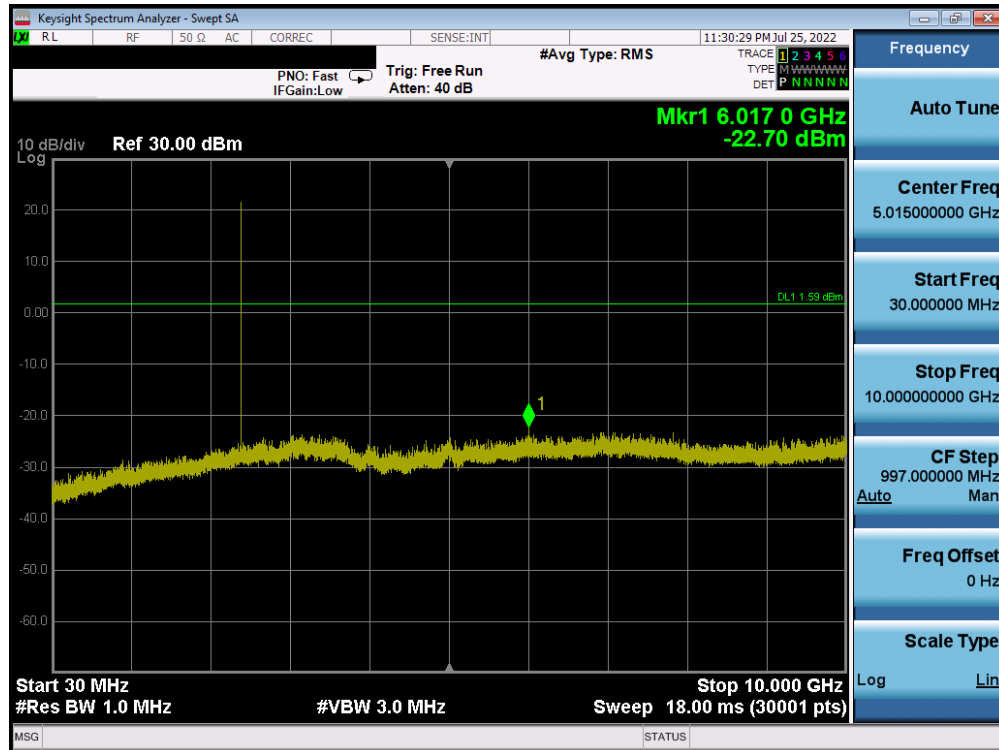
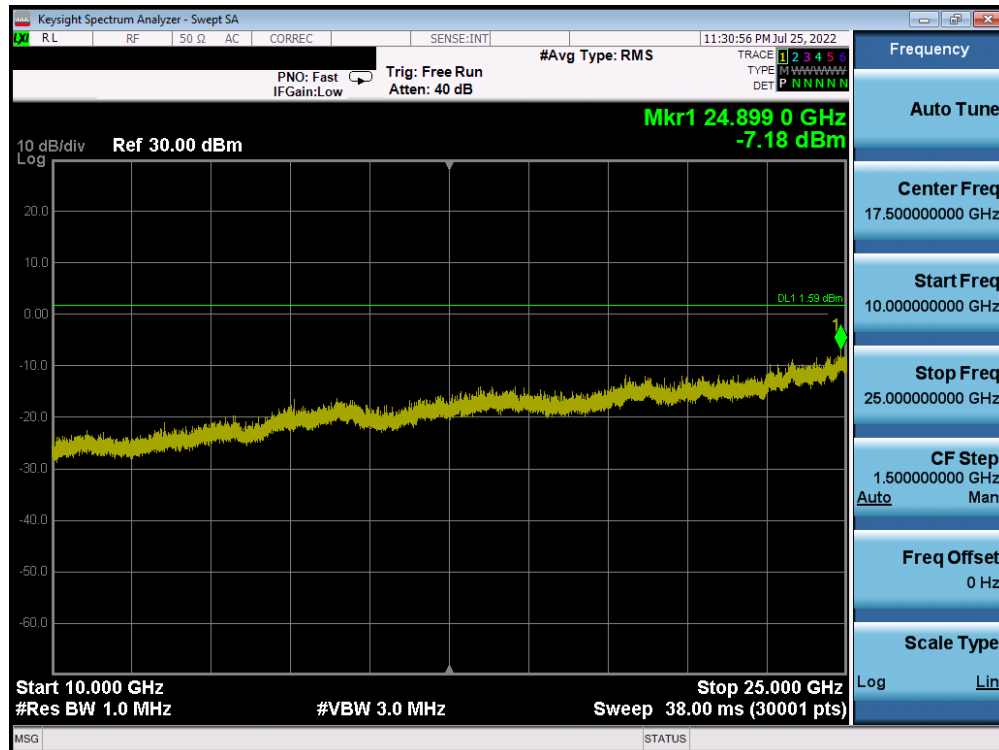


Antenna 2a



Plot 7-51. Conducted Spurious Plot Antenna 2a (Bluetooth, GFSK, ePA – 2402 MHz)

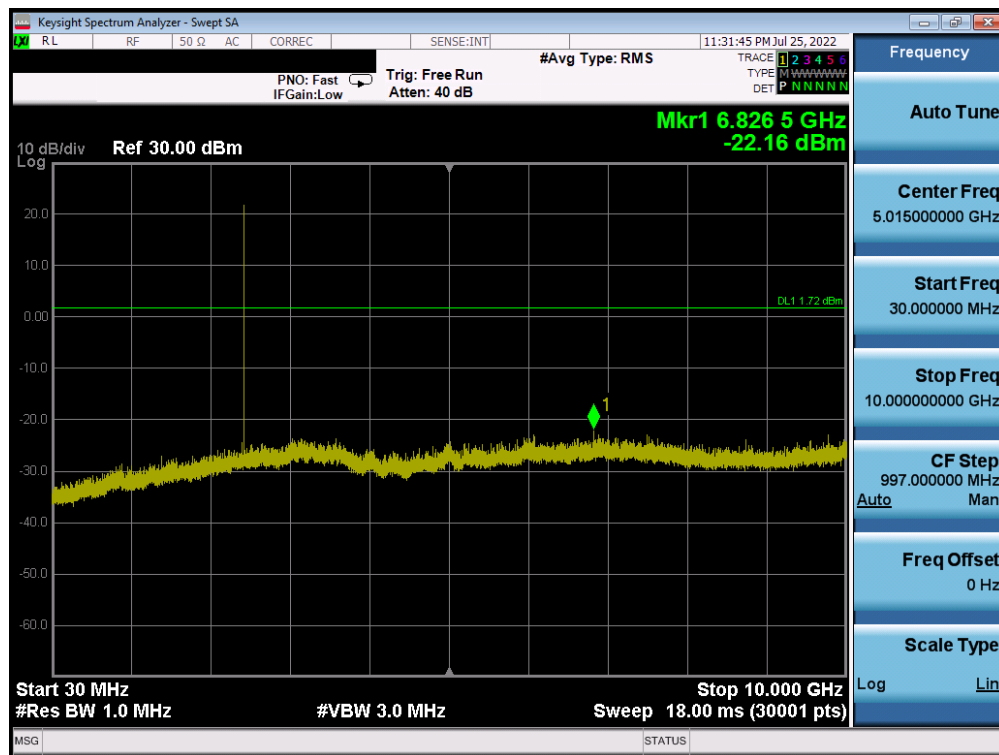


Plot 7-52. Conducted Spurious Plot Antenna 2a (Bluetooth, GFSK, ePA – 2402 MHz)

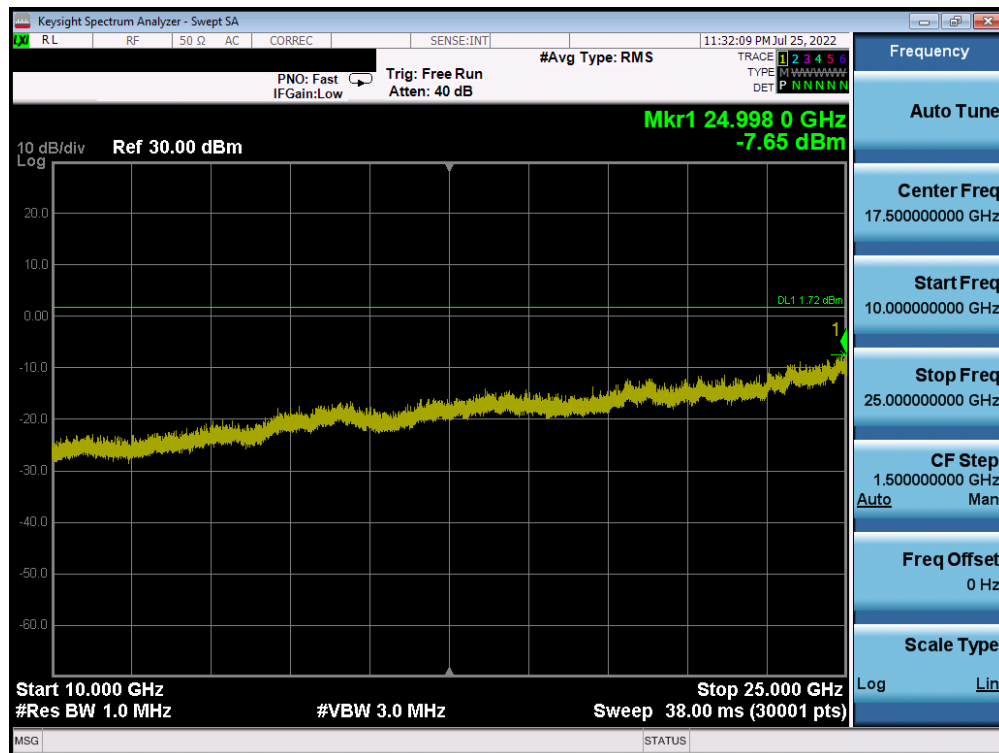
FCC ID: BCGA2435 IC: 579C-A2435		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Plot 7-53. Conducted Spurious Plot Antenna 2a (Bluetooth, GFSK, ePA – 2441 MHz)

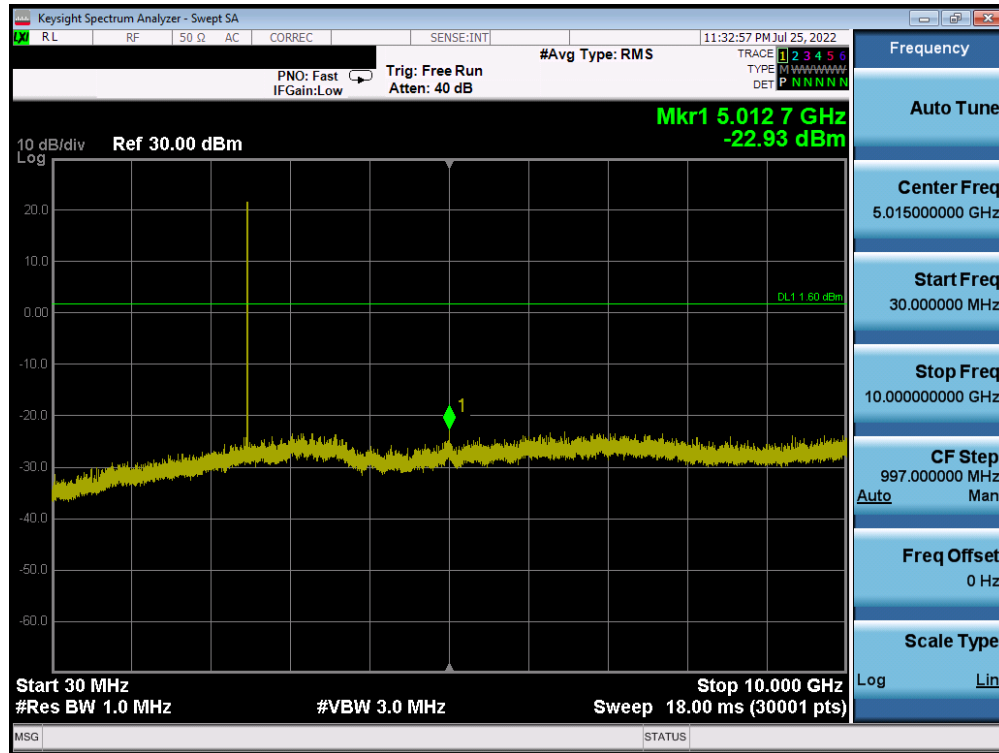


Plot 7-54. Conducted Spurious Plot Antenna 2a (Bluetooth, GFSK, ePA 2441 MHz)

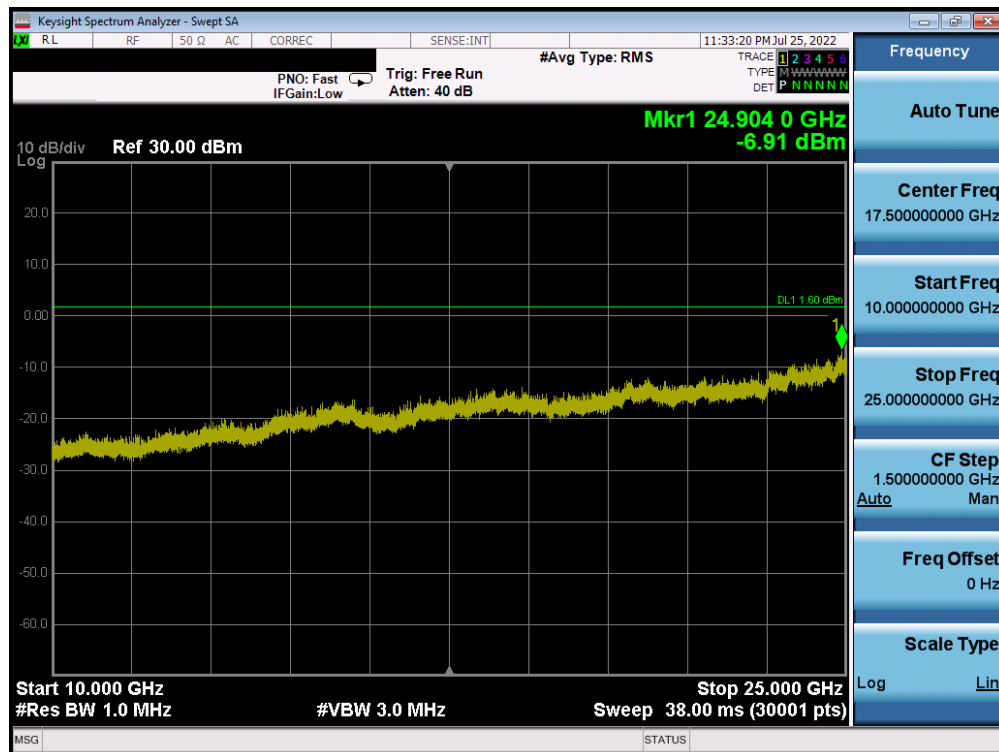
FCC ID: BCGA2435 IC: 579C-A2435		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Plot 7-55. Conducted Spurious Plot Antenna 2a (Bluetooth, GFSK, ePA – 2480 MHz)



Plot 7-56. Conducted Spurious Plot Antenna 2a (Bluetooth, GFSK, ePA – 2480 MHz)

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7.9 Radiated Spurious Emissions – 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 7 of RSS-Gen (8.10) must not exceed the limits shown in Table 7-12 per Section 15.209 and RSS-Gen (8.9).

Frequency	Field Strength [μV/m]	Measured Distance [Meters]
Above 960.0 MHz	500	3

Table 7-12. Radiated Limits

Test Procedure Used

ANSI C63.10-2013 – Section 6.6.4.3

Test Settings

Peak 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 = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

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Test Setup

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

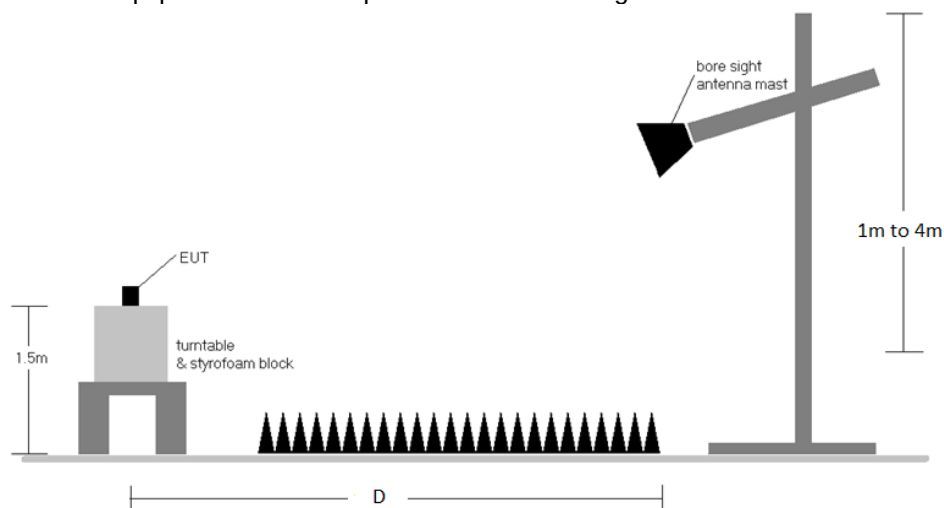


Figure 7-8. Radiated Test Setup >1GHz

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 7-12.
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 10th harmonic and the worst-case emissions are reported.
5. 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.
6. D is the measurement test distance and emissions 1-18GHz were measured at a 3 meters test distance while emissions above 18GHz were measured at a 1 meter test distance with the application of a distance correction factor.
7. The "-" shown in the following RSE tables are used to denote a noise floor measurement.
8. All supported modulation, antenna (including TxBF mode) and power schemes have been tested on the unit and only worst case configuration is reported.
9. Average emissions were not reported since the duty cycle correction factor was greater than 20dB.

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Sample Calculation

- Field Strength Level $_{[dB\mu V/m]} = \text{Analyzer Level }_{[dBm]} + 107 + \text{AFCL }_{[dB/m]}$
- $\text{AFCL }_{[dB/m]} = \text{Antenna Factor }_{[dB/m]} + \text{Cable Loss }_{[dB]} - \text{Preamplifier Gain }_{[dB]}$
- $\text{Margin }_{[dB]} = \text{Field Strength Level }_{[dB\mu V/m]} - \text{Limit }_{[dB\mu V/m]}$

Duty Cycle Correction Factor Calculation

- Channel hop rate = 800 hops/second (AFH Mode)
- Adjusted channel hop rate for DH5 mode = 133.33 hops/second
- Time per channel hop = $1 / 133.33 \text{ hops/second} = 7.50 \text{ ms}$
- Time to cycle through all channels = $7.50 \times 20 \text{ channels} = 150 \text{ ms}$
- Number of times transmitter hits on one channel = $100 \text{ ms} / 150 \text{ ms} = 1 \text{ time(s)}$
- Worst case dwell time = 7.5 ms
- Duty cycle correction factor = $20\log_{10}(7.5\text{ms}/100\text{ms}) = -22.5 \text{ dB}$

Average Emission Calculation

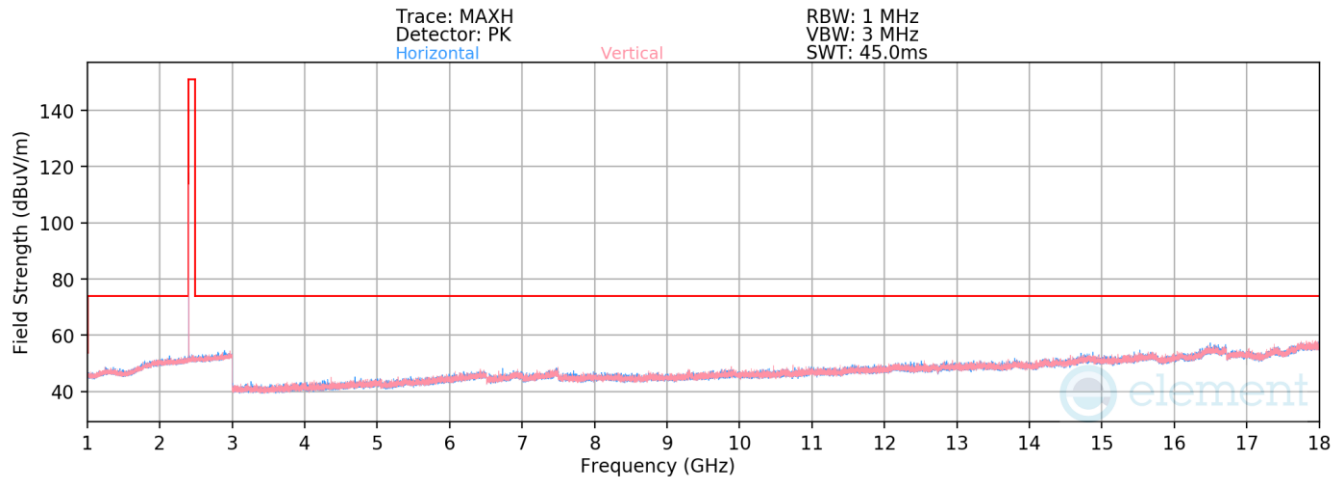
- $\text{Average Emission} = \text{Measured Peak Emissions }_{[dB\mu V/m]} - \text{Duty Cycle Correction Factor }_{[dB]}$

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7.9.1 Radiated Spurious Emission Measurements Antenna 4a (Above 1GHz)

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



Plot 7-57. Radiated Spurious Emissions 1-18GHz Antenna 4a (BT GFSK ePA – 2402 MHz)

Bluetooth Mode: GFSK
Data Rate: 1Mbps
Power Scheme: ePA
Distance of Measurements: 3 Meters
Operating Frequency: 2402MHz

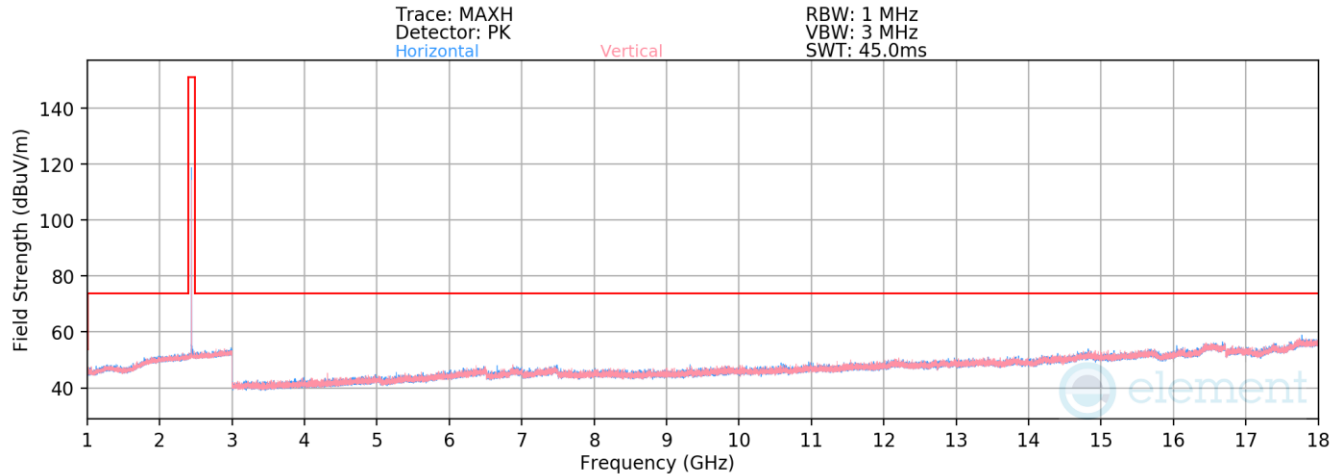
Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBuV/m]	Limit [dBuV/m]	Margin [dB]
4804.00	Peak	H	-	-	-66.22	3.90	44.68	73.98	-29.30
12010.00	Peak	H	-	-	-69.97	11.85	48.88	73.98	-25.10

Table 7-13. Radiated Measurements Antenna 4a

FCC ID: BCGA2435 IC: 579C-A2435		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Plot 7-58. Radiated Spurious Emissions 1-18GHz Antenna 4a (BT GFSK ePA – 2441 MHz)

Bluetooth Mode: GFSK
Data Rate: 1Mbps
Power Scheme: ePA
Distance of Measurements: 3 Meters
Operating Frequency: 2441MHz

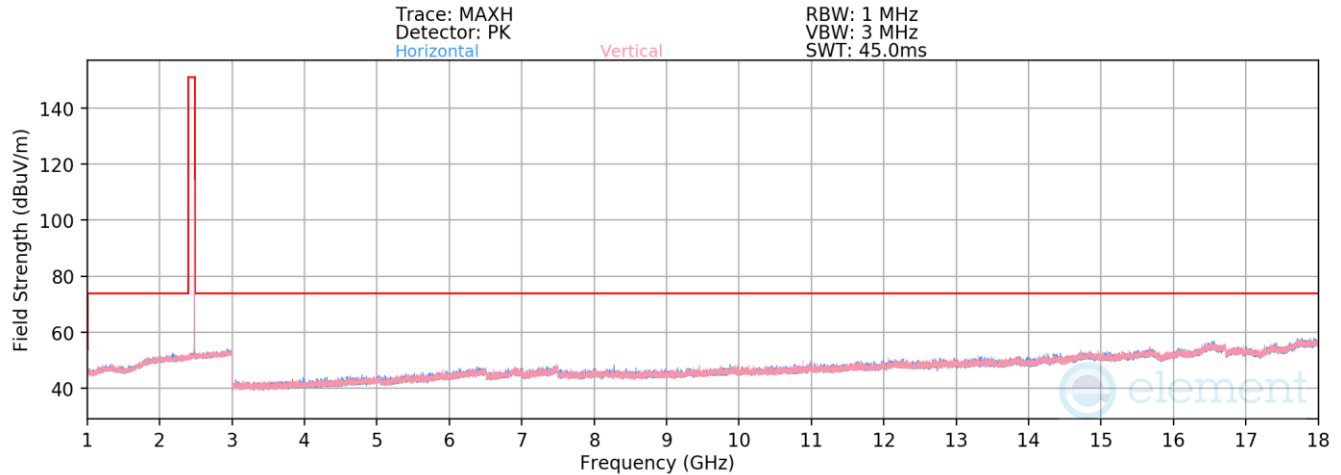
Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBuV/m]	Limit [dBuV/m]	Margin [dB]
4882.00	Peak	H	-	-	-66.89	4.03	44.14	73.98	-29.84
7323.00	Peak	H	-	-	-68.57	8.63	47.06	73.98	-26.92
12205.00	Peak	H	-	-	-69.65	12.15	49.50	73.98	-24.48

Table 7-14. Radiated Measurements Antenna 4a

FCC ID: BCGA2435 IC: 579C-A2435		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Plot 7-59. Radiated Spurious Emissions 1-18GHz Antenna 4a (BT GFSK ePA – 2480 MHz)

Bluetooth Mode: GFSK
Data Rate: 1Mbps
Power Scheme ePA
Distance of Measurements: 3 Meters
Operating Frequency: 2480MHz

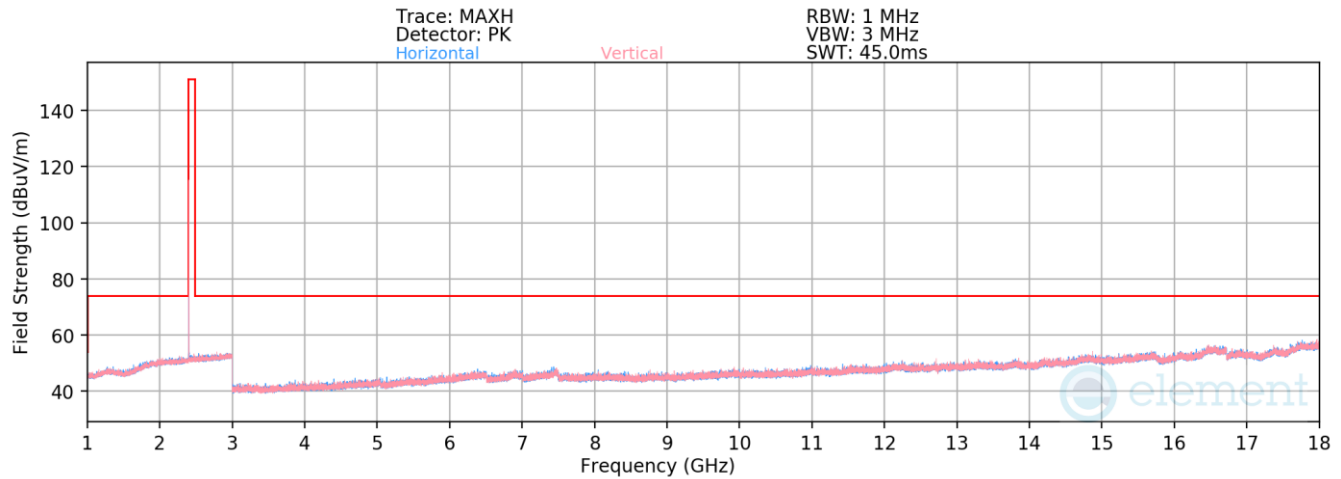
Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBuV/m]	Limit [dBuV/m]	Margin [dB]
4960.00	Peak	H	102	158	-65.23	4.38	46.15	73.98	-27.83
7440.00	Peak	H	-	-	-67.75	8.72	47.97	73.98	-26.01
12400.00	Peak	H	-	-	-69.70	12.36	49.66	73.98	-24.32

Table 7-15. Radiated Measurements Antenna 4a

FCC ID: BCGA2435 IC: 579C-A2435		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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7.9.2 Radiated Spurious Emission Measurements Antenna 2a (Above 1GHz)

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



Plot 7-60. Radiated Spurious Emissions 1-18GHz Antenna 2a (BT GFSK ePA – 2402 MHz)

Bluetooth Mode: GFSK
Data Rate: 1Mbps
Power Scheme: ePA
Distance of Measurements: 3 Meters
Operating Frequency: 2402MHz

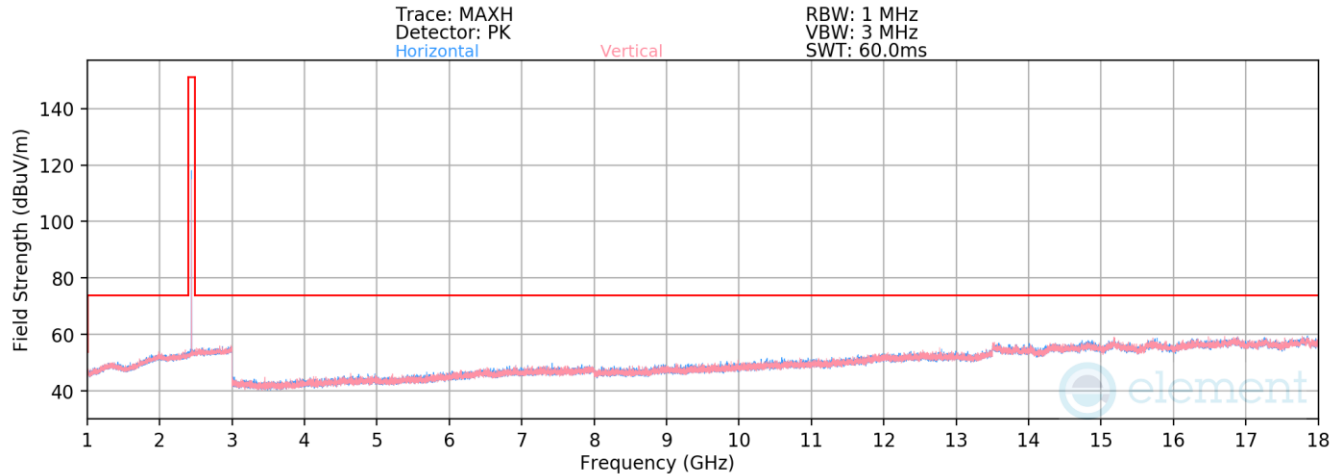
Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBuV/m]	Limit [dBuV/m]	Margin [dB]
4804.00	Peak	H	-	-	-67.30	3.90	43.60	73.98	-30.38
12010.00	Peak	H	-	-	-70.15	11.85	48.70	73.98	-25.28

Table 7-16. Radiated Measurements Antenna 2a

FCC ID: BCGA2435 IC: 579C-A2435		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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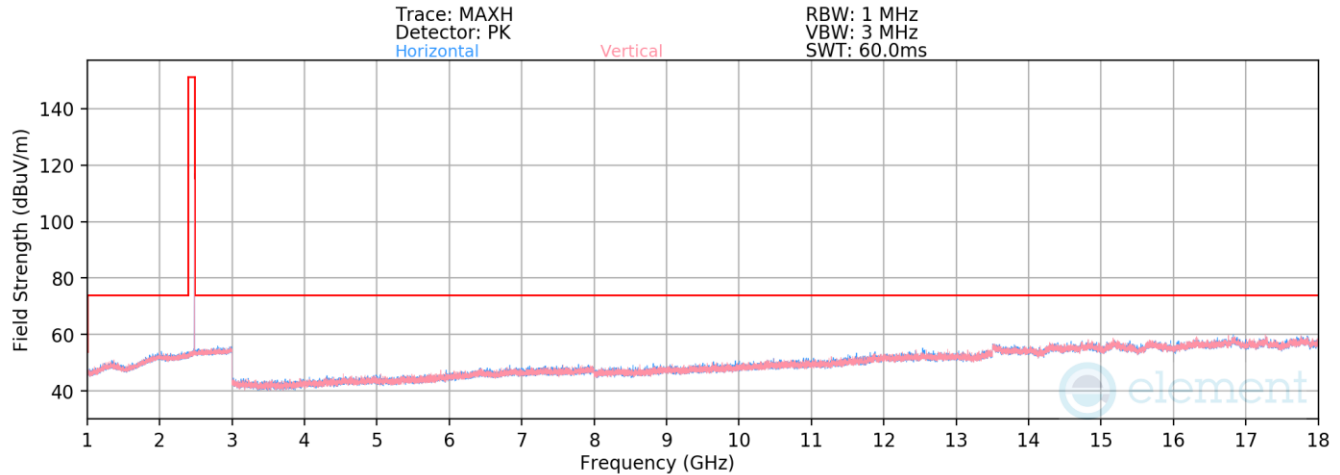
Plot 7-61. Radiated Spurious Emissions 1-18GHz Antenna 2a (BT GFSK ePA – 2441 MHz)

Bluetooth Mode: GFSK
Data Rate: 1Mbps
Power Scheme: ePA
Distance of Measurements: 3 Meters
Operating Frequency: 2441MHz

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBuV/m]	Limit [dBuV/m]	Margin [dB]
4882.00	Peak	H	-	-	-66.74	4.03	44.29	73.98	-29.69
7323.00	Peak	H	-	-	-68.64	8.63	46.99	73.98	-26.99
12205.00	Peak	H	-	-	-70.03	12.15	49.12	73.98	-24.86

Table 7-17. Radiated Measurements Antenna 2a

FCC ID: BCGA2435 IC: 579C-A2435		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Plot 7-62. Radiated Spurious Emissions 1-18GHz Antenna 2a (BT GFSK ePA – 2480 MHz)

Bluetooth Mode: GFSK
Data Rate: 1Mbps
Power Scheme: ePA
Distance of Measurements: 3 Meters
Operating Frequency: 2480MHz

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBuV/m]	Limit [dBuV/m]	Margin [dB]
4960.00	Peak	H	102	337	-66.62	4.38	44.76	73.98	-29.22
7440.00	Peak	H	-	-	-68.13	8.72	47.59	73.98	-26.39
12400.00	Peak	H	-	-	-70.17	12.36	49.19	73.98	-24.79

Table 7-18. Radiated Measurements Antenna 2a

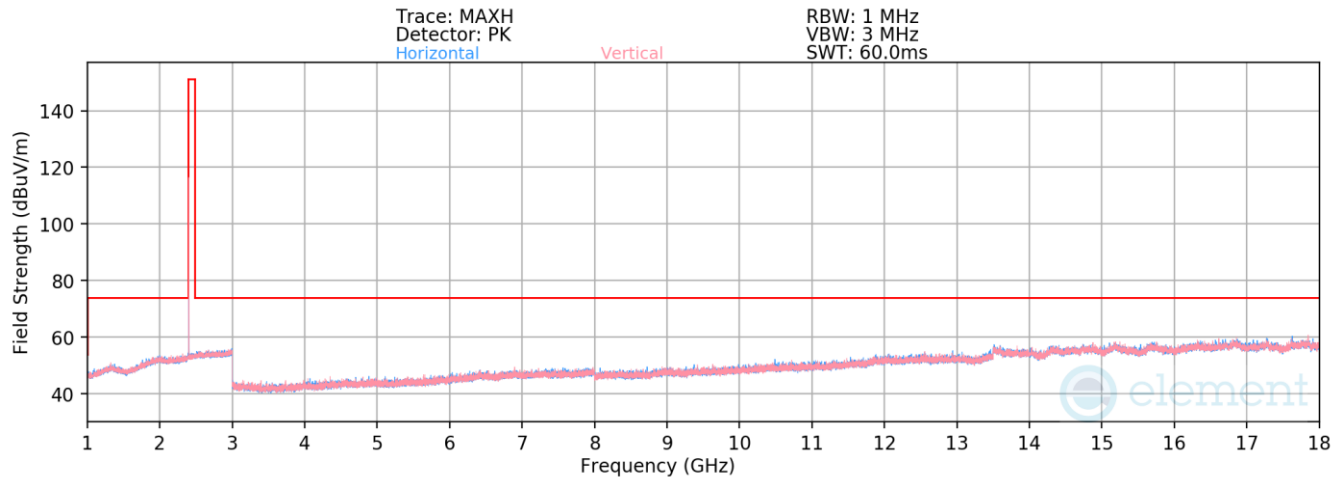
FCC ID: BCGA2435 IC: 579C-A2435		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1C2205090025-15.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device	Page 68 of 91

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7.9.3 Radiated Spurious Emission Measurements Tx BF (Above 1GHz)

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



Plot 7-63. Radiated Spurious Emissions 1-18GHz TxBF, 2.4GHz (BT GFSK ePA – 2402 MHz)

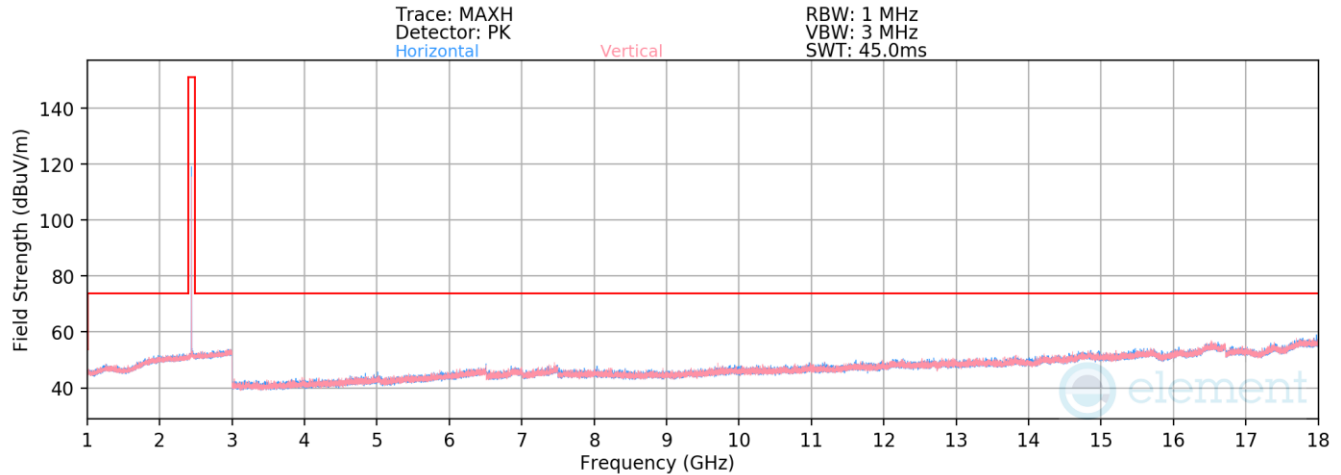
Bluetooth Mode: GFSK
Data Rate: 1Mbps
Power Scheme ePA
Distance of Measurements: 3 Meters
Operating Frequency: 2402MHz

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBuV/m]	Limit [dBuV/m]	Margin [dB]
4804.00	Peak	H	-	-	-67.03	3.90	43.87	73.98	-30.11
12010.00	Peak	H	-	-	-70.17	11.85	48.68	73.98	-25.30

Table 7-19. Radiated Measurements TxBF, 2.4GHz

FCC ID: BCGA2435 IC: 579C-A2435		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Plot 7-64. Radiated Spurious Emissions 1-18GHz TxBF, 2.4GHz (BT GFSK ePA – 2441 MHz)

Bluetooth Mode: GFSK
Data Rate: 1Mbps
Power Scheme ePA
Distance of Measurements: 3 Meters
Operating Frequency: 2441MHz

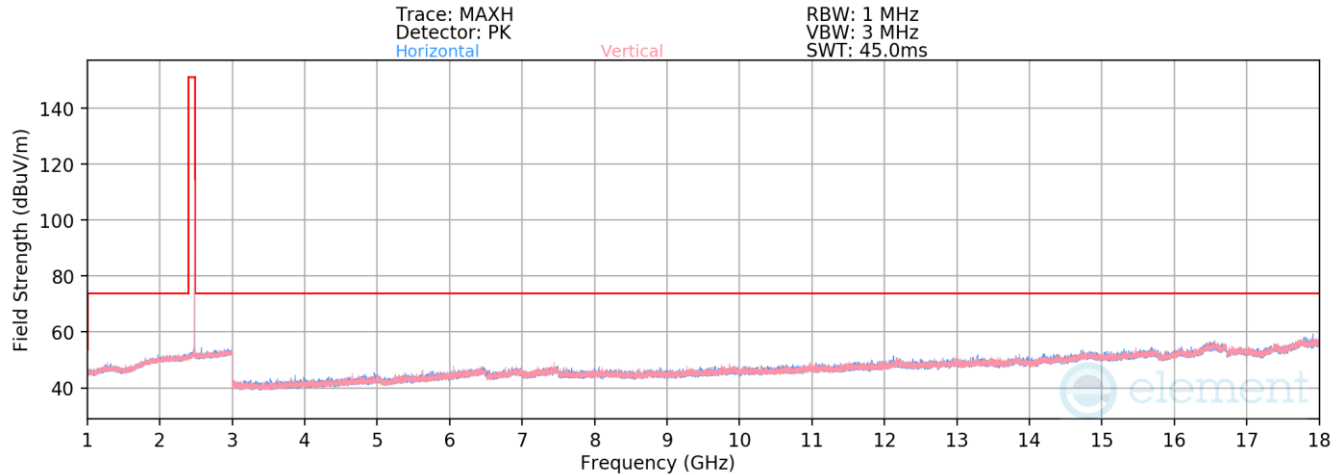
Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBuV/m]	Limit [dBuV/m]	Margin [dB]
4882.00	Peak	H	-	-	-66.57	4.03	44.46	73.98	-29.52
7323.00	Peak	H	-	-	-67.82	8.63	47.81	73.98	-26.17
12205.00	Peak	H	-	-	-69.27	12.15	49.88	73.98	-24.10

Table 7-20. Radiated Measurements TxBF, 2.4GHz

FCC ID: BCGA2435 IC: 579C-A2435		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Plot 7-65. Radiated Spurious Emissions 1-18GHz TxBF (BT GFSK ePA – 2480 MHz)

Bluetooth Mode: GFSK
Data Rate: 1Mbps
Power Scheme ePA
Distance of Measurements: 3 Meters
Operating Frequency: 2480MHz

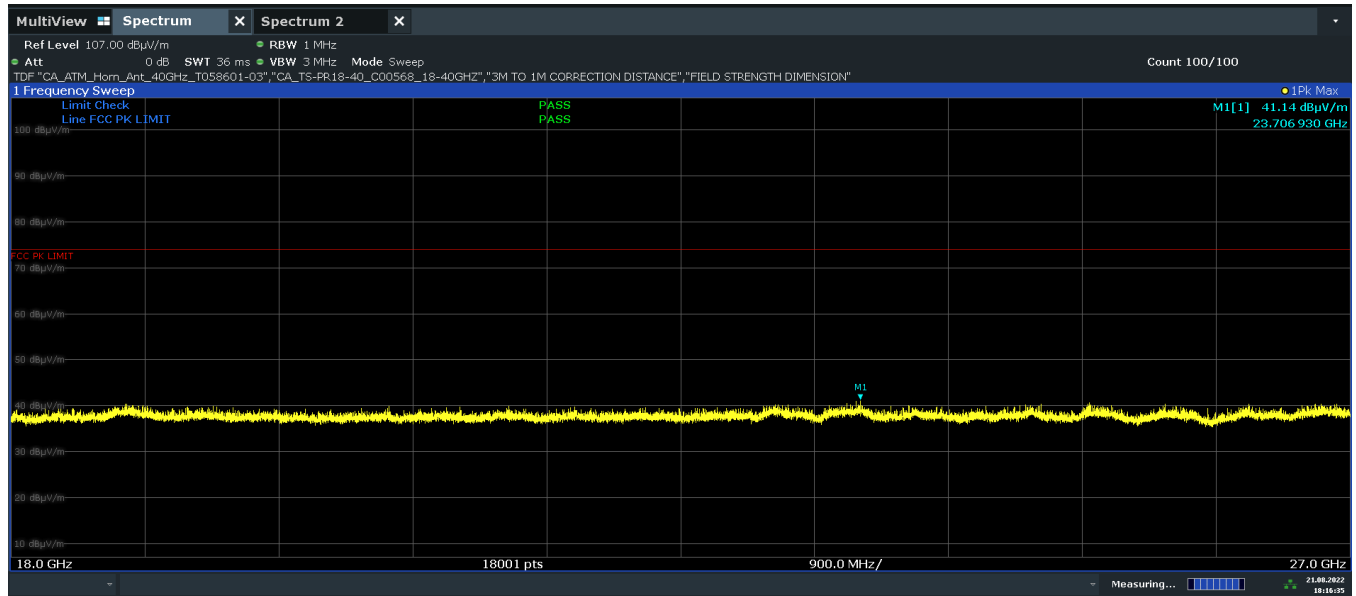
Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBuV/m]	Limit [dBuV/m]	Margin [dB]
4960.00	Peak	H	-	-	-66.99	4.38	44.39	73.98	-29.59
7440.00	Peak	H	-	-	-68.50	8.72	47.22	73.98	-26.76
12400.00	Peak	H	-	-	-69.86	12.36	49.50	73.98	-24.48

Table 7-21. Radiated Measurements TxBF, 2.4GHz

FCC ID: BCGA2435 IC: 579C-A2435		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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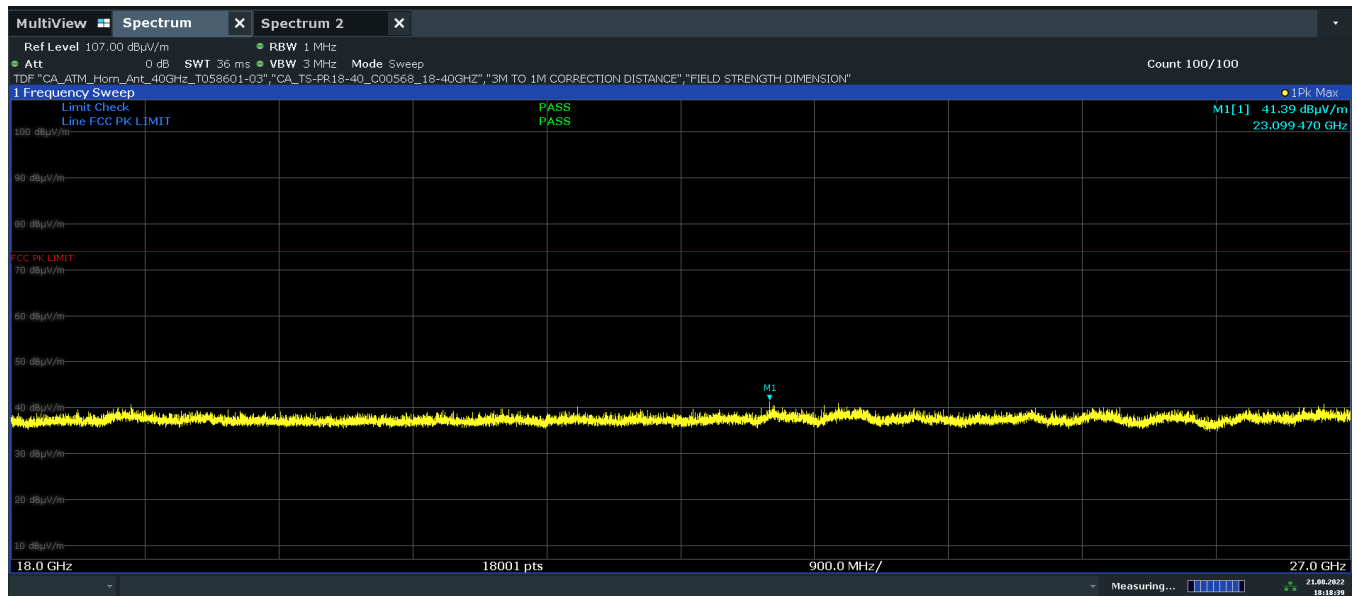
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10:16:36 21.08.2022

Plot 7-66. Radiated Spurious Emissions Above 18GHz TxBF (BT GFSK – 2480 MHz, Pol H)



10:18:40 21.08.2022

Plot 7-67. Radiated Spurious Emissions Above 18GHz TxBF (BT GFSK – 2480 MHz, Pol V)

FCC ID: BCGA2435 IC: 579C-A2435		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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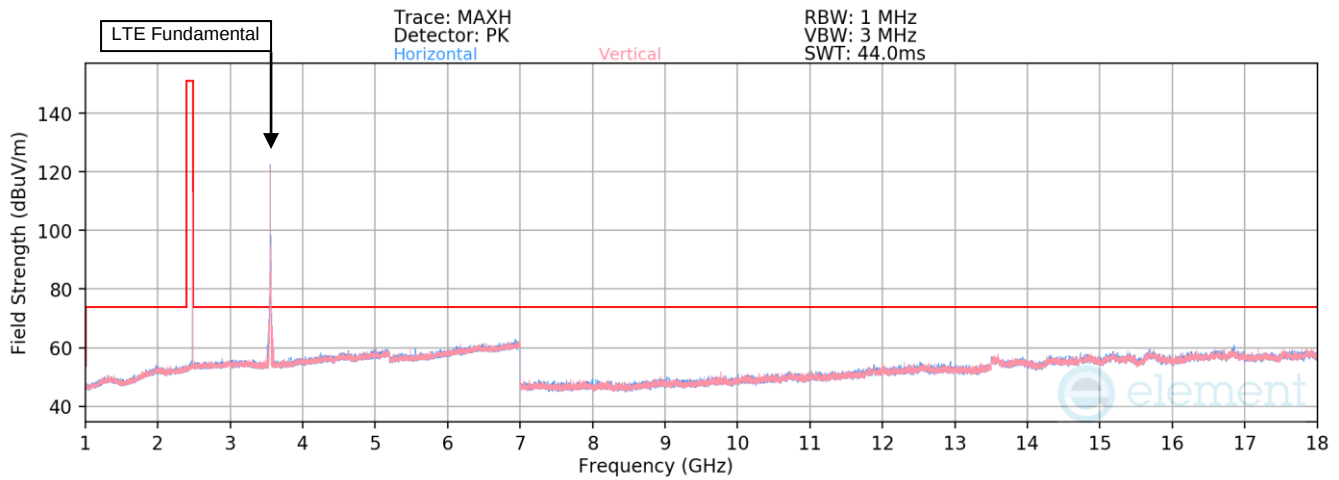
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7.9.4 Simultaneous Tx Radiated Spurious Emission Measurements

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

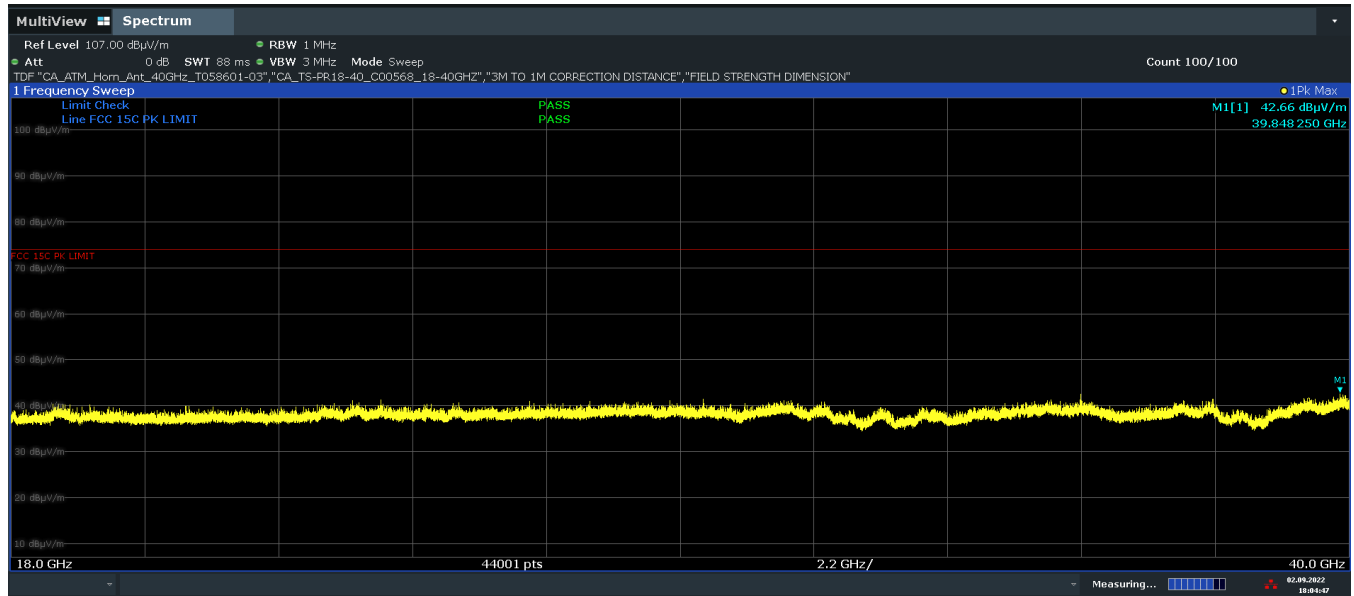
Description	Bluetooth	LTE
Antenna	2a	2a
Channel	79	55340
Operating Frequency (MHz)	2480	3560
Mode/Modulation	GFSK ePA	QPSK/1RB/20MHz



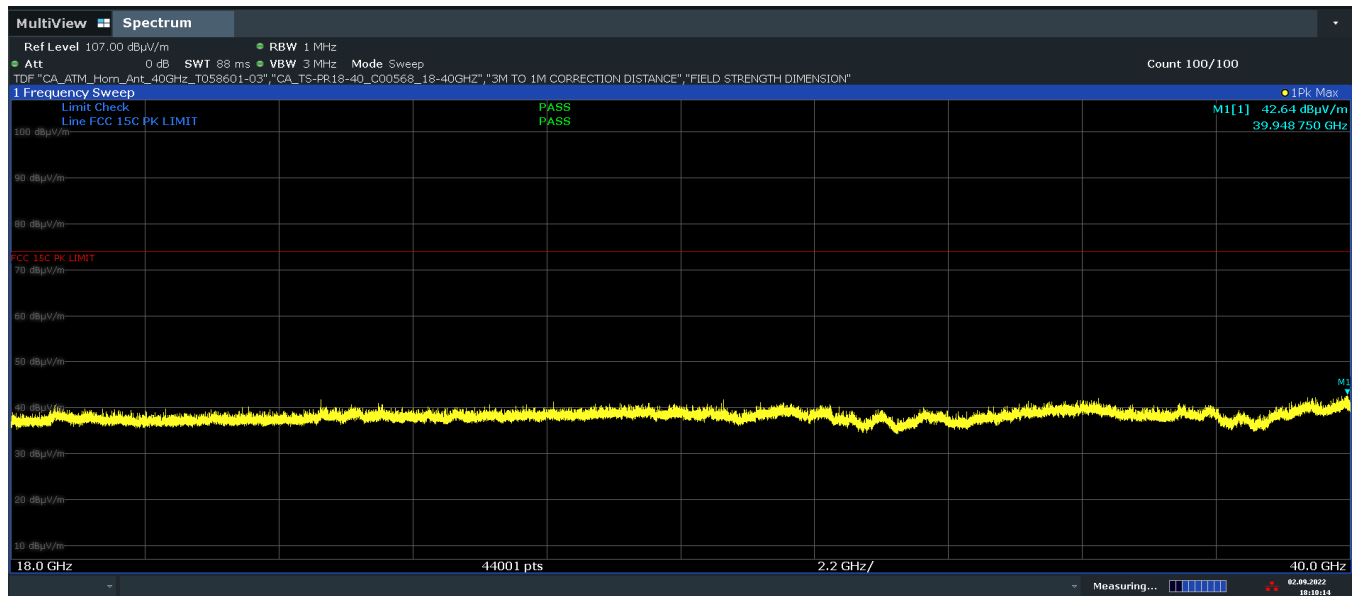
Plot 7-68. Radiated Spurious Emissions - Simultaneous Transmission 1-18GHz

FCC ID: BCGA2435 IC: 579C-A2435		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Plot 7-69. Radiated Spurious Emissions - Simultaneous Transmission 18GHz - 40GHz Pol H



Plot 7-70. Radiated Spurious Emissions - Simultaneous Transmission 18GHz - 40GHz Pol V

FCC ID: BCGA2435 IC: 579C-A2435		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm/MHz]	Limit [dBm/MHz]	Margin [dB]
7102.00	V	--	--	-79.25	9.25	37.00	-58.25	-40.00	-18.25
10653.00	V	--	--	-82.33	14.52	39.19	-56.07	-40.00	-16.07
14204.00	V	--	--	-81.16	18.50	44.34	-50.91	-40.00	-10.91
17755.00	V	--	--	-83.24	22.50	46.26	-49.00	-40.00	-9.00
1409.00*	V	--	--	-74.64	6.64	39.00	-56.25	-40.00	-16.25
4922.00*	V	--	--	-77.10	13.84	43.74	-51.52	-40.00	-11.52

Table 7-22. LTE Harmonics and Intermodulations (*) Emissions Measurements in Simultaneous Transmission Mode

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	Peak	-	-	-	-66.44	14.00	54.56	73.98	-19.41
7440.00	Peak	-	-	-	-69.35	9.50	47.15	73.98	-26.83
12400.00	Peak	-	-	-	-73.33	17.45	51.12	73.98	-22.86

Table 7-23. Bluetooth Harmonics Emissions Measurements in Simultaneous Transmission Mode

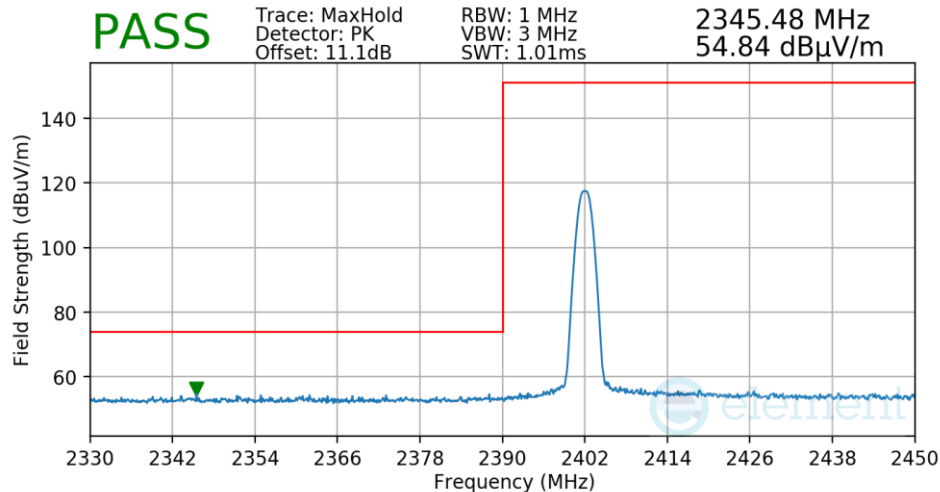
FCC ID: BCGA2435 IC: 579C-A2435		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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7.9.5 Radiated Restricted Band Edge Measurements

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

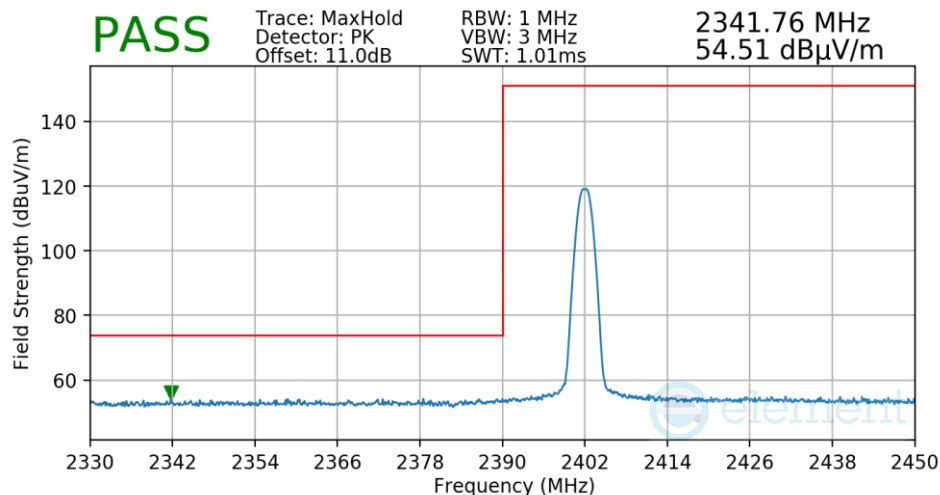
Antenna 4a

Bluetooth Mode:	GFSK
Power Scheme:	ePA
Measurement Distance:	3 Meters
Operating Frequency:	2402MHz



Plot 7-71. Radiated Restricted Lower Band Edge Measurement Antenna 4a

Bluetooth Mode:	8DPSK
Power Scheme:	ePA
Measurement Distance:	3 Meters
Operating Frequency:	2402MHz

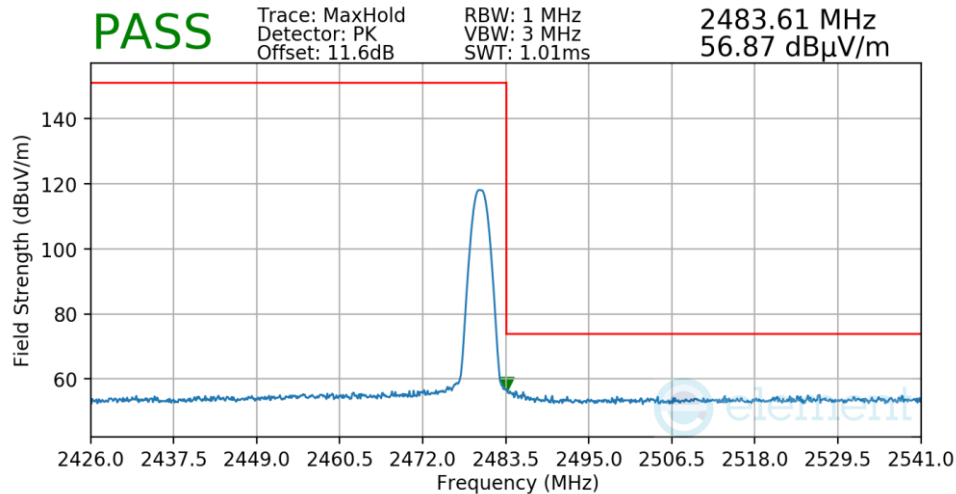


Plot 7-72. Radiated Restricted Lower Band Edge Measurement Antenna 4a

FCC ID: BCGA2435 IC: 579C-A2435		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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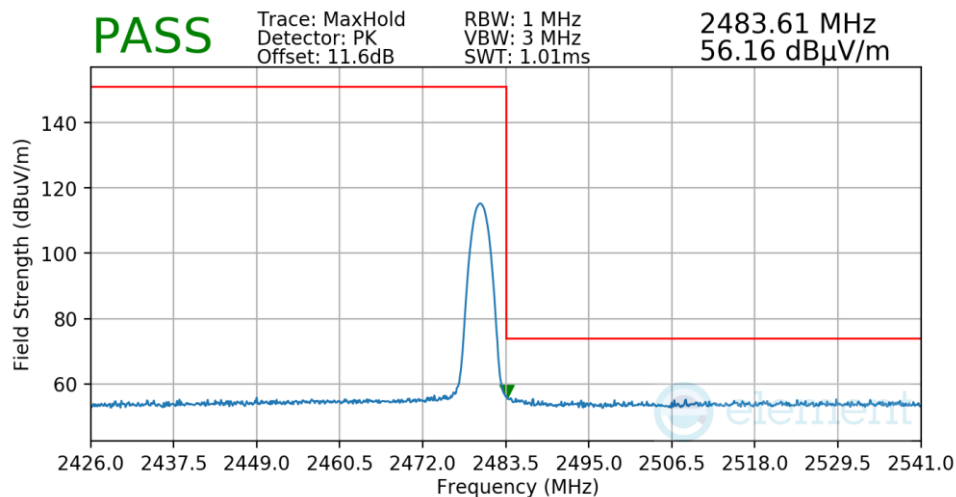
V 10.5 12/15/2021

Bluetooth Mode: GFSK
 Power Scheme: ePA
 Measurement Distance: 3 Meters
 Operating Frequency: 2480MHz



Plot 7-73. Radiated Restricted Upper Band Edge Measurement Antenna 4a

Bluetooth Mode: 8DPSK
 Power Scheme: ePA
 Measurement Distance: 3 Meters
 Operating Frequency: 2480MHz



Plot 7-74. Radiated Restricted Upper Band Edge Measurement Antenna 4a

FCC ID: BCGA2435 IC: 579C-A2435		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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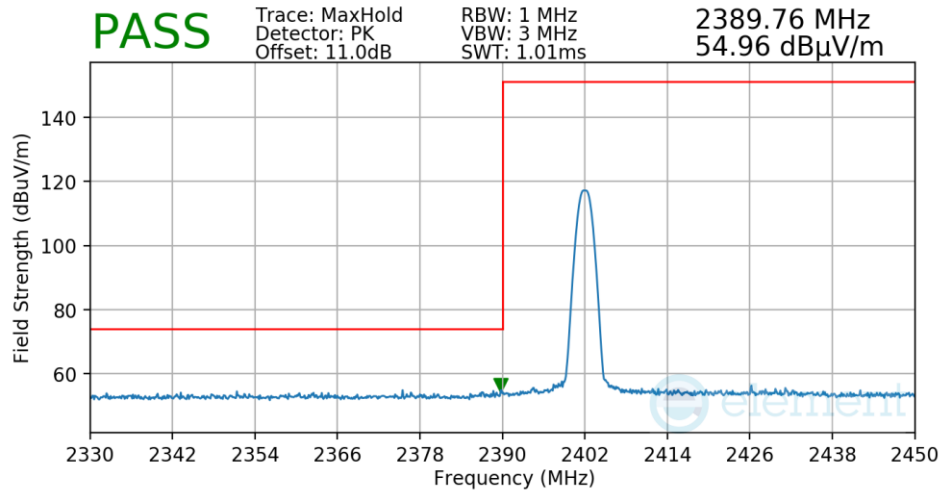
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Radiated Restricted Band Edge Measurements

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

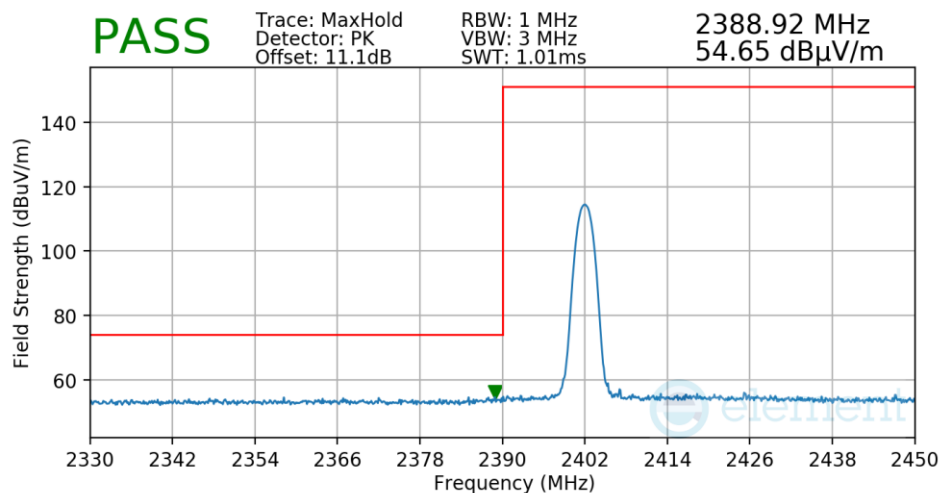
Antenna 2a

Bluetooth Mode:	GFSK
Power Scheme:	ePA
Measurement Distance:	3 Meters
Operating Frequency:	2402MHz



Plot 7-75. Radiated Restricted Lower Band Edge Measurement Antenna 2a

Bluetooth Mode:	8DPSK
Power Scheme:	ePA
Measurement Distance:	3 Meters
Operating Frequency:	2402MHz



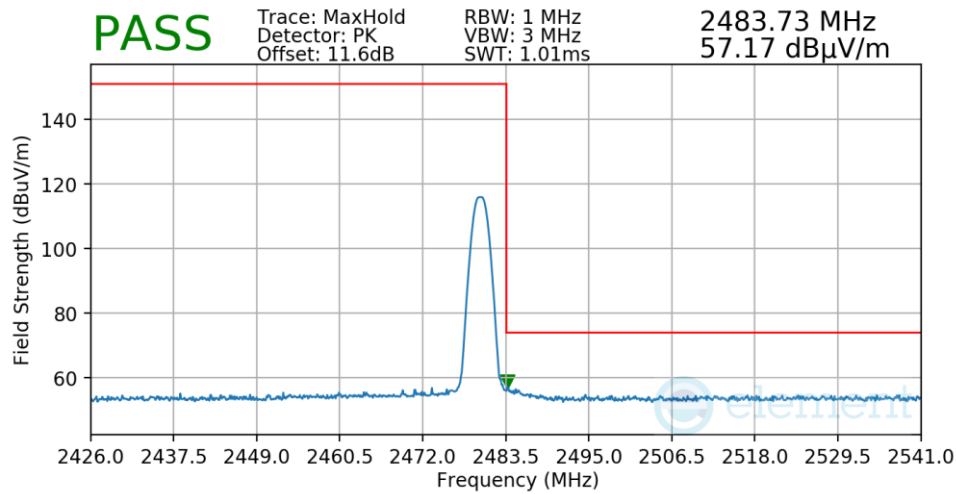
Plot 7-76. Radiated Restricted Lower Band Edge Measurement Antenna 2a

FCC ID: BCGA2435 IC: 579C-A2435		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1C2205090025-15.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device	Page 78 of 91

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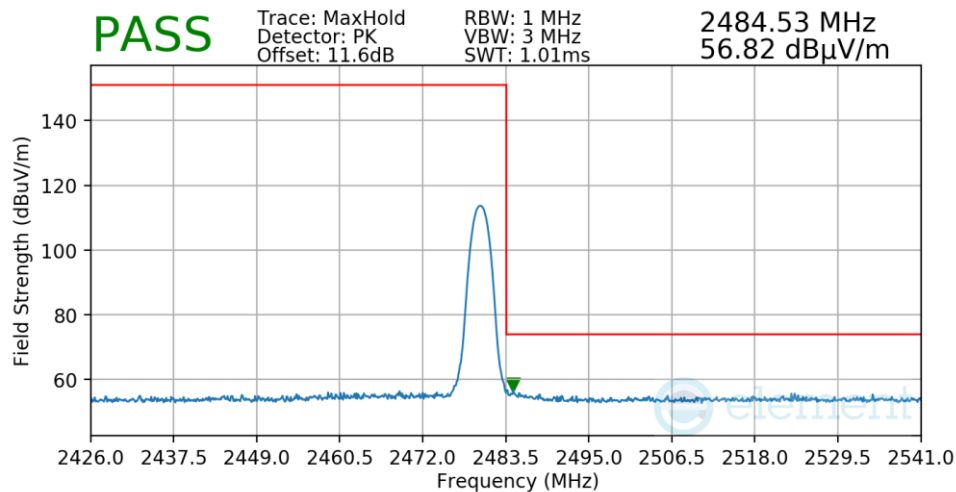
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Bluetooth Mode: GFSK
 Power Scheme: ePA
 Measurement Distance: 3 Meters
 Operating Frequency: 2480MHz



Plot 7-77. Radiated Restricted Upper Band Edge Measurement Antenna 2a

Bluetooth Mode: 8DPSK
 Power Scheme: ePA
 Measurement Distance: 3 Meters
 Operating Frequency: 2480MHz



Plot 7-78. Radiated Restricted Upper Band Edge Measurement Antenna 2a

FCC ID: BCGA2435 IC: 579C-A2435		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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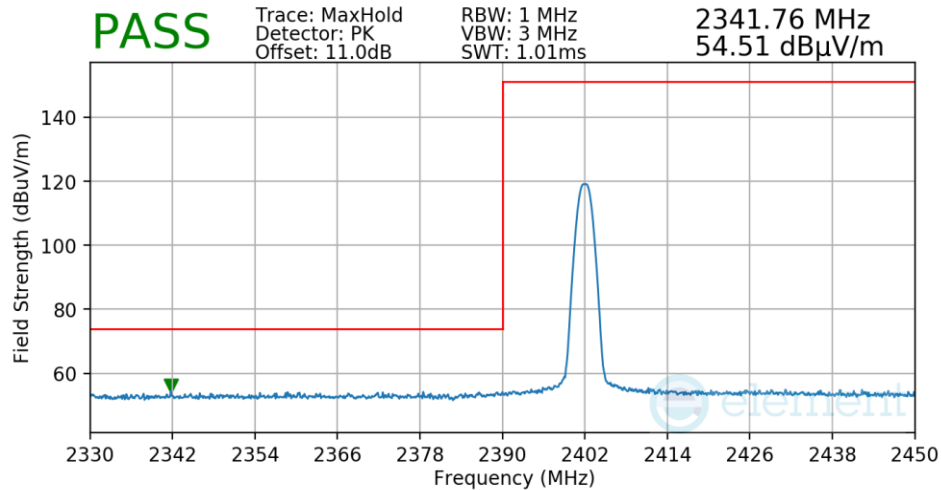
V 10.5 12/15/2021

Radiated Restricted Band Edge Measurements

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

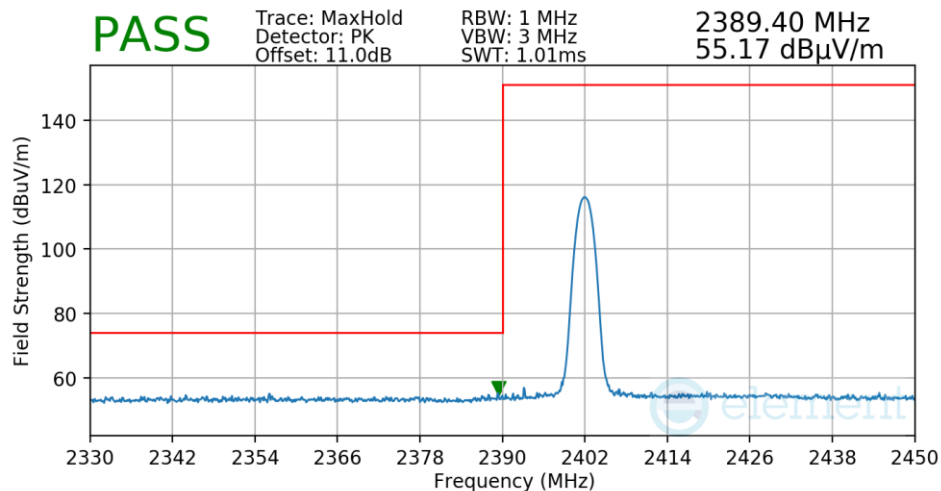
TxBF

Bluetooth Mode:	GFSK
Power Scheme:	ePA
Measurement Distance:	3 Meters
Operating Frequency:	2402MHz



Plot 7-79. Radiated Restricted Lower Band Edge Measurement TxBF, 2.4GHz

Bluetooth Mode:	8DPSK
Power Scheme:	ePA
Measurement Distance:	3 Meters
Operating Frequency:	2402MHz



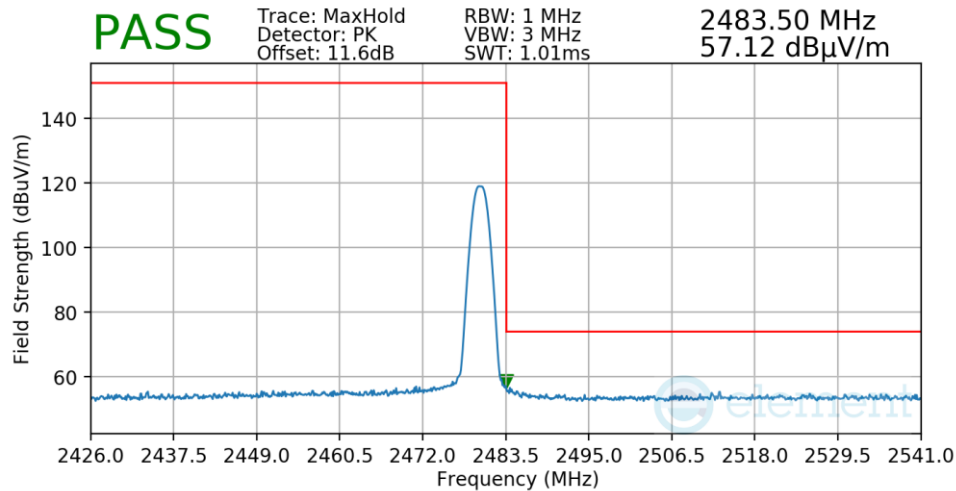
Plot 7-80. Radiated Restricted Lower Band Edge Measurement TxBF, 2.4GHz

FCC ID: BCGA2435 IC: 579C-A2435		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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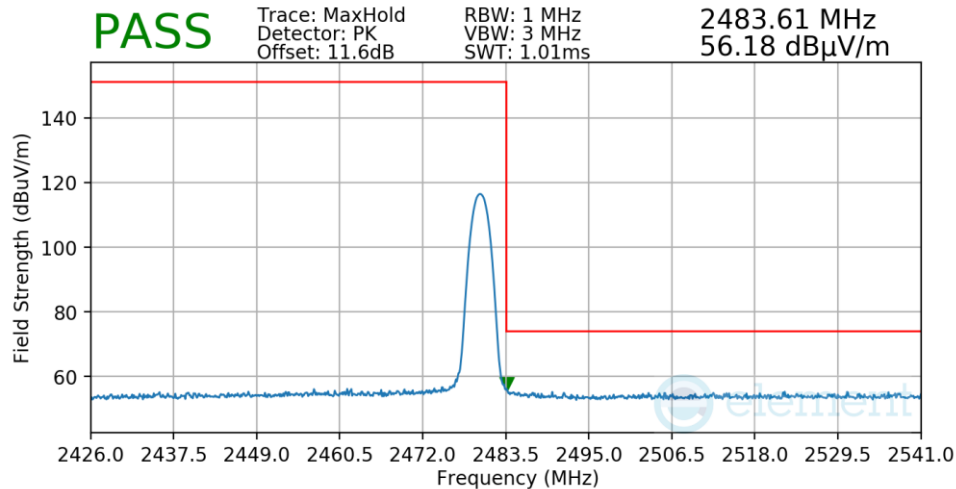
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Bluetooth Mode: GFSK
 Power Scheme: ePA
 Measurement Distance: 3 Meters
 Operating Frequency: 2480MHz



Plot 7-81. Radiated Restricted Upper Band Edge Measurement TxBF, 2.4GHz

Bluetooth Mode: 8DPSK
 Power Scheme: ePA
 Measurement Distance: 3 Meters
 Operating Frequency: 2480MHz



Plot 7-82. Radiated Restricted Upper Band Edge Measurement TxBF, 2.4GHz

FCC ID: BCGA2435 IC: 579C-A2435		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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7.10 Radiated Spurious Emissions – 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 7 of RSS-Gen (8.10) must not exceed the limits shown in Table 7-24 per Section 15.209 and RSS-Gen (8.9).

Frequency	Field Strength [μV/m]	Measured Distance [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 7-24. 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

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. VBW = 300kHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

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Test Setup

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

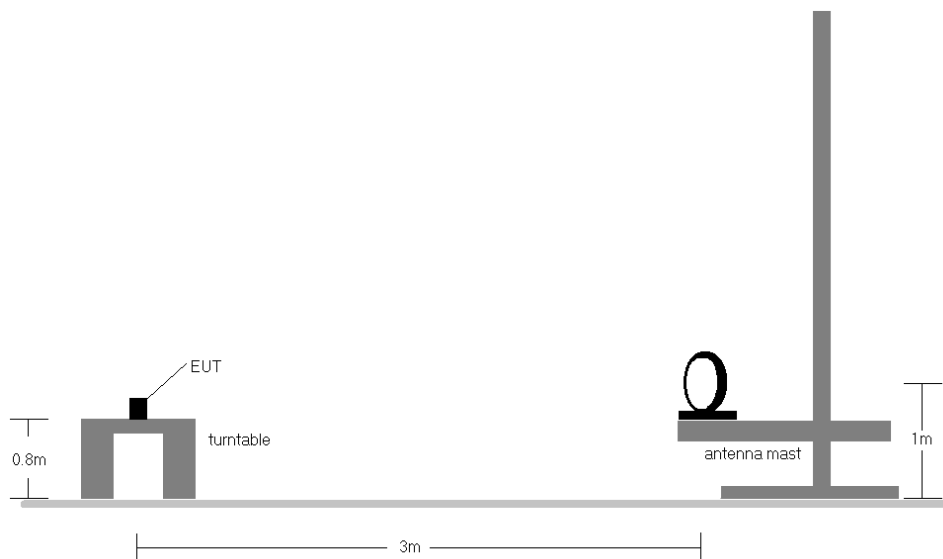


Figure 7-9. Radiated Test Setup < 30MHz

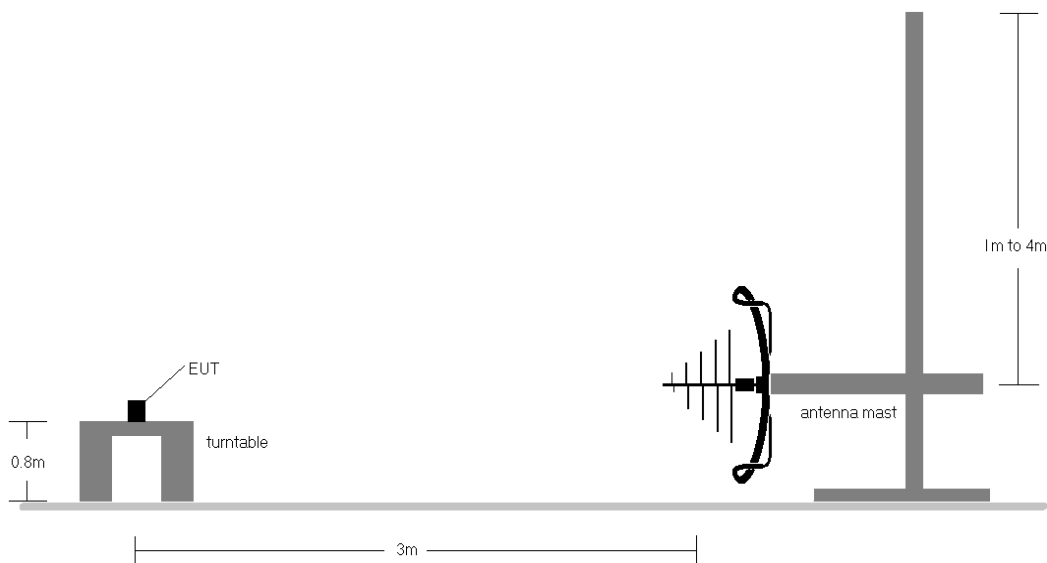


Figure 7-10. Radiated Test Setup < 1GHz

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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 7-24.
2. The broadband receive antenna is manipulated through vertical and horizontal polarizations during the tests. The EUT is manipulated through three orthogonal planes. For below 30MHz the loop antenna was positioned in 3 orthogonal planes (X front, Y side, Z top) to determine the orientation resulting in the worst case emissions.
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.
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. All supported modulation, antenna (including TxBF mode) and power schemes have been tested on the unit and only worst case configuration is reported.
10. Both configurations below were investigated, and the worst case has been reported.
 - a. EUT powered by AC/DC adaptor via USB-C cable with wire charger
 - b. EUT powered by host PC via USB-C cable with wire charger

Sample Calculations

Determining Spurious Emissions Levels

- Field Strength Level $_{[dB\mu V/m]} = \text{Analyzer Level }_{[dBm]} + 107 + \text{AFCL }_{[dB/m]}$
- $\text{AFCL }_{[dB/m]} = \text{Antenna Factor }_{[dB/m]} + \text{Cable Loss }_{[dB]} - \text{Preamplifier Gain }_{[dB]}$
- $\text{Margin }_{[dB]} = \text{Field Strength Level }_{[dB\mu V/m]} - \text{Limit }_{[dB\mu V/m]}$

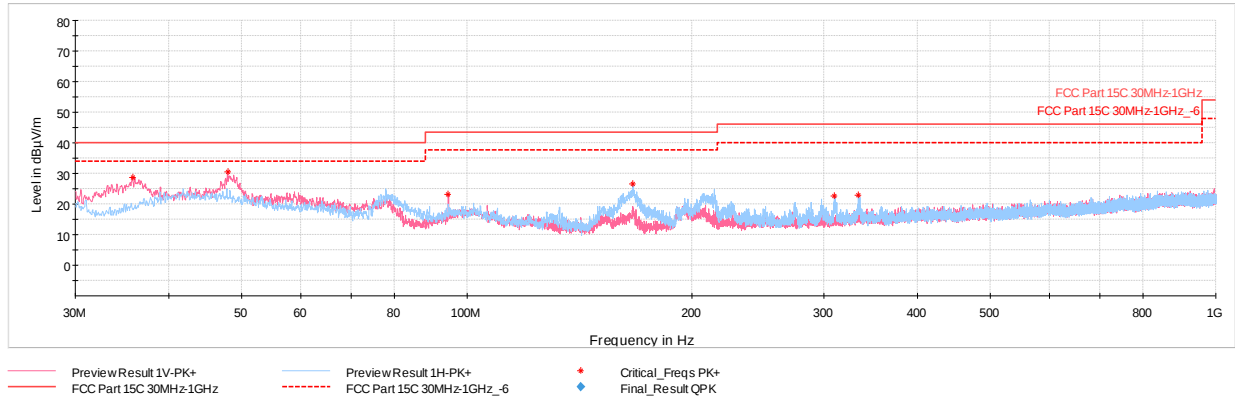
FCC ID: BCGA2435 IC: 579C-A2435		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Radiated Spurious Emissions Measurements (Below 1GHz)

§15.209; RSS-Gen [8.9]

TxBF



Plot 7-83. Radiated Spurious Emissions Below 1GHz TxBF, 2.4GHz (GFSK ePA – 2402 MHz, with AC/DC Adapter)

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]
35.77	Max Peak	V	100	253	-59.82	-18.49	28.69	40.00	-11.31
47.95	Max Peak	V	100	290	-60.92	-15.44	30.64	40.00	-9.36
94.46	Max Peak	V	100	11	-64.70	-19.06	23.24	43.52	-20.28
166.38	Max Peak	H	200	211	-60.27	-20.20	26.53	43.52	-16.99
309.31	Max Peak	H	100	347	-69.42	-15.03	22.55	46.02	-23.47
333.27	Max Peak	H	100	162	-69.82	-14.23	22.95	46.02	-23.07

Table 7-25. Radiated Spurious Emissions Below 1GHz TxBF, 2.4GHz (GFSK ePA – 2402 MHz with AC/DC Adapter)

FCC ID: BCGA2435 IC: 579C-A2435		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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7.11 AC Line-Conducted Emissions Measurement

§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 AC Line 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 7-26. Conducted Limits

*Decreases with the logarithm of the frequency.

Test Procedures Used

ANSI C63.10-2013, Section 6.2

Test Settings

Quasi-Peak 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 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

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Test Setup

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

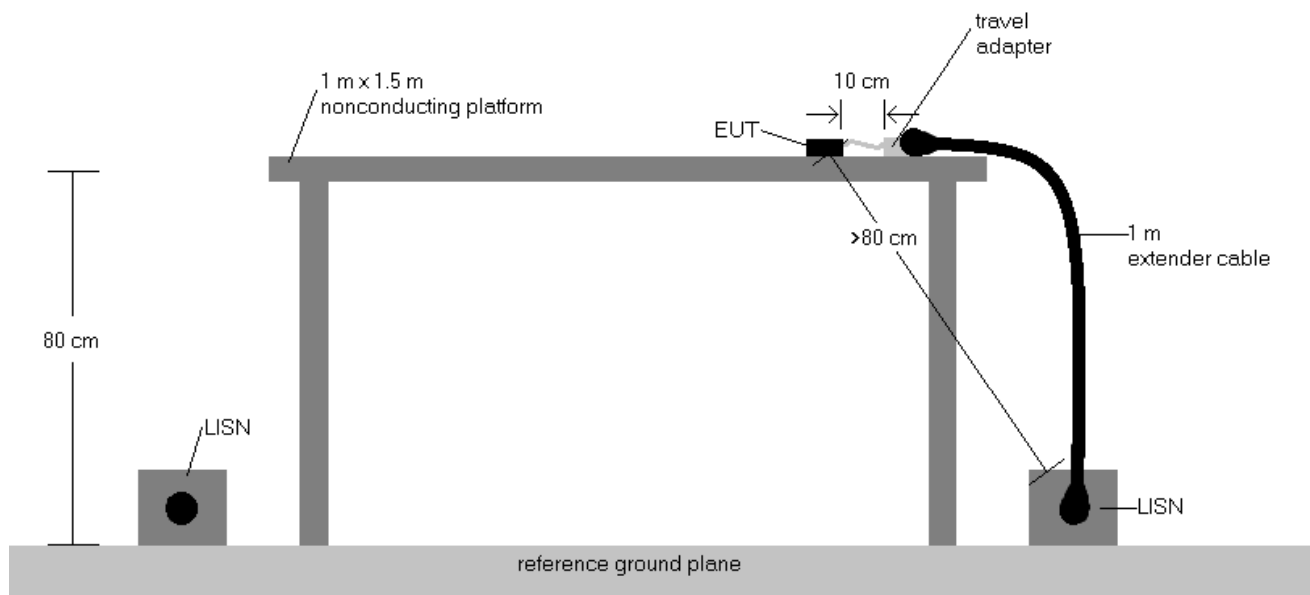


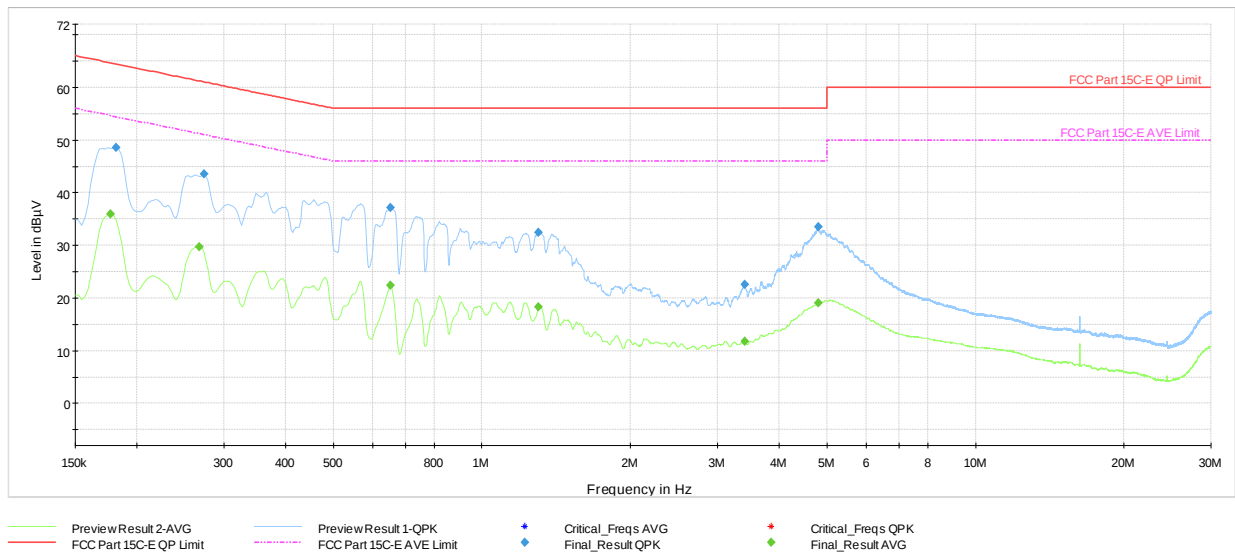
Figure 7-11. Test Instrument & Measurement Setup

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. Both configurations below were investigated, and the worst case has been reported.
 - a. EUT powered by AC/DC adaptor via USB-C cable with wire charger
 - b. EUT powered by host PC via USB-C cable with wire charger
3. The limit for an intentional radiator from 150kHz to 30MHz are specified in Part 15.207 and RSS-Gen (8.8).
4. $\text{Corr. (dB)} = \text{Cable loss (dB)} + \text{LISN insertion factor (dB)}$
5. $\text{QP/AV Level (dB}\mu\text{V)} = \text{QP/AV Analyzer/Receiver Level (dB}\mu\text{V)} + \text{Correction Factor (dB)}$
6. $\text{Margin (dB)} = \text{QP/AV Level (dB}\mu\text{V)} - \text{QP/AV Limit (dB}\mu\text{V)}$
7. Traces shown in plot are made using a quasi peak and average detectors.
8. Deviations to the Specifications: None.

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Plot 7-84. AC Line-Conducted Test Plot TxBF, 2.4GHz (L1, GFSK ePA – 2402 MHz, with AC/DC Adapter)

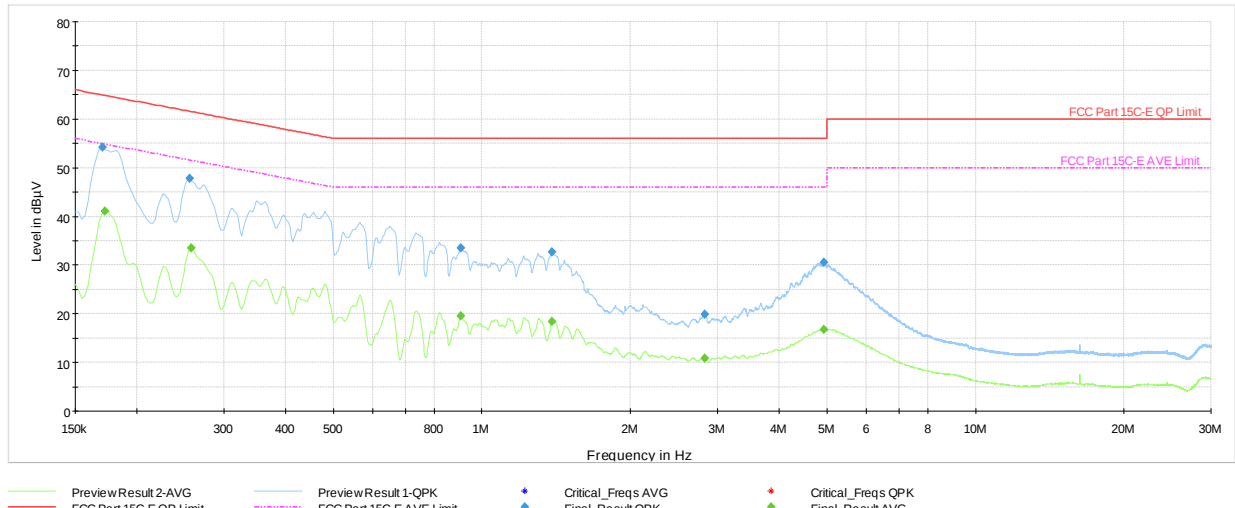
Frequency [MHz]	Process State	QuasiPeak [dBµV]	Average [dBµV]	Limit [dBµV]	Margin [dB]	Line	PE
0.177	FINAL	—	35.92	54.63	-18.71	L1	GND
0.182	FINAL	48.6	—	64.42	-15.86	L1	GND
0.267	FINAL	—	29.70	51.21	-21.51	L1	GND
0.274	FINAL	43.6	—	61.00	-17.45	L1	GND
0.652	FINAL	37.2	—	56.00	-18.84	L1	GND
0.652	FINAL	—	22.42	46.00	-23.58	L1	GND
1.302	FINAL	32.5	—	56.00	-23.50	L1	GND
1.302	FINAL	—	18.38	46.00	-27.62	L1	GND
3.404	FINAL	—	11.81	46.00	-34.19	L1	GND
3.406	FINAL	22.6	—	56.00	-33.36	L1	GND
4.796	FINAL	—	19.04	46.00	-26.96	L1	GND
4.801	FINAL	33.5	—	56.00	-22.47	L1	GND

Table 7-27. AC Line-Conducted Test Data TxBF, 2.4GHz (L1, GFSK ePA – 2402 MHz, with AC/DC Adapter)

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Plot 7-85. AC Line-Conducted Test Plot TxBF, 2.4GHz (N, GFSK ePA – 2402 MHz, with AC/DC Adapter)

Frequency [MHz]	Process State	QuasiPeak [dBμV]	Average [dBμV]	Limit [dBμV]	Margin [dB]	Line	PE
0.170	FINAL	54.3	—	64.95	-10.69	N	GND
0.173	FINAL	—	41.12	54.84	-13.72	N	GND
0.256	FINAL	47.8	—	61.57	-13.79	N	GND
0.258	FINAL	—	33.48	51.50	-18.02	N	GND
0.906	FINAL	33.5	—	56.00	-22.53	N	GND
0.906	FINAL	—	19.49	46.00	-26.51	N	GND
1.385	FINAL	32.8	—	56.00	-23.23	N	GND
1.385	FINAL	—	18.34	46.00	-27.66	N	GND
2.823	FINAL	—	10.89	46.00	-35.11	N	GND
2.825	FINAL	19.8	—	56.00	-36.17	N	GND
4.934	FINAL	—	16.72	46.00	-29.28	N	GND
4.934	FINAL	30.5	—	56.00	-25.51	N	GND

Table 7-28. AC Line-Conducted Test Data TxBF, 2.4GHz (N, GFSK ePA – 2402 MHz, with AC/DC Adapter)

FCC ID: BCGA2435 IC: 579C-A2435		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1C2205090025-15.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device	Page 89 of 91

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8.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the **Apple Tablet Device FCC ID: BCGA2435 and IC: 579C-A2435** 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: BCGA2435 IC: 579C-A2435		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1C2205090025-15.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device	Page 90 of 91

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9.0 APPENDIX A

Antenna gains provided by manufacturer.

Antenna Gains

Frequency (MHz)	Horizontal (dBi)	Vertical (dBi)
2412	0.7	0.6
2442	1.0	0.5
2472	1.6	1.7

Table 9-1. Wifi/BT 2.4GHz (Antenna 4a); Type: IFA

Frequency (MHz)	Horizontal (dBi)	Vertical (dBi)
2412	1.2	0.9
2442	1.5	0.7
2472	2.2	1.2

Table 9-2. WiFi/BT 2.4GHz (Antenna 2a); Type: IFA

FCC ID: BCGA2435 IC: 579C-A2435		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1C2205090025-15.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device	Page 91 of 91

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