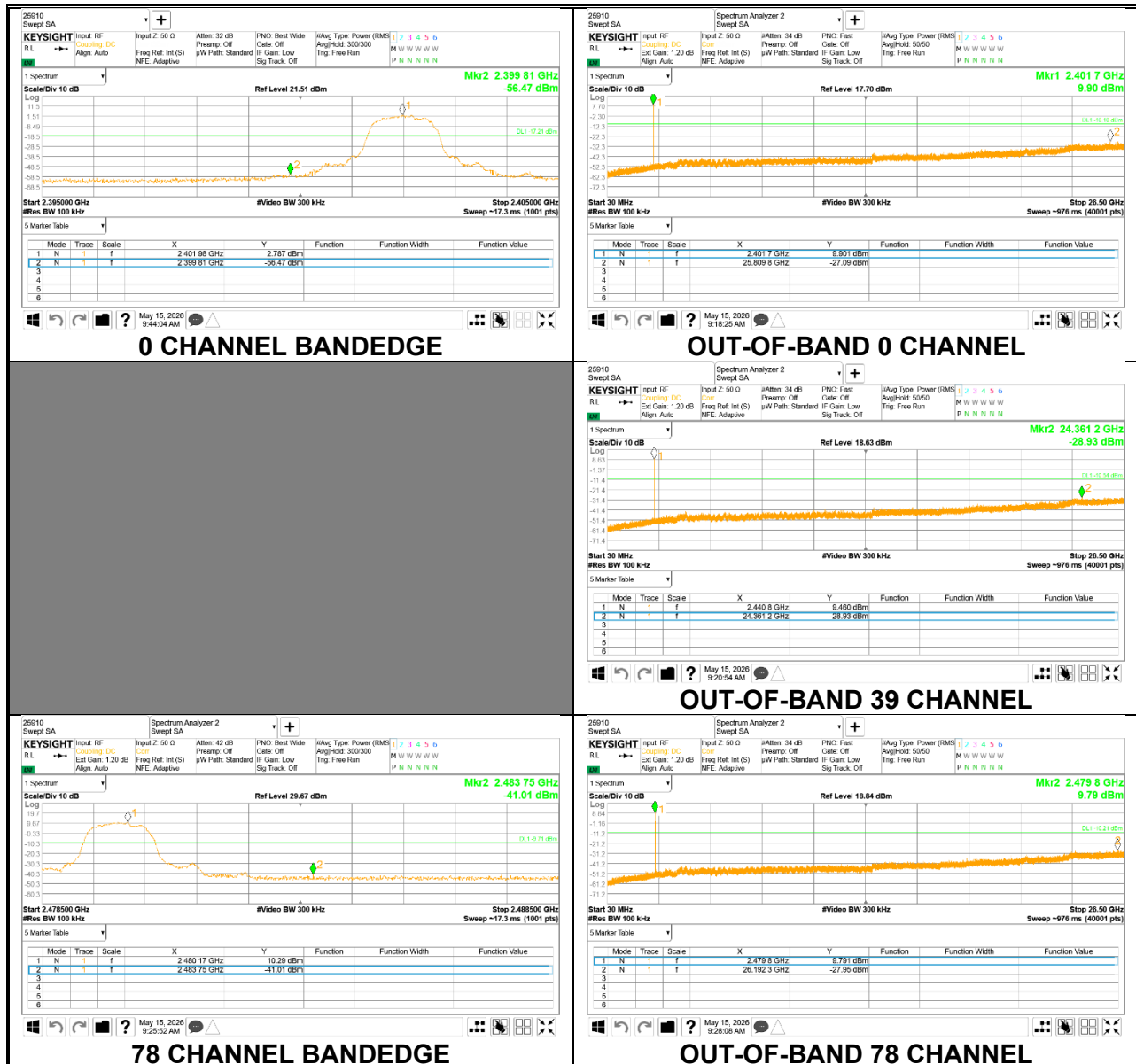
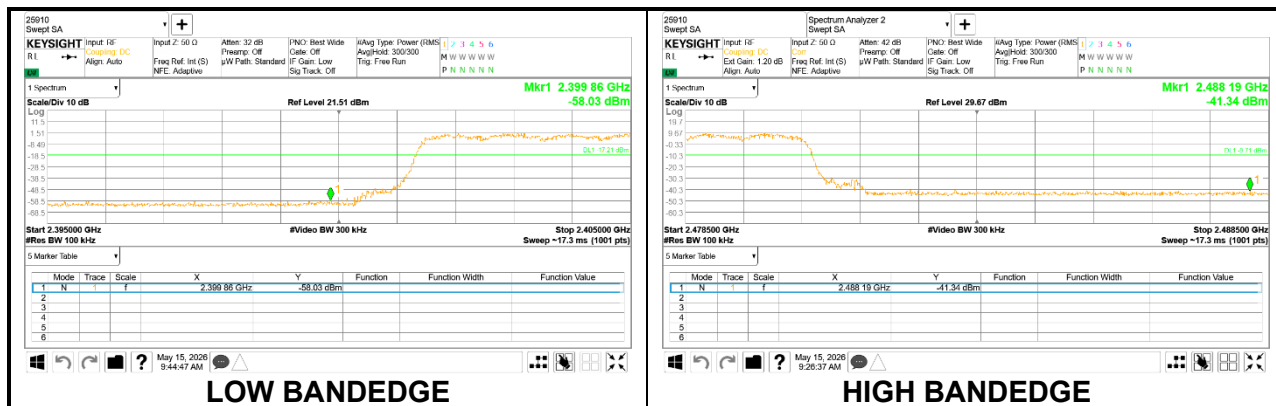


## 9.8.2. BLUETOOTH ENHANCED DATA RATE 8DPSK MODULATION

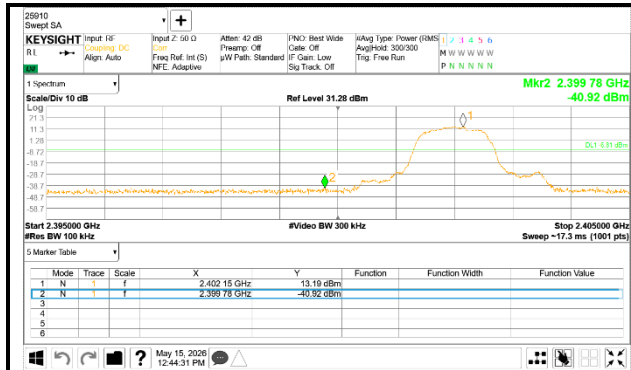
### SPURIOUS EMISSIONS, NON-HOPPING – ANT1



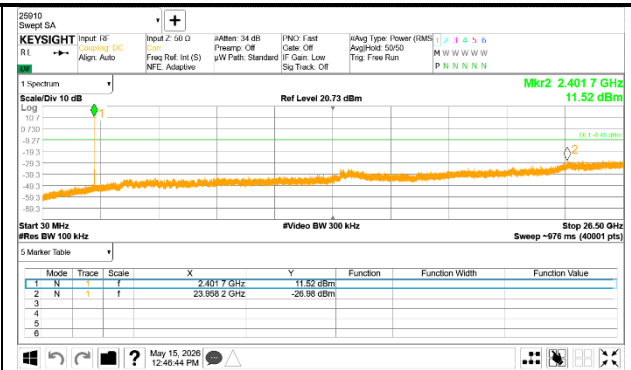
## SPURIOUS BANDEDGE EMISSIONS WITH HOPPING ON – ANT1



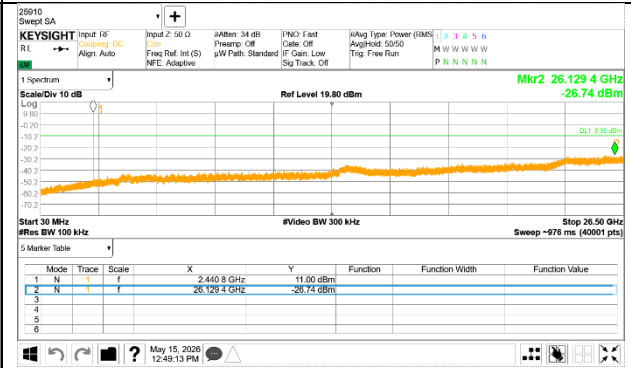
## SPURIOUS EMISSIONS, NON-HOPPING – ANT2



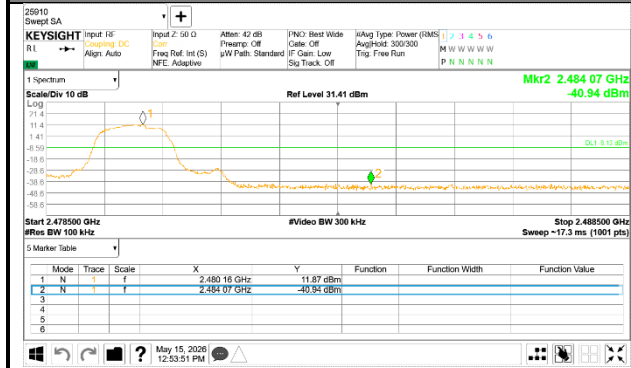
0 CHANNEL BANDEDGE



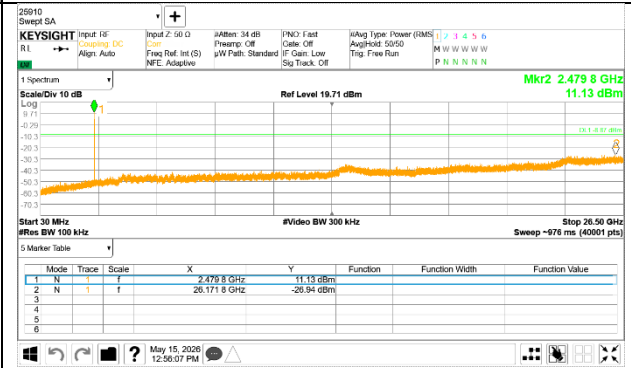
OUT-OF-BAND 0 CHANNEL



OUT-OF-BAND 39 CHANNEL

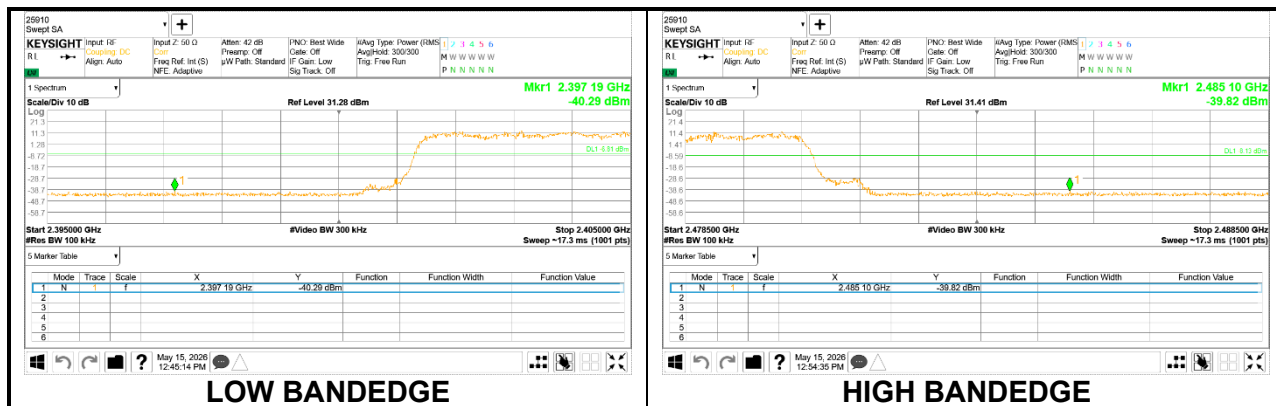


78 CHANNEL BANDEDGE



OUT-OF-BAND 78 CHANNEL

## SPURIOUS BANDEDGE EMISSIONS WITH HOPPING ON – ANT2



## 10. RADIATED TEST RESULTS

### 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 ~    | 1660 ~ 1710     | 8.025 ~ 8.5  | 22.01 ~ 23.12 |
| 4.17725 ~ 4.17775 | 13.36 ~ 13.41       | 156.52525      | 1718.8 ~ 1722.2 | 9.0 ~ 9.2    | 23.6 ~ 24.0   |
| 4.20725 ~ 4.20775 | 16.42 ~ 16.423      | 156.7 ~ 156.9  | 2200 ~ 2300     | 9.3 ~ 9.5    | 31.2 ~ 31.8   |
| 6.215 ~ 6.218     | 16.69475 ~ 16.69525 | 162.0125 ~     | 2310 ~ 2390     | 10.6 ~ 12.7  | 36.43 ~ 36.5  |
| 6.26775 ~ 6.26825 | 16.80425 ~ 16.80475 | 167.17         | 2483.5 ~ 2500   | 13.25 ~ 13.4 | Above 38.6    |
| 6.31175 ~ 6.31225 | 25.5 ~ 25.67        | 167.72 ~ 173.2 | 2655 ~ 2900     |              |               |
| 8.291 ~ 8.294     | 37.5 ~ 38.25        | 240 ~ 285      | 3260 ~ 3267     |              |               |
| 8.362 ~ 8.366     | 73 ~ 74.6           | 322 ~ 335.4    | 3332 ~ 3339     |              |               |
| 8.37625 ~ 8.38675 | 74.8 ~ 75.2         | 399.90 ~ 410   | 3345.8 ~ 3358   |              |               |
|                   |                     | 608 ~ 614      | 3600 ~ 4400     |              |               |
|                   |                     | 960 ~ 1240     |                 |              |               |

▪ 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.

## **TEST PROCEDURE**

The EUT is placed on a non-conducting table 80 cm above the ground plane for below 1GHz and 150 cm for above 1GHz. 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 measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak 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.)

For band edge measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 3 MHz for peak measurements and 1/T (on time) for average measurement.

$GFSK = 1/T = 1 / 0.00287s = 0.35 \text{ kHz.}$

The minimum VBW was 347Hz, but test receiver (ESU40) couldn't set value 347Hz. Due to this reason, testing VBW was set to 500Hz (Worst cases).

Since Bluetooth AFH operates twice per 100 ms on a single channel. Accordingly, the duty cycle reduction factor is calculated as

$$20 \cdot \log (2.88ms \times 2 / 100ms) = -24.79 \text{ dB}$$

Because the reduction factor is greater than the 20 dB difference between the peak and average limits, average measurements were omitted.

The spectrum from 1GHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in the 2.4 GHz band.  
(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.

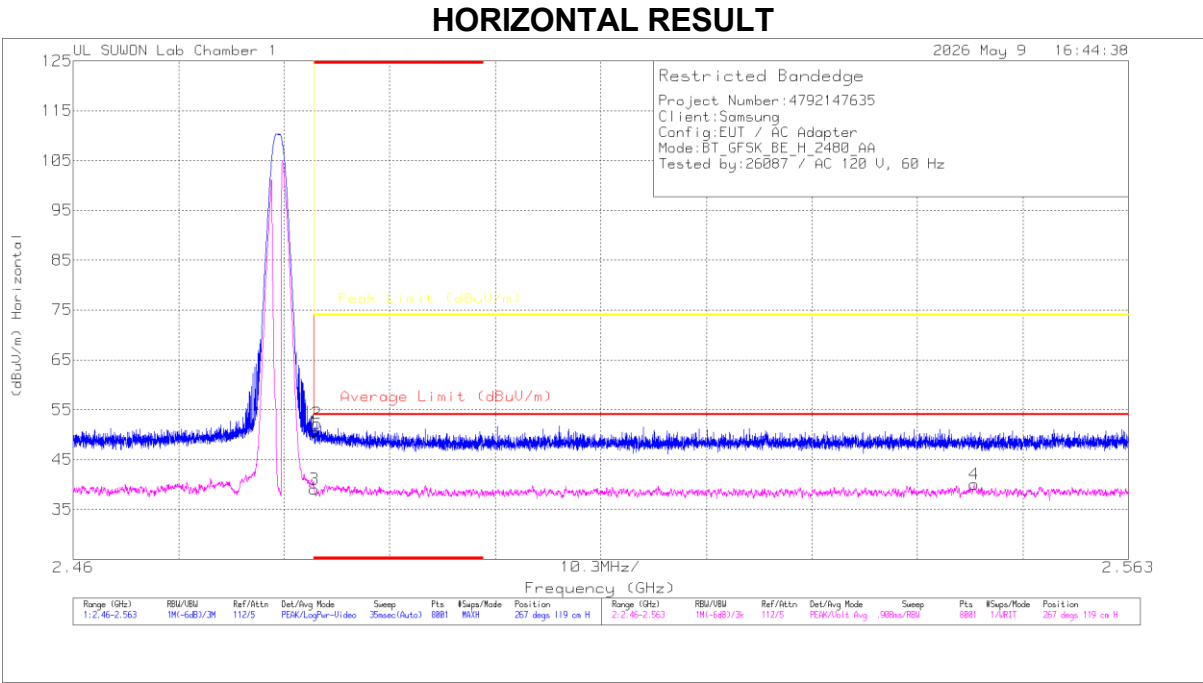
Note : Emission was pre-scanned from 9kHz to 30MHz; No emissions were detected which was at least 20dB below the specification limit (consider distance correction factor).  
Per FCC part 15.31(o), test results were not reported.

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

10.1. TRANSMITTER ABOVE 1 GHz

10.1.1. BLUETOOTH BASIC DATA RATE GFSK MODULATION

BANDEDGE (WORST CASE: 78 CHANNEL, DUAL)



Trace Markers

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | Antenna_Factor (dBm) | 10dB_Path Loss(dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|----------------------|--------------------|----------------------------|------------------------|-------------|---------------------|----------------|----------------|-------------|----------|
| 1      | * 2.48351       | 44.43                | Pk  | 32                   | -25.8              | 50.63                      | -                      | -           | 74                  | -23.37         | 267            | 119         | H        |
| 2      | * 2.48375       | 46.01                | Pk  | 32                   | -25.8              | 52.21                      | -                      | -           | 74                  | -21.79         | 267            | 119         | H        |

\* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band  
Pk - Peak detector  
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

## BANDEDGE TEST DATA

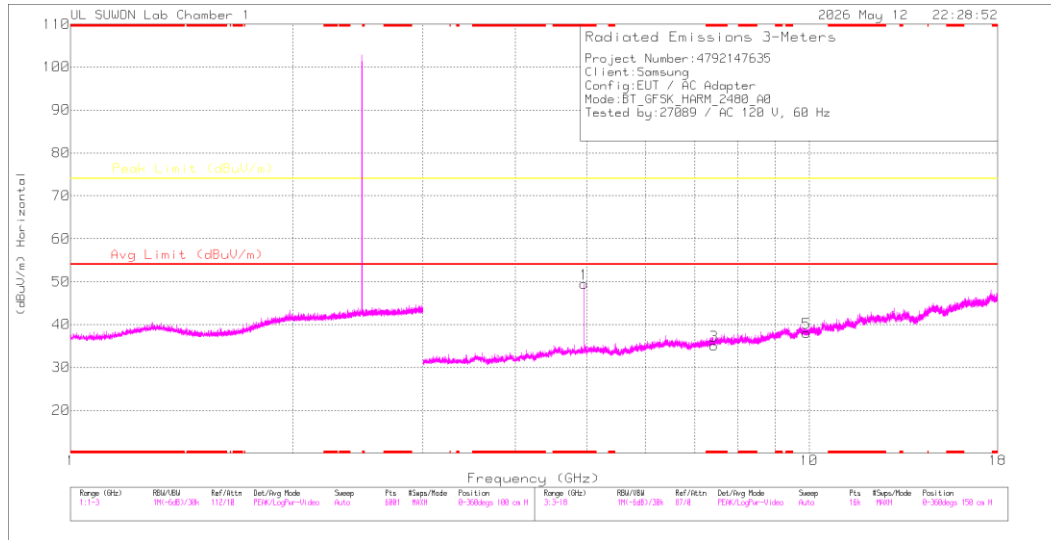
| Freq.<br>[MHz] | Antenna | Frequency<br>[GHz] | Reading<br>[dBuV] | Detector<br>Mode | ANT Factor<br>[dB(1/m)] | Loss<br>[dB] | Result<br>[dBuV/m] | AV Limit<br>[dBuV/m] | AV Margin<br>[dB] | PK Limit<br>[dBuV/m] | PK Margin<br>[dB] | Azimuth<br>[Degs] | Height<br>[cm] | Polarity |
|----------------|---------|--------------------|-------------------|------------------|-------------------------|--------------|--------------------|----------------------|-------------------|----------------------|-------------------|-------------------|----------------|----------|
| 2402           | ANT1    | * 2.39             | 41.16             | Pk               | 31.70                   | -26.20       | 46.66              | -                    | -                 | 74.00                | -27.34            | 156               | 170            | H        |
|                |         | * 2.38808          | 46.33             | Pk               | 31.70                   | -26.20       | 51.83              | -                    | -                 | 74.00                | -22.17            | 156               | 170            | H        |
|                |         | * 2.39             | 41.98             | Pk               | 31.70                   | -26.20       | 47.48              | -                    | -                 | 74.00                | -26.52            | 300               | 279            | V        |
|                |         | * 2.33297          | 46.22             | Pk               | 31.60                   | -26.30       | 51.52              | -                    | -                 | 74.00                | -22.48            | 300               | 279            | V        |
| 2480           | ANT1    | * 2.48351          | 42.08             | Pk               | 32.00                   | -25.80       | 48.28              | -                    | -                 | 74.00                | -25.72            | 141               | 126            | H        |
|                |         | * 2.48383          | 45.47             | Pk               | 32.00                   | -25.80       | 51.67              | -                    | -                 | 74.00                | -22.33            | 141               | 126            | H        |
|                |         | * 2.48351          | 44.15             | Pk               | 32.00                   | -26.20       | 49.95              | -                    | -                 | 74.00                | -24.05            | 317               | 295            | V        |
|                |         | * 2.48356          | 45.99             | Pk               | 32.00                   | -26.20       | 51.79              | -                    | -                 | 74.00                | -22.21            | 317               | 295            | V        |
| 2402           | ANT2    | * 2.39             | 42.46             | Pk               | 31.70                   | -26.20       | 47.96              | -                    | -                 | 74.00                | -26.04            | 260               | 301            | H        |
|                |         | * 2.38061          | 45.74             | Pk               | 31.70                   | -26.20       | 51.24              | -                    | -                 | 74.00                | -22.76            | 260               | 301            | H        |
|                |         | * 2.39             | 42.91             | Pk               | 31.70                   | -26.20       | 48.41              | -                    | -                 | 74.00                | -25.59            | 197               | 147            | V        |
|                |         | * 2.34605          | 45.32             | Pk               | 31.60                   | -26.20       | 50.72              | -                    | -                 | 74.00                | -23.28            | 197               | 147            | V        |
| 2480           | ANT2    | * 2.48351          | 43.05             | Pk               | 32.00                   | -25.80       | 49.25              | -                    | -                 | 74.00                | -24.75            | 253               | 200            | H        |
|                |         | * 2.48469          | 45.89             | Pk               | 32.00                   | -25.90       | 51.99              | -                    | -                 | 74.00                | -22.01            | 253               | 200            | H        |
|                |         | * 2.48351          | 44.27             | Pk               | 32.00                   | -26.20       | 50.07              | -                    | -                 | 74.00                | -23.93            | 281               | 135            | V        |
|                |         | * 2.48408          | 46.03             | Pk               | 32.00                   | -26.20       | 51.83              | -                    | -                 | 74.00                | -22.17            | 281               | 135            | V        |
| 2402           | Dual    | * 2.39             | 42.05             | Pk               | 31.70                   | -26.20       | 47.55              | -                    | -                 | 74.00                | -26.45            | 259               | 123            | H        |
|                |         | * 2.37736          | 46.01             | Pk               | 31.70                   | -26.20       | 51.51              | -                    | -                 | 74.00                | -22.49            | 259               | 123            | H        |
|                |         | * 2.39             | 42.12             | Pk               | 31.70                   | -26.20       | 47.62              | -                    | -                 | 74.00                | -26.38            | 246               | 352            | V        |
|                |         | * 2.38408          | 45.16             | Pk               | 31.70                   | -26.20       | 50.66              | -                    | -                 | 74.00                | -23.34            | 246               | 352            | V        |
| 2480           | Dual    | * 2.48351          | 44.43             | Pk               | 32.00                   | -25.80       | 50.63              | -                    | -                 | 74.00                | -23.37            | 267               | 119            | H        |
|                |         | * 2.48375          | 46.01             | Pk               | 32.00                   | -25.80       | 52.21              | -                    | -                 | 74.00                | -21.79            | 267               | 119            | H        |
|                |         | * 2.48351          | 44.43             | Pk               | 32.00                   | -26.20       | 50.23              | -                    | -                 | 74.00                | -23.77            | 248               | 367            | V        |
|                |         | 2.553              | 45.79             | Pk               | 32.10                   | -26.00       | 51.89              | -                    | -                 | 74.00                | -22.11            | 248               | 367            | V        |

Note1. Pk - Peak detector, VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

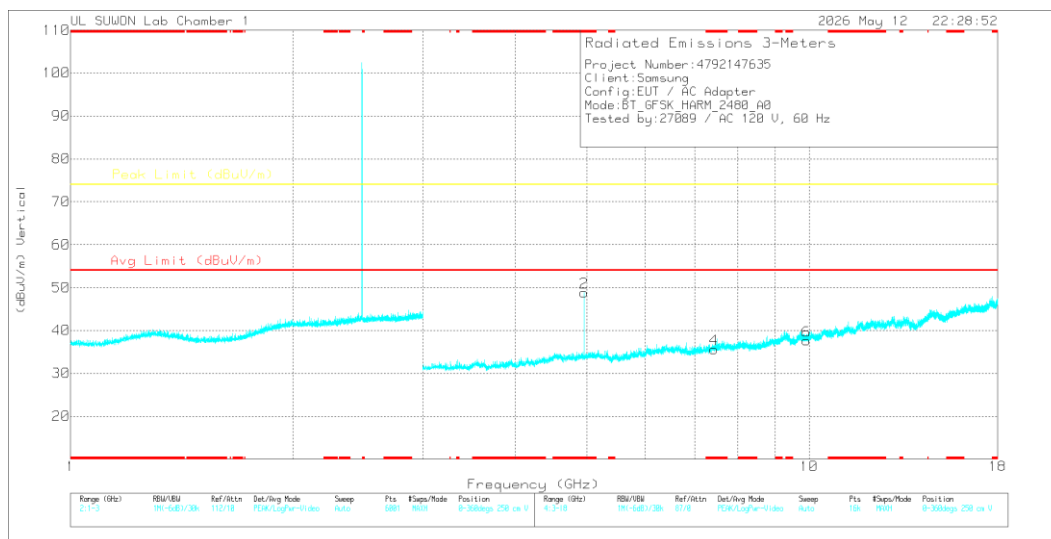
Note2. \* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band

## HARMONICS AND SPURIOUS EMISSIONS (WORST CASE – ANT 1)

### 78 CHANNEL RESULTS



### HORIZONTAL



### VERTICAL

Note: Emission was scanned up to 26GHz; 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 Factor (dB/m) | 3GHz_HP_Path Loss(dB) | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|-----------------|----------------------|------|-----------------------|-----------------------|----------------------------|--------------------|-------------|---------------------|-------------|----------------|-------------|----------|
| * 4.96016       | 52.02                | PKFH | 34.2                  | -32.9                 | 53.32                      | -                  | -           | 74                  | -20.68      | 112            | 120         | H        |
| * 4.9598        | 51.32                | PKFH | 34.2                  | -32.9                 | 52.62                      | -                  | -           | 74                  | -21.38      | 174            | 129         | V        |
| * 7.44043       | 38.76                | PKFH | 35.6                  | -30.4                 | 43.96                      | -                  | -           | 74                  | -30.04      | 0              | 100         | H        |
| * 7.44116       | 38.19                | PKFH | 35.6                  | -30.4                 | 43.39                      | -                  | -           | 74                  | -30.61      | 0              | 100         | V        |
| 9.91753         | 35.25                | PKFH | 37.4                  | -27.1                 | 45.55                      | -                  | -           | 74                  | -28.45      | 0              | 100         | H        |
| 9.92194         | 34.99                | PKFH | 37.4                  | -27.1                 | 45.29                      | -                  | -           | 74                  | -28.71      | 0              | 100         | V        |

\* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band  
PKFH FHSS/BT RB=100k for Frequencies<1GHz / RB=1MHz for Frequencies>1GHz, VB=3 x RB, Peak  
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

# HARMONICS AND SPURIOUS EMISSIONS TEST DATA

| Freq. [MHz] | Antenna | Frequency [GHz] | Reading [dBuV] | Detector Mode | ANT Factor [dB(1/m)] | Loss [dB] | Result [dBuV/m] | AV Limit [dBuV/m] | AV Margin [dB] | PK Limit [dBuV/m] | PK Margin [dB] | Azimuth [Degs] | Height [cm] | Polarity |
|-------------|---------|-----------------|----------------|---------------|----------------------|-----------|-----------------|-------------------|----------------|-------------------|----------------|----------------|-------------|----------|
| 2402        | ANT1    | * 4.8043        | 48.66          | PKFH          | 34.20                | -33.00    | 49.86           | -                 | -              | 74.00             | -24.14         | 203            | 100         | H        |
|             |         | * 4.80364       | 48.04          | PKFH          | 34.20                | -33.00    | 49.24           | -                 | -              | 74.00             | -24.76         | 177            | 113         | V        |
|             |         | 7.207           | 39.08          | PKFH          | 35.50                | -31.00    | 43.58           | -                 | -              | 74.00             | -30.42         | 0              | 100         | H        |
|             |         | 7.207           | 38.04          | PKFH          | 35.50                | -31.00    | 42.54           | -                 | -              | 74.00             | -31.46         | 0              | 100         | V        |
|             |         | 9.610           | 35.24          | PKFH          | 37.00                | -27.10    | 45.14           | -                 | -              | 74.00             | -28.86         | 0              | 100         | H        |
|             |         | 9.609           | 34.51          | PKFH          | 37.00                | -27.10    | 44.41           | -                 | -              | 74.00             | -29.59         | 0              | 100         | V        |
| 2441        | ANT1    | * 4.88183       | 49.72          | PKFH          | 34.20                | -33.00    | 50.92           | -                 | -              | 74.00             | -23.08         | 113            | 101         | H        |
|             |         | * 4.88163       | 49.25          | PKFH          | 34.20                | -33.00    | 50.45           | -                 | -              | 74.00             | -23.55         | 173            | 128         | V        |
|             |         | * 7.32319       | 38.44          | PKFH          | 35.50                | -30.80    | 43.14           | -                 | -              | 74.00             | -30.86         | 0              | 100         | H        |
|             |         | * 7.32404       | 38.14          | PKFH          | 35.50                | -30.80    | 42.84           | -                 | -              | 74.00             | -31.16         | 0              | 100         | V        |
|             |         | 9.764           | 36.71          | PKFH          | 37.20                | -26.60    | 47.31           | -                 | -              | 74.00             | -26.69         | 0              | 100         | H        |
|             |         | 9.766           | 34.62          | PKFH          | 37.20                | -26.50    | 45.32           | -                 | -              | 74.00             | -28.68         | 0              | 100         | V        |
| 2480        | ANT1    | * 4.96016       | 52.02          | PKFH          | 34.20                | -32.90    | 53.32           | -                 | -              | 74.00             | -20.68         | 112            | 120         | H        |
|             |         | * 4.9598        | 51.32          | PKFH          | 34.20                | -32.90    | 52.62           | -                 | -              | 74.00             | -21.38         | 174            | 129         | V        |
|             |         | * 7.44043       | 38.76          | PKFH          | 35.60                | -30.40    | 43.96           | -                 | -              | 74.00             | -30.04         | 0              | 100         | H        |
|             |         | * 7.44116       | 38.19          | PKFH          | 35.60                | -30.40    | 43.39           | -                 | -              | 74.00             | -30.61         | 0              | 100         | V        |
|             |         | 9.918           | 35.25          | PKFH          | 37.40                | -27.10    | 45.55           | -                 | -              | 74.00             | -28.45         | 0              | 100         | H        |
|             |         | 9.922           | 34.99          | PKFH          | 37.40                | -27.10    | 45.29           | -                 | -              | 74.00             | -28.71         | 0              | 100         | V        |
| 2402        | ANT2    | * 4.80362       | 42.43          | PKFH          | 34.20                | -33.00    | 43.63           | -                 | -              | 74.00             | -30.37         | 187            | 138         | H        |
|             |         | * 4.8038        | 42.17          | PKFH          | 34.20                | -33.00    | 43.37           | -                 | -              | 74.00             | -30.63         | 155            | 111         | V        |
|             |         | 7.206           | 40.26          | PKFH          | 35.50                | -31.00    | 44.76           | -                 | -              | 74.00             | -29.24         | 30             | 353         | H        |
|             |         | 7.208           | 38.09          | PKFH          | 35.50                | -31.00    | 42.59           | -                 | -              | 74.00             | -31.41         | 0              | 100         | V        |
|             |         | 9.607           | 35.63          | PKFH          | 37.00                | -27.10    | 45.53           | -                 | -              | 74.00             | -28.47         | 0              | 100         | H        |
|             |         | 9.608           | 35.58          | PKFH          | 37.00                | -27.10    | 45.48           | -                 | -              | 74.00             | -28.52         | 0              | 100         | V        |
| 2441        | ANT2    | * 4.88202       | 41.88          | PKFH          | 34.20                | -33.00    | 43.08           | -                 | -              | 74.00             | -30.92         | 185            | 136         | H        |
|             |         | * 4.88222       | 42.23          | PKFH          | 34.20                | -33.00    | 43.43           | -                 | -              | 74.00             | -30.57         | 172            | 158         | V        |
|             |         | * 7.32307       | 39.45          | PKFH          | 35.50                | -30.80    | 44.15           | -                 | -              | 74.00             | -29.85         | 192            | 100         | H        |
|             |         | * 7.32074       | 39.15          | PKFH          | 35.50                | -30.80    | 43.85           | -                 | -              | 74.00             | -30.15         | 0              | 100         | V        |
|             |         | 9.764           | 35.12          | PKFH          | 37.20                | -26.60    | 45.72           | -                 | -              | 74.00             | -28.28         | 0              | 100         | H        |
|             |         | 9.763           | 35.79          | PKFH          | 37.20                | -26.50    | 46.49           | -                 | -              | 74.00             | -27.51         | 0              | 100         | V        |
| 2480        | ANT2    | * 4.95973       | 40.76          | PKFH          | 34.20                | -32.90    | 42.06           | -                 | -              | 74.00             | -31.94         | 185            | 235         | H        |
|             |         | * 4.95977       | 41.64          | PKFH          | 34.20                | -32.90    | 42.94           | -                 | -              | 74.00             | -31.06         | 174            | 149         | V        |
|             |         | * 7.43955       | 40.53          | PKFH          | 35.60                | -30.40    | 45.73           | -                 | -              | 74.00             | -28.27         | 49             | 389         | H        |
|             |         | * 7.44184       | 37.80          | PKFH          | 35.60                | -30.30    | 43.10           | -                 | -              | 74.00             | -30.90         | 0              | 100         | V        |
|             |         | 9.922           | 35.74          | PKFH          | 37.40                | -27.10    | 46.04           | -                 | -              | 74.00             | -27.96         | 0              | 100         | H        |
|             |         | 9.922           | 36.20          | PKFH          | 37.40                | -27.10    | 46.50           | -                 | -              | 74.00             | -27.50         | 0              | 100         | V        |
| 2402        | DUAL    | * 4.80377       | 49.00          | PKFH          | 34.20                | -33.00    | 50.20           | -                 | -              | 74.00             | -23.80         | 320            | 104         | H        |
|             |         | * 4.80367       | 46.33          | PKFH          | 34.20                | -33.00    | 47.53           | -                 | -              | 74.00             | -26.47         | 306            | 304         | V        |
|             |         | 7.206           | 42.22          | PKFH          | 35.50                | -31.00    | 46.72           | -                 | -              | 74.00             | -27.28         | 44             | 125         | H        |
|             |         | 7.205           | 42.94          | PKFH          | 35.50                | -30.90    | 47.54           | -                 | -              | 74.00             | -26.46         | 198            | 100         | V        |
|             |         | 9.608           | 35.54          | PKFH          | 37.00                | -27.10    | 45.44           | -                 | -              | 74.00             | -28.56         | 0              | 100         | H        |
|             |         | 9.607           | 35.40          | PKFH          | 37.00                | -27.10    | 45.30           | -                 | -              | 74.00             | -28.70         | 0              | 100         | V        |
| 2441        | DUAL    | * 4.88164       | 47.73          | PKFH          | 34.20                | -33.00    | 48.93           | -                 | -              | 74.00             | -25.07         | 301            | 200         | H        |
|             |         | * 4.8821        | 48.06          | PKFH          | 34.20                | -33.00    | 49.26           | -                 | -              | 74.00             | -24.74         | 336            | 351         | V        |
|             |         | * 7.32278       | 42.02          | PKFH          | 35.50                | -30.80    | 46.72           | -                 | -              | 74.00             | -27.28         | 44             | 102         | H        |
|             |         | * 7.32293       | 43.03          | PKFH          | 35.50                | -30.80    | 47.73           | -                 | -              | 74.00             | -26.27         | 196            | 114         | V        |
|             |         | 9.766           | 34.47          | PKFH          | 37.20                | -26.50    | 45.17           | -                 | -              | 74.00             | -28.83         | 0              | 100         | H        |
|             |         | 9.762           | 34.37          | PKFH          | 37.20                | -26.40    | 45.17           | -                 | -              | 74.00             | -28.83         | 0              | 100         | V        |
| 2480        | DUAL    | * 4.95963       | 46.73          | PKFH          | 34.20                | -32.90    | 48.03           | -                 | -              | 74.00             | -25.97         | 325            | 117         | H        |
|             |         | * 4.95964       | 42.65          | PKFH          | 34.20                | -32.90    | 43.95           | -                 | -              | 74.00             | -30.05         | 359            | 102         | V        |
|             |         | * 7.4406        | 42.74          | PKFH          | 35.60                | -30.40    | 47.94           | -                 | -              | 74.00             | -26.06         | 43             | 101         | H        |
|             |         | * 7.43971       | 42.50          | PKFH          | 35.60                | -30.40    | 47.70           | -                 | -              | 74.00             | -26.30         | 194            | 109         | V        |
|             |         | 9.918           | 34.85          | PKFH          | 37.40                | -27.10    | 45.15           | -                 | -              | 74.00             | -28.85         | 0              | 100         | H        |
|             |         | 9.921           | 36.02          | PKFH          | 37.40                | -27.10    | 46.32           | -                 | -              | 74.00             | -27.68         | 0              | 100         | V        |

\* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band

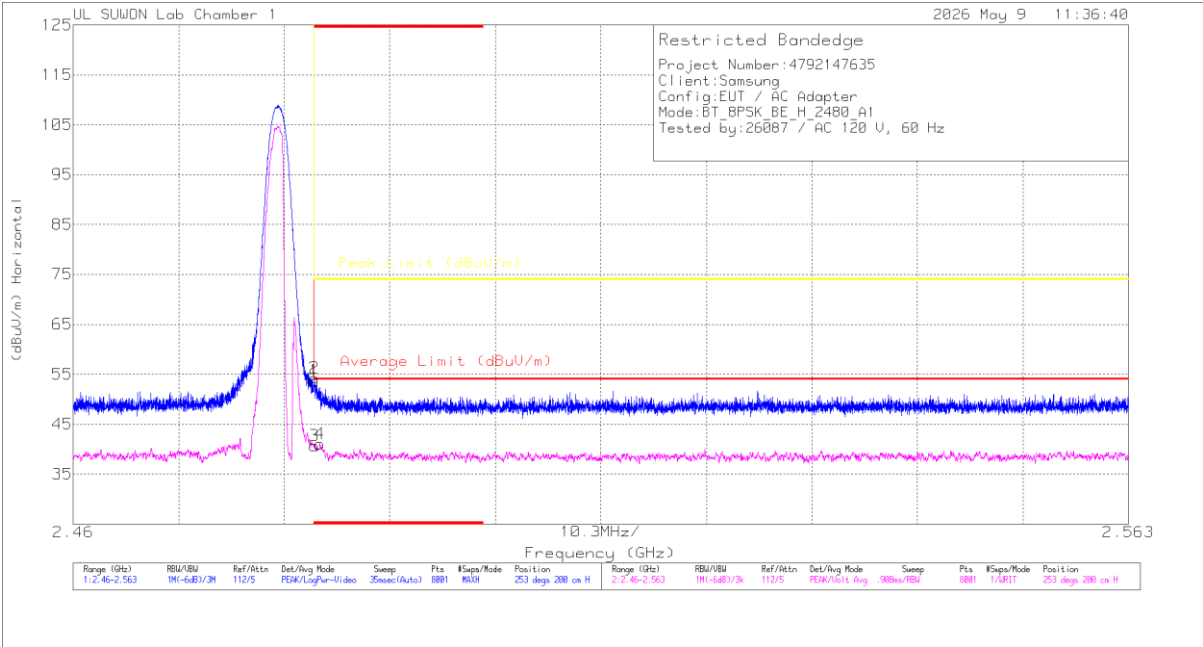
PKFH FHSS/BT RB=100k for Frequencies<1GHz / RB=1MHz for Frequencies>1GHz, VB=3 x RB, Peak

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

10.1.2.        **BLUETOOTH ENHANCED DATA RATE 8DPSK  
MODULATION**

**BANDEDGE (WORST CASE: 78 CHANNEL, ANT 2)**

**HORIZONTAL RESULT**



**Trace Markers**

| Marker | Frequency (GHz) | Meter Reading (dBuV) | Det | Antenna_Factor (dBm) | 10dB_Path Loss(dB) | Corrected Reading (dBuV/m) | Average Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|----------------------|--------------------|----------------------------|------------------------|-------------|---------------------|----------------|----------------|-------------|----------|
| 1      | * 2.48351       | 47.57                | Pk  | 32                   | -25.8              | 53.77                      | -                      | -           | 74                  | -20.23         | 253            | 200         | H        |
| 2      | * 2.48354       | 48.09                | Pk  | 32                   | -25.8              | 54.29                      | -                      | -           | 74                  | -19.71         | 253            | 200         | H        |

\* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band  
Pk - Peak detector  
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

## BANDEDGE TEST DATA

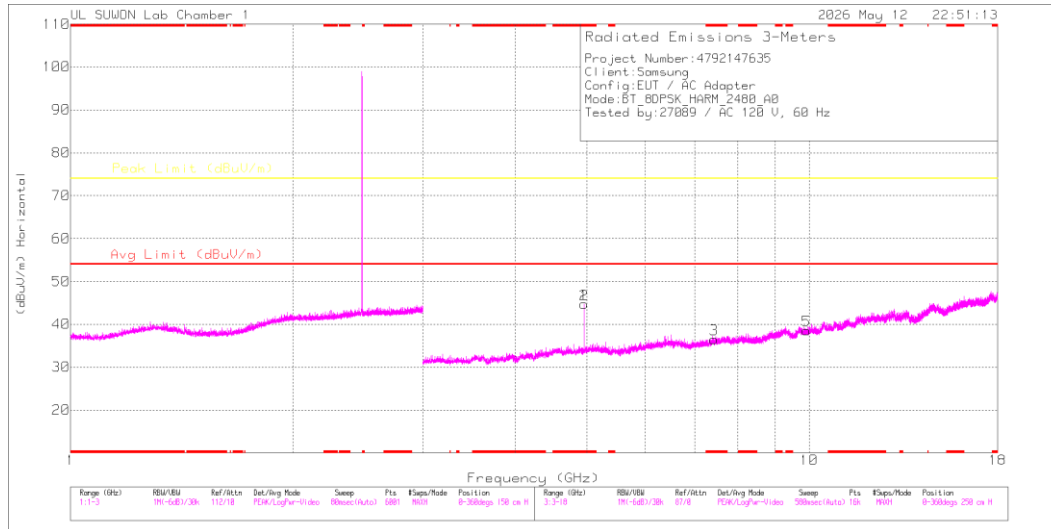
| Freq.<br>[MHz] | Antenna | Frequency<br>[GHz] | Reading<br>[dBuV] | Detector<br>Mode | ANT Factor<br>[dB(1/m)] | Loss<br>[dB] | Result<br>[dBuV/m] | AV Limit<br>[dBuV/m] | AV Margin<br>[dB] | PK Limit<br>[dBuV/m] | PK Margin<br>[dB] | Azimuth<br>[Degs] | Height<br>[cm] | Polarity |
|----------------|---------|--------------------|-------------------|------------------|-------------------------|--------------|--------------------|----------------------|-------------------|----------------------|-------------------|-------------------|----------------|----------|
| 2402           | ANT1    | * 2.39             | 41.99             | Pk               | 31.70                   | -26.20       | 47.49              | -                    | -                 | 74.00                | -26.51            | 156               | 170            | H        |
|                |         | * 2.38271          | 45.41             | Pk               | 31.70                   | -26.20       | 50.91              | -                    | -                 | 74.00                | -23.09            | 156               | 170            | H        |
|                |         | * 2.39             | 41.97             | Pk               | 31.70                   | -26.20       | 47.47              | -                    | -                 | 74.00                | -26.53            | 300               | 279            | V        |
|                |         | * 2.32881          | 46.02             | Pk               | 31.60                   | -26.30       | 51.32              | -                    | -                 | 74.00                | -22.68            | 300               | 279            | V        |
| 2480           | ANT1    | * 2.48351          | 42.40             | Pk               | 32.00                   | -25.80       | 48.60              | -                    | -                 | 74.00                | -25.40            | 141               | 126            | H        |
|                |         | * 2.540            | 45.52             | Pk               | 32.10                   | -25.70       | 51.92              | -                    | -                 | 74.00                | -22.08            | 141               | 126            | H        |
|                |         | * 2.48351          | 43.80             | Pk               | 32.00                   | -26.20       | 49.60              | -                    | -                 | 74.00                | -24.40            | 317               | 295            | V        |
|                |         | * 2.48361          | 45.94             | Pk               | 32.00                   | -26.20       | 51.74              | -                    | -                 | 74.00                | -22.26            | 317               | 295            | V        |
| 2402           | ANT2    | * 2.39             | 41.69             | Pk               | 31.70                   | -26.20       | 47.19              | -                    | -                 | 74.00                | -26.81            | 260               | 301            | H        |
|                |         | * 2.31252          | 45.27             | Pk               | 31.50                   | -26.30       | 50.47              | -                    | -                 | 74.00                | -23.53            | 260               | 301            | H        |
|                |         | * 2.39             | 42.98             | Pk               | 31.70                   | -26.20       | 48.48              | -                    | -                 | 74.00                | -25.52            | 197               | 147            | V        |
|                |         | * 2.35322          | 45.57             | Pk               | 31.60                   | -26.30       | 50.87              | -                    | -                 | 74.00                | -23.13            | 197               | 147            | V        |
| 2480           | ANT2    | * 2.48351          | 47.57             | Pk               | 32.00                   | -25.80       | 53.77              | -                    | -                 | 74.00                | -20.23            | 253               | 200            | H        |
|                |         | * 2.48354          | 48.09             | Pk               | 32.00                   | -25.80       | 54.29              | -                    | -                 | 74.00                | -19.71            | 253               | 200            | H        |
|                |         | * 2.48351          | 44.23             | Pk               | 32.00                   | -26.20       | 50.03              | -                    | -                 | 74.00                | -23.97            | 281               | 135            | V        |
|                |         | * 2.4836           | 46.44             | Pk               | 32.00                   | -26.20       | 52.24              | -                    | -                 | 74.00                | -21.76            | 281               | 135            | V        |
| 2402           | Dual    | * 2.39             | 41.78             | Pk               | 31.70                   | -26.20       | 47.28              | -                    | -                 | 74.00                | -26.72            | 246               | 352            | V        |
|                |         | * 2.34466          | 45.07             | Pk               | 31.60                   | -26.30       | 50.37              | -                    | -                 | 74.00                | -23.63            | 246               | 352            | V        |
|                |         | * 2.39             | 41.78             | Pk               | 31.70                   | -26.20       | 47.28              | -                    | -                 | 74.00                | -26.72            | 246               | 352            | V        |
|                |         | * 2.34466          | 45.07             | Pk               | 31.60                   | -26.30       | 50.37              | -                    | -                 | 74.00                | -23.63            | 246               | 352            | V        |
| 2480           | Dual    | * 2.48351          | 46.85             | Pk               | 32.00                   | -25.80       | 53.05              | -                    | -                 | 74.00                | -20.95            | 267               | 119            | H        |
|                |         | * 2.48365          | 47.64             | Pk               | 32.00                   | -25.80       | 53.84              | -                    | -                 | 74.00                | -20.16            | 267               | 119            | H        |
|                |         | * 2.48351          | 47.09             | Pk               | 32.00                   | -26.20       | 52.89              | -                    | -                 | 74.00                | -21.11            | 248               | 367            | V        |
|                |         | * 2.48365          | 46.97             | Pk               | 32.00                   | -26.20       | 52.77              | -                    | -                 | 74.00                | -21.23            | 248               | 367            | V        |

Note1. Pk - Peak detector, VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

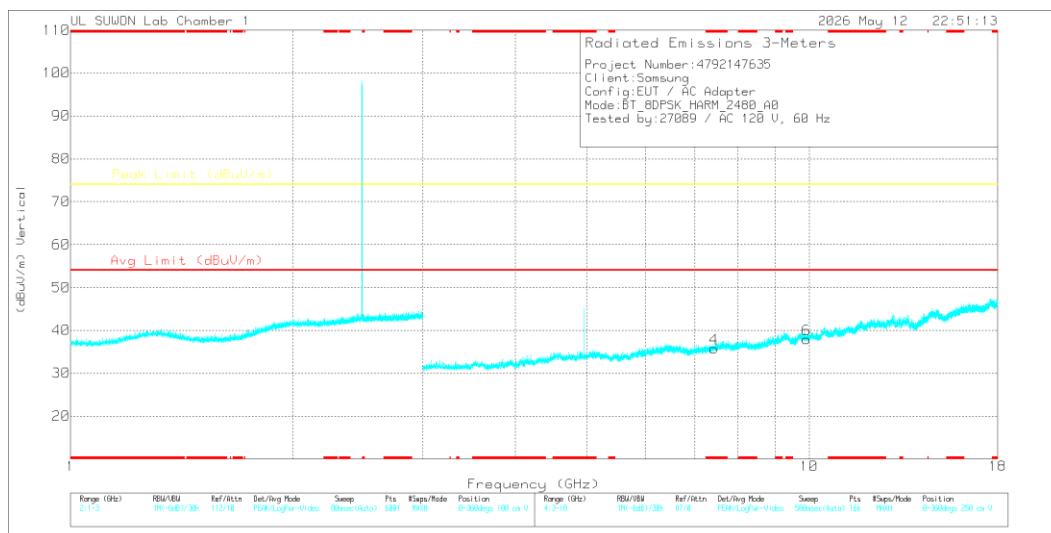
Note2. \* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band

## HARMONICS AND SPURIOUS EMISSIONS (WORST CASE – ANT 1)

### 0 CHANNEL RESULTS



### HORIZONTAL



### VERTICAL

Note: Emission was scanned up to 26GHz; 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_Factor (dBm) | 3GHz_HP_Path Loss(dB) | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|-----------------|----------------------|------|----------------------|-----------------------|----------------------------|--------------------|-------------|---------------------|-------------|----------------|-------------|----------|
| * 4.96002       | 50.23                | PKFH | 34.2                 | -32.9                 | 51.53                      | -                  | -           | 74                  | -22.47      | 112            | 120         | H        |
| * 4.95976       | 49.34                | PKFH | 34.2                 | -32.9                 | 50.64                      | -                  | -           | 74                  | -23.36      | 174            | 129         | V        |
| * 7.44177       | 37.39                | PKFH | 35.6                 | -30.3                 | 42.69                      | -                  | -           | 74                  | -31.31      | 0              | 100         | H        |
| * 7.44007       | 37.21                | PKFH | 35.6                 | -30.4                 | 42.41                      | -                  | -           | 74                  | -31.59      | 0              | 100         | V        |
| 9.9197          | 35                   | PKFH | 37.4                 | -27.1                 | 45.3                       | -                  | -           | 74                  | -28.7       | 0              | 100         | H        |
| 9.91889         | 34.62                | PKFH | 37.4                 | -27.1                 | 44.92                      | -                  | -           | 74                  | -29.08      | 0              | 100         | V        |

\* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band  
PKFH FHSS/BT RB=100k for Frequencies<1GHz / RB=1MHz for Frequencies>1GHz, VB=3 x RB, Peak  
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

# HARMONICS AND SPURIOUS EMISSIONS TEST DATA

| Freq. [MHz] | Antenna | Frequency [GHz] | Reading [dBuV] | Detector Mode | ANT Factor [dB(1/m)] | Loss [dB] | Result [dBuV/m] | AV Limit [dBuV/m] | AV Margin [dB] | PK Limit [dBuV/m] | PK Margin [dB] | Azimuth [Degs] | Height [cm] | Polarity |
|-------------|---------|-----------------|----------------|---------------|----------------------|-----------|-----------------|-------------------|----------------|-------------------|----------------|----------------|-------------|----------|
| 2402        | ANT1    | * 4.80391       | 46.34          | PKFH          | 34.20                | -33.00    | 47.54           | -                 | -              | 74.00             | -26.46         | 203            | 100         | H        |
|             |         | * 4.80406       | 46.10          | PKFH          | 34.20                | -33.00    | 47.30           | -                 | -              | 74.00             | -26.70         | 177            | 113         | V        |
|             |         | 7.204           | 37.81          | PKFH          | 35.50                | -30.90    | 42.41           | -                 | -              | 74.00             | -31.59         | 0              | 100         | H        |
|             |         | 7.205           | 37.52          | PKFH          | 35.50                | -30.90    | 42.12           | -                 | -              | 74.00             | -31.88         | 0              | 100         | V        |
|             |         | 9.606           | 34.81          | PKFH          | 37.00                | -27.10    | 44.71           | -                 | -              | 74.00             | -29.29         | 0              | 100         | H        |
|             |         | 9.610           | 34.33          | PKFH          | 37.00                | -27.10    | 44.23           | -                 | -              | 74.00             | -29.77         | 0              | 100         | V        |
| 2441        | ANT1    | * 4.88153       | 48.03          | PKFH          | 34.20                | -33.00    | 49.23           | -                 | -              | 74.00             | -24.77         | 113            | 101         | H        |
|             |         | * 4.88206       | 46.74          | PKFH          | 34.20                | -33.00    | 47.94           | -                 | -              | 74.00             | -26.06         | 173            | 128         | V        |
|             |         | * 7.32263       | 37.30          | PKFH          | 35.50                | -30.80    | 42.00           | -                 | -              | 74.00             | -32.00         | 0              | 100         | H        |
|             |         | * 7.3223        | 37.60          | PKFH          | 35.50                | -30.80    | 42.30           | -                 | -              | 74.00             | -31.70         | 0              | 100         | V        |
|             |         | 9.763           | 34.55          | PKFH          | 37.20                | -26.50    | 45.25           | -                 | -              | 74.00             | -28.75         | 0              | 100         | H        |
|             |         | 9.763           | 34.46          | PKFH          | 37.20                | -26.50    | 45.16           | -                 | -              | 74.00             | -28.84         | 0              | 100         | V        |
| 2480        | ANT1    | * 4.96002       | 50.23          | PKFH          | 34.20                | -32.90    | 51.53           | -                 | -              | 74.00             | -22.47         | 112            | 120         | H        |
|             |         | * 4.95976       | 49.34          | PKFH          | 34.20                | -32.90    | 50.64           | -                 | -              | 74.00             | -23.36         | 174            | 129         | V        |
|             |         | * 7.44177       | 37.39          | PKFH          | 35.60                | -30.30    | 42.69           | -                 | -              | 74.00             | -31.31         | 0              | 100         | H        |
|             |         | * 7.44007       | 37.21          | PKFH          | 35.60                | -30.40    | 42.41           | -                 | -              | 74.00             | -31.59         | 0              | 100         | V        |
|             |         | 9.920           | 35.00          | PKFH          | 37.40                | -27.10    | 45.30           | -                 | -              | 74.00             | -28.70         | 0              | 100         | H        |
|             |         | 9.919           | 34.62          | PKFH          | 37.40                | -27.10    | 44.92           | -                 | -              | 74.00             | -29.08         | 0              | 100         | V        |
| 2402        | ANT2    | * 4.80029       | 41.38          | PKFH          | 34.20                | -33.00    | 42.58           | -                 | -              | 74.00             | -31.42         | 187            | 139         | H        |
|             |         | * 4.80469       | 40.95          | PKFH          | 34.20                | -33.00    | 42.15           | -                 | -              | 74.00             | -31.85         | 155            | 111         | V        |
|             |         | 7.207           | 38.67          | PKFH          | 35.50                | -31.00    | 43.17           | -                 | -              | 74.00             | -30.83         | 30             | 353         | H        |
|             |         | 7.207           | 37.87          | PKFH          | 35.50                | -31.00    | 42.37           | -                 | -              | 74.00             | -31.63         | 0              | 100         | V        |
|             |         | 9.610           | 35.35          | PKFH          | 37.00                | -27.10    | 45.25           | -                 | -              | 74.00             | -28.75         | 0              | 100         | H        |
|             |         | 9.607           | 34.80          | PKFH          | 37.00                | -27.10    | 44.70           | -                 | -              | 74.00             | -29.30         | 0              | 100         | V        |
| 2441        | ANT2    | * 4.88239       | 41.28          | PKFH          | 34.20                | -33.00    | 42.48           | -                 | -              | 74.00             | -31.52         | 185            | 136         | H        |
|             |         | * 4.8824        | 42.24          | PKFH          | 34.20                | -33.00    | 43.44           | -                 | -              | 74.00             | -30.56         | 172            | 158         | V        |
|             |         | * 7.3233        | 38.81          | PKFH          | 35.50                | -30.80    | 43.51           | -                 | -              | 74.00             | -30.49         | 192            | 100         | H        |
|             |         | * 7.32189       | 37.95          | PKFH          | 35.50                | -30.70    | 42.75           | -                 | -              | 74.00             | -31.25         | 0              | 100         | V        |
|             |         | 9.765           | 34.66          | PKFH          | 37.20                | -26.50    | 45.36           | -                 | -              | 74.00             | -28.64         | 0              | 100         | H        |
|             |         | 9.762           | 34.24          | PKFH          | 37.20                | -26.50    | 44.94           | -                 | -              | 74.00             | -29.06         | 0              | 100         | V        |
| 2480        | ANT2    | * 4.96026       | 42.37          | PKFH          | 34.20                | -32.90    | 43.67           | -                 | -              | 74.00             | -30.33         | 185            | 235         | H        |
|             |         | * 4.95998       | 41.10          | PKFH          | 34.20                | -32.90    | 42.40           | -                 | -              | 74.00             | -31.60         | 174            | 149         | V        |
|             |         | * 7.44052       | 38.39          | PKFH          | 35.60                | -30.40    | 43.59           | -                 | -              | 74.00             | -30.41         | 49             | 389         | H        |
|             |         | * 7.44184       | 37.80          | PKFH          | 35.60                | -30.30    | 43.10           | -                 | -              | 74.00             | -30.90         | 0              | 100         | V        |
|             |         | 9.922           | 35.45          | PKFH          | 37.40                | -27.10    | 45.75           | -                 | -              | 74.00             | -28.25         | 0              | 100         | H        |
|             |         | 9.919           | 35.25          | PKFH          | 37.40                | -27.10    | 45.55           | -                 | -              | 74.00             | -28.45         | 0              | 100         | V        |
| 2402        | DUAL    | * 4.80445       | 47.03          | PKFH          | 34.20                | -33.00    | 48.23           | -                 | -              | 74.00             | -25.77         | 320            | 104         | H        |
|             |         | * 4.80411       | 45.24          | PKFH          | 34.20                | -33.00    | 46.44           | -                 | -              | 74.00             | -27.56         | 306            | 304         | V        |
|             |         | 7.208           | 39.31          | PKFH          | 35.50                | -31.00    | 43.81           | -                 | -              | 74.00             | -30.19         | 44             | 125         | H        |
|             |         | 7.205           | 40.05          | PKFH          | 35.50                | -30.90    | 44.65           | -                 | -              | 74.00             | -29.35         | 198            | 100         | V        |
|             |         | 9.609           | 35.27          | PKFH          | 37.00                | -27.10    | 45.17           | -                 | -              | 74.00             | -28.83         | 0              | 100         | H        |
|             |         | 9.609           | 34.91          | PKFH          | 37.00                | -27.10    | 44.81           | -                 | -              | 74.00             | -29.19         | 0              | 100         | V        |
| 2441        | DUAL    | * 4.88227       | 46.70          | PKFH          | 34.20                | -33.00    | 47.90           | -                 | -              | 74.00             | -26.10         | 301            | 200         | H        |
|             |         | * 4.88191       | 45.97          | PKFH          | 34.20                | -33.00    | 47.17           | -                 | -              | 74.00             | -26.83         | 336            | 351         | V        |
|             |         | * 7.32182       | 41.48          | PKFH          | 35.50                | -30.70    | 46.28           | -                 | -              | 74.00             | -27.72         | 44             | 102         | H        |
|             |         | * 7.32346       | 40.77          | PKFH          | 35.50                | -30.80    | 45.47           | -                 | -              | 74.00             | -28.53         | 196            | 114         | V        |
|             |         | 9.762           | 34.65          | PKFH          | 37.20                | -26.50    | 45.35           | -                 | -              | 74.00             | -28.65         | 0              | 100         | H        |
|             |         | 9.764           | 35.05          | PKFH          | 37.20                | -26.60    | 45.65           | -                 | -              | 74.00             | -28.35         | 0              | 100         | V        |
| 2480        | DUAL    | * 4.95985       | 47.45          | PKFH          | 34.20                | -32.90    | 48.75           | -                 | -              | 74.00             | -25.25         | 325            | 117         | H        |
|             |         | * 4.95958       | 41.38          | PKFH          | 34.20                | -32.90    | 42.68           | -                 | -              | 74.00             | -31.32         | 359            | 102         | V        |
|             |         | * 7.44092       | 40.19          | PKFH          | 35.60                | -30.40    | 45.39           | -                 | -              | 74.00             | -28.61         | 43             | 101         | H        |
|             |         | * 7.43947       | 39.94          | PKFH          | 35.60                | -30.40    | 45.14           | -                 | -              | 74.00             | -28.86         | 194            | 109         | V        |
|             |         | 9.921           | 34.58          | PKFH          | 37.40                | -27.10    | 44.88           | -                 | -              | 74.00             | -29.12         | 0              | 100         | H        |
|             |         | 9.921           | 35.25          | PKFH          | 37.40                | -27.10    | 45.55           | -                 | -              | 74.00             | -28.45         | 0              | 100         | V        |

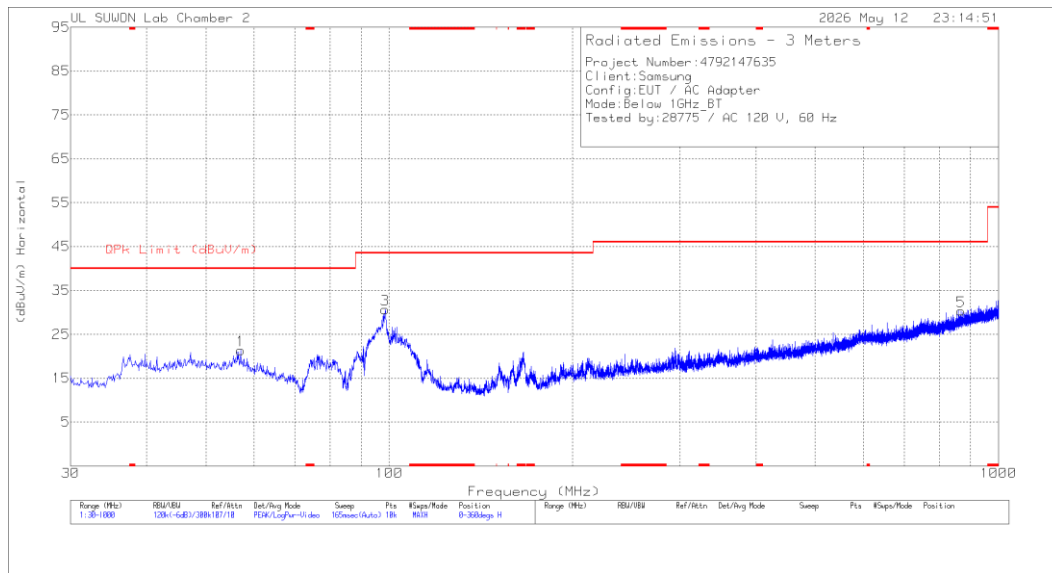
\* - indicates frequency in 47 CFR Pt 15 / IC RSS-Restricted Band

PKFH FHSS/BT RB=100k for Frequencies<1GHz / RB=1MHz for Frequencies>1GHz, VB=3 x RB, Peak

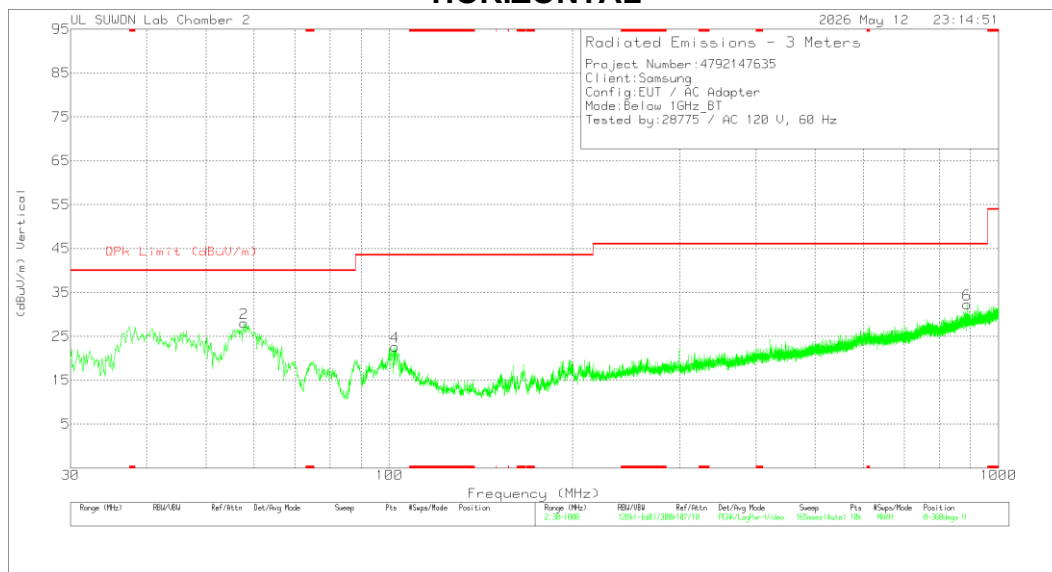
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

## 10.2. WORST CASE BELOW 1 GHz

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



#### HORIZONTAL



#### VERTICAL

#### Trace Markers

| Marker | Frequency (MHz) | Meter Reading (dBuV) | Det | Antenna_Factor (dB/m) | Below_1G_Path Loss(dB) | Corrected Reading (dBuV/m) | QPk Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|--------|-----------------|----------------------|-----|-----------------------|------------------------|----------------------------|--------------------|-------------|----------------|-------------|----------|
| 1      | 57.063          | 33.87                | Pk  | 19.1                  | -31.6                  | 21.37                      | 40                 | -18.63      | 0-360          | 200         | H        |
| 3      | 98.482          | 45                   | Pk  | 17.2                  | -31.5                  | 30.7                       | 43.52              | -12.82      | 0-360          | 200         | H        |
| 5      | 868.274         | 30.95                | Pk  | 27.7                  | -28.3                  | 30.35                      | 46.02              | -15.67      | 0-360          | 100         | H        |
| 2      | 57.742          | 40.59                | Pk  | 19                    | -31.6                  | 27.99                      | 40                 | -12.01      | 0-360          | 100         | V        |
| 4      | 102.265         | 36.35                | Pk  | 17.6                  | -31.3                  | 22.65                      | 43.52              | -20.87      | 0-360          | 300         | V        |
| 6      | 888.062         | 32.67                | Pk  | 27.7                  | -28.1                  | 32.27                      | 46.02              | -13.75      | 0-360          | 100         | V        |

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

## 11. AC POWER LINE CONDUCTED EMISSIONS

### LIMITS

FCC §15.207 (a)

| 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 C63.10:2020.

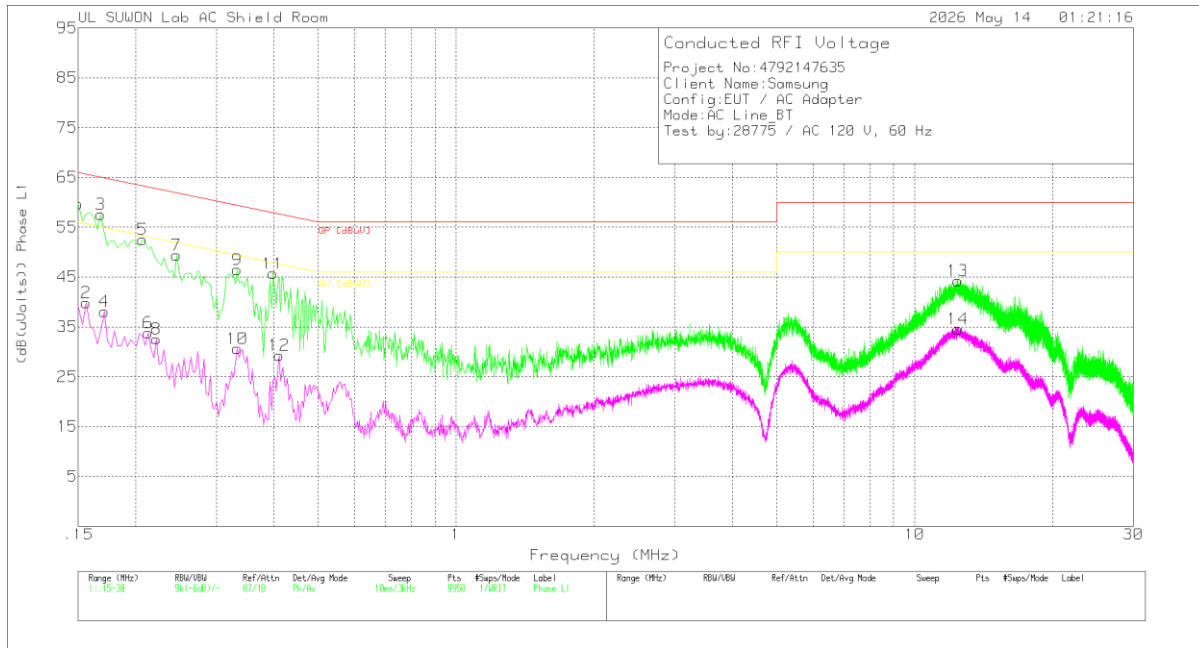
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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

### RESULTS

## 11.1. AC Power Line

### LINE 1 RESULTS



### Trace Markers

#### Range 1: Phase L1 .15 - 30MHz

| Marker | Frequency (MHz) | Meter Reading (dBuV) | Det | 101836_L1 [dB] | Cable Loss [dB] | Corrected Reading (dB(uVolts)) | QP [dBuV] | Margin (dB) | AV [dBuV] | Margin (dB) |
|--------|-----------------|----------------------|-----|----------------|-----------------|--------------------------------|-----------|-------------|-----------|-------------|
| 1      | .15             | 50.04                | Pk  | 9.6            | .1              | 59.74                          | 66        | -6.26       | -         | -           |
| 2      | .156            | 30.04                | Av  | 9.7            | .1              | 39.84                          | -         | -           | 55.67     | -15.83      |
| 3      | .168            | 47.58                | Pk  | 9.9            | .1              | 57.58                          | 65.06     | -7.48       | -         | -           |
| 4      | .171            | 28.11                | Av  | 9.9            | .1              | 38.11                          | -         | -           | 54.91     | -16.8       |
| 5      | .207            | 42.73                | Pk  | 9.7            | .1              | 52.53                          | 63.32     | -10.79      | -         | -           |
| 6      | .213            | 24.01                | Av  | 9.7            | .1              | 33.81                          | -         | -           | 53.09     | -19.28      |
| 7      | .246            | 39.81                | Pk  | 9.5            | .1              | 49.41                          | 61.89     | -12.48      | -         | -           |
| 8      | .222            | 22.81                | Av  | 9.7            | .1              | 32.61                          | -         | -           | 52.74     | -20.13      |
| 9      | .333            | 36.65                | Pk  | 9.7            | .1              | 46.45                          | 59.38     | -12.93      | -         | -           |
| 10     | .333            | 20.82                | Av  | 9.7            | .1              | 30.62                          | -         | -           | 49.38     | -18.76      |
| 11     | .399            | 35.89                | Pk  | 9.7            | .1              | 45.69                          | 57.87     | -12.18      | -         | -           |
| 12     | .411            | 19.48                | Av  | 9.7            | .1              | 29.28                          | -         | -           | 47.63     | -18.35      |
| 13     | 12.411          | 34.3                 | Pk  | 9.7            | .2              | 44.2                           | 60        | -15.8       | -         | -           |
| 14     | 12.417          | 24.64                | Av  | 9.7            | .2              | 34.54                          | -         | -           | 50        | -15.46      |

Pk - Peak detector

Av - Average detection

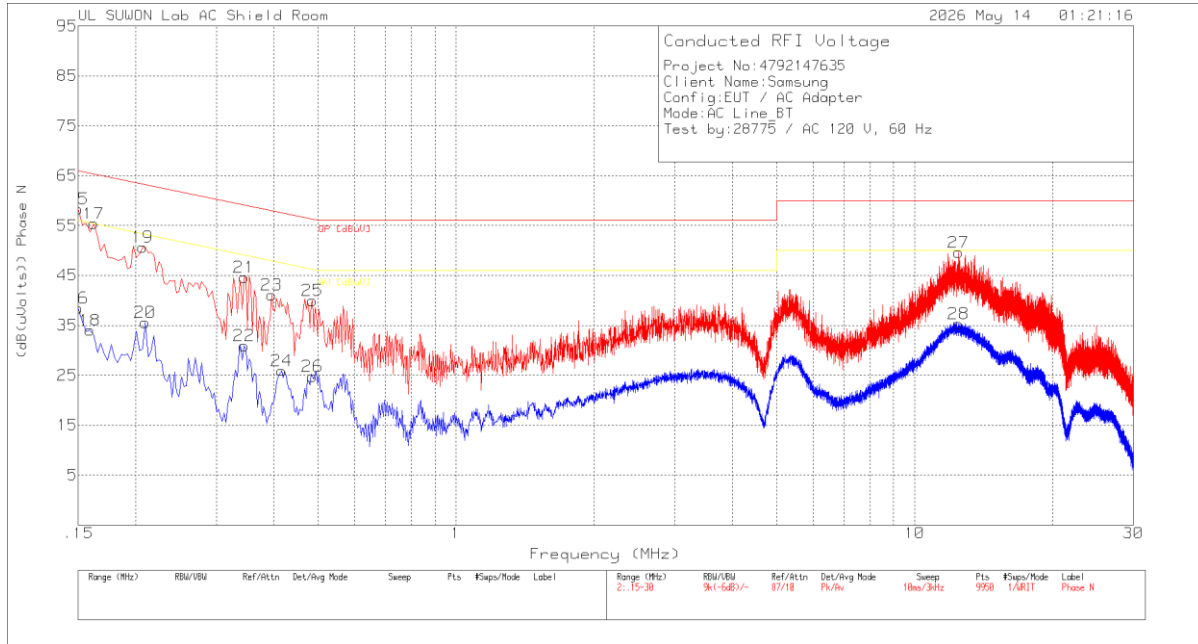
### Quasi-Peak Emissions

#### Range 1: Phase L1 .15 - 30MHz

| Frequency (MHz) | Meter Reading (dBuV) | Det | 101836_L1 [dB] | Cable Loss [dB] | Corrected Reading (dB(uVolts)) | QP [dBuV] | Margin (dB) | AV [dBuV] | Margin (dB) |
|-----------------|----------------------|-----|----------------|-----------------|--------------------------------|-----------|-------------|-----------|-------------|
| .1509           | 35.88                | Qp  | 9.6            | .1              | 45.58                          | 65.95     | -20.37      | -         | -           |
| .16725          | 30.15                | Qp  | 9.9            | .1              | 40.15                          | 65.1      | -24.95      | -         | -           |

Qp - Quasi-Peak detector

## LINE 2 RESULTS



### Trace Markers

#### Range 2: Phase N .15 - 30MHz

| Marker | Frequency (MHz) | Meter Reading (dBuV) | Det | 101836_N [dB] | Cable Loss [dB] | Corrected Reading (dB(uVolts)) | QP [dBuV] | Margin (dB) | AV [dBuV] | Margin (dB) |
|--------|-----------------|----------------------|-----|---------------|-----------------|--------------------------------|-----------|-------------|-----------|-------------|
| 15     | .15             | 48.64                | Pk  | 9.6           | .1              | 58.34                          | 66        | -7.66       | -         | -           |
| 16     | .15             | 28.8                 | Av  | 9.6           | .1              | 38.5                           | -         | -           | 56        | -17.5       |
| 17     | .162            | 45.47                | Pk  | 9.8           | .1              | 55.37                          | 65.36     | -9.99       | -         | -           |
| 18     | .159            | 24.21                | Av  | 9.7           | .1              | 34.01                          | -         | -           | 55.52     | -21.51      |
| 19     | .207            | 40.82                | Pk  | 9.7           | .1              | 50.62                          | 63.32     | -12.7       | -         | -           |
| 20     | .21             | 25.73                | Av  | 9.7           | .1              | 35.53                          | -         | -           | 53.21     | -17.68      |
| 21     | .345            | 34.87                | Pk  | 9.7           | .1              | 44.67                          | 59.08     | -14.41      | -         | -           |
| 22     | .345            | 21.15                | Av  | 9.7           | .1              | 30.95                          | -         | -           | 49.08     | -18.13      |
| 23     | .396            | 31.33                | Pk  | 9.7           | .1              | 41.13                          | 57.94     | -16.81      | -         | -           |
| 24     | .417            | 16.15                | Av  | 9.7           | .1              | 25.95                          | -         | -           | 47.51     | -21.56      |
| 25     | .486            | 30.12                | Pk  | 9.8           | .1              | 40.02                          | 56.24     | -16.22      | -         | -           |
| 26     | .486            | 14.84                | Av  | 9.8           | .1              | 24.74                          | -         | -           | 46.24     | -21.5       |
| 27     | 12.48           | 39.79                | Pk  | 9.6           | .2              | 49.59                          | 60        | -10.41      | -         | -           |
| 28     | 12.48           | 25.54                | Av  | 9.6           | .2              | 35.34                          | -         | -           | 50        | -14.66      |

Pk - Peak detector

Av - Average detection

### Quasi-Peak Emissions

#### Range 2: Phase N .15 - 30MHz

| Frequency (MHz) | Meter Reading (dBuV) | Det | 101836_N [dB] | Cable Loss [dB] | Corrected Reading (dB(uVolts)) | QP [dBuV] | Margin (dB) | AV [dBuV] | Margin (dB) |
|-----------------|----------------------|-----|---------------|-----------------|--------------------------------|-----------|-------------|-----------|-------------|
| .1509           | 34.56                | Qp  | 9.6           | .1              | 44.26                          | 65.95     | -21.69      | -         | -           |
| .16275          | 32.88                | Qp  | 9.8           | .1              | 42.78                          | 65.32     | -22.54      | -         | -           |

Qp - Quasi-Peak detector

## END OF TEST REPORT