

6.6 Conducted Emissions at the Band Edge

§15.247(d); RSS-210 [A8.5]

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, and 6.5/7.2Mbps for “n” mode. 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 measured in a 100kHz bandwidth.

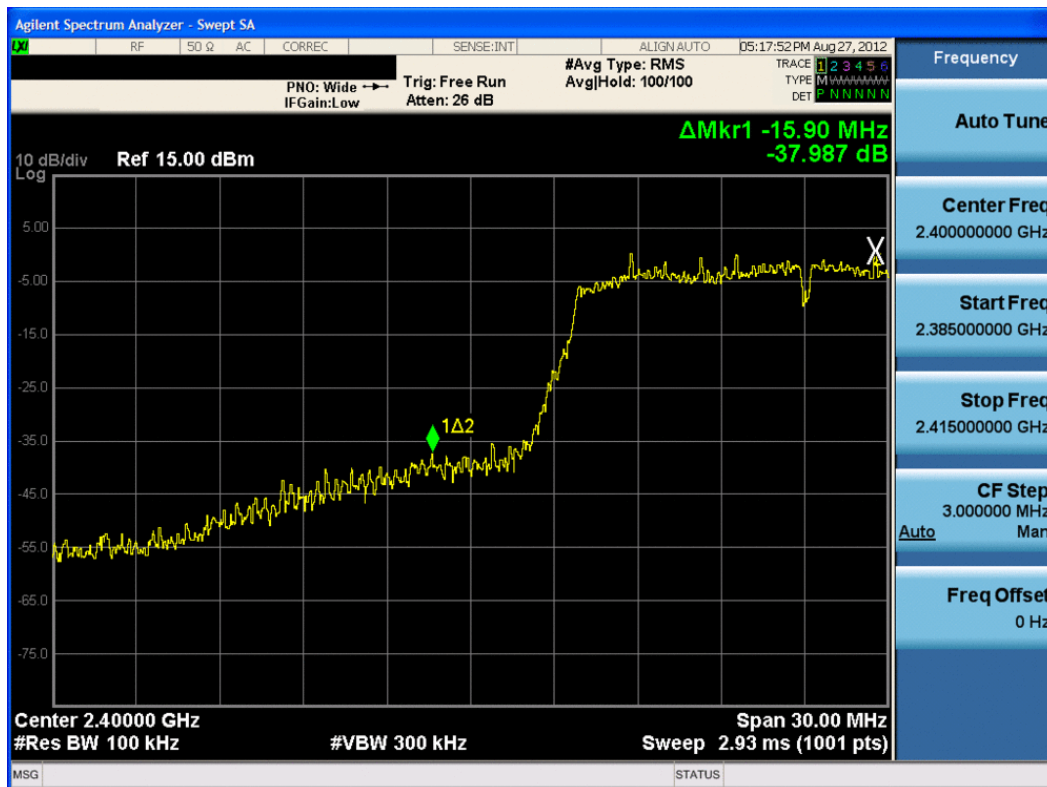


Plot 6-35. Band Edge Plot (802.11b – Ch. 1)

FCC ID: A3LEKKC120S	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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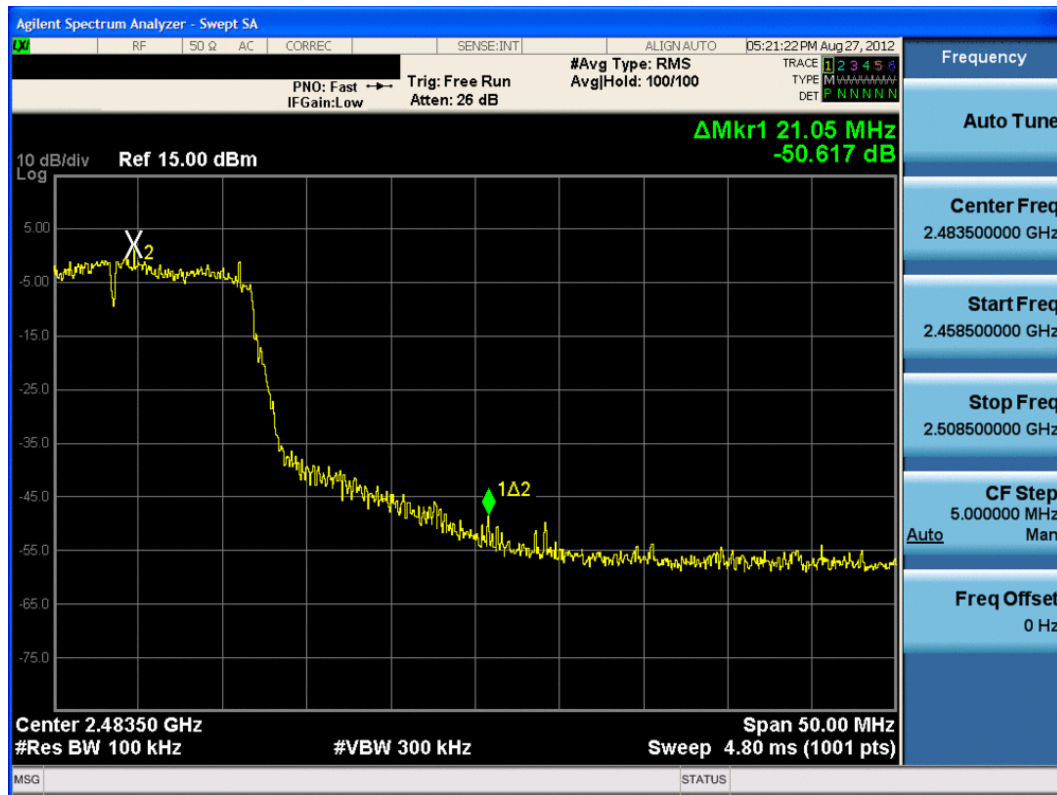


Plot 6-36. Band Edge Plot (802.11b – Ch. 11)

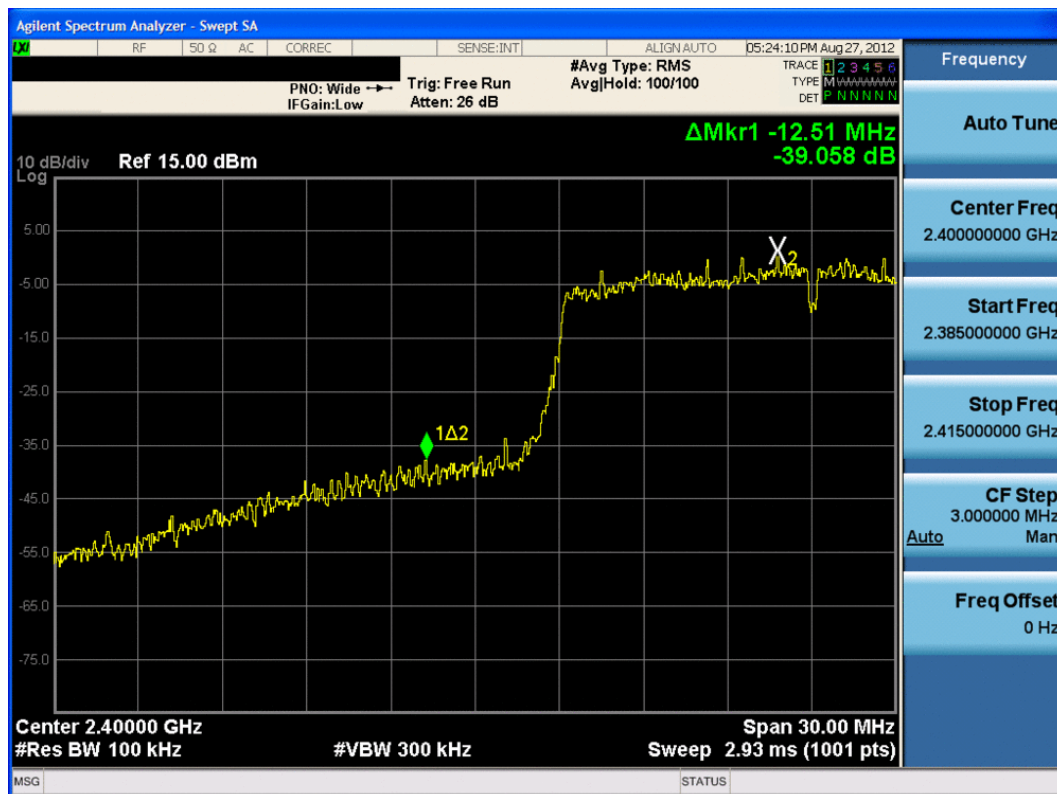


Plot 6-37. Band Edge Plot (802.11g – Ch. 1)

FCC ID: A3LEKCC120S	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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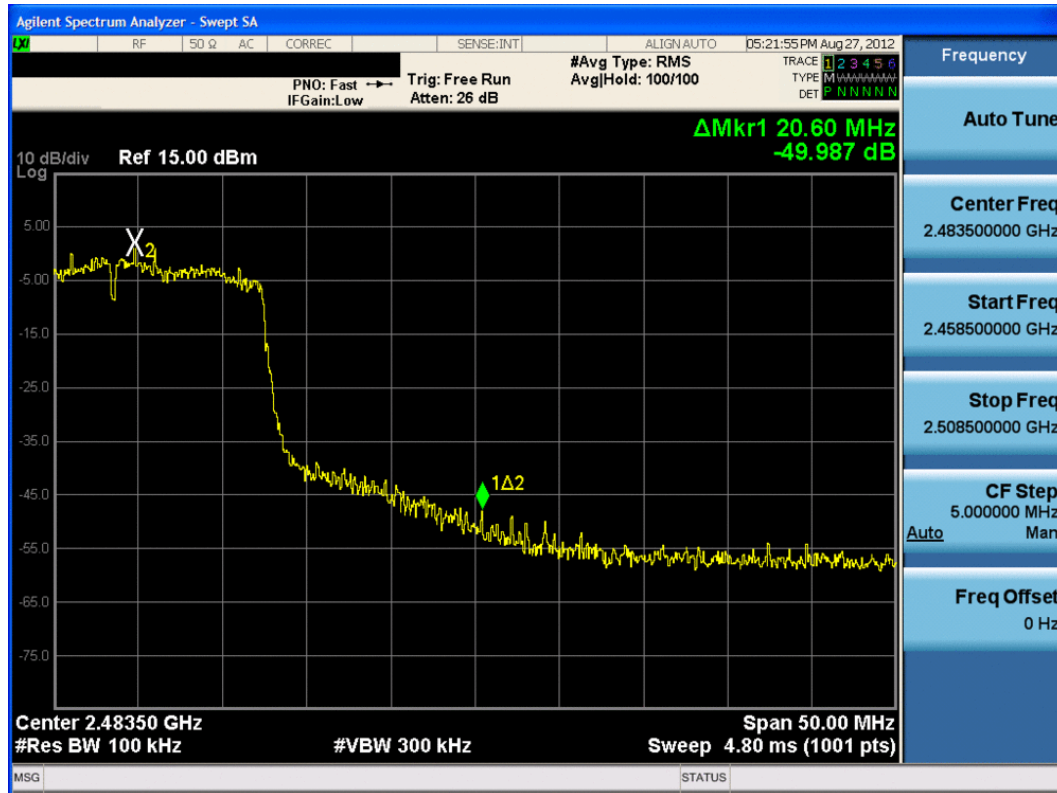


Plot 6-38. Band Edge Plot (802.11g – Ch. 11)

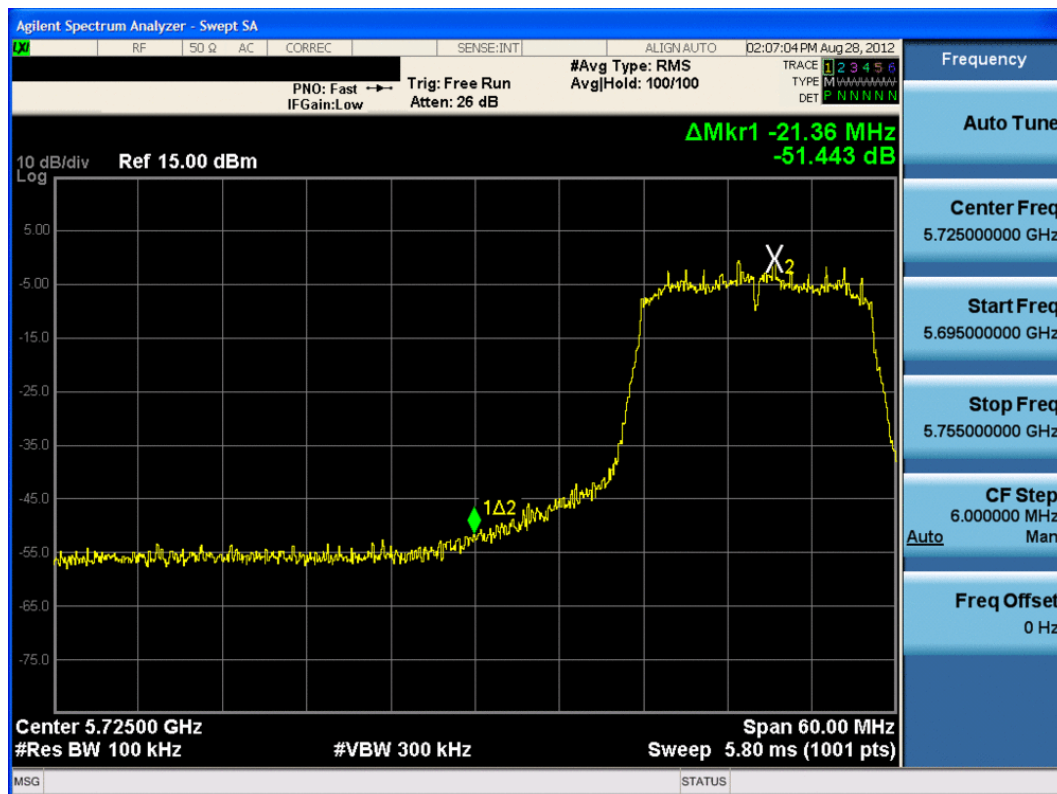


Plot 6-39. Band Edge Plot (802.11n (2.4GHz) – Ch. 1)

FCC ID: A3LEKKC120S	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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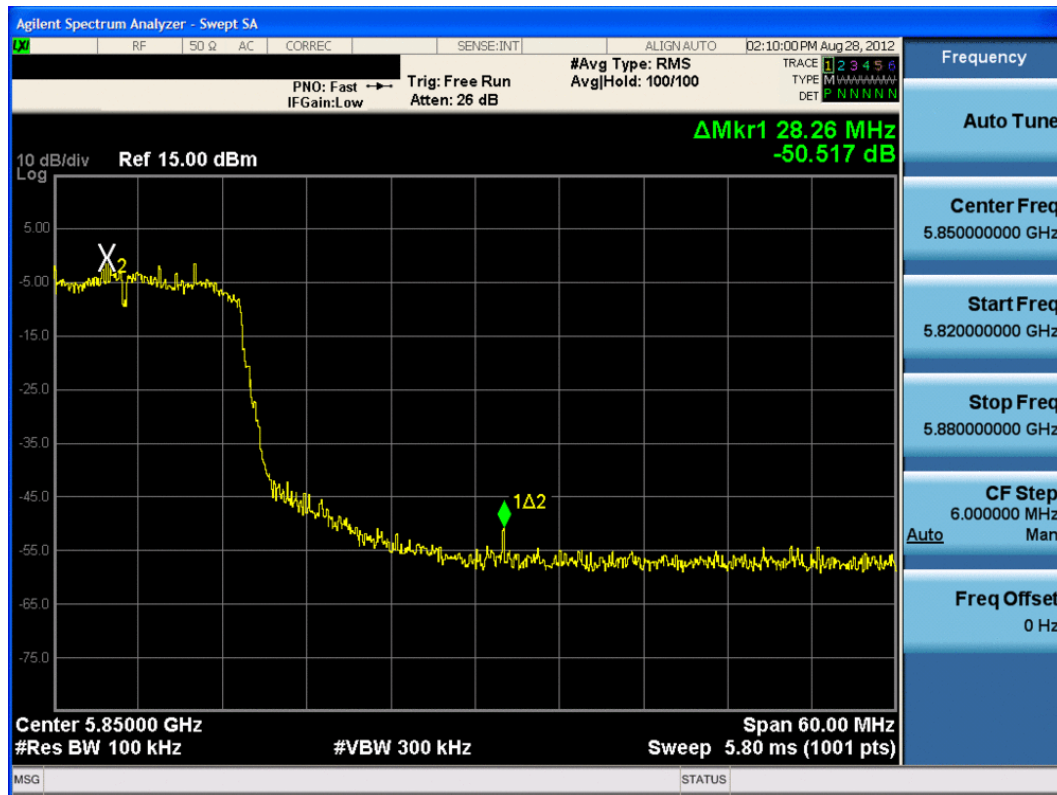


Plot 6-40. Band Edge Plot (802.11n (2.4GHz) – Ch. 11)

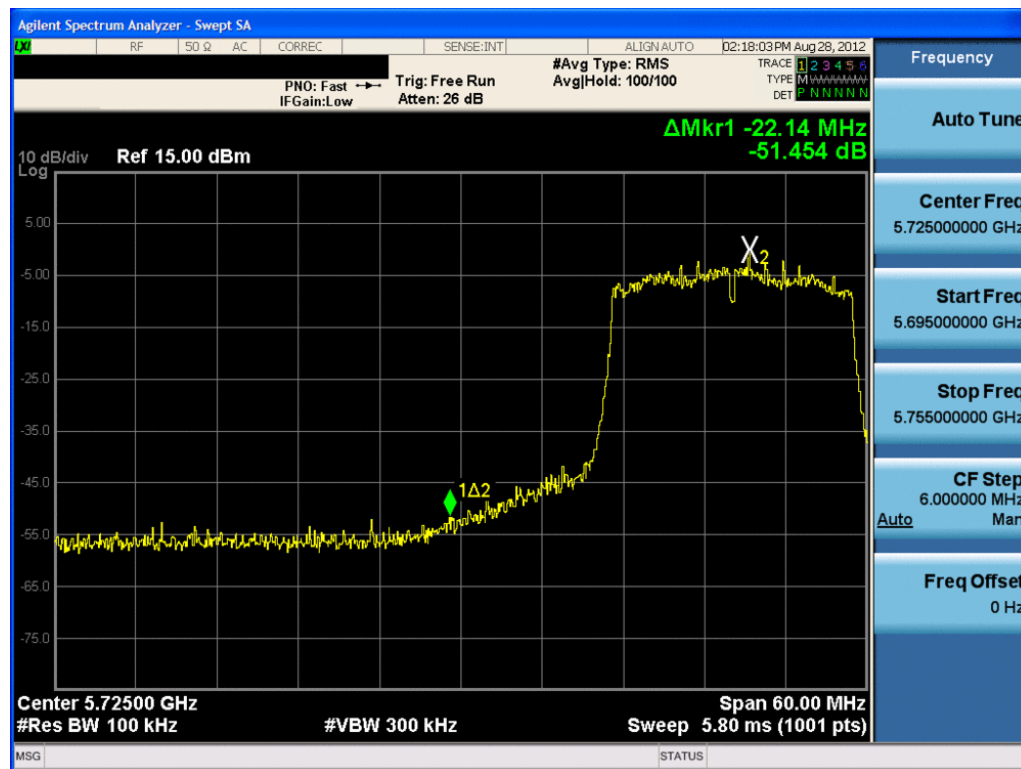


Plot 6-41. Band Edge Plot (802.11a – Ch. 149)

FCC ID: A3LEKKC120S	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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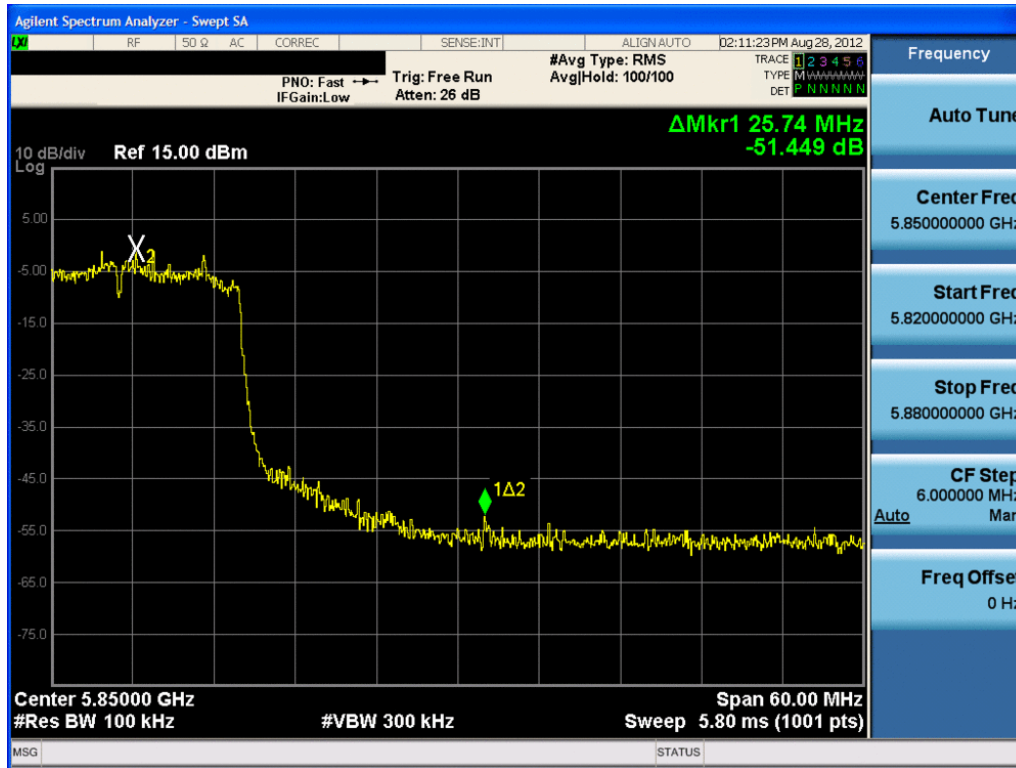


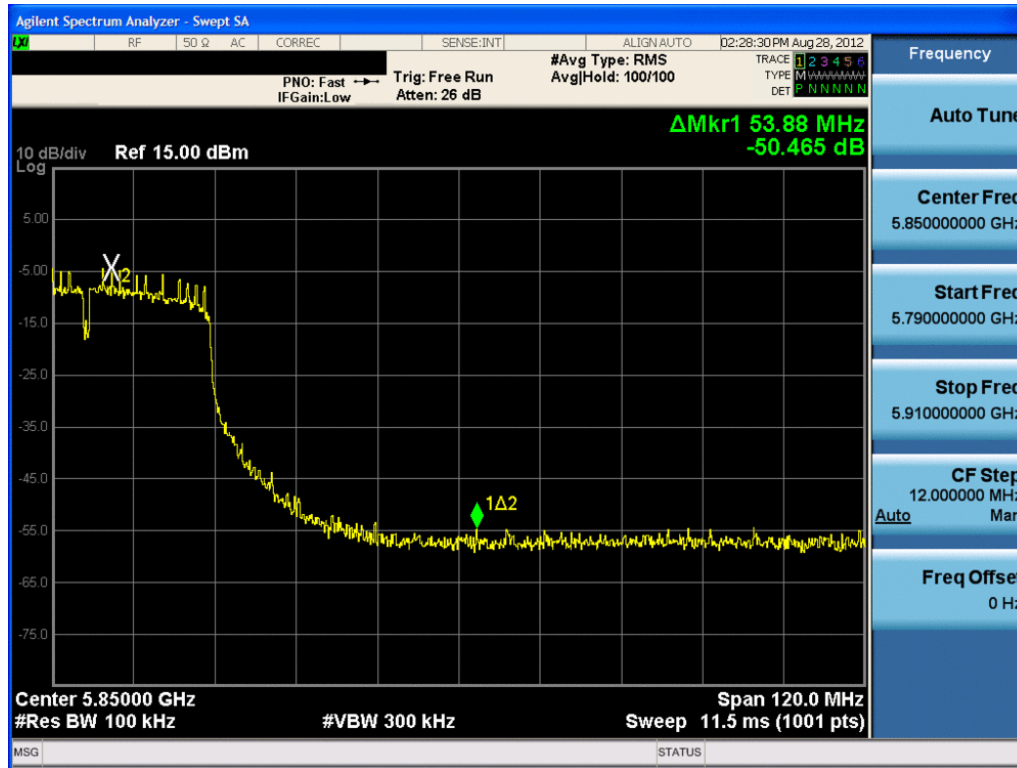
Plot 6-42. Band Edge Plot (802.11a – Ch. 165)



Plot 6-43. Band Edge Plot (20MHz BW 802.11n (5.8GHz) – Ch. 149)

FCC ID: A3LEKKC120S	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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Plot 6-46. Band Edge Plot (40MHz BW 802.11n (5.8GHz) – Ch. 163)

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6.7 Conducted Spurious Emissions

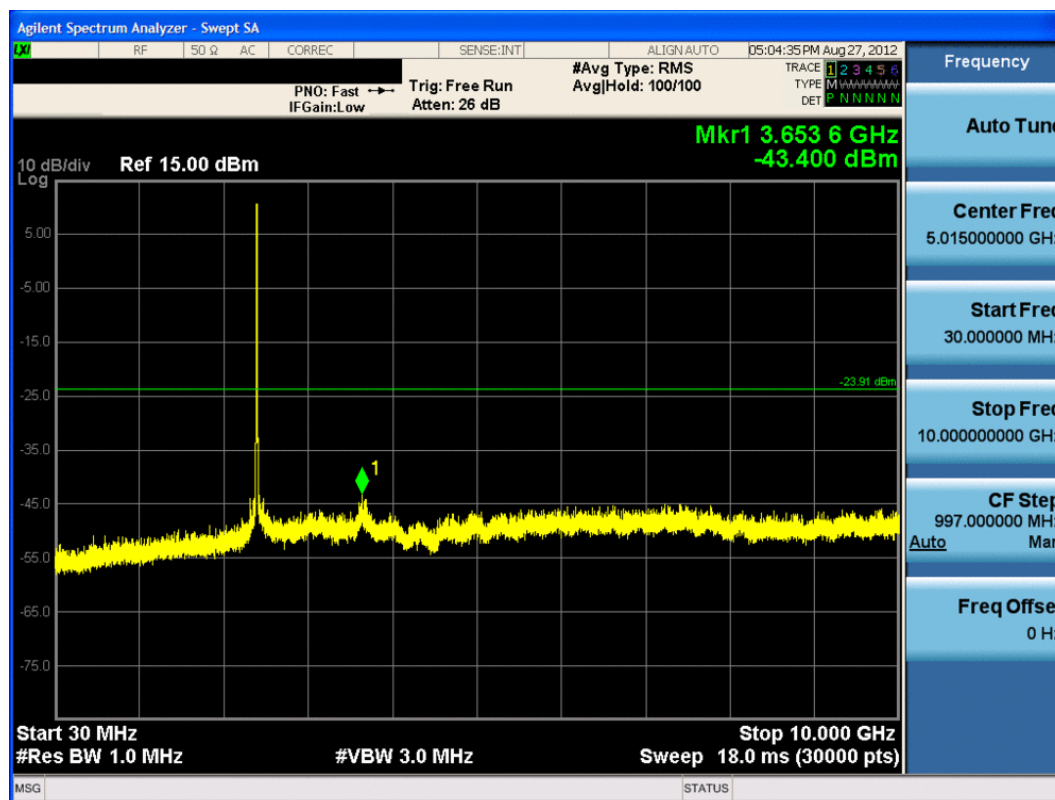
§15.247(d); RSS-210 [A8.5]

For the following out of band conducted spurious emissions plots, the EUT was investigated in all available data rates for “b”, “g”, “a”, and “n” modes. The worst case spurious emissions for the 2.4GHz band were found while transmitting in “b” mode at 1 Mbps and are shown in the plots below. The worst case spurious emissions for the 5.8GHz band were found while transmitting in “a” mode at 6 Mbps and are shown in the plots below.

The display line shown in the following plots denotes the limit at 30dB below the fundamental emission level measured in a 100kHz bandwidth, as determined in Section 6.5 of this report. However, since the traces in the following plots are measured with a 1MHz RBW, the display line may not necessarily appear to be 30dB below the level of the fundamental in a 1MHz bandwidth.

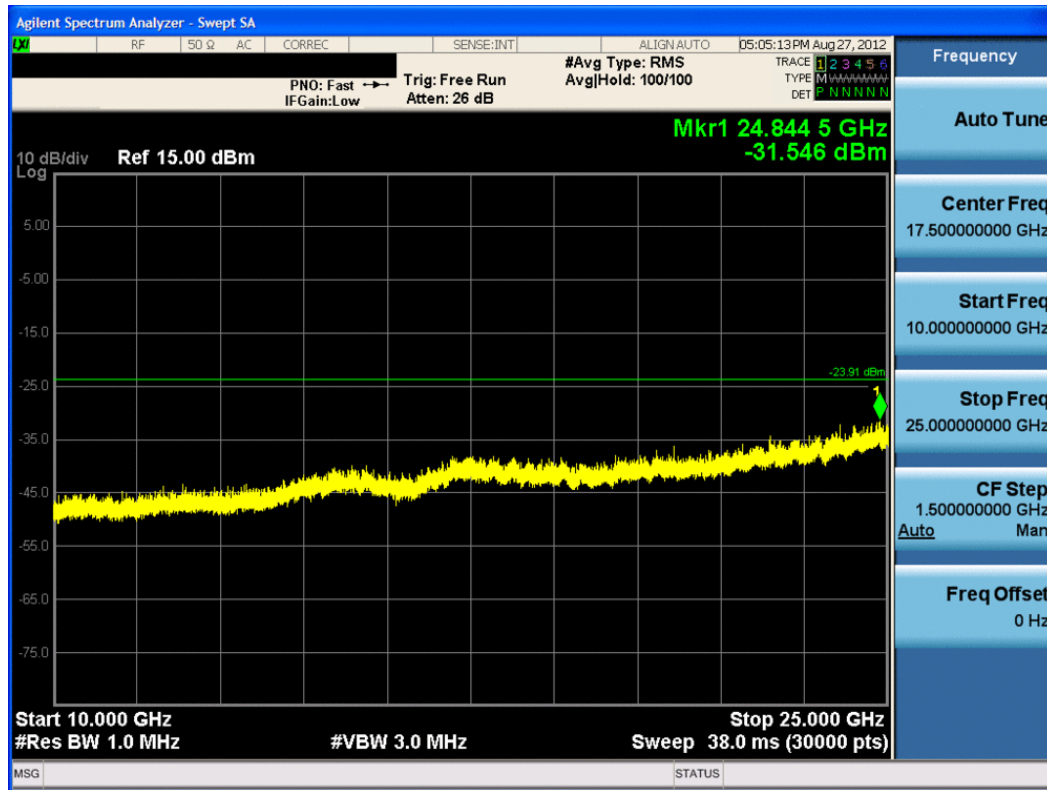
For plots showing conducted spurious emissions near the limit, the frequencies were investigated with a reduced RBW to ensure that no emissions were present.

Plot 6-53 through Plot 6-58 were recorded using a PSA spectrum analyzer connected to a laptop PC via GPIB connection. Since the PSA is limited to a maximum of 8192 sweeping points, roughly about 4GHz of spectrum can be analyzed while ensuring that the bin-to-bin spacing is such that narrowband emissions are not lost (i.e. # points $\geq 2 * \text{Span}/\text{RBW}$). A program installed on the laptop (“PCTEST 40GHz CSE”, Version 1.0) sets the spectrum analyzer to gather the maximum number of spectral points from 30MHz to 40GHz in 4GHz increments and then places the data into an Excel spreadsheet from which the conducted plots are generated. The limit is 30dBc and is determined from the power spectral density plots which are measured with a 100kHz RBW. The spectrum analyzer is set as follows for each 4GHz portion of spectrum that is analyzed: RBW = 1MHz, VBW = 3MHz, sweep time = auto, detector = max peak, number of points = 8192.



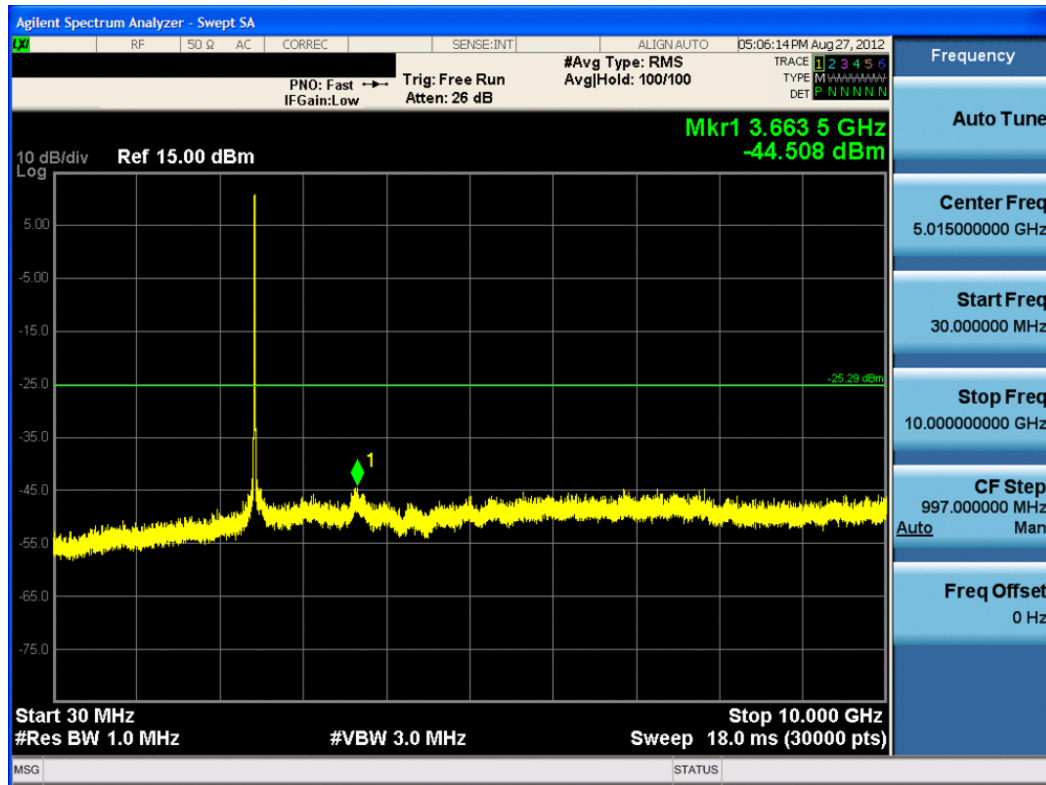
Plot 6-47. Conducted Spurious Plot (802.11b – Ch. 1)

FCC ID: A3LEKCC120S	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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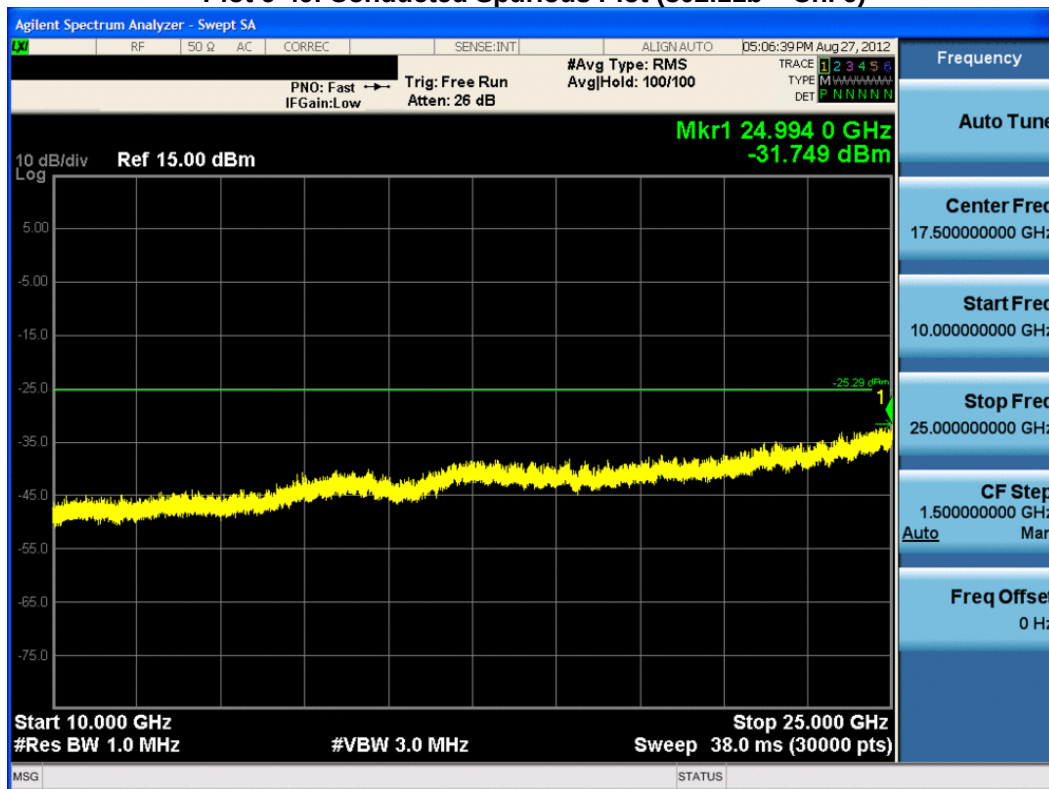


Plot 6-48. Conducted Spurious Plot (802.11b – Ch. 1)

FCC ID: A3LEKKC120S	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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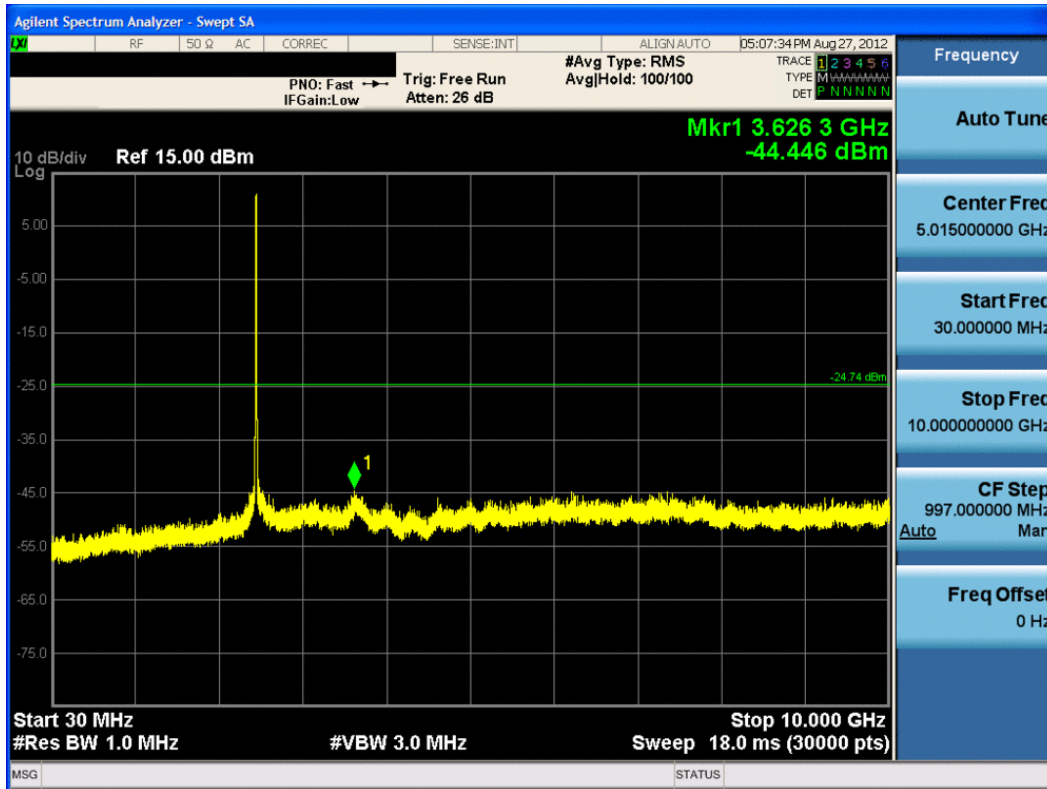


Plot 6-49. Conducted Spurious Plot (802.11b – Ch. 6)

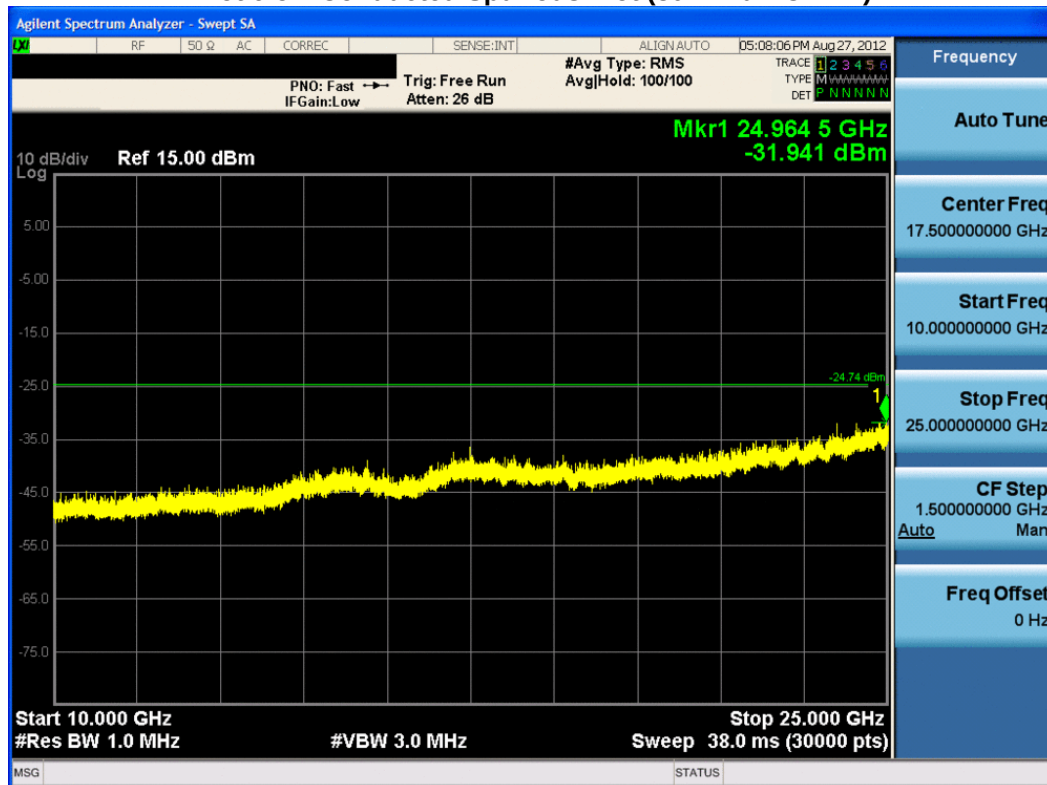


Plot 6-50. Conducted Spurious Plot (802.11b – Ch. 6)

FCC ID: A3LEKKC120S	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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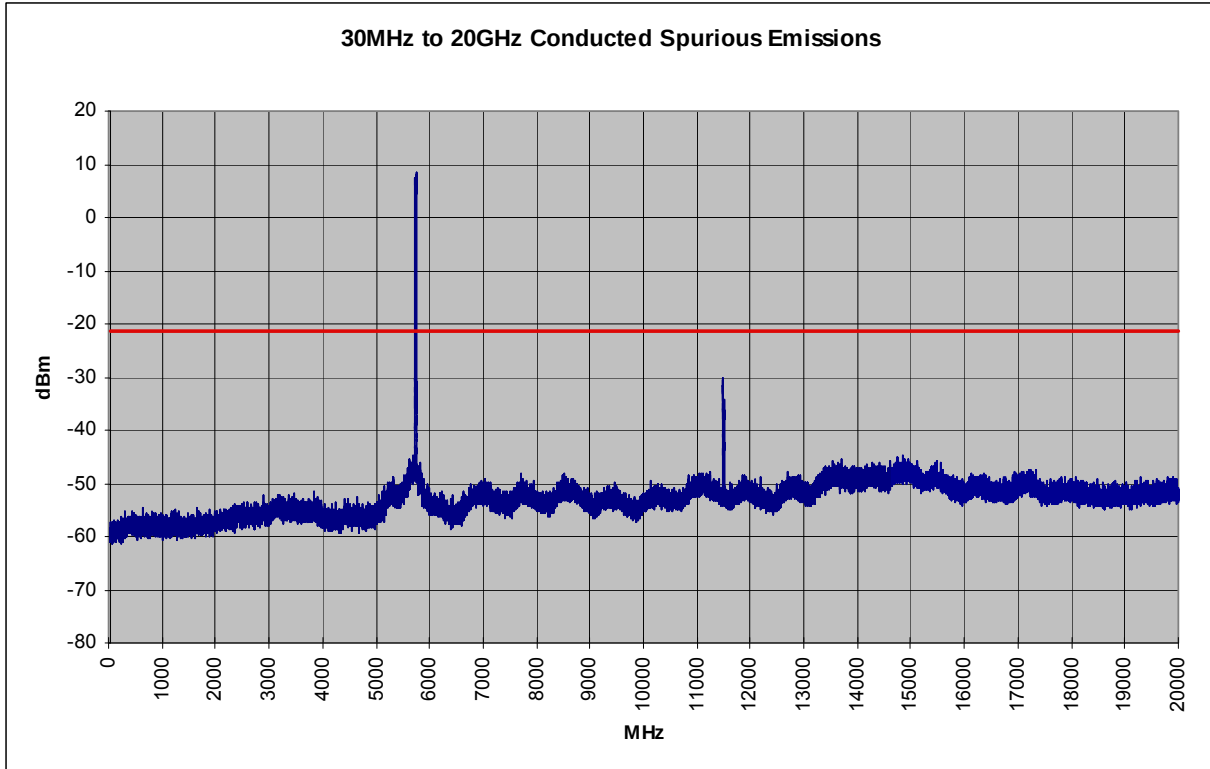


Plot 6-51. Conducted Spurious Plot (802.11b – Ch. 11)

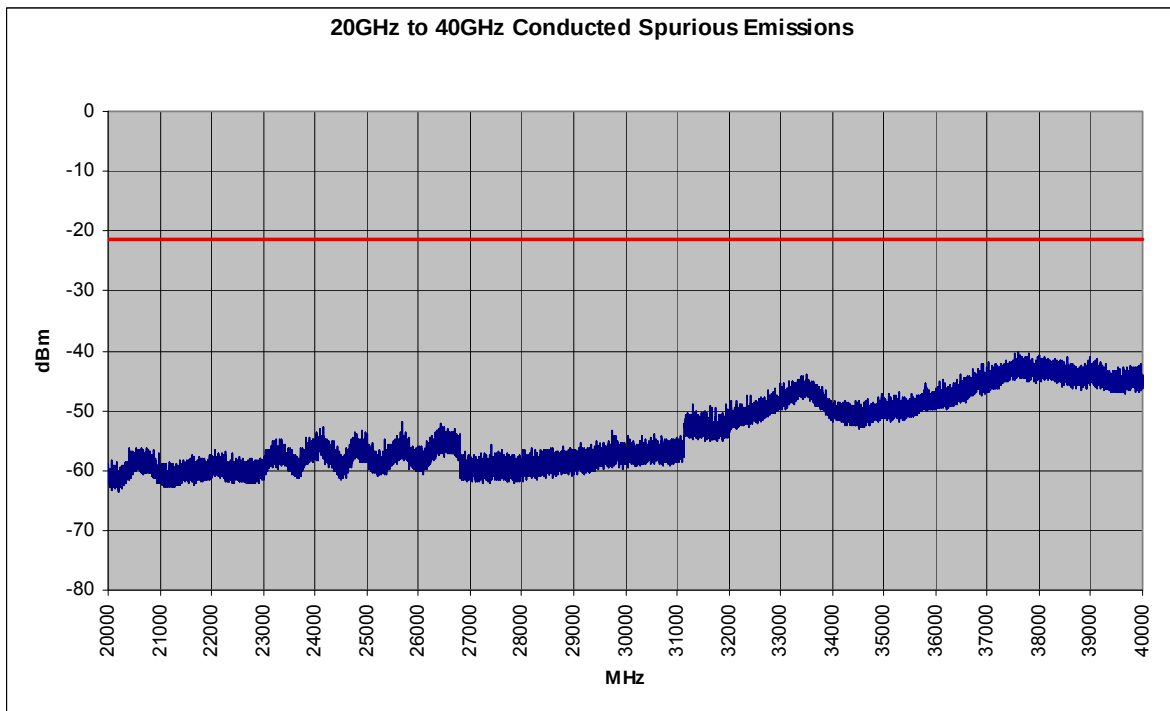


Plot 6-52. Conducted Spurious Plot (802.11b – Ch. 11)

FCC ID: A3LEK120S	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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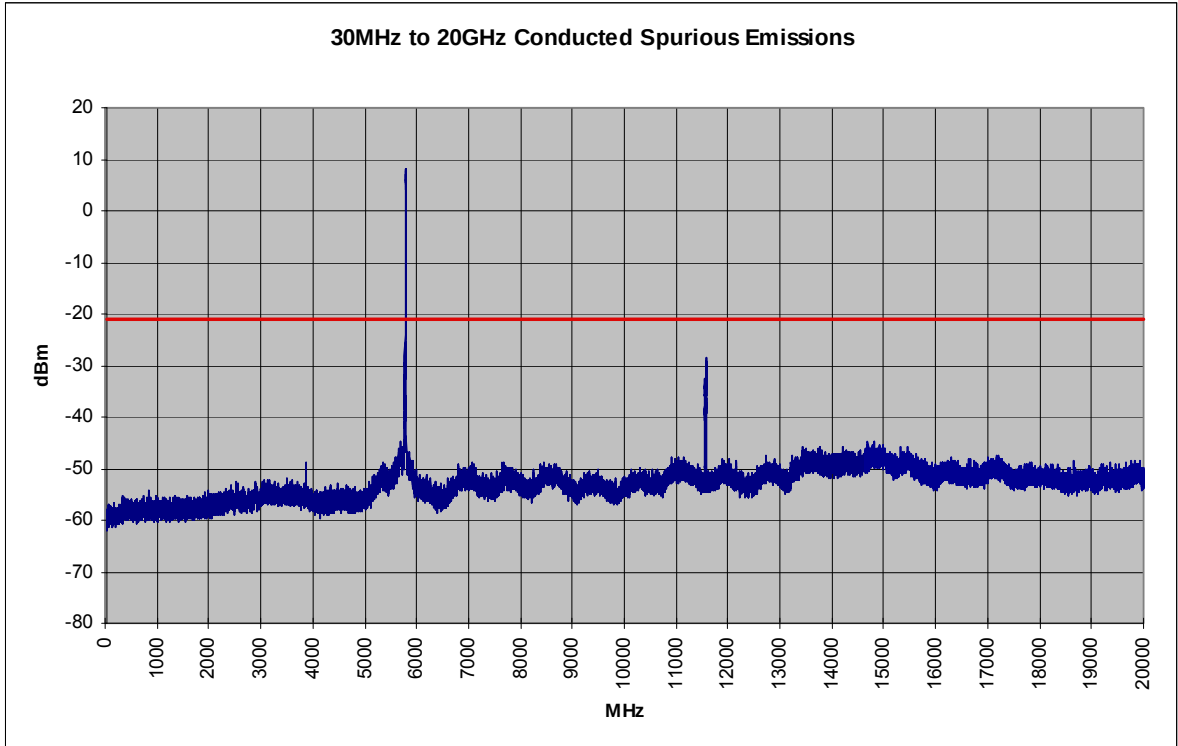


Plot 6-53. Conducted Spurious Plot (802.11a – Ch. 149)

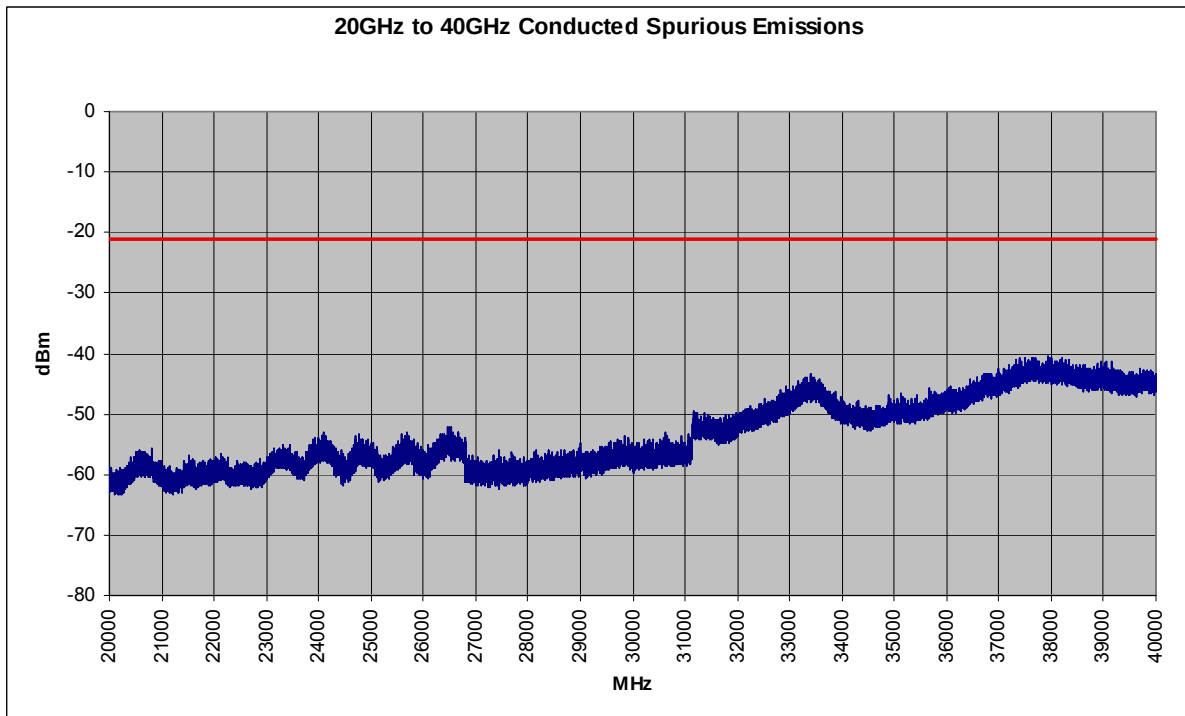


Plot 6-54. Conducted Spurious Plot (802.11a – Ch. 149)

FCC ID: A3LEKKC120S		FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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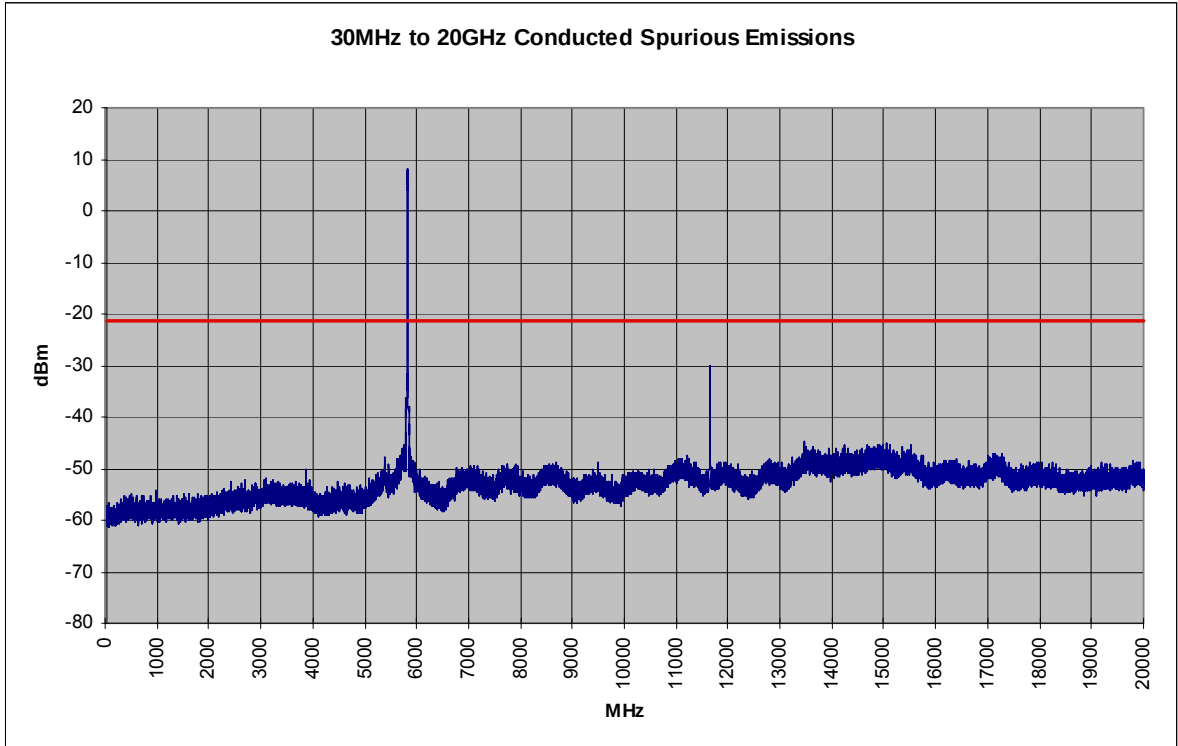


Plot 6-55. Conducted Spurious Plot (802.11a – Ch. 157)

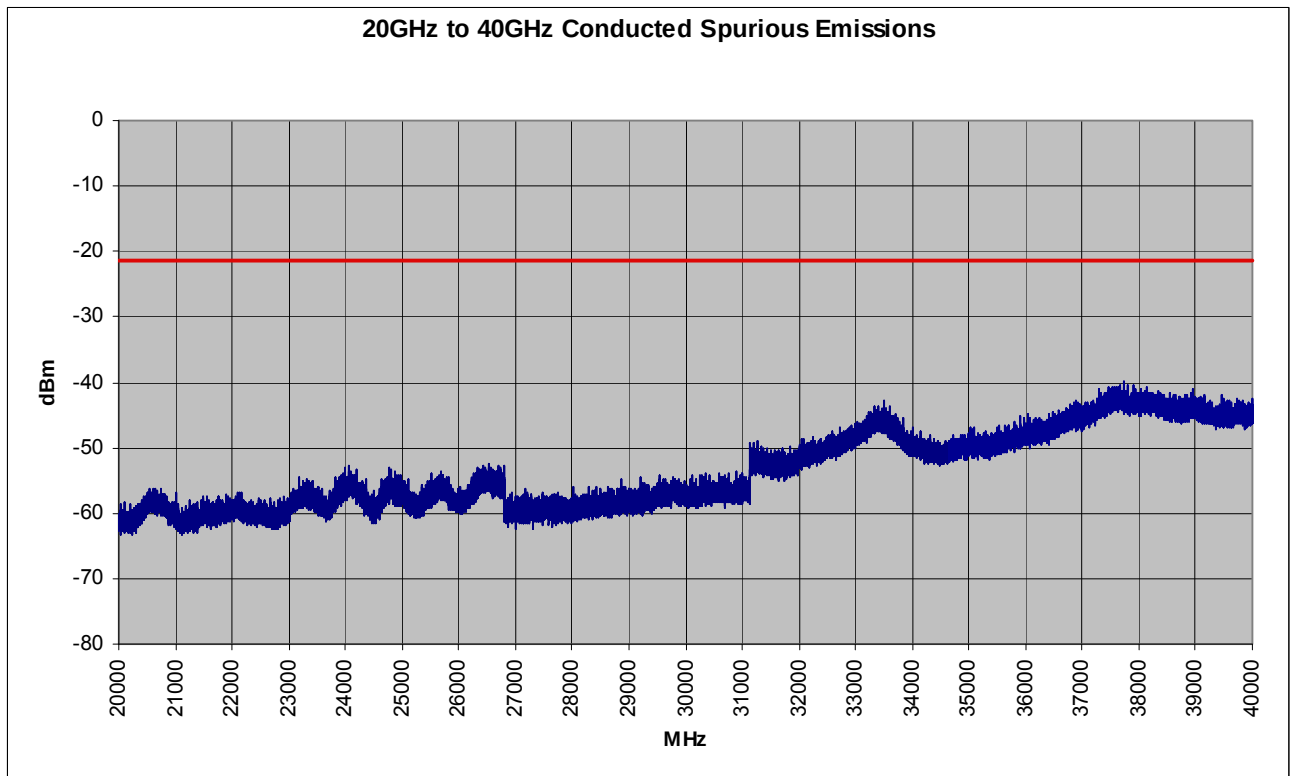


Plot 6-56. Conducted Spurious Plot (802.11a – Ch. 157)

FCC ID: A3LEKKC120S	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
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Plot 6-57. Conducted Spurious Plot (802.11a – Ch. 165)



Plot 6-58. Conducted Spurious Plot (802.11a – Ch. 165)

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6.8 Radiated Spurious Emission Measurements

§15.247(d) / §15.205 & §15.209; RSS-210 [A8.5]

The EUT was tested from 9kHz up to the tenth 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. 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 6-10 per Section 15.209.

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 measurements shown in this section were obtained using traditional radiated test methods as defined in C63.10-2009. The optional test procedures for antenna port conducted measurements of unwanted emissions per the guidance of KDB 558074 were not used to evaluate this device.

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 6-10. Radiated Limits

Sample Calculation

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

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Radiated Spurious Emission Measurements (Cont'd)

§15.247(d) / §15.205 & §15.209; RSS-210 [A8.5]

Worst Case Mode: 802.11b

Worst Case Transfer Rate: 1 Mbps

Distance of Measurements: 3 Meters

Operating Frequency: 2412MHz

Channel: 01

Frequency [MHz]	Analyzer Level [dBm]	Detector	Pol. [H/V]	AFCL [dB/m]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
4824.00	-107.00	Avg	H	41.72	41.72	53.98	-12.26
4824.00	-96.61	Peak	H	41.72	52.11	73.98	-21.87
12060.00	-135.00	Avg	H	55.33	27.33	53.98	-26.65
12060.00	-125.00	Peak	H	55.33	37.33	73.98	-36.65

Table 6-11. Radiated Measurements

NOTES:

1. All emissions shown lie in the restricted bands specified in §15.205 are below the limit shown in Table 6-10.
2. For frequencies > 1GHz, average measurements are recorded using the RBAVG1 measurement procedure of KDB 558074 using RBW = 1MHz, VBW = 3MHz, RMS detector, 1001 measurement points, and a 3 second sweep time. Peak measurements are recorded using RBW = 1MHz, VBW = 3MHz and a peak detector.
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 and the worst-case emissions are reported. No significant emissions were found beyond the 2nd Harmonic frequency shown in the table above.
6. Levels at - 135 dBm and -125 dBm represent the analyzer noise floor (when the detector is average and peak respectively) and signify that no emission was detected.
7. Above 960MHz the limit is 500 μV/m (54dBμ/m) at 3 meters radiated.
8. 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.

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Radiated Spurious Emission Measurements (Cont'd)

§15.247(d) / §15.205 & §15.209; RSS-210 [A8.5]

Worst Case Mode: 802.11b

Worst Case Transfer Rate: 1 Mbps

Distance of Measurements: 3 Meters

Operating Frequency: 2437MHz

Channel: 06

Frequency [MHz]	Analyzer Level [dBm]	Detector	Pol. [H/V]	AFCL [dB/m]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
4874.00	-106.62	Avg	H	41.89	42.26	53.98	-11.72
4874.00	-96.06	Peak	H	41.89	52.83	73.98	-21.15
7311.00	-135.00	Avg	H	48.48	20.48	53.98	-33.50
7311.00	-125.00	Peak	H	48.48	30.48	73.98	-43.50
12185.00	-135.00	Avg	H	55.90	27.90	53.98	-26.08
12185.00	-125.00	Peak	H	55.90	37.90	73.98	-36.08

Table 6-12. Radiated Measurements

NOTES:

1. All emissions shown lie in the restricted bands specified in §15.205 are below the limit shown in Table 6-10.
2. For frequencies > 1GHz, average measurements are recorded using the RBAVG1 measurement procedure of KDB 558074 using RBW = 1MHz, VBW = 3MHz, RMS detector, 1001 measurement points, and a 3 second sweep time. Peak measurements are recorded using RBW = 1MHz, VBW = 3MHz and a peak detector.
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 and the worst-case emissions are reported. No significant emissions were found beyond the 2nd Harmonic frequency shown in the table above.
6. Levels at - 135 dBm and -125 dBm represent the analyzer noise floor (when the detector is average and peak respectively) and signify that no emission was detected.
7. Above 960MHz the limit is 500 μV/m (54dBμV/m) at 3 meters radiated.
8. 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.

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Radiated Spurious Emission Measurements (Cont'd)

§15.247(d) / §15.205 & §15.209; RSS-210 [A8.5]

Worst Case Mode: 802.11b

Worst Case Transfer Rate: 1 Mbps

Distance of Measurements: 3 Meters

Operating Frequency: 2462MHz

Channel: 11

Frequency [MHz]	Analyzer Level [dBm]	Detector	Pol. [H/V]	AFCL [dB/m]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
4924.00	-106.49	Avg	H	42.13	42.63	53.98	-11.35
4924.00	-96.48	Peak	H	42.13	52.65	73.98	-21.33
7386.00	-135.00	Avg	H	48.63	20.63	53.98	-33.35
7386.00	-125.00	Peak	H	48.63	30.63	73.98	-43.35
12310.00	-135.00	Avg	H	55.60	27.60	53.98	-26.38
12310.00	-125.00	Peak	H	55.60	37.60	73.98	-36.38

Table 6-13. Radiated Measurements

NOTES:

1. All emissions shown lie in the restricted bands specified in §15.205 are below the limit shown in Table 6-10.
2. For frequencies > 1GHz, average measurements are recorded using the RBAVG1 measurement procedure of KDB 558074 using RBW = 1MHz, VBW = 3MHz, RMS detector, 1001 measurement points, and a 3 second sweep time. Peak measurements are recorded using RBW = 1MHz, VBW = 3MHz and a peak detector.
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 and the worst-case emissions are reported. No significant emissions were found beyond the 2nd Harmonic frequency shown in the table above.
6. Levels at - 135 dBm and -125 dBm represent the analyzer noise floor (when the detector is average and peak respectively) and signify that no emission was detected.
7. Above 960MHz the limit is 500 μV/m (54dBμ/m) at 3 meters radiated.
8. 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.

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Radiated Spurious Emission Measurements (Cont'd)

§15.247(d) / §15.205 & §15.209; RSS-210 [A8.5]

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	Pol. [H/V]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
11490.00	-105.99	Avg	H	41.72	-9.54	33.2	53.98	-20.79
11490.00	-94.97	Peak	H	41.72	-9.54	44.2	73.98	-29.77
22980.00	-135.00	Avg	H	51.22	0.00	23.2	53.98	-30.76
22980.00	-125.00	Peak	H	51.22	0.00	33.2	73.98	-40.76

Table 6-14. Radiated Measurements

NOTES:

1. All emissions shown lie in the restricted bands specified in §15.205 are below the limit shown in Table 6-10.
2. For frequencies > 1GHz, average measurements are recorded using the RBAVG1 measurement procedure of KDB 558074 using RBW = 1MHz, VBW = 3MHz, RMS detector, 1001 measurement points, and a 3 second sweep time. Peak measurements are recorded using RBW = 1MHz, VBW = 3MHz and a peak detector.
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 and the worst-case emissions are reported. No significant emissions were found beyond the 2nd Harmonic frequency shown in the table above.
6. Levels at - 135 dBm and -125 dBm represent the analyzer noise floor (when the detector is average and peak respectively) and signify that no emission was detected.
7. Above 960MHz the limit is 500 μV/m (54dBμ/m) at 3 meters radiated.
8. 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.

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Radiated Spurious Emission Measurements (Cont'd)

§15.247(d) / §15.205 & §15.209; RSS-210 [A8.5]

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	Pol. [H/V]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
11570.00	-106.38	Avg	H	41.89	-9.54	33.0	53.98	-21.01
11570.00	-96.95	Peak	H	41.89	-9.54	42.4	73.98	-31.58

Table 6-15. Radiated Measurements

NOTES:

1. All emissions shown lie in the restricted bands specified in §15.205 are below the limit shown in Table 6-10.
2. For frequencies > 1GHz, average measurements are recorded using the RBAVG1 measurement procedure of KDB 558074 using RBW = 1MHz, VBW = 3MHz, RMS detector, 1001 measurement points, and a 3 second sweep time. Peak measurements are recorded using RBW = 1MHz, VBW = 3MHz and a peak detector.
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 and the worst-case emissions are reported. No significant emissions were found beyond the 2nd Harmonic frequency shown in the table above.
6. Levels at - 135 dBm and -125 dBm represent the analyzer noise floor (when the detector is average and peak respectively) and signify that no emission was detected.
7. Above 960MHz the limit is 500 μV/m (54dBμ/m) at 3 meters radiated.
8. 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.

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Radiated Spurious Emission Measurements (Cont'd)

§15.247(d) / §15.205 & §15.209; RSS-210 [A8.5]

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	Pol. [H/V]	AFCL [dB/m]	Distance Correction Factor [dB]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
11650.00	-106.57	Avg	H	42.13	-9.54	33.0	53.98	-20.97
11650.00	-96.92	Peak	H	42.13	-9.54	42.7	73.98	-31.32

Table 6-16. Radiated Measurements

NOTES:

1. All emissions shown lie in the restricted bands specified in §15.205 are below the limit shown in Table 6-10.
2. For frequencies > 1GHz, average measurements are recorded using the RBAVG1 measurement procedure of KDB 558074 using RBW = 1MHz, VBW = 3MHz, RMS detector, 1001 measurement points, and a 3 second sweep time. Peak measurements are recorded using RBW = 1MHz, VBW = 3MHz and a peak detector.
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 and the worst-case emissions are reported. No significant emissions were found beyond the 2nd Harmonic frequency shown in the table above.
6. Levels at - 135 dBm and -125 dBm represent the analyzer noise floor (when the detector is average and peak respectively) and signify that no emission was detected.
7. Above 960MHz the limit is 500 μV/m (54dBμ/m) at 3 meters radiated.
8. 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.

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6.9 Radiated Restricted Band Edge Measurements

§15.205 / §15.209; RSS-210 [A8.5]

Worst Case Mode: 802.11g

Worst Case Transfer Rate: 6Mbps

Distance of Measurements: 3 Meters

Operating Frequency: 2412MHz

Channel: 1

Frequency [MHz]	Analyzer Level [dBm]	Detector	Pol. [H/V]	AFCL [dB/m]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
2384.48	-104.49	Avg	H	36.29	38.80	53.98	-15.18
2384.48	-86.53	Peak	H	36.29	56.76	73.98	-17.22
2486.83	-104.24	Avg	H	36.29	39.05	53.98	-14.93
2486.83	-84.30	Peak	H	36.29	58.99	73.98	-14.99
2390.00	-101.92	Avg	H	36.29	41.37	53.98	-12.61
2390.00	-82.56	Peak	H	36.29	60.73	73.98	-13.25

Table 6-17. Radiated Restricted Band Measurements

NOTES:

1. All emissions shown lie in the restricted bands specified in §15.205 are below the limit shown in Table 6-10.
2. For frequencies > 1GHz, average measurements are recorded using the RBAVG1 measurement procedure of KDB 558074 using RBW = 1MHz, VBW = 3MHz, RMS detector, 1001 measurement points, and a 3 second sweep time. Peak measurements are recorded using RBW = 1MHz, VBW = 3MHz and a peak detector.
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. Above 960MHz the limit is 500 μV/m (54dBμ/m) at 3 meters radiated.

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Radiated Restricted Band Edge Measurements (Cont'd)

§15.205 / §15.209; RSS-210 [A8.5]

Worst Case Mode: 802.11g

Worst Case Transfer Rate: 6Mbps

Distance of Measurements: 3 Meters

Operating Frequency: 2462MHz

Channel: 11

Frequency [MHz]	Analyzer Level [dBm]	Detector	Pol. [H/V]	AFCL [dB/m]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
2483.50	-97.14	Avg	H	36.29	46.15	53.98	-7.83
2483.50	-80.36	Peak	H	36.29	62.92	73.98	-11.05
2484.21	-98.53	Avg	H	36.29	44.76	53.98	-9.22
2484.21	-85.35	Peak	H	36.29	57.94	73.98	-16.04
2485.10	-99.15	Avg	H	36.29	44.14	53.98	-9.84
2485.10	-84.23	Peak	H	36.29	59.06	73.98	-14.92

Table 6-18. Radiated Restricted Band Measurements

NOTES:

1. All emissions shown lie in the restricted bands specified in §15.205 are below the limit shown in Table 6-10.
2. For frequencies > 1GHz, average measurements are recorded using the RBAVG1 measurement procedure of KDB 558074 using RBW = 1MHz, VBW = 3MHz, RMS detector, 1001 measurement points, and a 3 second sweep time. Peak measurements are recorded using RBW = 1MHz, VBW = 3MHz and a peak detector.
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. Above 960MHz the limit is 500 μV/m (54dBμ/m) at 3 meters radiated.

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6.10 Line-Conducted Test Data

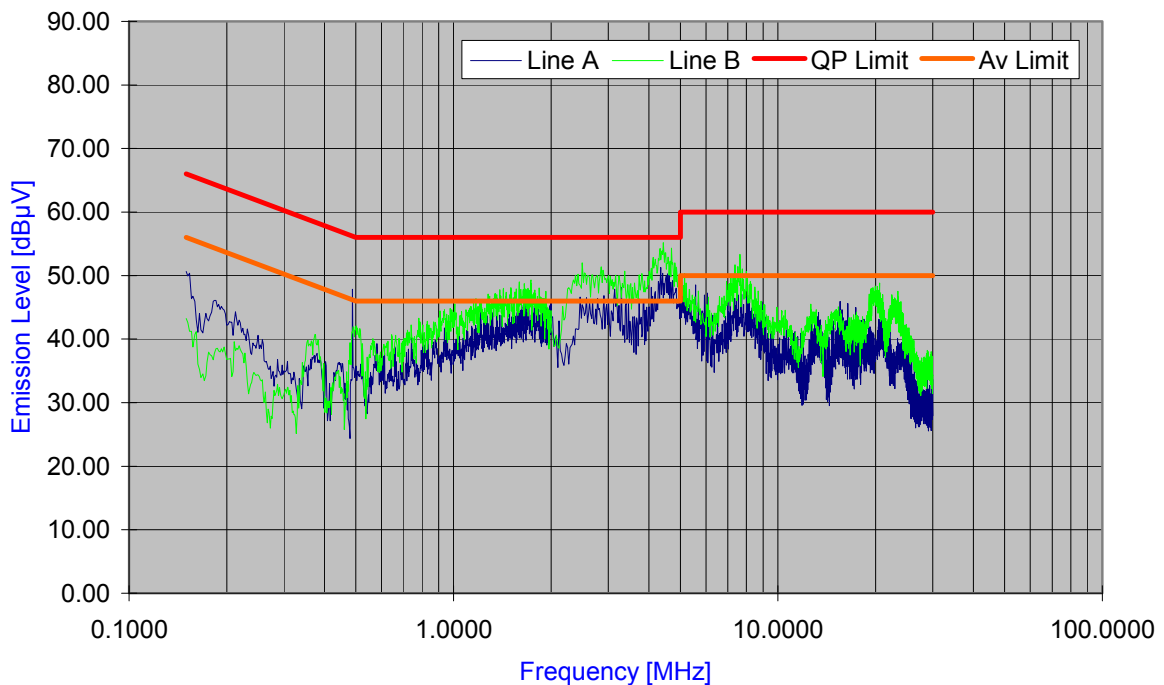
§15.207; RSS-Gen [7.2.2]

PCTEST Engineering Laboratory Inc.

Company : Samsung Electronics Co., Ltd.
Model Number : EK-KC120S
FCC ID Code : A3LEKKC120S
Standard : FCC Part 15C, 15.207

Power Source : AC120V/60Hz
Tested Date : 11/01/2012
Note : Tested with 802.11b ON

Conducted Emission Measurement



Ver.1.1 ©PCTEST 2006.08

Plot 6-59. Line Conducted Plot with 802.11b

Notes:

1. All modes of operation, data rates, and test channels were investigated and the worst-case emissions are reported in 802.11b mode using 1Mbps on Channel 6. 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. Line A = Phase; Line B = Neutral
4. Traces shown in plot are made using a peak detector.
5. Deviations to the Specifications: None.

FCC ID: A3LEKKC120S	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1210261548.A3L	Test Dates: 11/1/2012	EUT Type: Portable Handset		Page 56 of 60

Line-Conducted Test Data (Cont'd)

§15.207; RSS-Gen [7.2.2]

No.	Line	Frequency [MHz]	Factor [dB]	QP [dBμV]	Limit [dBμV]	Margin [dB]	Average [dBμV]	Limit [dBμV]	Margin [dB]
1	A	0.506	6.97	27.90	56.00	-28.10	15.39	46.00	-30.61
2	A	1.661	7.12	34.08	56.00	-21.92	24.57	46.00	-21.43
3	A	1.724	7.13	34.11	56.00	-21.89	24.36	46.00	-21.64
4	A	1.763	7.13	33.31	56.00	-22.69	24.29	46.00	-21.71
5	A	1.985	7.15	32.12	56.00	-23.88	22.80	46.00	-23.20
6	A	2.455	7.21	34.70	56.00	-21.30	26.09	46.00	-19.91
7	A	2.890	7.25	35.96	56.00	-20.04	26.26	46.00	-19.74
8	A	3.083	7.27	35.31	56.00	-20.69	25.54	46.00	-20.46
9	A	3.341	7.30	34.46	56.00	-21.54	25.47	46.00	-20.53
10	A	4.343	7.37	39.01	56.00	-16.99	31.11	46.00	-14.89
11	B	1.714	7.13	36.98	56.00	-19.02	26.50	46.00	-19.50
12	B	2.409	7.21	40.32	56.00	-15.68	30.55	46.00	-15.45
13	B	2.520	7.22	40.50	56.00	-15.50	31.03	46.00	-14.97
14	B	2.665	7.24	40.67	56.00	-15.33	31.05	46.00	-14.95
15	B	2.832	7.25	40.62	56.00	-15.38	30.50	46.00	-15.50
16	B	3.324	7.30	39.48	56.00	-16.52	28.99	46.00	-17.01
17	B	3.889	7.35	39.85	56.00	-16.15	30.14	46.00	-15.86
18	B	4.383	7.39	43.84	56.00	-12.16	35.27	46.00	-10.73
19	B	4.599	7.40	43.02	56.00	-12.98	34.35	46.00	-11.65
20	B	7.642	7.55	40.11	60.00	-19.89	30.74	50.00	-19.26

Table 6-19. Line Conducted Data with 802.11b

Notes:

1. All modes of operation, data rates, and test channels were investigated and the worst-case emissions are reported in 802.11b mode using 1Mbps on Channel 6. 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. Line A = Phase; Line B = Neutral
4. Factor (dB) = Cable loss (dB) + LISN insertion factor (dB)
5. QP/AV Level (dBμV) = QP/AV Analyzer/Receiver Level (dBμV) + Factor (dB)
6. Margin (dB) = QP/AV Level (dBμV) – QP/AV Limit (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 (Cont'd)

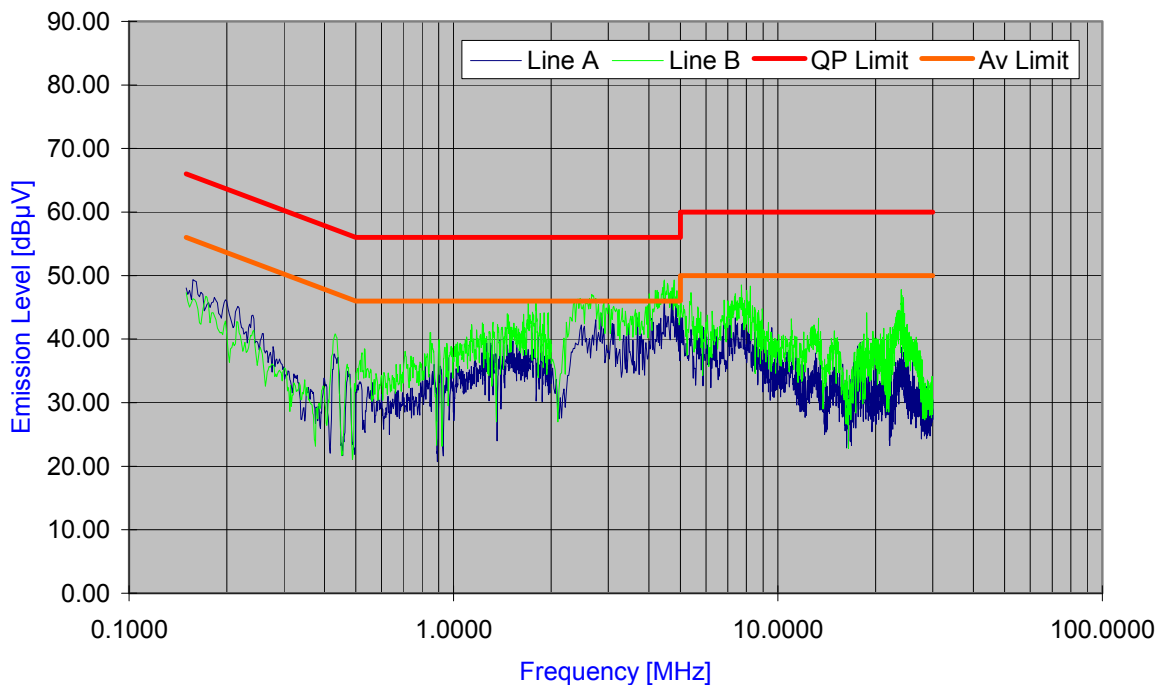
§15.207; RSS-Gen [7.2.2]

PCTEST Engineering Laboratory Inc.

Company : Samsung Electronics Co., Ltd.
Model Number : EK-KC120S
FCC ID Code : A3LEKKC120S
Standard : FCC Part 15C, 15.207

Power Source : AC120V/60Hz
Tested Date : 11/01/2012
Note : Tested with 802.11a ON

Conducted Emission Measurement



Ver.1.1 ©PCTEST 2006.08

Plot 6-60. Line Conducted Plot with 802.11a

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 6. 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. Line A = Phase; Line B = Neutral
4. Traces shown in plot are made using a peak detector.
5. Deviations to the Specifications: None.

FCC ID: A3LEKKC120S	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n 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]

No.	Line	Frequency [MHz]	Factor [dB]	QP [dBμV]	Limit [dBμV]	Margin [dB]	Average [dBμV]	Limit [dBμV]	Margin [dB]
1	A	1.429	7.10	30.11	56.00	-25.89	20.02	46.00	-25.98
2	A	1.745	7.13	30.55	56.00	-25.45	21.31	46.00	-24.69
3	A	1.816	7.13	31.91	56.00	-24.09	21.19	46.00	-24.81
4	A	2.798	7.25	34.03	56.00	-21.97	23.95	46.00	-22.05
5	A	3.163	7.28	34.42	56.00	-21.58	22.84	46.00	-23.16
6	A	3.487	7.31	32.69	56.00	-23.31	21.67	46.00	-24.33
7	A	3.638	7.32	32.88	56.00	-23.12	21.26	46.00	-24.74
8	A	4.154	7.36	35.46	56.00	-20.54	25.08	46.00	-20.92
9	A	4.471	7.38	37.02	56.00	-18.98	26.35	46.00	-19.65
10	A	4.759	7.40	35.51	56.00	-20.49	24.82	46.00	-21.18
11	B	1.690	7.12	35.01	56.00	-20.99	23.59	46.00	-22.41
12	B	1.763	7.13	36.08	56.00	-19.92	20.24	46.00	-25.76
13	B	1.798	7.13	36.37	56.00	-19.63	25.57	46.00	-20.43
14	B	2.413	7.21	38.53	56.00	-17.47	27.28	46.00	-18.72
15	B	2.660	7.24	40.11	56.00	-15.89	25.47	46.00	-20.53
16	B	3.237	7.29	37.27	56.00	-18.73	24.13	46.00	-21.87
17	B	4.497	7.39	41.89	56.00	-14.11	25.47	46.00	-20.53
18	B	4.780	7.41	39.56	56.00	-16.44	27.46	46.00	-18.54
19	B	7.693	7.55	40.84	60.00	-19.16	28.30	50.00	-21.70
20	B	8.160	7.57	38.87	60.00	-21.13	25.72	50.00	-24.28

Table 6-20. Line Conducted Data with 802.11a

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 6. 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. Line A = Phase; Line B = Neutral
4. Factor (dB) = Cable loss (dB) + LISN insertion factor (dB)
5. QP/AV Level (dBμV) = QP/AV Analyzer/Receiver Level (dBμV) + Factor (dB)
6. Margin (dB) = QP/AV Level (dBμV) – QP/AV Limit (dBμV)
7. Traces shown in plot are made using a peak detector.
8. Deviations to the Specifications: None.

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7.0 CONCLUSION

The data collected relate only the item(s) tested and show that the **Samsung Portable Handset FCC ID: A3LEKKC120S** is in compliance with Part 15C of the FCC Rules and RSS-210 of the Industry Canada Rules.

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