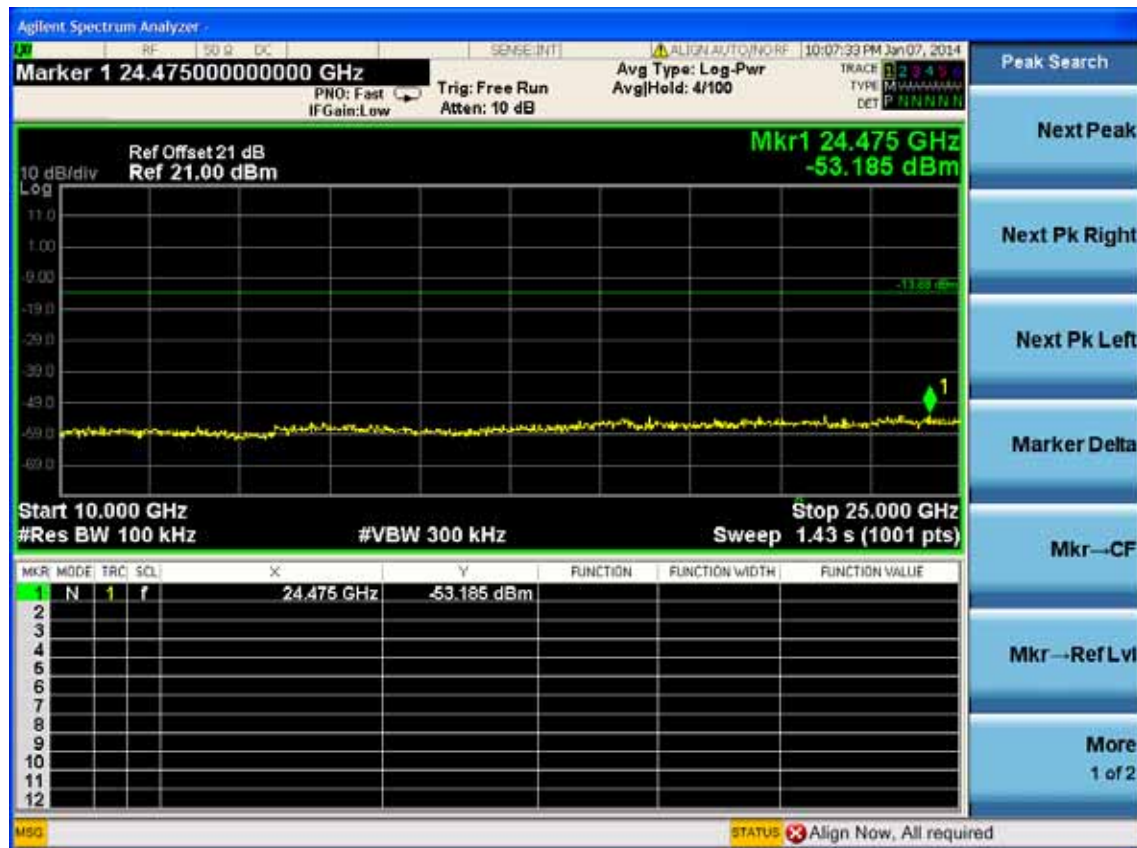
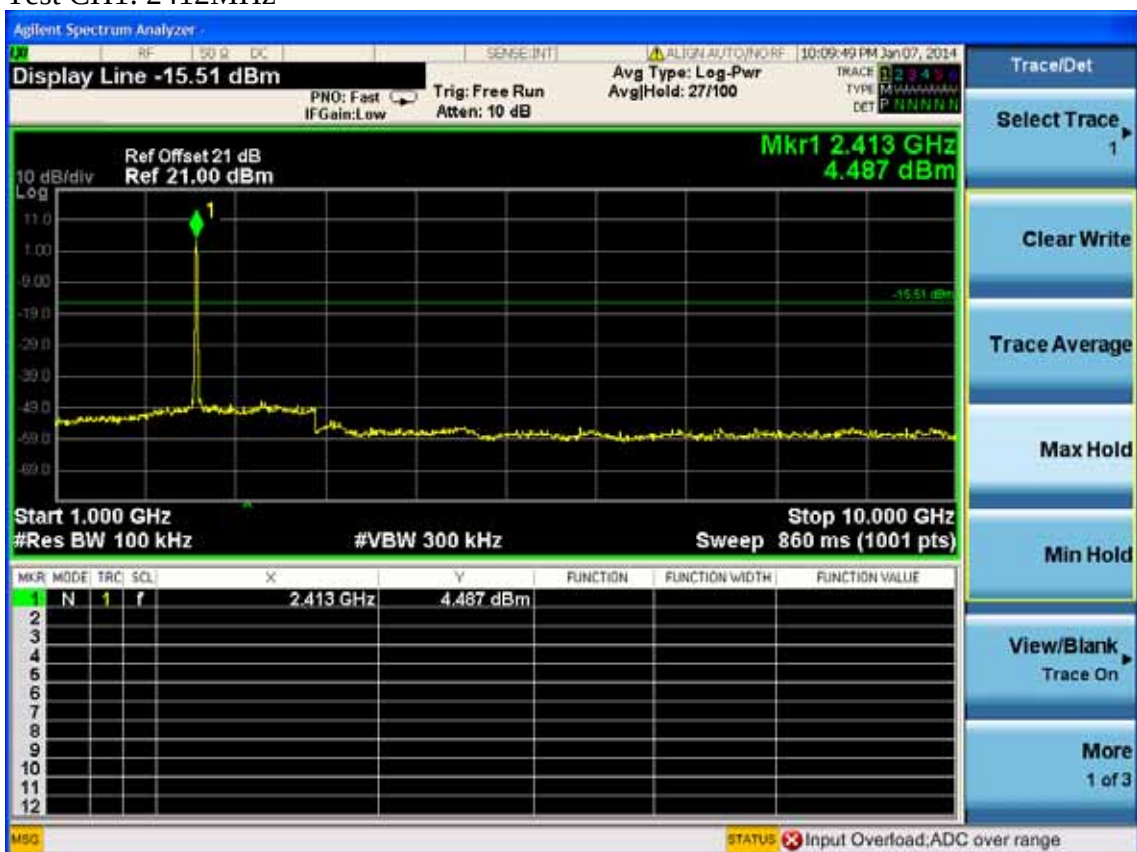
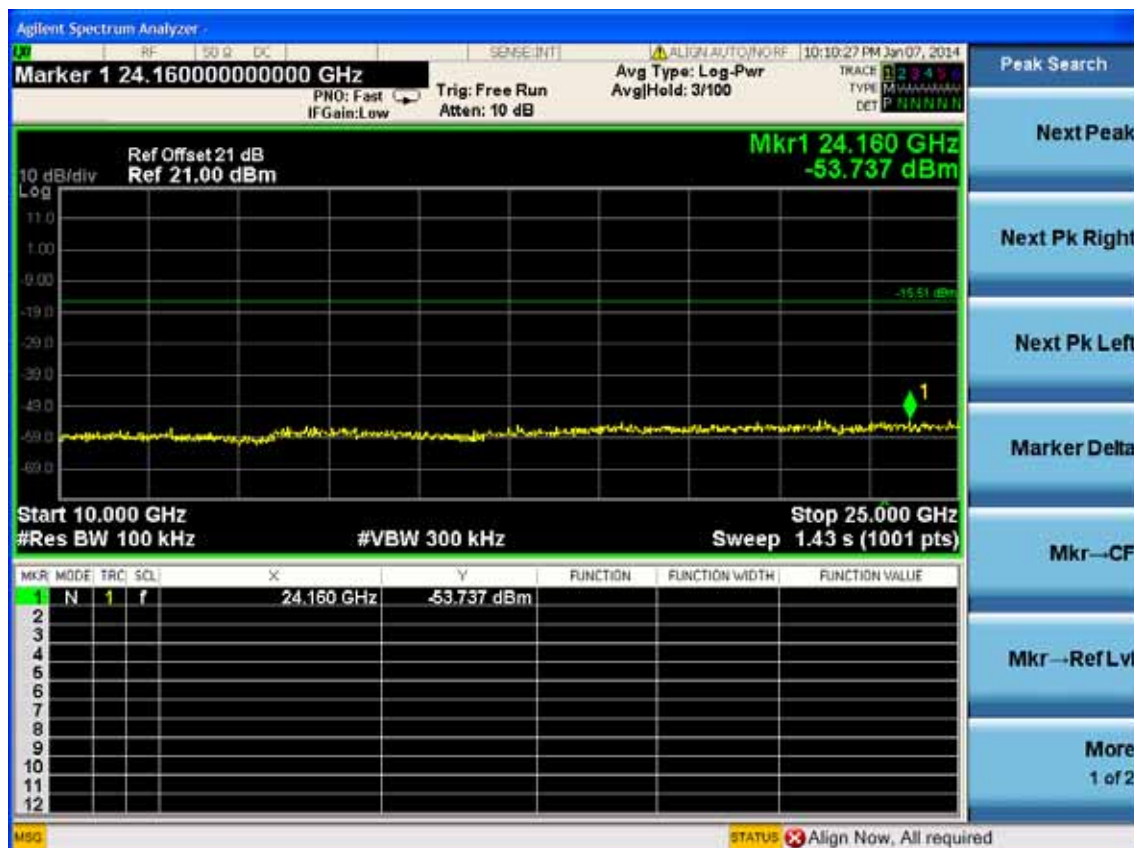
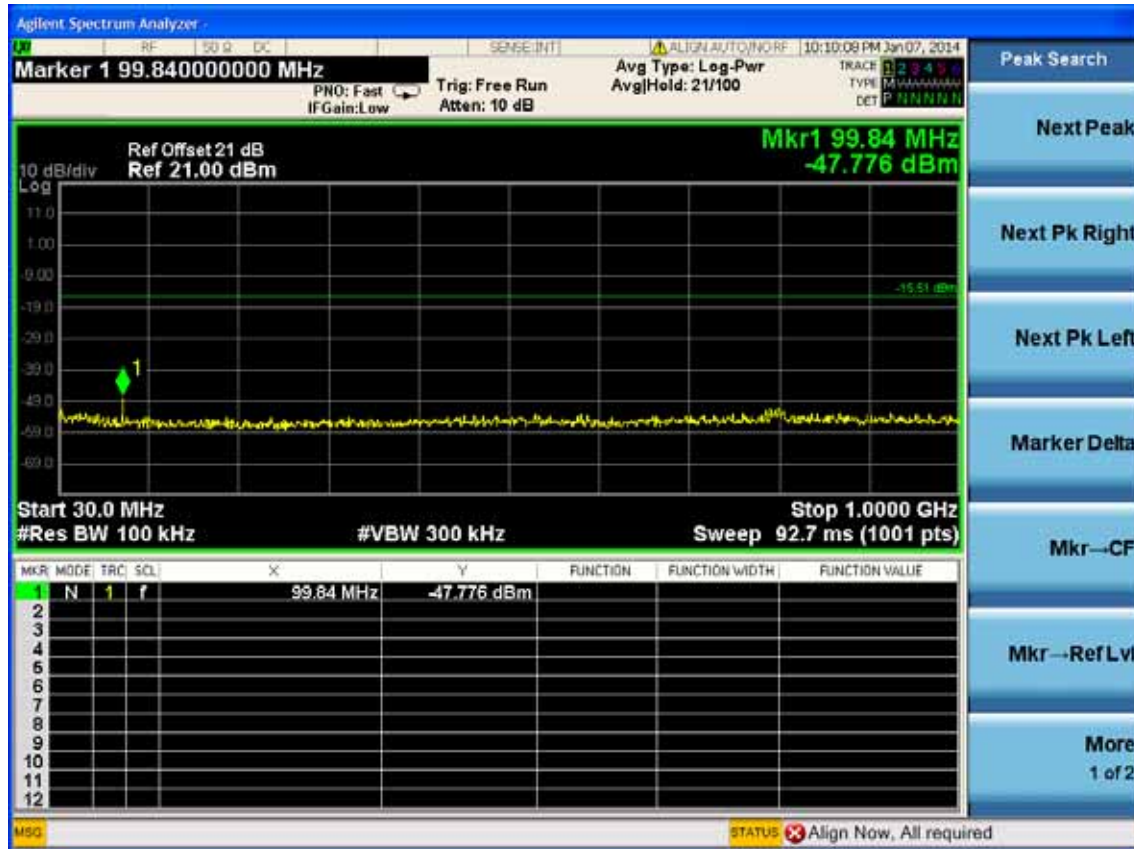




Test Mode: IEEE 802.11g TX

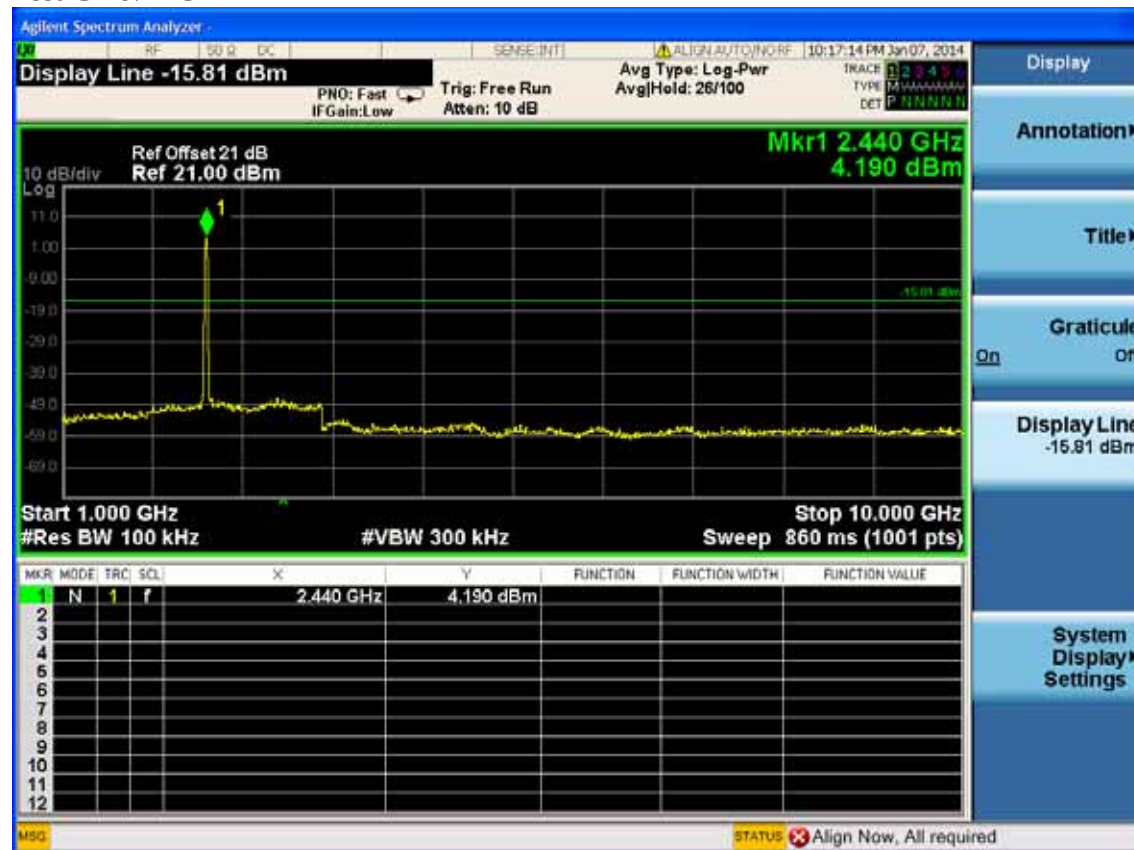
Test CH1: 2412MHz

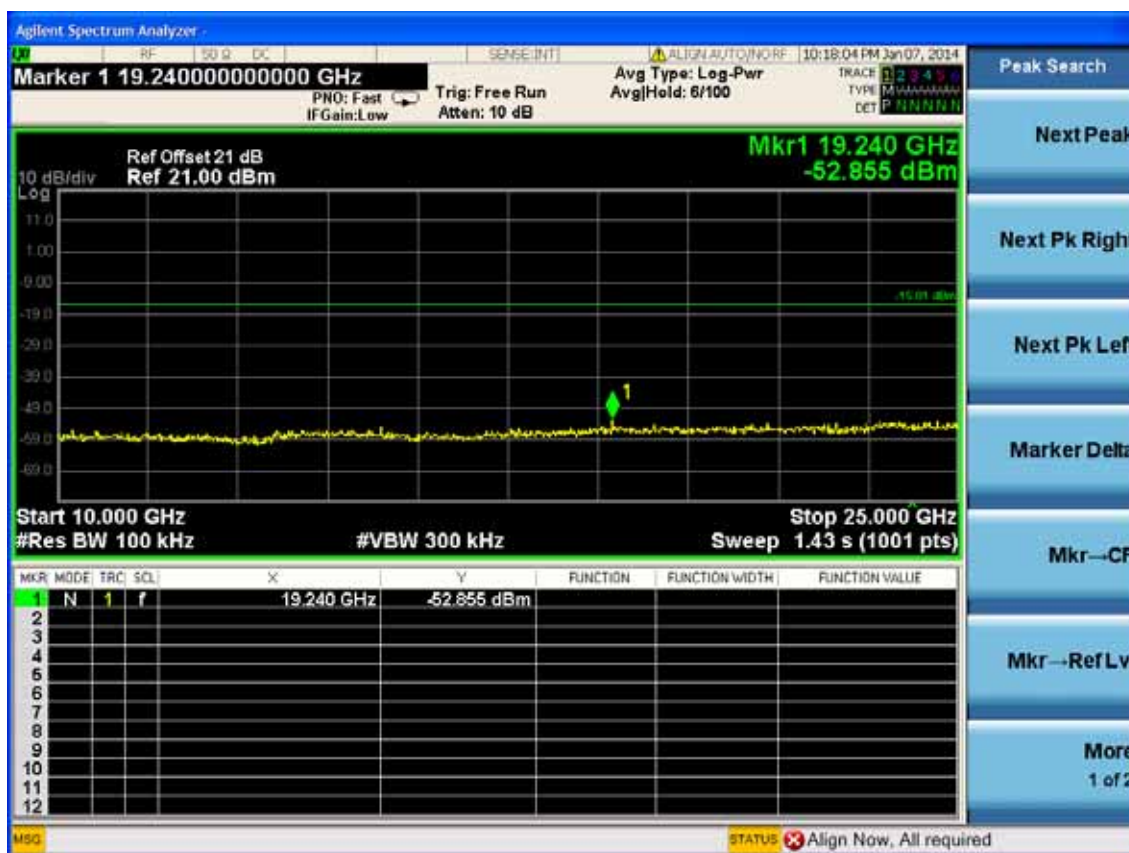
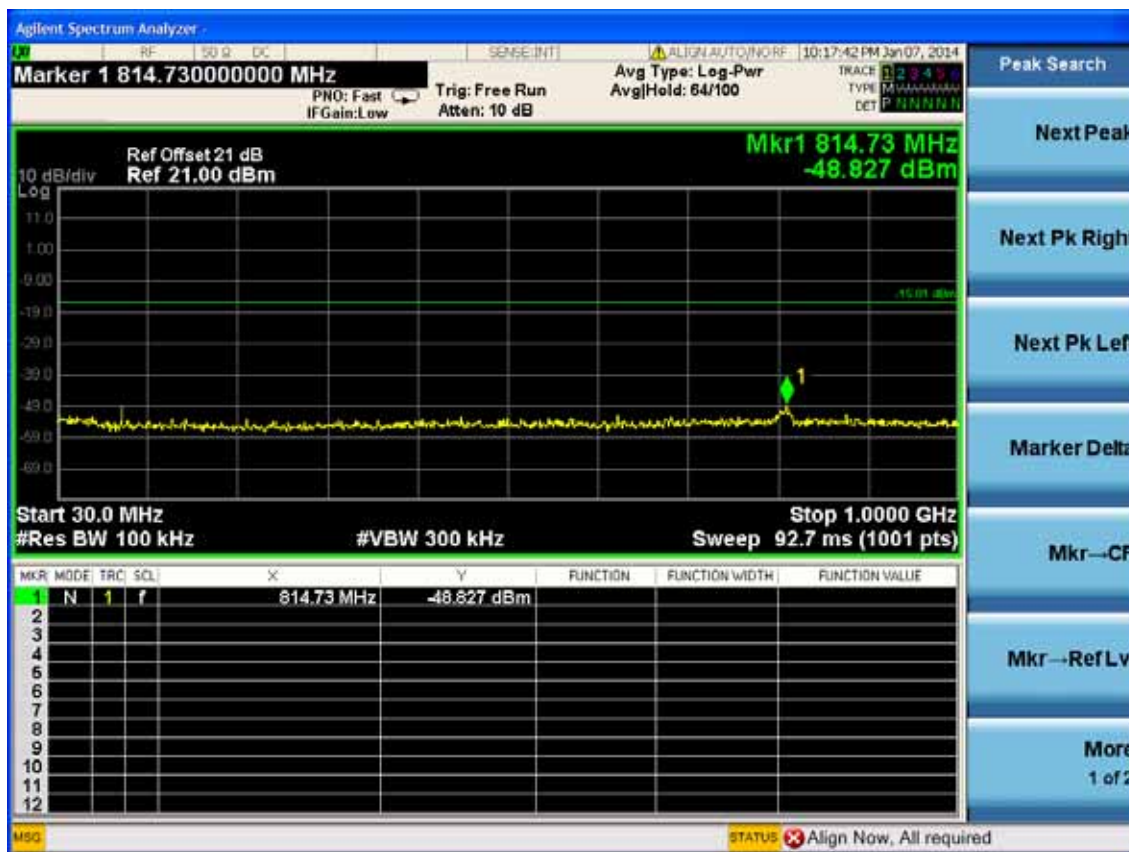




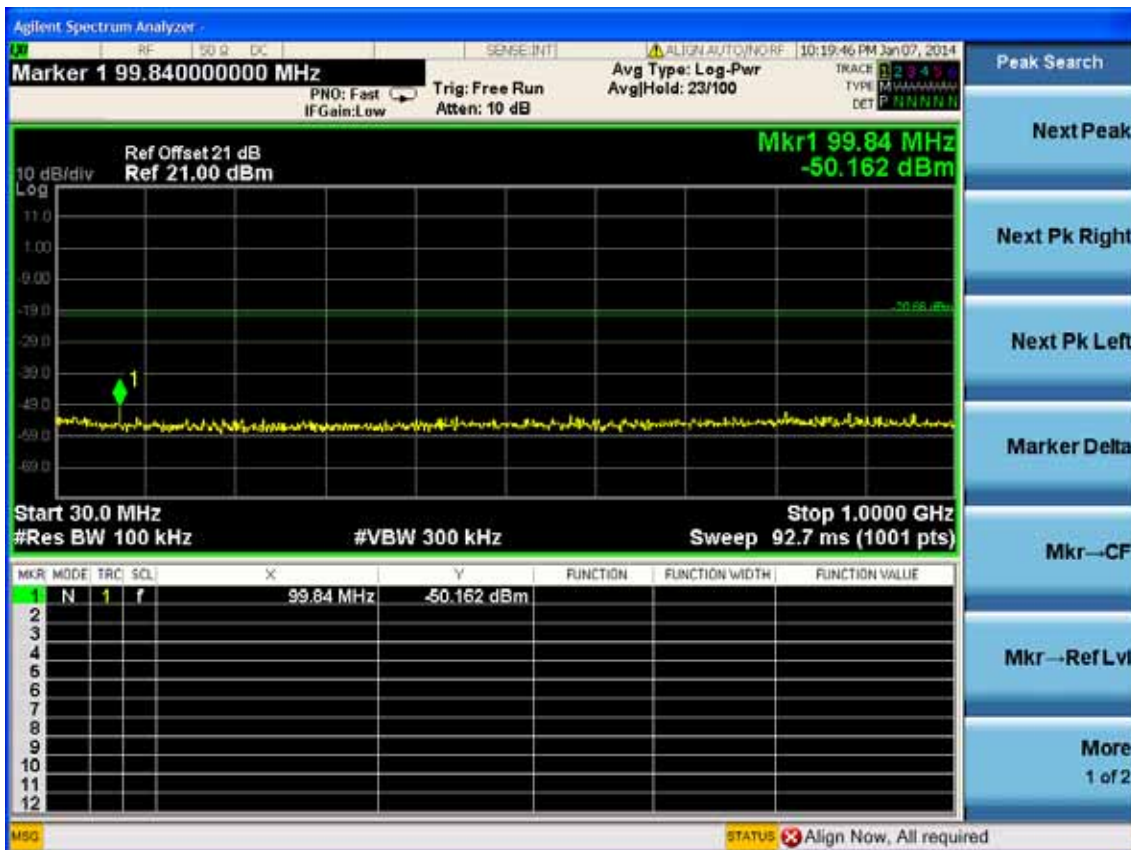
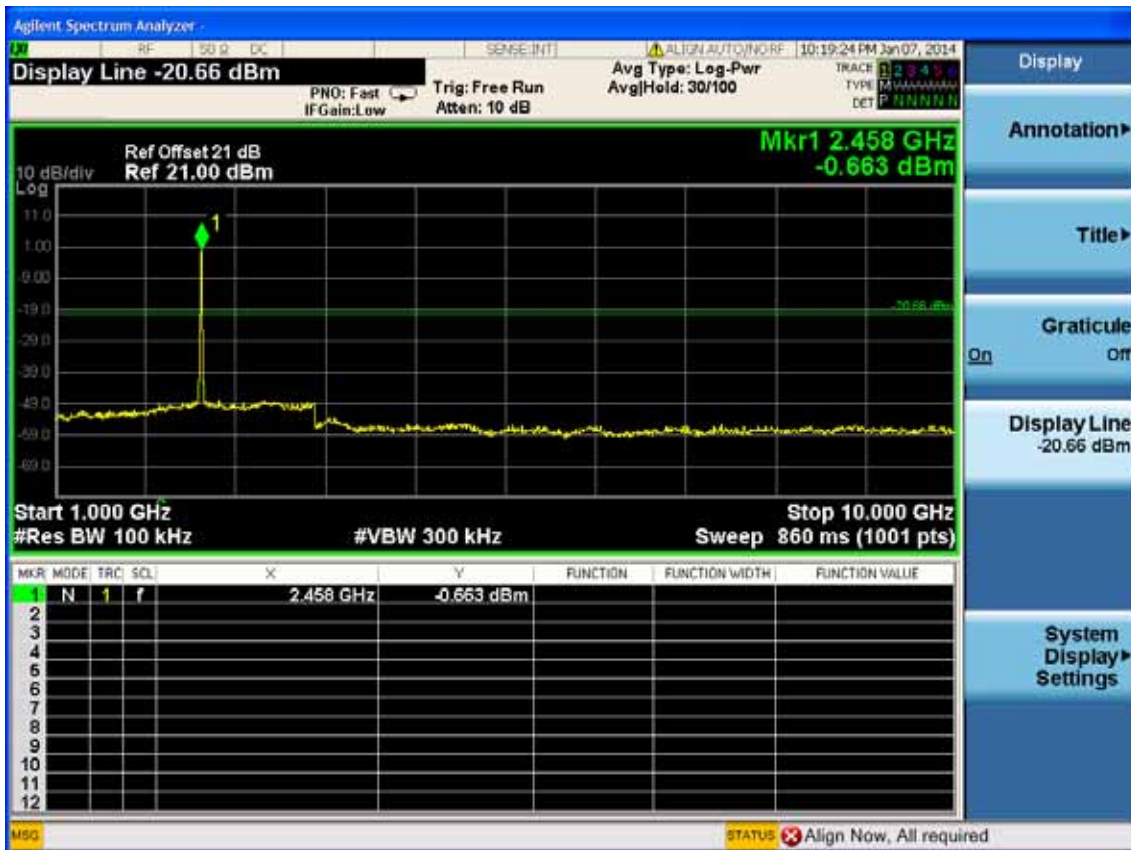


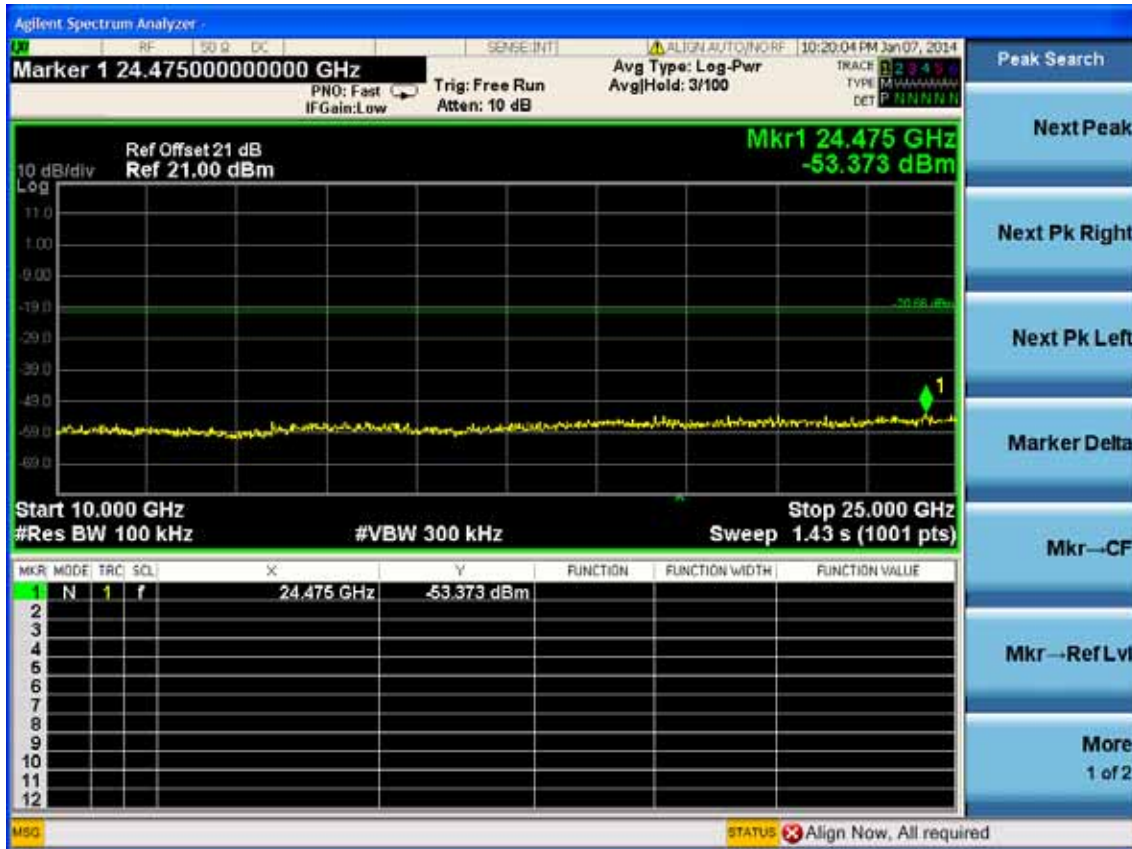
Test CH6: 2437MHz





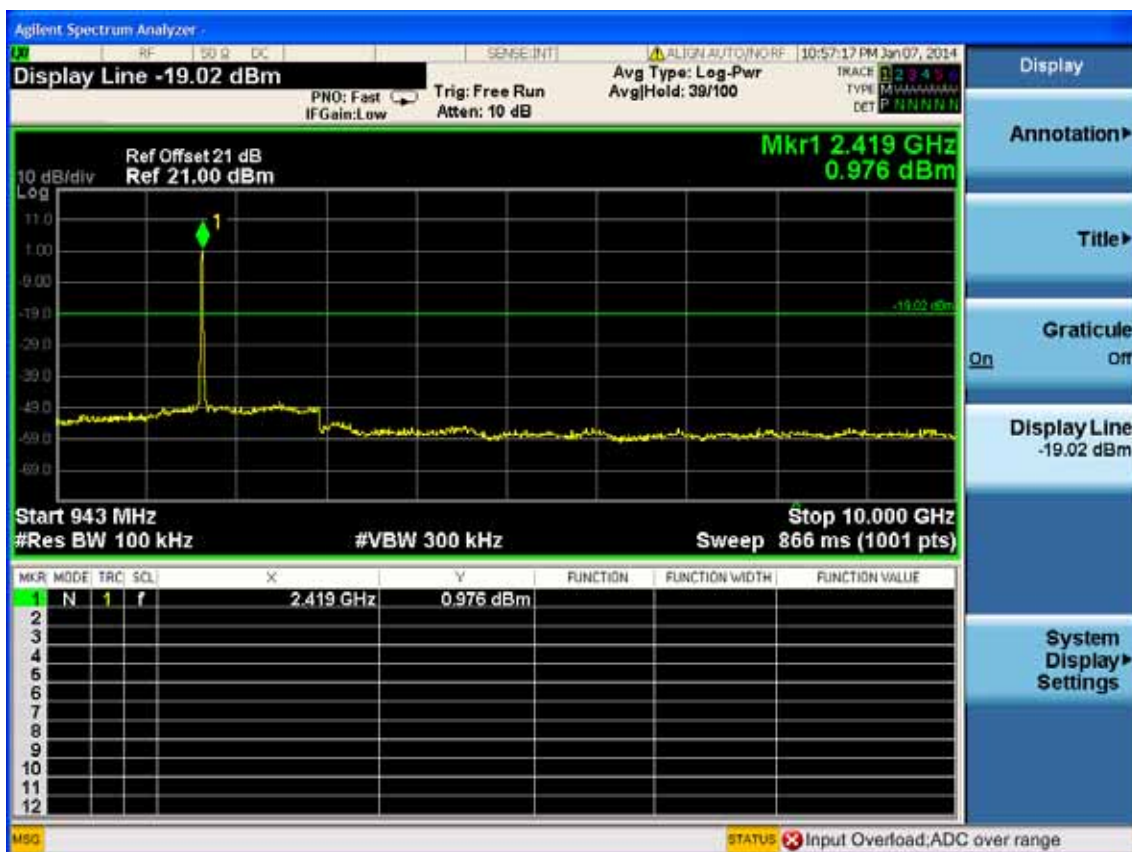
Test CH11: 2462MHz

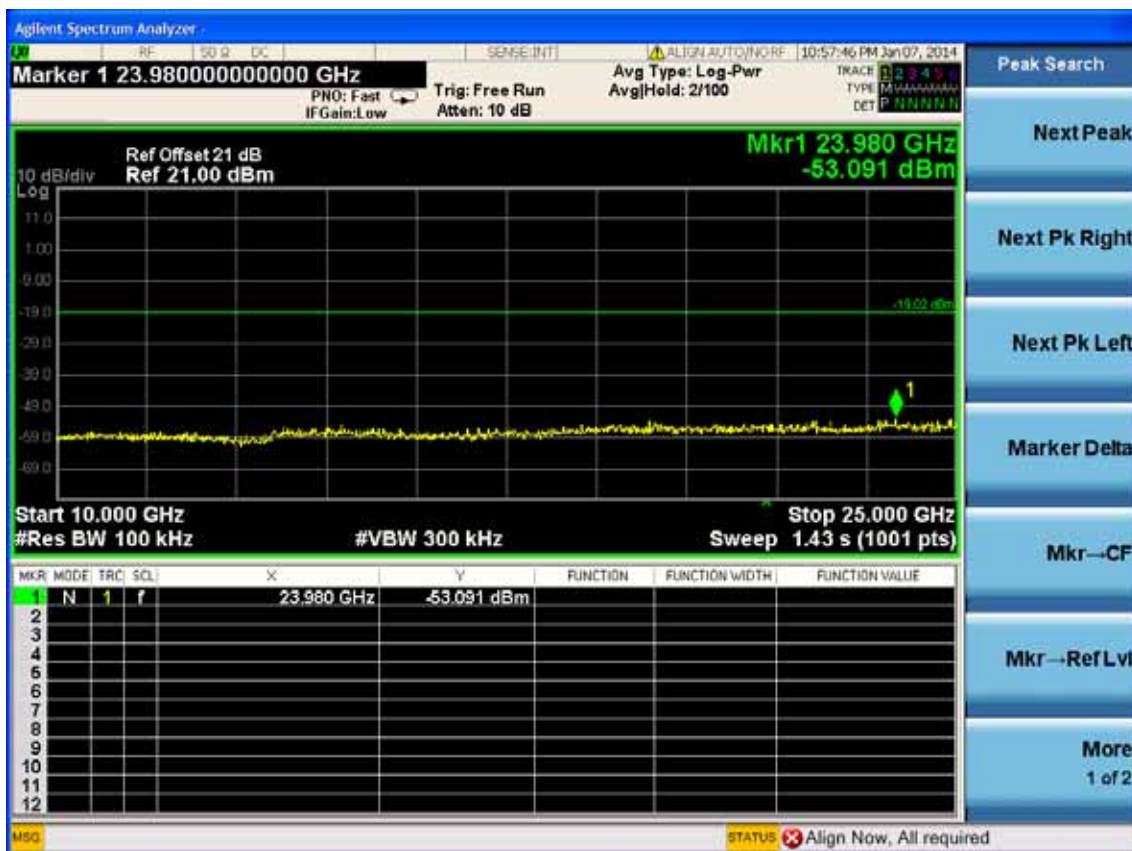
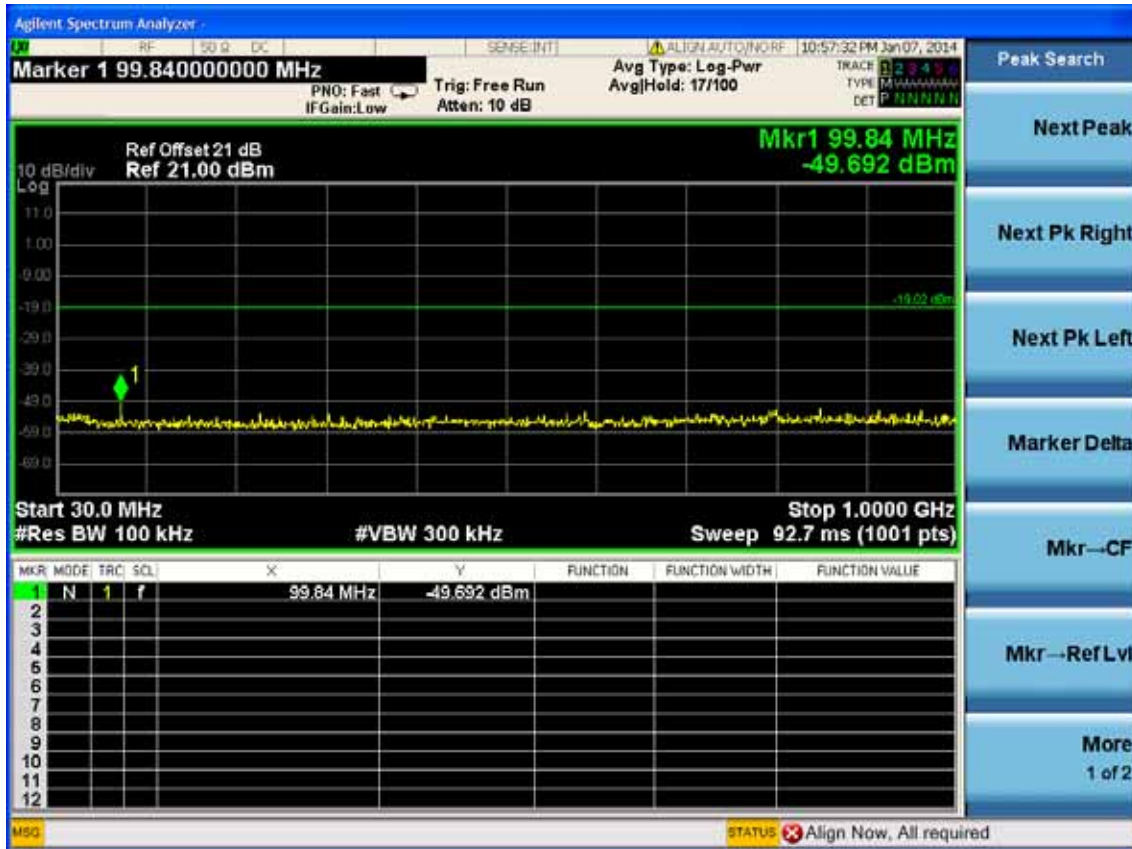




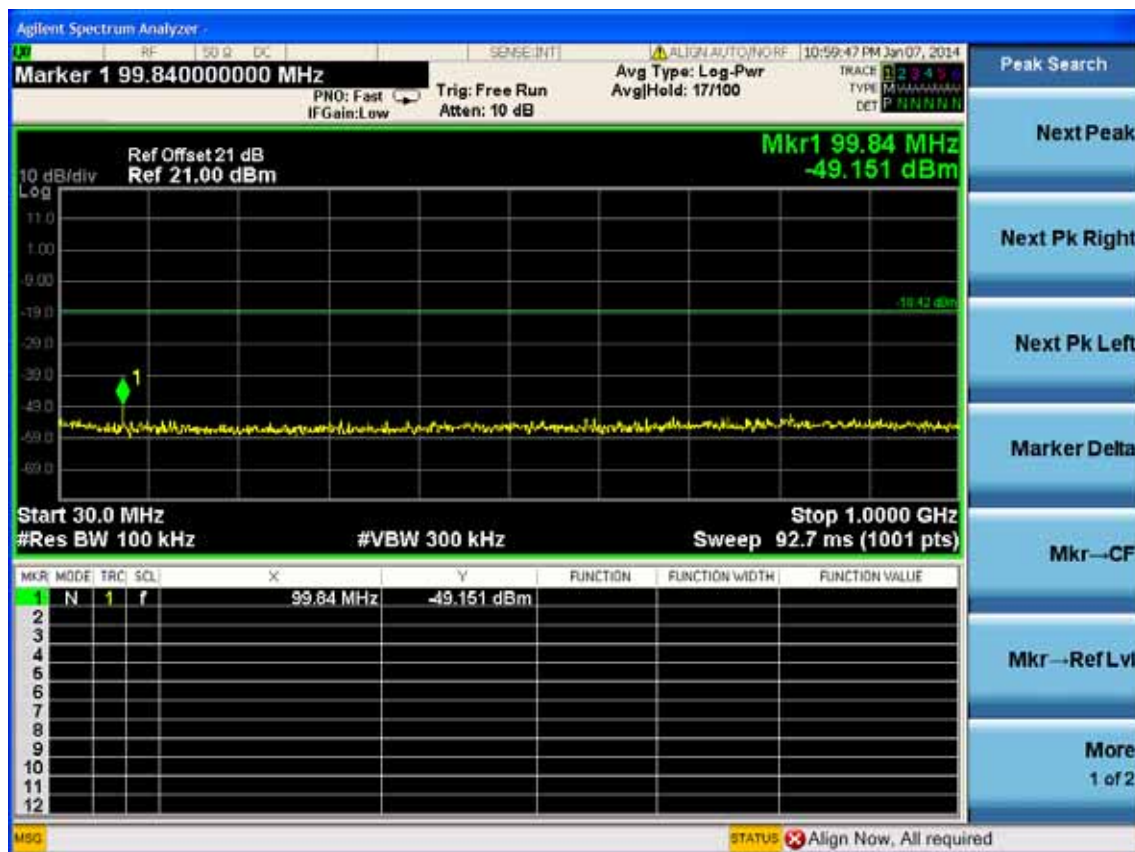
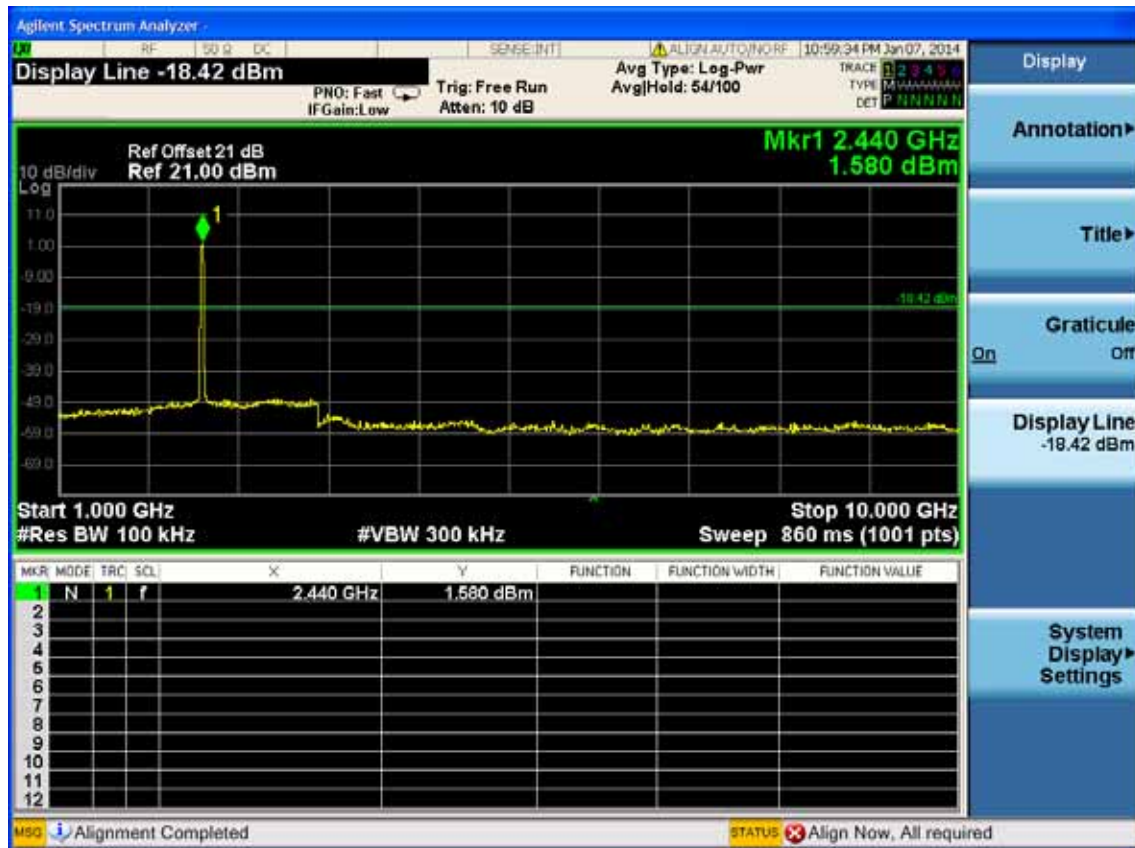
Test Mode: IEEE 802.11n HT20 TX

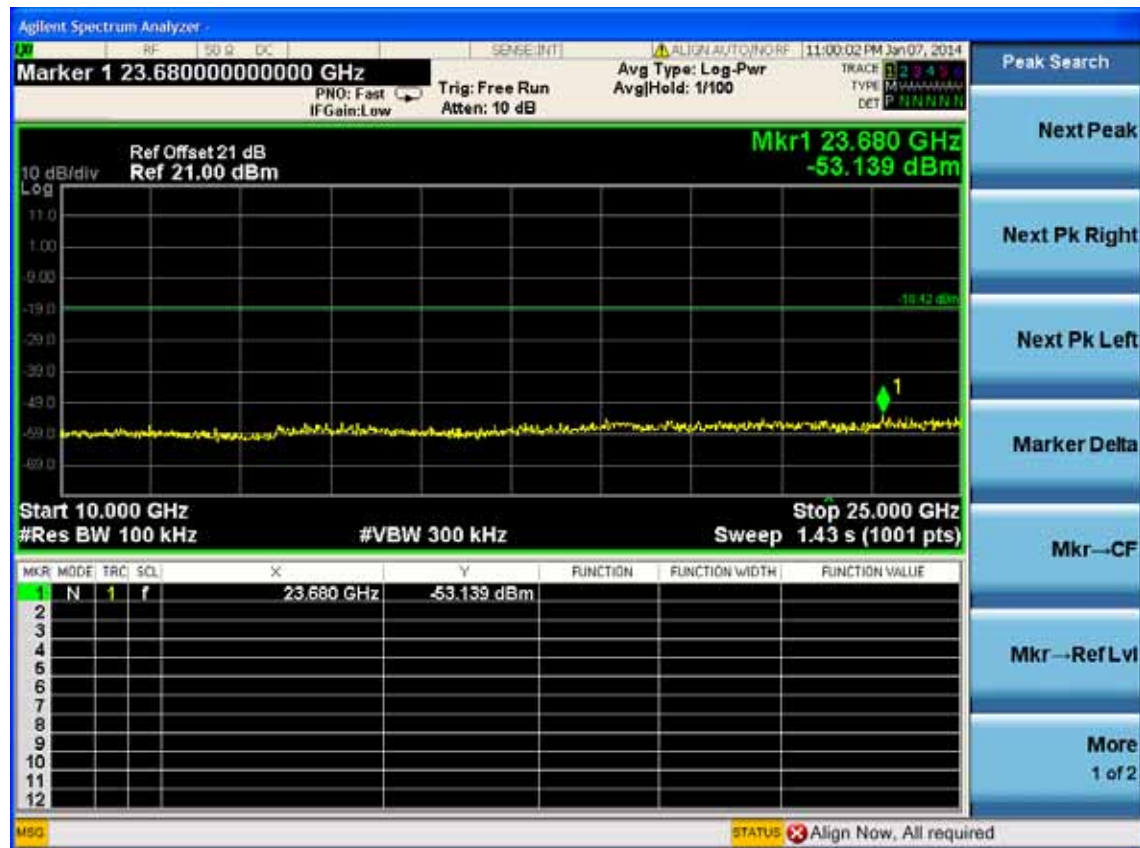
Test CH1: 2412MHz





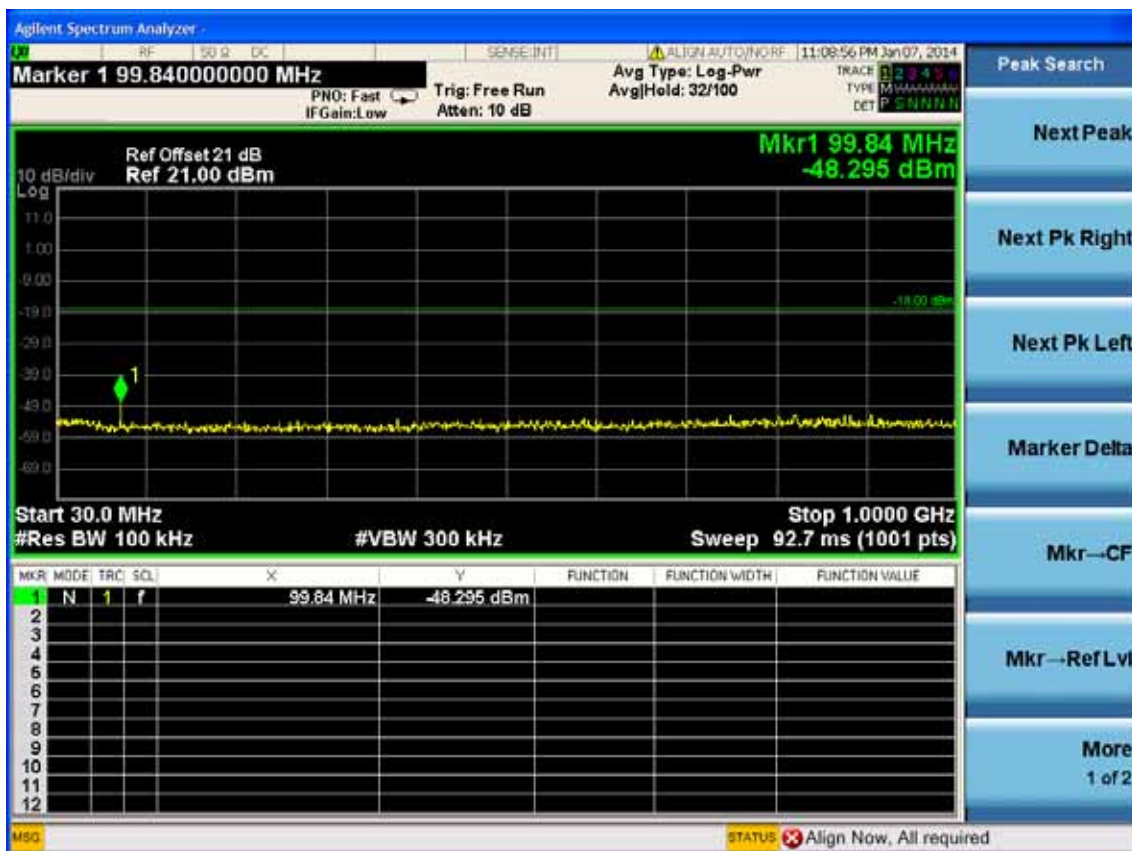
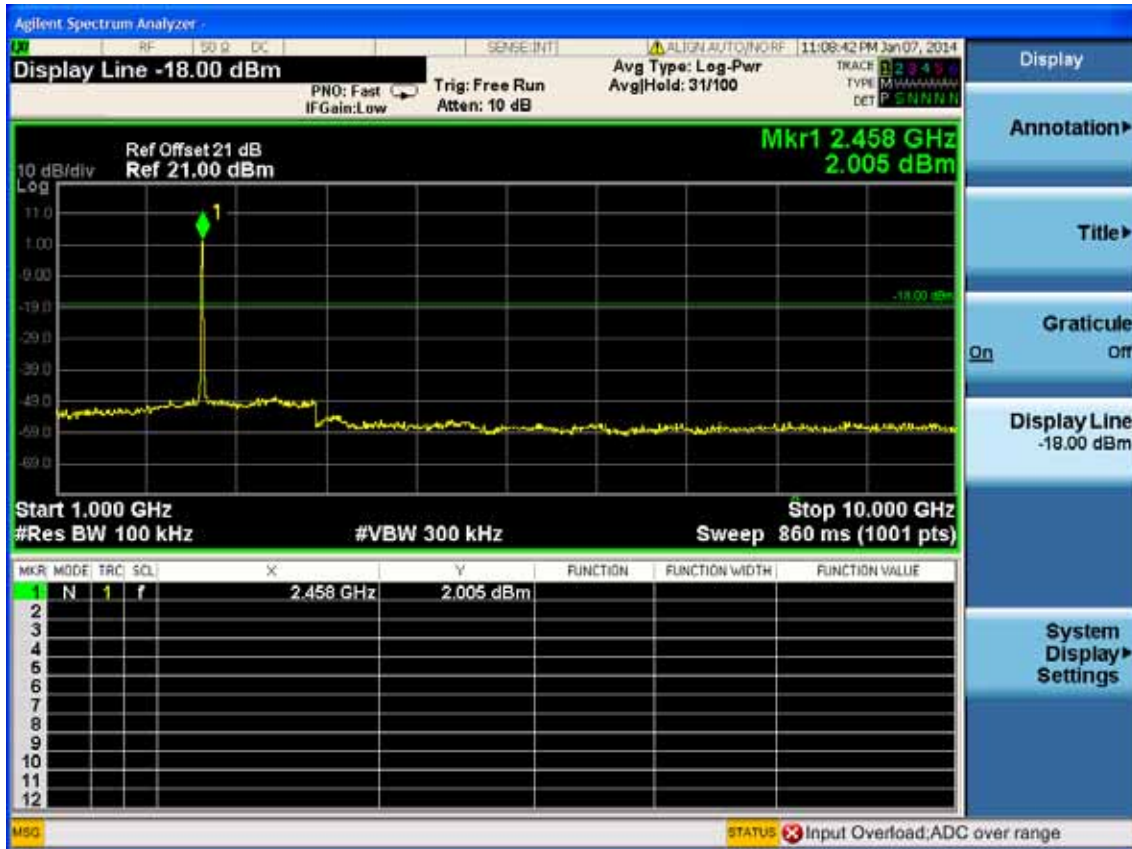
Test CH6: 2437MHz

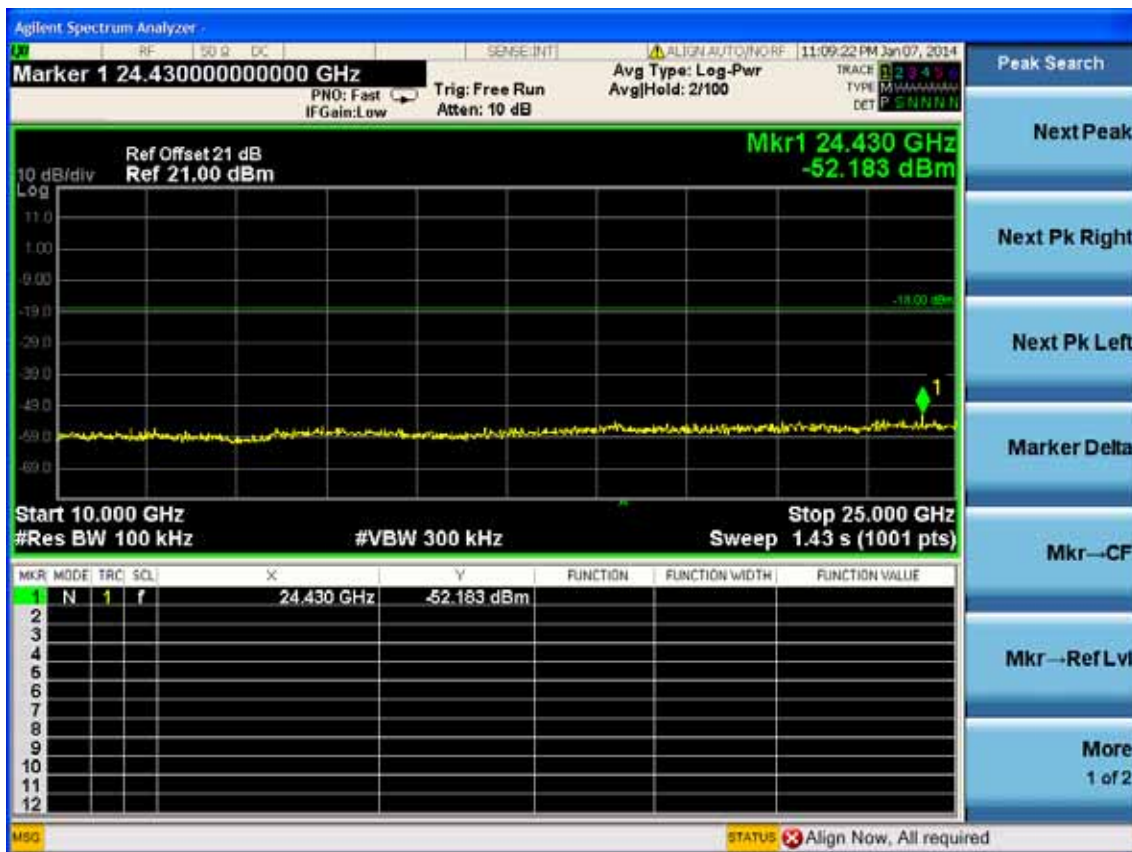




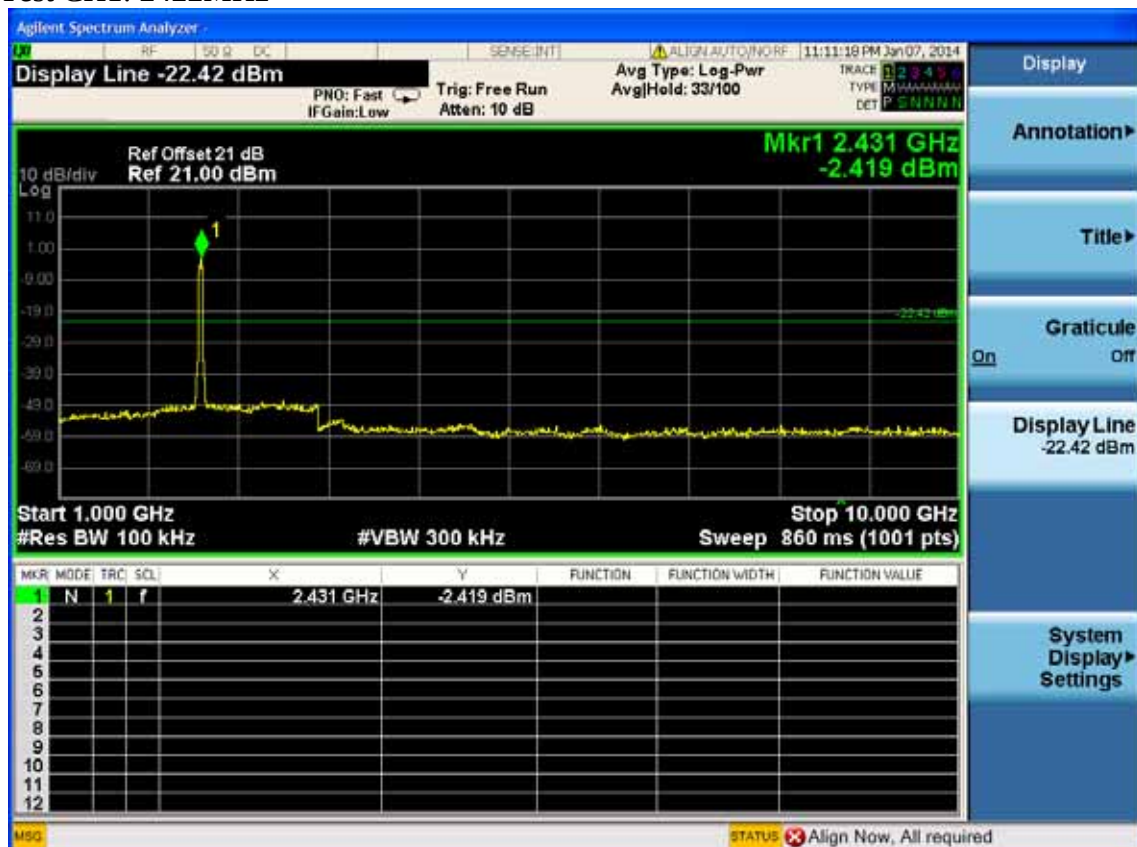
Test CH11: 2462MHz

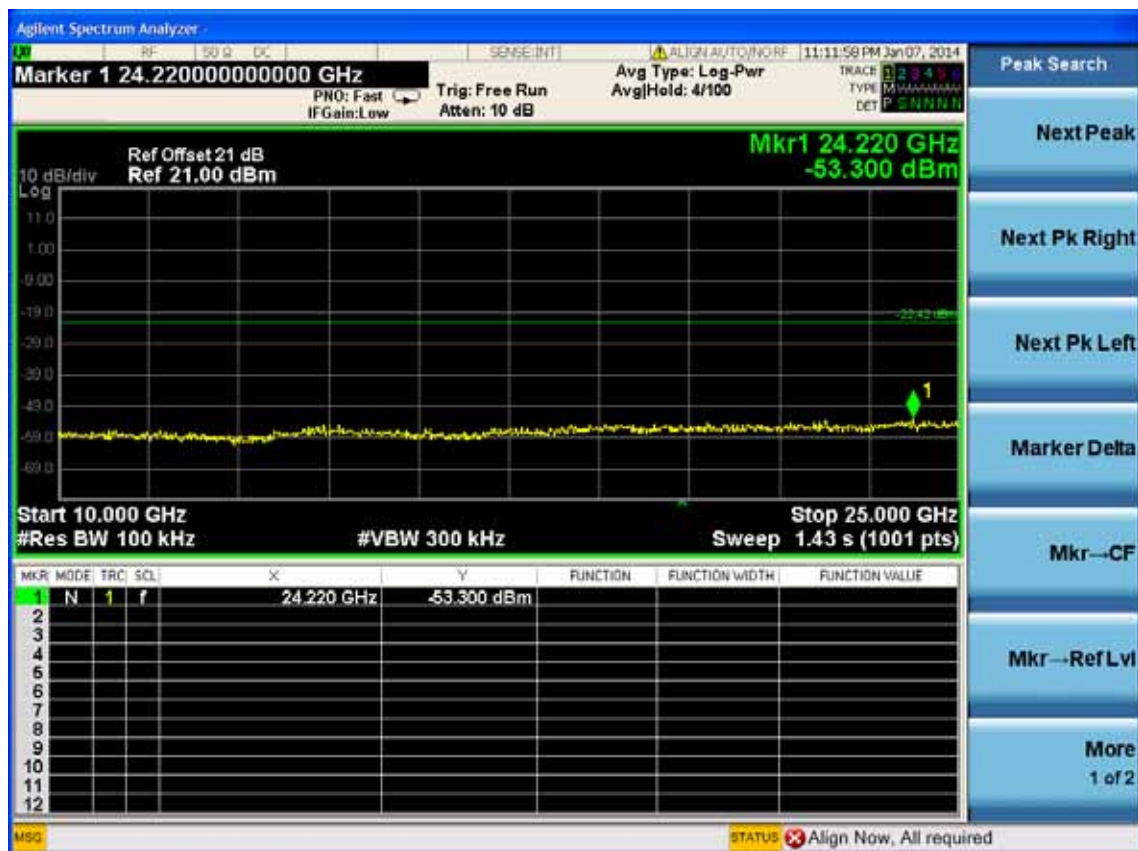
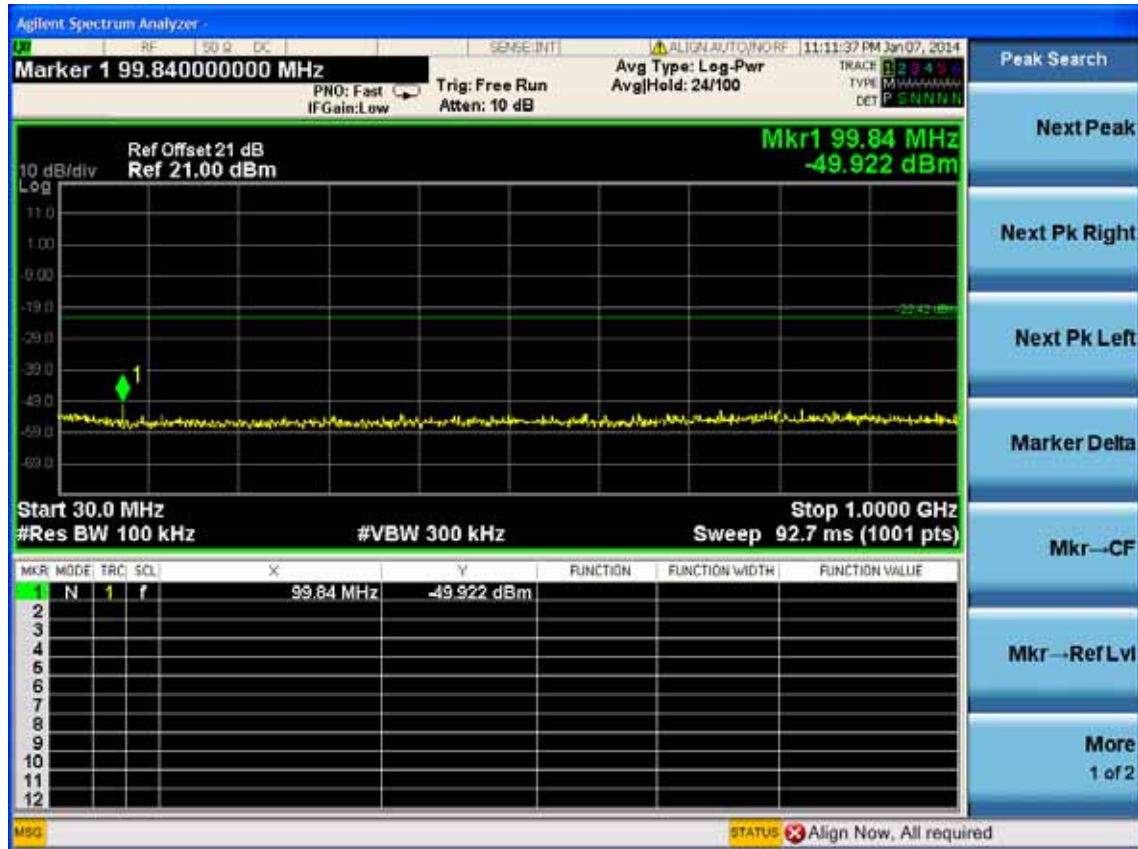






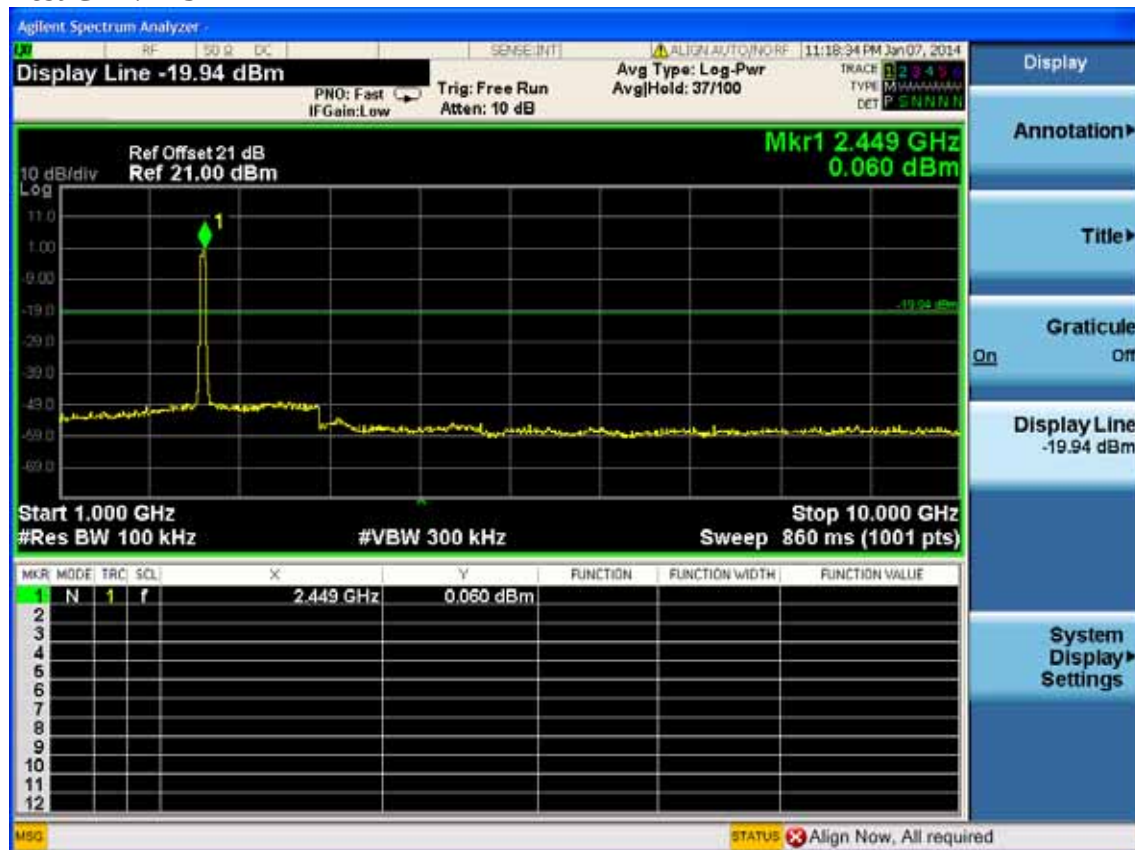
Test Mode: IEEE 802.11n HT40 TX
Test CH1: 2422MHz

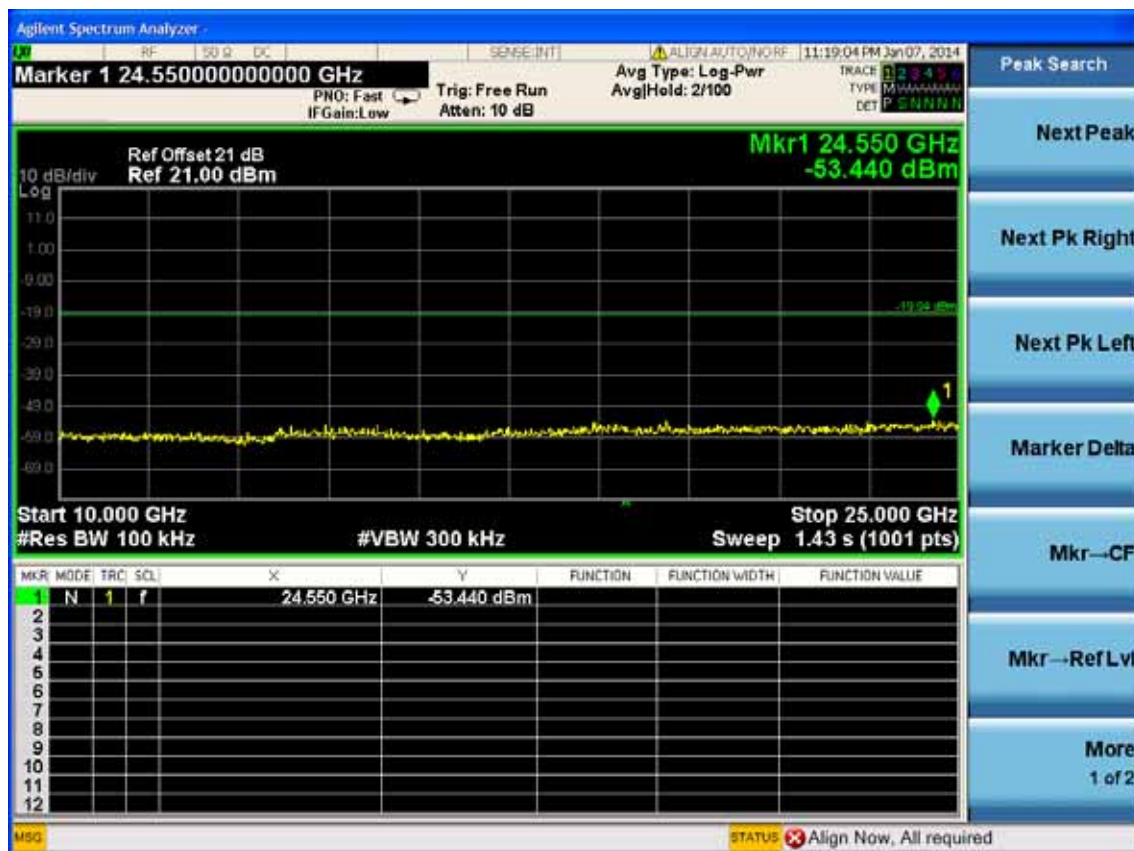
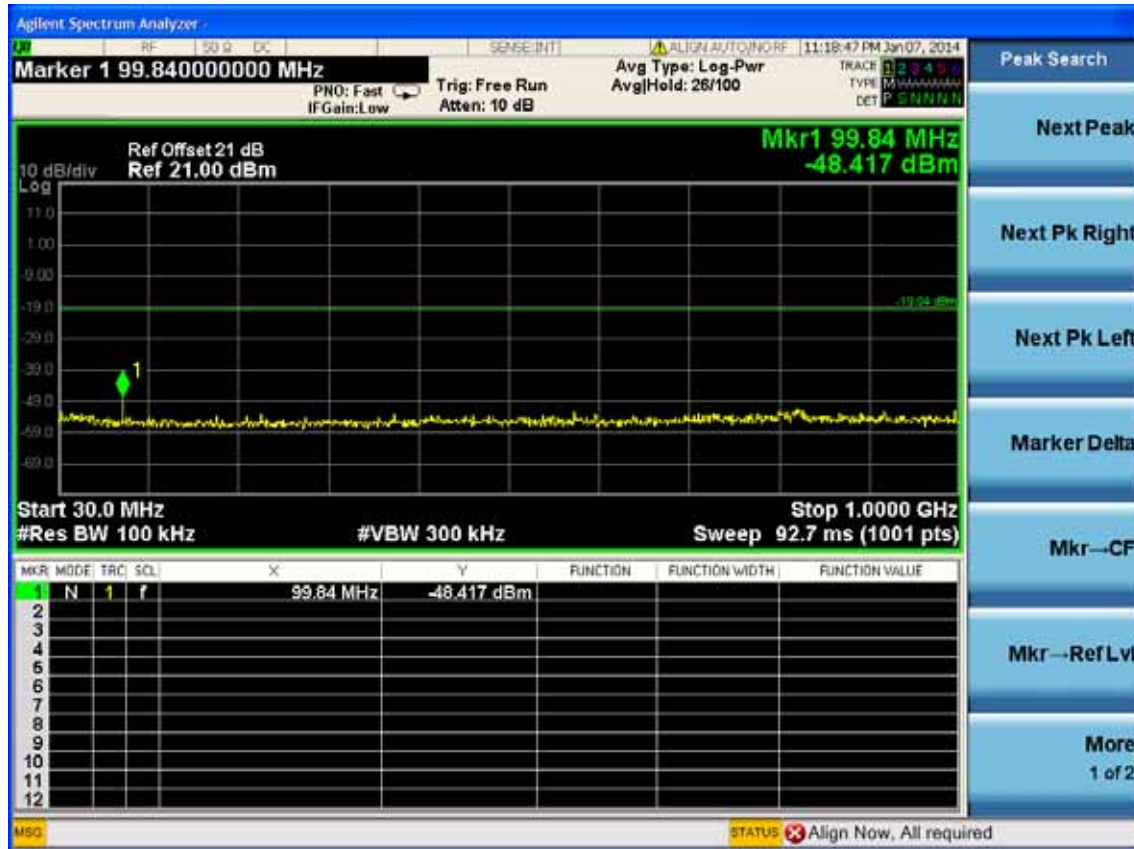




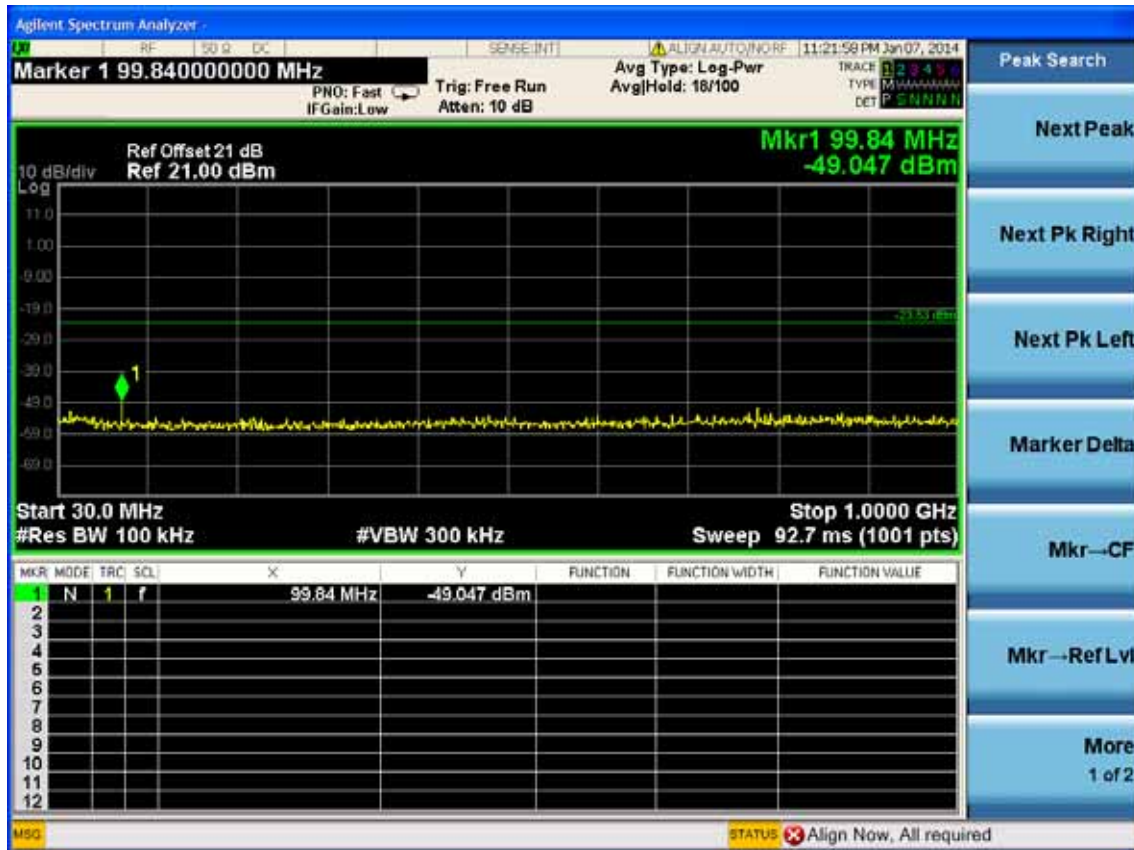
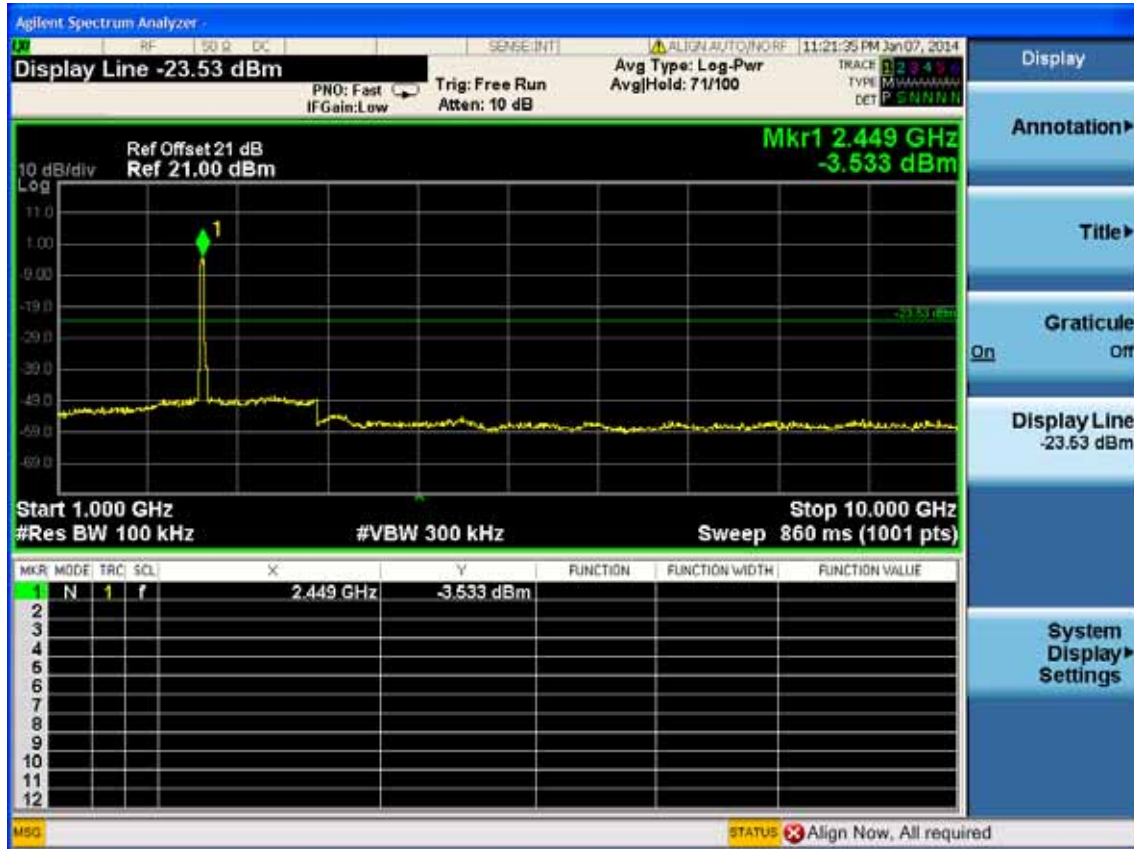


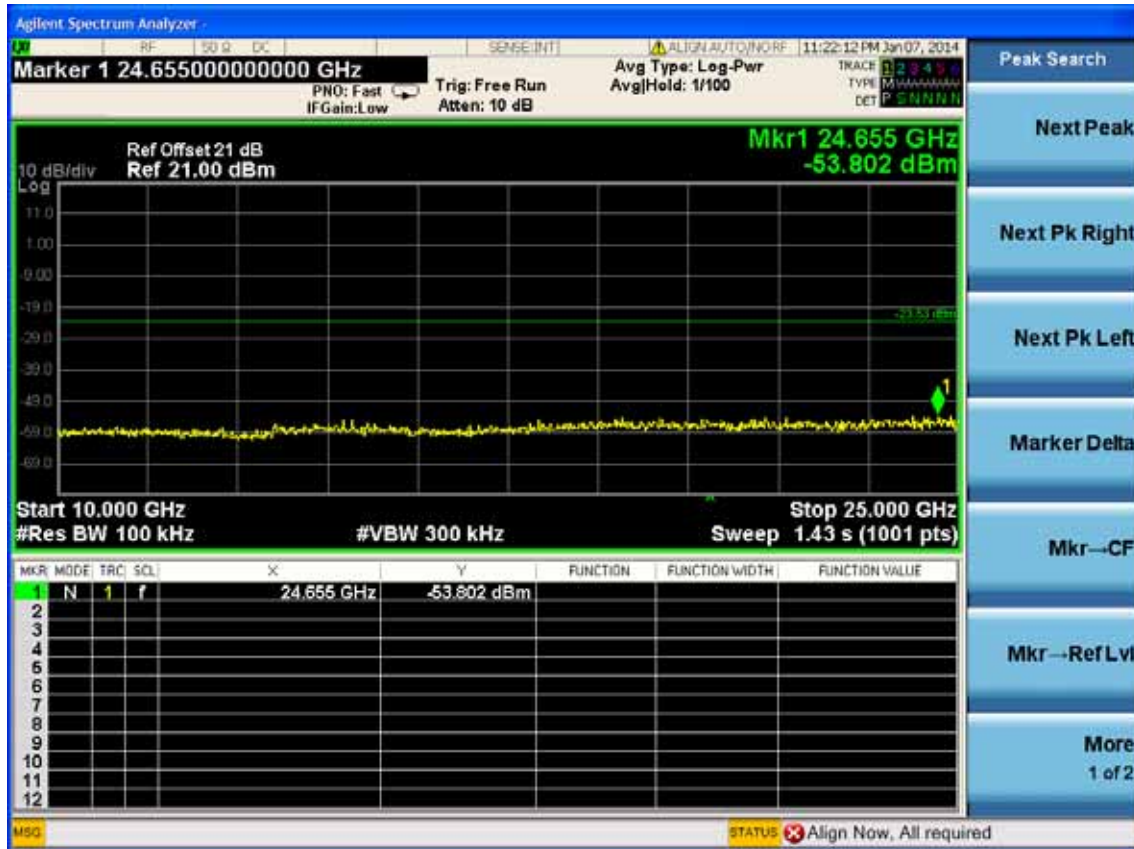
Test CH4: 2437MHz





Test CH7: 2452MHz





6. BAND EDGE COMPLIANCE TEST

6.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	N9030A	MY51380221	Oct.31, 13	1 Year
2.	Amp	HP	8449B	3008A08495	May.08, 13	1 Year
3.	Antenna	EMCO	3115	9607-4580	May.08, 13	1 Year
4.	HF Cable	Hubersuhne	Sucoflex104	-	May.08, 13	1 Year

6.2. Limit

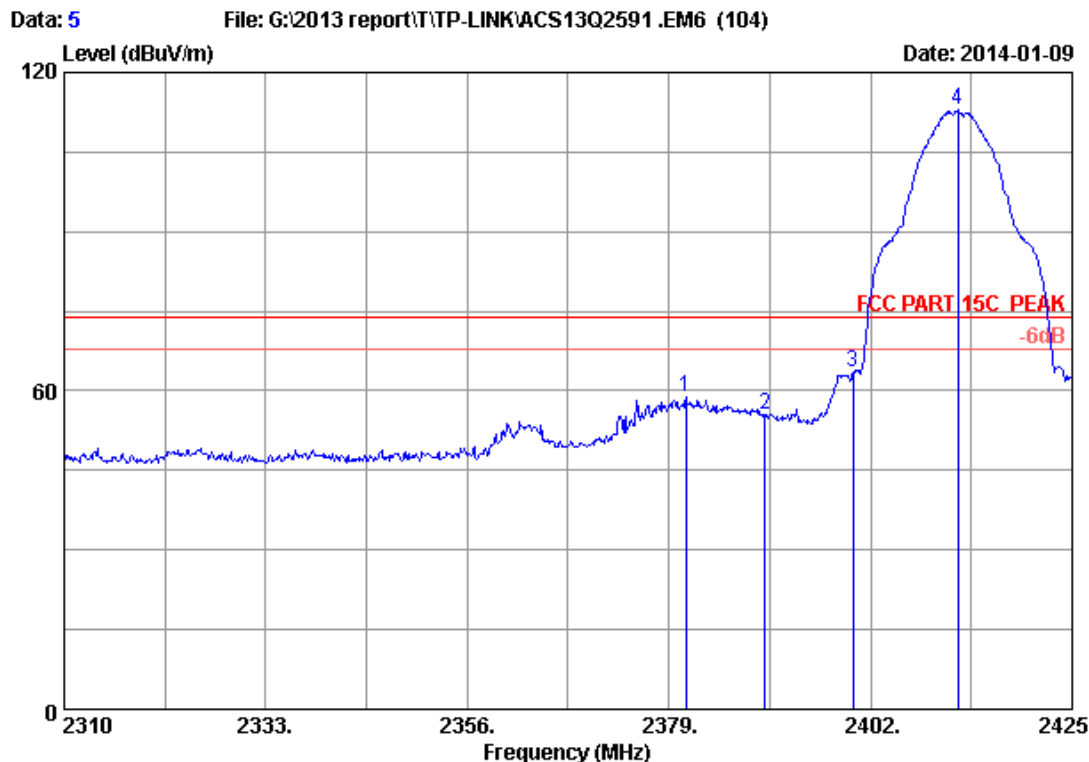
All the lower and upper band-edges emissions appearing within 2310MHz to 2390MHz and 2483.5MHz to 2500MHz restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions outside operation frequency band 2400MHz to 2483.5MHz shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

6.3. Test Produce

1. The EUT is placed on a turntable, which is 0.8m above the ground plane and worked at highest radiated power.
2. The turntable was rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.
4. Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission:
 - (a) PEAK: RBW=1MHz; VBW=3MHz; Sweep=AUTO
 - (b) AVERAGE: RBW=1MHz; VBW=10Hz; Sweep=AUTO

6.4. Test Results

Pass (The testing data was attached in the next pages.)

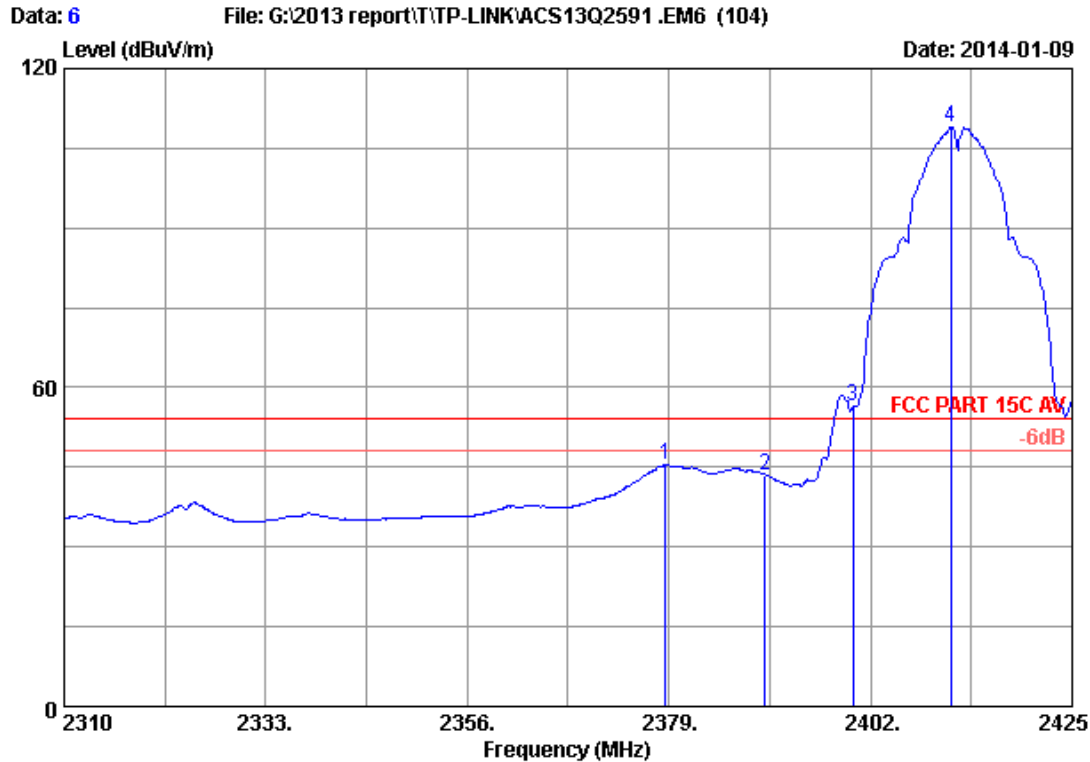


Site no. : RF Chamber Data no. : 5
Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23°C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N Router
Power supply : DC 9V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11b CH1 2412MHz Tx
M/N : TL-WR841N

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2380.955	28.14	5.77	35.70	60.61	58.82	74.00	15.18	Peak
2	2390.000	28.16	5.78	35.70	57.13	55.37	74.00	18.63	Peak
3	2400.000	28.18	5.80	35.70	65.33	63.61	74.00	10.39	Peak
4	2412.005	28.21	5.81	35.70	114.53	112.85	74.00	-38.85	Peak

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

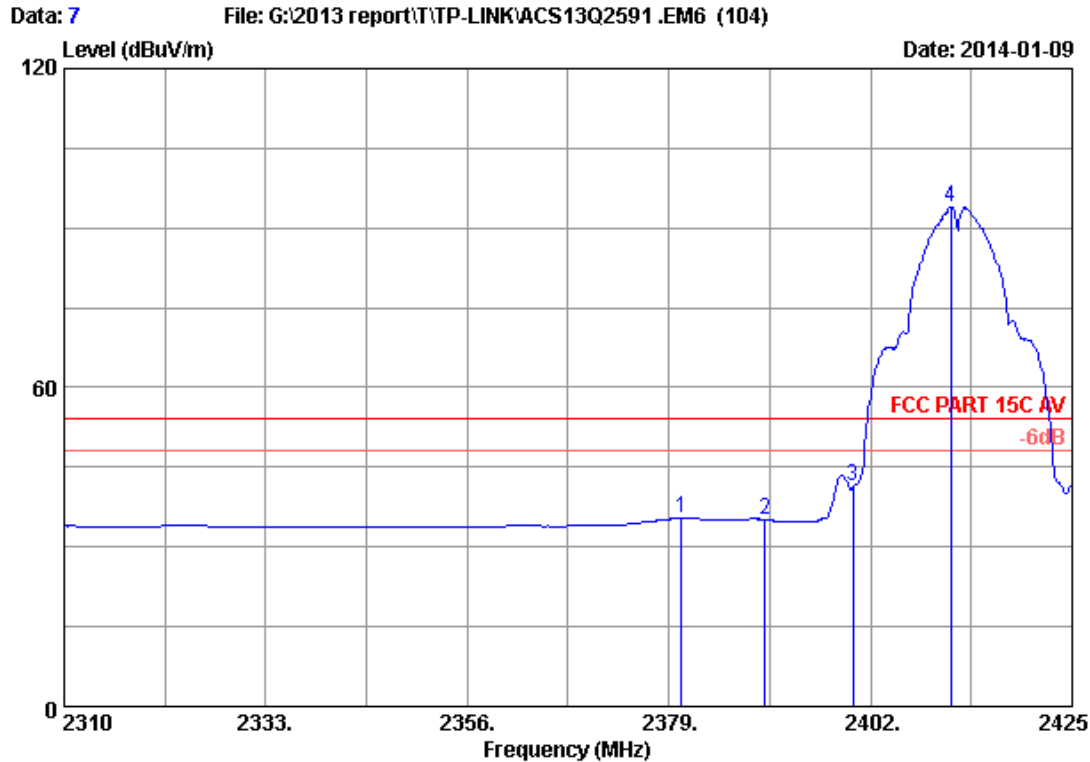


Site no. : RF Chamber Data no. : 6
 Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : VERTICAL
 Limit : FCC PART 15C AV
 Env. / Ins. : 23°C/54% Engineer : Leo-Li
 EUT : 300Mbps Wireless N Router
 Power supply : DC 9V From Adapter Input AC 120V/60Hz
 Test mode : IEEE802.11b CH1 2412MHz Tx
 M/N : TL-WR841N

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2378.655	28.13	5.77	35.70	47.17	45.37	54.00	8.63	Average
2	2390.000	28.16	5.78	35.70	45.37	43.61	54.00	10.39	Average
3	2400.000	28.18	5.80	35.70	58.09	56.37	54.00	-2.37	Average
4	2411.200	28.20	5.81	35.70	110.74	109.05	54.00	-55.05	Average

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

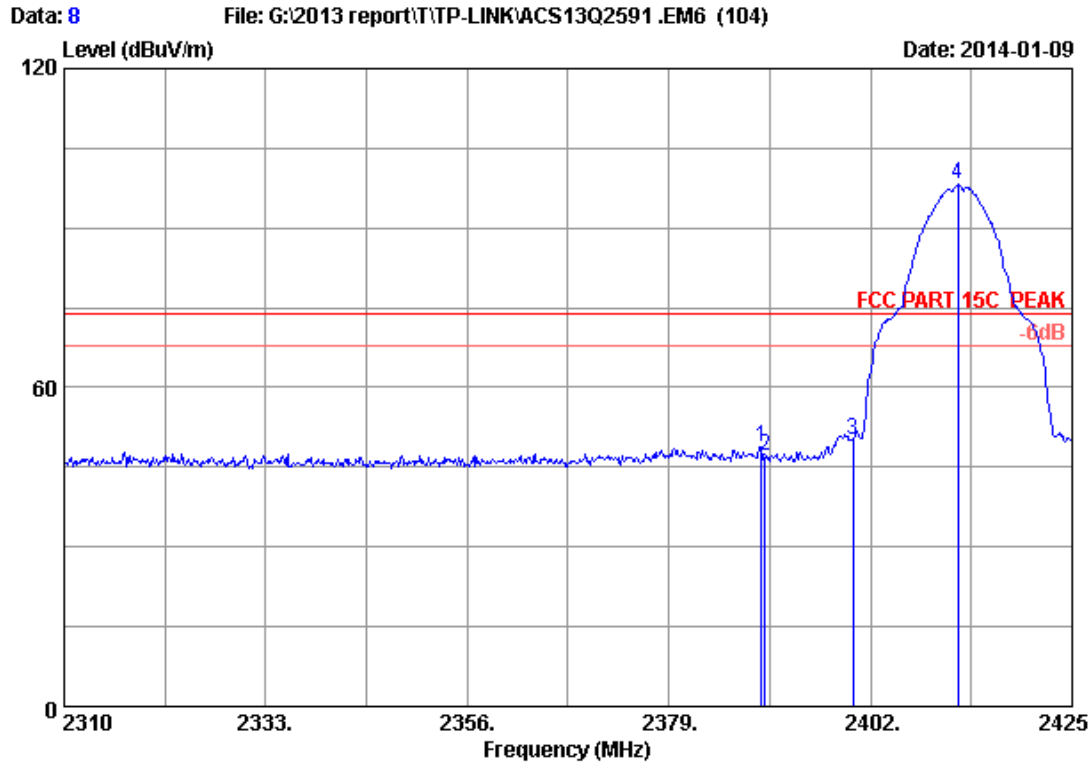


Site no. : RF Chamber Data no. : 7
 Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C AV
 Env. / Ins. : 23°C/54% Engineer : Leo-Li
 EUT : 300Mbps Wireless N Router
 Power supply : DC 9V From Adapter Input AC 120V/60Hz
 Test mode : IEEE802.11b CH1 2412MHz Tx
 M/N : TL-WR841N

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2380.380	28.14	5.77	35.70	37.32	35.53	54.00	18.47	Average
2	2390.000	28.16	5.78	35.70	36.92	35.16	54.00	18.84	Average
3	2400.000	28.18	5.80	35.70	43.26	41.54	54.00	12.46	Average
4	2411.200	28.20	5.81	35.70	95.63	93.94	54.00	-39.94	Average

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

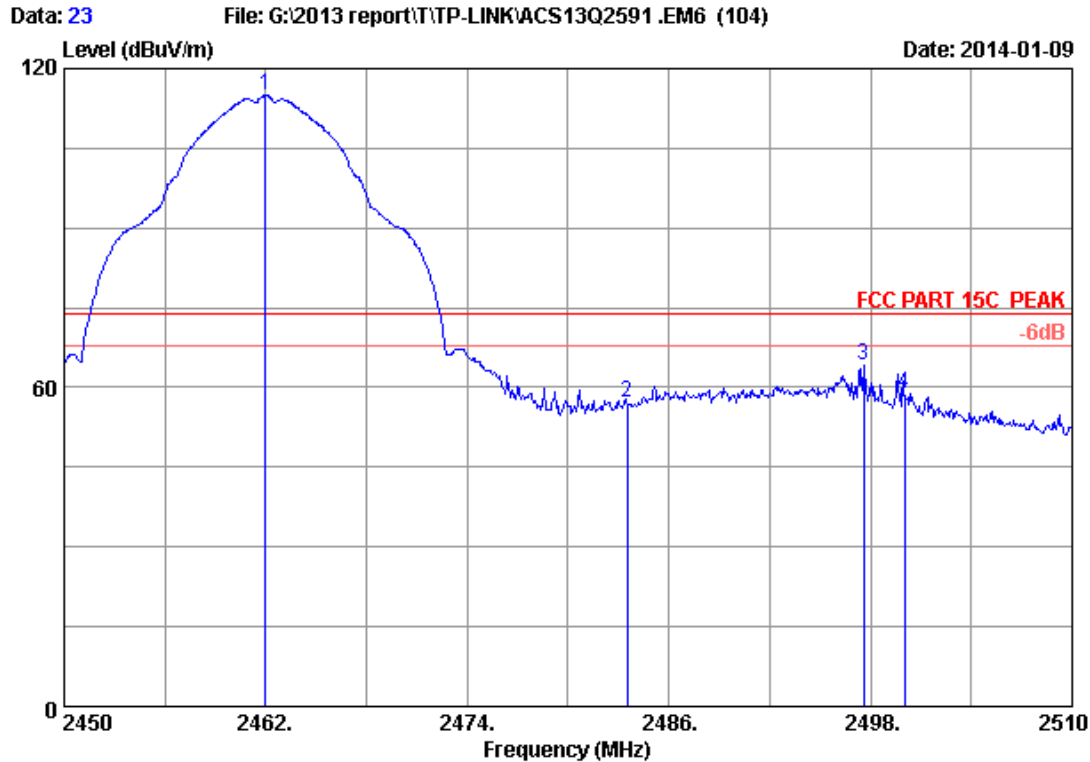


Site no. : RF Chamber Data no. : 8
 Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23°C/54% Engineer : Leo-Li
 EUT : 300Mbps Wireless N Router
 Power supply : DC 9V From Adapter Input AC 120V/60Hz
 Test mode : IEEE802.11b CH1 2412MHz Tx
 M/N : TL-WR841N

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2389.580	28.16	5.78	35.70	50.52	48.76	74.00	25.24	Peak
2	2390.000	28.16	5.78	35.70	48.92	47.16	74.00	26.84	Peak
3	2400.000	28.18	5.80	35.70	51.89	50.17	74.00	23.83	Peak
4	2412.005	28.21	5.81	35.70	99.79	98.11	74.00	-24.11	Peak

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

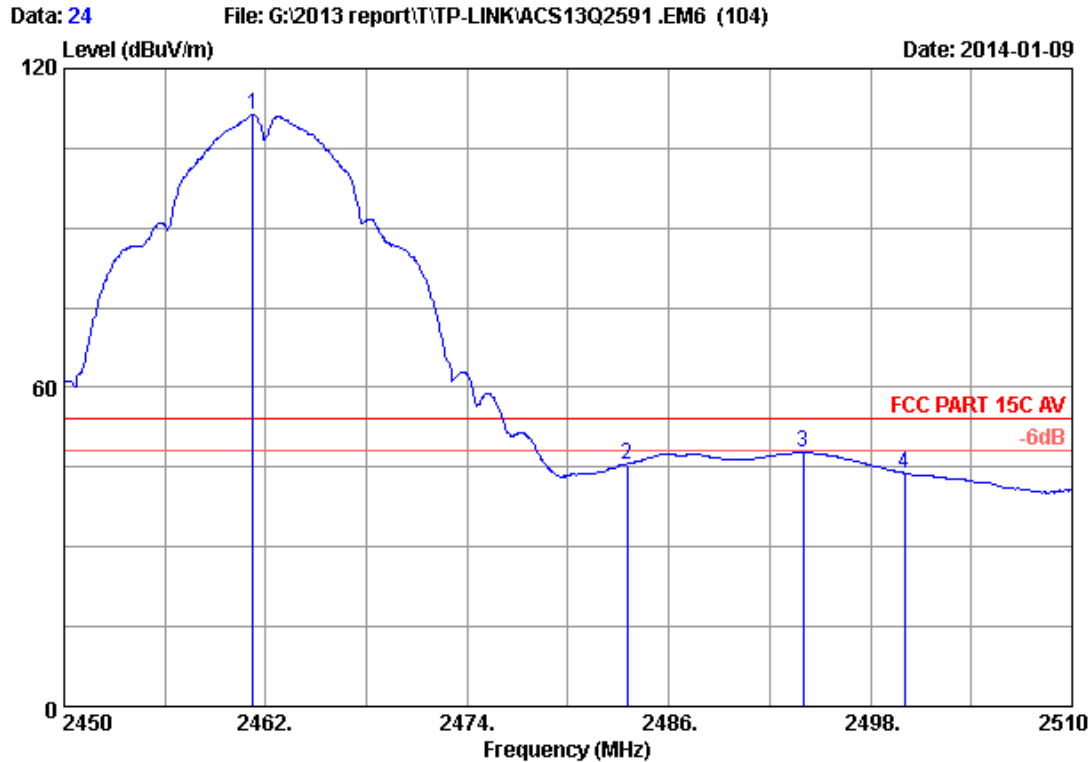


Site no. : RF Chamber Data no. : 23
 Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23°C/54% Engineer : Leo-Li
 EUT : 300Mbps Wireless N Router
 Power supply : DC 9V From Adapter Input AC 120V/60Hz
 Test mode : IEEE802.11b CH11 2462MHz Tx
 M/N : TL-WR841N

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2462.000	28.32	5.89	35.70	116.39	114.90	74.00	-40.90	Peak
2	2483.500	28.36	5.92	35.70	58.62	57.20	74.00	16.80	Peak
3	2497.580	28.39	5.94	35.70	65.62	64.25	74.00	9.75	Peak
4	2500.000	28.40	5.94	35.70	60.19	58.83	74.00	15.17	Peak

Remarks:

- Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- The emission levels that are 20dB below the official limit are not reported.

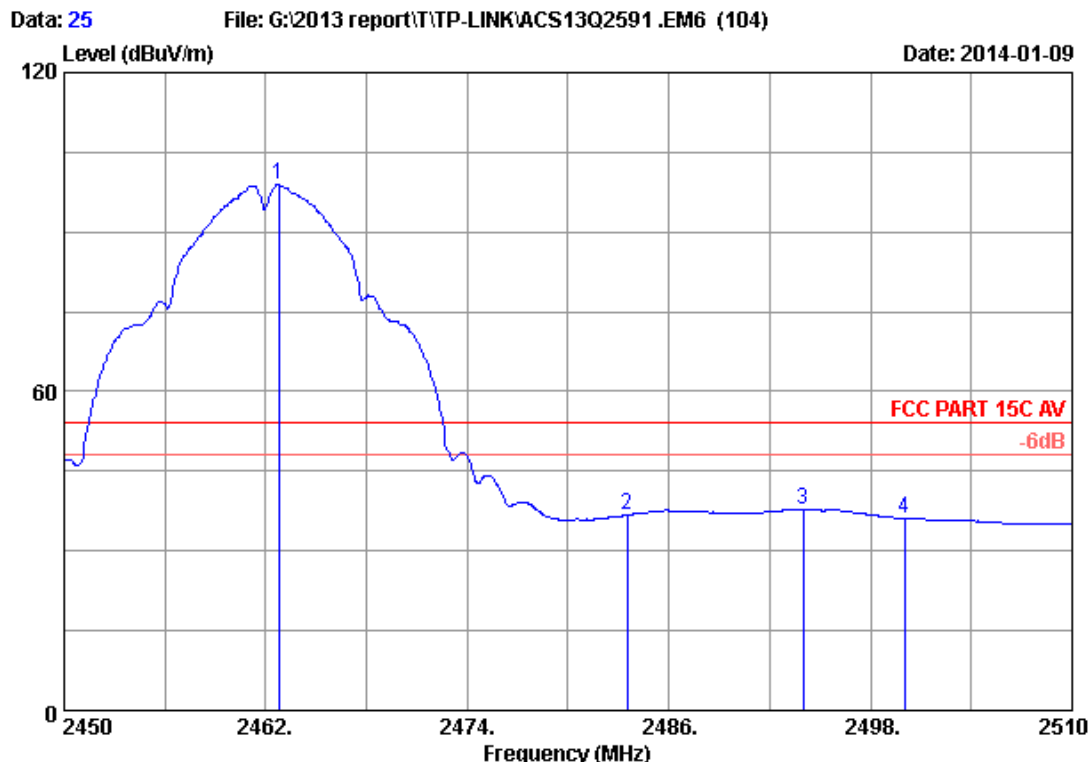


Site no. : RF Chamber Data no. : 24
Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : VERTICAL
Limit : FCC PART 15C AV
Env. / Ins. : 23°C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N Router
Power supply : DC 9V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11b CH11 2462MHz Tx
M/N : TL-WR841N

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2461.220	28.31	5.89	35.70	112.81	111.31	54.00	-57.31	Average
2	2483.500	28.36	5.92	35.70	46.98	45.56	54.00	8.44	Average
3	2493.980	28.39	5.93	35.70	49.31	47.93	54.00	6.07	Average
4	2500.000	28.40	5.94	35.70	45.29	43.93	54.00	10.07	Average

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

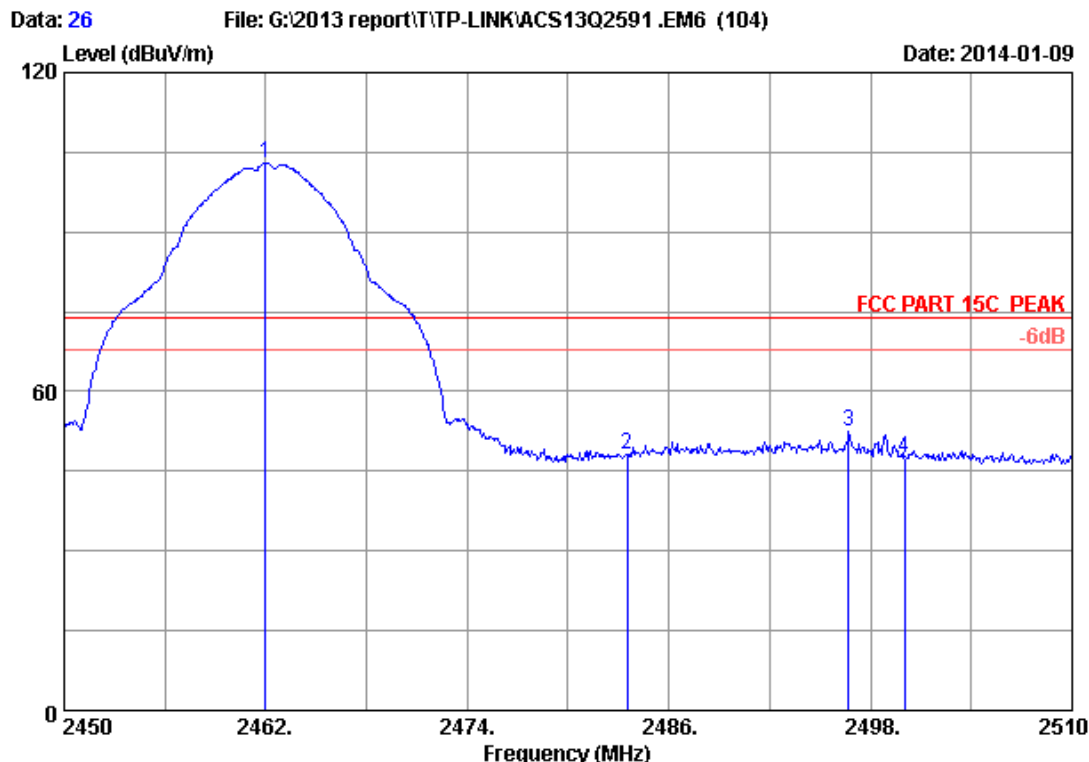


Site no. : RF Chamber Data no. : 25
 Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C AV
 Env. / Ins. : 23°C/54% Engineer : Leo-Li
 EUT : 300Mbps Wireless N Router
 Power supply : DC 9V From Adapter Input AC 120V/60Hz
 Test mode : IEEE802.11b CH11 2462MHz Tx
 M/N : TL-WR841N

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2462.780	28.32	5.89	35.70	100.35	98.86	54.00	-44.86	Average
2	2483.500	28.36	5.92	35.70	38.25	36.83	54.00	17.17	Average
3	2493.980	28.39	5.93	35.70	39.29	37.91	54.00	16.09	Average
4	2500.000	28.40	5.94	35.70	37.53	36.17	54.00	17.83	Average

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

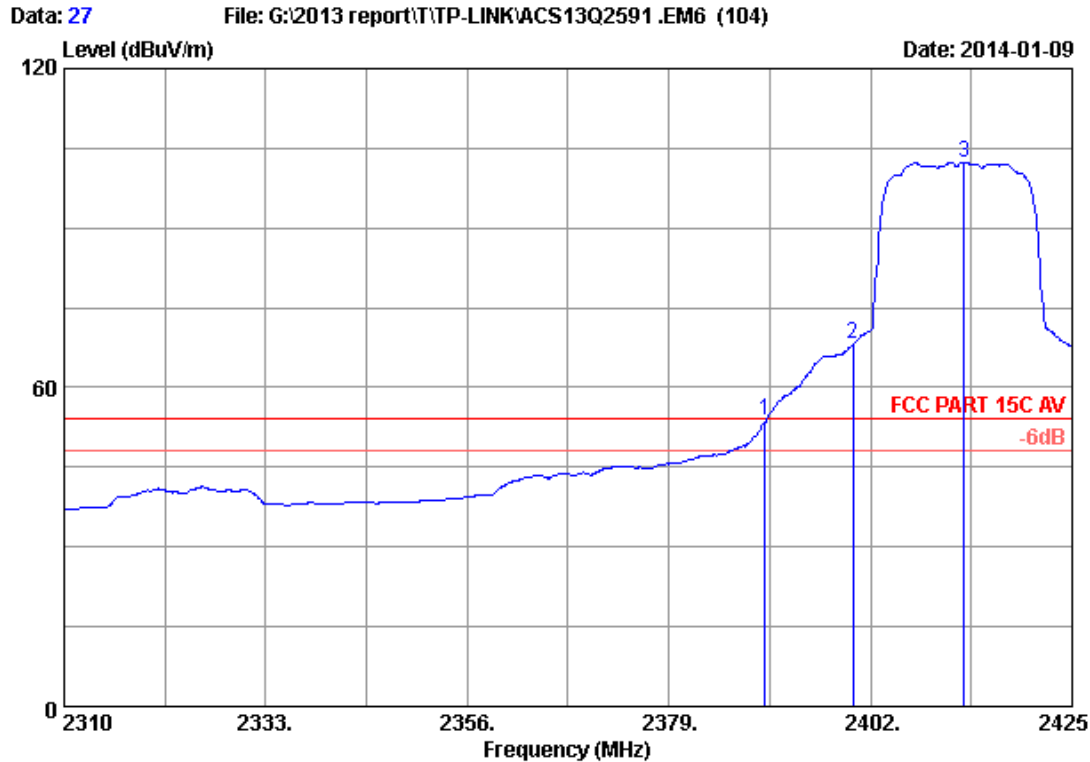


Site no. : RF Chamber Data no. : 26
 Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23°C/54% Engineer : Leo-Li
 EUT : 300Mbps Wireless N Router
 Power supply : DC 9V From Adapter Input AC 120V/60Hz
 Test mode : IEEE802.11b CH11 2462MHz Tx
 M/N : TL-WR841N

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2462.000	28.32	5.89	35.70	104.53	103.04	74.00	-29.04	Peak
2	2483.500	28.36	5.92	35.70	49.58	48.16	74.00	25.84	Peak
3	2496.680	28.39	5.94	35.70	53.77	52.40	74.00	21.60	Peak
4	2500.000	28.40	5.94	35.70	48.97	47.61	74.00	26.39	Peak

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

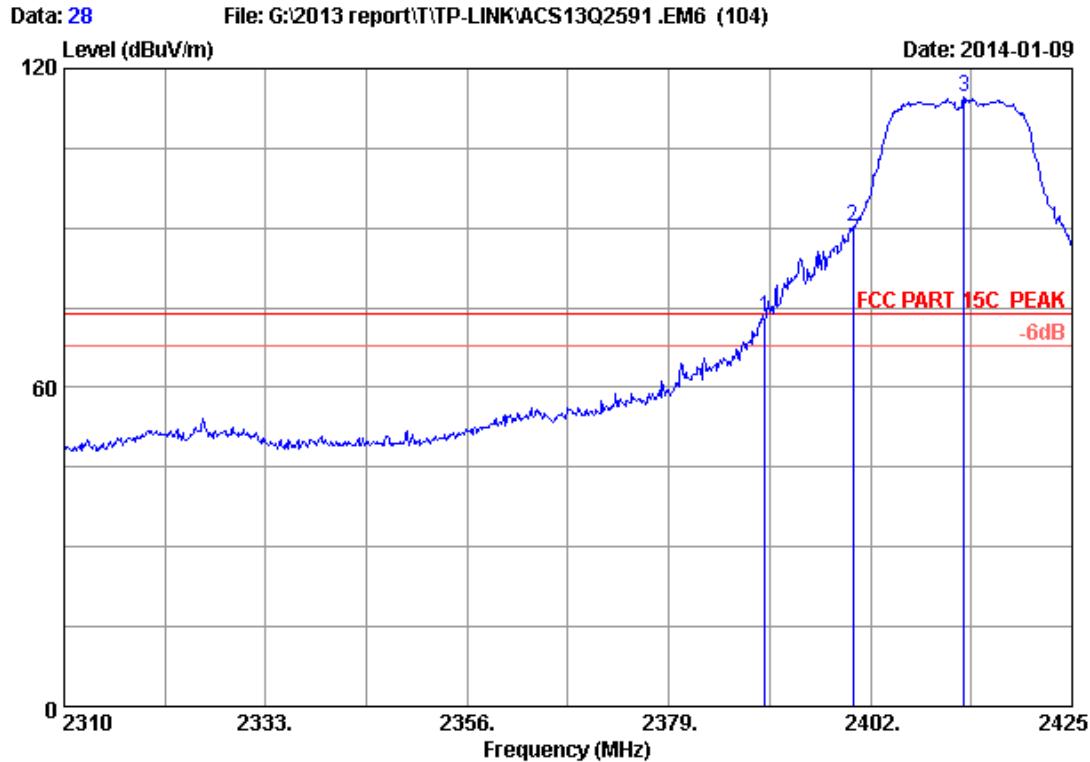


Site no. : RF Chamber Data no. : 27
 Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : VERTICAL
 Limit : FCC PART 15C AV
 Env. / Ins. : 23°C/54% Engineer : Leo-Li
 EUT : 300Mbps Wireless N Router
 Power supply : DC 9V From Adapter Input AC 120V/60Hz
 Test mode : IEEE802.11g CH1 2412MHz Tx
 M/N : TL-WR841N

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	28.16	5.78	35.70	55.63	53.87	54.00	0.13	Average
2	2400.000	28.18	5.80	35.70	69.99	68.27	54.00	-14.27	Average
3	2412.695	28.21	5.82	35.70	104.05	102.38	54.00	-48.38	Average

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

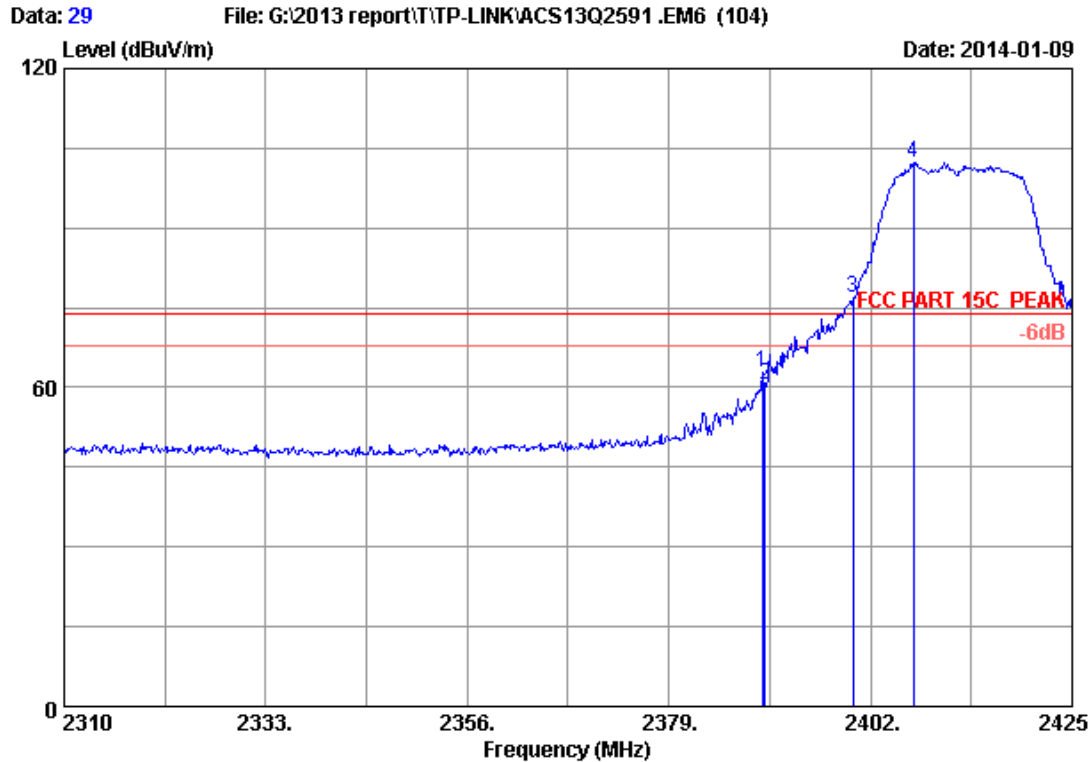


Site no. : RF Chamber Data no. : 28
 Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23°C/54% Engineer : Leo-Li
 EUT : 300Mbps Wireless N Router
 Power supply : DC 9V From Adapter Input AC 120V/60Hz
 Test mode : IEEE802.11g CH1 2412MHz Tx
 M/N : TL-WR841N

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	28.16	5.78	35.70	74.89	73.13	74.00	0.87	Peak
2	2400.000	28.18	5.80	35.70	91.98	90.26	74.00	-16.26	Peak
3	2412.695	28.21	5.82	35.70	116.26	114.59	74.00	-40.59	Peak

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

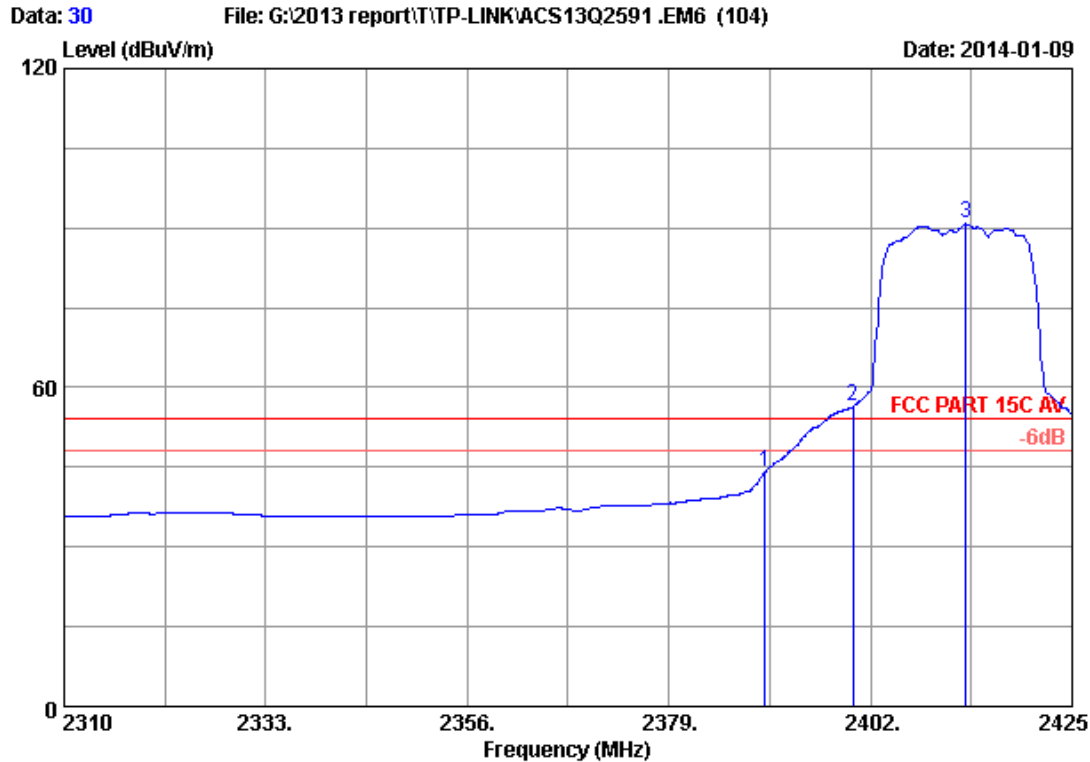


Site no. : RF Chamber Data no. : 29
 Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23°C/54% Engineer : Leo-Li
 EUT : 300Mbps Wireless N Router
 Power supply : DC 9V From Adapter Input AC 120V/60Hz
 Test mode : IEEE802.11g CH1 2412MHz Tx
 M/N : TL-WR841N

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2389.695	28.16	5.78	35.70	64.56	62.80	74.00	11.20	Peak
2	2390.000	28.16	5.78	35.70	62.13	60.37	74.00	13.63	Peak
3	2400.000	28.18	5.80	35.70	78.52	76.80	74.00	-2.80	Peak
4	2406.945	28.20	5.81	35.70	104.09	102.40	74.00	-28.40	Peak

Remarks:

- Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- The emission levels that are 20dB below the official limit are not reported.

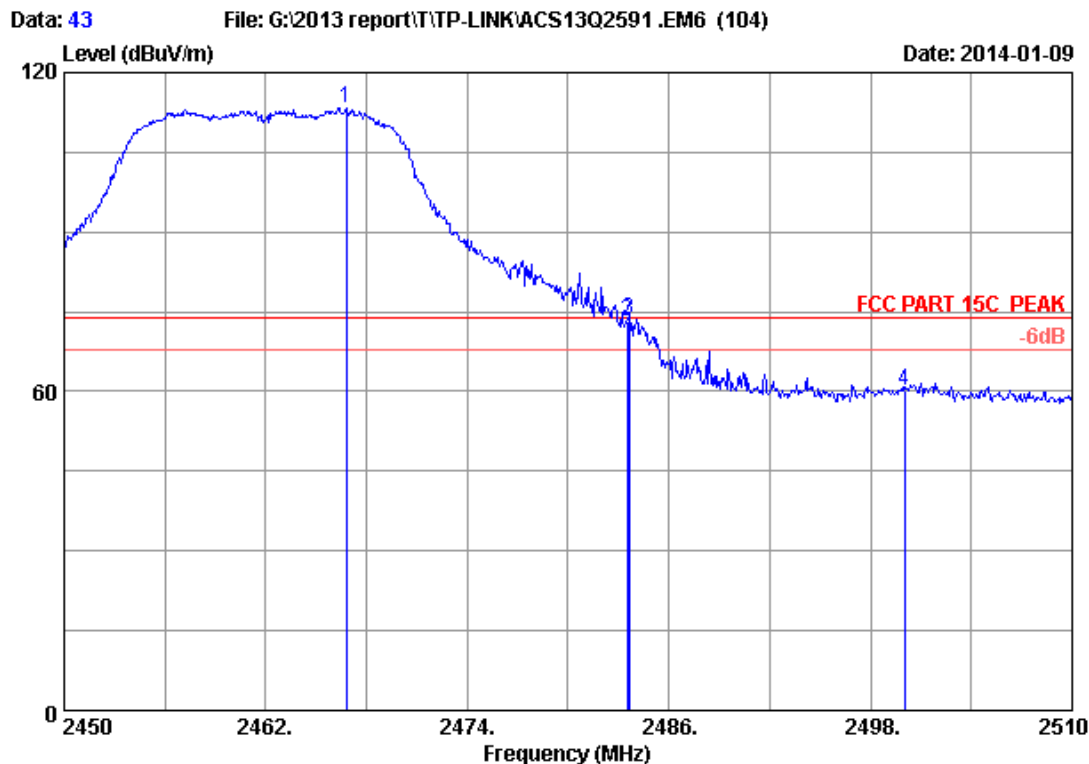


Site no. : RF Chamber Data no. : 30
 Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C AV
 Env. / Ins. : 23°C/54% Engineer : Leo-Li
 EUT : 300Mbps Wireless N Router
 Power supply : DC 9V From Adapter Input AC 120V/60Hz
 Test mode : IEEE802.11g CH1 2412MHz Tx
 M/N : TL-WR841N

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	28.16	5.78	35.70	45.92	44.16	54.00	9.84	Average
2	2400.000	28.18	5.80	35.70	58.22	56.50	54.00	-2.50	Average
3	2412.925	28.21	5.82	35.70	92.45	90.78	54.00	-36.78	Average

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

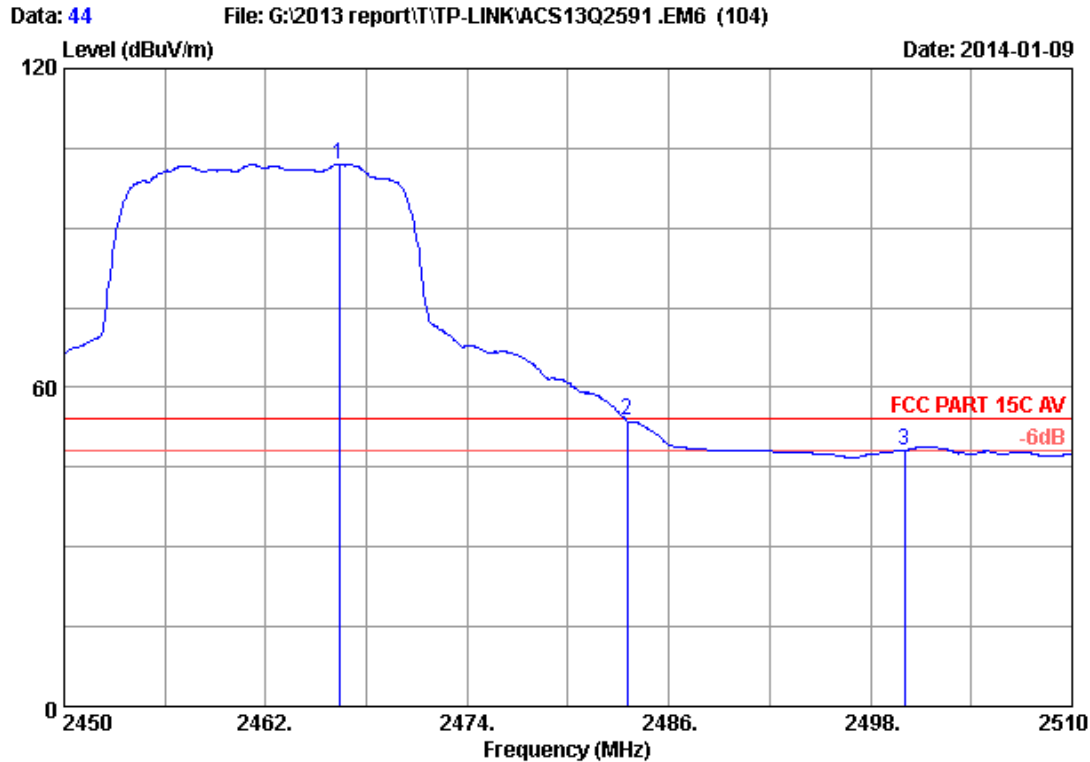


Site no. : RF Chamber Data no. : 43
 Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23°C/54% Engineer : Leo-Li
 EUT : 300Mbps Wireless N Router
 Power supply : DC 9V From Adapter Input AC 120V/60Hz
 Test mode : IEEE802.11g CH11 2462MHz Tx
 M/N : TL-WR841N

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2466.800	28.33	5.89	35.70	114.82	113.34	74.00	-39.34	Peak
2	2483.500	28.36	5.92	35.70	74.55	73.13	74.00	0.87	Peak
3	2483.600	28.36	5.92	35.70	75.11	73.69	74.00	0.31	Peak
4	2500.000	28.40	5.94	35.70	61.60	60.24	74.00	13.76	Peak

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

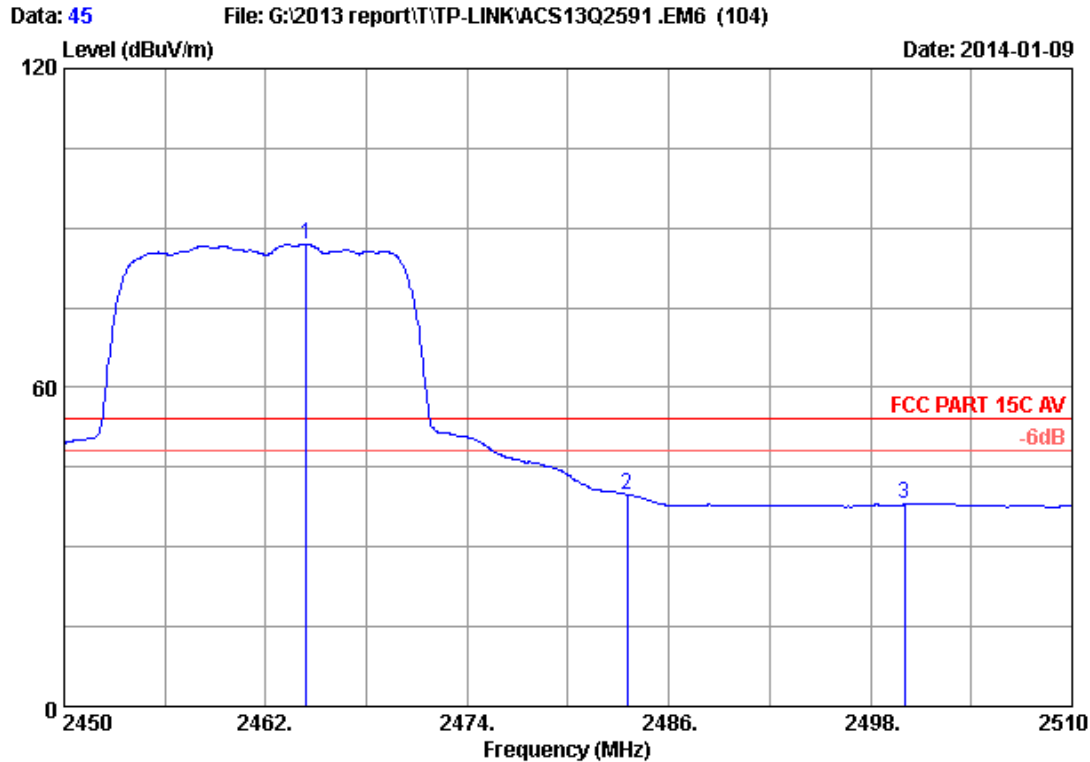


Site no. : RF Chamber Data no. : 44
 Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : VERTICAL
 Limit : FCC PART 15C AV
 Env. / Ins. : 23°C/54% Engineer : Leo-Li
 EUT : 300Mbps Wireless N Router
 Power supply : DC 9V From Adapter Input AC 120V/60Hz
 Test mode : IEEE802.11g CH11 2462MHz Tx
 M/N : TL-WR841N

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2466.380	28.33	5.89	35.70	103.45	101.97	54.00	-47.97	Average
2	2483.500	28.36	5.92	35.70	55.22	53.80	54.00	0.20	Average
3	2500.000	28.40	5.94	35.70	49.45	48.09	54.00	5.91	Average

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

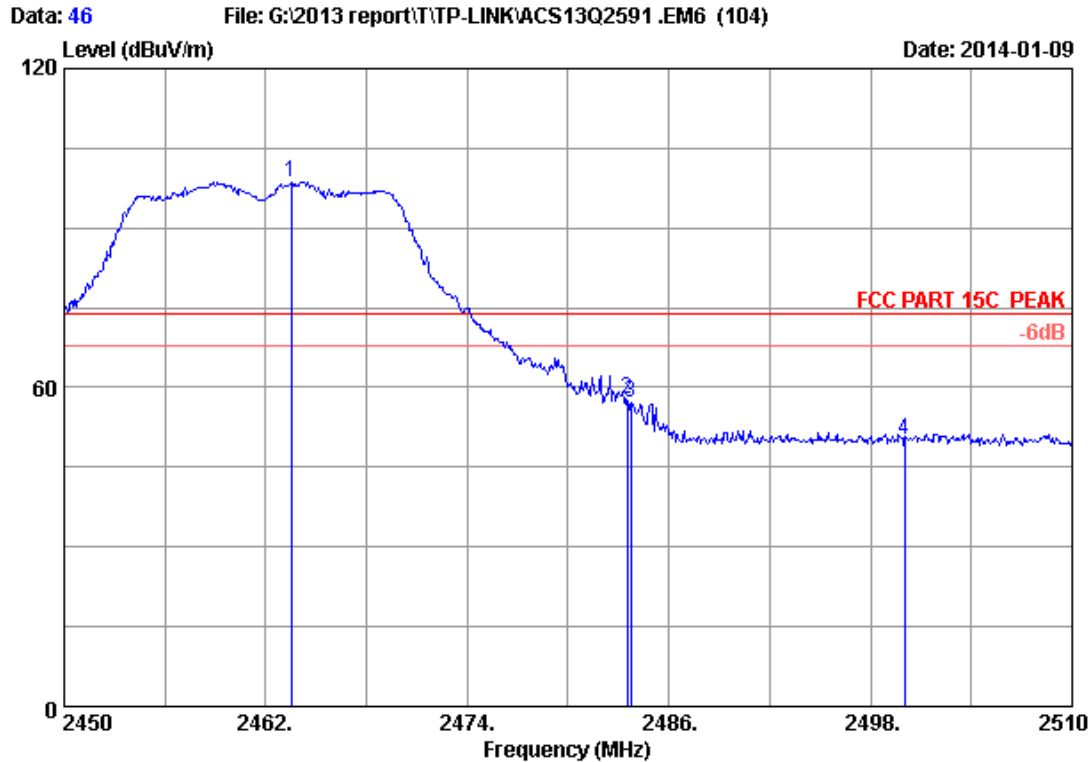


Site no. : RF Chamber Data no. : 45
 Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C AV
 Env. / Ins. : 23°C/54% Engineer : Leo-Li
 EUT : 300Mbps Wireless N Router
 Power supply : DC 9V From Adapter Input AC 120V/60Hz
 Test mode : IEEE802.11g CH11 2462MHz Tx
 M/N : TL-WR841N

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2464.400	28.32	5.89	35.70	88.46	86.97	54.00	-32.97	Average
2	2483.500	28.36	5.92	35.70	41.34	39.92	54.00	14.08	Average
3	2500.000	28.40	5.94	35.70	39.33	37.97	54.00	16.03	Average

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

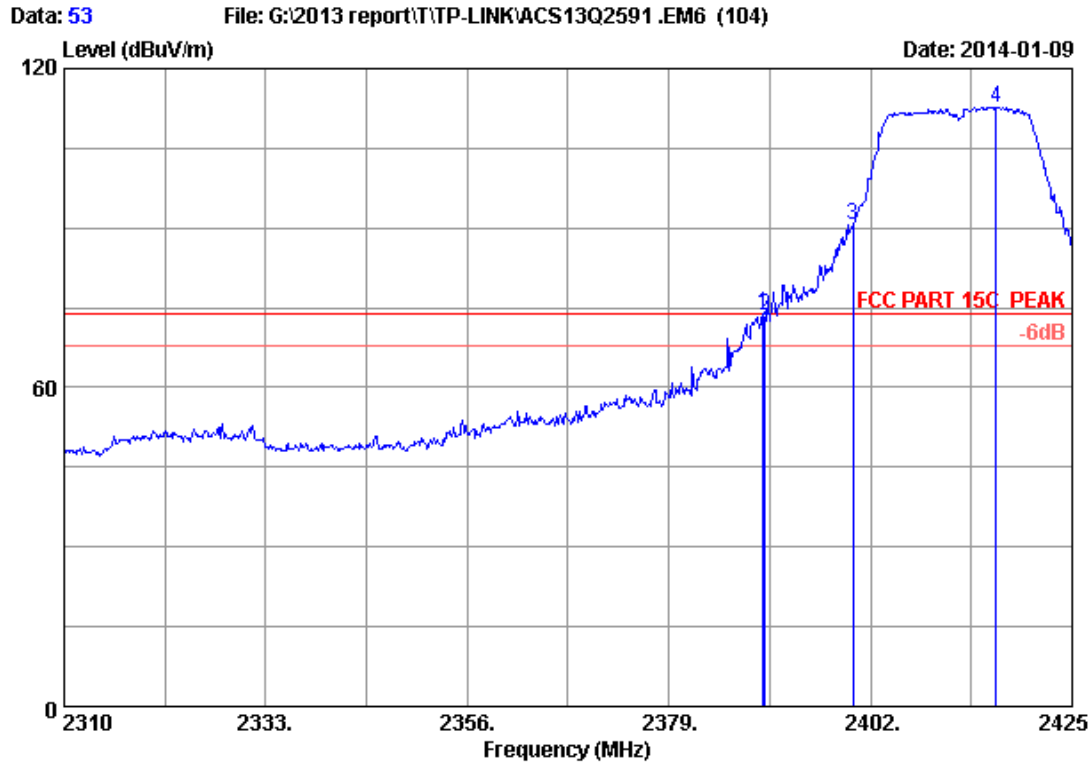


Site no. : RF Chamber Data no. : 46
 Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23°C/54% Engineer : Leo-Li
 EUT : 300Mbps Wireless N Router
 Power supply : DC 9V From Adapter Input AC 120V/60Hz
 Test mode : IEEE802.11g CH11 2462MHz Tx
 M/N : TL-WR841N

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2463.500	28.32	5.89	35.70	100.13	98.64	74.00	-24.64	Peak
2	2483.500	28.36	5.92	35.70	59.08	57.66	74.00	16.34	Peak
3	2483.720	28.36	5.92	35.70	58.67	57.25	74.00	16.75	Peak
4	2500.000	28.40	5.94	35.70	51.59	50.23	74.00	23.77	Peak

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

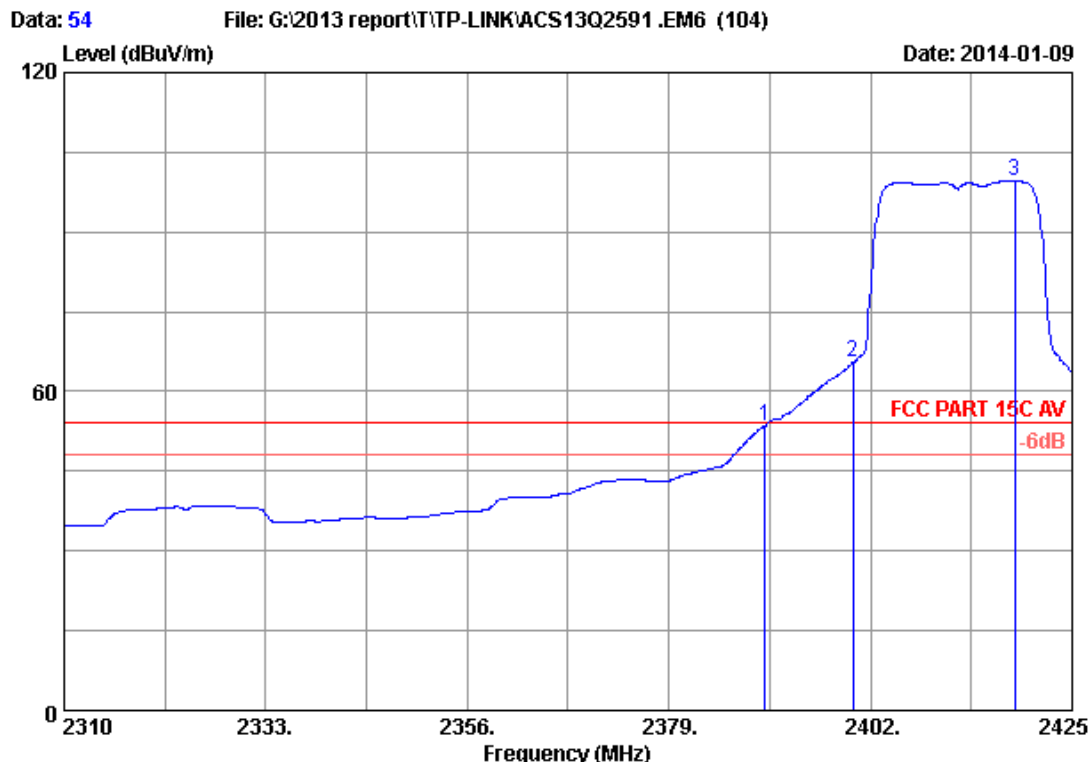


Site no. : RF Chamber Data no. : 53
 Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23°C/54% Engineer : Leo-Li
 EUT : 300Mbps Wireless N Router
 Power supply : DC 9V From Adapter Input AC 120V/60Hz
 Test mode : IEEE802.11n HT20 CH1 2412MHz Tx
 M/N : TL-WR841N

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2389.810	28.16	5.78	35.70	75.52	73.76	74.00	0.24	Peak
2	2390.000	28.16	5.78	35.70	75.14	73.38	74.00	0.62	Peak
3	2400.000	28.18	5.80	35.70	92.36	90.64	74.00	-16.64	Peak
4	2416.375	28.22	5.82	35.70	114.44	112.78	74.00	-38.78	Peak

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

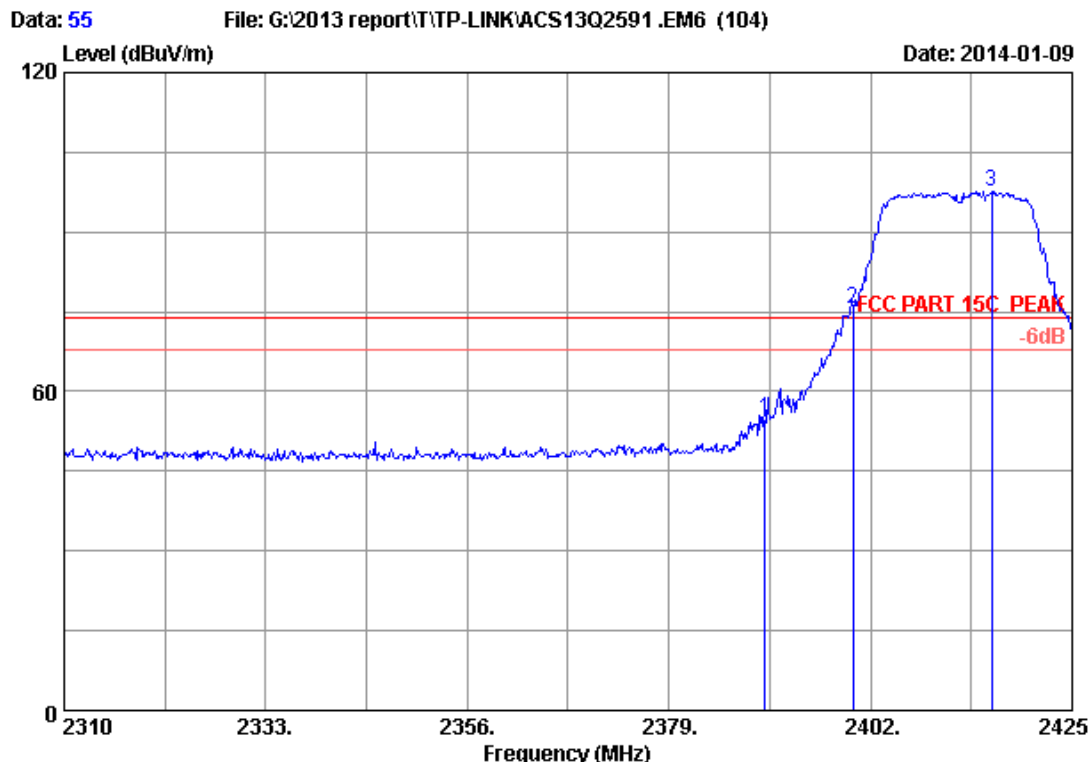


Site no. : RF Chamber Data no. : 54
Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : VERTICAL
Limit : FCC PART 15C AV
Env. / Ins. : 23°C/54% Engineer : Leo-Li
EUT : 300Mbps Wireless N Router
Power supply : DC 9V From Adapter Input AC 120V/60Hz
Test mode : IEEE802.11n HT20 CH1 2412MHz Tx
M/N : TL-WR841N

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	28.16	5.78	35.70	55.38	53.62	54.00	0.38	Average
2	2400.000	28.18	5.80	35.70	67.29	65.57	54.00	-11.57	Average
3	2418.445	28.22	5.82	35.70	101.36	99.70	54.00	-45.70	Average

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

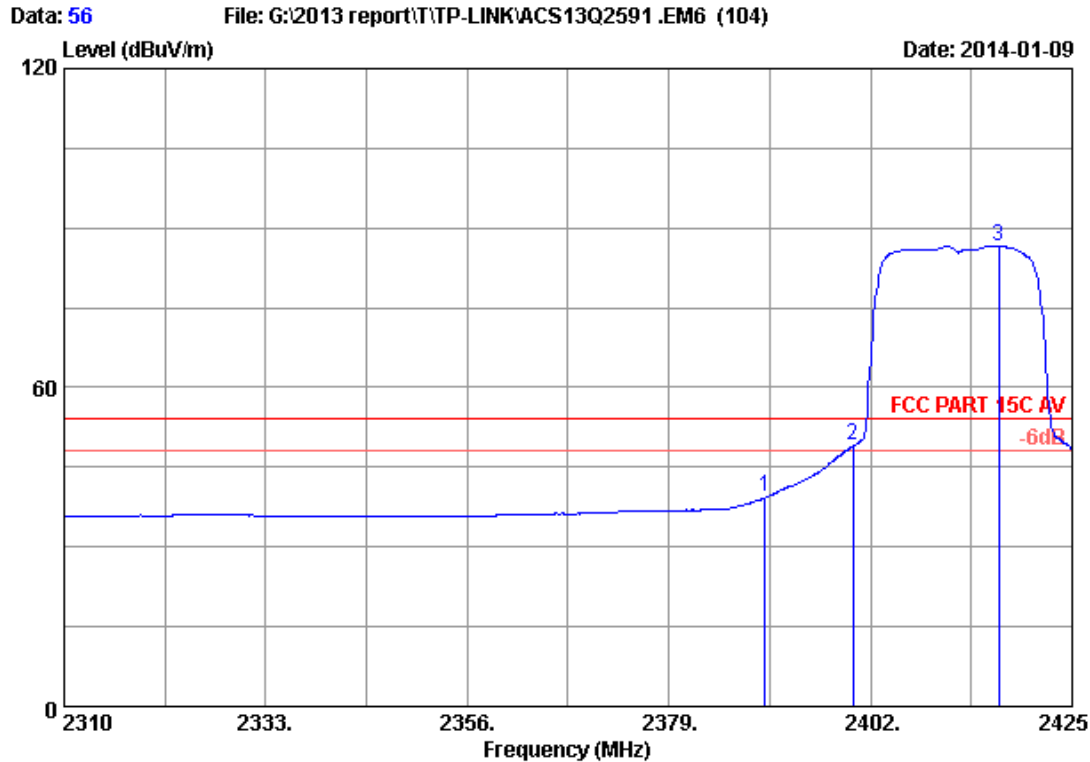


Site no. : RF Chamber Data no. : 55
 Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23°C/54% Engineer : Leo-Li
 EUT : 300Mbps Wireless N Router
 Power supply : DC 9V From Adapter Input AC 120V/60Hz
 Test mode : IEEE802.11n HT20 CH1 2412MHz Tx
 M/N : TL-WR841N

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	28.16	5.78	35.70	56.64	54.88	74.00	19.12	Peak
2	2400.000	28.18	5.80	35.70	77.18	75.46	74.00	-1.46	Peak
3	2415.800	28.21	5.82	35.70	99.26	97.59	74.00	-23.59	Peak

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

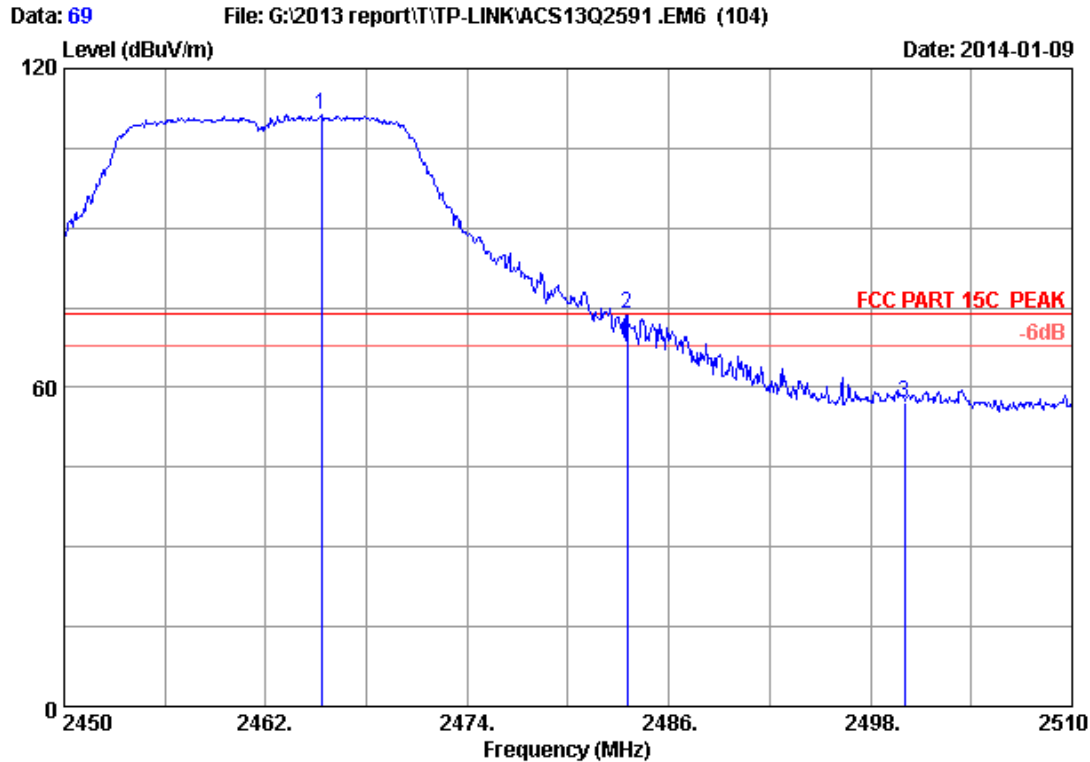


Site no. : RF Chamber Data no. : 56
 Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C AV
 Env. / Ins. : 23°C/54% Engineer : Leo-Li
 EUT : 300Mbps Wireless N Router
 Power supply : DC 9V From Adapter Input AC 120V/60Hz
 Test mode : IEEE802.11n HT20 CH1 2412MHz Tx
 M/N : TL-WR841N

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	28.16	5.78	35.70	41.12	39.36	54.00	14.64	Average
2	2400.000	28.18	5.80	35.70	50.74	49.02	54.00	4.98	Average
3	2416.605	28.22	5.82	35.70	88.28	86.62	54.00	-32.62	Average

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

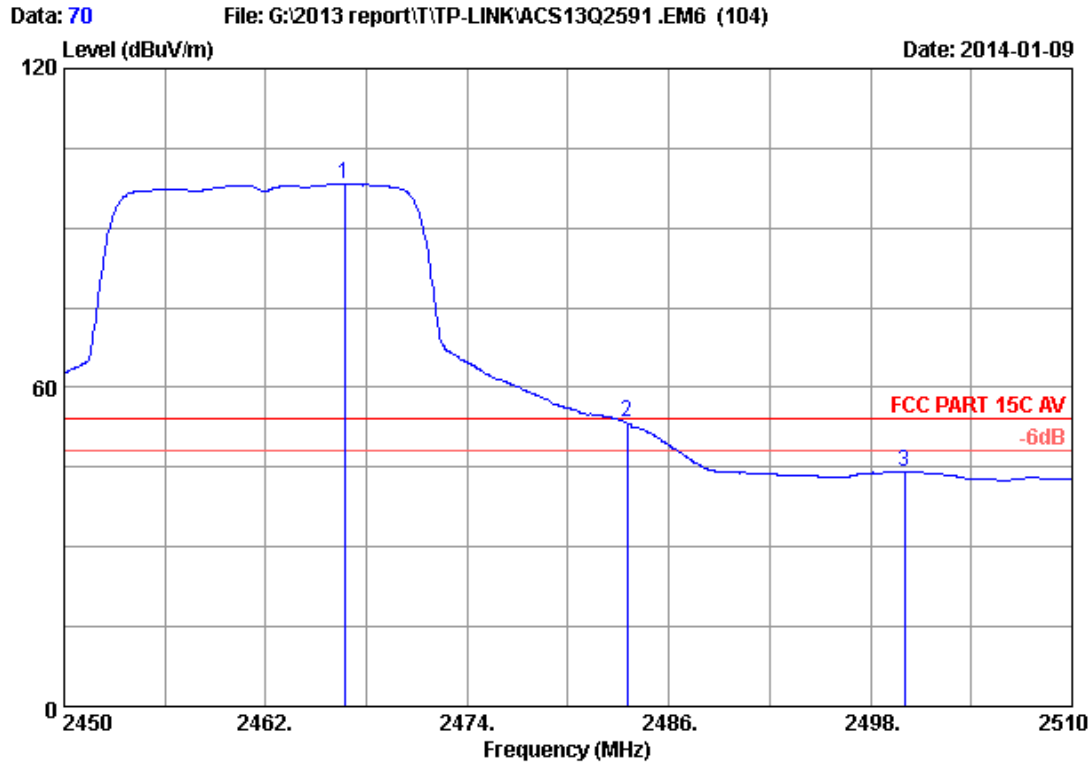


Site no. : RF Chamber Data no. : 69
 Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23°C/54% Engineer : Leo-Li
 EUT : 300Mbps Wireless N Router
 Power supply : DC 9V From Adapter Input AC 120V/60Hz
 Test mode : IEEE802.11n HT20 CH11 2462MHz Tx
 M/N : TL-WR841N

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2465.300	28.32	5.89	35.70	112.70	111.21	74.00	-37.21	Peak
2	2483.500	28.36	5.92	35.70	75.21	73.79	74.00	0.21	Peak
3	2500.000	28.40	5.94	35.70	58.53	57.17	74.00	16.83	Peak

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

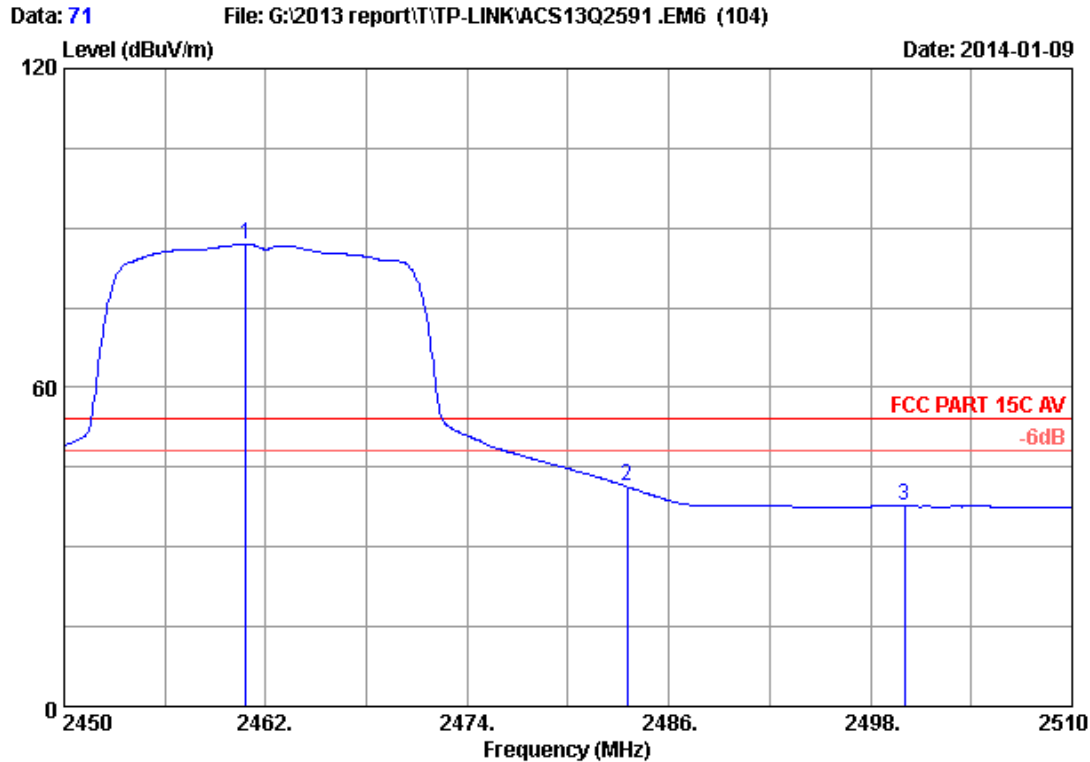


Site no. : RF Chamber Data no. : 70
 Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : VERTICAL
 Limit : FCC PART 15C AV
 Env. / Ins. : 23°C/54% Engineer : Leo-Li
 EUT : 300Mbps Wireless N Router
 Power supply : DC 9V From Adapter Input AC 120V/60Hz
 Test mode : IEEE802.11n HT20 CH11 2462MHz Tx
 M/N : TL-WR841N

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBUV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Remark
1	2466.680	28.33	5.89	35.70	99.88	98.40	54.00	-44.40	Average
2	2483.500	28.36	5.92	35.70	54.78	53.36	54.00	0.64	Average
3	2500.000	28.40	5.94	35.70	45.44	44.08	54.00	9.92	Average

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

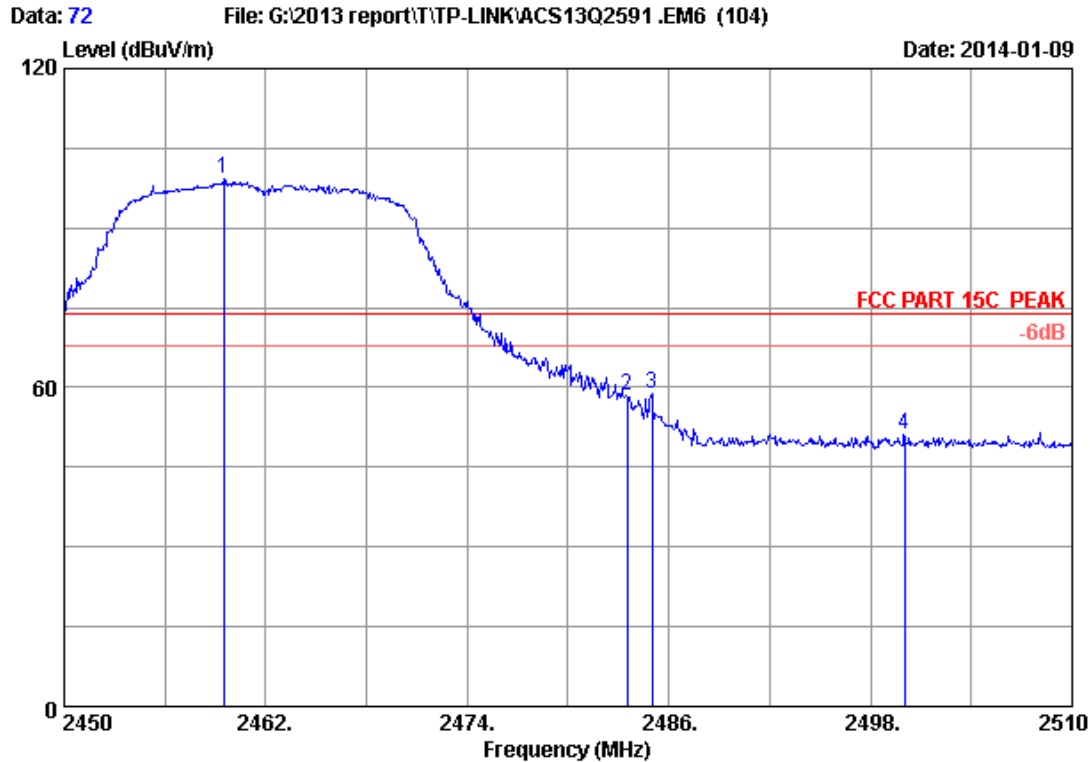


Site no. : RF Chamber Data no. : 71
 Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C AV
 Env. / Ins. : 23°C/54% Engineer : Leo-Li
 EUT : 300Mbps Wireless N Router
 Power supply : DC 9V From Adapter Input AC 120V/60Hz
 Test mode : IEEE802.11n HT20 CH11 2462MHz Tx
 M/N : TL-WR841N

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBUV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Remark
1	2460.800	28.31	5.89	35.70	88.48	86.98	54.00	-32.98	Average
2	2483.500	28.36	5.92	35.70	42.71	41.29	54.00	12.71	Average
3	2500.000	28.40	5.94	35.70	39.01	37.65	54.00	16.35	Average

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

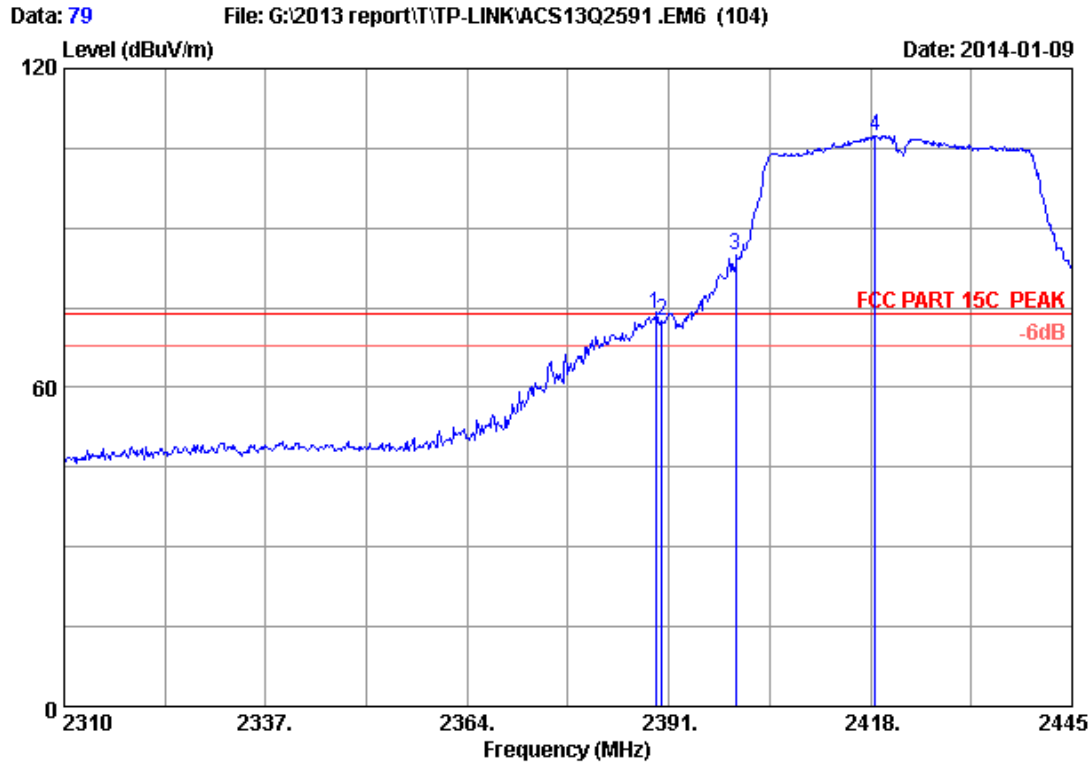


Site no. : RF Chamber Data no. : 72
 Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23°C/54% Engineer : Leo-Li
 EUT : 300Mbps Wireless N Router
 Power supply : DC 9V From Adapter Input AC 120V/60Hz
 Test mode : IEEE802.11n HT20 CH11 2462MHz Tx
 M/N : TL-WR841N

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2459.480	28.31	5.88	35.70	100.84	99.33	74.00	-25.33	Peak
2	2483.500	28.36	5.92	35.70	59.81	58.39	74.00	15.61	Peak
3	2484.980	28.37	5.92	35.70	60.21	58.80	74.00	15.20	Peak
4	2500.000	28.40	5.94	35.70	52.56	51.20	74.00	22.80	Peak

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

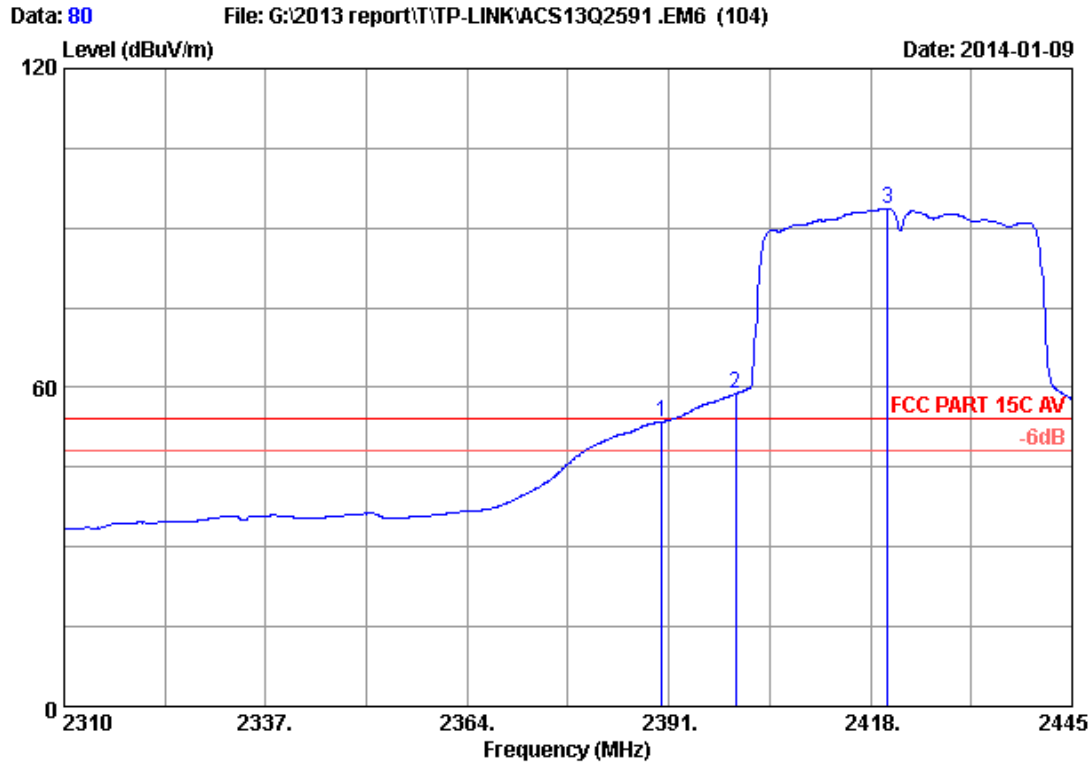


Site no. : RF Chamber Data no. : 79
 Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23°C/54% Engineer : Leo-Li
 EUT : 300Mbps Wireless N Router
 Power supply : DC 9V From Adapter Input AC 120V/60Hz
 Test mode : IEEE802.11n HT40 CH1 2422MHz Tx
 M/N : TL-WR841N

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2389.245	28.16	5.78	35.70	75.48	73.72	74.00	0.28	Peak
2	2390.000	28.16	5.78	35.70	74.20	72.44	74.00	1.56	Peak
3	2400.000	28.18	5.80	35.70	86.75	85.03	74.00	-11.03	Peak
4	2418.675	28.22	5.82	35.70	109.06	107.40	74.00	-33.40	Peak

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

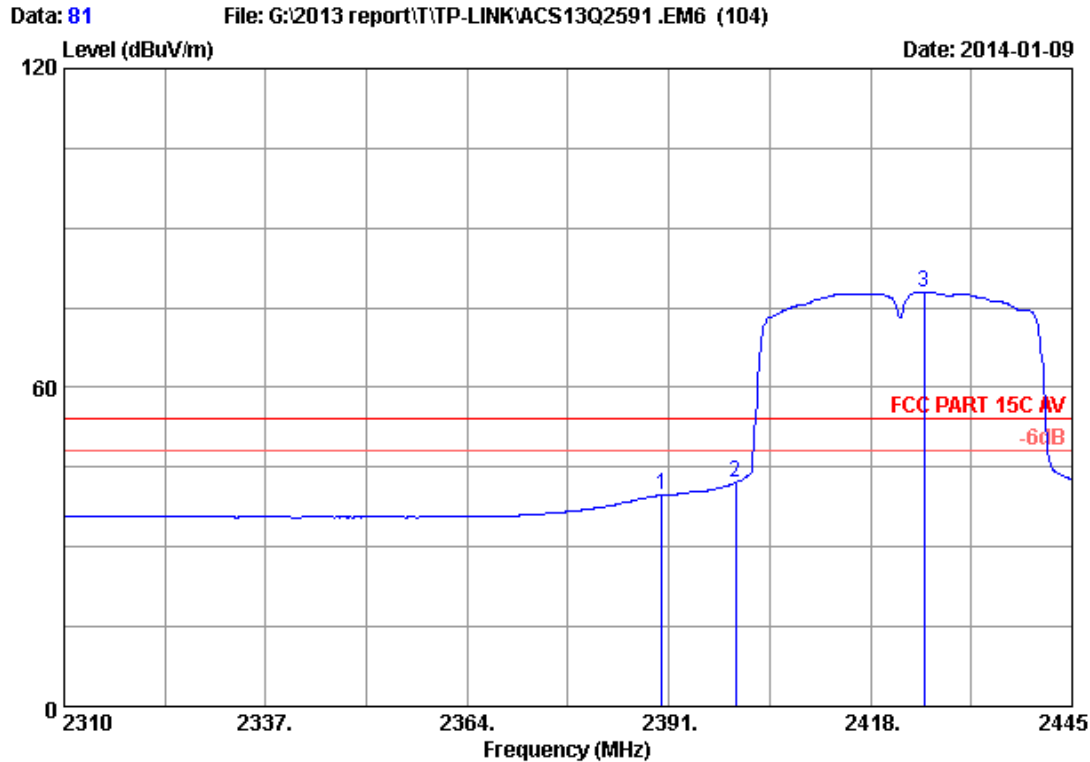


Site no. : RF Chamber Data no. : 80
 Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : VERTICAL
 Limit : FCC PART 15C AV
 Env. / Ins. : 23°C/54% Engineer : Leo-Li
 EUT : 300Mbps Wireless N Router
 Power supply : DC 9V From Adapter Input AC 120V/60Hz
 Test mode : IEEE802.11n HT40 CH1 2422MHz Tx
 M/N : TL-WR841N

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	28.16	5.78	35.70	55.20	53.44	54.00	0.56	Average
2	2400.000	28.18	5.80	35.70	60.56	58.84	54.00	-4.84	Average
3	2420.295	28.22	5.83	35.70	95.27	93.62	54.00	-39.62	Average

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

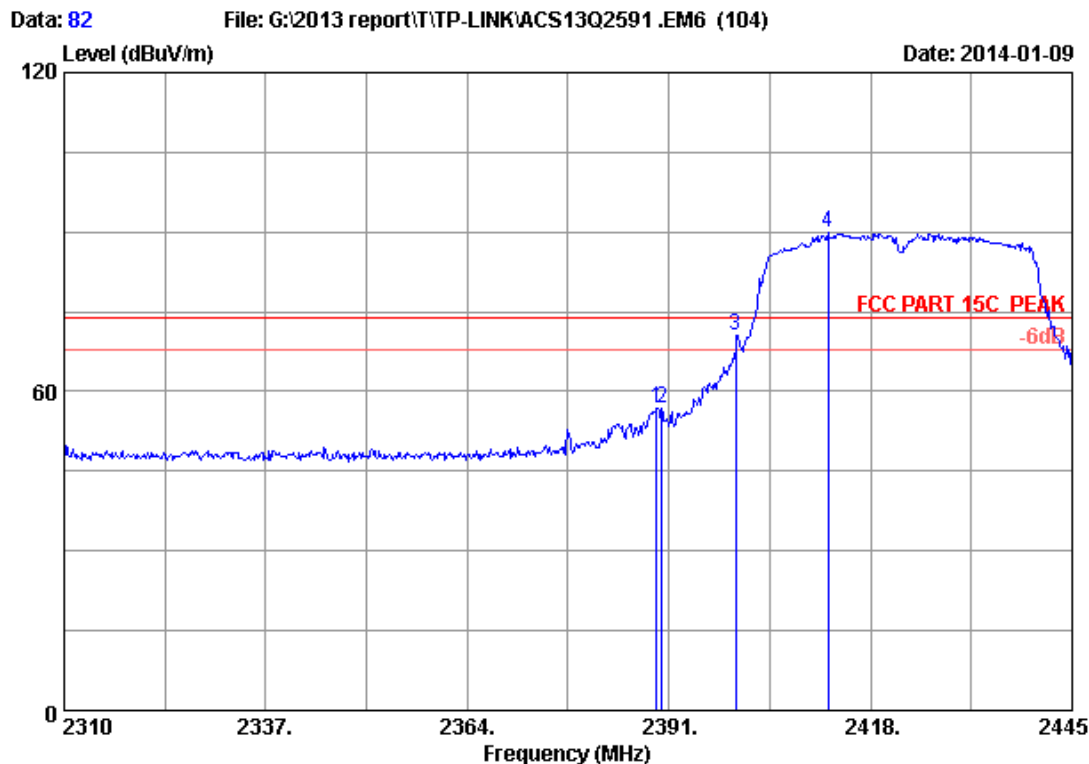


Site no. : RF Chamber Data no. : 81
 Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C AV
 Env. / Ins. : 23°C/54% Engineer : Leo-Li
 EUT : 300Mbps Wireless N Router
 Power supply : DC 9V From Adapter Input AC 120V/60Hz
 Test mode : IEEE802.11n HT40 CH1 2422MHz Tx
 M/N : TL-WR841N

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.000	28.16	5.78	35.70	41.50	39.74	54.00	14.26	Average
2	2400.000	28.18	5.80	35.70	43.88	42.16	54.00	11.84	Average
3	2425.155	28.24	5.83	35.70	79.52	77.89	54.00	-23.89	Average

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

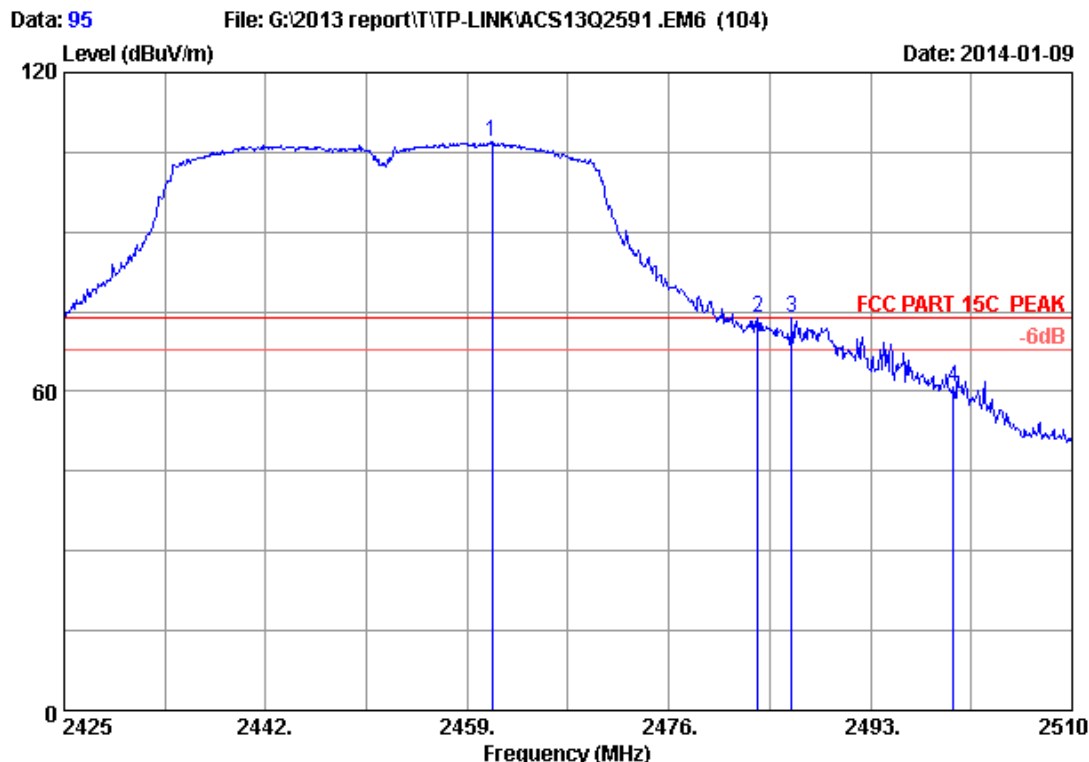


Site no. : RF Chamber Data no. : 82
 Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23°C/54% Engineer : Leo-Li
 EUT : 300Mbps Wireless N Router
 Power supply : DC 9V From Adapter Input AC 120V/60Hz
 Test mode : IEEE802.11n HT40 CH1 2422MHz Tx
 M/N : TL-WR841N

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2389.380	28.16	5.78	35.70	58.73	56.97	74.00	17.03	Peak
2	2390.000	28.16	5.78	35.70	58.59	56.83	74.00	17.17	Peak
3	2400.000	28.18	5.80	35.70	72.13	70.41	74.00	3.59	Peak
4	2412.330	28.21	5.81	35.70	91.45	89.77	74.00	-15.77	Peak

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

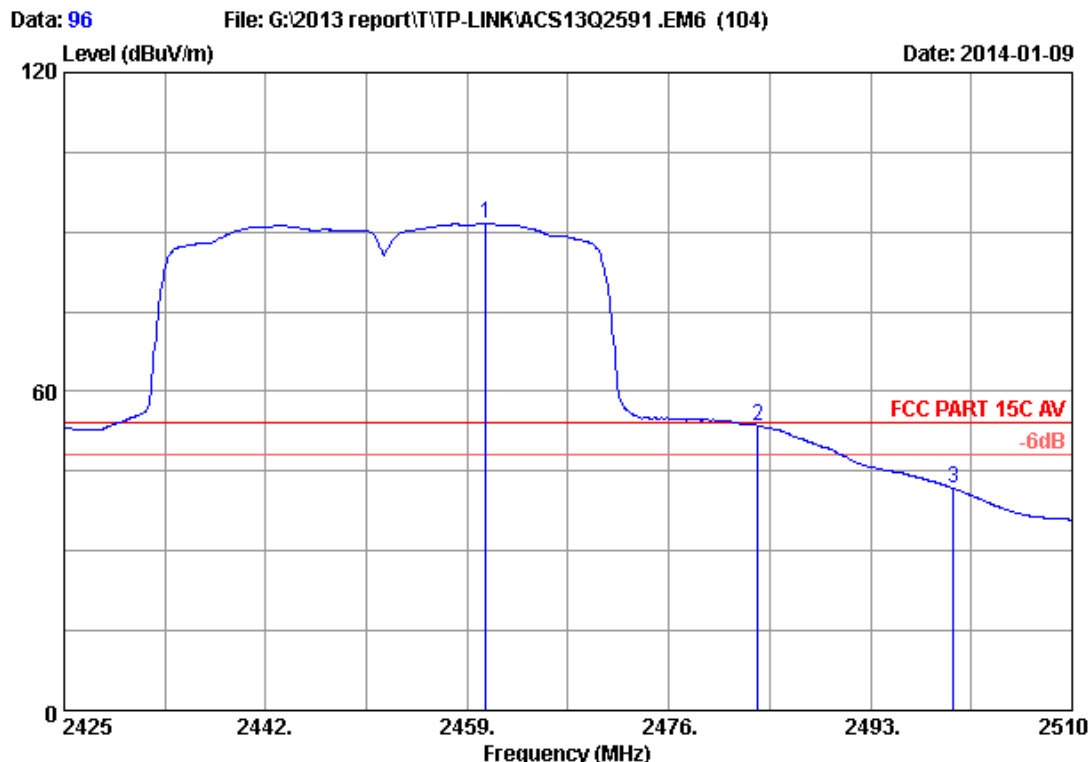


Site no. : RF Chamber Data no. : 95
 Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23°C/54% Engineer : Leo-Li
 EUT : 300Mbps Wireless N Router
 Power supply : DC 9V From Adapter Input AC 120V/60Hz
 Test mode : IEEE802.11n HT40 CH7 2452MHz Tx
 M/N : TL-WR841N

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2461.125	28.31	5.89	35.70	108.50	107.00	74.00	-33.00	Peak
2	2483.500	28.36	5.92	35.70	75.13	73.71	74.00	0.29	Peak
3	2486.370	28.37	5.92	35.70	75.15	73.74	74.00	0.26	Peak
4	2500.000	28.40	5.94	35.70	62.22	60.86	74.00	13.14	Peak

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

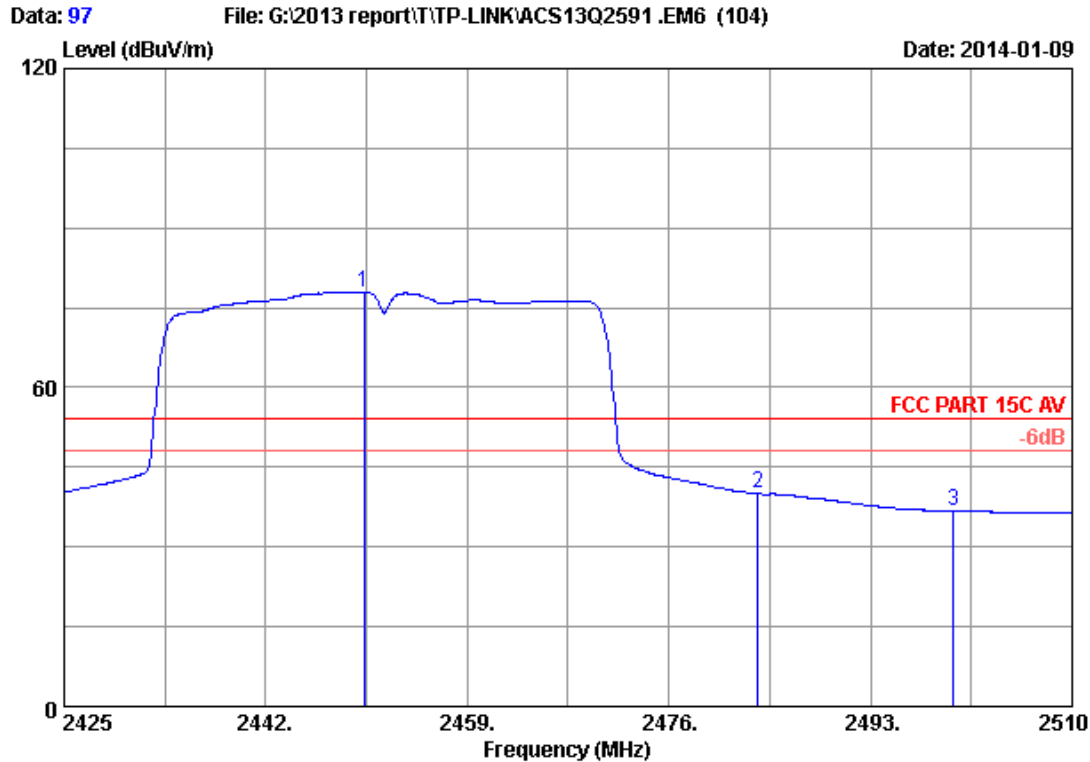


Site no. : RF Chamber Data no. : 96
 Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : VERTICAL
 Limit : FCC PART 15C AV
 Env. / Ins. : 23°C/54% Engineer : Leo-Li
 EUT : 300Mbps Wireless N Router
 Power supply : DC 9V From Adapter Input AC 120V/60Hz
 Test mode : IEEE802.11n HT40 CH7 2452MHz Tx
 M/N : TL-WR841N

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2460.530	28.31	5.89	35.70	93.04	91.54	54.00	-37.54	Average
2	2483.500	28.36	5.92	35.70	54.97	53.55	54.00	0.45	Average
3	2500.000	28.40	5.94	35.70	43.26	41.90	54.00	12.10	Average

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

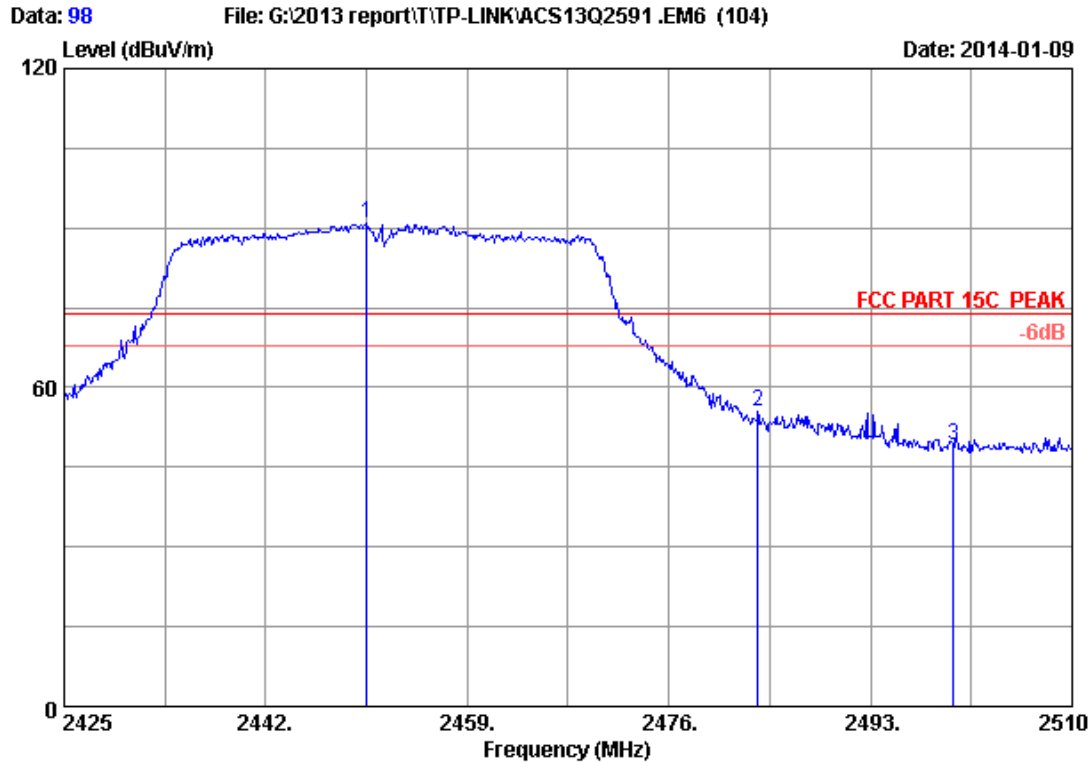


Site no. : RF Chamber Data no. : 97
 Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C AV
 Env. / Ins. : 23°C/54% Engineer : Leo-Li
 EUT : 300Mbps Wireless N Router
 Power supply : DC 9V From Adapter Input AC 120V/60Hz
 Test mode : IEEE802.11n HT40 CH7 2452MHz Tx
 M/N : TL-WR841N

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2450.330	28.29	5.87	35.70	79.55	78.01	54.00	-24.01	Average
2	2483.500	28.36	5.92	35.70	41.44	40.02	54.00	13.98	Average
3	2500.000	28.40	5.94	35.70	38.14	36.78	54.00	17.22	Average

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : RF Chamber Data no. : 98
 Dis. / Ant. : 3m 2013 3115 (4580) Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23°C/54% Engineer : Leo-Li
 EUT : 300Mbps Wireless N Router
 Power supply : DC 9V From Adapter Input AC 120V/60Hz
 Test mode : IEEE802.11n HT40 CH7 2452MHz Tx
 M/N : TL-WR841N

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2450.500	28.29	5.87	35.70	92.32	90.78	74.00	-16.78	Peak
2	2483.500	28.36	5.92	35.70	57.02	55.60	74.00	18.40	Peak
3	2500.000	28.40	5.94	35.70	50.46	49.10	74.00	24.90	Peak

Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

7. 6dB Bandwidth Test

7.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	N9030A	MY51380221	Oct.31, 13	1 Year
2.	Amp	HP	8449B	3008A08495	May.08, 13	1 Year
3.	Antenna	EMCO	3115	9510-4580	May.08, 13	1Year
4.	HF Cable	Hubersuhner	Sucoflex104	-	May.08, 13	1 Year

7.2. Limit

For direct sequence systems, the minimum 6dB bandwidth shall be at least 500kHz

7.3. Test Procedure

The transmitter output was connected to a spectrum analyzer, The bandwidth of the fundamental frequency was measured by spectrum analyzer with 300KHz RBW and 1MHz VBW. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

7.4. Test Results

EUT: 300Mbps Wireless N Router		
M/N: TL-WR841N		
Test date: 2014-1-08	Pressure: 101.2±1.0 kpa	Humidity: 51.3±3.0%
Tested by: Leo-Li	Test site: RF site	Temperature:21.8±0.6 °C

Cable loss: 1 dB		Attenuator loss: 20 dB		
Test Mode	CH	6dB bandwidth (MHz)		Limit (KHz)
		Chain0	Chain1	
11b	CH1	6.129	6.133	>500
	CH6	6.119	5.707	>500
	CH11	5.716	6.161	>500
11g	CH1	16.28	16.41	>500
	CH6	16.30	15.77	>500
	CH11	16.27	15.79	>500
11n HT20	CH1	17.48	17.67	>500
	CH6	17.51	17.65	>500
	CH11	17.13	15.43	>500
11n HT40	CH1	35.94	35.68	>500
	CH4	36.16	35.58	>500
	CH7	36.03	35.42	>500
Conclusion : PASS				

Chain 0

Test Mode: IEEE 802.11b TX

Test CH1: 2412MHz



Test CH6: 2437MHz



Test CH11: 2462MHz

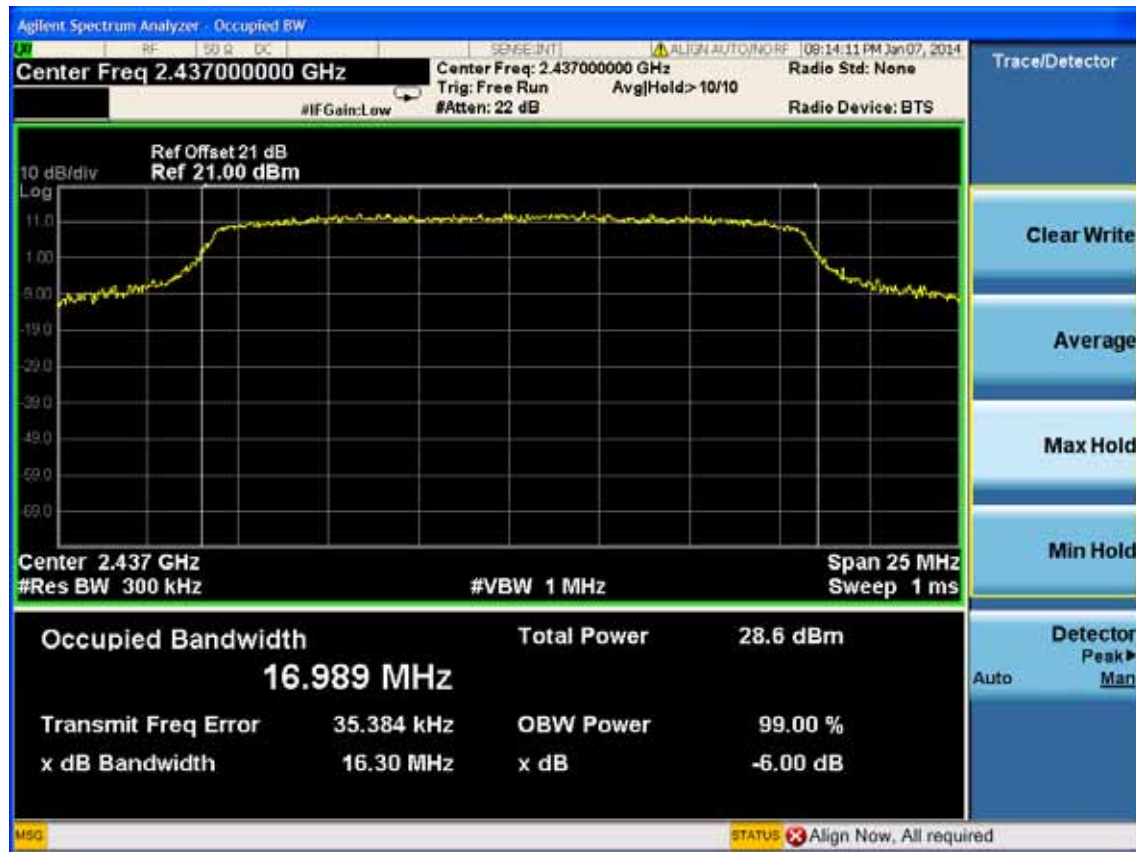


Test Mode: IEEE 802.11g TX

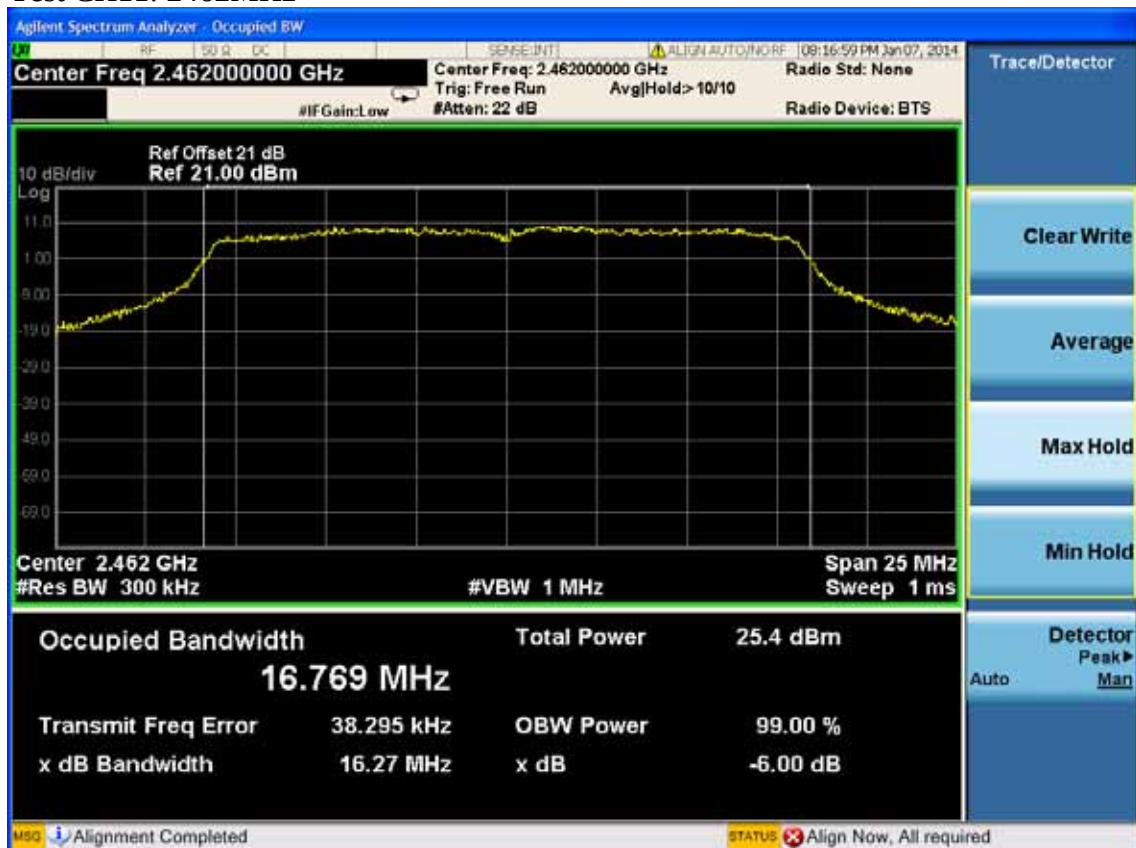
Test CH1: 2412MHz



Test CH6: 2437MHz



Test CH11: 2462MHz



Test Mode: IEEE 802.11n HT20 TX

Test CH1: 2412MHz



Test CH6: 2437MHz

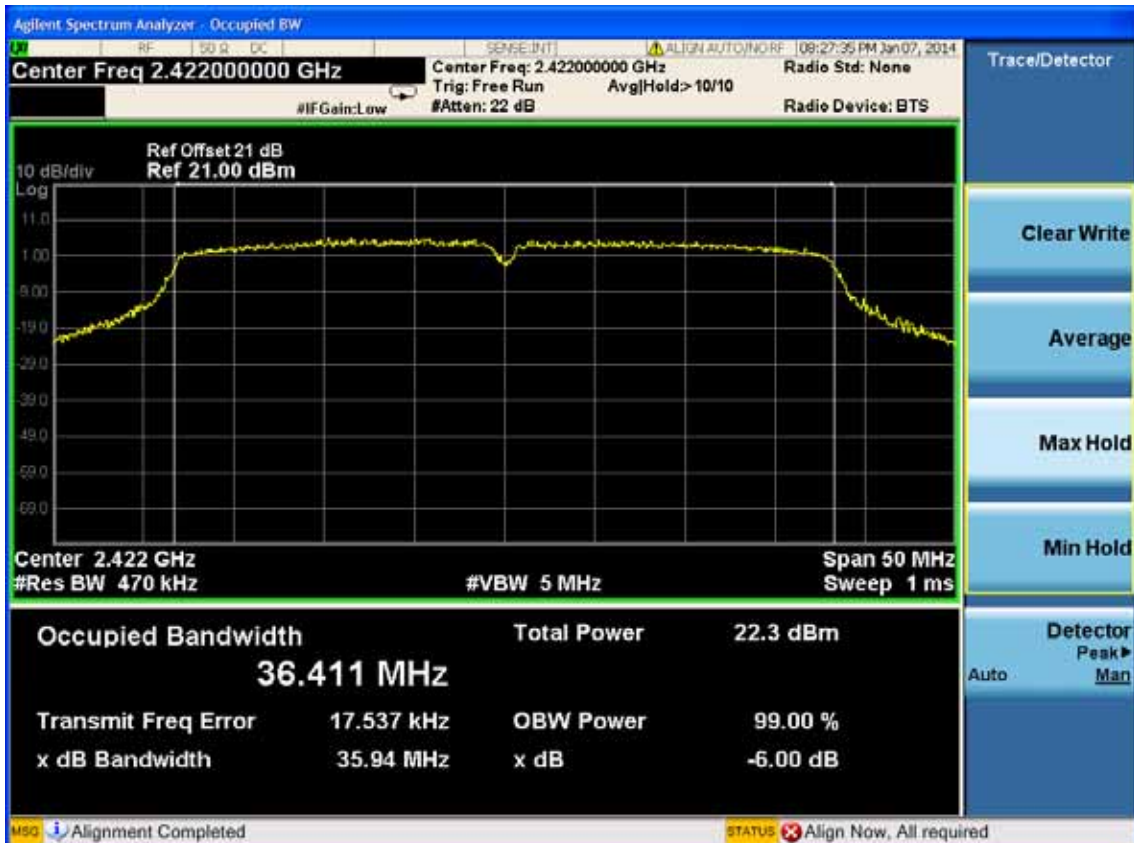


Test CH11: 2462MHz



Test Mode: IEEE 802.11n HT40 TX

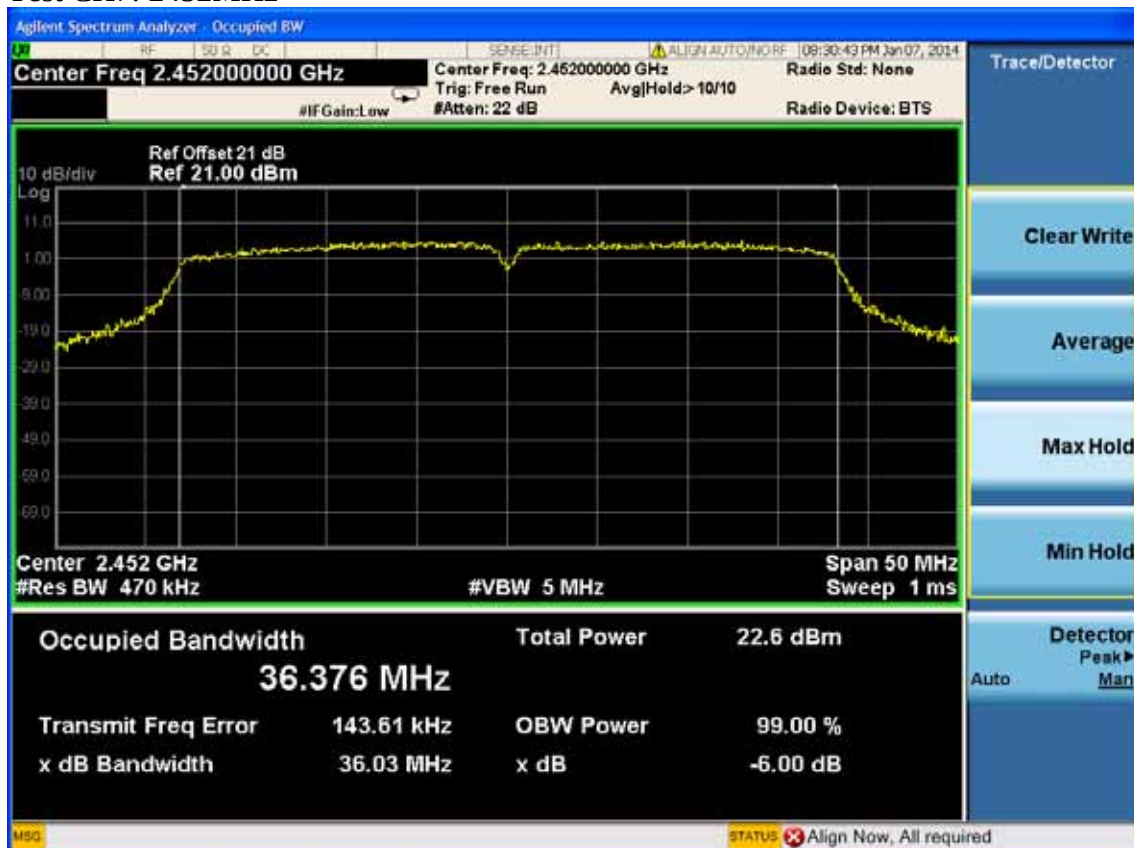
Test CH1: 2422MHz



Test CH4: 2437MHz



Test CH7: 2452MHz



Chain 1

Test Mode: IEEE 802.11b TX

Test CH1: 2412MHz



Test CH6: 2437MHz



Test CH11: 2462MHz

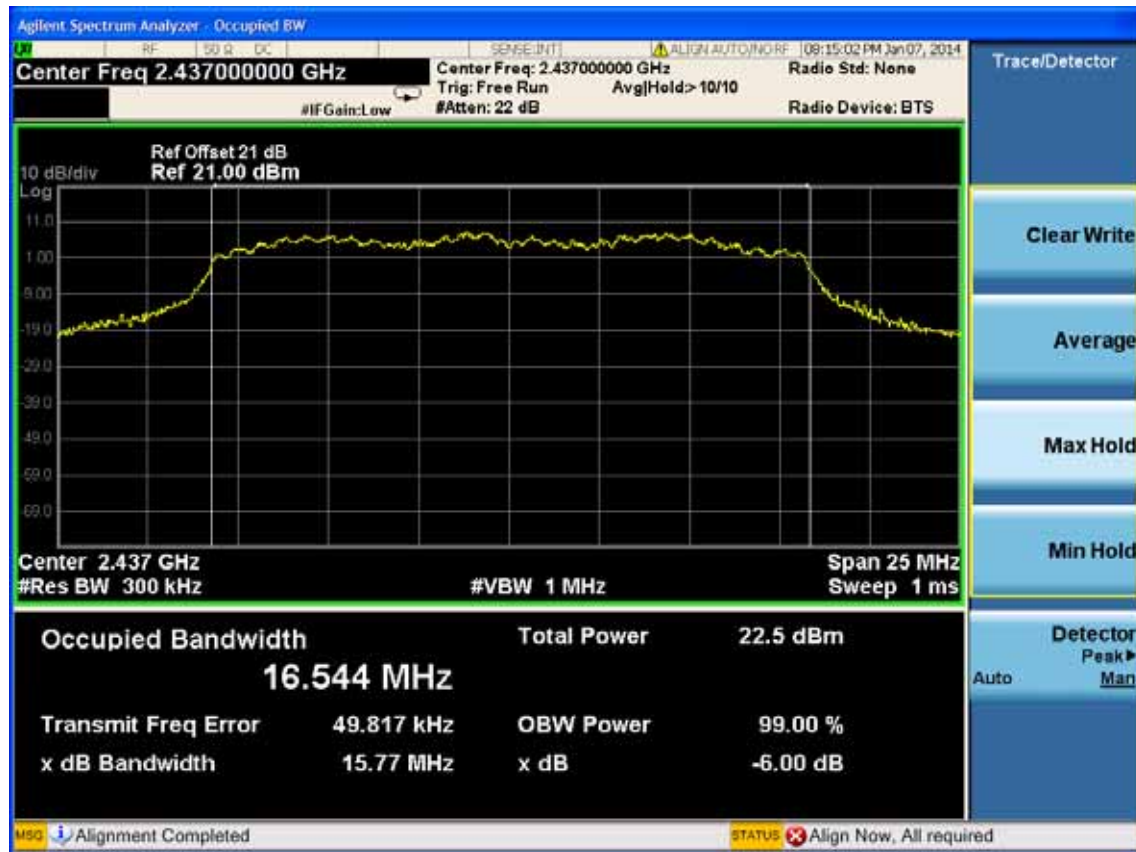


Test Mode: IEEE 802.11g TX

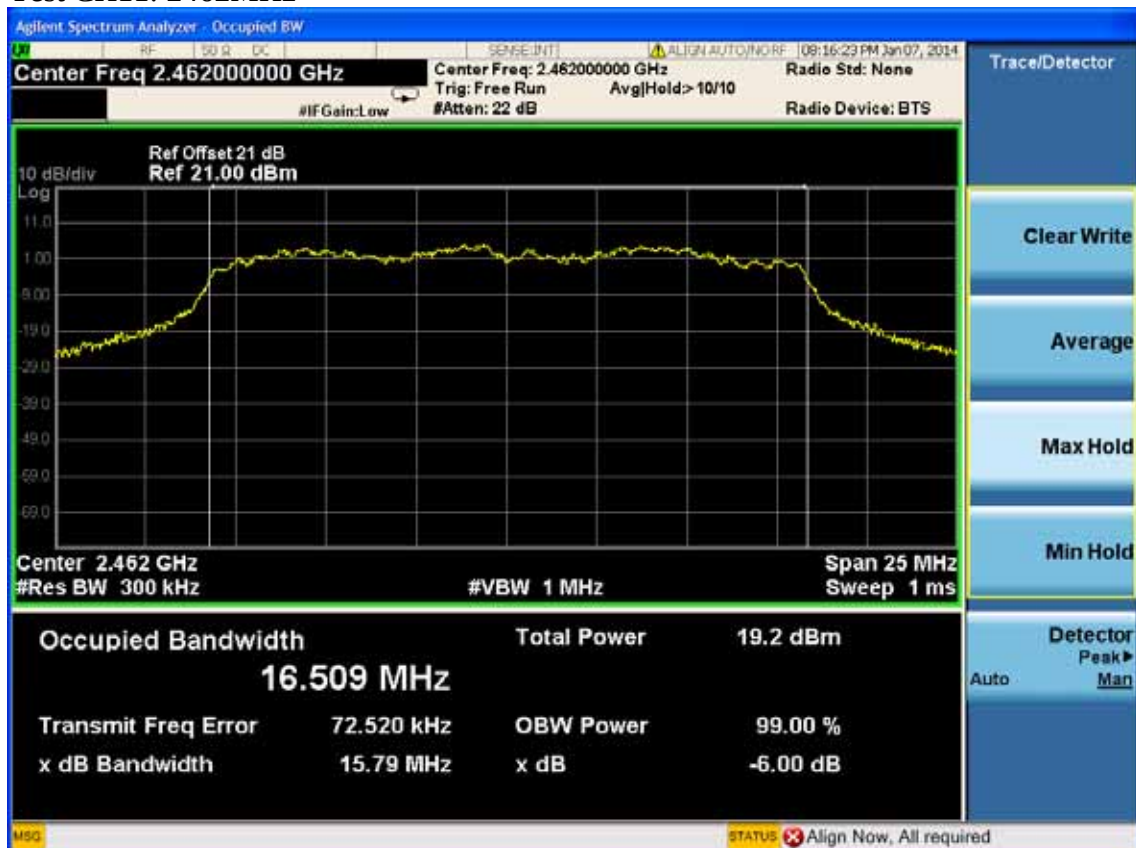
Test CH1: 2412MHz



Test CH6: 2437MHz

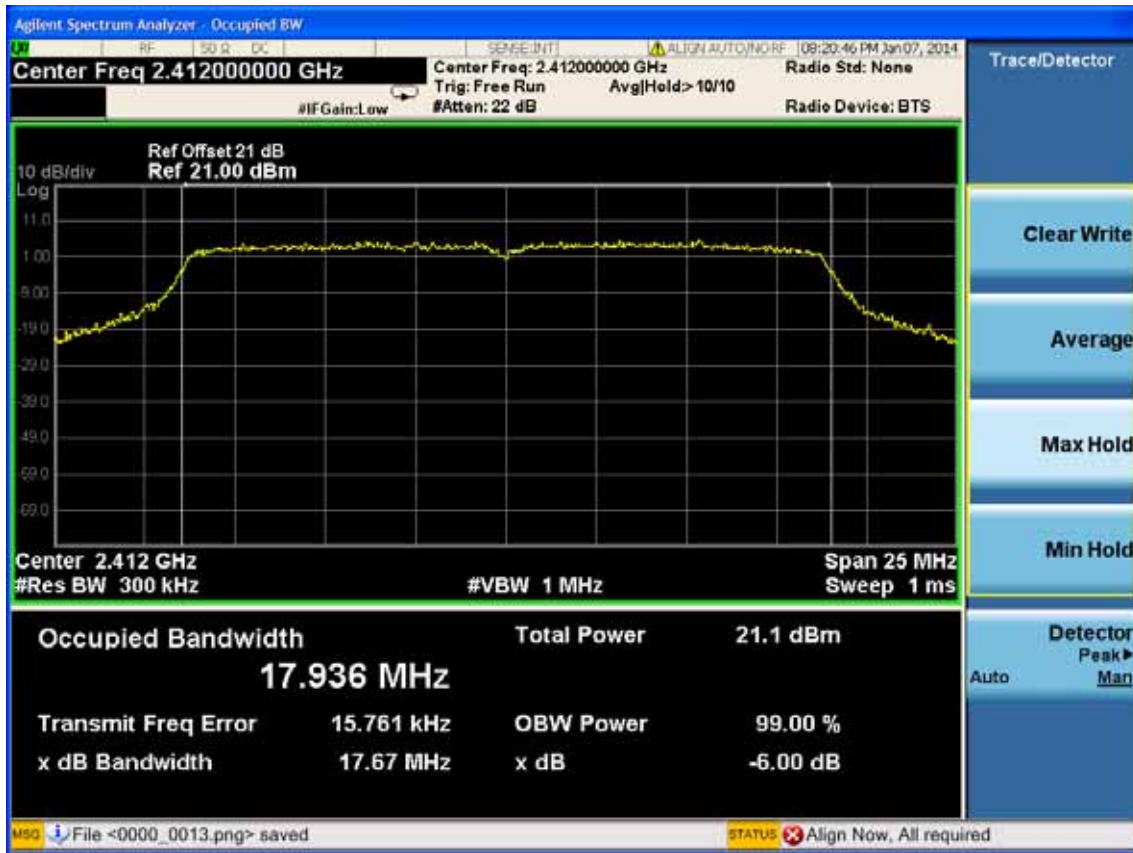


Test CH11: 2462MHz

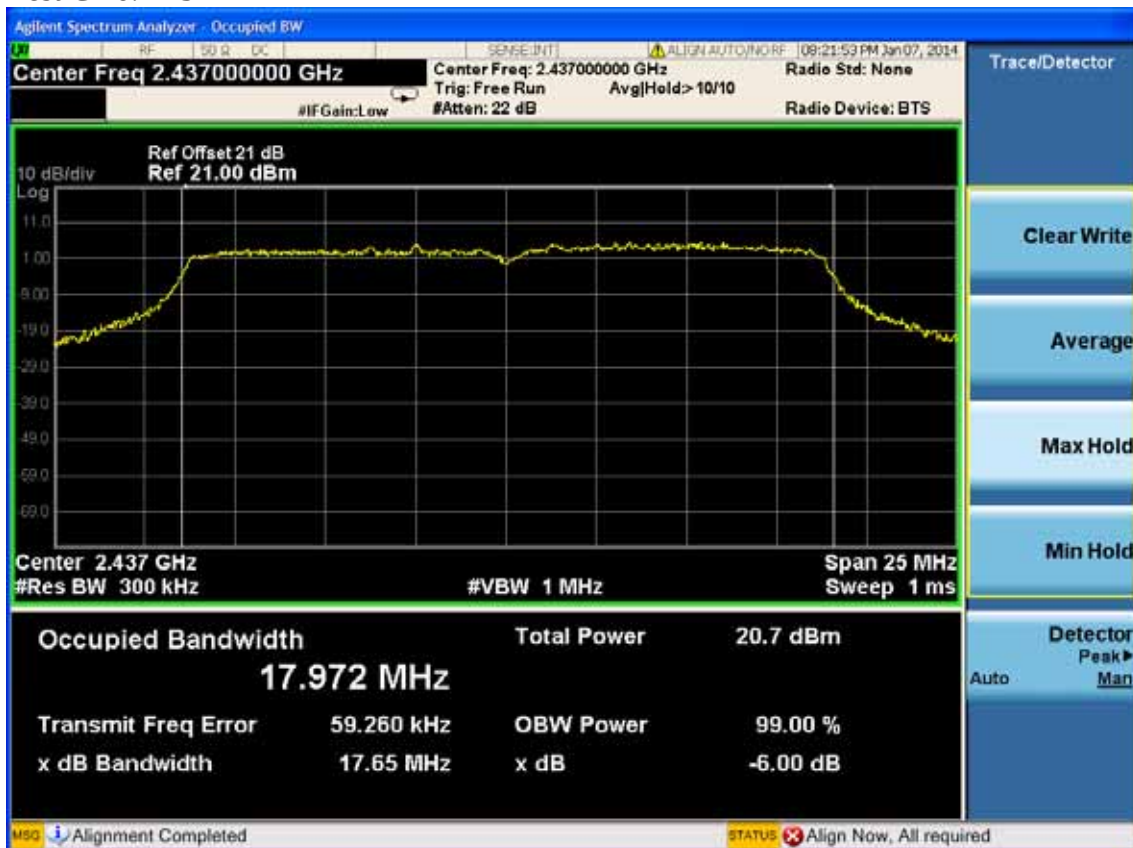


Test Mode: IEEE 802.11n HT20 TX

Test CH1: 2412MHz



Test CH6: 2437MHz

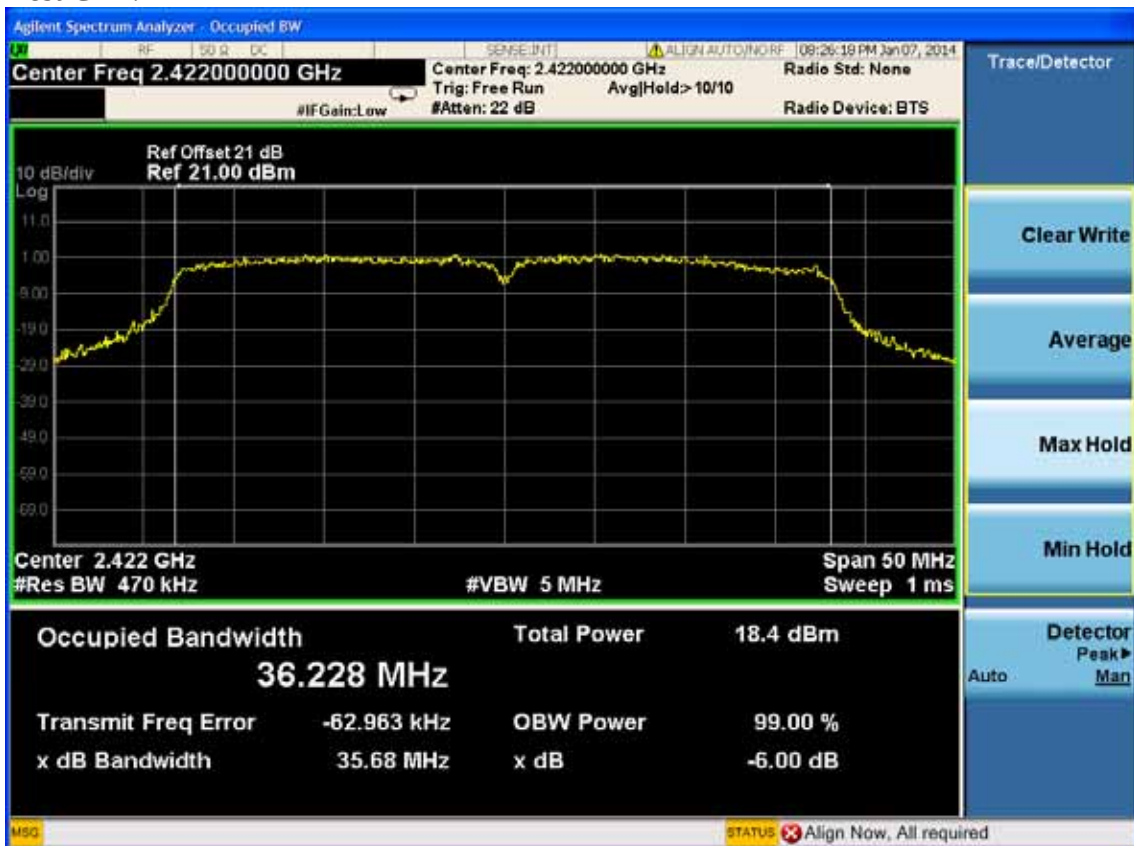


Test CH11: 2462MHz

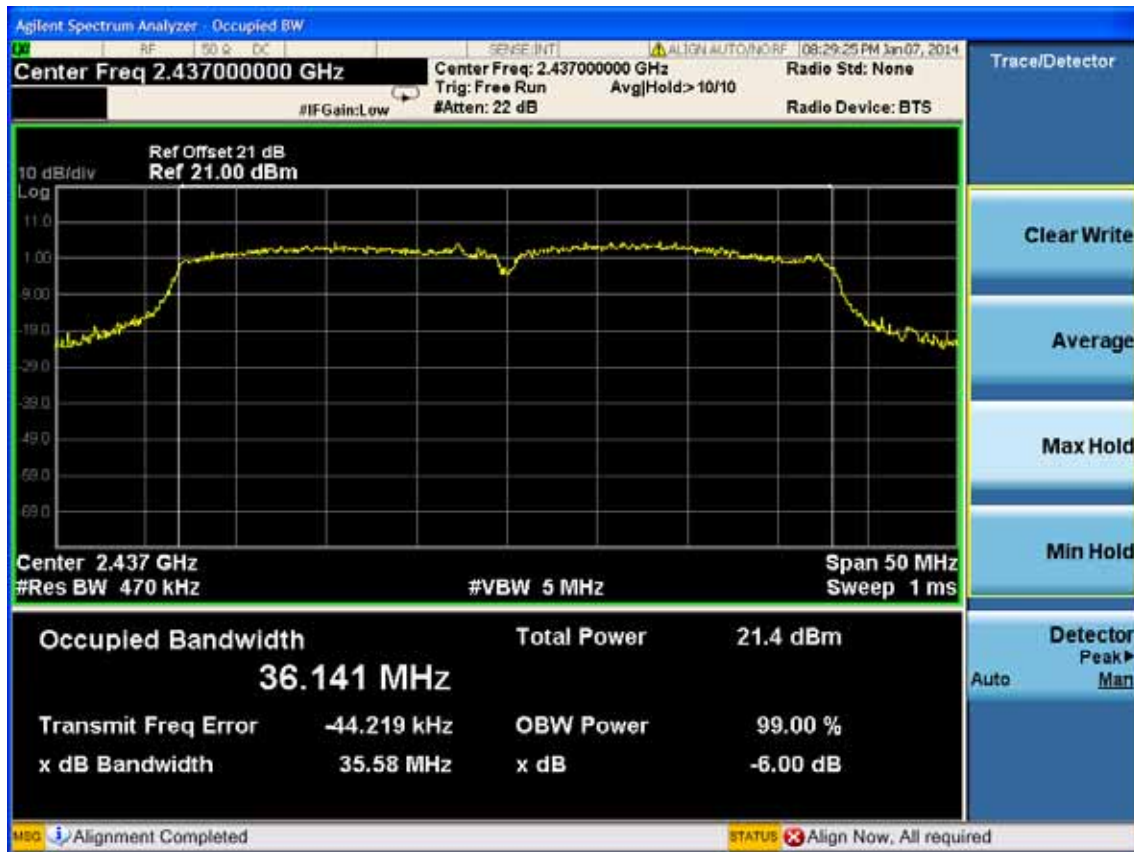


Test Mode: IEEE 802.11n HT40 TX

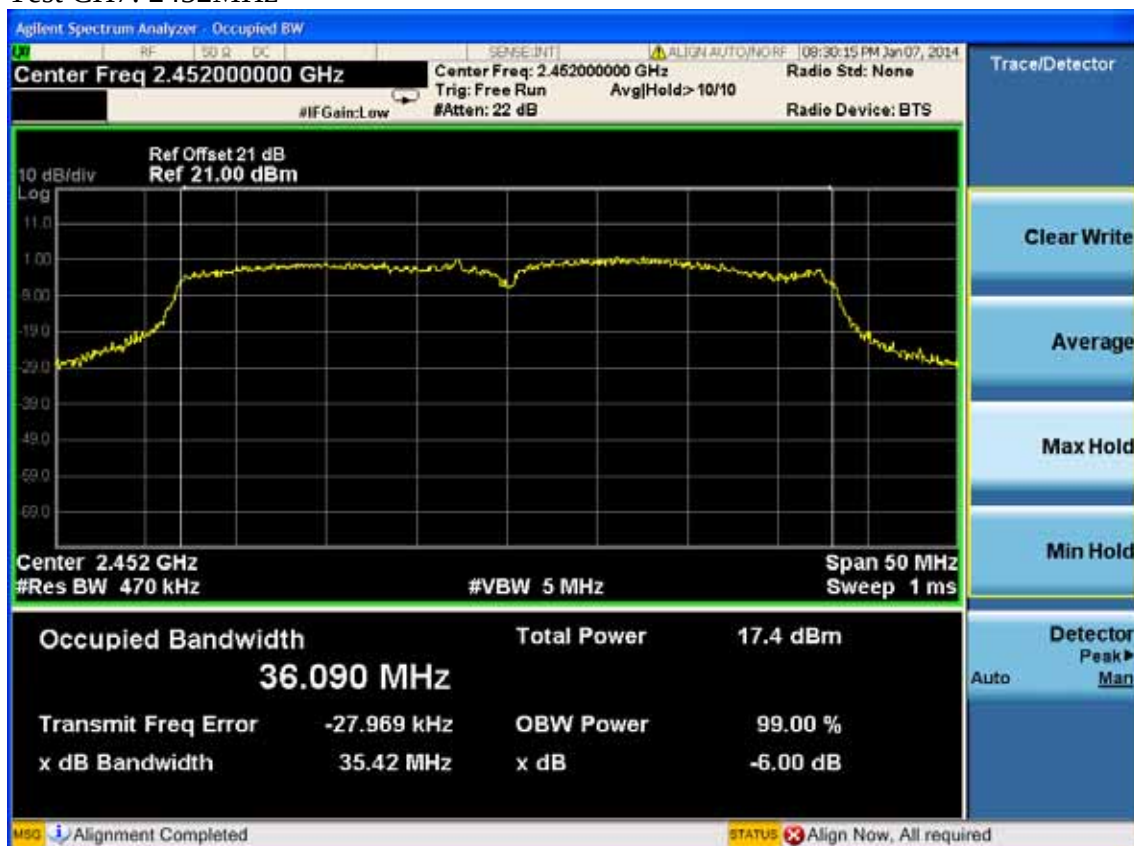
Test CH1: 2422MHz



Test CH4: 2437MHz



Test CH7: 2452MHz



8. OUTPUT POWER TEST

8.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	N9030A	MY51380221	Oct.31, 13	1 Year
2.	Amp	HP	8449B	3008A08495	May.08, 13	1 Year
3.	Antenna	EMCO	3115	9510-4580	May.08, 13	1Year
4.	HF Cable	Hubersuhne	Sucoflex104	-	May.08, 13	1 Year
5.	Power Meter	Anritsu	ML2487A	6K00002472	May.08, 13	1Year
6.	Power Sensor	Anritsu	MA2491A	033005	May.08, 13	1Year
7.	Spectrum Analyzer	Agilent	N9030A	MY5138022	May.08, 13	1 Year

8.2. Limit (FCC Part 15C 15.247 b(3))

For systems using digital modulation in the 2400—2483.5MHz, The Peak out put Power shall not exceed 1W(30dBm)

8.3. Test Procedure

- 1, Connected the EUT's antenna port to measure device by 26dB attenuator.
- 2, For IEEE 802.11b/g and IEEE802.11n HT20 mode, use a PK power meter which's bandwidth is 20MHz and above 26dB bandwidth of signal to measure out each test modes' PK output power.
- 3, For IEEE802.11n HT40 mode, because the signal's bandwidth is about 40MHz and above 20MHz bandwidth of power sensor ML2491A. So used the test method per KDB558074.
 - 1) Set the RBW=1MHz and VBW =3MHz
 - 2) Set the span to a value that is 5-30% greater than EBW
 - 3) Detector = peak
 - 4) Sweep time = auto couple
 - 5) Trace Mode = max hold
 - 6) allow trace to fully stabilize
 - 7) use the spectrum analyzer's integrated band power measurement function with band limits set equal to the EBW band edges.

Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.

8.4.Test Results

EUT: 300Mbps Wireless N Router					
M/N: TL-WR841N					
Test date: 2014-1-13		Pressure: 101.3±1.0kpa		Humidity: 51.8±3.0%	
Tested by: Leo-Li		Test site: RF site		Temperature: 20.6±0.6 °C	
Cable loss: 1 dB		Attenuator loss: 20 dB			
Test Mode	CH (MHz)	Peak output Power (dBm)			Limit (dBm)
		Chain 0	Chain 1	Total	
11b	CH1	22.06	20.51	24.36	30
	CH6	21.14	18.55	23.05	30
	CH11	21.66	21.99	24.84	30
11g	CH1	26.39	25.89	29.16	30
	CH6	26.54	26.20	29.38	30
	CH11	25.06	25.40	28.24	30
11nHT20	CH1	24.71	24.18	27.46	30
	CH6	27.21	25.65	29.51	30
	CH11	24.27	24.37	27.33	30
11nHT40	CH1	21.53	20.31	23.97	30
	CH4	26.25	24.81	28.60	30
	CH7	21.67	20.59	24.17	30
Conclusion: PASS					

Chain 0

Test Mode: IEEE 802.11n HT40 TX

Test CH1: 2422MHz



Test CH4: 2437MHz



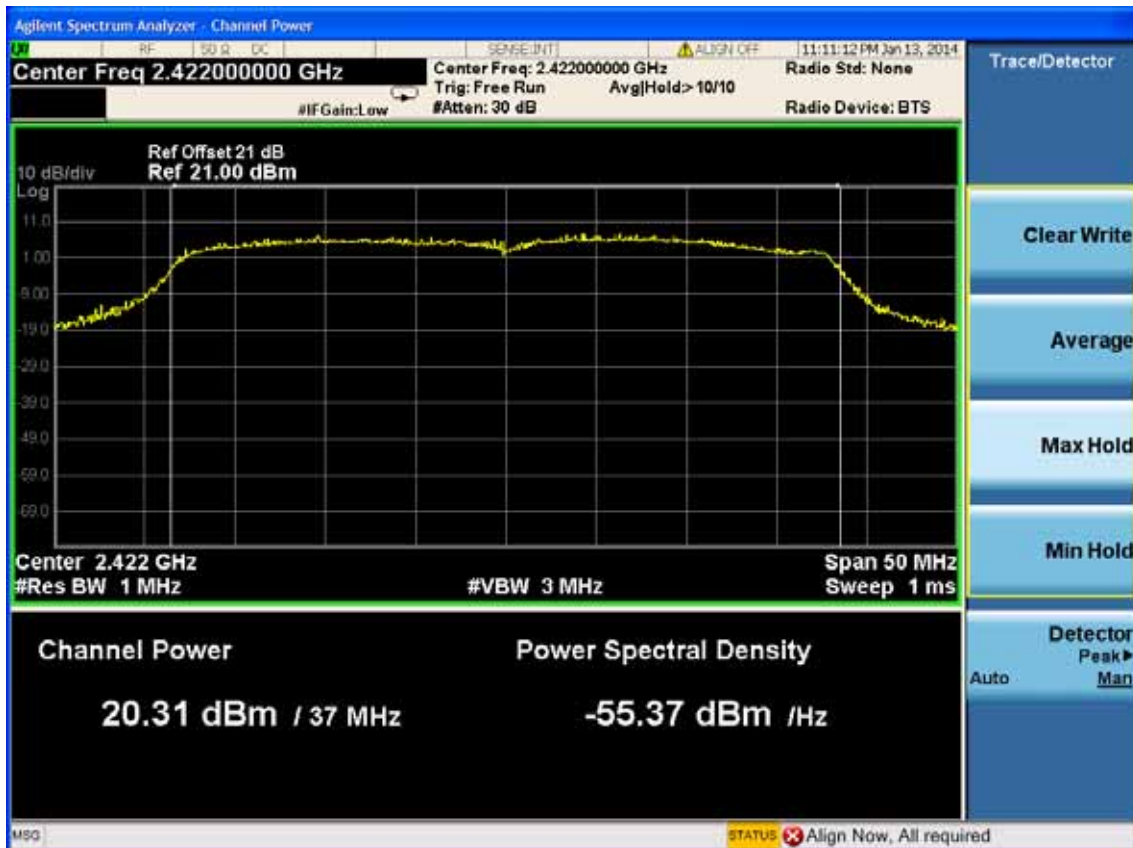
Test CH7: 2452MHz



Chain 1

Test Mode: IEEE 802.11n HT40 TX

Test CH1: 2422MHz



Test CH4: 2437MHz



Test CH7: 2452MHz



9. POWER SPECTRAL DENSITY TEST

9.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	N9030A	MY51380221	Oct.31, 13	1 Year
2.	Amp	HP	8449B	3008A08495	May.08, 13	1 Year
3.	Antenna	EMCO	3115	9607-4580	Aug.28, 13	1Year
4.	HF Cable	Hubersuhne	Sucoflex104	-	May.08, 13	1 Year

9.2. Limit

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3kHz band during any time interval of continuous transmission.

9.3. Test Procedure

1. Connected the EUT's antenna port to spectrum analyzer device by 20dB attenuator.
2. Set the test frequency as center frequency, Set RBW=3KHz,VBW=10KHz,Span large enough capture the entire frequency, Read out maximum peak level frequency
3. Set the frequency read from produce 2 as center frequency, then set the span=300KHz, Sweep time=Span/RBW, Then Max hold, read out each mode and each chain's Power density.

Note: The cable loss and attenuator loss were offset into measure device as an amplitude.

9.4.Test Results

EUT: 300Mbps Wireless N Router		
M/N:TL-WR841N		
Test date: 2014-1-08	Pressure: 101.2±1.0 kpa	Humidity: 51.2±3.0%
Tested by: Leo-Li	Test site: RF Site	Temperature: 21.7±0.6℃

Cable loss: 1 dB		Attenuator loss: 20 dB			
Test Mode	CH	Power density (dBm/3KHz)			Limit (dBm/3KHz)
		ANT 0	ANT 1	Total	
11b	CH1	-1.170	-5.895	0.09	8
	CH6	0.031	-5.522	1.10	8
	CH11	0.888	-6.201	1.66	8
11g	CH1	-3.624	-8.281	-2.35	8
	CH6	5.031	-8.604	5.22	8
	CH11	-6.569	-11.309	-5.31	8
11n HT20	CH1	-6.173	-11.807	-5.21	8
	CH6	3.750	-11.513	3.88	8
	CH11	-4.614	-10.885	-3.69	8
11n HT40	CH1	-11.792	-15.300	-10.19	8
	CH4	2.454	-12.445	2.59	8
	CH7	-13.583	-17.119	-11.99	8
Conclusion : PASS					

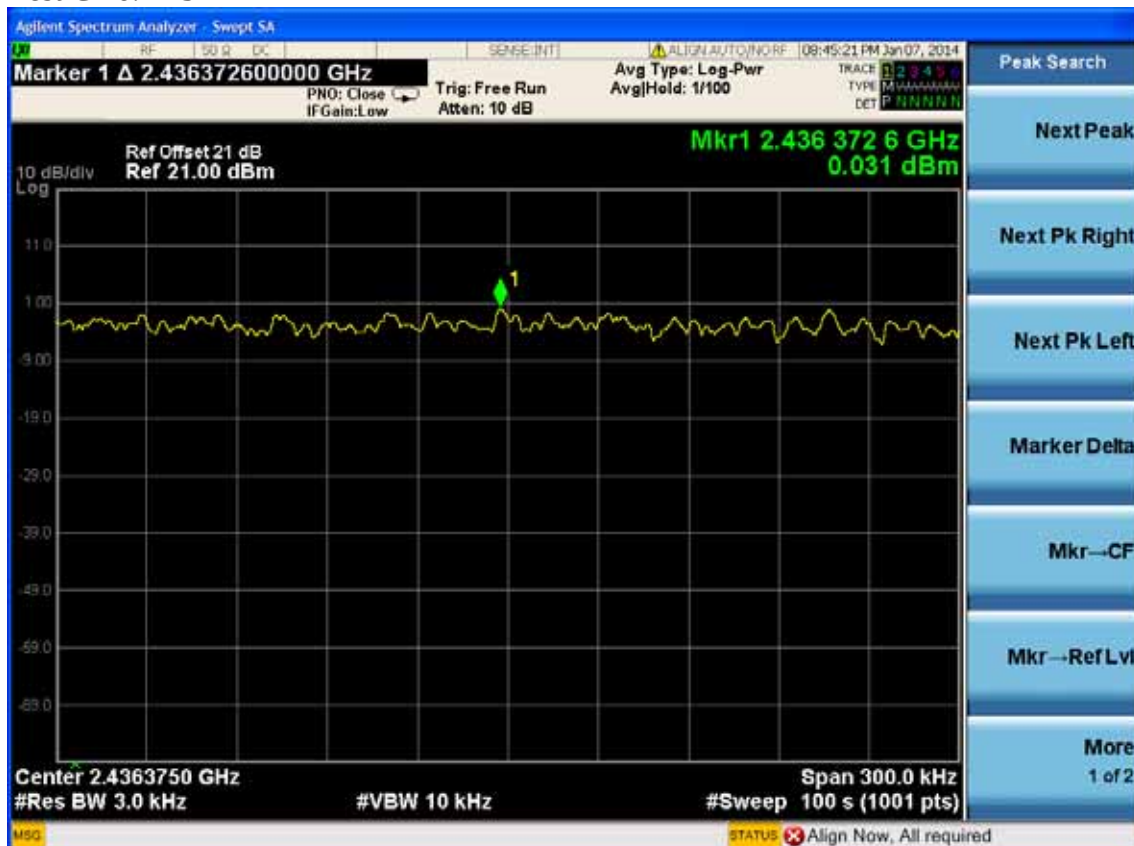
Chain 0

Test Mode: IEEE 802.11b TX

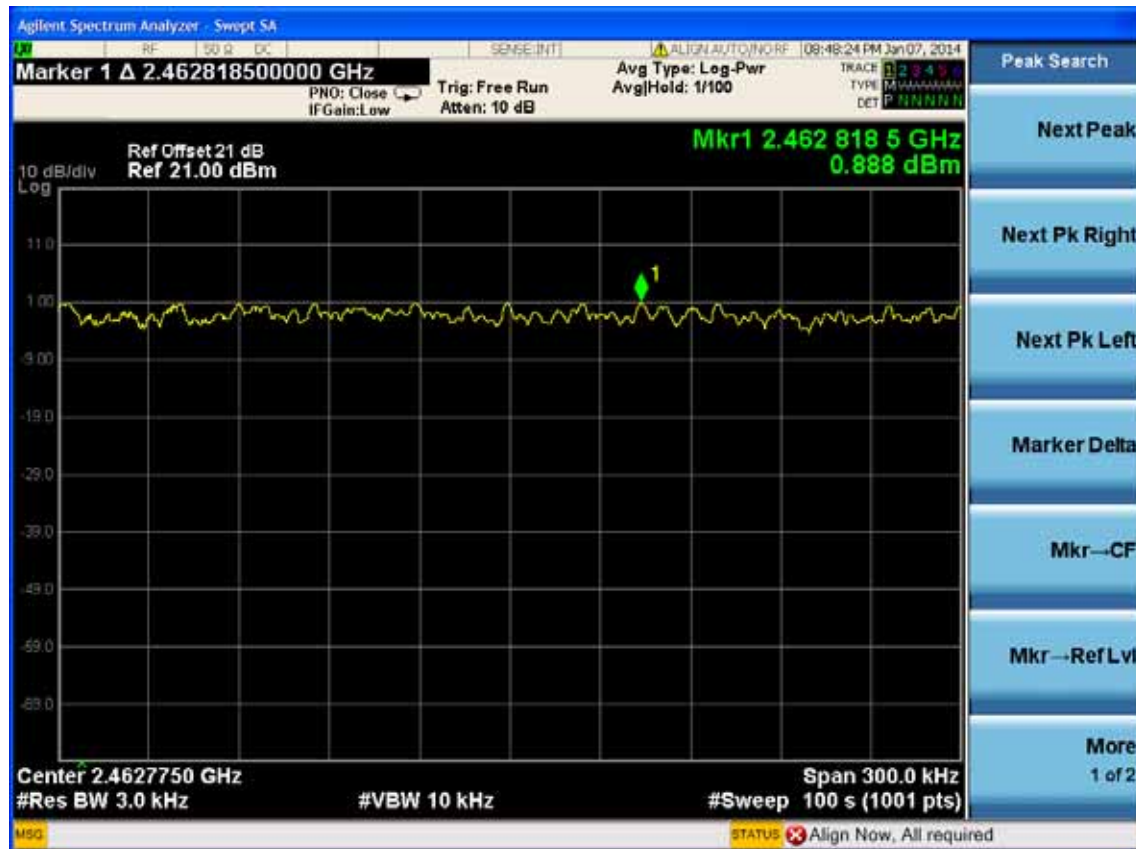
Test CH1: 2412MHz



Test CH6: 2437MHz



Test CH11: 2462MHz



Test Mode: IEEE 802.11g TX

Test CH1: 2412MHz



Test CH6: 2437MHz



Test CH11: 2462MHz



Test Mode: IEEE 802.11n HT20 TX

Test CH1: 2412MHz



Test CH6: 2437MHz



Test CH11: 2462MHz

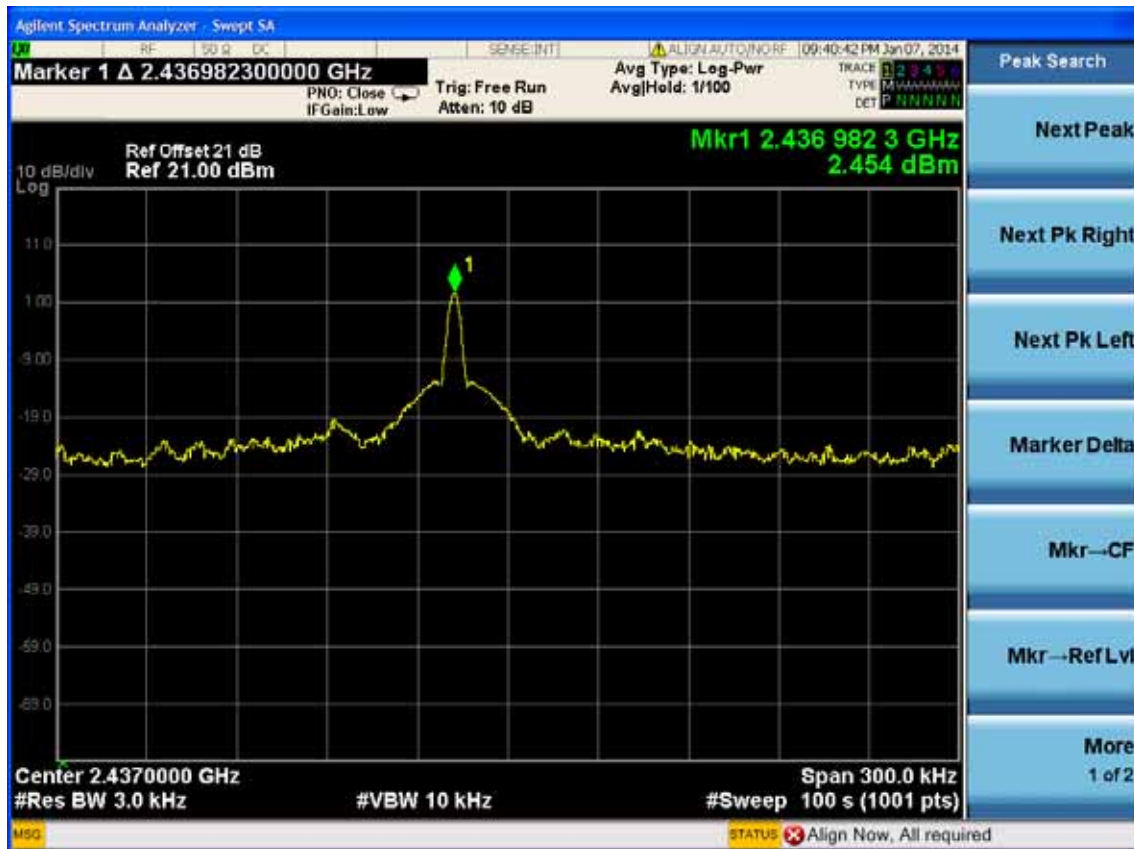


Test Mode: IEEE 802.11n HT40 TX

Test CH1: 2422MHz



Test CH4: 2437MHz



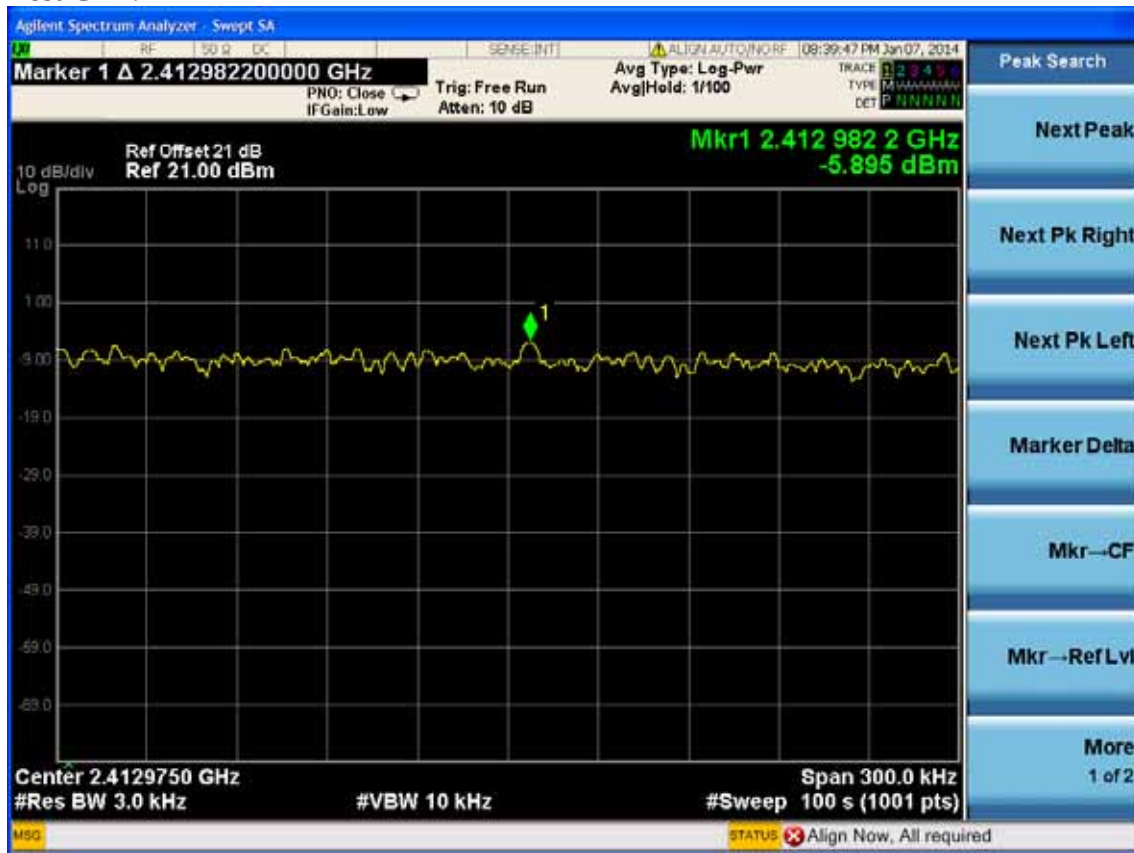
Test CH7: 2452MHz



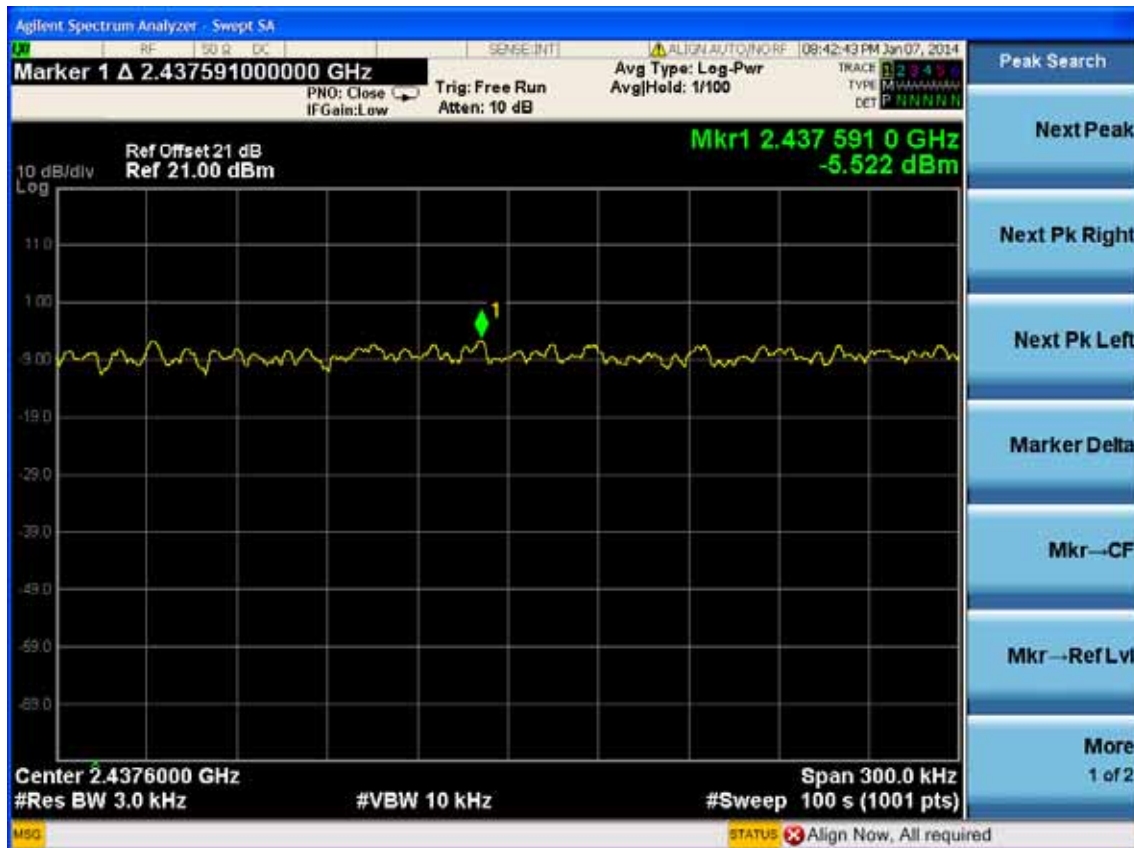
Chain 1

Test Mode: IEEE 802.11b TX

Test CH1: 2412MHz



Test CH6: 2437MHz



Test CH11: 2462MHz

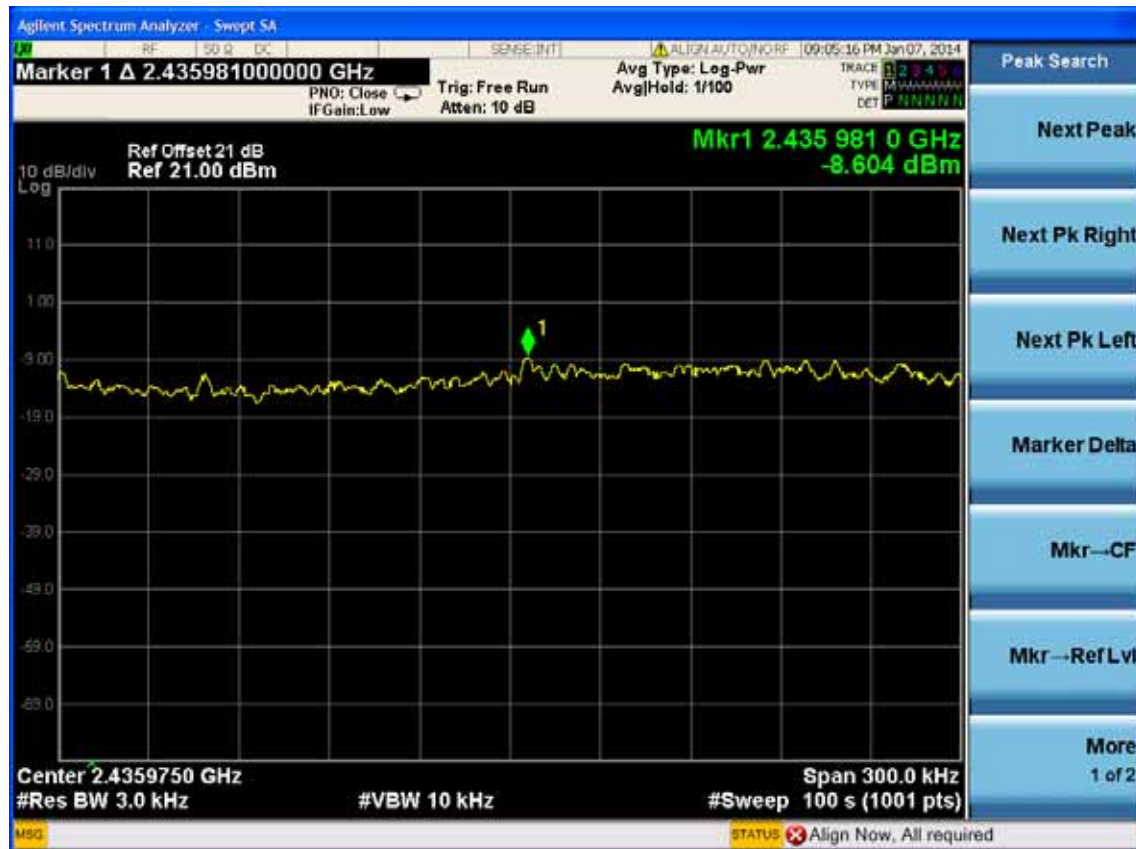


Test Mode: IEEE 802.11g TX

Test CH1: 2412MHz



Test CH6: 2437MHz



Test CH11: 2462MHz



Test Mode: IEEE 802.11n HT20 TX

Test CH1: 2412MHz



Test CH6: 2437MHz



Test CH11: 2462MHz



Test Mode: IEEE 802.11n HT40 TX

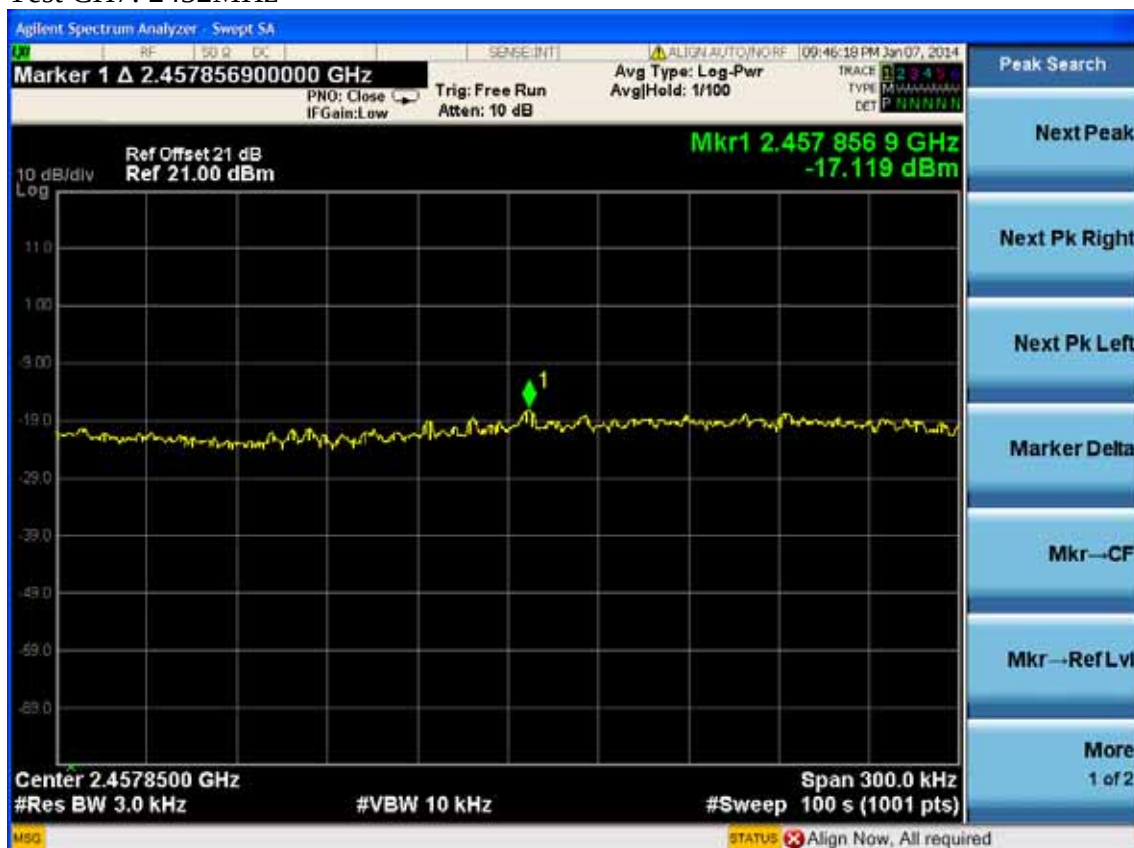
Test CH1: 2422MHz



Test CH4: 2437MHz



Test CH7: 2452MHz



10.MPE ESTIMATION

10.1.Limit for General Population/ Uncontrolled Exposures

Frequency	Power density (mW/ cm ²)	Averaging time(minutes)
300MHz----1.5GHz	F/1500	30
1.5GHz---100GHz	1.0	30

Frequency(MHz)	Power density (mW/ cm ²)	Averaging time(minutes)
2412	1	30
2437	1	30
2462	1	30

Note: F= Frequency in MHz Estimation Result

EUT: 300Mbps Wireless N Router		
M/N: TL-WR841N		
Test date: 2014-01-13	Pressure: 101.1±1.0 kpa	Humidity: 52.2±3.0%
Tested by: Leo-Li	Test site: RF site	Temperature: 22.1±0.6 °C

Cable loss: 1 dB		Attenuator loss: 20 dB				Antenna Gain: 5dBi	
Test Mode	CH	Frequency (MHz)	Peak Output Power (dBm)	Output Power (mW)	Antenna Gain (dBi)	Antenna Gain (Linear)	MPE
11b	CH1	2412	24.36	272.90	5	3.16	0.1718
	CH6	2437	23.05	201.84	5	3.16	0.1270
	CH11	2462	24.84	304.79	5	3.16	0.1918
11g	CH1	2412	29.16	824.14	5	3.16	0.5187
	CH6	2437	29.38	866.96	5	3.16	0.5457
	CH11	2462	28.24	666.81	5	3.16	0.4197
11n HT20	CH1	2412	27.46	557.19	5	3.16	0.3507
	CH6	2437	29.51	893.31	5	3.16	0.5623
	CH11	2462	27.33	540.75	5	3.16	0.3404
11n HT40	CH1	2422	23.97	249.46	5	3.16	0.1570
	CH4	2437	28.60	724.44	5	3.16	0.4560
	CH7	2452	24.17	261.22	5	3.16	0.1644

11. ANTENNA REQUIREMENT

11.1. STANDARD APPLICABLE

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

11.2. ANTENNA CONNECTED CONSTRUCTION

The antennas used for this product are Dipole antenna that no antenna other than that furnished by the responsible party shall be used with the device, the maximum peak gain of the transmit antenna is 5dBi.

12.DEVIATION TO TEST SPECIFICATIONS

[NONE]