

6.4 Peak Power Spectral Density – 802.11a/n §15.407 (a)(1),(5) / RSS-210 [A9.2]

Test Overview and Limit

The spectrum analyzer was connected to the antenna terminal while the EUT was operating at its maximum duty cycle (>98%), at its maximum power control level, as defined in KDB 789033, and at the appropriate frequencies. Method SA-1, as defined in KDB 789033, was used to measure the power spectral density.

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

Test Procedure Used

KDB 789033 v01r02 – Section E

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 $\geq 2 \times (\text{span/RBW})$
6. Sweep time = auto
7. Detector = power averaging (RMS)
8. Trigger was set to free run since the EUT was operating at a duty cycle $\geq 98\%$
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.

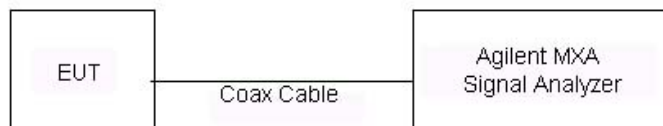


Figure 6-3. Test Instrument & Measurement Setup

Test Notes

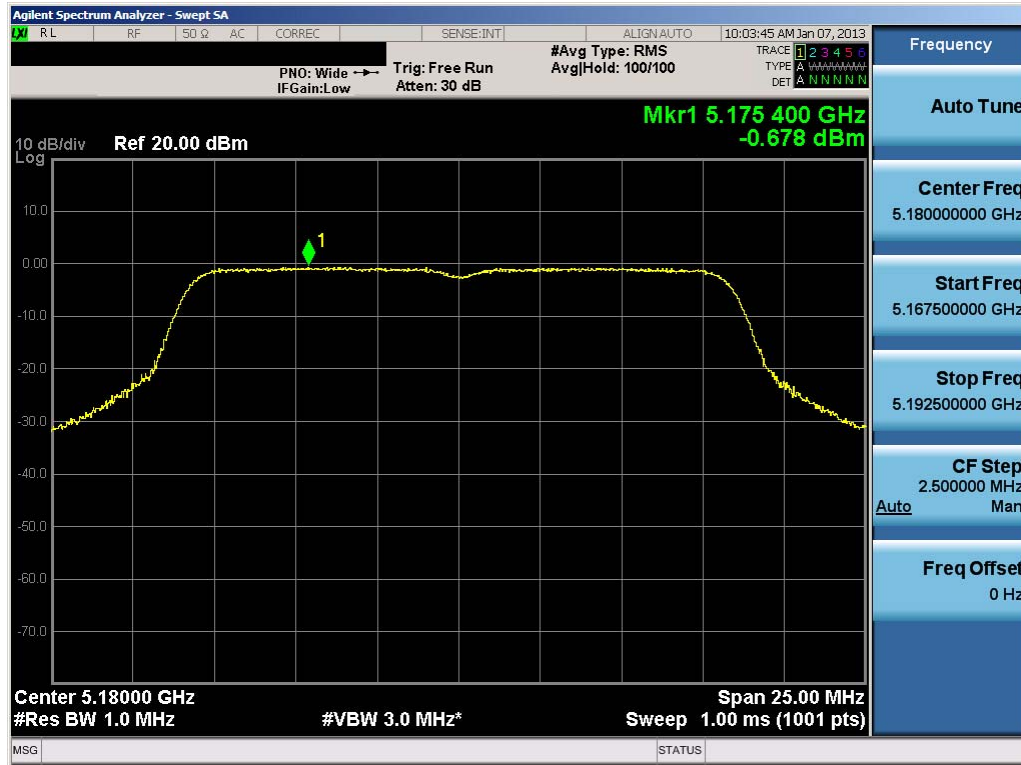
None

FCC ID: A3LGTI8730		FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1301020020.A3L	Test Dates: 1/3 - 1/8/2013	EUT Type: Portable Handset		Page 28 of 81

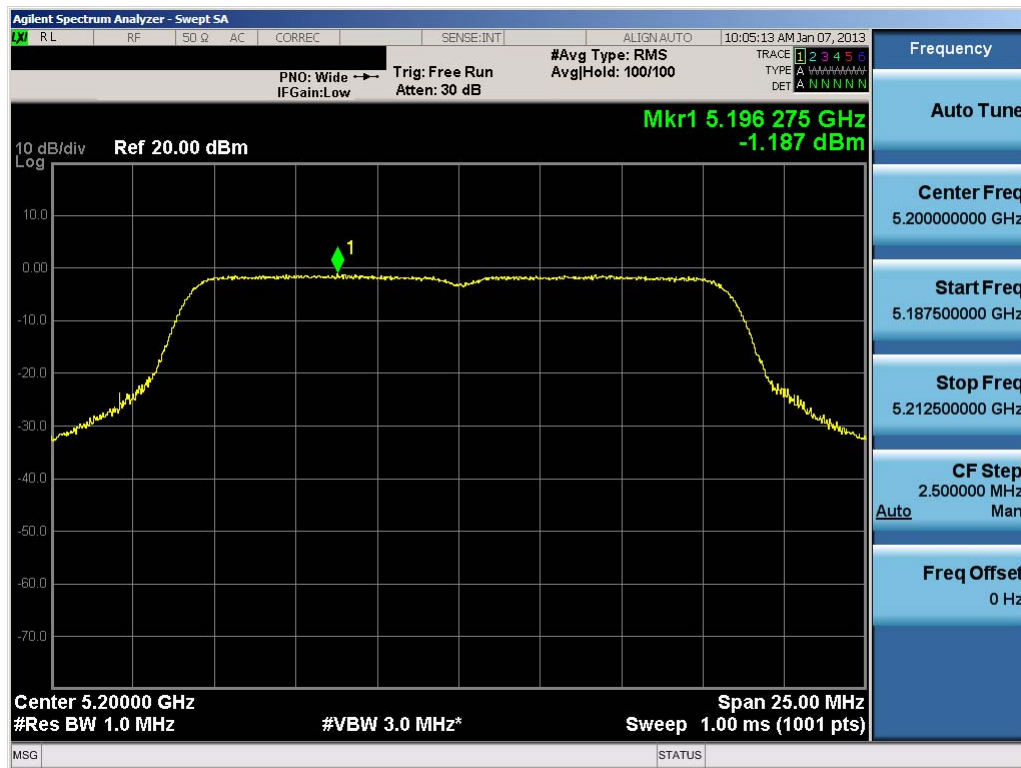
	Frequency [MHz]	Channel No.	802.11 Mode	Data Rate [Mbps]	Measured Power Density [dBm]	Max Permissible Power Density [dBm/MHz]	Margin [dB]
Band I	5180	36	a	6	-0.68	4.0	-4.68
	5200	40	a	6	-1.19	4.0	-5.19
	5240	48	a	6	-1.45	4.0	-5.45
	5180	36	n (20MHz)	6.5/7.2 (MCS0)	0.31	4.0	-3.69
	5200	40	n (20MHz)	6.5/7.2 (MCS0)	-0.66	4.0	-4.66
	5240	48	n (20MHz)	6.5/7.2 (MCS0)	-0.42	4.0	-4.42
	5190	38	n (40MHz)	13.5/15 (MCS0)	-3.78	4.0	-7.78
	5230	46	n (40MHz)	13.5/15 (MCS0)	-3.92	4.0	-7.92
Band II	5260	52	a	6	-0.98	11.0	-11.98
	5280	56	a	6	-0.90	11.0	-11.90
	5320	64	a	6	-1.37	11.0	-12.37
	5260	52	n (20MHz)	6.5/7.2 (MCS0)	0.15	11.0	-10.85
	5280	56	n (20MHz)	6.5/7.2 (MCS0)	0.07	11.0	-10.93
	5320	64	n (20MHz)	6.5/7.2 (MCS0)	-0.20	11.0	-11.20
	5270	54	n (40MHz)	13.5/15 (MCS0)	-3.78	11.0	-14.78
	5310	62	n (40MHz)	13.5/15 (MCS0)	-4.43	11.0	-15.43
Band III	5500	100	a	6	-0.11	11.0	-11.11
	5580	116	a	6	-0.39	11.0	-11.39
	5700	140	a	6	-0.97	11.0	-11.97
	5500	100	n (20MHz)	6.5/7.2 (MCS0)	-0.28	11.0	-11.28
	5580	116	n (20MHz)	6.5/7.2 (MCS0)	-0.30	11.0	-11.30
	5700	140	n (20MHz)	6.5/7.2 (MCS0)	-0.68	11.0	-11.68
	5510	102	n (40MHz)	13.5/15 (MCS0)	-4.11	11.0	-15.11
	5550	110	n (40MHz)	13.5/15 (MCS0)	-4.30	11.0	-15.30
	5670	134	n (40MHz)	13.5/15 (MCS0)	-4.27	11.0	-15.27

Table 6-6. Conducted Power Spectral Density Measurements

FCC ID: A3LGTI8730		FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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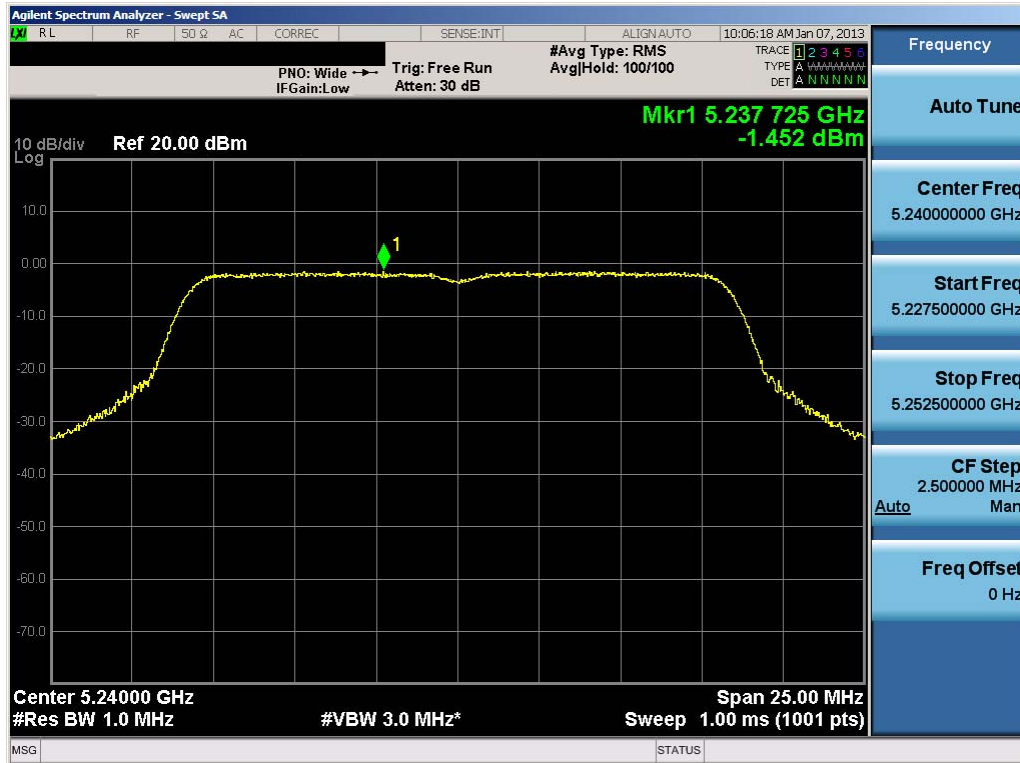


Plot 6-26. Peak Power Spectral Density Plot (802.11a (UNII Band 1) – Ch. 36)

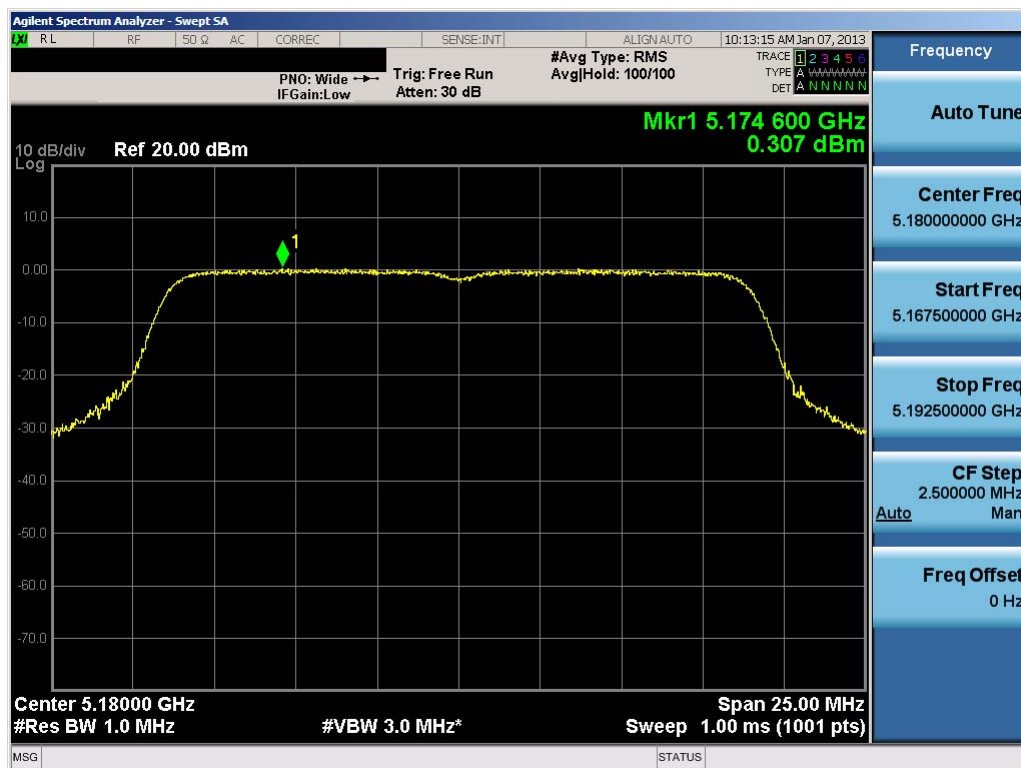


Plot 6-27. Peak Power Spectral Density Plot (802.11a (UNII Band 1) – Ch. 40)

FCC ID: A3LGT18730	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1301020020.A3L	Test Dates: 1/3 - 1/8/2013	EUT Type: Portable Handset		Page 30 of 81

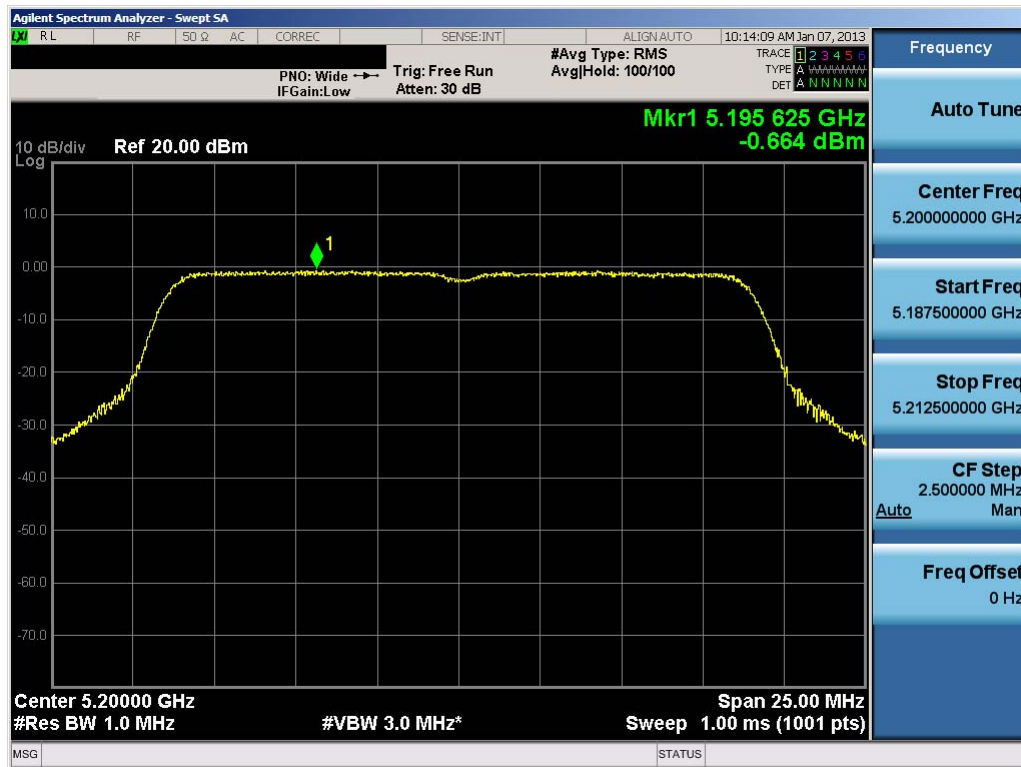


Plot 6-28. Peak Power Spectral Density Plot (802.11a (UNII Band 1) – Ch. 48)

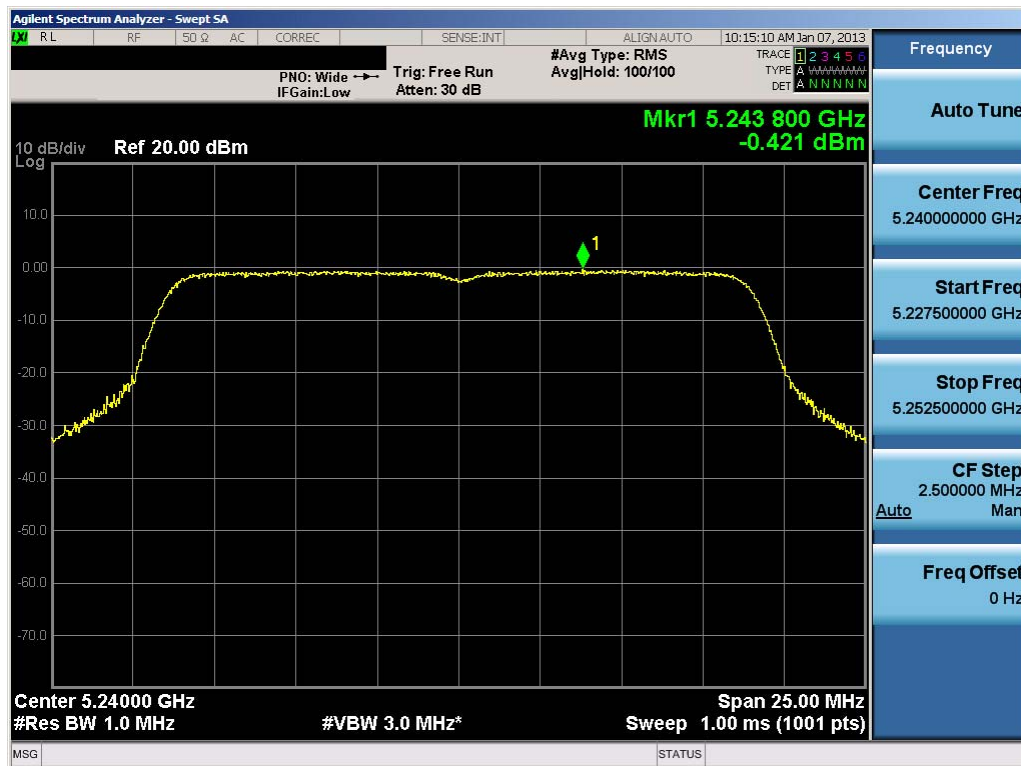


Plot 6-29. Peak Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 1) – Ch. 36)

FCC ID: A3LGTI8730	 FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION) 		Reviewed by: Quality Manager
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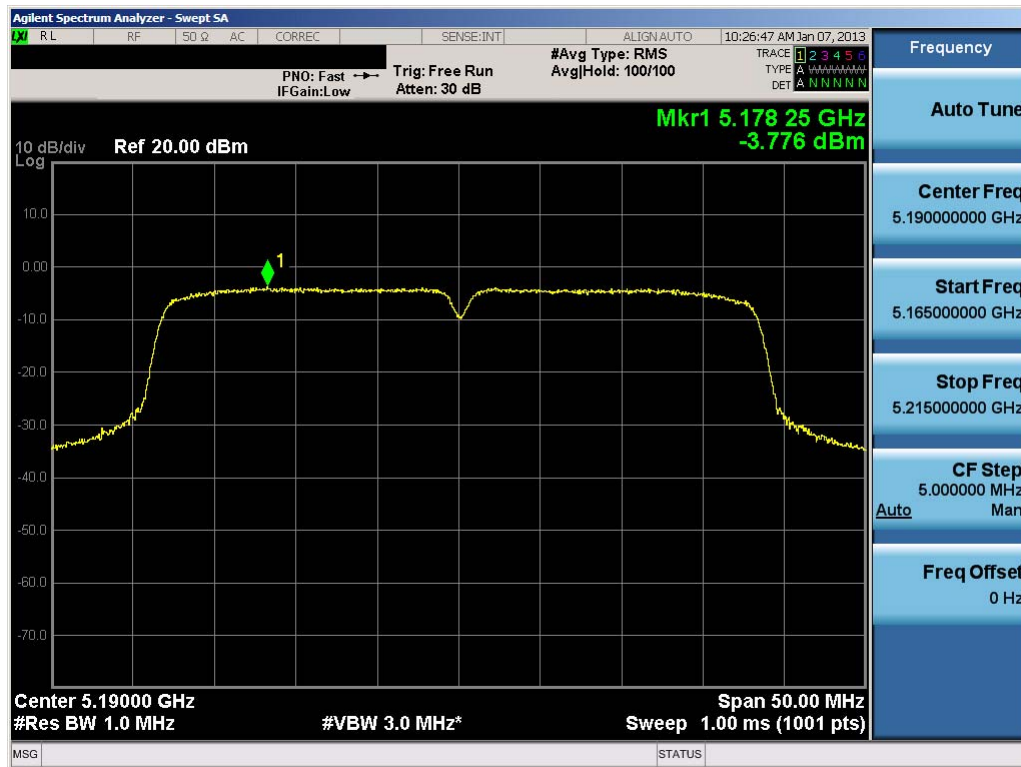


Plot 6-30. Peak Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 1) – Ch. 40)

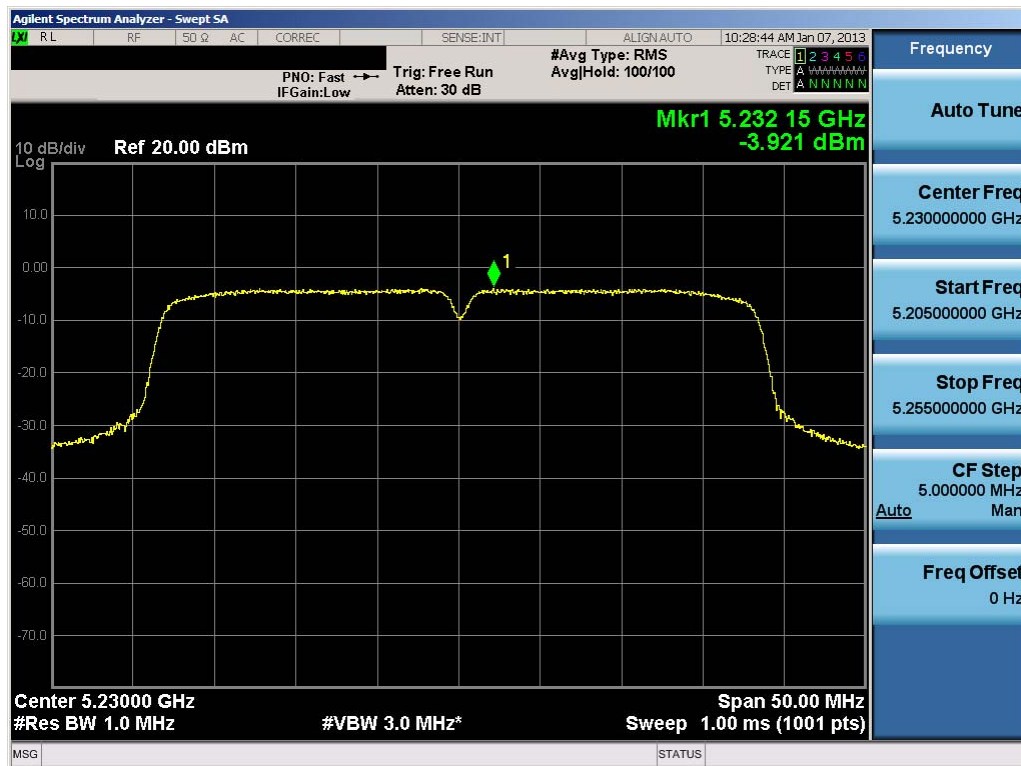


Plot 6-31. Peak Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 1) – Ch. 48)

FCC ID: A3LGT18730	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1301020020.A3L	Test Dates: 1/3 - 1/8/2013	EUT Type: Portable Handset		Page 32 of 81

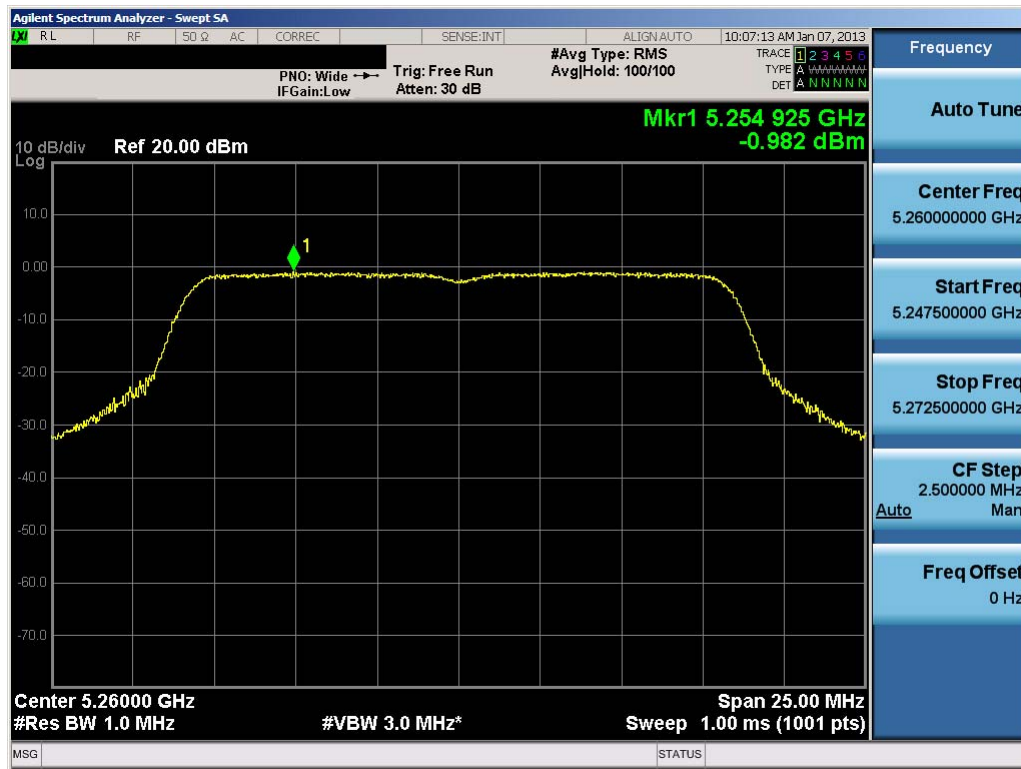


Plot 6-32. Peak Power Spectral Density Plot (40MHz BW 802.11n (UNII Band 1) – Ch. 38)

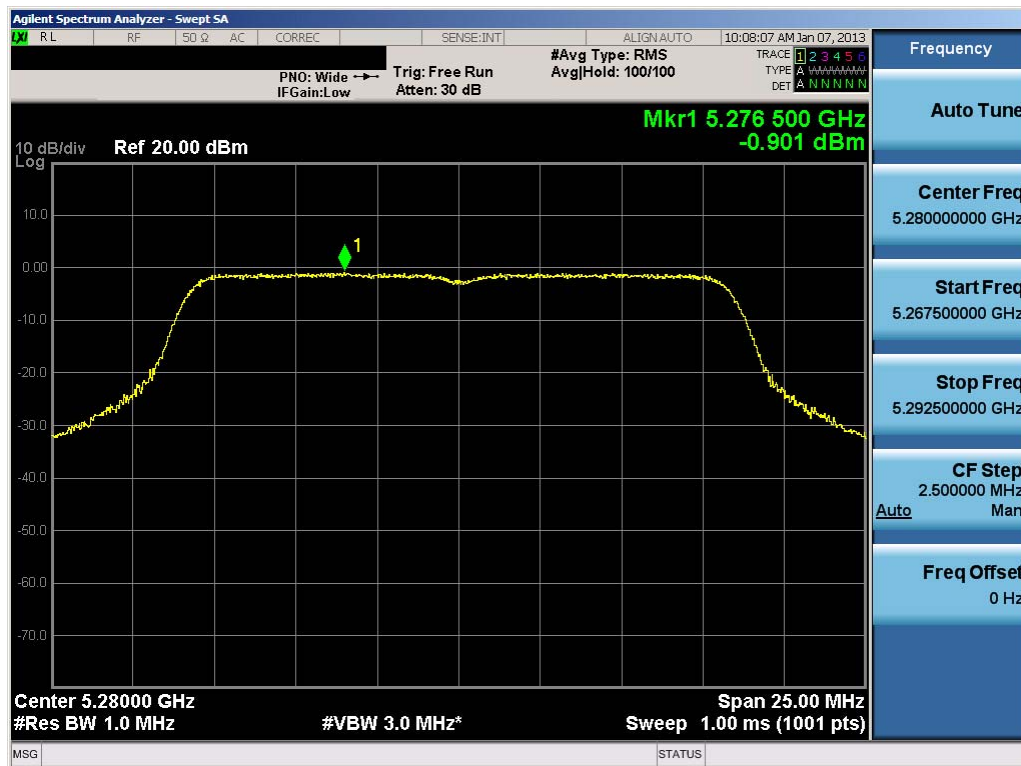


Plot 6-33. Peak Power Spectral Density Plot (40MHz BW 802.11n (UNII Band 1) – Ch. 46)

FCC ID: A3LGTI8730	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1301020020.A3L	Test Dates: 1/3 - 1/8/2013	EUT Type: Portable Handset		Page 33 of 81

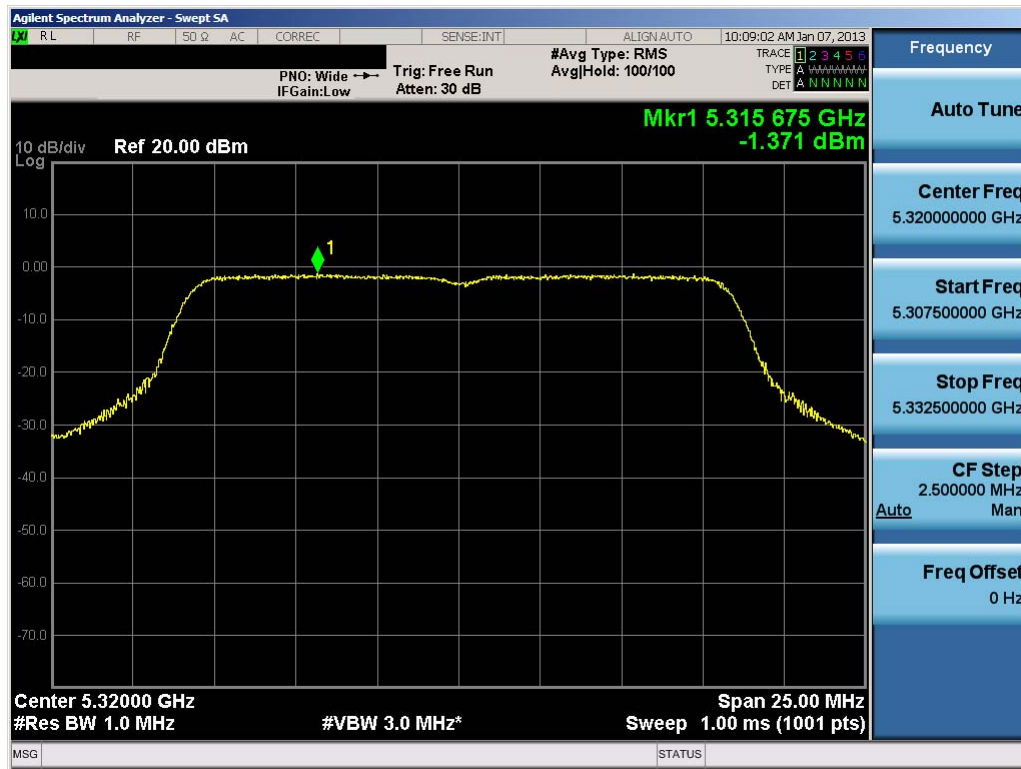


Plot 6-34. Peak Power Spectral Density Plot (802.11a (UNII Band 2) – Ch. 52)

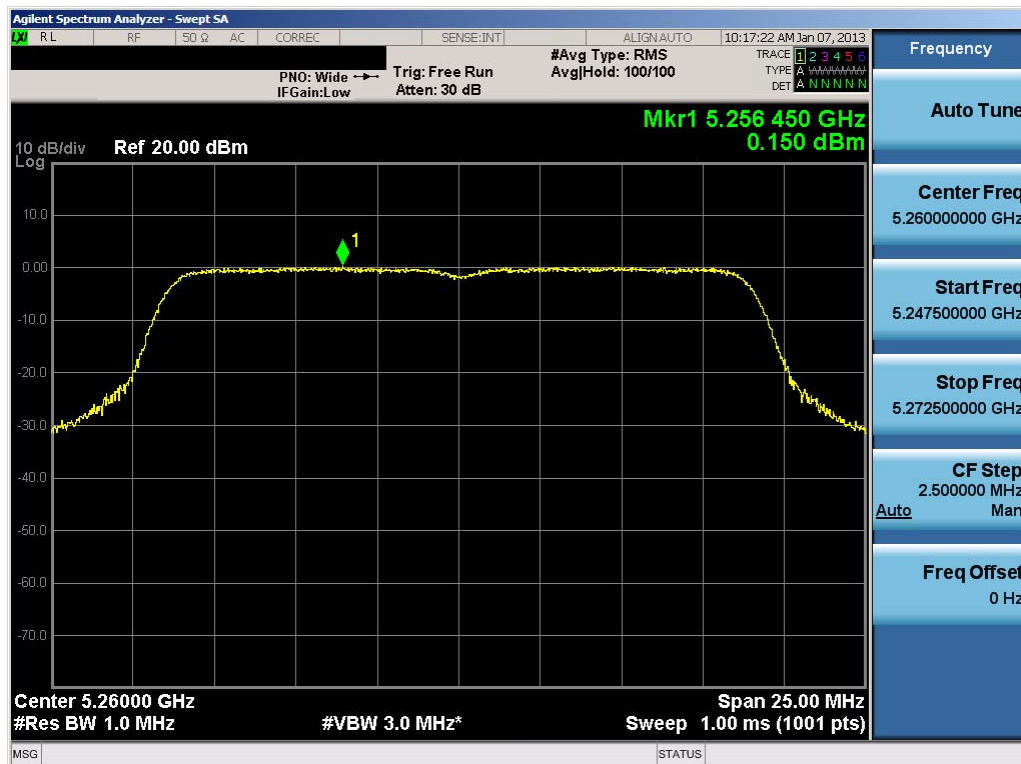


Plot 6-35. Peak Power Spectral Density Plot (802.11a (UNII Band 2) – Ch. 56)

FCC ID: A3LGTI8730	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1301020020.A3L	Test Dates: 1/3 - 1/8/2013	EUT Type: Portable Handset		Page 34 of 81

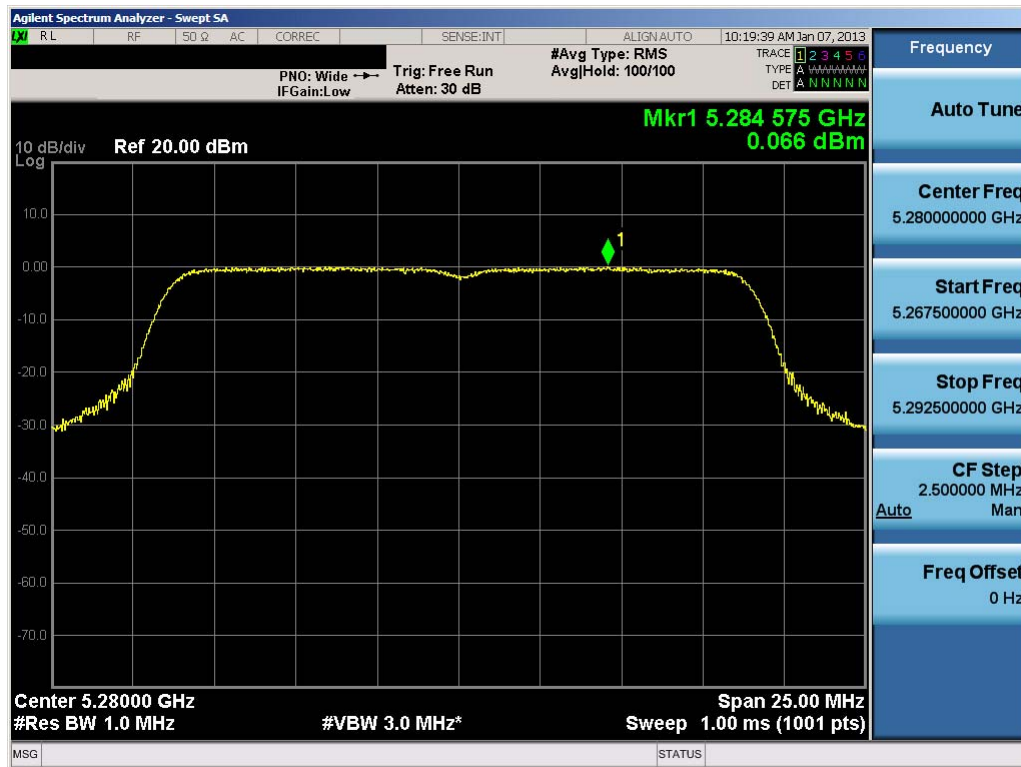


Plot 6-36. Peak Power Spectral Density Plot (802.11a (UNII Band 2) – Ch. 64)

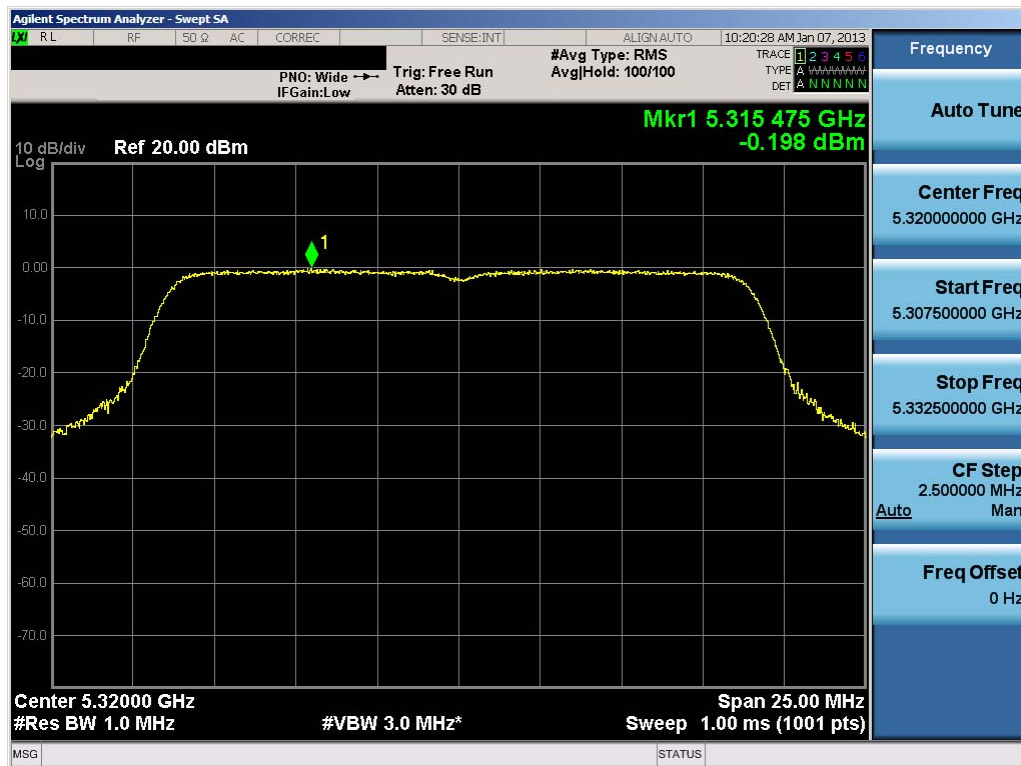


Plot 6-37. Peak Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 2) – Ch. 52)

FCC ID: A3LGTI8730	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1301020020.A3L	Test Dates: 1/3 - 1/8/2013	EUT Type: Portable Handset		Page 35 of 81

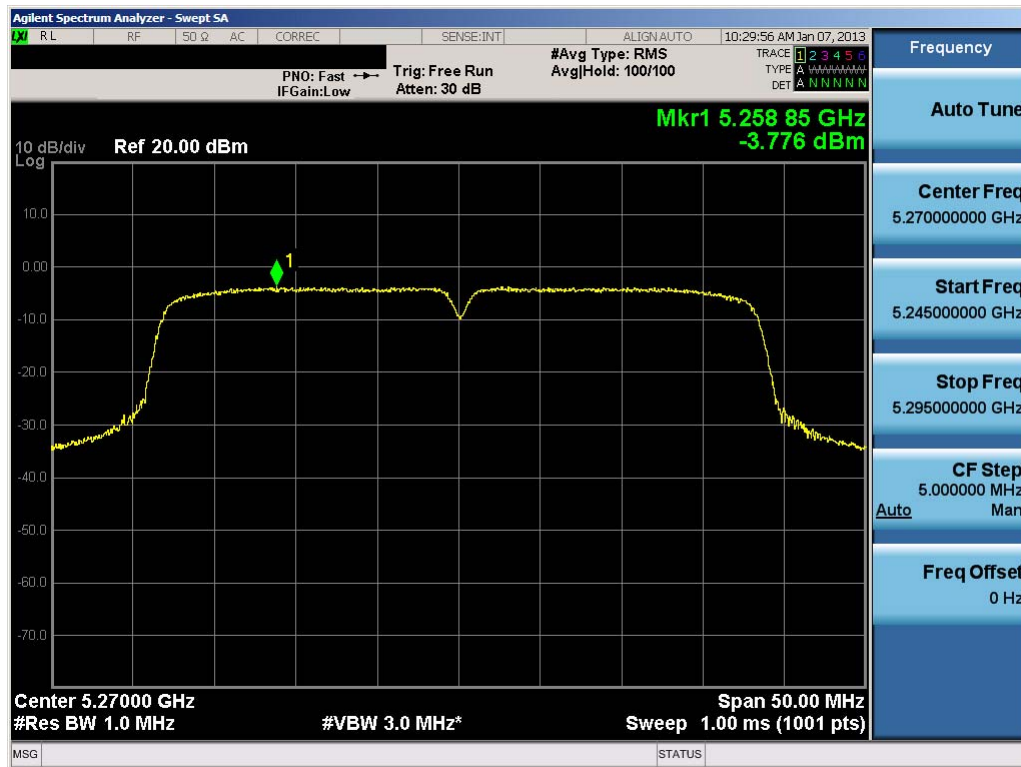


Plot 6-38. Peak Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 2) – Ch. 56)

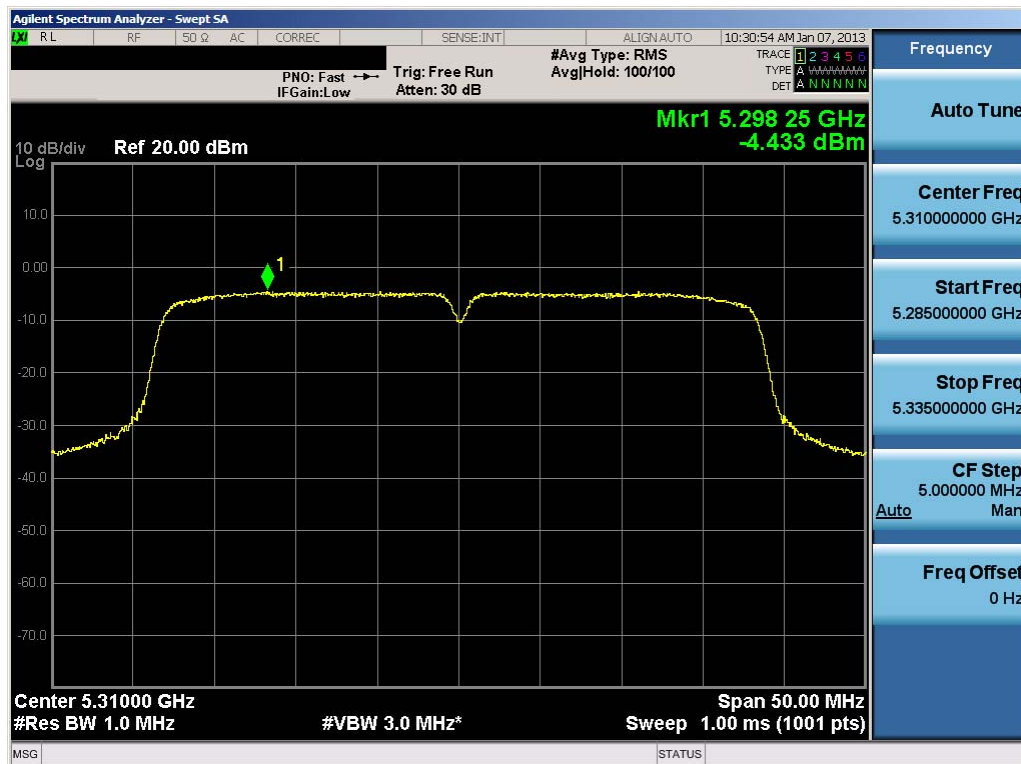


Plot 6-39. Peak Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 2) – Ch. 64)

FCC ID: A3LGTI8730	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1301020020.A3L	Test Dates: 1/3 - 1/8/2013	EUT Type: Portable Handset		Page 36 of 81

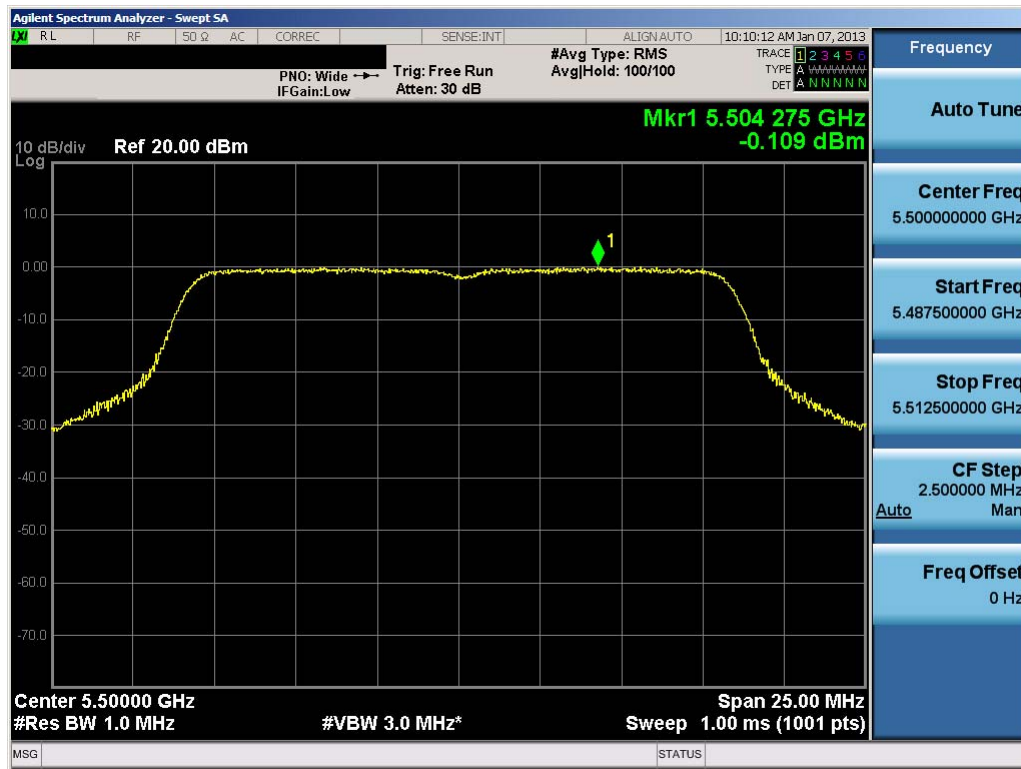


Plot 6-40. Peak Power Spectral Density Plot (40MHz BW 802.11n (UNII Band 2) – Ch. 54)

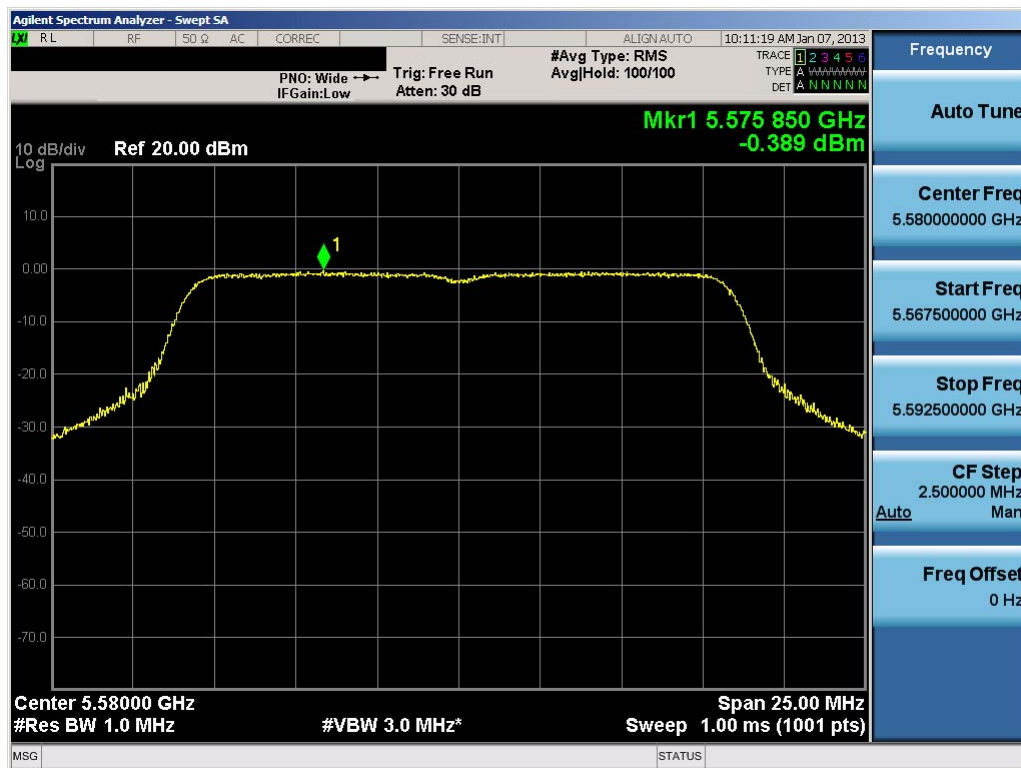


Plot 6-41. Peak Power Spectral Density Plot (40MHz BW 802.11n (UNII Band 2) – Ch. 62)

FCC ID: A3LGTI8730	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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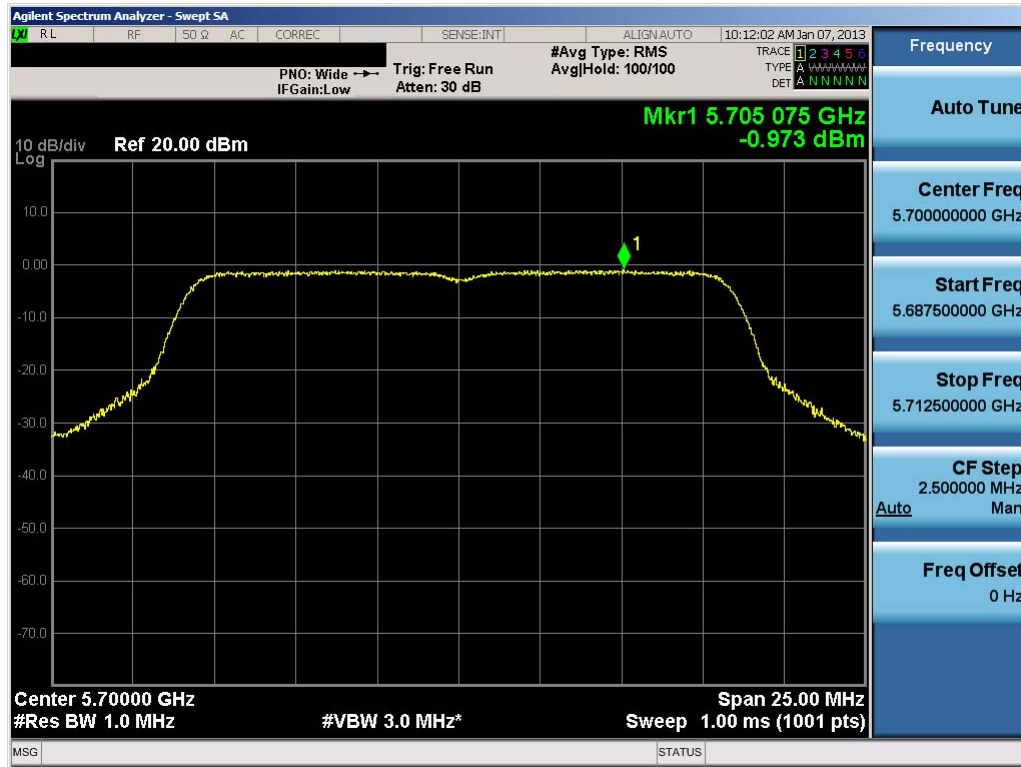


Plot 6-42. Peak Power Spectral Density Plot (802.11a (UNII Band 3) – Ch. 100)

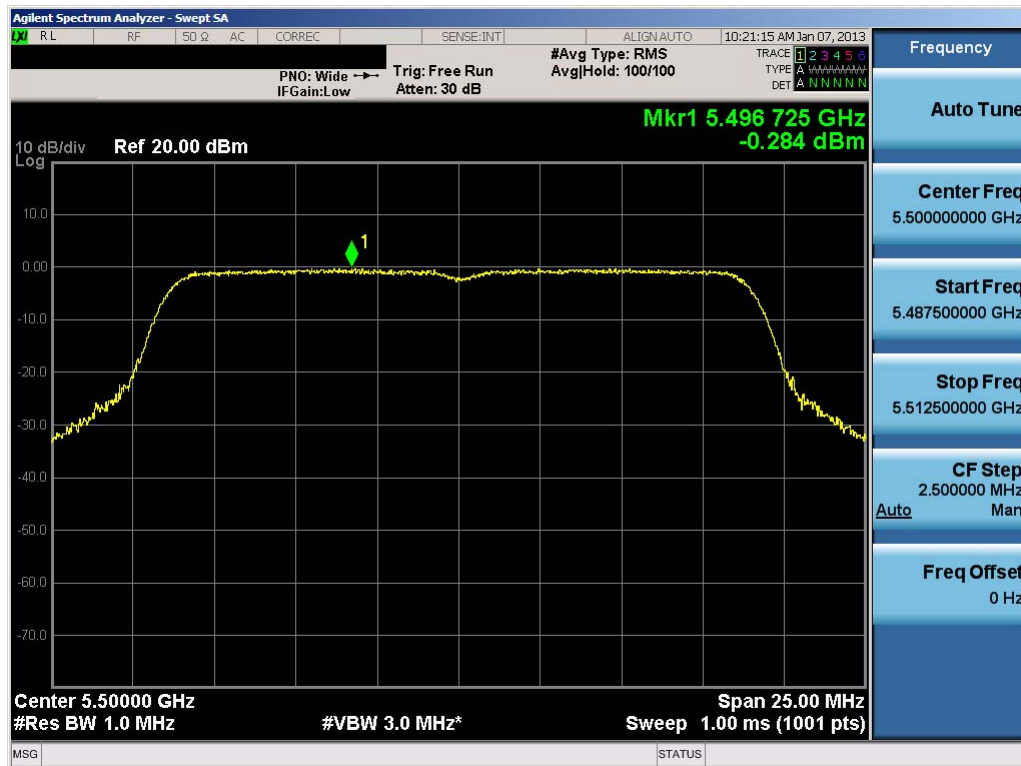


Plot 6-43. Peak Power Spectral Density Plot (802.11a (UNII Band 3) – Ch. 116)

FCC ID: A3LGTI8730	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1301020020.A3L	Test Dates: 1/3 - 1/8/2013	EUT Type: Portable Handset		Page 38 of 81

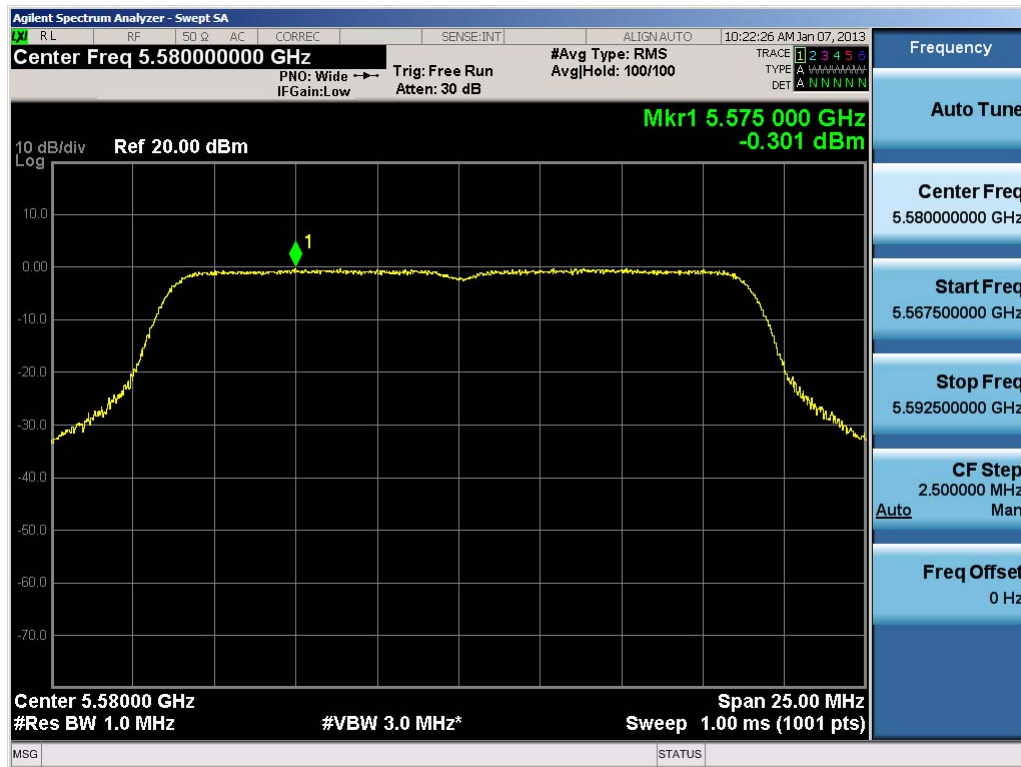


Plot 6-44. Peak Power Spectral Density Plot (802.11a (UNII Band 3) – Ch. 140)

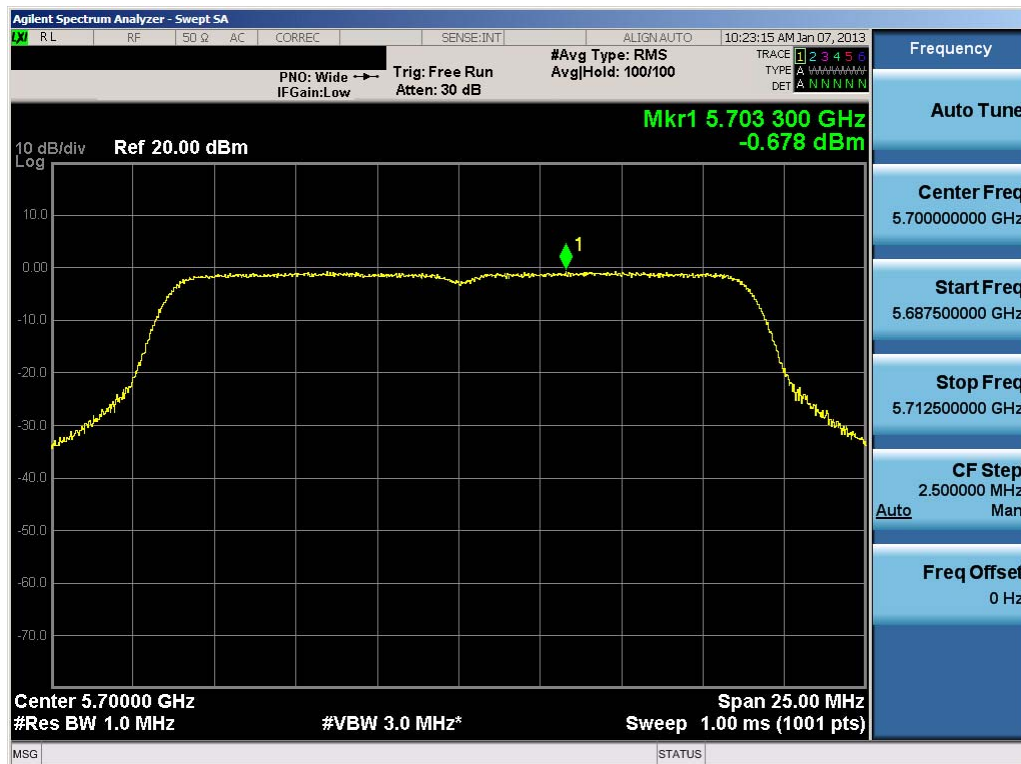


Plot 6-45. Peak Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 3) – Ch. 100)

FCC ID: A3LGTI8730	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1301020020.A3L	Test Dates: 1/3 - 1/8/2013	EUT Type: Portable Handset		Page 39 of 81

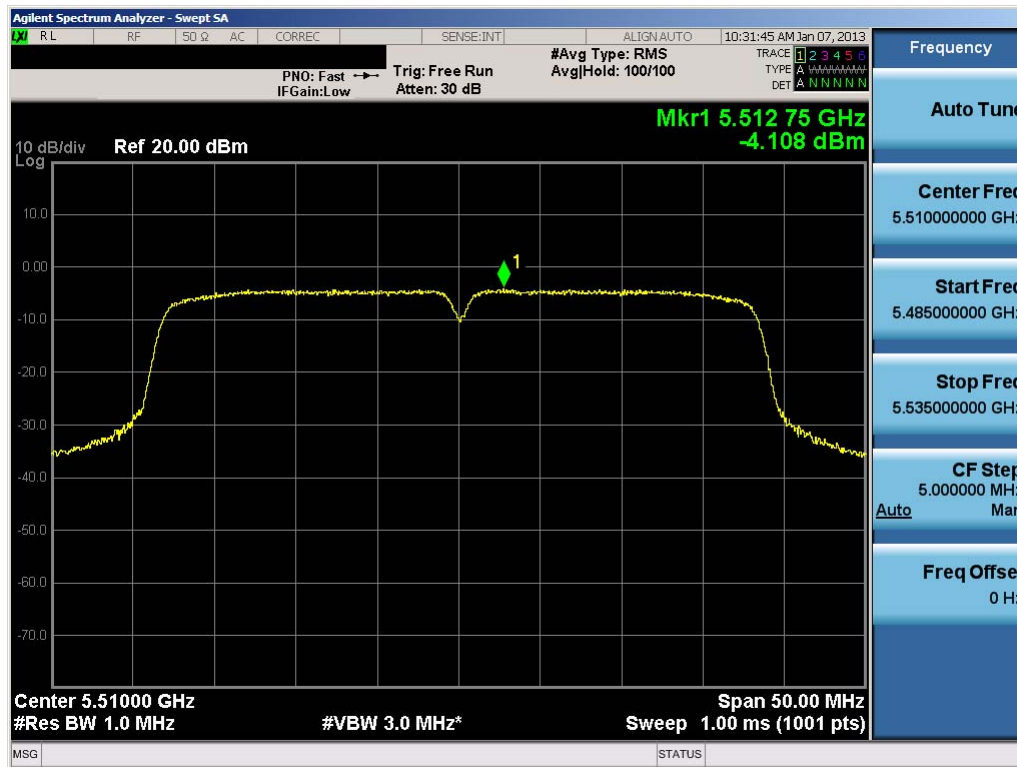


Plot 6-46. Peak Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 3) – Ch. 116)

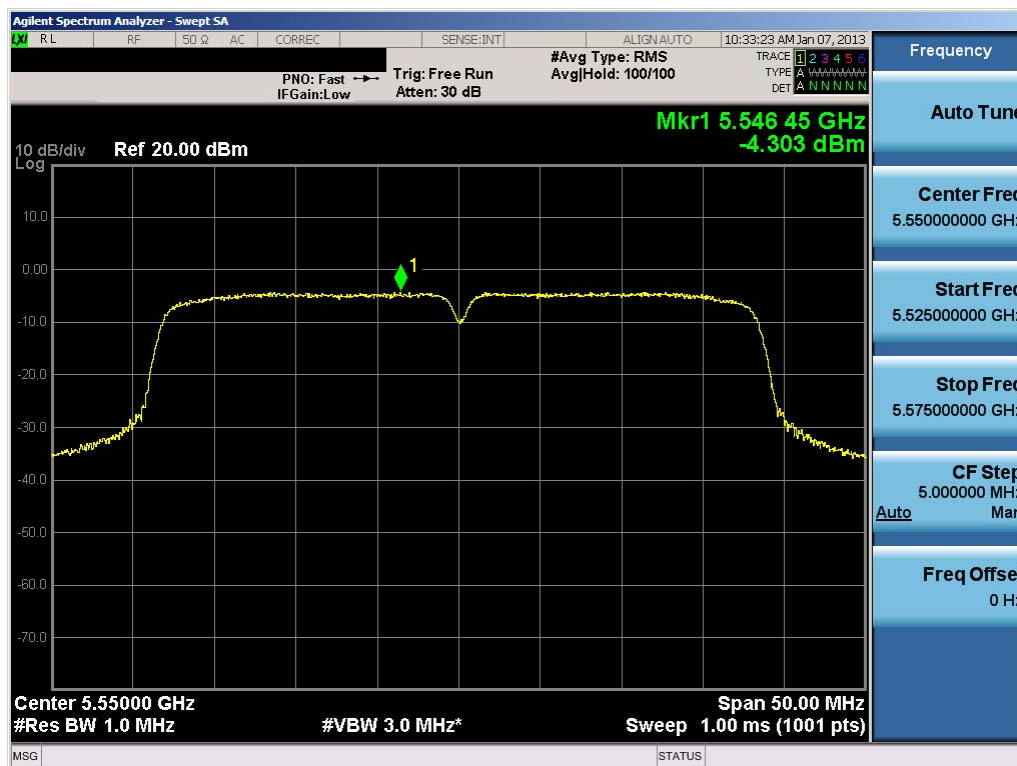


Plot 6-47. Peak Power Spectral Density Plot (20MHz BW 802.11n (UNII Band 3) – Ch. 140)

FCC ID: A3LGT18730	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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Plot 6-48. Peak Power Spectral Density Plot (40MHz BW 802.11n (UNII Band 3) – Ch. 102)



Plot 6-49. Peak Power Spectral Density Plot (40MHz BW 802.11n (UNII Band 3) – Ch. 110)

FCC ID: A3LGTI8730	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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6.5 Peak Excursion Ratio – 802.11a/n §15.407(a)(6)

Test Overview and Limit

The spectrum analyzer was connected to the antenna terminal while the EUT was operating at its maximum duty cycle (>98%), at its maximum power control level, as defined in KDB 789033, and at the appropriate frequencies. Method SA-1, as defined in KDB 789033, was used to capture the average trace used to make the peak excursion measurement.

The largest permissible difference between the modulation envelope (measured using a peak hold function) and the maximum power spectral density is 13 dBm/MHz.

Test Procedure Used

KDB 789033 v01r02 – Section F

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. Detector = peak
6. Trace mode = max hold
7. Trace was allowed to stabilize
8. The peak search function of the spectrum analyzer was used to find the peak of the spectrum. This level was compared to the peak power density level found from the previous section to determine the peak excursion.

Test Setup

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

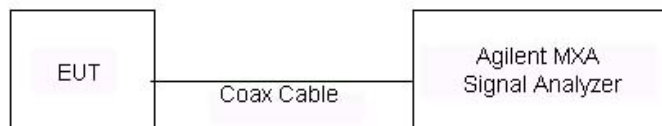
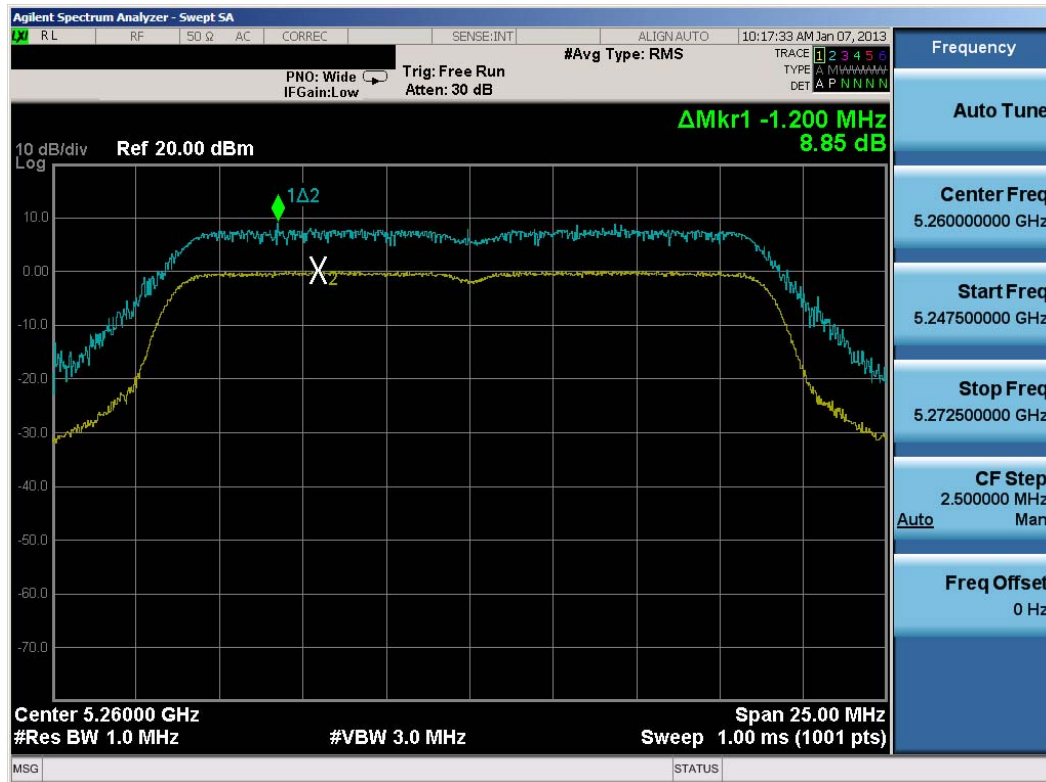


Figure 6-4. Test Instrument & Measurement Setup

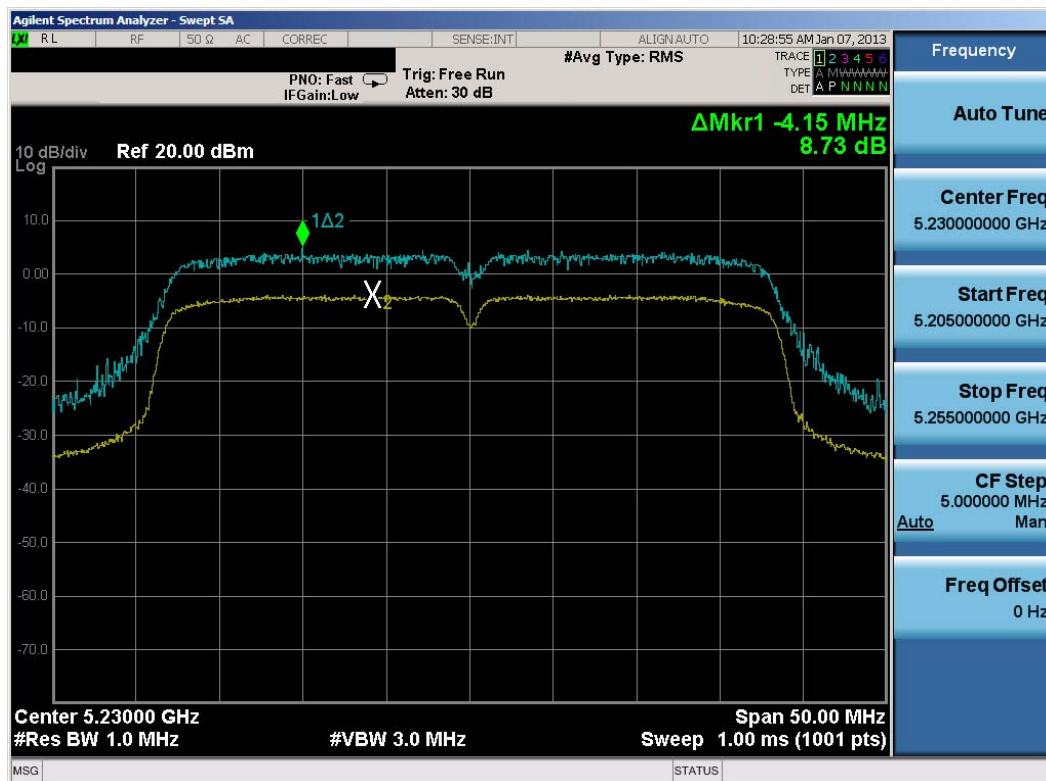
Test Notes

1. Only the worst case modulation mode on a single channel among all bands is reported since that is sufficient to demonstrate compliance to the peak excursion requirement per KDB 789033 v01r02.

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Plot 6-52. Peak Excursion Ratio Plot (20MHz BW 802.11n)



Plot 6-53. Peak Excursion Ratio Plot (40MHz BW 802.11n)

FCC ID: A3LGTI8730	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1301020020.A3L	Test Dates: 1/3 - 1/8/2013	EUT Type: Portable Handset		Page 45 of 81

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: 3.8 VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.80	+ 20 (Ref)	5,179,999,993	-7	-0.00000014
100 %		- 30	5,180,000,009	9	0.00000017
100 %		- 20	5,180,000,016	16	0.00000031
100 %		- 10	5,179,999,996	-4	-0.00000008
100 %		0	5,180,000,009	9	0.00000017
100 %		+ 10	5,180,000,010	10	0.00000019
100 %		+ 20	5,180,000,006	6	0.00000012
100 %		+ 30	5,180,000,005	5	0.00000010
100 %		+ 40	5,180,000,011	11	0.00000021
100 %		+ 50	5,180,000,003	3	0.00000006
115 %	4.37	+ 20	5,180,000,013	13	0.00000025
BATT. ENDPOINT	3.43	+ 20	5,179,999,994	-6	-0.00000012

Table 6-8. 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.

FCC ID: A3LGTI8730		FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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Frequency Stability (Cont'd)

§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: 3.8 VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.80	+ 20 (Ref)	5,260,000,005	5	0.00000010
100 %		- 30	5,260,000,002	2	0.00000004
100 %		- 20	5,260,000,007	7	0.00000013
100 %		- 10	5,260,000,016	16	0.00000030
100 %		0	5,259,999,997	-3	-0.00000006
100 %		+ 10	5,259,999,992	-8	-0.00000015
100 %		+ 20	5,260,000,012	12	0.00000023
100 %		+ 30	5,259,999,994	-6	-0.00000011
100 %		+ 40	5,259,999,993	-7	-0.00000013
100 %		+ 50	5,260,000,009	9	0.00000017
115 %	4.37	+ 20	5,260,000,008	8	0.00000015
BATT. ENDPOINT	3.43	+ 20	5,260,000,011	11	0.00000021

Table 6-9. Frequency Stability Measurements for UNII Band 2 (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 (Cont'd)

§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: 3.8 VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.80	+ 20 (Ref)	5,500,000,002	2	0.00000004
100 %		- 30	5,500,000,006	6	0.00000011
100 %		- 20	5,500,000,003	3	0.00000005
100 %		- 10	5,500,000,008	8	0.00000015
100 %		0	5,499,999,990	-10	-0.00000018
100 %		+ 10	5,499,999,989	-11	-0.00000020
100 %		+ 20	5,500,000,007	7	0.00000013
100 %		+ 30	5,499,999,995	-5	-0.00000009
100 %		+ 40	5,499,999,992	-8	-0.00000015
100 %		+ 50	5,499,999,994	-6	-0.00000011
115 %	4.37	+ 20	5,500,000,009	9	0.00000016
BATT. ENDPOINT	3.43	+ 20	5,499,999,992	-8	-0.00000015

Table 6-10. Frequency Stability Measurements for UNII Band 3 (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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6.7 Radiated Spurious Emission Measurements

§15.407(b)(1), (6), §15.205, §15.209; RSS-210 [A9.2]

Test Overview and Limit

All out of band radiated spurious emissions are measured with a spectrum analyzer connected to a receive antenna while the EUT is operating at its maximum duty cycle (>98%), at its maximum power control level, as defined in KDB 789033, and at the appropriate frequencies. All channels, modes (e.g. 802.11a, 802.11n (20MHz BW) and 802.11n (40MHz BW)), and modulations/data rates were investigated among all UNII bands. Only the radiated emissions of the configuration that produced the worst case emissions are reported in this section.

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table 6-11 per Section 15.209.

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

Table 6-11. Radiated Limits

Test Procedures Used

ANSI C63.10-2009

KDB 789033 v01r02 – 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. Sweep time = auto couple
7. Trace was averaged over 100 sweeps

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Peak Measurements above 1GHz

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. Span was set greater than 1MHz
3. RBW = 1MHz
4. VBW = 3MHz
5. Detector = peak
6. Sweep time = auto couple
7. Trace mode = max hold
8. Trace was allowed to stabilize

Peak Measurements below 1GHz

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

Test Setup

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

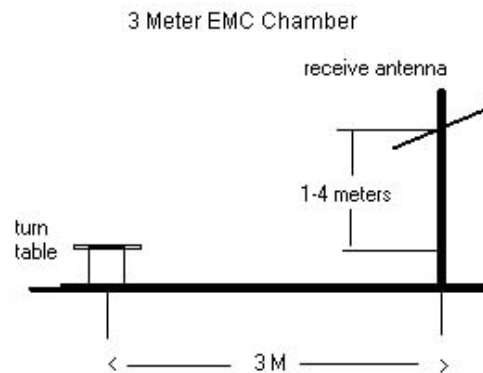


Figure 6-5. Test Instrument & Measurement Setup

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Test Notes

1. The optional test procedures for antenna port conducted measurements of unwanted emissions per the guidance of KDB 789033 v01r02 were not used to evaluate this device.
2. All spurious emissions lying in restricted bands specified in §15.205 are below the limit shown in Table 6-10. All spurious emissions that do not lie in a restricted band are subject to a peak limit of -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a "conversion" factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions of 68.2dBμV/m.
3. The antenna is manipulated through typical positions, polarity and length during the tests. The EUT is manipulated through three orthogonal planes.
4. The EUT is supplied with nominal AC voltage and/or a new/fully-recharged battery.
5. The spectrum is measured from 9kHz to the 10th harmonic of the fundamental frequency of the transmitter using CISPR quasi peak detector below 1GHz. Above 1 GHz, average and peak measurements were taken using linearly polarized horn antennas. The worst-case emissions are reported however emissions whose levels were not within 20dB of the respective limits were not reported.
6. Emissions below 18GHz were measured at a 3 meter test distance while emissions above 18GHz were measured at a 1 meter test distance with the application of a distance correction factor.
7. Average levels at -135dBm and peak levels at -125dBm represent the analyzer noise floor and signify that no emission was detected.

Sample Calculations

Determining Spurious Emissions Levels

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

Radiated Band Edge Measurement Offset

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

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Radiated Spurious Emission Measurements (Cont'd)

§15.407(b)(1) and (2), §15.205 & §15.209; RSS-210 [A9.2]

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	Pol. [H/V]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10360.00	-105.58	Peak	H	45.89	0.00	47.32	68.20	-20.88
* 15540.00	-135.00	Average	H	58.35	0.00	30.35	53.98	-23.63
* 15540.00	-125.00	Peak	H	58.35	0.00	40.35	73.98	-33.63
* 20720.00	-111.90	Average	H	44.02	-9.54	29.58	53.98	-24.40
* 20720.00	-102.23	Peak	H	44.02	-9.54	39.25	73.98	-34.73
25900.00	-125.00	Peak	H	44.85	0.00	26.85	68.20	-41.35

Table 6-12. Radiated Measurements

FCC ID: A3LGTI8730		FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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Radiated Spurious Emission Measurements (Cont'd)

§15.407(b)(1) and (2), §15.205 & §15.209; RSS-210 [A9.2]

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	Pol. [H/V]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10400.00	-105.30	Peak	H	45.98	0.00	47.68	68.20	-20.52
* 15600.00	-135.00	Average	H	58.64	0.00	30.64	53.98	-23.34
* 15600.00	-125.00	Peak	H	58.64	0.00	40.64	73.98	-33.34
* 20800.00	-111.26	Average	H	44.00	-9.54	30.19	53.98	-23.79
* 20800.00	-101.31	Peak	H	44.00	-9.54	40.14	73.98	-33.84
26000.00	-125.00	Peak	H	44.88	0.00	26.88	68.20	-41.32

Table 6-13. Radiated Measurements

FCC ID: A3LGTI8730		FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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Radiated Spurious Emission Measurements (Cont'd)

§15.407(b)(1) and (2), §15.205 & §15.209; RSS-210 [A9.2]

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	Pol. [H/V]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10480.00	-106.40	Peak	H	46.14	0.00	46.74	68.20	-21.46
* 15720.00	-135.00	Average	H	59.21	0.00	31.21	53.98	-22.77
* 15720.00	-125.00	Peak	H	59.21	0.00	41.21	73.98	-32.77
* 20960.00	-111.41	Average	H	43.99	-9.54	30.04	53.98	-23.94
* 20960.00	-102.99	Peak	H	43.99	-9.54	38.46	73.98	-35.52
26200.00	-125.00	Peak	H	44.82	0.00	26.82	68.20	-41.38

Table 6-14. Radiated Measurements

FCC ID: A3LGTI8730		FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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Radiated Spurious Emission Measurements (Cont'd)

§15.407(b)(1) and (2), §15.205 & §15.209; RSS-210 [A9.2]

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	Pol. [H/V]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10520.00	-105.81	Peak	H	46.23	0.00	47.41	68.20	-20.79
* 15780.00	-135.00	Average	H	59.53	0.00	31.53	53.98	-22.45
* 15780.00	-125.00	Peak	H	59.53	0.00	41.53	73.98	-32.45
* 21040.00	-110.42	Average	H	44.01	-9.54	31.05	53.98	-22.93
* 21040.00	-103.04	Peak	H	44.01	-9.54	38.43	73.98	-35.55
26300.00	-125.00	Peak	H	44.87	0.00	26.87	68.20	-41.33

Table 6-15. Radiated Measurements

FCC ID: A3LGTI8730		FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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Radiated Spurious Emission Measurements (Cont'd)

§15.407(b)(1) and (2), §15.205 & §15.209; RSS-210 [A9.2]

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	Pol. [H/V]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
10560.00	-105.07	Peak	H	46.32	0.00	48.26	68.20	-19.94
* 15840.00	-135.00	Average	H	59.88	0.00	31.88	53.98	-22.09
* 15840.00	-125.00	Peak	H	59.88	0.00	41.88	73.98	-32.09
* 21120.00	-110.17	Average	H	44.00	-9.54	31.29	53.98	-22.69
* 21120.00	-103.78	Peak	H	44.00	-9.54	37.68	73.98	-36.30
26400.00	-125.00	Peak	H	44.81	0.00	26.81	68.20	-41.39

Table 6-16. Radiated Measurements

FCC ID: A3LGTI8730		FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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Radiated Spurious Emission Measurements (Cont'd)

§15.407(b)(1) and (2), §15.205 & §15.209; RSS-210 [A9.2]

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	Pol. [H/V]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
*	10640.00	-106.20	Average	H	46.52	0.00	47.31	53.98	-6.66
*	10640.00	-98.43	Peak	H	46.52	0.00	55.08	73.98	-18.89
*	15960.00	-135.00	Average	H	62.27	0.00	34.27	53.98	-19.71
*	15960.00	-125.00	Peak	H	62.27	0.00	44.27	73.98	-29.71
*	21280.00	-110.37	Average	H	44.02	-9.54	31.11	53.98	-22.87
*	21280.00	-103.89	Peak	H	44.02	-9.54	37.59	73.98	-36.39
	26600.00	-125.00	Peak	H	44.70	0.00	26.70	68.20	-41.50

Table 6-17. Radiated Measurements

FCC ID: A3LGTI8730		FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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Radiated Spurious Emission Measurements (Cont'd)

§15.407(b)(1) and (2), §15.205 & §15.209; RSS-210 [A9.2]

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	Pol. [H/V]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
11000.00	-105.97	Average	H	46.98	0.00	48.01	53.98	-5.97
11000.00	-97.43	Peak	H	46.98	0.00	56.55	73.98	-17.43
16500.00	-125.00	Peak	H	60.10	0.00	42.10	68.20	-26.10
22000.00	-102.44	Peak	H	44.30	-9.54	39.32	68.20	-28.88
27500.00	-125.00	Peak	H	47.96	0.00	29.96	68.20	-38.24

Table 6-18. Radiated Measurements

FCC ID: A3LGTI8730		FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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Radiated Spurious Emission Measurements (Cont'd)

§15.407(b)(1) and (2), §15.205 & §15.209; RSS-210 [A9.2]

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	Pol. [H/V]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
11160.00	-105.95	Average	H	49.42	0.00	50.48	53.98	-3.50
11160.00	-95.11	Peak	H	49.42	0.00	61.32	73.98	-12.66
16740.00	-125.00	Peak	H	58.53	0.00	40.53	68.20	-27.67
22320.00	-109.34	Average	H	44.40	-9.54	32.52	53.98	-21.46
22320.00	-102.64	Peak	H	44.40	-9.54	39.22	73.98	-34.76
27900.00	-125.00	Peak	H	48.14	0.00	30.14	68.20	-38.06

Table 6-19. Radiated Measurements

FCC ID: A3LGTI8730		FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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Radiated Spurious Emission Measurements (Cont'd)

§15.407(b)(1) and (2), §15.205 & §15.209; RSS-210 [A9.2]

Worst Case Mode: 802.11a

Worst Case Transfer Rate: 6 Mbps

Distance of Measurements: 1 & 3 Meters

Operating Frequency: 5700MHz

Channel: 140

Frequency [MHz]	Analyzer Level [dBm]	Detector	Pol. [H/V]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
11400.00	-106.25	Average	H	47.61	0.00	48.36	53.98	-5.62
11400.00	-97.64	Peak	H	47.61	0.00	56.97	73.98	-17.01
17100.00	-125.00	Peak	H	56.08	0.00	38.08	68.20	-30.12
22800.00	-110.63	Average	H	44.45	-9.54	31.28	53.98	-22.70
22800.00	-102.28	Peak	H	44.45	-9.54	39.63	73.98	-34.35
28500.00	-125.00	Peak	H	48.28	0.00	30.28	68.20	-37.92

Table 6-20. Radiated Measurements

FCC ID: A3LGTI8730		FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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6.8 Radiated Band Edge Measurements (20MHz BW)

§15.407(b)(1) and (2), §15.205 & §15.209; RSS-210 [A9.2]

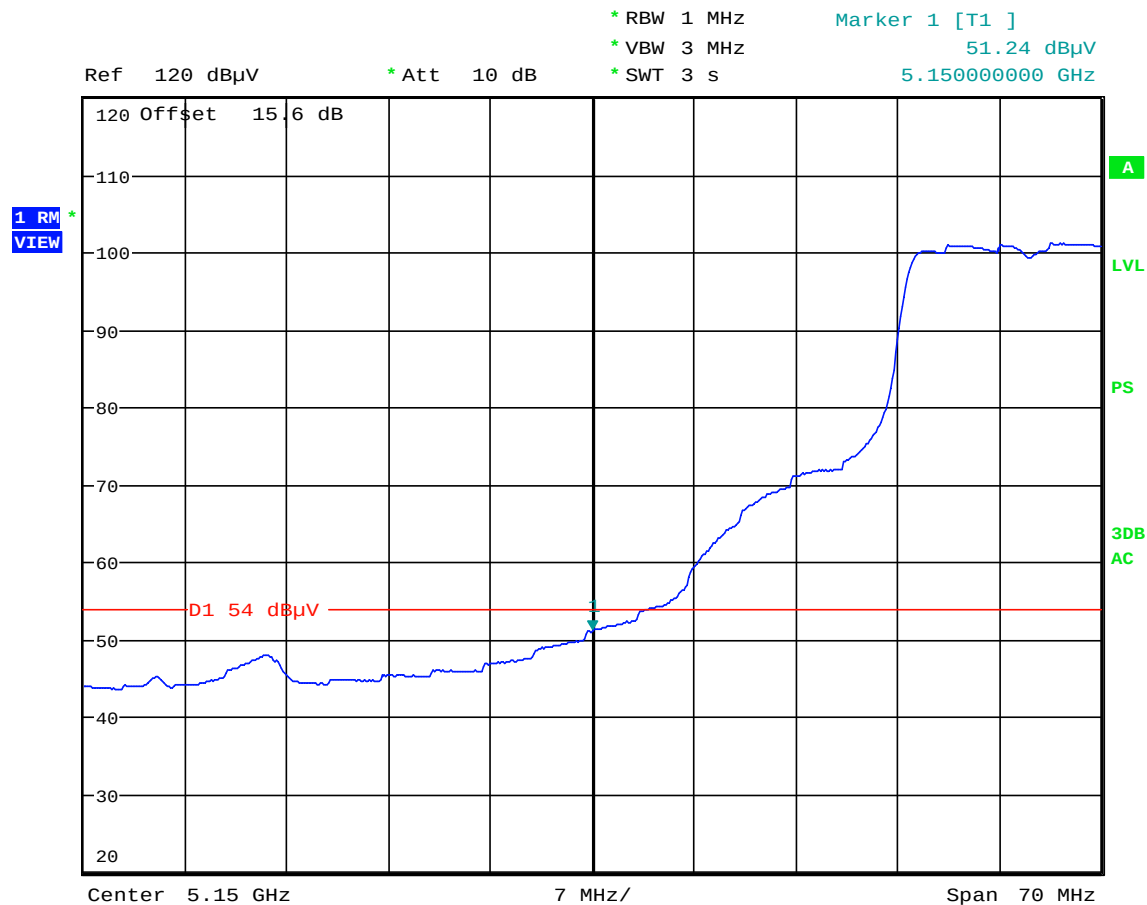
Worst Case Mode: 802.11n (20MHz)

Worst Case Transfer Rate: MCS0

Distance of Measurements: 3 Meters

Operating Frequency: 5180MHz

Channel: 36



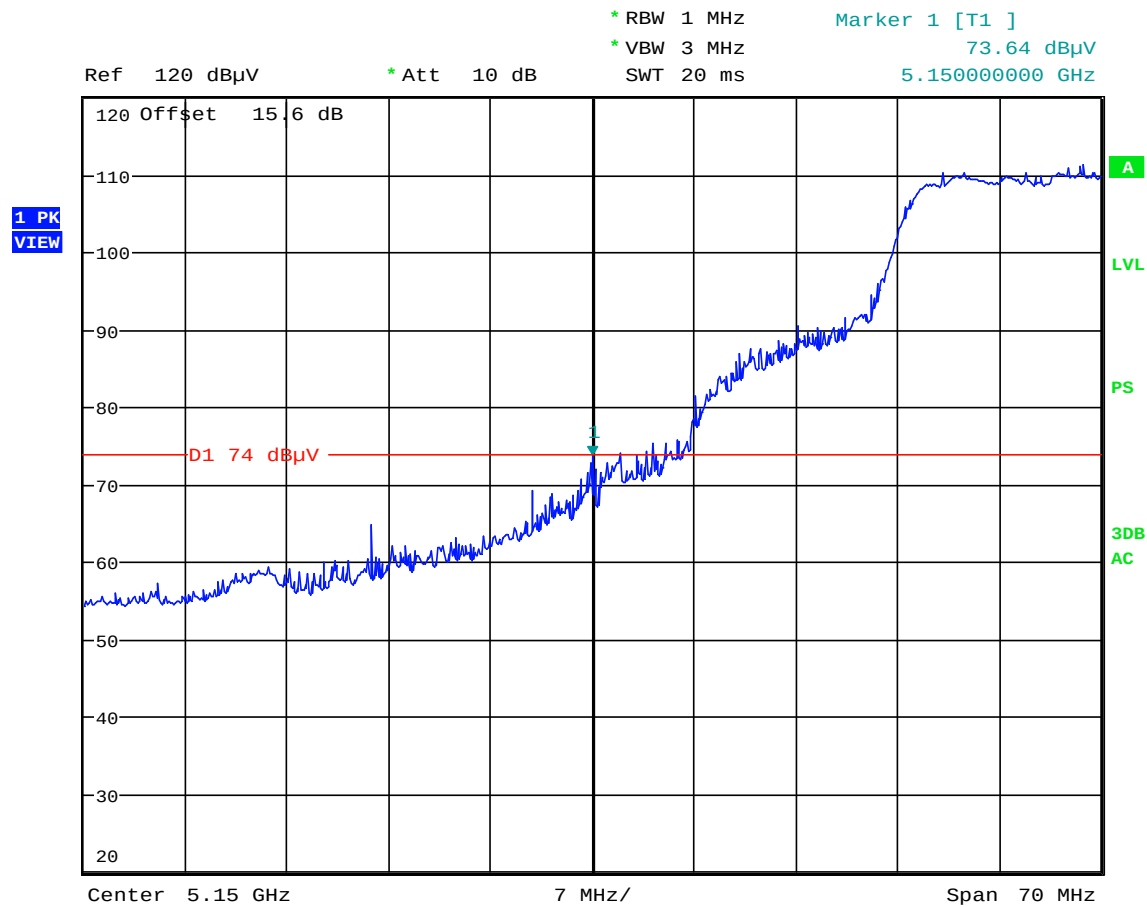
Date: 4. JAN. 2013 09:16:40

Plot 6-54. Radiated Restricted Lower Band Edge Plot (Average – UNII Band 1)

FCC ID: A3LGTI8730	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1301020020.A3L	Test Dates: 1/3 - 1/8/2013	EUT Type: Portable Handset		Page 61 of 81

Radiated Band Edge Measurements (20MHz BW) (Cont'd)

§15.407(b)(1) and (2), §15.205 & §15.209; RSS-210 [A9.2]



Date: 4.JAN.2013 09:18:17

Plot 6-55. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 1)

FCC ID: A3LGTI8730	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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Radiated Band Edge Measurements (20MHz BW) (Cont'd)

§15.407(b)(1) and (2), §15.205 & §15.209; RSS-210 [A9.2]

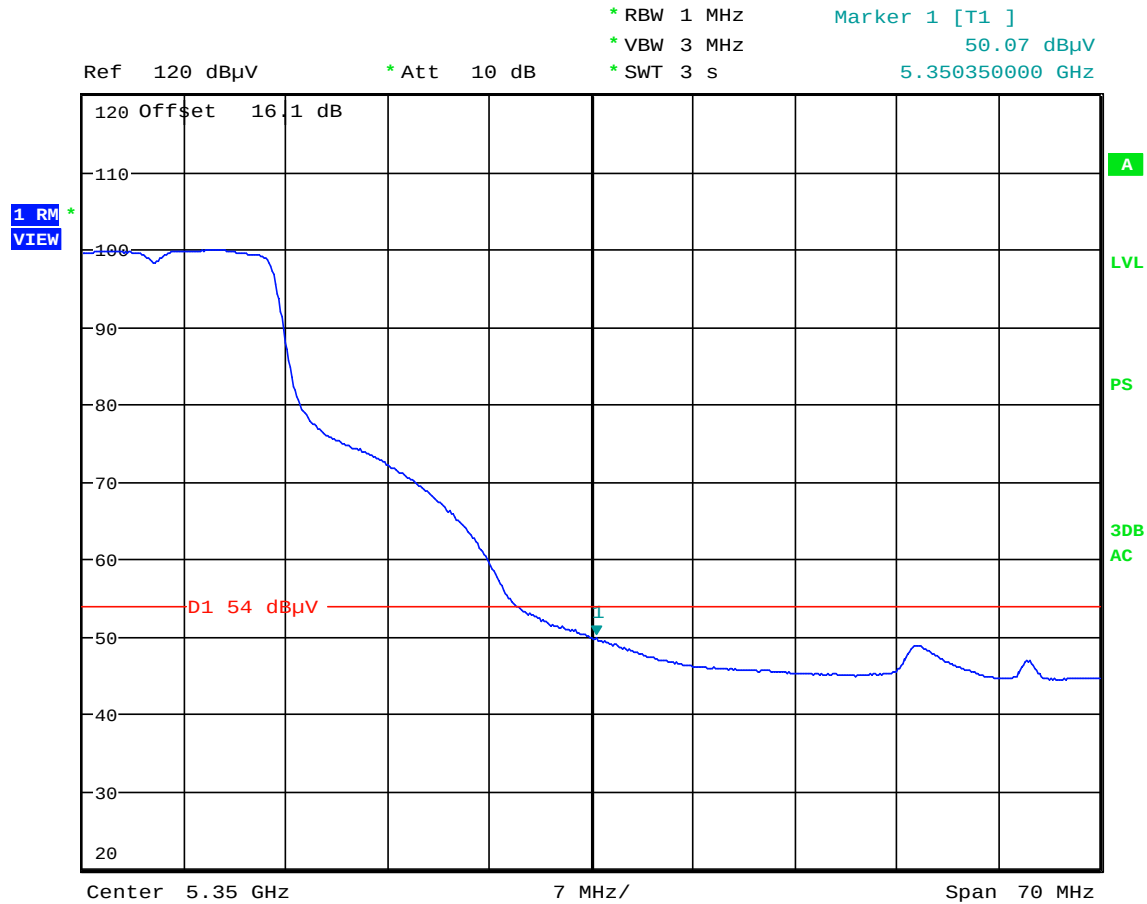
Worst Case Mode: 802.11n (20MHz)

Worst Case Transfer Rate: MCS0

Distance of Measurements: 3 Meters

Operating Frequency: 5320MHz

Channel: 64



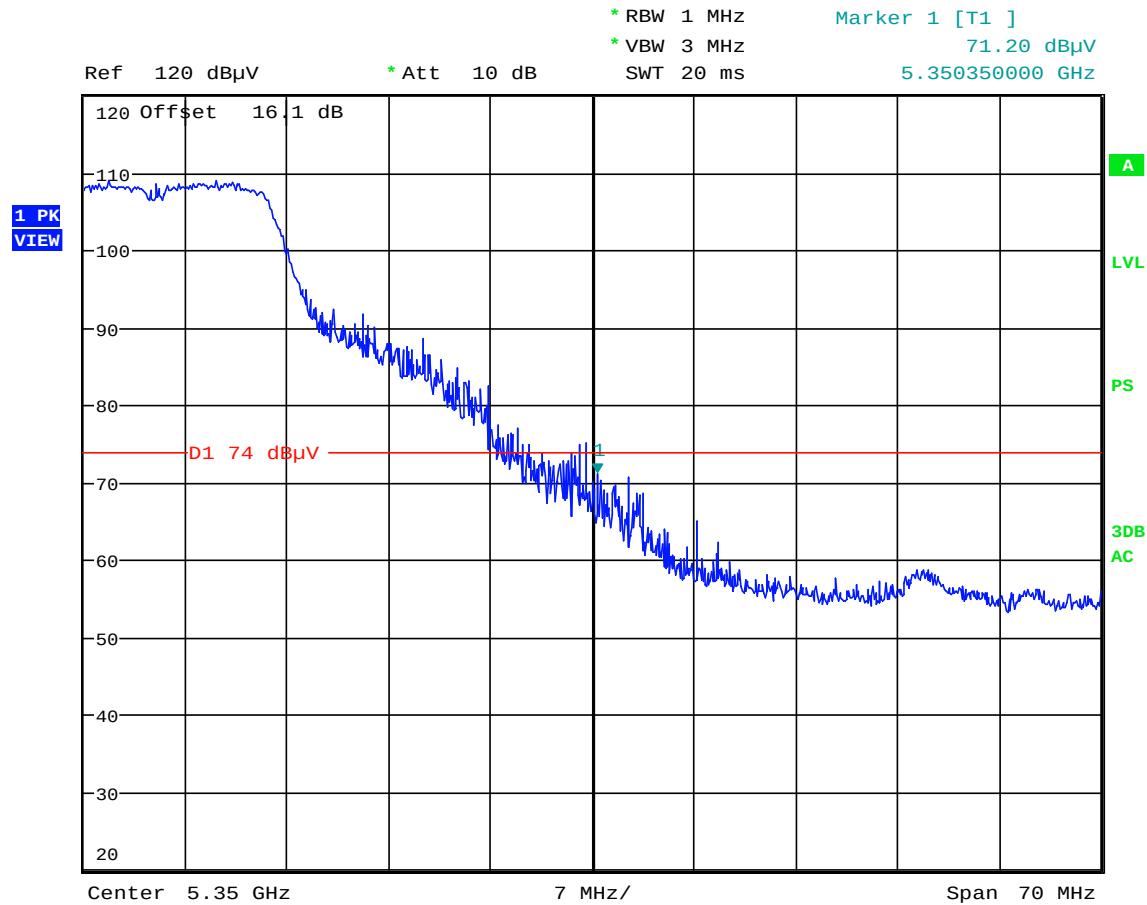
Date: 4. JAN. 2013 10:05:55

Plot 6-56. Radiated Restricted Upper Band Edge Plot (Average – UNII Band 2)

FCC ID: A3LGTI8730	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1301020020.A3L	Test Dates: 1/3 - 1/8/2013	EUT Type: Portable Handset		Page 63 of 81

Radiated Band Edge Measurements (20MHz BW) (Cont'd)

§15.407(b)(1) and (2), §15.205 & §15.209; RSS-210 [A9.2]



Date: 4.JAN.2013 10:04:50

Plot 6-57. Radiated Restricted Upper Band Edge Plot (Peak – UNII Band 2)

FCC ID: A3LGTI8730	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1301020020.A3L	Test Dates: 1/3 - 1/8/2013	EUT Type: Portable Handset		Page 64 of 81

Radiated Band Edge Measurements (20MHz BW) (Cont'd)

§15.407(b)(1) and (2), §15.205 & §15.209; RSS-210 [A9.2]

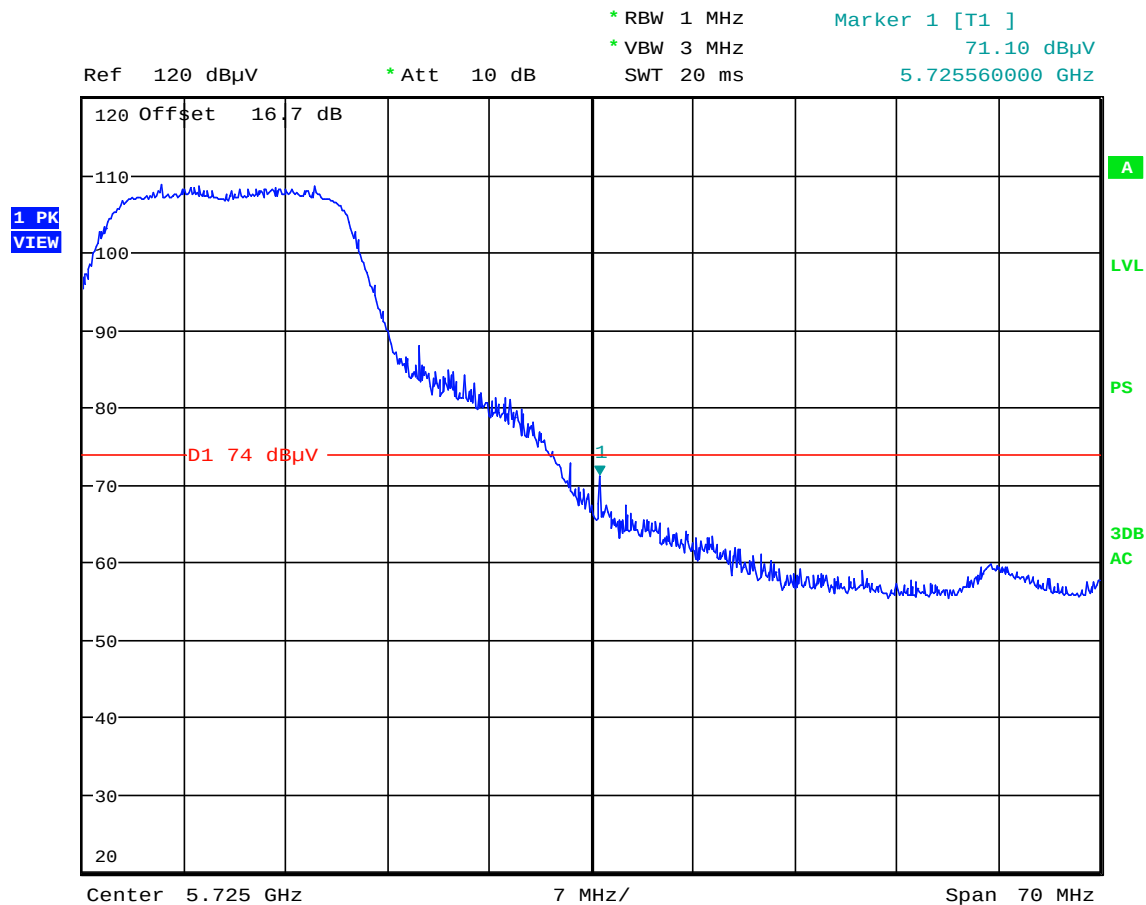
Worst Case Mode: 802.11n (20MHz)

Worst Case Transfer Rate: MCS0

Distance of Measurements: 3 Meters

Operating Frequency: 5500MHz

Channel: 100



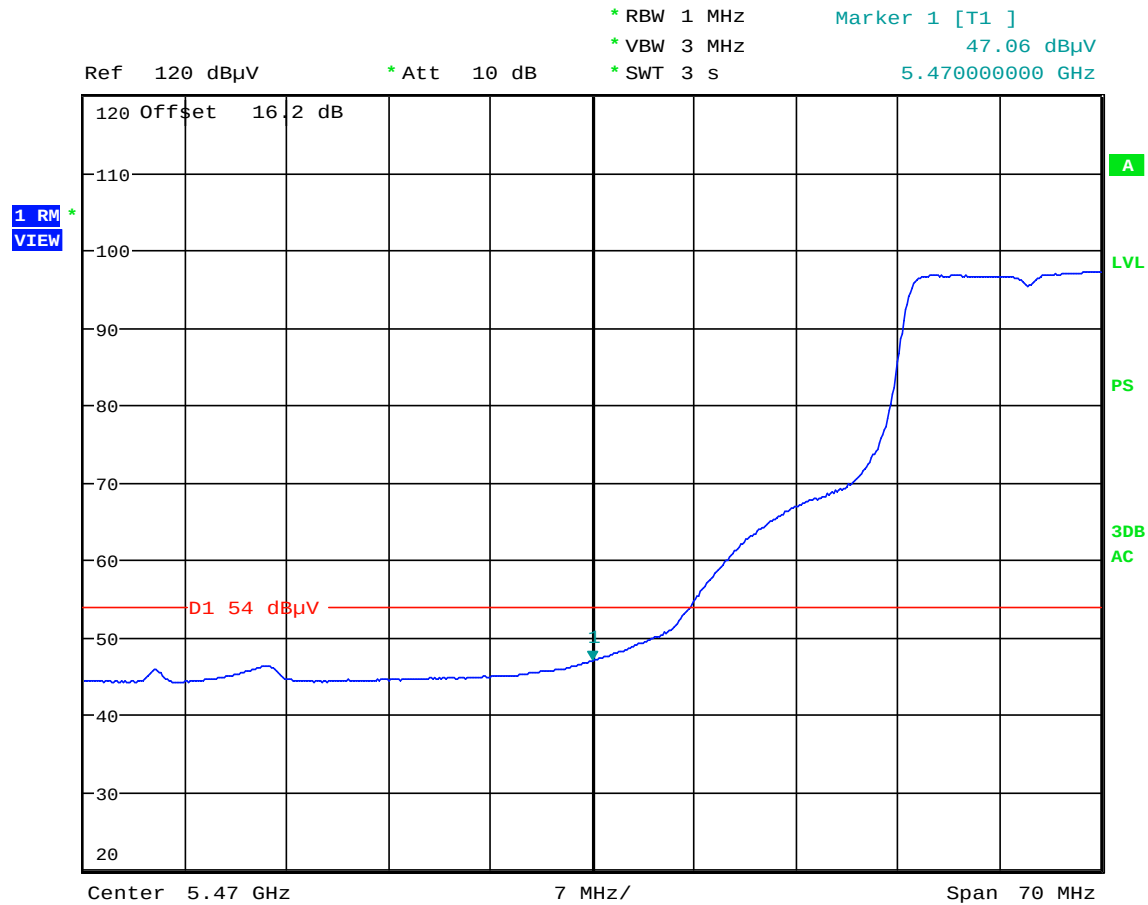
Date: 4. JAN. 2013 10:54:53

Plot 6-58. Radiated Restricted Lower Band Edge Plot (Average – UNII Band 3)

FCC ID: A3LGT18730	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1301020020.A3L	Test Dates: 1/3 - 1/8/2013	EUT Type: Portable Handset		Page 65 of 81

Radiated Band Edge Measurements (20MHz BW) (Cont'd)

§15.407(b)(1) and (2), §15.205 & §15.209; RSS-210 [A9.2]



Date: 4. JAN. 2013 10:36:46

Plot 6-59. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 3)

FCC ID: A3LGTI8730	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1301020020.A3L	Test Dates: 1/3 - 1/8/2013	EUT Type: Portable Handset		Page 66 of 81

Radiated Band Edge Measurements (20MHz BW) (Cont'd)

§15.407(b)(1) and (2), §15.205 & §15.209; RSS-210 [A9.2]

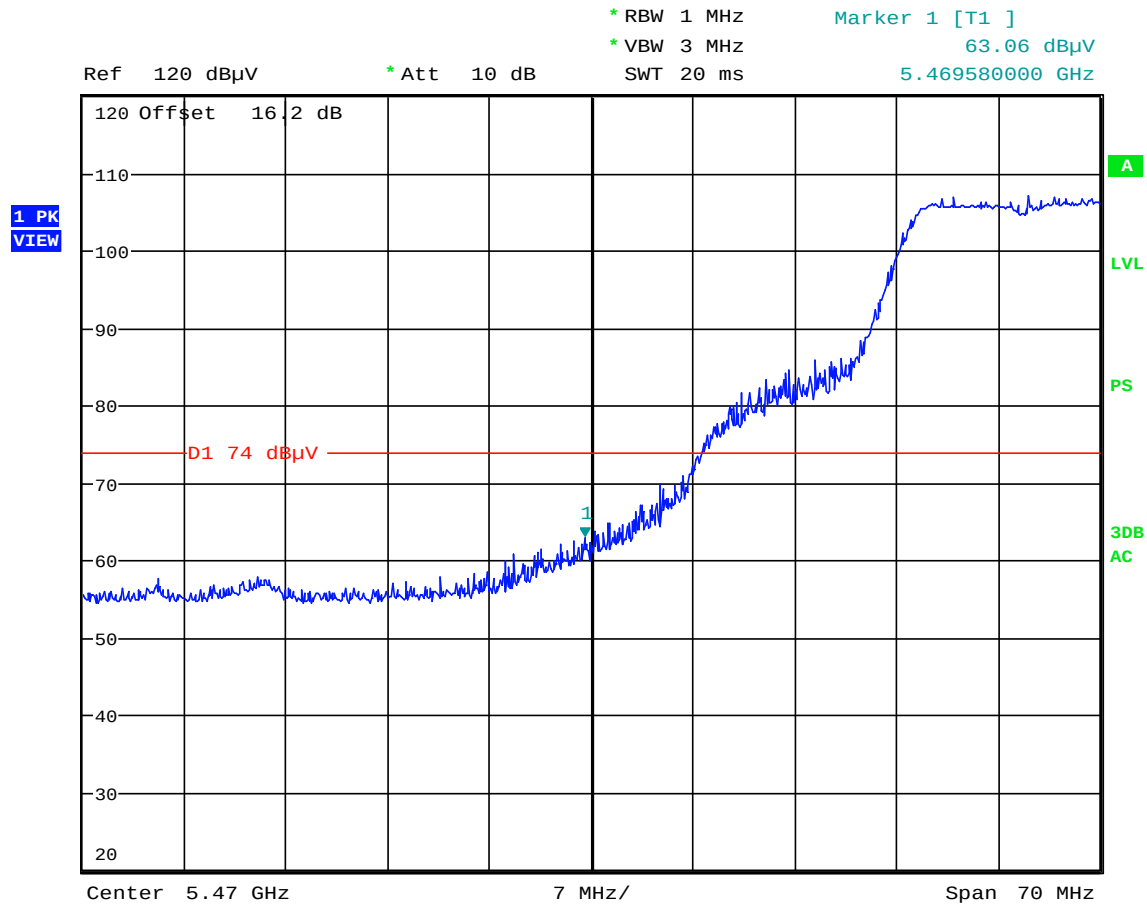
Worst Case Mode: 802.11n (20MHz)

Worst Case Transfer Rate: MCS0

Distance of Measurements: 3 Meters

Operating Frequency: 5700MHz

Channel: 140



Date: 4. JAN. 2013 10:38:08

Plot 6-60. Radiated Upper Band Edge Plot (Peak – UNII Band 3)

FCC ID: A3LGT18730	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1301020020.A3L	Test Dates: 1/3 - 1/8/2013	EUT Type: Portable Handset		Page 67 of 81

6.9 Radiated Band Edge Measurements (40MHz BW)

§15.407(b)(1) and (2), §15.205 & §15.209; RSS-210 [A9.2]

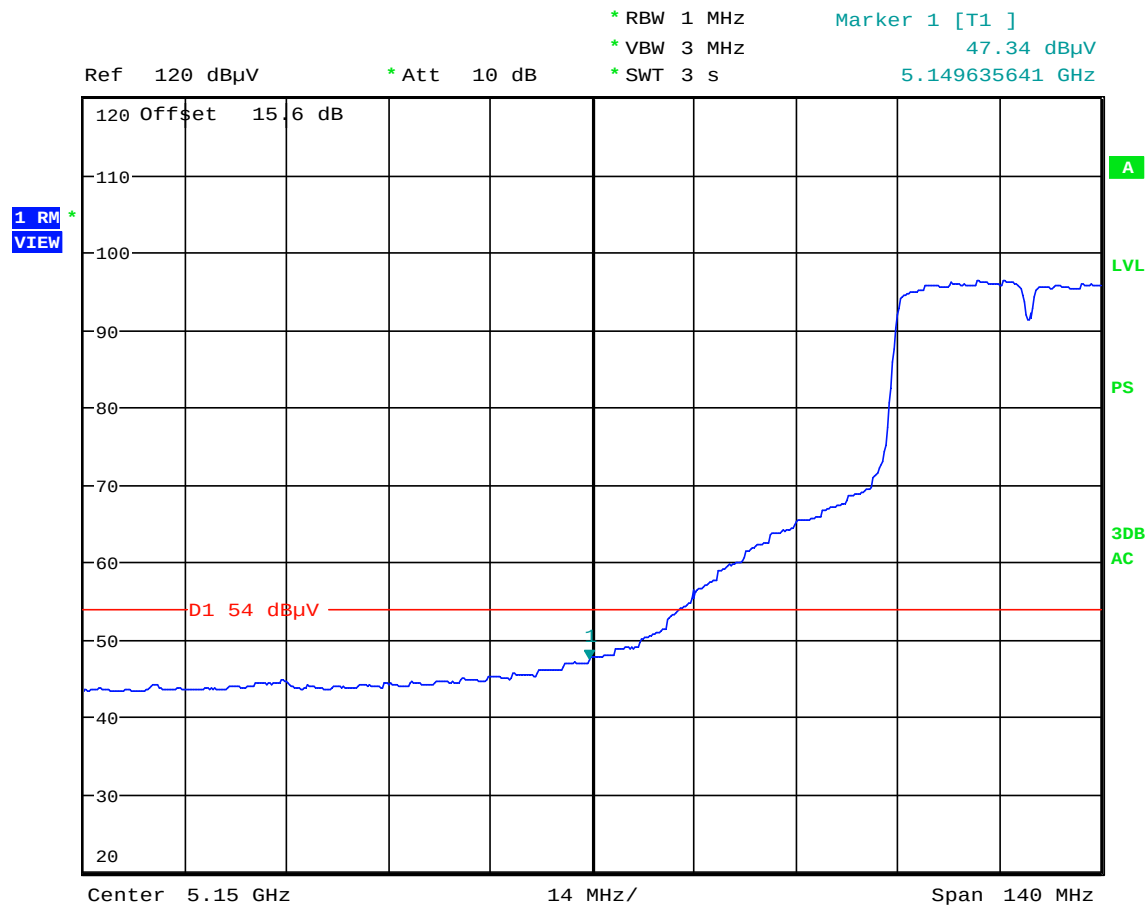
Worst Case Mode: 802.11n (40MHz)

Worst Case Transfer Rate: MCS0

Distance of Measurements: 3 Meters

Operating Frequency: 5190MHz

Channel: 38



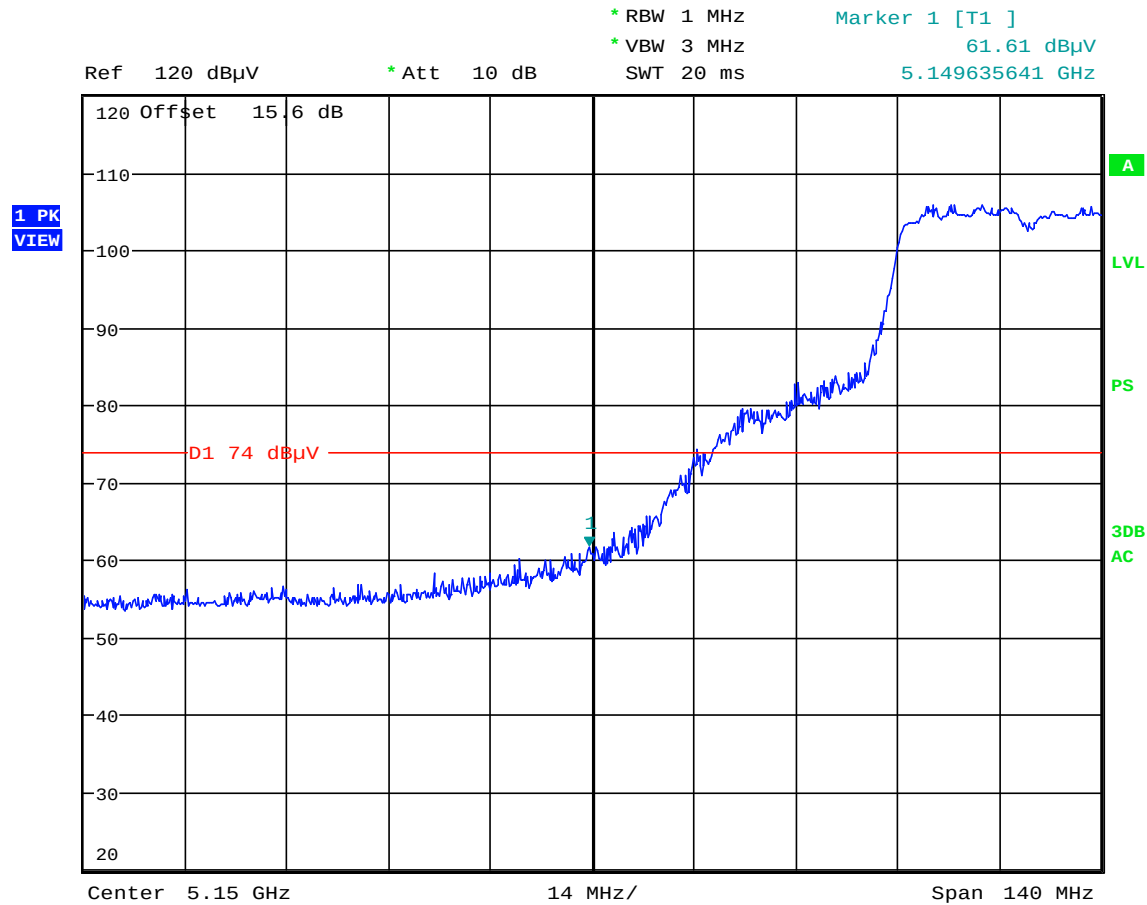
Date: 4. JAN. 2013 09:24:05

Plot 6-61. Radiated Restricted Lower Band Edge Plot (Average – UNII Band 1)

FCC ID: A3LGTI8730	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1301020020.A3L	Test Dates: 1/3 - 1/8/2013	EUT Type: Portable Handset		Page 68 of 81

Radiated Band Edge Measurements (40MHz BW) (Cont'd)

§15.407(b)(1) and (2), §15.205 & §15.209; RSS-210 [A9.2]



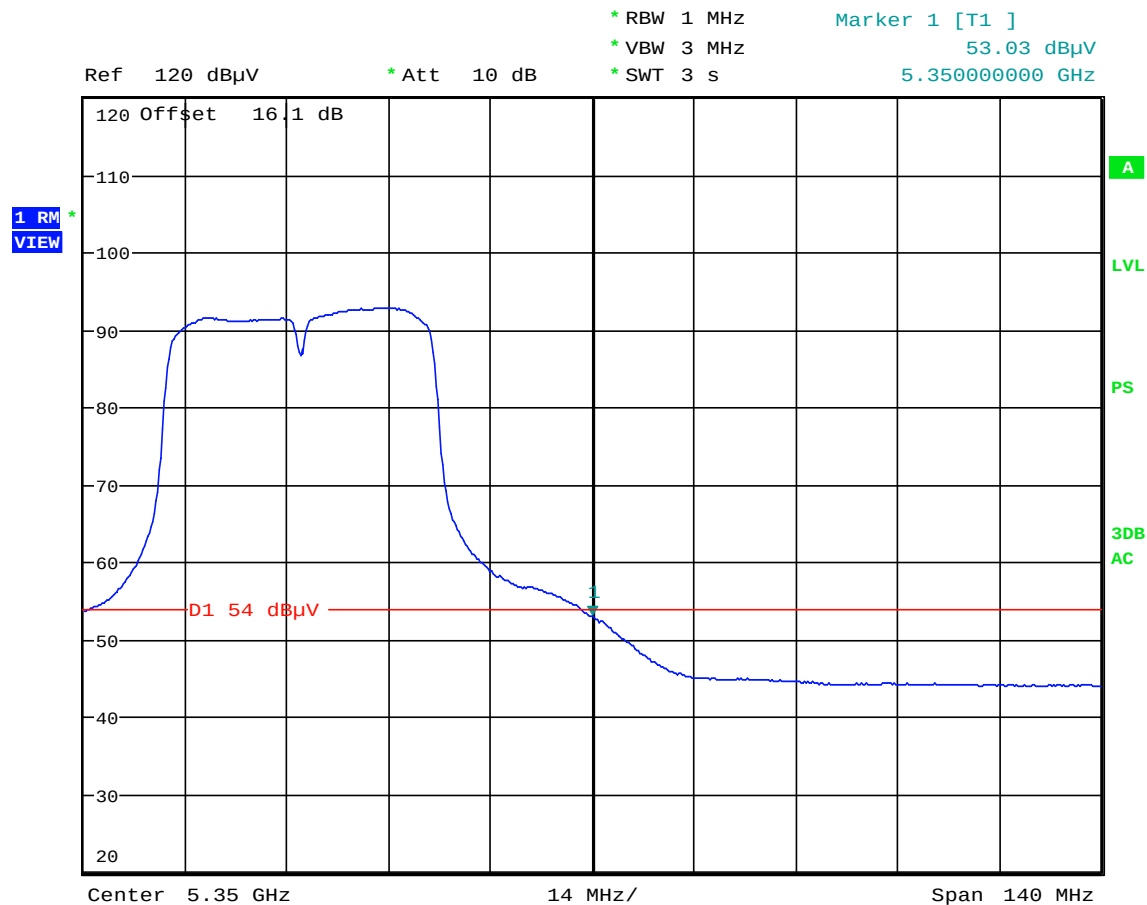
Date: 4.JAN.2013 09:22:57

Plot 6-62. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 1)

FCC ID: A3LGTI8730	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1301020020.A3L	Test Dates: 1/3 - 1/8/2013	EUT Type: Portable Handset		Page 69 of 81

Radiated Band Edge Measurements (40MHz BW) (Cont'd) §15.407(b)(1) and (2), §15.205 & §15.209; RSS-210 [A9.2]

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



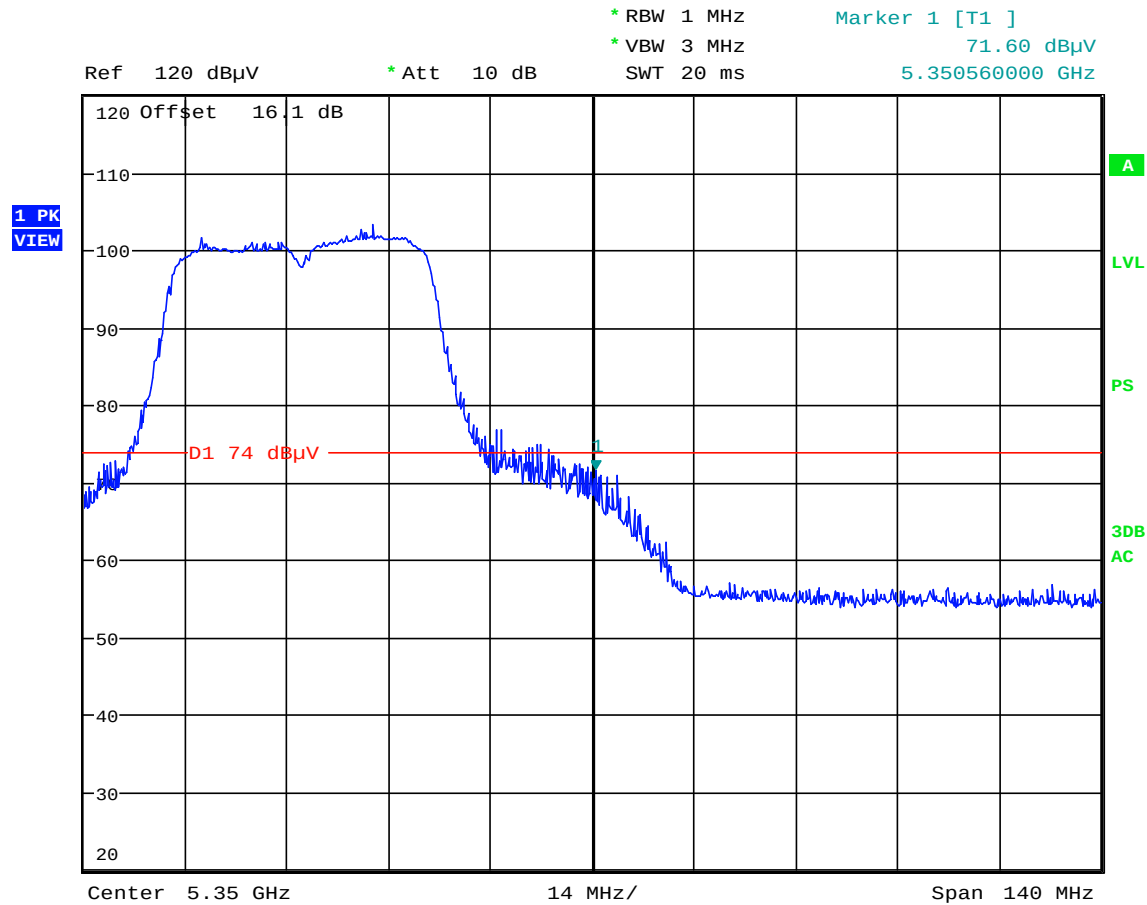
Date: 4. JAN. 2013 10:29:20

Plot 6-63. Radiated Restricted Upper Band Edge Plot (Average – UNII Band 2)

FCC ID: A3LGTI8730	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1301020020.A3L	Test Dates: 1/3 - 1/8/2013	EUT Type: Portable Handset		Page 70 of 81

Radiated Band Edge Measurements (40MHz BW) (Cont'd)

§15.407(b)(1) and (2), §15.205 & §15.209; RSS-210 [A9.2]



Date: 4.JAN.2013 10:30:23

Plot 6-64. Radiated Restricted Upper Band Edge Plot (Peak – UNII Band 2)

FCC ID: A3LGTI8730	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1301020020.A3L	Test Dates: 1/3 - 1/8/2013	EUT Type: Portable Handset		Page 71 of 81

Radiated Band Edge Measurements (40MHz BW) (Cont'd)

§15.407(b)(1) and (2), §15.205 & §15.209; RSS-210 [A9.2]

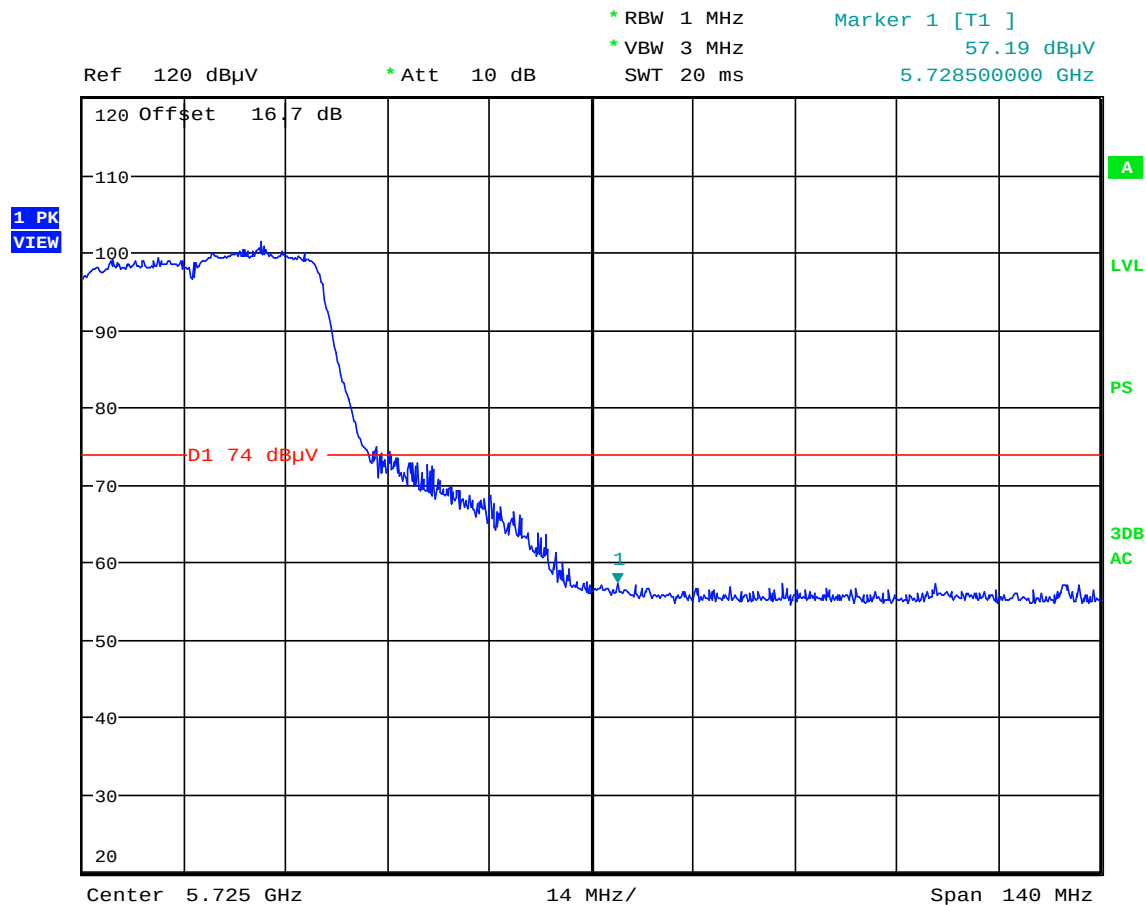
Worst Case Mode: 802.11n (40MHz)

Worst Case Transfer Rate: MCS0

Distance of Measurements: 3 Meters

Operating Frequency: 5510MHz

Channel: 102



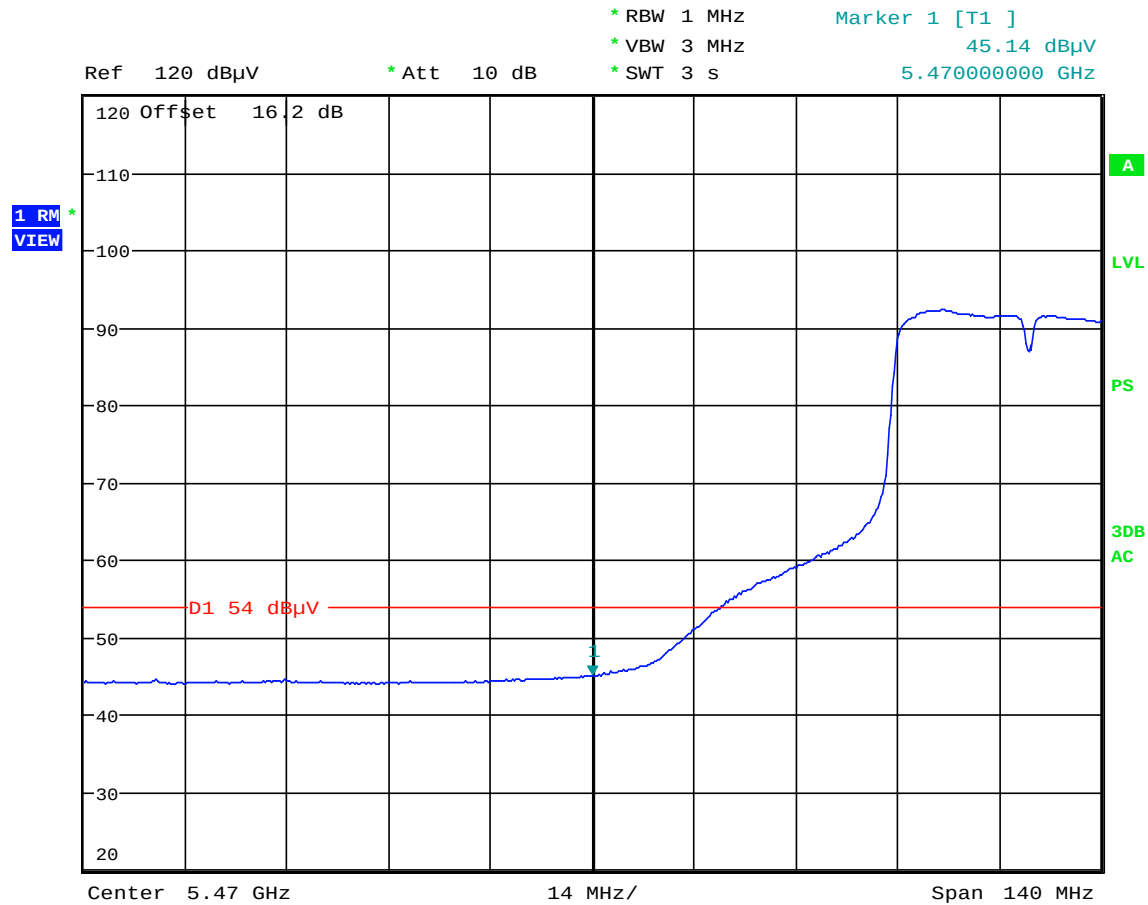
Date: 4. JAN. 2013 11:00:40

Plot 6-65. Radiated Restricted Lower Band Edge Plot (Average – UNII Band 3)

FCC ID: A3LGT18730	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1301020020.A3L	Test Dates: 1/3 - 1/8/2013	EUT Type: Portable Handset		Page 72 of 81

Radiated Band Edge Measurements (40MHz BW) (Cont'd)

§15.407(b)(1) and (2), §15.205 & §15.209; RSS-210 [A9.2]



Date: 4. JAN. 2013 10:44:29

Plot 6-66. Radiated Restricted Lower Band Edge Plot (Peak – UNII Band 3)

FCC ID: A3LGTI8730	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1301020020.A3L	Test Dates: 1/3 - 1/8/2013	EUT Type: Portable Handset		Page 73 of 81

Radiated Band Edge Measurements (40MHz BW) (Cont'd)

§15.407(b)(1) and (2), §15.205 & §15.209; RSS-210 [A9.2]

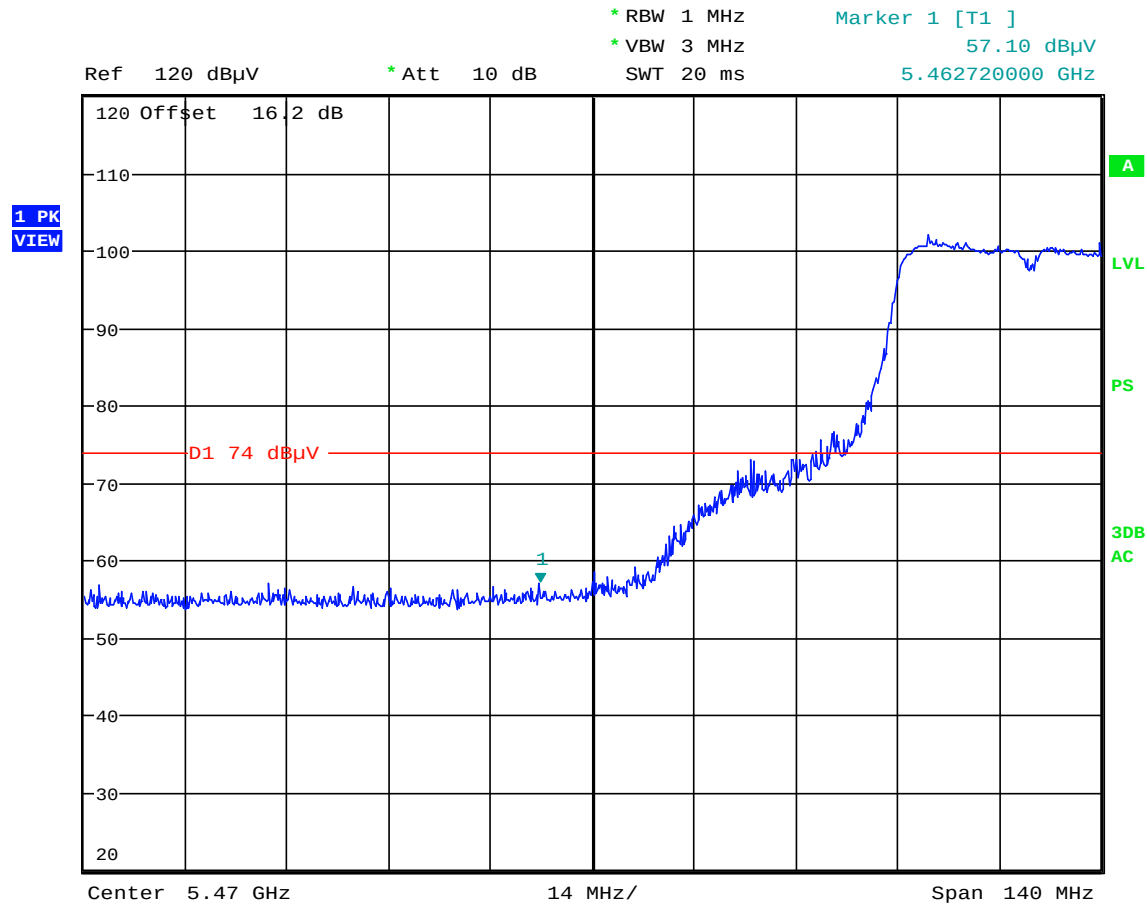
Worst Case Mode: 802.11n (40MHz)

Worst Case Transfer Rate: MCS0

Distance of Measurements: 3 Meters

Operating Frequency: 5670MHz

Channel: 134



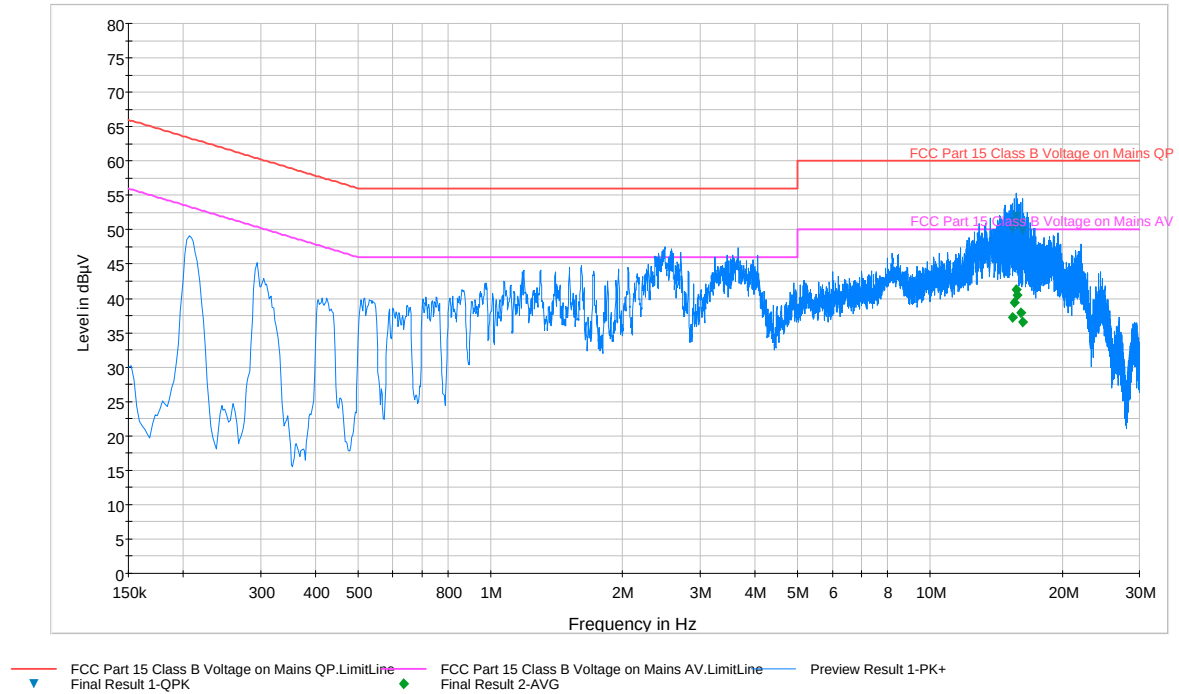
Date: 4. JAN. 2013 10:40:54

Plot 6-67. Radiated Upper Band Edge Plot (Peak – UNII Band 3)

FCC ID: A3LGTI8730	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1301020020.A3L	Test Dates: 1/3 - 1/8/2013	EUT Type: Portable Handset		Page 74 of 81

6.10 Line-Conducted Test Data

§15.207; RSS-Gen [7.2.2]



Plot 6-68. Line Conducted Plot with 802.11a UNII Band 1 (L1)

Frequency MHz	Line	Corr. dB	QuasiPeak dBμV	Limit dBμV	Margin dB	Average dBμV	Limit dBμV	Margin dB
15.387	L1	0.6	50.10	60.00	9.90	37.30	50.00	12.70
15.601	L1	0.6	51.10	60.00	8.90	39.40	50.00	10.60
15.707	L1	0.6	51.90	60.00	8.10	41.30	50.00	8.70
15.817	L1	0.6	50.50	60.00	9.50	40.50	50.00	9.50
16.136	L1	0.6	51.00	60.00	9.00	37.90	50.00	12.10
16.244	L1	0.6	49.70	60.00	10.30	36.60	50.00	13.40

Table 6-21. Line Conducted Data with 802.11a UNII Band 1 (L1)

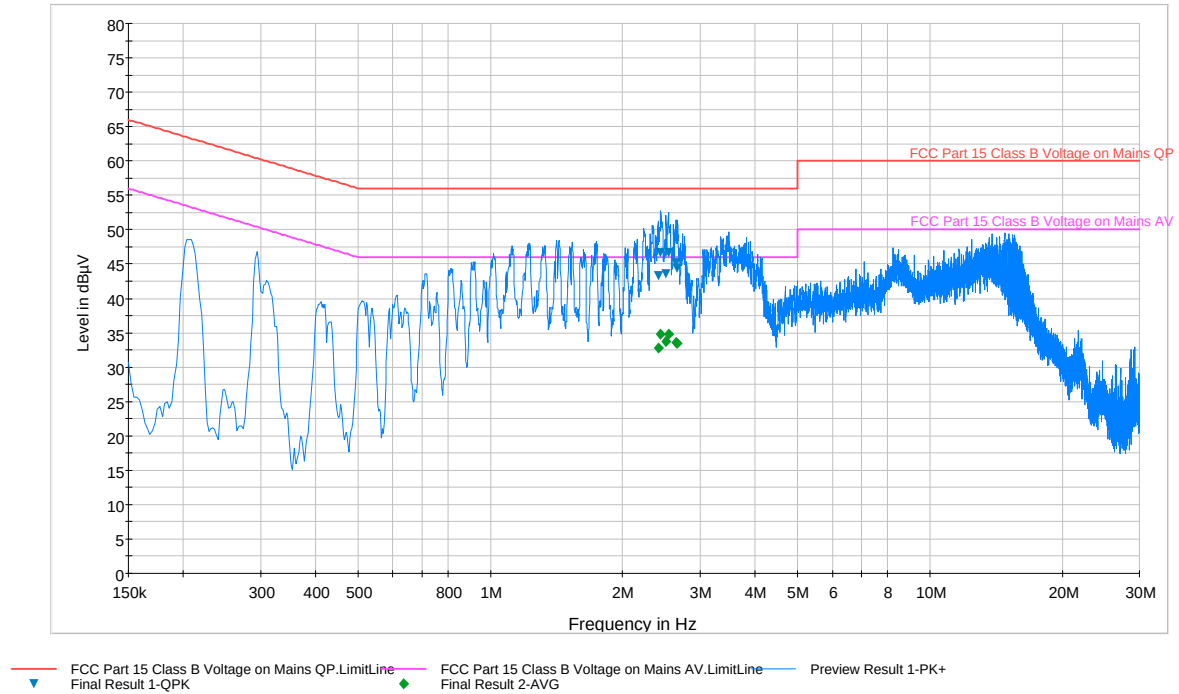
Notes:

- 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.
- The limit for Class B device(s) from 150kHz to 30MHz are specified in Section 15.207 of the Title 47 CFR.
- L1 = Phase; N = Neutral
- Corr. (dB) = Cable loss (dB) + LISN insertion factor (dB)
- QP/AV Level (dBμV) = QP/AV Analyzer/Receiver Level (dBμV) + Corr. (dB)
- Margin (dB) = QP/AVLimit (dBμV) - QP/AV Level (dBμV)
- Traces shown in plot are made using a peak detector.
- Deviations to the Specifications: None.

FCC ID: A3LGTI8730	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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Line-Conducted Test Data (Cont'd)

§15.207; RSS-Gen [7.2.2]



Plot 6-69. Line Conducted Plot with 802.11a UNII Band 1 (N)

Frequency MHz	Line	Corr. dB	QuasiPeak dBμV	Limit dBμV	Margin dB	Average dBμV	Limit dBμV	Margin dB
2.409	N	0.2	43.30	56.00	12.70	32.80	46.00	13.20
2.441	N	0.2	46.70	56.00	9.30	34.80	46.00	11.20
2.510	N	0.2	43.60	56.00	12.40	33.70	46.00	12.30
2.542	N	0.2	46.60	56.00	9.40	34.80	46.00	11.20
2.643	N	0.2	45.20	56.00	10.80	33.60	46.00	12.40
2.663	N	0.2	44.30	56.00	11.70	33.40	46.00	12.60

Table 6-22. Line Conducted Data with 802.11a UNII Band 1 (N)

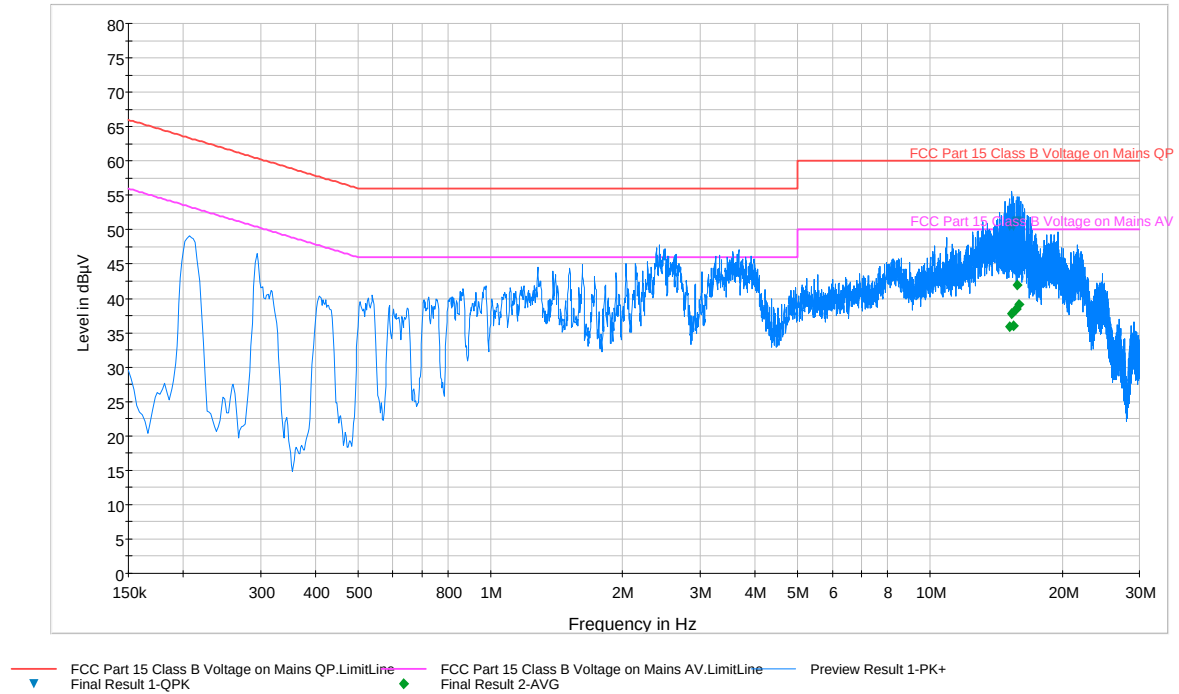
Notes:

- 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.
- The limit for Class B device(s) from 150kHz to 30MHz are specified in Section 15.207 of the Title 47 CFR.
- L1 = Phase; N = Neutral
- Corr. (dB) = Cable loss (dB) + LISN insertion factor (dB)
- QP/AV Level (dBμV) = QP/AV Analyzer/Receiver Level (dBμV) + Corr. (dB)
- Margin (dB) = QP/AVLimit (dBμV) - QP/AV Level (dBμV)
- Traces shown in plot are made using a peak detector.
- Deviations to the Specifications: None.

FCC ID: A3LGTI8730	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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Line-Conducted Test Data (Cont'd)

§15.207; RSS-Gen [7.2.2]



Plot 6-70. Line Conducted Plot with 802.11a UNII Band 2 (L1)

Frequency MHz	Line	Corr. dB	QuasiPeak dBµV	Limit dBµV	Margin dB	Average dBµV	Limit dBµV	Margin dB
15.164	L1	0.6	50.50	60.00	9.50	35.80	50.00	14.20
15.385	L1	0.6	50.70	60.00	9.30	37.80	50.00	12.20
15.488	L1	0.6	50.50	60.00	9.50	36.10	50.00	13.90
15.704	L1	0.6	51.20	60.00	8.80	38.50	50.00	11.50
15.812	L1	0.6	51.20	60.00	8.80	42.00	50.00	8.00
15.923	L1	0.6	51.10	60.00	8.90	39.10	50.00	10.90

Table 6-23. Line Conducted Data with 802.11a UNII Band 2 (L1)

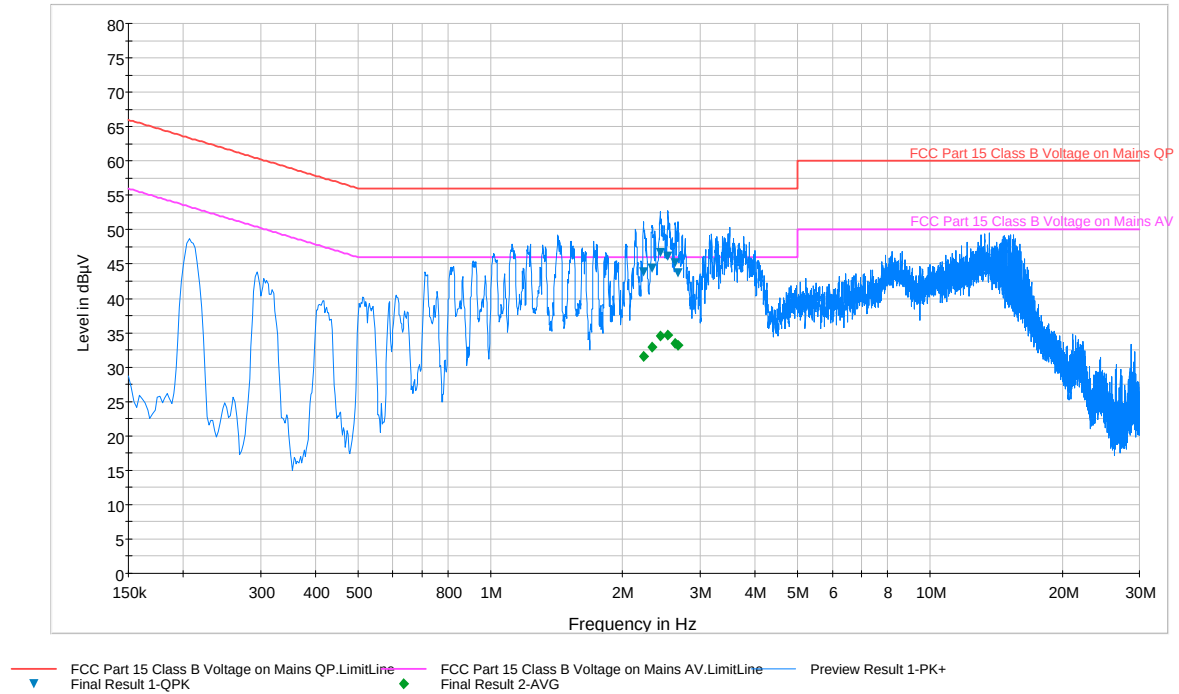
Notes:

- 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.
- The limit for Class B device(s) from 150kHz to 30MHz are specified in Section 15.207 of the Title 47 CFR.
- L1 = Phase; N = Neutral
- Corr. (dB) = Cable loss (dB) + LISN insertion factor (dB)
- QP/AV Level (dBµV) = QP/AV Analyzer/Receiver Level (dBµV) + Corr. (dB)
- Margin (dB) = QP/AVLimit (dBµV) - QP/AV Level (dBµV)
- Traces shown in plot are made using a peak detector.
- Deviations to the Specifications: None.

FCC ID: A3LGTI8730	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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Line-Conducted Test Data (Cont'd)

§15.207; RSS-Gen [7.2.2]



Plot 6-71. Line Conducted Plot with 802.11a UNII Band 2 (N)

Frequency MHz	Line	Corr. dB	QuasiPeak dBμV	Limit dBμV	Margin dB	Average dBμV	Limit dBμV	Margin dB
2.231	N	0.2	43.80	56.00	12.20	31.50	46.00	14.50
2.337	N	0.2	44.40	56.00	11.60	32.90	46.00	13.10
2.436	N	0.2	46.70	56.00	9.30	34.60	46.00	11.40
2.533	N	0.2	46.20	56.00	9.80	34.60	46.00	11.40
2.634	N	0.2	45.20	56.00	10.80	33.50	46.00	12.50
2.670	N	0.2	43.70	56.00	12.30	33.20	46.00	12.80

Table 6-24. Line Conducted Data with 802.11a UNII Band 2 (N)

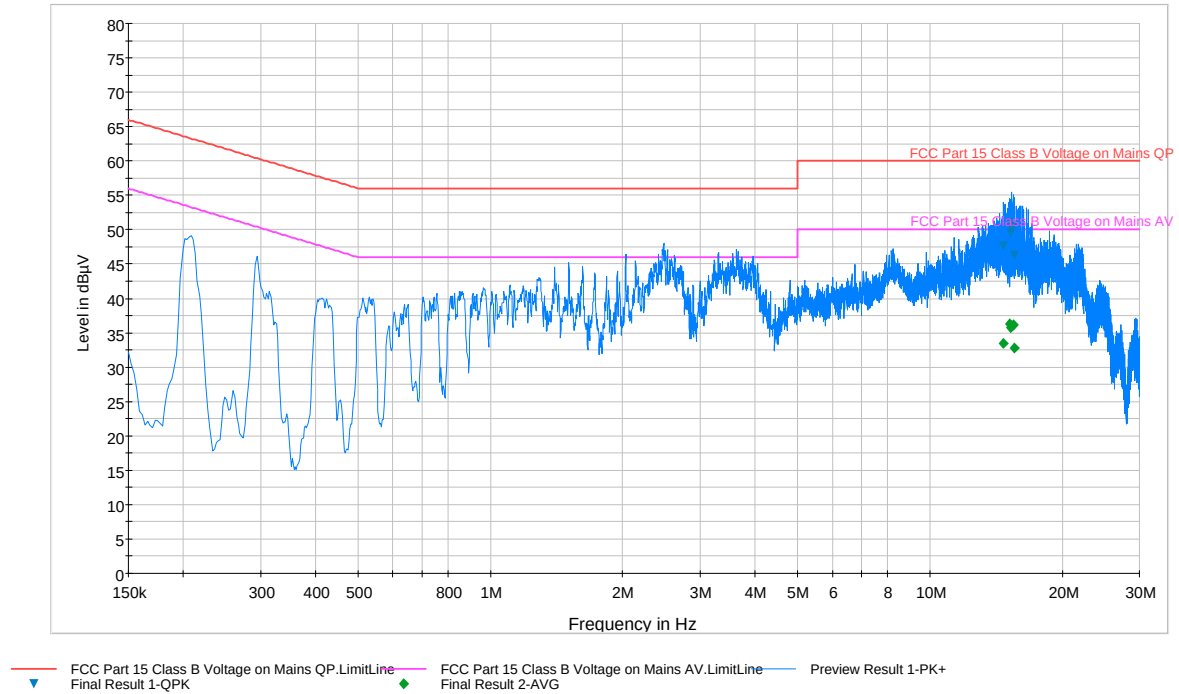
Notes:

- 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.
- The limit for Class B device(s) from 150kHz to 30MHz are specified in Section 15.207 of the Title 47 CFR.
- L1 = Phase; N = Neutral
- Corr. (dB) = Cable loss (dB) + LISN insertion factor (dB)
- QP/AV Level (dBμV) = QP/AV Analyzer/Receiver Level (dBμV) + Corr. (dB)
- Margin (dB) = QP/AVLimit (dBμV) - QP/AV Level (dBμV)
- Traces shown in plot are made using a peak detector.
- Deviations to the Specifications: None.

FCC ID: A3LGTI8730	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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Line-Conducted Test Data (Cont'd)

§15.207; RSS-Gen [7.2.2]



Plot 6-72. Line Conducted Plot with 802.11a UNII Band 3 (L1)

Frequency MHz	Line	Corr. dB	QuasiPeak dBμV	Limit dBμV	Margin dB	Average dBμV	Limit dBμV	Margin dB
14.728	L1	0.5	47.70	60.00	12.30	33.50	50.00	16.50
15.167	L1	0.6	50.90	60.00	9.10	36.30	50.00	13.70
15.272	L1	0.6	49.50	60.00	10.50	35.70	50.00	14.30
15.380	L1	0.6	50.20	60.00	9.80	36.00	50.00	14.00
15.488	L1	0.6	50.60	60.00	9.40	36.20	50.00	13.80
15.594	L1	0.6	46.30	60.00	13.70	32.80	50.00	17.20

Table 6-25. Line Conducted Plot with 802.11a UNII Band 3 (L1)

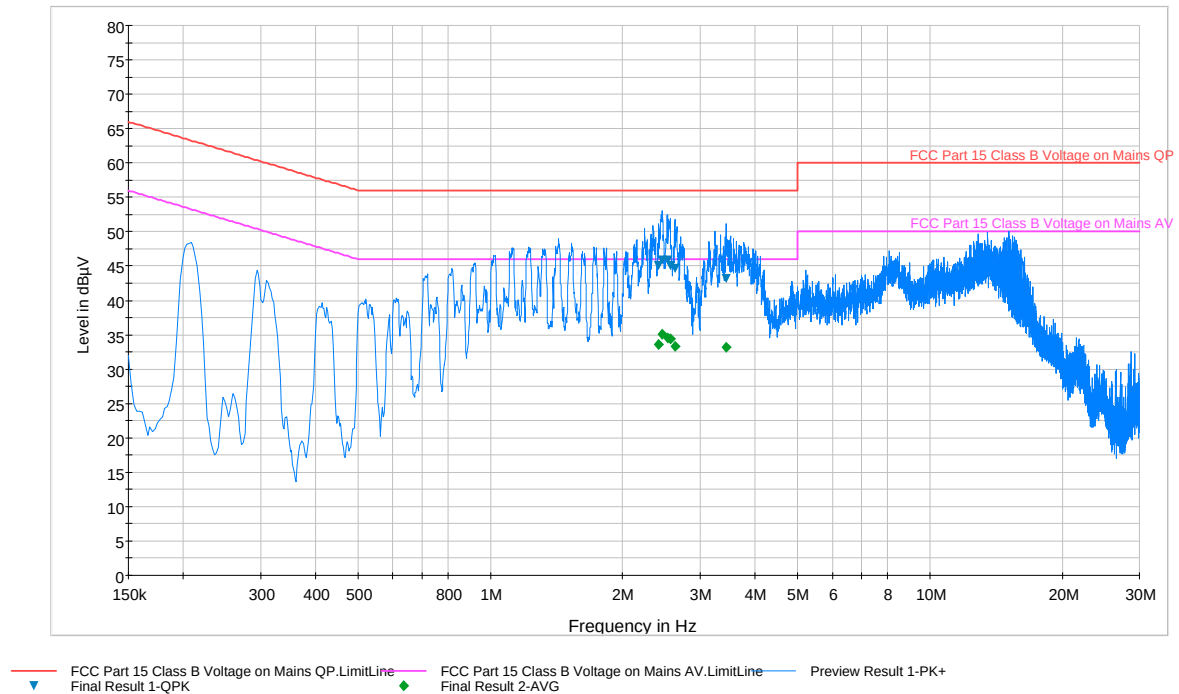
Notes:

- 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.
- The limit for Class B device(s) from 150kHz to 30MHz are specified in Section 15.207 of the Title 47 CFR.
- L1 = Phase; N = Neutral
- Corr. (dB) = Cable loss (dB) + LISN insertion factor (dB)
- QP/AV Level (dBμV) = QP/AV Analyzer/Receiver Level (dBμV) + Corr. (dB)
- Margin (dB) = QP/AVLimit (dBμV) - QP/AV Level (dBμV)
- Traces shown in plot are made using a peak detector.
- Deviations to the Specifications: None.

FCC ID: A3LGTI8730	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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Line-Conducted Test Data (Cont'd)

§15.207; RSS-Gen [7.2.2]



Plot 6-73. Line Conducted Plot with 802.11a UNII Band 3 (N)

Frequency MHz	Line	Corr. dB	QuasiPeak dBμV	Limit dBμV	Margin dB	Average dBμV	Limit dBμV	Margin dB
2.418	N	0.2	45.10	56.00	10.90	33.50	46.00	12.50
2.463	N	0.2	45.90	56.00	10.10	35.00	46.00	11.00
2.528	N	0.2	45.90	56.00	10.10	34.60	46.00	11.40
2.567	N	0.2	45.00	56.00	11.00	34.40	46.00	11.60
2.627	N	0.2	44.70	56.00	11.30	33.40	46.00	12.60
3.442	N	0.2	43.20	56.00	12.80	33.20	46.00	12.80

Table 6-26. Line Conducted Data with 802.11a UNII Band 3 (N)

Notes:

- 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.
- The limit for Class B device(s) from 150kHz to 30MHz are specified in Section 15.207 of the Title 47 CFR.
- L1 = Phase; N = Neutral
- Corr. (dB) = Cable loss (dB) + LISN insertion factor (dB)
- QP/AV Level (dBμV) = QP/AV Analyzer/Receiver Level (dBμV) + Corr. (dB)
- Margin (dB) = QP/AVLimit (dBμV) - QP/AV Level (dBμV)
- Traces shown in plot are made using a peak detector.
- Deviations to the Specifications: None.

FCC ID: A3LGTI8730	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.407 802.11a/n UNII MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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7.0 CONCLUSION

The data collected relate only the item(s) tested and show that the **Samsung Portable Handset FCC ID: A3LGTI8730** is in compliance with Part 15E of the FCC Rules.

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Test Report S/N: 0Y1301020020.A3L	Test Dates: 1/3 - 1/8/2013	EUT Type: Portable Handset		Page 81 of 81