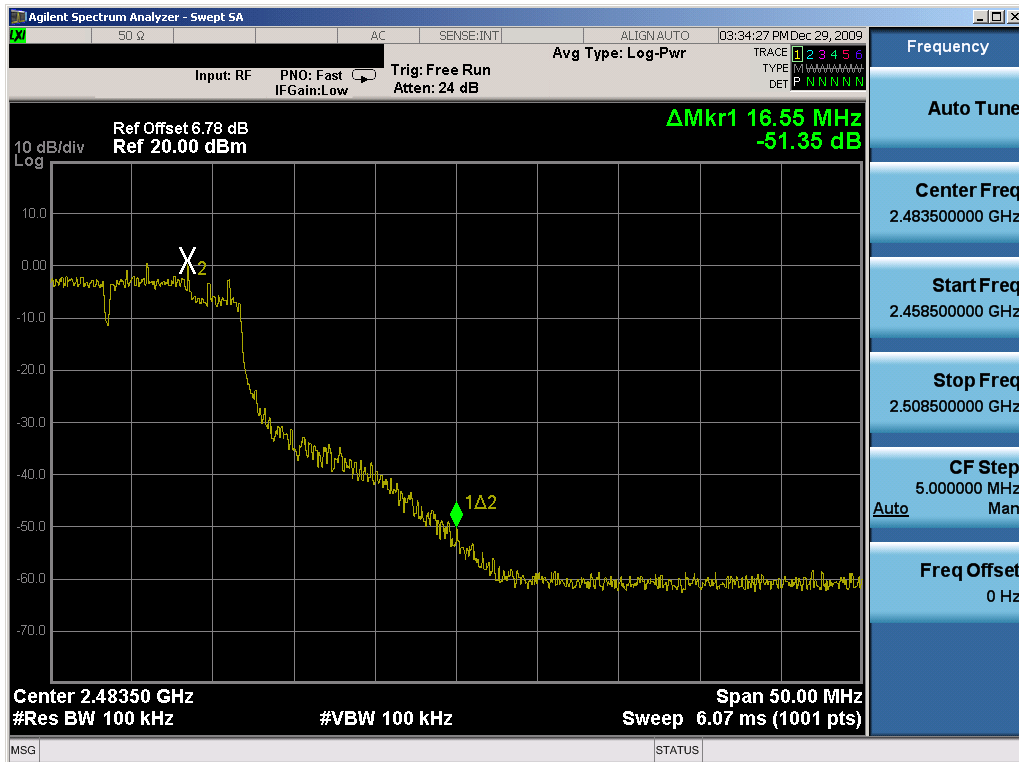
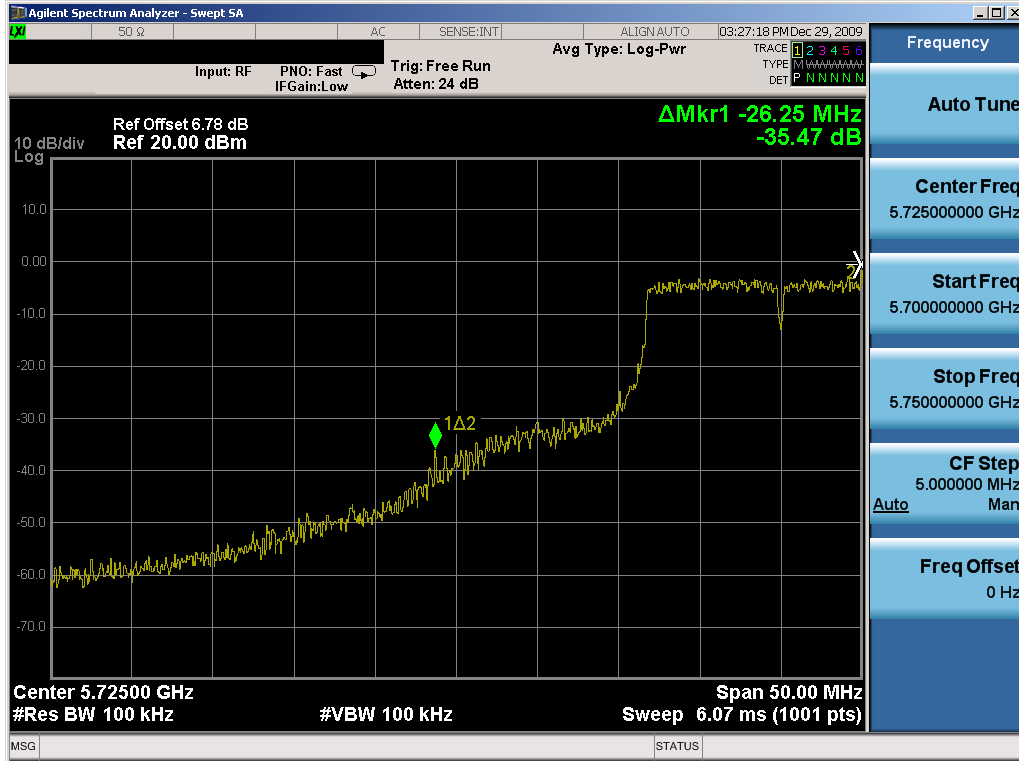


Plot 6-32. Band Edge Plot (802.11g– Ch. 1) – Chain A

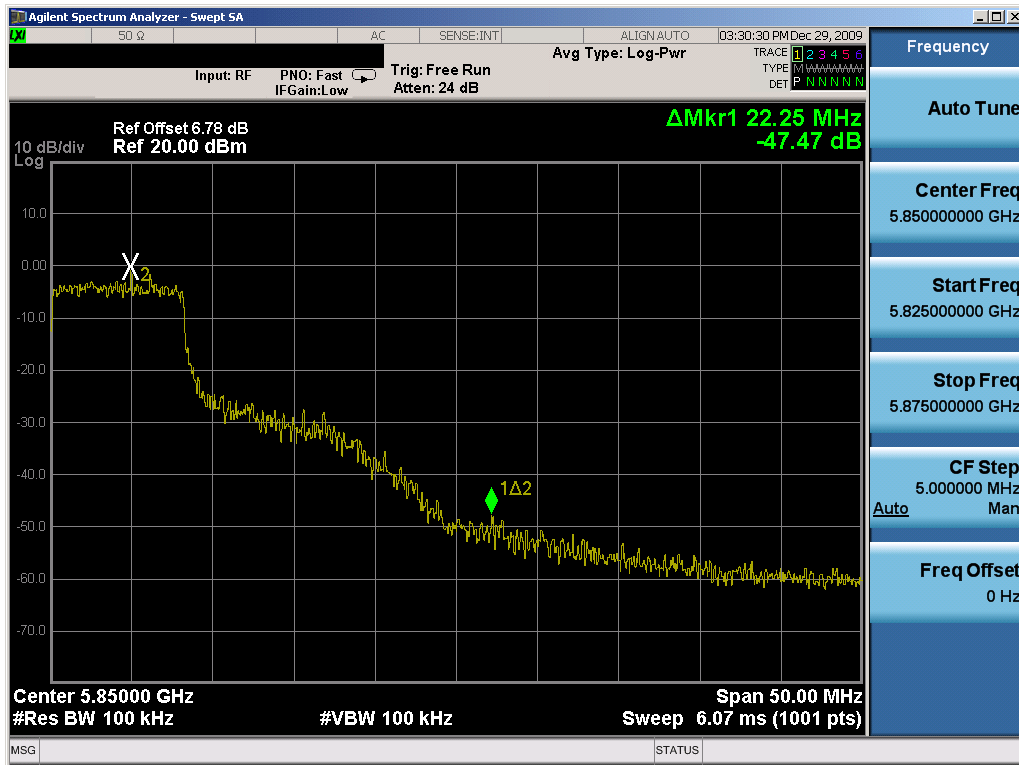


Plot 6-33. Band Edge Plot (802.11g – Ch. 11) – Chain A

FCC ID: ACJ9TGCF-19D		FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19		Page 41 of 89

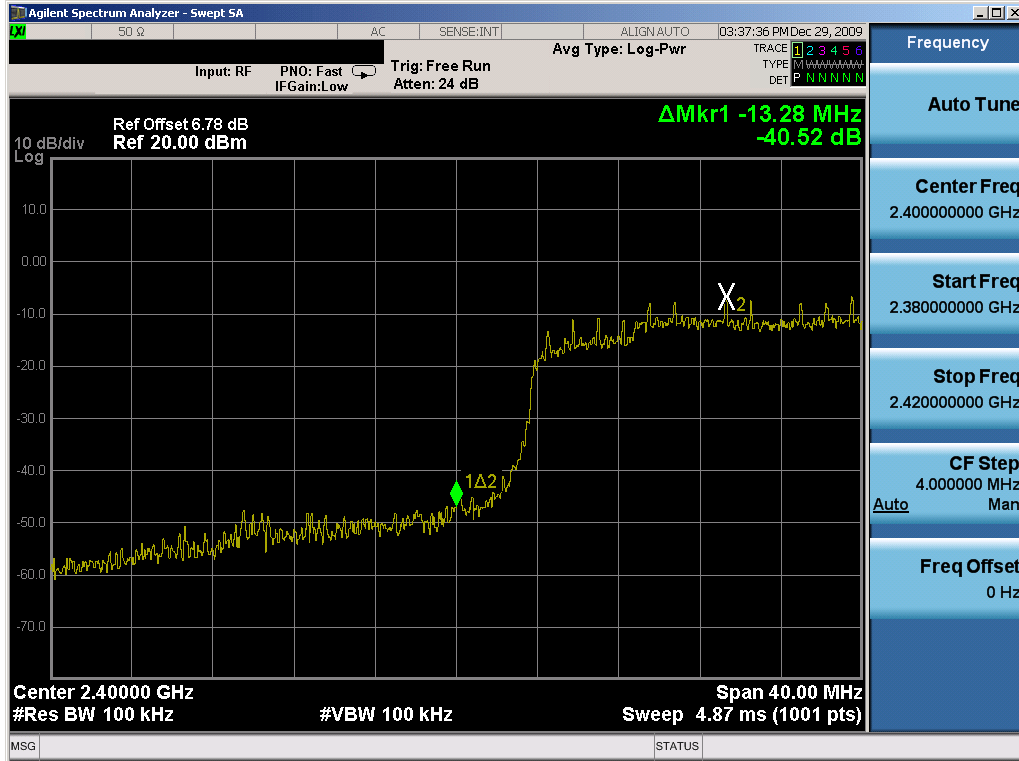


Plot 6-34. Band Edge Plot (802.11a – Ch. 149) – Chain A

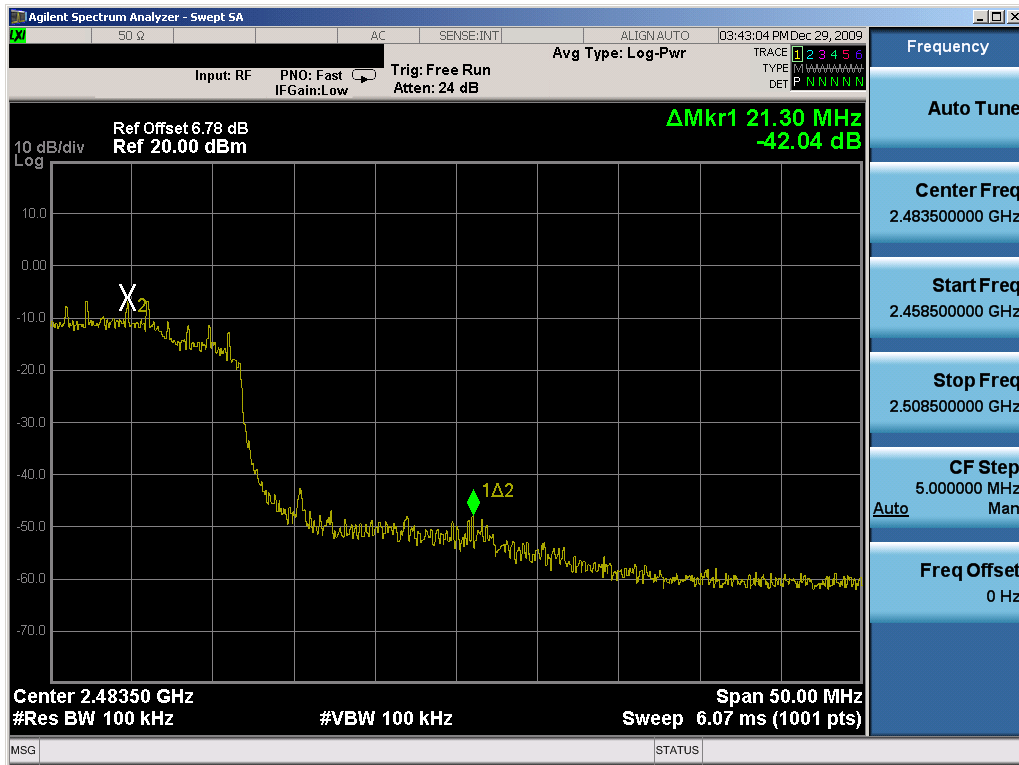


Plot 6-35. Band Edge Plot (802.11a – Ch. 165) – Chain A

FCC ID: ACJ9TGCF-19D		FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19		Page 42 of 89



Plot 6-36. Band Edge Plot (802.11n (2.4GHz) – Ch. 3) – Chain A



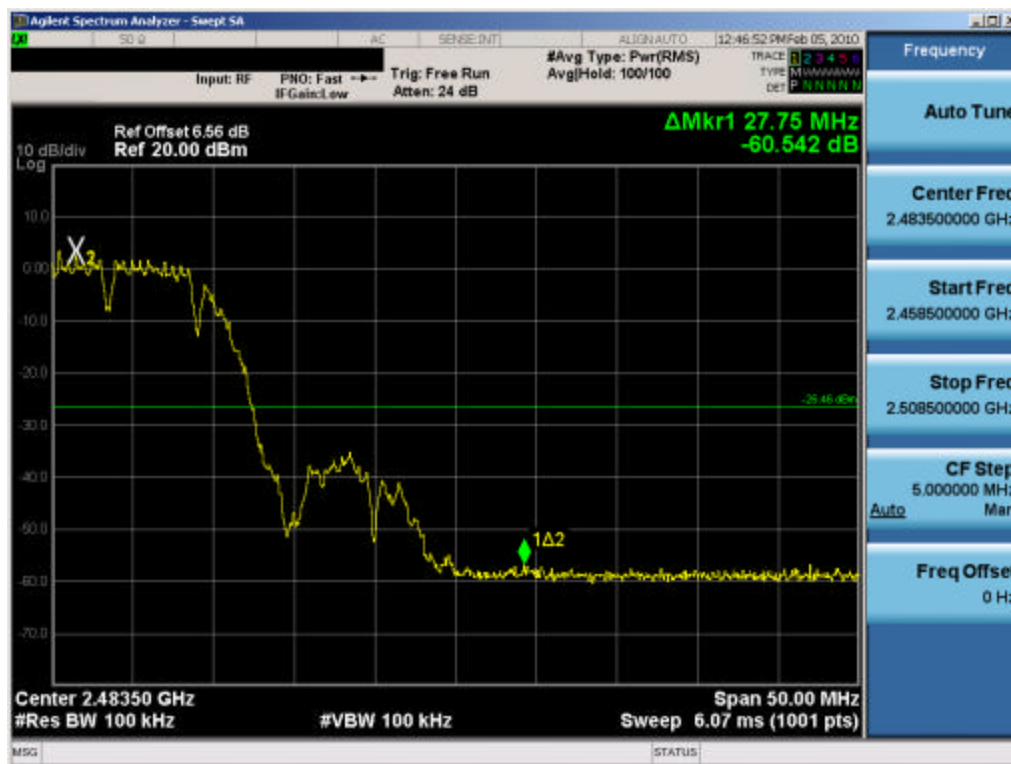
Plot 6-37. Band Edge Plot (802.11n (2.4GHz) – Ch. 9) – Chain A

FCC ID: ACJ9TGCF-19D		FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19		Page 43 of 89





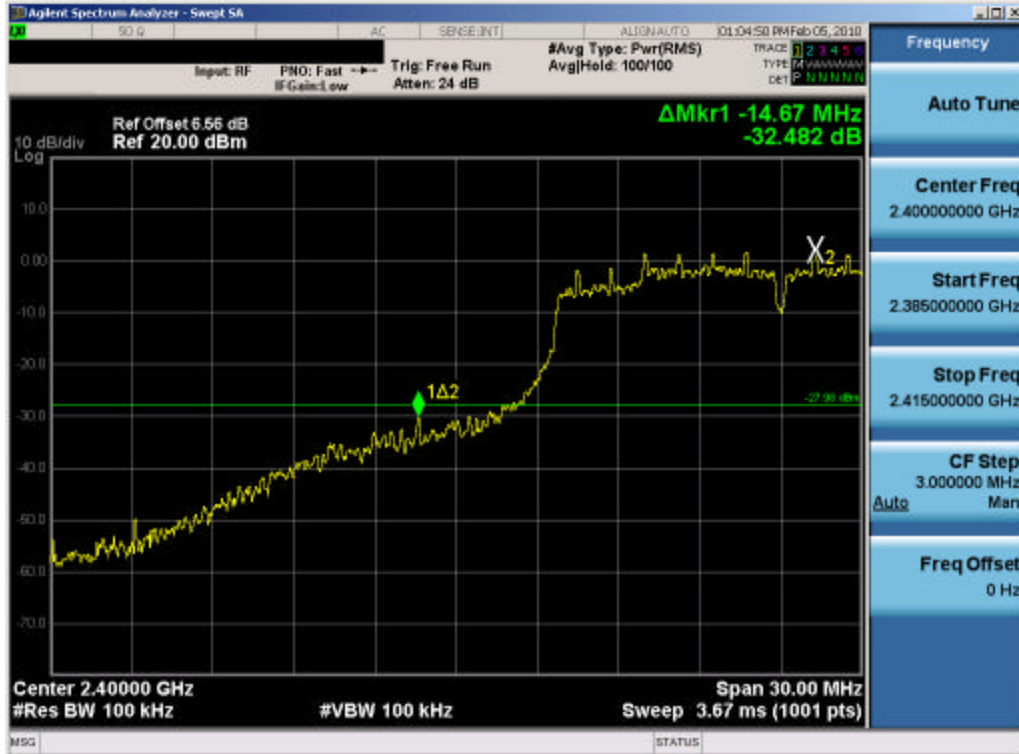


Plot 6-40. Band Edge Plot (802.11b – Ch. 1) – Chain B

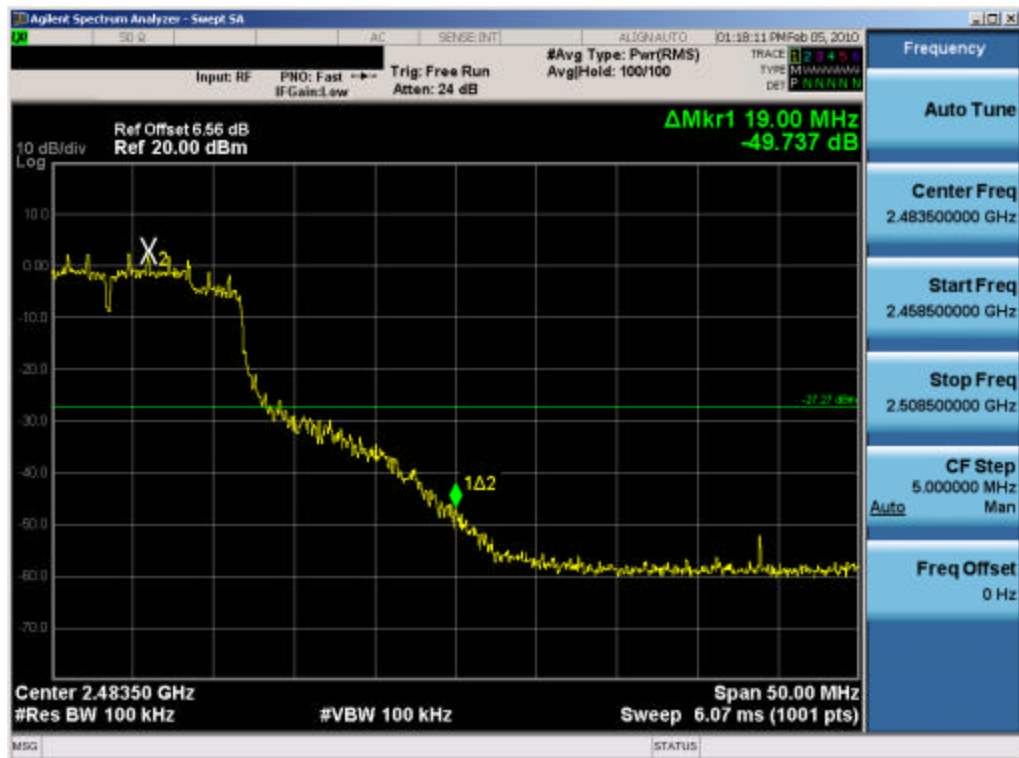


Plot 6-41. Band Edge Plot (802.11b – Ch. 1) – Chain B

FCC ID: ACJ9TGCF-19D		FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19		Page 45 of 89

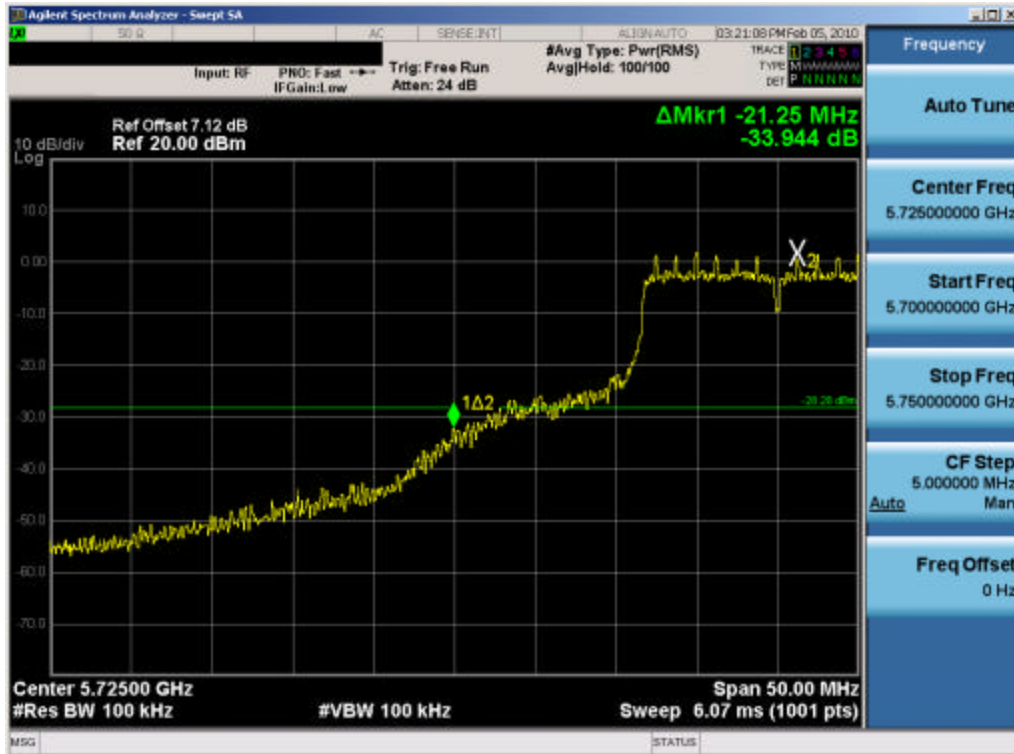


Plot 6-42. Band Edge Plot (802.11g– Ch. 1) – Chain B

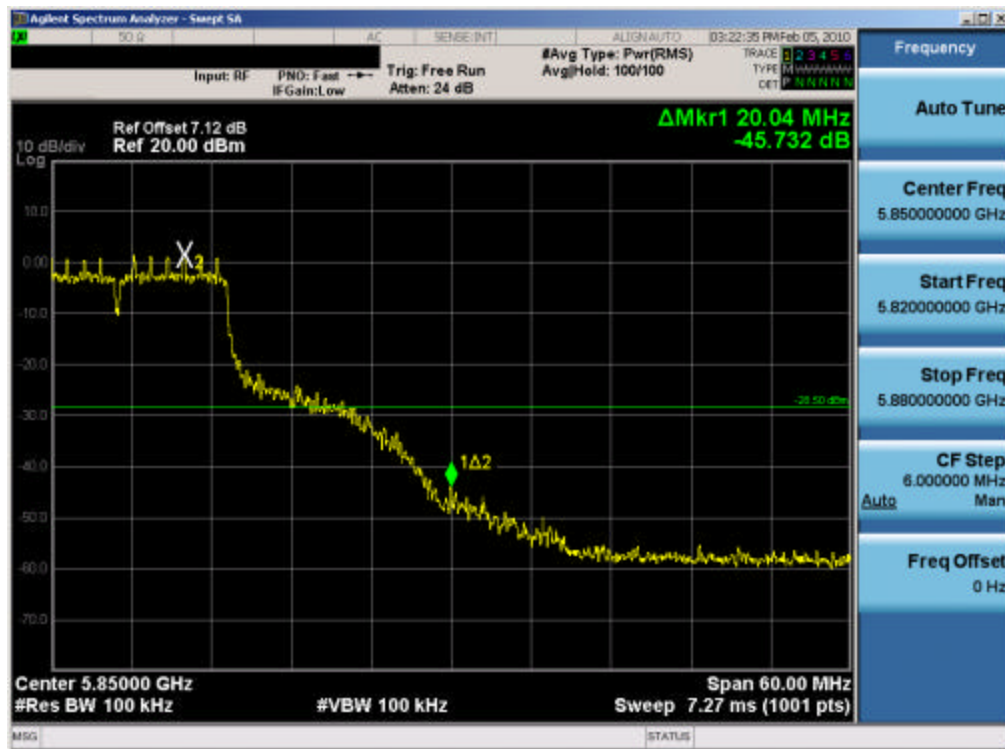


Plot 6-43. Band Edge Plot (802.11g – Ch. 11) – Chain B

FCC ID: ACJ9TGCF-19D		FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19		Page 46 of 89

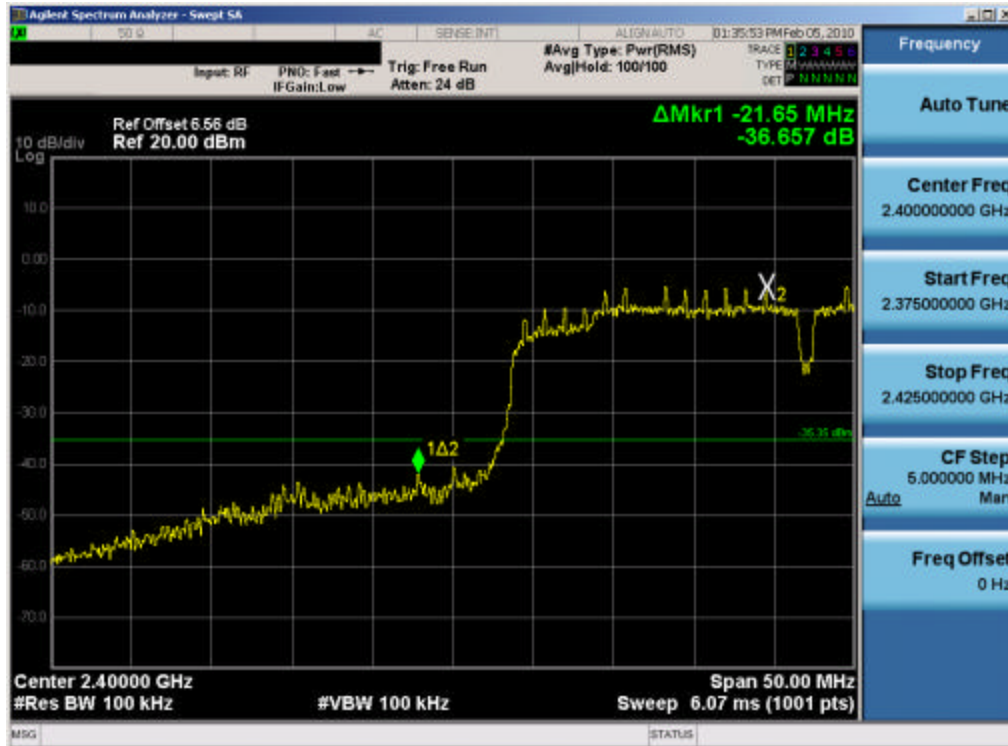


Plot 6-44. Band Edge Plot (802.11a – Ch. 149) – Chain B

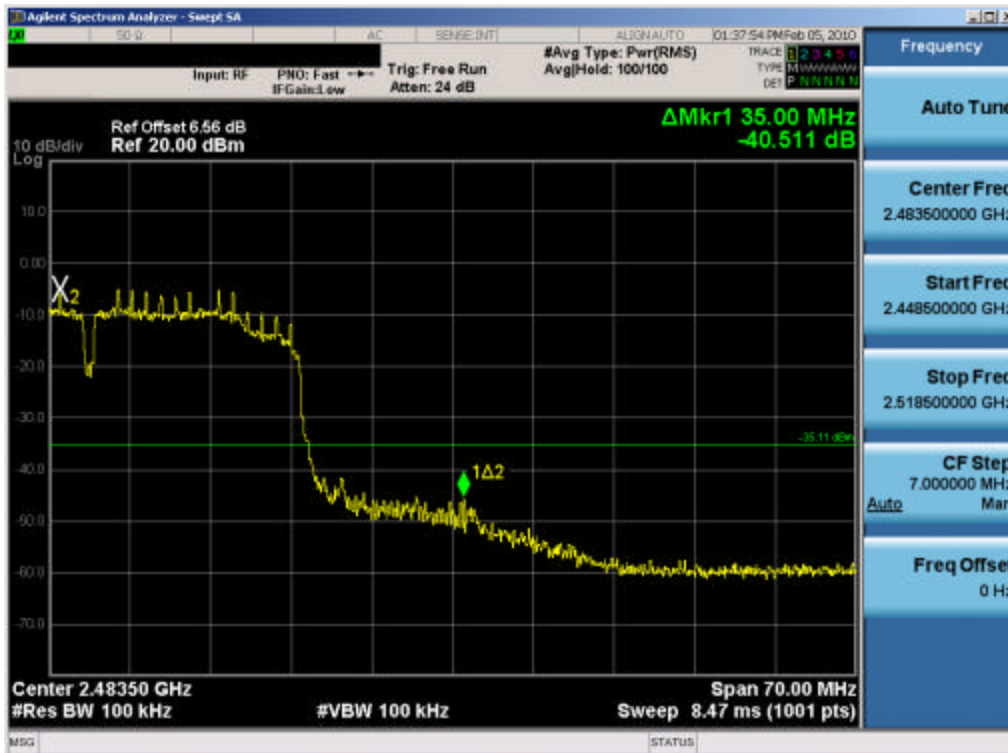


Plot 6-45. Band Edge Plot (802.11a – Ch. 165) – Chain B

FCC ID: ACJ9TGCF-19D	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)	Panasonic	Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19		Page 47 of 89

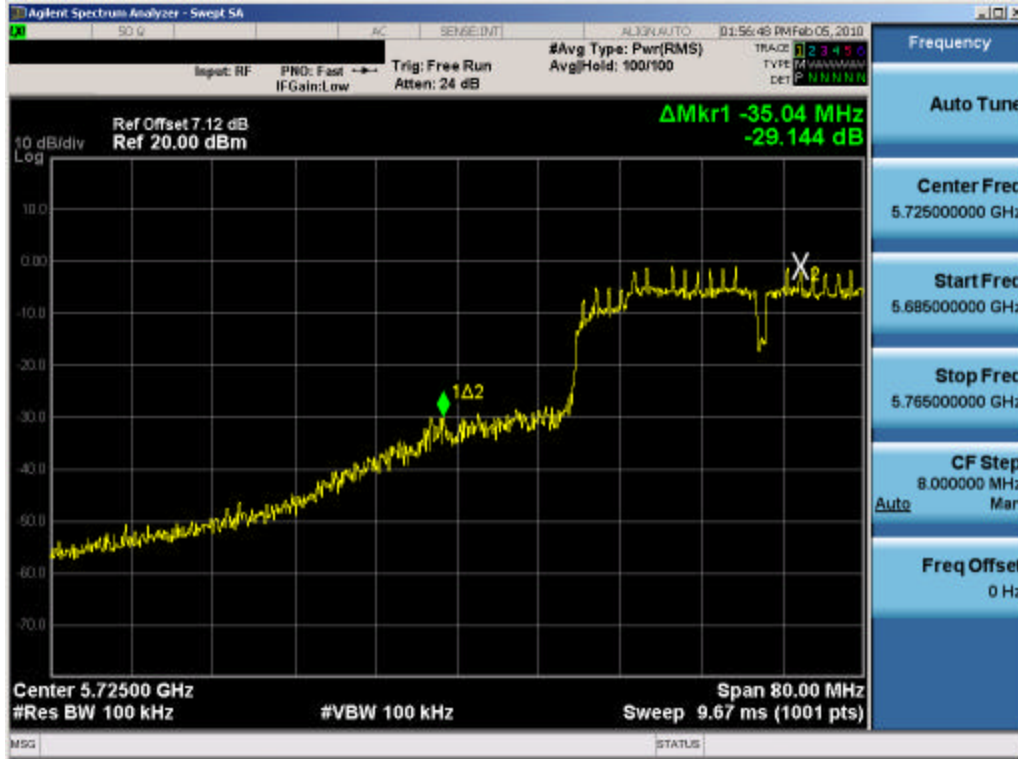


Plot 6-46. Band Edge Plot (802.11n (2.4GHz) – Ch. 3) – Chain B

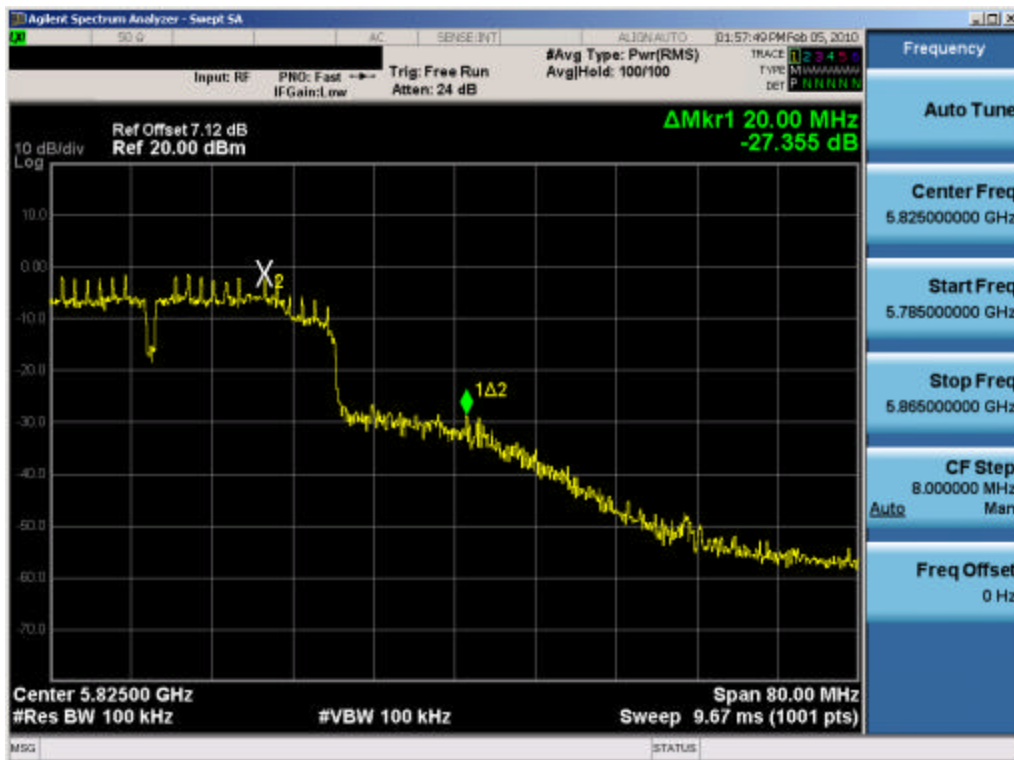


Plot 6-47. Band Edge Plot (802.11n (2.4GHz) – Ch. 9) – Chain B



FCC ID: ACJ9TGCF-19D	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)	Panasonic	Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19		Page 48 of 89



Plot 6-48. Band Edge Plot (802.11n (5.8GHz) – Ch. 151) – Chain B

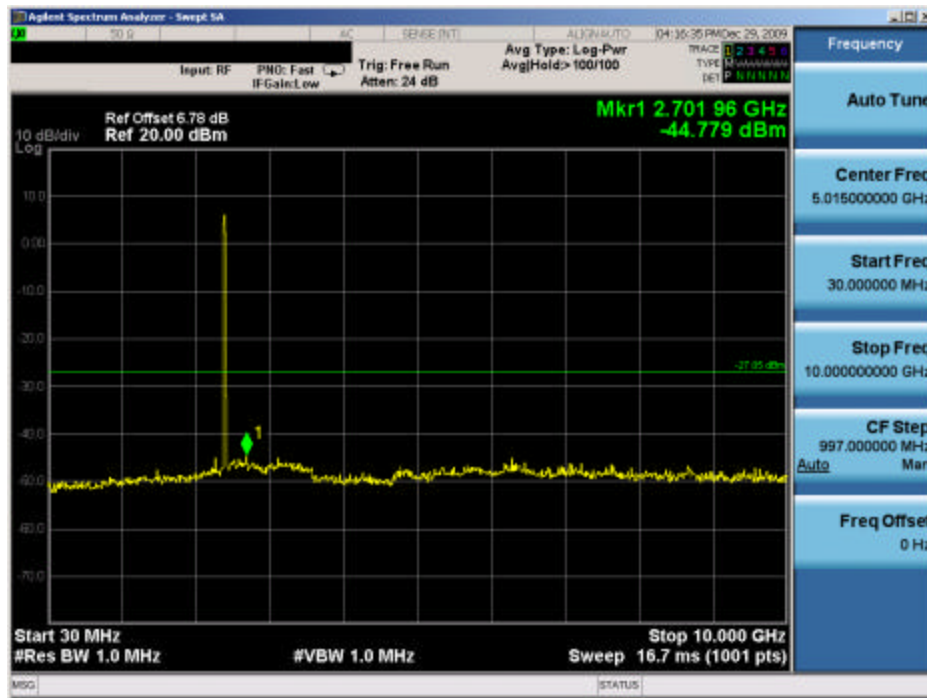


Plot 6-49. Band Edge Plot (802.11n (5.8GHz) – Ch. 159) – Chain B

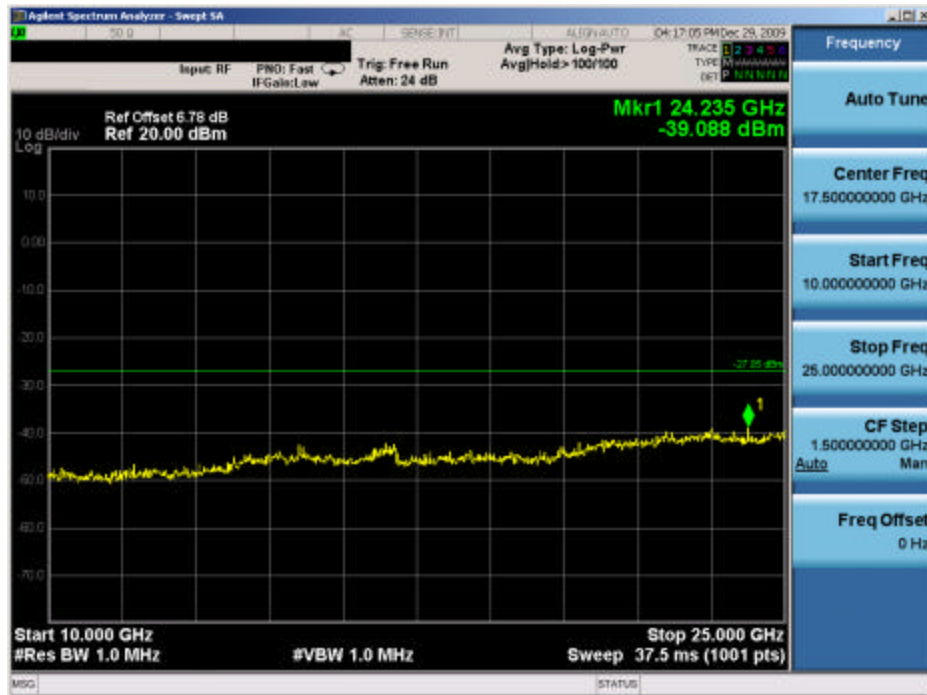
FCC ID: ACJ9TGCF-19D		FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19		Page 49 of 89

## 6.9 Out of Band Emissions

### §15.247(d)

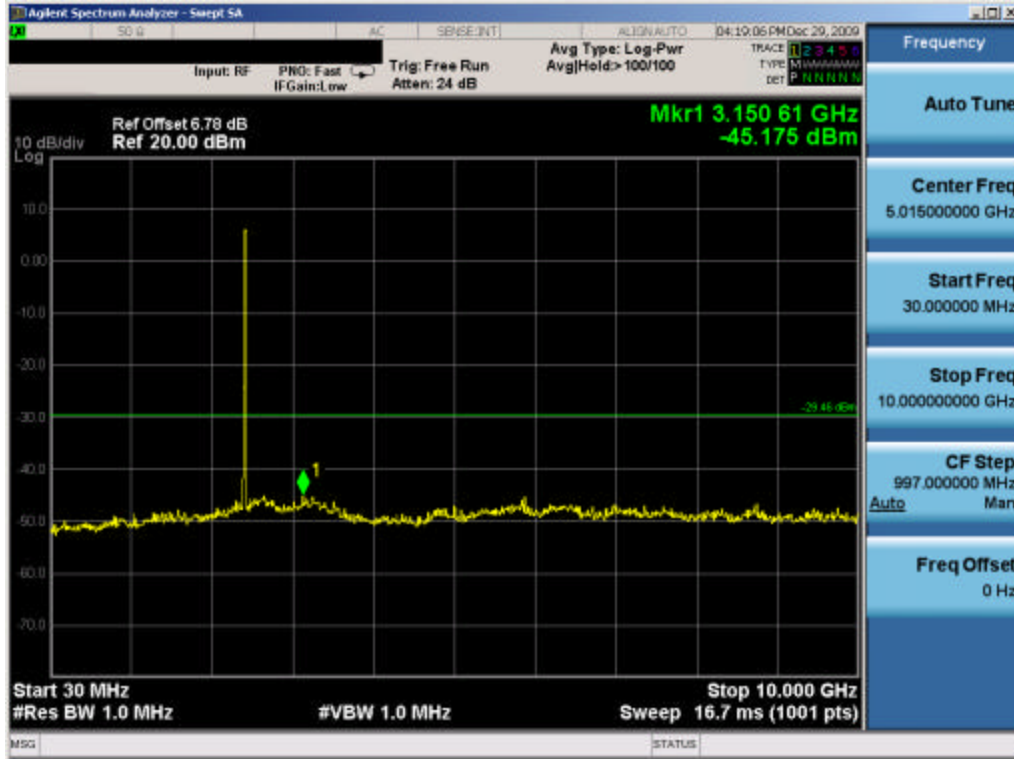


Plot 6-50. Conducted Spurious Plot (802.11b – Ch. 1) – Chain A



Plot 6-51. Conducted Spurious Plot (802.11b – Ch. 1) – Chain A



FCC ID: ACJ9TGCF-19D		FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19		Page 50 of 89

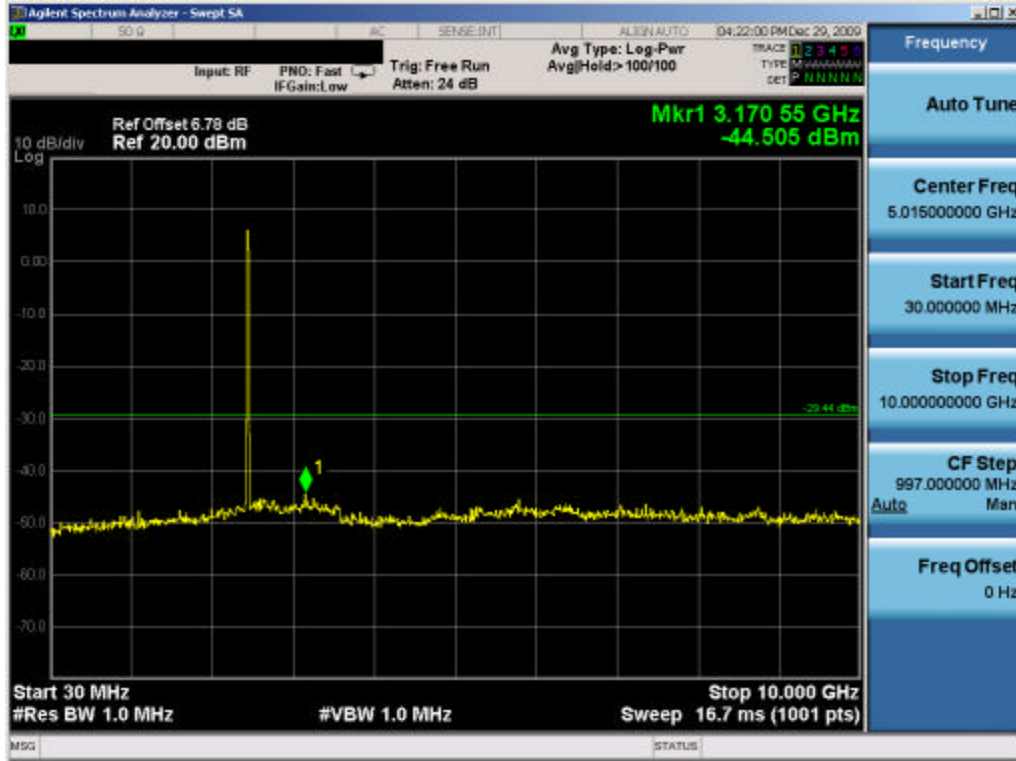


Plot 6-52. Conducted Spurious Plot (802.11b – Ch. 6) – Chain A

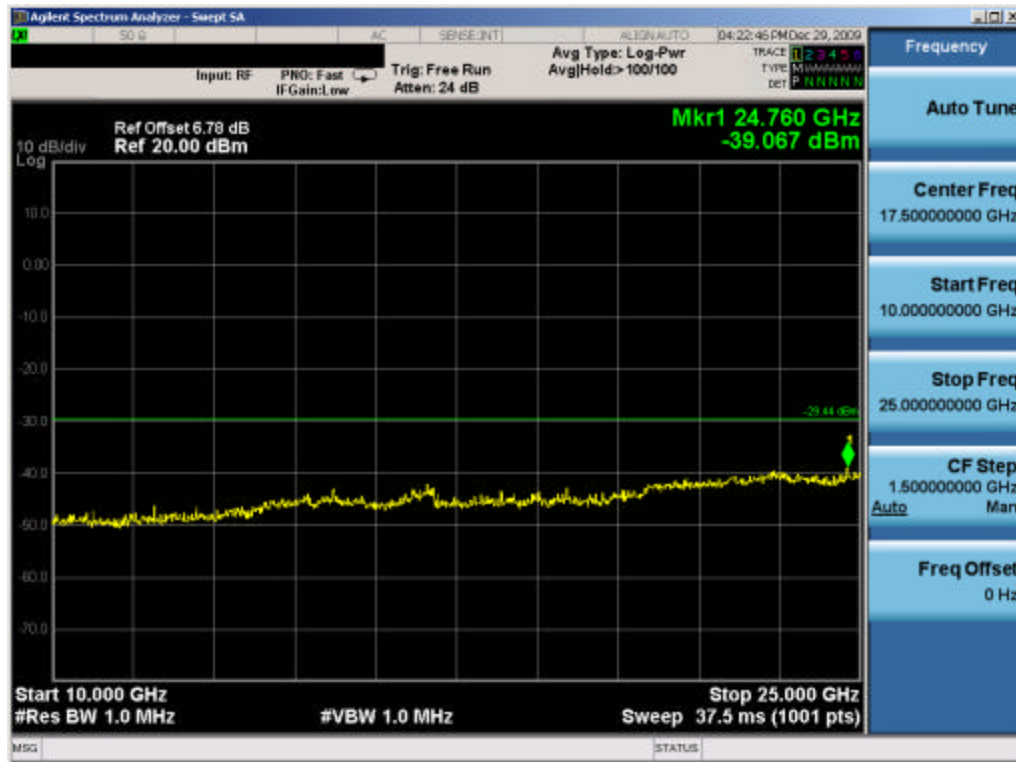


Plot 6-53. Conducted Spurious Plot (802.11b – Ch. 6) – Chain A



FCC ID: ACJ9TGCF-19D		FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19		Page 51 of 89

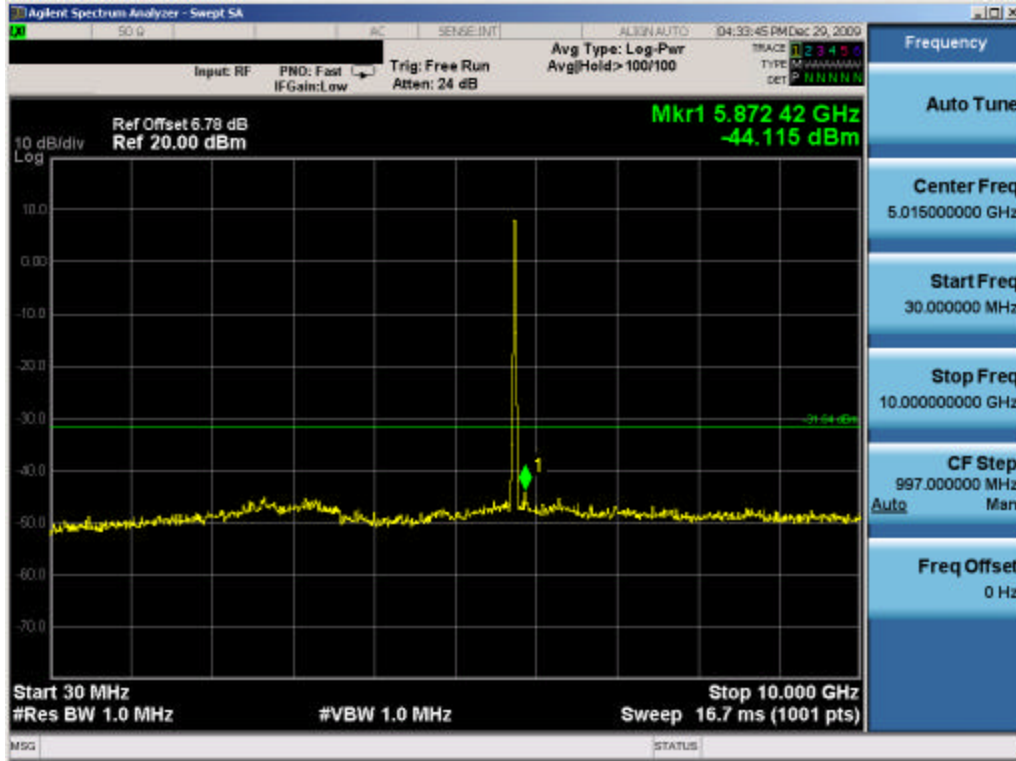


Plot 6-54. Conducted Spurious Plot (802.11b – Ch. 11) – Chain A



Plot 6-55. Conducted Spurious Plot (802.11b – Ch. 11) – Chain A

FCC ID: ACJ9TGCF-19D		FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19		Page 52 of 89

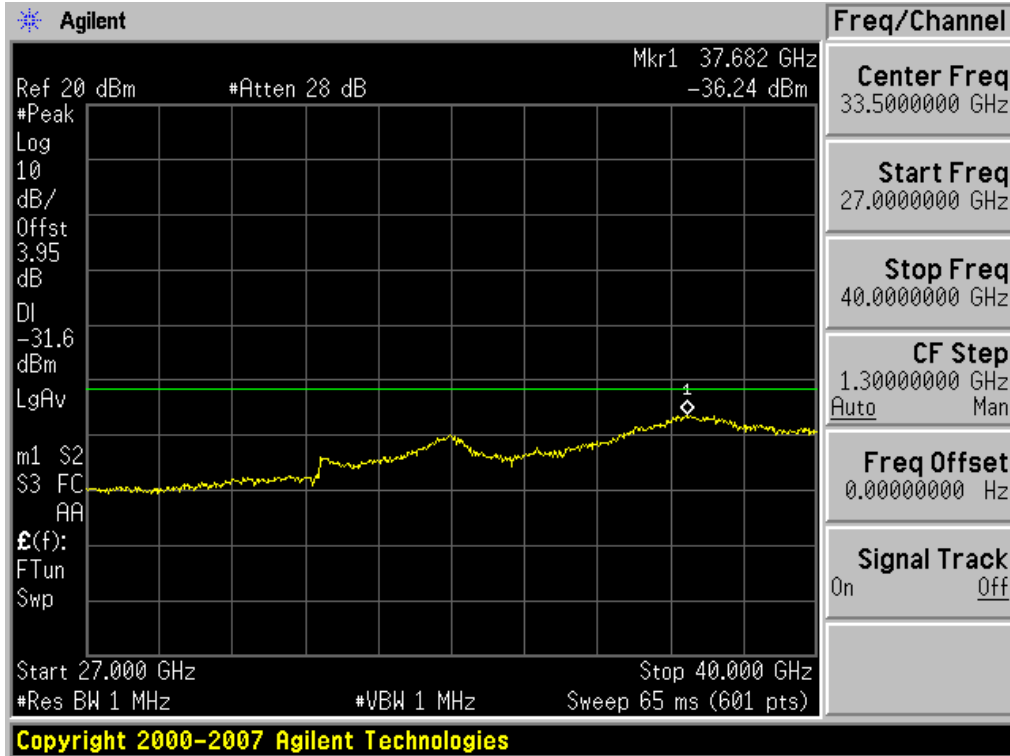


Plot 6-56. Conducted Spurious Plot (802.11a – Ch. 149) – Chain A

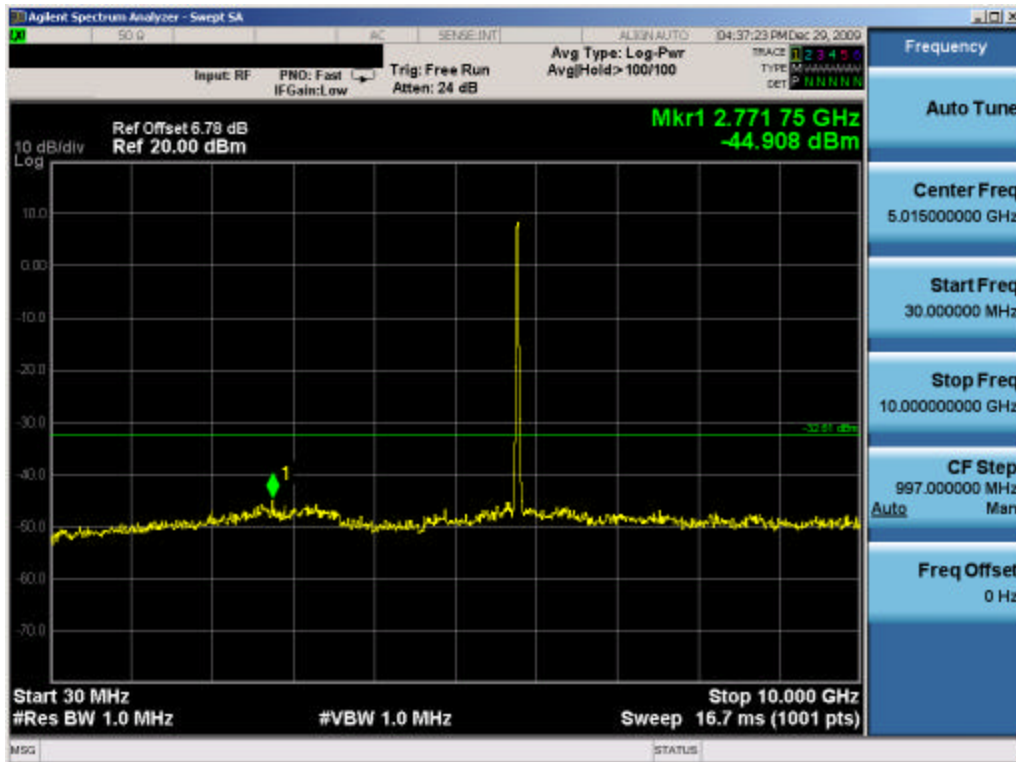


Plot 6-57. Conducted Spurious Plot (802.11a – Ch. 149) – Chain A

FCC ID: ACJ9TGCF-19D		FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19		Page 53 of 89



Plot 6-58. Conducted Spurious Plot (802.11a – Ch. 149) – Chain A

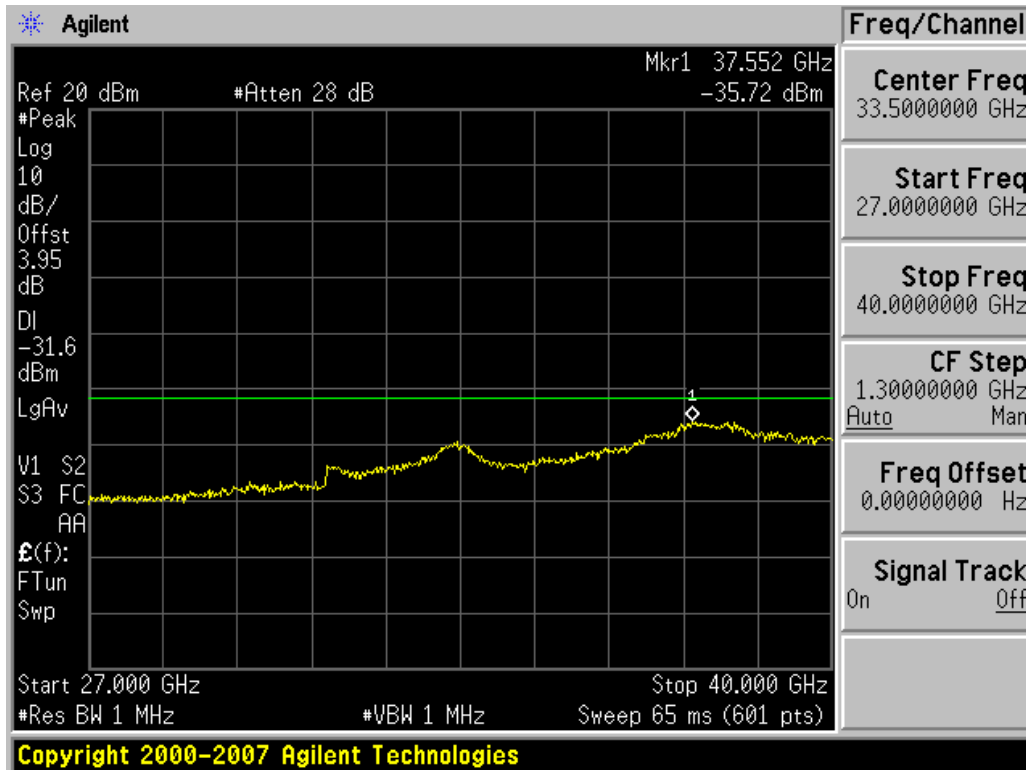


Plot 6-59. Conducted Spurious Plot (802.11a – Ch. 157) – Chain A

FCC ID: ACJ9TGCF-19D		FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: OY1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19		Page 54 of 89

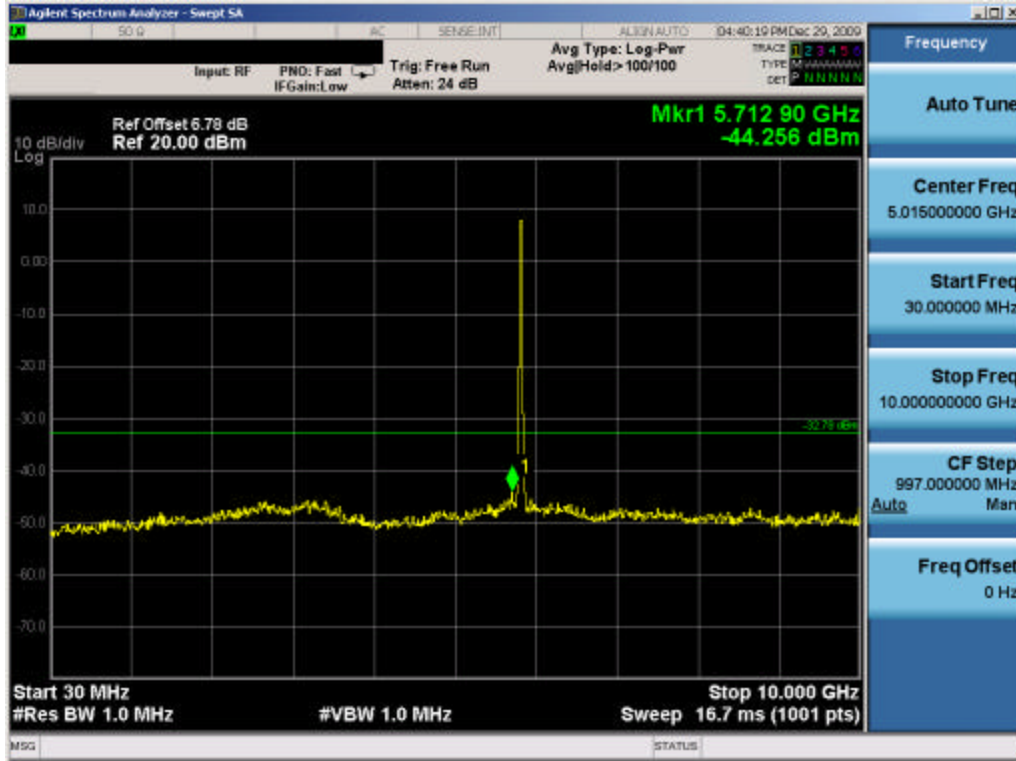


Plot 6-60. Conducted Spurious Plot (802.11a – Ch. 157) – Chain A



Plot 6-61. Conducted Spurious Plot (802.11a – Ch. 157) – Chain A



FCC ID: ACJ9TGCF-19D	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)	Panasonic	Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19		Page 55 of 89

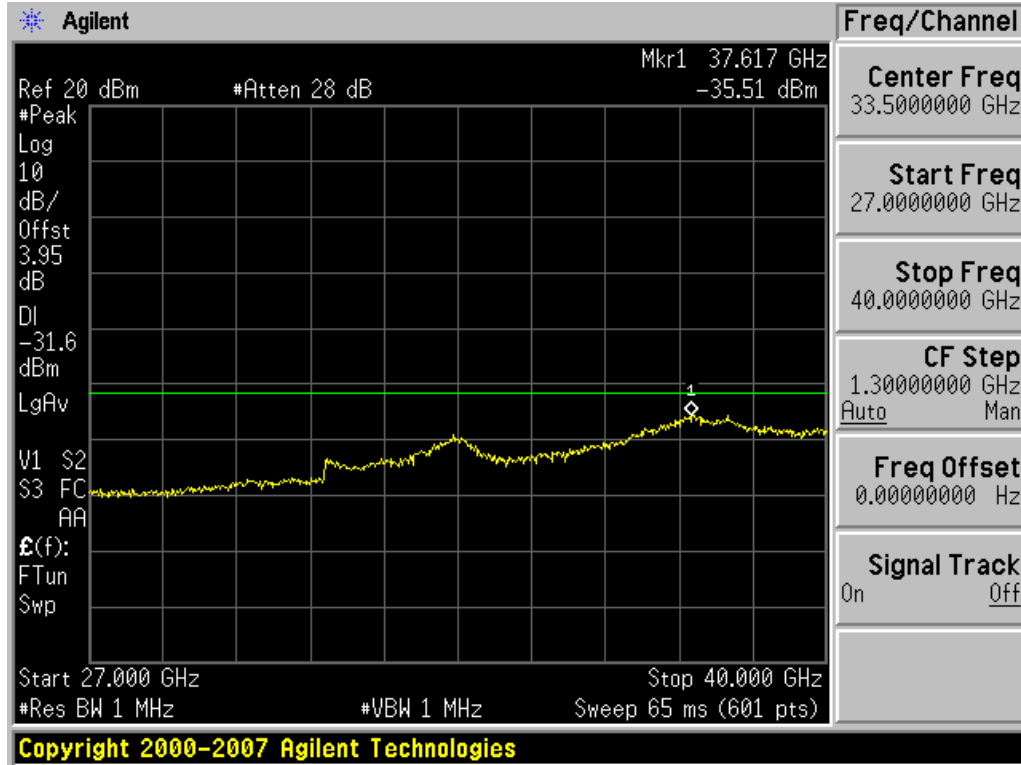


Plot 6-62. Conducted Spurious Plot (802.11a – Ch. 165) – Chain A

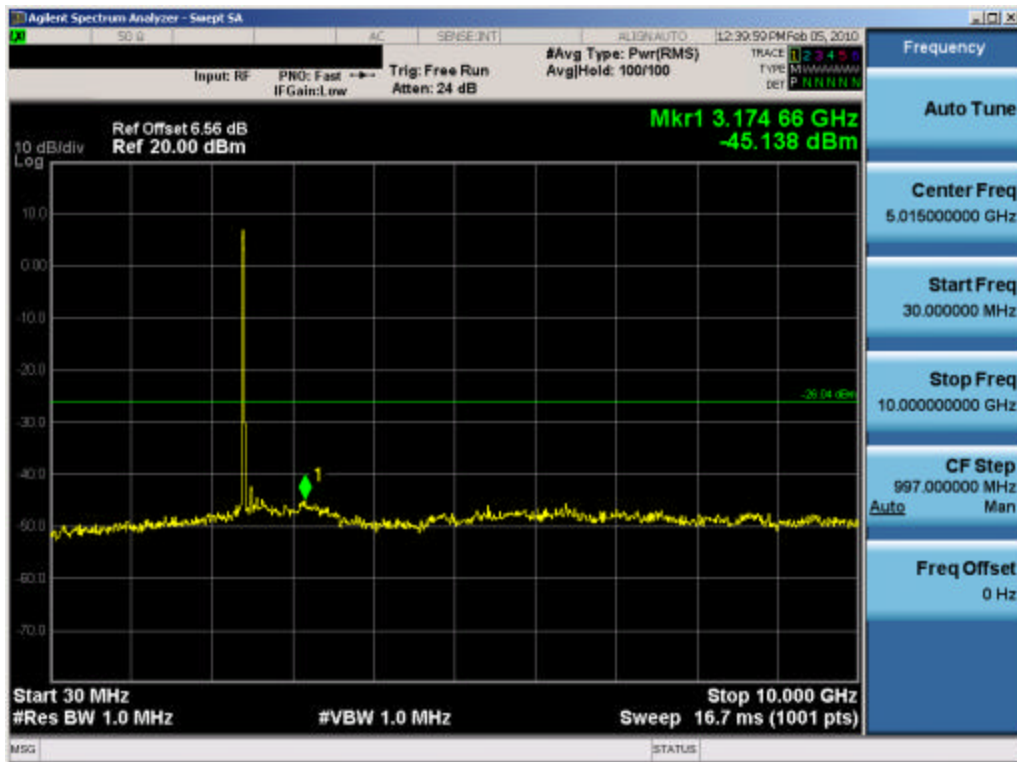


Plot 6-63. Conducted Spurious Plot (802.11a – Ch. 165) – Chain A

FCC ID: ACJ9TGCF-19D		FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19		Page 56 of 89



Plot 6-64. Conducted Spurious Plot (802.11a – Ch. 165) – Chain A

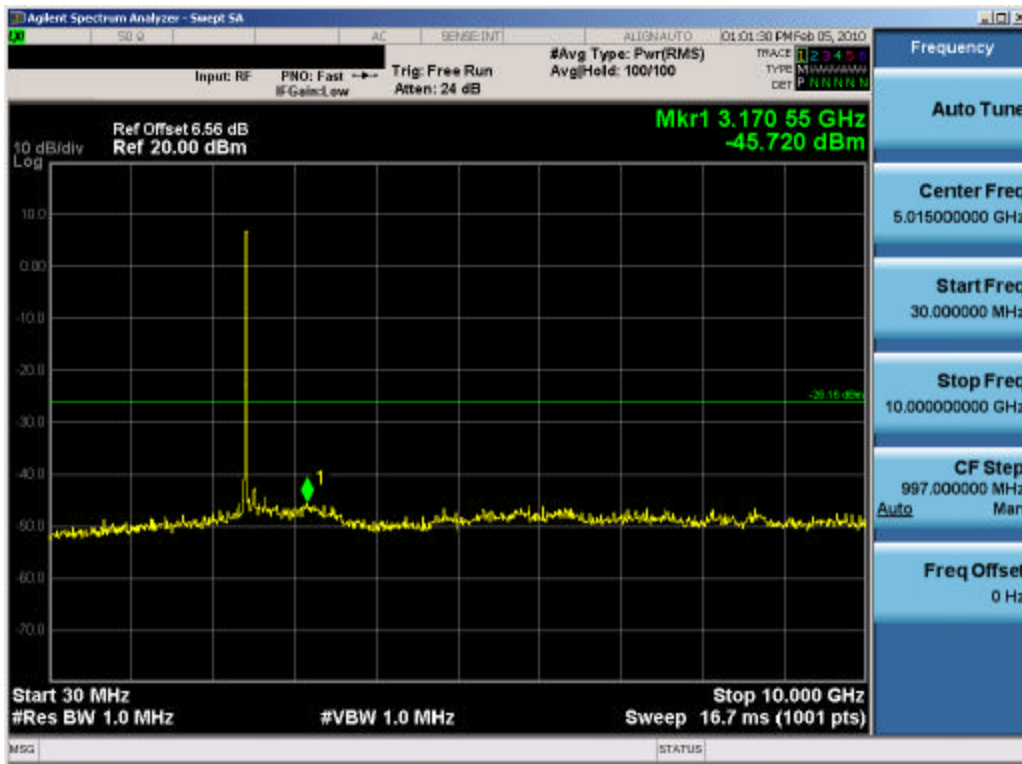


Plot 6-65. Conducted Spurious Plot (802.11b – Ch. 1) – Chain B



FCC ID: ACJ9TGCF-19D	<b>PCTEST</b> ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)	<b>Panasonic</b>	Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19		Page 57 of 89

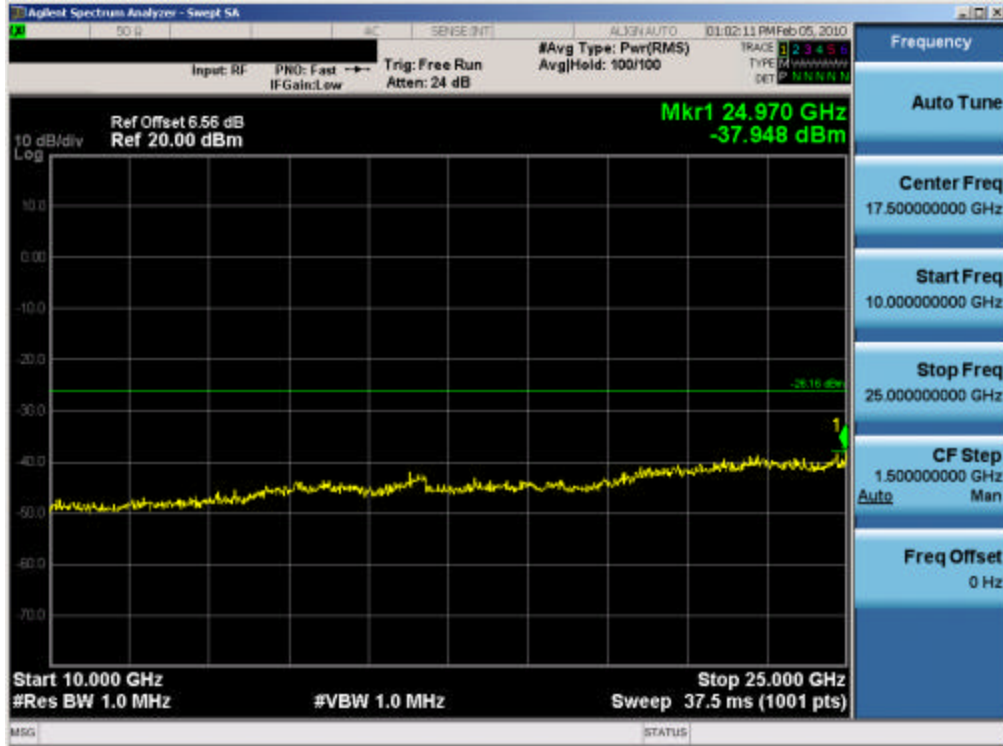


Plot 6-66. Conducted Spurious Plot (802.11b – Ch. 1) – Chain B

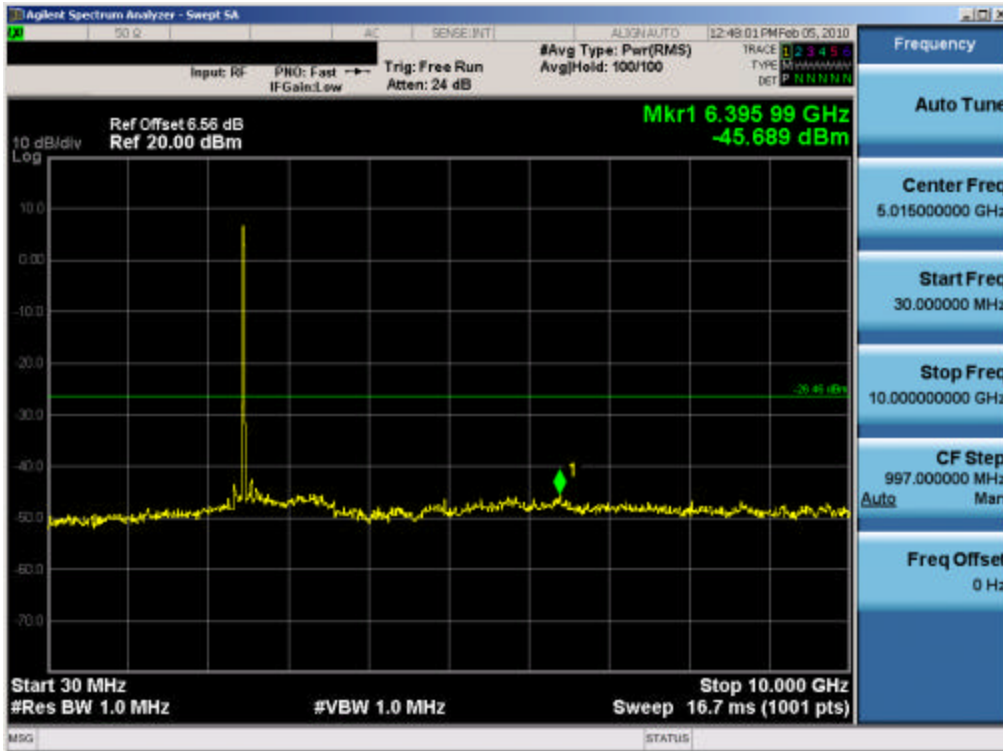


Plot 6-67. Conducted Spurious Plot (802.11b – Ch. 6) – Chain B



FCC ID: ACJ9TGCF-19D		FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19		Page 58 of 89

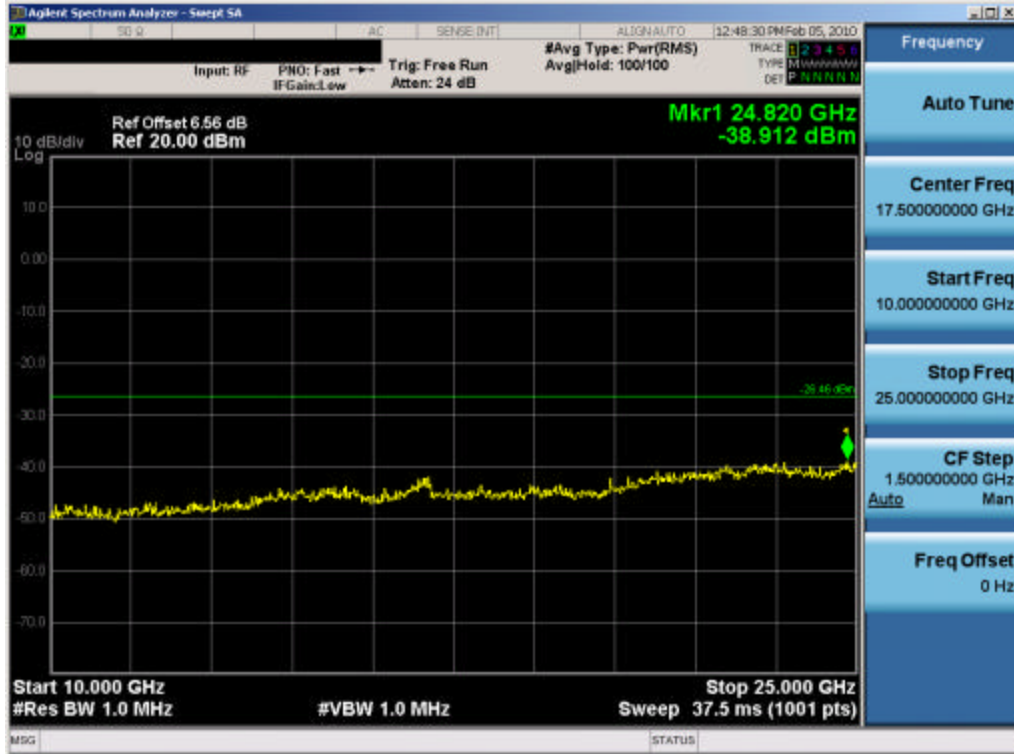


Plot 6-68. Conducted Spurious Plot (802.11b – Ch. 6) – Chain B

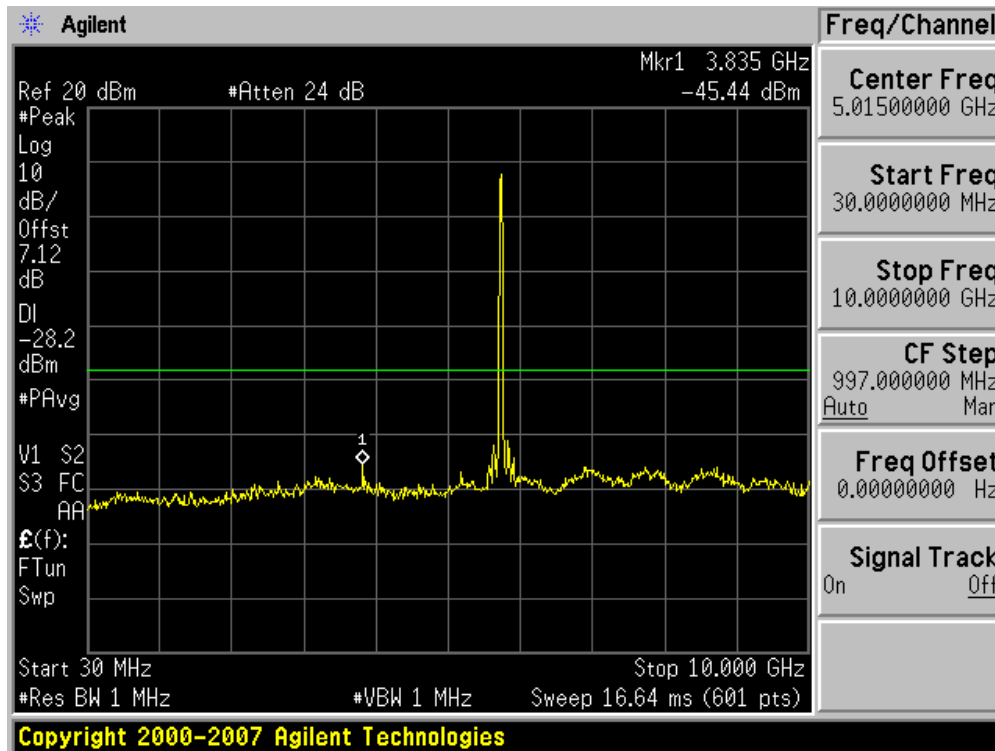


Plot 6-69. Conducted Spurious Plot (802.11b – Ch. 11) – Chain B

FCC ID: ACJ9TGCF-19D		FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19		Page 59 of 89



Plot 6-70. Conducted Spurious Plot (802.11b – Ch. 11) – Chain B

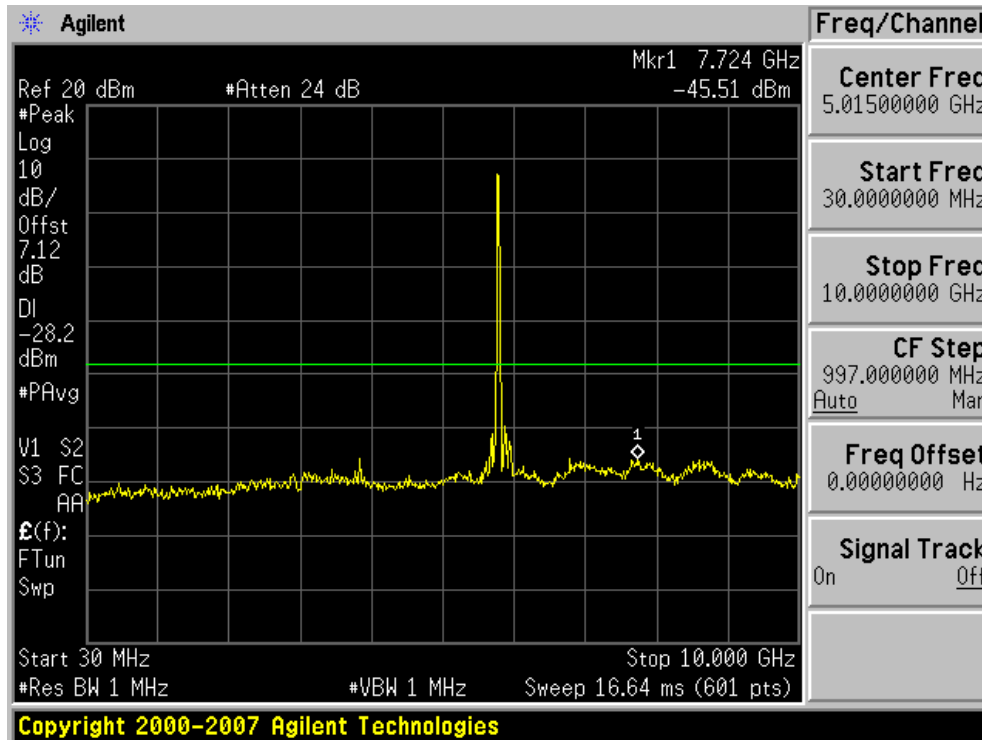


Plot 6-71. Conducted Spurious Plot (802.11a – Ch. 149) – Chain B

FCC ID: ACJ9TGCF-19D	<b>PCTEST</b> ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)	<b>Panasonic</b>	Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19		Page 60 of 89

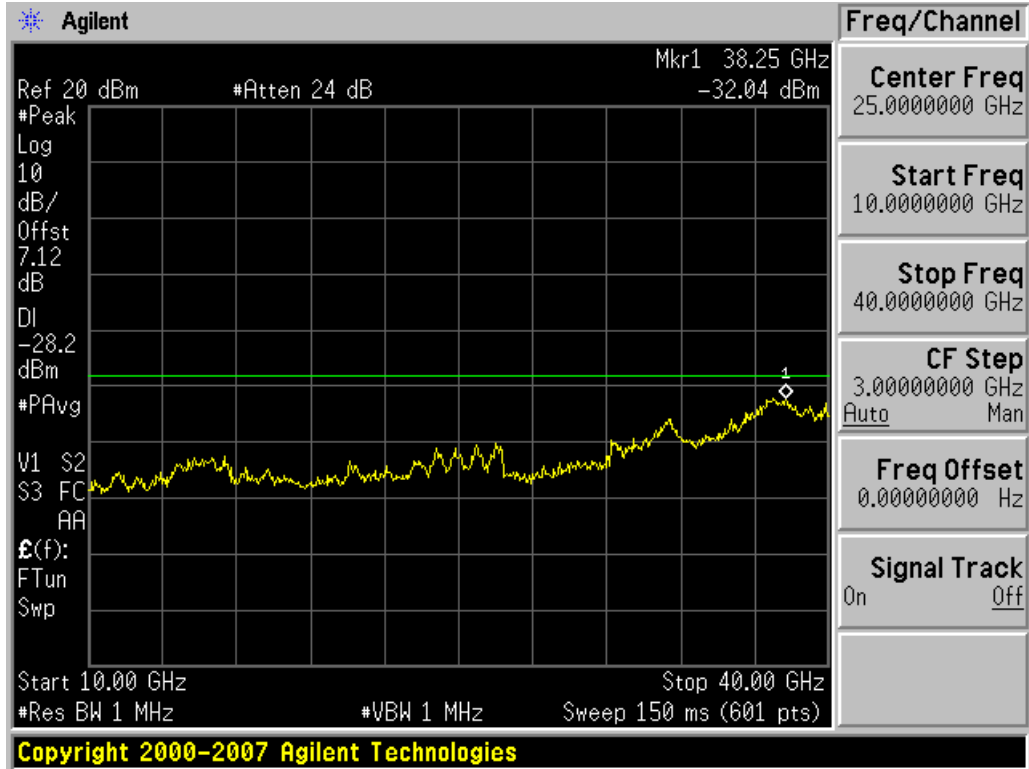


Plot 6-72. Conducted Spurious Plot (802.11a – Ch. 149) – Chain B

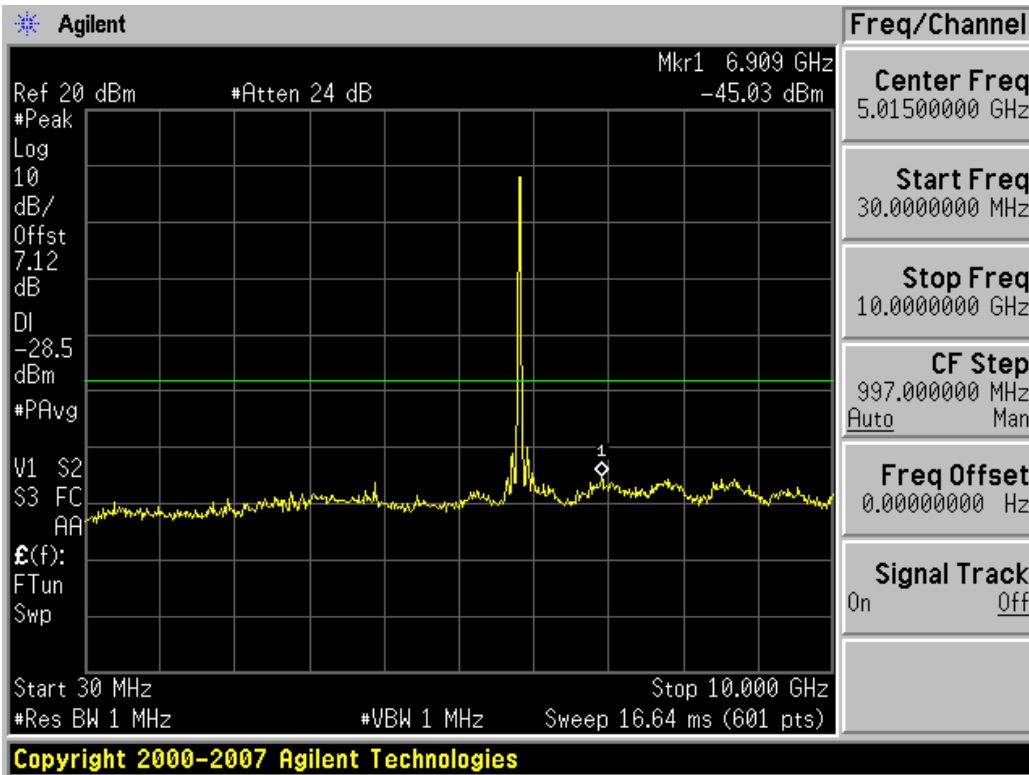


Plot 6-73. Conducted Spurious Plot (802.11a – Ch. 157) – Chain B

FCC ID: ACJ9TGCF-19D	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)	Panasonic	Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19		Page 61 of 89



Plot 6-74. Conducted Spurious Plot (802.11a – Ch. 157) – Chain B



Plot 6-75. Conducted Spurious Plot (802.11a – Ch. 165) – Chain B

FCC ID: ACJ9TGCF-19D	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)	Panasonic	Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19		Page 62 of 89



Plot 6-76. Conducted Spurious Plot (802.11a – Ch. 165) – Chain B

FCC ID: ACJ9TGCF-19D	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)	Panasonic	Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19		Page 63 of 89

## 6.10 Radiated Spurious Emission Measurements

### §15.247(d) / §15.205 & §15.209

The EUT was tested from 9kHz to the tenth harmonic of the fundamental frequency of the transmitter. Below 1GHz a CISPR quasi peak detector was used. Above 1 GHz average measurements were taken, using RBW= 1MHz, VBW= 10Hz, and linearly polarized horn antennas. In addition, peak measurements (RBW= 1MHz, VBW= 1MHz) were taken to ensure that the peak levels are not more than 20dB above the average limit. No harmonics/spurs peak emissions are more than 20dB above the average limit. Special attention is taken for the EUT's harmonic and spurious radiated emissions in the restricted bands of operations, as defined in Section 15.205.

Frequency	Field Strength [mV/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 6-21. Radiated Limits**

### Sample Calculation

- Field Strength Level [dB<sub>μV/m</sub>] = Analyzer Level [dBm] + 107 + AFCL [dB]

### Notes:

- AFCL = Antenna Factor [dB] + Cable Loss [dB]

FCC ID: ACJ9TGCF-19D		FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19	Page 64 of 89	

## Radiated Spurious Emission Measurements (Cont'd)

§15.247(d) / §15.205 & §15.209

Mode: 802.11b

Transfer Rate: 9 Mbps

Distance of Measurements: 3 Meters

Operating Frequency: 2412MHz



Channel: 01

Frequency [MHz]	Analyzer Level [dBm]	Detector	Pol. [H/V]	AFCL [dB]	Field Strength [dBmV/m]	Limit [dBmV/m]	Margin [dB]
4824.00	-114.40	Avg	V	41.2	33.85	53.98	-20.13
4824.00	-99.80	Peak	V	41.2	48.45	73.98	-25.53
12060.00	-135.00	Avg	V	56.2	28.17	53.98	-25.81
12060.00	-125.00	Peak	V	56.2	38.17	73.98	-35.81

**Table 6-22. Radiated Measurements @ 3 meters – Chain A**

Frequency [MHz]	Analyzer Level [dBm]	Detector	Pol. [H/V]	AFCL [dB]	Field Strength [dBmV/m]	Limit [dBmV/m]	Margin [dB]
4824.00	-117.00	Avg	V	41.2	31.25	53.98	-22.73
4824.00	-102.00	Peak	V	41.2	46.25	73.98	-27.73
12060.00	-135.00	Avg	V	56.2	28.17	53.98	-25.81
12060.00	-125.00	Peak	V	56.2	38.17	73.98	-35.81

**Table 6-23. Radiated Measurements @ 3 meters – Chain B**

FCC ID: ACJ9TGCF-19D		FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19		Page 65 of 89



**Radiated Spurious Emission Measurements (Cont'd)**  
**§15.247(d) / §15.205 & §15.209**

Frequency [MHz]	Analyzer Level [dBm]	Detector	Pol. [H/V]	AFCL [dB]	Field Strength [dBmV/m]	Limit [dBmV/m]	Margin [dB]
4824.00	-116.50	Avg	V	41.2	31.75	53.98	-22.23
4824.00	-102.50	Peak	V	41.2	45.75	73.98	-28.23
12060.00	-135.00	Avg	V	56.2	28.17	53.98	-25.81
12060.00	-125.00	Peak	V	56.2	38.17	73.98	-35.81

**Table 6-24. Radiated Measurements @ 3 meters – Chain A+B**

**NOTES:**

1. All emissions shown lie in the restricted bands specified in §15.205 are below the limit shown in Table 6-21.
2. Average Measurements > 1GHz using RBW = 1MHz VBW = 10Hz
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 10<sup>th</sup> harmonic and the worst-case emissions are reported. No significant emissions were found beyond the fifth harmonic for this device.
6. Levels at - 135 dBm represent the analyzer noise floor and signify that no emission was detected.
7. Above 960MHz the limit is 500  $\mu$ V/m (54dB $\mu$ /m) at 3 meters radiated.

FCC ID: ACJ9TGCF-19D		FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19	Page 66 of 89	

## Radiated Spurious Emission Measurements (Cont'd)

§15.247(d) / §15.205 & §15.209

Mode: 802.11b

Transfer Rate: 9 Mbps

Distance of Measurements: 3 Meter

Operating Frequency: 2437MHz



Channel: 06

Frequency [MHz]	Analyzer Level [dBm]	Detector	Pol. [H/V]	AFCL [dB]	Field Strength [dBmV/m]	Limit [dBmV/m]	Margin [dB]
4874.00	-114.51	Avg	V	41.38	33.86	53.98	-20.12
4874.00	-99.61	Peak	V	41.38	48.76	73.98	-25.22
7311.00	-135.00	Avg	V	46.50	18.50	53.98	-35.48
7311.00	-125.00	Peak	V	46.50	28.50	73.98	-45.48
12185.00	-135.00	Avg	V	56.44	28.44	53.98	-25.54
12185.00	-125.00	Peak	V	56.44	38.44	73.98	-35.54

**Table 6-25. Radiated Measurements @ 3 meters – Chain A**

Frequency [MHz]	Analyzer Level [dBm]	Detector	Pol. [H/V]	AFCL [dB]	Field Strength [dBmV/m]	Limit [dBmV/m]	Margin [dB]
4874.00	-115.51	Avg	V	41.38	32.86	53.98	-21.12
4874.00	-96.91	Peak	V	41.38	51.46	73.98	-22.52
7311.00	-135.00	Avg	V	46.50	18.50	53.98	-35.48
7311.00	-125.00	Peak	V	46.50	28.50	73.98	-45.48
12185.00	-135.00	Avg	V	56.44	28.44	53.98	-25.54
12185.00	-125.00	Peak	V	56.44	38.44	73.98	-35.54

**Table 6-26. Radiated Measurements @ 3 meters – Chain B**

FCC ID: ACJ9TGCF-19D		FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19		Page 67 of 89

## Radiated Spurious Emission Measurements (Cont'd)



§15.247(d) / §15.205 & §15.209

Frequency [MHz]	Analyzer Level [dBm]	Detector	Pol. [H/V]	AFCL [dB]	Field Strength [dBmV/m]	Limit [dBmV/m]	Margin [dB]
4874.00	-116.11	Avg	V	41.38	32.26	53.98	-21.72
4874.00	-102.01	Peak	V	41.38	46.36	73.98	-27.62
7311.00	-135.00	Avg	V	46.50	18.50	53.98	-35.48
7311.00	-125.00	Peak	V	46.50	28.50	73.98	-45.48
12185.00	-135.00	Avg	V	56.44	28.44	53.98	-25.54
12185.00	-125.00	Peak	V	56.44	38.44	73.98	-35.54

**Table 6-27. Radiated Measurements @ 3 meters – Chain A+B**

### NOTES:

1. All emissions shown lie in the restricted bands specified in §15.205 are below the limit shown in Table 6-21.
2. Average Measurements > 1GHz using RBW = 1MHz VBW = 10Hz
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 10<sup>th</sup> harmonic and the worst-case emissions are reported. No significant emissions were found beyond the fifth harmonic for this device.
6. Levels at - 135 dBm represent the analyzer noise floor and signify that no emission was detected.
7. Above 960MHz the limit is 500  $\mu$ V/m (54dB $\mu$ /m) at 3 meters radiated.

FCC ID: ACJ9TGCF-19D		FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19	Page 68 of 89	

## Radiated Spurious Emission Measurements (Cont'd)

§15.247(d) / §15.205 & §15.209

Mode: 802.11b

Transfer Rate: 9 Mbps

Distance of Measurements: 3 Meters

Operating Frequency: 2462MHz



Channel: 11

Frequency [MHz]	Analyzer Level [dBm]	Detector	Pol. [H/V]	AFCL [dB]	Field Strength [dBmV/m]	Limit [dBmV/m]	Margin [dB]
4924.00	-114.23	Avg	V	41.50	34.28	53.98	-19.70
4924.00	-99.23	Peak	V	41.50	49.28	73.98	-24.70
7386.00	-135.00	Avg	V	46.60	18.60	53.98	-35.38
7386.00	-125.00	Peak	V	46.60	28.60	73.98	-45.38
12310.00	-135.00	Avg	V	56.70	28.70	53.98	-25.28
12310.00	-125.00	Peak	V	56.70	38.70	73.98	-35.28

**Table 6-28. Radiated Measurements @ 3 meters – Chain A**

Frequency [MHz]	Analyzer Level [dBm]	Detector	Pol. [H/V]	AFCL [dB]	Field Strength [dBmV/m]	Limit [dBmV/m]	Margin [dB]
4924.00	-116.13	Avg	V	41.50	32.38	53.98	-21.60
4924.00	-101.33	Peak	V	41.50	47.18	73.98	-26.80
7386.00	-135.00	Avg	V	46.60	18.60	53.98	-35.38
7386.00	-125.00	Peak	V	46.60	28.60	73.98	-45.38
12310.00	-135.00	Avg	V	56.70	28.70	53.98	-25.28
12310.00	-125.00	Peak	V	56.70	38.70	73.98	-35.28

**Table 6-29. Radiated Measurements @ 3 meters – Chain B**

FCC ID: ACJ9TGCF-19D		FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19		Page 69 of 89

## Radiated Spurious Emission Measurements (Cont'd)



§15.247(d) / §15.205 & §15.209

Frequency [MHz]	Analyzer Level [dBm]	Detector	Pol. [H/V]	AFCL [dB]	Field Strength [dBmV/m]	Limit [dBmV/m]	Margin [dB]
4924.00	-116.03	Avg	V	41.50	32.48	53.98	-21.50
4924.00	-101.93	Peak	V	41.50	46.58	73.98	-27.40
7386.00	-135.00	Avg	V	46.60	18.60	53.98	-35.38
7386.00	-125.00	Peak	V	46.60	28.60	73.98	-45.38
12310.00	-135.00	Avg	V	56.70	28.70	53.98	-25.28
12310.00	-125.00	Peak	V	56.70	38.70	73.98	-35.28

**Table 6-30. Radiated Measurements @ 3 meters – Chain A+B**

### NOTES:

- All emissions shown lie in the restricted bands specified in §15.205 are below the limit shown in Table 6-21.
- Average Measurements > 1GHz using RBW = 1MHz VBW = 10Hz
- The antenna is manipulated through typical positions, polarity and length during the tests. The EUT is manipulated through three orthogonal planes.
- The EUT is supplied with nominal AC voltage and/or a new/fully-recharged battery.
- The spectrum is measured from 9kHz to the 10<sup>th</sup> harmonic and the worst-case emissions are reported. No significant emissions were found beyond the fifth harmonic for this device.
- Levels at - 135 dBm represent the analyzer noise floor and signify that no emission was detected.
- Above 960MHz the limit is 500  $\mu$ V/m (54dB $\mu$ /m) at 3 meters radiated.

FCC ID: ACJ9TGCF-19D		FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19		Page 70 of 89

## Radiated Spurious Emission Measurements (Cont'd)

§15.247(d) / §15.205 & §15.209

Mode: 802.11a

Transfer Rate: 6 Mbps

Distance of Measurements: 1 Meter

Operating Frequency: 5745MHz



Channel: 149

Frequency [MHz]	Analyzer Level [dBm]	Detector	Pol. [H/V]	AFCL [dB]	Distance Correction Factor [dB]	Field Strength [dBmV/m]	Limit [dBmV/m]	Margin [dB]
11490.00	-117.65	Avg	H	49.74	-9.54	29.6	53.98	-24.43
11490.00	-102.75	Peak	H	49.74	-9.54	44.5	73.98	-29.53
22980.00	-113.95	Avg	H	58.36	-9.54	41.9	53.98	-12.11
22980.00	-98.05	Peak	H	58.36	-9.54	57.8	73.98	-16.21

**Table 6-31. Radiated Measurements @ 1 meter – Chain A**

Frequency [MHz]	Analyzer Level [dBm]	Detector	Pol. [H/V]	AFCL [dB]	Distance Correction Factor [dB]	Field Strength [dBmV/m]	Limit [dBmV/m]	Margin [dB]
11490.00	-118.25	Avg	H	49.74	-9.54	29.0	53.98	-25.03
11490.00	-103.05	Peak	H	49.74	-9.54	44.2	73.98	-29.83
22980.00	-113.85	Avg	H	58.36	-9.54	42.0	53.98	-12.01
22980.00	-96.75	Peak	H	58.36	-9.54	59.1	73.98	-14.91

**Table 6-32. Radiated Measurements @ 1 meter – Chain B**

FCC ID: ACJ9TGCF-19D		FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19		Page 71 of 89

## Radiated Spurious Emission Measurements (Cont'd)



§15.247(d) / §15.205 & §15.209

Frequency [MHz]	Analyzer Level [dBm]	Detector	Pol. [H/V]	AFCL [dB]	Distance Correction Factor [dB]	Field Strength [dBmV/m]	Limit [dBmV/m]	Margin [dB]
11490.00	-117.45	Avg	H	49.74	-9.54	29.8	53.98	-24.23
11490.00	-103.45	Peak	H	49.74	-9.54	43.8	73.98	-30.23
22980.00	-114.05	Avg	H	58.36	-9.54	41.8	53.98	-12.21
22980.00	-97.05	Peak	H	58.36	-9.54	58.8	73.98	-15.21

**Table 6-33. Radiated Measurements @ 1 meter – Chain A+B**

**NOTES:**

- All emissions shown lie in the restricted bands specified in §15.205 are below the limit shown in Table 6-21.
- Average Measurements > 1GHz using RBW = 1MHz VBW = 10Hz
- The antenna is manipulated through typical positions, polarity and length during the tests. The EUT is manipulated through three orthogonal planes.
- The EUT is supplied with nominal AC voltage and/or a new/fully-recharged battery.
- The spectrum is measured from 9kHz to the 10<sup>th</sup> harmonic and the worst-case emissions are reported. No significant emissions were found beyond the fifth harmonic for this device.
- Levels at - 135 dBm represent the analyzer noise floor and signify that no emission was detected.
- Above 960MHz the limit is 500  $\mu$ V/m (54dB $\mu$ /m) at 3 meters radiated.

FCC ID: ACJ9TGCF-19D		FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19	Page 72 of 89	

## Radiated Spurious Emission Measurements (Cont'd)

§15.247(d) / §15.205 & §15.209

Mode: 802.11a

Transfer Rate: 6 Mbps

Distance of Measurements: 1 Meter

Operating Frequency: 5785MHz



Channel: 157

Frequency [MHz]	Analyzer Level [dBm]	Detector	Pol. [H/V]	AFCL [dB]	Distance Correction Factor [dB]	Field Strength [dBmV/m]	Limit [dBmV/m]	Margin [dB]
11570.00	-117.58	Avg	H	50.01	-9.54	29.9	53.98	-24.09
11570.00	-103.68	Peak	H	50.01	-9.54	43.8	73.98	-30.19

**Table 6-34. Radiated Measurements @ 1 meter – Chain A**

Frequency [MHz]	Analyzer Level [dBm]	Detector	Pol. [H/V]	AFCL [dB]	Distance Correction Factor [dB]	Field Strength [dBmV/m]	Limit [dBmV/m]	Margin [dB]
11570.00	-117.28	Avg	H	50.01	-9.54	30.2	53.98	-23.79
11570.00	-103.08	Peak	H	50.01	-9.54	44.4	73.98	-29.59

**Table 6-35. Radiated Measurements @ 1 meter – Chain B**

FCC ID: ACJ9TGCF-19D		FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19		Page 73 of 89



**Radiated Spurious Emission Measurements (Cont'd)**  
**§15.247(d) / §15.205 & §15.209**

Frequency [MHz]	Analyzer Level [dBm]	Detector	Pol. [H/V]	AFCL [dB]	Distance Correction Factor [dB]	Field Strength [dBmV/m]	Limit [dBmV/m]	Margin [dB]
11570.00	-117.28	Avg	H	50.01	-9.54	30.2	53.98	-23.79
11570.00	-102.48	Peak	H	50.01	-9.54	45.0	73.98	-28.99

**Table 6-36. Radiated Measurements @ 1 meter – Chain A+B**

**NOTES:**

1. All emissions shown lie in the restricted bands specified in §15.205 are below the limit shown in Table 6-21.
2. Average Measurements > 1GHz using RBW = 1MHz VBW = 10Hz
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 10<sup>th</sup> harmonic and the worst-case emissions are reported. No significant emissions were found beyond the fifth harmonic for this device.
6. Levels at - 135 dBm represent the analyzer noise floor and signify that no emission was detected.
7. Above 960MHz the limit is 500 µV/m (54dBµ/m) at 3 meters radiated.

FCC ID: ACJ9TGCF-19D		FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19	Page 74 of 89	

**Radiated Spurious Emission Measurements (Cont'd)**  
§15.247(d) / §15.205 & §15.209

Mode: 802.11a

Transfer Rate: 6 Mbps

Distance of Measurements: 1 Meter

Operating Frequency: 5825MHz

Channel: 165

Frequency [MHz]	Analyzer Level [dBm]	Detector	Pol. [H/V]	AFCL [dB]	Distance Correction Factor [dB]	Field Strength [dBmV/m]	Limit [dBmV/m]	Margin [dB]
11650.00	-117.81	Avg	H	50.29	-9.54	29.9	53.98	-24.04
11650.00	-102.91	Peak	H	50.29	-9.54	44.8	73.98	-29.14

**Table 6-37. Radiated Measurements @ 1 meter – Chain A**

Frequency [MHz]	Analyzer Level [dBm]	Detector	Pol. [H/V]	AFCL [dB]	Distance Correction Factor [dB]	Field Strength [dBmV/m]	Limit [dBmV/m]	Margin [dB]
11650.00	-117.41	Avg	H	50.29	-9.54	30.3	53.98	-23.64
11650.00	-102.41	Peak	H	50.29	-9.54	45.3	73.98	-28.64

**Table 6-38. Radiated Measurements @ 1 meter – Chain B**

## Radiated Spurious Emission Measurements (Cont'd)



§15.247(d) / §15.205 & §15.209

Frequency [MHz]	Analyzer Level [dBm]	Detector	Pol. [H/V]	AFCL [dB]	Distance Correction Factor [dB]	Field Strength [dBmV/m]	Limit [dBmV/m]	Margin [dB]
11650.00	-117.31	Avg	H	50.29	-9.54	30.4	53.98	-23.54
11650.00	-102.41	Peak	H	50.29	-9.54	45.3	73.98	-28.64

**Table 6-39. Radiated Measurements @ 1 meter – Chain A+B**

**NOTES:**

- All emissions shown lie in the restricted bands specified in §15.205 are below the limit shown in Table 6-21.
- Average Measurements > 1GHz using RBW = 1MHz VBW = 10Hz
- The antenna is manipulated through typical positions, polarity and length during the tests. The EUT is manipulated through three orthogonal planes.
- The EUT is supplied with nominal AC voltage and/or a new/fully-recharged battery.
- The spectrum is measured from 9kHz to the 10<sup>th</sup> harmonic and the worst-case emissions are reported. No significant emissions were found beyond the fifth harmonic for this device.
- Levels at - 135 dBm represent the analyzer noise floor and signify that no emission was detected.
- Above 960MHz the limit is 500 µV/m (54dBµ/m) at 3 meters radiated.

FCC ID: ACJ9TGCF-19D		FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19	Page 76 of 89	

## 6.11 Radiated Restricted Band Edge Measurements §15.205 / §15.209



Mode: 802.11g  
 Transfer Rate: 9 Mbps  
 Distance of Measurements: 1 Meters  
 Operating Frequency: 2462MHz  
 Channel: 11

Frequency [MHz]	Analyzer Level [dBm]	Detector	Pol. [H/V]	AFCL [dB]	Distance Correction Factor [dB]	Field Strength [dBmV/m]	Limit [dBmV/m]	Margin [dB]
2484.10	-88.80	Avg	H	34.5	-9.54	43.12	53.98	-10.86
2484.10	-72.60	Peak	H	34.5	-9.54	59.32	73.98	-14.66
2485.50	-90.60	Avg	H	34.5	-9.54	41.32	53.98	-12.66
2485.50	-74.80	Peak	H	34.5	-9.54	57.12	73.98	-16.86
2486.50	-91.40	Avg	H	34.5	-9.54	40.52	53.98	-13.45
2486.50	-76.10	Peak	H	34.5	-9.54	55.82	73.98	-18.15

**Table 6-40. Radiated Restricted Band Measurements at 1-meter – Chain A**

Frequency [MHz]	Analyzer Level [dBm]	Detector	Pol. [H/V]	AFCL [dB]	Distance Correction Factor [dB]	Field Strength [dBmV/m]	Limit [dBmV/m]	Margin [dB]
2483.60	-88.40	Avg	H	34.46	-9.54	43.52	53.98	-10.46
2483.60	-71.70	Peak	H	34.46	-9.54	60.22	73.98	-13.76
2484.50	-89.70	Avg	H	34.46	-9.54	42.22	53.98	-11.76
2484.50	-73.60	Peak	H	34.46	-9.54	58.32	73.98	-15.66
2485.80	-91.00	Avg	H	34.47	-9.54	40.92	53.98	-13.05
2485.80	-75.30	Peak	H	34.47	-9.54	56.62	73.98	-17.35

**Table 6-41. Radiated Restricted Band Measurements at 1-meter – Chain B**

FCC ID: ACJ9TGCF-19D		FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19		Page 77 of 89

## Radiated Spurious Emission Measurements (Cont'd)



§15.247(d) / §15.205 & §15.209

Frequency [MHz]	Analyzer Level [dBm]	Detector	Pol. [H/V]	AFCL [dB]	Distance Correction Factor [dB]	Field Strength [dBmV/m]	Limit [dBmV/m]	Margin [dB]
2483.50	-87.30	Avg	H	34.5	-9.54	44.62	53.98	-9.36
2483.50	-72.20	Peak	H	34.5	-9.54	59.72	73.98	-14.26
2484.30	-88.70	Avg	H	34.5	-9.54	43.22	53.98	-10.76
2484.30	-70.60	Peak	H	34.5	-9.54	61.32	73.98	-12.66
2485.50	-90.50	Avg	H	34.5	-9.54	41.42	53.98	-12.55
2485.50	-73.80	Peak	H	34.5	-9.54	58.12	73.98	-15.85

**Table 6-42. Radiated Restricted Band Measurements at 1-meters – Chain A+B**

### NOTES:

- All emissions shown lie in the restricted bands specified in §15.205 are below the limit shown in Table 6-21.
- Average Measurements > 1GHz using RBW = 1MHz VBW = 10Hz
- The antenna is manipulated through typical positions, polarity and length during the tests. The EUT is manipulated through three orthogonal planes.
- The EUT is supplied with nominal AC voltage and/or a new/fully-recharged battery.
- The spectrum is measured from 9kHz to the 10<sup>th</sup> harmonic and the worst-case emissions are reported. No significant emissions were found beyond the fifth harmonic for this device.
- Levels at - 135 dBm represent the analyzer noise floor and signify that no emission was detected.
- Above 960MHz the limit is 500  $\mu$ V/m (54dB $\mu$ /m) at 3 meters radiated.

FCC ID: ACJ9TGCF-19D		FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19		Page 78 of 89

## Radiated Restricted Band Edge Measurements §15.205 / §15.209



Mode: 802.11n  
 Transfer Rate: 40/45 Mbps  
 Distance of Measurements: 1 Meter  
 Operating Frequency: 2452MHz  
 Channel: 9

Frequency [MHz]	Analyzer Level [dBm]	Detector	Pol. [H/V]	AFCL [dB]	Distance Correction Factor [dB]	Field Strength [dBmV/m]	Limit [dBmV/m]	Margin [dB]
2484.80	-89.60	Avg	H	34.46	-9.54	42.32	53.98	-11.66
2484.80	-74.80	Peak	H	34.46	-9.54	57.12	73.98	-16.86
2486.40	-89.90	Avg	H	34.46	-9.54	42.02	53.98	-11.96
2486.40	-75.30	Peak	H	34.46	-9.54	56.62	73.98	-17.36
2487.80	-90.70	Avg	H	34.47	-9.54	41.22	53.98	-12.75
2487.80	-76.40	Peak	H	34.47	-9.54	55.52	73.98	-18.45

**Table 6-43. Radiated Restricted Band Measurements at 1-meter – Chain A**

Frequency [MHz]	Analyzer Level [dBm]	Detector	Pol. [H/V]	AFCL [dB]	Distance Correction Factor [dB]	Field Strength [dBmV/m]	Limit [dBmV/m]	Margin [dB]
2484.40	-89.40	Avg	H	34.46	-9.54	42.52	53.98	-11.46
2484.40	-73.40	Peak	H	34.46	-9.54	58.52	73.98	-15.46
2485.80	-90.30	Avg	H	34.46	-9.54	41.62	53.98	-12.36
2485.80	-75.70	Peak	H	34.46	-9.54	56.22	73.98	-17.76
2487.80	-90.60	Avg	H	34.47	-9.54	41.32	53.98	-12.65
2487.80	-72.30	Peak	H	34.47	-9.54	59.62	73.98	-14.35

**Table 6-44. Radiated Restricted Band Measurements at 1-meter – Chain B**

FCC ID: ACJ9TGCF-19D		FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19		Page 79 of 89



**Radiated Spurious Emission Measurements (Cont'd)**  
**§15.247(d) / §15.205 & §15.209**

Frequency [MHz]	Analyzer Level [dBm]	Detector	Pol. [H/V]	AFCL [dB]	Distance Correction Factor [dB]	Field Strength [dBmV/m]	Limit [dBmV/m]	Margin [dB]
2483.50	-89.90	Avg	H	34.46	-9.54	42.02	53.98	-11.96
2483.50	-73.10	Peak	H	34.46	-9.54	58.82	73.98	-15.16
2484.60	-90.20	Avg	H	34.46	-9.54	41.72	53.98	-12.26
2484.60	-72.70	Peak	H	34.46	-9.54	59.22	73.98	-14.76
2487.90	-90.80	Avg	H	34.47	-9.54	41.12	53.98	-12.85
2487.90	-74.40	Peak	H	34.47	-9.54	57.52	73.98	-16.45

**Table 6-45. Radiated Restricted Band Measurements at 1-meter – Chain A+B**

**NOTES:**

- All emissions shown lie in the restricted bands specified in §15.205 are below the limit shown in Table 6-21.
- Average Measurements > 1GHz using RBW = 1MHz VBW = 10Hz
- The antenna is manipulated through typical positions, polarity and length during the tests. The EUT is manipulated through three orthogonal planes.
- The EUT is supplied with nominal AC voltage and/or a new/fully-recharged battery.
- The spectrum is measured from 9kHz to the 10<sup>th</sup> harmonic and the worst-case emissions are reported. No significant emissions were found beyond the fifth harmonic for this device.
- Levels at - 135 dBm represent the analyzer noise floor and signify that no emission was detected.
- Above 960MHz the limit is 500 µV/m (54dBµ/m) at 3 meters radiated.

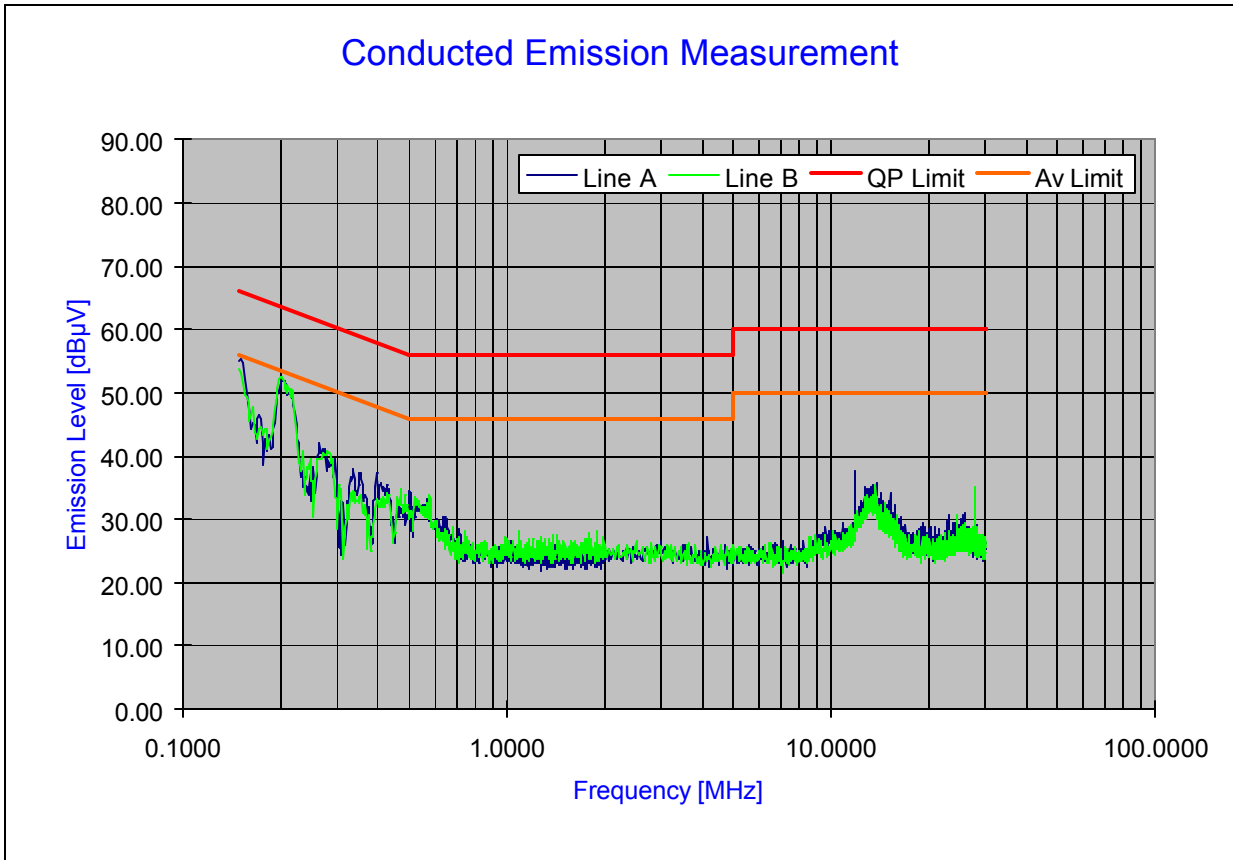
FCC ID: ACJ9TGCF-19D		FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19	Page 80 of 89	

**6.12 Line-Conducted Test Data**  
**§15.207**

# PCTEST Engineering Laboratory Inc.

Company : **Panasonic**  
 Model Number : **CF-19**  
 FCC ID Code : **ACJ9TGCF-19D**  
 Standard : **FCC Part 15C, 15.207**

Power Source : **AC120V/60Hz**  
 Tested Date : **04/23/2010**  
 Note : **Tested with WLAN b ON**





Ver.1.1 ©PCTEST 2006.08

**Plot 6-77. Line Conducted Plot with 802.11b**

**Notes:**

1. All Modes of operation were investigated and the worst-case emissions are reported.
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: ACJ9TGCF-19D		FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19	Page 81 of 89	

## Line-Conducted Test Data (Cont'd)



### §15.207

No.	Line	Frequency [MHz]	Factor [dB]	QP [dBµV]	Limit [dBµV]	Margin [dB]	Average [dBµV]	Limit [dBµV]	Margin [dB]
1	A	0.150	8.20	58.32	66.00	-7.68	40.27	56.00	-15.73
2	A	0.156	8.16	41.26	65.66	-24.40	32.53	55.66	-23.13
3	A	0.201	7.92	48.65	63.55	-14.90	36.41	53.55	-17.14
4	A	0.266	7.69	37.80	61.23	-23.43	27.51	51.23	-23.72
5	A	0.336	7.54	31.41	59.31	-27.90	22.02	49.31	-27.29
6	A	0.341	7.54	34.86	59.19	-24.33	22.70	49.19	-26.49
7	A	0.397	7.49	31.25	57.92	-26.67	21.66	47.92	-26.26
8	A	0.415	7.48	30.95	57.54	-26.59	21.73	47.54	-25.81
9	A	0.484	7.44	29.61	56.27	-26.66	21.15	46.27	-25.12
10	A	11.857	7.72	33.30	60.00	-26.70	30.56	50.00	-19.44
11	B	0.150	8.20	55.07	66.00	-10.93	45.79	56.00	-10.21
12	B	0.189	7.98	46.95	64.08	-17.13	36.42	54.08	-17.66
13	B	0.216	7.87	43.75	62.96	-19.21	25.19	52.96	-27.77
14	B	0.267	7.69	38.80	61.22	-22.42	28.79	51.22	-22.43
15	B	0.420	7.48	29.79	57.44	-27.65	19.88	47.44	-27.56
16	B	0.475	7.44	28.83	56.42	-27.59	21.12	46.42	-25.30
17	B	0.532	7.42	29.67	56.00	-26.33	20.97	46.00	-25.03
18	B	0.540	7.42	29.69	56.00	-26.31	21.38	46.00	-24.62
19	B	0.558	7.41	29.09	56.00	-26.91	20.87	46.00	-25.13
20	B	0.560	7.41	29.34	56.00	-26.66	21.04	46.00	-24.96

Table 6-46. Line Conducted Data with 802.11b

#### Notes:

1. All Modes of operation were investigated and the worst-case emissions are reported.
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.

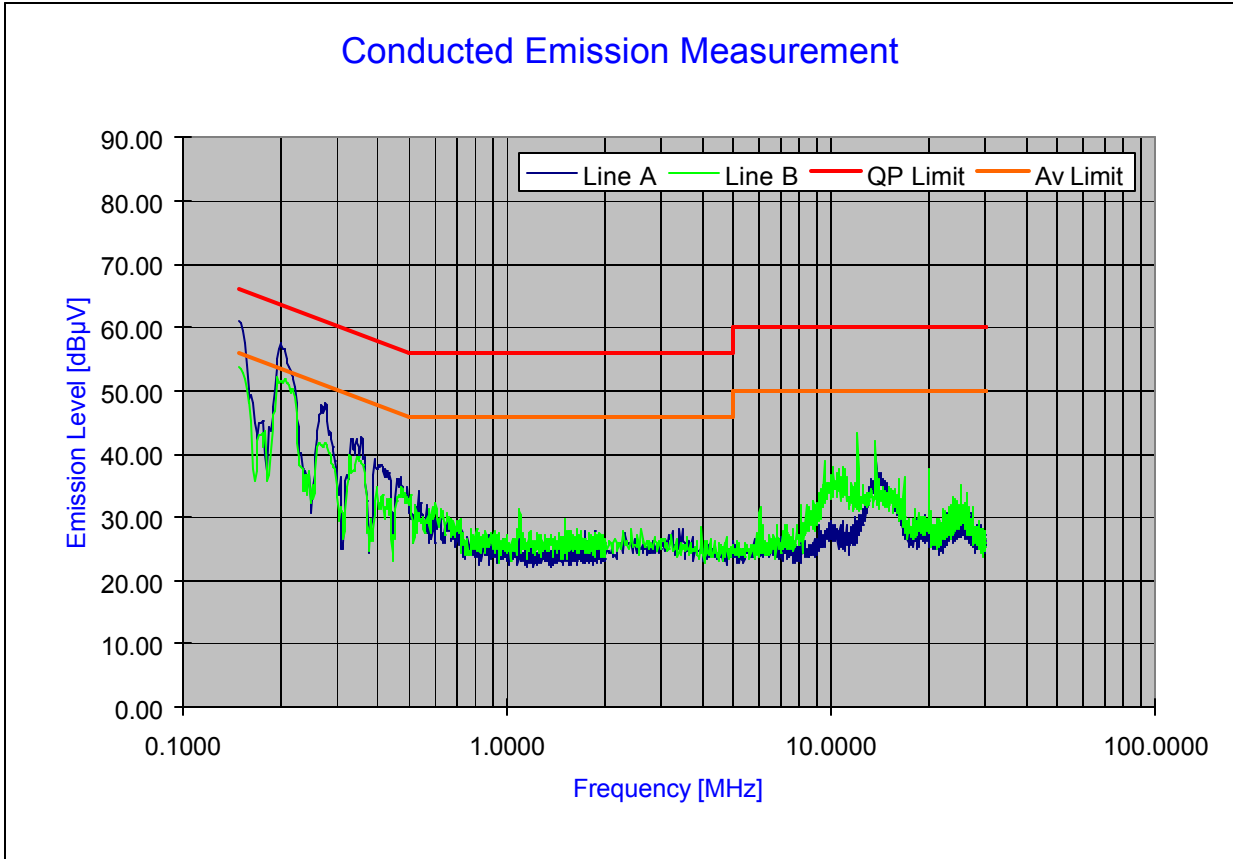
FCC ID: ACJ9TGCF-19D		FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19	Page 82 of 89	

**Line-Conducted Test Data (Cont'd)**  
**§15.207**

# PCTEST Engineering Laboratory Inc.

Company : **Panasonic**  
 Model Number : **CF-19**  
 FCC ID Code : **ACJ9TGCF-19D**  
 Standard : **FCC Part 15C, 15.207**

Power Source : **AC120V/60Hz**  
 Tested Date : **04/23/2010**  
 Note : **Tested with WLAN g ON**





Ver.1.1 ©PCTEST 2006.08

**Plot 6-78. Line Conducted Plot with 802.11g**

**Notes:**

1. All Modes of operation were investigated and the worst-case emissions are reported.
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: ACJ9TGCF-19D		FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19	Page 83 of 89	

## Line-Conducted Test Data (Cont'd)



### §15.207

No.	Line	Frequency [MHz]	Factor [dB]	QP [dBµV]	Limit [dBµV]	Margin [dB]	Average [dBµV]	Limit [dBµV]	Margin [dB]
1	A	0.150	8.20	64.26	66.00	-1.74	47.41	56.00	-8.59
2	A	0.159	8.14	39.41	65.50	-26.09	31.75	55.50	-23.75
3	A	0.201	7.93	51.82	63.57	-11.75	36.79	53.57	-16.78
4	A	0.267	7.69	41.09	61.20	-20.11	27.04	51.20	-24.16
5	A	0.331	7.54	37.54	59.42	-21.88	25.08	49.42	-24.34
6	A	0.339	7.54	37.30	59.24	-21.94	24.62	49.24	-24.62
7	A	0.396	7.49	32.23	57.94	-25.71	21.86	47.94	-26.08
8	A	0.398	7.49	32.15	57.94	-25.79	21.88	47.94	-26.06
9	A	0.409	7.48	30.71	57.66	-26.95	21.31	47.66	-26.35
10	A	13.697	7.81	39.91	60.00	-20.09	30.91	50.00	-19.09
11	B	0.150	8.20	58.76	66.00	-7.24	45.63	56.00	-10.37
12	B	0.164	8.12	37.56	65.27	-27.71	31.24	55.27	-24.03
13	B	0.201	7.92	49.51	63.55	-14.04	34.07	53.55	-19.48
14	B	0.266	7.69	37.92	61.23	-23.31	26.31	51.23	-24.92
15	B	0.329	7.55	33.27	59.48	-26.21	22.29	49.48	-27.19
16	B	0.336	7.54	32.64	59.30	-26.66	22.33	49.30	-26.97
17	B	0.463	7.45	28.63	56.64	-28.01	20.84	46.64	-25.80
18	B	9.481	7.59	33.47	60.00	-26.53	31.51	50.00	-18.49
19	B	12.049	7.73	41.82	60.00	-18.18	40.07	50.00	-9.93
20	B	13.697	7.81	31.40	60.00	-28.60	25.42	50.00	-24.58

Table 6-47. Line Conducted Data with 802.11g

#### Notes:

1. All Modes of operation were investigated and the worst-case emissions are reported.
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.

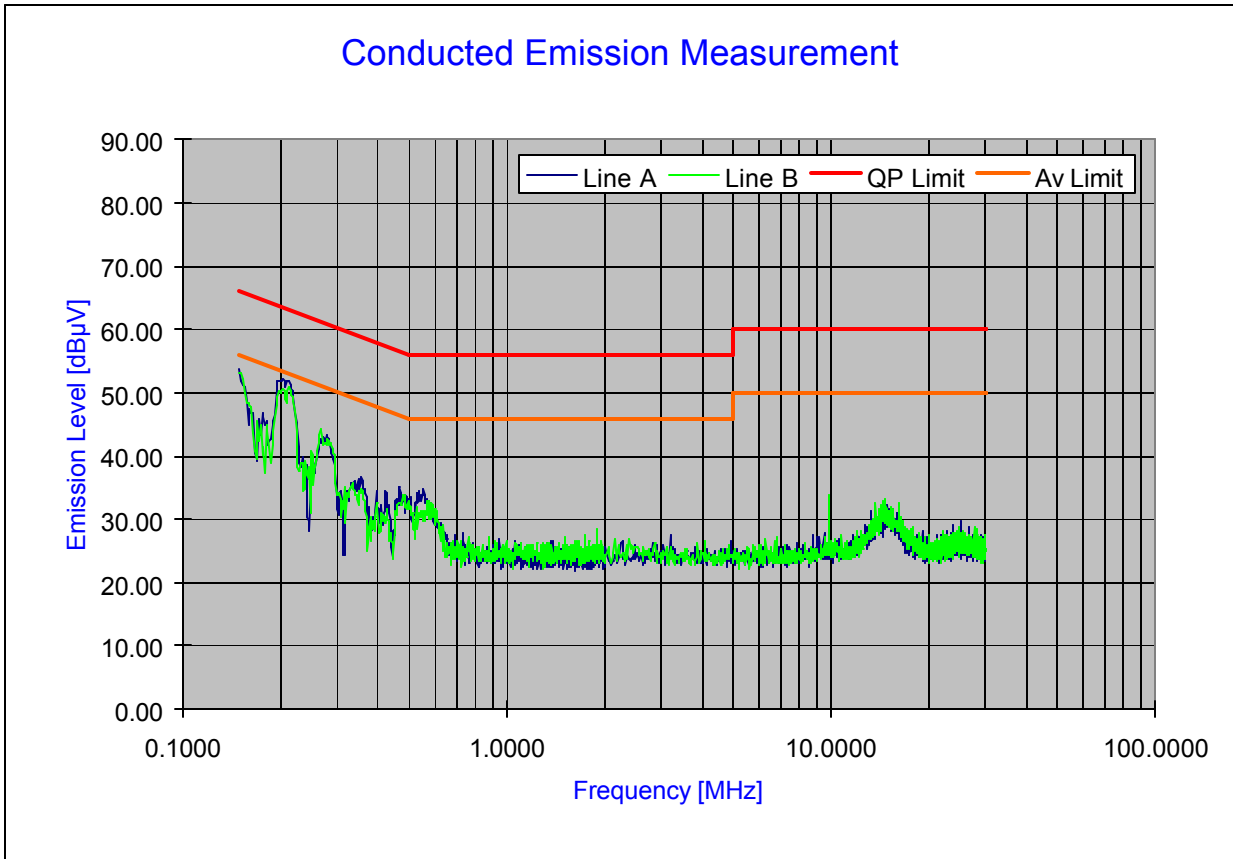
FCC ID: ACJ9TGCF-19D		FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19	Page 84 of 89	

**Line-Conducted Test Data (Cont'd)**  
**§15.207**

# PCTEST Engineering Laboratory Inc.

Company : **Panasonic**  
 Model Number : **CF-19**  
 FCC ID Code : **ACJ9TGCF-19D**  
 Standard : **FCC Part 15C, 15.207**

Power Source : **AC120V/60Hz**  
 Tested Date : **04/23/2010**  
 Note : **Tested with WLAN a ON**





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**Plot 6-79. Line Conducted Plot with 802.11a**

**Notes:**

1. All Modes of operation were investigated and the worst-case emissions are reported.
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: ACJ9TGCF-19D		FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19	Page 85 of 89	

## Line-Conducted Test Data (Cont'd)



### §15.207

No.	Line	Frequency [MHz]	Factor [dB]	QP [dBµV]	Limit [dBµV]	Margin [dB]	Average [dBµV]	Limit [dBµV]	Margin [dB]
1	A	0.150	8.20	57.98	66.00	-8.02	46.00	56.00	-10.00
2	A	0.161	8.14	40.26	65.43	-25.17	32.22	55.43	-23.21
3	A	0.201	7.93	48.03	63.57	-15.54	36.24	53.57	-17.33
4	A	0.267	7.69	40.12	61.22	-21.10	29.42	51.22	-21.80
5	A	0.337	7.54	31.06	59.28	-28.22	21.29	49.28	-27.99
6	A	0.395	7.49	27.69	57.95	-30.26	20.27	47.95	-27.68
7	A	0.402	7.49	26.52	57.81	-31.29	20.12	47.81	-27.69
8	A	0.418	7.48	28.82	57.48	-28.66	20.39	47.48	-27.09
9	A	0.483	7.44	30.92	56.29	-25.37	22.14	46.29	-24.15
10	A	0.559	7.41	27.25	56.00	-28.75	20.62	46.00	-25.38
11	B	0.150	8.20	56.59	66.00	-9.41	45.29	56.00	-10.71
12	B	0.153	8.18	42.99	65.86	-22.87	33.01	55.86	-22.85
13	B	0.201	7.93	47.12	63.57	-16.45	30.23	53.57	-23.34
14	B	0.202	7.92	47.38	63.51	-16.13	35.54	53.51	-17.97
15	B	0.215	7.87	45.94	62.99	-17.05	25.97	52.99	-27.02
16	B	0.221	7.85	40.96	62.79	-21.83	25.06	52.79	-27.73
17	B	0.270	7.68	39.24	61.13	-21.89	29.68	51.13	-21.45
18	B	0.481	7.44	30.07	56.32	-26.25	21.78	46.32	-24.54
19	B	0.484	7.44	30.00	56.27	-26.27	21.89	46.27	-24.38
20	B	0.559	7.41	28.76	56.00	-27.24	20.65	46.00	-25.35

Table 6-48. Line Conducted Data with 802.11a

#### Notes:

1. All Modes of operation were investigated and the worst-case emissions are reported.
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.

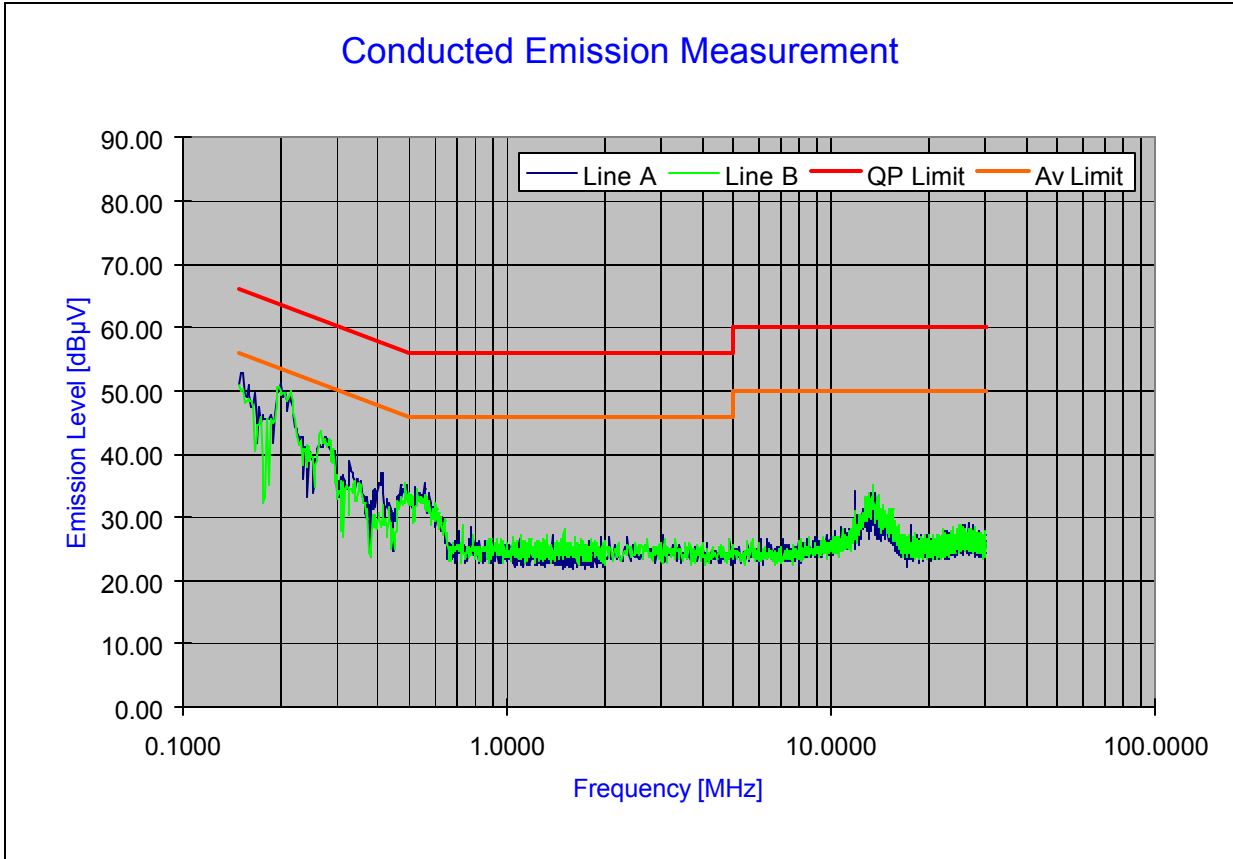
FCC ID: ACJ9TGCF-19D		FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19	Page 86 of 89	

**Line-Conducted Test Data (Cont'd)**  
**§15.207**

# PCTEST Engineering Laboratory Inc.

Company : **Panasonic**  
 Model Number : **CF-19**  
 FCC ID Code : **ACJ9TGCF-19D**  
 Standard : **FCC Part 15C, 15.207**

Power Source : **AC120V/60Hz**  
 Tested Date : **04/23/2010**  
 Note : **Tested with WLAN n ON**





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**Plot 6-80. Line Conducted Plot with 802.11n**

**Notes:**

1. All Modes of operation were investigated and the worst-case emissions are reported.
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: ACJ9TGCF-19D		FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19	Page 87 of 89	

## Line-Conducted Test Data (Cont'd)



### §15.207

No.	Line	Frequency [MHz]	Factor [dB]	QP [dBµV]	Limit [dBµV]	Margin [dB]	Average [dBµV]	Limit [dBµV]	Margin [dB]
1	A	0.150	8.20	56.93	66.00	-9.07	43.48	56.00	-12.52
2	A	0.152	8.19	44.96	65.89	-20.93	33.42	55.89	-22.47
3	A	0.201	7.93	46.39	63.57	-17.18	34.19	53.57	-19.38
4	A	0.202	7.92	46.29	63.53	-17.24	36.31	53.53	-17.22
5	A	0.266	7.69	38.97	61.23	-22.26	29.28	51.23	-21.95
6	A	0.278	7.65	37.77	60.88	-23.11	26.89	50.88	-23.99
7	A	0.331	7.54	32.07	59.42	-27.35	23.31	49.42	-26.11
8	A	0.414	7.48	27.73	57.57	-29.84	20.15	47.57	-27.42
9	A	0.501	7.43	30.46	56.00	-25.54	21.26	46.00	-24.74
10	A	0.543	7.41	30.62	56.00	-25.38	21.56	46.00	-24.44
11	B	0.150	8.20	55.20	66.00	-10.80	45.39	56.00	-10.61
12	B	0.201	7.93	45.63	63.56	-17.93	35.76	53.56	-17.80
13	B	0.202	7.92	46.09	63.55	-17.46	36.46	53.55	-17.09
14	B	0.267	7.69	38.82	61.22	-22.40	27.91	51.22	-23.31
15	B	0.276	7.66	38.05	60.94	-22.89	27.32	50.94	-23.62
16	B	0.331	7.54	31.54	59.42	-27.88	22.96	49.42	-26.46
17	B	0.340	7.54	30.90	59.21	-28.31	22.63	49.21	-26.58
18	B	0.480	7.44	29.05	56.34	-27.29	21.04	46.34	-25.30
19	B	0.526	7.42	29.66	56.00	-26.34	20.77	46.00	-25.23
20	B	0.590	7.40	27.52	56.00	-28.48	20.28	46.00	-25.72

Table 6-49. Line Conducted Data with 802.11n



#### Notes:

1. All Modes of operation were investigated and the worst-case emissions are reported.
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: ACJ9TGCF-19D		FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170437.ACJ	Test Dates: April 23, 2010	EUT Type: ToughBook Model: CF-19		Page 88 of 89

## 7.0 CONCLUSION

The data collected relate only the item(s) tested and show that the **Panasonic ToughBook Model: CF-19 FCC ID: ACJ9TGCF-19D** is in compliance with Part 15C of the FCC Rules.

<b>FCC ID:</b> ACJ9TGCF-19D		<b>FCC Pt. 15.247 802.11a/b/g/n MEASUREMENT REPORT (CERTIFICATION)</b>		<b>Reviewed by:</b> Quality Manager
<b>Test Report S/N:</b> 0Y1003170437.ACJ	<b>Test Dates:</b> April 23, 2010	<b>EUT Type:</b> ToughBook Model: CF-19		Page 89 of 89