



Test mode: IEEE 802.11n HT 40 MHz mode / 5190 ~ 5230MHz

| Channel | Frequency (MHz) | PPSD (dBm) | Limit (dBm) | Margain | Result |
|---------|-----------------|------------|-------------|---------|--------|
| Low | 5190 | -4.785 | 17 | -21.785 | PASS |
| High | 5230 | -0.771 | | -17.771 | PASS |

Test mode: IEEE 802.11n HT 40 MHz mode / 5755 ~ 5795MHz

| Channel | Frequency (MHz) | PPSD (dBm) | factor | Limit (dBm) | Margain | Result |
|---------|-----------------|------------|--------|-------------|---------|--------|
| Low | 5755 | -0.893 | -3.01 | 17 | -20.903 | PASS |
| High | 5795 | 0.459 | -3.01 | | -19.551 | PASS |

Remark: factor = $10 \cdot \log_{10}(500/RBW)$

Test mode: IEEE 802.11ac 80 mode / 5210MHz

| Channel | Frequency (MHz) | PPSD (dBm) | Limit (dBm) | Margain | Result |
|---------|-----------------|------------|-------------|---------|--------|
| | 5210 | -8.747 | 17 | -25.747 | PASS |

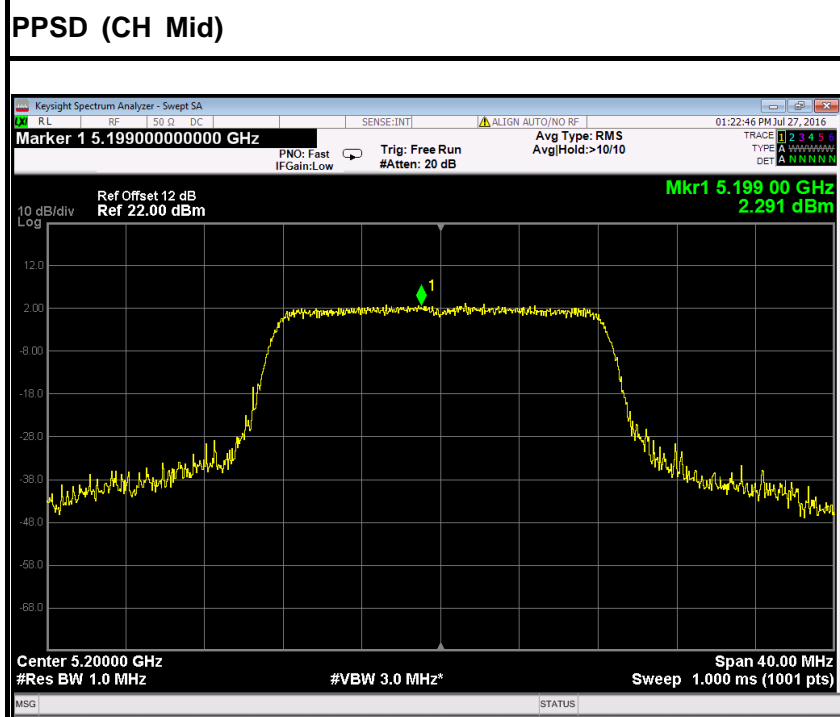
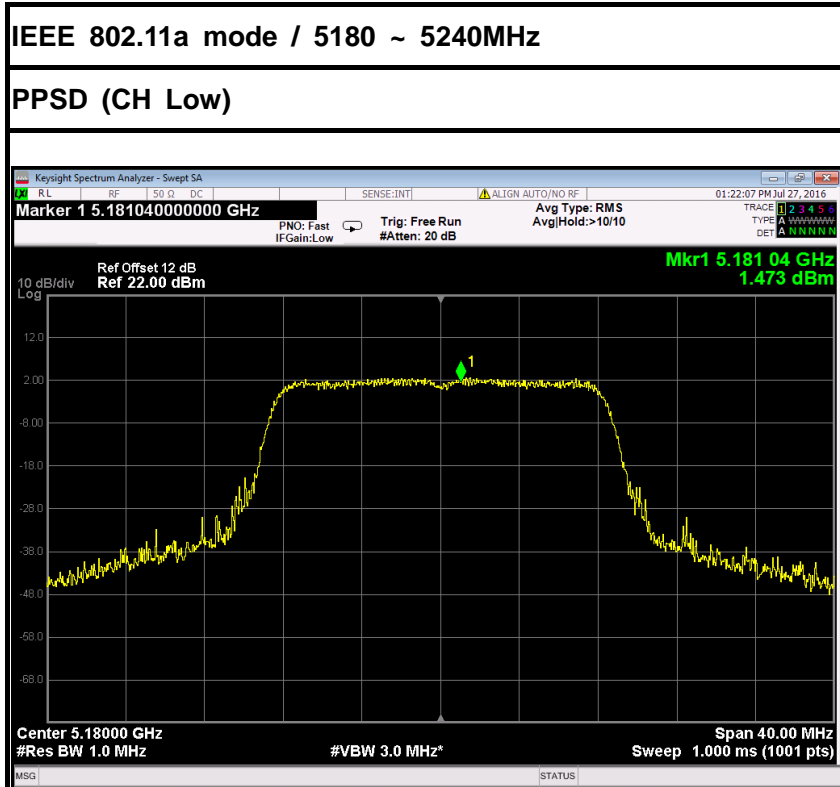
Test mode: IEEE 802.11ac 80 mode / 5775MHz

| Channel | Frequency (MHz) | PPSD (dBm) | factor | Limit (dBm) | Margain | Result |
|---------|-----------------|------------|--------|-------------|---------|--------|
| Low | 5775 | -3.773 | -3.01 | 17 | -23.783 | PASS |

Remark: factor = $10 \cdot \log_{10}(500/RBW)$

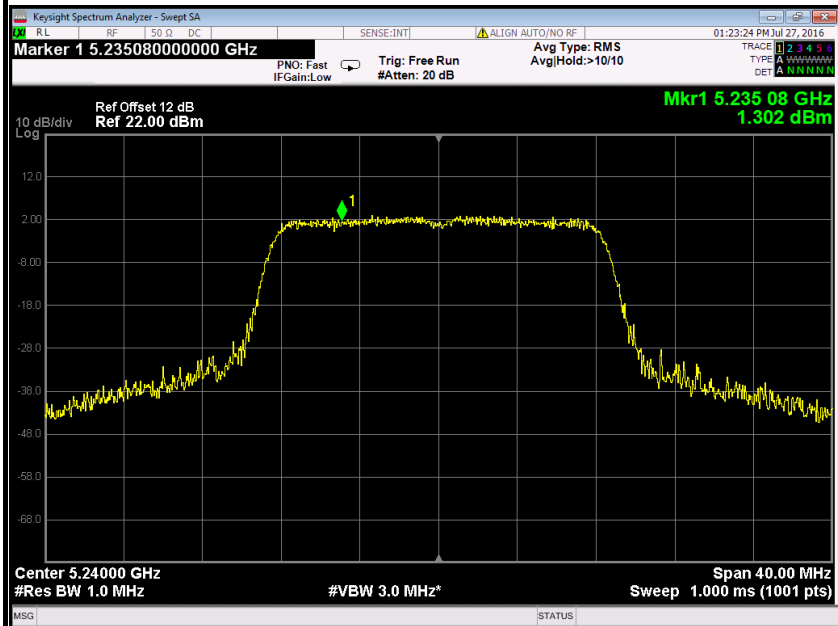


Test Plot



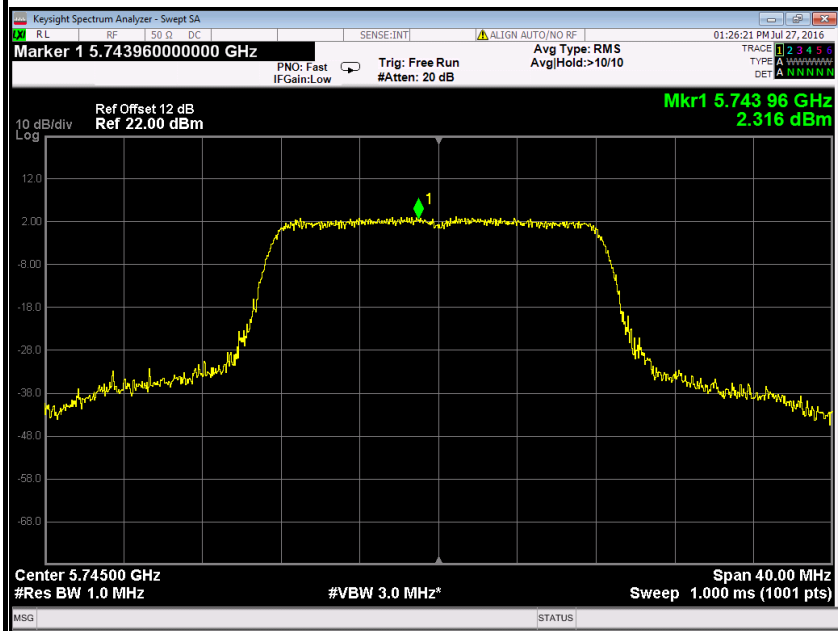


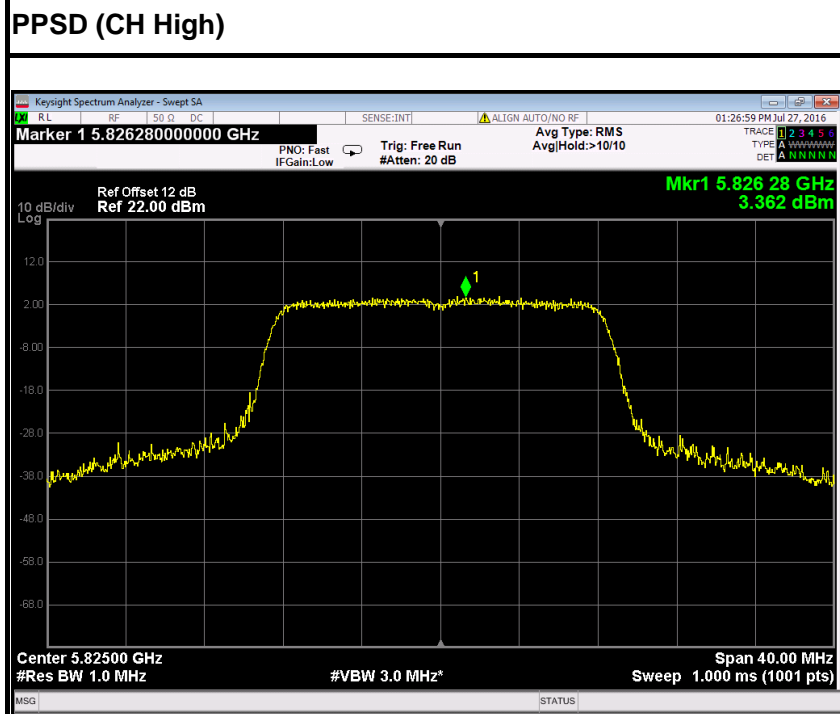
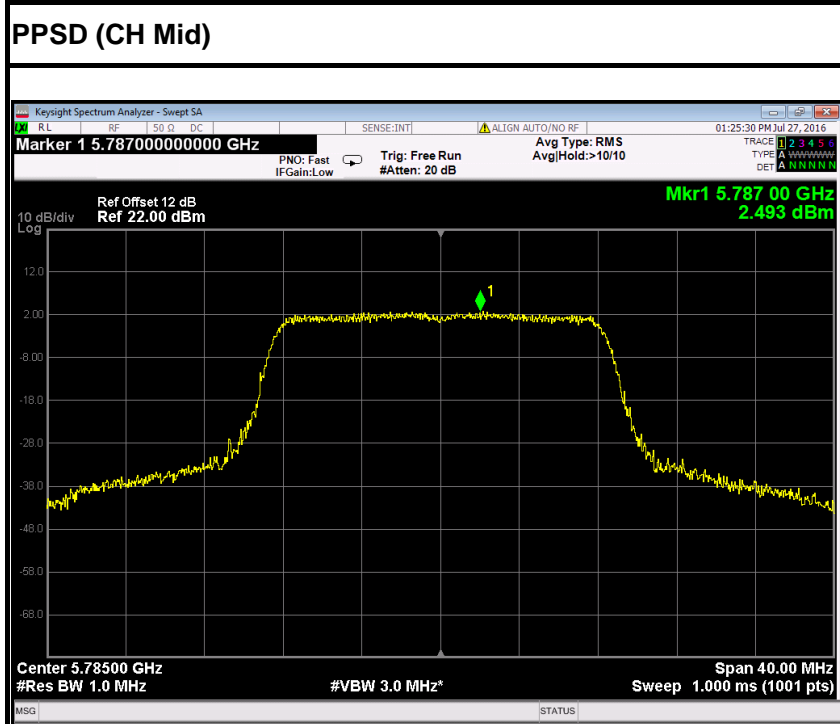
PPSD (CH High)



IEEE 802.11a mode / 5745 ~ 5825MHz

PPSD (CH Low)

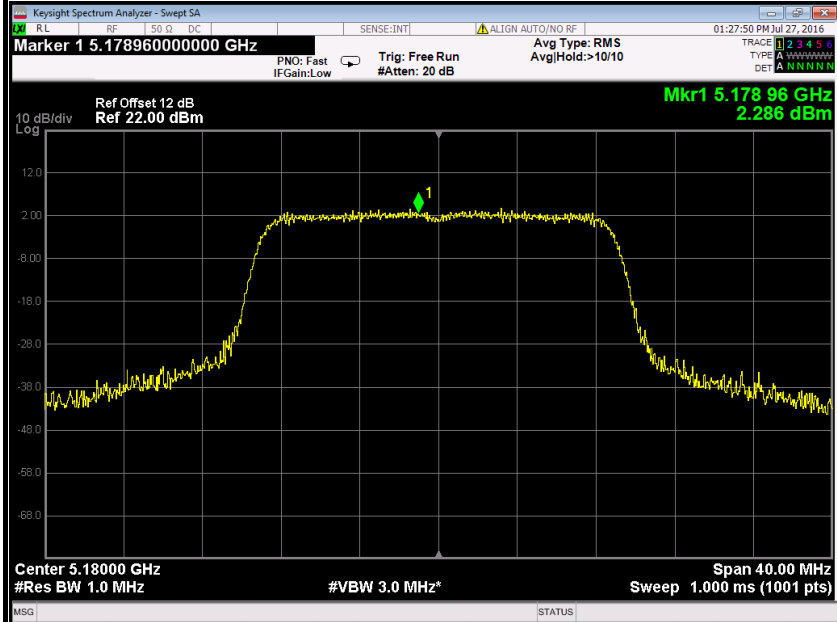




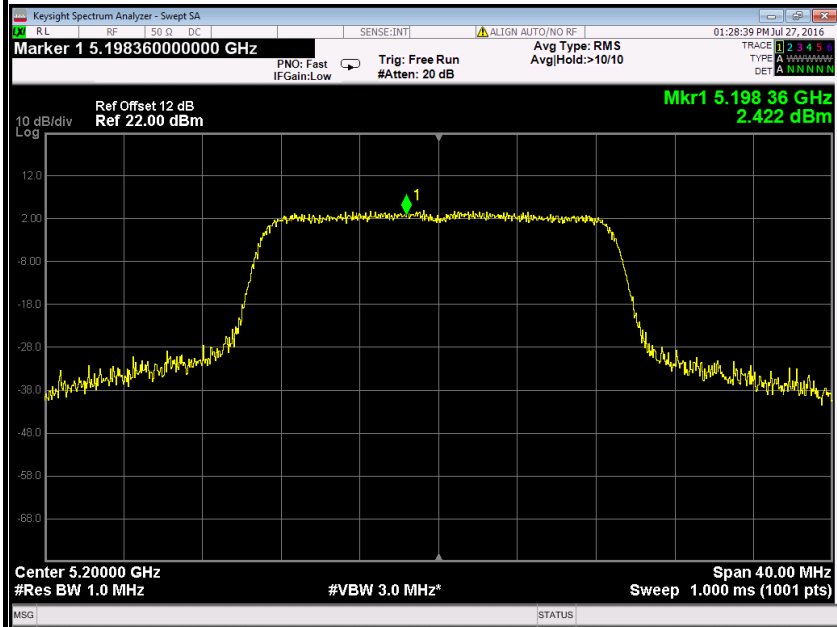


IEEE 802.11n HT 20 MHz mode / 5180 ~ 5240MHz

PPSD (CH Low)

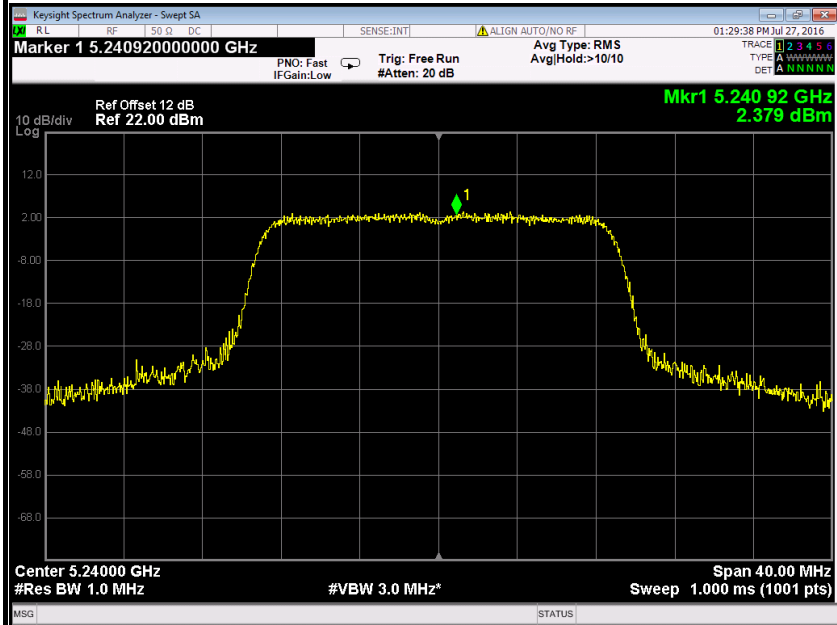


PPSD (CH Mid)



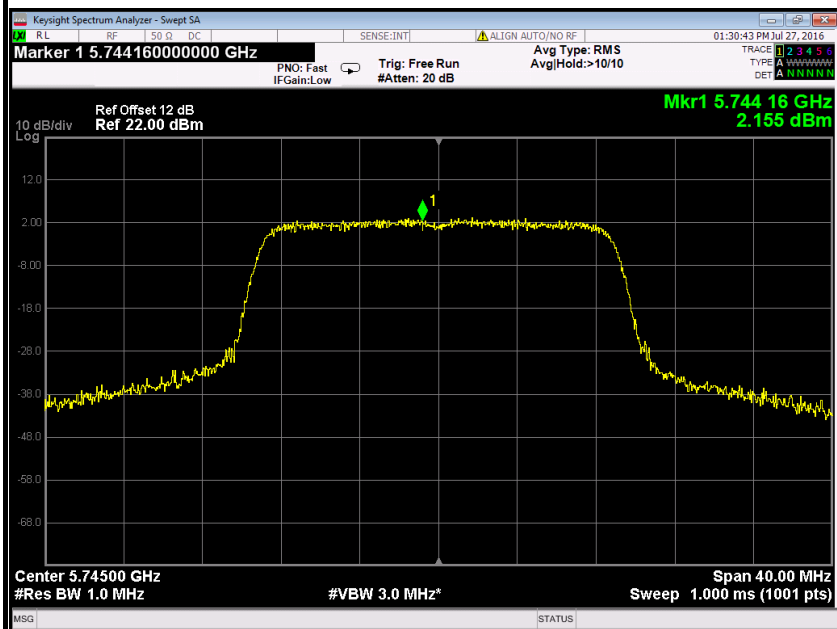


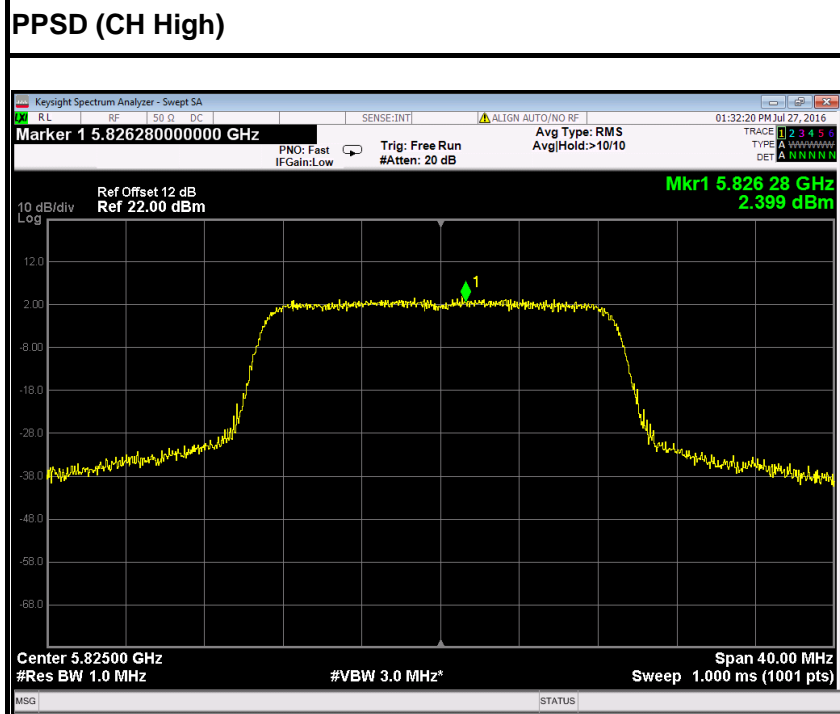
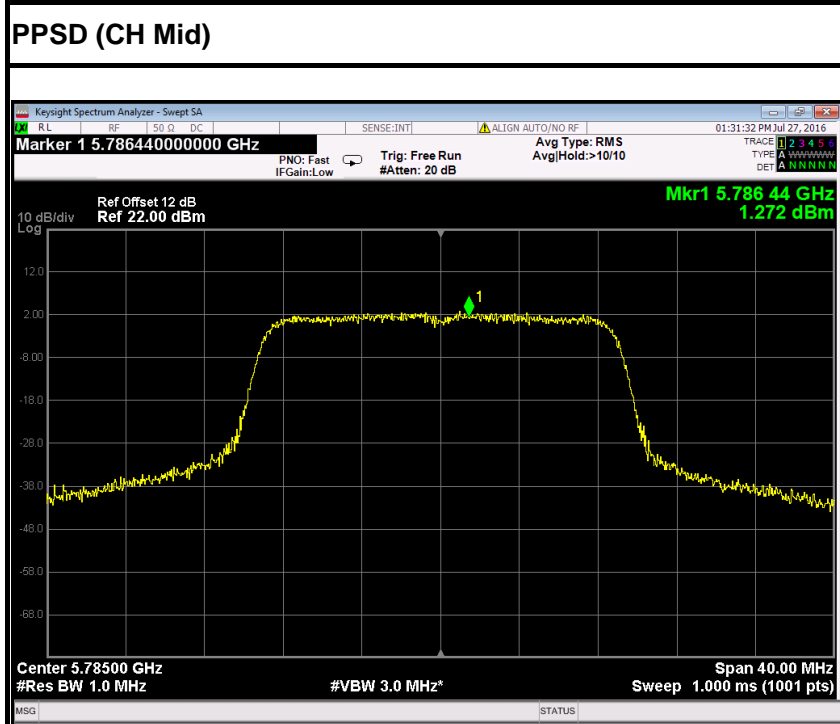
PPSD (CH High)



IEEE 802.11n HT 20 MHz mode / 5745 ~ 5825MHz

PPSD (CH Low)

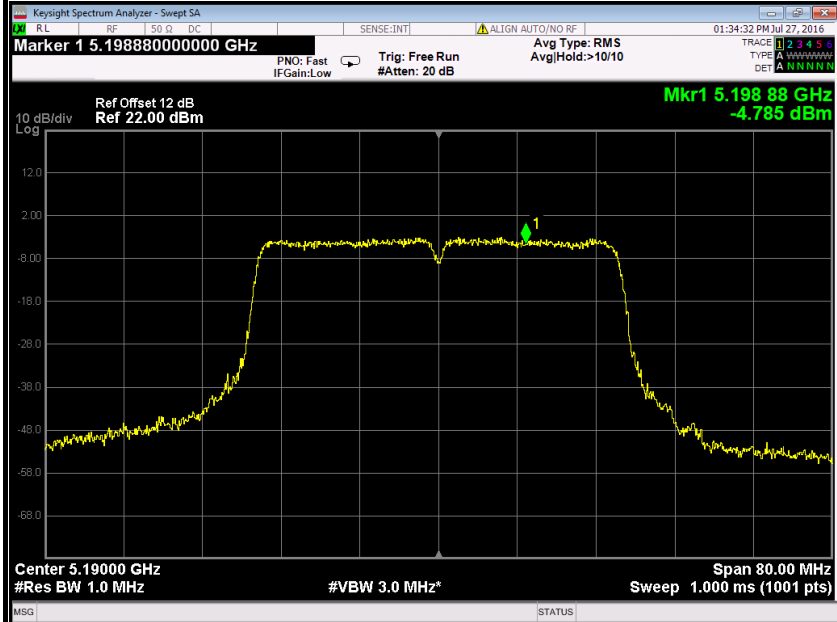




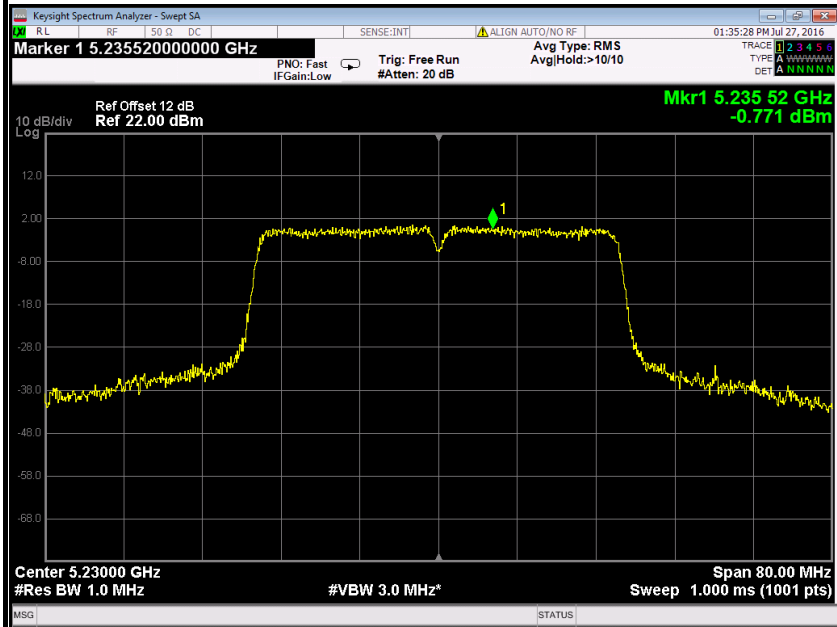


IEEE 802.11n HT 40 MHz mode / 5190 ~ 5230MHz

PPSD (CH Low)



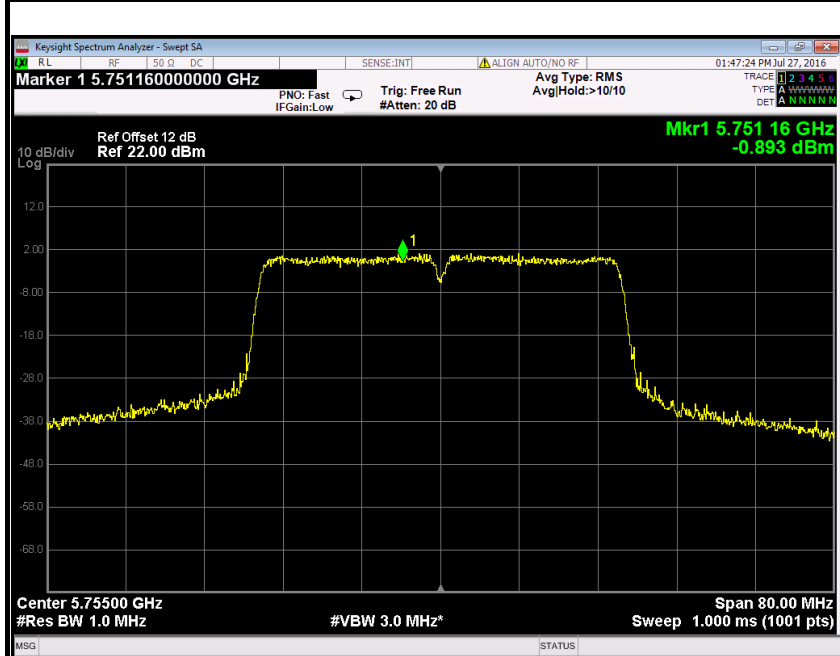
PPSD (CH High)



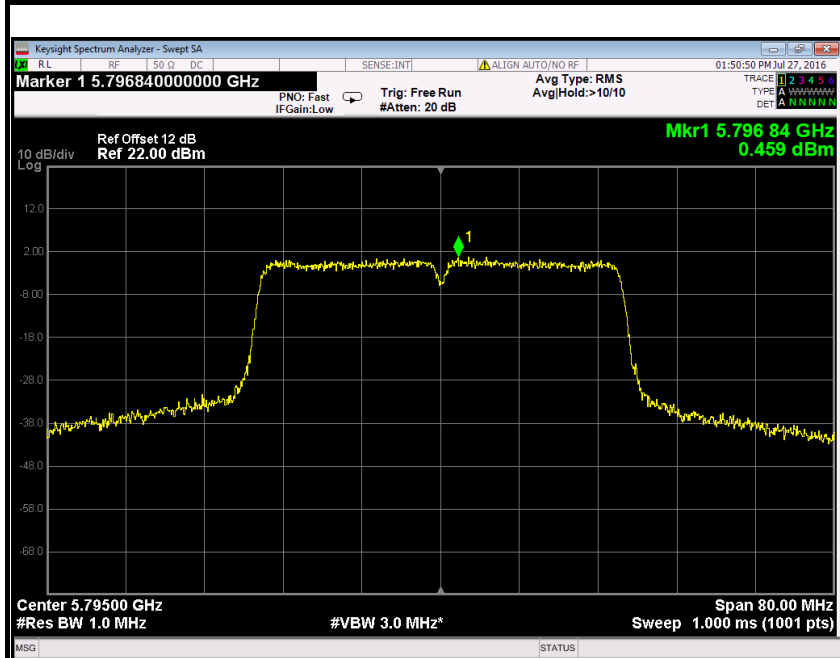


IEEE 802.11n HT 40 MHz mode / 5755 ~ 5795MHz

PPSD (CH Low)



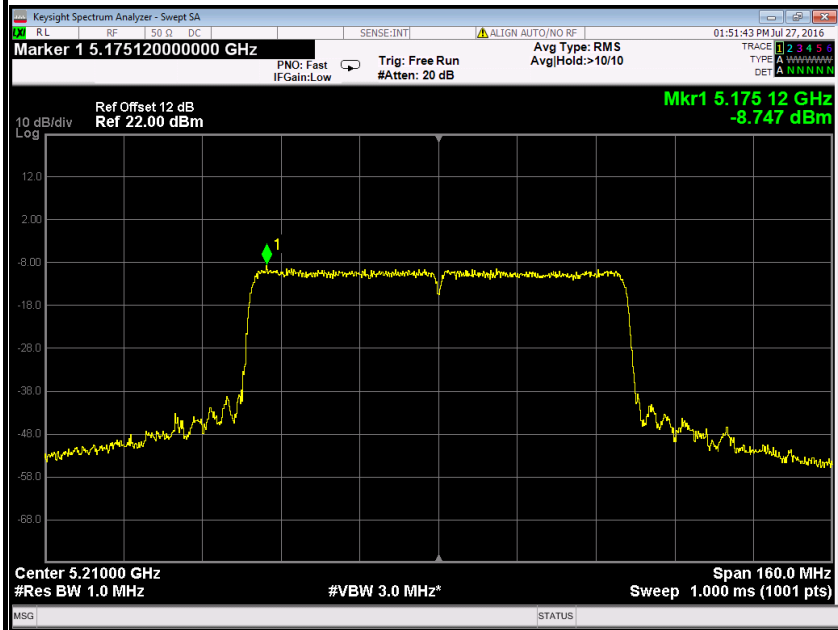
PPSD (CH High)





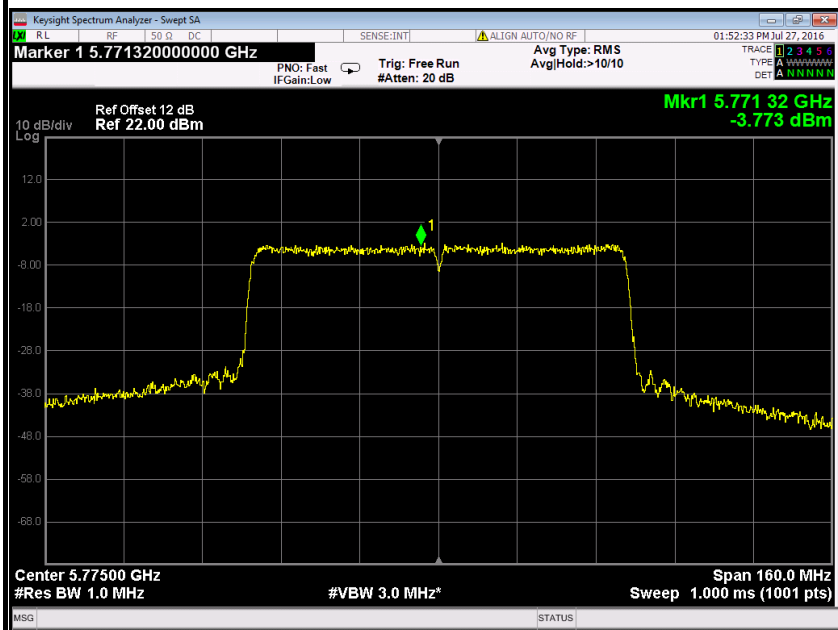
IEEE 802.11ac 80 mode / 5210MHz

PPSD



IEEE 802.11ac 80 mode / 5775MHz

PPSD





6.7 RADIATED UNDESIRABLE EMISSION

6.7.1 LIMIT

1. According to §15.209(a), except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

| Frequency (MHz) | Field Strength ($\mu\text{V}/\text{m}$) | Measurement Distance (m) |
|-----------------|---|--------------------------|
| 30-88 | 100* | 3 |
| 88-216 | 150* | 3 |
| 216-960 | 200* | 3 |
| Above 960 | 500 | 3 |

Remark: Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

2. In the emission table above, the tighter limit applies at the band edges.

| Frequency (MHz) | Field Strength ($\mu\text{V}/\text{m}$ at 3-meter) | Field Strength ($\text{dB}\mu\text{V}/\text{m}$ at 3-meter) |
|-----------------|---|--|
| 30-88 | 100 | 40 |
| 88-216 | 150 | 43.5 |
| 216-960 | 200 | 46 |
| Above 960 | 500 | 54 |

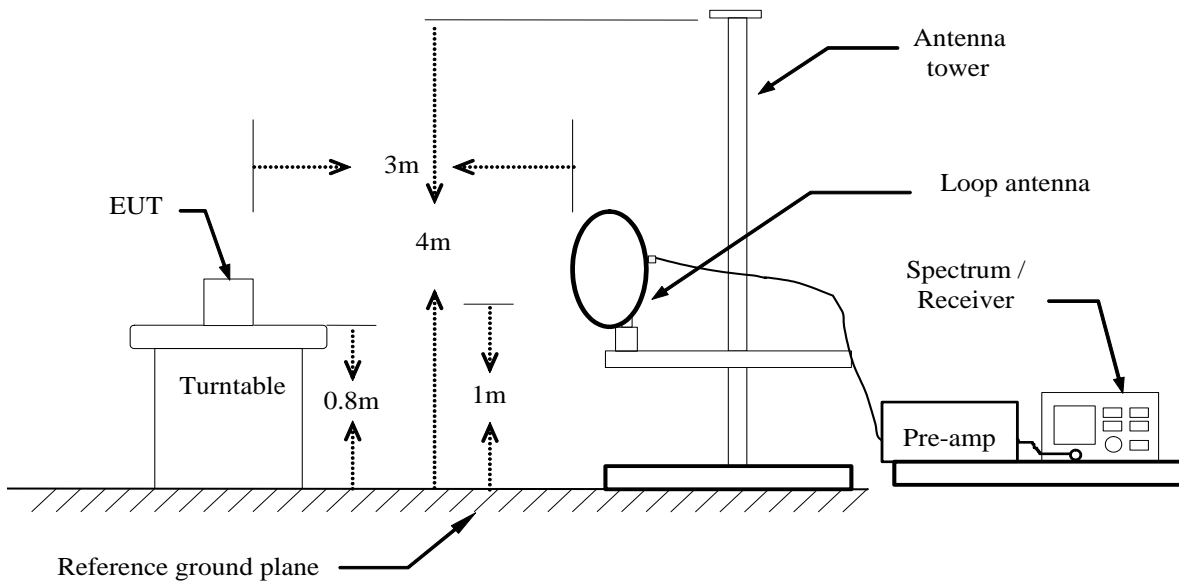


6.7.2 TEST INSTRUMENTS

| Radiated Emission Test Site 966(2) | | | | | | |
|------------------------------------|----------------|--------------------|---------------|------------------|-----------------|--|
| Name of Equipment | Manufacturer | Model Number | Serial Number | Last Calibration | Due Calibration | |
| PSA Series Spectrum Analyzer | Agilent | E4446A | US44300399 | 02/21/2016 | 02/20/2017 | |
| EMI TEST RECEIVER | ROHDE&SCHWARZ | ESCI | 100783 | 02/21/2016 | 02/20/2017 | |
| Amplifier | EMEC | EM330 | 060661 | 03/18/2016 | 03/17/2017 | |
| High Noise Amplifier | Agilent | 8449B | 3008A01838 | 02/21/2016 | 02/20/2017 | |
| Board-Band Horn Antenna | Schwarzbeck | BBHA 9170 | 9170-497 | 02/28/2016 | 02/27/2017 | |
| Bilog Antenna | SCHAFFNER | CBL6143 | 5082 | 02/21/2016 | 02/20/2017 | |
| Horn Antenna | SCHWARZBECK | BBHA9120 | D286 | 02/28/2016 | 02/27/2017 | |
| Loop Antenna | COM-POWER | AL-130 | 121044 | 09/25/2015 | 09/24/2016 | |
| Turn Table | N/A | N/A | N/A | N.C.R | N.C.R | |
| Controller | Sunol Sciences | SC104V | 022310-1 | N.C.R | N.C.R | |
| Controller | CT | N/A | N/A | N.C.R | N.C.R | |
| Temp. / Humidity Meter | Anymetre | JR913 | N/A | 02/21/2016 | 02/20/2017 | |
| Antenna Tower | SUNOL | TLT2 | N/A | N.C.R | N.C.R | |
| Test S/W | FARAD | LZ-RF / CCS-SZ-3A2 | | | | |

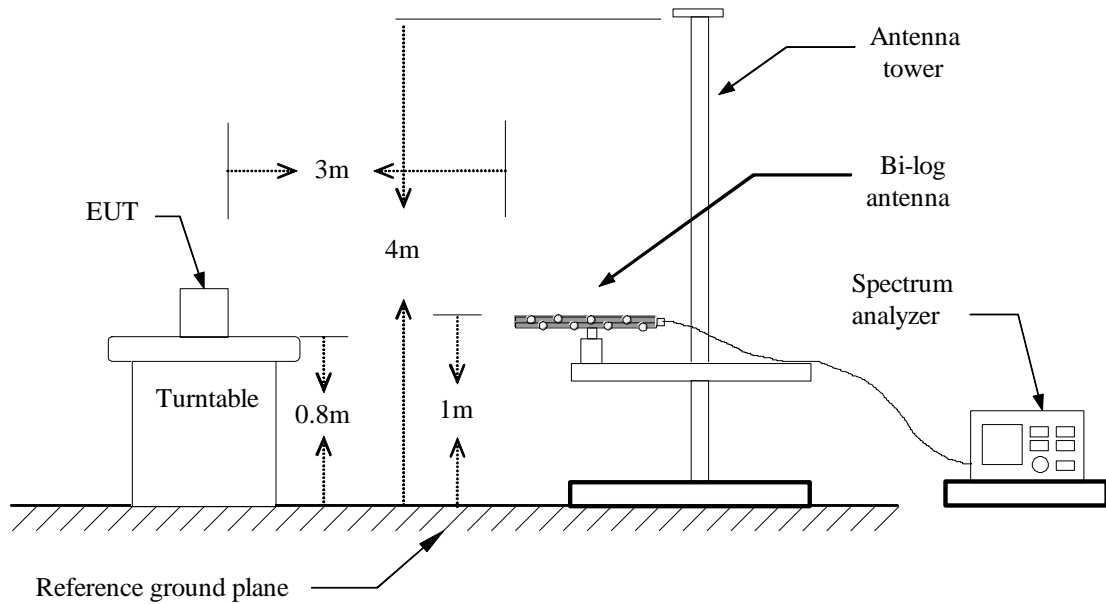
6.7.3 TEST CONFIGURATION

Below 30MHz

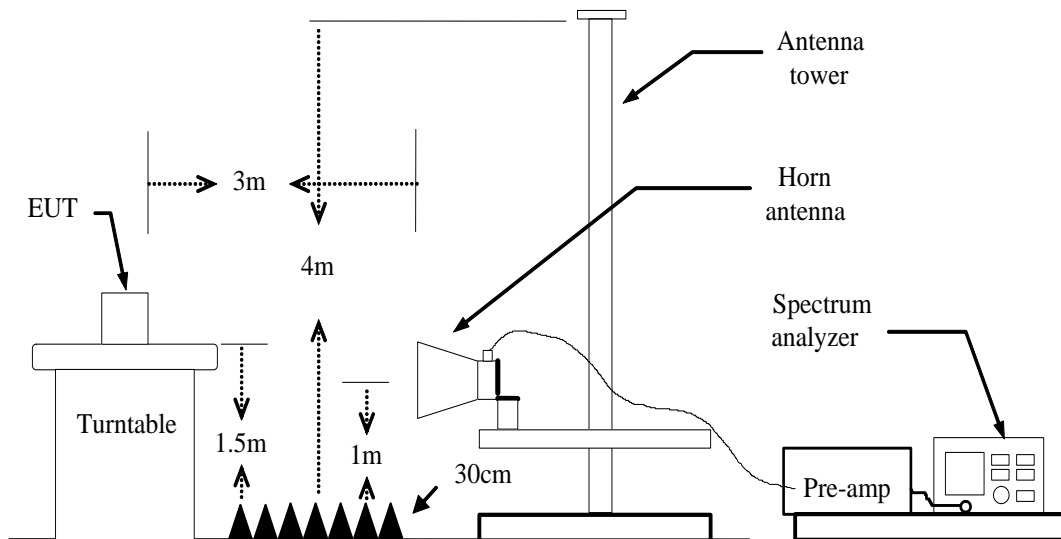




Below 1 GHz



Above 1 GHz



For the actual test configuration, please refer to the related item – Photographs of the TEST CONFIGURATION.



6.7.4 TEST PROCEDURE

1. The EUT is placed on a turntable, which is 0.8m or 1.5m above ground plane.
2. The turntable shall be 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 emissions.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Set the spectrum analyzer in the following setting as:

Below 1GHz:

RBW=100kHz / VBW=300kHz / Sweep=AUTO

Above 1GHz:

(a) PEAK: RBW=1MHz / VBW=3MHz / Sweep=AUTO

(b) AVERAGE: RBW=1MHz / VBW=10Hz / Sweep=AUTO / Detector=Peak

7. Repeat above procedures until the measurements for all frequencies are complete.



6.7.5 DATA SAPLE

Below 1GHz

| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|-----------------------|-----------------|----------------|-------------|--------------------|--------|
| XXX.XXXX | 36.37 | -12.20 | 24.17 | 40.00 | -15.83 | V | QP |

Frequency (MHz) = Emission frequency in MHz
 Reading (dBuV) = Uncorrected Analyzer / Receiver reading
 Correct Factor (dB/m) = Antenna factor + Cable loss – Amplifier gain
 Result (dBuV/m) = Reading (dBuV) + Corr. Factor (dB/m)
 Limit (dBuV/m) = Limit stated in standard
 Margin (dB) = Result (dBuV/m) – Limit (dBuV/m)
 Q.P. = Quasi-peak Reading

Above 1GHz

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| XXXX.XXXX | 62.09 | -11.42 | 50.67 | 74.00 | -23.33 | V | Peak |
| XXXX.XXXX | 49.78 | -11.42 | 38.36 | 54.00 | -15.64 | V | AVG |

Frequency (MHz) = Emission frequency in MHz
 Reading (dBuV) = Uncorrected Analyzer / Receiver reading
 Correction Factor (dB/m) = Antenna factor + Cable loss – Amplifier gain
 Result (dBuV/m) = Reading (dBuV) + Corr. Factor (dB/m)
 Limit (dBuV/m) = Limit stated in standard
 Margin (dB) = Result (dBuV/m) – Limit (dBuV/m)
 Peak = Peak Reading
 AVG = Average Reading

Calculation Formula

Margin (dB) = Result (dBuV/m) – Limits (dBuV/m)
 Result (dBuV/m) = Reading (dBuV) + Correction Factor



6.7.6 TEST RESULTS

Below 1 GHz

Test Mode: TX

Tested by: Jack Chen

Ambient temperature: 24°C **Relative humidity:** 52% RH

Date: June 29, 2016

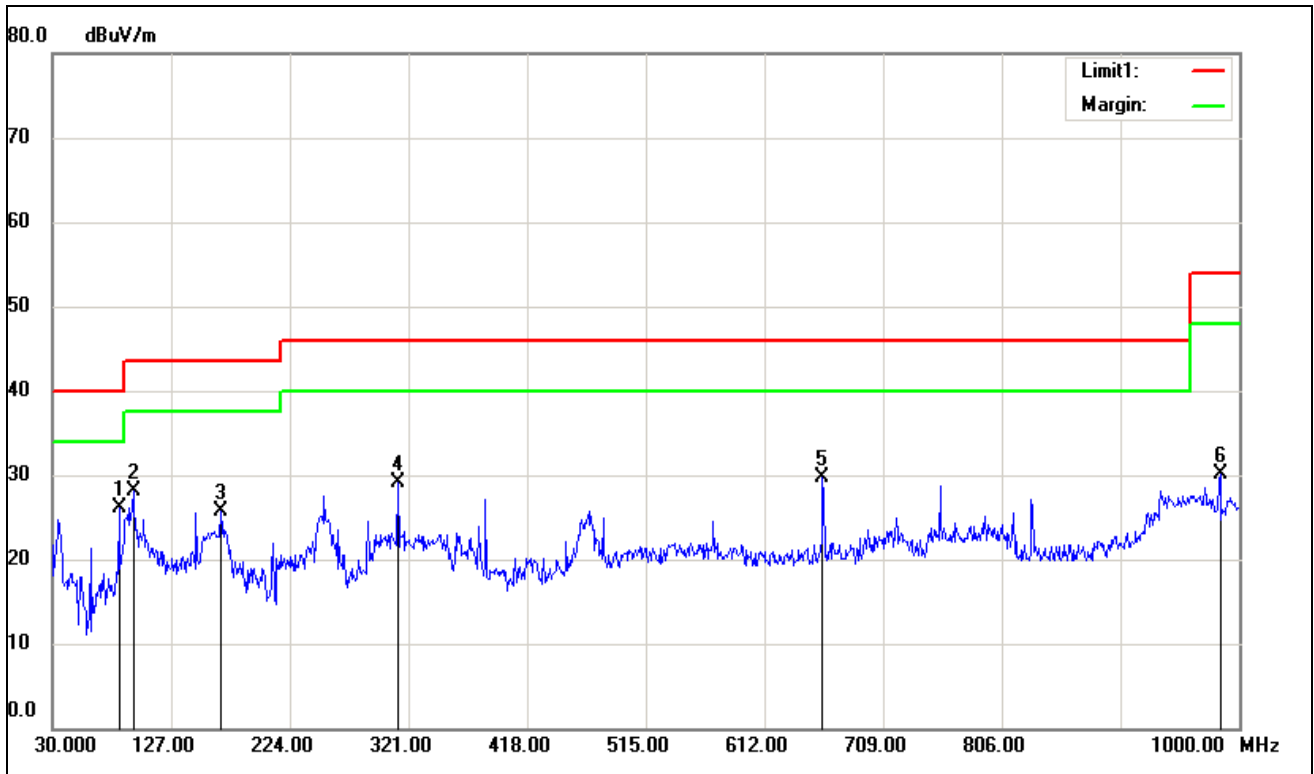
| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 84.3200 | 51.90 | -25.84 | 26.06 | 40.00 | -13.94 | V | QP |
| 95.9600 | 52.26 | -24.11 | 28.15 | 43.50 | -15.35 | V | QP |
| 167.7400 | 48.60 | -22.83 | 25.77 | 43.50 | -17.73 | V | QP |
| 312.2700 | 48.18 | -19.12 | 29.06 | 46.00 | -16.94 | V | QP |
| 659.5300 | 42.02 | -12.39 | 29.63 | 46.00 | -16.37 | V | QP |
| 984.4800 | 39.27 | -9.24 | 30.03 | 54.00 | -23.97 | V | QP |
| | | | | | | | |
| 120.2100 | 50.03 | -21.13 | 28.90 | 43.50 | -14.60 | H | QP |
| 147.3700 | 51.64 | -21.63 | 30.01 | 43.50 | -13.49 | H | QP |
| 312.2700 | 49.24 | -19.12 | 30.12 | 46.00 | -15.88 | H | QP |
| 335.5500 | 49.02 | -18.26 | 30.76 | 46.00 | -15.24 | H | QP |
| 829.2800 | 43.13 | -10.56 | 32.57 | 46.00 | -13.43 | H | QP |
| 935.9800 | 40.94 | -9.80 | 31.14 | 46.00 | -14.86 | H | QP |

Remark:

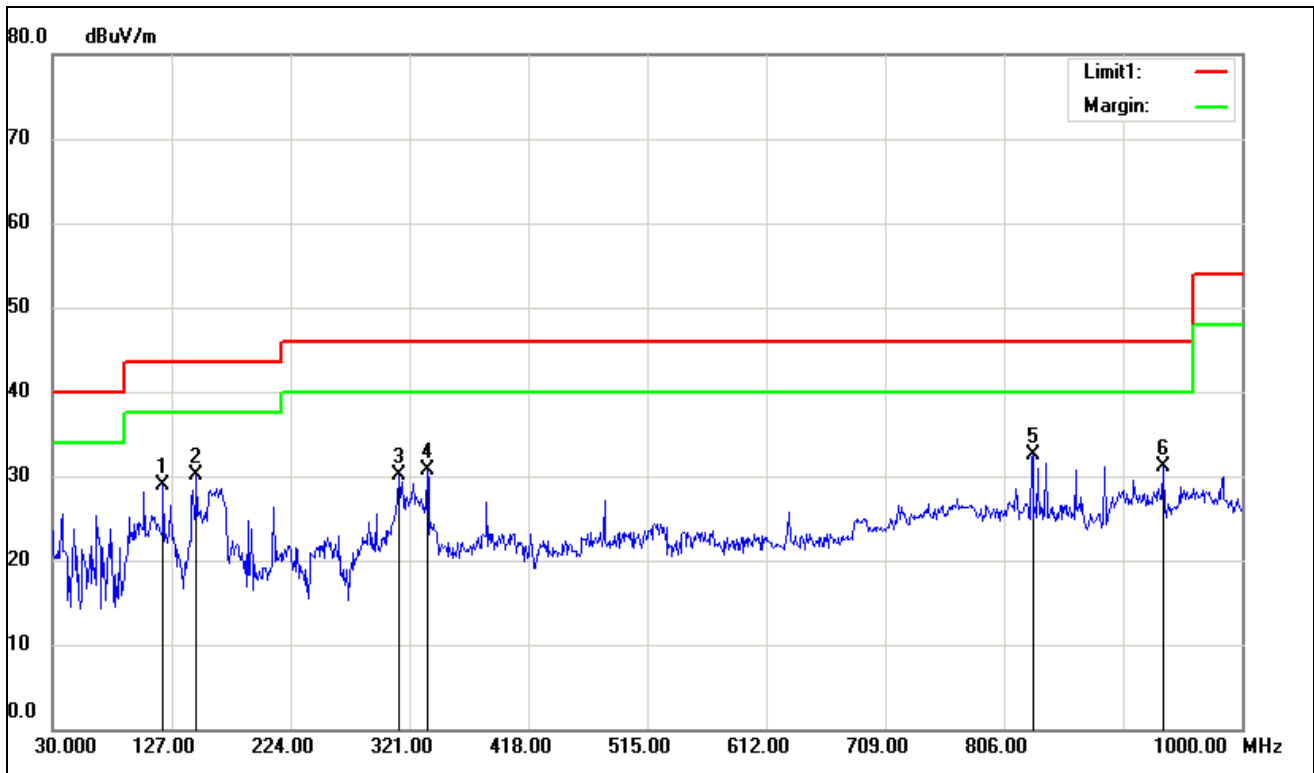
1. No emission found between lowest internal used/generated frequency to 30MHz (9kHz~30MHz)
2. Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using peak/quasi-peak detector mode.
3. Quasi-peak test would be performed if the peak result were greater than the quasi-peak limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Quasi-peak limit (dBuV/m).



Vertical



Horizontal





Above 1 GHz

1GHz~6GHz

Test Mode: TX

Tested by: Jack Chen

Ambient temperature: 24°C **Relative humidity:** 52% RH

Date: July 5, 2016

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 2590.0000 | 51.17 | -2.10 | 49.07 | 74.00 | -24.93 | V | peak |
| 2955.0000 | 44.59 | -1.44 | 43.15 | 74.00 | -30.85 | V | peak |
| 3745.0000 | 42.66 | 0.51 | 43.17 | 74.00 | -30.83 | V | peak |
| 4150.0000 | 42.70 | 2.12 | 44.82 | 74.00 | -29.18 | V | peak |
| 4630.0000 | 41.95 | 3.77 | 45.72 | 74.00 | -28.28 | V | peak |
| 5510.0000 | 43.36 | 5.87 | 49.23 | 74.00 | -24.77 | V | peak |
| | | | | | | | |
| 1505.0000 | 46.56 | -6.87 | 39.69 | 74.00 | -34.31 | H | Peak |
| 2220.0000 | 45.44 | -3.79 | 41.65 | 74.00 | -32.35 | H | Peak |
| 2875.0000 | 44.36 | -1.58 | 42.78 | 74.00 | -31.22 | H | Peak |
| 3825.0000 | 42.31 | 0.85 | 43.16 | 74.00 | -30.84 | H | peak |
| 4440.0000 | 41.81 | 3.14 | 44.95 | 74.00 | -29.05 | H | peak |
| 4845.0000 | 43.17 | 4.47 | 47.64 | 74.00 | -26.36 | H | peak |

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Test Mode: TX / IEEE 802.11a / 5180MHz / (CH Low)

Tested by: Jack Chen

Ambient temperature: 24°C Relative humidity: 52% RH

Date: July 5, 2016

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 7752.0000 | 31.96 | 9.17 | 41.13 | 74.00 | -32.87 | V | peak |
| 10356.0000 | 32.62 | 13.08 | 45.70 | 74.00 | -28.30 | V | peak |
| 11112.0000 | 29.87 | 15.03 | 44.90 | 74.00 | -29.10 | V | peak |
| 12612.0000 | 29.41 | 16.67 | 46.08 | 74.00 | -27.92 | V | peak |
| 14460.0000 | 28.42 | 20.85 | 49.27 | 74.00 | -24.73 | V | peak |
| 14952.0000 | 28.46 | 21.13 | 49.59 | 74.00 | -24.41 | V | peak |
| | | | | | | | |
| 7728.0000 | 31.95 | 9.12 | 41.07 | 74.00 | -32.93 | H | Peak |
| 9828.0000 | 30.46 | 11.48 | 41.94 | 74.00 | -32.06 | H | Peak |
| 11208.0000 | 29.77 | 14.99 | 44.76 | 74.00 | -29.24 | H | Peak |
| 12348.0000 | 29.52 | 15.79 | 45.31 | 74.00 | -28.69 | H | peak |
| 12936.0000 | 29.06 | 17.74 | 46.80 | 74.00 | -27.20 | H | peak |
| 15000.0000 | 28.40 | 21.16 | 49.56 | 74.00 | -24.44 | H | peak |

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. $Margin (dB) = Remark\ result (dBuV/m) - Average\ limit (dBuV/m).$



Test Mode: TX / IEEE 802.11a / 5200MHz /(CH Mid)

Tested by: Jack Chen

Ambient temperature: 24°C Relative humidity: 52% RH

Date: July 5, 2016

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 8436.0000 | 31.78 | 9.41 | 41.19 | 74.00 | -32.81 | V | peak |
| 10404.0000 | 32.36 | 13.23 | 45.59 | 74.00 | -28.41 | V | peak |
| 11052.0000 | 29.97 | 15.06 | 45.03 | 74.00 | -28.97 | V | peak |
| 12228.0000 | 30.02 | 15.39 | 45.41 | 74.00 | -28.59 | V | peak |
| 12984.0000 | 29.09 | 17.90 | 46.99 | 74.00 | -27.01 | V | peak |
| 14952.0000 | 28.39 | 21.13 | 49.52 | 74.00 | -24.48 | V | peak |
| 8232.0000 | 30.76 | 9.52 | 40.28 | 74.00 | -33.72 | H | Peak |
| 9612.0000 | 30.60 | 10.86 | 41.46 | 74.00 | -32.54 | H | Peak |
| 10512.0000 | 30.50 | 13.57 | 44.07 | 74.00 | -29.93 | H | Peak |
| 12984.0000 | 29.03 | 17.90 | 46.93 | 74.00 | -27.07 | H | peak |
| 14280.0000 | 28.23 | 20.74 | 48.97 | 74.00 | -25.03 | H | peak |
| 14916.0000 | 28.58 | 21.11 | 49.69 | 74.00 | -24.31 | H | peak |

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Test Mode: TX / IEEE 802.11a / 5240MHz /(CH High)

Tested by: Jack Chen

Ambient temperature: 24°C Relative humidity: 52% RH

Date: July 5, 2016

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 9960.0000 | 30.81 | 11.86 | 42.67 | 74.00 | -31.33 | V | peak |
| 10476.0000 | 33.52 | 13.46 | 46.98 | 74.00 | -27.02 | V | peak |
| 11820.0000 | 30.39 | 14.72 | 45.11 | 74.00 | -28.89 | V | peak |
| 12672.0000 | 29.25 | 16.86 | 46.11 | 74.00 | -27.89 | V | peak |
| 13980.0000 | 27.31 | 20.53 | 47.84 | 74.00 | -26.16 | V | peak |
| 15000.0000 | 28.56 | 21.16 | 49.72 | 74.00 | -24.28 | V | peak |
| 7764.0000 | 31.84 | 9.19 | 41.03 | 74.00 | -32.97 | H | Peak |
| 10296.0000 | 30.55 | 12.90 | 43.45 | 74.00 | -30.55 | H | Peak |
| 10860.0000 | 29.67 | 14.65 | 44.32 | 74.00 | -29.68 | H | Peak |
| 12492.0000 | 29.89 | 16.27 | 46.16 | 74.00 | -27.84 | H | peak |
| 14064.0000 | 27.80 | 20.62 | 48.42 | 74.00 | -25.58 | H | peak |
| 14940.0000 | 28.52 | 21.13 | 49.65 | 74.00 | -24.35 | H | peak |

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Test Mode: TX / IEEE 802.11a / 5745MHz / (CH Low)

Tested by: Jack Chen

Ambient temperature: 24°C Relative humidity: 52% RH

Date: July 5, 2016

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 7656.0000 | 32.14 | 8.98 | 41.12 | 74.00 | -32.88 | V | Peak |
| 9960.0000 | 30.76 | 11.86 | 42.62 | 74.00 | -31.38 | V | Peak |
| 11100.0000 | 29.84 | 15.04 | 44.88 | 74.00 | -29.12 | V | Peak |
| 12696.0000 | 28.79 | 16.94 | 45.73 | 74.00 | -28.27 | V | Peak |
| 13752.0000 | 27.37 | 19.93 | 47.30 | 74.00 | -26.70 | V | Peak |
| 14976.0000 | 28.70 | 21.15 | 49.85 | 74.00 | -24.15 | V | Peak |
| | | | | | | | |
| 7752.0000 | 32.08 | 9.17 | 41.25 | 74.00 | -32.75 | H | Peak |
| 9864.0000 | 30.54 | 11.59 | 42.13 | 74.00 | -31.87 | H | Peak |
| 11016.0000 | 29.74 | 15.07 | 44.81 | 74.00 | -29.19 | H | Peak |
| 12936.0000 | 29.40 | 17.74 | 47.14 | 74.00 | -26.86 | H | Peak |
| 14244.0000 | 28.26 | 20.72 | 48.98 | 74.00 | -25.02 | H | Peak |
| 15000.0000 | 28.71 | 21.16 | 49.87 | 74.00 | -24.13 | H | Peak |

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.*
3. *Average test would be performed if the peak result were greater than the average limit.*
4. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
5. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
6. *Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).*



Test Mode: TX / IEEE 802.11a / 5785MHz / (CH Mid)

Tested by: Jack Chen

Ambient temperature: 24°C Relative humidity: 52% RH

Date: July 5, 2016

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 6960.0000 | 32.03 | 7.64 | 39.67 | 74.00 | -34.33 | V | Peak |
| 8364.0000 | 31.74 | 9.45 | 41.19 | 74.00 | -32.81 | V | Peak |
| 10056.0000 | 31.04 | 12.15 | 43.19 | 74.00 | -30.81 | V | Peak |
| 11832.0000 | 30.29 | 14.71 | 45.00 | 74.00 | -29.00 | V | Peak |
| 13080.0000 | 28.42 | 18.16 | 46.58 | 74.00 | -27.42 | V | Peak |
| 14460.0000 | 28.13 | 20.85 | 48.98 | 74.00 | -25.02 | V | Peak |
| 8352.0000 | 31.87 | 9.46 | 41.33 | 74.00 | -32.67 | H | Peak |
| 11064.0000 | 29.83 | 15.05 | 44.88 | 74.00 | -29.12 | H | Peak |
| 12396.0000 | 29.16 | 15.95 | 45.11 | 74.00 | -28.89 | H | Peak |
| 13008.0000 | 28.74 | 17.97 | 46.71 | 74.00 | -27.29 | H | Peak |
| 14052.0000 | 27.45 | 20.61 | 48.06 | 74.00 | -25.94 | H | Peak |
| 15000.0000 | 28.57 | 21.16 | 49.73 | 74.00 | -24.27 | H | Peak |

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Test Mode: TX / IEEE 802.11a / 5825MHz /(CH High)

Tested by: Jack Chen

Ambient temperature: 24°C Relative humidity: 52% RH

Date: July 5, 2016

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 8376.0000 | 31.85 | 9.44 | 41.29 | 74.00 | -32.71 | V | Peak |
| 11052.0000 | 30.14 | 15.06 | 45.20 | 74.00 | -28.80 | V | Peak |
| 11652.0000 | 31.16 | 14.79 | 45.95 | 74.00 | -28.05 | V | Peak |
| 12984.0000 | 29.04 | 17.90 | 46.94 | 74.00 | -27.06 | V | Peak |
| 14052.0000 | 27.71 | 20.61 | 48.32 | 74.00 | -25.68 | V | Peak |
| 14904.0000 | 28.13 | 21.10 | 49.23 | 74.00 | -24.77 | V | Peak |
| 8412.0000 | 31.59 | 9.42 | 41.01 | 74.00 | -32.99 | H | Peak |
| 10056.0000 | 30.93 | 12.15 | 43.08 | 74.00 | -30.92 | H | Peak |
| 10896.0000 | 29.98 | 14.76 | 44.74 | 74.00 | -29.26 | H | Peak |
| 12420.0000 | 29.26 | 16.03 | 45.29 | 74.00 | -28.71 | H | Peak |
| 14280.0000 | 28.40 | 20.74 | 49.14 | 74.00 | -24.86 | H | Peak |
| 14952.0000 | 28.57 | 21.13 | 49.70 | 74.00 | -24.30 | H | Peak |

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Test Mode: TX / IEEE 802.11n HT 20 MHz / 5180MHz /(CH Low) Tested by: Jack Chen

Ambient temperature: 24°C Relative humidity: 52% RH Date: July 5, 2016

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 8400.0000 | 31.75 | 9.43 | 41.18 | 74.00 | -32.82 | V | Peak |
| 10356.0000 | 31.92 | 13.08 | 45.00 | 74.00 | -29.00 | V | Peak |
| 11844.0000 | 30.34 | 14.71 | 45.05 | 74.00 | -28.95 | V | Peak |
| 12936.0000 | 28.95 | 17.74 | 46.69 | 74.00 | -27.31 | V | Peak |
| 14352.0000 | 28.05 | 20.78 | 48.83 | 74.00 | -25.17 | V | Peak |
| 14928.0000 | 28.49 | 21.12 | 49.61 | 74.00 | -24.39 | V | Peak |
| | | | | | | | |
| 8436.0000 | 31.78 | 9.41 | 41.19 | 74.00 | -32.81 | H | Peak |
| 10500.0000 | 29.63 | 13.53 | 43.16 | 74.00 | -30.84 | H | Peak |
| 11184.0000 | 29.38 | 15.00 | 44.38 | 74.00 | -29.62 | H | Peak |
| 12984.0000 | 28.40 | 17.90 | 46.30 | 74.00 | -27.70 | H | Peak |
| 13596.0000 | 27.30 | 19.52 | 46.82 | 74.00 | -27.18 | H | Peak |
| 14928.0000 | 27.74 | 21.12 | 48.86 | 74.00 | -25.14 | H | Peak |

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. $Margin (dB) = Remark\ result (dBuV/m) - Average\ limit (dBuV/m)$.



Test Mode: TX / IEEE 802.11n HT 20 MHz / 5200MHz /(CH Mid) Tested by: Jack Chen

Ambient temperature: 24°C Relative humidity: 52% RH

Date: July 5, 2016

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 6924.0000 | 31.28 | 7.58 | 38.86 | 74.00 | -35.14 | V | Peak |
| 10404.0000 | 31.54 | 13.23 | 44.77 | 74.00 | -29.23 | V | Peak |
| 11844.0000 | 29.74 | 14.71 | 44.45 | 74.00 | -29.55 | V | Peak |
| 12816.0000 | 29.03 | 17.34 | 46.37 | 74.00 | -27.63 | V | Peak |
| 14388.0000 | 27.77 | 20.81 | 48.58 | 74.00 | -25.42 | V | Peak |
| 14868.0000 | 28.10 | 21.08 | 49.18 | 74.00 | -24.82 | V | Peak |
| 7728.0000 | 31.39 | 9.12 | 40.51 | 74.00 | -33.49 | H | Peak |
| 9996.0000 | 30.58 | 11.97 | 42.55 | 74.00 | -31.45 | H | Peak |
| 11040.0000 | 29.51 | 15.06 | 44.57 | 74.00 | -29.43 | H | Peak |
| 12648.0000 | 28.73 | 16.78 | 45.51 | 74.00 | -28.49 | H | Peak |
| 14460.0000 | 27.83 | 20.85 | 48.68 | 74.00 | -25.32 | H | Peak |
| 14916.0000 | 27.79 | 21.11 | 48.90 | 74.00 | -25.10 | H | Peak |

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Test Mode: TX / IEEE 802.11n HT 20 MHz / 5240MHz /(CH High)

Tested by: Ad Gan

Ambient temperature: 24°C Relative humidity: 52% RH

Date: May 19, 2016

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 7752.0000 | 31.37 | 9.17 | 40.54 | 74.00 | -33.46 | V | peak |
| 10476.0000 | 31.64 | 13.46 | 45.10 | 74.00 | -28.90 | V | peak |
| 11844.0000 | 29.75 | 14.71 | 44.46 | 74.00 | -29.54 | V | peak |
| 12960.0000 | 28.71 | 17.82 | 46.53 | 74.00 | -27.47 | V | peak |
| 14280.0000 | 28.16 | 20.74 | 48.90 | 74.00 | -25.10 | V | peak |
| 14964.0000 | 28.29 | 21.14 | 49.43 | 74.00 | -24.57 | V | peak |
| 6924.0000 | 31.44 | 7.58 | 39.02 | 74.00 | -34.98 | H | Peak |
| 8352.0000 | 31.36 | 9.46 | 40.82 | 74.00 | -33.18 | H | Peak |
| 10272.0000 | 30.14 | 12.82 | 42.96 | 74.00 | -31.04 | H | Peak |
| 12348.0000 | 29.26 | 15.79 | 45.05 | 74.00 | -28.95 | H | peak |
| 14436.0000 | 27.90 | 20.83 | 48.73 | 74.00 | -25.27 | H | peak |
| 14880.0000 | 27.96 | 21.09 | 49.05 | 74.00 | -24.95 | H | peak |

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown “ --- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with “ N/A ” remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. $Margin (dB) = Remark\ result (dBuV/m) - Average\ limit (dBuV/m)$.



Test Mode: TX / IEEE 802.11n HT 20 MHz / 5745MHz /(CH Low) **Tested by:** Jack Chen

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** July 5, 2016

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 8364.0000 | 31.68 | 9.45 | 41.13 | 74.00 | -32.87 | V | peak |
| 10524.0000 | 29.42 | 13.60 | 43.02 | 74.00 | -30.98 | V | peak |
| 11136.0000 | 29.36 | 15.02 | 44.38 | 74.00 | -29.62 | V | peak |
| 12912.0000 | 28.83 | 17.66 | 46.49 | 74.00 | -27.51 | V | peak |
| 14244.0000 | 27.60 | 20.72 | 48.32 | 74.00 | -25.68 | V | peak |
| 15276.0000 | 28.14 | 19.90 | 48.04 | 74.00 | -25.96 | V | peak |
| | | | | | | | |
| 6924.0000 | 31.44 | 7.58 | 39.02 | 74.00 | -34.98 | H | Peak |
| 8352.0000 | 31.36 | 9.46 | 40.82 | 74.00 | -33.18 | H | Peak |
| 10272.0000 | 30.14 | 12.82 | 42.96 | 74.00 | -31.04 | H | Peak |
| 12348.0000 | 29.26 | 15.79 | 45.05 | 74.00 | -28.95 | H | peak |
| 14436.0000 | 27.90 | 20.83 | 48.73 | 74.00 | -25.27 | H | peak |
| 14880.0000 | 27.96 | 21.09 | 49.05 | 74.00 | -24.95 | H | peak |

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.*
3. *Average test would be performed if the peak result were greater than the average limit.*
4. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
5. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
6. *Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).*



Test Mode: TX / IEEE 802.11n HT 20 MHz / 5785MHz /(CH Mid) Tested by: Jack Chen
Ambient temperature: 24°C Relative humidity: 52% RH Date: July 5, 2016

Table with 8 columns: Frequency (MHz), Reading (dBuV), Correction Factor (dB/m), Result (dBuV/m), Limit (dBuV/m), Margin (dB), Antenna Pole (V/H), Remark. It contains two groups of data rows for various frequencies.

Remark:

- 1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Test Mode: TX / IEEE 802.11n HT 20 MHz / 5825MHz /(CH High) Tested by: Jack Chen

Ambient temperature: 24°C Relative humidity: 52% RH Date: July 5, 2016

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 8340.0000 | 31.87 | 9.46 | 41.33 | 74.00 | -32.67 | V | peak |
| 9948.0000 | 29.92 | 11.83 | 41.75 | 74.00 | -32.25 | V | peak |
| 11220.0000 | 29.50 | 14.98 | 44.48 | 74.00 | -29.52 | V | peak |
| 13032.0000 | 28.41 | 18.03 | 46.44 | 74.00 | -27.56 | V | peak |
| 14376.0000 | 27.88 | 20.80 | 48.68 | 74.00 | -25.32 | V | peak |
| 15024.0000 | 28.09 | 21.05 | 49.14 | 74.00 | -24.86 | V | peak |
| 8364.0000 | 31.29 | 9.45 | 40.74 | 74.00 | -33.26 | H | Peak |
| 10020.0000 | 30.62 | 12.04 | 42.66 | 74.00 | -31.34 | H | Peak |
| 11208.0000 | 29.44 | 14.99 | 44.43 | 74.00 | -29.57 | H | Peak |
| 13008.0000 | 28.51 | 17.97 | 46.48 | 74.00 | -27.52 | H | peak |
| 13980.0000 | 27.59 | 20.53 | 48.12 | 74.00 | -25.88 | H | peak |
| 15036.0000 | 28.14 | 21.00 | 49.14 | 74.00 | -24.86 | H | peak |

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Test Mode: TX / IEEE 802.11n HT 40 MHz / 5190MHz /(CH Low) Tested by: Jack Chen

Ambient temperature: 24°C Relative humidity: 52% RH Date: July 5, 2016

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 7728.0000 | 31.66 | 9.12 | 40.78 | 74.00 | -33.22 | V | peak |
| 9360.0000 | 30.66 | 10.14 | 40.80 | 74.00 | -33.20 | V | peak |
| 11328.0000 | 29.76 | 14.94 | 44.70 | 74.00 | -29.30 | V | peak |
| 12852.0000 | 28.65 | 17.46 | 46.11 | 74.00 | -27.89 | V | peak |
| 13812.0000 | 26.80 | 20.09 | 46.89 | 74.00 | -27.11 | V | peak |
| 14988.0000 | 28.17 | 21.15 | 49.32 | 74.00 | -24.68 | V | peak |
| | | | | | | | |
| 7020.0000 | 31.60 | 7.74 | 39.34 | 74.00 | -34.66 | H | Peak |
| 8340.0000 | 31.50 | 9.46 | 40.96 | 74.00 | -33.04 | H | Peak |
| 10524.0000 | 29.58 | 13.60 | 43.18 | 74.00 | -30.82 | H | Peak |
| 11844.0000 | 30.26 | 14.71 | 44.97 | 74.00 | -29.03 | H | peak |
| 14088.0000 | 27.18 | 20.63 | 47.81 | 74.00 | -26.19 | H | peak |
| 14988.0000 | 27.92 | 21.15 | 49.07 | 74.00 | -24.93 | H | peak |

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Test Mode: TX / IEEE 802.11n HT 40 MHz / 5230MHz /(CH High) **Tested by:** Jack Chen

Ambient temperature: 24°C **Relative humidity:** 52% RH

Date: July 5, 2016

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 8412.0000 | 31.23 | 9.42 | 40.65 | 74.00 | -33.35 | V | peak |
| 10452.0000 | 30.86 | 13.38 | 44.24 | 74.00 | -29.76 | V | peak |
| 11844.0000 | 30.04 | 14.71 | 44.75 | 74.00 | -29.25 | V | peak |
| 12612.0000 | 28.74 | 16.67 | 45.41 | 74.00 | -28.59 | V | peak |
| 14304.0000 | 27.90 | 20.76 | 48.66 | 74.00 | -25.34 | V | peak |
| 15012.0000 | 27.64 | 21.11 | 48.75 | 74.00 | -25.25 | V | peak |
| 8364.0000 | 31.84 | 9.45 | 41.29 | 74.00 | -32.71 | H | Peak |
| 9612.0000 | 30.57 | 10.86 | 41.43 | 74.00 | -32.57 | H | Peak |
| 11040.0000 | 29.65 | 15.06 | 44.71 | 74.00 | -29.29 | H | Peak |
| 12960.0000 | 28.88 | 17.82 | 46.70 | 74.00 | -27.30 | H | peak |
| 14316.0000 | 27.90 | 20.76 | 48.66 | 74.00 | -25.34 | H | peak |
| 14964.0000 | 28.33 | 21.14 | 49.47 | 74.00 | -24.53 | H | peak |

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Test Mode: TX / IEEE 802.11n HT 40 MHz / 5755MHz /(CH Low) **Tested by:** Jack Chen

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** July 5, 2016

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 8448.0000 | 31.91 | 9.40 | 41.31 | 74.00 | -32.69 | V | peak |
| 10500.0000 | 29.90 | 13.53 | 43.43 | 74.00 | -30.57 | V | peak |
| 11856.0000 | 30.43 | 14.70 | 45.13 | 74.00 | -28.87 | V | peak |
| 13512.0000 | 27.40 | 19.30 | 46.70 | 74.00 | -27.30 | V | peak |
| 14340.0000 | 27.87 | 20.78 | 48.65 | 74.00 | -25.35 | V | peak |
| 14916.0000 | 28.20 | 21.11 | 49.31 | 74.00 | -24.69 | V | peak |
| | | | | | | | |
| 7308.0000 | 32.30 | 8.30 | 40.60 | 74.00 | -33.40 | H | Peak |
| 10032.0000 | 30.73 | 12.08 | 42.81 | 74.00 | -31.19 | H | Peak |
| 11688.0000 | 30.33 | 14.78 | 45.11 | 74.00 | -28.89 | H | Peak |
| 12636.0000 | 29.01 | 16.75 | 45.76 | 74.00 | -28.24 | H | peak |
| 14028.0000 | 27.48 | 20.60 | 48.08 | 74.00 | -25.92 | H | peak |
| 14916.0000 | 28.54 | 21.11 | 49.65 | 74.00 | -24.35 | H | peak |

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. $Margin (dB) = Remark\ result (dBuV/m) - Average\ limit (dBuV/m)$.



Test Mode: TX / IEEE 802.11n HT 40 MHz / 5795MHz /(CH High) **Tested by:** Jack Chen
Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** July 5, 2016

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 8436.0000 | 31.30 | 9.41 | 40.71 | 74.00 | -33.29 | V | peak |
| 10524.0000 | 29.93 | 13.60 | 43.53 | 74.00 | -30.47 | V | peak |
| 11700.0000 | 30.25 | 14.77 | 45.02 | 74.00 | -28.98 | V | peak |
| 13104.0000 | 28.40 | 18.22 | 46.62 | 74.00 | -27.38 | V | peak |
| 14388.0000 | 27.87 | 20.81 | 48.68 | 74.00 | -25.32 | V | peak |
| 15000.0000 | 28.37 | 21.16 | 49.53 | 74.00 | -24.47 | V | peak |
| | | | | | | | |
| 7764.0000 | 31.34 | 9.19 | 40.53 | 74.00 | -33.47 | H | Peak |
| 10524.0000 | 29.93 | 13.60 | 43.53 | 74.00 | -30.47 | H | Peak |
| 12348.0000 | 29.46 | 15.79 | 45.25 | 74.00 | -28.75 | H | Peak |
| 13104.0000 | 28.40 | 18.22 | 46.62 | 74.00 | -27.38 | H | peak |
| 13896.0000 | 27.73 | 20.31 | 48.04 | 74.00 | -25.96 | H | peak |
| 15000.0000 | 28.37 | 21.16 | 49.53 | 74.00 | -24.47 | H | peak |

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Test Mode: TX / IEEE 802. 11ac 80 / 5210MHz /(CH Low)

Tested by: Jack Chen

Ambient temperature: 24°C

Relative humidity: 52% RH

Date: July 5, 2016

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 8376.0000 | 31.38 | 9.44 | 40.82 | 74.00 | -33.18 | V | peak |
| 10152.0000 | 30.30 | 12.45 | 42.75 | 74.00 | -31.25 | V | peak |
| 11844.0000 | 30.35 | 14.71 | 45.06 | 74.00 | -28.94 | V | peak |
| 13056.0000 | 28.59 | 18.10 | 46.69 | 74.00 | -27.31 | V | peak |
| 14436.0000 | 27.89 | 20.83 | 48.72 | 74.00 | -25.28 | V | peak |
| 15000.0000 | 28.45 | 21.16 | 49.61 | 74.00 | -24.39 | V | peak |
| | | | | | | | |
| 7644.0000 | 30.72 | 8.96 | 39.68 | 74.00 | -34.32 | H | Peak |
| 8412.0000 | 31.50 | 9.42 | 40.92 | 74.00 | -33.08 | H | Peak |
| 11172.0000 | 29.55 | 15.00 | 44.55 | 74.00 | -29.45 | H | Peak |
| 12936.0000 | 28.86 | 17.74 | 46.60 | 74.00 | -27.40 | H | peak |
| 14460.0000 | 27.96 | 20.85 | 48.81 | 74.00 | -25.19 | H | peak |
| 15036.0000 | 28.26 | 21.00 | 49.26 | 74.00 | -24.74 | H | peak |

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.*
3. *Average test would be performed if the peak result were greater than the average limit.*
4. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
5. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
6. *Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).*



Test Mode: TX / IEEE 802.11ac 80 / 5775MHz

Tested by: Jack Chen

Ambient temperature: 24°C Relative humidity: 52% RH

Date: July 5, 2016

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 7308.0000 | 33.23 | 8.30 | 41.53 | 74.00 | -32.47 | V | peak |
| 10020.0000 | 30.53 | 12.04 | 42.57 | 74.00 | -31.43 | V | peak |
| 11304.0000 | 29.51 | 14.95 | 44.46 | 74.00 | -29.54 | V | peak |
| 12984.0000 | 28.79 | 17.90 | 46.69 | 74.00 | -27.31 | V | peak |
| 14052.0000 | 27.14 | 20.61 | 47.75 | 74.00 | -26.25 | V | peak |
| 14928.0000 | 28.46 | 21.12 | 49.58 | 74.00 | -24.42 | V | peak |
| 9936.0000 | 30.10 | 11.80 | 41.90 | 74.00 | -32.10 | H | Peak |
| 10980.0000 | 29.07 | 15.02 | 44.09 | 74.00 | -29.91 | H | Peak |
| 11316.0000 | 29.50 | 14.94 | 44.44 | 74.00 | -29.56 | H | Peak |
| 12468.0000 | 28.70 | 16.19 | 44.89 | 74.00 | -29.11 | H | peak |
| 12960.0000 | 28.74 | 17.82 | 46.56 | 74.00 | -27.44 | H | peak |
| 14736.0000 | 27.82 | 21.01 | 48.83 | 74.00 | -25.17 | H | peak |

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



6.8 CONDUCTED UNDESIRABLE EMISSION

6.8.1 LIMIT

According to 15.407(b) ,

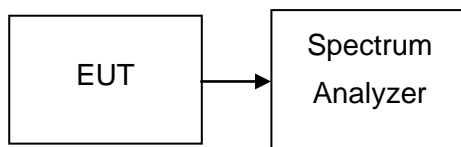
- (1) For transmitters operating in the 5.15-5.25 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz.
- (2) For transmitters operating in the 5.725–5.850 GHz band: all emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an EIRP of –17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an EIRP of –27 dBm/MHz.
- (3) The provisions of §15.205 apply to intentional radiators operating under this section.

6.8.2 MEASUREMENT EQUIPMENT USED

| Name of Equipment | Manufacturer | Model | Serial Number | Last Calibration | Due Calibration |
|-------------------|--------------|--------|---------------|------------------|-----------------|
| Spectrum Analyzer | Agilent | N9010A | MY52221469 | 02/21/2016 | 02/20/2017 |

Remark: Each piece of equipment is scheduled for calibration once a year.

6.8.3 TEST CONFIGURATION



6.8.4 TEST PROCEDURE

Conducted RF measurements of the transmitter output were made to confirm that the EUT antenna port conducted emissions meet the specified limit and to identify any spurious signals that require further investigation or measurements on the radiated emissions site.

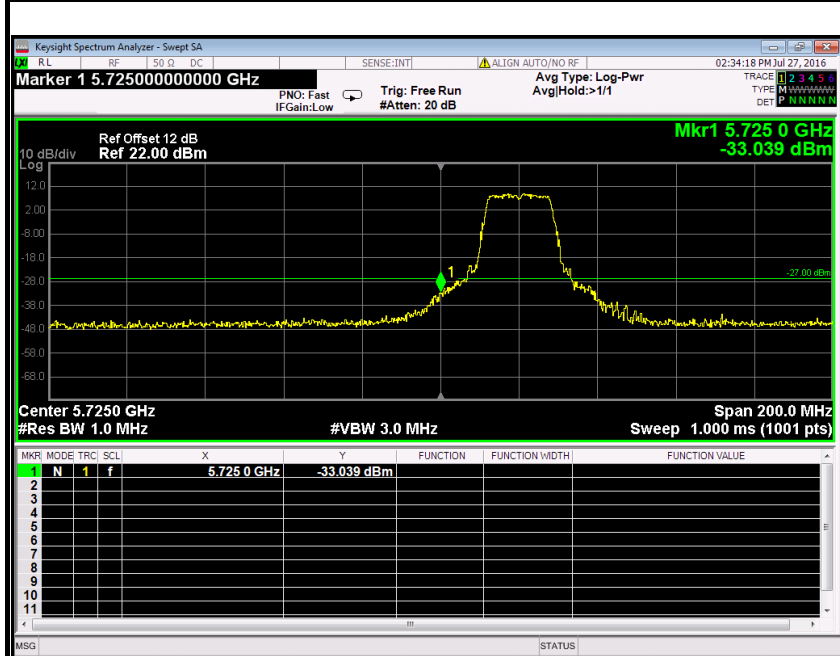
The transmitter output is connected to the spectrum analyzer. The resolution bandwidth is set to 1 MHz. The video bandwidth is set to 1 MHz. Peak detection measurements are compared to the average EIRP limit, adjusted for the maximum antenna gain. If necessary, additional average detection measurements are made.

Measurements are made over the 30 MHz to 40 GHz range with the transmitter set to the lowest, middle, and highest channels.

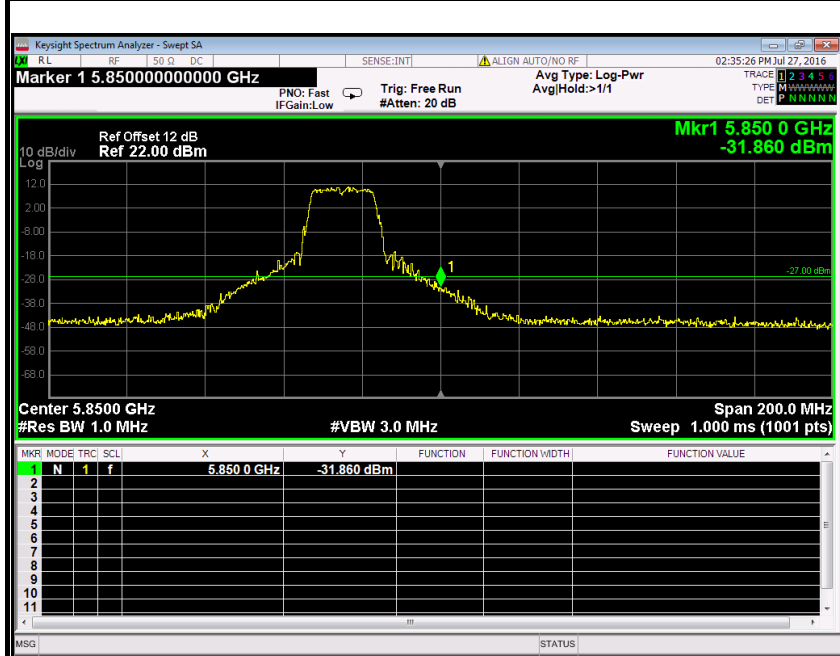


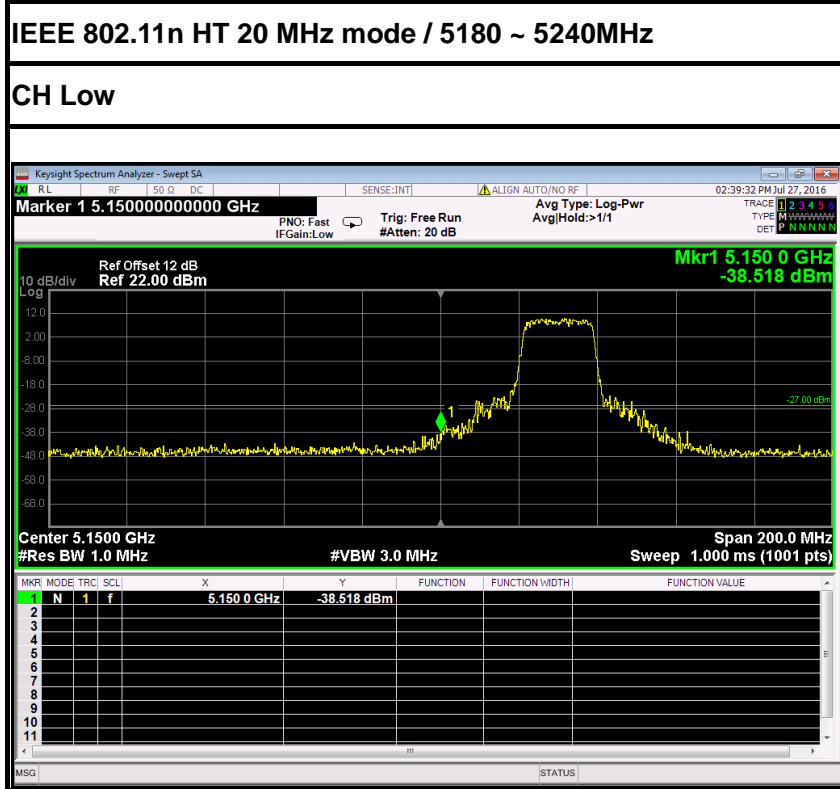
IEEE 802.11a mode / 5745 ~ 5825MHz

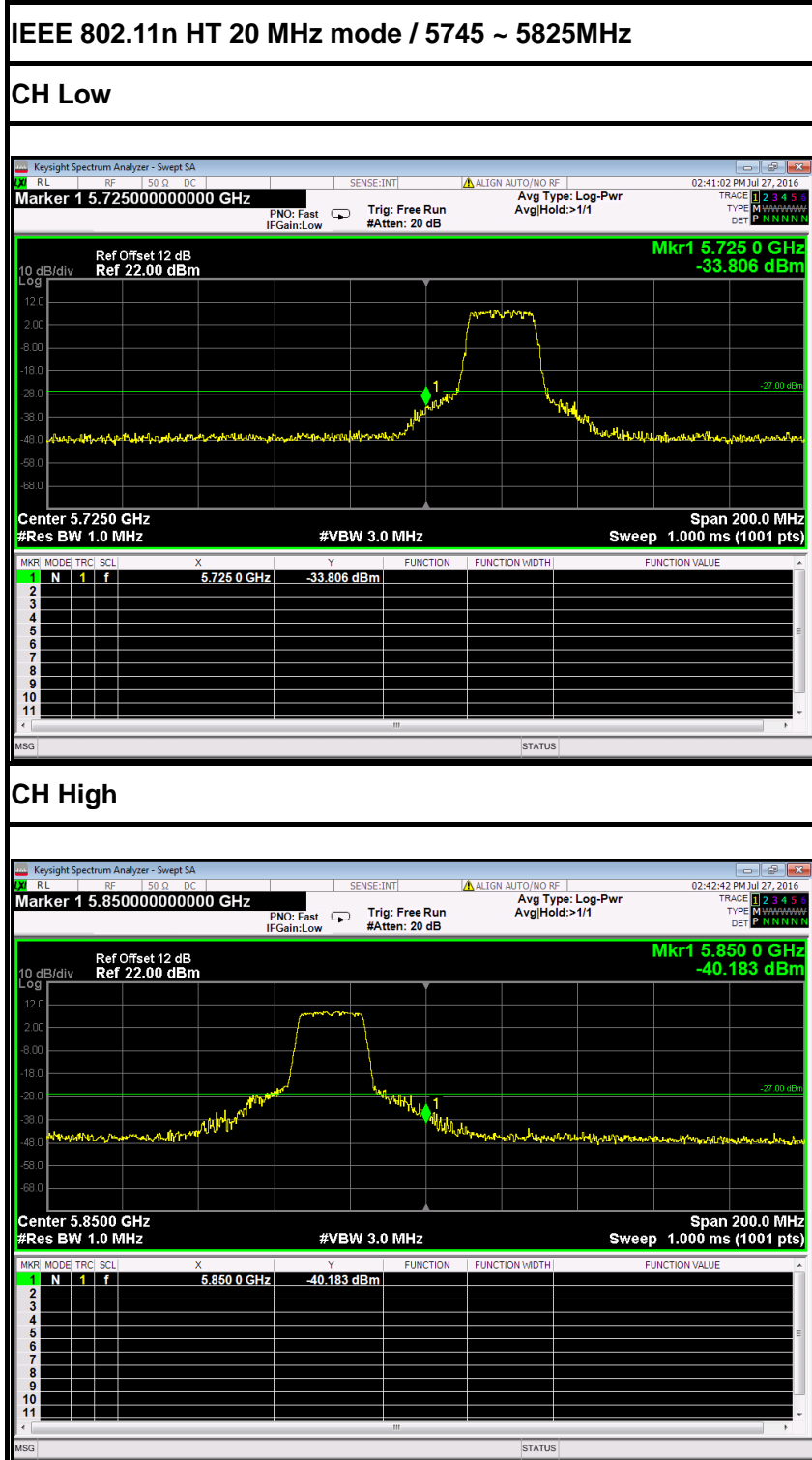
CH Low

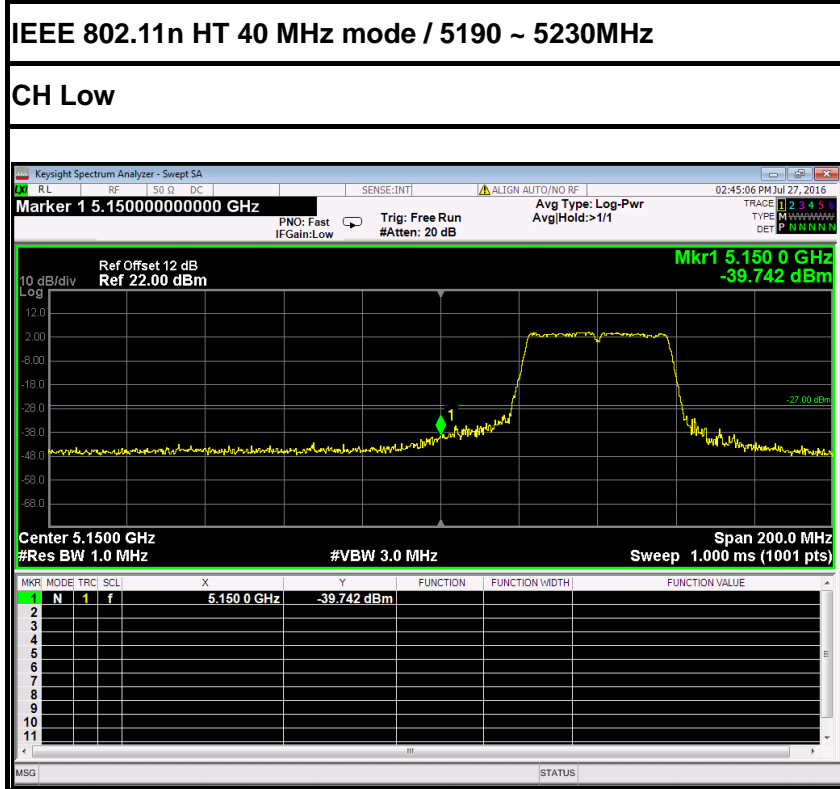


CH High





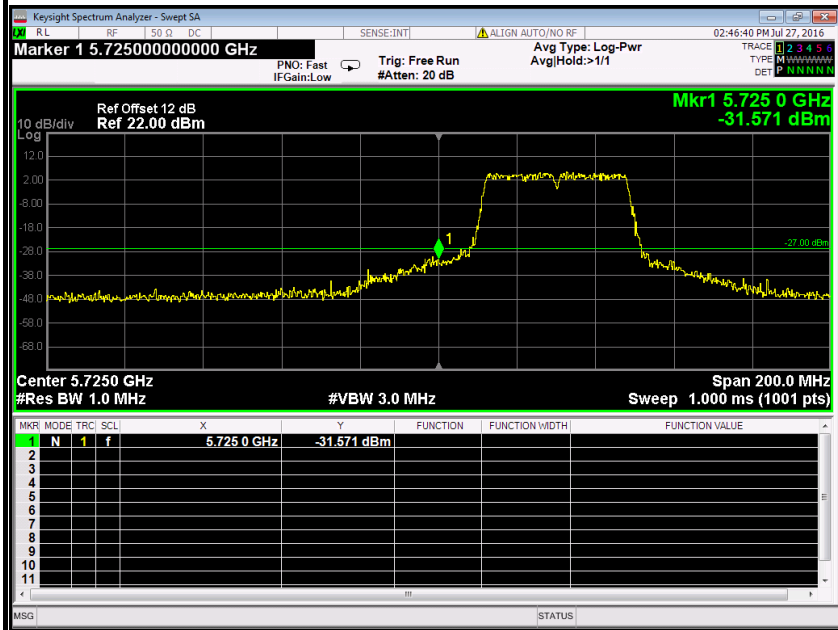




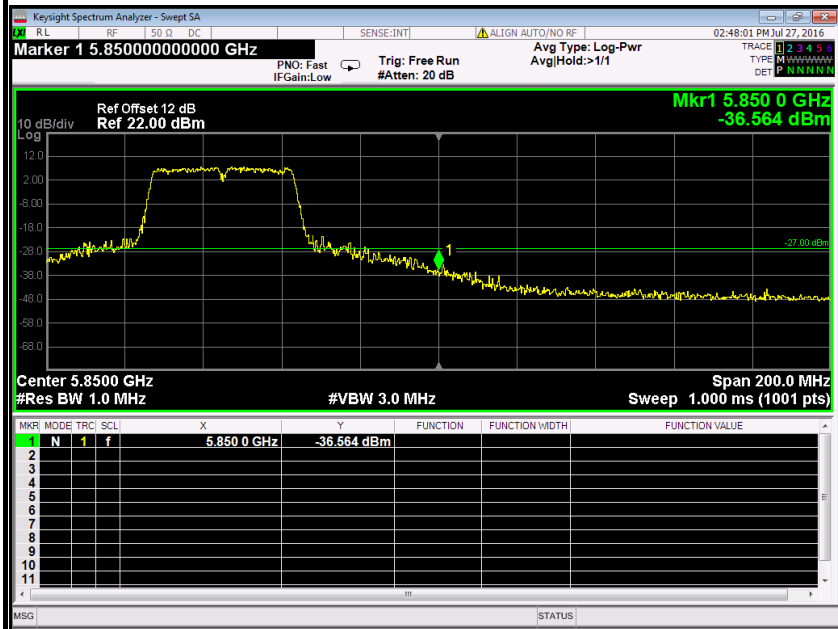


IEEE 802.11n HT 40 MHz mode / 5755 ~ 5795MHz

CH Low

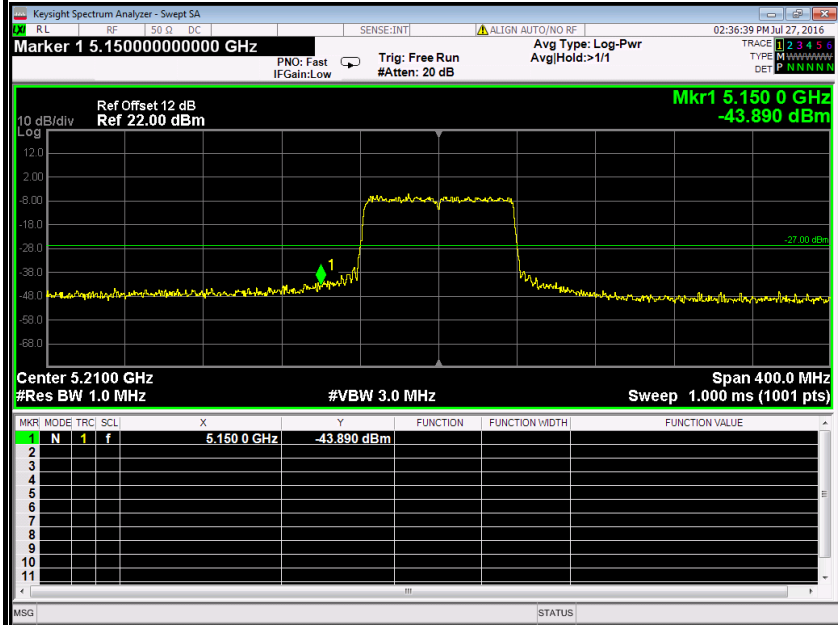


CH High

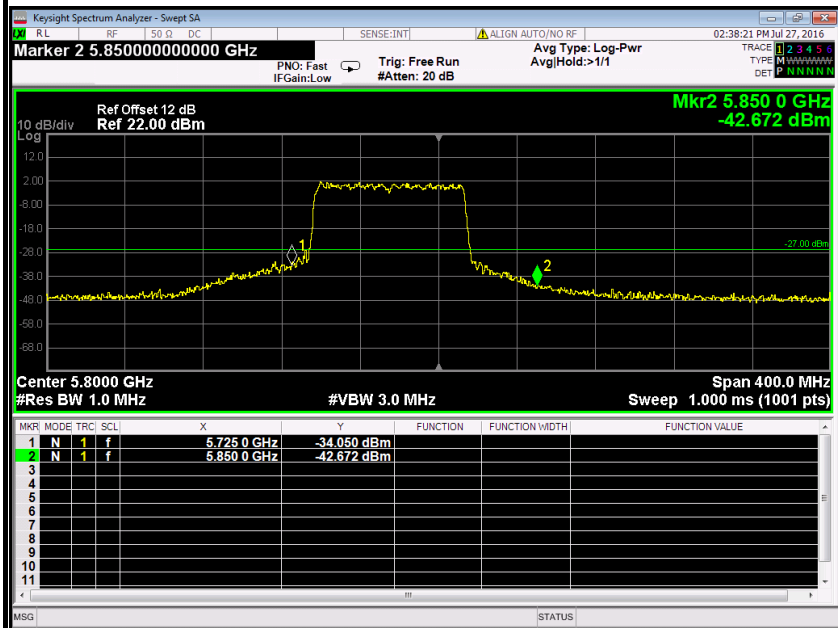




IEEE 802.11ac 80 mode / 5210MHz



IEEE 802.11ac 80 mode / 5775MHz





6.9 POWERLINE CONDUCTED EMISSIONS

6.9.1 LIMIT

According to §15.207(a), except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 μ H/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

| Frequency Range (MHz) | Limits (dB μ V) | |
|-----------------------|---------------------|-----------|
| | Quasi-peak | Average |
| 0.15 to 0.50 | 66 to 56* | 56 to 46* |
| 0.50 to 5 | 56 | 46 |
| 5 to 30 | 60 | 50 |

* Decreases with the logarithm of the frequency.

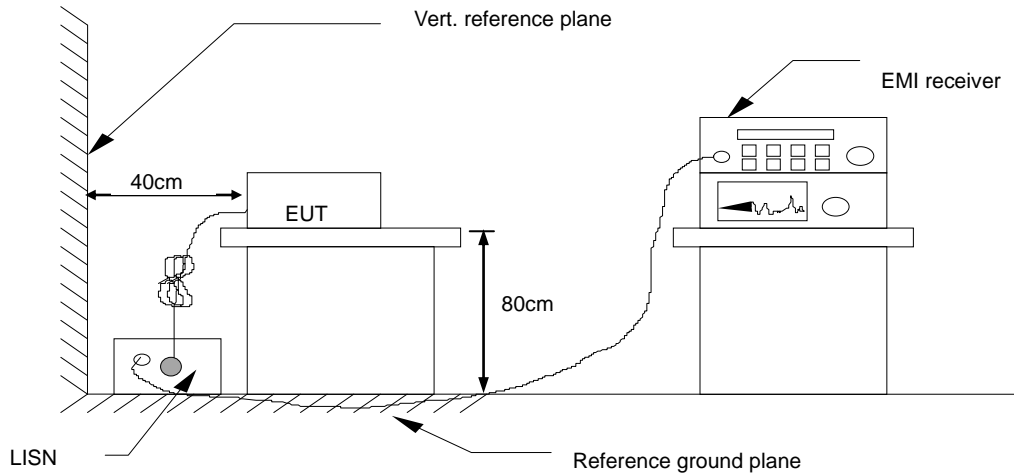
6.9.2 TEST INSTRUMENTS

| Conducted Emission Test Site | | | | | |
|------------------------------|---------------|--------------------|---------------|------------------|-----------------|
| Name of Equipment | Manufacturer | Model Number | Serial Number | Last Calibration | Due Calibration |
| EMI TEST RECEIVER | ROHDE&SCHWARZ | ESCI | 100783 | 02/21/2016 | 02/20/2017 |
| LISN(EUT) | ROHDE&SCHWARZ | ENV216 | 101543-WX | 02/21/2016 | 02/20/2017 |
| LISN | EMCO | 3825/2 | 8901-1459 | 02/21/2016 | 02/20/2017 |
| Temp. / Humidity Meter | VICTOR | HTC-1 | N/A | 02/21/2016 | 02/20/2017 |
| Test S/W | FARAD | EZ-EMC/ CCS-3A1-CE | | | |

- NOTE:** 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 2. N.C.R = No Calibration Request.



6.9.3 TEST CONFIGURATION



6.9.4 TEST PROCEDURE

1. The EUT was placed on a table, which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. Repeat above procedures until all frequency measured were complete.

6.9.5 DATA SAMPLE

| Frequency (MHz) | QuasiPeak Reading (dBuV) | Average Reading (dBuV) | Correction Factor (dB) | QuasiPeak Result (dBuV) | Average Result (dBuV) | QuasiPeak Limit (dBuV) | Average Limit (dBuV) | QuasiPeak Margin (dB) | Average Margin (dB) | Remark (Pass/Fail) |
|-----------------|--------------------------|------------------------|------------------------|-------------------------|-----------------------|------------------------|----------------------|-----------------------|---------------------|--------------------|
| X.XXXX | 32.69 | 25.65 | 11.52 | 44.21 | 37.17 | 65.78 | 55.79 | -21.57 | -18.62 | Pass |

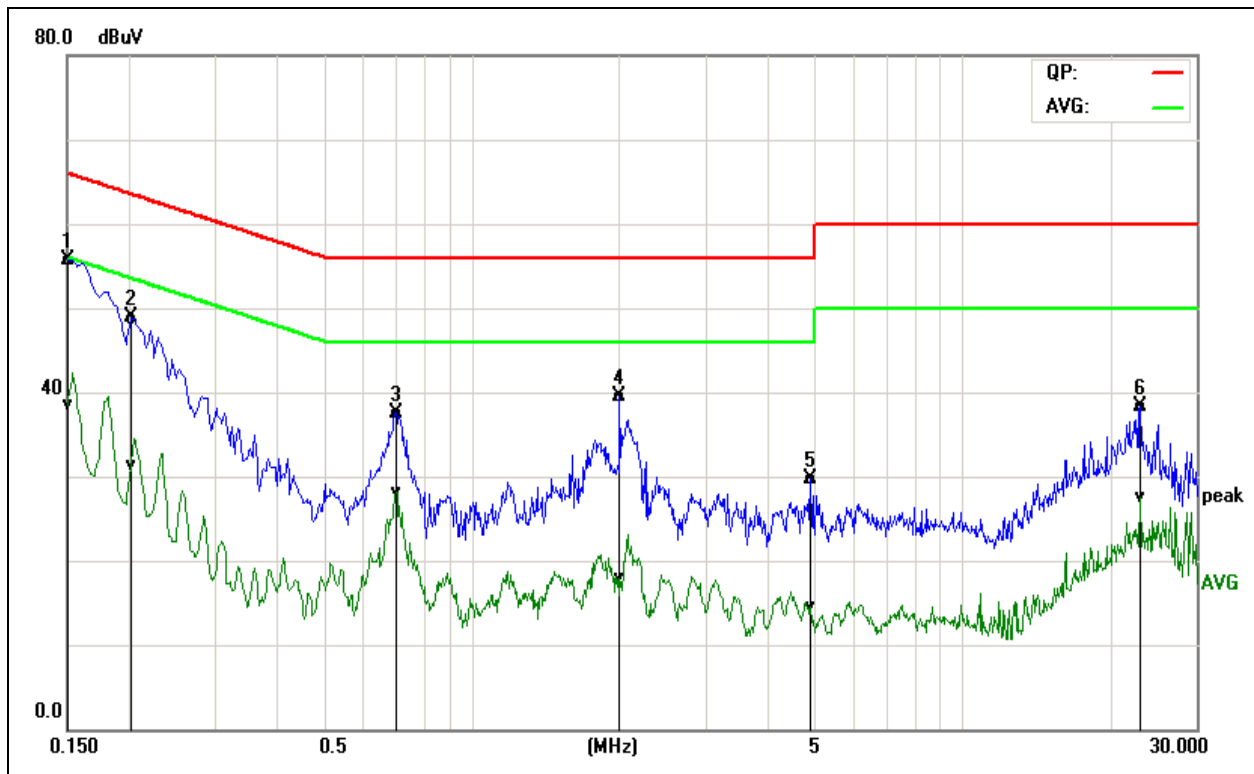
Factor = Insertion loss of LISN + Cable Loss
Result = Quasi-peak Reading/ Average Reading + Factor
Limit = Limit stated in standard
Margin = Result (dBuV) – Limit (dBuV)



6.9.6 TEST RESULTS

| | | | |
|---------------------------------|--------------|------------------|--------|
| Model No. | WR7502 | RBW,VBW | 9 kHz |
| Environmental Conditions | 22°C, 45% RH | Test Mode | Mode 2 |
| Tested by | Saber Huang | Line | L1 |
| Tested Date | 2016/06/27 | | |

(The chart below shows the highest readings taken from the final data.)



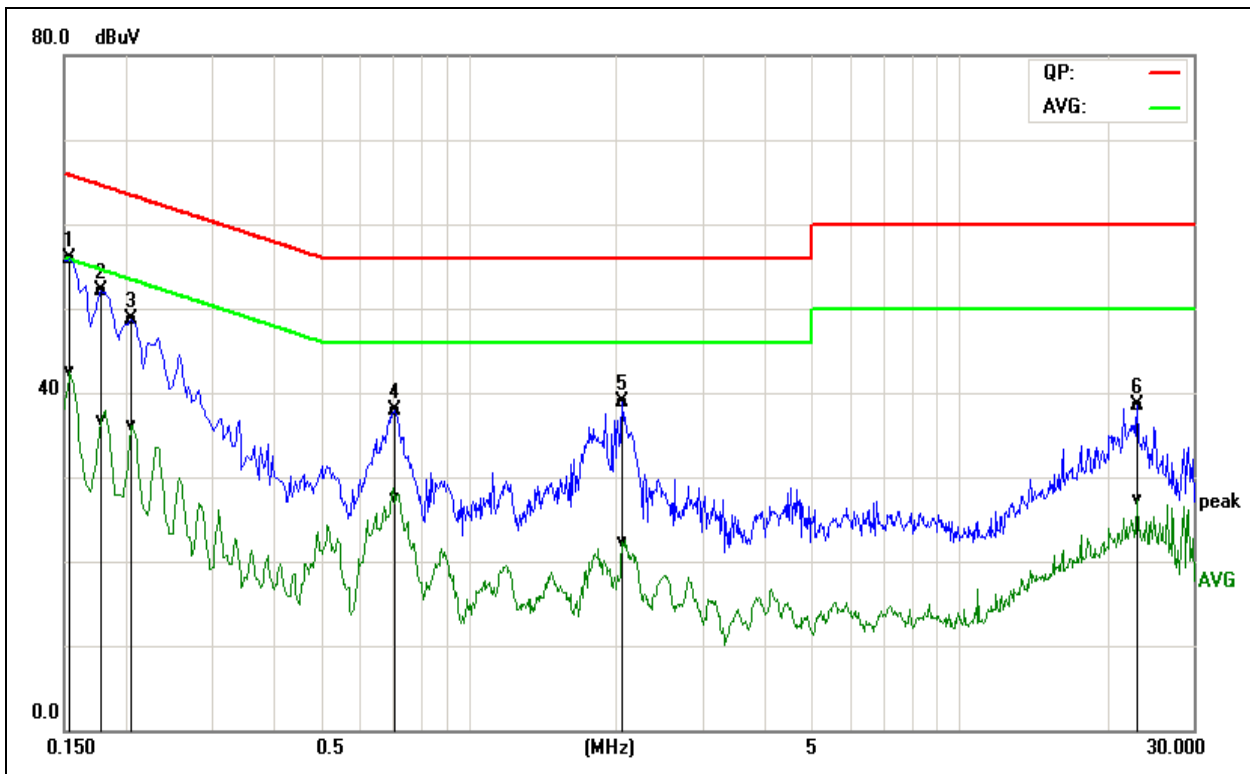
| Frequency (MHz) | QuasiPeak Reading (dBuV) | Average Reading (dBuV) | Correction Factor (dB) | QuasiPeak Result (dBuV) | Average Result (dBuV) | QuasiPeak Limit (dBuV) | Average Limit (dBuV) | QuasiPeak Margin (dB) | Average Margin (dB) | Remark (Pass/Fail) |
|-----------------|--------------------------|------------------------|------------------------|-------------------------|-----------------------|------------------------|----------------------|-----------------------|---------------------|--------------------|
| 0.1500 | 46.18 | 28.86 | 9.58 | 55.76 | 38.44 | 65.99 | 56.00 | -10.23 | -17.56 | Pass |
| 0.2020 | 39.11 | 21.58 | 9.69 | 48.80 | 31.27 | 63.52 | 53.53 | -14.72 | -22.26 | Pass |
| 0.7019 | 27.68 | 18.23 | 9.79 | 37.47 | 28.02 | 56.00 | 46.00 | -18.53 | -17.98 | Pass |
| 2.0020 | 29.77 | 8.27 | 9.73 | 39.50 | 18.00 | 56.00 | 46.00 | -16.50 | -28.00 | Pass |
| 4.9220 | 20.11 | 4.75 | 9.68 | 29.79 | 14.43 | 56.00 | 46.00 | -26.21 | -31.57 | Pass |
| 23.1299 | 28.43 | 17.62 | 9.87 | 38.30 | 27.49 | 60.00 | 50.00 | -21.70 | -22.51 | Pass |

REMARKS: L1 = Line One (Live Line)



| | | | |
|---------------------------------|--------------|------------------|--------|
| Model No. | WR7502 | RBW,VBW | 9 kHz |
| Environmental Conditions | 22°C, 45% RH | Test Mode | Mode 2 |
| Tested by | Saber Huang | Line | L2 |
| Tested Date | 2016/06/27 | | |

(The chart below shows the highest readings taken from the final data.)



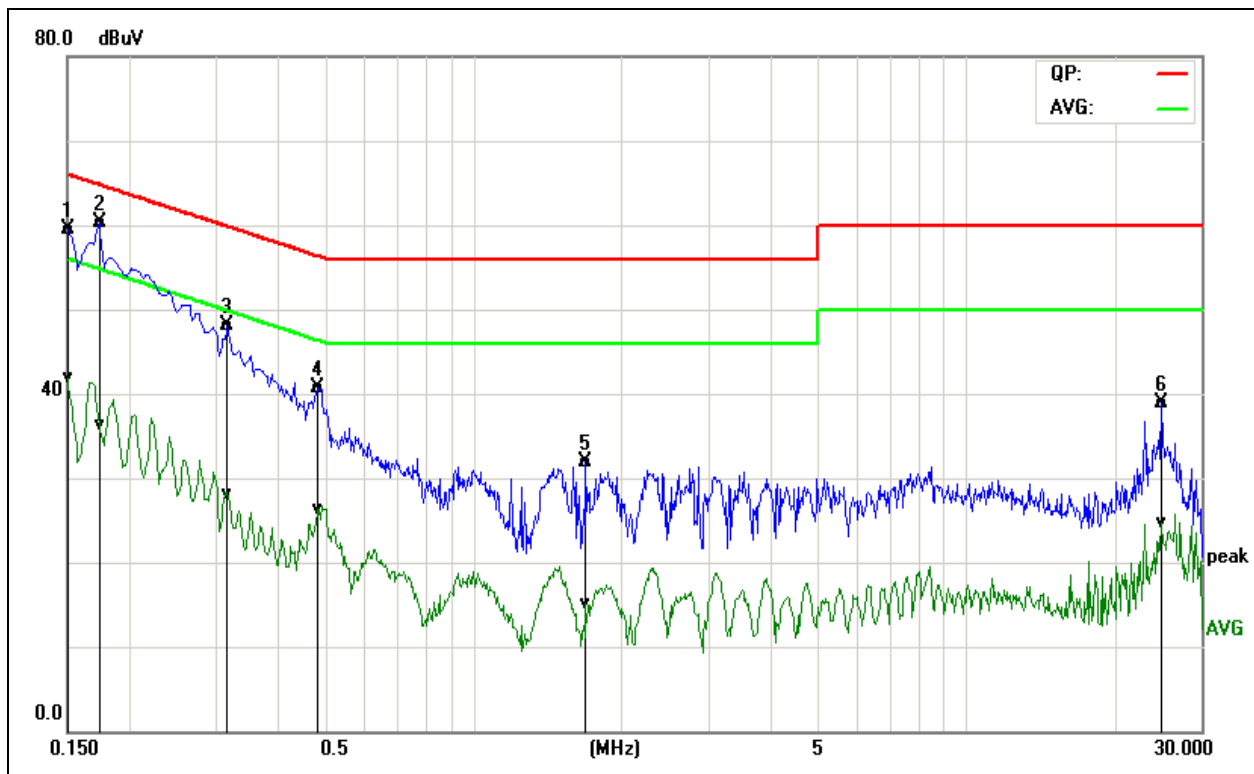
| Frequency (MHz) | QuasiPeak Reading (dBuV) | Average Reading (dBuV) | Correction Factor (dB) | QuasiPeak Result (dBuV) | Average Result (dBuV) | QuasiPeak Limit (dBuV) | Average Limit (dBuV) | QuasiPeak Margin (dB) | Average Margin (dB) | Remark (Pass/Fail) |
|-----------------|--------------------------|------------------------|------------------------|-------------------------|-----------------------|------------------------|----------------------|-----------------------|---------------------|--------------------|
| 0.1539 | 46.07 | 32.65 | 9.78 | 55.85 | 42.43 | 65.78 | 55.79 | -9.93 | -13.36 | Pass |
| 0.1780 | 42.33 | 26.83 | 9.79 | 52.12 | 36.62 | 64.57 | 54.58 | -12.45 | -17.96 | Pass |
| 0.2060 | 38.98 | 26.33 | 9.79 | 48.77 | 36.12 | 63.36 | 53.37 | -14.59 | -17.25 | Pass |
| 0.7060 | 28.24 | 17.75 | 9.69 | 37.93 | 27.44 | 56.00 | 46.00 | -18.07 | -18.56 | Pass |
| 2.0620 | 29.11 | 12.55 | 9.73 | 38.84 | 22.28 | 56.00 | 46.00 | -17.16 | -23.72 | Pass |
| 23.1259 | 28.67 | 17.49 | 9.77 | 38.44 | 27.26 | 60.00 | 50.00 | -21.56 | -22.74 | Pass |

REMARKS: L2 = Line Two (Neutral Line).



| | | | |
|---------------------------------|--------------|------------------|--------|
| Model No. | WR7502 | RBW,VBW | 9 kHz |
| Environmental Conditions | 22°C, 45% RH | Test Mode | Mode 4 |
| Tested by | Saber Huang | Line | L1 |
| Tested Date | 2016/06/27 | | |

(The chart below shows the highest readings taken from the final data.)



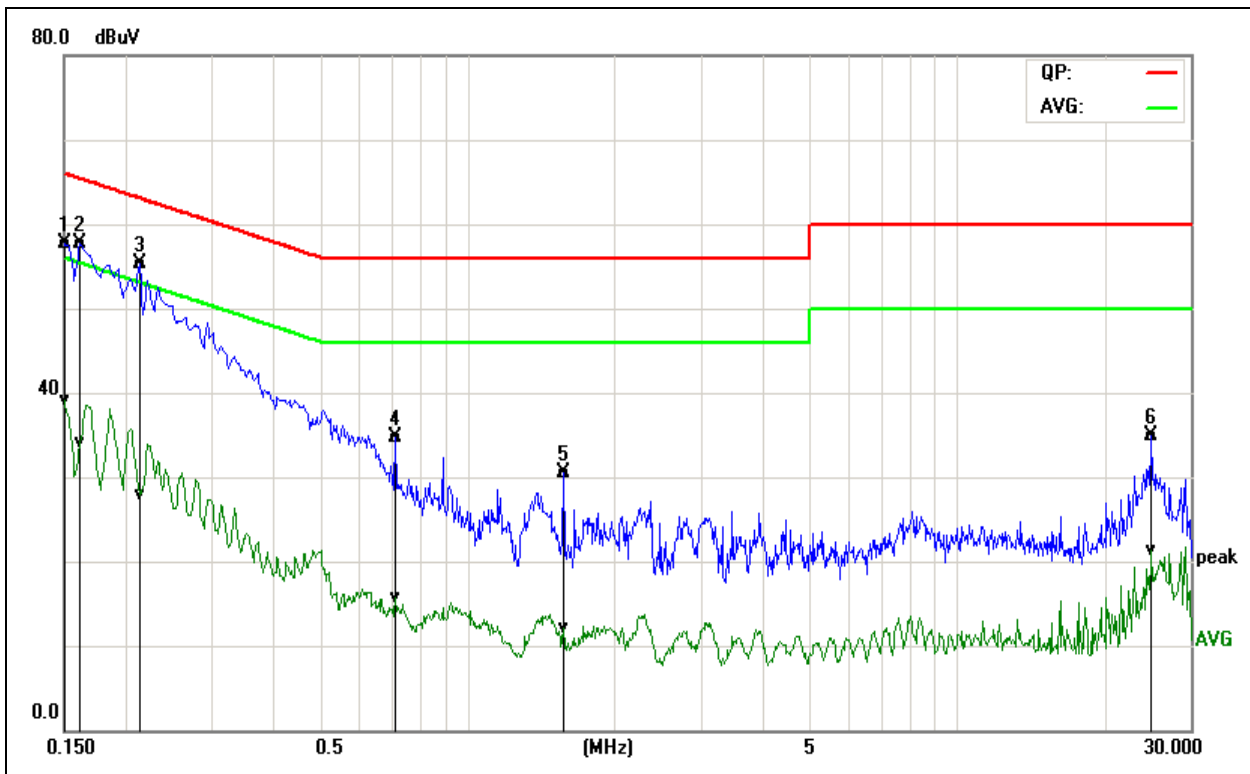
| Frequency (MHz) | QuasiPeak Reading (dBuV) | Average Reading (dBuV) | Correction Factor (dB) | QuasiPeak Result (dBuV) | Average Result (dBuV) | QuasiPeak Limit (dBuV) | Average Limit (dBuV) | QuasiPeak Margin (dB) | Average Margin (dB) | Remark (Pass/Fail) |
|-----------------|--------------------------|------------------------|------------------------|-------------------------|-----------------------|------------------------|----------------------|-----------------------|---------------------|--------------------|
| 0.1500 | 49.92 | 32.30 | 9.58 | 59.50 | 41.88 | 65.99 | 56.00 | -6.49 | -14.12 | Pass |
| 0.1740 | 50.74 | 26.62 | 9.63 | 60.37 | 36.25 | 64.76 | 54.77 | -4.39 | -18.52 | Pass |
| 0.3180 | 38.39 | 18.37 | 9.69 | 48.08 | 28.06 | 59.76 | 49.76 | -11.68 | -21.70 | Pass |
| 0.4820 | 31.04 | 16.68 | 9.68 | 40.72 | 26.36 | 56.30 | 46.30 | -15.58 | -19.94 | Pass |
| 1.6940 | 22.12 | 5.33 | 9.72 | 31.84 | 15.05 | 56.00 | 46.00 | -24.16 | -30.95 | Pass |
| 24.8819 | 28.95 | 14.77 | 9.89 | 38.84 | 24.66 | 60.00 | 50.00 | -21.16 | -25.34 | Pass |

REMARKS: L1 = Line One (Live Line)



| | | | |
|---------------------------------|--------------|------------------|--------|
| Model No. | WR7502 | RBW,VBW | 9 kHz |
| Environmental Conditions | 22°C, 45% RH | Test Mode | Mode 4 |
| Tested by | Saber Huang | Line | L2 |
| Tested Date | 2016/06/27 | | |

(The chart below shows the highest readings taken from the final data.)



| Frequency (MHz) | QuasiPeak Reading (dBuV) | Average Reading (dBuV) | Correction Factor (dB) | QuasiPeak Result (dBuV) | Average Result (dBuV) | QuasiPeak Limit (dBuV) | Average Limit (dBuV) | QuasiPeak Margin (dB) | Average Margin (dB) | Remark (Pass/Fail) |
|-----------------|--------------------------|------------------------|------------------------|-------------------------|-----------------------|------------------------|----------------------|-----------------------|---------------------|--------------------|
| 0.1500 | 47.89 | 29.26 | 9.78 | 57.67 | 39.04 | 65.99 | 56.00 | -8.32 | -16.96 | Pass |
| 0.1620 | 47.89 | 24.32 | 9.78 | 57.67 | 34.10 | 65.36 | 55.36 | -7.69 | -21.26 | Pass |
| 0.2140 | 45.43 | 18.14 | 9.79 | 55.22 | 27.93 | 63.04 | 53.05 | -7.82 | -25.12 | Pass |
| 0.7140 | 24.95 | 5.96 | 9.69 | 34.64 | 15.65 | 56.00 | 46.00 | -21.36 | -30.35 | Pass |
| 1.5740 | 20.66 | 2.26 | 9.76 | 30.42 | 12.02 | 56.00 | 46.00 | -25.58 | -33.98 | Pass |
| 25.0419 | 25.12 | 11.56 | 9.79 | 34.91 | 21.35 | 60.00 | 50.00 | -25.09 | -28.65 | Pass |

REMARKS: L2 = Line Two (Neutral Line).



6.10 FREQUENCY STABILITY

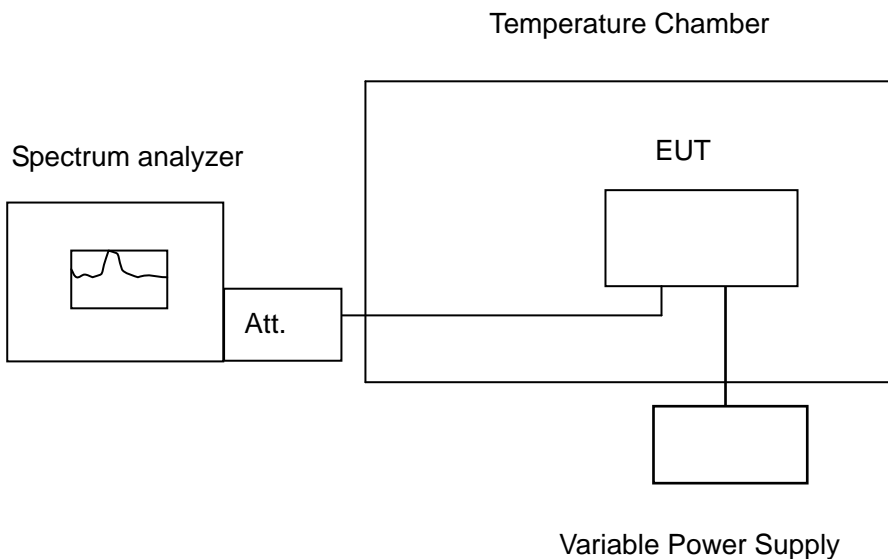
6.10.1 LIMIT

According to §15.407(g), manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the operational description.

6.10.2 TEST INSTRUMENTS

| Name of Equipment | Manufacturer | Model Number | Serial Number | Last Calibration | Due Calibration |
|------------------------|--------------|--------------|---------------|------------------|-----------------|
| Spectrum Analyzer | Agilent | N9010A | MY52221469 | 02/21/2016 | 02/20/2017 |
| DC Power Supply | DAZHENG | PS-605D | 20018978 | N.C.R | N.C.R |
| AC POWER SOUCE | UMART | HPA1010 | N/A | N.C.R | N.C.R |
| Power Meter | Anritsu | ML2495A | 1204003 | 02/21/2016 | 02/20/2017 |
| Power Sensor | Anritsu | MA2411B | 1126150 | 02/21/2016 | 02/20/2017 |
| Temperature Chamber | TERCHY | MHG-800N | E21104 | 11/18/2015 | 11/17/2016 |
| Temp. / Humidity Meter | Anymetre | JR913 | N/A | 02/21/2016 | 02/20/2017 |

6.10.3 TEST CONFIGURATION



Remark: Measurement setup for testing on Antenna connector



6.10.4 TEST PROCEDURE

The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 20°C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to -20°C. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached.

6.10.5 TEST RESULTS

No non-compliance noted.



Test Data

IEEE 802.11a MHz mode / 5180 ~ 5240MHz (Low)

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 50 | 120 | 5179.953812 | 5150-5250 | PASS |
| 40 | 120 | 5179.968727 | 5150-5250 | PASS |
| 30 | 120 | 5179.980338 | 5150-5250 | PASS |
| 20 | 120 | 5180.005700 | 5150-5250 | PASS |
| 10 | 120 | 5179.961398 | 5150-5250 | PASS |
| 0 | 120 | 5179.982194 | 5150-5250 | PASS |
| -10 | 120 | 5179.960144 | 5150-5250 | PASS |
| -20 | 120 | 5179.951849 | 5150-5250 | PASS |

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 20 | 108 | 5179.957327 | 5150-5250 | PASS |
| | 120 | 5180.005700 | 5150-5250 | PASS |
| | 132 | 5179.978837 | 5150-5250 | PASS |

IEEE 802.11a MHz mode / 5180 ~ 5240MHz (High)

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 50 | 120 | 5239.981272 | 5150-5250 | PASS |
| 40 | 120 | 5239.950123 | 5150-5250 | PASS |
| 30 | 120 | 5239.958917 | 5150-5250 | PASS |
| 20 | 120 | 5240.013300 | 5150-5250 | PASS |
| 10 | 120 | 5239.995085 | 5150-5250 | PASS |
| 0 | 120 | 5239.955580 | 5150-5250 | PASS |
| -10 | 120 | 5239.973277 | 5150-5250 | PASS |
| -20 | 120 | 5239.966632 | 5150-5250 | PASS |

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 20 | 108 | 5239.972503 | 5150-5250 | PASS |
| | 120 | 5240.013300 | 5150-5250 | PASS |
| | 132 | 5239.968376 | 5150-5250 | PASS |



IEEE 802.11a mode / 5745 ~ 5825MHz (Low)

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 50 | 120 | 5744.995766 | 5725-5850 | PASS |
| 40 | 120 | 5744.994507 | 5725-5850 | PASS |
| 30 | 120 | 5744.987593 | 5725-5850 | PASS |
| 20 | 120 | 5745.014800 | 5725-5850 | PASS |
| 10 | 120 | 5744.998777 | 5725-5850 | PASS |
| 0 | 120 | 5744.964256 | 5725-5850 | PASS |
| -10 | 120 | 5744.994439 | 5725-5850 | PASS |
| -20 | 120 | 5744.969893 | 5725-5850 | PASS |

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 20 | 108 | 5744.956809 | 5725-5850 | PASS |
| | 120 | 5745.014800 | 5725-5850 | PASS |
| | 132 | 5744.973853 | 5725-5850 | PASS |

IEEE 802.11a mode / 5745 ~ 5825MHz (High)

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 50 | 120 | 5824.956359 | 5725-5850 | PASS |
| 40 | 120 | 5824.967186 | 5725-5850 | PASS |
| 30 | 120 | 5824.960523 | 5725-5850 | PASS |
| 20 | 120 | 5824.997520 | 5725-5850 | PASS |
| 10 | 120 | 5824.976239 | 5725-5850 | PASS |
| 0 | 120 | 5824.953436 | 5725-5850 | PASS |
| -10 | 120 | 5824.972920 | 5725-5850 | PASS |
| -20 | 120 | 5824.962510 | 5725-5850 | PASS |

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 20 | 108 | 5824.980674 | 5725-5850 | PASS |
| | 120 | 5825.016700 | 5725-5850 | PASS |
| | 132 | 5824.982873 | 5725-5850 | PASS |



IEEE 802.11n HT 20 MHz mode / 5180 ~ 5240MHz (Low)

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 50 | 120 | 5179.995839 | 5150-5250 | PASS |
| 40 | 120 | 5179.975411 | 5150-5250 | PASS |
| 30 | 120 | 5179.973991 | 5150-5250 | PASS |
| 20 | 120 | 5180.004600 | 5150-5250 | PASS |
| 10 | 120 | 5179.981135 | 5150-5250 | PASS |
| 0 | 120 | 5179.968029 | 5150-5250 | PASS |
| -10 | 120 | 5179.996964 | 5150-5250 | PASS |
| -20 | 120 | 5179.952940 | 5150-5250 | PASS |

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 20 | 108 | 5239.955925 | 5150-5250 | PASS |
| | 120 | 5240.012800 | 5150-5250 | PASS |
| | 132 | 5239.978237 | 5150-5250 | PASS |

IEEE 802.11n HT 20 MHz mode / 5180 ~ 5240MHz (High)

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 50 | 120 | 5239.975624 | 5150-5250 | PASS |
| 40 | 120 | 5239.980822 | 5150-5250 | PASS |
| 30 | 120 | 5239.993275 | 5150-5250 | PASS |
| 20 | 120 | 5240.012800 | 5150-5250 | PASS |
| 10 | 120 | 5239.975954 | 5150-5250 | PASS |
| 0 | 120 | 5239.989707 | 5150-5250 | PASS |
| -10 | 120 | 5239.970581 | 5150-5250 | PASS |
| -20 | 120 | 5239.952804 | 5150-5250 | PASS |

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 20 | 108 | | 5150-5250 | PASS |
| | 120 | | 5150-5250 | PASS |
| | 132 | | 5150-5250 | PASS |



IEEE 802.11n HT 20 MHz mode / 5745 ~ 5825MHz (Low)

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 50 | 120 | 5744.998738 | 5725-5850 | PASS |
| 40 | 120 | 5744.988126 | 5725-5850 | PASS |
| 30 | 120 | 5744.959064 | 5725-5850 | PASS |
| 20 | 120 | 5745.013800 | 5725-5850 | PASS |
| 10 | 120 | 5744.984064 | 5725-5850 | PASS |
| 0 | 120 | 5744.976982 | 5725-5850 | PASS |
| -10 | 120 | 5744.961636 | 5725-5850 | PASS |
| -20 | 120 | 5744.992436 | 5725-5850 | PASS |

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 20 | 108 | 5744.988892 | 5725-5850 | PASS |
| | 120 | 5745.013800 | 5725-5850 | PASS |
| | 132 | 5744.950267 | 5725-5850 | PASS |

IEEE 802.11n HT 20 MHz mode / 5745 ~ 5825MHz (High)

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 50 | 120 | 5824.966283 | 5725-5850 | PASS |
| 40 | 120 | 5824.977125 | 5725-5850 | PASS |
| 30 | 120 | 5824.987762 | 5725-5850 | PASS |
| 20 | 120 | 5824.997630 | 5725-5850 | PASS |
| 10 | 120 | 5825.016200 | 5725-5850 | PASS |
| 0 | 120 | 5824.974237 | 5725-5850 | PASS |
| -10 | 120 | 5824.960419 | 5725-5850 | PASS |
| -20 | 120 | 5824.996387 | 5725-5850 | PASS |

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 20 | 108 | 5824.961899 | 5725-5850 | PASS |
| | 120 | 5825.016200 | 5725-5850 | PASS |
| | 132 | 5824.996690 | 5725-5850 | PASS |



IEEE 802.11n HT 40 MHz mode / 5190 ~ 5230MHz (Low)

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 50 | 120 | 5189.997917 | 5150-5250 | PASS |
| 40 | 120 | 5189.973441 | 5150-5250 | PASS |
| 30 | 120 | 5189.968983 | 5150-5250 | PASS |
| 20 | 120 | 5190.014800 | 5150-5250 | PASS |
| 10 | 120 | 5189.957007 | 5150-5250 | PASS |
| 0 | 120 | 5189.981898 | 5150-5250 | PASS |
| -10 | 120 | 5189.966647 | 5150-5250 | PASS |
| -20 | 120 | 5189.954796 | 5150-5250 | PASS |

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 20 | 108 | 5189.984528 | 5150-5250 | PASS |
| | 120 | 5190.014800 | 5150-5250 | PASS |
| | 132 | 5189.980890 | 5150-5250 | PASS |

IEEE 802.11n HT 40 MHz mode / 5190 ~ 5230MHz (High)

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 50 | 120 | 5229.961703 | 5150-5250 | PASS |
| 40 | 120 | 5229.968755 | 5150-5250 | PASS |
| 30 | 120 | 5229.959424 | 5150-5250 | PASS |
| 20 | 120 | 5230.012700 | 5150-5250 | PASS |
| 10 | 120 | 5229.991035 | 5150-5250 | PASS |
| 0 | 120 | 5229.951332 | 5150-5250 | PASS |
| -10 | 120 | 5229.954724 | 5150-5250 | PASS |
| -20 | 120 | 5229.968268 | 5150-5250 | PASS |

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 20 | 108 | 5229.954286 | 5150-5250 | PASS |
| | 120 | 5230.012700 | 5150-5250 | PASS |
| | 132 | 5229.955495 | 5150-5250 | PASS |



IEEE 802.11n HT 40 MHz mode / 5755 ~ 5795MHz (Low)

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 50 | 120 | 5754.951406 | 5725-5850 | PASS |
| 40 | 120 | 5754.981281 | 5725-5850 | PASS |
| 30 | 120 | 5754.988205 | 5725-5850 | PASS |
| 20 | 120 | 5755.016300 | 5725-5850 | PASS |
| 10 | 120 | 5754.972107 | 5725-5850 | PASS |
| 0 | 120 | 5754.963579 | 5725-5850 | PASS |
| -10 | 120 | 5754.981367 | 5725-5850 | PASS |
| -20 | 120 | 5754.973120 | 5725-5850 | PASS |

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 20 | 108 | 5754.961083 | 5725-5850 | PASS |
| | 120 | 5755.016300 | 5725-5850 | PASS |
| | 132 | 5754.968517 | 5725-5850 | PASS |

IEEE 802.11n HT 40 MHz mode / 5755 ~ 5795MHz (High)

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 50 | 120 | 5794.989866 | 5725-5850 | PASS |
| 40 | 120 | 5794.970109 | 5725-5850 | PASS |
| 30 | 120 | 5794.966003 | 5725-5850 | PASS |
| 20 | 120 | 5795.020200 | 5725-5850 | PASS |
| 10 | 120 | 5794.954600 | 5725-5850 | PASS |
| 0 | 120 | 5794.985701 | 5725-5850 | PASS |
| -10 | 120 | 5794.983837 | 5725-5850 | PASS |
| -20 | 120 | 5794.956241 | 5725-5850 | PASS |

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 20 | 108 | 5794.987643 | 5725-5850 | PASS |
| | 120 | 5795.020200 | 5725-5850 | PASS |
| | 132 | 5794.979272 | 5725-5850 | PASS |



IEEE 802.11ac 80 mode / 5210MHz

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 50 | 120 | 5209.993412 | 5150-5250 | PASS |
| 40 | 120 | 5209.968500 | 5150-5250 | PASS |
| 30 | 120 | 5209.983231 | 5150-5250 | PASS |
| 20 | 120 | 5210.017400 | 5150-5250 | PASS |
| 10 | 120 | 5209.989080 | 5150-5250 | PASS |
| 0 | 120 | 5209.993323 | 5150-5250 | PASS |
| -10 | 120 | 5209.953351 | 5150-5250 | PASS |
| -20 | 120 | 5209.981586 | 5150-5250 | PASS |

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 20 | 108 | 5209.970956 | 5150-5250 | PASS |
| | 120 | 5210.017400 | 5150-5250 | PASS |
| | 132 | 5209.967509 | 5150-5250 | PASS |

IEEE 802.11ac 80 mode / 5775MHz

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 50 | 120 | 5774.965059 | 5725-5850 | PASS |
| 40 | 120 | 5774.991785 | 5725-5850 | PASS |
| 30 | 120 | 5774.967096 | 5725-5850 | PASS |
| 20 | 120 | 5775.020300 | 5725-5850 | PASS |
| 10 | 120 | 5774.956718 | 5725-5850 | PASS |
| 0 | 120 | 5774.992192 | 5725-5850 | PASS |
| -10 | 120 | 5774.982797 | 5725-5850 | PASS |
| -20 | 120 | 5774.980751 | 5725-5850 | PASS |

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 20 | 108 | 5774.975291 | 5725-5850 | PASS |
| | 120 | 5775.020300 | 5725-5850 | PASS |
| | 132 | 5774.984084 | 5725-5850 | PASS |