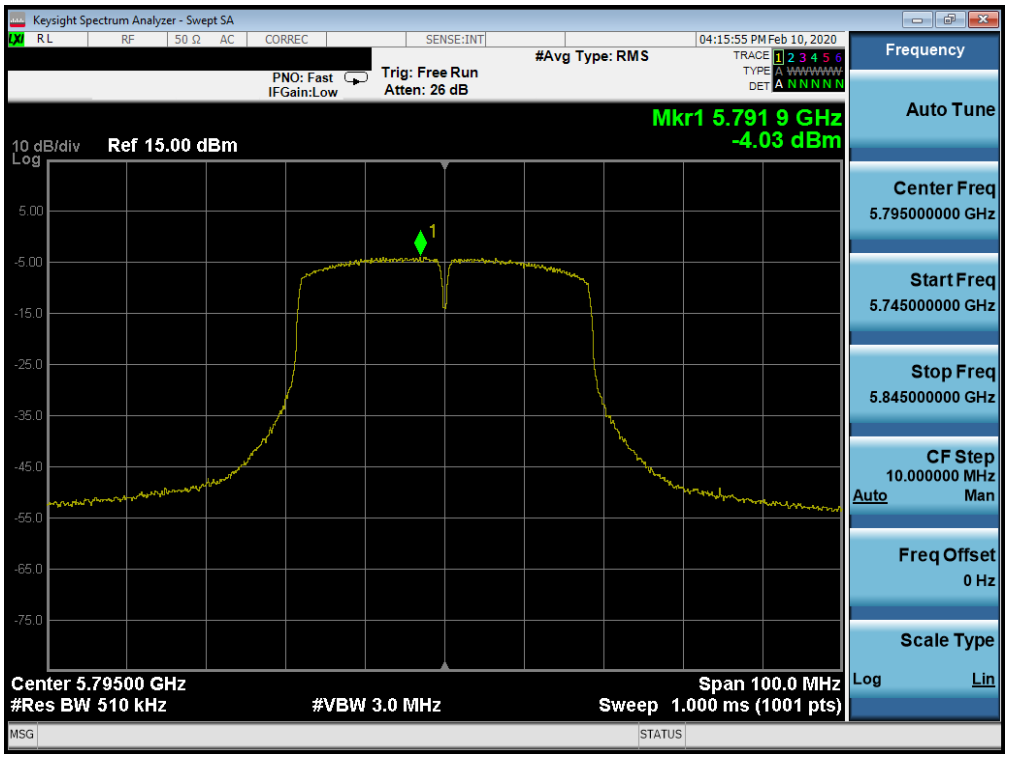
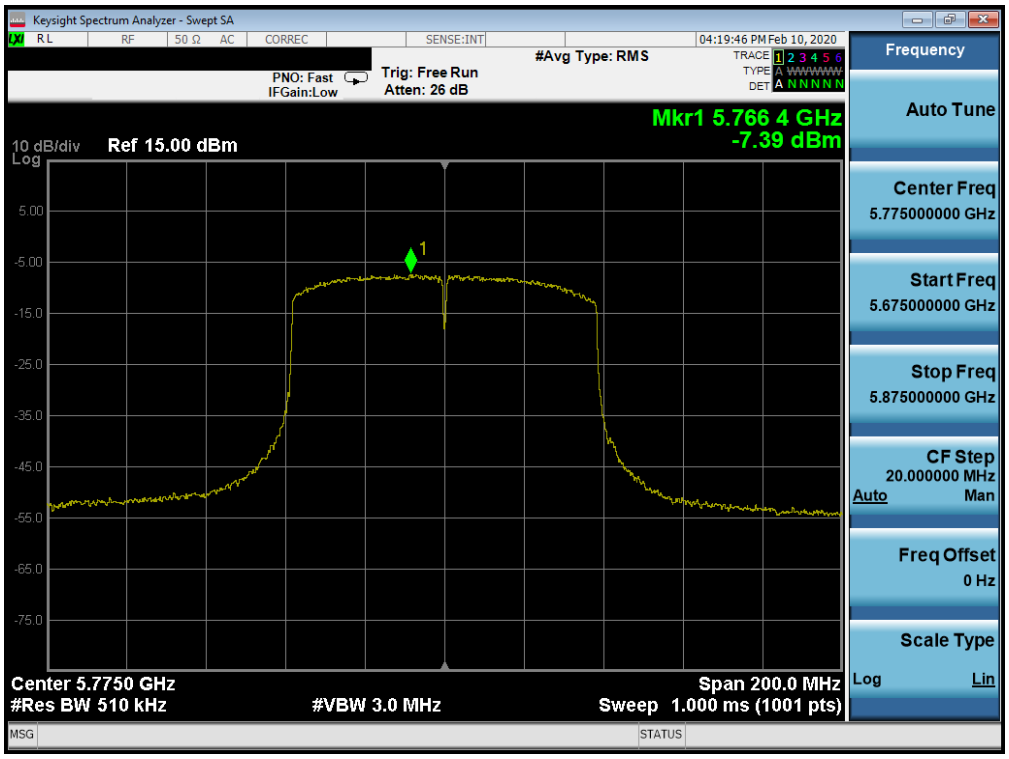


Plot 7-116. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 3) – Ch. 159)



Plot 7-117. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ac (UNII Band 3) – Ch. 155)

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SISO Antenna-2 Power Spectral Density Measurements

	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Measured Power Density [dBm]	Max Power Density [dBm/MHz]	Margin [dB]
Band 1	5180	36	a	6	4.35	11.0	-6.65
	5200	40	a	6	4.22	11.0	-6.79
	5240	48	a	6	4.28	11.0	-6.73
	5180	36	n (20MHz)	6.5/7.2 (MCS0)	3.74	11.0	-7.26
	5200	40	n (20MHz)	6.5/7.2 (MCS0)	4.14	11.0	-6.87
	5240	48	n (20MHz)	6.5/7.2 (MCS0)	3.95	11.0	-7.05
	5190	38	n (40MHz)	13.5/15 (MCS0)	0.64	11.0	-10.36
	5230	46	n (40MHz)	13.5/15 (MCS0)	0.96	11.0	-10.04
	5210	42	ac (80MHz)	29.3/32.5 (MCS0)	-3.77	11.0	-14.77
Band 2A	5260	52	a	6	4.16	11.0	-6.84
	5280	56	a	6	4.13	11.0	-6.87
	5320	64	a	6	4.43	11.0	-6.57
	5260	52	n (20MHz)	6.5/7.2 (MCS0)	3.73	11.0	-7.27
	5280	56	n (20MHz)	6.5/7.2 (MCS0)	3.54	11.0	-7.46
	5320	64	n (20MHz)	6.5/7.2 (MCS0)	4.11	11.0	-6.89
	5270	54	n (40MHz)	13.5/15 (MCS0)	0.59	11.0	-10.41
	5310	62	n (40MHz)	13.5/15 (MCS0)	0.74	11.0	-10.26
	5290	58	ac (80MHz)	29.3/32.5 (MCS0)	-3.90	11.0	-14.90
Band 2C	5500	100	a	6	3.87	11.0	-7.13
	5600	120	a	6	3.49	11.0	-7.51
	5720	144	a	6	4.39	11.0	-6.61
	5500	100	n (20MHz)	6.5/7.2 (MCS0)	3.49	11.0	-7.51
	5600	120	n (20MHz)	6.5/7.2 (MCS0)	3.07	11.0	-7.93
	5720	144	n (20MHz)	6.5/7.2 (MCS0)	3.87	11.0	-7.13
	5510	102	n (40MHz)	13.5/15 (MCS0)	0.68	11.0	-10.32
	5590	118	n (40MHz)	13.5/15 (MCS0)	0.12	11.0	-10.88
	5710	142	n (40MHz)	13.5/15 (MCS0)	0.94	11.0	-10.06
	5530	106	ac (80MHz)	29.3/32.5 (MCS0)	-3.39	11.0	-14.39
	5610	122	ac (80MHz)	29.3/32.5 (MCS0)	-3.80	11.0	-14.80
	5690	138	ac (80MHz)	29.3/32.5 (MCS0)	-3.08	11.0	-14.08

Table 7-20. Conducted Power Spectral Density Measurements SISO ANT2

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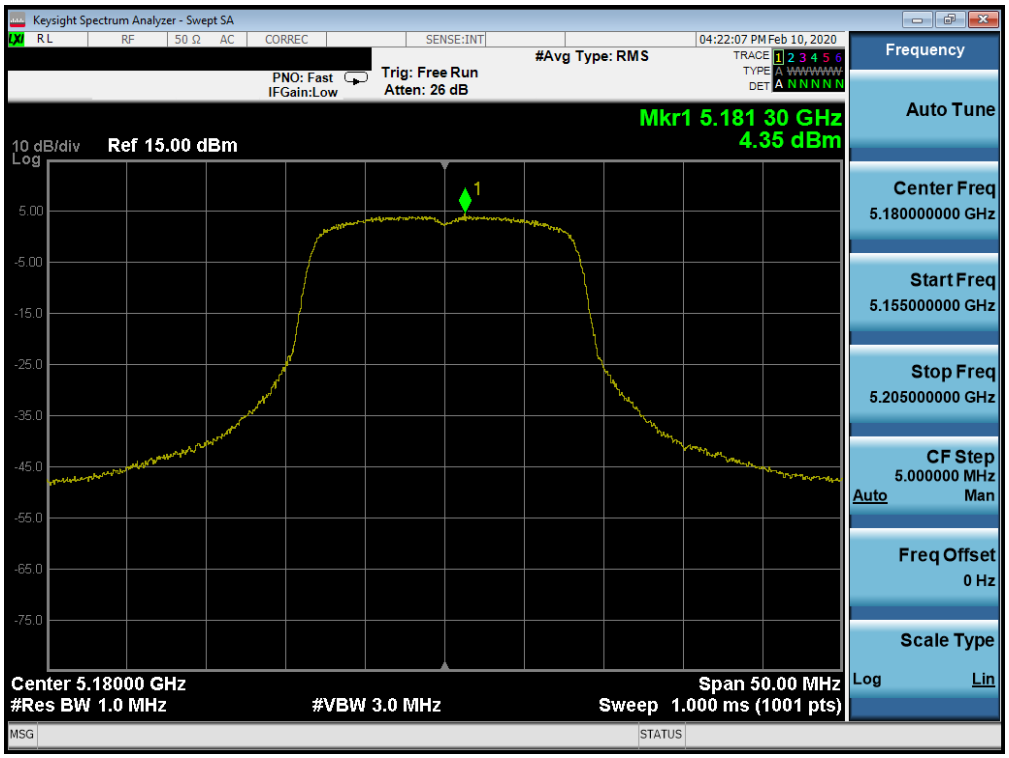
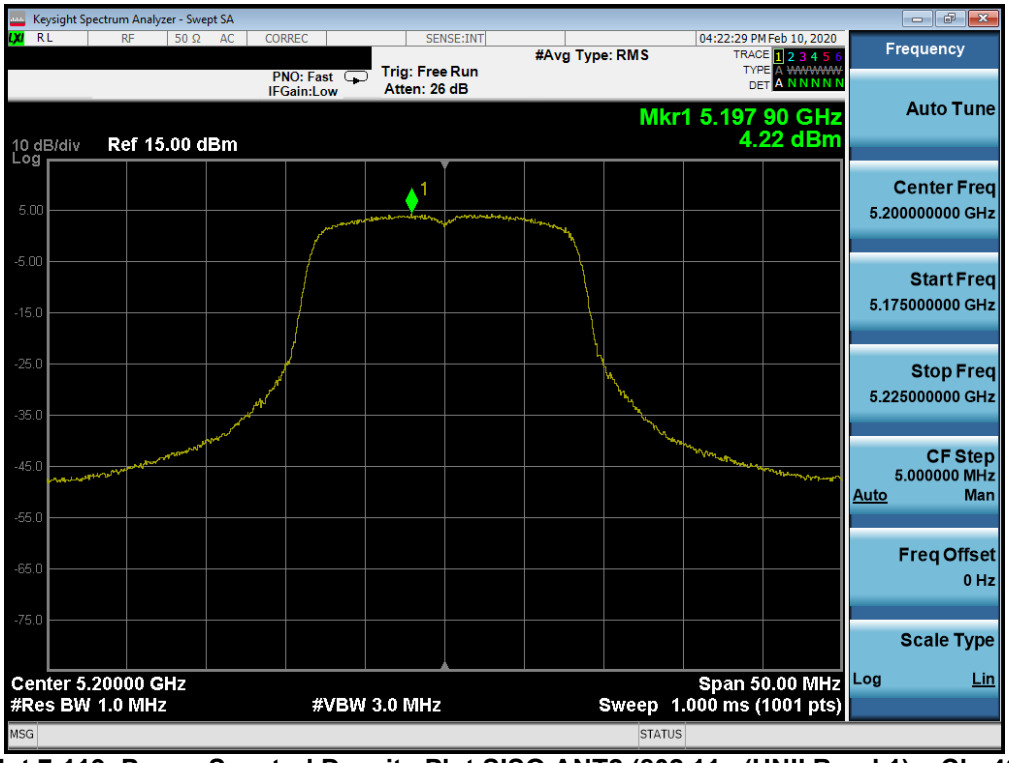


Plot 7-118. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 1) – Ch. 36)



Plot 7-119. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 1) – Ch. 40)

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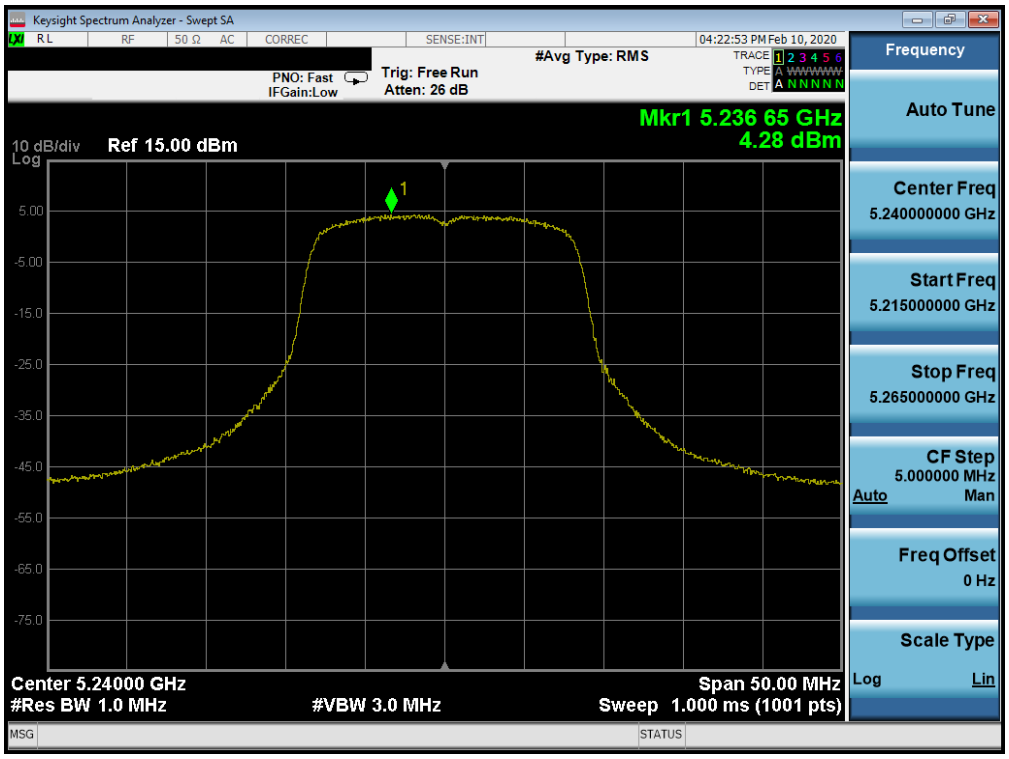
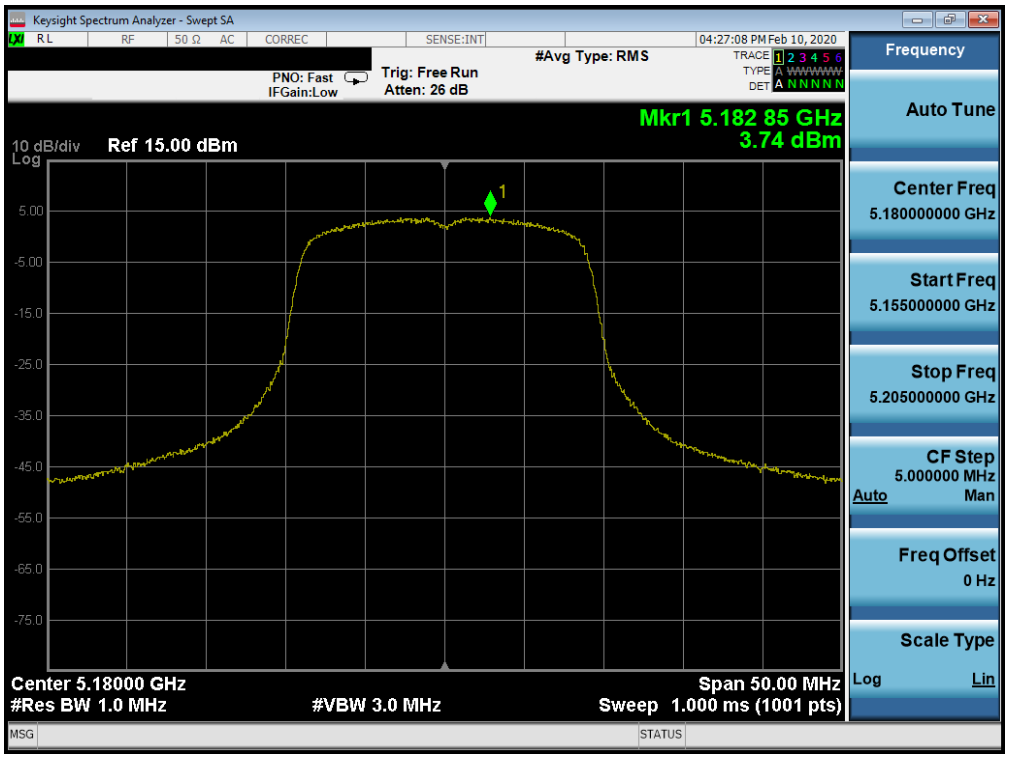


Plot 7-120. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 1) – Ch. 48)



Plot 7-121. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 1) – Ch. 36)

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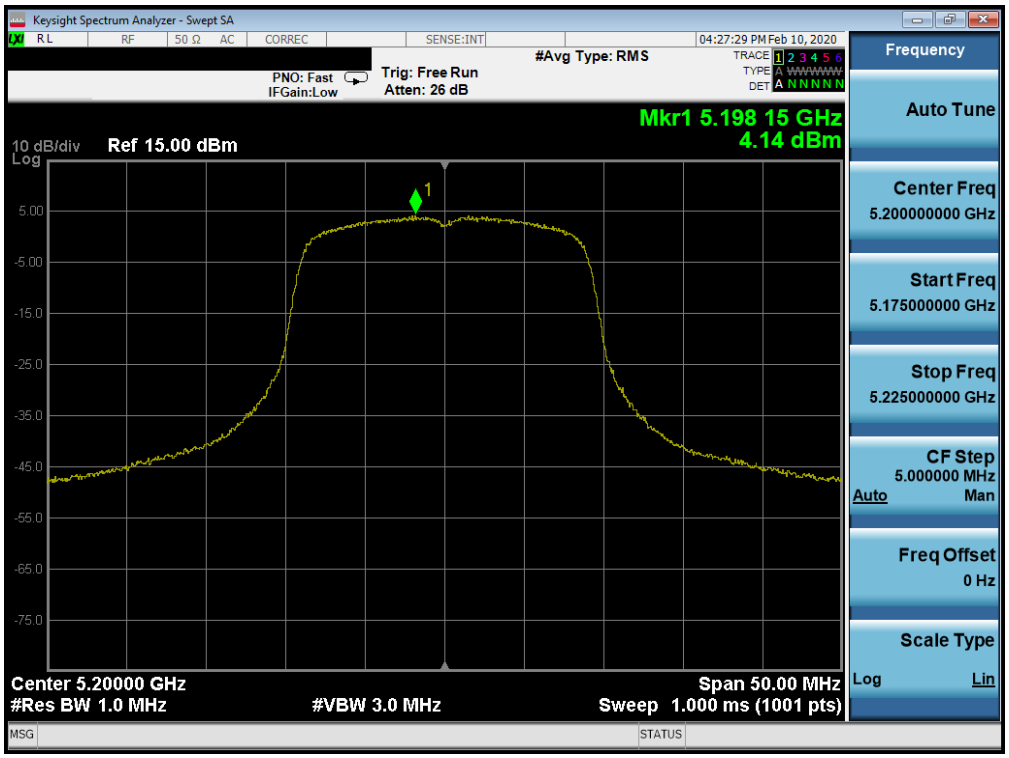
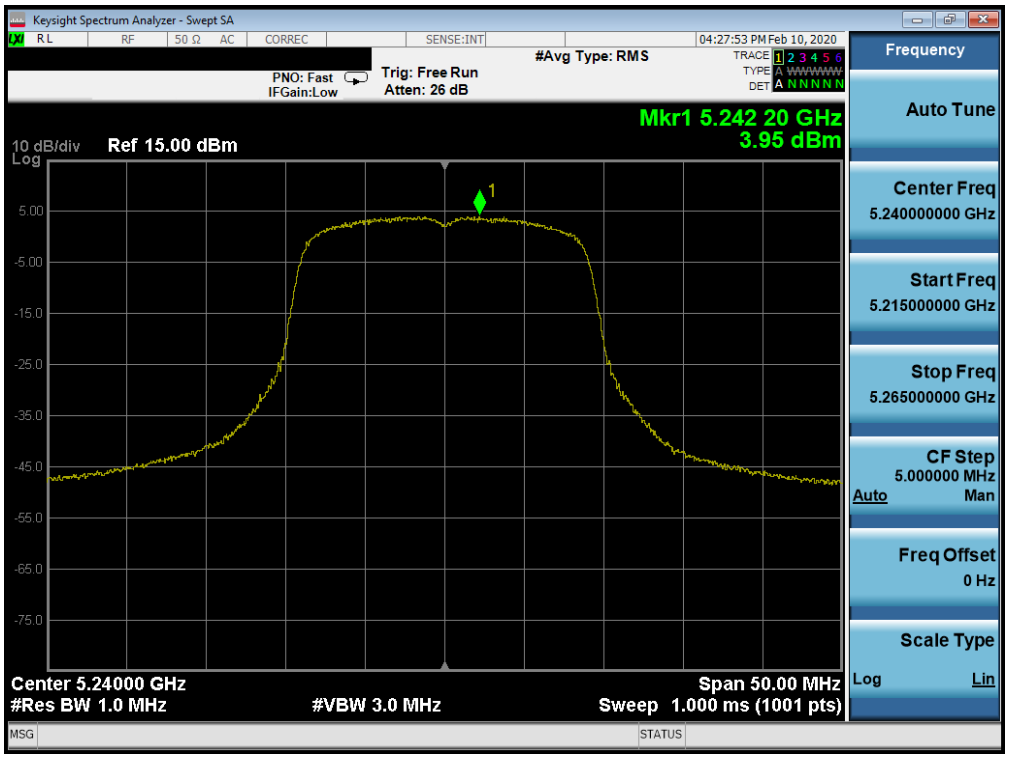


Plot 7-122. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 1) – Ch. 40)



Plot 7-123. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 1) – Ch. 48)

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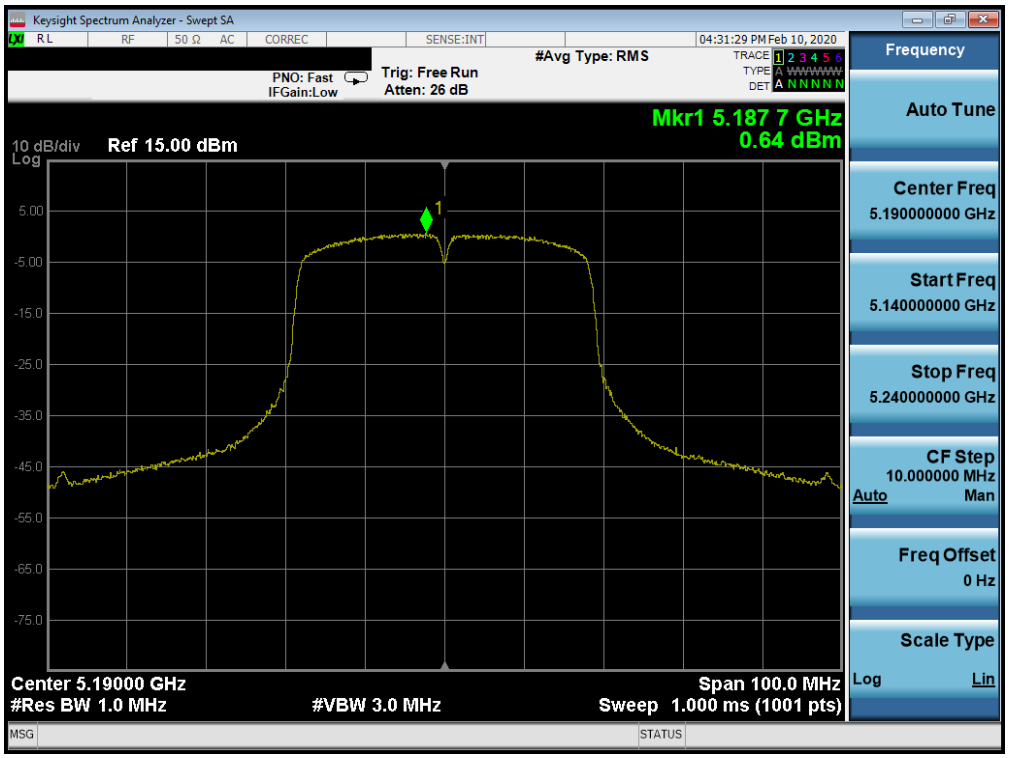
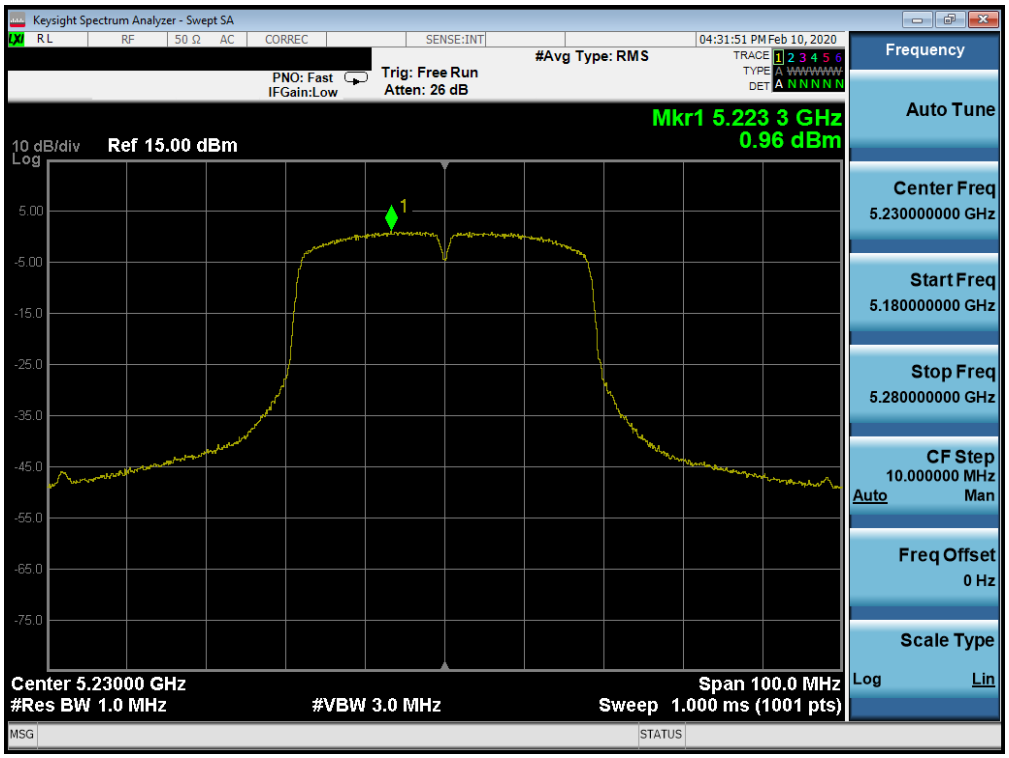


Plot 7-124. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 1) – Ch. 38)



Plot 7-125. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 1) – Ch. 46)

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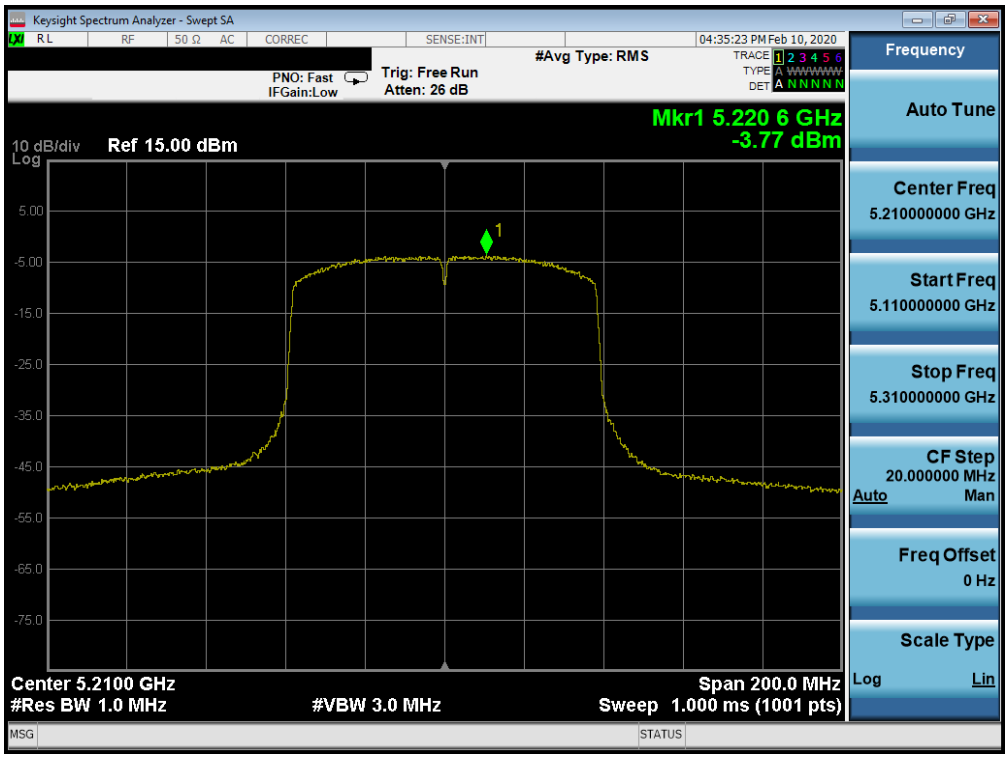
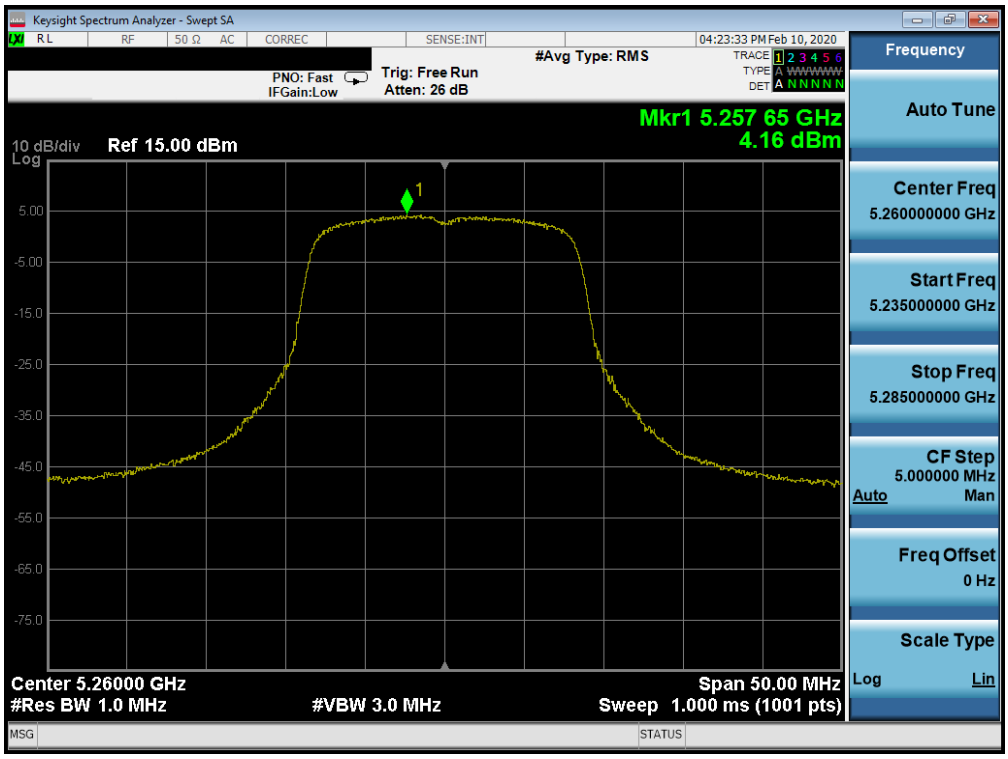


Plot 7-126. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 1) – Ch. 42)



Plot 7-127. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 2A) – Ch. 52)

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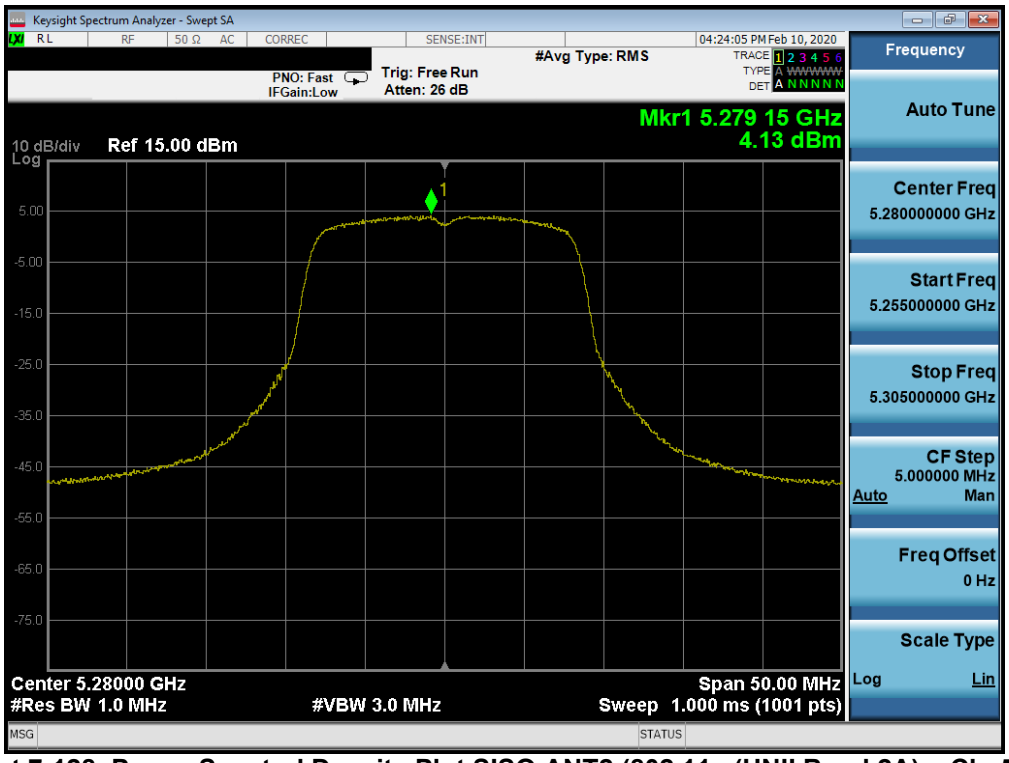
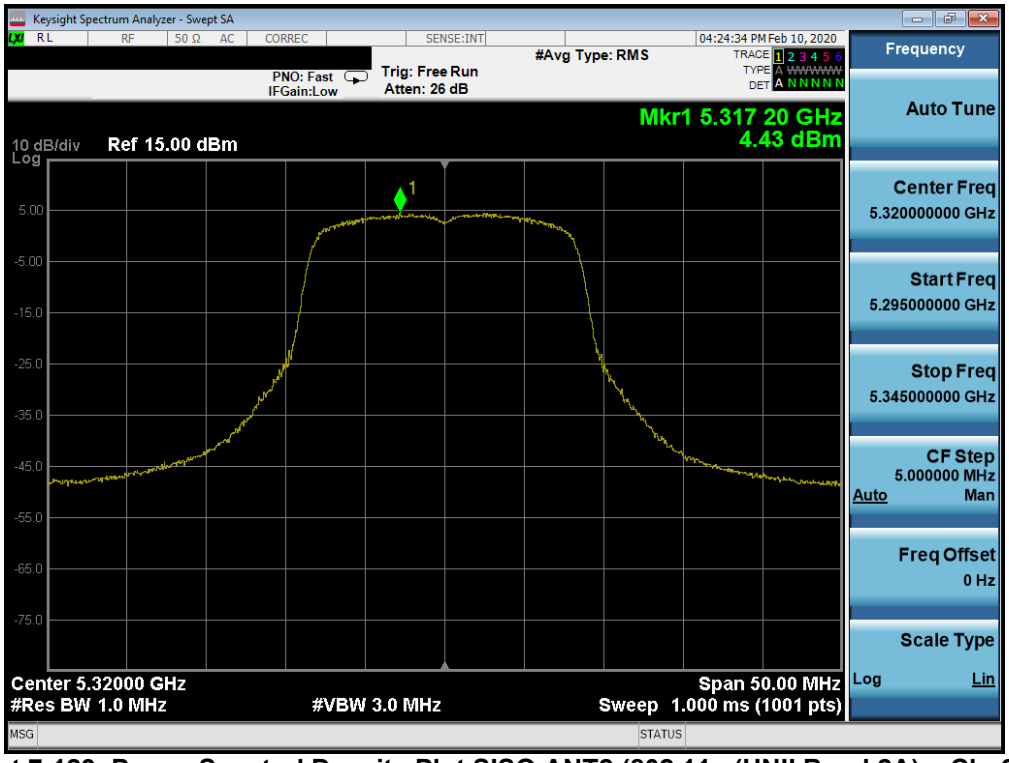


Plot 7-128. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 2A) – Ch. 56)



Plot 7-129. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 2A) – Ch. 64)

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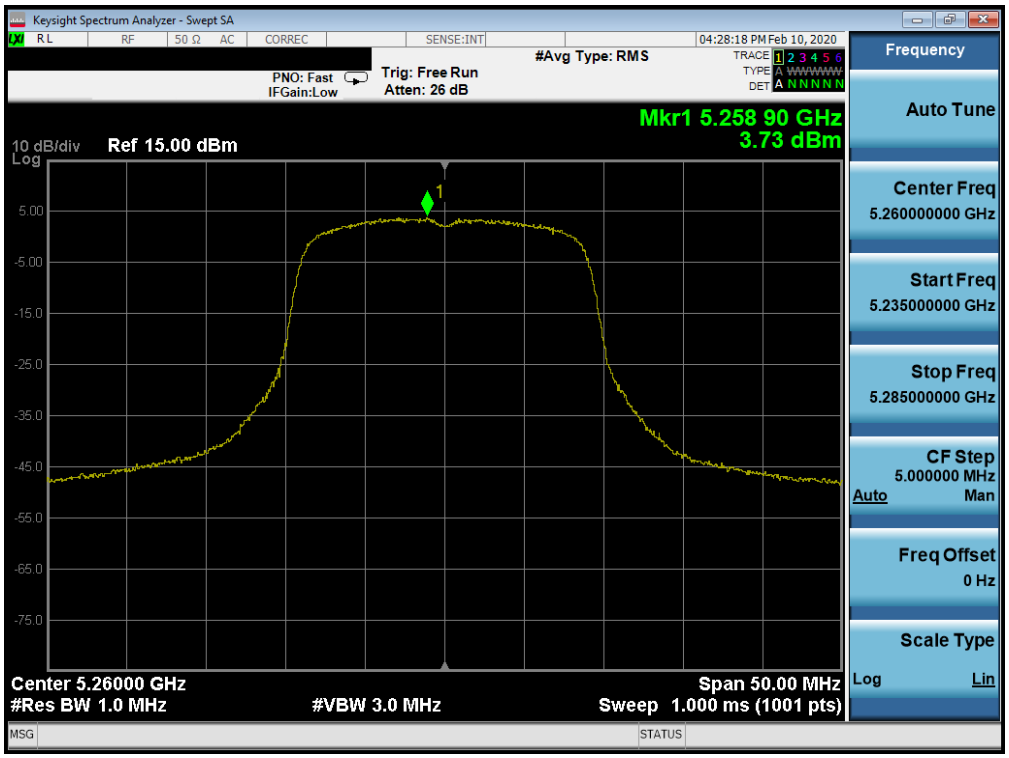
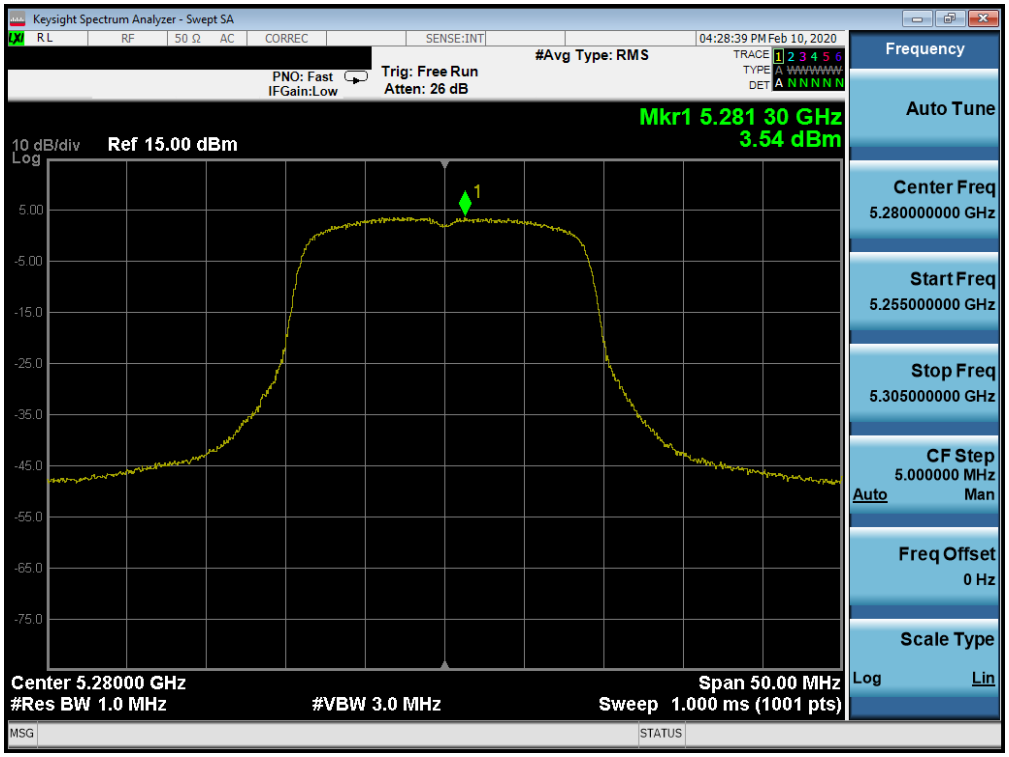


Plot 7-130. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2A) – Ch. 52)



Plot 7-131. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2A) – Ch. 56)

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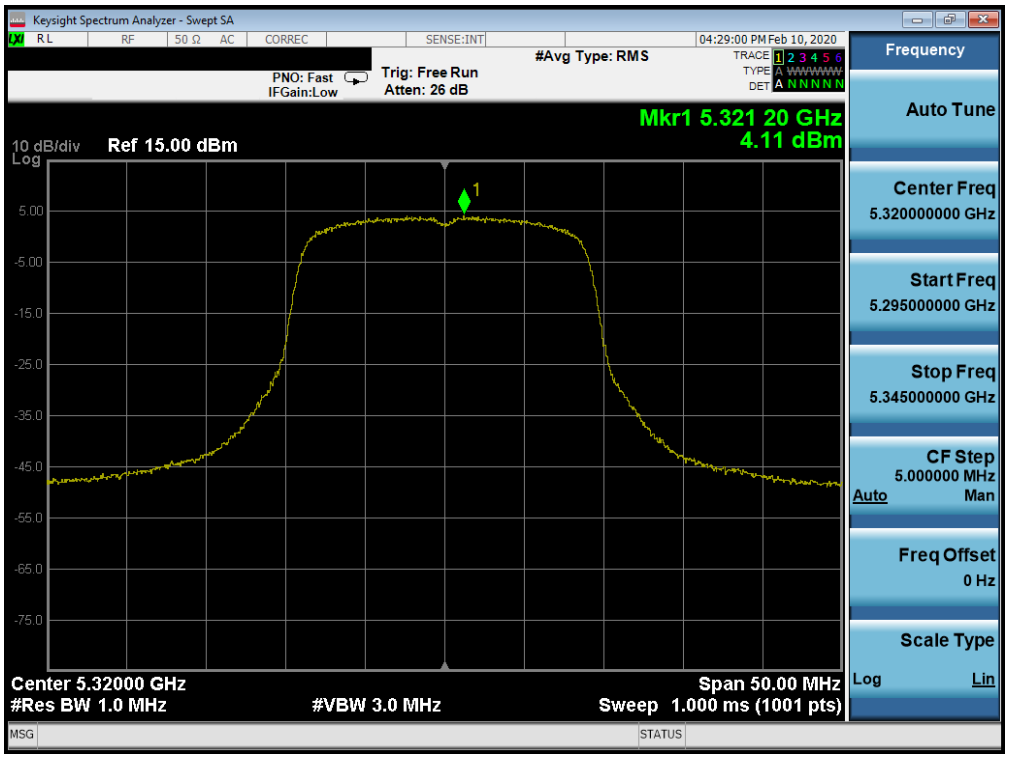
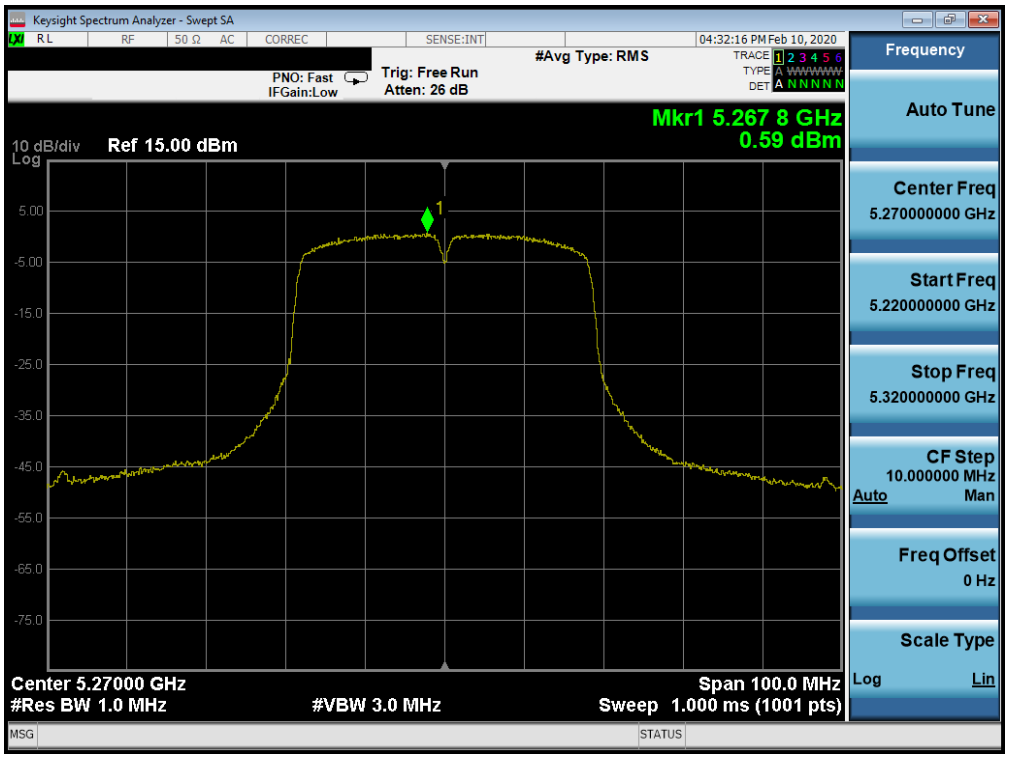


Plot 7-132. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2A) – Ch. 64)



Plot 7-133. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 2A) – Ch. 54)

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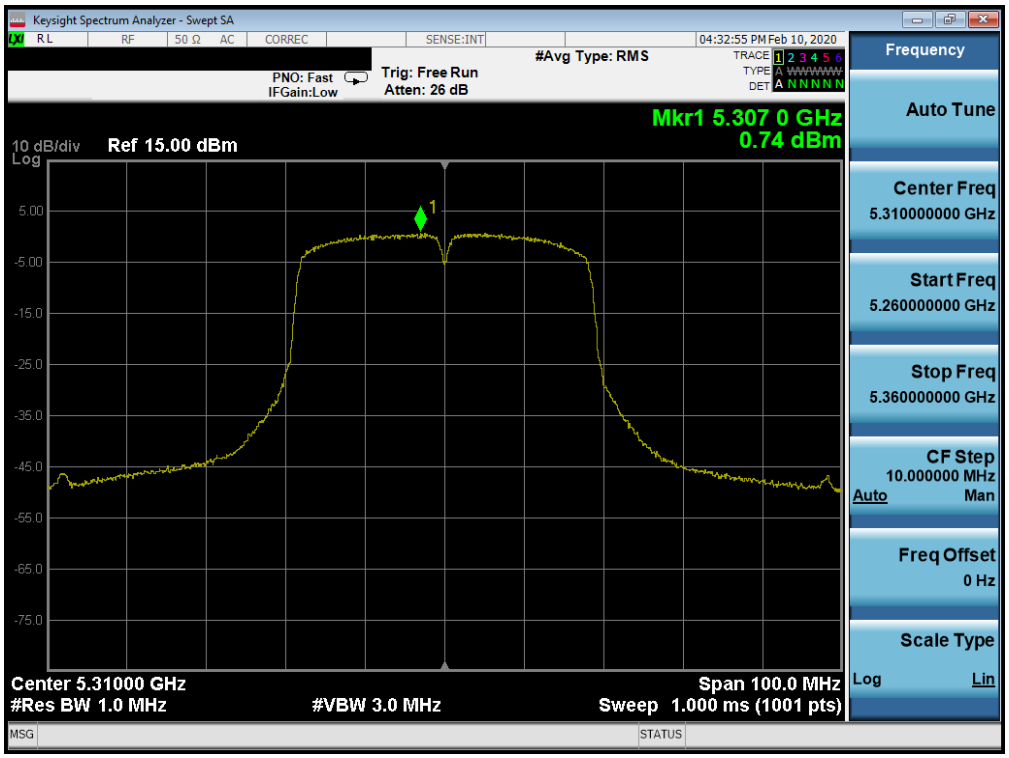
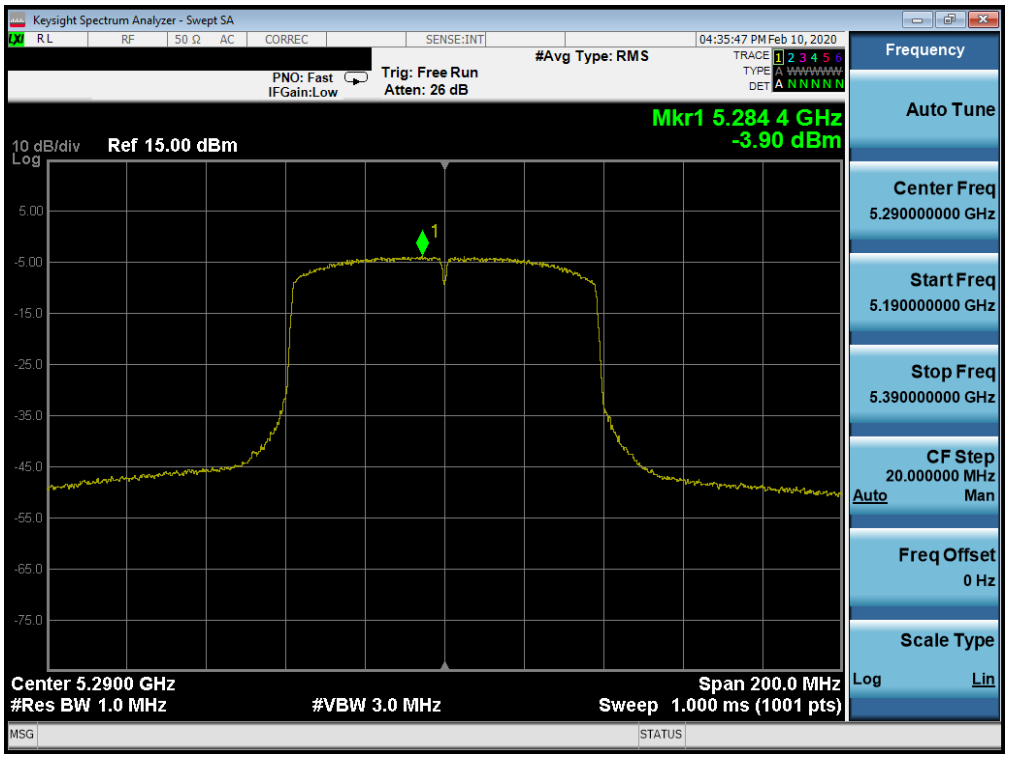


Plot 7-134. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 2A) – Ch. 62)



Plot 7-135. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 2A) – Ch. 58)

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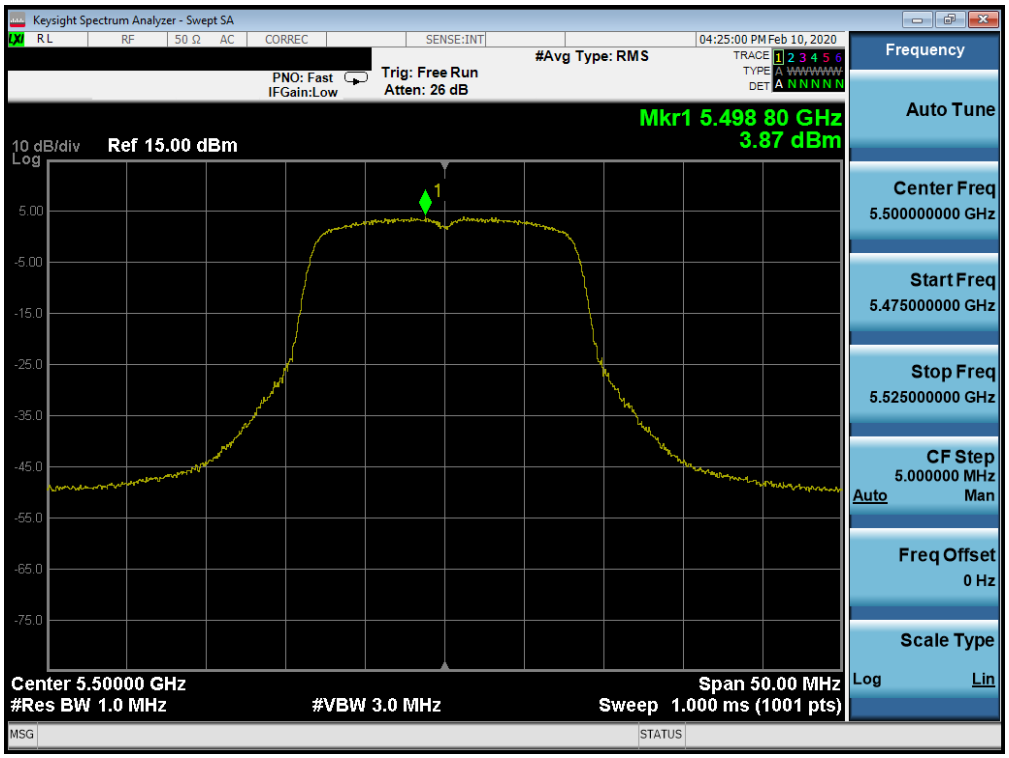
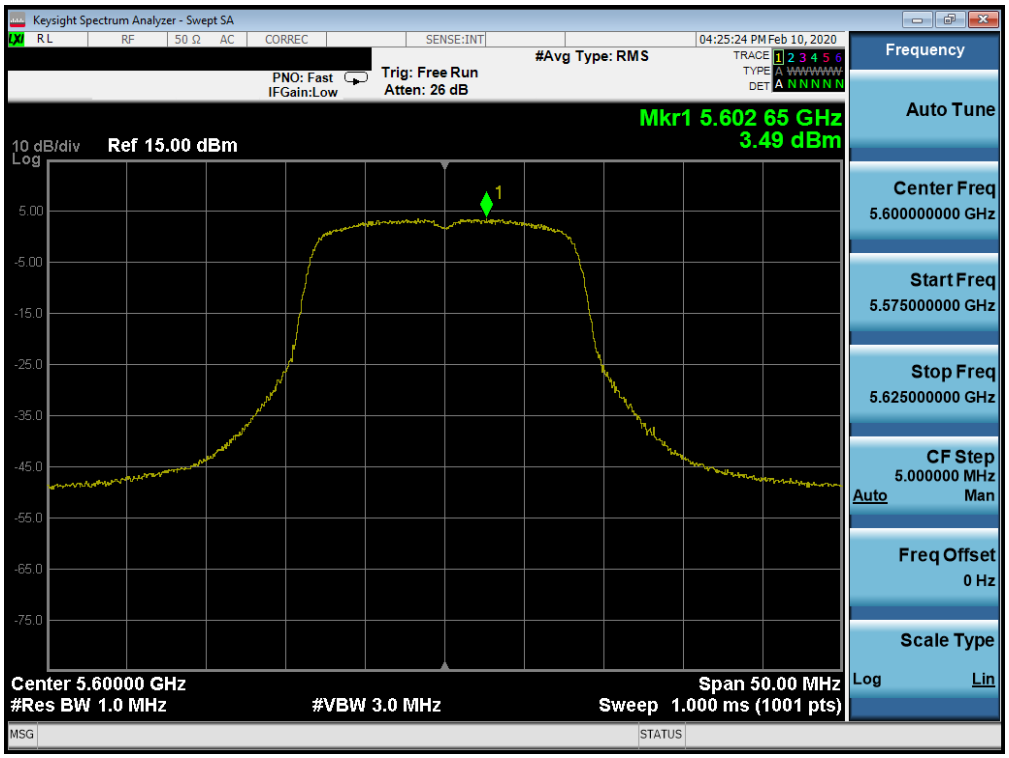


Plot 7-136. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 2C) – Ch. 100)



Plot 7-137. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 2C) – Ch. 120)

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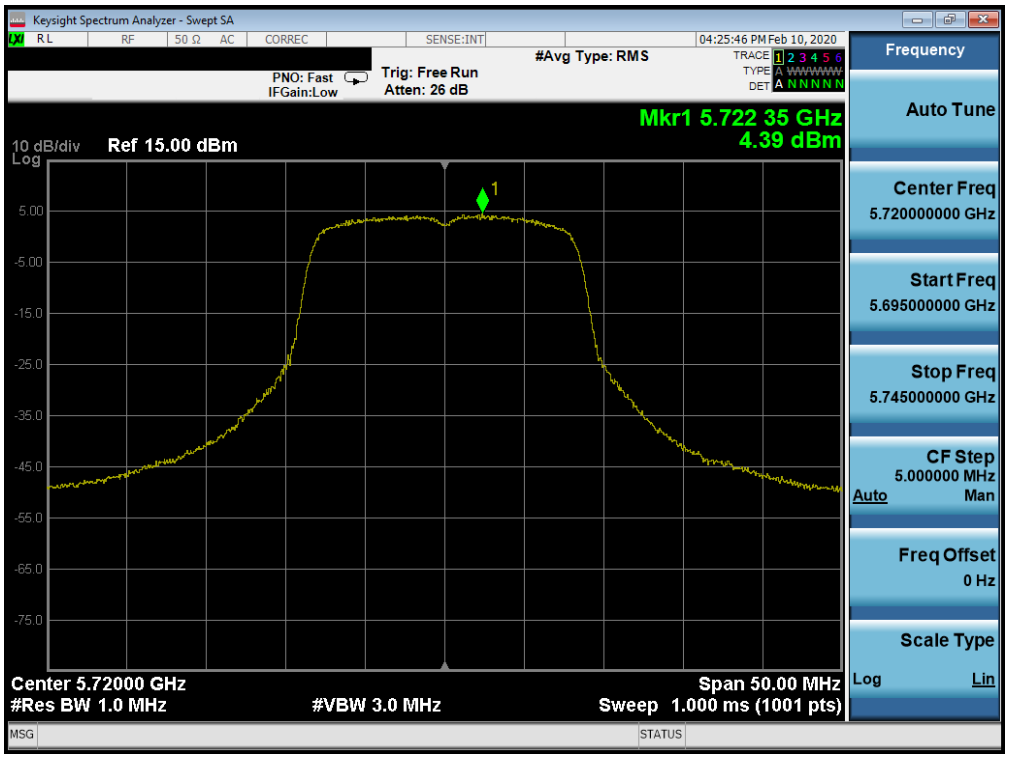
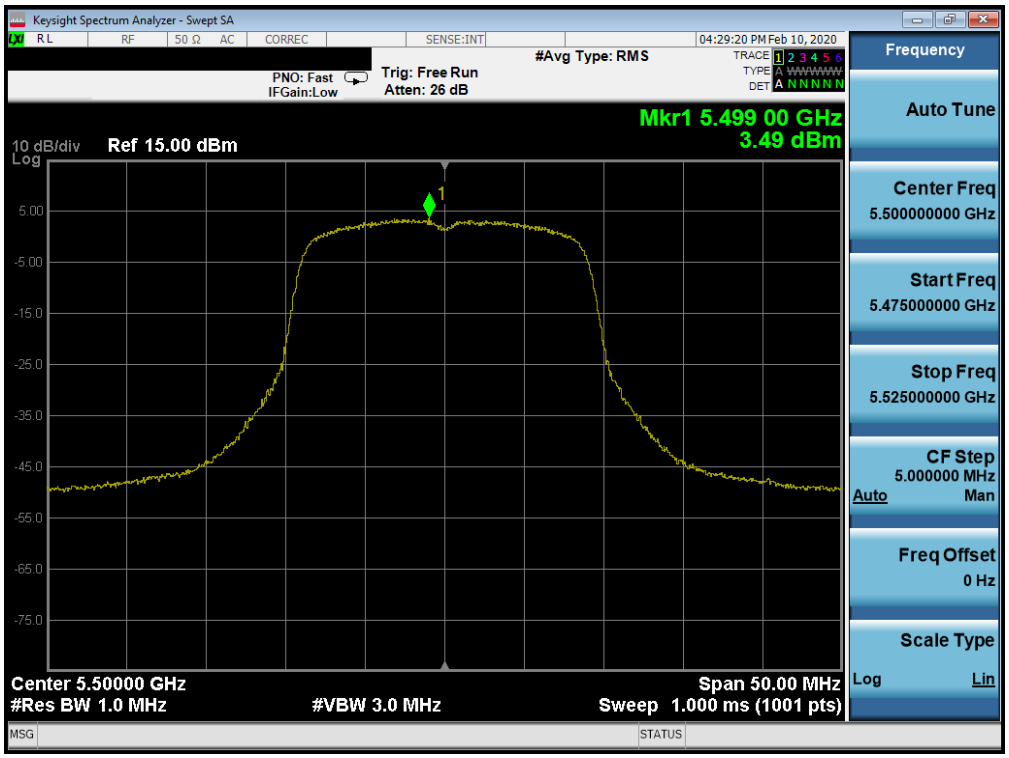


Plot 7-138. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 2C) – Ch. 144)



Plot 7-139. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2C) – Ch. 100)

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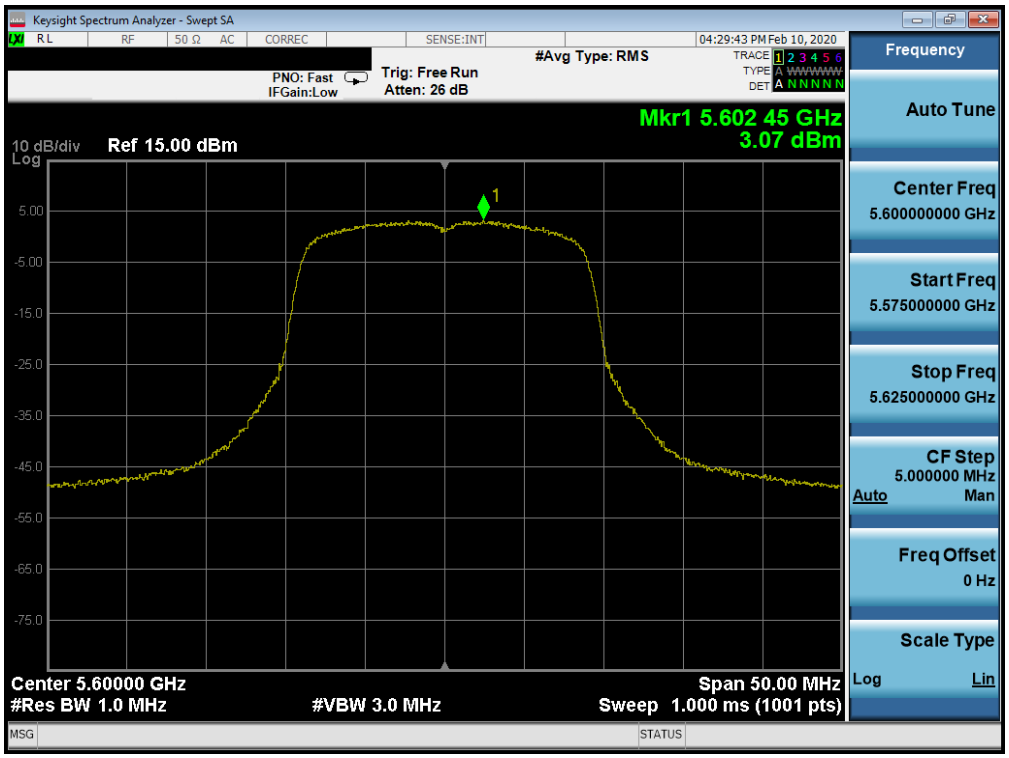
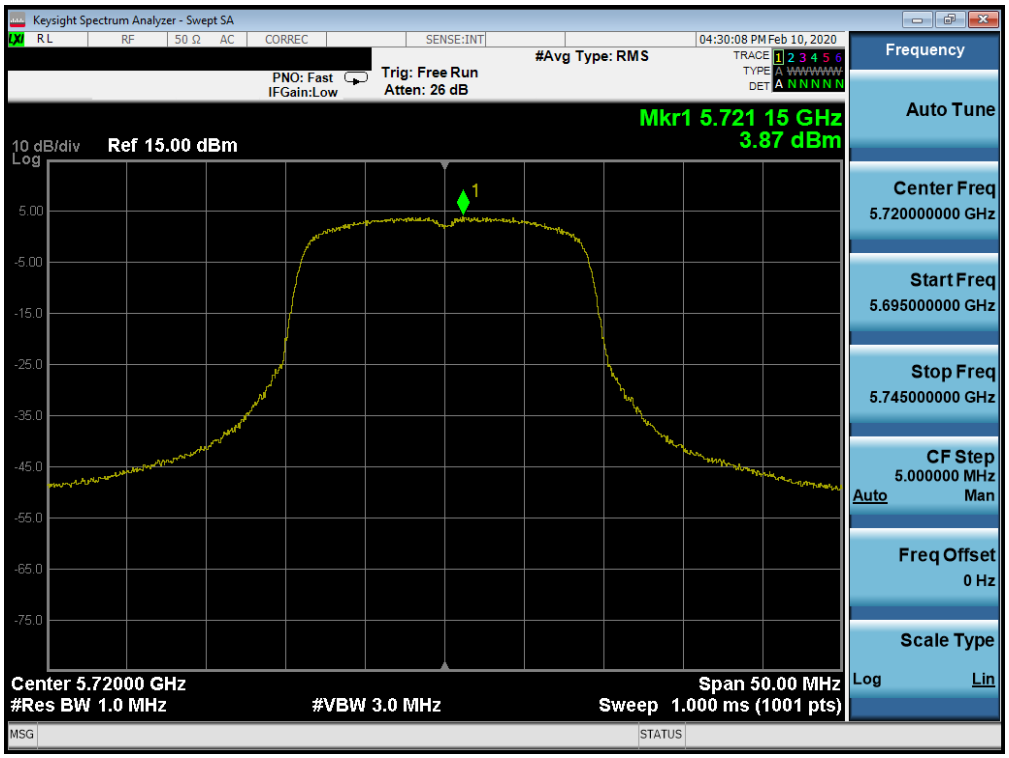


Plot 7-140. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2C) – Ch. 120)



Plot 7-141. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2C) – Ch. 144)

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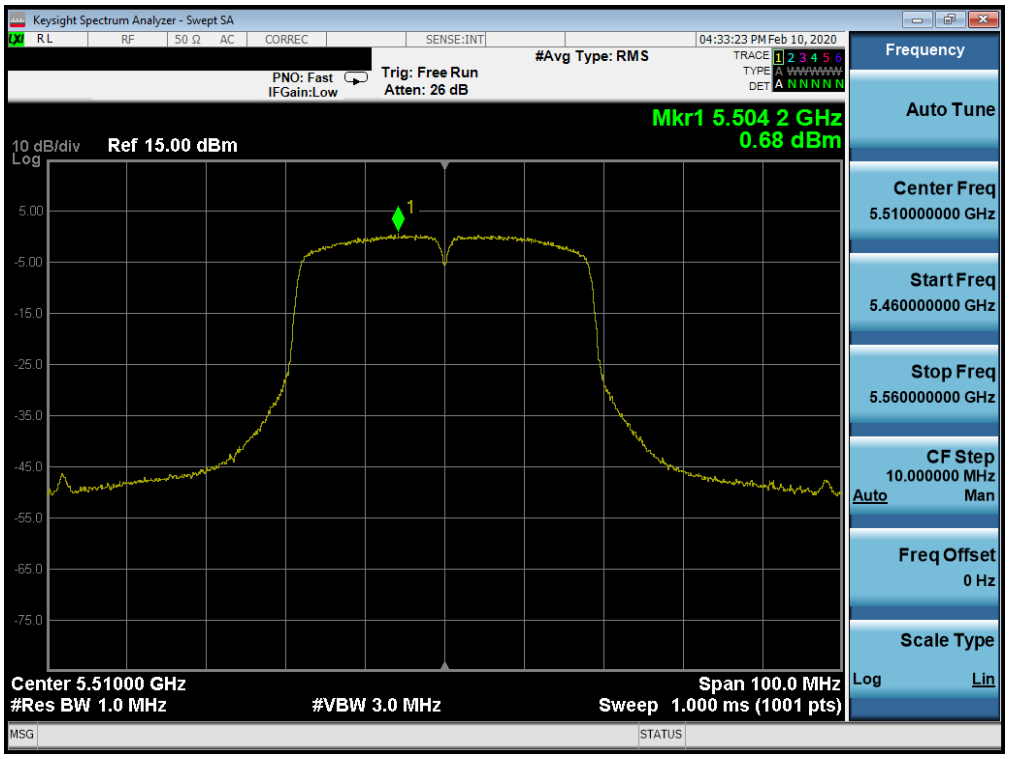
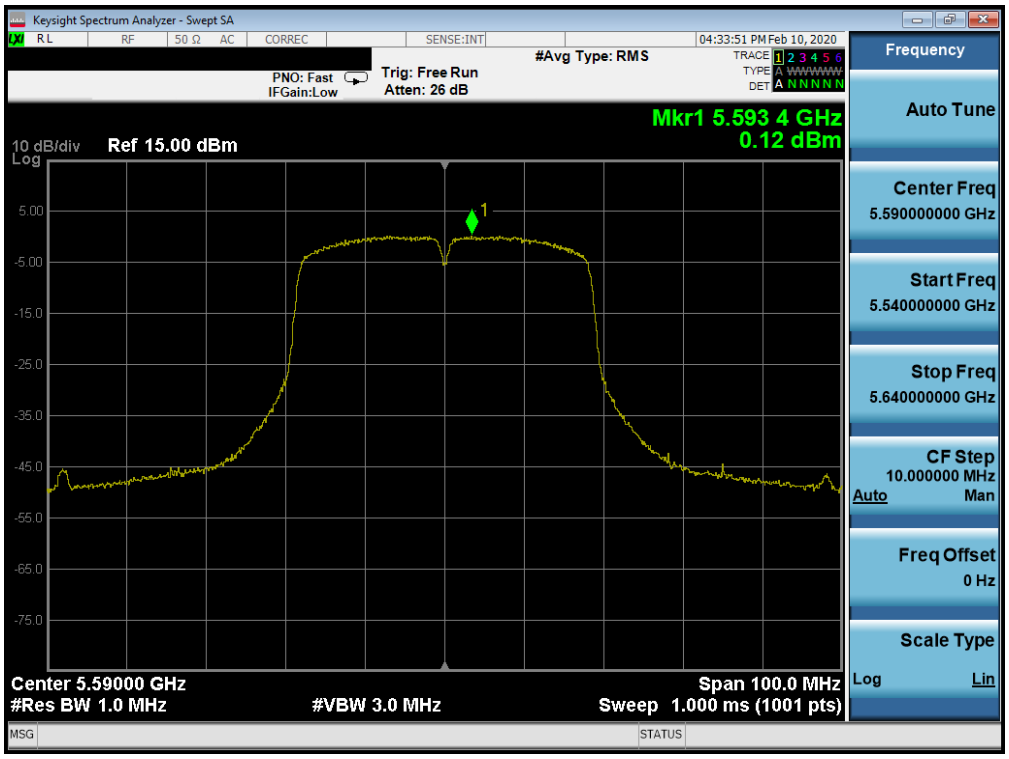


Plot 7-142. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 2C) – Ch. 102)



Plot 7-143. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 2C) – Ch. 118)

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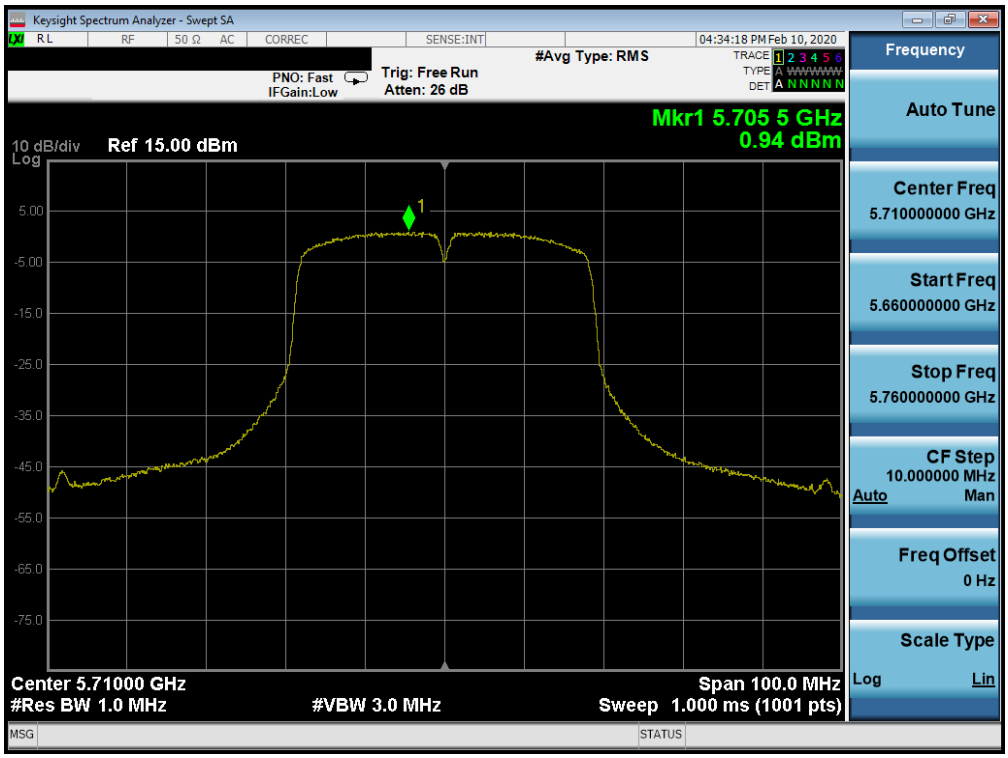
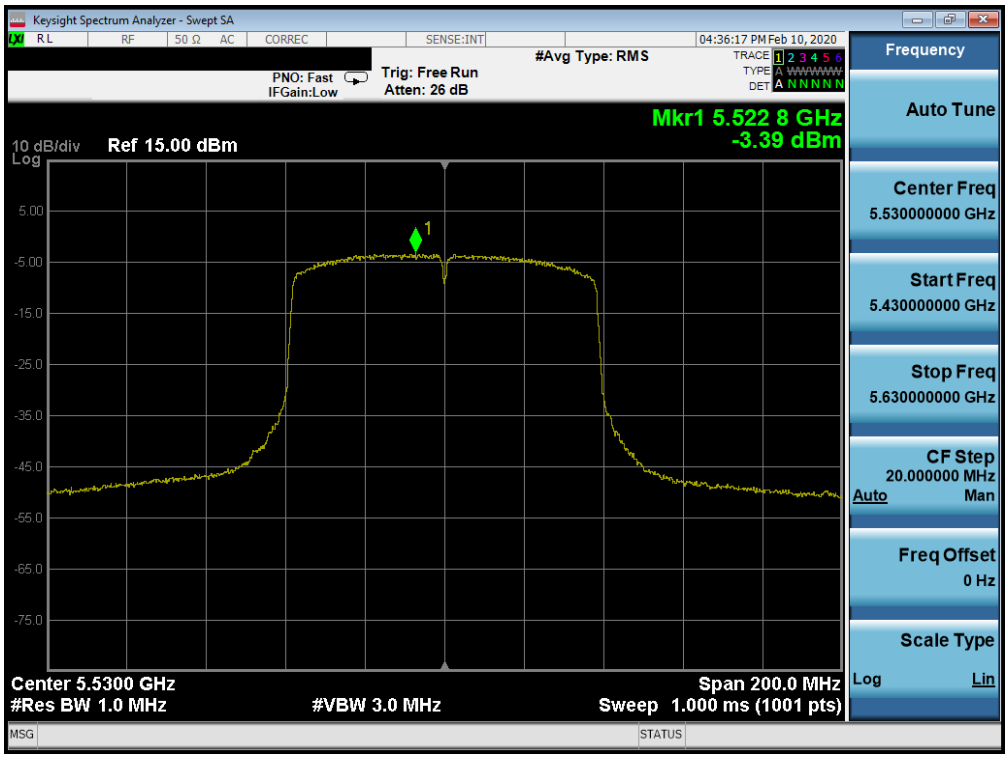


Plot 7-144. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 2C) – Ch. 142)



Plot 7-145. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 2C) – Ch. 106)

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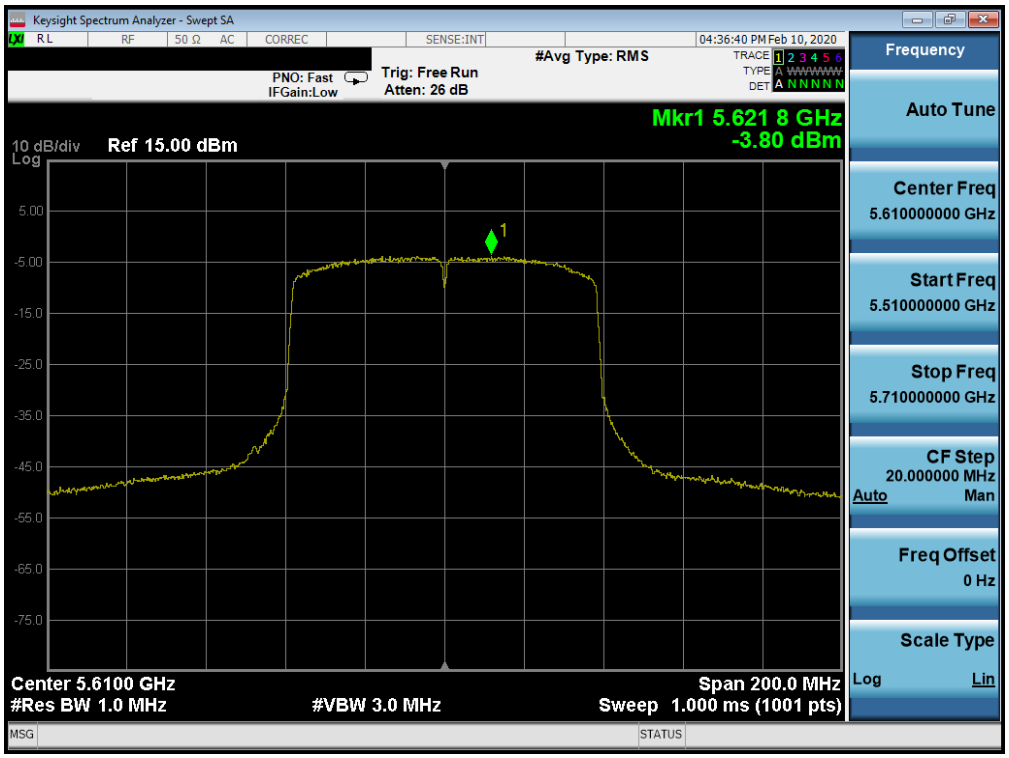
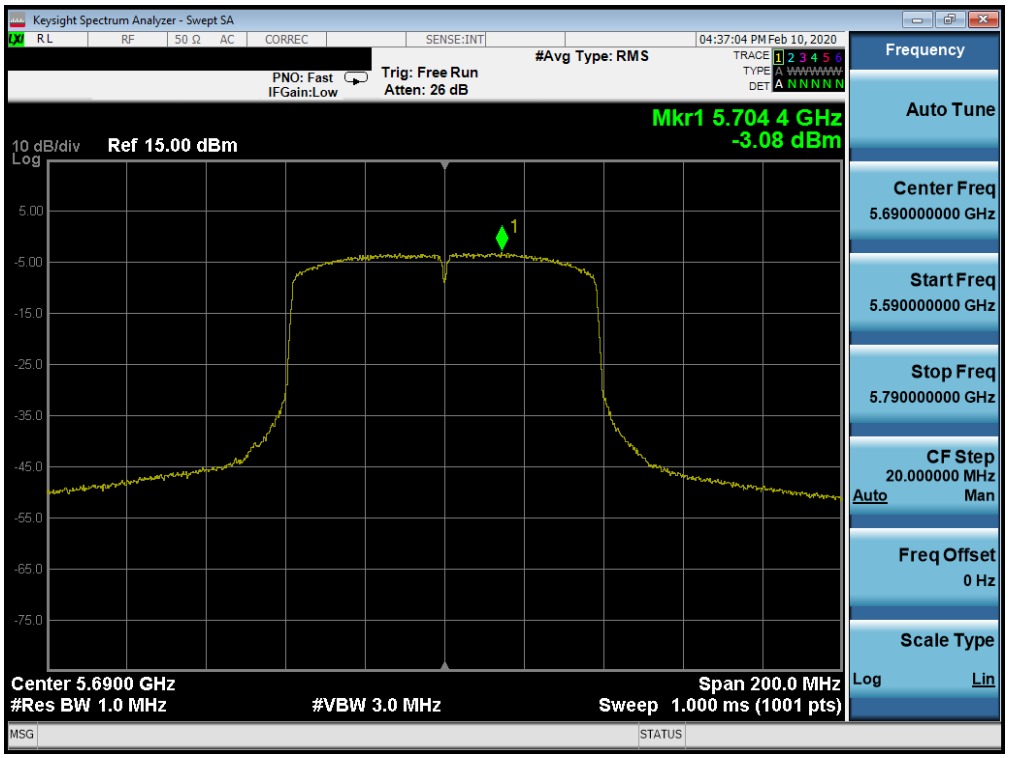


Plot 7-146. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 2C) – Ch. 122)



Plot 7-147. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 2C) – Ch. 138)

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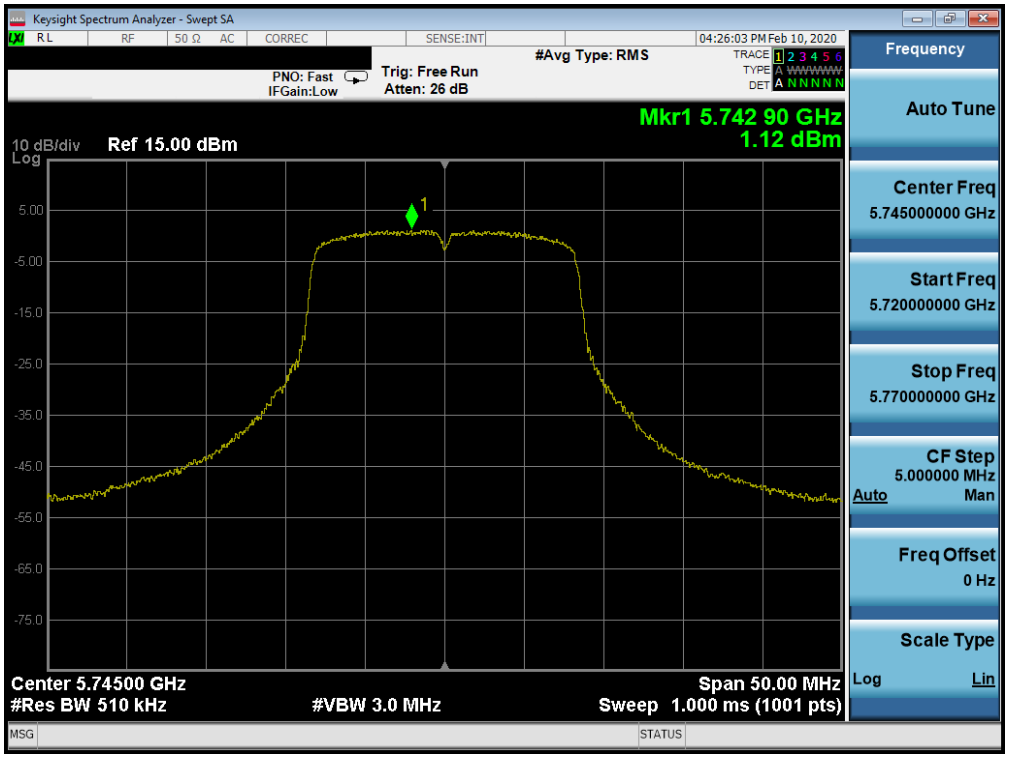
	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Measured Power Density [dBm]	Max Permissible Power Density [dBm/500kHz]	Margin [dB]
Band 3	5745	149	a	6	1.12	30.0	-28.88
	5785	157	a	6	1.22	30.0	-28.78
	5825	165	a	6	0.91	30.0	-29.09
	5745	149	n (20MHz)	6.5/7.2 (MCS0)	0.96	30.0	-29.04
	5785	157	n (20MHz)	6.5/7.2 (MCS0)	0.64	30.0	-29.36
	5825	165	n (20MHz)	6.5/7.2 (MCS0)	0.69	30.0	-29.31
	5755	151	n (40MHz)	13.5/15 (MCS0)	-1.82	30.0	-31.82
	5795	159	n (40MHz)	13.5/15 (MCS0)	-2.32	30.0	-32.32
	5775	155	ac (80MHz)	29.3/32.5 (MCS0)	-5.48	30.0	-35.48

Table 7-21. Band 3 Conducted Power Spectral Density Measurements SISO ANT2



Plot 7-148. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 3) – Ch. 149)

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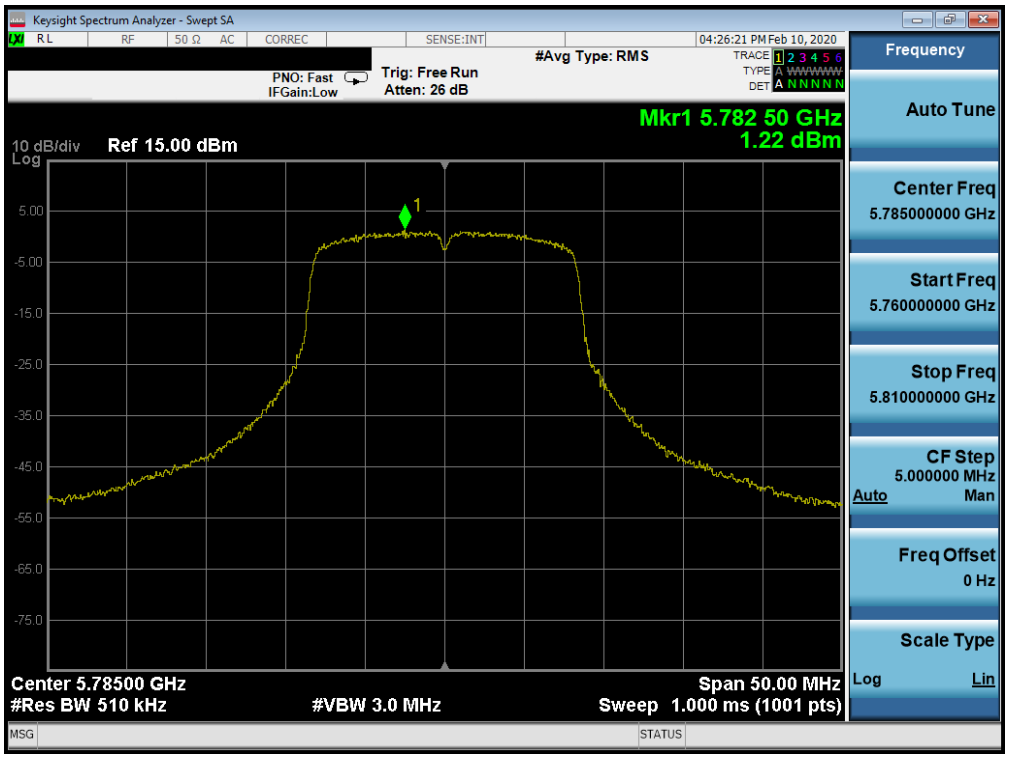
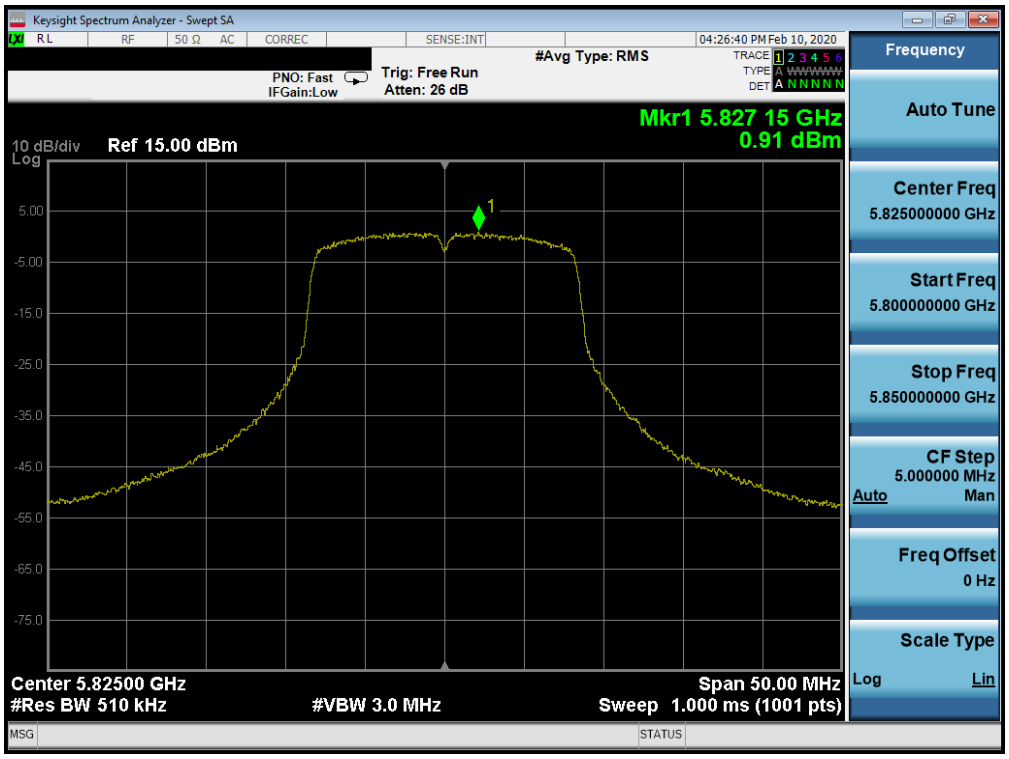


Plot 7-149. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 3) – Ch. 157)



Plot 7-150. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 3) – Ch. 165)

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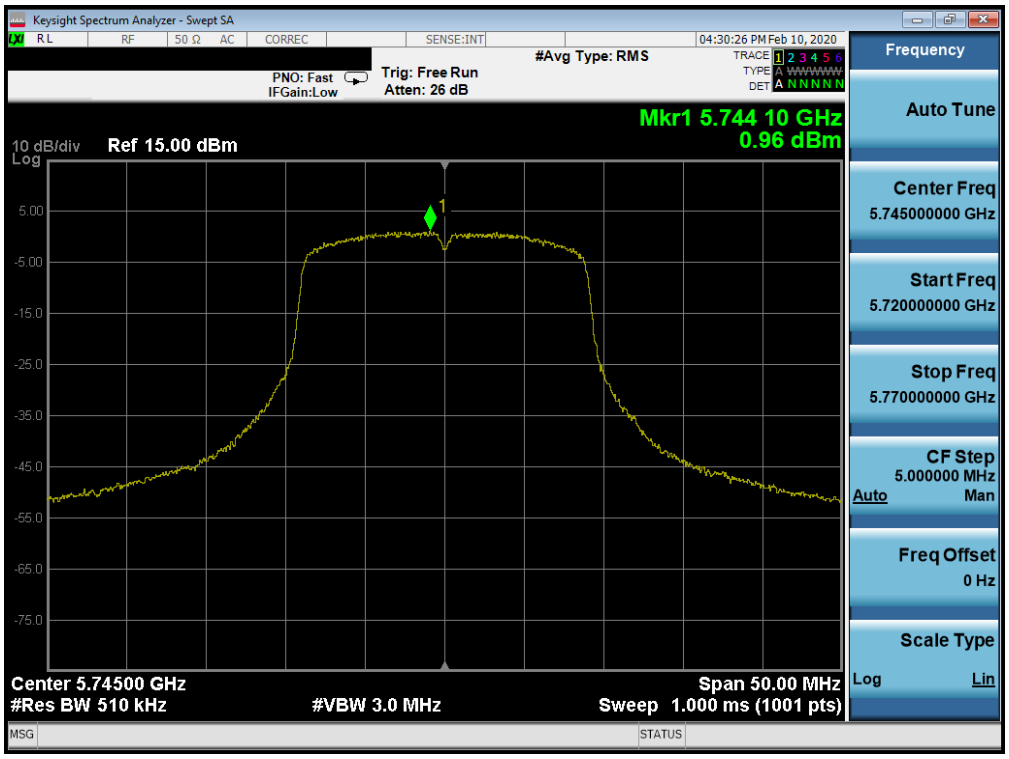
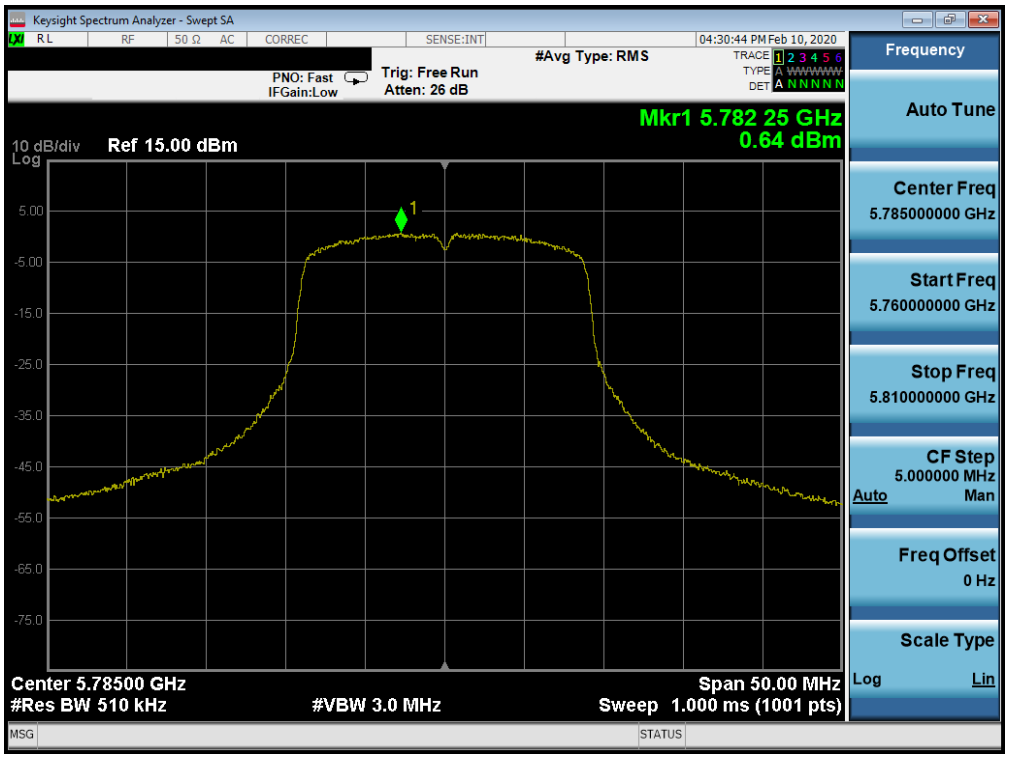


Plot 7-151. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 3) – Ch. 149)



Plot 7-152. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 3) – Ch. 157)

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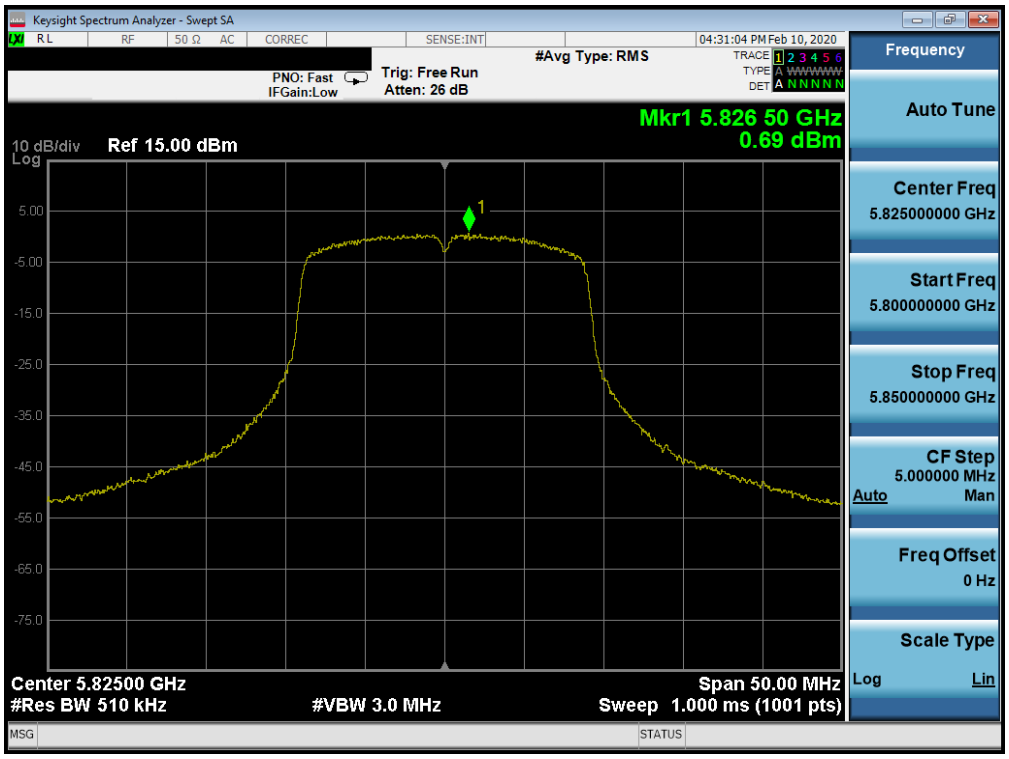
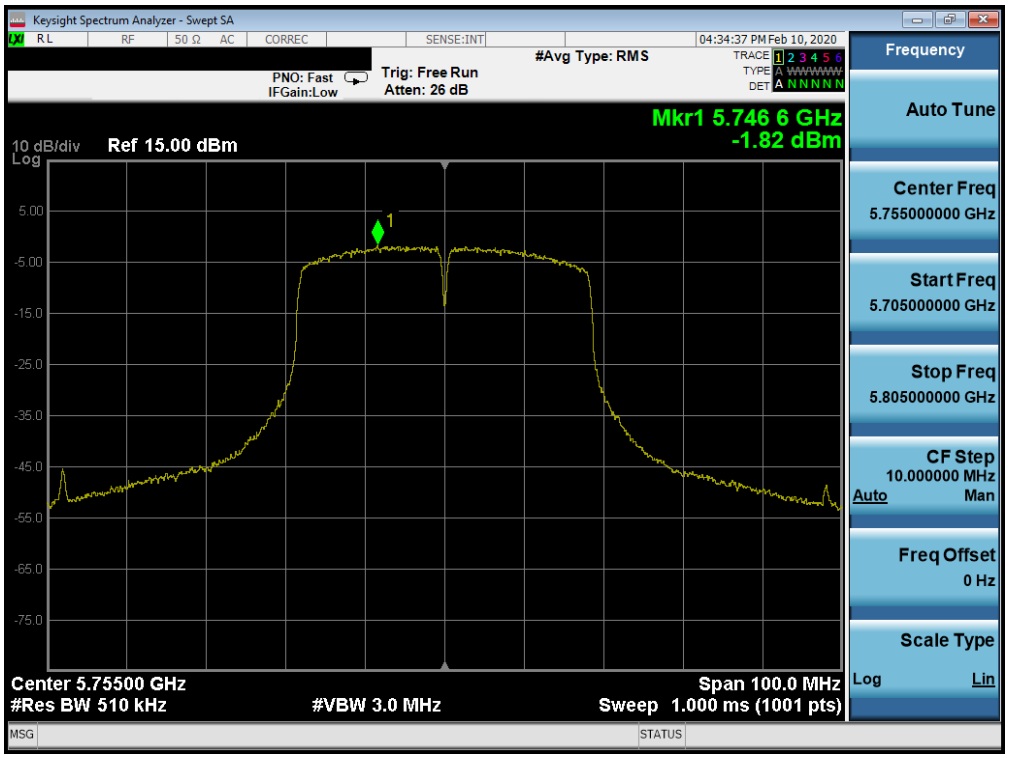


Plot 7-153. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 3) – Ch. 165)



Plot 7-154. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 3) – Ch. 151)

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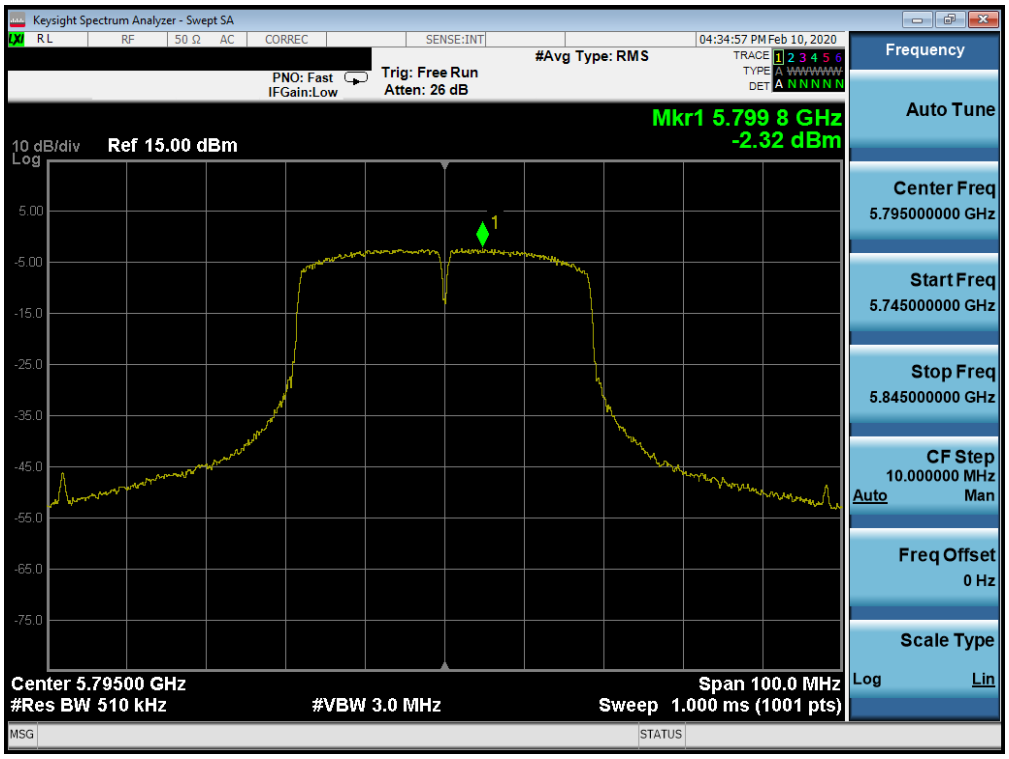
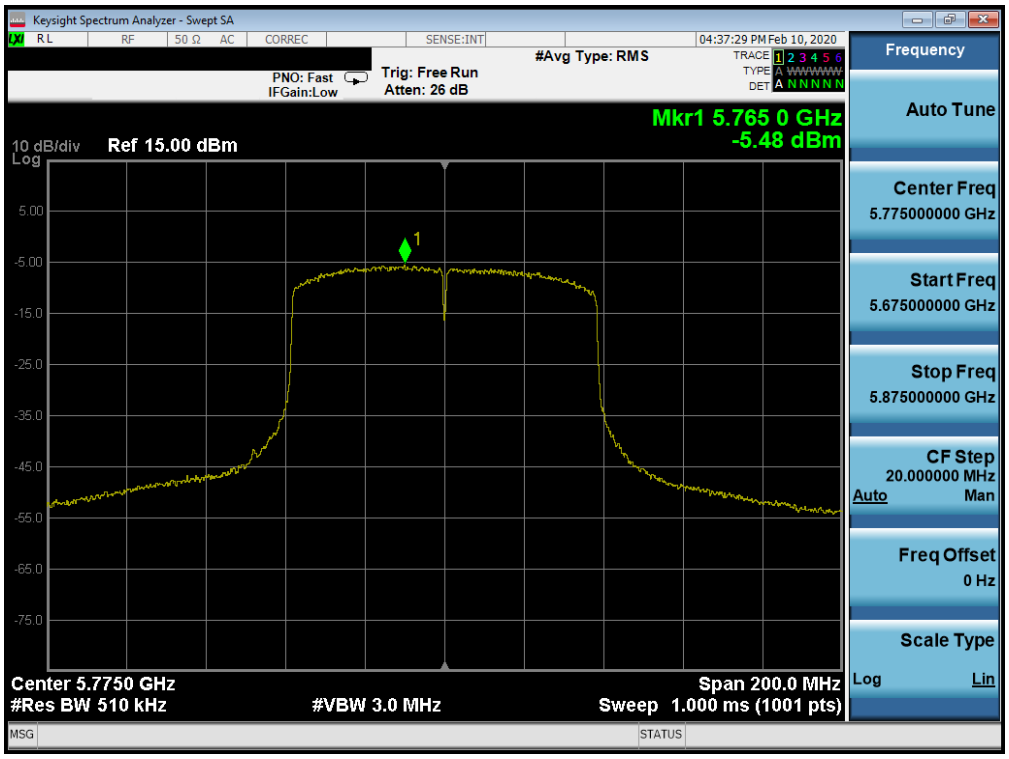


Plot 7-155. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 3) – Ch. 159)



Plot 7-156. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 3) – Ch. 155)

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Summed MIMO Power Spectral Density Measurements

	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Antenna-1 Power Density [dBm]	Antenna-2 Power Density [dBm]	Summed MIMO Power Density [dBm]	Max Power Density [dBm/MHz]	Margin [dB]
Band 1	5180	36	a	6	3.66	4.35	7.03	11.0	-3.97
	5200	40	a	6	3.96	4.22	7.10	11.0	-3.90
	5240	48	a	6	4.28	4.28	7.29	11.0	-3.71
	5180	36	n (20MHz)	6.5/7.2 (MCS0)	3.21	3.74	6.49	11.0	-4.51
	5200	40	n (20MHz)	6.5/7.2 (MCS0)	3.72	4.14	6.94	11.0	-4.06
	5240	48	n (20MHz)	6.5/7.2 (MCS0)	3.64	3.95	6.80	11.0	-4.20
	5190	38	n (40MHz)	13.5/15 (MCS0)	0.17	0.64	3.42	11.0	-7.58
	5230	46	n (40MHz)	13.5/15 (MCS0)	0.33	0.96	3.66	11.0	-7.34
	5210	42	ac (80MHz)	29.3/32.5 (MCS0)	-4.52	-3.77	-1.12	11.0	-12.12
Band 2A	5260	52	a	6	3.57	4.16	6.89	11.0	-4.11
	5280	56	a	6	3.43	4.13	6.80	11.0	-4.20
	5320	64	a	6	3.76	4.43	7.12	11.0	-3.88
	5260	52	n (20MHz)	6.5/7.2 (MCS0)	3.33	3.73	6.55	11.0	-4.45
	5280	56	n (20MHz)	6.5/7.2 (MCS0)	3.07	3.54	6.32	11.0	-4.68
	5320	64	n (20MHz)	6.5/7.2 (MCS0)	3.17	4.11	6.67	11.0	-4.33
	5270	54	n (40MHz)	13.5/15 (MCS0)	-0.34	0.59	3.16	11.0	-7.84
	5310	62	n (40MHz)	13.5/15 (MCS0)	-0.15	0.74	3.33	11.0	-7.67
	5290	58	ac (80MHz)	29.3/32.5 (MCS0)	-4.66	-3.90	-1.25	11.0	-12.25
Band 2C	5500	100	a	6	2.34	3.87	6.18	11.0	-4.82
	5600	120	a	6	2.43	3.49	6.00	11.0	-5.00
	5720	144	a	6	2.63	4.39	6.61	11.0	-4.39
	5500	100	n (20MHz)	6.5/7.2 (MCS0)	1.80	3.49	5.74	11.0	-5.26
	5600	120	n (20MHz)	6.5/7.2 (MCS0)	1.71	3.07	5.46	11.0	-5.54
	5720	144	n (20MHz)	6.5/7.2 (MCS0)	2.05	3.87	6.07	11.0	-4.93
	5510	102	n (40MHz)	13.5/15 (MCS0)	-1.37	0.68	2.78	11.0	-8.22
	5590	118	n (40MHz)	13.5/15 (MCS0)	-1.53	0.12	2.38	11.0	-8.62
	5710	142	n (40MHz)	13.5/15 (MCS0)	-1.14	0.94	3.03	11.0	-7.97
	5530	106	ac (80MHz)	29.3/32.5 (MCS0)	-4.85	-3.39	-1.04	11.0	-12.04
	5610	122	ac (80MHz)	29.3/32.5 (MCS0)	-5.34	-3.80	-1.49	11.0	-12.49
	5690	138	ac (80MHz)	29.3/32.5 (MCS0)	-5.44	-3.08	-1.09	11.0	-12.09

Table 7-22. Bands 1, 2A, 2C MIMO Conducted Power Spectral Density Measurements

	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Antenn-1 Power Density [dBm]	Antenn-2 Power Density [dBm]	Summed MIMO Power Density [dBm]	Max Permissible Power Density [dBm/500kHz]	Margin [dB]
Band 3	5745	149	a	6	-0.01	1.12	3.60	30.0	-26.40
	5785	157	a	6	-0.22	1.22	3.57	30.0	-26.43
	5825	165	a	6	-0.83	0.91	3.14	30.0	-26.86
	5745	149	n (20MHz)	6.5/7.2 (MCS0)	-0.25	0.96	3.41	30.0	-26.59
	5785	157	n (20MHz)	6.5/7.2 (MCS0)	-0.71	0.64	3.03	30.0	-26.97
	5825	165	n (20MHz)	6.5/7.2 (MCS0)	-1.15	0.69	2.88	30.0	-27.12
	5755	151	n (40MHz)	13.5/15 (MCS0)	-3.79	-1.82	0.32	30.0	-29.68
	5795	159	n (40MHz)	13.5/15 (MCS0)	-4.03	-2.32	-0.08	30.0	-30.08
	5775	155	ac (80MHz)	29.3/32.5 (MCS0)	-7.39	-5.48	-3.32	30.0	-33.32

Table 7-23. Band 3 MIMO Conducted Power Spectral Density Measurements

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Note:

Per ANSI C63.10-2013 Section 14.3.2.2 and KDB 662911 v02r01 Section E)2), the power spectral density at Antenna 1 and Antenna 2 were first measured separately as shown in the section above. The measured values were then summed in linear power units then converted back to dBm.

Sample MIMO Calculation:

At 5180MHz in 802.11n (20MHz BW) mode, the average conducted power spectral density was measured to be 3.21 dBm for Antenna-1 and 3.74 dBm for Antenna-2.

Antenna 1 + Antenna 2 = MIMO

(3.21 dBm + 3.74 dBm) = (2.09 mW + 2.37 mW) = 4.46 mW = 6.49 dBm

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7.6 Radiated Spurious Emission Measurements – Above 1GHz

§15.407(b) §15.205 §15.209; RSS-Gen [8.9]

Test Overview and Limit

All out of band radiated spurious emissions are measured with a spectrum analyzer connected to a receive antenna while the EUT is operating at its maximum duty cycle, at its maximum power control level, as defined in ANSI C63.10-2013 and KDB 789033 D02 v02r01, and at the appropriate frequencies. All channels, modes (e.g. 802.11a, 802.11n (20MHz BW), 802.11n (40MHz BW), and 802.11ac (80MHz)), and modulations/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 and 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of −27 dBm/MHz.

For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 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 and Table 6 of RSS-Gen (8.10) must not exceed the limits shown in Table 7-24 per Section 15.209 and RSS-Gen (8.9).

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

Table 7-24. Radiated Limits

Test Procedures Used

ANSI C63.10-2013 – Sections 12.7.7.2, 12.7.6, 12.7.5
KDB 789033 D02 v02r01 – Section G

Test Settings

Average Measurements above 1GHz (Method AD)

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

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Peak Measurements above 1GHz

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

Peak Measurements below 1GHz

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. Span was set greater than 1MHz
3. RBW = 120kHz
4. Detector = CISPR quasi-peak
5. Sweep time = auto couple
6. Trace was allowed to stabilize

Test Setup

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

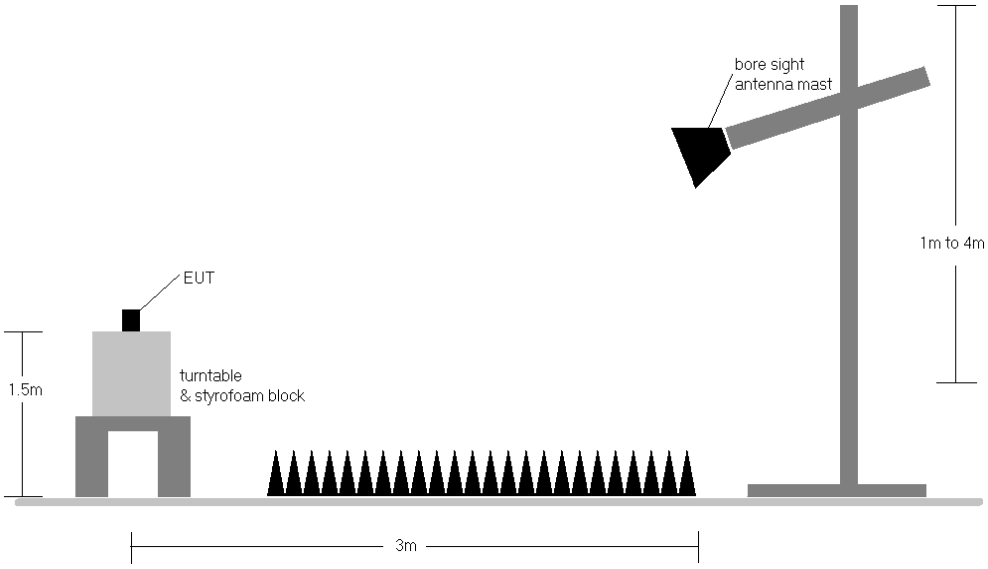

Figure 7-5. Test Instrument & Measurement Setup

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Test Notes

1. All emissions that lie in the restricted bands (denoted by a * next to the frequency) specified in §15.205 and Section 8.10 of RSS-Gen are below the limit shown in Table 7-24.
2. All spurious emissions lying in restricted bands specified in §15.205 and Section 8.10 of RSS-Gen are below the limit shown in Table 7-24. 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. The worst-case emissions are reported however emissions whose levels were not within 20dB of the respective limits were not reported.
6. Emissions below 18GHz were measured at a 3 meter test distance while emissions above 18GHz were measured at a 1 meter test distance with the application of a distance correction factor.
7. Radiated spurious emissions were investigated while operating in MIMO mode, however, it was determined that single antenna operation produced the worst case emissions. Since the emissions produced from MIMO operation were found to be more than 20dB below the limit, the MIMO emissions are not reported.
8. The wide spectrum spurious emissions plots shown on the following pages are used only for the purpose of emission identification. Any emissions found to be within 20dB of the limit are fully investigated and the results are shown in this section.
9. The "-" shown in the following RSE tables are used to denote a noise floor measurement.

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 $_{[dB]}$
- 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 was calculated using the formula:
  Offset (dB) = (Antenna Factor + Cable Loss + Attenuator) – Preamplifier Gain

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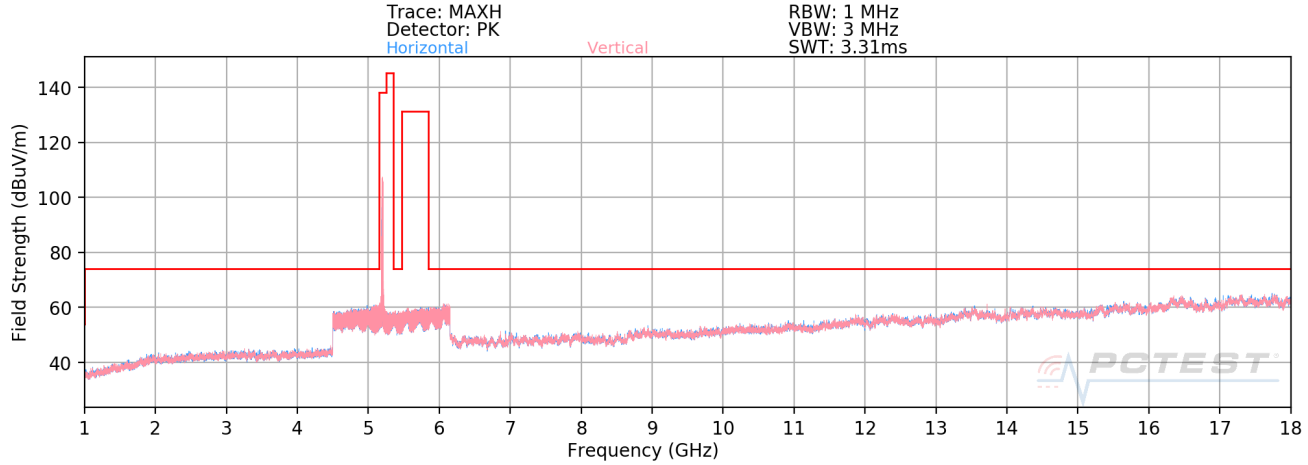
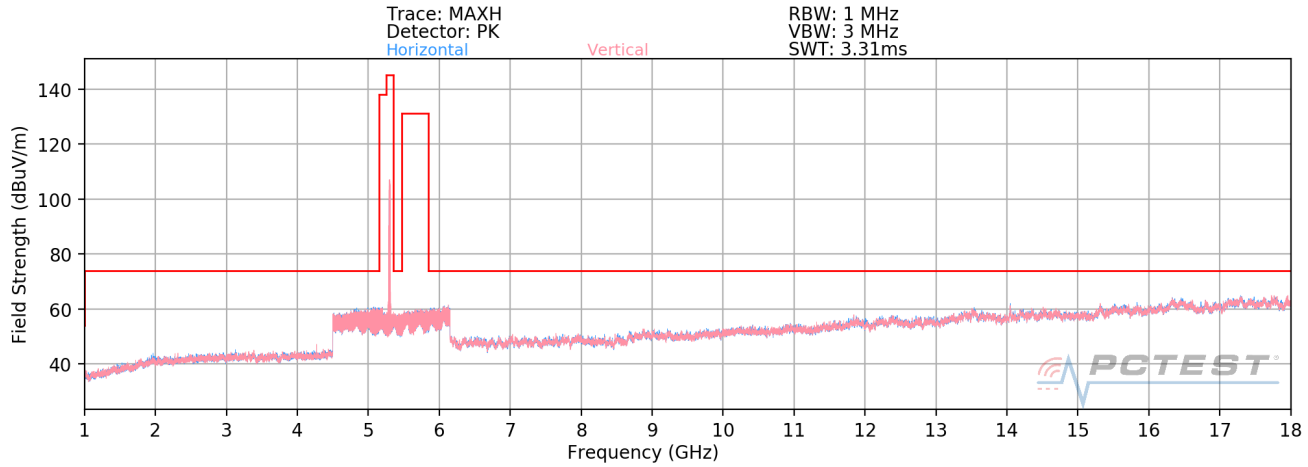
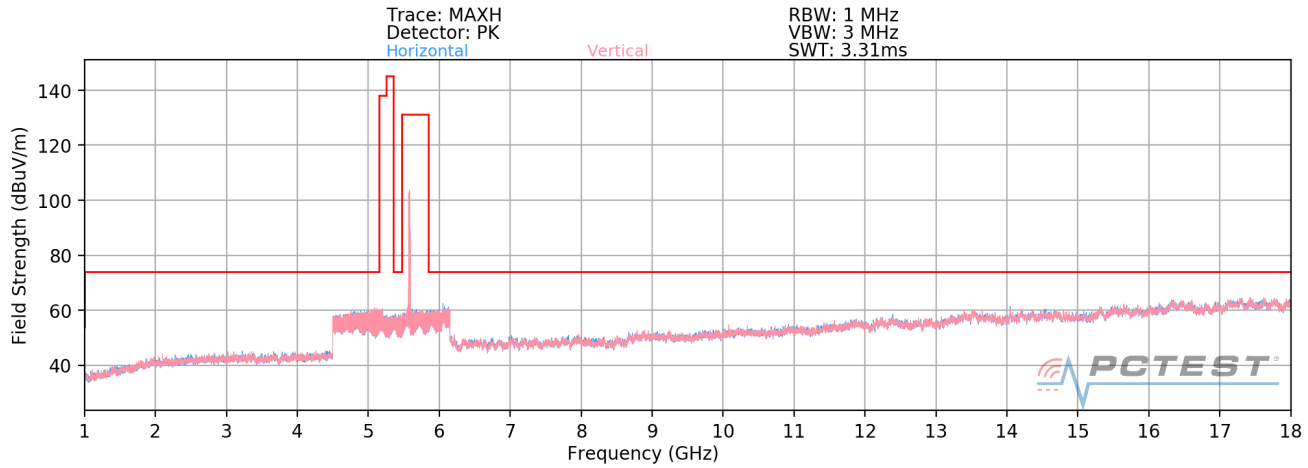
7.6.1 SISO Antenna-1 Radiated Spurious Emission Measurements



Plot 7-157. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11a – U1 Ch. 40)



Plot 7-158. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11a – U2A Ch. 56)



Plot 7-159. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11a – U2C Ch. 120)

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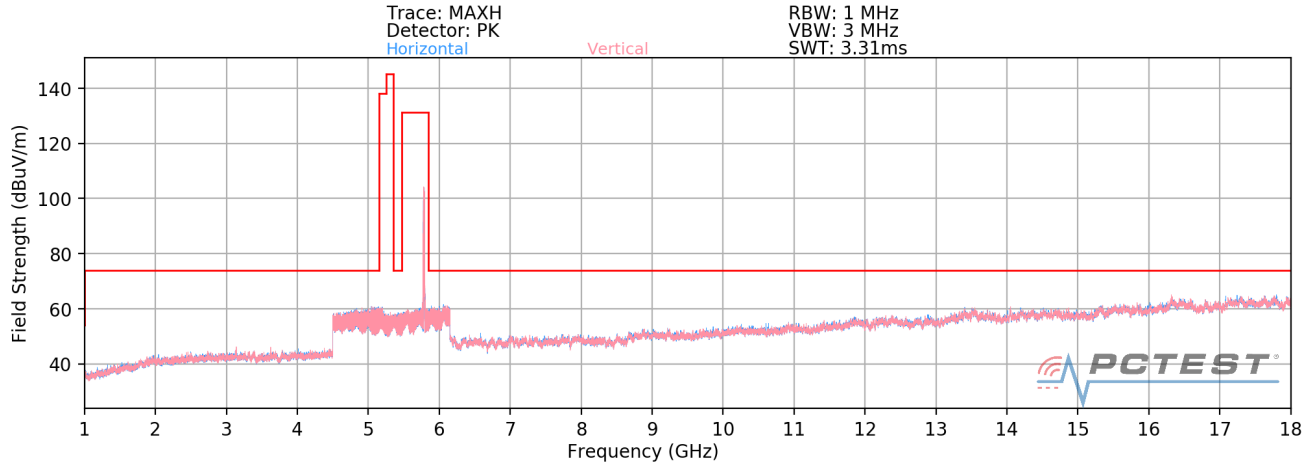

Plot 7-160. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11a – U3 Ch. 157)

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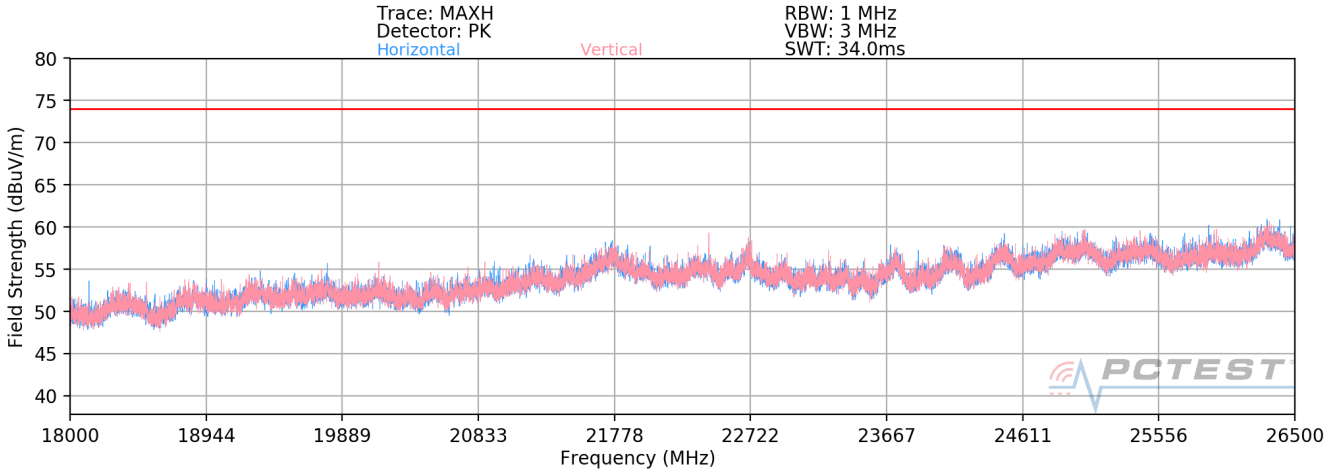
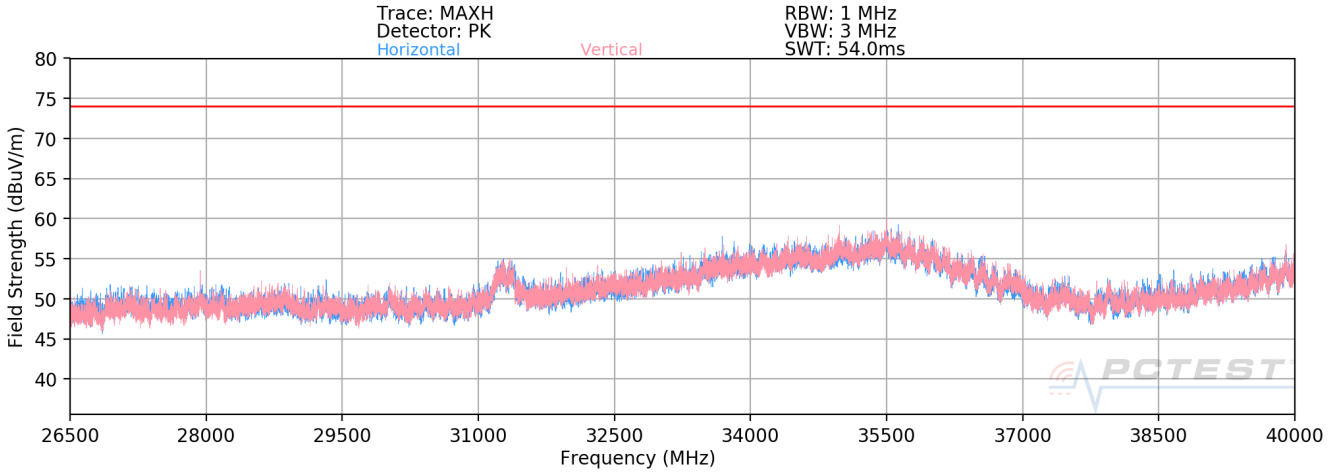
SISO Antenna-1 Radiated Spurious Emissions Measurements (Above 18GHz)



Plot 7-161. Radiated Spurious Plot 18GHz - 26.5GHz SISO ANT1 (802.11a)



Plot 7-162. Radiated Spurious Plot 26.5GHz - 40GHz SISO ANT1 (802.11a)

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SISO Antenna-1 Radiated Spurious Emission Measurements

§15.407(b) §15.205 & §15.209; RSS-Gen [8.9]

Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5180MHz
Channel: 36

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	10360.00	Peak	H	175	59	-67.57	11.41	0.00	50.84	68.20	-17.36
*	15540.00	Average	H	-	-	-79.38	13.23	0.00	40.85	53.98	-13.13
*	15540.00	Peak	H	-	-	-67.56	13.23	0.00	52.67	73.98	-21.31
*	20720.00	Average	H	-	-	-75.95	17.51	-9.54	39.02	53.98	-14.96
*	20720.00	Peak	H	-	-	-65.52	17.51	-9.54	49.45	73.98	-24.53
	25900.00	Peak	H	-	-	-65.30	19.88	-9.54	52.04	68.20	-16.16

Table 7-25. Radiated Measurements SISO ANT1

Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5200MHz
Channel: 40

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	10400.00	Peak	H	179	1	-68.16	11.17	0.00	50.01	68.20	-18.19
*	15600.00	Average	H	-	-	-79.41	12.81	0.00	40.40	53.98	-13.58
*	15600.00	Peak	H	-	-	-68.12	12.81	0.00	51.69	73.98	-22.29
*	20800.00	Average	H	-	-	-88.18	17.87	-9.54	27.14	53.98	-26.84
*	20800.00	Peak	H	-	-	-66.20	17.87	-9.54	49.12	73.98	-24.86
	26000.00	Peak	H	-	-	-63.50	20.15	-9.54	54.10	68.20	-14.10

Table 7-26. Radiated Measurements SISO ANT1

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Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5240MHz
Channel: 48

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	10480.00	Peak	H	-	-	-67.99	11.37	0.00	50.38	68.20	-17.82
*	15720.00	Average	H	-	-	-79.66	15.18	0.00	42.52	53.98	-11.46
*	15720.00	Peak	H	-	-	-69.11	15.18	0.00	53.07	73.98	-20.91
*	20960.00	Average	H	-	-	-75.08	18.06	-9.54	40.43	53.98	-13.54
*	20960.00	Peak	H	-	-	-65.07	18.06	-9.54	50.44	73.98	-23.53
	26200.00	Peak	H	-	-	-64.77	20.23	-9.54	52.92	68.20	-15.28

Table 7-27. Radiated Measurements SISO ANT1

Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5260MHz
Channel: 52

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	10520.00	Peak	H	-	-	-68.44	11.86	0.00	50.42	68.20	-17.78
*	15780.00	Average	H	-	-	-79.77	13.75	0.00	40.98	53.98	-13.00
*	15780.00	Peak	H	-	-	-69.43	13.75	0.00	51.32	73.98	-22.66
*	21040.00	Average	H	-	-	-83.58	18.36	-9.54	32.23	53.98	-21.75
*	21040.00	Peak	H	-	-	-64.10	18.36	-9.54	51.71	73.98	-22.27
	26300.00	Peak	H	-	-	-64.36	20.96	-9.54	54.05	68.20	-14.15

Table 7-28. Radiated Measurements SISO ANT1

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Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5280MHz
Channel: 56

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	10560.00	Peak	H	-	-	-68.40	12.47	0.00	51.07	68.20	-17.13
*	15840.00	Average	H	-	-	-79.52	15.16	0.00	42.64	53.98	-11.34
*	15840.00	Peak	H	-	-	-68.99	15.16	0.00	53.17	73.98	-20.81
*	21120.00	Average	H	-	-	-79.55	18.17	-9.54	36.07	53.98	-17.90
*	21120.00	Peak	H	-	-	-63.92	18.17	-9.54	51.70	73.98	-22.27
	26400.00	Peak	H	-	-	-62.40	20.65	-9.54	55.71	68.20	-12.49

Table 7-29. Radiated Measurements SISO ANT1

Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5320MHz
Channel: 64

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
*	10640.00	Average	H	-	-	-79.52	13.08	0.00	40.56	53.98	-13.42
*	10640.00	Peak	H	-	-	-68.47	13.08	0.00	51.61	73.98	-22.37
*	15960.00	Average	H	-	-	-79.55	13.43	0.00	40.88	53.98	-13.10
*	15960.00	Peak	H	-	-	-68.44	13.43	0.00	51.99	73.98	-21.99
*	21280.00	Average	H	-	-	-83.59	18.57	-9.54	32.44	53.98	-21.54
*	21280.00	Peak	H	-	-	-65.07	18.57	-9.54	50.96	73.98	-23.02
	26600.00	Peak	H	-	-	-53.80	5.16	-9.54	48.82	68.20	-19.38

Table 7-30. Radiated Measurements SISO ANT1

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Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5500MHz
Channel: 100

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
*	11000.00	Average	H	139	17	-79.33	12.53	0.00	40.20	53.98	-13.78
*	11000.00	Peak	H	139	17	-68.92	12.53	0.00	50.61	73.98	-23.37
	16500.00	Peak	H	-	-	-69.16	15.04	0.00	52.88	68.20	-15.32
	22000.00	Peak	H	-	-	-64.30	19.12	-9.54	52.27	68.20	-15.93
	27500.00	Peak	H	-	-	-52.66	3.98	-9.54	48.78	68.20	-19.42

Table 7-31. Radiated Measurements SISO ANT1

Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5600MHz
Channel: 120

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
*	11200.00	Average	H	144	17	-78.58	12.71	0.00	41.13	53.98	-12.85
*	11200.00	Peak	H	144	17	-67.30	12.71	0.00	52.41	73.98	-21.57
	16800.00	Peak	H	-	-	-68.34	15.84	0.00	54.50	68.20	-13.70
*	22400.00	Average	H	-	-	-77.99	20.03	-9.54	39.50	53.98	-14.48
*	22400.00	Peak	H	-	-	-64.24	20.03	-9.54	53.25	73.98	-20.73
	28000.00	Peak	H	-	-	-53.13	4.70	-9.54	49.03	68.20	-19.17

Table 7-32. Radiated Measurements SISO ANT1

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Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5720MHz
Channel: 144

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
*	11440.00	Average	H	-	-	-79.51	12.70	0.00	40.19	53.98	-13.79
*	11440.00	Peak	H	-	-	-68.49	12.70	0.00	51.21	73.98	-22.77
	17160.00	Peak	H	-	-	-68.88	17.71	0.00	55.83	68.20	-12.37
*	22880.00	Average	H	-	-	-81.54	19.50	-9.54	35.42	53.98	-18.56
*	22880.00	Peak	H	-	-	-64.23	19.50	-9.54	52.73	73.98	-21.25
	28600.00	Peak	H	-	-	-53.93	5.14	-9.54	48.67	68.20	-19.53

Table 7-33. Radiated Measurements SISO ANT1

Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5745MHz
Channel: 149

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
*	11490.00	Average	H	-	-	-79.54	13.38	0.00	40.84	53.98	-13.14
*	11490.00	Peak	H	-	-	-67.72	13.38	0.00	52.66	73.98	-21.32
	17235.00	Peak	H	-	-	-68.06	17.44	0.00	56.38	68.20	-11.82
*	22980.00	Average	H	-	-	-78.46	19.89	-9.54	38.88	53.98	-15.10
*	22980.00	Peak	H	-	-	-64.97	19.89	-9.54	52.37	73.98	-21.61
	28725.00	Peak	H	-	-	-52.74	4.66	-9.54	49.38	68.20	-18.82

Table 7-34. Radiated Measurements SISO ANT1

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Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5785MHz
Channel: 157

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
*	11570.00	Average	H	-	-	-79.37	12.70	0.00	40.33	53.98	-13.65
*	11570.00	Peak	H	-	-	-68.22	12.70	0.00	51.48	73.98	-22.50
	17355.00	Peak	H	-	-	-68.79	19.46	0.00	57.67	68.20	-10.53
	23140.00	Peak	H	-	-	-63.98	19.59	-9.54	53.07	68.20	-15.13
	28925.00	Peak	H	-	-	-54.01	4.43	-9.54	47.88	68.20	-20.32

Table 7-35. Radiated Measurements SISO ANT1

Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5825MHz
Channel: 165

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
*	11650.00	Average	H	-	-	-79.43	13.24	0.00	40.81	53.98	-13.17
*	11650.00	Peak	H	-	-	-68.88	13.24	0.00	51.36	73.98	-22.62
	17475.00	Peak	H	-	-	-68.83	20.06	0.00	58.23	68.20	-9.97
	23300.00	Peak	H	-	-	-63.84	18.93	-9.54	52.55	68.20	-15.65
	29125.00	Peak	H	-	-	-50.86	3.48	-9.54	50.08	68.20	-18.12

Table 7-36. Radiated Measurements SISO ANT1

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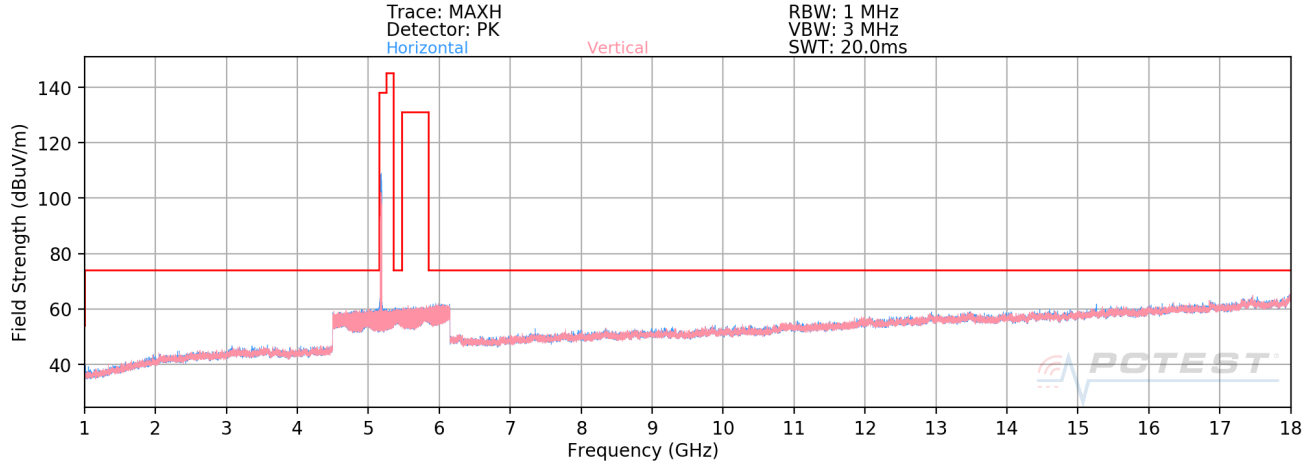
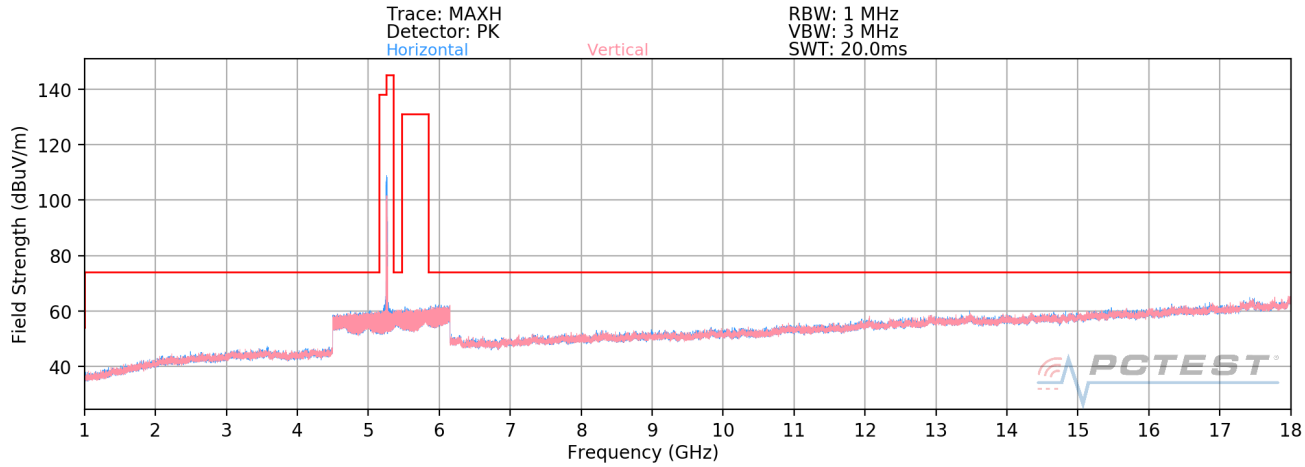
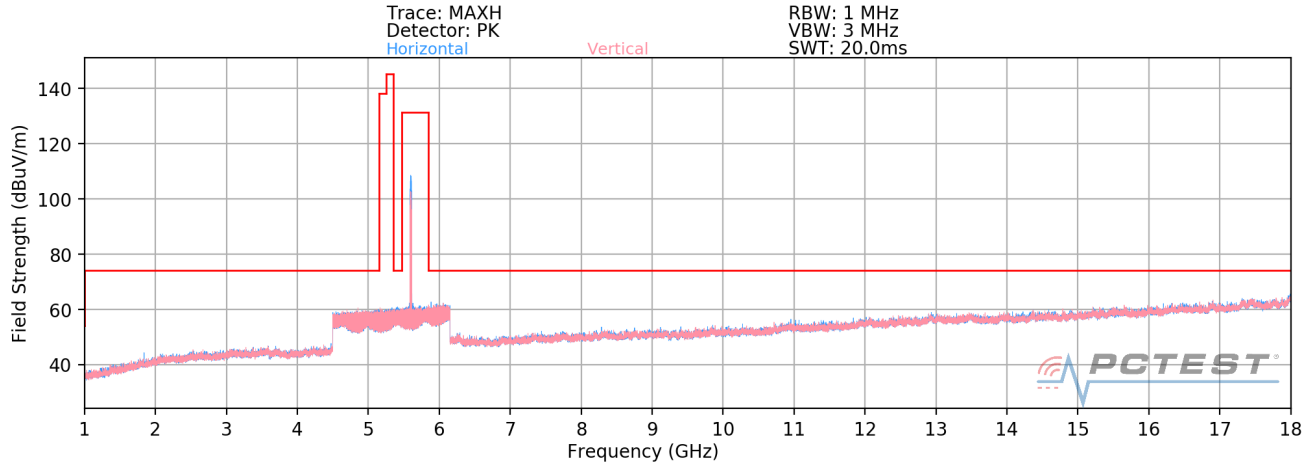
7.6.2 SISO Antenna-2 Radiated Spurious Emission Measurements



Plot 7-163. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11a – U1 Ch. 40)



Plot 7-164. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11a – U2A Ch. 56)



Plot 7-165. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11a – U2C Ch. 120)

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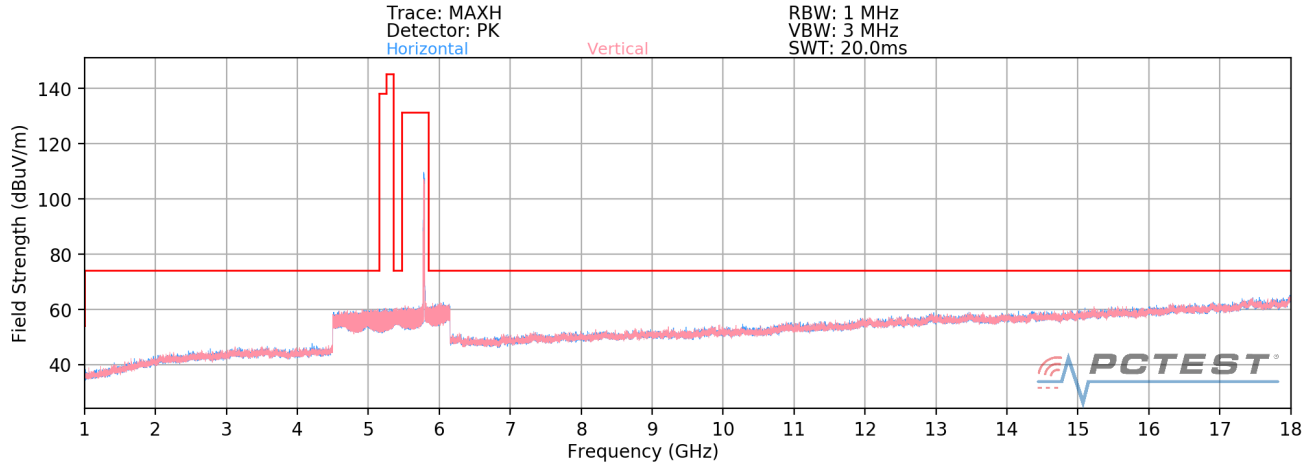

Plot 7-166. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11a – U3 Ch. 157)

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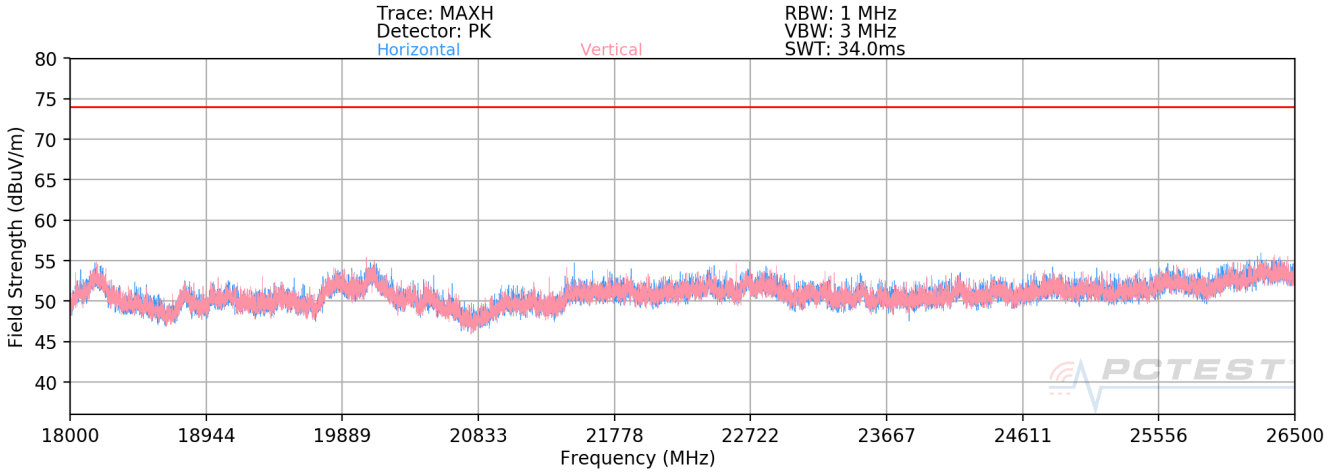
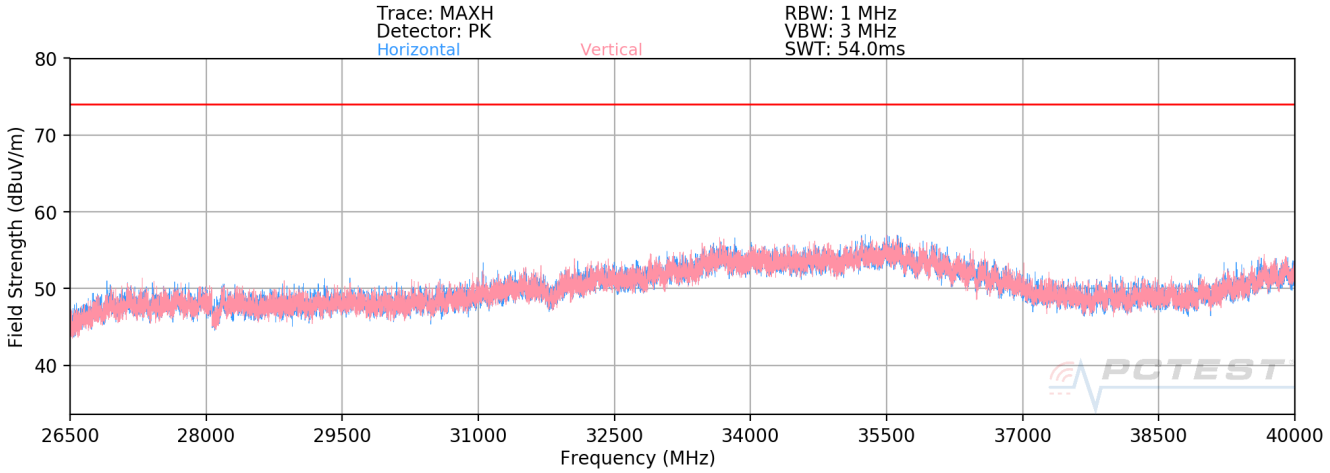
SISO Antenna-2 Radiated Spurious Emissions Measurements (Above 18GHz)



Plot 7-167. Radiated Spurious Plot above 18GHz - 26.5GHz SISO ANT2 (802.11a)



Plot 7-168. Radiated Spurious Plot 26.5GHz - 40GHz SISO ANT2 (802.11a)

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SISO Antenna-2 Radiated Spurious Emission Measurements

§15.407(b) §15.205 & §15.209; RSS-Gen [8.9]

Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5180MHz
Channel: 36

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	10360.00	Peak	H	187	136	-68.50	11.41	0.00	49.91	68.20	-18.29
*	15540.00	Average	H	-	-	-79.44	13.23	0.00	40.79	53.98	-13.19
*	15540.00	Peak	H	-	-	-68.51	13.23	0.00	51.72	73.98	-22.26
*	20720.00	Average	H	-	-	-75.57	17.51	-9.54	39.40	53.98	-14.58
*	20720.00	Peak	H	-	-	-67.06	17.51	-9.54	47.91	73.98	-26.07
	25900.00	Peak	H	-	-	-58.76	19.88	-9.54	58.58	68.20	-9.62

Table 7-37. Radiated Measurements SISO ANT2

Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5200MHz
Channel: 40

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	10400.00	Peak	H	-	-	-68.43	11.17	0.00	49.74	68.20	-18.46
*	15600.00	Average	H	-	-	-79.49	12.81	0.00	40.32	53.98	-13.66
*	15600.00	Peak	H	-	-	-68.83	12.81	0.00	50.98	73.98	-23.00
*	20800.00	Average	H	-	-	-77.13	17.87	-9.54	38.19	53.98	-15.79
*	20800.00	Peak	H	-	-	-67.09	17.87	-9.54	48.23	73.98	-25.75
	26000.00	Peak	H	-	-	-58.69	20.15	-9.54	58.91	68.20	-9.29

Table 7-38. Radiated Measurements SISO ANT2

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Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5240MHz
Channel: 48

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	10480.00	Peak	H	-	-	-67.73	11.37	0.00	50.64	68.20	-17.56
*	15720.00	Average	H	-	-	-79.69	15.18	0.00	42.49	53.98	-11.49
*	15720.00	Peak	H	-	-	-69.14	15.18	0.00	53.04	73.98	-20.94
*	20960.00	Average	H	-	-	-82.52	18.06	-9.54	32.99	53.98	-20.98
*	20960.00	Peak	H	-	-	-65.94	18.06	-9.54	49.57	73.98	-24.40
	26200.00	Peak	H	-	-	-62.47	20.23	-9.54	55.22	68.20	-12.98

Table 7-39. Radiated Measurements SISO ANT2

Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5260MHz
Channel: 52

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	10520.00	Peak	H	-	-	-67.78	11.86	0.00	51.08	68.20	-17.12
*	15780.00	Average	H	-	-	-79.83	13.75	0.00	40.92	53.98	-13.06
*	15780.00	Peak	H	-	-	-69.34	13.75	0.00	51.41	73.98	-22.57
*	21040.00	Average	H	-	-	-84.03	18.36	-9.54	31.78	53.98	-22.20
*	21040.00	Peak	H	-	-	-64.54	18.36	-9.54	51.27	73.98	-22.71
	26300.00	Peak	H	-	-	-59.76	20.96	-9.54	58.65	68.20	-9.55

Table 7-40. Radiated Measurements SISO ANT2

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Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5280MHz
Channel: 56

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	10560.00	Peak	H	-	-	-69.11	12.47	0.00	50.36	68.20	-17.84
*	15840.00	Average	H	-	-	-79.54	15.16	0.00	42.62	53.98	-11.36
*	15840.00	Peak	H	-	-	-68.98	15.16	0.00	53.18	73.98	-20.80
*	21120.00	Average	H	-	-	-75.23	18.17	-9.54	40.39	53.98	-13.58
*	21120.00	Peak	H	-	-	-64.13	18.17	-9.54	51.49	73.98	-22.48
	26400.00	Peak	H	-	-	-59.02	20.65	-9.54	59.09	68.20	-9.11

Table 7-41. Radiated Measurements SISO ANT2

Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5320MHz
Channel: 64

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
*	10640.00	Average	H	-	-	-79.56	13.08	0.00	40.52	53.98	-13.46
*	10640.00	Peak	H	-	-	-69.34	13.08	0.00	50.74	73.98	-23.24
*	15960.00	Average	H	-	-	-79.64	13.43	0.00	40.79	53.98	-13.19
*	15960.00	Peak	H	-	-	-69.06	13.43	0.00	51.37	73.98	-22.61
*	21280.00	Average	H	-	-	-81.61	18.57	-9.54	34.42	53.98	-19.56
*	21280.00	Peak	H	-	-	-65.93	18.57	-9.54	50.10	73.98	-23.88
	26600.00	Peak	H	-	-	-53.77	5.16	-9.54	48.85	68.20	-19.35

Table 7-42. Radiated Measurements SISO ANT2

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Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5500MHz
Channel: 100

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
*	11000.00	Average	H	113	216	-78.61	12.53	0.00	40.92	53.98	-13.06
*	11000.00	Peak	H	113	216	-66.62	12.53	0.00	52.91	73.98	-21.07
	16500.00	Peak	H	-	-	-68.91	15.04	0.00	53.13	68.20	-15.07
	22000.00	Peak	H	-	-	-64.16	19.12	-9.54	52.41	68.20	-15.79
	27500.00	Peak	H	-	-	-53.16	3.98	-9.54	48.28	68.20	-19.92

Table 7-43. Radiated Measurements SISO ANT2

Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5600MHz
Channel: 120

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
*	11200.00	Average	H	213	212	-77.95	12.71	0.00	41.76	53.98	-12.22
*	11200.00	Peak	H	213	212	-66.49	12.71	0.00	53.22	73.98	-20.76
	16800.00	Peak	H	-	-	-68.82	15.84	0.00	54.02	68.20	-14.18
*	22400.00	Average	H	-	-	-78.92	20.03	-9.54	38.57	53.98	-15.41
*	22400.00	Peak	H	-	-	-64.24	20.03	-9.54	53.25	73.98	-20.73
	28000.00	Peak	H	-	-	-52.42	4.70	-9.54	49.74	68.20	-18.46

Table 7-44. Radiated Measurements SISO ANT2

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Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5720MHz
Channel: 144

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
*	11440.00	Average	H	-	-	-79.56	12.70	0.00	40.14	53.98	-13.84
*	11440.00	Peak	H	-	-	-68.80	12.70	0.00	50.90	73.98	-23.08
	17160.00	Peak	H	-	-	-68.97	17.71	0.00	55.74	68.20	-12.46
*	22880.00	Average	H	-	-	-74.53	19.50	-9.54	42.43	53.98	-11.55
*	22880.00	Peak	H	-	-	-63.59	19.50	-9.54	53.37	73.98	-20.61
	28600.00	Peak	H	-	-	-53.02	5.14	-9.54	49.58	68.20	-18.62

Table 7-45. Radiated Measurements SISO ANT2

Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5745MHz
Channel: 149

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
*	11490.00	Average	H	177	86	-79.28	13.38	0.00	41.10	53.98	-12.88
*	11490.00	Peak	H	177	86	-67.40	13.38	0.00	52.98	73.98	-21.00
	17235.00	Peak	H	-	-	-68.71	17.44	0.00	55.73	68.20	-12.47
*	22980.00	Average	H	-	-	-72.07	19.89	-9.54	45.27	53.98	-8.71
*	22980.00	Peak	H	-	-	-66.70	19.89	-9.54	50.64	73.98	-23.34
	28725.00	Peak	H	-	-	-54.20	4.66	-9.54	47.92	68.20	-20.28

Table 7-46. Radiated Measurements SISO ANT2

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Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5785MHz
Channel: 157

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
*	11570.00	Average	H	-	-	-79.40	12.70	0.00	40.30	53.98	-13.68
*	11570.00	Peak	H	-	-	-68.73	12.70	0.00	50.97	73.98	-23.01
	17355.00	Peak	H	-	-	-69.06	19.46	0.00	57.40	68.20	-10.80
	23140.00	Peak	H	-	-	-64.60	19.59	-9.54	52.45	68.20	-15.75
	28925.00	Peak	H	-	-	-53.29	4.43	-9.54	48.60	68.20	-19.60

Table 7-47. Radiated Measurements SISO ANT2

Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5825MHz
Channel: 165

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
*	11650.00	Average	H	-	-	-79.43	13.24	0.00	40.81	53.98	-13.17
*	11650.00	Peak	H	-	-	-67.78	13.24	0.00	52.46	73.98	-21.52
	17475.00	Peak	H	-	-	-68.47	20.06	0.00	58.59	68.20	-9.61
	23300.00	Peak	H	-	-	-65.55	18.93	-9.54	50.84	68.20	-17.36
	29125.00	Peak	H	-	-	-52.66	3.48	-9.54	48.28	68.20	-19.92

Table 7-48. Radiated Measurements SISO ANT2

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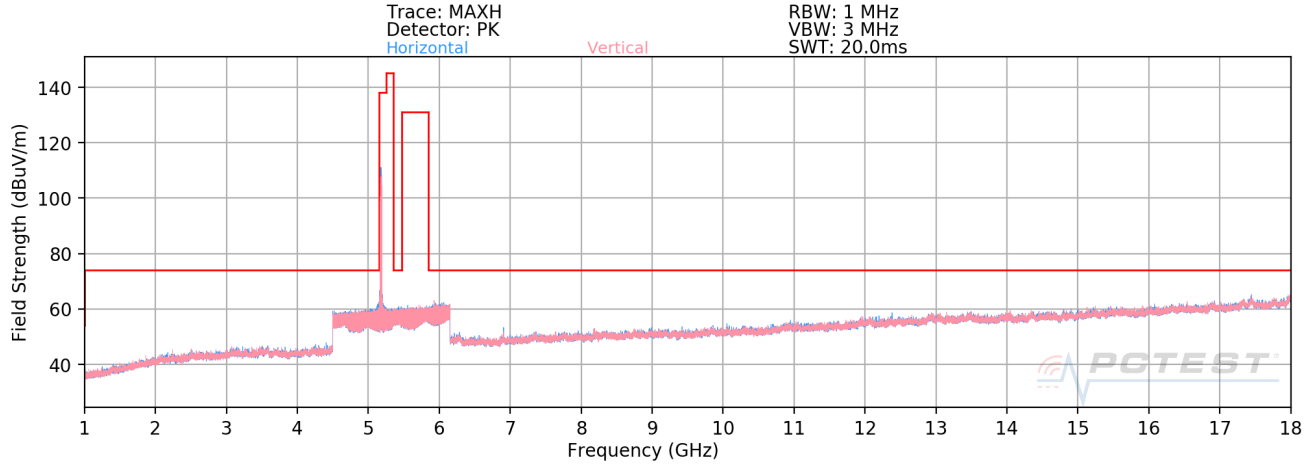
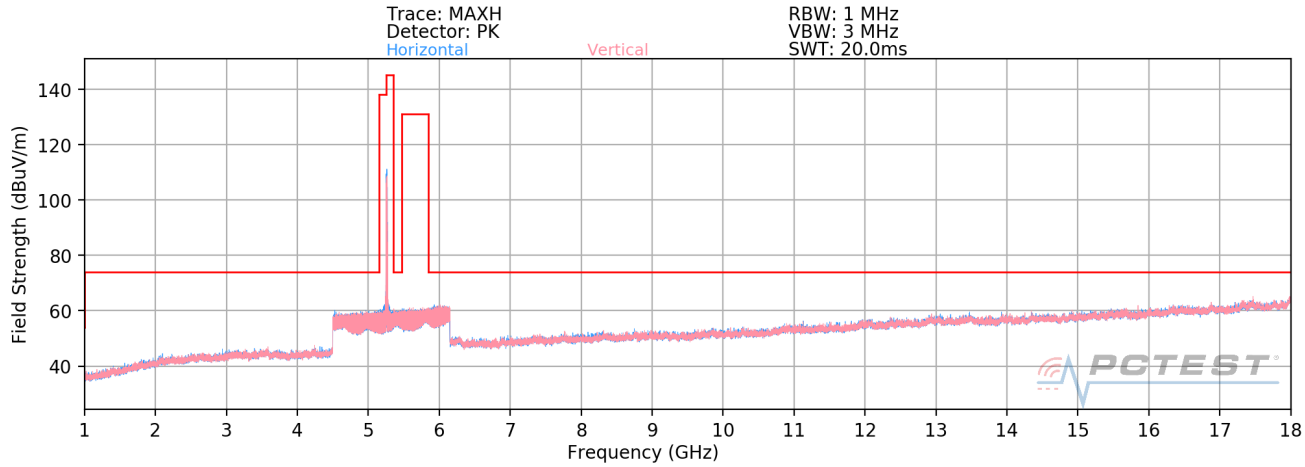
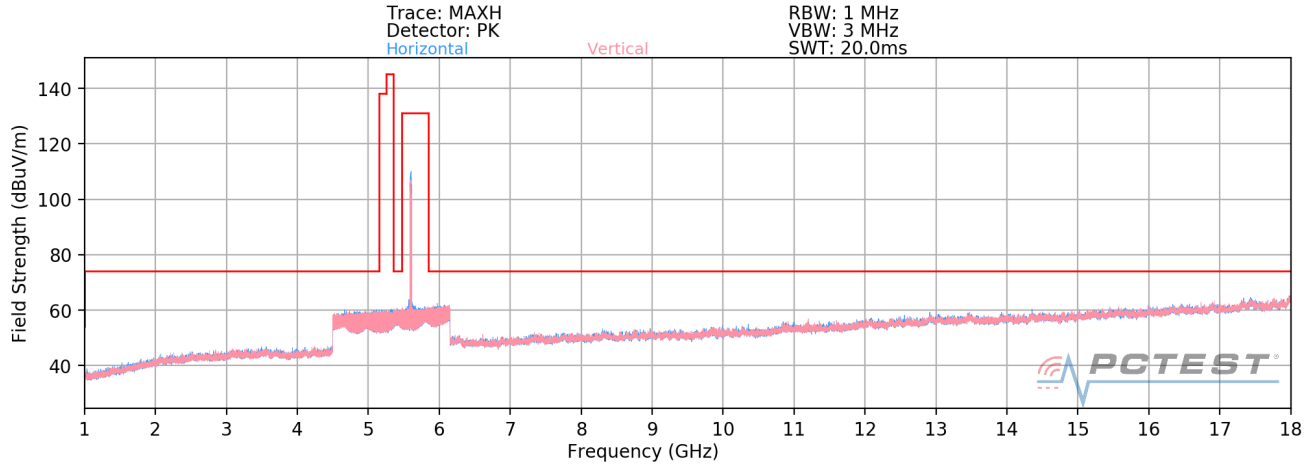
7.6.3 MIMO Radiated Spurious Emission Measurements



Plot 7-169. Radiated Spurious Plot above 1GHz MIMO (802.11a – U1 Ch. 40)



Plot 7-170. Radiated Spurious Plot above 1GHz MIMO (802.11a – U2A Ch. 56)



Plot 7-171. Radiated Spurious Plot above 1GHz MIMO (802.11a – U2C Ch. 120)

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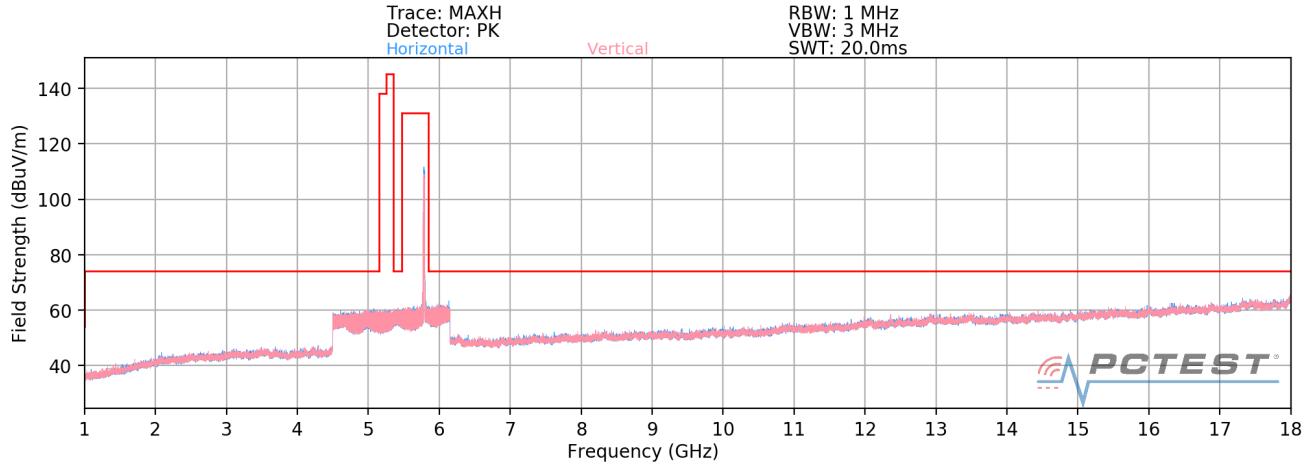

Plot 7-172. Radiated Spurious Plot above 1GHz MIMO (802.11a – U3 Ch. 157)

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MIMO Radiated Spurious Emission Measurements

§15.407(b) §15.205 & §15.209; RSS-Gen [8.9]

Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5180MHz
Channel: 36

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	10360.00	Peak	H	-	-	-68.94	11.41	0.00	49.47	68.20	-18.73
*	15540.00	Average	H	-	-	-79.49	13.23	0.00	40.74	53.98	-13.24
*	15540.00	Peak	H	-	-	-67.89	13.23	0.00	52.34	73.98	-21.64
*	20720.00	Average	H	-	-	-74.53	17.51	-9.54	40.44	53.98	-13.54
*	20720.00	Peak	H	-	-	-65.64	17.51	-9.54	49.33	73.98	-24.65
	25900.00	Peak	H	-	-	-65.33	19.88	-9.54	52.01	68.20	-16.19

Table 7-49. Radiated Measurements MIMO

Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5200MHz
Channel: 40

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	10400.00	Peak	H	-	-	-68.60	11.17	0.00	49.57	68.20	-18.63
*	15600.00	Average	H	-	-	-79.56	12.81	0.00	40.25	53.98	-13.73
*	15600.00	Peak	H	-	-	-68.80	12.81	0.00	51.01	73.98	-22.97
*	20800.00	Average	H	-	-	-74.64	17.87	-9.54	40.68	53.98	-13.30
*	20800.00	Peak	H	-	-	-65.57	17.87	-9.54	49.75	73.98	-24.23
	26000.00	Peak	H	-	-	-63.76	20.15	-9.54	53.84	68.20	-14.36

Table 7-50. Radiated Measurements MIMO

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Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5240MHz
Channel: 48

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	10480.00	Peak	H	-	-	-68.29	11.37	0.00	50.08	68.20	-18.12
*	15720.00	Average	H	-	-	-79.69	15.18	0.00	42.49	53.98	-11.49
*	15720.00	Peak	H	-	-	-69.12	15.18	0.00	53.06	73.98	-20.92
*	20960.00	Average	H	-	-	-81.61	18.06	-9.54	33.90	53.98	-20.07
*	20960.00	Peak	H	-	-	-65.07	18.06	-9.54	50.44	73.98	-23.53
	26200.00	Peak	H	-	-	-64.45	20.23	-9.54	53.24	68.20	-14.96

Table 7-51. Radiated Measurements MIMO

Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5260MHz
Channel: 52

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	10520.00	Peak	H	-	-	-68.66	11.86	0.00	50.20	68.20	-18.00
*	15780.00	Average	H	-	-	-79.81	13.75	0.00	40.94	53.98	-13.04
*	15780.00	Peak	H	-	-	-68.72	13.75	0.00	52.03	73.98	-21.95
*	21040.00	Average	H	-	-	-78.27	18.36	-9.54	37.54	53.98	-16.44
*	21040.00	Peak	H	-	-	-63.83	18.36	-9.54	51.98	73.98	-22.00
	26300.00	Peak	H	-	-	-64.83	20.96	-9.54	53.58	68.20	-14.62

Table 7-52. Radiated Measurements MIMO

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Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5280MHz
Channel: 56

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	10560.00	Peak	H	-	-	-69.02	12.47	0.00	50.45	68.20	-17.75
*	15840.00	Average	H	-	-	-79.60	15.16	0.00	42.56	53.98	-11.42
*	15840.00	Peak	H	-	-	-68.63	15.16	0.00	53.53	73.98	-20.45
*	21120.00	Average	H	-	-	-77.73	18.17	-9.54	37.89	53.98	-16.08
*	21120.00	Peak	H	-	-	-64.52	18.17	-9.54	51.10	73.98	-22.87
	26400.00	Peak	H	-	-	-63.78	20.65	-9.54	54.33	68.20	-13.87

Table 7-53. Radiated Measurements MIMO

Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5320MHz
Channel: 64

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
*	10640.00	Average	H	137	19	-79.12	13.08	0.00	40.96	53.98	-13.02
*	10640.00	Peak	H	137	19	-68.64	13.08	0.00	51.44	73.98	-22.54
*	15960.00	Average	H	-	-	-79.59	13.43	0.00	40.84	53.98	-13.14
*	15960.00	Peak	H	-	-	-69.19	13.43	0.00	51.24	73.98	-22.74
*	21280.00	Average	H	-	-	-77.89	18.57	-9.54	38.14	53.98	-15.84
*	21280.00	Peak	H	-	-	-63.85	18.57	-9.54	52.18	73.98	-21.80
	26600.00	Peak	H	-	-	-54.17	5.16	-9.54	48.45	68.20	-19.75

Table 7-54. Radiated Measurements MIMO

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Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5500MHz
Channel: 100

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
*	11000.00	Average	H	178	26	-76.75	12.53	0.00	42.78	53.98	-11.20
*	11000.00	Peak	H	178	26	-63.56	12.53	0.00	55.97	73.98	-18.01
	16500.00	Peak	H	-	-	-69.01	15.04	0.00	53.03	68.20	-15.17
	22000.00	Peak	H	-	-	-63.89	19.12	-9.54	52.68	68.20	-15.52
	27500.00	Peak	H	-	-	-52.75	3.98	-9.54	48.69	68.20	-19.51

Table 7-55. Radiated Measurements MIMO

Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5600MHz
Channel: 120

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
*	11200.00	Average	H	259	210	-75.26	12.71	0.00	44.45	53.98	-9.53
*	11200.00	Peak	H	259	210	-61.65	12.71	0.00	58.06	73.98	-15.92
	16800.00	Peak	H	-	-	-68.35	15.84	0.00	54.49	68.20	-13.71
*	22400.00	Average	H	-	-	-75.80	20.03	-9.54	41.69	53.98	-12.29
*	22400.00	Peak	H	-	-	-64.91	20.03	-9.54	52.58	73.98	-21.40
	28000.00	Peak	H	-	-	-53.22	4.70	-9.54	48.94	68.20	-19.26

Table 7-56. Radiated Measurements MIMO

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Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5720MHz
Channel: 144

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
*	11440.00	Average	H	267	288	-78.12	12.70	0.00	41.58	53.98	-12.40
*	11440.00	Peak	H	267	288	-65.19	12.70	0.00	54.51	73.98	-19.47
	17160.00	Peak	H	-	-	-68.78	17.71	0.00	55.93	68.20	-12.27
*	22880.00	Average	H	-	-	-78.95	19.50	-9.54	38.01	53.98	-15.97
*	22880.00	Peak	H	-	-	-63.62	19.50	-9.54	53.34	73.98	-20.64
	28600.00	Peak	H	-	-	-54.05	5.14	-9.54	48.55	68.20	-19.65

Table 7-57. Radiated Measurements MIMO

Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5745MHz
Channel: 149

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
*	11490.00	Average	H	218	285	-78.39	13.38	0.00	41.99	53.98	-11.99
*	11490.00	Peak	H	218	285	-66.57	13.38	0.00	53.81	73.98	-20.17
	17235.00	Peak	H	-	-	-68.21	17.44	0.00	56.23	68.20	-11.97
*	22980.00	Average	H	-	-	-79.91	19.89	-9.54	37.43	53.98	-16.55
*	22980.00	Peak	H	-	-	-64.39	19.89	-9.54	52.95	73.98	-21.03
	28725.00	Peak	H	-	-	-53.65	4.66	-9.54	48.47	69.20	-20.73

Table 7-58. Radiated Measurements MIMO

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Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5785MHz
Channel: 157

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
*	11570.00	Average	H	208	283	-78.76	12.70	0.00	40.94	53.98	-13.04
*	11570.00	Peak	H	208	283	-67.78	12.70	0.00	51.92	73.98	-22.06
	17355.00	Peak	H	-	-	-69.26	19.46	0.00	57.20	68.20	-11.00
	23140.00	Peak	H	-	-	-64.71	19.59	-9.54	52.34	68.20	-15.86
	28925.00	Peak	H	-	-	-54.48	4.43	-9.54	47.41	68.20	-20.79

Table 7-59. Radiated Measurements MIMO

Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5825MHz
Channel: 165

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
*	11650.00	Average	H	-	-	-79.33	13.24	0.00	40.91	53.98	-13.07
*	11650.00	Peak	H	-	-	-68.24	13.24	0.00	52.00	73.98	-21.98
	17475.00	Peak	H	-	-	-69.65	20.06	0.00	57.41	68.20	-10.79
	23300.00	Peak	H	-	-	-64.36	18.93	-9.54	52.03	68.20	-16.17
	29125.00	Peak	H	-	-	-52.85	3.48	-9.54	48.09	68.20	-20.11

Table 7-60. Radiated Measurements MIMO

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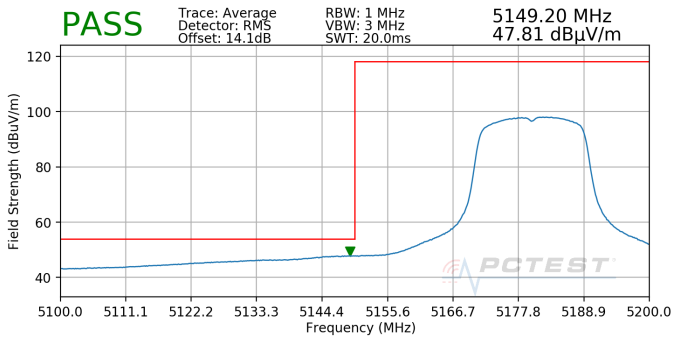
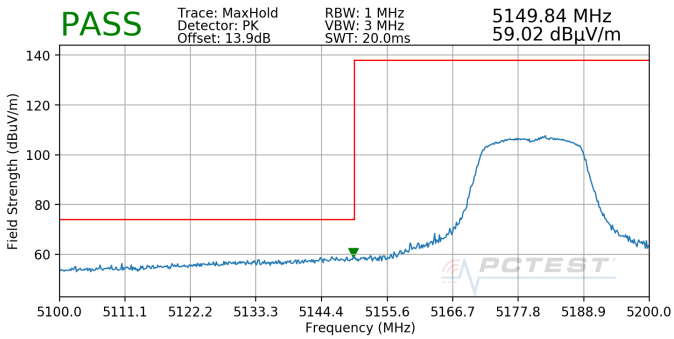
7.6.4 SISO Antenna-1 Radiated Band Edge Measurements (20MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209; RSS-Gen [8.9]; RSS-Gen [8.9]

Worst Case Mode:	802.11n
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5180MHz
Channel:	36

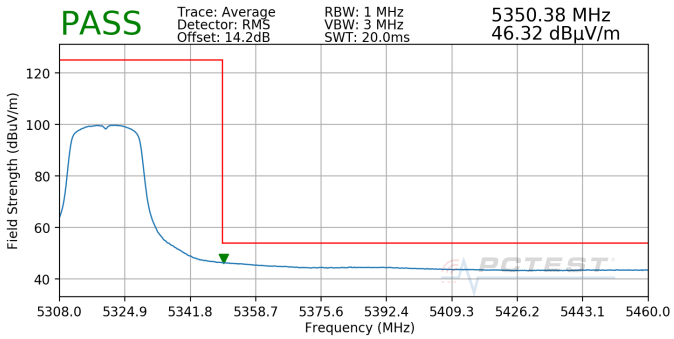


Plot 7-173. Radiated Lower Band Edge Plot SISO ANT1 (Average – UNII Band 1)

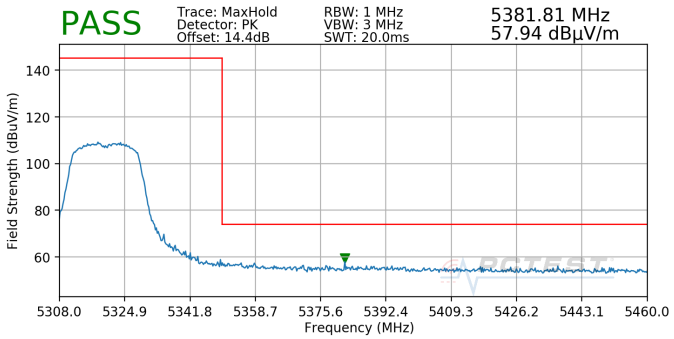


Plot 7-174. Radiated Lower Band Edge Plot SISO ANT1 (Peak – UNII Band 1)

Worst Case Mode:	802.11n
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5320MHz
Channel:	64



Plot 7-175. Radiated Upper Band Edge Plot SISO ANT1 (Average – UNII Band 2A)



Plot 7-176. Radiated Upper Band Edge Plot SISO ANT1 (Peak – UNII Band 2A)

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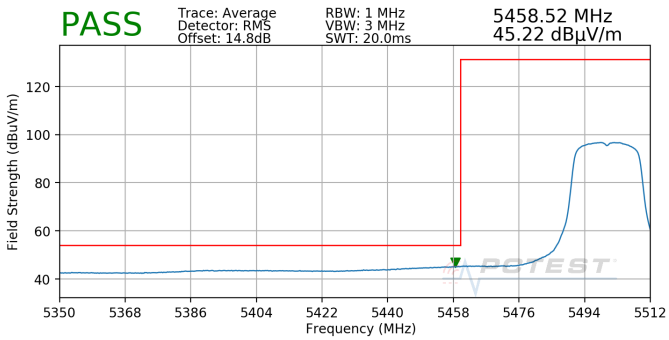
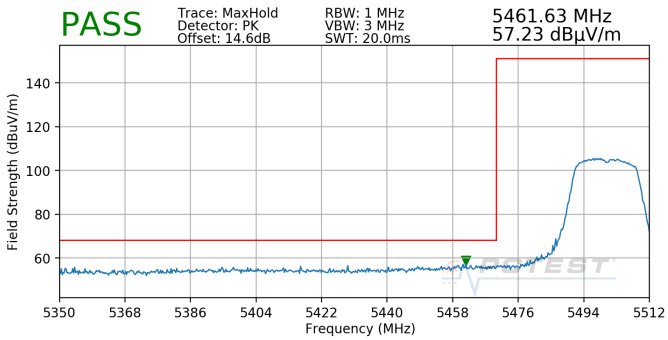
Worst Case Mode:	802.11n
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5500MHz
Channel:	100

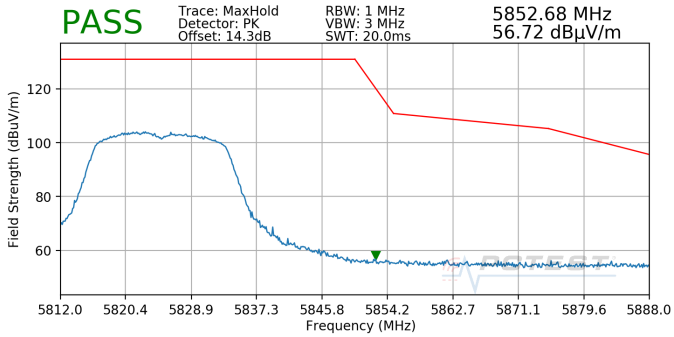


Plot 7-177. Radiated Lower Band Edge Plot SISO ANT1 (Average – UNII Band 2C)



Plot 7-178. Radiated Lower Band Edge Plot SISO ANT1 (Peak – UNII Band 2C)

Worst Case Mode:	802.11n
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5825MHz
Channel:	165



Plot 7-179. Radiated Upper Band Edge Plot SISO ANT1 (Peak – UNII Band 3)

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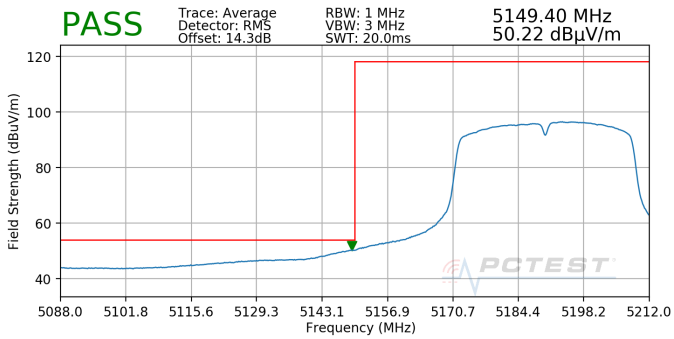
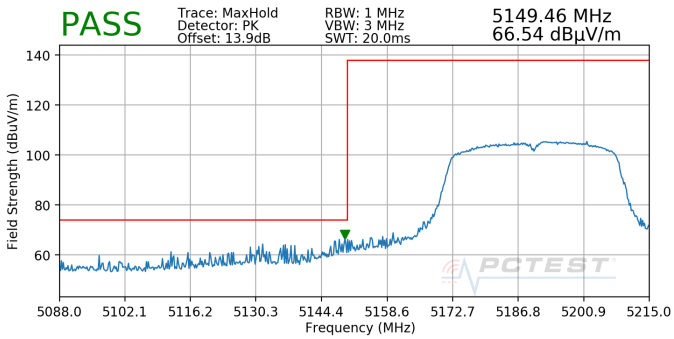
7.6.5 SISO Antenna-1 Radiated Band Edge Measurements (40MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209; RSS-Gen [8.9]

Worst Case Mode:	802.11n
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5190MHz
Channel:	38

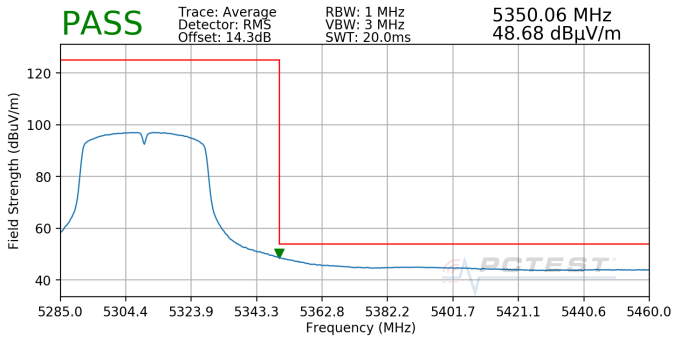


Plot 7-180. Radiated Lower Band Edge Plot SISO ANT1 (Average – UNII Band 1)

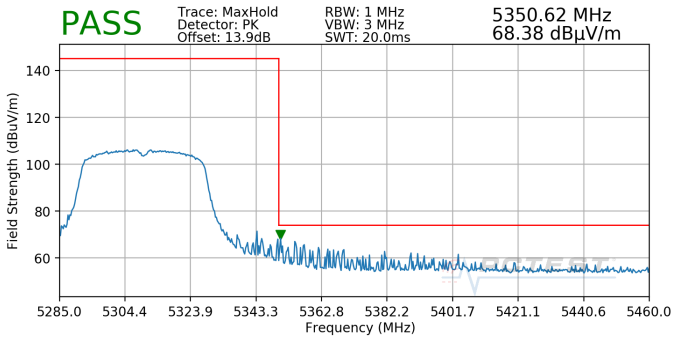


Plot 7-181. Radiated Lower Band Edge Plot SISO ANT1 (Peak – UNII Band 1)

Worst Case Mode:	802.11n
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5310MHz
Channel:	62



Plot 7-182. Radiated Upper Band Edge Plot SISO ANT1 (Average – UNII Band 2A)



Plot 7-183. Radiated Upper Band Edge Plot SISO ANT1 (Peak – UNII Band 2A)

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