Final measurement:

--- The final measurement will be performed with minimum the six highest peaks.

--- According to the maximum antenna and turntable positions of premeasurement the software maximize the peaks by changing turntable position (± 45°) and antenna movement between 1 and 4 meter.

--- The final measurement will be done with QP detector with an EMI receiver.

--- The final levels, frequency, measuring time, bandwidth, antenna height, antenna polarization, turntable angle, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement with marked maximum final measurements and the limit will be stored.

3) Sequence of testing 1 GHz to 18 GHz

Setup:

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.

--- If the EUT is a tabletop system, a rotatable table with 1.5 m height is used.

--- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.

--- Auxiliary equipment and cables were positioned to simulate normal operation conditions

--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.

--- The measurement distance is 3 meter.

--- The EUT was set into operation.

Pre measurement:

--- The turntable rotates from 0° to 315° using 45° steps.

--- The antenna is polarized vertical and horizontal.

--- The antenna height scan range is 1 meter to 2.5 meter.

--- At each turntable position and antenna polarization the analyzer sweeps with peak detection to find the maximum of all emissions.

Final measurement:

--- The final measurement will be performed with minimum the six highest peaks.

--- According to the maximum antenna and turntable positions of premeasurement the software maximize the peaks by changing turntable position (± 45°) and antenna movement between 1 and 4 meter. This procedure is repeated for both antenna polarizations.

--- The final measurement will be done in the position (turntable, EUT-table and antenna polarization) causing the highest emissions with Peak and Average detector.
--- The final levels, frequency, measuring time, bandwidth, turntable position, EUT-table position, antenna polarization, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the pre measurement with marked maximum final measurements and the limit will be stored.

4) Sequence of testing above 18 GHz
Setup:

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.

--- If the EUT is a tabletop system, a rotatable table with 1.5 m height is used.

--- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.

--- Auxiliary equipment and cables were positioned to simulate normal operation conditions

--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.

--- The measurement distance is 1 meter.

--- The EUT was set into operation.

Pre measurement:

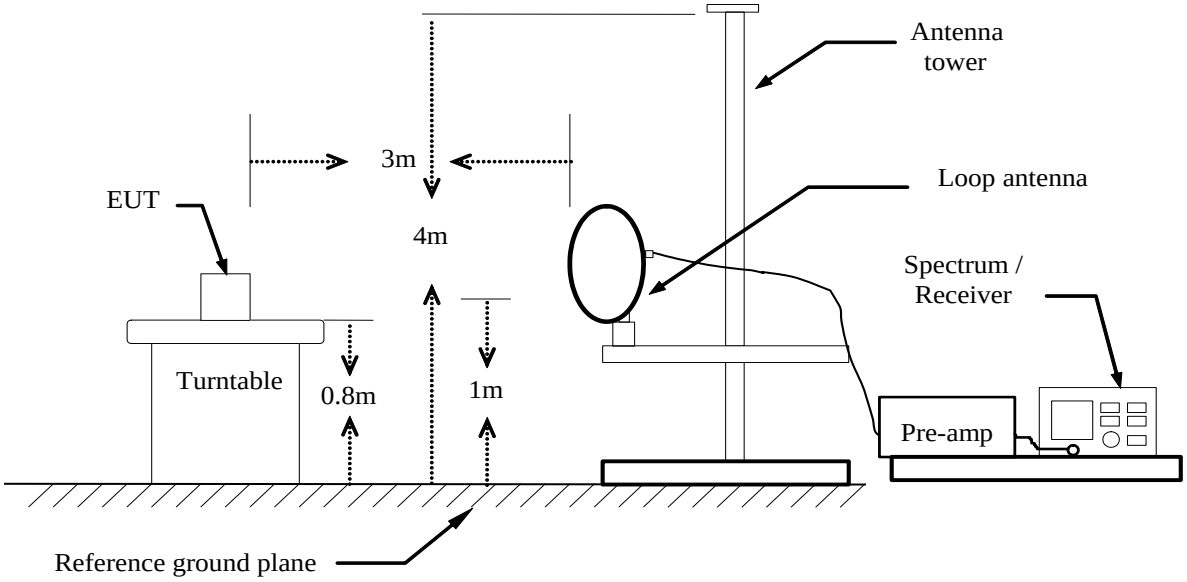
--- The antenna is moved spherical over the EUT in different polarisations of the antenna.

Final measurement:

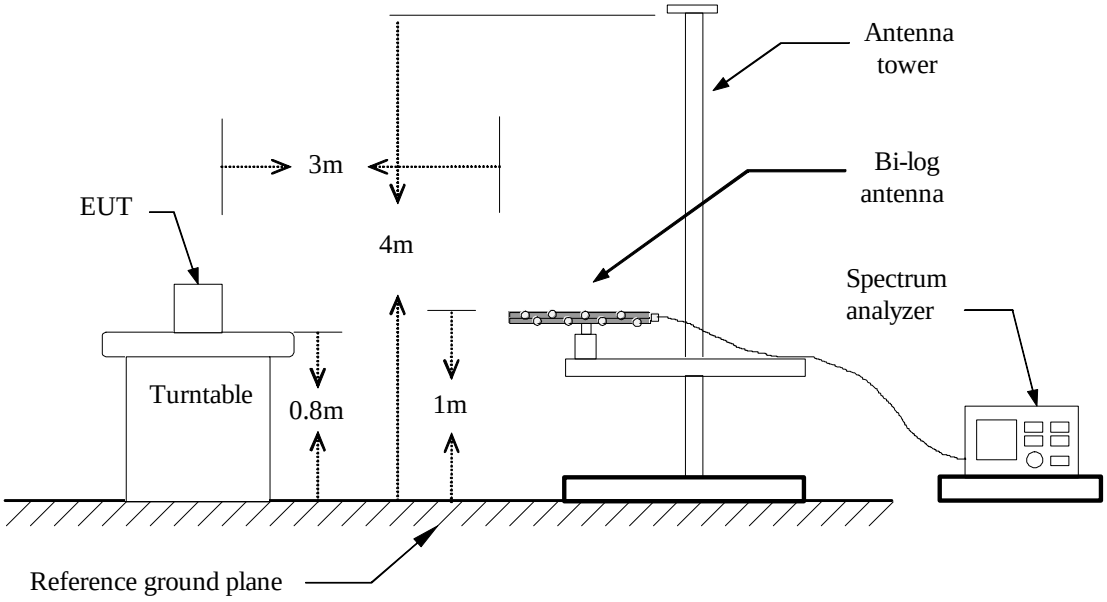
--- The final measurement will be performed at the position and antenna orientation for all detected emissions that were found during the premeasurements with Peak and Average detector.
--- The final levels, frequency, measuring time, bandwidth, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement and the limit will be stored.

7.2.2.5. TEST SETUP

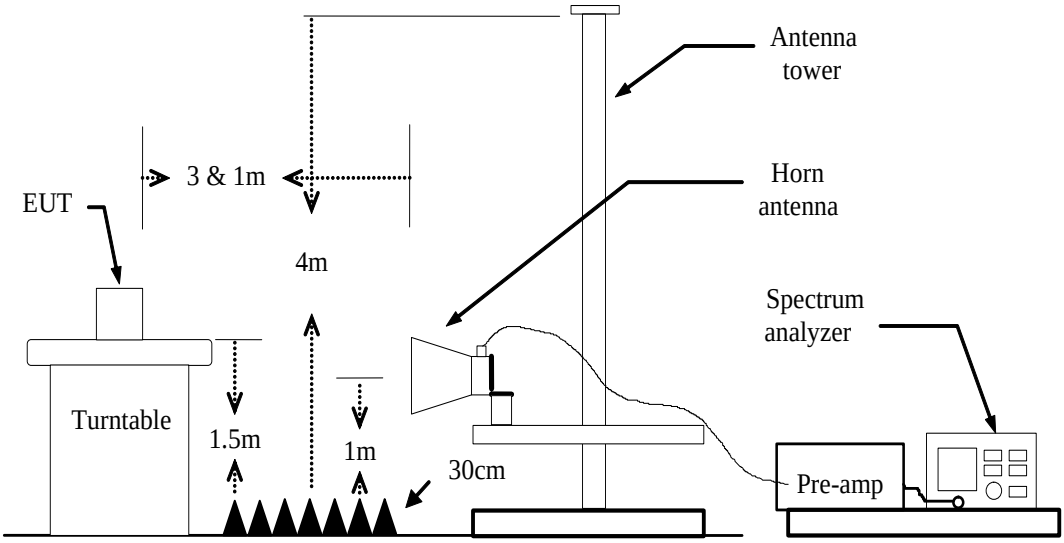
Below 30MHz



Below 1 GHz



Above 1 GHz



For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

7.2.2.6. 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
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	62.09	-11.42	50.67	74.00	-23.33	V	Peak
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

7.2.2.7. TEST RESULTS

Below 1 GHz

Test Mode: TX / IEEE 802.11b(CH Low) **Tested by:** Fade Zhong

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** August 26, 2017

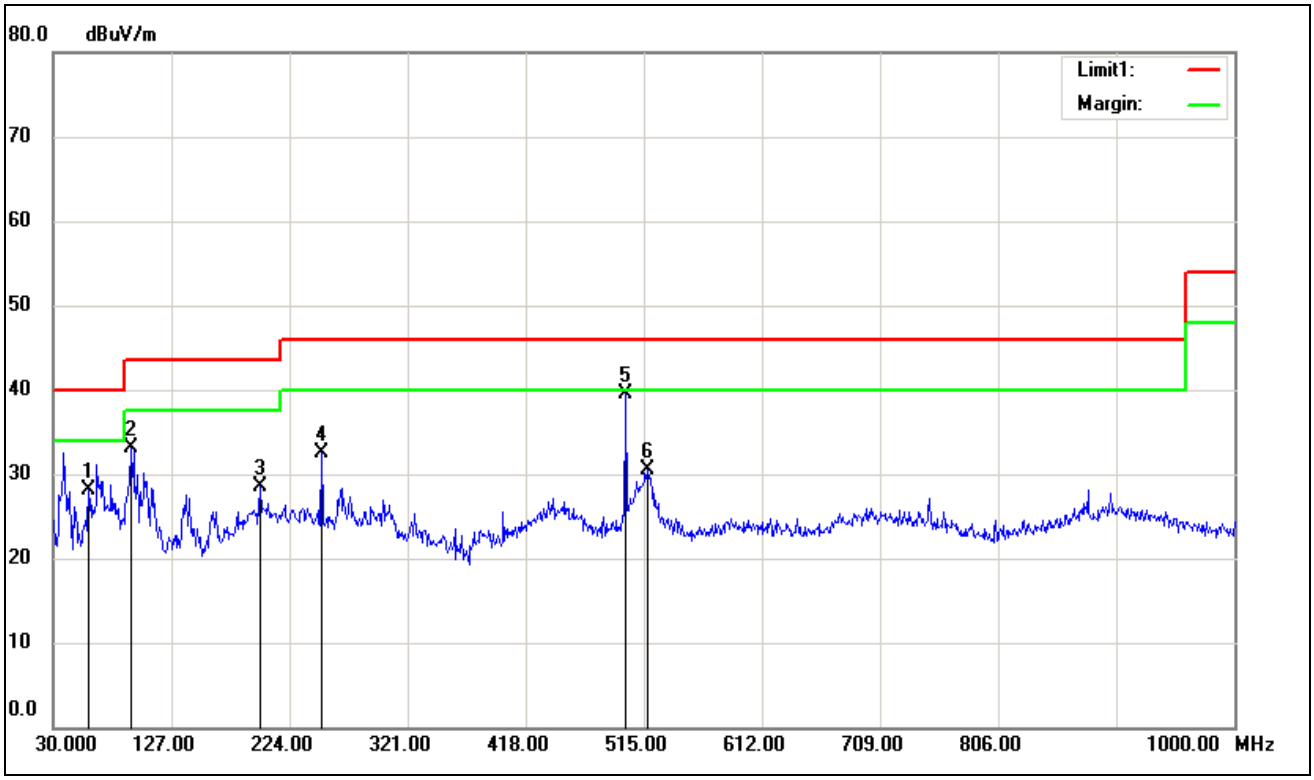
Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
59.1000	45.88	-17.85	28.03	40.00	-11.97	V	QP
94.0200	48.58	-15.46	33.12	43.50	-10.38	V	QP
199.7500	38.80	-10.23	28.57	43.50	-14.93	V	QP
250.1900	41.63	-9.09	32.54	46.00	-13.46	V	QP
500.4500	45.65	-6.10	39.55	46.00	-6.45	V	QP
517.9100	36.25	-5.76	30.49	46.00	-15.51	V	QP
94.0200	47.95	-15.46	32.49	43.50	-11.01	H	QP
138.6400	44.67	-12.14	32.53	43.50	-10.97	H	QP
250.1900	50.04	-9.09	40.95	46.00	-5.05	H	QP
500.4500	44.39	-6.10	38.29	46.00	-7.71	H	QP
520.8200	35.68	-5.71	29.97	46.00	-16.03	H	QP
708.0300	28.02	-2.28	25.74	46.00	-20.26	H	QP

Pre-scan all mode and recorded the worst case results in this report (802.11b (Low Mid))

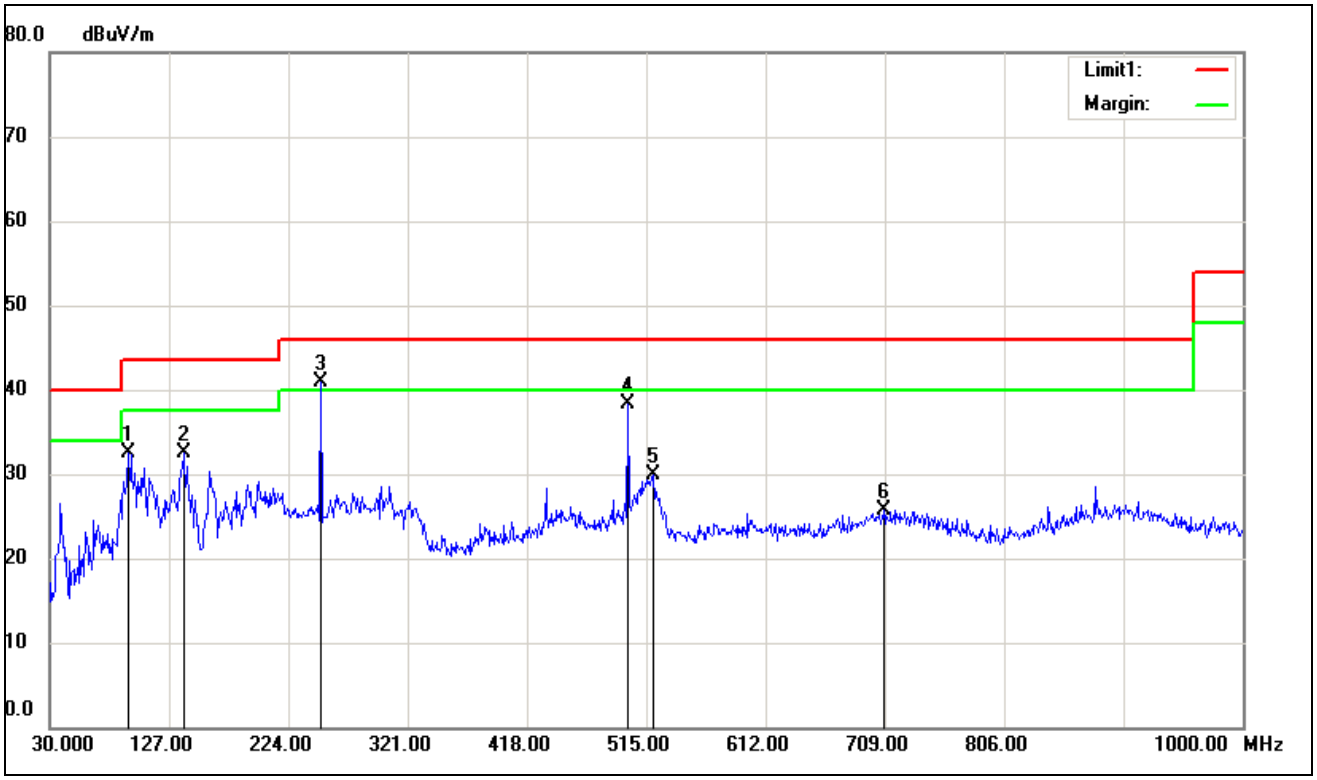
Remark:

1. No emission found between lowest internal used/generated frequency to 30MHz (9kHz~30MHz)
2. Radiated emissions measured in frequency range from 9kHz to 1GHz were made with an instrument using Quasi-peak detector mode.
3. 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.
4. The IF bandwidth of Receiver between 30MHz to 1GHz was 120kHz.
5. Frequency (MHz) = Emission frequency in MHz
   Reading (dBμV/m) = Receiver reading
   Correction Factor (dB) = Antenna factor + Cable loss – Amplifier gain
   Limit (dBμV/m) = Limit stated in standard
   Margin (dB) = Measured (dBμV/m) – Limits (dBμV/m)
   Antenna Pol e(H/V) = Current carrying line of reading

Vertical



Horizontal



Above 1 GHz
Antenna 0
Test Mode: TX / IEEE 802.11b(CH Low) **Tested by:** Fade Zhong

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** August 24, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
1765.000	52.79	-6.35	46.44	74.00	-27.56	V	peak
2215.000	50.70	-3.82	46.88	74.00	-27.12	V	peak
2998.000	46.44	-1.36	45.08	74.00	-28.92	V	peak
4825.000	52.92	4.41	57.33	74.00	-16.67	V	peak
4825.000	44.91	4.41	49.32	54.00	-4.68	V	AVG
6616.000	41.32	7.08	48.40	74.00	-25.60	V	peak
7993.000	40.87	9.64	50.51	74.00	-23.49	V	peak
2530.000	45.15	-2.21	42.94	74.00	-31.06	H	Peak
3907.000	42.45	1.20	43.65	74.00	-30.35	H	Peak
4825.000	45.08	4.41	49.49	74.00	-24.51	H	Peak
5617.000	41.56	5.92	47.48	74.00	-26.52	H	peak
7291.000	41.27	8.27	49.54	74.00	-24.46	H	peak
8101.000	41.05	9.59	50.64	74.00	-23.36	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 or as required by the applicant.
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 802.11b (CH Mid) **Tested by:** Fade Zhong

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** August 24, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
1765.000	54.90	-6.35	48.55	74.00	-25.45	V	Peak
2233.000	49.71	-3.72	45.99	74.00	-28.01	V	Peak
2440.000	50.80	-2.59	48.21	74.00	-25.79	V	Peak
2998.000	46.23	-1.36	44.87	74.00	-29.13	V	Peak
3727.000	43.16	0.44	43.60	74.00	-30.40	V	Peak
4888.000	50.95	4.61	55.56	74.00	-18.44	V	Peak
4888.000	46.60	4.61	51.21	54.00	-2.79	V	AVG
2836.000	44.51	-1.66	42.85	74.00	-31.15	H	Peak
4186.000	43.66	2.24	45.90	74.00	-28.10	H	Peak
4888.000	44.40	4.61	49.01	74.00	-24.99	H	Peak
5743.000	40.62	5.97	46.59	74.00	-27.41	H	Peak
7084.000	41.25	7.86	49.11	74.00	-24.89	H	Peak
8038.000	41.11	9.63	50.74	74.00	-23.26	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 or as required by the applicant.
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 802.11b (CH High) **Tested by:** Fade Zhong

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** August 24, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
1765.000	55.60	-6.35	49.25	74.00	-24.75	V	Peak
2476.000	51.47	-2.39	49.08	74.00	-24.92	V	Peak
2998.000	46.03	-1.36	44.67	74.00	-29.33	V	Peak
4609.000	41.55	3.71	45.26	74.00	-28.74	V	Peak
4942.000	49.51	4.79	54.30	74.00	-19.70	V	Peak
4942.000	46.50	4.79	51.29	54.00	-2.71	V	AVG
6859.000	40.61	7.47	48.08	74.00	-25.92	V	Peak
1765.000	50.27	-6.35	43.92	74.00	-30.08	H	Peak
2521.000	45.69	-2.22	43.47	74.00	-30.53	H	Peak
3079.000	44.70	-1.23	43.47	74.00	-30.53	H	Peak
4942.000	44.06	4.79	48.85	74.00	-25.15	H	Peak
5419.000	42.18	5.73	47.91	74.00	-26.09	H	Peak
6805.000	41.20	7.38	48.58	74.00	-25.42	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 or as required by the applicant.
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).

Antenna 1

Test Mode: TX / IEEE 802.11b(CH Low) **Tested by:** Fade Zhong

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** August 24, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
2413.000	47.35	-2.74	44.61	74.00	-29.39	V	peak
2998.000	45.09	-1.36	43.73	74.00	-30.27	V	peak
4411.000	41.91	3.04	44.95	74.00	-29.05	V	peak
4825.000	50.95	4.41	55.36	74.00	-18.64	V	peak
4825.000	47.70	4.41	52.11	54.00	-1.89	V	AVG
6382.000	41.80	6.70	48.50	74.00	-25.50	V	peak
7237.000	43.33	8.16	51.49	74.00	-22.51	V	peak
1738.000	53.08	-6.40	46.68	74.00	-27.32	H	Peak
2557.000	44.98	-2.16	42.82	74.00	-31.18	H	Peak
4474.000	43.02	3.26	46.28	74.00	-27.72	H	Peak
4825.000	46.65	4.41	51.06	74.00	-22.94	H	peak
5554.000	41.36	5.89	47.25	74.00	-26.75	H	peak
7237.000	40.73	8.16	48.89	74.00	-25.11	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 or as required by the applicant.
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 802.11b (CH Mid) **Tested by:** Fade Zhong

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** August 24, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
2440.000	50.91	-2.59	48.32	74.00	-25.68	V	Peak
2998.000	46.39	-1.36	45.03	74.00	-28.97	V	Peak
4888.000	47.56	4.61	52.17	74.00	-21.83	V	Peak
6103.000	41.53	6.25	47.78	74.00	-26.22	V	Peak
6967.000	40.46	7.65	48.11	74.00	-25.89	V	Peak
7327.000	42.67	8.34	51.01	74.00	-22.99	V	Peak
2521.000	45.13	-2.22	42.91	74.00	-31.09	H	Peak
3673.000	43.02	0.21	43.23	74.00	-30.77	H	Peak
4564.000	42.09	3.56	45.65	74.00	-28.35	H	Peak
4888.000	44.68	4.61	49.29	74.00	-24.71	H	Peak
5941.000	41.67	6.06	47.73	74.00	-26.27	H	Peak
8002.000	40.73	9.65	50.38	74.00	-23.62	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 or as required by the applicant.
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 802.11b (CH High) **Tested by:** Fade Zhong

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** August 24, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
1765.000	56.82	-6.35	50.47	74.00	-23.53	V	Peak
2476.000	51.51	-2.39	49.12	74.00	-24.88	V	Peak
3835.000	42.42	0.89	43.31	74.00	-30.69	V	Peak
4942.000	43.74	4.79	48.53	74.00	-25.47	V	Peak
6337.000	40.73	6.63	47.36	74.00	-26.64	V	Peak
7417.000	43.19	8.51	51.70	74.00	-22.30	V	Peak
3196.000	43.56	-1.03	42.53	74.00	-31.47	H	Peak
3664.000	42.54	0.17	42.71	74.00	-31.29	H	Peak
5104.000	41.64	5.17	46.81	74.00	-27.19	H	Peak
5572.000	41.21	5.90	47.11	74.00	-26.89	H	Peak
6859.000	40.45	7.47	47.92	74.00	-26.08	H	Peak
8155.000	41.23	9.56	50.79	74.00	-23.21	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 or as required by the applicant.
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).

Antenna 2

Test Mode: TX / IEEE 802.11b(CH Low) **Tested by:** Fade Zhong

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** August 24, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
2413.000	50.23	-2.74	47.49	74.00	-26.51	V	peak
2998.000	46.20	-1.36	44.84	74.00	-29.16	V	peak
4825.000	51.86	4.41	56.27	74.00	-17.73	V	peak
4825.000	47.85	4.41	52.26	54.00	-1.74	V	AVG
5671.000	41.62	5.94	47.56	74.00	-26.44	V	peak
7237.000	42.44	8.16	50.60	74.00	-23.40	V	peak
7975.000	40.99	9.60	50.59	74.00	-23.41	V	peak
2530.000	45.19	-2.21	42.98	74.00	-31.02	H	Peak
3817.000	42.92	0.82	43.74	74.00	-30.26	H	Peak
4825.000	47.81	4.41	52.22	74.00	-21.78	H	Peak
4825.000	44.83	4.41	49.24	54.00	-4.76	H	AVG
5644.000	41.04	5.93	46.97	74.00	-27.03	H	peak
6643.000	40.23	7.12	47.35	74.00	-26.65	H	peak
7957.000	39.89	9.57	49.46	74.00	-24.54	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 or as required by the applicant.
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 802.11b (CH Mid) **Tested by:** Fade Zhong

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** August 24, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
1738.000	54.41	-6.40	48.01	74.00	-25.99	V	Peak
2440.000	51.36	-2.59	48.77	74.00	-25.23	V	Peak
2998.000	45.78	-1.36	44.42	74.00	-29.58	V	Peak
4888.000	50.97	4.61	55.58	74.00	-18.42	V	Peak
4888.000	47.70	4.61	52.31	54.00	-1.69	V	AVG
6274.000	40.66	6.52	47.18	74.00	-26.82	V	Peak
7327.000	42.27	8.34	50.61	74.00	-23.39	V	Peak
2242.000	46.11	-3.67	42.44	74.00	-31.56	H	Peak
3223.000	43.99	-0.99	43.00	74.00	-31.00	H	Peak
4258.000	41.78	2.50	44.28	74.00	-29.72	H	Peak
4888.000	47.25	4.61	51.86	74.00	-22.14	H	Peak
6049.000	41.08	6.16	47.24	74.00	-26.76	H	Peak
7327.000	42.04	8.34	50.38	74.00	-23.62	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 or as required by the applicant.
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 802.11b (CH High) **Tested by:** Fade Zhong

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** August 24, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
2476.000	52.37	-2.39	49.98	74.00	-24.02	V	Peak
2998.000	45.73	-1.36	44.37	74.00	-29.63	V	Peak
4672.000	41.69	3.91	45.60	74.00	-28.40	V	Peak
4942.000	50.97	4.79	55.76	74.00	-18.24	V	Peak
4942.000	47.31	4.79	52.10	54.00	-1.90	V	AVG
7273.000	40.96	8.23	49.19	74.00	-24.81	V	Peak
7984.000	41.85	9.62	51.47	74.00	-22.53	V	Peak
2512.000	45.75	-2.24	43.51	74.00	-30.49	H	Peak
3979.000	42.20	1.50	43.70	74.00	-30.30	H	Peak
4942.000	45.70	4.79	50.49	74.00	-23.51	H	Peak
6211.000	40.58	6.42	47.00	74.00	-27.00	H	Peak
6832.000	40.66	7.43	48.09	74.00	-25.91	H	Peak
7624.000	41.70	8.92	50.62	74.00	-23.38	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 or as required by the applicant.
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).

Antenna 3

Test Mode: TX / IEEE 802.11b(CH Low) **Tested by:** Fade Zhong

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** August 24, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
2233.000	47.24	-3.72	43.52	74.00	-30.48	V	peak
2413.000	49.29	-2.74	46.55	74.00	-27.45	V	peak
3754.000	43.04	0.55	43.59	74.00	-30.41	V	peak
4825.000	46.83	4.41	51.24	54.00	-2.76	V	peak
5878.000	40.67	6.03	46.70	74.00	-27.30	V	peak
7237.000	42.63	8.16	50.79	74.00	-23.21	V	peak
2638.000	44.32	-2.01	42.31	74.00	-31.69	H	Peak
4312.000	42.58	2.69	45.27	74.00	-28.73	H	Peak
4825.000	44.30	4.41	48.71	74.00	-25.29	H	Peak
6301.000	41.01	6.57	47.58	74.00	-26.42	H	peak
7840.000	40.74	9.34	50.08	74.00	-23.92	H	peak
8128.000	40.83	9.58	50.41	74.00	-23.59	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 or as required by the applicant.
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 802.11b (CH Mid) **Tested by:** Fade Zhong

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** August 24, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
1765.000	57.35	-6.35	51.00	74.00	-23.00	V	Peak
2467.000	52.00	-2.44	49.56	74.00	-24.44	V	Peak
3916.000	41.74	1.24	42.98	74.00	-31.02	V	Peak
4942.000	47.05	4.79	51.84	74.00	-22.16	V	Peak
6472.000	40.49	6.84	47.33	74.00	-26.67	V	Peak
7417.000	41.43	8.51	49.94	74.00	-24.06	V	Peak
2242.000	46.31	-3.67	42.64	74.00	-31.36	H	Peak
3223.000	43.41	-0.99	42.42	74.00	-31.58	H	Peak
4942.000	42.93	4.79	47.72	74.00	-26.28	H	Peak
5482.000	40.93	5.84	46.77	74.00	-27.23	H	Peak
6571.000	40.76	7.01	47.77	74.00	-26.23	H	Peak
7291.000	41.00	8.27	49.27	74.00	-24.73	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 or as required by the applicant.
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 802.11b (CH High) **Tested by:** Fade Zhong

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** August 24, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
2467.000	52.30	-2.44	49.86	74.00	-24.14	V	Peak
3727.000	43.54	0.44	43.98	74.00	-30.02	V	Peak
4384.000	41.32	2.94	44.26	74.00	-29.74	V	Peak
4942.000	47.07	4.79	51.86	74.00	-22.14	V	Peak
6049.000	41.12	6.16	47.28	74.00	-26.72	V	Peak
7327.000	41.47	8.34	49.81	74.00	-24.19	V	Peak
1765.000	49.10	-6.35	42.75	74.00	-31.25	H	Peak
2539.000	45.82	-2.19	43.63	74.00	-30.37	H	Peak
4186.000	41.52	2.24	43.76	74.00	-30.24	H	Peak
5131.000	42.88	5.21	48.09	74.00	-25.91	H	Peak
6526.000	41.45	6.93	48.38	74.00	-25.62	H	Peak
8002.000	41.20	9.65	50.85	74.00	-23.15	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 or as required by the applicant.
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).

Antenna 0

Test Mode: TX / IEEE 802.11g(CH Low) **Tested by:** Fade Zhong

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** August 24, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
2233.000	47.91	-3.72	44.19	74.00	-29.81	V	Peak
2998.000	46.24	-1.36	44.88	74.00	-29.12	V	Peak
4285.000	41.76	2.59	44.35	74.00	-29.65	V	Peak
5176.000	41.60	5.29	46.89	74.00	-27.11	V	Peak
6589.000	40.96	7.03	47.99	74.00	-26.01	V	Peak
7651.000	41.24	8.97	50.21	74.00	-23.79	V	Peak
2530.000	45.55	-2.21	43.34	74.00	-30.66	H	Peak
4213.000	41.95	2.34	44.29	74.00	-29.71	H	Peak
4996.000	41.62	4.97	46.59	74.00	-27.41	H	Peak
6292.000	40.83	6.55	47.38	74.00	-26.62	H	Peak
7039.000	40.70	7.78	48.48	74.00	-25.52	H	Peak
8092.000	40.54	9.60	50.14	74.00	-23.86	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 or as required by the applicant.
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 802.11g (CH Mid) **Tested by:** Fade Zhong

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** August 24, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
1756.000	56.03	-6.36	49.67	74.00	-24.33	V	Peak
2224.000	49.19	-3.77	45.42	74.00	-28.58	V	Peak
2440.000	49.17	-2.59	46.58	74.00	-27.42	V	Peak
2998.000	45.55	-1.36	44.19	74.00	-29.81	V	Peak
4888.000	45.95	4.61	50.56	74.00	-23.44	V	Peak
6373.000	41.55	6.68	48.23	74.00	-25.77	V	Peak
2917.000	44.93	-1.51	43.42	74.00	-30.58	H	Peak
3799.000	43.43	0.74	44.17	74.00	-29.83	H	Peak
4555.000	42.42	3.53	45.95	74.00	-28.05	H	Peak
5158.000	41.68	5.26	46.94	74.00	-27.06	H	Peak
6040.000	41.14	6.14	47.28	74.00	-26.72	H	Peak
7642.000	40.66	8.95	49.61	74.00	-24.39	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 or as required by the applicant.
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 802.11g (CH High) **Tested by:** Fade Zhong

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** August 24, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
2197.000	49.01	-3.92	45.09	74.00	-28.91	V	Peak
2467.000	49.63	-2.44	47.19	74.00	-26.81	V	Peak
2998.000	46.83	-1.36	45.47	74.00	-28.53	V	Peak
4942.000	45.74	4.79	50.53	74.00	-23.47	V	Peak
6859.000	40.56	7.47	48.03	74.00	-25.97	V	Peak
7975.000	41.39	9.60	50.99	74.00	-23.01	V	Peak
2251.000	46.13	-3.62	42.51	74.00	-31.49	H	Peak
2611.000	44.92	-2.06	42.86	74.00	-31.14	H	Peak
3088.000	45.12	-1.21	43.91	74.00	-30.09	H	Peak
5518.000	41.57	5.88	47.45	74.00	-26.55	H	Peak
6184.000	41.17	6.38	47.55	74.00	-26.45	H	Peak
8326.000	41.23	9.47	50.70	74.00	-23.30	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 or as required by the applicant.
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).

Antenna 1

Test Mode: TX / IEEE 802.11g(CH Low) **Tested by:** Fade Zhong

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** August 24, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
1765.000	52.22	-6.35	45.87	74.00	-28.13	V	Peak
2998.000	45.33	-1.36	43.97	74.00	-30.03	V	Peak
4735.000	41.39	4.12	45.51	74.00	-28.49	V	Peak
5419.000	41.09	5.73	46.82	74.00	-27.18	V	Peak
7003.000	40.91	7.71	48.62	74.00	-25.38	V	Peak
8146.000	40.62	9.57	50.19	74.00	-23.81	V	Peak
2521.000	45.58	-2.22	43.36	74.00	-30.64	H	Peak
3763.000	43.35	0.59	43.94	74.00	-30.06	H	Peak
4510.000	43.58	3.38	46.96	74.00	-27.04	H	Peak
6049.000	41.36	6.16	47.52	74.00	-26.48	H	Peak
7417.000	40.66	8.51	49.17	74.00	-24.83	H	Peak
8119.000	40.83	9.58	50.41	74.00	-23.59	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 or as required by the applicant.
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 802.11g (CH Mid) **Tested by:** Fade Zhong

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** August 24, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
1765.000	52.65	-6.35	46.30	74.00	-27.70	V	Peak
2440.000	49.09	-2.59	46.50	74.00	-27.50	V	Peak
3610.000	43.92	-0.06	43.86	74.00	-30.14	V	Peak
4879.000	47.57	4.59	52.16	74.00	-21.84	V	Peak
6931.000	40.97	7.59	48.56	74.00	-25.44	V	Peak
8029.000	40.57	9.63	50.20	74.00	-23.80	V	Peak
2629.000	44.68	-2.03	42.65	74.00	-31.35	H	Peak
4069.000	41.75	1.83	43.58	74.00	-30.42	H	Peak
5014.000	43.02	5.00	48.02	74.00	-25.98	H	Peak
6580.000	41.19	7.02	48.21	74.00	-25.79	H	Peak
7084.000	41.38	7.86	49.24	74.00	-24.76	H	Peak
7975.000	40.89	9.60	50.49	74.00	-23.51	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 or as required by the applicant.
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 802.11g (CH High) **Tested by:** Fade Zhong

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** August 24, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
1765.000	52.95	-6.35	46.60	74.00	-27.40	V	Peak
2476.000	49.50	-2.39	47.11	74.00	-26.89	V	Peak
2998.000	46.61	-1.36	45.25	74.00	-28.75	V	Peak
4519.000	41.95	3.41	45.36	74.00	-28.64	V	Peak
4942.000	43.69	4.79	48.48	74.00	-25.52	V	Peak
7561.000	41.19	8.79	49.98	74.00	-24.02	V	Peak
2152.000	45.51	-4.17	41.34	74.00	-32.66	H	Peak
2809.000	44.10	-1.70	42.40	74.00	-31.60	H	Peak
3898.000	42.64	1.16	43.80	74.00	-30.20	H	Peak
5005.000	42.47	4.99	47.46	74.00	-26.54	H	Peak
6508.000	41.02	6.90	47.92	74.00	-26.08	H	Peak
8002.000	40.51	9.65	50.16	74.00	-23.84	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 or as required by the applicant.
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).

Antenna 2

Test Mode: TX / IEEE 802.11g(CH Low) **Tested by:** Fade Zhong

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** August 24, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
1765.000	52.42	-6.35	46.07	74.00	-27.93	V	Peak
2998.000	45.79	-1.36	44.43	74.00	-29.57	V	Peak
4609.000	42.27	3.71	45.98	74.00	-28.02	V	Peak
5428.000	41.77	5.74	47.51	74.00	-26.49	V	Peak
7138.000	41.58	7.97	49.55	74.00	-24.45	V	Peak
7876.000	40.25	9.41	49.66	74.00	-24.34	V	Peak
2539.000	45.21	-2.19	43.02	74.00	-30.98	H	Peak
2998.000	45.92	-1.36	44.56	74.00	-29.44	H	Peak
4573.000	42.17	3.59	45.76	74.00	-28.24	H	Peak
5563.000	40.98	5.90	46.88	74.00	-27.12	H	Peak
7588.000	41.13	8.85	49.98	74.00	-24.02	H	Peak
8470.000	41.26	9.39	50.65	74.00	-23.35	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 or as required by the applicant.
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 802.11g (CH Mid) **Tested by:** Fade Zhong

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** August 24, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
1738.000	54.30	-6.40	47.90	74.00	-26.10	V	Peak
2440.000	50.86	-2.59	48.27	74.00	-25.73	V	Peak
2998.000	46.44	-1.36	45.08	74.00	-28.92	V	Peak
4879.000	43.71	4.59	48.30	74.00	-25.70	V	Peak
7435.000	41.83	8.55	50.38	74.00	-23.62	V	Peak
8434.000	41.80	9.41	51.21	74.00	-22.79	V	Peak
2242.000	45.38	-3.67	41.71	74.00	-32.29	H	Peak
2530.000	44.73	-2.21	42.52	74.00	-31.48	H	Peak
3691.000	43.10	0.29	43.39	74.00	-30.61	H	Peak
4879.000	43.94	4.59	48.53	74.00	-25.47	H	Peak
6796.000	40.63	7.37	48.00	74.00	-26.00	H	Peak
7948.000	40.54	9.55	50.09	74.00	-23.91	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 or as required by the applicant.
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 802.11g (CH High) **Tested by:** Fade Zhong

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** August 24, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
2467.000	52.35	-2.44	49.91	74.00	-24.09	V	Peak
4321.000	42.24	2.72	44.96	74.00	-29.04	V	Peak
4942.000	47.15	4.79	51.94	74.00	-22.06	V	Peak
6211.000	40.66	6.42	47.08	74.00	-26.92	V	Peak
7147.000	41.41	7.99	49.40	74.00	-24.60	V	Peak
7849.000	42.34	9.36	51.70	74.00	-22.30	V	Peak
2548.000	44.97	-2.17	42.80	74.00	-31.20	H	Peak
4654.000	41.74	3.85	45.59	74.00	-28.41	H	Peak
4942.000	42.88	4.79	47.67	74.00	-26.33	H	Peak
5644.000	41.47	5.93	47.40	74.00	-26.60	H	Peak
6886.000	40.76	7.52	48.28	74.00	-25.72	H	Peak
8362.000	41.40	9.45	50.85	74.00	-23.15	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 or as required by the applicant.
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).

Antenna 3

Test Mode: TX / IEEE 802.11g(CH Low) **Tested by:** Fade Zhong

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** August 24, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
1747.000	49.68	-6.38	43.30	74.00	-30.70	V	Peak
2998.000	46.70	-1.36	45.34	74.00	-28.66	V	Peak
5014.000	41.73	5.00	46.73	74.00	-27.27	V	Peak
5338.000	41.66	5.58	47.24	74.00	-26.76	V	Peak
6175.000	41.44	6.36	47.80	74.00	-26.20	V	Peak
8002.000	41.20	9.65	50.85	74.00	-23.15	V	Peak
2494.000	43.99	-2.29	41.70	74.00	-32.30	H	Peak
3214.000	44.14	-1.00	43.14	74.00	-30.86	H	Peak
4456.000	42.00	3.20	45.20	74.00	-28.80	H	Peak
5644.000	41.34	5.93	47.27	74.00	-26.73	H	Peak
6643.000	41.42	7.12	48.54	74.00	-25.46	H	Peak
7759.000	40.66	9.18	49.84	74.00	-24.16	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 or as required by the applicant.
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 802.11g (CH Mid) **Tested by:** Fade Zhong

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** August 24, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
1756.000	53.89	-6.36	47.53	74.00	-26.47	V	Peak
2440.000	50.14	-2.59	47.55	74.00	-26.45	V	Peak
4888.000	46.61	4.61	51.22	74.00	-22.78	V	Peak
5554.000	41.70	5.89	47.59	74.00	-26.41	V	Peak
7318.000	41.75	8.32	50.07	74.00	-23.93	V	Peak
8173.000	40.18	9.55	49.73	74.00	-24.27	V	Peak
2242.000	45.67	-3.67	42.00	74.00	-32.00	H	Peak
2827.000	44.34	-1.67	42.67	74.00	-31.33	H	Peak
4582.000	41.02	3.62	44.64	74.00	-29.36	H	Peak
5176.000	41.71	5.29	47.00	74.00	-27.00	H	Peak
7237.000	40.44	8.16	48.60	74.00	-25.40	H	Peak
8029.000	40.77	9.63	50.40	74.00	-23.60	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 or as required by the applicant.
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 802.11g (CH High) **Tested by:** Fade Zhong

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** August 24, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
1765.000	56.55	-6.35	50.20	74.00	-23.80	V	Peak
2476.000	51.33	-2.39	48.94	74.00	-25.06	V	Peak
2998.000	45.49	-1.36	44.13	74.00	-29.87	V	Peak
4951.000	45.18	4.82	50.00	74.00	-24.00	V	Peak
7354.000	40.42	8.39	48.81	74.00	-25.19	V	Peak
7885.000	41.39	9.43	50.82	74.00	-23.18	V	Peak
2521.000	45.14	-2.22	42.92	74.00	-31.08	H	Peak
3898.000	42.23	1.16	43.39	74.00	-30.61	H	Peak
4942.000	41.16	4.79	45.95	74.00	-28.05	H	Peak
6364.000	40.49	6.67	47.16	74.00	-26.84	H	Peak
7570.000	40.48	8.81	49.29	74.00	-24.71	H	Peak
8668.000	41.26	9.28	50.54	74.00	-23.46	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 or as required by the applicant.
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).

Combine with Antenna 0 and Antenna 1 and Antenna 2 and Antenna 3

Test Mode: TX / IEEE 802.11n HT20 MHz (CH Low) **Tested by:** Fade Zhong

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** August 24, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
1756.000	52.25	-6.36	45.89	74.00	-28.11	V	Peak
2899.000	45.38	-1.54	43.84	74.00	-30.16	V	Peak
4672.000	41.79	3.91	45.70	74.00	-28.30	V	Peak
5572.000	40.88	5.90	46.78	74.00	-27.22	V	Peak
7201.000	40.50	8.09	48.59	74.00	-25.41	V	Peak
8317.000	40.92	9.48	50.40	74.00	-23.60	V	Peak
2521.000	45.27	-2.22	43.05	74.00	-30.95	H	Peak
4159.000	42.11	2.15	44.26	74.00	-29.74	H	Peak
4879.000	40.53	4.59	45.12	74.00	-28.88	H	Peak
5266.000	41.06	5.45	46.51	74.00	-27.49	H	Peak
7228.000	40.55	8.14	48.69	74.00	-25.31	H	Peak
8137.000	42.26	9.57	51.83	74.00	-22.17	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 or as required by the applicant.
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 HT20 MHz (CH Mid) **Tested by:** Fade Zhong

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** August 24, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
2233.000	51.96	-3.72	48.24	74.00	-25.76	V	Peak
2440.000	52.64	-2.59	50.05	74.00	-23.95	V	Peak
4141.000	41.70	2.09	43.79	74.00	-30.21	V	Peak
4879.000	45.78	4.59	50.37	74.00	-23.63	V	Peak
6382.000	40.56	6.70	47.26	74.00	-26.74	V	Peak
7327.000	41.93	8.34	50.27	74.00	-23.73	V	Peak
2530.000	45.70	-2.21	43.49	74.00	-30.51	H	Peak
4051.000	42.22	1.77	43.99	74.00	-30.01	H	Peak
4879.000	42.93	4.59	47.52	74.00	-26.48	H	Peak
6094.000	41.31	6.23	47.54	74.00	-26.46	H	Peak
7318.000	42.01	8.32	50.33	74.00	-23.67	H	Peak
8047.000	40.82	9.62	50.44	74.00	-23.56	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 or as required by the applicant.
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 / EEE 802.11n HT20 MHz (CH High) **Tested by:** Fade Zhong

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** August 24, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
1756.000	54.75	-6.36	48.39	74.00	-25.61	V	Peak
2467.000	53.31	-2.44	50.87	74.00	-23.13	V	Peak
2998.000	46.74	-1.36	45.38	74.00	-28.62	V	Peak
3988.000	41.54	1.54	43.08	74.00	-30.92	V	Peak
4582.000	41.79	3.62	45.41	74.00	-28.59	V	Peak
4942.000	45.54	4.79	50.33	74.00	-23.67	V	Peak
2467.000	46.36	-2.44	43.92	74.00	-30.08	H	Peak
3754.000	42.30	0.55	42.85	74.00	-31.15	H	Peak
4267.000	42.48	2.53	45.01	74.00	-28.99	H	Peak
4942.000	42.21	4.79	47.00	74.00	-27.00	H	Peak
6085.000	40.35	6.22	46.57	74.00	-27.43	H	Peak
7957.000	41.40	9.57	50.97	74.00	-23.03	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 or as required by the applicant.
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).

Combine with Antenna 0 and Antenna 1 and Antenna 2 and Antenna 3

Test Mode: TX/ IEEE 802.11n HT40 MHz (CH Low) **Tested by:** Fade Zhong

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** August 24, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
1756.000	57.42	-6.36	51.06	74.00	-22.94	V	Peak
2494.000	45.27	-2.29	42.98	74.00	-31.02	V	Peak
4249.000	42.17	2.47	44.64	74.00	-29.36	V	Peak
5077.000	42.77	5.12	47.89	74.00	-26.11	V	Peak
6112.000	41.43	6.26	47.69	74.00	-26.31	V	Peak
8326.000	41.13	9.47	50.60	74.00	-23.40	V	Peak
1756.000	53.06	-6.36	46.70	74.00	-27.30	H	Peak
3061.000	43.54	-1.26	42.28	74.00	-31.72	H	Peak
4150.000	41.55	2.12	43.67	74.00	-30.33	H	Peak
5059.000	41.60	5.09	46.69	74.00	-27.31	H	Peak
7696.000	40.16	9.06	49.22	74.00	-24.78	H	Peak
8083.000	41.53	9.60	51.13	74.00	-22.87	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 or as required by the applicant.
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 HT40 MHz (CH Mid) **Tested by:** Fade Zhong

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** August 24, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
2224.000	52.17	-3.77	48.40	74.00	-25.60	V	Peak
2440.000	50.42	-2.59	47.83	74.00	-26.17	V	Peak
4015.000	41.63	1.64	43.27	74.00	-30.73	V	Peak
4888.000	44.69	4.61	49.30	74.00	-24.70	V	Peak
6256.000	41.36	6.49	47.85	74.00	-26.15	V	Peak
7723.000	41.15	9.11	50.26	74.00	-23.74	V	Peak
2494.000	44.72	-2.29	42.43	74.00	-31.57	H	Peak
3718.000	42.65	0.40	43.05	74.00	-30.95	H	Peak
4384.000	42.03	2.94	44.97	74.00	-29.03	H	Peak
5266.000	41.28	5.45	46.73	74.00	-27.27	H	Peak
7066.000	41.01	7.83	48.84	74.00	-25.16	H	Peak
7975.000	40.60	9.60	50.20	74.00	-23.80	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 or as required by the applicant.
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 HT40 MHz (CH High) **Tested by:** Fade Zhong

Ambient temperature: 24°C **Relative humidity:** 52% RH **Date:** August 24, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
2458.000	45.58	-2.49	43.09	74.00	-30.91	V	Peak
2998.000	45.65	-1.36	44.29	74.00	-29.71	V	Peak
4375.000	42.37	2.91	45.28	74.00	-28.72	V	Peak
6382.000	41.04	6.70	47.74	74.00	-26.26	V	Peak
7489.000	41.85	8.65	50.50	74.00	-23.50	V	Peak
8092.000	40.81	9.60	50.41	74.00	-23.59	V	Peak
1765.000	49.03	-6.35	42.68	74.00	-31.32	H	Peak
2566.000	44.57	-2.14	42.43	74.00	-31.57	H	Peak
4285.000	41.37	2.59	43.96	74.00	-30.04	H	Peak
5221.000	41.69	5.37	47.06	74.00	-26.94	H	Peak
7336.000	40.45	8.36	48.81	74.00	-25.19	H	Peak
8119.000	41.04	9.58	50.62	74.00	-23.38	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 or as required by the applicant.
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).

7.3. 6dB BANDWIDTH MEASUREMENT

7.3.1. LIMITS

According to §15.247(a) (2), systems using digital modulation techniques may operate in the 902 - 928 MHz, 2400 - 2483.5 MHz. The minimum 6 dB bandwidth shall be at least 500 kHz.

7.3.2. TEST INSTRUMENTS

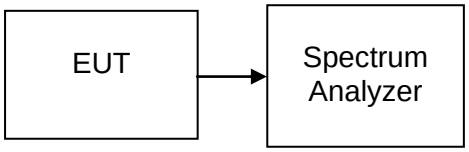
Name of Equipment	Manufacturer	Model	Serial Number	Last Calibration	Calibration Due
Spectrum Analyzer	Agilent	N9010A	MY52221469	02/21/2017	02/20/2018

7.3.3. TEST PROCEDURES (please refer to measurement standard)

8.1 Option 2:

The automatic bandwidth measurement capability of an instrument may be employed using the X dB bandwidth mode with X set to 6 dB, if the functionality described above (i.e., RBW = 100 kHz, VBW ≥ 3 RBW, peak detector with maximum hold) is implemented by the instrumentation function. When using this capability, care shall be taken so that the bandwidth measurement is not influenced by any intermediate power nulls in the fundamental emission that might be ≥ 6 dB.

7.3.4. TEST SETUP



7.3.5. TEST RESULTS

No non-compliance noted

Test Data

Test mode: IEEE 802.11b

Channel	Frequency (MHz)	Bandwidth (kHz)				Limit (kHz)	Test Result
		Antenna 0	Antenna 1	Antenna 2	Antenna 3		
Low	2412	7552	7113	7103	8076	>500	PASS
Mid	2437	7098	7561	7098	8024		PASS
High	2462	7557	7094	7573	8552		PASS

Test mode: IEEE 802.11g

Channel	Frequency (MHz)	Bandwidth (kHz)				Limit (kHz)	Test Result
		Antenna 0	Antenna 1	Antenna 2	Antenna 3		
Low	2412	15100	15100	15110	15110	>500	PASS
Mid	2437	15100	15100	15100	15080		PASS
High	2462	15100	15100	15110	15110		PASS

Test mode: IEEE 802.11n HT20 MHz

Channel	Frequency (MHz)	Bandwidth (kHz)				Limit (kHz)	Test Result
		Antenna 0	Antenna 1	Antenna 2	Antenna 3		
Low	2412	15110	15700	15090	15110	>500	PASS
Mid	2437	15100	15700	15110	15100		PASS
High	2462	15110	15700	15110	15110		PASS

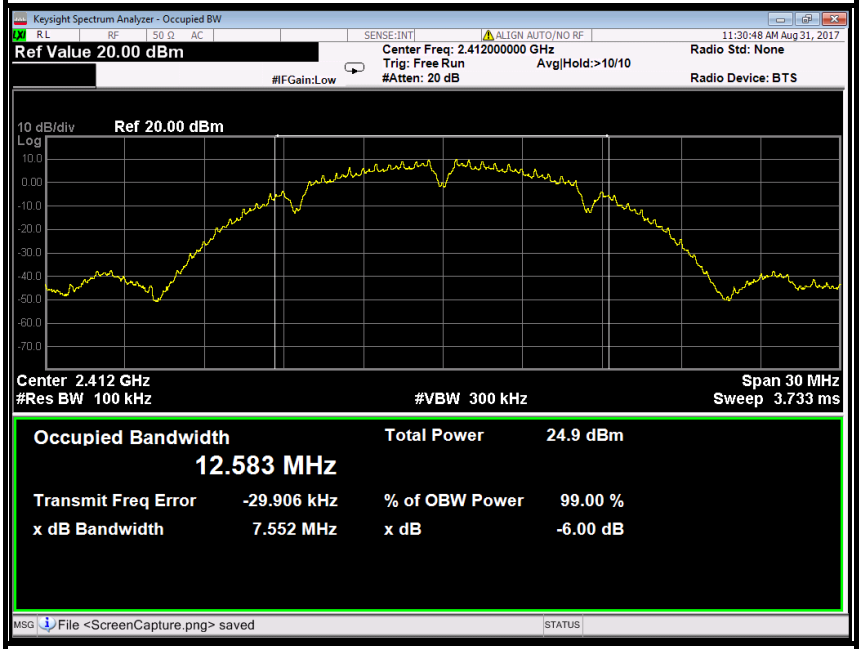
Test mode: IEEE 802.11n HT40 MHz

Channel	Frequency (MHz)	Bandwidth (kHz)				Limit (kHz)	Test Result
		Antenna 0	Antenna 1	Antenna 2	Antenna 3		
Low	2422	35070	35070	35060	35070	>500	PASS
Mid	2437	35070	35070	35060	35070		PASS
High	2452	35070	35070	35060	35070		PASS

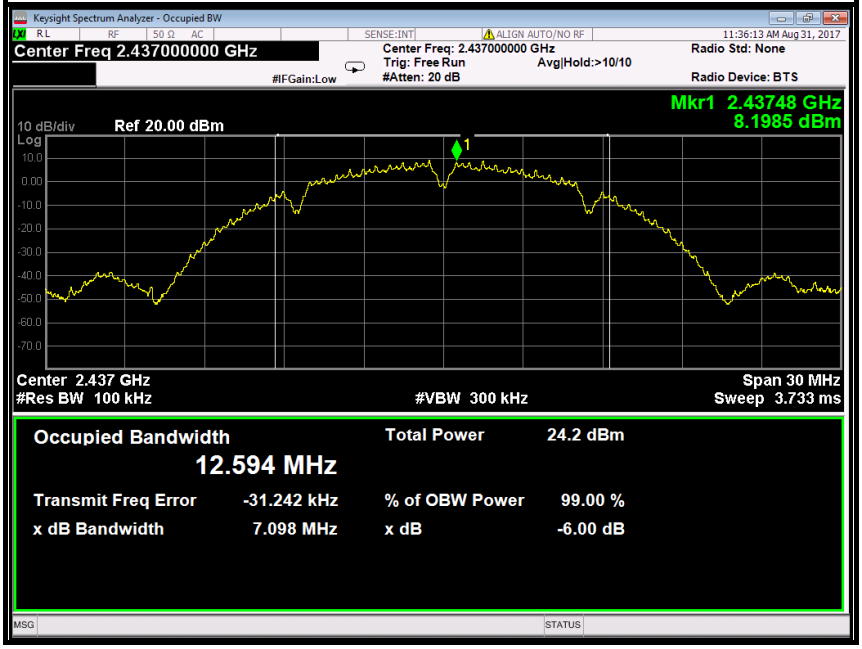
Test Plot
Antenna 0

IEEE 802.11b mode

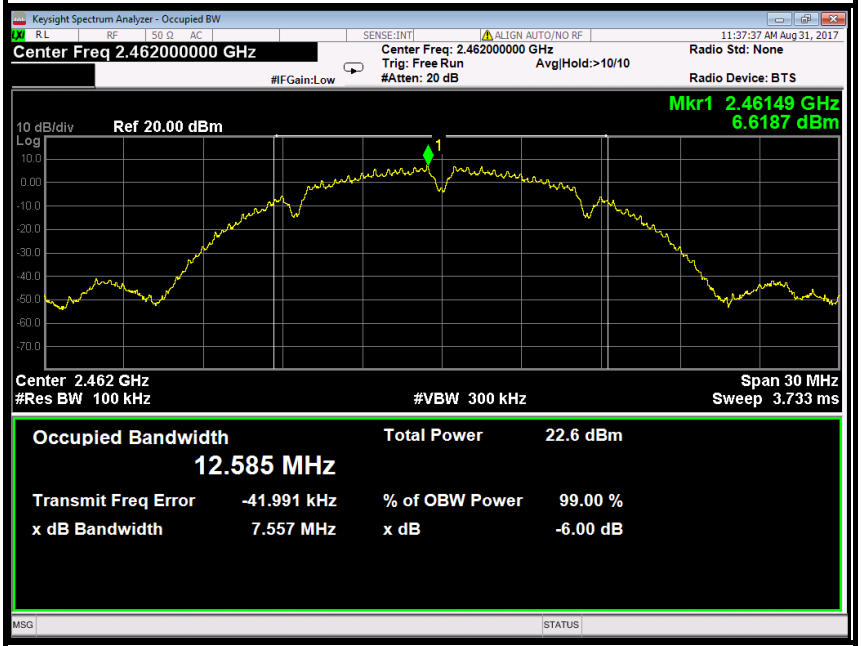
6dB Bandwidth (CH Low)



6dB Bandwidth (CH Mid)

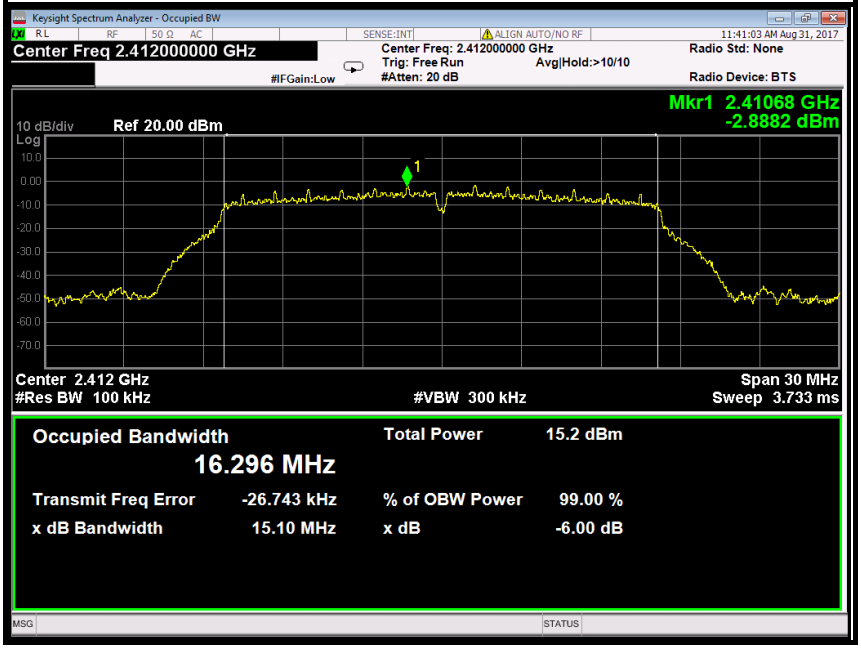


6dB Bandwidth (CH High)

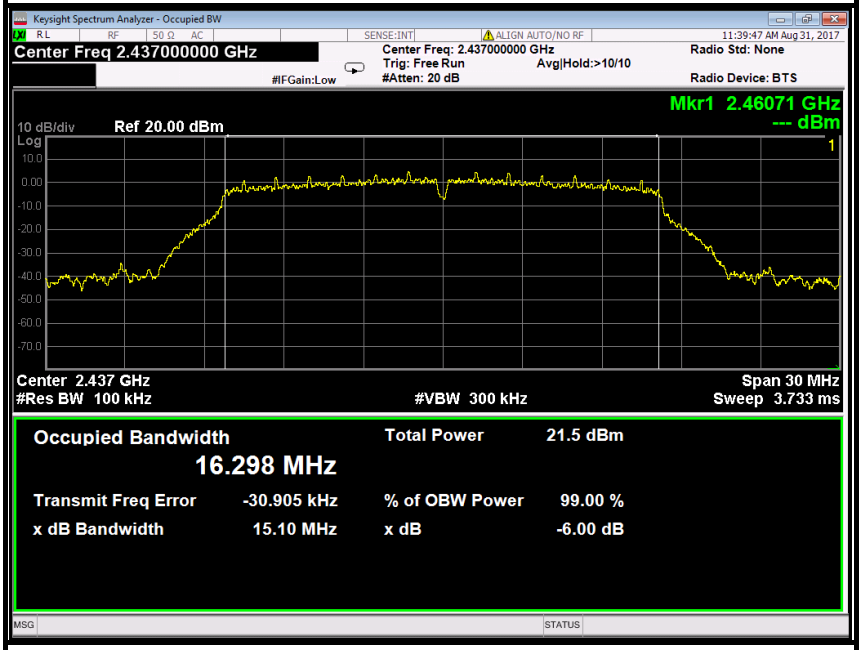


IEEE 802.11g mode

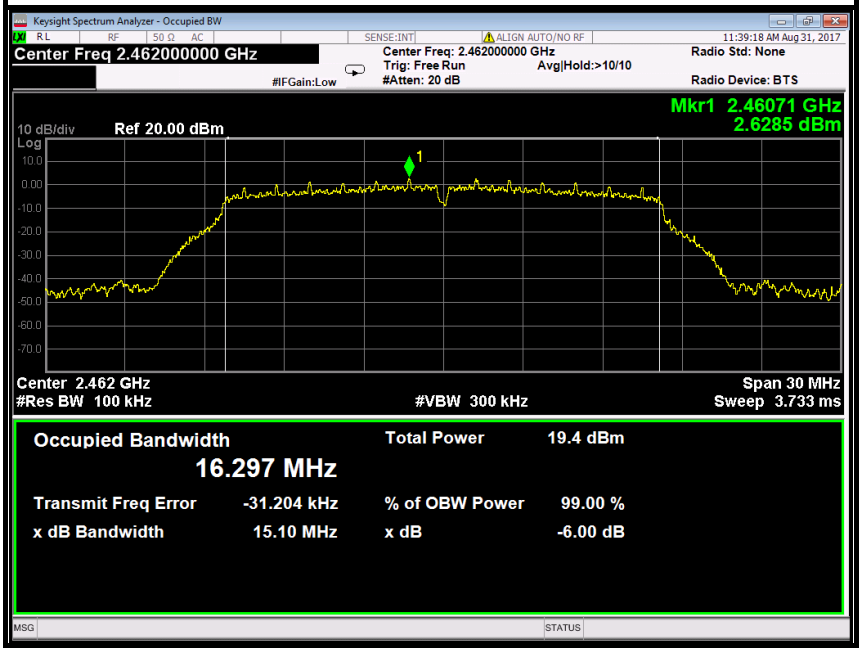
6dB Bandwidth (CH Low)



6dB Bandwidth (CH Mid)

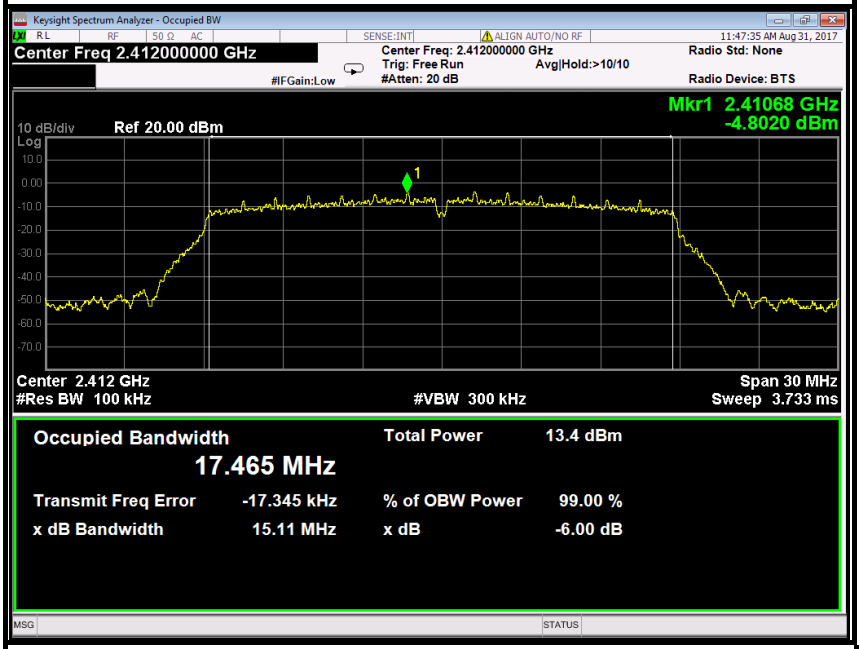


6dB Bandwidth (CH High)

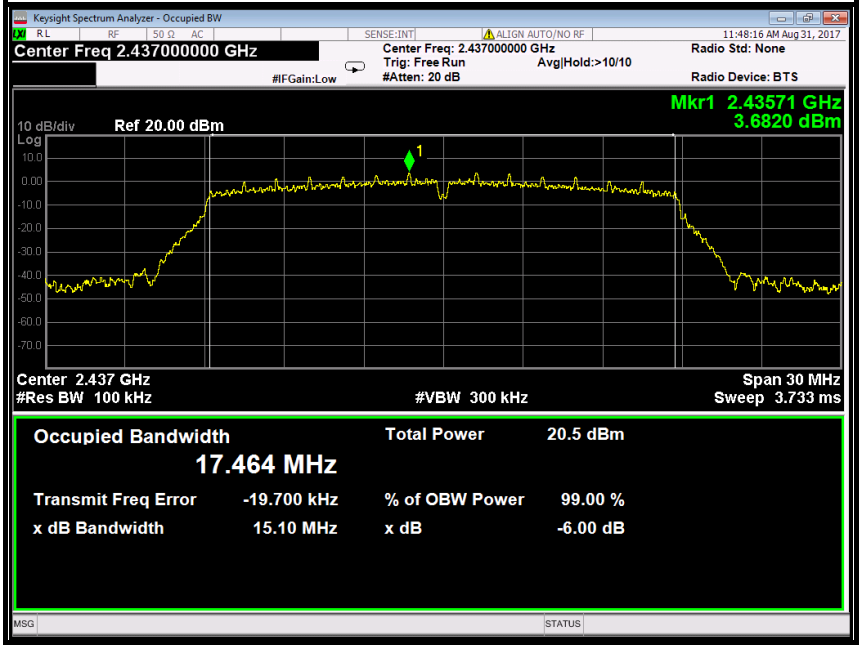


IEEE 802.11n HT20 MHz mode

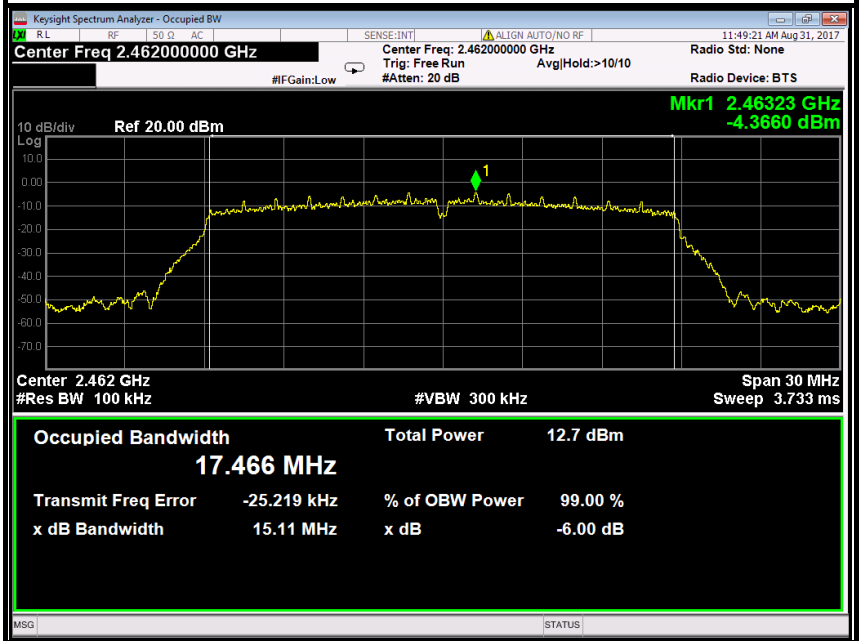
6dB Bandwidth (CH Low)



6dB Bandwidth (CH Mid)

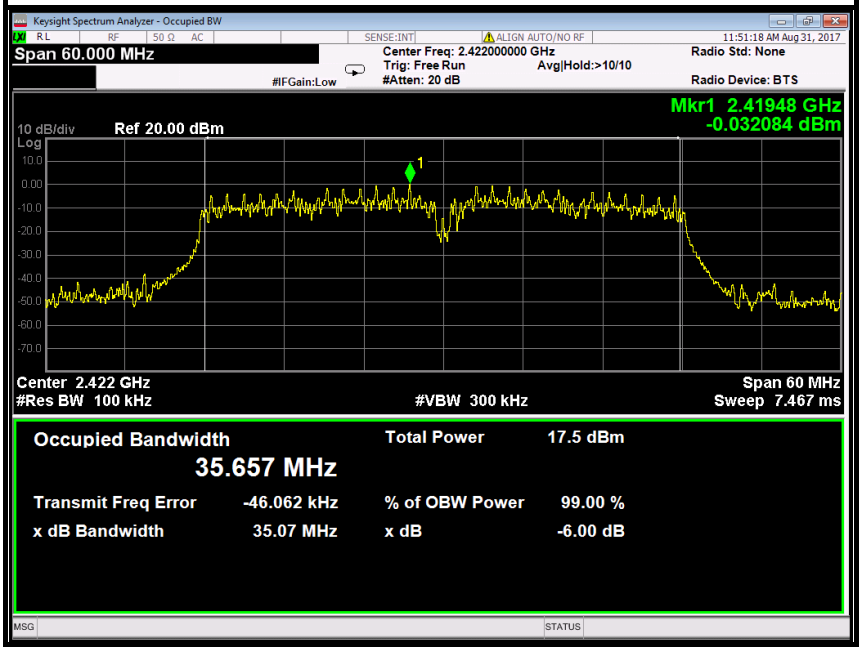


6dB Bandwidth (CH High)

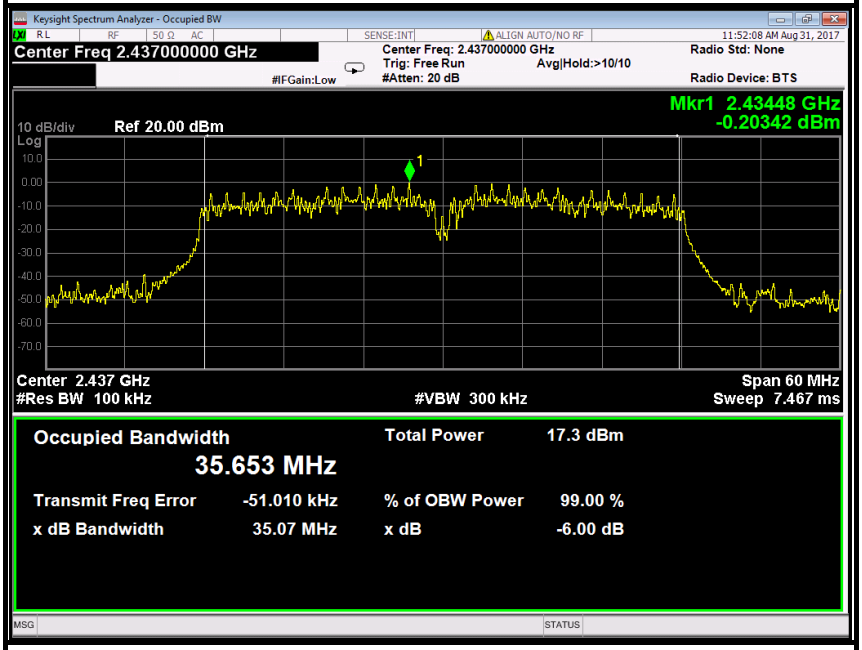


IEEE 802.11n HT40 MHz mode

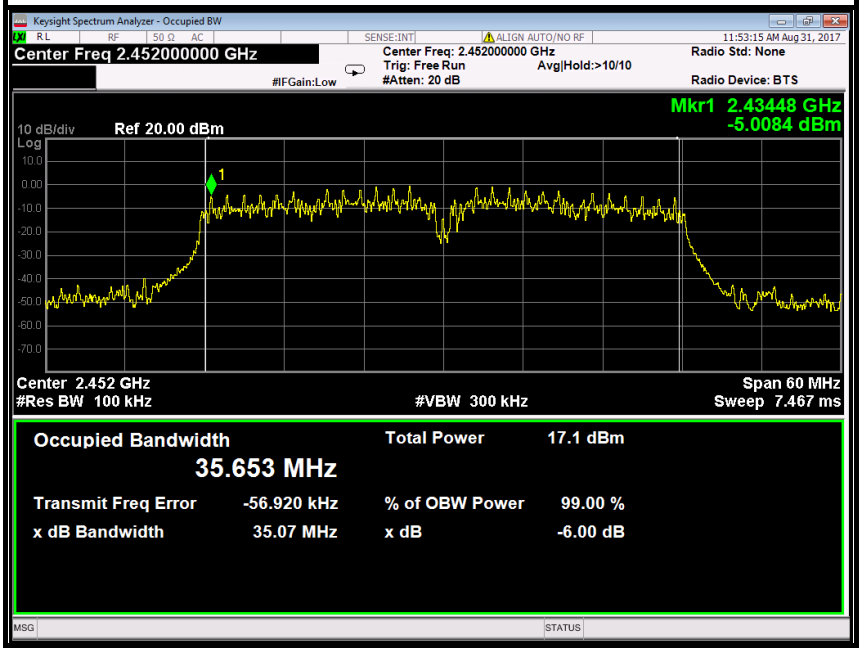
6dB Bandwidth (CH Low)



6dB Bandwidth (CH Mid)



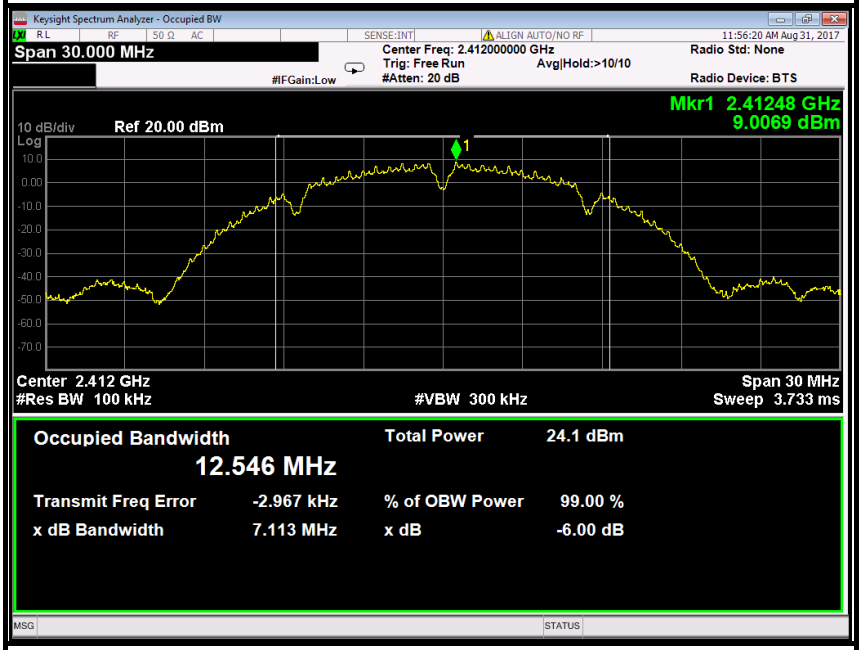
6dB Bandwidth (CH High)



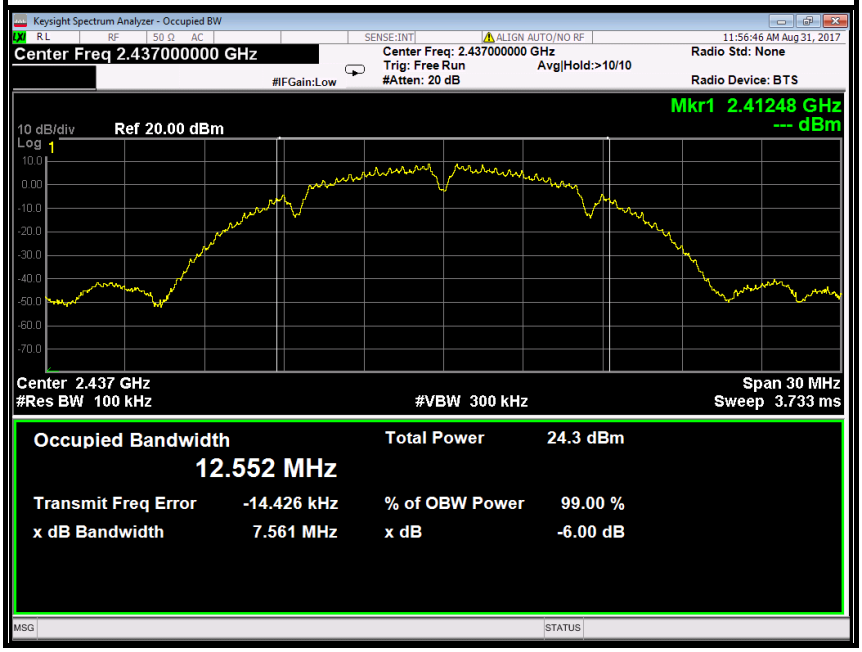
Antenna 1

IEEE 802.11b mode

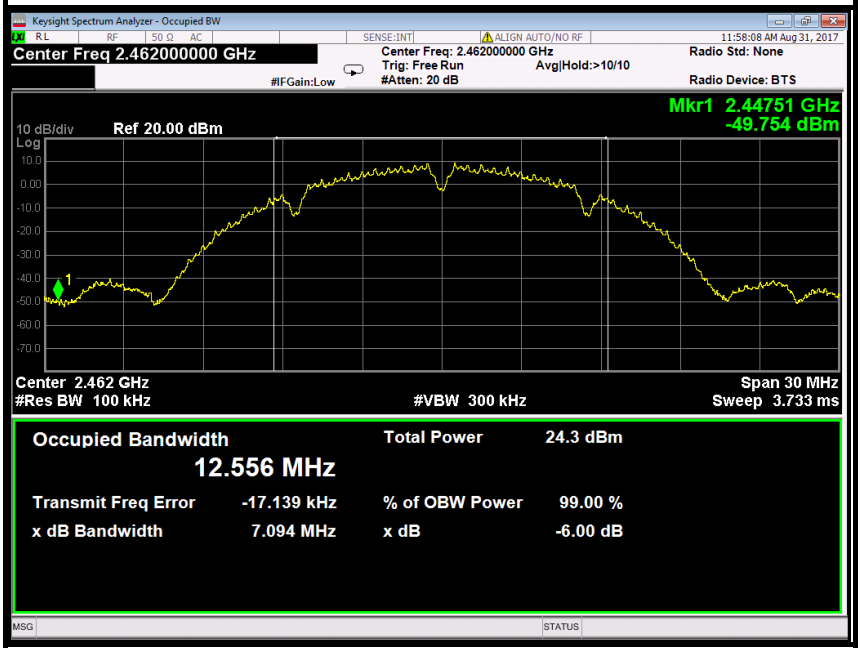
6dB Bandwidth (CH Low)



6dB Bandwidth (CH Mid)

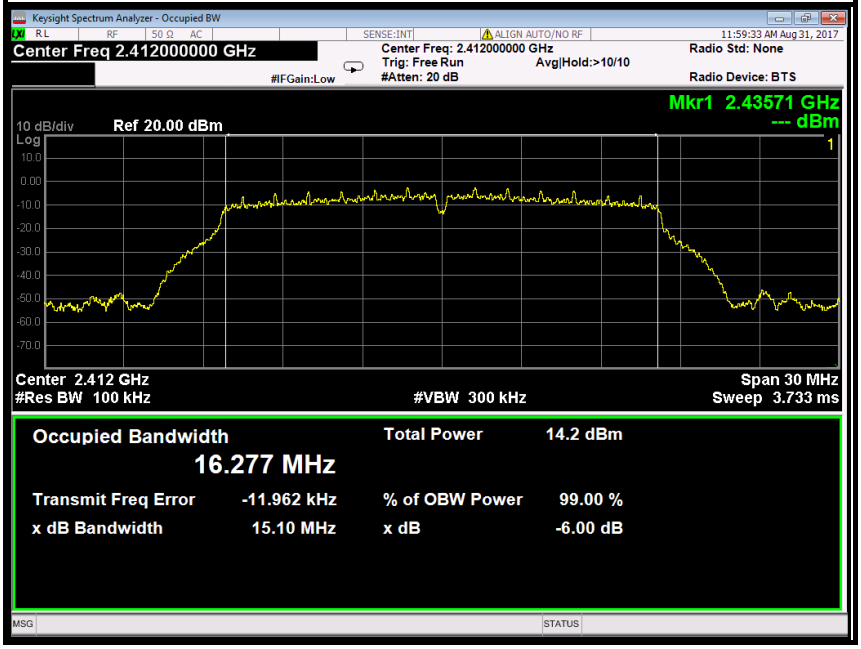


6dB Bandwidth (CH High)

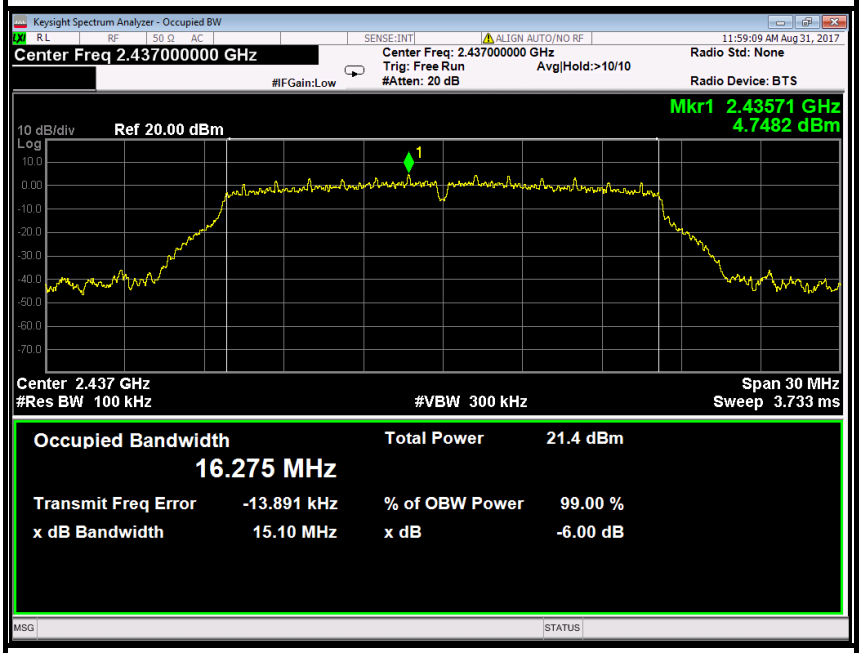


IEEE 802.11g mode

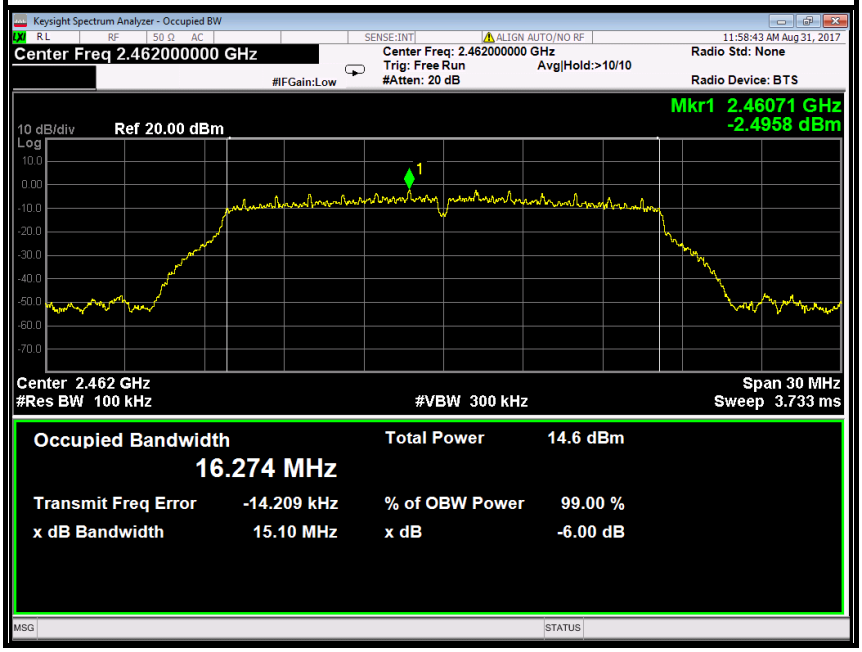
6dB Bandwidth (CH Low)



6dB Bandwidth (CH Mid)

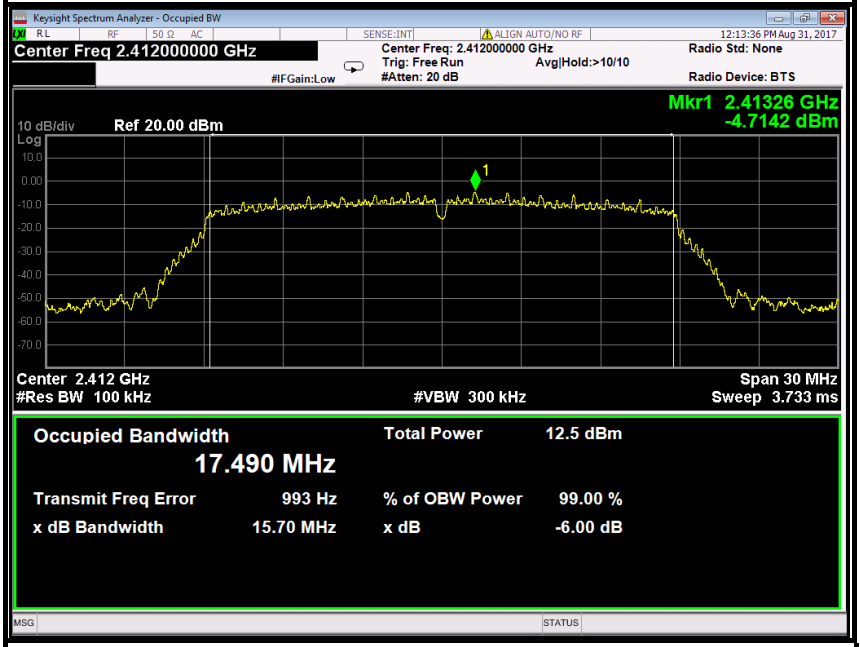


6dB Bandwidth (CH High)

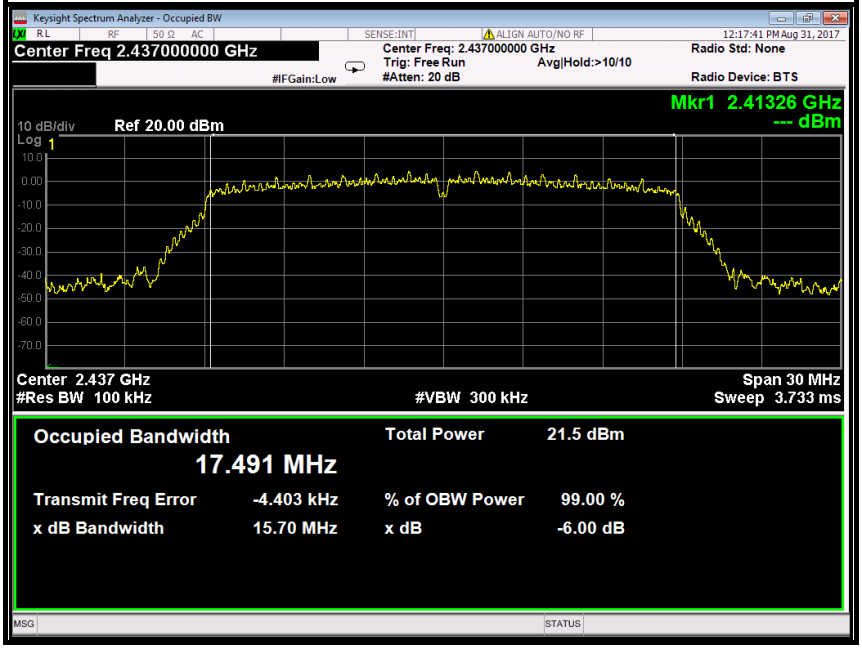


IEEE 802.11n HT20 MHz mode

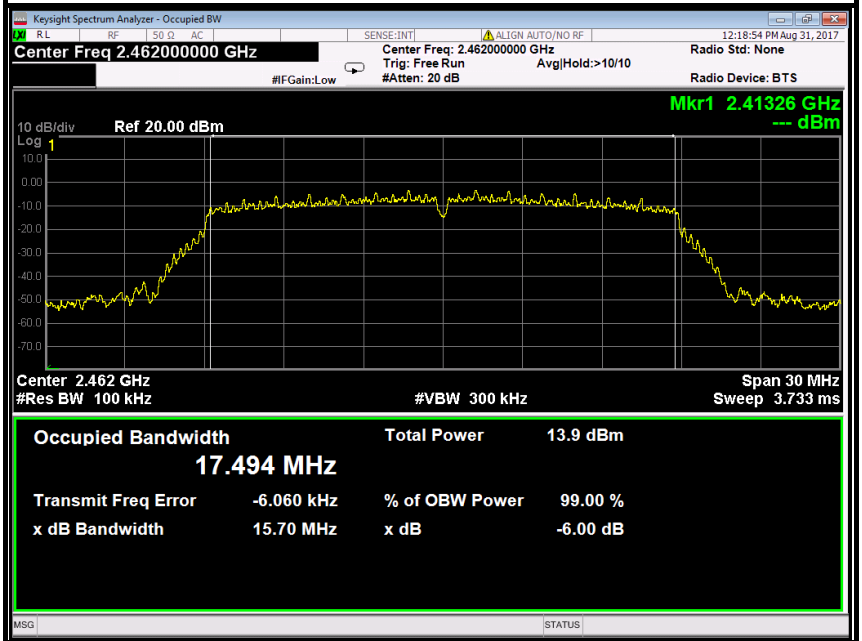
6dB Bandwidth (CH Low)



6dB Bandwidth (CH Mid)

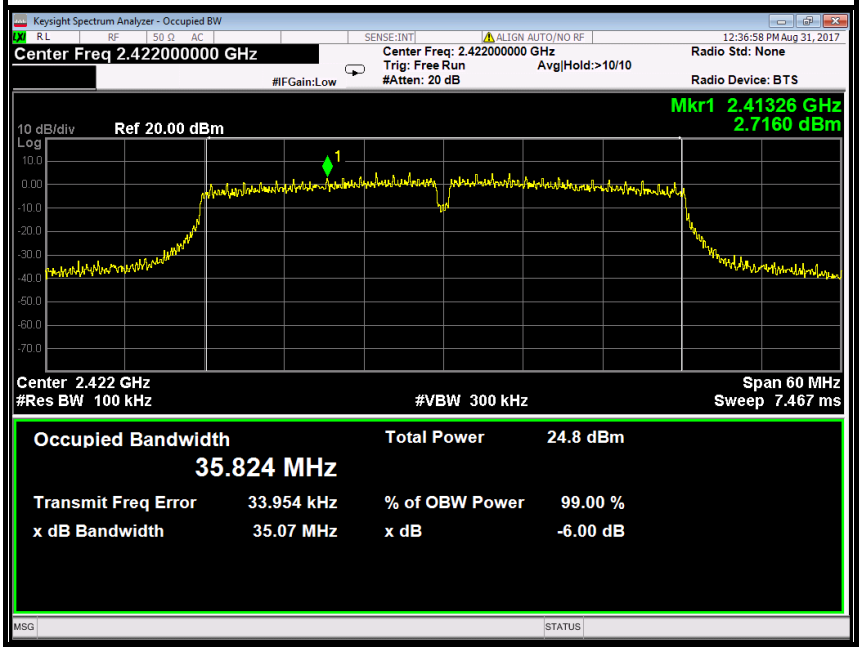


6dB Bandwidth (CH High)

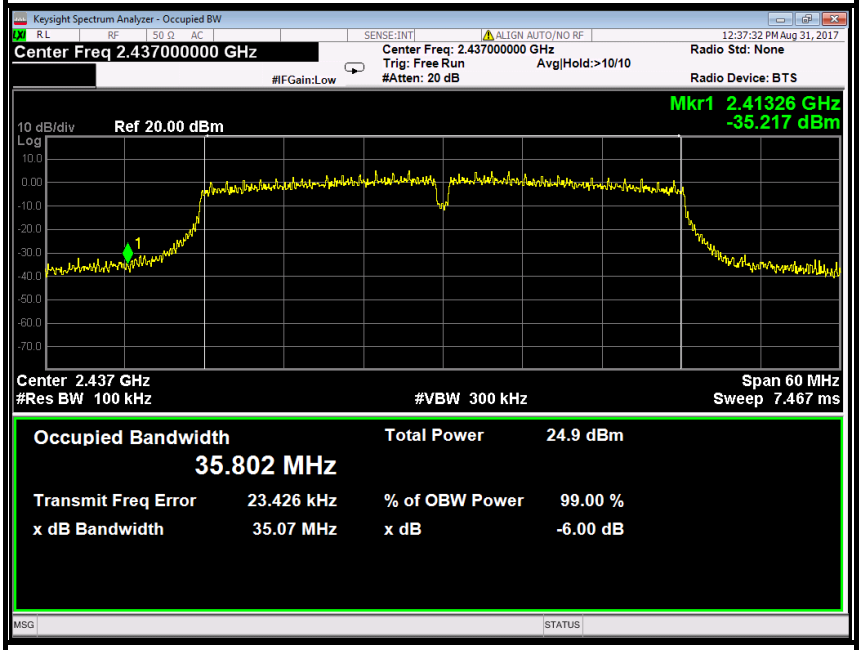


IEEE 802.11n HT40 MHz mode

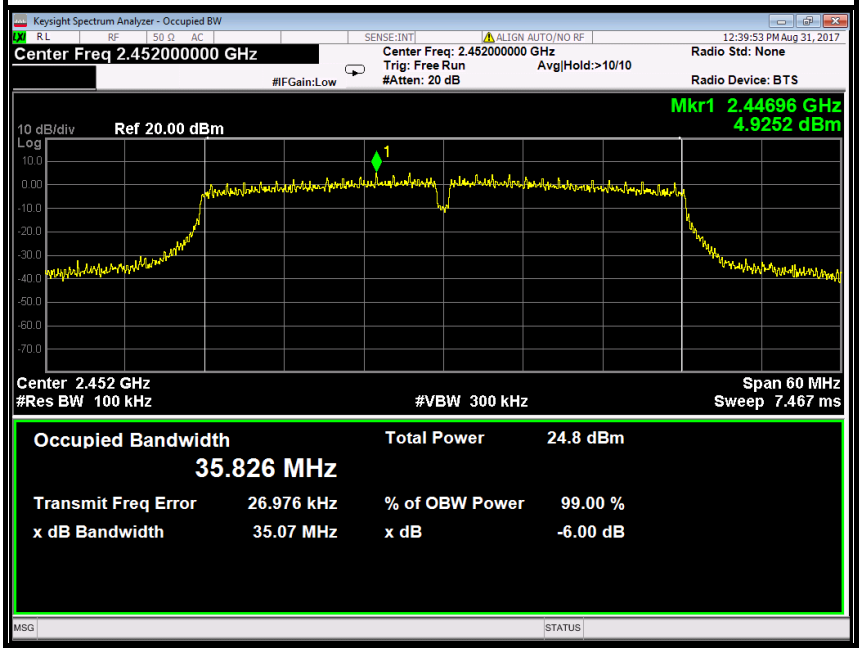
6dB Bandwidth (CH Low)



6dB Bandwidth (CH Mid)



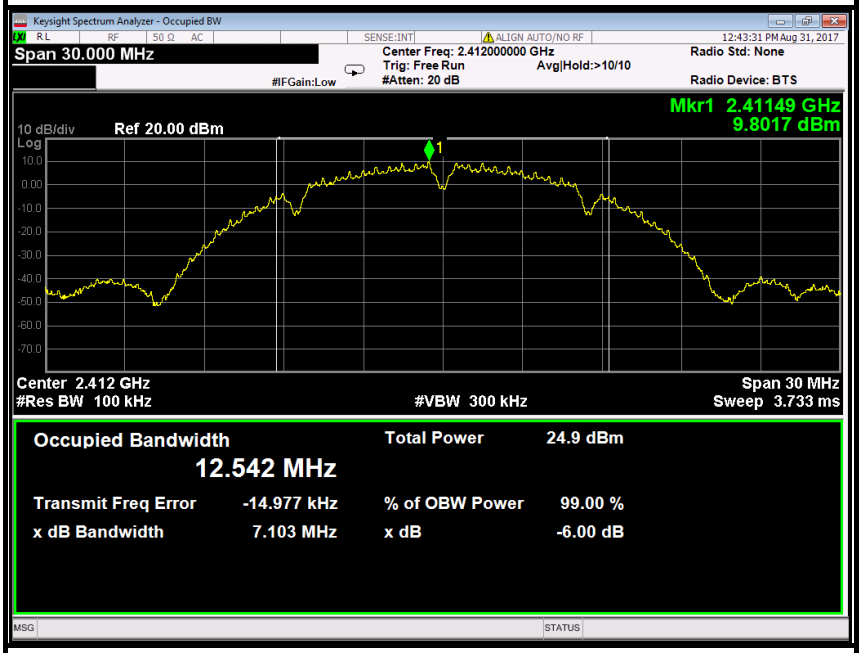
6dB Bandwidth (CH High)



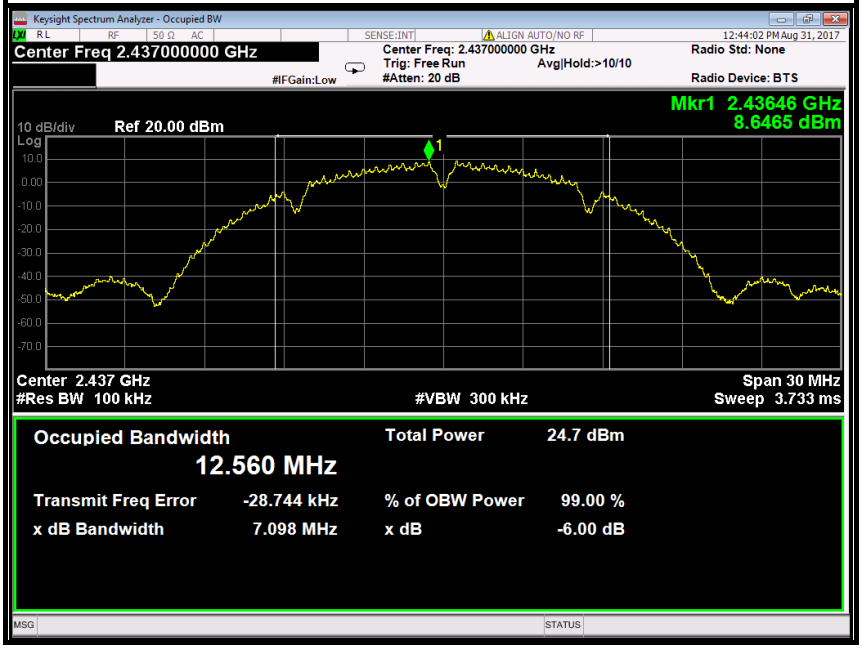
Antenna 2

IEEE 802.11b mode

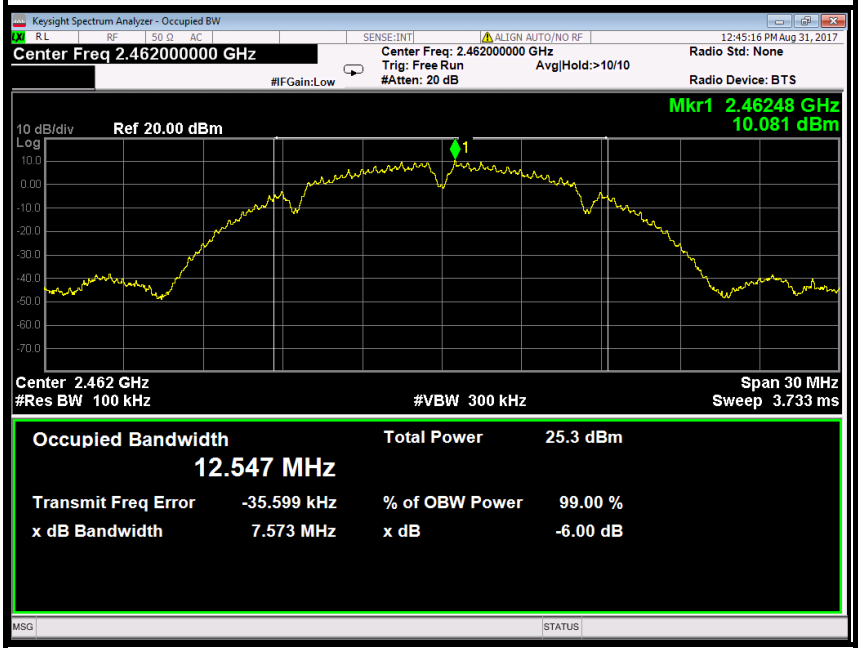
6dB Bandwidth (CH Low)



6dB Bandwidth (CH Mid)

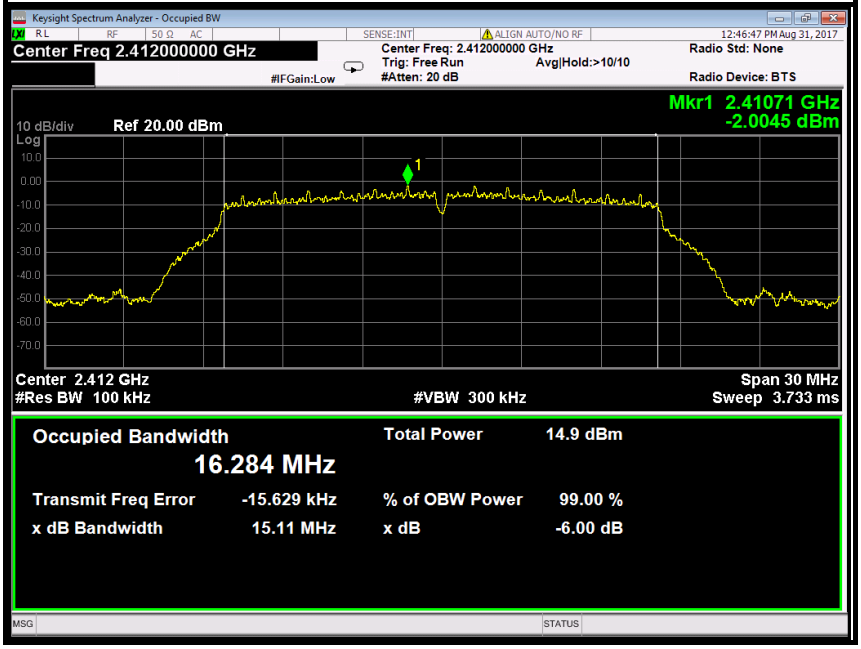


6dB Bandwidth (CH High)

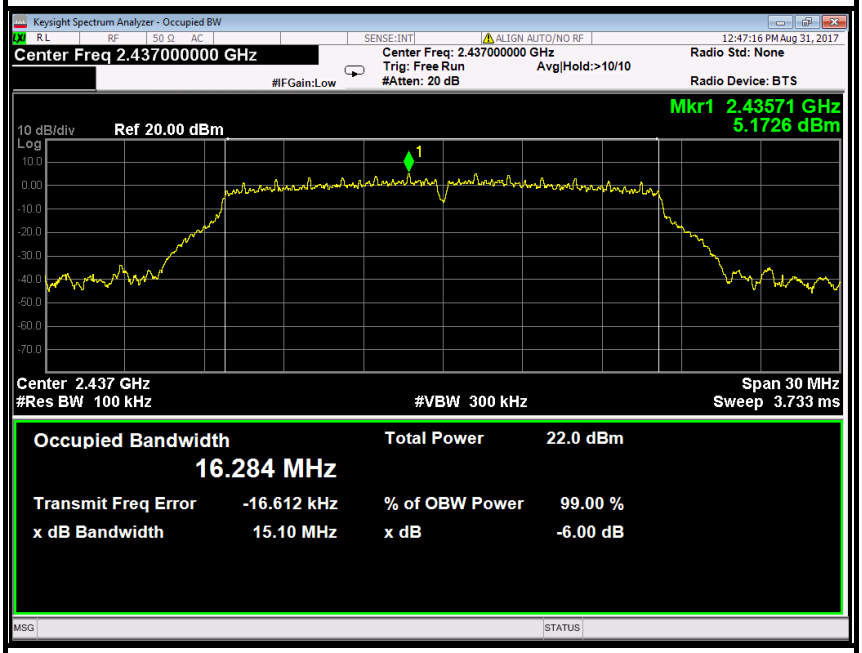


IEEE 802.11g mode

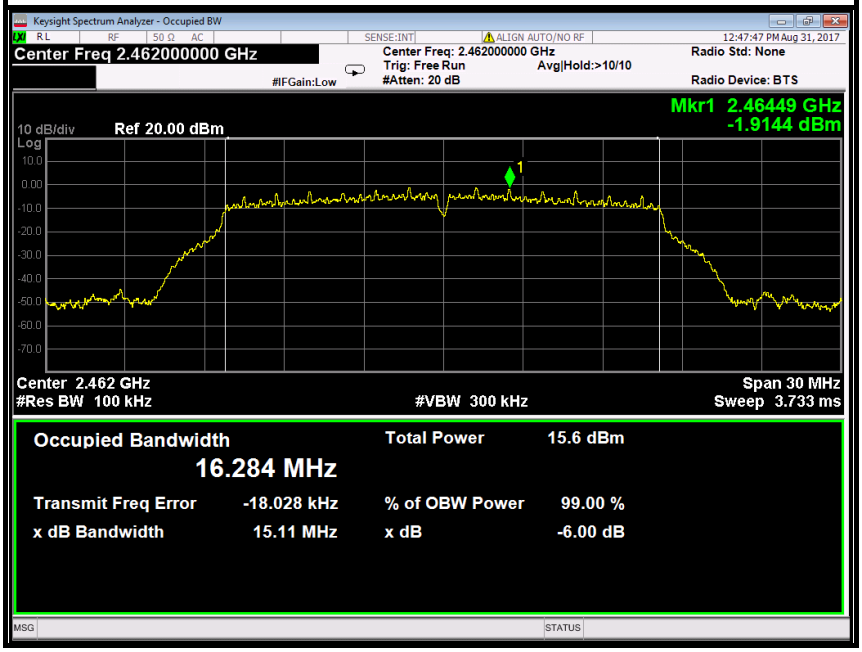
6dB Bandwidth (CH Low)



6dB Bandwidth (CH Mid)

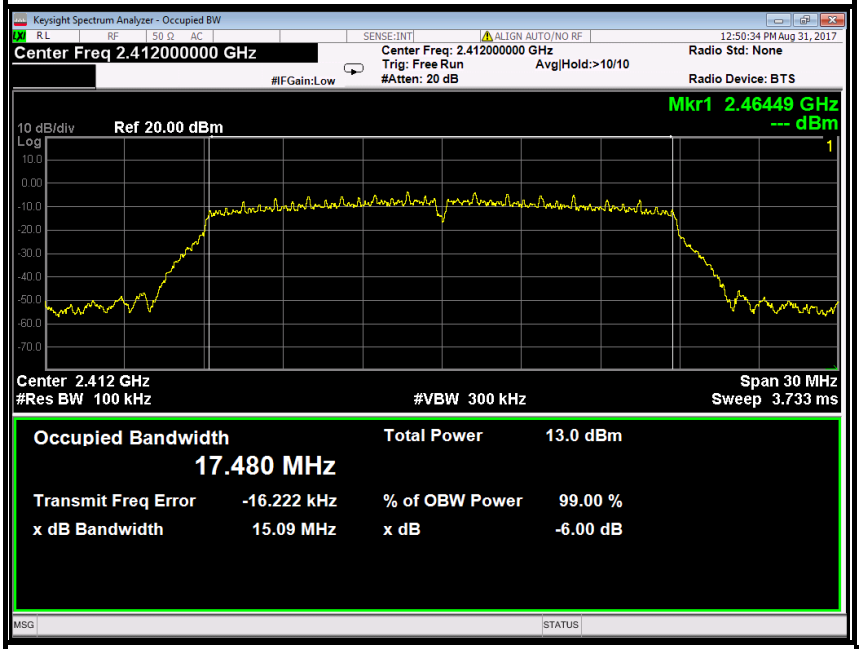


6dB Bandwidth (CH High)

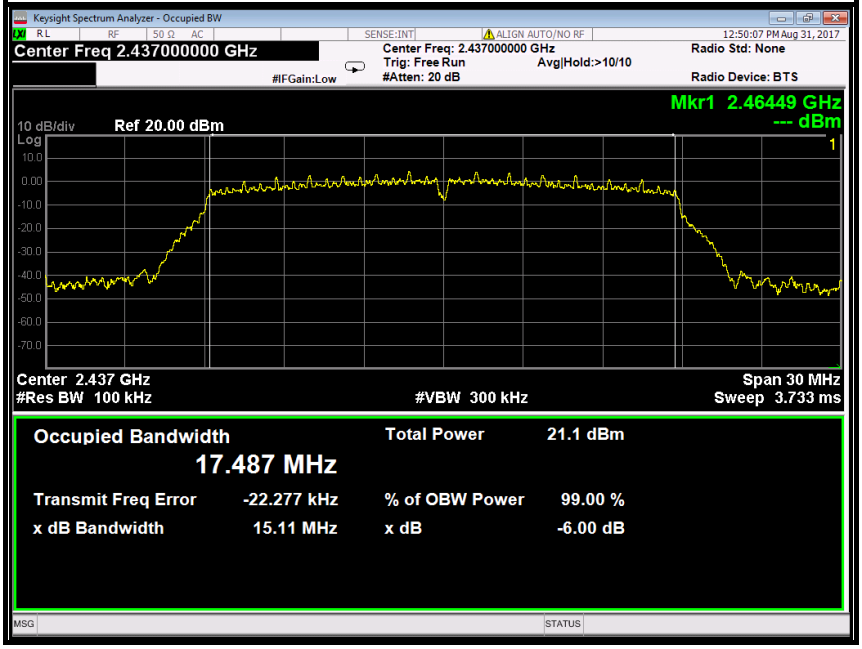


IEEE 802.11n HT20 MHz mode

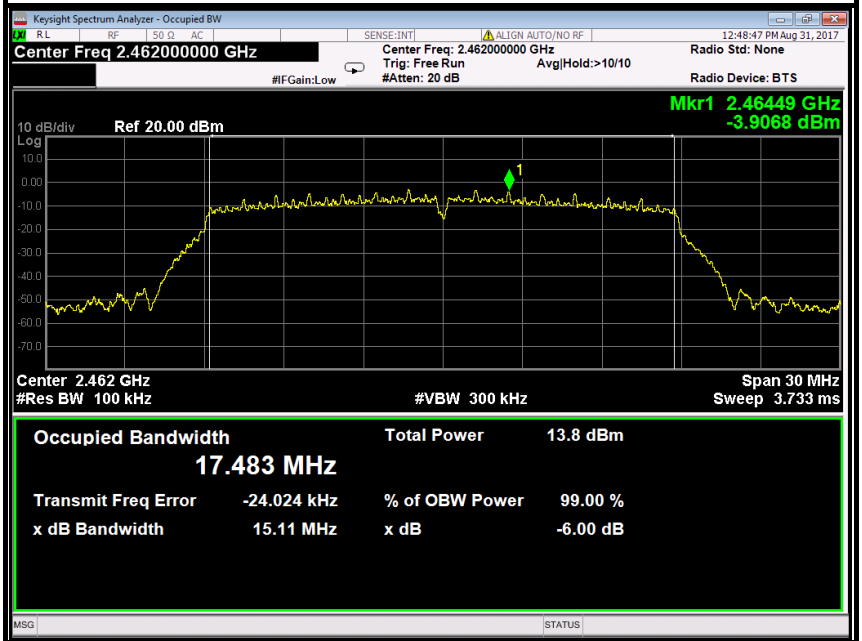
6dB Bandwidth (CH Low)



6dB Bandwidth (CH Mid)

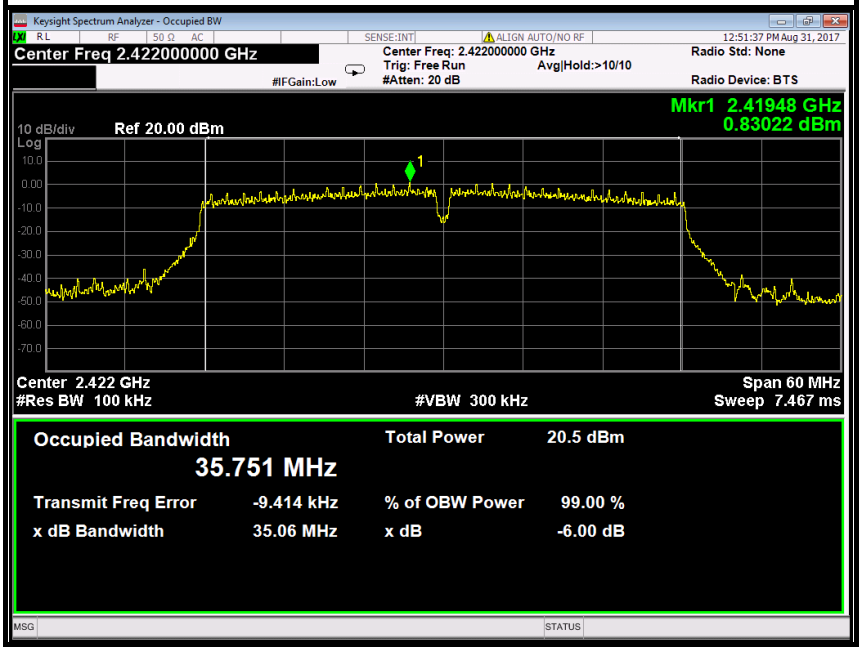


6dB Bandwidth (CH High)

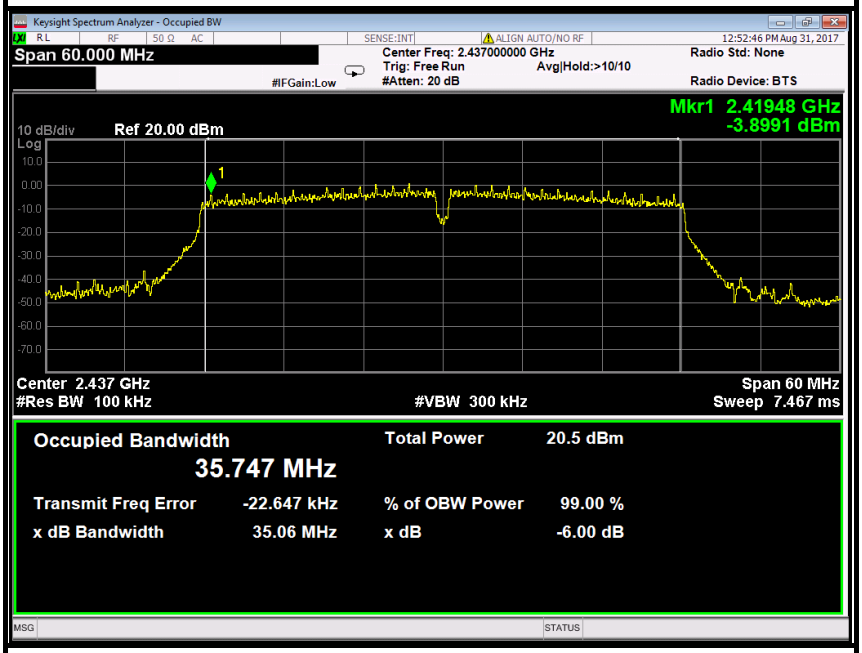


IEEE 802.11n HT40 MHz mode

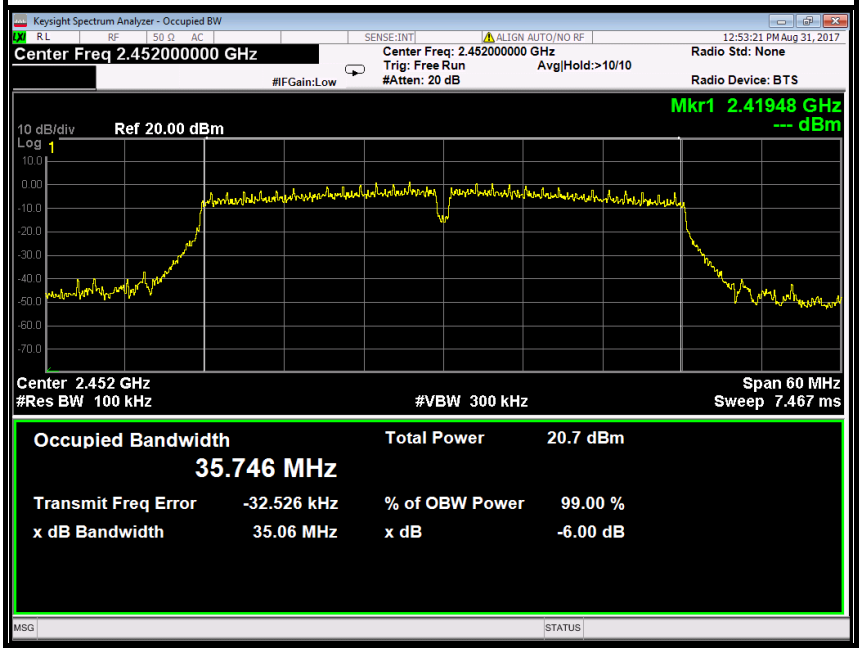
6dB Bandwidth (CH Low)



6dB Bandwidth (CH Mid)



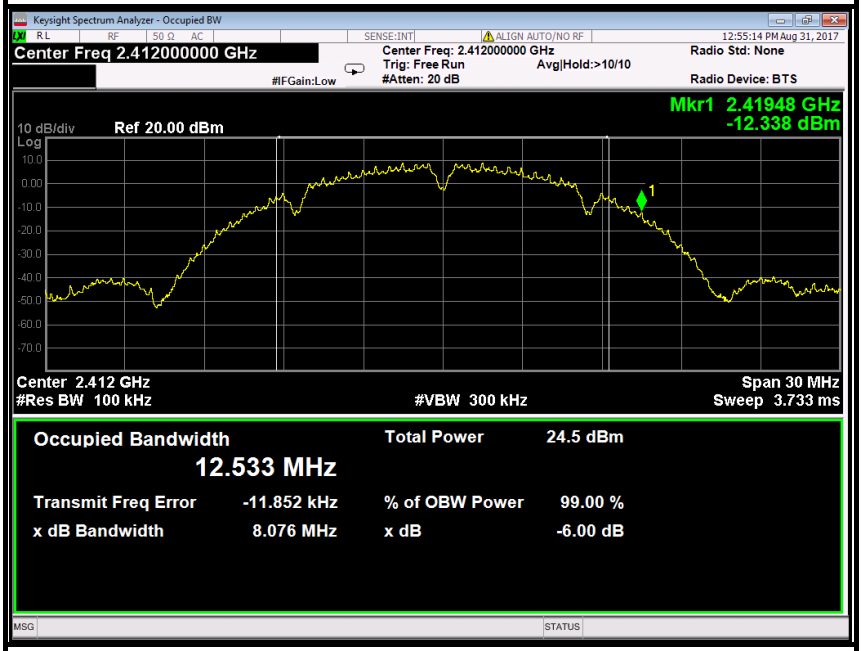
6dB Bandwidth (CH High)



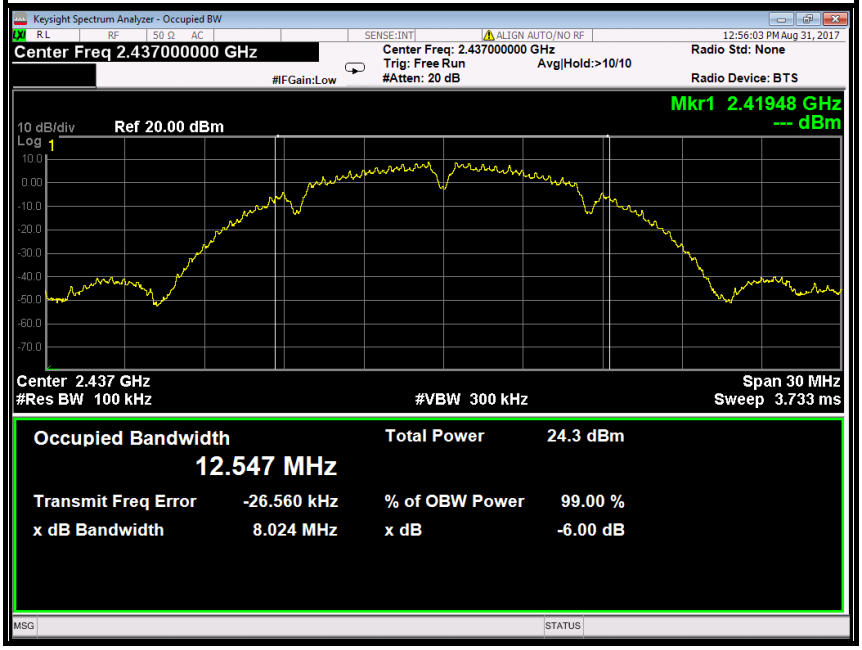
Antenna 3

IEEE 802.11b mode

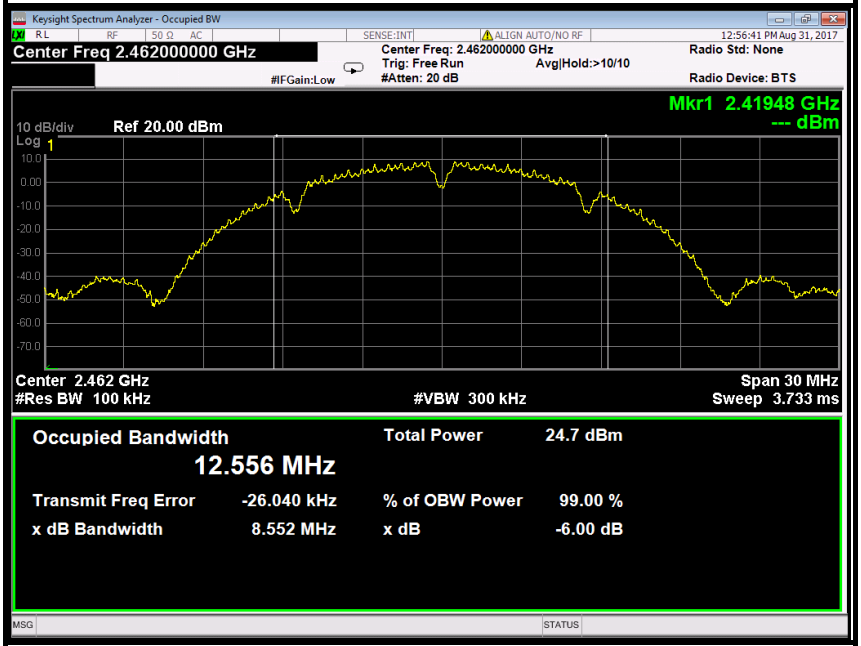
6dB Bandwidth (CH Low)



6dB Bandwidth (CH Mid)

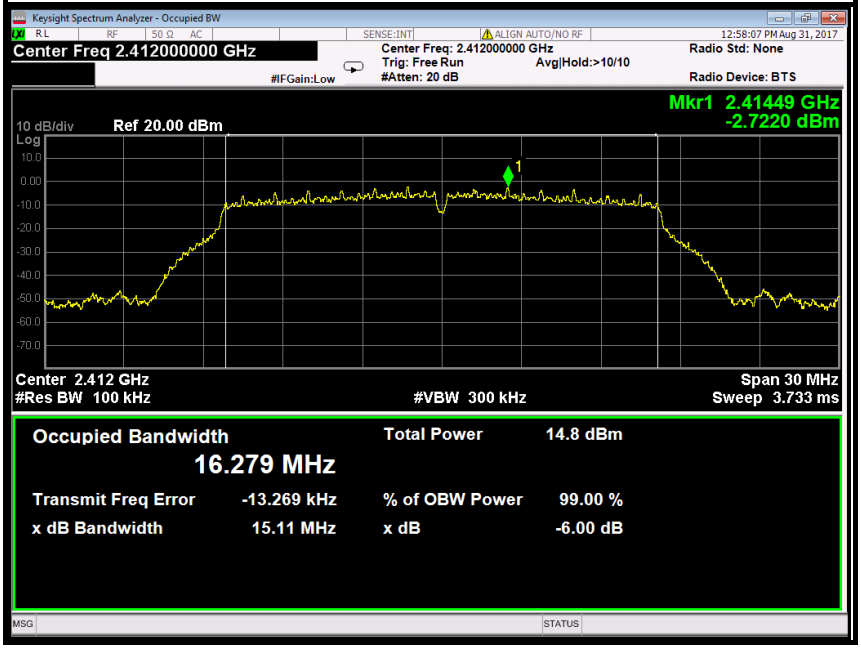


6dB Bandwidth (CH High)

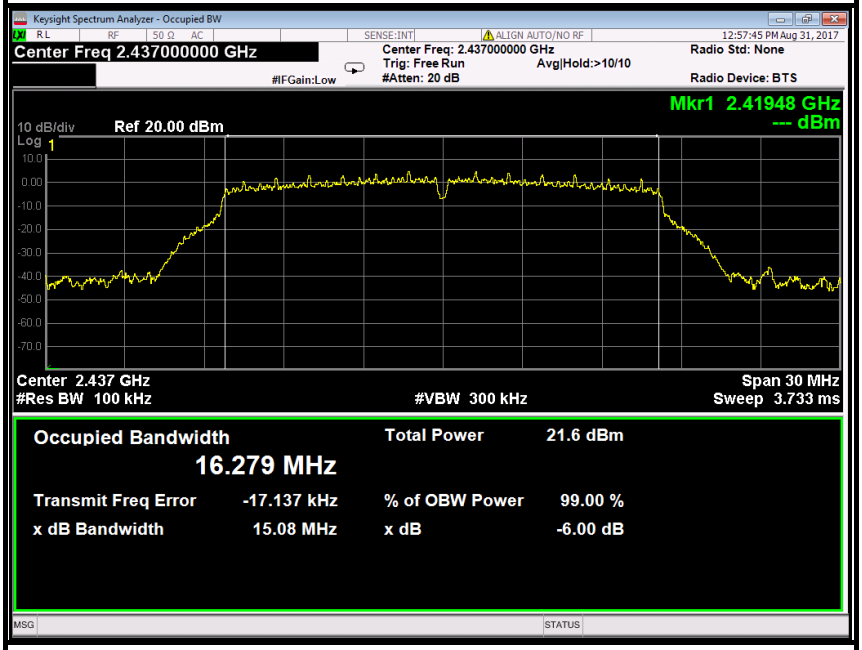


IEEE 802.11g mode

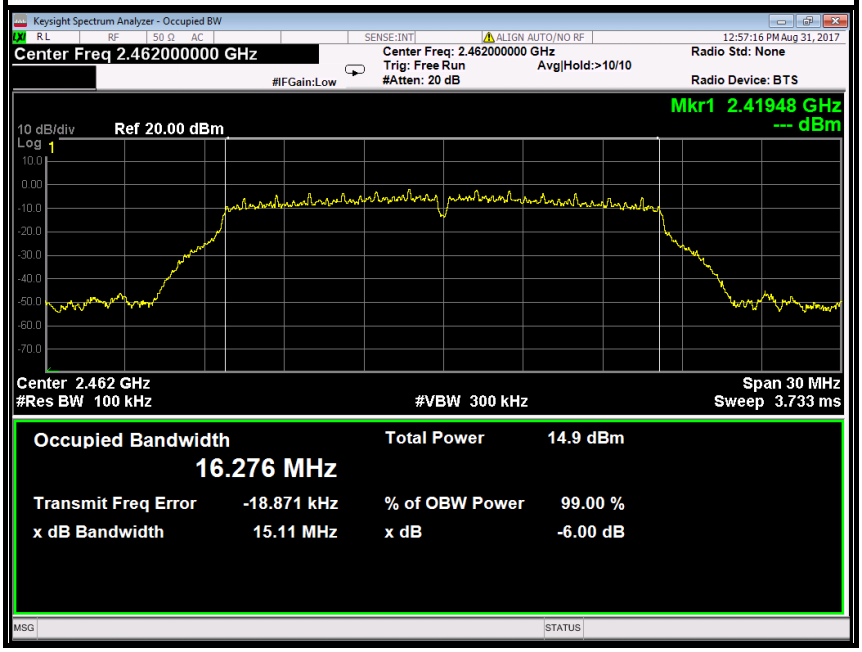
6dB Bandwidth (CH Low)



6dB Bandwidth (CH Mid)

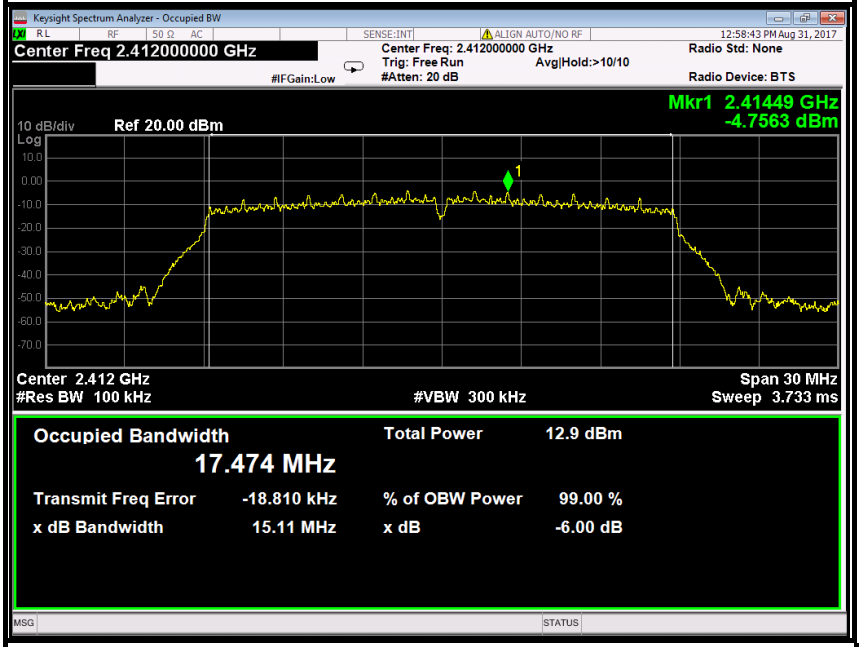


6dB Bandwidth (CH High)

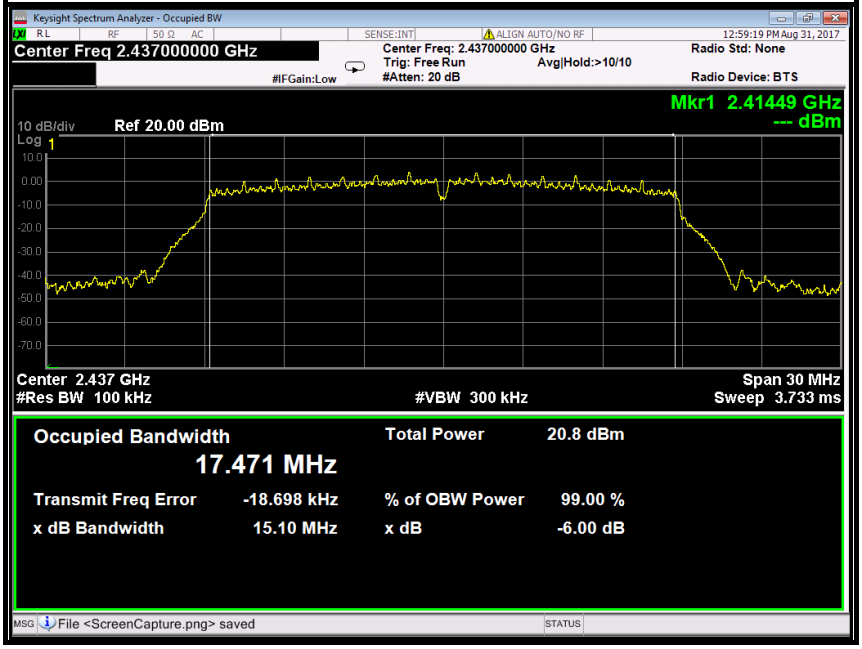


IEEE 802.11n HT20 MHz mode

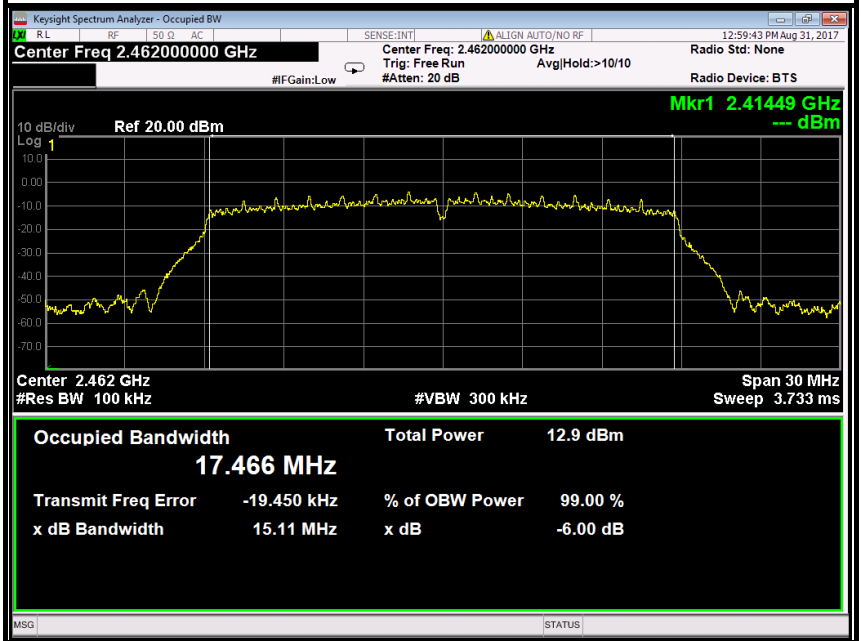
6dB Bandwidth (CH Low)



6dB Bandwidth (CH Mid)

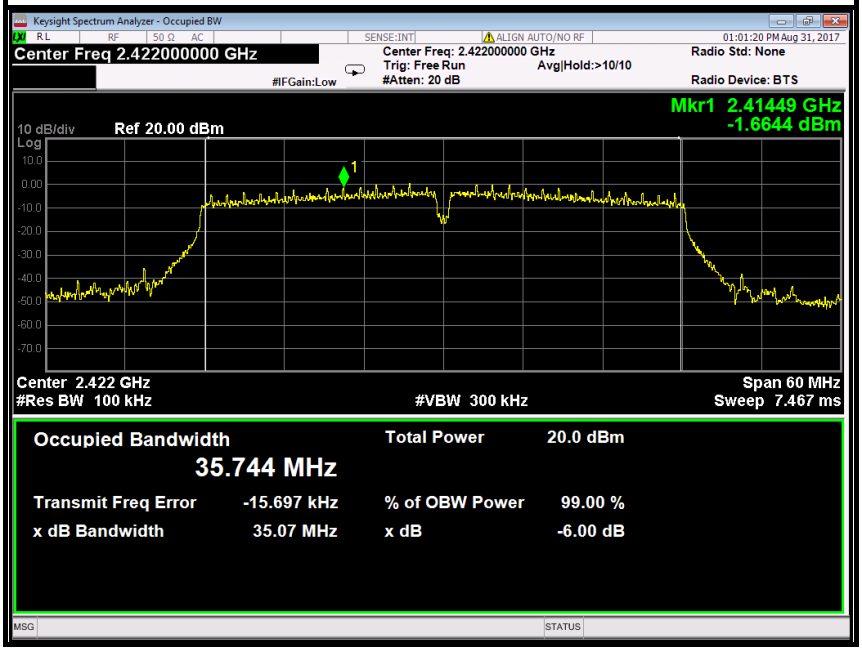


6dB Bandwidth (CH High)

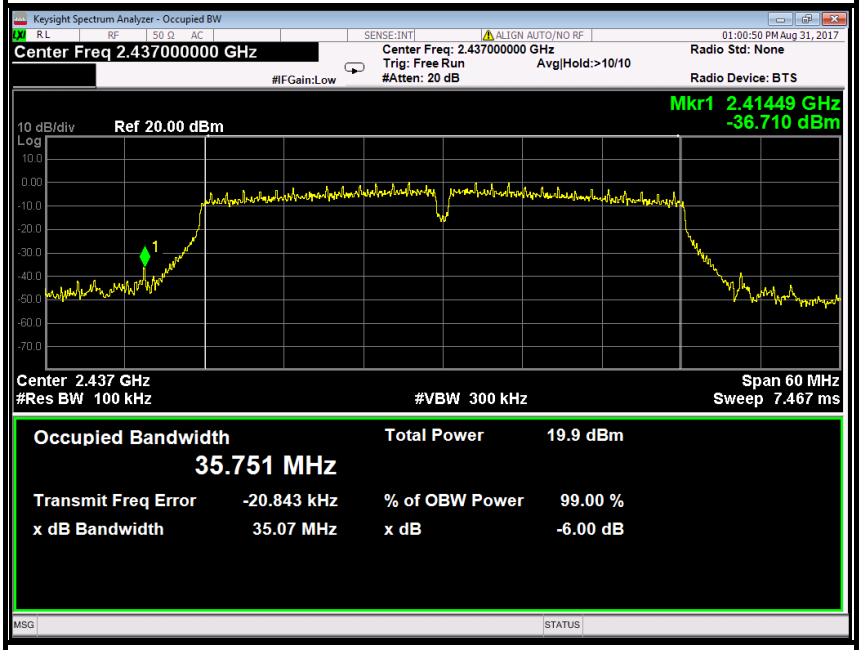


IEEE 802.11n HT40 MHz mode

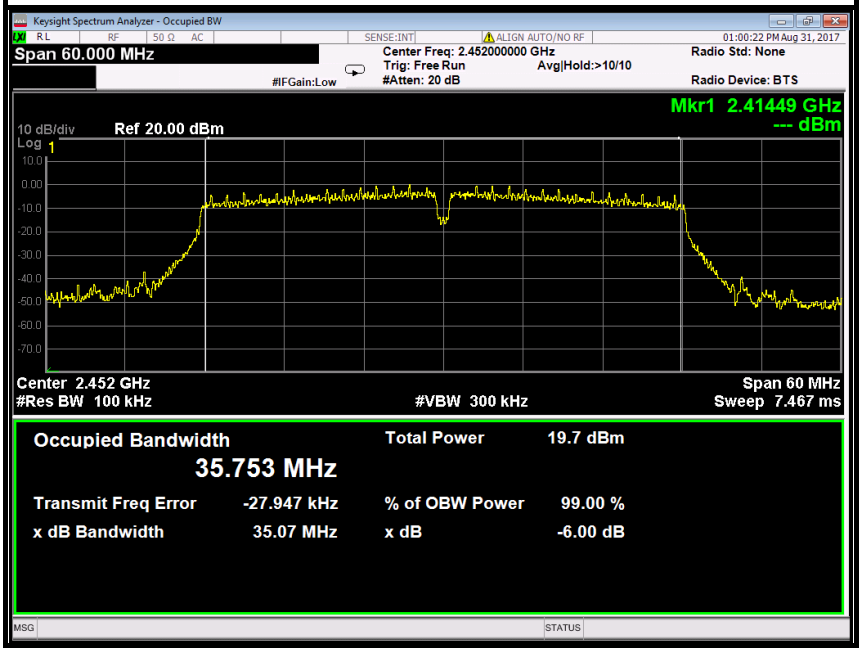
6dB Bandwidth (CH Low)



6dB Bandwidth (CH Mid)



6dB Bandwidth (CH High)



7.4. ANTENNA GAIN

MEASUREMENT

The antenna gain of the complete system is calculated by the difference of radiated power in EIRP and the conducted power of the module. For normal WLAN devices, the DSSS mode is used.

MEASUREMENT PARAMETERS

Measurement parameter	
Detector	Peak
Sweep time	Auto
Resolution bandwidth	3 MHz
Video bandwidth	3 MHz
Trace-Mode	Max hold

LIMITS

FCC	IC
Antenna Gain	
6 dBi	

TEST RESULTS

Antenna 0

T_{nom}	V_{nom}	Lowest channel 2412MHz	Middle channel 2437MHz	Highest channel 2462MHz
Conducted power [dBm/MHz] Measured with DSSS modulation		12.97	14.56	13.58
Radiated power [dBm/MHz] Measured with DSSS modulation		16.82	17.76	16.09
Gain [dBi] Calculated		3.85	3.20	2.51
Measurement uncertainty		± 1.5 dB (cond.) / ± 3 dB (rad.)		

Antenna 1

T_{nom}	V_{nom}	Lowest channel 2412MHz	Middle channel 2437MHz	Highest channel 2462MHz
Conducted power [dBm/MHz] Measured with DSSS modulation		12.97	14.56	13.58
Radiated power [dBm/MHz] Measured with DSSS modulation		16.82	17.76	16.09
Gain [dBi] Calculated		3.85	3.20	2.51
Measurement uncertainty		± 1.5 dB (cond.) / ± 3 dB (rad.)		

Antenna 2

T_{nom}	V_{nom}	Lowest channel 2412MHz	Middle channel 2437MHz	Highest channel 2462MHz
Conducted power [dBm/MHz] Measured with DSSS modulation		13.68	15.29	13.07
Radiated power [dBm/MHz] Measured with DSSS modulation		17.08	18.26	17.38
Gain [dBi] Calculated		3.40	2.97	4.31
Measurement uncertainty		± 1.5 dB (cond.) / ± 3 dB (rad.)		

Antenna 3

T_{nom}	V_{nom}	Lowest channel 2412MHz	Middle channel 2437MHz	Highest channel 2462MHz
Conducted power [dBm/MHz] Measured with DSSS modulation		12.00	14.53	11.75
Radiated power [dBm/MHz] Measured with DSSS modulation		15.08	18.26	14.38
Gain [dBi] Calculated		3.08	3.73	2.63
Measurement uncertainty		± 1.5 dB (cond.) / ± 3 dB (rad.)		

7.5. PEAK OUTPUT POWER

7.5.1. LIMITS

The maximum peak output power of the intentional radiator shall not exceed the following:

1. According to §15.247(b)(3), for systems using digital modulation in the bands of 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz: 1 Watt.

2. According to §15.247(b)(4), the conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

7.5.2. TEST INSTRUMENTS

Name of Equipment	Manufacturer	Model	Serial Number	Last Calibration	Calibration Due
Power Meter	Anritsu	ML2495A	1204003	02/21/2017	02/20/2018
Power Sensor	Anritsu	MA2411B	1126150	02/21/2017	02/20/2018

7.5.3. TEST PROCEDURES (please refer to measurement standard)

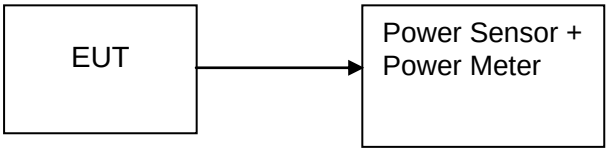
9.1.1 RBW ≥ *DTS bandwidth*

This procedure shall be used when the measurement instrument has available a resolution bandwidth that is greater than the *DTS bandwidth*.
a) Set the RBW ≥ *DTS bandwidth*.
b) Set VBW ≥ 3 RBW.
c) Set span ≥ 3 x RBW
d) Sweep time = auto couple.
e) Detector = peak.
f) Trace mode = max hold.
g) Allow trace to fully stabilize.
h) Use peak marker function to determine the peak amplitude level.

9.1.2 PKPM1 Peak power meter method

The maximum peak conducted output power may be measured using a broadband peak RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall utilize a fast-responding diode detector.

7.5.4. TEST SETUP



7.5.5. TEST RESULTS

No non-compliance noted

Test Data

Test mode: IEEE 802.11b

Channel	Frequency (MHz)	Output Power (dBm)				Output Power (W)				Peak / AVG	Limit (W)	Result
		Antenna 0	Antenna 1	Antenna 2	Antenna	Antenna 0	Antenna 1	Antenna 2	Antenna 3			
Low	2412	21.75	20.19	22.19	21.07	0.14962	0.10447	0.16558	0.12794	Peak	1	PASS
Mid	2437	23.07	23.15	23.80	23.57	0.20277	0.20654	0.23988	0.22751			PASS
High	2462	22.36	20.65	21.86	21.07	0.17219	0.11614	0.15346	0.12794			PASS
Low	2412	19.18	18.01	19.67	18.93	0.08279	0.06324	0.09268	0.07816	AVG	1	PASS
Mid	2437	20.87	20.79	21.37	21.13	0.12218	0.11995	0.13709	0.12972			PASS
High	2462	18.70	18.25	19.61	18.92	0.07413	0.06683	0.09141	0.07798			PASS

Test mode: IEEE 802.11g

Channel	Frequency (MHz)	Output Power (dBm)				Output Power (W)				Peak / AVG	Limit (W)	Result
		Antenna 0	Antenna 1	Antenna 2	Antenna	Antenna 0	Antenna 1	Antenna 2	Antenna 3			
Low	2412	18.87	18.63	18.77	19.07	0.07709	0.07295	0.07534	0.08072	Peak	1	PASS
Mid	2437	21.53	22.66	22.27	21.67	0.14223	0.18450	0.16866	0.14689			PASS
High	2462	17.78	18.05	18.23	18.38	0.05998	0.06383	0.06653	0.06887			PASS
Low	2412	14.46	14.27	14.54	14.76	0.02793	0.02673	0.02844	0.02992	AVG	1	PASS
Mid	2437	17.17	18.59	19.86	19.38	0.05212	0.07228	0.09683	0.08670			PASS
High	2462	12.89	12.67	13.18	13.26	0.01945	0.01849	0.02080	0.02118			PASS

Test mode: IEEE 802.11n HT20 MHz

Channe	Frequency (MHz)	Output Power (dBm)					Output Power (W)	Peak / AVG	Limit (W)	Resul t
		Antenna 0	Antenna 1	Antenna 2	Antenna 3	Total				
Low	2412	21.96	20.37	21.48	21.49	27.38	0.54746	Peak	1	PASS
Mid	2437	23.54	23.46	23.47	23.86	29.61	0.91331			PASS
High	2462	21.11	20.75	20.56	20.29	26.71	0.46864			PASS
Low	2412	12.65	11.84	12.78	12.49	18.48	0.07039	AVG	1	PASS
Mid	2437	16.24	17.21	17.86	17.69	23.31	0.21452			PASS
High	2462	12.58	12.39	11.92	11.28	18.09	0.06444			PASS

Test mode: IEEE 802.11n HT40 MHz

Channe	Frequency (MHz)	Output Power (dBm)					Output Power (W)	Peak / AVG	Limit (W)	Resul t
		Antenna 0	Antenna 1	Antenna 2	Antenna 3	Total				
Low	2422	20.70	19.82	20.10	20.26	26.25	0.42193	Peak	1	PASS
Mid	2437	23.15	23.54	23.87	23.41	29.52	0.89554			PASS
High	2452	20.13	19.63	19.24	19.64	25.69	0.37086			PASS
Low	2422	11.61	11.12	12.04	11.85	17.69	0.05874	AVG	1	PASS
Mid	2437	15.20	15.86	16.75	16.14	22.04	0.16009			PASS
High	2452	10.95	11.01	10.79	11.04	16.97	0.04976			PASS

7.6. BAND EDGES MEASUREMENT

7.6.1. LIMITS

According to §15.247(d), in any 100 kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator in operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in 15.209(a) (see Section 15.205(c)).

7.6.2. 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	N9010A	MY52221469	02/21/2017	02/20/2018
EMI TEST RECEIVER	ROHDE&SCHWARZ	ESCI	100783	02/21/2017	02/20/2018
Amplifier	EMEC	EM330	060661	03/18/2017	03/17/2018
High Noise Amplifier	Agilent	8449B	3008A01838	02/21/2017	02/20/2018
Loop Antenna	COM-POWER	AL-130	121044	09/25/2017	09/24/2018
Bilog Antenna	SCHAFFNER	CBL6143	5082	02/21/2017	02/20/2018
Horn Antenna	SCHWARZBECK	BBHA9120	D286	02/27/2017	02/27/2018
Board-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170-497	02/27/2017	02/27/2018
Turn Table	N/A	N/A	N/A	N.C.R	N.C.R
Antenna Tower	SUNOL	TLT2	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	02/21/2017	02/20/2018
Test S/W	FARAD	LZ-RF / CCS-SZ-3A2			

NOTE: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

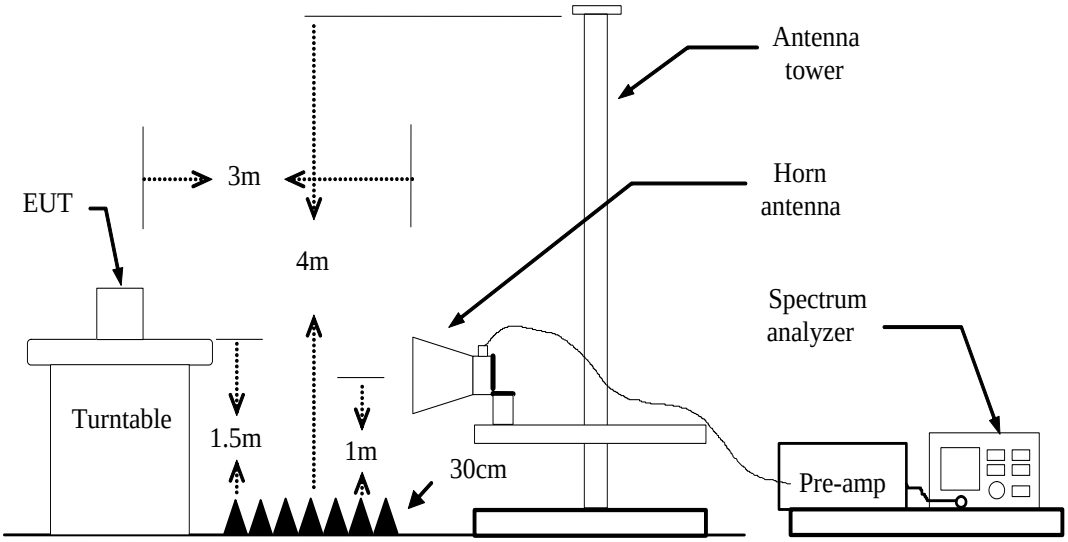
2. The FCC Site Registration number is 101879.

3. N.C.R = No Calibration Required.

7.6.3. TEST PROCEDURES (please refer to measurement standard)

1. The EUT is placed on a turntable, which is 1.5m above the 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 emission.
4. Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission:
   (a) PEAK: RBW=1MHz / VBW=3MHz / Sweep=AUTO
   (b) AVERAGE: RBW=1MHz / VBW=1/T / Sweep=AUTO / Detector=PEAK
5. Repeat the procedures until all the PEAK and AVERAGE versus POLARIZATION are

7.6.4. TEST SETUP



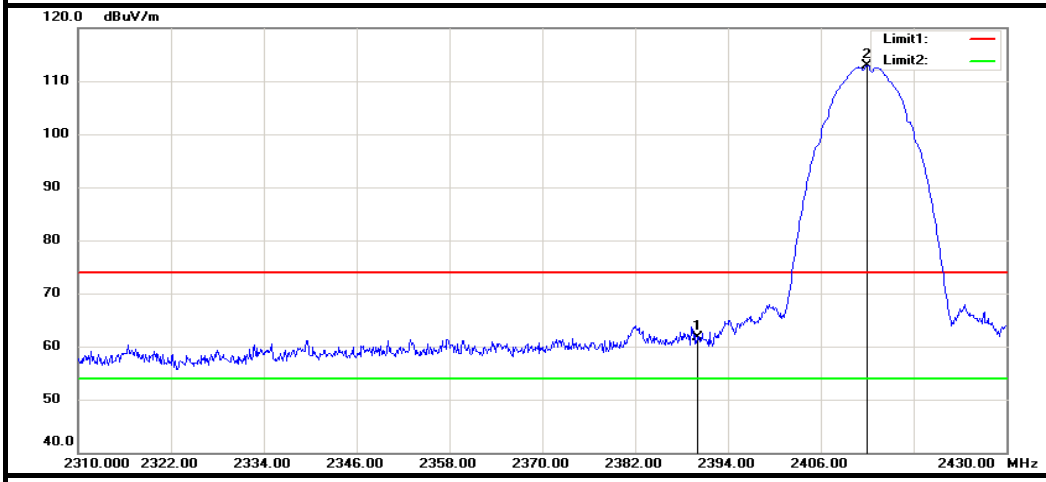
7.6.5. TEST RESULTS

Test Plot

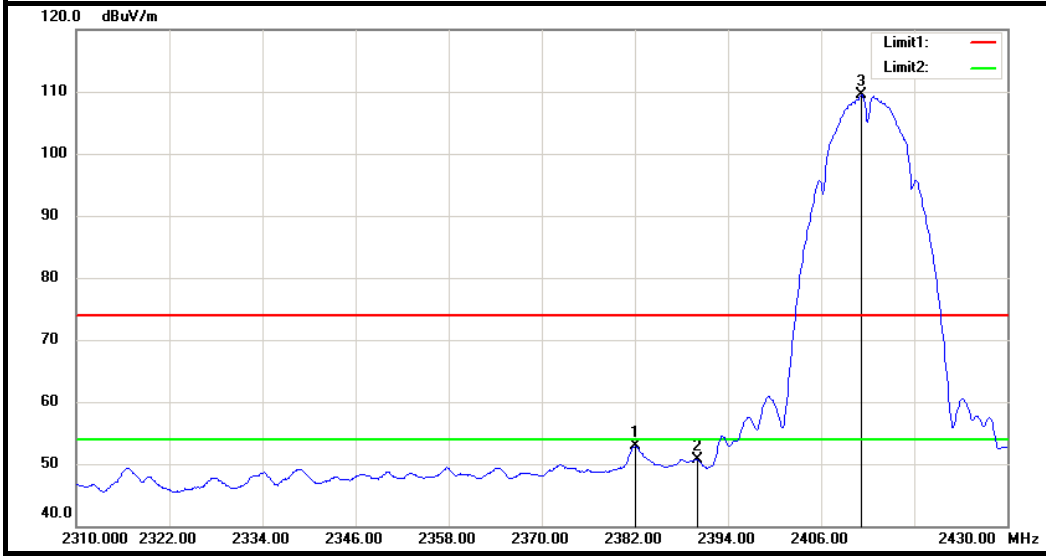
IEEE 802.11b mode (Antenna 0)

Band Edges (CH Low)

Detector mode: Peak **Polarity: Vertical**



Detector mode: Average **Polarity: Vertical**



No.	Frequency (MHz)	Reading (dB)	Factor (dB/m)	Result (dB/m)	Limit (dB/m)	Margin (dB)	Remark	Antenna Polar
1	2390.0000	64.55	-2.86	61.69	74.00	-12.31	Peak	Vertical
2	2412.0000	115.70	-2.74	112.96	---	---	Peak	Vertical
1	2382.0000	55.77	-2.91	52.86	54.00	-1.14	Average	Vertical
2	2390.0000	53.50	-2.86	50.64	54.00	-3.36	Average	Vertical
3	2411.1600	112.18	-2.75	109.43	---	---	Average	Vertical