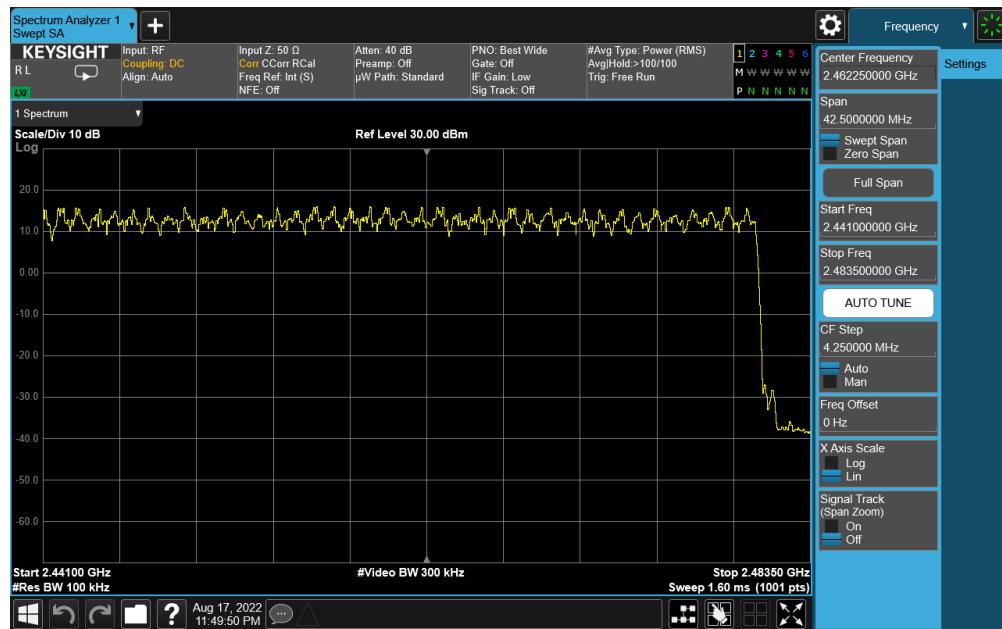


Plot 7-43. Low End Spectrum Channel Hopping Plot Antenna 2a (Bluetooth, 8DPSK, ePA, 2.4GHz)



Plot 7-44. High End Spectrum Channel Hopping Plot Antenna 2a (Bluetooth, 8DPSK, ePA, 2.4GHz)

FCC ID: BCGA2435 IC: 579C-A2435	 element	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 52 of 91

7.8 Conducted Spurious Emissions

§15.247 (d); RSS-247 [5.5]

Test Overview and Limit

Conducted out-of-band spurious emissions were investigated from 30MHz up to 25GHz to include the 10th harmonic of the fundamental transmit frequency. ***The maximum permissible out-of-band emission level is 20 dBc.***

Test Procedure Used

ANSI C63.10-2013 – Section 7.8.8

Test Settings

1. Start frequency was set to 30MHz and stop frequency was set to 25GHz for the 2400-2483.5 MHz band (separated into two plots per channel)
2. RBW = 1MHz* (See note below)
3. VBW = 3MHz
4. Detector = Peak
5. Trace mode = max hold
6. Sweep time = auto couple
7. The trace was allowed to stabilize

Test Setup

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



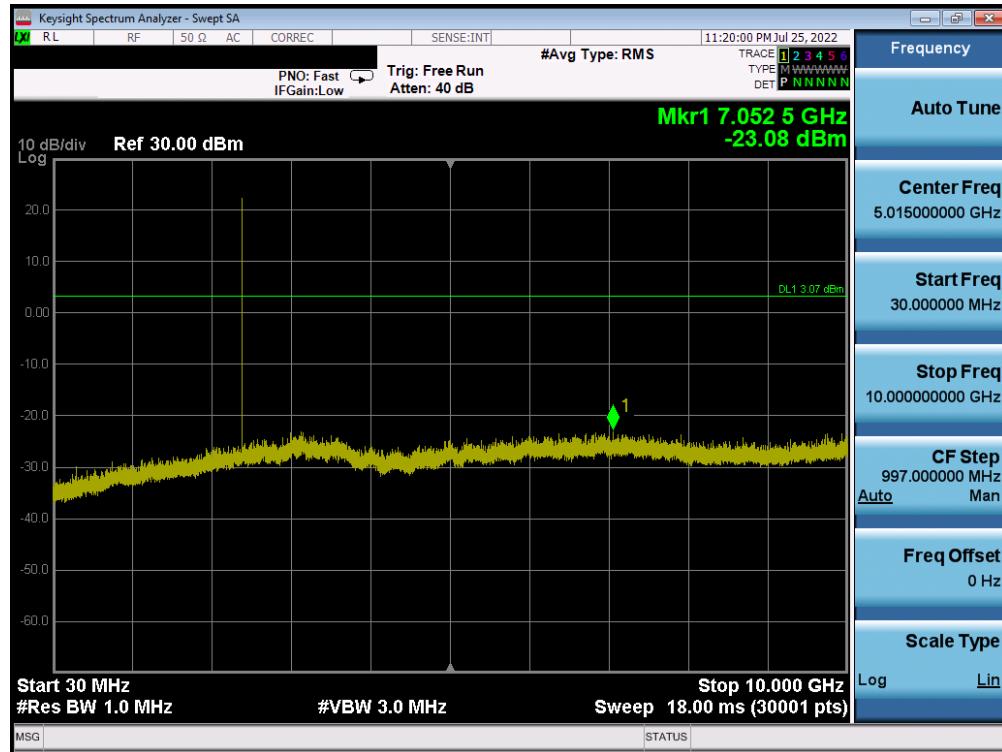
Figure 7-7. Test Instrument & Measurement Setup

Test Notes

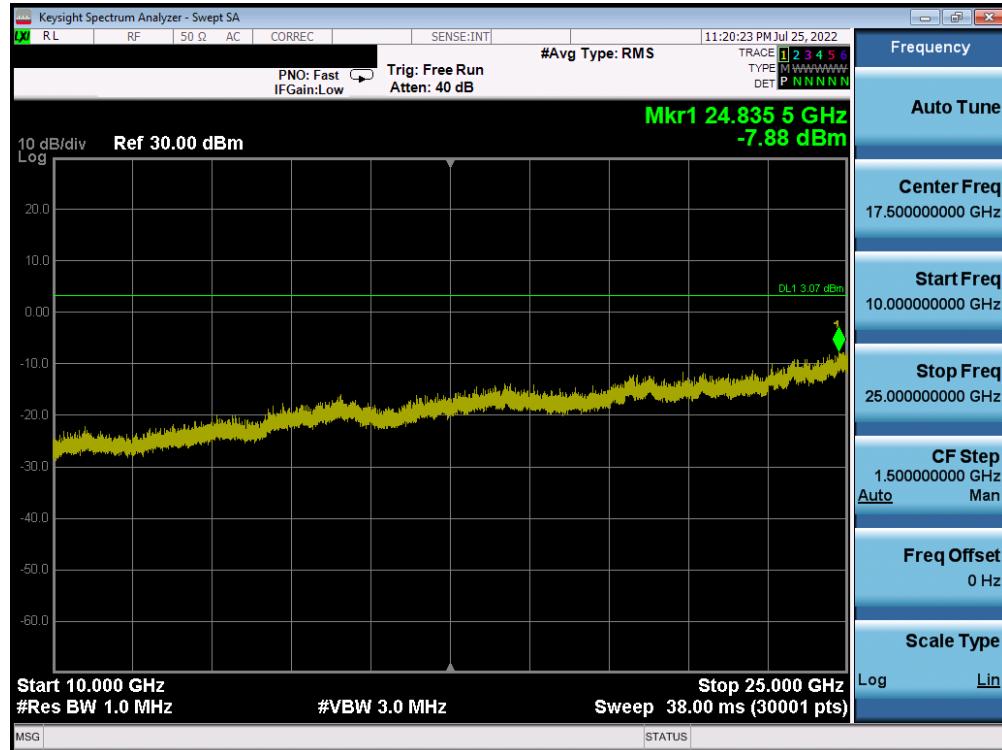
1. Out-of-band conducted spurious emissions were investigated for all data rates and the worst case emissions were found with the EUT transmitting at 1Mbps. The display line shown in the following plots is the limit at 20dB below the fundamental emission level measured in a 100kHz bandwidth. However, the traces in the following plots are measured with a 1MHz RBW to reduce test time, so the display line may not necessarily appear to be 20dB below the level of the fundamental in a 1MHz bandwidth.
2. The unit was tested with all possible mode and power schemes and only the highest emission is reported.

FCC ID: BCGA2435 IC: 579C-A2435	 element	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 53 of 91

Antenna 4a

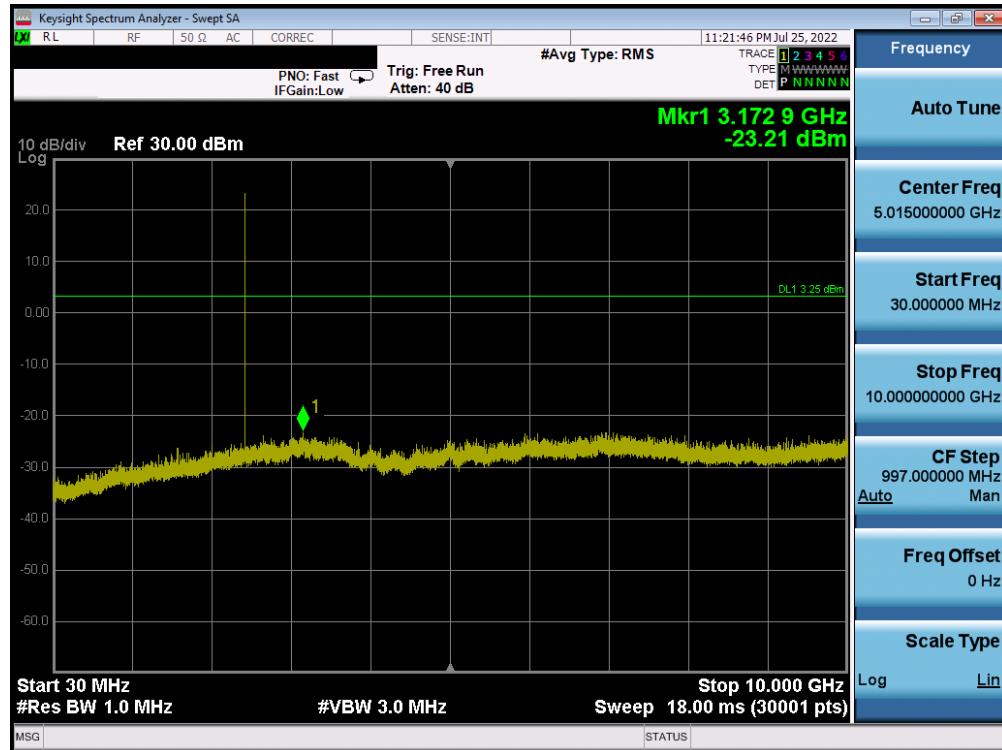


Plot 7-45. Conducted Spurious Plot Antenna 4a (Bluetooth, GFSK, ePA – 2402 MHz)

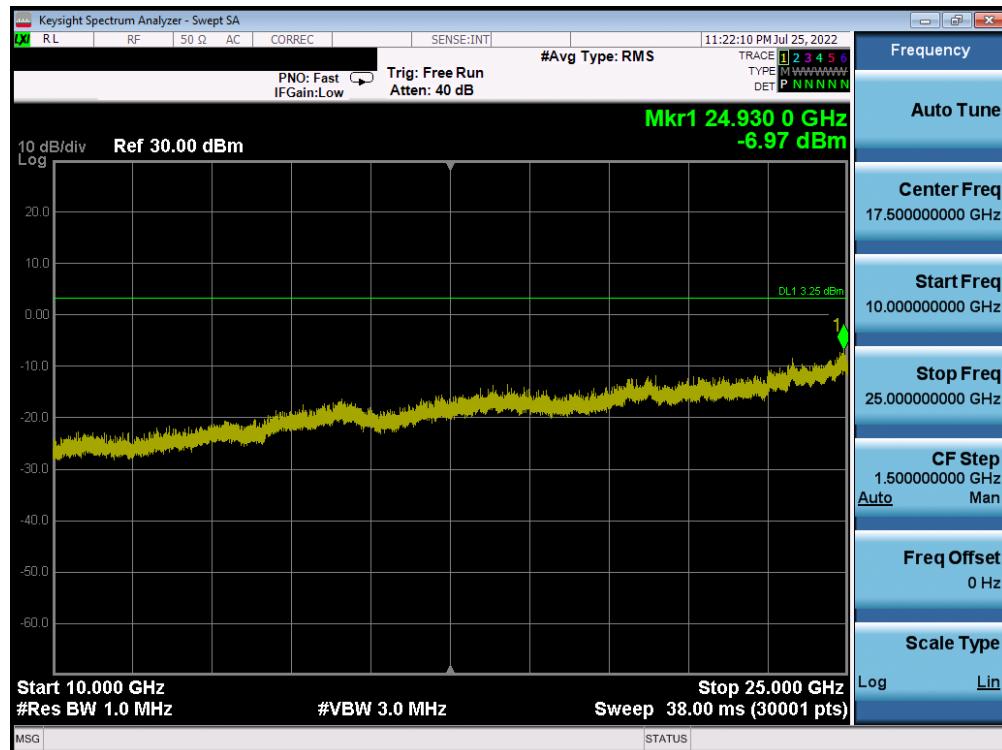


Plot 7-46. Conducted Spurious Plot Antenna 4a (Bluetooth, GFSK, ePA – 2402 MHz)

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 54 of 91

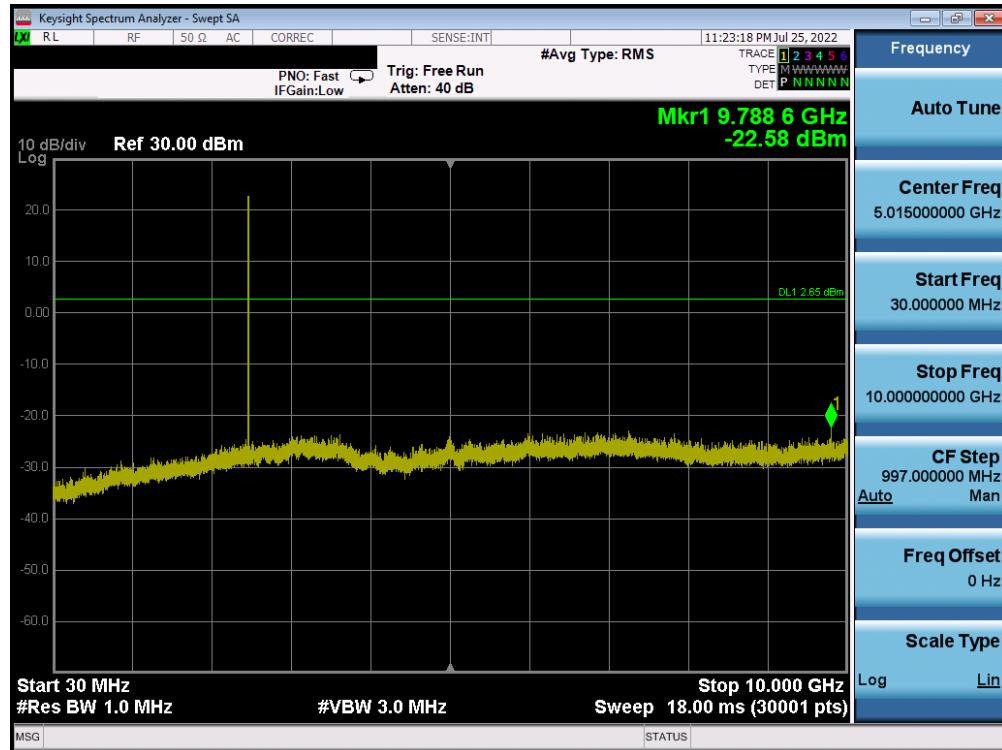


Plot 7-47. Conducted Spurious Plot Antenna 4a (Bluetooth, GFSK, ePA – 2441 MHz)

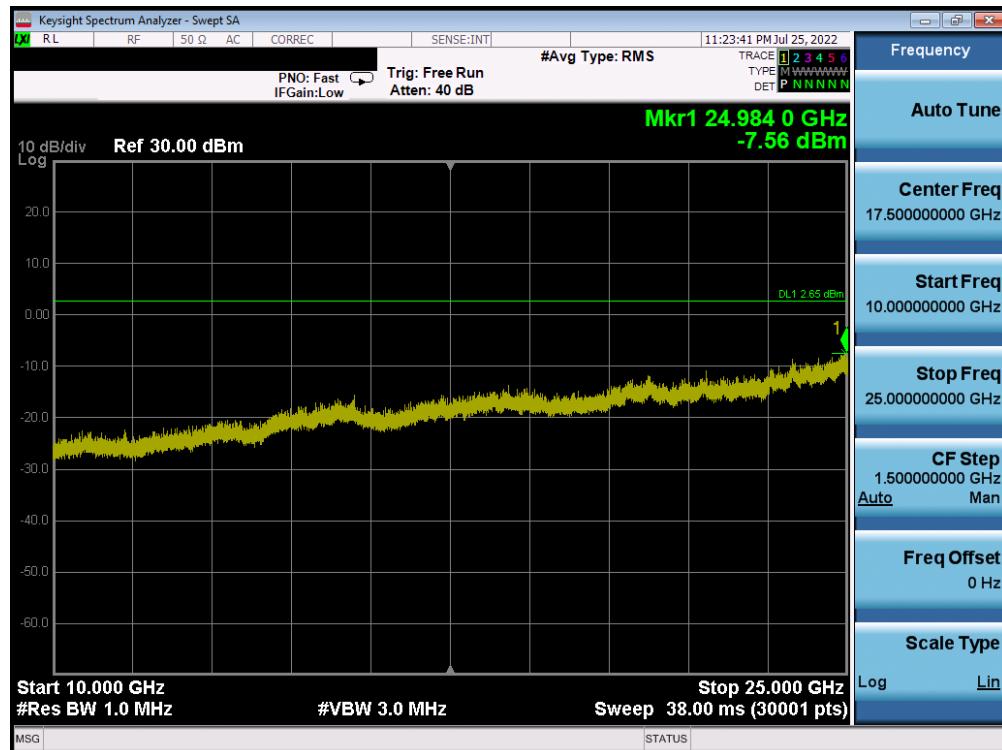


Plot 7-48. Conducted Spurious Plot Antenna 4a (Bluetooth, GFSK, ePA 2441 MHz)

FCC ID: BCGA2435	 element	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 55 of 91



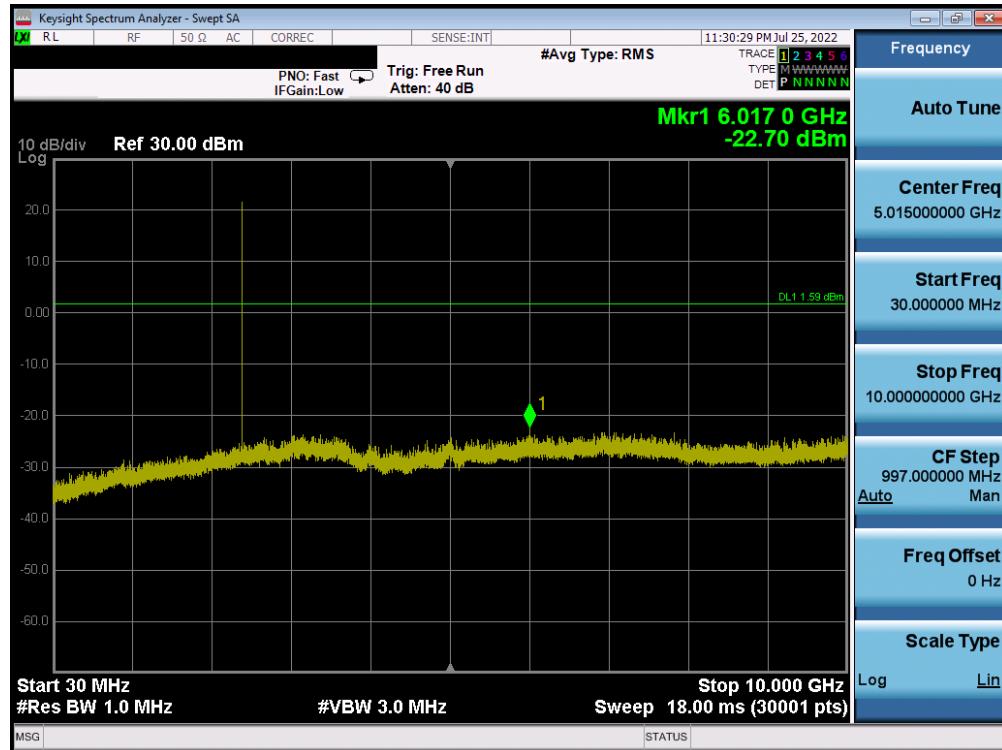
Plot 7-49. Conducted Spurious Plot Antenna 4a (Bluetooth, GFSK, ePA – 2480 MHz)



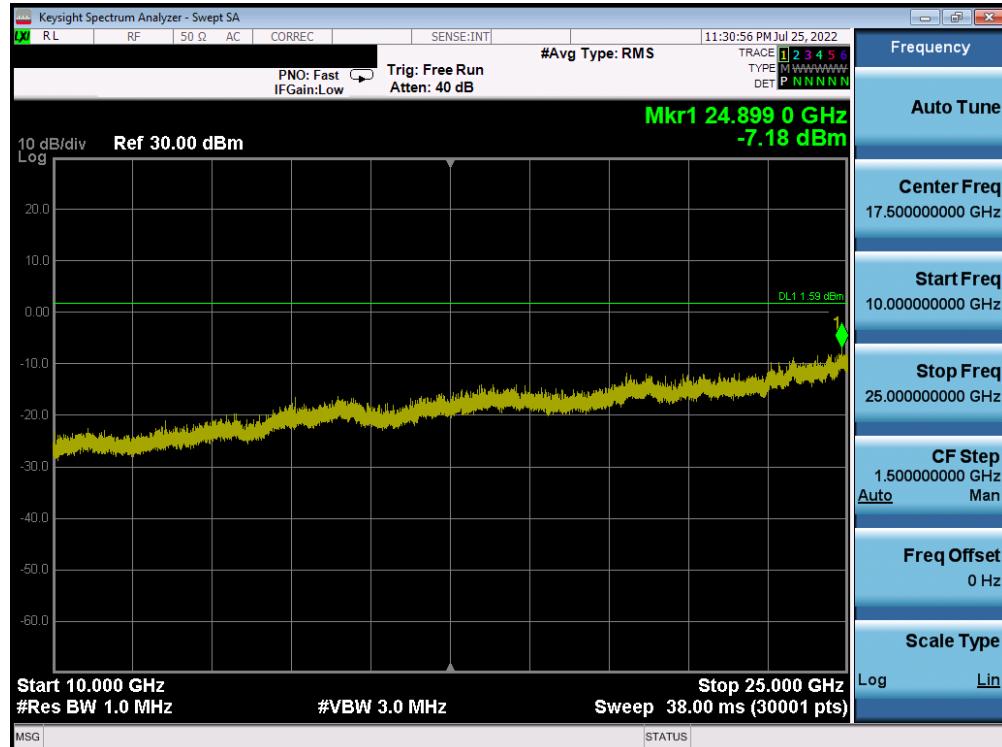
Plot 7-50. Conducted Spurious Plot Antenna 4a (Bluetooth, GFSK, ePA – 2480 MHz)

FCC ID: BCGA2435 IC: 579C-A2435	 element	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 56 of 91

Antenna 2a

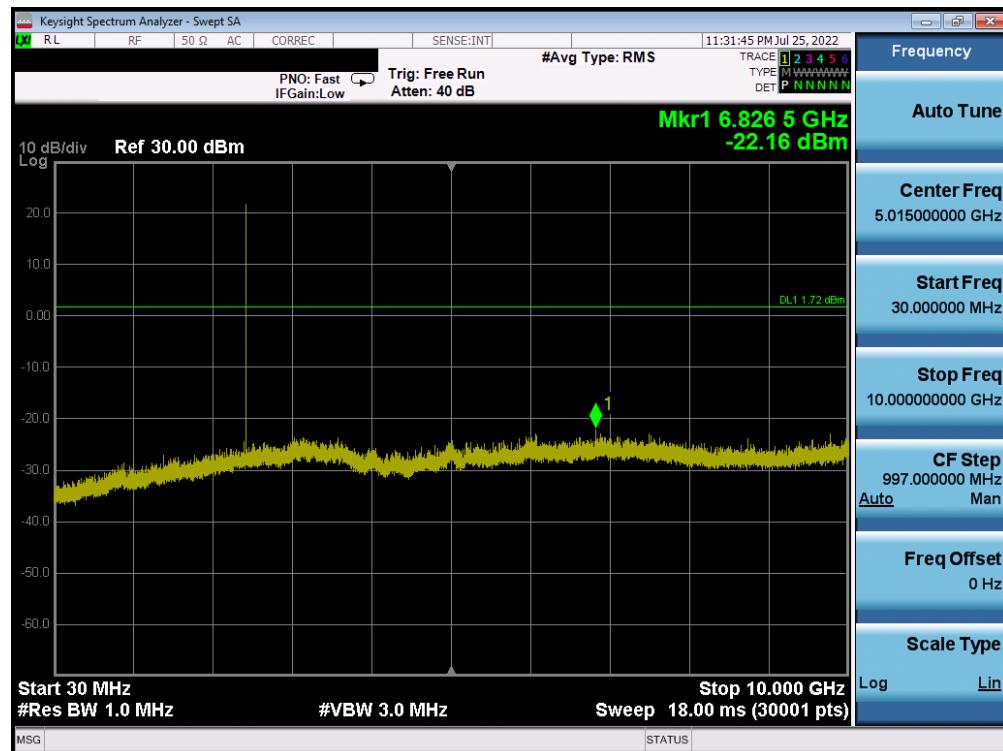


Plot 7-51. Conducted Spurious Plot Antenna 2a (Bluetooth, GFSK, ePA – 2402 MHz)

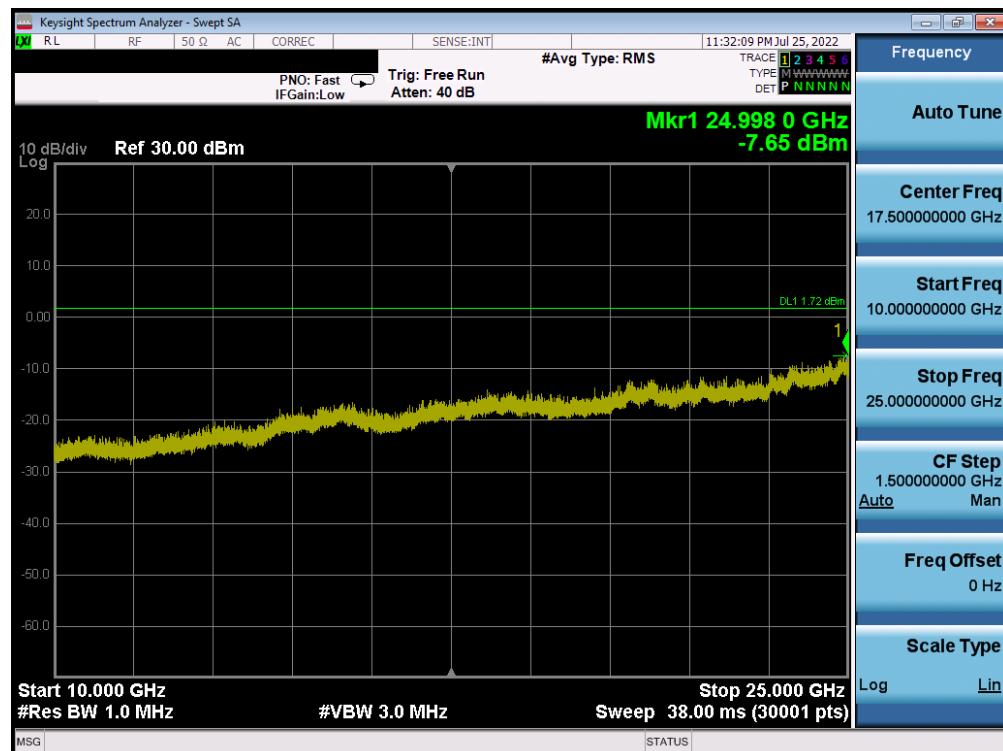


Plot 7-52. Conducted Spurious Plot Antenna 2a (Bluetooth, GFSK, ePA – 2402 MHz)

FCC ID: BCGA2435 IC: 579C-A2435		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1C2205090025-15.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device	Page 57 of 91

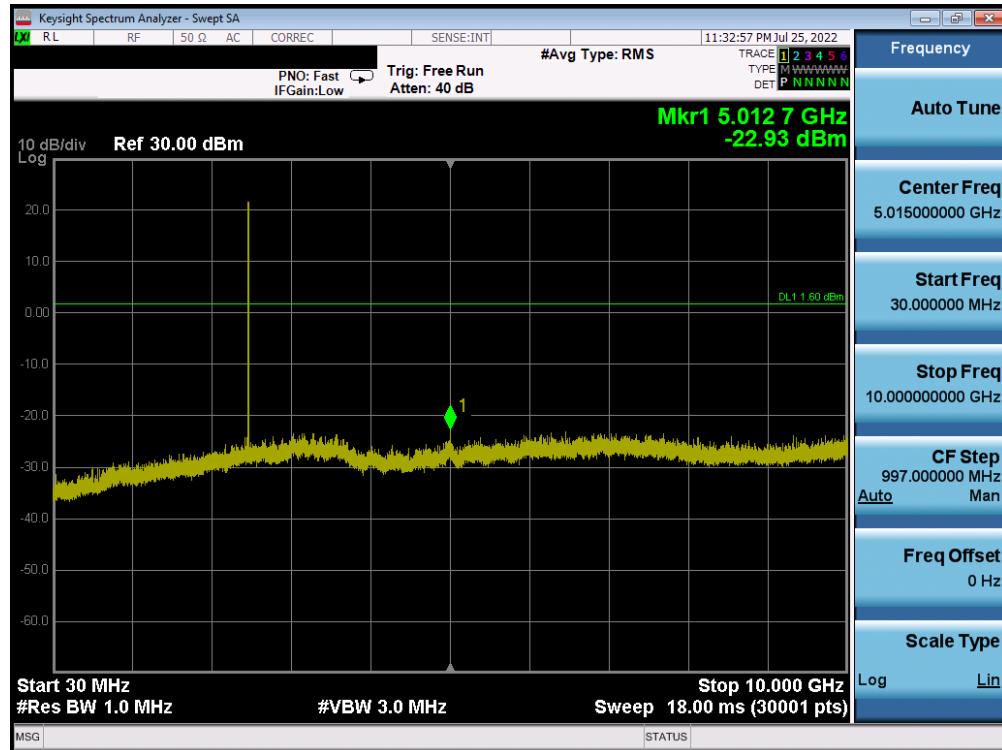


Plot 7-53. Conducted Spurious Plot Antenna 2a (Bluetooth, GFSK, ePA – 2441 MHz)

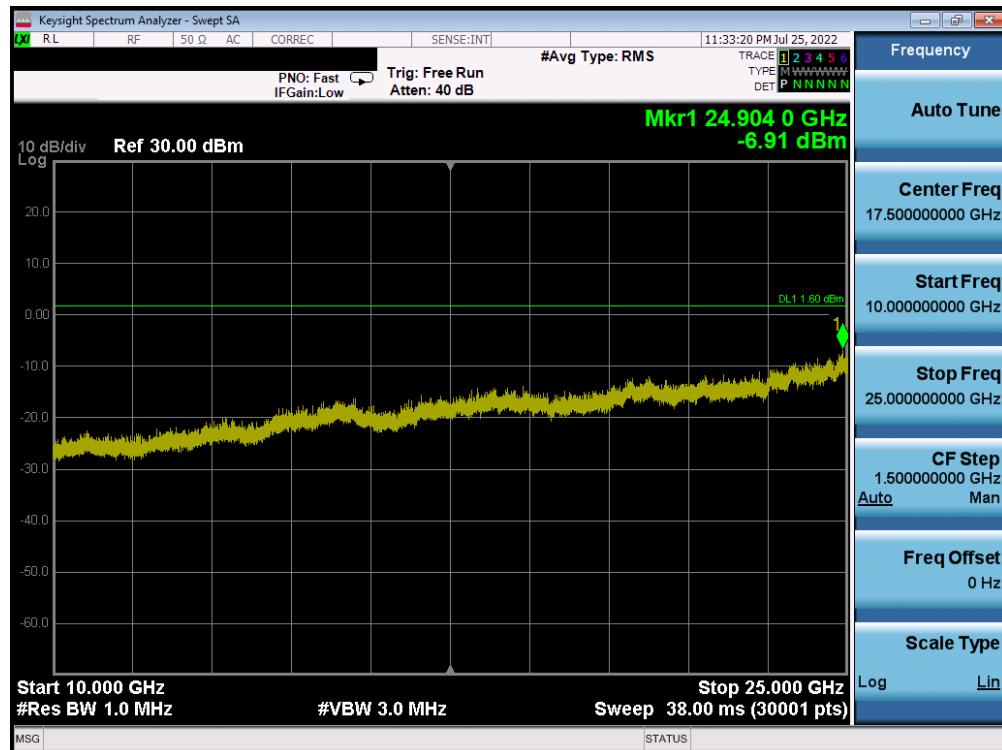


Plot 7-54. Conducted Spurious Plot Antenna 2a (Bluetooth, GFSK, ePA 2441 MHz)

FCC ID: BCGA2435 IC: 579C-A2435	 element	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 58 of 91



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)

FCC ID: BCGA2435 IC: 579C-A2435	 element	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 59 of 91

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 [μ V/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

FCC ID: BCGA2435 IC: 579C-A2435	 element	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 60 of 91

Test Setup

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

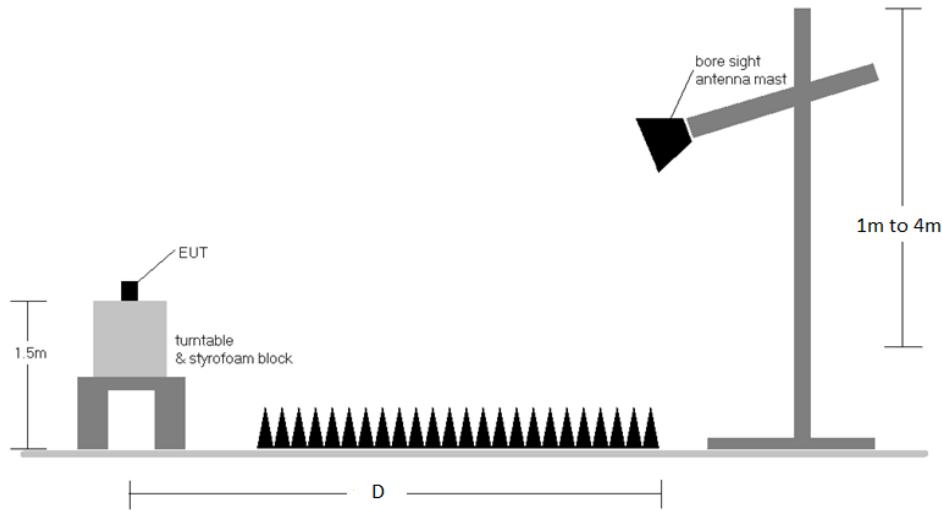


Figure 7-8. Radiated Test Setup >1GHz

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.

FCC ID: BCGA2435 IC: 579C-A2435	 element	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 61 of 91

Sample Calculation

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

Duty Cycle Correction Factor Calculation

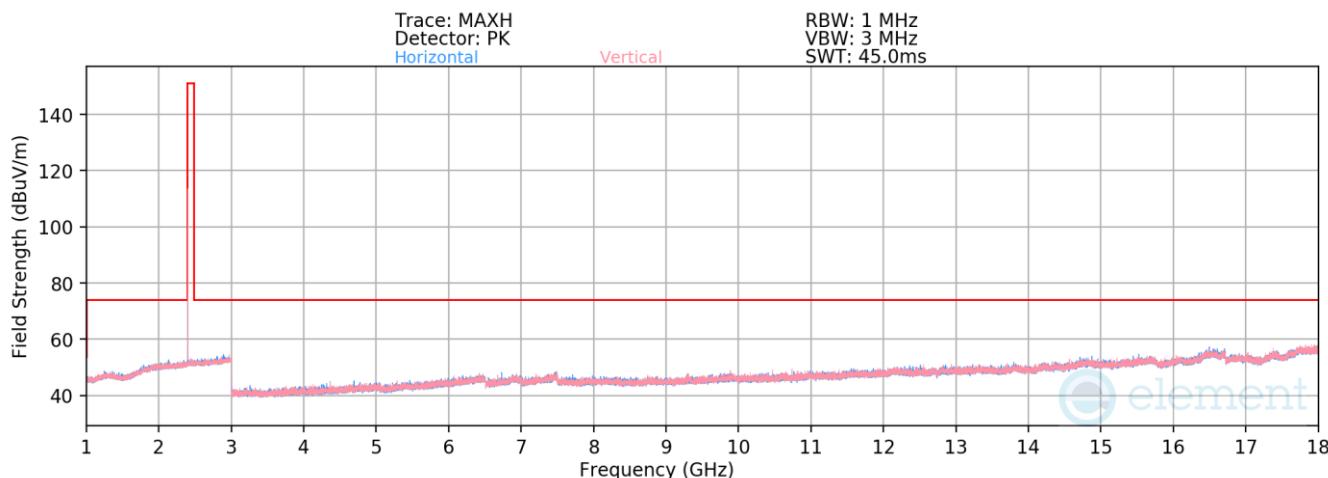
- Channel hop rate = 800 hops/second (AFH Mode)
- Adjusted channel hop rate for DH5 mode = 133.33 hops/second
- Time per channel hop = $1 / 133.33$ hops/second = 7.50 ms
- Time to cycle through all channels = 7.50×20 channels = 150 ms
- Number of times transmitter hits on one channel = $100 \text{ ms} / 150 \text{ ms} = 1 \text{ time(s)}$
- 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

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

FCC ID: BCGA2435 IC: 579C-A2435	 element	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 62 of 91

7.9.1 Radiated Spurious Emission Measurements Antenna 4a (Above 1GHz)
§15.205 §15.209 §15.247 (d); RSS-Gen [8.9]



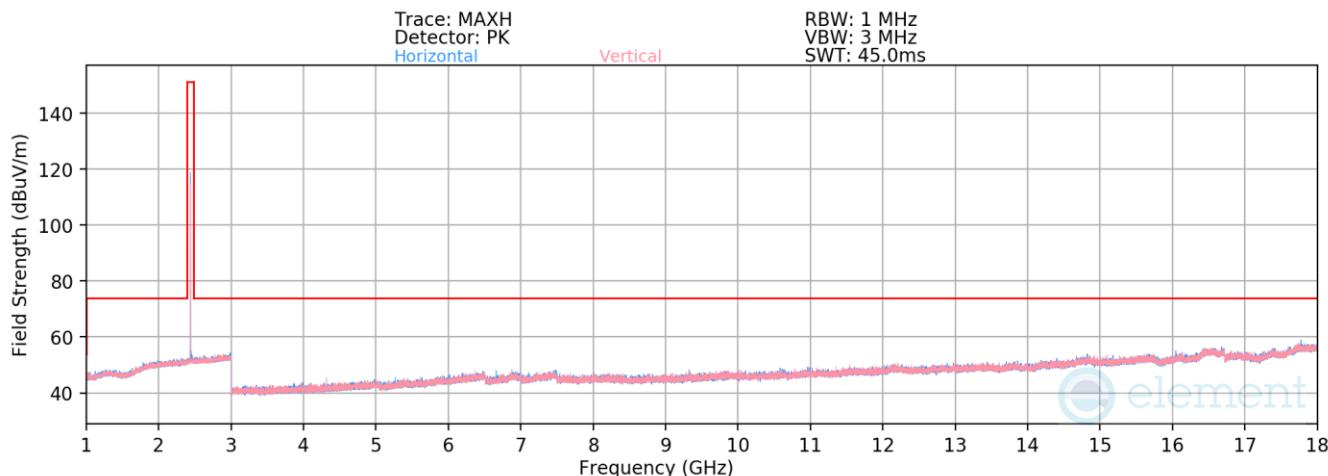
Plot 7-57. Radiated Spurious Emissions 1-18GHz Antenna 4a (BT GFSK ePA – 2402 MHz)

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	 element	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 63 of 91



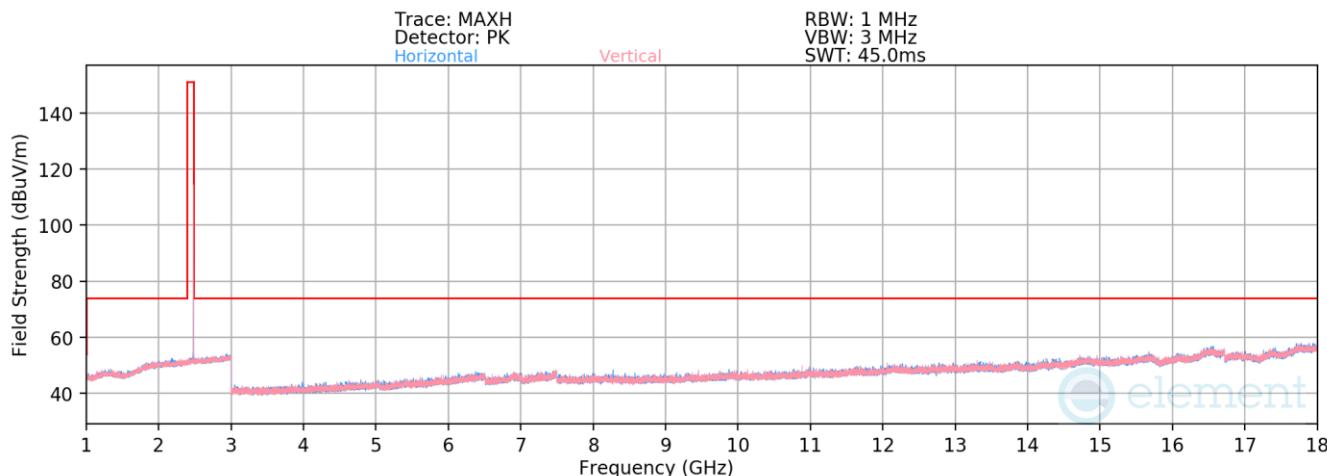
Plot 7-58. Radiated Spurious Emissions 1-18GHz Antenna 4a (BT GFSK ePA – 2441 MHz)

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 [dB μ V/m]	Limit [dB μ V/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	 element	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 64 of 91



Plot 7-59. Radiated Spurious Emissions 1-18GHz Antenna 4a (BT GFSK ePA – 2480 MHz)

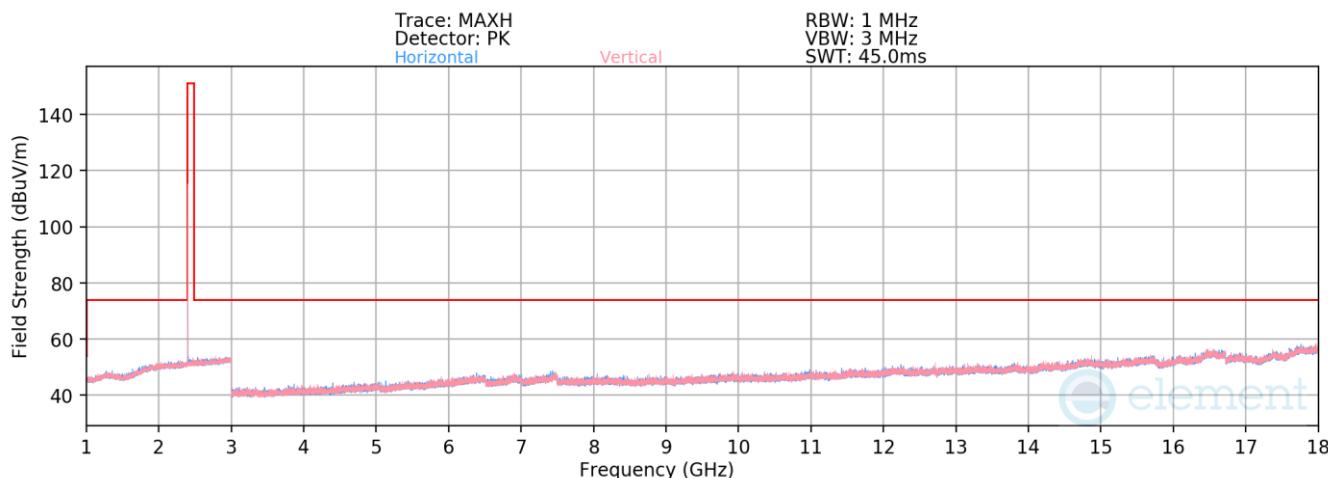
Bluetooth Mode:	GFSK
Data Rate:	1Mbps
Power Scheme	ePA
Distance of Measurements:	3 Meters
Operating Frequency:	2480MHz

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dB μ V/m]	Limit [dB μ V/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	 element 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 65 of 91

7.9.2 Radiated Spurious Emission Measurements Antenna 2a (Above 1GHz) §15.205 §15.209 §15.247 (d); RSS-Gen [8.9]



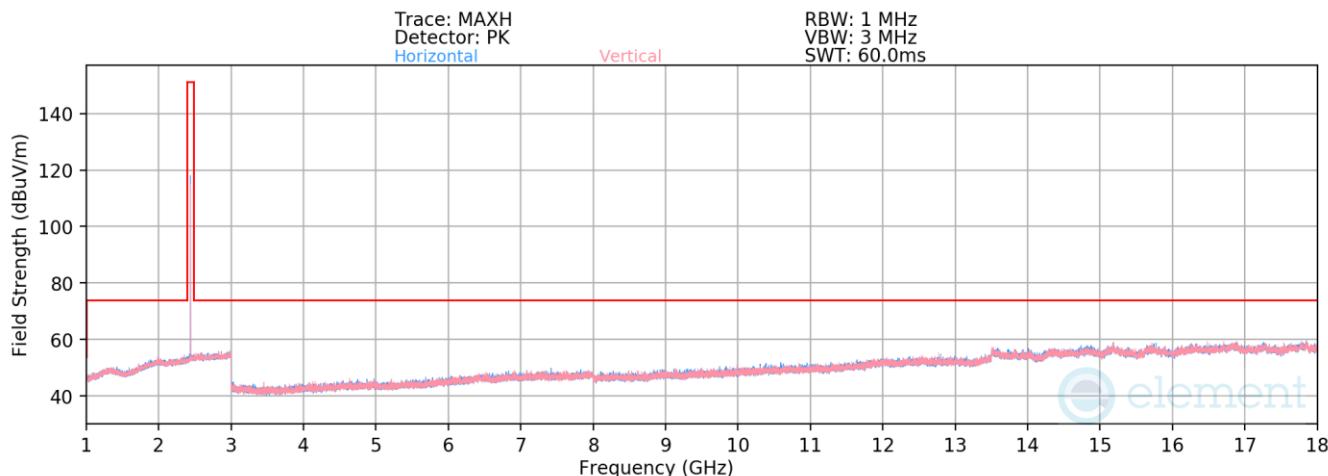
Plot 7-60. Radiated Spurious Emissions 1-18GHz Antenna 2a (BT GFSK ePA – 2402 MHz)

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	 element	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 66 of 91



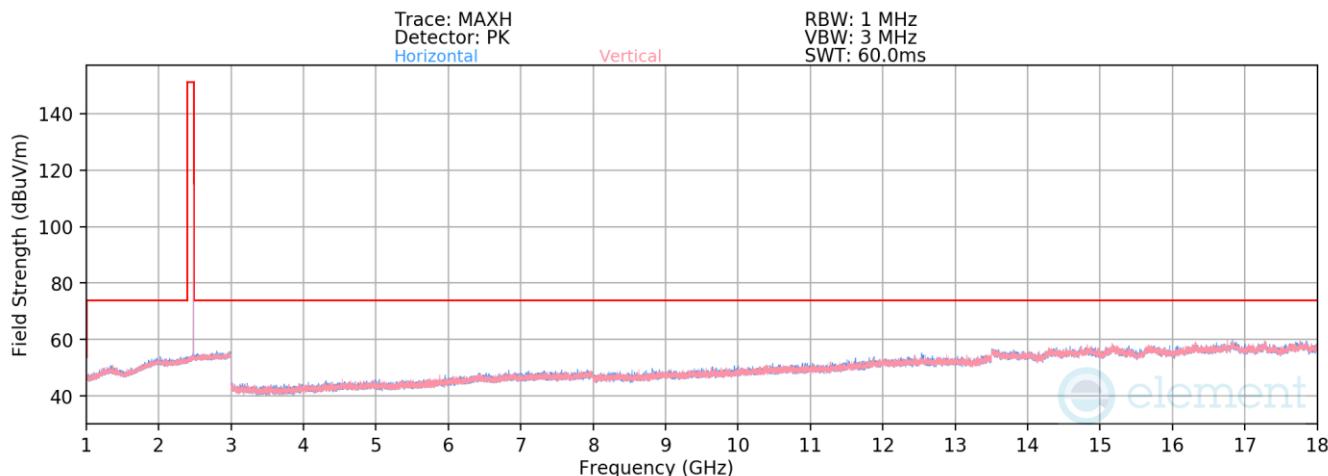
Plot 7-61. Radiated Spurious Emissions 1-18GHz Antenna 2a (BT GFSK ePA – 2441 MHz)

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 [dB μ V/m]	Limit [dB μ V/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
Test Report S/N: 1C2205090025-15.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device			



Plot 7-62. Radiated Spurious Emissions 1-18GHz Antenna 2a (BT GFSK ePA – 2480 MHz)

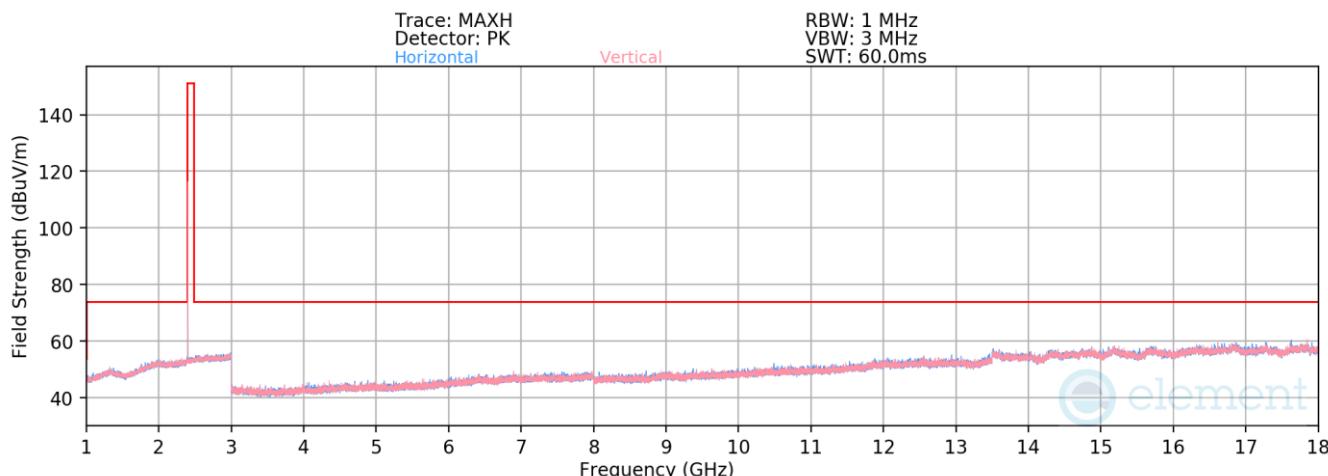
Bluetooth Mode: GFSK
 Data Rate: 1Mbps
 Power Scheme ePA
 Distance of Measurements: 3 Meters
 Operating Frequency: 2480MHz

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dB μ V/m]	Limit [dB μ V/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	 element	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			

7.9.3 Radiated Spurious Emission Measurements Tx BF (Above 1GHz) §15.205 §15.209 §15.247 (d); RSS-Gen [8.9]



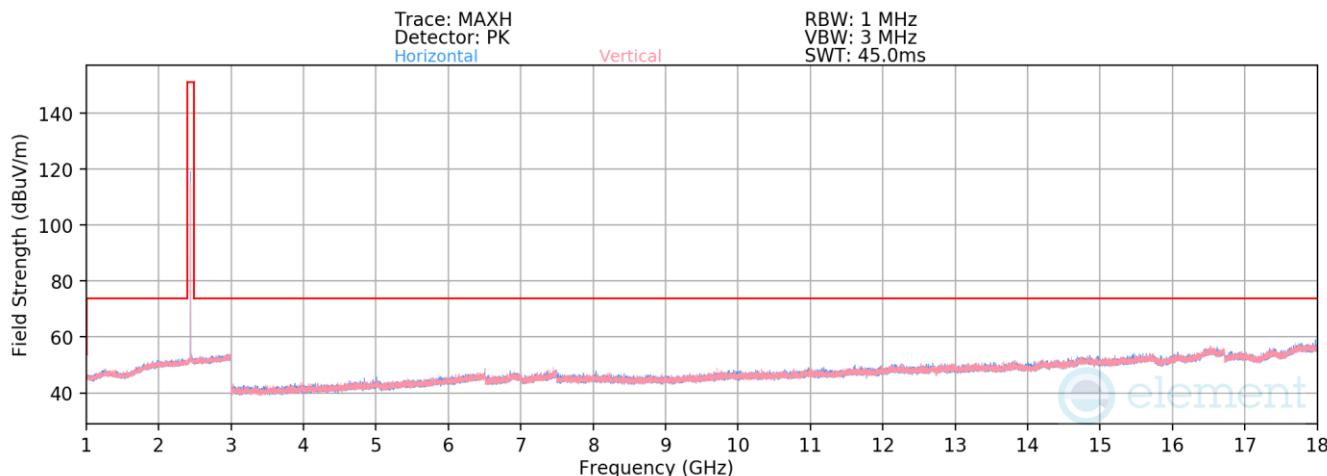
Plot 7-63. Radiated Spurious Emissions 1-18GHz TxBF, 2.4GHz (BT GFSK ePA – 2402 MHz)

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]	Turtable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dB μ V/m]	Limit [dB μ V/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	 element	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 69 of 91



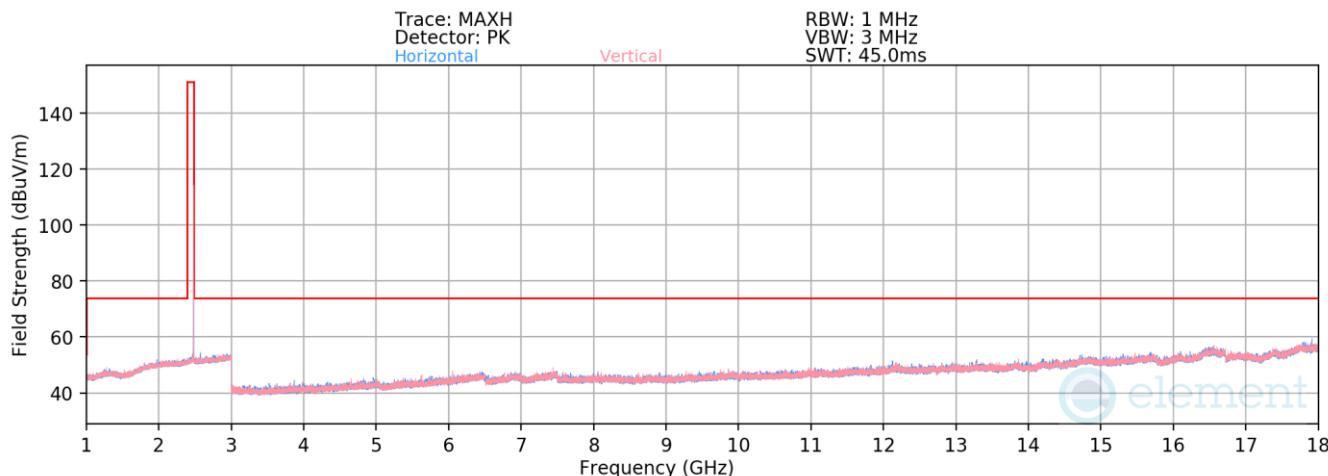
Plot 7-64. Radiated Spurious Emissions 1-18GHz TxBF, 2.4GHz (BT GFSK ePA – 2441 MHz)

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 [dB μ V/m]	Limit [dB μ V/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	 element 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			



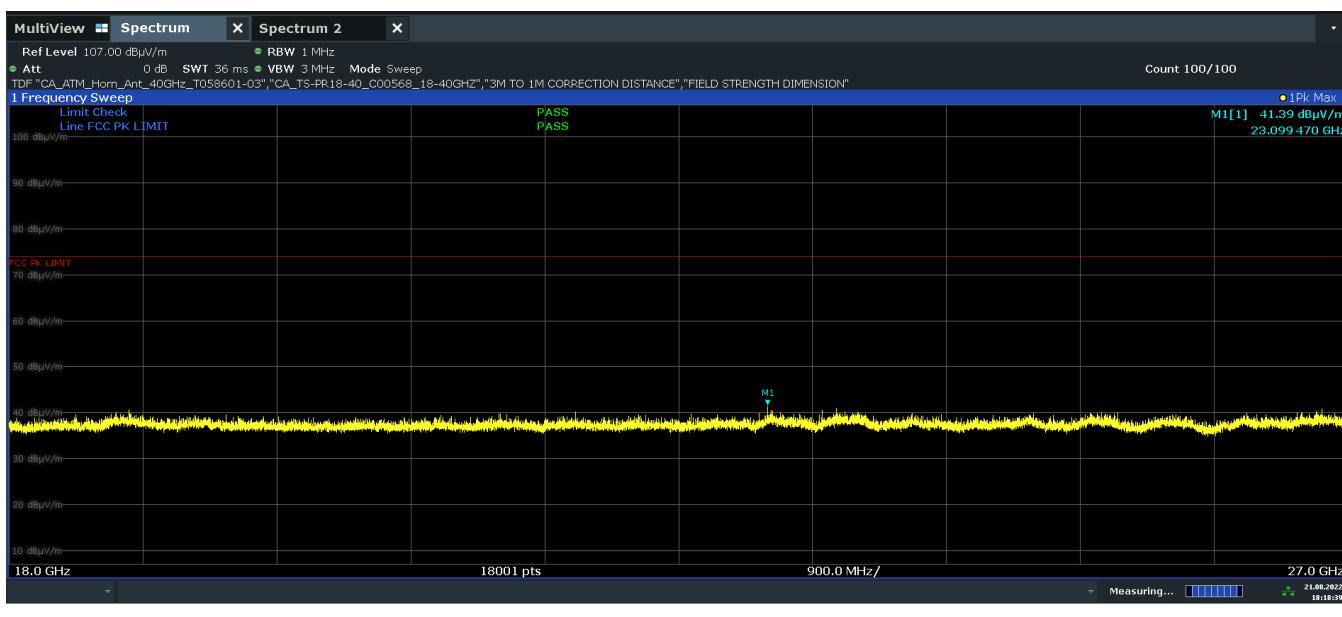
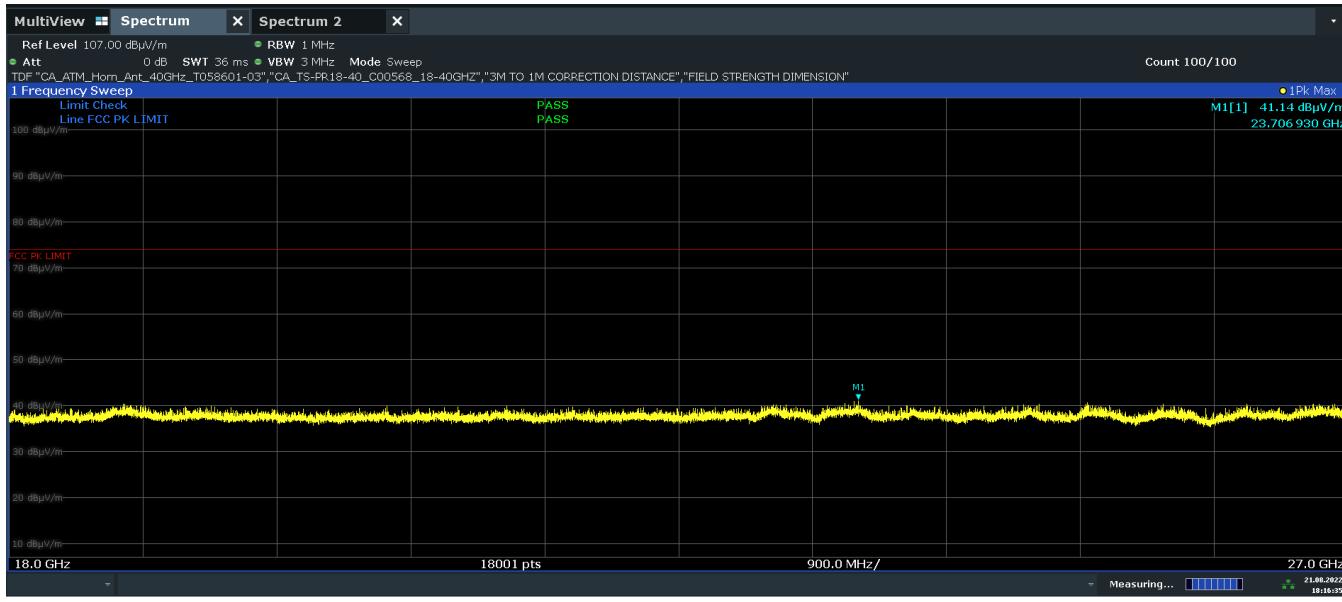
Plot 7-65. Radiated Spurious Emissions 1-18GHz TxBF (BT GFSK ePA – 2480 MHz)

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 [dB μ V/m]	Limit [dB μ V/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	 element	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 71 of 91

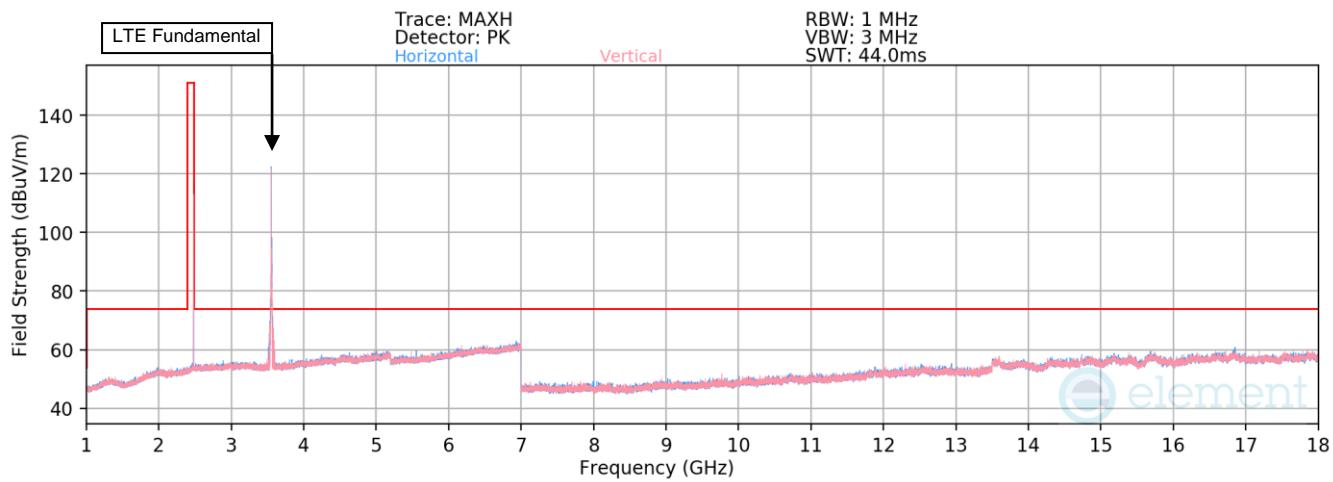


FCC ID: BCGA2435 IC: 579C-A2435		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1C2205090025-15.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device	Page 72 of 91

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

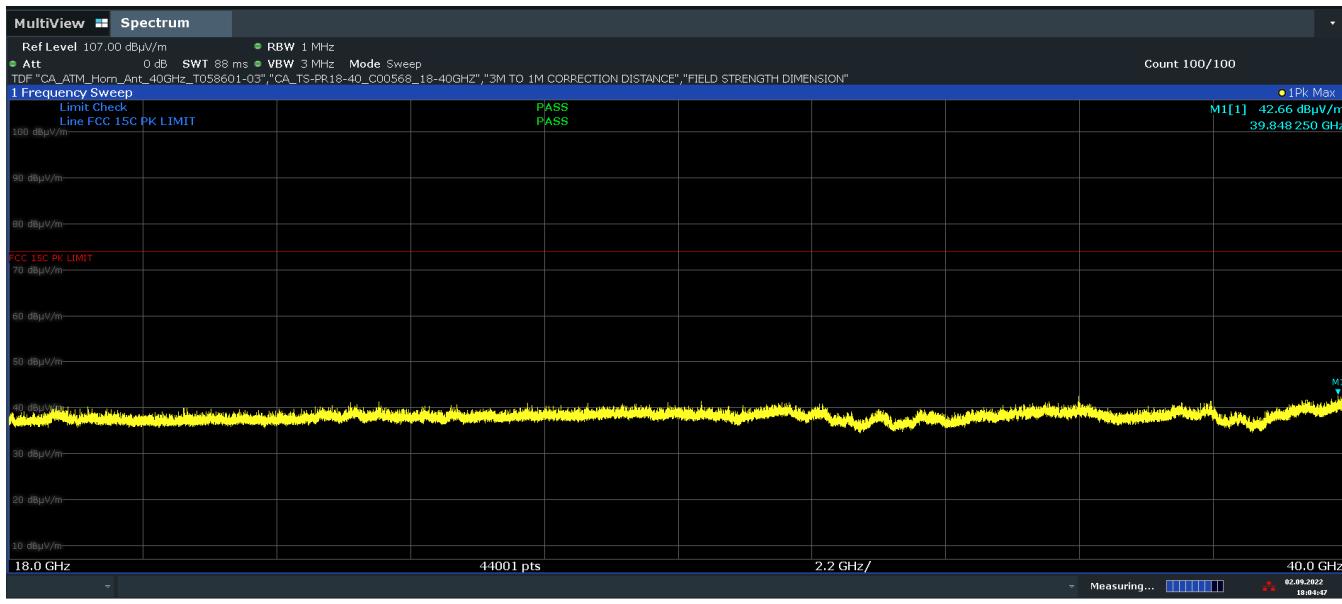


Plot 7-68. Radiated Spurious Emissions - Simultaneous Transmission 1-18GHz

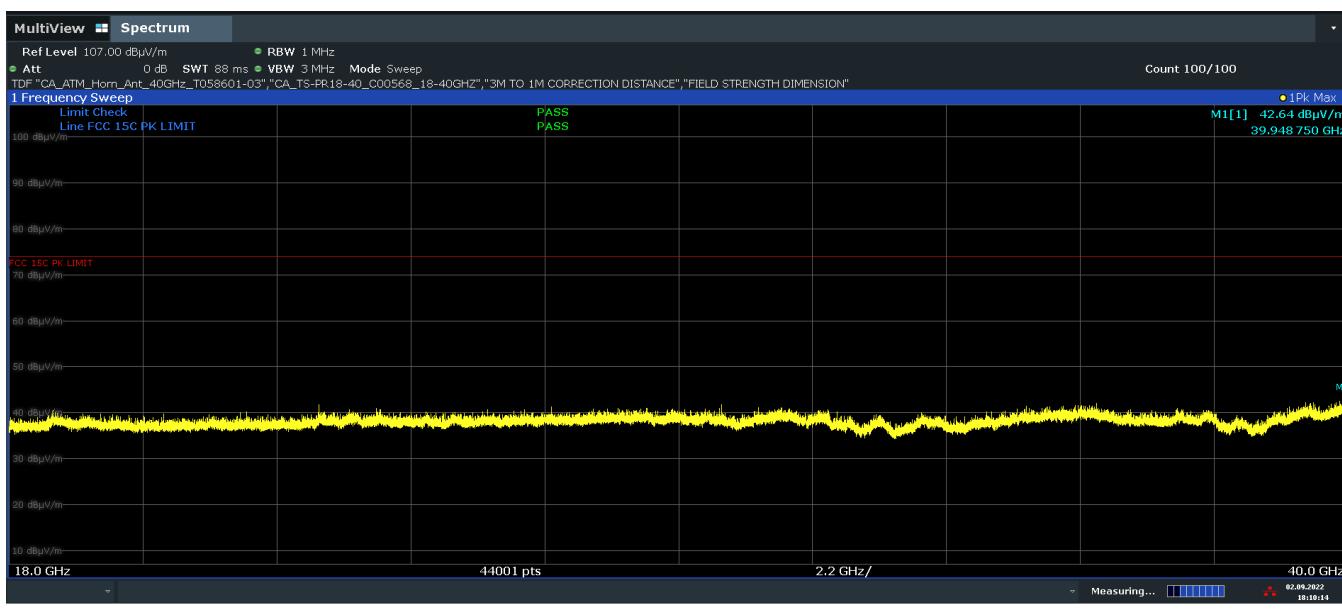
FCC ID: BCGA2435 IC: 579C-A2435	 element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1C2205090025-15.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device	Page 73 of 91



element



Plot 7-69. Radiated Spurious Emissions - Simultaneous Transmission 18GHz - 40GHz Pol H



Plot Z-Z0. Radiated Spurious Emissions - Simultaneous Transmission 18GHz - 40GHz Pol V

FCC ID: BCGA2435 IC: 579C-A2435	 element	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 74 of 91

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dB μ V/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 [dB μ V/m]	Limit [dB μ V/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	 element	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				

V 10.5 12/15/2021

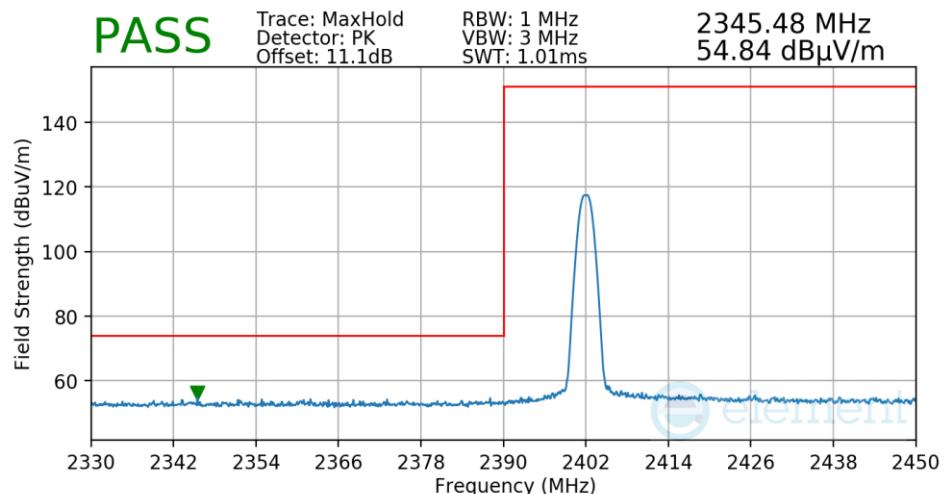
Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Washington DC LLC. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

7.9.5 Radiated Restricted Band Edge Measurements

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

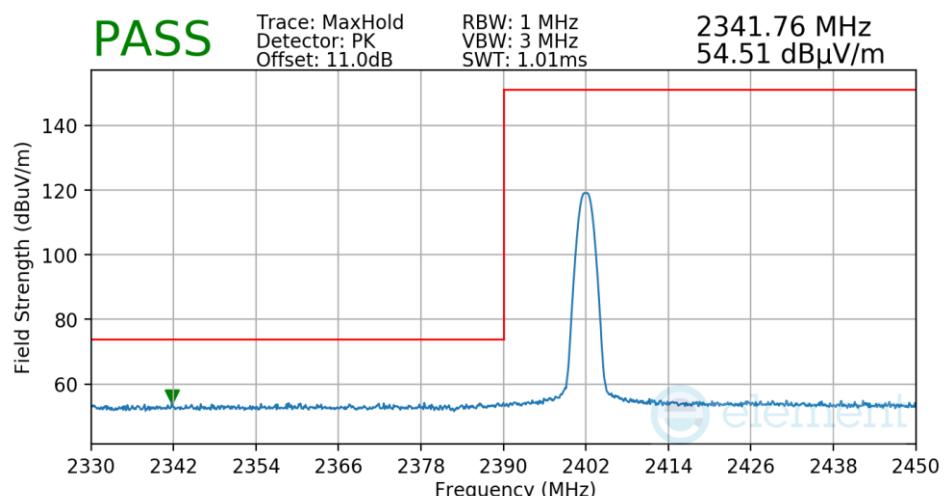
Antenna 4a

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



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

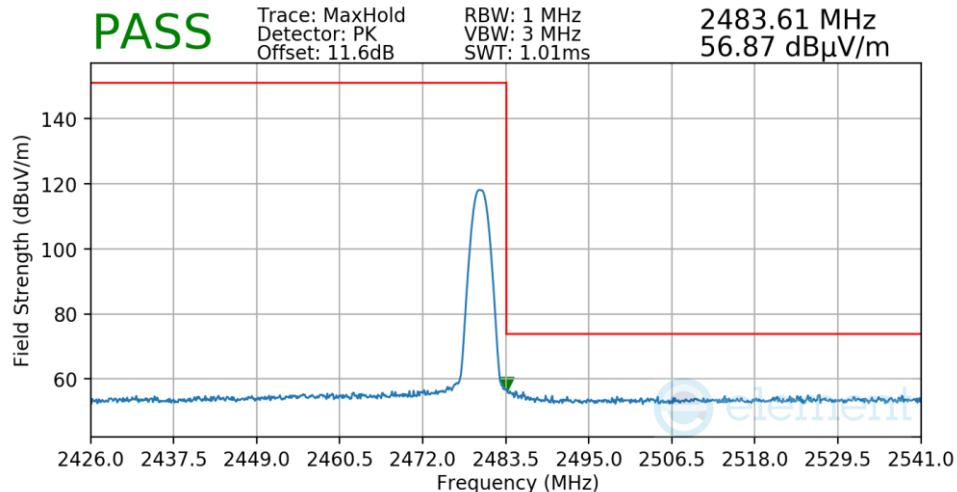
Bluetooth Mode:	8DPSK
Power Scheme:	ePA
Measurement Distance:	3 Meters
Operating Frequency:	2402MHz



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

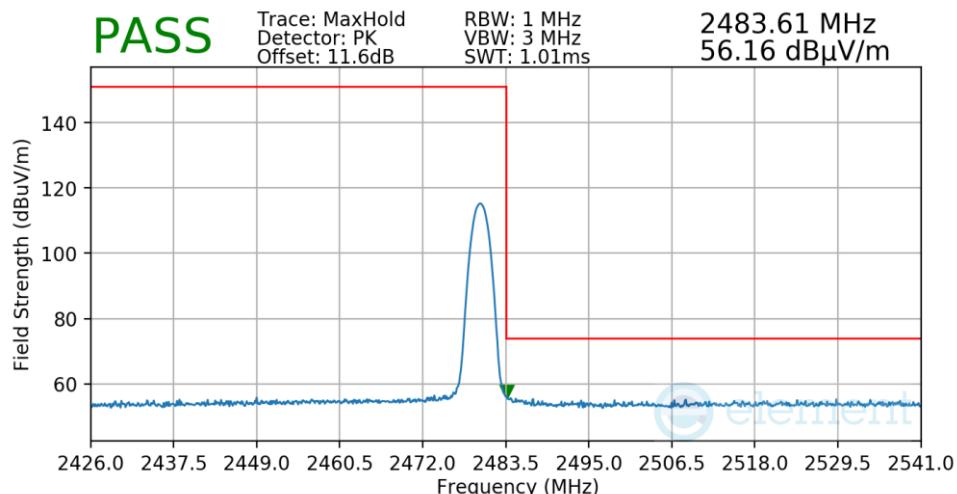
FCC ID: BCGA2435 IC: 579C-A2435	 element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1C2205090025-15.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device	Page 76 of 91

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

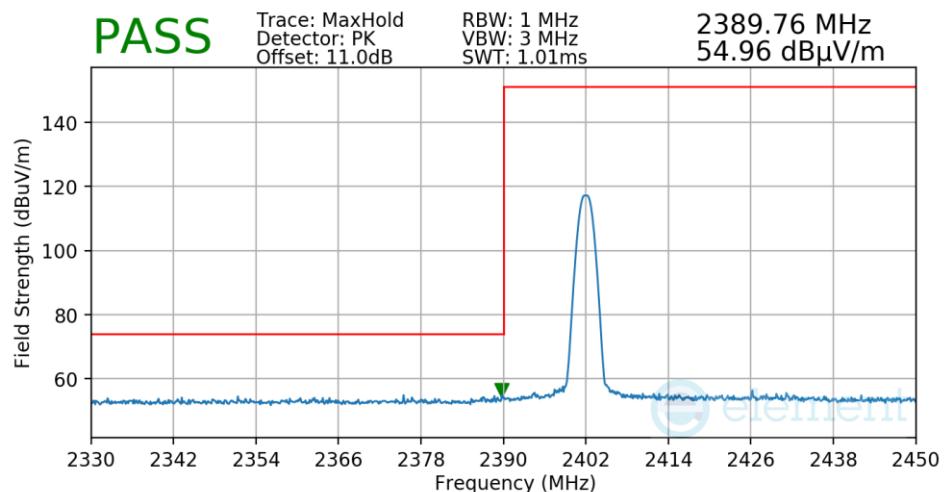
FCC ID: BCGA2435 IC: 579C-A2435	 element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1C2205090025-15.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device	Page 77 of 91

Radiated Restricted Band Edge Measurements

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

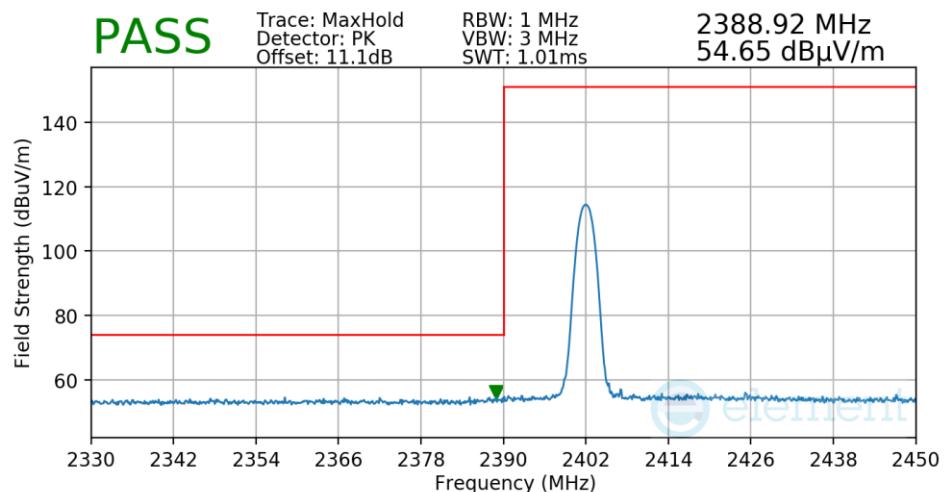
Antenna 2a

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



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

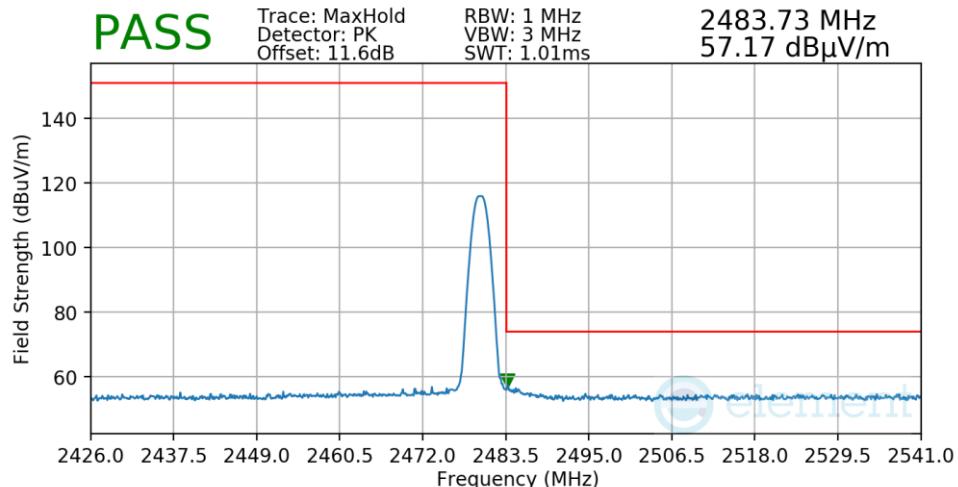
Bluetooth Mode:	8DPSK
Power Scheme:	ePA
Measurement Distance:	3 Meters
Operating Frequency:	2402MHz



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

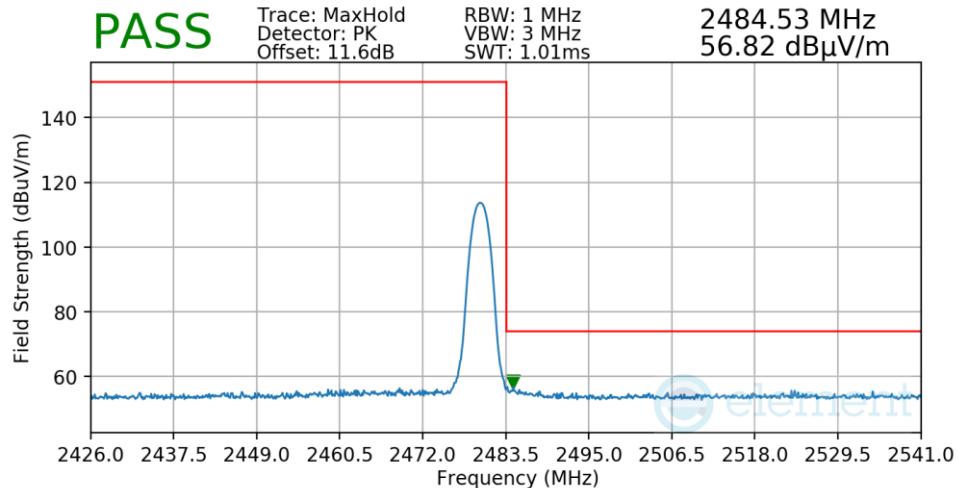
FCC ID: BCGA2435 IC: 579C-A2435	 element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1C2205090025-15.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device	Page 78 of 91

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

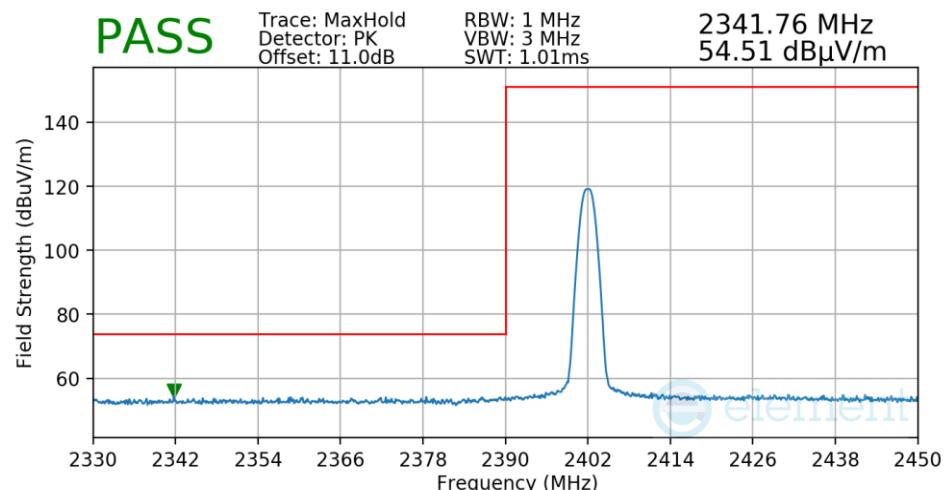
FCC ID: BCGA2435 IC: 579C-A2435	 element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1C2205090025-15.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device	Page 79 of 91

Radiated Restricted Band Edge Measurements

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

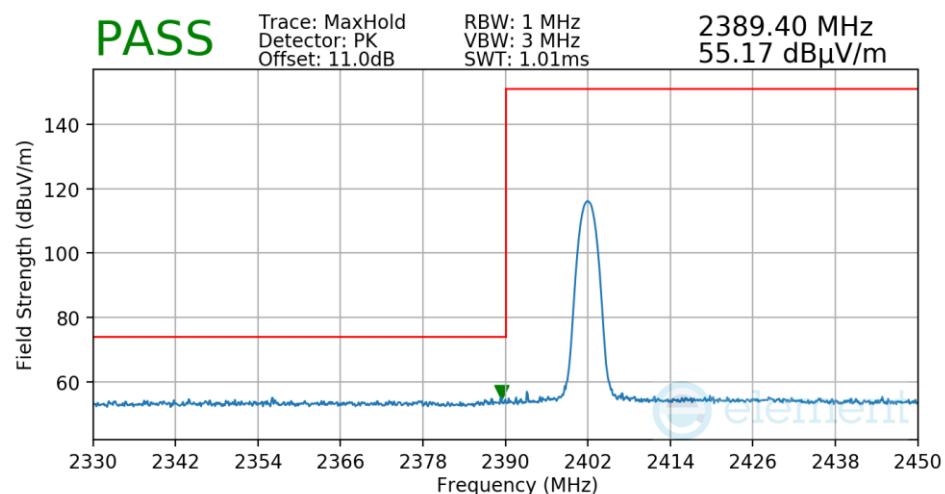
TxBF

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

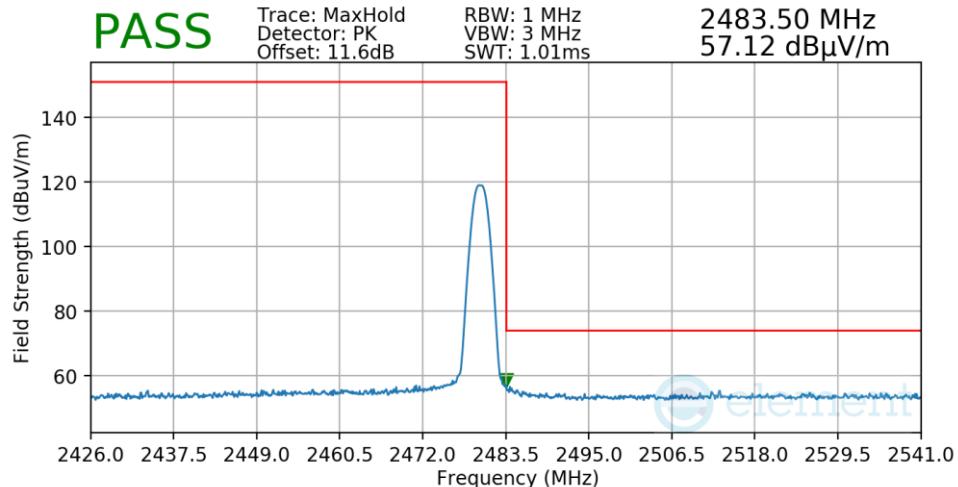


Plot 7-80. Radiated Restricted Lower Band Edge Measurement TxBF, 2.4GHz

FCC ID: BCGA2435 IC: 579C-A2435	 element	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 80 of 91

Bluetooth Mode:
Power Scheme:
Measurement Distance:
Operating Frequency:

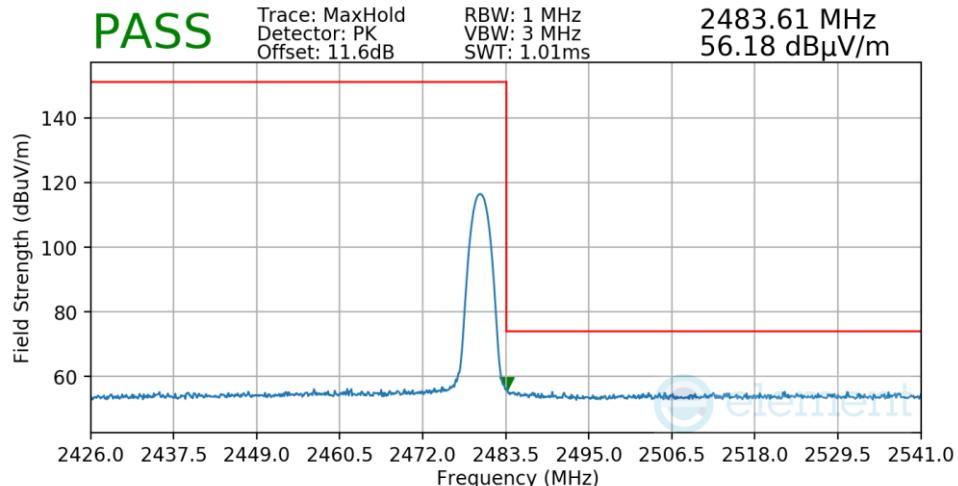
GFSK
ePA
3 Meters
2480MHz



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

Bluetooth Mode:
Power Scheme:
Measurement Distance:
Operating Frequency:

8DPSK
ePA
3 Meters
2480MHz



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

FCC ID: BCGA2435 IC: 579C-A2435	 element	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 81 of 91

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 [μ V/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

FCC ID: BCGA2435 IC: 579C-A2435	 element		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 82 of 91

Test Setup

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

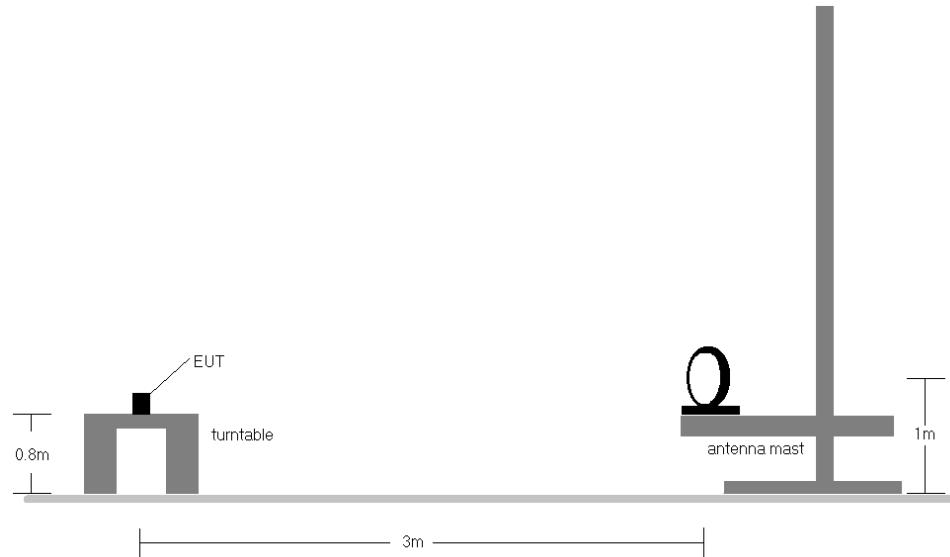


Figure 7-9. Radiated Test Setup < 30MHz

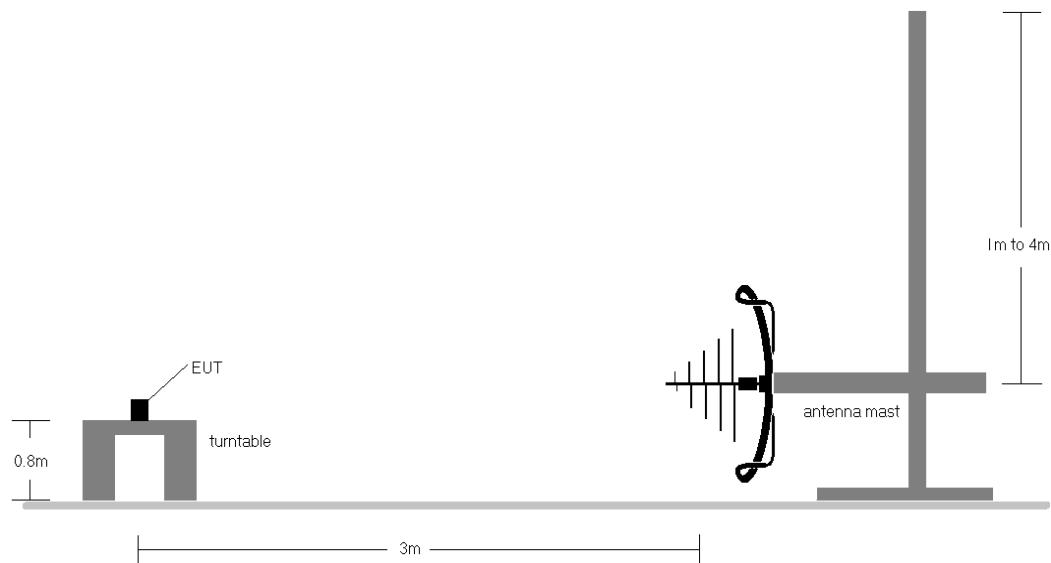


Figure 7-10. Radiated Test Setup < 1GHz

FCC ID: BCGA2435 IC: 579C-A2435	 element	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 83 of 91

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

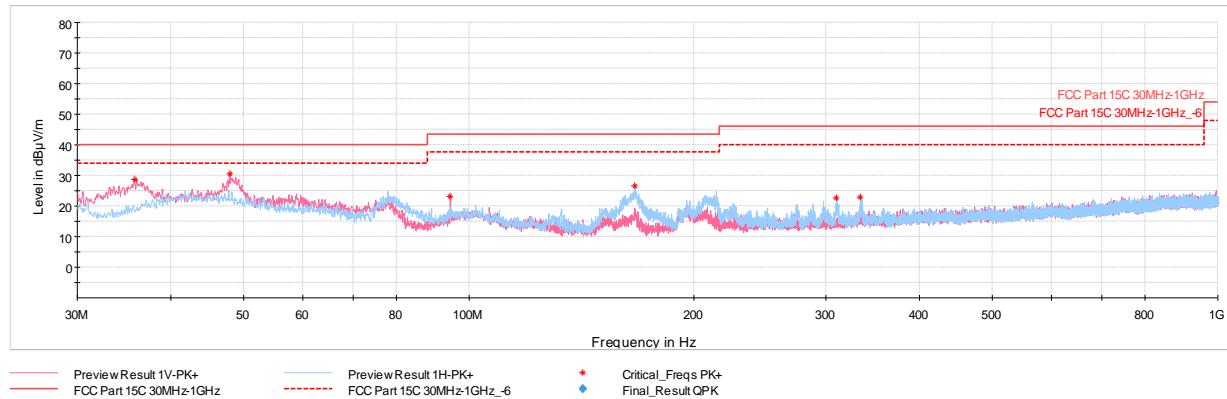
- Field Strength Level $[\text{dB}_{\mu\text{V/m}}]$ = Analyzer Level $[\text{dBm}]$ + 107 + AFCL $[\text{dB/m}]$
- AFCL $[\text{dB/m}]$ = Antenna Factor $[\text{dB/m}]$ + Cable Loss $[\text{dB}]$ – Preamplifier Gain $[\text{dB}]$
- Margin $[\text{dB}]$ = Field Strength Level $[\text{dB}_{\mu\text{V/m}}]$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

FCC ID: BCGA2435 IC: 579C-A2435	 element	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 84 of 91

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	 element	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			

V 10.5 12/15/2021

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Washington DC LLC. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

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 (dB μ V)	
	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

FCC ID: BCGA2435 IC: 579C-A2435	 element	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 86 of 91

Test Setup

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

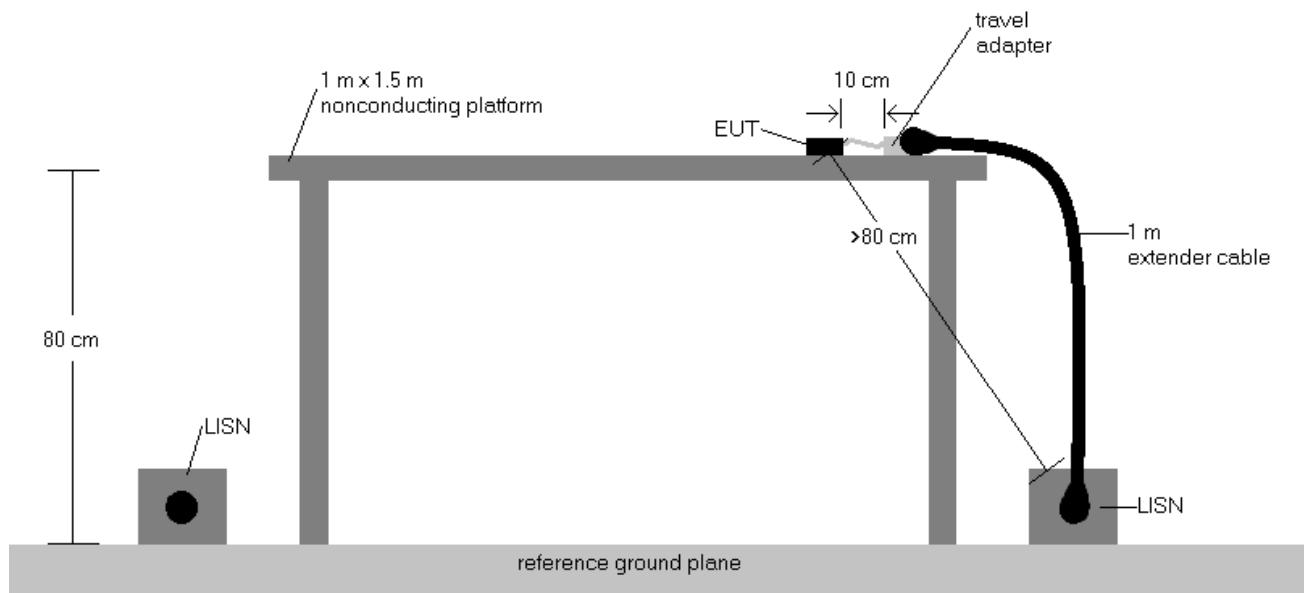
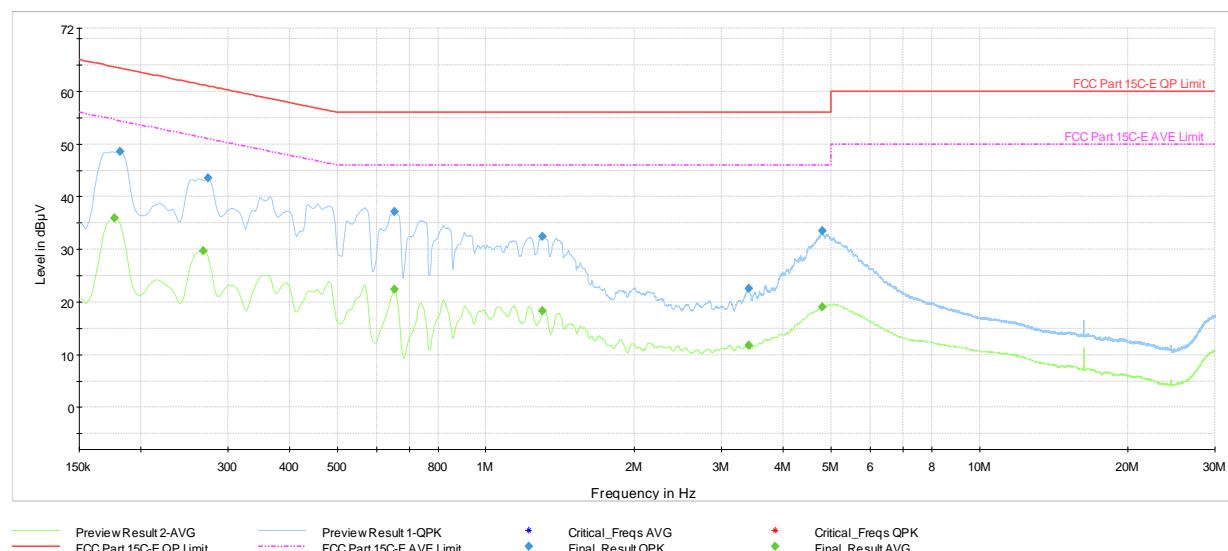


Figure 7-11. Test Instrument & Measurement Setup

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. Corr. (dB) = Cable loss (dB) + LISN insertion factor (dB)
5. QP/AV Level (dB μ V) = QP/AV Analyzer/Receiver Level (dB μ V) + Correction Factor (dB)
6. Margin (dB) = QP/AV Level (dB μ V) - QP/AV Limit (dB μ V)
7. Traces shown in plot are made using a quasi peak and average detectors.
8. Deviations to the Specifications: None.

FCC ID: BCGA2435 IC: 579C-A2435	 element	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 87 of 91



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

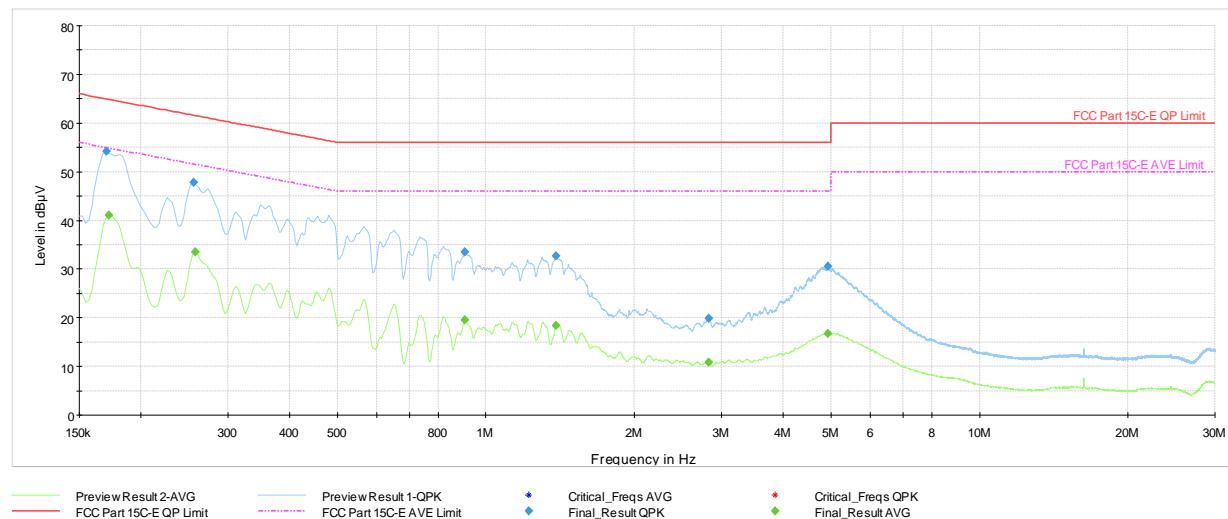
Frequency [MHz]	Process State	QuasiPeak [dBμV]	Average [dBμV]	Limit [dBμV]	Margin [dB]	Line	PE
0.177	FINAL	—	35.92	54.63	-18.71	L1	GND
0.182	FINAL	48.6	—	64.42	-15.86	L1	GND
0.267	FINAL	—	29.70	51.21	-21.51	L1	GND
0.274	FINAL	43.6	—	61.00	-17.45	L1	GND
0.652	FINAL	37.2	—	56.00	-18.84	L1	GND
0.652	FINAL	—	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)

FCC ID: BCGA2435 IC: 579C-A2435	 element	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			

V 10.5 12/15/2021

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Washington DC LLC. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.



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 [dB μ V]	Average [dB μ V]	Limit [dB μ V]	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	 element	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			

V 10.5 12/15/2021

Unless otherwise specified, no part of this report may be reproduced or utilized in any part, form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from Element Washington DC LLC. If you have any questions about this or have an enquiry about obtaining additional rights to this report or assembly of contents thereof, please contact ct.info@element.com.

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	 element		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

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	 element	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