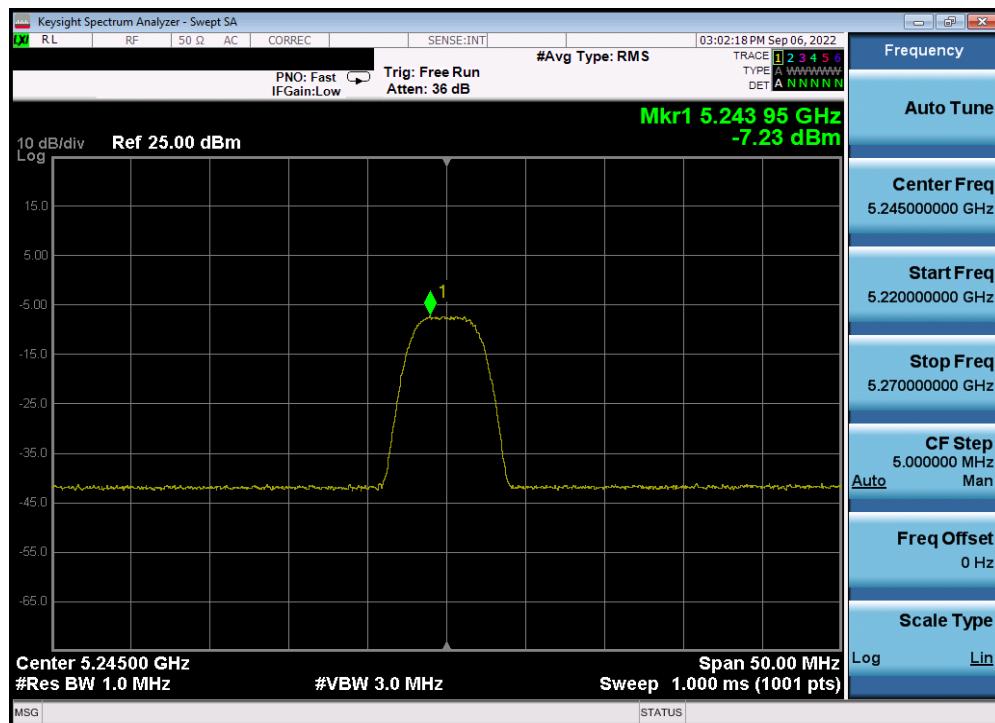


Plot 7-95. PSD TxBF Antenna 5b (HDR8, iPA, 5245MHz)



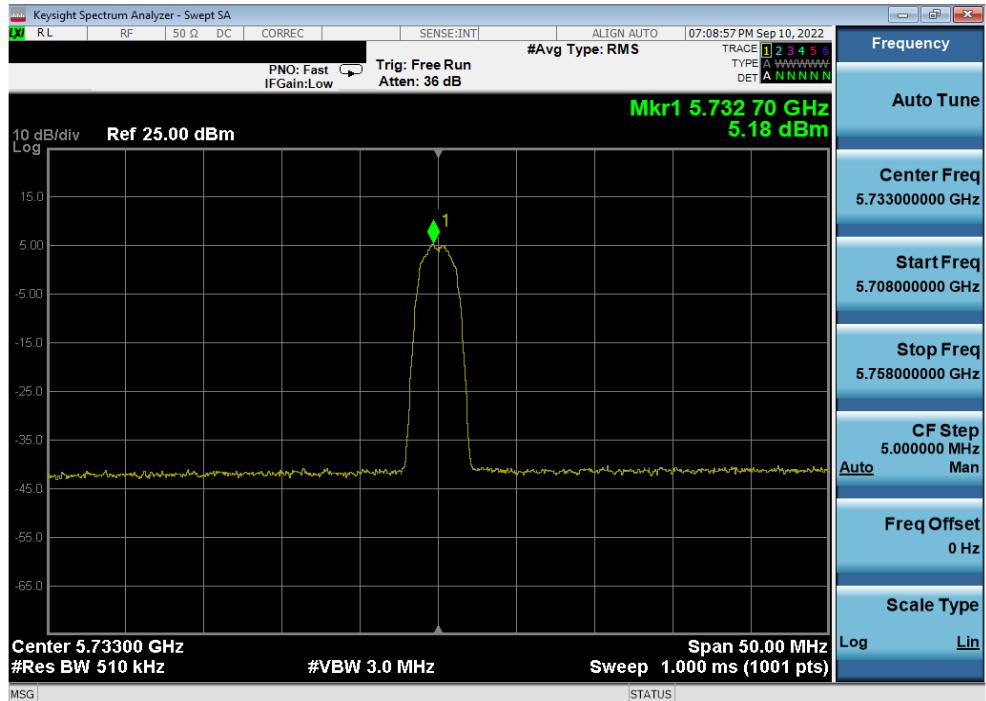
Plot 7-96. PSD TxBF Antenna 4a (HDR8, iPA, 5245MHz)

FCC ID: BCGA2435	 element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device	Page 79 of 136

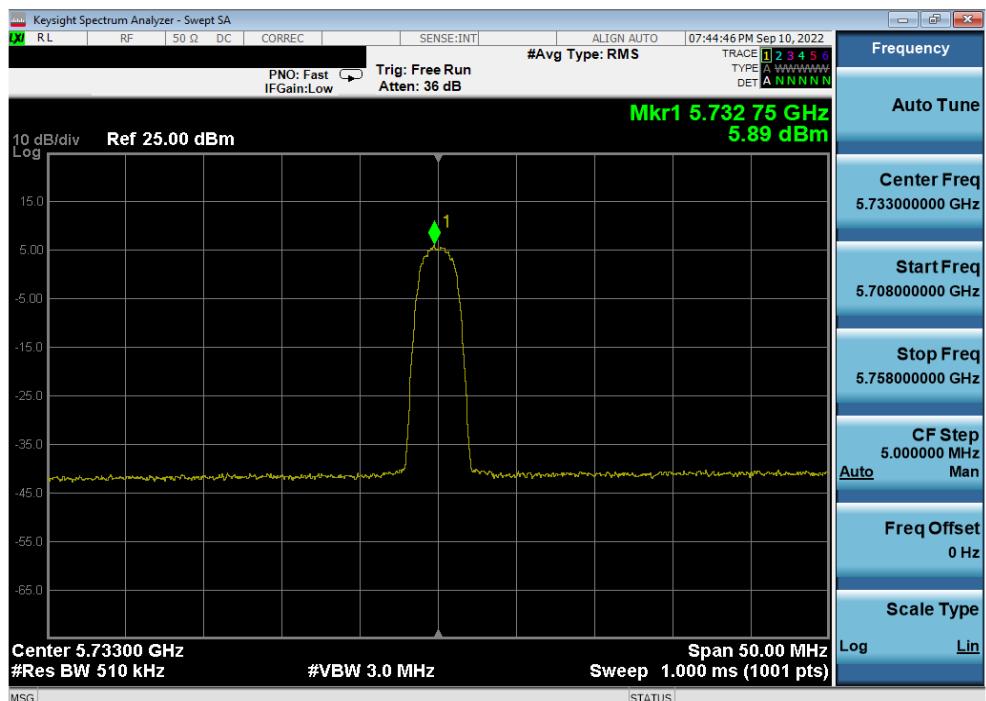
	Frequency [MHz]	Mode	Power Scheme	Antenna 5b Power Density [dBm/500kHz]	Antenna 4a Power Density [dBm/500kHz]	Summed Power Density [dBm/500kHz]	Max Permissible Power Density [dBm/500kHz]	Margin [dB]
Band 3	5733	HDR4	ePA	5.18	5.89	8.56	30.0	-21.44
	5789	HDR4	ePA	5.09	5.46	8.29	30.0	-21.71
	5844	HDR4	ePA	4.33	5.96	8.23	30.0	-21.77
	5745	HDR8	ePA	3.18	3.98	6.61	30.0	-23.39
	5785	HDR8	ePA	3.47	2.89	6.20	30.0	-23.80
	5825	HDR8	ePA	1.81	1.63	4.73	30.0	-25.27
	5733	HDR4	iPA	-3.85	-4.63	-1.21	30.0	-31.21
	5789	HDR4	iPA	-4.54	-4.96	-1.73	30.0	-31.73
	5844	HDR4	iPA	-5.09	-4.47	-1.75	30.0	-31.75
	5745	HDR8	iPA	-6.97	-7.42	-4.18	30.0	-34.18
	5785	HDR8	iPA	-7.32	-7.87	-4.57	30.0	-34.57
	5825	HDR8	iPA	-9.09	-9.13	-6.10	30.0	-36.10

Table 7-14. Power Spectral Density Measurements

FCC ID: BCGA2435	MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device		Page 80 of 136

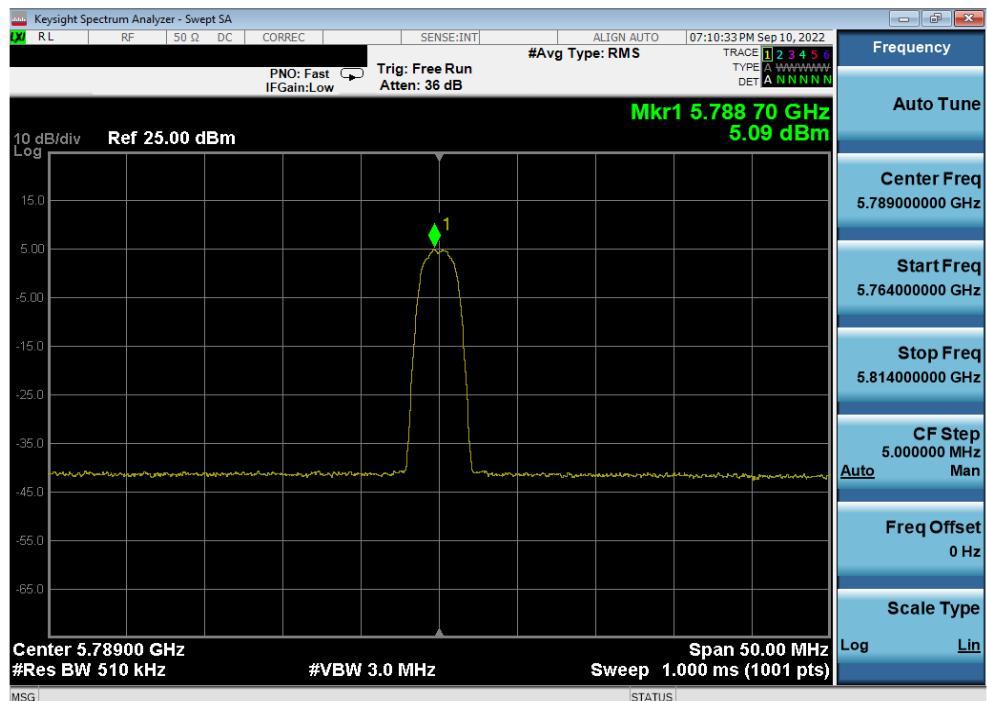


Plot 7-97. PSD TxBF Antenna 5b (HDR4, ePA, 5733MHz)

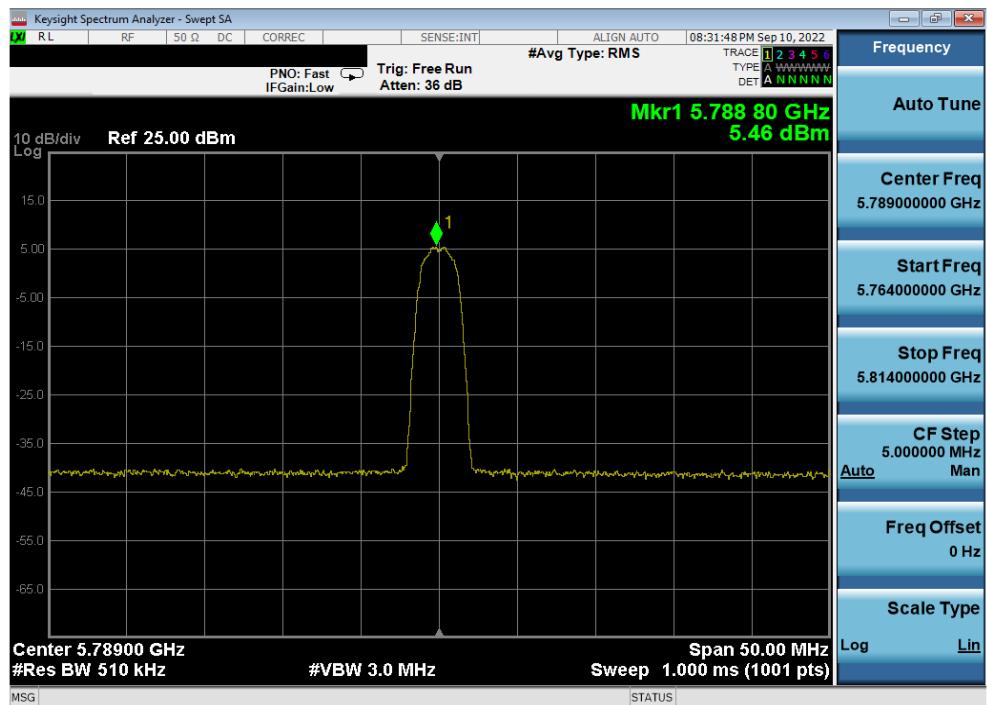


Plot 7-98. PSD TxBF Antenna 4a (HDR4, ePA, 5733MHz)

FCC ID: BCGA2435	 element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device	Page 81 of 136

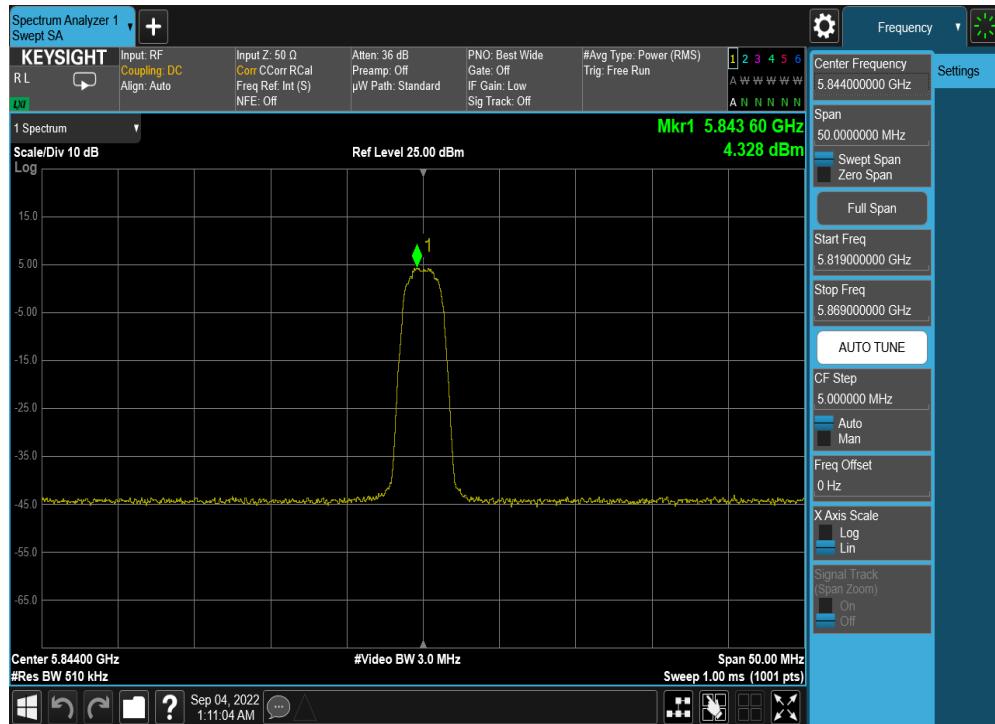
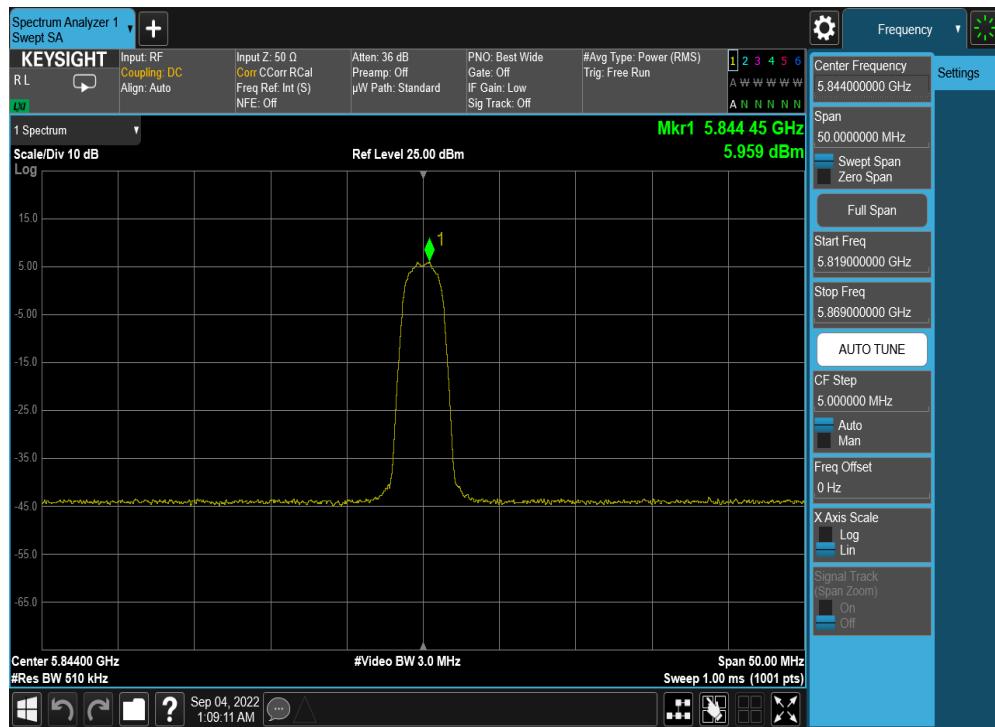


Plot 7-99. PSD TxBF Antenna 5b (HDR4, ePA, 5789MHz)

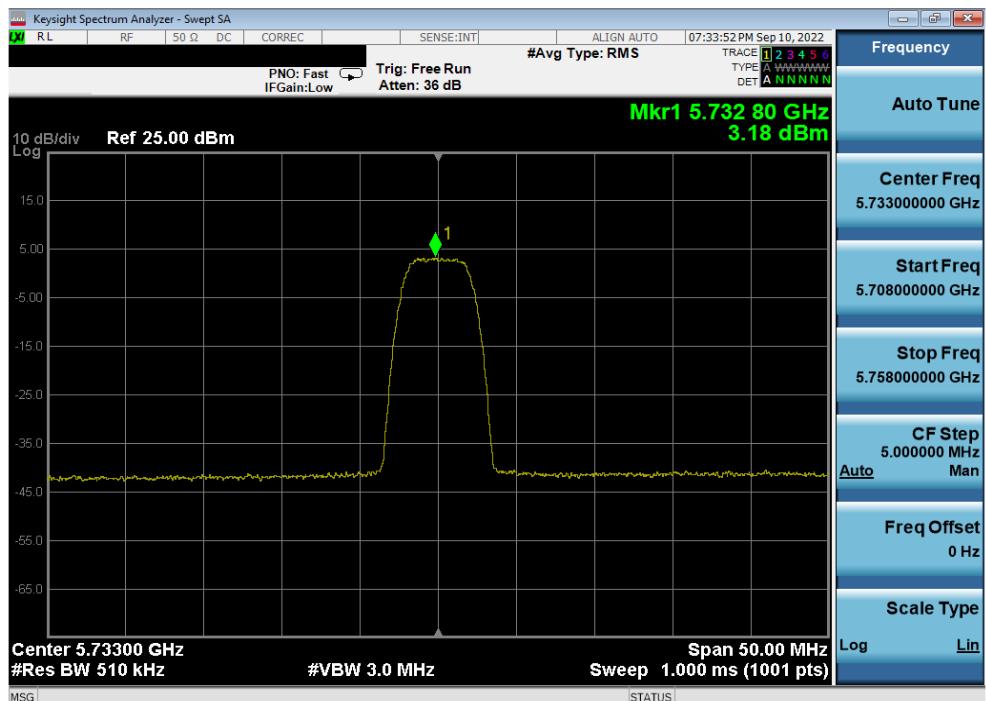


Plot 7-100. PSD TxBF Antenna 4a (HDR4, ePA, 5789MHz)

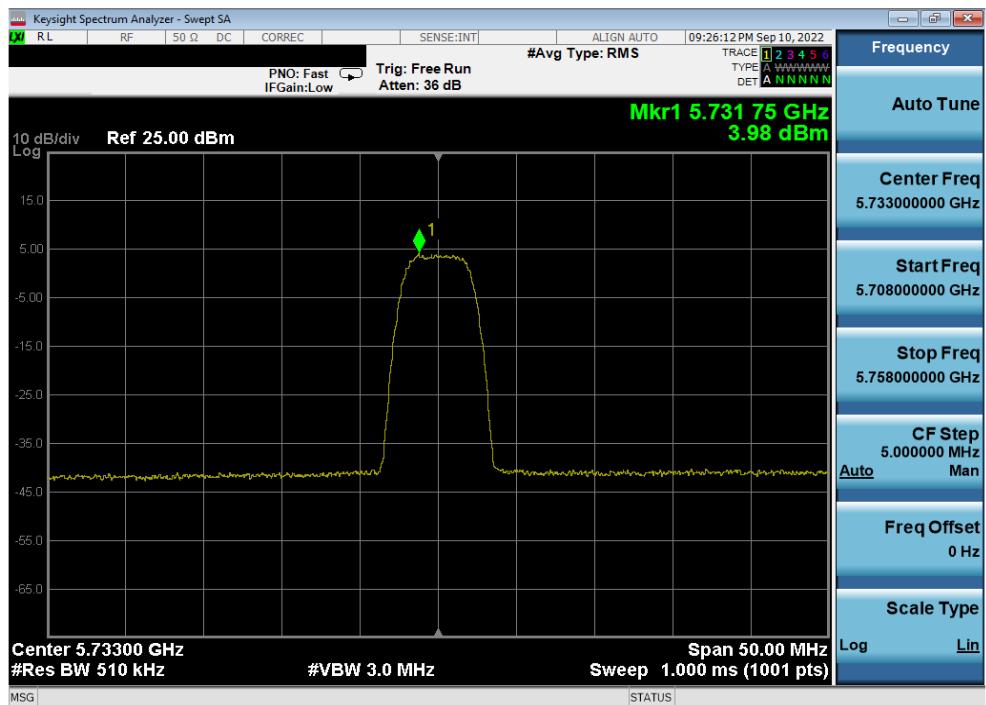
FCC ID: BCGA2435	 element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device	Page 82 of 136


Plot 7-101. PSD TxBF Antenna 5b (HDR4, ePA, 5844MHz)

Plot 7-102. PSD TxBF Antenna 4a (HDR4, ePA, 5844MHz)

FCC ID: BCGA2435	 element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device	Page 83 of 136

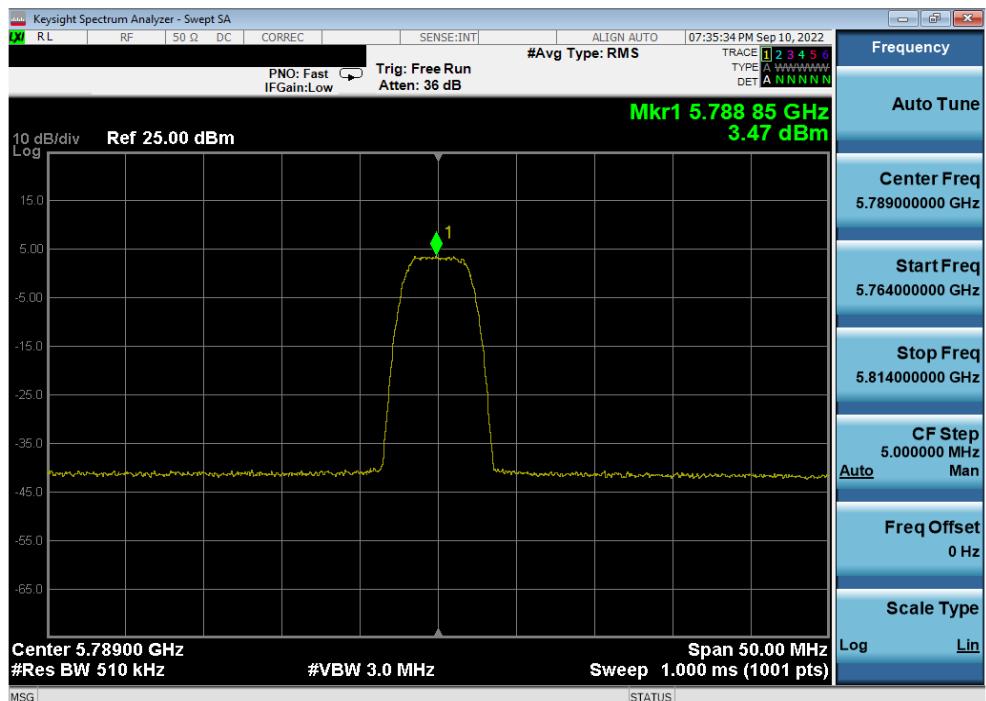


Plot 7-103. PSD TxBF Antenna 5b (HDR8, ePA, 5733MHz)

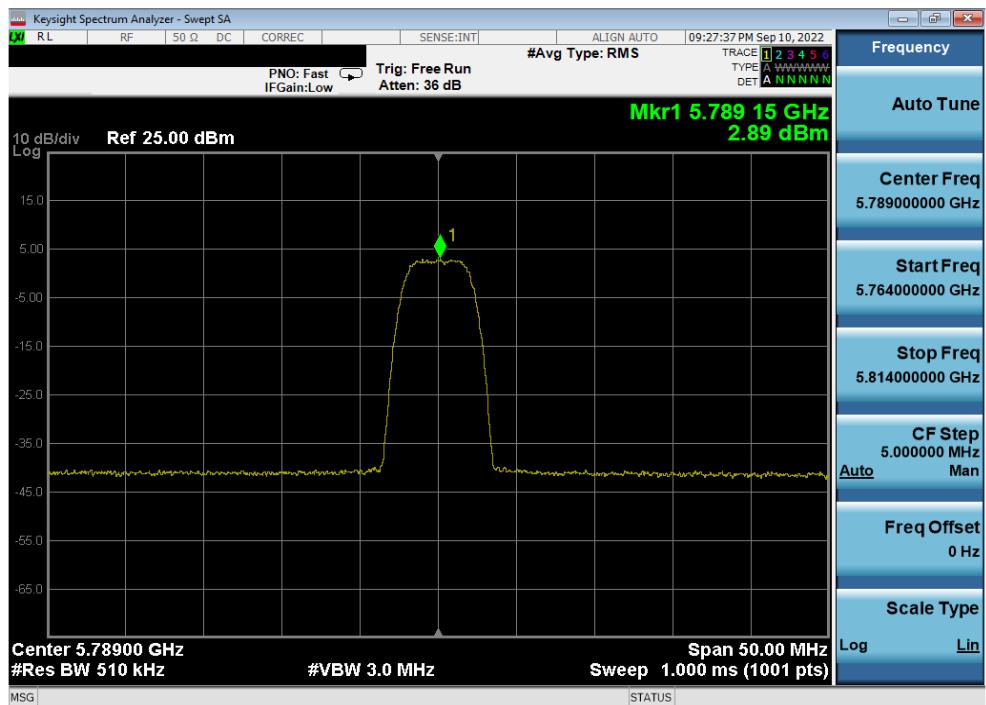


Plot 7-104. PSD TxBF Antenna 4a (HDR8, ePA, 5733MHz)

FCC ID: BCGA2435		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device	Page 84 of 136

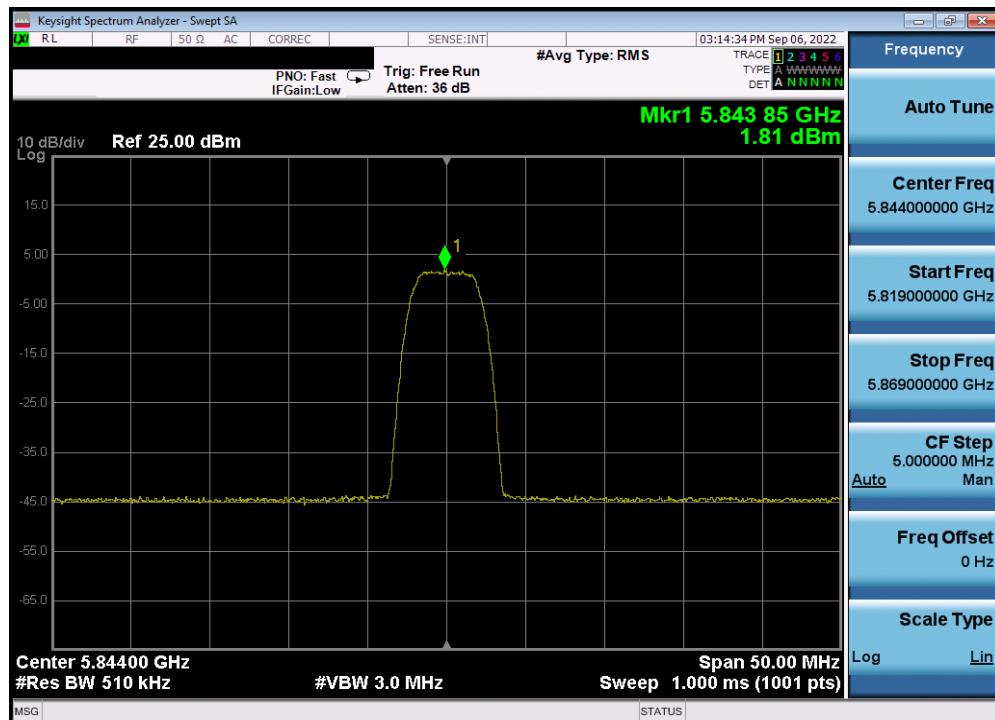


Plot 7-105. PSD TxBF Antenna 5b (HDR8, ePA, 5789MHz)

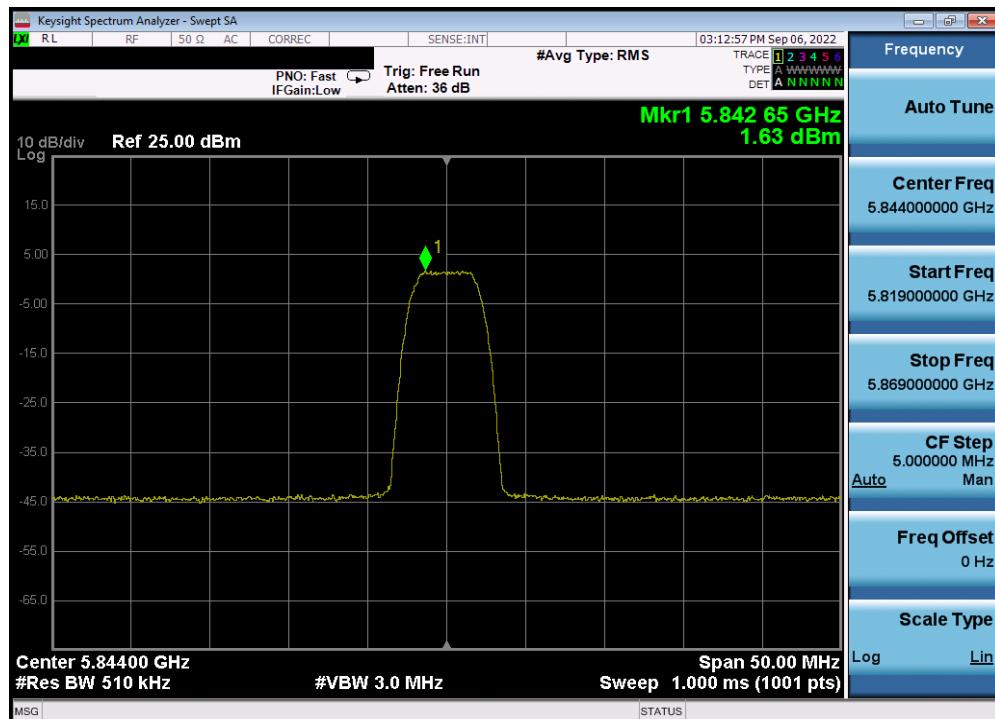


Plot 7-106. PSD TxBF Antenna 4a (HDR8, ePA, 5789MHz)

FCC ID: BCGA2435		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device	Page 85 of 136

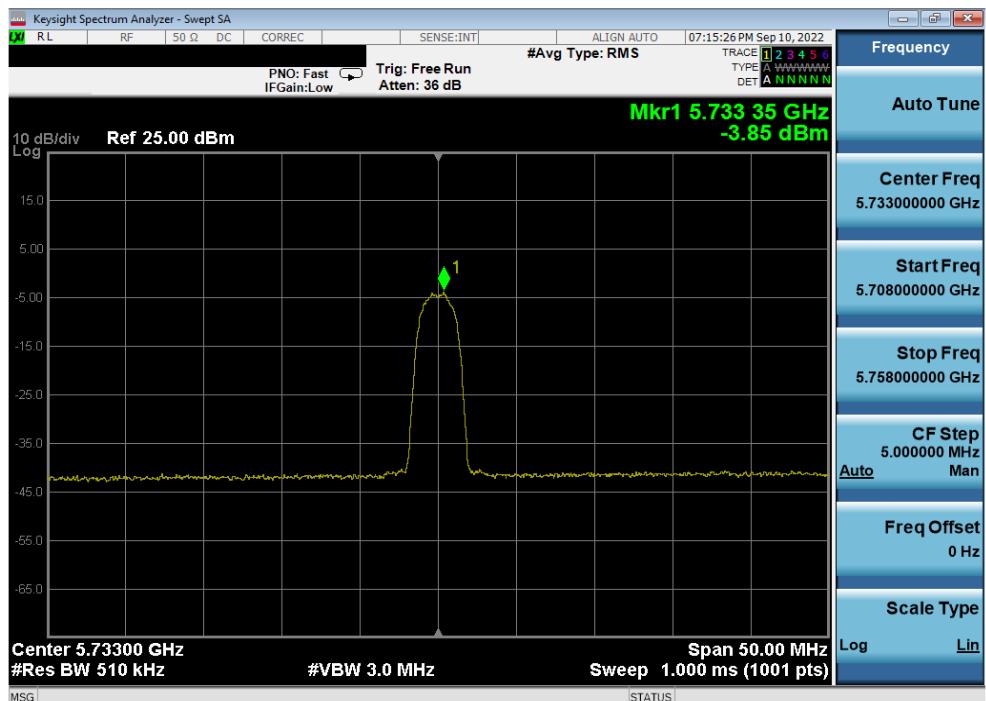


Plot 7-107. PSD TxBF Antenna 5b (HDR8, ePA, 5844MHz)

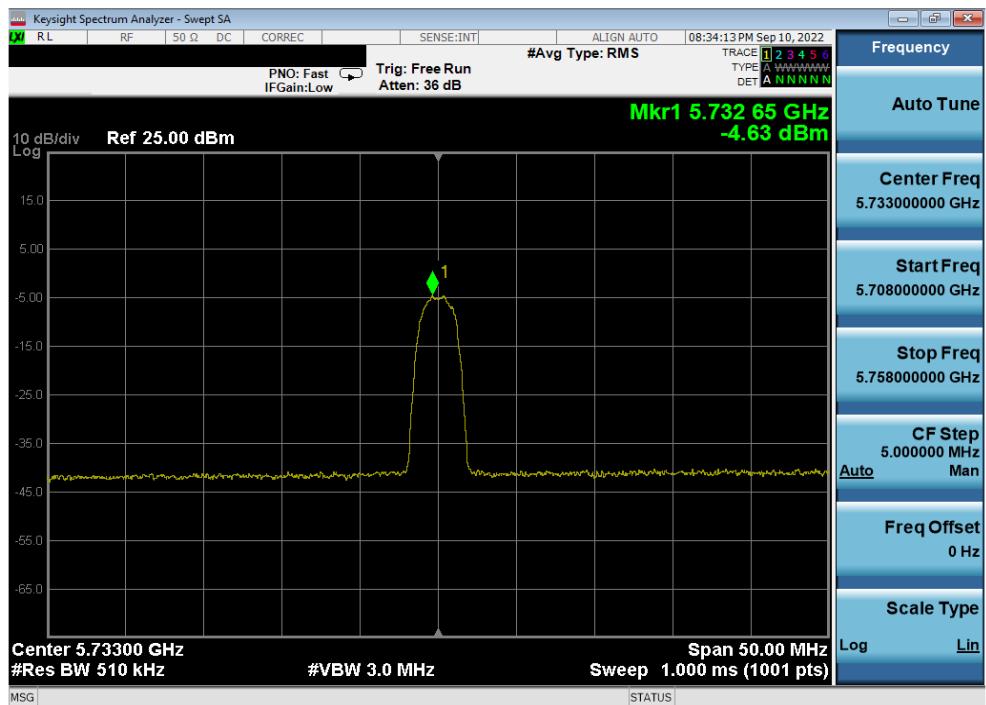


Plot 7-108. PSD TxBF Antenna 4a (HDR8, ePA, 5844MHz)

FCC ID: BCGA2435	 element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device	Page 86 of 136

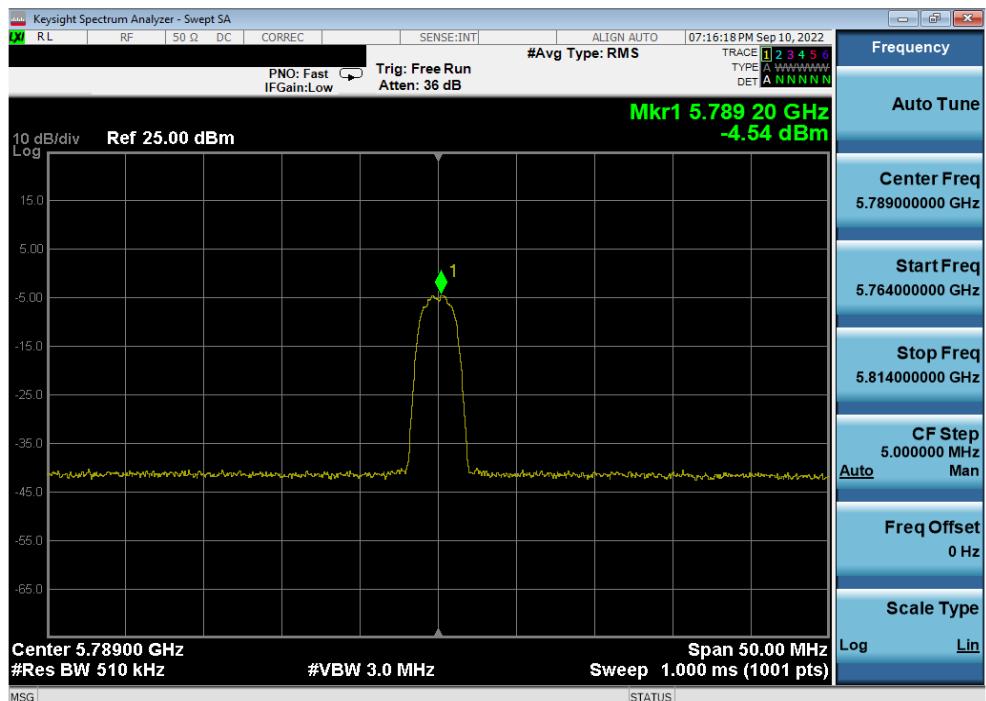


Plot 7-109. PSD TxBF Antenna 5b (HDR4, iPA, 5733MHz)

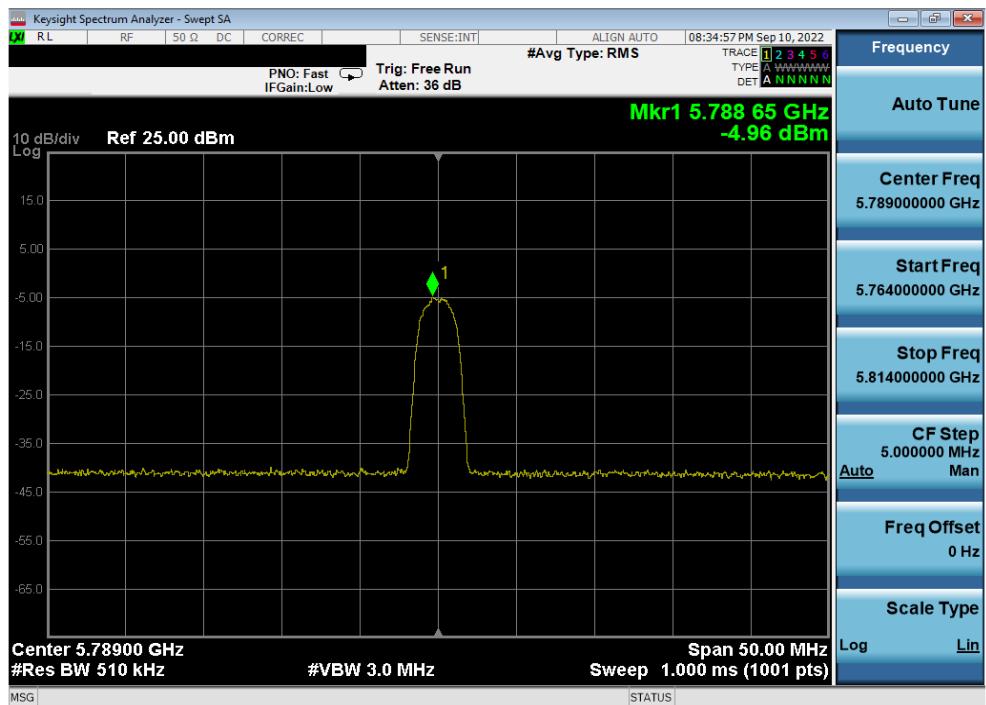


Plot 7-110. PSD TxBF Antenna 4a (HDR4, iPA, 5733MHz)

FCC ID: BCGA2435		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device	Page 87 of 136

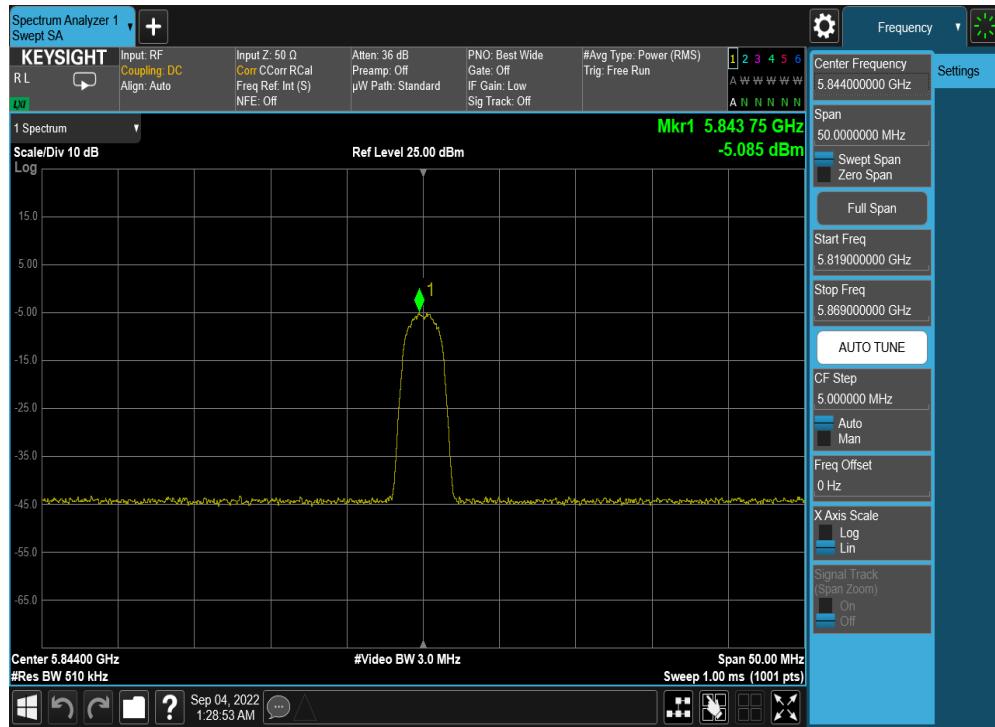
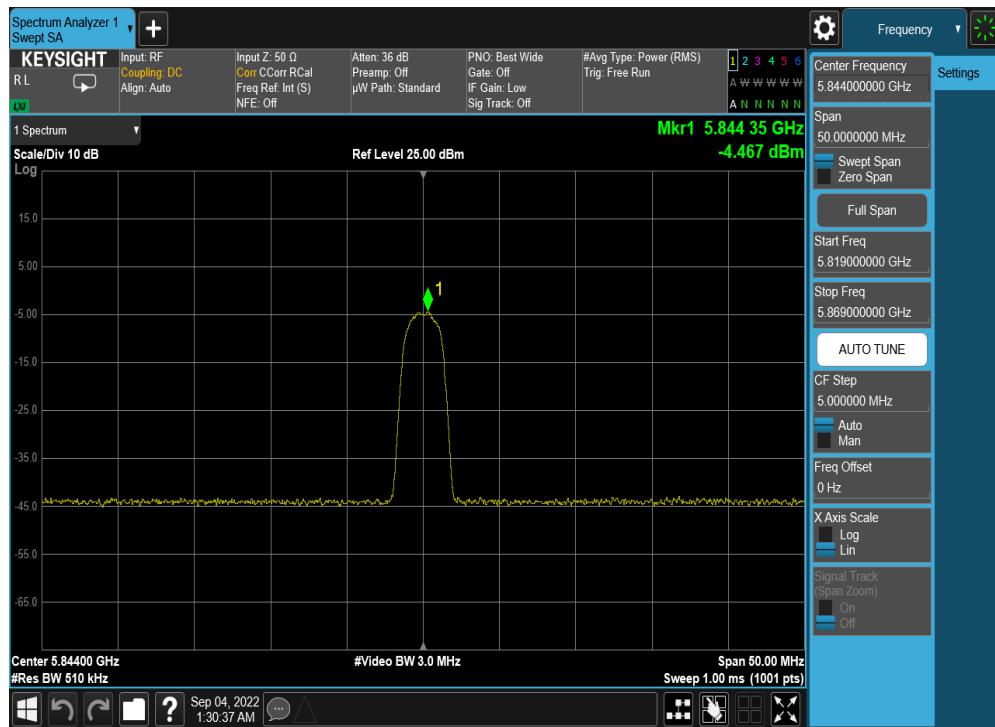


Plot 7-111. PSD TxBF Antenna 5b (HDR4, iPA, 5789MHz)

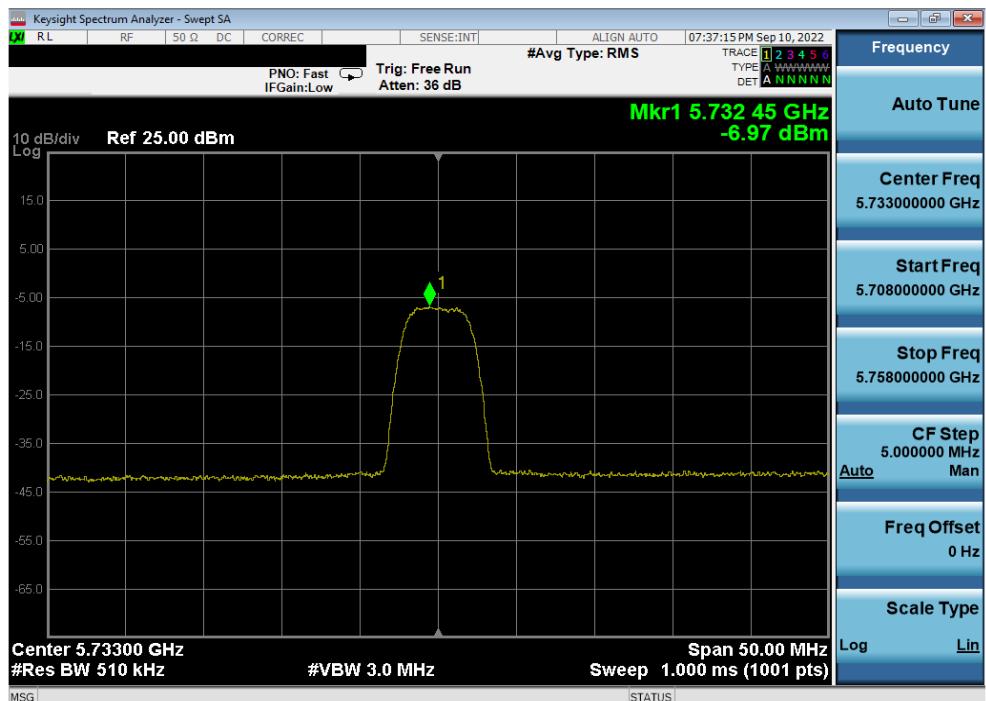


Plot 7-112. PSD TxBF Antenna 4a (HDR4, iPA, 5789MHz)

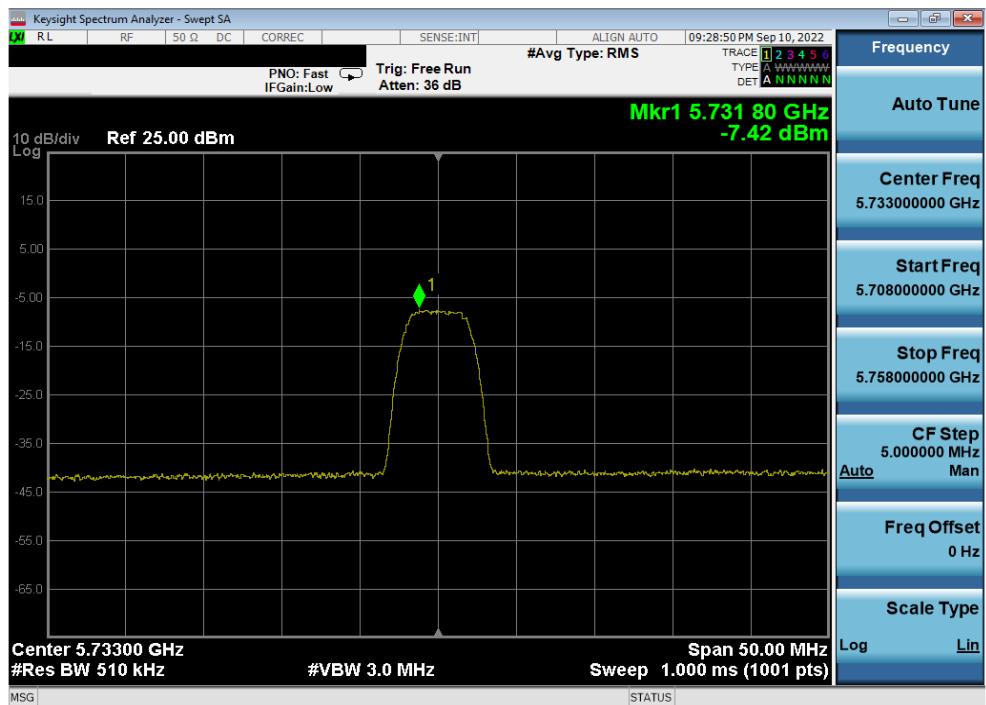
FCC ID: BCGA2435		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device	Page 88 of 136


Plot 7-113. PSD TxBF Antenna 5b (HDR4, iPA, 5844MHz)

Plot 7-114. PSD TxBF Antenna 4a (HDR4, iPA, 5844MHz)

FCC ID: BCGA2435		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device	Page 89 of 136

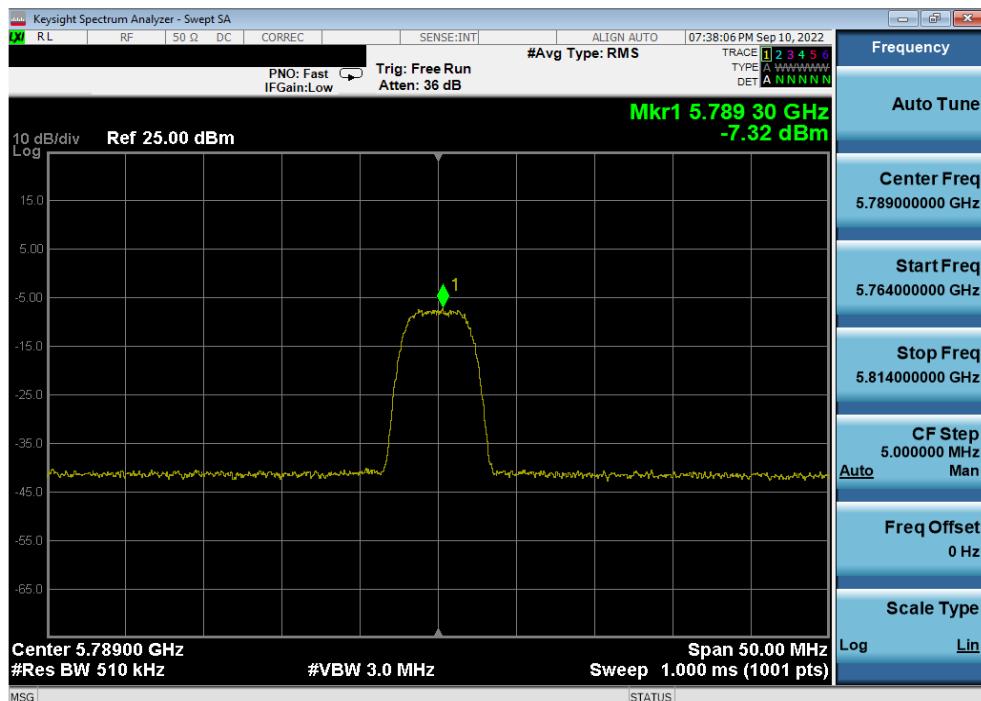


Plot 7-115. PSD TxBF Antenna 5b (HDR8, iPA, 5733MHz)

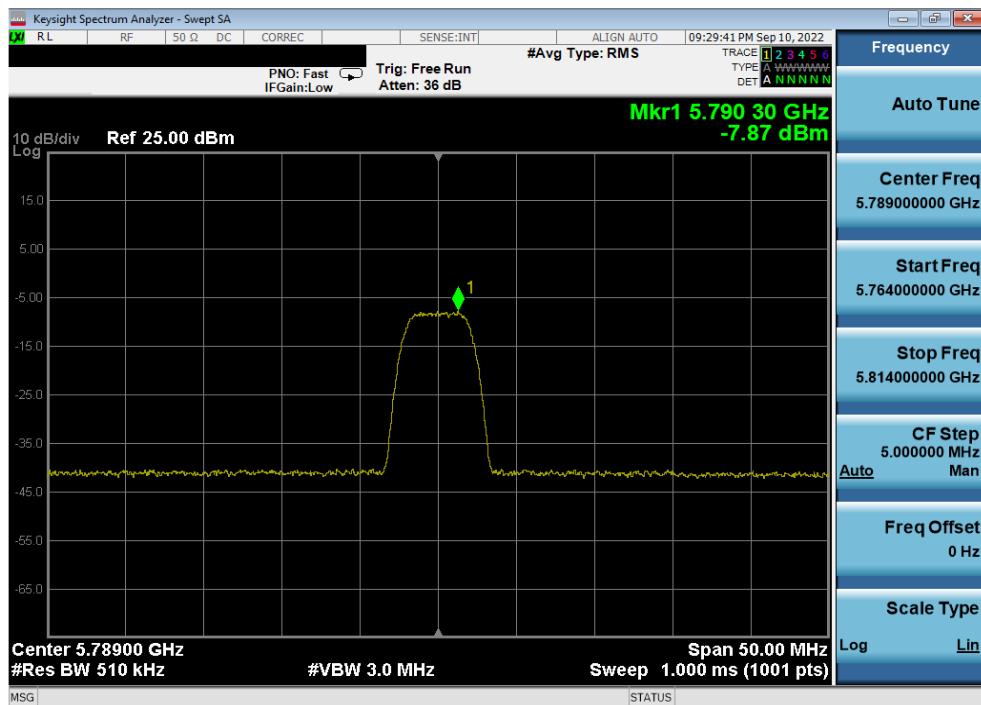


Plot 7-116. PSD TxBF Antenna 4a (HDR8, iPA, 5733MHz)

FCC ID: BCGA2435	 element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device	Page 90 of 136

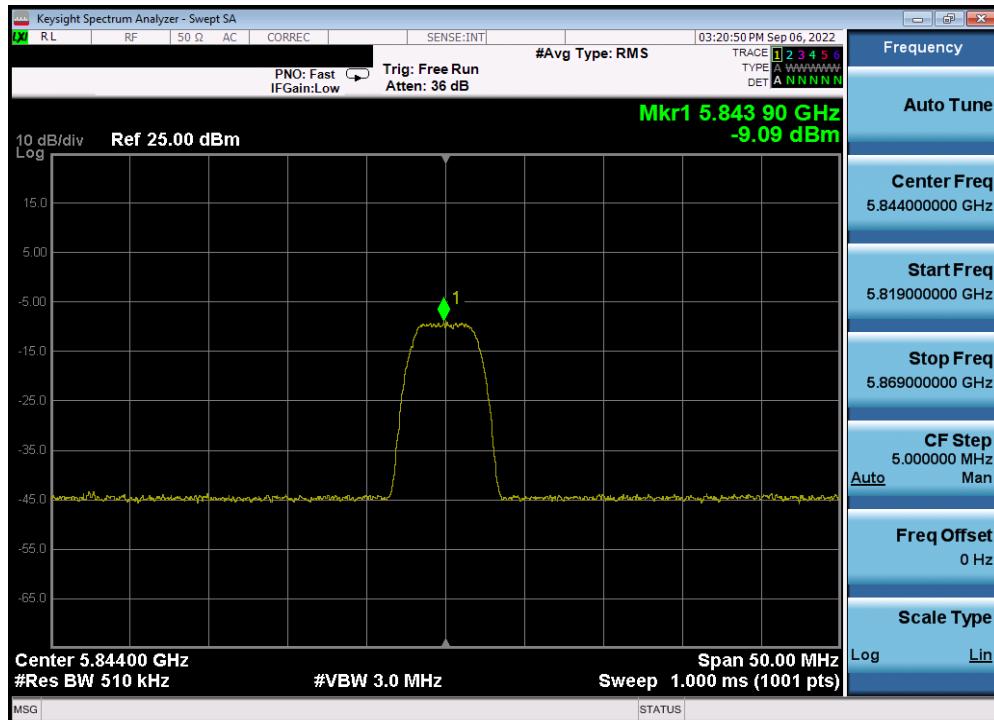


Plot 7-117. PSD Tx BF Antenna 5b (HDR8, iPA, 5789MHz)

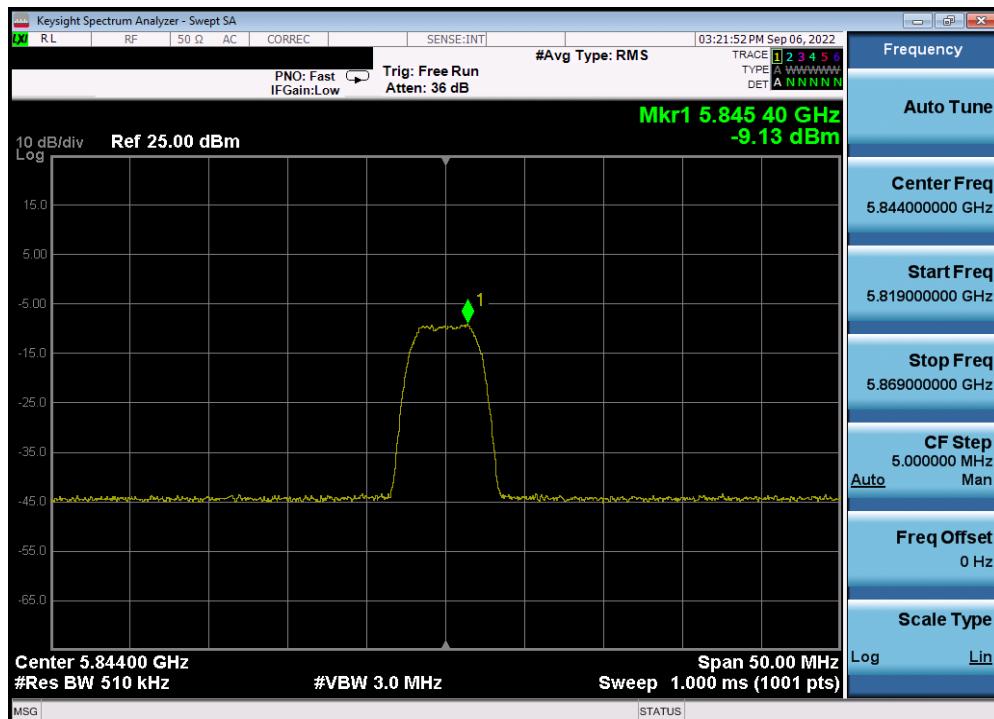


Plot 7-118. PSD Tx BF Antenna 4a (HDR8, iPA, 5789MHz)

FCC ID: BCGA2435	 element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device	Page 91 of 136



Plot 7-119. PSD TxBF Antenna 5b (HDR8, iPA, 5844MHz)



Plot 7-120. PSD TxBF Antenna 4a (HDR8, iPA, 5844MHz)

FCC ID: BCGA2435		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device	Page 92 of 136

**Note:**

Per ANSI C63.10-2013 Subclause 14.3.2.2 and KDB 662911 v02r01 Section E(2), the power spectral density at Antenna 5b and Antenna 4a were first measured separately during TxBF transmission as shown in the section above. The measured values were then summed in linear power units then converted back to dBm.

Sample TxBF Calculation:

Assuming the average conducted power spectral density was measured to be 5.18 dBm for Antenna 5b and 5.89 dBm for Antenna 4a.

Antenna 5b + Antenna 4a = TxBF

$$(5.18 \text{ dBm} + 5.89 \text{ dBm}) = (3.296 \text{ mW} + 3.882 \text{ mW}) = 7.178 \text{ mW} = 8.56 \text{ dBm}$$

FCC ID: BCGA2435			MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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7.6 Radiated Spurious Emission – Above 1GHz

§15.407(b) §15.205 §15.209

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 its maximum power control level, as defined in ANSI C63.10-2013 and KDB 789033 D02 v02r01, and at the appropriate frequencies. All channels and data rates were investigated among all UNII bands. Only the radiated emissions of the configuration that produced the worst case emissions are reported in this section.

For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.25 GHz band shall not exceed an EIRP of -27 dBm/MHz.

For transmitters operating in the 5.725 – 5.85 GHz band: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table 7-15 per Section 15.209.

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

Table 7-15. Radiated Limits

Test Procedures Used

ANSI C63.10-2013 – Subclauses 12.7.7.2, 12.7.6, 12.7.5

KDB 789033 D02 v02r01 – Section G

FCC ID: BCGA2435	 element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Test Settings

Average Field Strength Measurements

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

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

Test Setup

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

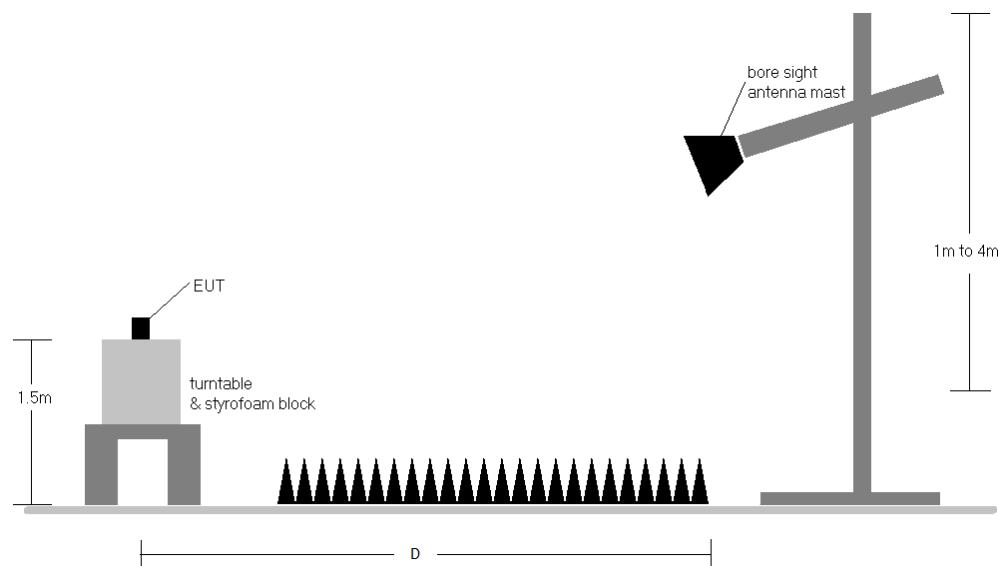


Figure 7-5. Test Instrument & Measurement Setup

FCC ID: BCGA2435	 element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device	Page 95 of 136

Test Notes

1. All emissions that lie in the restricted bands (denoted by a * next to the frequency) specified in §15.205 are below the limit shown in Table 7-15.
2. All spurious emissions lying in restricted bands specified in §15.205 are below the limit shown in Table 7-15. All spurious emissions that do not lie in a restricted band are subject to a peak limit of -27dBm/MHz. At a distance of 3 meters, the field strength limit in dB μ V/m can be determined by adding a "conversion" factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions of 68.2dB μ V/m.
3. The antenna is manipulated through typical positions, polarity and length during the tests. The EUT is manipulated through three orthogonal planes.
4. This unit was tested with its standard battery.
5. The spectrum is measured from 9kHz to the 10th harmonic of the fundamental frequency of the transmitter using CISPR quasi peak detector below 1GHz. Above 1 GHz, average and peak measurements were taken using linearly polarized horn antennas.
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 have been tested on the unit and only worst case configuration is reported.

Sample Calculations

Determining Spurious Emissions Levels

- Field Strength Level [dB μ V/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 [dB μ V/m] – Limit [dB μ V/m]

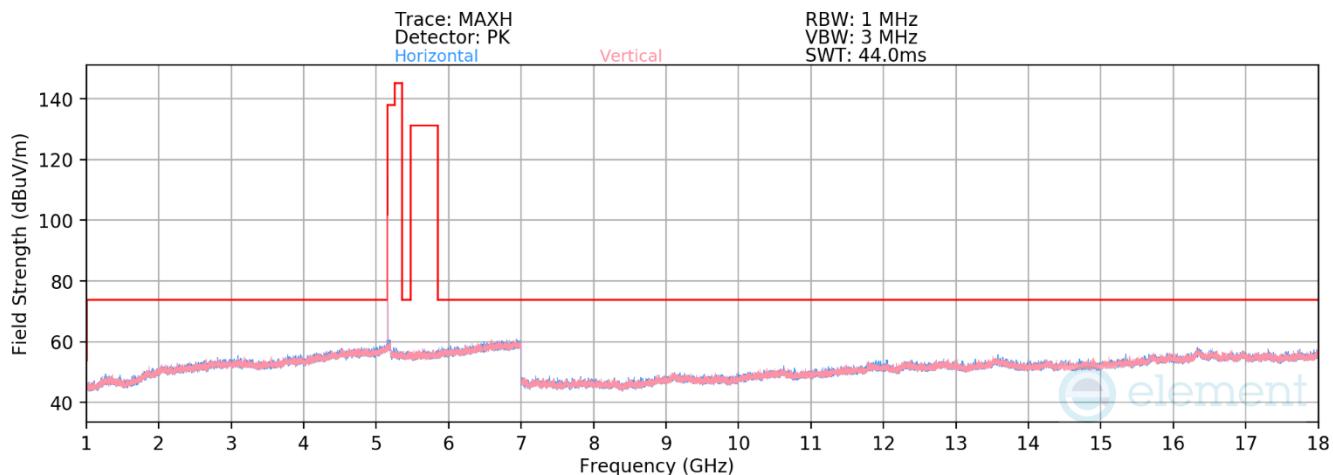
Radiated Band Edge Measurement Offset

- The amplitude offset shown in the radiated restricted band edge plots in Section 7.6.4 was calculated using the formula:
Offset (dB) = (Antenna Factor + Cable Loss + Attenuator) – Preamplifier Gain

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7.6.1 Antenna 5b Radiated Spurious Emissions

§15.407(b) §15.205 §15.209



Plot 7-121. Radiated Spurious Emissions 1-18GHz Antenna 5b (HDR4, ePA – 5162MHz)

Mode: HDR4
 Data Rate: 4Mbps
 Distance of Measurements: 3 Meters
 Operating Frequency: 5162MHz

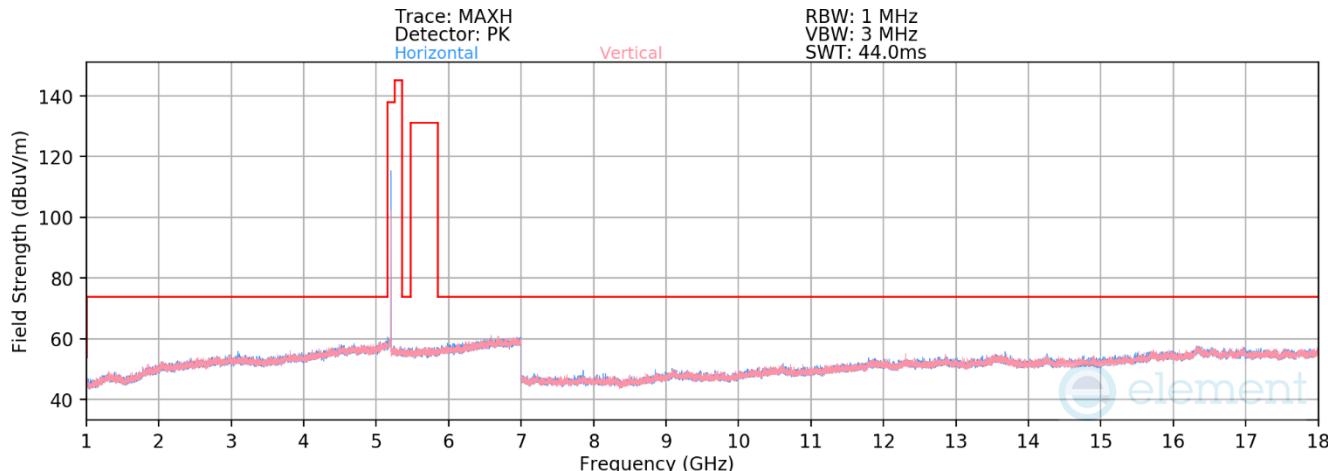
Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]
10324.00	Peak	H	-	-	-72.25	14.80	49.55	68.20	-18.65
* 15486.00	Average	H	-	-	-83.92	20.16	43.24	53.98	-10.74
* 15486.00	Peak	H	-	-	-73.33	20.16	53.83	73.98	-20.15

Table 7-16. Radiated Spurious Emissions Measurements Antenna 5b

FCC ID: BCGA2435	 element			MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Plot 7-122. Radiated Spurious Emissions 1-18GHz Antenna 5b (HDR4- 5204MHz)

Mode: HDR4
 Data Rate: 4Mbps
 Distance of Measurements: 3 Meters
 Operating Frequency: 5204MHz

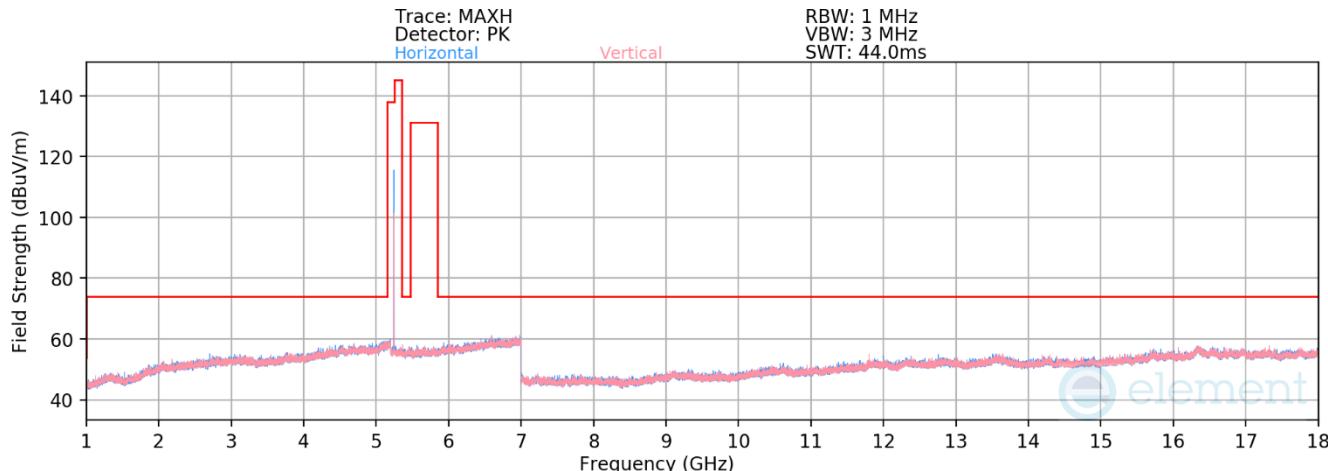
Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]
10408.00	Peak	H	-	-	-72.21	15.46	50.25	68.20	-17.95
* 15612.00	Average	H	-	-	-84.53	20.13	42.60	53.98	-11.37
* 15612.00	Peak	H	-	-	-73.49	20.13	53.64	73.98	-20.33

Table 7-17. Radiated Spurious Emissions Measurements Antenna 5b

FCC ID: BCGA2435	 element	MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device			

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Plot 7-123. Radiated Spurious Emissions 1-18GHz Antenna 5b (HDR4 – 5245MHz)

Mode: HDR4
 Data Rate: 4Mbps
 Distance of Measurements: 3 Meters
 Operating Frequency: 5245MHz

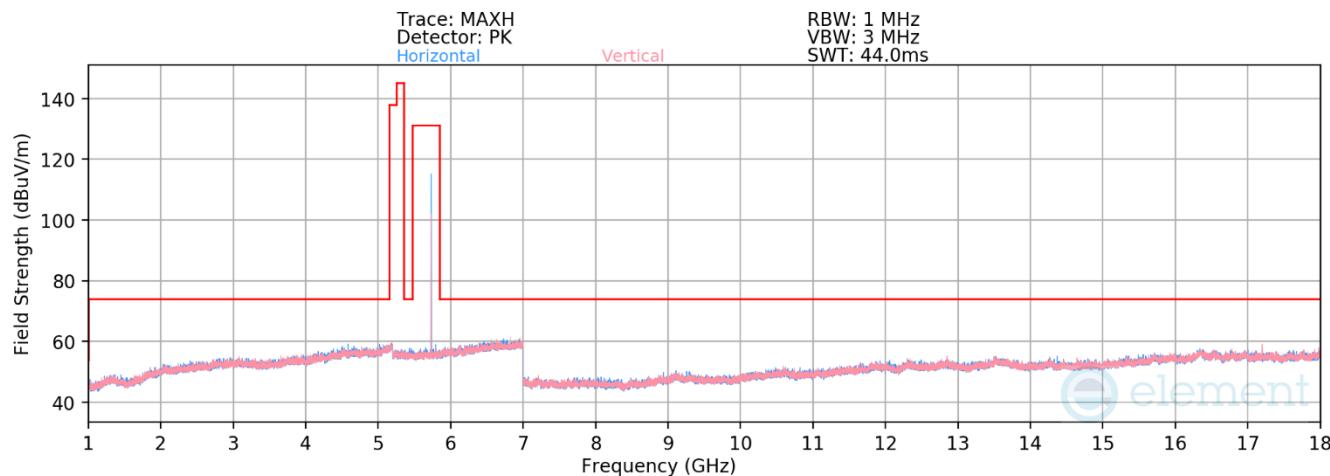
Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10490.00	Peak	H	-	-	-71.27	14.98	50.71	68.20	-17.49
* 15735.00	Average	H	-	-	-84.78	21.37	43.59	53.98	-10.39
* 15735.00	Peak	H	-	-	-73.95	21.37	54.42	73.98	-19.56

Table 7-18. Radiated Spurious Emissions Measurements Antenna 5b

FCC ID: BCGA2435	 element	MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
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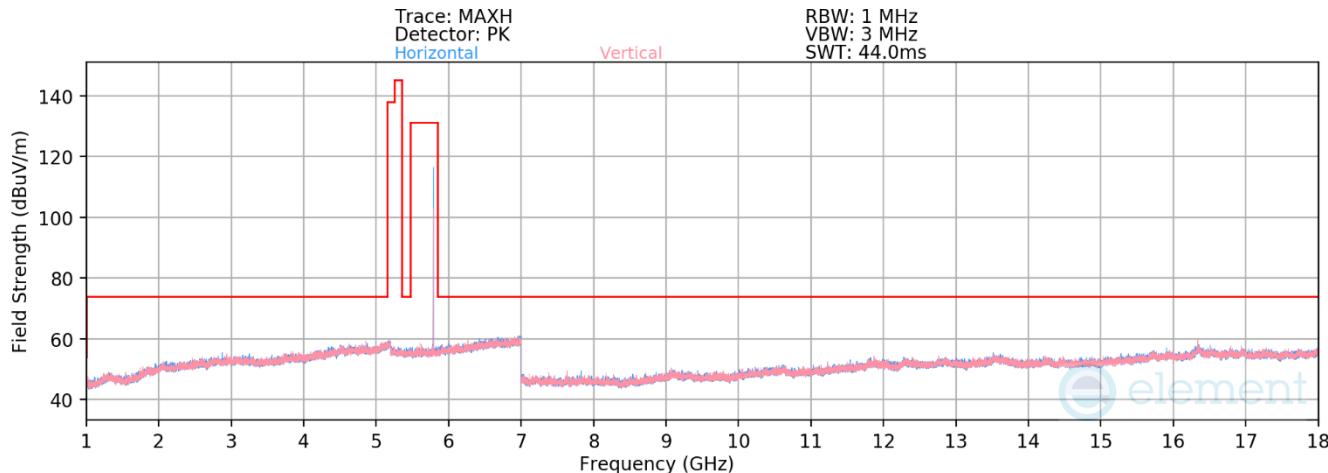

Plot 7-124. Radiated Spurious Emissions 1-18GHz Antenna 5b (HDR4 – 5733MHz)

Mode: HDR4
 Data Rate: 4Mbps
 Distance of Measurements: 3 Meters
 Operating Frequency: 5733MHz

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]
11466.00	Peak	H	135	186	-71.93	16.40	51.47	73.98	-22.51
17199.00	Peak	H	262	260	-68.71	21.10	59.39	68.20	-8.81

Table 7-19. Radiated Spurious Emissions Measurements Antenna 5b

FCC ID: BCGA2435	MEASUREMENT REPORT (CERTIFICATION)				Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device			



Plot 7-125. Radiated Spurious Emissions 1-18GHz Antenna 5b (HDR4 – 5789MHz)

Mode: HDR4
 Data Rate: 4Mbps
 Distance of Measurements: 3 Meters
 Operating Frequency: 5789MHz

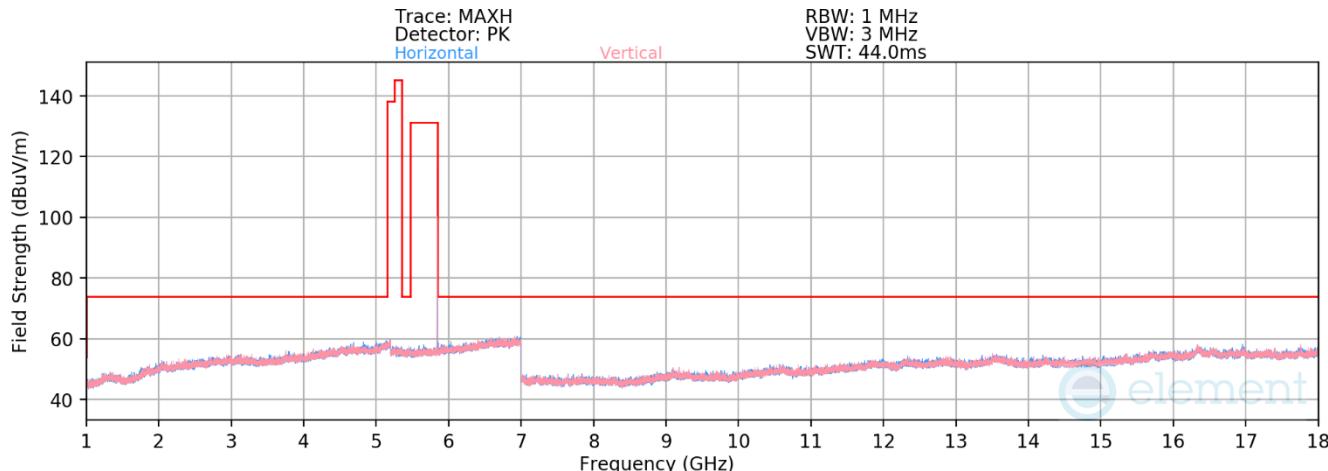
Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11578.00	Average	H	176	147	-78.71	16.28	44.57	53.98	-9.41
* 11578.00	Peak	H	176	147	-70.43	16.28	52.85	73.98	-21.13
17367.00	Peak	H	270	165	-71.01	21.28	57.27	68.20	-10.93

Table 7-20. Radiated Spurious Emissions Measurements Antenna 5b

FCC ID: BCGA2435	 element			MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device			

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Plot 7-126. Radiated Spurious Emissions 1-18GHz Antenna 5b (HDR4 – 5844MHz)

Mode: HDR4
 Data Rate: 4Mbps
 Distance of Measurements: 3 Meters
 Operating Frequency: 5844MHz

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]
* 11688.00	Average	H	161	191	-77.29	16.89	46.60	53.98	-7.37
* 11688.00	Peak	H	161	191	-70.29	16.89	53.60	73.98	-20.37
17532.00	Peak	H	-	-	-73.47	21.68	55.21	68.20	-12.99

Table 7-21. Radiated Spurious Emissions Measurements Antenna 5b

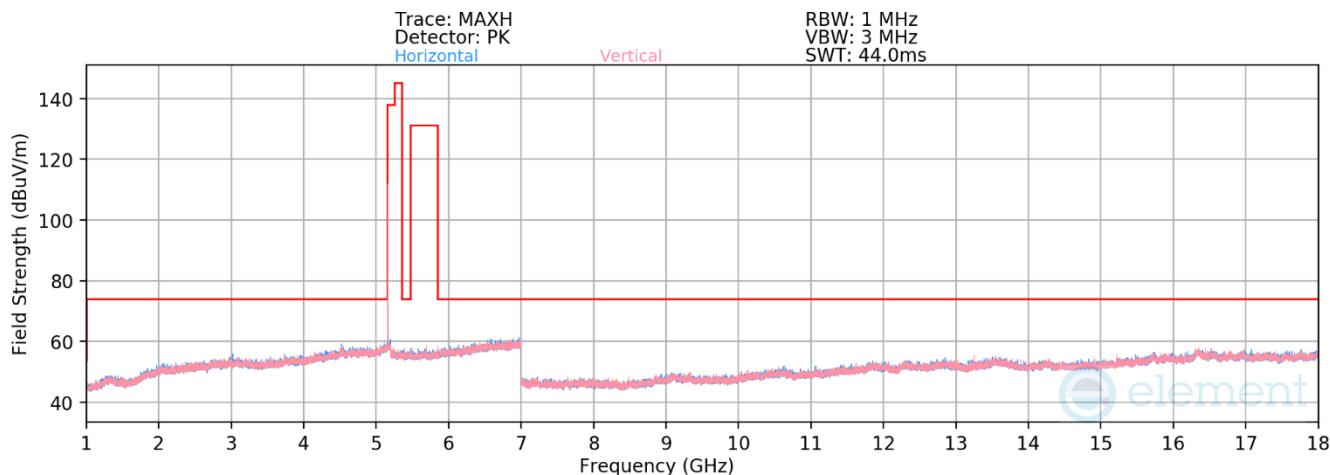
FCC ID: BCGA2435	 element	MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device			

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7.6.2 Antenna 4a Radiated Spurious Emissions

§15.407(b) §15.205 §15.209



Plot 7-127. Radiated Spurious Emissions 1-18GHz Antenna 4a (HDR4, ePA – 5162MHz)

Mode: HDR4
 Data Rate: 4Mbps
 Distance of Measurements: 3 Meters
 Operating Frequency: 5162MHz

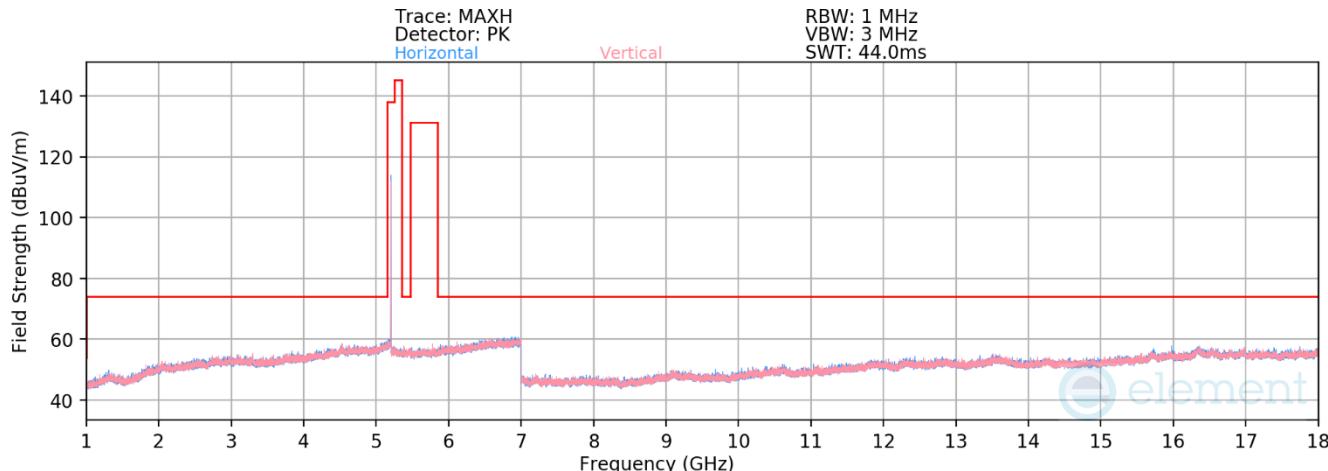
Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]
10324.00	Peak	H	-	-	-72.28	14.80	49.52	68.20	-18.68
* 15486.00	Average	H	-	-	-83.75	20.16	43.41	53.98	-10.57
* 15486.00	Peak	H	-	-	-72.61	20.16	54.55	73.98	-19.43

Table 7-22. Radiated Spurious Emissions Measurements Antenna 4a

FCC ID: BCGA2435	 element			MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device			

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Plot 7-128. Radiated Spurious Emissions 1-18GHz Antenna 4a (HDR4- 5204MHz)

Mode: HDR4
 Data Rate: 4Mbps
 Distance of Measurements: 3 Meters
 Operating Frequency: 5204MHz

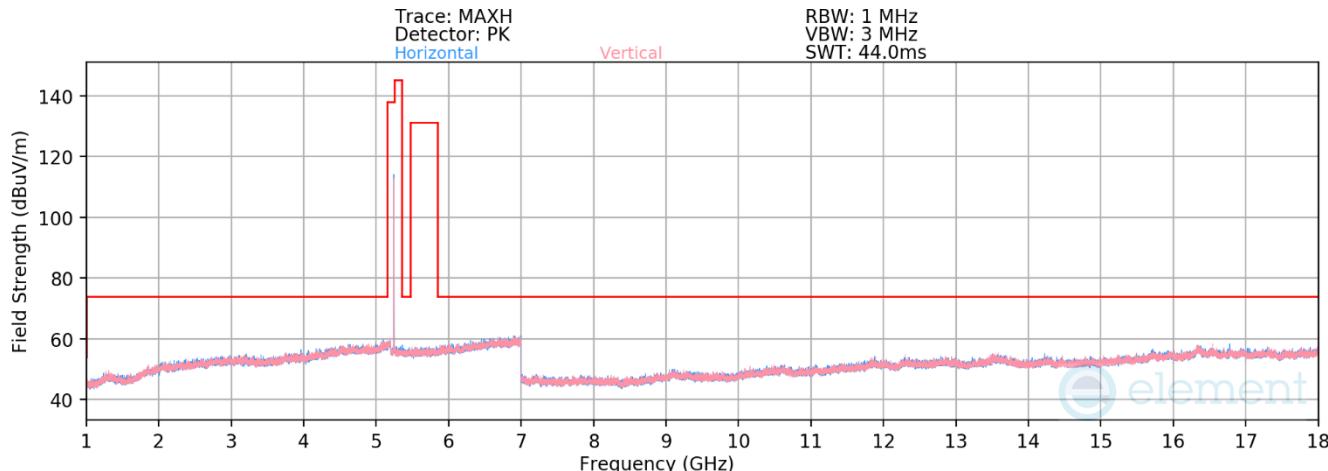
Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]
10408.00	Peak	H	-	-	-71.71	15.46	50.75	68.20	-17.45
* 15612.00	Average	H	-	-	-84.66	20.13	42.47	53.98	-11.50
* 15612.00	Peak	H	-	-	-72.90	20.13	54.23	73.98	-19.74

Table 7-23. Radiated Spurious Emissions Measurements Antenna 4a

FCC ID: BCGA2435	MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device		

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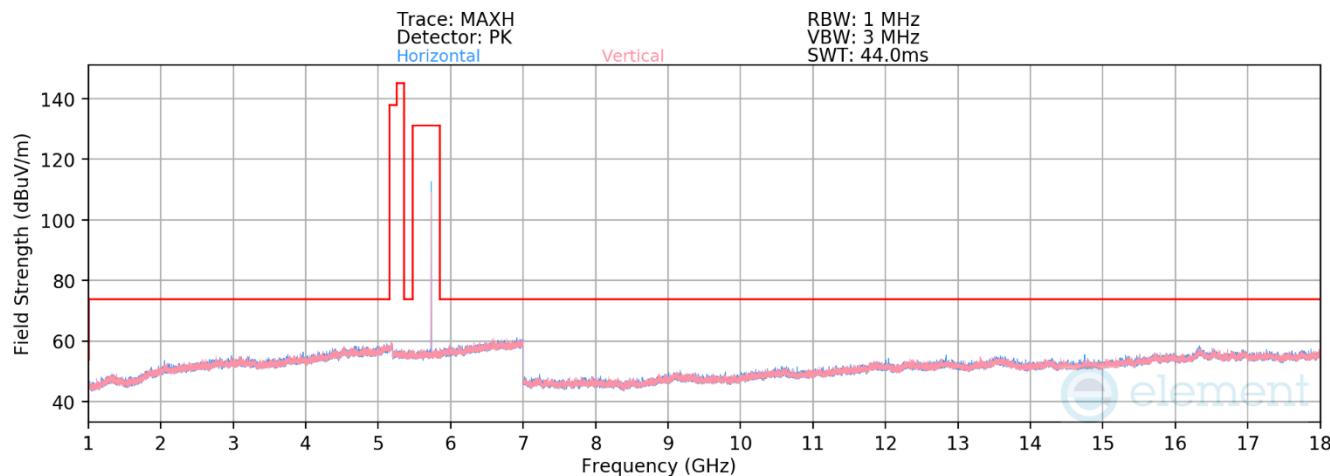
Plot 7-129. Radiated Spurious Emissions 1-18GHz Antenna 4a (HDR4 – 5245MHz)

Mode: HDR4
 Data Rate: 4Mbps
 Distance of Measurements: 3 Meters
 Operating Frequency: 5245MHz

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]
10490.00	Peak	H	-	-	-71.37	14.98	50.61	68.20	-17.59
*	Average	H	-	-	-84.79	21.37	43.58	53.98	-10.40
*	Peak	H	-	-	-73.11	21.37	55.26	73.98	-18.72

Table 7-24. Radiated Spurious Emissions Measurements Antenna 4a

FCC ID: BCGA2435	MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device		Page 105 of 136



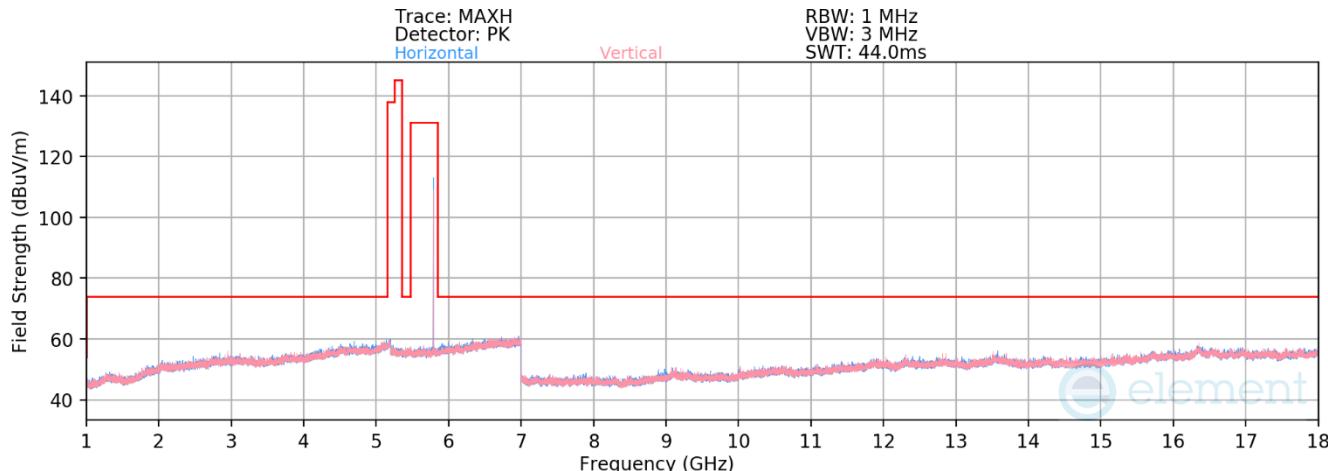
Plot 7-130. Radiated Spurious Emissions 1-18GHz Antenna 4a (HDR4 – 5733MHz)

Mode: HDR4
 Data Rate: 4Mbps
 Distance of Measurements: 3 Meters
 Operating Frequency: 5733MHz

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]
11466.00	Peak	H	-	-	-71.87	16.40	51.53	73.98	-22.45
17199.00	Peak	H	-	-	-72.89	21.10	55.21	68.20	-12.99

Table 7-25. Radiated Spurious Emissions Measurements Antenna 4a

FCC ID: BCGA2435	MEASUREMENT REPORT (CERTIFICATION)				Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device			



Plot 7-131. Radiated Spurious Emissions 1-18GHz Antenna 4a (HDR4 – 5789MHz)

Mode: HDR4
 Data Rate: 4Mbps
 Distance of Measurements: 3 Meters
 Operating Frequency: 5789MHz

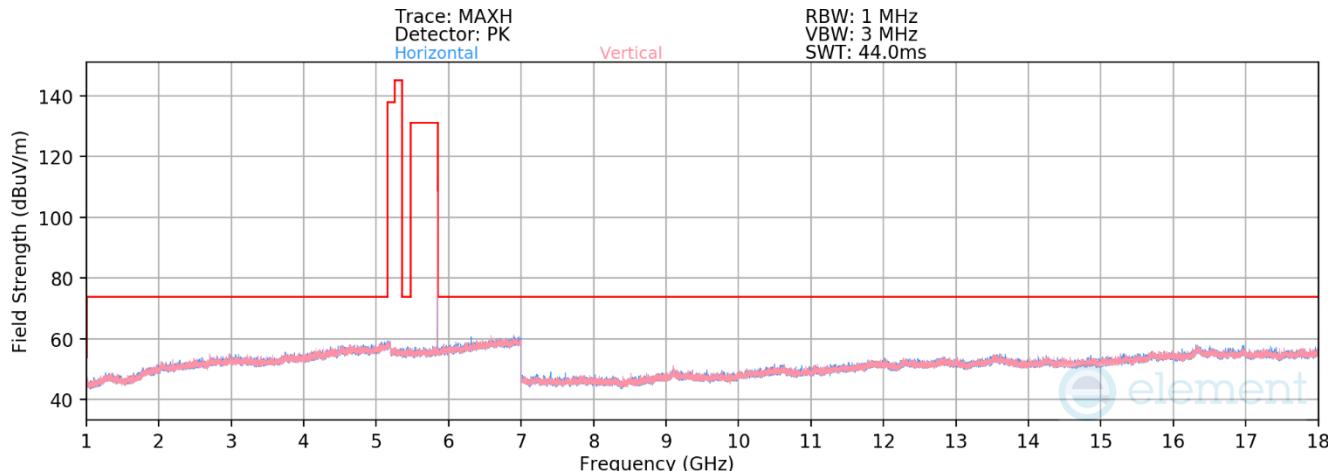
Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11578.00	Average	H	-	-	-83.22	16.28	40.06	53.98	-13.92
* 11578.00	Peak	H	-	-	-71.92	16.28	51.36	73.98	-22.62
* 17367.00	Peak	H	-	-	-72.63	21.28	55.65	68.20	-12.55

Table 7-26. Radiated Spurious Emissions Measurements Antenna 4a

FCC ID: BCGA2435	 element	MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device			

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Plot 7-132. Radiated Spurious Emissions 1-18GHz Antenna 4a (HDR4 – 5844MHz)

Mode: HDR4
 Data Rate: 4Mbps
 Distance of Measurements: 3 Meters
 Operating Frequency: 5844MHz

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]
* 11688.00	Average	H	-	-	-83.27	16.89	40.62	53.98	-13.35
* 11688.00	Peak	H	-	-	-71.65	16.89	52.24	73.98	-21.73
* 17532.00	Peak	H	-	-	-73.16	21.68	55.52	68.20	-12.68

Table 7-27. Radiated Spurious Emissions Measurements Antenna 4a

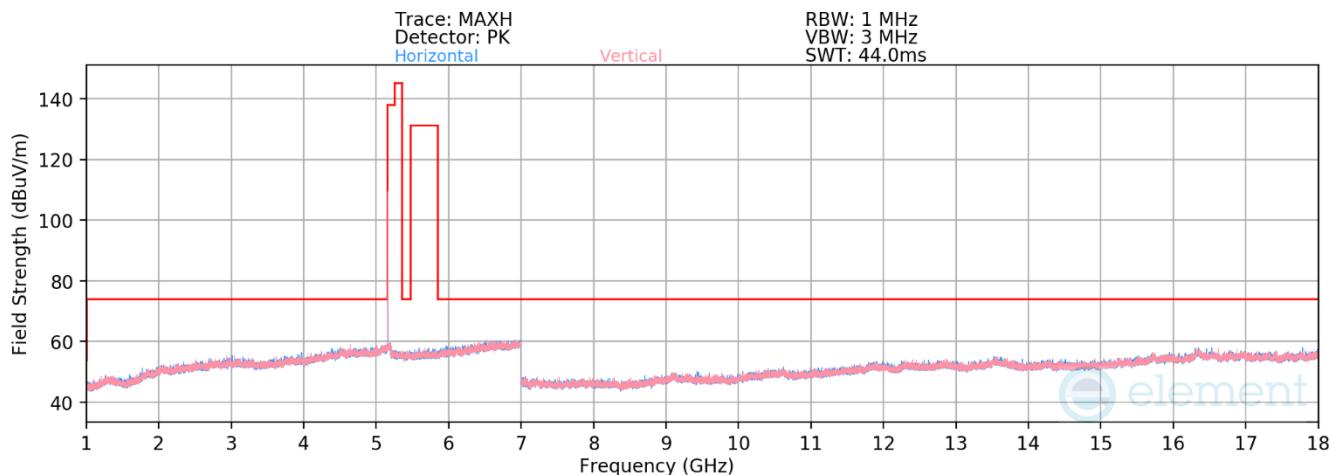
FCC ID: BCGA2435	 element	MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device			

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7.6.3 TxBF Radiated Spurious Emissions

§15.407(b) §15.205 §15.209



Plot 7-133. Radiated Spurious Emissions 1-18GHz TxBF (HDR4, ePA – 5162MHz)

Mode: HDR4
 Data Rate: 4Mbps
 Distance of Measurements: 3 Meters
 Operating Frequency: 5162MHz

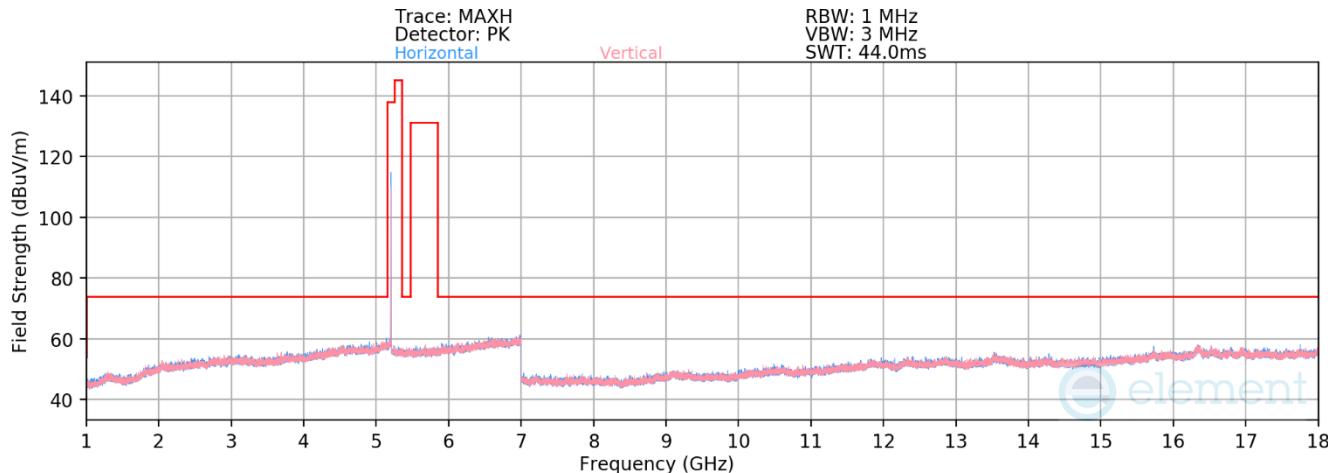
Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]
10324.00	Peak	H	-	-	-71.02	14.80	50.78	68.20	-17.42
* 15486.00	Average	H	-	-	-83.22	20.16	43.94	53.98	-10.04
* 15486.00	Peak	H	-	-	-71.68	20.16	55.48	73.98	-18.50

Table 7-28. Radiated Spurious Emissions Measurements TxBF

FCC ID: BCGA2435	 element			MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device			

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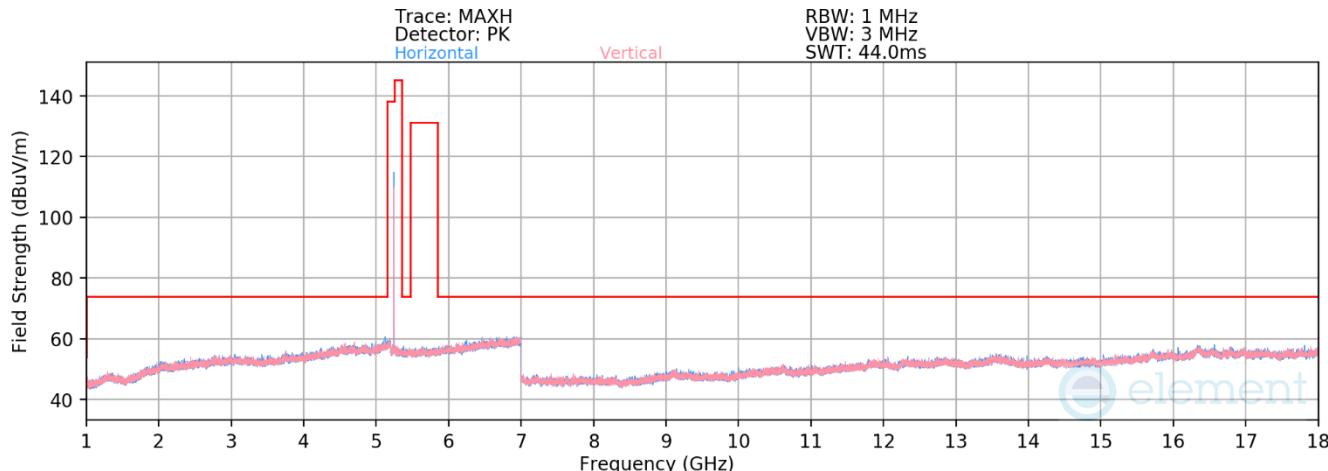
Plot 7-134. Radiated Spurious Emissions 1-18GHz TxBF (HDR4– 5204MHz)

Mode: HDR4
 Data Rate: 4Mbps
 Distance of Measurements: 3 Meters
 Operating Frequency: 5204MHz

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]
10408.00	Peak	H	-	-	-70.97	15.46	51.49	68.20	-16.71
* 15612.00	Average	H	-	-	-83.58	20.13	43.55	53.98	-10.42
* 15612.00	Peak	H	-	-	-72.03	20.13	55.10	73.98	-18.87

Table 7-29. Radiated Spurious Emissions Measurements TxBF

FCC ID: BCGA2435	MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device		Page 110 of 136



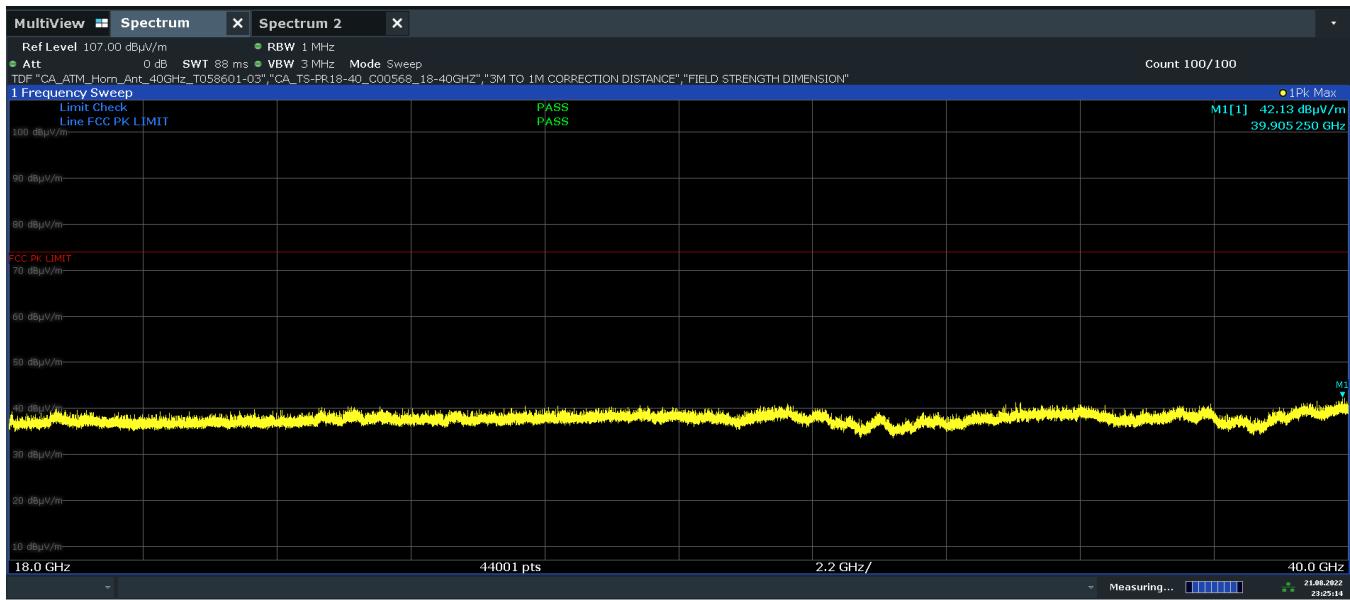
Plot 7-135. Radiated Spurious Emissions 1-18GHz TxBF (HDR4 – 5245MHz)

Mode: HDR4
 Data Rate: 4Mbps
 Distance of Measurements: 3 Meters
 Operating Frequency: 5245MHz

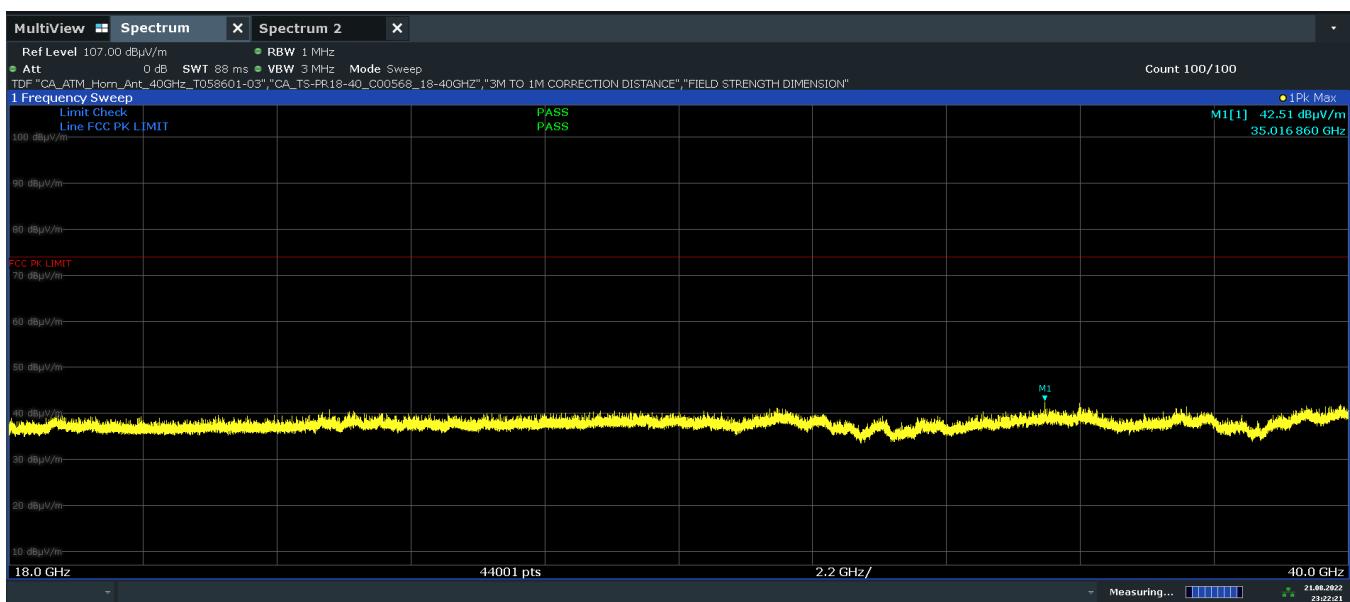
Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]
10490.00	Peak	H	-	-	-71.51	14.98	50.47	68.20	-17.73
* 15735.00	Average	H	-	-	-83.74	21.37	44.63	53.98	-9.35
* 15735.00	Peak	H	-	-	-71.89	21.37	56.48	73.98	-17.50

Table 7-30. Radiated Spurious Emissions Measurements TxBF

FCC ID: BCGA2435	 element	MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device			

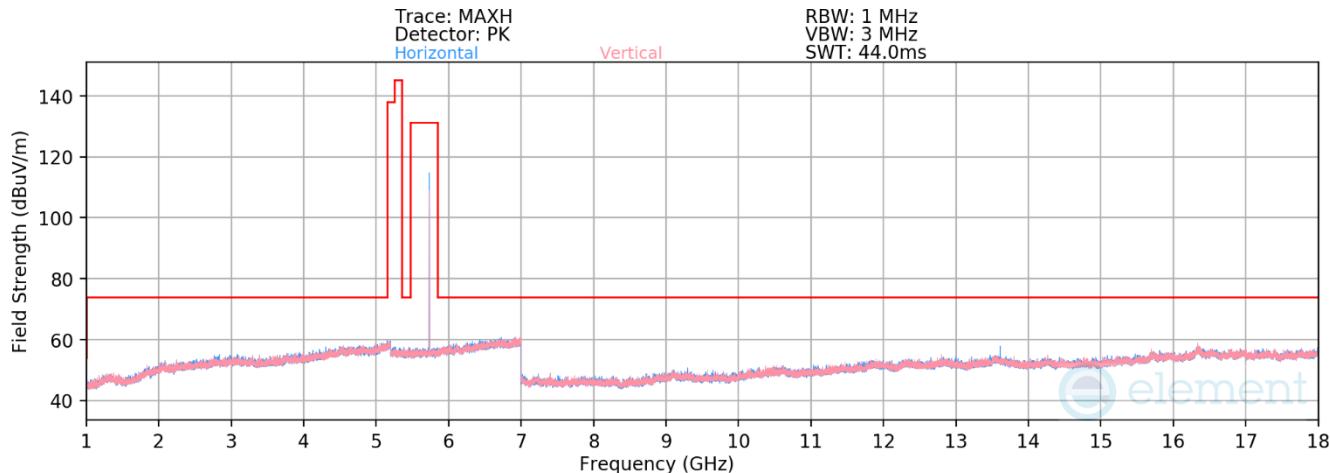


Plot 7-136. Radiated Spurious Emissions Above 18GHz TxBF (HDR4 – 5245MHz Pol. H)



Plot 7-137. Radiated Spurious Emissions Above 18GHz TxBF (HDR4 – 5245MHz Pol. V)

FCC ID: BCGA2435	 element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device	Page 112 of 136



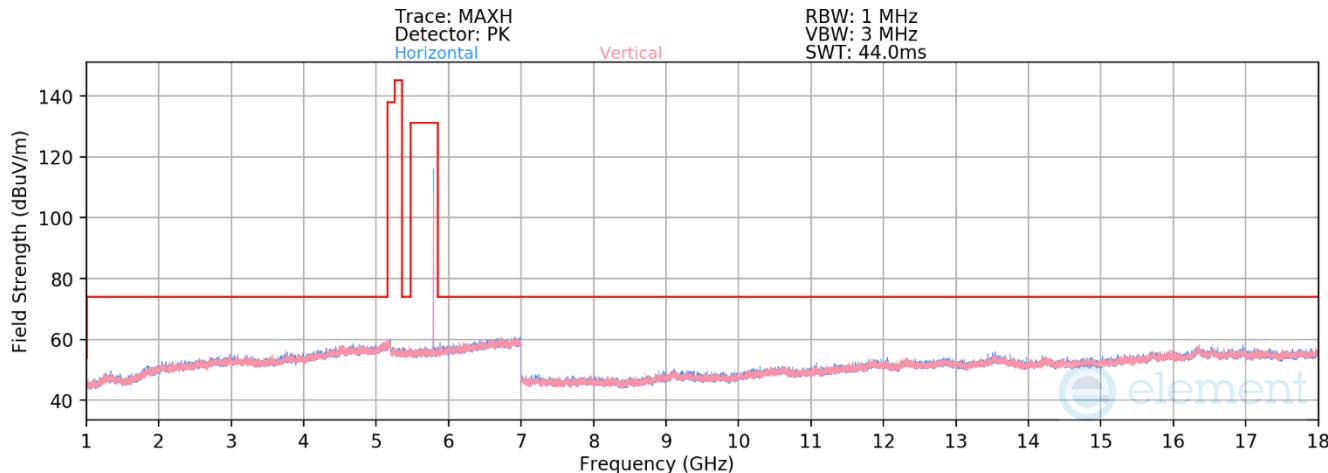
Plot 7-138. Radiated Spurious Emissions 1-18GHz TxBF (HDR4 – 5733MHz)

Mode: HDR4
 Data Rate: 4Mbps
 Distance of Measurements: 3 Meters
 Operating Frequency: 5733MHz

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]
11466.00	Peak	H	-	-	-71.16	16.40	52.24	68.20	-15.96
17199.00	Peak	H	-	-	-71.21	21.10	56.89	68.20	-11.31

Table 7-31. Radiated Spurious Emissions Measurements TxBF

FCC ID: BCGA2435	 element			MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device			



Plot 7-139. Radiated Spurious Emissions 1-18GHz TxBF (HDR4 – 5789MHz)

Mode: HDR4
 Data Rate: 4Mbps
 Distance of Measurements: 3 Meters
 Operating Frequency: 5789MHz

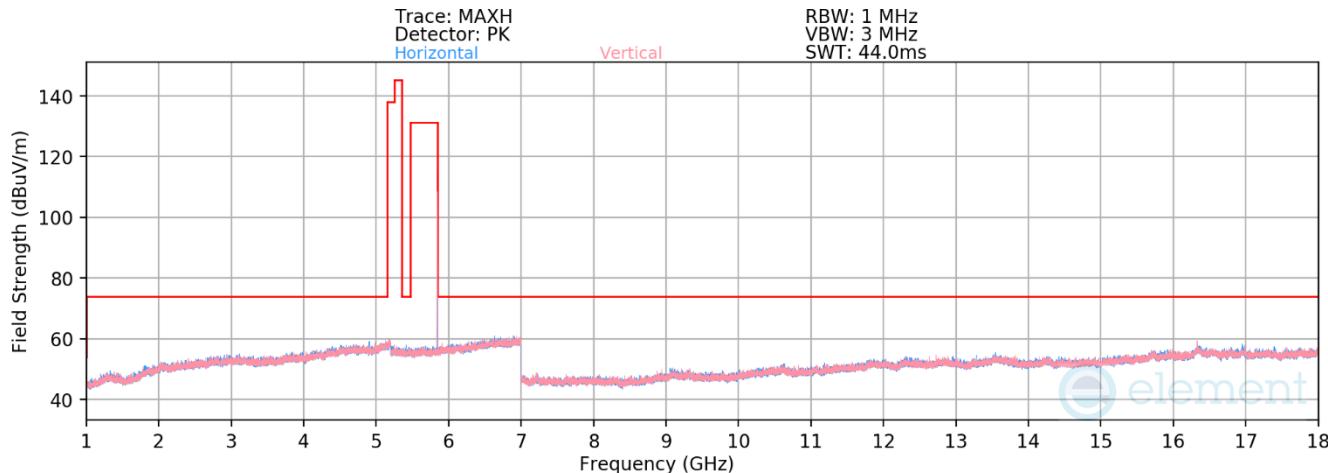
Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]
* 11578.00	Average	H	-	-	-82.33	16.28	40.95	53.98	-13.03
* 11578.00	Peak	H	-	-	-71.03	16.28	52.25	73.98	-21.73
* 17367.00	Peak	H	-	-	-71.38	21.28	56.90	68.20	-11.30

Table 7-32. Radiated Spurious Emissions Measurements TxBF

FCC ID: BCGA2435	 element	MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device			

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Plot 7-140. Radiated Spurious Emissions 1-18GHz TxBF (HDR4 – 5844MHz)

Mode: HDR4
 Data Rate: 4Mbps
 Distance of Measurements: 3 Meters
 Operating Frequency: 5844MHz

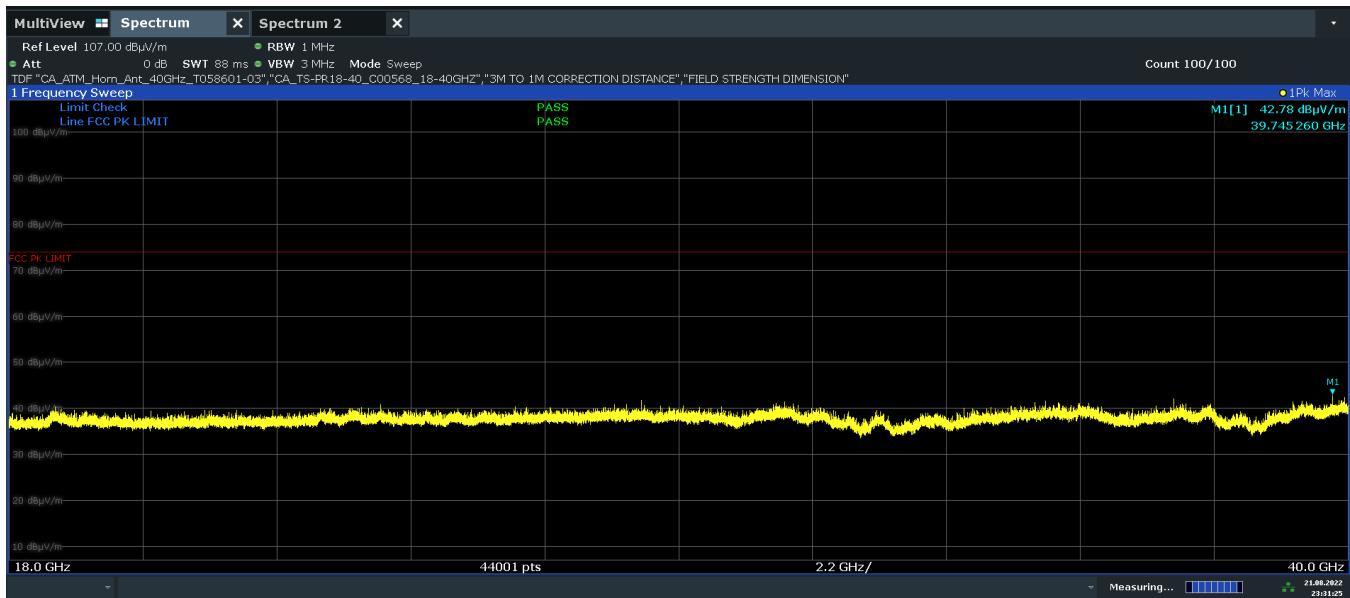
Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]
* 11688.00	Average	H	-	-	-82.28	16.89	41.61	53.98	-12.36
* 11688.00	Peak	H	-	-	-71.06	16.89	52.83	73.98	-21.14
17532.00	Peak	H	-	-	-71.63	21.68	57.05	68.20	-11.15

Table 7-33. Radiated Spurious Emissions Measurements TxBF

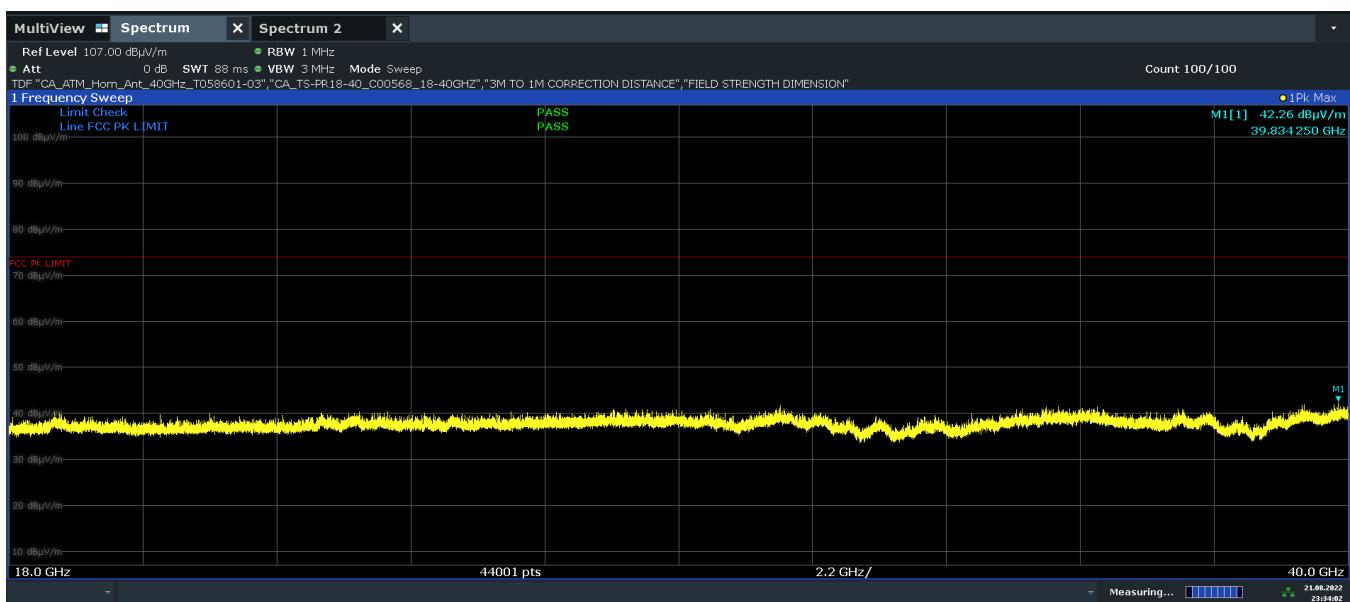
FCC ID: BCGA2435	 element	MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device			

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Plot 7-141. Radiated Spurious Emissions Above 18GHz Tx BF (HDR4 – 5844MHz Pol. H)



Plot 7-142. Radiated Spurious Emissions Above 18GHz TxBF (HDR4 – 5844MHz Pol. V)

FCC ID: BCGA2435	 element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device	Page 116 of 136

7.6.4 Radiated Band Edge Measurements

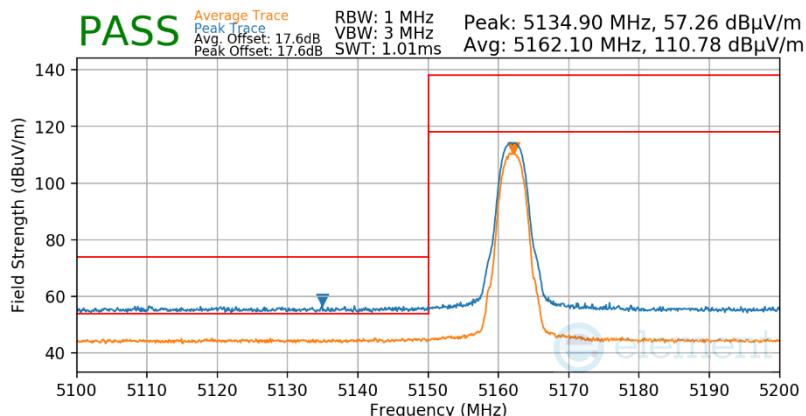
§15.407(b.1) §15.205 §15.209

Antenna 5b

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

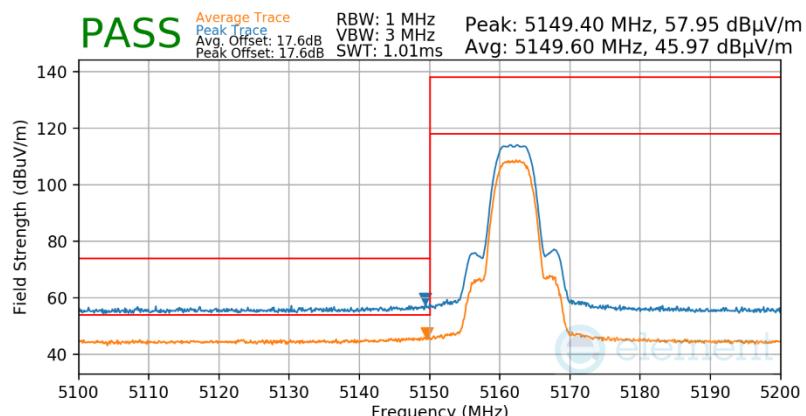
$$\text{Offset (dB)} = (\text{Antenna Factor} + \text{Cable Loss} + \text{Attenuator}) - \text{Preamplifier Gain}$$

Mode:	HDR4
Power Scheme	ePA
Measurement Distance:	3 Meters
Operating Frequency:	5162MHz



Plot 7-143. Radiated Lower Band Edge Measurement

Mode:	HDR8
Power Scheme	ePA
Measurement Distance:	3 Meters
Operating Frequency:	5162MHz

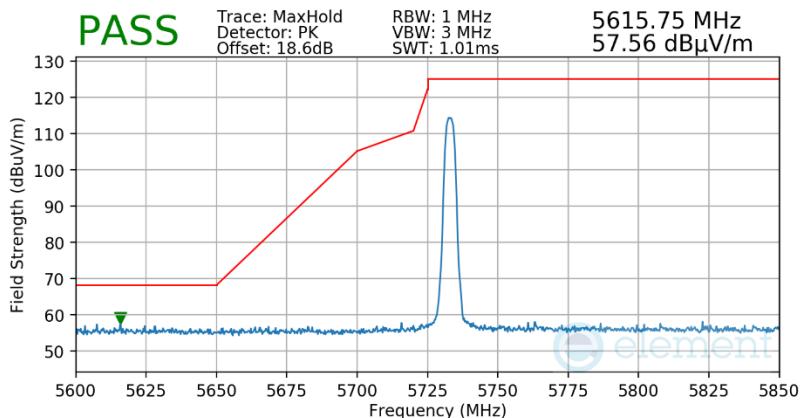


Plot 7-144. Radiated Lower Band Edge Measurement

FCC ID: BCGA2435	 element		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device		Page 117 of 136

Mode:
Power Scheme
Measurement Distance:
Operating Frequency:

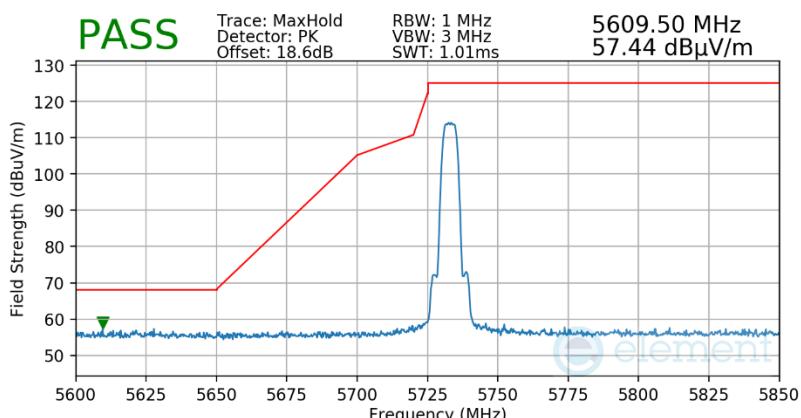
HDR4
ePA
3 Meters
5733MHz



Plot 7-145. Radiated Lower Band Edge Measurement

Mode:
Power Scheme
Measurement Distance:
Operating Frequency:

HDR8
ePA
3 Meters
5733MHz

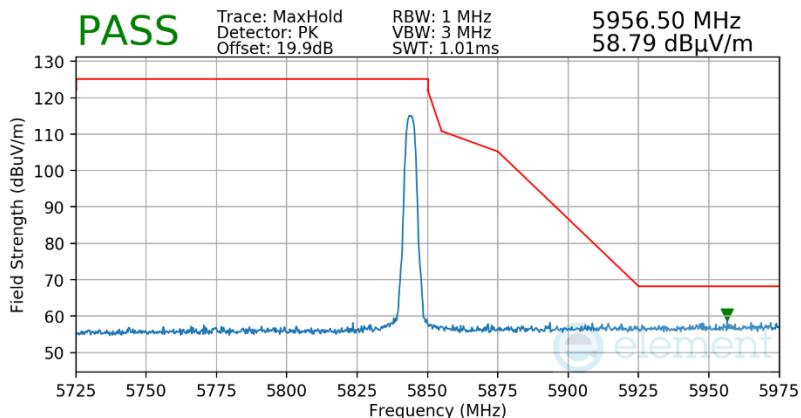


Plot 7-146. Radiated Lower Band Edge Measurement

FCC ID: BCGA2435	 element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device		Page 118 of 136

Mode:
Power Scheme
Measurement Distance:
Operating Frequency:

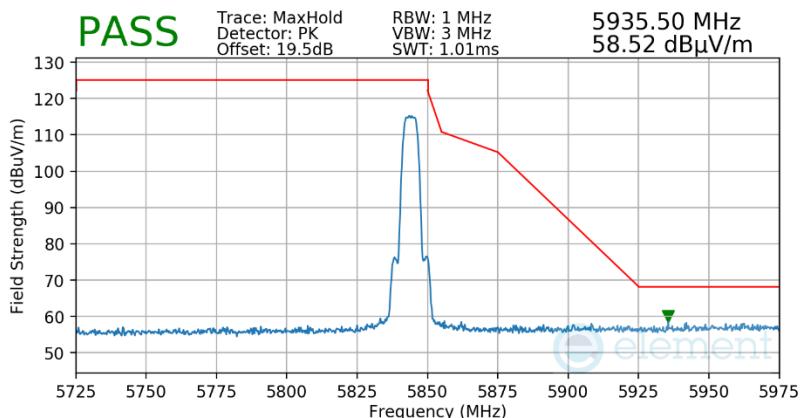
HDR4
ePA
3 Meters
5844MHz



Plot 7-147. Radiated Upper Band Edge Measurement

Mode:
Power Scheme
Measurement Distance:
Operating Frequency:

HDR8
ePA
3 Meters
5844MHz



Plot 7-148. Radiated Upper Band Edge Measurement

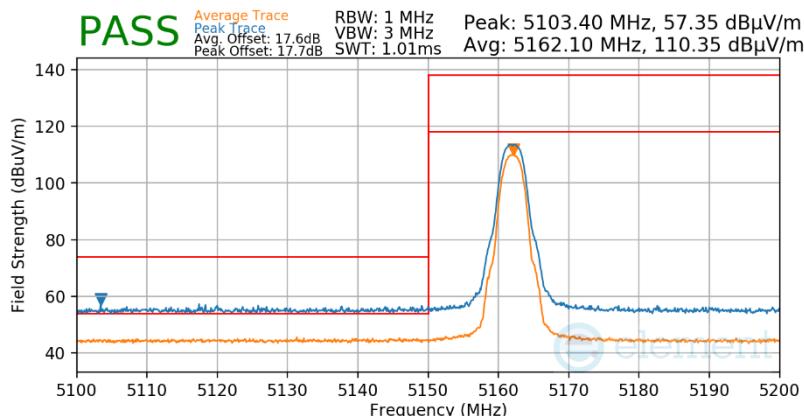
FCC ID: BCGA2435	 element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device		Page 119 of 136

Antenna 4a

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

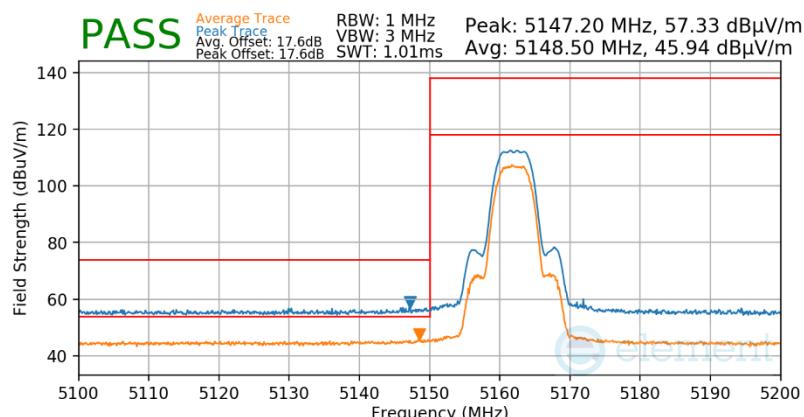
$$\text{Offset (dB)} = (\text{Antenna Factor} + \text{Cable Loss} + \text{Attenuator}) - \text{Preamplifier Gain}$$

Mode:	HDR4
Power Scheme	ePA
Measurement Distance:	3 Meters
Operating Frequency:	5162MHz



Plot 7-149. Radiated Lower Band Edge Measurement

Mode:	HDR8
Power Scheme	ePA
Measurement Distance:	3 Meters
Operating Frequency:	5162MHz

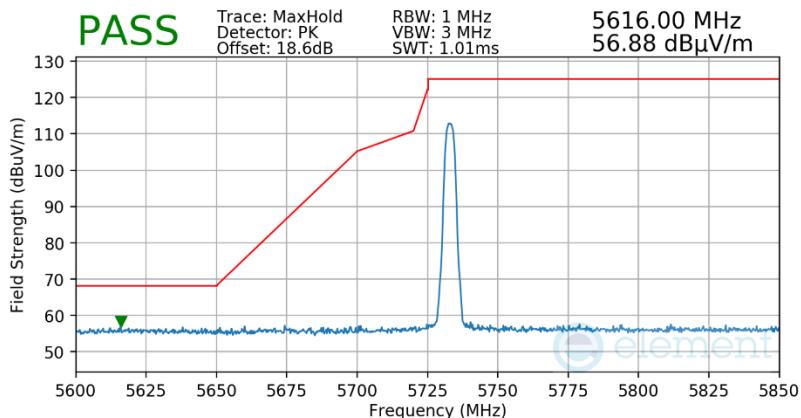


Plot 7-150. Radiated Lower Band Edge Measurement

FCC ID: BCGA2435	 element		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device		Page 120 of 136

Mode:
Power Scheme
Measurement Distance:
Operating Frequency:

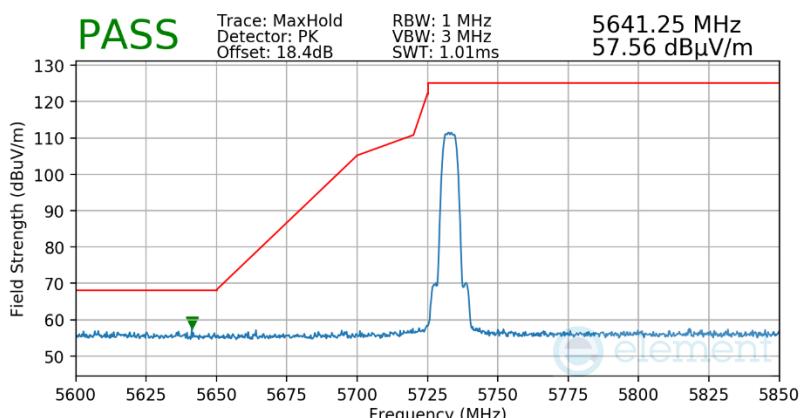
HDR4
ePA
3 Meters
5733MHz



Plot 7-151. Radiated Lower Band Edge Measurement

Mode:
Power Scheme
Measurement Distance:
Operating Frequency:

HDR8
ePA
3 Meters
5733MHz

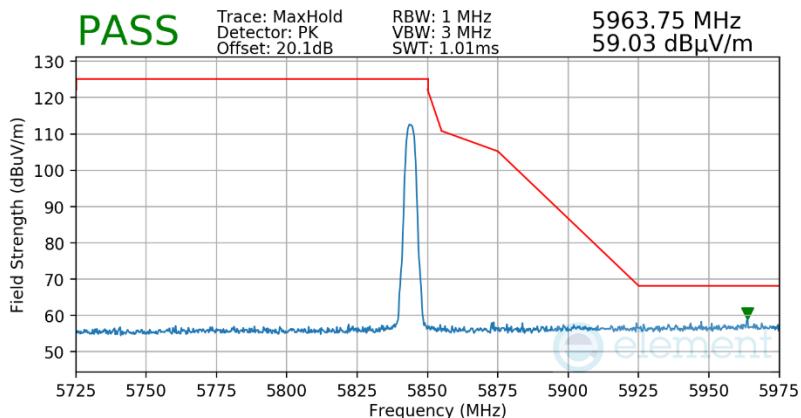


Plot 7-152. Radiated Lower Band Edge Measurement

FCC ID: BCGA2435	 element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device		Page 121 of 136

Mode:
Power Scheme
Measurement Distance:
Operating Frequency:

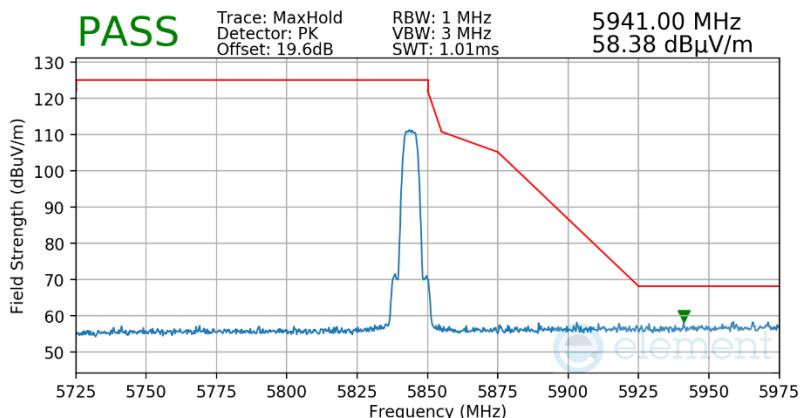
HDR4
ePA
3 Meters
5844MHz



Plot 7-153. Radiated Upper Band Edge Measurement

Mode:
Power Scheme
Measurement Distance:
Operating Frequency:

HDR8
ePA
3 Meters
5844MHz



Plot 7-154. Radiated Upper Band Edge Measurement

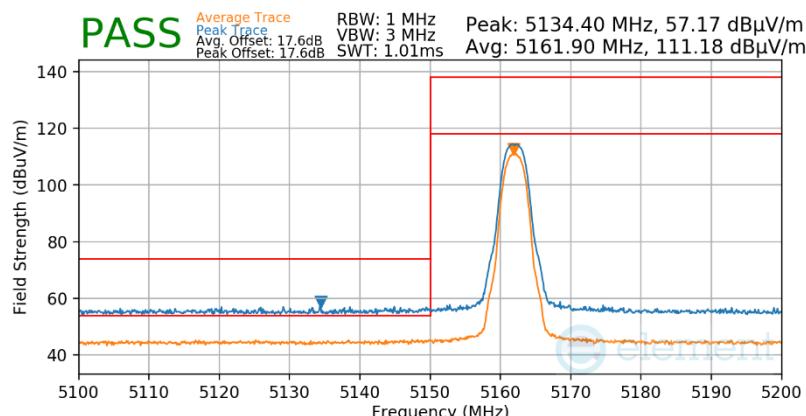
FCC ID: BCGA2435	 element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device		Page 122 of 136

TxBF

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

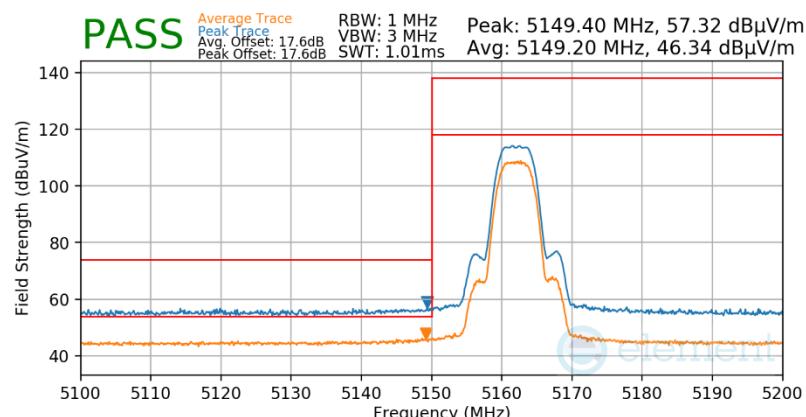
$$\text{Offset (dB)} = (\text{Antenna Factor} + \text{Cable Loss} + \text{Attenuator}) - \text{Preamplifier Gain}$$

Mode:	HDR4
Power Scheme	ePA
Measurement Distance:	3 Meters
Operating Frequency:	5162MHz



Plot 7-155. Radiated Lower Band Edge Measurement

Mode:	HDR8
Power Scheme	ePA
Measurement Distance:	3 Meters
Operating Frequency:	5162MHz

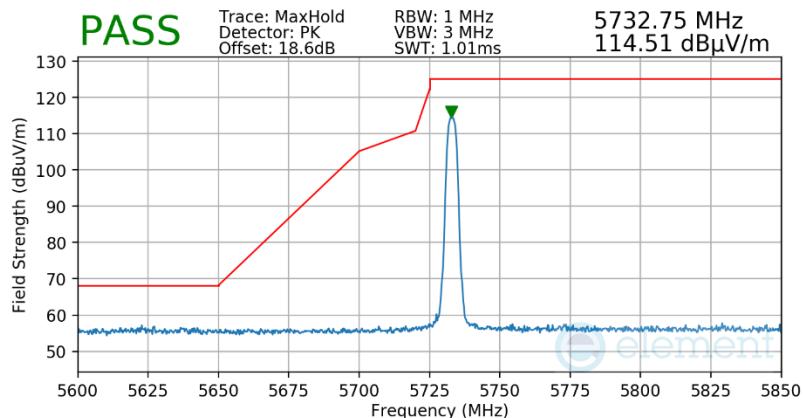


Plot 7-156. Radiated Lower Band Edge Measurement

FCC ID: BCGA2435	 element		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device		Page 123 of 136

Mode:
Power Scheme
Measurement Distance:
Operating Frequency:

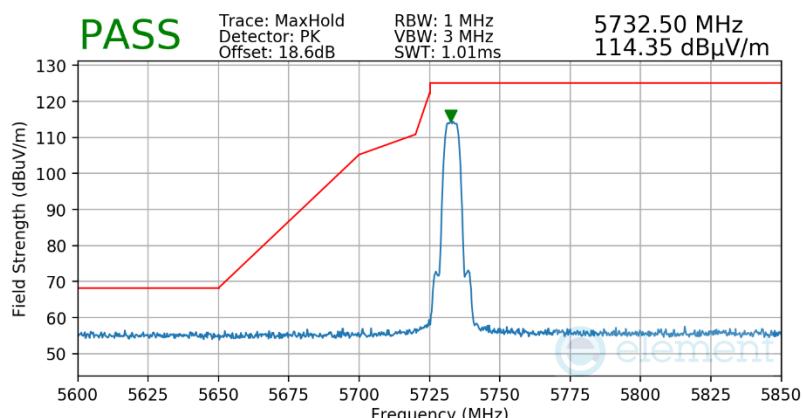
HDR4
ePA
3 Meters
5733MHz



Plot 7-157. Radiated Lower Band Edge Measurement

Mode:
Power Scheme
Measurement Distance:
Operating Frequency:

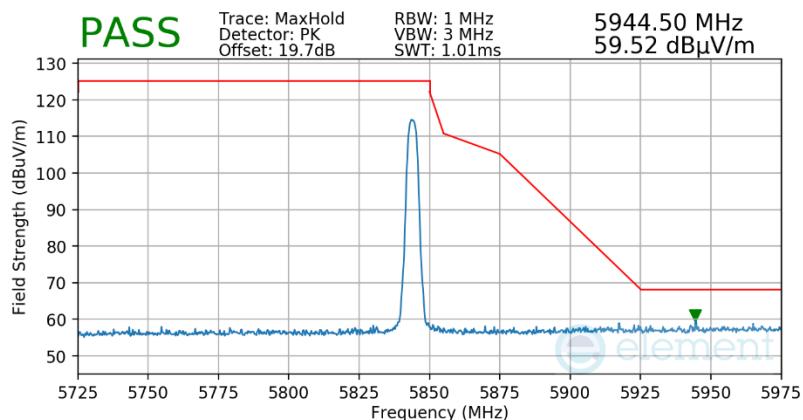
HDR8
ePA
3 Meters
5733MHz



Plot 7-158. Radiated Lower Band Edge Measurement

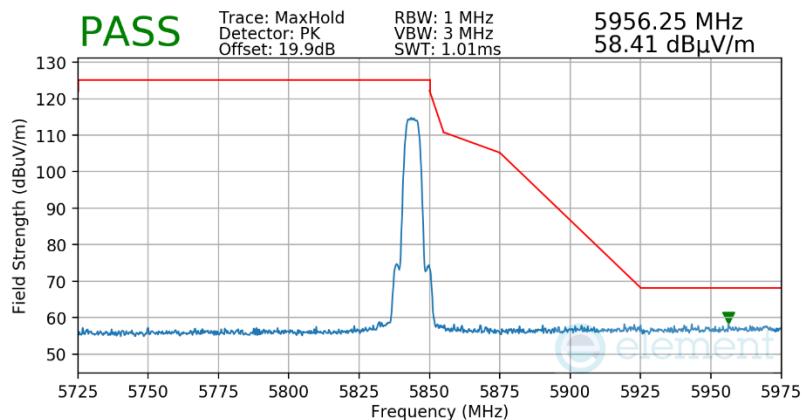
FCC ID: BCGA2435	 element	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device		Page 124 of 136

Mode: HDR4
 Power Scheme ePA
 Measurement Distance: 3 Meters
 Operating Frequency: 5844MHz



Plot 7-159. Radiated Upper Band Edge Measurement

Mode: HDR8
 Power Scheme ePA
 Measurement Distance: 3 Meters
 Operating Frequency: 5844MHz



Plot 7-160. Radiated Upper Band Edge Measurement

FCC ID: BCGA2435	 element		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device		Page 125 of 136

7.7 Radiated Spurious Emissions – Below 1GHz

§15.209

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 must not exceed the limits shown in Table 7-34 per Section 15.209.

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 7-34. 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	 element		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device		Page 126 of 136

Test Setup

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

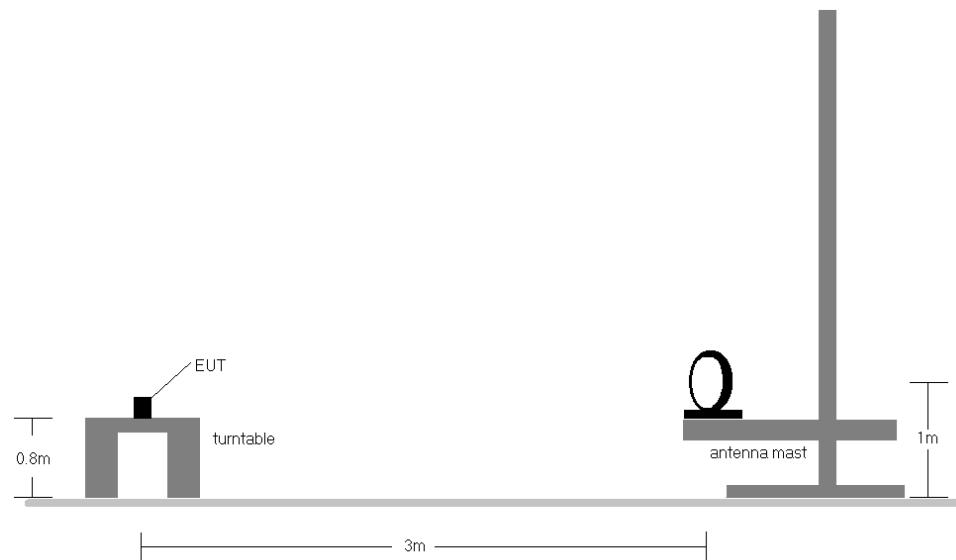


Figure 7-6. Radiated Test Setup < 30MHz

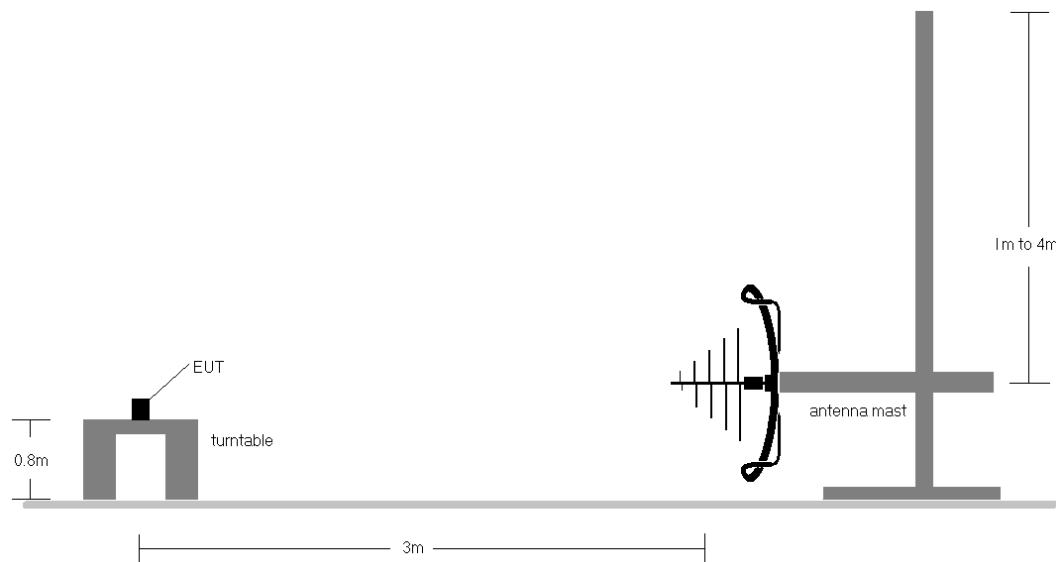


Figure 7-7. Radiated Test Setup < 1GHz

FCC ID: BCGA2435	 element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device	Page 127 of 136

Test Notes

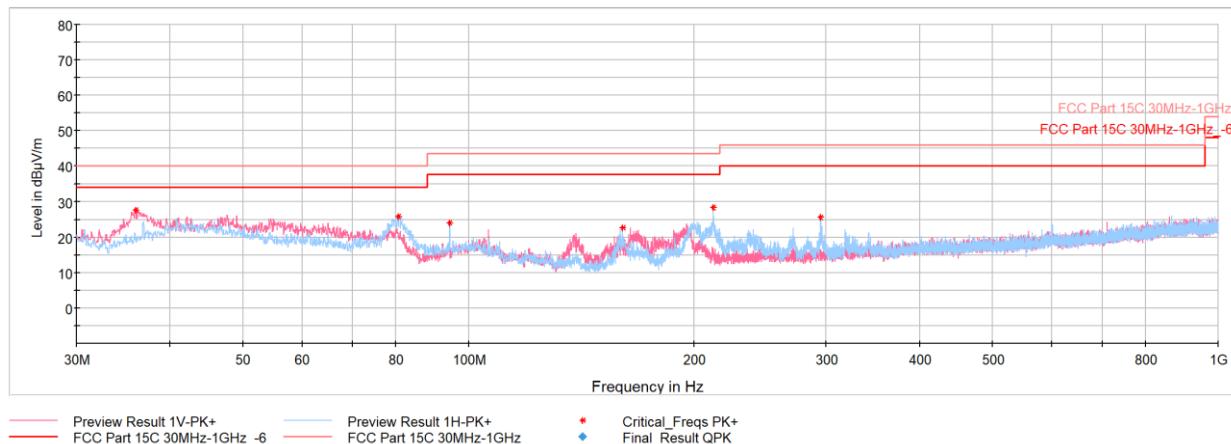
1. All emissions lying in restricted bands specified in §15.205 are below the limit shown in Table 7-34.
2. The broadband receive antenna is manipulated through vertical and horizontal polarizations during the tests. The EUT is manipulated through three orthogonal planes. For below 30MHz the loop antenna 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 for emissions 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 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

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

FCC ID: BCGA2435	 element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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TxBF Radiated Spurious Emissions (Below 1GHz)
§15.209

Plot 7-161. RSE 30MHz - 1GHz TxBF (HDR4 – 5245MHz), 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]
35.97	Max Peak	V	100	157	-60.84	-18.46	27.70	40.00	-12.30
80.54	Max Peak	H	200	138	-58.23	-22.85	25.92	40.00	-14.08
94.46	Max Peak	H	200	285	-63.85	-19.06	24.09	43.52	-19.43
160.51	Max Peak	H	100	253	-63.88	-20.41	22.71	43.52	-20.81
212.02	Max Peak	H	100	163	-60.76	-17.96	28.28	43.52	-15.24
294.96	Max Peak	H	100	130	-66.10	-15.35	25.55	46.02	-20.47

Table 7-35. RSE 30MHz - 1GHz TxBF (HDR4 – 5245MHz), with AC/DC Adapter

FCC ID: BCGA2435	 element	MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device			Page 129 of 136

7.8 AC Line Conducted Emissions Measurement

§15.207

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. All data rates and modes were investigated for AC Line conducted spurious emissions.

All conducted emissions must not exceed the limits shown in the table below, per Section 15.207.

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 7-36. Conducted Limits

*Decreases with the logarithm of the frequency.

Test Procedures Used

ANSI C63.10-2013, Subclause 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	 element		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device		Page 130 of 136

Test Setup

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

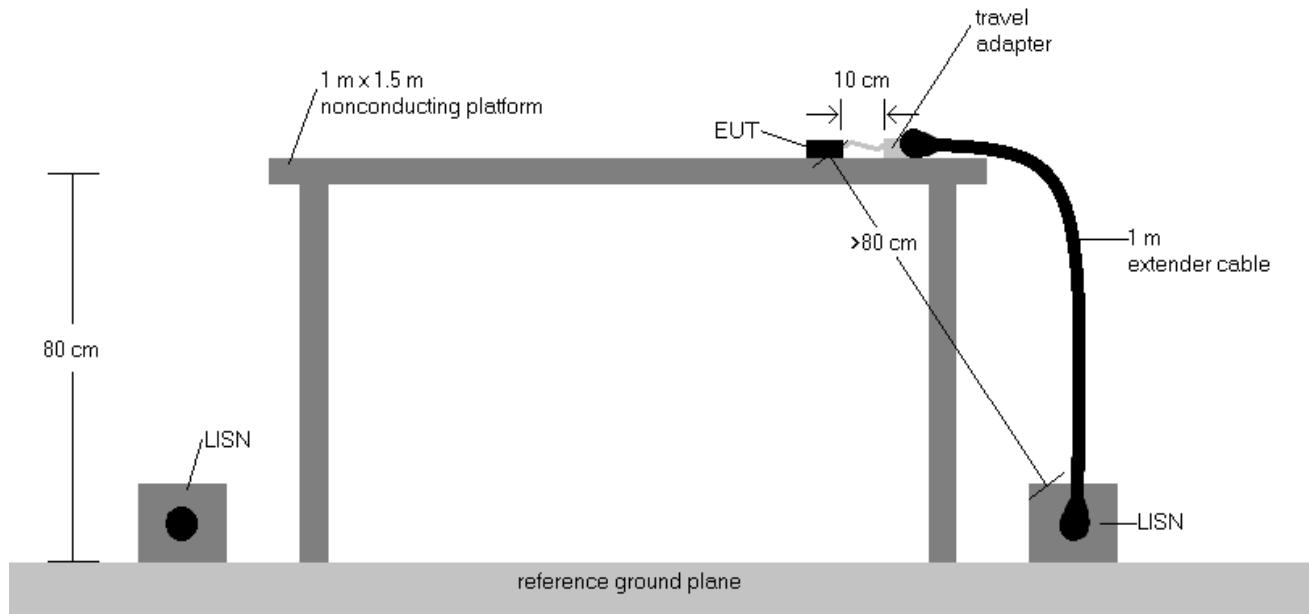
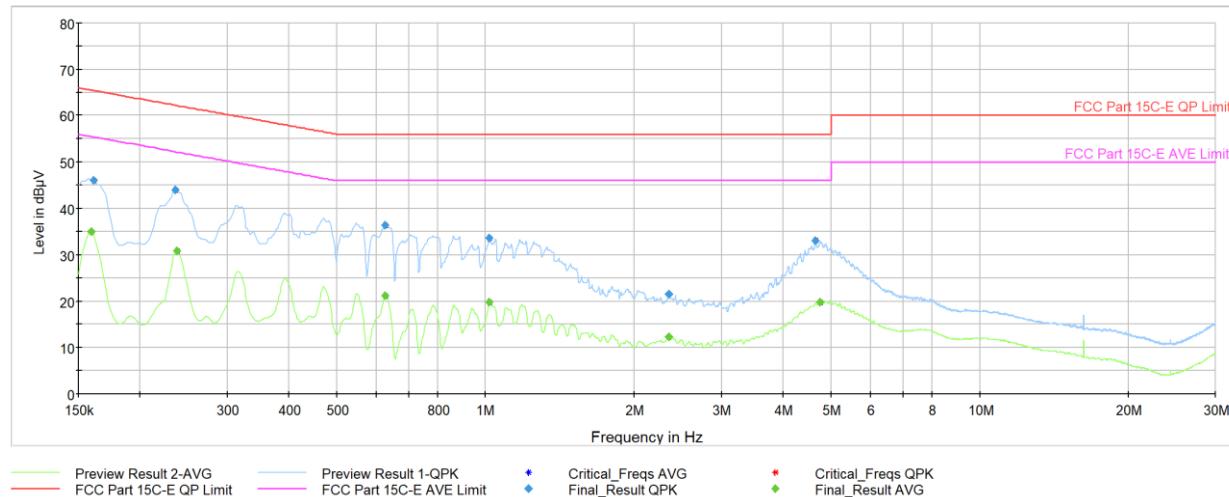


Figure 7-8. Test Instrument & Measurement Setup

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 15.207.
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 plots are made using quasi-peak and average detectors.
8. Deviations to the Specifications: None.

FCC ID: BCGA2435	 element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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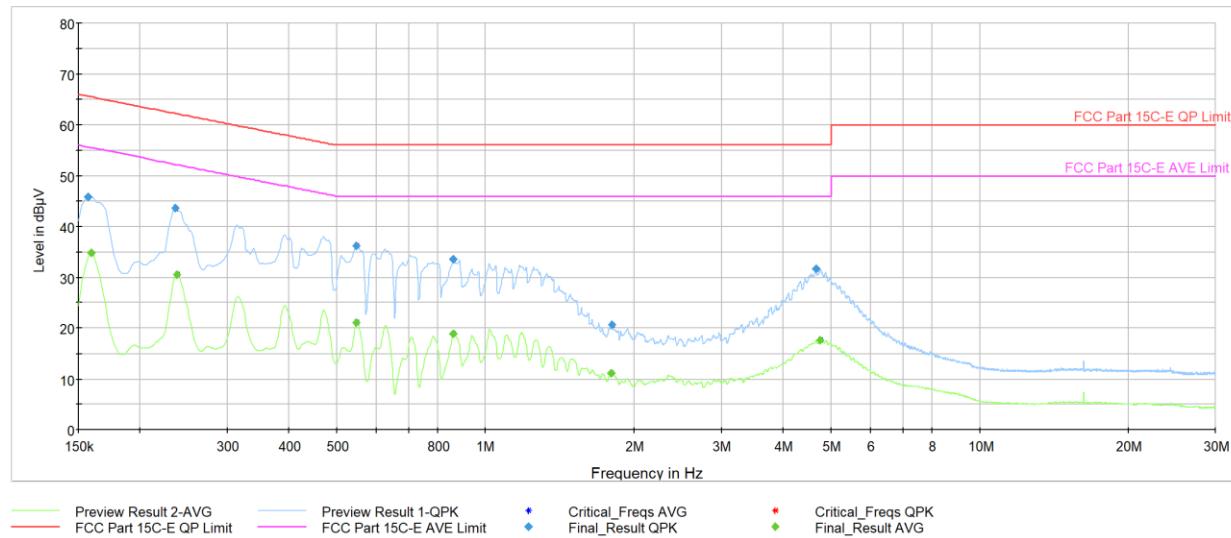


Plot 7-162. AC Line Conducted Plot (HDR4 – 5245MHz) (L1) with AC/DC Adapter

Frequency [MHz]	Process State	QuasiPeak [dB μ V]	Average [dB μ V]	Limit [dB μ V]	Margin [dB]	Line	PE
0.159	FINAL	—	34.97	55.52	-20.55	L1	GND
0.161	FINAL	46.1	—	65.40	-19.27	L1	GND
0.236	FINAL	44.0	—	62.25	-18.26	L1	GND
0.238	FINAL	—	30.81	52.17	-21.37	L1	GND
0.627	FINAL	36.4	—	56.00	-19.65	L1	GND
0.627	FINAL	—	21.19	46.00	-24.81	L1	GND
1.019	FINAL	33.5	—	56.00	-22.46	L1	GND
1.019	FINAL	—	19.77	46.00	-26.23	L1	GND
2.346	FINAL	—	12.35	46.00	-33.65	L1	GND
2.348	FINAL	21.6	—	56.00	-34.45	L1	GND
4.652	FINAL	33.1	—	56.00	-22.91	L1	GND
4.751	FINAL	—	19.82	46.00	-26.18	L1	GND

Table 7-37. AC Line Conducted (HDR4 – 5245MHz) (L1) with AC/DC Adapter

FCC ID: BCGA2435	 element	MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
Test Report S/N: 1C2205090025-17.BCG	Test Dates: 05/30/2022 - 9/13/2022	EUT Type: Tablet Device			Page 132 of 136



Plot 7-163. AC Line Conducted Plot (HDR4 – 5245MHz) (N) with AC/DC Adapter

Frequency [MHz]	Process State	QuasiPeak [dBμV]	Average [dBμV]	Limit [dBμV]	Margin [dB]	Line	PE
0.157	FINAL	45.9	—	65.63	-19.75	N	GND
0.159	FINAL	—	34.78	55.52	-20.73	N	GND
0.236	FINAL	43.6	—	62.25	-18.63	N	GND
0.238	FINAL	—	30.56	52.17	-21.61	N	GND
0.548	FINAL	36.3	—	56.00	-19.75	N	GND
0.548	FINAL	—	21.10	46.00	-24.91	N	GND
0.861	FINAL	33.5	—	56.00	-22.47	N	GND
0.861	FINAL	—	18.90	46.00	-27.10	N	GND
1.795	FINAL	—	11.25	46.00	-34.75	N	GND
1.797	FINAL	20.6	—	56.00	-35.41	N	GND
4.655	FINAL	31.7	—	56.00	-24.33	N	GND
4.745	FINAL	—	17.60	46.00	-28.40	N	GND

Table 7-38. AC Line Conducted (HDR4 – 5245MHz) (N) with AC/DC Adapter

FCC ID: BCGA2435	 element	MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
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8.0 CONCLUSION

The data collected relate only the item(s) tested and show that the **Apple Tablet Device** **FCC ID: BCGA2435** is in compliance with is in compliance with Part 15 Subpart E (15.407) of the FCC Rules.

FCC ID: BCGA2435	 element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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9.0 APPENDIX A

Antenna gains provided by manufacturer.

Antenna Gains

Frequency (MHz)	Horizontal (dBi)	Vertical (dBi)
5180	3.7	1.0
5260	3.6	0.9
5320	3.4	1.0
5500	3.1	0.4
5600	3.3	-0.4
5700	3.5	0.2
5745	3.7	0.5
5785	3.7	1.0
5825	4.0	1.8
5955	4.2	2.4
6075	3.9	1.9
6135	3.9	1.5
6255	4.1	1.9
6375	4.2	1.8
6435	4.3	2.0
6555	3.4	1.4
6675	4.2	2.8
6735	4.1	3.3
6855	4.7	2.4
6975	4.2	2.0
7035	4.1	2.4
7115	4.1	3.0

Table 9-1. WiFi [5GHz/6GHz] / NB UNII (Antenna 5b); Type: Cavity Backed

FCC ID: BCGA2435	 element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Frequency (MHz)	Horizontal (dBi)	Vertical (dBi)
5180	1.5	2.4
5260	1.4	2.3
5320	2.0	2.8
5500	0.1	0.7
5600	-0.5	-0.1
5700	-1.0	0.1
5745	-1.1	0.3
5785	-1.1	-0.2
5825	-2.1	-0.1
5955	-4.0	-0.7
6075	-3.7	-0.9
6135	-2.3	-0.6
6255	-1.1	0.6
6375	-0.5	1.0
6435	-0.3	1.2
6555	-0.7	-0.3
6675	-1.9	-1.6
6735	-1.9	-1.5
6855	-2.4	-2.7
6975	-3.3	-4.8
7035	-4.9	-5.9
7115	-4.9	-6.2

Table 9-2. WiFi [5GHz/6GHz] / NB UNII (Antenna 4a); Type: IFA

FCC ID: BCGA2435	 element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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