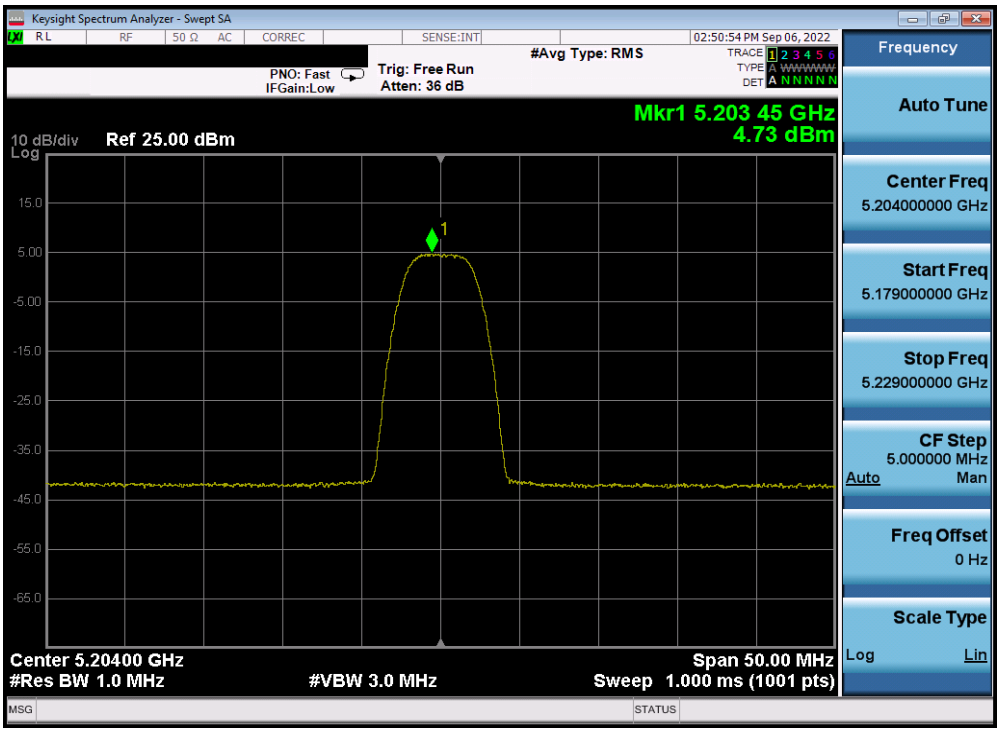
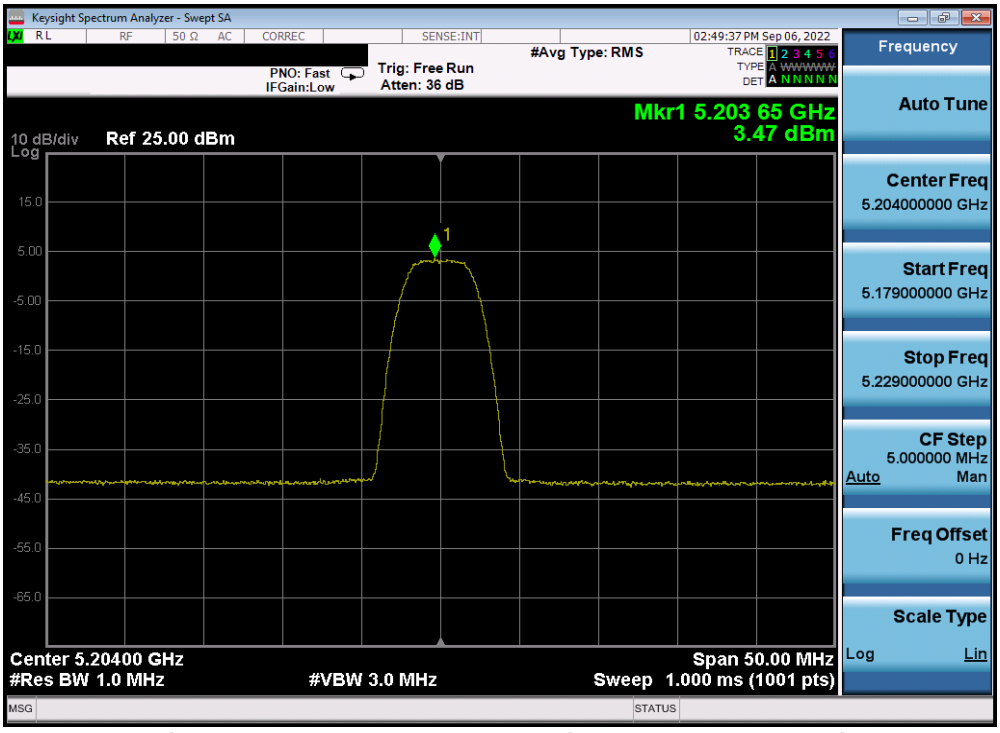
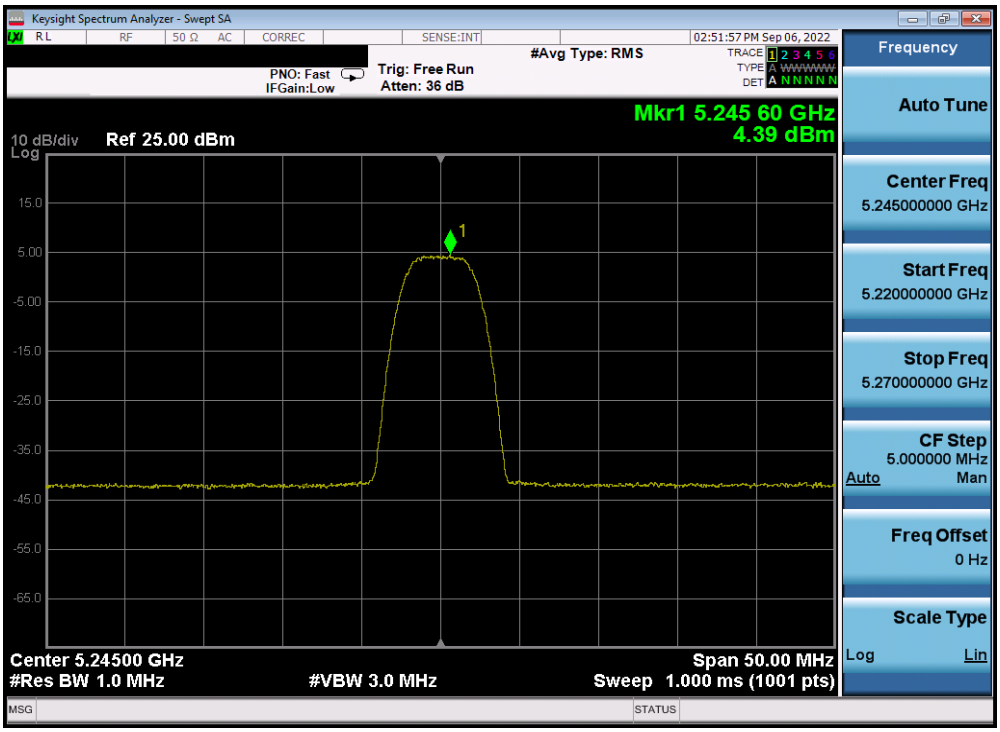


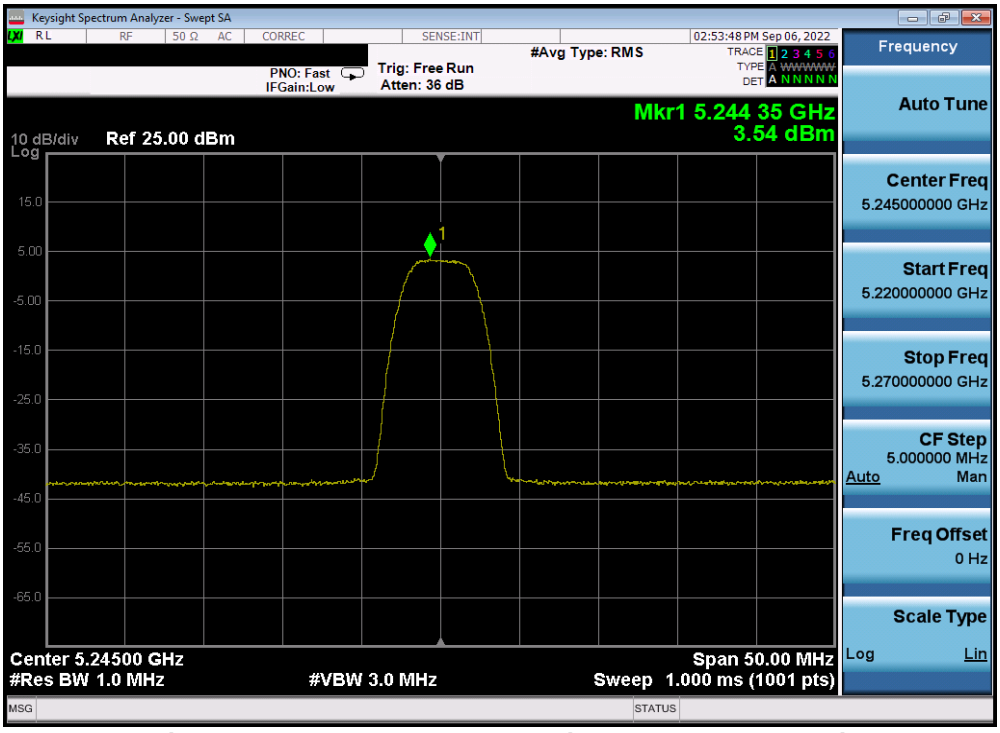
Plot 7-81. PSD TxBF Antenna 5b (HDR8, ePA, 5204MHz)



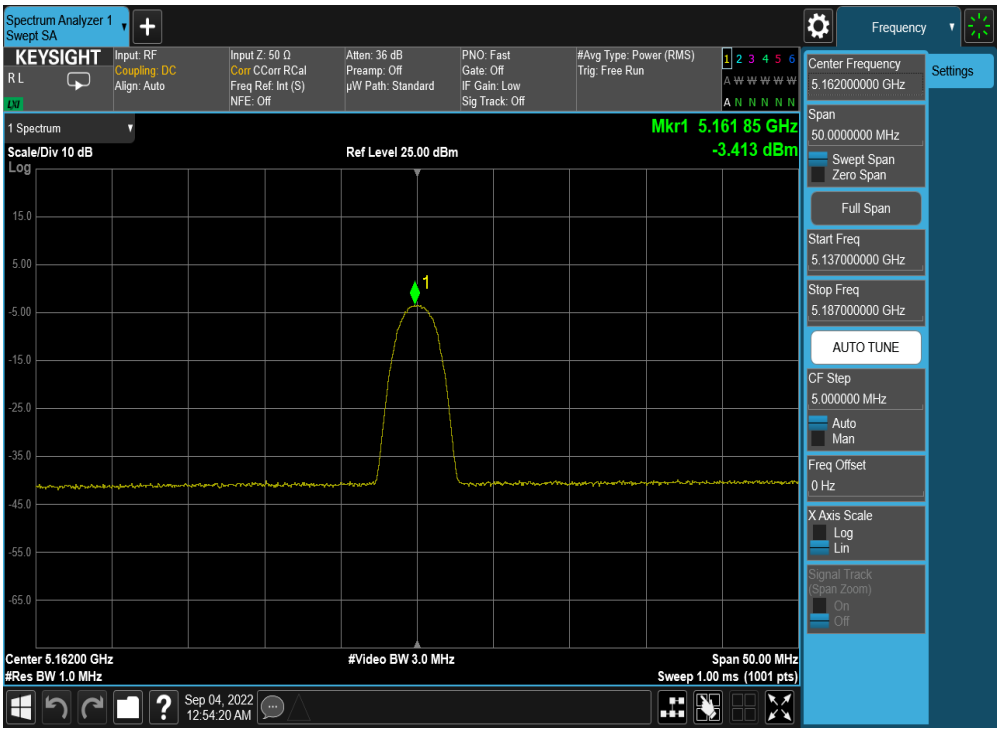
Plot 7-82. PSD TxBF Antenna 4a (HDR8, ePA, 5204MHz)



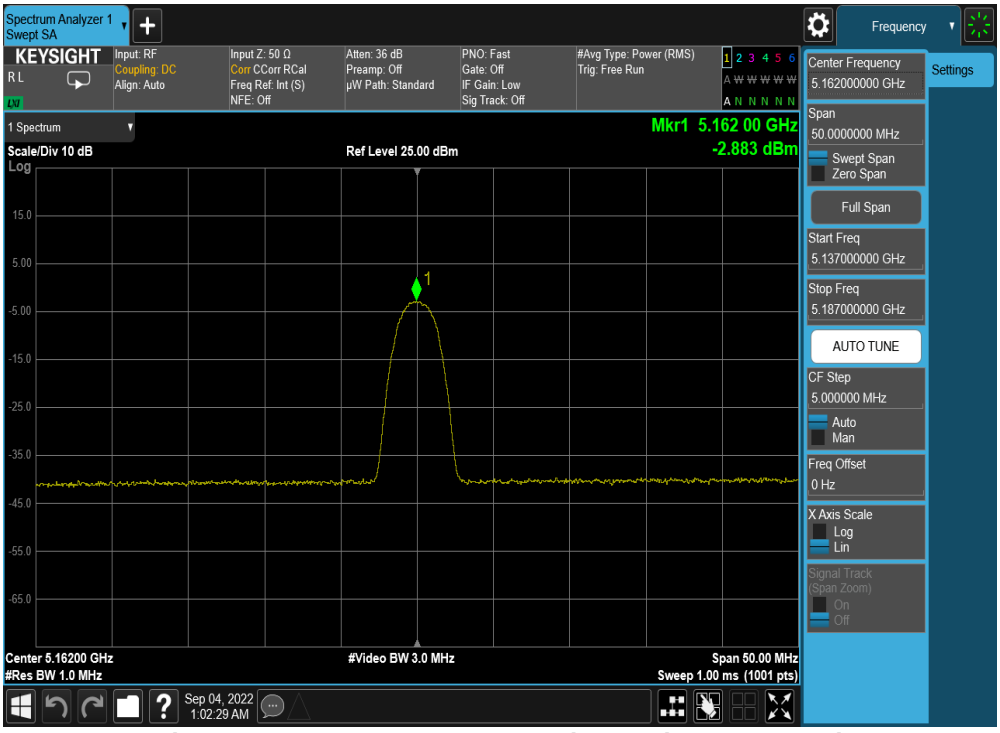
Plot 7-83. PSD TxBF Antenna 5b (HDR8, ePA, 5245MHz)



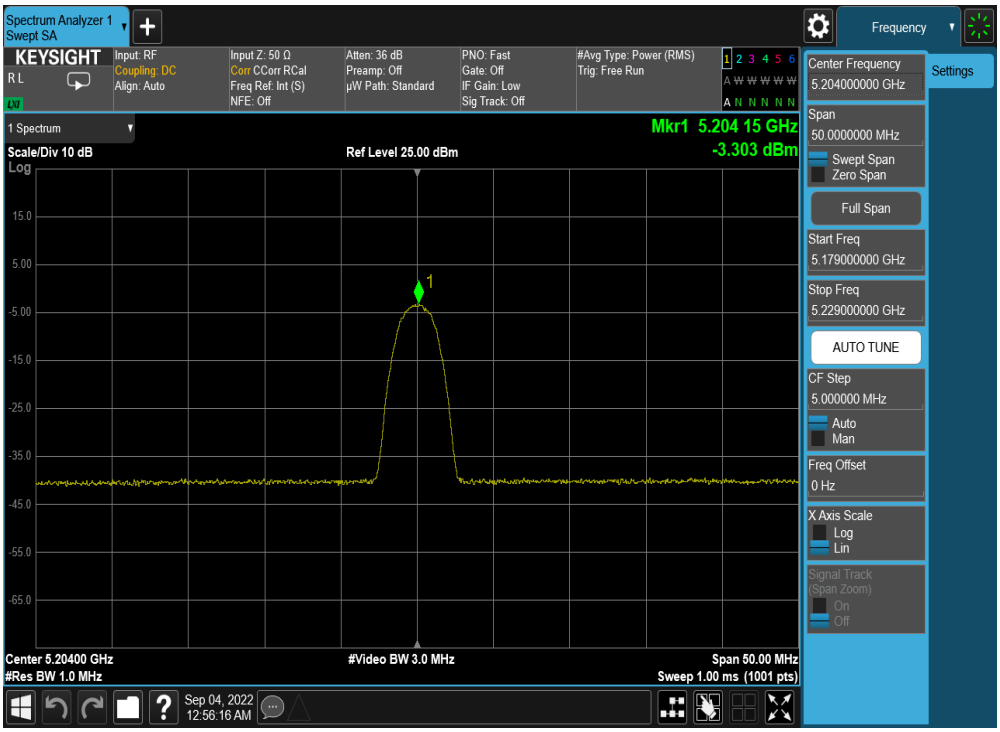
Plot 7-84. PSD TxBF Antenna 4a (HDR8, ePA, 5245MHz)



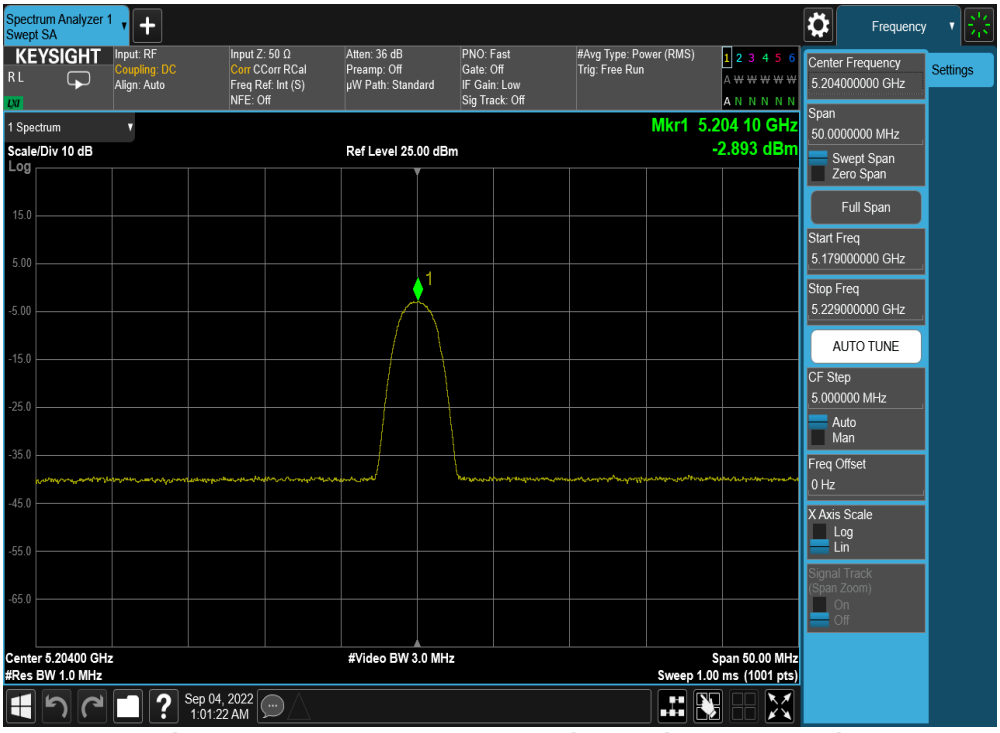
Plot 7-85. PSD TxBF Antenna 5b (HDR4, iPA, 5162MHz)



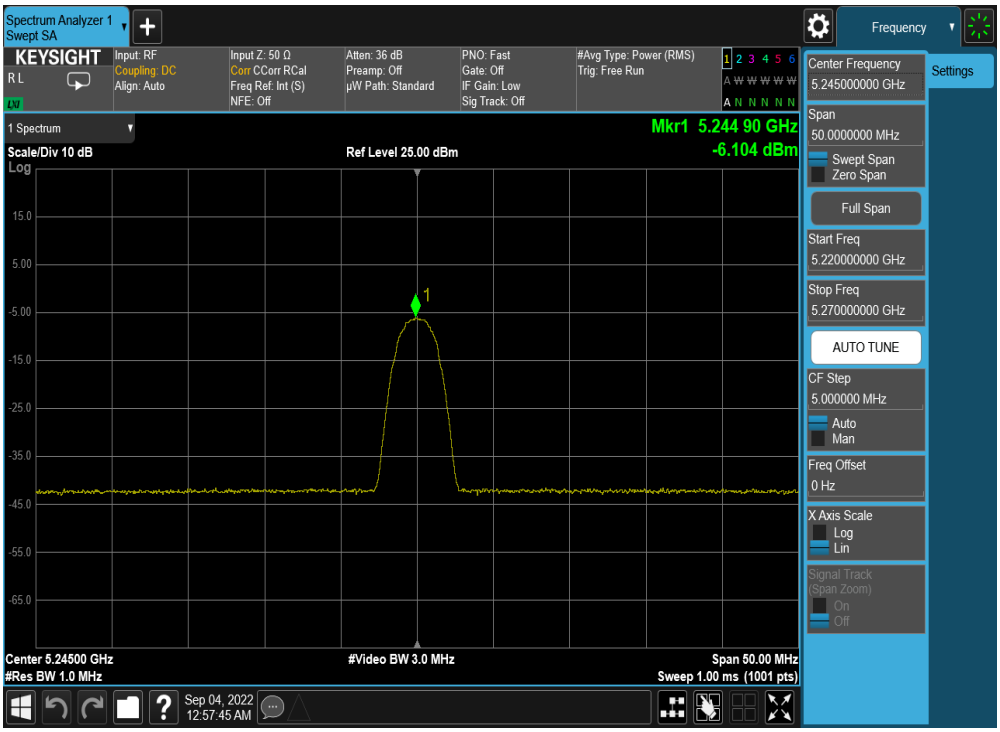
Plot 7-86. PSD TxBF Antenna 4a (HDR4, iPA, 5162MHz)



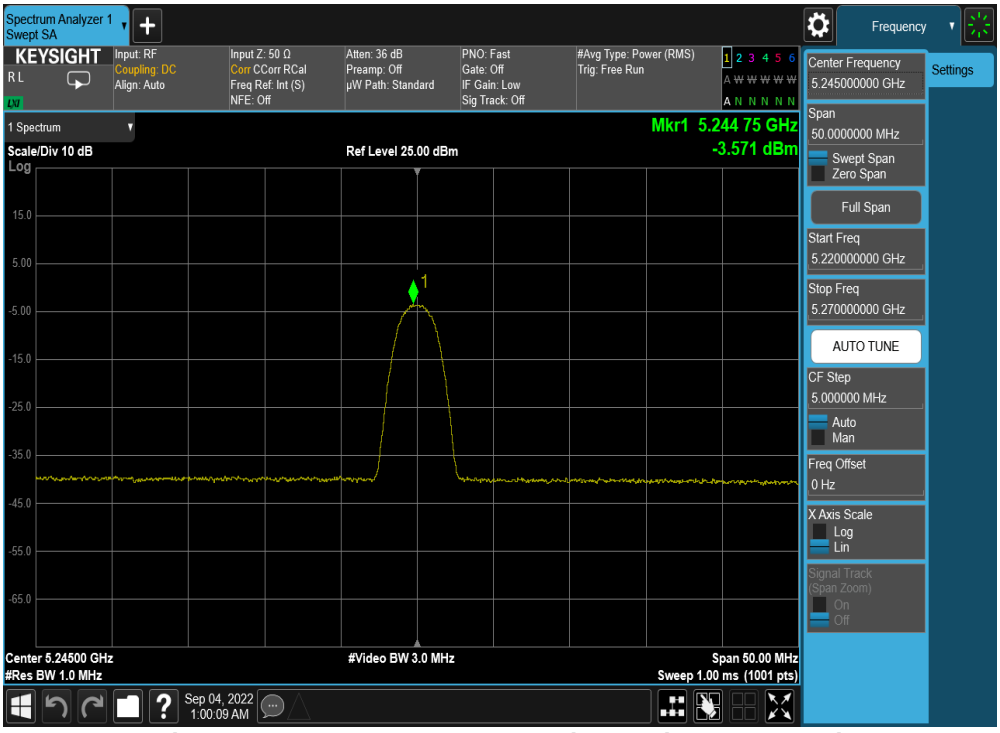
Plot 7-87. PSD TxBF Antenna 5b (HDR4, iPA, 5204MHz)



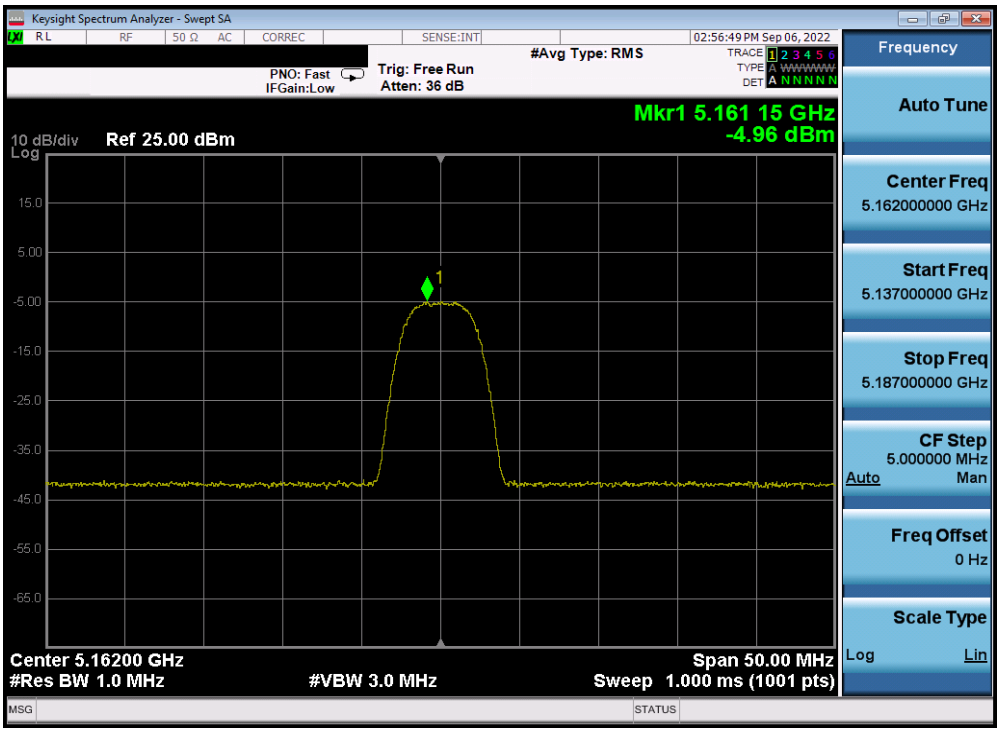
Plot 7-88. PSD TxBF Antenna 4a (HDR4, iPA, 5204MHz)



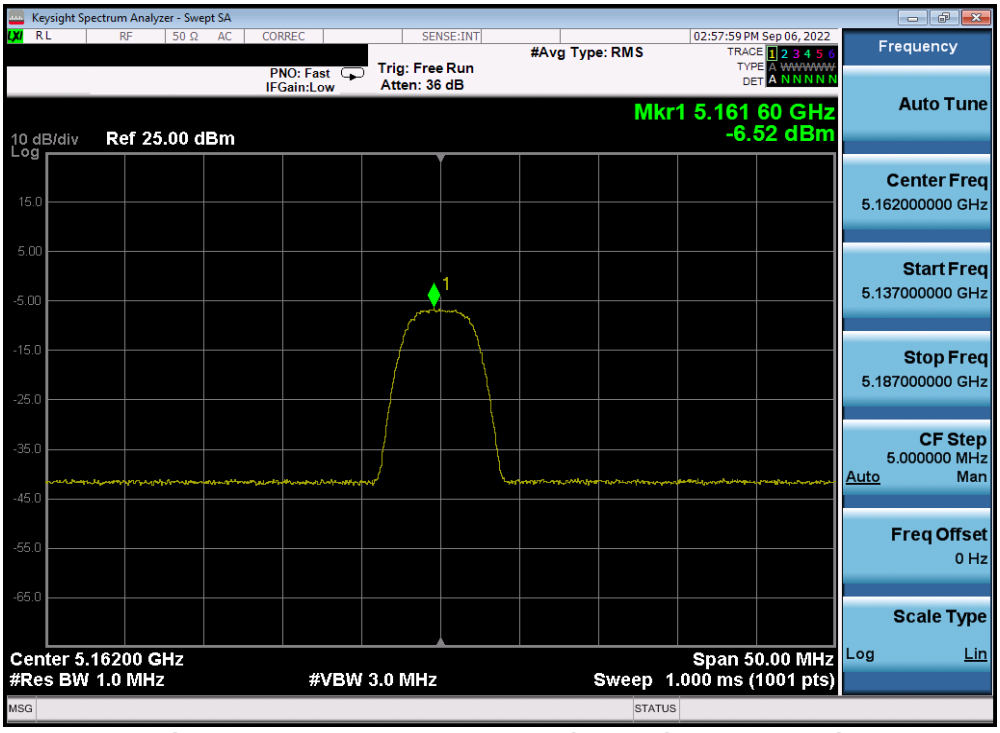
Plot 7-89. PSD TxBF Antenna 5b (HDR4, iPA, 5245MHz)



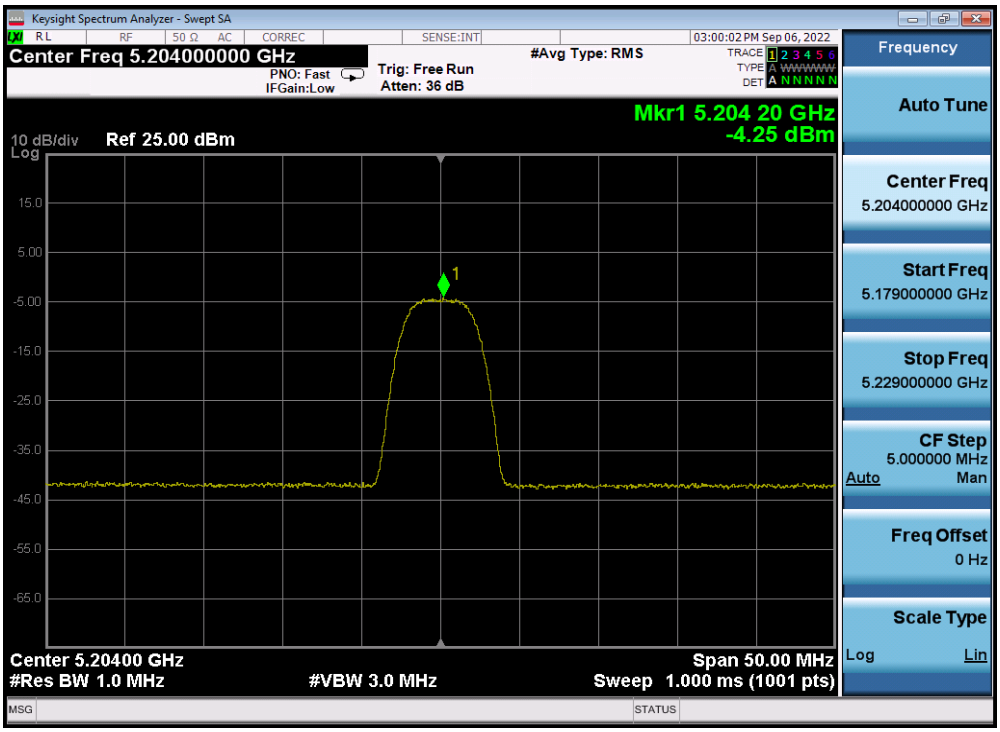
Plot 7-90. PSD TxBF Antenna 4a (HDR4, iPA, 5245MHz)



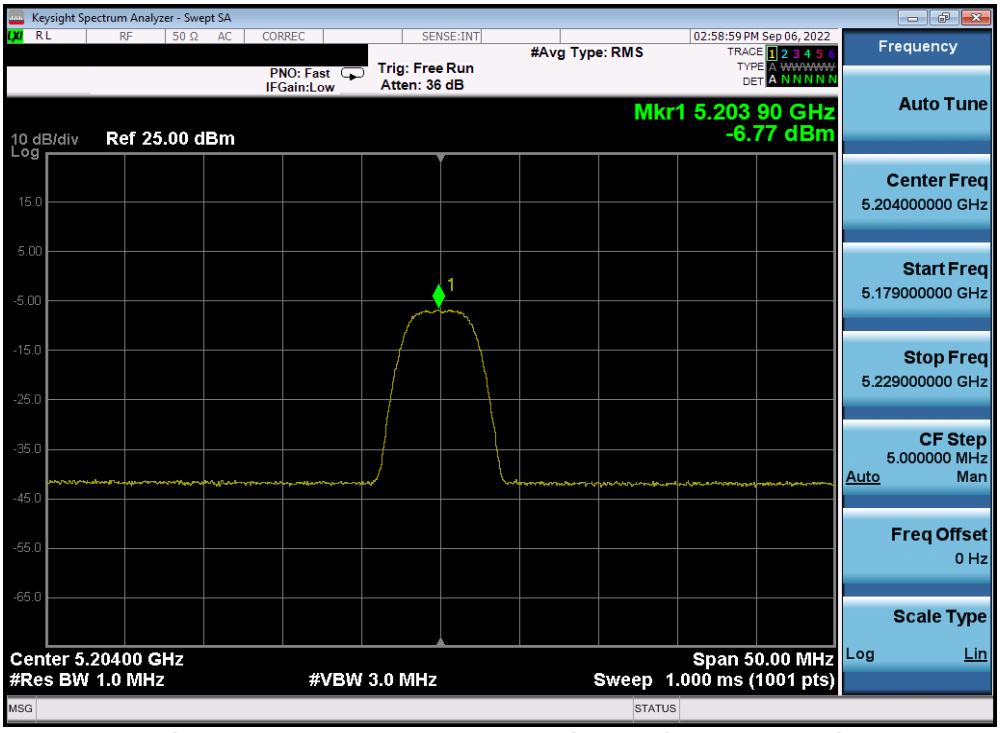
Plot 7-91. PSD TxBF Antenna 5b (HDR8, iPA, 5162MHz)



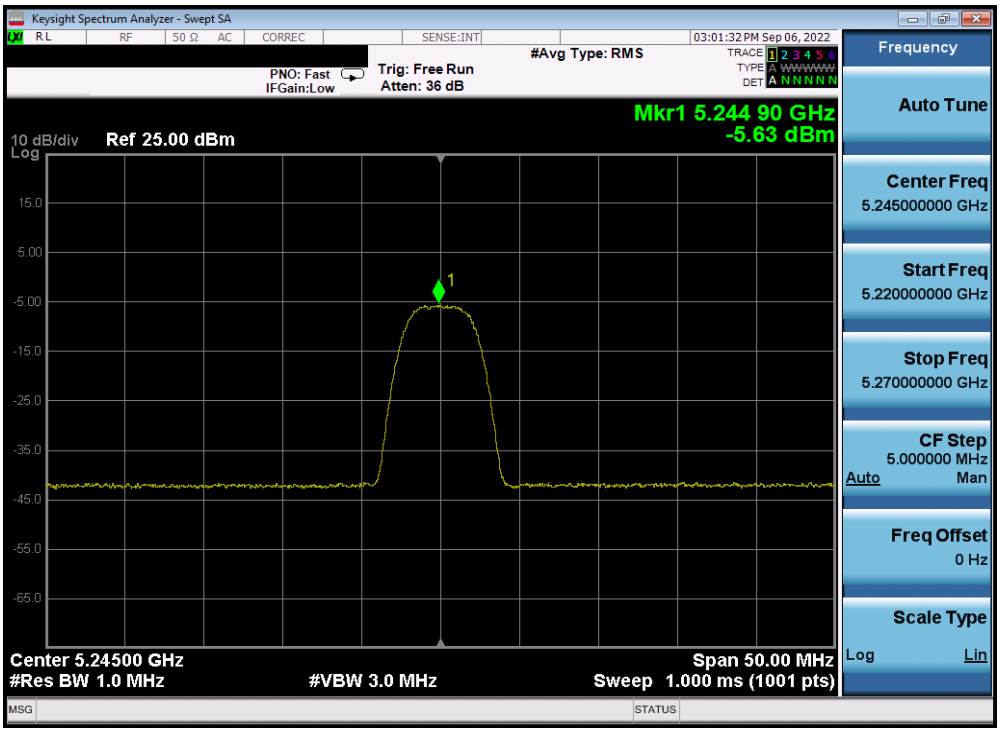
Plot 7-92. PSD TxBF Antenna 4a (HDR8, iPA, 5162MHz)



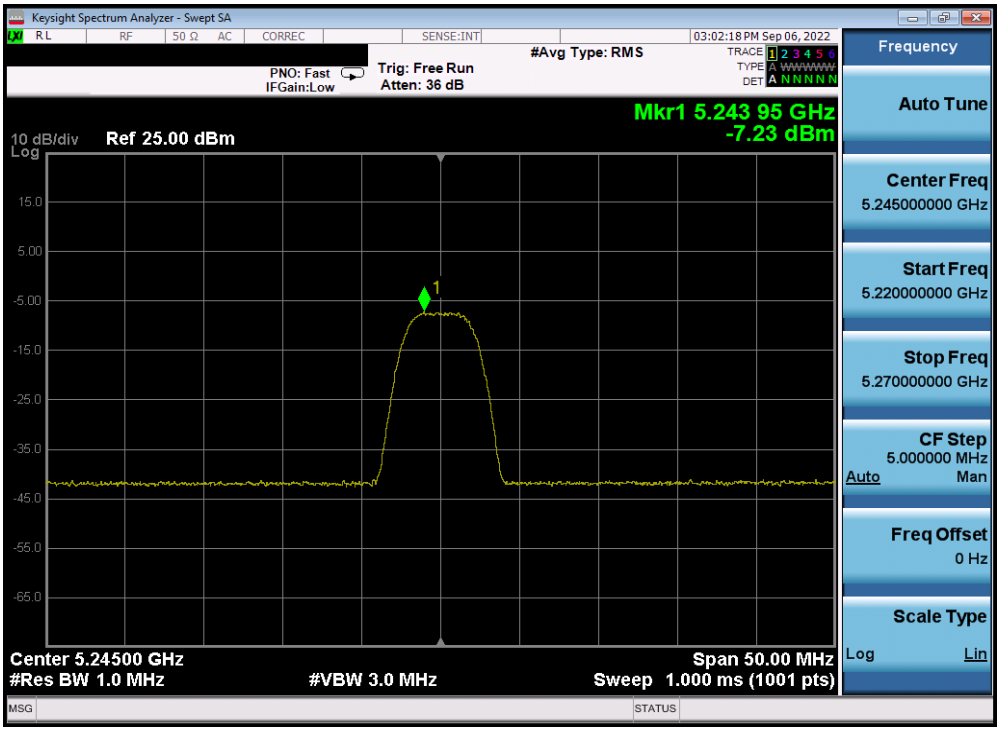
Plot 7-93. PSD TxBF Antenna 5b (HDR8, iPA, 5204MHz)



Plot 7-94. PSD TxBF Antenna 4a (HDR8, iPA, 5204MHz)



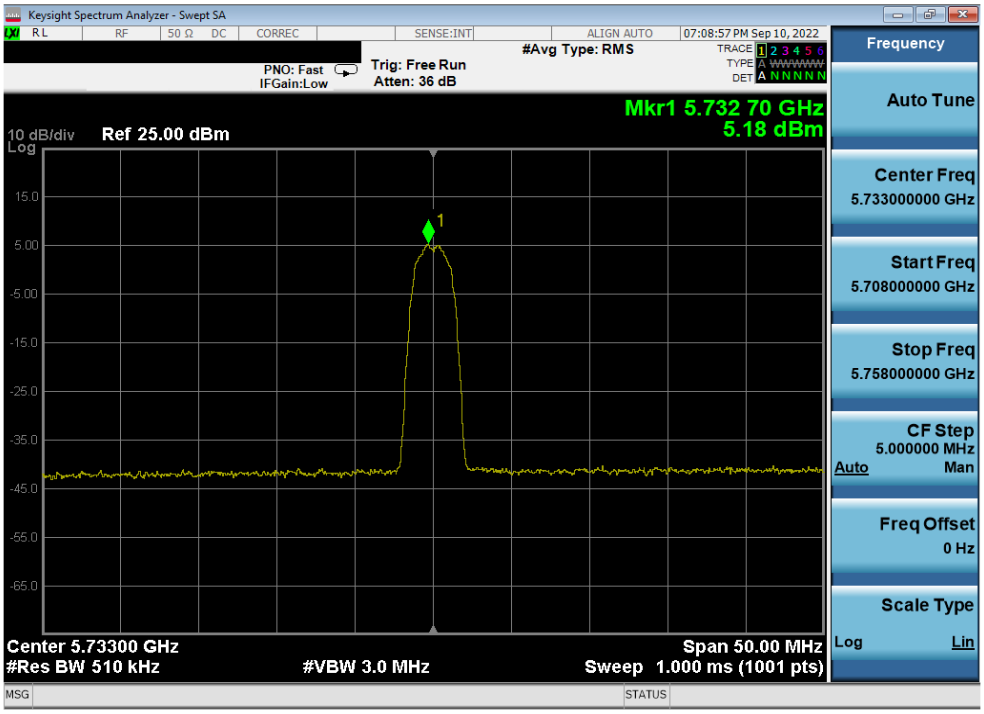
Plot 7-95. PSD TxBF Antenna 5b (HDR8, iPA, 5245MHz)



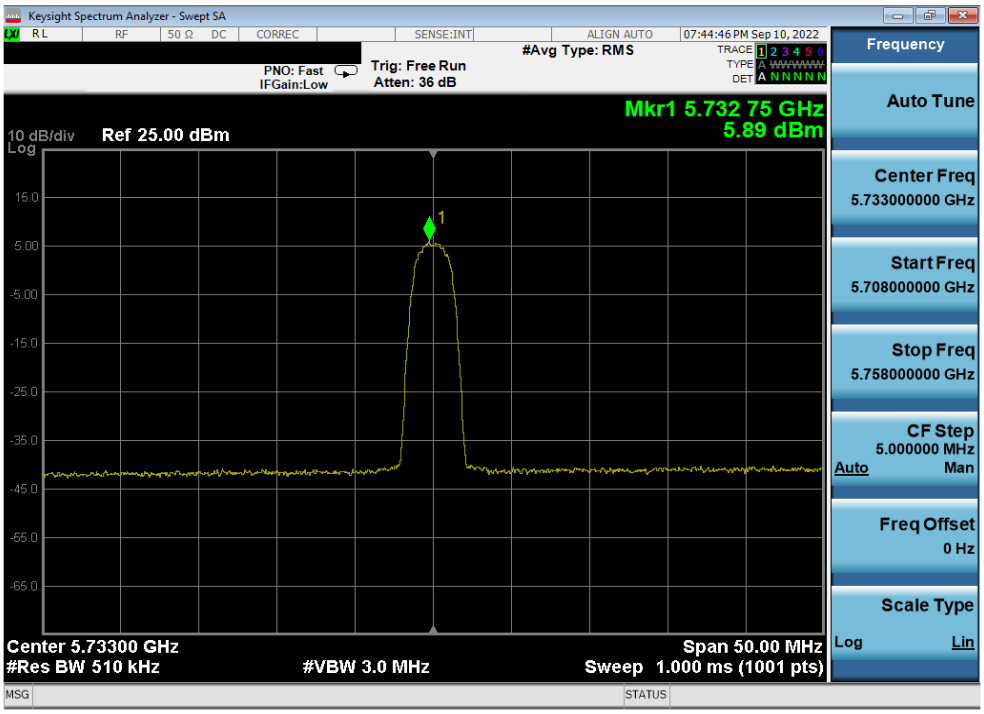
Plot 7-96. PSD TxBF Antenna 4a (HDR8, iPA, 5245MHz)

	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

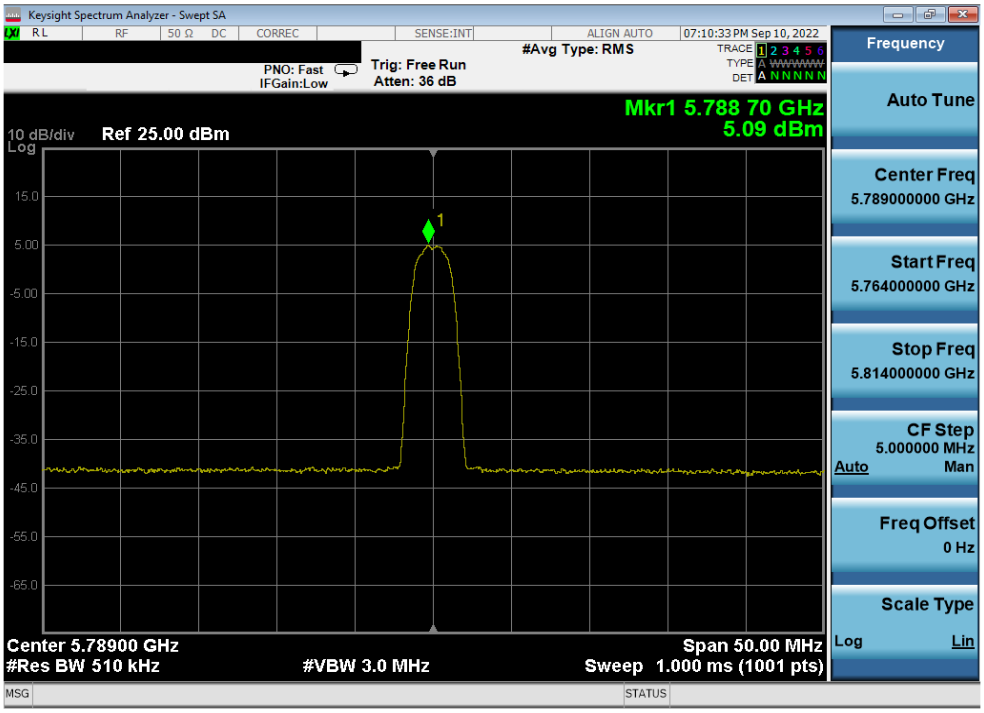
Table 7-14. Power Spectral Density Measurements



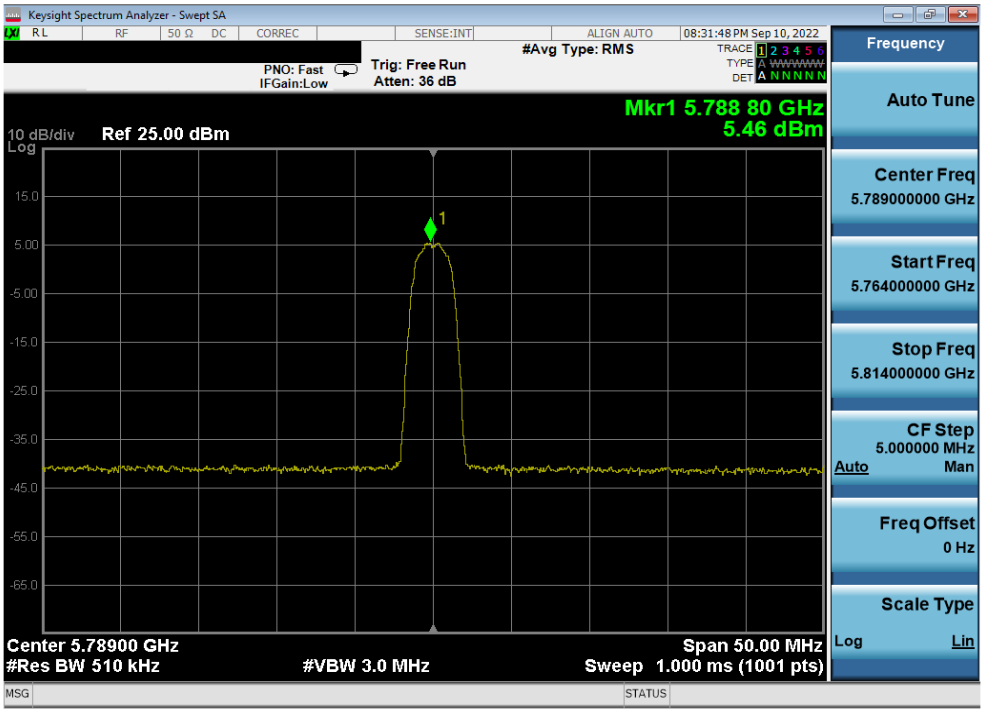
Plot 7-97. PSD TxBF Antenna 5b (HDR4, ePA, 5733MHz)



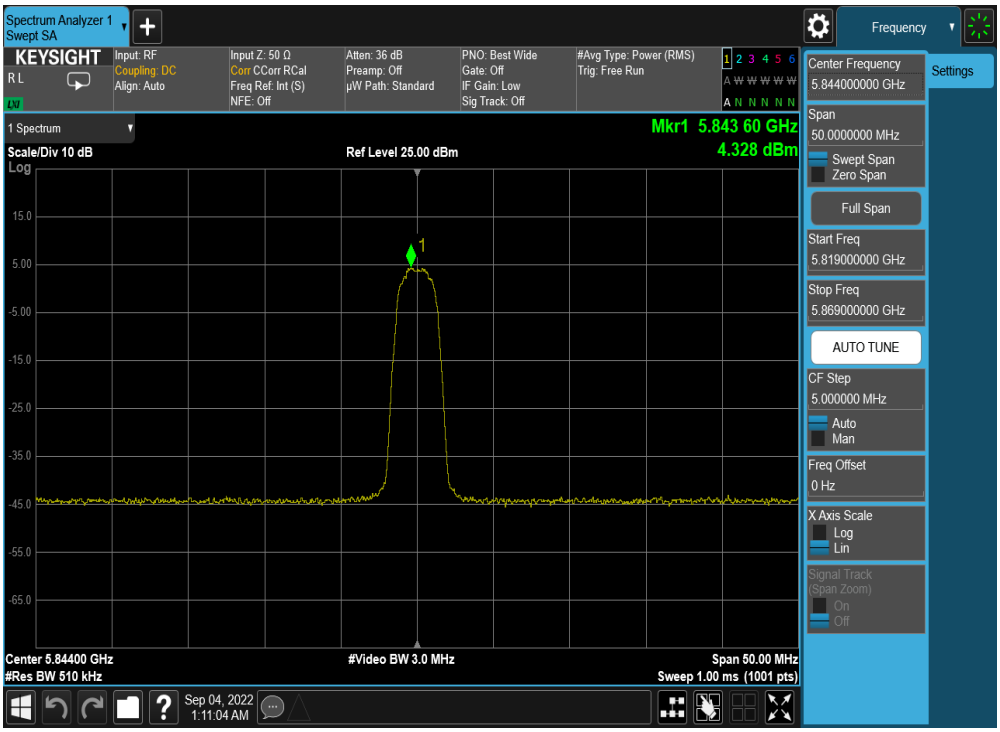
Plot 7-98. PSD TxBF Antenna 4a (HDR4, ePA, 5733MHz)



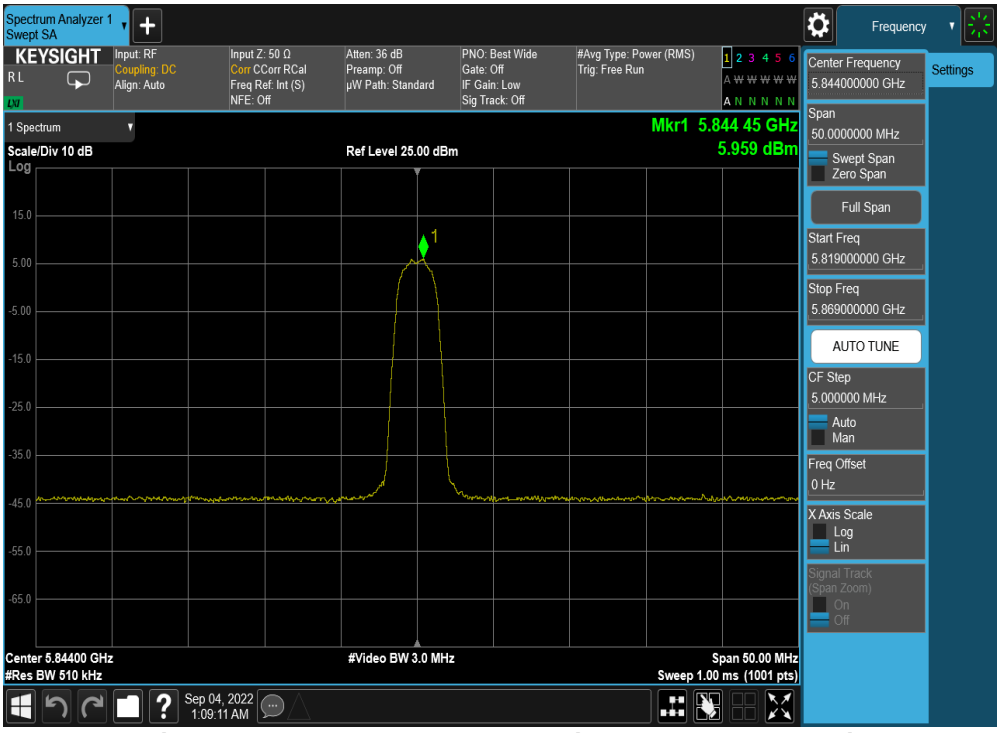
Plot 7-99. PSD TxBF Antenna 5b (HDR4, ePA, 5789MHz)



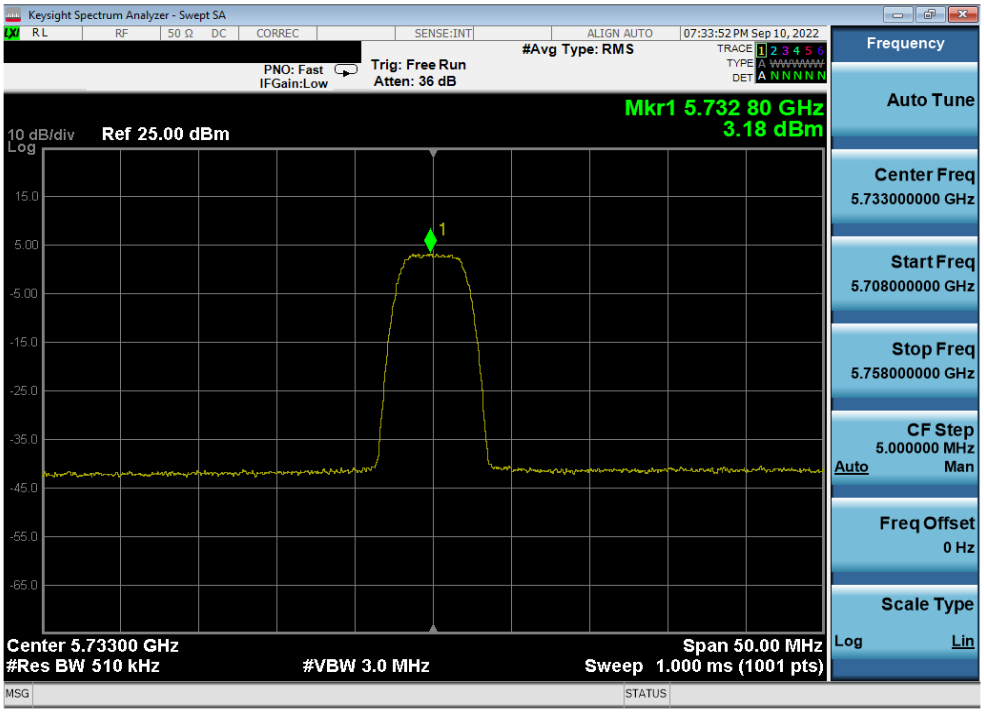
Plot 7-100. PSD TxBF Antenna 4a (HDR4, ePA, 5789MHz)



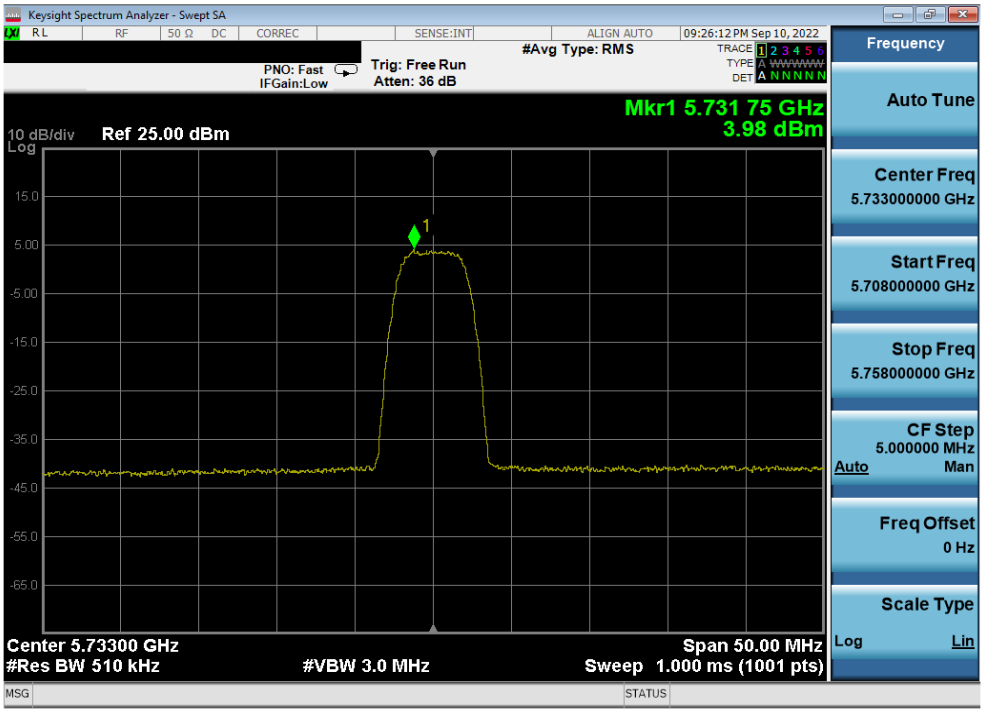
Plot 7-101. PSD TxBF Antenna 5b (HDR4, ePA, 5844MHz)



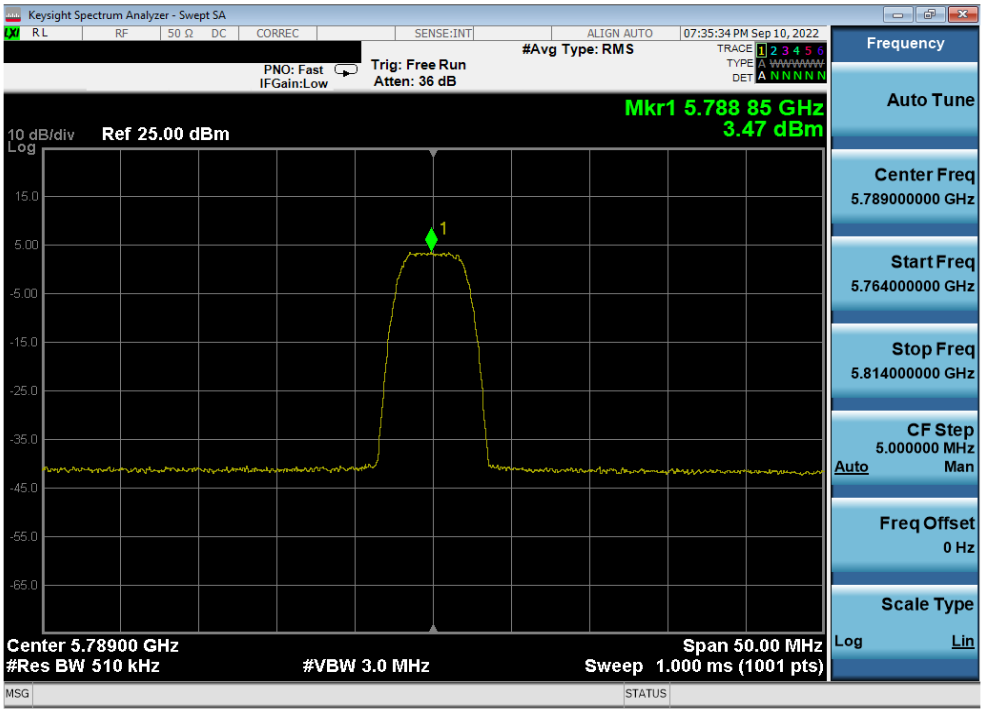
Plot 7-102. PSD TxBF Antenna 4a (HDR4, ePA, 5844MHz)



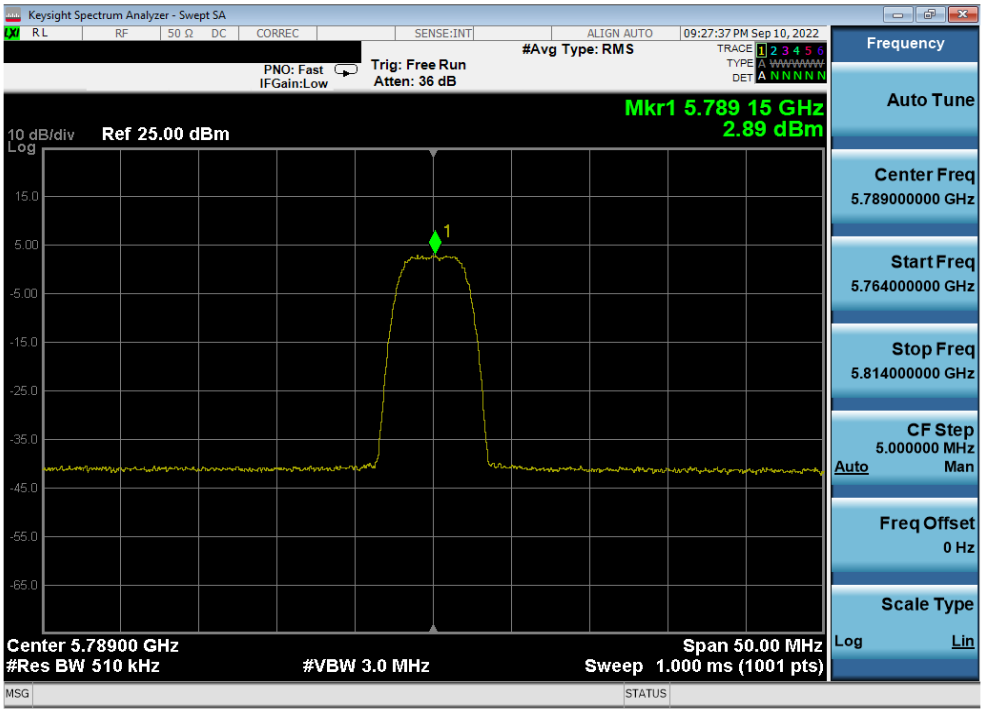
Plot 7-103. PSD TxBF Antenna 5b (HDR8, ePA, 5733MHz)



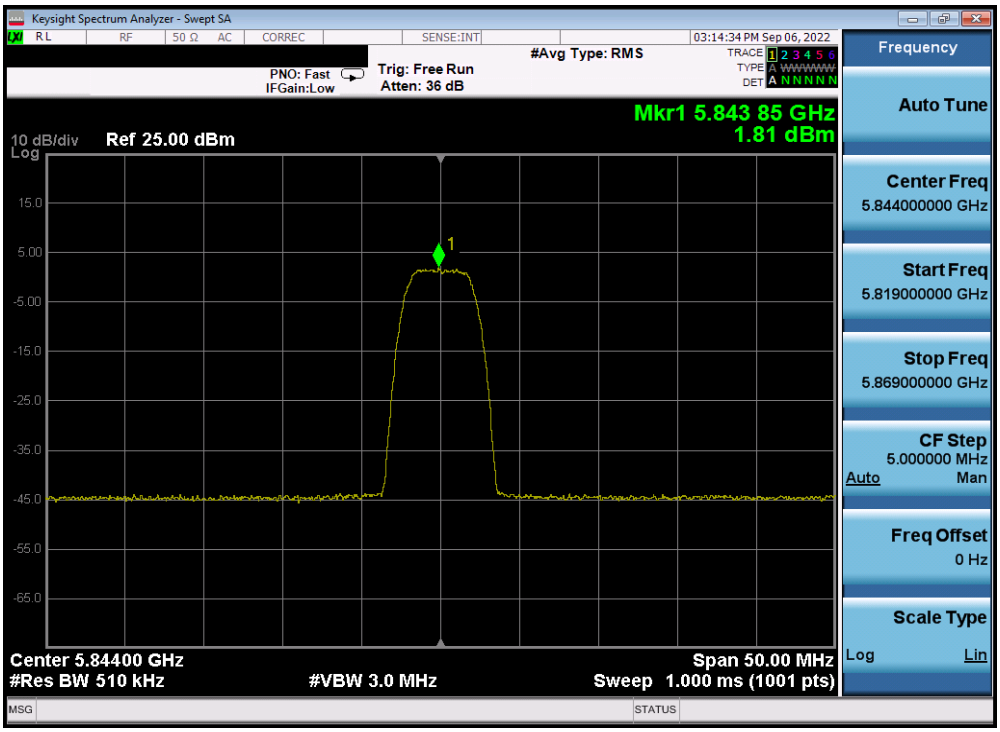
Plot 7-104. PSD TxBF Antenna 4a (HDR8, ePA, 5733MHz)



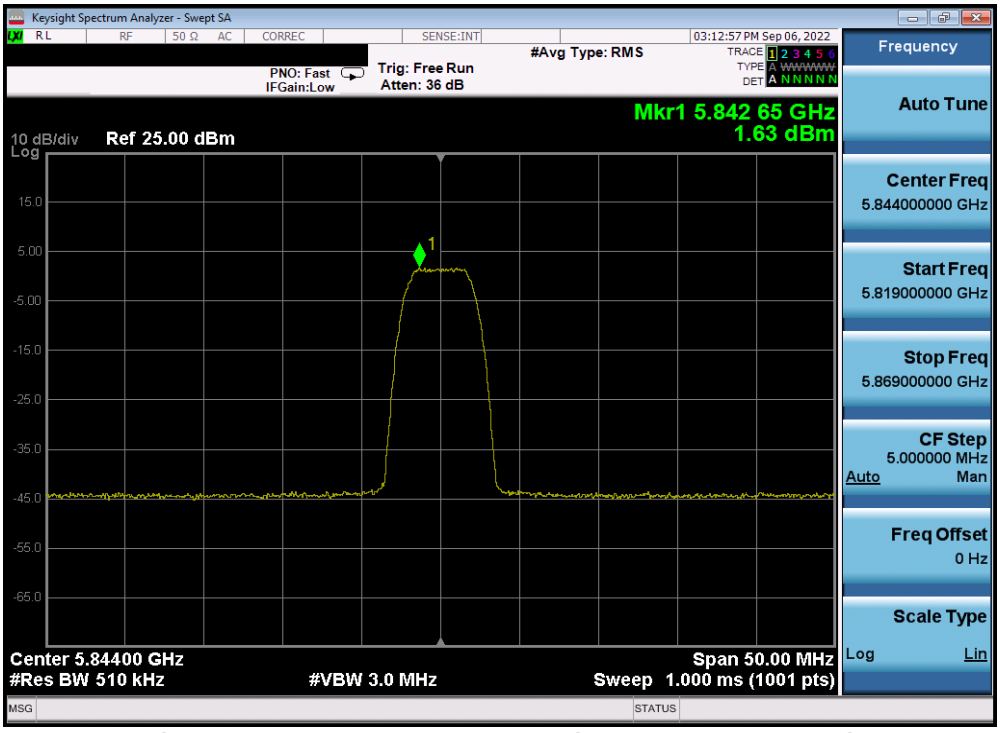
Plot 7-105. PSD TxBF Antenna 5b (HDR8, ePA, 5789MHz)



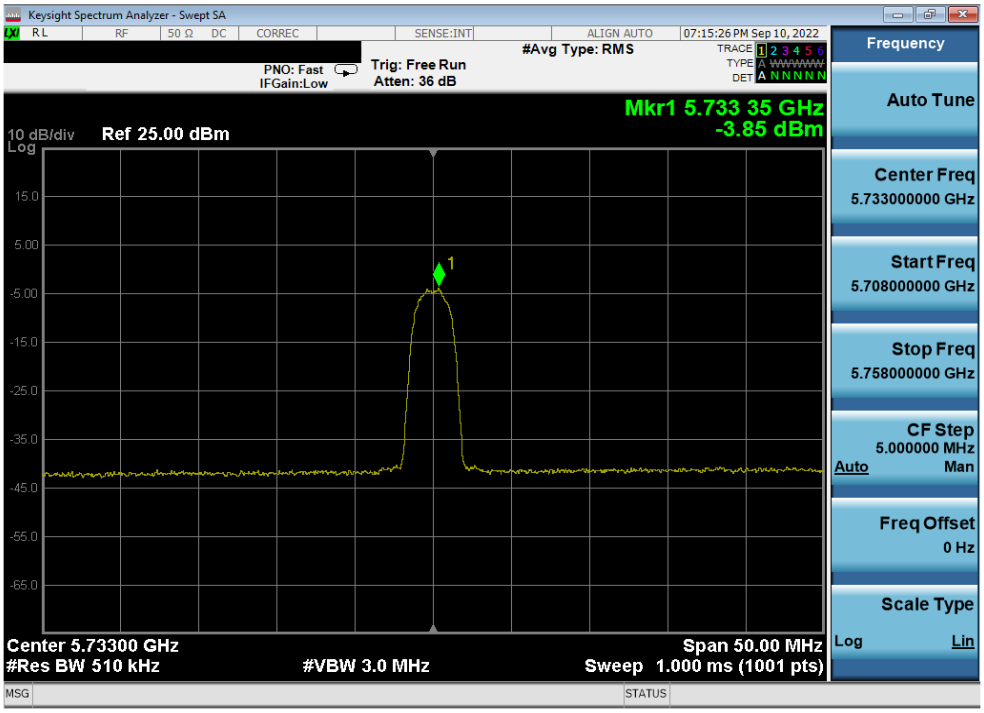
Plot 7-106. PSD TxBF Antenna 4a (HDR8, ePA, 5789MHz)



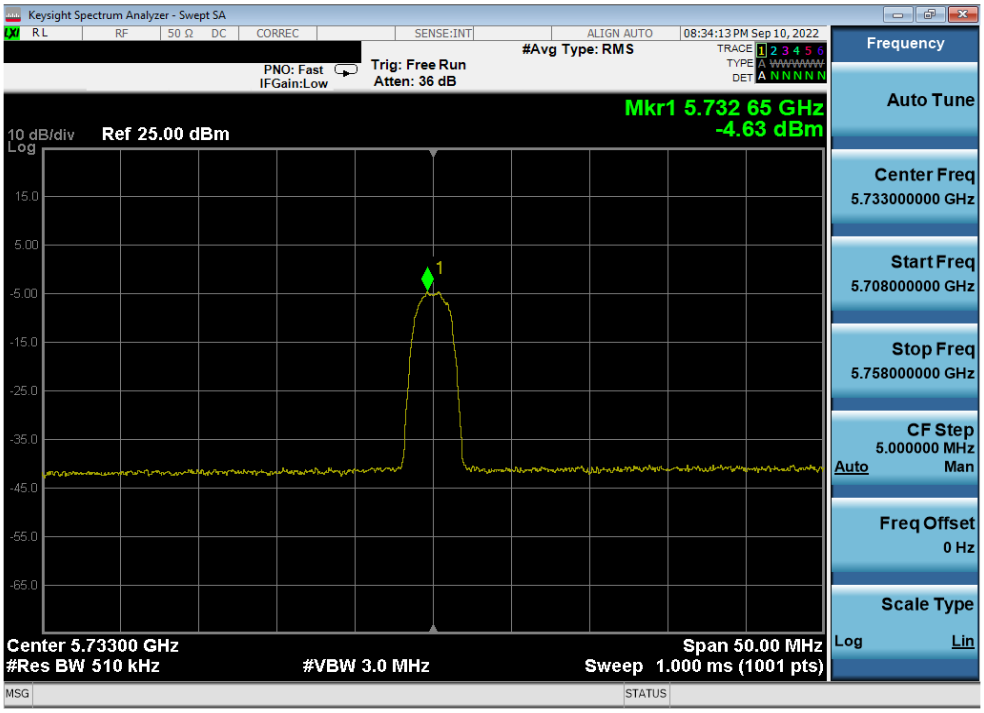
Plot 7-107. PSD TxBF Antenna 5b (HDR8, ePA, 5844MHz)



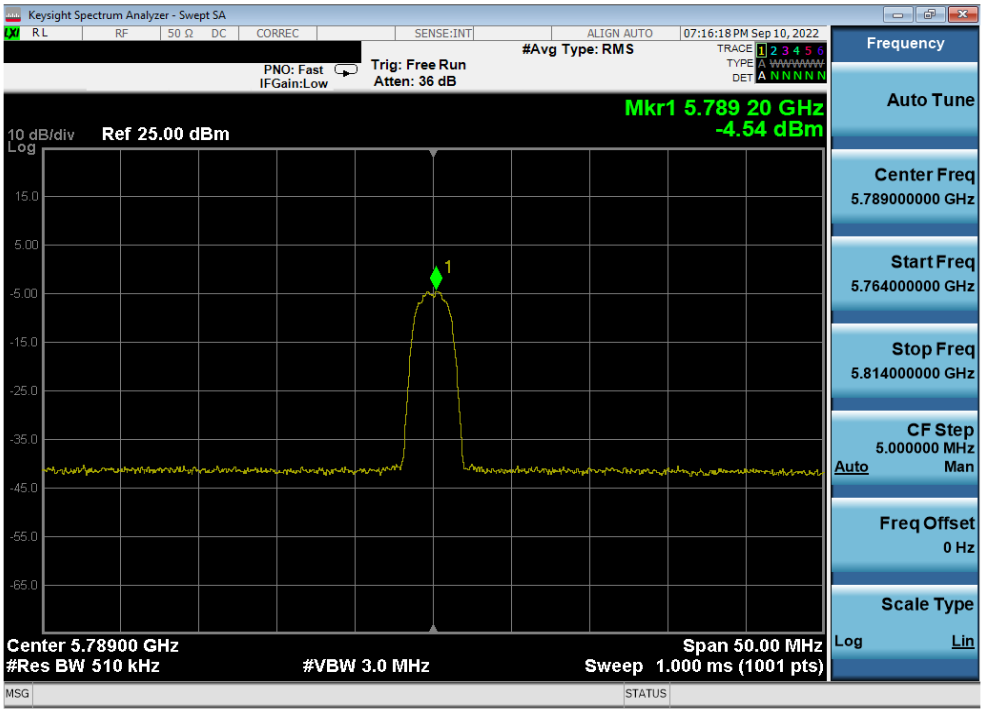
Plot 7-108. PSD TxBF Antenna 4a (HDR8, ePA, 5844MHz)



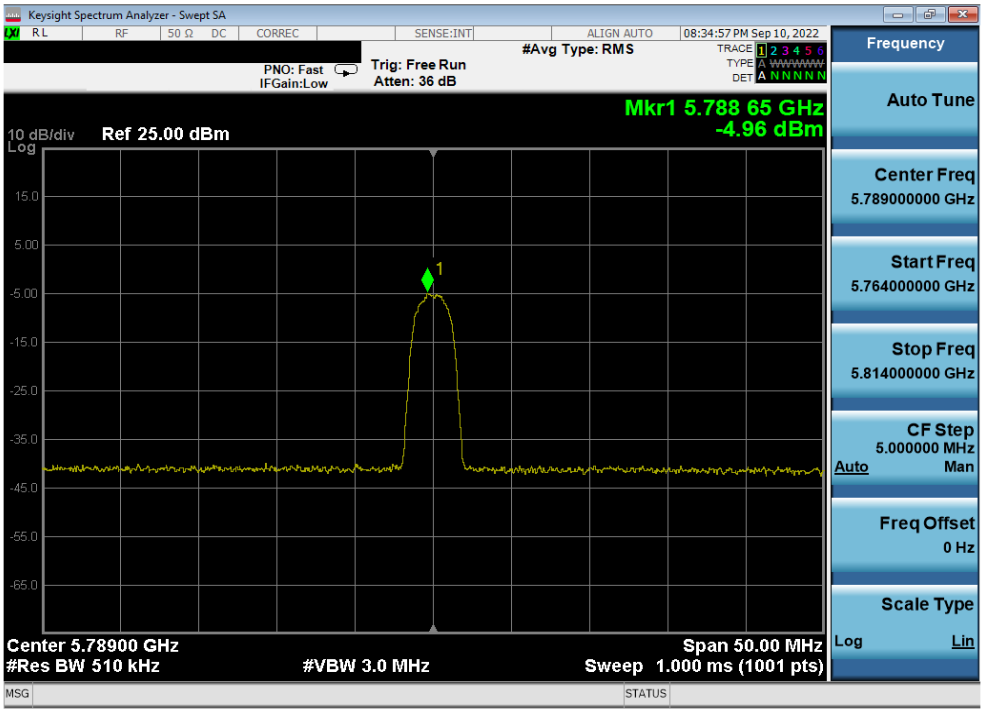
Plot 7-109. PSD TxBF Antenna 5b (HDR4, iPA, 5733MHz)



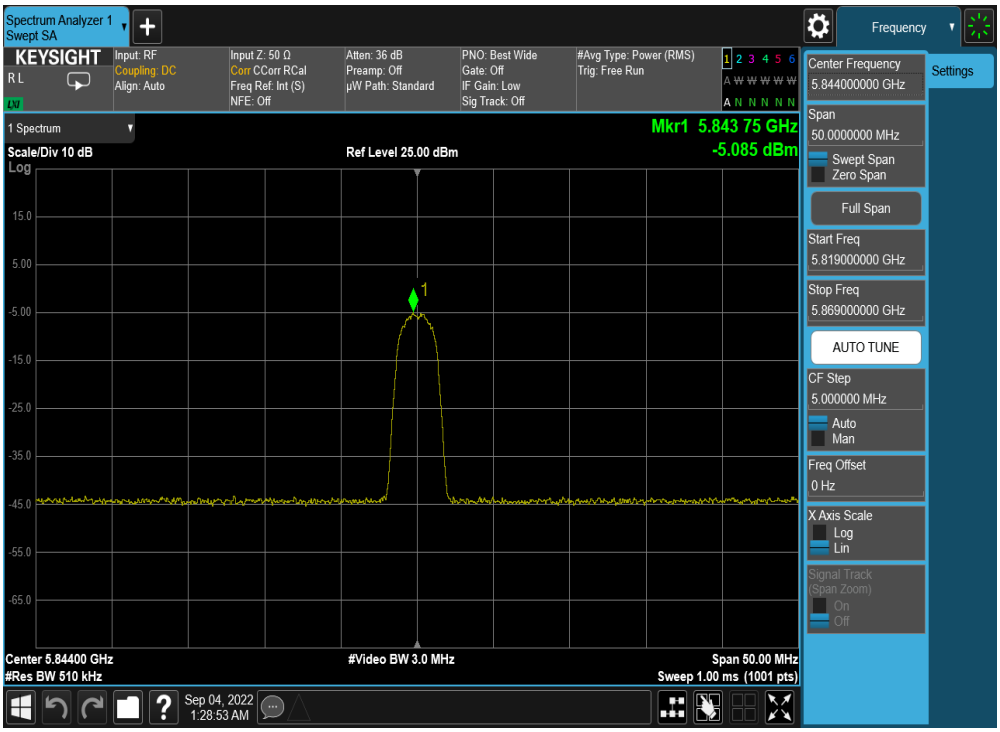
Plot 7-110. PSD TxBF Antenna 4a (HDR4, iPA, 5733MHz)



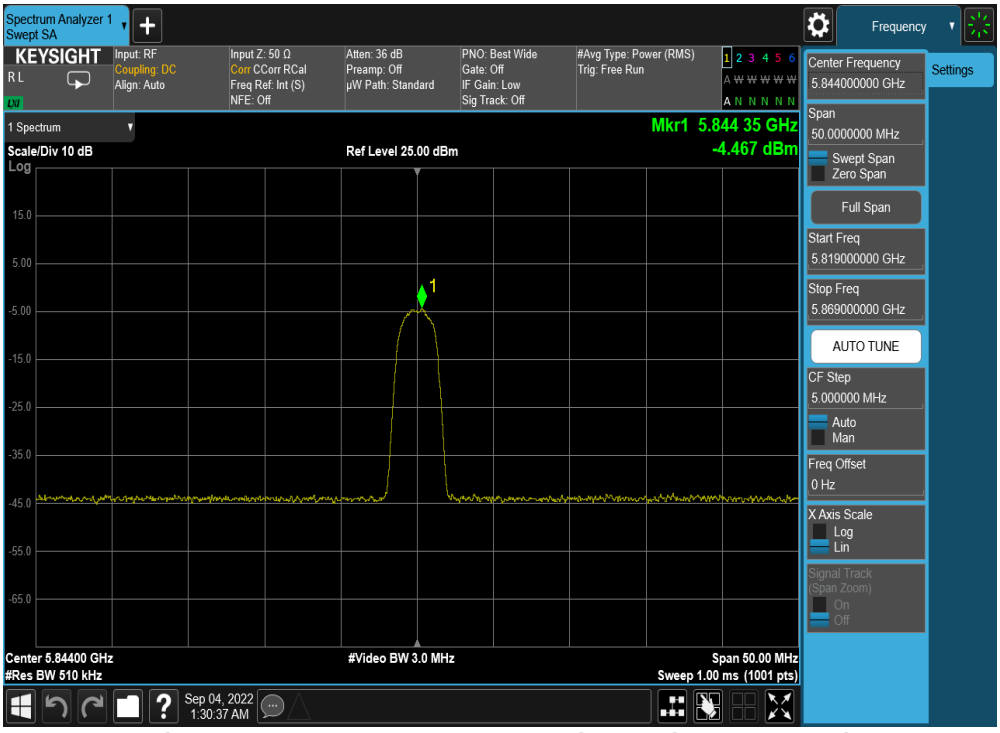
Plot 7-111. PSD TxBF Antenna 5b (HDR4, iPA, 5789MHz)



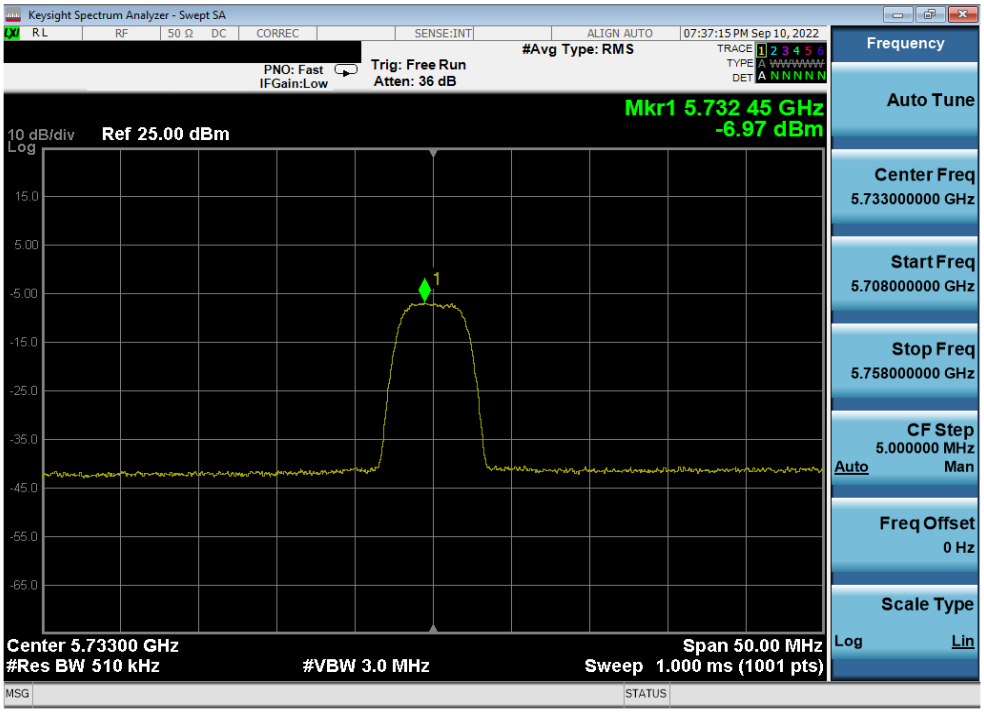
Plot 7-112. PSD TxBF Antenna 4a (HDR4, iPA, 5789MHz)



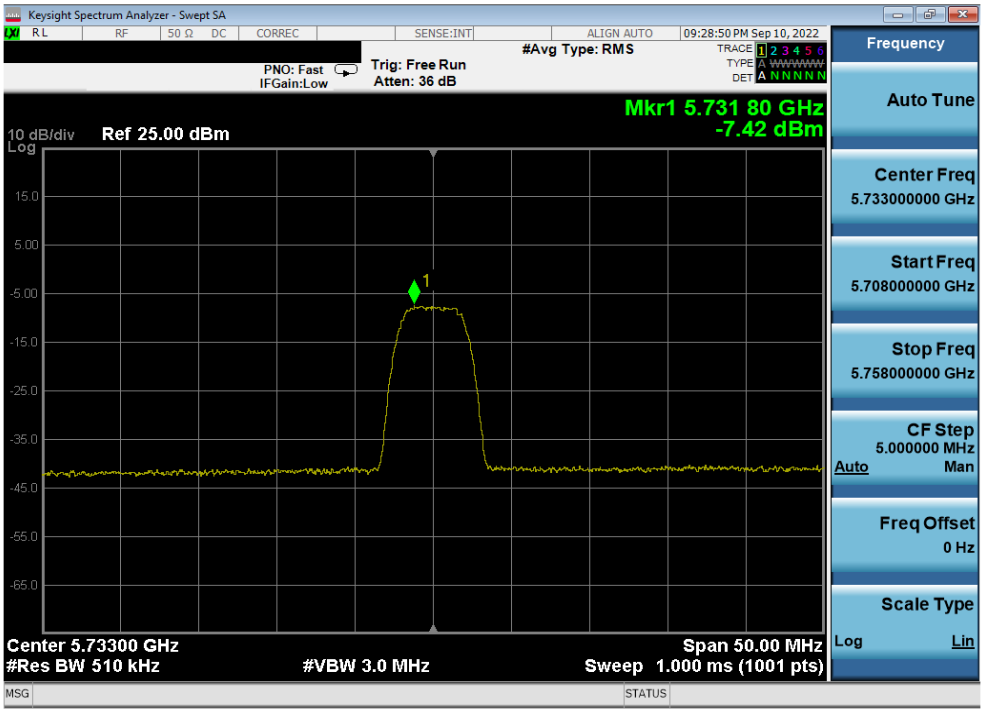
Plot 7-113. PSD TxBF Antenna 5b (HDR4, iPA, 5844MHz)



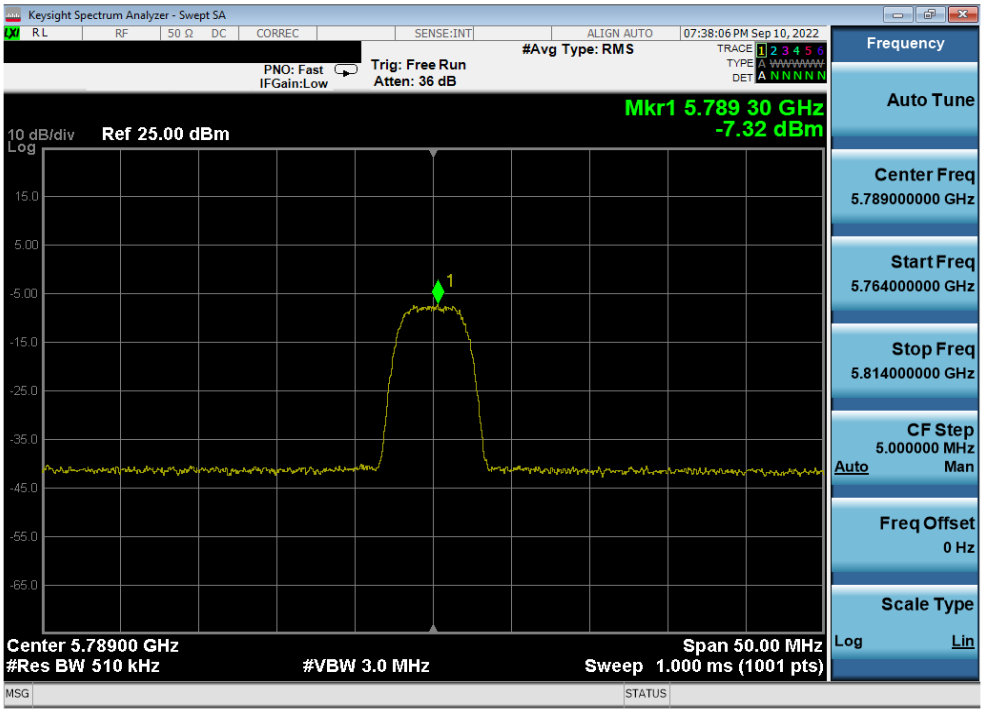
Plot 7-114. PSD TxBF Antenna 4a (HDR4, iPA, 5844MHz)



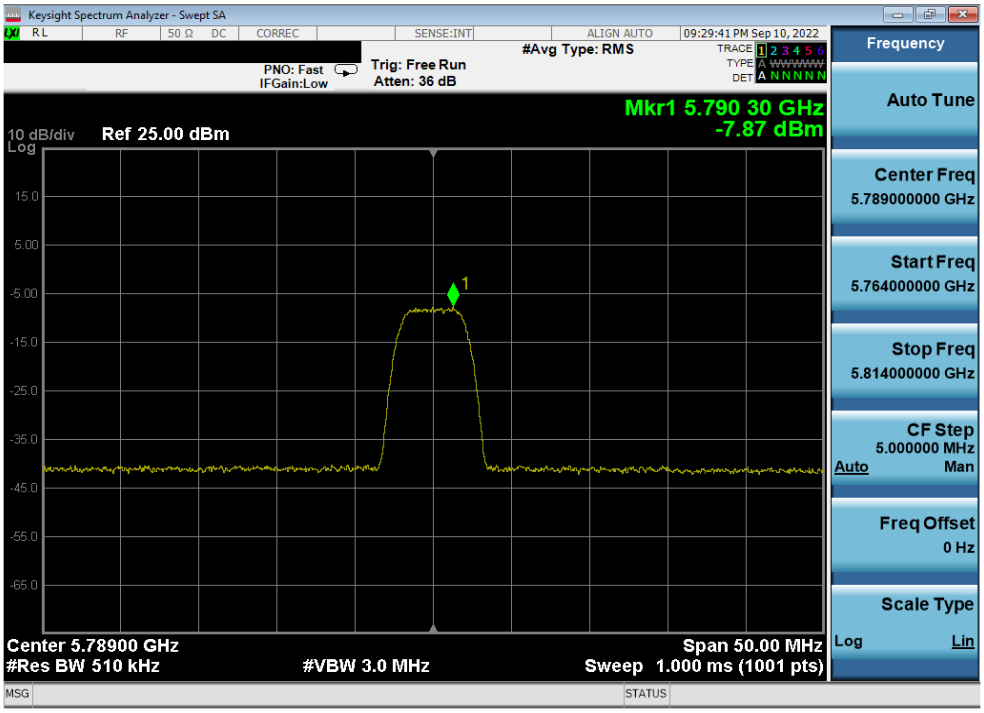
Plot 7-115. PSD TxBF Antenna 5b (HDR8, iPA, 5733MHz)



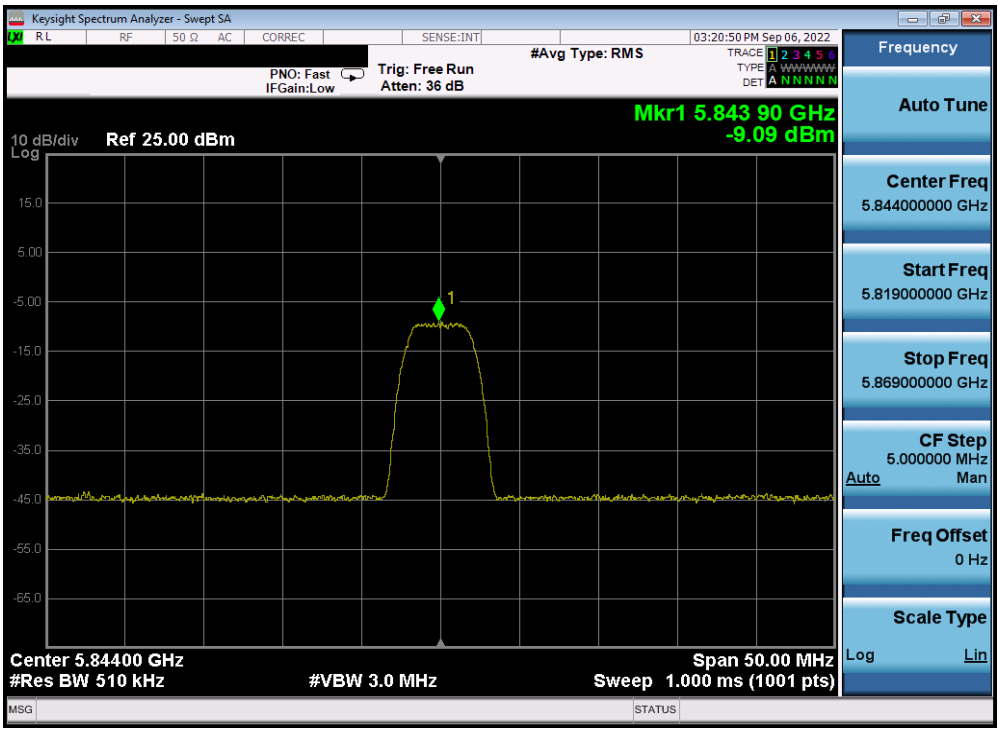
Plot 7-116. PSD TxBF Antenna 4a (HDR8, iPA, 5733MHz)



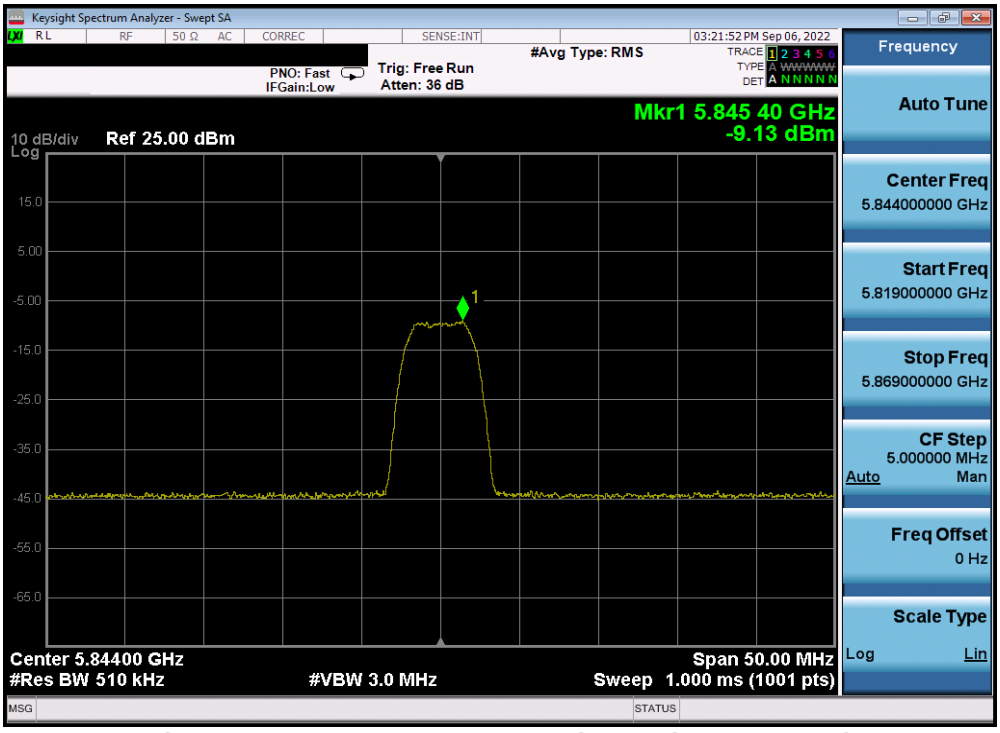
Plot 7-117. PSD TxBF Antenna 5b (HDR8, iPA, 5789MHz)



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



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



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

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 dBm + 5.89 dBm) = (3.296 mW + 3.882 mW) = 7.178 mW = 8.56 dBm

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 [µV/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

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 ≥ 2 x span/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.

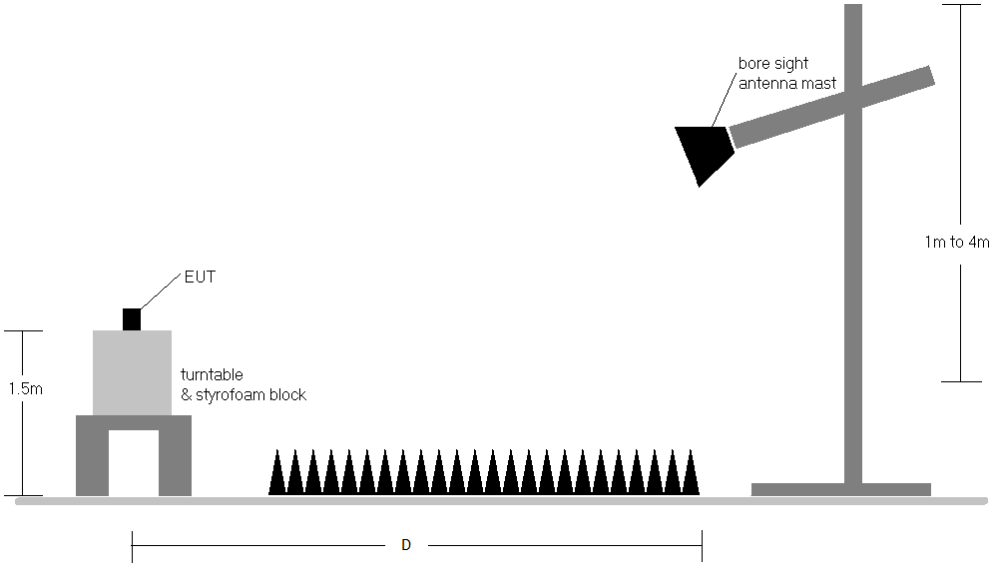


Figure 7-5. Test Instrument & Measurement Setup

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 dBμV/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 68.2dBμV/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 $_{[dB\mu V/m]}$ = 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 $_{[dB\mu V/m]}$ – Limit $_{[dB\mu V/m]}$

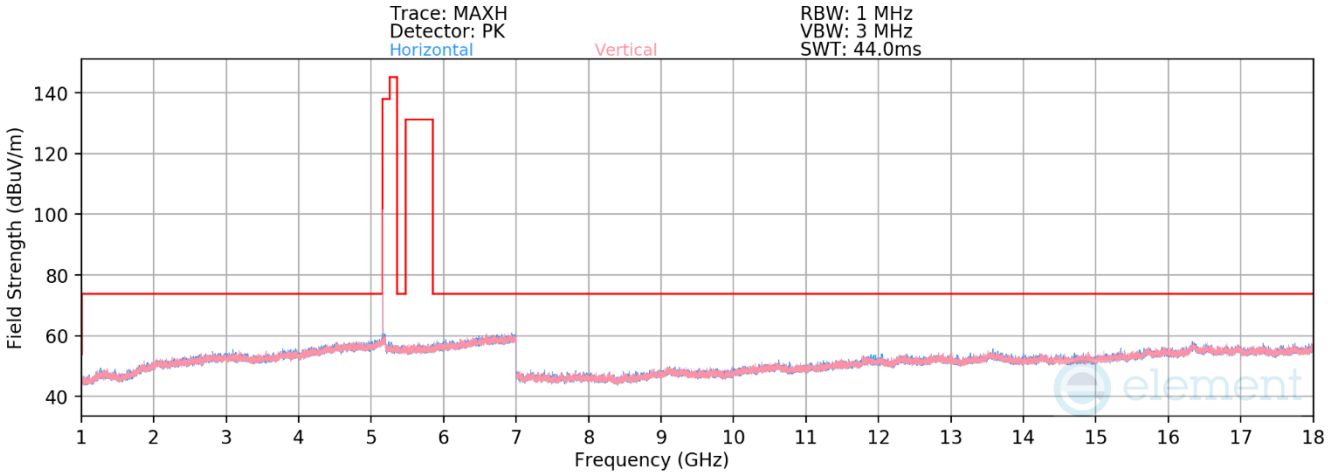
Radiated Band Edge Measurement Offset

- 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

7.6.1 Antenna 5b Radiated Spurious Emissions

§15.407(b) §15.205 §15.209

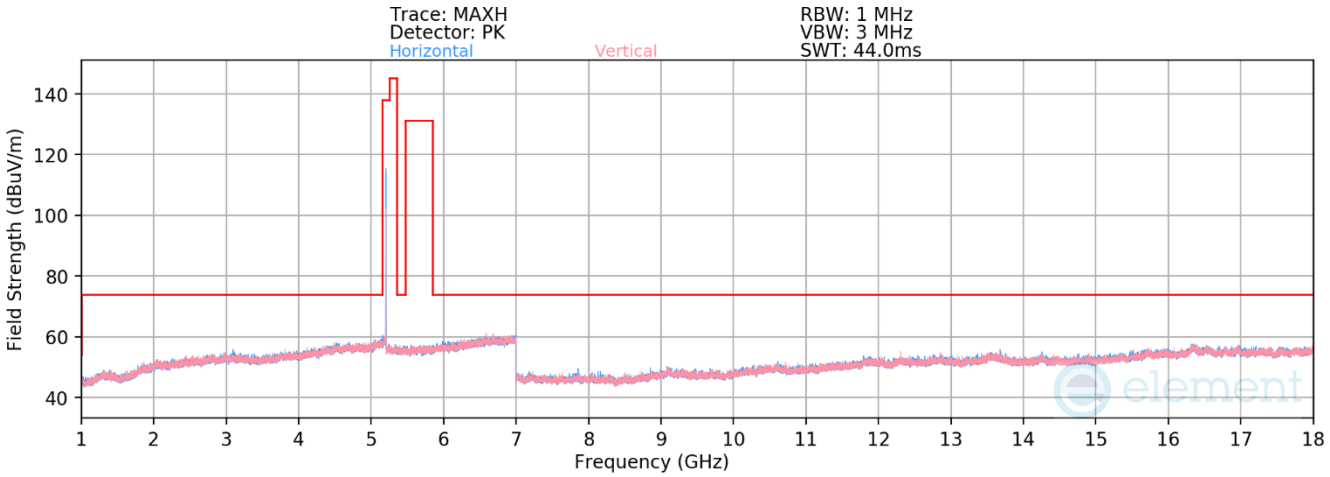


Plot 7-121. Radiated Spurious Emissions 1-18GHz Antenna 5b (HDR4, ePA – 5162MHz)

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 [dBµV/m]	Limit [dBµV/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

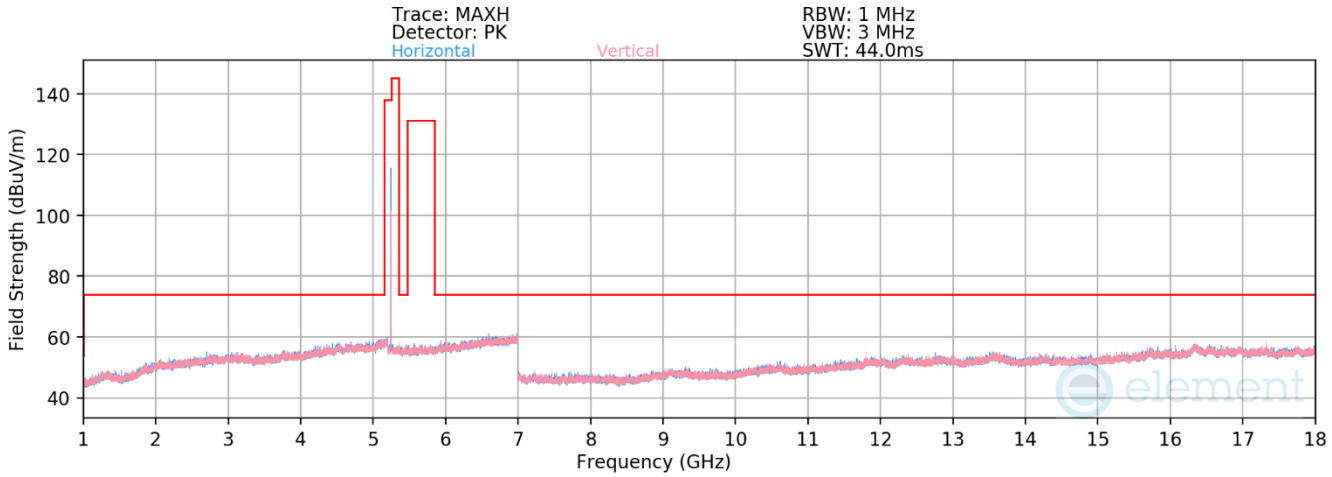


Plot 7-122. Radiated Spurious Emissions 1-18GHz Antenna 5b (HDR4– 5204MHz)

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 [dBµV/m]	Limit [dBµV/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

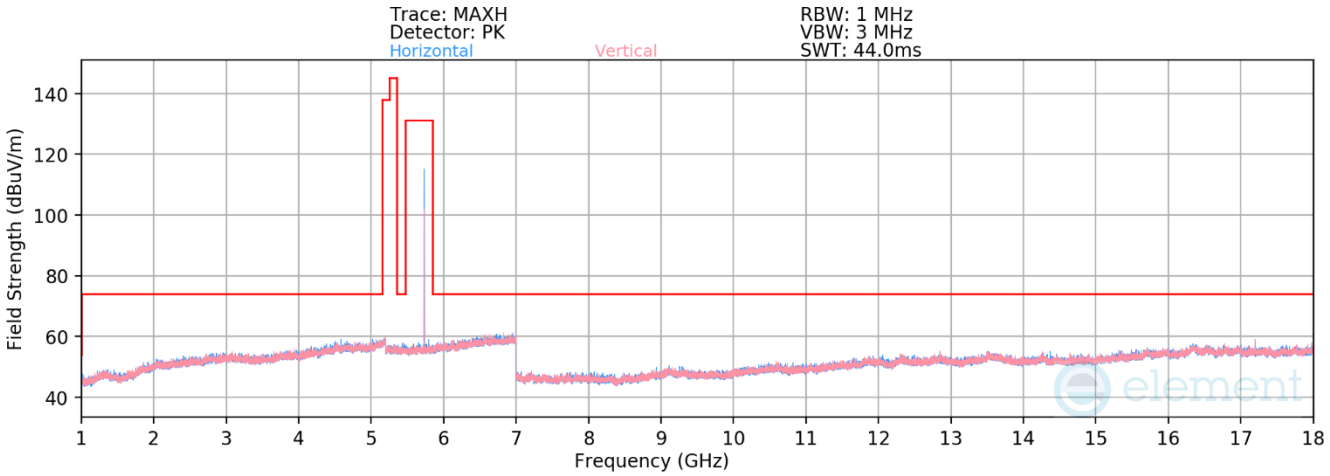


Plot 7-123. Radiated Spurious Emissions 1-18GHz Antenna 5b (HDR4 – 5245MHz)

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

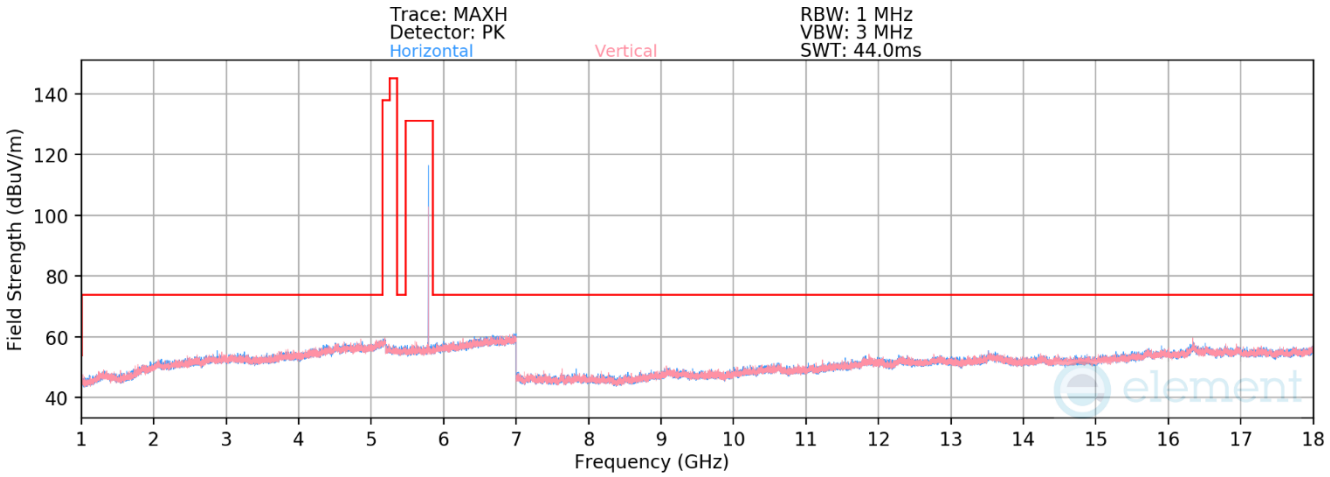


Plot 7-124. Radiated Spurious Emissions 1-18GHz Antenna 5b (HDR4 – 5733MHz)

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

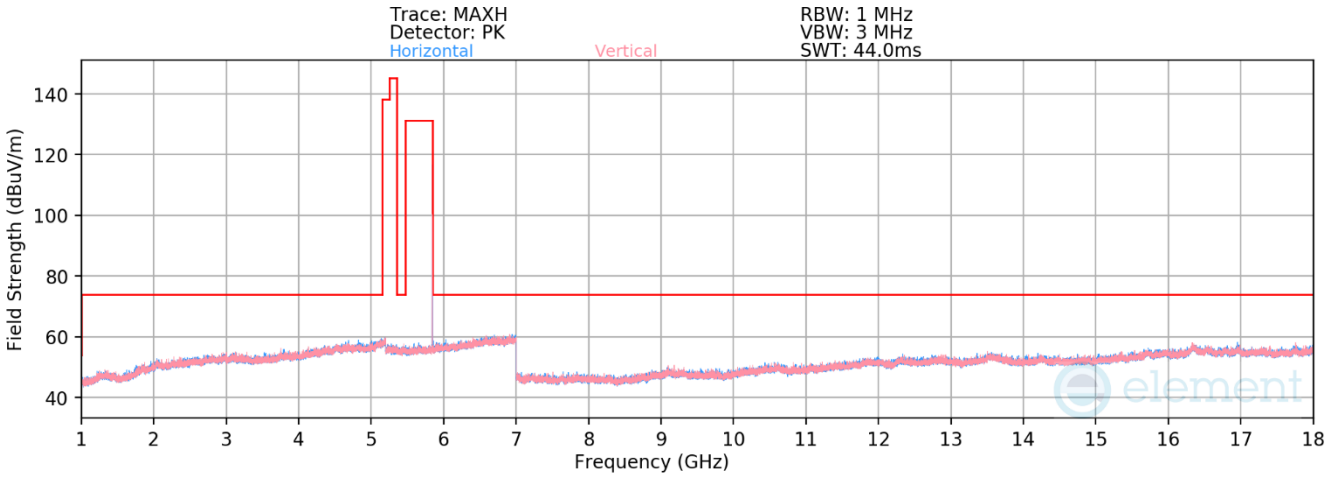


Plot 7-125. Radiated Spurious Emissions 1-18GHz Antenna 5b (HDR4 – 5789MHz)

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



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

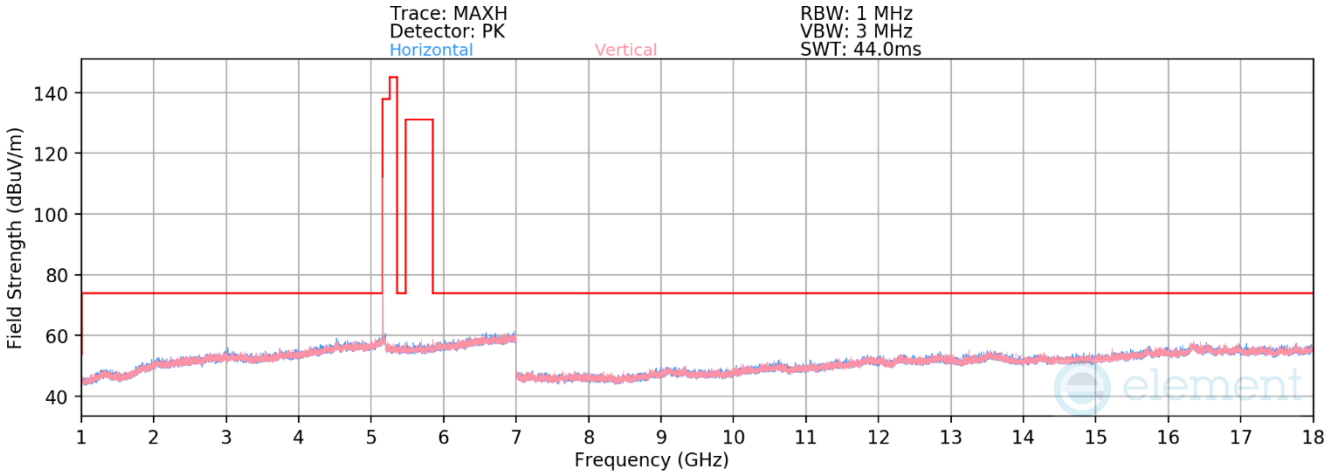
Mode:	HDR4
Data Rate:	4Mbps
Distance of Measurements:	3 Meters
Operating Frequency:	5844MHz

	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

7.6.2 Antenna 4a Radiated Spurious Emissions

§15.407(b) §15.205 §15.209

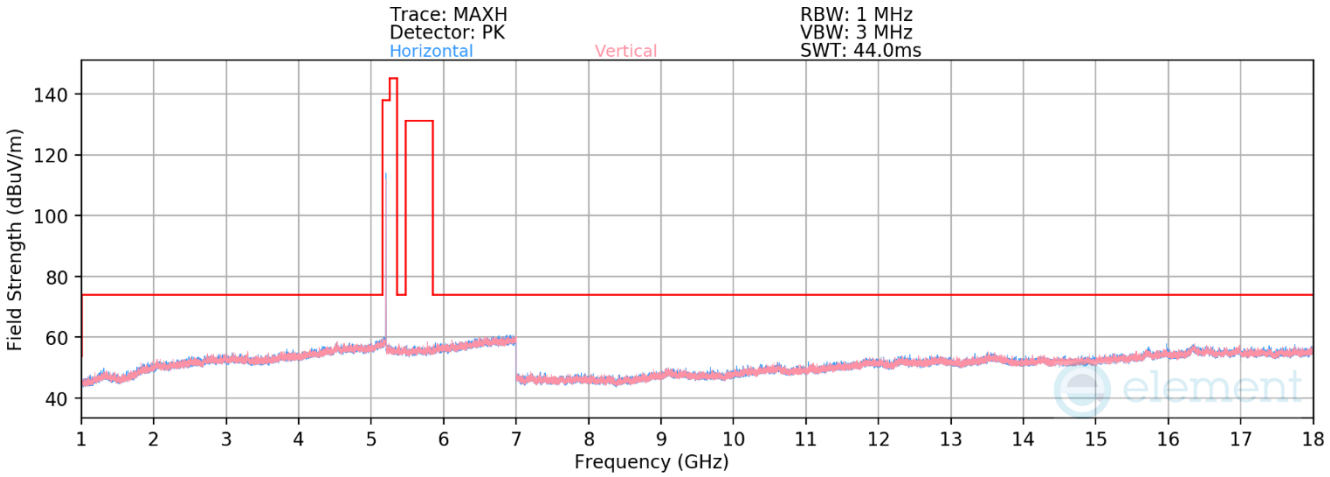


Plot 7-127. Radiated Spurious Emissions 1-18GHz Antenna 4a (HDR4, ePA – 5162MHz)

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 [dBµV/m]	Limit [dBµV/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

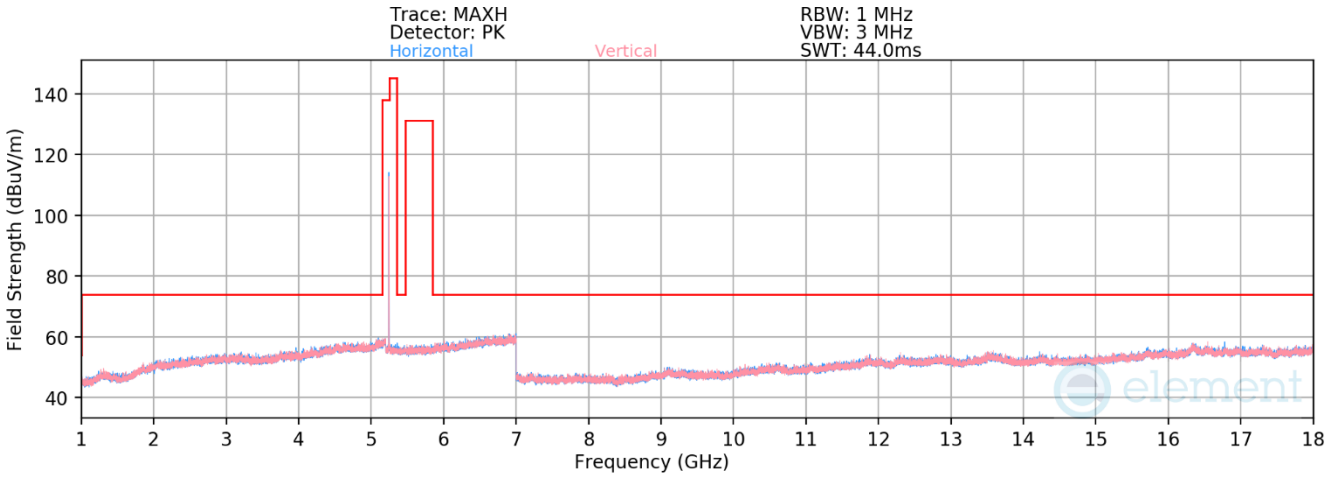


Plot 7-128. Radiated Spurious Emissions 1-18GHz Antenna 4a (HDR4– 5204MHz)

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 [dBµV/m]	Limit [dBµV/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

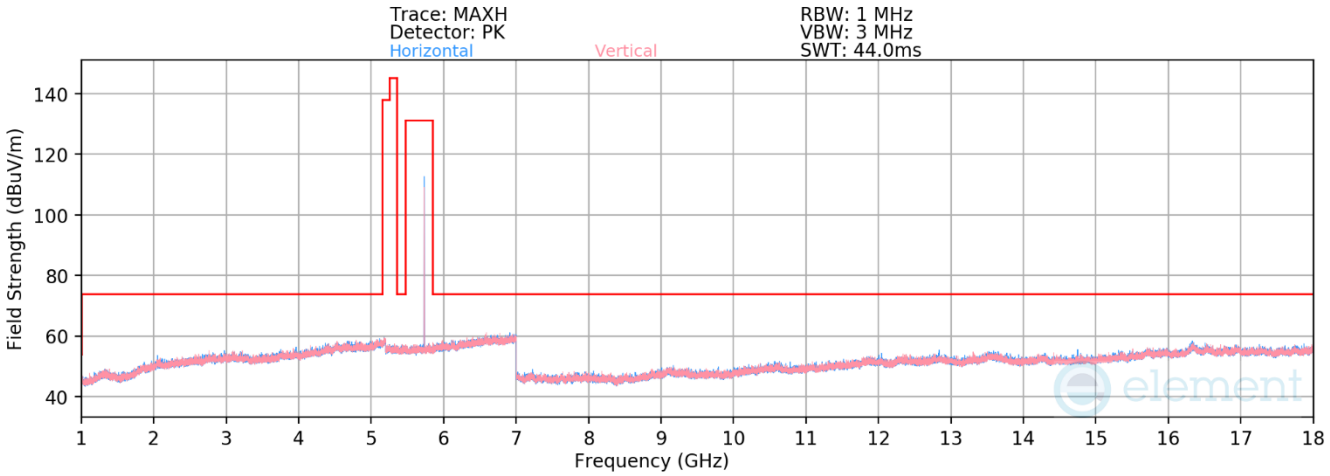


Plot 7-129. Radiated Spurious Emissions 1-18GHz Antenna 4a (HDR4 – 5245MHz)

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 [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	10490.00	Peak	H	-	-	-71.37	14.98	50.61	68.20	-17.59
*	15735.00	Average	H	-	-	-84.79	21.37	43.58	53.98	-10.40
*	15735.00	Peak	H	-	-	-73.11	21.37	55.26	73.98	-18.72

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

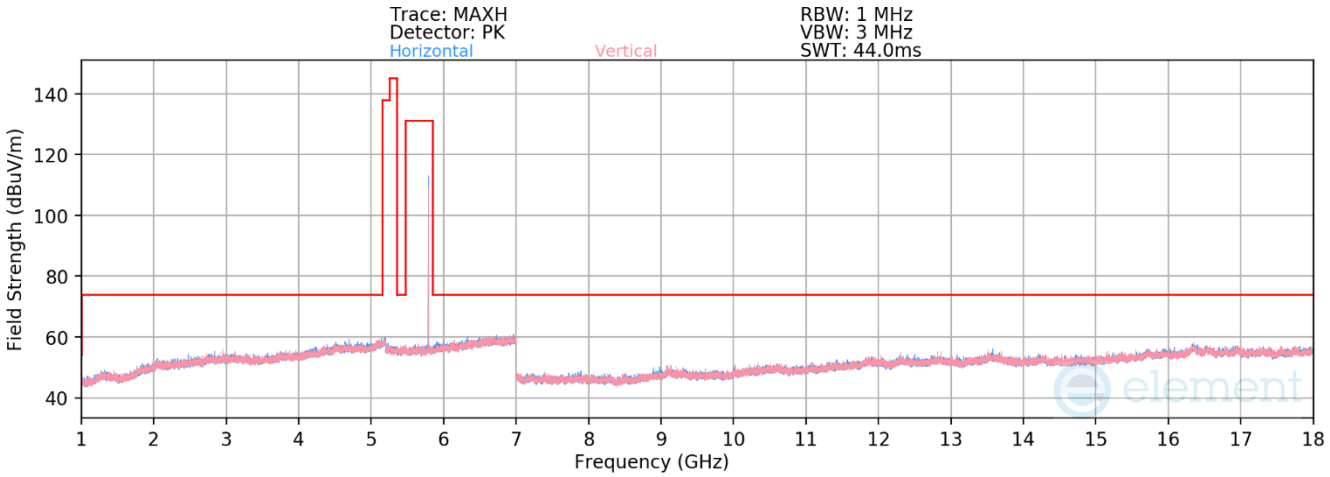


Plot 7-130. Radiated Spurious Emissions 1-18GHz Antenna 4a (HDR4 – 5733MHz)

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

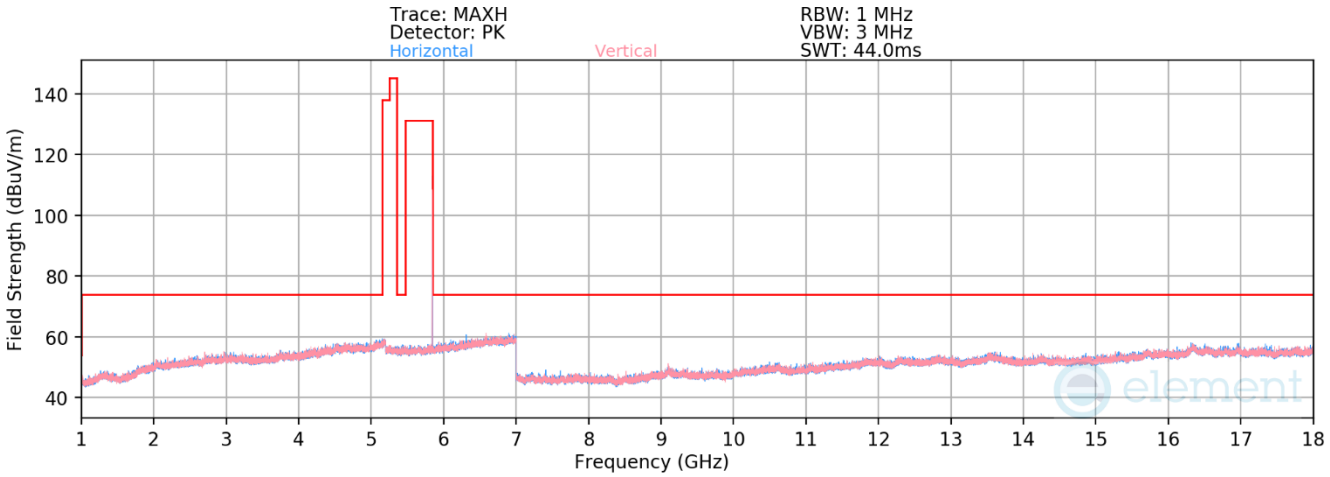


Plot 7-131. Radiated Spurious Emissions 1-18GHz Antenna 4a (HDR4 – 5789MHz)

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



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

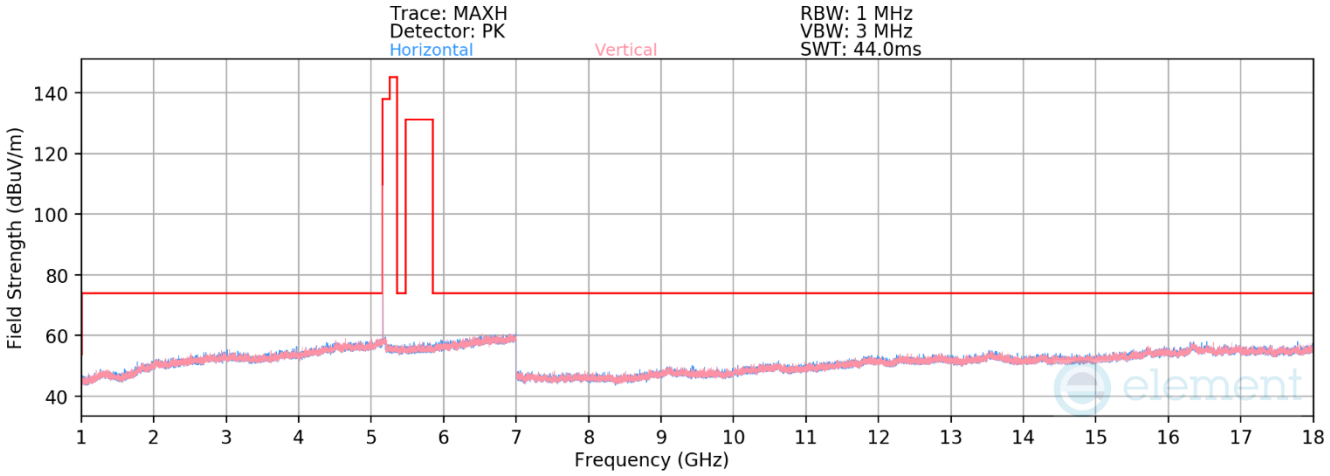
Mode:	HDR4
Data Rate:	4Mbps
Distance of Measurements:	3 Meters
Operating Frequency:	5844MHz

	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

7.6.3 TxBF Radiated Spurious Emissions

§15.407(b) §15.205 §15.209

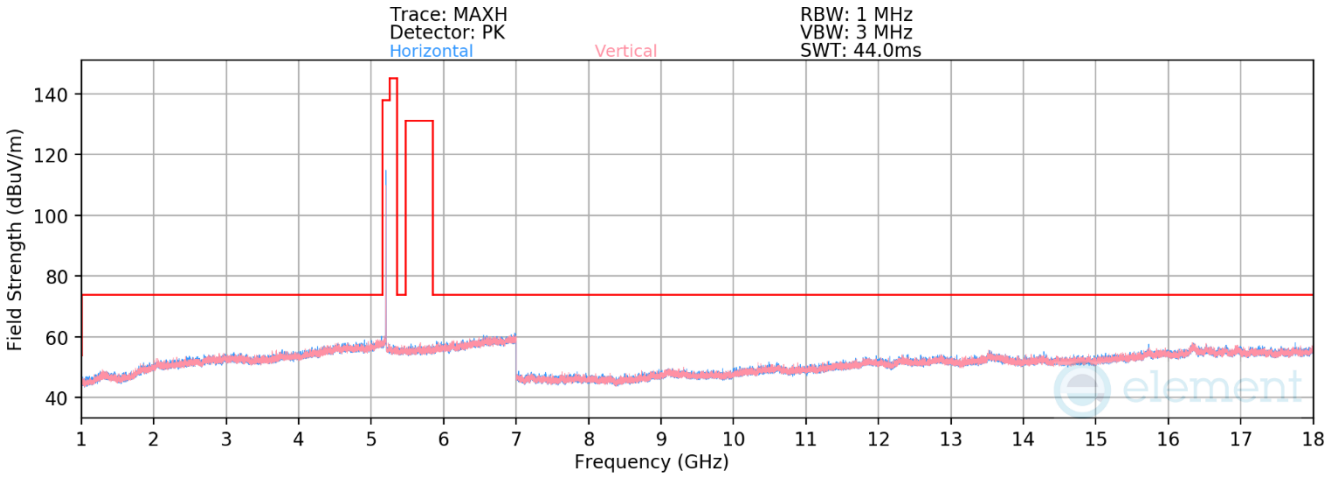


Plot 7-133. Radiated Spurious Emissions 1-18GHz TxBF (HDR4, ePA – 5162MHz)

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 [dBµV/m]	Limit [dBµV/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

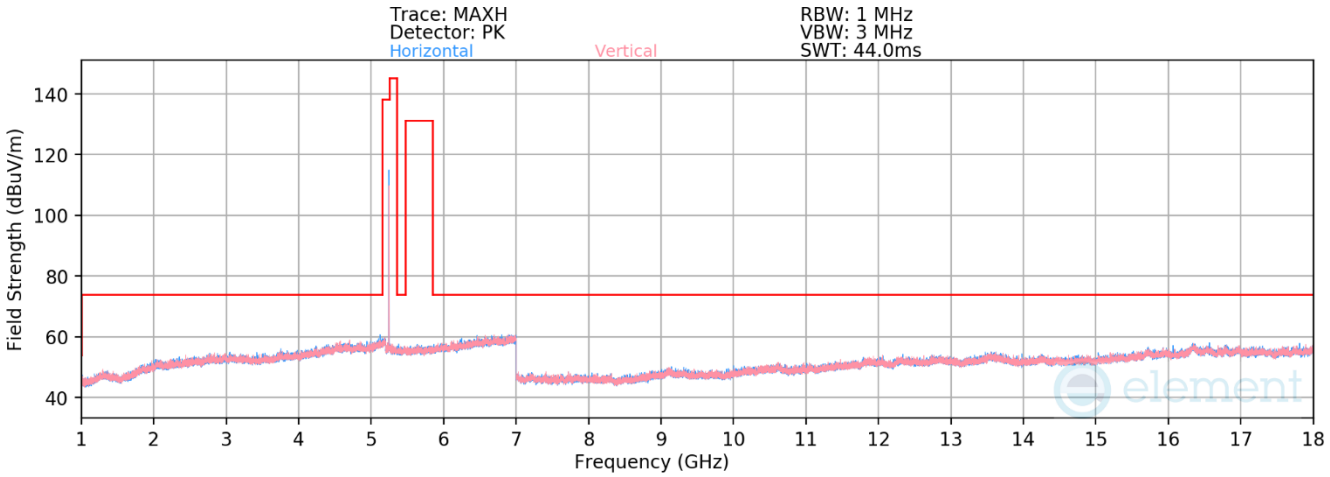


Plot 7-134. Radiated Spurious Emissions 1-18GHz TxBF (HDR4– 5204MHz)

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

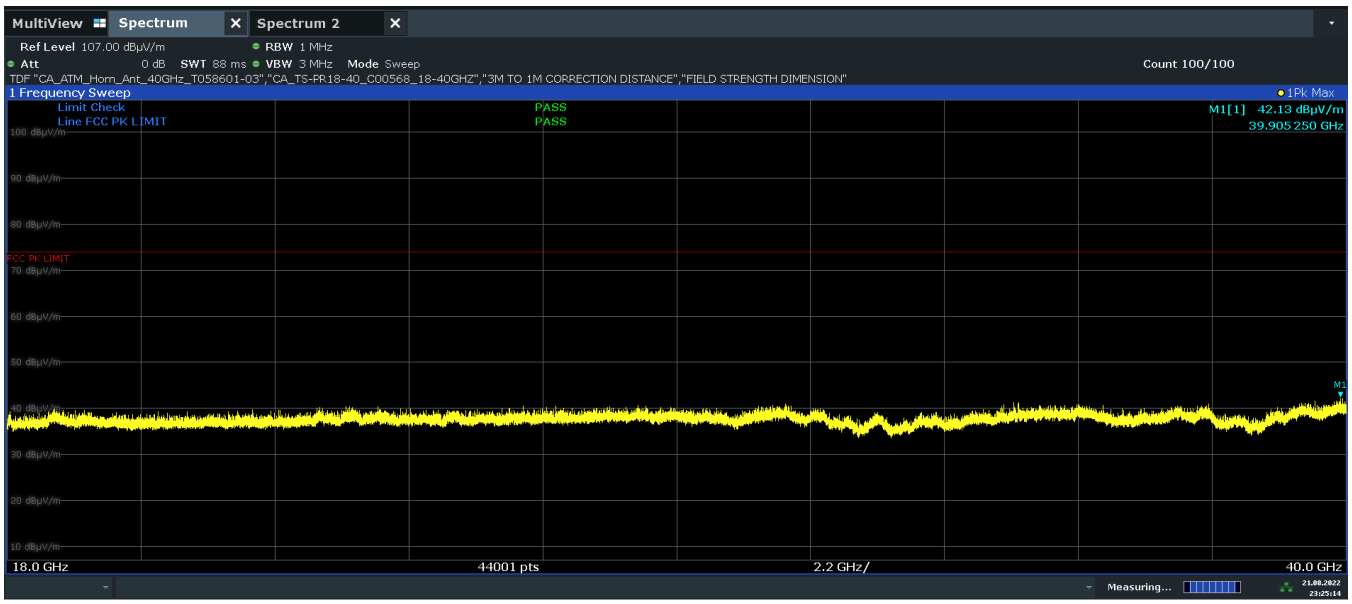


Plot 7-135. Radiated Spurious Emissions 1-18GHz TxBF (HDR4 – 5245MHz)

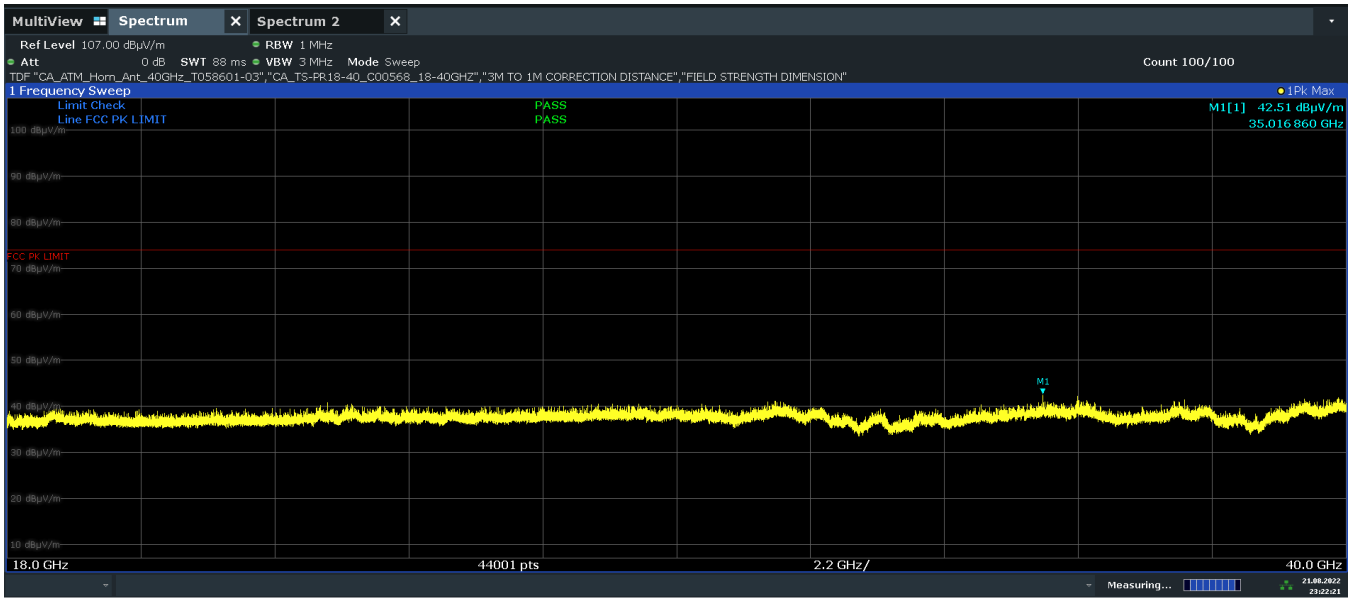
Mode:	HDR4
Data Rate:	4Mbps
Distance of Measurements:	3 Meters
Operating Frequency:	5245MHz

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

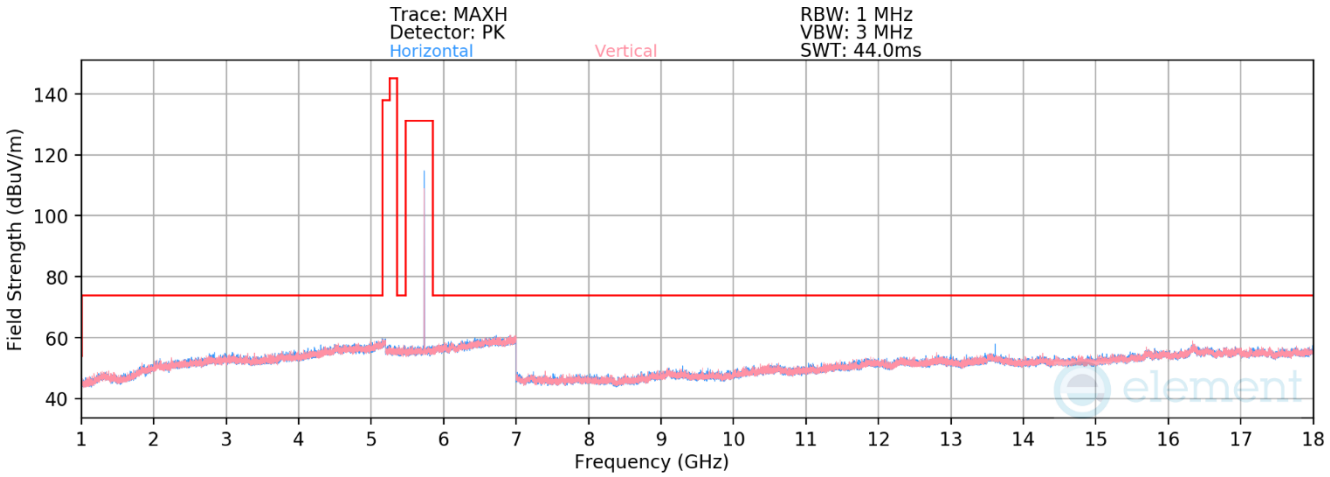
Table 7-30. Radiated Spurious Emissions Measurements TxBF



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)

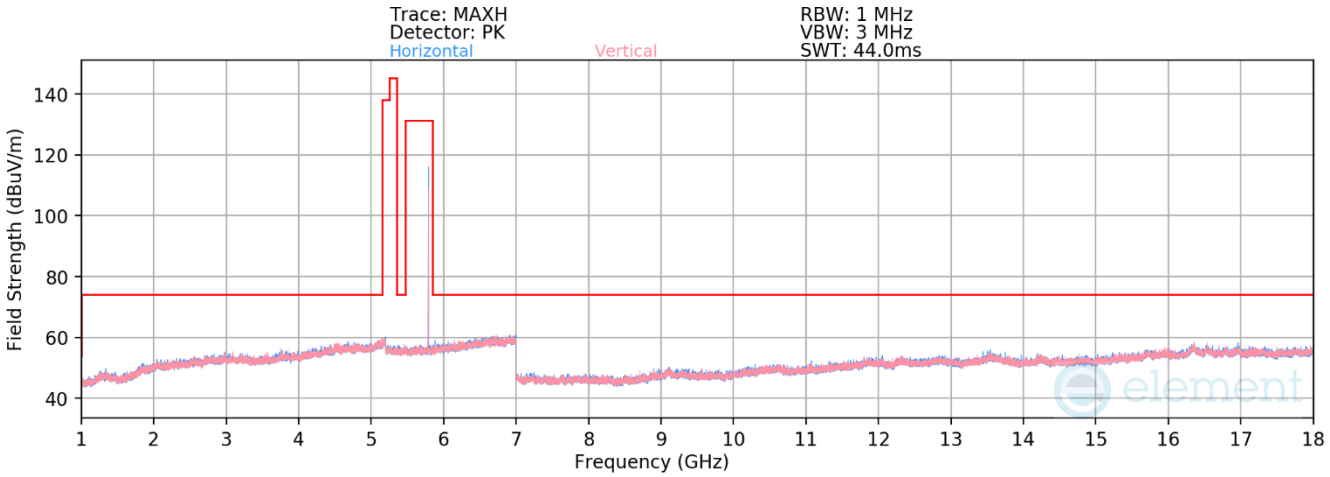


Plot 7-138. Radiated Spurious Emissions 1-18GHz TxBF (HDR4 – 5733MHz)

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

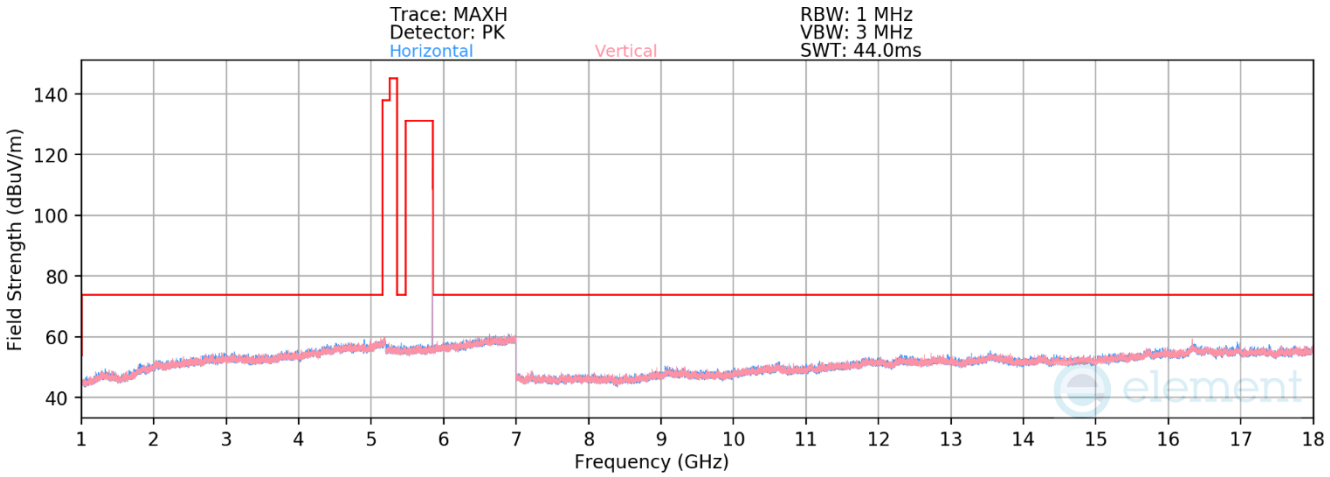


Plot 7-139. Radiated Spurious Emissions 1-18GHz TxBF (HDR4 – 5789MHz)

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 [dBµV/m]	Limit [dBµV/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

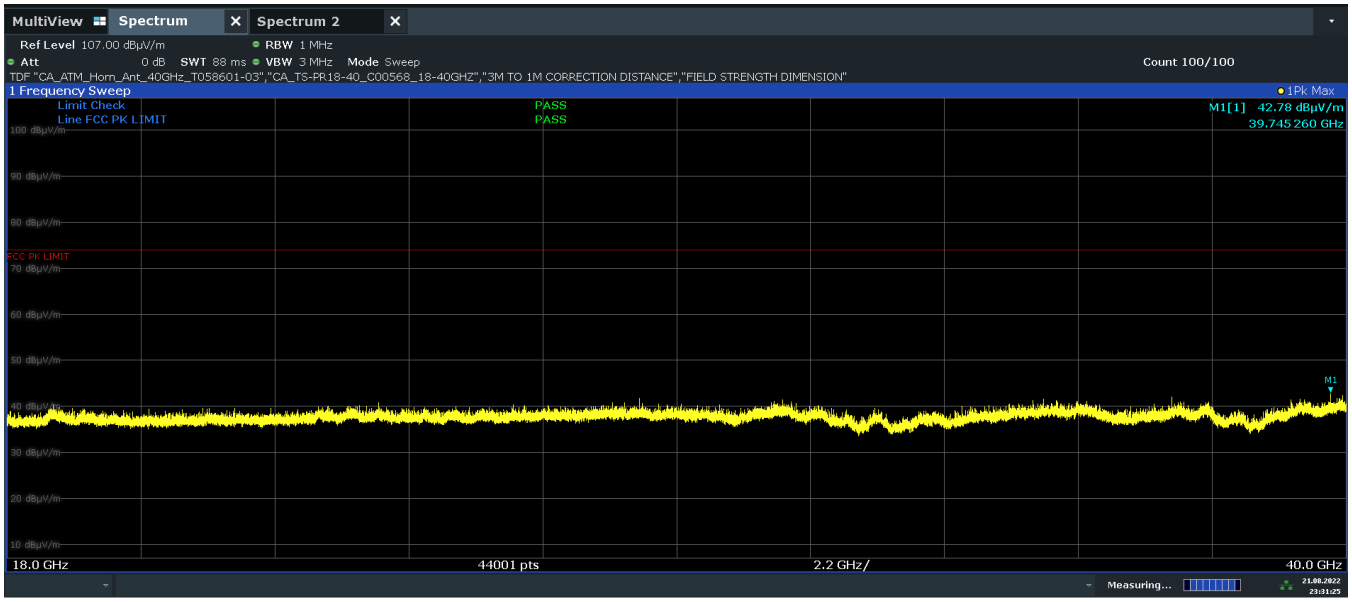


Plot 7-140. Radiated Spurious Emissions 1-18GHz TxBF (HDR4 – 5844MHz)

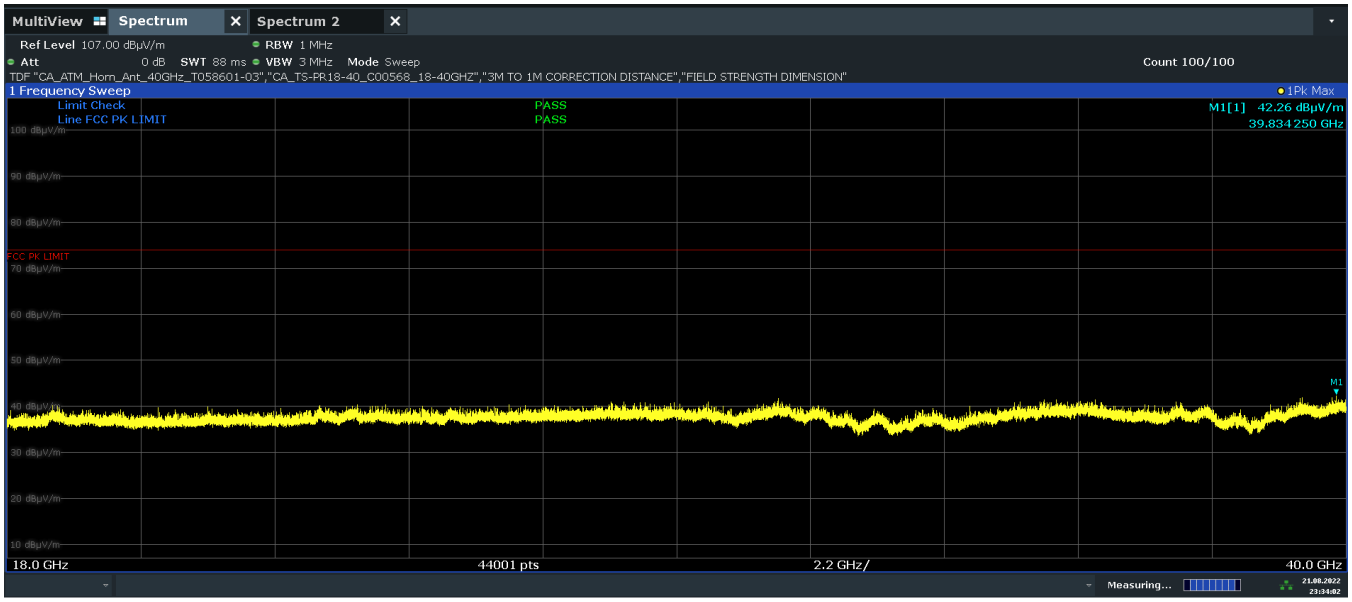
Mode:	HDR4
Data Rate:	4Mbps
Distance of Measurements:	3 Meters
Operating Frequency:	5844MHz

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



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)

7.6.4 Radiated Band Edge Measurements

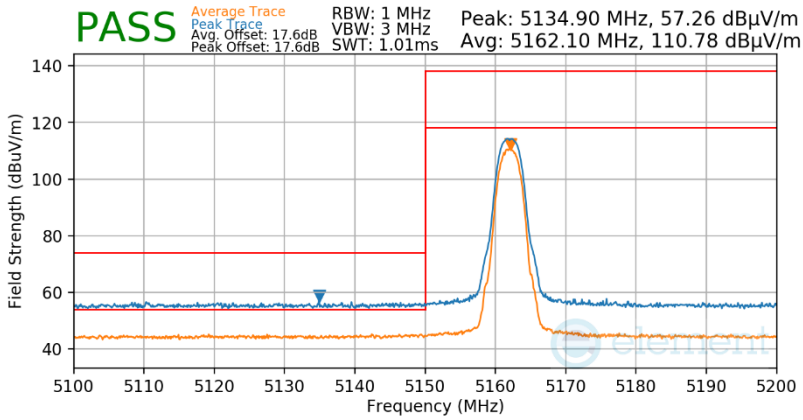
§15.407(b.1) §15.205 §15.209

Antenna 5b

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

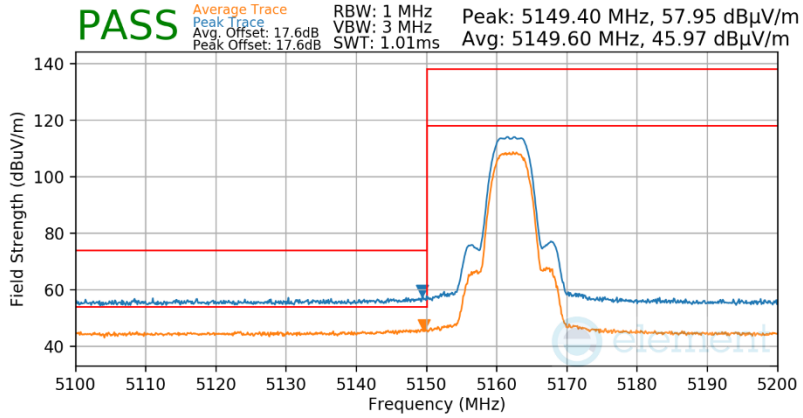
Offset (dB) = (Antenna Factor + Cable Loss + Attenuator) – Preamplifier Gain

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



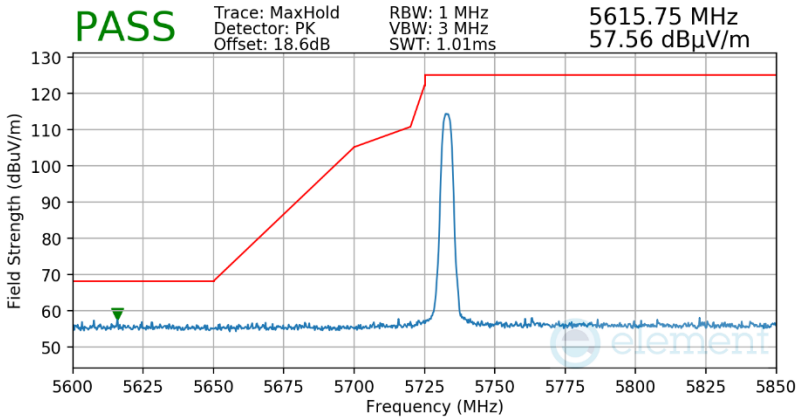
Plot 7-143. Radiated Lower Band Edge Measurement

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



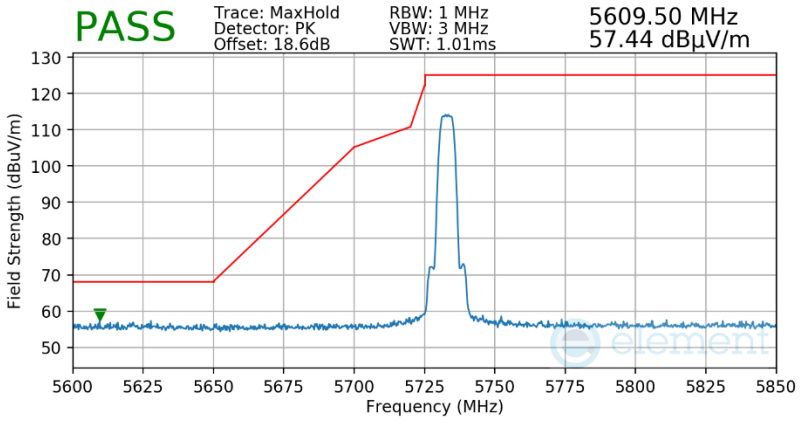
Plot 7-144. Radiated Lower Band Edge Measurement

Mode:	HDR4
Power Scheme	ePA
Measurement Distance:	3 Meters
Operating Frequency:	5733MHz



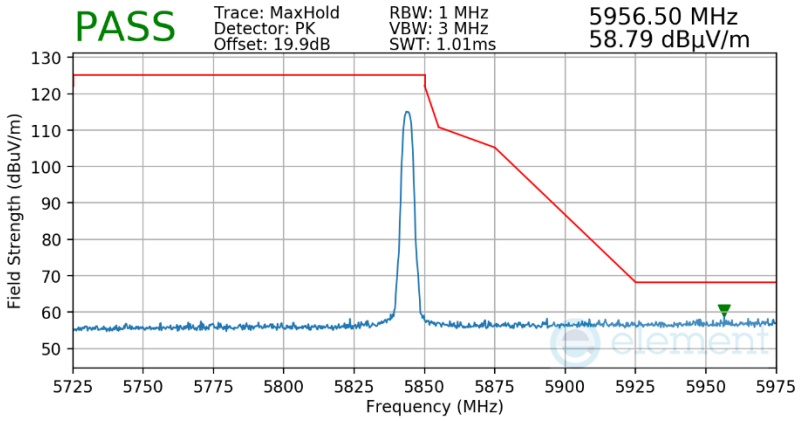
Plot 7-145. Radiated Lower Band Edge Measurement

Mode:	HDR8
Power Scheme	ePA
Measurement Distance:	3 Meters
Operating Frequency:	5733MHz



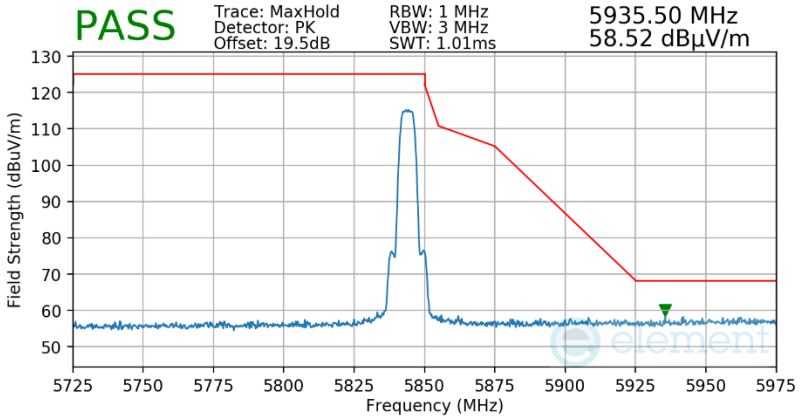
Plot 7-146. Radiated Lower Band Edge Measurement

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



Plot 7-147. Radiated Upper Band Edge Measurement

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



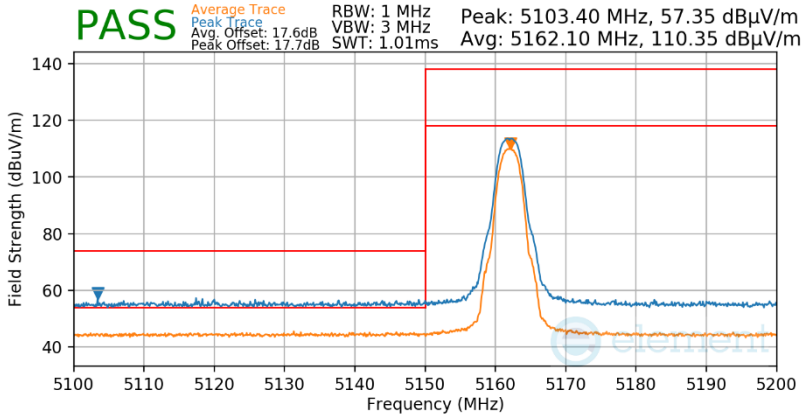
Plot 7-148. Radiated Upper Band Edge Measurement

Antenna 4a

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

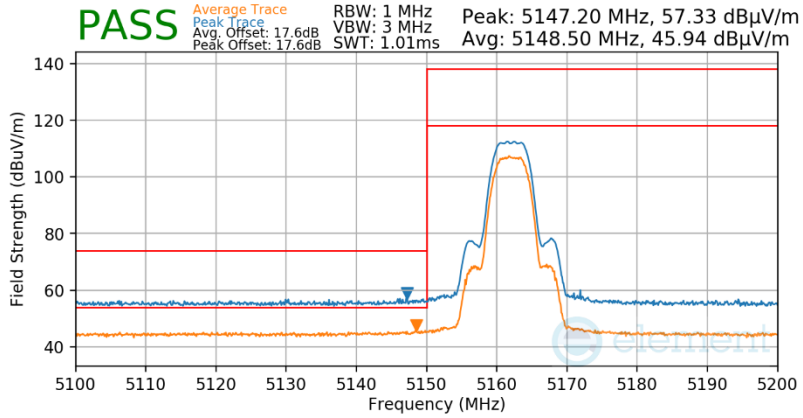
Offset (dB) = (Antenna Factor + Cable Loss + Attenuator) – Preamplifier Gain

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