Antenna-2 Power Spectral Density Measurements

	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Measured Power Density [dBm]	Max Permissible Power Density [dBm/MHz]	Margin [dB]	Pass / Fail
Band 1	5180	36	a	6	0.32	11.0	-10.68	Pass
	5200	40	a	6	0.48	11.0	-10.52	Pass
	5240	48	a	6	0.53	11.0	-10.47	Pass
	5180	36	n (20MHz)	6.5/7.2 (MCS0)	-1.33	11.0	-12.33	Pass
	5200	40	n (20MHz)	6.5/7.2 (MCS0)	-0.84	11.0	-11.84	Pass
	5240	48	n (20MHz)	6.5/7.2 (MCS0)	-0.87	11.0	-11.87	Pass
	5190	38	n (40MHz)	13.5/15 (MCS0)	-4.15	11.0	-15.15	Pass
	5230	46	n (40MHz)	13.5/15 (MCS0)	-3.82	11.0	-14.82	Pass
	5210	42	ac (80MHz)	29.3/32.5 (MCS0)	-5.92	11.0	-16.92	Pass
Band 2A	5260	52	a	6	0.82	11.0	-10.18	Pass
	5280	56	a	6	0.85	11.0	-10.15	Pass
	5320	64	a	6	1.29	11.0	-9.71	Pass
	5260	52	n (20MHz)	6.5/7.2 (MCS0)	-0.57	11.0	-11.57	Pass
	5280	56	n (20MHz)	6.5/7.2 (MCS0)	-0.45	11.0	-11.45	Pass
	5320	64	n (20MHz)	6.5/7.2 (MCS0)	-0.31	11.0	-11.31	Pass
	5270	54	n (40MHz)	13.5/15 (MCS0)	-3.56	11.0	-14.56	Pass
	5310	62	n (40MHz)	13.5/15 (MCS0)	-3.61	11.0	-14.61	Pass
	5290	58	ac (80MHz)	29.3/32.5 (MCS0)	-5.43	11.0	-16.43	Pass
Band 2C	5500	100	a	6	1.49	11.0	-9.51	Pass
	5580	116	a	6	1.22	11.0	-9.79	Pass
	5720	144	a	6	1.21	11.0	-9.79	Pass
	5500	100	n (20MHz)	6.5/7.2 (MCS0)	0.58	11.0	-10.42	Pass
	5580	116	n (20MHz)	6.5/7.2 (MCS0)	0.10	11.0	-10.90	Pass
	5720	144	n (20MHz)	6.5/7.2 (MCS0)	0.96	11.0	-10.04	Pass
	5510	102	n (40MHz)	13.5/15 (MCS0)	-2.84	11.0	-13.84	Pass
	5550	110	n (40MHz)	13.5/15 (MCS0)	-3.05	11.0	-14.05	Pass
	5710	142	n (40MHz)	13.5/15 (MCS0)	-1.30	11.0	-12.30	Pass
	5530	106	ac (80MHz)	29.3/32.5 (MCS0)	-4.99	11.0	-15.99	Pass
	5690	138	ac (80MHz)	29.3/32.5 (MCS0)	-5.61	11.0	-16.61	Pass

Table 6-19. Conducted Power Spectral Density Measurements

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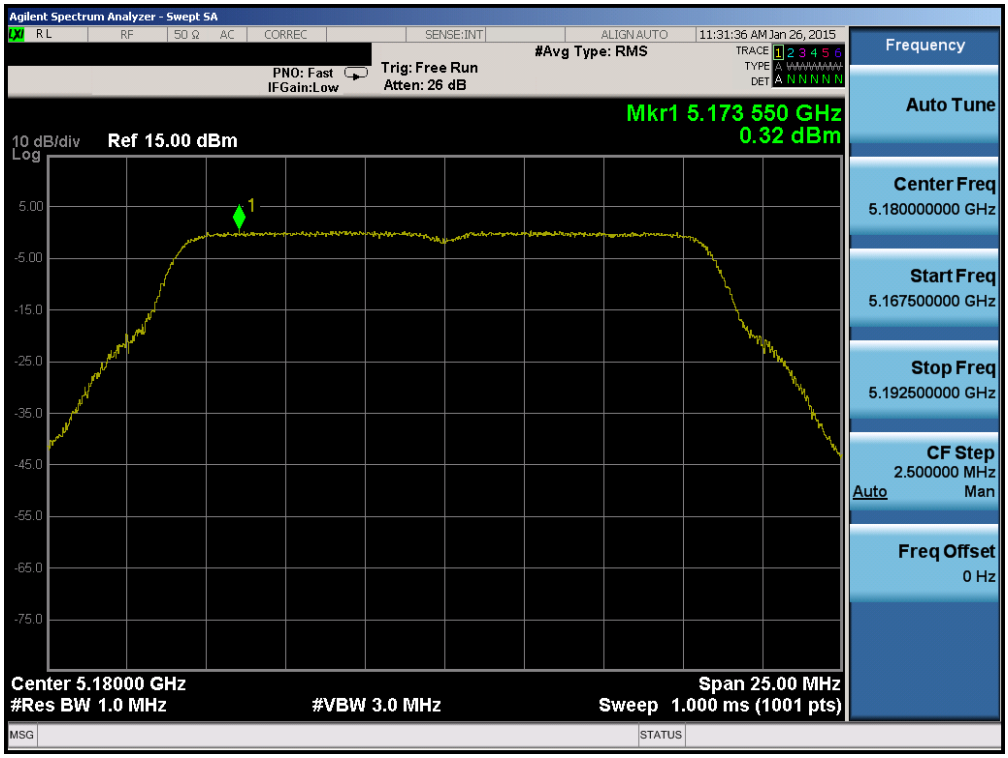
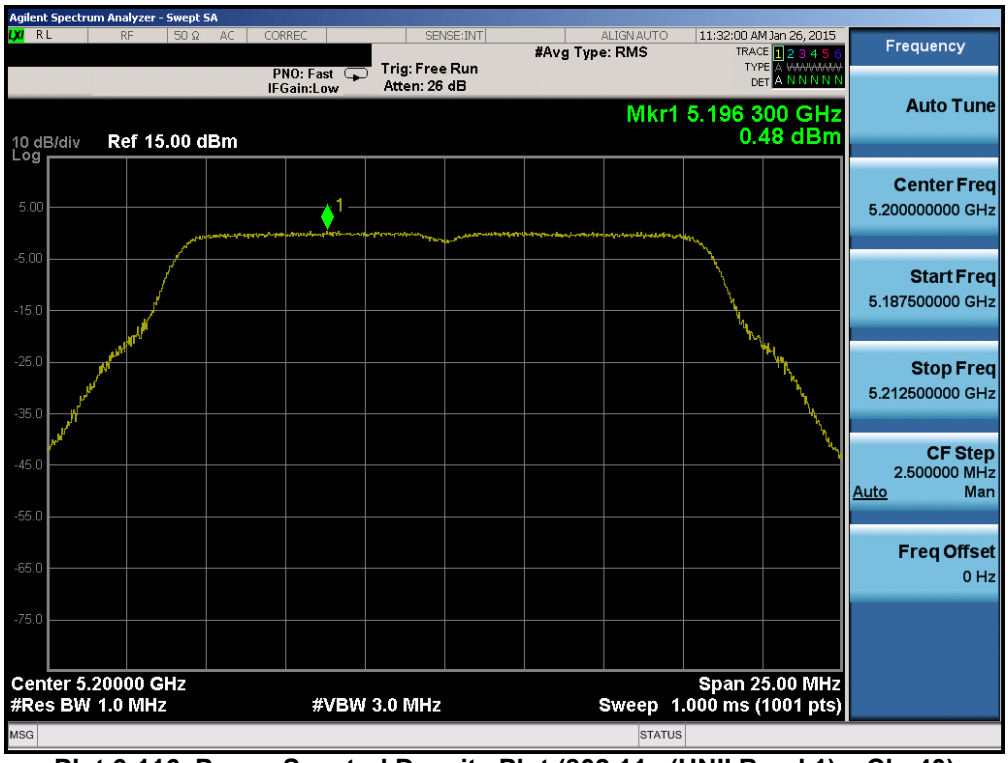


Plot 6-115. Power Spectral Density Plot (802.11a (UNII Band 1) – Ch. 36)



Plot 6-116. Power Spectral Density Plot (802.11a (UNII Band 1) – Ch. 40)

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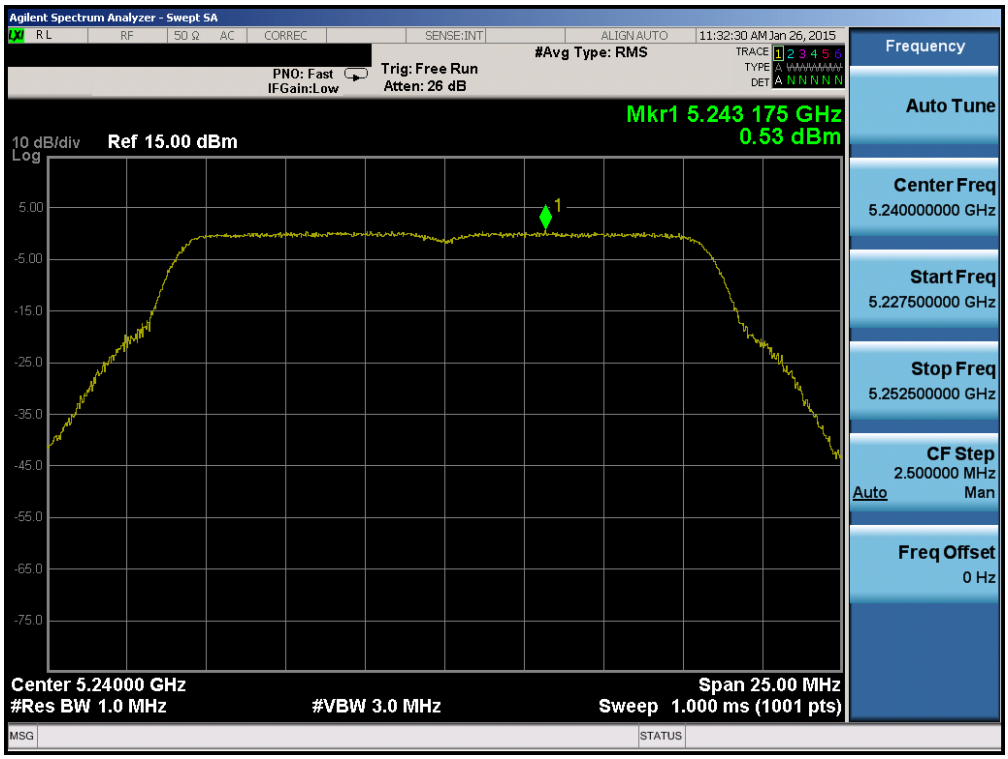
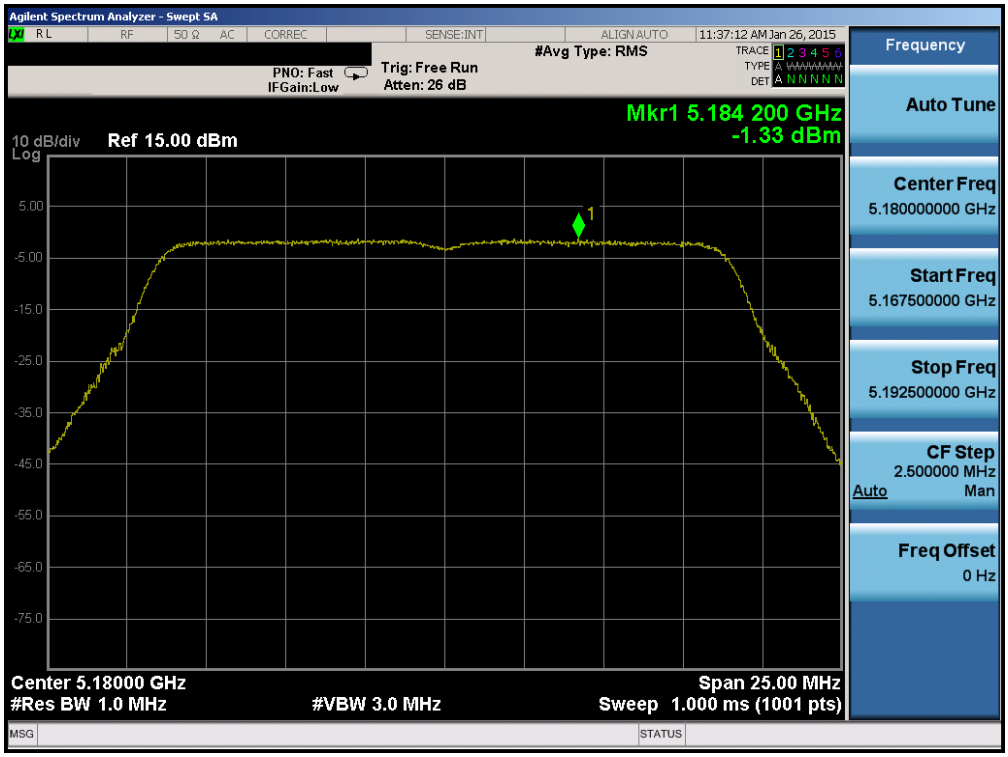


Plot 6-117. Power Spectral Density Plot (802.11a (UNII Band 1) – Ch. 48)



Plot 6-118. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 1) – Ch. 36)

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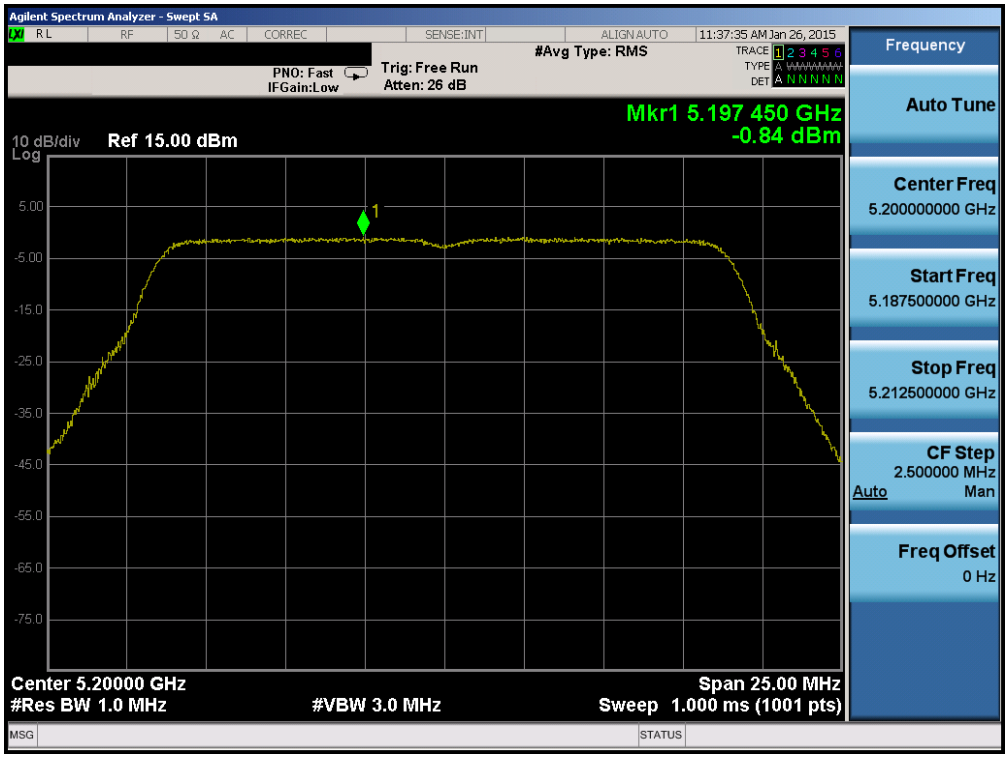
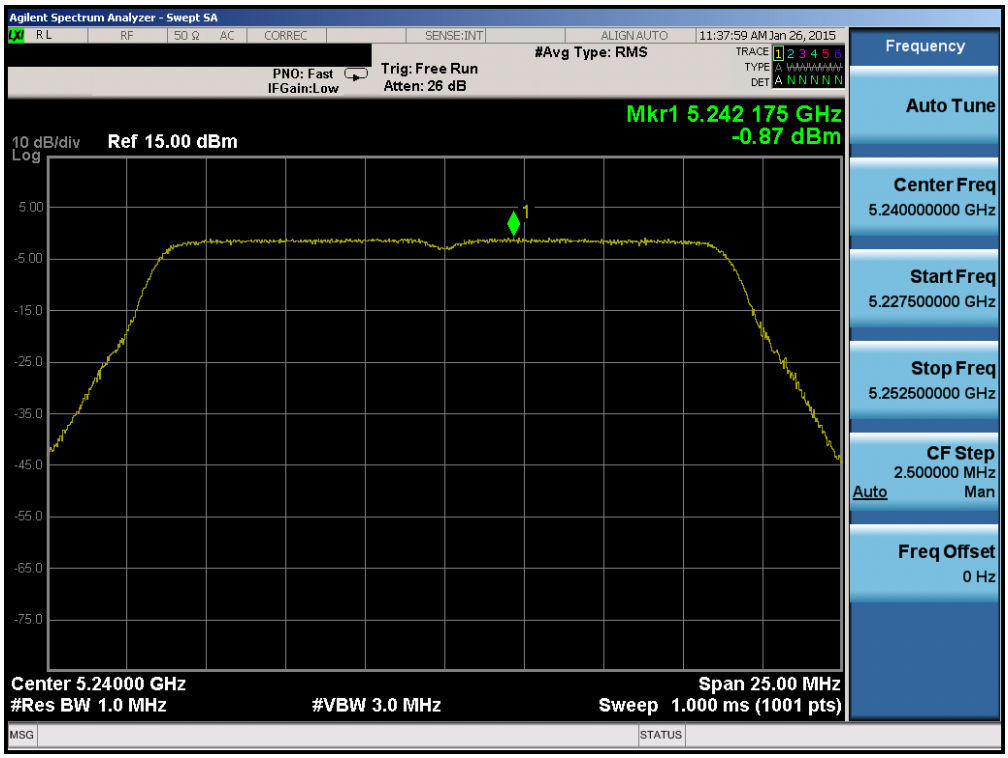


Plot 6-119. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 1) – Ch. 40)



Plot 6-120. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 1) – Ch. 48)

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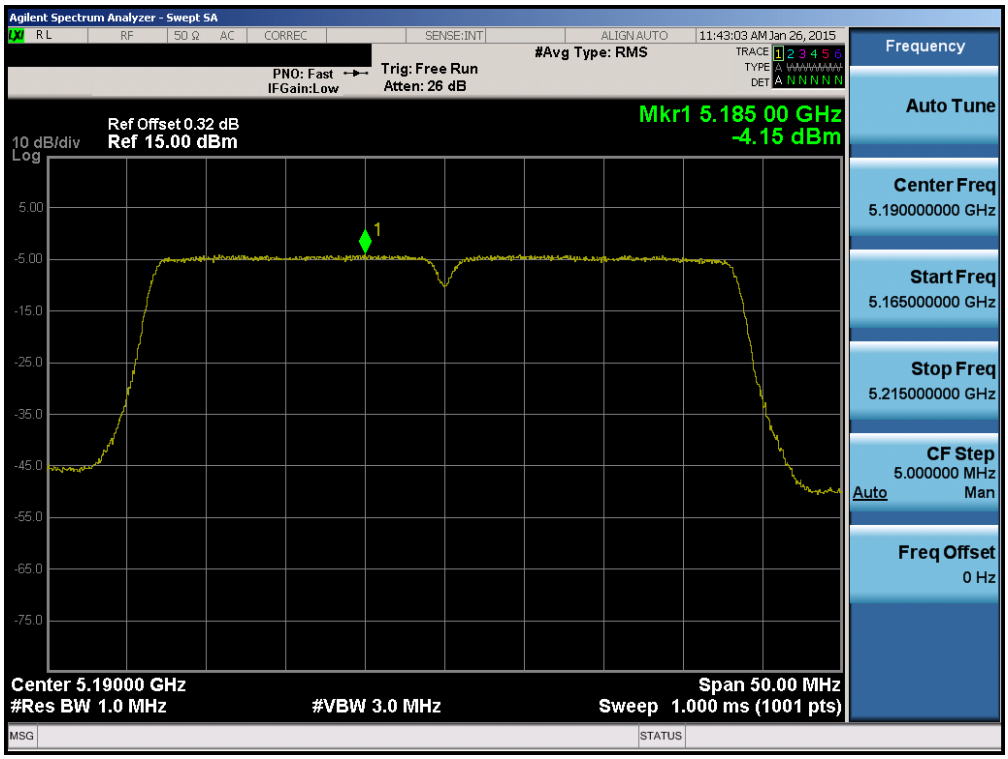
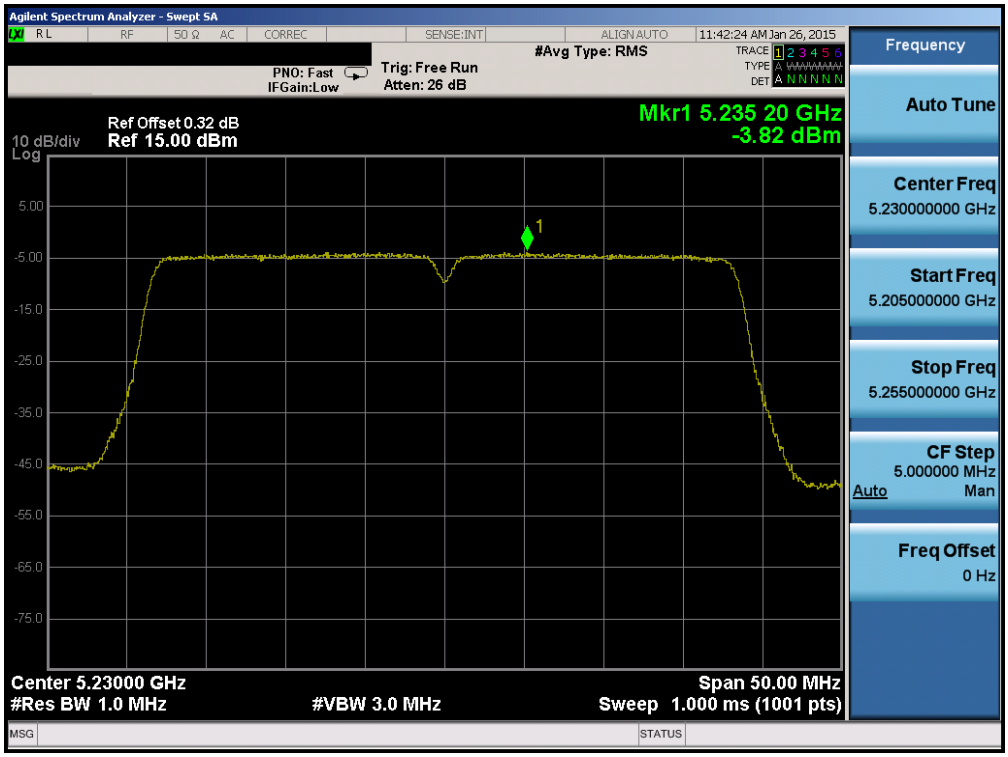


Plot 6-121. Power Spectral Density Plot (40MHz BW 802.11n (UNII Band 1) – Ch. 38)



Plot 6-122. Power Spectral Density Plot (40MHz BW 802.11n (UNII Band 1) – Ch. 46)

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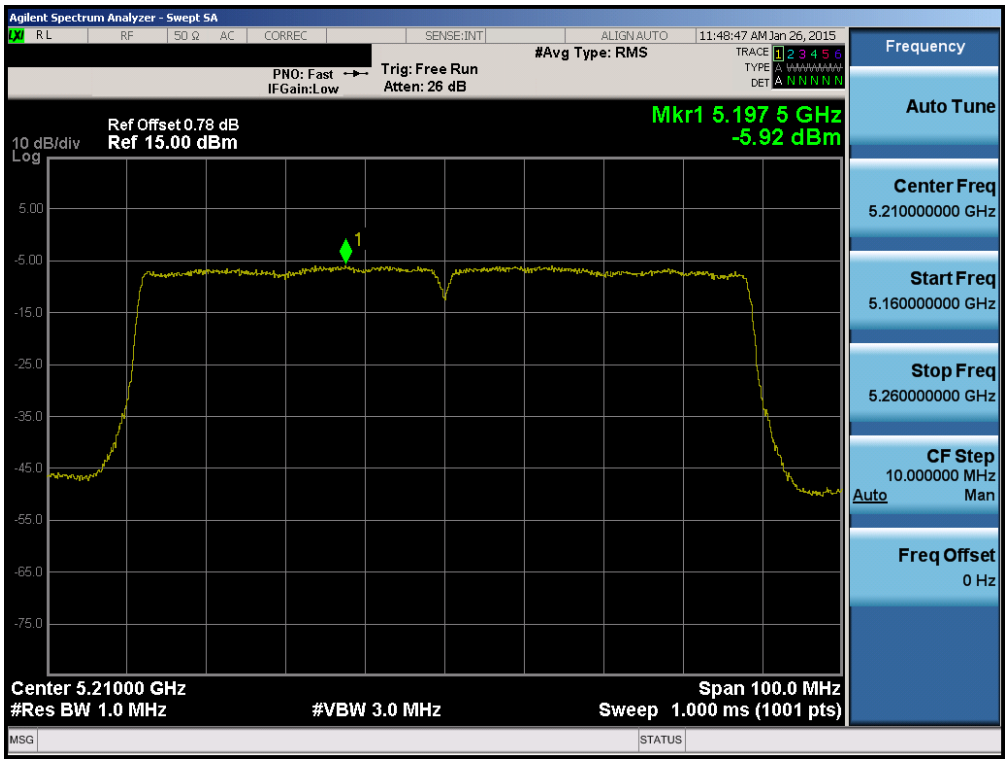
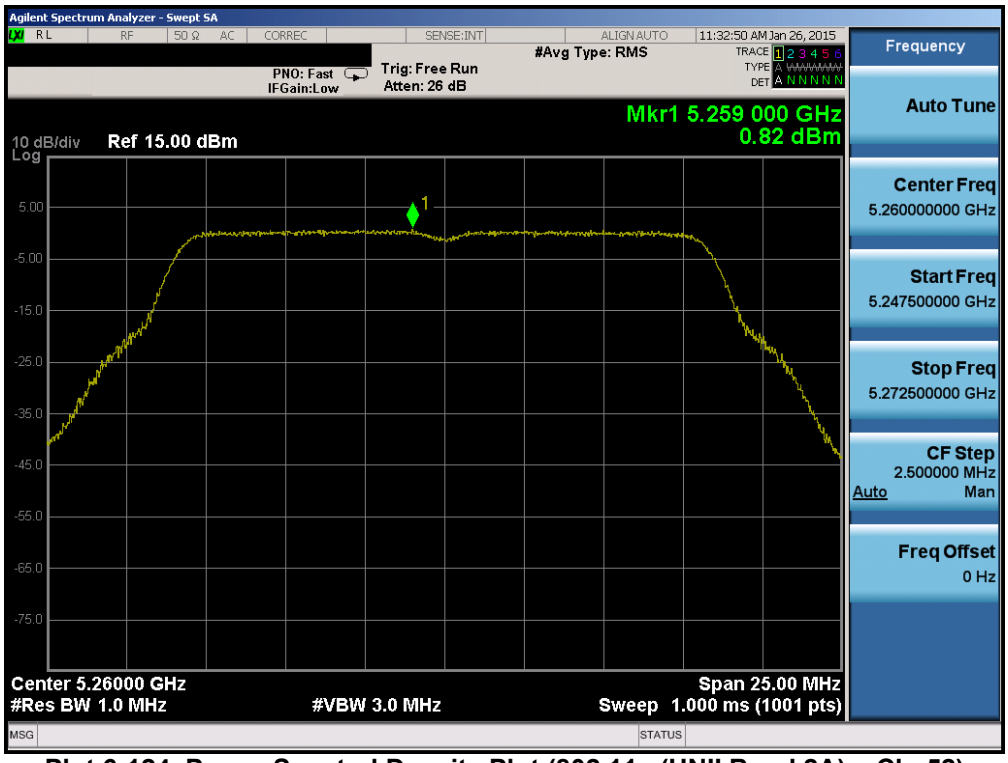


Plot 6-123. Power Spectral Density Plot (80MHz BW 802.11ac (UNII Band 1) – Ch. 42)



Plot 6-124. Power Spectral Density Plot (802.11a (UNII Band 2A) – Ch. 52)

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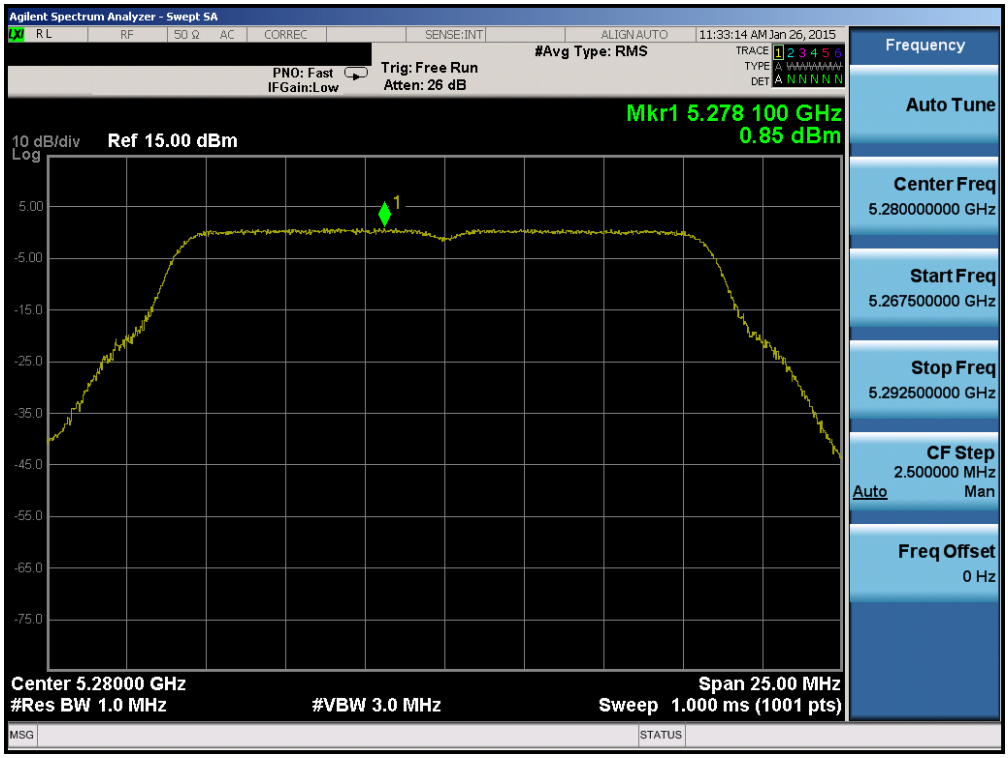
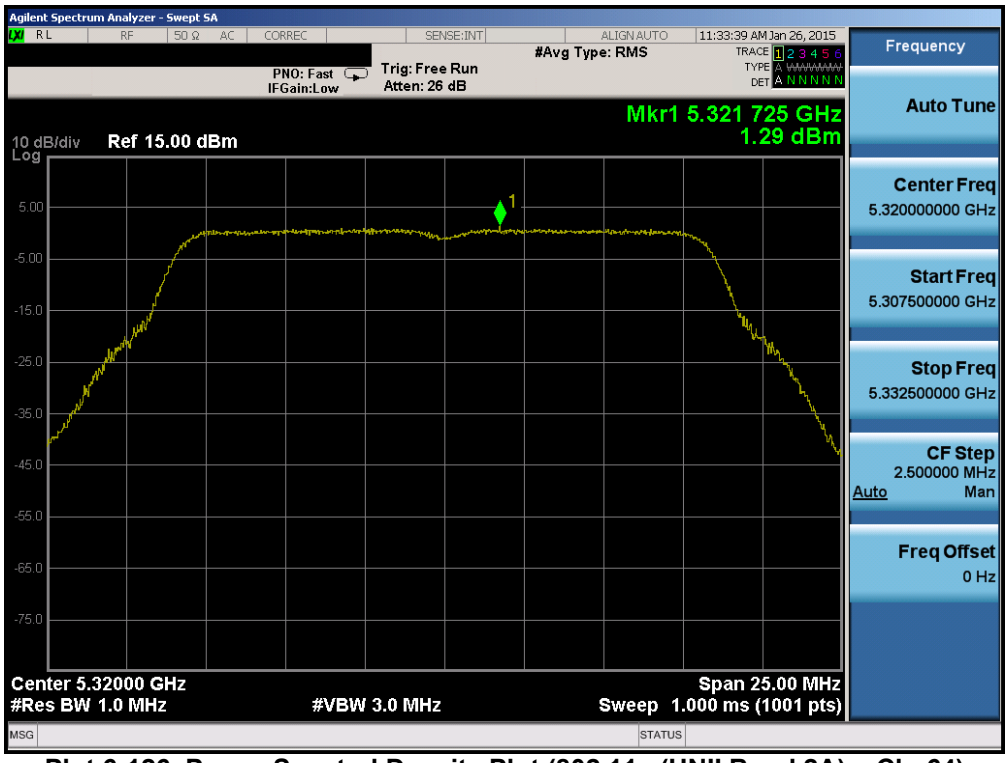


Plot 6-125. Power Spectral Density Plot (802.11a (UNII Band 2A) – Ch. 56)



Plot 6-126. Power Spectral Density Plot (802.11a (UNII Band 2A) – Ch. 64)

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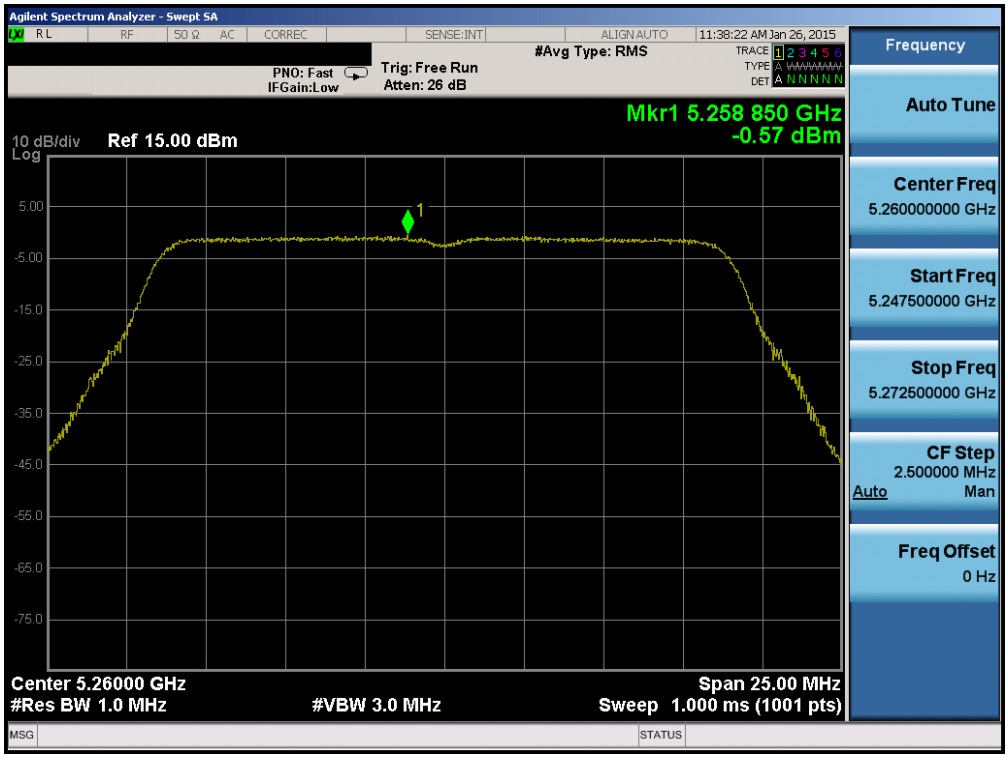
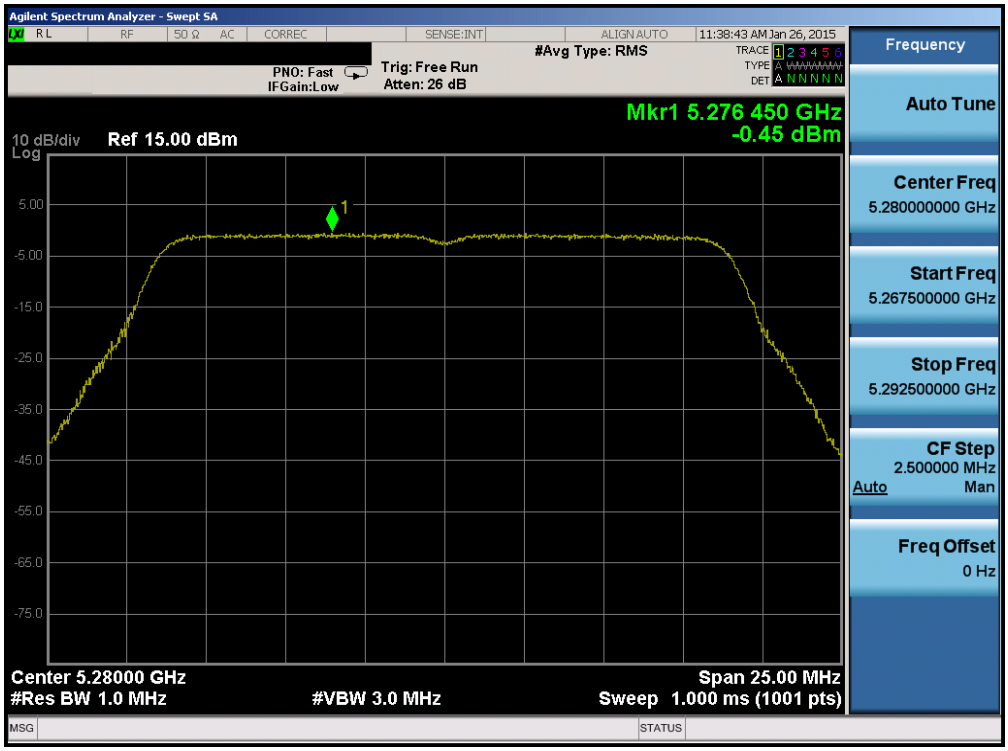


Plot 6-127. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 2A) – Ch. 52)



Plot 6-128. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 2A) – Ch. 56)

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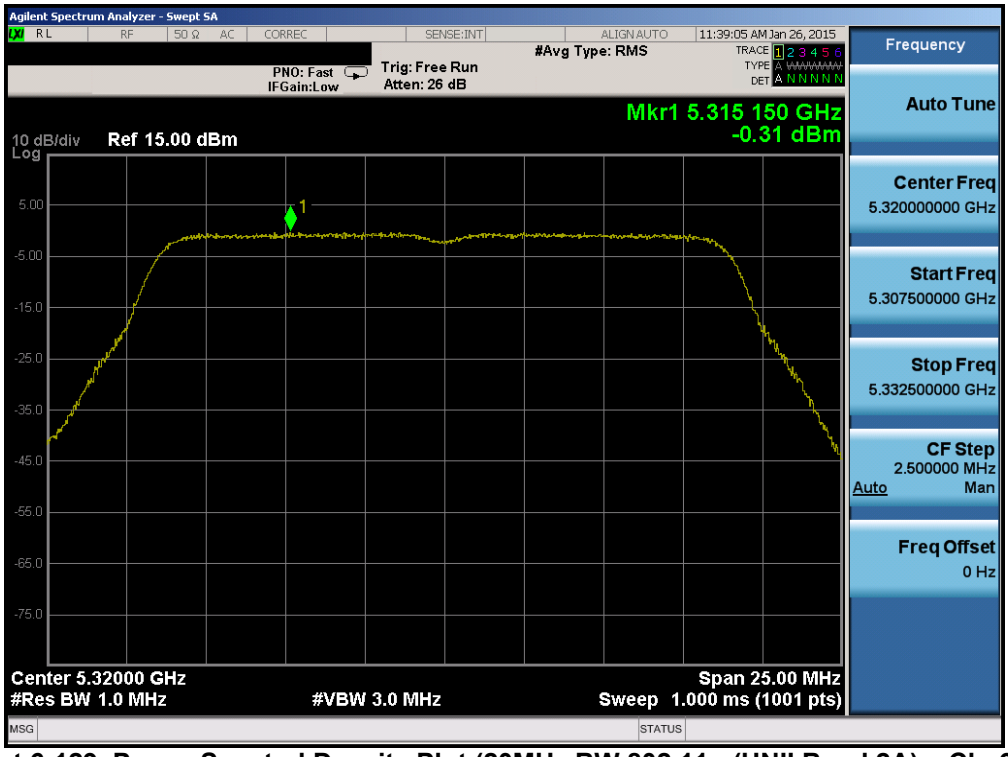
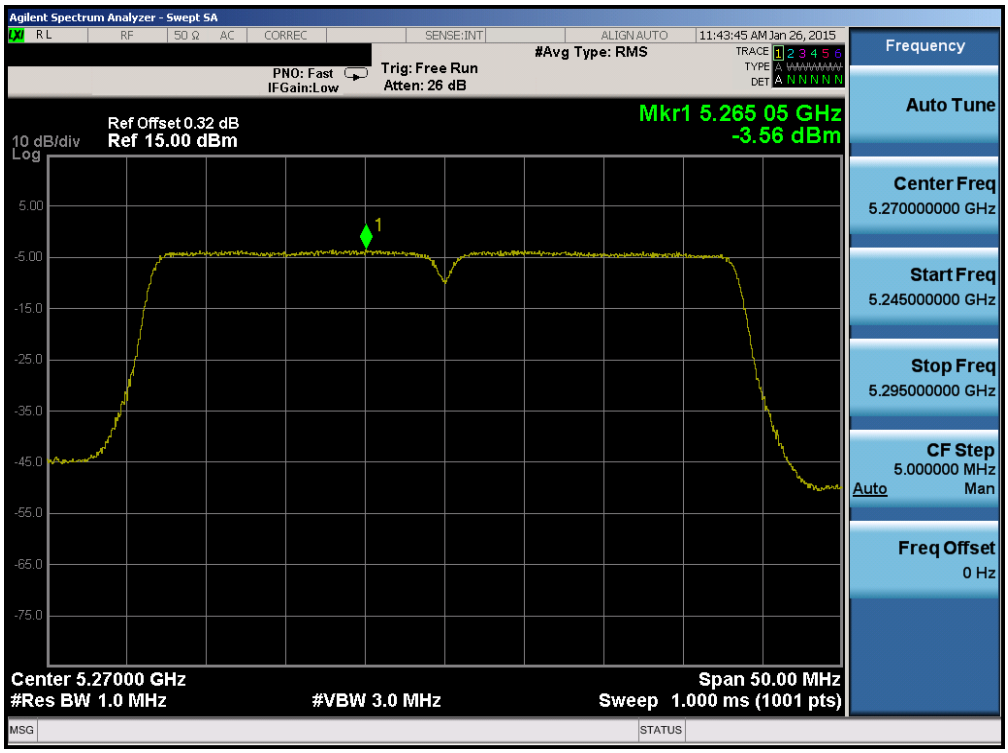


Plot 6-129. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 2A) – Ch. 64)



Plot 6-130. Power Spectral Density Plot (40MHz BW 802.11n (UNII Band 2A) – Ch. 54)

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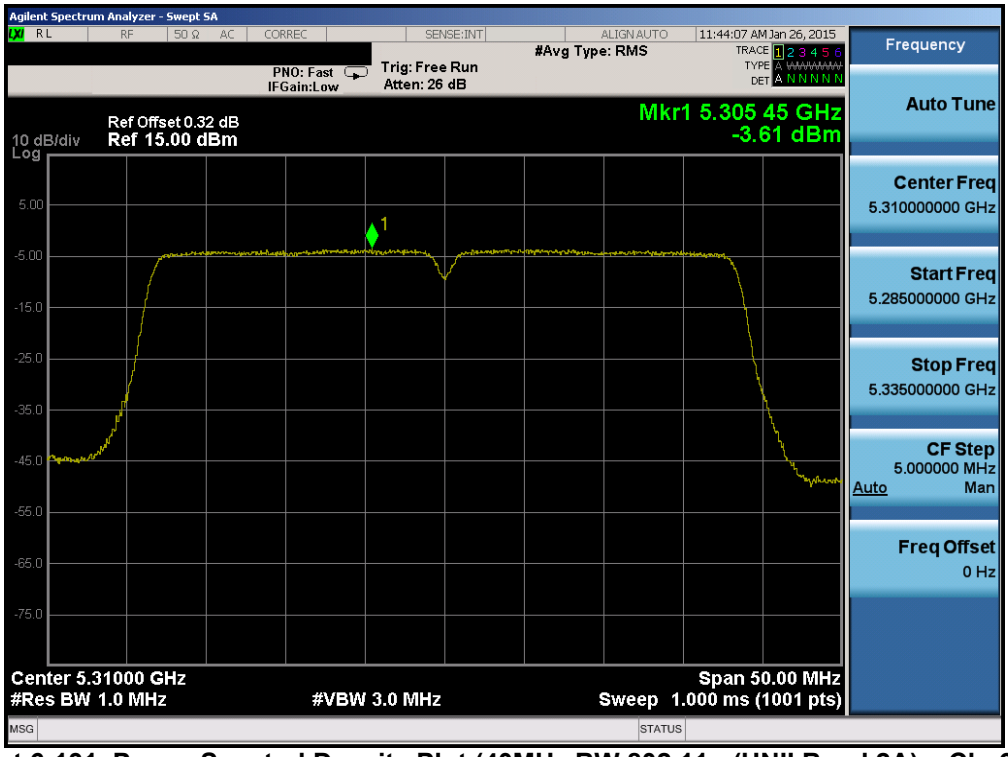
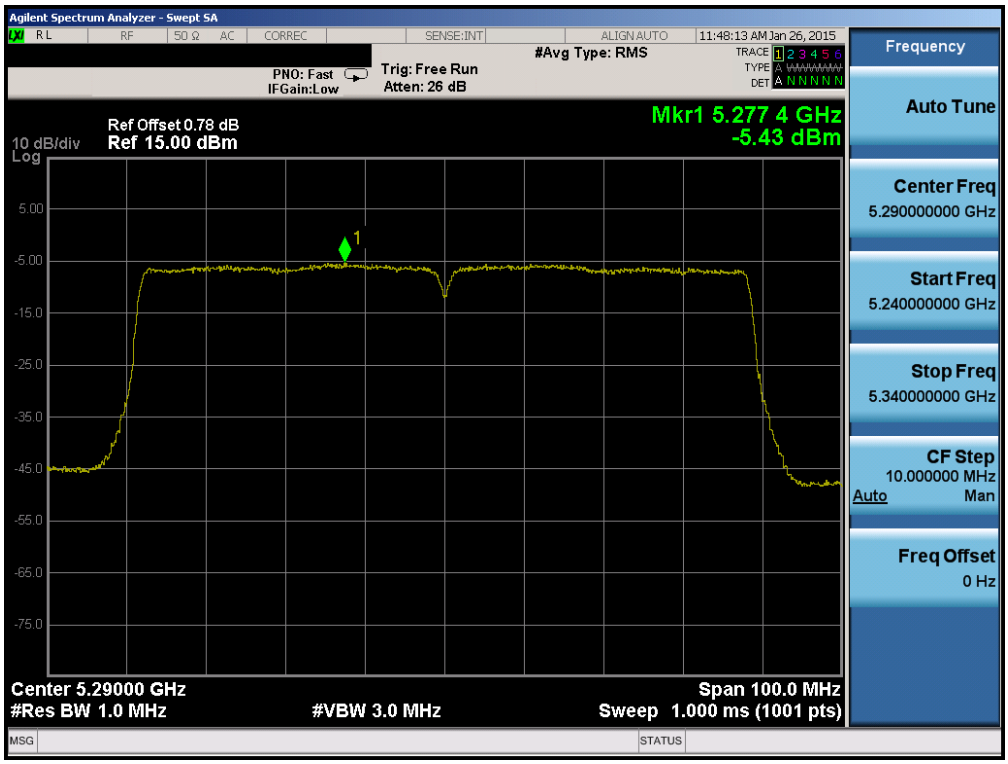


Plot 6-131. Power Spectral Density Plot (40MHz BW 802.11n (UNII Band 2A) – Ch. 62)



Plot 6-132. Power Spectral Density Plot (80MHz BW 802.11ac (UNII Band 2A) – Ch. 58)

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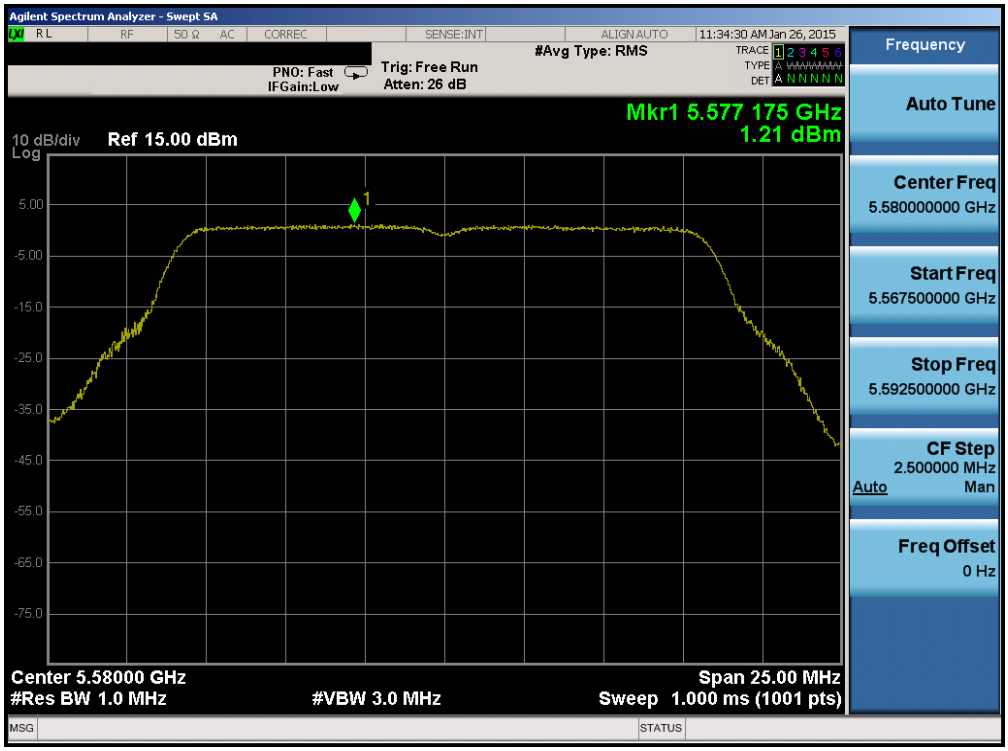
Plot 6-133. Power Spectral Density Plot (802.11a (UNII Band 2C) – Ch. 100)



Plot 6-134. Power Spectral Density Plot (802.11a (UNII Band 2C) – Ch. 116)

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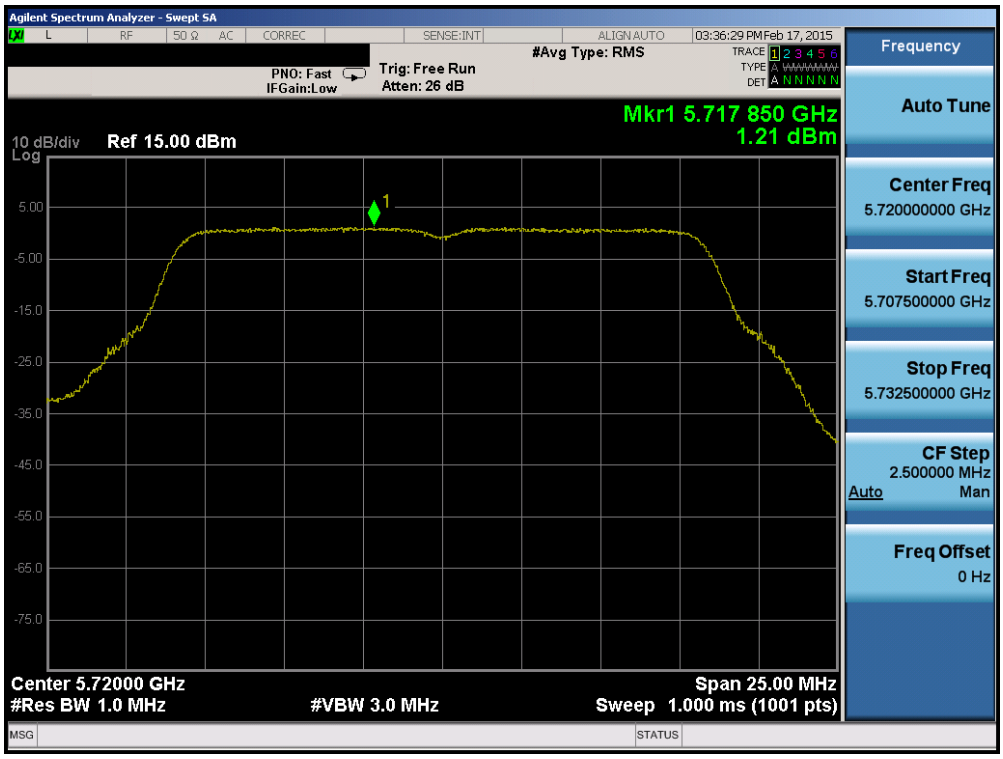
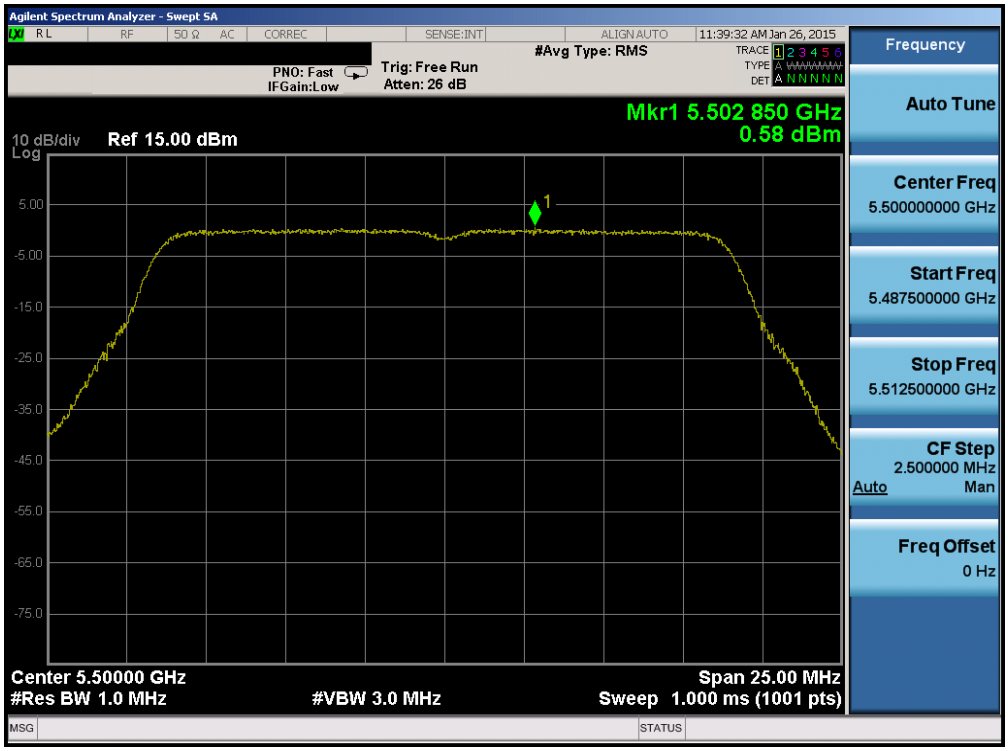


Plot 6-135. Power Spectral Density Plot (802.11a UNII Band 2C) – Ch. 144)



Plot 6-136. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 2C) – Ch. 100)

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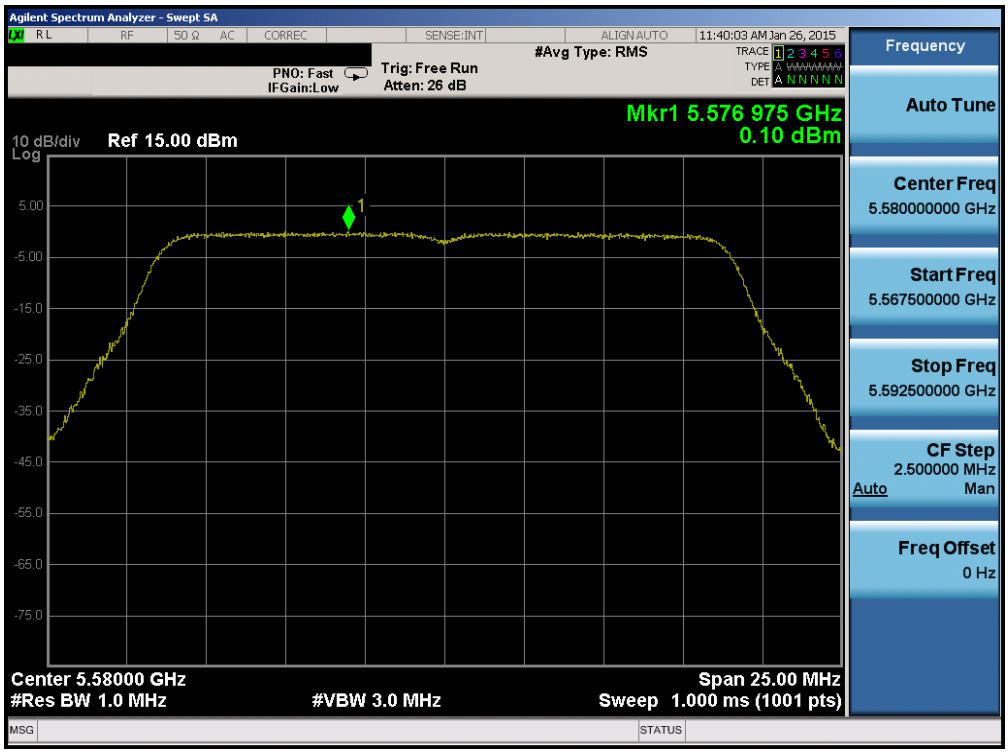
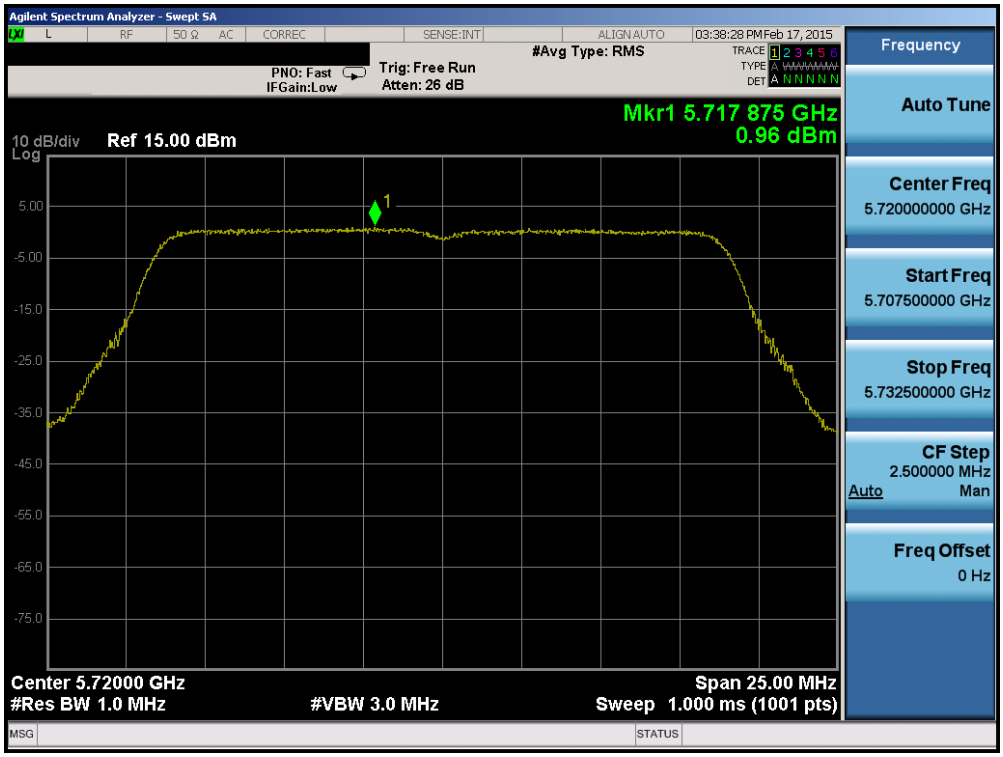


Plot 6-137. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 2C) – Ch. 116)



Plot 6-138. Power Spectral Density Plot (20MHz 802.11n (UNII Band 2C) – Ch. 144)

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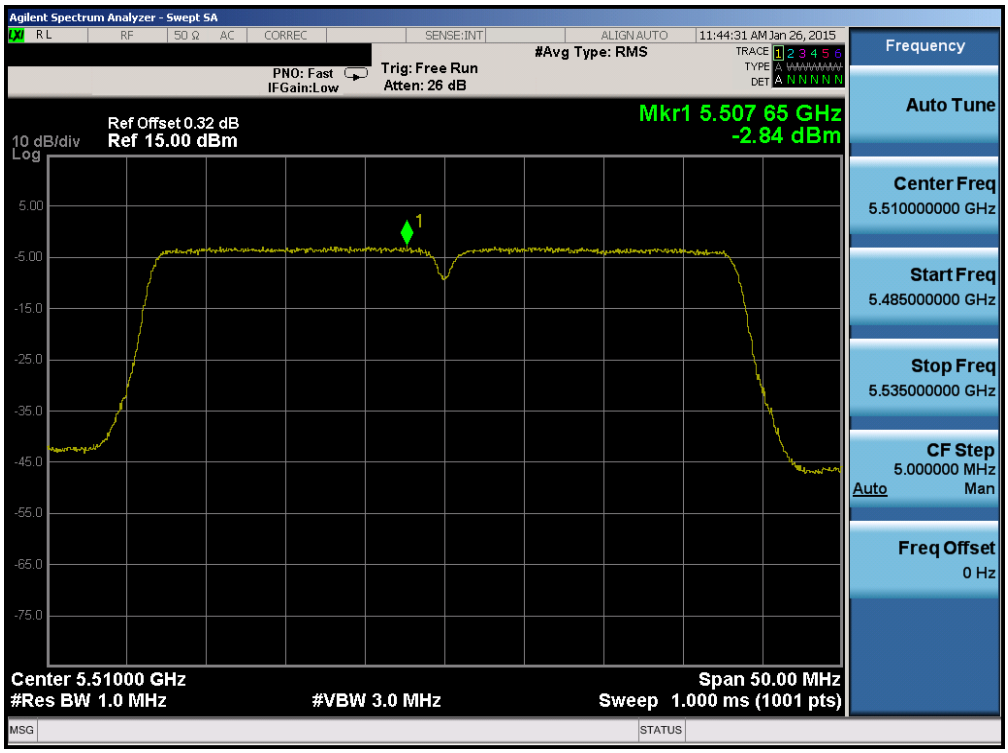
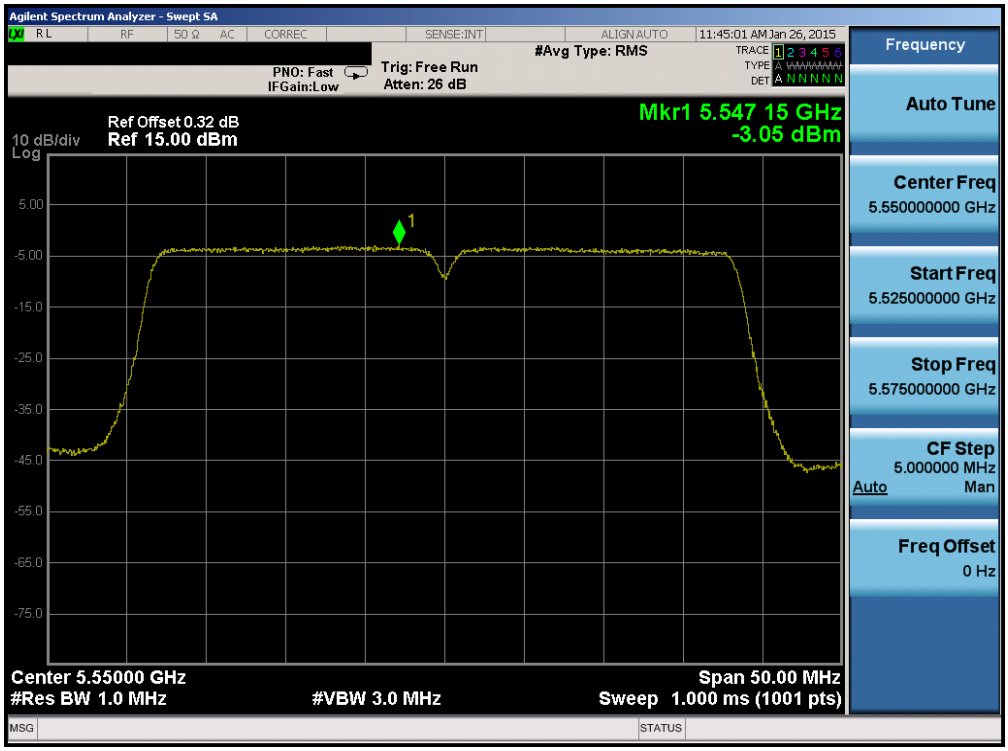


Plot 6-139. Power Spectral Density Plot (40MHz BW 802.11n (UNII Band 2C) – Ch. 102)



Plot 6-140. Power Spectral Density Plot (40MHz BW 802.11n (UNII Band 2C) – Ch. 110)

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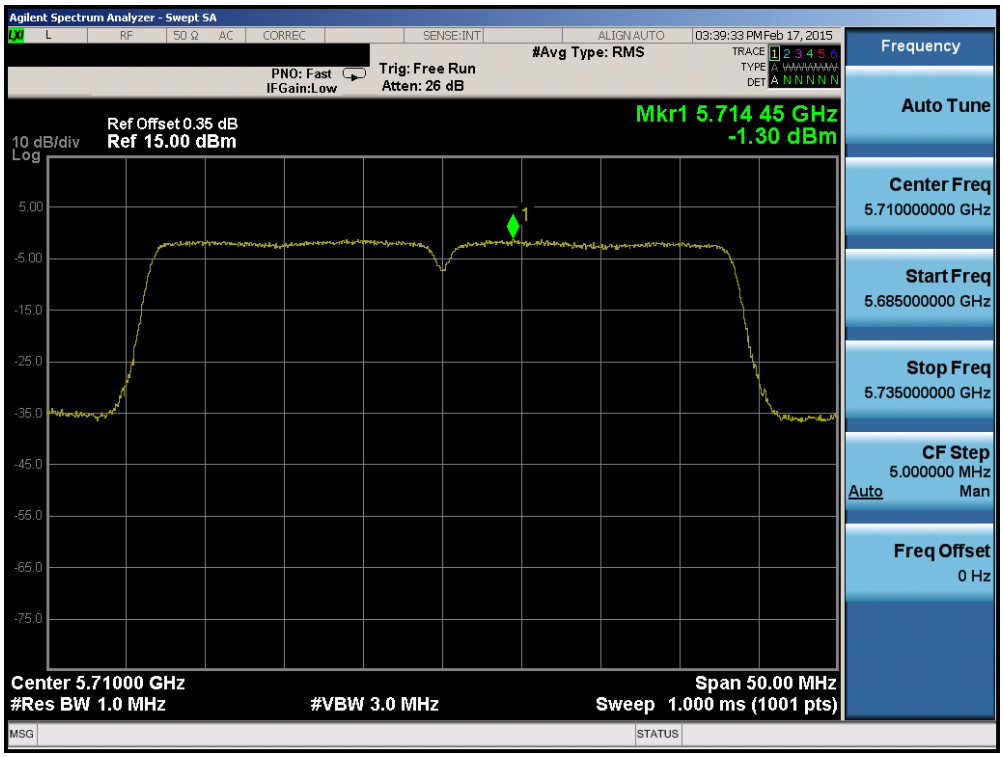
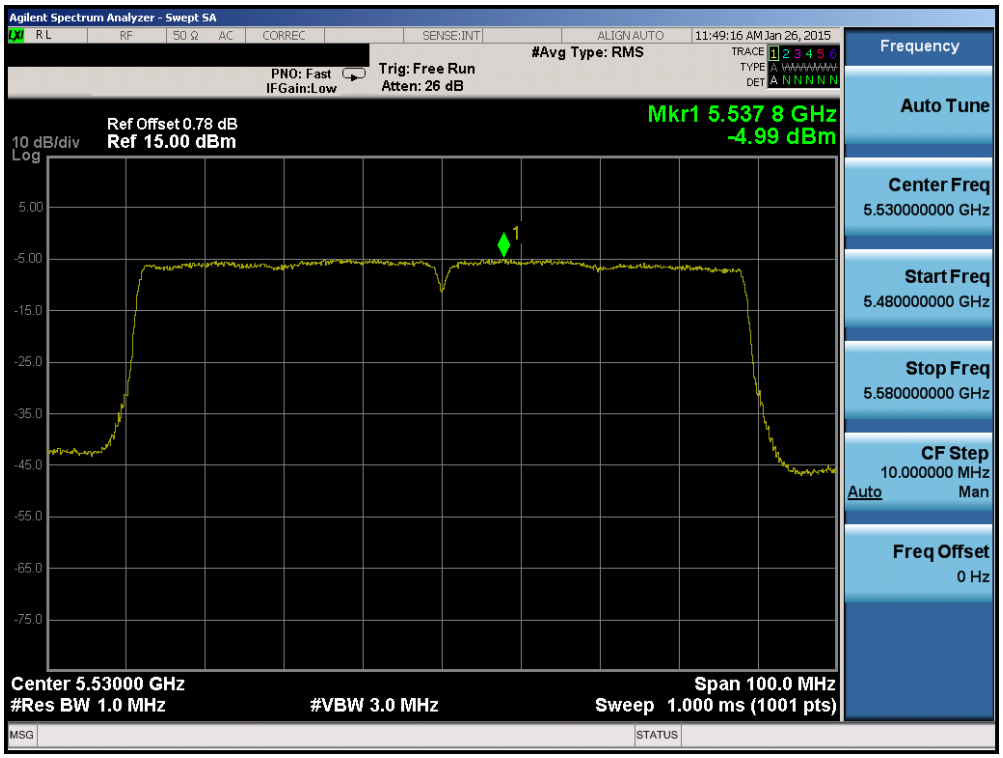


Plot 6-141. Power Spectral Density Plot (40MHz BW 802.11n (UNII Band 2C) – Ch. 142)



Plot 6-142. Power Spectral Density Plot (80MHz BW 802.11ac (UNII Band 2C) – Ch. 106)

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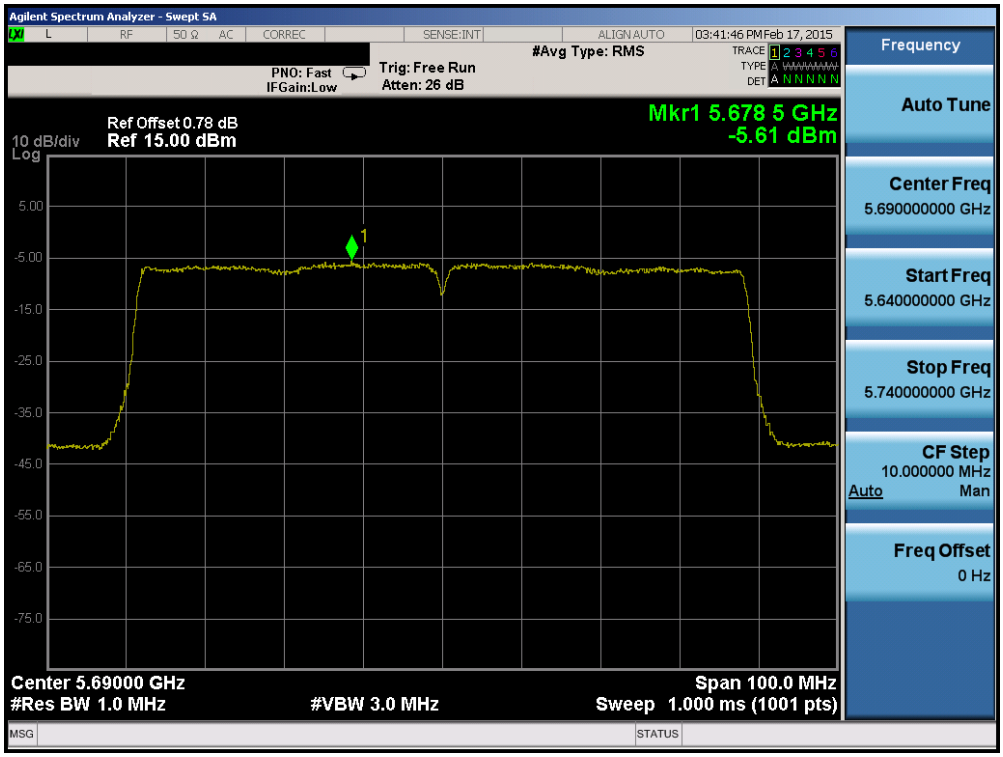

Plot 6-143. Power Spectral Density Plot (80MHz BW 802.11ac (UNII Band 2C) – Ch. 138)

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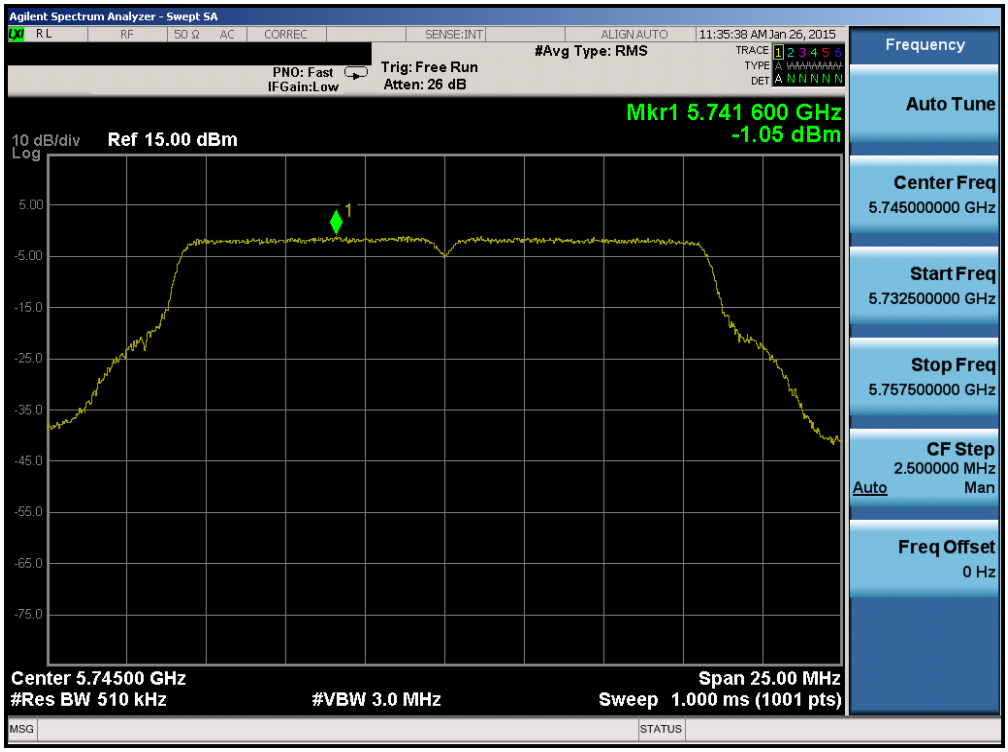
	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Measured Power Density [dBm]	Max Permissible Power Density [dBm/500kHz]	Margin [dB]	Pass / Fail
Band 3	5745	149	a	6	-1.05	30.0	-31.05	Pass
	5785	157	a	6	-1.58	30.0	-31.58	Pass
	5825	165	a	6	-1.70	30.0	-31.70	Pass
	5745	149	n (20MHz)	6.5/7.2 (MCS0)	-2.65	30.0	-32.65	Pass
	5785	157	n (20MHz)	6.5/7.2 (MCS0)	-3.05	30.0	-33.05	Pass
	5825	165	n (20MHz)	6.5/7.2 (MCS0)	-3.08	30.0	-33.08	Pass
	5755	151	n (40MHz)	13.5/15 (MCS0)	-6.60	30.0	-36.60	Pass
	5795	159	n (40MHz)	13.5/15 (MCS0)	-7.06	30.0	-37.06	Pass
	5775	155	ac (80MHz)	29.3/32.5 (MCS0)	-8.52	30.0	-38.52	Pass

Table 6-20. Band 3 Conducted Power Spectral Density Measurements



Plot 6-144. Power Spectral Density Plot (802.11a (UNII Band 3) – Ch. 149)

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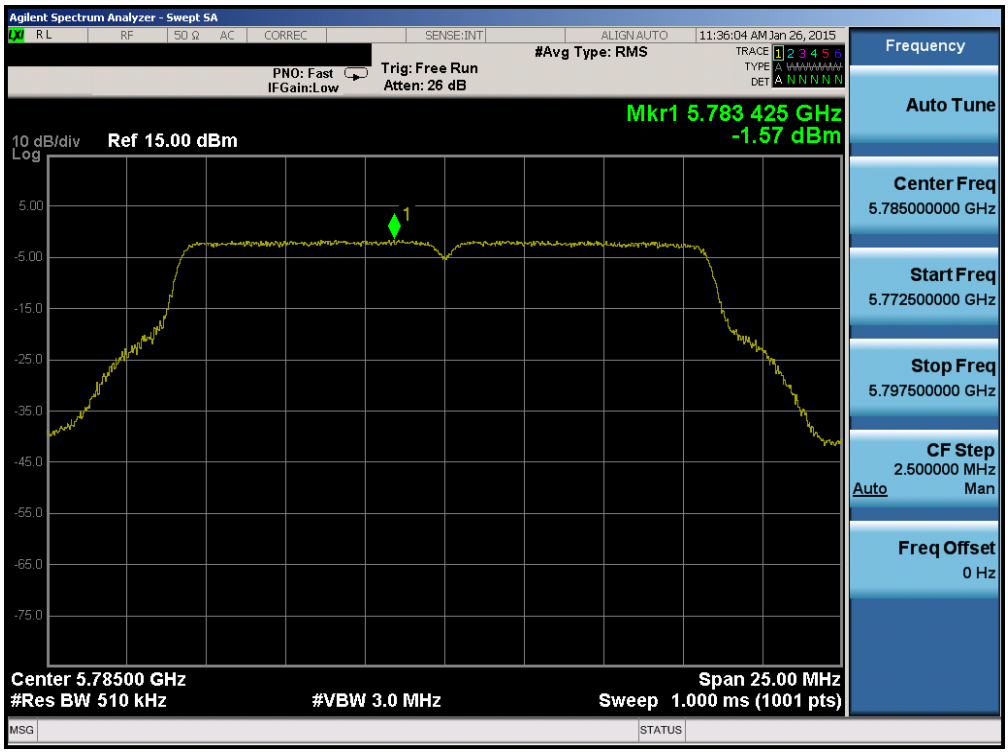
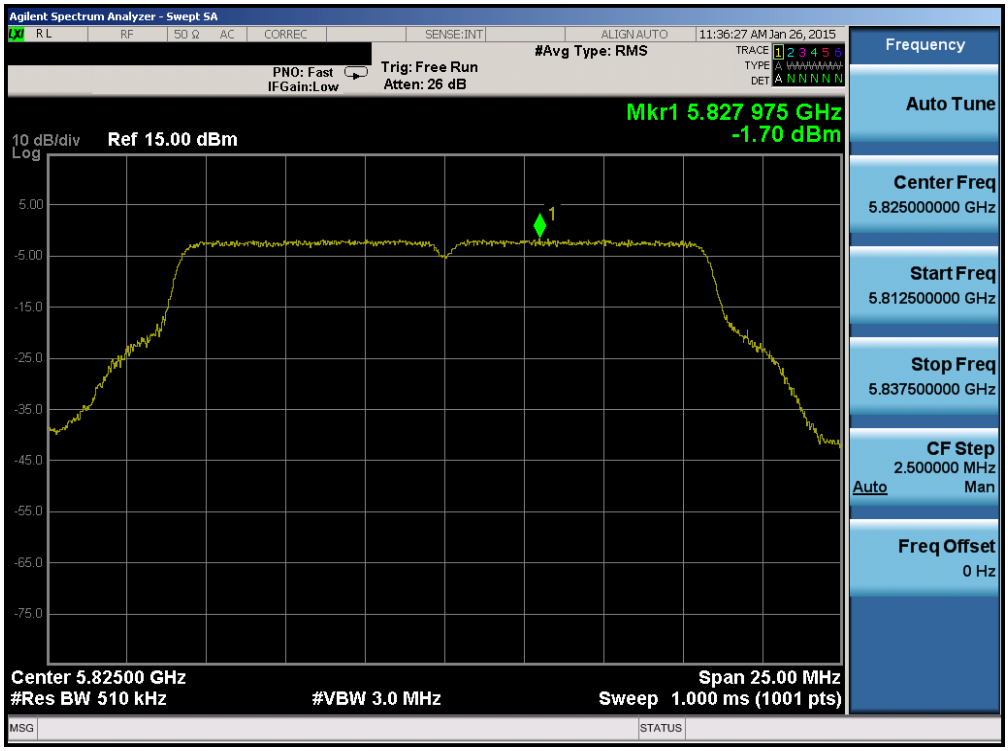


Plot 6-145. Power Spectral Density Plot (802.11a (UNII Band 3) – Ch. 157)



Plot 6-146. Power Spectral Density Plot (802.11a (UNII Band 3) – Ch. 165)

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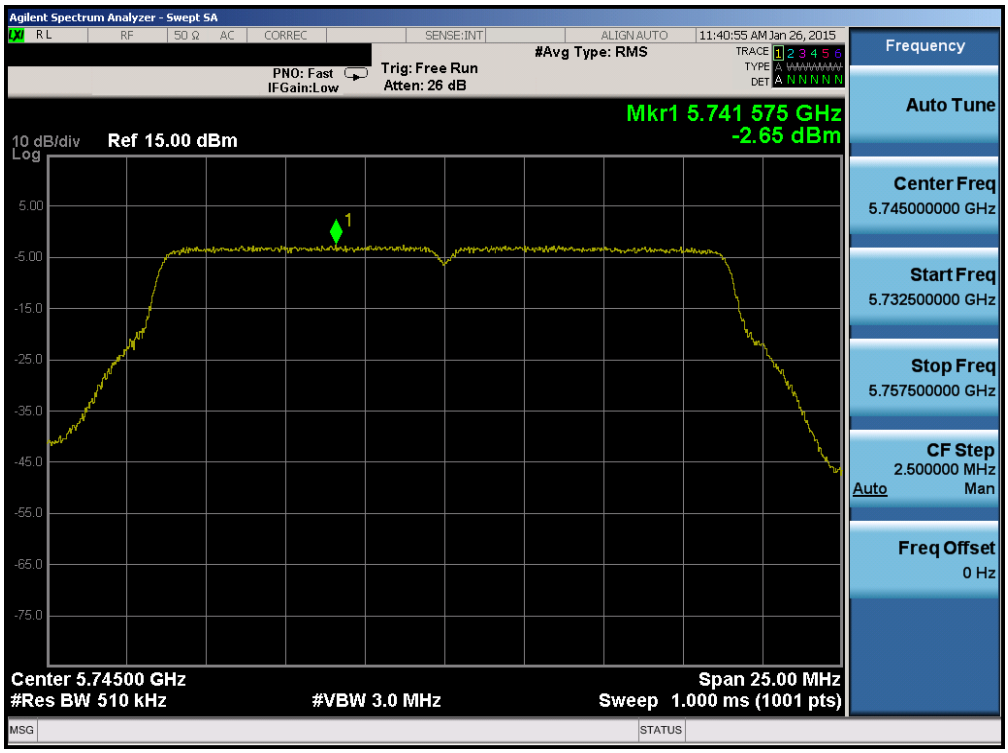
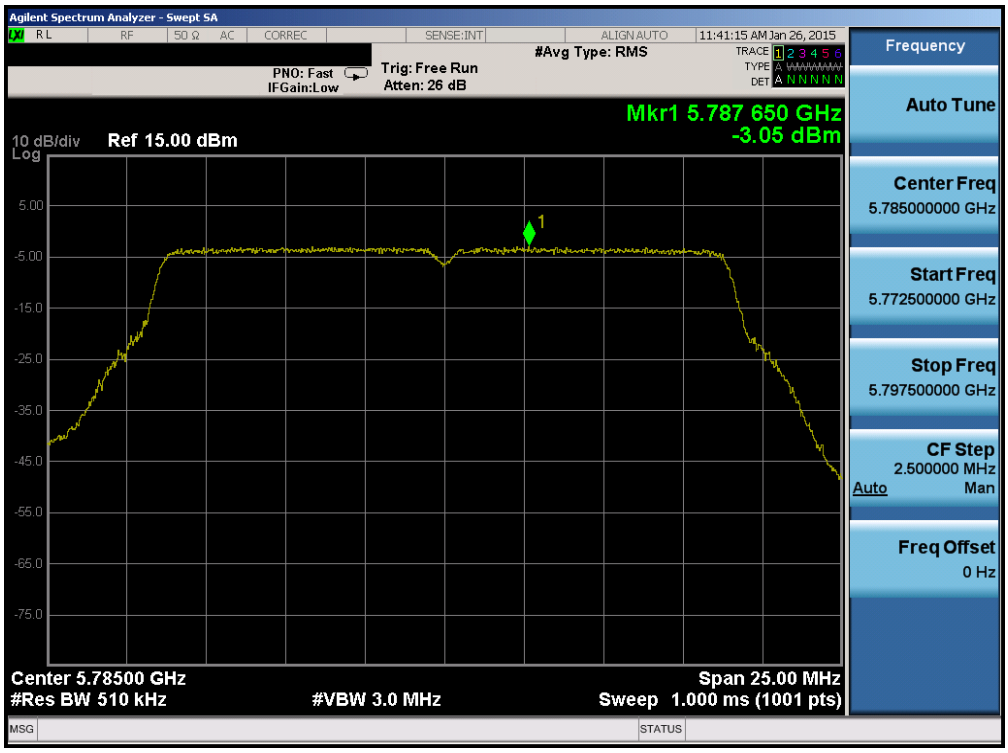


Plot 6-147. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 3) – Ch. 149)



Plot 6-148. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 3) – Ch. 157)

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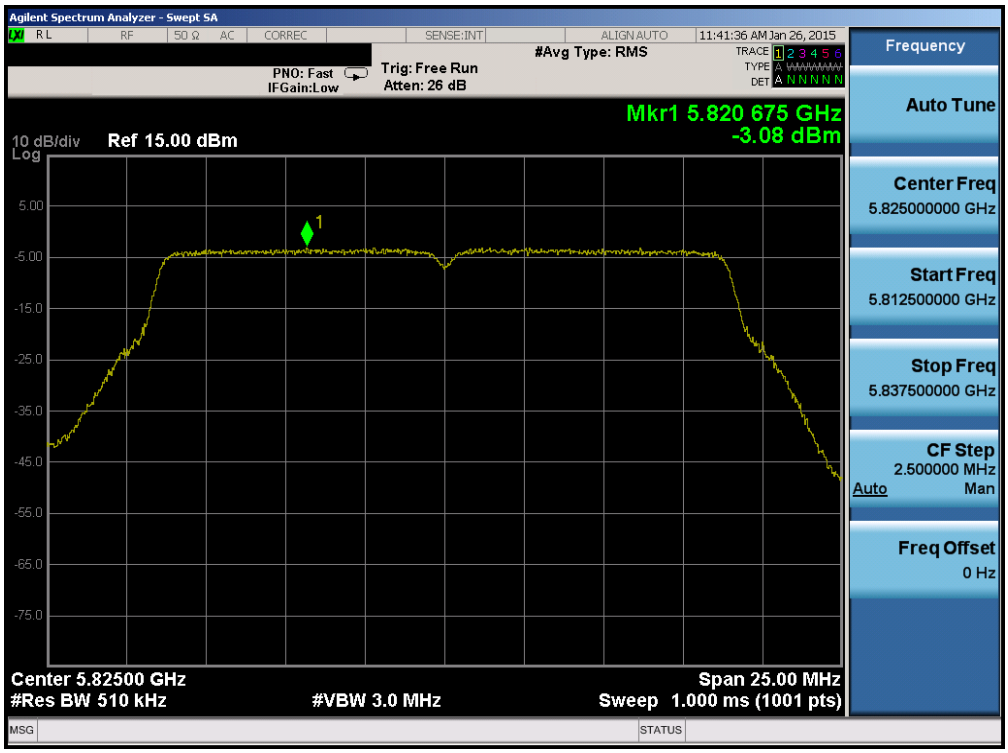
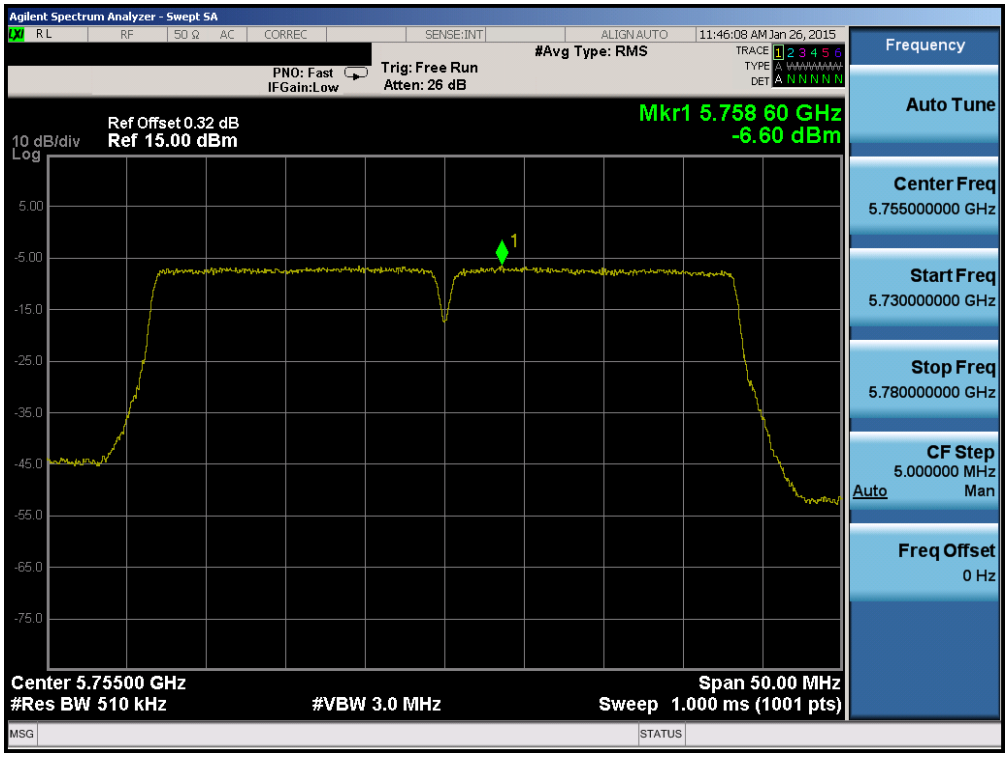


Plot 6-149. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 3) – Ch. 165)



Plot 6-150. Power Spectral Density Plot (40MHz BW 802.11n (UNII Band 3) – Ch. 151)

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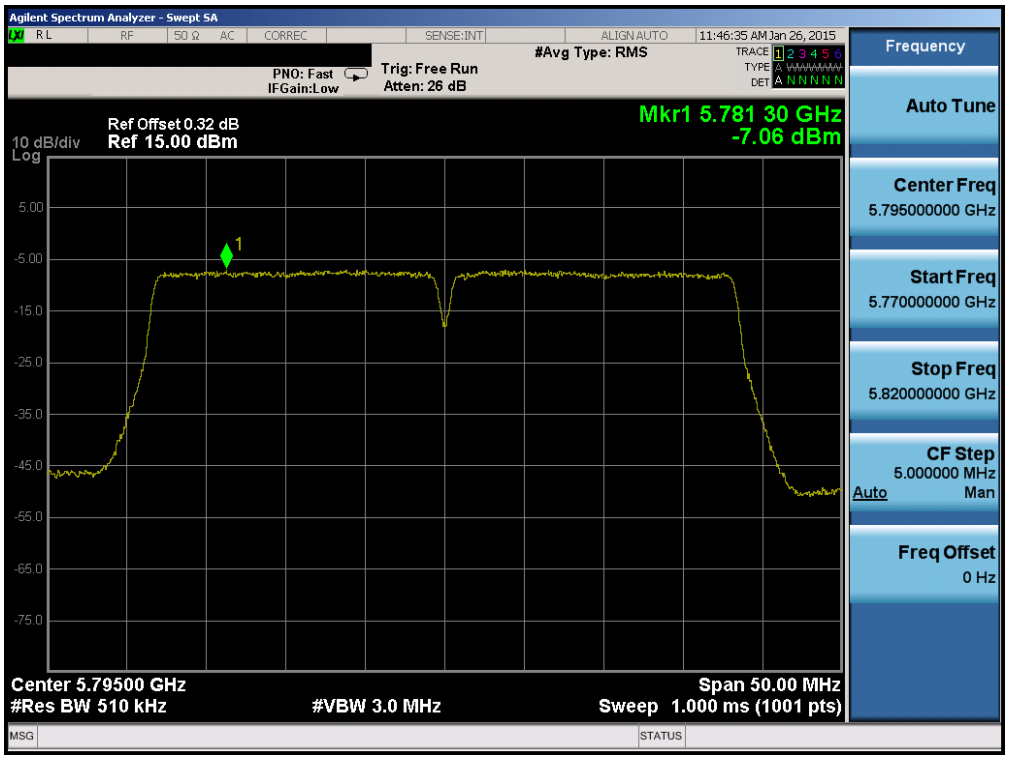
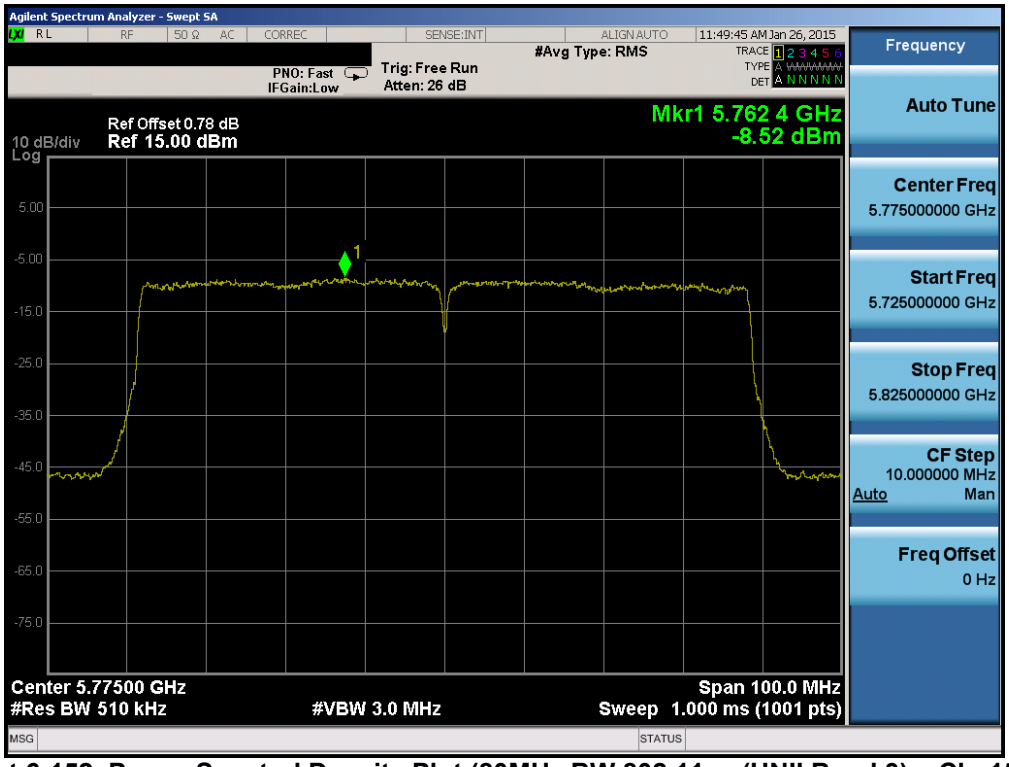


Plot 6-151. Power Spectral Density Plot (40MHz BW 802.11n (UNII Band 3) – Ch. 159)



Plot 6-152. Power Spectral Density Plot (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]	Antenn-1 Power Density [dBm]	Antenn-2 Power Density [dBm]	Summed MIMO Power Density [dBm]	Max Permissible Power Density [dBm/MHz]	Margin [dB]	Pass / Fail
Band 1	5180	36	n (20MHz)	6.5/7.2 (MCS0)	-0.62	-1.33	2.05	11.0	-8.95	Pass
	5200	40	n (20MHz)	6.5/7.2 (MCS0)	-0.32	-0.84	2.44	11.0	-8.56	Pass
	5240	48	n (20MHz)	6.5/7.2 (MCS0)	-0.83	-0.87	2.16	11.0	-8.84	Pass
	5190	38	n (40MHz)	13.5/15 (MCS0)	-4.22	-4.15	-1.18	11.0	-12.18	Pass
	5230	46	n (40MHz)	13.5/15 (MCS0)	-4.14	-3.82	-0.97	11.0	-11.97	Pass
	5210	42	ac (80MHz)	29.3/32.5 (MCS0)	-6.78	-5.92	-3.32	11.0	-14.32	Pass
Band 2A	5260	52	n (20MHz)	6.5/7.2 (MCS0)	-0.94	-0.57	2.26	11.0	-8.74	Pass
	5280	56	n (20MHz)	6.5/7.2 (MCS0)	-0.84	-0.45	2.37	11.0	-8.63	Pass
	5320	64	n (20MHz)	6.5/7.2 (MCS0)	-0.54	-0.31	2.59	11.0	-8.41	Pass
	5270	54	n (40MHz)	13.5/15 (MCS0)	-4.13	-3.56	-0.82	11.0	-11.82	Pass
	5310	62	n (40MHz)	13.5/15 (MCS0)	-3.86	-3.61	-0.72	11.0	-11.72	Pass
	5290	58	ac (80MHz)	29.3/32.5 (MCS0)	-6.98	-5.43	-3.12	11.0	-14.12	Pass
Band 2C	5500	100	n (20MHz)	6.5/7.2 (MCS0)	-1.65	0.58	2.62	11.0	-8.38	Pass
	5580	116	n (20MHz)	6.5/7.2 (MCS0)	-1.40	0.10	2.42	11.0	-8.58	Pass
	5720	144	n (20MHz)	6.5/7.2 (MCS0)	-0.09	0.96	3.48	11.0	-7.52	Pass
	5510	102	n (40MHz)	13.5/15 (MCS0)	-3.74	-2.84	-0.25	11.0	-11.25	Pass
	5550	110	n (40MHz)	13.5/15 (MCS0)	-3.82	-3.05	-0.41	11.0	-11.41	Pass
	5710	142	n (40MHz)	13.5/15 (MCS0)	-2.41	-1.30	1.19	11.0	-9.81	Pass
	5530	106	ac (80MHz)	29.3/32.5 (MCS0)	-7.71	-4.99	-3.13	11.0	-14.13	Pass
	5690	138	ac (80MHz)	29.3/32.5 (MCS0)	-6.36	-5.61	-2.96	11.0	-13.96	Pass

Table 6-21. 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]	Pass / Fail
Band 3	5745	149	n (20MHz)	6.5/7.2 (MCS0)	-2.87	-2.65	0.25	30.0	-29.75	Pass
	5785	157	n (20MHz)	6.5/7.2 (MCS0)	-3.46	-3.05	-0.24	30.0	-30.24	Pass
	5825	165	n (20MHz)	6.5/7.2 (MCS0)	-3.40	-3.08	-0.23	30.0	-30.23	Pass
	5755	151	n (40MHz)	13.5/15 (MCS0)	-6.24	-6.60	-3.40	30.0	-33.40	Pass
	5795	159	n (40MHz)	13.5/15 (MCS0)	-6.40	-7.06	-3.71	30.0	-33.71	Pass
	5775	155	ac (80MHz)	29.3/32.5 (MCS0)	-10.32	-8.52	-6.32	30.0	-36.32	Pass

Table 6-22. Band 3 MIMO Conducted Power Spectral Density Measurements

Note:

Per 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 the average conducted power spectral density was measured to be -0.62 dBm for Antenna-1 and -1.33 dBm for Antenna-2.

Antenna 1 + Antenna 2 = MIMO

(-0.62 dBm + -1.33 dBm) = (0.87 mW + 0.74 mW) = 1.60 mW = 2.05 dBm

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6.6 Frequency Stability

§15.407(g)

The EUT was placed inside of an environmental chamber as the temperature in the chamber was varied between -30°C and +50°C. The temperature was incremented by 10° intervals and the unit was allowed to stabilize at each temperature before each measurement. The center frequency of the transmitting channel was evaluated at each temperature and the frequency deviation from the channel's center frequency was recorded. Data for the worst case channel is shown below.

OPERATING FREQUENCY: 5,180,000,000 Hz

CHANNEL: 36

REFERENCE VOLTAGE: 3.85 VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.85	+ 20 (Ref)	5,179,999,763	-237	-0.00000458
100 %		- 30	5,179,999,887	-113	-0.00000218
100 %		- 20	5,180,000,088	88	0.00000170
100 %		- 10	5,179,999,689	-311	-0.00000600
100 %		0	5,180,000,102	102	0.00000197
100 %		+ 10	5,180,000,035	35	0.00000068
100 %		+ 20	5,179,999,774	-226	-0.00000436
100 %		+ 30	5,180,000,014	14	0.00000027
100 %		+ 40	5,180,000,040	40	0.00000077
100 %		+ 50	5,179,999,832	-168	-0.00000324
BATT. ENDPOINT	3.45	+ 20	5,180,000,204	204	0.00000394

Table 6-23. Frequency Stability Measurements for UNII Band 1 (Ch. 36)

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

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Frequency Stability
§15.407(g)

The EUT was placed inside of an environmental chamber as the temperature in the chamber was varied between -30°C and +50°C. The temperature was incremented by 10° intervals and the unit was allowed to stabilize at each temperature before each measurement. The center frequency of the transmitting channel was evaluated at each temperature and the frequency deviation from the channel's center frequency was recorded. Data for the worst case channel is shown below.

OPERATING FREQUENCY: 5,260,000,000 Hz

CHANNEL: 52

REFERENCE VOLTAGE: 3.85 VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.85	+ 20 (Ref)	5,259,999,757	-243	-0.00000462
100 %		- 30	5,259,999,875	-125	-0.00000238
100 %		- 20	5,259,999,964	-36	-0.00000068
100 %		- 10	5,260,000,179	179	0.00000340
100 %		0	5,260,000,198	198	0.00000376
100 %		+ 10	5,260,000,206	206	0.00000392
100 %		+ 20	5,259,999,801	-199	-0.00000378
100 %		+ 30	5,259,999,558	-442	-0.00000840
100 %		+ 40	5,260,000,068	68	0.00000129
100 %		+ 50	5,260,000,061	61	0.00000116
BATT. ENDPOINT	3.45	+ 20	5,260,000,342	342	0.00000650

Table 6-24. Frequency Stability Measurements for UNII Band 2A (Ch. 52)

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

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Frequency Stability
§15.407(g)

The EUT was placed inside of an environmental chamber as the temperature in the chamber was varied between -30°C and +50°C. The temperature was incremented by 10° intervals and the unit was allowed to stabilize at each temperature before each measurement. The center frequency of the transmitting channel was evaluated at each temperature and the frequency deviation from the channel's center frequency was recorded. Data for the worst case channel is shown below.

OPERATING FREQUENCY: 5,500,000,000 Hz

CHANNEL: 100

REFERENCE VOLTAGE: 3.85 VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.85	+ 20 (Ref)	5,500,000,062	62	0.00000113
100 %		- 30	5,499,999,820	-180	-0.00000327
100 %		- 20	5,499,999,803	-197	-0.00000358
100 %		- 10	5,499,999,933	-67	-0.00000122
100 %		0	5,500,000,331	331	0.00000602
100 %		+ 10	5,500,000,446	446	0.00000811
100 %		+ 20	5,500,000,378	378	0.00000687
100 %		+ 30	5,500,000,057	57	0.00000104
100 %		+ 40	5,500,000,180	180	0.00000327
100 %		+ 50	5,499,999,850	-150	-0.00000273
BATT. ENDPOINT	3.45	+ 20	5,500,000,180	180	0.00000327

Table 6-25. Frequency Stability Measurements for UNII Band 2C (Ch. 100)

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

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Frequency Stability
§15.407(g)

The EUT was placed inside of an environmental chamber as the temperature in the chamber was varied between -30°C and +50°C. The temperature was incremented by 10° intervals and the unit was allowed to stabilize at each temperature before each measurement. The center frequency of the transmitting channel was evaluated at each temperature and the frequency deviation from the channel's center frequency was recorded. Data for the worst case channel is shown below.

OPERATING FREQUENCY: 5,745,000,000 Hz

CHANNEL: 149

REFERENCE VOLTAGE: 3.85 VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.85	+ 20 (Ref)	5,745,000,360	360	0.00000627
100 %		- 30	5,744,999,727	-273	-0.00000475
100 %		- 20	5,744,999,997	-3	-0.00000005
100 %		- 10	5,744,999,749	-251	-0.00000437
100 %		0	5,745,000,186	186	0.00000324
100 %		+ 10	5,744,999,853	-147	-0.00000256
100 %		+ 20	5,744,999,823	-177	-0.00000308
100 %		+ 30	5,744,999,917	-83	-0.00000144
100 %		+ 40	5,745,000,371	371	0.00000646
100 %		+ 50	5,745,000,007	7	0.00000012
BATT. ENDPOINT	3.45	+ 20	5,744,999,888	-112	-0.00000195

Table 6-26. Frequency Stability Measurements for UNII Band 3 (Ch. 149)

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

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6.7 Radiated Spurious Emission Measurements

§15.407(b.1)(b.6) §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 (>98%), at its maximum power control level, as defined in KDB 789033 D02 v01, and at the appropriate frequencies. All channels, modes (e.g. 802.11a, 802.11n (20MHz BW), 802.11n (40MHz BW), 802.11ac (80MHz BW)), 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.

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 6-27 per Section 15.209.

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

Table 6-27. Radiated Limits

Test Procedures Used

KDB 789033 D02 v01 – 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

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

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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.

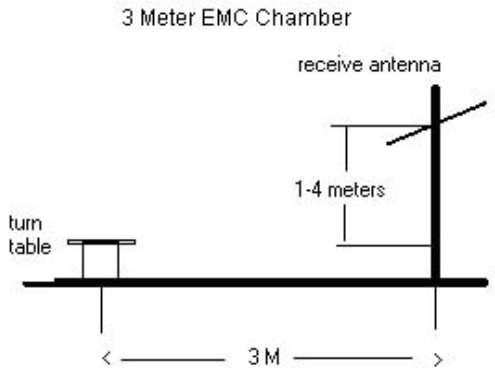

Figure 6-5. Test Instrument & Measurement Setup

Test Notes

1. All radiated spurious emissions levels were measured in a radiated test setup per the guidance of KDB 789033 D02 v01 Section H.
2. 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 6-27.
3. All spurious emissions lying in restricted bands specified in §15.205 are below the limit shown in Table 6-11. 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.
4. The antenna is manipulated through typical positions, polarity and length during the tests. The EUT is manipulated through three orthogonal planes.
5. This unit was tested with its standard battery.

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6. 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.
7. 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.
8. 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.
9. Radiated spurious emissions pre-scan plots are also reported in this section. The plots apply the appropriate system corrections, however, they do not show the fully maximized spectrum. 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. Rohde & Schwarz EMC32, Version 9.15.00 automated test software was used to perform the Radiated Spurious Emissions Pre-Scan testing.

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 in Section 6.8 was calculated using the formula:
  Offset (dB) = (Antenna Factor + Cable Loss + 10 dB Attenuator) – Preamplifier Gain

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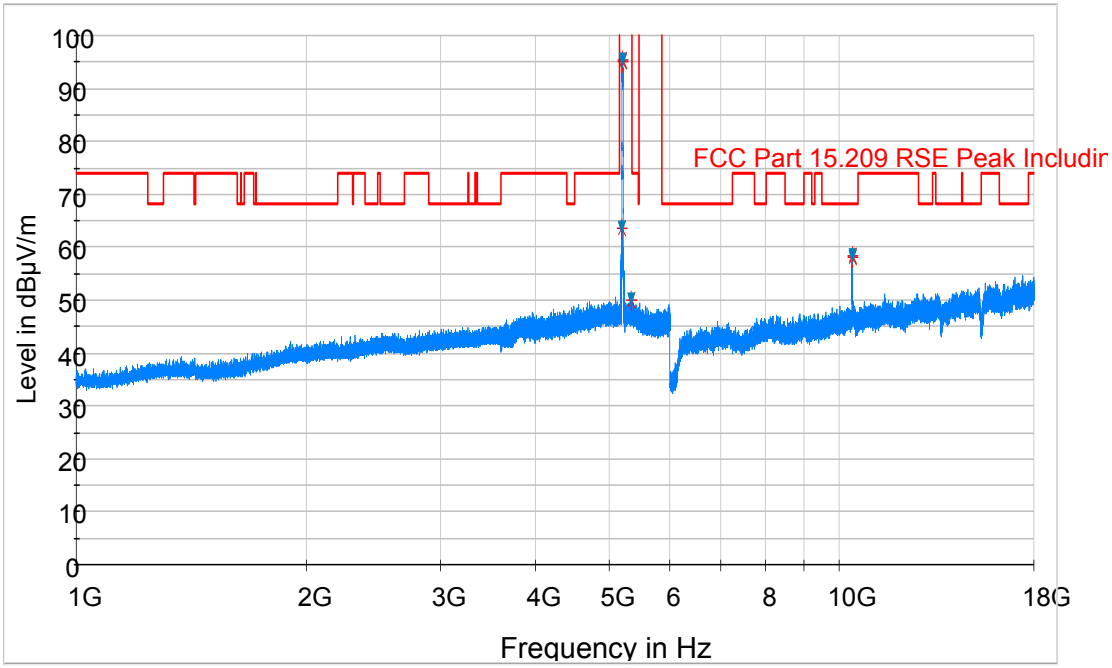
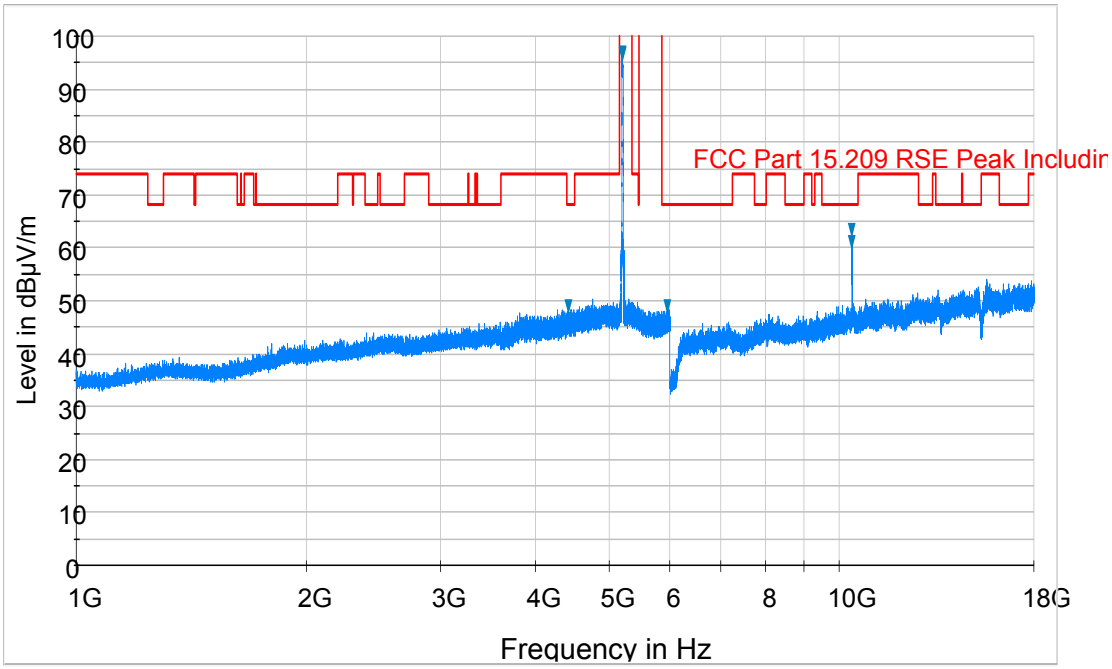
6.7.1 Antenna-1 Radiated Spurious Emission Measurements



Plot 6-153. Radiated Spurious Plot above 1GHz (802.11a – U1 Ch. 40, Ant. Pol. H)



Plot 6-154. Radiated Spurious Plot above 1GHz (802.11a – U1 Ch. 40, Ant. Pol. V)

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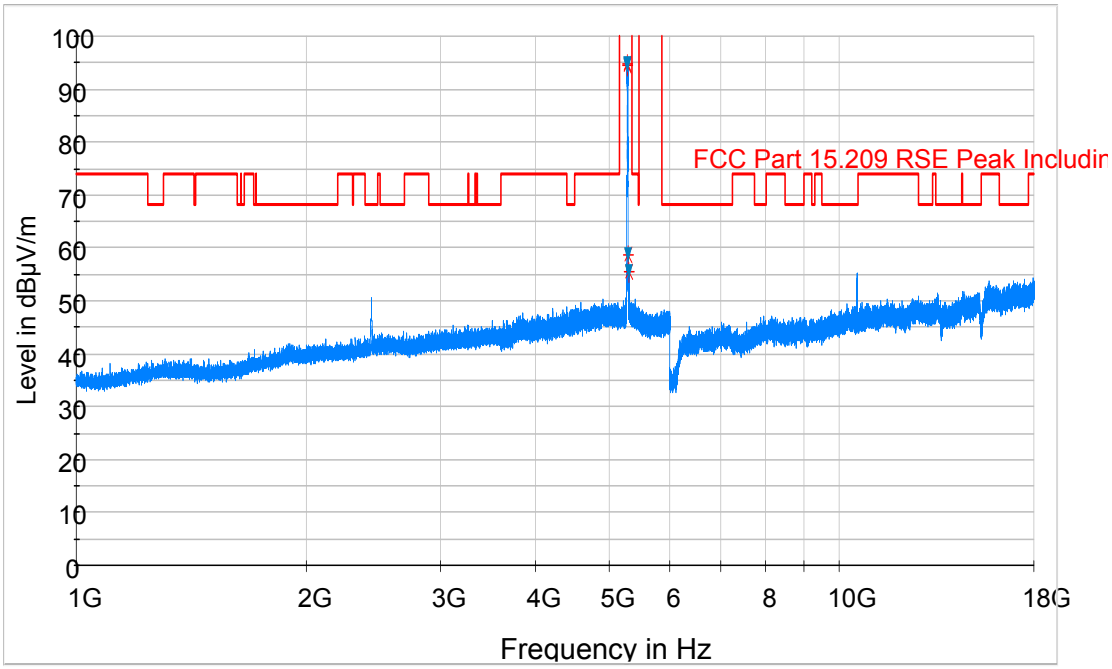
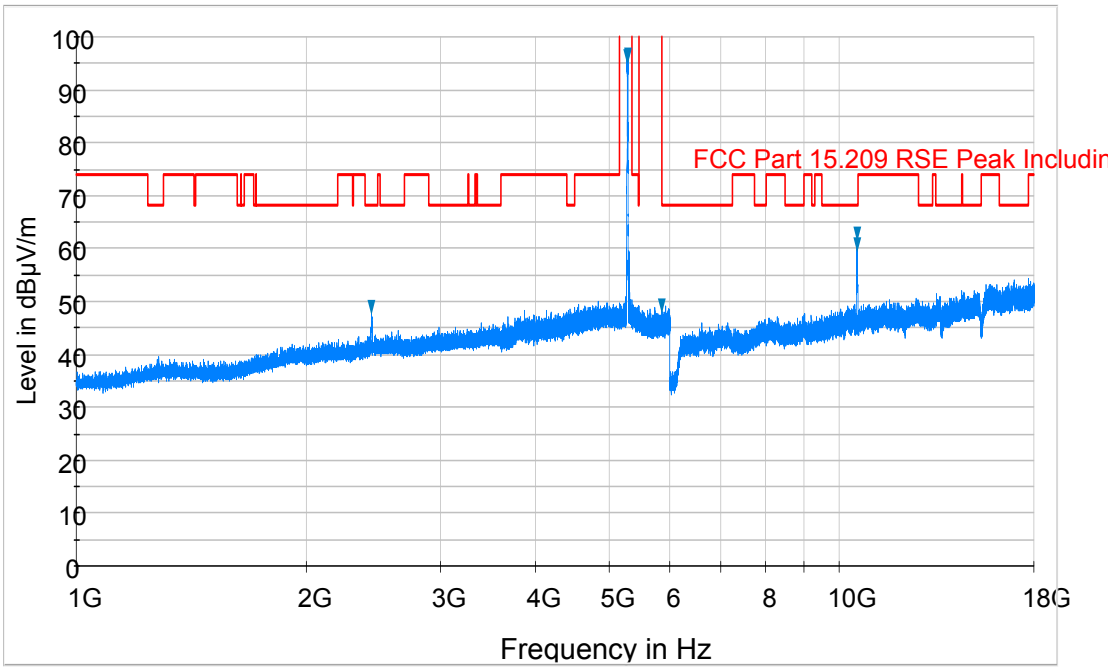


Plot 6-155. Radiated Spurious Plot above 1GHz (802.11a – U2A Ch. 56, Ant. Pol. H)



Plot 6-156. Radiated Spurious Plot above 1GHz (802.11a – U2A Ch. 56, Ant. Pol. V)

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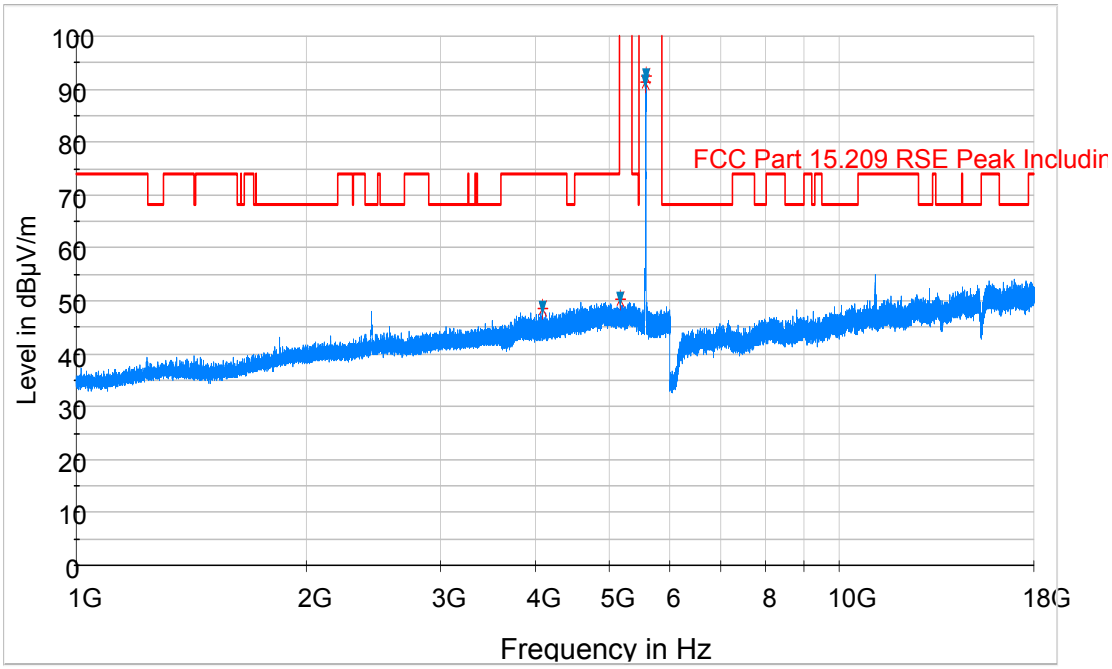
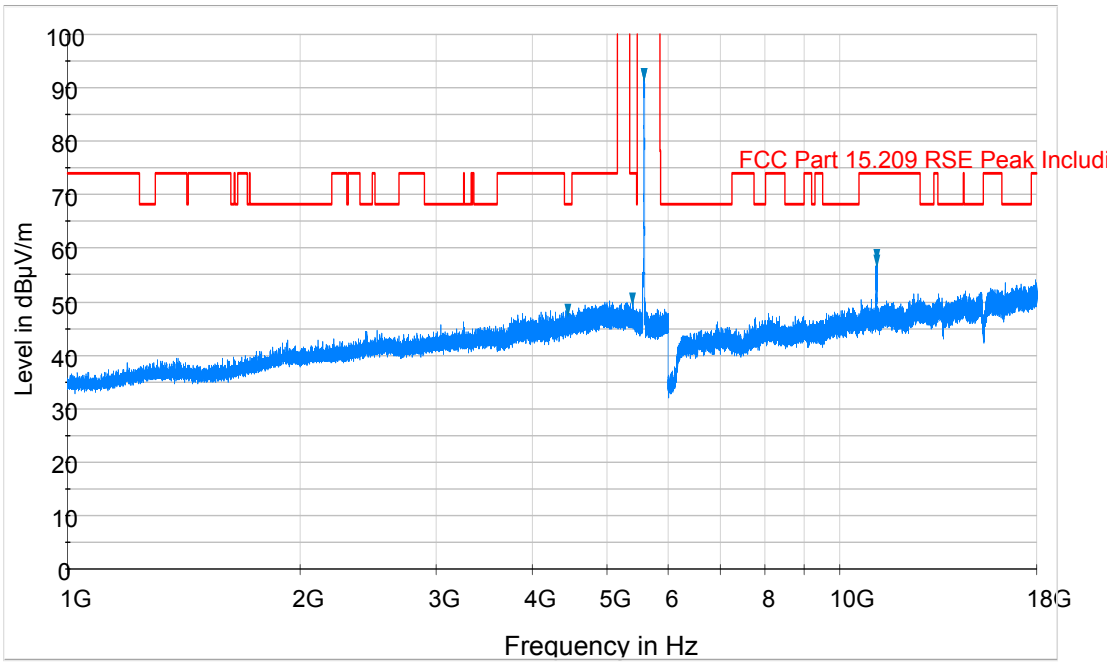


Plot 6-157. Radiated Spurious Plot above 1GHz (802.11a – U2C Ch. 116, Ant. Pol. H)



Plot 6-158. Radiated Spurious Plot above 1GHz (802.11a – U2C Ch. 116, Ant. Pol. V)

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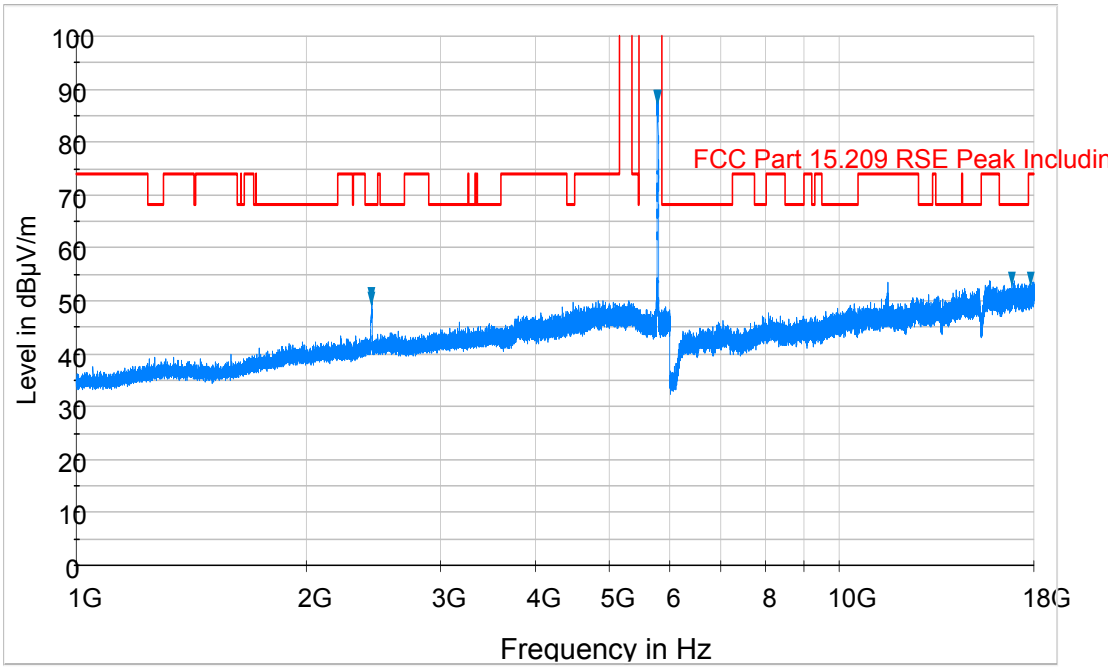
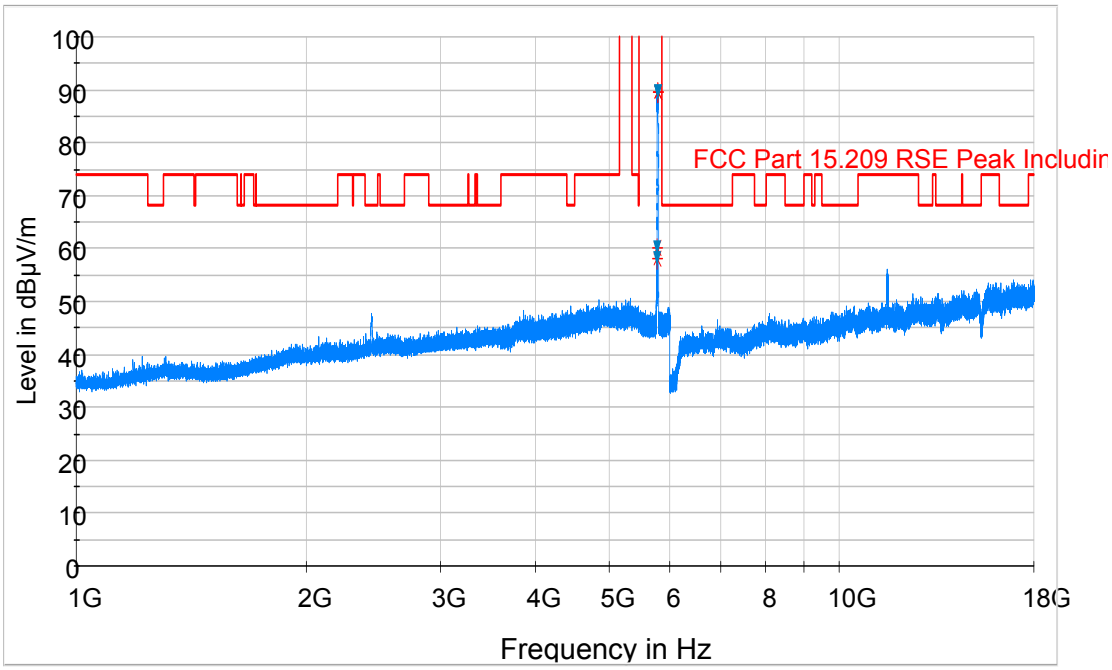


Plot 6-159. Radiated Spurious Plot above 1GHz (802.11a – U3 Ch. 157, Ant. Pol. H)



Plot 6-160. Radiated Spurious Plot above 1GHz (802.11a – U3 Ch. 157, Ant. Pol. V)

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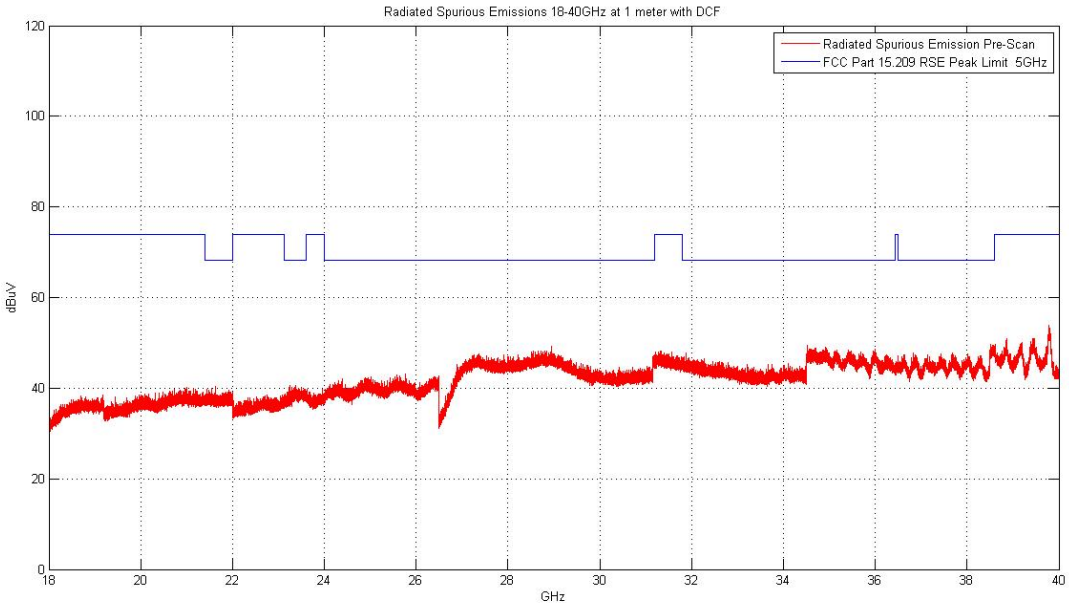
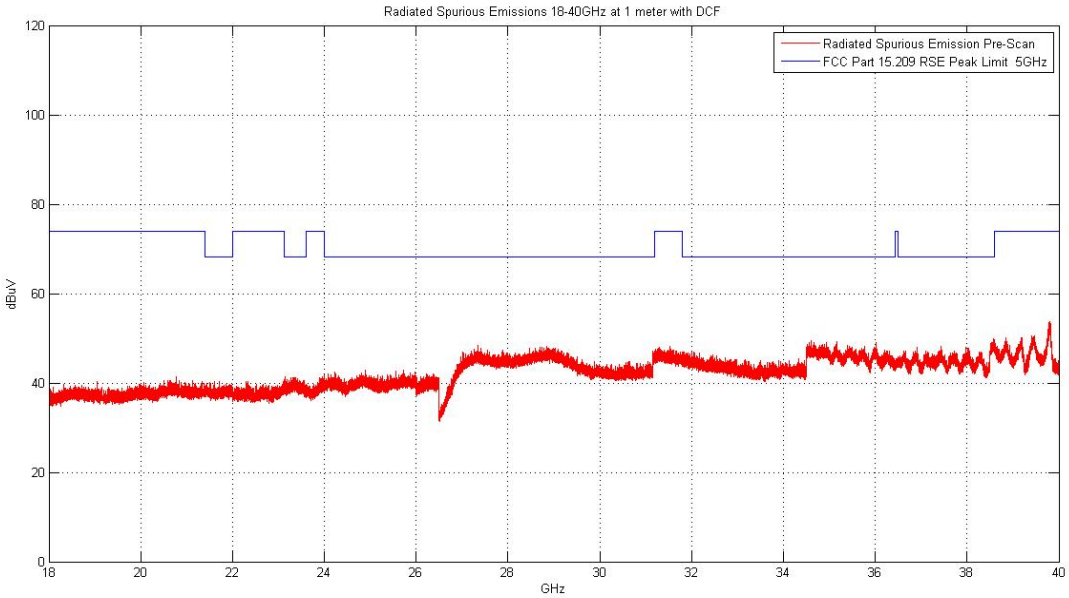
Antenna-1 Radiated Spurious Emissions Measurements (Above 18GHz)

§15.209



Plot 6-161. Radiated Spurious Plot above 18GHz (802.11a – Ant. Pol. H)



Plot 6-162. Radiated Spurious Plot above 18GHz (802.11a – Ant. Pol. V)

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Antenna-1 Radiated Spurious Emission Measurements

§15.247(d) §15.205 & §15.209

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

	Frequency [MHz]	Analyzer Level [dBm]	Detector	Ant. Pol. [H/V]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	10360.00	-107.06	Peak	H	44.79	0.00	44.72	68.20	-23.48
*	15540.00	-118.17	Average	H	49.29	0.00	38.12	53.98	-15.86
*	15540.00	-106.62	Peak	H	49.29	0.00	49.67	73.98	-24.31
*	20720.00	-107.00	Average	H	44.20	-9.54	34.65	53.98	-19.33
*	20720.00	-99.95	Peak	H	44.20	-9.54	41.70	73.98	-32.28
	25900.00	-102.16	Peak	H	45.08	-9.54	40.37	68.20	-27.83

Table 6-28. Radiated Measurements

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

	Frequency [MHz]	Analyzer Level [dBm]	Detector	Ant. Pol. [H/V]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	10400.00	-106.31	Peak	H	44.87	0.00	45.57	68.20	-22.63
*	15600.00	-118.92	Average	H	49.31	0.00	37.39	53.98	-16.59
*	15600.00	-106.24	Peak	H	49.31	0.00	50.07	73.98	-23.91
*	20800.00	-107.26	Average	H	44.20	-9.54	34.40	53.98	-19.58
*	20800.00	-100.25	Peak	H	44.20	-9.54	41.41	73.98	-32.57
	26000.00	-101.72	Peak	H	45.11	-9.54	40.85	68.20	-27.35

Table 6-29. Radiated Measurements

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

	Frequency [MHz]	Analyzer Level [dBm]	Detector	Ant. Pol. [H/V]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	10480.00	-106.06	Peak	H	45.08	0.00	46.02	68.20	-22.18
*	15720.00	-117.65	Average	H	49.40	0.00	38.75	53.98	-15.23
*	15720.00	-106.23	Peak	H	49.40	0.00	50.17	73.98	-23.81
*	20960.00	-105.78	Average	H	44.19	-9.54	35.86	53.98	-18.12
*	20960.00	-99.80	Peak	H	44.19	-9.54	41.84	73.98	-32.14
	26200.00	-101.50	Peak	H	44.95	-9.54	40.91	68.20	-27.29

Table 6-30. Radiated Measurements

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

	Frequency [MHz]	Analyzer Level [dBm]	Detector	Ant. Pol. [H/V]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	10520.00	-107.02	Peak	H	45.13	0.00	45.11	68.20	-23.09
*	15780.00	-118.12	Average	H	49.46	0.00	38.33	53.98	-15.65
*	15780.00	-105.93	Peak	H	49.46	0.00	50.52	73.98	-23.46
*	21040.00	-108.05	Average	H	44.18	-9.54	33.58	53.98	-20.39
*	21040.00	-102.43	Peak	H	44.18	-9.54	39.20	73.98	-34.77
	26300.00	-100.47	Peak	H	44.95	-9.54	41.93	68.20	-26.27

Table 6-31. Radiated Measurements

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

	Frequency [MHz]	Analyzer Level [dBm]	Detector	Ant. Pol. [H/V]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	10560.00	-104.71	Peak	H	45.13	0.00	47.42	68.20	-20.78
*	15840.00	-118.14	Average	H	49.54	0.00	38.41	53.98	-15.57
*	15840.00	-106.32	Peak	H	49.54	0.00	50.23	73.98	-23.75
*	21120.00	-107.85	Average	H	44.17	-9.54	33.78	53.98	-20.20
*	21120.00	-102.30	Peak	H	44.17	-9.54	39.33	73.98	-34.65
	26400.00	-100.27	Peak	H	45.01	-9.54	42.19	68.20	-26.01

Table 6-32. Radiated Measurements

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

	Frequency [MHz]	Analyzer Level [dBm]	Detector	Ant. Pol. [H/V]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
*	10640.00	-117.60	Average	H	45.16	0.00	34.56	53.98	-19.42
*	10640.00	-106.69	Peak	H	45.16	0.00	45.47	73.98	-28.51
*	15960.00	-118.12	Average	H	49.75	0.00	38.63	53.98	-15.35
*	15960.00	-106.48	Peak	H	49.75	0.00	50.27	73.98	-23.71
*	21280.00	-108.29	Average	H	44.18	-9.54	33.34	53.98	-20.63
*	21280.00	-101.92	Peak	H	44.18	-9.54	39.71	73.98	-34.26
	26600.00	-104.29	Peak	H	47.61	-9.54	40.78	68.20	-27.42

Table 6-33. Radiated Measurements

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

	Frequency [MHz]	Analyzer Level [dBm]	Detector	Ant. Pol. [H/V]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
*	11000.00	-117.25	Average	H	45.24	0.00	34.99	53.98	-18.99
*	11000.00	-105.43	Peak	H	45.24	0.00	46.81	73.98	-27.17
	16500.00	-105.53	Peak	H	50.35	0.00	51.82	68.20	-16.38
	22000.00	-103.15	Peak	H	44.47	-9.54	38.78	68.20	-29.42
	27500.00	-105.25	Peak	H	47.92	-9.54	40.13	68.20	-28.07

Table 6-34. Radiated Measurements

Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6 Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5580MHz
Channel: 116

	Frequency [MHz]	Analyzer Level [dBm]	Detector	Ant. Pol. [H/V]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
*	11160.00	-116.80	Average	H	45.23	0.00	35.43	53.98	-18.55
*	11160.00	-104.74	Peak	H	45.23	0.00	47.49	73.98	-26.49
	16740.00	-106.46	Peak	H	50.51	0.00	51.05	68.20	-17.15
*	22320.00	-114.34	Average	H	44.59	-9.54	27.71	53.98	-26.27
*	22320.00	-103.27	Peak	H	44.59	-9.54	38.78	73.98	-35.20
	27900.00	-104.57	Peak	H	48.09	-9.54	40.98	68.20	-27.22

Table 6-35. Radiated Measurements

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

	Frequency [MHz]	Analyzer Level [dBm]	Detector	Ant. Pol. [H/V]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
*	11440.00	-116.52	Average	H	45.38	0.00	35.86	53.98	-18.12
*	11440.00	-104.60	Peak	H	45.38	0.00	47.78	73.98	-26.20
	17160.00	-106.85	Peak	H	50.43	0.00	50.58	68.20	-17.62
*	22880.00	-112.68	Average	H	44.62	-9.54	29.40	53.98	-24.58
*	22880.00	-103.33	Peak	H	44.62	-9.54	38.75	73.98	-35.23
	28600.00	-105.07	Peak	H	48.35	-9.54	40.74	68.20	-27.46

Table 6-36. Radiated Measurements

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

	Frequency [MHz]	Analyzer Level [dBm]	Detector	Ant. Pol. [H/V]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
*	11490.00	-117.79	Average	H	45.36	0.00	34.57	53.98	-19.41
*	11490.00	-105.93	Peak	H	45.36	0.00	46.43	73.98	-27.55
	17235.00	-105.80	Peak	H	49.98	0.00	51.17	68.20	-17.03
*	22980.00	-110.75	Average	H	44.64	-9.54	31.34	53.98	-22.64
*	22980.00	-103.58	Peak	H	44.64	-9.54	38.51	73.98	-35.47
	28725.00	-104.23	Peak	H	48.26	-9.54	41.49	68.20	-26.71

Table 6-37. Radiated Measurements

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

	Frequency [MHz]	Analyzer Level [dBm]	Detector	Ant. Pol. [H/V]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
*	11570.00	-117.37	Average	H	45.46	0.00	35.09	53.98	-18.89
*	11570.00	-105.89	Peak	H	45.46	0.00	46.57	73.98	-27.41
	17355.00	-106.62	Peak	H	50.40	0.00	50.78	68.20	-17.42
	23140.00	-101.41	Peak	H	44.73	-9.54	40.78	68.20	-27.42
	28925.00	-105.07	Peak	H	48.28	-9.54	40.66	68.20	-27.54

Table 6-38. Radiated Measurements

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

	Frequency [MHz]	Analyzer Level [dBm]	Detector	Ant. Pol. [H/V]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
*	11650.00	-117.75	Average	H	45.57	0.00	34.82	53.98	-19.16
*	11650.00	-106.26	Peak	H	45.57	0.00	46.31	73.98	-27.67
	17475.00	-106.02	Peak	H	50.74	0.00	51.72	68.20	-16.48
	23300.00	-101.04	Peak	H	44.76	-9.54	41.18	68.20	-27.02
	29125.00	-104.91	Peak	H	48.24	-9.54	40.79	68.20	-27.41

Table 6-39. Radiated Measurements

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

	Frequency [MHz]	Analyzer Level [dBm]	Detector	Ant. Pol. [H/V]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	10480.00	-105.14	Peak	H	45.08	0.00	46.94	68.20	-21.26
*	15720.00	-120.67	Average	H	49.40	0.00	35.73	53.98	-18.25
*	15720.00	-108.15	Peak	H	49.40	0.00	48.25	73.98	-25.73
*	20960.00	-104.65	Average	H	44.19	-9.54	36.99	53.98	-16.99
*	20960.00	-96.63	Peak	H	44.19	-9.54	45.01	73.98	-28.97
	26200.00	-96.94	Peak	H	44.95	-9.54	45.47	68.20	-22.73

Table 6-40. Radiated Measurements with WCC

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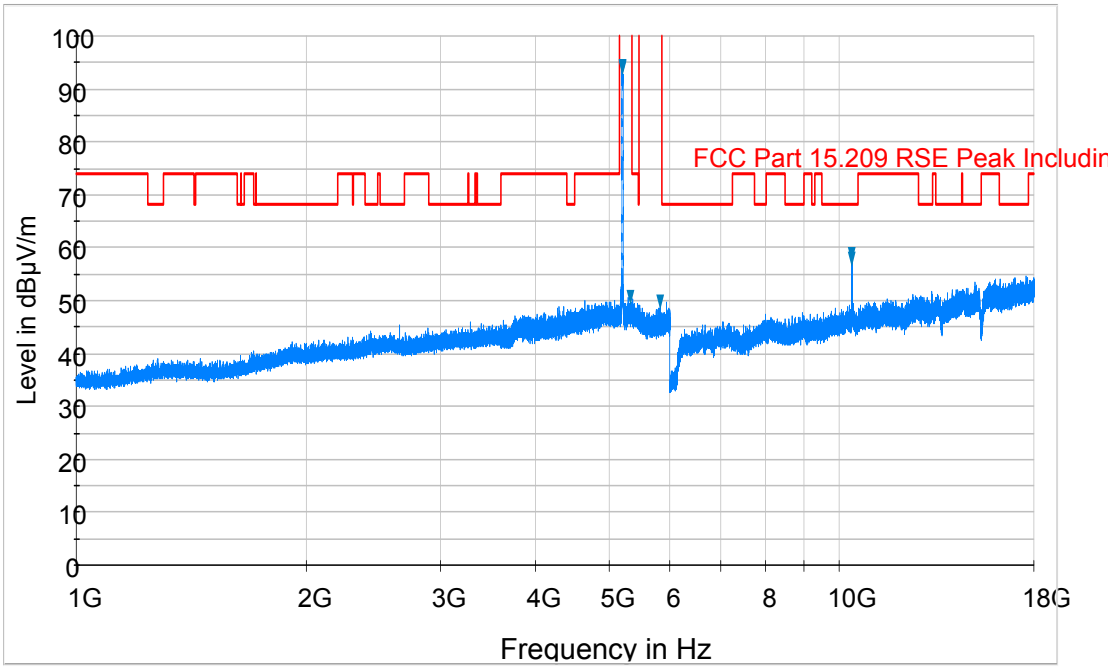
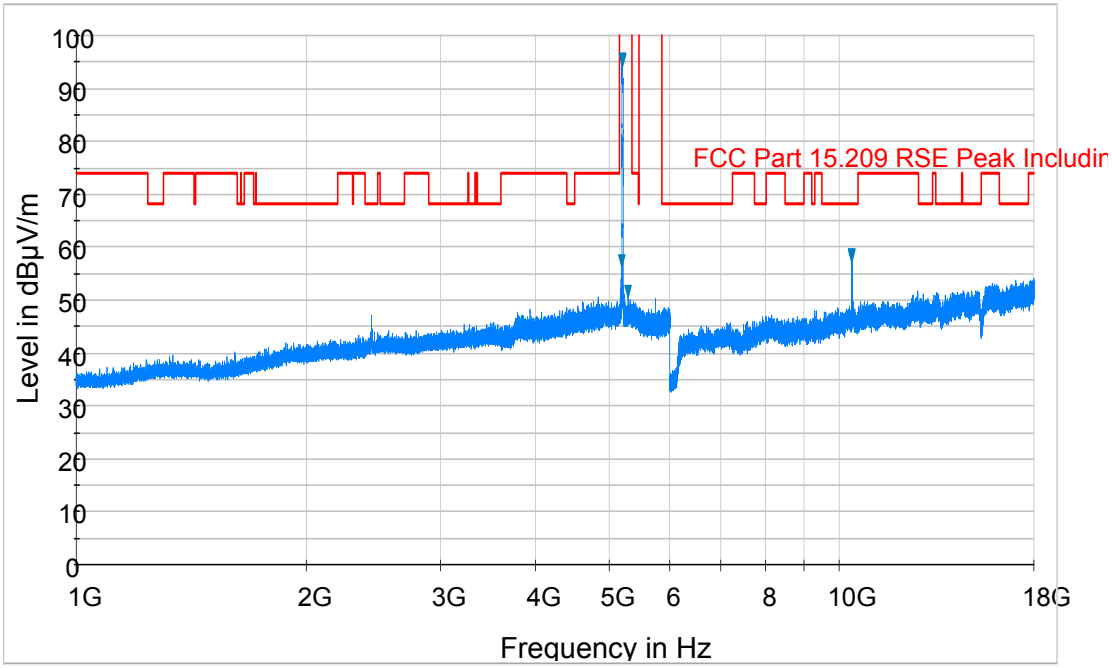
6.7.2 Antenna-2 Radiated Spurious Emission Measurements



Plot 6-163. Radiated Spurious Plot above 1GHz (802.11a – U1 Ch. 40, Ant. Pol. H)



Plot 6-164. Radiated Spurious Plot above 1GHz (802.11a – U1 Ch. 40, Ant. Pol. V)

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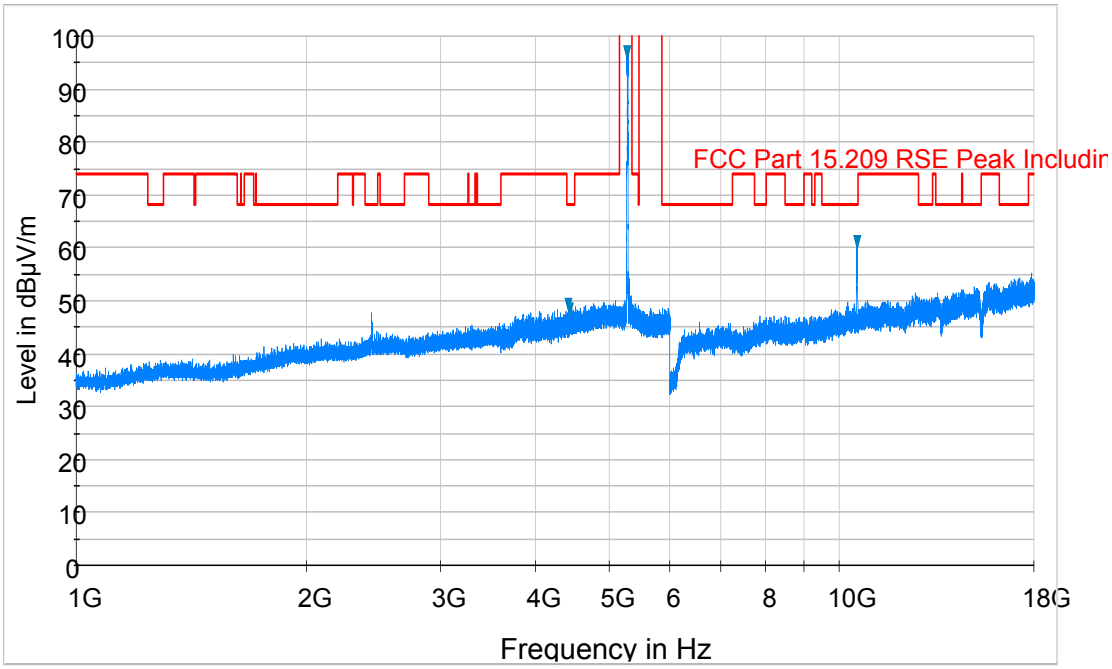
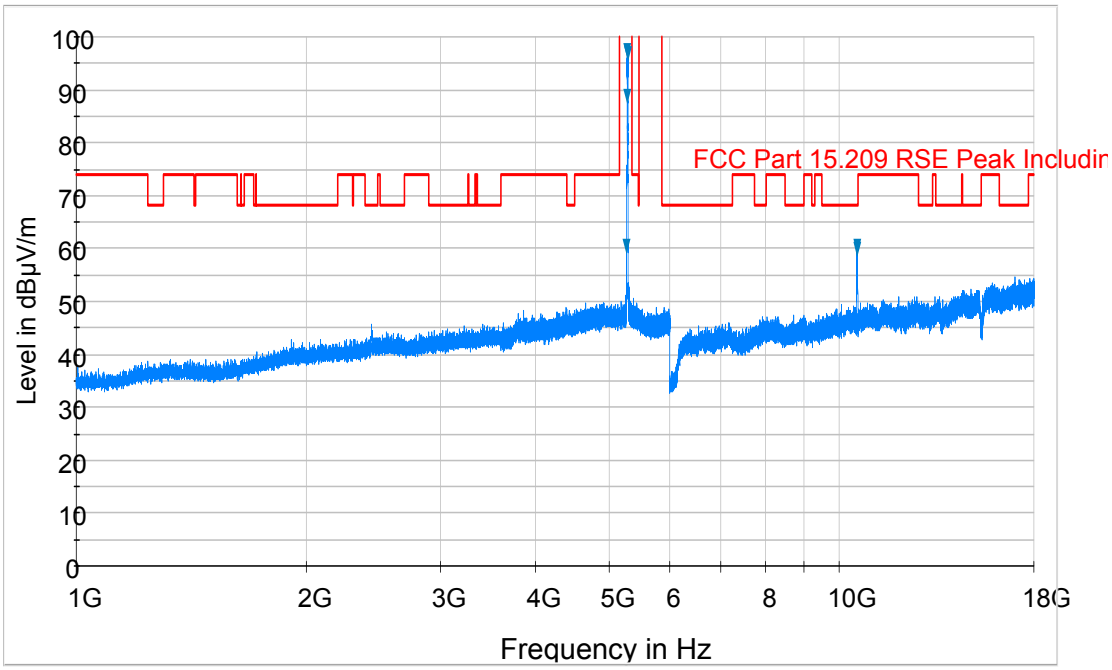


Plot 6-165. Radiated Spurious Plot above 1GHz (802.11a – U2A Ch. 56, Ant. Pol. H)



Plot 6-166. Radiated Spurious Plot above 1GHz (802.11a – U2A Ch. 56, Ant. Pol. V)

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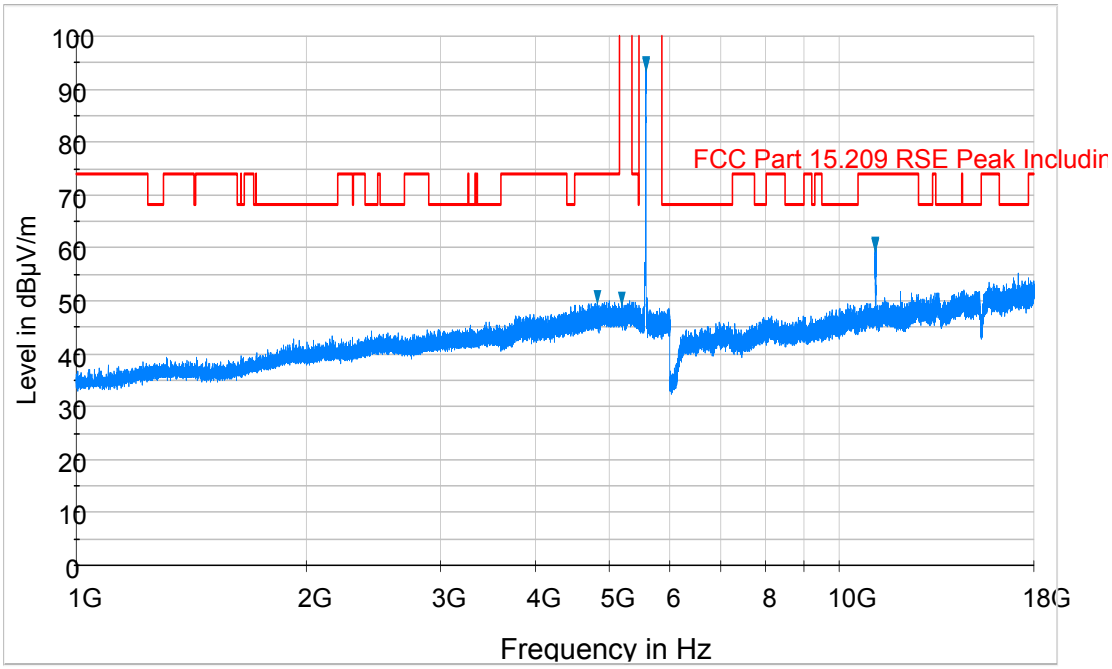
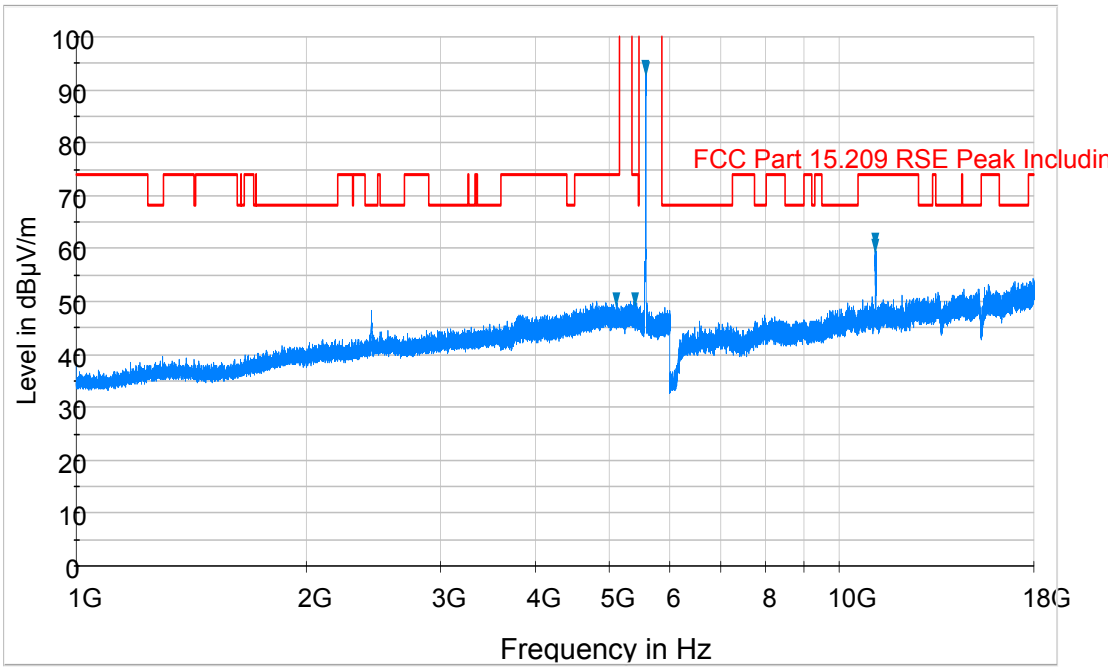


Plot 6-167. Radiated Spurious Plot above 1GHz (802.11a – U2C Ch. 116, Ant. Pol. H)



Plot 6-168. Radiated Spurious Plot above 1GHz (802.11a – U2C Ch. 116, Ant. Pol. V)

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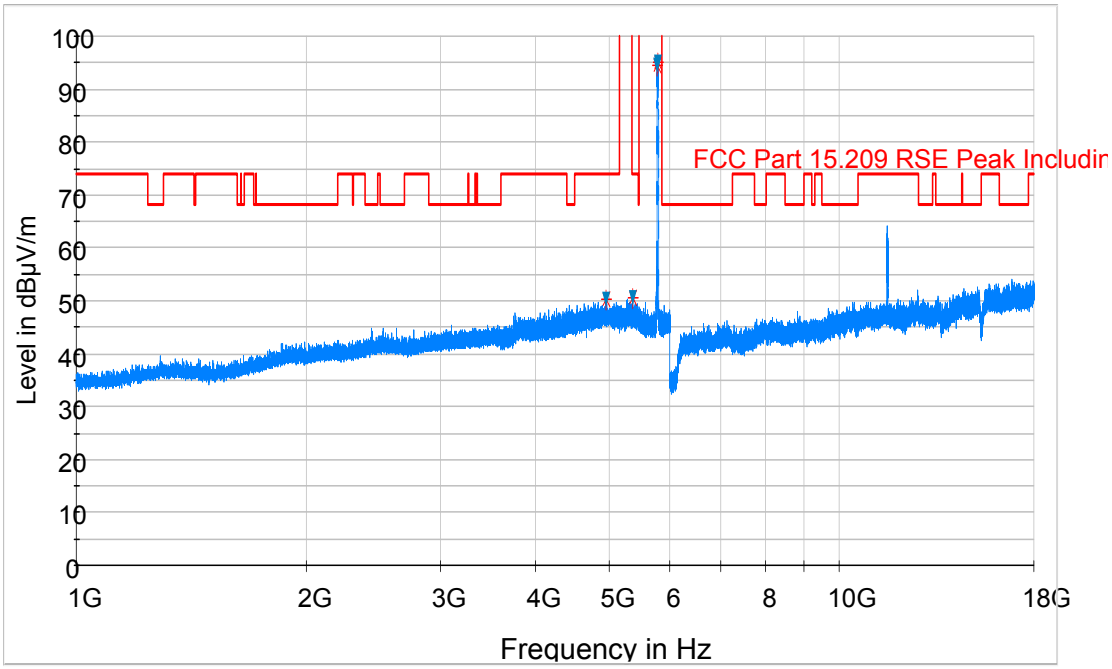
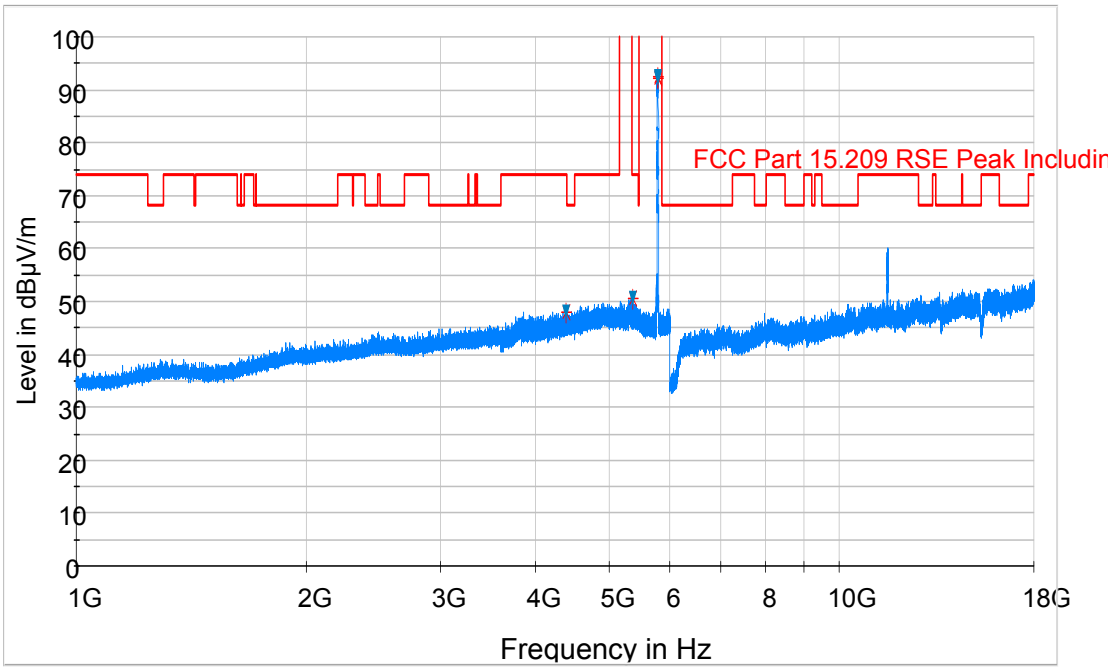


Plot 6-169. Radiated Spurious Plot above 1GHz (802.11a – U3 Ch. 157, Ant. Pol. H)



Plot 6-170. Radiated Spurious Plot above 1GHz (802.11a – U3 Ch. 157, Ant. Pol. V)

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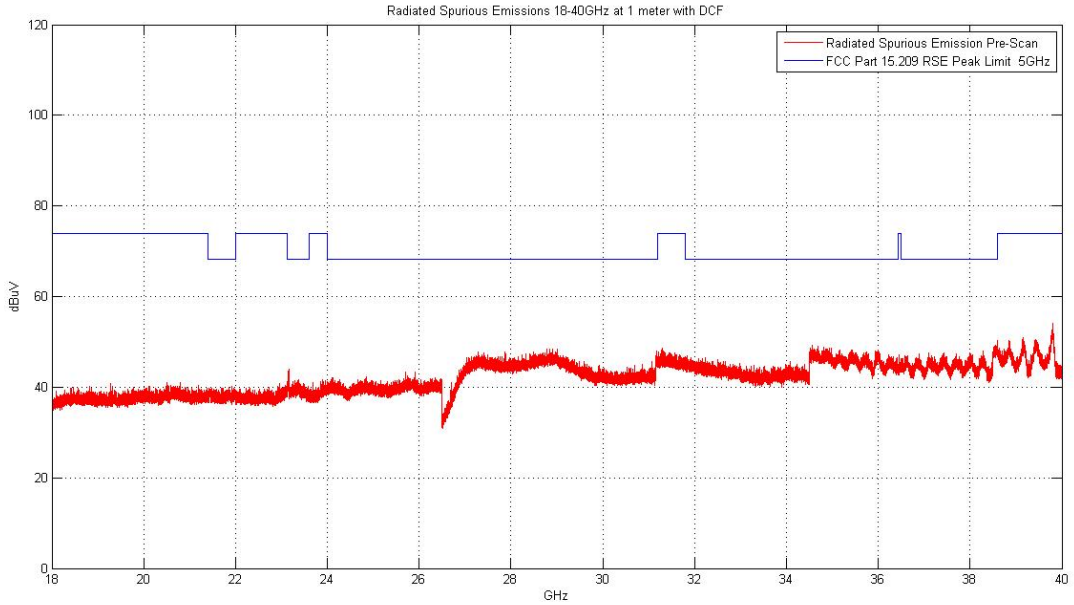
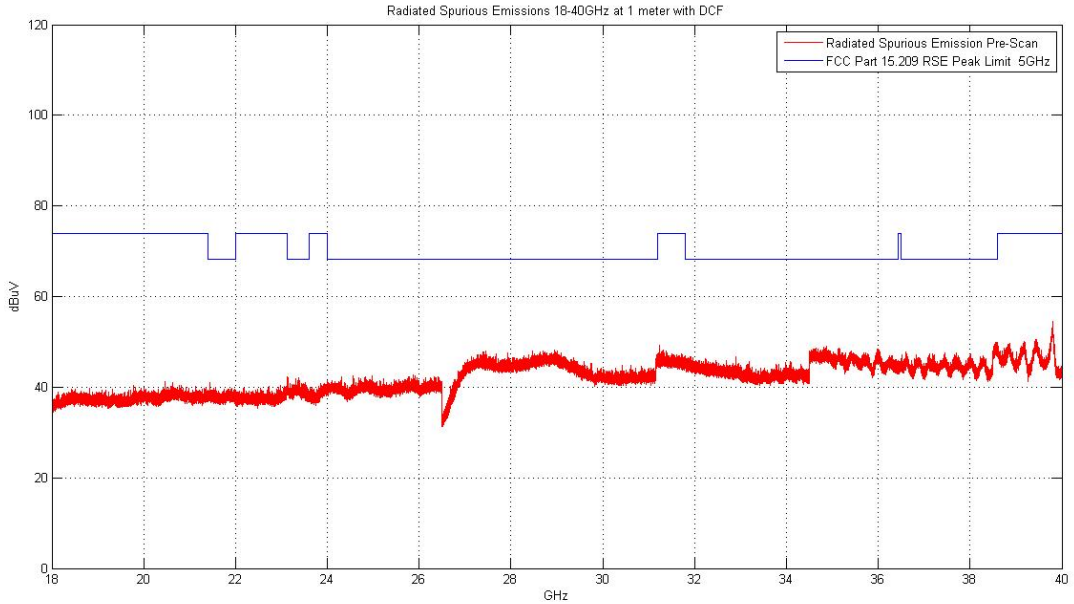
Antenna-2 Radiated Spurious Emissions Measurements (Above 18GHz)
§15.209



Plot 6-171. Radiated Spurious Plot above 18GHz (802.11a – Ant. Pol. H)



Plot 6-172. Radiated Spurious Plot above 18GHz (802.11a – Ant. Pol. V)

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Antenna-2 Radiated Spurious Emission Measurements

§15.247(d) §15.205 & §15.209

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

	Frequency [MHz]	Analyzer Level [dBm]	Detector	Ant. Pol. [H/V]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	10360.00	-105.84	Peak	H	44.79	0.00	45.94	68.20	-22.26
*	15540.00	-117.92	Average	H	49.29	0.00	38.37	53.98	-15.61
*	15540.00	-105.33	Peak	H	49.29	0.00	50.96	73.98	-23.02
*	20720.00	-110.73	Average	H	44.20	-9.54	30.92	53.98	-23.06
*	20720.00	-103.19	Peak	H	44.20	-9.54	38.46	73.98	-35.52
	25900.00	-102.02	Peak	H	45.08	-9.54	40.51	68.20	-27.69

Table 6-41. Radiated Measurements

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

	Frequency [MHz]	Analyzer Level [dBm]	Detector	Ant. Pol. [H/V]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	10400.00	-106.49	Peak	H	44.87	0.00	45.39	68.20	-22.81
*	15600.00	-117.80	Average	H	49.31	0.00	38.51	53.98	-15.47
*	15600.00	-105.34	Peak	H	49.31	0.00	50.97	73.98	-23.01
*	20800.00	-110.39	Average	H	44.20	-9.54	31.27	53.98	-22.71
*	20800.00	-102.59	Peak	H	44.20	-9.54	39.07	73.98	-34.91
	26000.00	-103.10	Peak	H	45.11	-9.54	39.47	68.20	-28.73

Table 6-42. Radiated Measurements

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

	Frequency [MHz]	Analyzer Level [dBm]	Detector	Ant. Pol. [H/V]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	10480.00	-105.79	Peak	H	45.08	0.00	46.29	68.20	-21.91
*	15720.00	-117.48	Average	H	49.40	0.00	38.92	53.98	-15.06
*	15720.00	-105.96	Peak	H	49.40	0.00	50.44	73.98	-23.54
*	20960.00	-110.89	Average	H	44.19	-9.54	30.75	53.98	-23.23
*	20960.00	-102.12	Peak	H	44.19	-9.54	39.52	73.98	-34.46
	26200.00	-101.81	Peak	H	44.95	-9.54	40.60	68.20	-27.60

Table 6-43. Radiated Measurements

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

	Frequency [MHz]	Analyzer Level [dBm]	Detector	Ant. Pol. [H/V]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	10520.00	-105.91	Peak	H	45.13	0.00	46.22	68.20	-21.98
*	15780.00	-118.13	Average	H	49.46	0.00	38.32	53.98	-15.66
*	15780.00	-106.34	Peak	H	49.46	0.00	50.11	73.98	-23.87
*	21040.00	-110.74	Average	H	44.18	-9.54	30.89	53.98	-23.08
*	21040.00	-103.82	Peak	H	44.18	-9.54	37.81	73.98	-36.16
	26300.00	-101.13	Peak	H	44.95	-9.54	41.27	68.20	-26.93

Table 6-44. Radiated Measurements

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

	Frequency [MHz]	Analyzer Level [dBm]	Detector	Ant. Pol. [H/V]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	10560.00	-105.41	Peak	H	45.13	0.00	46.72	68.20	-21.48
*	15840.00	-118.29	Average	H	49.54	0.00	38.26	53.98	-15.72
*	15840.00	-106.77	Peak	H	49.54	0.00	49.78	73.98	-24.20
*	21120.00	-112.49	Average	H	44.17	-9.54	29.14	53.98	-24.84
*	21120.00	-103.39	Peak	H	44.17	-9.54	38.24	73.98	-35.74
	26400.00	-101.13	Peak	H	45.01	-9.54	41.33	68.20	-26.87

Table 6-45. Radiated Measurements

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

	Frequency [MHz]	Analyzer Level [dBm]	Detector	Ant. Pol. [H/V]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
*	10640.00	-116.03	Average	H	45.16	0.00	36.13	53.98	-17.85
*	10640.00	-105.86	Peak	H	45.16	0.00	46.30	73.98	-27.68
*	15960.00	-116.53	Average	H	49.75	0.00	40.22	53.98	-13.76
*	15960.00	-106.95	Peak	H	49.75	0.00	49.80	73.98	-24.18
*	21280.00	-112.37	Average	H	44.18	-9.54	29.26	53.98	-24.71
*	21280.00	-103.12	Peak	H	44.18	-9.54	38.51	73.98	-35.46
	26600.00	-103.66	Peak	H	47.61	-9.54	41.41	68.20	-26.79

Table 6-46. Radiated Measurements

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

	Frequency [MHz]	Analyzer Level [dBm]	Detector	Ant. Pol. [H/V]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
*	11000.00	-117.30	Average	H	45.24	0.00	34.94	53.98	-19.04
*	11000.00	-105.18	Peak	H	45.24	0.00	47.06	73.98	-26.92
	16500.00	-105.58	Peak	H	50.35	0.00	51.77	68.20	-16.43
	22000.00	-101.99	Peak	H	44.47	-9.54	39.94	68.20	-28.26
	27500.00	-107.16	Peak	H	47.92	-9.54	38.22	68.20	-29.98

Table 6-47. Radiated Measurements

Worst Case Mode: 802.11a
Worst Case Transfer Rate: 6 Mbps
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5580MHz
Channel: 116

	Frequency [MHz]	Analyzer Level [dBm]	Detector	Ant. Pol. [H/V]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
*	11160.00	-117.09	Average	H	45.23	0.00	35.14	53.98	-18.84
*	11160.00	-105.03	Peak	H	45.23	0.00	47.20	73.98	-26.78
	16740.00	-106.02	Peak	H	50.51	0.00	51.49	68.20	-16.71
*	22320.00	-112.73	Average	H	44.59	-9.54	29.32	53.98	-24.66
*	22320.00	-104.22	Peak	H	44.59	-9.54	37.83	73.98	-36.15
	27900.00	-104.96	Peak	H	48.09	-9.54	40.59	68.20	-27.61

Table 6-48. Radiated Measurements

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

	Frequency [MHz]	Analyzer Level [dBm]	Detector	Ant. Pol. [H/V]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
*	11440.00	-117.72	Average	H	45.38	0.00	34.66	53.98	-19.32
*	11440.00	-107.87	Peak	H	45.38	0.00	44.51	73.98	-29.47
	17160.00	-106.21	Peak	H	50.43	0.00	51.22	68.20	-16.98
*	22880.00	-113.66	Average	H	44.62	-9.54	28.42	53.98	-25.56
*	22880.00	-104.40	Peak	H	44.62	-9.54	37.68	73.98	-36.30
	28600.00	-106.67	Peak	H	48.35	-9.54	39.14	68.20	-29.06

Table 6-49. Radiated Measurements

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

	Frequency [MHz]	Analyzer Level [dBm]	Detector	Ant. Pol. [H/V]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
*	11490.00	-117.95	Average	H	45.36	0.00	34.41	53.98	-19.57
*	11490.00	-105.37	Peak	H	45.36	0.00	46.99	73.98	-26.99
	17235.00	-106.06	Peak	H	49.98	0.00	50.91	68.20	-17.29
*	22980.00	-113.55	Average	H	44.64	-9.54	28.54	53.98	-25.44
*	22980.00	-104.36	Peak	H	44.64	-9.54	37.73	73.98	-36.25
	28725.00	-104.39	Peak	H	48.26	-9.54	41.33	68.20	-26.87

Table 6-50. Radiated Measurements

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

	Frequency [MHz]	Analyzer Level [dBm]	Detector	Ant. Pol. [H/V]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
*	11570.00	-117.32	Average	H	45.46	0.00	35.14	53.98	-18.84
*	11570.00	-105.60	Peak	H	45.46	0.00	46.86	73.98	-27.12
	17355.00	-106.15	Peak	H	50.40	0.00	51.25	68.20	-16.95
	23140.00	-102.02	Peak	H	44.73	-9.54	40.17	68.20	-28.03
	28925.00	-104.65	Peak	H	48.28	-9.54	41.08	68.20	-27.12

Table 6-51. Radiated Measurements

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

	Frequency [MHz]	Analyzer Level [dBm]	Detector	Ant. Pol. [H/V]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
*	11650.00	-117.79	Average	H	45.57	0.00	34.78	53.98	-19.20
*	11650.00	-105.94	Peak	H	45.57	0.00	46.63	73.98	-27.35
	17475.00	-106.50	Peak	H	50.74	0.00	51.24	68.20	-16.96
	23300.00	-102.23	Peak	H	44.76	-9.54	39.99	68.20	-28.21
	29125.00	-105.52	Peak	H	48.24	-9.54	40.18	68.20	-28.02

Table 6-52. Radiated Measurements

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

	Frequency [MHz]	Analyzer Level [dBm]	Detector	Ant. Pol. [H/V]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
*	10640.00	-117.95	Average	H	45.16	0.00	34.21	53.98	-19.77
*	10640.00	-105.43	Peak	H	45.16	0.00	46.73	73.98	-27.25
*	15960.00	-120.32	Average	H	49.75	0.00	36.43	53.98	-17.55
*	15960.00	-108.96	Peak	H	49.75	0.00	47.79	73.98	-26.19
*	21280.00	-109.66	Average	H	44.18	-9.54	31.97	53.98	-22.00
*	21280.00	-98.39	Peak	H	44.18	-9.54	43.24	73.98	-30.73
	26600.00	-104.18	Peak	H	47.61	-9.54	40.89	68.20	-27.31

Table 6-53. Radiated Measurements with WCC

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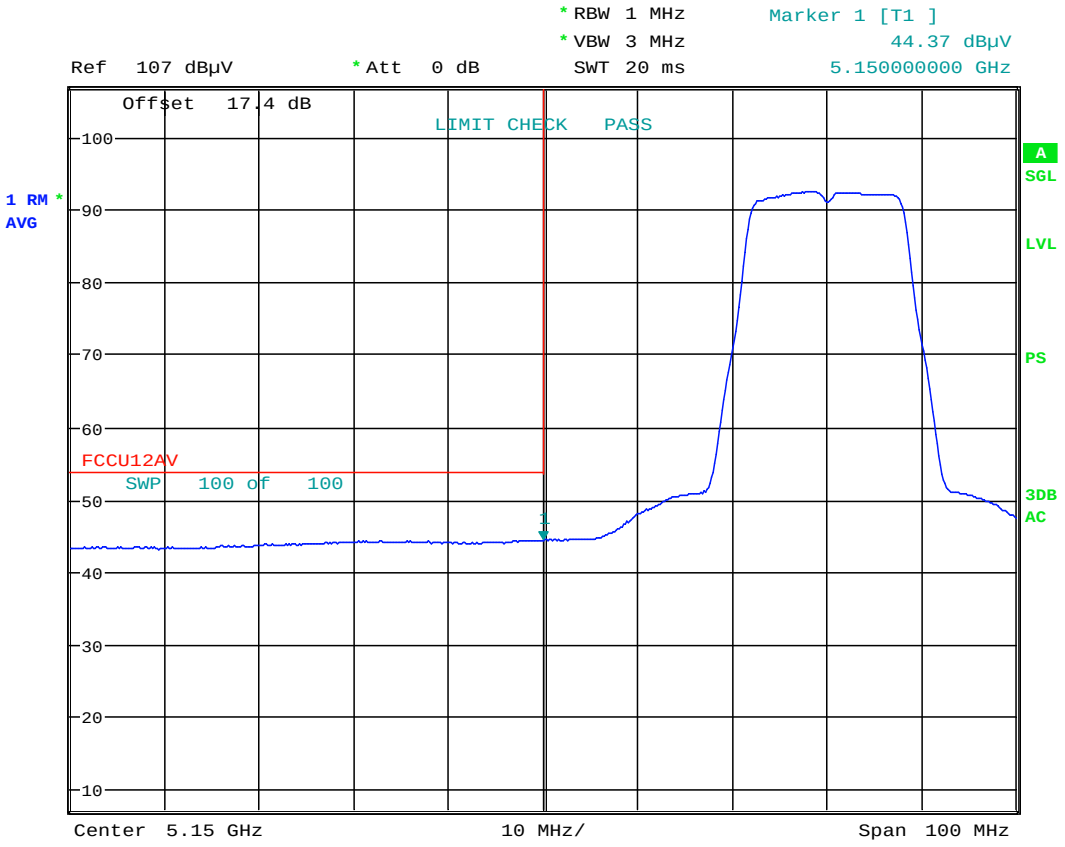
6.7.3 Antenna-1 Radiated Band Edge Measurements (20MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

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



Date: 23.JAN.2015 08:48:38

Plot 6-173. Radiated Restricted Lower Band Edge Plot (Average – UNII Band 1)

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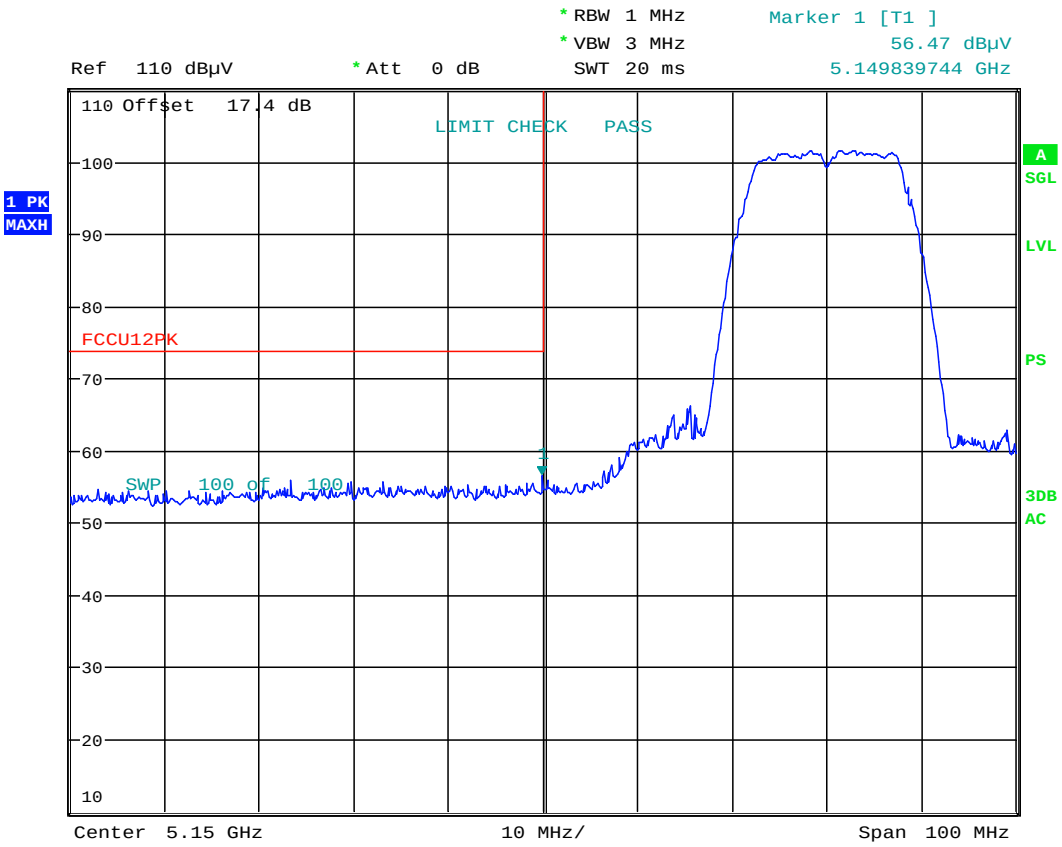
Antenna-1 Radiated Band Edge Measurements (20MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209



Date: 23.JAN.2015 08:50:05

Plot 6-174. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 1)

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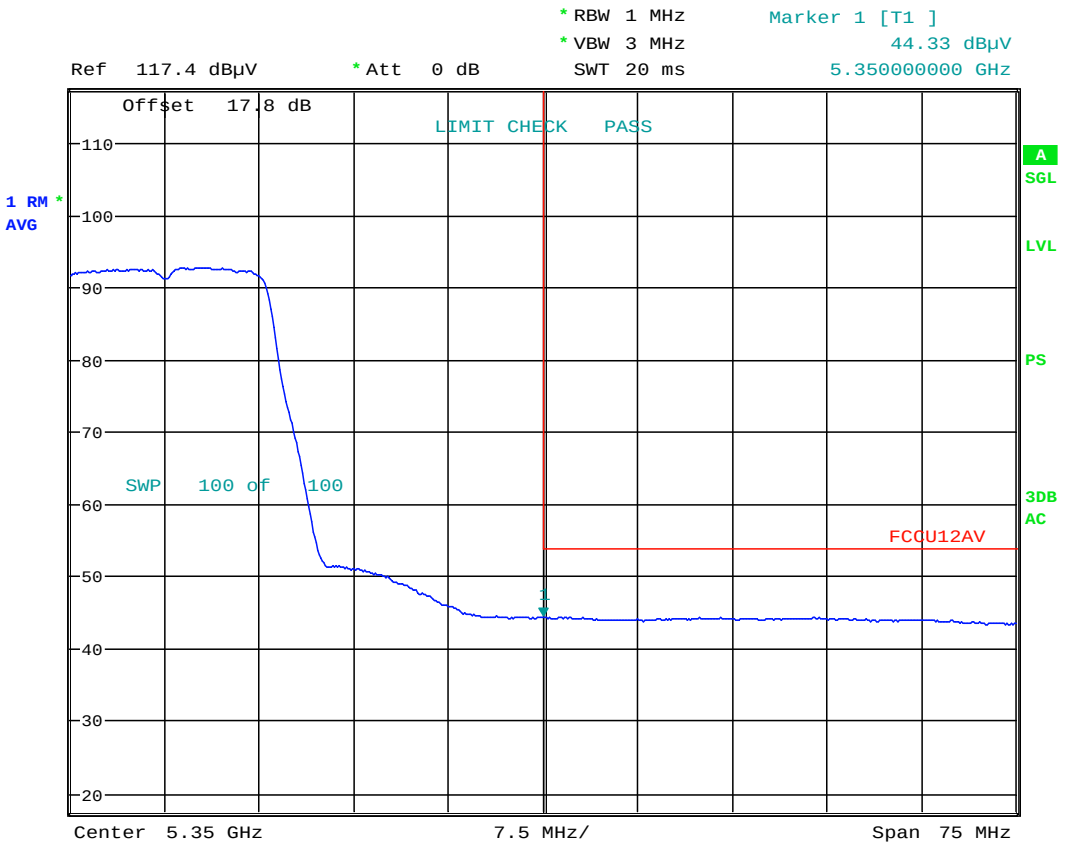
Antenna-1 Radiated Band Edge Measurements (20MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

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



Date: 23.JAN.2015 09:20:35

Plot 6-175. Radiated Restricted Upper Band Edge Plot (Average – UNII Band 2A)

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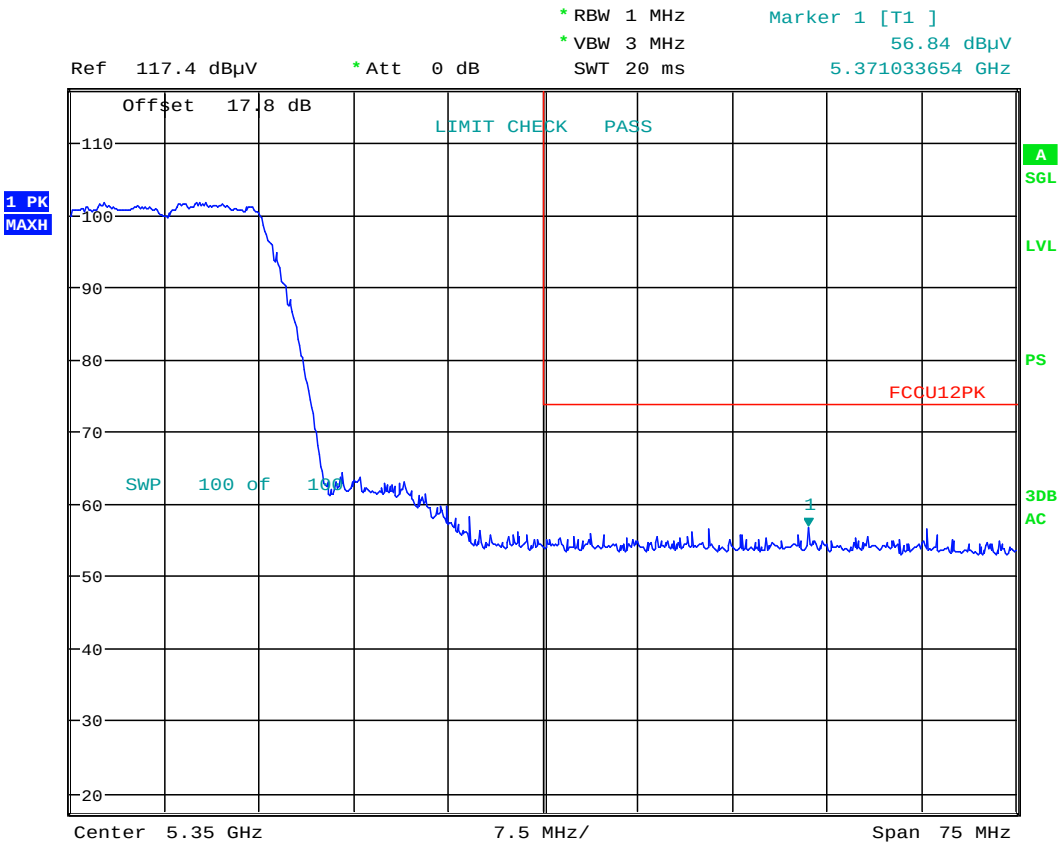
Antenna-1 Radiated Band Edge Measurements (20MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209



Date: 23.JAN.2015 09:20:59

Plot 6-176. Radiated Restricted Upper Band Edge Plot (Peak – UNII Band 2A)

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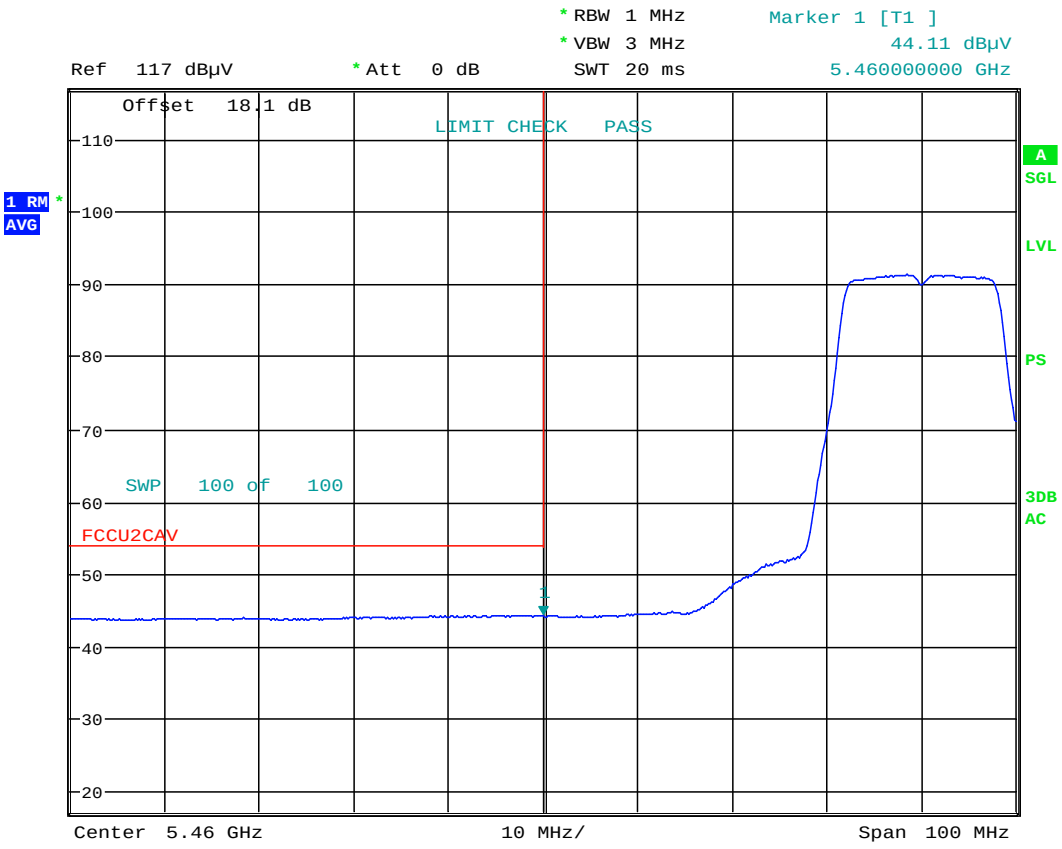
Antenna-1 Radiated Band Edge Measurements (20MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

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



Date: 23.JAN.2015 09:39:46

Plot 6-177. Radiated Restricted Lower Band Edge Plot (Average – UNII Band 2C)

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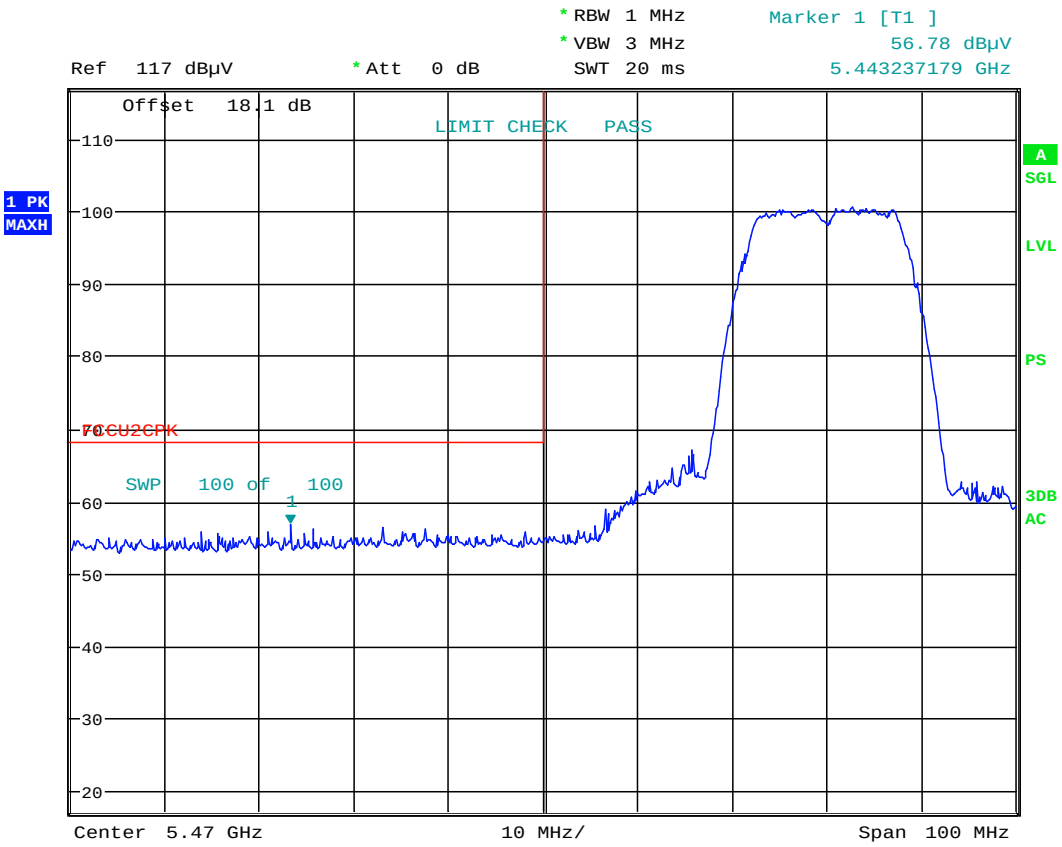
Antenna-1 Radiated Band Edge Measurements (20MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209



Date: 23.JAN.2015 09:40:27

Plot 6-178. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 2C)

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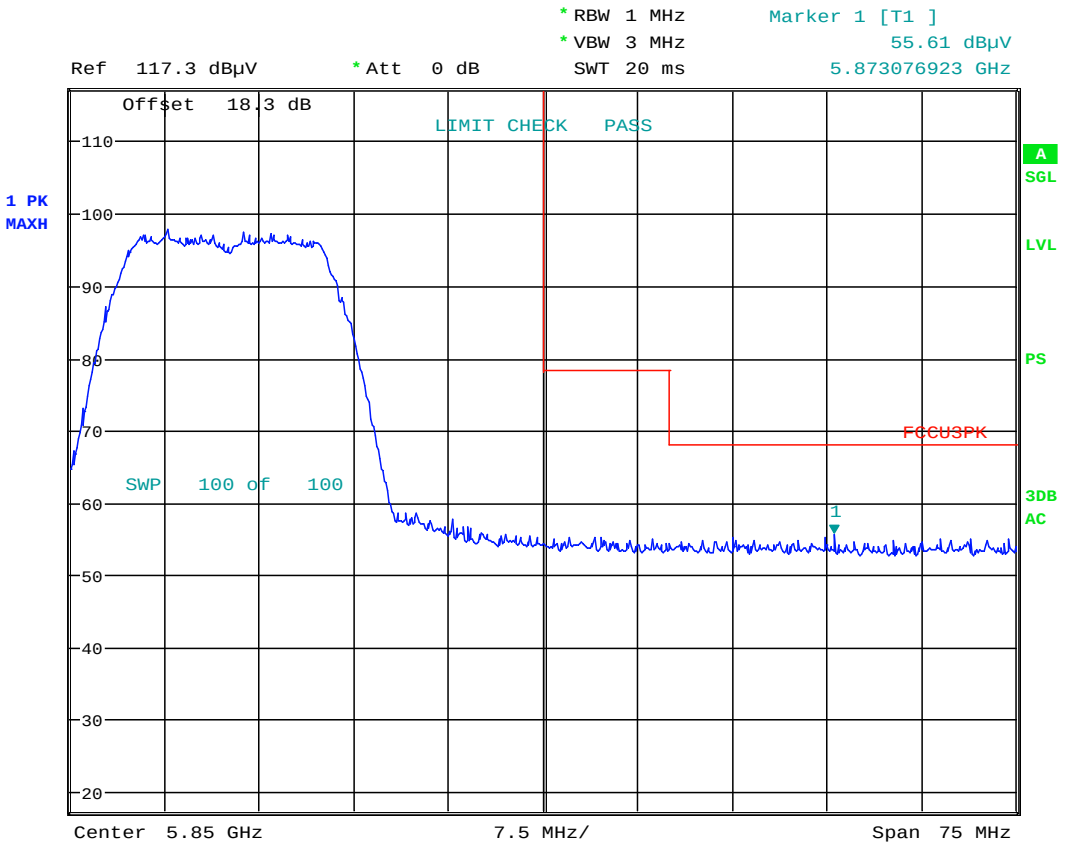
Antenna-1 Radiated Band Edge Measurements (20MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

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



Date: 23.JAN.2015 10:22:34

Plot 6-179. Radiated Upper Band Edge Plot (Peak – UNII Band 3)

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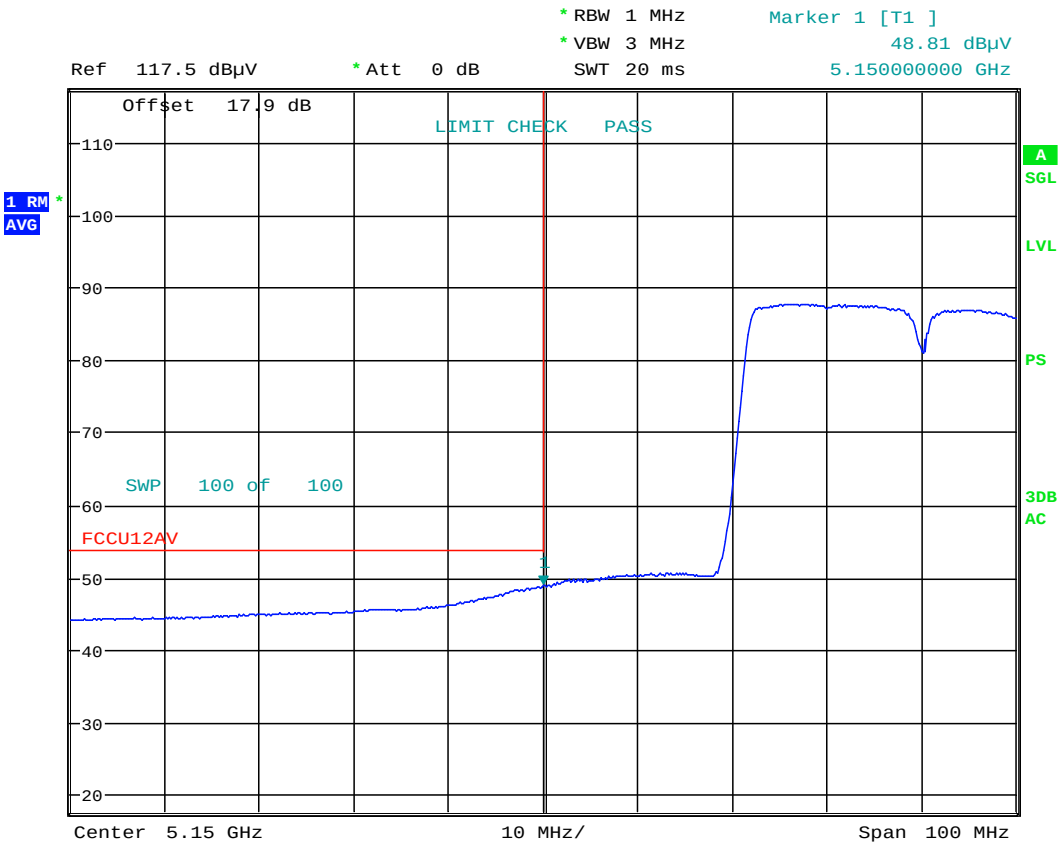
6.7.4 Antenna-1 Radiated Band Edge Measurements (40MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode:	802.11n (40MHz)
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5190MHz
Channel:	38



Date: 23.JAN.2015 08:58:46

Plot 6-180. Radiated Restricted Lower Band Edge Plot (Average – UNII Band 1)

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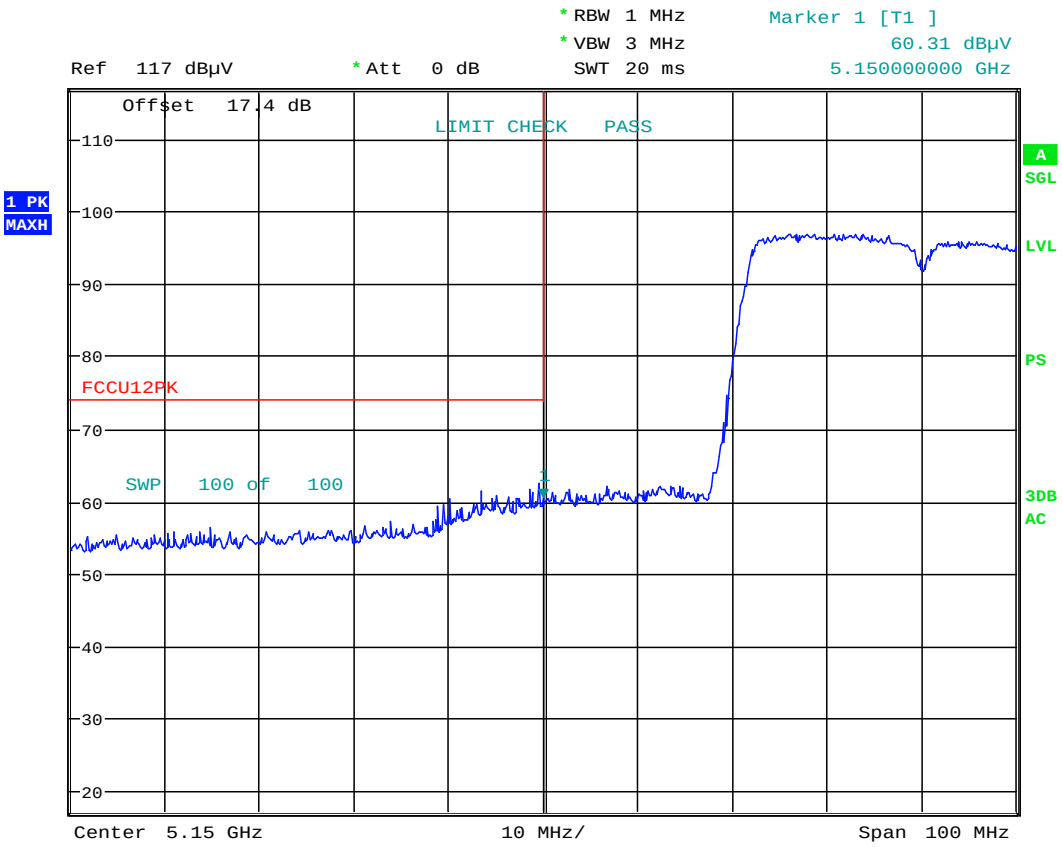
Antenna-1 Radiated Band Edge Measurements (40MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209



Date: 23.JAN.2015 08:56:05

Plot 6-181. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 1)

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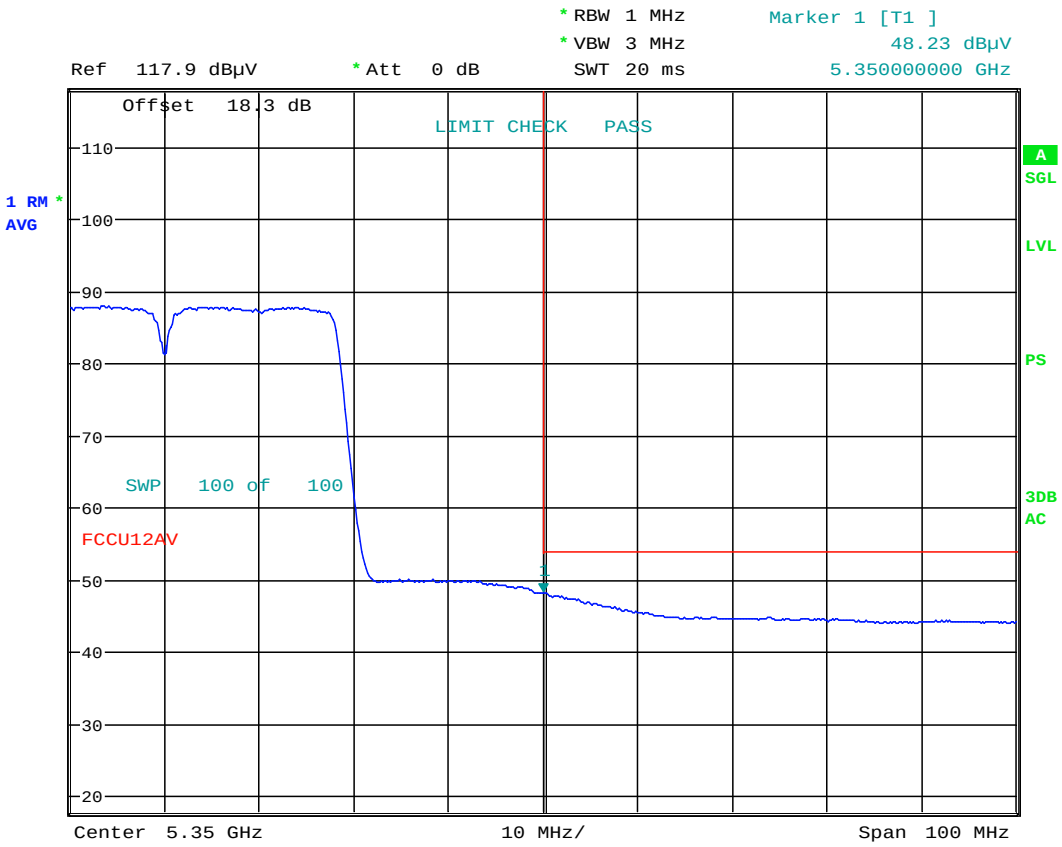
Antenna-1 Radiated Band Edge Measurements (40MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode:	802.11n (40MHz)
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5310MHz
Channel:	62



Date: 23.JAN.2015 09:25:04

Plot 6-182. Radiated Restricted Upper Band Edge Plot (Average – UNII Band 2A)

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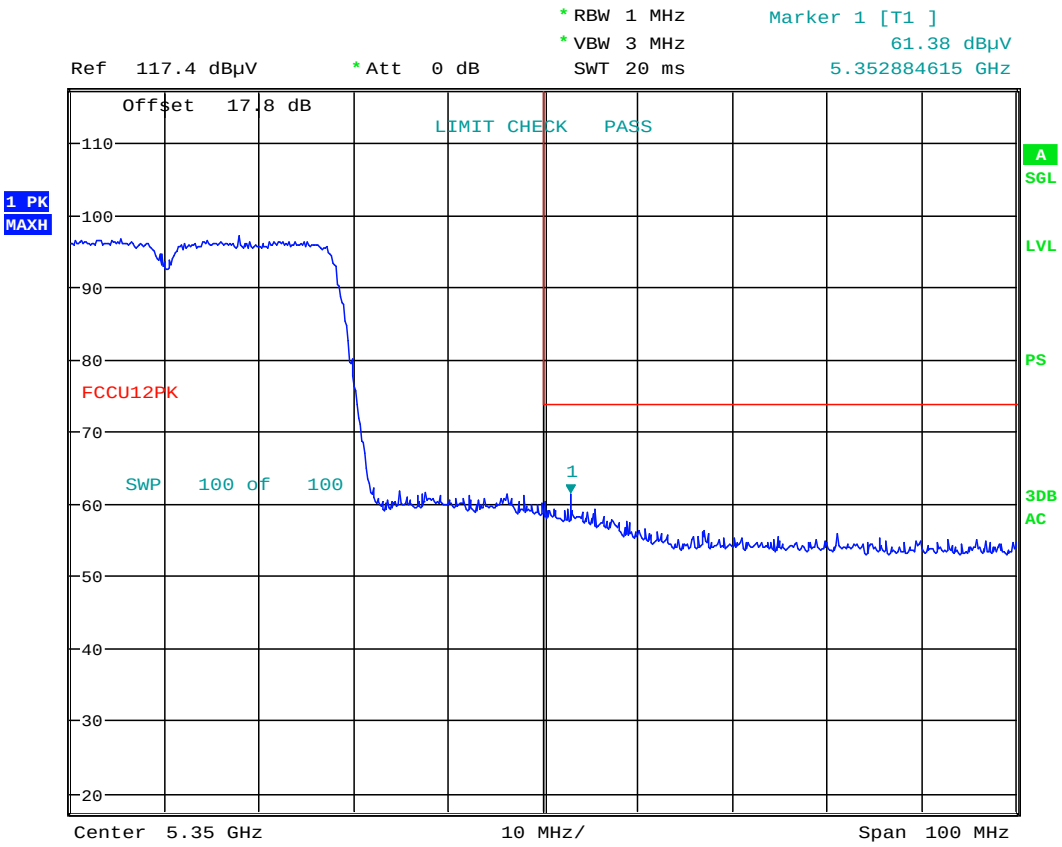
Antenna-1 Radiated Band Edge Measurements (40MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209



Date: 23.JAN.2015 09:26:00

Plot 6-183. Radiated Restricted Upper Band Edge Plot (Peak – UNII Band 2A)

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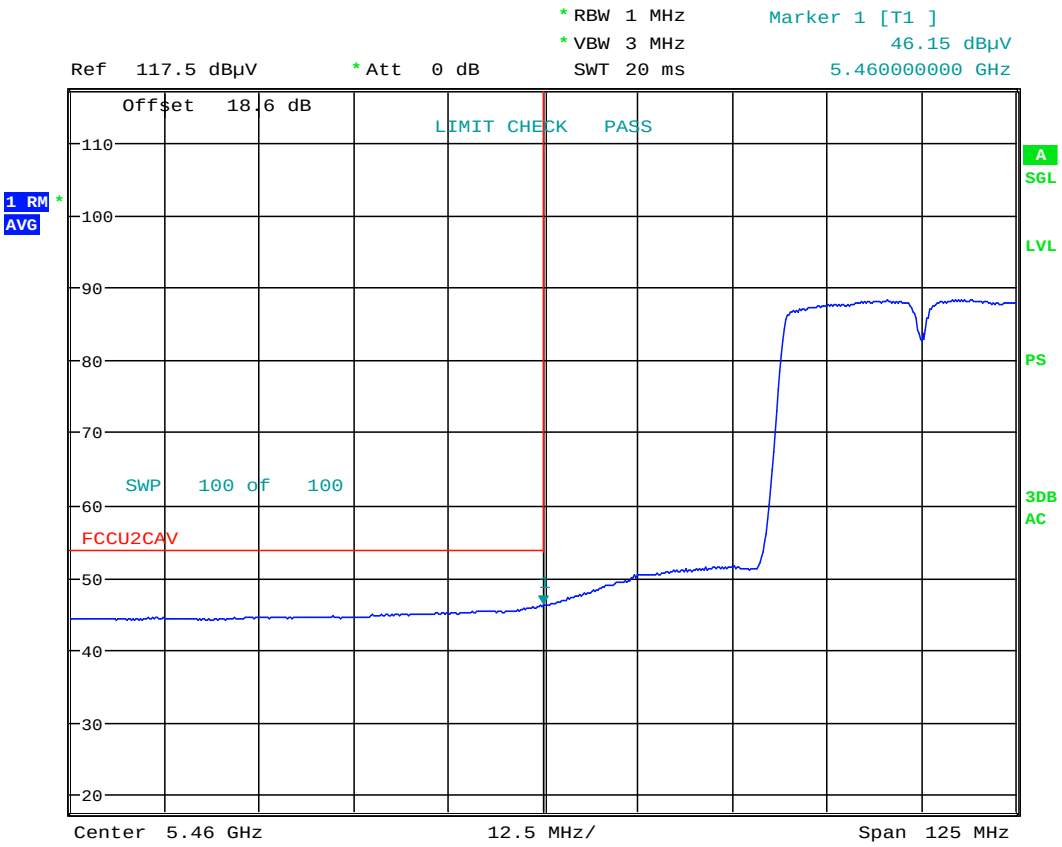
Antenna-1 Radiated Band Edge Measurements (40MHz BW)
§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode:	802.11n (40MHz)
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5510MHz
Channel:	102



Date: 23.JAN.2015 09:43:41

Plot 6-184. Radiated Restricted Lower Band Edge Plot (Average – UNII Band 2C)

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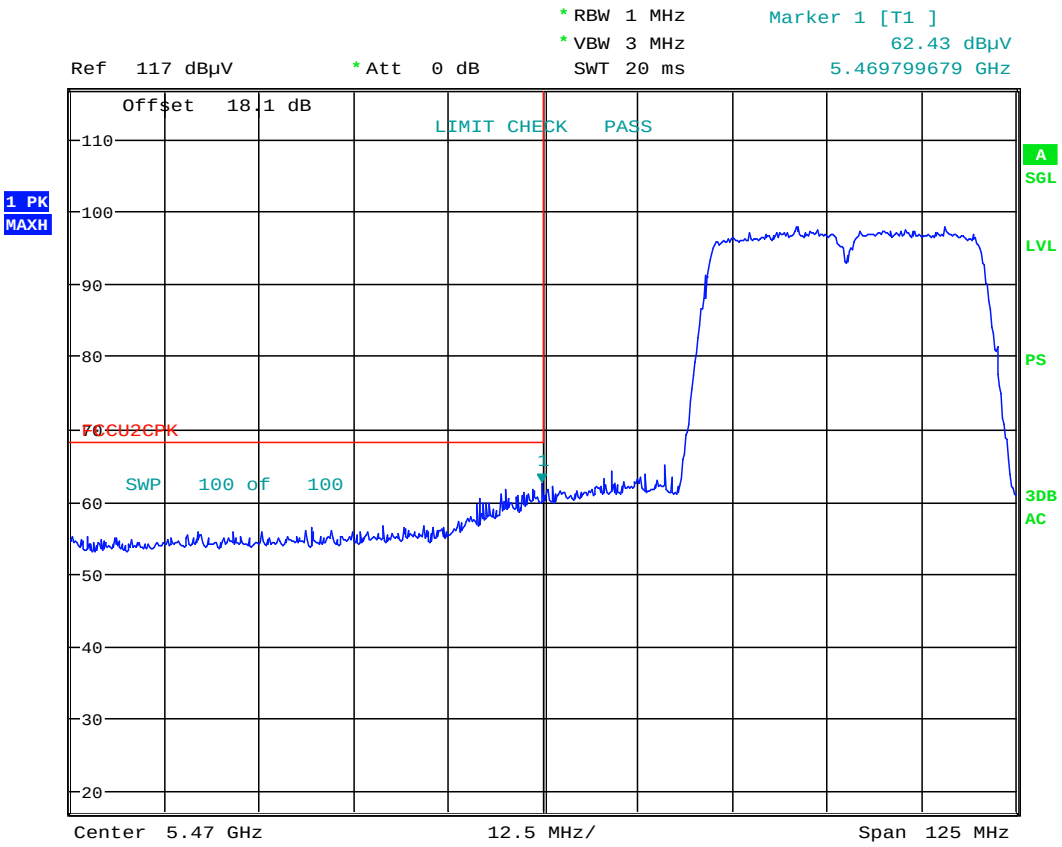
Antenna-1 Radiated Band Edge Measurements (40MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209



Date: 23.JAN.2015 09:44:50

Plot 6-185. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 2C)

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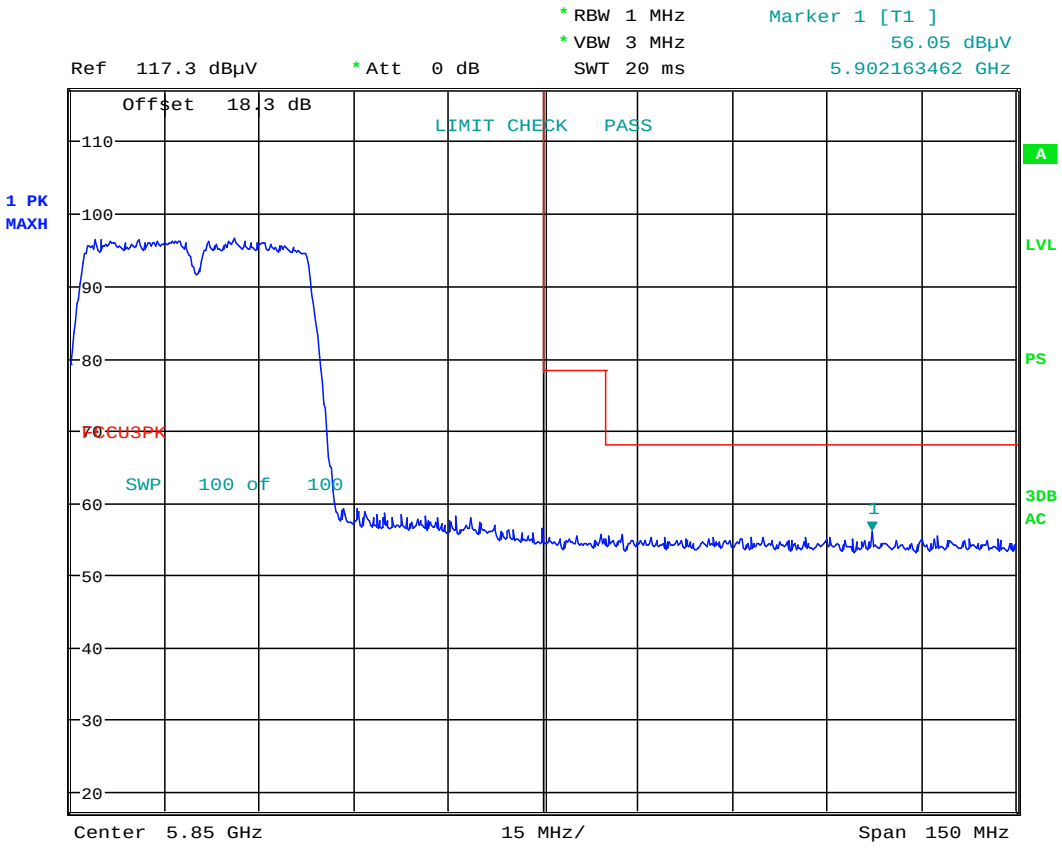
Antenna-1 Radiated Band Edge Measurements (40MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode:	802.11n (40MHz)
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5795MHz
Channel:	159



Date: 23.JAN.2015 10:34:18

Plot 6-186. Radiated Upper Band Edge Plot (Peak – UNII Band 3)

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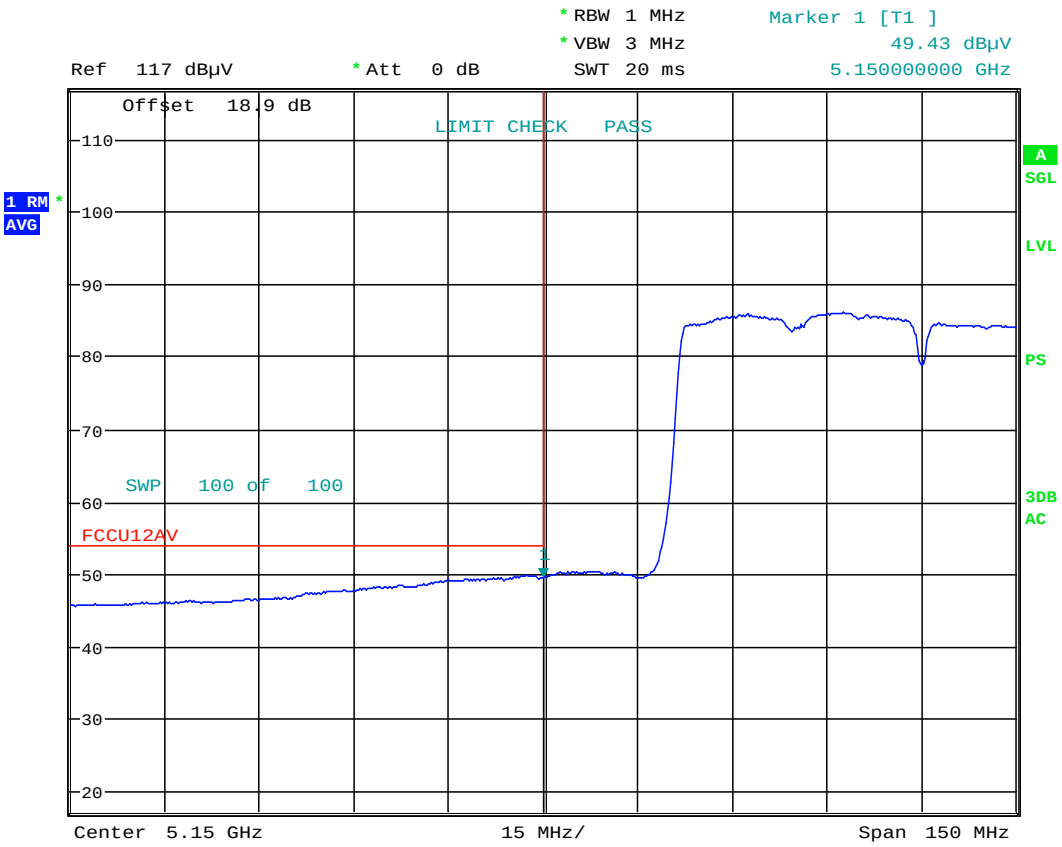
6.7.5 Antenna-1 Radiated Band Edge Measurements (80MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode:	802.11n (80MHz)
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5210MHz
Channel:	42



Date: 23.JAN.2015 09:07:18

Plot 6-187. Radiated Restricted Lower Band Edge Plot (Average – UNII Band 1)

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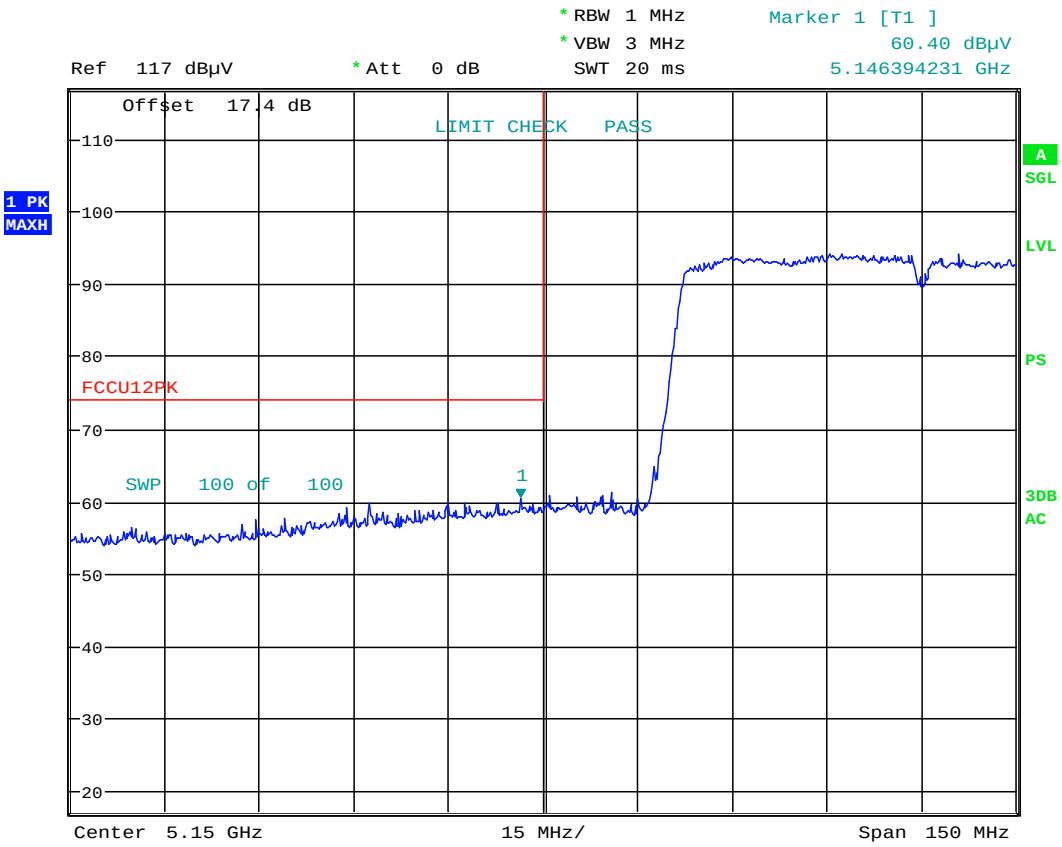
Antenna-1 Radiated Band Edge Measurements (80MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209



Date: 23.JAN.2015 09:12:56

Plot 6-188. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 1)

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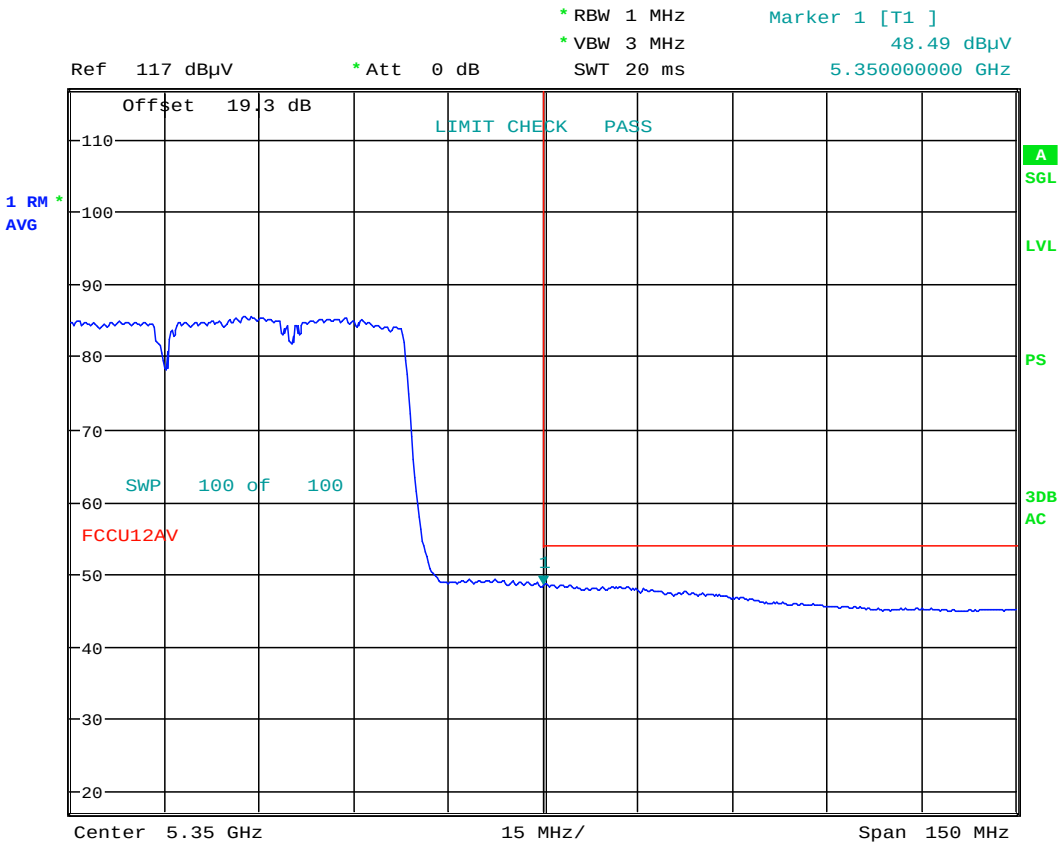
Antenna-1 Radiated Band Edge Measurements (80MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode:	802.11ac (80MHz)
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5290MHz
Channel:	58



Date: 23.JAN.2015 09:31:35

Plot 6-189. Radiated Restricted Upper Band Edge Plot (Average – UNII Band 2A)

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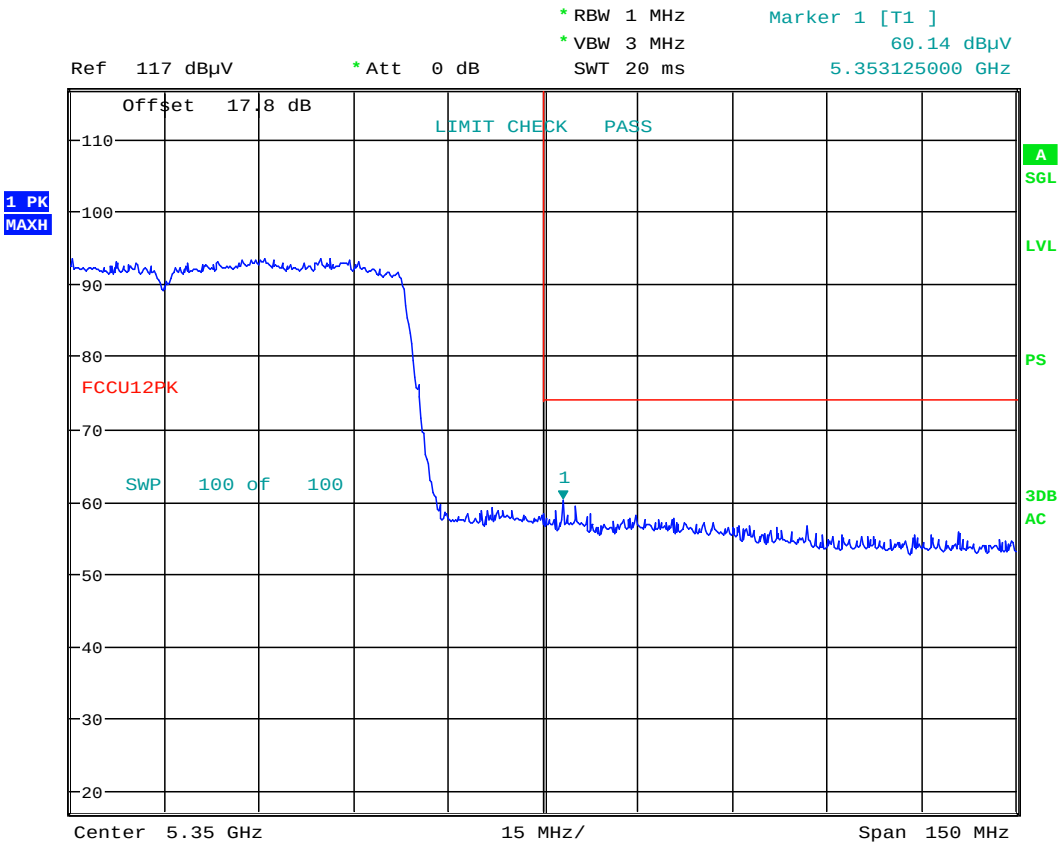
Antenna-1 Radiated Band Edge Measurements (80MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209



Date: 23.JAN.2015 09:33:01

Plot 6-190. Radiated Restricted Upper Band Edge Plot (Peak – UNII Band 2A)

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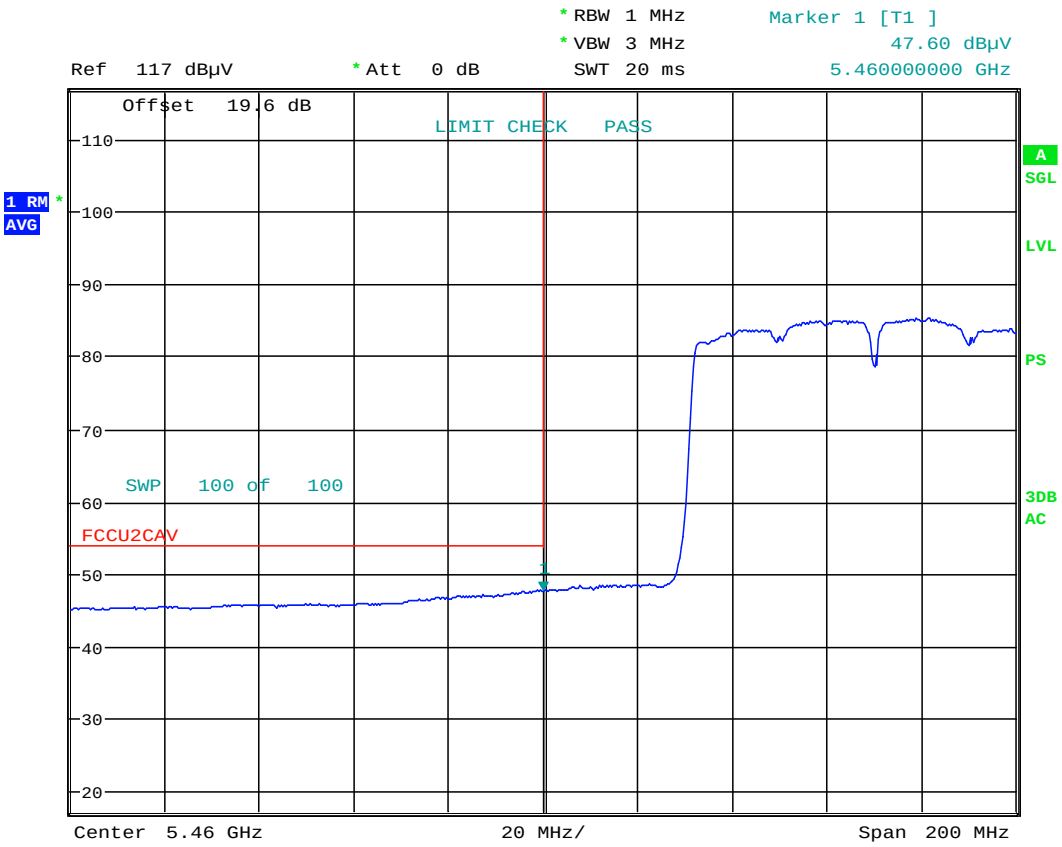
Antenna-1 Radiated Band Edge Measurements (80MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode:	802.11ac (80MHz)
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5530MHz
Channel:	106



Date: 23.JAN.2015 09:53:21

Plot 6-191. Radiated Restricted Lower Band Edge Plot (Average – UNII Band 2C)

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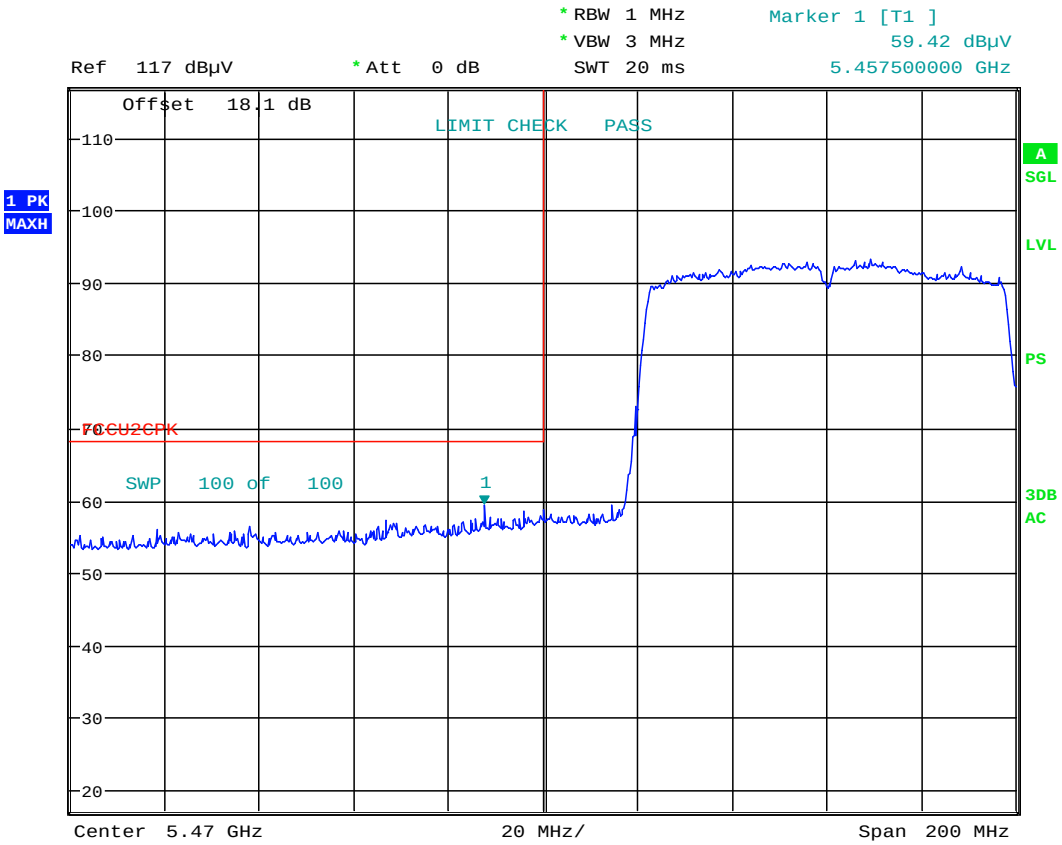
Antenna-1 Radiated Band Edge Measurements (80MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209



Date: 23.JAN.2015 09:54:18

Plot 6-192. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 2C)

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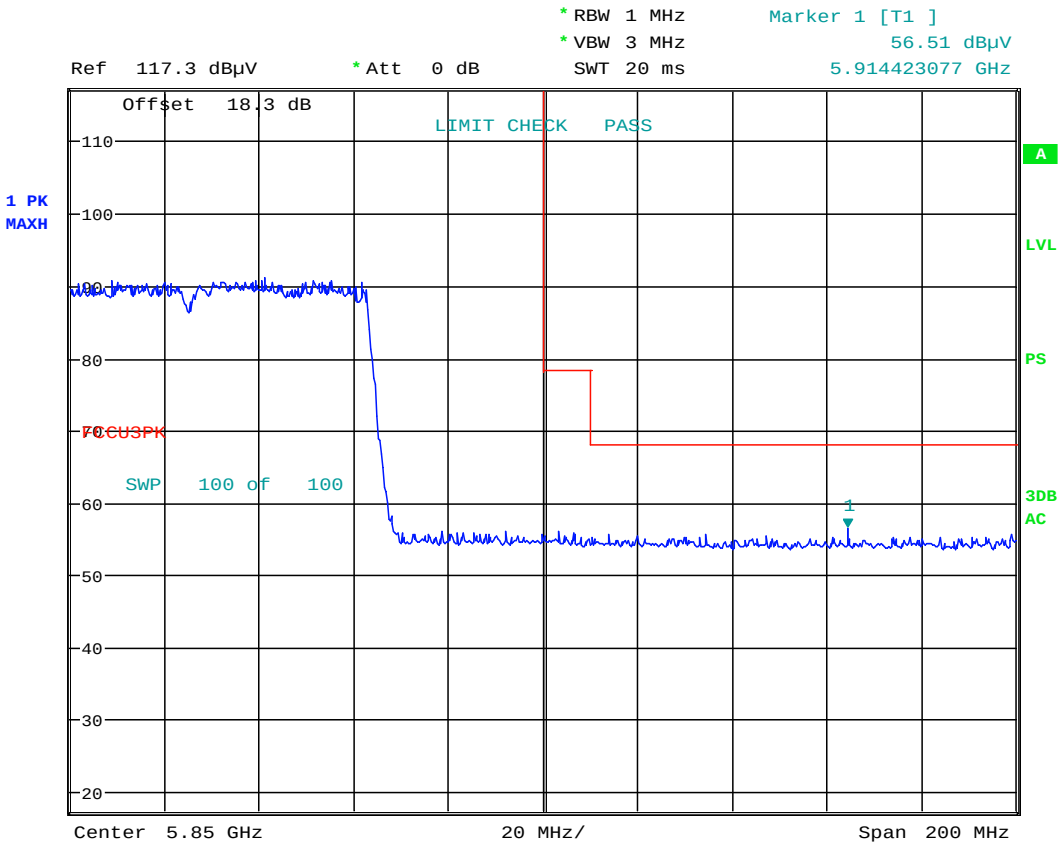
Antenna-1 Radiated Band Edge Measurements (80MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode:	802.11ac (80MHz)
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5775MHz
Channel:	155



Date: 23.JAN.2015 10:44:07

Plot 6-193. Radiated Upper Band Edge Plot (Peak – UNII Band 3)

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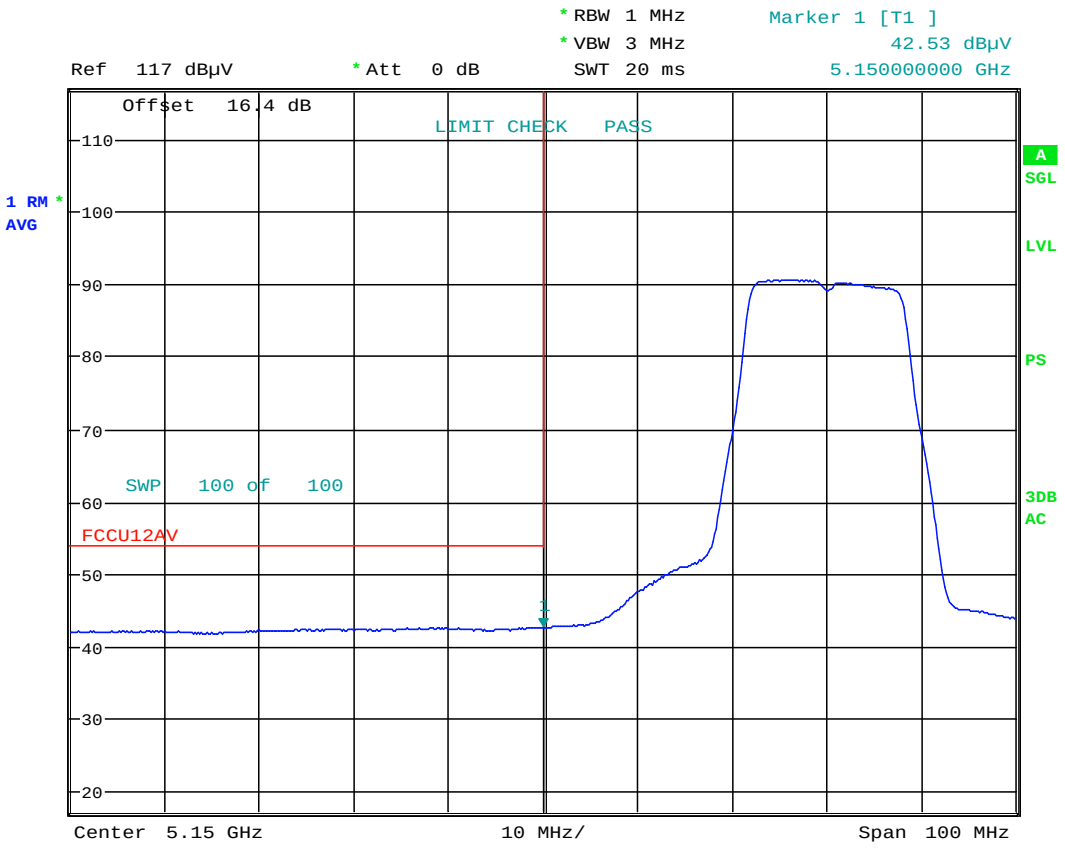
6.7.6 Antenna-2 Radiated Band Edge Measurements (20MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

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



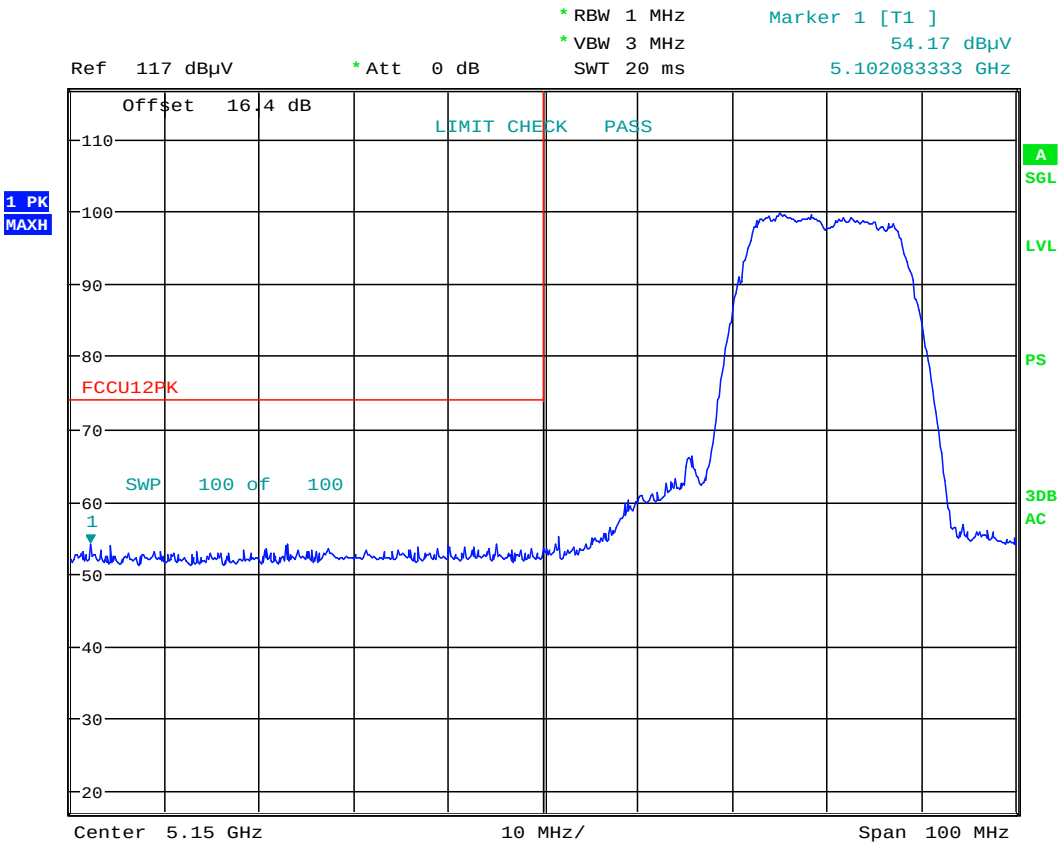
Date: 24.JAN.2015 16:28:20

Plot 6-194. Radiated Restricted Lower Band Edge Plot (Average – UNII Band 1)

© 2015 PCTEST Engineering Laboratory, Inc.

Antenna-2 Radiated Band Edge Measurements (20MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209



Date: 24.JAN.2015 16:28:48

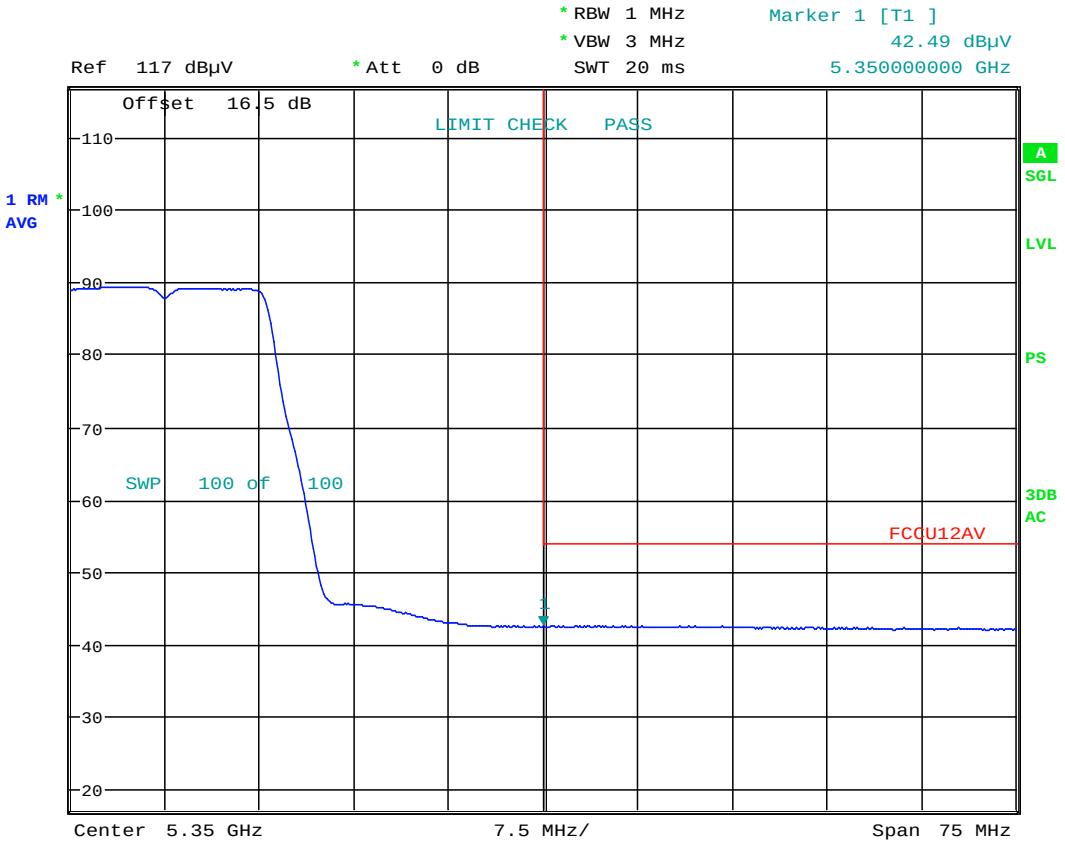
Plot 6-195. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 1)

© 2015 PCTEST Engineering Laboratory, Inc.

Antenna-2 Radiated Band Edge Measurements (20MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

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



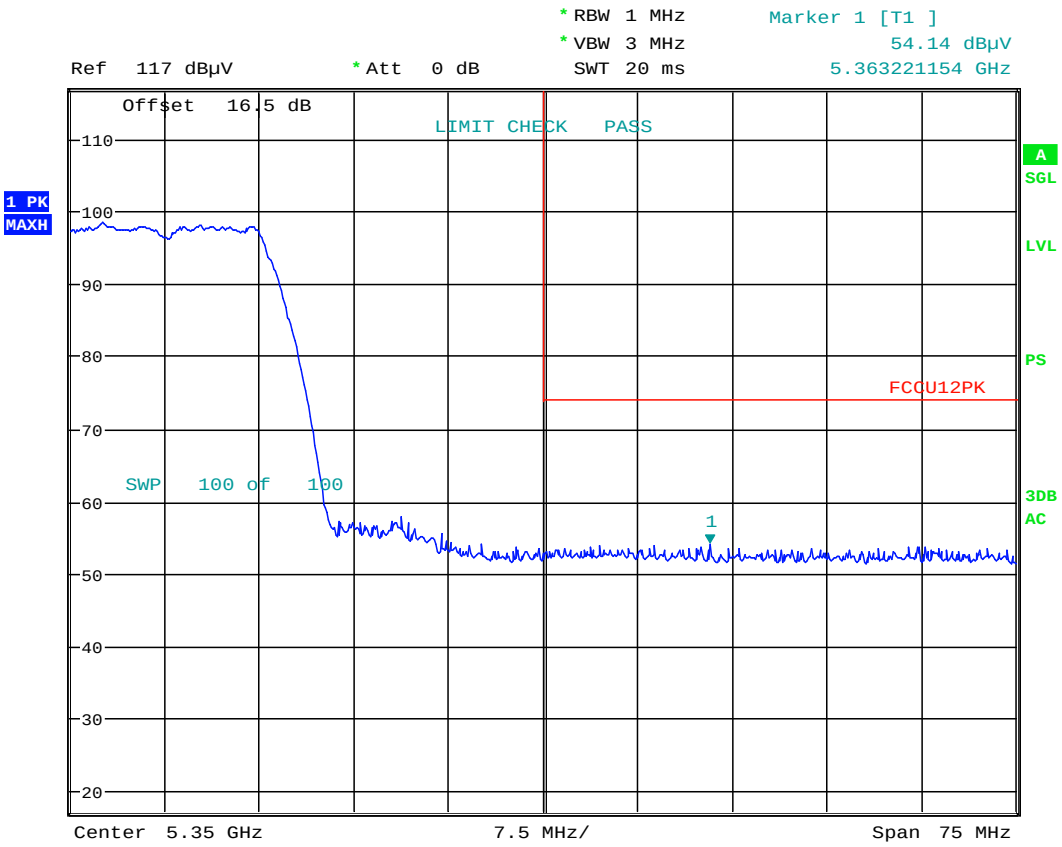
Date: 24.JAN.2015 16:57:11

Plot 6-196. Radiated Restricted Upper Band Edge Plot (Average – UNII Band 2A)

© 2015 PCTEST Engineering Laboratory, Inc.

Antenna-2 Radiated Band Edge Measurements (20MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209



Date: 24.JAN.2015 16:57:37

Plot 6-197. Radiated Restricted Upper Band Edge Plot (Peak – UNII Band 2A)

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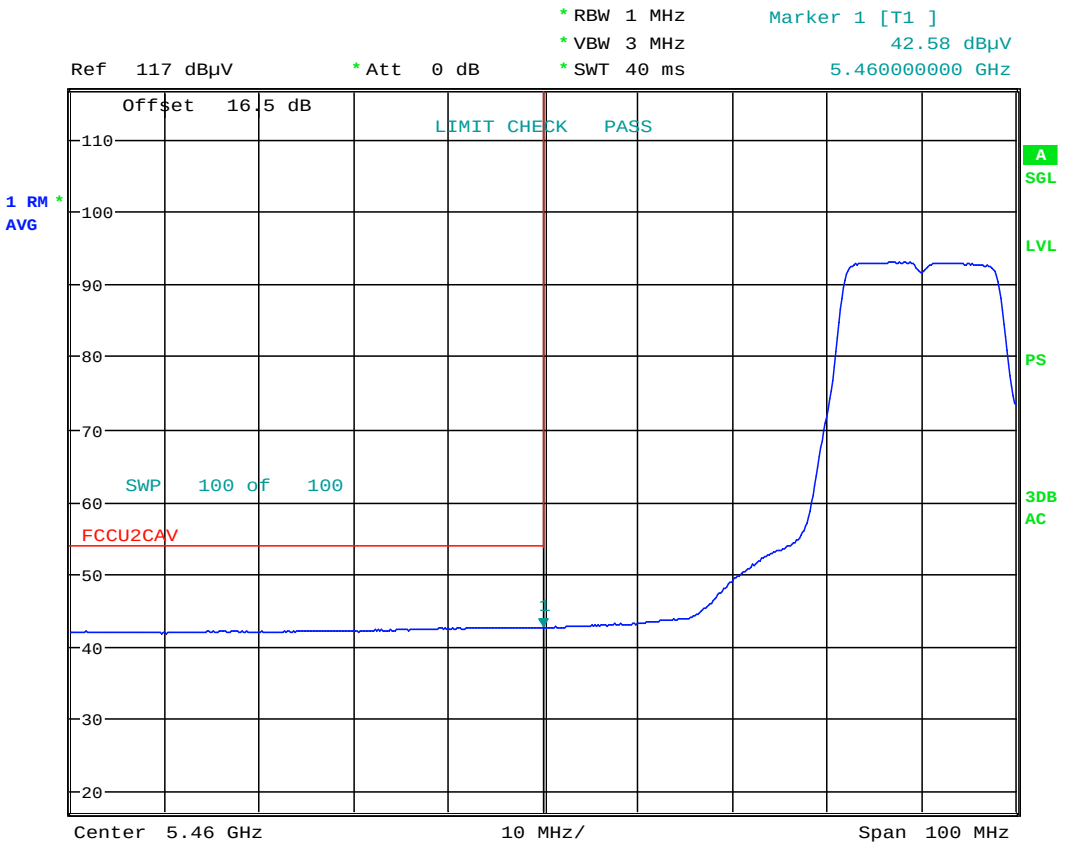
Antenna-2 Radiated Band Edge Measurements (20MHz BW)
§15.407(b.1)(b.2) §15.205 §15.209

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



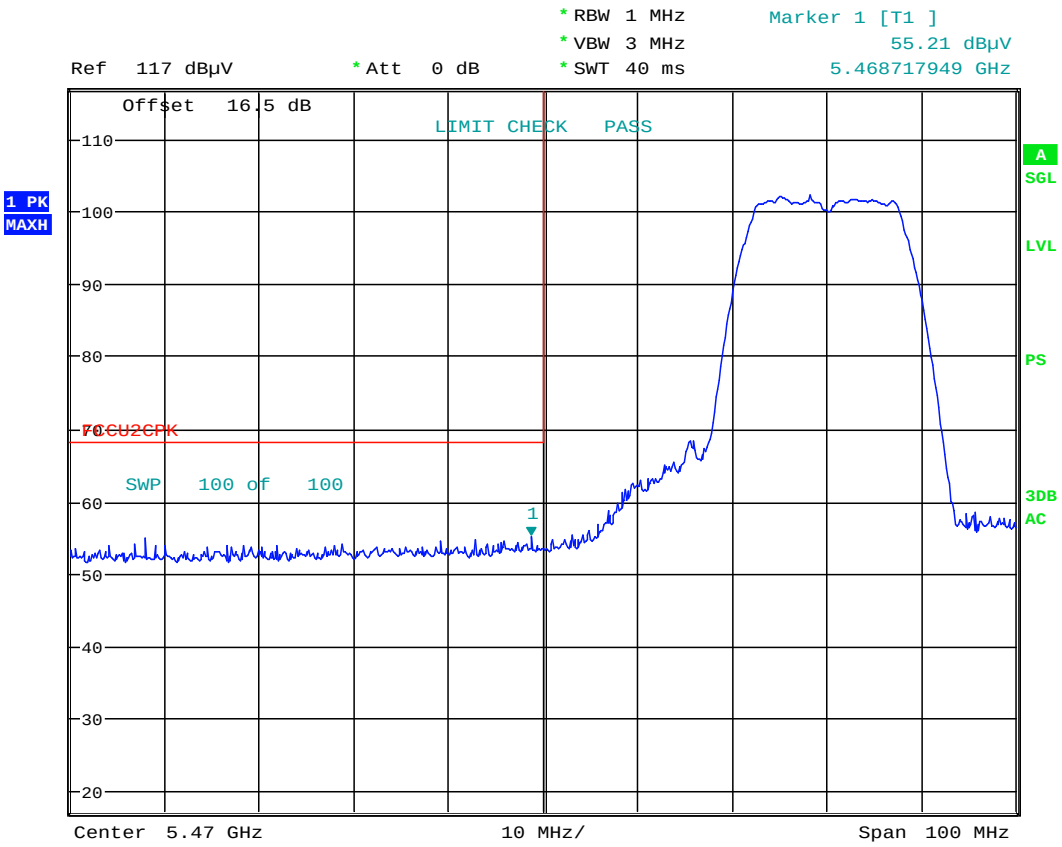
Date: 24.JAN.2015 17:39:31

Plot 6-198. Radiated Restricted Lower Band Edge Plot (Average – UNII Band 2C)

© 2015 PCTEST Engineering Laboratory, Inc.

Antenna-2 Radiated Band Edge Measurements (20MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209



Date: 24.JAN.2015 17:42:21

Plot 6-199. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 2C)

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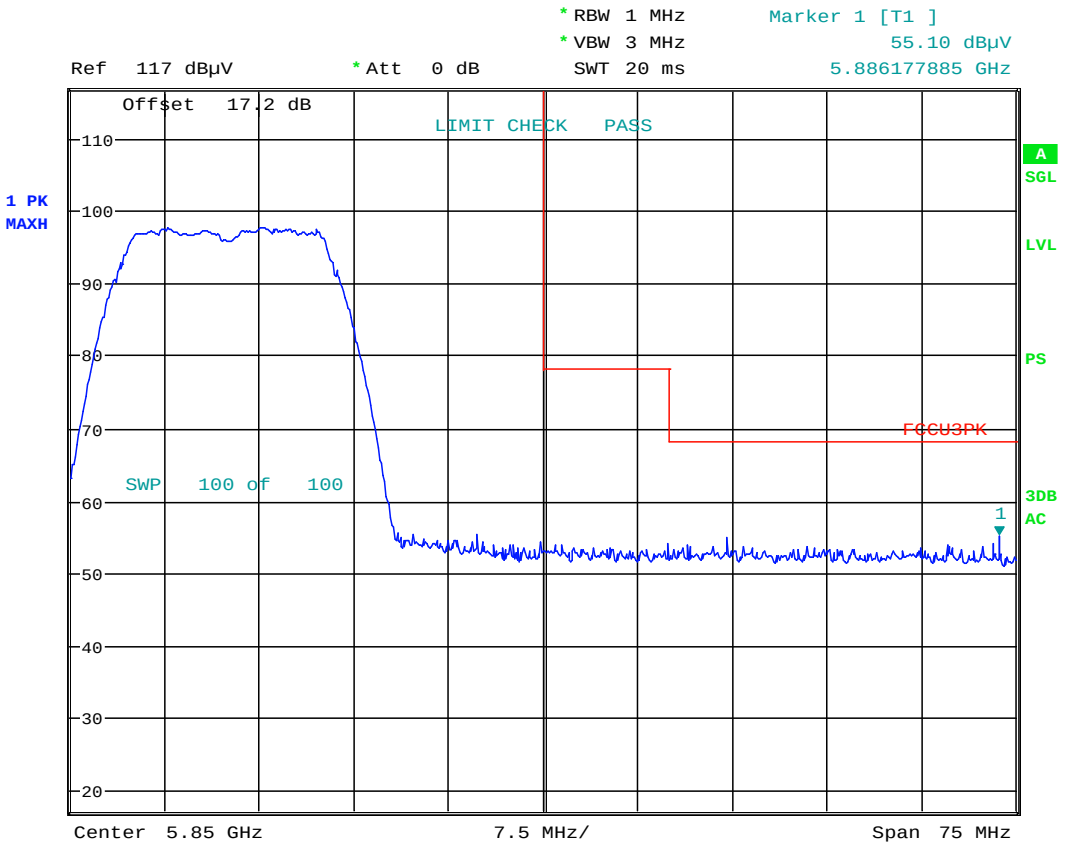
Antenna-2 Radiated Band Edge Measurements (20MHz BW)
§15.407(b.1)(b.2) §15.205 §15.209

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



Date: 24.JAN.2015 18:35:43

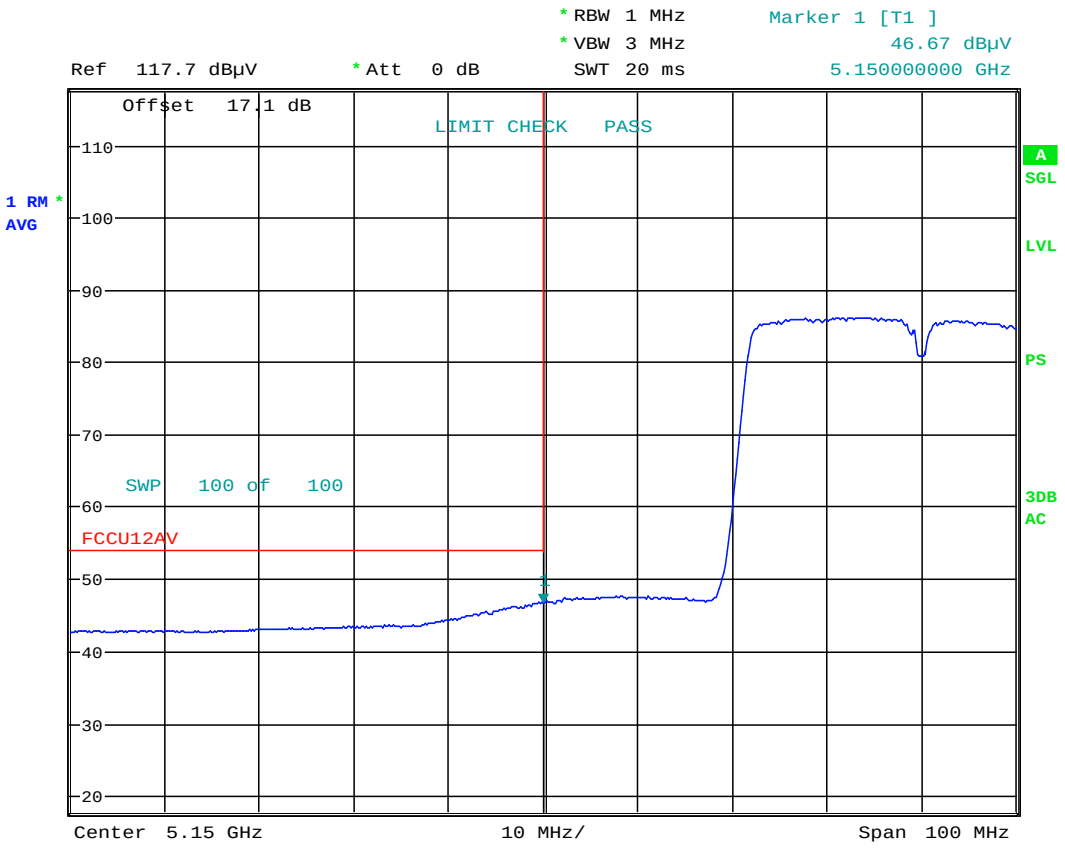
Plot 6-200. Radiated Upper Band Edge Plot (Peak – UNII Band 3)

© 2015 PCTEST Engineering Laboratory, Inc.

6.7.7 Antenna-2 Radiated Band Edge Measurements (40MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode:	802.11n (40MHz)
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5190MHz
Channel:	38



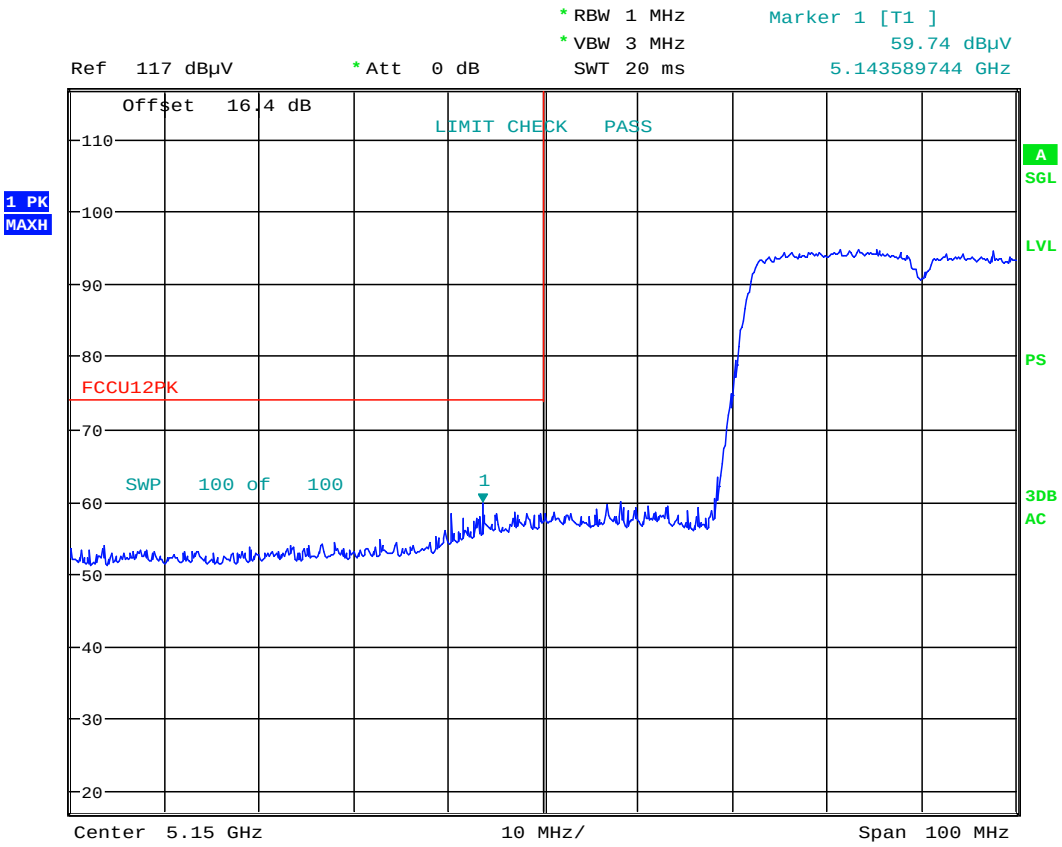
Date: 24.JAN.2015 16:40:59

Plot 6-201. Radiated Restricted Lower Band Edge Plot (Average – UNII Band 1)

© 2015 PCTEST Engineering Laboratory, Inc.

Antenna-2 Radiated Band Edge Measurements (40MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209



Date: 24.JAN.2015 16:41:27

Plot 6-202. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 1)

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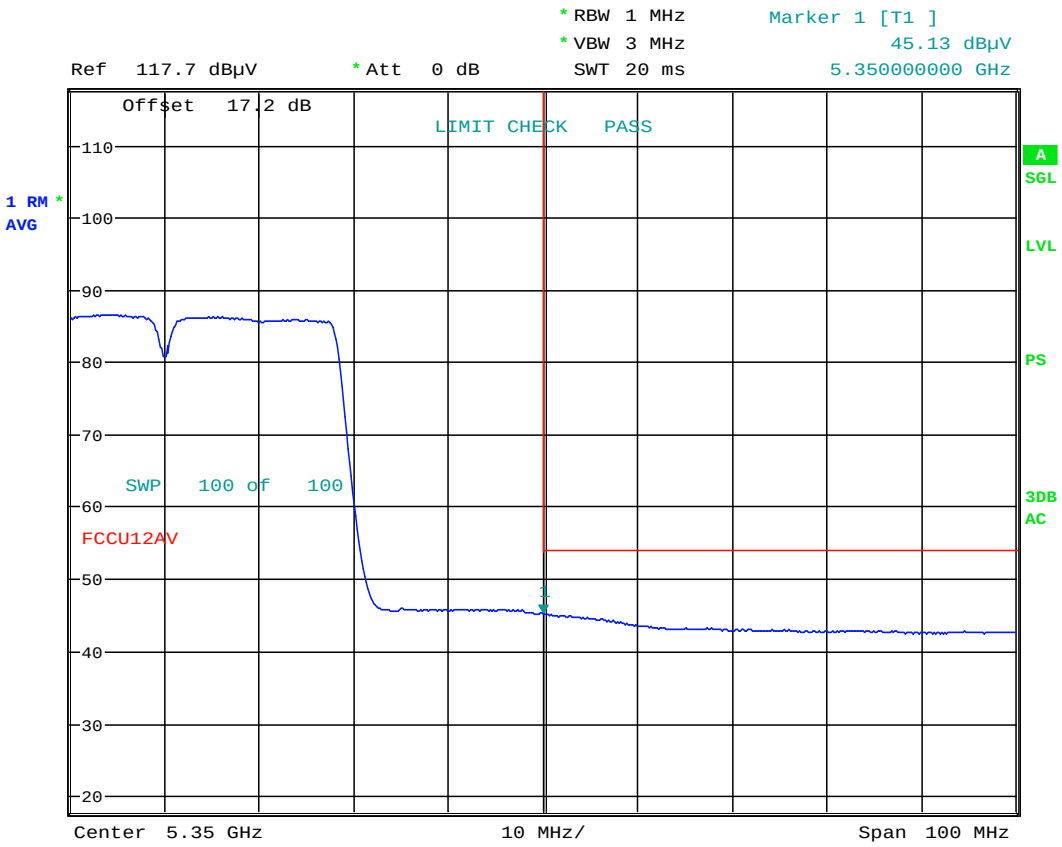
Antenna-2 Radiated Band Edge Measurements (40MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode:	802.11n (40MHz)
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5310MHz
Channel:	62



Date: 24.JAN.2015 17:20:14

Plot 6-203. Radiated Restricted Upper Band Edge Plot (Average – UNII Band 2A)

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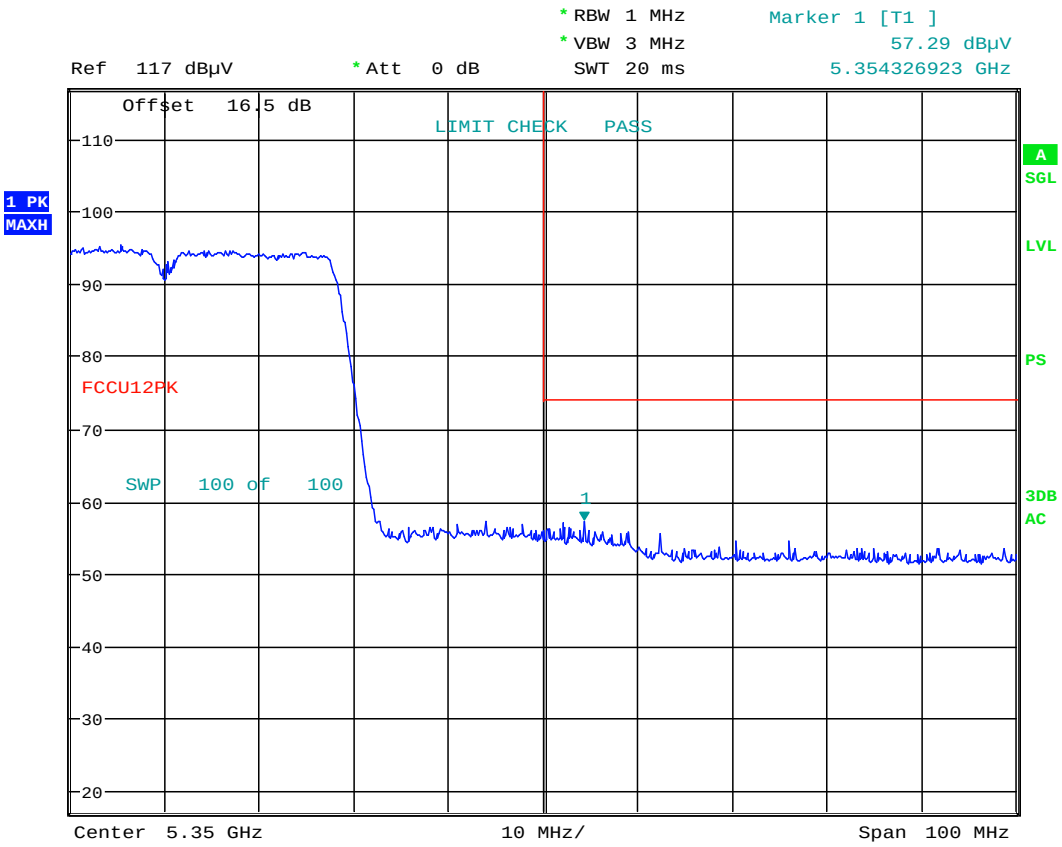
Antenna-2 Radiated Band Edge Measurements (40MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209



Date: 24.JAN.2015 17:21:19

Plot 6-204. Radiated Restricted Upper Band Edge Plot (Peak – UNII Band 2A)

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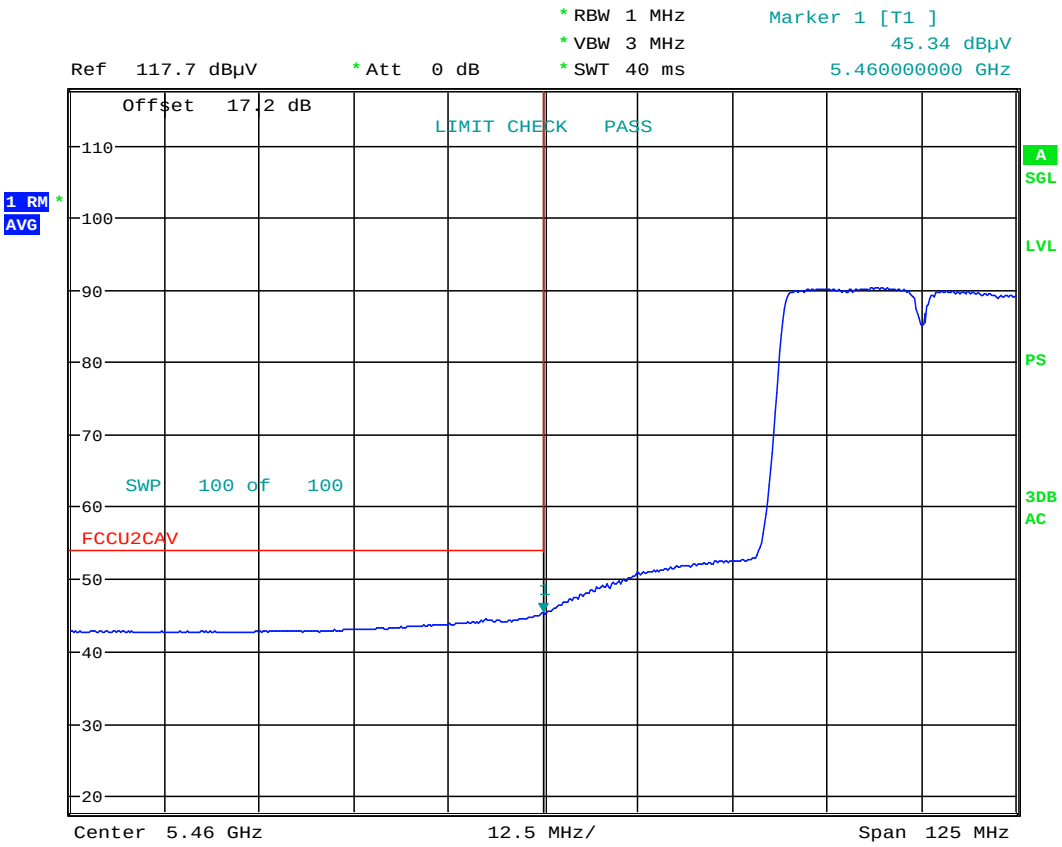
Antenna-2 Radiated Band Edge Measurements (40MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode:	802.11n (40MHz)
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5510MHz
Channel:	102



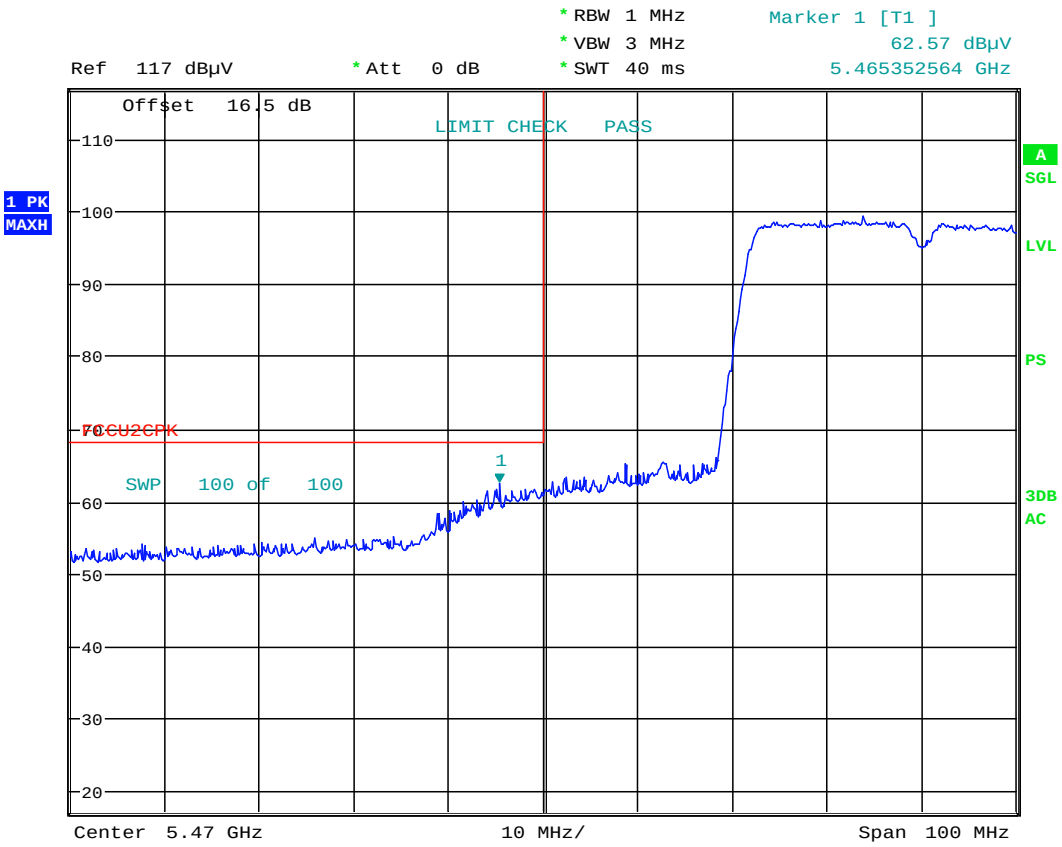
Date: 24.JAN.2015 17:47:20

Plot 6-205. Radiated Restricted Lower Band Edge Plot (Average – UNII Band 2C)

© 2015 PCTEST Engineering Laboratory, Inc.

Antenna-2 Radiated Band Edge Measurements (40MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209



Date: 24.JAN.2015 17:46:30

Plot 6-206. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 2C)

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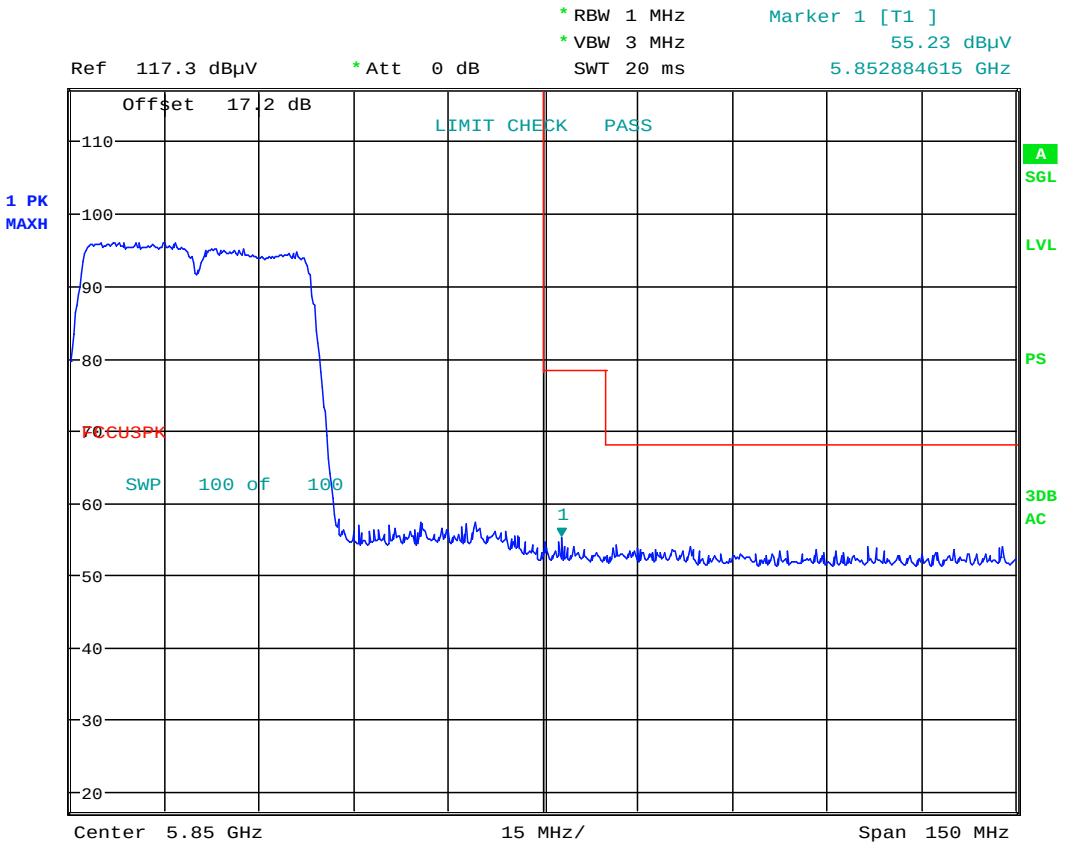
Antenna-2 Radiated Band Edge Measurements (40MHz BW)
§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode:	802.11n (40MHz)
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5795MHz
Channel:	159



Date: 24.JAN.2015 18:34:11

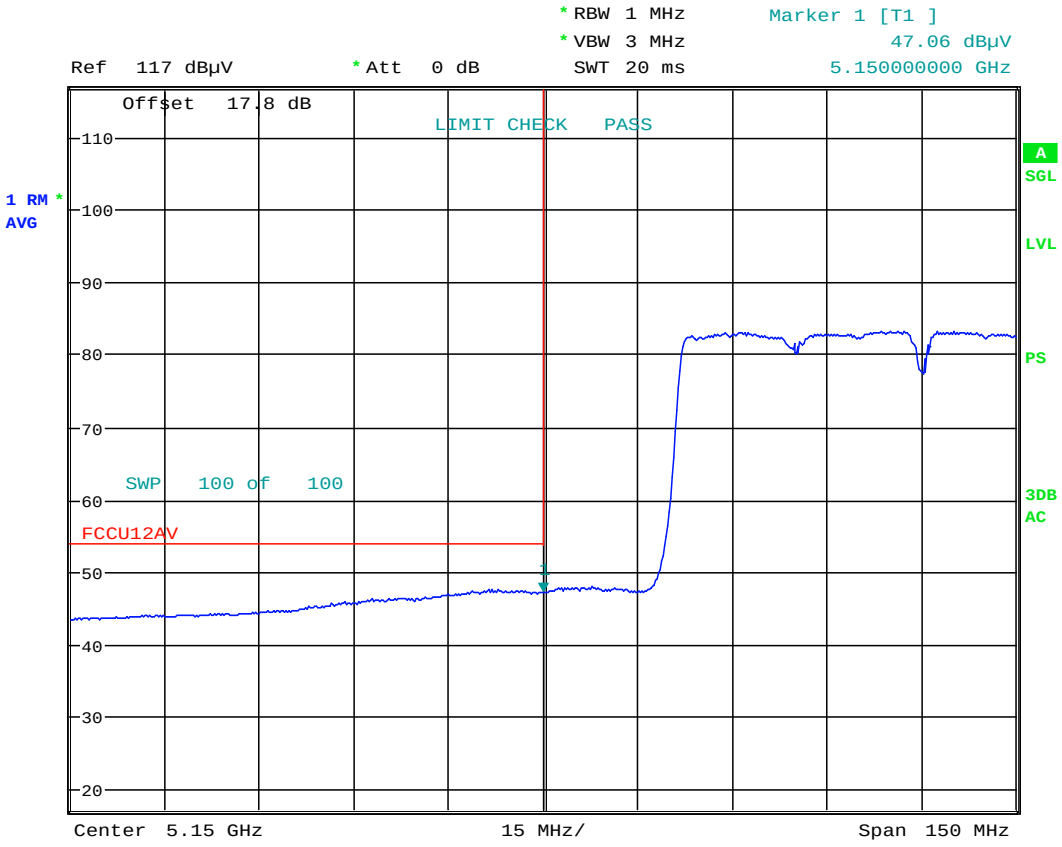
Plot 6-207. Radiated Upper Band Edge Plot (Peak – UNII Band 3)

© 2015 PCTEST Engineering Laboratory, Inc.

6.7.8 Antenna-2 Radiated Band Edge Measurements (80MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode:	802.11n (80MHz)
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5210MHz
Channel:	42



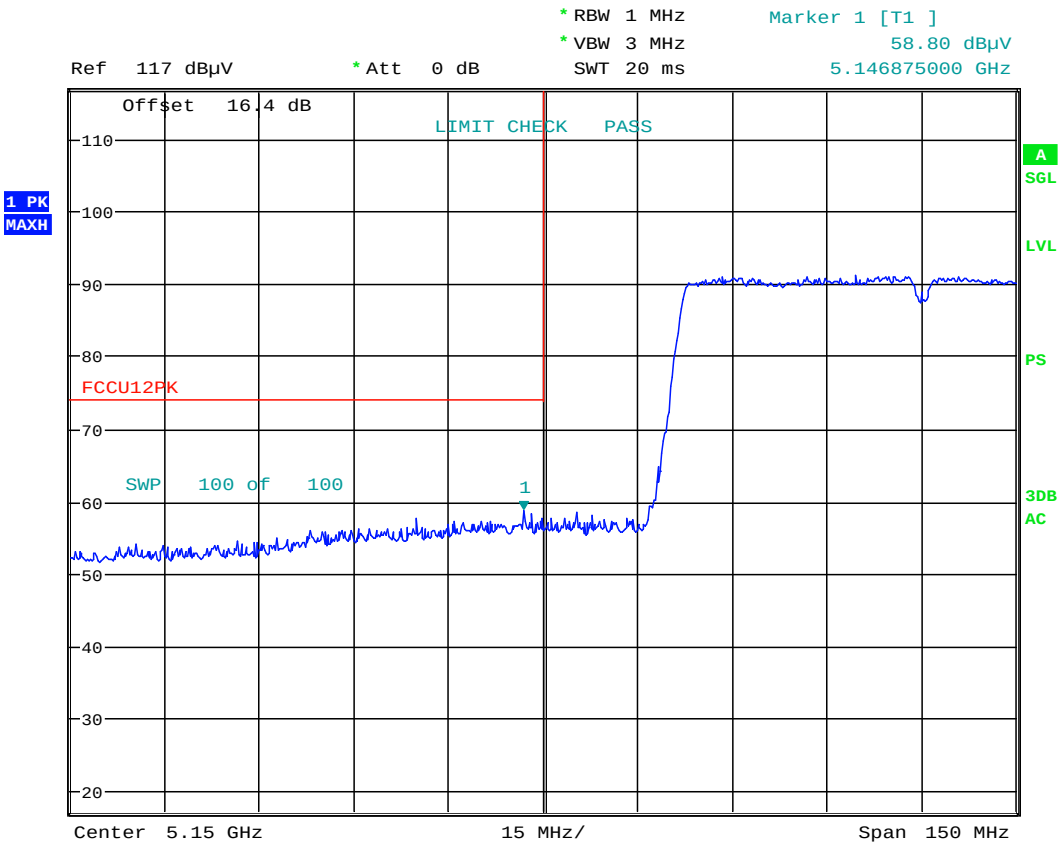
Date: 24.JAN.2015 16:50:02

Plot 6-208. Radiated Restricted Lower Band Edge Plot (Average – UNII Band 1)

© 2015 PCTEST Engineering Laboratory, Inc.

Antenna-2 Radiated Band Edge Measurements (80MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209



Date: 24.JAN.2015 16:50:55

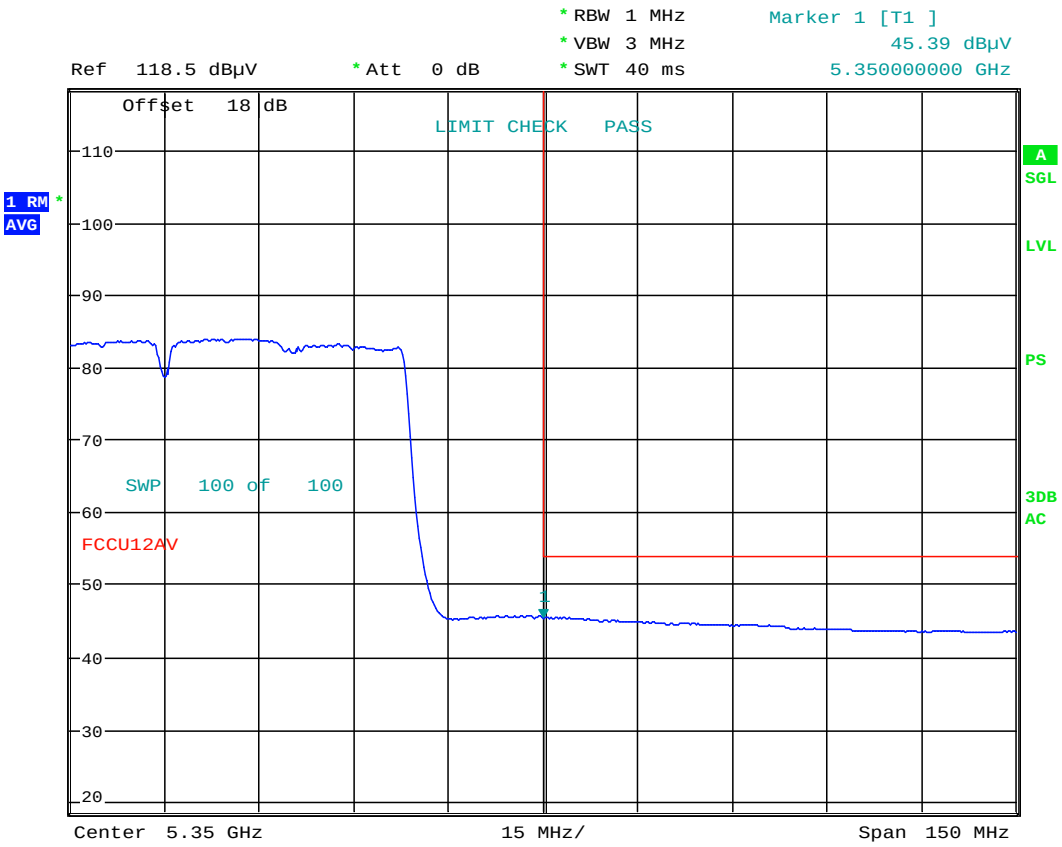
Plot 6-209. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 1)

© 2015 PCTEST Engineering Laboratory, Inc.

Antenna-2 Radiated Band Edge Measurements (80MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode:	802.11ac (80MHz)
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5290MHz
Channel:	58



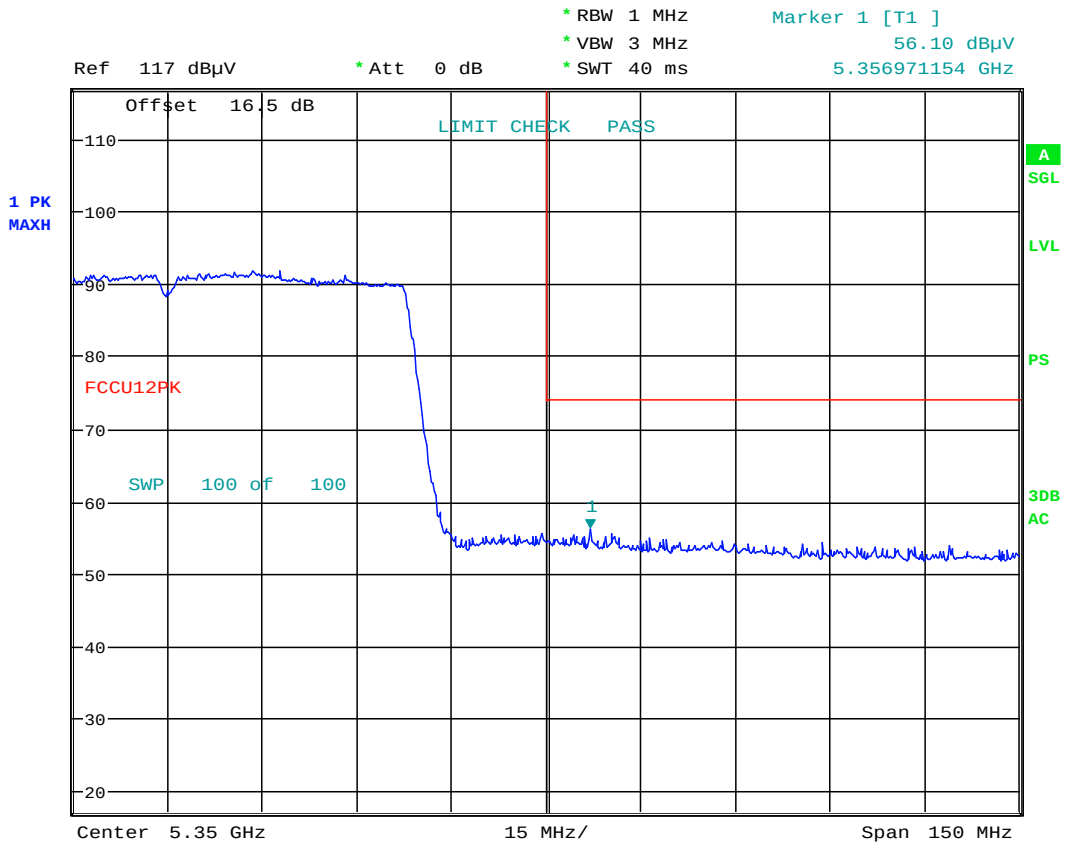
Date: 24.JAN.2015 17:29:13

Plot 6-210. Radiated Restricted Upper Band Edge Plot (Average – UNII Band 2A)

© 2015 PCTEST Engineering Laboratory, Inc.

Antenna-2 Radiated Band Edge Measurements (80MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209



Date: 24.JAN.2015 17:27:42

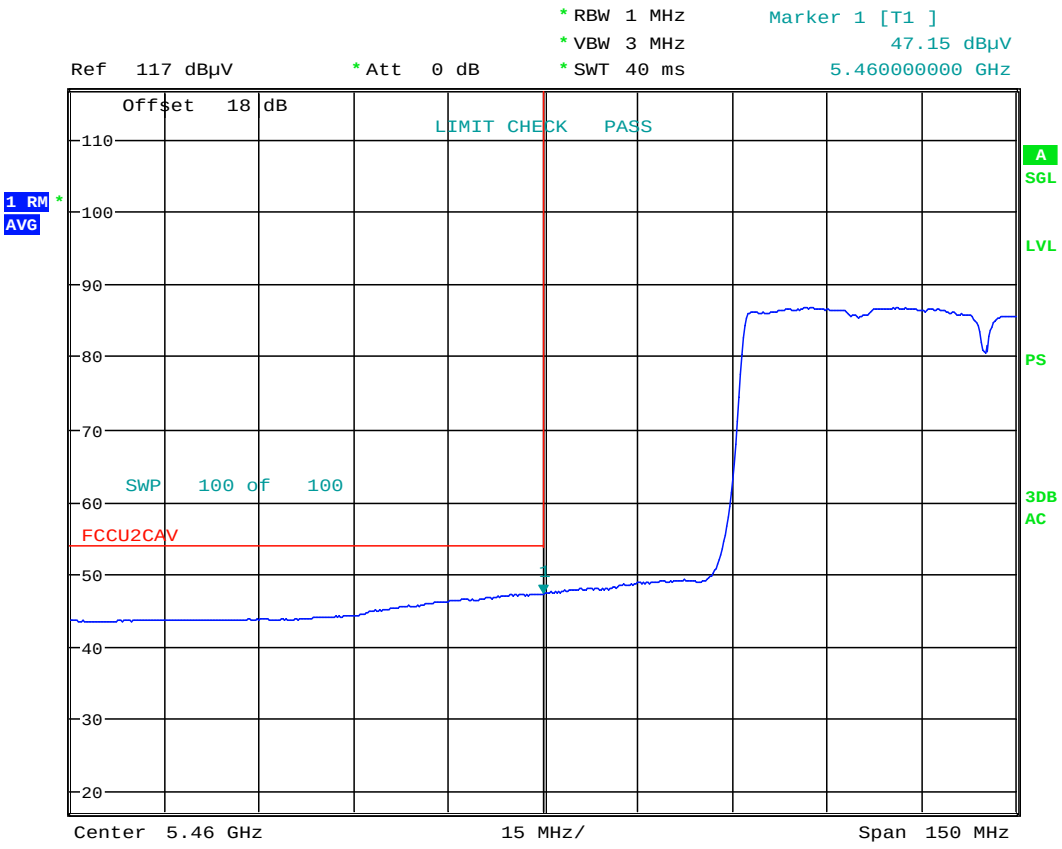
Plot 6-211. Radiated Restricted Upper Band Edge Plot (Peak – UNII Band 2A)

© 2015 PCTEST Engineering Laboratory, Inc.

Antenna-2 Radiated Band Edge Measurements (80MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode:	802.11ac (80MHz)
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5530MHz
Channel:	106



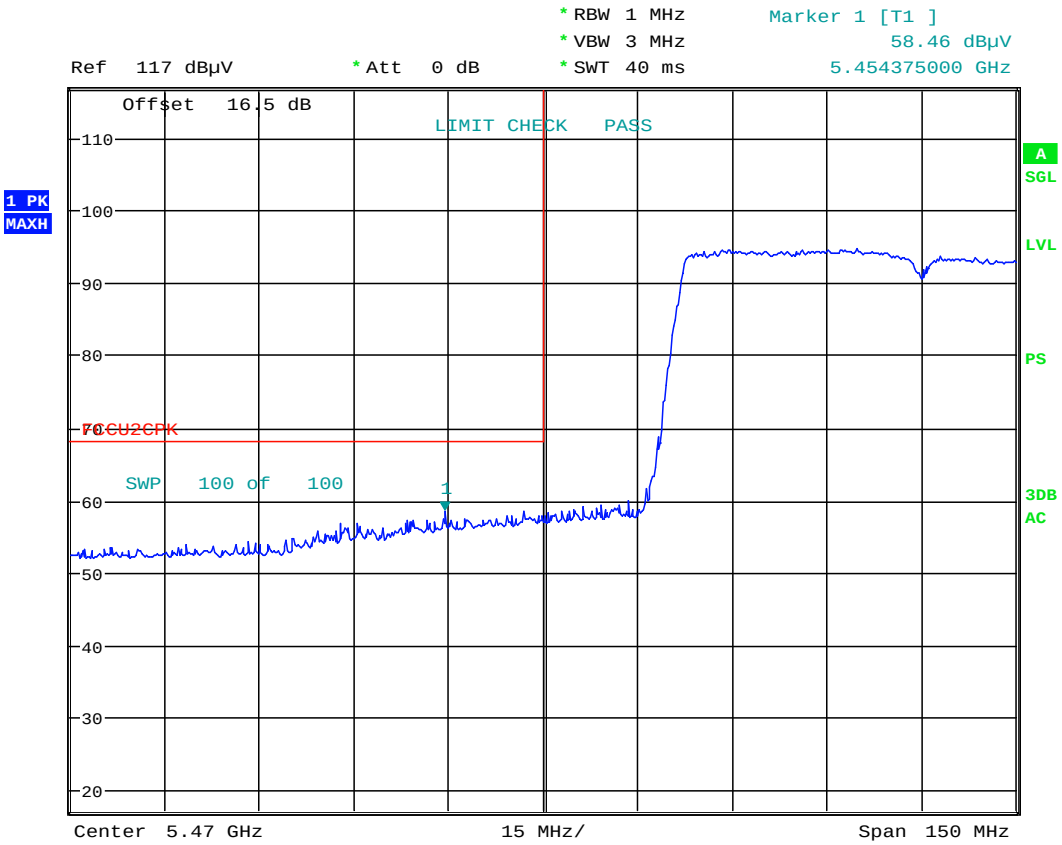
Date: 24.JAN.2015 17:50:56

Plot 6-212. Radiated Restricted Lower Band Edge Plot (Average – UNII Band 2C)

© 2015 PCTEST Engineering Laboratory, Inc.

Antenna-2 Radiated Band Edge Measurements (80MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209



Date: 24.JAN.2015 17:52:13

Plot 6-213. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 2C)

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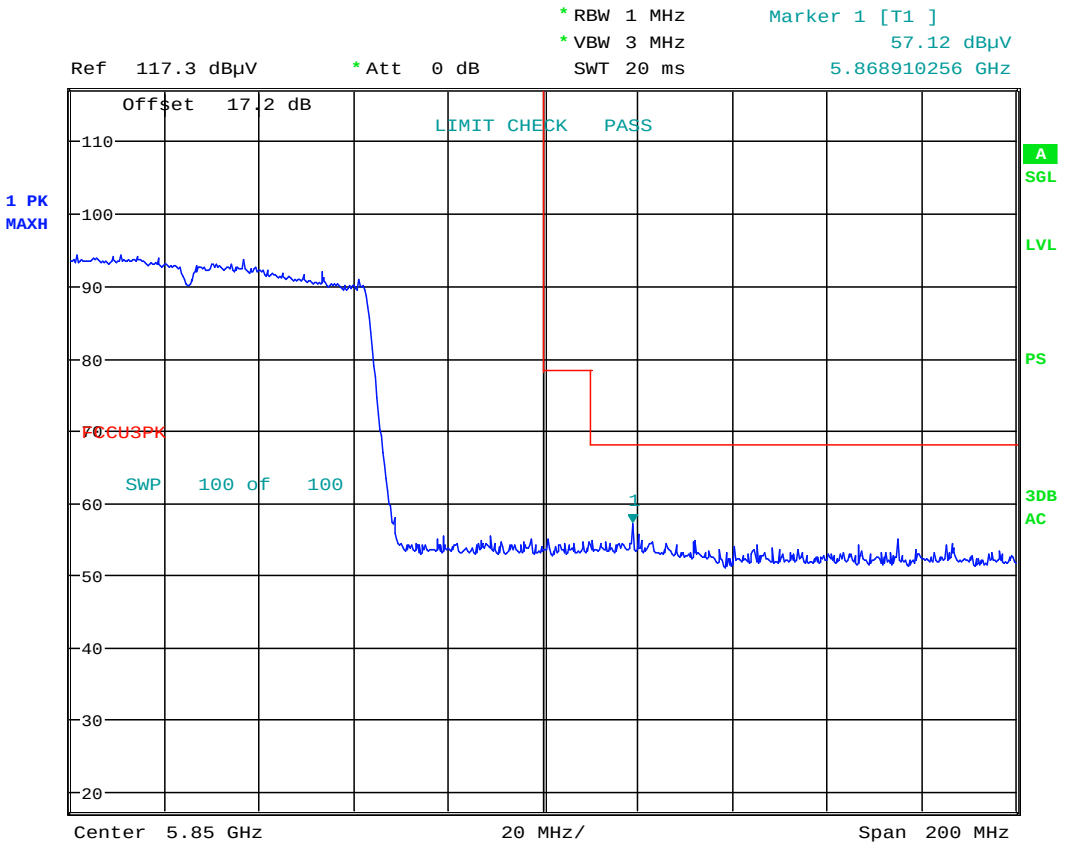
Antenna-2 Radiated Band Edge Measurements (80MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode:	802.11ac (80MHz)
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5775MHz
Channel:	155



Date: 24.JAN.2015 18:31:31

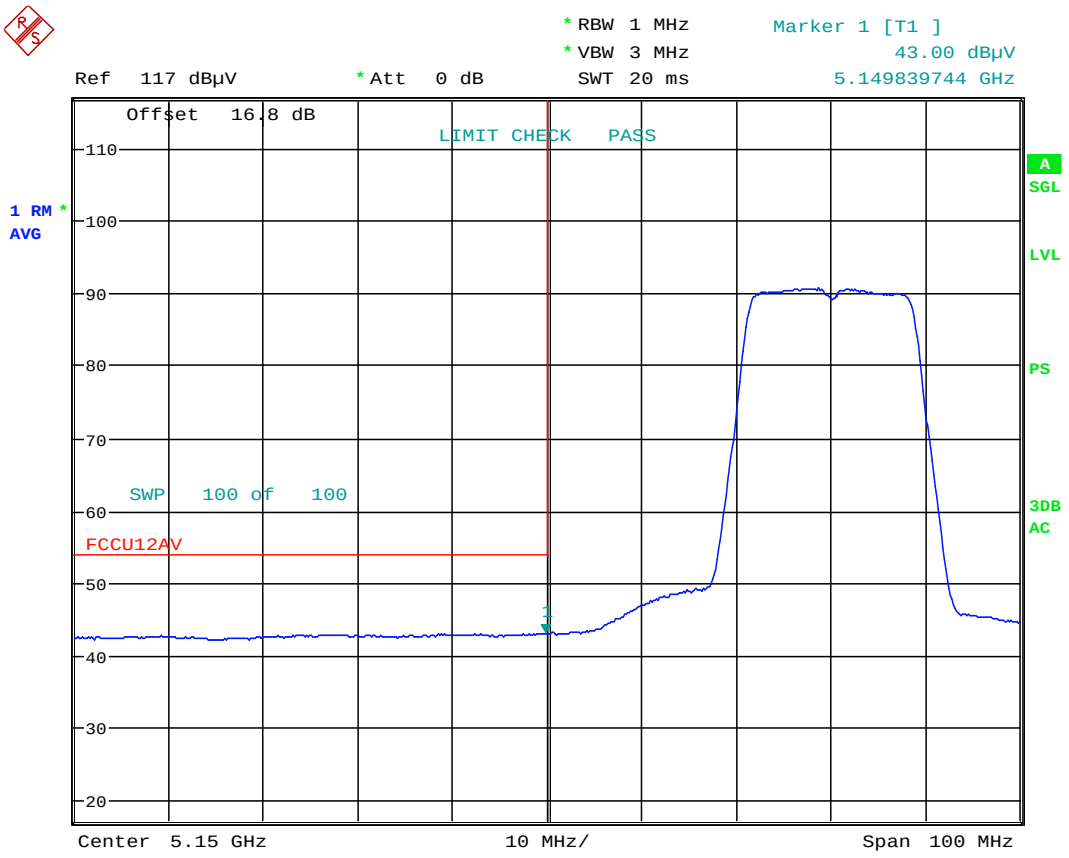
Plot 6-214. Radiated Upper Band Edge Plot (Peak – UNII Band 3)

© 2015 PCTEST Engineering Laboratory, Inc.

6.7.9 MIMO Radiated Band Edge Measurements (20MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode:	802.11n (20MHz)
Worst Case Transfer Rate:	MCS8
Distance of Measurements:	3 Meters
Operating Frequency:	5180MHz
Channel:	36



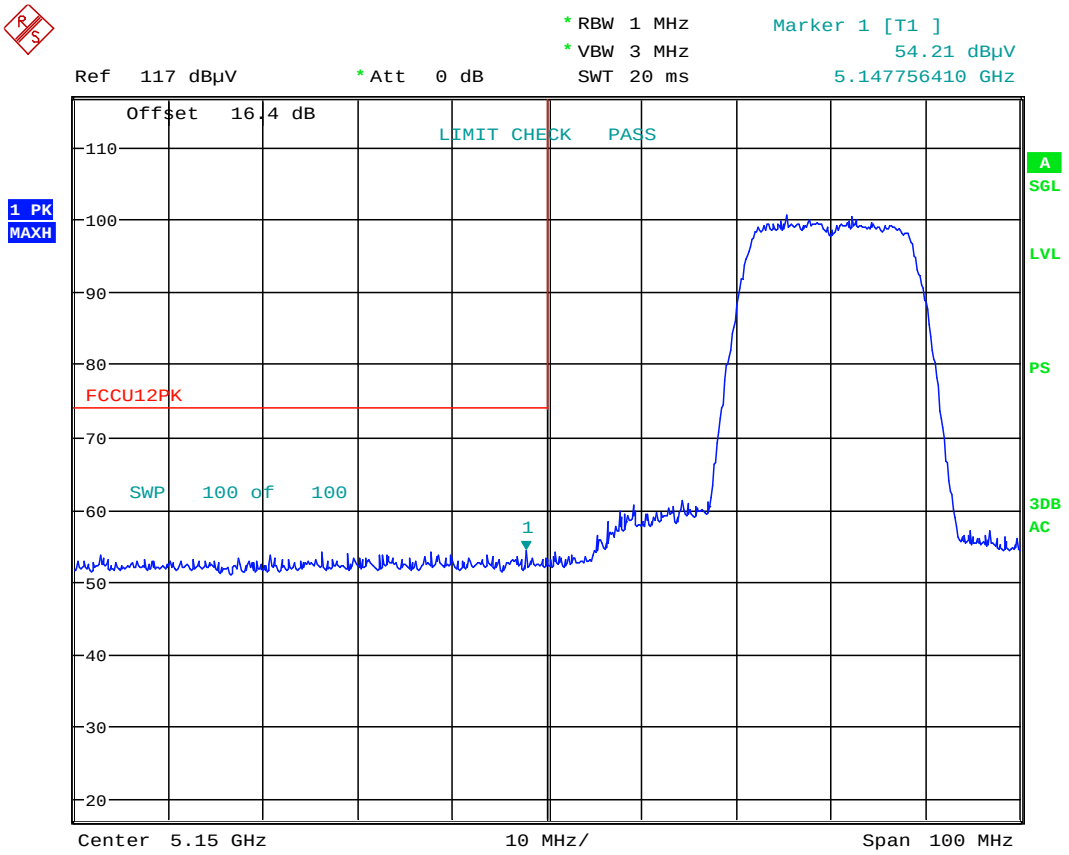
Date: 28.JAN.2015 16:14:55

Plot 6-215. Radiated Restricted Lower Band Edge Plot (Average – UNII Band 1)

© 2015 PCTEST Engineering Laboratory, Inc.

MIMO Radiated Band Edge Measurements (20MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209



Date: 28.JAN.2015 16:15:32

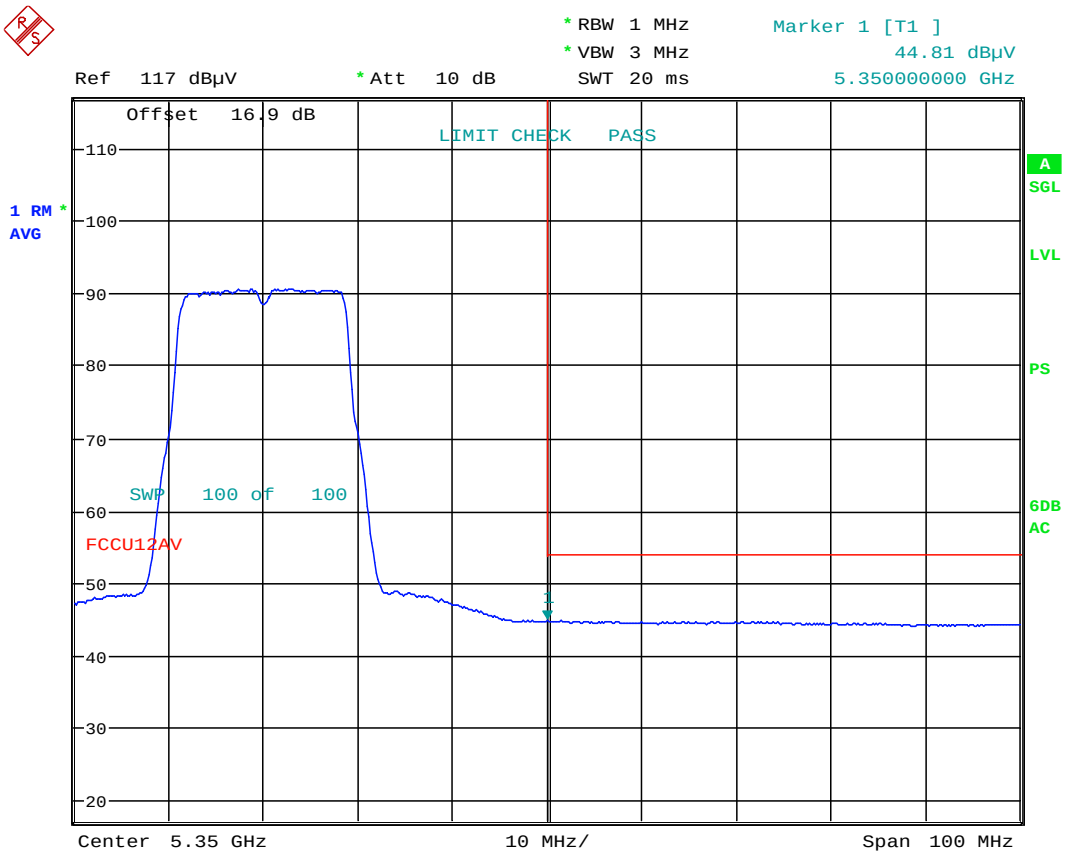
Plot 6-216. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 1)

© 2015 PCTEST Engineering Laboratory, Inc.

MIMO Radiated Band Edge Measurements (20MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode:	802.11n (20MHz)
Worst Case Transfer Rate:	MCS8
Distance of Measurements:	3 Meters
Operating Frequency:	5320MHz
Channel:	64



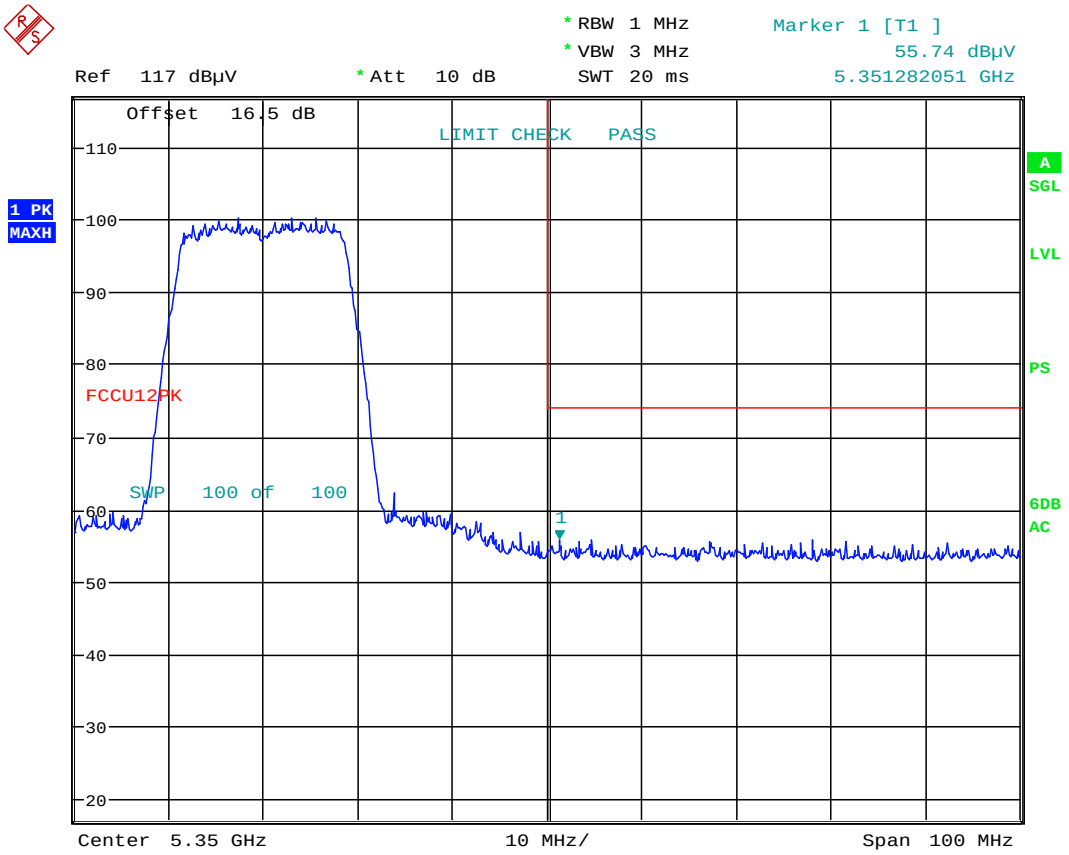
Date: 28.JAN.2015 16:27:40

Plot 6-217. Radiated Restricted Upper Band Edge Plot (Average – UNII Band 2A)

© 2015 PCTEST Engineering Laboratory, Inc.

MIMO Radiated Band Edge Measurements (20MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209



Date: 28.JAN.2015 16:32:36

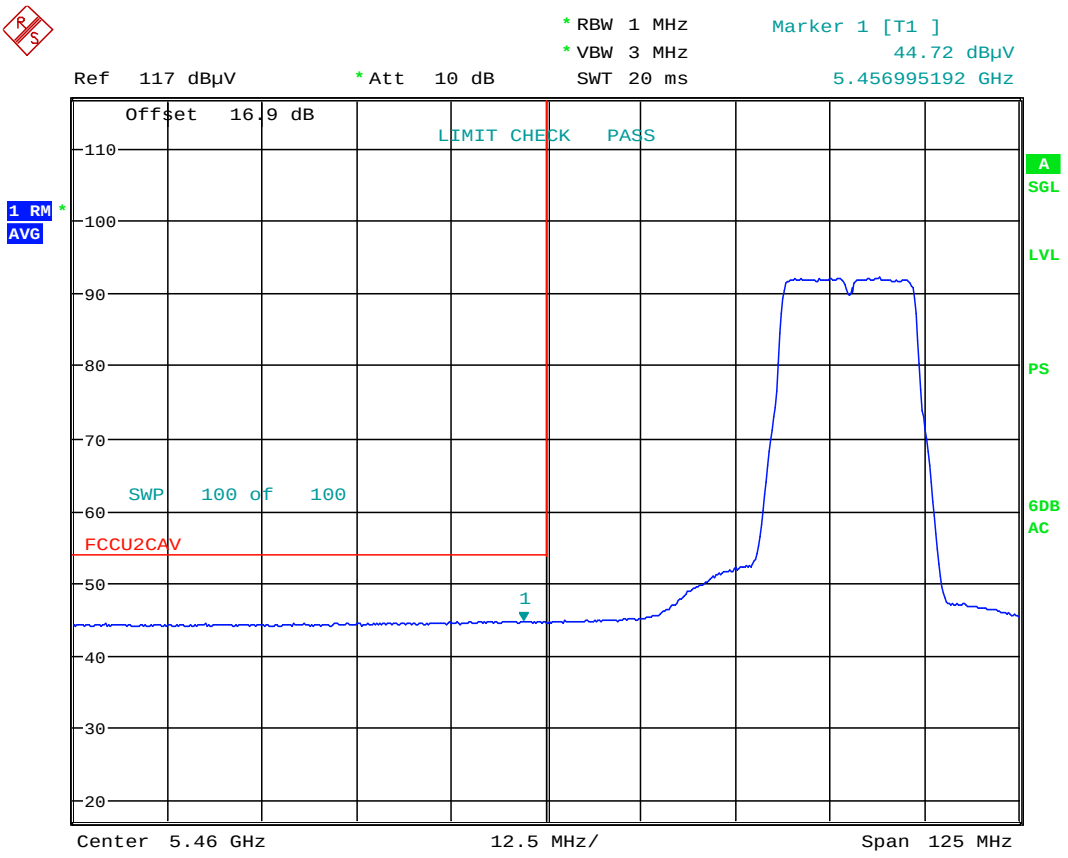
Plot 6-218. Radiated Restricted Upper Band Edge Plot (Peak – UNII Band 2A)

© 2015 PCTEST Engineering Laboratory, Inc.

MIMO Radiated Band Edge Measurements (20MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode:	802.11n (20MHz)
Worst Case Transfer Rate:	MCS8
Distance of Measurements:	3 Meters
Operating Frequency:	5500MHz
Channel:	100



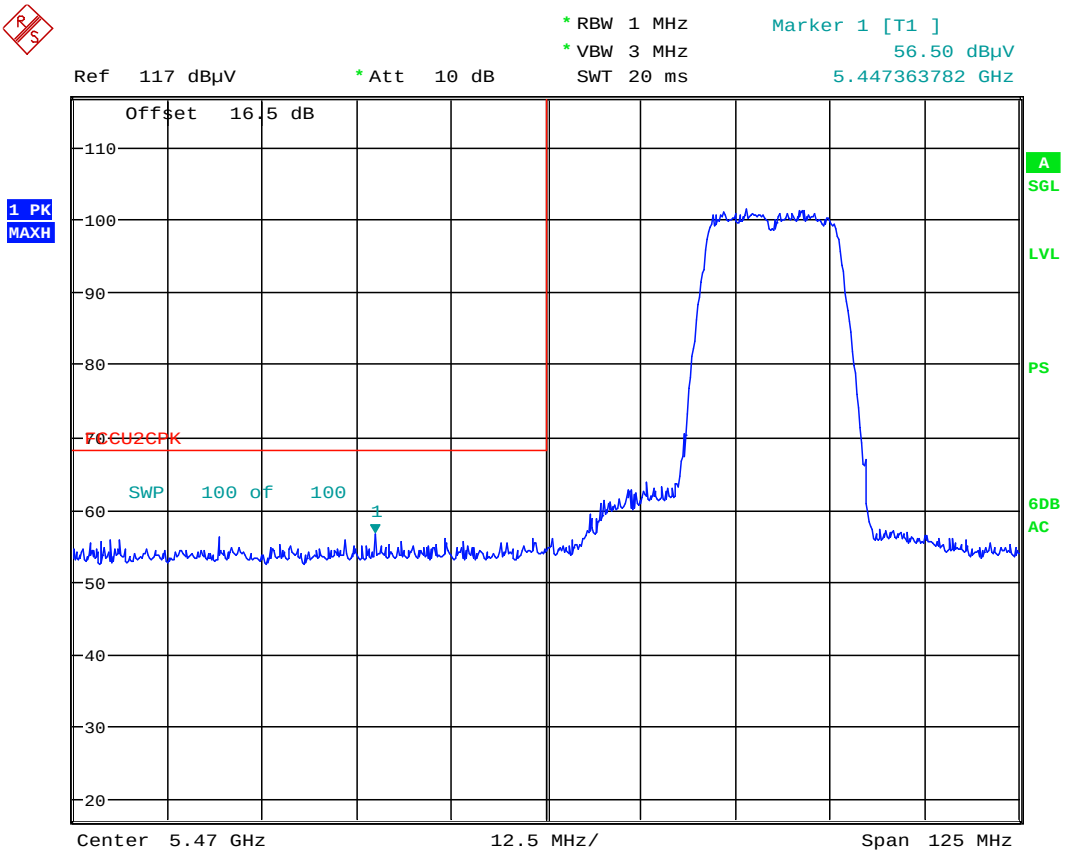
Date: 28.JAN.2015 16:45:48

Plot 6-219. Radiated Restricted Lower Band Edge Plot (Average – UNII Band 2C)

© 2015 PCTEST Engineering Laboratory, Inc.

MIMO Radiated Band Edge Measurements (20MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209



Date: 28.JAN.2015 16:48:04

Plot 6-220. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 2C)

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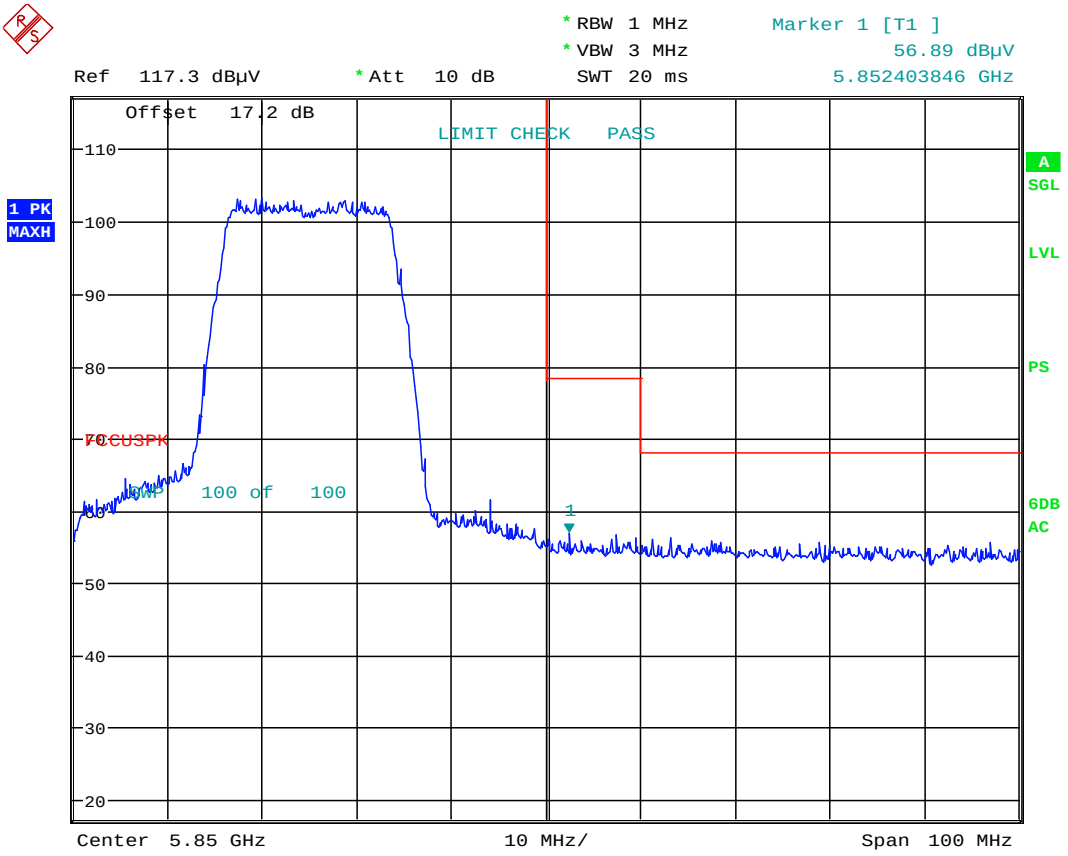
MIMO Radiated Band Edge Measurements (20MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode:	802.11n (20MHz)
Worst Case Transfer Rate:	MCS8
Distance of Measurements:	3 Meters
Operating Frequency:	5825MHz
Channel:	165



Date: 28.JAN.2015 17:13:03

Plot 6-221. Radiated Upper Band Edge Plot (Peak – UNII Band 3)

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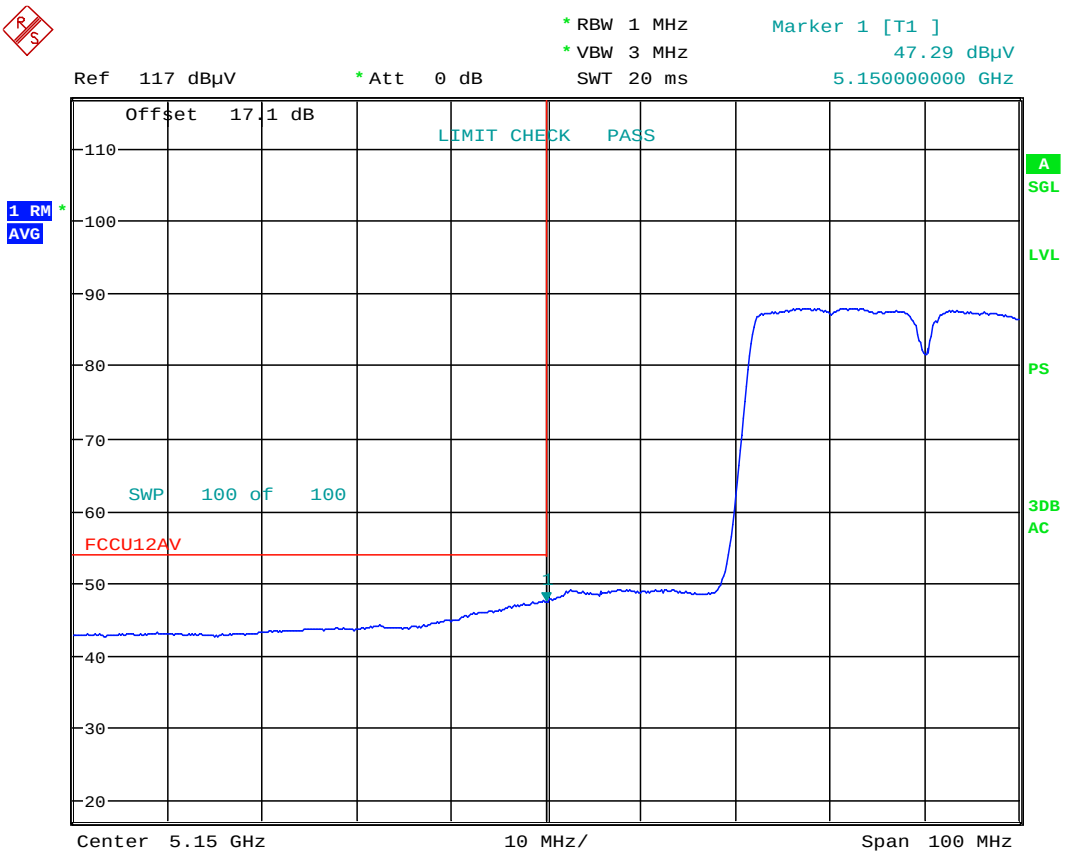
6.7.10 MIMO Radiated Band Edge Measurements (40MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode:	802.11n (40MHz)
Worst Case Transfer Rate:	MCS8
Distance of Measurements:	3 Meters
Operating Frequency:	5190MHz
Channel:	38



Date: 28.JAN.2015 16:17:42

Plot 6-222. Radiated Restricted Lower Band Edge Plot (Average – UNII Band 1)

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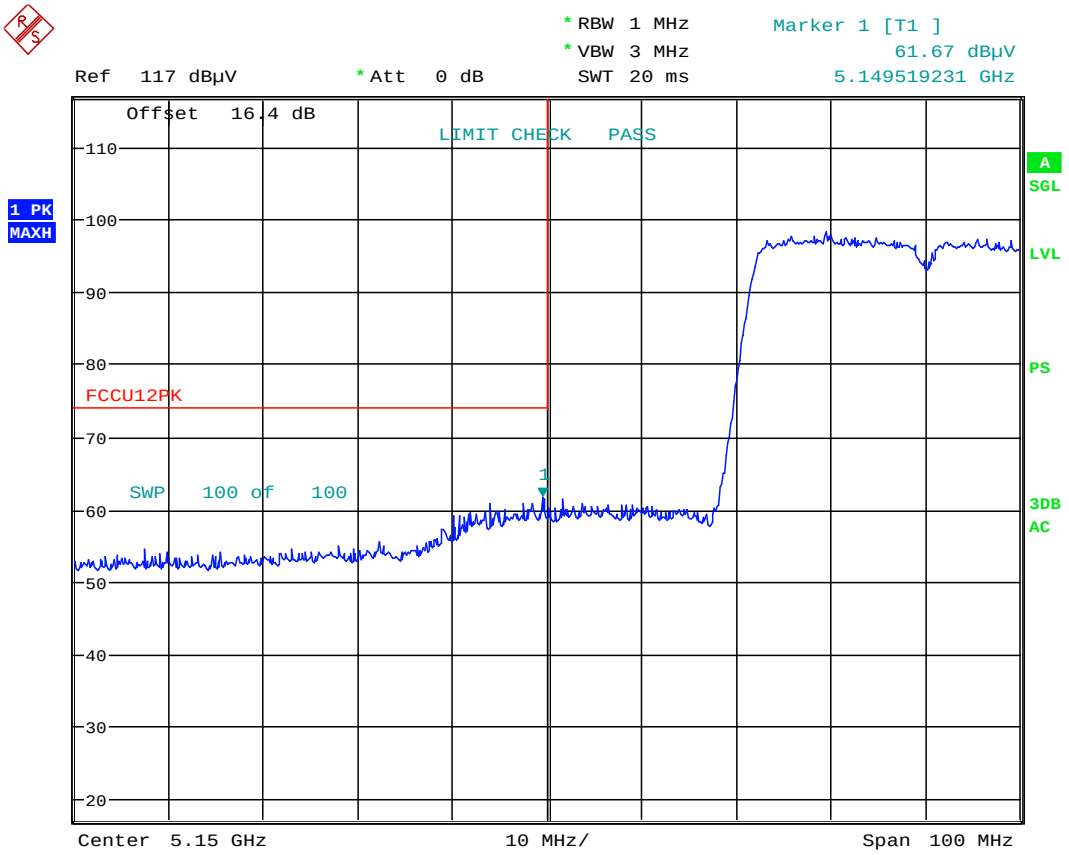
MIMO Radiated Band Edge Measurements (40MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209



Date: 28.JAN.2015 16:17:02

Plot 6-223. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 1)

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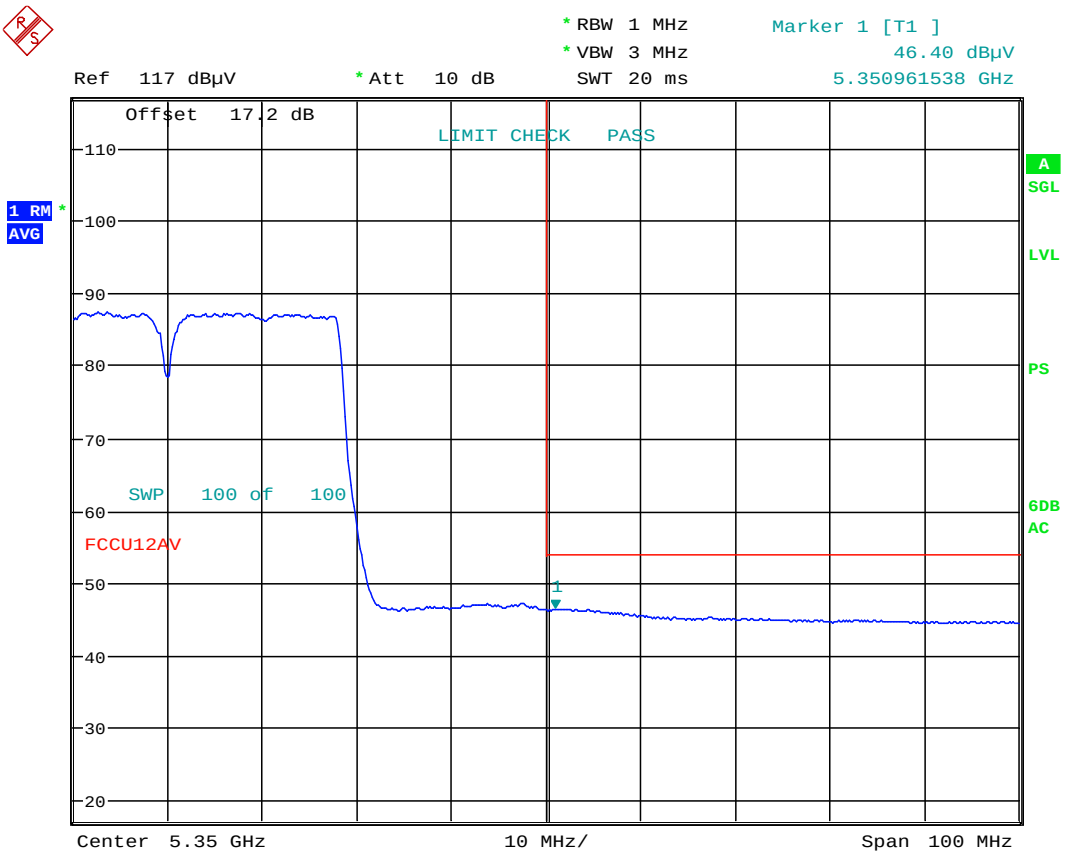
MIMO Radiated Band Edge Measurements (40MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode:	802.11n (40MHz)
Worst Case Transfer Rate:	MCS8
Distance of Measurements:	3 Meters
Operating Frequency:	5310MHz
Channel:	62



Date: 28.JAN.2015 16:36:13

Plot 6-224. Radiated Restricted Upper Band Edge Plot (Average – UNII Band 2A)

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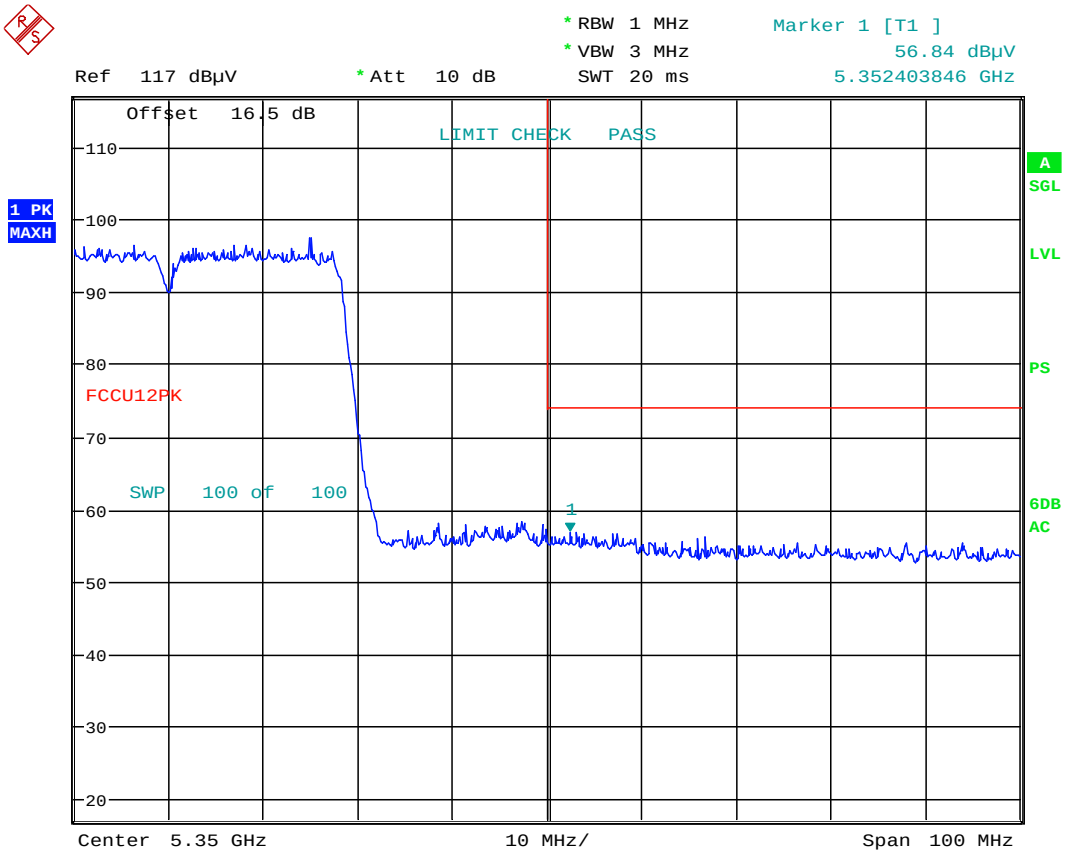
MIMO Radiated Band Edge Measurements (40MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209



Date: 28.JAN.2015 16:35:25

Plot 6-225. Radiated Restricted Upper Band Edge Plot (Peak – UNII Band 2A)

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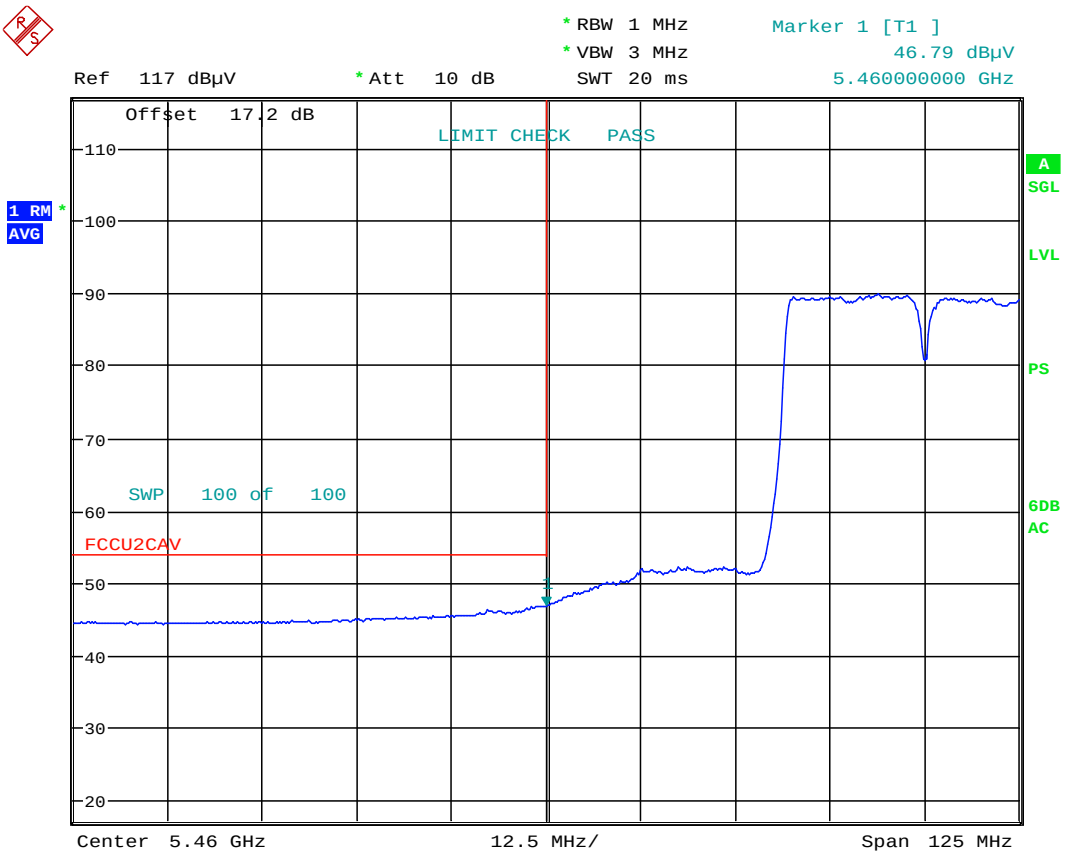
MIMO Radiated Band Edge Measurements (40MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode:	802.11n (40MHz)
Worst Case Transfer Rate:	MCS8
Distance of Measurements:	3 Meters
Operating Frequency:	5510MHz
Channel:	102



Date: 28.JAN.2015 16:50:37

Plot 6-226. Radiated Restricted Lower Band Edge Plot (Average – UNII Band 2C)

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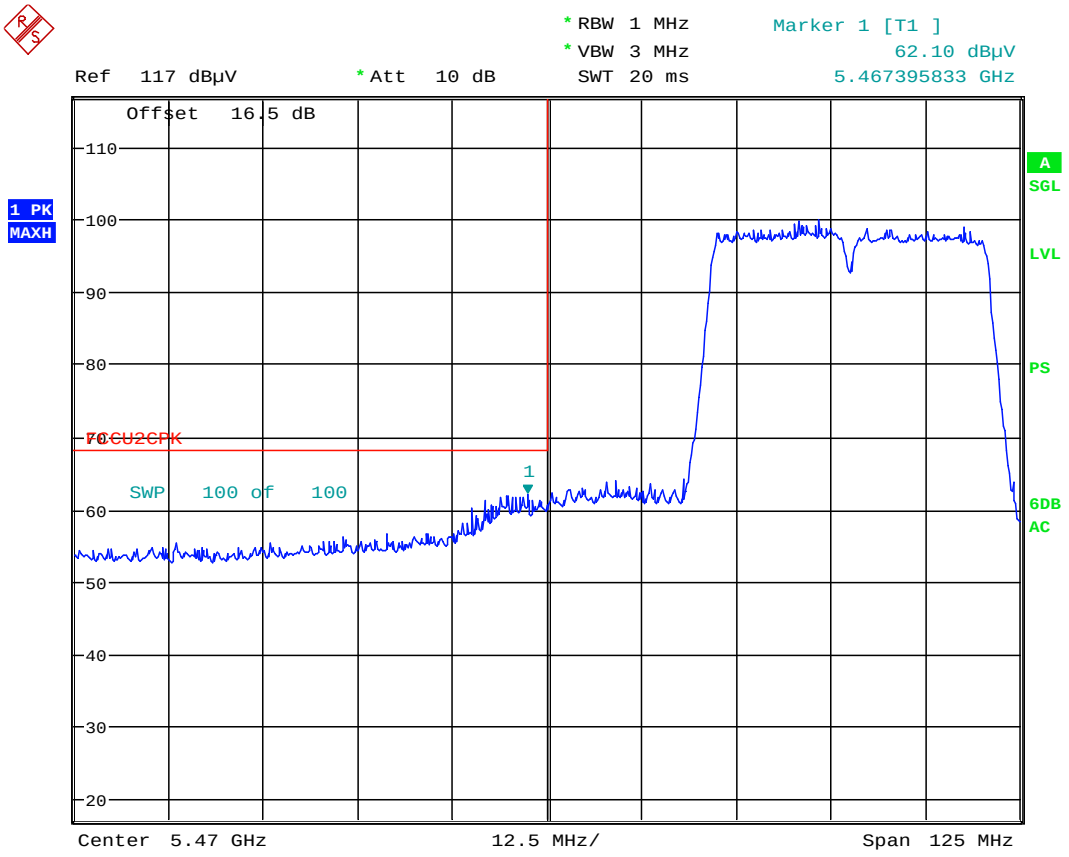
MIMO Radiated Band Edge Measurements (40MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209



Date: 28.JAN.2015 16:49:55

Plot 6-227. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 2C)

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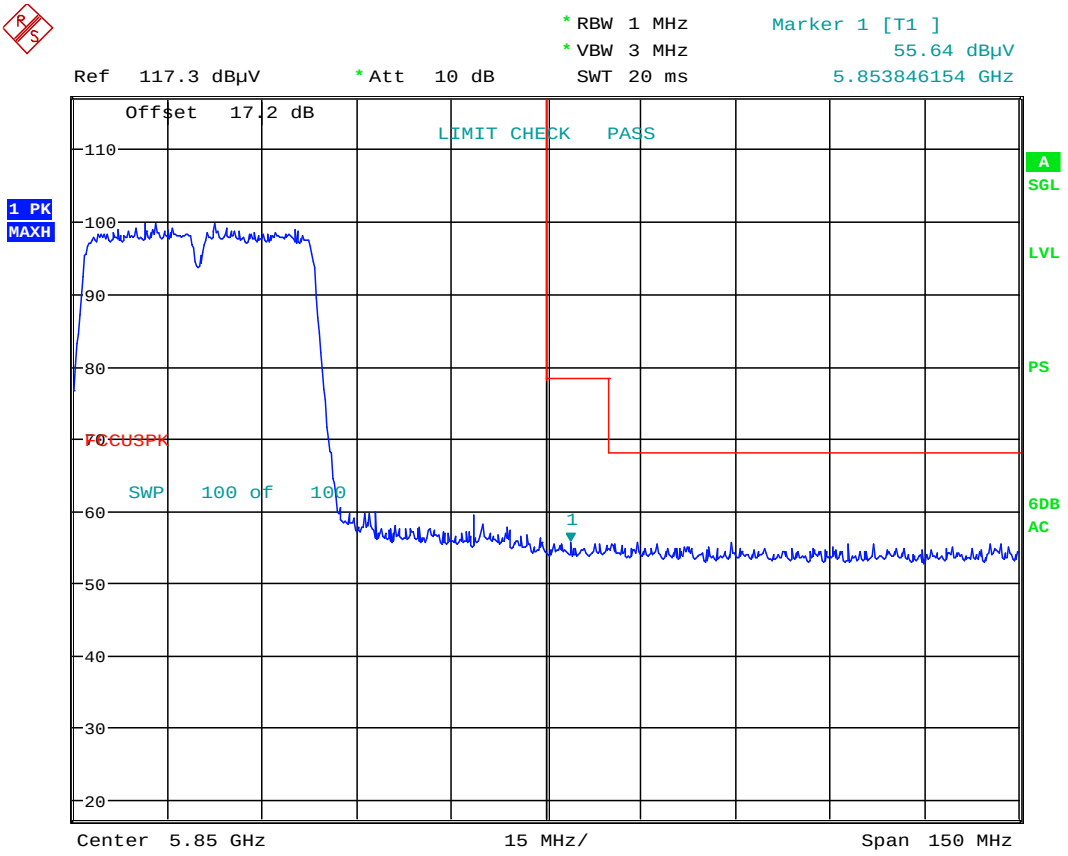
MIMO Radiated Band Edge Measurements (40MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode:	802.11n (40MHz)
Worst Case Transfer Rate:	MCS8
Distance of Measurements:	3 Meters
Operating Frequency:	5795MHz
Channel:	159



Date: 28.JAN.2015 17:12:09

Plot 6-228. Radiated Upper Band Edge Plot (Peak – UNII Band 3)

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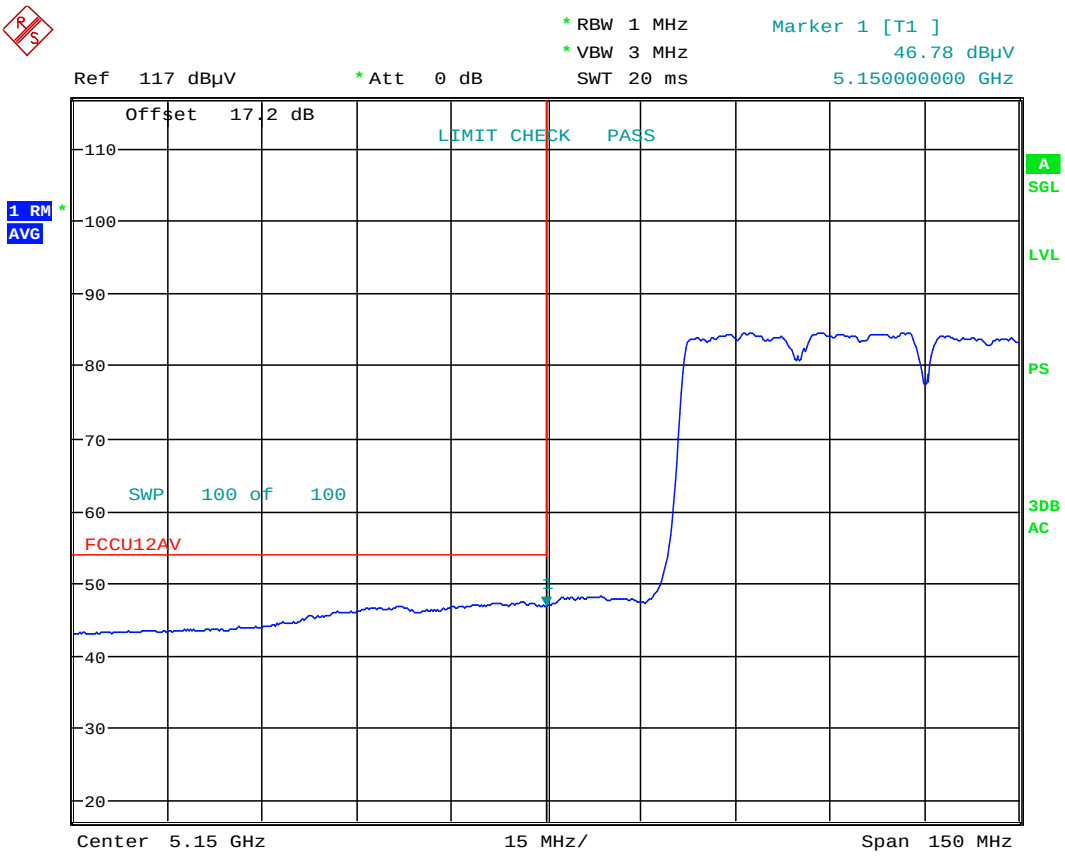
6.7.11 MIMO Radiated Band Edge Measurements (80MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode:	802.11ac (80MHz)
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5210MHz
Channel:	42



Date: 28.JAN.2015 16:19:50

Plot 6-229. Radiated Restricted Lower Band Edge Plot (Average – UNII Band 1)

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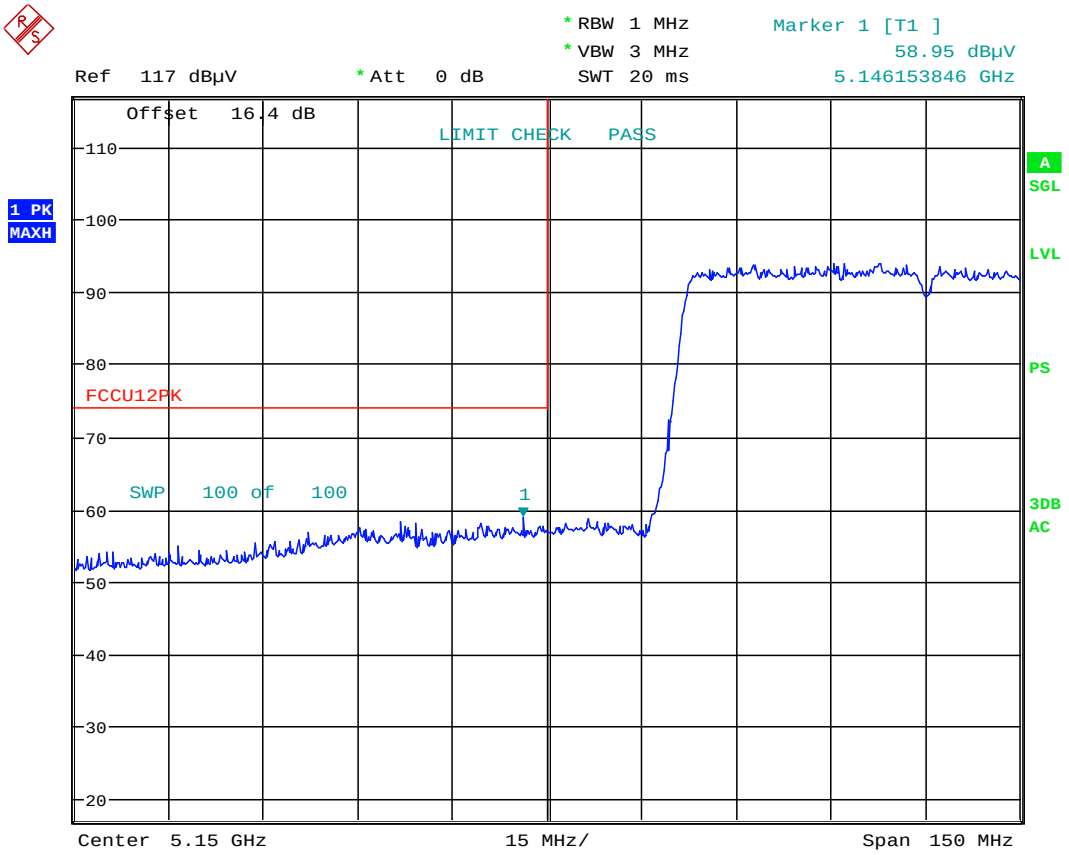
MIMO Radiated Band Edge Measurements (80MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209



Date: 28.JAN.2015 16:20:24

Plot 6-230. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 1)

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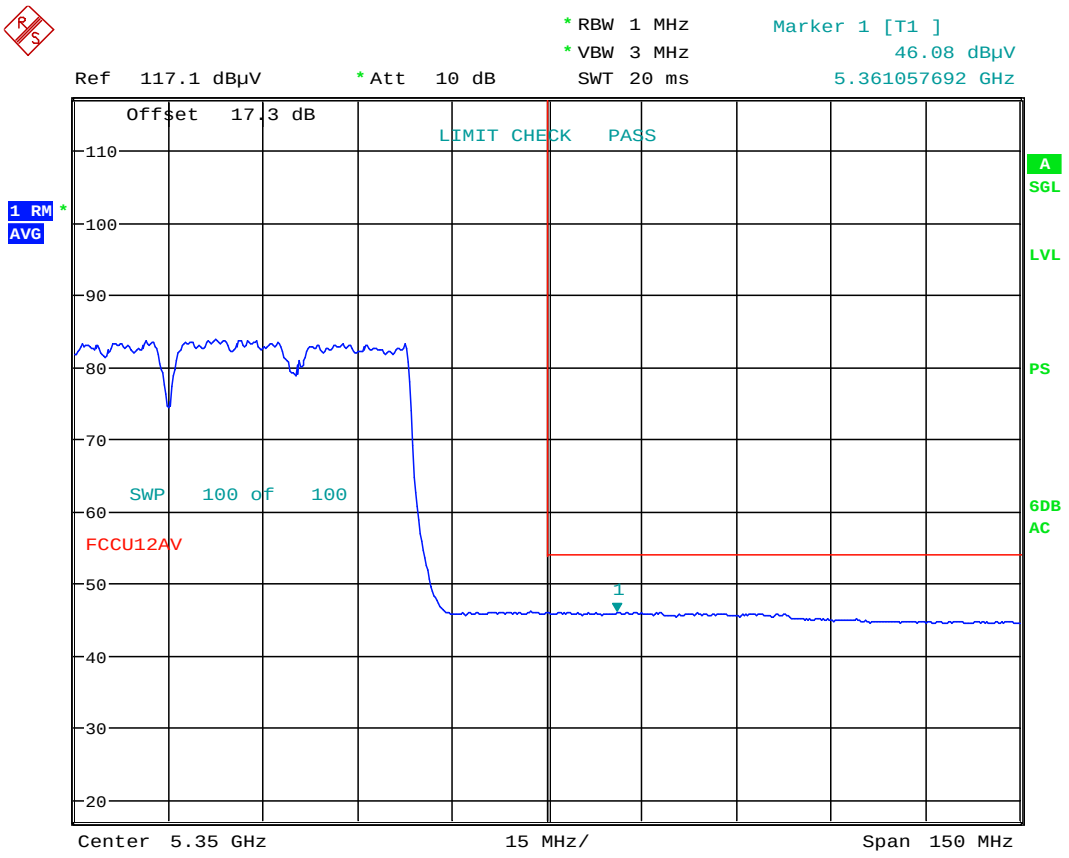
MIMO Radiated Band Edge Measurements (80MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode:	802.11ac (80MHz)
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5290MHz
Channel:	58



Date: 28.JAN.2015 16:38:17

Plot 6-231. Radiated Restricted Upper Band Edge Plot (Average – UNII Band 2A)

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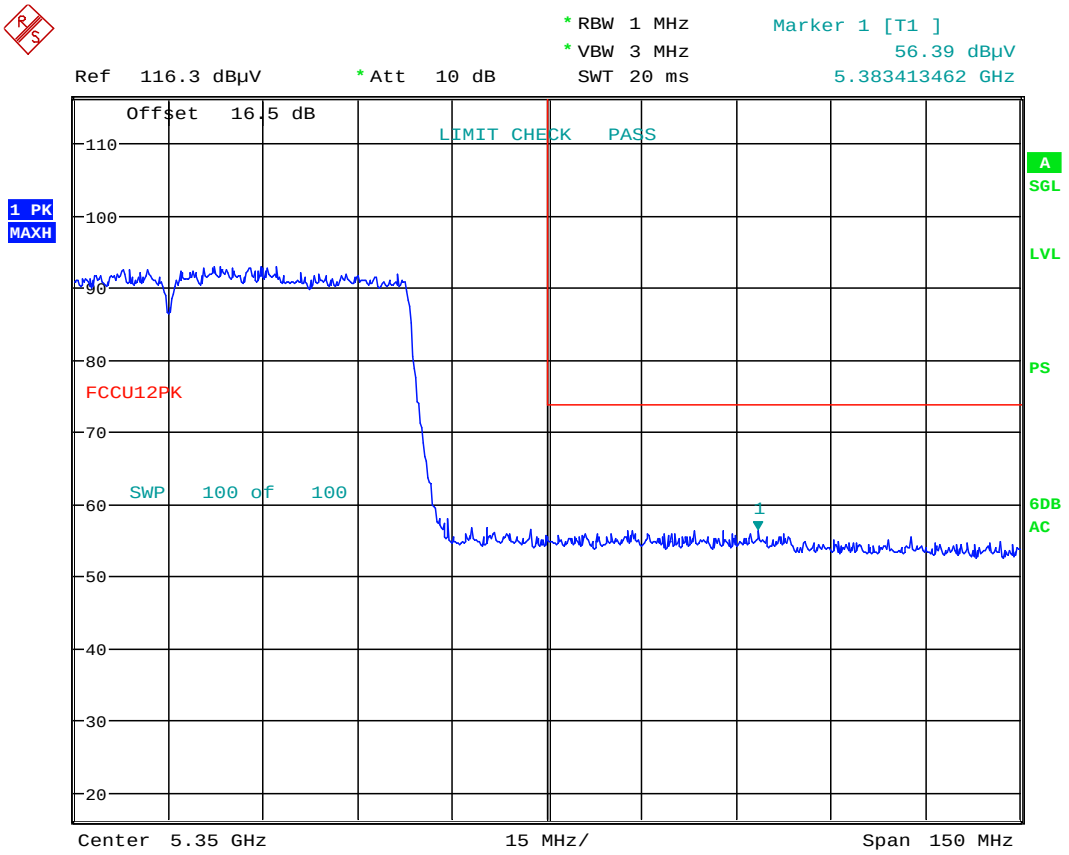
MIMO Radiated Band Edge Measurements (80MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209



Date: 28.JAN.2015 16:39:14

Plot 6-232. Radiated Restricted Upper Band Edge Plot (Peak – UNII Band 2A)

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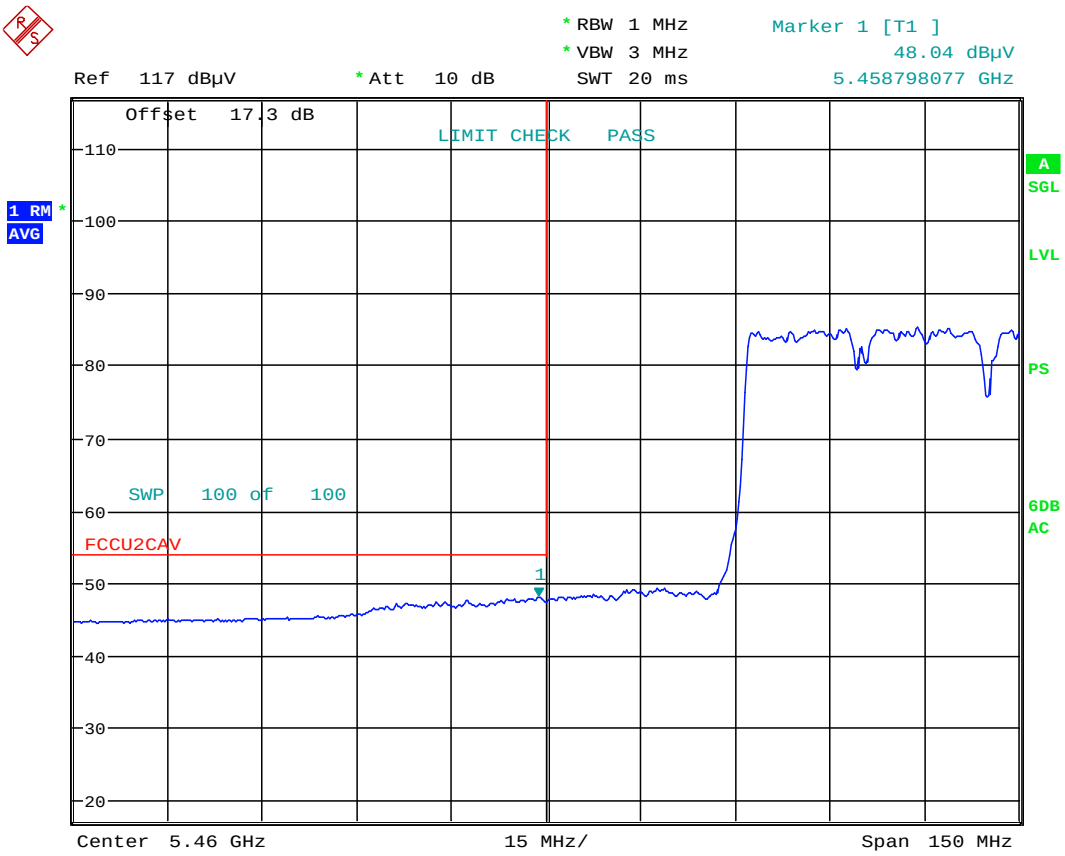
MIMO Radiated Band Edge Measurements (80MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode:	802.11ac (80MHz)
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5530MHz
Channel:	106



Date: 28.JAN.2015 16:52:06

Plot 6-233. Radiated Restricted Lower Band Edge Plot (Average – UNII Band 2C)

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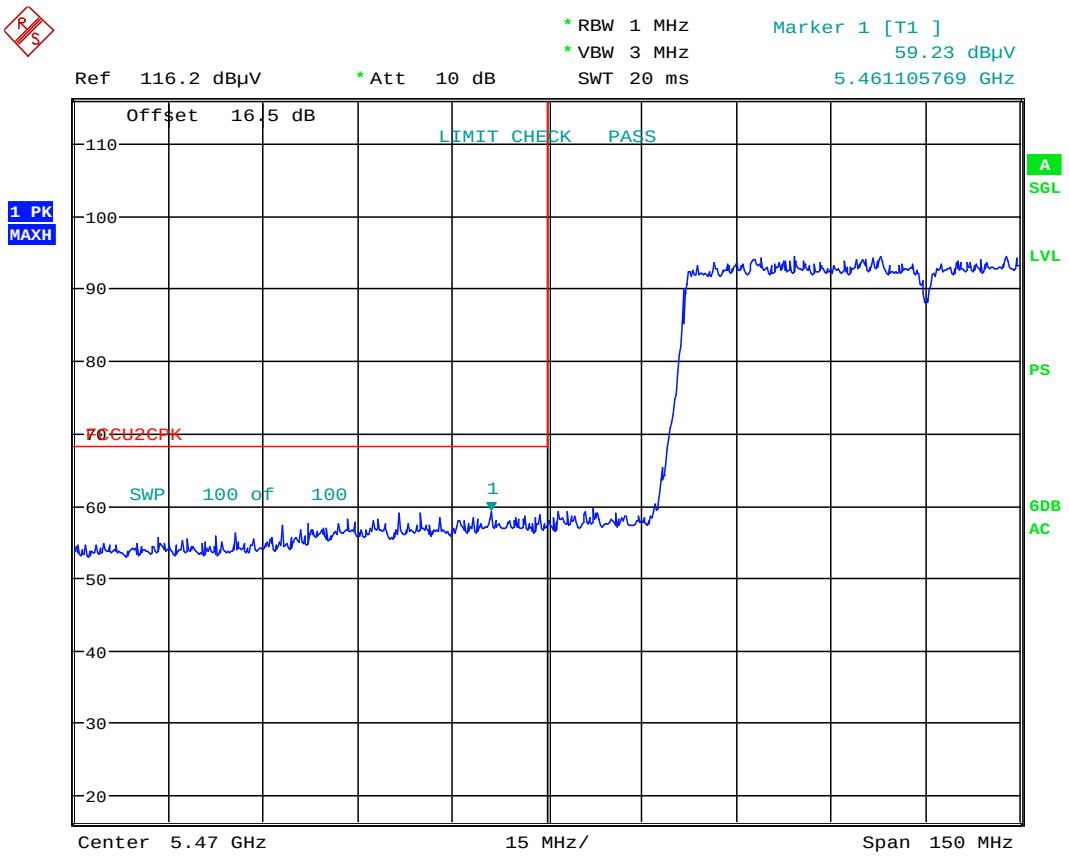
MIMO Radiated Band Edge Measurements (80MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209



Date: 28.JAN.2015 16:52:55

Plot 6-234. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 2C)

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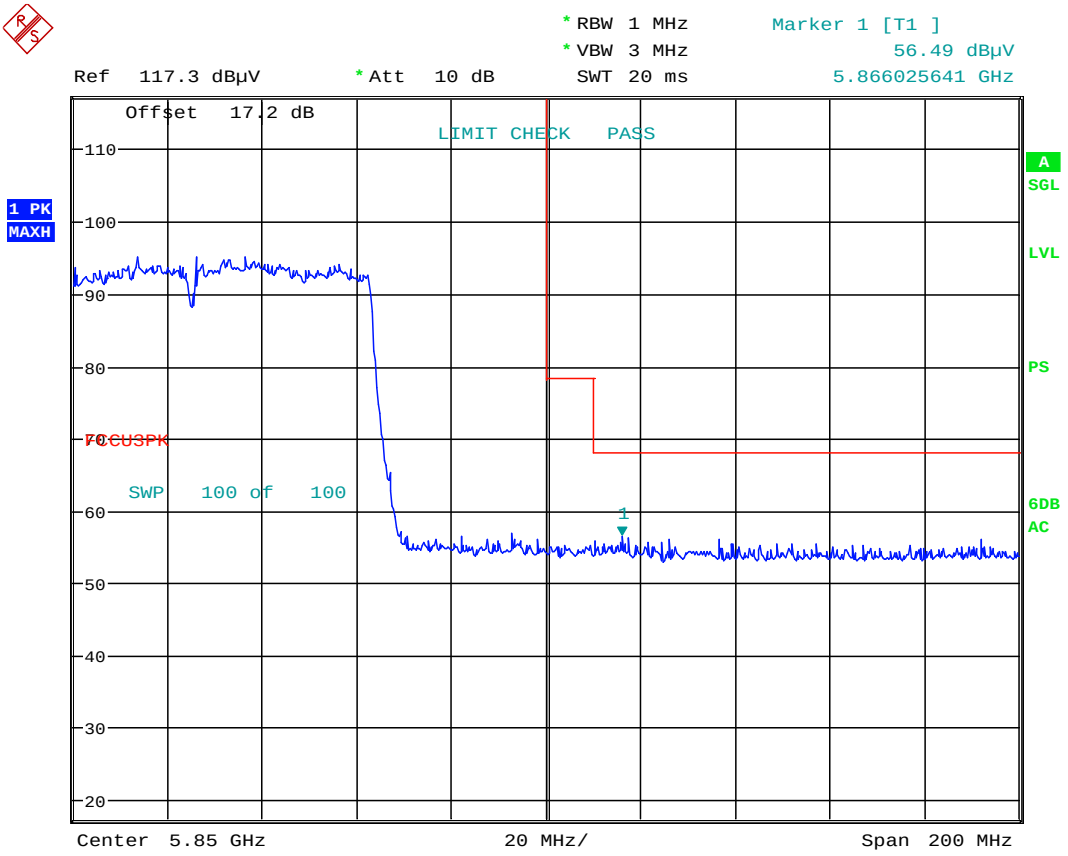
MIMO Radiated Band Edge Measurements (80MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209

Worst Case Mode:	802.11ac (80MHz)
Worst Case Transfer Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5775MHz
Channel:	155



Date: 28.JAN.2015 17:09:31

Plot 6-235. Radiated Upper Band Edge Plot (Peak – UNII Band 3)

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6.8 Radiated Spurious Emissions Measurements – Below 1GHz

§15.209

Test Overview and Limit

All out of band radiated spurious emissions are measured with a spectrum analyzer connected to a receive antenna while the EUT is operating at its maximum duty cycle (>98%), at maximum power, and at the appropriate frequencies. All data rates and modes were investigated for radiated spurious emissions. Only the radiated emissions of the configuration that produced the worst case emissions are reported in this section.

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table 6-54 per Section 15.209.

Frequency	Field Strength [μV/m]	Measured Distance [Meters]
0.009 – 0.490 MHz	2400/F (kHz)	300
0.490 – 1.705 MHz	24000/F (kHz)	30
1.705 – 30.00 MHz	30	30
30.00 – 88.00 MHz	100	3
88.00 – 216.0 MHz	150	3
216.0 – 960.0 MHz	200	3
Above 960.0 MHz	500	3

Table 6-54. Radiated Limits

Test Procedures Used

ANSI C63.4-2009

Test Settings

Quasi-Peak Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 120kHz (for emissions from 30MHz – 1GHz)
3. Detector = quasi-peak
4. Sweep time = auto couple
5. Trace mode = max hold
6. Trace was allowed to stabilize

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Test Setup

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

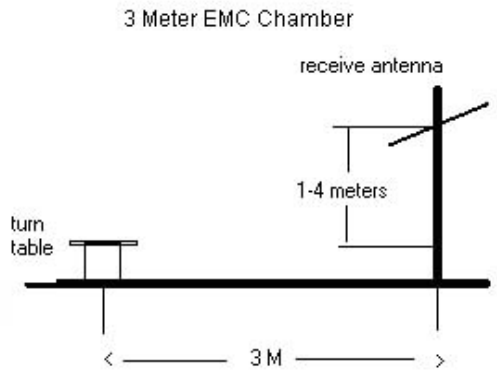

Figure 6-6. Test Instrument & Measurement Setup

Test Notes

1. All emissions lying in restricted bands specified in §15.205 are below the limit shown in Table 6-10.
2. The broadband receive antenna is manipulated through vertical and horizontal polarizations during the tests. The EUT is manipulated through three orthogonal planes.
3. This unit was tested with its standard battery.
4. The spectrum is investigated using a peak detector and final measurements are recorded using CISPR quasi peak detector. The worst-case emissions are reported however emissions whose levels were not within 20dB of the respective limits were not reported.
5. Emissions were measured at a 3 meter test distance.
6. Emissions are investigated while operating on the center channel of the mode, band, and modulation that produced the worst case results during the transmitter spurious emissions testing.
7. No spurious emissions were detected within 20dB of the limit below 30MHz.
8. The wide spectrum spurious emissions plots shown on the following pages are used only for the purpose of emission identification. There were no emissions detected in the 30MHz – 1GHz frequency range, as shown in the subsequent plots.
9. The results recorded using the broadband antenna is known to correlate with the results obtained by using a tuned dipole with an acceptable degree of accuracy. The VSWR for the measurement antenna was found to be less than 2:1.

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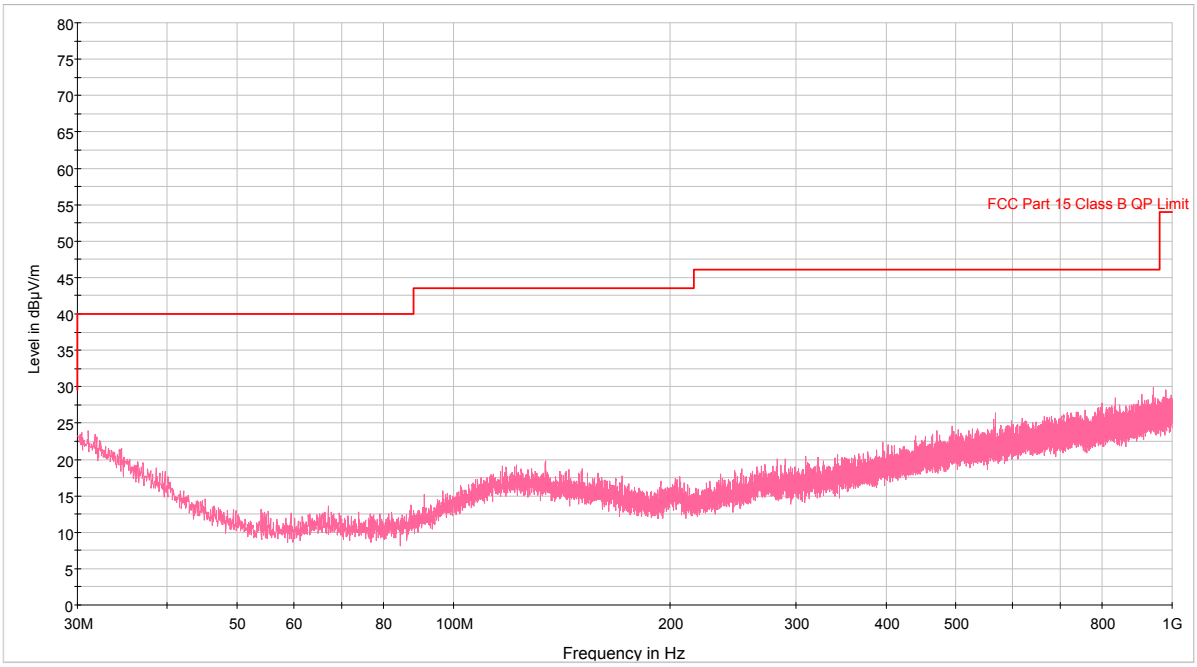
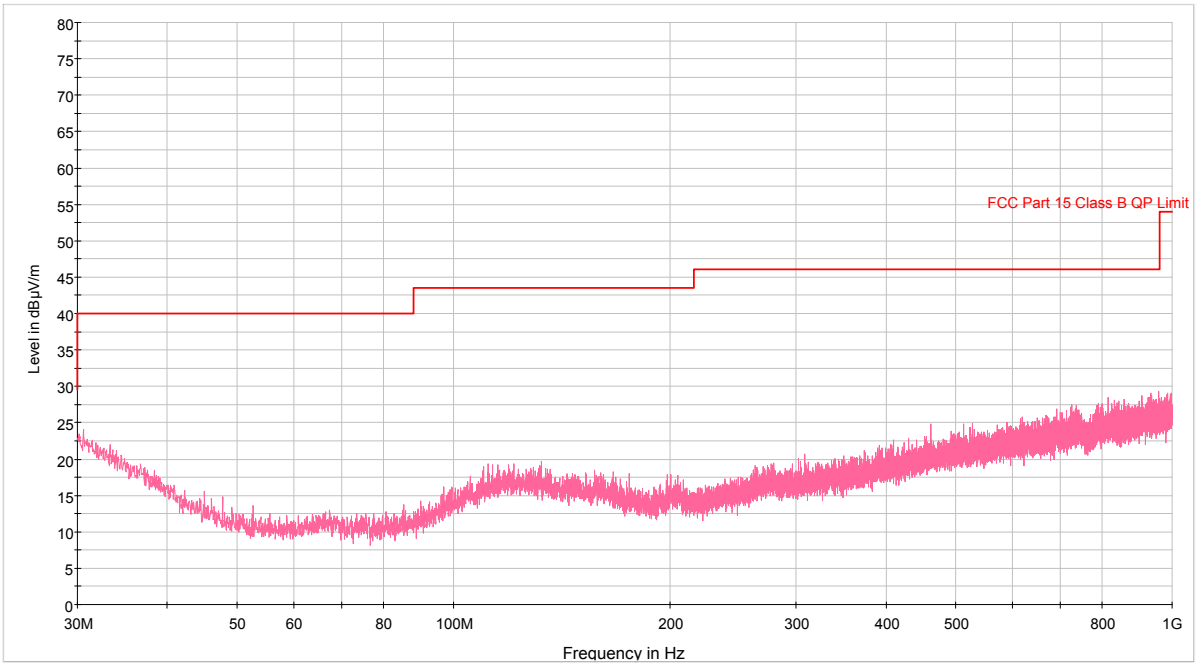
Antenna-1 Radiated Spurious Emissions Measurements (Below 1GHz)

§15.209



Plot 6-236. Radiated Spurious Plot below 1GHz (802.11a – U3 Ch. 157, Ant. Pol. H)



Plot 6-237. Radiated Spurious Plot below 1GHz (802.11a – U3 Ch. 157, Ant. Pol. V)

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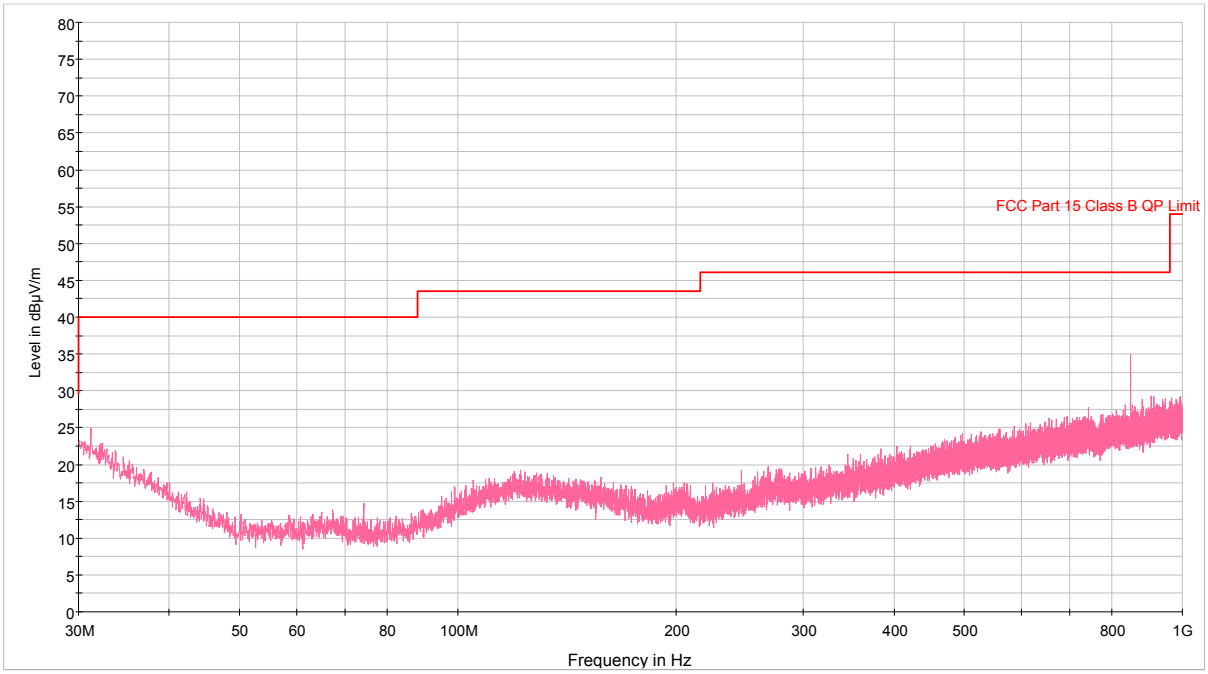
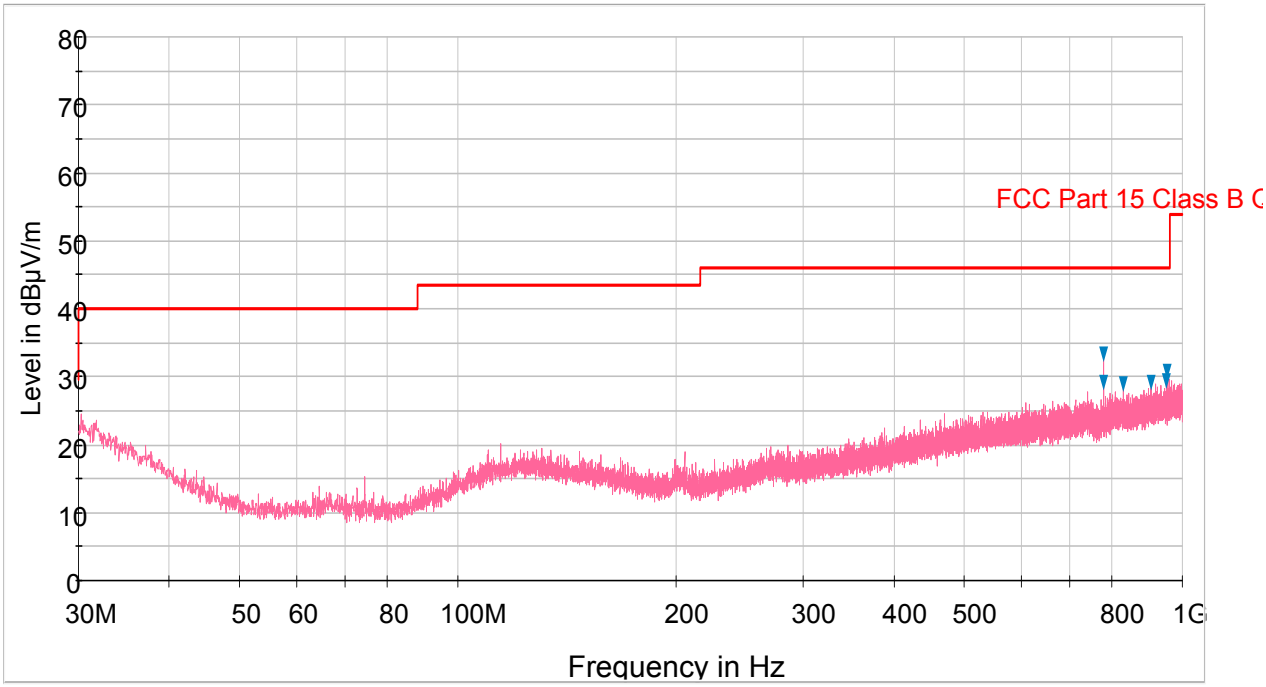
Antenna-2 Radiated Spurious Emissions Measurements (Below 1GHz)

§15.209



Plot 6-238. Radiated Spurious Plot below 1GHz (802.11a – U3 Ch. 157, Ant. Pol. H)



Plot 6-239. Radiated Spurious Plot below 1GHz (802.11a – U3 Ch. 157, Ant. Pol. V)

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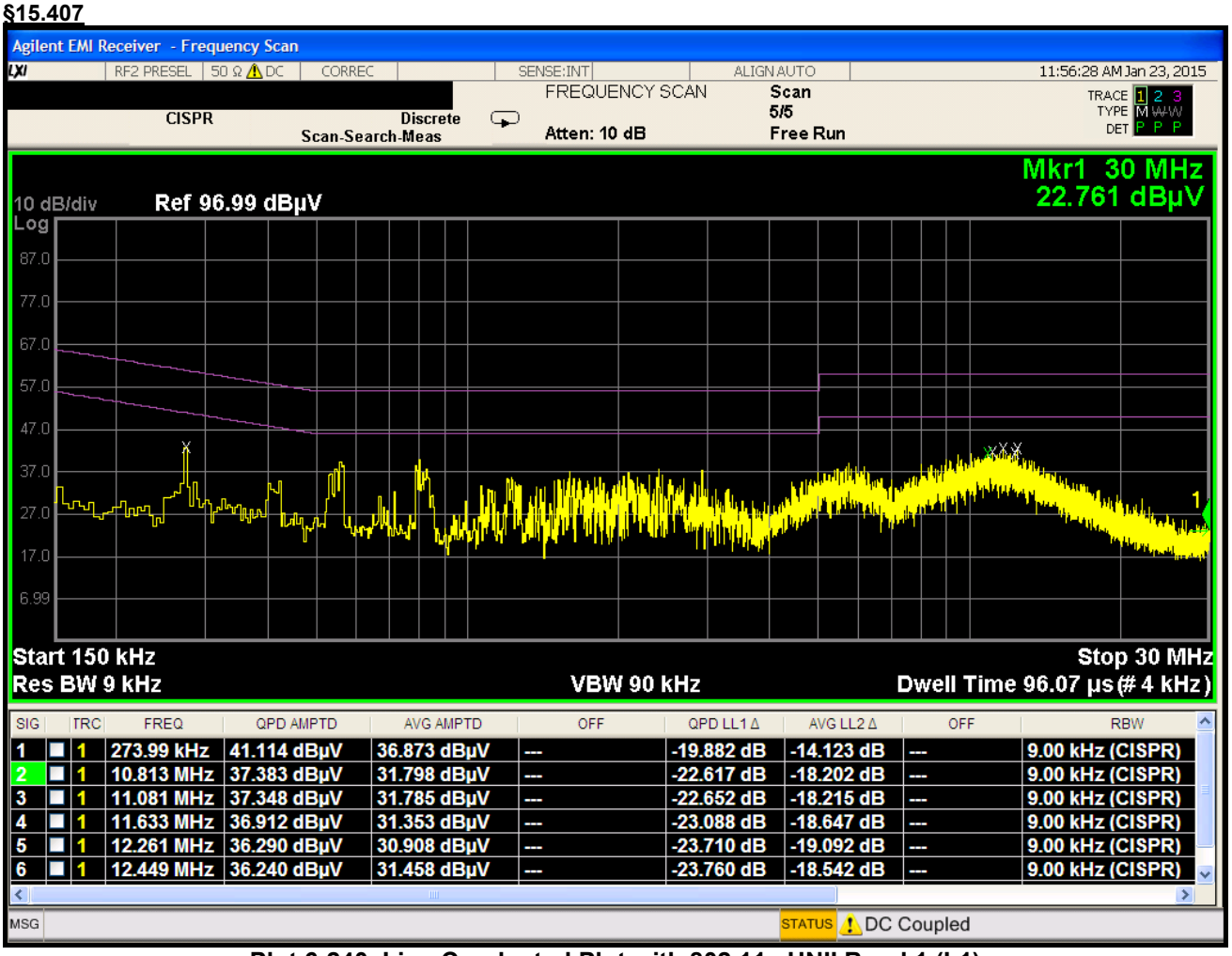
6.9 Line-Conducted Test Data

§15.407



SIG	TRC	FREQ	QPD AMPTD	AVG AMPTD	OFF	QPD LL1 Δ	AVG LL2 Δ	OFF	RBW
1	1	273.99 kHz	41.114 dBµV	36.873 dBµV	---	-19.882 dB	-14.123 dB	---	9.00 kHz (CISPR)
2	1	10.813 MHz	37.383 dBµV	31.798 dBµV	---	-22.617 dB	-18.202 dB	---	9.00 kHz (CISPR)
3	1	11.081 MHz	37.348 dBµV	31.785 dBµV	---	-22.652 dB	-18.215 dB	---	9.00 kHz (CISPR)
4	1	11.633 MHz	36.912 dBµV	31.353 dBµV	---	-23.088 dB	-18.647 dB	---	9.00 kHz (CISPR)
5	1	12.261 MHz	36.290 dBµV	30.908 dBµV	---	-23.710 dB	-19.092 dB	---	9.00 kHz (CISPR)
6	1	12.449 MHz	36.240 dBµV	31.458 dBµV	---	-23.760 dB	-18.542 dB	---	9.00 kHz (CISPR)

Plot 6-240. Line Conducted Plot with 802.11a UNII Band 1 (L1)

Notes:

1. All modes of operation, data rates, and test channels were investigated and the worst-case emissions are reported in 802.11a mode using 6Mbps on Channel 36. The emissions found were not affected by the choice of channel used during testing.
2. The limit for Class B device(s) from 150kHz to 30MHz are specified in Section 15.207 of the Title 47 CFR.
3. L1 = Phase; N = Neutral
4. Corr. (dB) = Cable loss (dB) + LISN insertion factor (dB)
5. QP/AV Level (dBµV) = QP/AV Analyzer/Receiver Level (dBµV) + Corr. (dB)
6. Margin (dB) = QP/AVLimit (dBµV) - QP/AV Level (dBµV)
7. Traces shown in plot are made using a peak detector.
8. Deviations to the Specifications: None.

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Line-Conducted Test Data

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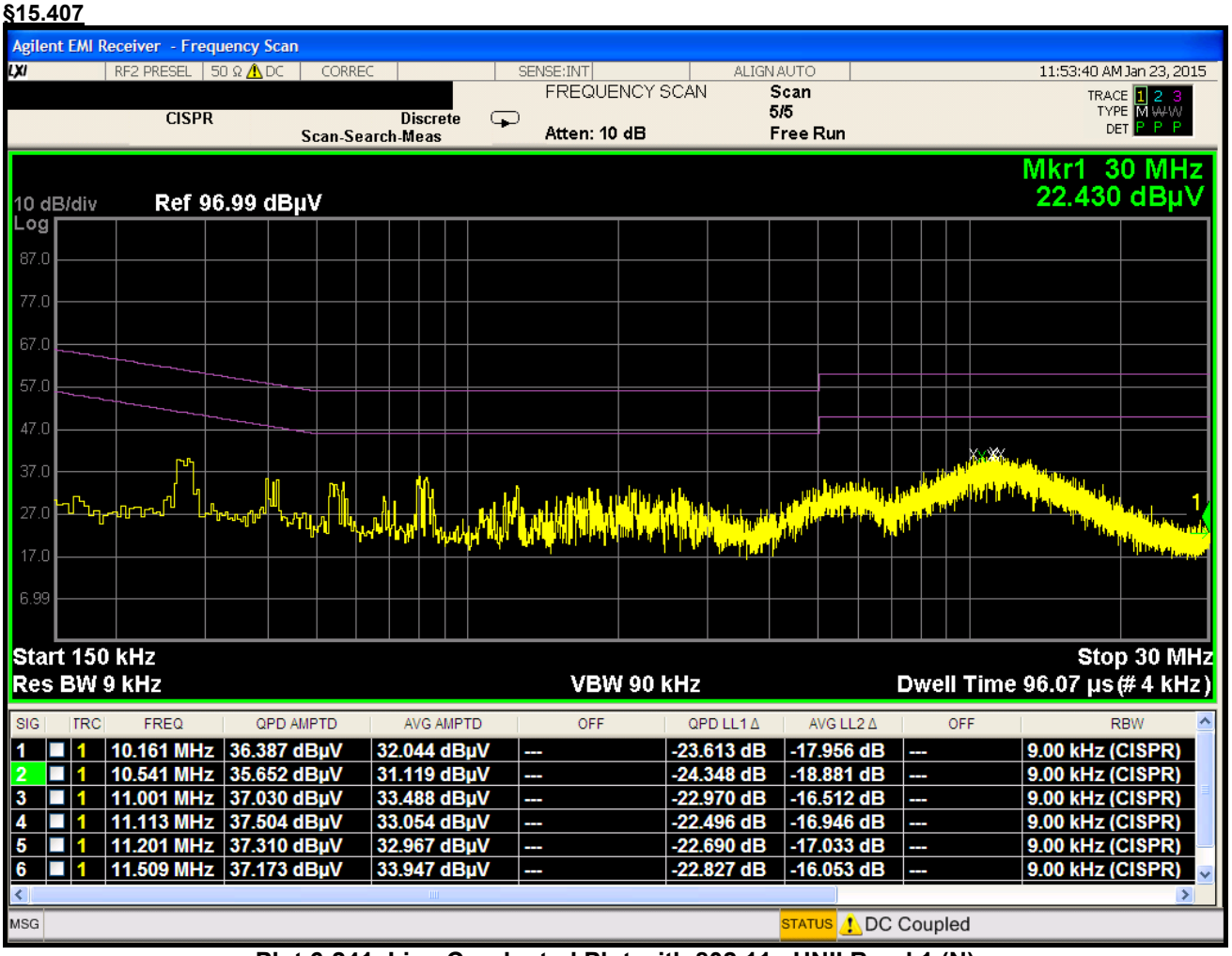

SIG	TRC	FREQ	QPD AMPTD	AVG AMPTD	OFF	QPD LL1 Δ	AVG LL2 Δ	OFF	RBW
1	1	10.161 MHz	36.387 dBµV	32.044 dBµV	---	-23.613 dB	-17.956 dB	---	9.00 kHz (CISPR)
2	1	10.541 MHz	35.652 dBµV	31.119 dBµV	---	-24.348 dB	-18.881 dB	---	9.00 kHz (CISPR)
3	1	11.001 MHz	37.030 dBµV	33.488 dBµV	---	-22.970 dB	-16.512 dB	---	9.00 kHz (CISPR)
4	1	11.113 MHz	37.504 dBµV	33.054 dBµV	---	-22.496 dB	-16.946 dB	---	9.00 kHz (CISPR)
5	1	11.201 MHz	37.310 dBµV	32.967 dBµV	---	-22.690 dB	-17.033 dB	---	9.00 kHz (CISPR)
6	1	11.509 MHz	37.173 dBµV	33.947 dBµV	---	-22.827 dB	-16.053 dB	---	9.00 kHz (CISPR)

Plot 6-241. Line Conducted Plot with 802.11a UNII Band 1 (N)

Notes:

1. All modes of operation, data rates, and test channels were investigated and the worst-case emissions are reported in 802.11a mode using 6Mbps on Channel 36. The emissions found were not affected by the choice of channel used during testing.
2. The limit for Class B device(s) from 150kHz to 30MHz are specified in Section 15.207 of the Title 47 CFR.
3. L1 = Phase; N = Neutral
4. Corr. (dB) = Cable loss (dB) + LISN insertion factor (dB)
5. QP/AV Level (dBµV) = QP/AV Analyzer/Receiver Level (dBµV) + Corr. (dB)
6. Margin (dB) = QP/AVLimit (dBµV) - QP/AV Level (dBµV)
7. Traces shown in plot are made using a peak detector.
8. Deviations to the Specifications: None.

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Line-Conducted Test Data

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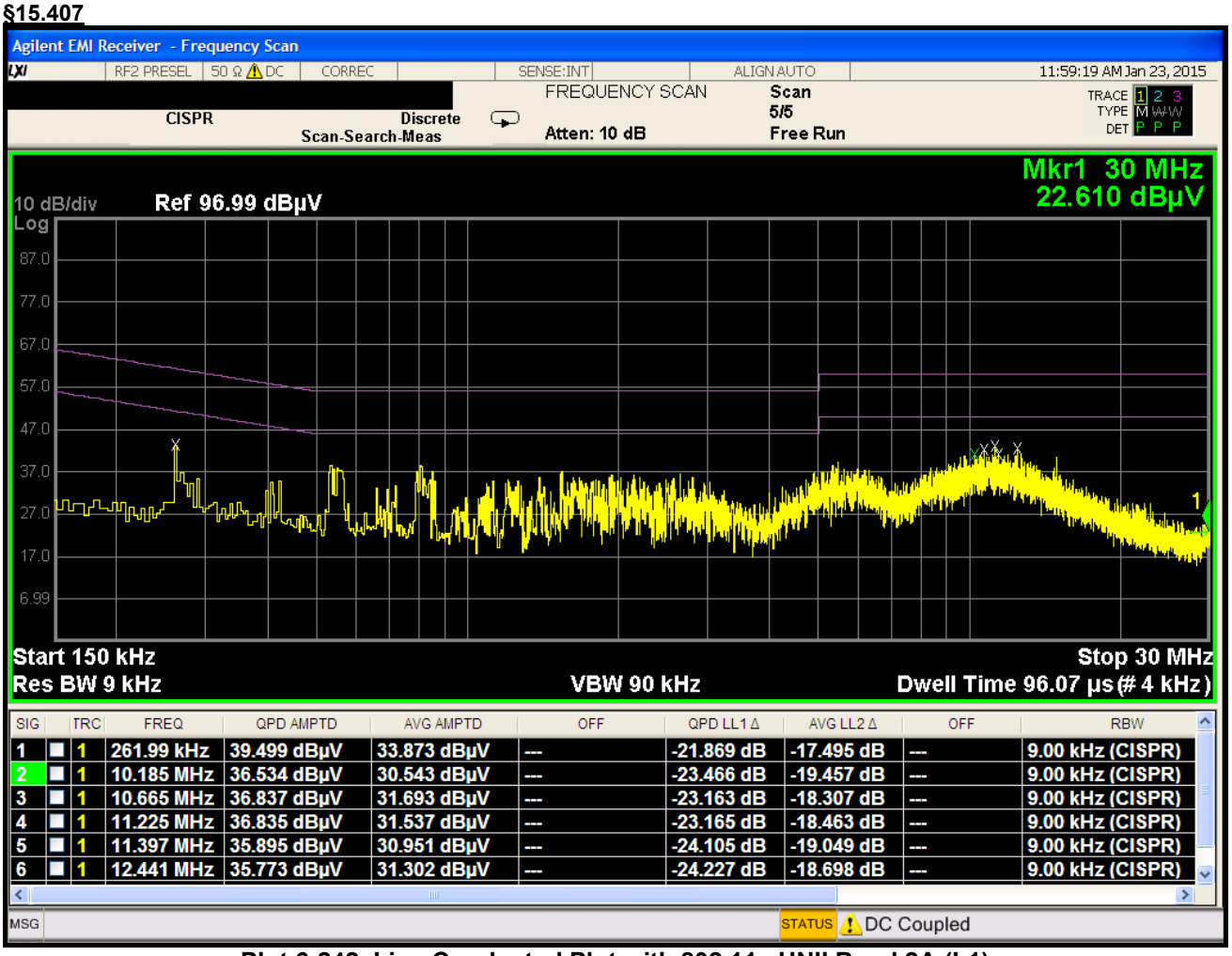

SIG	TRC	FREQ	QPD AMPTD	AVG AMPTD	OFF	QPD LL1 Δ	AVG LL2 Δ	OFF	RBW
1	1	261.99 kHz	39.499 dBµV	33.873 dBµV	---	-21.869 dB	-17.495 dB	---	9.00 kHz (CISPR)
2	1	10.185 MHz	36.534 dBµV	30.543 dBµV	---	-23.466 dB	-19.457 dB	---	9.00 kHz (CISPR)
3	1	10.665 MHz	36.837 dBµV	31.693 dBµV	---	-23.163 dB	-18.307 dB	---	9.00 kHz (CISPR)
4	1	11.225 MHz	36.835 dBµV	31.537 dBµV	---	-23.165 dB	-18.463 dB	---	9.00 kHz (CISPR)
5	1	11.397 MHz	35.895 dBµV	30.951 dBµV	---	-24.105 dB	-19.049 dB	---	9.00 kHz (CISPR)
6	1	12.441 MHz	35.773 dBµV	31.302 dBµV	---	-24.227 dB	-18.698 dB	---	9.00 kHz (CISPR)

Plot 6-242. Line Conducted Plot with 802.11a UNII Band 2A (L1)

Notes:

1. All modes of operation, data rates, and test channels were investigated and the worst-case emissions are reported in 802.11a mode using 6Mbps on Channel 52. The emissions found were not affected by the choice of channel used during testing.
2. The limit for Class B device(s) from 150kHz to 30MHz are specified in Section 15.207 of the Title 47 CFR.
3. L1 = Phase; N = Neutral
4. Corr. (dB) = Cable loss (dB) + LISN insertion factor (dB)
5. QP/AV Level (dBµV) = QP/AV Analyzer/Receiver Level (dBµV) + Corr. (dB)
6. Margin (dB) = QP/AVLimit (dBµV) - QP/AV Level (dBµV)
7. Traces shown in plot are made using a peak detector.
8. Deviations to the Specifications: None.

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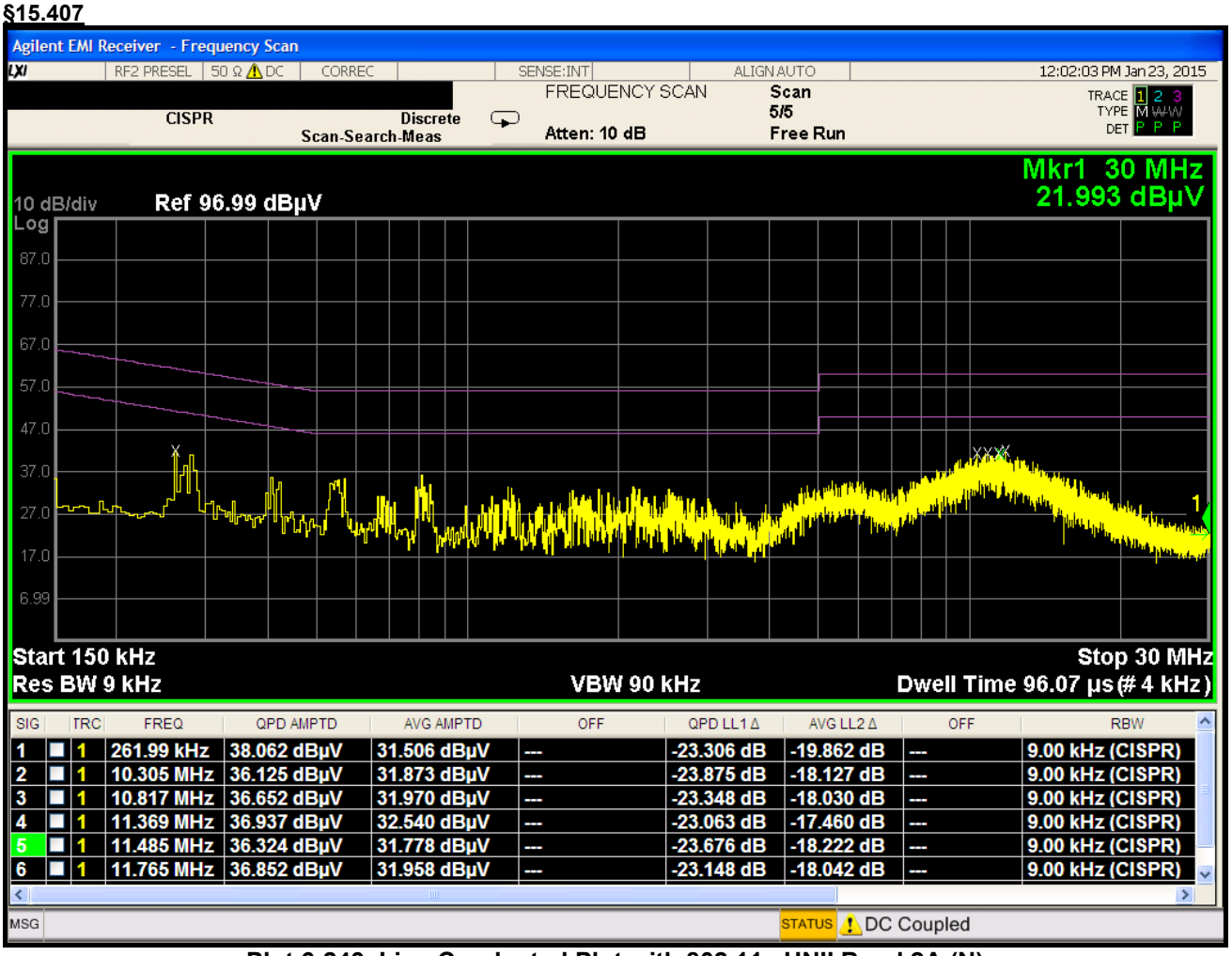
Line-Conducted Test Data

§15.407



SIG	TRC	FREQ	QPD AMPTD	AVG AMPTD	OFF	QPD LL1 Δ	AVG LL2 Δ	OFF	RBW
1	1	261.99 kHz	38.062 dBµV	31.506 dBµV	---	-23.306 dB	-19.862 dB	---	9.00 kHz (CISPR)
2	1	10.305 MHz	36.125 dBµV	31.873 dBµV	---	-23.875 dB	-18.127 dB	---	9.00 kHz (CISPR)
3	1	10.817 MHz	36.652 dBµV	31.970 dBµV	---	-23.348 dB	-18.030 dB	---	9.00 kHz (CISPR)
4	1	11.369 MHz	36.937 dBµV	32.540 dBµV	---	-23.063 dB	-17.460 dB	---	9.00 kHz (CISPR)
5	1	11.485 MHz	36.324 dBµV	31.778 dBµV	---	-23.676 dB	-18.222 dB	---	9.00 kHz (CISPR)
6	1	11.765 MHz	36.852 dBµV	31.958 dBµV	---	-23.148 dB	-18.042 dB	---	9.00 kHz (CISPR)

Plot 6-243. Line Conducted Plot with 802.11a UNII Band 2A (N)

Notes:

1. All modes of operation, data rates, and test channels were investigated and the worst-case emissions are reported in 802.11a mode using 6Mbps on Channel 52. The emissions found were not affected by the choice of channel used during testing.
2. The limit for Class B device(s) from 150kHz to 30MHz are specified in Section 15.207 of the Title 47 CFR.
3. L1 = Phase; N = Neutral
4. Corr. (dB) = Cable loss (dB) + LISN insertion factor (dB)
5. QP/AV Level (dBµV) = QP/AV Analyzer/Receiver Level (dBµV) + Corr. (dB)
6. Margin (dB) = QP/AVLimit (dBµV) - QP/AV Level (dBµV)
7. Traces shown in plot are made using a peak detector.
8. Deviations to the Specifications: None.

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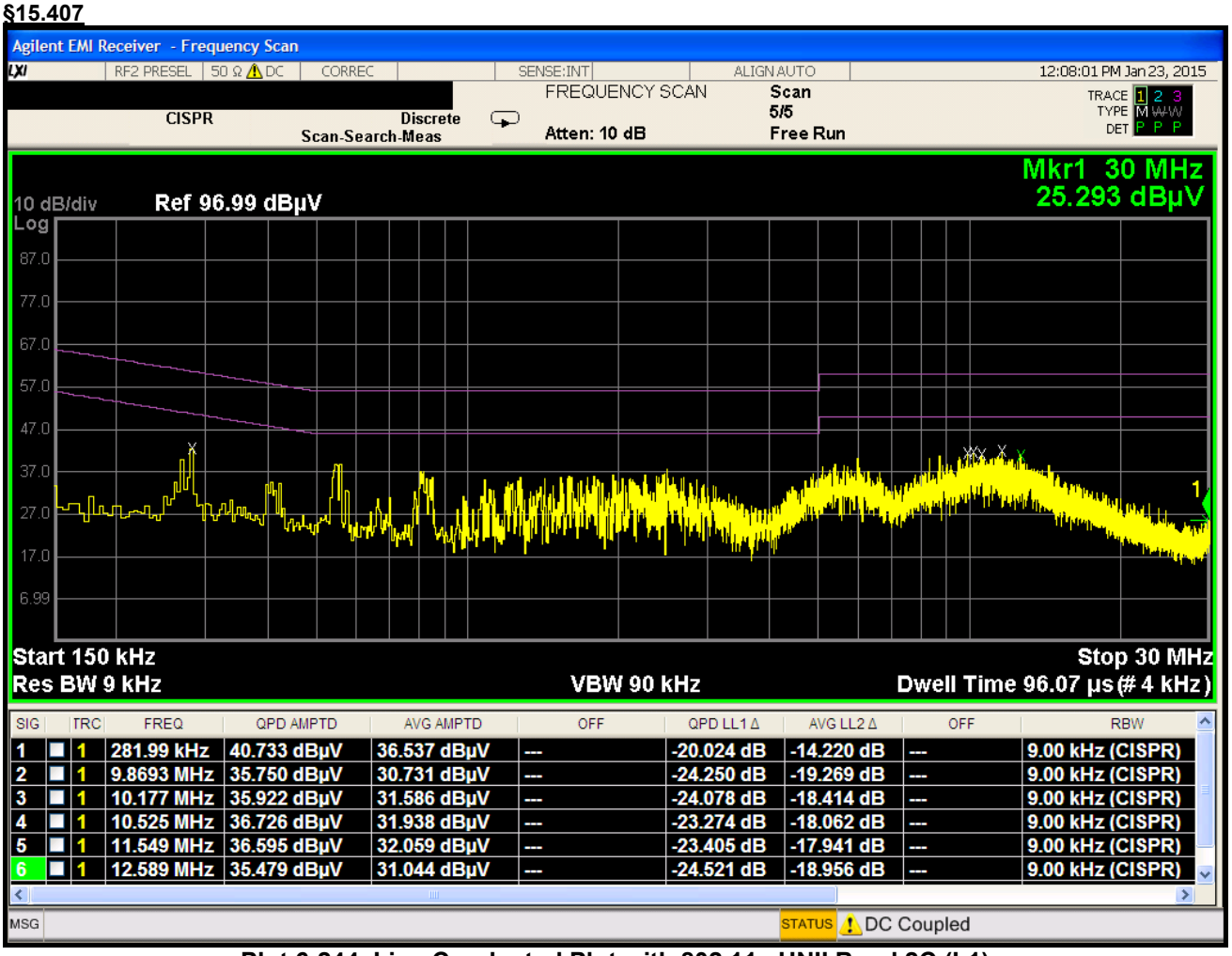
Line-Conducted Test Data

§15.407



SIG	TRC	FREQ	QPD AMPTD	AVG AMPTD	OFF	QPD LL1 Δ	AVG LL2 Δ	OFF	RBW
1	1	281.99 kHz	40.733 dBµV	36.537 dBµV	---	-20.024 dB	-14.220 dB	---	9.00 kHz (CISPR)
2	1	9.8693 MHz	35.750 dBµV	30.731 dBµV	---	-24.250 dB	-19.269 dB	---	9.00 kHz (CISPR)
3	1	10.177 MHz	35.922 dBµV	31.586 dBµV	---	-24.078 dB	-18.414 dB	---	9.00 kHz (CISPR)
4	1	10.525 MHz	36.726 dBµV	31.938 dBµV	---	-23.274 dB	-18.062 dB	---	9.00 kHz (CISPR)
5	1	11.549 MHz	36.595 dBµV	32.059 dBµV	---	-23.405 dB	-17.941 dB	---	9.00 kHz (CISPR)
6	1	12.589 MHz	35.479 dBµV	31.044 dBµV	---	-24.521 dB	-18.956 dB	---	9.00 kHz (CISPR)

Plot 6-244. Line Conducted Plot with 802.11a UNII Band 2C (L1)

Notes:

1. All modes of operation, data rates, and test channels were investigated and the worst-case emissions are reported in 802.11a mode using 6Mbps on Channel 100. The emissions found were not affected by the choice of channel used during testing.
2. The limit for Class B device(s) from 150kHz to 30MHz are specified in Section 15.207 of the Title 47 CFR.
3. L1 = Phase; N = Neutral
4. Corr. (dB) = Cable loss (dB) + LISN insertion factor (dB)
5. QP/AV Level (dBµV) = QP/AV Analyzer/Receiver Level (dBµV) + Corr. (dB)
6. Margin (dB) = QP/AVLimit (dBµV) - QP/AV Level (dBµV)
7. Traces shown in plot are made using a peak detector.
8. Deviations to the Specifications: None.

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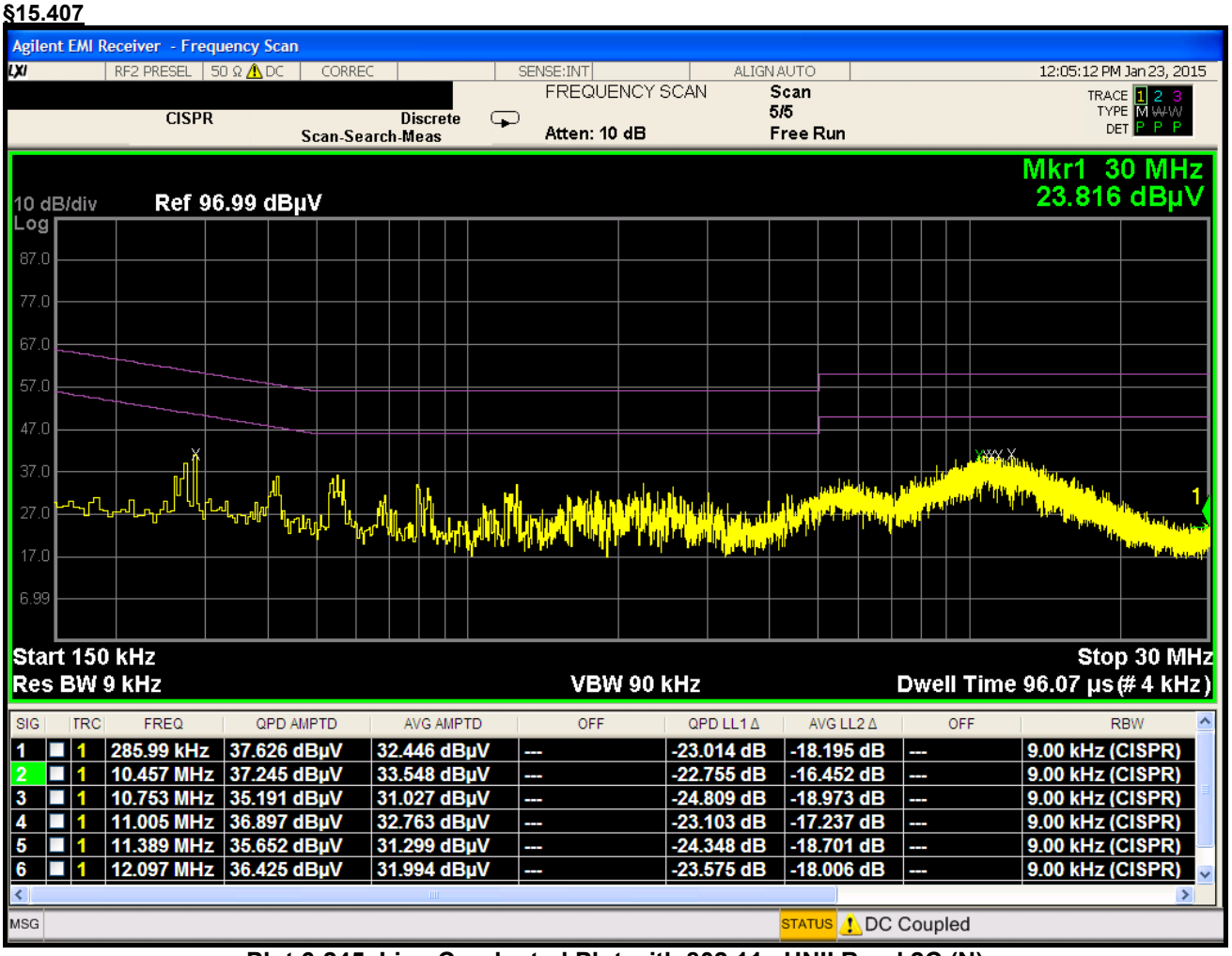
Line-Conducted Test Data

§15.407



SIG		TRC	FREQ	QPD AMPTD	AVG AMPTD	OFF	QPD LL1 Δ	AVG LL2 Δ	OFF	RBW
1	■	1	285.99 kHz	37.626 dBµV	32.446 dBµV	---	-23.014 dB	-18.195 dB	---	9.00 kHz (CISPR)
2	■	1	10.457 MHz	37.245 dBµV	33.548 dBµV	---	-22.755 dB	-16.452 dB	---	9.00 kHz (CISPR)
3	■	1	10.753 MHz	35.191 dBµV	31.027 dBµV	---	-24.809 dB	-18.973 dB	---	9.00 kHz (CISPR)
4	■	1	11.005 MHz	36.897 dBµV	32.763 dBµV	---	-23.103 dB	-17.237 dB	---	9.00 kHz (CISPR)
5	■	1	11.389 MHz	35.652 dBµV	31.299 dBµV	---	-24.348 dB	-18.701 dB	---	9.00 kHz (CISPR)
6	■	1	12.097 MHz	36.425 dBµV	31.994 dBµV	---	-23.575 dB	-18.006 dB	---	9.00 kHz (CISPR)

Plot 6-245. Line Conducted Plot with 802.11a UNII Band 2C (N)

Notes:

1. All modes of operation, data rates, and test channels were investigated and the worst-case emissions are reported in 802.11a mode using 6Mbps on Channel 100. The emissions found were not affected by the choice of channel used during testing.
2. The limit for Class B device(s) from 150kHz to 30MHz are specified in Section 15.207 of the Title 47 CFR.
3. L1 = Phase; N = Neutral
4. Corr. (dB) = Cable loss (dB) + LISN insertion factor (dB)
5. QP/AV Level (dBµV) = QP/AV Analyzer/Receiver Level (dBµV) + Corr. (dB)
6. Margin (dB) = QP/AVLimit (dBµV) - QP/AV Level (dBµV)
7. Traces shown in plot are made using a peak detector.
8. Deviations to the Specifications: None.

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Line-Conducted Test Data

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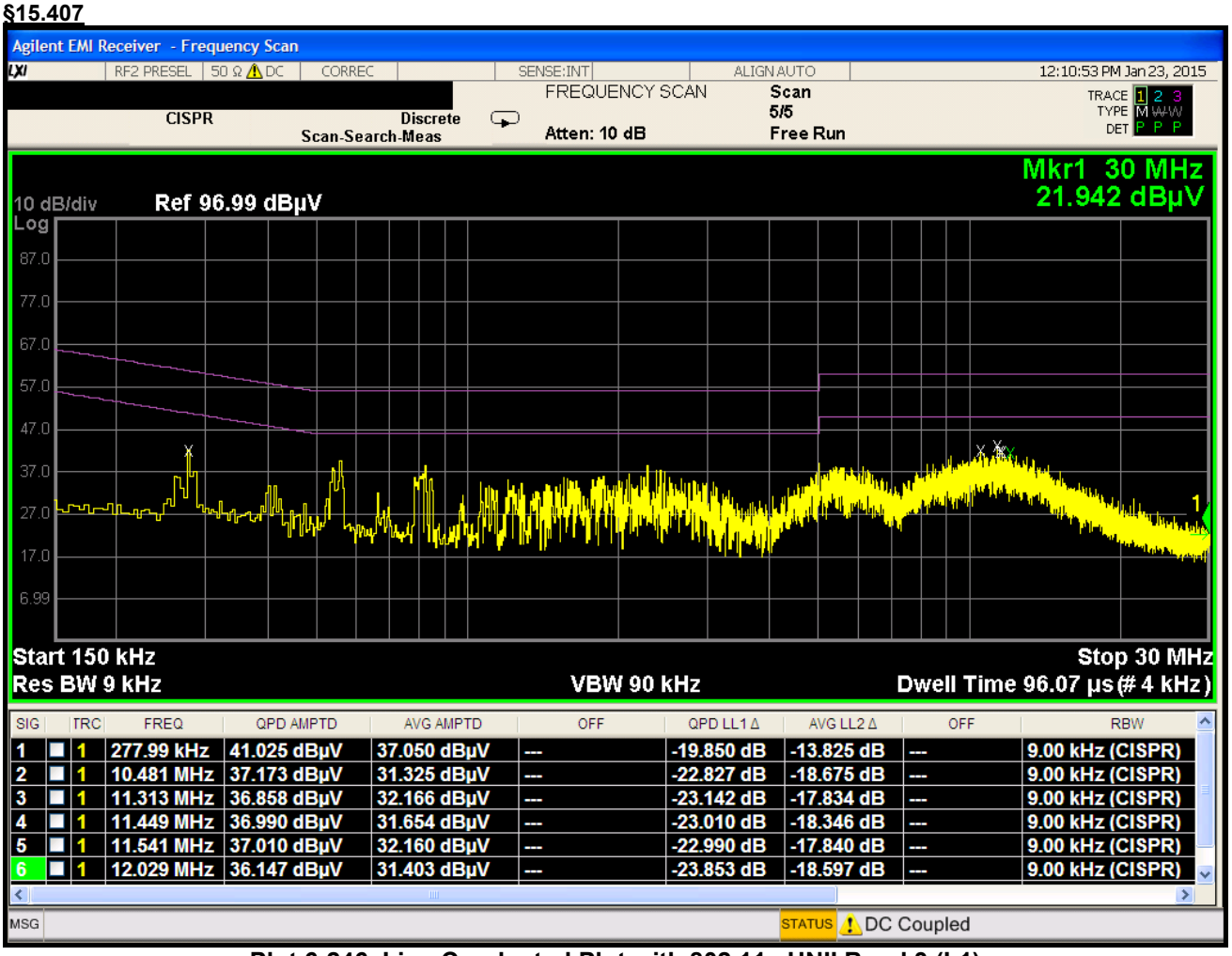

SIG	TRC	FREQ	QPD AMPTD	AVG AMPTD	OFF	QPD LL1 Δ	AVG LL2 Δ	OFF	RBW
1	1	277.99 kHz	41.025 dBµV	37.050 dBµV	---	-19.850 dB	-13.825 dB	---	9.00 kHz (CISPR)
2	1	10.481 MHz	37.173 dBµV	31.325 dBµV	---	-22.827 dB	-18.675 dB	---	9.00 kHz (CISPR)
3	1	11.313 MHz	36.858 dBµV	32.166 dBµV	---	-23.142 dB	-17.834 dB	---	9.00 kHz (CISPR)
4	1	11.449 MHz	36.990 dBµV	31.654 dBµV	---	-23.010 dB	-18.346 dB	---	9.00 kHz (CISPR)
5	1	11.541 MHz	37.010 dBµV	32.160 dBµV	---	-22.990 dB	-17.840 dB	---	9.00 kHz (CISPR)
6	1	12.029 MHz	36.147 dBµV	31.403 dBµV	---	-23.853 dB	-18.597 dB	---	9.00 kHz (CISPR)

Plot 6-246. Line Conducted Plot with 802.11a UNII Band 3 (L1)

Notes:

1. All modes of operation, data rates, and test channels were investigated and the worst-case emissions are reported in 802.11a mode using 6Mbps on Channel 149. The emissions found were not affected by the choice of channel used during testing.
2. The limit for Class B device(s) from 150kHz to 30MHz are specified in Section 15.207 of the Title 47 CFR.
3. L1 = Phase; N = Neutral
4. Corr. (dB) = Cable loss (dB) + LISN insertion factor (dB)
5. QP/AV Level (dBµV) = QP/AV Analyzer/Receiver Level (dBµV) + Corr. (dB)
6. Margin (dB) = QP/AVLimit (dBµV) - QP/AV Level (dBµV)
7. Traces shown in plot are made using a peak detector.
8. Deviations to the Specifications: None.

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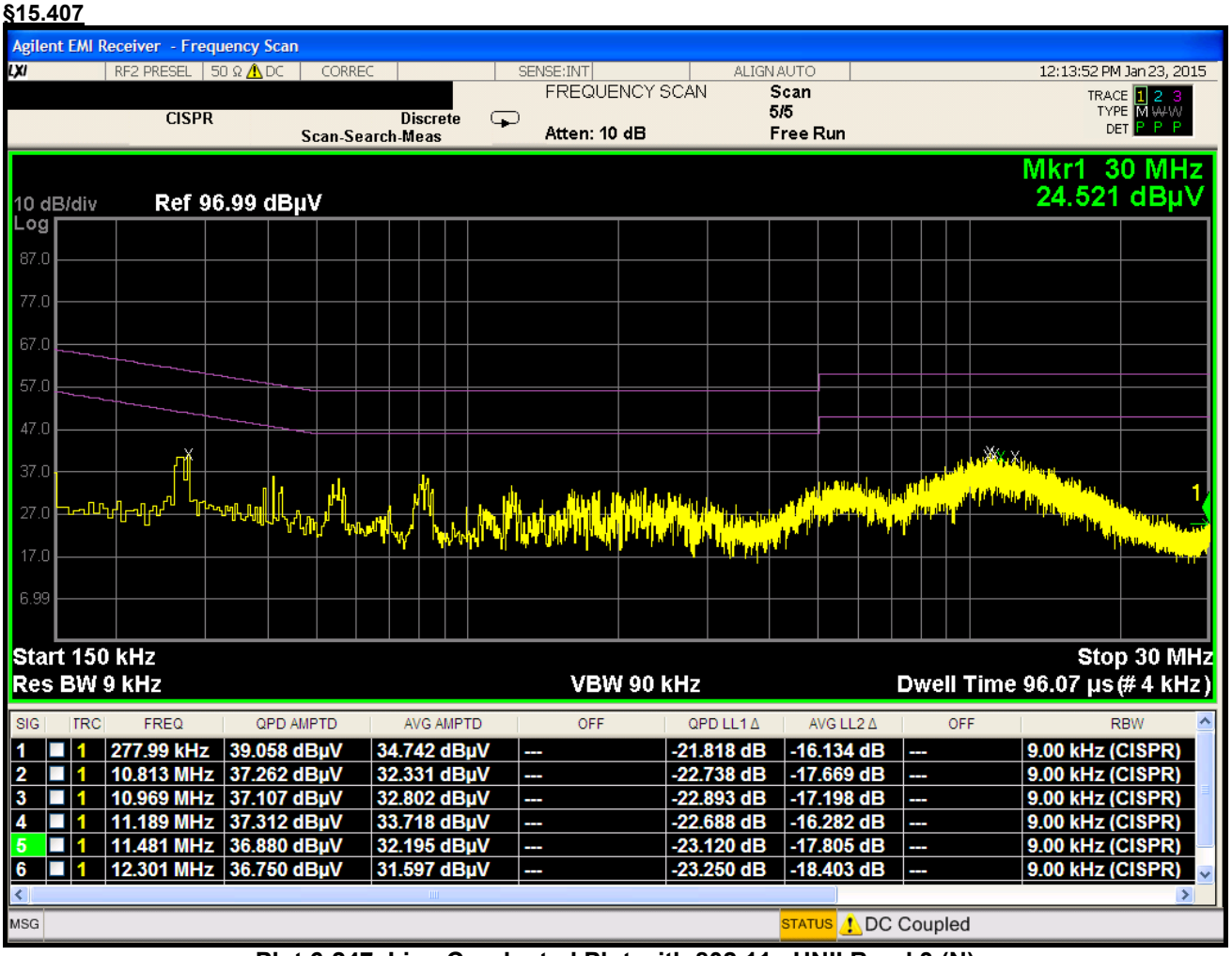
Line-Conducted Test Data

§15.407



SIG		TRC	FREQ	QPD AMPTD	AVG AMPTD	OFF	QPD LL1 Δ	AVG LL2 Δ	OFF	RBW
1		1	277.99 kHz	39.058 dBµV	34.742 dBµV	---	-21.818 dB	-16.134 dB	---	9.00 kHz (CISPR)
2		1	10.813 MHz	37.262 dBµV	32.331 dBµV	---	-22.738 dB	-17.669 dB	---	9.00 kHz (CISPR)
3		1	10.969 MHz	37.107 dBµV	32.802 dBµV	---	-22.893 dB	-17.198 dB	---	9.00 kHz (CISPR)
4		1	11.189 MHz	37.312 dBµV	33.718 dBµV	---	-22.688 dB	-16.282 dB	---	9.00 kHz (CISPR)
5		1	11.481 MHz	36.880 dBµV	32.195 dBµV	---	-23.120 dB	-17.805 dB	---	9.00 kHz (CISPR)
6		1	12.301 MHz	36.750 dBµV	31.597 dBµV	---	-23.250 dB	-18.403 dB	---	9.00 kHz (CISPR)

Plot 6-247. Line Conducted Plot with 802.11a UNII Band 3 (N)

Notes:

1. All modes of operation, data rates, and test channels were investigated and the worst-case emissions are reported in 802.11a mode using 6Mbps on Channel 149. The emissions found were not affected by the choice of channel used during testing.
2. The limit for Class B device(s) from 150kHz to 30MHz are specified in Section 15.207 of the Title 47 CFR.
3. L1 = Phase; N = Neutral
4. Corr. (dB) = Cable loss (dB) + LISN insertion factor (dB)
5. QP/AV Level (dBµV) = QP/AV Analyzer/Receiver Level (dBµV) + Corr. (dB)
6. Margin (dB) = QP/AVLimit (dBµV) - QP/AV Level (dBµV)
7. Traces shown in plot are made using a peak detector.
8. Deviations to the Specifications: None.

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7.0 CONCLUSION

The data collected relate only the item(s) tested and show that the **Samsung Portable Handset FCC ID: A3LSMG9200** is in compliance with Part 15E of the FCC Rules.

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