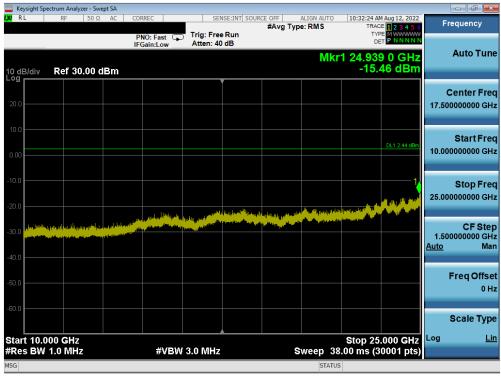


Plot 7-55. Conducted Spurious Plot (Bluetooth, GFSK, ePA - Ch. 78)



Plot 7-56. Conducted Spurious Plot (Bluetooth, GFSK, ePA - Ch. 78)

FCC ID: BCGA2696 IC: 579C-A2696	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Daga 57 of 05
1C2205090022-05.BCG	05/30/2022 - 09/15/2022	Tablet Device	Page 57 of 95



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

FCC ID: BCGA2696 IC: 579C-A2696	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogg 50 of 05
1C2205090022-05.BCG	05/30/2022 - 09/15/2022	Tablet Device	Page 58 of 95



Test Setup

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

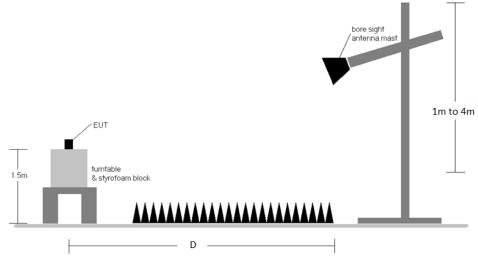


Figure 7-8. Radiated Test Setup >1GHz

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 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: BCGA2696 IC: 579C-A2696	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogg 50 of 05
1C2205090022-05.BCG	05/30/2022 - 09/15/2022	Tablet Device	Page 59 of 95



Sample Calculation

- Field Strength Level [dBμV/m] = Analyzer Level [dBm] + 107 + AFCL [dB/m]
- O AFCL [dB/m] = Antenna Factor [dB/m] + Cable Loss [dB] Preamplifier Gain [dB]
- o Margin [dB] = Field Strength Level [dB μ V/m] Limit [dB μ 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
- o Time to cycle through all channels = 7.50 x 20 channels = 150 ms
- Number of times transmitter hits on one channel = 100 ms / 150 ms = 1 time(s)
- Worst case dwell time = 7.5 ms

Duty cycle correction factor = 20log₁₀(7.5ms/100ms) = -22.5 dB

Average Emission Calculation

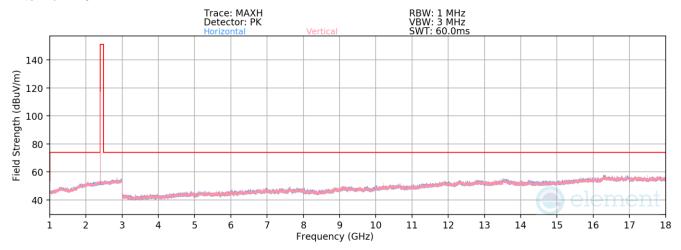
Average Emission = Measured Peak Emissions [dBμV/m] - Duty Cycle Correction Factor [dB]

FCC ID: BCGA2696 IC: 579C-A2696	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogg 60 of 05
1C2205090022-05.BCG	05/30/2022 - 09/15/2022	Tablet Device	Page 60 of 95



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

Antenna WF8



Plot 7-57. Radiated Spurious Emissions above 1GHz Antenna WF8 (BT GFSK ePA - Ch. 0)

Bluetooth Mode: GFSK

Data Rate: 1Mbps

Power Scheme ePA

Distance of Measurements: 3 Meters

Operating Frequency: 2402MHz

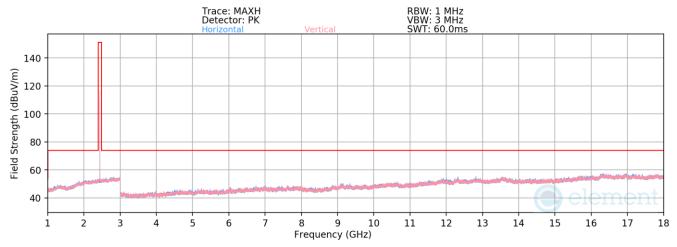
Channel: 0

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	Peak	V	-	-	-69.67	8.49	45.82	73.98	-28.15
12010.00	Peak	V	-	-	-71.43	17.30	52.87	73.98	-21.11

Table 7-13. Radiated Spurious Emissions Measurements Antenna WF8

FCC ID: BCGA2696 IC: 579C-A2696	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 61 of 95
1C2205090022-05.BCG	05/30/2022 - 09/15/2022	Tablet Device	Fage 61 01 95





Plot 7-58. Radiated Spurious Emissions above 1GHz Antenna WF8 (BT GFSK ePA - Ch. 39)

Bluetooth Mode: GFSK

Data Rate: 1Mbps

Power Scheme ePA

Distance of Measurements: 3 Meters

Operating Frequency: 2441MHz

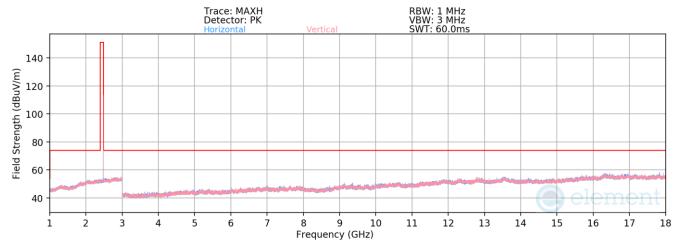
Channel: 39

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	Peak	V	-	ı	-67.24	6.65	46.41	73.98	-27.57
7323.00	Peak	V	-	•	-67.55	9.74	49.19	73.98	-24.79
12205.00	Peak	V	-	-	-66.85	16.13	56.28	73.98	-17.70

Table 7-14. Radiated Spurious Emissions Measurements Antenna WF8

FCC ID: BCGA2696 IC: 579C-A2696	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 62 of 95
1C2205090022-05.BCG	05/30/2022 - 09/15/2022	Tablet Device	Fage 62 01 95





Plot 7-59. Radiated Spurious Emissions above 1GHz Antenna WF8 (BT GFSK ePA - Ch. 78)

Bluetooth Mode: GFSK

Data Rate: 1Mbps

Power Scheme ePA

Distance of Measurements: 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	Peak	V	-	ı	-68.68	6.66	44.98	73.98	-29.00
7440.00	Peak	V	-	•	-69.14	10.20	48.06	73.98	-25.92
12400.00	Peak	V	-	-	-68.63	15.83	54.20	73.98	-19.78

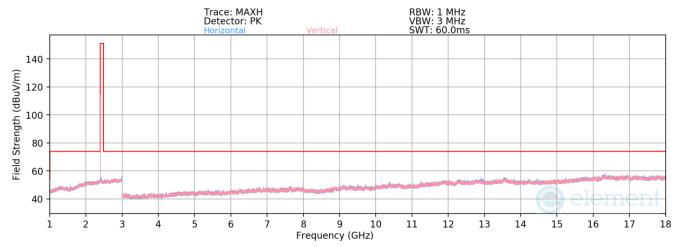
Table 7-15. Radiated Spurious Emissions Measurements Antenna WF8

FCC ID: BCGA2696 IC: 579C-A2696	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 63 of 95
1C2205090022-05.BCG	05/30/2022 - 09/15/2022	Tablet Device	Fage 63 01 95



Radiated Spurious Emission Measurements (1 – 18GHz) §15.205 §15.209 §15.247 (d); RSS-Gen [8.9]

Antenna WF7b



Plot 7-60. Radiated Spurious Emissions above 1GHz Antenna WF7b (BT GFSK ePA - Ch. 0)

Bluetooth Mode: GFSK

Data Rate: 1Mbps

Power Scheme ePA

Distance of Measurements: 3 Meters

Operating Frequency: 2402MHz

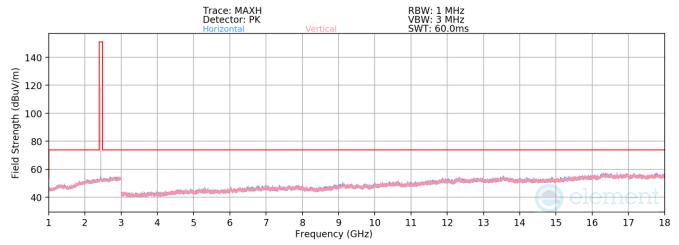
Channel: 0

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	Peak	Н	-	-	-69.93	8.49	45.56	73.98	-28.41
12010.00	Peak	Н	-	-	-71.89	17.30	52.41	73.98	-21.57

Table 7-16. Radiated Spurious Emissions Measurements Antenna WF7b

FCC ID: BCGA2696 IC: 579C-A2696	element)	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 64 of 95
1C2205090022-05.BCG	05/30/2022 - 09/15/2022	Tablet Device	Fage 64 01 95





Plot 7-61. Radiated Spurious Emissions above 1GHz Antenna WF7b (BT GFSK ePA - Ch. 39)

Bluetooth Mode: GFSK

Data Rate: 1Mbps

Power Scheme ePA

Distance of Measurements: 3 Meters

Operating Frequency: 2441MHz

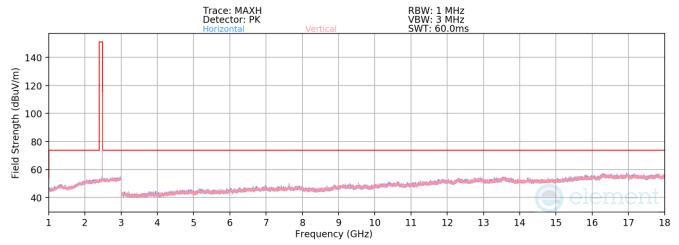
Channel: 39

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	Peak	Н	-	ı	-69.99	8.67	45.68	73.98	-28.30
7323.00	Peak	Н	286	252	-70.78	11.40	47.62	73.98	-26.36
12205.00	Peak	Н	-	-	-72.66	17.51	51.85	73.98	-22.13

Table 7-17. Radiated Spurious Emissions Measurements Antenna WF7b

FCC ID: BCGA2696 IC: 579C-A2696	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 65 of 95
1C2205090022-05.BCG	05/30/2022 - 09/15/2022	Tablet Device	Fage 65 01 95





Plot 7-62. Radiated Spurious Emissions above 1GHz Antenna WF7b (BT GFSK ePA - Ch. 78)

Bluetooth Mode: GFSK

Data Rate: 1Mbps

Power Scheme ePA

Distance of Measurements: 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	Peak	Н	-	•	-70.86	9.08	45.22	73.98	-28.76
7440.00	Peak	Н	262	141	-71.04	12.23	48.19	73.98	-25.79
12400.00	Peak	Н	-	-	-72.93	17.71	51.78	73.98	-22.19

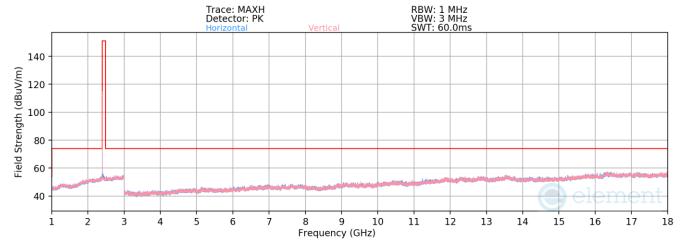
Table 7-18. Radiated Spurious Emissions Measurements Antenna WF7b

FCC ID: BCGA2696 IC: 579C-A2696	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 66 of 95
1C2205090022-05.BCG	05/30/2022 - 09/15/2022	Tablet Device	Fage 66 01 95



Radiated Spurious Emission Measurements (1 – 18GHz) §15.205 §15.209 §15.247 (d); RSS-Gen [8.9]

TxBF



Plot 7-63. Radiated Spurious Emissions above 1GHz TxBF (BT GFSK ePA - Ch. 0)

Bluetooth Mode: GFSK

Data Rate: 1Mbps

Power Scheme ePA

Distance of Measurements: 3 Meters

Operating Frequency: 2402MHz

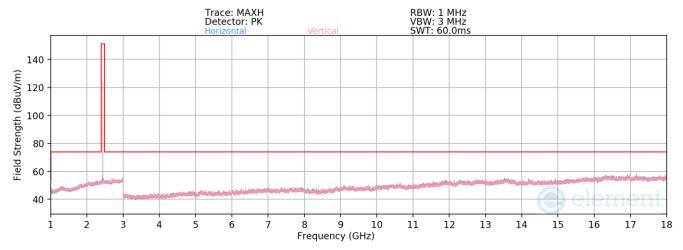
Channel: 0

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	Peak	Н	-	-	-70.23	8.49	45.26	73.98	-28.71
12010.00	Peak	Н	-	-	-72.02	17.30	52.28	73.98	-21.70

Table 7-19. Radiated Spurious Emissions Measurements TxBF

FCC ID: BCGA2696 IC: 579C-A2696	element)	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 67 of 95
1C2205090022-05.BCG	05/30/2022 - 09/15/2022	Tablet Device	Fage 67 01 95





Plot 7-64. Radiated Spurious Emissions above 1GHz TxBF (BT GFSK ePA - Ch. 39)

Bluetooth Mode: GFSK

Data Rate: 1Mbps

Power Scheme ePA

Distance of Measurements: 3 Meters

Operating Frequency: 2441MHz

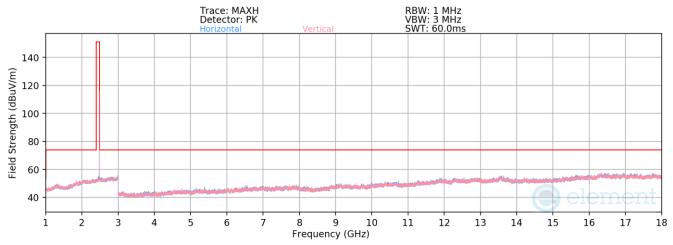
Channel: 39

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	Peak	Н	-	ı	-69.89	8.67	45.78	73.98	-28.20
7323.00	Peak	Н	328	163	-71.10	11.40	47.30	73.98	-26.68
12205.00	Peak	Н	-	-	-72.07	17.51	52.44	73.98	-21.54

Table 7-20. Radiated Spurious Emissions Measurements TxBF

FCC ID: BCGA2696 IC: 579C-A2696	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 68 of 95
1C2205090022-05.BCG	05/30/2022 - 09/15/2022	Tablet Device	Fage 66 01 95





Plot 7-65. Radiated Spurious Emissions above 1GHz TxBF (BT GFSK ePA - Ch. 78)

Bluetooth Mode: GFSK

Data Rate: 1Mbps

Power Scheme ePA

Distance of Measurements: 3 Meters

Operating Frequency: 2480MHz

Channel: 78

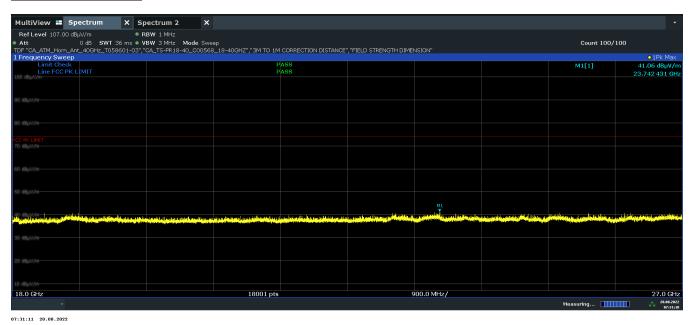
Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
4960.00	Peak	Н	-	-	-69.69	9.08	46.39	73.98	-27.59
7440.00	Peak	Н	324	139	-70.65	12.23	48.58	73.98	-25.40
12400.00	Peak	Н	-	-	-72.02	17.71	52.69	73.98	-21.28

Table 7-21. Radiated Spurious Emissions Measurements TxBF

FCC ID: BCGA2696 IC: 579C-A2696	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 60 of 05
1C2205090022-05.BCG	05/30/2022 - 09/15/2022	Tablet Device	Page 69 of 95



Radiated Spurious Emission Measurements (Above 18GHz) §15.209; RSS-Gen [8.9]



Plot 7-66. Radiated Spurious Emissions above 18GHz TxBF (BT GFSK ePA - Ch.78, Pol.H)



Plot 7-67. Radiated Spurious Emissions above 18GHz TxBF (BT GFSK ePA - Ch.78, Pol V)

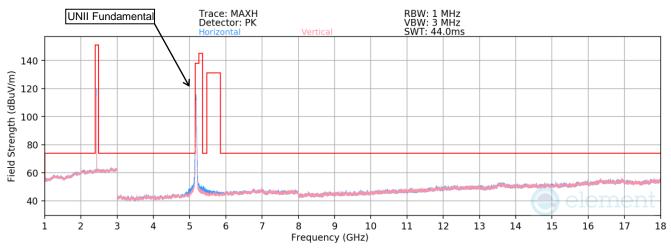
FCC ID: BCGA2696 IC: 579C-A2696	element)	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 70 of 95
1C2205090022-05.BCG	05/30/2022 - 09/15/2022	Tablet Device	Fage 70 01 95



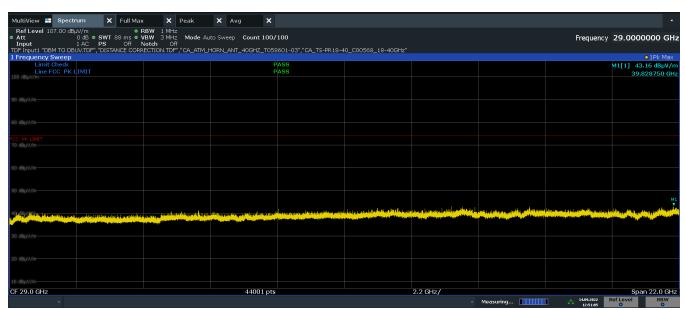
7.9.1 Simultaneous Tx Radiated Spurious Emissions Measurements §15.205 §15.209; RSS-Gen [8.9]

Description	Bluetooth	UNII
Antenna	WF8	WF8
Channel	79	36
Operating Frequency (MHz)	2480	5180
Mode/Modulation	GFSK ePA	802.11n

Table 7-22. Worst Case Simultaneous Transmission Configuration



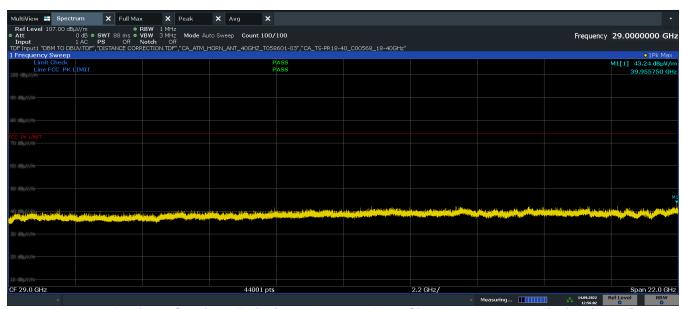
Plot 7-68. Radiated Spurious Emissions 1 - 18GHz - Simultaneous Transmission



Plot 7-69. Radiated Spurious Emissions above 18GHz - Simultaneous Transmission (Pol. H)

FCC ID: BCGA2696 IC: 579C-A2696	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Dog 71 of 05
1C2205090022-05.BCG	05/30/2022 - 09/15/2022	Tablet Device	Page 71 of 95





Plot 7-70. Radiated Spurious Emissions above 18GHz - Simultaneous Transmission (Pol. V)

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	Н	-	ı	-67.15	5.47	45.32	73.98	-28.66
7440.00	Peak	Н	-	ı	-69.29	9.32	47.03	73.98	-26.95
12400.00	Peak	Н	-	-	-69.91	14.33	51.42	73.98	-22.55

Table 7-23. Bluetooth Harmonics Emission Measurements – Simultaneous Transmission

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]
10360.00	Peak	Н	-	-	-75.45	11.82	43.37	68.20	-24.83
15540.00	Average	Н	-	-	-86.29	16.04	36.75	53.98	-17.23
15540.00	Peak	Н	-	-	-74.72	16.04	48.32	73.98	-25.66
7880.00	Peak	Н	-	-	-72.68	8.93	43.25	68.20	-24.95

Table 7-24. UNII and Intermodulations Emissions Measurements – Simultaneous Transmission

FCC ID: BCGA2696 IC: 579C-A2696	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Page 72 of 95
1C2205090022-05.BCG	05/30/2022 - 09/15/2022	Tablet Device	Fage 72 01 95



Antenna WF8

Bluetooth Mode:

GFSK

Power Scheme:

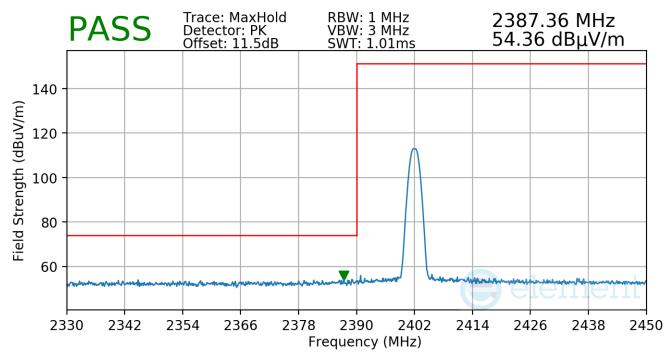
ePA

Measurement Distance:

Operating Frequency:

Channel:

0



Plot 7-71. Radiated Restricted Lower Band Edge Measurement Antenna WF8

FCC ID: BCGA2696 IC: 579C-A2696	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 73 of 95
1C2205090022-05.BCG	05/30/2022 - 09/15/2022	Tablet Device	raye 73 01 95



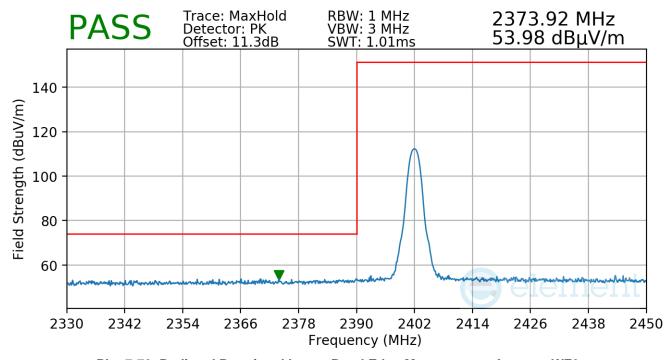
Bluetooth Mode: 8DPSK

Power Scheme: ePA

Measurement Distance: 3 Meters

Operating Frequency: 2402MHz

Channel: 0



Plot 7-72. Radiated Restricted Lower Band Edge Measurement Antenna WF8

FCC ID: BCGA2696 IC: 579C-A2696	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Page 74 of 95
1C2205090022-05.BCG	05/30/2022 - 09/15/2022	Tablet Device	Page 74 01 95



Bluetooth Mode:

GFSK

Power Scheme:

ePA

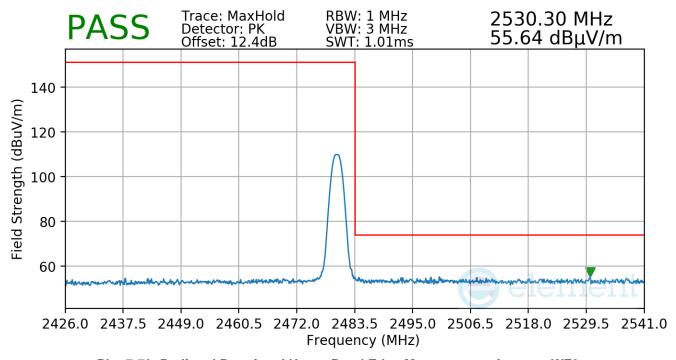
Measurement Distance:

Operating Frequency:

2480MHz

Channel:

78



Plot 7-73. Radiated Restricted Upper Band Edge Measurement Antenna WF8

FCC ID: BCGA2696 IC: 579C-A2696	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Page 75 of 95
1C2205090022-05.BCG	05/30/2022 - 09/15/2022	Tablet Device	Fage 75 01 95



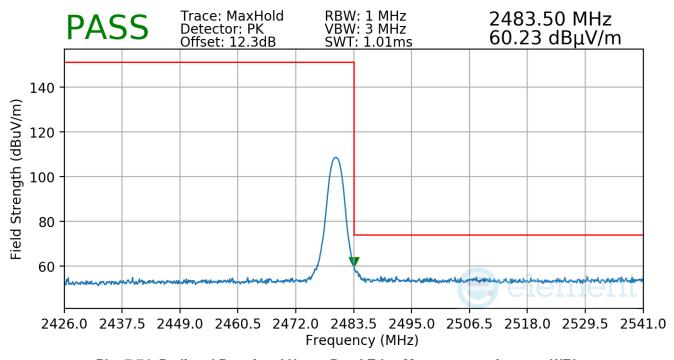
Bluetooth Mode: 8DPSK

Power Scheme: ePA

Measurement Distance: 3 Meters

Operating Frequency: 2480MHz

Channel: 78



Plot 7-74. Radiated Restricted Upper Band Edge Measurement Antenna WF8

FCC ID: BCGA2696 IC: 579C-A2696	element	element Measurement report (Certification)	
Test Report S/N:	Test Dates:	EUT Type:	Page 76 of 95
1C2205090022-05.BCG	05/30/2022 - 09/15/2022	Tablet Device	Fage 76 01 95



Antenna WF7b

Bluetooth Mode:

GFSK

Power Scheme:

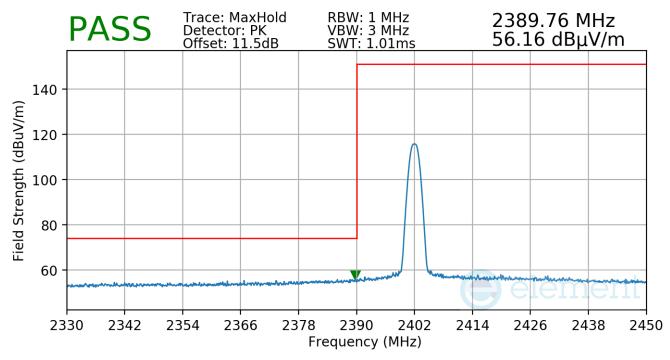
ePA

Measurement Distance:

Operating Frequency:

Channel:

0



Plot 7-75. Radiated Restricted Lower Band Edge Measurement Antenna WF7b

FCC ID: BCGA2696 IC: 579C-A2696	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Dog 77 of 05
1C2205090022-05.BCG	05/30/2022 - 09/15/2022	Tablet Device	Page 77 of 95



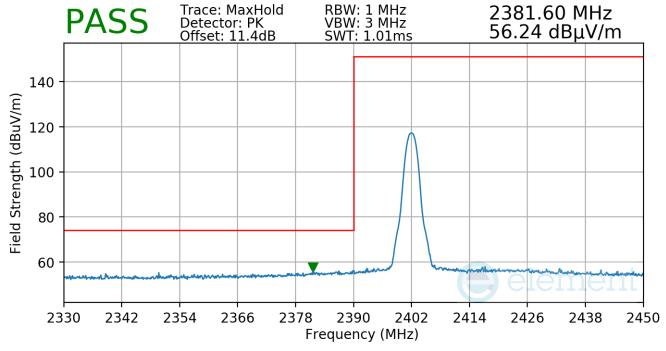
Bluetooth Mode: 8DPSK

Power Scheme: ePA

Measurement Distance: 3 Meters

Operating Frequency: 2402MHz

Channel: 0



Plot 7-76. Radiated Restricted Lower Band Edge Measurement Antenna WF7b

FCC ID: BCGA2696 IC: 579C-A2696	element)	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Page 78 of 95
1C2205090022-05.BCG	05/30/2022 - 09/15/2022	Tablet Device	Fage 76 01 95



Bluetooth Mode:

GFSK

Power Scheme:

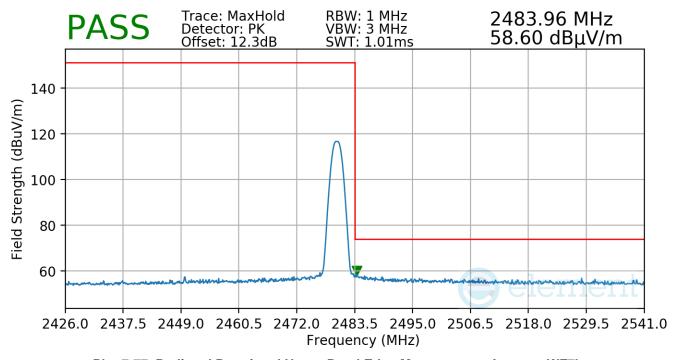
ePA

Measurement Distance:

Operating Frequency:

Channel:

78



Plot 7-77. Radiated Restricted Upper Band Edge Measurement Antenna WF7b

FCC ID: BCGA2696 IC: 579C-A2696	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Page 79 of 95
1C2205090022-05.BCG	05/30/2022 - 09/15/2022	Tablet Device	Page 79 01 95



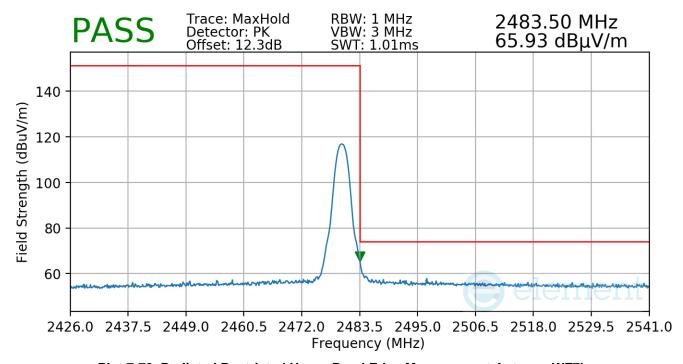
Bluetooth Mode: 8DPSK

Power Scheme: ePA

Measurement Distance: 3 Meters

Operating Frequency: 2480MHz

Channel: 78



Plot 7-78. Radiated Restricted Upper Band Edge Measurement Antenna WF7b

FCC ID: BCGA2696 IC: 579C-A2696	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Dags 90 of 05
1C2205090022-05.BCG	05/30/2022 - 09/15/2022	Tablet Device	Page 80 of 95



TxBF

Bluetooth Mode:

GFSK

Power Scheme:

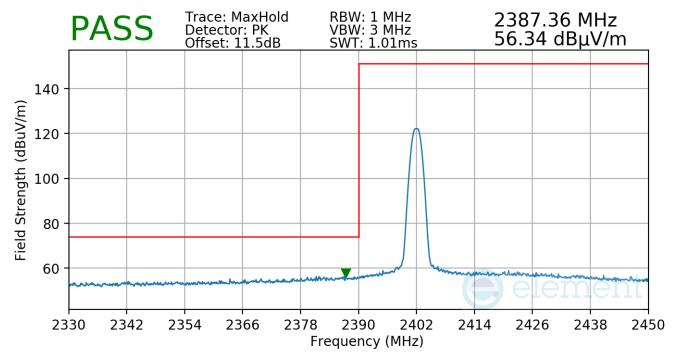
ePA

Measurement Distance:

Operating Frequency:

Channel:

0



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

FCC ID: BCGA2696 IC: 579C-A2696	element	ement MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Page 81 of 95
1C2205090022-05.BCG	05/30/2022 - 09/15/2022	Tablet Device	Page 61 01 95



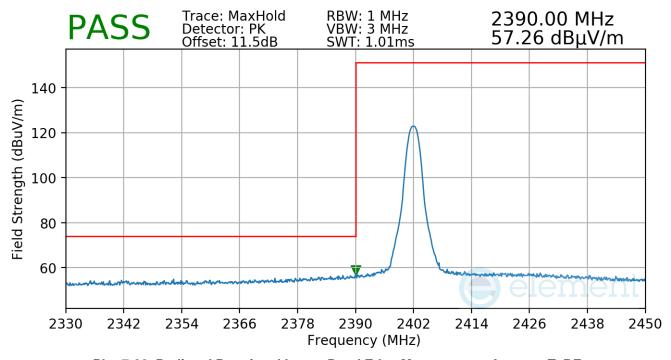
Bluetooth Mode: 8DPSK

Power Scheme: ePA

Measurement Distance: 3 Meters

Operating Frequency: 2402MHz

Channel: 0



Plot 7-80. Radiated Restricted Lower Band Edge Measurement Antenna TxBF

FCC ID: BCGA2696 IC: 579C-A2696	element	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Page 82 of 95
1C2205090022-05.BCG	05/30/2022 - 09/15/2022	Tablet Device	Fage 62 01 95



Bluetooth Mode:

GFSK

Power Scheme:

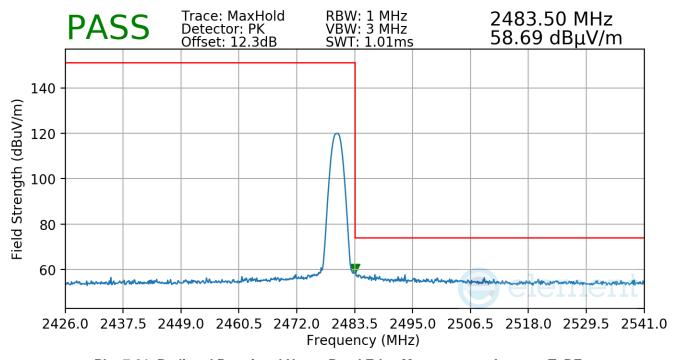
ePA

Measurement Distance:

Operating Frequency:

Channel:

78



Plot 7-81. Radiated Restricted Upper Band Edge Measurement Antenna TxBF

FCC ID: BCGA2696 IC: 579C-A2696	element	ment Measurement report (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Page 83 of 95
1C2205090022-05.BCG	05/30/2022 - 09/15/2022	Tablet Device	Fage 63 01 95



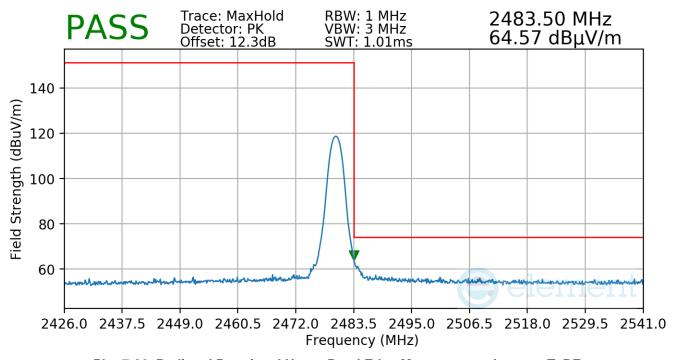
Bluetooth Mode: 8DPSK

Power Scheme: ePA

Measurement Distance: 3 Meters

Operating Frequency: 2480MHz

Channel: 78



Plot 7-82. Radiated Restricted Upper Band Edge Measurement Antenna TxBF

FCC ID: BCGA2696 IC: 579C-A2696	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 84 of 95
1C2205090022-05.BCG	05/30/2022 - 09/15/2022	Tablet Device	Page 64 01 95



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 7-25 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 7-25. 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
- RBW = 120kHz (for emissions from 30MHz 1GHz)
- 3. VBW = 300kHz
- 4. Detector = peak
- 5. Sweep time = auto couple
- 6. Trace mode = max hold
- Trace was allowed to stabilize

FCC ID: BCGA2696 IC: 579C-A2696	element MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo OF of OF
1C2205090022-05.BCG	05/30/2022 - 09/15/2022	Tablet Device	Page 85 of 95



Test Setup

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

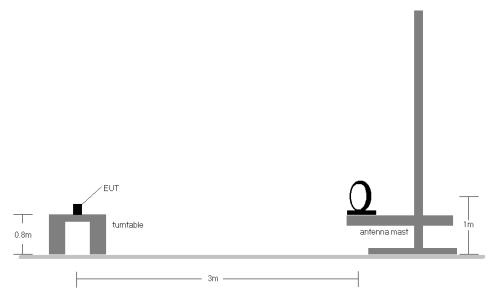


Figure 7-9. Radiated Test Setup < 30MHz

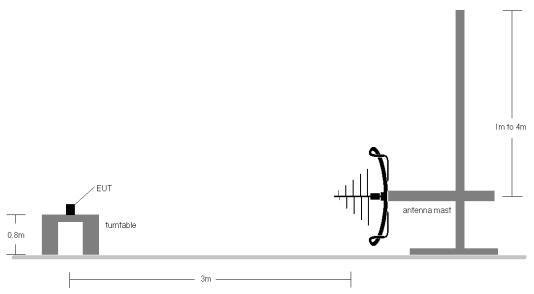


Figure 7-10. Radiated Test Setup < 1GHz

FCC ID: BCGA2696 IC: 579C-A2696	element	ement MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Page 86 of 95
1C2205090022-05.BCG	05/30/2022 - 09/15/2022	Tablet Device	Page 66 01 95



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 7-25.
- 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 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.
 - EUT powered by AC/DC adaptor via USB-C cable with magnetic charger
 - b. EUT powered by host PC via USB-C cable with magnetic charger

Sample Calculations

Determining Spurious Emissions Levels

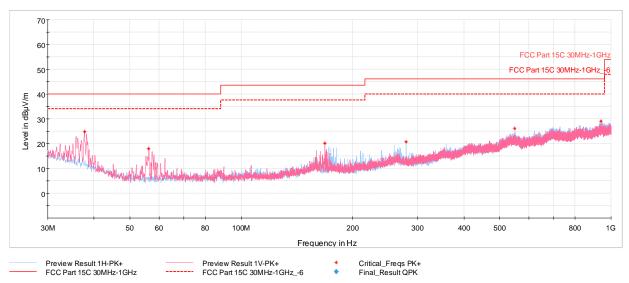
- Field Strength Level [dBμV/m] = Analyzer Level [dBm] + 107 + AFCL [dB/m]
- AFCL [dB/m] = Antenna Factor [dB/m] + Cable Loss [dB] Preamplifier Gain [dB]
- Margin [dB] = Field Strength Level [dBμV/m] Limit [dBμV/m]

FCC ID: BCGA2696 IC: 579C-A2696	element Measurement Report (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogg 97 of 05
1C2205090022-05.BCG	05/30/2022 - 09/15/2022	Tablet Device	Page 87 of 95



Radiated Spurious Emissions Measurements (Below 1GHz) §15.209; RSS-Gen [8.9]

TxBF



Plot 7-83. Radiated Spurious Emissions Below 1GHz TxBF (GFSK ePA - Ch.78, 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]
37.71	Max Peak	V	100	99	-69.04	-13.13	24.83	40.00	-15.17
56.29	Max Peak	V	100	94	-70.84	-18.27	17.89	40.00	-22.11
168.32	Max Peak	V	100	53	-73.61	-13.15	20.24	43.52	-23.28
279.00	Max Peak	Н	100	158	-76.05	-10.23	20.72	46.02	-25.30
549.05	Max Peak	Н	300	17	-80.43	-0.51	26.06	46.02	-19.96
939.76	Max Peak	Н	100	33	-82.09	4.22	29.13	46.02	-16.89

Table 7-26. Radiated Spurious Emissions Below 1GHz TxBF (GFSK ePA – Ch.78 with AC/DC Adapter)

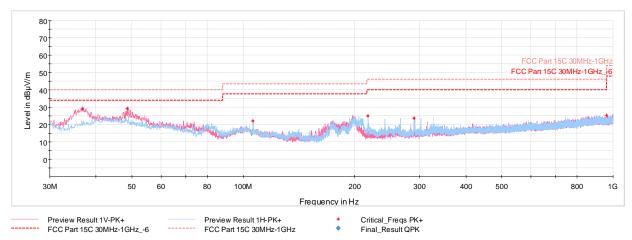
FCC ID: BCGA2696 IC: 579C-A2696	element)	element MEASUREMENT REPORT (CERTIFICATION)	
Test Report S/N:	Test Dates:	EUT Type:	Page 88 of 95
1C2205090022-05.BCG	05/30/2022 - 09/15/2022	Tablet Device	Fage 66 01 95



7.10.1 Simultaneous Tx Radiated Spurious Emissions Measurements (Below 1GHz) §15.209; RSS-Gen [8.9]

Description	Bluetooth	UNII
Antenna	WF8	WF8
Channel	79	36
Operating Frequency (MHz)	2480	5180
Mode/Modulation	GFSK ePA	802.11n

Table 7-15. Worst Case Simultaneous Transmission Configuration



Plot 7-84. Radiated Spurious Emissions below 1GHz - Simultaneous Transmission

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]
36.84	Max Peak	V	100	75	-59.66	-18.25	29.09	40.00	-10.91
48.67	Max Peak	V	100	345	-62.35	-15.49	29.16	40.00	-10.84
106.39	Max Peak	V	200	103	-66.24	-18.59	22.17	43.52	-21.35
217.60	Max Peak	Н	100	160	-64.35	-17.65	25.00	46.02	-21.02
290.01	Max Peak	Н	100	135	-67.93	-15.38	23.69	46.02	-22.33
959.94	Max Peak	V	300	312	-77.77	-4.06	25.17	46.02	-20.85

Table 7-27. Bluetooth and UNII Harmonics Emission Measurements - Simultaneous Transmission

FCC ID: BCGA2696 IC: 579C-A2696	element)	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 89 of 95
1C2205090022-05.BCG	05/30/2022 - 09/15/2022	Tablet Device	Fage 69 01 95



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)		
(IVITIZ)	Quasi-peak	Average	
0.15 – 0.5	66 to 56*	56 to 46*	
0.5 – 5	56	46	
5 – 30	60	50	

Table 7-28. Conducted Limits

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)
- Detector = RMS
- 4. Sweep time = auto couple
- 5. Trace mode = max hold
- 6. Trace was allowed to stabilize

FCC ID: BCGA2696 IC: 579C-A2696	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 90 of 95
1C2205090022-05.BCG	05/30/2022 - 09/15/2022	Tablet Device	Page 90 01 95

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



Test Setup

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

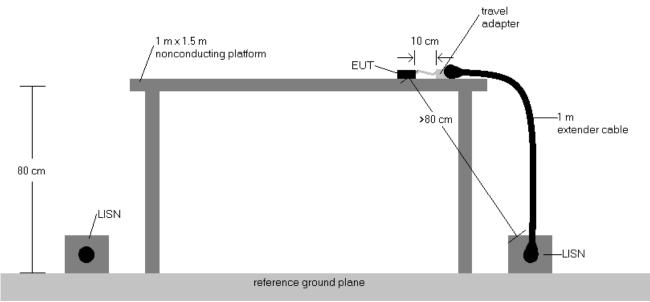


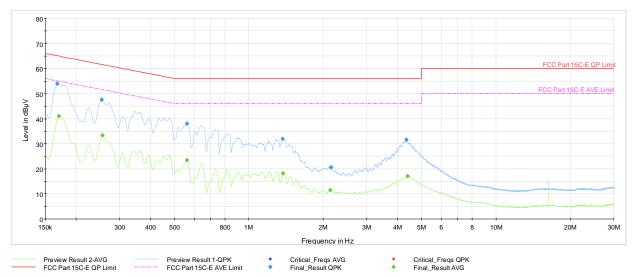
Figure 7-11. Test Instrument & Measurement Setup

Test Notes

- 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 magnetic charger
 - b. EUT powered by host PC via USB-C cable with magnetic charger
- 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: BCGA2696 IC: 579C-A2696	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 91 of 95
1C2205090022-05.BCG	05/30/2022 - 09/15/2022	Tablet Device	Page 91 01 95





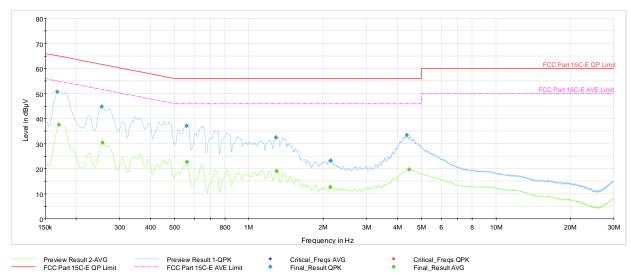
Plot 7-85. AC Line-Conducted Test Plot (L1, GFSK ePA - Ch.78, with AC/DC Adapter)

Frequency [MHz]	Process State	QuasiPeak [dBµV]	Average [dBµV]	Limit [dBµV]	Marqin [dB]	Line	PE
0.168	FINAL	54.0	_	65.06	-11.01	L1	GND
0.170	FINAL		41.10	54.95	-13.85	L1	GND
0.254	FINAL	47.6		61.64	-14.06	L1	GND
0.256	FINAL		33.34	51.57	-18.23	L1	GND
0.562	FINAL		23.54	46.00	-22.46	L1	GND
0.562	FINAL	38.0		56.00	-17.96	L1	GND
1.370	FINAL	31.9		56.00	-24.10	L1	GND
1.376	FINAL	_	18.24	46.00	-27.76	L1	GND
2.137	FINAL	_	11.55	46.00	-34.45	L1	GND
2.150	FINAL	20.6		56.00	-35.45	L1	GND
4.349	FINAL	31.6		56.00	-24.45	L1	GND
4.389	FINAL	_	17.03	46.00	-28.97	L1	GND

Table 7-29. AC Line-Conducted Test Data (L1, GFSK ePA - Ch.78, with AC/DC Adapter)

FCC ID: BCGA2696 IC: 579C-A2696	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 92 of 95
1C2205090022-05.BCG	05/30/2022 - 09/15/2022	Tablet Device	Page 92 01 95





Plot 7-86. AC Line-Conducted Test Plot (N, GFSK ePA - Ch.78, with AC/DC Adapter)

Frequency [MHz]	Process State	QuasiPeak [dBµV]	Averaqe [dBµV]	Limit [dBµV]	Marqin [dB]	Line	PE
0.168	FINAL	50.7		65.06	-14.33	N	GND
0.170	FINAL	_	37.63	54.95	-17.32	Ν	GND
0.254	FINAL	44.9		61.64	-16.76	Ν	GND
0.256	FINAL	_	30.47	51.57	-21.10	Ν	GND
0.560	FINAL	37.2		56.00	-18.84	Ν	GND
0.562	FINAL	_	22.67	46.00	-23.33	Ν	GND
1.286	FINAL	32.5		56.00	-23.48	Ν	GND
1.295	FINAL	_	19.06	46.00	-26.94	N	GND
2.137	FINAL	_	12.61	46.00	-33.39	N	GND
2.146	FINAL	23.1	_	56.00	-32.86	Ν	GND
4.358	FINAL	33.4	_	56.00	-22.58	N	GND
4.461	FINAL		19.67	46.00	-26.33	N	GND

Table 7-30. AC Line-Conducted Test Data (N, GFSK ePA - Ch.78, with AC/DC Adapter)

FCC ID: BCGA2696 IC: 579C-A2696	element)	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 93 of 95
1C2205090022-05.BCG	05/30/2022 - 09/15/2022	Tablet Device	Fage 93 01 93



8.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the **Apple Tablet Device FCC ID: BCGA2696** and **IC: 579C-A2696** 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: BCGA2696 IC: 579C-A2696	element MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 04 of 05
1C2205090022-05.BCG	05/30/2022 - 09/15/2022	Tablet Device	Page 94 of 95



APPENDIX A

Antenna gains provided by manufacturer:

Frequency (MHz)	Horizontal (dBi)	Vertical (dBi)
2412	1.6	-0.1
2442	1.6	-0.5
2472	0.8	-1.3

Table 9-1. WiFi/BT 2.4GHz (ANT WF8); Type: PIFA

Frequency (MHz)	Horizontal (dBi)	Vertical (dBi)
2412	0.4	-0.1
2442	0.1	-0.5
2472	-0.3	-0.6

Table 9-2. WiFi/BT 2.4GHz (ANT WF7b); Type: PIFA

FCC ID: BCGA2696 IC: 579C-A2696	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo OF of OF
1C2205090022-05.BCG	05/30/2022 - 09/15/2022	Tablet Device	Page 95 of 95