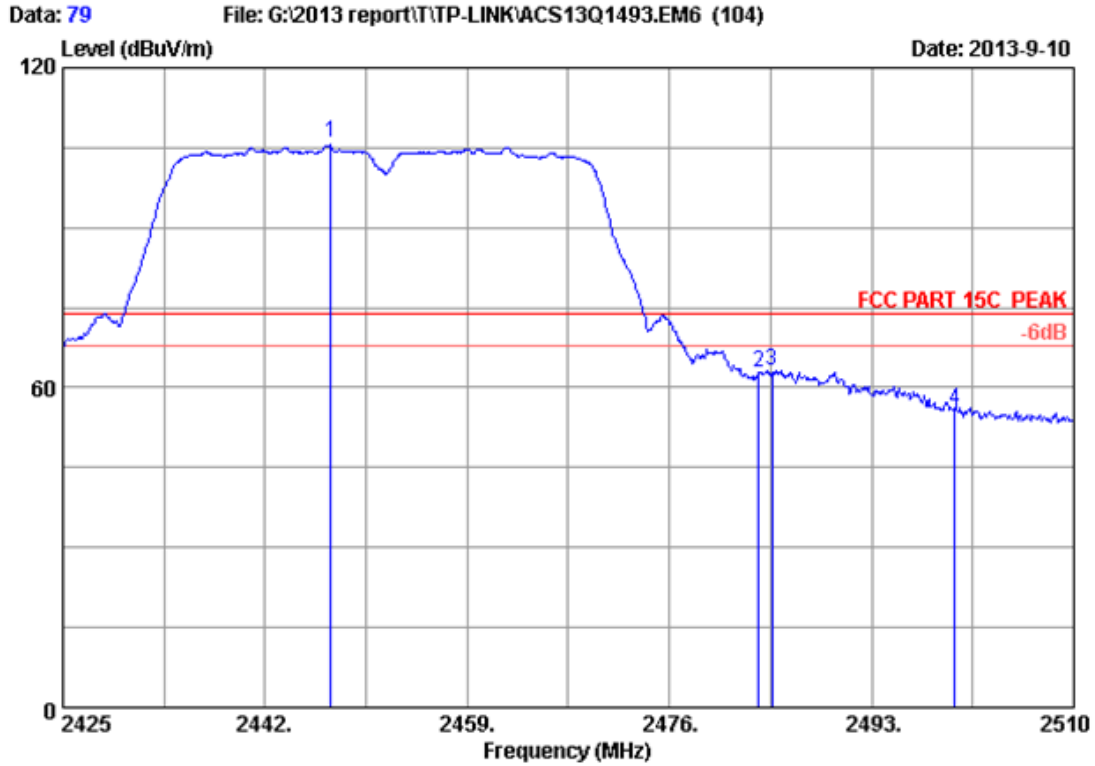


Site no. : 3m Chamber Data no. : 78
 Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : VERTICAL
 Limit : FCC PART 15C AV
 Env. / Ins. : 23°C/54% Engineer : Leo-Li
 EUT : 300Mbps Multi-Function Wireless N Router
 Power supply : DC 12V From Adapter input AC 120V/60Hz
 Test mode : IEEE802.11nHT20 2462MHz Tx Mode
 TL-WR842ND

| | 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 | 2465.460 | 27.18 | 5.89 | 35.70 | 101.31 | 98.68 | 54.00 | -44.68 | Average |
| 2 | 2483.500 | 27.29 | 5.92 | 35.70 | 51.94 | 49.45 | 54.00 | 4.55 | Average |
| 3 | 2500.000 | 27.40 | 5.94 | 35.70 | 44.88 | 42.52 | 54.00 | 11.48 | 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.

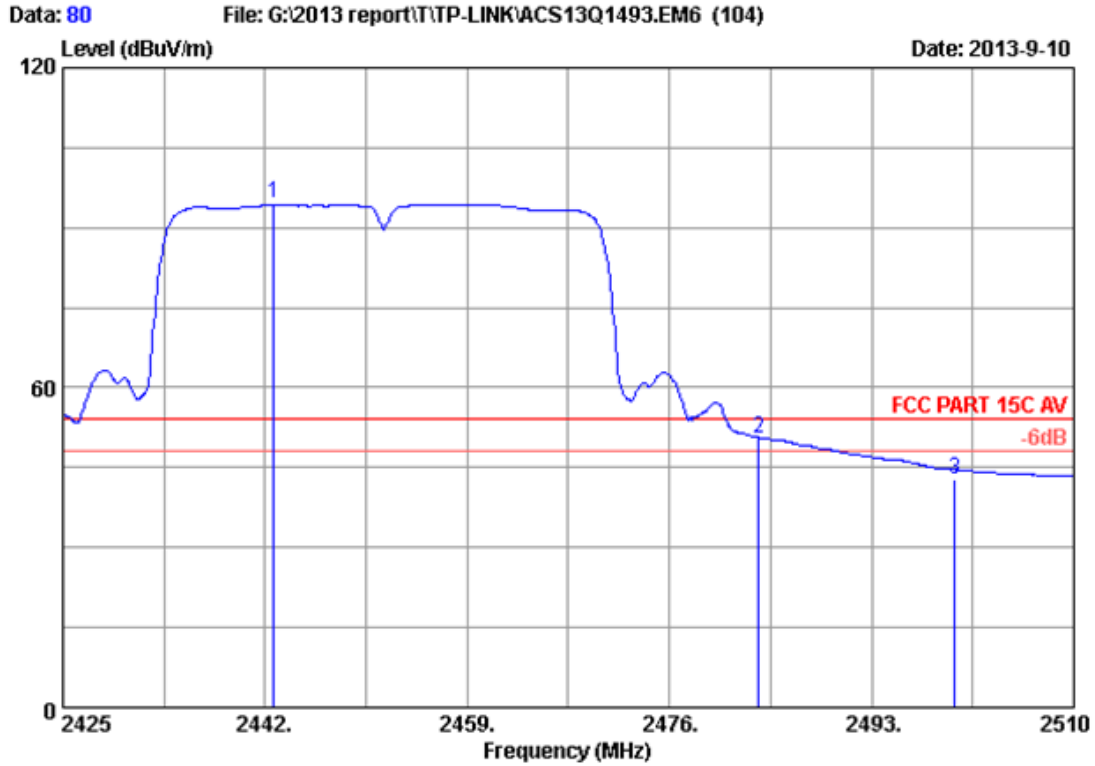


Site no. : 3m Chamber Data no. : 79
 Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23°C/54% Engineer : Leo-Li
 EUT : 300Mbps Multi-Function Wireless N Router
 Power supply : DC 12V From Adapter input AC 120V/60Hz
 Test mode : IEEE802.11nHT40 2452MHz Tx Mode
 TL-WR842ND

| | 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 | 2447.500 | 27.06 | 5.87 | 35.70 | 108.71 | 105.94 | 74.00 | -31.94 | Peak |
| 2 | 2483.500 | 27.29 | 5.92 | 35.70 | 65.31 | 62.82 | 74.00 | 11.18 | Peak |
| 3 | 2484.615 | 27.30 | 5.92 | 35.70 | 65.79 | 63.31 | 74.00 | 10.69 | Peak |
| 4 | 2500.000 | 27.40 | 5.94 | 35.70 | 58.24 | 55.88 | 74.00 | 18.12 | 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.

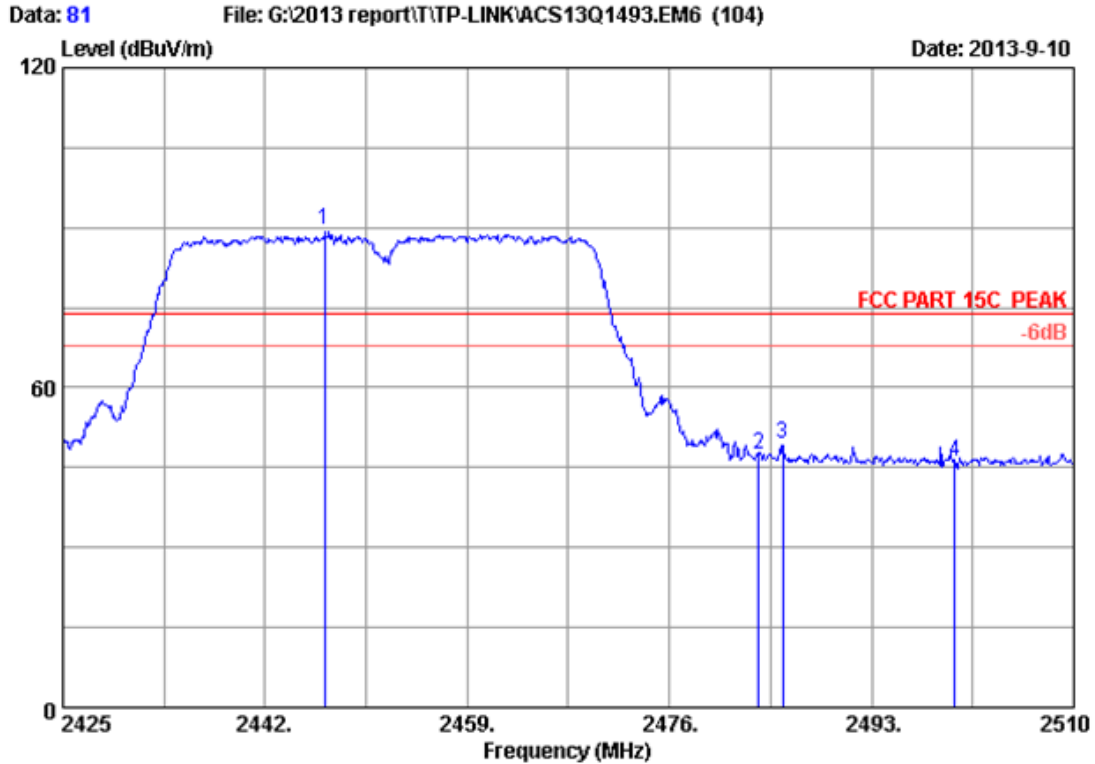


Site no. : 3m Chamber Data no. : 80
 Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : VERTICAL
 Limit : FCC PART 15C AV
 Env. / Ins. : 23°C/54% Engineer : Leo-Li
 EUT : 300Mbps Multi-Function Wireless N Router
 Power supply : DC 12V From Adapter input AC 120V/60Hz
 Test mode : IEEE802.11nHT40 2452MHz Tx Mode
 TL-WR842ND

| | 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 | 2442.697 | 27.03 | 5.86 | 35.70 | 97.51 | 94.70 | 54.00 | -40.70 | Average |
| 2 | 2483.500 | 27.29 | 5.92 | 35.70 | 53.08 | 50.59 | 54.00 | 3.41 | Average |
| 3 | 2500.000 | 27.40 | 5.94 | 35.70 | 44.99 | 42.63 | 54.00 | 11.37 | 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.

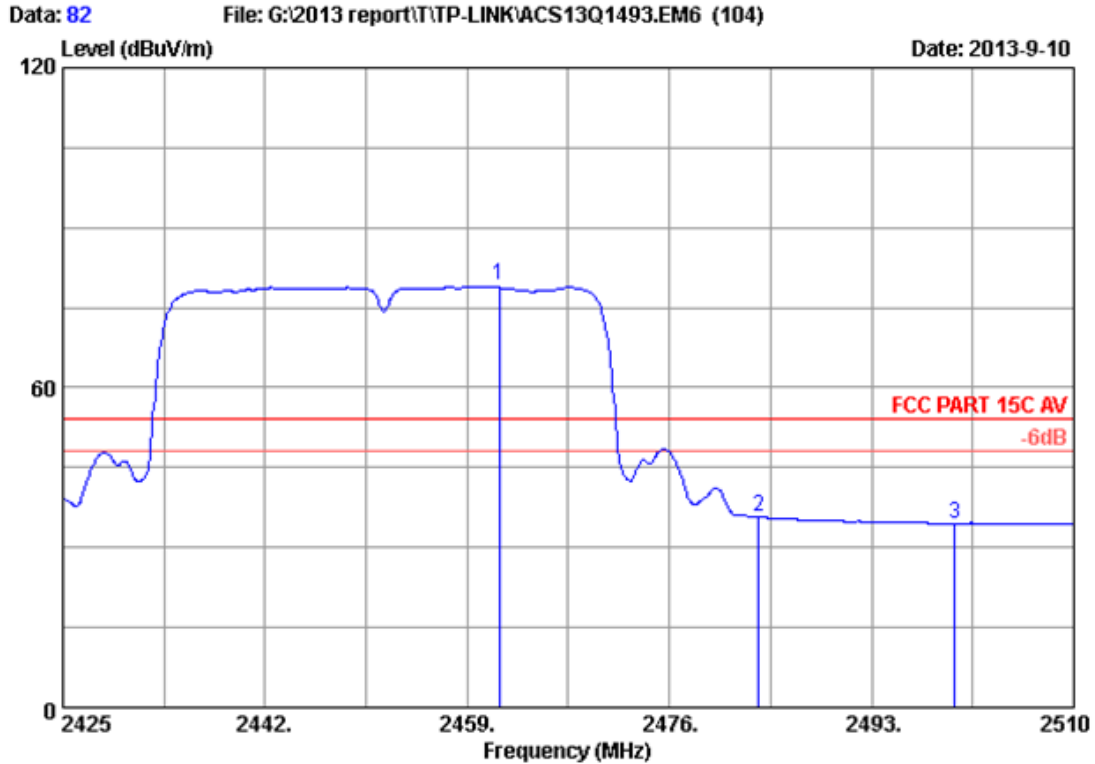


Site no. : 3m Chamber Data no. : 81
 Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23°C/54% Engineer : Leo-Li
 EUT : 300Mbps Multi-Function Wireless N Router
 Power supply : DC 12V From Adapter input AC 120V/60Hz
 Test mode : IEEE802.11nHT40 2452MHz Tx Mode
 TL-WR842ND

| | 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 | 2447.016 | 27.06 | 5.87 | 35.70 | 92.36 | 89.59 | 74.00 | -15.59 | Peak |
| 2 | 2483.500 | 27.29 | 5.92 | 35.70 | 49.88 | 47.39 | 74.00 | 26.61 | Peak |
| 3 | 2485.531 | 27.31 | 5.92 | 35.70 | 51.94 | 49.47 | 74.00 | 24.53 | Peak |
| 4 | 2500.000 | 27.40 | 5.94 | 35.70 | 48.65 | 46.29 | 74.00 | 27.71 | 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.

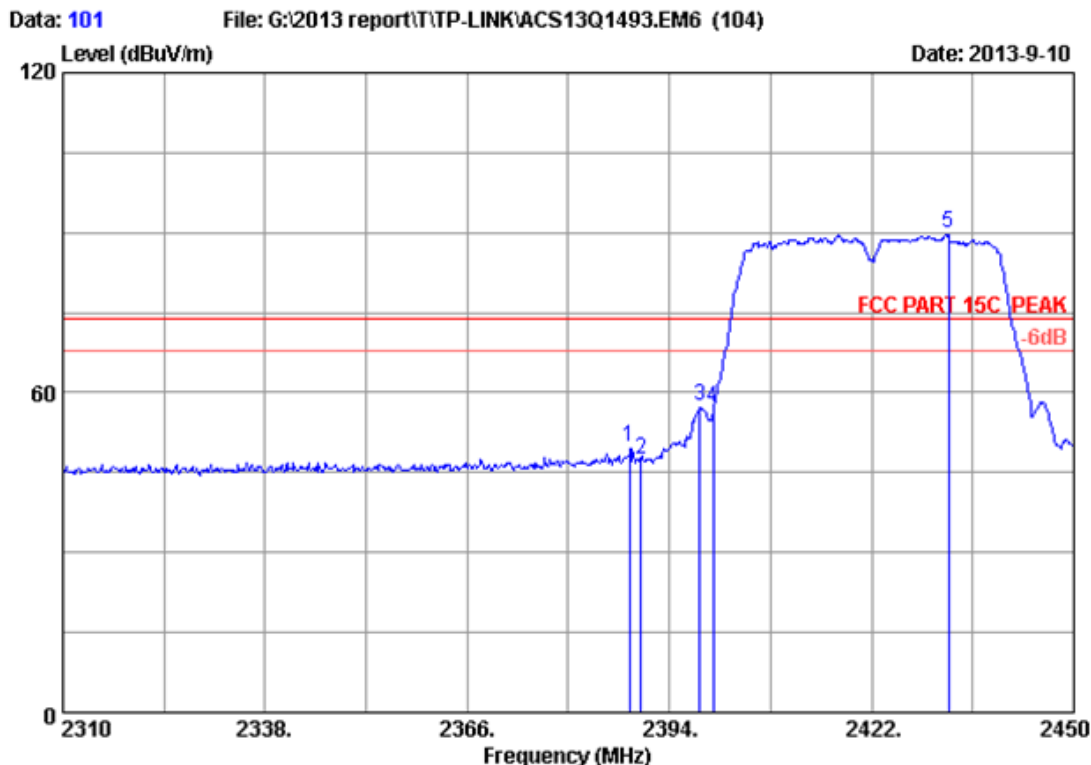


Site no. : 3m Chamber Data no. : 82
 Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C AV
 Env. / Ins. : 23°C/54% Engineer : Leo-Li
 EUT : 300Mbps Multi-Function Wireless N Router
 Power supply : DC 12V From Adapter input AC 120V/60Hz
 Test mode : IEEE802.11nHT40 2452MHz Tx Mode
 TL-WR842ND

| | 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 | 2461.670 | 27.15 | 5.89 | 35.70 | 81.87 | 79.21 | 54.00 | -25.21 | Average |
| 2 | 2483.500 | 27.29 | 5.92 | 35.70 | 38.14 | 35.65 | 54.00 | 18.35 | Average |
| 3 | 2500.000 | 27.40 | 5.94 | 35.70 | 36.89 | 34.53 | 54.00 | 19.47 | 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.

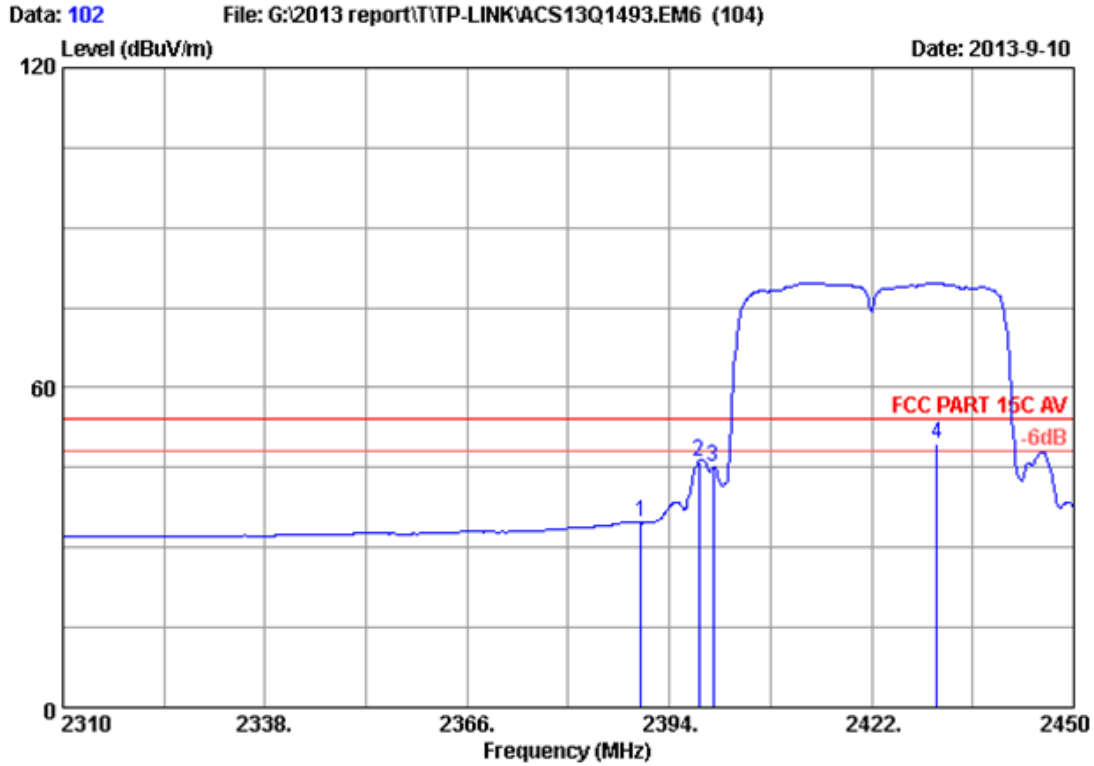


Site no. : 3m Chamber Data no. : 101
 Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23°C/54% Engineer : Leo-Li
 EUT : 300Mbps Multi-Function Wireless N Router
 Power supply : DC 12V From Adapter input AC 120V/60Hz
 Test mode : IEEE802.11nHT40 2422MHz Tx Mode
 TL-WR842ND

| | 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 | 2388.510 | 26.69 | 5.78 | 35.70 | 53.06 | 49.83 | 74.00 | 24.17 | Peak |
| 2 | 2390.000 | 26.70 | 5.78 | 35.70 | 50.52 | 47.30 | 74.00 | 26.70 | Peak |
| 3 | 2398.160 | 26.75 | 5.79 | 35.70 | 60.57 | 57.41 | 74.00 | 16.59 | Peak |
| 4 | 2400.000 | 26.76 | 5.80 | 35.70 | 60.41 | 57.27 | 74.00 | 16.73 | Peak |
| 5 | 2432.680 | 26.97 | 5.84 | 35.70 | 92.64 | 89.75 | 74.00 | -15.75 | 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.

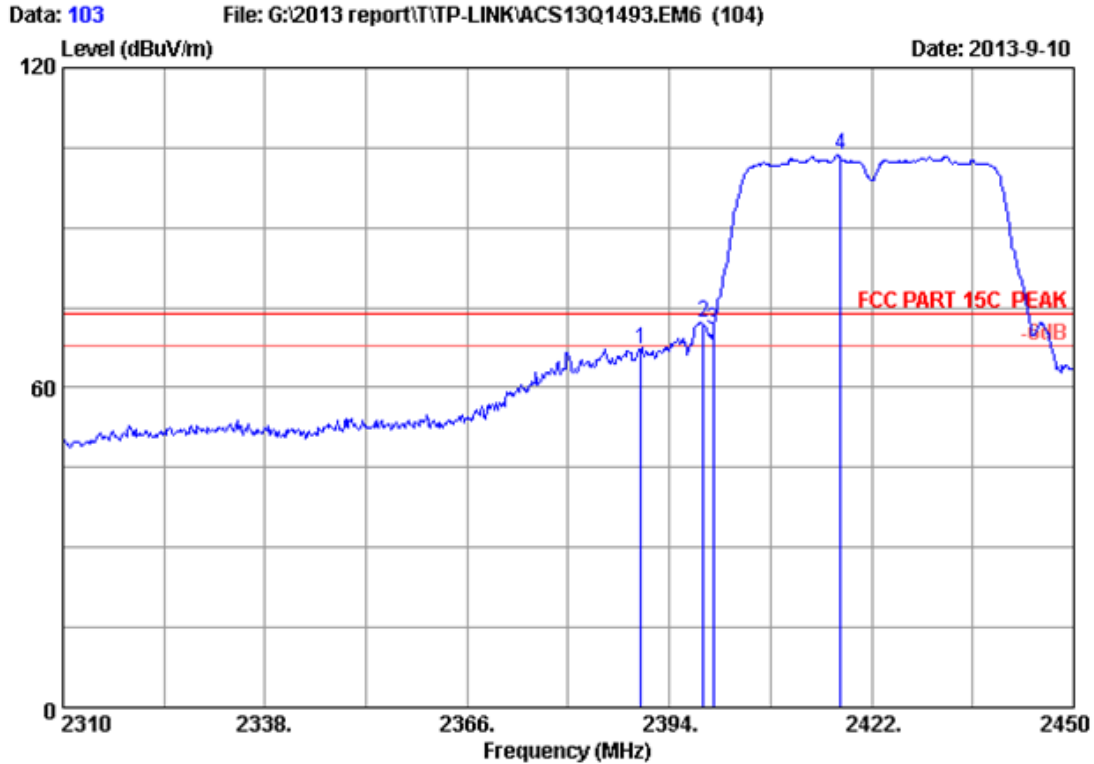


Site no. : 3m Chamber Data no. : 102
 Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C AV
 Env. / Ins. : 23°C/54% Engineer : Leo-Li
 EUT : 300Mbps Multi-Function Wireless N Router
 Power supply : DC 12V From Adapter input AC 120V/60Hz
 Test mode : IEEE802.11nHT40 2422MHz Tx Mode
 TL-WR842ND

| | 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 | 26.70 | 5.78 | 35.70 | 37.86 | 34.64 | 54.00 | 19.36 | Average |
| 2 | 2398.130 | 26.75 | 5.79 | 35.70 | 49.35 | 46.19 | 54.00 | 7.81 | Average |
| 3 | 2400.000 | 26.76 | 5.80 | 35.70 | 48.14 | 45.00 | 54.00 | 9.00 | Average |
| 4 | 2431.070 | 26.96 | 5.84 | 35.70 | 52.28 | 49.38 | 54.00 | 4.62 | 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.

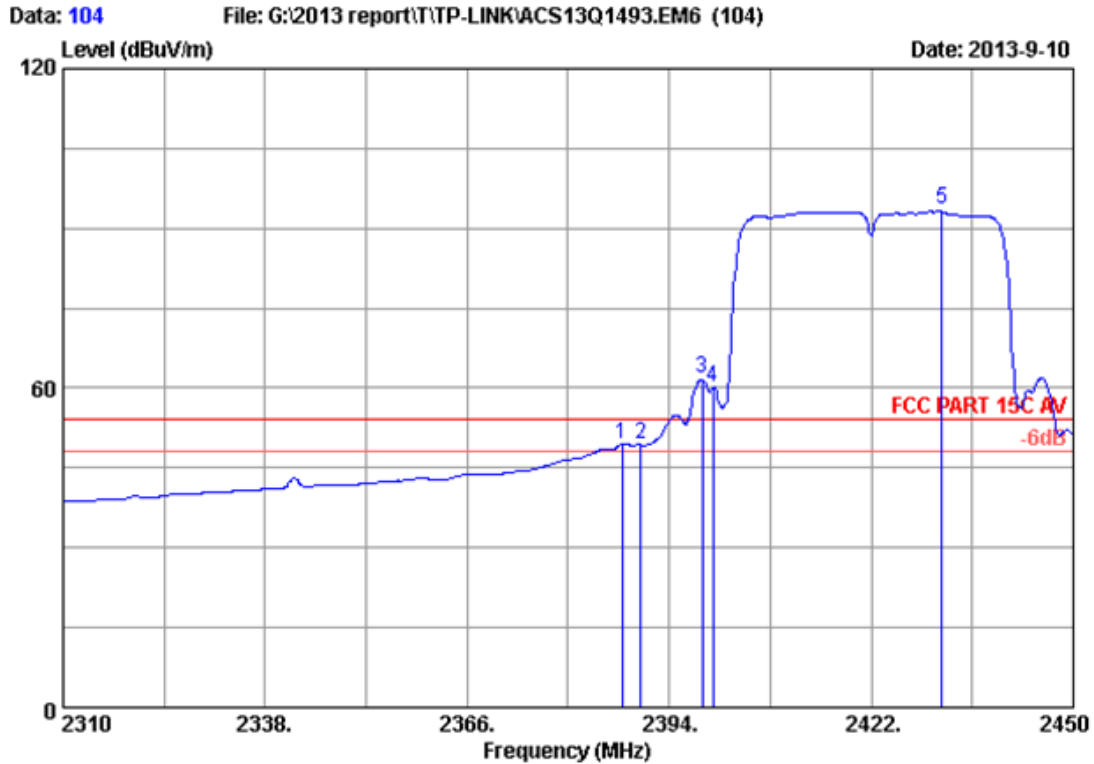


Site no. : 3m Chamber Data no. : 103
 Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23°C/54% Engineer : Leo-Li
 EUT : 300Mbps Multi-Function Wireless N Router
 Power supply : DC 12V From Adapter input AC 120V/60Hz
 Test mode : IEEE802.11nHT40 2422MHz Tx Mode
 TL-WR842ND

| | 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 | 26.70 | 5.78 | 35.70 | 70.39 | 67.17 | 74.00 | 6.83 | Peak |
| 2 | 2398.660 | 26.75 | 5.80 | 35.70 | 75.43 | 72.28 | 74.00 | 1.72 | Peak |
| 3 | 2400.000 | 26.76 | 5.80 | 35.70 | 74.11 | 70.97 | 74.00 | 3.03 | Peak |
| 4 | 2417.660 | 26.87 | 5.82 | 35.70 | 106.78 | 103.77 | 74.00 | -29.77 | 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. : 3m Chamber Data no. : 104
 Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : VERTICAL
 Limit : FCC PART 15C AV
 Env. / Ins. : 23°C/54% Engineer : Leo-Li
 EUT : 300Mbps Multi-Function Wireless N Router
 Power supply : DC 12V From Adapter input AC 120V/60Hz
 Test mode : IEEE802.11nHT40 2422MHz Tx Mode
 TL-WR842ND

| | 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 | 2387.430 | 26.68 | 5.78 | 35.70 | 52.63 | 49.39 | 54.00 | 4.61 | Average |
| 2 | 2390.000 | 26.70 | 5.78 | 35.70 | 52.57 | 49.35 | 54.00 | 4.65 | Average |
| 3 | 2398.550 | 26.75 | 5.79 | 35.70 | 64.85 | 61.69 | 54.00 | -7.69 | Average |
| 4 | 2400.000 | 26.76 | 5.80 | 35.70 | 63.16 | 60.02 | 54.00 | -6.02 | Average |
| 5 | 2431.740 | 26.96 | 5.84 | 35.70 | 96.35 | 93.45 | 54.00 | -39.45 | 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.

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, 12 | 1 Year |
| 2. | Amp | HP | 8449B | 3008A08495 | May.08, 13 | 1 Year |
| 3. | Antenna | EMCO | 3115 | 9510-4580 | May.08, 13 | 1 Year |
| 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

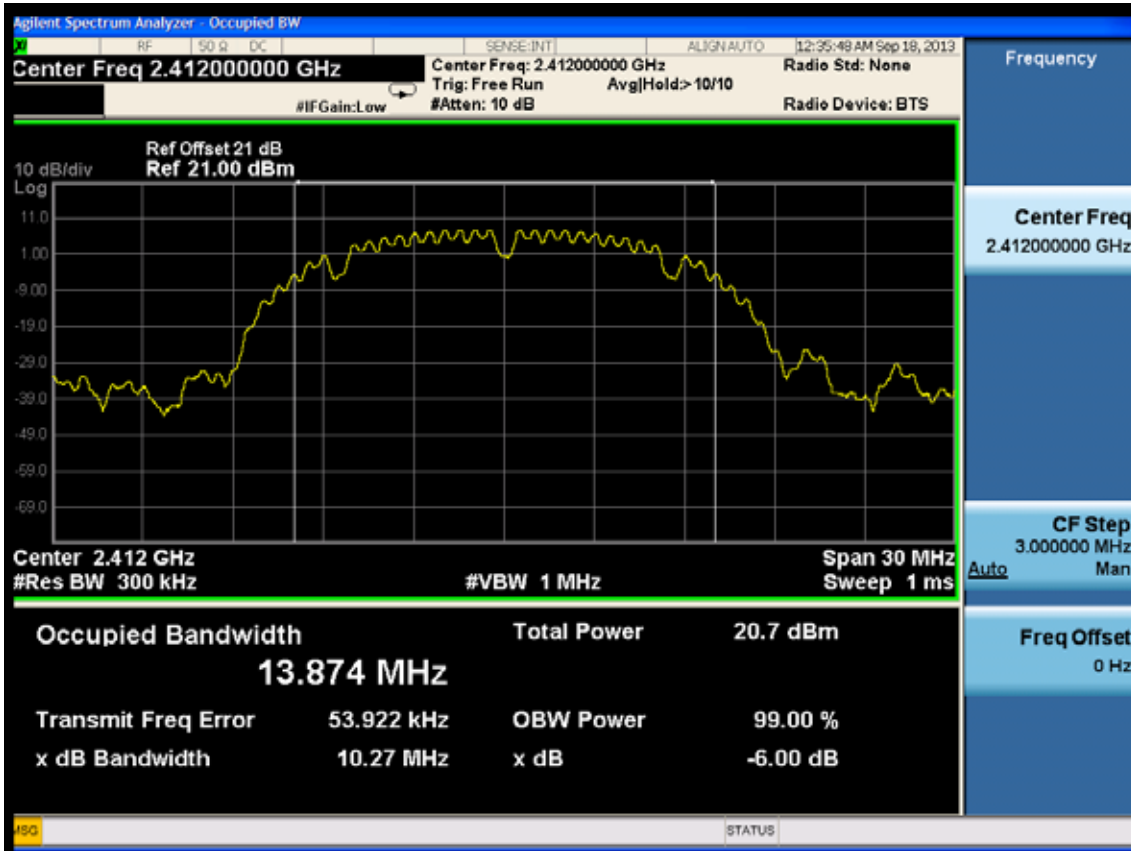
| | | |
|---|-------------------------|--------------------------|
| EUT: 300Mbps Multi-Function Wireless N Router | | |
| M/N: TL-WR842ND | | |
| Test date: 2013-09-18 | Pressure: 101.1±1.0 kpa | Humidity: 49.2±3.0% |
| Tested by: Leo-Li | Test site: RF site | Temperature: 21.5±0.6 °C |

| Cable loss: 1 dB | | Attenuator loss: 20 dB | | |
|-------------------|------|------------------------|---------|-------------|
| Test Mode | CH | 6dB bandwidth (MHz) | | Limit (KHz) |
| | | Chain 0 | Chain 1 | |
| 11b | CH1 | 10.27 | 10.23 | >500 |
| | CH6 | 10.27 | 10.21 | >500 |
| | CH11 | 10.26 | 10.21 | >500 |
| 11g | CH1 | 16.46 | 16.47 | >500 |
| | CH6 | 16.40 | 16.49 | >500 |
| | CH11 | 16.39 | 16.45 | >500 |
| 11n HT20 | CH1 | 17.67 | 17.67 | >500 |
| | CH6 | 17.66 | 17.69 | >500 |
| | CH11 | 17.62 | 17.74 | >500 |
| 11n HT40 | CH1 | 35.63 | 34.96 | >500 |
| | CH4 | 35.70 | 35.38 | >500 |
| | CH7 | 35.53 | 35.33 | >500 |
| Conclusion : PASS | | | | |

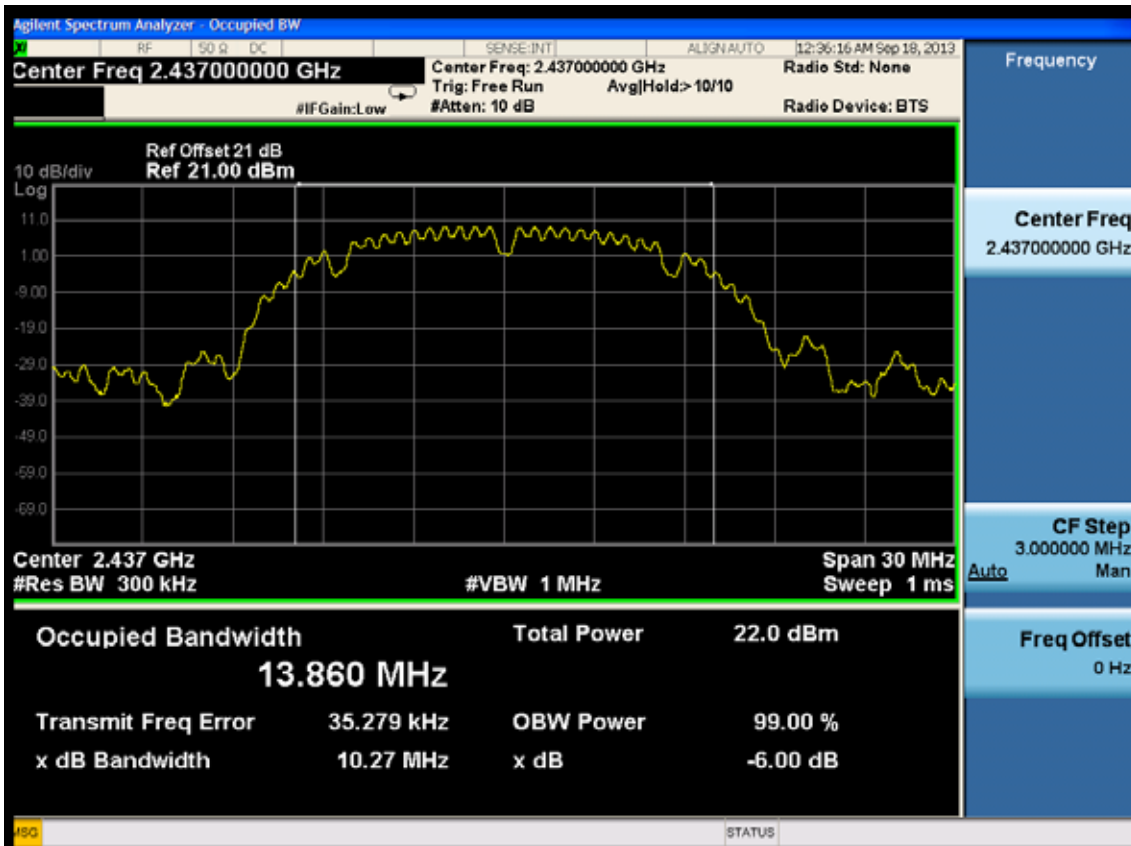
ANT 0

Test Mode: IEEE 802.11b TX

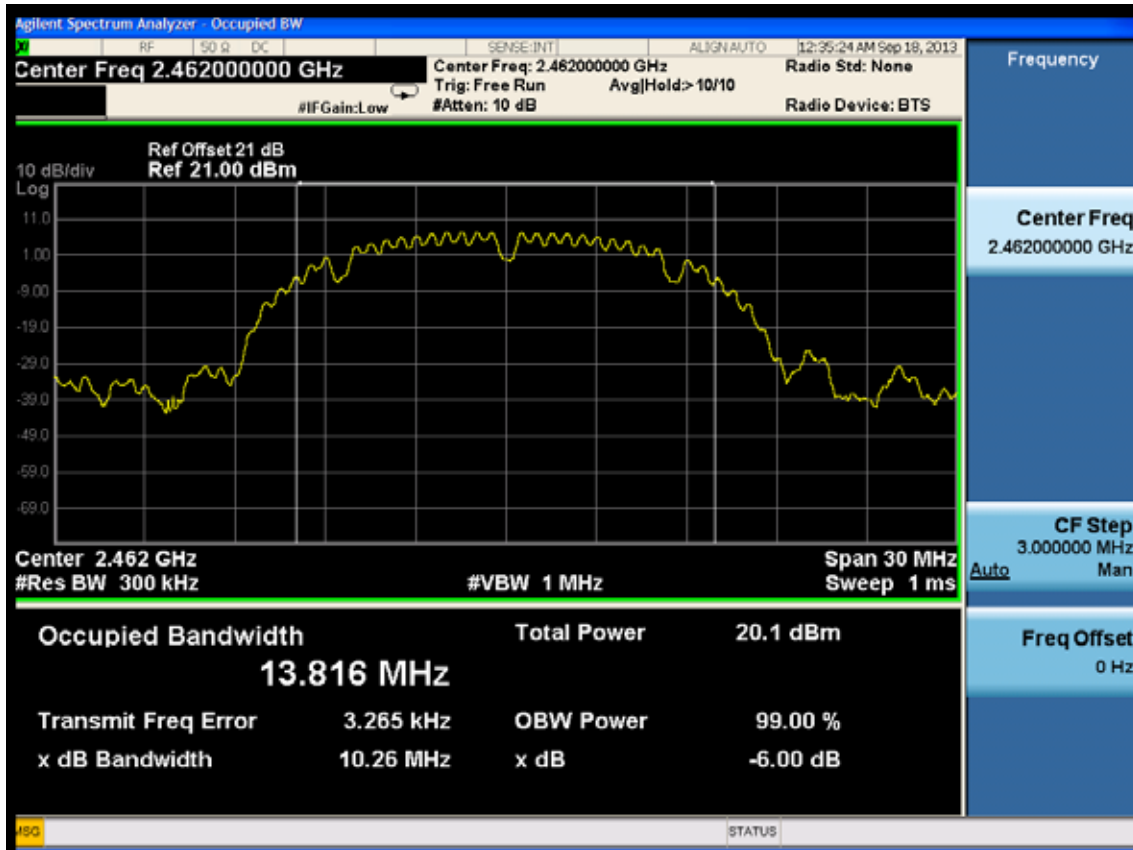
Test CH1: 2412MHz



Test CH6: 2437MHz

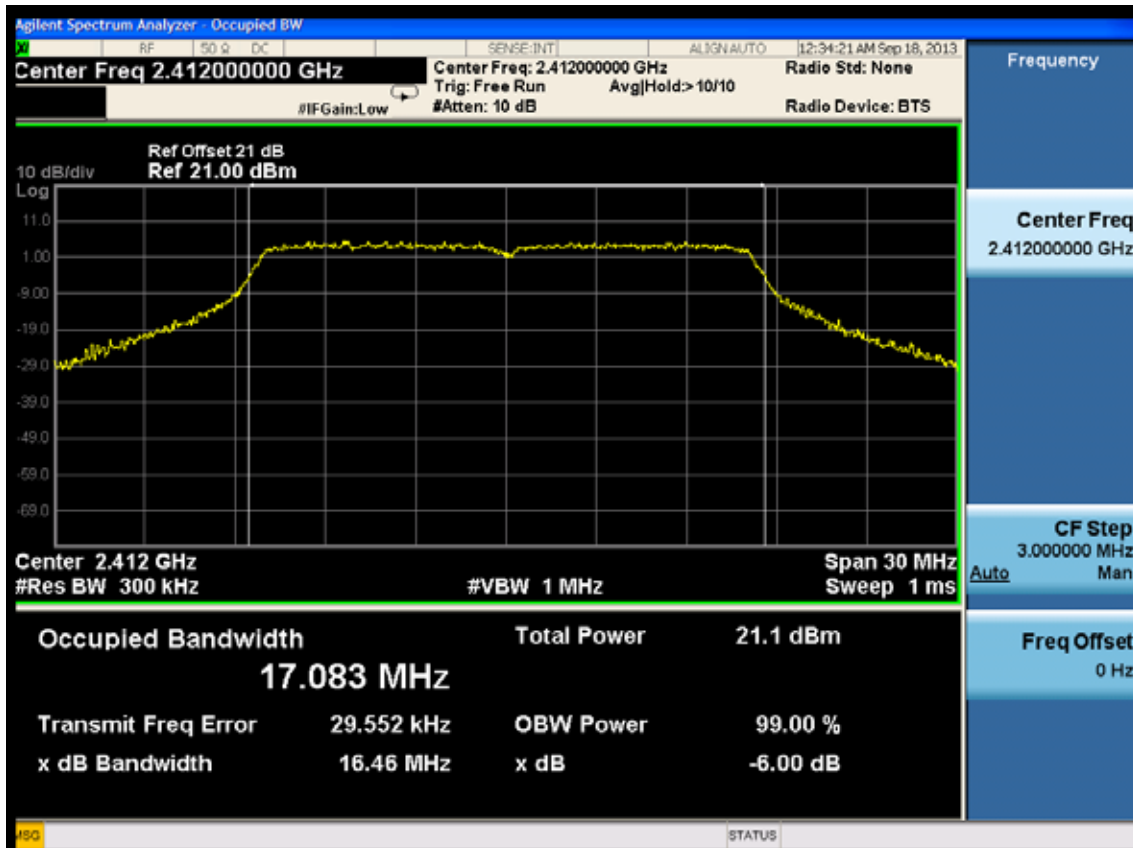


Test CH11: 2462MHz

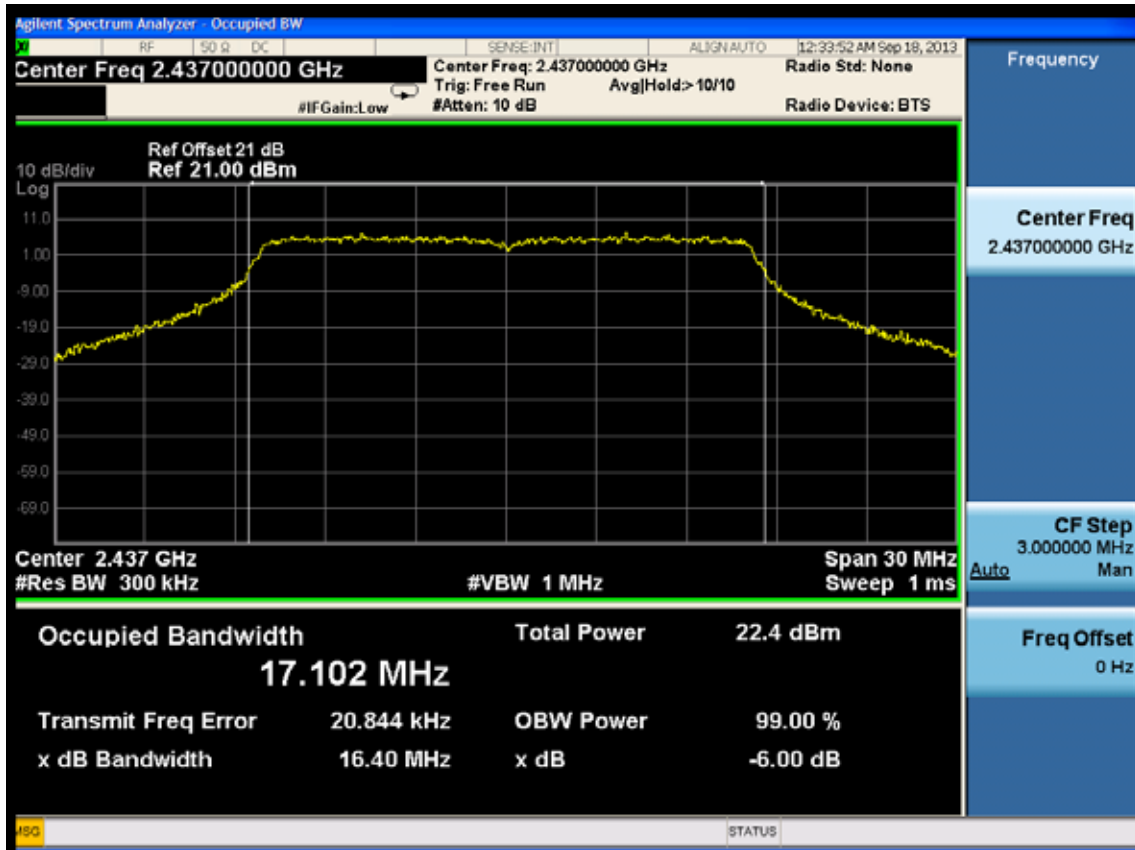


Test Mode: IEEE 802.11g TX

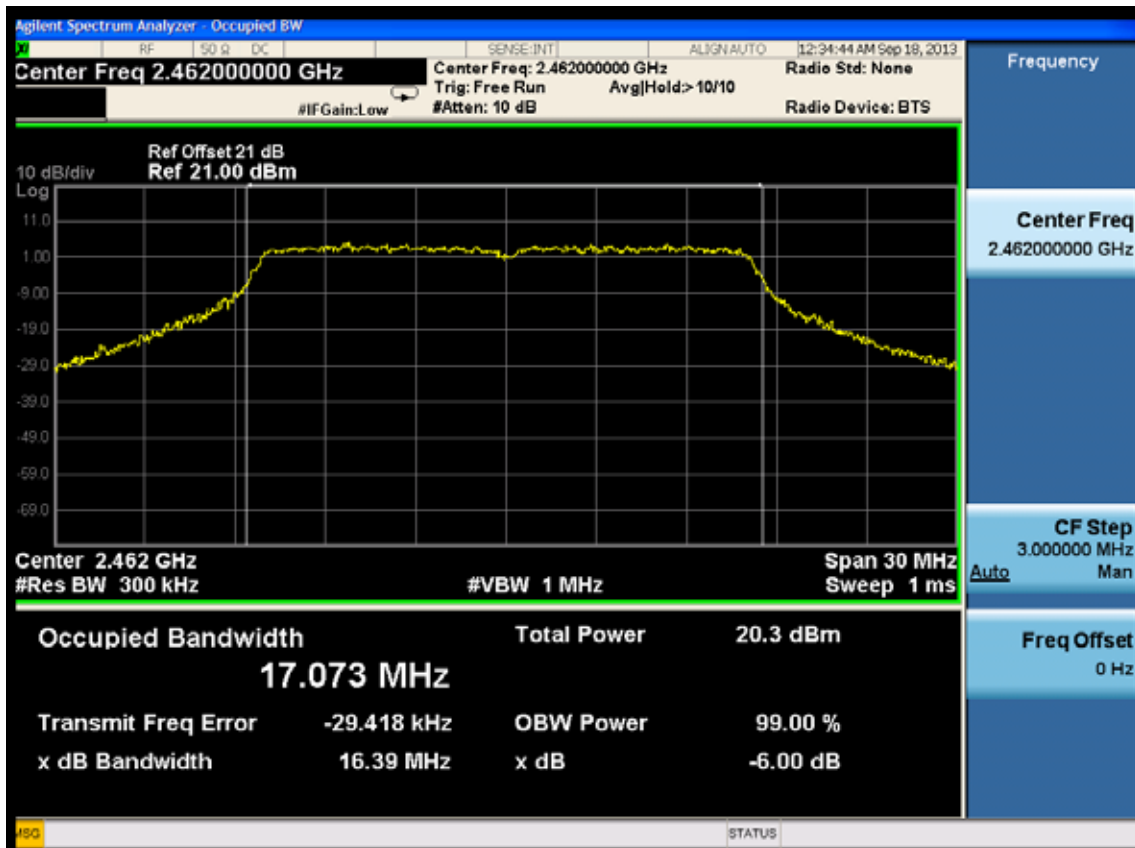
Test CH1: 2412MHz



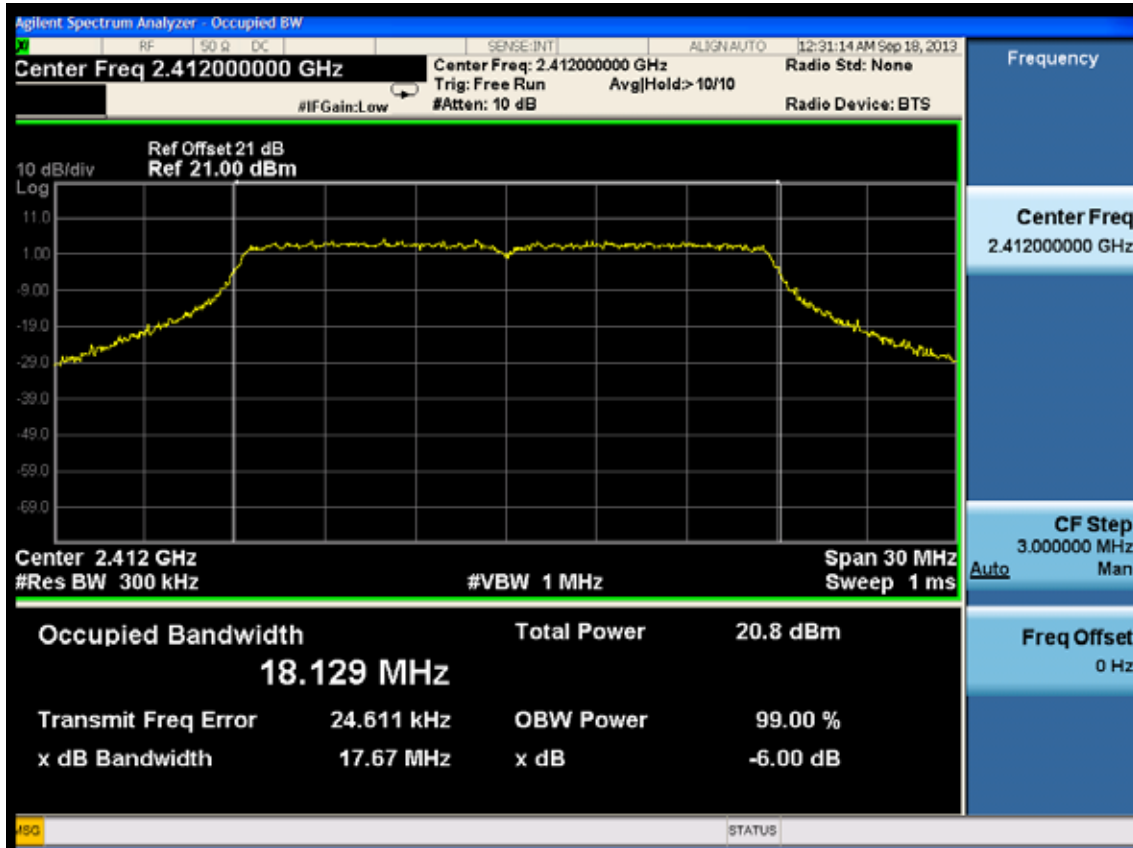
Test CH6: 2437MHz



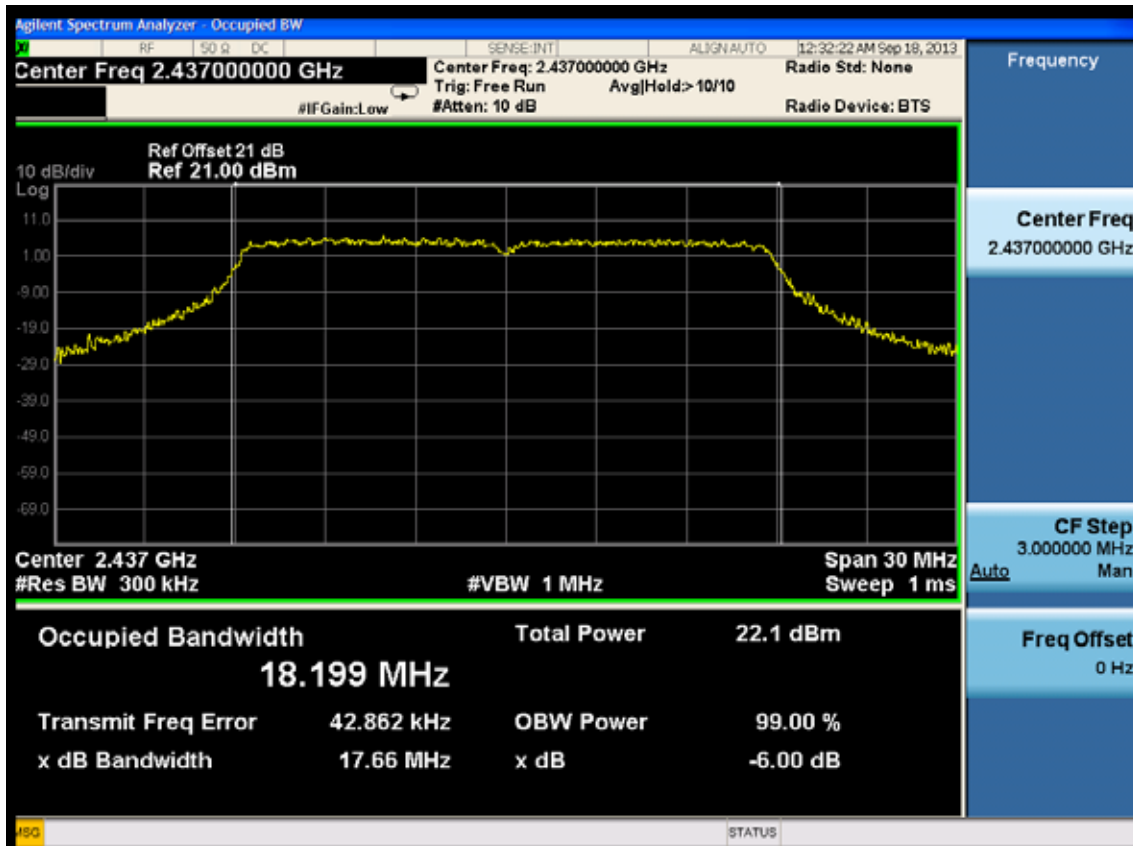
Test CH11: 2462MHz



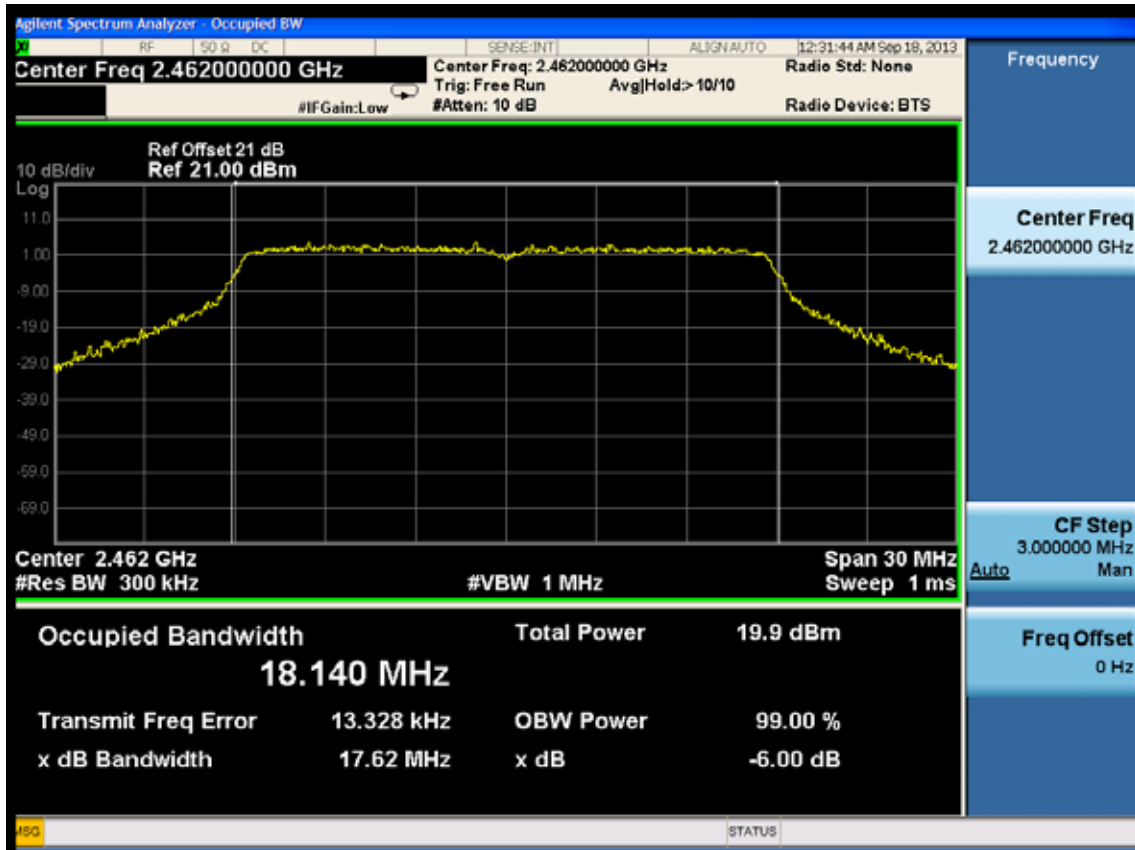
Test Mode: IEEE 802.11n HT20 TX
 Test CH1: 2412MHz



Test CH6: 2437MHz

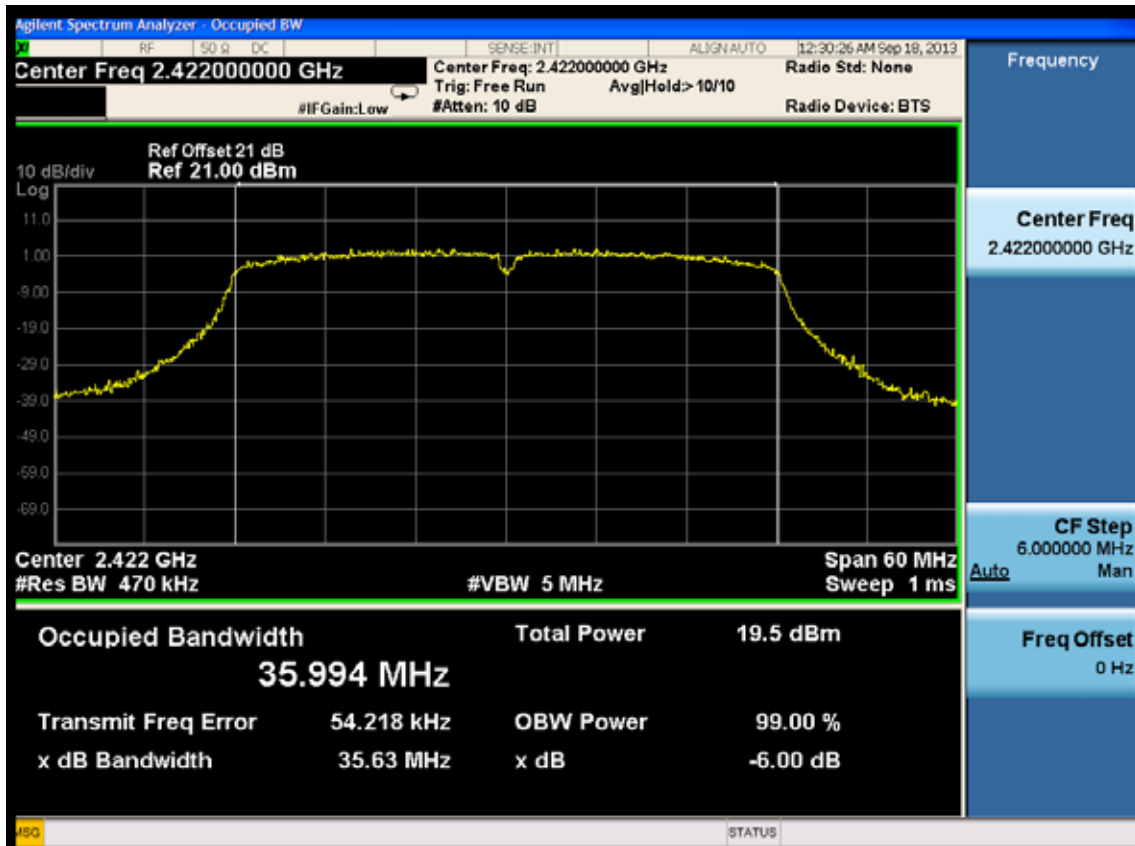


Test CH11: 2462MHz

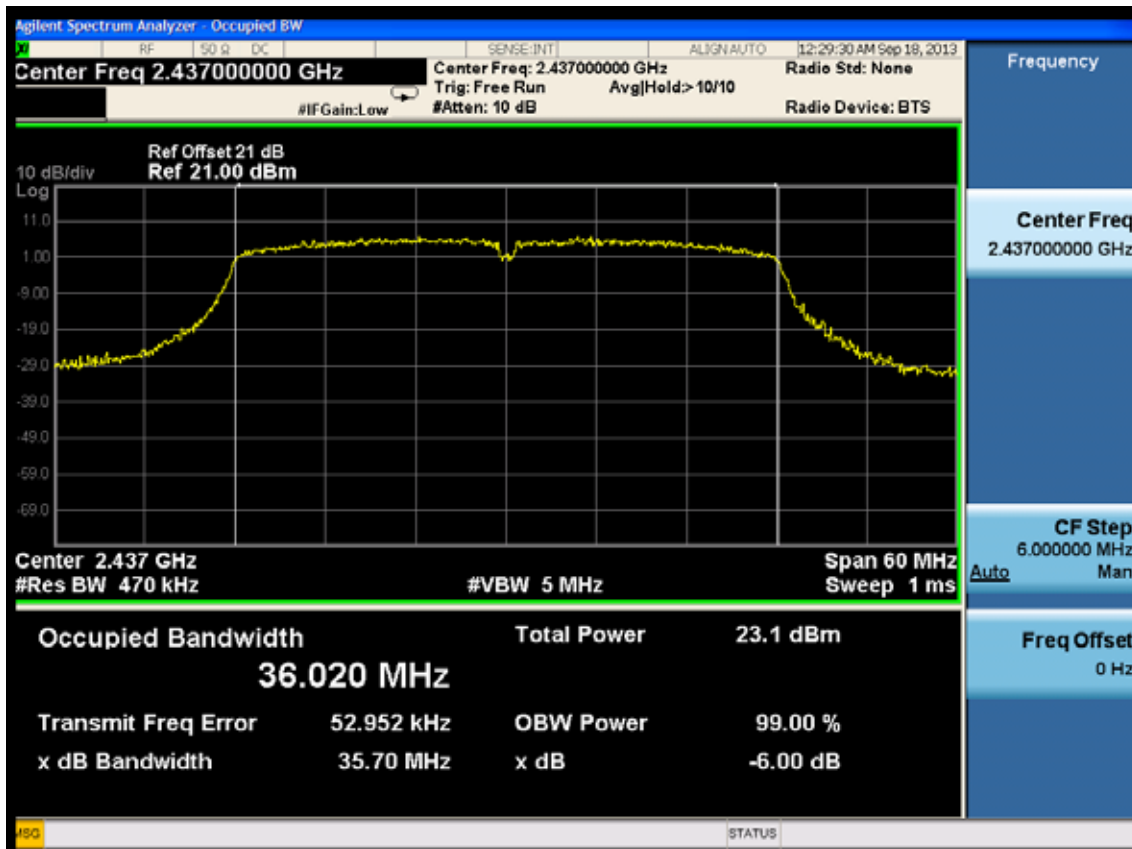


Test Mode: IEEE 802.11n HT40 TX

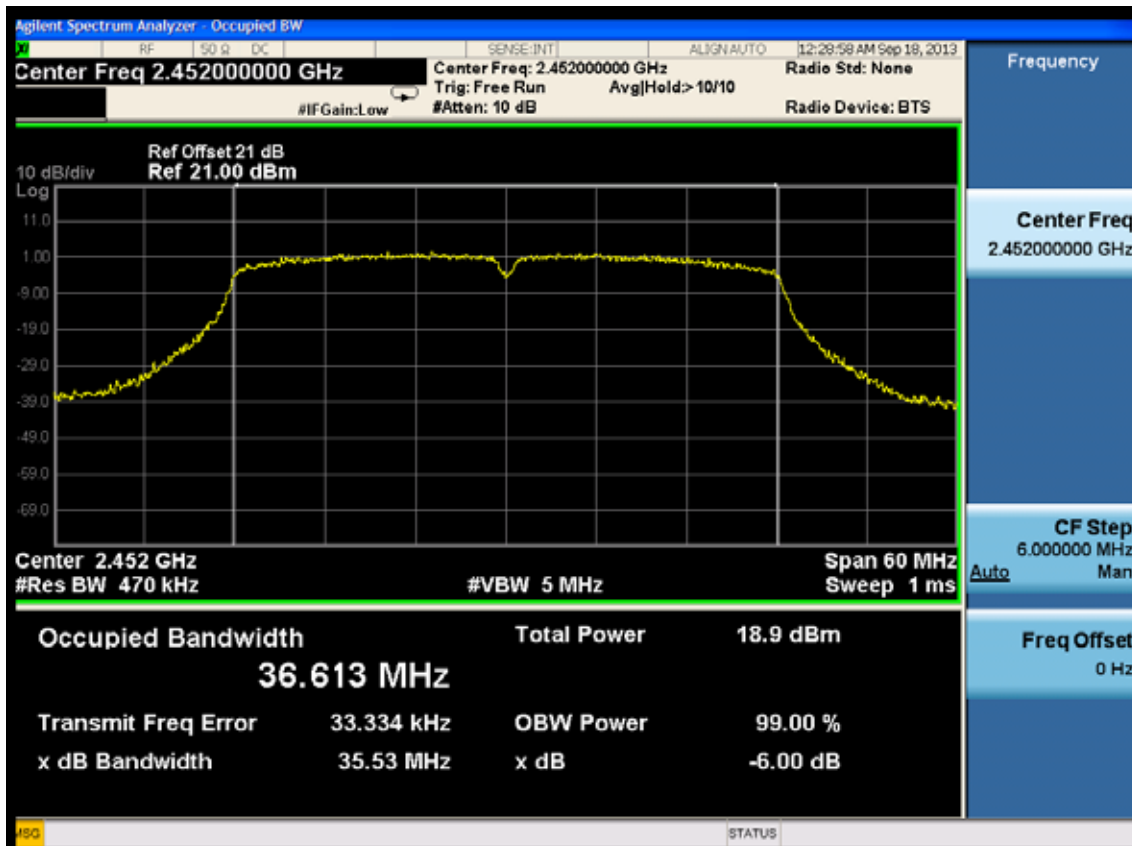
Test CH1: 2422MHz



Test CH4: 2437MHz



Test CH7: 2452MHz



ANT 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



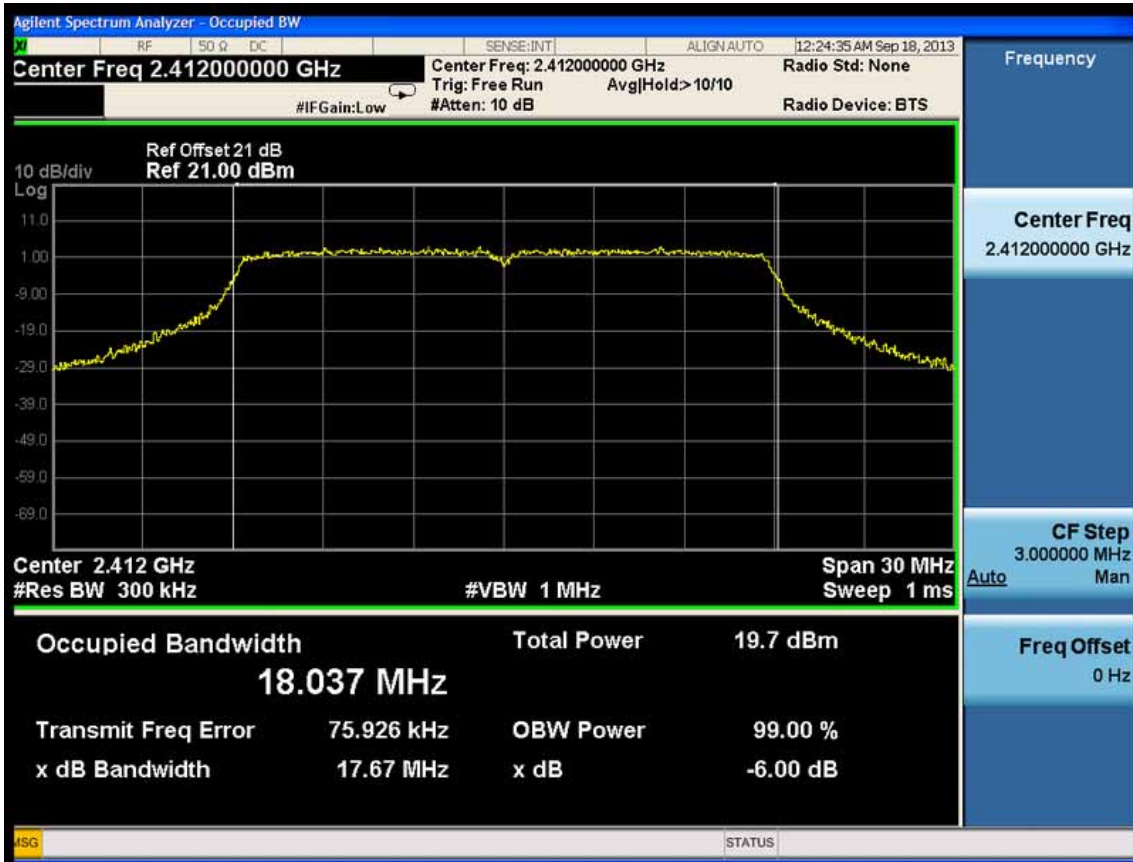
Test CH6: 2437MHz



Test CH11: 2462MHz



Test Mode: IEEE 802.11n HT20 TX
 Test CH1: 2412MHz



Test CH6: 2437MHz



Test CH11: 2462MHz

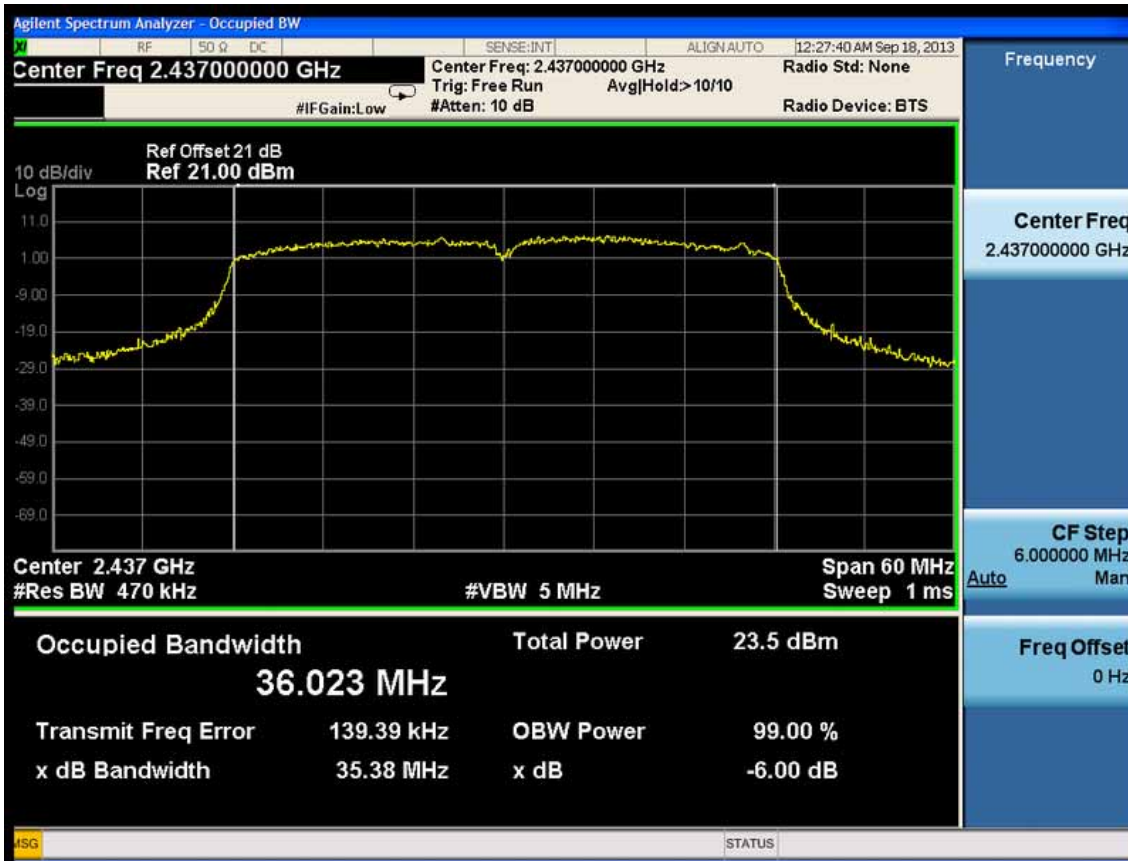


Test Mode: IEEE 802.11n HT40 TX

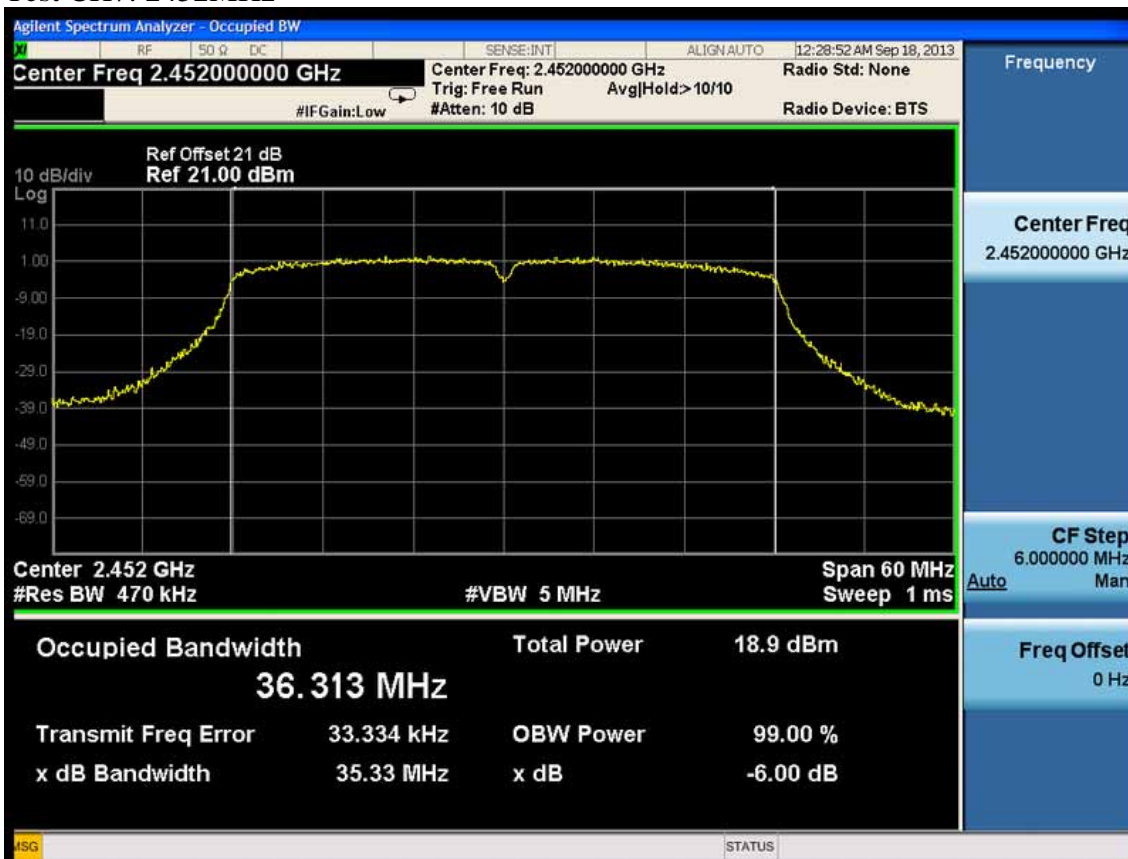
Test CH1: 2422MHz



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 | Agilent | E4446A | US44300459 | May.08, 13 | 1 Year |
| 2. | Amp | HP | 8449B | 3008A08495 | May.08, 13 | 1 Year |
| 3. | Antenna | EMCO | 3115 | 9510-4580 | May.08, 13 | 1 Year |
| 4. | HF Cable | Hubersuhne | Sucoflex104 | - | May.08, 13 | 1 Year |
| 5. | Power Meter | Anritsu | ML2487A | 6K00002472 | May.08, 13 | 1 Year |
| 6. | Power Sensor | Anritsu | MA2491A | 033005 | May.08, 13 | 1 Year |
| 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 Bandwidth correction method according to ANSI C63.10 clause 6.10.2.1 part (c) was used:
 - 1) Set the RBW=3MHz and VBW =8MHz
 - 2) Turn averaging off
 - 3) Set sweep to automatic
 - 4) Set the span just large enough to capture the emission
 - 5) Use a peak detector on max hold
 - 6) Record the measured power
 - 7) Calculate Output power of EUT use the formula:

Peak output power =measured power+ 10log[(26dB bandwidth of emission)/(analyzer RBW)]

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

8.4. Test Results

| EUT: 300Mbps Multi-Function Wireless N Router | | | | | |
|---|----------|-------------------------|------------------------|-------------------------|-------------|
| M/N:TL-WR842ND | | | | | |
| Test date: 2013-09-20 | | Pressure: 101.3±1.0 kpa | | Humidity: 49.4±3.0% | |
| Tested by: Leo-Li | | Test site: RF site | | Temperature:20.9±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 | 19.49 | 18.72 | N/A | 30 |
| | CH6 | 21.43 | 19.87 | N/A | 30 |
| | CH11 | 19.47 | 18.41 | N/A | 30 |
| 11g | CH1 | 22.1 | 20.76 | N/A | 30 |
| | CH6 | 26.28 | 25.93 | N/A | 30 |
| | CH11 | 21.48 | 21.45 | N/A | 30 |
| 11n HT20 | CH1 | 20.34 | 20.27 | 23.32 | 30 |
| | CH6 | 26.24 | 25.32 | 28.81 | 30 |
| | CH11 | 20.21 | 20.43 | 23.33 | 30 |

| Test Mode | CH | Result | | | | | Limit (dBm) |
|------------------|-----|---|---------|-----------------------|---------|-------|-------------|
| | | Measured power(dBm)/3MHz | | PK Output power (dBm) | | | |
| | | Chain 0 | Chain 1 | Chain 0 | Chain 1 | Total | |
| 11n HT40 | CH3 | 7.97 | 8.34 | 19.51 | 20.05 | 22.80 | 30 |
| | CH6 | 11.5 | 12.51 | 23.04 | 24.22 | 26.68 | 30 |
| | CH9 | 7.78 | 8.44 | 19.32 | 20.15 | 22.77 | 30 |
| Chain 0 | | 26dB Bandwidth for 11n HT40:42.73MHz | | | | | |
| Chain 1 | | 26dB Bandwidth for 11n HT40:44.47MHz | | | | | |
| Chain 0 | | BW correction factor = $10\log[(42.73\text{MHz})/(3\text{MHz})] = 11.54\text{dB}$ | | | | | |
| Chain 1 | | BW correction factor = $10\log[(44.47\text{MHz})/(3\text{MHz})] = 11.71\text{dB}$ | | | | | |
| Conclusion: PASS | | | | | | | |

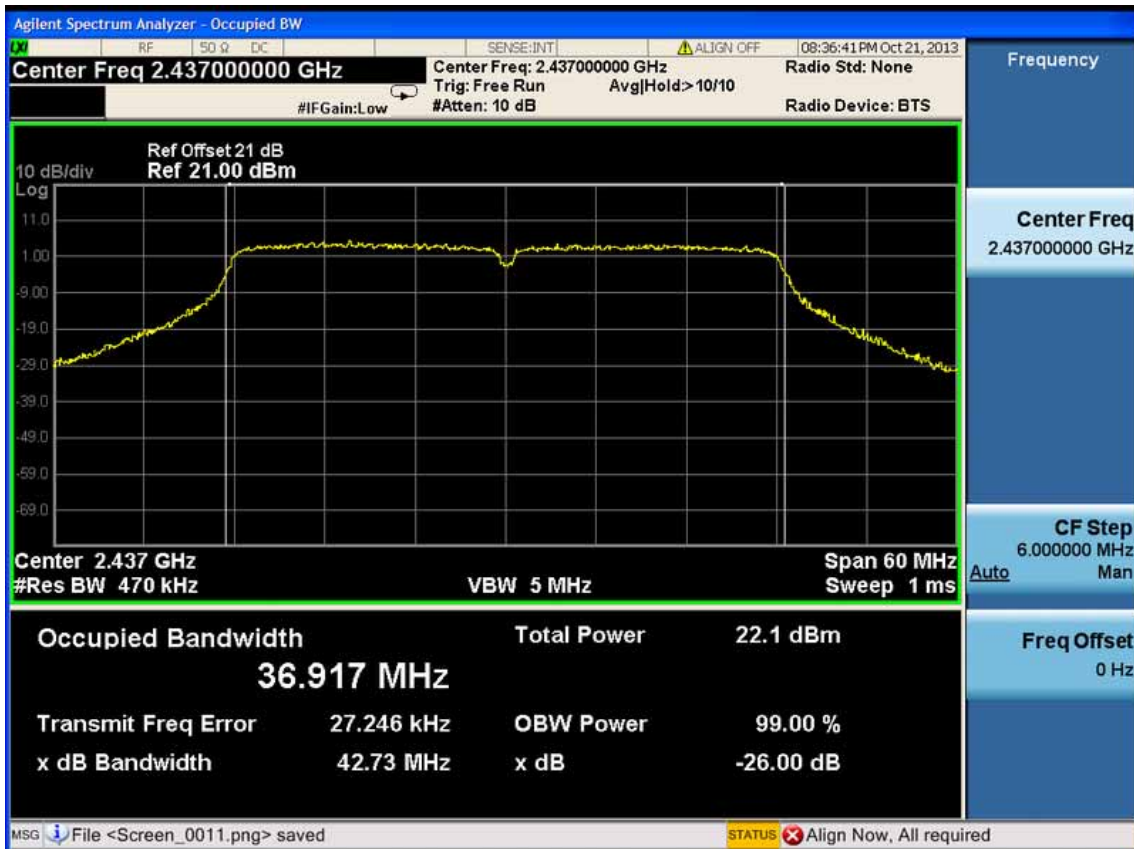
26dB Bandwidth

ANT 0

Test CH3: 2422MHz



Test CH6: 2437MHz

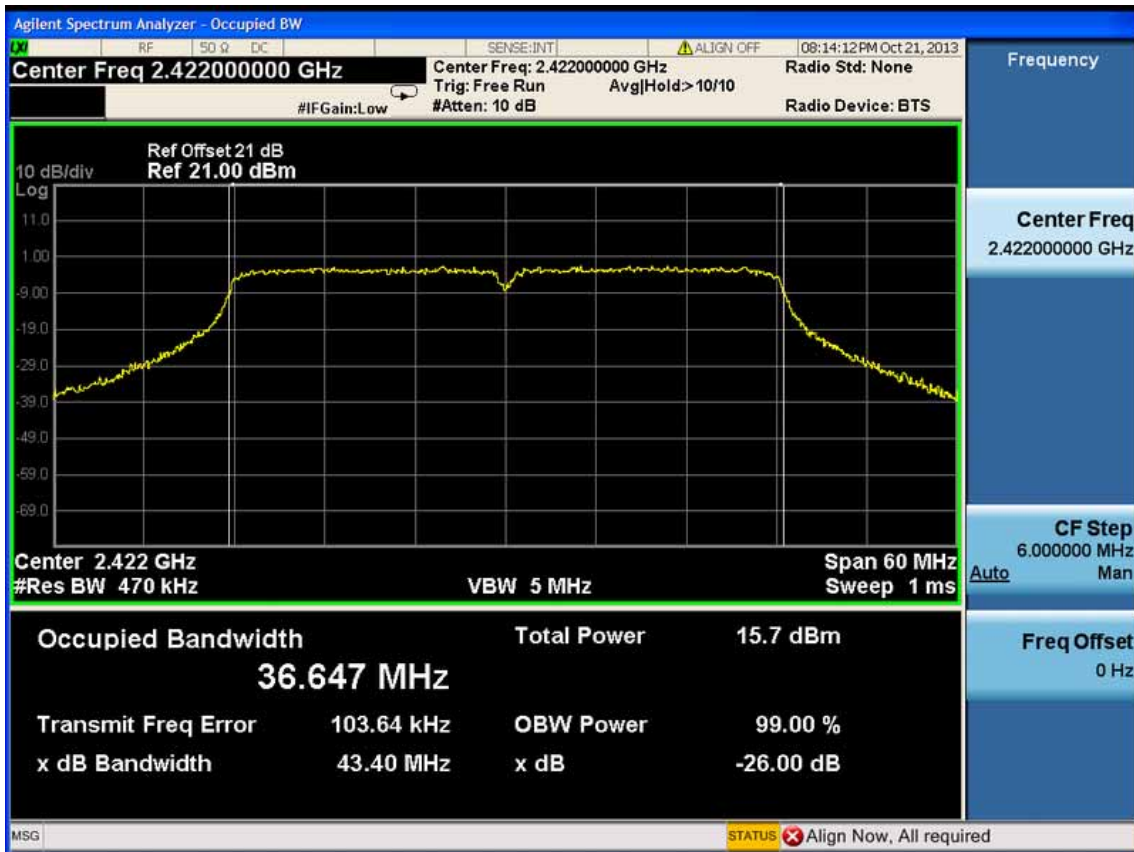


Test CH9: 2452MHz

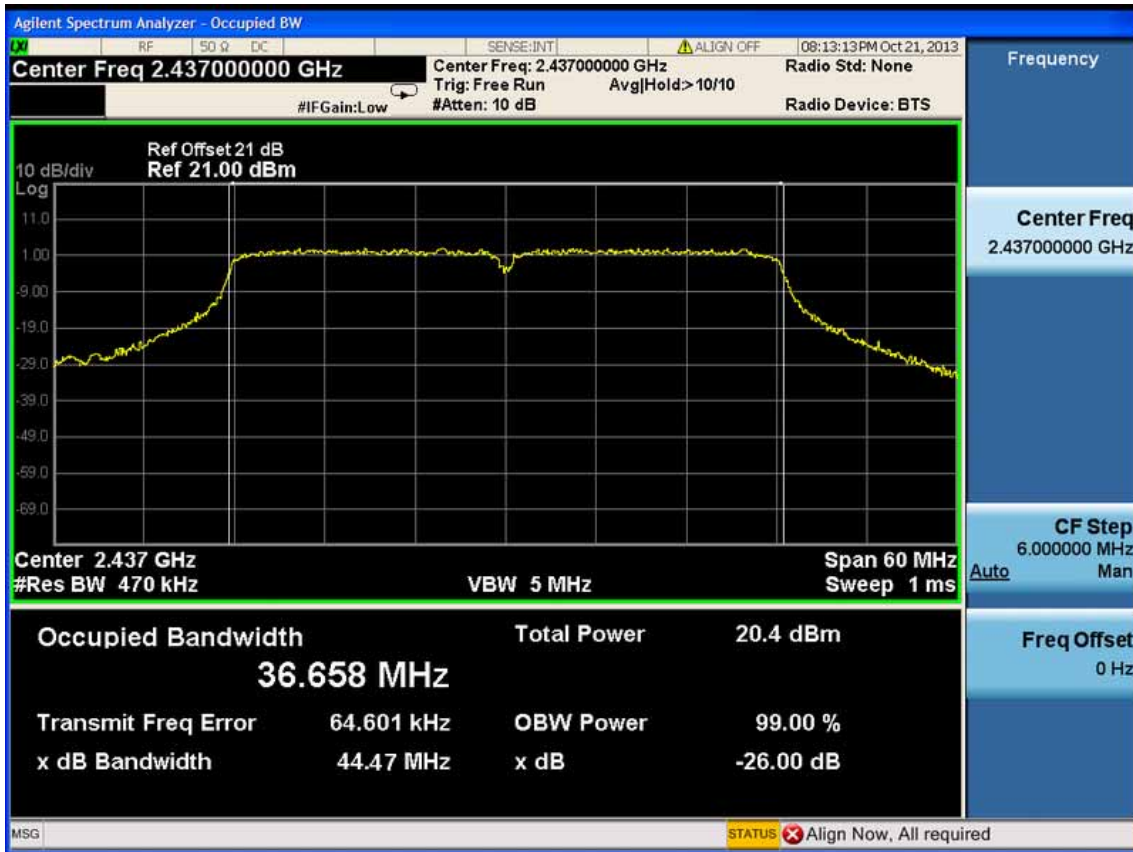


ANT 1

Test CH3: 2422MHz



Test CH6: 2437MHz



Test CH9: 2452MHz



HT40
ANT 0
 Test CH3: 2422MHz



Test CH6: 2437MHz



Test CH9: 2452MHz



ANT 1

Test CH3: 2422MHz



Test CH6: 2437MHz



Test CH9: 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, 12 | 1 Year |
| 2. | Amp | HP | 8449B | 3008A08495 | May.08, 13 | 1 Year |
| 3. | Antenna | EMCO | 3115 | 9607-4580 | Aug.28, 13 | 1 Year |
| 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

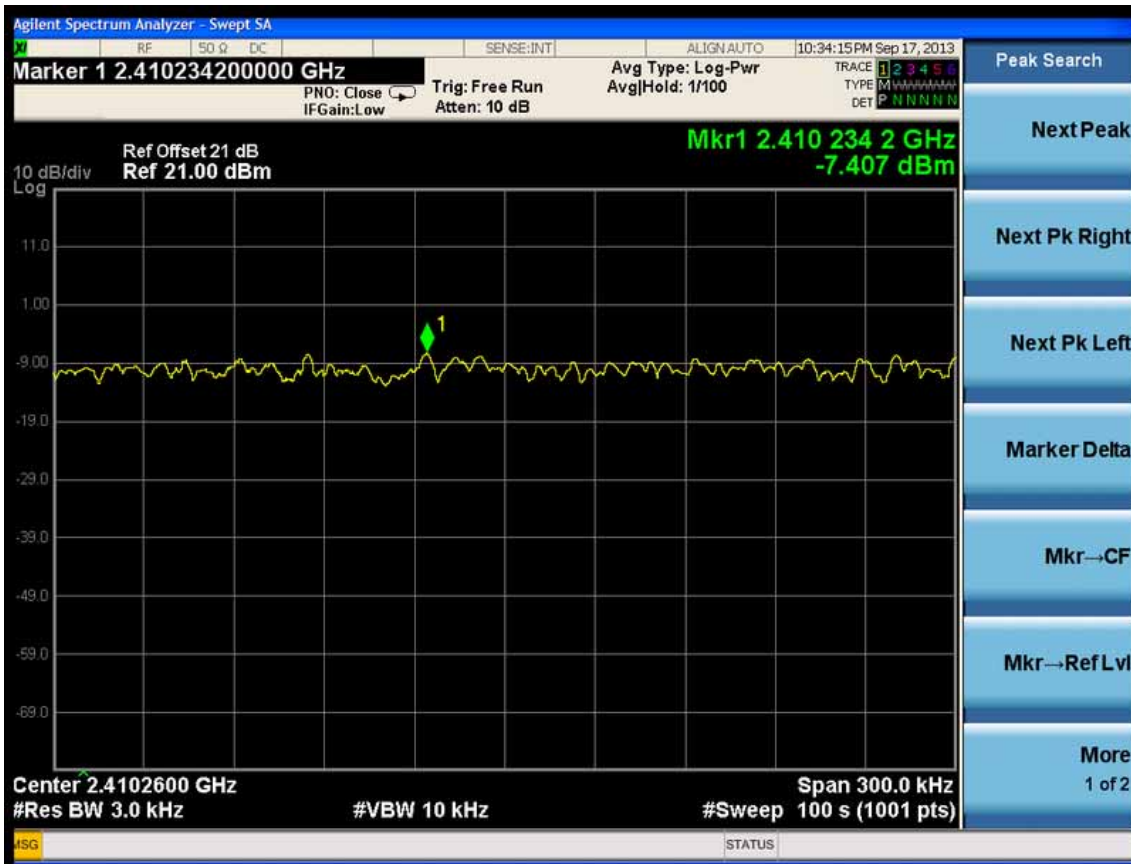
| | | |
|---|-------------------------|--------------------------|
| EUT: 300Mbps Multi-Function Wireless N Router | | |
| M/N:TL-WR842ND | | |
| Test date: 2013-09-18 | Pressure: 101.2±1.0 kpa | Humidity: 49.2±3.0% |
| Tested by: Leo-Li | Test site: RF Site | Temperature : 23.4±0.6°C |

| 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 | -7.407 | -8.185 | N/A | 8 |
| | CH6 | -5.966 | -6.389 | N/A | 8 |
| | CH11 | -8.165 | -8.565 | N/A | 8 |
| 11g | CH1 | -10.876 | -11.153 | N/A | 8 |
| | CH6 | -8.519 | -9.470 | N/A | 8 |
| | CH11 | -12.053 | -12.128 | N/A | 8 |
| 11n Mode | | | | | |
| Test Mode | CH | Power density (dBm/3KHz) | | | Limit (dBm/3KHz) |
| | | ANT 0 | ANT 1 | Total | |
| 11n HT20 | CH1 | -12.029 | -11.847 | -8.93 | 8 |
| | CH6 | -8.278 | -10.164 | -6.11 | 8 |
| | CH11 | -12.856 | -13.189 | -10.01 | 8 |
| 11n HT40 | CH1 | -16.643 | -15.199 | -12.85 | 8 |
| | CH4 | -9.139 | -7.104 | -4.99 | 8 |
| | CH7 | -16.062 | -17.219 | -13.59 | 8 |
| Conclusion : PASS | | | | | |

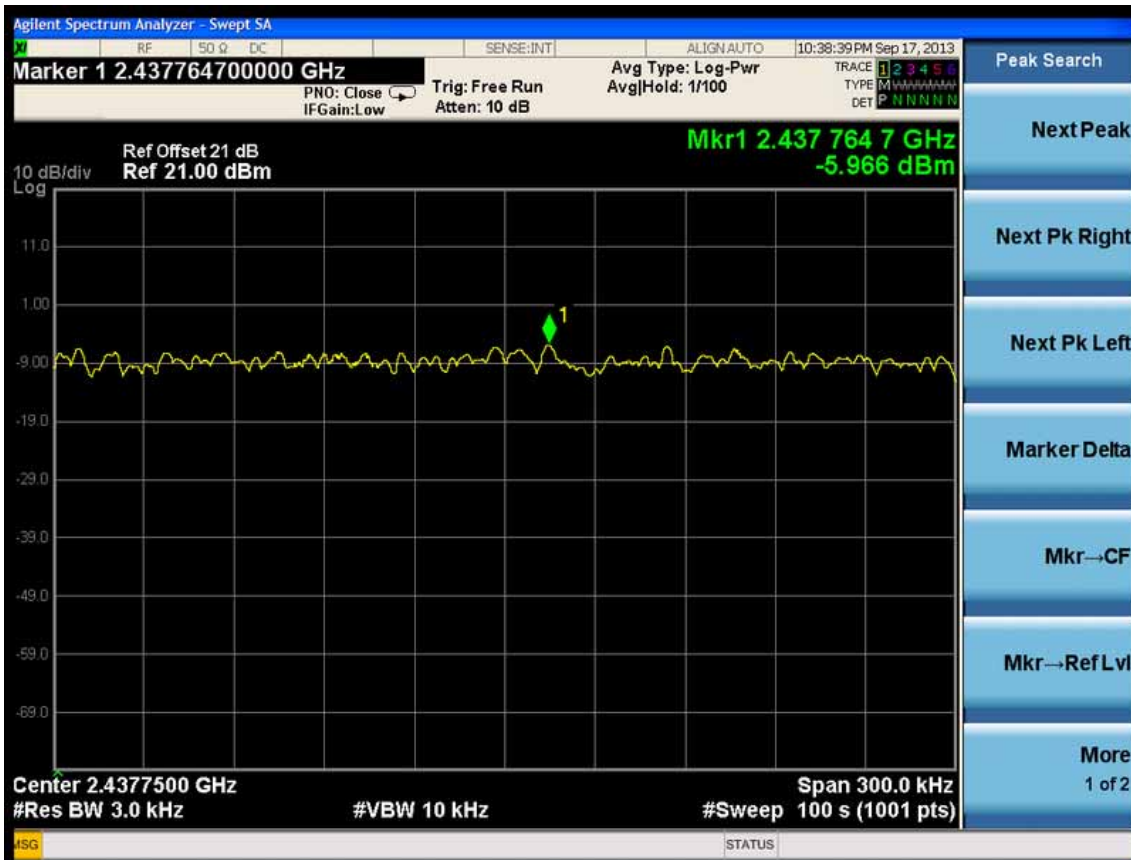
ANT 0

Test Mode: IEEE 802.11b TX

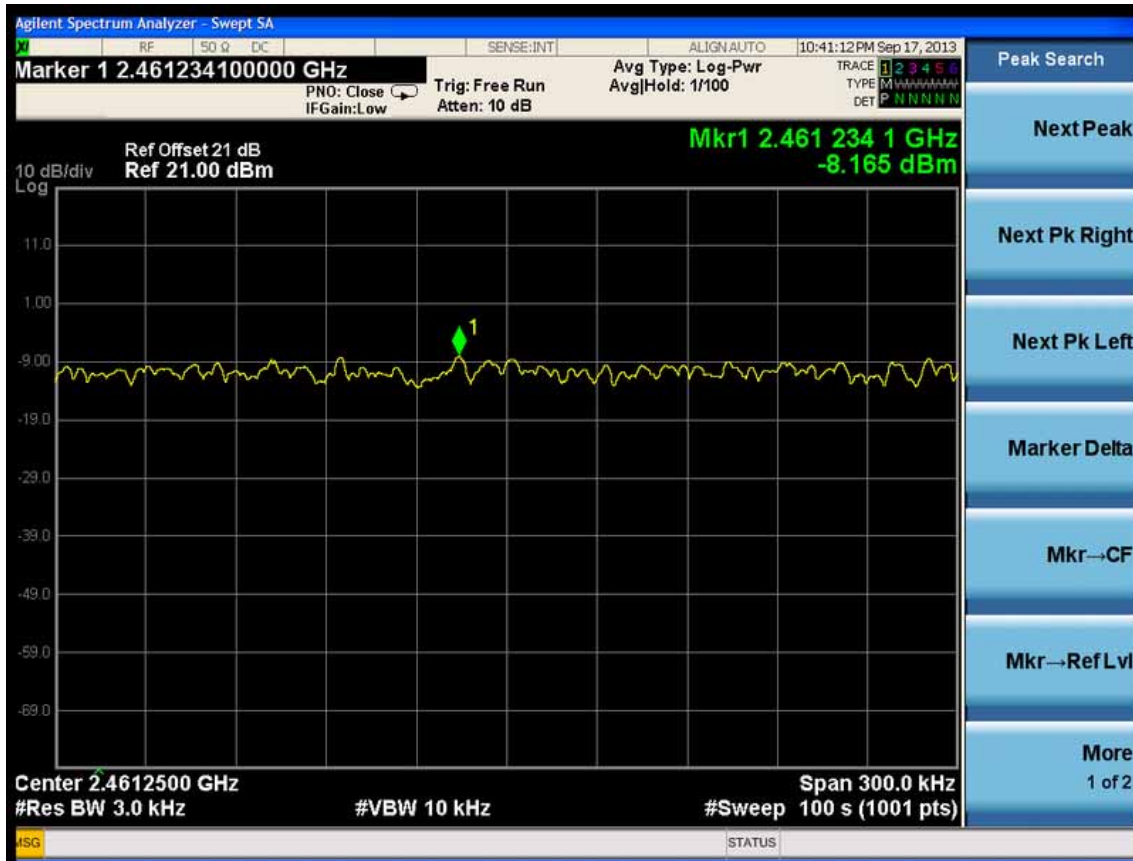
Test CH1: 2412MHz



Test CH6: 2437MHz

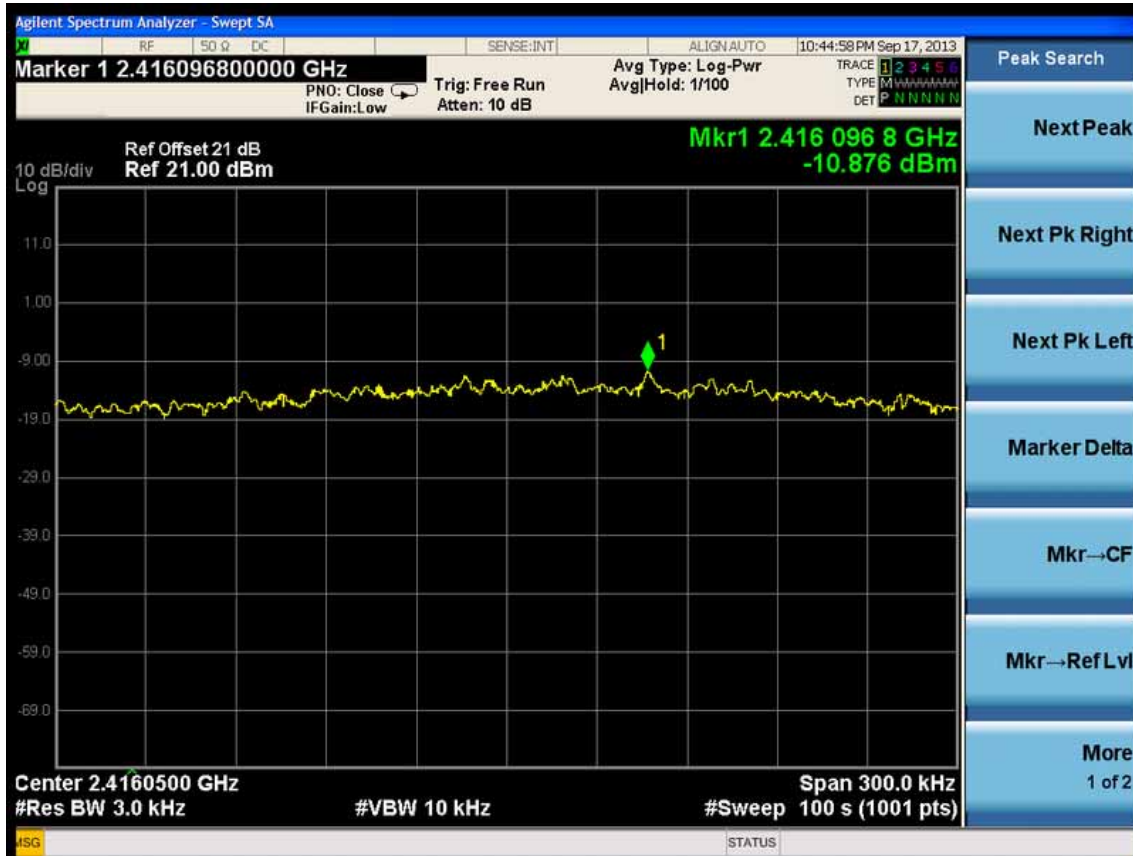


Test CH11: 2462MHz



Test Mode: IEEE 802.11g TX

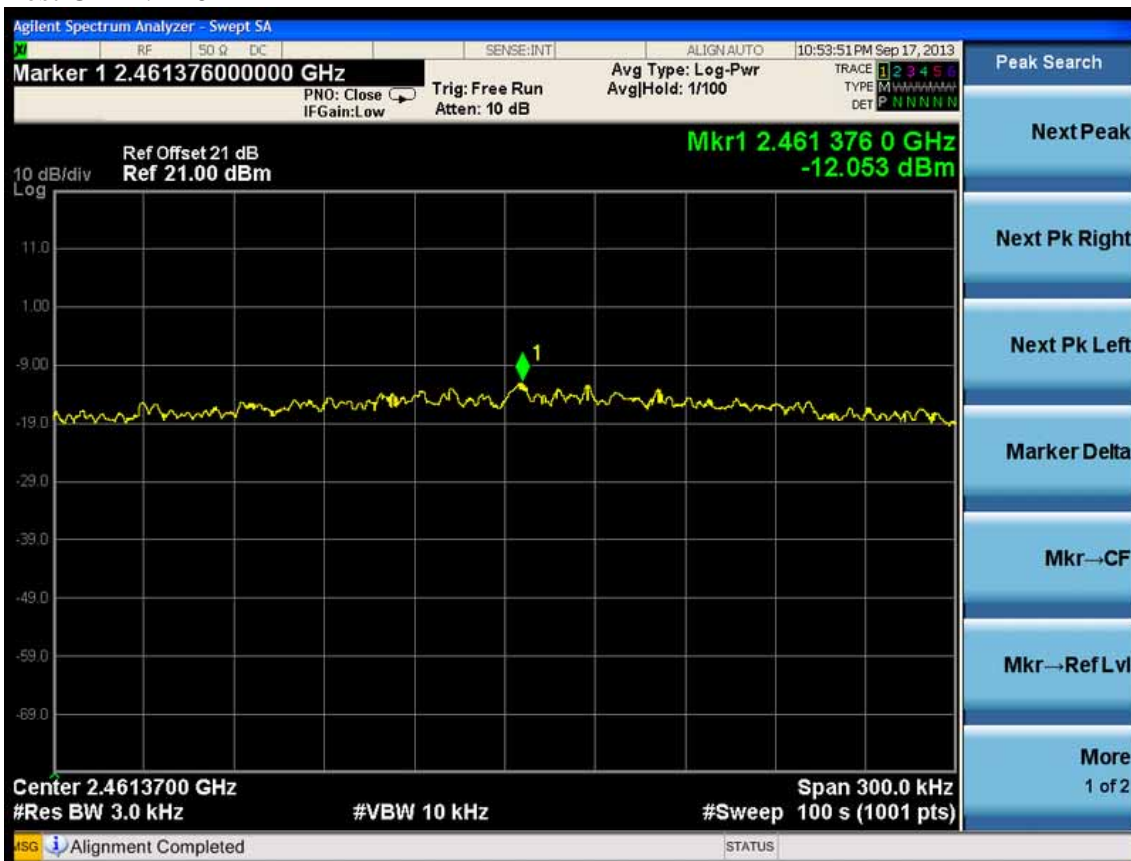
Test CH1: 2412MHz



Test CH6: 2437MHz



Test CH11: 2462MHz



Test Mode: IEEE 802.11n HT20 TX
 Test CH1: 2412MHz



Test CH6: 2437MHz

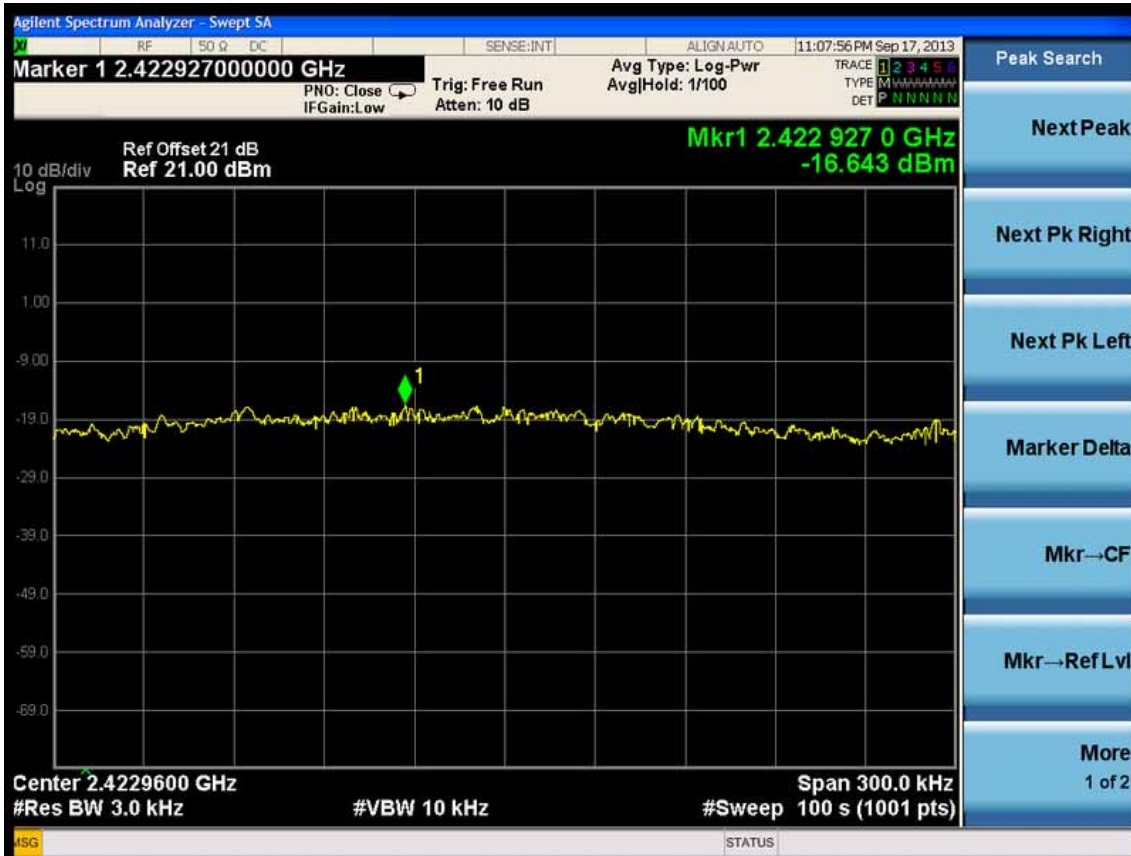


Test CH11: 2462MHz

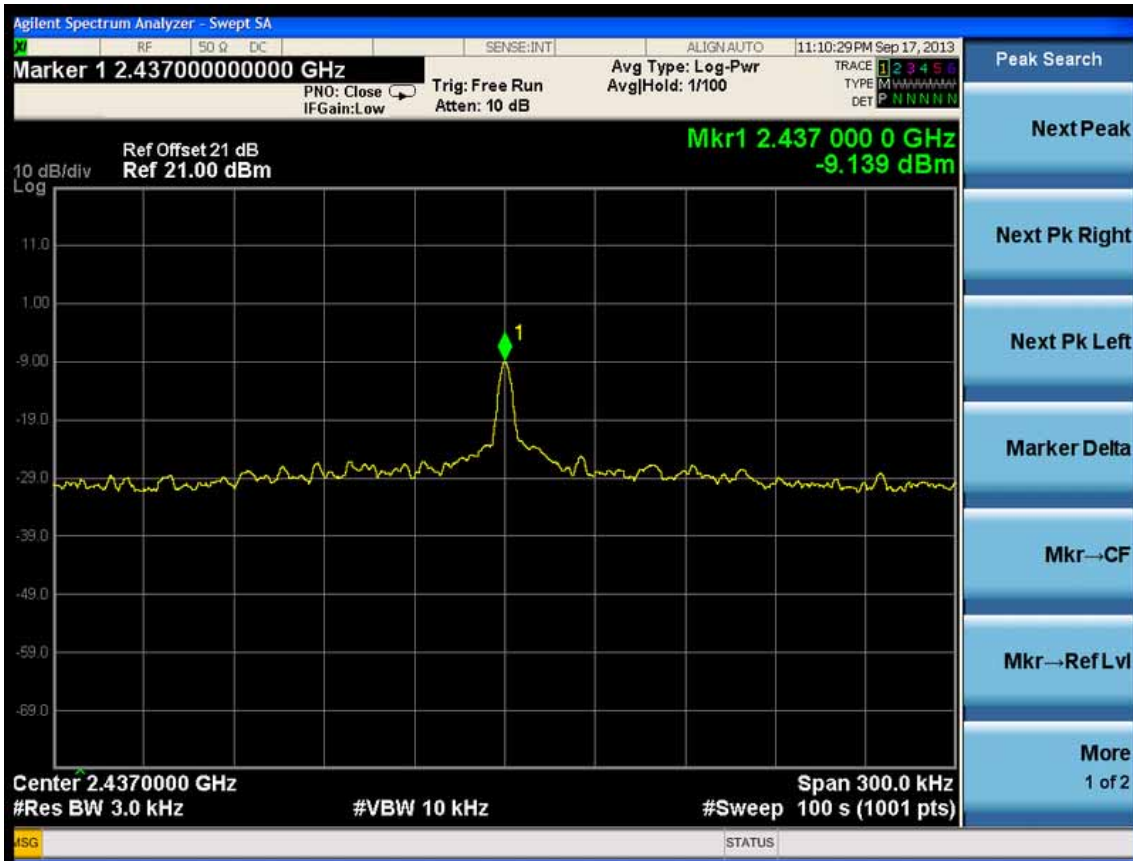


Test Mode: IEEE 802.11n HT40 TX

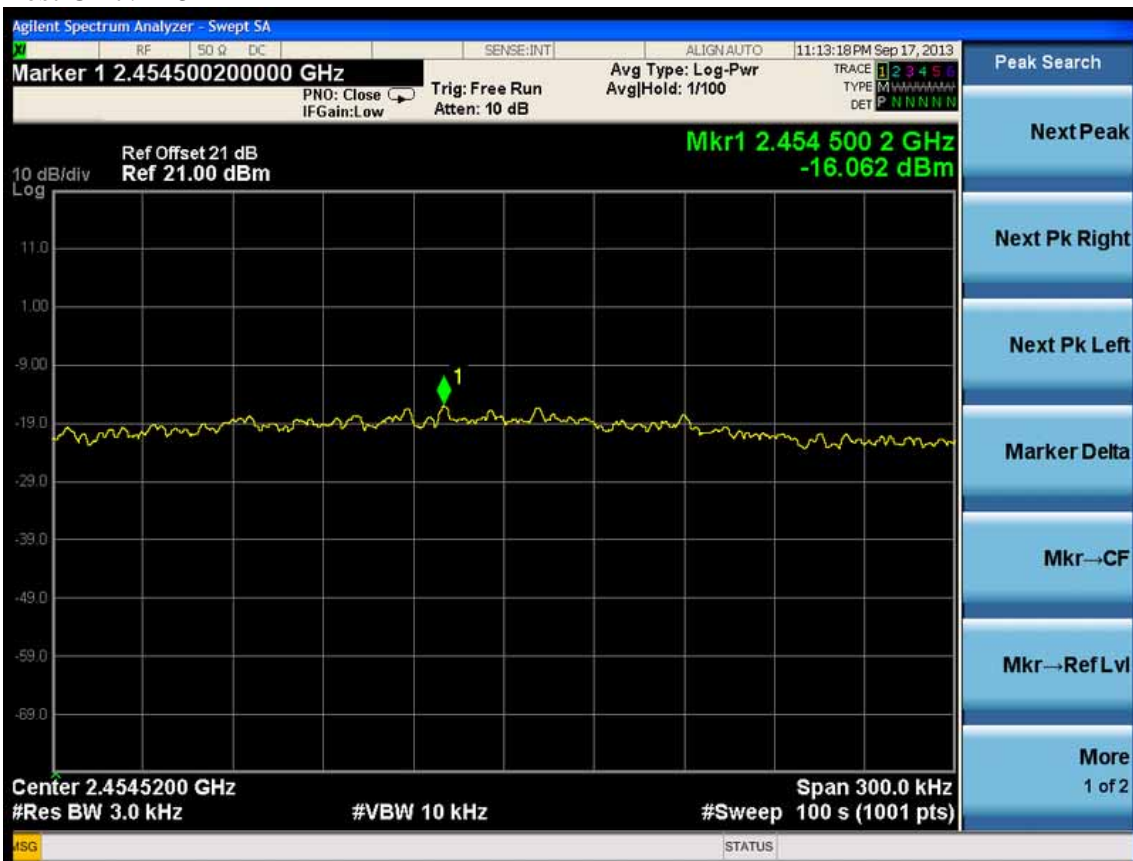
Test CH1: 2422MHz



Test CH4: 2437MHz



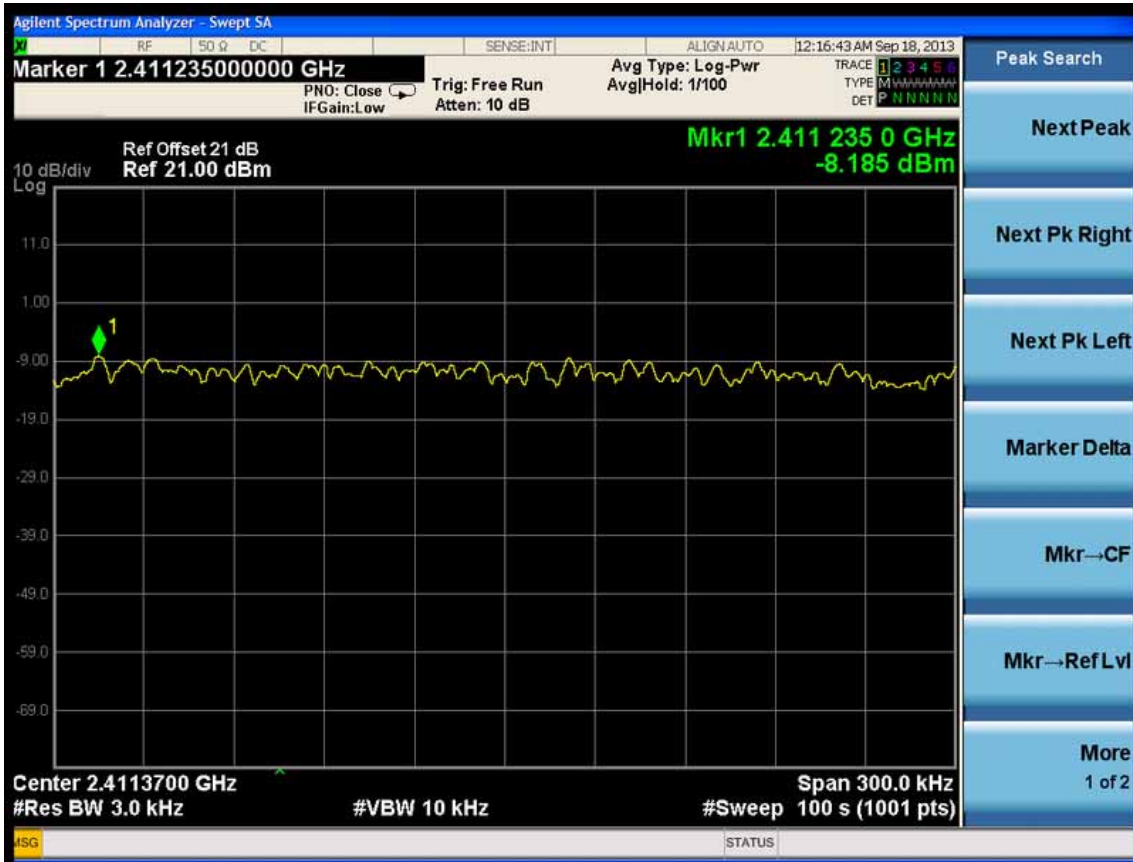
Test CH7: 2452MHz



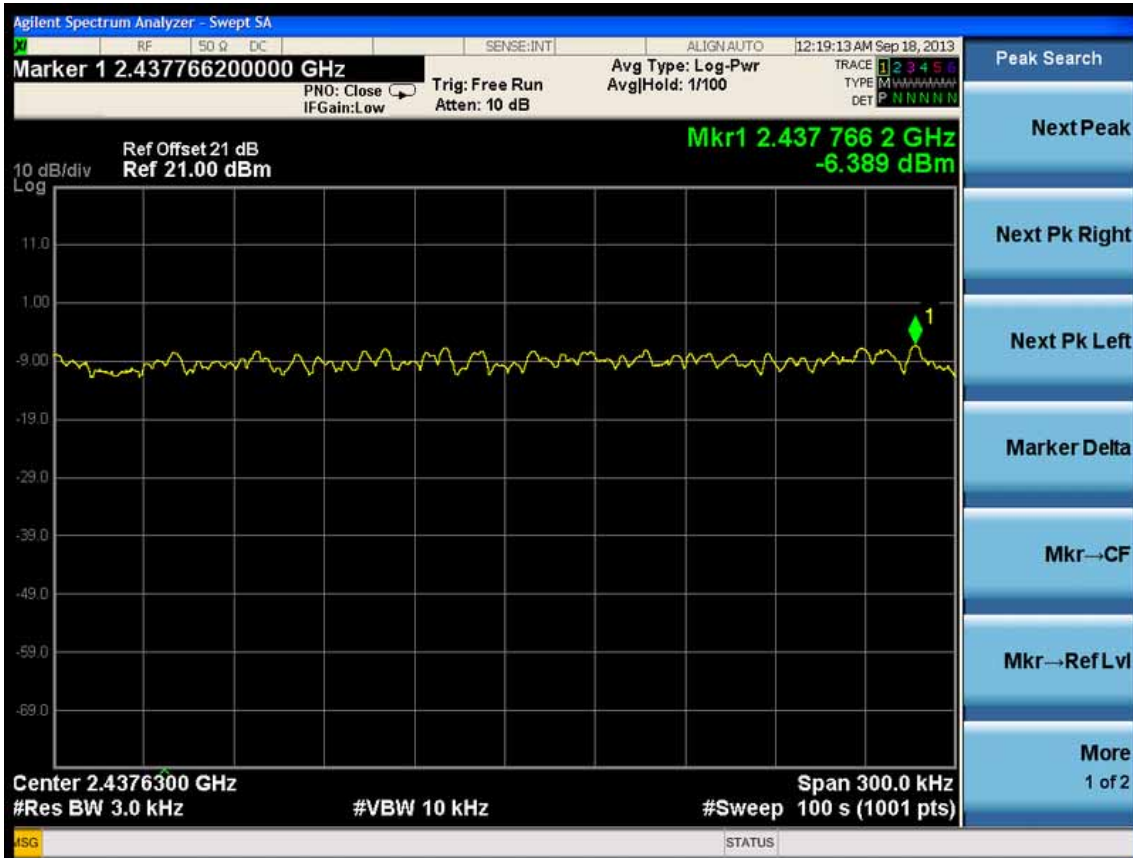
ANT 1

Test Mode: IEEE 802.11b TX

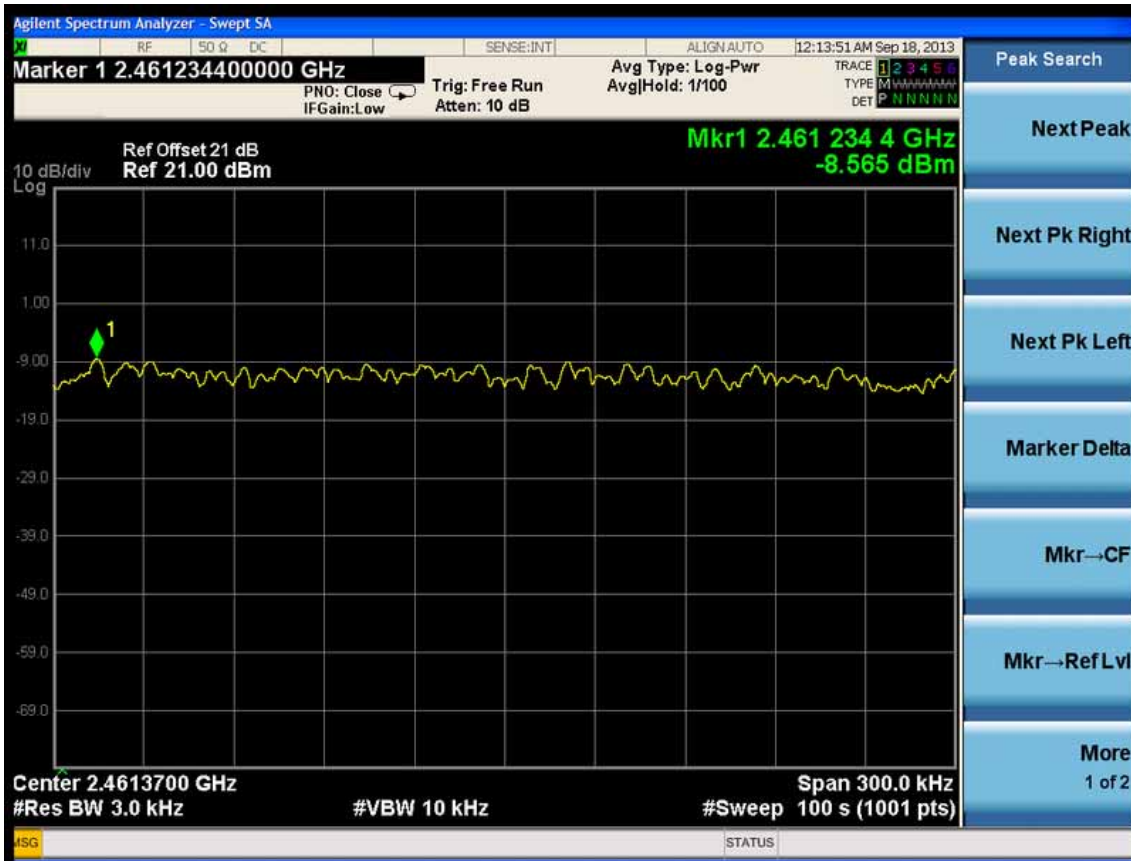
Test CH1: 2412MHz



Test CH6: 2437MHz



Test CH11: 2462MHz

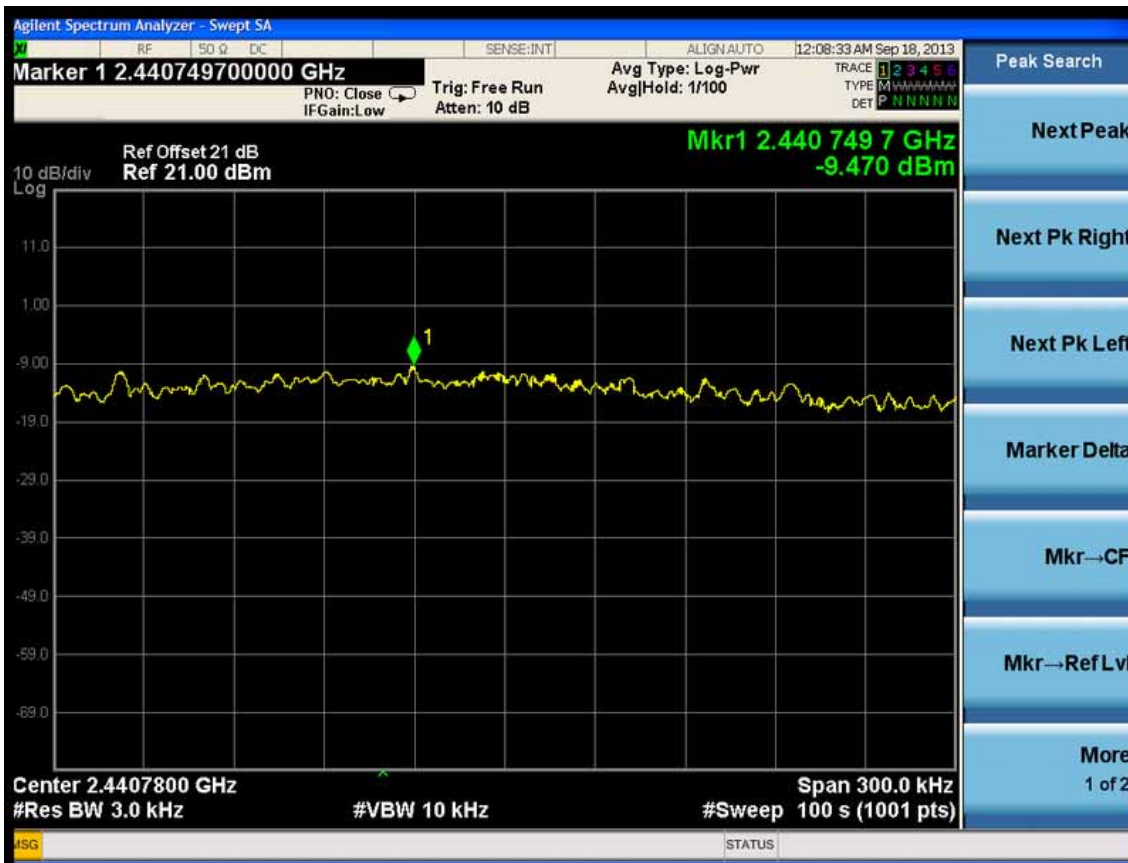


Test Mode: IEEE 802.11g TX

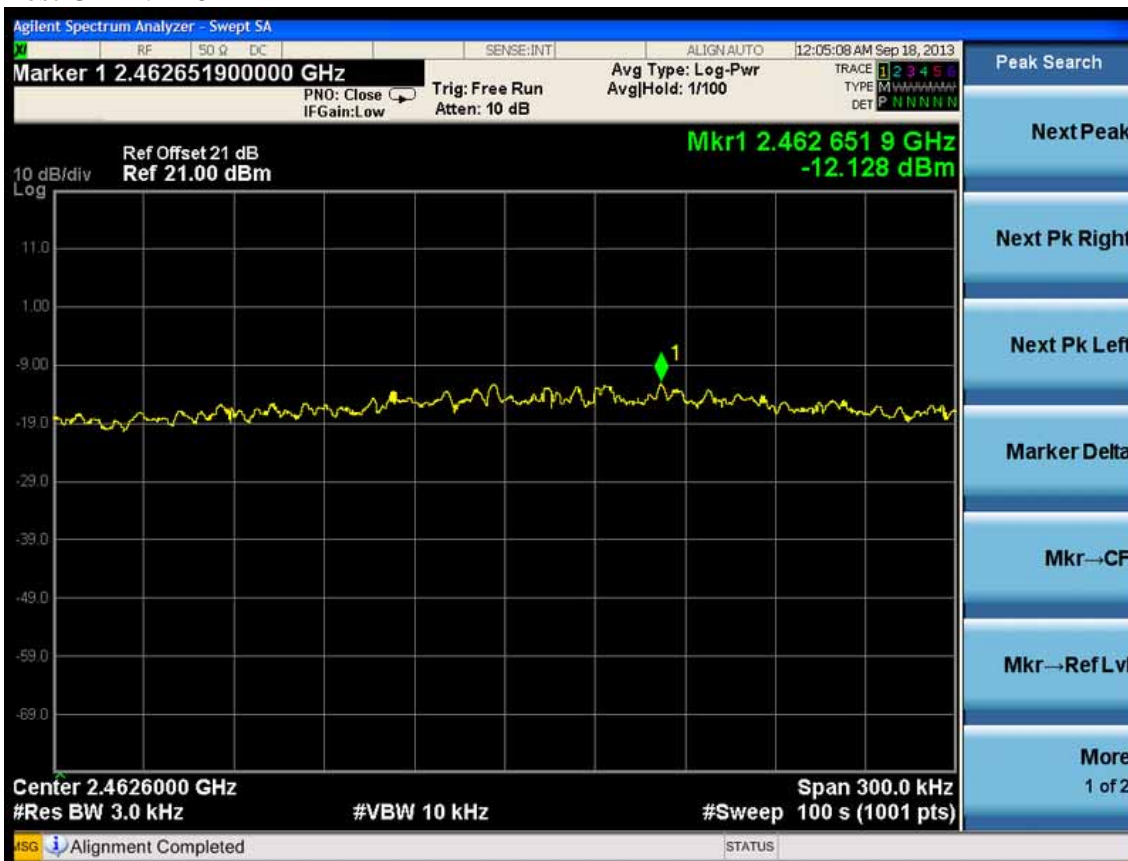
Test CH1: 2412MHz



Test CH6: 2437MHz



Test CH11: 2462MHz



Test Mode: IEEE 802.11n HT20 TX
 Test CH1: 2412MHz



Test CH6: 2437MHz



Test CH11: 2462MHz

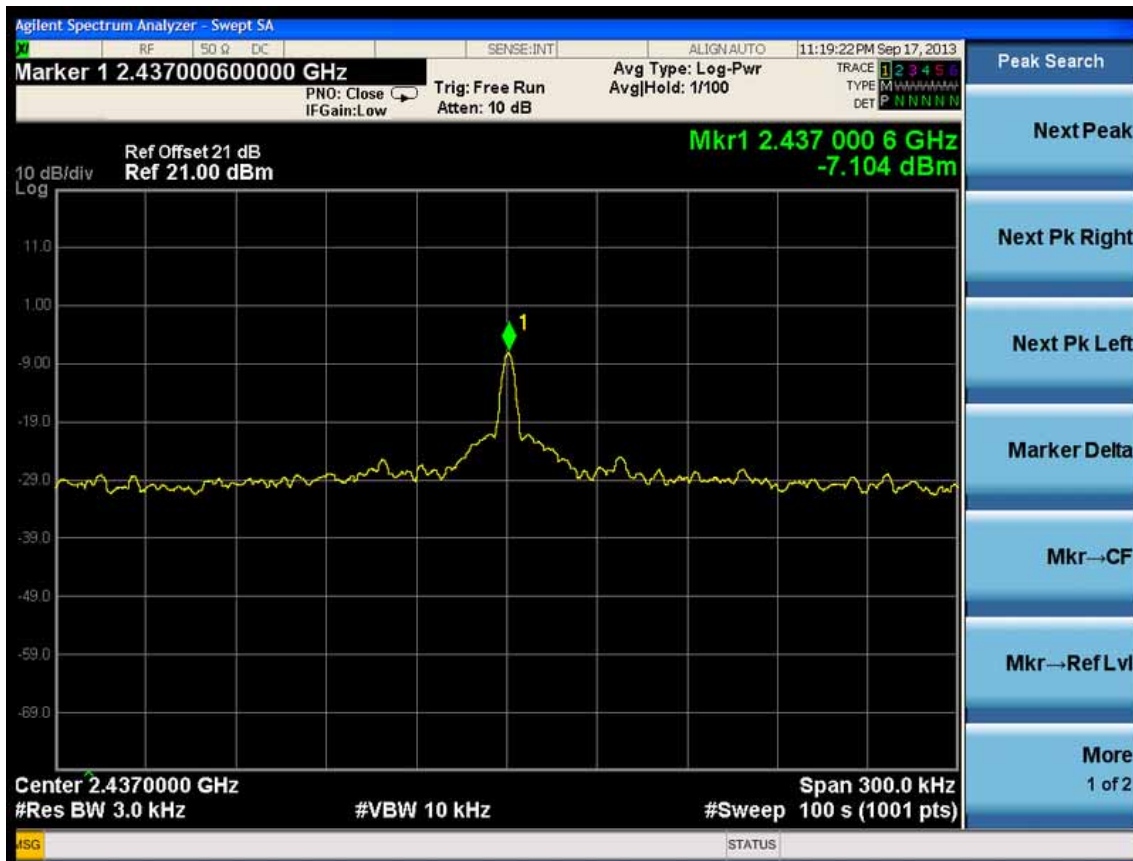


Test Mode: IEEE 802.11n HT40 TX

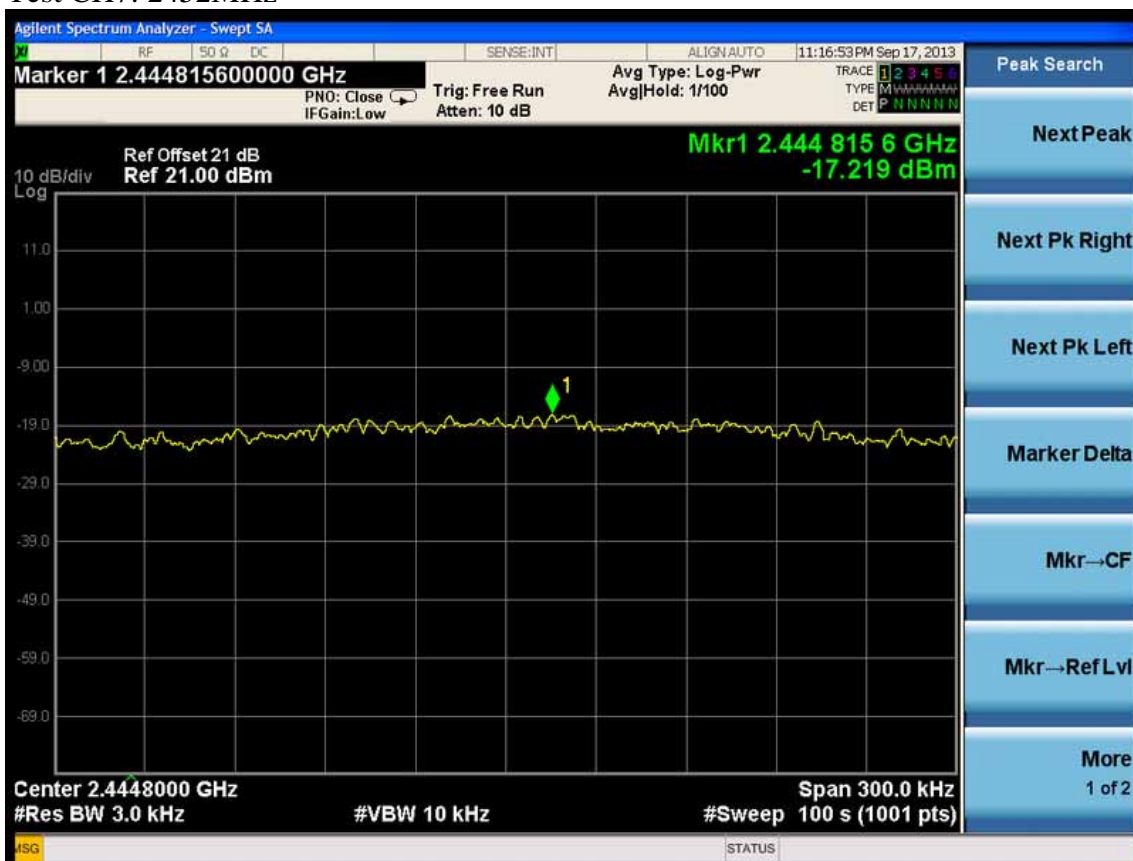
Test CH1: 2422MHz



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

10.2. Estimation Result

| | | |
|---|-------------------------|-------------------------|
| EUT: 300Mbps Multi-Function Wireless N Router | | |
| M/N:TL-WR842ND | | |
| Test date: 2013-09-20 | Pressure: 101.2±1.0 kpa | Humidity: 48.4±3.0% |
| Tested by: Leo-Li | Test site: RF site | Temperature:20.7±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 | 19.49 | 88.92 | 5.0 | 3.16 | 0.0560 |
| | CH6 | 2437 | 21.43 | 139.00 | 5.0 | 3.16 | 0.0875 |
| | CH11 | 2462 | 19.47 | 88.51 | 5.0 | 3.16 | 0.0557 |
| 11g | CH1 | 2412 | 22.1 | 162.18 | 5.0 | 3.16 | 0.1021 |
| | CH6 | 2437 | 26.28 | 424.62 | 5.0 | 3.16 | 0.2673 |
| | CH11 | 2462 | 21.48 | 140.60 | 5.0 | 3.16 | 0.0885 |
| 11n HT20 | CH1 | 2412 | 23.32 | 214.78 | 5.0 | 3.16 | 0.1352 |
| | CH6 | 2437 | 28.81 | 760.33 | 5.0 | 3.16 | 0.4786 |
| | CH11 | 2462 | 23.33 | 215.28 | 5.0 | 3.16 | 0.1355 |
| 11n HT40 | CH1 | 2422 | 22.80 | 190.55 | 5.0 | 3.16 | 0.1199 |
| | CH4 | 2437 | 26.68 | 465.59 | 5.0 | 3.16 | 0.2931 |
| | CH7 | 2452 | 22.77 | 189.23 | 5.0 | 3.16 | 0.1191 |

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]