

6.4 Power Spectral Density

§15.247(e)

Test Overview and Limit

The peak power density is measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at its maximum duty cycle (>98%), at maximum power, and at the appropriate frequencies. All data rates were investigated and the worst case configuration results are reported in this section.

The maximum permissible power spectral density is 8 dBm in any 3 kHz band.

Test Procedure Used

KDB 558074 v03r02 – Section 10.2 Method PKPSD

KDB 662911 v02r01 – Section E)2) Measure-and-Sum Technique

Test Settings

1. Analyzer was set to the center frequency of the DTS channel under investigation
2. Span = 1.5 times the DTS channel bandwidth
3. RBW = 10kHz
4. VBW = 1MHz
5. Detector = peak
6. Sweep time = auto couple
7. Trace mode = max hold
8. Trace was allowed to stabilize

Test Setup

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

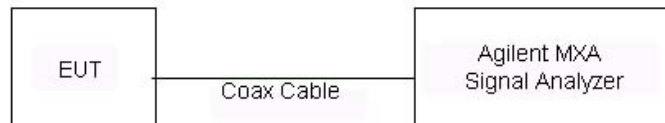


Figure 6-3. Test Instrument & Measurement Setup

Test Notes

None

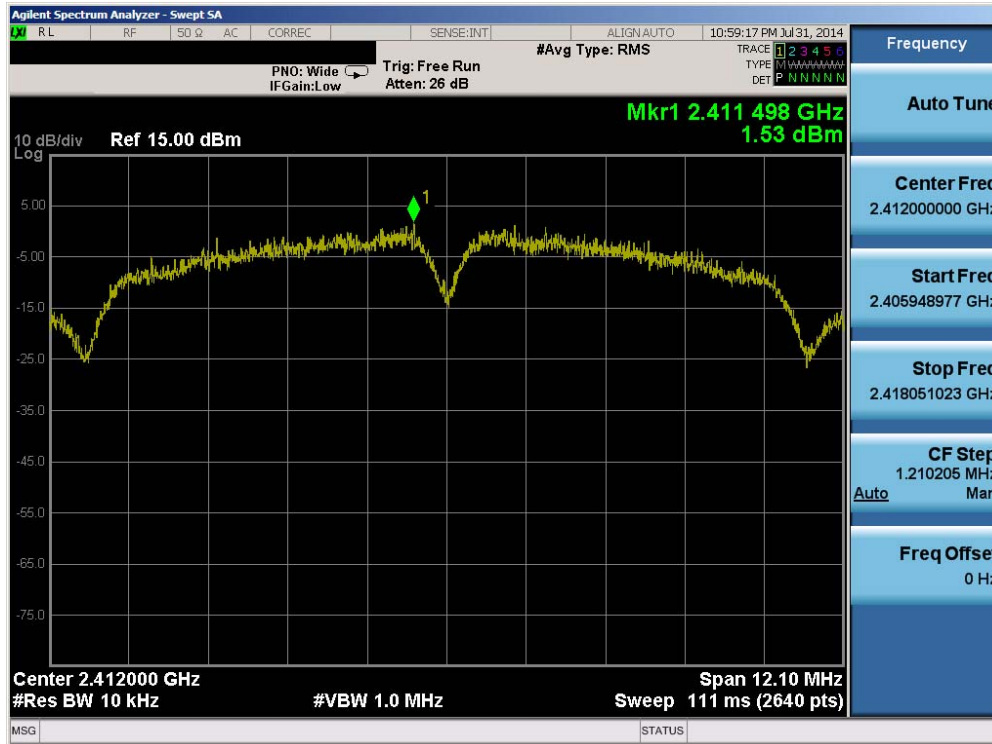
FCC ID: A3LSMN910P		FCC Pt. 15.247 802.11a/b/g/n/ac/n MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1408011595.A3L	Test Dates: 07/29 - 09/04/14	EUT Type: Portable Handset	Page 42 of 121	

Antenna-1 Power Spectral Density Measurements

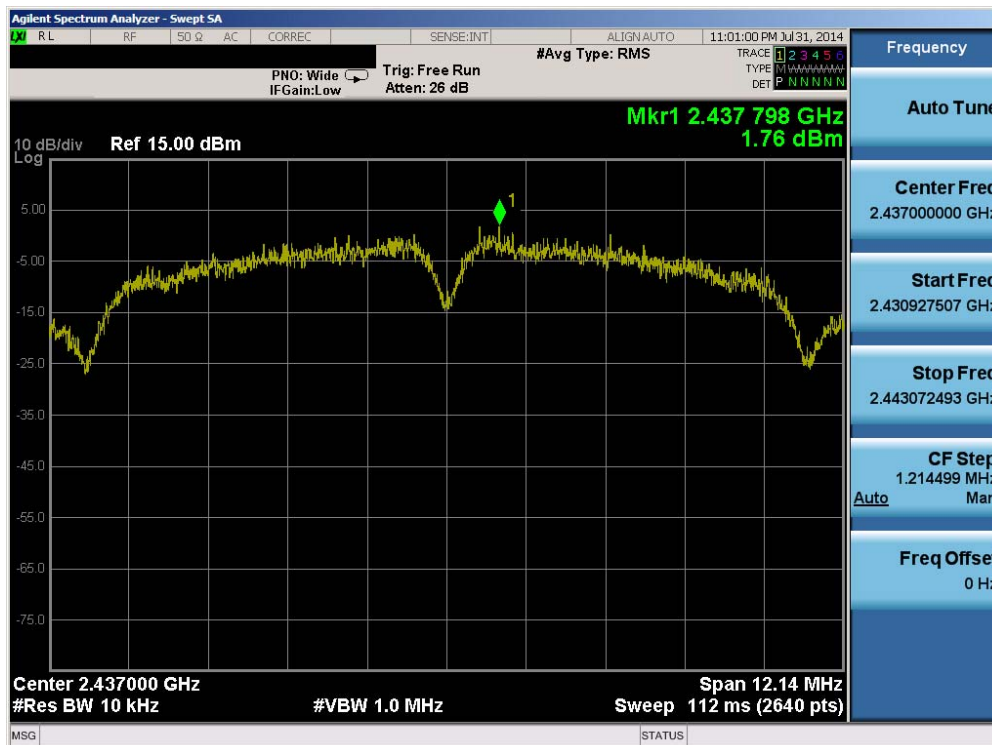
Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Measured Power Spectral Density [dBm]	Maximum Permissible Power Density [dBm / 3kHz]	Margin [dB]	Pass / Fail
2412	1	b	1	1.53	8.00	-6.47	Pass
2437	6	b	1	1.76	8.00	-6.24	Pass
2462	11	b	1	0.55	8.00	-7.45	Pass
2412	1	g	6	-5.76	8.00	-13.76	Pass
2437	6	g	6	-6.66	8.00	-14.66	Pass
2462	11	g	6	-6.08	8.00	-14.08	Pass
2412	1	n	6.5/7.2 (MCS0)	-5.95	8.00	-13.95	Pass
2437	6	n	6.5/7.2 (MCS0)	-5.64	8.00	-13.64	Pass
2462	11	n	6.5/7.2 (MCS0)	-5.99	8.00	-13.99	Pass
5745	149	a	6	-7.99	8.00	-15.99	Pass
5785	157	a	6	-9.17	8.00	-17.17	Pass
5825	165	a	6	-9.08	8.00	-17.08	Pass
5745	149	n (20MHz)	6.5/7.2 (MCS0)	-7.97	8.00	-15.97	Pass
5785	157	n (20MHz)	6.5/7.2 (MCS0)	-8.91	8.00	-16.91	Pass
5825	165	n (20MHz)	6.5/7.2 (MCS0)	-8.86	8.00	-16.86	Pass
5755	151	n (40MHz)	13.5/15 (MCS0)	-11.54	8.00	-19.54	Pass
5795	159	n (40MHz)	13.5/15 (MCS0)	-11.72	8.00	-19.72	Pass
5775	155	ac (80MHz)	29.3/32.5 (MCS0)	-16.35	8.00	-24.35	Pass

Table 6-28. Conducted Power Density Measurements

FCC ID: A3LSMN910P		FCC Pt. 15.247 802.11a/b/g/n/ac/n MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1408011595.A3L	Test Dates: 07/29 - 09/04/14	EUT Type: Portable Handset		Page 43 of 121

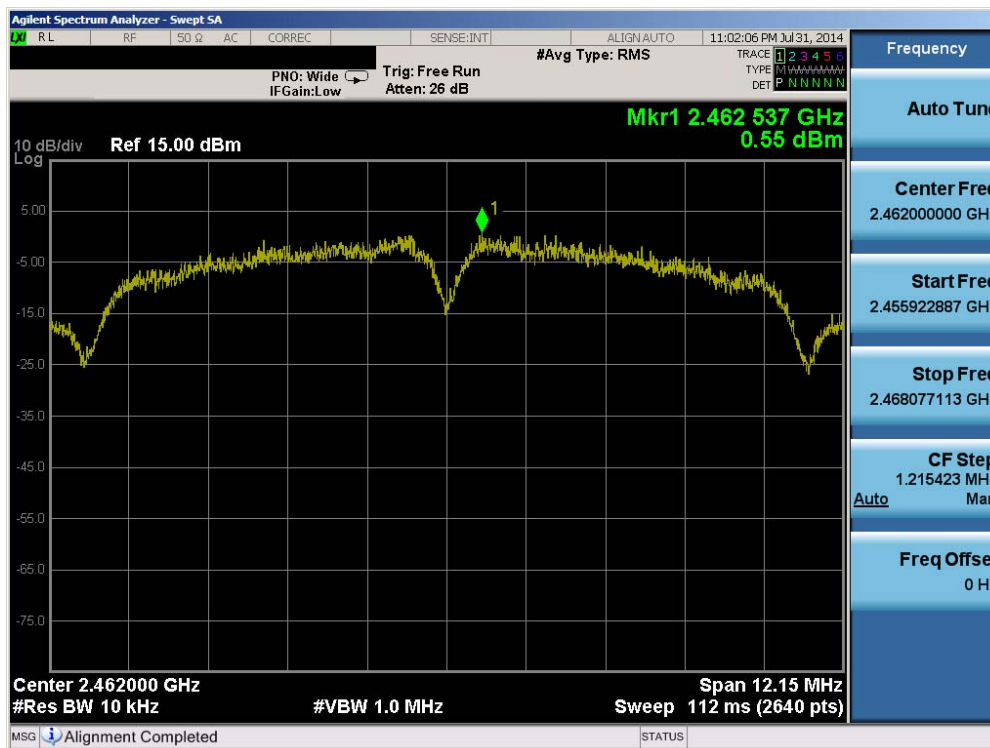


Plot 6-37. Power Spectral Density Plot (802.11b – Ch. 1)

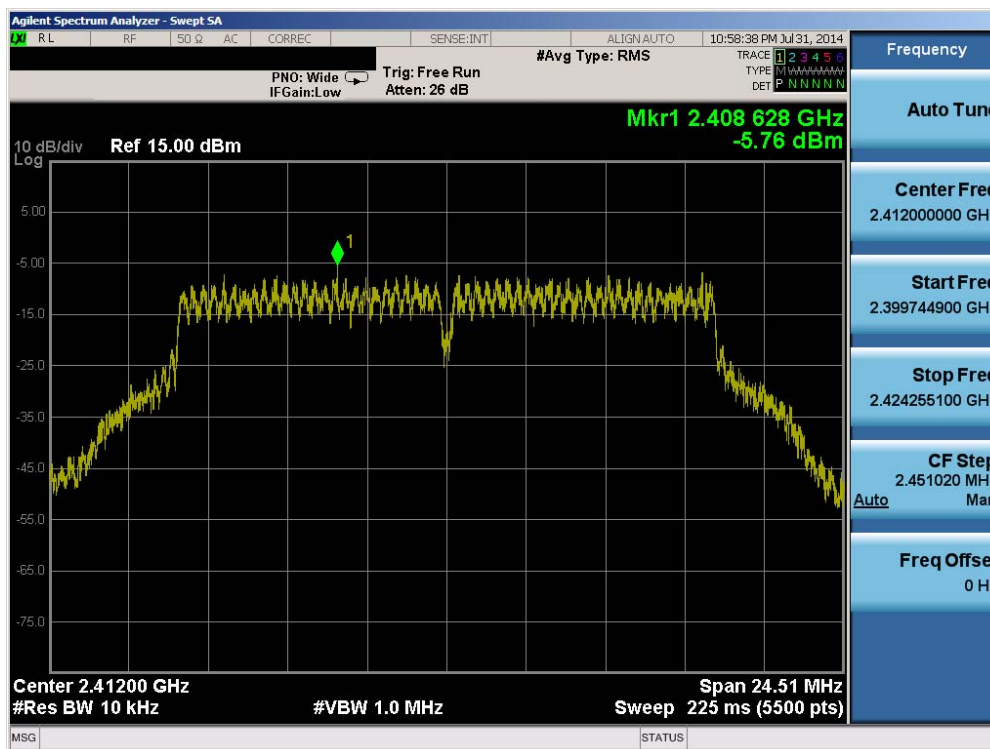


Plot 6-38. Power Spectral Density Plot (802.11b – Ch. 6)

FCC ID: A3LSMN910P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n/ac/n MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1408011595.A3L	Test Dates: 07/29 - 09/04/14	EUT Type: Portable Handset		Page 44 of 121

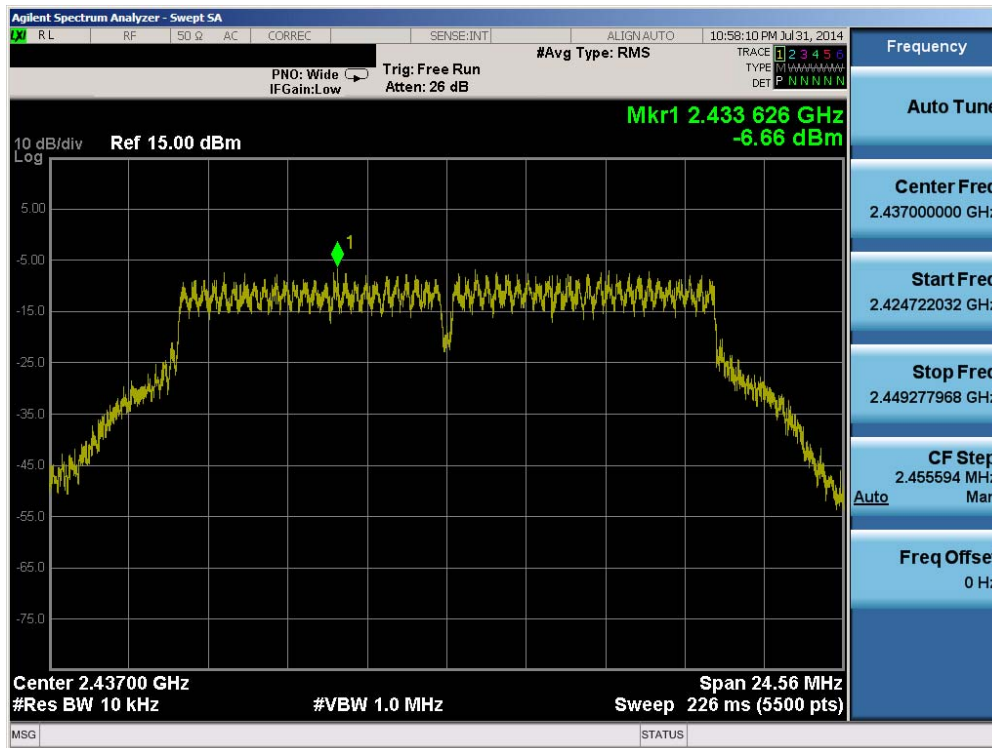


Plot 6-39. Power Spectral Density Plot (802.11b – Ch. 11)

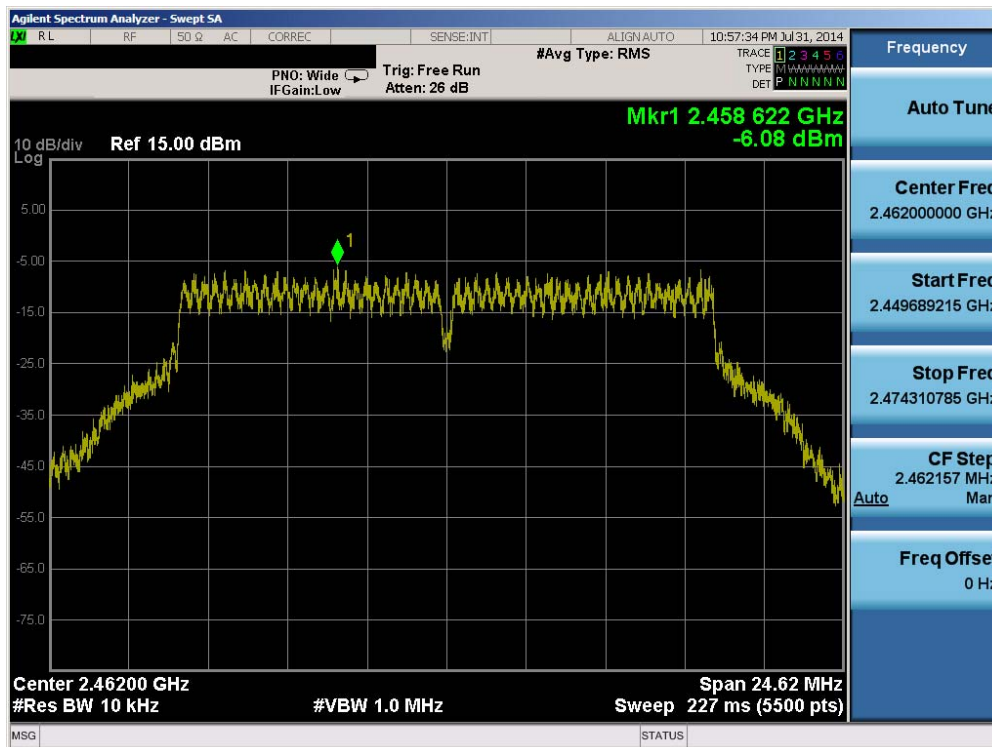


Plot 6-40. Power Spectral Density Plot (802.11g – Ch. 1)

FCC ID: A3LSMN910P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n/ac/n MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1408011595.A3L	Test Dates: 07/29 - 09/04/14	EUT Type: Portable Handset		Page 45 of 121

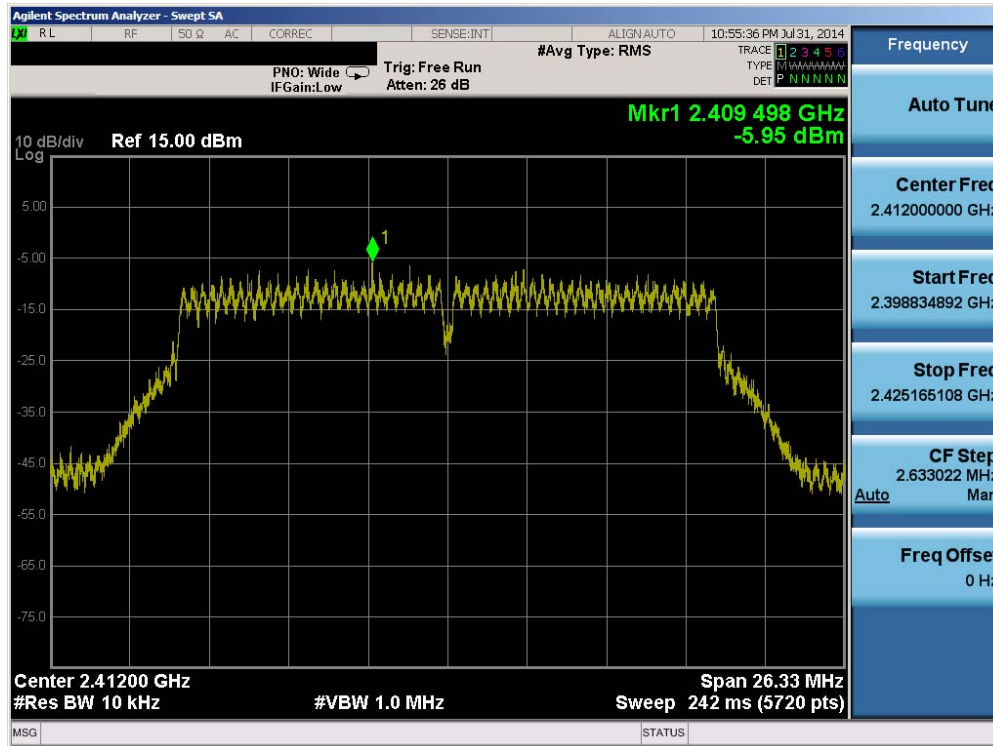


Plot 6-41. Power Spectral Density Plot (802.11g – Ch. 6)

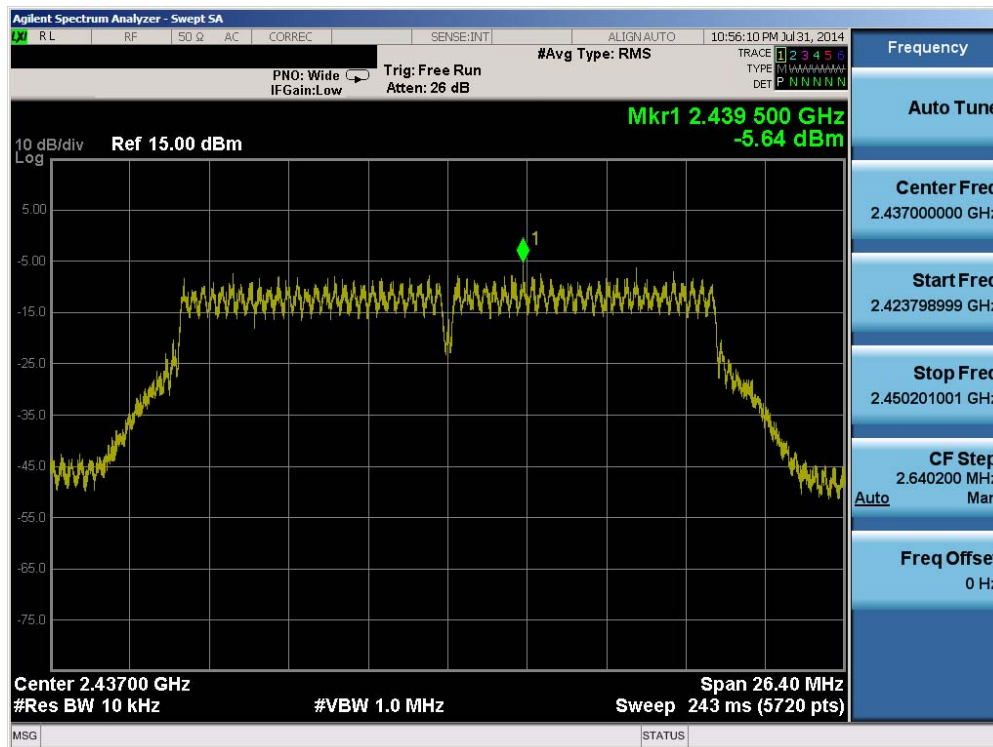


Plot 6-42. Power Spectral Density Plot (802.11g – Ch. 11)

FCC ID: A3LSMN910P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n/ac/n MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1408011595.A3L	Test Dates: 07/29 - 09/04/14	EUT Type: Portable Handset		Page 46 of 121

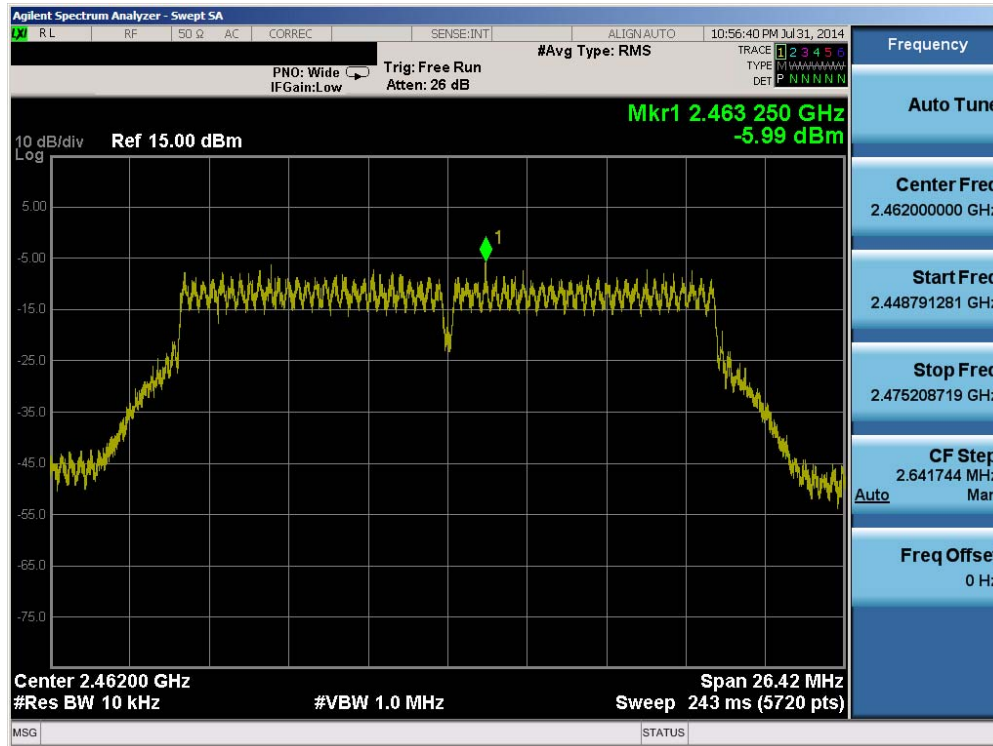


Plot 6-43. Power Spectral Density Plot (802.11n (2.4GHz) – Ch. 1)

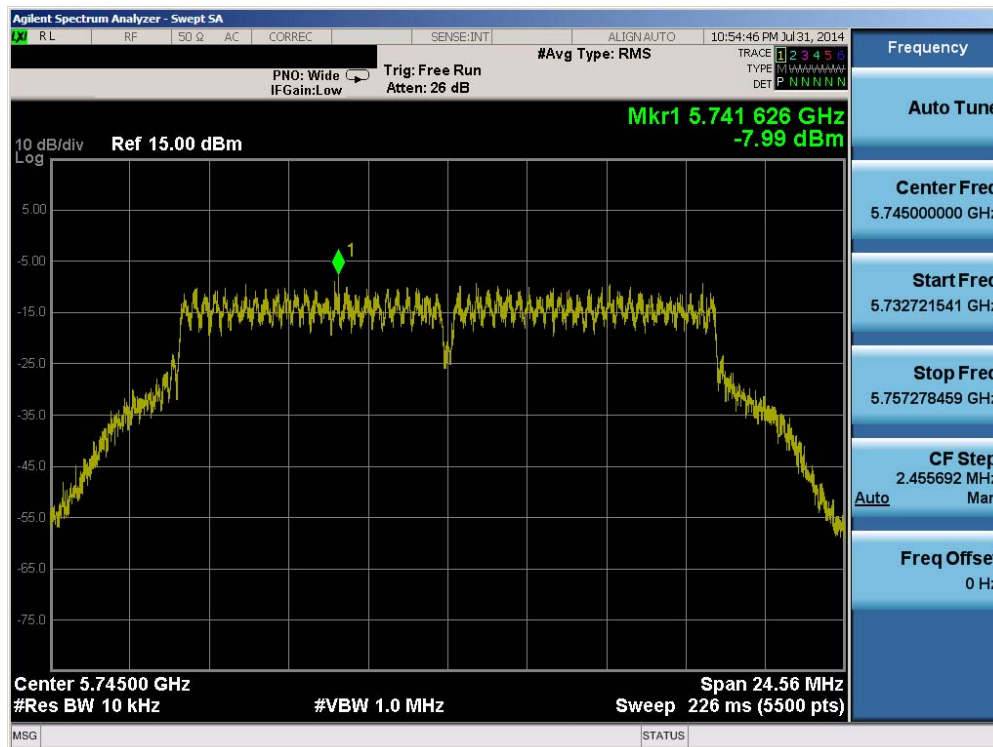


Plot 6-44. Power Spectral Density Plot (802.11n (2.4GHz) – Ch. 6)

FCC ID: A3LSMN910P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n/ac/n MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1408011595.A3L	Test Dates: 07/29 - 09/04/14	EUT Type: Portable Handset		Page 47 of 121

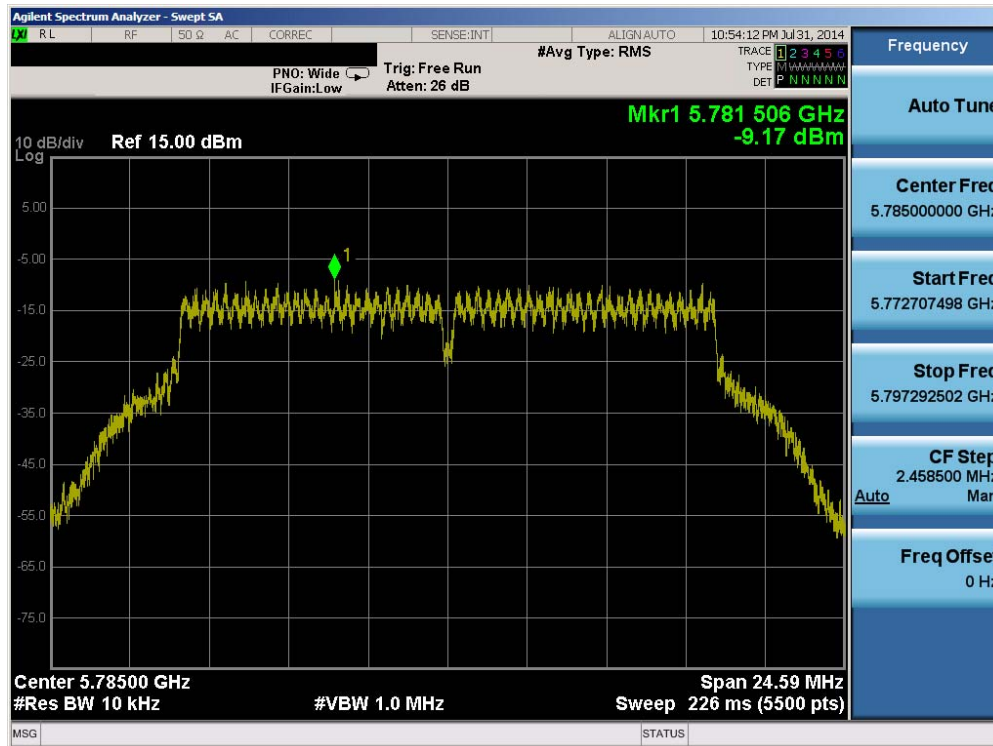


Plot 6-45. Power Spectral Density Plot (802.11n (2.4GHz) – Ch. 11)

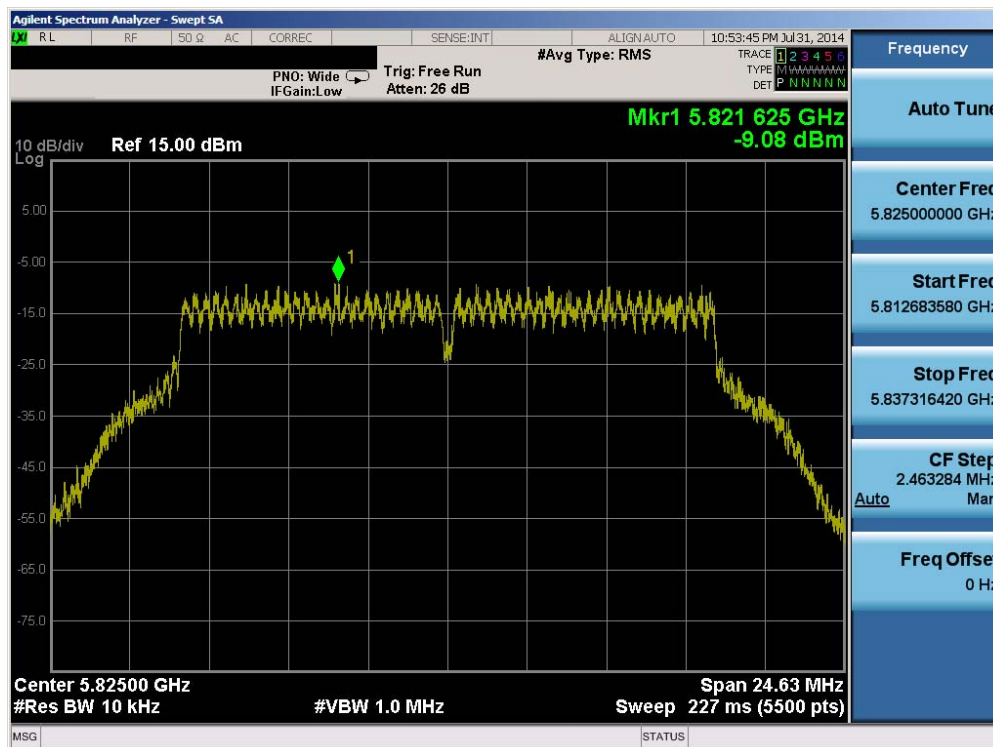


Plot 6-46. Power Spectral Density Plot (802.11a – Ch. 149)

FCC ID: A3LSMN910P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n/ac/n MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1408011595.A3L	Test Dates: 07/29 - 09/04/14	EUT Type: Portable Handset		Page 48 of 121

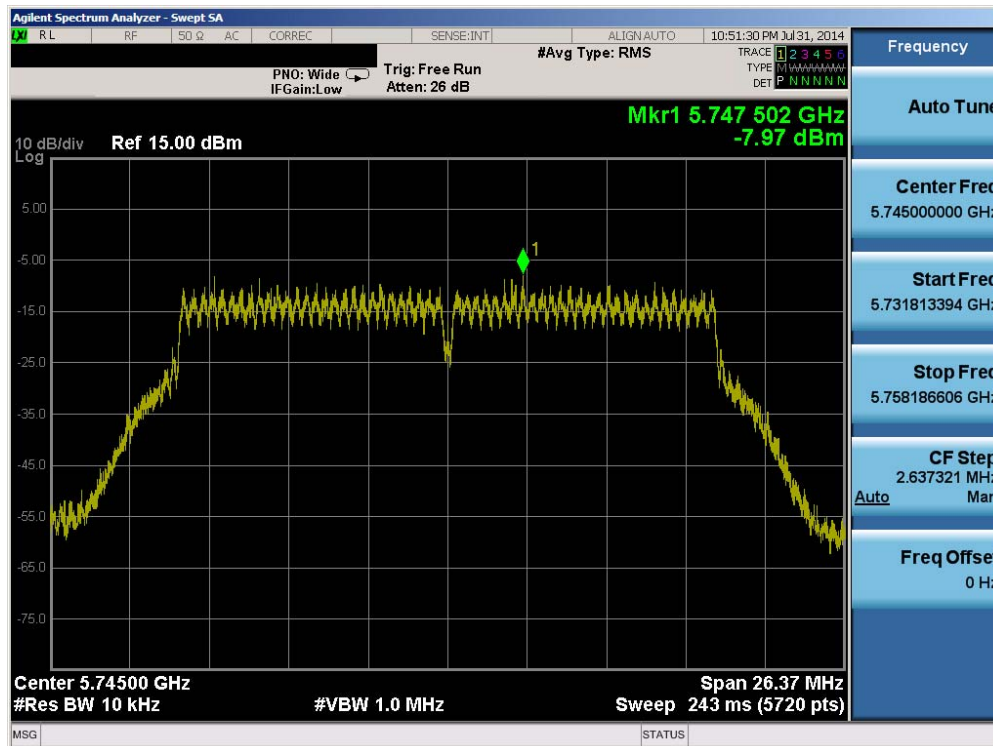


Plot 6-47. Power Spectral Density Plot (802.11a – Ch. 157)

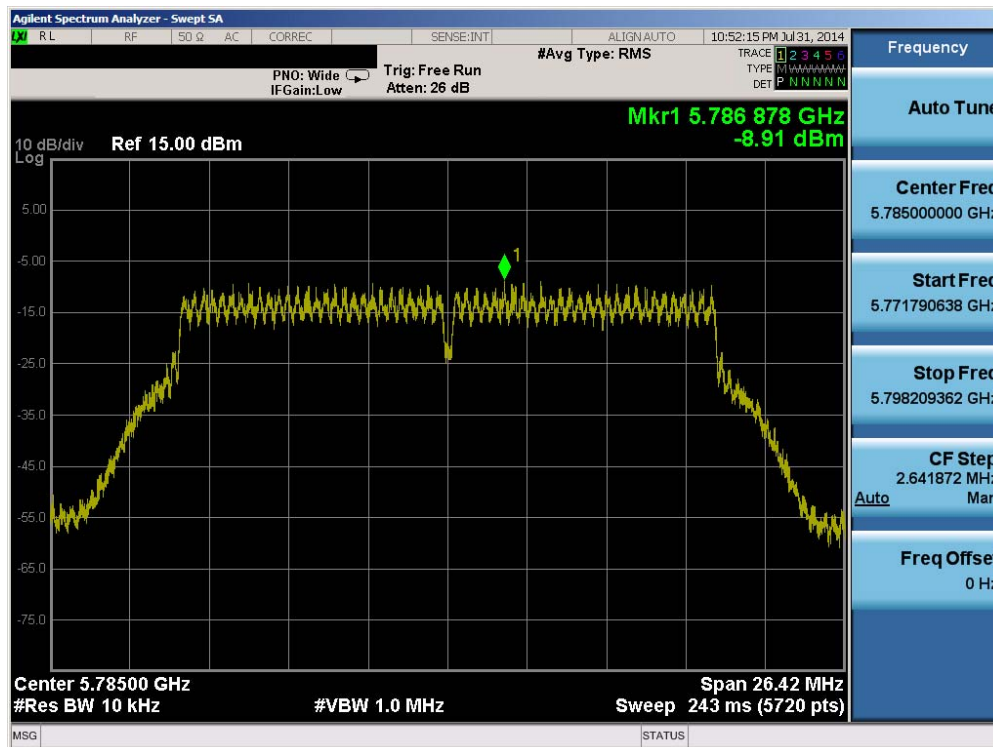


Plot 6-48. Power Spectral Density Plot (802.11a – Ch. 165)

FCC ID: A3LSMN910P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n/ac/n MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1408011595.A3L	Test Dates: 07/29 - 09/04/14	EUT Type: Portable Handset		Page 49 of 121

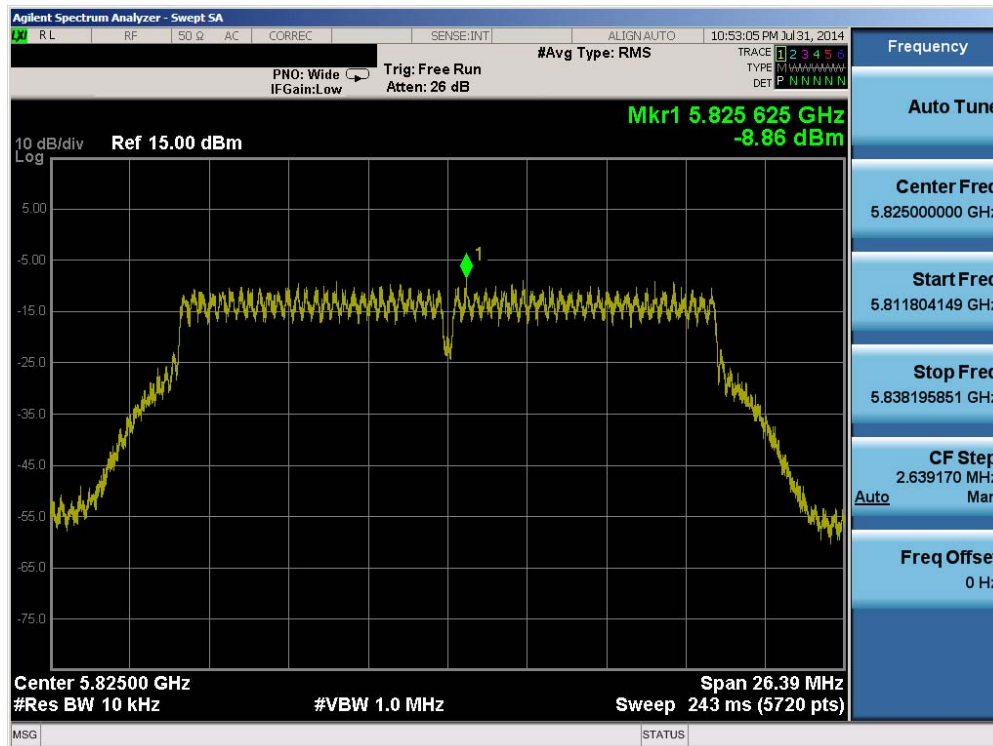


Plot 6-49. Power Spectral Density Plot (20MHz BW 802.11n (5.8GHz) – Ch. 149)

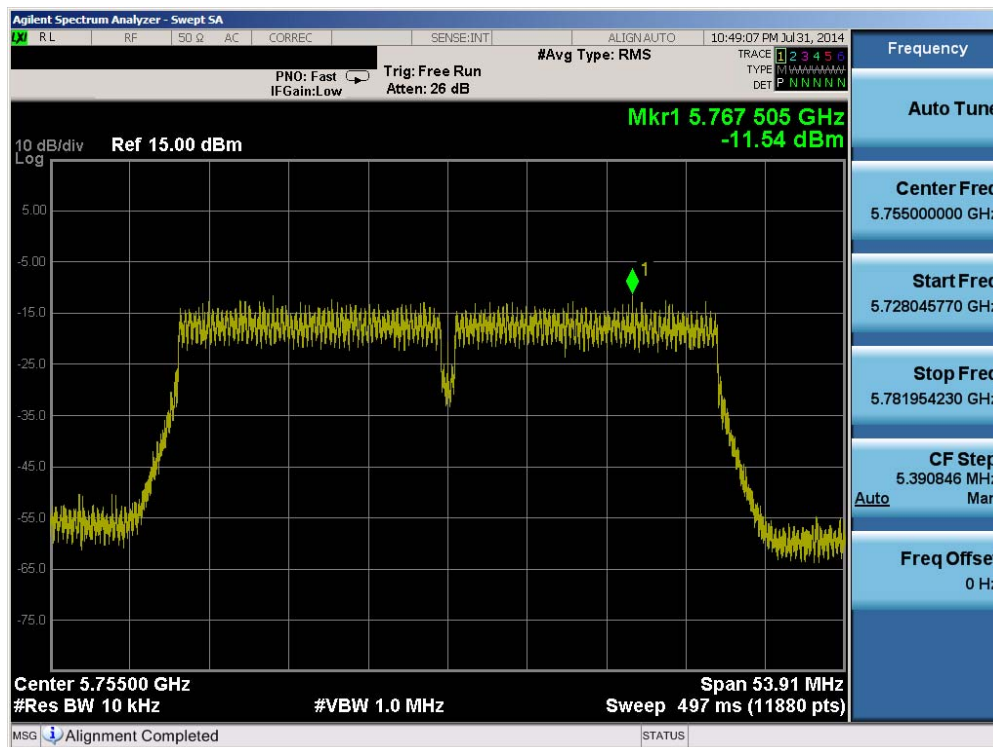


Plot 6-50. Power Spectral Density Plot (20MHz BW 802.11n (5.8GHz) – Ch. 157)

FCC ID: A3LSMN910P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n/ac/n MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1408011595.A3L	Test Dates: 07/29 - 09/04/14	EUT Type: Portable Handset		Page 50 of 121

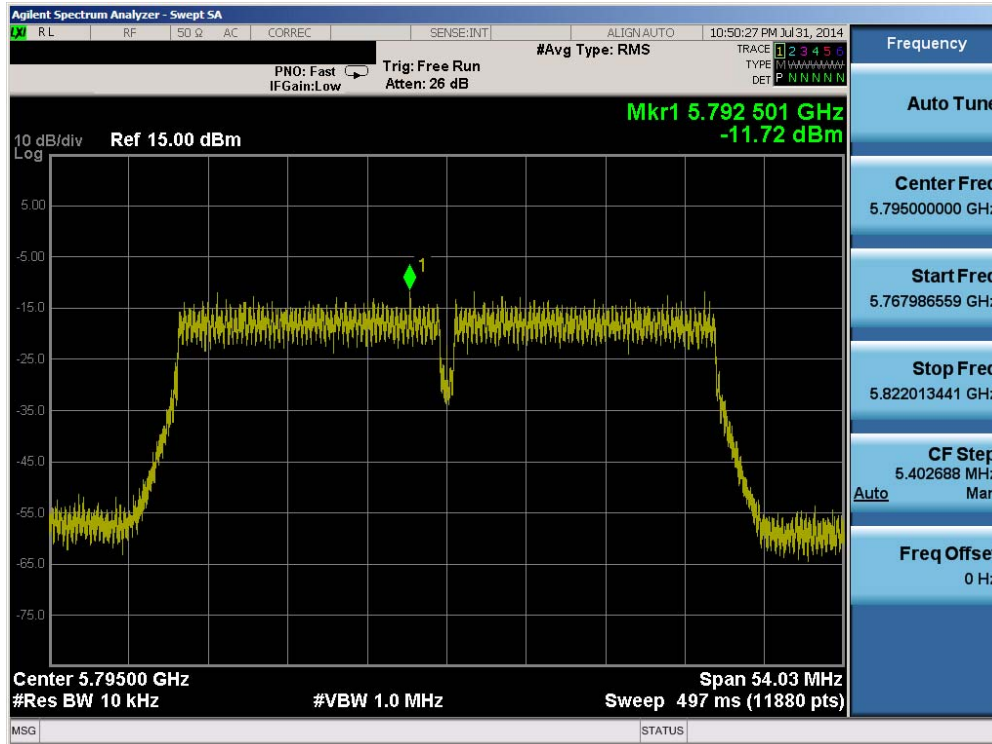


Plot 6-51. Power Spectral Density Plot (20MHz BW 802.11n (5.8GHz) – Ch. 165)



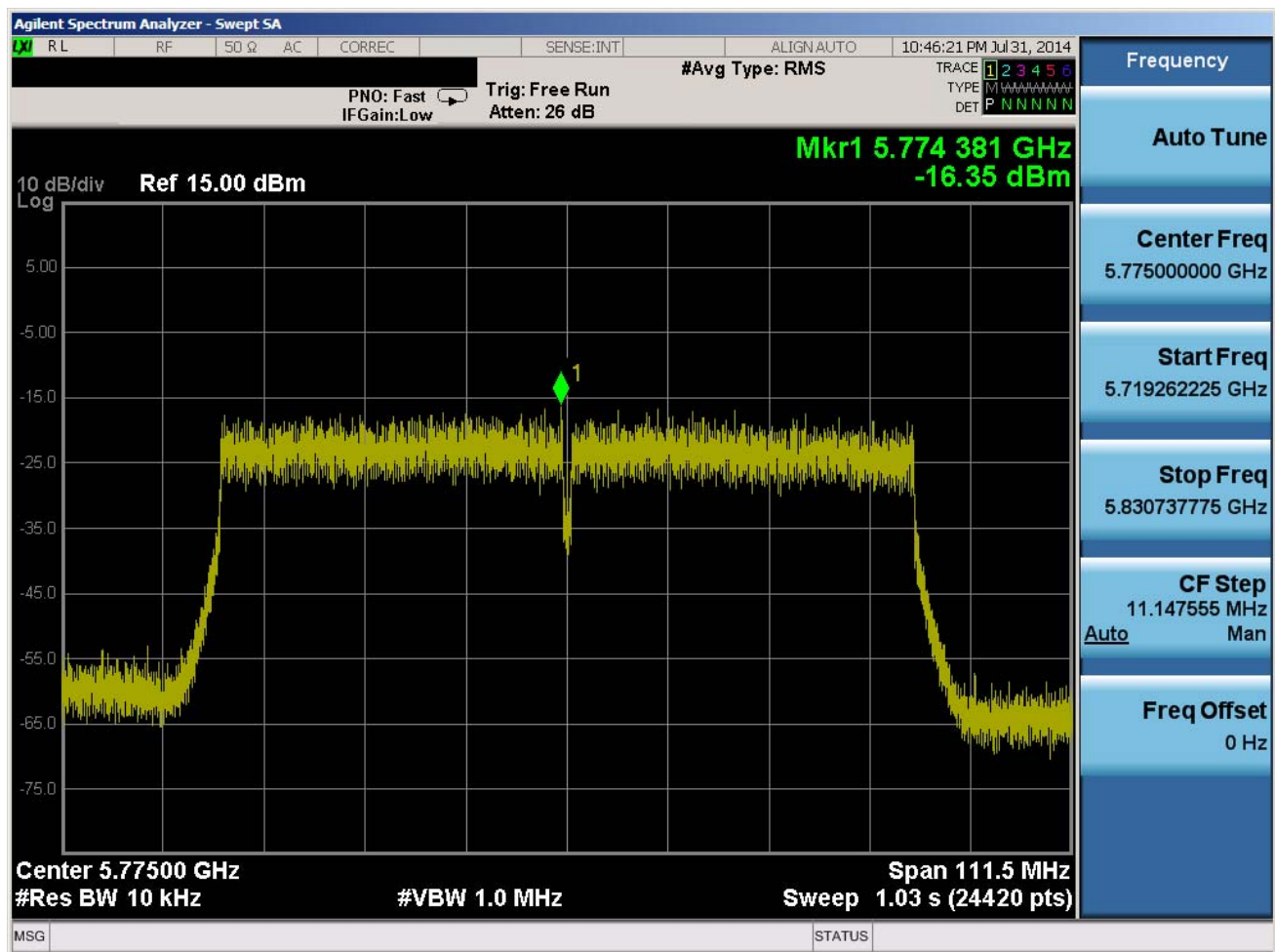
Plot 6-52. Power Spectral Density Plot (40MHz BW 802.11n (5.8GHz) – Ch. 151)

FCC ID: A3LSMN910P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n/ac/n MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1408011595.A3L	Test Dates: 07/29 - 09/04/14	EUT Type: Portable Handset		Page 51 of 121



Plot 6-53. Power Spectral Density Plot (40MHz BW 802.11n (5.8GHz) – Ch. 159)

FCC ID: A3LSMN910P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n/ac/n MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1408011595.A3L	Test Dates: 07/29 - 09/04/14	EUT Type: Portable Handset		Page 52 of 121



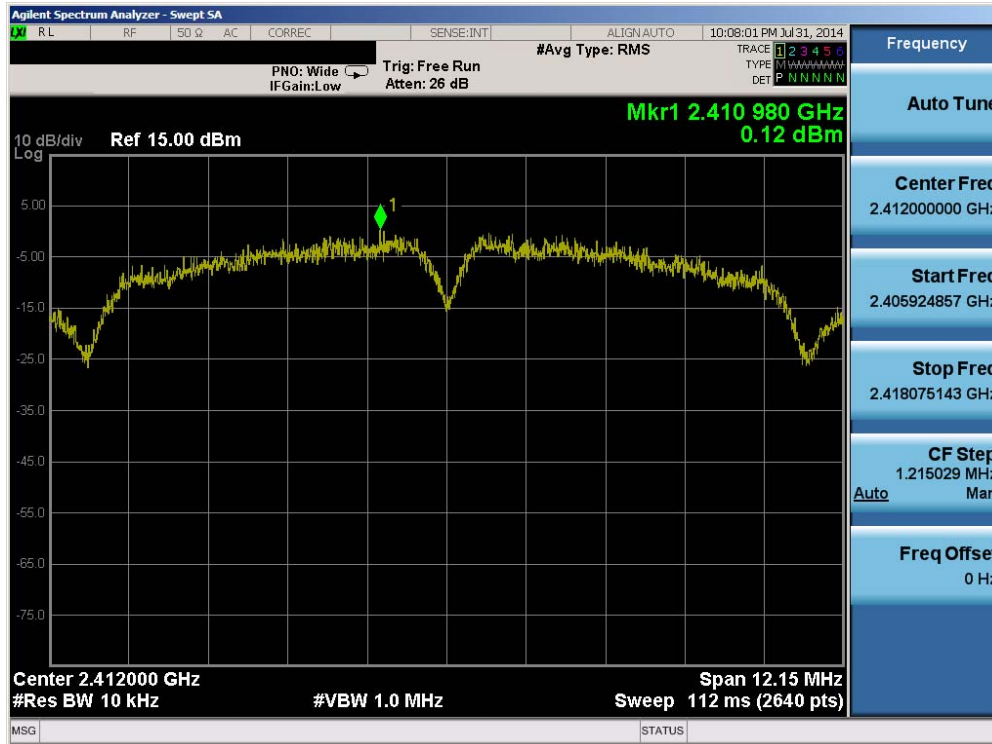
Plot 6-54. Power Spectral Density Plot (80MHz BW 802.11ac (5.8GHz) – Ch. 155)

FCC ID: A3LSMN910P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n/ac/n MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1408011595.A3L	Test Dates: 07/29 - 09/04/14	EUT Type: Portable Handset		Page 53 of 121

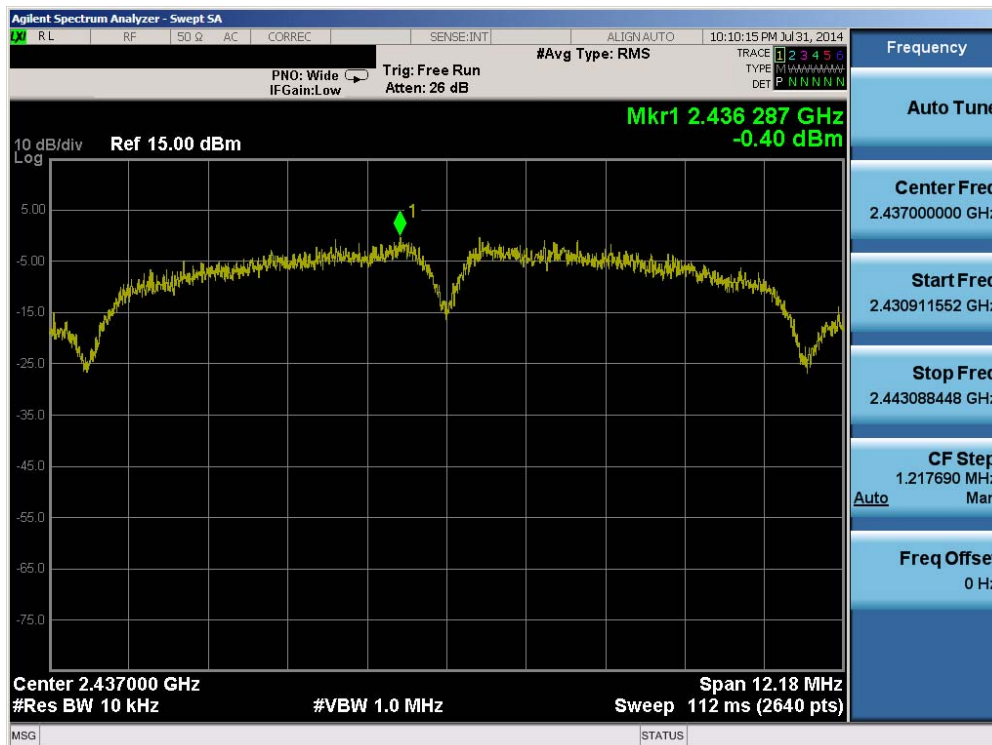
Antenna-2 Power Spectral Density Measurements

Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Measured Power Spectral Density [dBm]	Maximum Permissible Power Density [dBm / 3kHz]	Margin [dB]	Pass / Fail
2412	1	b	1	0.12	8.00	-7.88	Pass
2437	6	b	1	-0.40	8.00	-8.40	Pass
2462	11	b	1	-0.53	8.00	-8.53	Pass
2412	1	g	6	-6.18	8.00	-14.18	Pass
2437	6	g	6	-7.26	8.00	-15.26	Pass
2462	11	g	6	-6.39	8.00	-14.39	Pass
2412	1	n	6.5/7.2 (MCS0)	-6.32	8.00	-14.32	Pass
2437	6	n	6.5/7.2 (MCS0)	-6.58	8.00	-14.58	Pass
2462	11	n	6.5/7.2 (MCS0)	-6.49	8.00	-14.49	Pass
5745	149	a	6	-7.57	8.00	-15.57	Pass
5785	157	a	6	-7.13	8.00	-15.13	Pass
5825	165	a	6	-7.44	8.00	-15.44	Pass
5745	149	n (20MHz)	6.5/7.2 (MCS0)	-7.00	8.00	-15.00	Pass
5785	157	n (20MHz)	6.5/7.2 (MCS0)	-8.36	8.00	-16.36	Pass
5825	165	n (20MHz)	6.5/7.2 (MCS0)	-7.25	8.00	-15.25	Pass
5755	151	n (40MHz)	13.5/15 (MCS0)	-11.92	8.00	-19.92	Pass
5795	159	n (40MHz)	13.5/15 (MCS0)	-11.23	8.00	-19.23	Pass
5775	155	ac (80MHz)	29.3/32.5 (MCS0)	-14.89	8.00	-22.89	Pass

Table 6-29. Conducted Power Density Measurements

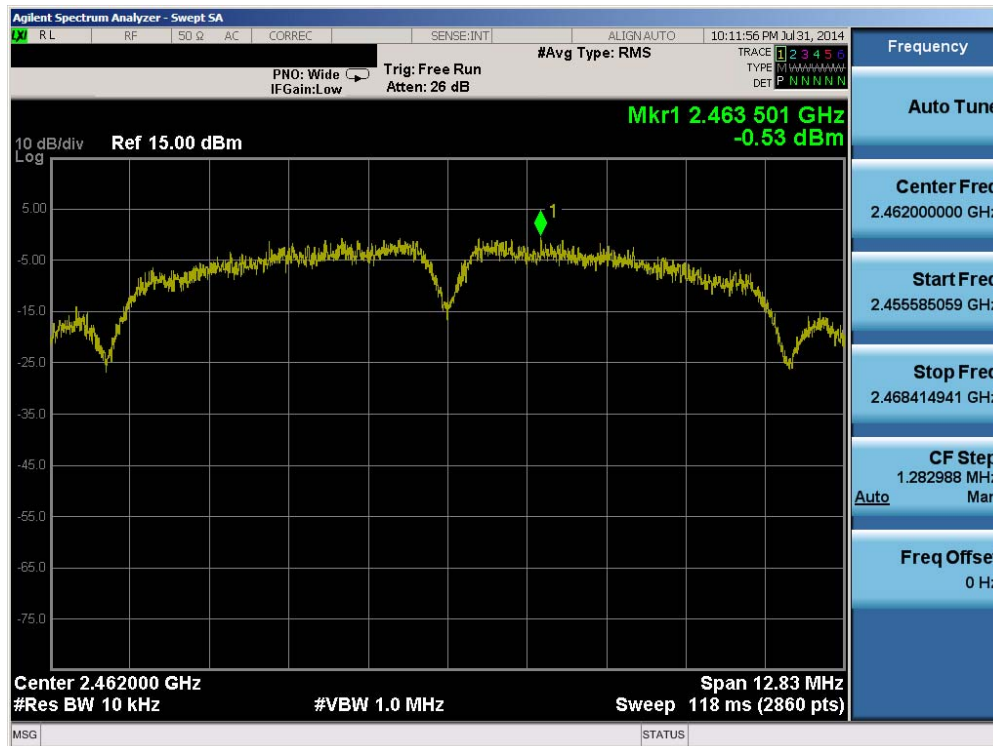


Plot 6-55. Power Spectral Density Plot (802.11b – Ch. 1)

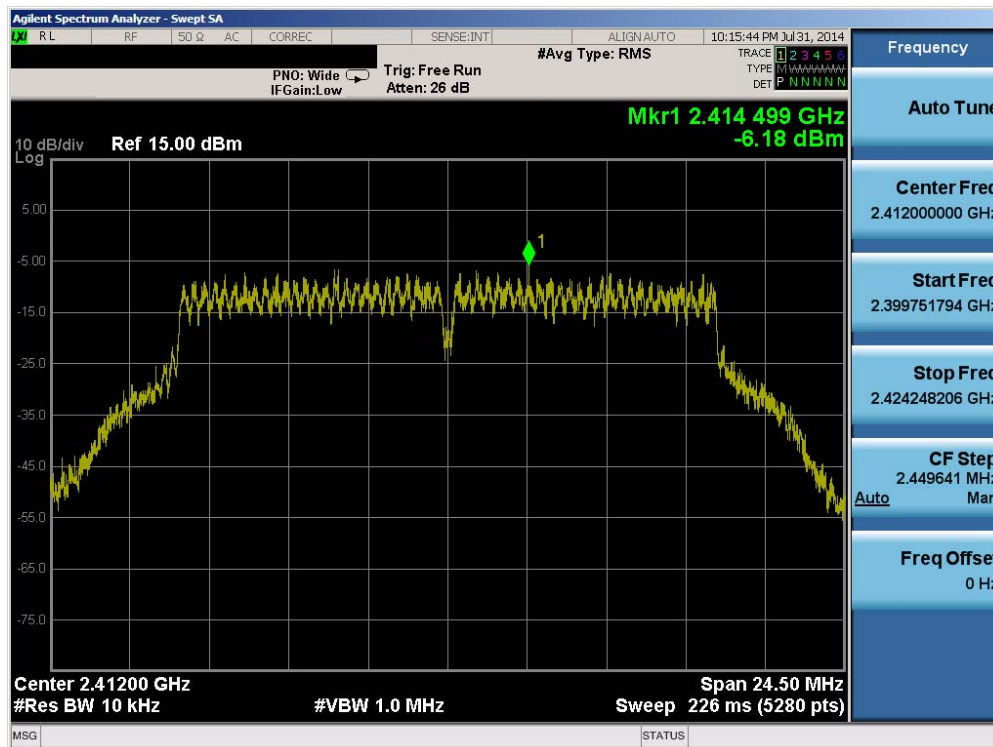


Plot 6-56. Power Spectral Density Plot (802.11b – Ch. 6)

FCC ID: A3LSMN910P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n/ac/n MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1408011595.A3L	Test Dates: 07/29 - 09/04/14	EUT Type: Portable Handset		Page 55 of 121

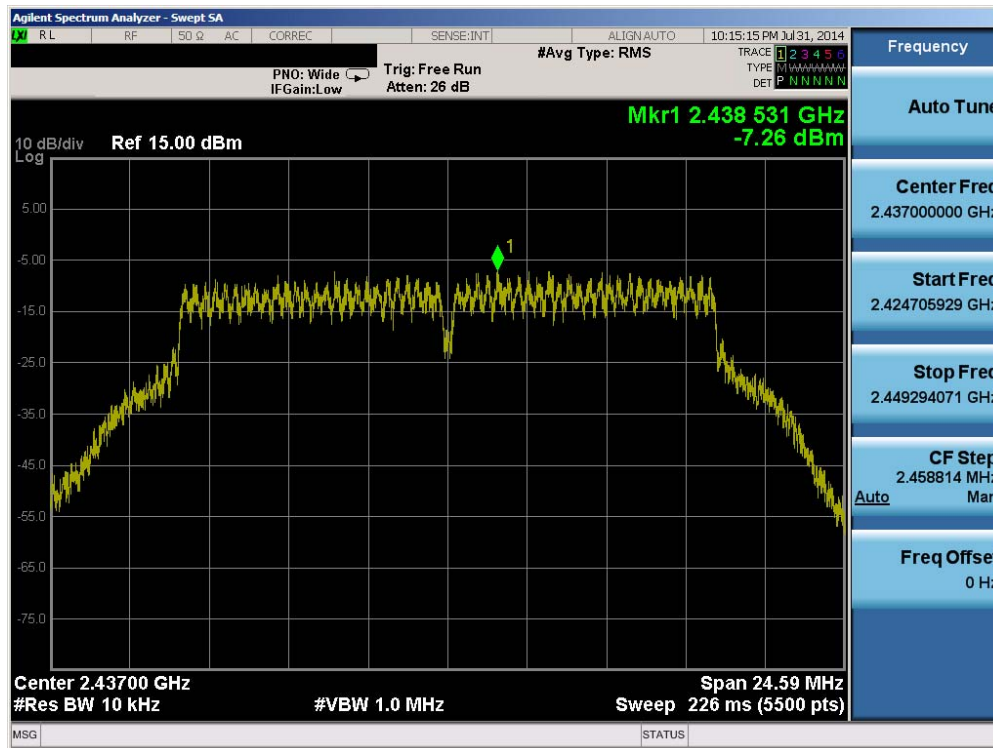


Plot 6-57. Power Spectral Density Plot (802.11b – Ch. 11)

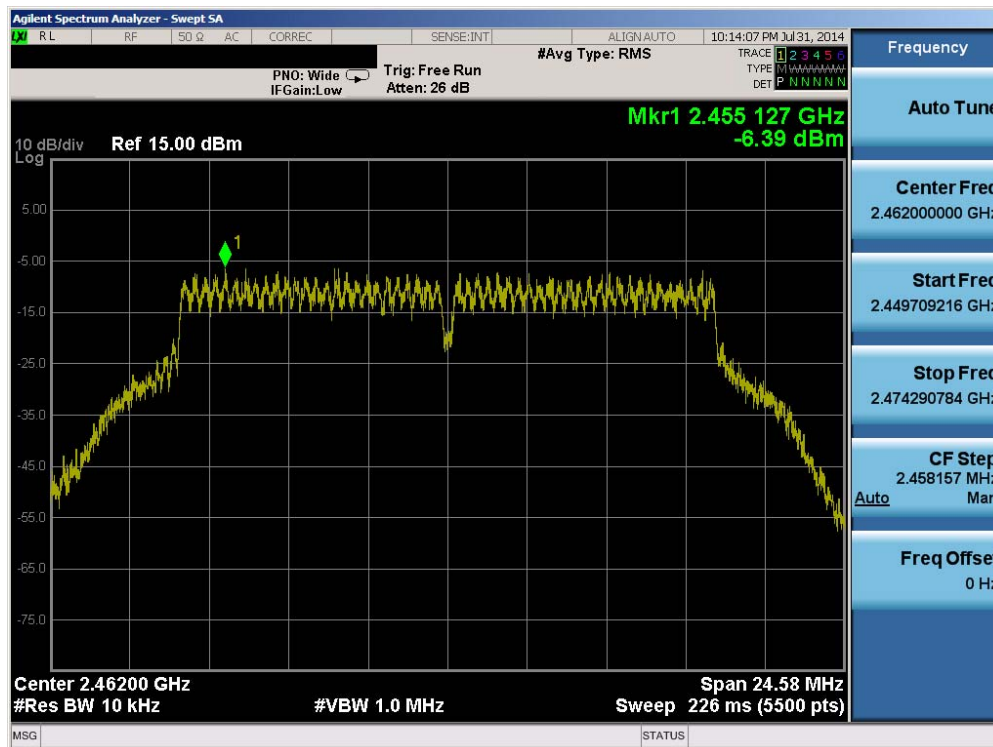


Plot 6-58. Power Spectral Density Plot (802.11g – Ch. 1)

FCC ID: A3LSMN910P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n/ac/n MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1408011595.A3L	Test Dates: 07/29 - 09/04/14	EUT Type: Portable Handset		Page 56 of 121

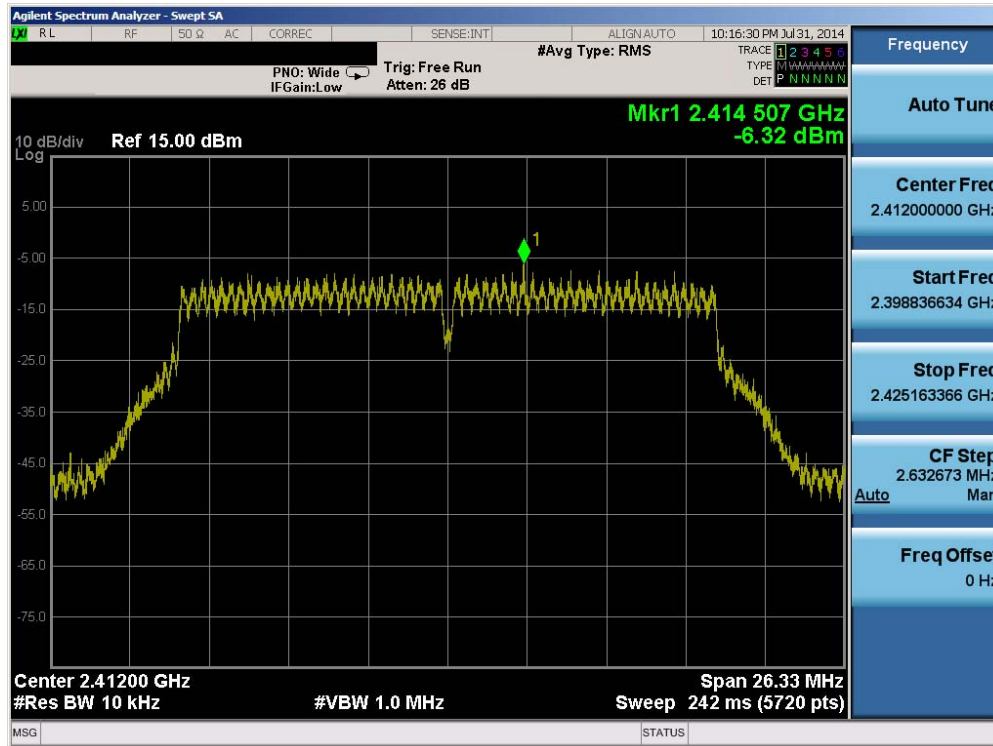


Plot 6-59. Power Spectral Density Plot (802.11g – Ch. 6)

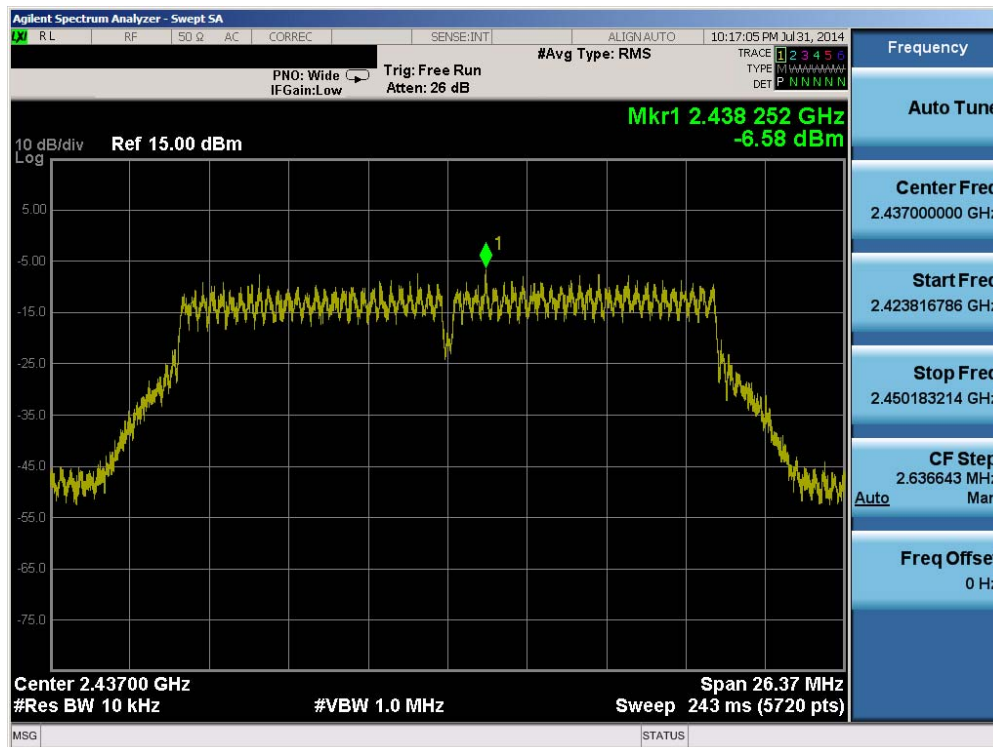


Plot 6-60. Power Spectral Density Plot (802.11g – Ch. 11)

FCC ID: A3LSMN910P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n/ac/n MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1408011595.A3L	Test Dates: 07/29 - 09/04/14	EUT Type: Portable Handset		Page 57 of 121

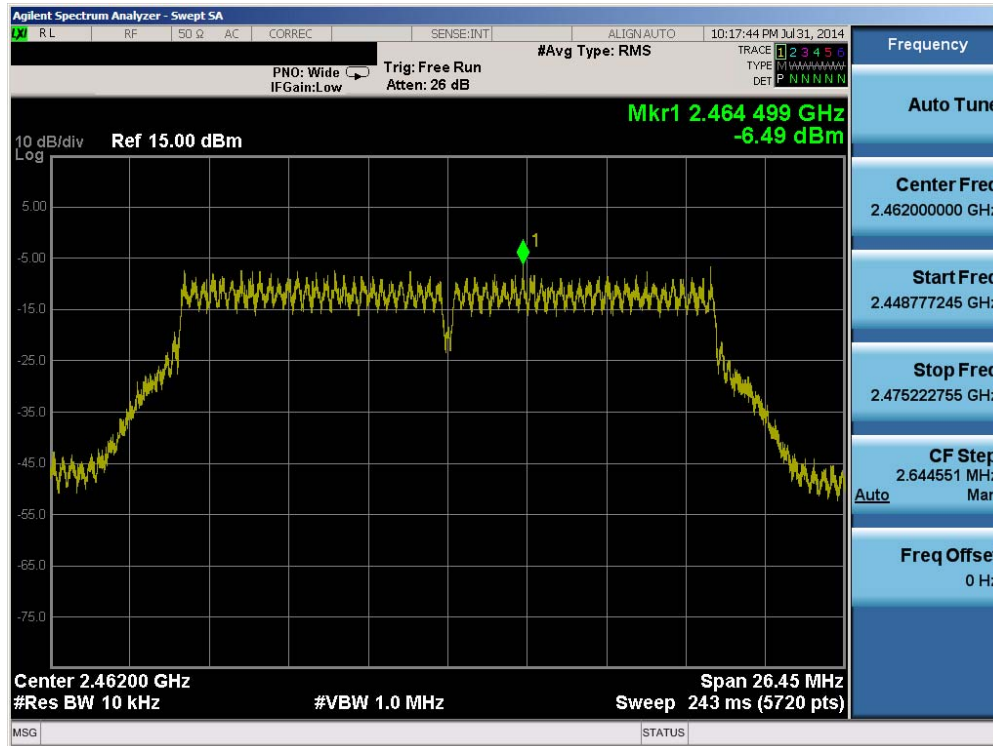


Plot 6-61. Power Spectral Density Plot (802.11n (2.4GHz) – Ch. 1)

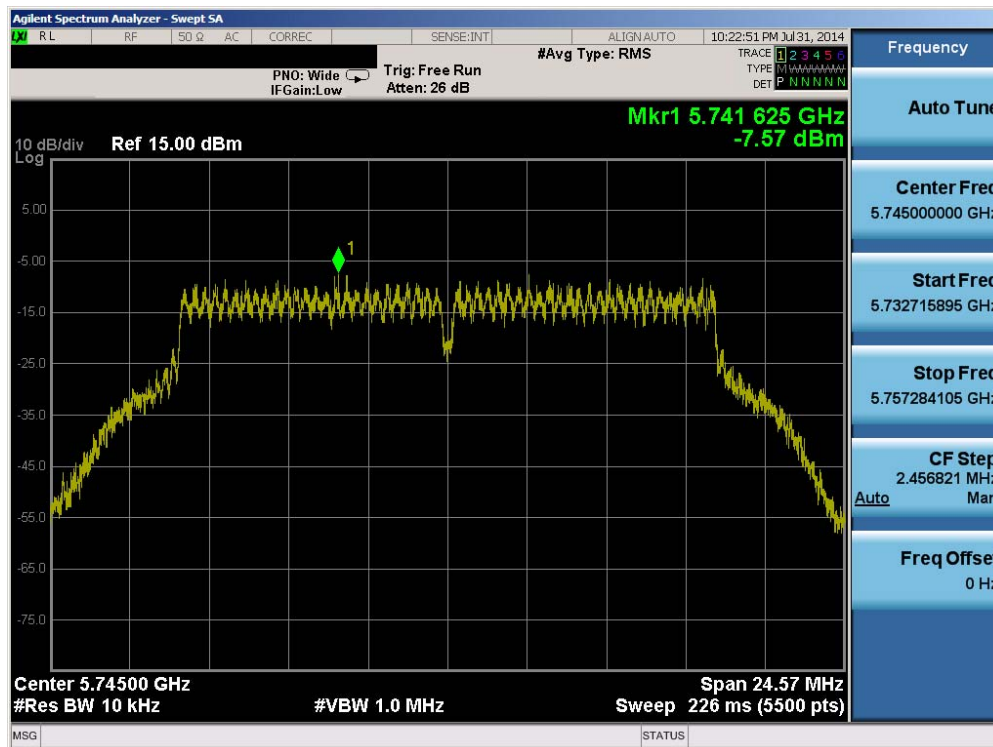


Plot 6-62. Power Spectral Density Plot (802.11n (2.4GHz) – Ch. 6)

FCC ID: A3LSMN910P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n/ac/n MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1408011595.A3L	Test Dates: 07/29 - 09/04/14	EUT Type: Portable Handset		Page 58 of 121

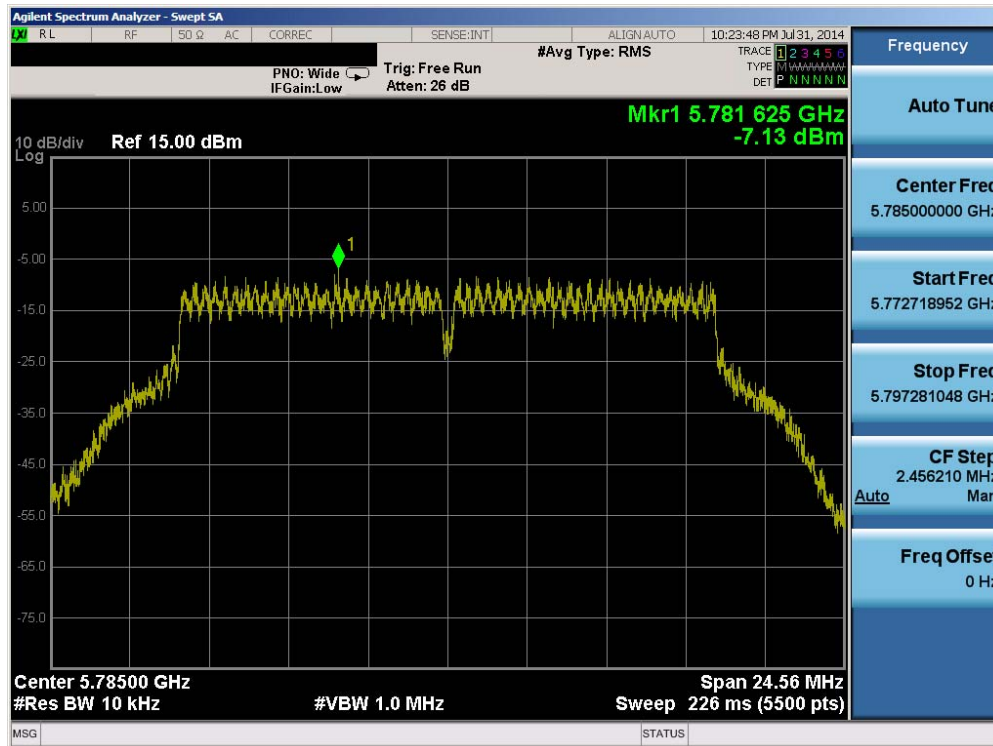


Plot 6-63. Power Spectral Density Plot (802.11n (2.4GHz) – Ch. 11)

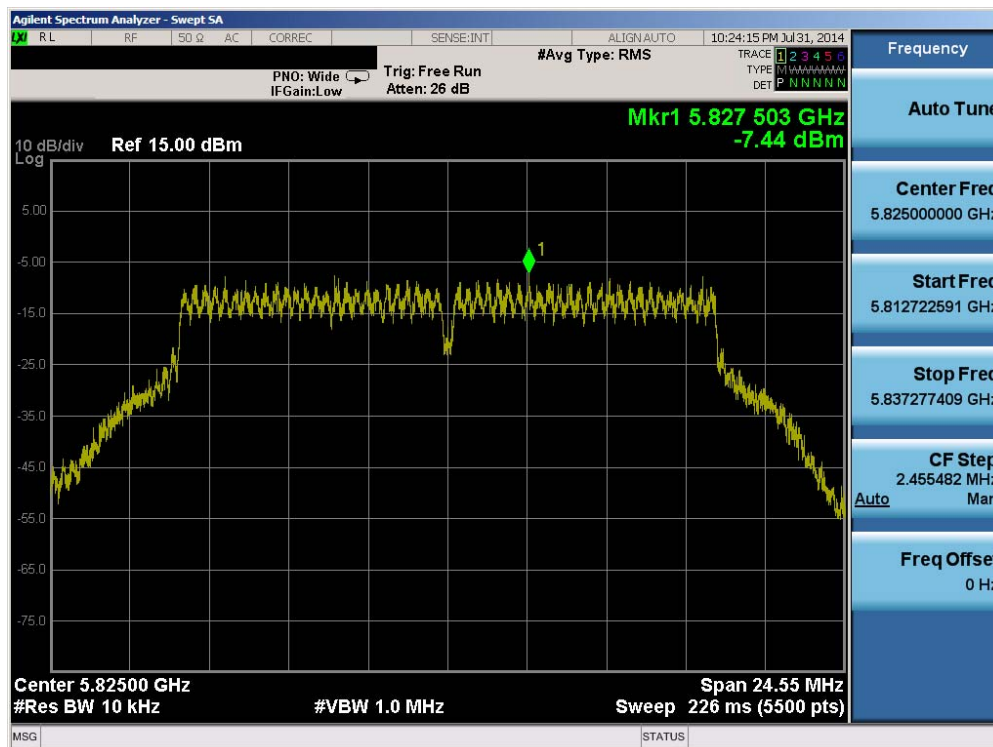


Plot 6-64. Power Spectral Density Plot (802.11a – Ch. 149)

FCC ID: A3LSMN910P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n/ac/n MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1408011595.A3L	Test Dates: 07/29 - 09/04/14	EUT Type: Portable Handset		Page 59 of 121

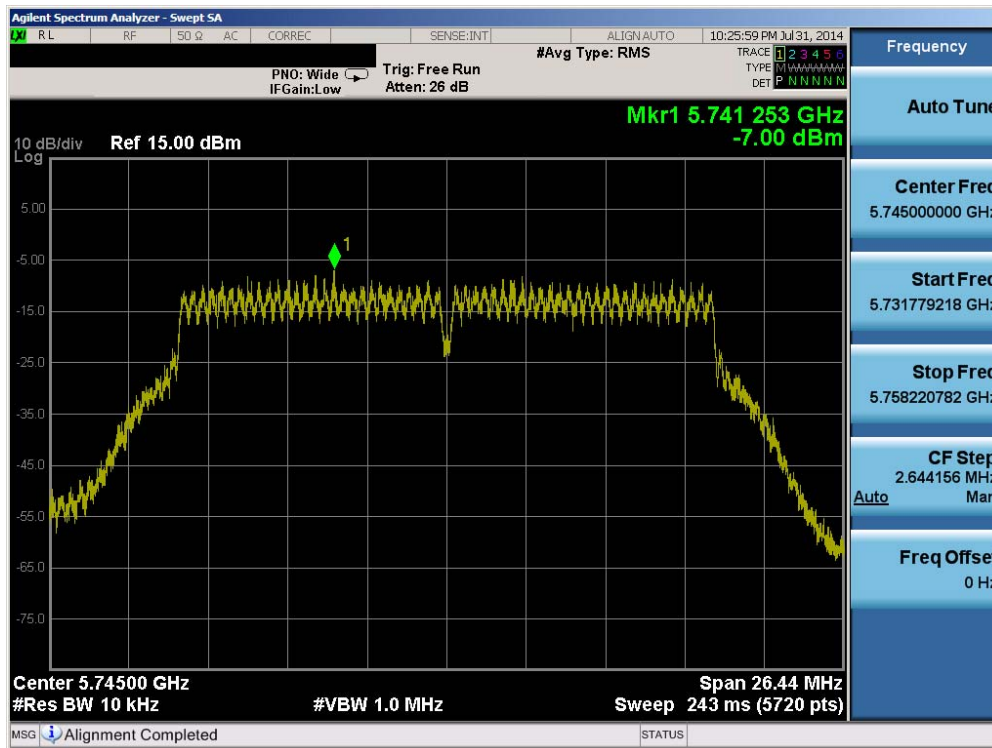


Plot 6-65. Power Spectral Density Plot (802.11a – Ch. 157)

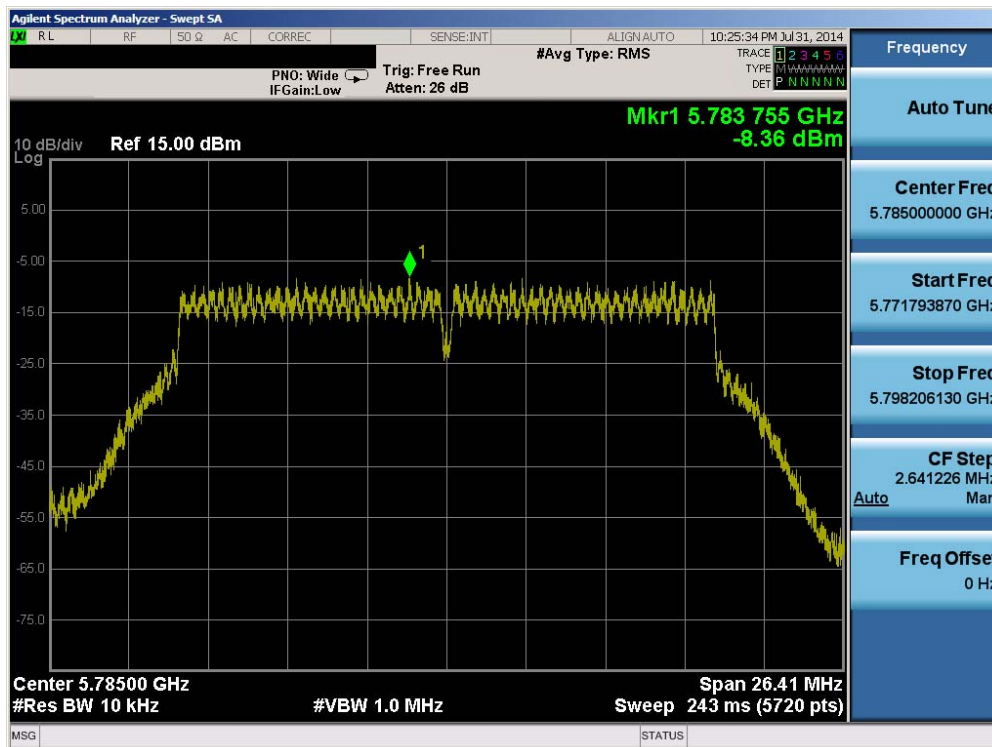


Plot 6-66. Power Spectral Density Plot (802.11a – Ch. 165)

FCC ID: A3LSMN910P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n/ac/n MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1408011595.A3L	Test Dates: 07/29 - 09/04/14	EUT Type: Portable Handset		Page 60 of 121

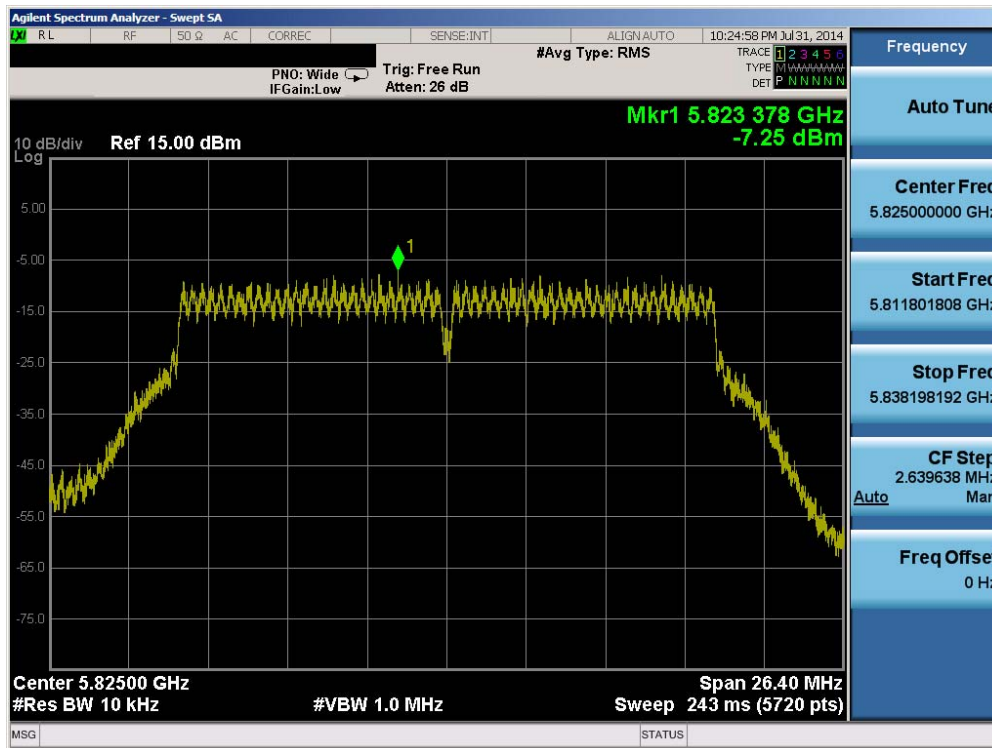


Plot 6-67. Power Spectral Density Plot (20MHz BW 802.11n (5.8GHz) – Ch. 149)

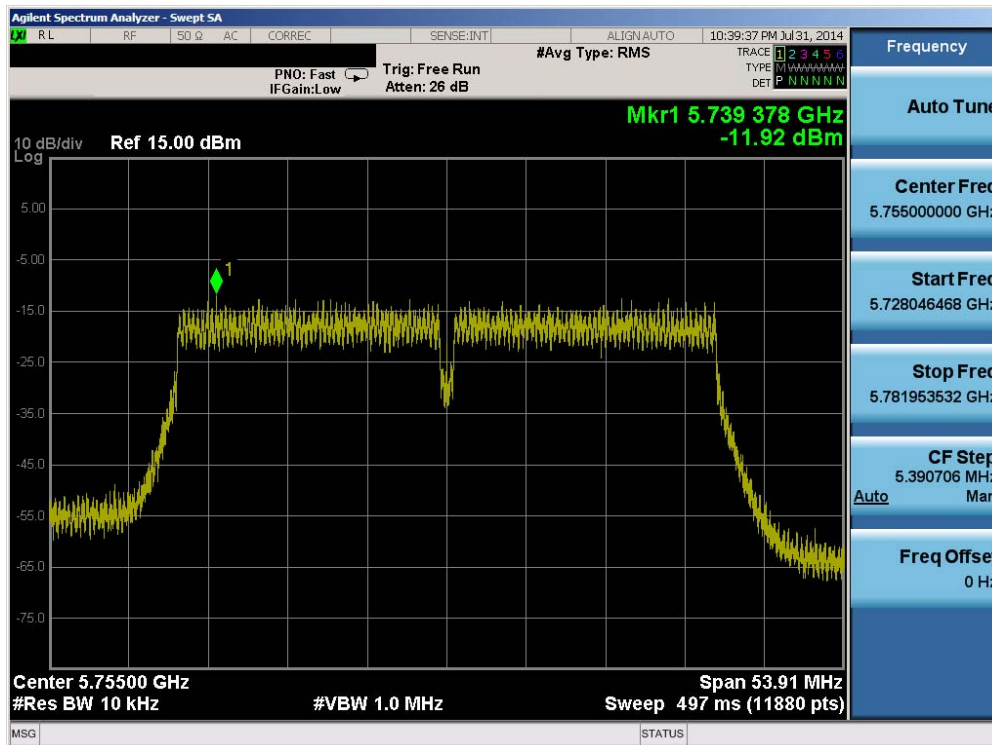


Plot 6-68. Power Spectral Density Plot (20MHz BW 802.11n (5.8GHz) – Ch. 157)

FCC ID: A3LSMN910P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n/ac/n MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1408011595.A3L	Test Dates: 07/29 - 09/04/14	EUT Type: Portable Handset		Page 61 of 121

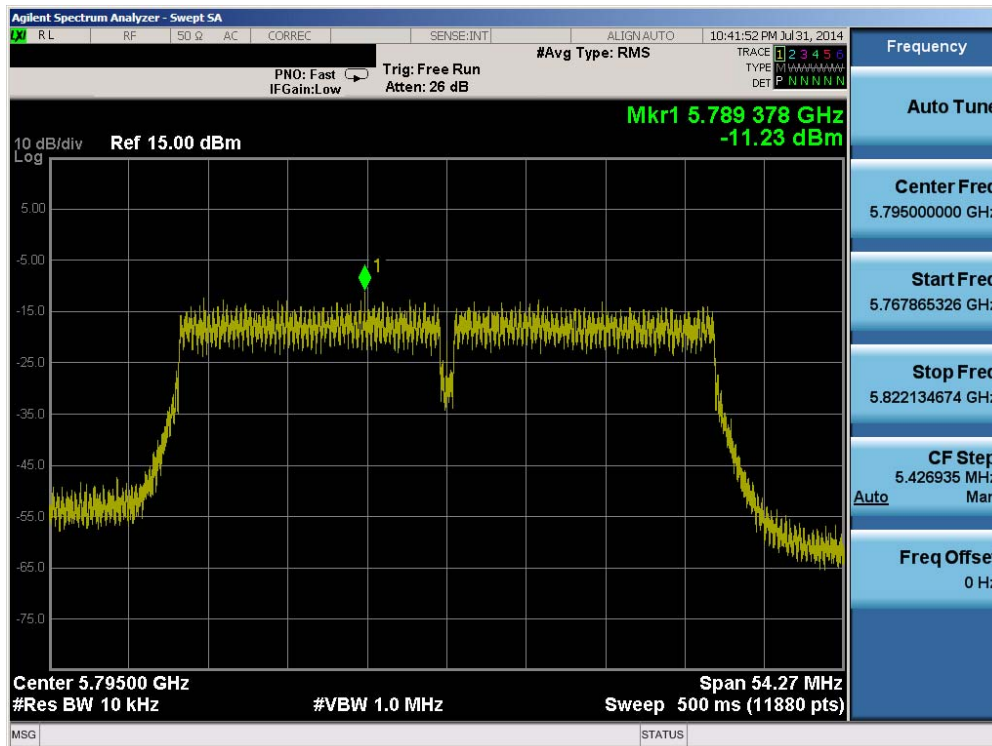


Plot 6-69. Power Spectral Density Plot (20MHz BW 802.11n (5.8GHz) – Ch. 165)

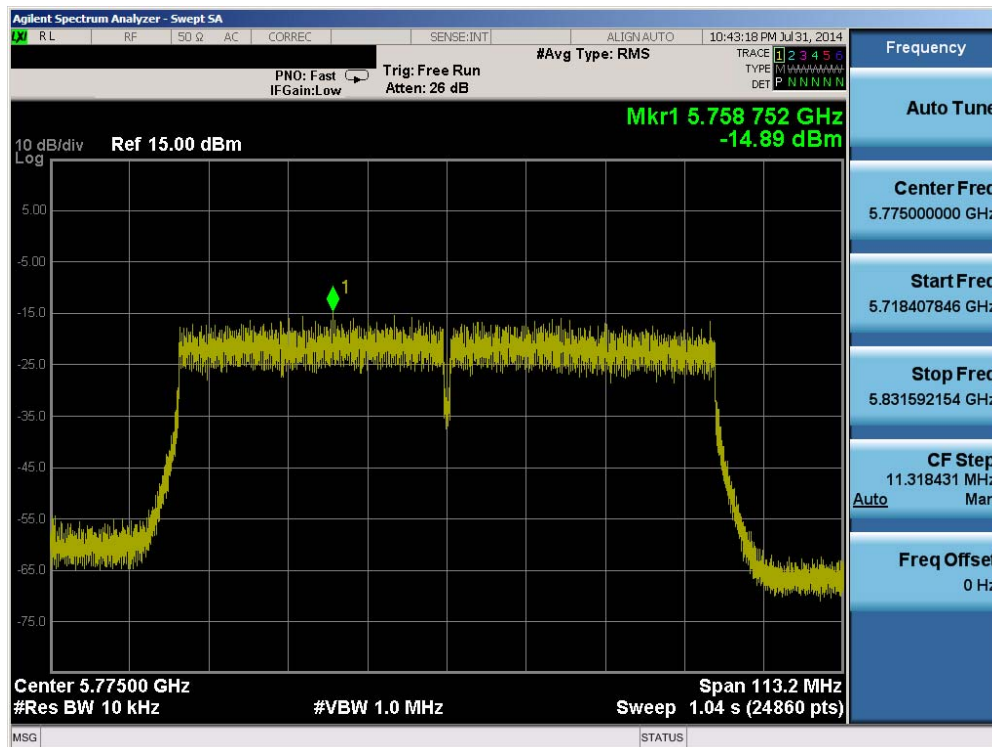


Plot 6-70. Power Spectral Density Plot (40MHz BW 802.11n (5.8GHz) – Ch. 151)

FCC ID: A3LSMN910P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n/ac/n MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1408011595.A3L	Test Dates: 07/29 - 09/04/14	EUT Type: Portable Handset		Page 62 of 121



Plot 6-71. Power Spectral Density Plot (40MHz BW 802.11n (5.8GHz) – Ch. 159)



Plot 6-72. Power Spectral Density Plot (80MHz BW 802.11ac (5.8GHz) – Ch. 155)

FCC ID: A3LSMN910P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n/ac/n MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1408011595.A3L	Test Dates: 07/29 - 09/04/14	EUT Type: Portable Handset		Page 63 of 121

MIMO Power Spectral Density Measurements

Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	ANT 1 Power Spectral Density [dBm]	ANT 2 Power Spectral Density [dBm]	Summed MIMO Power Spectral Density [dBm]	Maximum Permissible Power Density [dBm / 3kHz]	Margin [dB]	Pass / Fail
2412	1	n	6.5/7.2 (MCS0)	-5.95	-6.32	-3.12	8.00	-11.12	Pass
2437	6	n	6.5/7.2 (MCS0)	-5.64	-6.58	-3.07	8.00	-11.07	Pass
2462	11	n	6.5/7.2 (MCS0)	-5.99	-6.50	-3.22	8.00	-11.22	Pass
5745	149	n (20MHz)	6.5/7.2 (MCS0)	-7.97	-7.00	-4.45	8.00	-12.45	Pass
5785	157	n (20MHz)	6.5/7.2 (MCS0)	-8.91	-8.36	-5.62	8.00	-13.62	Pass
5825	165	n (20MHz)	6.5/7.2 (MCS0)	-8.86	-7.25	-4.97	8.00	-12.97	Pass
5755	151	n (40MHz)	13.5/15 (MCS0)	-11.54	-11.92	-8.71	8.00	-16.71	Pass
5795	159	n (40MHz)	13.5/15 (MCS0)	-11.72	-11.23	-8.46	8.00	-16.46	Pass
5775	155	ac (80MHz)	29.3/32.5 (MCS0)	-16.35	-14.89	-12.55	8.00	-20.55	Pass

Table 6-30.MIMO Conducted Power Density Measurements

Note:

Per KDB 662911 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 2412MHz the average conducted power spectral density was measured to be N/A dBm for Antenna-1 and N/A dBm for Antenna-2.

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

$$(-5.95\text{dBm} + -6.32\text{dBm}) = (0.00025\text{mW} + 0.00023\text{mW}) = 0.000487\text{mW} = -3.12\text{dBm}$$

FCC ID: A3LSMN910P		FCC Pt. 15.247 802.11a/b/g/n/ac/n MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1408011595.A3L	Test Dates: 07/29 - 09/04/14	EUT Type: Portable Handset		Page 64 of 121

6.5 Conducted Emissions at the Band Edge

§15.247(d)

Test Overview and Limit

All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at its maximum duty cycle (>98%), at maximum power, and at the appropriate frequencies. All data rates were investigated to determine the worst case configuration. For the following out of band conducted spurious emissions plots at the band edge, the EUT was set at a data rate of 1Mbps for “b” mode, 6 Mbps for “g” mode, 6 Mbps for “a” mode, 6.5/7.2Mbps for 20MHz BW “n” mode, 13.5/15Mbps for 40MHz “n”, and 29.3/32.5Mbps for 80MHz “ac” mode as these settings produced the worst-case emissions.

The limit for out-of-band spurious emissions at the band edge is 30dB below the fundamental emission level, as determined from the in-band power measurement of the DTS channel performed in a 100kHz bandwidth per the PSD procedure (Section 9.1).

Test Procedure Used

KDB 558074 v03r02 – Section 11.3

Test Settings

1. Start and stop frequency were set such that the band edge would be placed in the center of the plot
2. Span was set large enough so as to capture all out of band emissions near the band edge
3. RBW = 100kHz
4. VBW = 1MHz
5. Detector = Peak
6. Number of sweep points $\geq 2 \times \text{Span/RBW}$
7. Trace mode = max hold
8. Sweep time = auto couple
9. The trace was allowed to stabilize

Test Setup

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

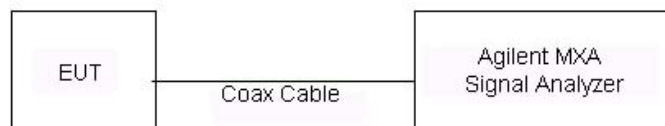


Figure 6-4. Test Instrument & Measurement Setup

Test Notes

None

FCC ID: A3LSMN910P		FCC Pt. 15.247 802.11a/b/g/n/ac/n MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1408011595.A3L	Test Dates: 07/29 - 09/04/14	EUT Type: Portable Handset	Page 65 of 121	

Antenna-1 Conducted Emissions at the Band Edge

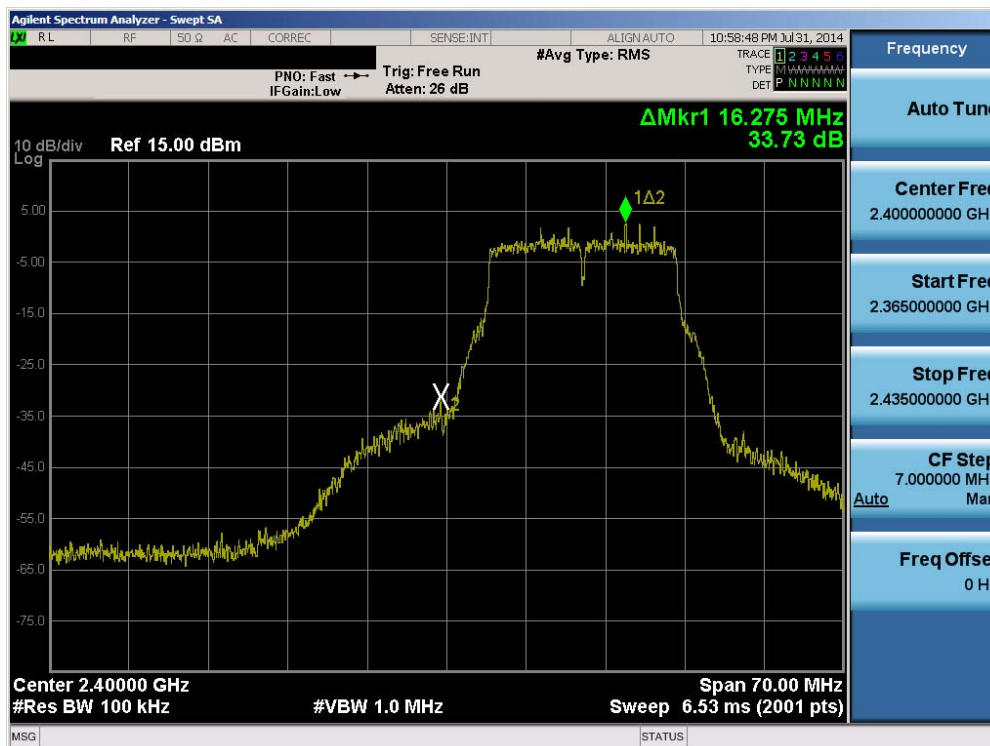


Plot 6-73. Band Edge Plot (802.11b – Ch. 1)

FCC ID: A3LSMN910P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n/ac/n MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1408011595.A3L	Test Dates: 07/29 - 09/04/14	EUT Type: Portable Handset		Page 66 of 121

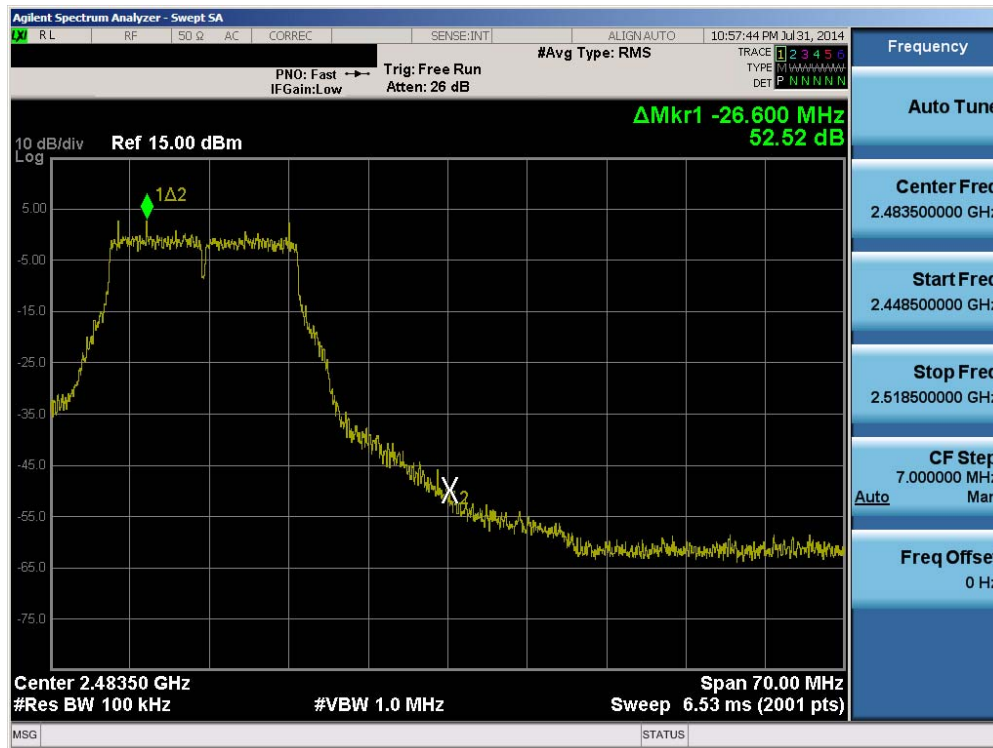


Plot 6-74. Band Edge Plot (802.11b – Ch. 11)

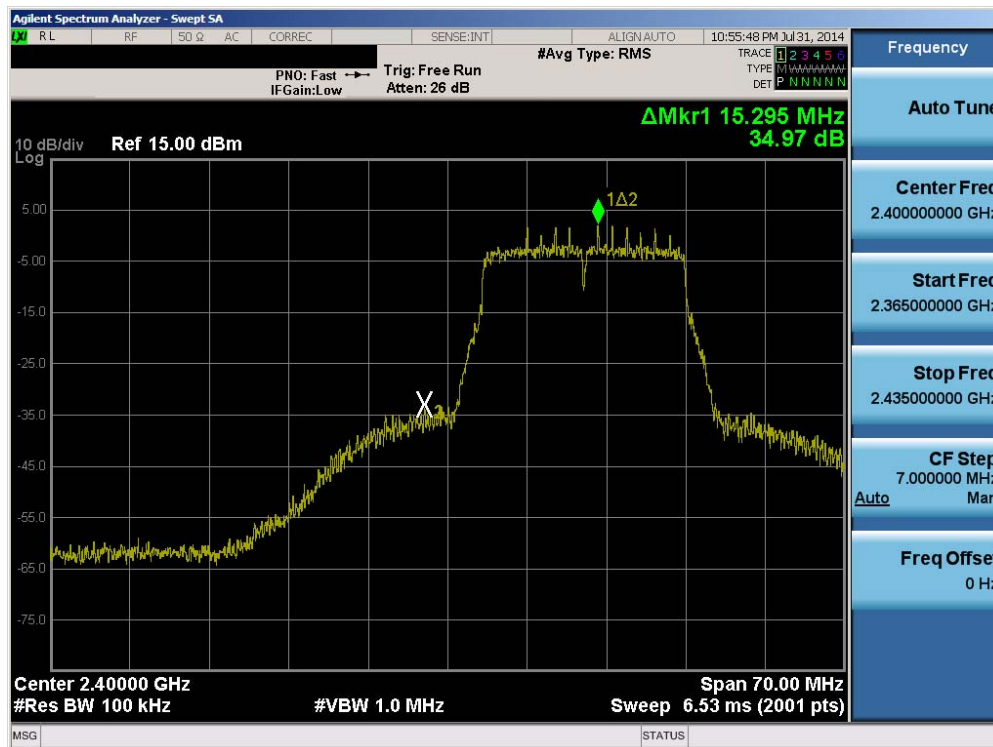


Plot 6-75. Band Edge Plot (802.11g– Ch. 1)

FCC ID: A3LSMN910P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n/ac/n MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1408011595.A3L	Test Dates: 07/29 - 09/04/14	EUT Type: Portable Handset		Page 67 of 121

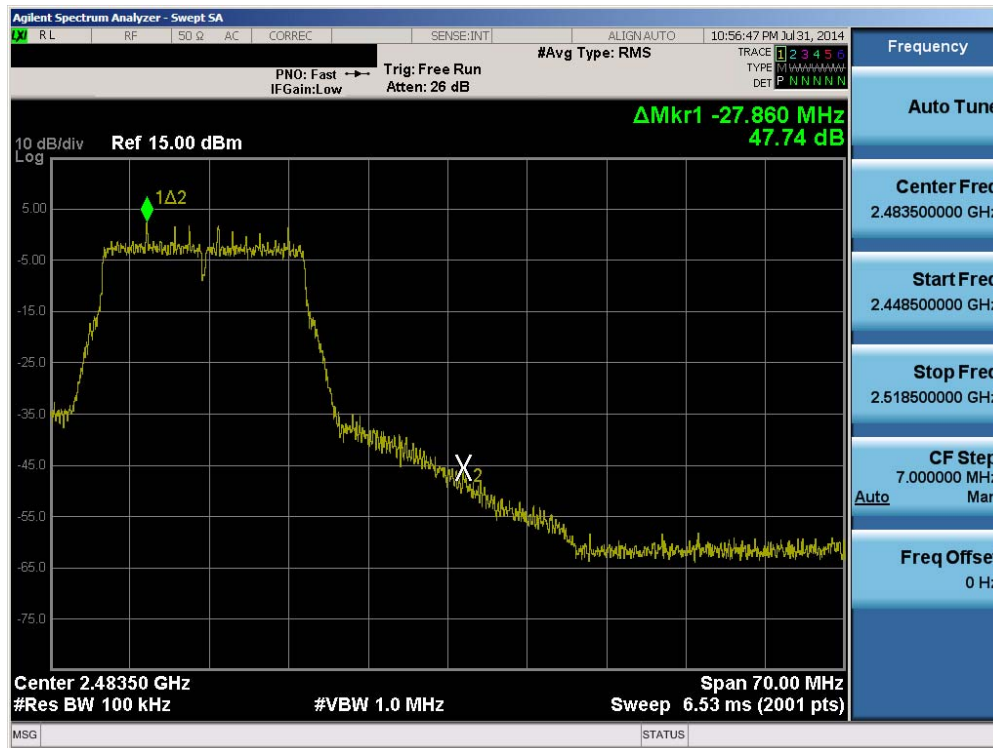


Plot 6-76. Band Edge Plot (802.11g – Ch. 11)

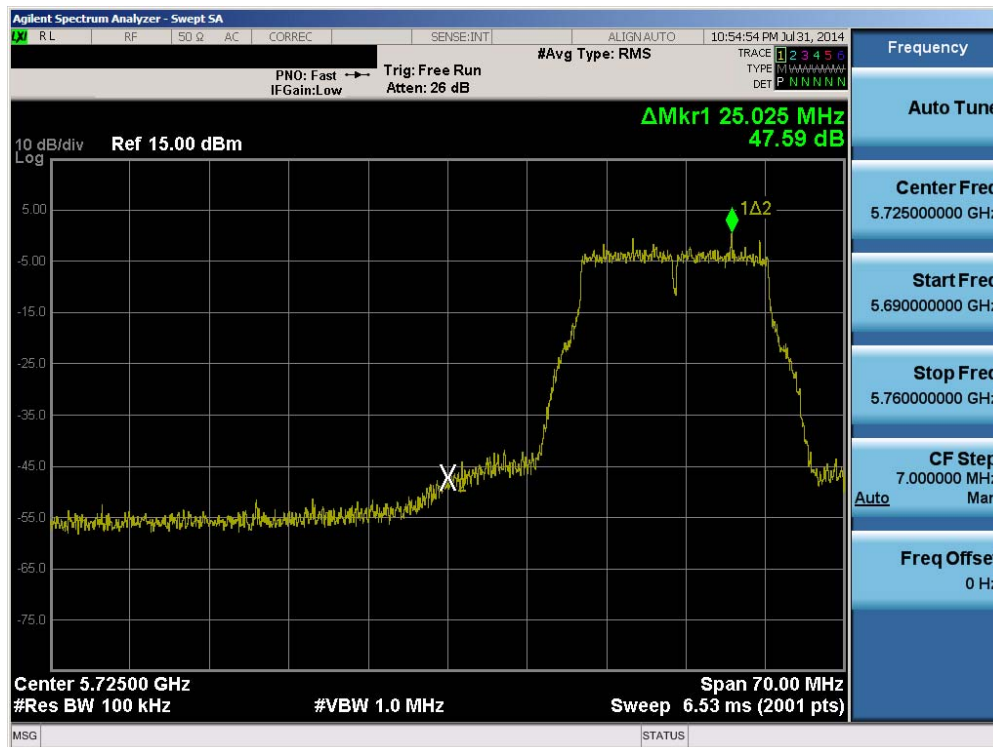


Plot 6-77. Band Edge Plot (802.11n (2.4GHz) – Ch. 1)

FCC ID: A3LSMN910P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n/ac/n MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1408011595.A3L	Test Dates: 07/29 - 09/04/14	EUT Type: Portable Handset		Page 68 of 121

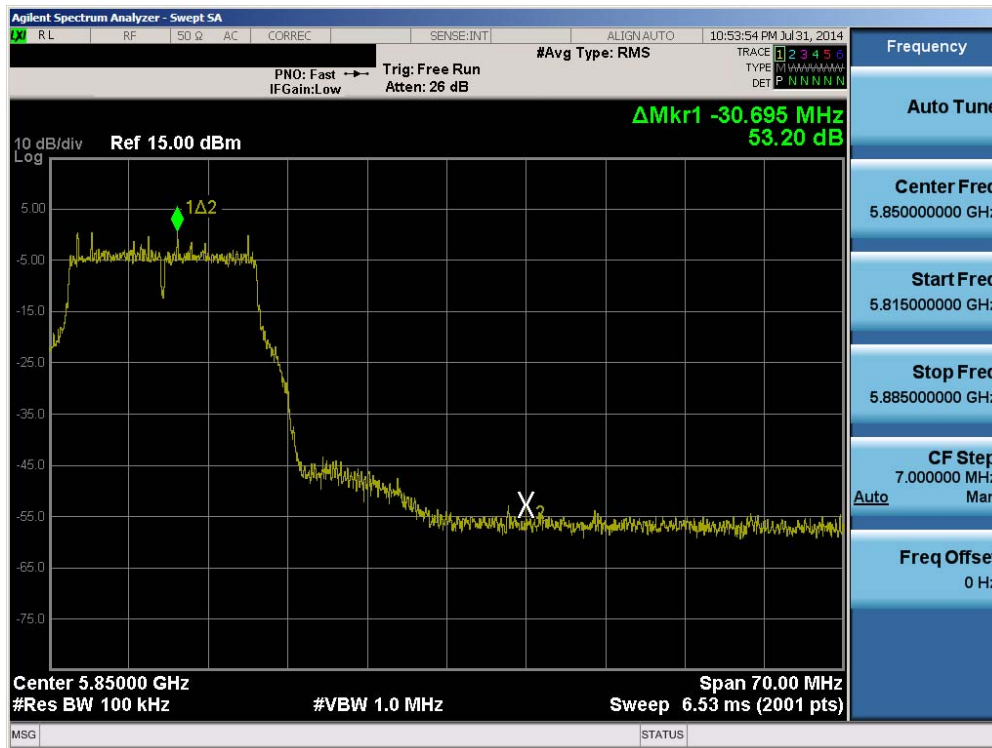


Plot 6-78. Band Edge Plot (802.11n (2.4GHz) – Ch. 11)

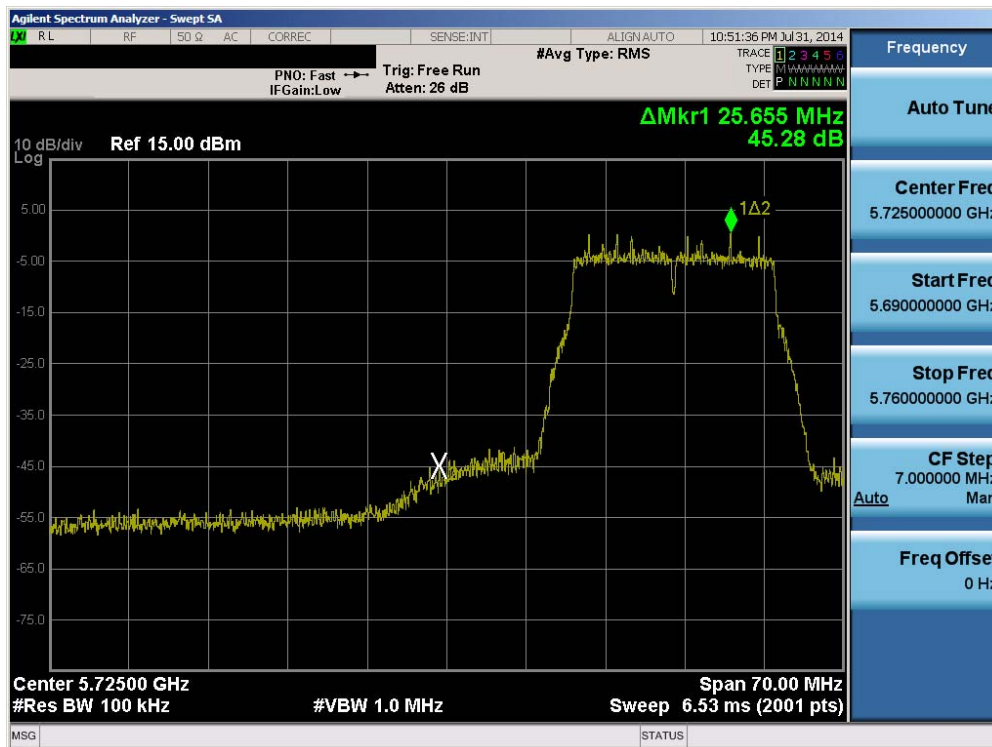


Plot 6-79. Band Edge Plot (802.11a – Ch. 149)

FCC ID: A3LSMN910P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n/ac/n MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1408011595.A3L	Test Dates: 07/29 - 09/04/14	EUT Type: Portable Handset		Page 69 of 121

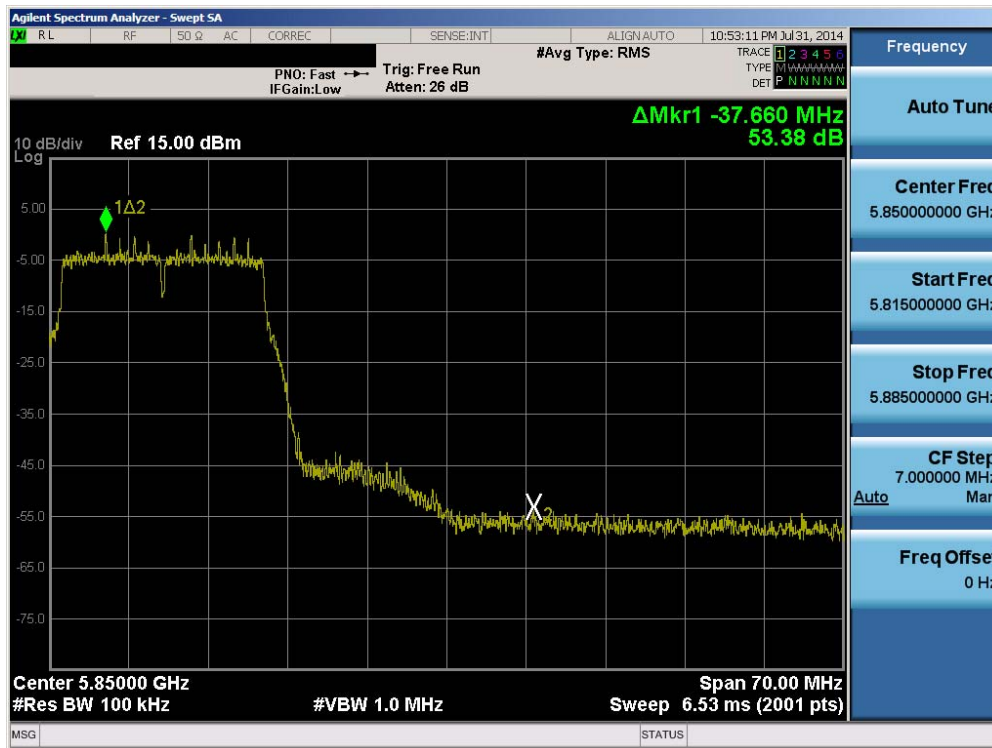


Plot 6-80. Band Edge Plot (802.11a – Ch. 165)

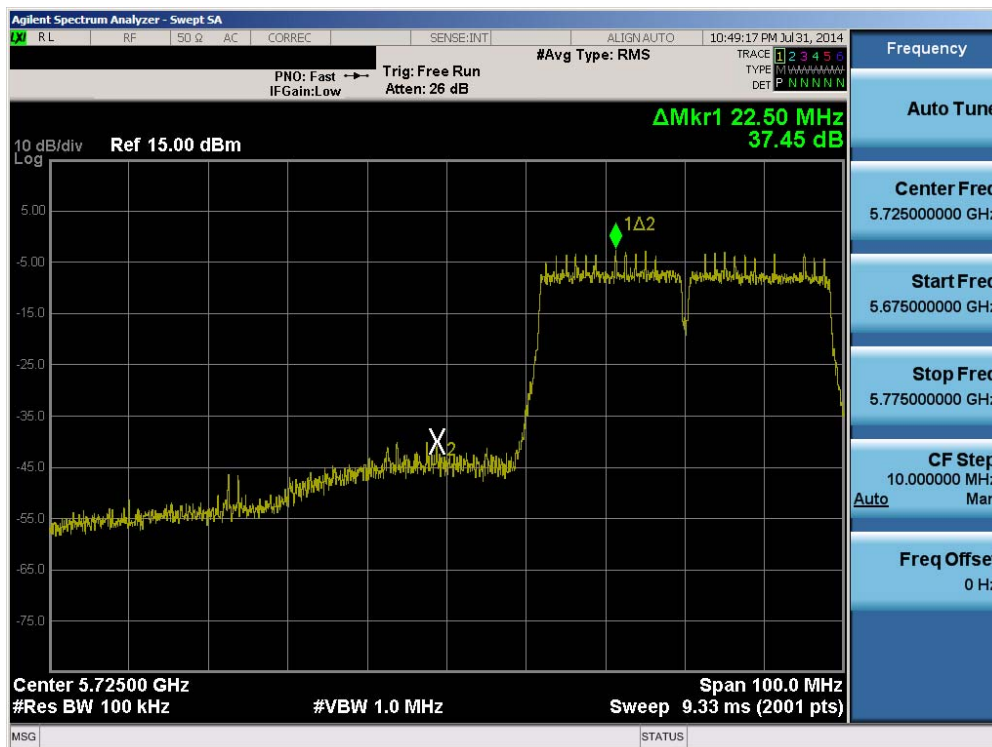


Plot 6-81. Band Edge Plot (20MHz BW 802.11n (5.8GHz) – Ch. 149)

FCC ID: A3LSMN910P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n/ac/n MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1408011595.A3L	Test Dates: 07/29 - 09/04/14	EUT Type: Portable Handset		Page 70 of 121

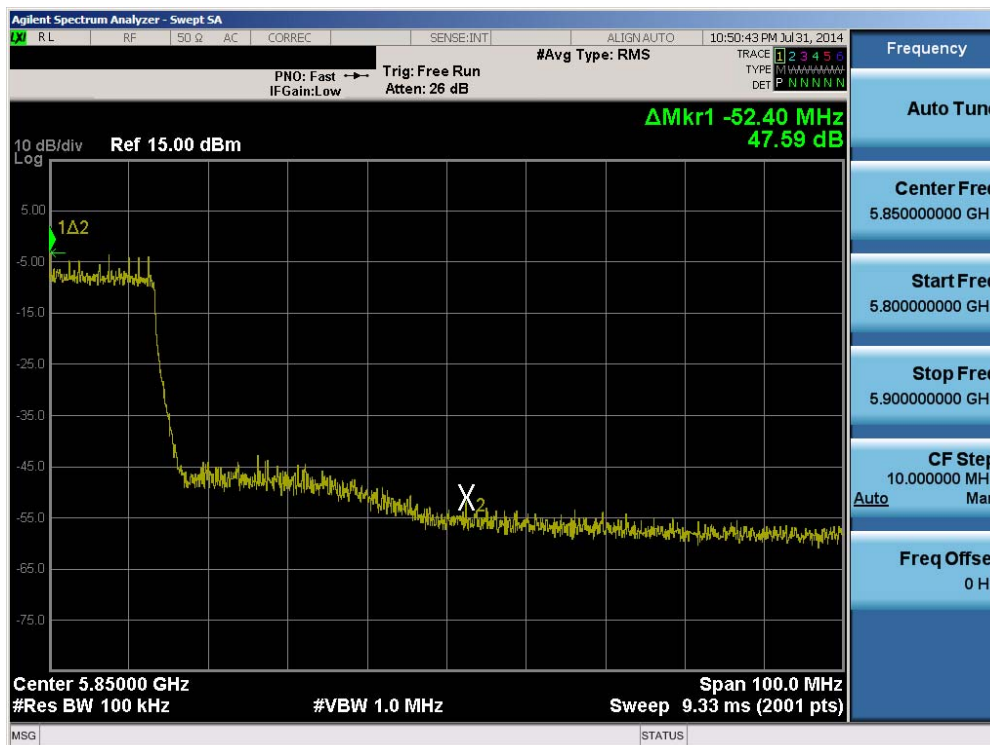


Plot 6-82. Band Edge Plot (20MHz BW 802.11n (5.8GHz) – Ch. 165)

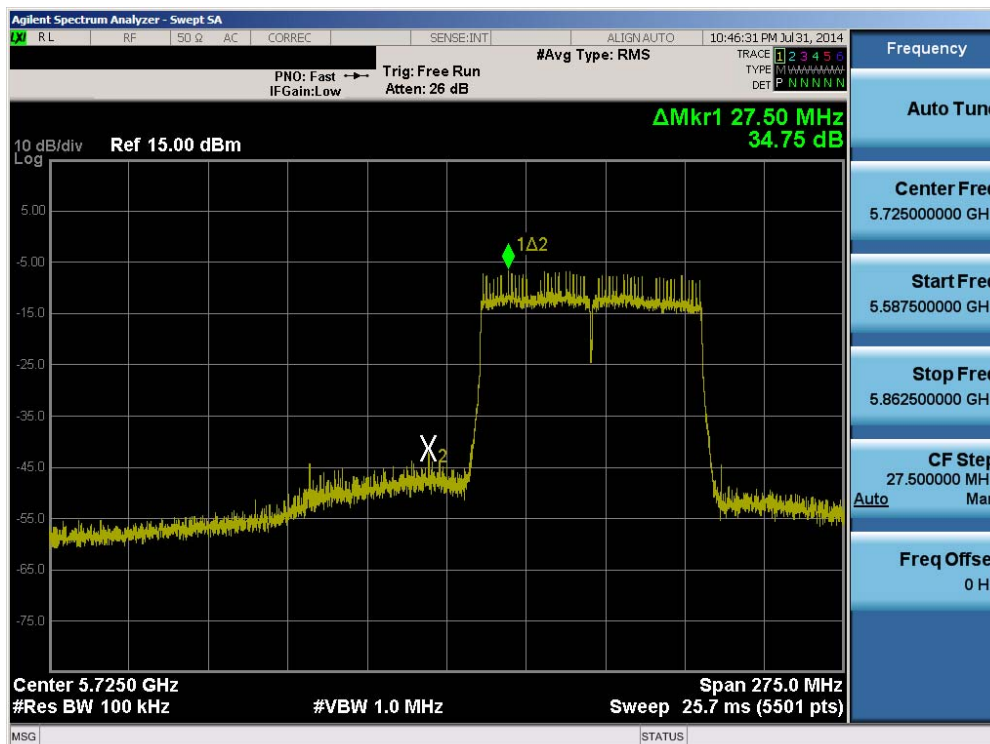


Plot 6-83. Band Edge Plot (40MHz BW 802.11n (5.8GHz) – Ch. 151)

FCC ID: A3LSMN910P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n/ac/n MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1408011595.A3L	Test Dates: 07/29 - 09/04/14	EUT Type: Portable Handset		Page 71 of 121



Plot 6-84. Band Edge Plot (40MHz BW 802.11n (5.8GHz) – Ch. 159)



Plot 6-85. Band Edge Plot (80MHz BW 802.11ac (5.8GHz) – Ch. 155)

FCC ID: A3LSMN910P	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n/ac/n MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1408011595.A3L	Test Dates: 07/29 - 09/04/14	EUT Type: Portable Handset		Page 72 of 121