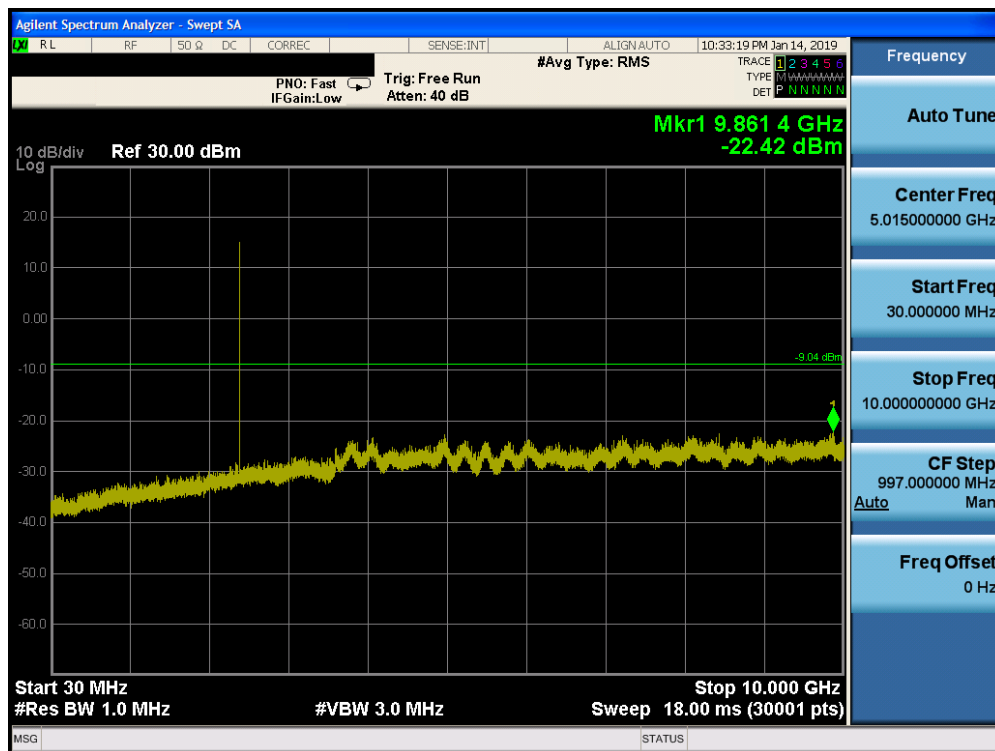
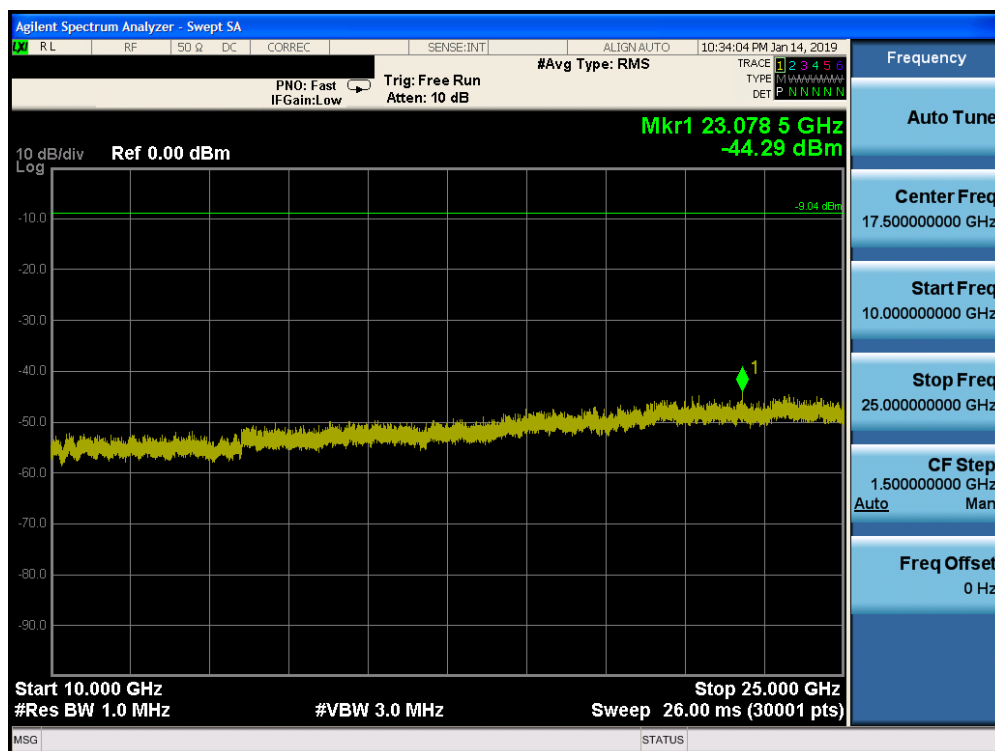


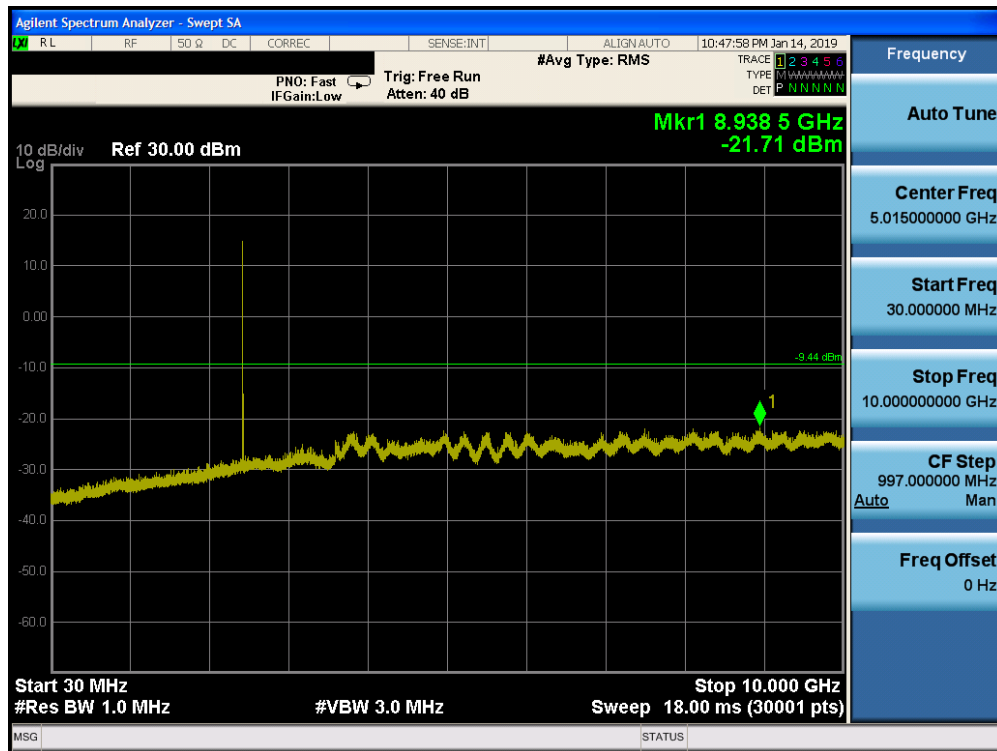


Plot 7-85. Conducted Spurious Plot ANT 1 (Bluetooth, 8DPSK, ePA – Ch. 0)

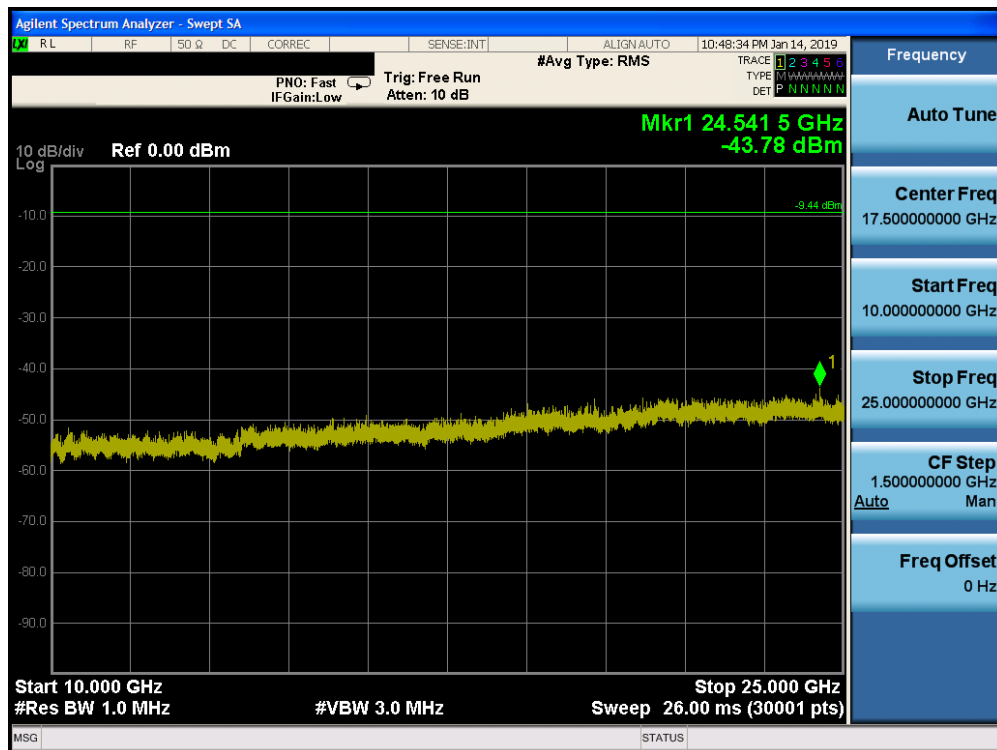


Plot 7-86. Conducted Spurious Plot ANT 1 (Bluetooth, 8DPSK, ePA – Ch. 0)

|                                         |                                               |                            |                                 |
|-----------------------------------------|-----------------------------------------------|----------------------------|---------------------------------|
| FCC ID: BCGA2124                        | <b>MEASUREMENT REPORT<br/>(CERTIFICATION)</b> |                            | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1C1811080027-08.BCG | Test Dates:<br>12/19/2018-02/07/2019          | EUT Type:<br>Tablet Device | Page 75 of 121                  |

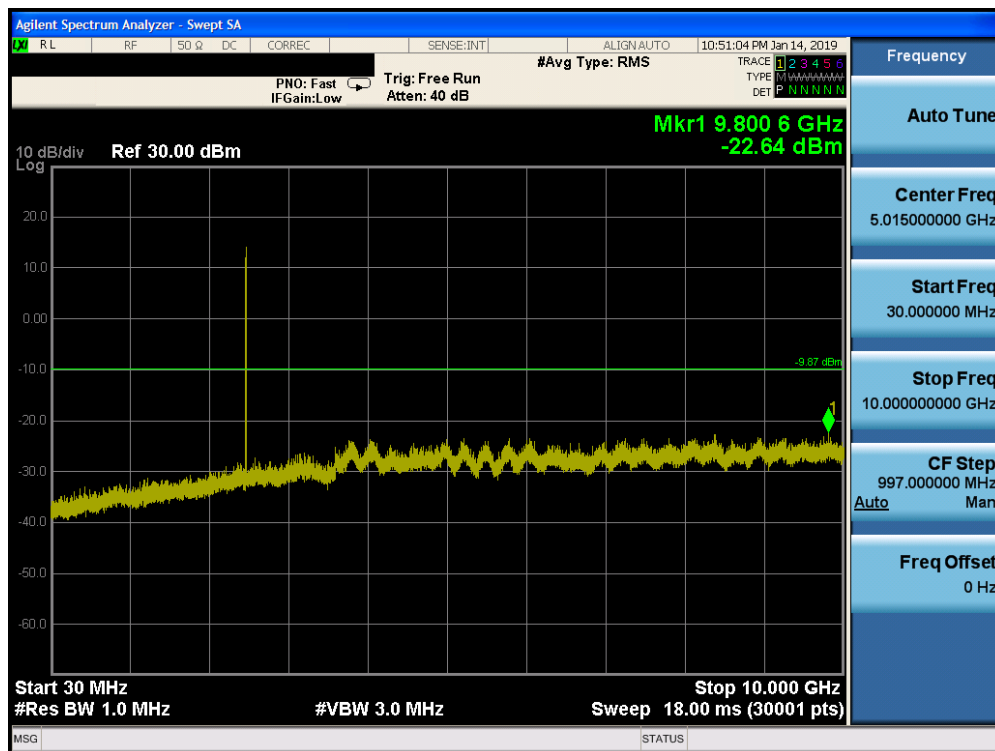


Plot 7-87. Conducted Spurious Plot ANT 1 (Bluetooth, 8DPSK, ePA – Ch. 39)

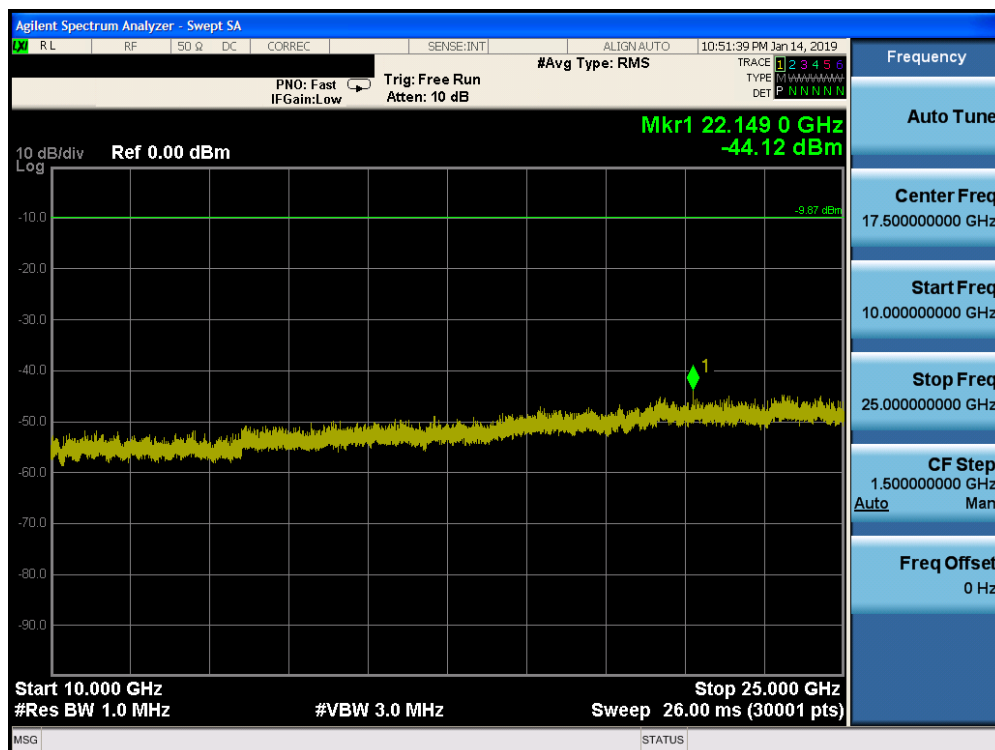


Plot 7-88. Conducted Spurious Plot ANT 1 (Bluetooth, 8DPSK, ePA Ch. 39)

|                                         |                                                                                                                                   |                            |                                 |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------|
| FCC ID: BCGA2124                        |  <b>MEASUREMENT REPORT<br/>(CERTIFICATION)</b> |                            | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1C1811080027-08.BCG | Test Dates:<br>12/19/2018-02/07/2019                                                                                              | EUT Type:<br>Tablet Device | Page 76 of 121                  |



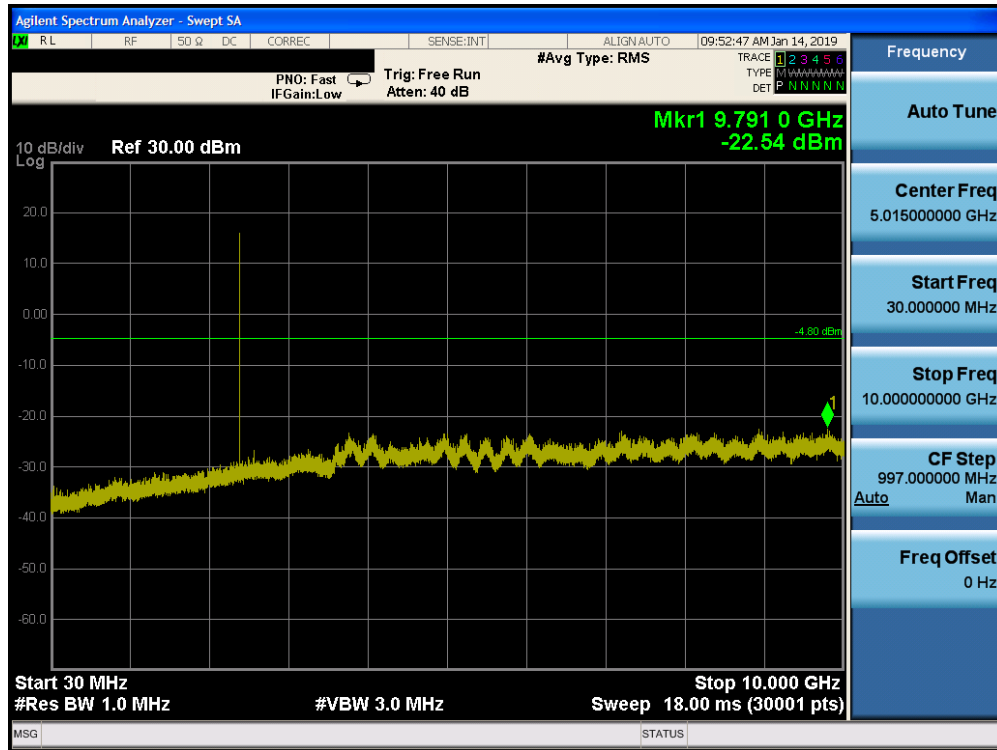
Plot 7-89. Conducted Spurious Plot ANT 1 (Bluetooth, 8DPSK, ePA – Ch. 78)



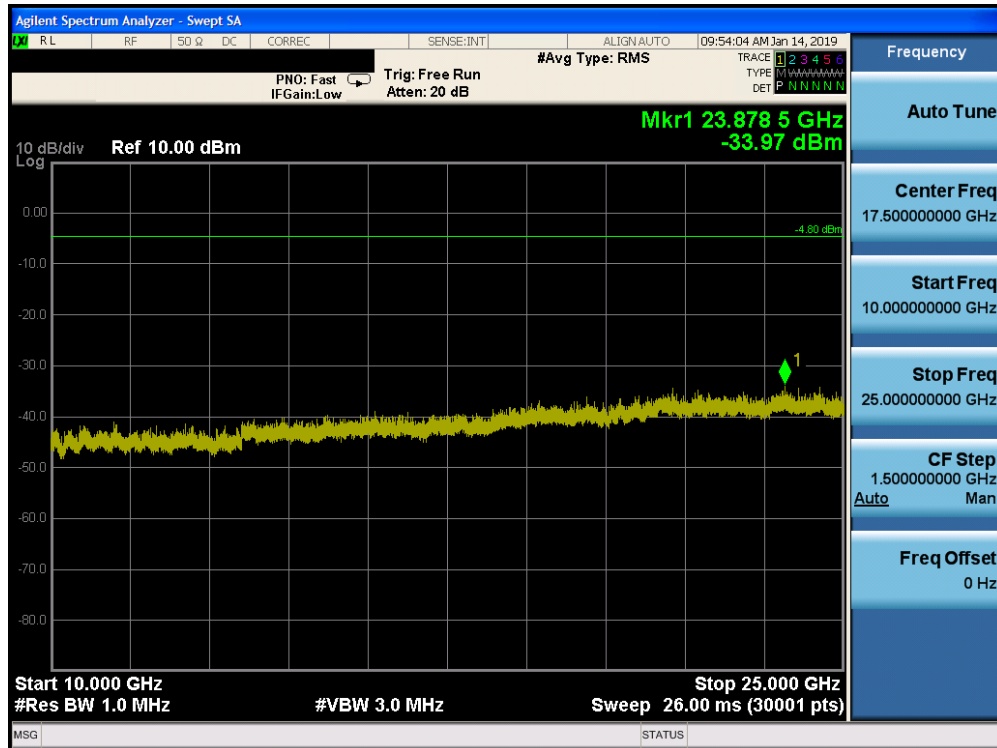
Plot 7-90. Conducted Spurious Plot ANT 1 (Bluetooth, 8DPSK, ePA – Ch. 78)

|                                         |                                                                                                                                   |                            |                                 |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------|
| FCC ID: BCGA2124                        |  <b>MEASUREMENT REPORT<br/>(CERTIFICATION)</b> |                            | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1C1811080027-08.BCG | Test Dates:<br>12/19/2018-02/07/2019                                                                                              | EUT Type:<br>Tablet Device | Page 77 of 121                  |

## Antenna 2

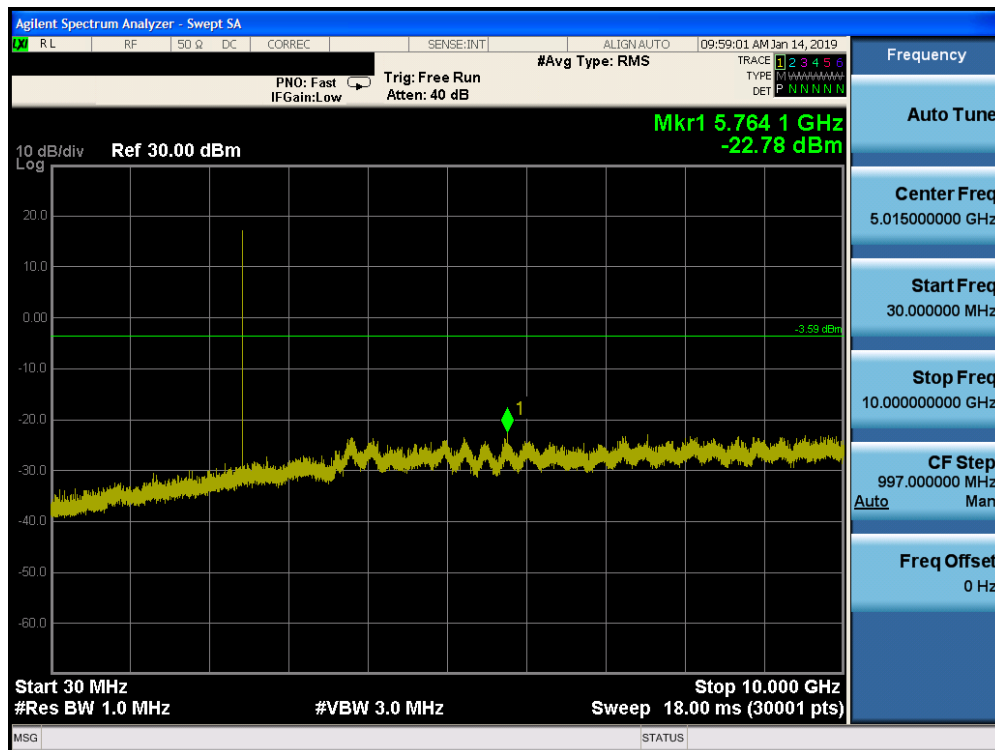


Plot 7-91. Conducted Spurious Plot ANT 2 (Bluetooth, GFSK, ePA – Ch. 0)

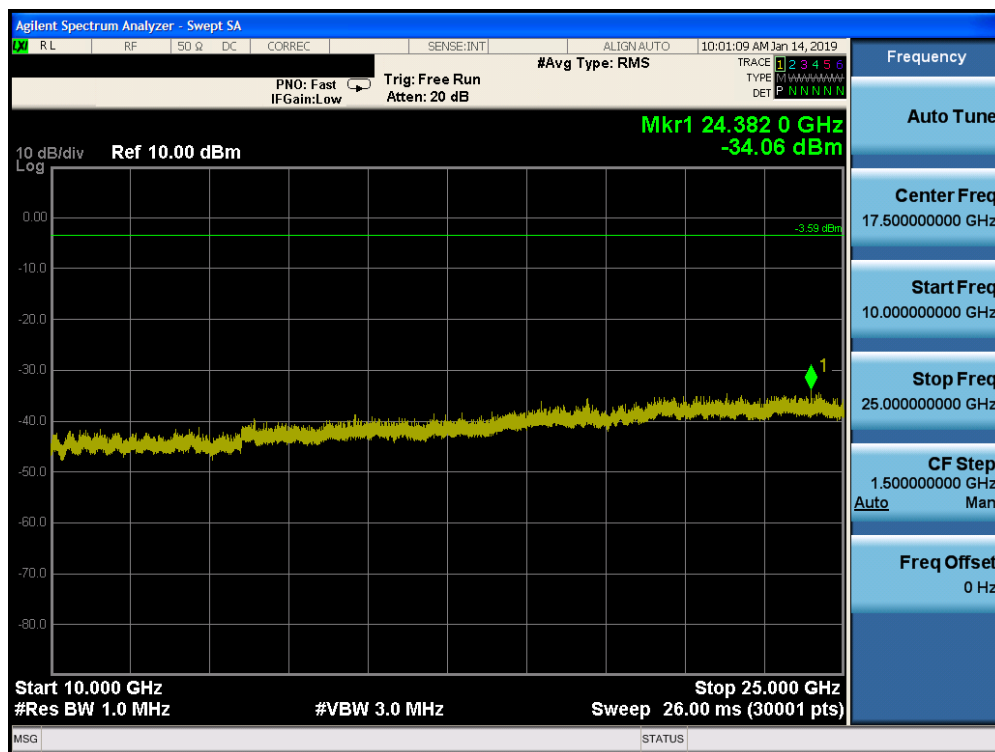


Plot 7-92. Conducted Spurious Plot ANT 2 (Bluetooth, GFSK, ePA – Ch. 0)

|                                         |                                              |                            |                                 |
|-----------------------------------------|----------------------------------------------|----------------------------|---------------------------------|
| FCC ID: BCGA2124                        | <b>MEASUREMENT REPORT</b><br>(CERTIFICATION) |                            | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1C1811080027-08.BCG | Test Dates:<br>12/19/2018-02/07/2019         | EUT Type:<br>Tablet Device | Page 78 of 121                  |

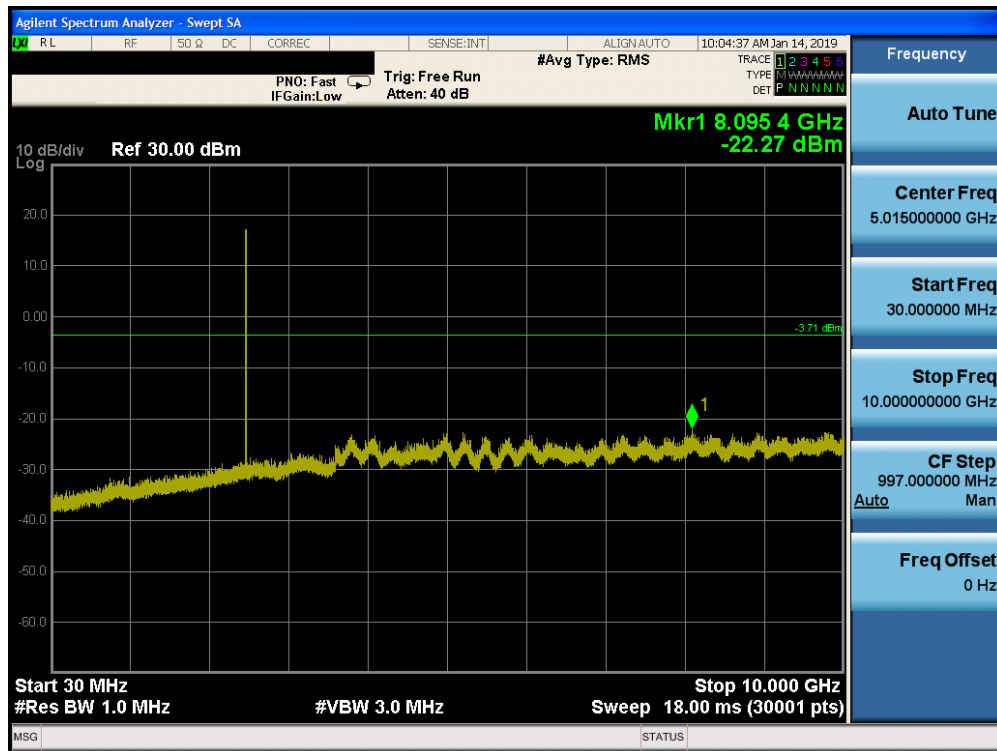


Plot 7-93. Conducted Spurious Plot ANT 2 (Bluetooth, GFSK, ePA – Ch. 39)

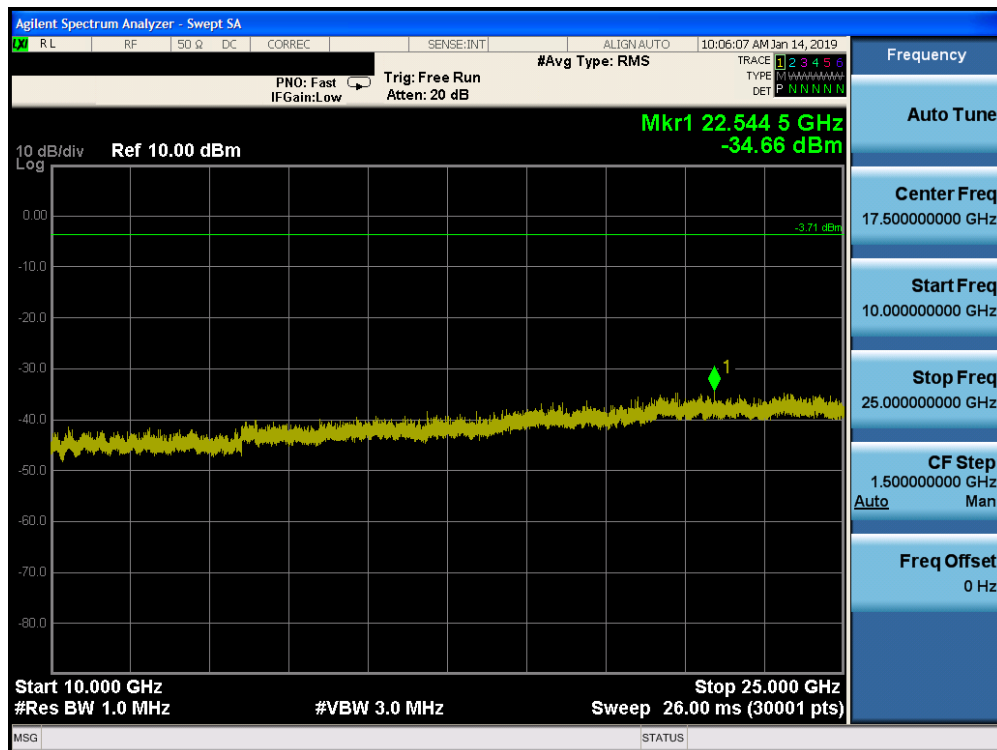


Plot 7-94. Conducted Spurious Plot ANT 2 (Bluetooth, GFSK, ePA Ch. 39)

|                                         |                                                                                                                                  |                            |                                 |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------|
| FCC ID: BCGA2124                        |  <b>MEASUREMENT REPORT</b><br>(CERTIFICATION) |                            | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1C1811080027-08.BCG | Test Dates:<br>12/19/2018-02/07/2019                                                                                             | EUT Type:<br>Tablet Device | Page 79 of 121                  |

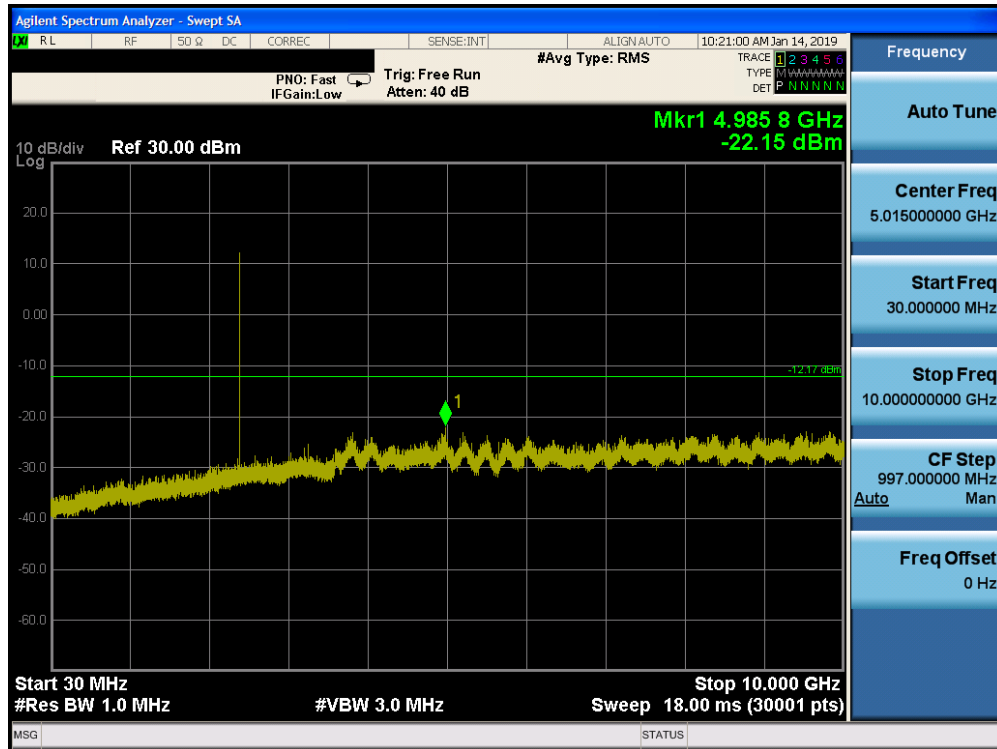


Plot 7-95. Conducted Spurious Plot ANT 2 (Bluetooth, GFSK, ePA – Ch. 78)

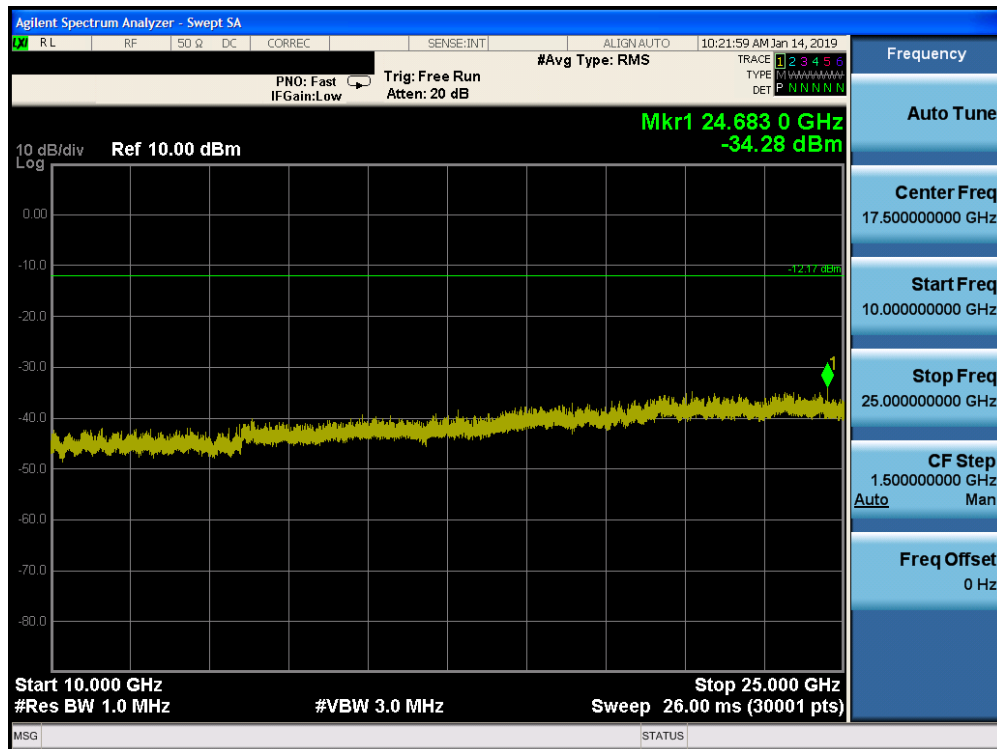


Plot 7-96. Conducted Spurious Plot ANT 2 (Bluetooth, GFSK, ePA – Ch. 78)

|                                         |                                              |                            |                                 |
|-----------------------------------------|----------------------------------------------|----------------------------|---------------------------------|
| FCC ID: BCGA2124                        | <b>MEASUREMENT REPORT</b><br>(CERTIFICATION) |                            | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1C1811080027-08.BCG | Test Dates:<br>12/19/2018-02/07/2019         | EUT Type:<br>Tablet Device | Page 80 of 121                  |

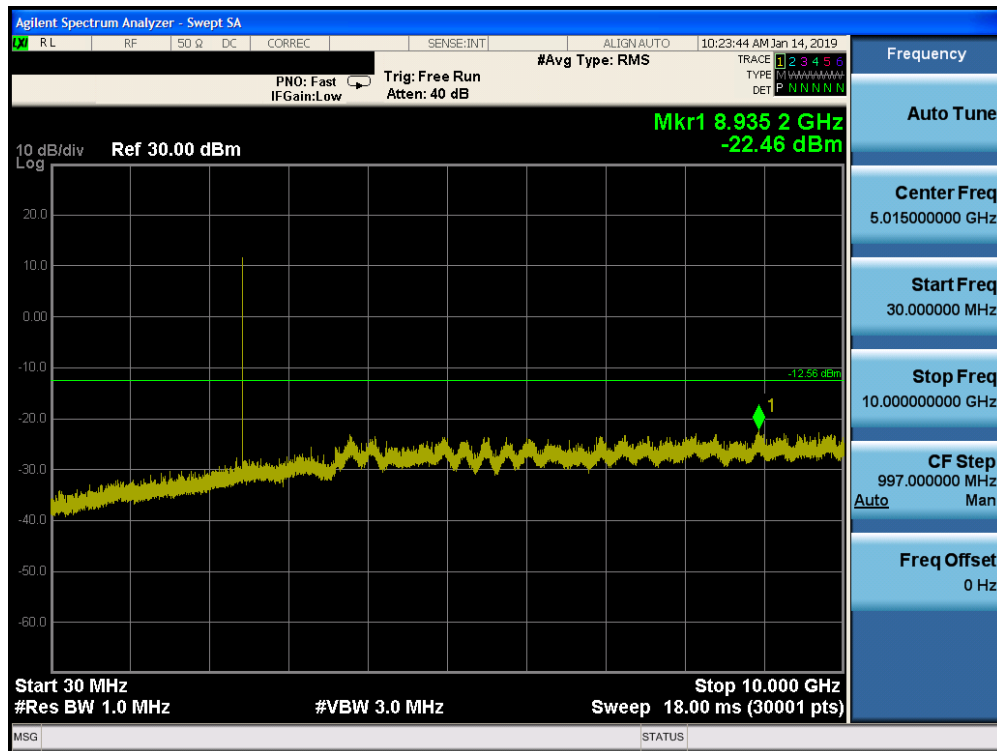


Plot 7-97. Conducted Spurious Plot ANT 2 (Bluetooth, 8DPSK, ePA – Ch. 0)

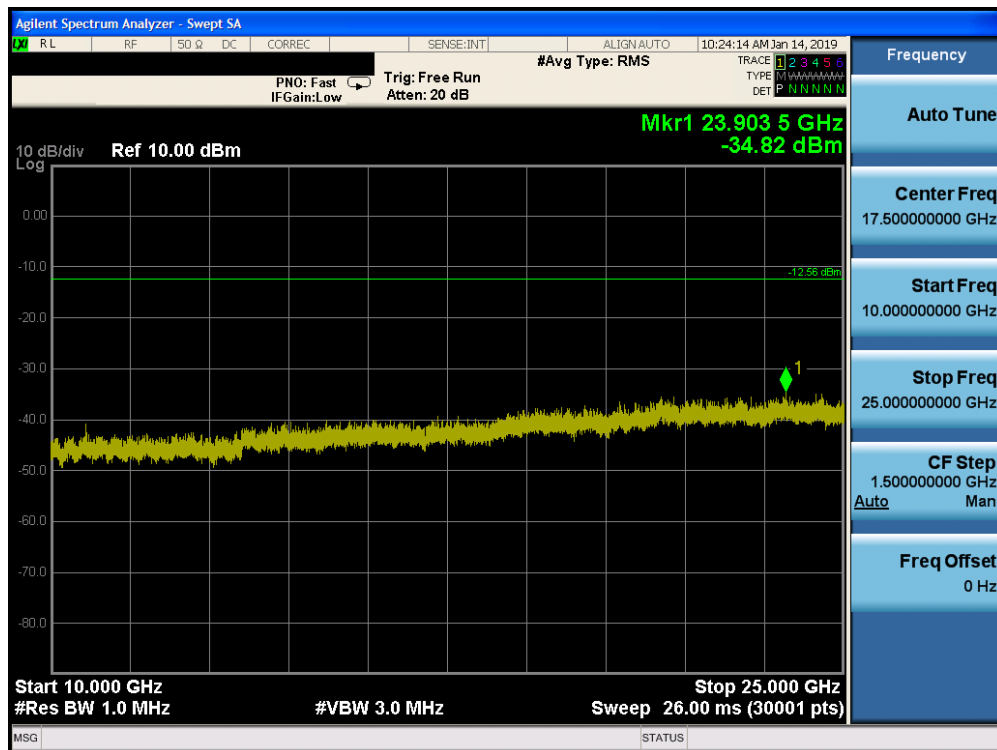


Plot 7-98. Conducted Spurious Plot ANT 2 (Bluetooth, 8DPSK, ePA – Ch. 0)

|                                         |                                                                                                                                   |                            |                                 |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------|
| FCC ID: BCGA2124                        |  <b>MEASUREMENT REPORT<br/>(CERTIFICATION)</b> |                            | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1C1811080027-08.BCG | Test Dates:<br>12/19/2018-02/07/2019                                                                                              | EUT Type:<br>Tablet Device | Page 81 of 121                  |

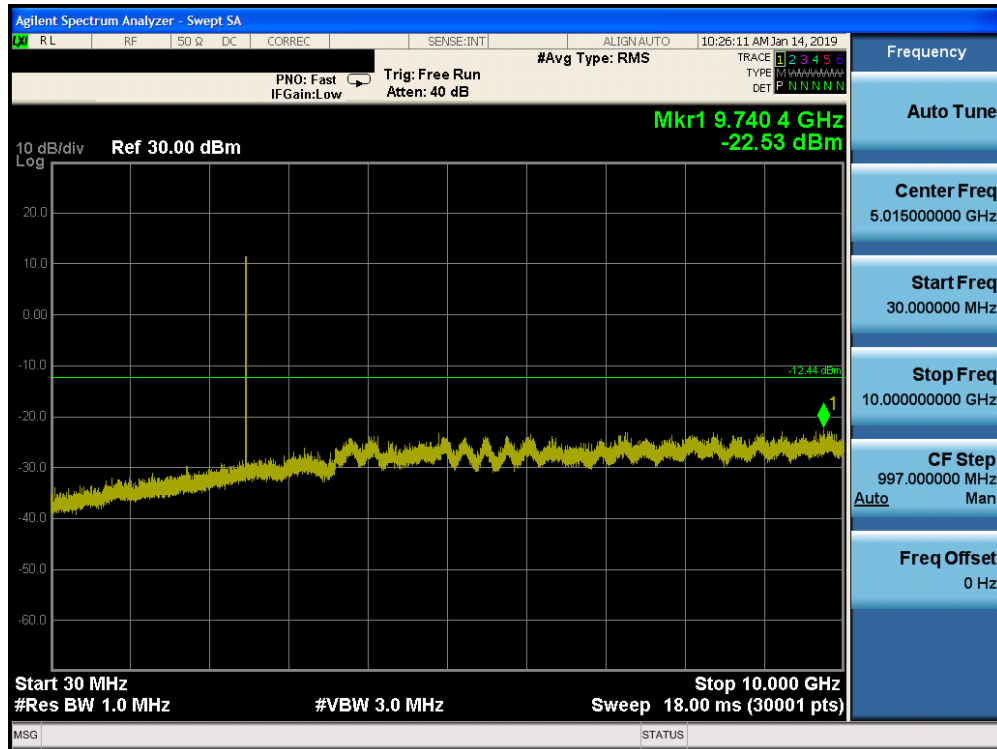


Plot 7-99. Conducted Spurious Plot ANT 2 (Bluetooth, 8DPSK, ePA – Ch. 39)

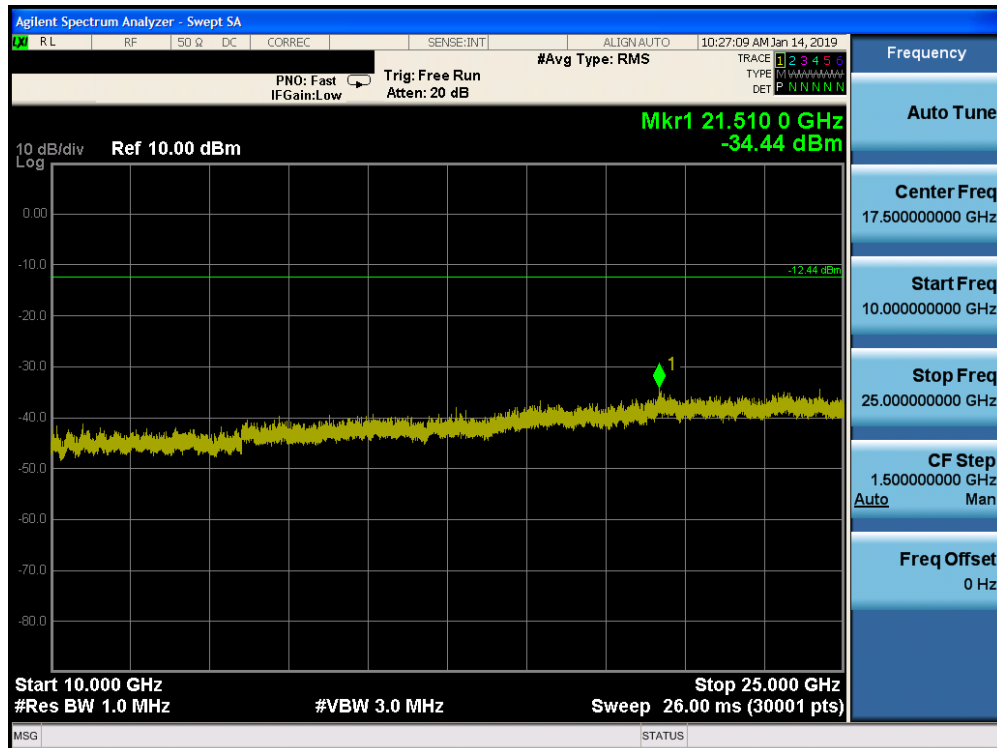


Plot 7-100. Conducted Spurious Plot ANT 2 (Bluetooth, 8DPSK, ePA Ch. 39)

|                                         |                                                                                                                                   |                            |                                 |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------|
| FCC ID: BCGA2124                        |  <b>MEASUREMENT REPORT<br/>(CERTIFICATION)</b> |                            | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1C1811080027-08.BCG | Test Dates:<br>12/19/2018-02/07/2019                                                                                              | EUT Type:<br>Tablet Device | Page 82 of 121                  |



Plot 7-101. Conducted Spurious Plot ANT 2 (Bluetooth, 8DPSK, ePA – Ch. 78)



Plot 7-102. Conducted Spurious Plot ANT 2 (Bluetooth, 8DPSK, ePA – Ch. 78)

|                                         |                                              |                            |                                 |
|-----------------------------------------|----------------------------------------------|----------------------------|---------------------------------|
| FCC ID: BCGA2124                        | <b>MEASUREMENT REPORT</b><br>(CERTIFICATION) |                            | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1C1811080027-08.BCG | Test Dates:<br>12/19/2018-02/07/2019         | EUT Type:<br>Tablet Device | Page 83 of 121                  |

## 7.9 Radiated Spurious Emission Measurements – Above 1GHz

§15.205 §15.209 §15.247 (d); RSS-Gen [8.9]

### Test Overview and Limit

All out of band radiated spurious emissions are measured with a spectrum analyzer connected to a receive antenna while the EUT is operating at maximum power and at the appropriate frequencies. Only the radiated emissions of the configuration that produced the worst case emissions are reported in this section.

***All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR and Table 6 of RSS-Gen (8.10) must not exceed the limits shown in Table 7-14 per Section 15.209 and RSS-Gen (8.9).***

| Frequency       | Field Strength<br>[ $\mu\text{V/m}$ ] | Measured Distance<br>[Meters] |
|-----------------|---------------------------------------|-------------------------------|
| Above 960.0 MHz | 500                                   | 3                             |

**Table 7-14. Radiated Limits**

### Test Procedure Used

ANSI C63.10-2013 – Section 6.6.4.3

### Test Settings

#### Average Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = power average (RMS)
5. Number of measurement points = 1001 (Number of points must be  $\geq 2 \times \text{span/RBW}$ )
6. Sweep time = auto
7. Trace (RMS) averaging was performed over at least 100 traces

#### Peak Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW is set depending on measurement frequency, as specified in Table 7-15 below
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

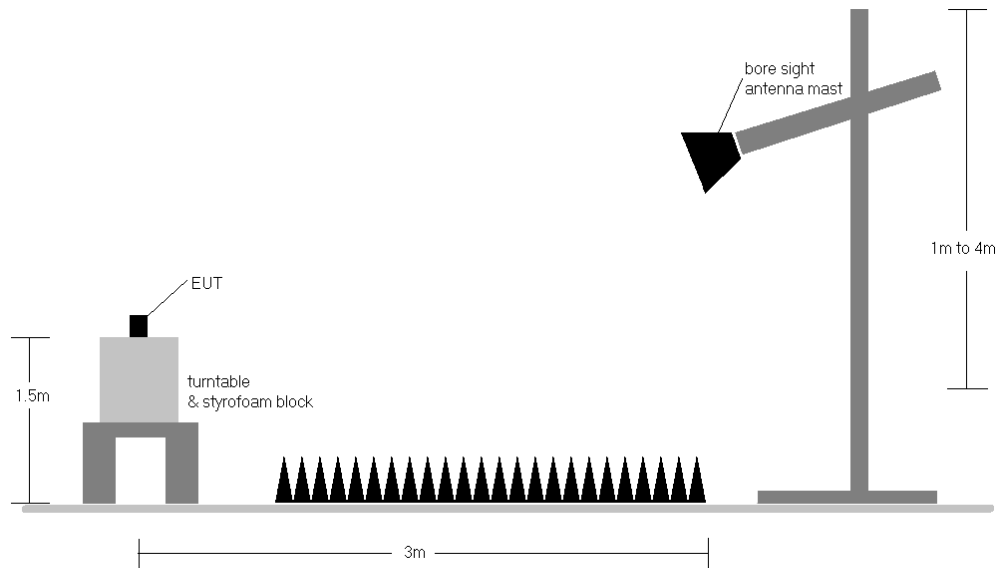
|                                         |                                                                                                                                   |                            |                                 |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------|
| FCC ID: BCGA2124                        |  <b>MEASUREMENT REPORT<br/>(CERTIFICATION)</b> |                            | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1C1811080027-08.BCG | Test Dates:<br>12/19/2018-02/07/2019                                                                                              | EUT Type:<br>Tablet Device | Page 84 of 121                  |

| Frequency    | RBW          |
|--------------|--------------|
| 9 – 150kHz   | 200 – 300Hz  |
| 0.15 – 30MHz | 9 – 10kHz    |
| 30 – 1000MHz | 100 – 120kHz |
| > 1000MHz    | 1MHz         |

**Table 7-15. RBW as a Function of Frequency**

### Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.



**Figure 7-8. Radiated Test Setup >1GHz**

### Test Notes

1. All emissions lying in restricted bands specified in §15.205 and Section 8.10 of RSS-Gen are below the limit shown in Table 7-14.
2. The antenna is manipulated through typical positions, polarity and length during the tests. The EUT is manipulated through three orthogonal planes.
3. This unit was tested with its standard battery.
4. The spectrum is measured from 9kHz to the 10<sup>th</sup> harmonic and the worst-case emissions are reported.
5. The duty cycle correction factor was not applied to noise floor measurements.
6. The wide spectrum spurious emissions plots shown on the following pages are used only for the purpose of emission identification. Any emissions found to be within 20dB of the limit are fully investigated and the results are shown in this section.
7. The "-" shown in the following RSE tables are used to denote a noise floor measurement.
8. Both power schemes were investigated and only the worst case is reported

|                                         |                                                                                                                                   |                            |                                 |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------|
| FCC ID: BCGA2124                        |  <b>MEASUREMENT REPORT<br/>(CERTIFICATION)</b> |                            | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1C1811080027-08.BCG | Test Dates:<br>12/19/2018-02/07/2019                                                                                              | EUT Type:<br>Tablet Device | Page 85 of 121                  |

## Sample Calculation

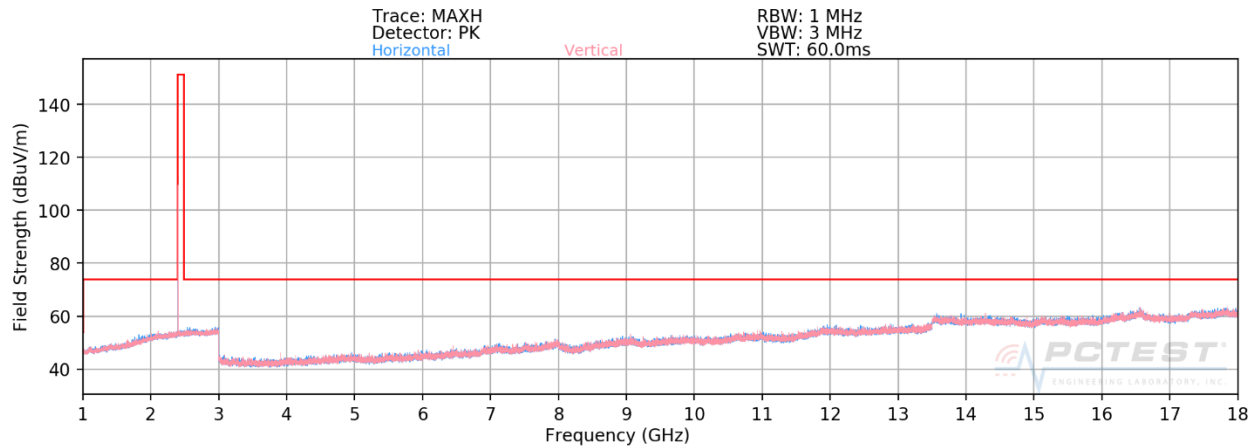
- Field Strength Level  $_{\text{dB}\mu\text{V/m}} = \text{Analyzer Level}_{\text{dBm}} + 107 + \text{AFCL}_{\text{dB/m}} + \text{Duty Cycle Correction}_{\text{dB}}$
- $\text{AFCL}_{\text{dB/m}} = \text{Antenna Factor}_{\text{dB/m}} + \text{Cable Loss}_{\text{dB}}$
- $\text{Margin}_{\text{dB}} = \text{Field Strength Level}_{\text{dB}\mu\text{V/m}} - \text{Limit}_{\text{dB}\mu\text{V/m}}$

|                                         |                                                                                                                                   |                            |                                 |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------|
| FCC ID: BCGA2124                        |  <b>MEASUREMENT REPORT<br/>(CERTIFICATION)</b> |                            | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1C1811080027-08.BCG | Test Dates:<br>12/19/2018-02/07/2019                                                                                              | EUT Type:<br>Tablet Device | Page 86 of 121                  |

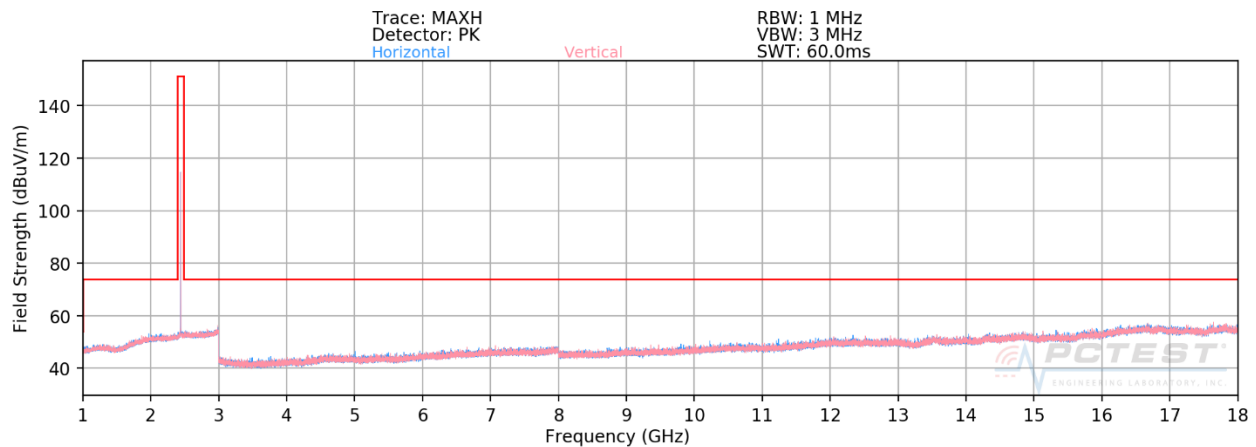
## Radiated Spurious Emission Measurements

§15.205 §15.209 §15.247 (d); RSS-Gen [8.9]

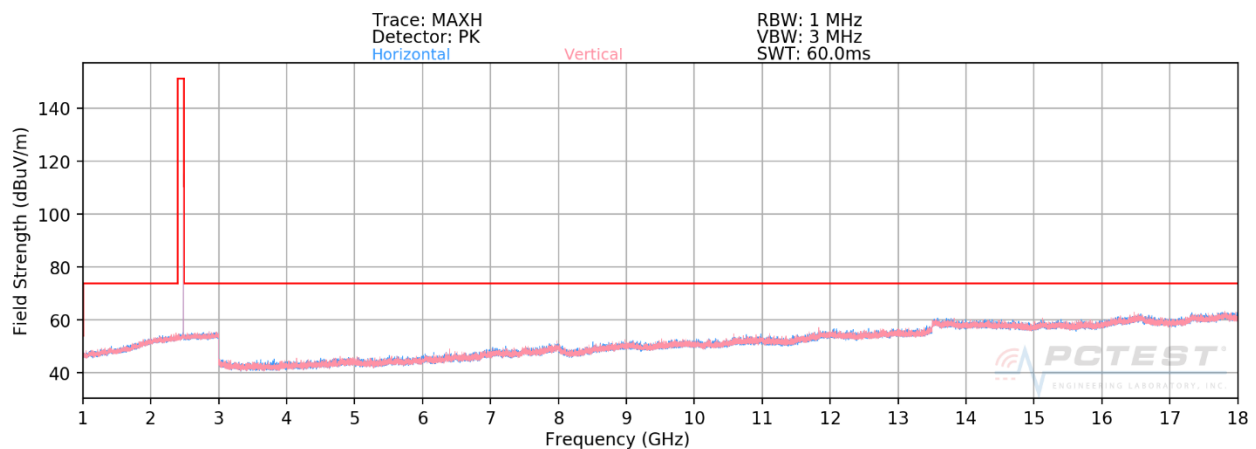
### Antenna 0



Plot 7-103. Radiated Spurious Plot above 1GHz ANT 0 (BT GFSK ePA – Ch. 0)



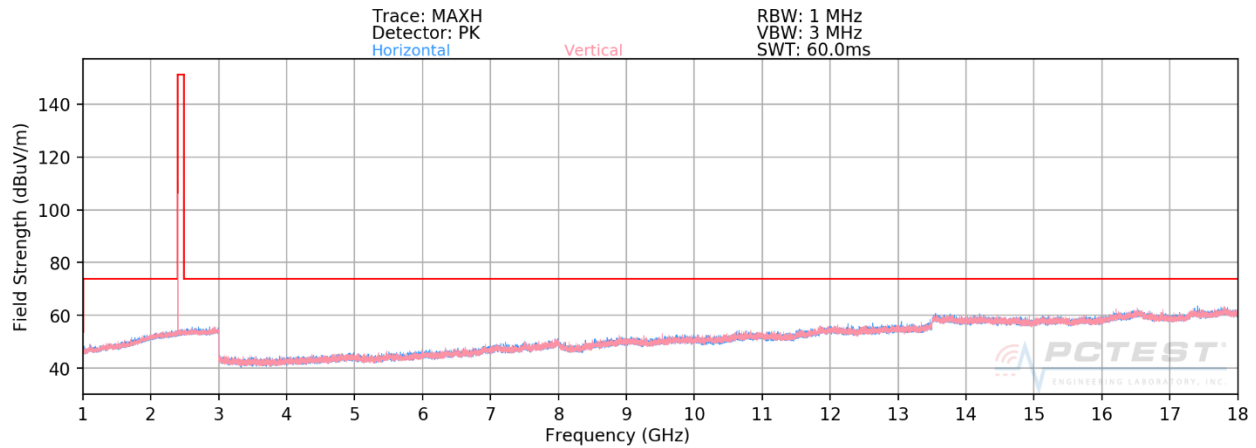
Plot 7-104. Radiated Spurious Plot above 1GHz ANT 0 (BT GFSK ePA – Ch. 39)



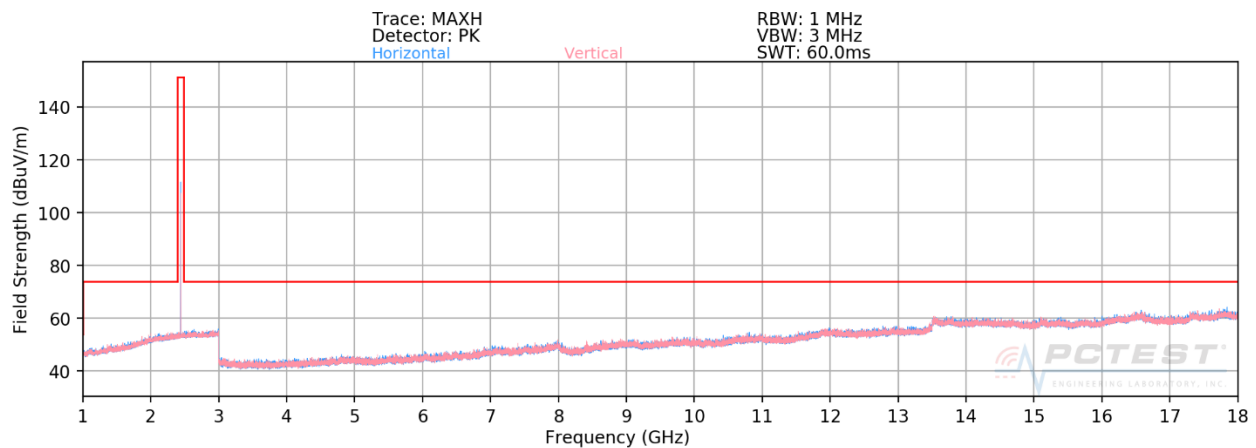
Plot 7-105. Radiated Spurious Plot above 1GHz ANT 0 (BT GFSK ePA – Ch. 78)

|                                         |                                                                                                                                   |                            |                                 |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------|
| FCC ID: BCGA2124                        |  <b>MEASUREMENT REPORT<br/>(CERTIFICATION)</b> |                            | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1C1811080027-08.BCG | Test Dates:<br>12/19/2018-02/07/2019                                                                                              | EUT Type:<br>Tablet Device | Page 87 of 121                  |

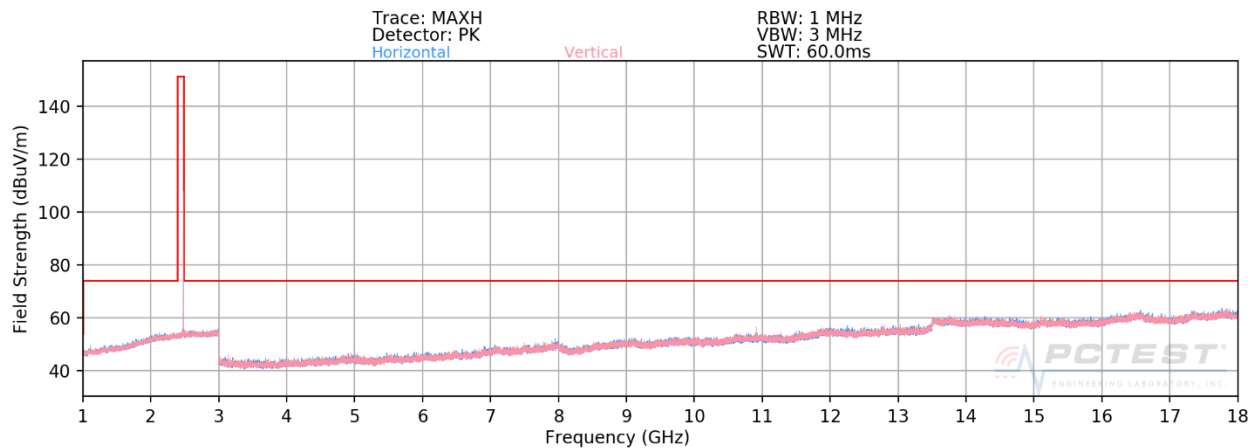
## Antenna 1



**Plot 7-106. Radiated Spurious Plot above 1GHz ANT 1 (BT GFSK ePA – Ch. 0)**



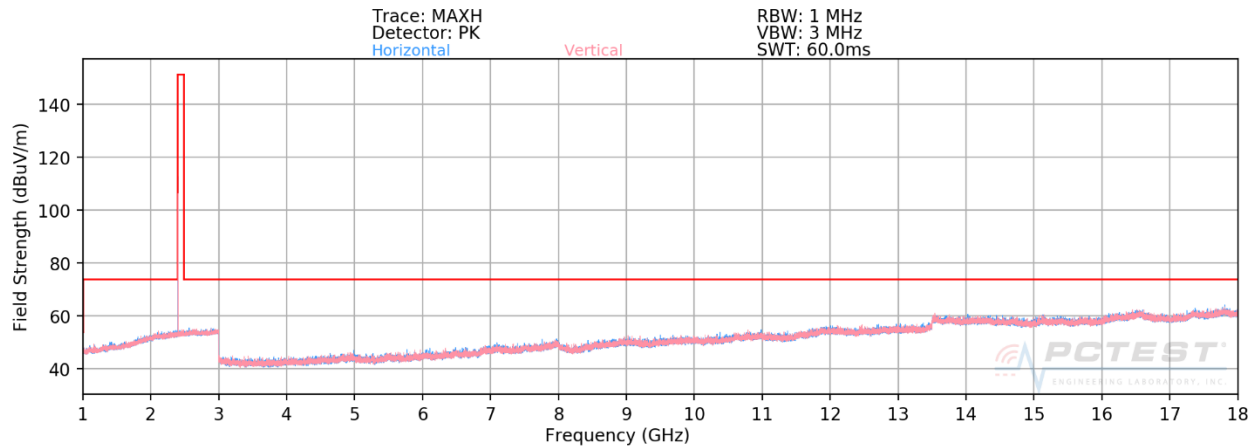
**Plot 7-107. Radiated Spurious Plot above 1GHz ANT 1 (BT GFSK ePA – Ch. 39)**



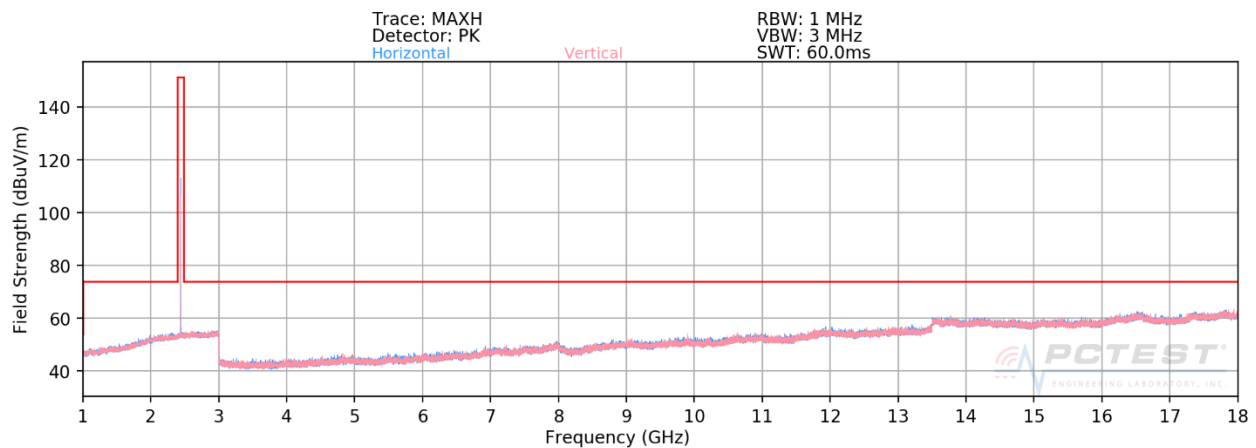
**Plot 7-108. Radiated Spurious Plot above 1GHz ANT 1 (BT GFSK ePA – Ch. 78)**

|                                         |                                                                                                                                   |                            |                                 |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------|
| FCC ID: BCGA2124                        |  <b>MEASUREMENT REPORT<br/>(CERTIFICATION)</b> |                            | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1C1811080027-08.BCG | Test Dates:<br>12/19/2018-02/07/2019                                                                                              | EUT Type:<br>Tablet Device | Page 88 of 121                  |

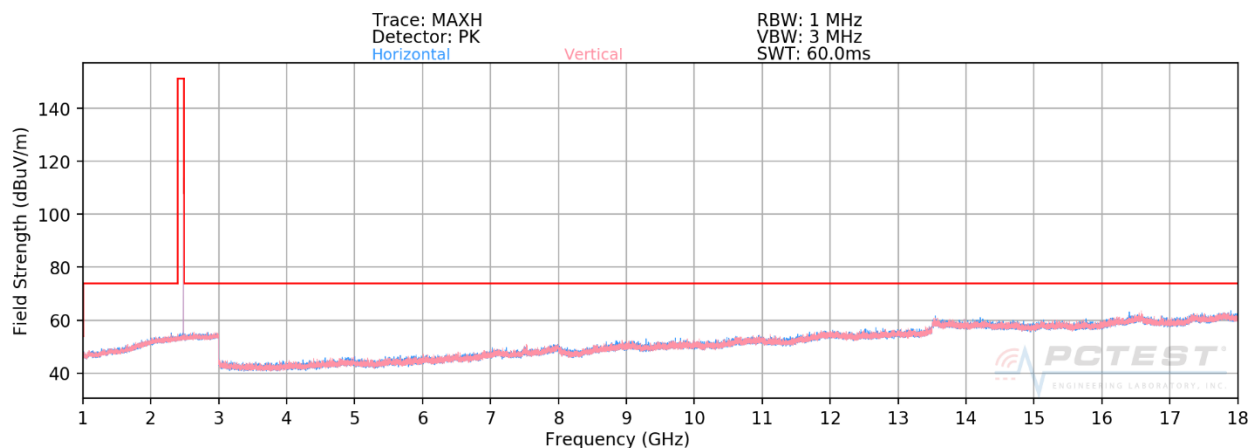
## Antenna 2



**Plot 7-109. Radiated Spurious Plot above 1GHz ANT 2 (BT GFSK ePA – Ch. 0)**



**Plot 7-110. Radiated Spurious Plot above 1GHz ANT 2 (BT GFSK ePA – Ch. 39)**

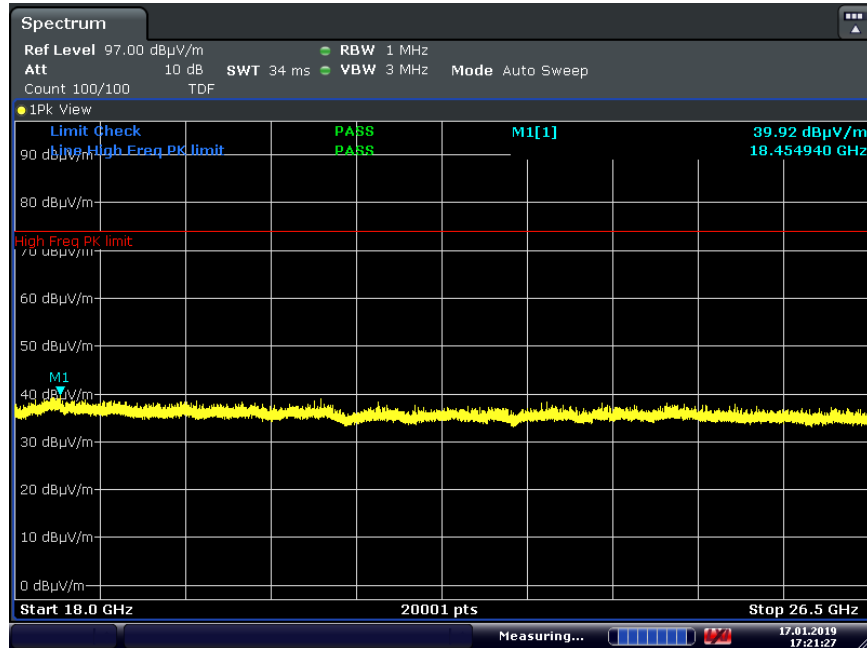


**Plot 7-111. Radiated Spurious Plot above 1GHz ANT 2 (BT GFSK ePA – Ch. 78)**

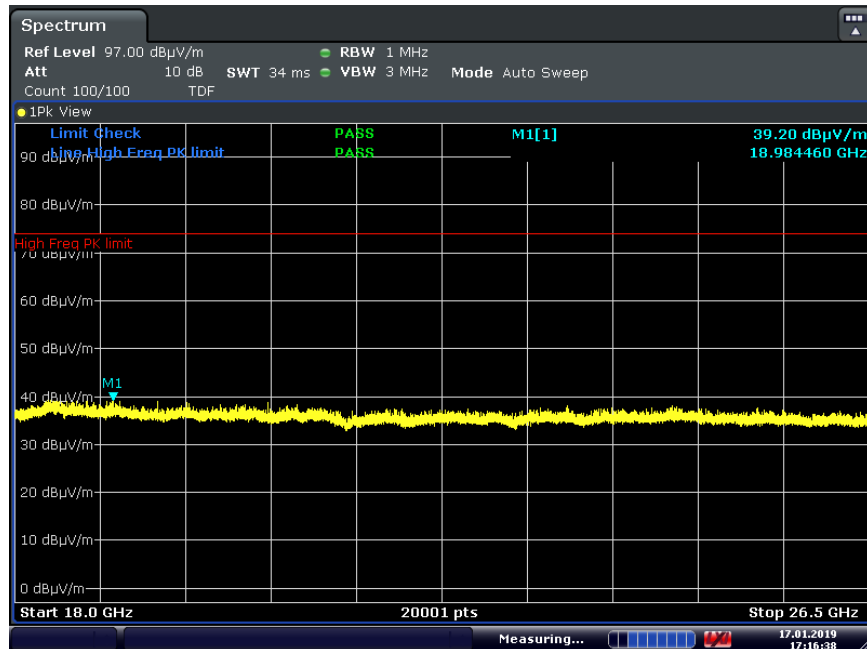
|                                         |                                                                                                                                   |                            |                                 |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------|
| FCC ID: BCGA2124                        |  <b>MEASUREMENT REPORT<br/>(CERTIFICATION)</b> |                            | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1C1811080027-08.BCG | Test Dates:<br>12/19/2018-02/07/2019                                                                                              | EUT Type:<br>Tablet Device | Page 89 of 121                  |

## Radiated Spurious Emissions Measurements (Above 18GHz)

§15.209; RSS-Gen [8.9]



Plot 7-112. Radiated Spurious Plot above 18GHz (GFSK ePA – Ch. 78, Pol. H)



Plot 7-113. Radiated Spurious Plot above 18GHz (GFSK ePA – Ch. 78, Pol. V)

|                                         |                                                                                                                                  |                            |                                 |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------|
| FCC ID: BCGA2124                        |  <b>MEASUREMENT REPORT</b><br>(CERTIFICATION) |                            | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1C1811080027-08.BCG | Test Dates:<br>12/19/2018-02/07/2019                                                                                             | EUT Type:<br>Tablet Device | Page 90 of 121                  |

## Radiated Spurious Emission Measurements

§15.205 §15.209 §15.247 (d); RSS-Gen [8.9]

### Antenna 0

Worst Case Mode: Bluetooth  
Worst Case Modulation: GFSK  
Worst Case Power Scheme: ePA  
Measurement Distance: 3 Meters  
Operating Frequency: 2402MHz  
Channel: 0

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|-------------------------|----------------|-------------|
| 4804.00         | Avg      | H               | -                   | -                          | -78.87               | 6.00        | 34.13                   | 53.98          | -19.85      |
| 4804.00         | Peak     | H               | -                   | -                          | -66.35               | 6.00        | 46.65                   | 73.98          | -27.33      |
| 12010.00        | Avg      | H               | -                   | -                          | -82.92               | 15.14       | 39.22                   | 53.98          | -14.76      |
| 12010.00        | Peak     | H               | -                   | -                          | -71.78               | 15.14       | 50.36                   | 73.98          | -23.62      |

Table 7-16. Radiated Measurements

Worst Case Mode: Bluetooth  
Worst Case Modulation: GFSK  
Worst Case Power Scheme: ePA  
Measurement Distance: 3 Meters  
Operating Frequency: 2441MHz  
Channel: 39

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|-------------------------|----------------|-------------|
| 4882.00         | Avg      | H               | -                   | -                          | -79.17               | 6.12        | 33.95                   | 53.98          | -20.03      |
| 4882.00         | Peak     | H               | -                   | -                          | -67.23               | 6.12        | 45.89                   | 73.98          | -28.09      |
| 7323.00         | Avg      | H               | -                   | -                          | -79.72               | 8.50        | 35.78                   | 53.98          | -18.20      |
| 7323.00         | Peak     | H               | -                   | -                          | -68.19               | 8.50        | 47.31                   | 73.98          | -26.67      |
| 12205.00        | Avg      | H               | -                   | -                          | -82.34               | 14.89       | 39.55                   | 53.98          | -14.43      |
| 12205.00        | Peak     | H               | -                   | -                          | -70.24               | 14.89       | 51.65                   | 73.98          | -22.33      |

Table 7-17. Radiated Measurements

|                                         |                                                                                                                               |                            |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------|
| FCC ID: BCGA2124                        |  <b>MEASUREMENT REPORT (CERTIFICATION)</b> |                            | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1C1811080027-08.BCG | Test Dates:<br>12/19/2018-02/07/2019                                                                                          | EUT Type:<br>Tablet Device | Page 91 of 121                  |

## Radiated Spurious Emission Measurements

§15.205 §15.209 §15.247 (d); RSS-Gen [8.9]

|                          |           |
|--------------------------|-----------|
| Worst Case Mode:         | Bluetooth |
| Worst Case Modulation:   | GFSK      |
| Worst Case Power Scheme: | ePA       |
| Measurement Distance:    | 3 Meters  |
| Operating Frequency:     | 2480MHz   |
| Channel:                 | 78        |

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|-------------------------|----------------|-------------|
| 4960.00         | Avg      | H               | -                   | -                          | -79.11               | 6.12        | 34.01                   | 53.98          | -19.97      |
| 4960.00         | Peak     | H               | -                   | -                          | -67.81               | 6.12        | 45.31                   | 73.98          | -28.67      |
| 7440.00         | Avg      | H               | -                   | -                          | -80.06               | 8.97        | 35.91                   | 53.98          | -18.07      |
| 7440.00         | Peak     | H               | -                   | -                          | -68.94               | 8.97        | 47.03                   | 73.98          | -26.95      |
| 12400.00        | Avg      | H               | -                   | -                          | -83.10               | 15.91       | 39.81                   | 53.98          | -14.17      |
| 12400.00        | Peak     | H               | -                   | -                          | -72.04               | 15.91       | 50.87                   | 73.98          | -23.11      |

Table 7-18. Radiated Measurements

|                                         |                                                                                                                               |                            |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------|
| FCC ID: BCGA2124                        |  <b>MEASUREMENT REPORT (CERTIFICATION)</b> |                            | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1C1811080027-08.BCG | Test Dates:<br>12/19/2018-02/07/2019                                                                                          | EUT Type:<br>Tablet Device | Page 92 of 121                  |

## Antenna 1

Worst Case Mode: Bluetooth  
 Worst Case Modulation: GFSK  
 Worst Case Power Scheme: ePA  
 Measurement Distance: 3 Meters  
 Operating Frequency: 2402MHz  
 Channel: 0

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|-------------------------|----------------|-------------|
| 4804.00         | Avg      | V               | -                   | -                          | -78.73               | 6.00        | 34.27                   | 53.98          | -19.71      |
| 4804.00         | Peak     | V               | -                   | -                          | -67.75               | 6.00        | 45.25                   | 73.98          | -28.73      |
| 12010.00        | Avg      | V               | -                   | -                          | -82.44               | 15.14       | 39.70                   | 53.98          | -14.28      |
| 12010.00        | Peak     | V               | -                   | -                          | -70.79               | 15.14       | 51.35                   | 73.98          | -22.63      |

**Table 7-19. Radiated Measurements**

Worst Case Mode: Bluetooth  
 Worst Case Modulation: GFSK  
 Worst Case Power Scheme: ePA  
 Measurement Distance: 3 Meters  
 Operating Frequency: 2441MHz  
 Channel: 39

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|-------------------------|----------------|-------------|
| 4882.00         | Avg      | V               | -                   | -                          | -79.18               | 6.12        | 33.94                   | 53.98          | -20.04      |
| 4882.00         | Peak     | V               | -                   | -                          | -67.69               | 6.12        | 45.43                   | 73.98          | -28.55      |
| 7323.00         | Avg      | V               | 115                 | 130                        | -74.91               | 8.50        | 40.59                   | 53.98          | -13.39      |
| 7323.00         | Peak     | V               | 115                 | 130                        | -65.97               | 8.50        | 49.53                   | 73.98          | -24.45      |
| 12205.00        | Avg      | V               | -                   | -                          | -81.84               | 14.89       | 40.05                   | 53.98          | -13.93      |
| 12205.00        | Peak     | V               | -                   | -                          | -70.83               | 14.89       | 51.06                   | 73.98          | -22.92      |

**Table 7-20. Radiated Measurements**

|                                         |                                                                                                                               |                            |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------|
| FCC ID: BCGA2124                        |  <b>MEASUREMENT REPORT (CERTIFICATION)</b> |                            | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1C1811080027-08.BCG | Test Dates:<br>12/19/2018-02/07/2019                                                                                          | EUT Type:<br>Tablet Device | Page 93 of 121                  |

## Radiated Spurious Emission Measurements

§15.205 §15.209 §15.247 (d); RSS-Gen [8.9]

|                          |           |
|--------------------------|-----------|
| Worst Case Mode:         | Bluetooth |
| Worst Case Modulation:   | GFSK      |
| Worst Case Power Scheme: | ePA       |
| Measurement Distance:    | 3 Meters  |
| Operating Frequency:     | 2480MHz   |
| Channel:                 | 78        |

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|-------------------------|----------------|-------------|
| 4960.00         | Avg      | H               | 340                 | 81                         | -76.06               | 6.12        | 37.06                   | 53.98          | -16.92      |
| 4960.00         | Peak     | H               | 340                 | 81                         | -66.83               | 6.12        | 46.29                   | 73.98          | -27.69      |
| 7440.00         | Avg      | Y               | -                   | -                          | -79.77               | 8.97        | 36.20                   | 53.98          | -17.78      |
| 7440.00         | Peak     | Y               | -                   | -                          | -68.85               | 8.97        | 47.12                   | 73.98          | -26.86      |
| 12400.00        | Avg      | Y               | -                   | -                          | -82.89               | 15.91       | 40.02                   | 53.98          | -13.96      |
| 12400.00        | Peak     | Y               | -                   | -                          | -71.48               | 15.91       | 51.43                   | 73.98          | -22.55      |

Table 7-21. Radiated Measurements

|                                         |                                                                                                                               |                            |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------|
| FCC ID: BCGA2124                        |  <b>MEASUREMENT REPORT (CERTIFICATION)</b> |                            | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1C1811080027-08.BCG | Test Dates:<br>12/19/2018-02/07/2019                                                                                          | EUT Type:<br>Tablet Device | Page 94 of 121                  |

## Antenna 2

Worst Case Mode: Bluetooth  
 Worst Case Modulation: GFSK  
 Worst Case Power Scheme: ePA  
 Measurement Distance: 3 Meters  
 Operating Frequency: 2402MHz  
 Channel: 0

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|-------------------------|----------------|-------------|
| 4804.00         | Avg      | H               | -                   | -                          | -78.91               | 6.00        | 34.09                   | 53.98          | -19.89      |
| 4804.00         | Peak     | H               | -                   | -                          | -66.85               | 6.00        | 46.15                   | 73.98          | -27.83      |
| 12010.00        | Avg      | H               | -                   | -                          | -82.38               | 15.14       | 39.76                   | 53.98          | -14.22      |
| 12010.00        | Peak     | H               | -                   | -                          | -70.46               | 15.14       | 51.68                   | 73.98          | -22.30      |

**Table 7-22. Radiated Measurements**

Worst Case Mode: Bluetooth  
 Worst Case Modulation: GFSK  
 Worst Case Power Scheme: ePA  
 Measurement Distance: 3 Meters  
 Operating Frequency: 2441MHz  
 Channel: 39

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|-------------------------|----------------|-------------|
| 4882.00         | Avg      | H               | -                   | -                          | -79.08               | 6.12        | 34.04                   | 53.98          | -19.94      |
| 4882.00         | Peak     | H               | -                   | -                          | -67.40               | 6.12        | 45.72                   | 73.98          | -28.26      |
| 7323.00         | Avg      | H               | -                   | -                          | -79.50               | 8.50        | 36.00                   | 53.98          | -17.98      |
| 7323.00         | Peak     | H               | -                   | -                          | -68.54               | 8.50        | 46.96                   | 73.98          | -27.02      |
| 12205.00        | Avg      | H               | -                   | -                          | -81.77               | 14.89       | 40.12                   | 53.98          | -13.86      |
| 12205.00        | Peak     | H               | -                   | -                          | -70.27               | 14.89       | 51.62                   | 73.98          | -22.36      |

**Table 7-23. Radiated Measurements**

|                                         |                                                                                                                               |                            |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------|
| FCC ID: BCGA2124                        |  <b>MEASUREMENT REPORT (CERTIFICATION)</b> |                            | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1C1811080027-08.BCG | Test Dates:<br>12/19/2018-02/07/2019                                                                                          | EUT Type:<br>Tablet Device | Page 95 of 121                  |

## Radiated Spurious Emission Measurements

§15.205 §15.209 §15.247 (d); RSS-Gen [8.9]

|                          |           |
|--------------------------|-----------|
| Worst Case Mode:         | Bluetooth |
| Worst Case Modulation:   | GFSK      |
| Worst Case Power Scheme: | ePA       |
| Measurement Distance:    | 3 Meters  |
| Operating Frequency:     | 2480MHz   |
| Channel:                 | 78        |

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|-------------------------|----------------|-------------|
| 4960.00         | Avg      | V               | 347                 | 44                         | -78.36               | 6.12        | 34.76                   | 53.98          | -19.22      |
| 4960.00         | Peak     | V               | 347                 | 44                         | -67.62               | 6.12        | 45.50                   | 73.98          | -28.48      |
| 7440.00         | Avg      | H               | -                   | -                          | -79.66               | 8.97        | 36.31                   | 53.98          | -17.67      |
| 7440.00         | Peak     | H               | -                   | -                          | -67.90               | 8.97        | 48.07                   | 73.98          | -25.91      |
| 12400.00        | Avg      | H               | -                   | -                          | -83.00               | 15.91       | 39.91                   | 53.98          | -14.07      |
| 12400.00        | Peak     | H               | -                   | -                          | -71.33               | 15.91       | 51.58                   | 73.98          | -22.40      |

Table 7-24. Radiated Measurements

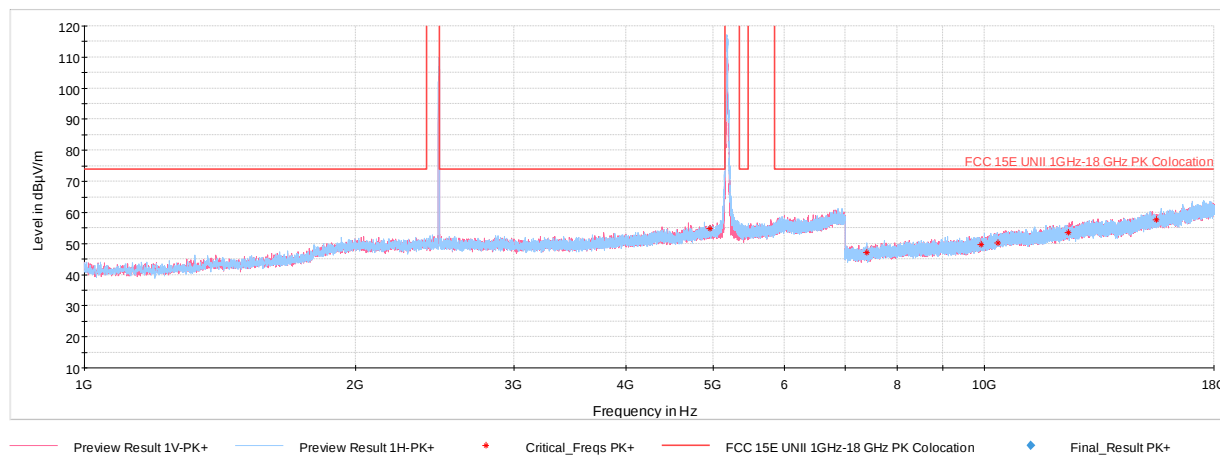
|                                         |                                                                                                                               |                            |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------|
| FCC ID: BCGA2124                        |  <b>MEASUREMENT REPORT (CERTIFICATION)</b> |                            | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1C1811080027-08.BCG | Test Dates:<br>12/19/2018-02/07/2019                                                                                          | EUT Type:<br>Tablet Device | Page 96 of 121                  |

## Simultaneous Tx Radiated Spurious Measurements

§15.247 §15.205 & §15.209; RSS-Gen [8.9]

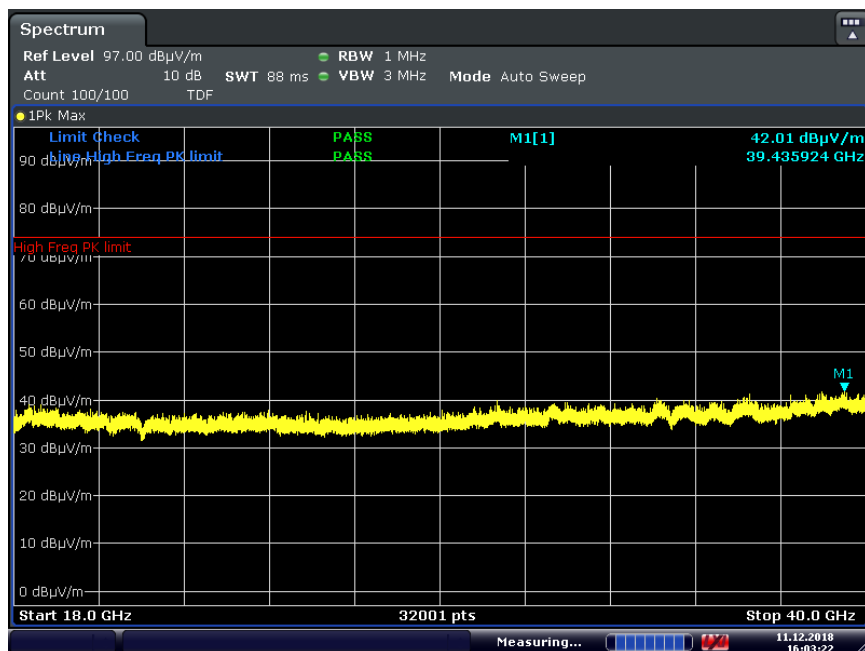
| Description               | 2.4 GHz Emission | 5 GHz Emission |
|---------------------------|------------------|----------------|
| Antenna                   | 0                | 0              |
| Channel                   | 78               | 36             |
| Operating Frequency (MHz) | 2480             | 5180           |
| Data Rate (Mbps)          | GFSK/1Mbps       | MCS0           |
| Mode                      | Bluetooth        | UNII           |

**Table 7-25. Worst Case Simultaneous Transmission Config**

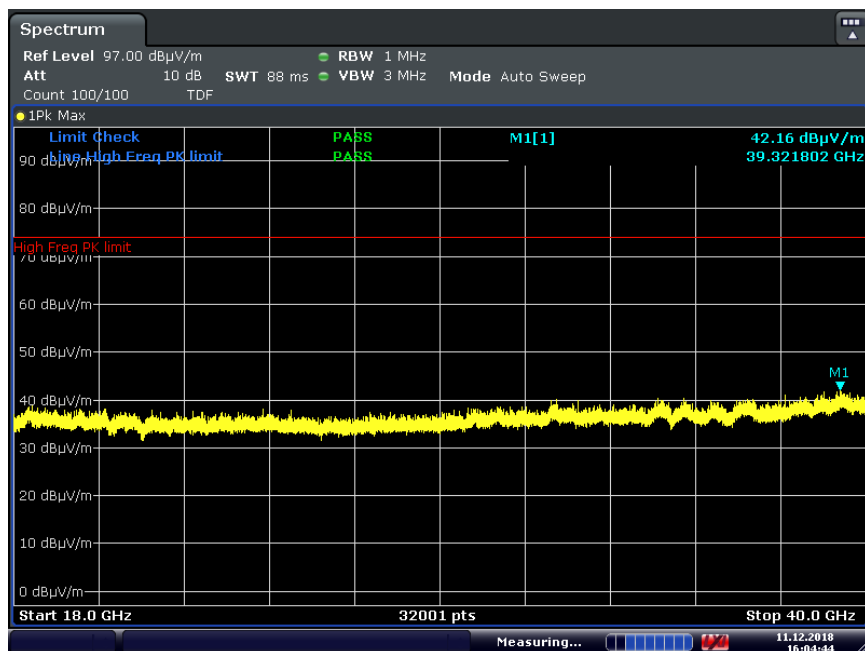


**Plot 7-114. Radiated Spurious Plot above 1GHz (2.4GHz – 5GHz)**

|                                         |                                               |                            |                                 |
|-----------------------------------------|-----------------------------------------------|----------------------------|---------------------------------|
| FCC ID: BCGA2124                        | <b>MEASUREMENT REPORT<br/>(CERTIFICATION)</b> |                            | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1C1811080027-08.BCG | Test Dates:<br>12/19/2018-02/07/2019          | EUT Type:<br>Tablet Device | Page 97 of 121                  |



Plot 7-115. Radiated Spurious Plot 18GHz – 40GHz (2.4GHz – 5GHz) Pol. H



Plot 7-116. Radiated Spurious Plot 18GHz – 40GHz (2.4GHz – 5GHz) Pol. V

|                                         |                                                                                                                                   |                            |                                 |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------|
| FCC ID: BCGA2124                        |  <b>MEASUREMENT REPORT<br/>(CERTIFICATION)</b> |                            | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1C1811080027-08.BCG | Test Dates:<br>12/19/2018-02/07/2019                                                                                              | EUT Type:<br>Tablet Device | Page 98 of 121                  |

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|-------------------------|----------------|-------------|
| 4960.00         | Avg      | V               | -                   | -                          | -81.73               | 16.90       | 42.17                   | 53.98          | -11.81      |
| 4960.00         | Peak     | V               | -                   | -                          | -68.82               | 16.90       | 55.08                   | 73.98          | -18.90      |
| 7440.00         | Avg      | V               | -                   | -                          | -85.14               | 15.99       | 37.85                   | 53.98          | -16.13      |
| 7440.00         | Peak     | V               | -                   | -                          | -72.42               | 15.99       | 50.57                   | 73.98          | -23.41      |
| 9920.00         | Avg      | V               | -                   | -                          | -86.93               | 19.66       | 39.73                   | 53.98          | -14.25      |
| 9920.00         | Peak     | V               | -                   | -                          | -73.75               | 19.66       | 52.91                   | 73.98          | -21.07      |
| 12400.00        | Avg      | V               | -                   | -                          | -86.88               | 23.65       | 43.77                   | 53.98          | -10.21      |
| 12400.00        | Peak     | V               | -                   | -                          | -73.83               | 23.65       | 56.82                   | 73.98          | -17.16      |
| 10360.00        | Avg      | V               | -                   | -                          | -84.91               | 20.61       | 42.70                   | 53.98          | -11.28      |
| 10360.00        | Peak     | V               | -                   | -                          | -73.44               | 20.61       | 54.17                   | 73.98          | -19.81      |
| 15540.00        | Avg      | V               | -                   | -                          | -85.49               | 27.67       | 49.18                   | 53.98          | -4.80       |
| 15540.00        | Peak     | V               | -                   | -                          | -74.27               | 27.67       | 60.40                   | 73.98          | -13.58      |

**Table 7-26. Radiated Measurements (2.4GHz – 5GHz)**

|                                                |                                                                                                                               |                                   |                                        |
|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|----------------------------------------|
| <b>FCC ID:</b> BCGA2124                        |  <b>MEASUREMENT REPORT (CERTIFICATION)</b> |                                   | <b>Approved by:</b><br>Quality Manager |
| <b>Test Report S/N:</b><br>1C1811080027-08.BCG | <b>Test Dates:</b><br>12/19/2018-02/07/2019                                                                                   | <b>EUT Type:</b><br>Tablet Device | Page 99 of 121                         |

## 7.10 Radiated Restricted Band Edge Measurements

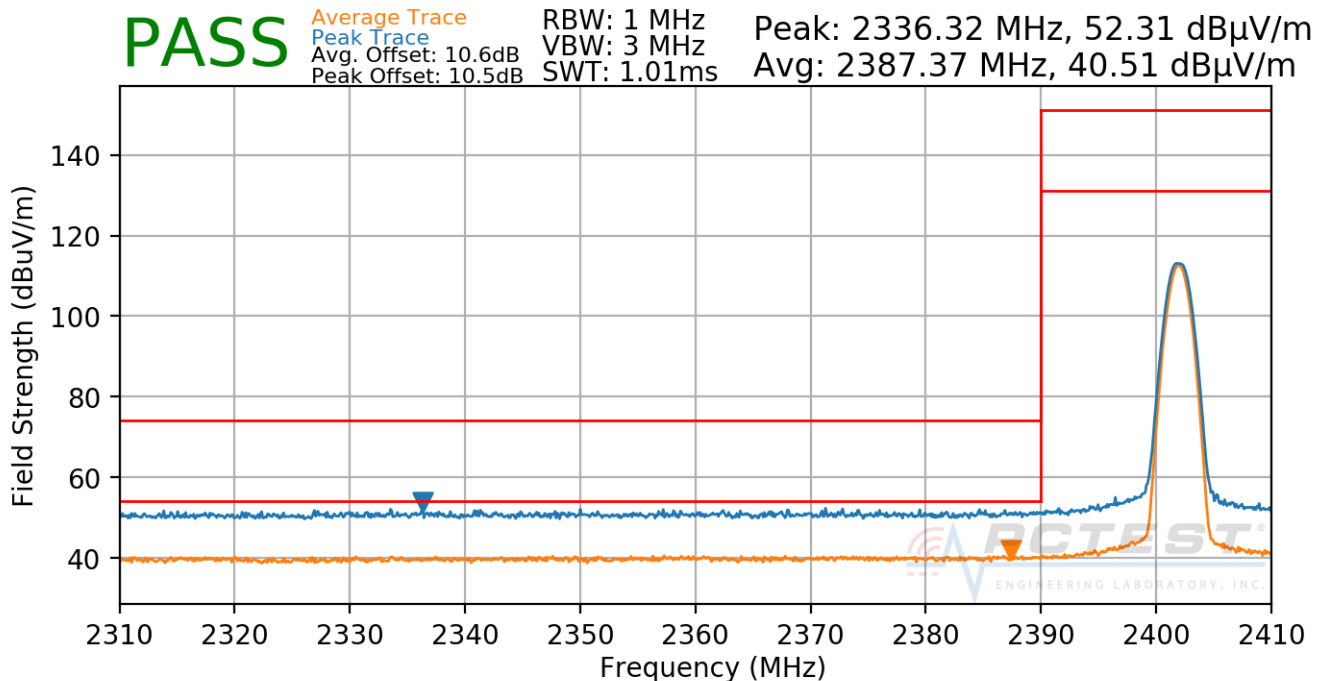
§15.205 §15.209 §15.247 (d); RSS-Gen [8.9]

The radiated restricted band edge measurements are measured with an EMI test receiver connected to the receive antenna while the EUT is transmitting. Two different amplitude offsets were used depending on whether peak or average measurements were measured. The average measurements use a duty cycle correction factor (DCCF).

The amplitude offset shown in the following plots for average measurements was calculated using the formula:

$$\text{Offset (dB)} = (\text{Antenna Factor} + \text{Cable Loss} + \text{Attenuator}) - \text{Preamplifier Gain} + \text{DCCF}$$

|                          |           |
|--------------------------|-----------|
| Worst Case Mode:         | Bluetooth |
| Worst Case Modulation:   | GFSK      |
| Worst Case Power Scheme: | ePA       |
| Measurement Distance:    | 3 Meters  |
| Operating Frequency:     | 2402MHz   |
| Channel:                 | 0         |



Plot 7-117. Radiated Restricted Lower Band Edge Measurement ANT 0

|                                         |                                               |                            |                                 |
|-----------------------------------------|-----------------------------------------------|----------------------------|---------------------------------|
| FCC ID: BCGA2124                        | <b>MEASUREMENT REPORT<br/>(CERTIFICATION)</b> |                            | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1C1811080027-08.BCG | Test Dates:<br>12/19/2018-02/07/2019          | EUT Type:<br>Tablet Device | Page 100 of 121                 |

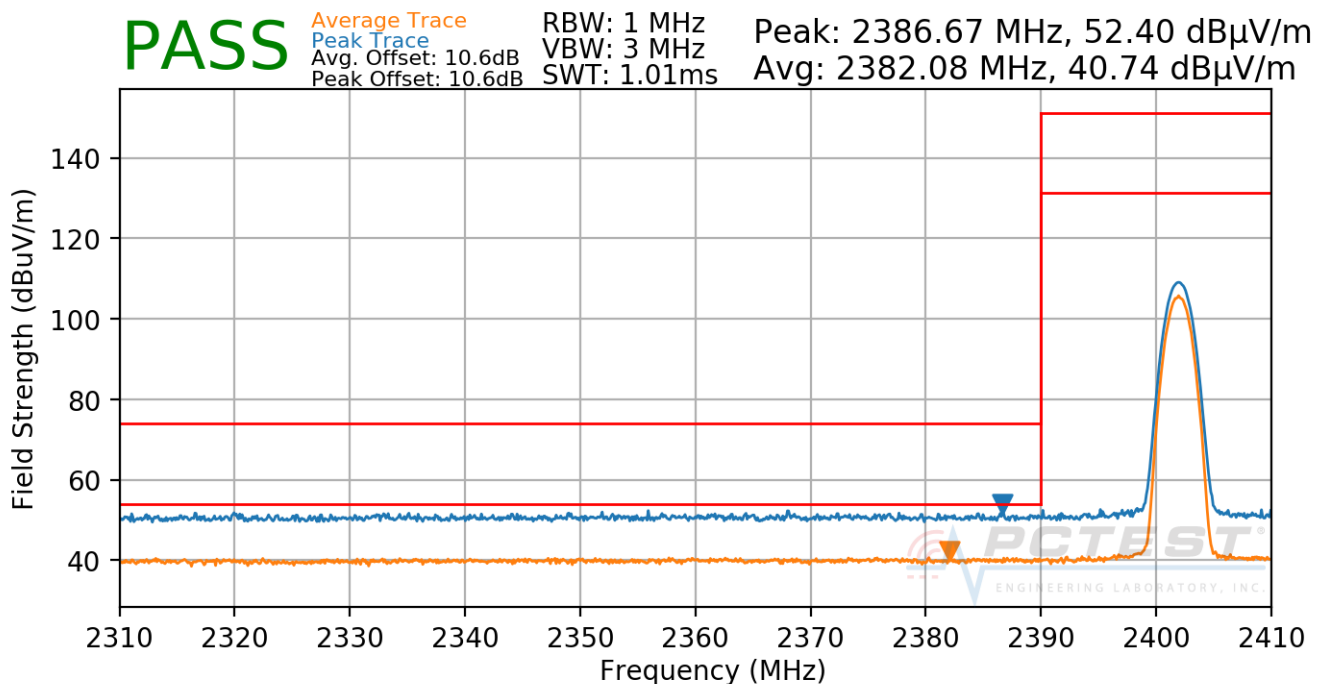
## Radiated Restricted Band Edge Measurements

§15.205 §15.209 §15.247 (d); RSS-Gen [8.9]

The amplitude offset shown in the following plots for peak measurements was calculated using the formula:

$$\text{Offset (dB)} = (\text{Antenna Factor} + \text{Cable Loss} + \text{Attenuator}) - \text{Preamplifier Gain}$$

|                          |           |
|--------------------------|-----------|
| Worst Case Mode:         | Bluetooth |
| Worst Case Modulation:   | 8DPSK     |
| Worst Case Power Scheme: | ePA       |
| Measurement Distance:    | 3 Meters  |
| Operating Frequency:     | 2402MHz   |
| Channel:                 | 0         |



Plot 7-118. Radiated Restricted Lower Band Edge Measurement ANT 0

|                                         |                                                                                                                                   |                            |                                 |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------|
| FCC ID: BCGA2124                        |  <b>MEASUREMENT REPORT<br/>(CERTIFICATION)</b> |                            | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1C1811080027-08.BCG | Test Dates:<br>12/19/2018-02/07/2019                                                                                              | EUT Type:<br>Tablet Device | Page 101 of 121                 |

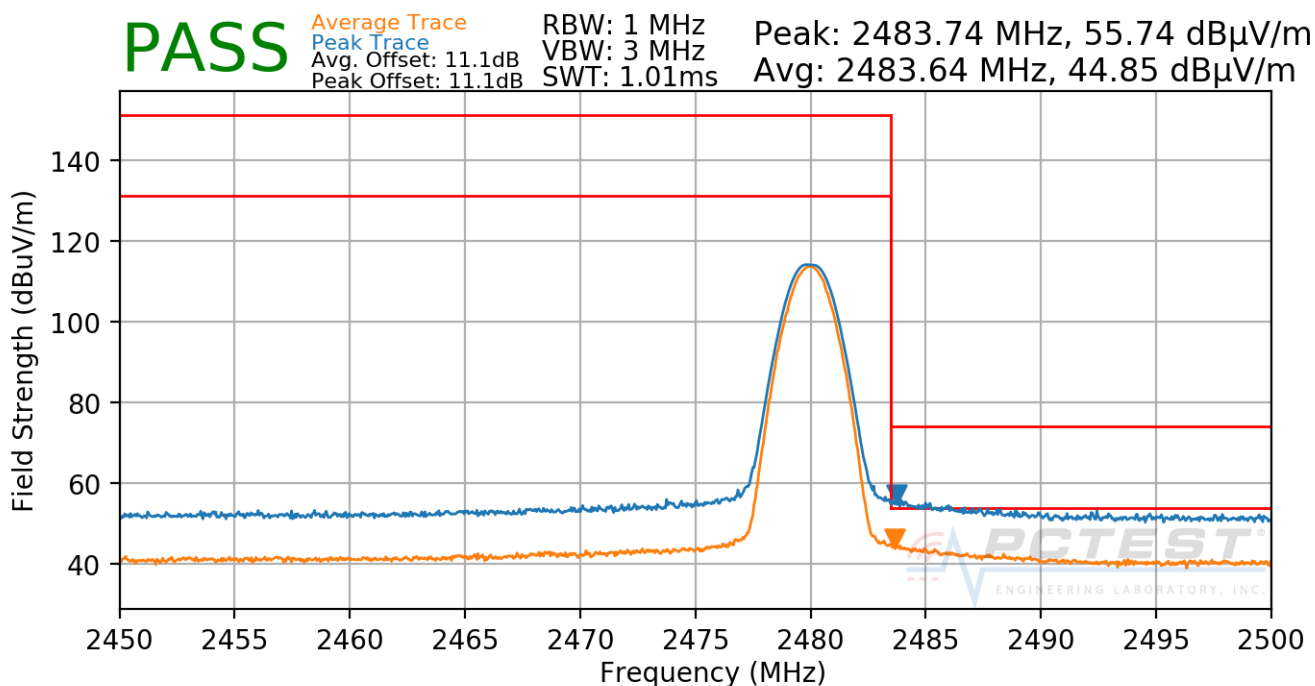
## Radiated Restricted Band Edge Measurements

§15.205 §15.209 §15.247 (d); RSS-Gen [8.9]

The amplitude offset shown in the following plots for peak measurements was calculated using the formula:

Offset (dB) = (Antenna Factor + Cable Loss + Attenuator) – Preamplifier Gain

|                          |           |
|--------------------------|-----------|
| Worst Case Mode:         | Bluetooth |
| Worst Case Modulation:   | GFSK      |
| Worst Case Power Scheme: | ePA       |
| Measurement Distance:    | 3 Meters  |
| Operating Frequency:     | 2480MHz   |
| Channel:                 | 78        |



Plot 7-119. Radiated Restricted Upper Band Edge Measurement ANT 0

|                                         |                                               |                            |                                 |
|-----------------------------------------|-----------------------------------------------|----------------------------|---------------------------------|
| FCC ID: BCGA2124                        | <b>MEASUREMENT REPORT<br/>(CERTIFICATION)</b> |                            | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1C1811080027-08.BCG | Test Dates:<br>12/19/2018-02/07/2019          | EUT Type:<br>Tablet Device | Page 102 of 121                 |

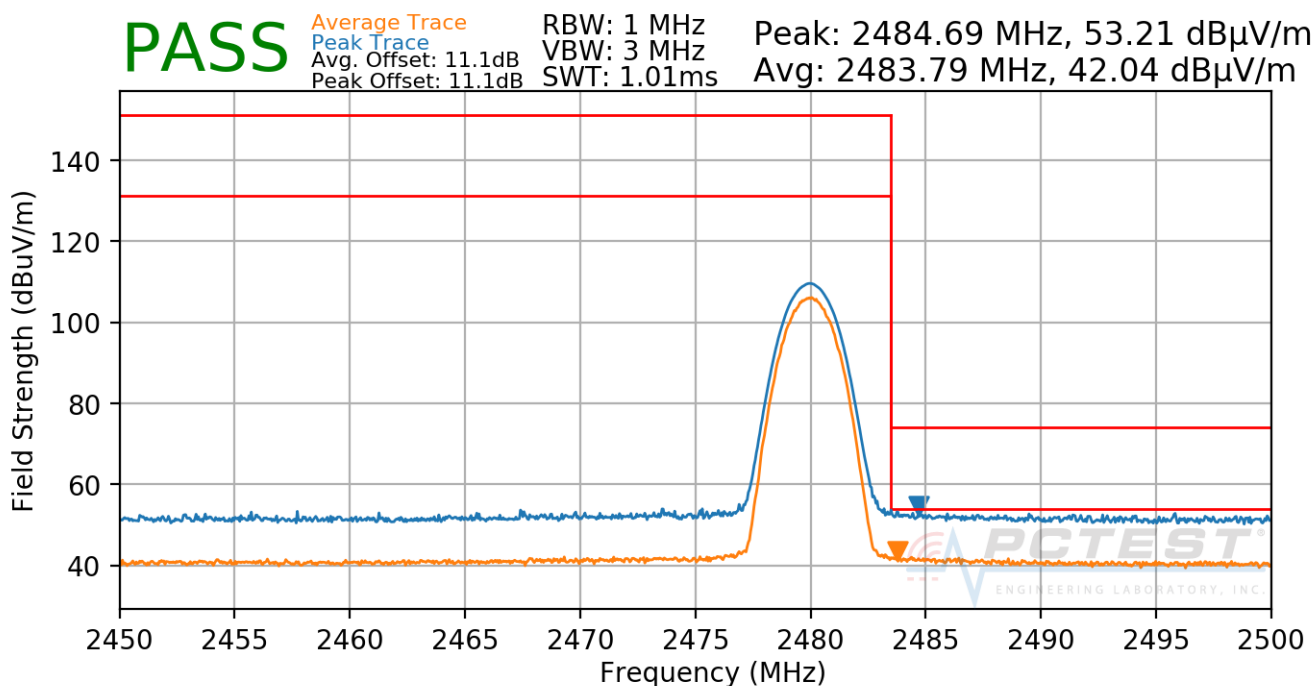
## Radiated Restricted Band Edge Measurements

§15.205 §15.209 §15.247 (d); RSS-Gen [8.9]

The amplitude offset shown in the following plots for peak measurements was calculated using the formula:

Offset (dB) = (Antenna Factor + Cable Loss + Attenuator) – Preamplifier Gain

|                          |           |
|--------------------------|-----------|
| Worst Case Mode:         | Bluetooth |
| Worst Case Modulation:   | 8DPSK     |
| Worst Case Power Scheme: | ePA       |
| Measurement Distance:    | 3 Meters  |
| Operating Frequency:     | 2480MHz   |
| Channel:                 | 78        |



Plot 7-120. Radiated Restricted Upper Band Edge Measurement ANT 0

|                                         |                                                                                                                                   |                            |                                 |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------|
| FCC ID: BCGA2124                        |  <b>MEASUREMENT REPORT<br/>(CERTIFICATION)</b> |                            | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1C1811080027-08.BCG | Test Dates:<br>12/19/2018-02/07/2019                                                                                              | EUT Type:<br>Tablet Device | Page 103 of 121                 |

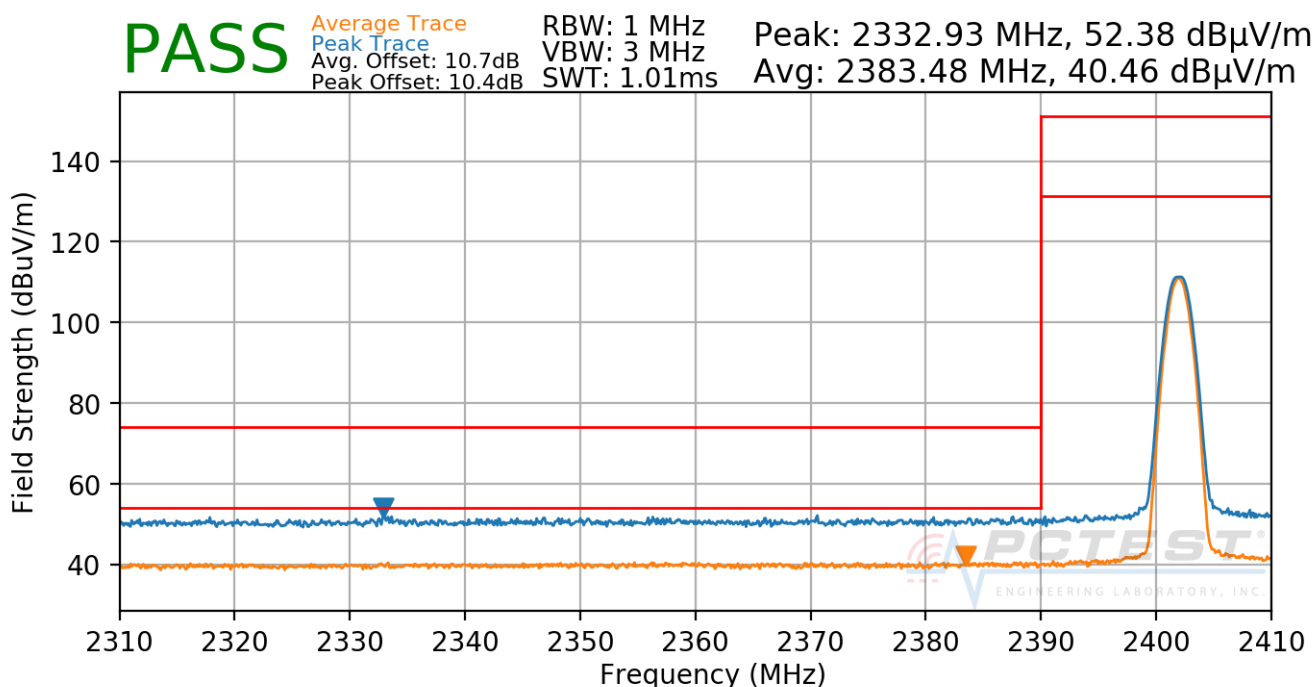
## Radiated Restricted Band Edge Measurements

§15.205 §15.209 §15.247 (d); RSS-Gen [8.9]

The amplitude offset shown in the following plots for average measurements was calculated using the formula:

Offset (dB) = (Antenna Factor + Cable Loss + Attenuator) – Preamplifier Gain + DCCF

|                          |           |
|--------------------------|-----------|
| Worst Case Mode:         | Bluetooth |
| Worst Case Modulation:   | GFSK      |
| Worst Case Power Scheme: | ePA       |
| Measurement Distance:    | 3 Meters  |
| Operating Frequency:     | 2402MHz   |
| Channel:                 | 0         |



Plot 7-121. Radiated Restricted Lower Band Edge Measurement ANT 1

|                                         |                                               |                            |                                 |
|-----------------------------------------|-----------------------------------------------|----------------------------|---------------------------------|
| FCC ID: BCGA2124                        | <b>MEASUREMENT REPORT<br/>(CERTIFICATION)</b> |                            | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1C1811080027-08.BCG | Test Dates:<br>12/19/2018-02/07/2019          | EUT Type:<br>Tablet Device | Page 104 of 121                 |

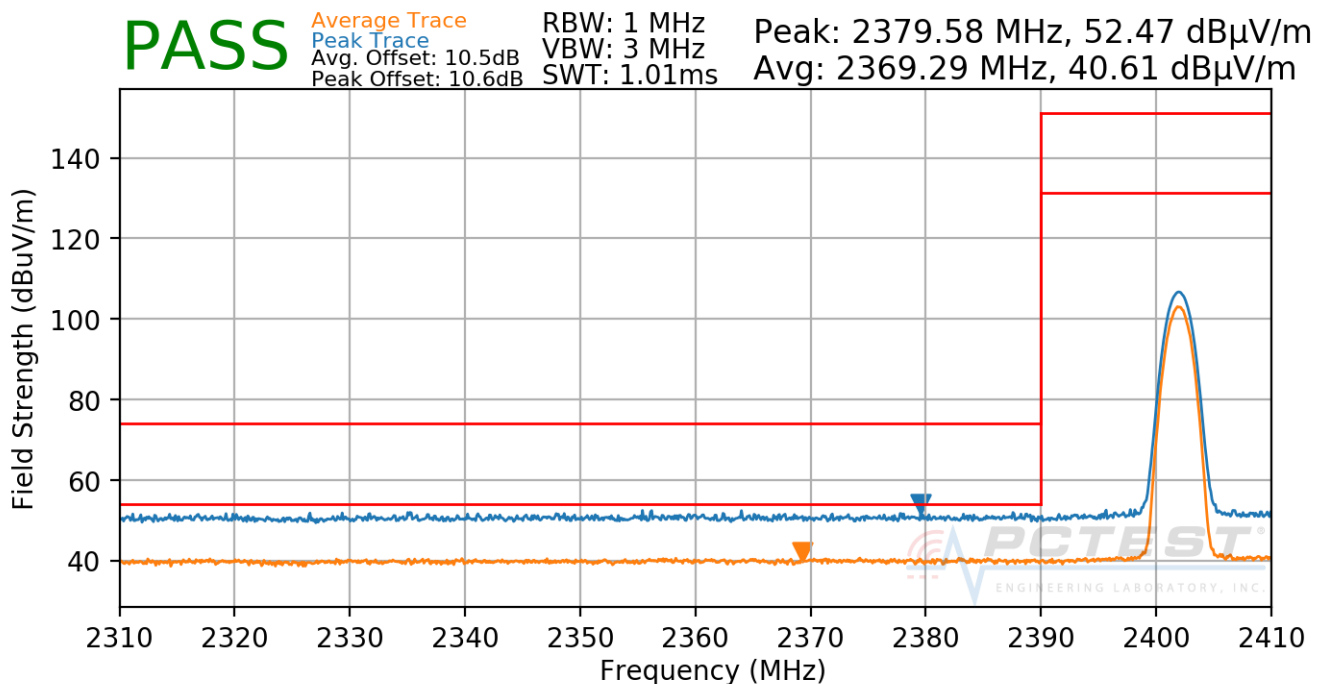
## Radiated Restricted Band Edge Measurements

§15.205 §15.209 §15.247 (d); RSS-Gen [8.9]

The amplitude offset shown in the following plots for peak measurements was calculated using the formula:

Offset (dB) = (Antenna Factor + Cable Loss + Attenuator) – Preamplifier Gain

|                          |           |
|--------------------------|-----------|
| Worst Case Mode:         | Bluetooth |
| Worst Case Modulation:   | 8DPSK     |
| Worst Case Power Scheme: | ePA       |
| Measurement Distance:    | 3 Meters  |
| Operating Frequency:     | 2402MHz   |
| Channel:                 | 0         |



Plot 7-122. Radiated Restricted Lower Band Edge Measurement ANT 1

|                                         |                                                                                                                                   |                            |                                 |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------|
| FCC ID: BCGA2124                        |  <b>MEASUREMENT REPORT<br/>(CERTIFICATION)</b> |                            | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1C1811080027-08.BCG | Test Dates:<br>12/19/2018-02/07/2019                                                                                              | EUT Type:<br>Tablet Device | Page 105 of 121                 |

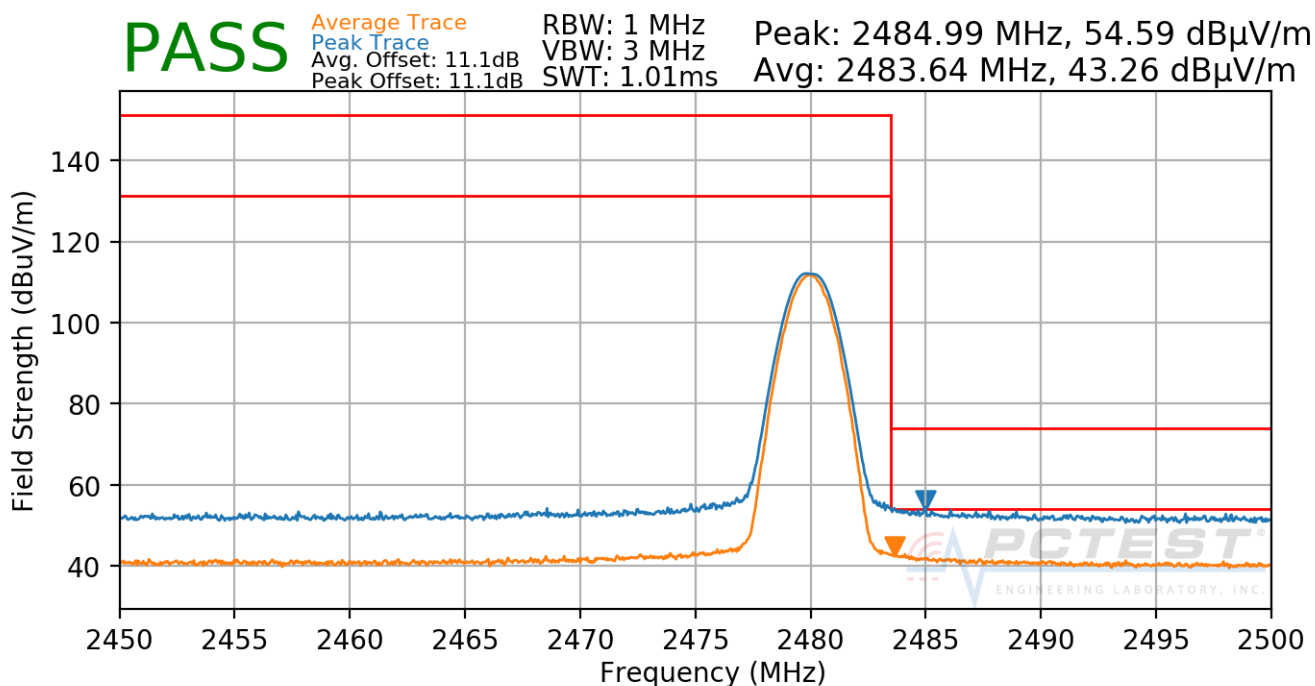
## Radiated Restricted Band Edge Measurements

§15.205 §15.209 §15.247 (d); RSS-Gen [8.9]

The amplitude offset shown in the following plots for peak measurements was calculated using the formula:

Offset (dB) = (Antenna Factor + Cable Loss + Attenuator) – Preamplifier Gain

|                          |           |
|--------------------------|-----------|
| Worst Case Mode:         | Bluetooth |
| Worst Case Modulation:   | GFSK      |
| Worst Case Power Scheme: | ePA       |
| Measurement Distance:    | 3 Meters  |
| Operating Frequency:     | 2480MHz   |
| Channel:                 | 78        |



**Plot 7-123. Radiated Restricted Upper Band Edge Measurement ANT 1**

|                                         |                                                                                                                                   |                            |                                 |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------|
| FCC ID: BCGA2124                        |  <b>MEASUREMENT REPORT<br/>(CERTIFICATION)</b> |                            | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1C1811080027-08.BCG | Test Dates:<br>12/19/2018-02/07/2019                                                                                              | EUT Type:<br>Tablet Device | Page 106 of 121                 |

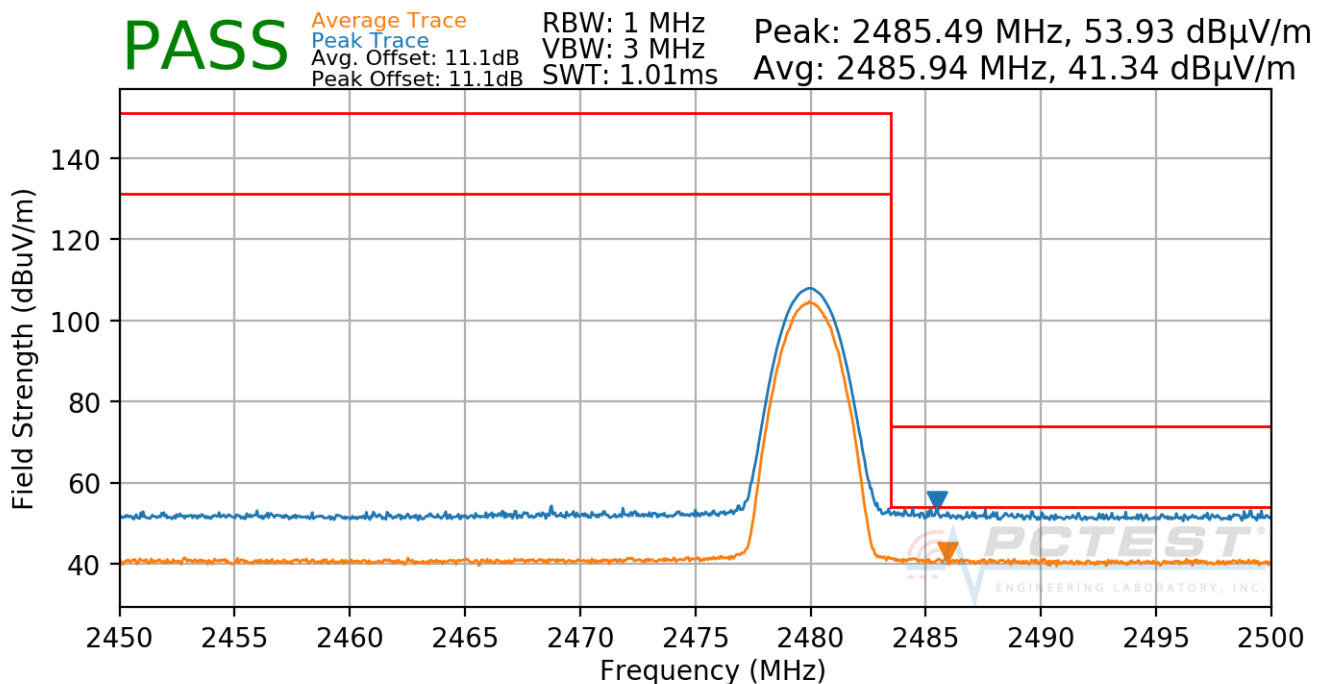
## Radiated Restricted Band Edge Measurements

§15.205 §15.209 §15.247 (d); RSS-Gen [8.9]

The amplitude offset shown in the following plots for peak measurements was calculated using the formula:

Offset (dB) = (Antenna Factor + Cable Loss + Attenuator) – Preamplifier Gain

|                          |           |
|--------------------------|-----------|
| Worst Case Mode:         | Bluetooth |
| Worst Case Modulation:   | 8DPSK     |
| Worst Case Power Scheme: | ePA       |
| Measurement Distance:    | 3 Meters  |
| Operating Frequency:     | 2480MHz   |
| Channel:                 | 78        |



**Plot 7-124. Radiated Restricted Upper Band Edge Measurement ANT 1**

|                                         |                                                                                                                                   |                            |                                 |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------|
| FCC ID: BCGA2124                        |  <b>MEASUREMENT REPORT<br/>(CERTIFICATION)</b> |                            | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1C1811080027-08.BCG | Test Dates:<br>12/19/2018-02/07/2019                                                                                              | EUT Type:<br>Tablet Device | Page 107 of 121                 |

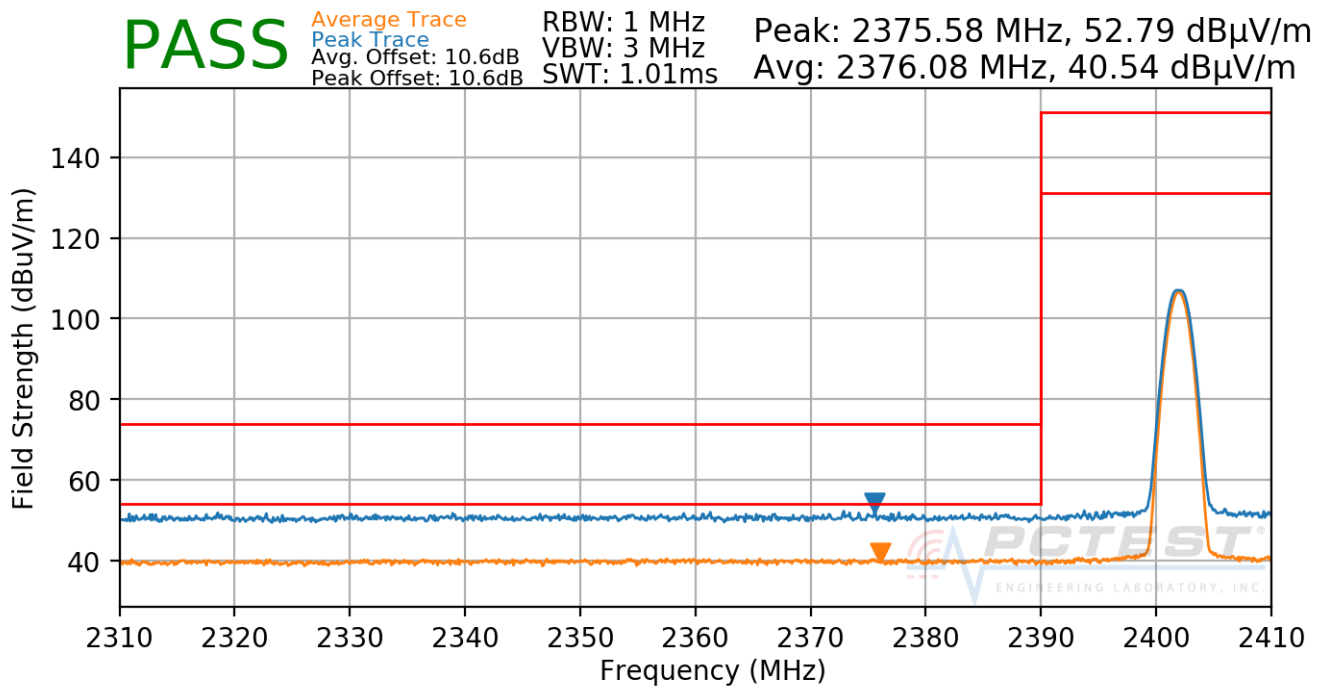
## Radiated Restricted Band Edge Measurements

§15.205 §15.209 §15.247 (d); RSS-Gen [8.9]

The amplitude offset shown in the following plots for average measurements was calculated using the formula:

$$\text{Offset (dB)} = (\text{Antenna Factor} + \text{Cable Loss} + \text{Attenuator}) - \text{Preamplifier Gain} + \text{DCCF}$$

|                          |           |
|--------------------------|-----------|
| Worst Case Mode:         | Bluetooth |
| Worst Case Modulation:   | GFSK      |
| Worst Case Power Scheme: | ePA       |
| Measurement Distance:    | 3 Meters  |
| Operating Frequency:     | 2402MHz   |
| Channel:                 | 0         |



Plot 7-125. Radiated Restricted Lower Band Edge Measurement ANT 2

|                                         |                                               |                            |                                 |
|-----------------------------------------|-----------------------------------------------|----------------------------|---------------------------------|
| FCC ID: BCGA2124                        | <b>MEASUREMENT REPORT<br/>(CERTIFICATION)</b> |                            | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1C1811080027-08.BCG | Test Dates:<br>12/19/2018-02/07/2019          | EUT Type:<br>Tablet Device | Page 108 of 121                 |

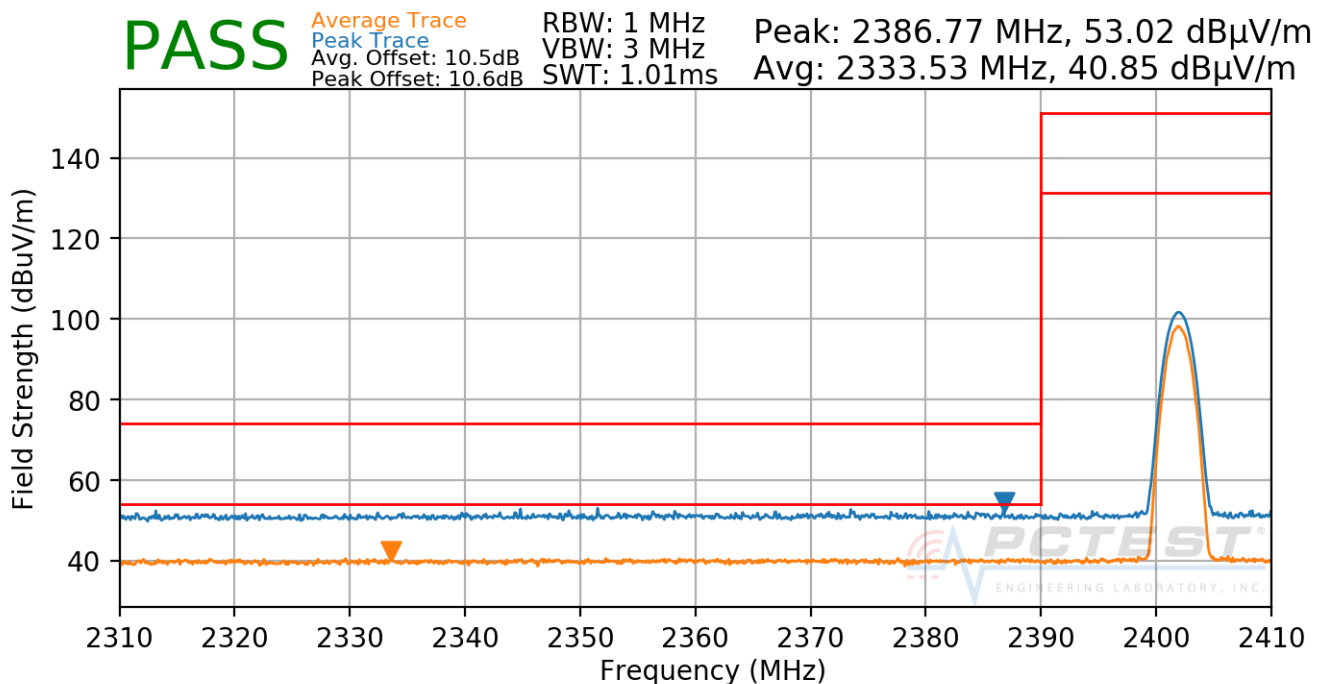
## Radiated Restricted Band Edge Measurements

§15.205 §15.209 §15.247 (d); RSS-Gen [8.9]

The amplitude offset shown in the following plots for peak measurements was calculated using the formula:

$$\text{Offset (dB)} = (\text{Antenna Factor} + \text{Cable Loss} + \text{Attenuator}) - \text{Preamplifier Gain}$$

|                          |           |
|--------------------------|-----------|
| Worst Case Mode:         | Bluetooth |
| Worst Case Modulation:   | 8DPSK     |
| Worst Case Power Scheme: | ePA       |
| Measurement Distance:    | 3 Meters  |
| Operating Frequency:     | 2402MHz   |
| Channel:                 | 0         |



Plot 7-126. Radiated Restricted Lower Band Edge Measurement ANT 2

|                                         |                                               |                            |                                 |
|-----------------------------------------|-----------------------------------------------|----------------------------|---------------------------------|
| FCC ID: BCGA2124                        | <b>MEASUREMENT REPORT<br/>(CERTIFICATION)</b> |                            | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1C1811080027-08.BCG | Test Dates:<br>12/19/2018-02/07/2019          | EUT Type:<br>Tablet Device | Page 109 of 121                 |

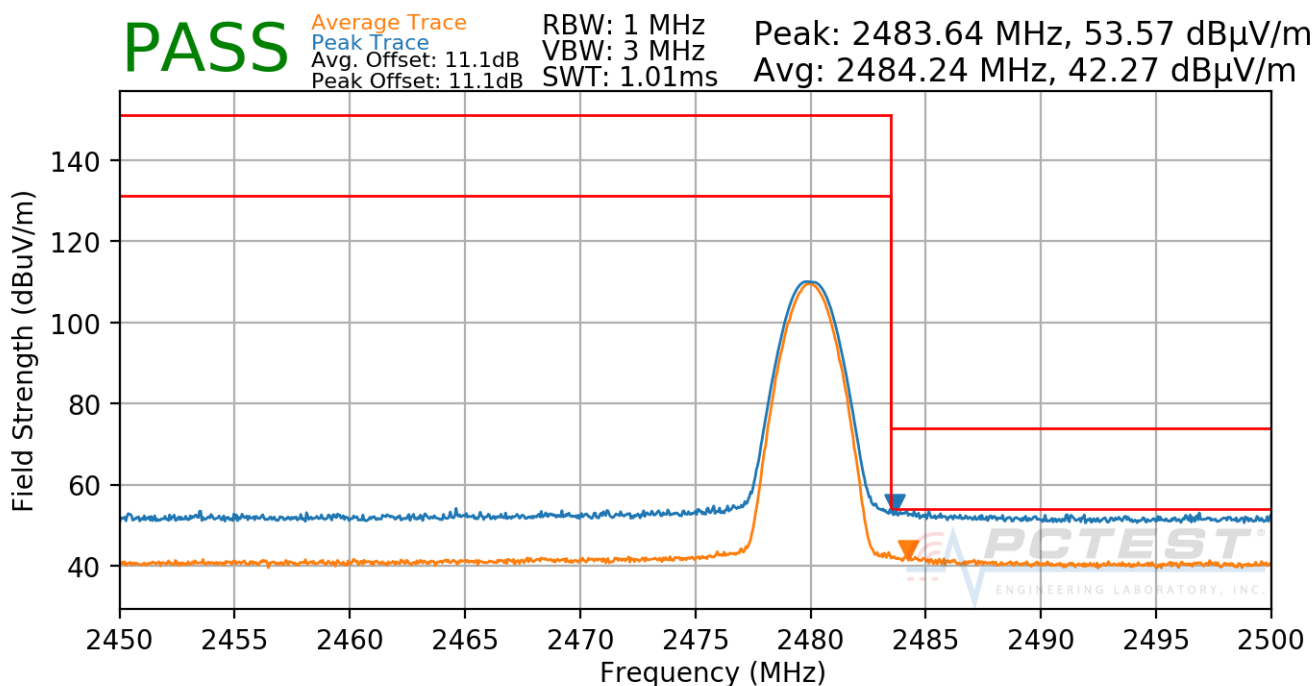
## Radiated Restricted Band Edge Measurements

§15.205 §15.209 §15.247 (d); RSS-Gen [8.9]

The amplitude offset shown in the following plots for peak measurements was calculated using the formula:

Offset (dB) = (Antenna Factor + Cable Loss + Attenuator) – Preamplifier Gain

|                          |           |
|--------------------------|-----------|
| Worst Case Mode:         | Bluetooth |
| Worst Case Modulation:   | GFSK      |
| Worst Case Power Scheme: | ePA       |
| Measurement Distance:    | 3 Meters  |
| Operating Frequency:     | 2480MHz   |
| Channel:                 | 78        |



**Plot 7-127. Radiated Restricted Upper Band Edge Measurement ANT 2**

|                                         |                                               |                            |                                 |
|-----------------------------------------|-----------------------------------------------|----------------------------|---------------------------------|
| FCC ID: BCGA2124                        | <b>MEASUREMENT REPORT<br/>(CERTIFICATION)</b> |                            | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1C1811080027-08.BCG | Test Dates:<br>12/19/2018-02/07/2019          | EUT Type:<br>Tablet Device | Page 110 of 121                 |

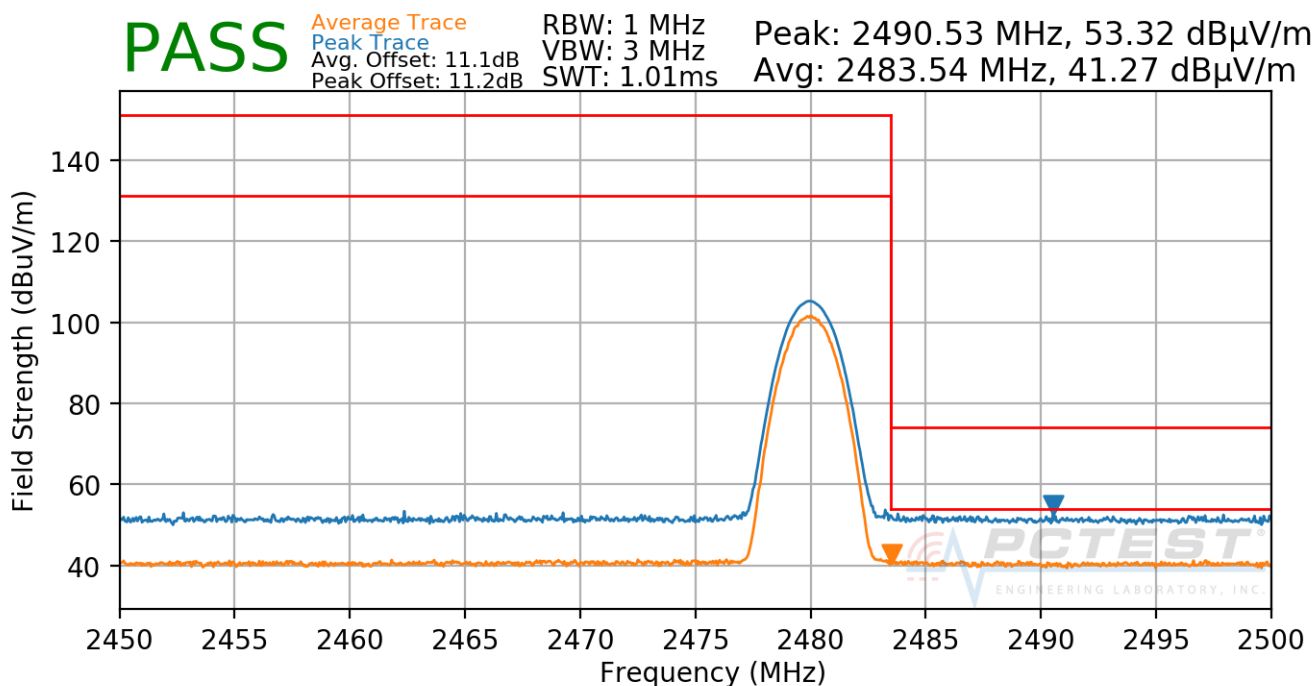
## Radiated Restricted Band Edge Measurements

§15.205 §15.209 §15.247 (d); RSS-Gen [8.9]

The amplitude offset shown in the following plots for peak measurements was calculated using the formula:

Offset (dB) = (Antenna Factor + Cable Loss + Attenuator) – Preamplifier Gain

|                          |           |
|--------------------------|-----------|
| Worst Case Mode:         | Bluetooth |
| Worst Case Modulation:   | 8DPSK     |
| Worst Case Power Scheme: | ePA       |
| Measurement Distance:    | 3 Meters  |
| Operating Frequency:     | 2480MHz   |
| Channel:                 | 78        |



Plot 7-128. Radiated Restricted Upper Band Edge Measurement ANT 2

|                                         |                                                                                                                                   |                            |                                 |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------|
| FCC ID: BCGA2124                        |  <b>MEASUREMENT REPORT<br/>(CERTIFICATION)</b> |                            | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1C1811080027-08.BCG | Test Dates:<br>12/19/2018-02/07/2019                                                                                              | EUT Type:<br>Tablet Device | Page 111 of 121                 |

## 7.11 Radiated Spurious Emissions Measurements – Below 1GHz

§15.209; RSS-Gen [8.9]

### Test Overview and Limit

All out of band radiated spurious emissions are measured with a spectrum analyzer connected to a receive antenna while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates and modes were investigated for radiated spurious emissions. Only the radiated emissions of the configuration that produced the worst case emissions are reported in this section.

***All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR and Table 6 of RSS-Gen (8.10) must not exceed the limits shown in Table 7-27 per Section 15.209 and RSS-Gen (8.9).***

| Frequency         | Field Strength<br>[ $\mu\text{V/m}$ ] | Measured Distance<br>[Meters] |
|-------------------|---------------------------------------|-------------------------------|
| 0.009 – 0.490 MHz | 2400/F (kHz)                          | 300                           |
| 0.490 – 1.705 MHz | 24000/F (kHz)                         | 30                            |
| 1.705 – 30.00 MHz | 30                                    | 30                            |
| 30.00 – 88.00 MHz | 100                                   | 3                             |
| 88.00 – 216.0 MHz | 150                                   | 3                             |
| 216.0 – 960.0 MHz | 200                                   | 3                             |
| Above 960.0 MHz   | 500                                   | 3                             |

**Table 7-27. Radiated Limits**

### Test Procedures Used

ANSI C63.10-2013

### Test Settings

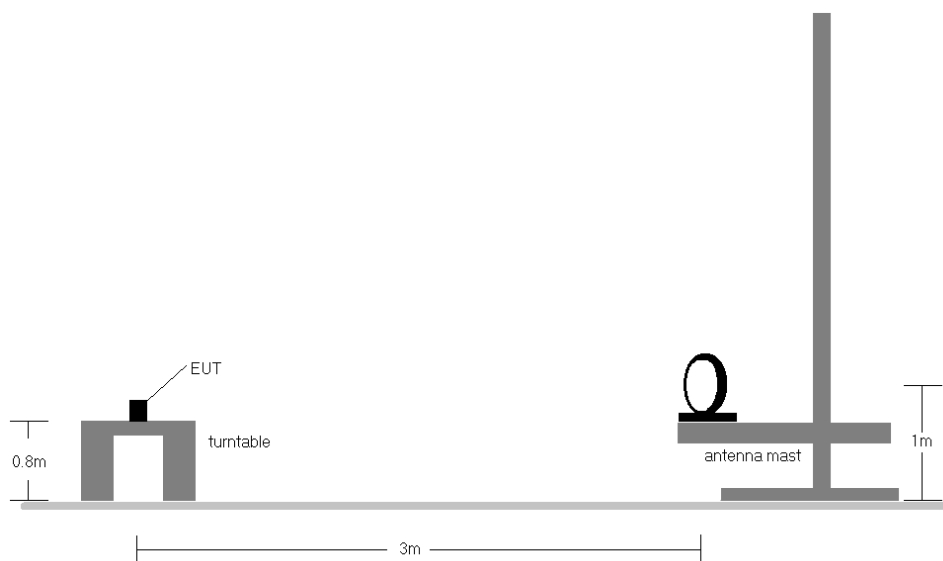
#### Quasi-Peak Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 120kHz (for emissions from 30MHz – 1GHz)
3. Detector = quasi-peak
4. Sweep time = auto couple
5. Trace mode = max hold
6. Trace was allowed to stabilize

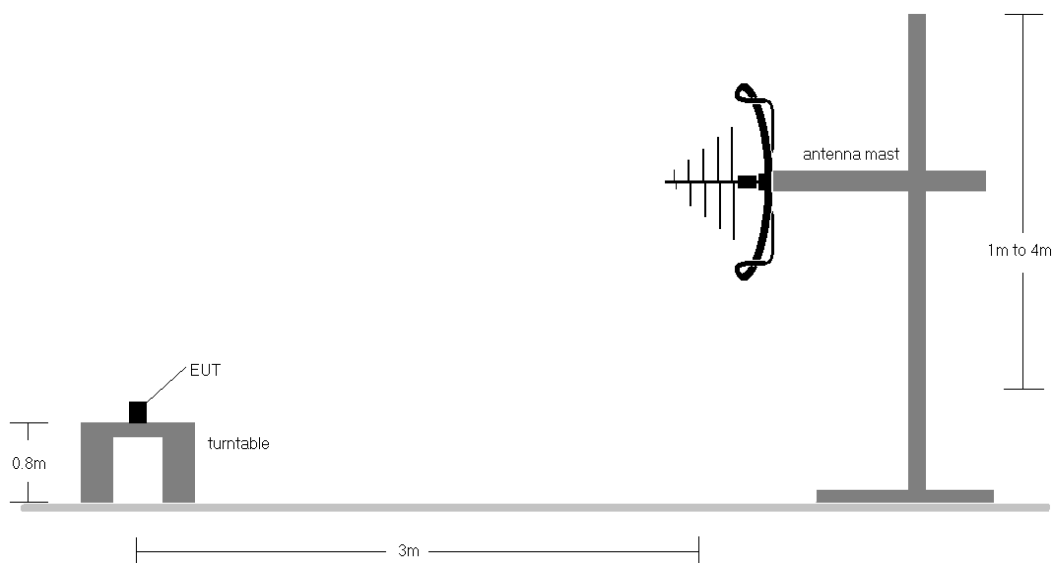
|                                         |                                                                                                                                   |                            |                                 |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------|
| FCC ID: BCGA2124                        |  <b>MEASUREMENT REPORT<br/>(CERTIFICATION)</b> |                            | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1C1811080027-08.BCG | Test Dates:<br>12/19/2018-02/07/2019                                                                                              | EUT Type:<br>Tablet Device | Page 112 of 121                 |

## Test Setup

The EUT and measurement equipment were set up as shown in the diagrams below.



**Figure 7-9. Radiated Test Setup < 30Mhz**



**Figure 7-10. Radiated Test Setup < 1GHz**

|                                         |                                                                                                                                   |                            |                                 |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------|
| FCC ID: BCGA2124                        |  <b>MEASUREMENT REPORT<br/>(CERTIFICATION)</b> |                            | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1C1811080027-08.BCG | Test Dates:<br>12/19/2018-02/07/2019                                                                                              | EUT Type:<br>Tablet Device | Page 113 of 121                 |

## Test Notes

1. All emissions lying in restricted bands specified in §15.205 and RSS-Gen (8.10) are below the limit shown in Table 7-27.
2. The broadband receive antenna is manipulated through vertical and horizontal polarizations during the tests. The EUT is manipulated through three orthogonal planes.
3. This unit was tested with its standard battery.
4. The spectrum is investigated using a peak detector and final measurements are recorded using CISPR quasi peak detector on emissions that were within 6dB of the limit. The worst-case emissions are reported however emissions whose levels were not within 20dB of the respective limits were not reported.
5. Emissions were measured at a 3 meter test distance.
6. Emissions are investigated while operating on the center channel of the mode, band, and modulation that produced the worst case results during the transmitter spurious emissions testing.
7. No spurious emissions were detected within 20dB of the limit below 30MHz.
8. The results recorded using the broadband antenna is known to correlate with the results obtained by using a tuned dipole with an acceptable degree of accuracy. The VSWR for the measurement antenna was found to be less than 2:1.
9. The wide spectrum spurious emissions plots shown on the following pages are used only for the purpose of emission identification. There were no emissions detected in the 30MHz – 1GHz frequency range, as shown in the subsequent plots.

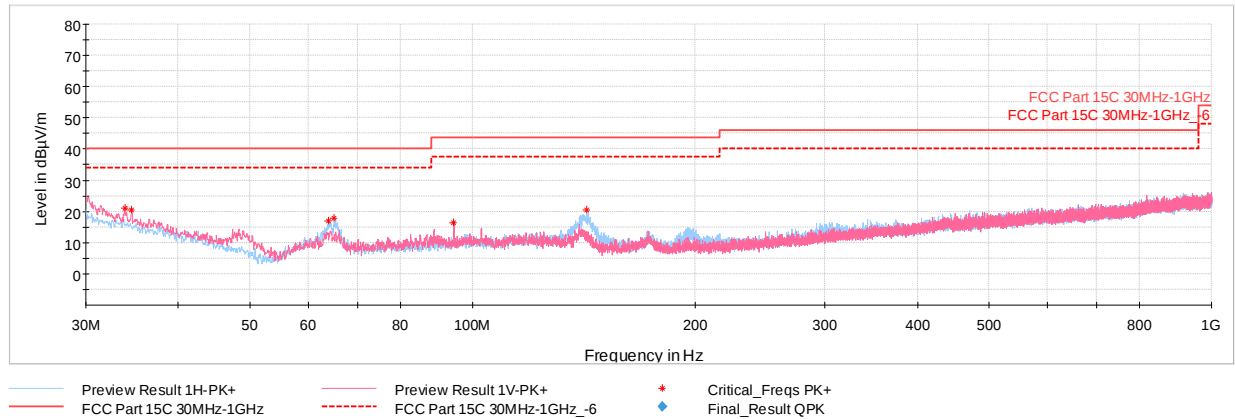
|                                         |                                                                                                                                   |                            |                                 |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------|
| FCC ID: BCGA2124                        |  <b>MEASUREMENT REPORT<br/>(CERTIFICATION)</b> |                            | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1C1811080027-08.BCG | Test Dates:<br>12/19/2018-02/07/2019                                                                                              | EUT Type:<br>Tablet Device | Page 114 of 121                 |



Table 7-28. Radiated Spurious Emissions Below 1GHz GFSK ePA - Ch.0, with Laptop

## Simultaneous TX Radiated Spurious Emissions Measurements (Below 1GHz)

§15.209; RSS-Gen [8.9]



| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|-------------------------|----------------|-------------|
| 30.00           | Max Peak | V               | 100                 | 218                        | -71.63               | -8.89       | 26.48                   | 40.00          | -13.52      |
| 43.14           | Max Peak | V               | 100                 | 200                        | -72.02               | -16.33      | 18.65                   | 40.00          | -21.35      |
| 56.19           | Max Peak | V               | 250                 | 65                         | -69.14               | -23.37      | 14.49                   | 40.00          | -25.51      |
| 108.81          | Max Peak | H               | 250                 | 222                        | -72.83               | -17.30      | 16.87                   | 43.52          | -26.65      |
| 186.27          | Max Peak | H               | 100                 | 245                        | -73.81               | -19.43      | 13.76                   | 43.52          | -29.76      |
| 293.55          | Max Peak | V               | 100                 | 229                        | -77.73               | -15.87      | 13.40                   | 46.02          | -32.62      |

Table 7-29. Radiated Spurious Emissions Below 1GHz (2.4GHz – 5GHz), with AC/DC Adapter

|                                         |                                                                                                                                  |                            |                                 |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------|
| FCC ID: BCGA2124                        |  <b>MEASUREMENT REPORT</b><br>(CERTIFICATION) |                            | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1C1811080027-08.BCG | Test Dates:<br>12/19/2018-02/07/2019                                                                                             | EUT Type:<br>Tablet Device | Page 116 of 121                 |

## 7.12 AC Line Conducted Measurement Data

### §15.207; RSS-Gen [8.8]

#### Test Overview and Limit

All AC line conducted spurious emissions are measured with a receiver connected to a grounded LISN while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates and modes were investigated for conducted spurious emissions. Only the conducted emissions of the configuration that produced the worst case emissions are reported in this section.

**All conducted emissions must not exceed the limits shown in the table below, per Section 15.207 and RSS-Gen (8.8).**

| Frequency of emission (MHz) | Conducted Limit (dBμV) |           |
|-----------------------------|------------------------|-----------|
|                             | Quasi-peak             | Average   |
| 0.15 – 0.5                  | 66 to 56*              | 56 to 46* |
| 0.5 – 5                     | 56                     | 46        |
| 5 – 30                      | 60                     | 50        |

**Table 7-30. Conducted Limits**

\*Decreases with the logarithm of the frequency.

#### Test Procedures Used

ANSI C63.10-2013, Section 6.2

#### Test Settings

##### Quasi-Peak Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the spurious emission of interest
2. RBW = 9kHz (for emissions from 150kHz – 30MHz)
3. Detector = quasi-peak
4. Sweep time = auto couple
5. Trace mode = max hold
6. Trace was allowed to stabilize

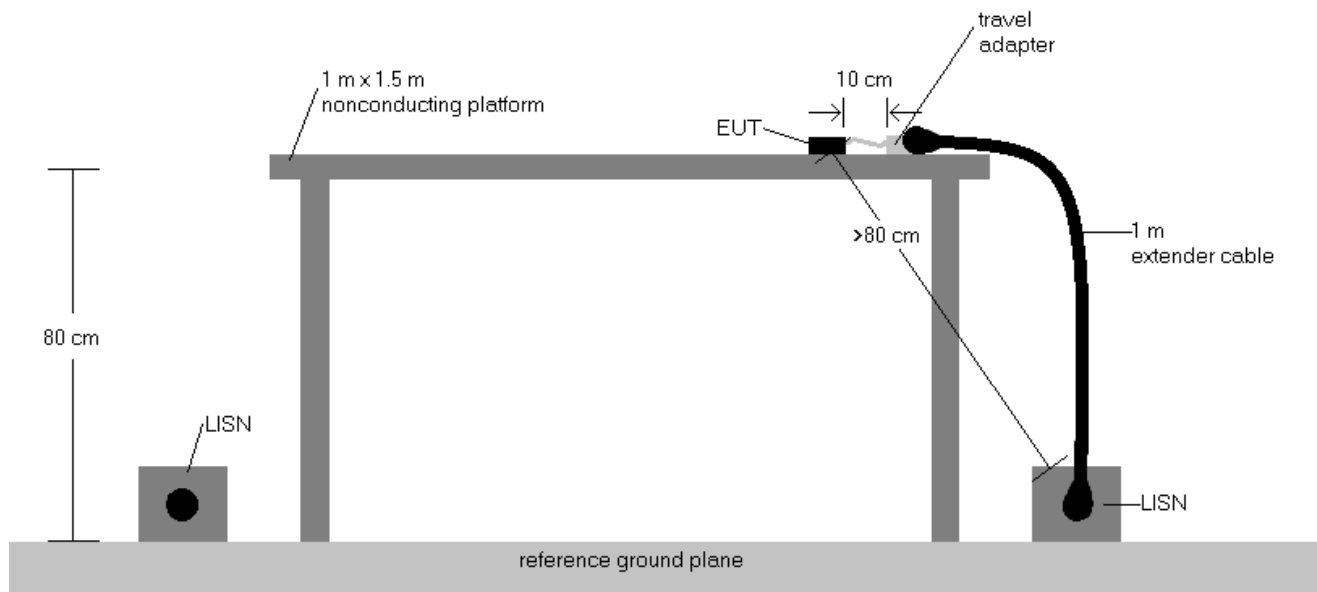
##### Average Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the spurious emission of interest
2. RBW = 9kHz (for emissions from 150kHz – 30MHz)
3. Detector = RMS
4. Sweep time = auto couple
5. Trace mode = max hold
6. Trace was allowed to stabilize

|                                         |                                                                                                                               |                            |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------|
| FCC ID: BCGA2124                        |  <b>MEASUREMENT REPORT (CERTIFICATION)</b> |                            | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1C1811080027-08.BCG | Test Dates:<br>12/19/2018-02/07/2019                                                                                          | EUT Type:<br>Tablet Device | Page 117 of 121                 |

## Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

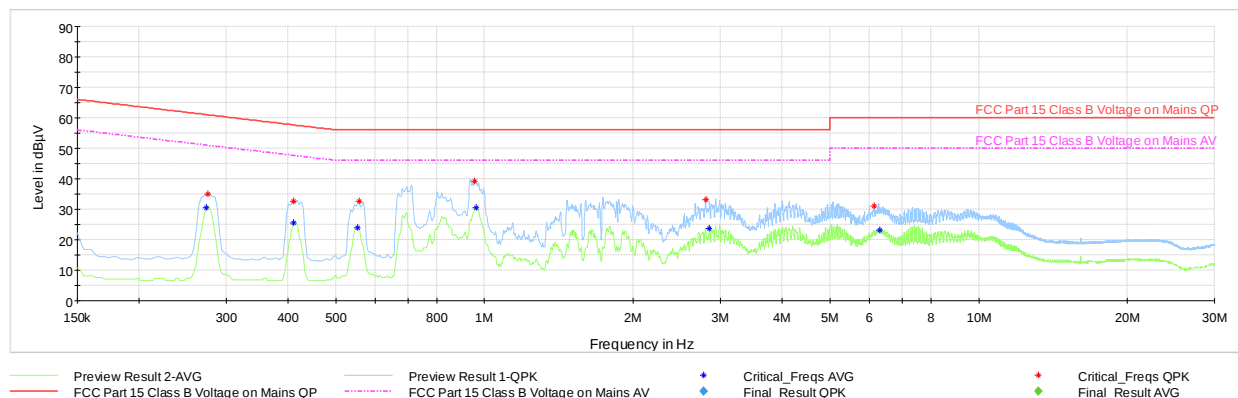


**Figure 7-11. Test Instrument & Measurement Setup**

## Test Notes

1. All modes of operation were investigated and the worst-case emissions are reported. The emissions found were not affected by the choice of channel used during testing.
2. The limit for an intentional radiator from 150kHz to 30MHz are specified in 15.207 and RSS-Gen (8.8).
3.  $\text{Corr. (dB)} = \text{Cable loss (dB)} + \text{LISN insertion factor (dB)}$
4.  $\text{QP/AV Level (dB}\mu\text{V)} = \text{QP/AV Analyzer/Receiver Level (dB}\mu\text{V)} + \text{Corr. (dB)}$
5.  $\text{Margin (dB)} = \text{QP/AV Limit (dB}\mu\text{V)} - \text{QP/AV Level (dB}\mu\text{V)}$
6. Traces shown in plot are made using a peak detector.
7. Deviations to the Specifications: None.

|                                         |                                                                                                                                   |                            |                                 |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------|
| FCC ID: BCGA2124                        |  <b>MEASUREMENT REPORT<br/>(CERTIFICATION)</b> |                            | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1C1811080027-08.BCG | Test Dates:<br>12/19/2018-02/07/2019                                                                                              | EUT Type:<br>Tablet Device | Page 118 of 121                 |

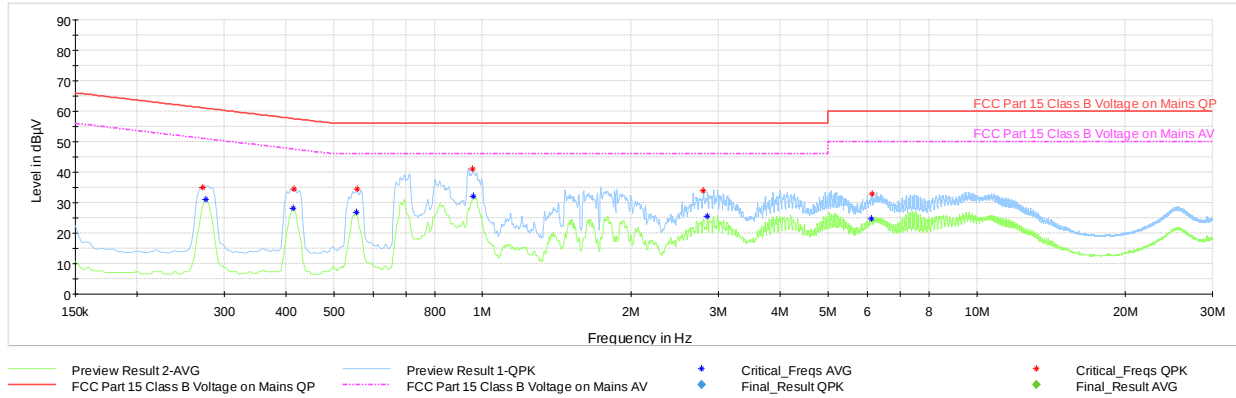


**Plot 7-131. Line-Conducted Test Plot – GFSK ePA Ch.0 (L1, with AC/DC Adapter)**

| Frequency [MHz] | Process State | QuasiPeak [dBμV] | Average [dBμV] | Limit [dBμV] | Margin [dB] | Line | PE  |
|-----------------|---------------|------------------|----------------|--------------|-------------|------|-----|
| 0.274           | FINAL         | —                | 30.62          | 51.00        | -20.38      | L1   | GND |
| 0.276           | FINAL         | 34.9             | —              | 60.94        | -25.99      | L1   | GND |
| 0.411           | FINAL         | —                | 25.47          | 47.63        | -22.16      | L1   | GND |
| 0.411           | FINAL         | 32.7             | —              | 57.63        | -24.95      | L1   | GND |
| 0.553           | FINAL         | —                | 23.85          | 46.00        | -22.15      | L1   | GND |
| 0.557           | FINAL         | 32.6             | —              | 56.00        | -23.44      | L1   | GND |
| 0.953           | FINAL         | 39.2             | —              | 56.00        | -16.81      | L1   | GND |
| 0.960           | FINAL         | —                | 30.50          | 46.00        | -15.50      | L1   | GND |
| 2.803           | FINAL         | 33.2             | —              | 56.00        | -22.76      | L1   | GND |
| 2.846           | FINAL         | —                | 23.66          | 46.00        | -22.34      | L1   | GND |
| 6.144           | FINAL         | 31.1             | —              | 60.00        | -28.95      | L1   | GND |
| 6.315           | FINAL         | —                | 23.23          | 50.00        | -26.77      | L1   | GND |

**Table 7-31. Line-Conducted Test Data - GFSK ePA Ch.0 (L1, with AC/DC Adapter)**

|                                                |                                               |                                   |                                        |
|------------------------------------------------|-----------------------------------------------|-----------------------------------|----------------------------------------|
| <b>FCC ID:</b> BCGA2124                        | <b>MEASUREMENT REPORT<br/>(CERTIFICATION)</b> |                                   | <b>Approved by:</b><br>Quality Manager |
| <b>Test Report S/N:</b><br>1C1811080027-08.BCG | <b>Test Dates:</b><br>12/19/2018-02/07/2019   | <b>EUT Type:</b><br>Tablet Device | Page 119 of 121                        |



**Plot 7-132. Line-Conducted Test Plot - GFSK ePA Ch.0 (N, with AC/DC Adapter)**

| Frequency [MHz] | Process State | QuasiPeak [dBµV] | Average [dBµV] | Limit [dBµV] | Margin [dB] | Line | PE  |
|-----------------|---------------|------------------|----------------|--------------|-------------|------|-----|
| 0.272           | FINAL         | 34.9             | —              | 61.07        | -26.15      | N    | GND |
| 0.276           | FINAL         | —                | 31.10          | 50.94        | -19.84      | N    | GND |
| 0.413           | FINAL         | —                | 28.08          | 47.58        | -19.50      | N    | GND |
| 0.416           | FINAL         | 34.4             | —              | 57.54        | -23.12      | N    | GND |
| 0.555           | FINAL         | —                | 26.73          | 46.00        | -19.27      | N    | GND |
| 0.557           | FINAL         | 34.5             | —              | 56.00        | -21.48      | N    | GND |
| 0.956           | FINAL         | 41.1             | —              | 56.00        | -14.92      | N    | GND |
| 0.958           | FINAL         | —                | 32.17          | 46.00        | -13.83      | N    | GND |
| 2.801           | FINAL         | 34.1             | —              | 56.00        | -21.93      | N    | GND |
| 2.848           | FINAL         | —                | 25.57          | 46.00        | -20.43      | N    | GND |
| 6.110           | FINAL         | —                | 24.66          | 50.00        | -25.34      | N    | GND |
| 6.135           | FINAL         | 32.9             | —              | 60.00        | -27.12      | N    | GND |

**Table 7-32. Line-Conducted Test Data - GFSK ePA Ch.0 (N, with AC/DC Adapter)**

|                                         |                                               |                            |                                 |
|-----------------------------------------|-----------------------------------------------|----------------------------|---------------------------------|
| FCC ID: BCGA2124                        | <b>MEASUREMENT REPORT<br/>(CERTIFICATION)</b> |                            | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1C1811080027-08.BCG | Test Dates:<br>12/19/2018-02/07/2019          | EUT Type:<br>Tablet Device | Page 120 of 121                 |

## 8.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the **Apple Tablet Device FCC ID: BCGA2124** is in compliance with Part 15 Subpart C (15.247) of the FCC Rules and RSS-247 of the Innovation, Science and Economic Development Canada Rules.

|                                         |                                                                                                                                   |                            |                                 |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------|
| FCC ID: BCGA2124                        |  <b>MEASUREMENT REPORT<br/>(CERTIFICATION)</b> |                            | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1C1811080027-08.BCG | Test Dates:<br>12/19/2018-02/07/2019                                                                                              | EUT Type:<br>Tablet Device | Page 121 of 121                 |