 | 105 | H |
| | | | 7.13227 | 39.33 | Pk | 35.90 | -16.60 | 0.00 | 58.63 | - | - | 88.00 | -29.37 | 155 | 105 | H |
| 802.11ax (HE40) SU mode | 7085 | MIMO | 7.12501 | 26.46 | RMS | 35.90 | -16.60 | 0.00 | 45.76 | 68.00 | -22.24 | - | - | 155 | 105 | H |
| | | | 7.18960 | 27.33 | RMS | 35.80 | -16.50 | 0.00 | 46.63 | 68.00 | -21.37 | - | - | 155 | 105 | H |
| | | | 7.12501 | 35.59 | Pk | 35.90 | -16.60 | 0.00 | 54.89 | - | - | 88.00 | -33.11 | 120 | 100 | V |
| | | | 7.15674 | 38.97 | Pk | 35.90 | -16.60 | 0.00 | 58.27 | - | - | 88.00 | -29.73 | 120 | 100 | V |
| | | | 7.12501 | 27.03 | RMS | 35.90 | -16.60 | 0.00 | 46.33 | 68.00 | -21.67 | - | - | 120 | 100 | V |
| | | | 7.19998 | 27.12 | RMS | 35.80 | -16.40 | 0.00 | 46.52 | 68.00 | -21.48 | - | - | 120 | 100 | V |
| | | | 7.12501 | 35.20 | Pk | 35.90 | -16.60 | 0.00 | 54.50 | - | - | 88.00 | -33.50 | 155 | 100 | H |
| | | | 7.15688 | 39.10 | Pk | 35.90 | -16.60 | 0.00 | 58.40 | - | - | 88.00 | -29.60 | 155 | 100 | H |
| | | | 7.12501 | 26.30 | RMS | 35.90 | -16.60 | 0.00 | 45.60 | 68.00 | -22.40 | - | - | 155 | 100 | H |
| 802.11ax (HE80) SU mode | 7025 | MIMO | 7.19676 | 27.32 | RMS | 35.80 | -16.50 | 0.00 | 46.62 | 68.00 | -21.38 | - | - | 155 | 100 | H |
| | | | 7.12501 | 35.22 | Pk | 35.90 | -16.60 | 0.00 | 54.52 | - | - | 88.00 | -33.48 | 246 | 100 | V |
| | | | 7.18660 | 39.07 | Pk | 35.80 | -16.50 | 0.00 | 58.37 | - | - | 88.00 | -29.63 | 246 | 100 | V |
| | | | 7.12501 | 26.45 | RMS | 35.90 | -16.60 | 0.00 | 45.75 | 68.00 | -22.25 | - | - | 246 | 100 | V |
| | | | 7.13347 | 27.33 | RMS | 35.90 | -16.60 | 0.00 | 46.63 | 68.00 | -21.37 | - | - | 246 | 100 | V |
| | | | 7.12501 | 36.05 | Pk | 35.90 | -16.60 | 0.00 | 55.35 | - | - | 88.00 | -32.65 | 156 | 107 | H |
| | | | 7.17472 | 38.88 | Pk | 35.90 | -16.50 | 0.00 | 58.28 | - | - | 88.00 | -29.72 | 156 | 107 | H |
| | | | 7.12501 | 26.12 | RMS | 35.90 | -16.60 | 0.00 | 45.42 | 68.00 | -22.58 | - | - | 156 | 107 | H |
| | | | 7.13569 | 27.54 | RMS | 35.90 | -16.70 | 0.00 | 46.74 | 68.00 | -21.26 | - | - | 156 | 107 | H |
| 802.11ax (HE160) SU mode | 6985 | MIMO | 7.12501 | 35.84 | Pk | 35.90 | -16.60 | 0.00 | 55.14 | - | - | 88.00 | -32.86 | 248 | 100 | V |
| | | | 7.18374 | 38.79 | Pk | 35.80 | -16.60 | 0.00 | 57.99 | - | - | 88.00 | -30.01 | 248 | 100 | V |
| | | | 7.12501 | 26.39 | RMS | 35.90 | -16.60 | 0.00 | 45.69 | 68.00 | -22.31 | - | - | 248 | 100 | V |
| | | | 7.20126 | 27.15 | RMS | 35.80 | -16.40 | 0.00 | 46.55 | 68.00 | -21.45 | - | - | 248 | 100 | V |

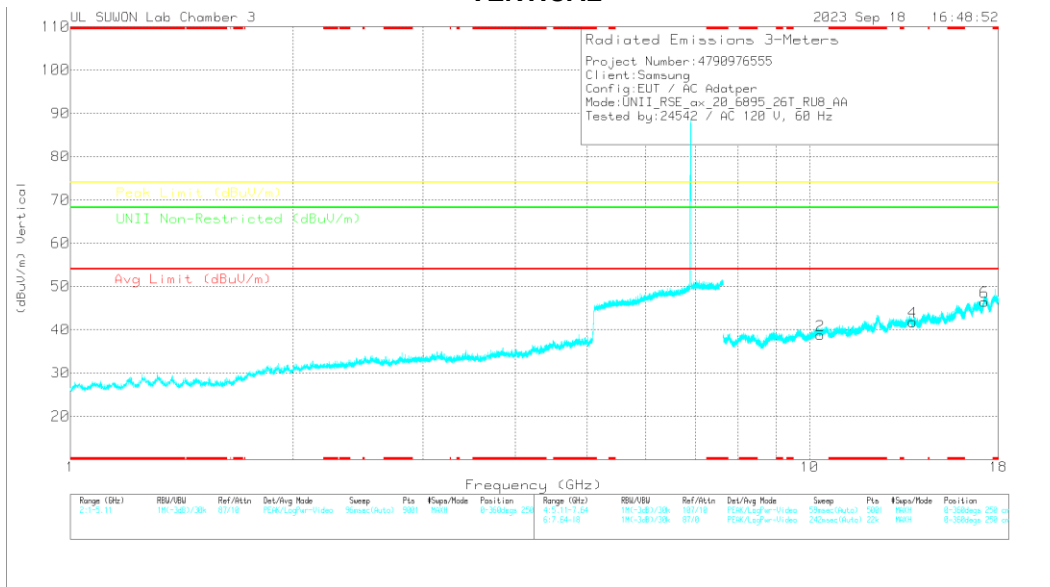
Note1. PK-U - U-NII: Maximum Peak / ADR - U-NII AD primary method, RMS average

HARMONICS AND SPURIOUS EMISSIONS(WORST CASE: 802.11ax HE20 / 6895 MHz / 26T 8RU)

HORIZONTAL



VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

Radiated Emissions

| Frequency (GHz) | Unit Reading (dBm) | Det | Antenna Correction Factor(dB(m)) | Path Loss(dB) | DC Corr (dB) | Corrected Reading (dB(m)) | Avg Limit (dBV(m)) | Margin (dB) | Peak Limit (dBV(m)) | Margin (dB) | UNII Non-Restricted (dBV(m)) | Margin (dB) | Azimuth (Deg) | Height (m) | Polarity |
|-----------------|--------------------|------|----------------------------------|---------------|--------------|---------------------------|--------------------|-------------|---------------------|-------------|------------------------------|-------------|---------------|------------|----------|
| 10.34468 | 33.99 | PK-U | 37.5 | -21.2 | 0 | 50.29 | - | - | - | - | 68.2 | -17.91 | 0 | 100 | H |
| 10.34252 | 33.13 | PK-U | 37.5 | -21.2 | 0 | 49.43 | - | - | - | - | 68.2 | -18.77 | 0 | 100 | V |
| 13.78857 | 35.85 | PK-U | 38.7 | -23.4 | 0 | 51.15 | - | - | - | - | 68.2 | -17.05 | 0 | 100 | H |
| 13.78901 | 36.14 | PK-U | 38.7 | -23.4 | 0 | 51.44 | - | - | - | - | 68.2 | -16.76 | 0 | 100 | V |
| 17.23764 | 32.73 | PK-U | 41.1 | -16.7 | 0 | 57.13 | - | - | - | - | 68.2 | -11.07 | 0 | 100 | H |
| 17.23602 | 32.44 | PK-U | 41.1 | -16.7 | 0 | 56.84 | - | - | - | - | 68.2 | -11.36 | 0 | 100 | V |

PK-U - U-NII: Maximum Peak

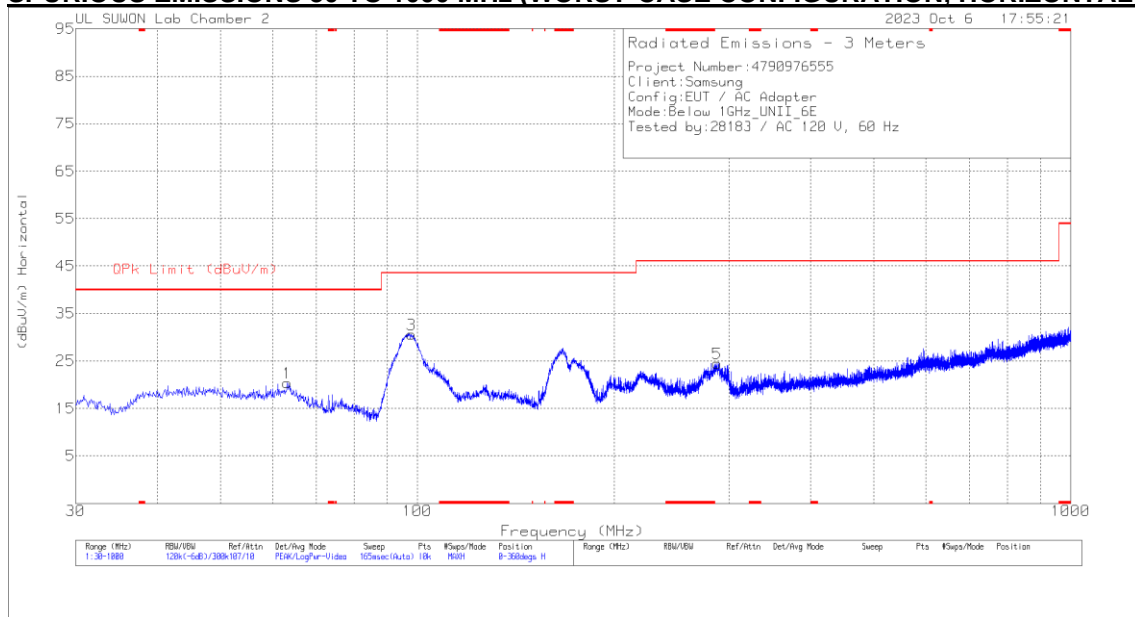
HARMONICS AND SPURIOUS EMISSIONS TEST DATA

| Mode | Freq. [MHz] | Antenna | Frequency [GHz] | Reading [dBuV] | Detector Mode | ANT Factor [dB(1/m)] | Loss [dB] | DC Corr [dB] | Result [dBuV/m] | AV Limit [dBuV/m] | AV Margin [dB] | PK Limit [dBuV/m] | PK Margin [dB] | Non-Restricted [dBuV/m] | Margin [dB] | Azimuth [Degs] | Height [cm] | Polarity | | | |
|---------|---|---------|-----------------|----------------|---------------|----------------------|-----------|--------------|-----------------|-------------------|----------------|-------------------|----------------|-------------------------|-------------|----------------|-------------|----------|-----|-----|---|
| 802.11a | 6895 | MIMO | 8.96322 | 34.98 | PK-U | 36.20 | -22.50 | 0.00 | 48.68 | - | - | - | - | 68.20 | -19.52 | 0 | 100 | H | | | |
| | | | 8.96332 | 35.23 | PK-U | 36.20 | -22.50 | 0.00 | 48.93 | - | - | - | - | 68.20 | -19.27 | 0 | 100 | V | | | |
| | | | *11.72148 | 34.67 | PK-U | 38.40 | -21.50 | 0.00 | 51.57 | - | - | 74.00 | -22.43 | - | - | - | 0 | 100 | H | | |
| | | | *11.72176 | 34.35 | PK-U | 38.40 | -21.50 | 0.00 | 51.25 | - | - | 74.00 | -22.75 | - | - | - | 0 | 100 | V | | |
| | | | 13.79058 | 36.57 | PK-U | 38.70 | -23.40 | 0.00 | 51.87 | - | - | - | - | - | - | 68.20 | -16.33 | 0 | 100 | H | |
| | | | 13.79071 | 36.97 | PK-U | 38.70 | -23.40 | 0.00 | 52.27 | - | - | - | - | - | - | 68.20 | -15.93 | 0 | 100 | V | |
| | 6895 | MIMO | *9.09357 | 34.61 | PK-U | 36.40 | -22.30 | 0.00 | 48.71 | - | - | 74.00 | -25.29 | - | - | - | 0 | 100 | H | | |
| | | | *9.09353 | 35.38 | PK-U | 36.40 | -22.30 | 0.00 | 49.48 | - | - | 74.00 | -24.52 | - | - | - | 0 | 100 | V | | |
| | | | *11.89147 | 35.01 | PK-U | 38.60 | -22.00 | 0.00 | 51.61 | - | - | 74.00 | -22.39 | - | - | - | 0 | 100 | H | | |
| | | | *11.89142 | 34.98 | PK-U | 38.60 | -22.00 | 0.00 | 51.58 | - | - | 74.00 | -22.42 | - | - | - | 0 | 100 | V | | |
| | | | 13.99045 | 36.48 | PK-U | 38.80 | -23.50 | 0.00 | 51.78 | - | - | - | - | - | - | 68.20 | -16.42 | 0 | 100 | H | |
| | | | 13.99047 | 36.71 | PK-U | 38.80 | -23.50 | 0.00 | 52.01 | - | - | - | - | - | - | 68.20 | -16.19 | 0 | 100 | V | |
| | 7115 | MIMO | 9.24969 | 33.53 | PK-U | 36.50 | -22.00 | 0.00 | 48.03 | - | - | - | - | - | 68.20 | -20.17 | 0 | 100 | H | | |
| | | | 9.24939 | 33.65 | PK-U | 36.50 | -22.00 | 0.00 | 48.15 | - | - | - | - | - | 68.20 | -20.05 | 0 | 100 | V | | |
| | | | *12.09543 | 34.61 | PK-U | 38.80 | -22.00 | 0.00 | 51.41 | - | - | 74.00 | -22.59 | - | - | - | 0 | 100 | H | | |
| | | | *12.09576 | 34.51 | PK-U | 38.80 | -22.00 | 0.00 | 51.31 | - | - | 74.00 | -22.69 | - | - | - | 0 | 100 | V | | |
| | | | 14.23072 | 36.25 | PK-U | 39.30 | -22.40 | 0.00 | 53.15 | - | - | - | - | - | - | 68.20 | -15.05 | 0 | 100 | H | |
| | | | 14.23058 | 35.95 | PK-U | 39.30 | -22.40 | 0.00 | 52.85 | - | - | - | - | - | - | 68.20 | -15.35 | 0 | 100 | V | |
| | 802.11ax (HE20) RU mode 26 Tone offset 8 Spot-check | 6895 | MIMO | 10.34468 | 33.99 | PK-U | 37.50 | -21.20 | 0.00 | 50.29 | - | - | - | - | - | 68.20 | -17.91 | 0 | 100 | H | |
| | | | | 10.34252 | 33.13 | PK-U | 37.50 | -21.20 | 0.00 | 49.43 | - | - | - | - | - | 68.20 | -18.77 | 0 | 100 | V | |
| | | | | 13.78857 | 35.85 | PK-U | 38.70 | -23.40 | 0.00 | 51.15 | - | - | - | - | - | 68.20 | -17.05 | 0 | 100 | H | |
| | | | | 13.78901 | 36.14 | PK-U | 38.70 | -23.40 | 0.00 | 51.44 | - | - | - | - | - | 68.20 | -16.76 | 0 | 100 | V | |
| | | | | 17.23764 | 32.73 | PK-U | 41.10 | -16.70 | 0.00 | 57.13 | - | - | - | - | - | - | 68.20 | -11.07 | 0 | 100 | H |
| | | | | 17.23602 | 32.44 | PK-U | 41.10 | -16.70 | 0.00 | 56.84 | - | - | - | - | - | - | 68.20 | -11.36 | 0 | 100 | V |

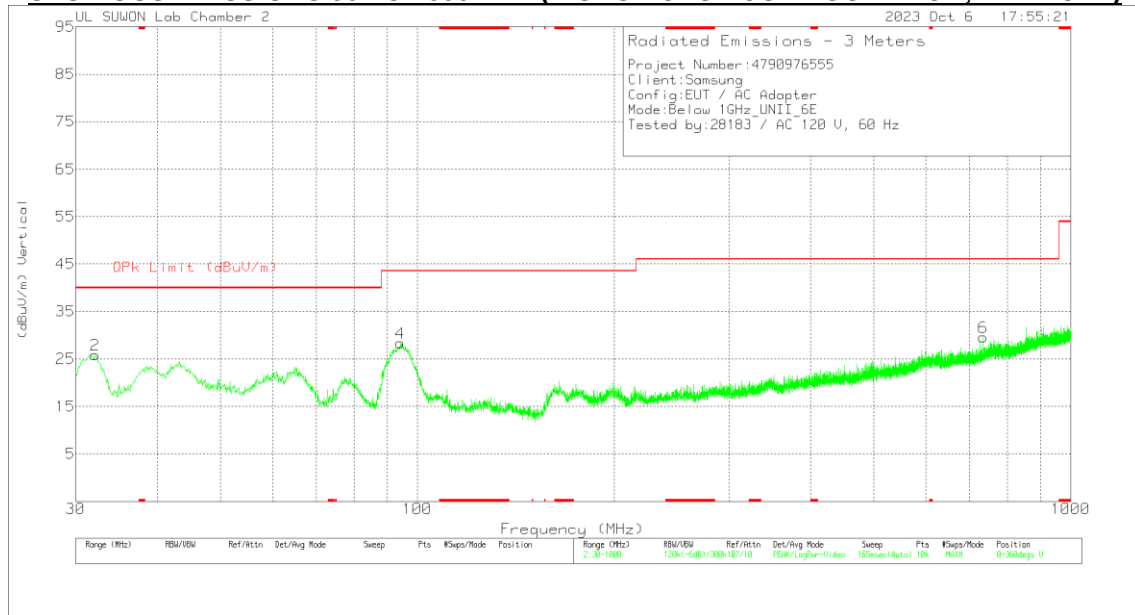
Note1. PK-U - U-NII: Maximum Peak / ADR - U-NII AD primary method, RMS average

Note2. * - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

12. WORST-CASE BELOW 1 GHz SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL)



SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, VERTICAL)



Trace Markers

| Marker | Frequency (MHz) | Meter Reading (dBuV) | Det | Antenna Correction Factor[dB(1/m)] | Path Loss(dB) | Corrected Reading (dBuV/m) | QPk Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|------------------------------------|---------------|----------------------------|--------------------|-------------|----------------|-------------|----------|
| 1 | 63.174 | 34.09 | Pk | 17.8 | -31.5 | 20.39 | 40 | -19.61 | 0-360 | 300 | H |
| 3 | 97.9 | 44.73 | Pk | 17.2 | -31.3 | 30.63 | 43.52 | -12.89 | 0-360 | 200 | H |
| 5 | 287.632 | 35.73 | Pk | 19 | -30.2 | 24.53 | 46.02 | -21.49 | 0-360 | 100 | H |
| 2 | 32.134 | 42.25 | Pk | 15.5 | -31.9 | 25.85 | 40 | -14.15 | 0-360 | 100 | V |
| 4 | 94.214 | 43.1 | Pk | 16.4 | -31.2 | 28.3 | 43.52 | -15.22 | 0-360 | 100 | V |
| 6 | 734.511 | 32.48 | Pk | 25.9 | -28.8 | 29.58 | 46.02 | -16.44 | 0-360 | 100 | V |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 Pk - Peak detector

13. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)
IC RSS-GEN Clause 8.8

| Frequency of Emission (MHz) | Conducted Limit (dBuV) | |
|-----------------------------|------------------------|-----------------------|
| | Quasi-peak | Average |
| 0.15-0.5 | 66 to 56 [*] | 56 to 46 [*] |
| 0.5-5 | 56 | 46 |
| 5-30 | 60 | 50 |

^{*}Decreases with the logarithm of the frequency.

TEST PROCEDURE

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.10.

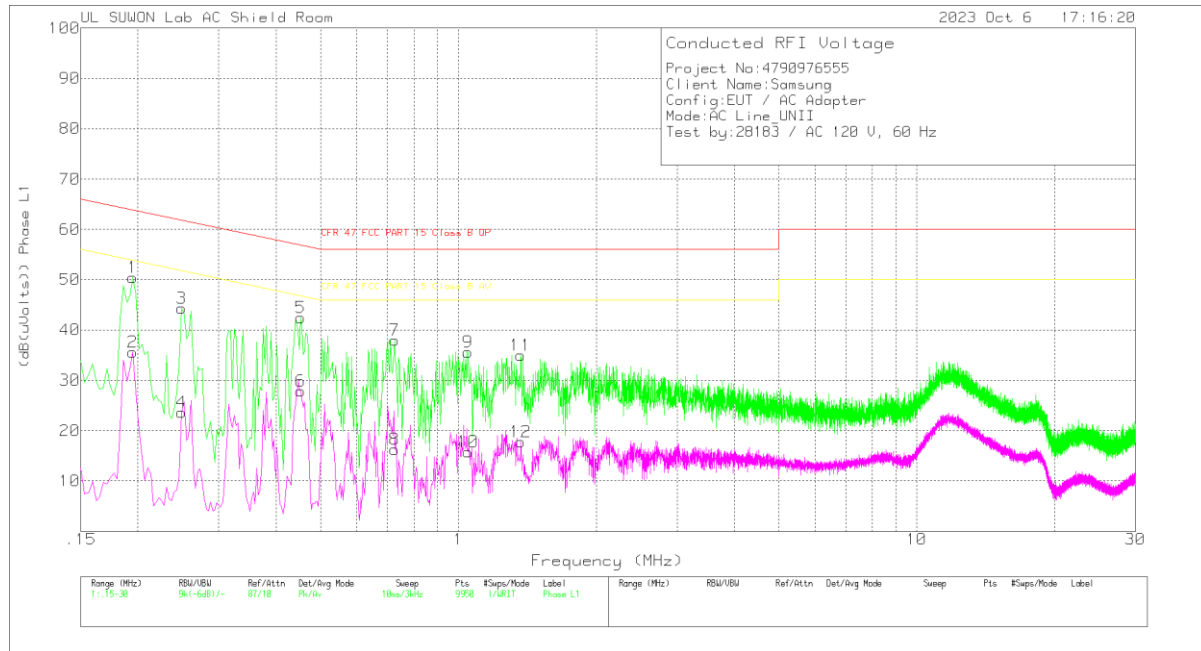
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

Line conducted data is recorded for both NEUTRAL and HOT lines.

RESULTS

WORST EMISSIONS

LINE 1 DATA



Trace Markers

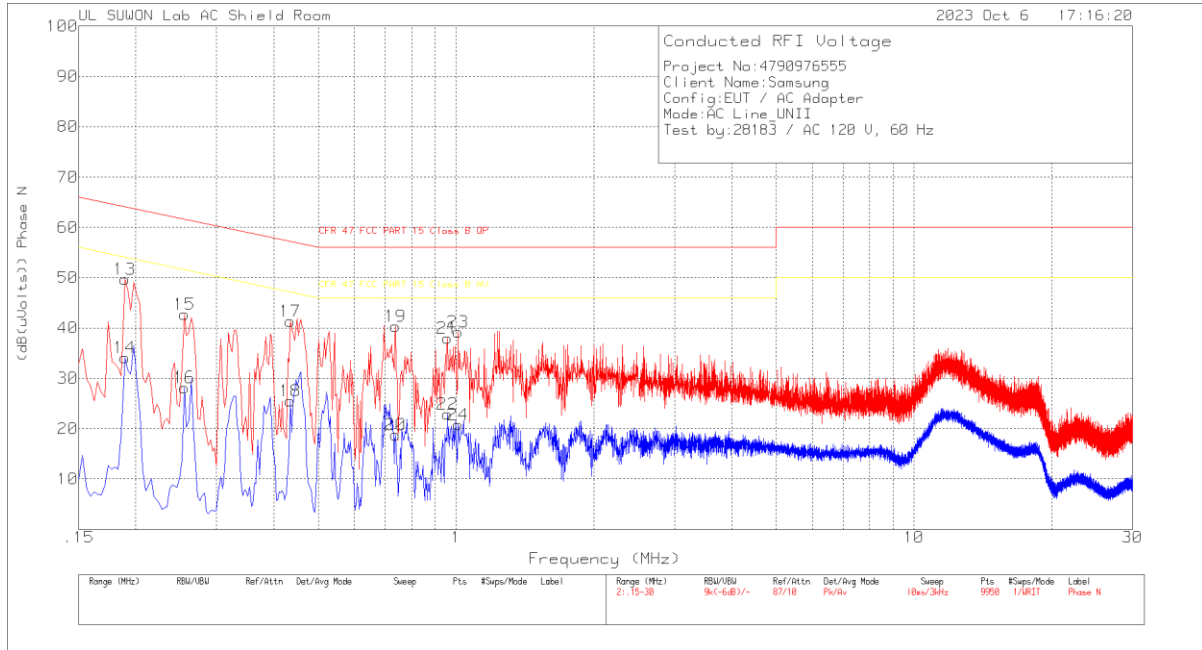
Range 1: Phase L1 .15 - 30MHz

| Marker | Frequency (MHz) | Meter Reading (dBuV) | Det | 101836_AU TO_With EX_L1[dB] | CABLELOS S[dB] | Corrected Reading (dB(uVolts)) | CFR 47 FCC PART 15 Class B QP (dB(uVolts)) | Margin (dB) | CFR 47 FCC PART 15 Class B AV (dB(uVolts)) | Margin (dB) |
|--------|-----------------|----------------------|-----|-----------------------------|----------------|--------------------------------|--|-------------|--|-------------|
| 1 | .195 | 40.77 | Pk | 9.5 | .2 | 50.47 | 63.82 | -13.35 | - | - |
| 2 | .195 | 25.91 | Av | 9.5 | .2 | 35.61 | - | - | 53.82 | -18.21 |
| 3 | .249 | 34.64 | Pk | 9.5 | .2 | 44.34 | 61.79 | -17.45 | - | - |
| 4 | .249 | 13.94 | Av | 9.5 | .2 | 23.64 | - | - | 51.79 | -28.15 |
| 5 | .453 | 32.78 | Pk | 9.5 | .2 | 42.48 | 56.82 | -14.34 | - | - |
| 6 | .453 | 18.2 | Av | 9.5 | .2 | 27.9 | - | - | 46.82 | -18.92 |
| 7 | .726 | 28.17 | Pk | 9.6 | .2 | 37.97 | 56 | -18.03 | - | - |
| 8 | .726 | 6.45 | Av | 9.6 | .2 | 16.25 | - | - | 46 | -29.75 |
| 9 | 1.05 | 25.66 | Pk | 9.6 | .3 | 35.56 | 56 | -20.44 | - | - |
| 10 | 1.05 | 5.9 | Av | 9.6 | .3 | 15.8 | - | - | 46 | -30.2 |
| 11 | 1.368 | 25.02 | Pk | 9.6 | .3 | 34.92 | 56 | -21.08 | - | - |
| 12 | 1.368 | 7.89 | Av | 9.6 | .3 | 17.79 | - | - | 46 | -28.21 |

Pk - Peak detector

Av - Average detection

LINE 2 DATA



Trace Markers

Range 2: Phase N .15 - 30MHz

| Marker | Frequency (MHz) | Meter Reading (dBuV) | Det | 101836_AU TO_With EX_N[dB] | CABLELOS S[dB] | Corrected Reading (dB(uVolts)) | CFR 47 FCC PART 15 Class B QP (dB(uVolts)) | Margin (dB) | CFR 47 FCC PART 15 Class B AV (dB(uVolts)) | Margin (dB) |
|--------|-----------------|----------------------|-----|----------------------------|----------------|--------------------------------|--|-------------|--|-------------|
| 13 | .189 | 40.02 | Pk | 9.5 | .2 | 49.72 | 64.08 | -14.36 | - | - |
| 14 | .189 | 24.43 | Av | 9.5 | .2 | 34.13 | - | - | 54.08 | -19.95 |
| 15 | .255 | 32.96 | Pk | 9.5 | .2 | 42.66 | 61.59 | -18.93 | - | - |
| 16 | .255 | 18.48 | Av | 9.5 | .2 | 28.18 | - | - | 51.59 | -23.41 |
| 17 | .435 | 31.66 | Pk | 9.5 | .2 | 41.36 | 57.16 | -15.8 | - | - |
| 18 | .435 | 15.83 | Av | 9.5 | .2 | 25.53 | - | - | 47.16 | -21.63 |
| 19 | .738 | 30.56 | Pk | 9.6 | .2 | 40.36 | 56 | -15.64 | - | - |
| 20 | .738 | 9.01 | Av | 9.6 | .2 | 18.81 | - | - | 46 | -27.19 |
| 21 | .957 | 28.09 | Pk | 9.6 | .3 | 37.99 | 56 | -18.01 | - | - |
| 22 | .957 | 12.95 | Av | 9.6 | .3 | 22.85 | - | - | 46 | -23.15 |
| 23 | 1.011 | 29.27 | Pk | 9.6 | .3 | 39.17 | 56 | -16.83 | - | - |
| 24 | 1.011 | 10.89 | Av | 9.6 | .3 | 20.79 | - | - | 46 | -25.21 |

Pk - Peak detector
 Av - Average detection

14. Contention Based Protocol

14.1. OVERVIEW

14.1.1. LIMITS

FCC

§15.407 (d) (6)
KDB 987594 D02

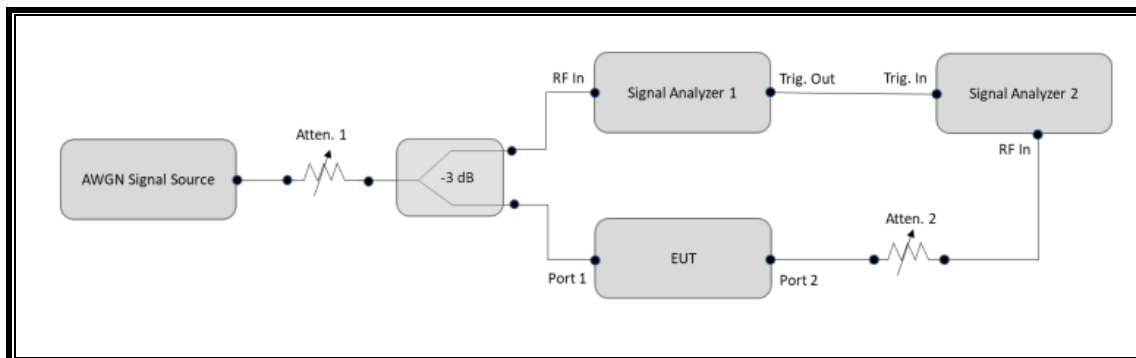
Indoor access points, subordinate devices and client devices operating in the 5.925-7.125 GHz band (herein referred to as unlicensed devices) are required to use technologies that include a contention-based protocol to avoid co-channel interference with incumbent devices sharing the band. To ensure incumbent co-channel operations are detected in a technology-agnostic manner, unlicensed devices are required to detect co-channel radio frequency energy (energy detect) and avoid simultaneous transmission.

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.

14.1.2. TEST AND MEASUREMENT SYSTEM

CONDUCTED METHOD SYSTEM BLOCK DIAGRAM



TEST SETTING

- 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 EUT 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.

TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

| TEST EQUIPMENT LIST | | | | |
|-------------------------|--------------|------------|------------|--------------|
| Description | Manufacturer | Model | S/N | Next Cal Due |
| Spectrum Analyzer | Keysight | N9030B | MY60070693 | 2024-01-09 |
| Spectrum Analyzer | Agilent | N9030A | MY54170614 | 2024-07-24 |
| Vector Signal Generator | R&S | SMW200A | 110251 | 2024-07-27 |
| Combiner | WEINSCHEL | WA1534 | UL001 | 2024-01-13 |
| Combiner | WEINSCHEL | WA1534 | UL003 | 2024-01-09 |
| Combiner | WEINSCHEL | WA1534 | UL004 | 2024-01-09 |
| Attenuator | WEINSCHEL | WA76-30-21 | A015 | 2024-07-24 |
| Attenuator | PASTERNAK | PE7087-10 | A001 | 2024-07-23 |
| Attenuator | PASTERNAK | PE7087-10 | A008 | 2024-07-27 |

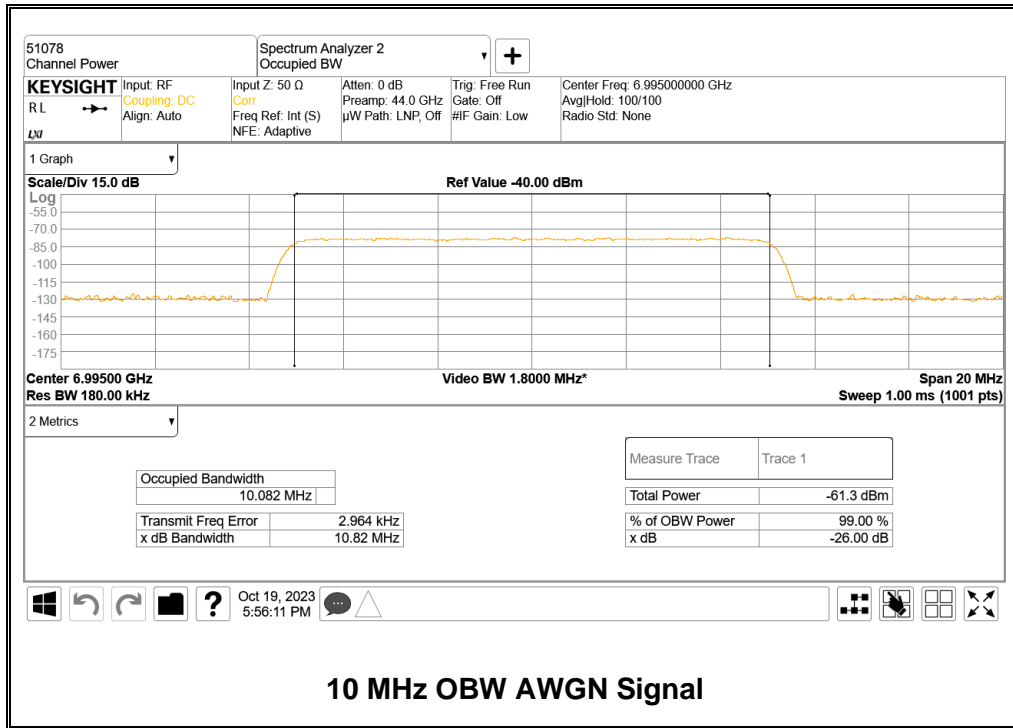
SUPPORT EQUIPMENT

The following support equipment was utilized for the CBP tests documented in this report:

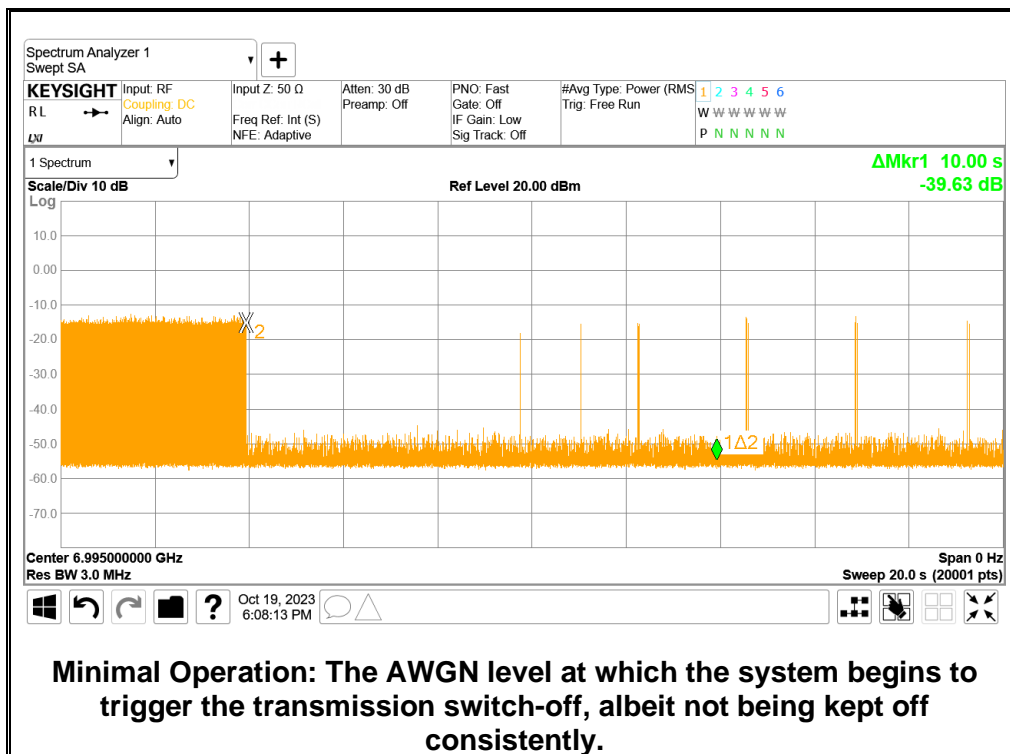
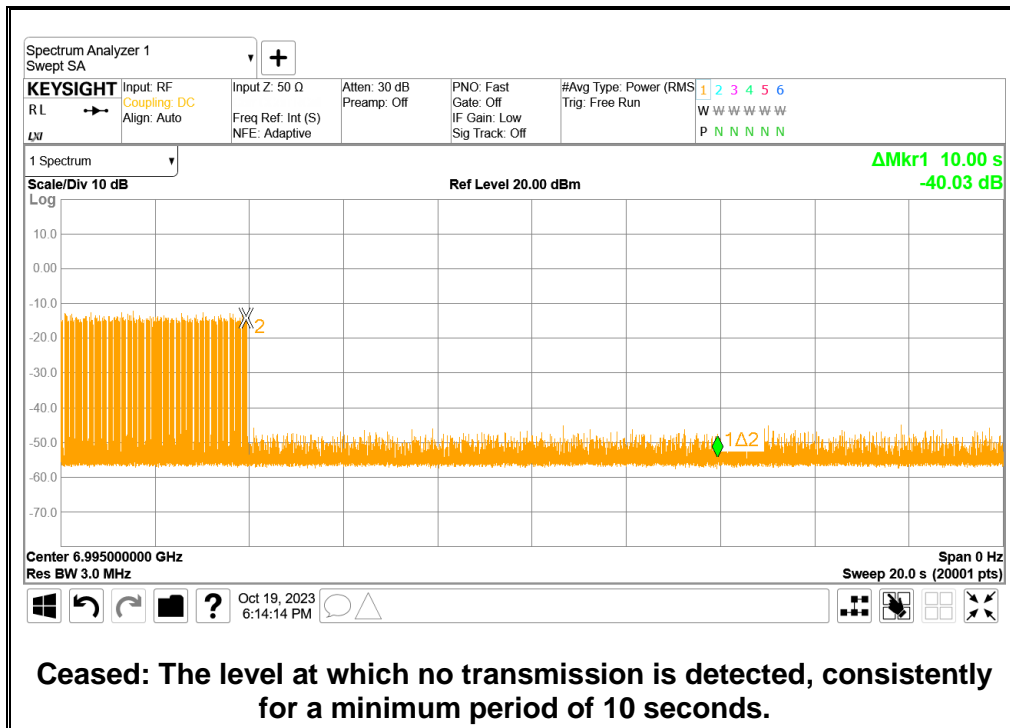
| PERIPHERAL SUPPORT EQUIPMENT LIST | | | | |
|-----------------------------------|--------------|-------------------------|---------------|--------------|
| Description | Manufacturer | Model | Serial Number | FCC ID |
| Wireless Access Point | ASUS | GT-AXE11000 | M3IAJF200742 | MSQ-RTAXJF00 |
| Notebook PC (Controller/Server) | HP | HP EliteDesk 800 G1 TWR | CZC4125J25 | DoC |

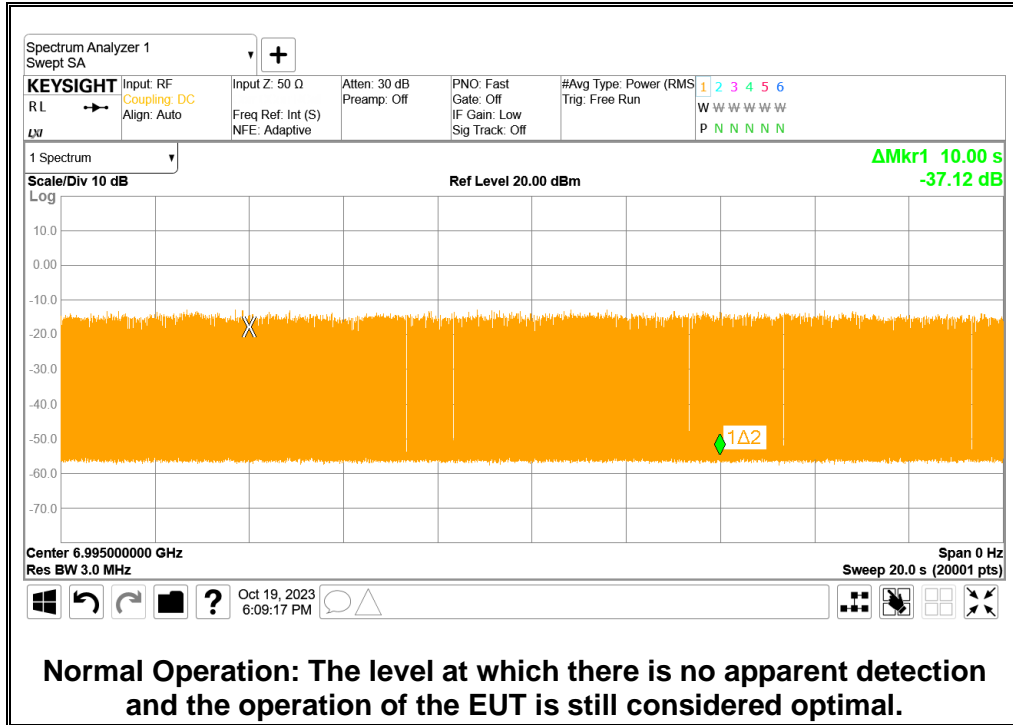
14.2. TEST RESULTS

14.2.1. AWGN Sample signal



14.2.2. Contention Based Protocol Timing Plot(Measurement Criteria)





14.2.3. Contention Based Protocol – Incumbent Detection & Trial Results

| Band | Channel | Freq | BW | Inc. Freq | Detection power level (Prior) | Detection limit | Gain | Detection limit (include Gain) | Margin | Condition |
|------|---------|------|-----|-----------|-------------------------------|-----------------|-------|--------------------------------|--------|-----------|
| 5 | 45 | 6175 | 20 | 6175 | -73.65 | -62.00 | -8.59 | -70.59 | -3.06 | Ceased |
| | | | | | -76.67 | -62.00 | -8.59 | -70.59 | -6.08 | Minimal |
| | | | | | -80.66 | -62.00 | -8.59 | -70.59 | -10.07 | Normal |
| | 47 | 6185 | 160 | 6110 | -71.67 | -62.00 | -8.59 | -70.59 | -1.08 | Ceased |
| | | | | | -76.65 | -62.00 | -8.59 | -70.59 | -6.06 | Minimal |
| | | | | | -82.55 | -62.00 | -8.59 | -70.59 | -11.96 | Normal |
| | | | | 6175 | -72.63 | -62.00 | -8.59 | -70.59 | -2.04 | Ceased |
| | | | | | -76.62 | -62.00 | -8.59 | -70.59 | -6.03 | Minimal |
| | | | | | -83.53 | -62.00 | -8.59 | -70.59 | -12.94 | Normal |
| | | | | 6260 | -72.66 | -62.00 | -8.59 | -70.59 | -2.07 | Ceased |
| | | | | | -74.65 | -62.00 | -8.59 | -70.59 | -4.06 | Minimal |
| | | | | | -75.69 | -62.00 | -8.59 | -70.59 | -5.10 | Normal |
| 6 | 105 | 6475 | 20 | 6475 | -74.66 | -62.00 | -8.44 | -70.44 | -4.22 | Ceased |
| | | | | | -80.68 | -62.00 | -8.44 | -70.44 | -10.24 | Minimal |
| | | | | | -85.07 | -62.00 | -8.44 | -70.44 | -14.63 | Normal |
| | 111 | 6505 | 160 | 6435 | -74.72 | -62.00 | -8.44 | -70.44 | -4.28 | Ceased |
| | | | | | -80.70 | -62.00 | -8.44 | -70.44 | -10.26 | Minimal |
| | | | | | -86.57 | -62.00 | -8.44 | -70.44 | -16.13 | Normal |
| | | | | 6505 | -71.59 | -62.00 | -8.44 | -70.44 | -1.15 | Ceased |
| | | | | | -76.61 | -62.00 | -8.44 | -70.44 | -6.17 | Minimal |
| | | | | | -83.52 | -62.00 | -8.44 | -70.44 | -13.08 | Normal |
| | | | | 6575 | -71.71 | -62.00 | -8.44 | -70.44 | -1.27 | Ceased |
| | | | | | -79.58 | -62.00 | -8.44 | -70.44 | -9.14 | Minimal |
| | | | | | -81.52 | -62.00 | -8.44 | -70.44 | -11.08 | Normal |
| 7 | 149 | 6695 | 20 | 6695 | -75.65 | -62.00 | -8.74 | -70.74 | -4.91 | Ceased |
| | | | | | -81.63 | -62.00 | -8.74 | -70.74 | -10.89 | Minimal |
| | | | | | -84.64 | -62.00 | -8.74 | -70.74 | -13.90 | Normal |
| | 143 | 6665 | 160 | 6595 | -72.65 | -62.00 | -8.74 | -70.74 | -1.91 | Ceased |
| | | | | | -76.68 | -62.00 | -8.74 | -70.74 | -5.94 | Minimal |
| | | | | | -82.61 | -62.00 | -8.74 | -70.74 | -11.87 | Normal |
| | | | | 6665 | -72.55 | -62.00 | -8.74 | -70.74 | -1.81 | Ceased |
| | | | | | -75.60 | -62.00 | -8.74 | -70.74 | -4.86 | Minimal |
| | | | | | -77.53 | -62.00 | -8.74 | -70.74 | -6.79 | Normal |
| | | | | 6735 | -73.57 | -62.00 | -8.74 | -70.74 | -2.83 | Ceased |
| | | | | | -76.53 | -62.00 | -8.74 | -70.74 | -5.79 | Minimal |
| | | | | | -81.57 | -62.00 | -8.74 | -70.74 | -10.83 | Normal |
| 8 | 209 | 6995 | 20 | 6995 | -75.72 | -62.00 | -8.80 | -70.80 | -4.92 | Ceased |
| | | | | | -78.69 | -62.00 | -8.80 | -70.80 | -7.89 | Minimal |
| | | | | | -85.52 | -62.00 | -8.80 | -70.80 | -14.72 | Normal |
| | 207 | 6985 | 160 | 6915 | -76.64 | -62.00 | -8.80 | -70.80 | -5.84 | Ceased |
| | | | | | -82.70 | -62.00 | -8.80 | -70.80 | -11.90 | Minimal |
| | | | | | -84.63 | -62.00 | -8.80 | -70.80 | -13.83 | Normal |
| | | | | 6975 | -79.70 | -62.00 | -8.80 | -70.80 | -8.90 | Ceased |
| | | | | | -82.62 | -62.00 | -8.80 | -70.80 | -11.82 | Minimal |
| | | | | | -85.52 | -62.00 | -8.80 | -70.80 | -14.72 | Normal |
| | | | | 7055 | -74.68 | -62.00 | -8.80 | -70.80 | -3.88 | Ceased |
| | | | | | -79.54 | -62.00 | -8.80 | -70.80 | -8.74 | Minimal |
| | | | | | -82.55 | -62.00 | -8.80 | -70.80 | -11.75 | Normal |

| Band | Channel | Freq | BW | Inc. Freq | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Detection Rate (%) |
|------|---------|------|-----|-----------|---|---|---|---|---|---|---|---|---|----|--------------------|
| 5 | 45 | 6175 | 20 | 6175 | O | O | O | O | O | O | O | O | O | O | 100 |
| | | | | 6110 | O | O | O | O | O | O | O | O | O | O | 100 |
| | 47 | 6185 | 160 | 6175 | O | O | O | O | O | O | O | O | O | O | 100 |
| | | | | 6260 | O | O | O | O | O | O | O | O | O | O | 100 |
| 6 | 105 | 6475 | 20 | 6475 | O | O | O | O | O | O | O | O | O | O | 100 |
| | | | | 6435 | O | X | O | O | O | O | O | O | O | O | 90 |
| | 111 | 6505 | 160 | 6505 | O | O | O | O | O | O | O | O | O | O | 100 |
| | | | | 6575 | O | O | O | O | O | O | O | O | O | O | 100 |
| 7 | 149 | 6695 | 20 | 6695 | O | O | O | O | O | O | O | O | O | O | 100 |
| | | | | 6595 | O | O | X | O | O | O | O | O | O | O | 90 |
| | 143 | 6665 | 160 | 6665 | O | O | O | O | O | O | O | O | O | O | 100 |
| | | | | 6735 | O | O | O | O | O | O | O | O | O | O | 100 |
| 8 | 209 | 6995 | 20 | 6995 | O | O | O | O | O | O | O | O | O | O | 100 |
| | | | | 6915 | O | O | O | O | O | O | X | O | O | O | 90 |
| | 207 | 6985 | 160 | 6975 | O | O | O | O | O | O | O | O | O | O | 100 |
| | | | | 7055 | O | O | O | O | O | O | O | O | O | O | 100 |

END OF TEST REPORT