

## 6.5 Maximum Power Spectral Density – 802.11a/n/ac §15.407(a.1)(2.5)

### Test Overview and Limit

The spectrum analyzer was connected to the antenna terminal while the EUT was operating at its maximum duty cycle, at its maximum power control level, as defined in KDB 789033 D02 v01, and at the appropriate frequencies. Method SA-1, as defined in KDB 789033 D02 v01, was used to measure the power spectral density.

***In the 5.15 – 5.25GHz, 5.25 – 5.35GHz, 5.47 – 5.725GHz bands, the maximum permissible power spectral density is 11dBm/MHz.***

***In the 5.725 – 5.850GHz band, the maximum permissible power spectral density is 30dBm/500kHz.***

### Test Procedure Used

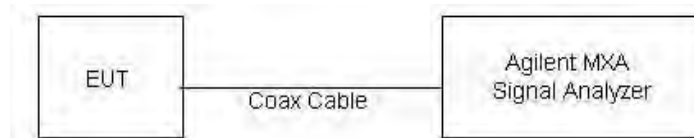
KDB 789033 D02 v01 – Section F  
KDB 662911 v02r01 – Section E)2) Measure-and-Sum Technique

### Test Settings

1. Analyzer was set to the center frequency of the UNII channel under investigation
2. Span was set to encompass the entire emission bandwidth of the signal
3. RBW = 1MHz
4. VBW = 3MHz
5. Number of sweep points  $\geq 2 \times$  (span/RBW)
6. Sweep time = auto
7. Detector = power averaging (RMS)
8. Trigger was set to free run for all modes
9. Trace was averaged over 100 sweeps
10. The peak search function of the spectrum analyzer was used to find the peak of the spectrum.

### Test Setup



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



**Figure 6-4. Test Instrument & Measurement Setup**

### Test Notes



None

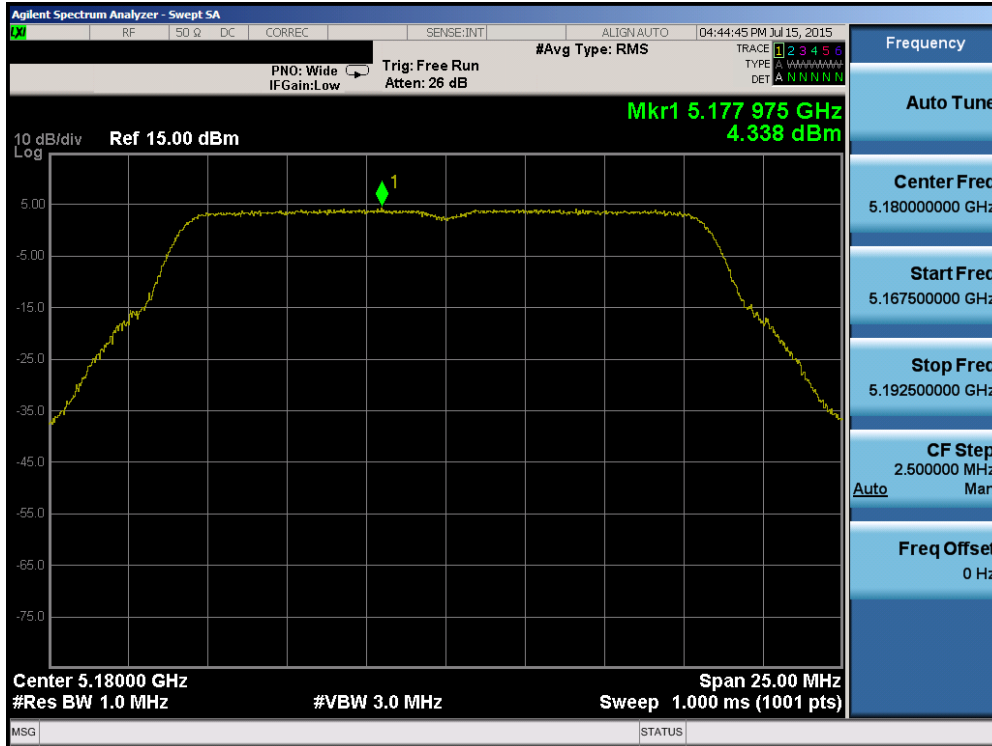
FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 61 of 208	

## Antenna-1 Power Spectral Density Measurements

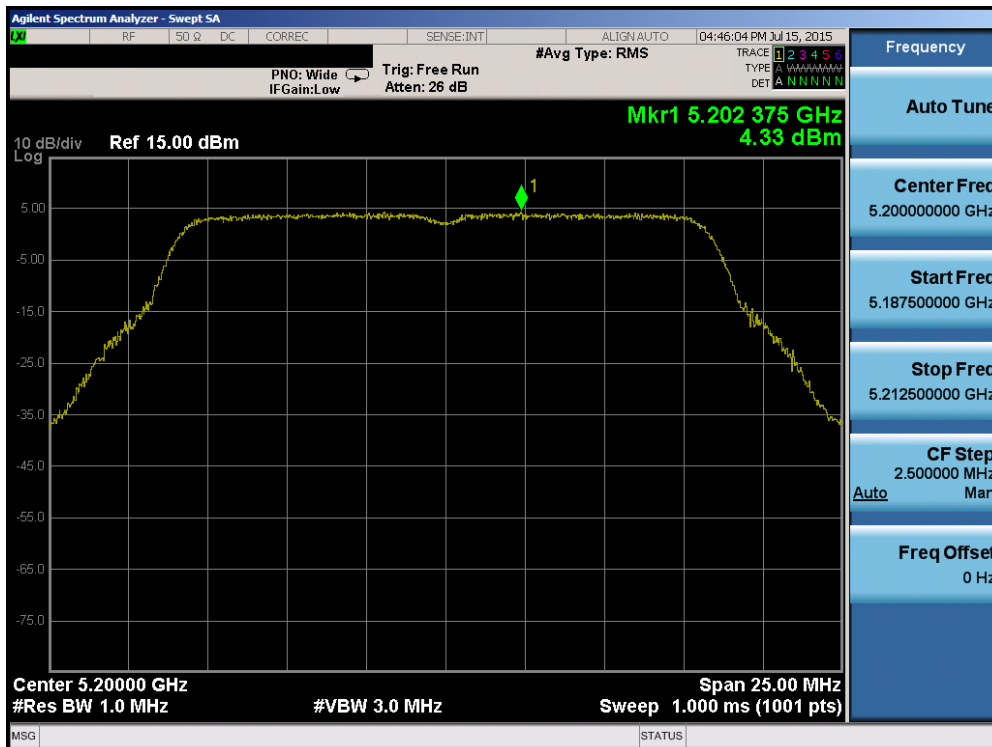
	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Measured Power Density [dBm]	Max Permissible Power Density [dBm/MHz]	Margin [dB]	Pass / Fail
Band 1	5180	36	a	6	4.34	11.0	-6.66	Pass
	5200	40	a	6	4.33	11.0	-6.67	Pass
	5240	48	a	6	4.52	11.0	-6.48	Pass
	5180	36	n (20MHz)	6.5/7.2 (MCS0)	0.86	11.0	-10.14	Pass
	5200	40	n (20MHz)	6.5/7.2 (MCS0)	1.30	11.0	-9.70	Pass
	5240	48	n (20MHz)	6.5/7.2 (MCS0)	1.49	11.0	-9.51	Pass
	5190	38	n (40MHz)	13.5/15 (MCS0)	-2.94	11.0	-13.94	Pass
	5230	46	n (40MHz)	13.5/15 (MCS0)	-3.00	11.0	-14.00	Pass
	5210	42	ac (80MHz)	29.3/32.5 (MCS0)	-6.37	11.0	-17.37	Pass
Band 2A	5260	52	a	6	4.81	11.0	-6.19	Pass
	5280	56	a	6	4.58	11.0	-6.42	Pass
	5320	64	a	6	4.17	11.0	-6.83	Pass
	5260	52	n (20MHz)	6.5/7.2 (MCS0)	1.66	11.0	-9.34	Pass
	5280	56	n (20MHz)	6.5/7.2 (MCS0)	1.69	11.0	-9.31	Pass
	5320	64	n (20MHz)	6.5/7.2 (MCS0)	2.01	11.0	-8.99	Pass
	5270	54	n (40MHz)	13.5/15 (MCS0)	-2.75	11.0	-13.75	Pass
	5310	62	n (40MHz)	13.5/15 (MCS0)	-2.47	11.0	-13.47	Pass
	5290	58	ac (80MHz)	29.3/32.5 (MCS0)	-6.06	11.0	-17.06	Pass
Band 2C	5500	100	a	6	5.60	11.0	-5.40	Pass
	5580	116	a	6	5.00	11.0	-6.00	Pass
	5720	144	a	6	5.20	11.0	-5.80	Pass
	5500	100	n (20MHz)	6.5/7.2 (MCS0)	1.82	11.0	-9.18	Pass
	5580	116	n (20MHz)	6.5/7.2 (MCS0)	1.29	11.0	-9.71	Pass
	5720	144	n (20MHz)	6.5/7.2 (MCS0)	1.16	11.0	-9.84	Pass
	5510	102	n (40MHz)	13.5/15 (MCS0)	-2.19	11.0	-13.19	Pass
	5550	110	n (40MHz)	13.5/15 (MCS0)	-2.03	11.0	-13.03	Pass
	5710	142	n (40MHz)	13.5/15 (MCS0)	-2.09	11.0	-13.09	Pass
	5530	106	ac (80MHz)	29.3/32.5 (MCS0)	-5.77	11.0	-16.77	Pass
5690	138	ac (80MHz)	29.3/32.5 (MCS0)	-5.90	11.0	-16.90	Pass	

**Table 6-17. Bands 1, 2A, 2C Conducted Power Spectral Density Measurements**

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 62 of 208	

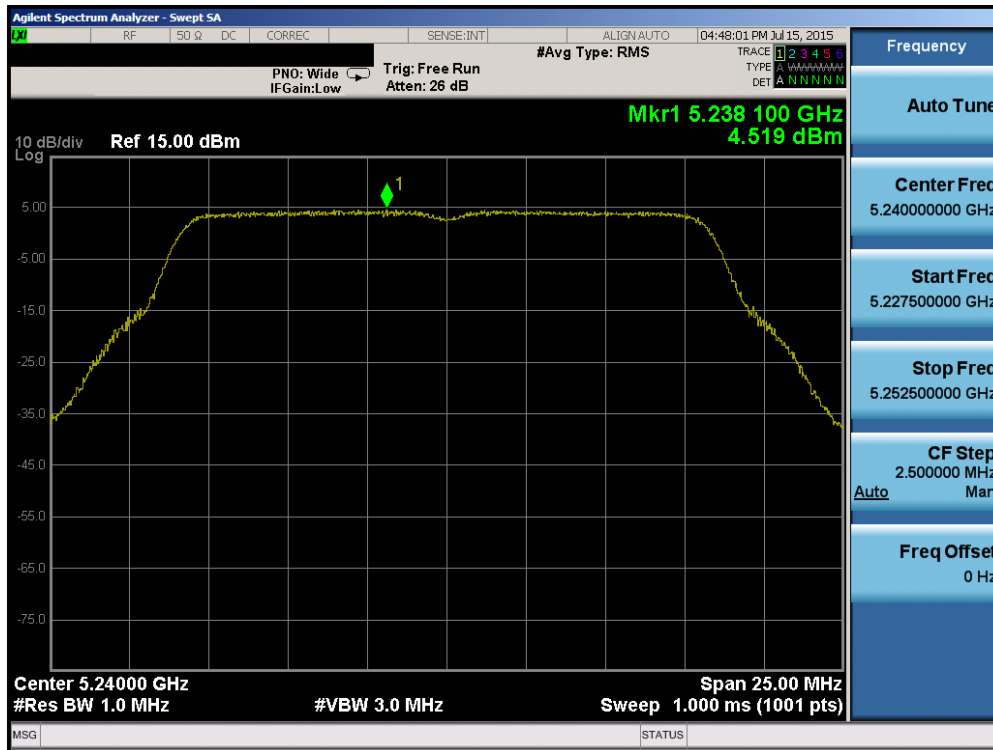


Plot 6-77. Power Spectral Density Plot (802.11a (UNII Band 1) – Ch. 36)

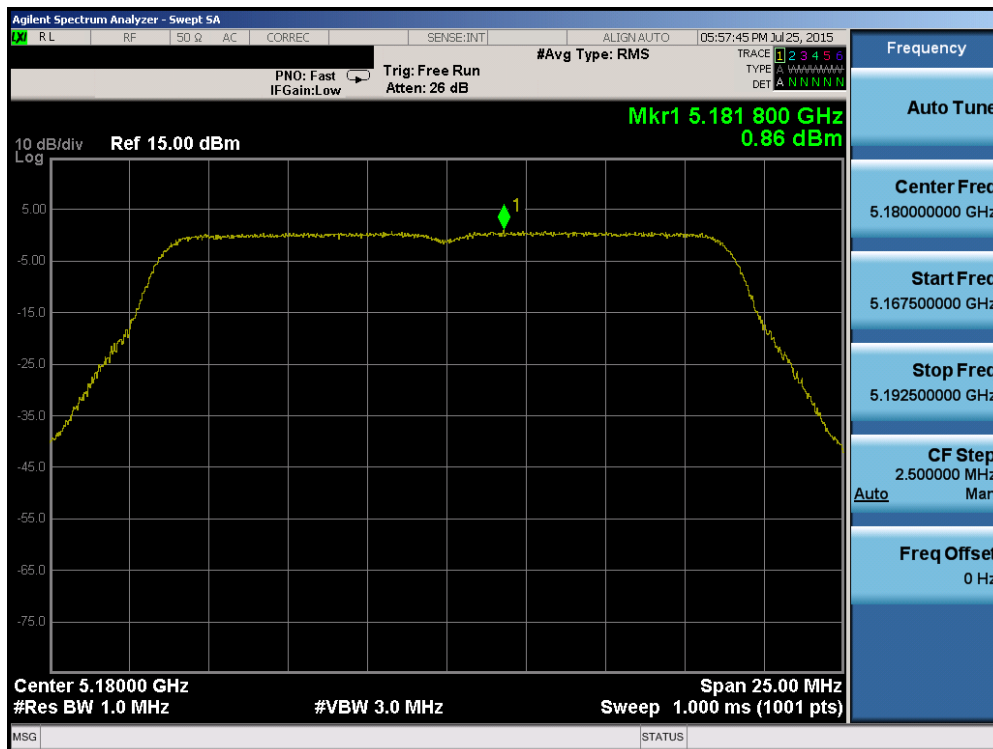


Plot 6-78. Power Spectral Density Plot (802.11a (UNII Band 1) – Ch. 40)

FCC ID: A3LSMT817P	<b>PCTEST</b> ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	<b>SAMSUNG</b>	Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet		Page 63 of 208

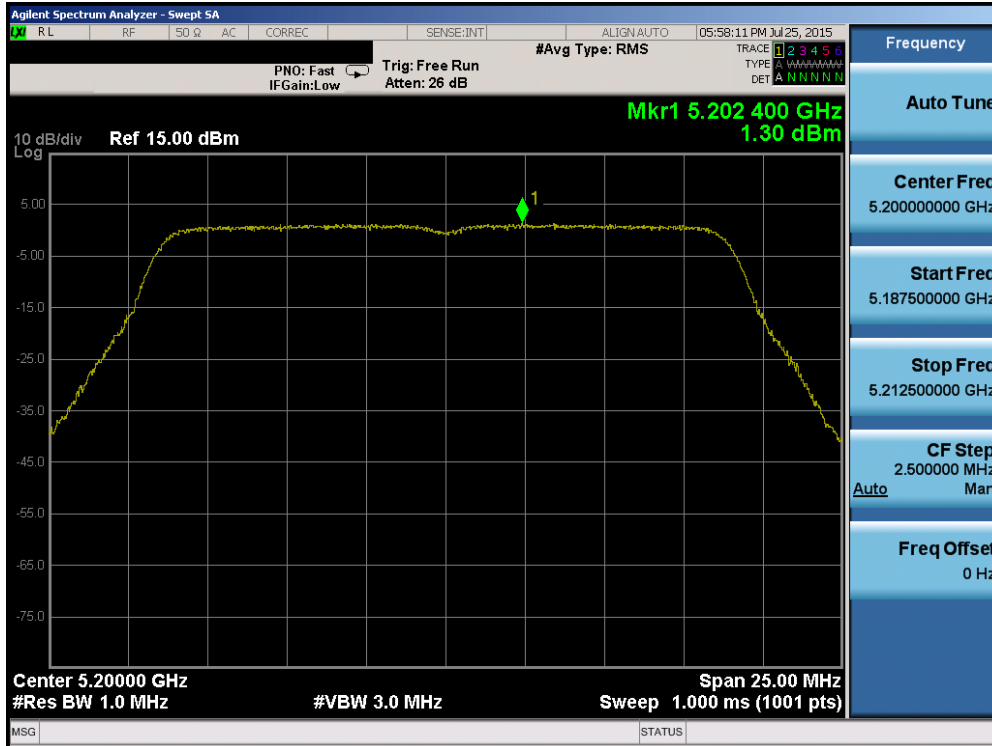


Plot 6-79. Power Spectral Density Plot (802.11a (UNII Band 1) – Ch. 48)

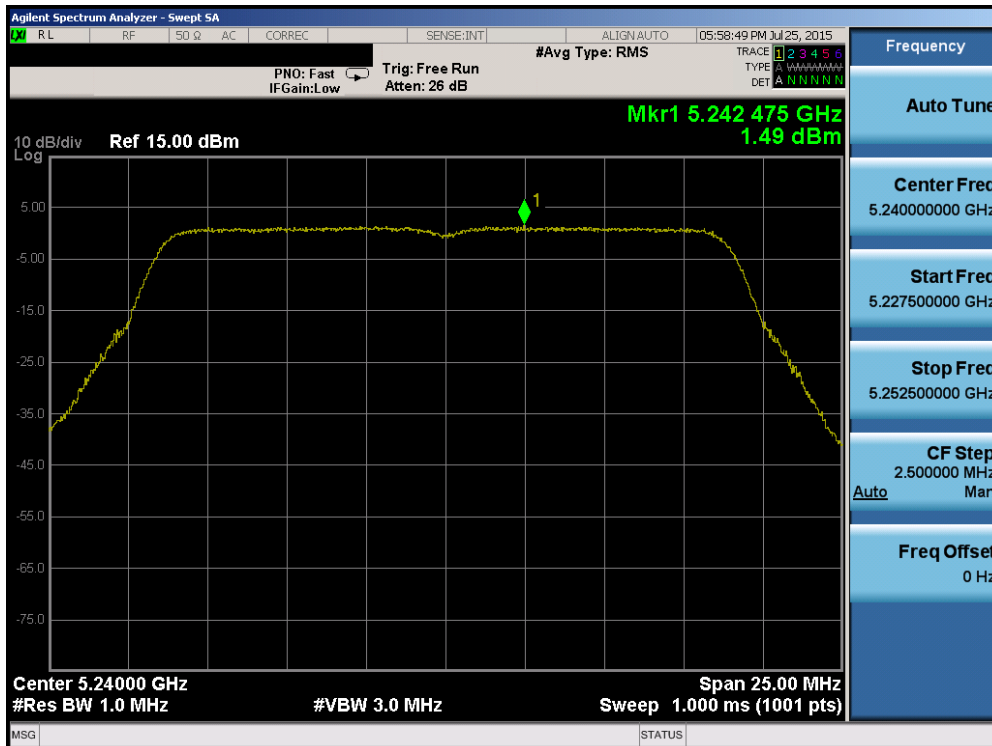


Plot 6-80. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 1) – Ch. 36)

FCC ID: A3LSMT817P	<b>PCTEST</b> ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	<b>SAMSUNG</b>	Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet		Page 64 of 208



Plot 6-81. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 1) – Ch. 40)

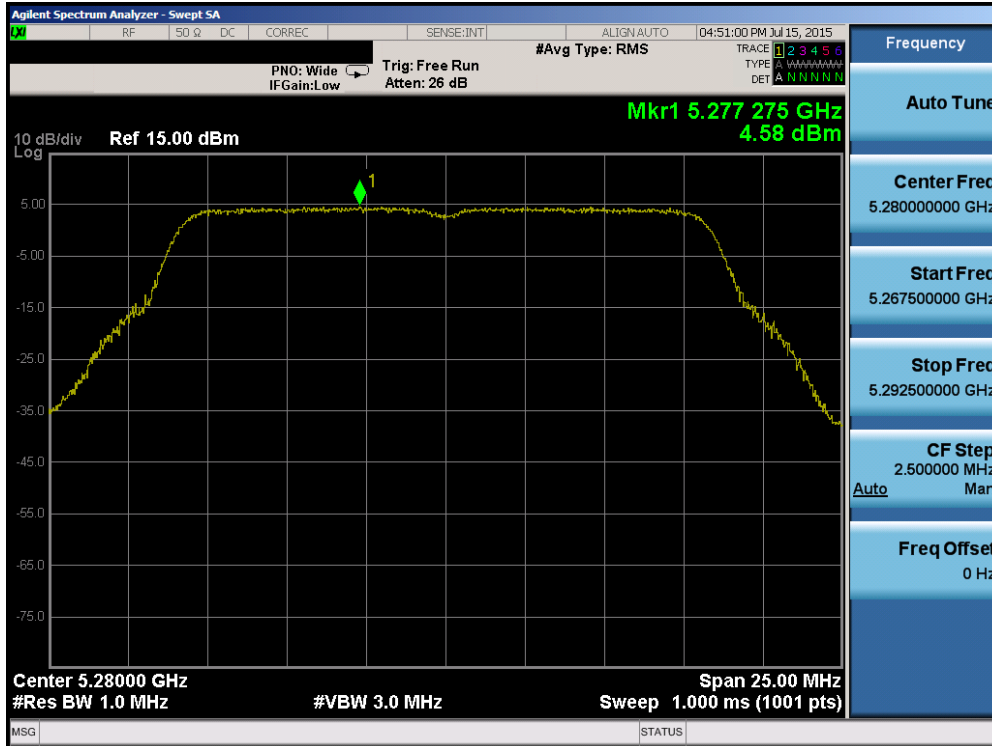


Plot 6-82. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 1) – Ch. 48)

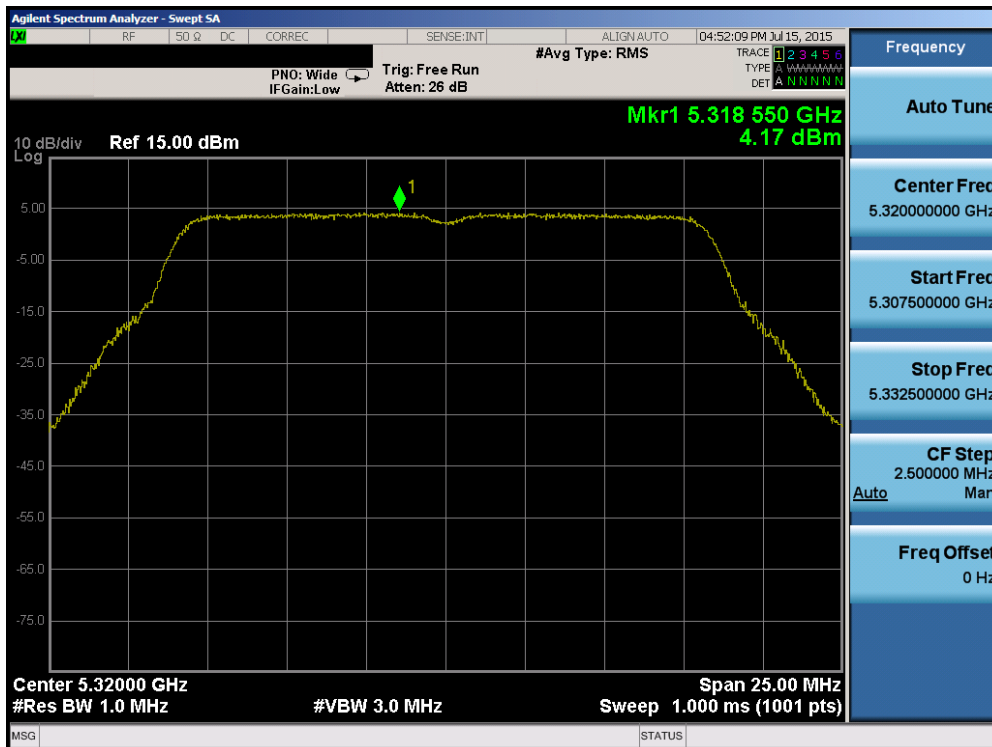
FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet		Page 65 of 208







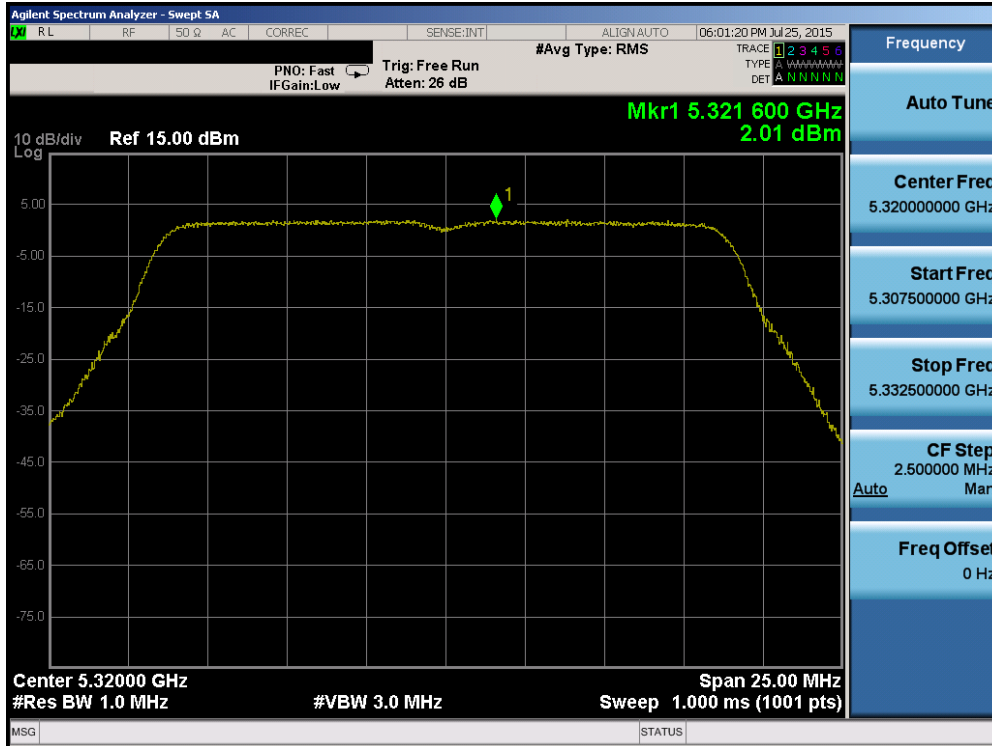
Plot 6-87. Power Spectral Density Plot (802.11a (UNII Band 2A) – Ch. 56)



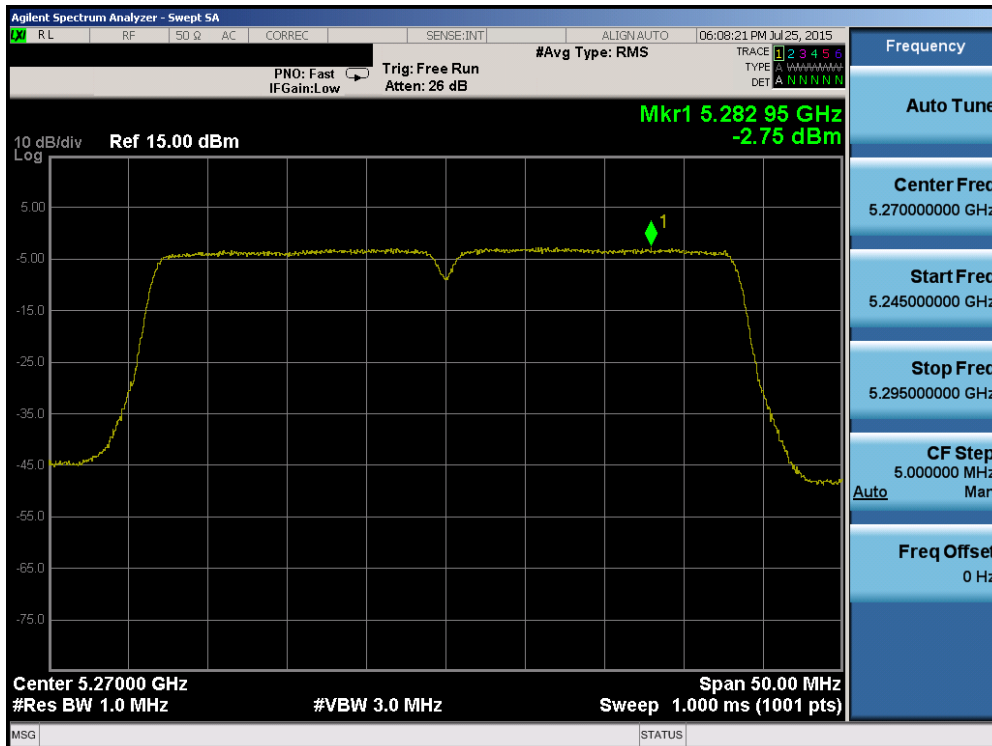
Plot 6-88. Power Spectral Density Plot (802.11a (UNII Band 2A) – Ch. 64)

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet		Page 68 of 208



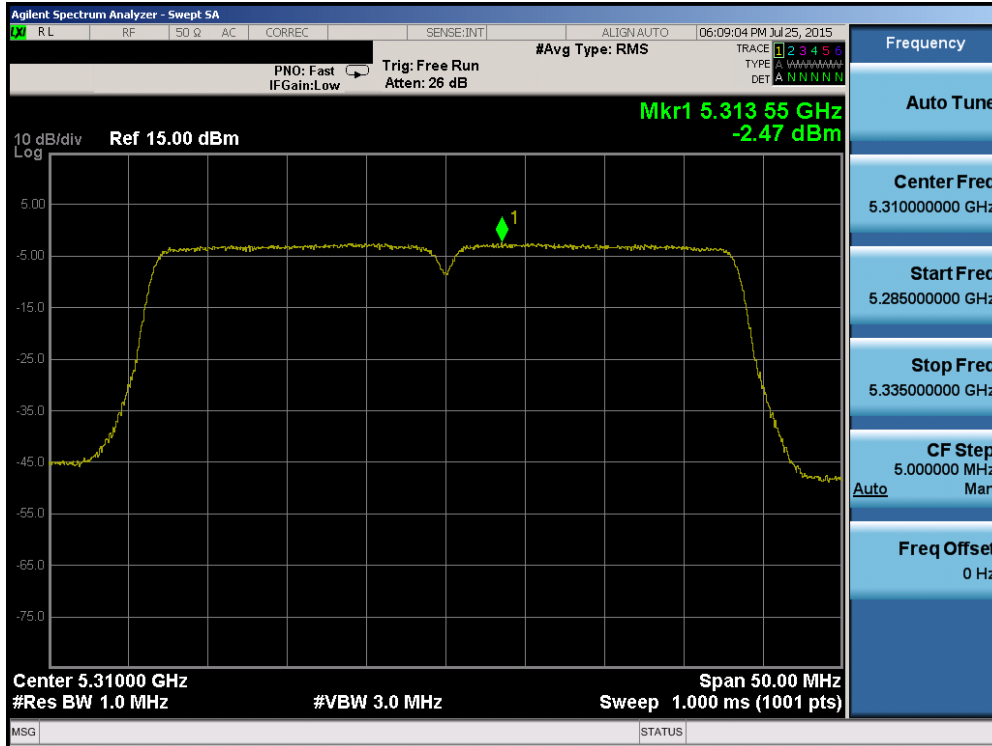


Plot 6-91. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 2A) – Ch. 64)

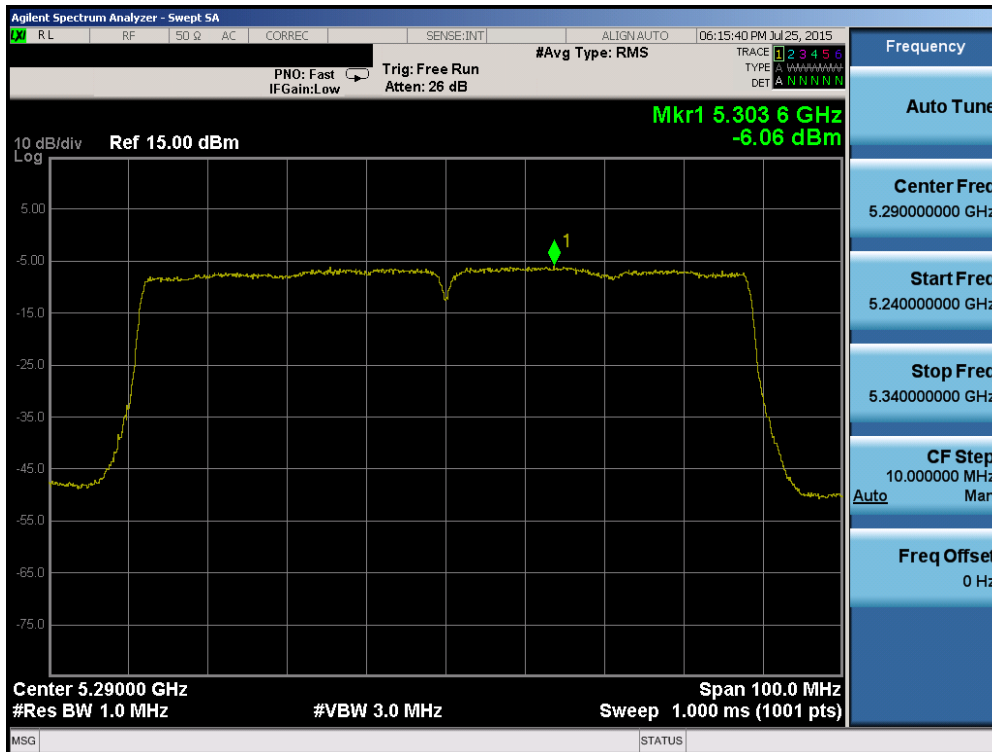


Plot 6-92. Power Spectral Density Plot (40MHz BW 802.11n (UNII Band 2A) – Ch. 54)

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet		Page 70 of 208

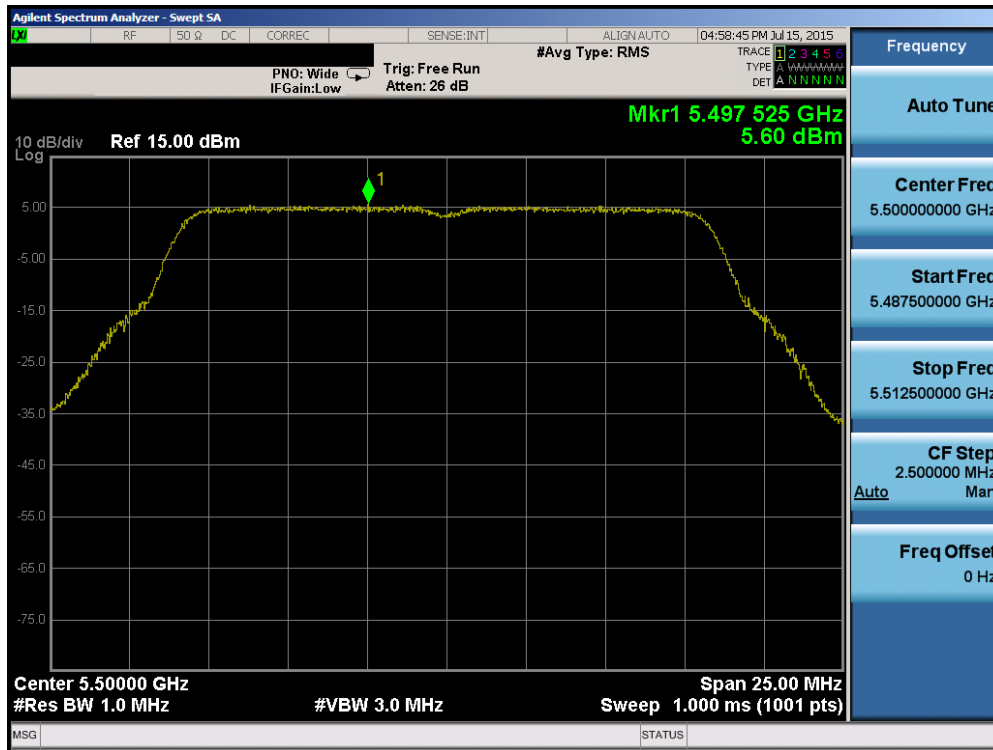


Plot 6-93. Power Spectral Density Plot (40MHz BW 802.11n (UNII Band 2A) – Ch. 62)

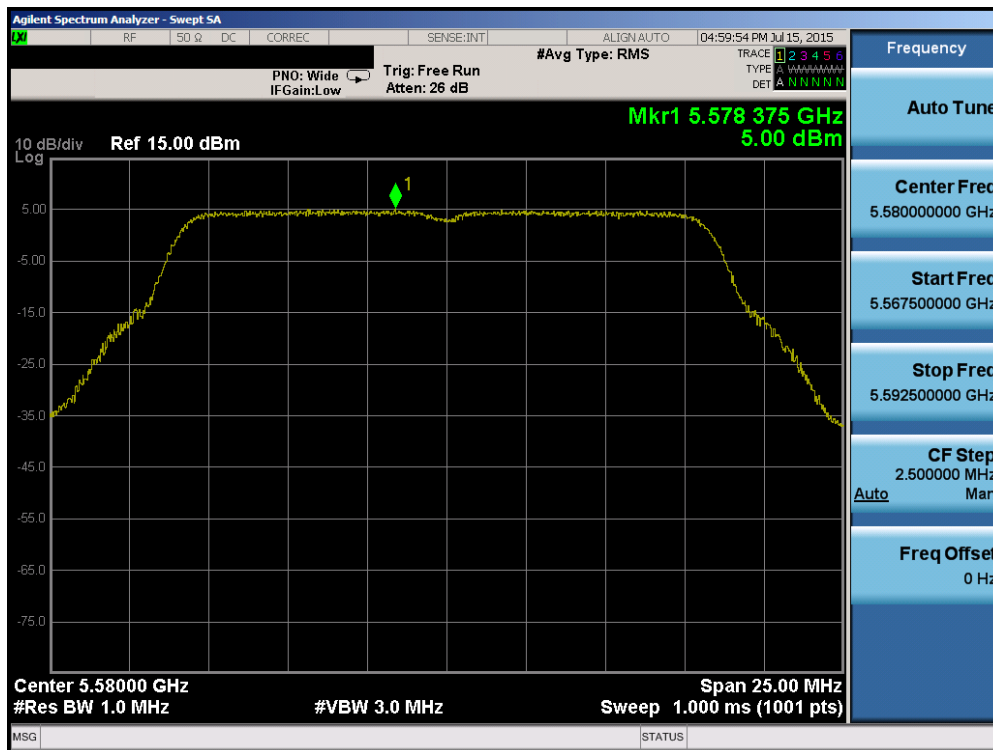


Plot 6-94. Power Spectral Density Plot (80MHz BW 802.11ac (UNII Band 2A) – Ch. 58)

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet		Page 71 of 208

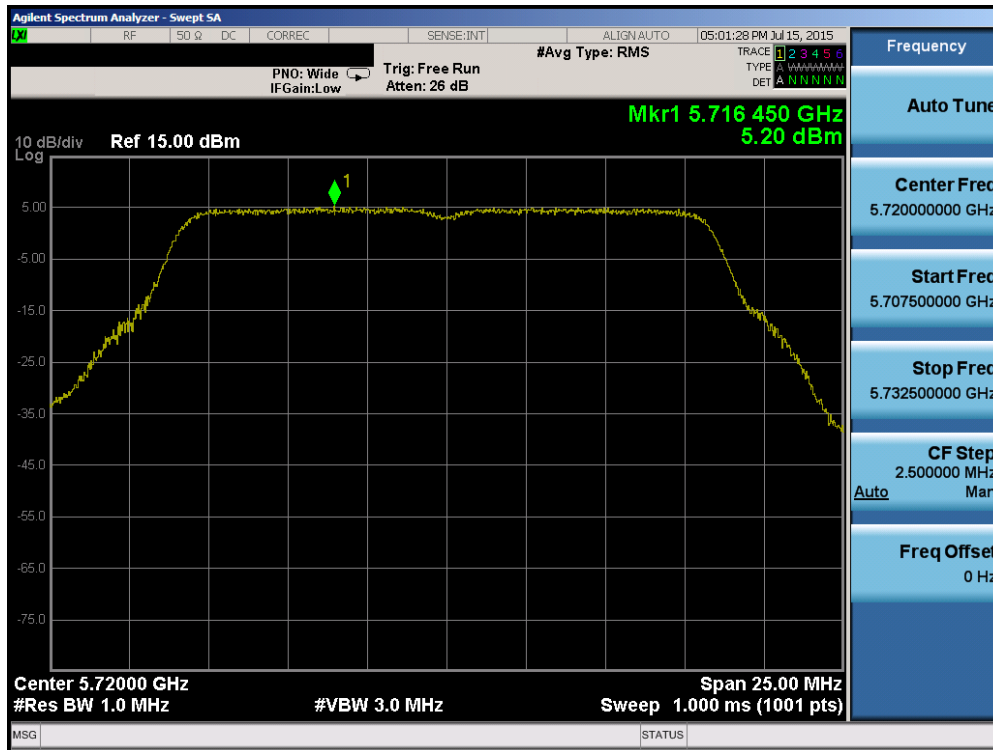


Plot 6-95. Power Spectral Density Plot (802.11a (UNII Band 2C) – Ch. 100)

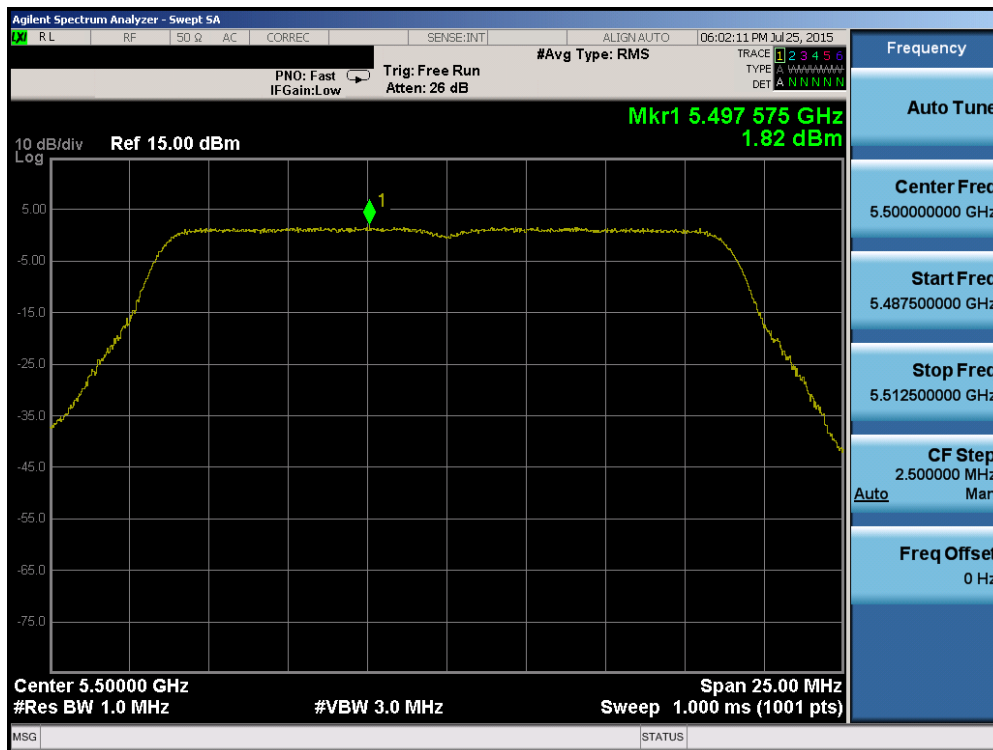


Plot 6-96. Power Spectral Density Plot (802.11a (UNII Band 2C) – Ch. 116)

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet		Page 72 of 208

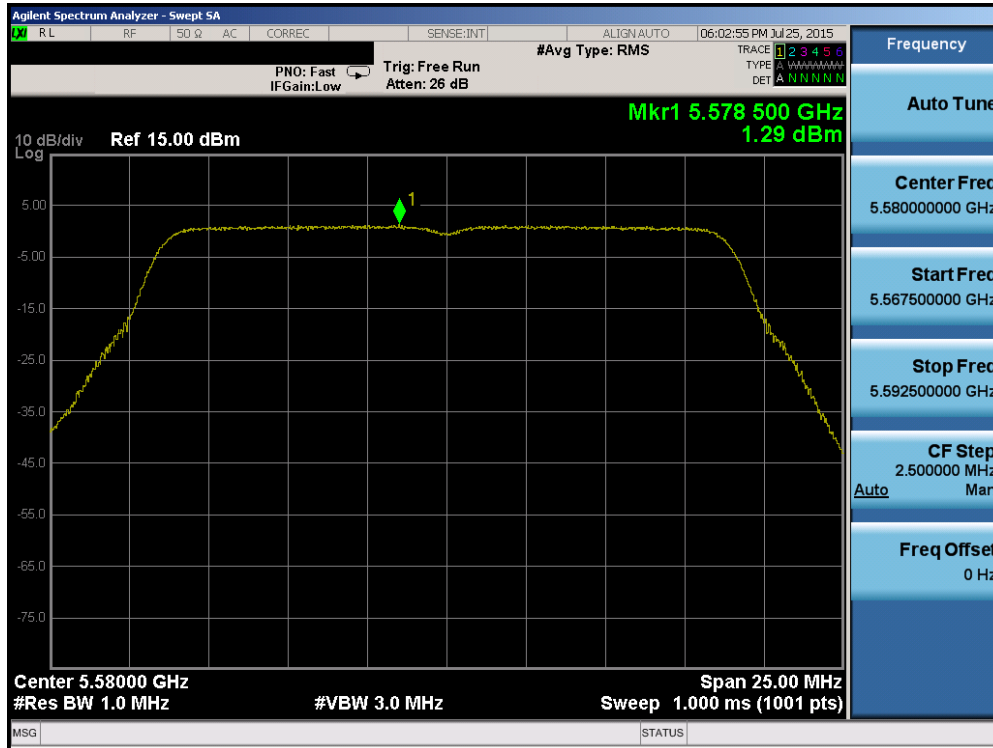


Plot 6-97. Power Spectral Density Plot (802.11a (UNII Band 2C) – Ch. 140144)

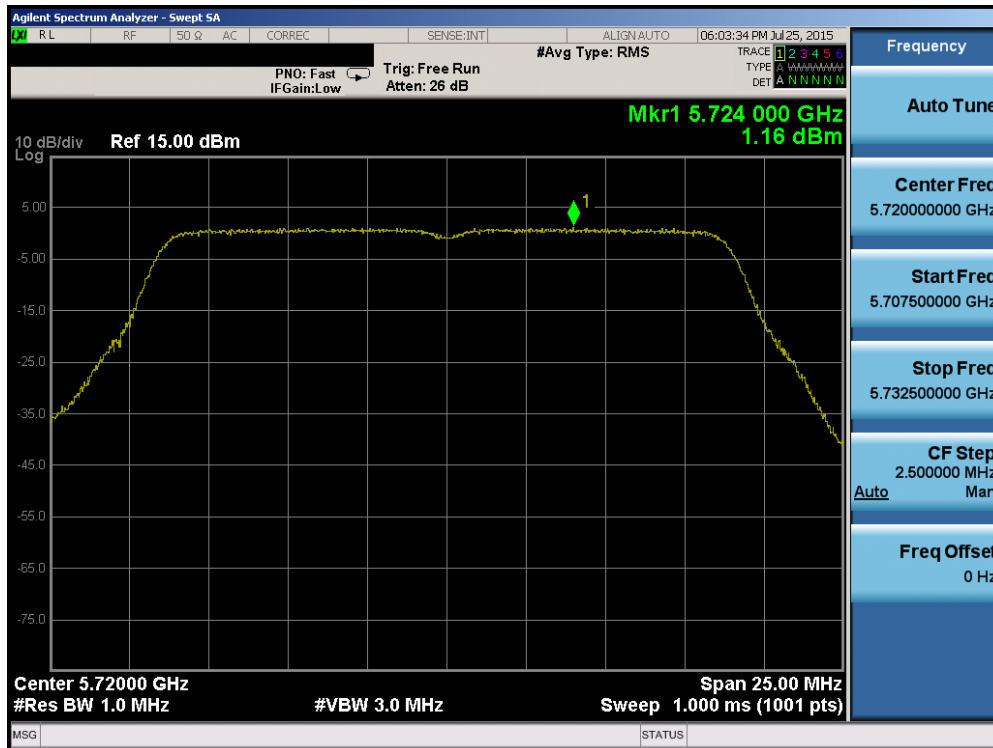


Plot 6-98. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 2C) – Ch. 100)

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet		Page 73 of 208

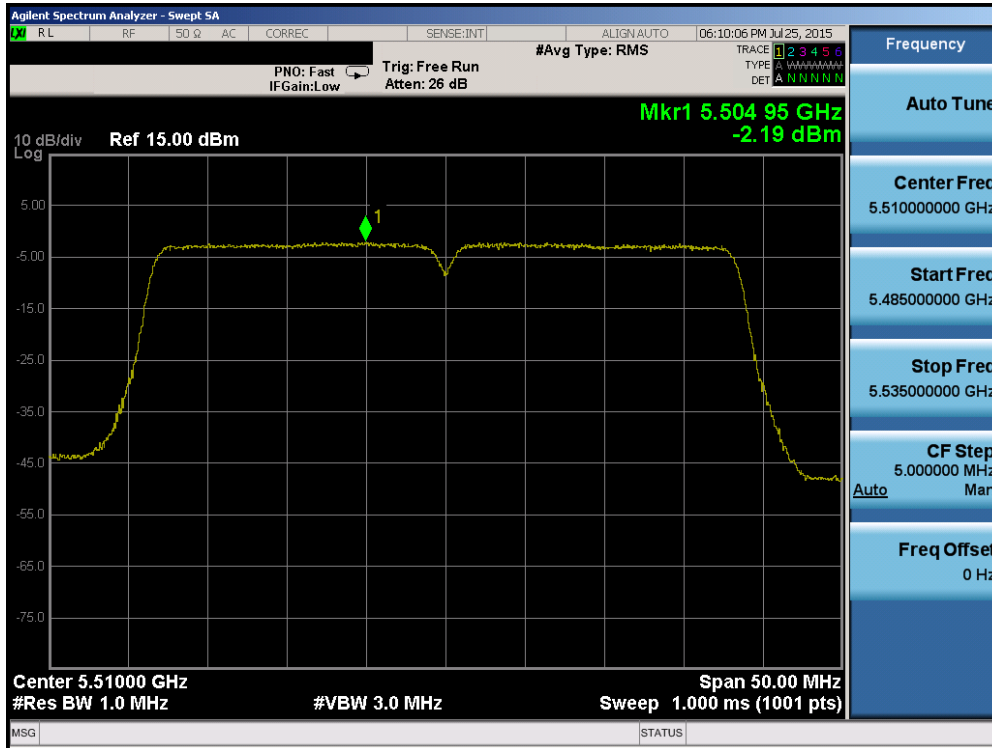


Plot 6-99. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 2C) – Ch. 116)

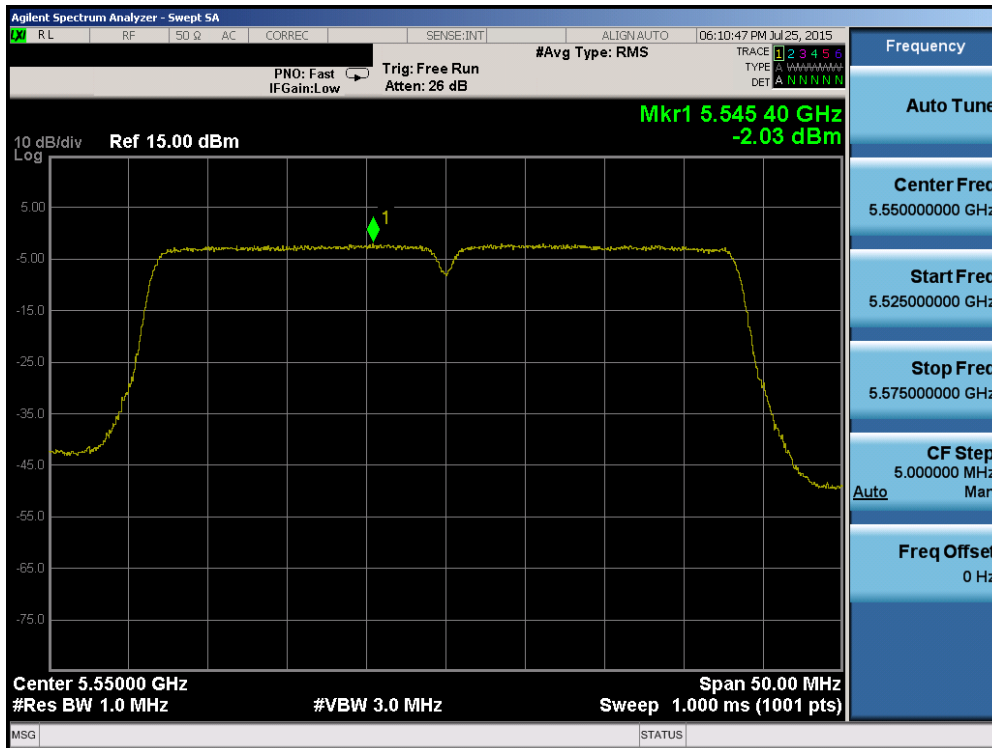


Plot 6-100. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 2C) – Ch. 140144)



FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet		Page 74 of 208

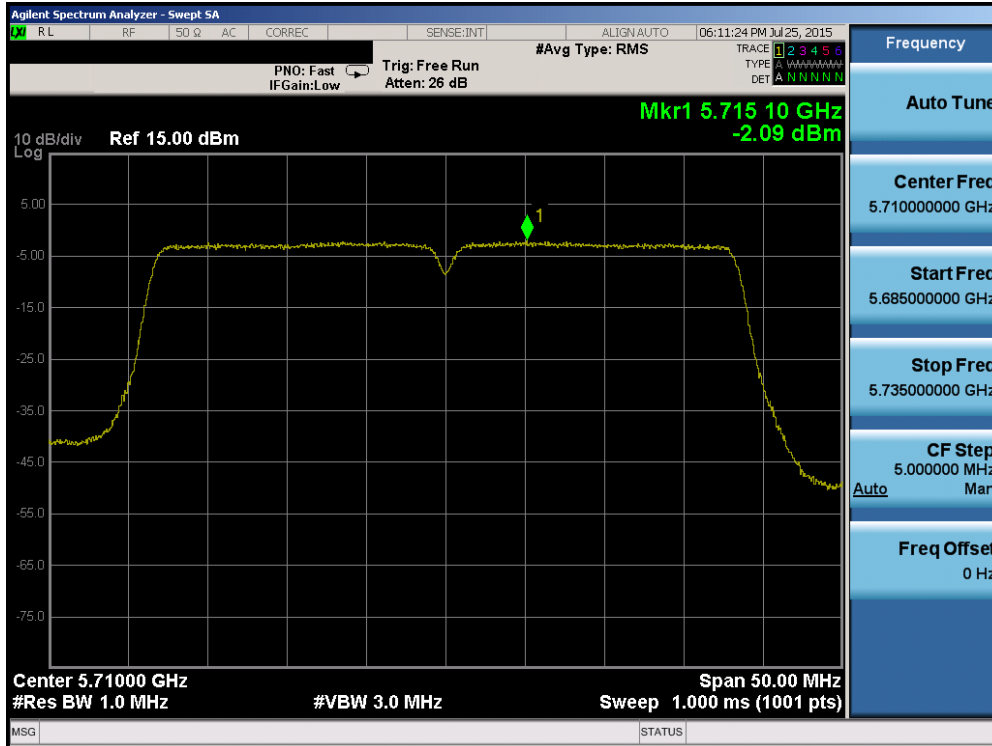


Plot 6-101. Power Spectral Density Plot (40MHz BW 802.11n (UNII Band 2C) – Ch. 102)

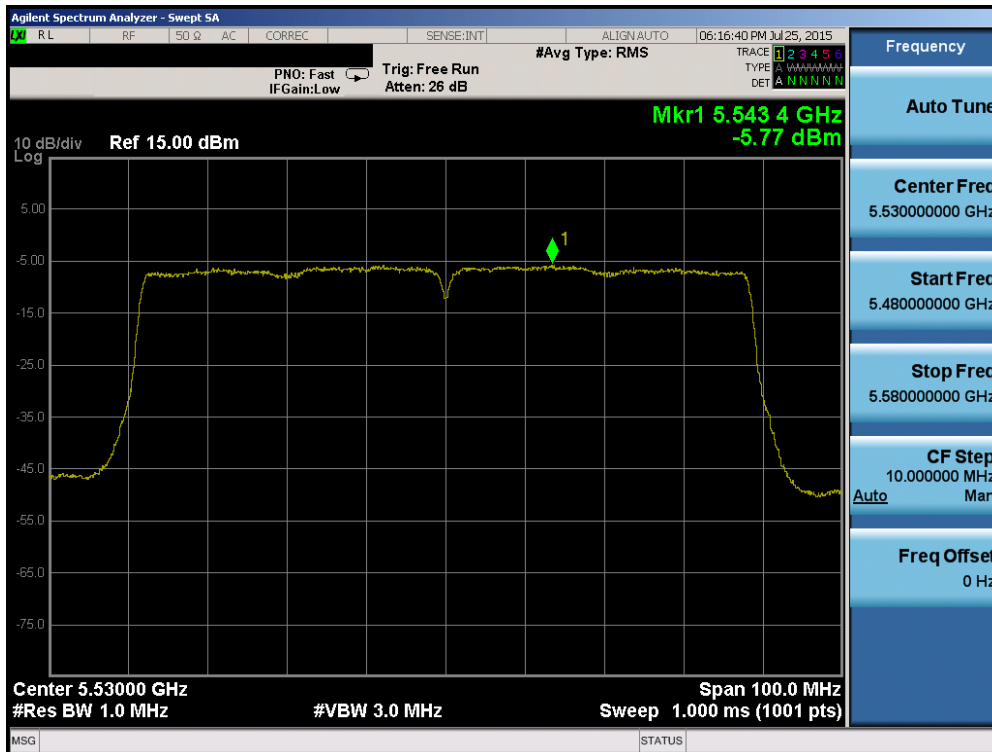


Plot 6-102. Power Spectral Density Plot (40MHz BW 802.11n (UNII Band 2C) – Ch. 110118)

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet		Page 75 of 208

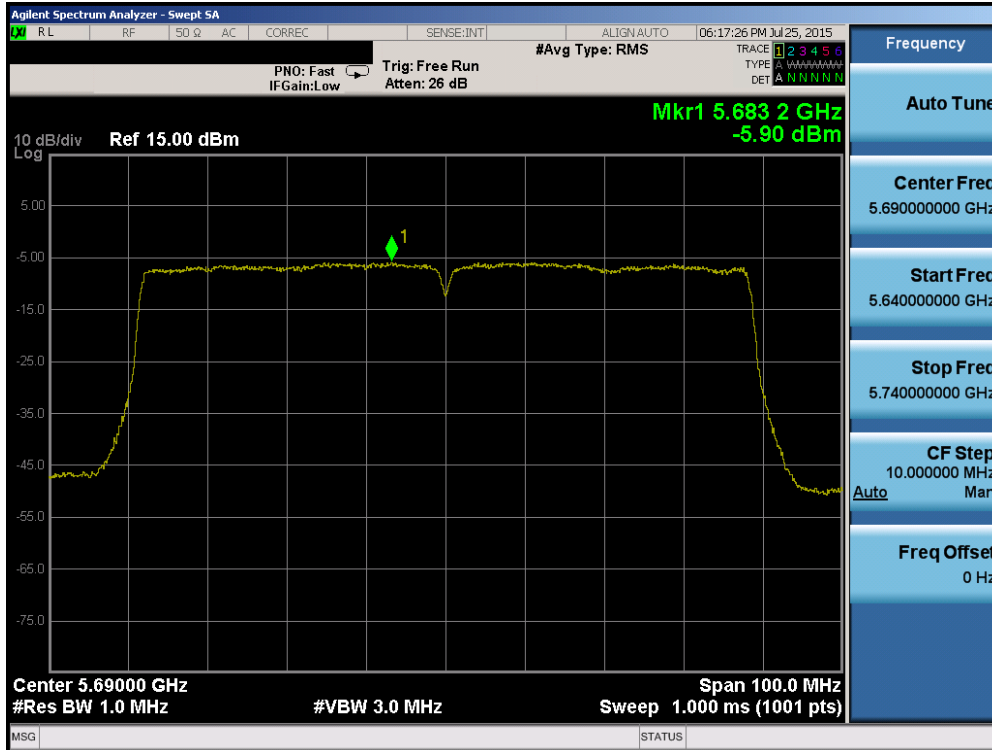


Plot 6-103. Power Spectral Density Plot (40MHz BW 802.11n (UNII Band 2C) – Ch. 134142)



Plot 6-104. Power Spectral Density Plot (80MHz BW 802.11ac (UNII Band 2C) – Ch. 106)

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet		Page 76 of 208

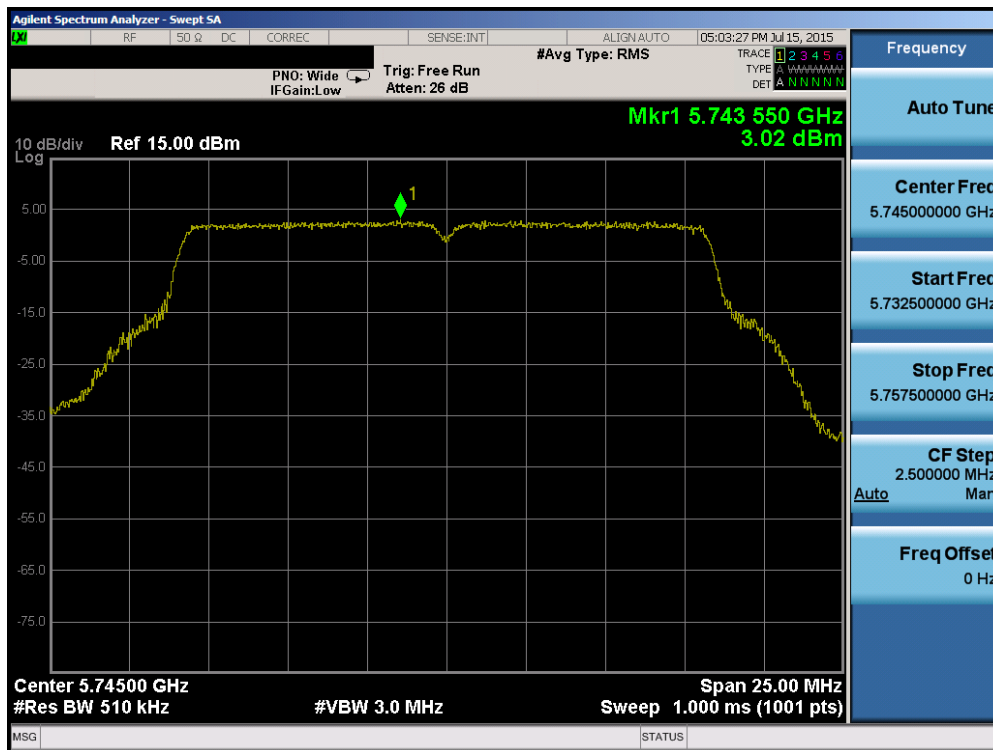


Plot 6-105. Power Spectral Density Plot (80MHz BW 802.11ac (UNII Band 2C) – Ch. 138)

FCC ID: A3LSMT817P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet		Page 77 of 208

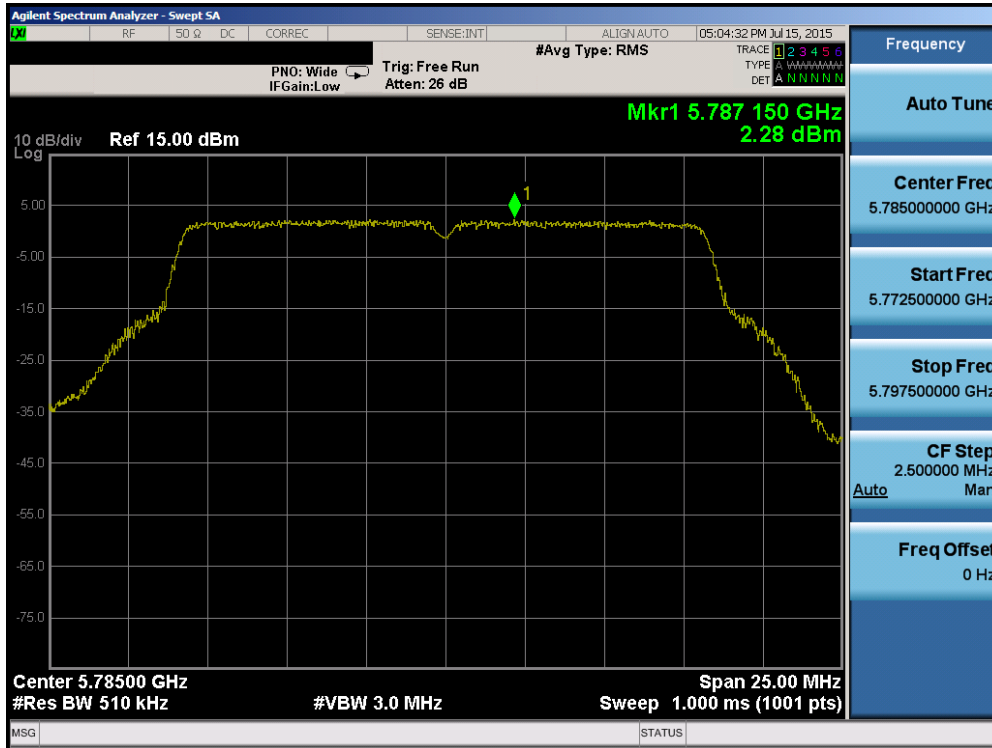
	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Measured Power Density [dBm]	Max Permissible Power Density [dBm/500kHz]	Margin [dB]	Pass / Fail
<b>Band 3</b>	5745	149	a	6	3.02	30.0	-26.98	Pass
	5785	157	a	6	2.28	30.0	-27.72	Pass
	5825	165	a	6	2.14	30.0	-27.86	Pass
	5745	149	n (20MHz)	6.5/7.2 (MCS0)	-0.87	30.0	-30.87	Pass
	5785	157	n (20MHz)	6.5/7.2 (MCS0)	-0.86	30.0	-30.86	Pass
	5825	165	n (20MHz)	6.5/7.2 (MCS0)	-0.91	30.0	-30.91	Pass
	5755	151	n (40MHz)	13.5/15 (MCS0)	-4.13	30.0	-34.13	Pass
	5795	159	n (40MHz)	13.5/15 (MCS0)	-4.28	30.0	-34.28	Pass
	5775	155	ac (80MHz)	29.3/32.5 (MCS0)	-7.60	30.0	-37.60	Pass

**Table 6-18. Band 3 Conducted Power Spectral Density Measurements**



**Plot 6-106. Power Spectral Density Plot (802.11a (UNII Band 3) – Ch. 149)**

<b>FCC ID:</b> A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		<b>Reviewed by:</b> Quality Manager
<b>Test Report S/N:</b> 0Y1507071385.A3L	<b>Test Dates:</b> 7/7 - 7/29/2015	<b>EUT Type:</b> Portable Tablet	Page 78 of 208	



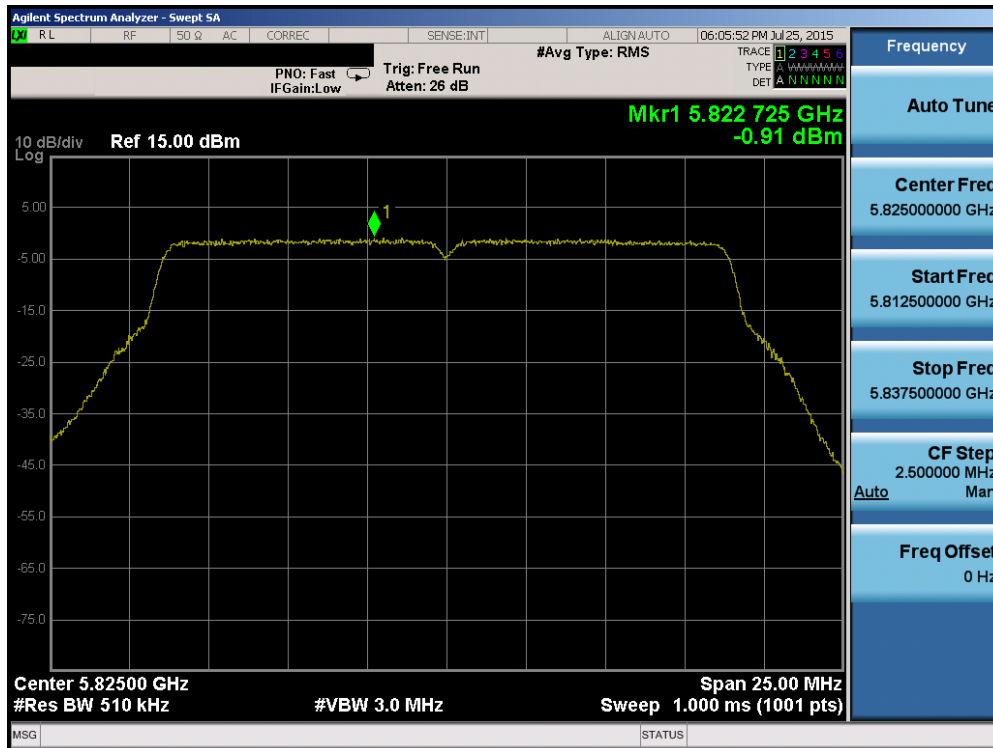
Plot 6-107. Power Spectral Density Plot (802.11a (UNII Band 3) – Ch. 157)



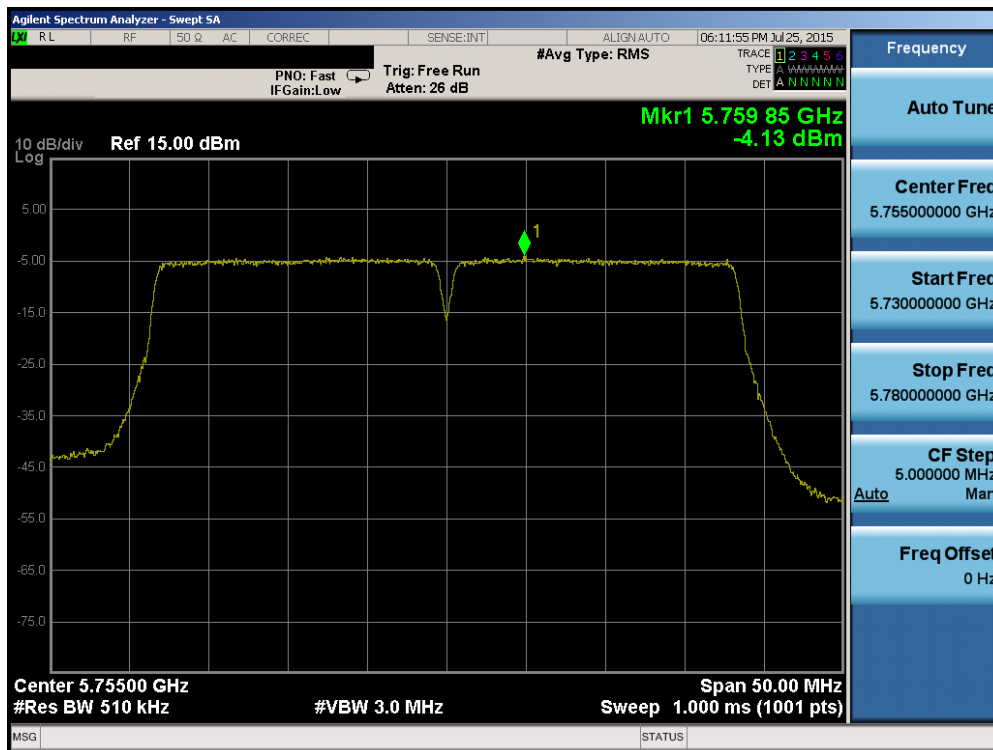
Plot 6-108. Power Spectral Density Plot (802.11a (UNII Band 3) – Ch. 165)

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet		Page 79 of 208



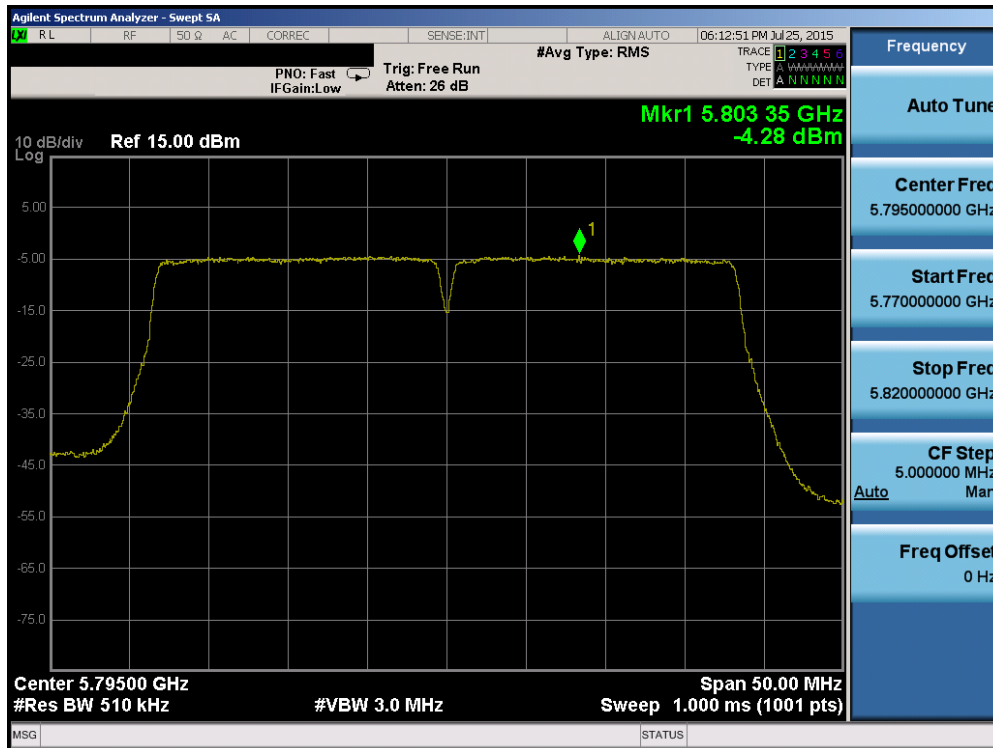


Plot 6-111. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 3) – Ch. 165)

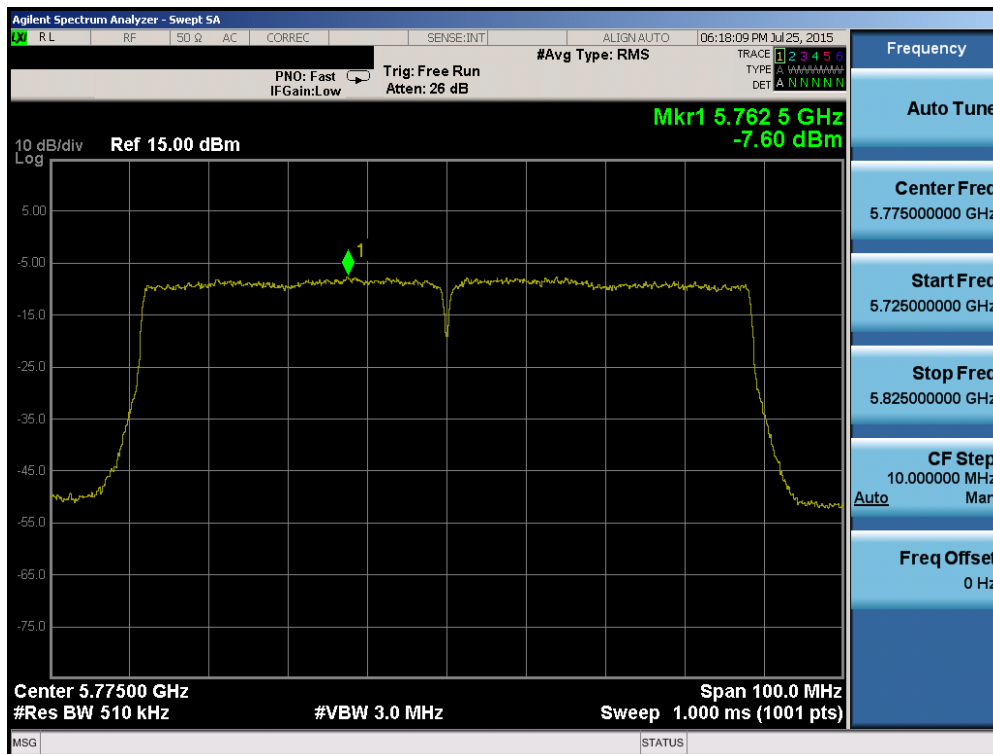


Plot 6-112. Power Spectral Density Plot (40MHz BW 802.11n (UNII Band 3) – Ch. 151)

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet		Page 81 of 208



Plot 6-113. Power Spectral Density Plot (40MHz BW 802.11n (UNII Band 3) – Ch. 159)





Plot 6-114. Power Spectral Density Plot (80MHz BW 802.11ac (UNII Band 3) – Ch. 155)

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet		Page 82 of 208

## Antenna-2 Power Spectral Density Measurements

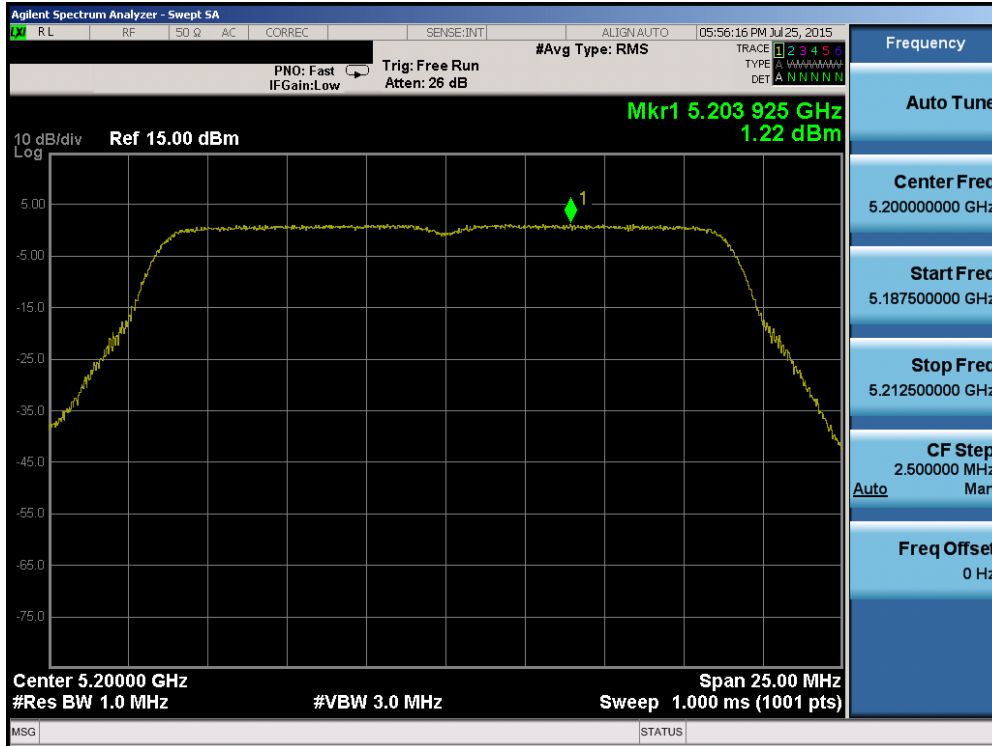
	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Measured Power Density [dBm]	Max Permissible Power Density [dBm/MHz]	Margin [dB]	Pass / Fail
Band 1	5180	36	a	6	2.44	11.0	-8.56	Pass
	5200	40	a	6	2.75	11.0	-8.25	Pass
	5240	48	a	6	2.81	11.0	-8.19	Pass
	5180	36	n (20MHz)	6.5/7.2 (MCS0)	0.75	11.0	-10.25	Pass
	5200	40	n (20MHz)	6.5/7.2 (MCS0)	1.22	11.0	-9.78	Pass
	5240	48	n (20MHz)	6.5/7.2 (MCS0)	1.65	11.0	-9.35	Pass
	5190	38	n (40MHz)	13.5/15 (MCS0)	-2.64	11.0	-13.64	Pass
	5230	46	n (40MHz)	13.5/15 (MCS0)	-2.76	11.0	-13.76	Pass
	5210	42	ac (80MHz)	29.3/32.5 (MCS0)	-6.33	11.0	-17.33	Pass
Band 2A	5260	52	a	6	2.55	11.0	-8.45	Pass
	5280	56	a	6	2.62	11.0	-8.38	Pass
	5320	64	a	6	2.22	11.0	-8.78	Pass
	5260	52	n (20MHz)	6.5/7.2 (MCS0)	1.73	11.0	-9.27	Pass
	5280	56	n (20MHz)	6.5/7.2 (MCS0)	1.75	11.0	-9.25	Pass
	5320	64	n (20MHz)	6.5/7.2 (MCS0)	1.87	11.0	-9.13	Pass
	5270	54	n (40MHz)	13.5/15 (MCS0)	-2.56	11.0	-13.56	Pass
	5310	62	n (40MHz)	13.5/15 (MCS0)	-2.43	11.0	-13.43	Pass
	5290	58	ac (80MHz)	29.3/32.5 (MCS0)	-6.00	11.0	-17.00	Pass
Band 2C	5500	100	a	6	2.99	11.0	-8.01	Pass
	5580	116	a	6	2.46	11.0	-8.54	Pass
	5720	144	a	6	2.58	11.0	-8.42	Pass
	5500	100	n (20MHz)	6.5/7.2 (MCS0)	1.96	11.0	-9.04	Pass
	5580	116	n (20MHz)	6.5/7.2 (MCS0)	2.04	11.0	-8.96	Pass
	5720	144	n (20MHz)	6.5/7.2 (MCS0)	1.92	11.0	-9.08	Pass
	5510	102	n (40MHz)	13.5/15 (MCS0)	-1.57	11.0	-12.57	Pass
	5550	110	n (40MHz)	13.5/15 (MCS0)	-1.60	11.0	-12.60	Pass
	5710	142	n (40MHz)	13.5/15 (MCS0)	-1.61	11.0	-12.61	Pass
	5530	106	ac (80MHz)	29.3/32.5 (MCS0)	-6.08	11.0	-17.08	Pass
5690	138	ac (80MHz)	29.3/32.5 (MCS0)	-6.31	11.0	-17.31	Pass	

**Table 6-19. Conducted Power Spectral Density Measurements**

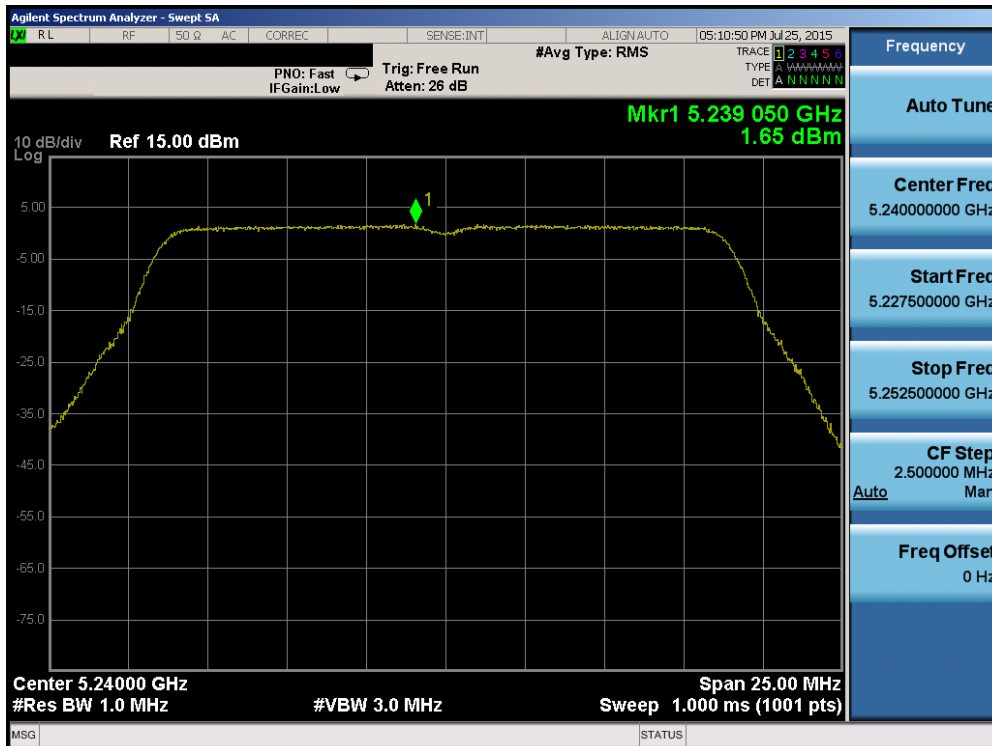
FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 83 of 208	





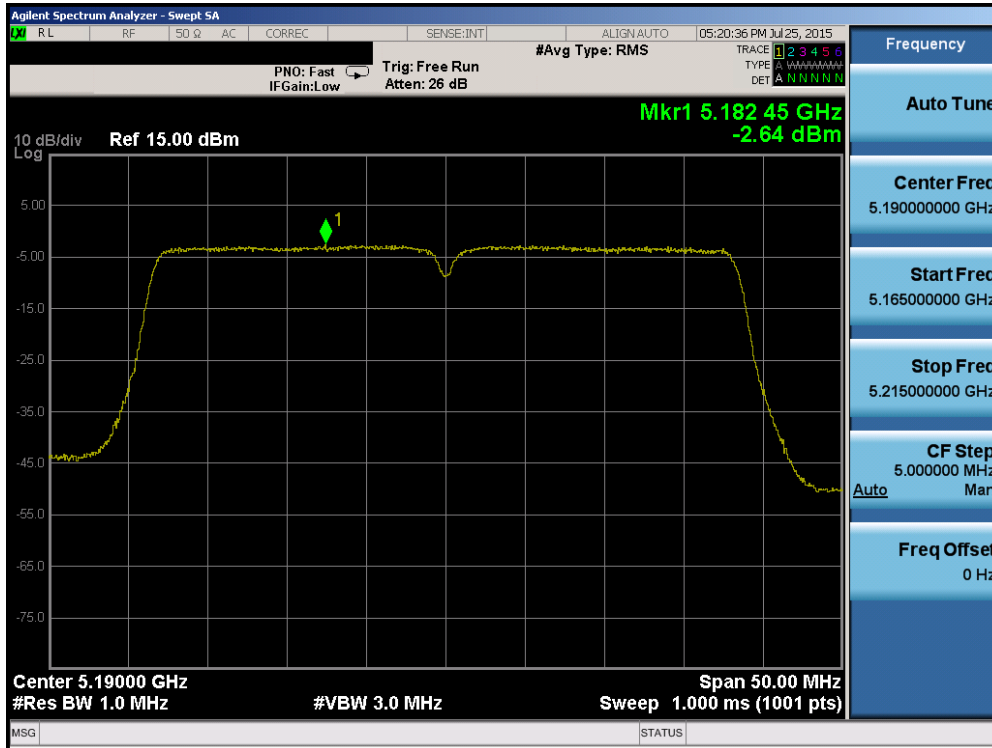


Plot 6-119. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 1) – Ch. 40)

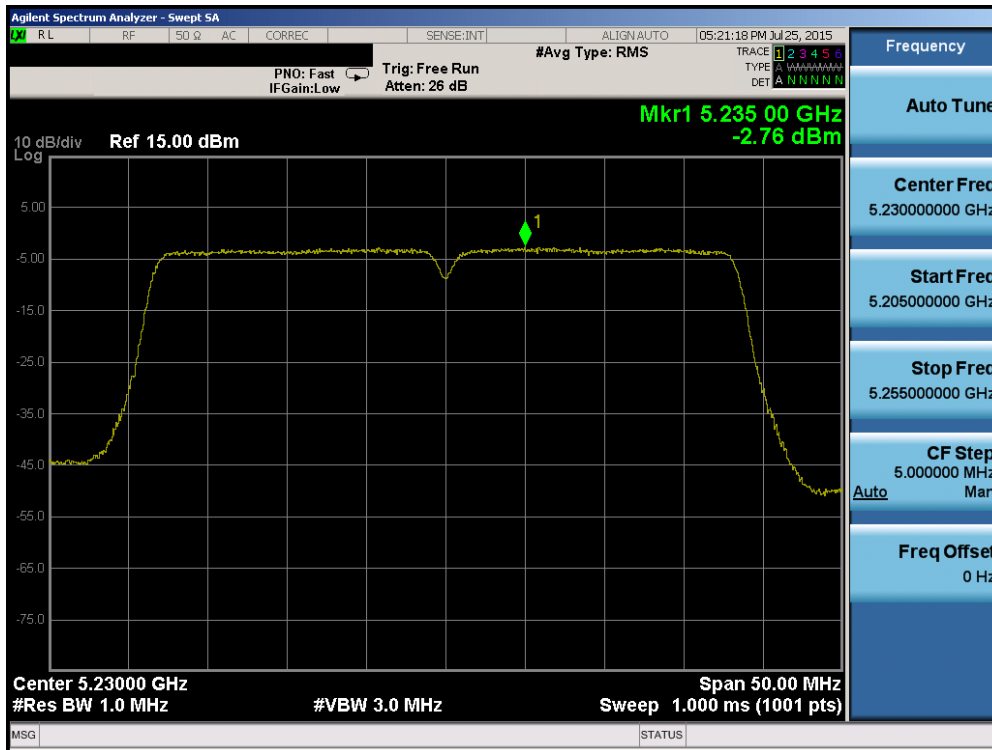


Plot 6-120. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 1) – Ch. 48)

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet		Page 86 of 208



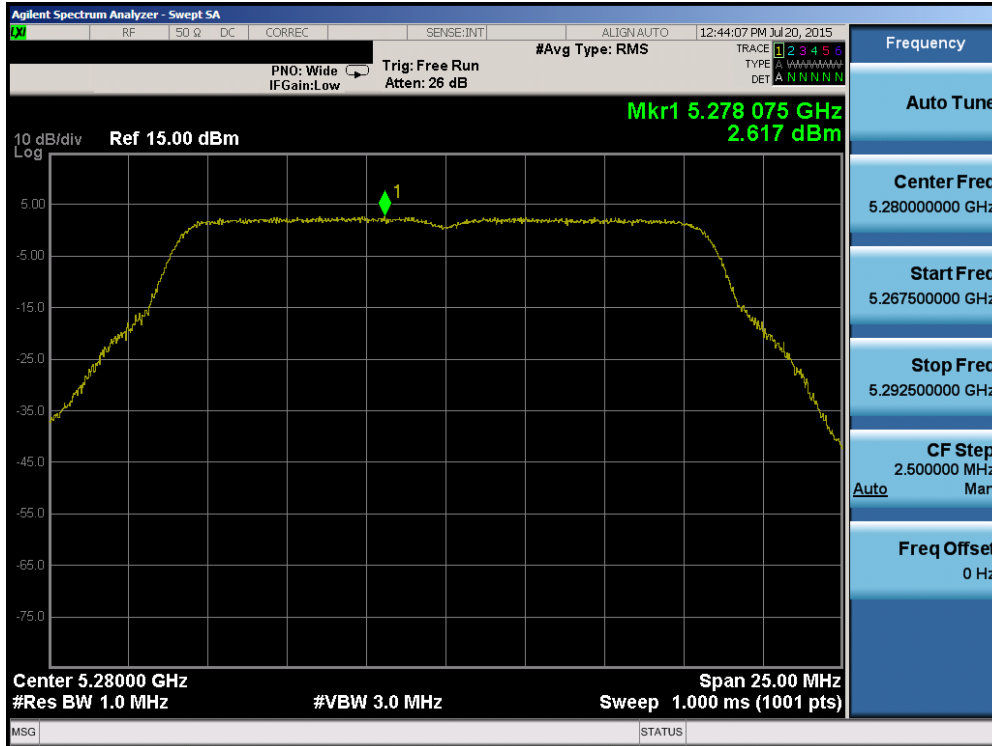
Plot 6-121. Power Spectral Density Plot (40MHz BW 802.11n (UNII Band 1) – Ch. 38)



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

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet		Page 87 of 208



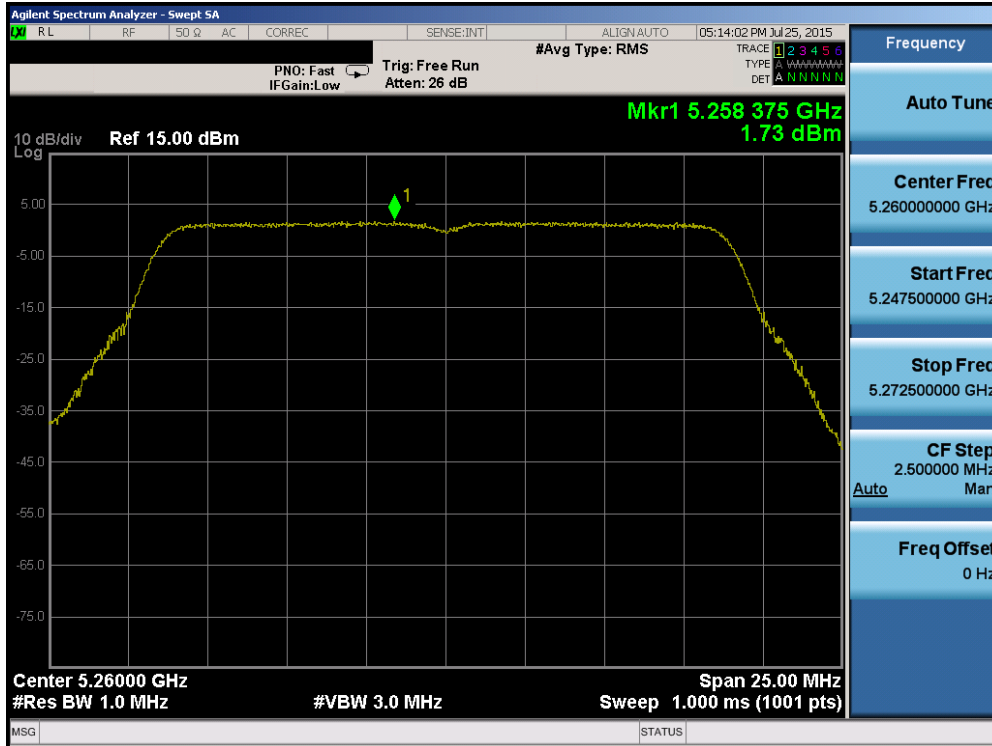


Plot 6-125. Power Spectral Density Plot (802.11a (UNII Band 2A) – Ch. 56)

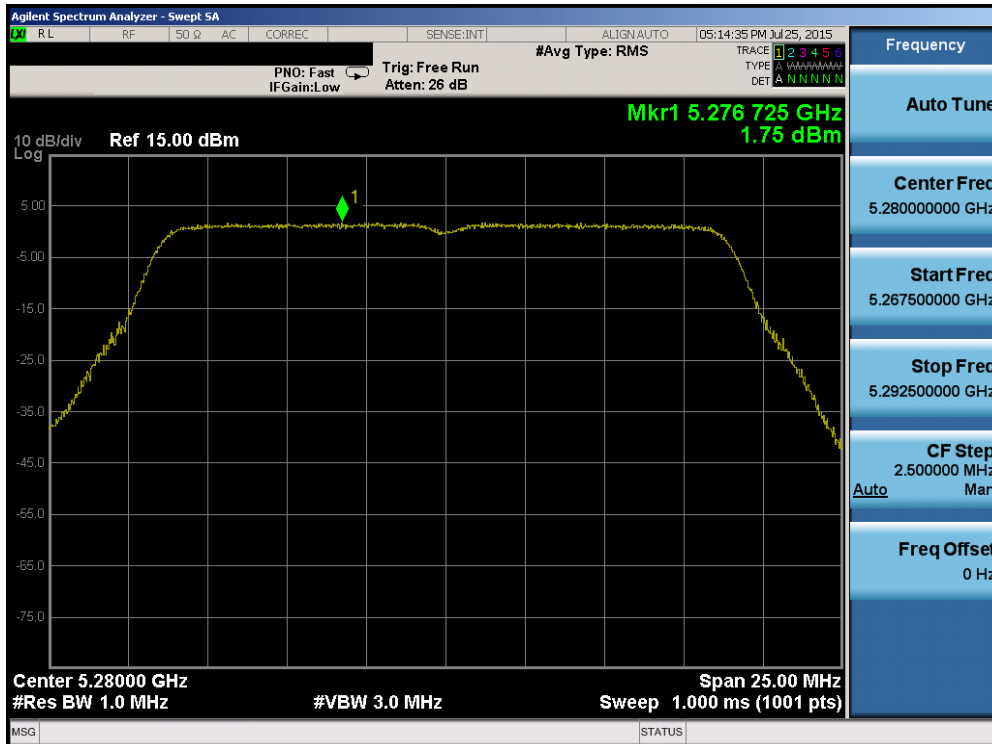


Plot 6-126. Power Spectral Density Plot (802.11a (UNII Band 2A) – Ch. 64)

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet		Page 89 of 208

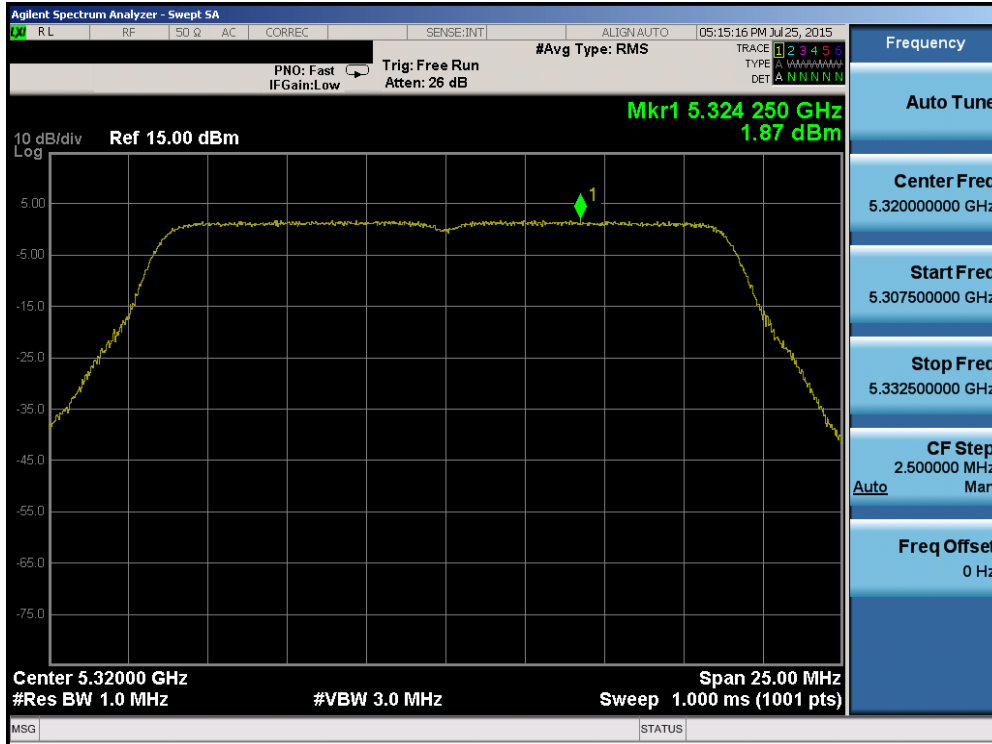


Plot 6-127. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 2A) – Ch. 52)

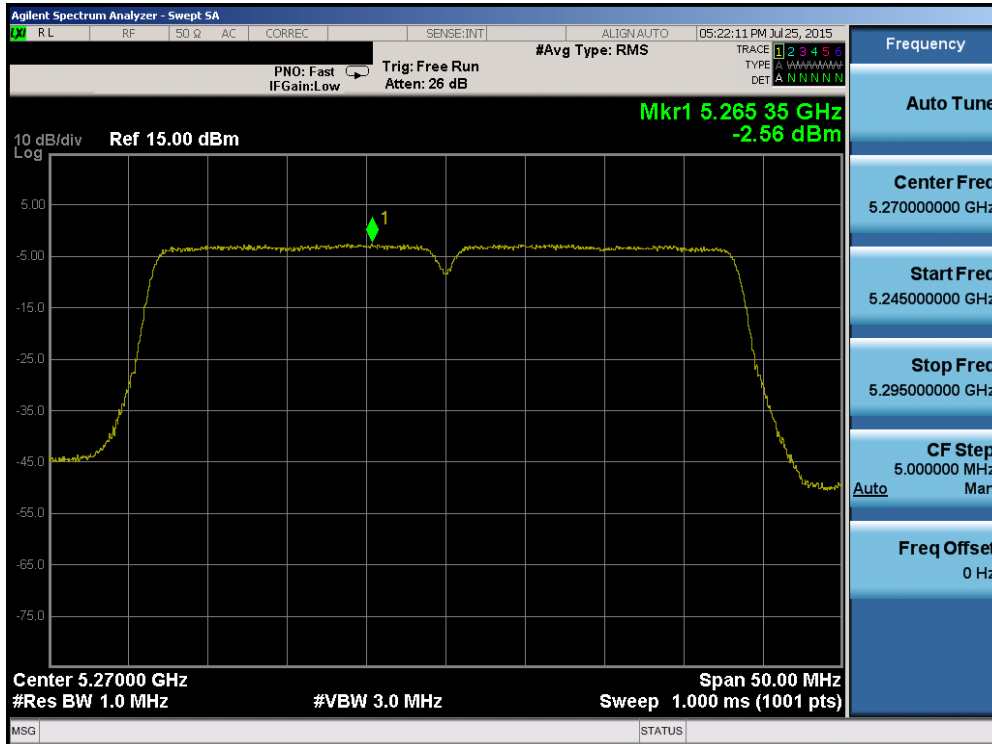


Plot 6-128. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 2A) – Ch. 56)

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet		Page 90 of 208

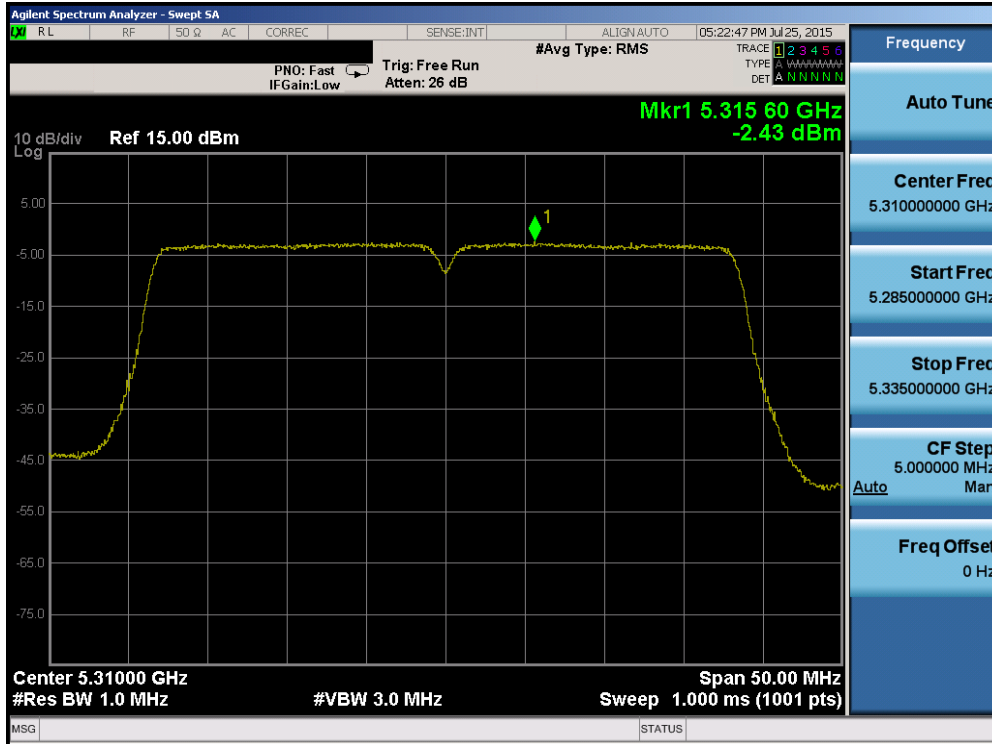


Plot 6-129. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 2A) – Ch. 64)

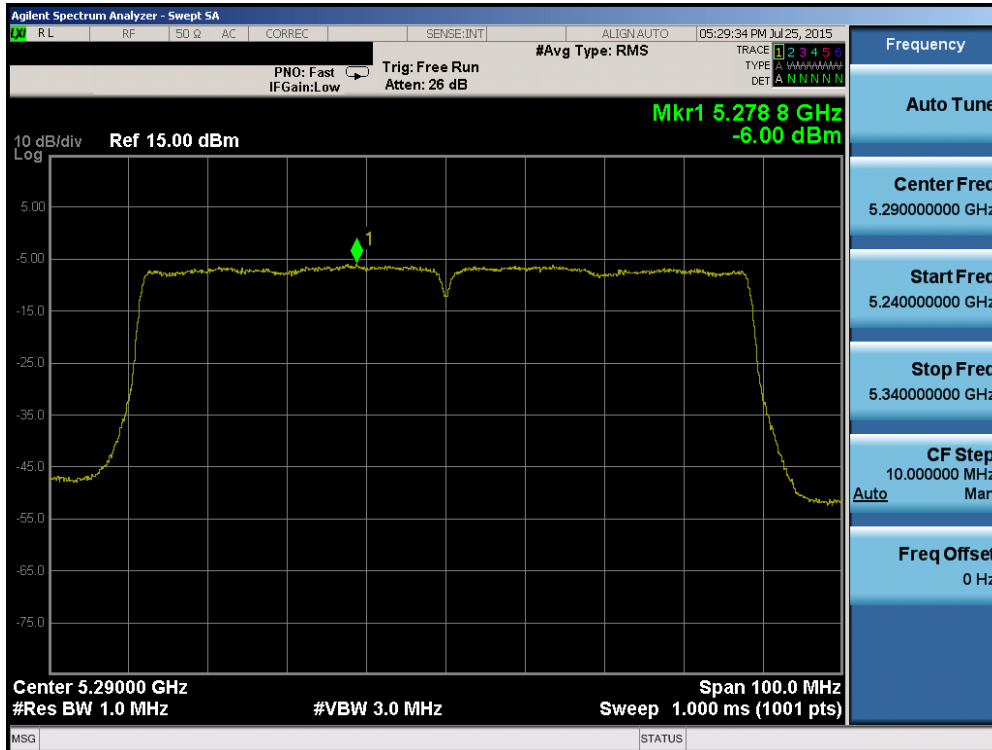


Plot 6-130. Power Spectral Density Plot (40MHz BW 802.11n (UNII Band 2A) – Ch. 54)

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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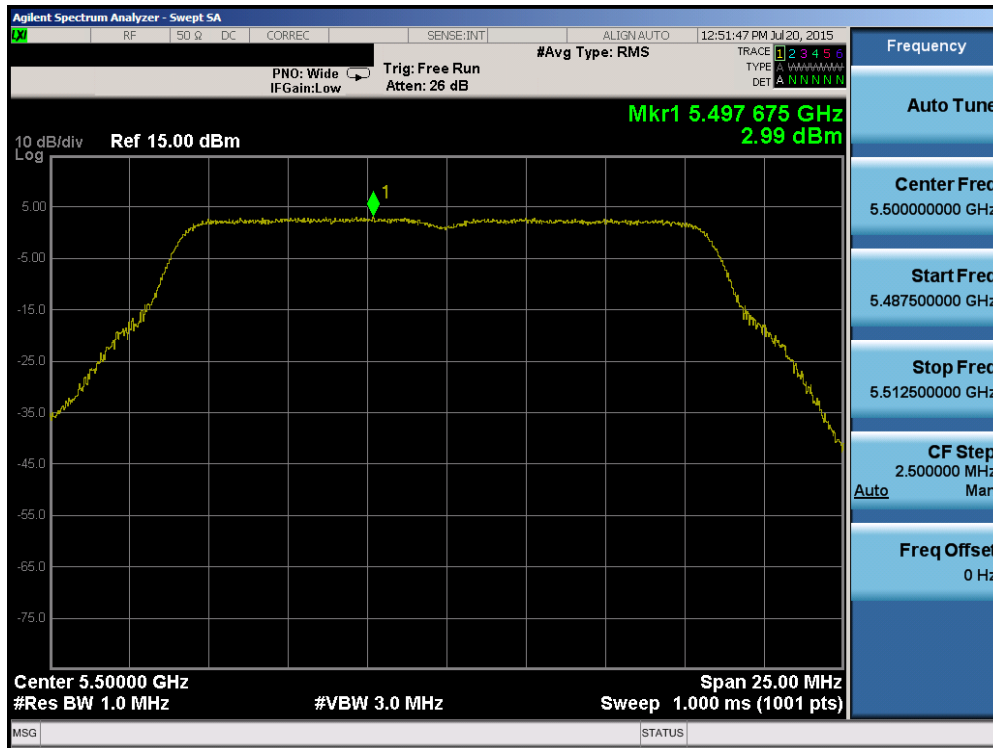


Plot 6-131. Power Spectral Density Plot (40MHz BW 802.11n (UNII Band 2A) – Ch. 62)

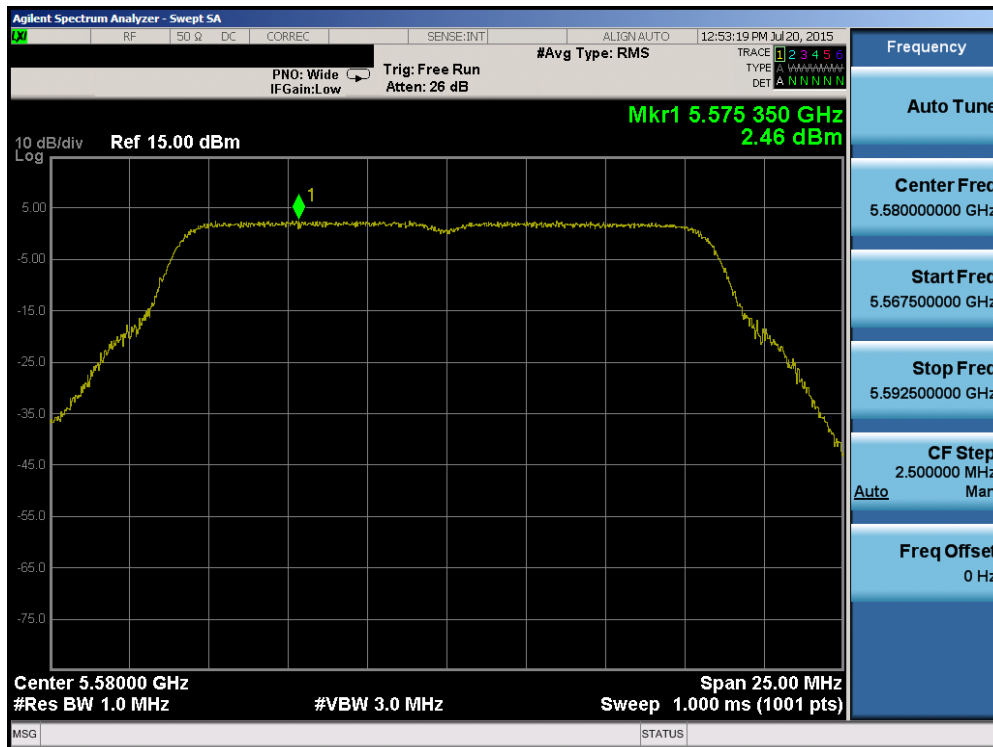


Plot 6-132. Power Spectral Density Plot (80MHz BW 802.11ac (UNII Band 2A) – Ch. 58)

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet		Page 92 of 208

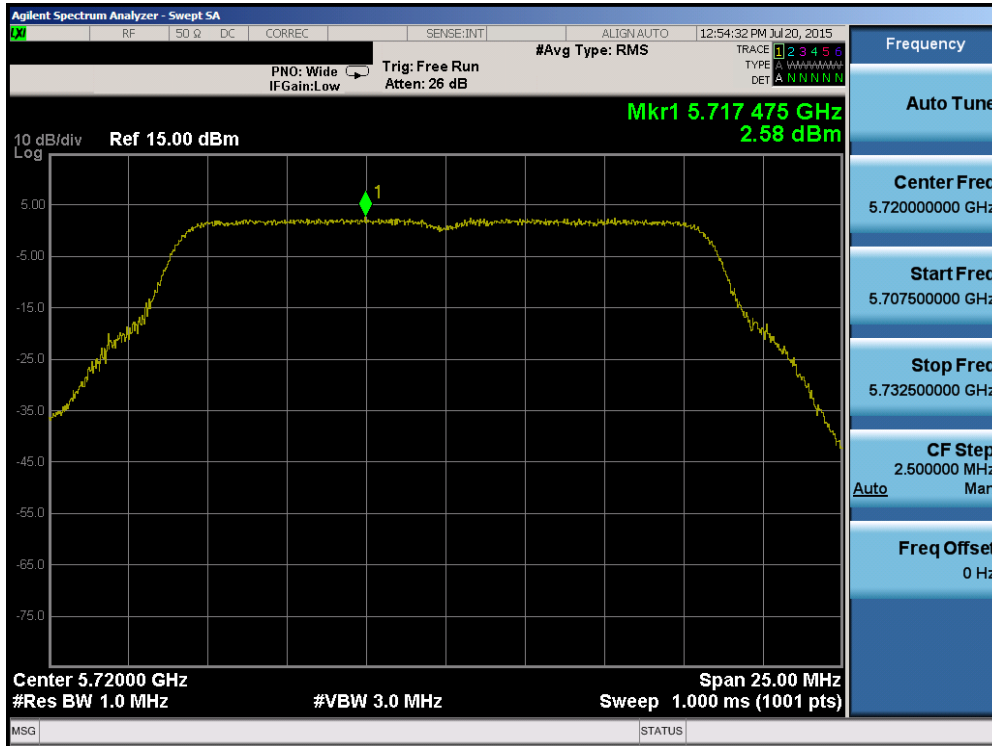


Plot 6-133. Power Spectral Density Plot (802.11a (UNII Band 2C) – Ch. 100)

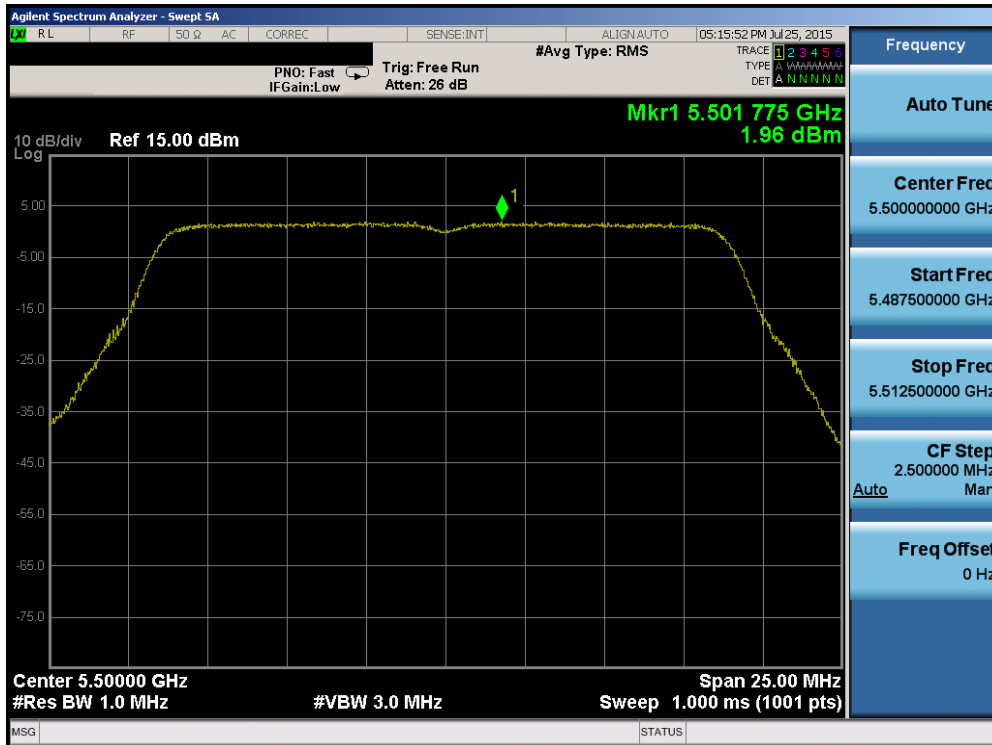


Plot 6-134. Power Spectral Density Plot (802.11a (UNII Band 2C) – Ch. 116)

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet		Page 93 of 208

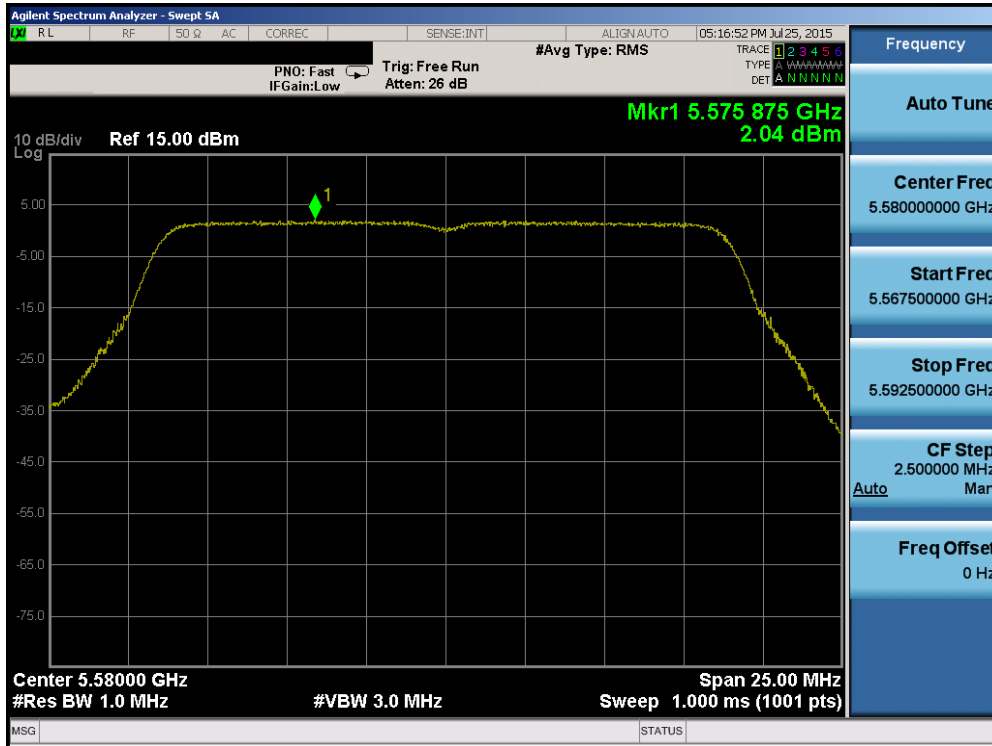


Plot 6-135. Power Spectral Density Plot (802.11a (UNII Band 2C) – Ch. 144)

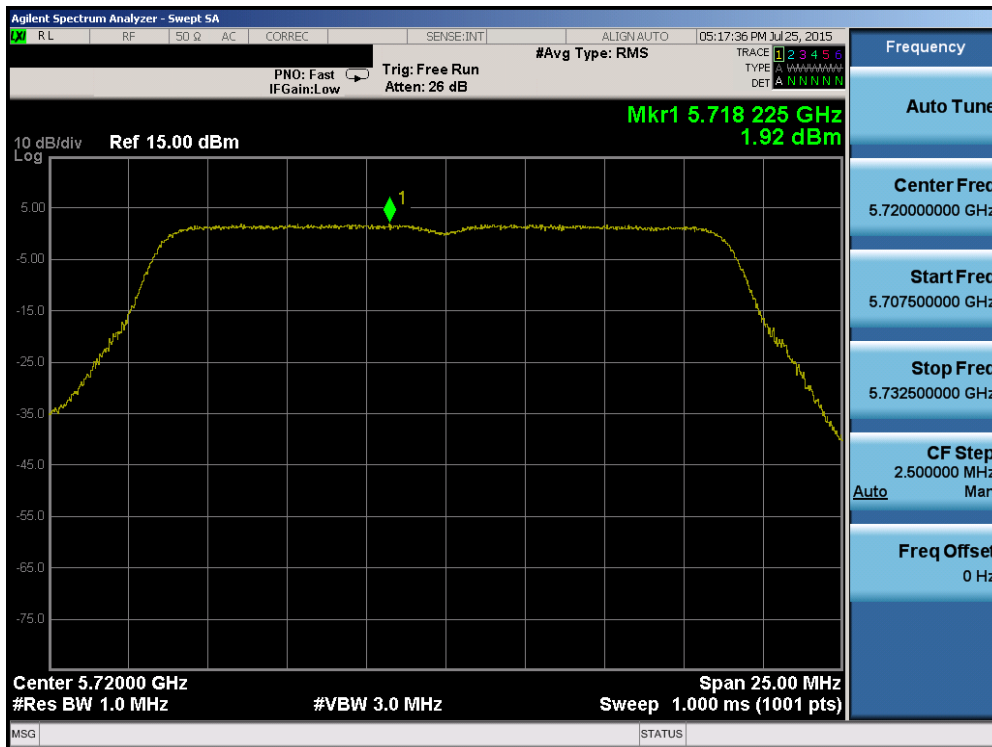


Plot 6-136. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 2C) – Ch. 100)

FCC ID: A3LSMT817P	<b>PCTEST</b> ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	<b>SAMSUNG</b>	Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet		Page 94 of 208

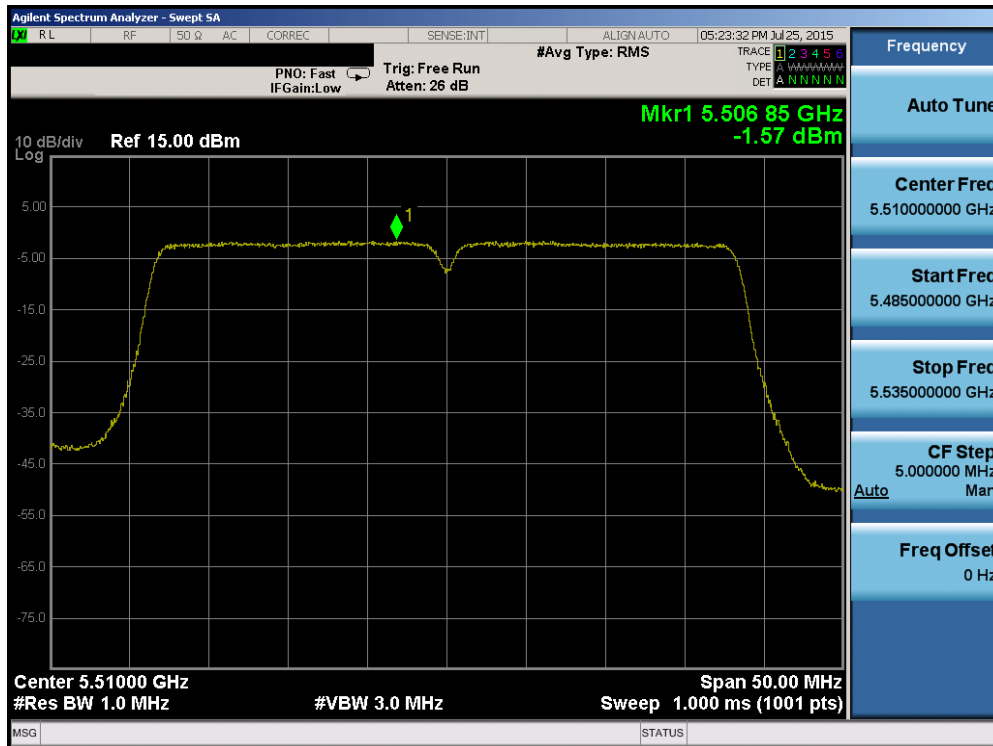


Plot 6-137. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 2C) – Ch. 116)

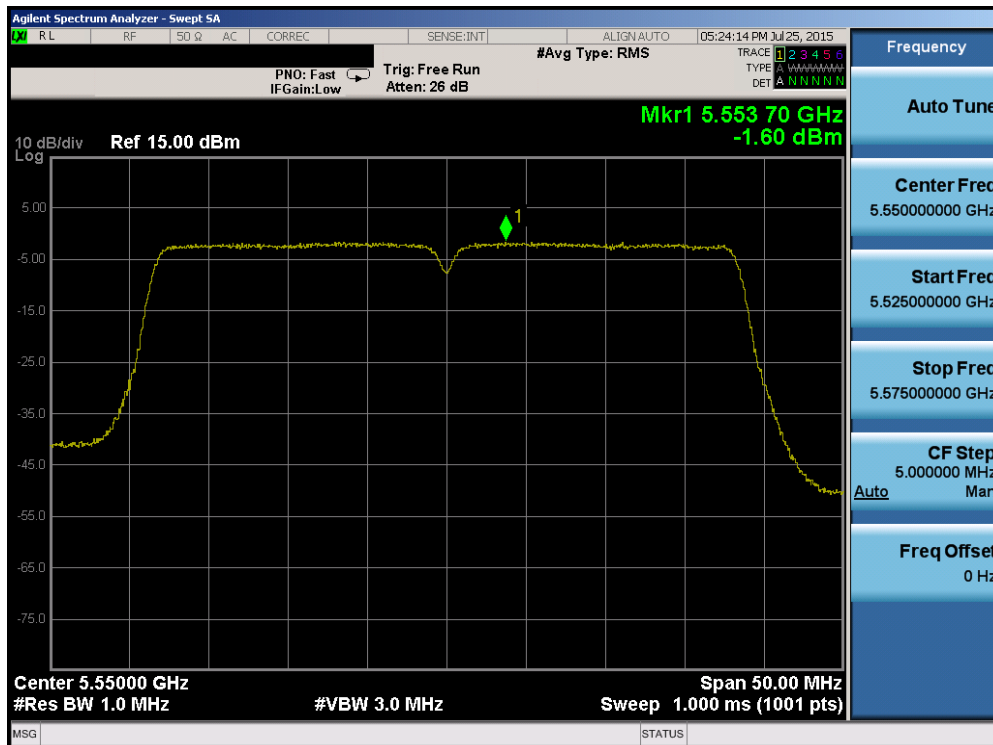


Plot 6-138. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 2C) – Ch. 144)

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet		Page 95 of 208

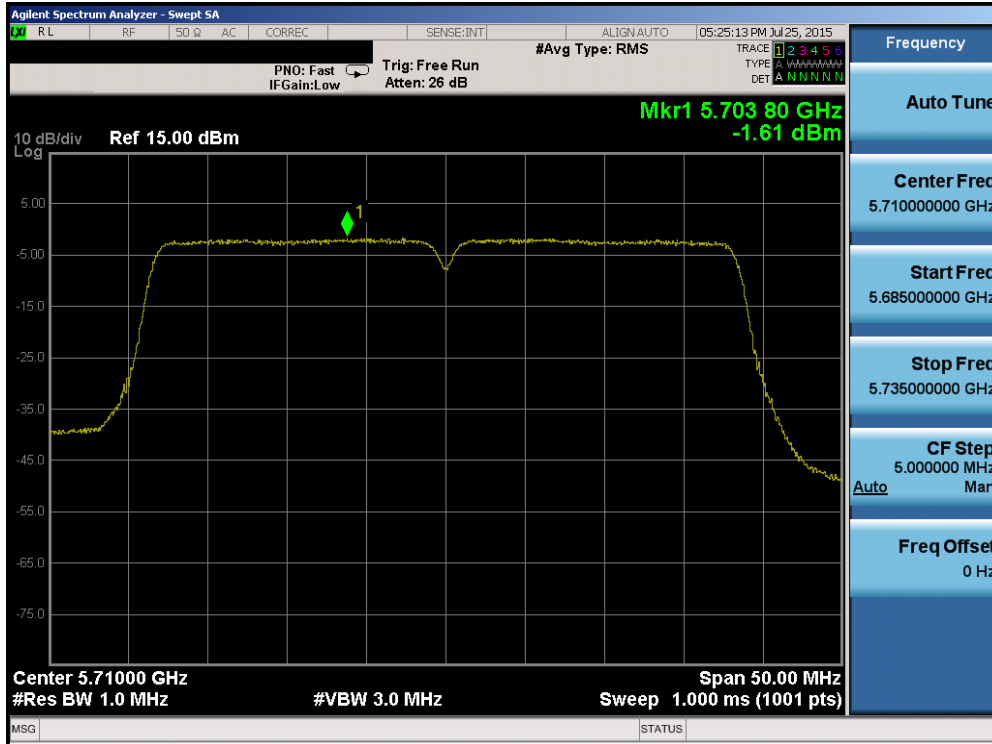


Plot 6-139. Power Spectral Density Plot (40MHz BW 802.11n (UNII Band 2C) – Ch. 102)

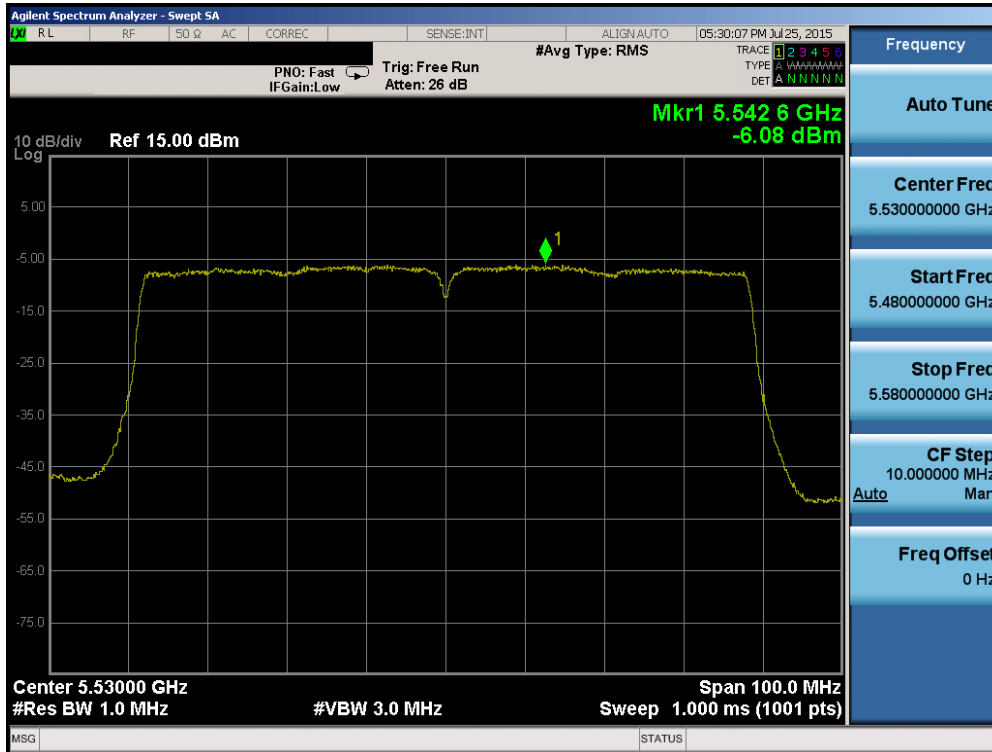


Plot 6-140. Power Spectral Density Plot (40MHz BW 802.11n (UNII Band 2C) – Ch. 110)

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet		Page 96 of 208

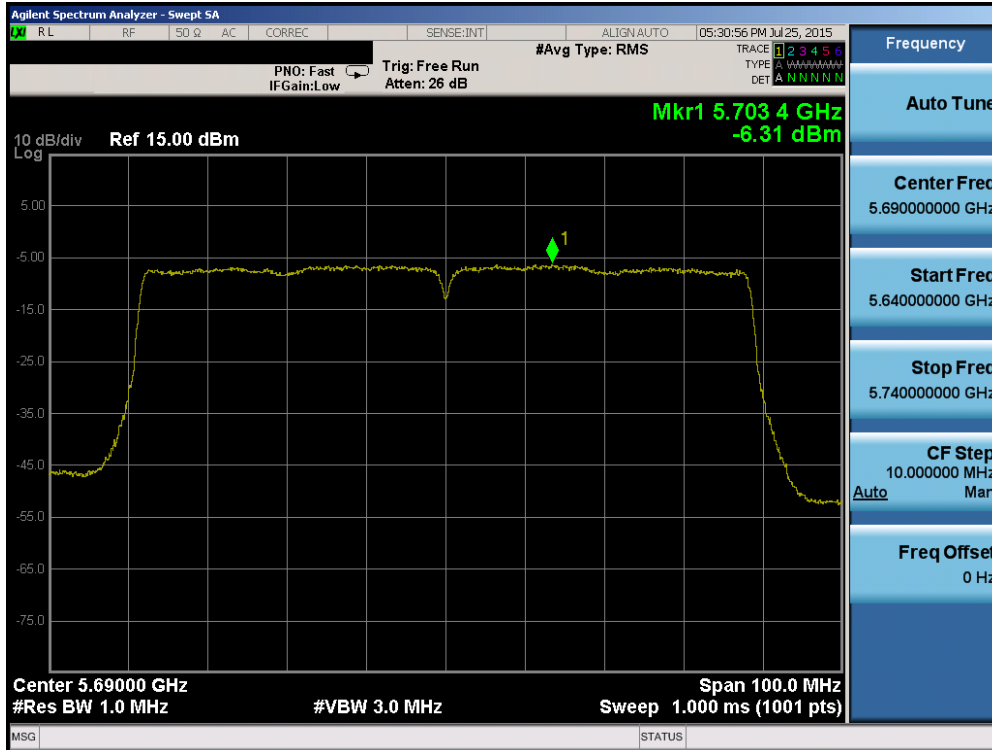


Plot 6-141. Power Spectral Density Plot (40MHz BW 802.11n (UNII Band 2C) – Ch. 142)



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

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet		Page 97 of 208

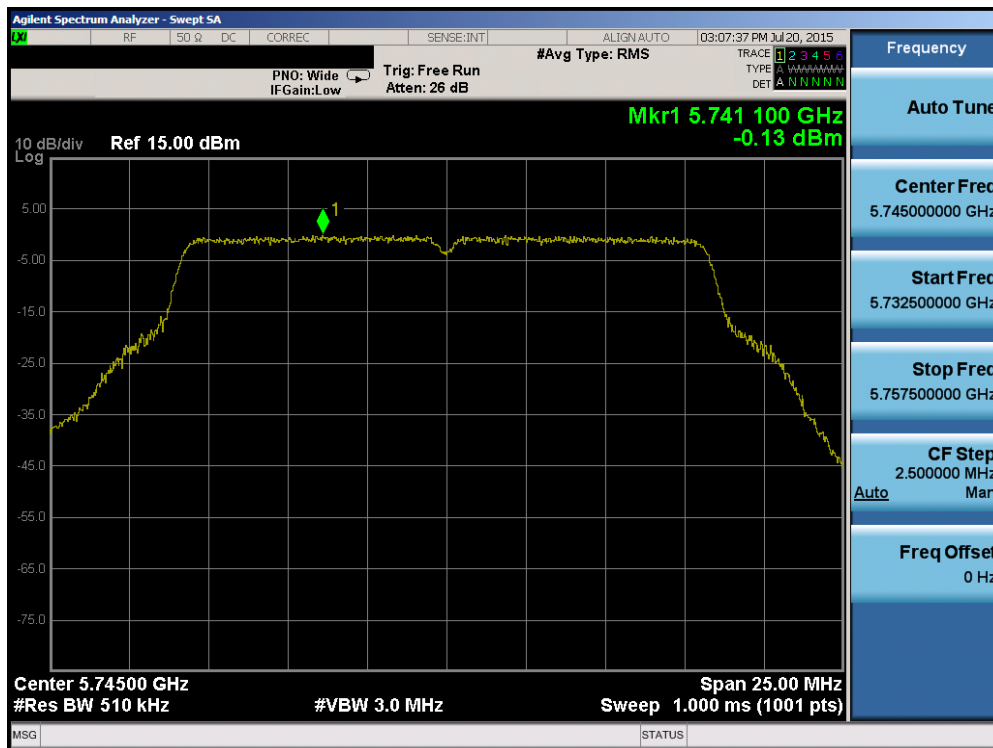


Plot 6-143. Power Spectral Density Plot (80MHz BW 802.11ac (UNII Band 2C) – Ch. 138)

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 98 of 208	

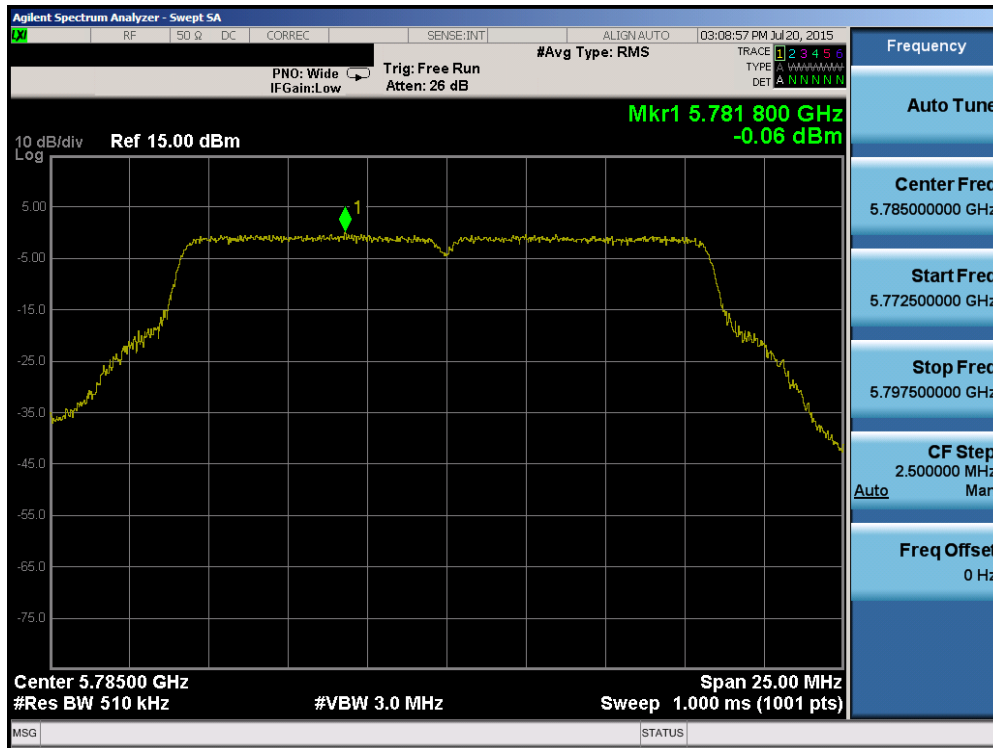
	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Measured Power Density [dBm]	Max Permissible Power Density [dBm/500kHz]	Margin [dB]	Pass / Fail
<b>Band 3</b>	5745	149	a	6	-0.13	30.0	-30.13	Pass
	5785	157	a	6	-0.06	30.0	-30.06	Pass
	5825	165	a	6	-0.47	30.0	-30.47	Pass
	5745	149	n (20MHz)	6.5/7.2 (MCS0)	-1.01	30.0	-31.01	Pass
	5785	157	n (20MHz)	6.5/7.2 (MCS0)	-0.66	30.0	-30.66	Pass
	5825	165	n (20MHz)	6.5/7.2 (MCS0)	-0.74	30.0	-30.74	Pass
	5755	151	n (40MHz)	13.5/15 (MCS0)	-4.16	30.0	-34.16	Pass
	5795	159	n (40MHz)	13.5/15 (MCS0)	-4.29	30.0	-34.29	Pass
5775	155	ac (80MHz)	29.3/32.5 (MCS0)	-8.78	30.0	-38.78	Pass	

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

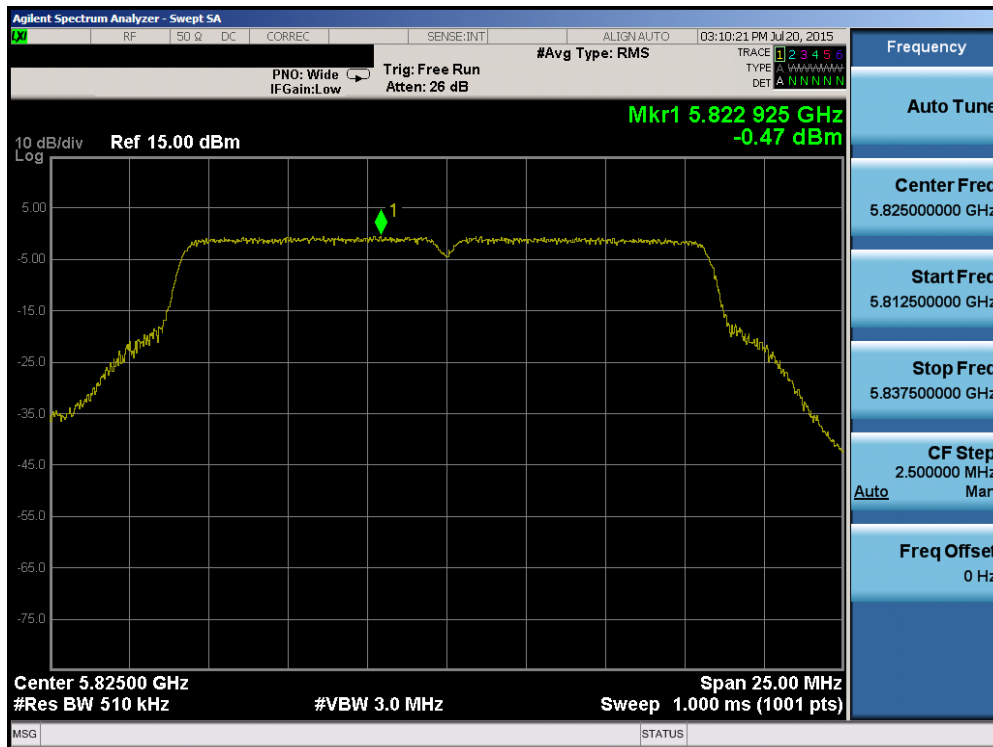


**Plot 6-144. Power Spectral Density Plot (802.11a (UNII Band 3) – Ch. 149)**

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet		Page 99 of 208

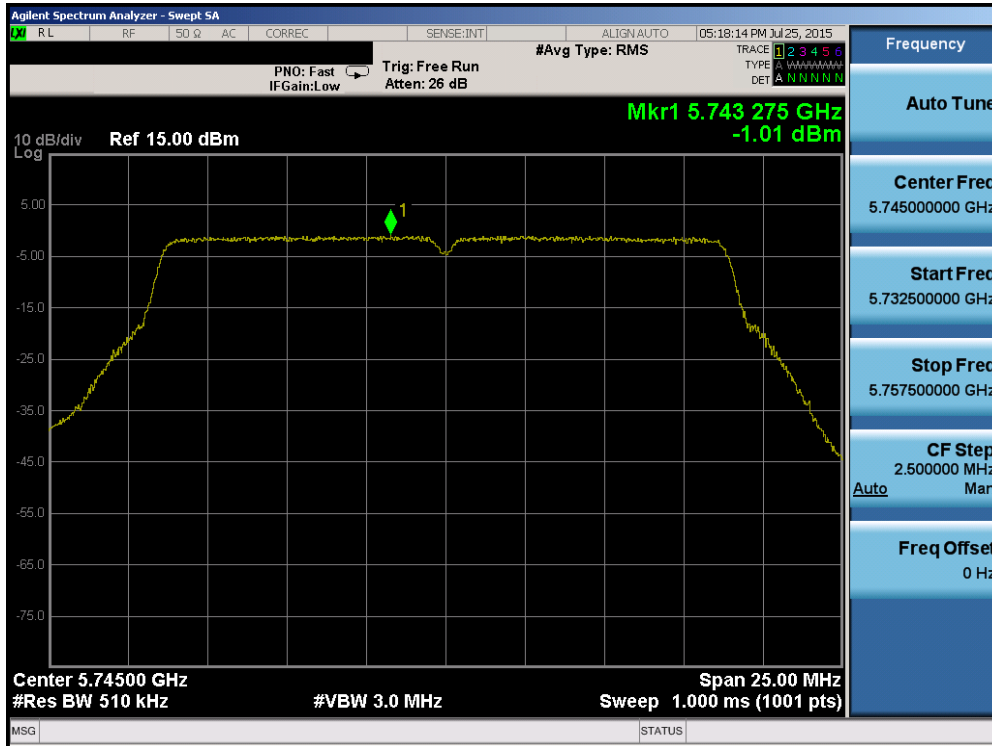


Plot 6-145. Power Spectral Density Plot (802.11a (UNII Band 3) – Ch. 157)

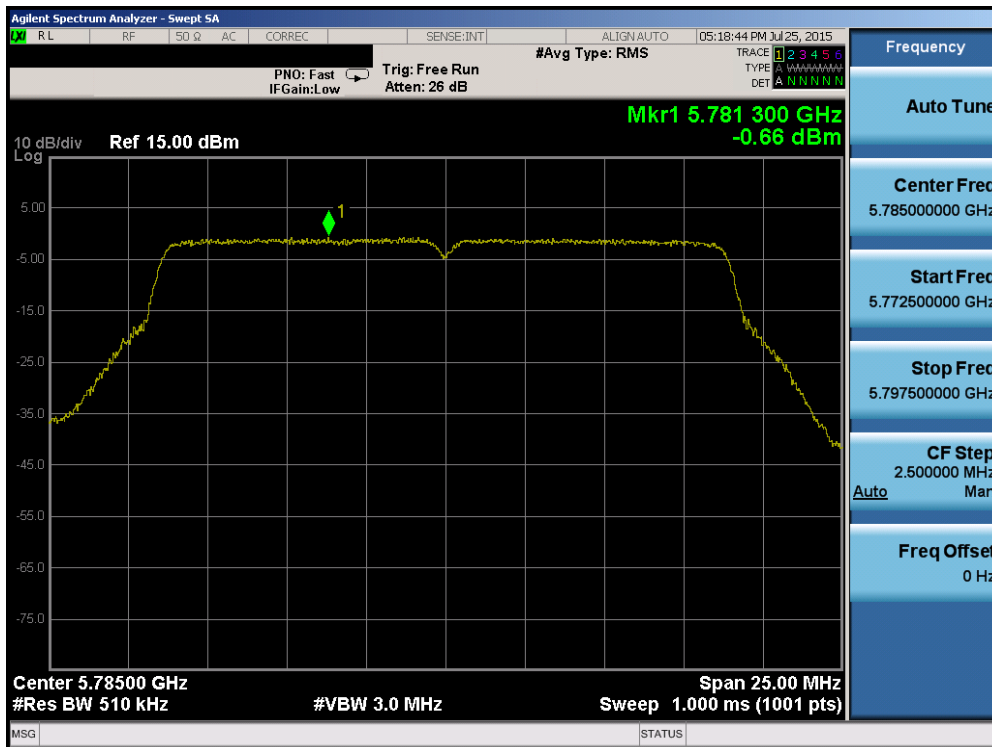


Plot 6-146. Power Spectral Density Plot (802.11a (UNII Band 3) – Ch. 165)

FCC ID: A3LSMT817P	<b>PCTEST</b> ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)	<b>SAMSUNG</b>	Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet		Page 100 of 208

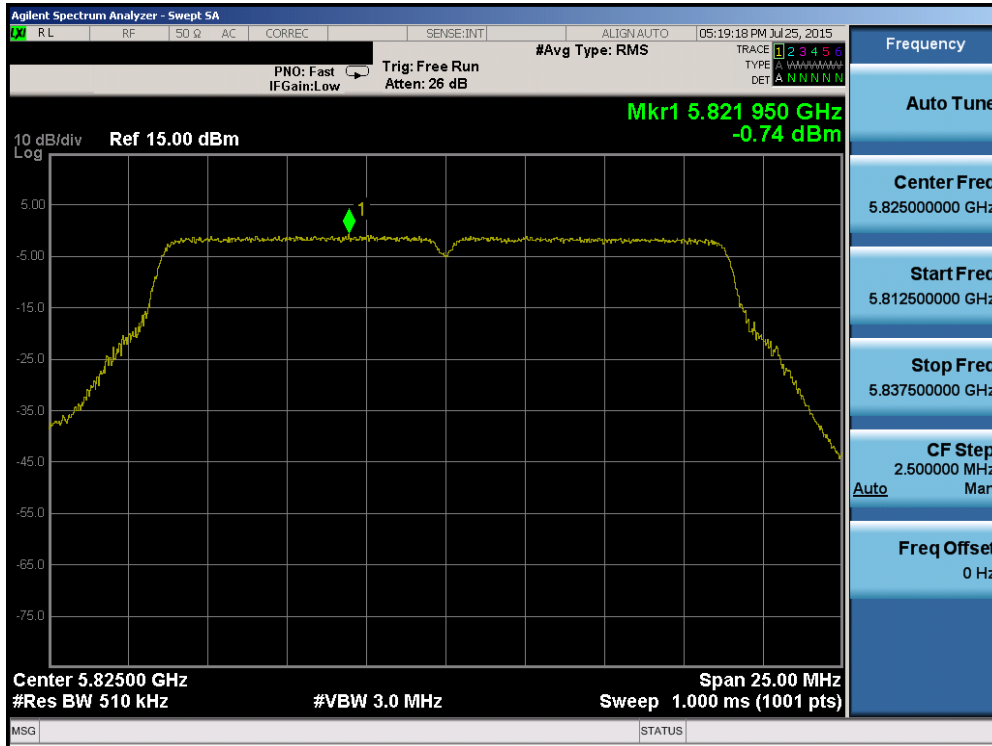


Plot 6-147. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 3) – Ch. 149)

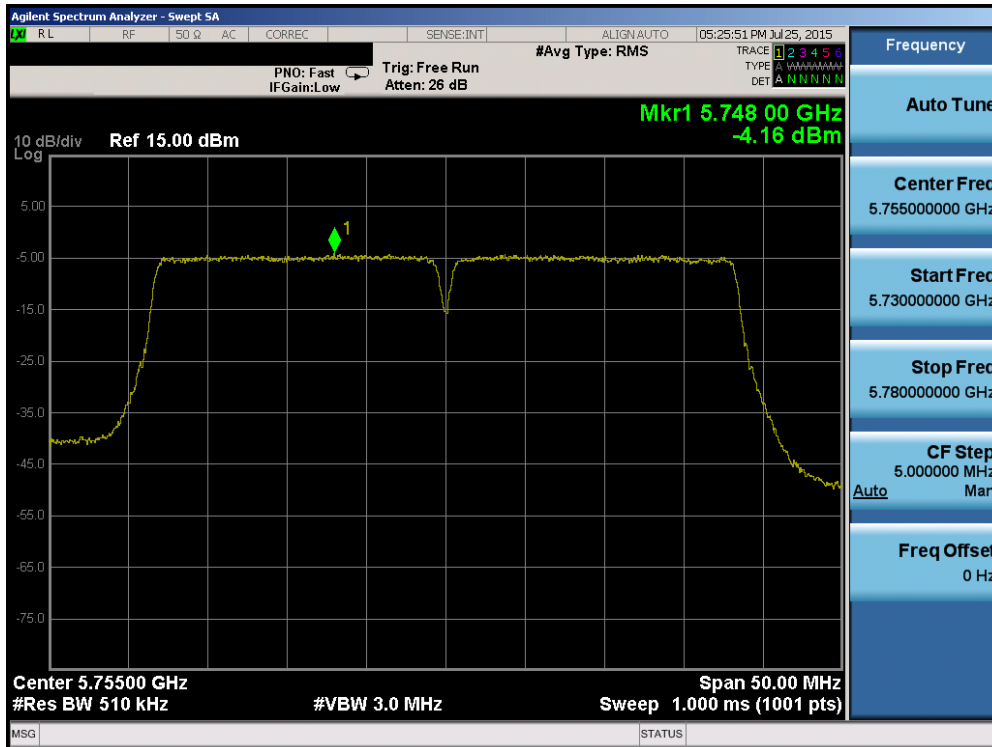


Plot 6-148. Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 3) – Ch. 157)



FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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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)

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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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)	0.86	0.75	3.82	11.0	-7.18	Pass
	5200	40	n (20MHz)	6.5/7.2 (MCS0)	1.30	1.22	4.27	11.0	-6.73	Pass
	5240	48	n (20MHz)	6.5/7.2 (MCS0)	1.49	1.65	4.58	11.0	-6.42	Pass
	5190	38	n (40MHz)	13.5/15 (MCS0)	-2.94	-2.64	0.23	11.0	-10.77	Pass
	5230	46	n (40MHz)	13.5/15 (MCS0)	-3.00	-2.76	0.13	11.0	-10.87	Pass
	5210	42	ac (80MHz)	29.3/32.5 (MCS0)	-6.37	-6.33	-3.34	11.0	-14.34	Pass
Band 2A	5260	52	n (20MHz)	6.5/7.2 (MCS0)	1.66	1.73	4.71	11.0	-6.29	Pass
	5280	56	n (20MHz)	6.5/7.2 (MCS0)	1.69	1.75	4.73	11.0	-6.27	Pass
	5320	64	n (20MHz)	6.5/7.2 (MCS0)	2.01	1.87	4.95	11.0	-6.05	Pass
	5270	54	n (40MHz)	13.5/15 (MCS0)	-2.75	-2.56	0.36	11.0	-10.64	Pass
	5310	62	n (40MHz)	13.5/15 (MCS0)	-2.47	-2.43	0.56	11.0	-10.44	Pass
	5290	58	ac (80MHz)	29.3/32.5 (MCS0)	-6.06	-6.00	-3.02	11.0	-14.02	Pass
Band 2C	5500	100	n (20MHz)	6.5/7.2 (MCS0)	1.82	1.96	4.90	11.0	-6.10	Pass
	5580	116	n (20MHz)	6.5/7.2 (MCS0)	1.29	2.04	4.70	11.0	-6.30	Pass
	5720	144	n (20MHz)	6.5/7.2 (MCS0)	1.16	1.92	4.57	11.0	-6.43	Pass
	5510	102	n (40MHz)	13.5/15 (MCS0)	-2.19	-1.57	1.14	11.0	-9.86	Pass
	5550	110	n (40MHz)	13.5/15 (MCS0)	-2.03	-1.60	1.20	11.0	-9.80	Pass
	5710	142	n (40MHz)	13.5/15 (MCS0)	-2.09	-1.61	1.17	11.0	-9.83	Pass
	5530	106	ac (80MHz)	29.3/32.5 (MCS0)	-5.77	-6.08	-2.91	11.0	-13.91	Pass
	5690	138	ac (80MHz)	29.3/32.5 (MCS0)	-5.90	-6.31	-3.09	11.0	-14.09	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)	-0.88	-1.01	2.07	30.0	-27.93	Pass
	5785	157	n (20MHz)	6.5/7.2 (MCS0)	-0.86	-0.66	2.25	30.0	-27.75	Pass
	5825	165	n (20MHz)	6.5/7.2 (MCS0)	-0.91	-0.74	2.19	30.0	-27.81	Pass
	5755	151	n (40MHz)	13.5/15 (MCS0)	-4.14	-4.16	-1.14	30.0	-31.14	Pass
	5795	159	n (40MHz)	13.5/15 (MCS0)	-4.28	-4.29	-1.27	30.0	-31.27	Pass
	5775	155	ac (80MHz)	29.3/32.5 (MCS0)	-7.60	-8.78	-5.14	30.0	-35.14	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 0.86 dBm for Antenna-1 and 0.75 dBm for Antenna-2.

$$\text{Antenna 1} + \text{Antenna 2} = \text{MIMO}$$

$$(0.86 \text{ dBm} + 0.75 \text{ dBm}) = (1.22 \text{ mW} + 1.19 \text{ mW}) = 2.41 \text{ mW} = 3.82 \text{ dBm}$$

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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)	5,179,999,915	-85	-0.00000164
100 %		- 30	5,179,999,789	-211	-0.00000407
100 %		- 20	5,179,999,819	-181	-0.00000349
100 %		- 10	5,180,000,095	95	0.00000183
100 %		0	5,179,999,707	-293	-0.00000566
100 %		+ 10	5,180,000,064	64	0.00000124
100 %		+ 20	5,180,000,138	138	0.00000266
100 %		+ 30	5,180,000,281	281	0.00000542
100 %		+ 40	5,179,999,922	-78	-0.00000151
100 %		+ 50	5,180,000,309	309	0.00000597
BATT. ENDPOINT	3.45	+ 20	5,180,000,030	30	0.00000058

**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)	5,260,000,171	171	0.00000325
100 %		- 30	5,260,000,009	9	0.00000017
100 %		- 20	5,260,000,104	104	0.00000198
100 %		- 10	5,260,000,010	10	0.00000019
100 %		0	5,259,999,890	-110	-0.00000209
100 %		+ 10	5,260,000,066	66	0.00000125
100 %		+ 20	5,259,999,897	-103	-0.00000196
100 %		+ 30	5,260,000,049	49	0.00000093
100 %		+ 40	5,259,999,884	-116	-0.00000221
100 %		+ 50	5,259,999,893	-107	-0.00000203
BATT. ENDPOINT	3.45	+ 20	5,259,999,924	-76	-0.00000144

**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)	5,499,999,823	-177	-0.00000322
100 %		- 30	5,499,999,876	-124	-0.00000225
100 %		- 20	5,499,999,697	-303	-0.00000551
100 %		- 10	5,499,999,613	-387	-0.00000704
100 %		0	5,500,000,005	5	0.00000009
100 %		+ 10	5,499,999,997	-3	-0.00000005
100 %		+ 20	5,500,000,158	158	0.00000287
100 %		+ 30	5,499,999,701	-299	-0.00000544
100 %		+ 40	5,500,000,005	5	0.00000009
100 %		+ 50	5,500,000,058	58	0.00000105
BATT. ENDPOINT		3.45	+ 20	5,499,999,897	-103

**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)	5,745,000,258	258	0.00000449
100 %		- 30	5,745,000,198	198	0.00000345
100 %		- 20	5,745,000,285	285	0.00000496
100 %		- 10	5,745,000,238	238	0.00000414
100 %		0	5,744,999,907	-93	-0.00000162
100 %		+ 10	5,744,999,619	-381	-0.00000663
100 %		+ 20	5,745,000,053	53	0.00000092
100 %		+ 30	5,745,000,064	64	0.00000111
100 %		+ 40	5,745,000,184	184	0.00000320
100 %		+ 50	5,745,000,244	244	0.00000425
BATT. ENDPOINT	3.45	+ 20	5,744,999,960	-40	-0.00000070

**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 – Above 1GHz

§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, 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), and 802.11ac (80MHz)), and modulations/data rates were investigated among all UNII bands. Only the radiated emissions of the configuration that produced the worst case emissions are reported in this section.

***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 [ $\mu\text{V/m}$ ]	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  $\geq 2 \times \text{span/RBW}$ )
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

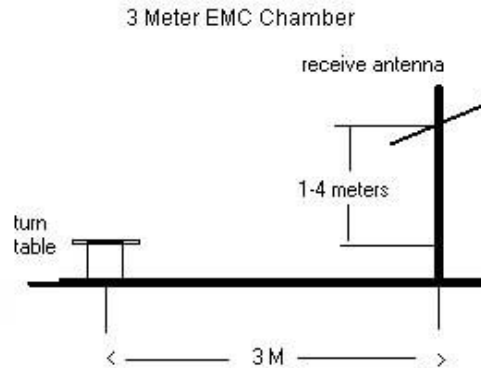
FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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**Peak Measurements below 1GHz**

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 dB $\mu$ V/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions of 68.2dB $\mu$ V/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. 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**

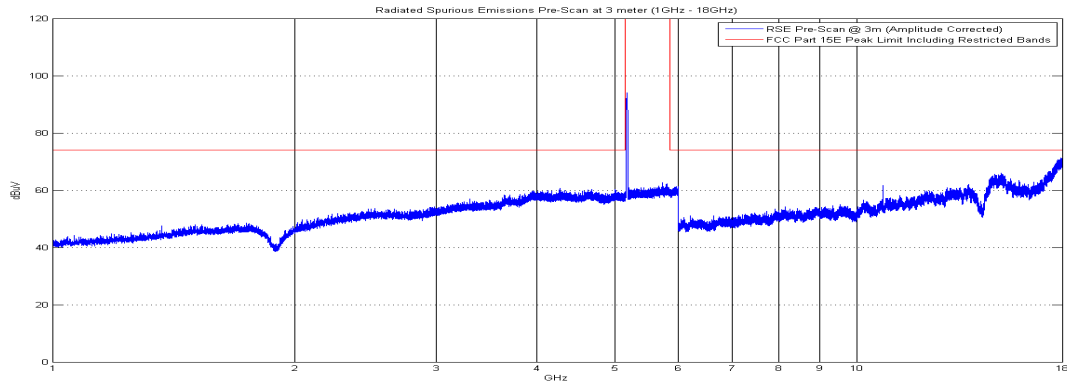
- Field Strength Level  $_{[dB\mu V/m]} = \text{Analyzer Level }_{[dBm]} + 107 + \text{AFCL }_{[dB/m]}$
- $\text{AFCL }_{[dB/m]} = \text{Antenna Factor }_{[dB/m]} + \text{Cable Loss }_{[dB]}$
- $\text{Margin }_{[dB]} = \text{Field Strength Level }_{[dB\mu V/m]} - \text{Limit }_{[dB\mu V/m]}$

### **Radiated Band Edge Measurement Offset**

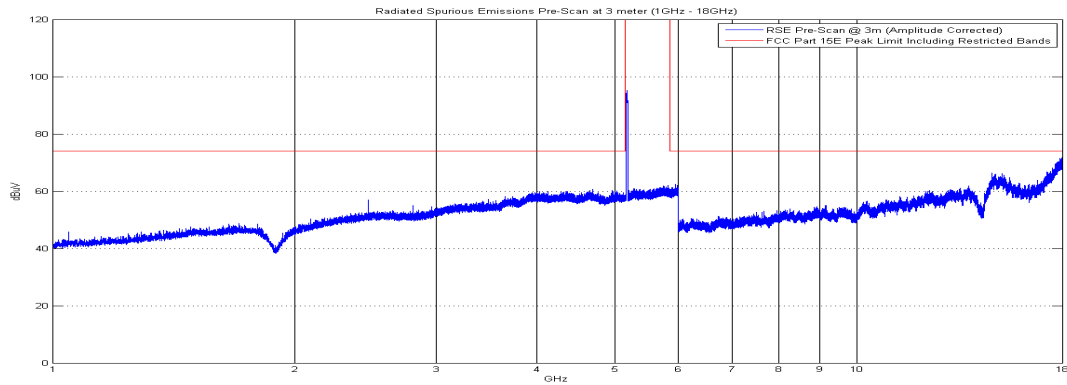
- The amplitude offset shown in the radiated restricted band edge plots in Section 6.8 was calculated using the formula:  
Offset (dB) = (Antenna Factor + Cable Loss + 10 dB Attenuator) – Pre-amplifier Gain

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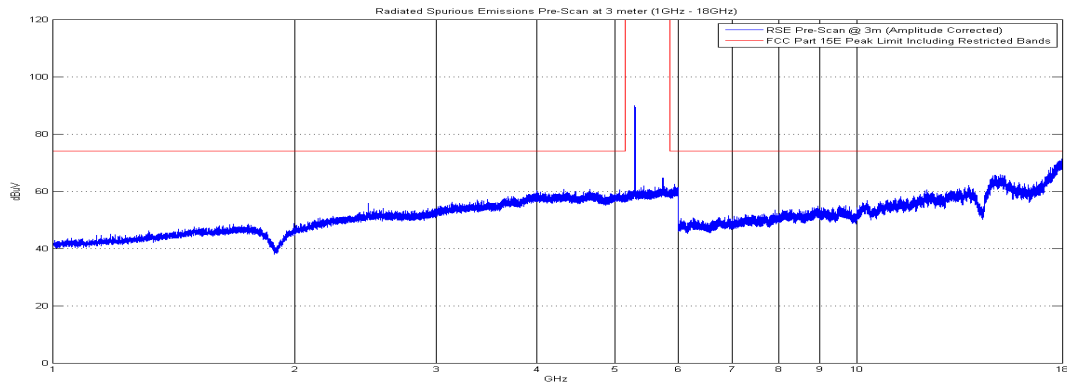
## 6.7.1 Antenna-1 Radiated Spurious Emission Measurements



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

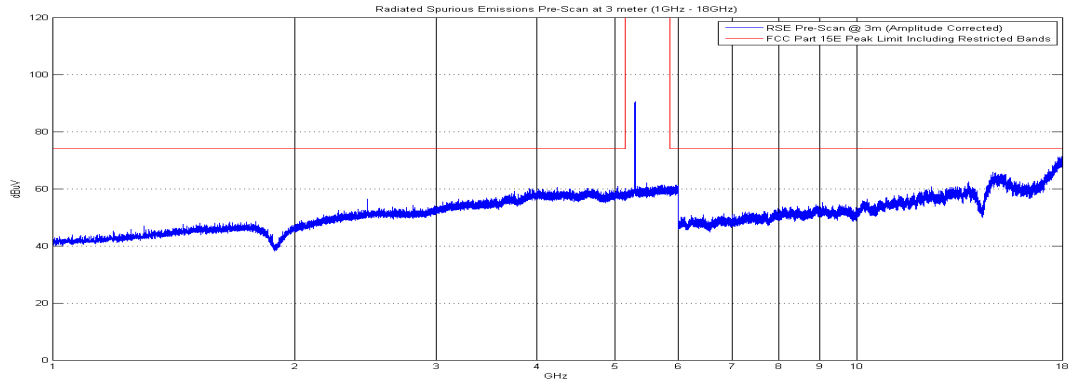


Plot 6-154. Radiated Spurious Plot above 1GHz (802.11a – U1 Ch. 40, Ant. Pol. V)

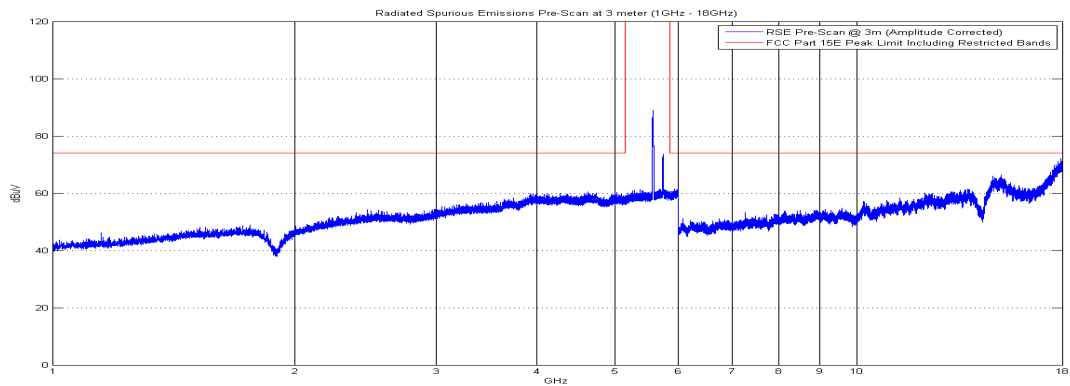


Plot 6-155. Radiated Spurious Plot above 1GHz (802.11a – U2A Ch. 56, Ant. Pol. H)

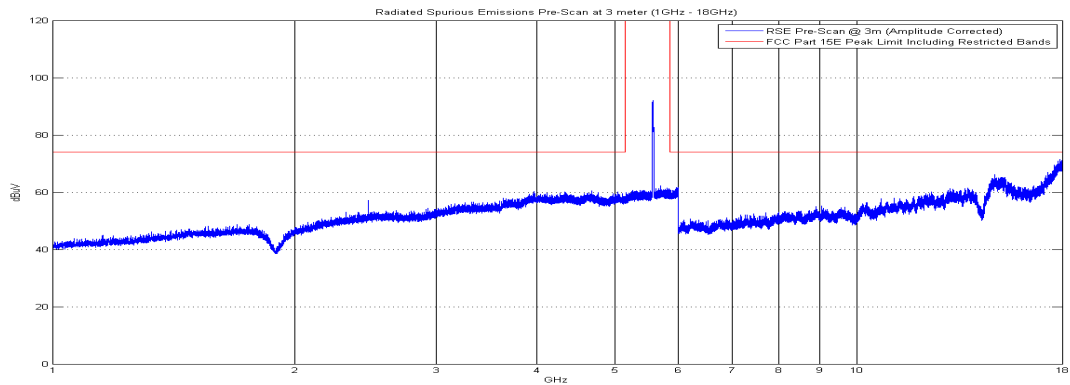
FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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**Plot 6-156. Radiated Spurious Plot above 1GHz (802.11a – U2A Ch. 56, Ant. Pol. V)**

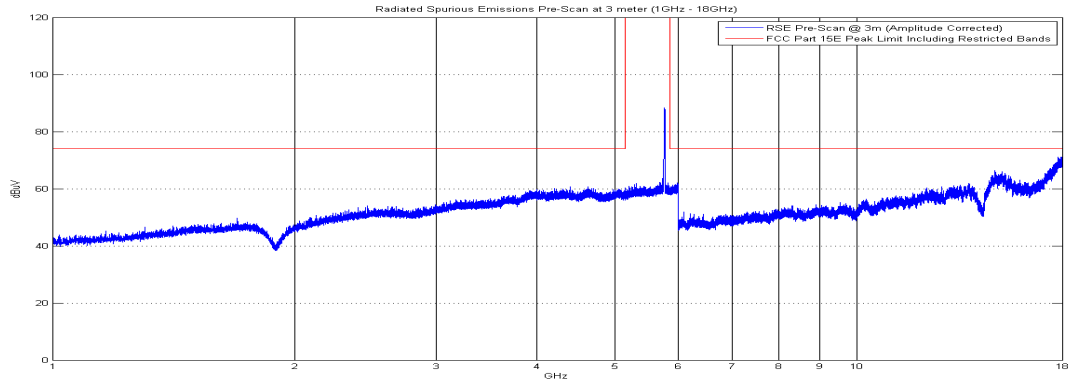


**Plot 6-157. Radiated Spurious Plot above 1GHz (802.11a – U2C Ch. 116, Ant. Pol. H)**

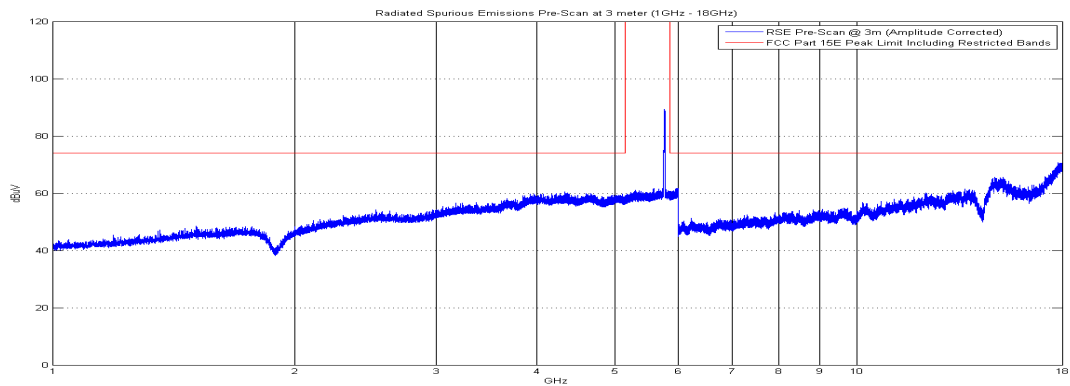


**Plot 6-158. Radiated Spurious Plot above 1GHz (802.11a – U2C Ch. 116, Ant. Pol. V)**



<b>FCC ID:</b> A3LSMT817P		<b>FCC Pt. 15.407 802.11a/n/ac UNI MEASUREMENT REPORT (CERTIFICATION)</b>		<b>Reviewed by:</b> Quality Manager
<b>Test Report S/N:</b> 0Y1507071385.A3L	<b>Test Dates:</b> 7/7 - 7/29/2015	<b>EUT Type:</b> Portable Tablet	Page 113 of 208	



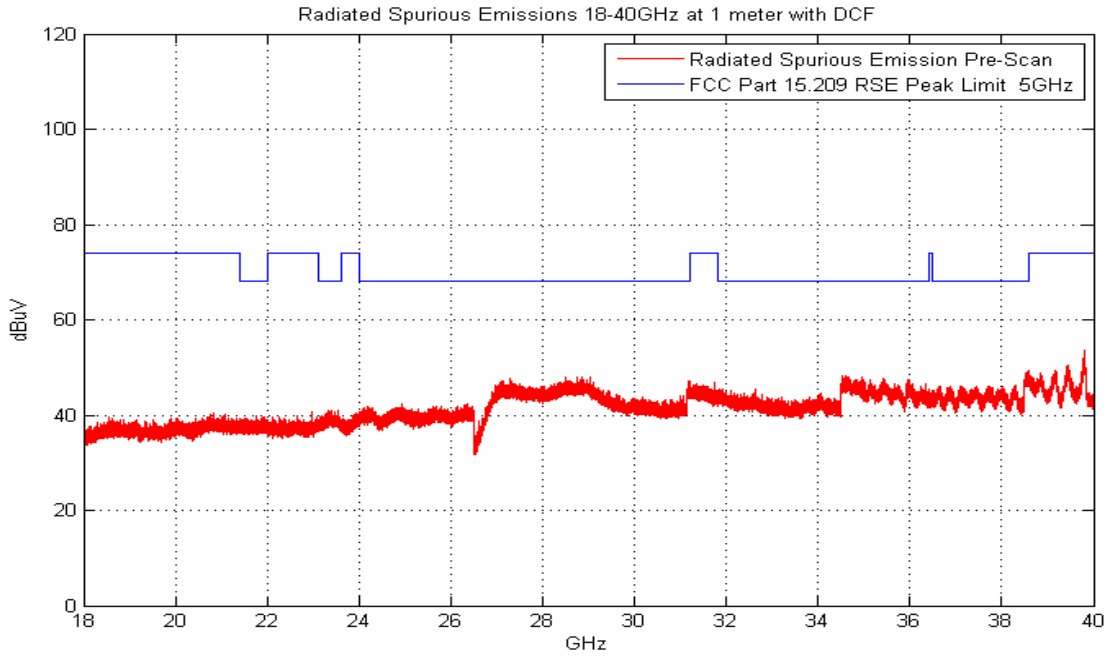
**Plot 6-159. Radiated Spurious Plot above 1GHz (802.11a – U3 Ch. 157, Ant. Pol. H)**



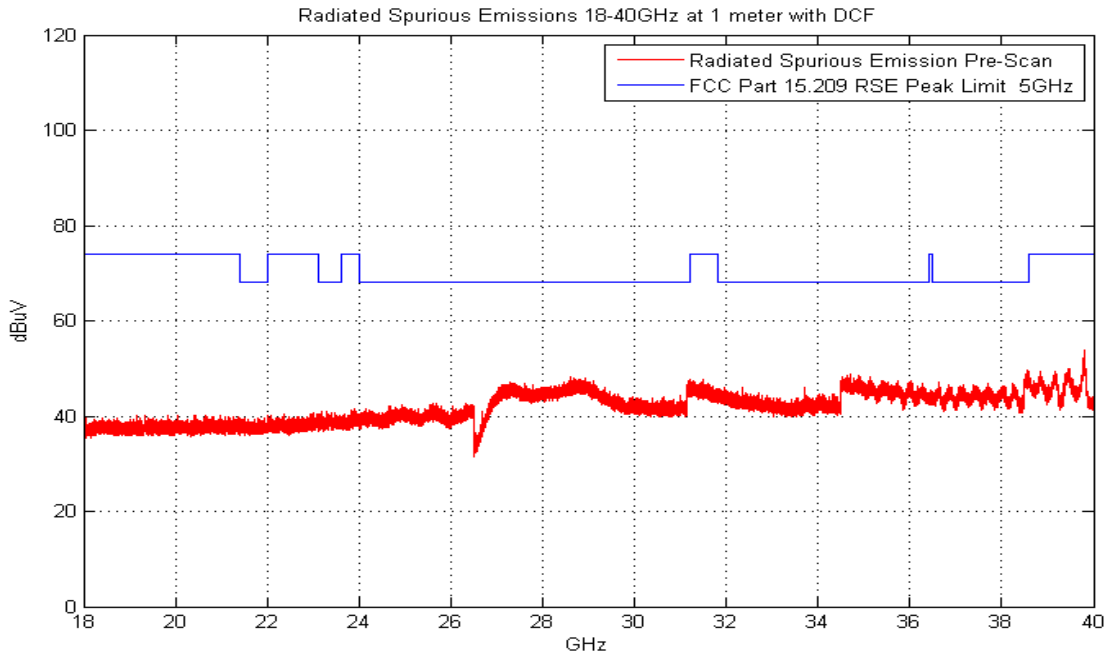
**Plot 6-160. Radiated Spurious Plot above 1GHz (802.11a – U3 Ch. 157, Ant. Pol. V)**

<b>FCC ID:</b> A3LSMT817P		<b>FCC Pt. 15.407 802.11a/n/ac UNI MEASUREMENT REPORT (CERTIFICATION)</b>		<b>Reviewed by:</b> Quality Manager
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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	-99.40	Peak	H	48.09	0.00	55.70	68.20	-12.50
* 15540.00	-113.21	Average	H	50.92	0.00	44.71	53.98	-9.27
* 15540.00	-102.08	Peak	H	50.92	0.00	55.84	73.98	-18.14
* 20720.00	-109.14	Average	V	44.39	-9.54	32.71	53.98	-21.27
* 20720.00	-97.93	Peak	V	44.39	-9.54	43.92	73.98	-30.06
25900.00	-97.87	Peak	V	45.11	-9.54	44.70	68.20	-23.50

**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	-99.76	Peak	H	48.10	0.00	55.33	68.20	-12.87
* 15600.00	-113.55	Average	H	50.42	0.00	43.87	53.98	-10.11
* 15600.00	-102.11	Peak	H	50.42	0.00	55.31	73.98	-18.67
* 20800.00	-112.23	Average	V	44.39	-9.54	29.62	53.98	-24.36
* 20800.00	-100.25	Peak	V	44.39	-9.54	41.60	73.98	-32.38
26000.00	-102.01	Peak	V	45.12	-9.54	40.56	68.20	-27.64

**Table 6-29. Radiated Measurements**

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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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	-99.88	Peak	H	47.93	0.00	55.06	68.20	-13.14
* 15720.00	-113.84	Average	H	49.56	0.00	42.72	53.98	-11.26
* 15720.00	-102.49	Peak	H	49.56	0.00	54.07	73.98	-19.91
* 20960.00	-108.32	Average	V	44.31	-9.54	33.45	53.98	-20.53
* 20960.00	-98.54	Peak	V	44.31	-9.54	43.23	73.98	-30.75
26200.00	-98.73	Peak	V	45.01	-9.54	43.74	68.20	-24.46

**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	-100.47	Peak	H	47.98	0.00	54.51	68.20	-13.69
* 15780.00	-113.81	Average	H	49.39	0.00	42.58	53.98	-11.40
* 15780.00	-102.99	Peak	H	49.39	0.00	53.40	73.98	-20.58
* 21040.00	-113.02	Average	V	44.29	-9.54	28.72	53.98	-25.26
* 21040.00	-102.08	Peak	V	44.29	-9.54	39.66	73.98	-34.32
26300.00	-98.62	Peak	V	45.00	-9.54	43.84	68.20	-24.36

**Table 6-31. Radiated Measurements**

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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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	-100.23	Peak	H	48.15	0.00	54.92	68.20	-13.28
* 15840.00	-114.05	Average	H	49.69	0.00	42.64	53.98	-11.34
* 15840.00	-102.47	Peak	H	49.69	0.00	54.22	73.98	-19.76
* 21120.00	-113.13	Average	V	44.28	-9.54	28.61	53.98	-25.37
* 21120.00	-102.03	Peak	V	44.28	-9.54	39.71	73.98	-34.27
26400.00	-98.67	Peak	V	45.02	-9.54	43.81	68.20	-24.39

**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	-110.69	Average	H	48.38	0.00	44.69	53.98	-9.29
* 10640.00	-100.31	Peak	H	48.38	0.00	55.07	73.98	-18.91
* 15960.00	-113.88	Average	H	50.76	0.00	43.87	53.98	-10.11
* 15960.00	-103.07	Peak	H	50.76	0.00	54.68	73.98	-19.30
* 21280.00	-113.18	Average	V	44.26	-9.54	28.54	53.98	-25.44
* 21280.00	-102.14	Peak	V	44.26	-9.54	39.58	73.98	-34.40
26600.00	-103.40	Peak	V	47.61	-9.54	41.67	68.20	-26.53

**Table 6-33. Radiated Measurements**

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 118 of 208	

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	-109.73	Average	H	48.77	0.00	46.04	53.98	-7.94
* 11000.00	-99.17	Peak	H	48.77	0.00	56.60	73.98	-17.38
16500.00	-101.45	Peak	H	51.83	0.00	57.38	68.20	-10.82
22000.00	-101.02	Peak	V	44.50	-9.54	40.93	68.20	-27.27
27500.00	-104.63	Peak	V	47.97	-9.54	40.80	68.20	-27.40

**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	-109.57	Average	H	48.65	0.00	46.08	53.98	-7.90
* 11160.00	-98.79	Peak	H	48.65	0.00	56.86	73.98	-17.12
16740.00	-101.91	Peak	H	52.92	0.00	58.01	68.20	-10.19
* 22320.00	-112.30	Average	V	44.56	-9.54	29.72	53.98	-24.26
* 22320.00	-101.39	Peak	V	44.56	-9.54	40.63	73.98	-33.35
27900.00	-105.40	Peak	V	48.08	-9.54	40.14	68.20	-28.06

**Table 6-35. Radiated Measurements**

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6 Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 57005720MHz  
 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	-110.16	Average	H	49.44	0.00	46.28	53.98	-7.70
* 11440.00	-98.94	Peak	H	49.44	0.00	57.50	73.98	-16.48
17160.00	-101.98	Peak	H	54.51	0.00	59.53	68.20	-8.67
* 22880.00	-112.24	Average	V	44.61	-9.54	29.83	53.98	-24.15
* 22880.00	-101.40	Peak	V	44.61	-9.54	40.67	73.98	-33.31
28600.00	-105.45	Peak	V	48.29	-9.54	40.30	68.20	-27.90

**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	-109.59	Average	H	49.78	0.00	47.20	53.98	-6.78
* 11490.00	-99.06	Peak	H	49.78	0.00	57.73	73.98	-16.25
17235.00	-101.63	Peak	H	56.16	0.00	61.53	68.20	-6.67
* 22980.00	-113.12	Average	V	44.68	-9.54	29.02	53.98	-24.96
* 22980.00	-101.34	Peak	V	44.68	-9.54	40.80	73.98	-33.18
28725.00	-104.78	Peak	V	48.26	-9.54	40.94	68.20	-27.26

**Table 6-37. Radiated Measurements**

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 120 of 208	

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	-109.99	Average	H	49.77	0.00	46.78	53.98	-7.20
* 11570.00	-98.56	Peak	H	49.77	0.00	58.21	73.98	-15.77
17355.00	-101.75	Peak	H	56.36	0.00	61.61	68.20	-6.59
23140.00	-100.31	Peak	V	44.75	-9.54	41.90	68.20	-26.30
28925.00	-105.23	Peak	V	48.29	-9.54	40.52	68.20	-27.68

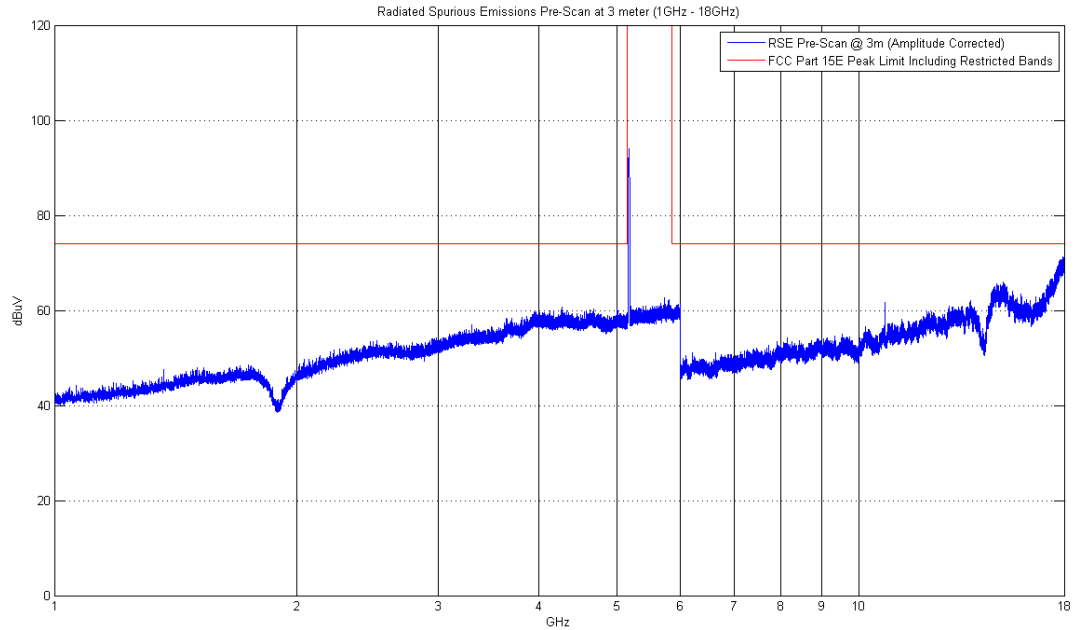
**Table 6-38. Radiated Measurements**

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

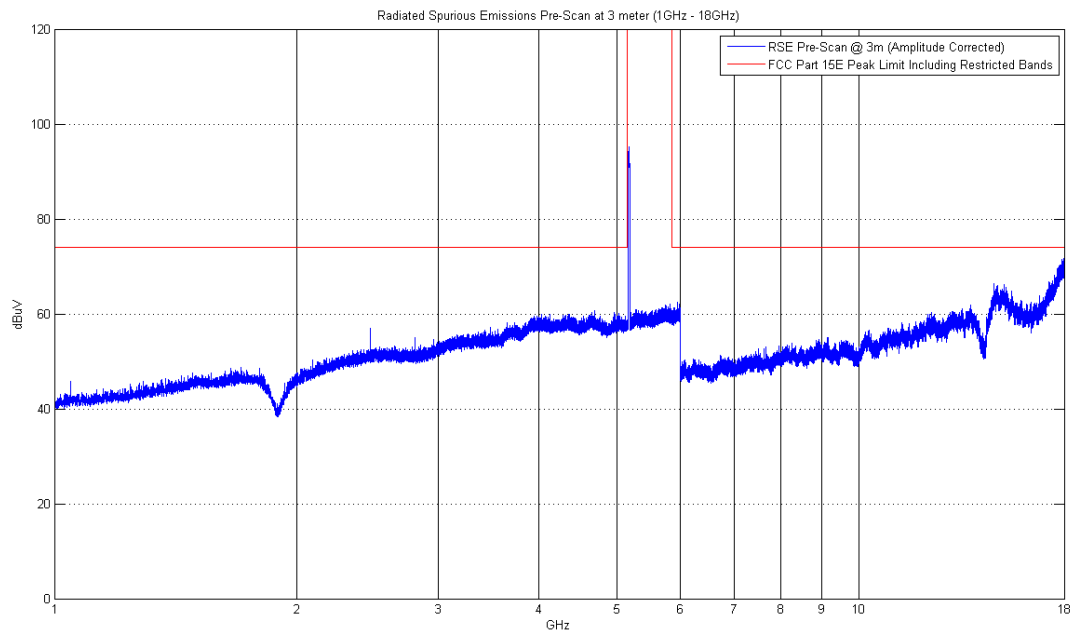
Frequency [MHz]	Analyzer Level [dBm]	Detector	Ant. Pol. [H/V]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
* 11650.00	-110.05	Average	H	49.72	0.00	46.67	53.98	-7.31
* 11650.00	-98.55	Peak	H	49.72	0.00	58.17	73.98	-15.81
17475.00	-101.67	Peak	H	56.47	0.00	61.80	68.20	-6.40
23300.00	-100.07	Peak	V	44.75	-9.54	42.13	68.20	-26.07
29125.00	-105.10	Peak	V	48.28	-9.54	40.65	68.20	-27.55

**Table 6-39. Radiated Measurements**

## 6.7.2 Antenna-2 Radiated Spurious Emission Measurements

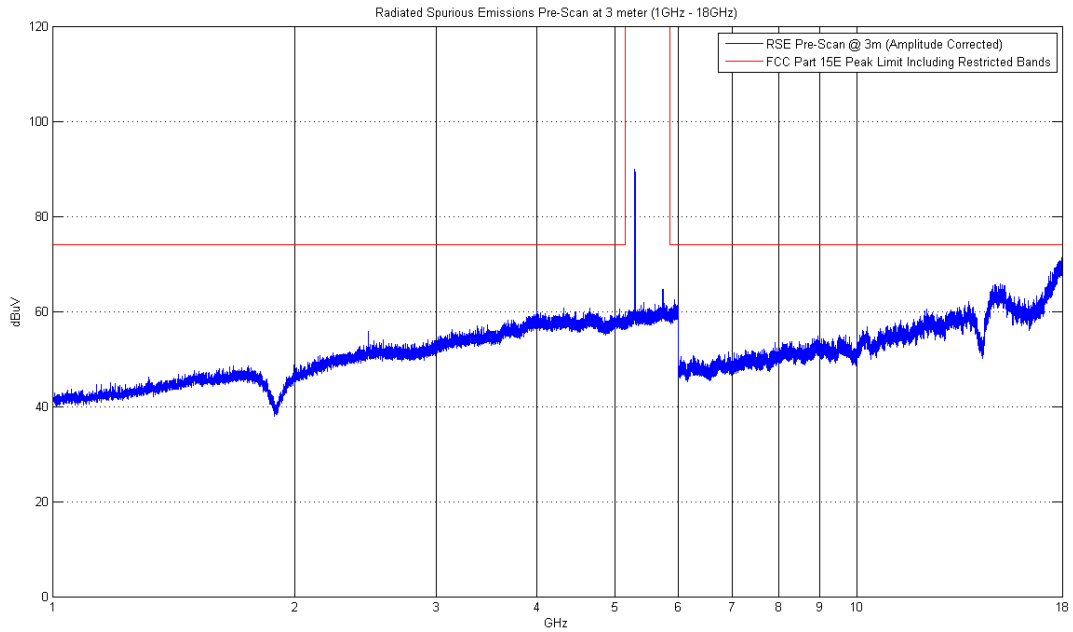


**Plot 6-163. Radiated Spurious Plot above 1GHz (802.11a – U1 Ch. 40, Ant. Pol. H)**

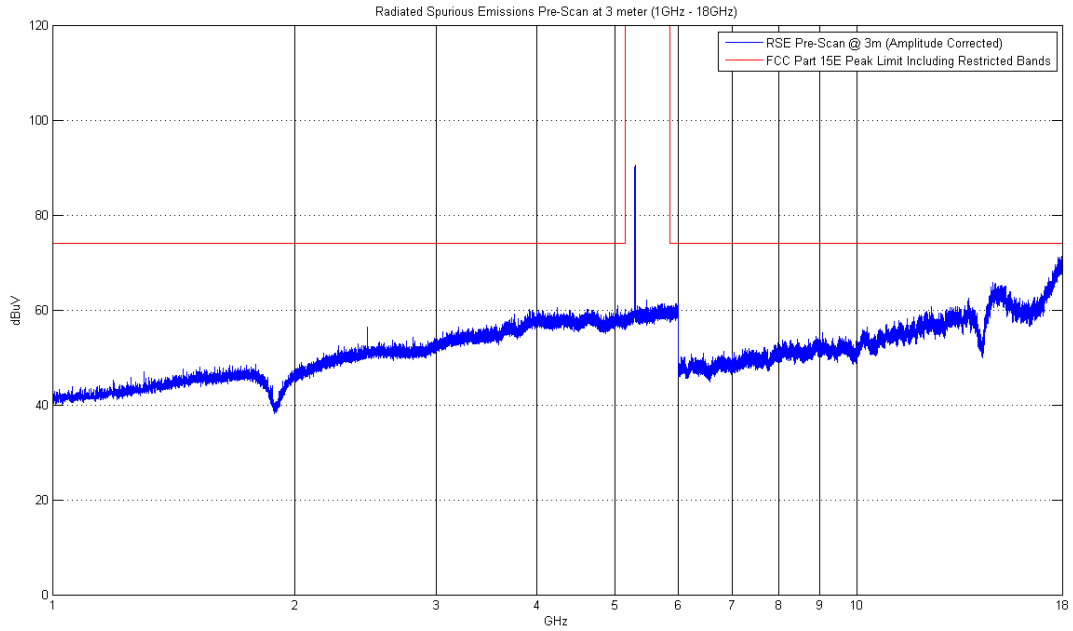


**Plot 6-164. Radiated Spurious Plot above 1GHz (802.11a – U1 Ch. 40, Ant. Pol. V)**

<b>FCC ID:</b> A3LSMT817P		<b>FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)</b>		<b>Reviewed by:</b> Quality Manager
<b>Test Report S/N:</b> 0Y1507071385.A3L	<b>Test Dates:</b> 7/7 - 7/29/2015	<b>EUT Type:</b> Portable Tablet	Page 122 of 208	

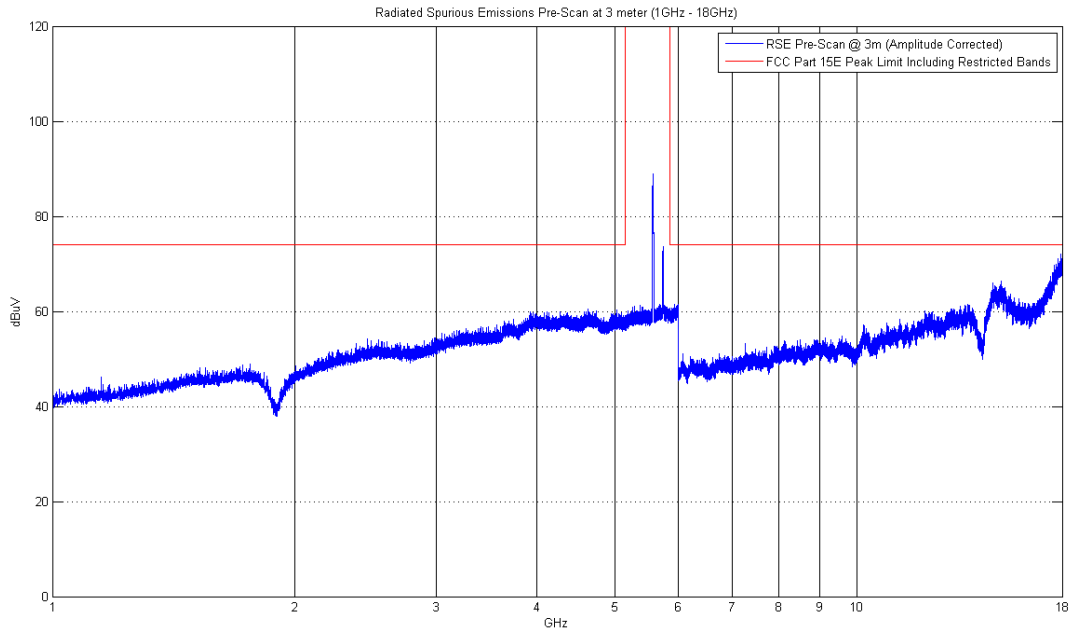


**Plot 6-165. Radiated Spurious Plot above 1GHz (802.11a – U2A Ch. 56, Ant. Pol. H)**

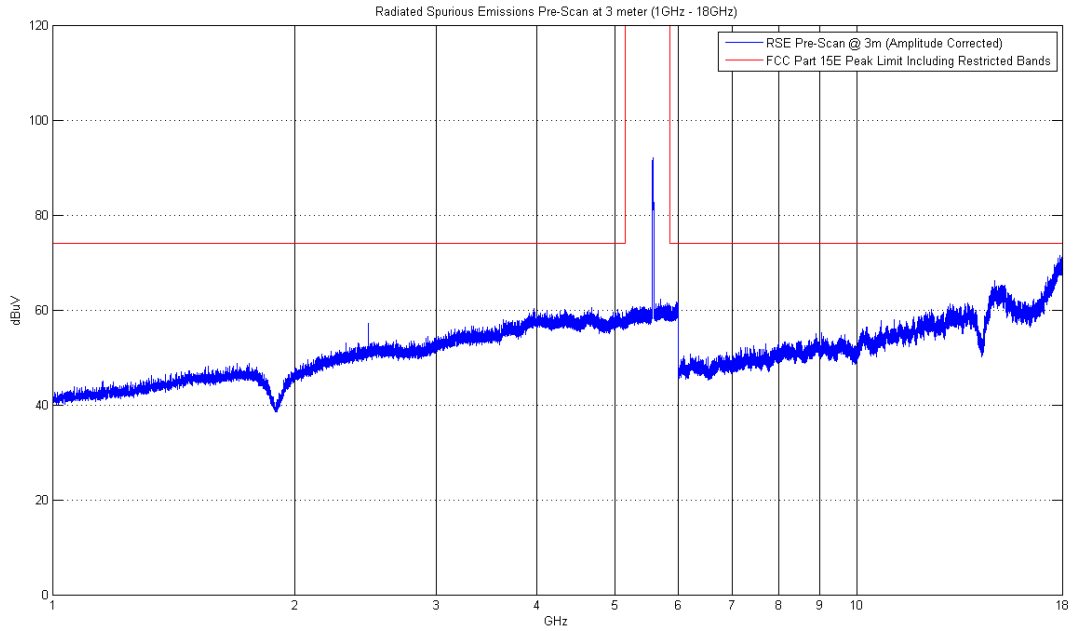


**Plot 6-166. Radiated Spurious Plot above 1GHz (802.11a – U2A Ch. 56, Ant. Pol. V)**

<b>FCC ID:</b> A3LSMT817P		<b>FCC Pt. 15.407 802.11a/n/ac UNI MEASUREMENT REPORT (CERTIFICATION)</b>		<b>Reviewed by:</b> Quality Manager
<b>Test Report S/N:</b> 0Y1507071385.A3L	<b>Test Dates:</b> 7/7 - 7/29/2015	<b>EUT Type:</b> Portable Tablet	Page 123 of 208	

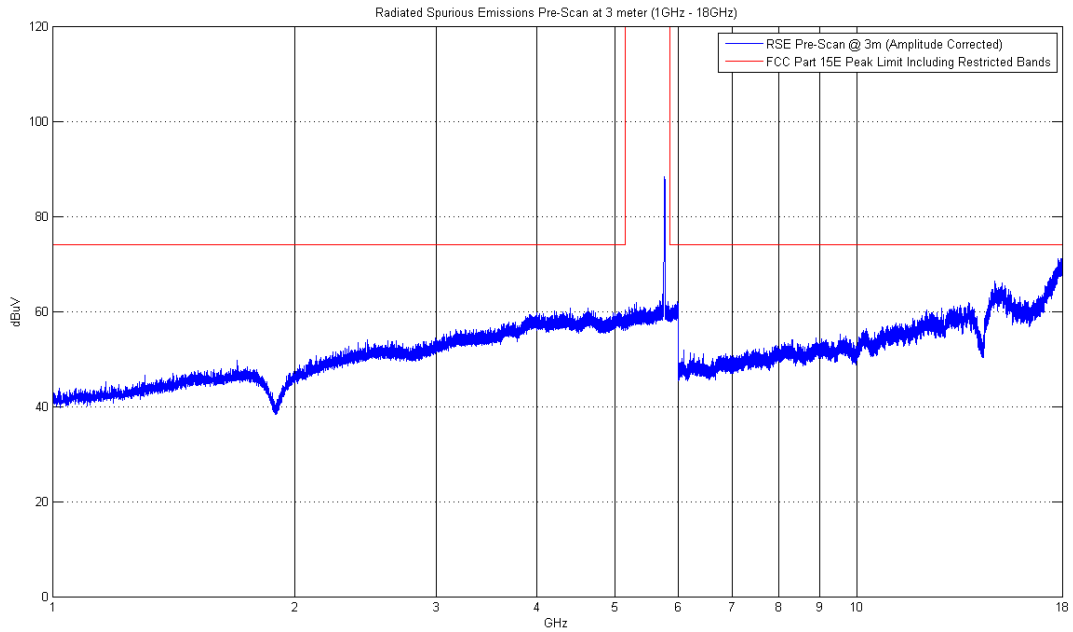


**Plot 6-167. Radiated Spurious Plot above 1GHz (802.11a – U2C Ch. 116, Ant. Pol. H)**

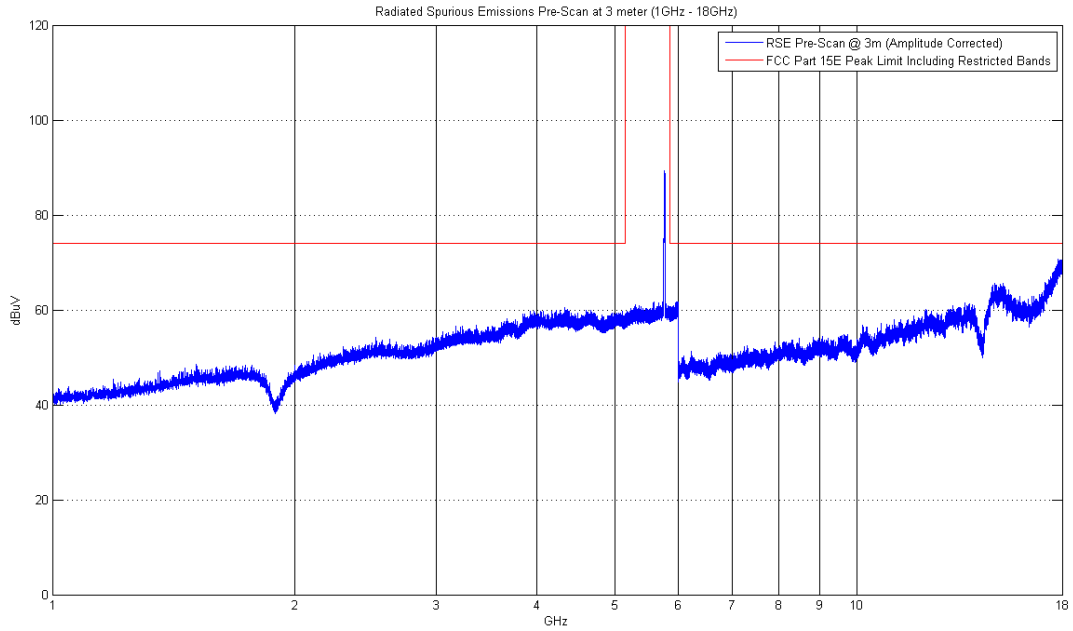


**Plot 6-168. Radiated Spurious Plot above 1GHz (802.11a – U2C Ch. 116, Ant. Pol. V)**

<b>FCC ID:</b> A3LSMT817P		<b>FCC Pt. 15.407 802.11a/n/ac UNI MEASUREMENT REPORT (CERTIFICATION)</b>		<b>Reviewed by:</b> Quality Manager
<b>Test Report S/N:</b> 0Y1507071385.A3L	<b>Test Dates:</b> 7/7 - 7/29/2015	<b>EUT Type:</b> Portable Tablet	Page 124 of 208	



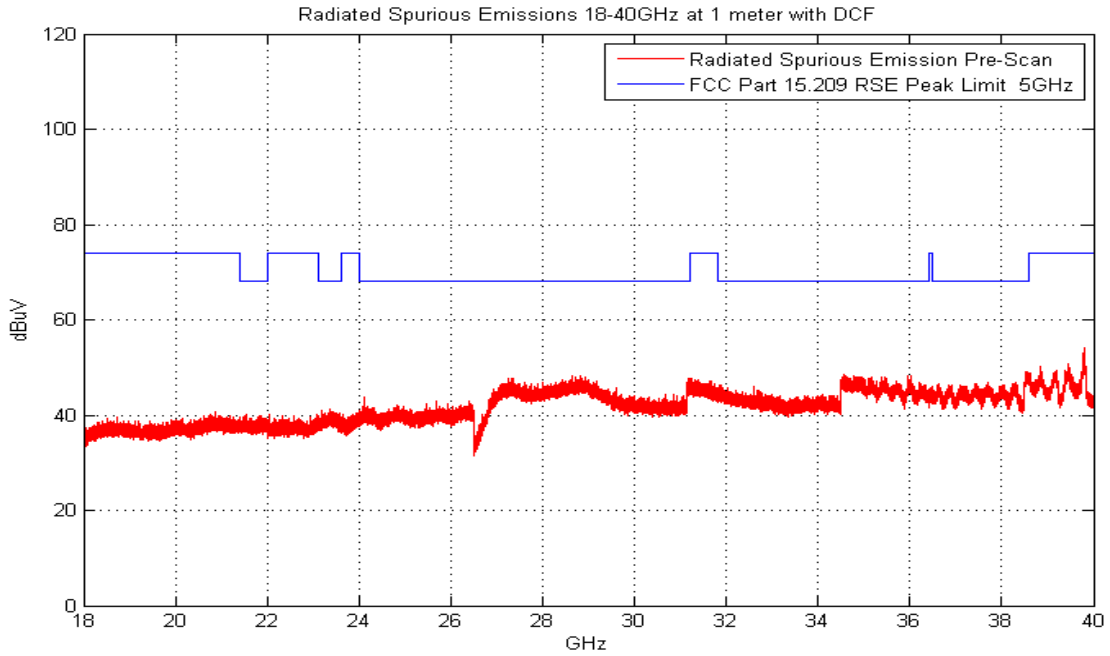
**Plot 6-169. Radiated Spurious Plot above 1GHz (802.11a – U3 Ch. 157, Ant. Pol. H)**



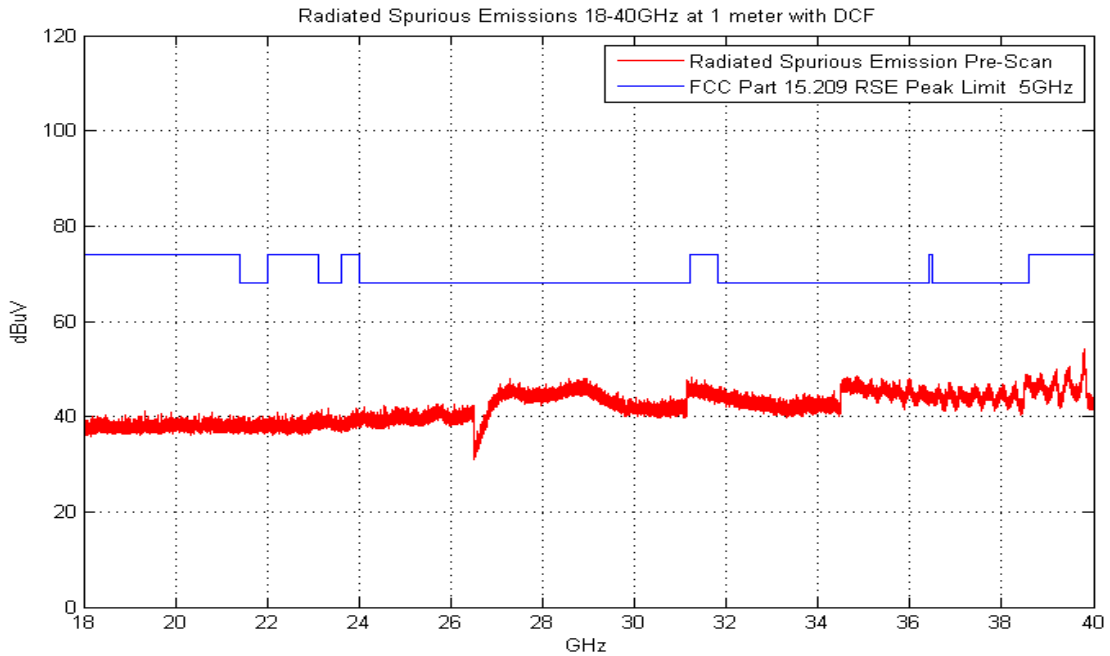
**Plot 6-170. Radiated Spurious Plot above 1GHz (802.11a – U3 Ch. 157, Ant. Pol. V)**

<b>FCC ID:</b> A3LSMT817P		<b>FCC Pt. 15.407 802.11a/n/ac UNI MEASUREMENT REPORT (CERTIFICATION)</b>		<b>Reviewed by:</b> Quality Manager
<b>Test Report S/N:</b> 0Y1507071385.A3L	<b>Test Dates:</b> 7/7 - 7/29/2015	<b>EUT Type:</b> Portable Tablet	Page 125 of 208	



## 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)**

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 126 of 208	

## 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	-91.88	Peak	H	48.09	0.00	63.22	68.20	-4.98
* 15540.00	-112.63	Average	H	50.92	0.00	45.29	53.98	-8.69
* 15540.00	-102.37	Peak	H	50.92	0.00	55.55	73.98	-18.43
* 20720.00	-112.45	Average	V	44.39	-9.54	29.40	53.98	-24.58
* 20720.00	-100.85	Peak	V	44.39	-9.54	41.00	73.98	-32.98
25900.00	-101.49	Peak	V	45.11	-9.54	41.08	68.20	-27.12

**Table 6-40. 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	-91.48	Peak	H	48.10	0.00	63.61	68.20	-4.59
* 15600.00	-112.49	Average	H	50.42	0.00	44.93	53.98	-9.05
* 15600.00	-102.14	Peak	H	50.42	0.00	55.28	73.98	-18.70
* 20800.00	-112.69	Average	V	44.39	-9.54	29.16	53.98	-24.82
* 20800.00	-101.11	Peak	V	44.39	-9.54	40.74	73.98	-33.24
26000.00	-101.47	Peak	V	45.12	-9.54	41.10	68.20	-27.10

**Table 6-41. Radiated Measurements**

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 127 of 208	

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	-91.84	Peak	H	47.93	0.00	63.10	68.20	-5.10
* 15720.00	-112.65	Average	H	49.56	0.00	43.91	53.98	-10.07
* 15720.00	-102.47	Peak	H	49.56	0.00	54.09	73.98	-19.89
* 20960.00	-113.08	Average	V	44.31	-9.54	28.69	53.98	-25.29
* 20960.00	-101.20	Peak	V	44.31	-9.54	40.57	73.98	-33.41
26200.00	-100.89	Peak	V	45.01	-9.54	41.58	68.20	-26.62

**Table 6-42. 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	-100.47	Peak	H	47.98	0.00	54.51	68.20	-13.69
* 15780.00	-113.81	Average	H	49.39	0.00	42.58	53.98	-11.40
* 15780.00	-102.99	Peak	H	49.39	0.00	53.40	73.98	-20.58
* 21040.00	-113.02	Average	V	44.29	-9.54	28.72	53.98	-25.26
* 21040.00	-102.08	Peak	V	44.29	-9.54	39.66	73.98	-34.32
26300.00	-98.62	Peak	V	45.00	-9.54	43.84	68.20	-24.36

**Table 6-43. Radiated Measurements**

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 128 of 208	

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	-100.23	Peak	H	48.15	0.00	54.92	68.20	-13.28
* 15840.00	-114.05	Average	H	49.69	0.00	42.64	53.98	-11.34
* 15840.00	-102.47	Peak	H	49.69	0.00	54.22	73.98	-19.76
* 21120.00	-113.13	Average	V	44.28	-9.54	28.61	53.98	-25.37
* 21120.00	-102.03	Peak	V	44.28	-9.54	39.71	73.98	-34.27
26400.00	-98.67	Peak	V	45.02	-9.54	43.81	68.20	-24.39

**Table 6-44. 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	-110.69	Average	H	48.38	0.00	44.69	53.98	-9.29
* 10640.00	-100.31	Peak	H	48.38	0.00	55.07	73.98	-18.91
* 15960.00	-113.88	Average	H	50.76	0.00	43.87	53.98	-10.11
* 15960.00	-103.07	Peak	H	50.76	0.00	54.68	73.98	-19.30
* 21280.00	-113.18	Average	V	44.26	-9.54	28.54	53.98	-25.44
* 21280.00	-102.14	Peak	V	44.26	-9.54	39.58	73.98	-34.40
26600.00	-103.40	Peak	V	47.61	-9.54	41.67	68.20	-26.53

**Table 6-45. Radiated Measurements**

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 129 of 208	

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	-109.73	Average	H	48.77	0.00	46.04	53.98	-7.94
* 11000.00	-99.17	Peak	H	48.77	0.00	56.60	73.98	-17.38
16500.00	-101.45	Peak	H	51.83	0.00	57.38	68.20	-10.82
22000.00	-101.02	Peak	V	44.50	-9.54	40.93	68.20	-27.27
27500.00	-104.63	Peak	V	47.97	-9.54	40.80	68.20	-27.40

**Table 6-46. 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	-109.57	Average	H	48.65	0.00	46.08	53.98	-7.90
* 11160.00	-98.79	Peak	H	48.65	0.00	56.86	73.98	-17.12
16740.00	-101.91	Peak	H	52.92	0.00	58.01	68.20	-10.19
* 22320.00	-112.30	Average	V	44.56	-9.54	29.72	53.98	-24.26
* 22320.00	-101.39	Peak	V	44.56	-9.54	40.63	73.98	-33.35
27900.00	-105.40	Peak	V	48.08	-9.54	40.14	68.20	-28.06

**Table 6-47. Radiated Measurements**

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	-110.16	Average	H	49.44	0.00	46.28	53.98	-7.70
* 11440.00	-98.94	Peak	H	49.44	0.00	57.50	73.98	-16.48
17160.00	-101.98	Peak	H	54.51	0.00	59.53	68.20	-8.67
* 22880.00	-112.24	Average	V	44.61	-9.54	29.83	53.98	-24.15
* 22880.00	-101.40	Peak	V	44.61	-9.54	40.67	73.98	-33.31
28600.00	-105.45	Peak	V	48.29	-9.54	40.30	68.20	-27.90

**Table 6-48. 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	-109.59	Average	H	49.78	0.00	47.20	53.98	-6.78
* 11490.00	-99.06	Peak	H	49.78	0.00	57.73	73.98	-16.25
17235.00	-101.63	Peak	H	56.16	0.00	61.53	68.20	-6.67
* 22980.00	-113.12	Average	V	44.68	-9.54	29.02	53.98	-24.96
* 22980.00	-101.34	Peak	V	44.68	-9.54	40.80	73.98	-33.18
28725.00	-104.78	Peak	V	48.26	-9.54	40.94	68.20	-27.26

**Table 6-49. Radiated Measurements**

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 131 of 208	

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	-109.99	Average	H	49.77	0.00	46.78	53.98	-7.20
* 11570.00	-98.56	Peak	H	49.77	0.00	58.21	73.98	-15.77
17355.00	-101.75	Peak	H	56.36	0.00	61.61	68.20	-6.59
23140.00	-100.31	Peak	V	44.75	-9.54	41.90	68.20	-26.30
28925.00	-105.23	Peak	V	48.29	-9.54	40.52	68.20	-27.68

**Table 6-50. Radiated Measurements**

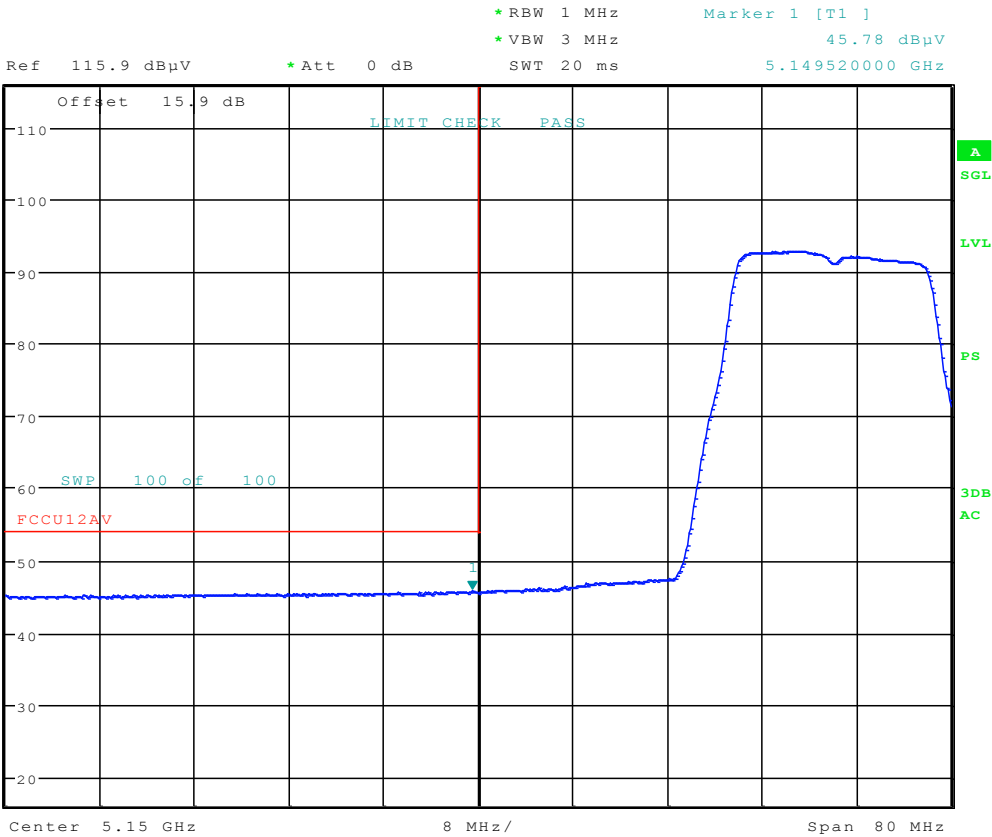
Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6 Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5825MHz  
 Channel: 165

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	-110.05	Average	H	49.72	0.00	46.67	53.98	-7.31
* 11650.00	-98.55	Peak	H	49.72	0.00	58.17	73.98	-15.81
17475.00	-101.67	Peak	H	56.47	0.00	61.80	68.20	-6.40
23300.00	-100.07	Peak	V	44.75	-9.54	42.13	68.20	-26.07
29125.00	-105.10	Peak	V	48.28	-9.54	40.65	68.20	-27.55

**Table 6-51. Radiated Measurements**

### 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



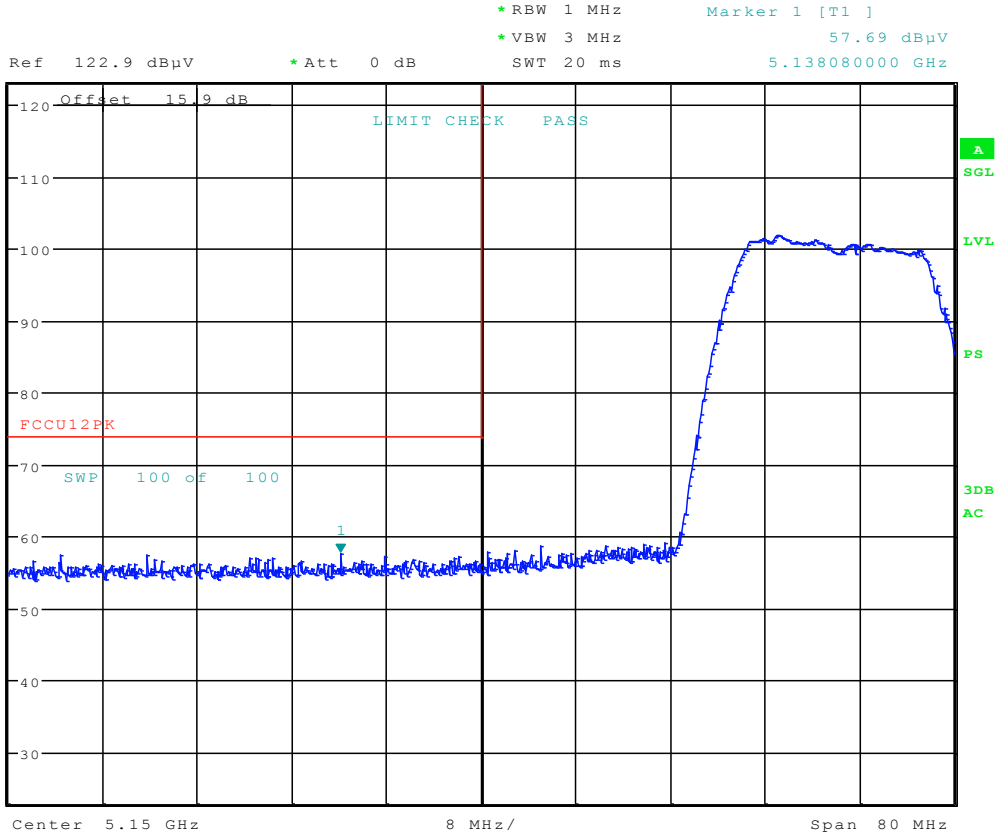
Date: 8.JUL.2015 13:49:17

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

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 133 of 208	

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

§15.407(b.1)(b.2) §15.205 §15.209



Date: 8.JUL.2015 14:00:03

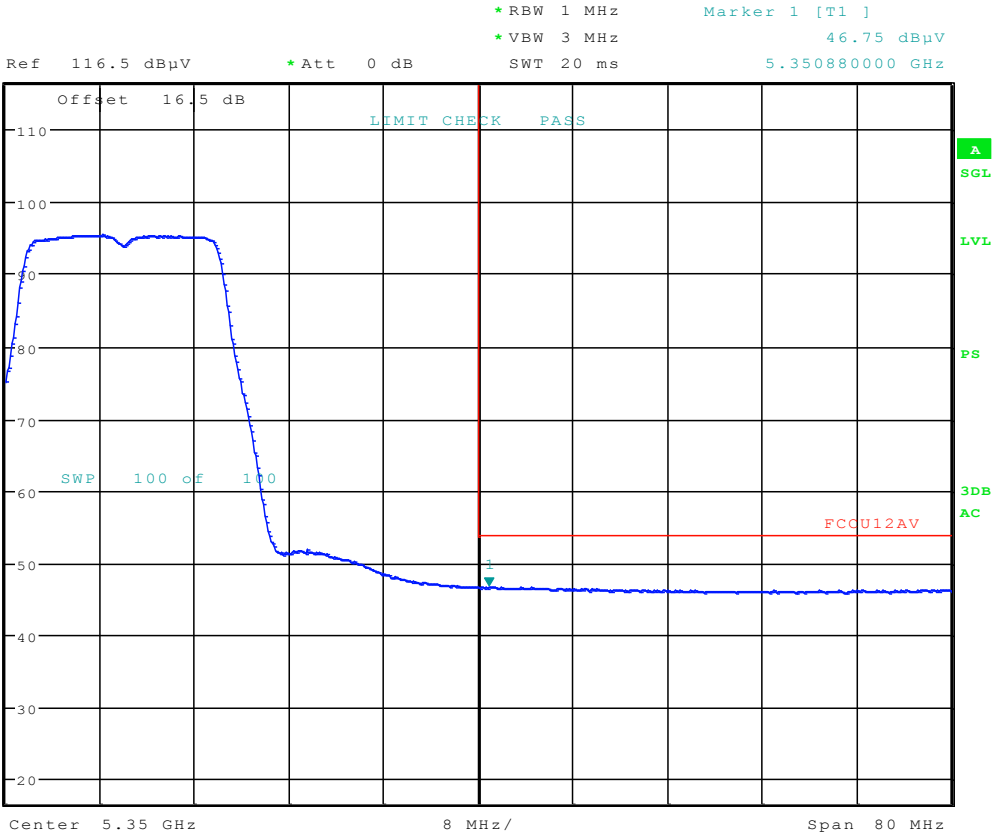
**Plot 6-174. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 1)**

<b>FCC ID:</b> A3LSMT817P		<b>FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)</b>		<b>Reviewed by:</b> Quality Manager
<b>Test Report S/N:</b> 0Y1507071385.A3L	<b>Test Dates:</b> 7/7 - 7/29/2015	<b>EUT Type:</b> Portable Tablet	Page 134 of 208	

# 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



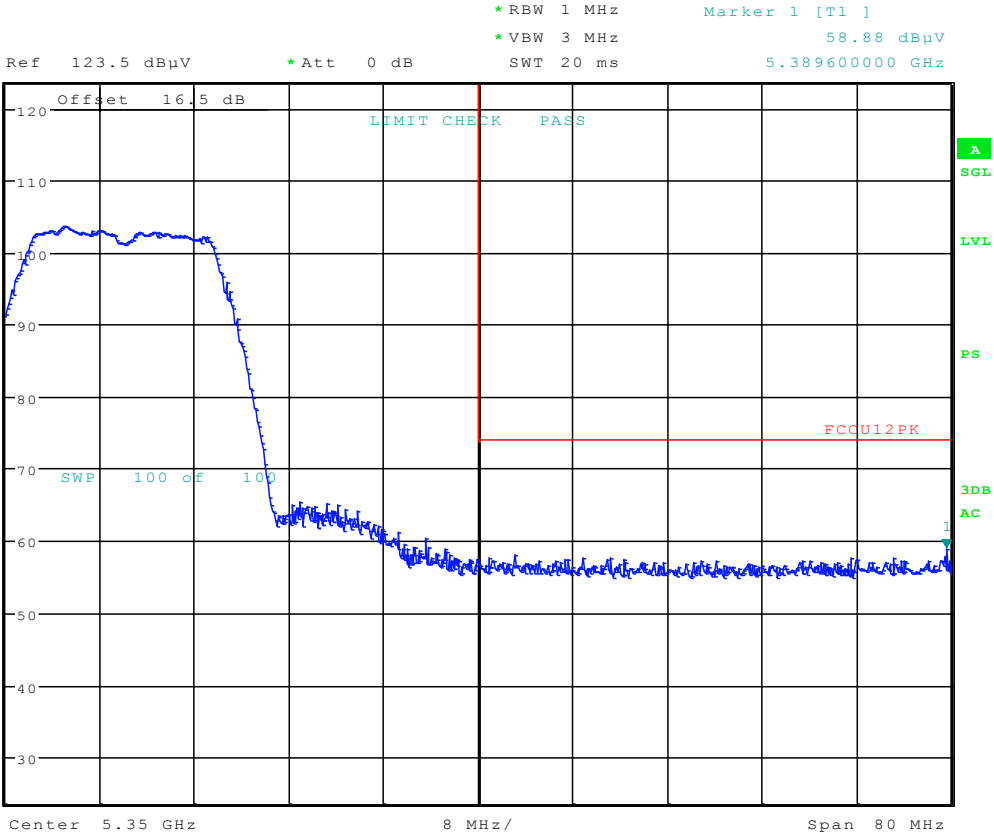
Date: 8.JUL.2015 14:37:06

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

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet		Page 135 of 208

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

\$15.407(b.1)(b.2) \$15.205 \$15.209



Date: 8.JUL.2015 14:46:06

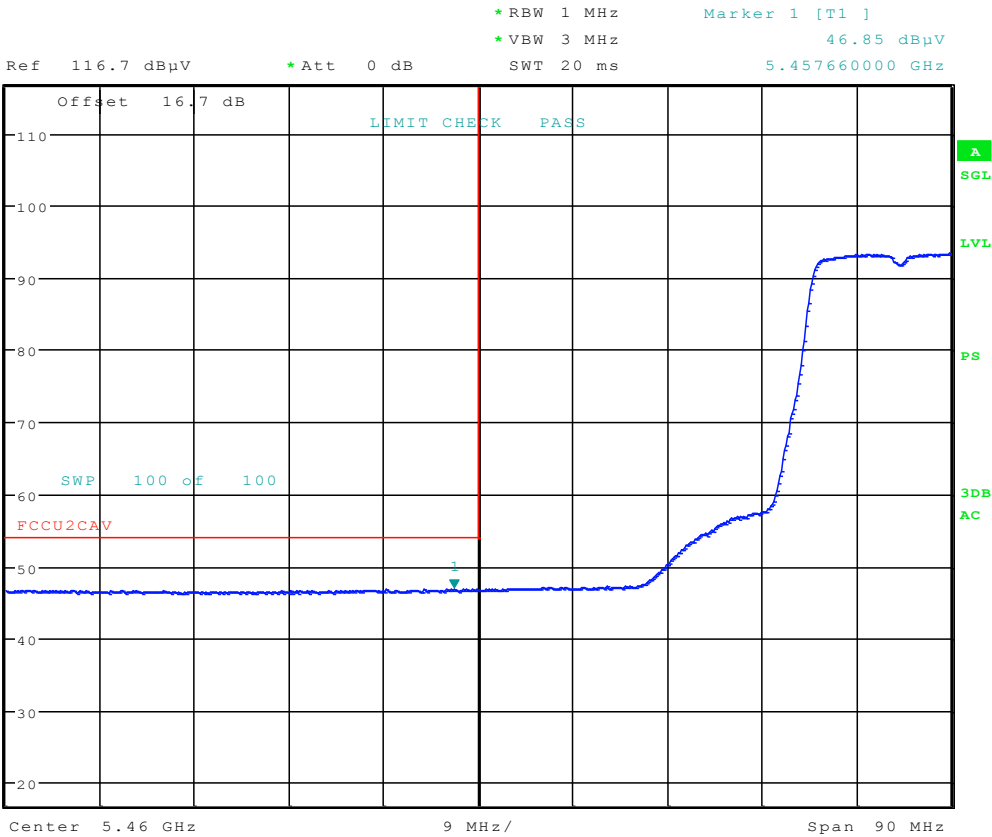
**Plot 6-176. Radiated Restricted Upper Band Edge Plot (Peak – UNII Band 2A)**

<b>FCC ID:</b> A3LSMT817P		<b>FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)</b>		<b>Reviewed by:</b> Quality Manager
<b>Test Report S/N:</b> 0Y1507071385.A3L	<b>Test Dates:</b> 7/7 - 7/29/2015	<b>EUT Type:</b> Portable Tablet	Page 136 of 208	

# 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

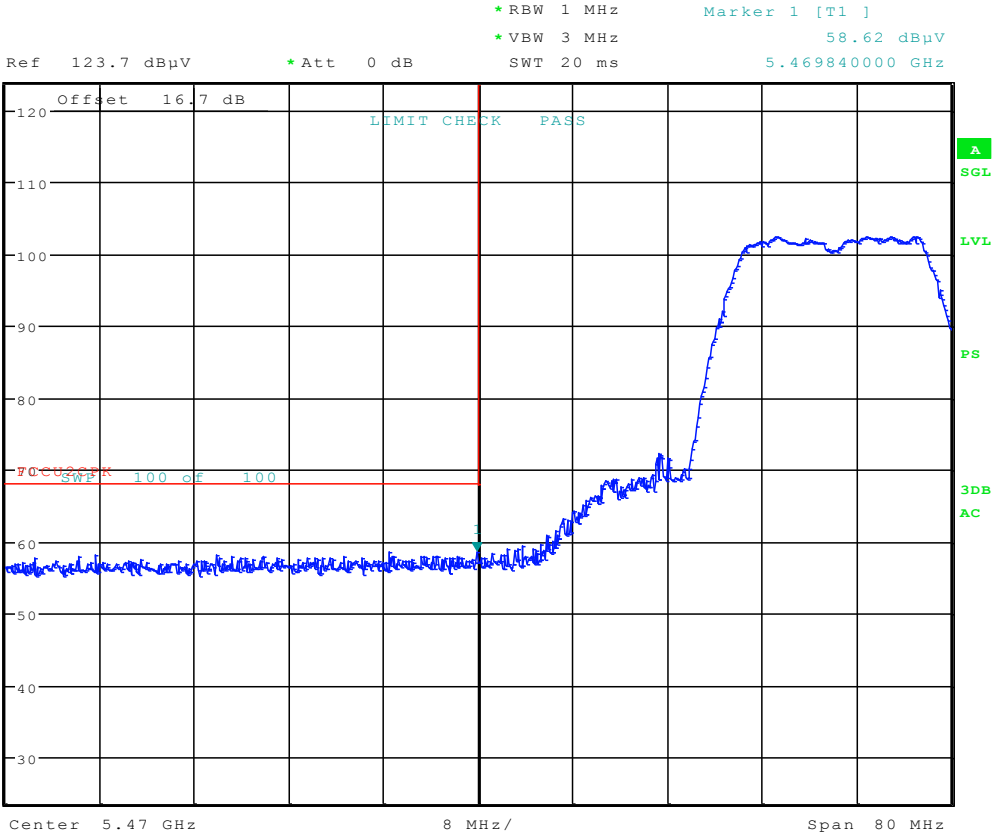


Date: 8.JUL.2015 14:51:52

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

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 137 of 208	

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



Date: 8.JUL.2015 15:01:38

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

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 138 of 208	

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

§15.407(b.1)(b.2) §15.205 §15.209

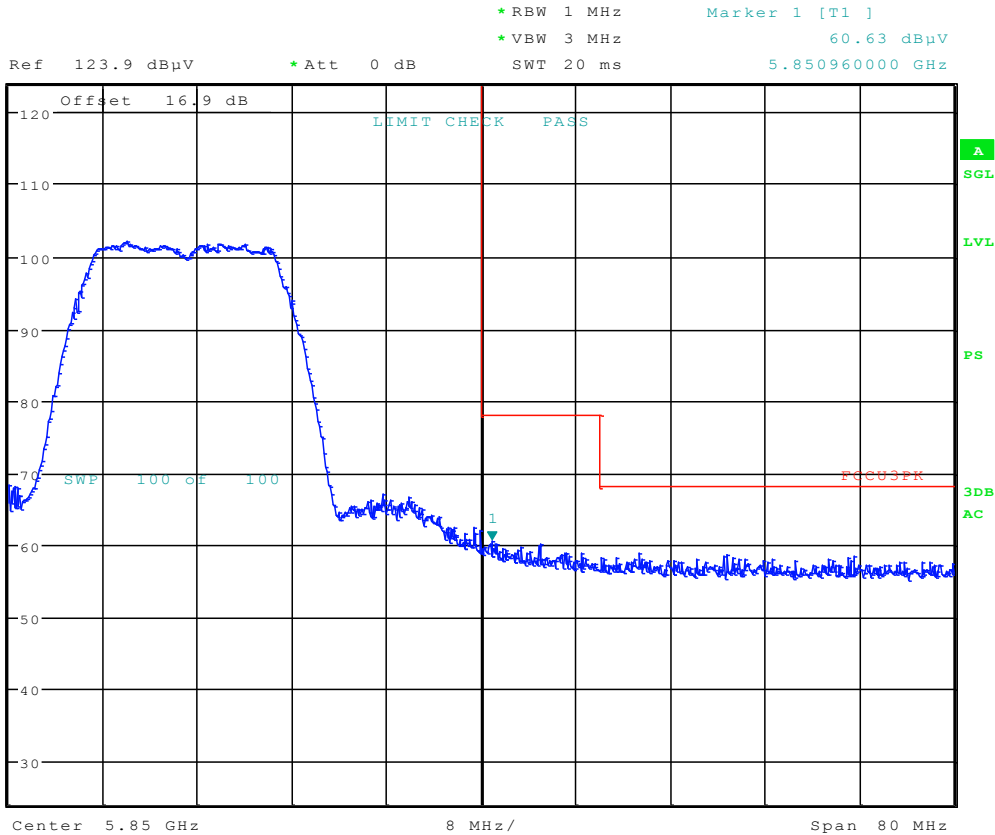
Worst Case Mode: 802.11a

Worst Case Transfer Rate: 6 Mbps

Distance of Measurements: 3 Meters

Operating Frequency: 5825MHz

Channel: 165



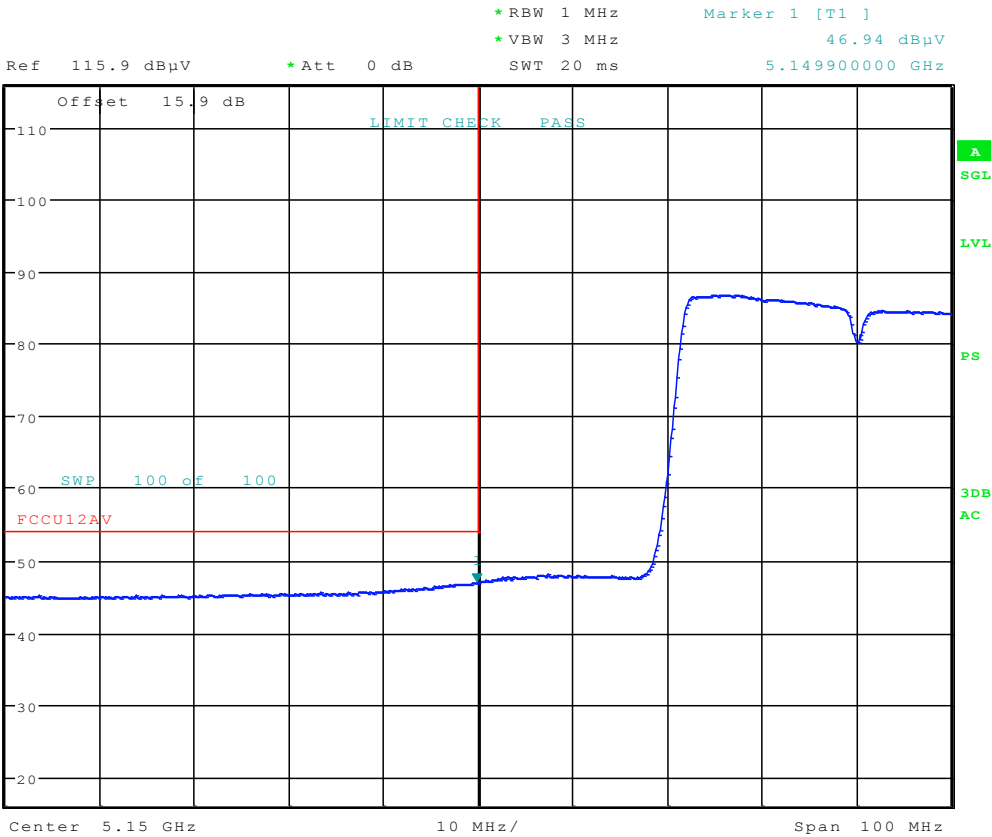
Date: 8.JUL.2015 15:04:32

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

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 139 of 208	

### 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



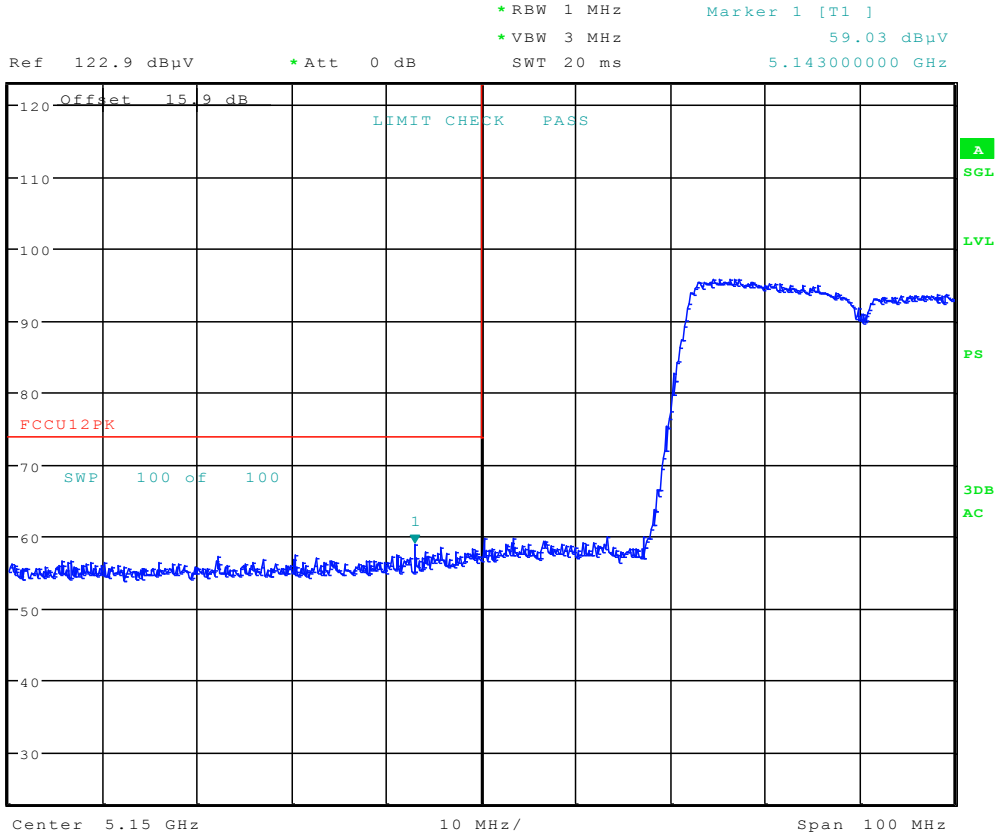
Date: 8.JUL.2015 13:51:47

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

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 140 of 208	

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

§15.407(b.1)(b.2) §15.205 §15.209



Date: 8.JUL.2015 13:57:55

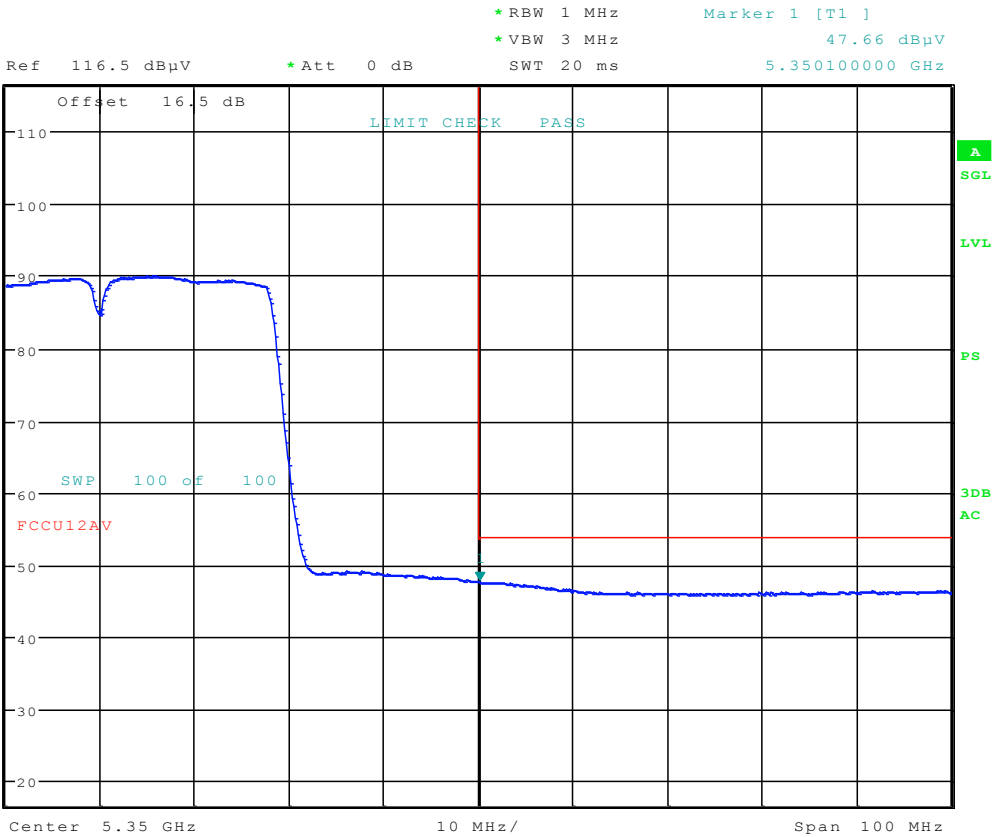
**Plot 6-181. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 1)**

<b>FCC ID:</b> A3LSMT817P		<b>FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)</b>		<b>Reviewed by:</b> Quality Manager
<b>Test Report S/N:</b> 0Y1507071385.A3L	<b>Test Dates:</b> 7/7 - 7/29/2015	<b>EUT Type:</b> Portable Tablet	Page 141 of 208	

# 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

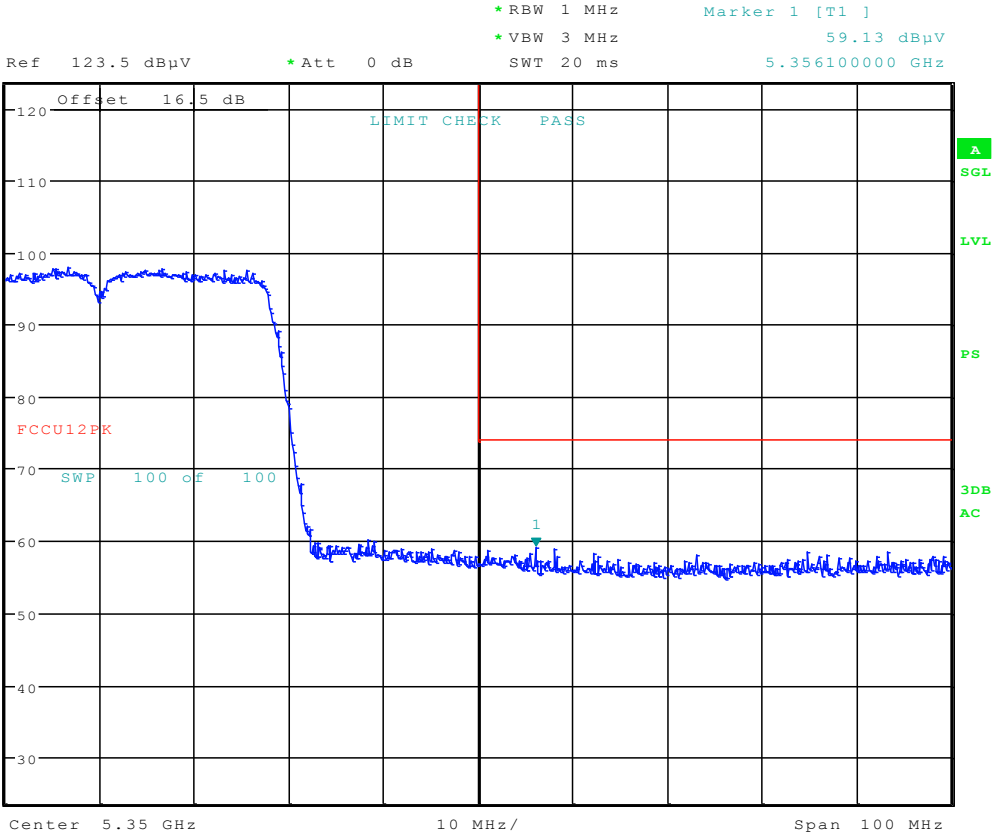


Date: 8.JUL.2015 14:39:02

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

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 142 of 208	

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



Date: 8.JUL.2015 14:43:48

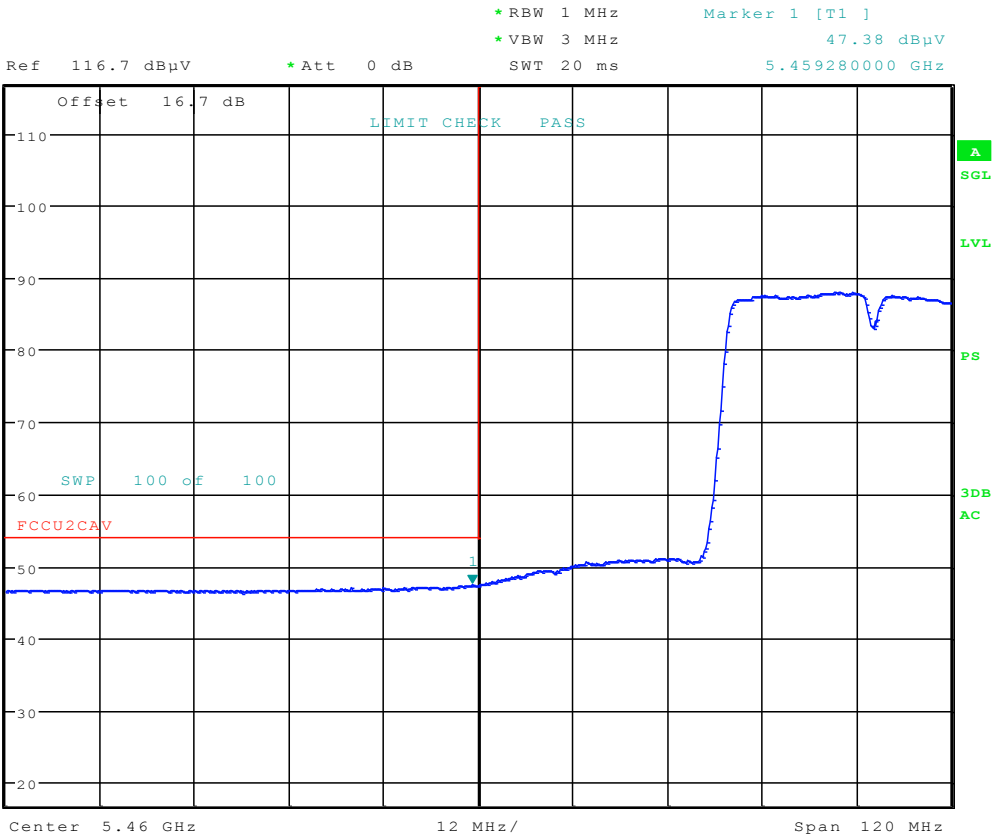
**Plot 6-183. Radiated Restricted Upper Band Edge Plot (Peak – UNII Band 2A)**

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 143 of 208	

# 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



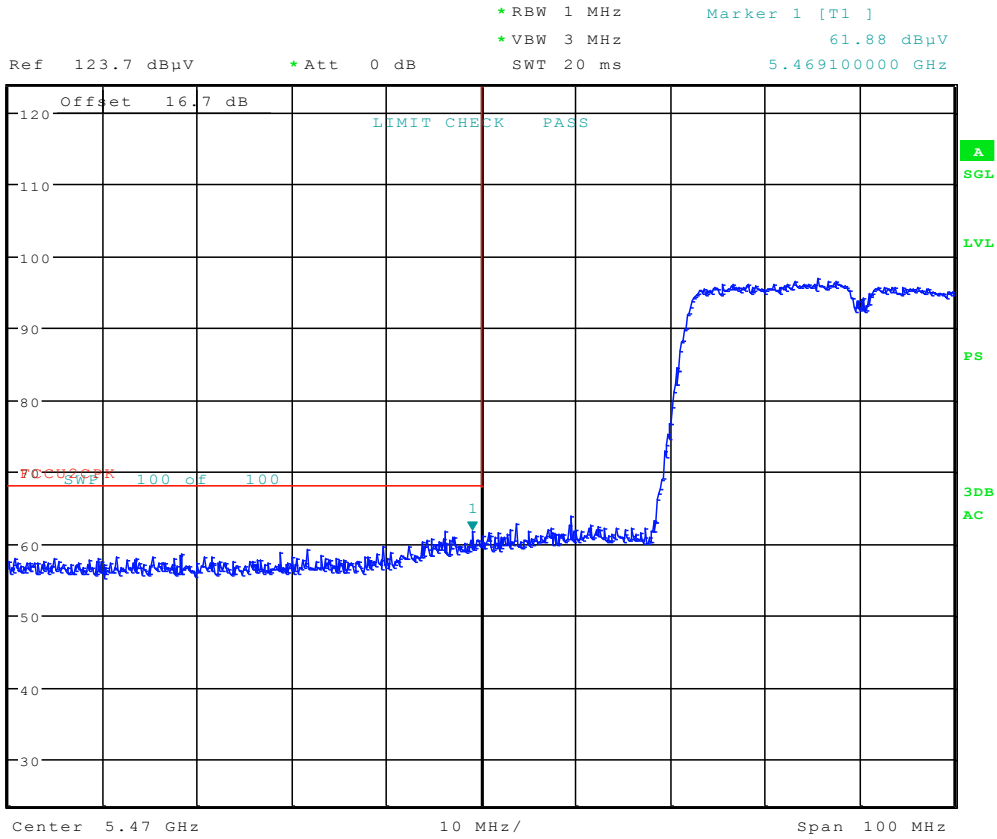
Date: 8.JUL.2015 14:53:55

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

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 144 of 208	

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

§15.407(b.1)(b.2) §15.205 §15.209



Date: 8.JUL.2015 14:59:38

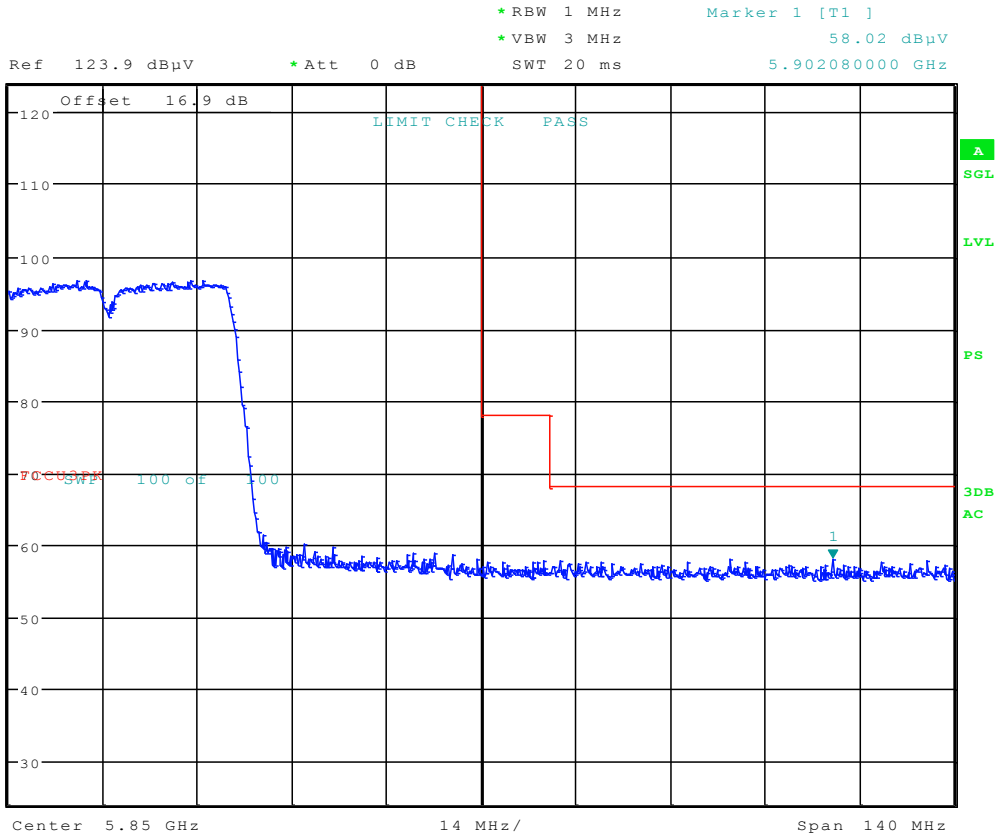
**Plot 6-185. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 2C)**

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 145 of 208	

# 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



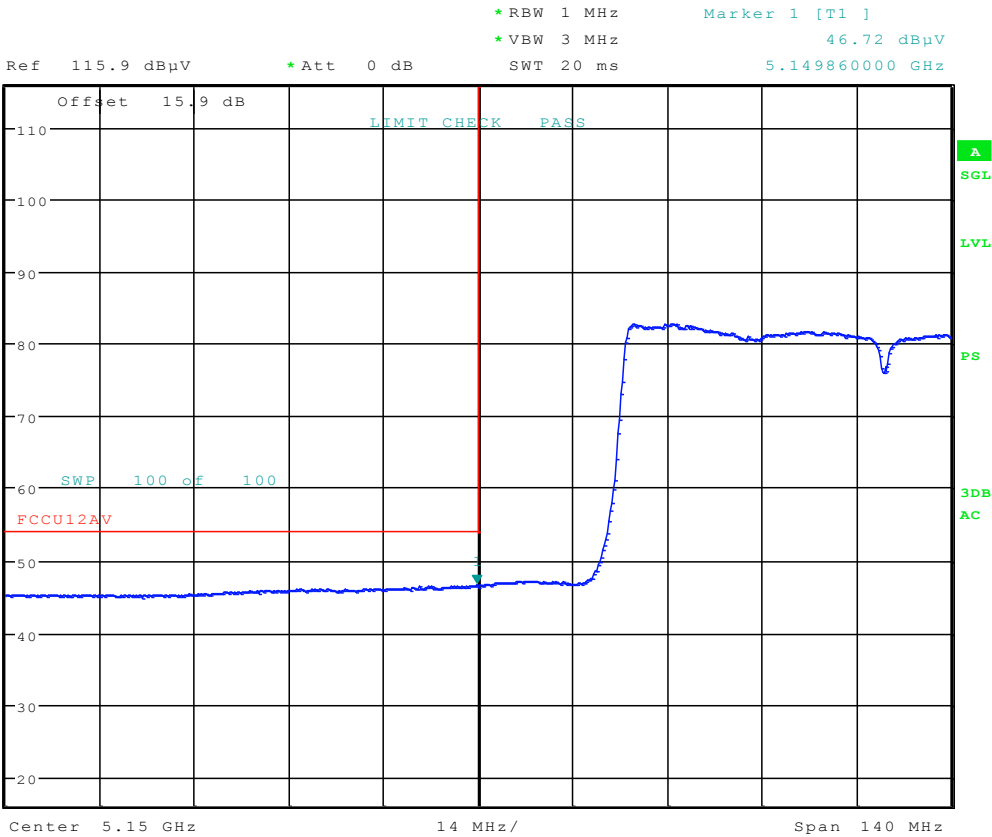
Date: 8.JUL.2015 15:06:34

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

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 146 of 208	

### 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



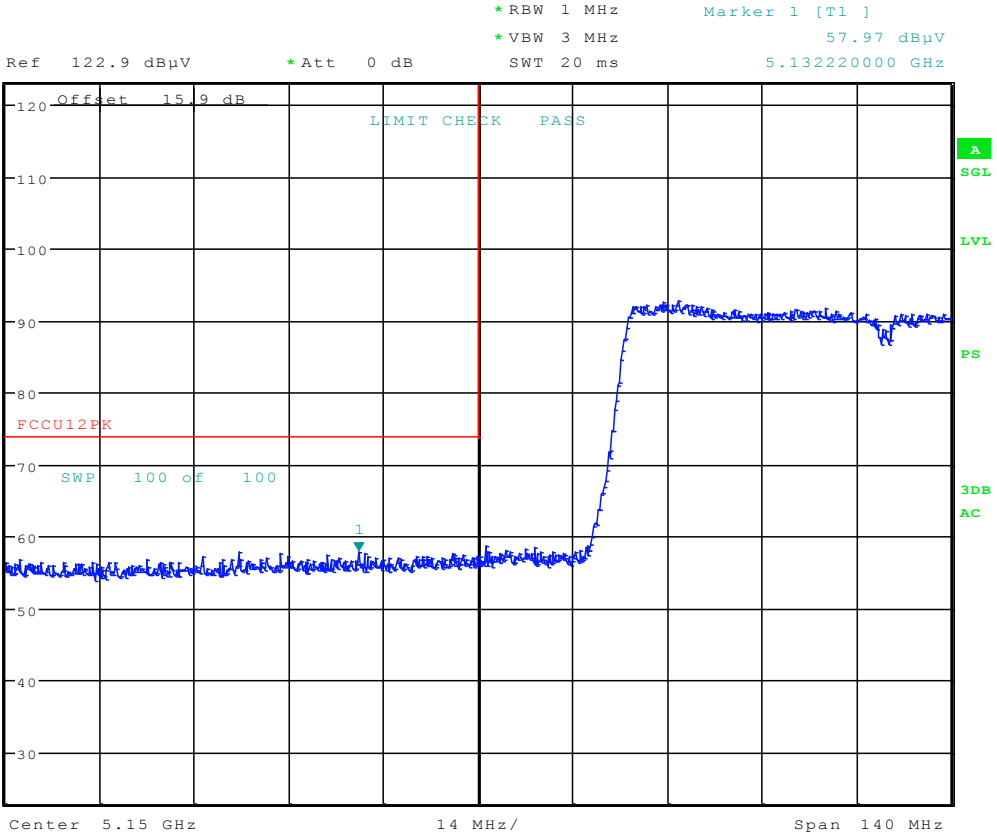
Date: 8.JUL.2015 13:53:38

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

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 147 of 208	

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

§15.407(b.1)(b.2) §15.205 §15.209



Date: 8.JUL.2015 13:55:41

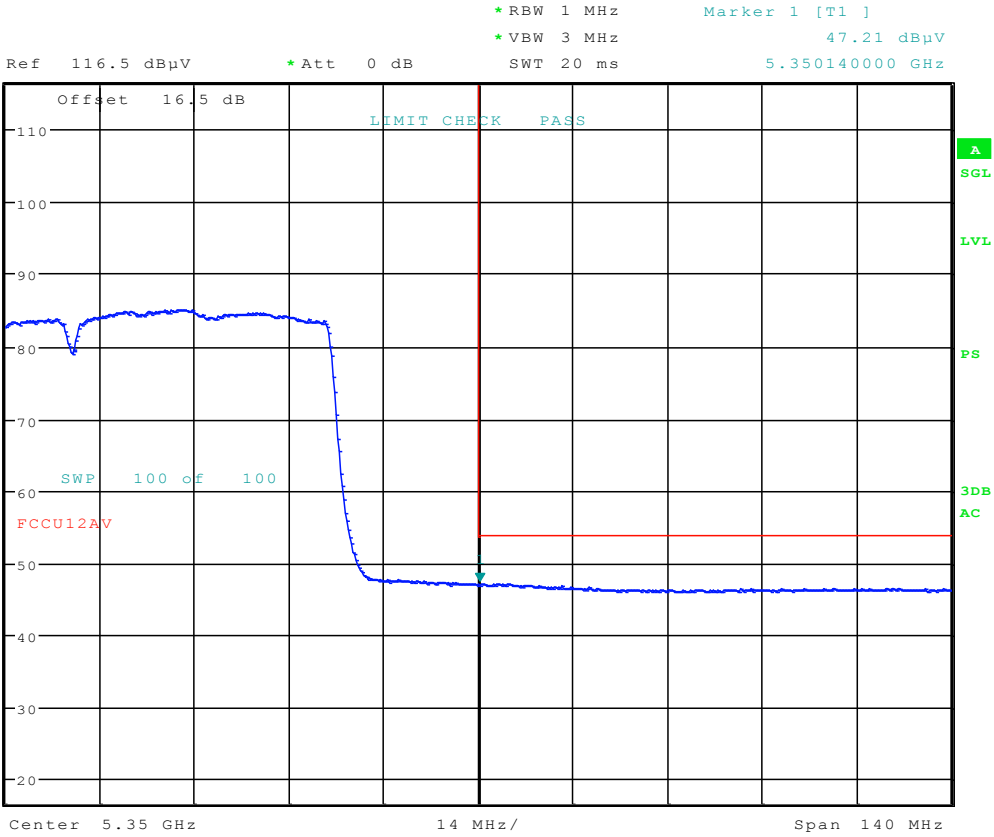
**Plot 6-188. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 1)**

<b>FCC ID:</b> A3LSMT817P		<b>FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)</b>		<b>Reviewed by:</b> Quality Manager
<b>Test Report S/N:</b> 0Y1507071385.A3L	<b>Test Dates:</b> 7/7 - 7/29/2015	<b>EUT Type:</b> Portable Tablet	Page 148 of 208	

# 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



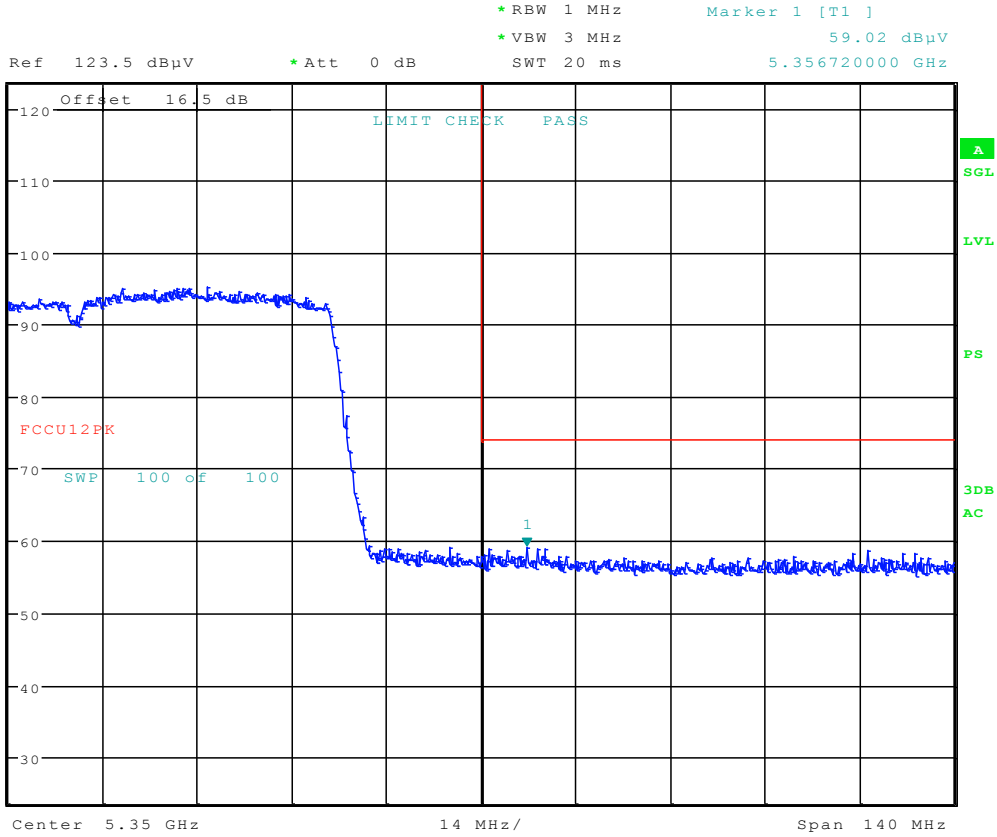
Date: 8.JUL.2015 14:40:34

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

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet		Page 149 of 208

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

§15.407(b.1)(b.2) §15.205 §15.209



Date: 8.JUL.2015 14:42:06

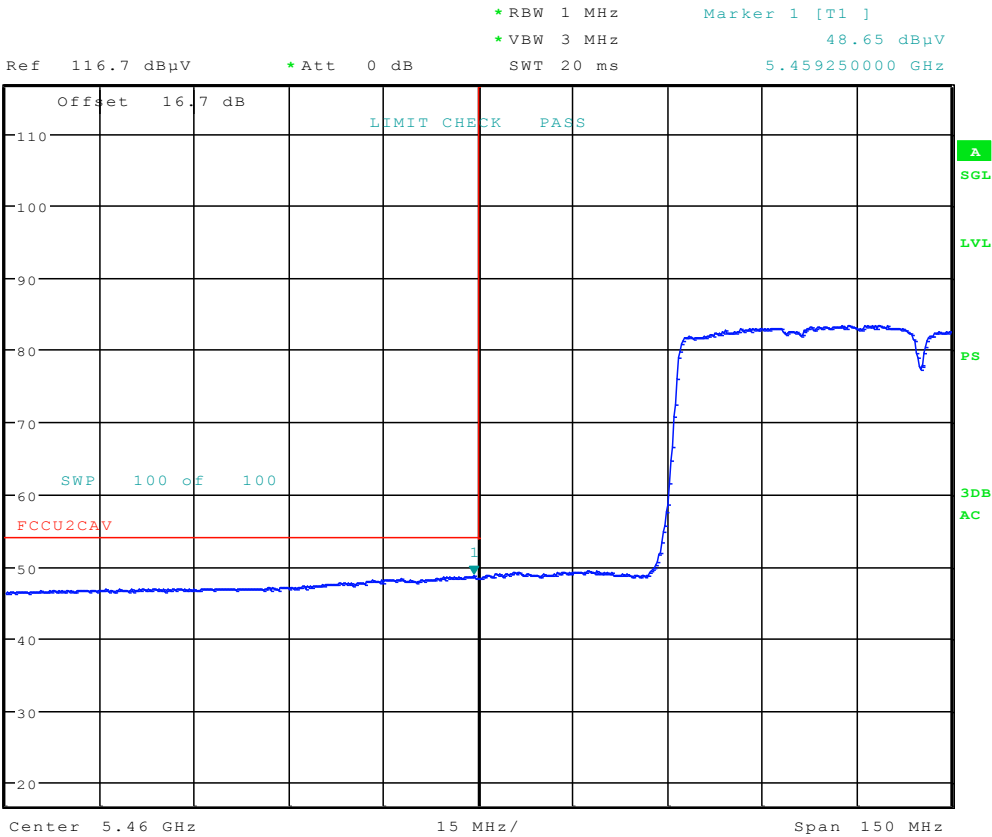
**Plot 6-190. Radiated Restricted Upper Band Edge Plot (Peak – UNII Band 2A)**

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 150 of 208	

# 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

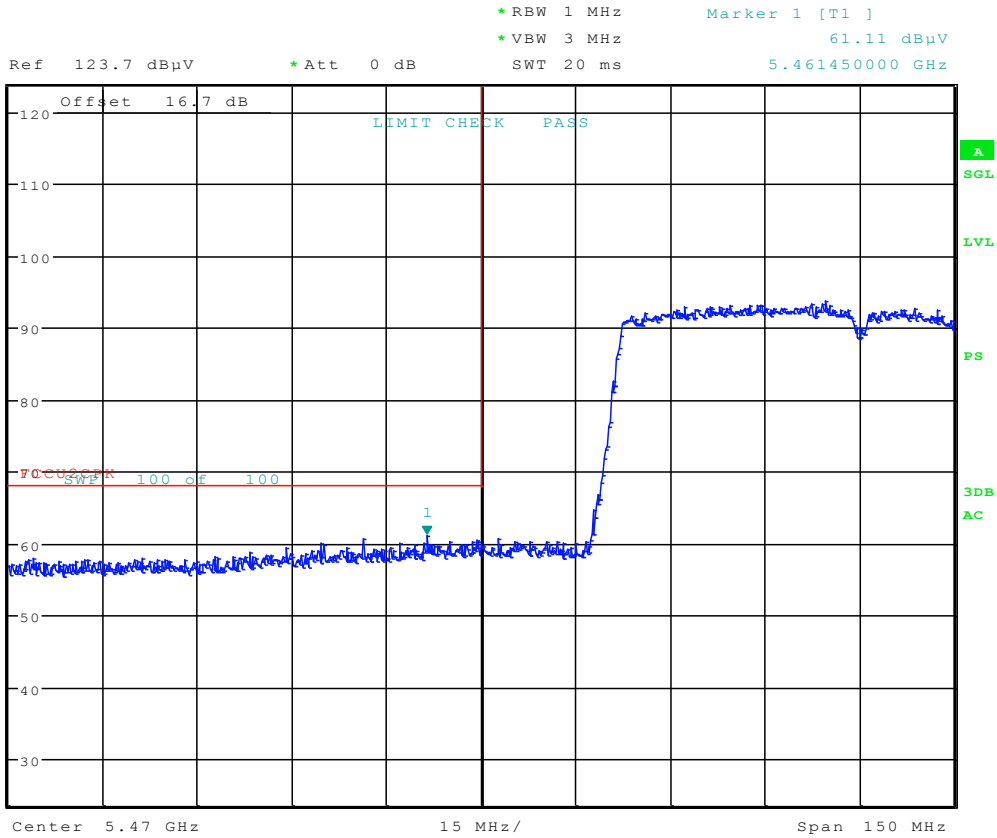


Date: 8.JUL.2015 14:56:09

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

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 151 of 208	

**Antenna-1 Radiated Band Edge Measurements (80MHz BW)**  
**§15.407(b.1)(b.2) §15.205 §15.209**



Date: 8.JUL.2015 14:57:47

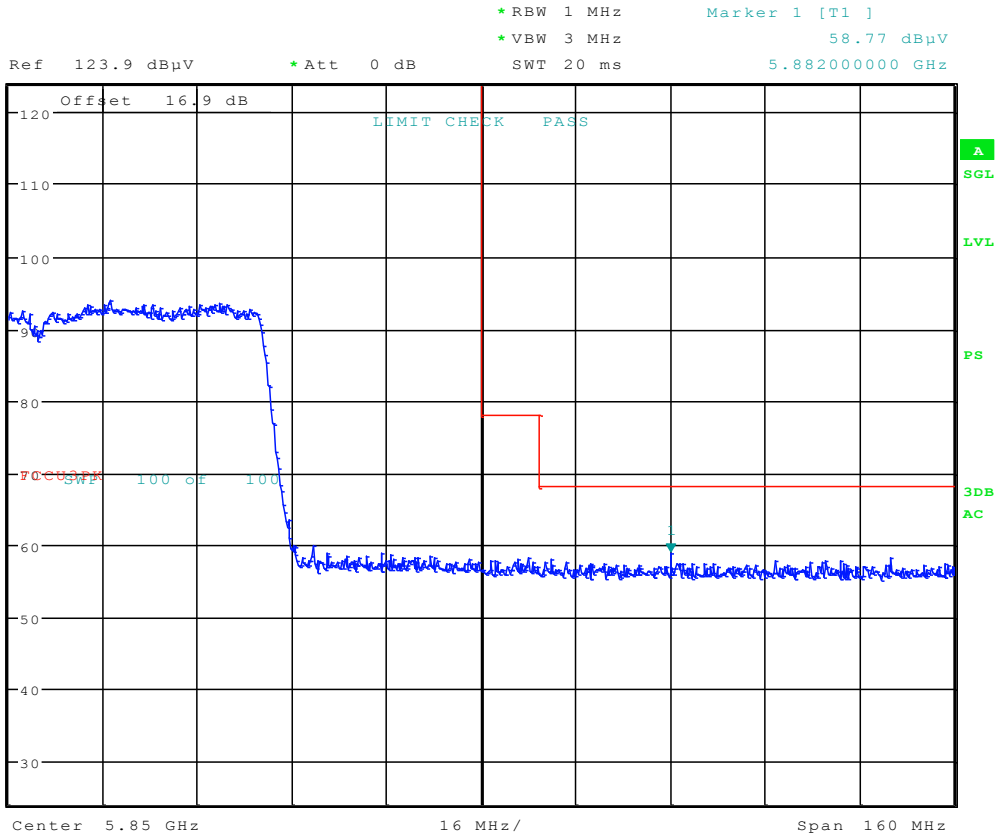
**Plot 6-192. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 2C)**

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 152 of 208	

# 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



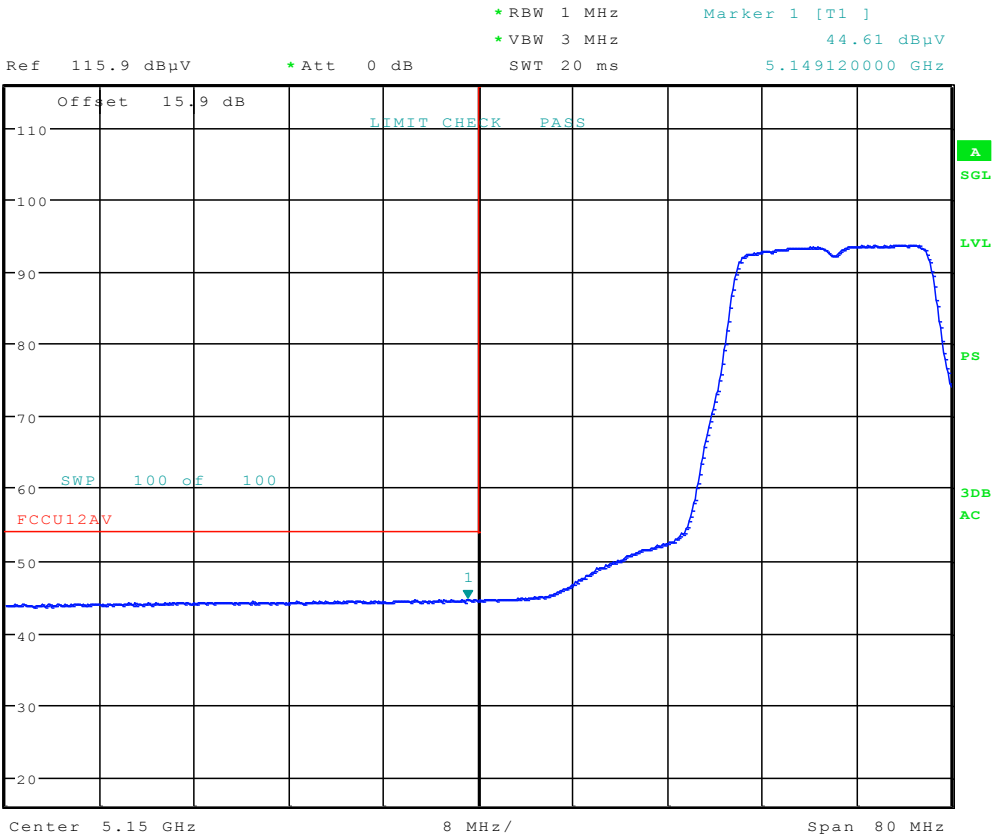
Date: 8.JUL.2015 15:08:06

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

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet		Page 153 of 208

### 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

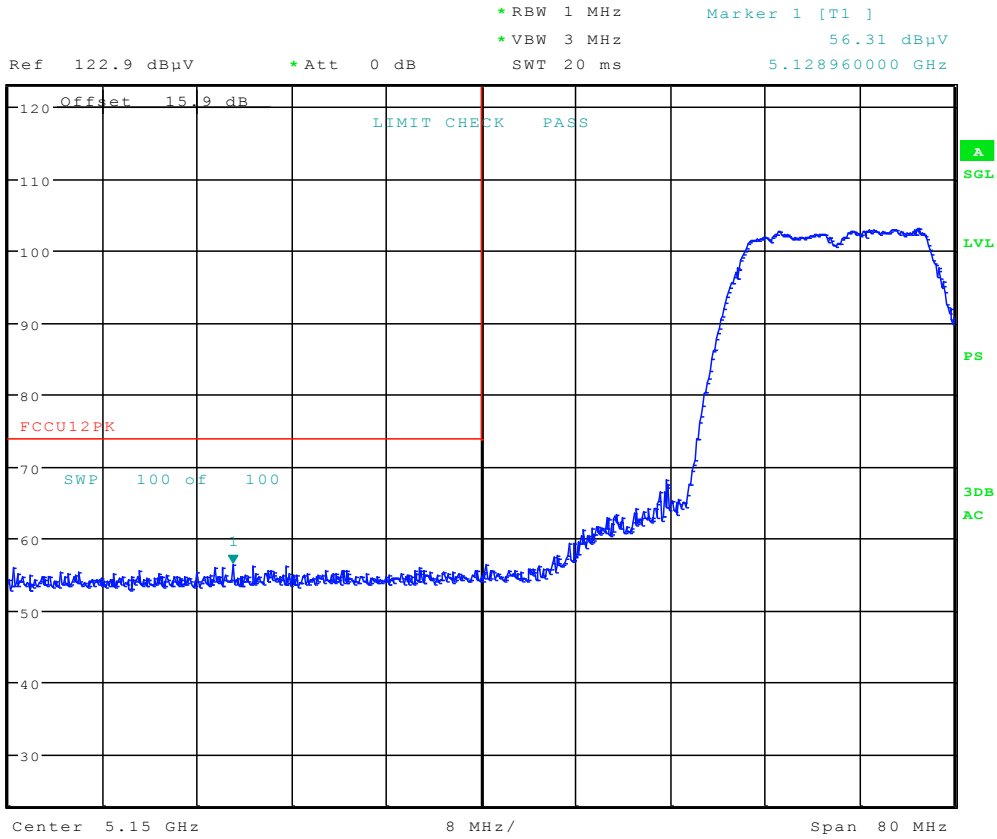


Date: 17.JUL.2015 15:15:49

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

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 154 of 208	

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



Date: 17.JUL.2015 15:31:29

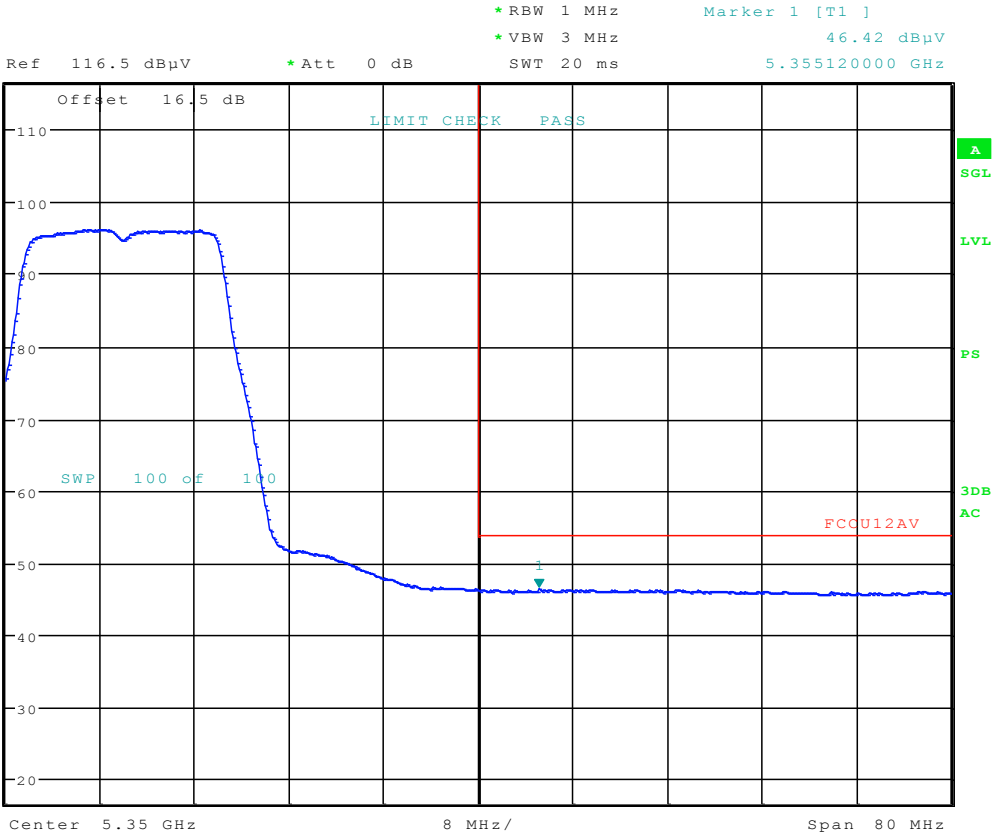
**Plot 6-195. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 1)**

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 155 of 208	

# 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



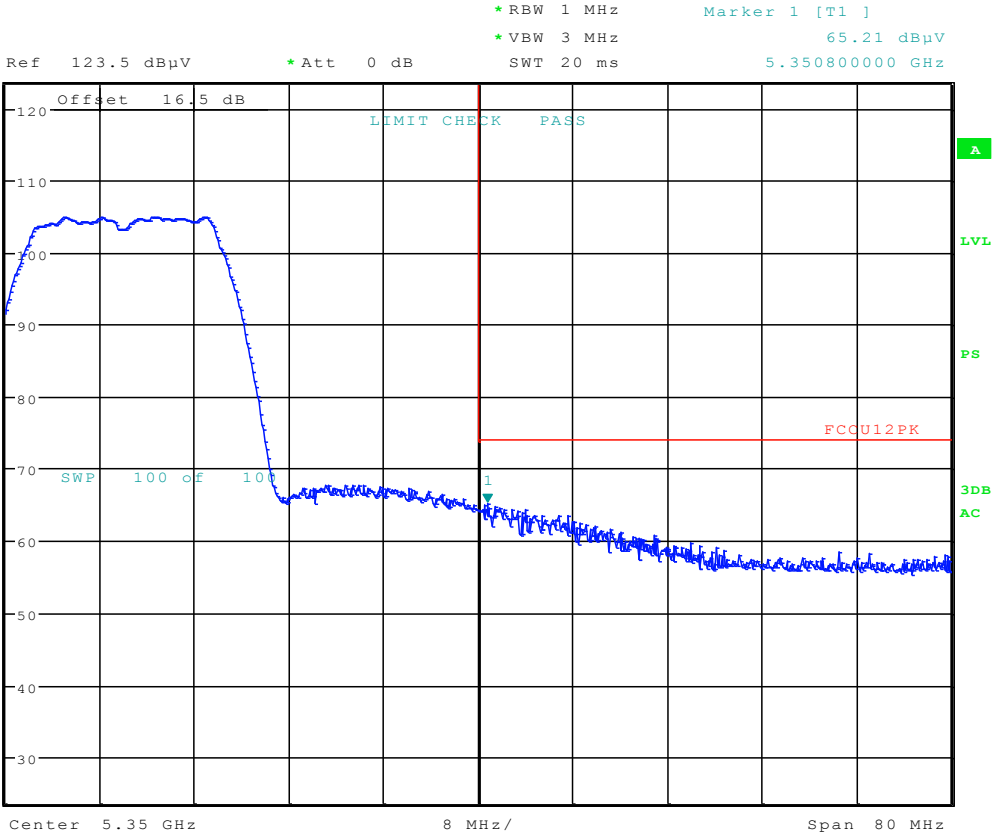
Date: 17.JUL.2015 15:39:54

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

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 156 of 208	

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

§15.407(b.1)(b.2) §15.205 §15.209



Date: 17.JUL.2015 16:04:42

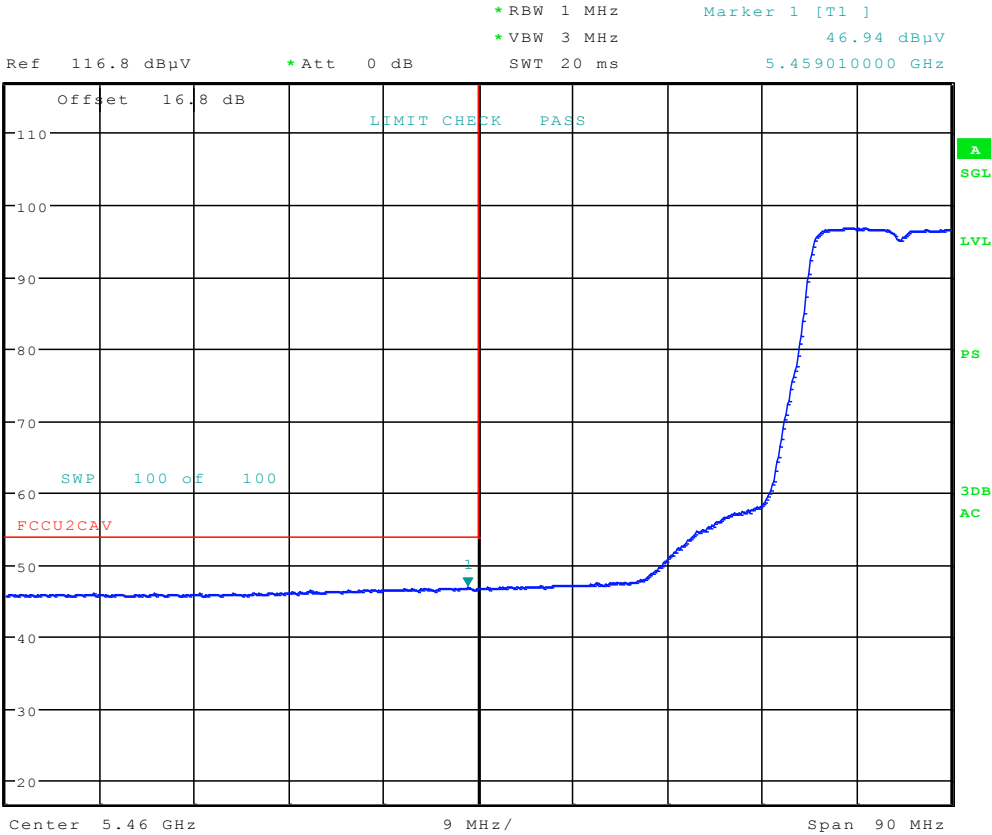
**Plot 6-197. Radiated Restricted Upper Band Edge Plot (Peak – UNII Band 2A)**

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 157 of 208	

# 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

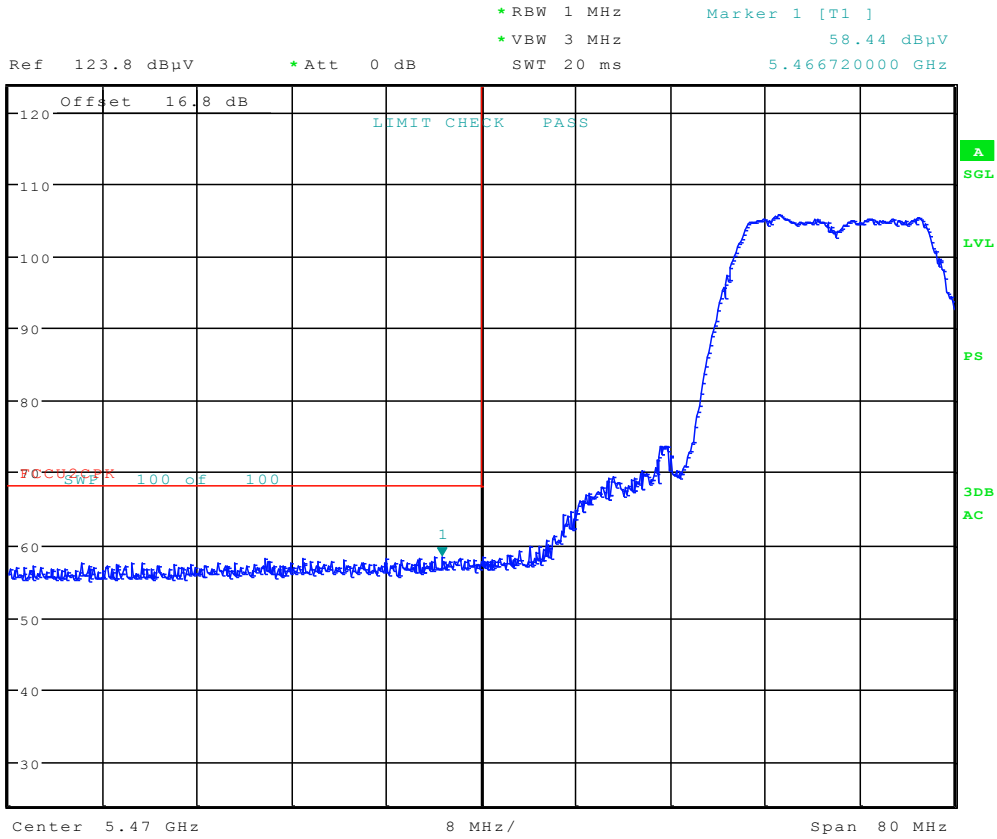


Date: 17.JUL.2015 16:22:59

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

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 158 of 208	

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



Date: 17.JUL.2015 16:36:23

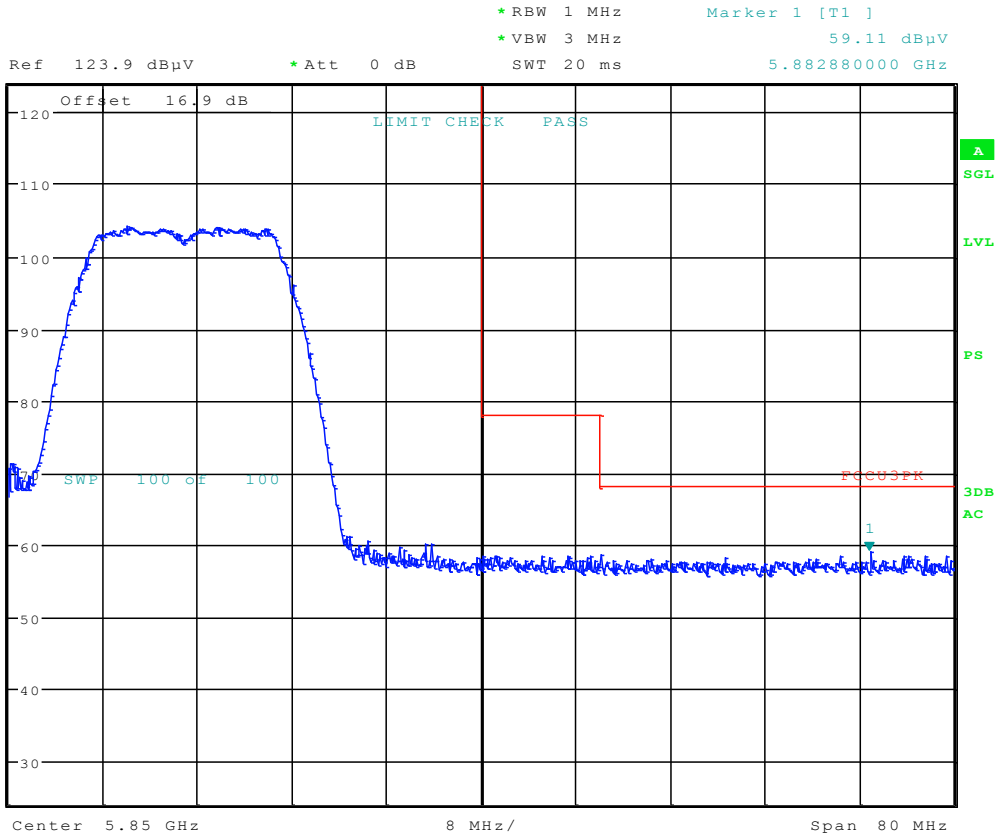
**Plot 6-199. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 2C)**

<b>FCC ID:</b> A3LSMT817P		<b>FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)</b>		<b>Reviewed by:</b> Quality Manager
<b>Test Report S/N:</b> 0Y1507071385.A3L	<b>Test Dates:</b> 7/7 - 7/29/2015	<b>EUT Type:</b> Portable Tablet		Page 159 of 208

# 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



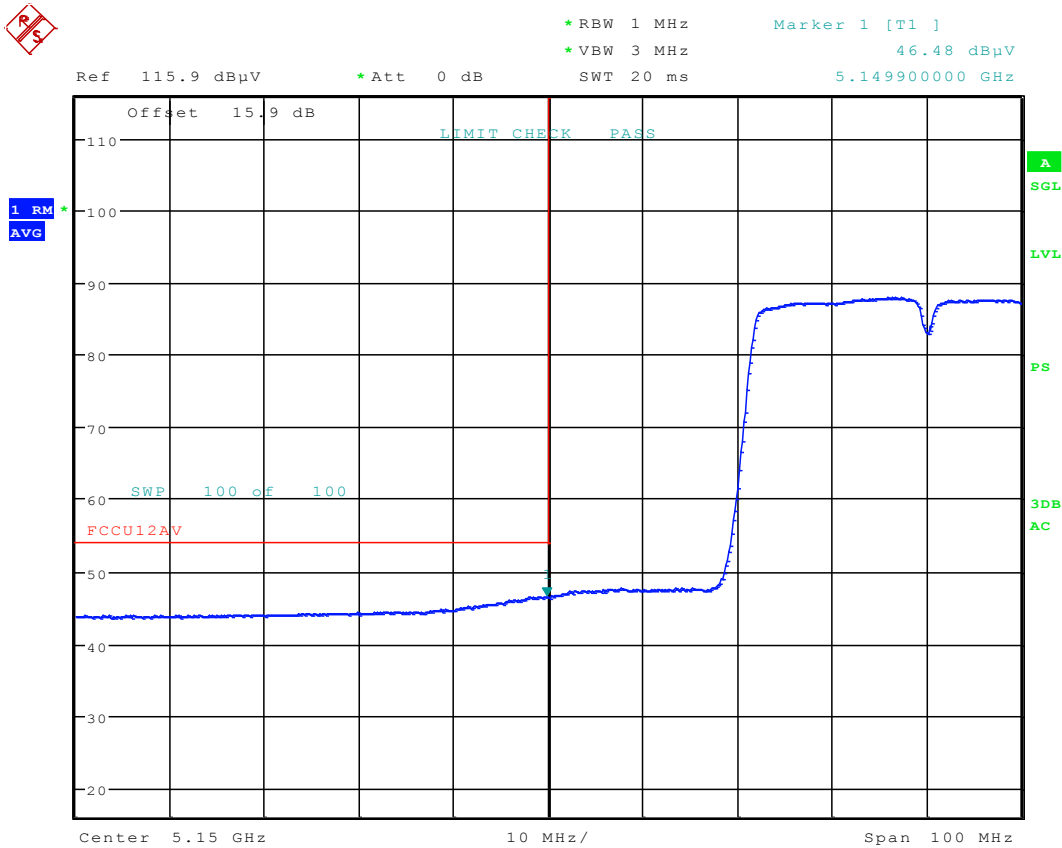
Date: 17.JUL.2015 16:42:55

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

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 160 of 208	

### 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



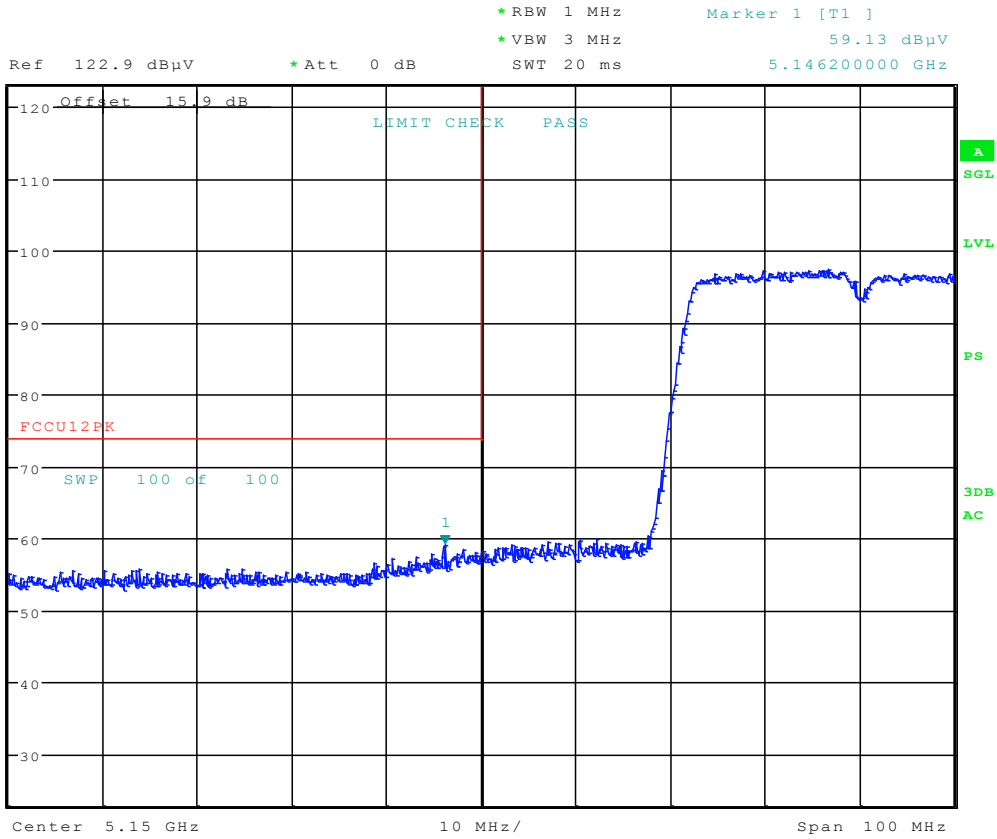
Date: 17.JUL.2015 15:19:10

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

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 161 of 208	

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

§15.407(b.1)(b.2) §15.205 §15.209



Date: 17.JUL.2015 15:28:25

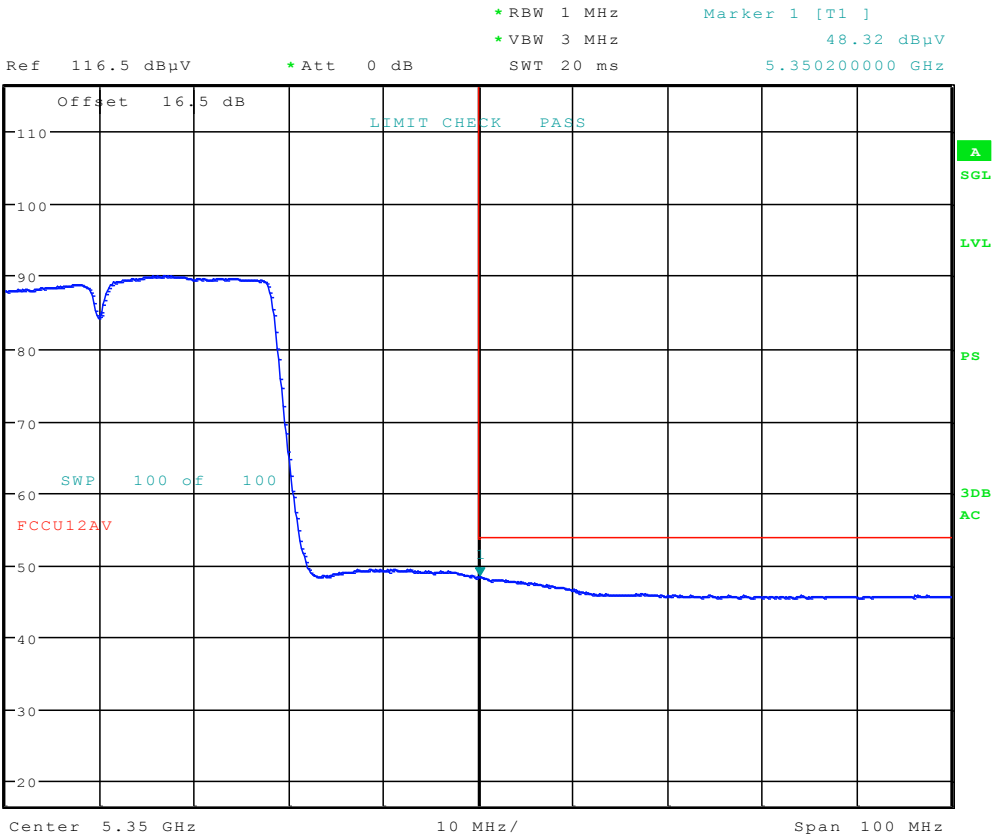
**Plot 6-202. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 1)**

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 162 of 208	

# 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

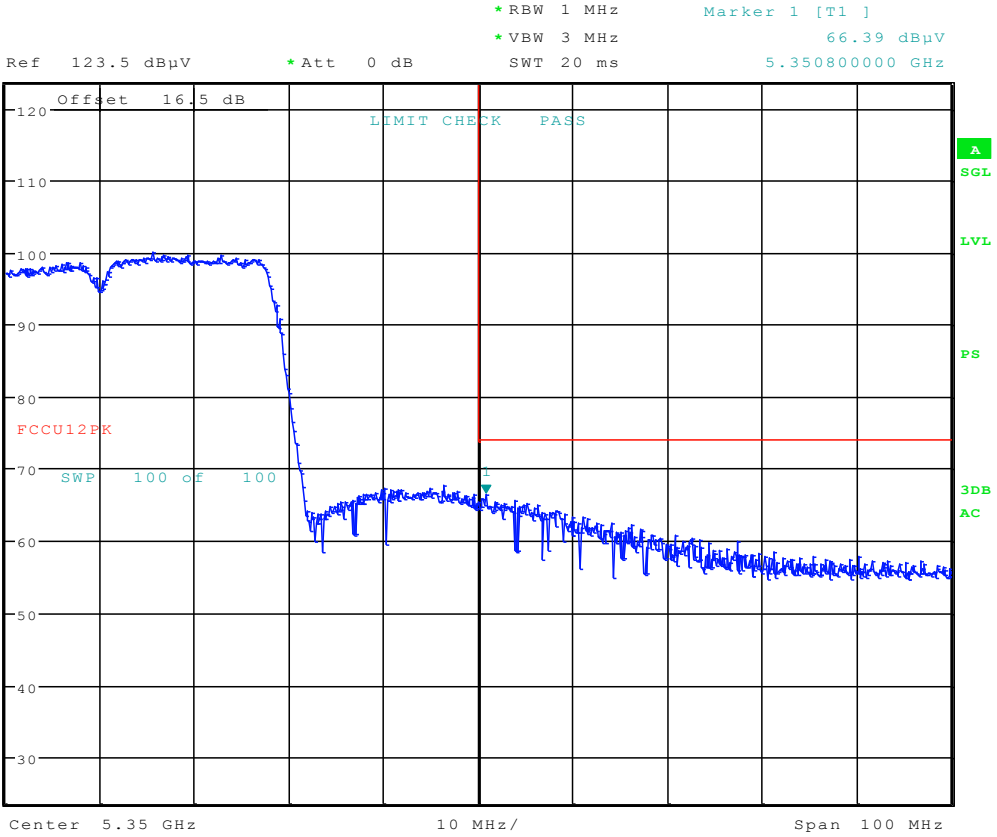


Date: 17.JUL.2015 15:49:55

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

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 163 of 208	

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



Date: 17.JUL.2015 16:01:25

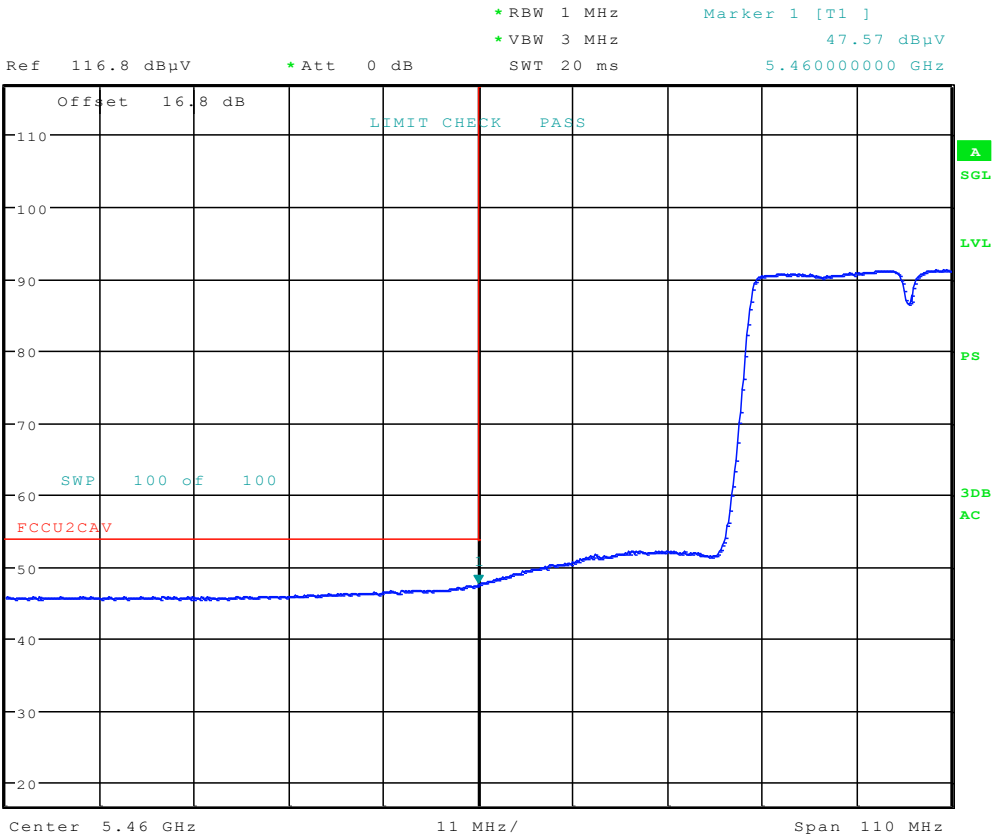
**Plot 6-204. Radiated Restricted Upper Band Edge Plot (Peak – UNII Band 2A)**

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 164 of 208	

# 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



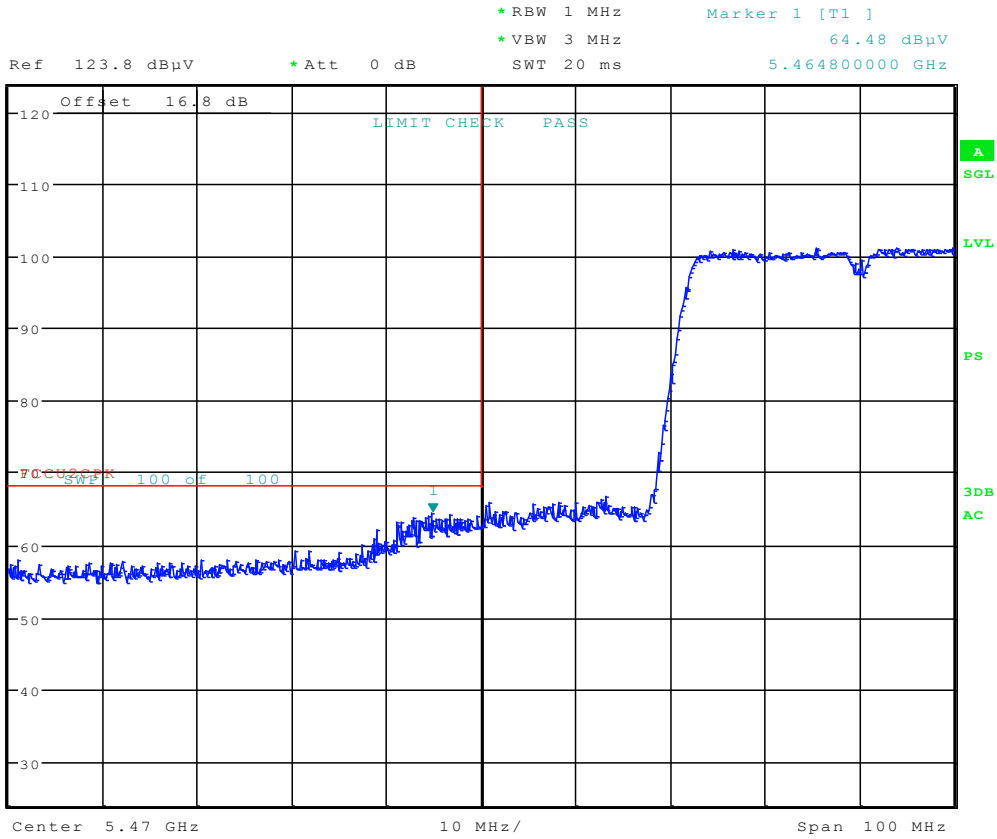
Date: 17.JUL.2015 16:25:44

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

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 165 of 208	

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

§15.407(b.1)(b.2) §15.205 §15.209



Date: 17.JUL.2015 16:34:18

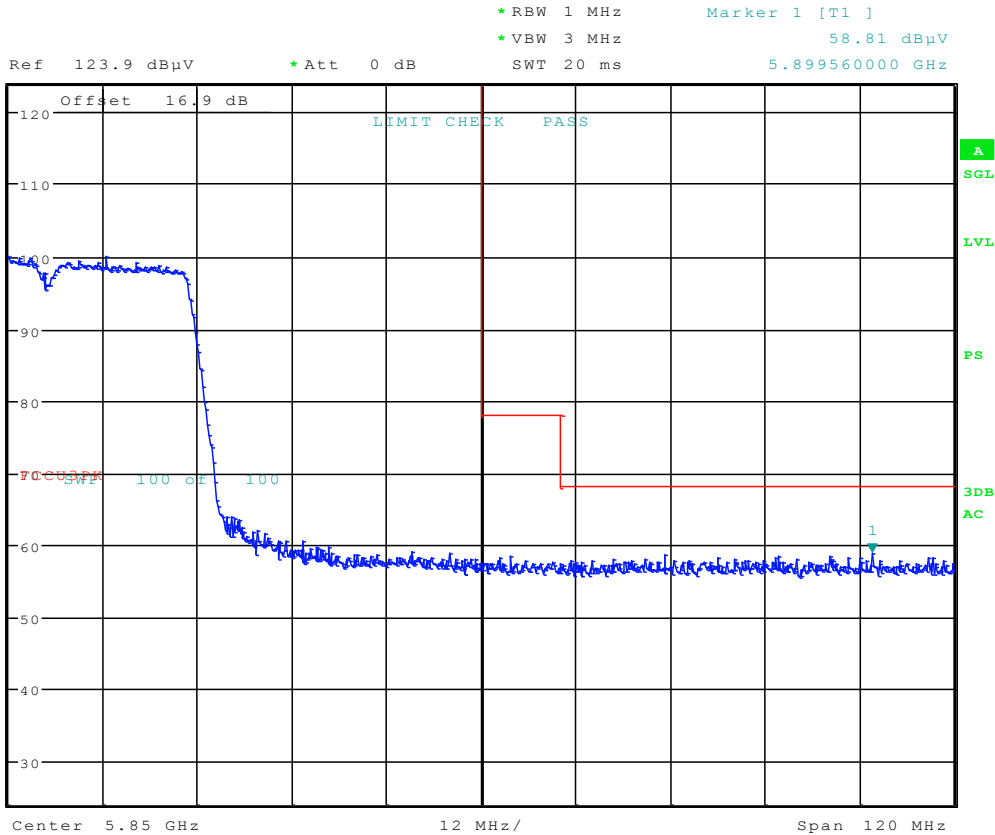
**Plot 6-206. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 2C)**

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 166 of 208	

# 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



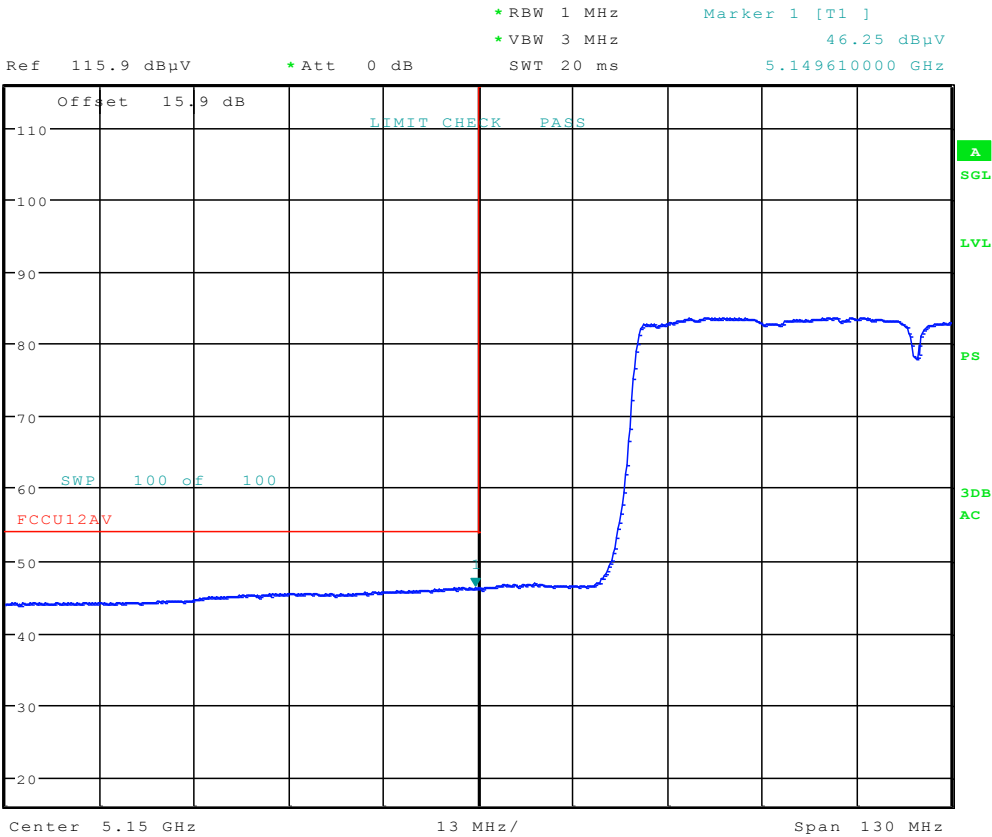
Date: 17.JUL.2015 16:45:14

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

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet		Page 167 of 208

### 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

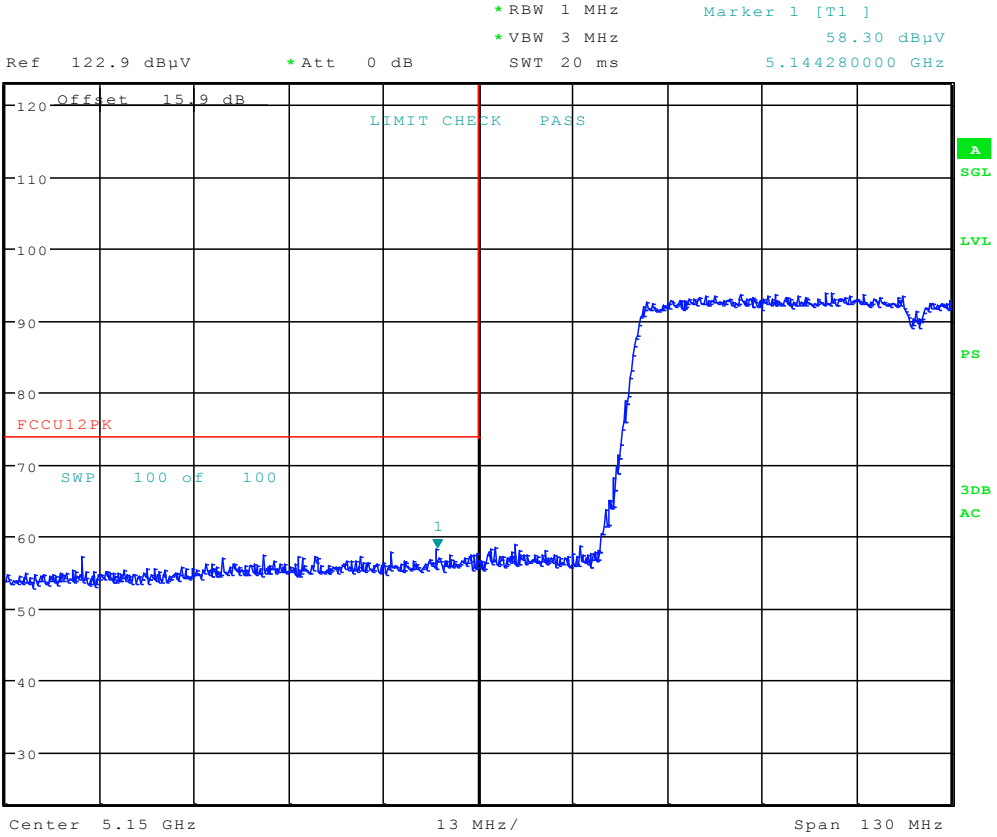


Date: 17.JUL.2015 15:22:44

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

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 168 of 208	

**Antenna-2 Radiated Band Edge Measurements (80MHz BW)**  
**§15.407(b.1)(b.2) §15.205 §15.209**



Date: 17.JUL.2015 15:25:04

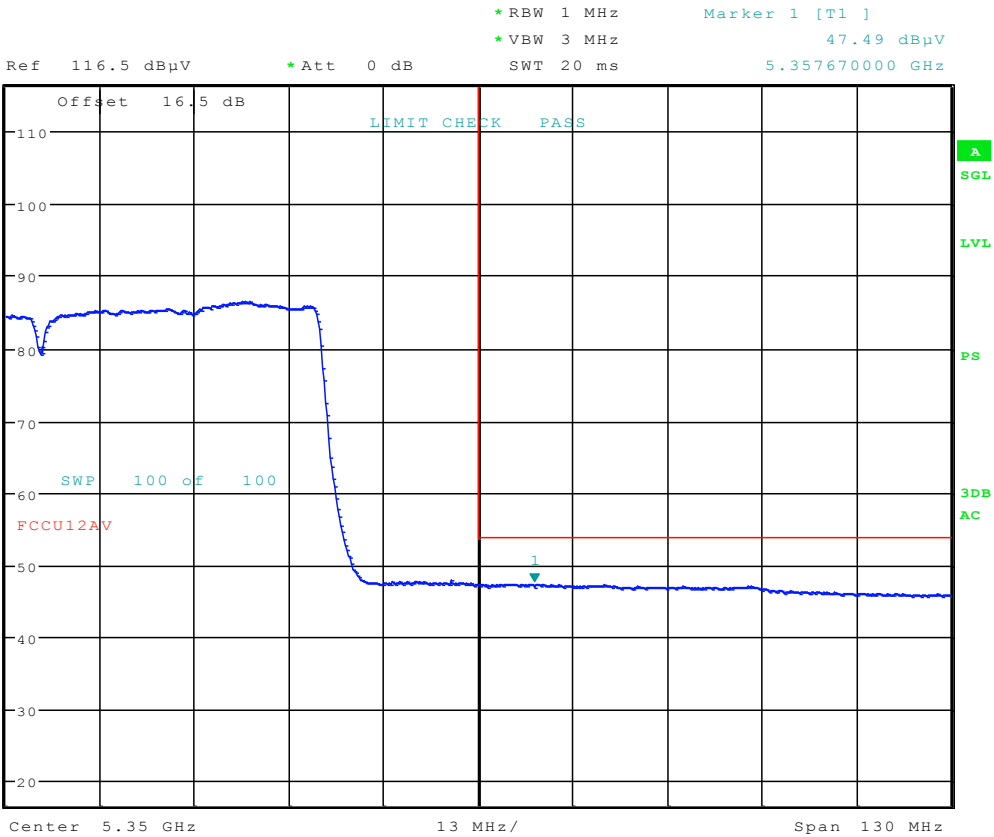
**Plot 6-209. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 1)**

<b>FCC ID:</b> A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		<b>Reviewed by:</b> Quality Manager
<b>Test Report S/N:</b> 0Y1507071385.A3L	<b>Test Dates:</b> 7/7 - 7/29/2015	<b>EUT Type:</b> Portable Tablet	Page 169 of 208	

# 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

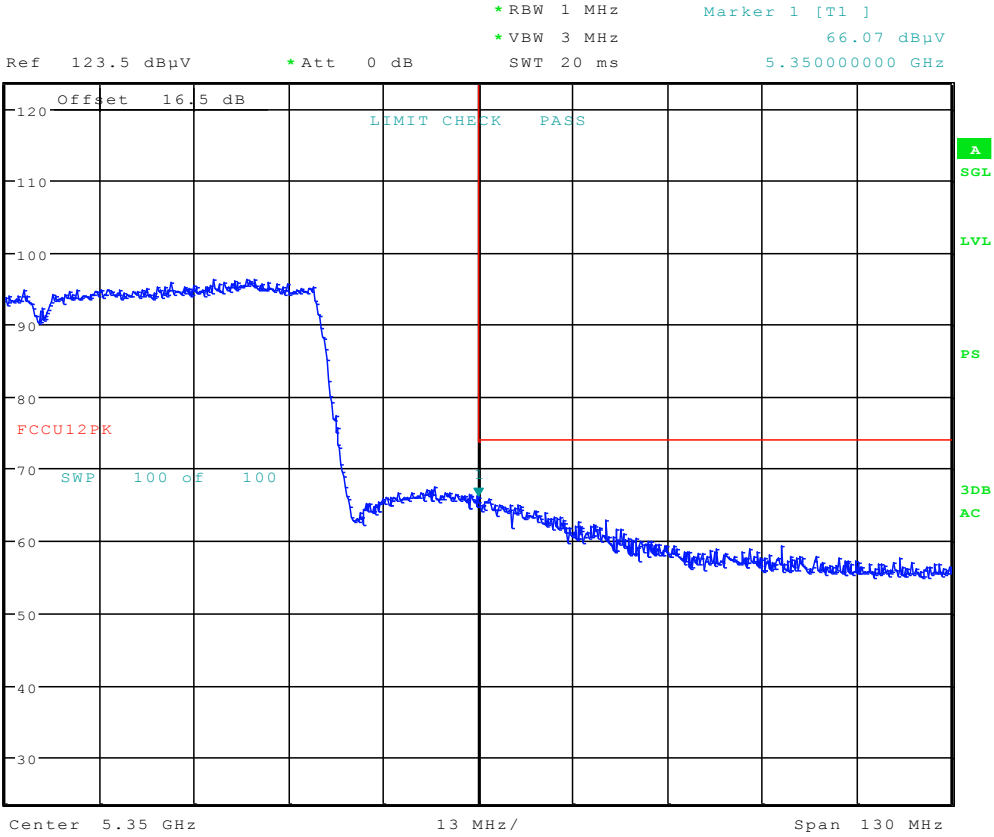


Date: 17.JUL.2015 15:57:28

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

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 170 of 208	

**Antenna-2 Radiated Band Edge Measurements (80MHz BW)**  
**\$15.407(b.1)(b.2) \$15.205 \$15.209**



Date: 17.JUL.2015 15:59:23

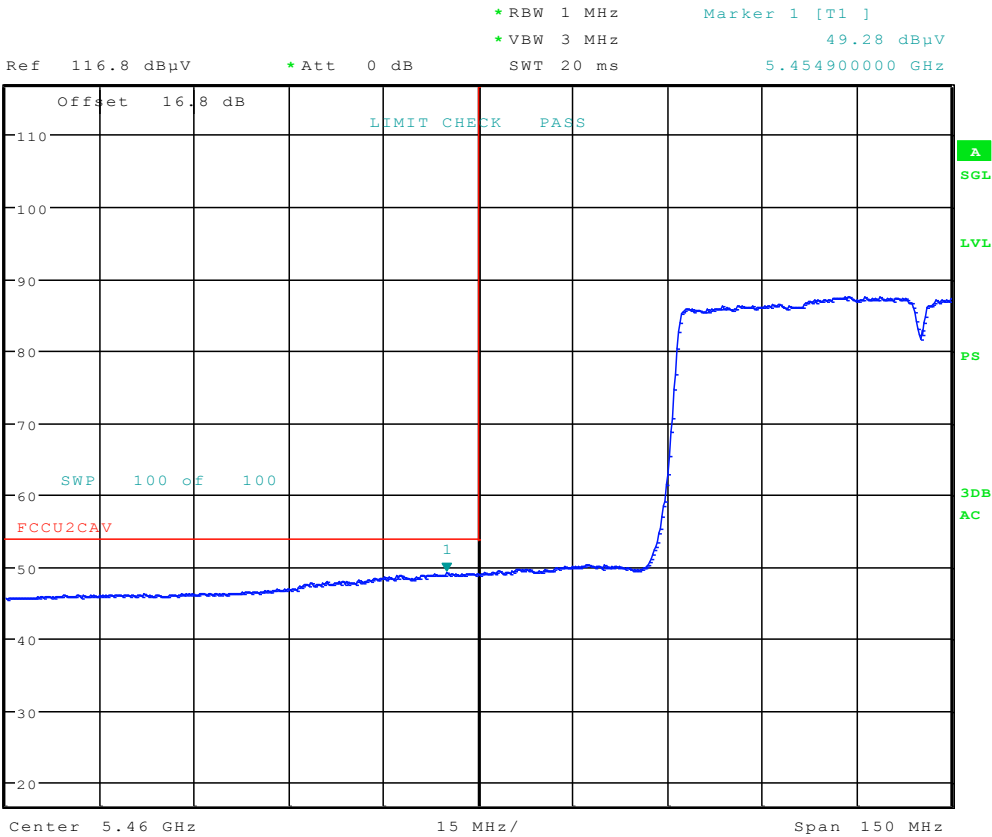
**Plot 6-211. Radiated Restricted Upper Band Edge Plot (Peak – UNII Band 2A)**

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 171 of 208	

# 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

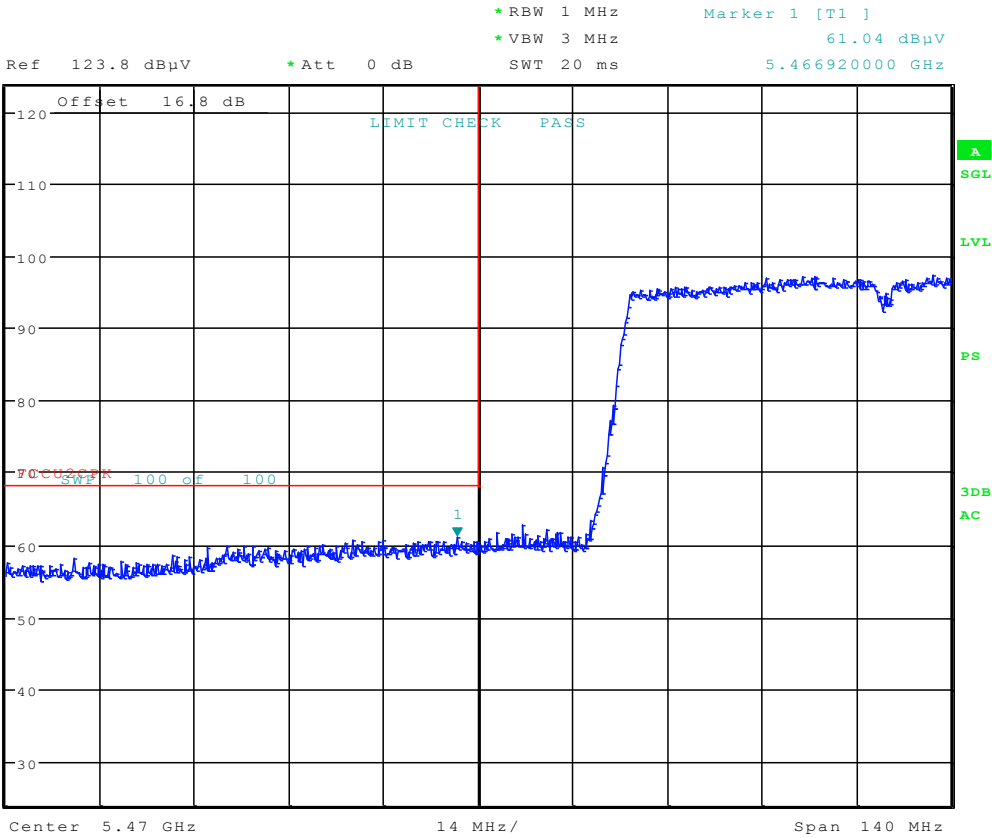


Date: 17.JUL.2015 16:28:31

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

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 172 of 208	

**Antenna-2 Radiated Band Edge Measurements (80MHz BW)**  
**§15.407(b.1)(b.2) §15.205 §15.209**



Date: 17.JUL.2015 16:31:17

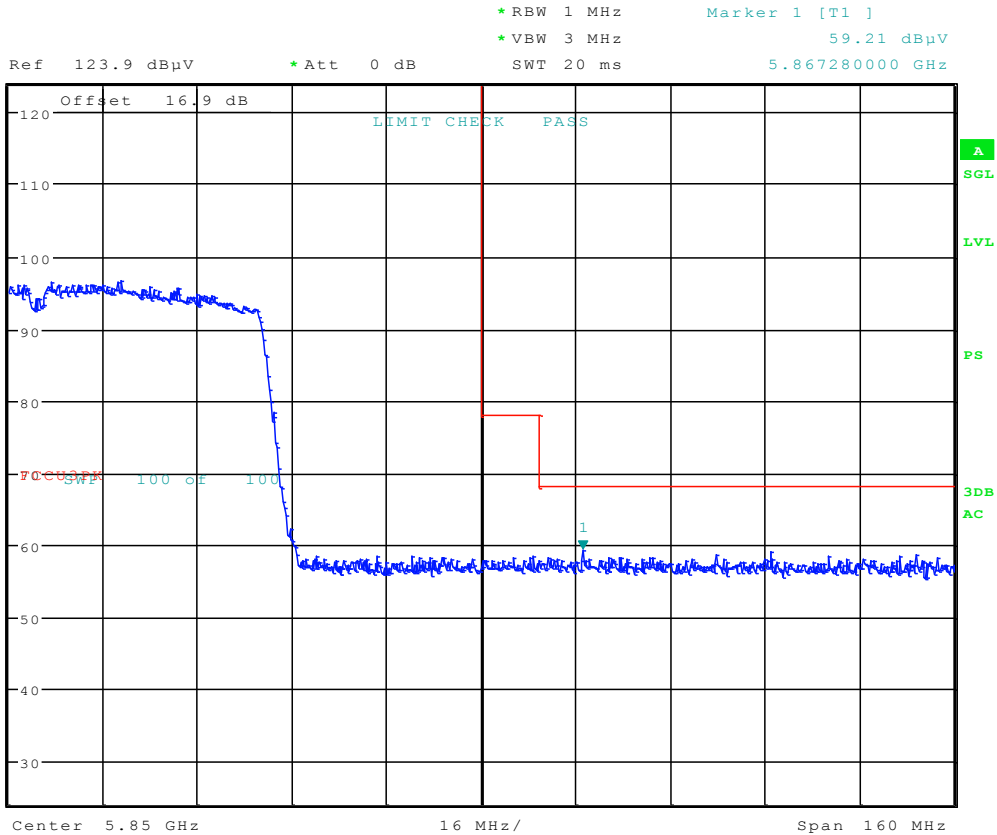
**Plot 6-213. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 2C)**

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 173 of 208	

# 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



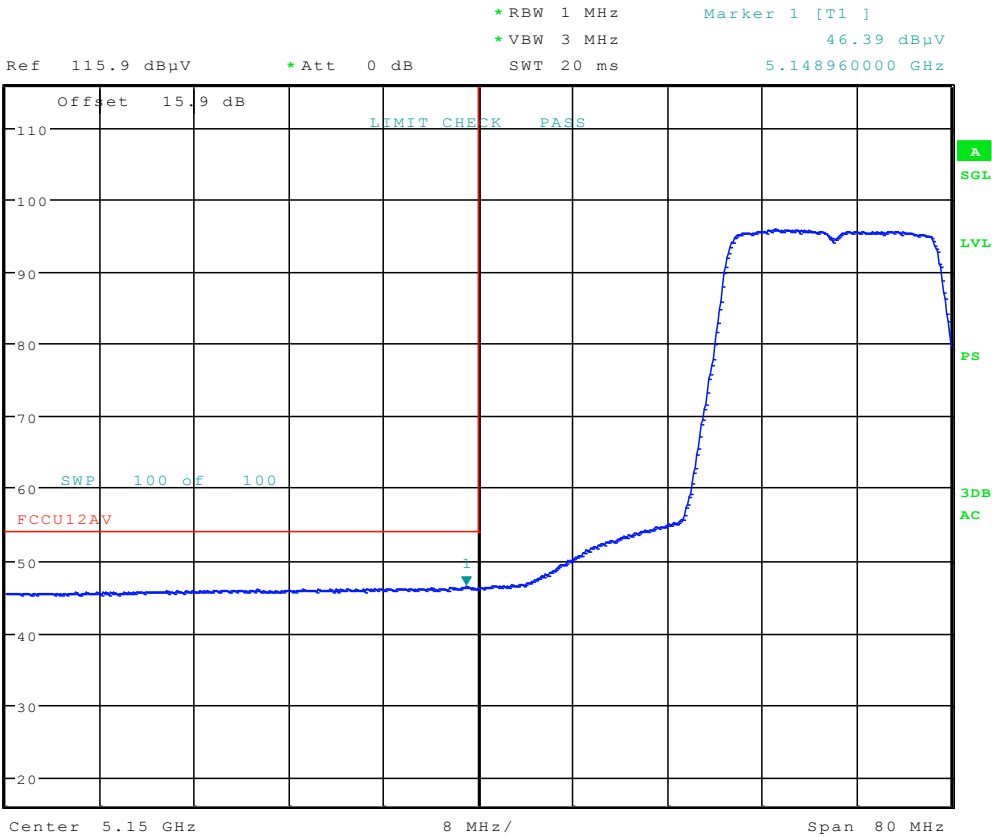
Date: 17.JUL.2015 16:47:17

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

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 174 of 208	

### 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



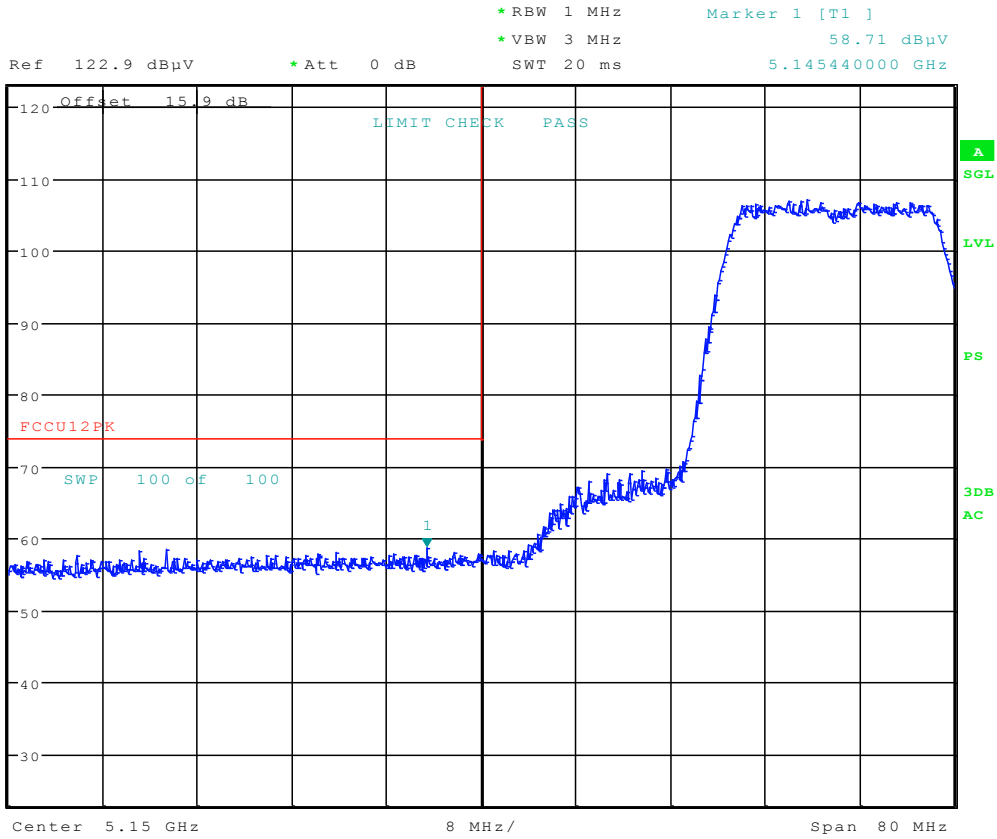
Date: 20.JUL.2015 18:05:04

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

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 175 of 208	

# MIMO Radiated Band Edge Measurements (20MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209



Date: 20.JUL.2015 18:23:32

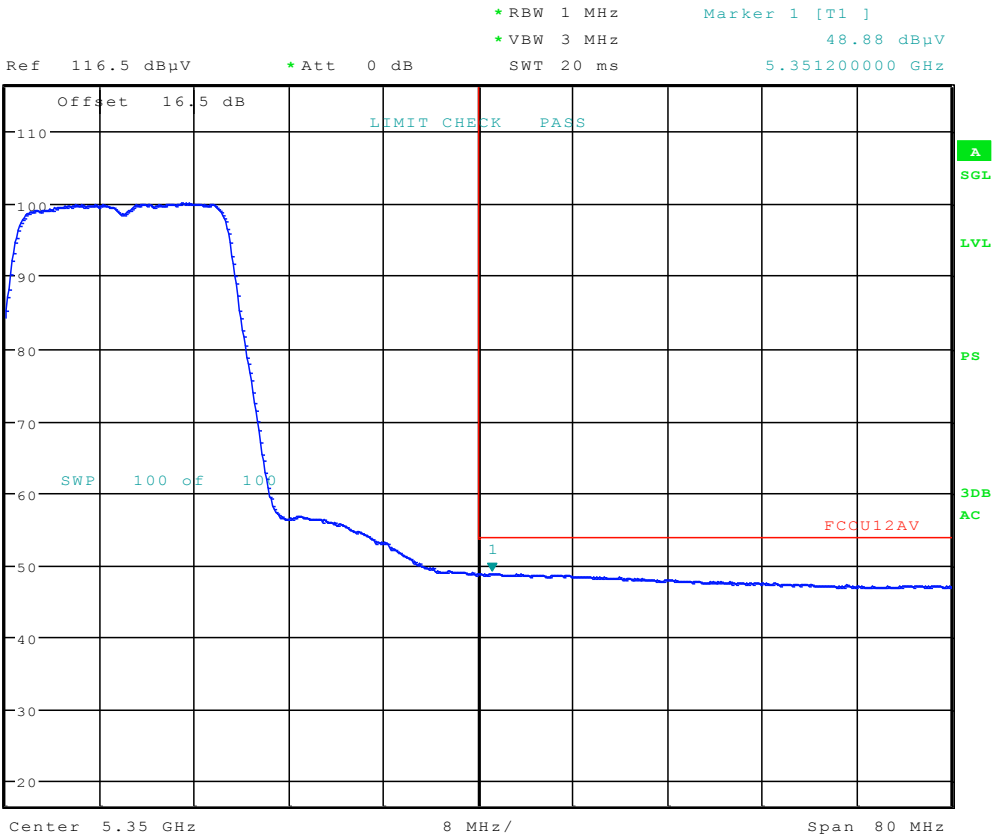
**Plot 6-216. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 1)**

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 176 of 208	

# 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



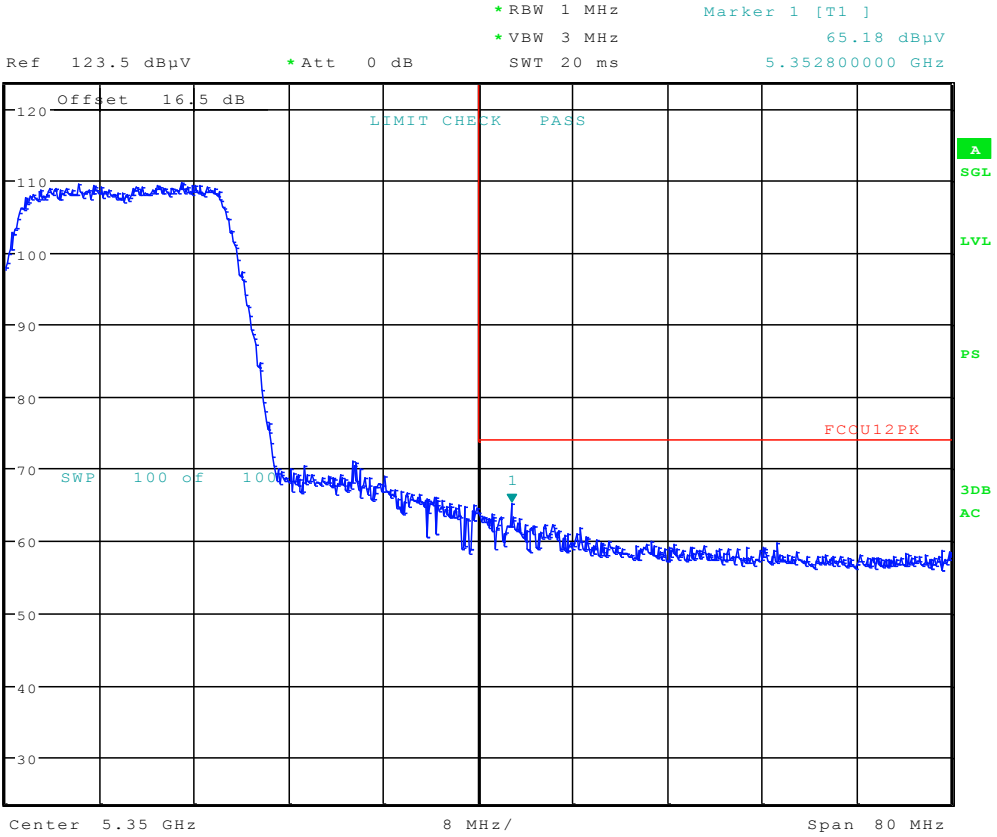
Date: 20.JUL.2015 18:29:40

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

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 177 of 208	

# MIMO Radiated Band Edge Measurements (20MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209



Date: 20.JUL.2015 18:45:44

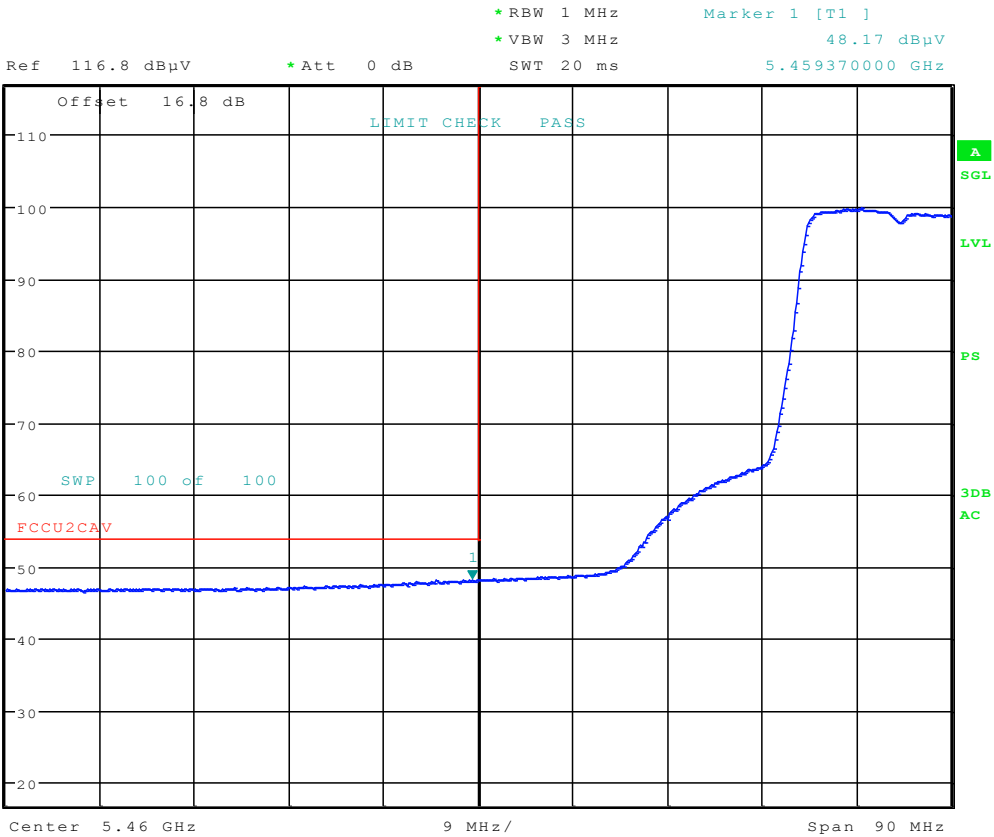
**Plot 6-218. Radiated Restricted Upper Band Edge Plot (Peak – UNII Band 2A)**

<b>FCC ID:</b> A3LSMT817P		<b>FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)</b>		<b>Reviewed by:</b> Quality Manager
<b>Test Report S/N:</b> 0Y1507071385.A3L	<b>Test Dates:</b> 7/7 - 7/29/2015	<b>EUT Type:</b> Portable Tablet	Page 178 of 208	

# 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



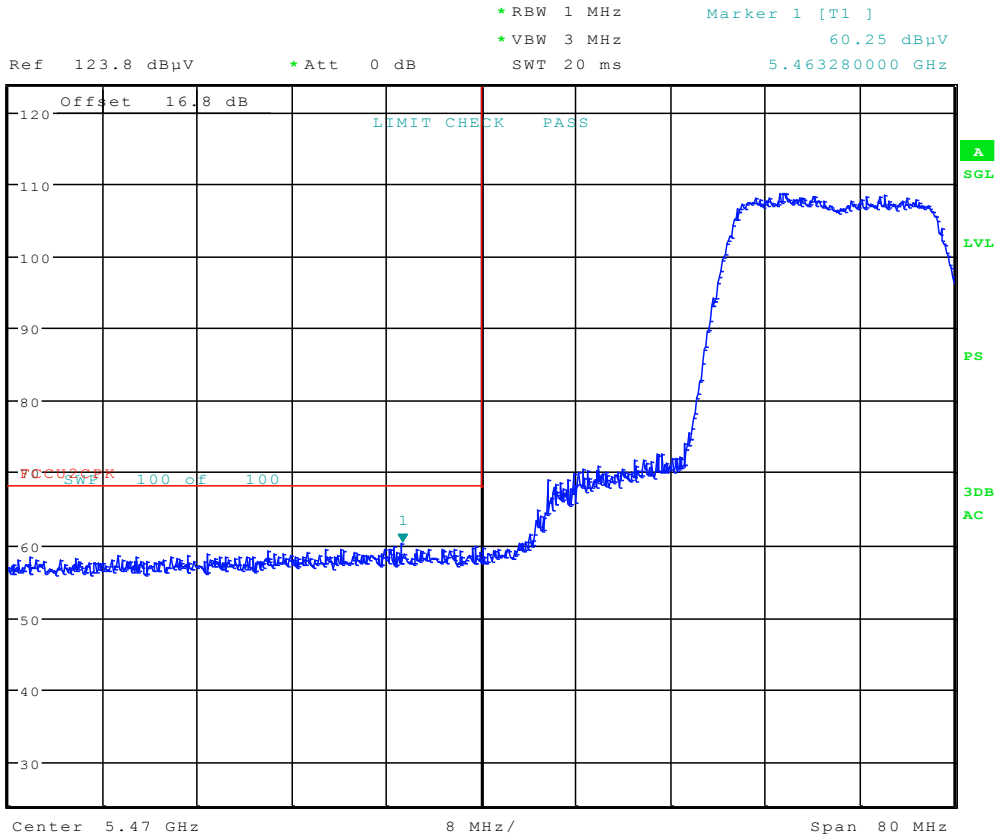
Date: 20.JUL.2015 18:51:46

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

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 179 of 208	

# MIMO Radiated Band Edge Measurements (20MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209



Date: 20.JUL.2015 19:05:05

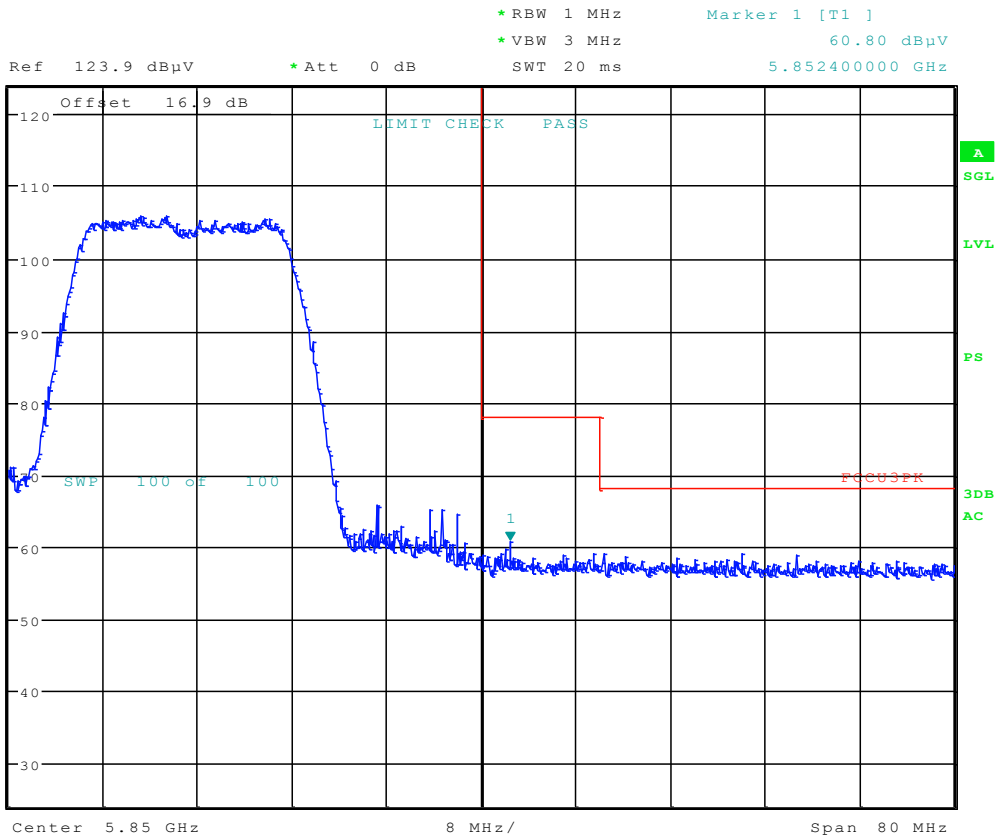
**Plot 6-220. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 2C)**

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 180 of 208	

# 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



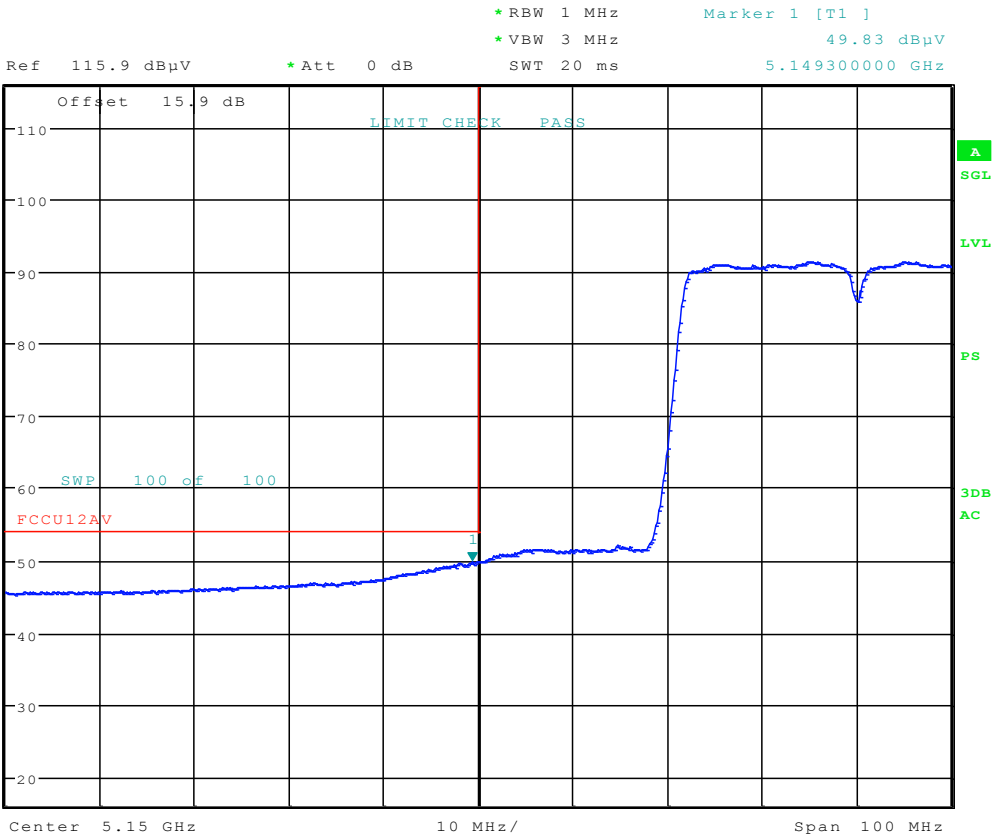
Date: 20.JUL.2015 19:10:18

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

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 181 of 208	

### 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

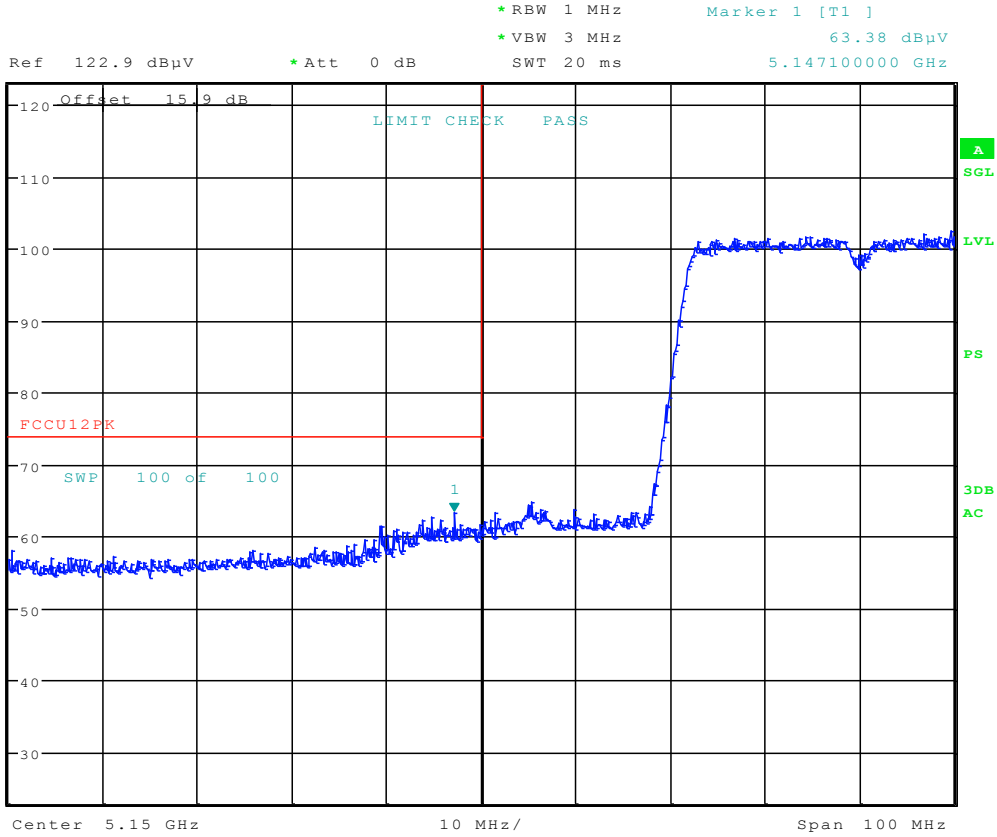


Date: 20.JUL.2015 18:12:37

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



FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet		Page 182 of 208

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



Date: 20.JUL.2015 18:21:59

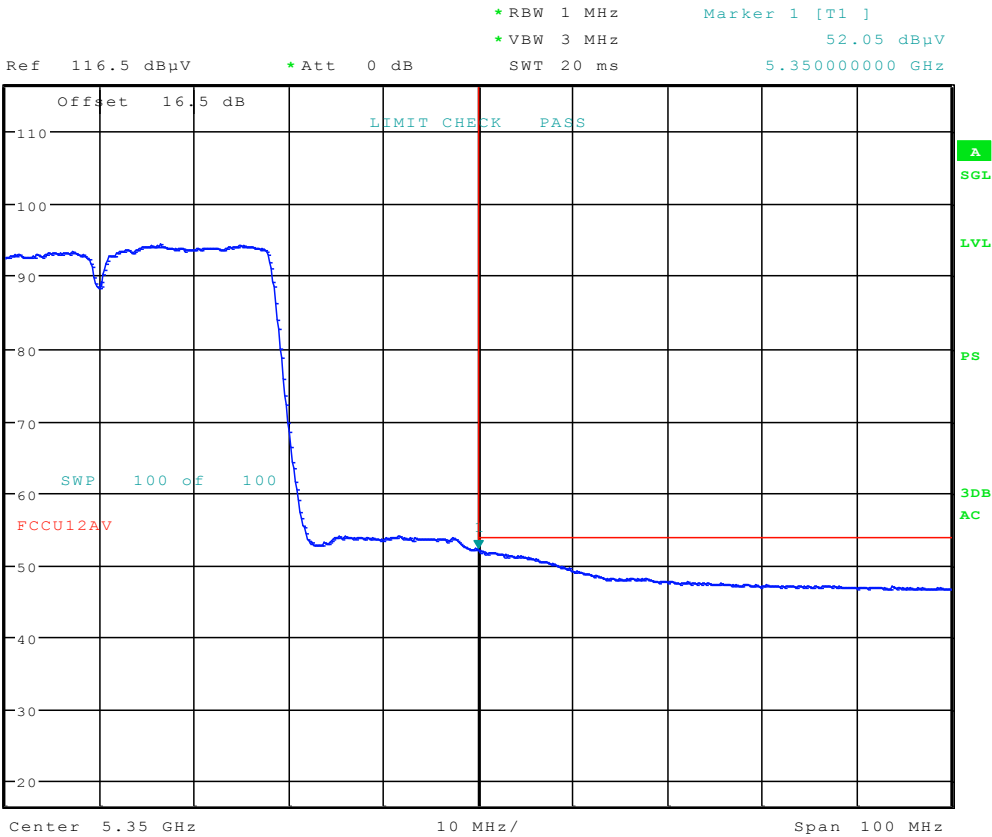
**Plot 6-223. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 1)**

<b>FCC ID:</b> A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		<b>Reviewed by:</b> Quality Manager
<b>Test Report S/N:</b> 0Y1507071385.A3L	<b>Test Dates:</b> 7/7 - 7/29/2015	<b>EUT Type:</b> Portable Tablet	Page 183 of 208	

# 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



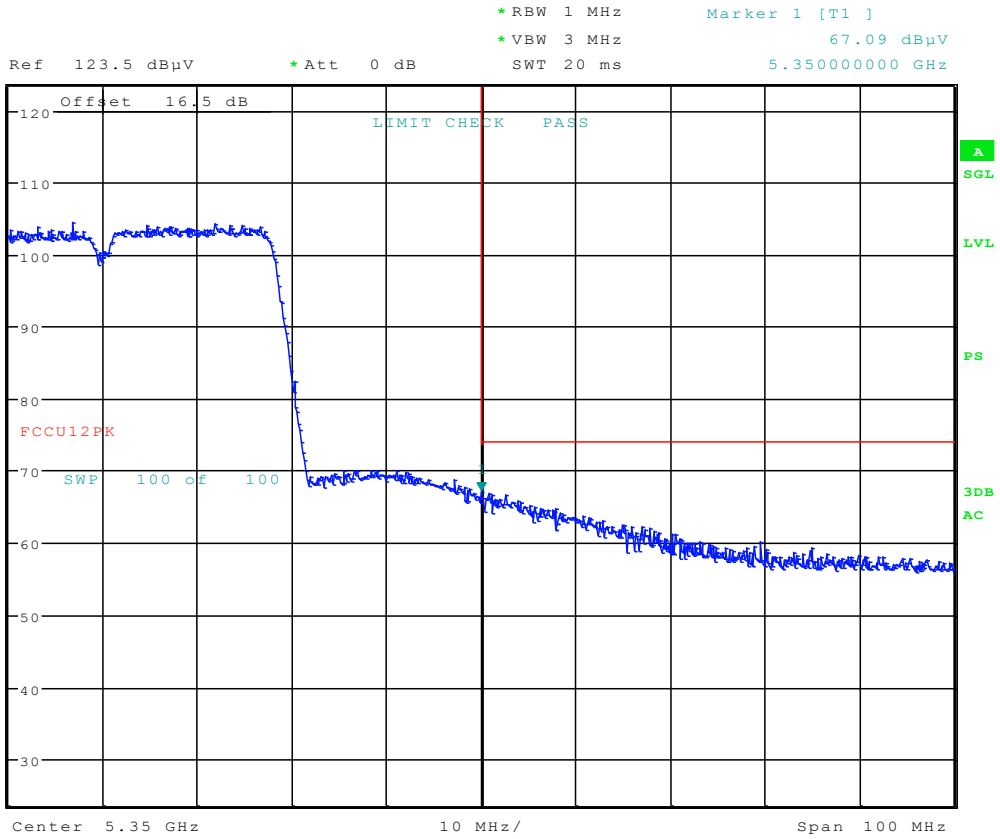
Date: 20.JUL.2015 18:37:02

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

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 184 of 208	

# MIMO Radiated Band Edge Measurements (40MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209



Date: 20.JUL.2015 18:43:38

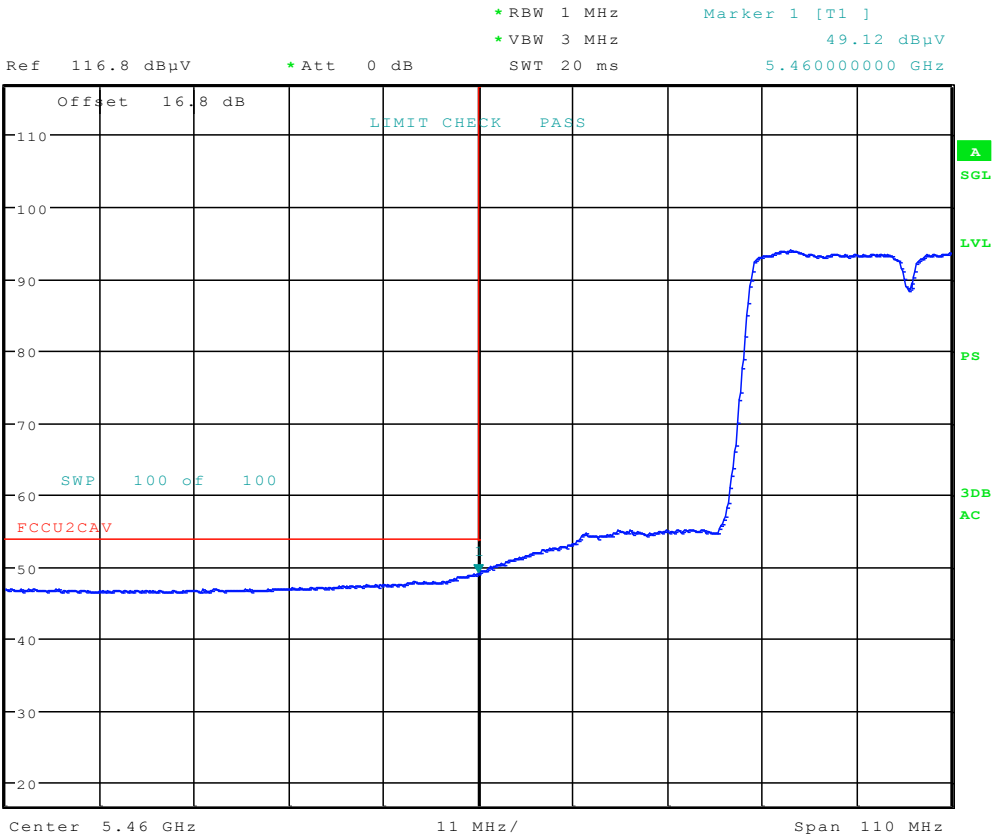
**Plot 6-225. Radiated Restricted Upper Band Edge Plot (Peak – UNII Band 2A)**

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 185 of 208	

# 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



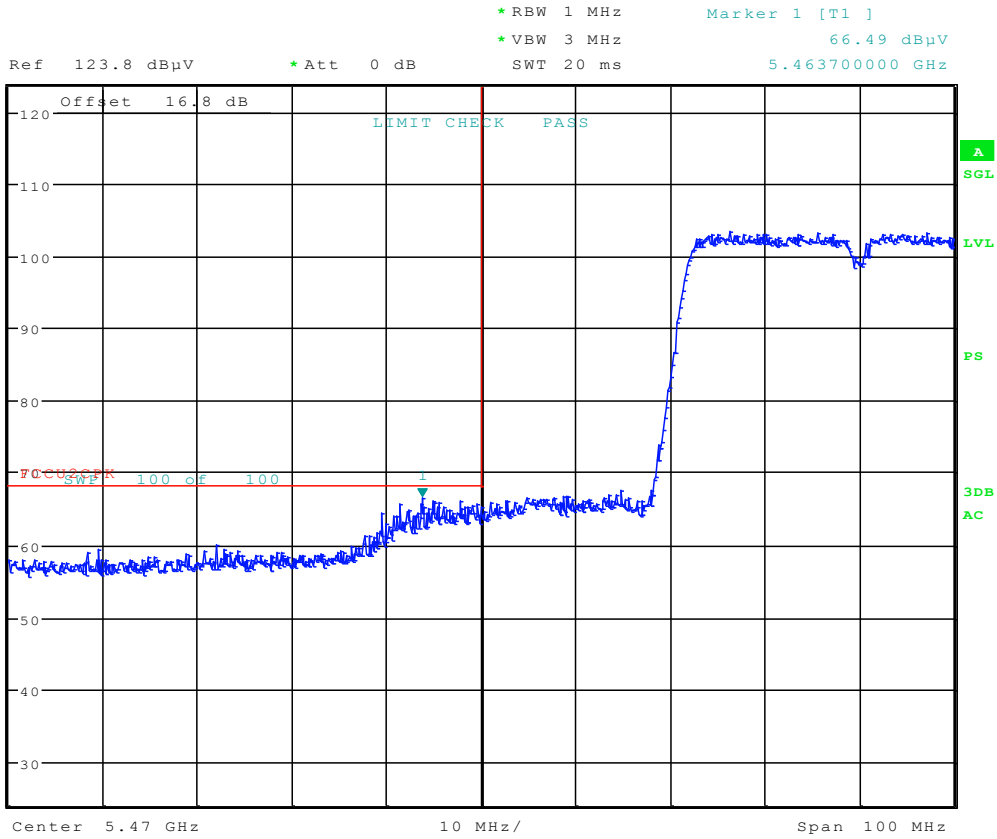
Date: 20.JUL.2015 18:53:35

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

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 186 of 208	

# MIMO Radiated Band Edge Measurements (40MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209



Date: 20.JUL.2015 19:02:45

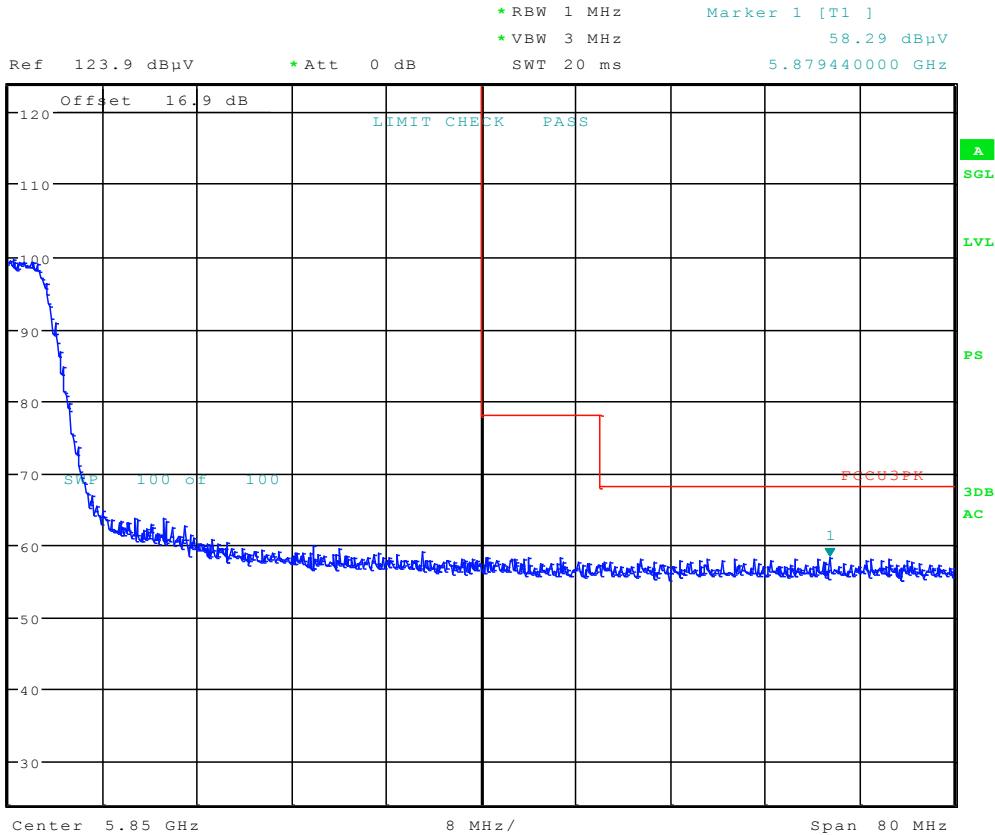
**Plot 6-227. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 2C)**

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 187 of 208	

# 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



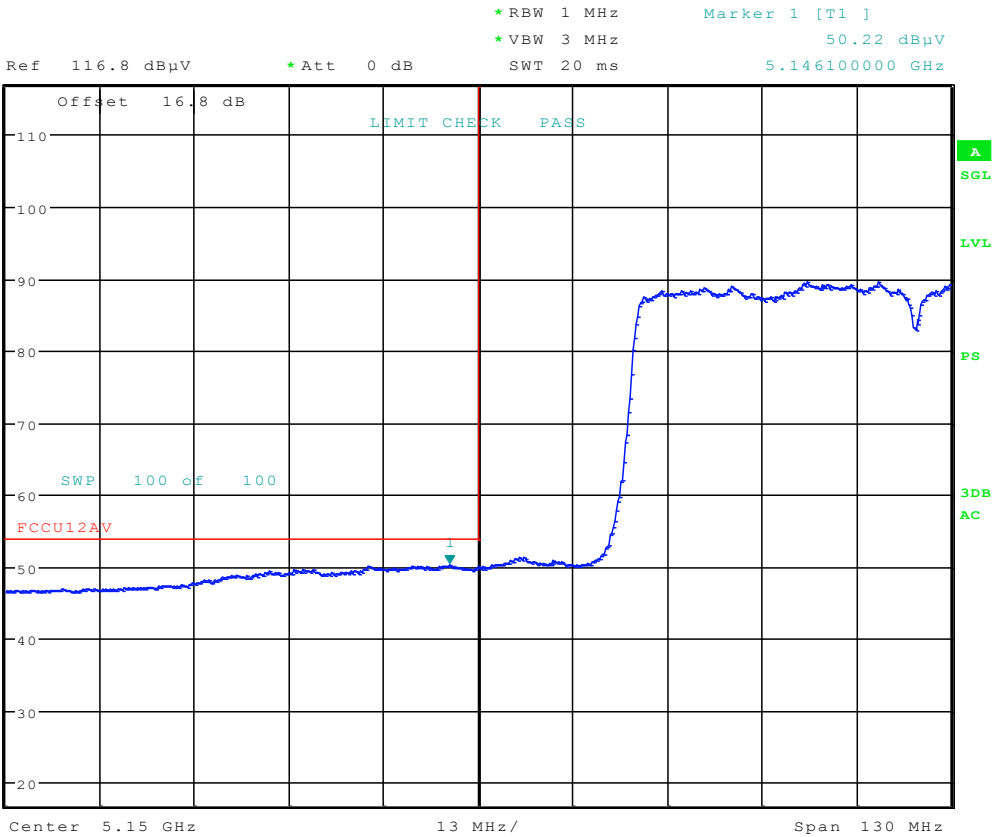
Date: 20.JUL.2015 19:12:00

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

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 188 of 208	

### 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



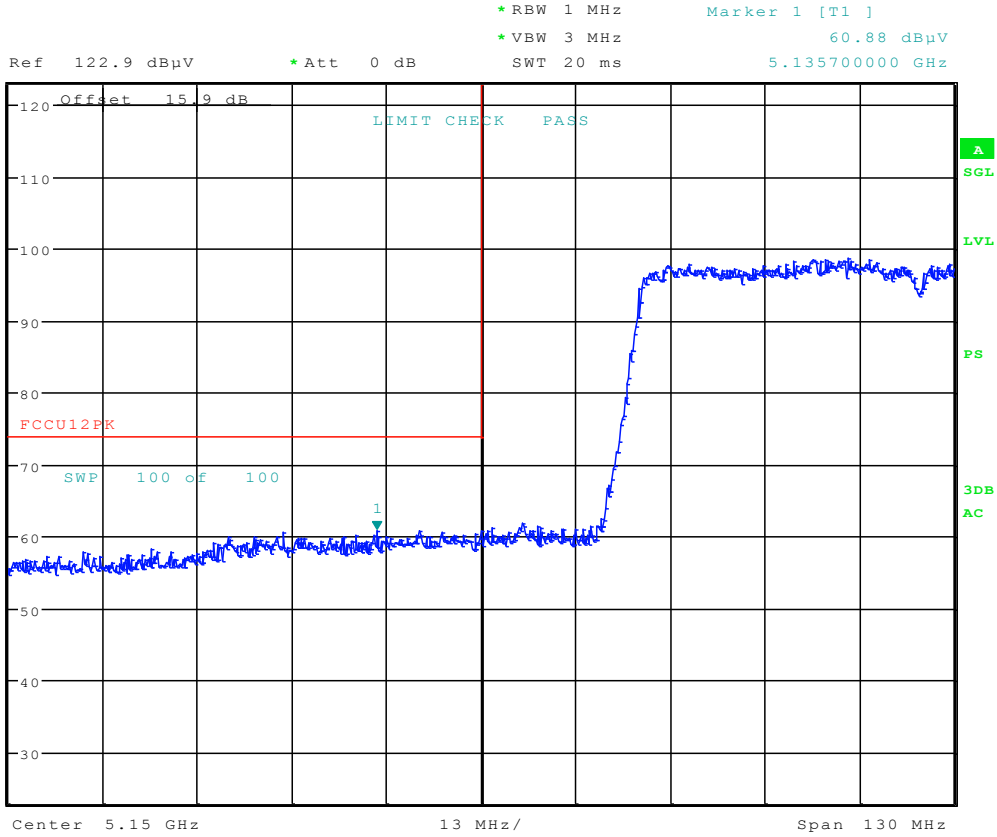
Date: 20.JUL.2015 18:18:45

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

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet		Page 189 of 208

# MIMO Radiated Band Edge Measurements (80MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209



Date: 20.JUL.2015 18:20:12

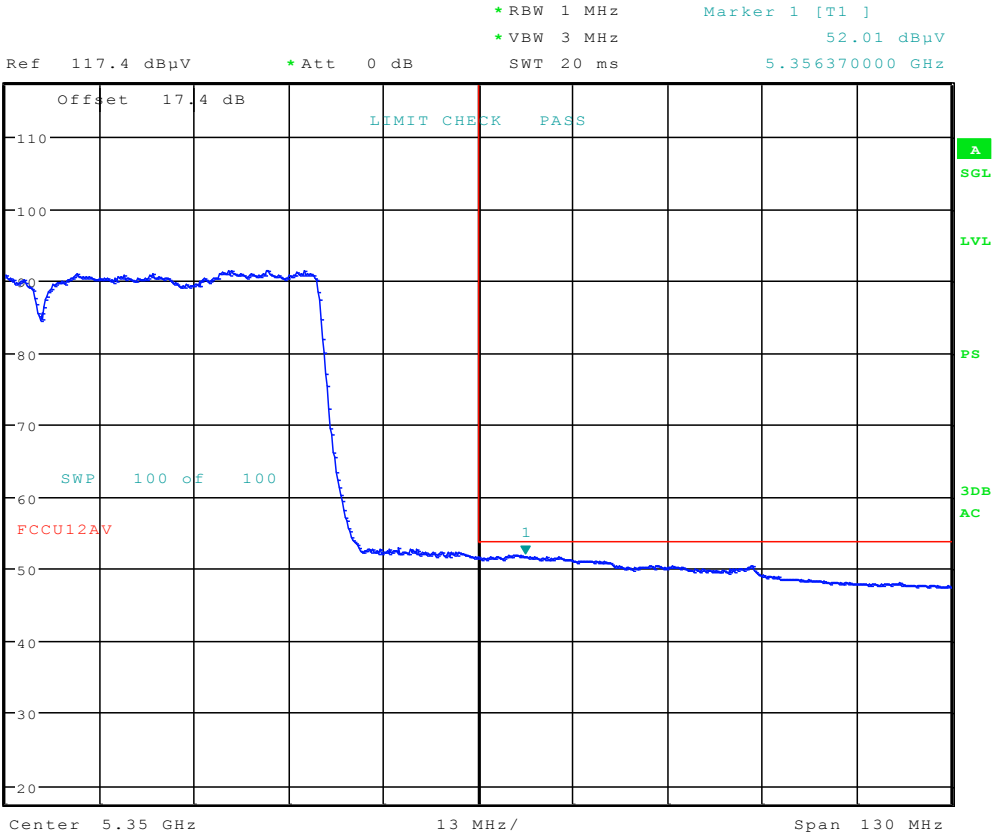
**Plot 6-230. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 1)**

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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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



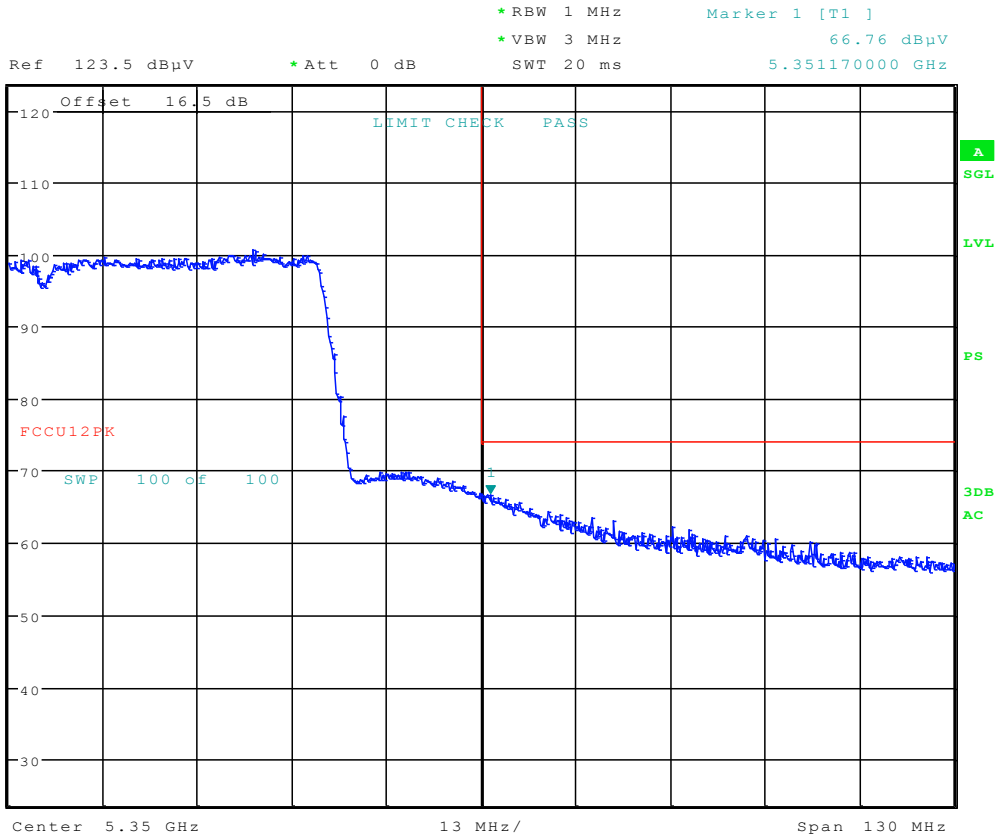
Date: 20.JUL.2015 18:40:29

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

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 191 of 208	

# MIMO Radiated Band Edge Measurements (80MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209



Date: 20.JUL.2015 18:41:49

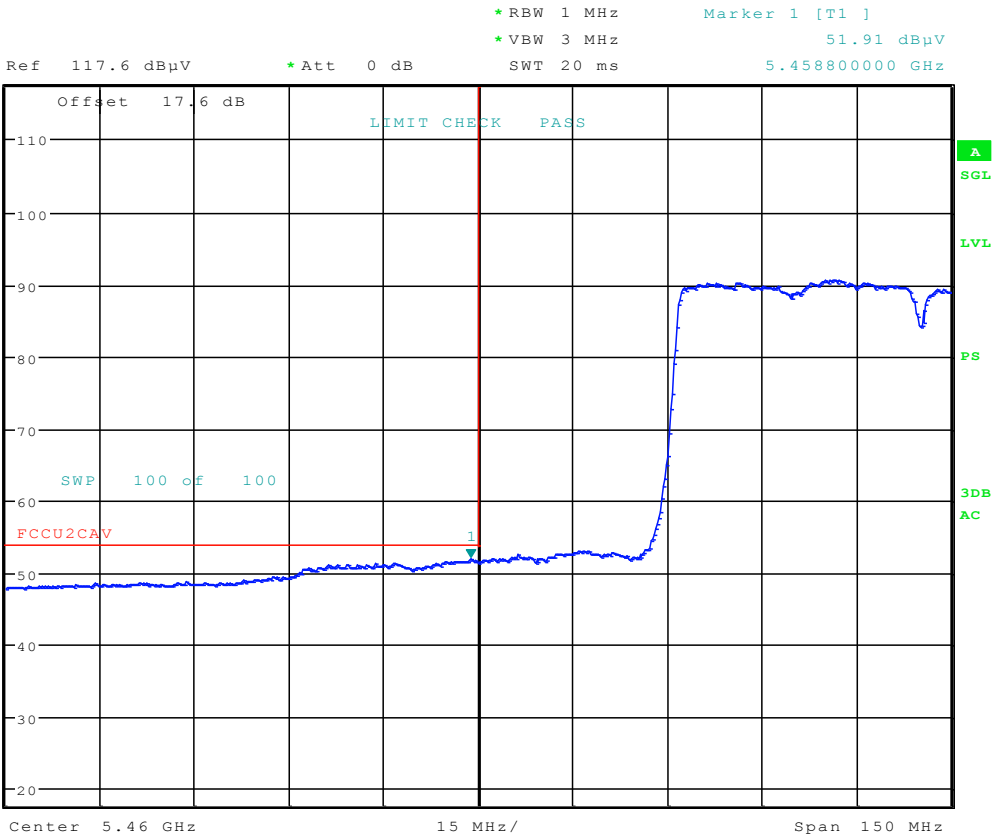
**Plot 6-232. Radiated Restricted Upper Band Edge Plot (Peak – UNII Band 2A)**

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet		Page 192 of 208

# 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

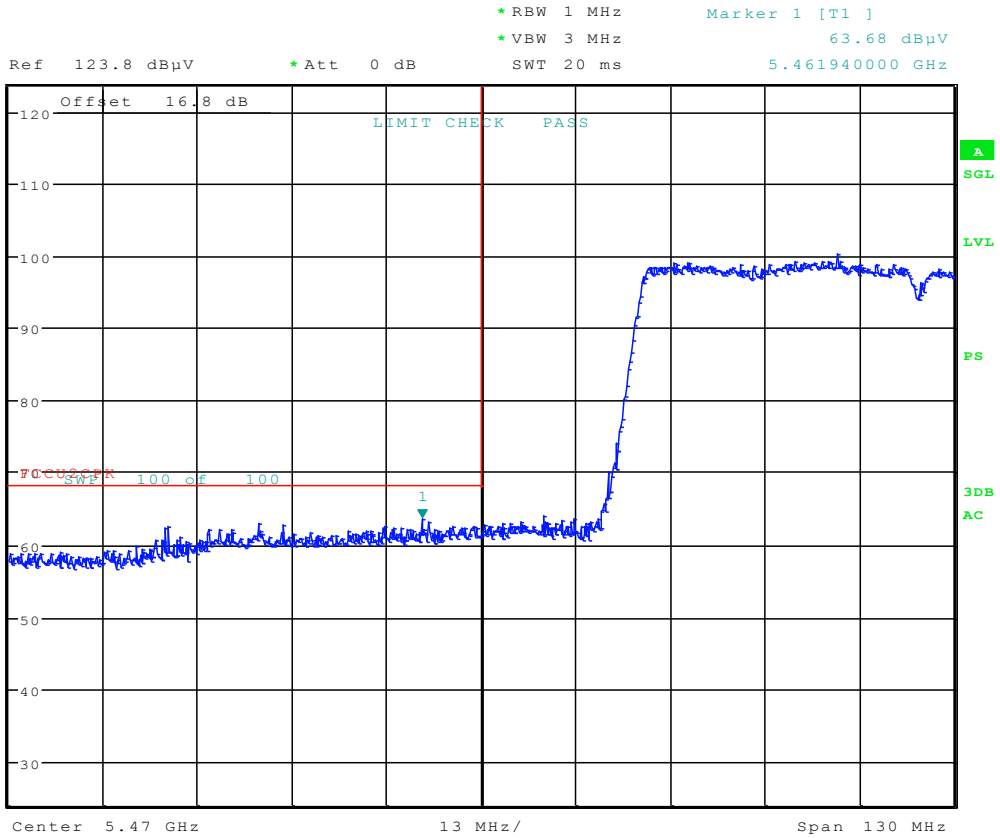


Date: 20.JUL.2015 18:56:01

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

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet	Page 193 of 208	

**MIMO Radiated Band Edge Measurements (80MHz BW)**  
**\$15.407(b.1)(b.2) \$15.205 \$15.209**



Date: 20.JUL.2015 19:00:22

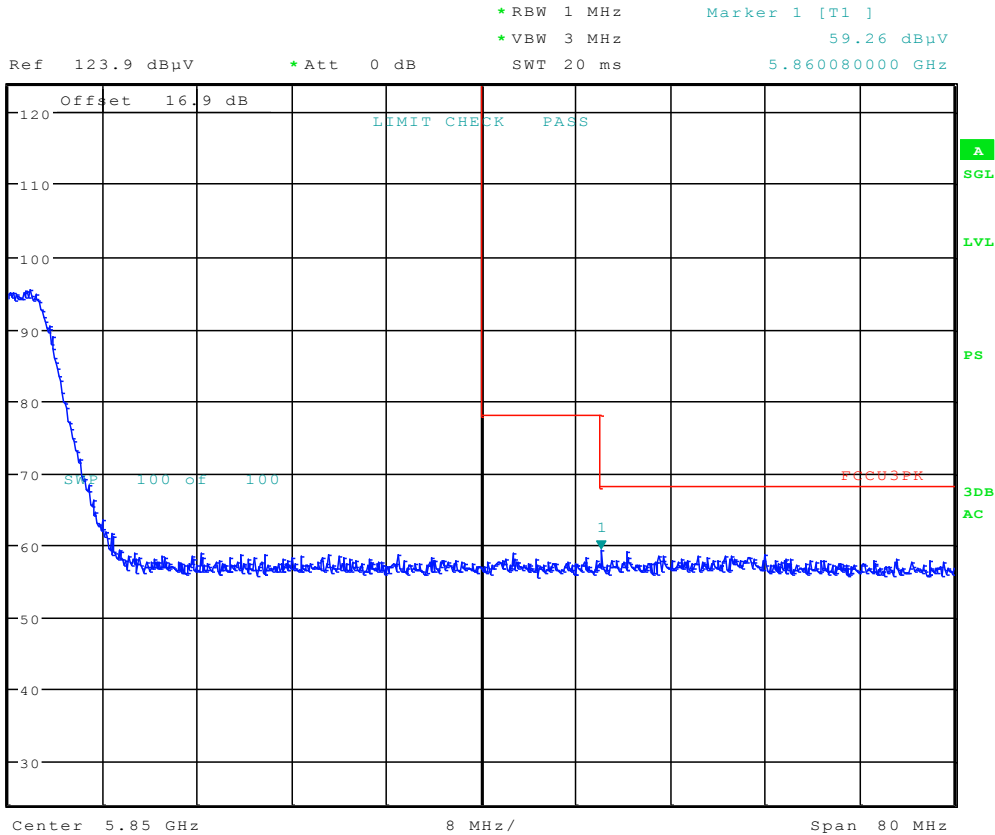
**Plot 6-234. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 2C)**

<b>FCC ID:</b> A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		<b>Reviewed by:</b> Quality Manager
<b>Test Report S/N:</b> 0Y1507071385.A3L	<b>Test Dates:</b> 7/7 - 7/29/2015	<b>EUT Type:</b> Portable Tablet	Page 194 of 208	

# 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: 20.JUL.2015 19:13:51

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

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet		Page 195 of 208

## 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, 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 6-52 per Section 15.209.**

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

**Table 6-52. Radiated Limits**



#### Test Procedures Used

ANSI C63.4-2009

#### Test Settings

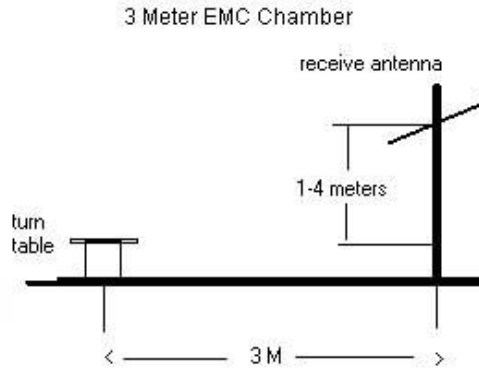
##### Quasi-Peak Field Strength Measurements

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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<b>Test Report S/N:</b> 0Y1507071385.A3L	<b>Test Dates:</b> 7/7 - 7/29/2015	<b>EUT Type:</b> Portable Tablet	Page 196 of 208	

## Test Setup



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



**Figure 6-6. Test Instrument & Measurement Setup**

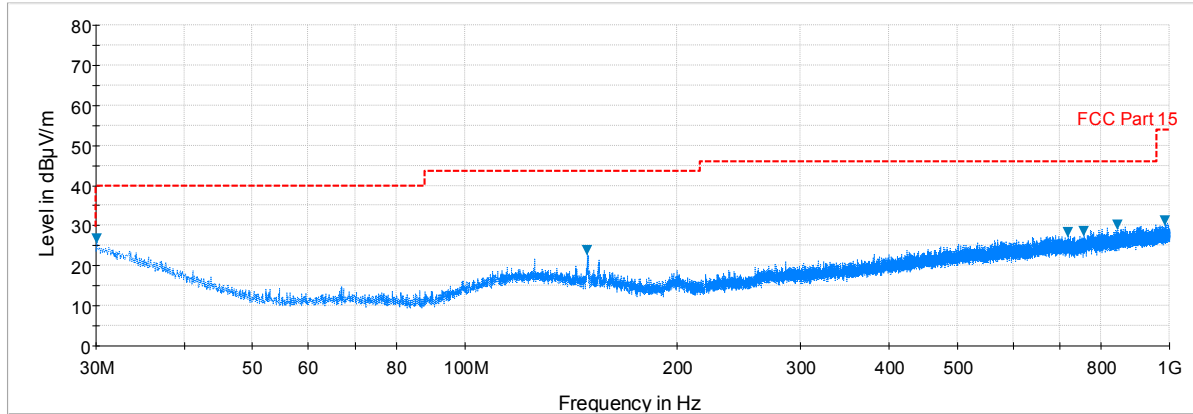
## Test Notes

1. All emissions lying in restricted bands specified in §15.205 are below the limit shown in Table 6-27.
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 results recorded using the broadband antenna is known to correlate with the results obtained by using a tuned dipole with an acceptable degree of accuracy. The VSWR for the measurement antenna was found to be less than 2:1.
9. 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.

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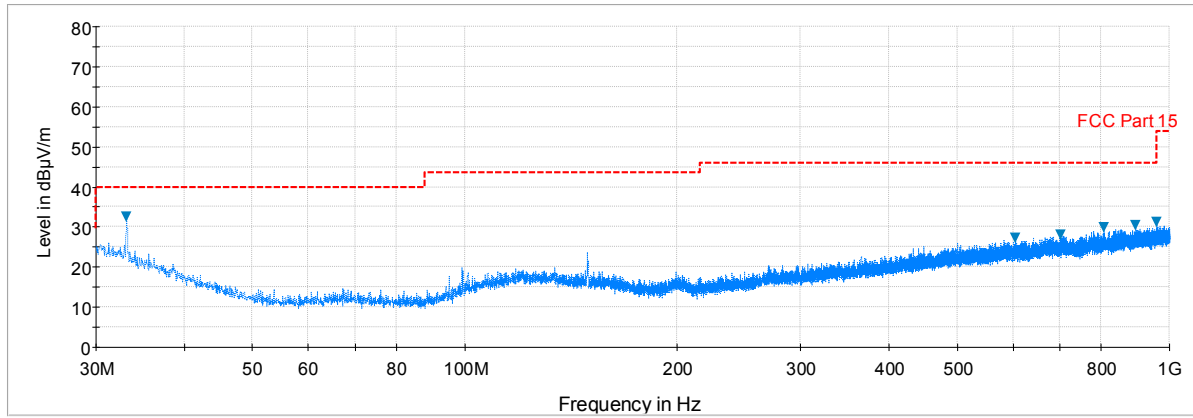
## Antenna-1 Radiated Spurious Emissions Measurements (Below 1GHz)

§15.209



Preview Result 1-PK+    FCC Part 15    Final\_Result PK+

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



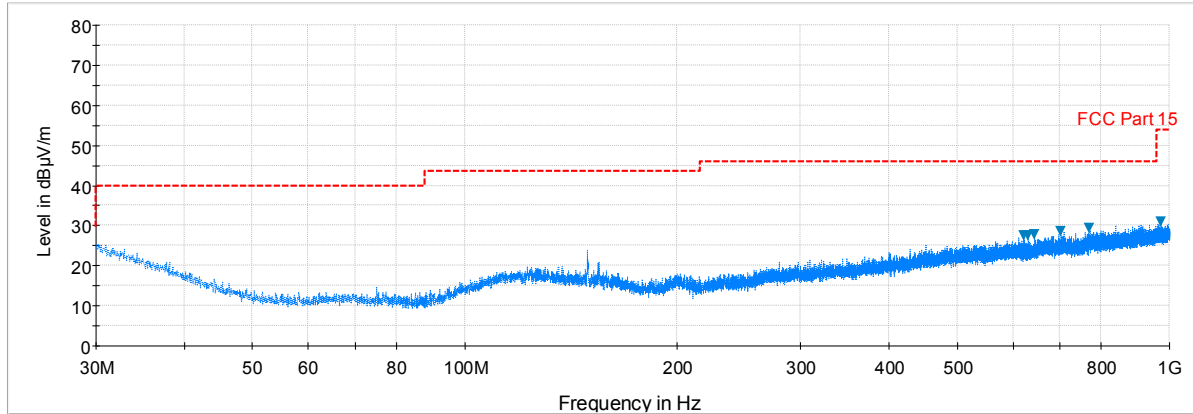
Preview Result 1-PK+    FCC Part 15    Final\_Result PK+

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

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1507071385.A3L	Test Dates: 7/7 - 7/29/2015	EUT Type: Portable Tablet		Page 198 of 208

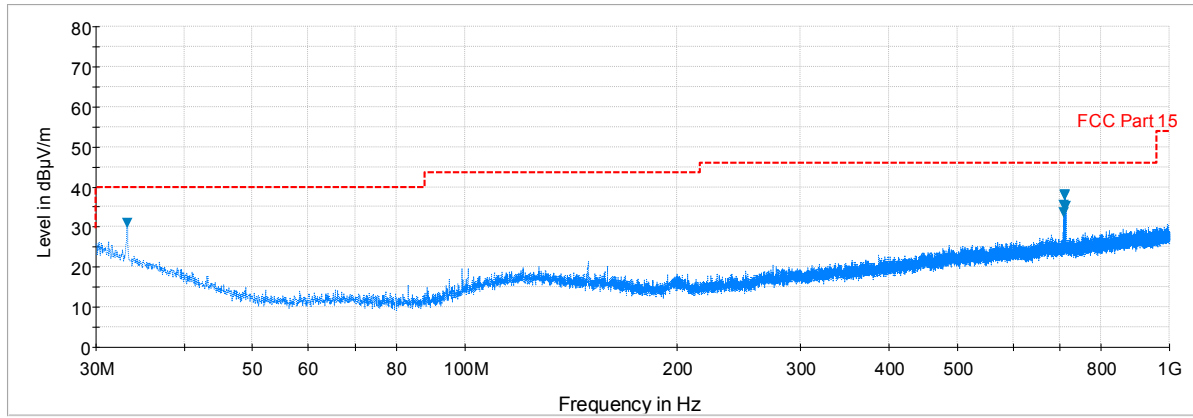
## Antenna-2 Radiated Spurious Emissions Measurements (Below 1GHz)

§15.209





Preview Result 1-PK+    FCC Part 15    Final\_Result PK+

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



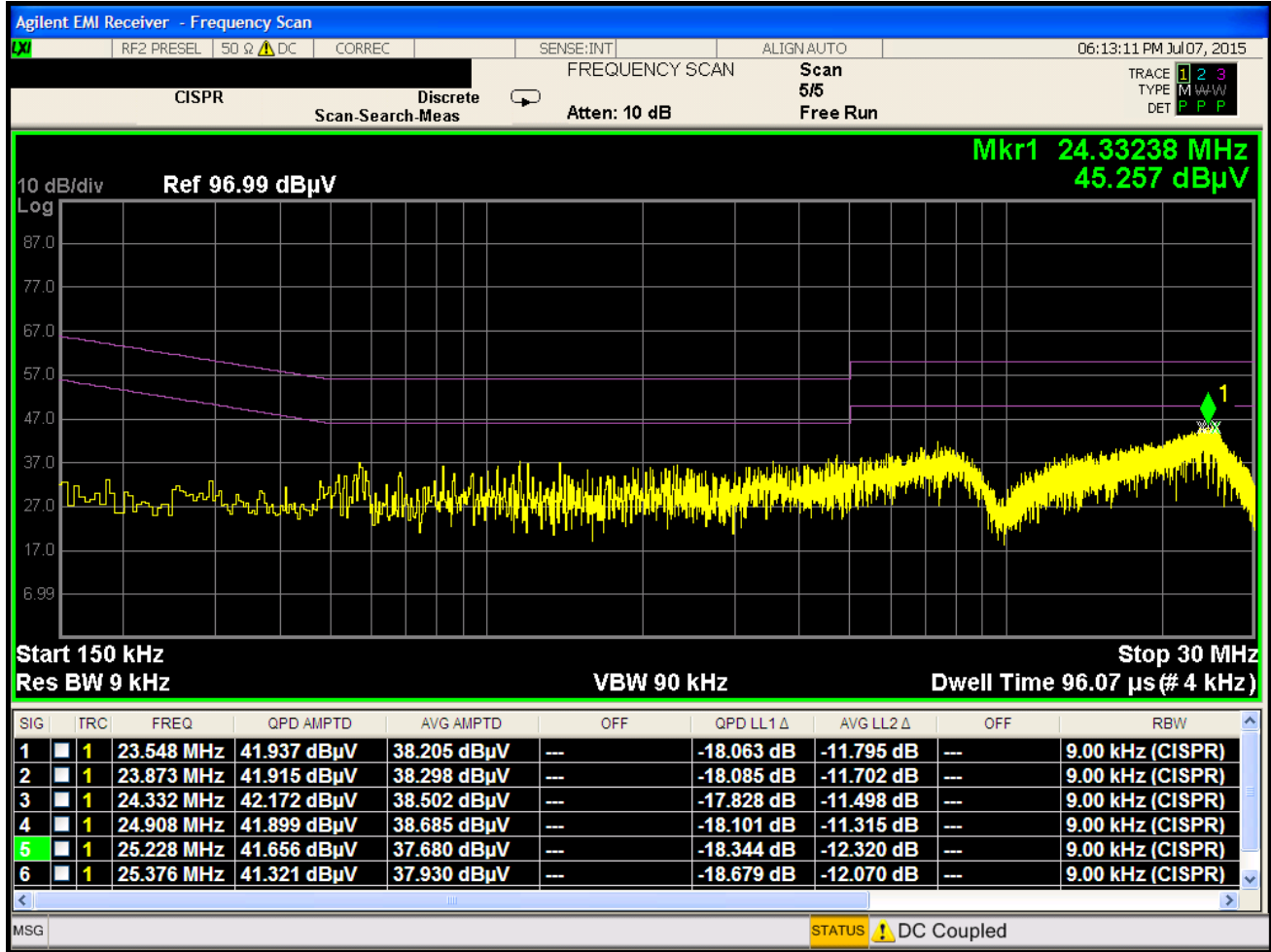
Preview Result 1-PK+    FCC Part 15    Final\_Result PK+

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

<b>FCC ID:</b> A3LSMT817P		<b>FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)</b>		<b>Reviewed by:</b> Quality Manager
<b>Test Report S/N:</b> 0Y1507071385.A3L	<b>Test Dates:</b> 7/7 - 7/29/2015	<b>EUT Type:</b> Portable Tablet	Page 199 of 208	

## 6.9 Line-Conducted Test Data

**\$15.407**



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

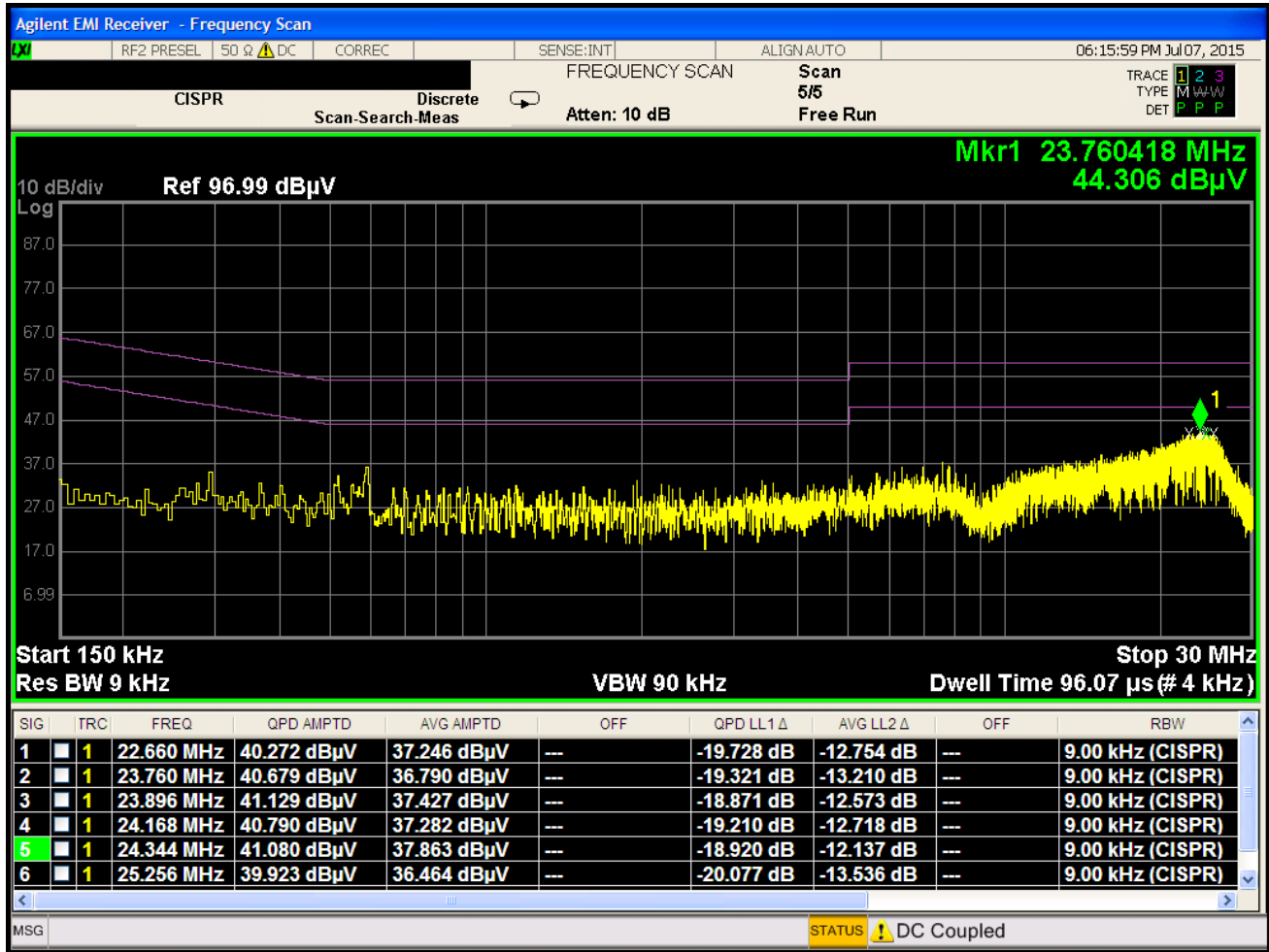
**Notes:**

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.

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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# Line-Conducted Test Data

**\$15.407**



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

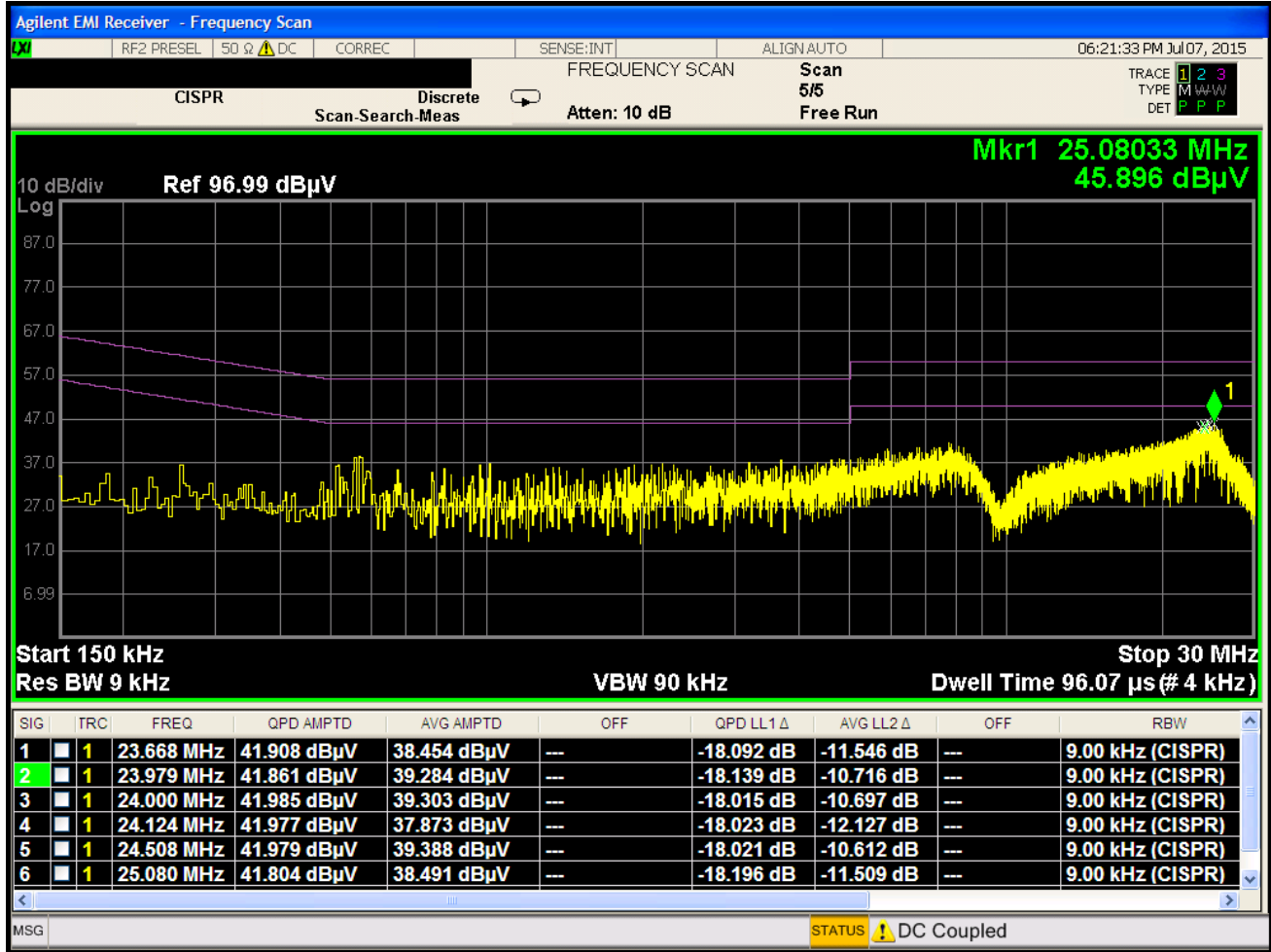
**Notes:**

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.

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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# Line-Conducted Test Data

**\$15.407**



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

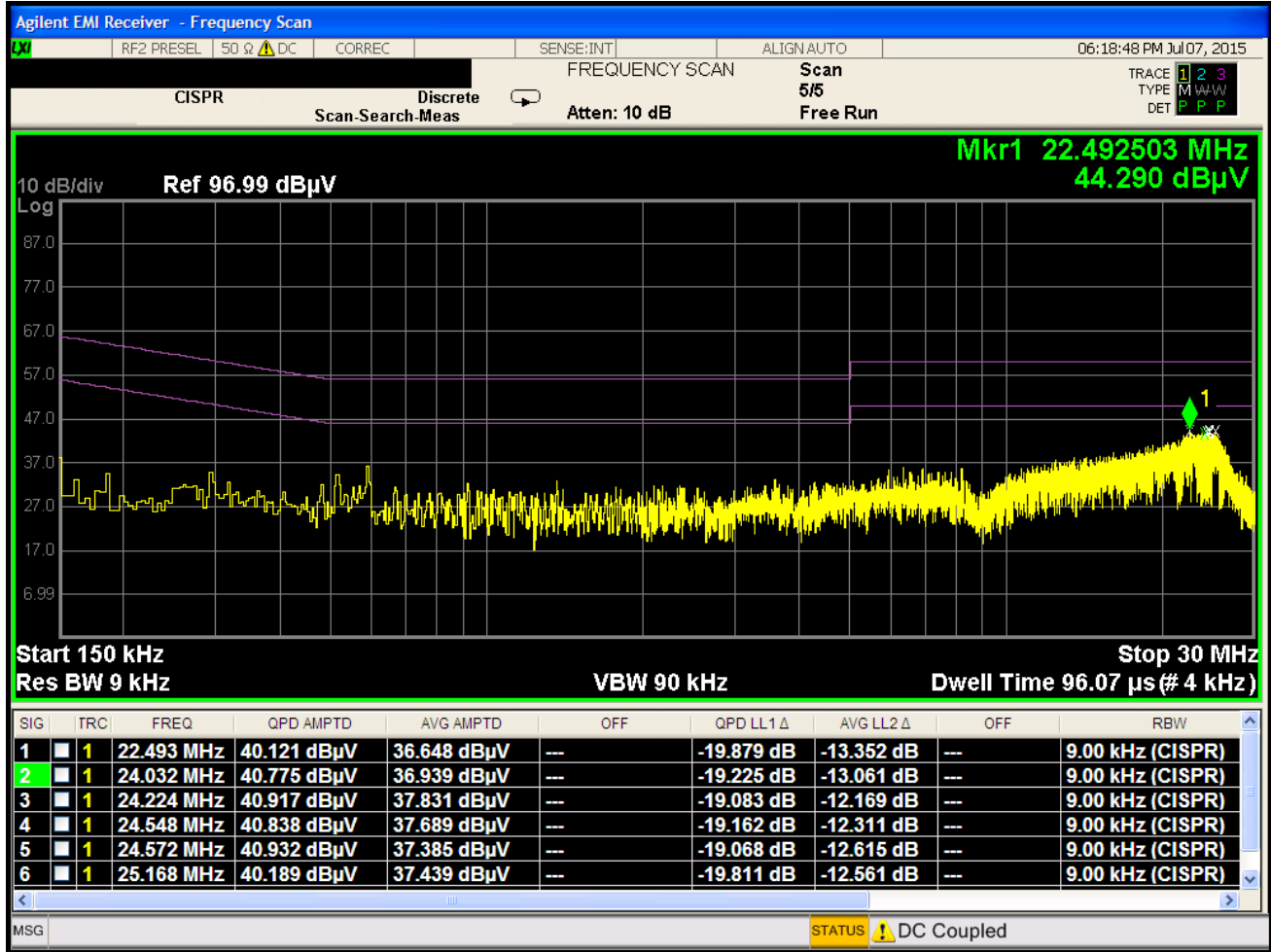
**Notes:**

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.

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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# Line-Conducted Test Data

**\$15.407**



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

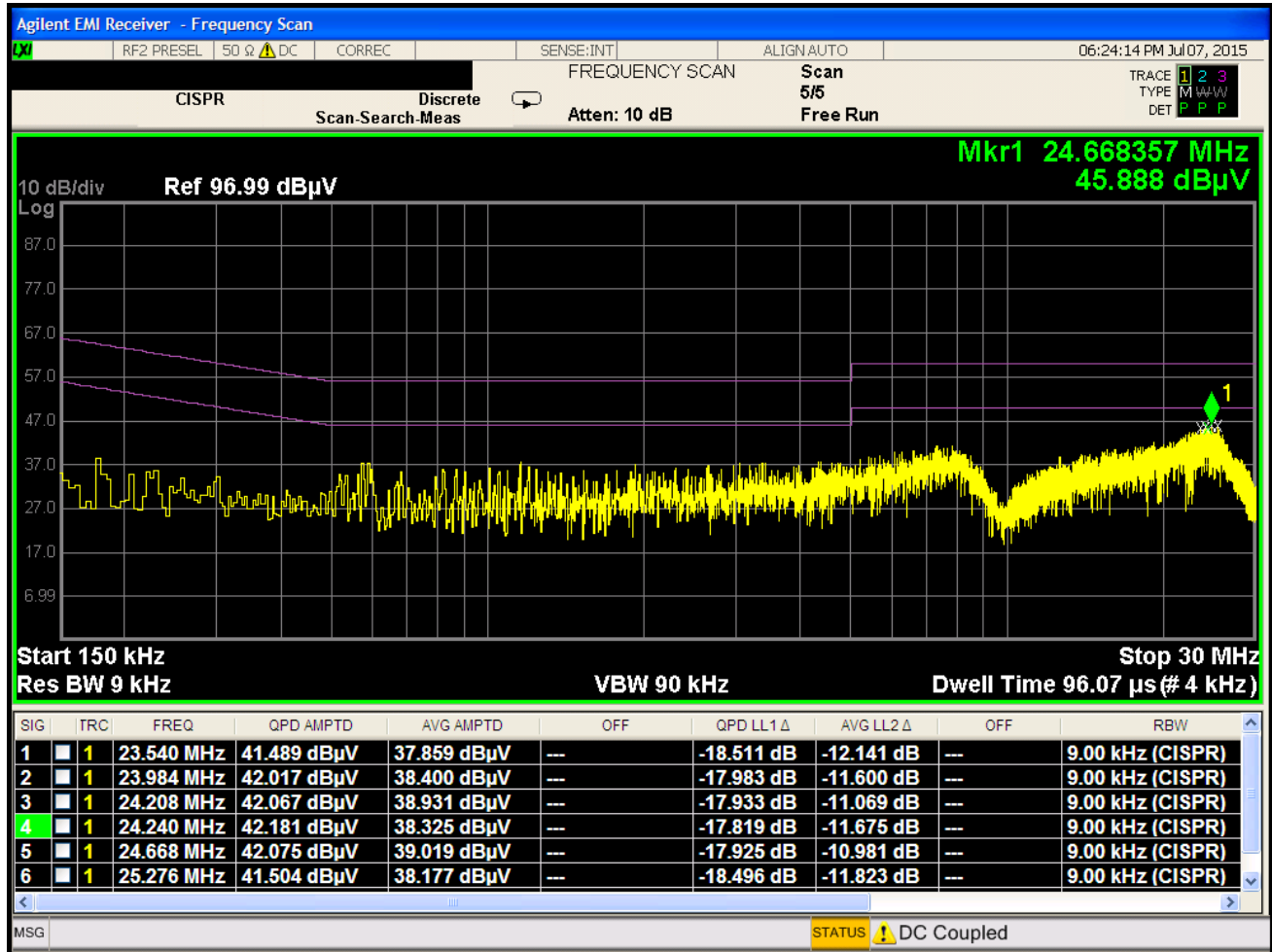
**Notes:**

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.

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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# Line-Conducted Test Data

**\$15.407**



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

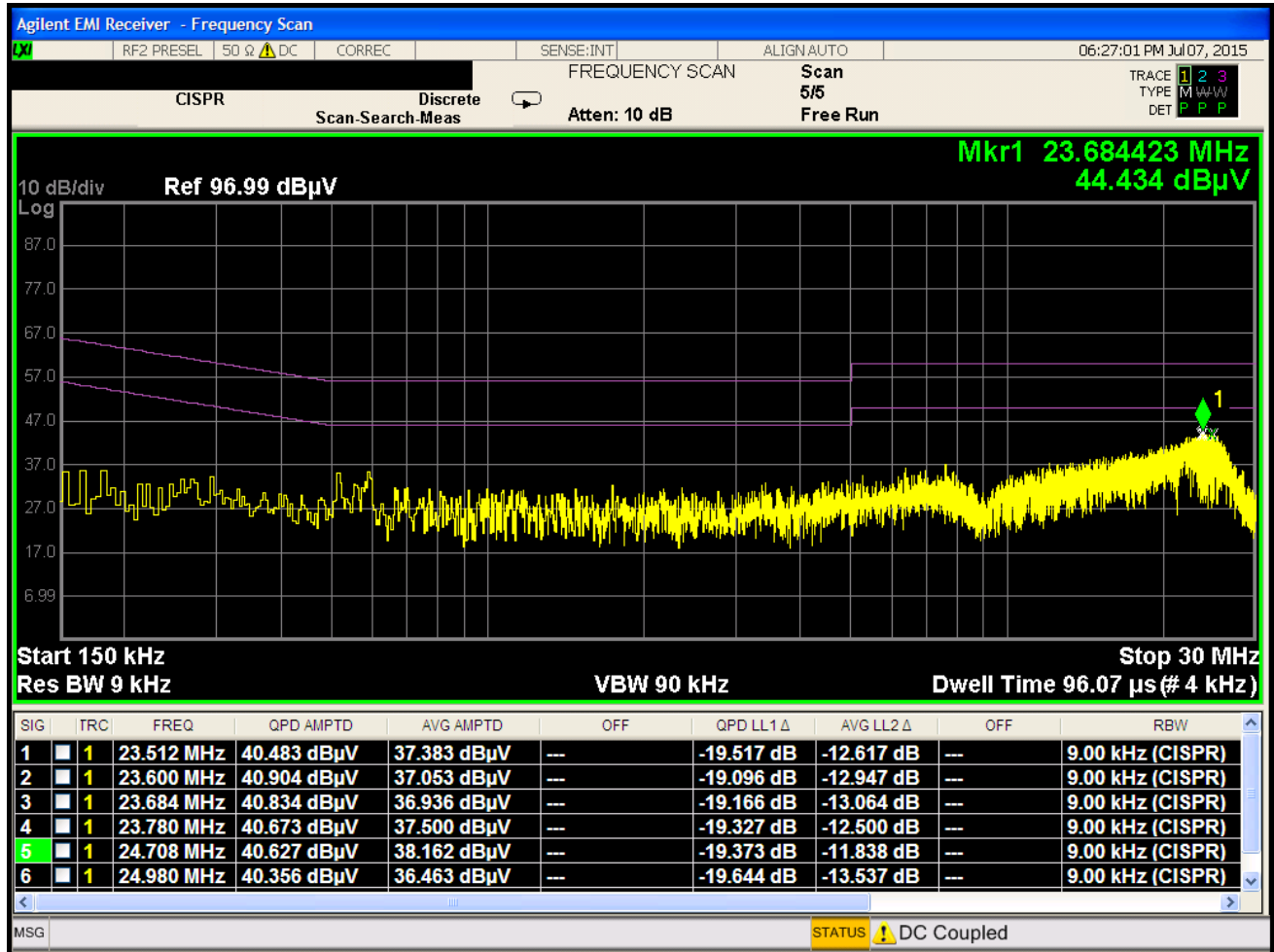
**Notes:**

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.

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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# Line-Conducted Test Data

**\$15.407**



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

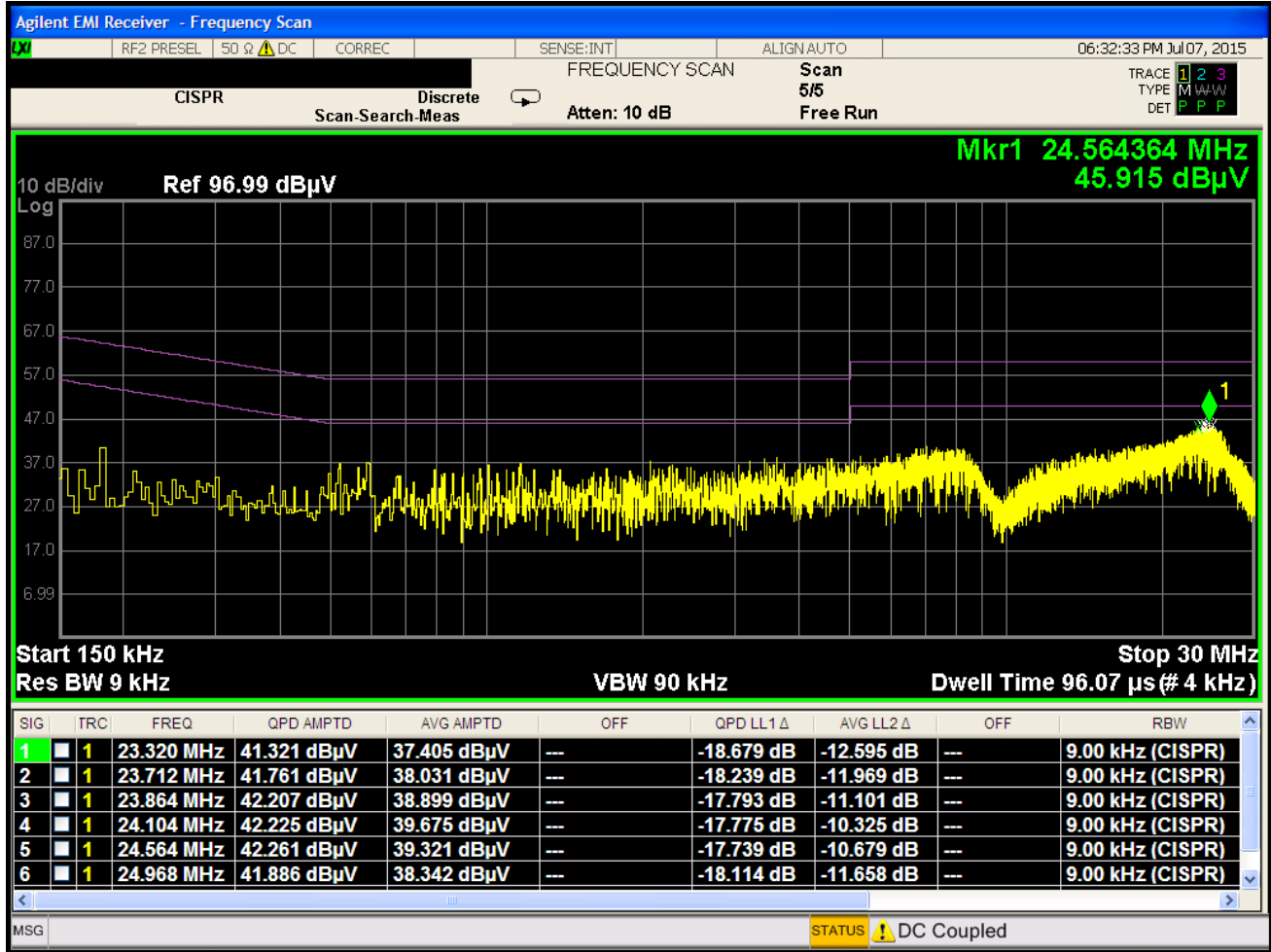
**Notes:**

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.

FCC ID: A3LSMT817P		FCC Pt. 15.407 802.11a/n/ac UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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# Line-Conducted Test Data

**\$15.407**



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

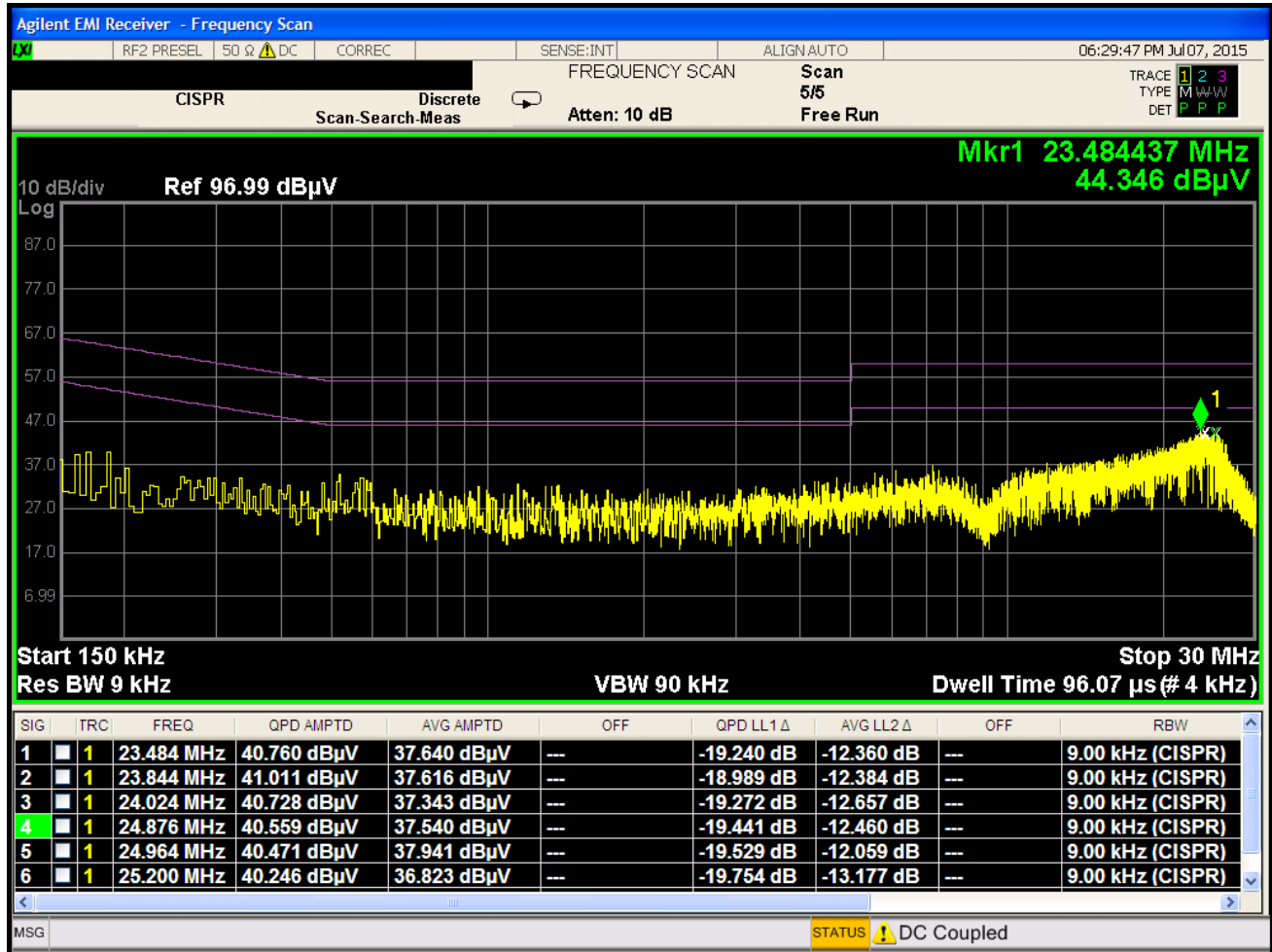
**Notes:**

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**



**Plot 6-247. Line Conducted Plot and Data 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.  $QP/AV\ Level (dB\mu V) = QP/AV\ Analyzer/Receiver\ Level (dB\mu V) + Corr. (dB)$
6.  $Margin (dB) = QP/AV\ Limit (dB\mu V) - QP/AV\ Level (dB\mu V)$
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 Tablet FCC ID: A3LSMT817P** is in compliance with Part 15E of the FCC Rules.

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