



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:** Darry Wu**Ambient temperature:** 24°C **Relative humidity:** 52% RH**Date:** May 7, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
35.8200	50.53	-14.91	35.62	40.00	-4.38	V	QP
106.6300	46.66	-22.45	24.21	43.50	-19.29	V	QP
221.0900	38.57	-20.51	18.06	46.00	-27.94	V	QP
251.1600	42.86	-20.94	21.92	46.00	-24.08	V	QP
547.9800	39.34	-13.14	26.20	46.00	-19.80	V	QP
873.9000	32.64	-10.17	22.47	46.00	-23.53	V	QP
35.8200	49.17	-14.91	34.26	40.00	-5.74	H	QP
106.6300	42.91	-22.45	20.46	43.50	-23.04	H	QP
153.1900	46.39	-22.01	24.38	43.50	-19.12	H	QP
274.4400	43.39	-20.45	22.94	46.00	-23.06	H	QP
545.0700	37.37	-13.19	24.18	46.00	-21.82	H	QP
572.2300	33.20	-13.04	20.16	46.00	-25.84	H	QP

****Remark:** 1. No emission found between lowest internal used/generated frequency to 30MHz.

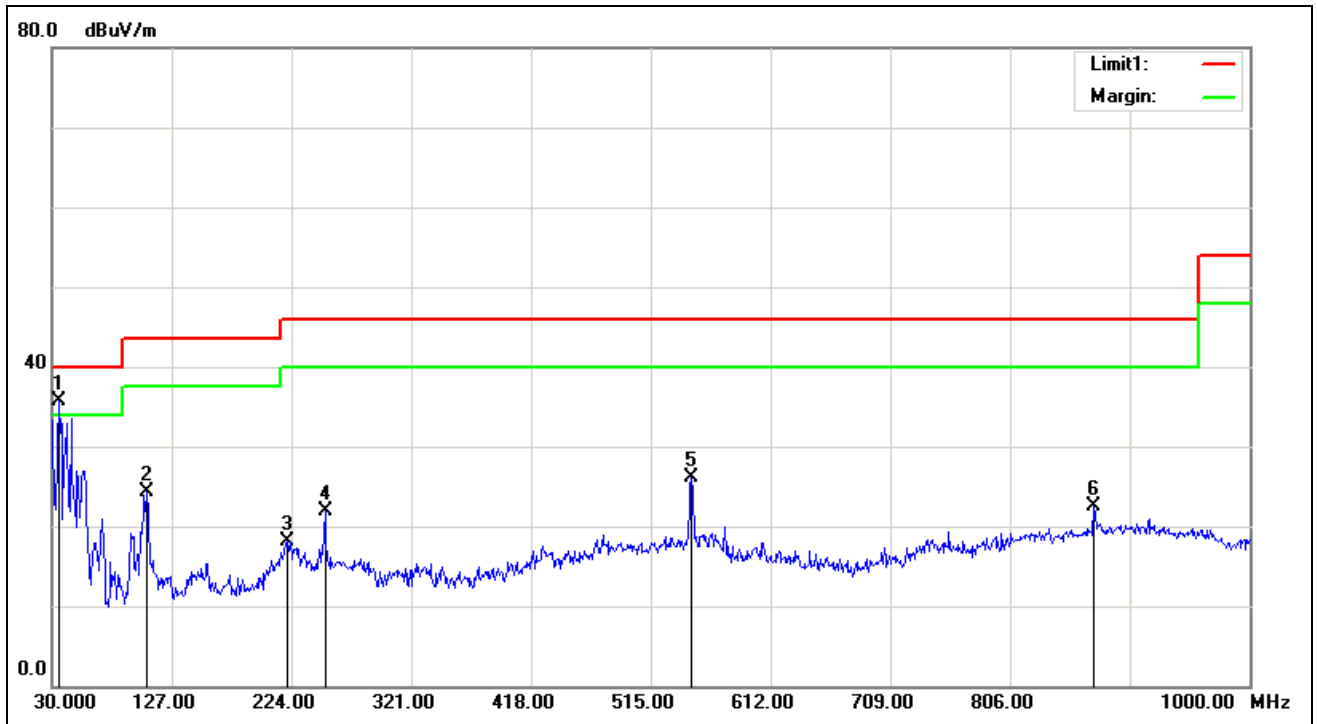
2. Pre-scan all mode and recorded the worst case results in this report (802.11b (Low Channel))

Notes:

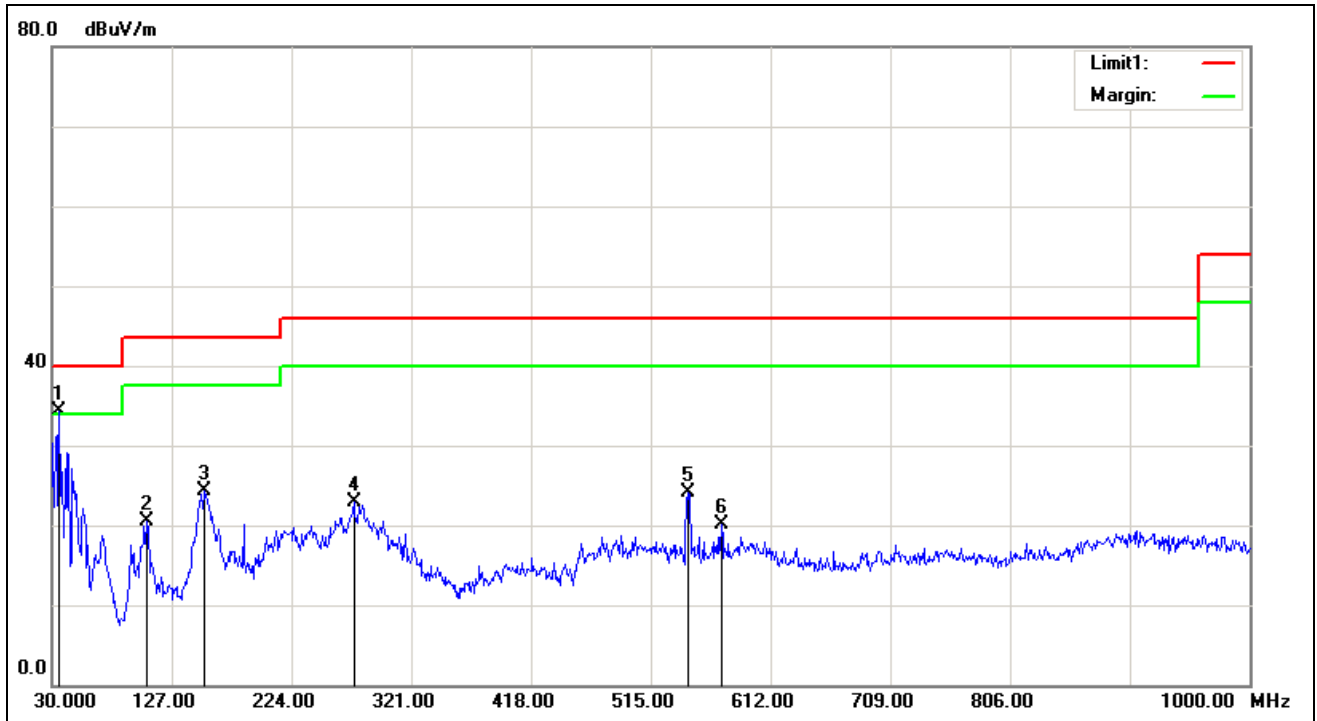
- Radiated emissions measured in frequency range from 9 kHz to 1GHz were made with an instrument using Quasi-peak detector mode.
- Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- The IF bandwidth of Receiver between 30MHz to 1GHz was 120 kHz.
- | | |
|------------------------|--|
| Frequency (MHz). | = Emission frequency in MHz |
| Reading (dBuV/m) | = Receiver reading |
| Correction Factor (dB) | = Antenna factor + Cable loss – Amplifier gain |
| Limit (dBuV/m) | = Limit stated in standard |
| Margin (dB) | = Measured (dBuV/m) – Limits (dBuV/m) |
| Antenna Pole (H/V) | = Current carrying line of reading |



Vertical



Horizontal



**Above 1 GHz****Antenna 0**

Test Mode: TX / IEEE 802.11b(CH Low)

Tested by: Darry WuAmbient temperature: 24°C Relative humidity: 52% RHDate: May 7, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
2539.000	47.39	-2.19	45.20	74.00	-28.80	V	peak
4429.000	44.69	3.10	47.79	74.00	-26.21	V	peak
4798.000	47.30	4.32	51.62	74.00	-22.38	V	peak
5464.000	44.22	5.81	50.03	74.00	-23.97	V	peak
5635.000	43.99	5.93	49.92	74.00	-24.08	V	peak
8461.000	43.19	9.40	52.59	74.00	-21.41	V	peak
8461.000	37.53	9.40	46.93	54.00	-7.07	V	AVG
3619.000	53.06	-0.02	53.04	74.00	-20.96	H	Peak
3619.000	50.61	-0.02	50.59	54.00	-3.41	H	AVG
4519.000	43.79	3.41	47.20	74.00	-26.80	H	Peak
4861.000	44.11	4.53	48.64	74.00	-25.36	H	Peak
6580.000	43.00	7.02	50.02	74.00	-23.98	H	peak
7714.000	42.35	9.09	51.44	74.00	-22.56	H	peak
8308.000	42.55	9.48	52.03	74.00	-21.97	H	peak

REMARKS:

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: Darry WuAmbient temperature: 24°C Relative humidity: 52% RHDate: June 13,
2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
2242.000	46.99	-3.67	43.32	74.00	-30.68	V	Peak
3970.000	43.98	1.46	45.44	74.00	-28.56	V	Peak
4798.000	46.30	4.32	50.62	74.00	-23.38	V	Peak
5329.000	43.24	5.57	48.81	74.00	-25.19	V	Peak
6715.000	42.31	7.24	49.55	74.00	-24.45	V	Peak
7723.000	42.22	9.11	51.33	74.00	-22.67	V	Peak
2494.000	48.15	-2.29	45.86	74.00	-28.14	H	Peak
3655.000	50.64	0.13	50.77	74.00	-23.23	H	Peak
4798.000	44.84	4.32	49.16	74.00	-24.84	H	Peak
5140.000	43.51	5.23	48.74	74.00	-25.26	H	Peak
5419.000	43.02	5.73	48.75	74.00	-25.25	H	Peak
7129.000	42.51	7.95	50.46	74.00	-23.54	H	Peak

REMARKS:

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.



Test Mode: TX / IEEE 802.11b (CH High)

Tested by: Darry Wu

Ambient temperature: 24°C

Relative humidity: 52% RH

Date: June 13, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
1747.000	54.94	-6.38	48.56	74.00	-25.44	V	Peak
3349.000	44.82	-0.77	44.05	74.00	-29.95	V	Peak
3871.000	44.24	1.05	45.29	74.00	-28.71	V	Peak
4798.000	47.87	4.32	52.19	74.00	-21.81	V	Peak
4798.000	46.06	4.32	50.38	54.00	-3.62	V	AVG
5383.000	42.60	5.66	48.26	74.00	-25.74	V	Peak
7822.000	42.57	9.30	51.87	74.00	-22.13	V	Peak
2197.000	47.05	-3.92	43.13	74.00	-30.87	H	Peak
2800.000	46.81	-1.72	45.09	74.00	-28.91	H	Peak
3502.000	45.23	-0.51	44.72	74.00	-29.28	H	Peak
3691.000	51.58	0.29	51.87	74.00	-22.13	H	Peak
5725.000	42.76	5.96	48.72	74.00	-25.28	H	Peak
7237.000	42.36	8.16	50.52	74.00	-23.48	H	Peak

REMARKS:

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:** Darry Wu**Ambient temperature:** 24°C **Relative humidity:** 52% RH**Date:** June 13, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
3097.000	45.59	-1.20	44.39	74.00	-29.61	V	peak
3871.000	43.83	1.05	44.88	74.00	-29.12	V	peak
4663.000	44.23	3.88	48.11	74.00	-25.89	V	peak
4798.000	47.26	4.32	51.58	74.00	-22.42	V	peak
6391.000	43.08	6.71	49.79	74.00	-24.21	V	peak
6841.000	42.54	7.44	49.98	74.00	-24.02	V	peak
2935.000	45.70	-1.48	44.22	74.00	-29.78	H	Peak
3871.000	44.46	1.05	45.51	74.00	-28.49	H	Peak
5077.000	44.90	5.12	50.02	74.00	-23.98	H	Peak
6076.000	42.43	6.20	48.63	74.00	-25.37	H	peak
6562.000	43.13	6.99	50.12	74.00	-23.88	H	peak
6859.000	42.39	7.47	49.86	74.00	-24.14	H	peak

REMARKS:

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 t.
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: Darry Wu

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

Date: June 13, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
1198.000	48.51	-7.80	40.71	74.00	-33.29	V	Peak
4357.000	43.43	2.85	46.28	74.00	-27.72	V	Peak
4663.000	44.65	3.88	48.53	74.00	-25.47	V	Peak
4798.000	46.30	4.32	50.62	74.00	-23.38	V	Peak
5140.000	43.00	5.23	48.23	74.00	-25.77	V	Peak
6148.000	43.12	6.32	49.44	74.00	-24.56	V	Peak
1900.000	46.93	-5.63	41.30	74.00	-32.70	H	Peak
2809.000	46.45	-1.70	44.75	74.00	-29.25	H	Peak
4195.000	44.76	2.28	47.04	74.00	-26.96	H	Peak
5086.000	42.99	5.13	48.12	74.00	-25.88	H	Peak
5671.000	42.70	5.94	48.64	74.00	-25.36	H	Peak
7435.000	42.66	8.55	51.21	74.00	-22.79	H	Peak

REMARKS:

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: Darry Wu

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

Date: June 13, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
2242.000	48.46	-3.67	44.79	74.00	-29.21	V	Peak
2773.000	46.62	-1.77	44.85	74.00	-29.15	V	Peak
4420.000	43.33	3.07	46.40	74.00	-27.60	V	Peak
4798.000	46.58	4.32	50.90	74.00	-23.10	V	Peak
5248.000	43.07	5.42	48.49	74.00	-25.51	V	Peak
6571.000	42.86	7.01	49.87	74.00	-24.13	V	Peak
1477.000	47.97	-6.92	41.05	74.00	-32.95	H	Peak
3763.000	44.88	0.59	45.47	74.00	-28.53	H	Peak
4276.000	44.09	2.56	46.65	74.00	-27.35	H	Peak
4591.000	44.24	3.65	47.89	74.00	-26.11	H	Peak
5293.000	42.91	5.50	48.41	74.00	-25.59	H	Peak
6265.000	42.40	6.51	48.91	74.00	-25.09	H	Peak

REMARKS:

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: Darry Wu

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

Date: June 13, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
2233.000	46.77	-3.72	43.05	74.00	-30.95	V	peak
2836.000	46.93	-1.66	45.27	74.00	-28.73	V	peak
4033.000	44.53	1.71	46.24	74.00	-27.76	V	peak
4798.000	45.96	4.32	50.28	74.00	-23.72	V	peak
5518.000	42.70	5.88	48.58	74.00	-25.42	V	peak
6184.000	42.54	6.38	48.92	74.00	-25.08	V	peak
2548.000	47.10	-2.17	44.93	74.00	-29.07	H	Peak
3097.000	45.86	-1.20	44.66	74.00	-29.34	H	Peak
4609.000	44.31	3.71	48.02	74.00	-25.98	H	Peak
4825.000	46.32	4.41	50.73	74.00	-23.27	H	peak
5410.000	43.55	5.71	49.26	74.00	-24.74	H	peak
6184.000	42.96	6.38	49.34	74.00	-24.66	H	peak

REMARKS:

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 t.
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 background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Test Mode: TX / IEEE 802.11b (CH Mid)

Tested by: Darry WuAmbient temperature: 24°C Relative humidity: 52% RHDate: June 13, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
3214.000	46.30	-1.00	45.30	74.00	-28.70	V	Peak
3367.000	45.90	-0.74	45.16	74.00	-28.84	V	Peak
4798.000	46.75	4.32	51.07	74.00	-22.93	V	Peak
4870.000	50.29	4.56	54.85	74.00	-19.15	V	Peak
4870.000	45.60	4.56	50.16	54.00	-3.84	V	AVG
6193.000	42.56	6.39	48.95	74.00	-25.05	V	Peak
1342.000	48.63	-7.27	41.36	74.00	-32.64	H	Peak
2836.000	45.12	-1.66	43.46	74.00	-30.54	H	Peak
4870.000	50.02	4.56	54.58	74.00	-19.42	H	Peak
4870.000	45.73	4.56	50.29	54.00	-3.71	H	AVG
5401.000	41.96	5.69	47.65	74.00	-26.35	H	Peak
6103.000	41.92	6.25	48.17	74.00	-25.83	H	Peak
6715.000	42.22	7.24	49.46	74.00	-24.54	H	Peak

REMARKS:

1. Measuring frequencies from 1 GHz to the 10th harmonic of 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: Darry WuAmbient temperature: 24°C Relative humidity: 52% RHDate: June 13, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
2845.000	46.23	-1.64	44.59	74.00	-29.41	V	Peak
3799.000	44.78	0.74	45.52	74.00	-28.48	V	Peak
4798.000	46.51	4.32	50.83	74.00	-23.17	V	Peak
5194.000	43.22	5.33	48.55	74.00	-25.45	V	Peak
6391.000	42.51	6.71	49.22	74.00	-24.78	V	Peak
7624.000	42.12	8.92	51.04	74.00	-22.96	V	Peak
2773.000	46.04	-1.77	44.27	74.00	-29.73	H	Peak
3331.000	44.93	-0.80	44.13	74.00	-29.87	H	Peak
3898.000	44.45	1.16	45.61	74.00	-28.39	H	Peak
4924.000	45.68	4.73	50.41	74.00	-23.59	H	Peak
5671.000	43.14	5.94	49.08	74.00	-24.92	H	Peak
6346.000	42.36	6.64	49.00	74.00	-25.00	H	Peak

REMARKS:

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: Darry Wu

Ambient temperature: 24°C

Relative humidity: 52% RH

Date: June 13, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
2251.000	43.63	-3.62	40.01	74.00	-33.99	V	Peak
3619.000	47.38	-0.02	47.36	74.00	-26.64	V	Peak
4825.000	49.76	4.41	54.17	74.00	-19.83	V	Peak
4825.000	39.21	4.41	43.62	54.00	-10.38	V	AVG
5266.000	38.93	5.45	44.38	74.00	-29.62	V	Peak
5896.000	40.08	6.04	46.12	74.00	-27.88	V	Peak
7381.000	39.51	8.44	47.95	74.00	-26.05	V	Peak
2818.000	42.54	-1.69	40.85	74.00	-33.15	H	Peak
3997.000	40.19	1.58	41.77	74.00	-32.23	H	Peak
4798.000	46.63	4.32	50.95	74.00	-23.05	H	Peak
5500.000	39.11	5.87	44.98	74.00	-29.02	H	Peak
5878.000	38.93	6.03	44.96	74.00	-29.04	H	Peak
7435.000	39.50	8.55	48.05	74.00	-25.95	H	Peak

REMARKS:

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: Darry Wu

Ambient temperature: 24°C

Relative humidity: 52% RH

Date: June 13, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
2431.000	45.70	-2.64	43.06	74.00	-30.94	V	Peak
3655.000	47.04	0.13	47.17	74.00	-26.83	V	Peak
4870.000	47.96	4.56	52.52	74.00	-21.48	V	Peak
4870.000	41.82	4.56	46.38	54.00	-7.62	V	AVG
5446.000	38.81	5.77	44.58	74.00	-29.42	V	Peak
7075.000	39.38	7.85	47.23	74.00	-26.77	V	Peak
7777.000	39.40	9.22	48.62	74.00	-25.38	V	Peak
1270.000	46.04	-7.53	38.51	74.00	-35.49	H	Peak
2584.000	43.91	-2.11	41.80	74.00	-32.20	H	Peak
3772.000	39.61	0.63	40.24	74.00	-33.76	H	Peak
4798.000	45.46	4.32	49.78	74.00	-24.22	H	Peak
5968.000	38.94	6.07	45.01	74.00	-28.99	H	Peak
7660.000	39.22	8.99	48.21	74.00	-25.79	H	Peak

REMARKS:

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: Darry Wu

Ambient temperature: 24°C

Relative humidity: 52% RH

Date: June 13, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
2224.000	44.76	-3.77	40.99	74.00	-33.01	V	Peak
2566.000	43.64	-2.14	41.50	74.00	-32.50	V	Peak
3691.000	46.59	0.29	46.88	74.00	-27.12	V	Peak
4924.000	48.65	4.73	53.38	74.00	-20.62	V	Peak
4924.000	44.83	4.73	49.56	54.00	-4.44	V	AVG
5923.000	39.58	6.05	45.63	74.00	-28.37	V	Peak
7498.000	39.83	8.67	48.50	74.00	-25.50	V	Peak
2467.000	46.14	-2.44	43.70	74.00	-30.30	H	Peak
3529.000	41.14	-0.40	40.74	74.00	-33.26	H	Peak
4798.000	43.92	4.32	48.24	74.00	-25.76	H	Peak
4933.000	42.30	4.76	47.06	74.00	-26.94	H	Peak
5302.000	39.52	5.52	45.04	74.00	-28.96	H	Peak
7417.000	39.03	8.51	47.54	74.00	-26.46	H	Peak

REMARKS:

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: Darry Wu

Ambient temperature: 24°C

Relative humidity: 52% RH

Date: June 13, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
2512.000	43.61	-2.24	41.37	74.00	-32.63	V	Peak
3124.000	42.06	-1.15	40.91	74.00	-33.09	V	Peak
3853.000	40.39	0.97	41.36	74.00	-32.64	V	Peak
4366.000	39.22	2.88	42.10	74.00	-31.90	V	Peak
4825.000	45.58	4.41	49.99	74.00	-24.01	V	Peak
5824.000	39.13	6.01	45.14	74.00	-28.86	V	Peak
2260.000	46.20	-3.58	42.62	74.00	-31.38	H	Peak
2413.000	46.56	-2.74	43.82	74.00	-30.18	H	Peak
4816.000	46.31	4.38	50.69	74.00	-23.31	H	Peak
5815.000	39.08	6.00	45.08	74.00	-28.92	H	Peak
7021.000	39.07	7.74	46.81	74.00	-27.19	H	Peak
7822.000	39.28	9.30	48.58	74.00	-25.42	H	Peak

REMARKS:

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 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: Darry Wu

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

Date: June 13, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
2440.000	44.23	-2.59	41.64	74.00	-32.36	V	Peak
3106.000	41.98	-1.18	40.80	74.00	-33.20	V	Peak
3997.000	40.34	1.58	41.92	74.00	-32.08	V	Peak
4870.000	46.11	4.56	50.67	74.00	-23.33	V	Peak
5491.000	38.93	5.85	44.78	74.00	-29.22	V	Peak
6661.000	38.58	7.15	45.73	74.00	-28.27	V	Peak
2548.000	44.84	-2.17	42.67	74.00	-31.33	H	Peak
4393.000	39.55	2.97	42.52	74.00	-31.48	H	Peak
4870.000	47.04	4.56	51.60	74.00	-22.40	H	Peak
5662.000	39.71	5.94	45.65	74.00	-28.35	H	Peak
6373.000	38.82	6.68	45.50	74.00	-28.50	H	Peak
7471.000	39.18	8.62	47.80	74.00	-26.20	H	Peak

REMARKS:

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: Darry Wu

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

Date: June 13, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
2458.000	44.41	-2.49	41.92	74.00	-32.08	V	Peak
3997.000	39.82	1.58	41.40	74.00	-32.60	V	Peak
4924.000	45.35	4.73	50.08	74.00	-23.92	V	Peak
5491.000	38.67	5.85	44.52	74.00	-29.48	V	Peak
7282.000	39.57	8.25	47.82	74.00	-26.18	V	Peak
7687.000	39.52	9.04	48.56	74.00	-25.44	V	Peak
2080.000	45.30	-4.56	40.74	74.00	-33.26	H	Peak
2467.000	48.40	-2.44	45.96	74.00	-28.04	H	Peak
4591.000	39.75	3.65	43.40	74.00	-30.60	H	Peak
4798.000	43.55	4.32	47.87	74.00	-26.13	H	Peak
4924.000	47.05	4.73	51.78	74.00	-22.22	H	Peak
6040.000	39.09	6.14	45.23	74.00	-28.77	H	Peak

REMARKS:

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:** Darry Wu**Ambient temperature:** 24°C **Relative humidity:** 52% RH**Date:** June 13, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
2260.000	45.01	-3.58	41.43	74.00	-32.57	V	Peak
3583.000	41.28	-0.17	41.11	74.00	-32.89	V	Peak
4834.000	56.63	4.44	61.07	74.00	-12.93	V	Peak
4834.000	46.84	4.44	51.28	54.00	-2.72	V	AVG
5707.000	38.95	5.96	44.91	74.00	-29.09	V	Peak
7678.000	40.04	9.02	49.06	74.00	-24.94	V	Peak
8065.000	39.47	9.61	49.08	74.00	-24.92	V	Peak
2584.000	43.77	-2.11	41.66	74.00	-32.34	H	Peak
3844.000	39.95	0.93	40.88	74.00	-33.12	H	Peak
4825.000	46.99	4.41	51.40	74.00	-22.60	H	Peak
6049.000	39.32	6.16	45.48	74.00	-28.52	H	Peak
6616.000	38.40	7.08	45.48	74.00	-28.52	H	Peak
6913.000	38.84	7.56	46.40	74.00	-27.60	H	Peak

REMARKS:

7. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
8. Radiated emissions measured in frequency above 1000MHz were made with instrument using peak/average detector mode.
9. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
10. 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.
11. 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.
12. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Test Mode: TX / IEEE 802.11g (CH Mid)

Tested by: Darry Wu

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

Date: June 13, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
2584.000	42.50	-2.11	40.39	74.00	-33.61	V	Peak
3205.000	41.84	-1.02	40.82	74.00	-33.18	V	Peak
4888.000	58.11	4.61	62.72	74.00	-11.28	V	Peak
4888.000	48.27	4.61	52.88	54.00	-1.12	V	AVG
6337.000	37.83	6.63	44.46	74.00	-29.54	V	Peak
6697.000	37.80	7.21	45.01	74.00	-28.99	V	Peak
7894.000	37.89	9.44	47.33	74.00	-26.67	V	Peak
2548.000	44.79	-2.17	42.62	74.00	-31.38	H	Peak
3997.000	40.76	1.58	42.34	74.00	-31.66	H	Peak
4879.000	51.39	4.59	55.98	74.00	-18.02	H	Peak
4879.000	42.29	4.59	46.88	54.00	-7.12	H	AVG
5680.000	39.12	5.95	45.07	74.00	-28.93	H	Peak
7282.000	39.70	8.25	47.95	74.00	-26.05	H	Peak
7480.000	39.71	8.64	48.35	74.00	-25.65	H	Peak

REMARKS:

7. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
8. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
9. Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
10. 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.
11. 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.
12. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Test Mode: TX / IEEE 802.11g (CH High)

Tested by: Darry Wu

Ambient temperature: 24°C

Relative humidity: 52% RH

Date: June 13, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
2467.000	45.37	-2.44	42.93	74.00	-31.07	V	Peak
3997.000	39.62	1.58	41.20	74.00	-32.80	V	Peak
4924.000	58.48	4.73	63.21	74.00	-10.79	V	Peak
4924.000	46.92	4.73	51.65	54.00	-2.35	V	AVG
5401.000	38.89	5.69	44.58	74.00	-29.42	V	Peak
6616.000	38.90	7.08	45.98	74.00	-28.02	V	Peak
7552.000	39.90	8.78	48.68	74.00	-25.32	V	Peak
2458.000	44.76	-2.49	42.27	74.00	-31.73	H	Peak
2818.000	42.77	-1.69	41.08	74.00	-32.92	H	Peak
4798.000	43.77	4.32	48.09	74.00	-25.91	H	Peak
4924.000	49.28	4.73	54.01	74.00	-19.99	H	Peak
4924.000	43.06	4.73	47.79	54.00	-6.21	H	AVG
6391.000	38.78	6.71	45.49	74.00	-28.51	H	Peak
7813.000	39.32	9.29	48.61	74.00	-25.39	H	Peak

REMARKS:

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

Test Mode: TX / IEEE 802.11n HT20 MHz (CH Low)

Tested by: Darry Wu

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

Date: June 13, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
2260.000	45.55	-3.58	41.97	74.00	-32.03	V	Peak
2422.000	47.54	-2.69	44.85	74.00	-29.15	V	Peak
3619.000	48.02	-0.02	48.00	74.00	-26.00	V	Peak
4825.000	57.10	4.41	61.51	74.00	-12.49	V	Peak
4825.000	47.18	4.41	51.59	54.00	-2.41	V	AVG
5860.000	38.79	6.02	44.81	74.00	-29.19	V	Peak
7417.000	39.39	8.51	47.90	74.00	-26.10	V	Peak
2413.000	48.51	-2.74	45.77	74.00	-28.23	H	Peak
3619.000	42.28	-0.02	42.26	74.00	-31.74	H	Peak
4825.000	50.01	4.41	54.42	74.00	-19.58	H	Peak
4825.000	46.87	4.41	51.28	54.00	-2.72	H	AVG
6049.000	39.29	6.16	45.45	74.00	-28.55	H	Peak
6616.000	39.64	7.08	46.72	74.00	-27.28	H	Peak
7696.000	39.07	9.06	48.13	74.00	-25.87	H	Peak

REMARKS:

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: Darry Wu

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

Date: June 13, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
3655.000	48.65	0.13	48.78	74.00	-25.22	V	Peak
3853.000	44.03	0.97	45.00	74.00	-29.00	V	Peak
4699.000	43.01	4.00	47.01	74.00	-26.99	V	Peak
4879.000	44.80	4.59	49.39	74.00	-24.61	V	Peak
5428.000	42.70	5.74	48.44	74.00	-25.56	V	Peak
6535.000	42.07	6.95	49.02	74.00	-24.98	V	Peak
7309.000	39.09	8.30	47.39	54.00	-6.61	V	AVG
1765.000	47.18	-6.35	40.83	74.00	-33.17	H	Peak
2800.000	44.77	-1.72	43.05	74.00	-30.95	H	Peak
3898.000	44.37	1.16	45.53	74.00	-28.47	H	Peak
4798.000	45.02	4.32	49.34	74.00	-24.66	H	Peak
4960.000	43.33	4.85	48.18	74.00	-25.82	H	Peak
6202.000	42.43	6.41	48.84	74.00	-25.16	H	Peak

REMARKS:

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: Darry Wu

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

Date: June 13, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
2467.000	47.79	-2.44	45.35	74.00	-28.65	V	Peak
3196.000	43.69	-1.03	42.66	74.00	-31.34	V	Peak
3691.000	47.06	0.29	47.35	74.00	-26.65	V	Peak
4924.000	58.17	4.73	62.90	74.00	-11.10	V	Peak
4924.000	46.41	4.73	51.14	54.00	-2.86	V	AVG
7552.000	39.49	8.78	48.27	74.00	-25.73	V	Peak
8416.000	39.52	9.42	48.94	74.00	-25.06	V	Peak
2467.000	49.46	-2.44	47.02	74.00	-26.98	H	Peak
2773.000	44.22	-1.77	42.45	74.00	-31.55	H	Peak
3232.000	42.99	-0.97	42.02	74.00	-31.98	H	Peak
4798.000	44.15	4.32	48.47	74.00	-25.53	H	Peak
4933.000	51.24	4.76	56.00	74.00	-18.00	H	Peak
4933.000	46.06	4.76	50.82	54.00	-3.18	H	AVG
7678.000	39.89	9.02	48.91	74.00	-25.09	H	Peak

REMARKS:

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

Test Mode: TX/ IEEE 802.11n HT40 MHz (CH Low)

Tested by: Darry Wu

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

Date: June 13, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
2431.000	48.30	-2.64	45.66	74.00	-28.34	V	Peak
2728.000	43.64	-1.85	41.79	74.00	-32.21	V	Peak
3637.000	47.46	0.06	47.52	74.00	-26.48	V	Peak
4825.000	57.76	4.41	62.17	74.00	-11.83	V	Peak
4825.000	46.94	4.41	51.35	54.00	-2.65	V	AVG
7021.000	38.66	7.74	46.40	74.00	-27.60	V	Peak
7498.000	39.63	8.67	48.30	74.00	-25.70	V	Peak
2413.000	46.95	-2.74	44.21	74.00	-29.79	H	Peak
2728.000	43.39	-1.85	41.54	74.00	-32.46	H	Peak
3367.000	42.15	-0.74	41.41	74.00	-32.59	H	Peak
4852.000	48.27	4.50	52.77	74.00	-21.23	H	Peak
4852.000	44.86	4.50	49.36	54.00	-4.64	H	AVG
6049.000	38.54	6.16	44.70	74.00	-29.30	H	Peak
7651.000	38.76	8.97	47.73	74.00	-26.27	H	Peak

REMARKS:

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).

Horizontal



Test Mode: TX / IEEE 802.11n HT40 MHz (CH Mid)

Tested by: Darry Wu

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

Date: June 13, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
1198.000	48.57	-7.80	40.77	74.00	-33.23	V	Peak
3655.000	49.27	0.13	49.40	74.00	-24.60	V	Peak
4573.000	43.25	3.59	46.84	74.00	-27.16	V	Peak
4870.000	44.34	4.56	48.90	74.00	-25.10	V	Peak
5545.000	42.62	5.89	48.51	74.00	-25.49	V	Peak
6157.000	42.28	6.33	48.61	74.00	-25.39	V	Peak
3205.000	44.45	-1.02	43.43	74.00	-30.57	H	Peak
4798.000	45.75	4.32	50.07	74.00	-23.93	H	Peak
5140.000	43.42	5.23	48.65	74.00	-25.35	H	Peak
5374.000	42.36	5.65	48.01	74.00	-25.99	H	Peak
6211.000	42.34	6.42	48.76	74.00	-25.24	H	Peak
6589.000	42.51	7.03	49.54	74.00	-24.46	H	Peak

REMARKS:

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: Darry Wu

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

Date: June 13, 2017

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Pole (V/H)	Remark
1090.000	47.79	-8.21	39.58	74.00	-34.42	V	Peak
2152.000	45.75	-4.17	41.58	74.00	-32.42	V	Peak
2440.000	48.05	-2.59	45.46	74.00	-28.54	V	Peak
2755.000	47.30	-1.80	45.50	74.00	-28.50	V	Peak
3682.000	46.63	0.25	46.88	74.00	-27.12	V	Peak
4906.000	56.96	4.67	61.63	74.00	-12.37	V	Peak
4906.000	44.92	4.67	49.59	54.00	-4.41	V	AVG
2458.000	47.03	-2.49	44.54	74.00	-29.46	H	Peak
2755.000	47.26	-1.80	45.46	74.00	-28.54	H	Peak
4798.000	44.42	4.32	48.74	74.00	-25.26	H	Peak
4906.000	49.58	4.67	54.25	74.00	-19.75	H	Peak
4906.000	42.36	4.67	47.03	54.00	-6.97	H	AVG
7354.000	39.51	8.39	47.90	74.00	-26.10	H	Peak
8074.000	39.46	9.61	49.07	74.00	-24.93	H	Peak

REMARKS:

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

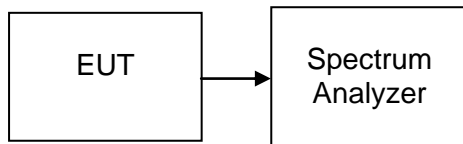
Name of Equipment	Manufacturer	Model	Serial Number	Last Calibration	Calibration Due
Spectrum Analyzer	Agilent	N9010A	MY52221469	02/21/2017	02/20/2018

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		
Low	2412	9074	9059	9088	>500	PASS
Mid	2437	9081	9064	9083		PASS
High	2462	9084	9086	9065		PASS

Test mode: IEEE 802.11g

Channel	Frequency (MHz)	Bandwidth (kHz)			Limit (kHz)	Test Result
		Antenna 0	Antenna 1	Antenna 2		
Low	2412	16390	16390	16370	>500	PASS
Mid	2437	16360	16360	16340		PASS
High	2462	16370	16350	16370		PASS

Test mode: IEEE 802.11n HT20 MHz

Channel	Frequency (MHz)	Bandwidth (kHz)			Limit (kHz)	Test Result
		Antenna 0	Antenna 1	Antenna 2		
Low	2412	17600	17640	17620	>500	PASS
Mid	2437	17590	17630	17610		PASS
High	2462	17570	17630	17610		PASS

Test mode: IEEE 802.11n HT40 MHz

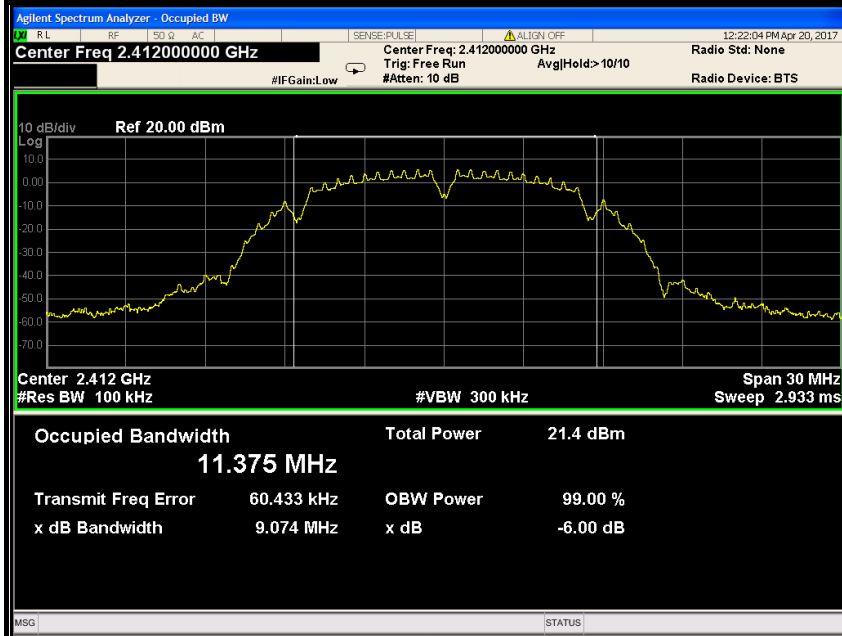
Channel	Frequency (MHz)	Bandwidth (kHz)			Limit (kHz)	Test Result
		Antenna 0	Antenna 1	Antenna 2		
Low	2422	36500	36520	36520	>500	PASS
Mid	2437	36500	36510	36520		PASS
High	2452	36510	36520	36500		PASS



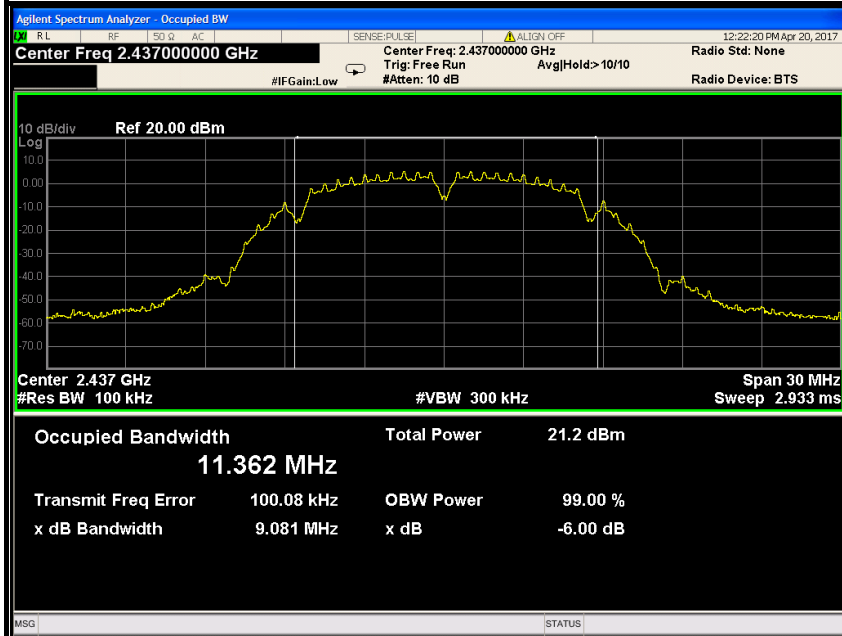
Test Plot

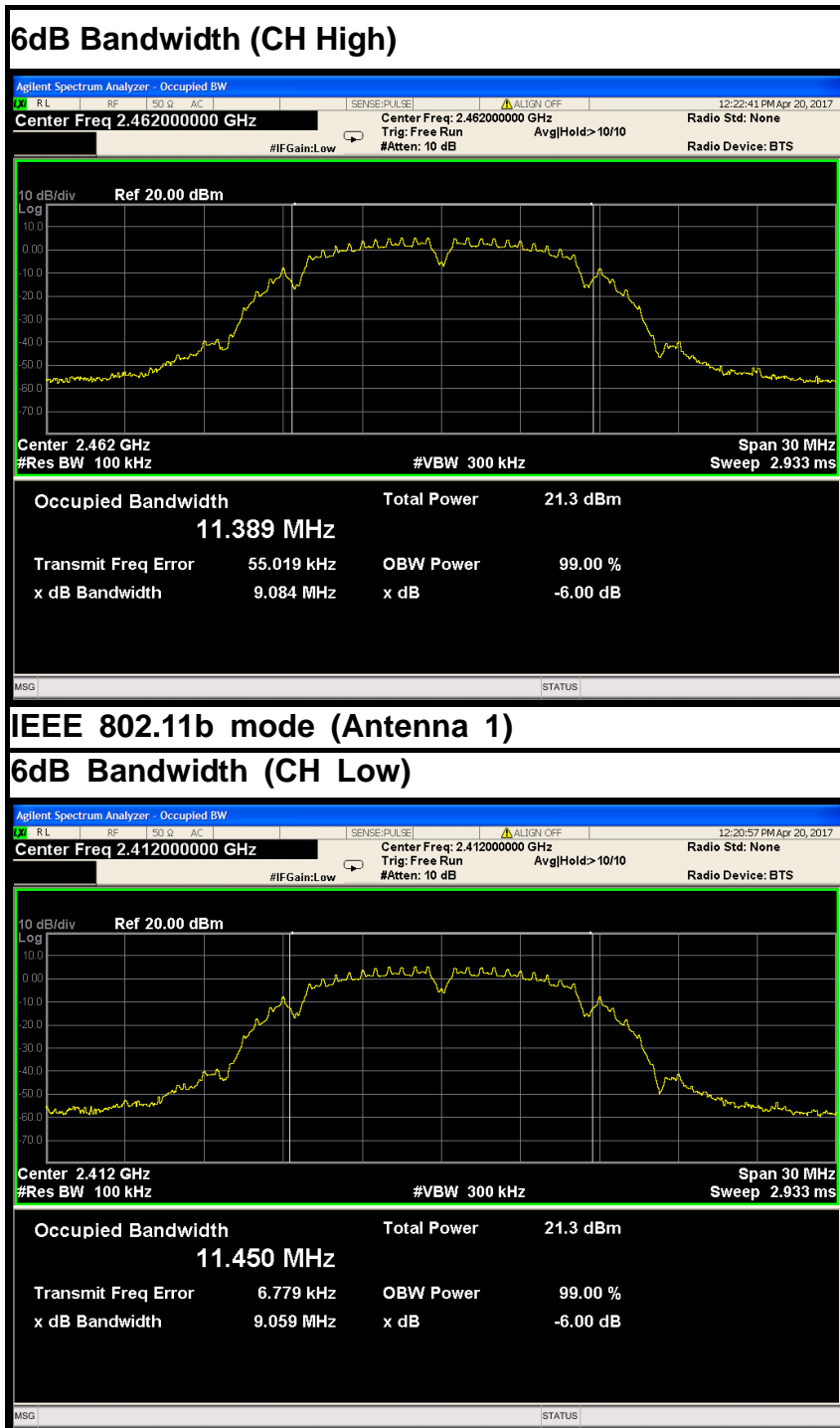
IEEE 802.11b mode (Antenna 0)

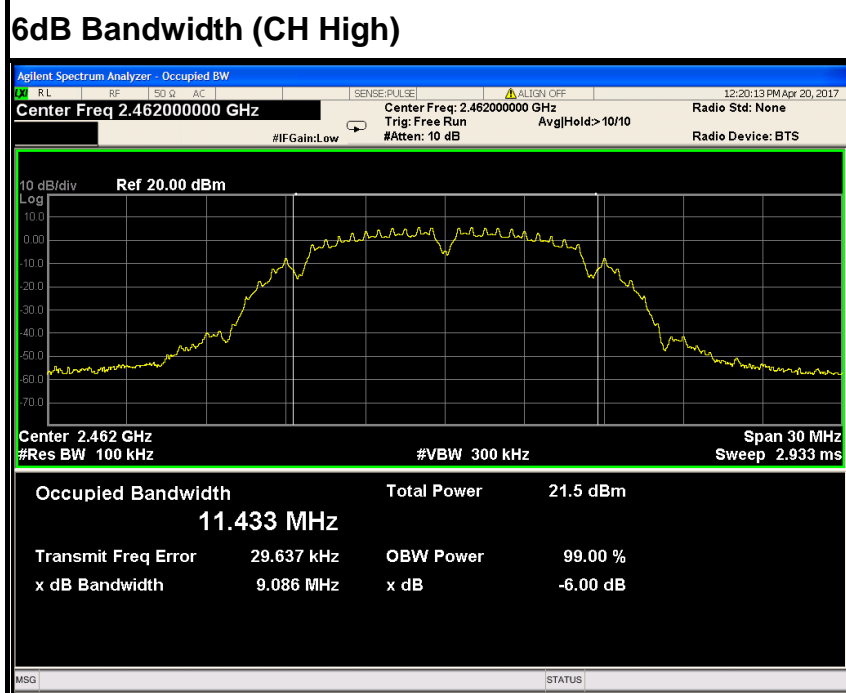
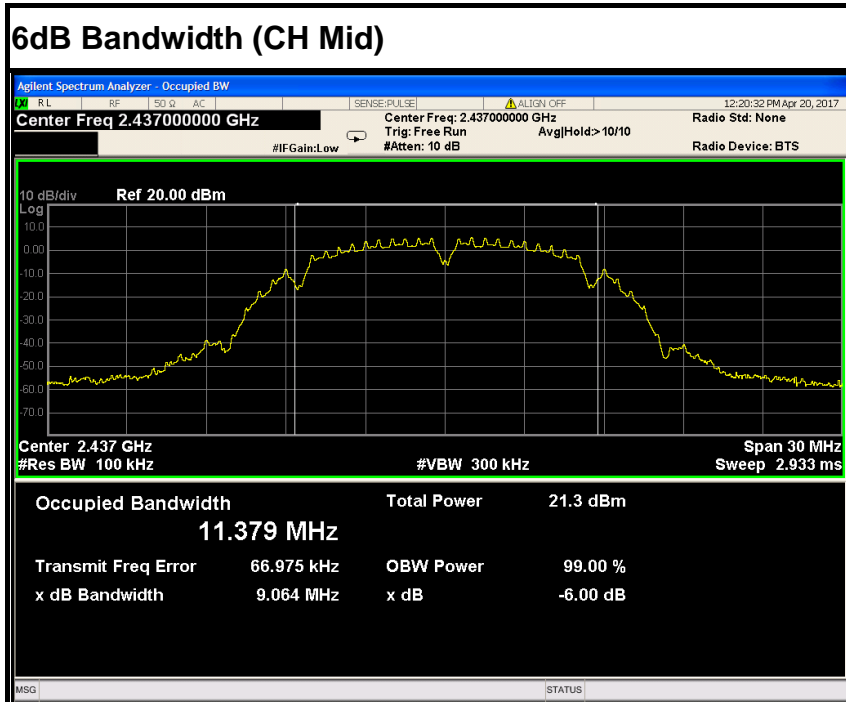
6dB Bandwidth (CH Low)



6dB Bandwidth (CH Mid)



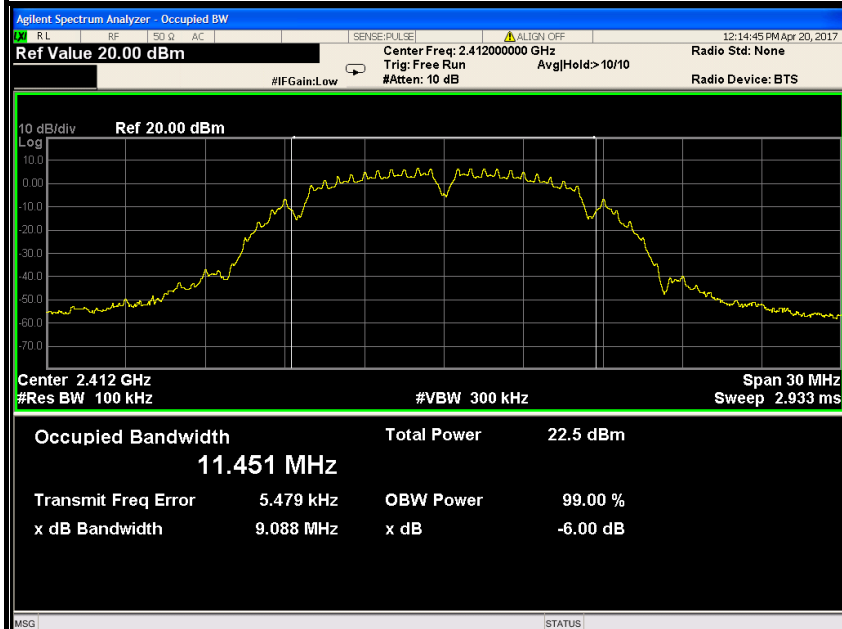




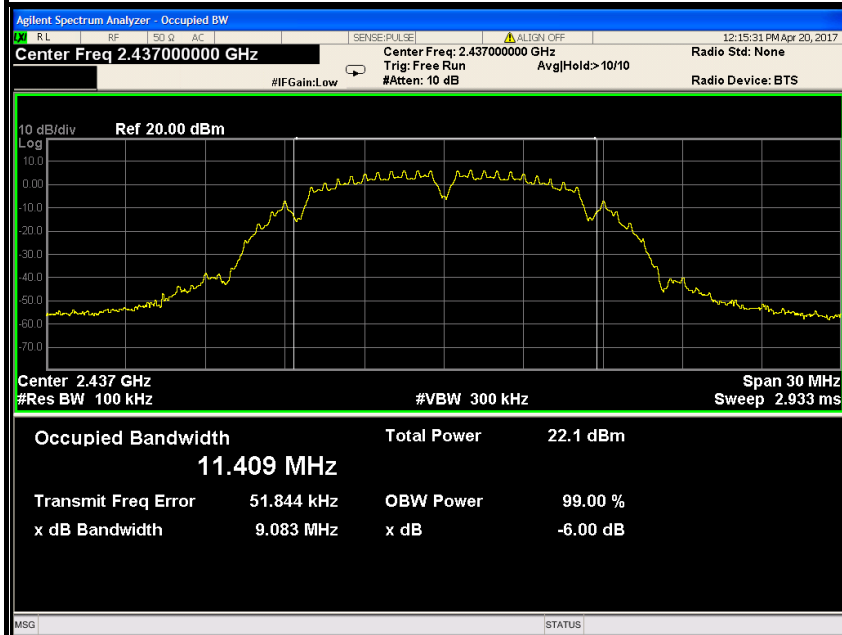


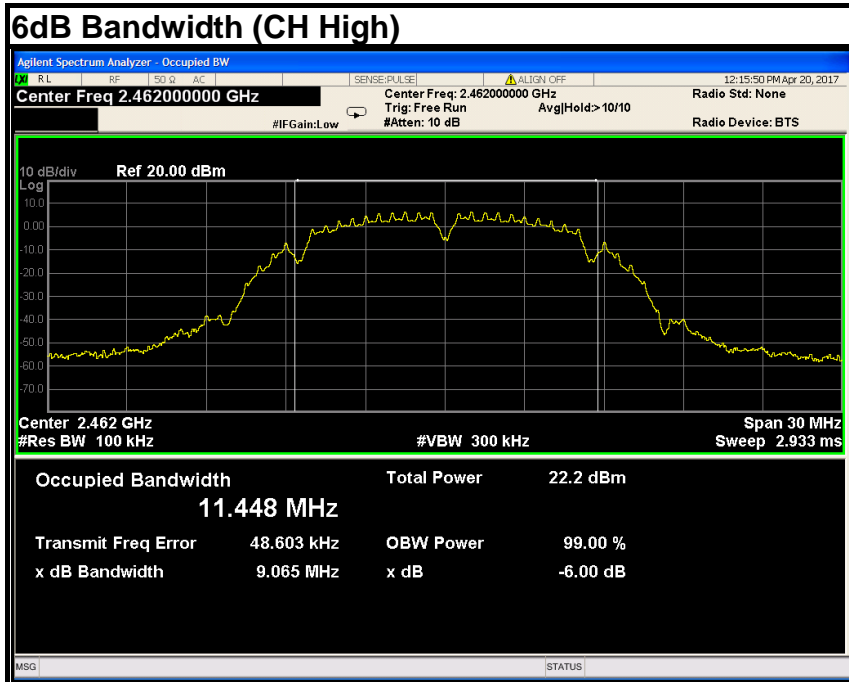
IEEE 802.11b mode (Antenna 2)

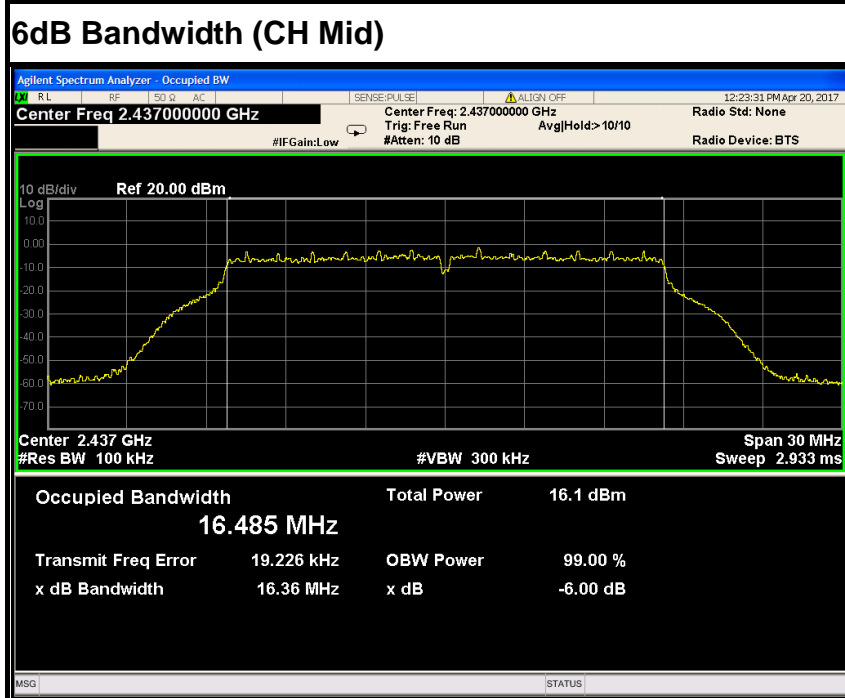
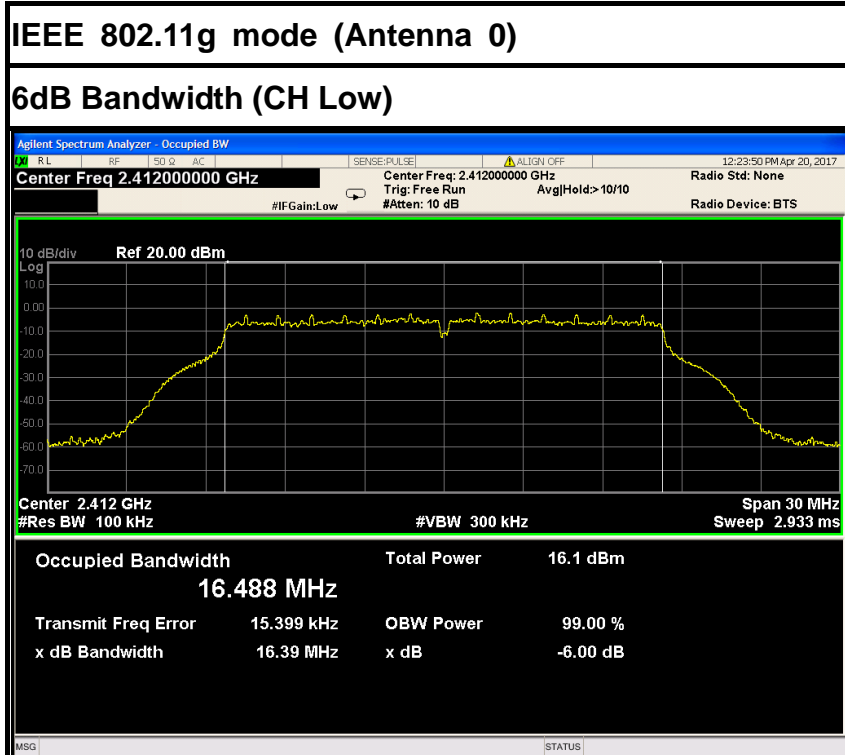
6dB Bandwidth (CH Low)

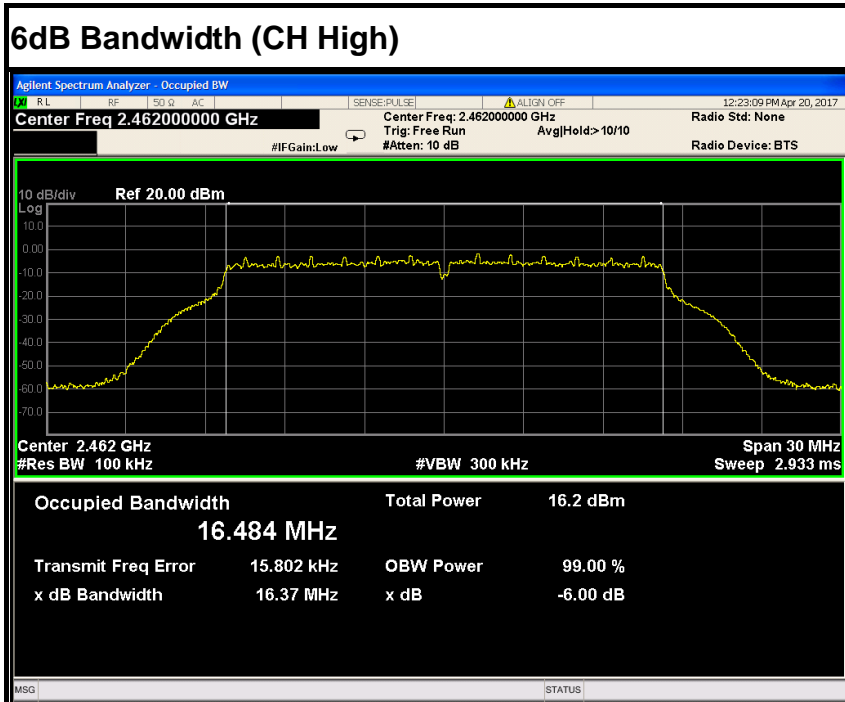


6dB Bandwidth (CH Mid)

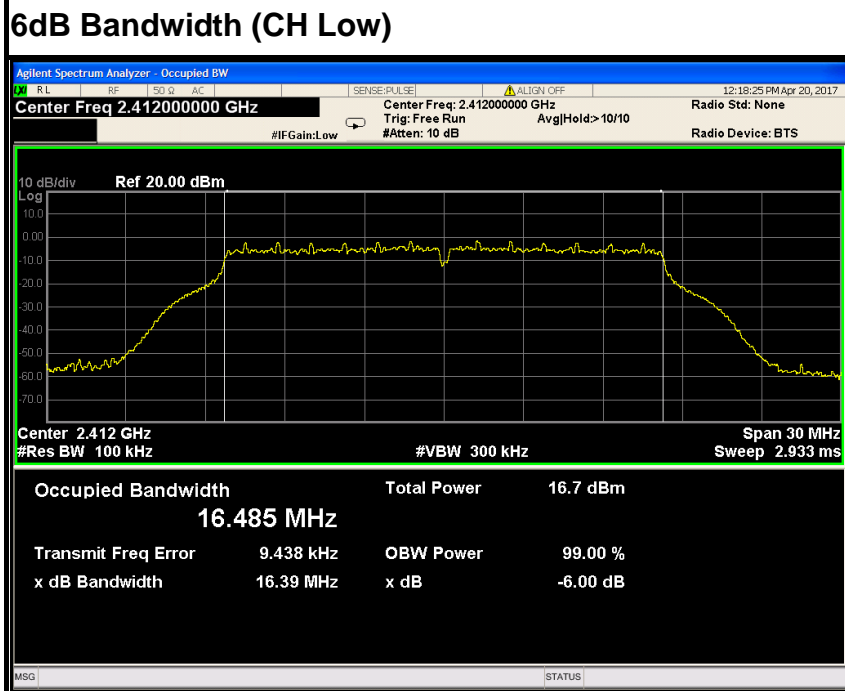


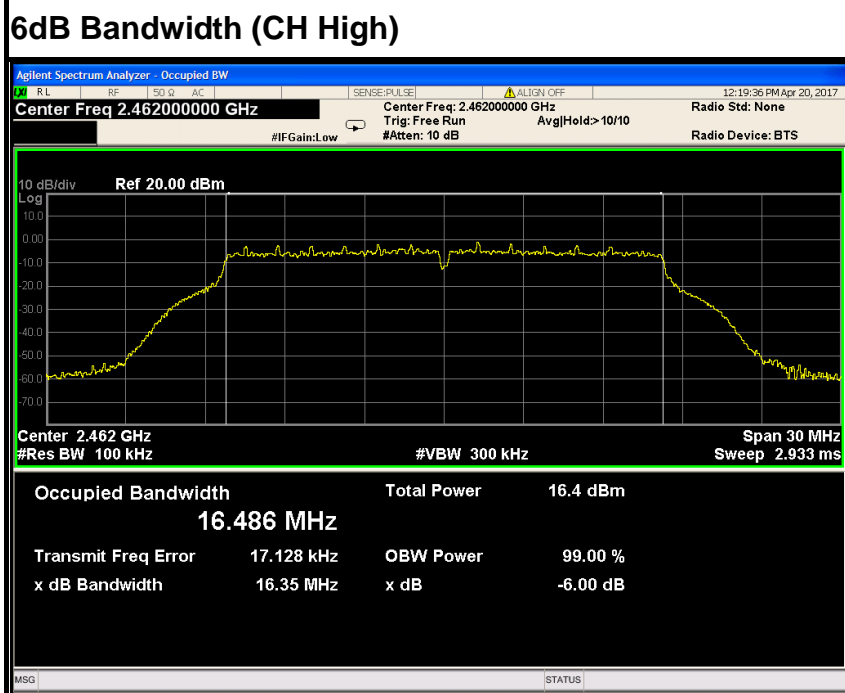
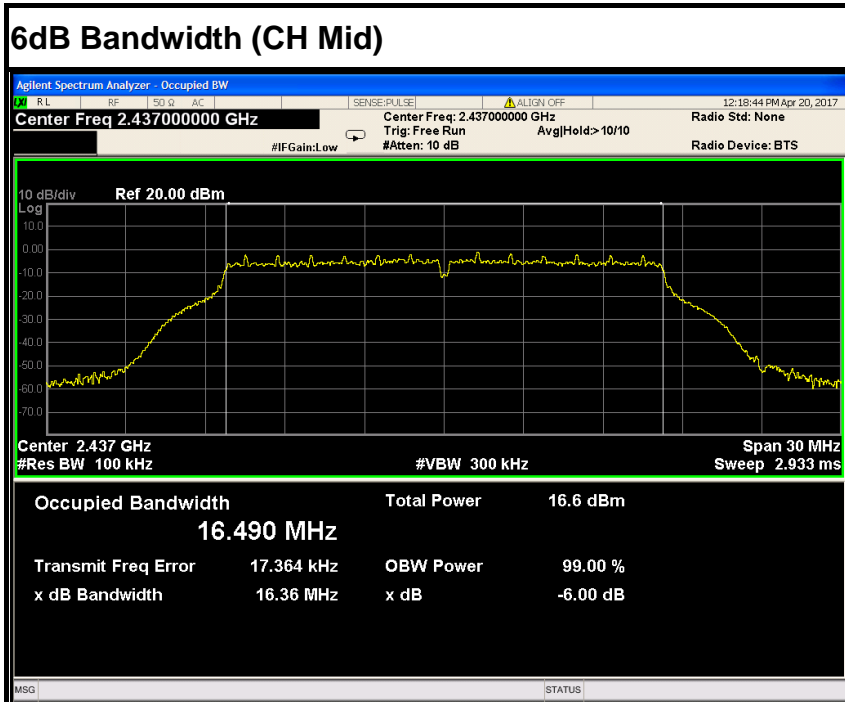


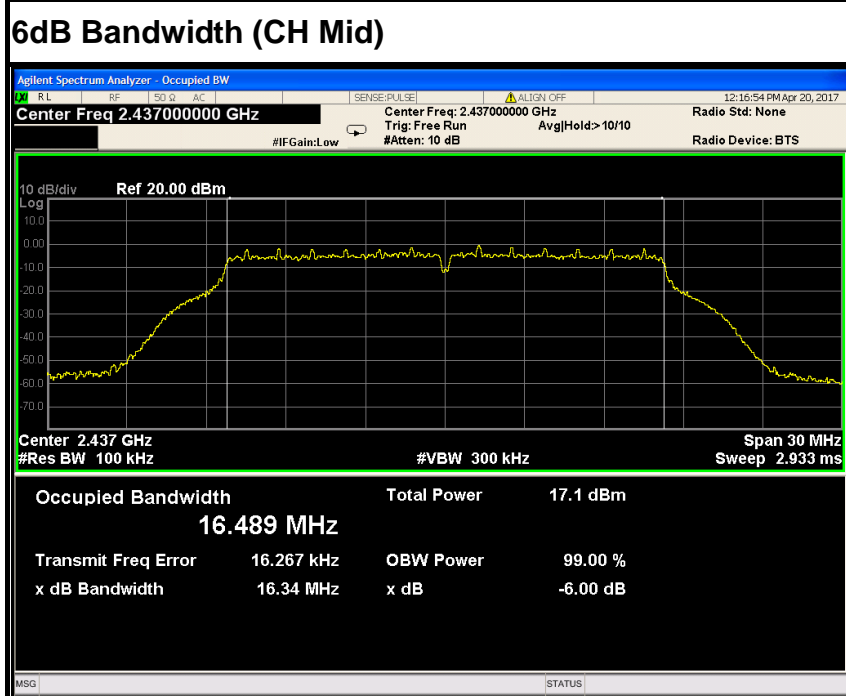
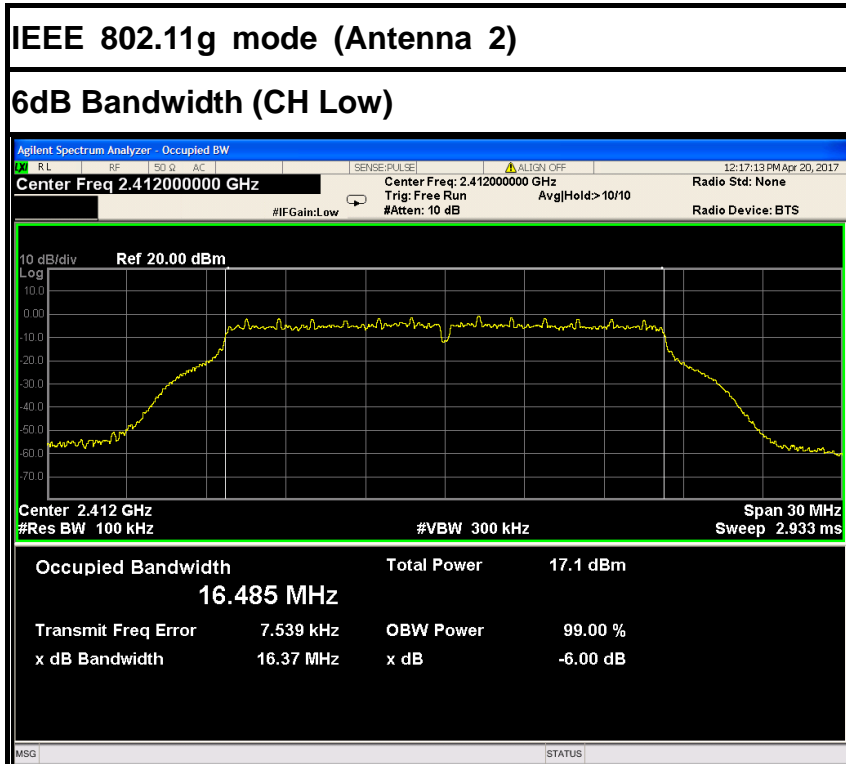


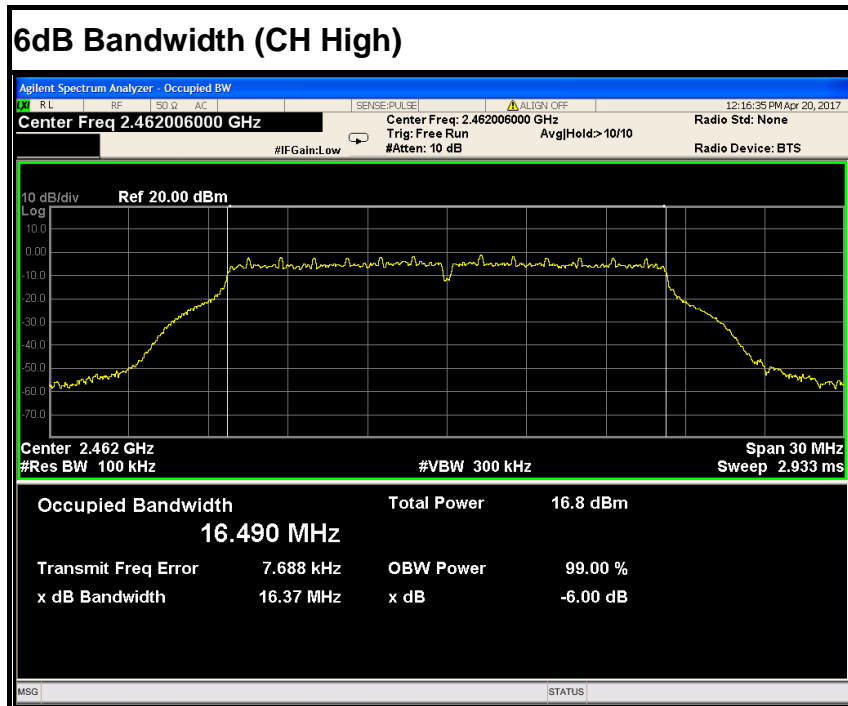


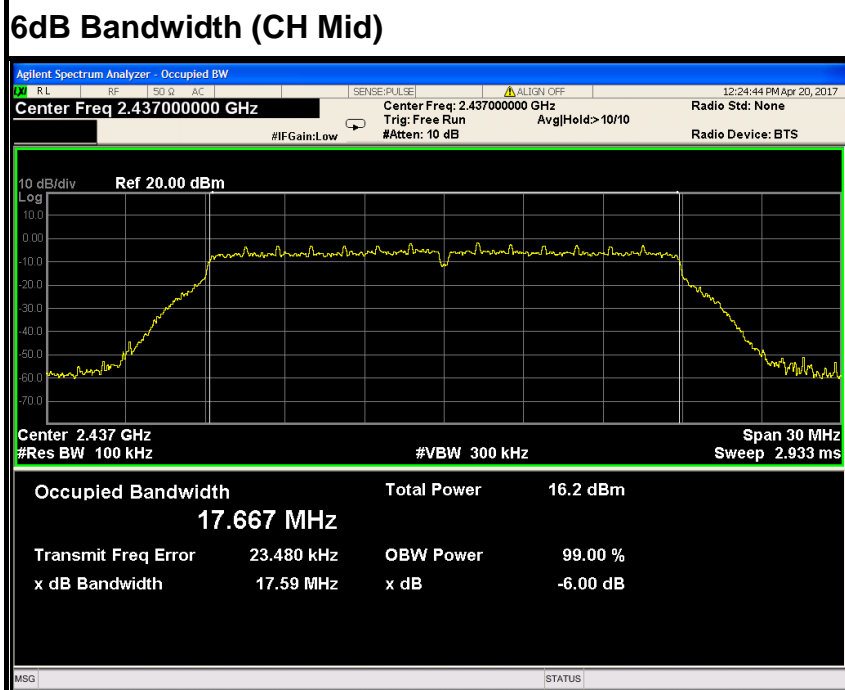
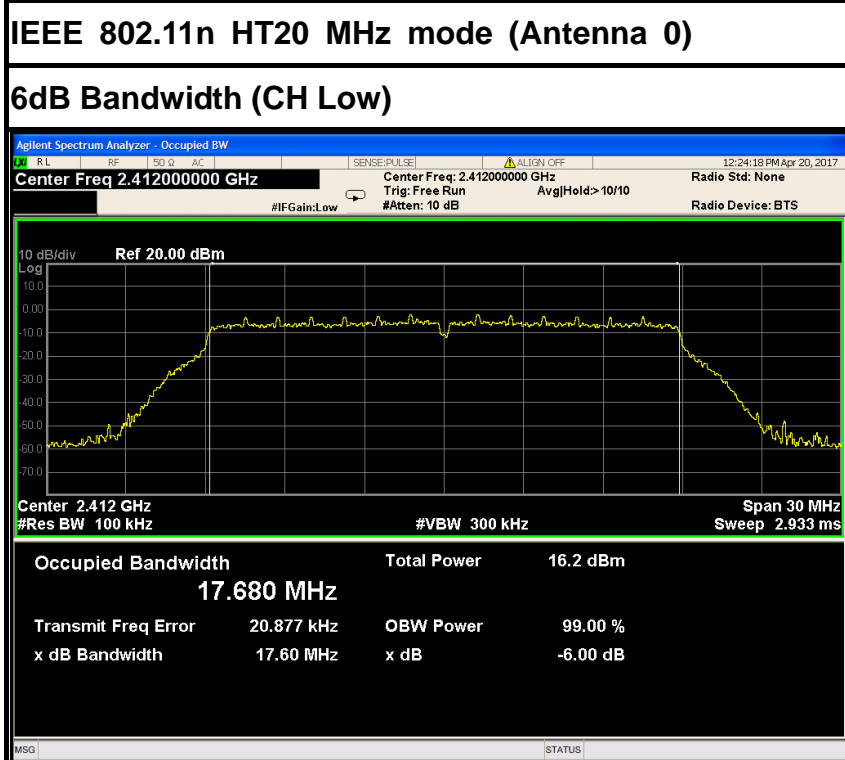
IEEE 802.11g mode (Antenna 1)

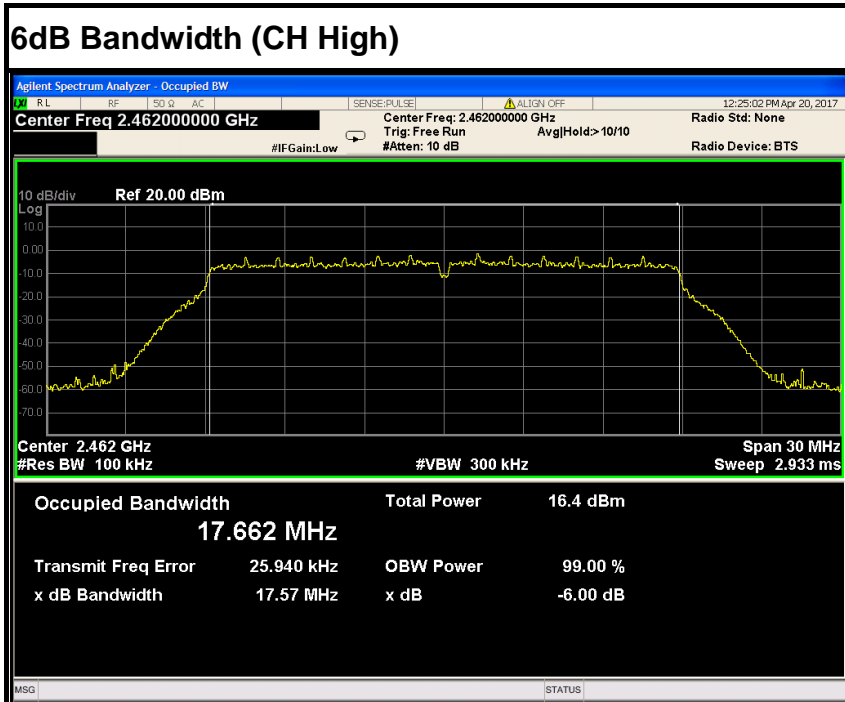




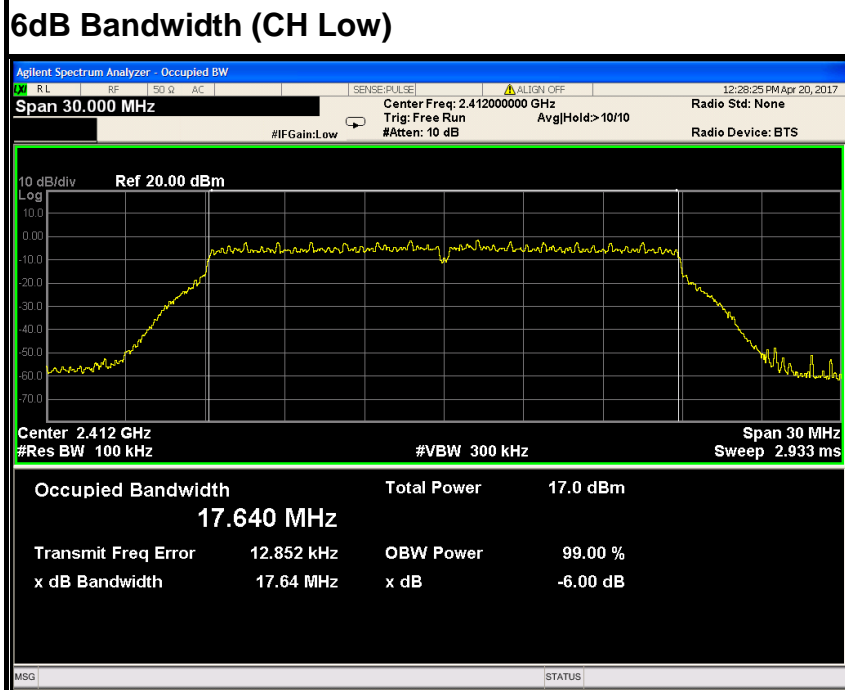


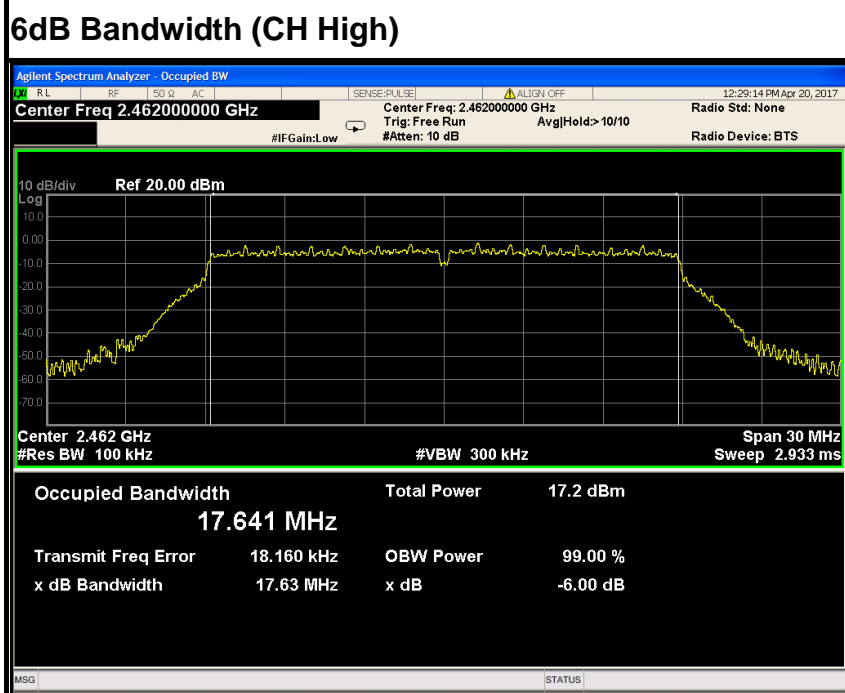
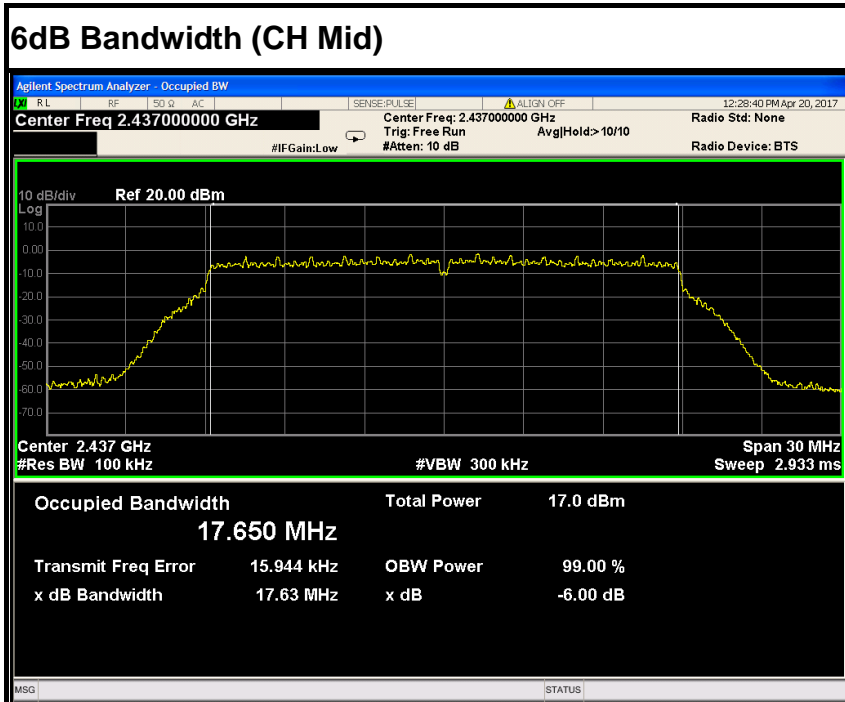


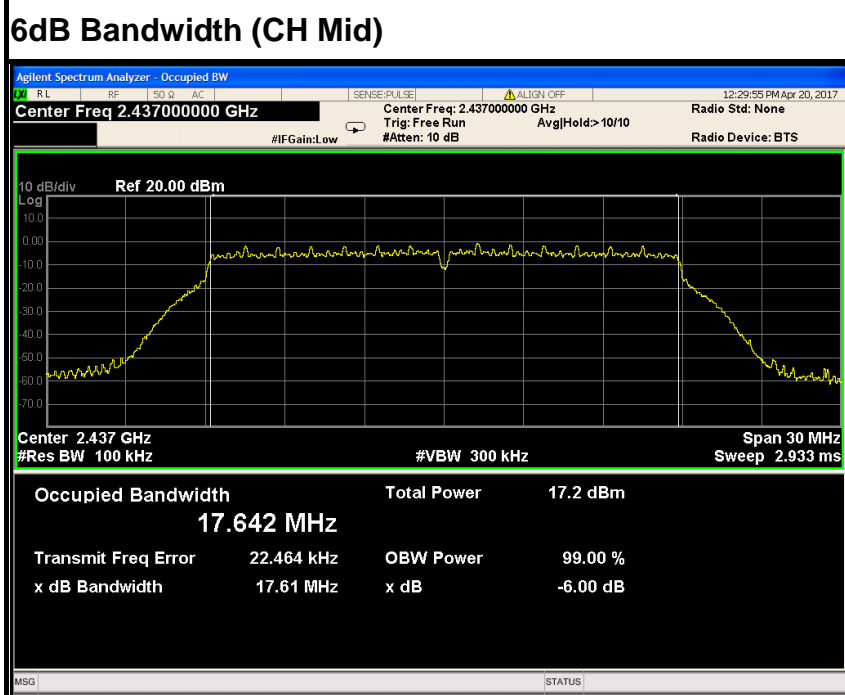
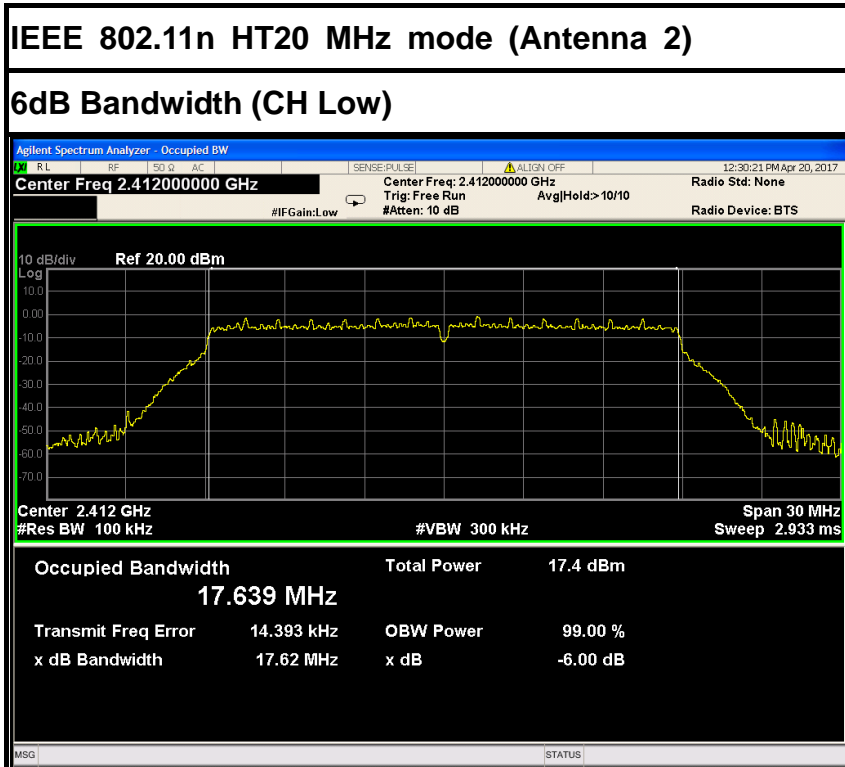


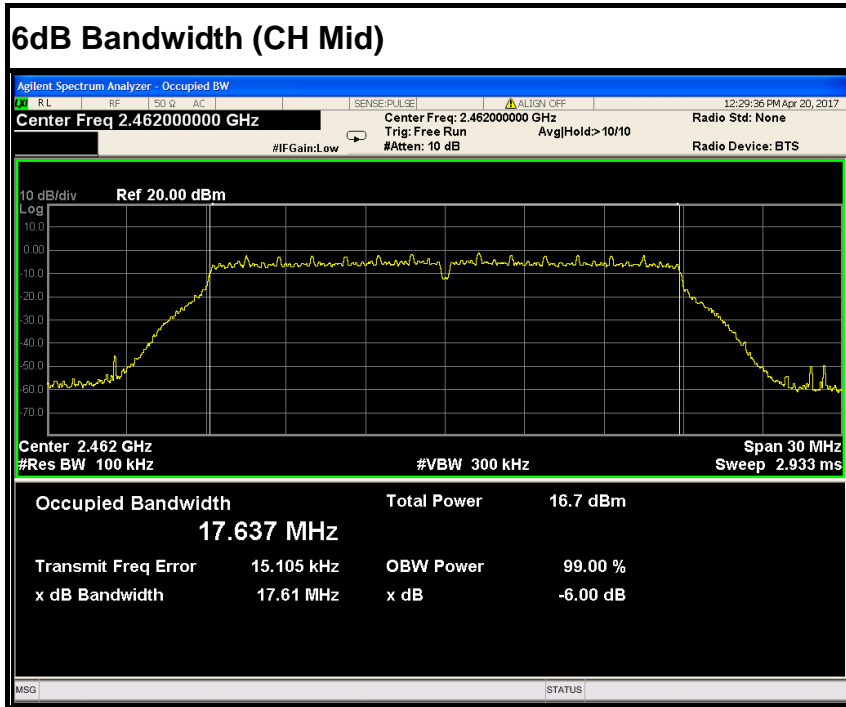


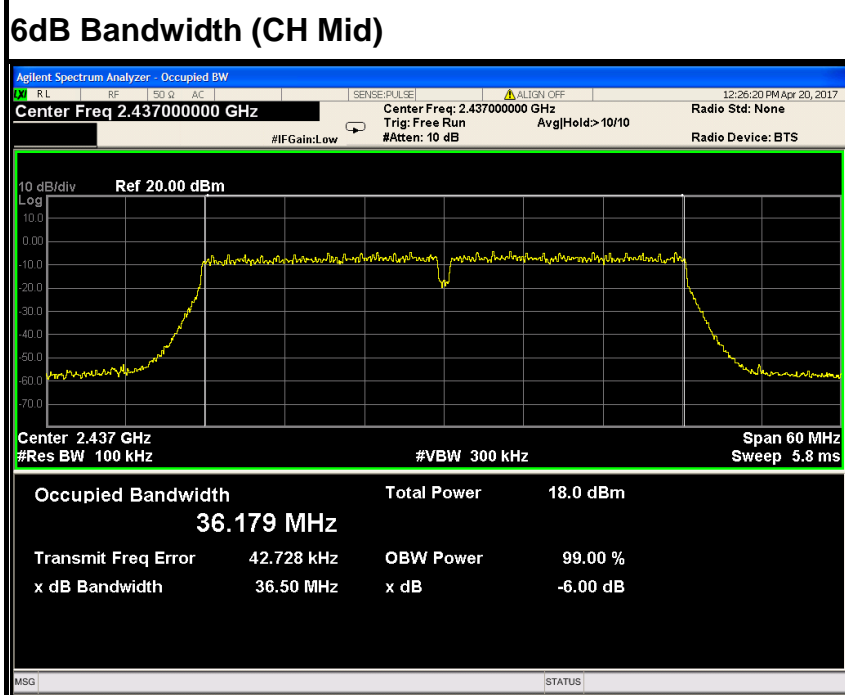
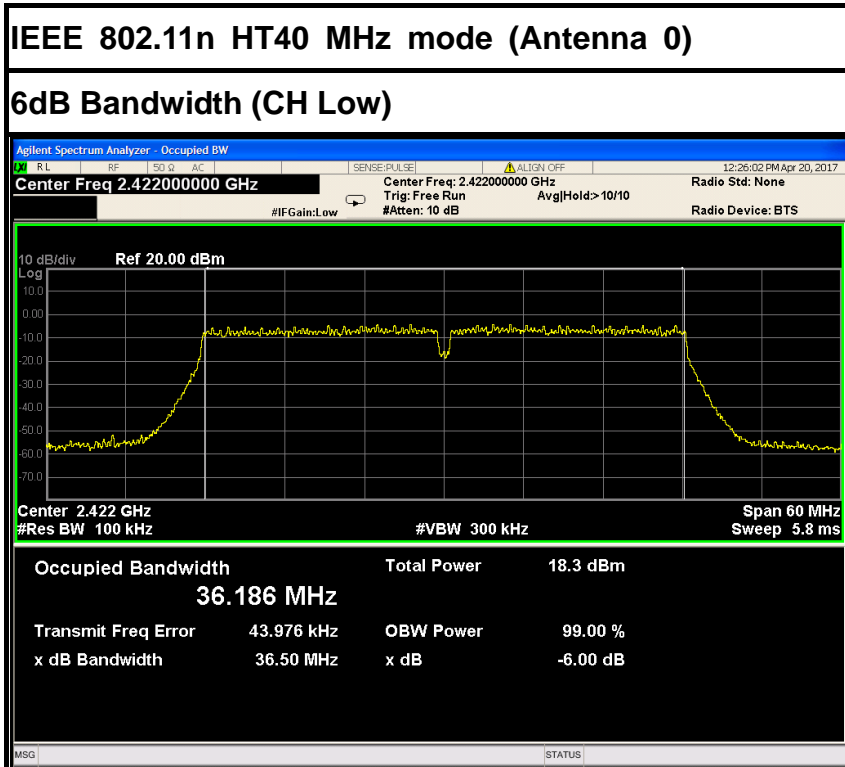
IEEE 802.11n HT20 MHz mode (Antenna 1)

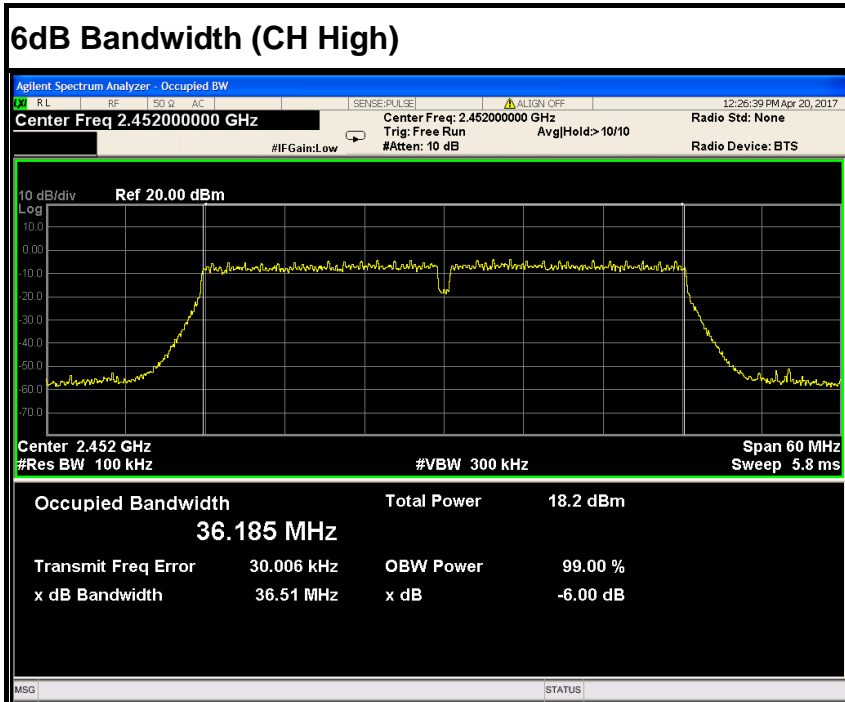




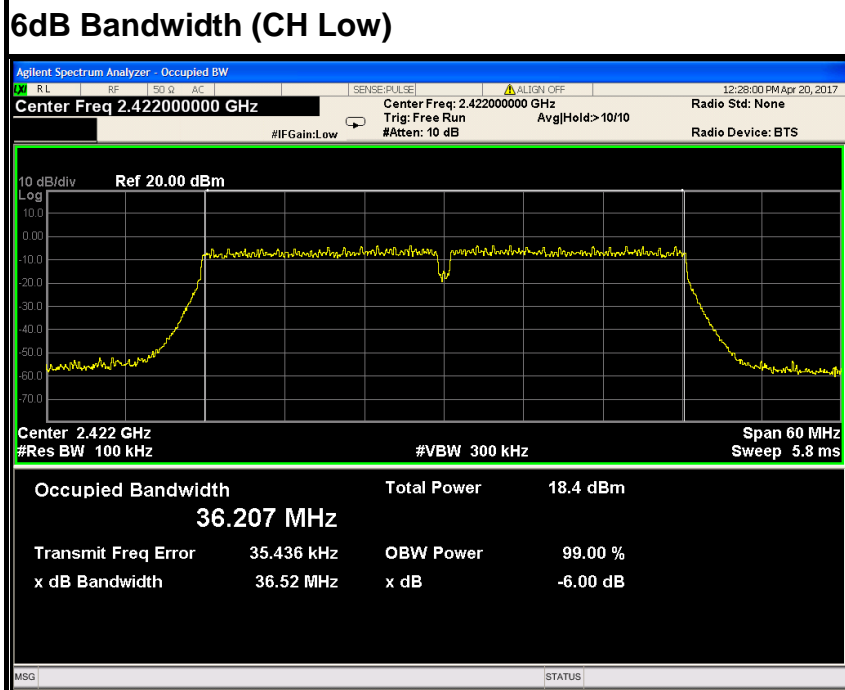


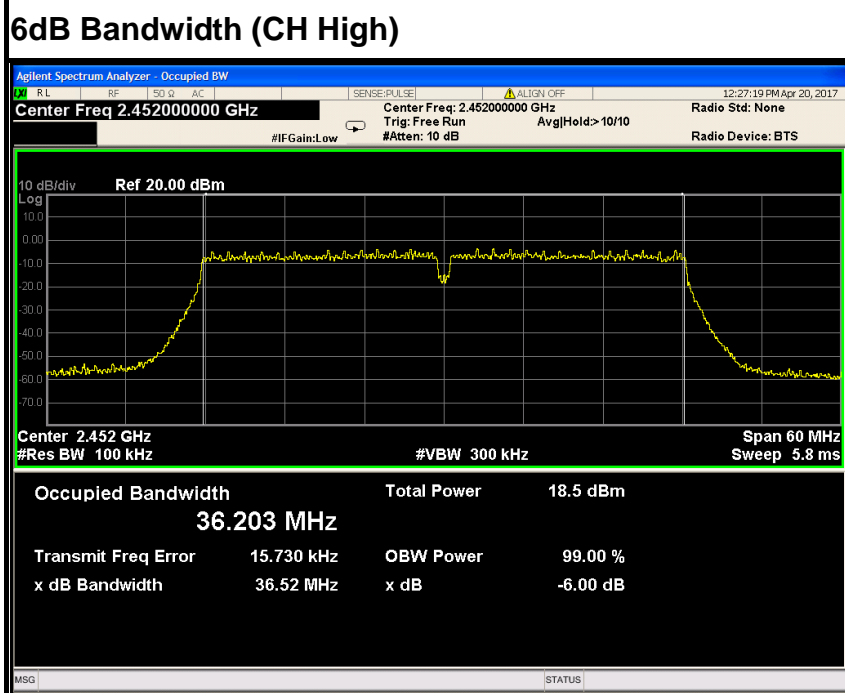
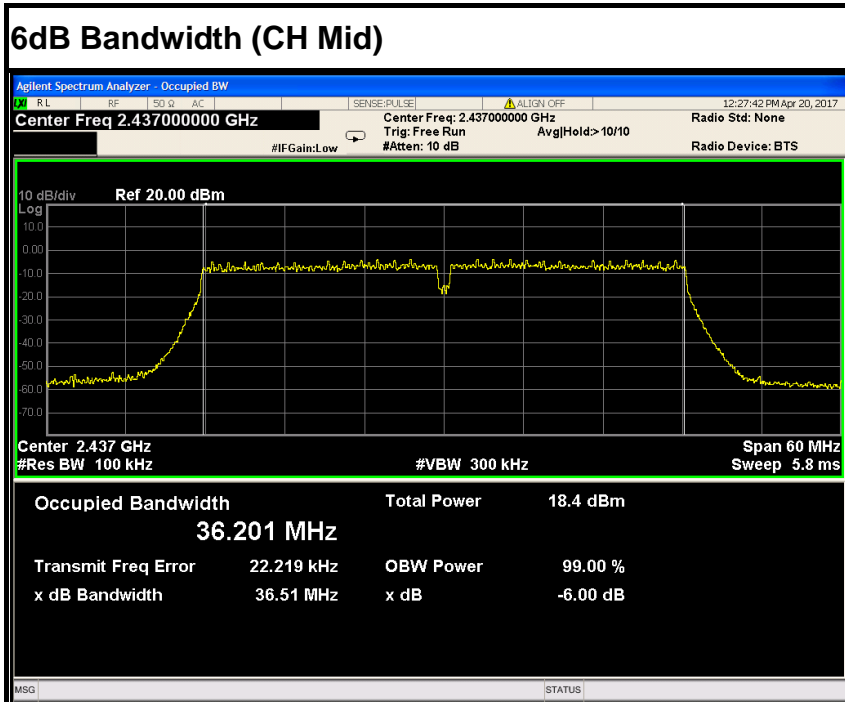






IEEE 802.11n HT40 MHz mode (Antenna 1)

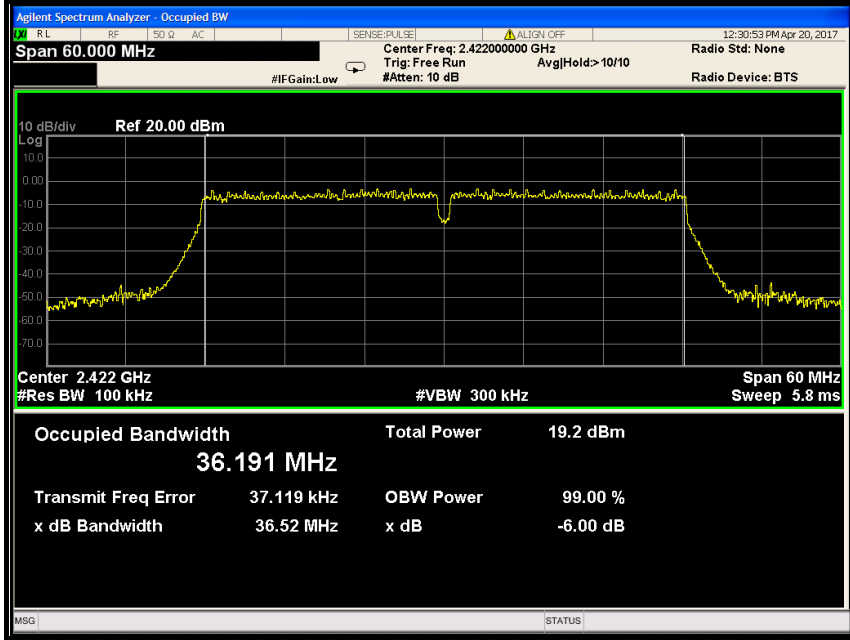




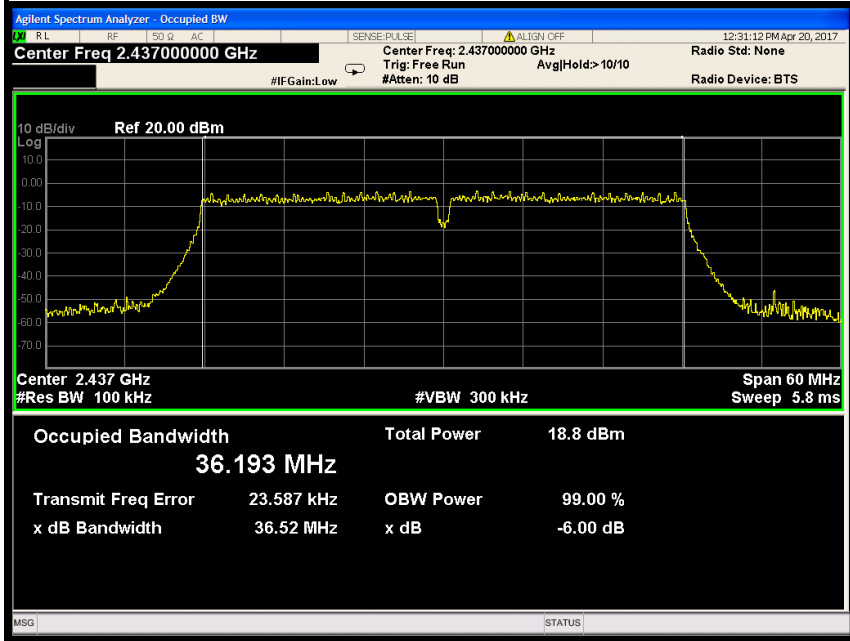


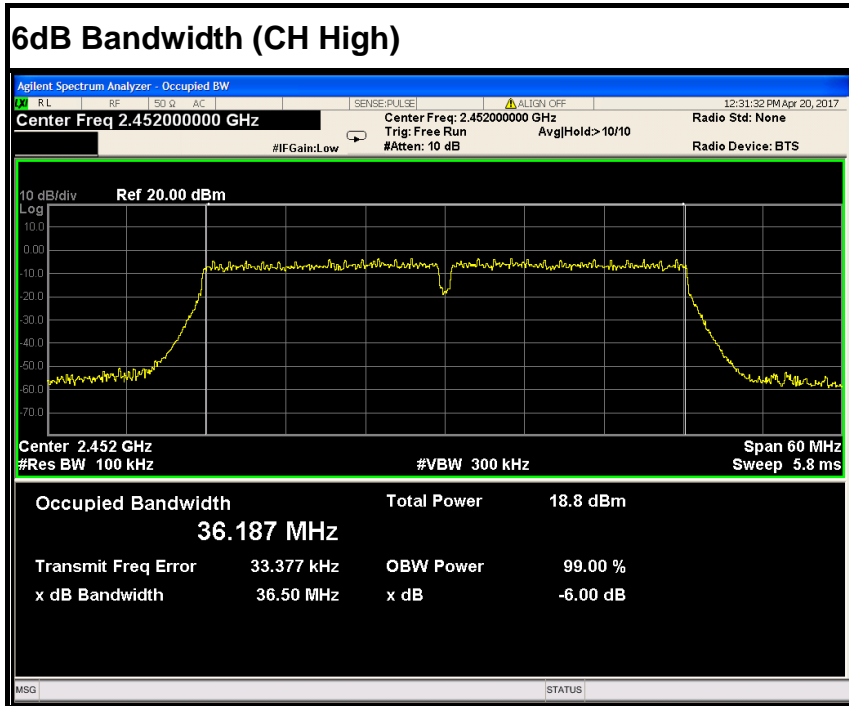
IEEE 802.11n HT40 MHz mode (Antenna 2)

6dB Bandwidth (CH Low)



6dB Bandwidth (CH Mid)







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

IEEE 802.11b mode

Antenna 0

T_{nom}	V_{nom}	Lowest channel 2412MHz	Middle channel 2437MHz	Highest channel 2462MHz
Conducted power [dBm/MHz] Measured with DSSS modulation		9.87	9.90	9.92
Radiated power [dBm/MHz] Measured with DSSS modulation		12.84	12.91	12.78
Gain [dBi] Calculated		2.97	3.01	2.86
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		10.11	10.16	9.85
Radiated power [dBm/MHz] Measured with DSSS modulation		12.94	13.11	12.68
Gain [dBi] Calculated		2.83	2.95	2.83
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		9.72	9.18	9.07
Radiated power [dBm/MHz] Measured with DSSS modulation		12.54	12.11	12.01
Gain [dBi] Calculated		2.82	2.93	2.94
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 \geq DTS bandwidth

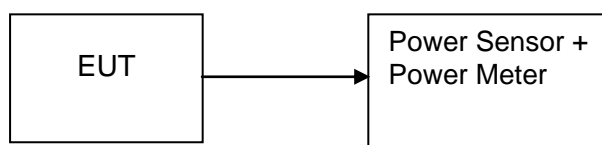
This procedure shall be used when the measurement instrument has available a resolution bandwidth that is greater than the *DTS bandwidth*.

- a) Set the RBW \geq *DTS bandwidth*.
- b) Set VBW \geq 3 RBW.
- c) Set span \geq 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 (Antenna 0)

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Peak / AVG	Limit (W)	Result
Low	2412	20.27	0.10641	Peak	1	PASS
Mid	2437	20.31	0.10740			PASS
High	2462	20.33	0.10789			PASS
Low	2412	16.61	0.04581	AVG	1	PASS
Mid	2437	16.48	0.04446			PASS
High	2462	16.39	0.04355			PASS

Test mode: IEEE 802.11b (Antenna 1)

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Peak / AVG	Limit (W)	Result
Low	2412	20.52	0.11272	Peak	1	PASS
Mid	2437	20.57	0.11402			PASS
High	2462	20.26	0.10617			PASS
Low	2412	16.72	0.04699	AVG	1	PASS
Mid	2437	16.71	0.04688			PASS
High	2462	16.32	0.04285			PASS

Test mode: IEEE 802.11b (Antenna 2)

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Peak / AVG	Limit (W)	Result
Low	2412	20.13	0.10304	Peak	1	PASS
Mid	2437	19.59	0.09099			PASS
High	2462	19.48	0.08872			PASS
Low	2412	16.18	0.04150	AVG	1	PASS
Mid	2437	16.15	0.04121			PASS
High	2462	16.11	0.04083			PASS



Test mode: IEEE 802.11g (Antenna 0)

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Peak / AVG	Limit (W)	Result
Low	2412	28.93	0.78163	Peak	1	PASS
Mid	2437	29.12	0.81658			PASS
High	2462	29.26	0.84333			PASS
Low	2412	19.75	0.09441	AVG	1	PASS
Mid	2437	19.85	0.09661			PASS
High	2462	19.83	0.09616			PASS

Test mode: IEEE 802.11g (Antenna 1)

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Peak / AVG	Limit (W)	Result
Low	2412	28.57	0.71945	Peak	1	PASS
Mid	2437	28.78	0.75509			PASS
High	2462	29.02	0.79799			PASS
Low	2412	19.32	0.08551	AVG	1	PASS
Mid	2437	19.63	0.09183			PASS
High	2462	19.41	0.08730			PASS

Test mode: IEEE 802.11g (Antenna 2)

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Peak / AVG	Limit (W)	Result
Low	2412	27.65	0.58210	Peak	1	PASS
Mid	2437	28.45	0.69984			PASS
High	2462	28.47	0.70307			PASS
Low	2412	18.33	0.06808	AVG	1	PASS
Mid	2437	19.43	0.08770			PASS
High	2462	19.42	0.08750			PASS



Test mode: IEEE 802.11n HT20 MHz(Combine with Antenna 0 and Antenna 1 and Antenna 2)

Channel	Frequency (MHz)	Output Power (dBm)				Output Power (W)	Peak / AVG	Limit (W)	Result
		Antenna	Antenna 1	Antenna	Total				
Low	2412	24.82	24.62	24.78	29.51	0.89373	Peak	1	PASS
Mid	2437	24.82	24.62	24.58	29.45	0.88020			PASS
High	2462	24.46	24.68	24.38	29.28	0.84718			PASS
Low	2412	15.63	15.61	15.53	20.36	0.10868	AVG	1	PASS
Mid	2437	15.67	15.79	15.86	20.55	0.11338			PASS
High	2462	15.88	15.55	15.43	20.40	0.10953			PASS

Test mode: IEEE 802.11n HT40 MHz(Combine with Antenna 0 and Antenna 1 and Antenna 2)

Channel	Frequency (MHz)	Output Power (dBm)				Output Power (W)	Peak / AVG	Limit (W)	Result
		Antenna 0	Antenna 1	Antenna	Total				
Low	2422	24.61	24.72	24.83	29.49	0.88964	Peak	1	PASS
Mid	2437	25.74	24.78	24.86	29.92	0.98178			PASS
High	2452	24.64	24.52	24.38	29.29	0.84837			PASS
Low	2422	15.87	15.91	15.85	20.65	0.11609	AVG	1	PASS
Mid	2437	15.21	15.33	15.88	20.25	0.10603			PASS
High	2452	15.93	15.97	15.74	20.65	0.11621			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 is 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	E4446A	US44300399	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	09/25/2016	09/24/2017
Bilog Antenna	SCHAFFNER	CBL6143	5082	02/21/2017	02/20/2018
Horn Antenna	SCHWARZBECK	BBHA9120	D286	02/28/2017	02/27/2018
Board-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170-497	02/28/2017	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.

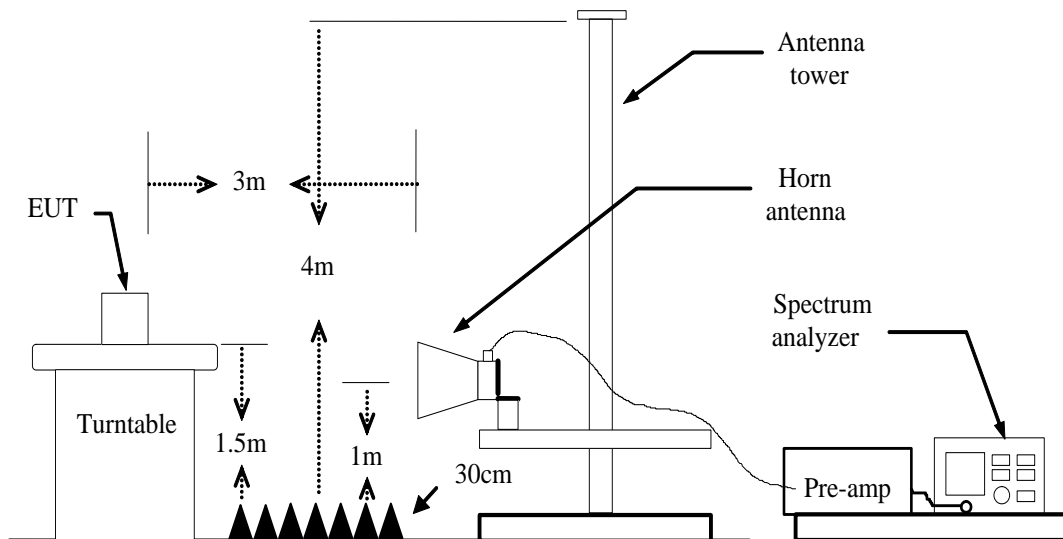
3. N.C.R = No Calibration Required.



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



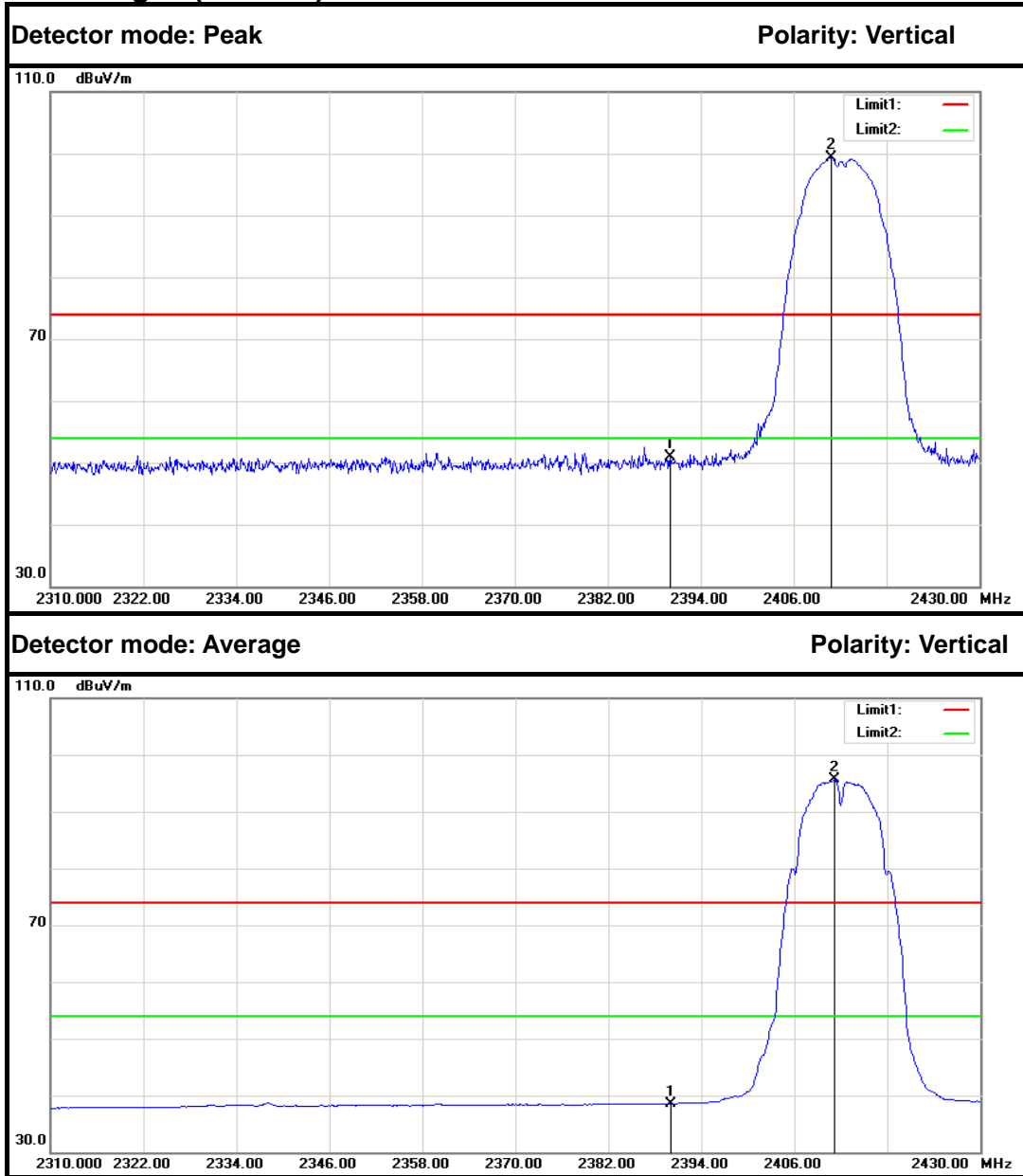


7.6.5. TEST RESULTS

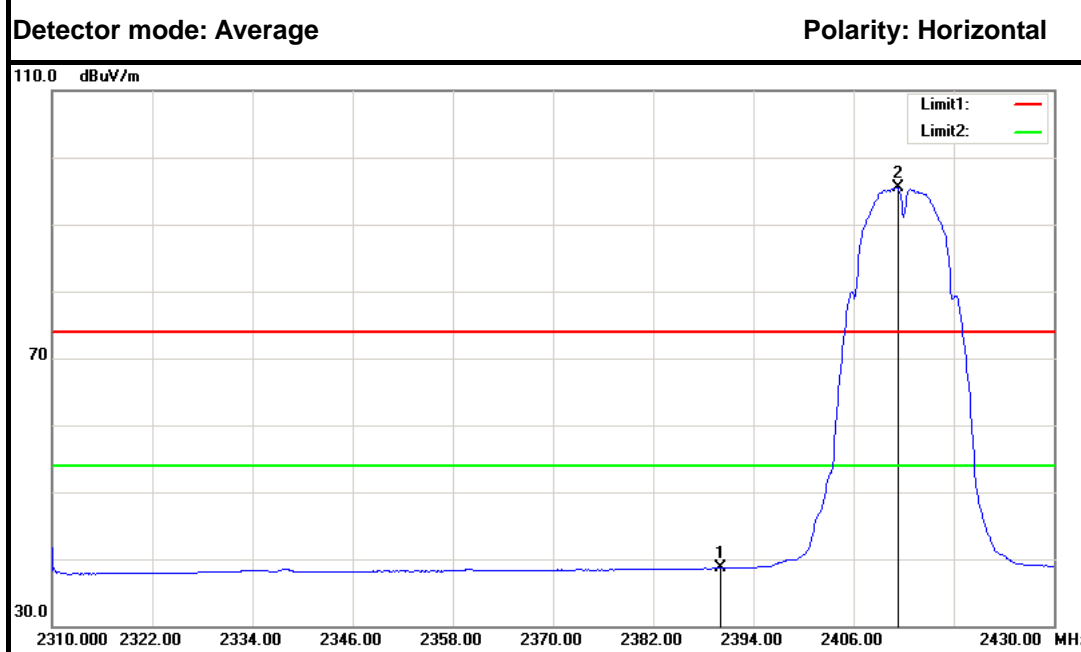
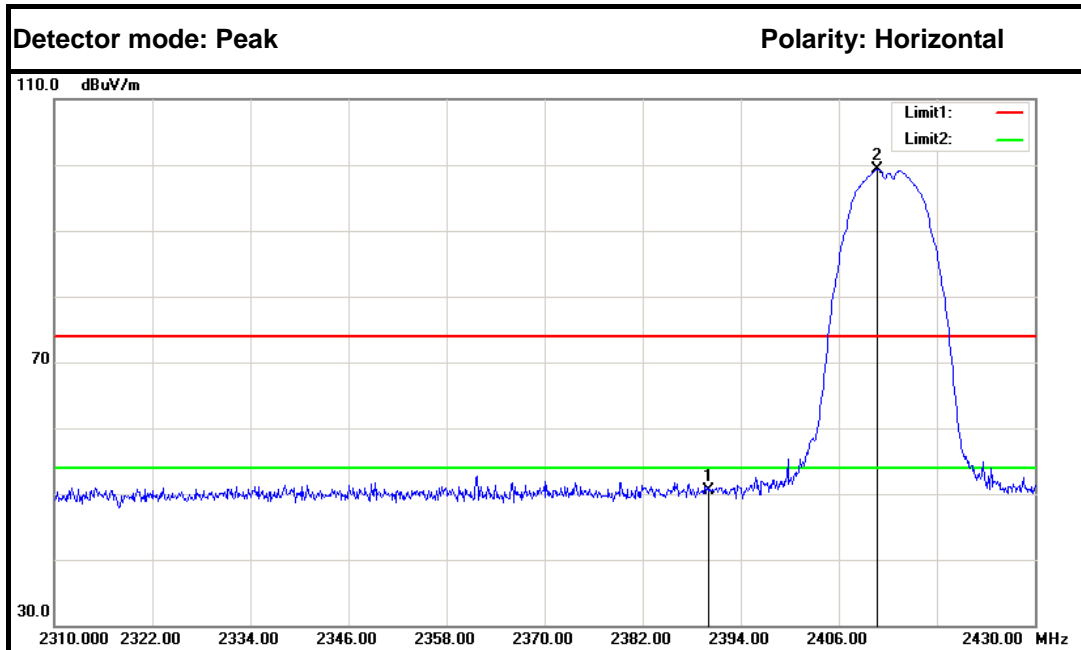
Test Plot

IEEE 802.11b mode (Antenna 0)

Band Edges (CH Low)



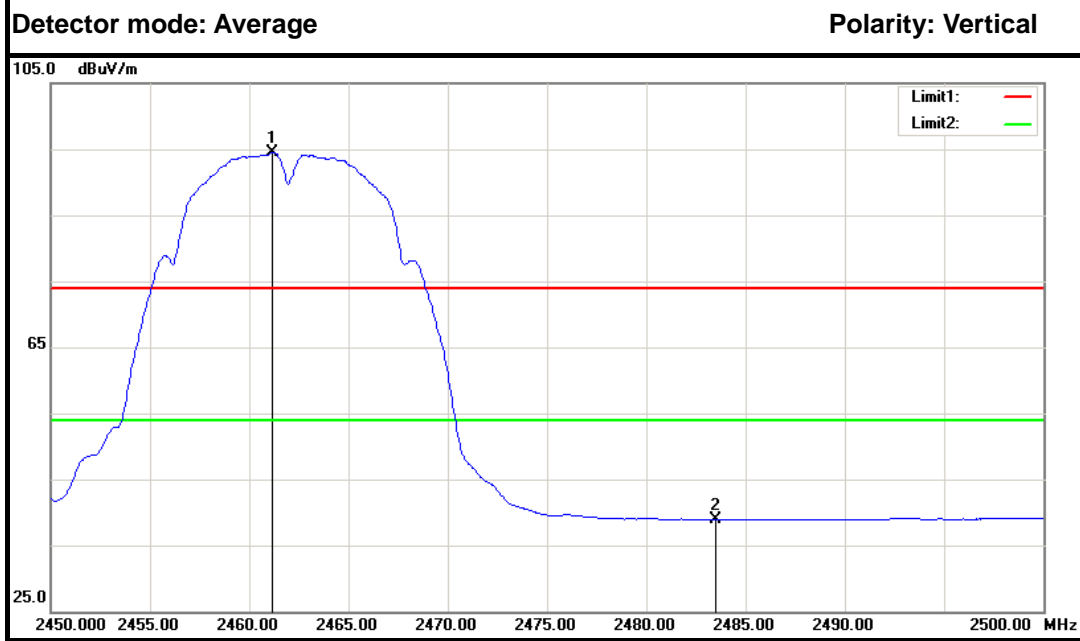
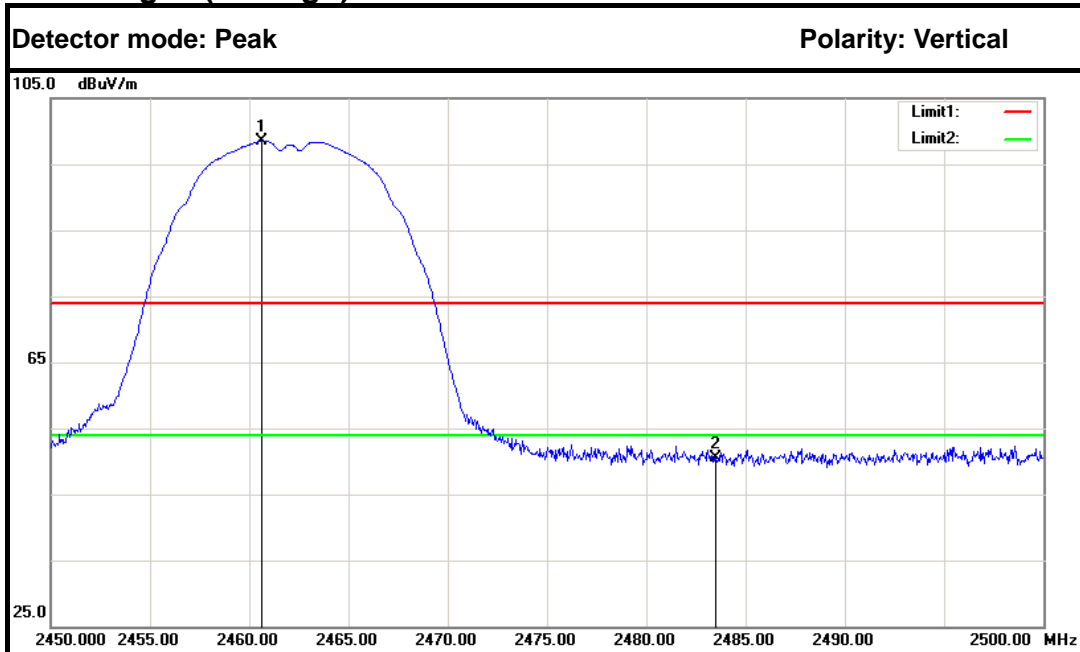
No.	Frequency (MHz)	Reading (dB)	Factor (dB/m)	Result (dB/m)	Limit (dB/m)	Margin (dB)	Remark	Antenna Polar
1.	2390.000	53.85	-2.86	50.99	74.00	-23.01	Peak	Vertical
2.	2410.800	102.01	-2.75	99.26	---	---	Peak	Vertical
1.	2390.000	41.45	-2.86	38.59	54.00	-15.41	Average	Vertical
2.	2411.160	98.39	-2.75	95.64	---	---	Average	Vertical



No.	Frequency (MHz)	Reading (dB)	Factor (dB/m)	Result (dB/m)	Limit (dB/m)	Margin (dB)	Remark	Antenna Polar
1.	2390.000	53.42	-2.86	50.56	74.00	-23.44	Peak	Horizontal
2.	2410.680	102.01	-2.75	99.26	---	---	Peak	Horizontal
1.	2390.000	41.48	-2.86	38.62	54.00	-15.38	Average	Horizontal
2.	2411.280	98.34	-2.75	95.59	---	---	Average	Horizontal



Band Edges (CH High)



No.	Frequency (MHz)	Reading (dB)	Factor (dB/m)	Result (dB/m)	Limit (dB/m)	Margin (dB)	Remark	Antenna Polar
1.	2460.600	100.98	-2.48	98.50	---	---	Peak	Vertical
2.	2483.500	52.92	-2.35	50.57	74.00	-23.43	Peak	Vertical
1.	2461.150	96.95	-2.47	94.48	---	---	Average	Vertical
2.	2483.500	41.31	-2.35	38.96	54.00	-15.04	Average	Vertical