7.5 CONDUCTED SPURIOUS EMISSION

LIMITS

§ 15.247(d) In any 100 kHz bandwidth outside the frequency band 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 and that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in § 15.209(a) is not required. 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 § 15.205(c)).

TEST EQUIPMENT

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4446A	MY43360132	06/10/2015

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

TEST SETUP

TEST PROCEDURE

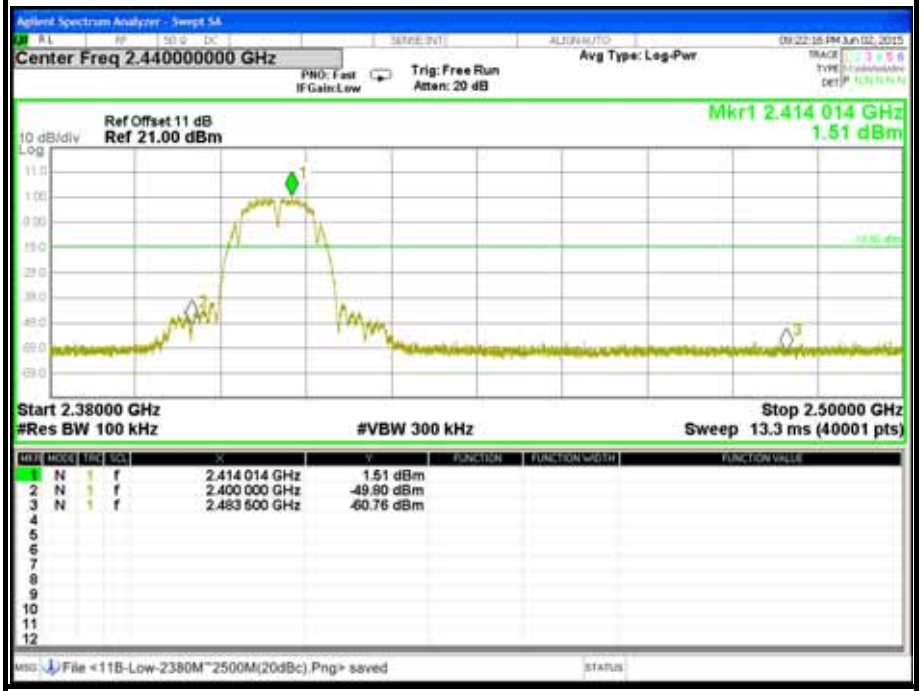
The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

The spectrum from 30 MHz to 26.5 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in the 2.4 GHz band.

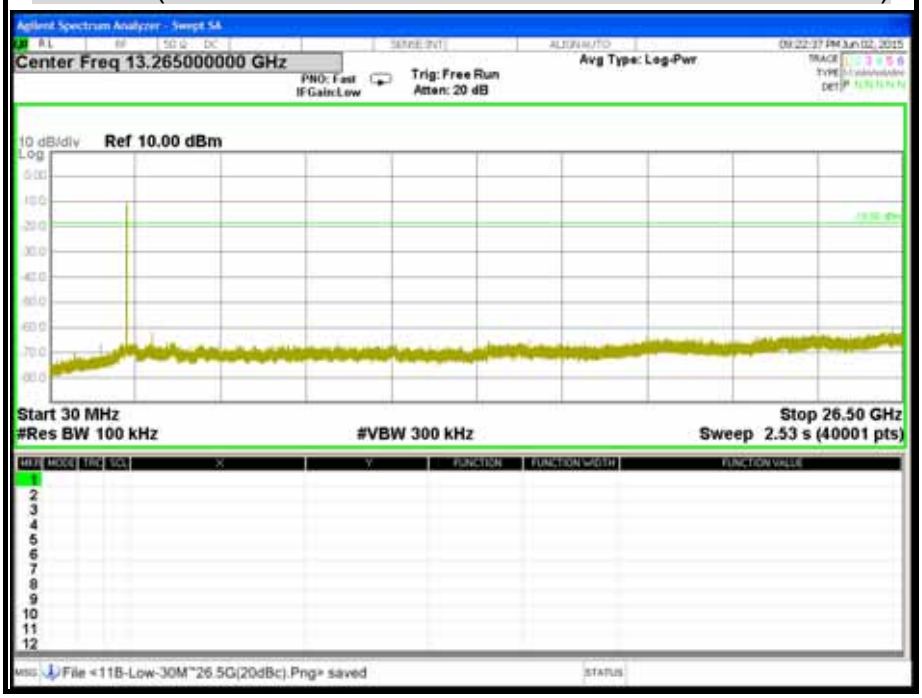
TEST RESULTS

OUT-OF-BAND SPURIOUS EMISSIONS-CONDUCTED MEASUREMENT

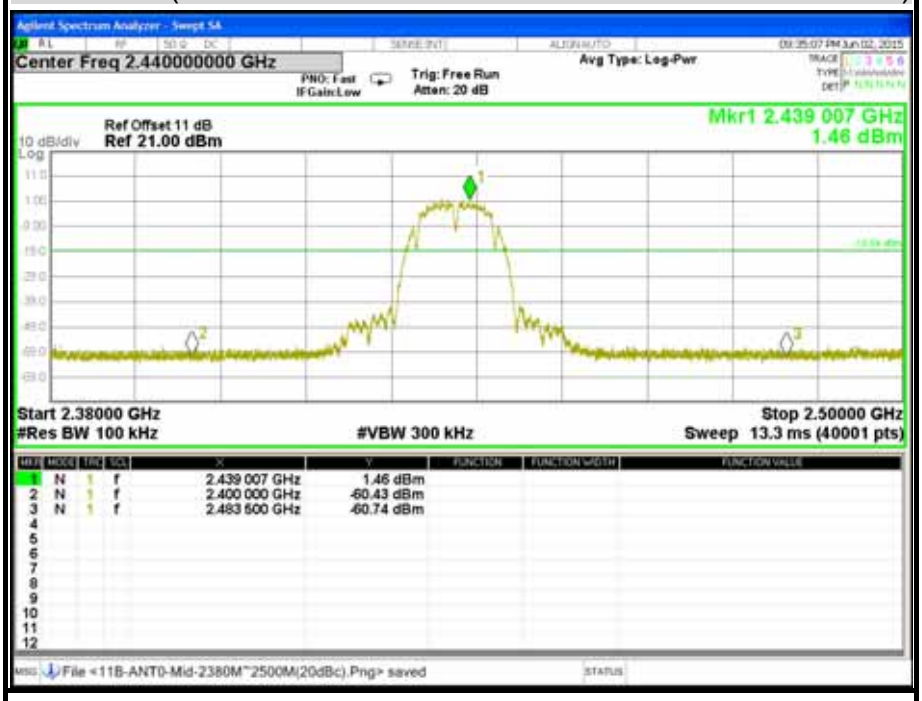
CH Low (2.38GHz ~ 2.5GHz / IEEE 802.11b Mode / Chain 0)



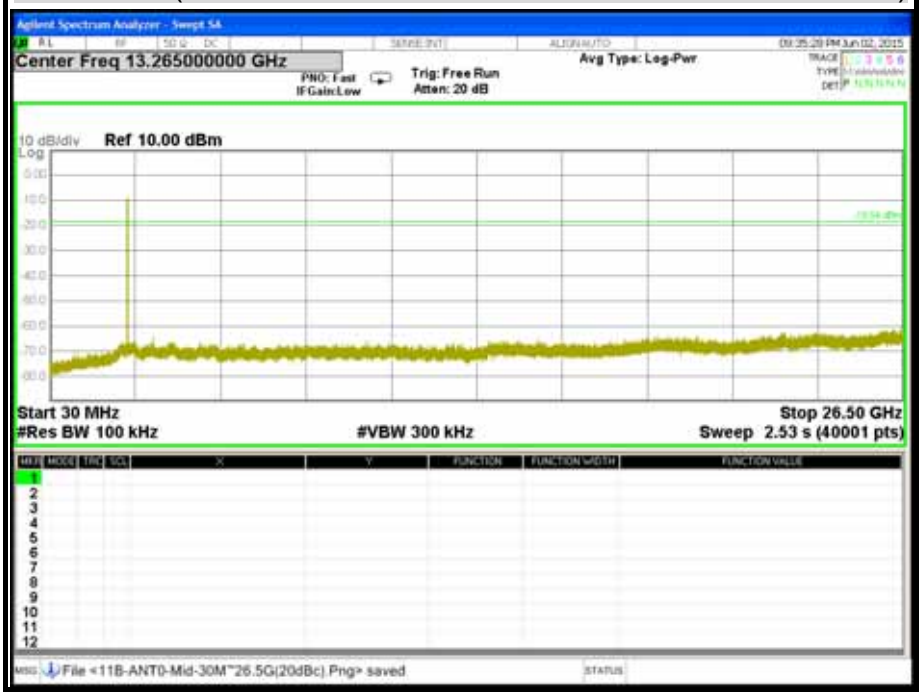
CH Low (30MHz ~ 26.5GHz / IEEE 802.11b Mode / Chain 0)



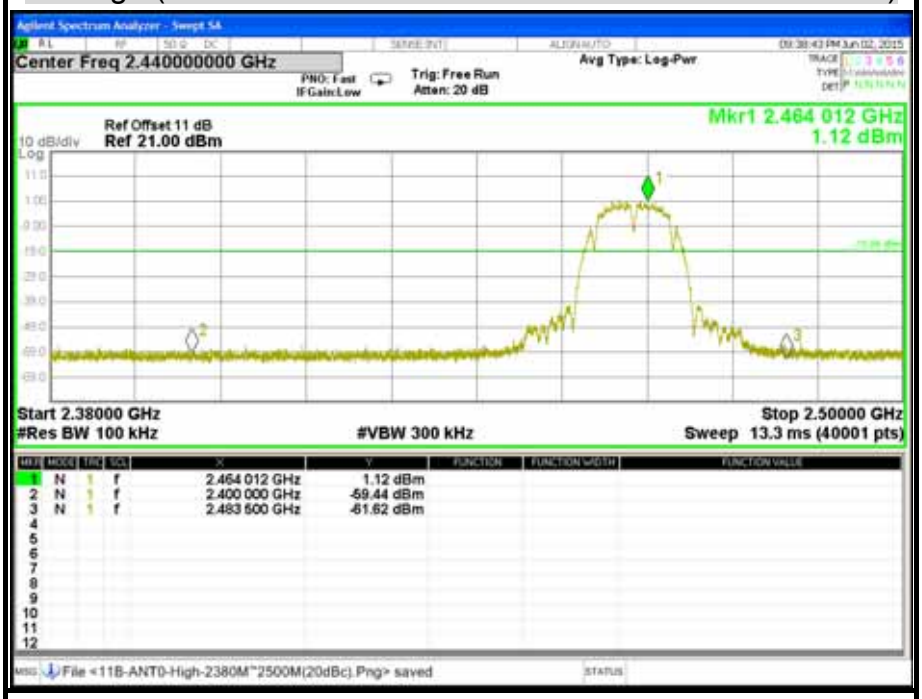
CH Middle (2.38GHz ~ 2.5GHz / IEEE 802.11b Mode / Chain 0)



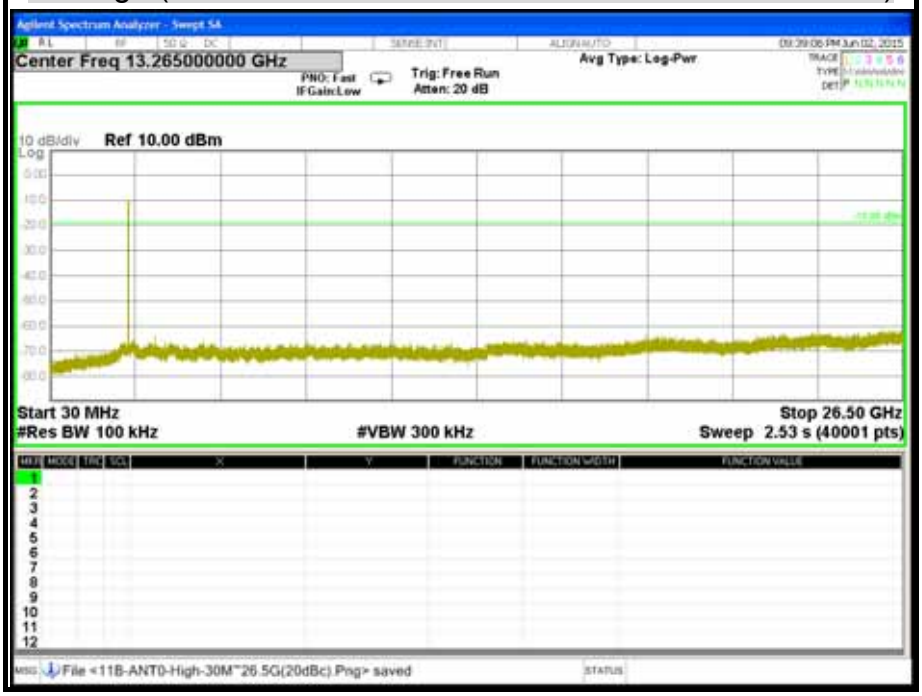
CH Middle (30MHz ~ 26.5GHz / IEEE 802.11b Mode / Chain 0)



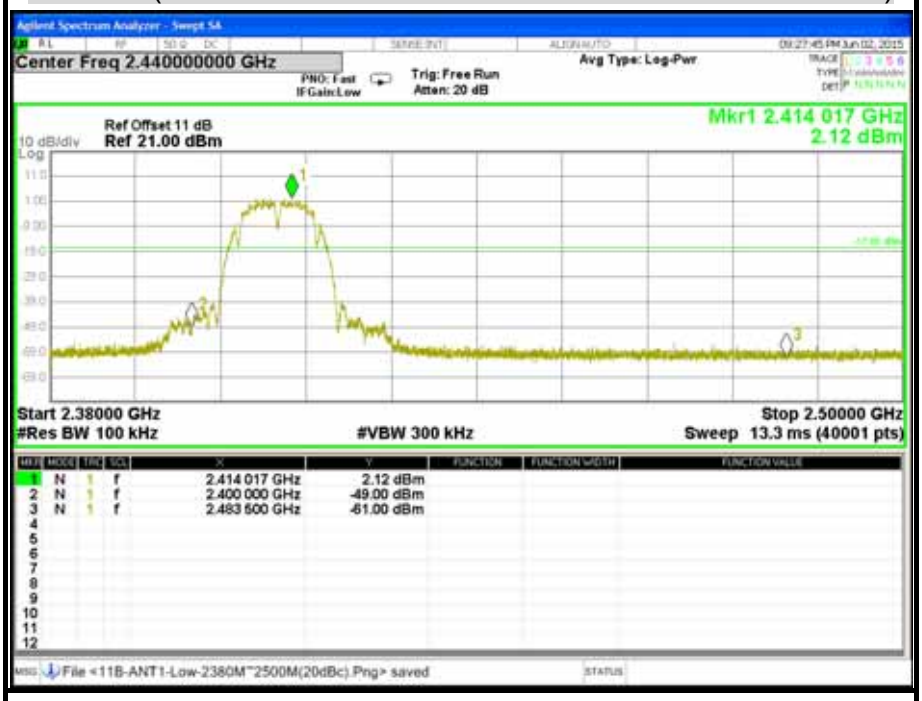
CH High (2.38GHz ~ 2.5GHz / IEEE 802.11b Mode / Chain 0)



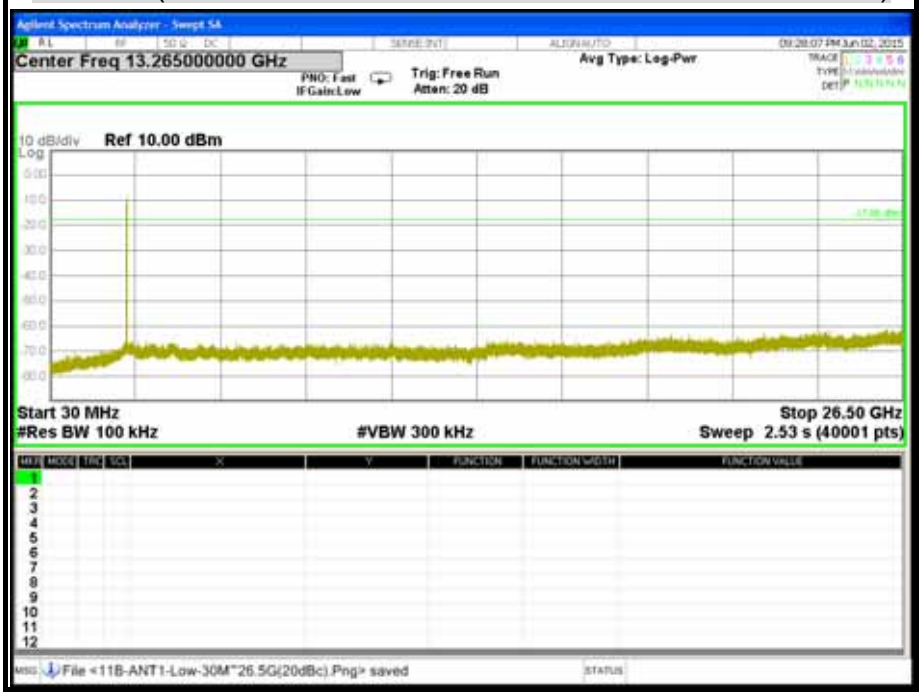
CH High (30MHz ~ 26.5GHz / IEEE 802.11b Mode / Chain 0)



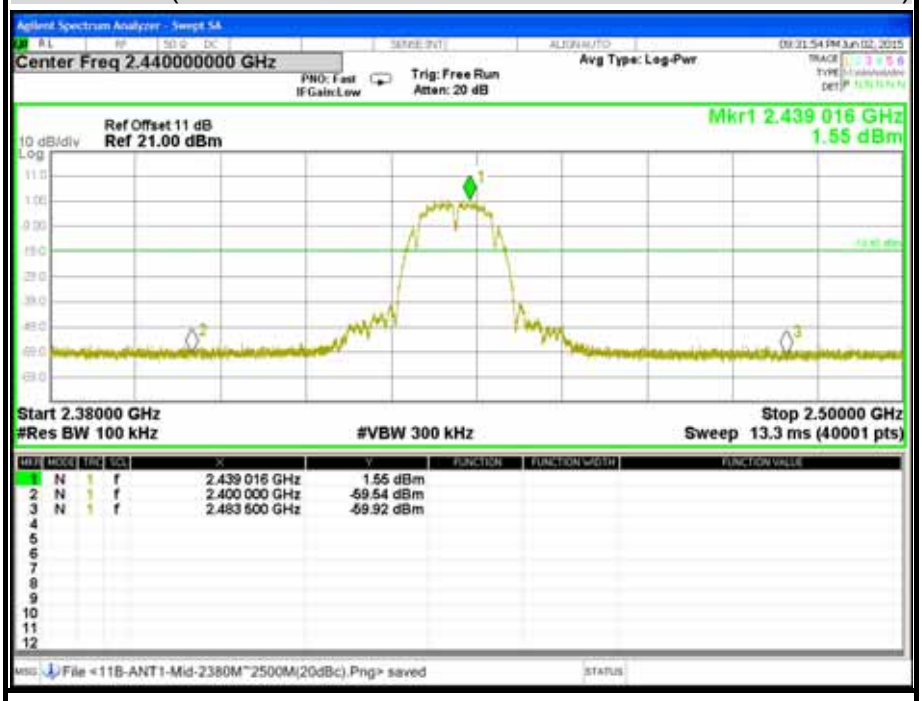
CH Low (2.38GHz ~ 2.5GHz / IEEE 802.11b Mode / Chain 1)



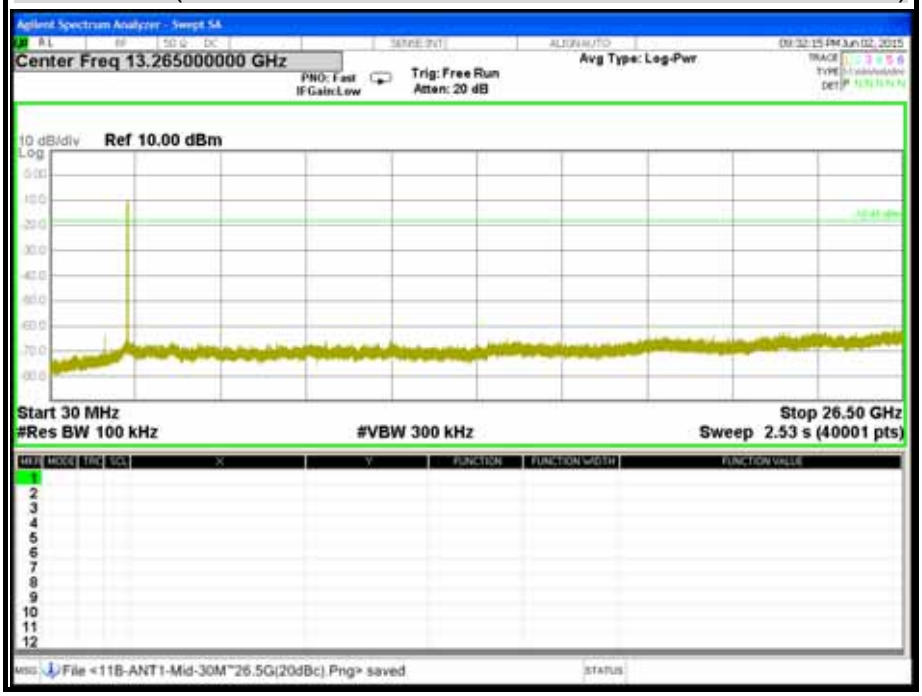
CH Low (30MHz ~ 26.5GHz / IEEE 802.11b Mode / Chain 1)



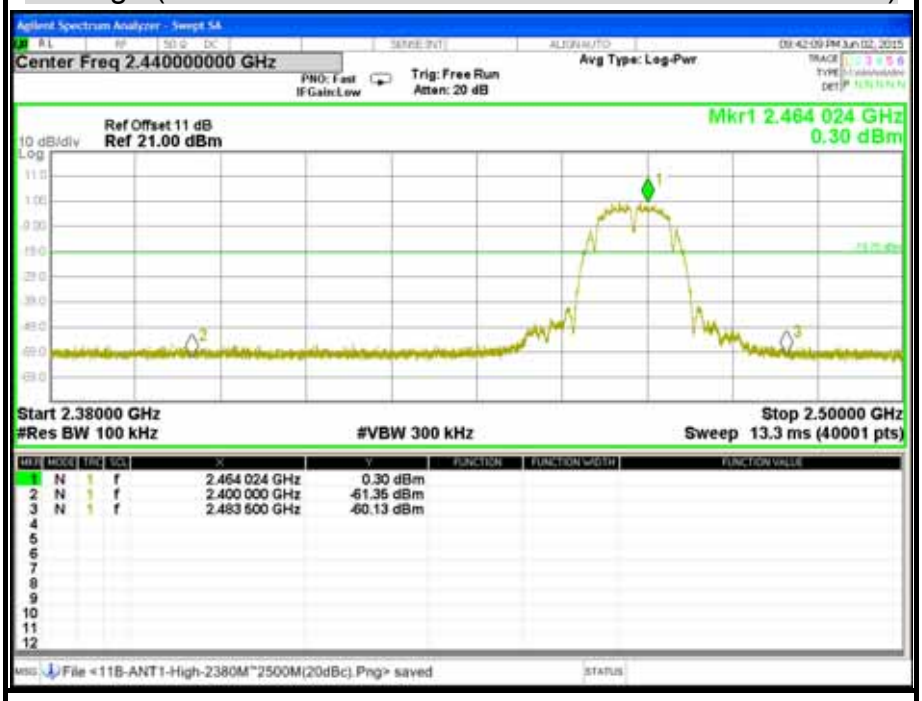
CH Middle (2.38GHz ~ 2.5GHz / IEEE 802.11b Mode / Chain 1)



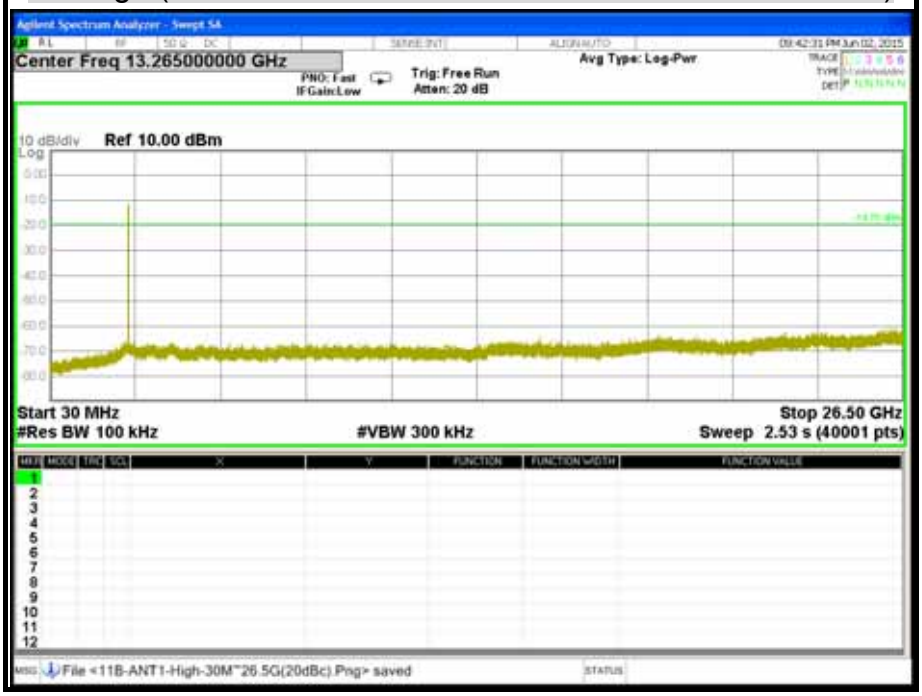
CH Middle (30MHz ~ 26.5GHz / IEEE 802.11b Mode / Chain 1)



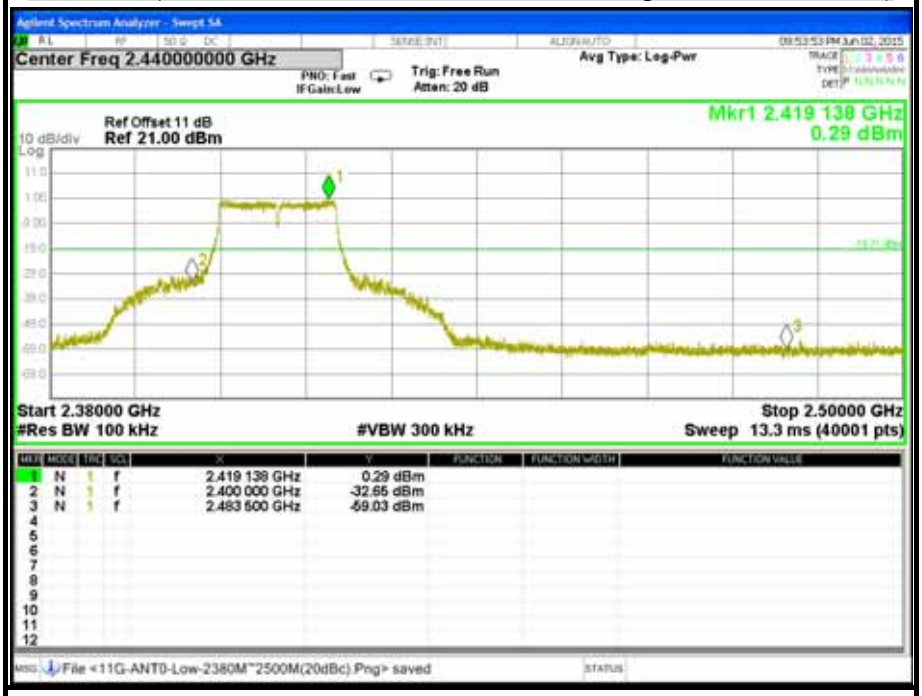
CH High (2.38GHz ~ 2.5GHz / IEEE 802.11b Mode / Chain 1)



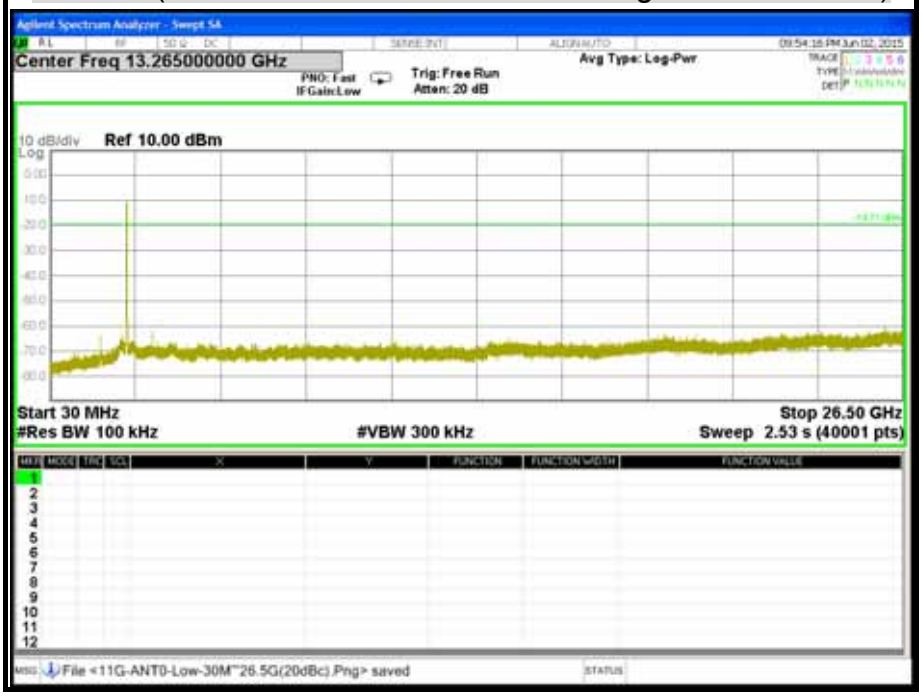
CH High (30MHz ~ 26.5GHz / IEEE 802.11b Mode / Chain 1)



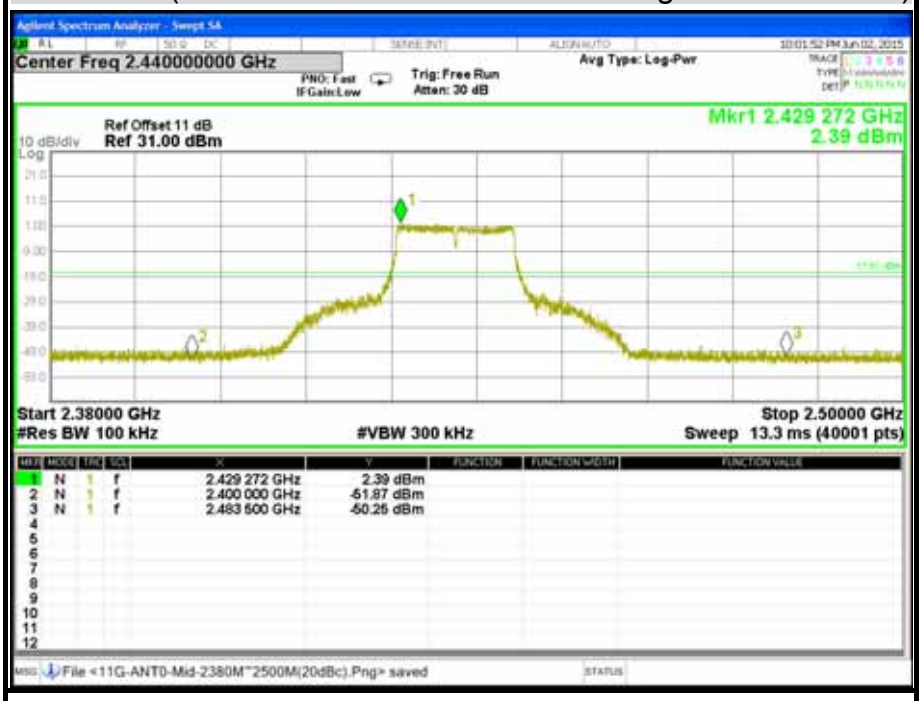
CH Low (2.38GHz ~ 2.5GHz / IEEE 802.11g Mode / Chain 0)



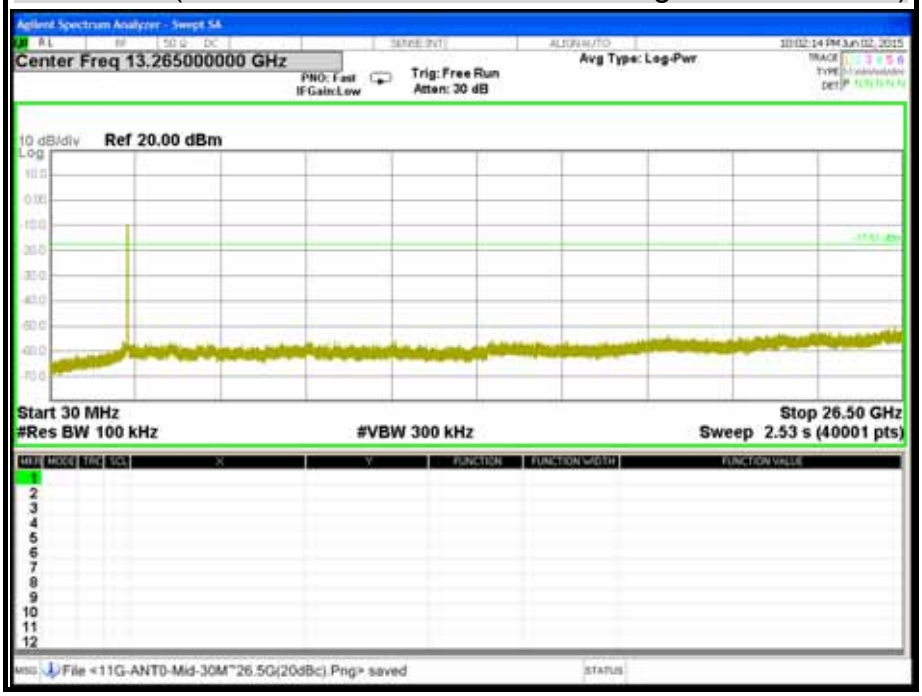
CH Low (30MHz ~ 26.5GHz / IEEE 802.11g Mode / Chain 0)



CH Middle (2.38GHz ~ 2.5GHz / IEEE 802.11g Mode / Chain 0)

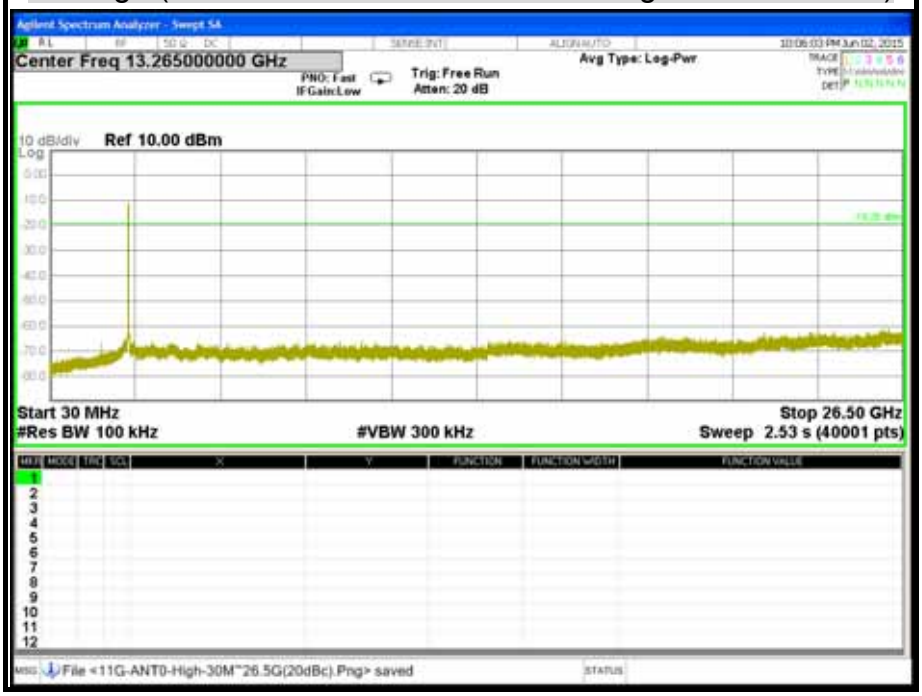


CH Middle (30MHz ~ 26.5GHz / IEEE 802.11g Mode / Chain 0)

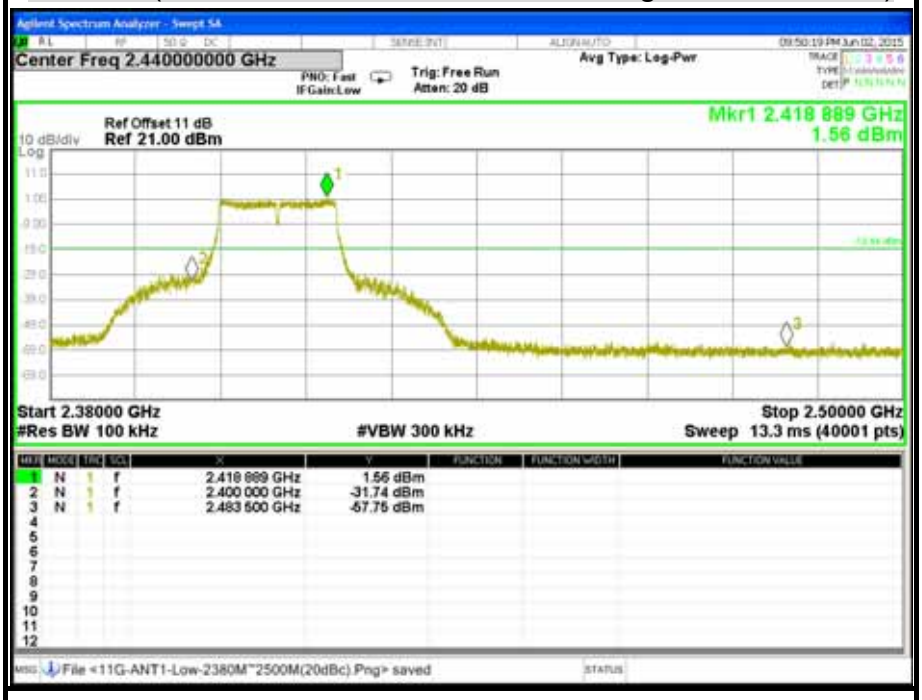


CH High (2.38GHz ~ 2.5GHz / IEEE 802.11g Mode / Chain 0)

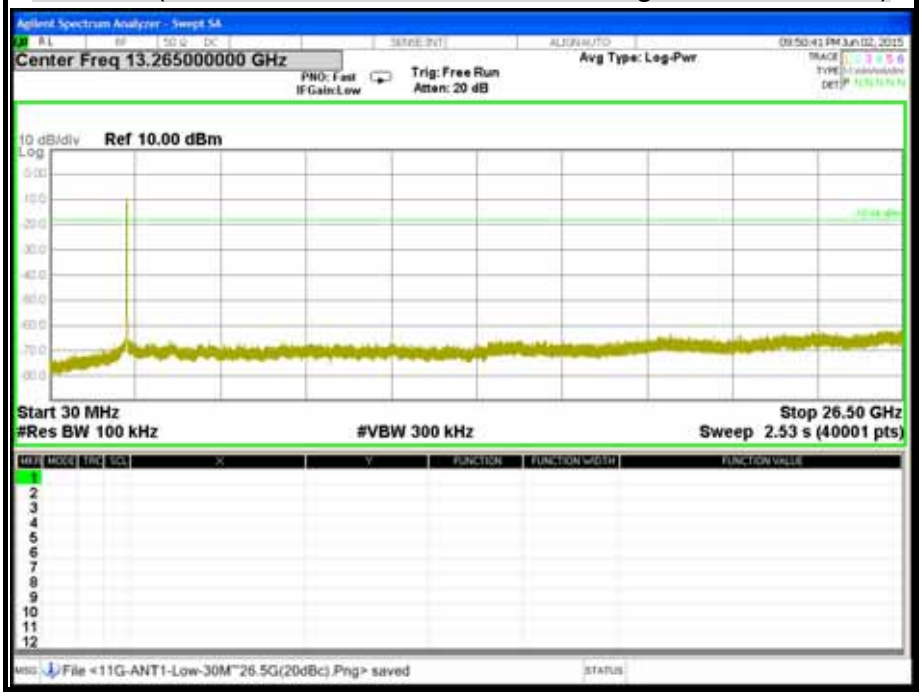
CH High (30MHz ~ 26.5GHz / IEEE 802.11g Mode / Chain 0)



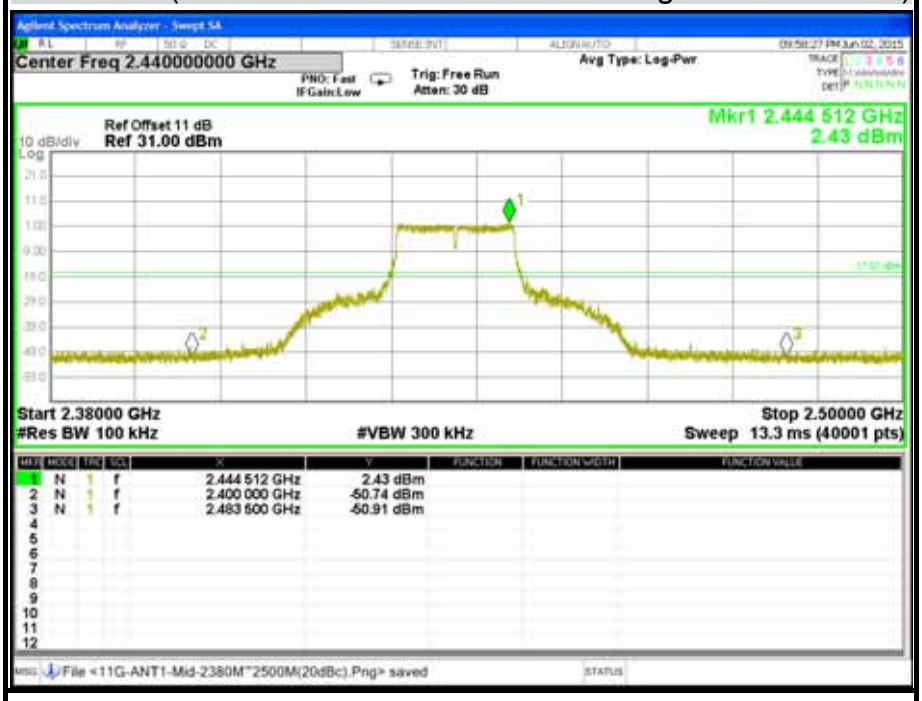
CH Low (2.38GHz ~ 2.5GHz / IEEE 802.11g Mode / Chain 1)



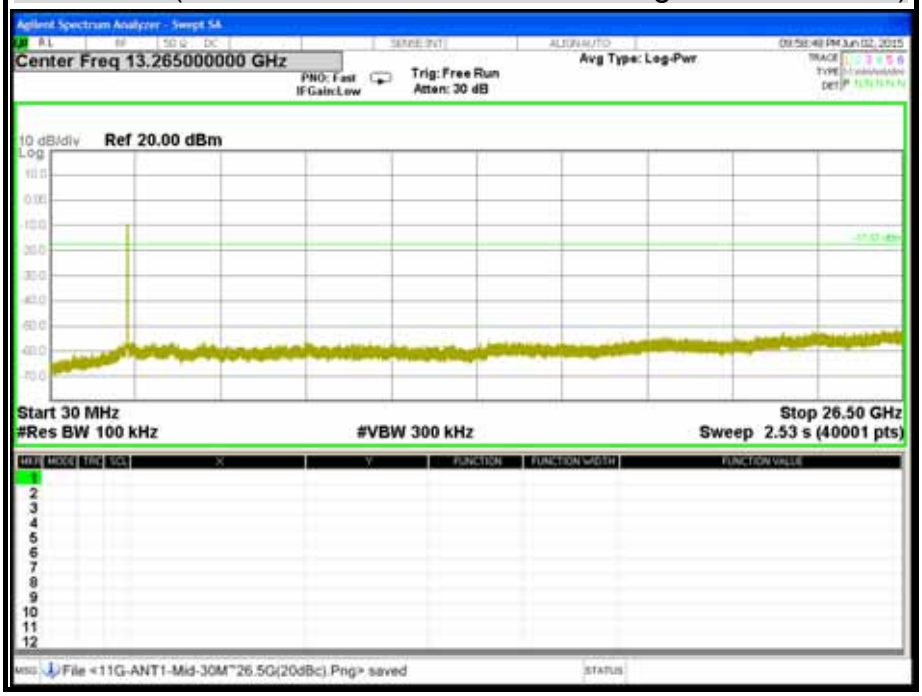
CH Low (30MHz ~ 26.5GHz / IEEE 802.11g Mode / Chain 1)



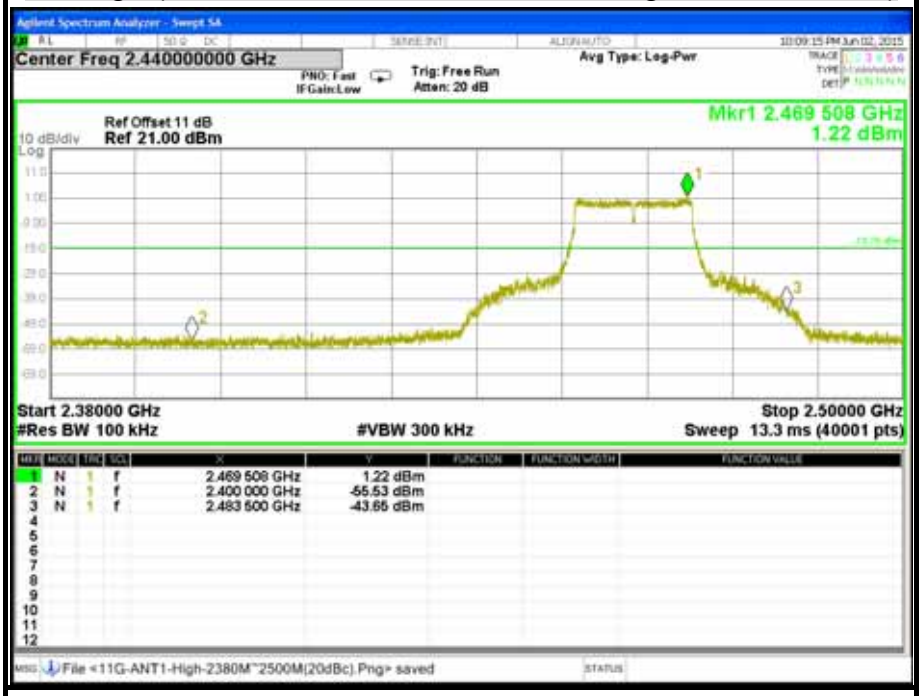
CH Middle (2.38GHz ~ 2.5GHz / IEEE 802.11g Mode / Chain 1)



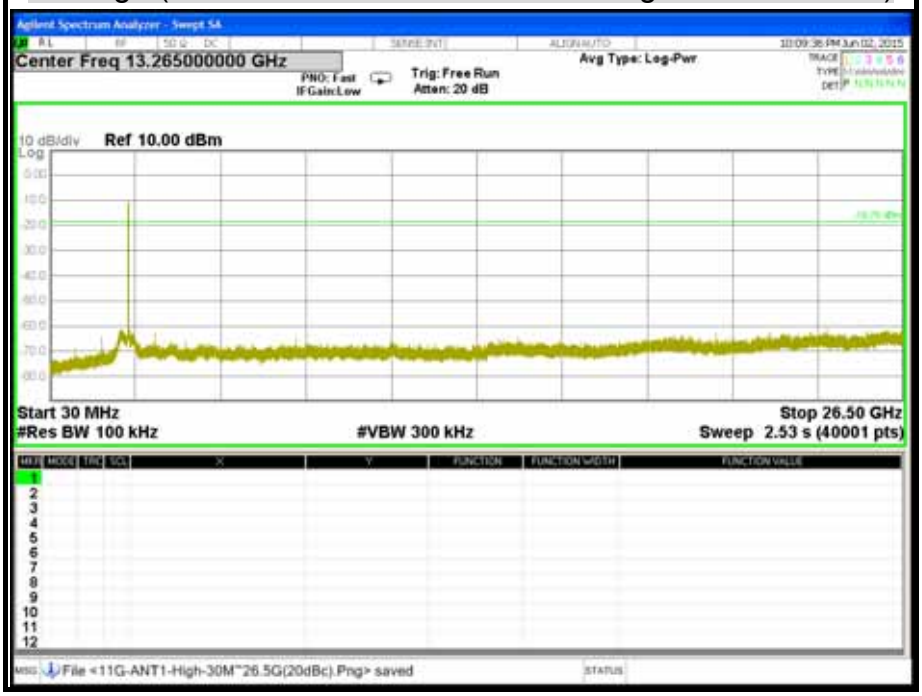
CH Middle (30MHz ~ 26.5GHz / IEEE 802.11g Mode / Chain 1)



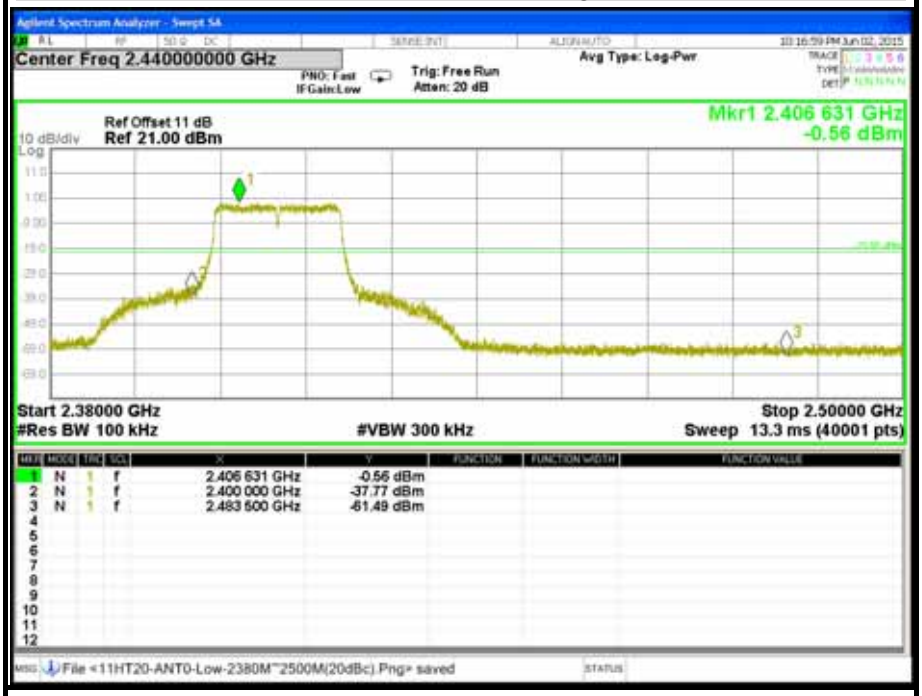
CH High (2.38GHz ~ 2.5GHz / IEEE 802.11g Mode / Chain 1)



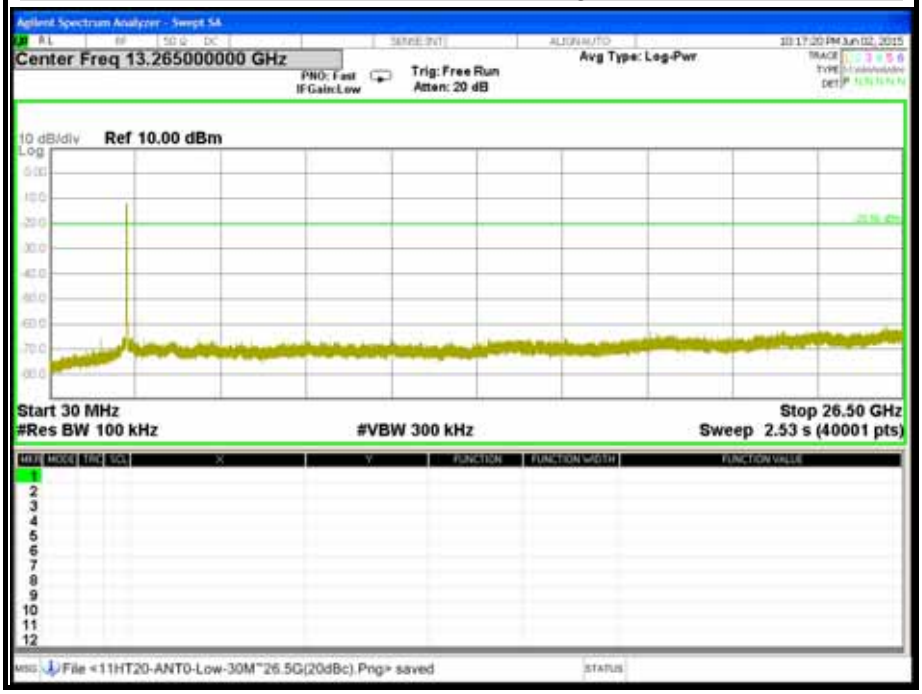
CH High (30MHz ~ 26.5GHz / IEEE 802.11g Mode / Chain 1)



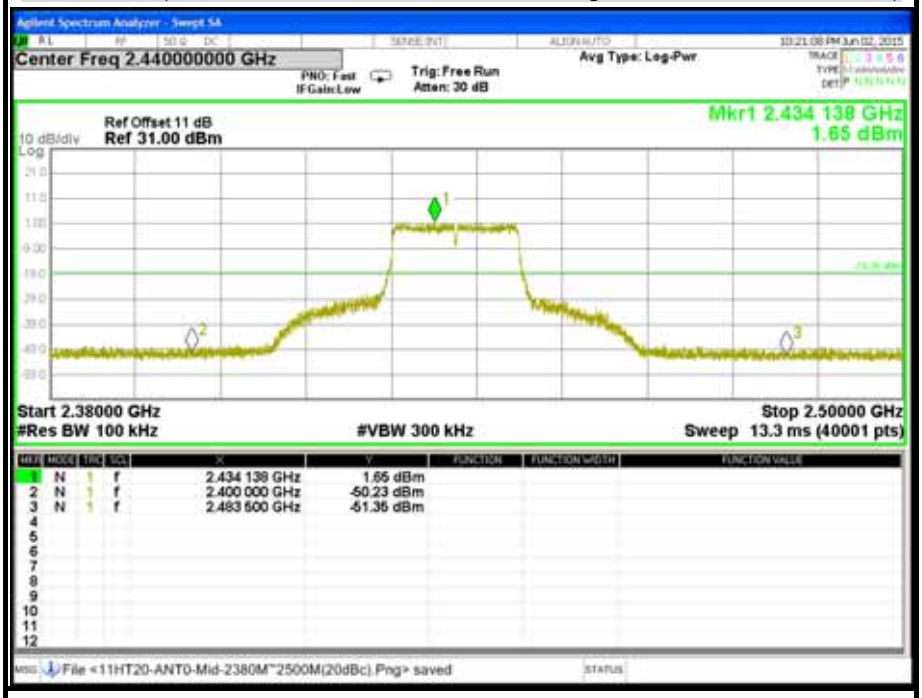
CH Low (2.38GHz ~ 2.5GHz / IEEE 802.11gn HT20 Mode / Chain 0)



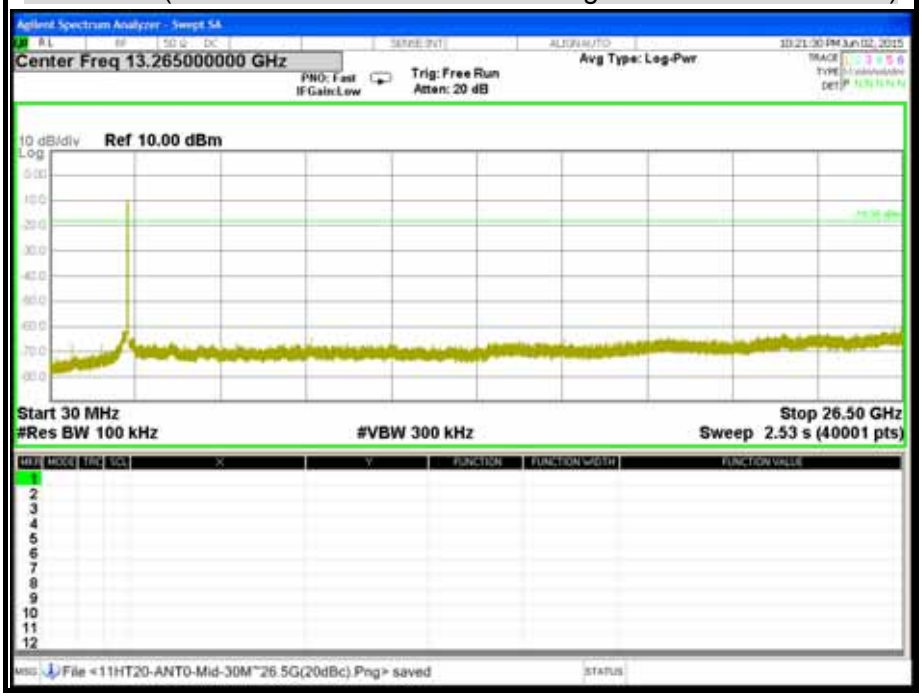
CH Low (30MHz ~ 26.5GHz / IEEE 802.11gn HT20 Mode / Chain 0)



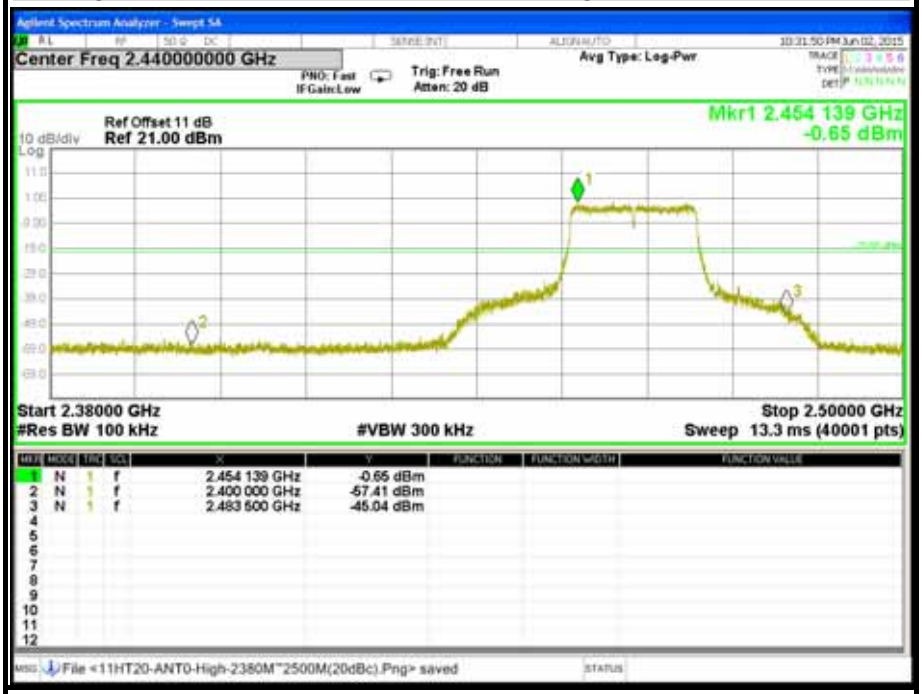
CH Middle (2.38GHz ~ 2.5GHz / IEEE 802.11gn HT20 Mode / Chain 0)



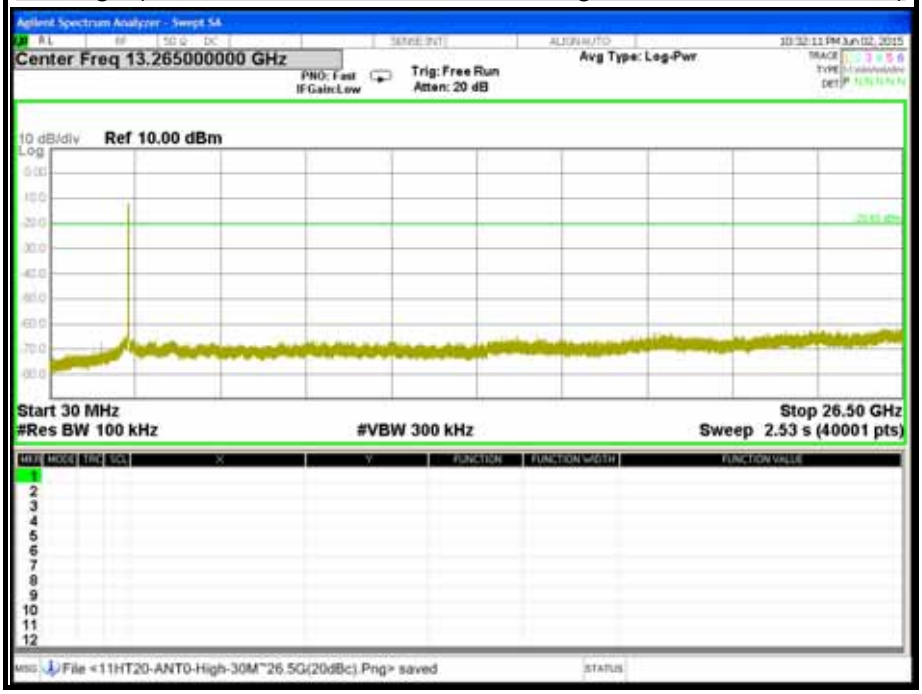
CH Middle (30MHz ~ 26.5GHz / IEEE 802.11gn HT20 Mode / Chain 0)



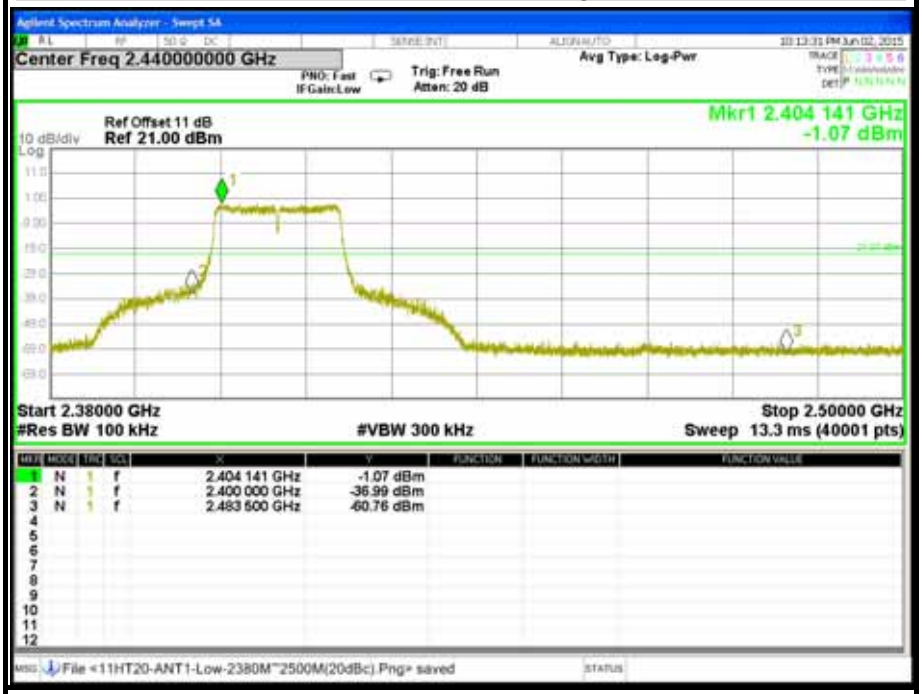
CH High (2.38GHz ~ 2.5GHz / IEEE 802.11gn HT20 Mode / Chain 0)



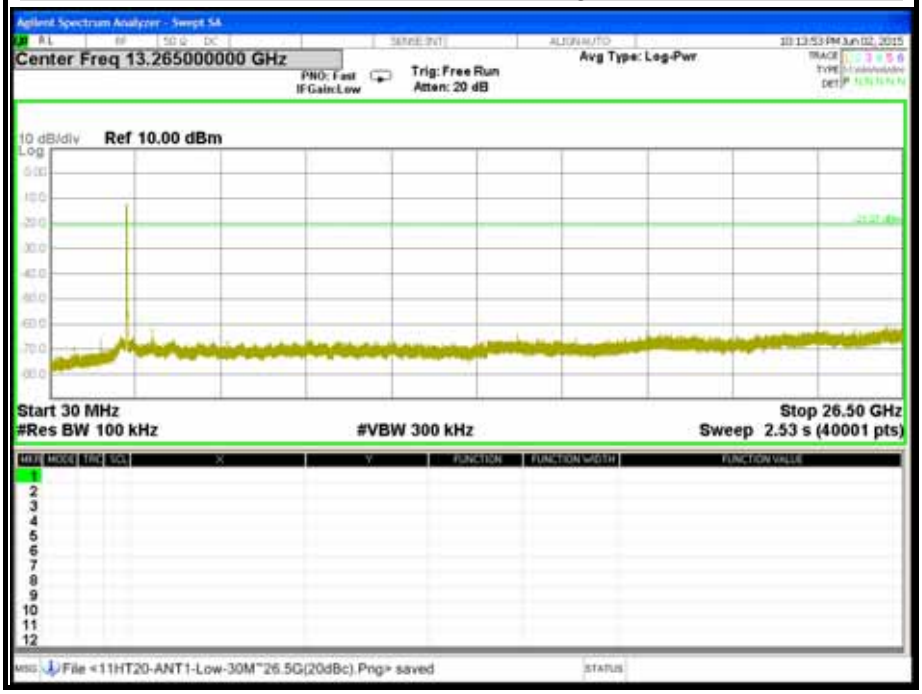
CH High (30MHz ~ 26.5GHz / IEEE 802.11gn HT20 Mode / Chain 0)



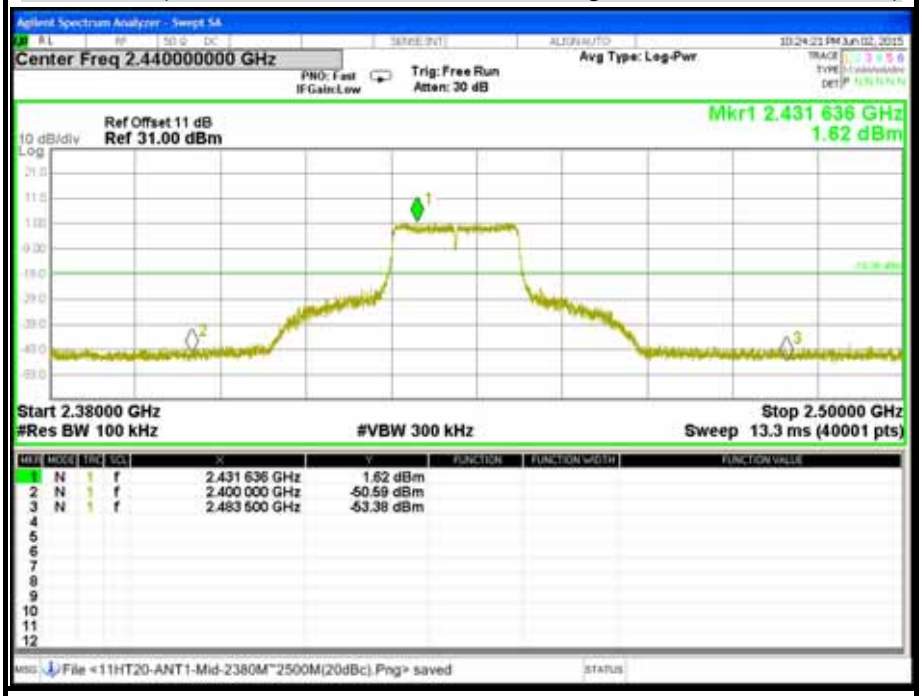
CH Low (2.38GHz ~ 2.5GHz / IEEE 802.11gn HT20 Mode / Chain 1)



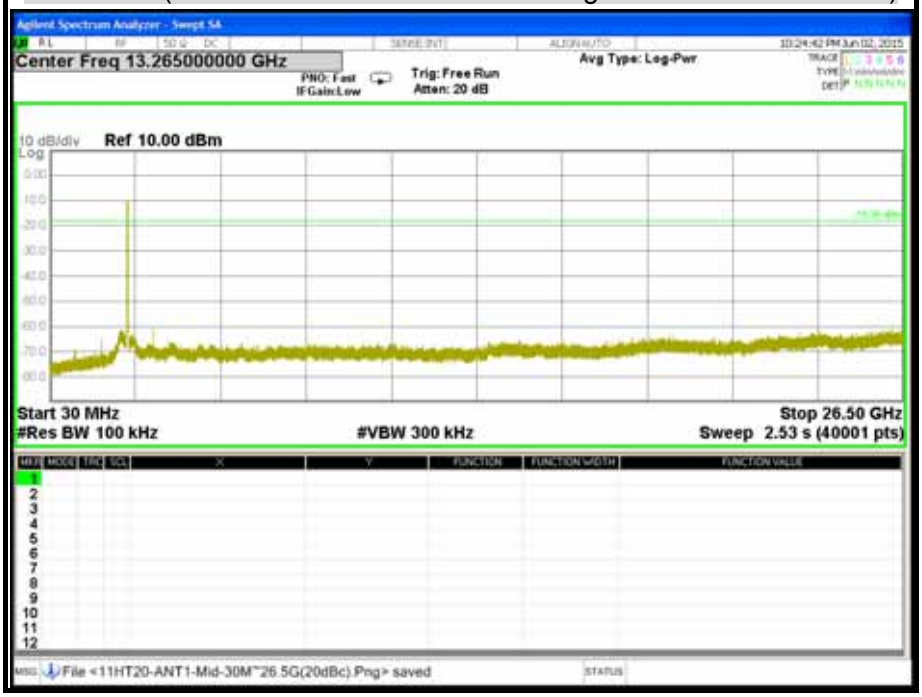
CH Low (30MHz ~ 26.5GHz / IEEE 802.11gn HT20 Mode / Chain 1)



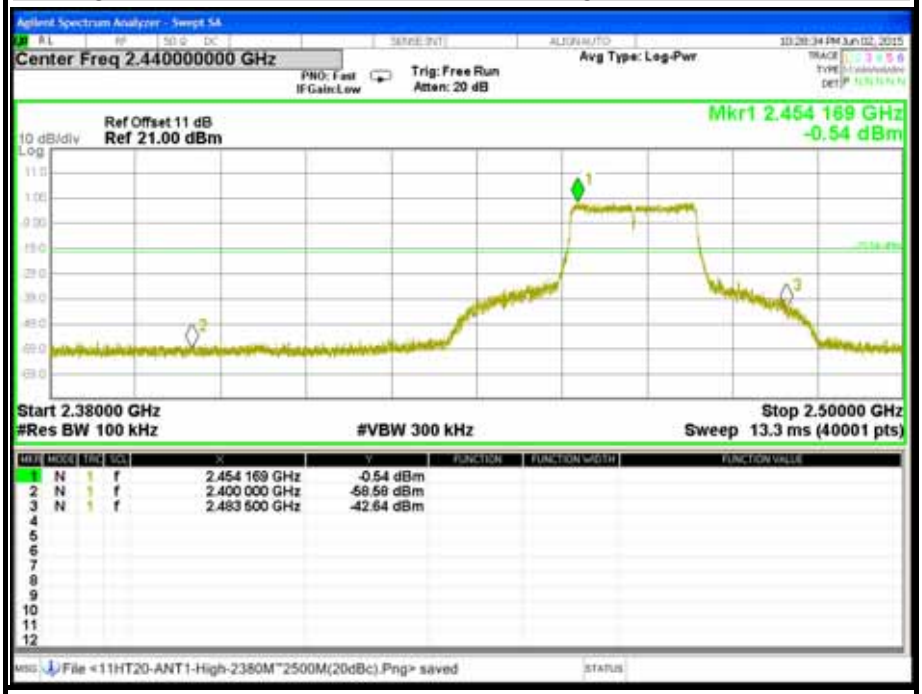
CH Middle (2.38GHz ~ 2.5GHz / IEEE 802.11gn HT20 Mode / Chain 1)



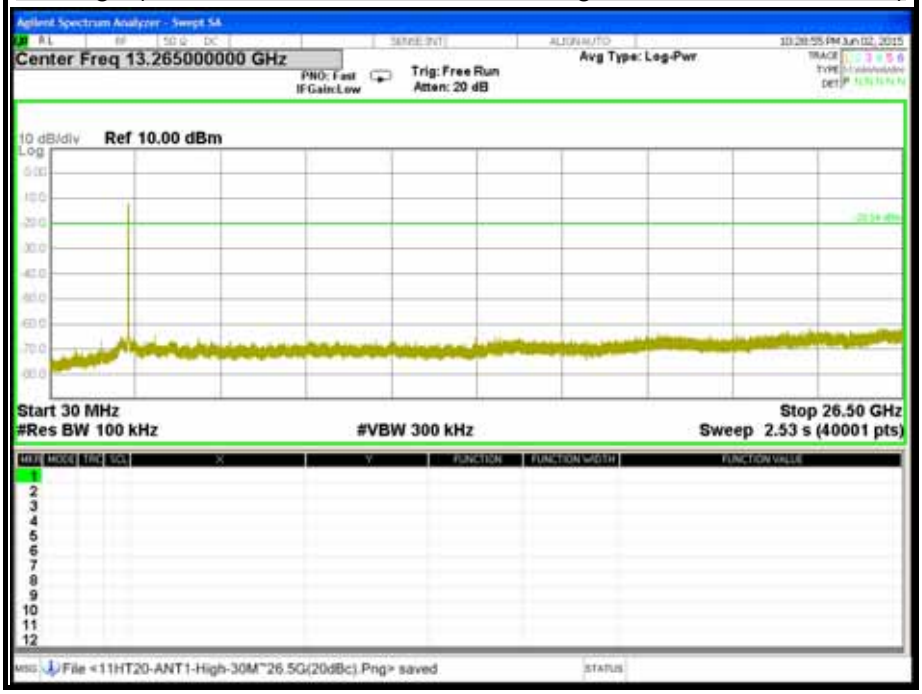
CH Middle (30MHz ~ 26.5GHz / IEEE 802.11gn HT20 Mode / Chain 1)



CH High (2.38GHz ~ 2.5GHz / IEEE 802.11gn HT20 Mode / Chain 1)

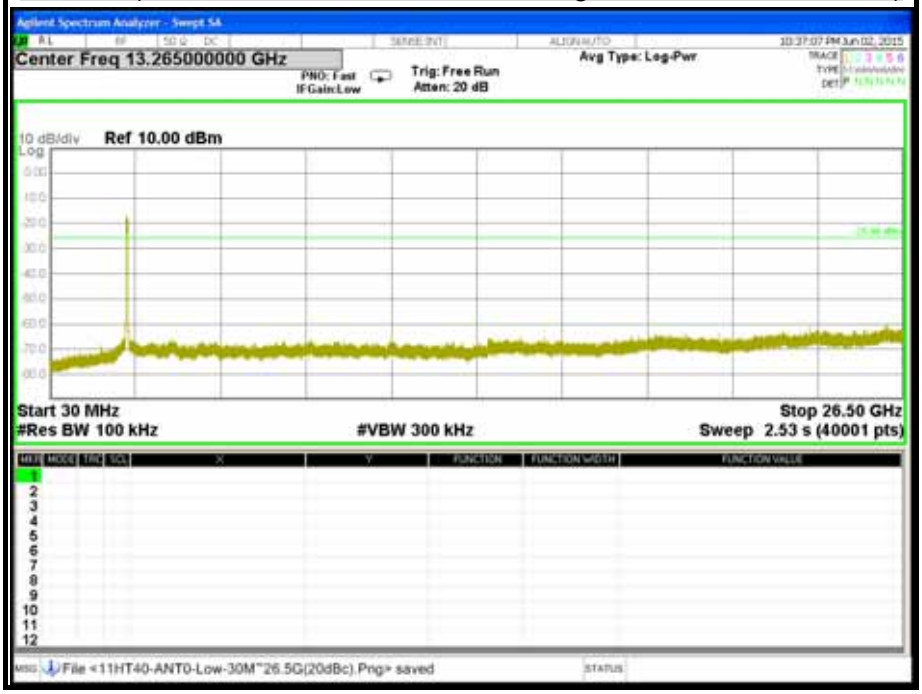


CH High (30MHz ~ 26.5GHz / IEEE 802.11gn HT20 Mode / Chain 1)

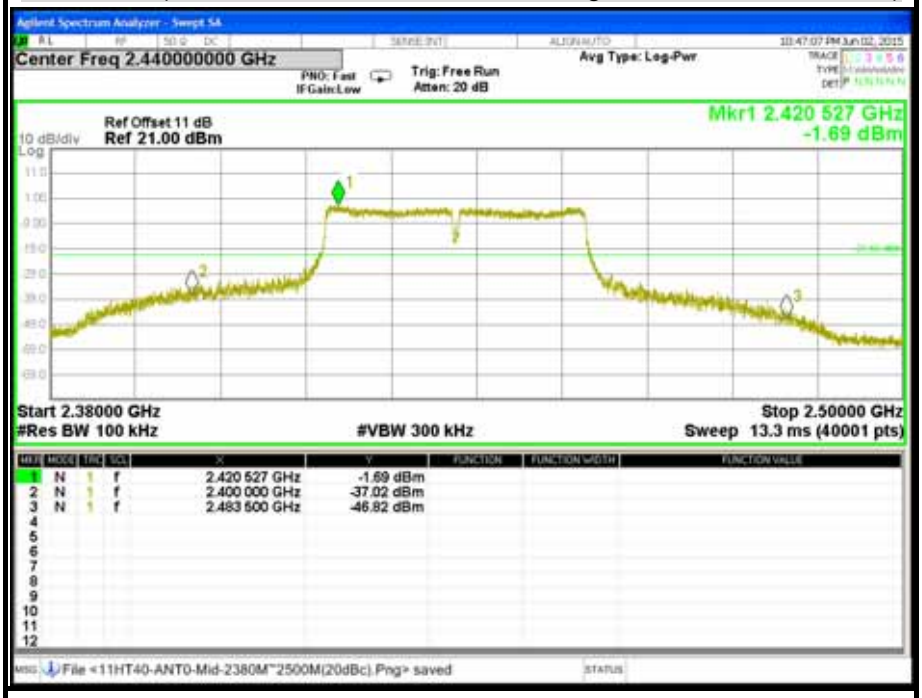


CH Low (2.38GHz ~ 2.5GHz / IEEE 802.11gn HT40 Mode / Chain 0)

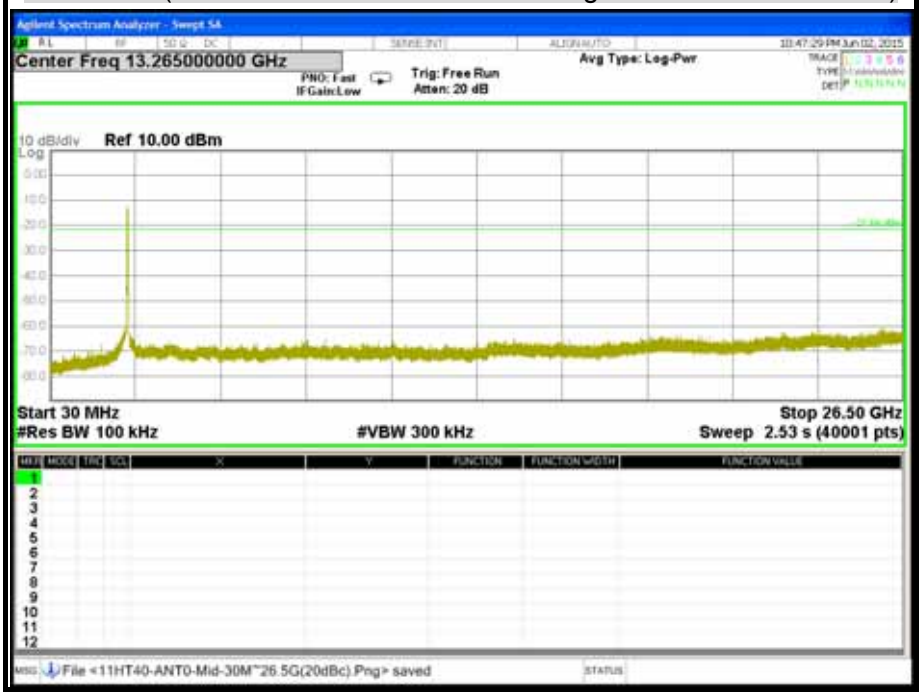
CH Low (30MHz ~ 26.5GHz / IEEE 802.11gn HT40 Mode / Chain 0)



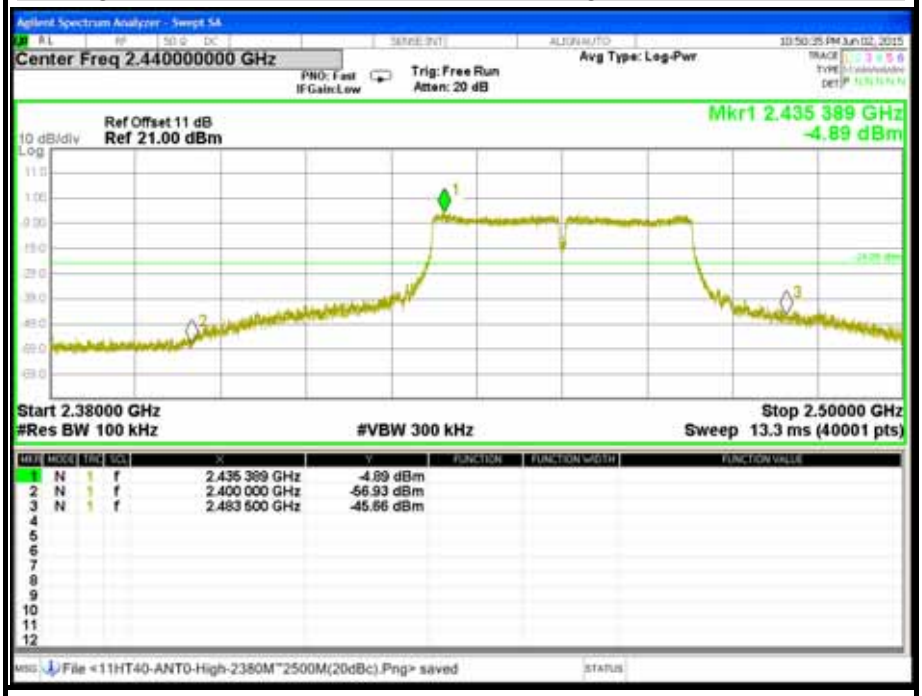
CH Middle (2.38GHz ~ 2.5GHz / IEEE 802.11gn HT40 Mode / Chain 0)



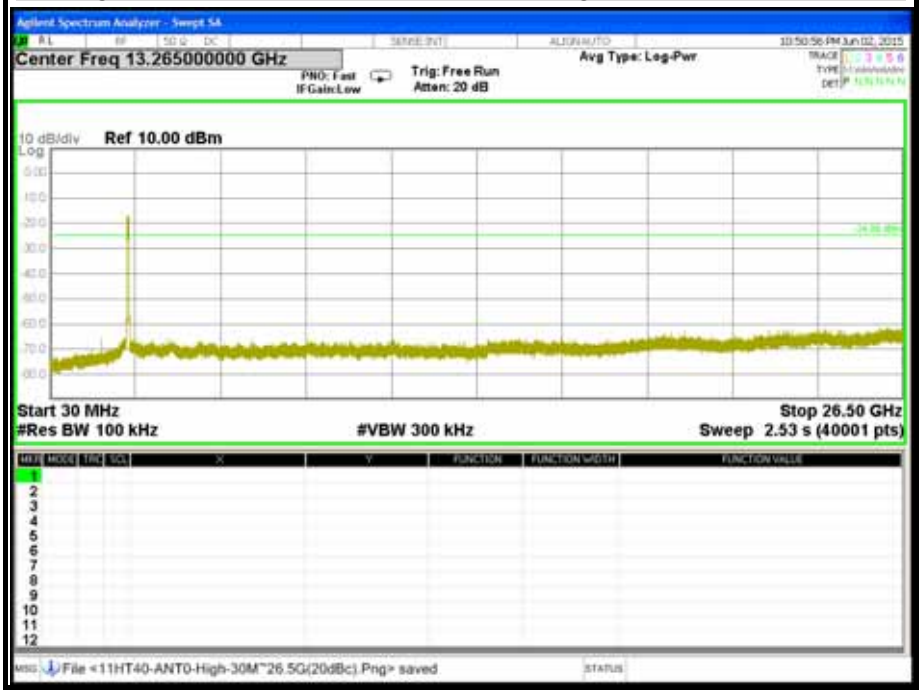
CH Middle (30MHz ~ 26.5GHz / IEEE 802.11gn HT40 Mode / Chain 0)



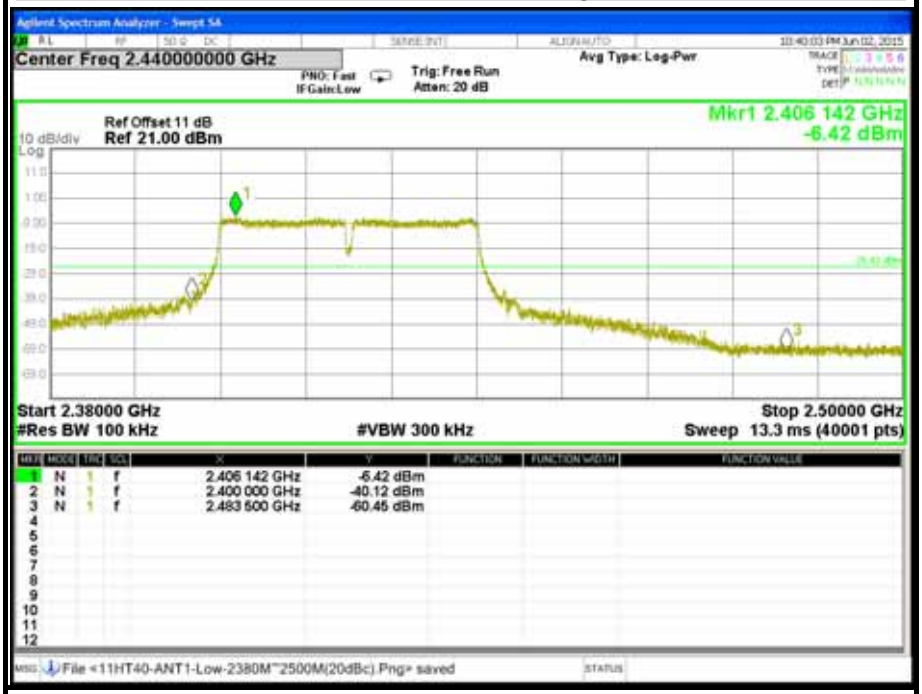
CH High (2.38GHz ~ 2.5GHz / IEEE 802.11gn HT40 Mode/ Chain 0)



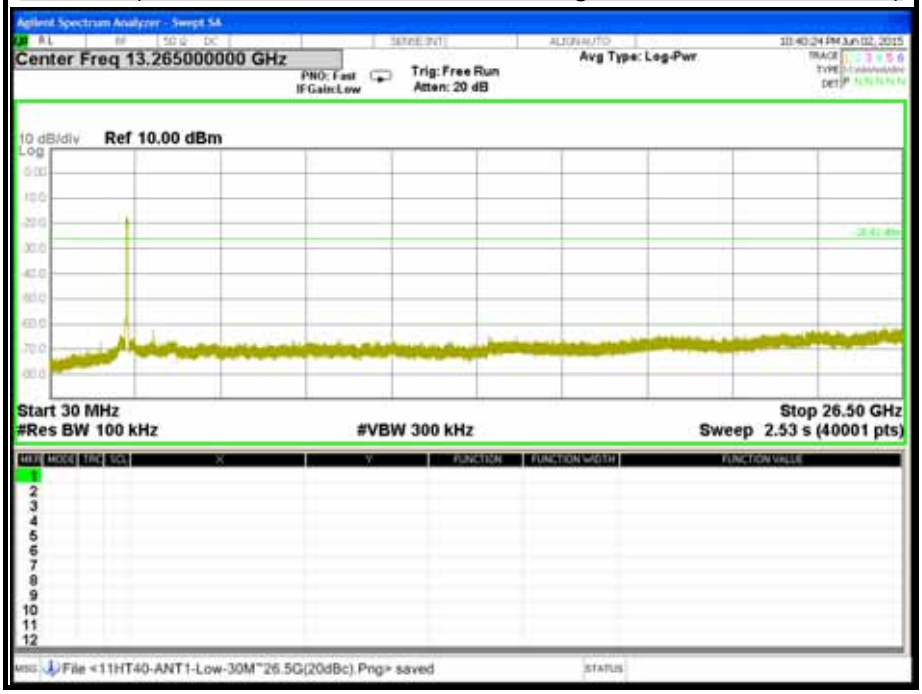
CH High (30MHz ~ 26.5GHz / IEEE 802.11gn HT40 Mode / Chain 0)



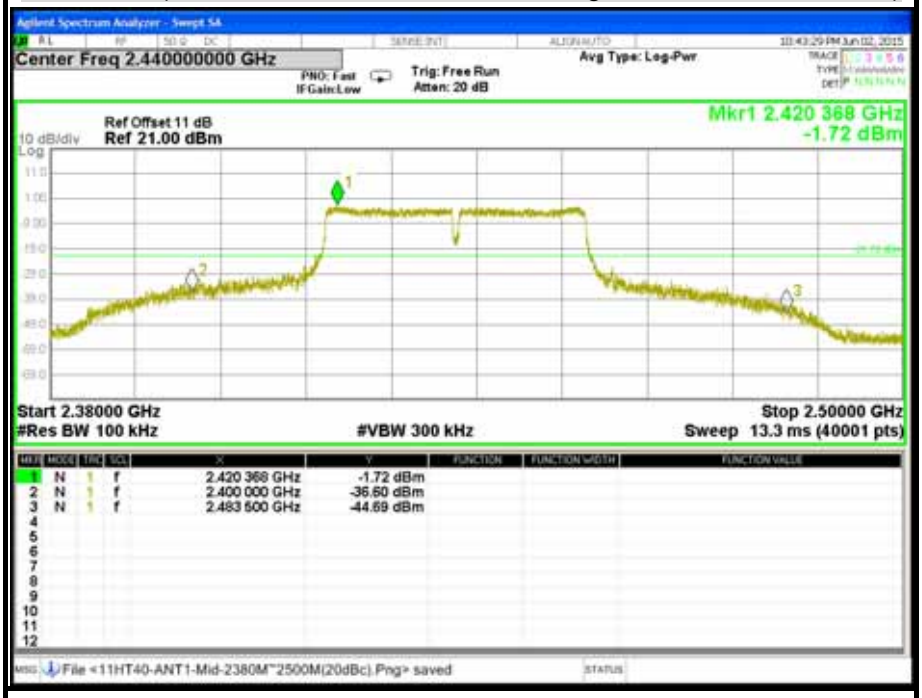
CH Low (2.38GHz ~ 2.5GHz / IEEE 802.11gn HT40 Mode / Chain 1)



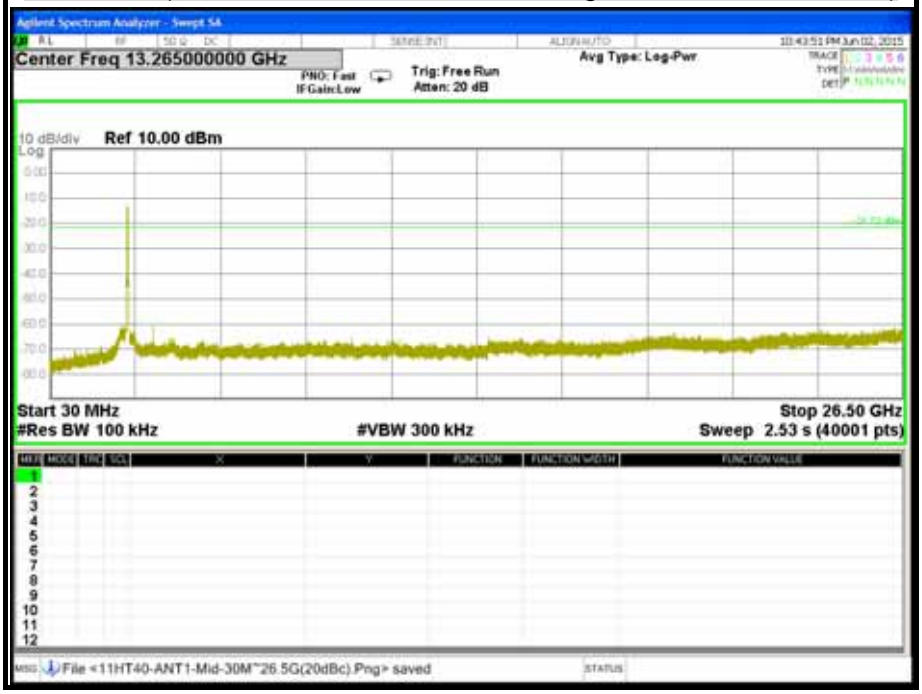
CH Low (30MHz ~ 26.5GHz / IEEE 802.11gn HT40 Mode / Chain 1)



CH Middle (2.38GHz ~ 2.5GHz / IEEE 802.11gn HT40 Mode / Chain 1)

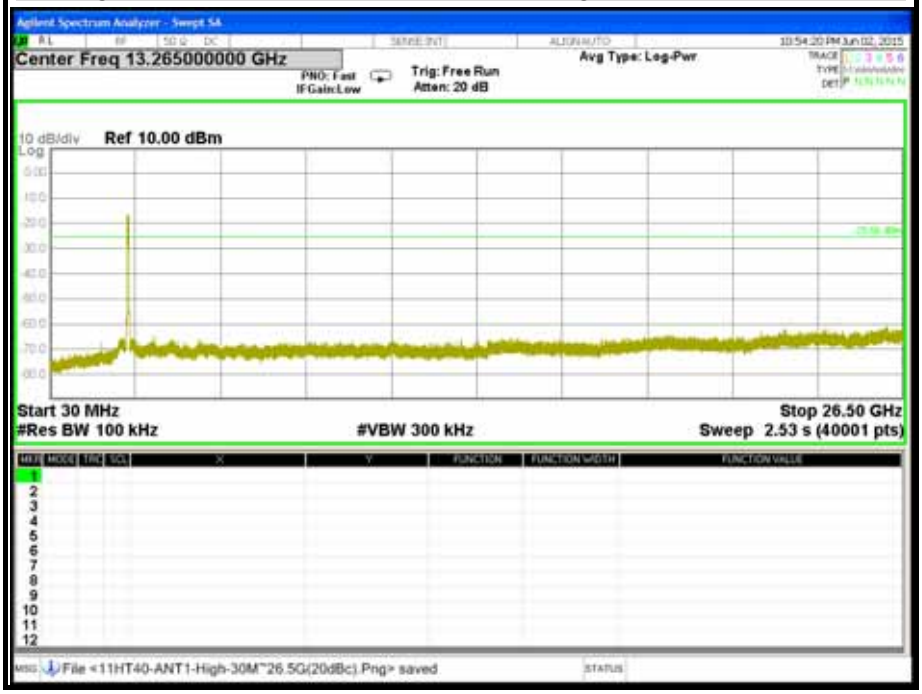


CH Middle (30MHz ~ 26.5GHz / IEEE 802.11gn HT40 Mode / Chain 1)



CH High (2.38GHz ~ 2.5GHz / IEEE 802.11gn HT40 Mode/ Chain 1)

CH High (30MHz ~ 26.5GHz / IEEE 802.11gn HT40 Mode / Chain 1)



7.6 RADIATED EMISSION

LIMITS

(1) According to § 15.205 (a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
[1]0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 -1710	10.6 -12.7
6.26775 - 6.26825	108 -121.94	1718.8 - 1722.2	13.25 -13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 – 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 -16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2655 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3338	36.43 - 36.5
12.57675 - 12.57725	322 -335.4	3600 - 4400	([2])
13.36 - 13.41			

Remark:
1. [1] Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.
2. [2] Above 38.6

(2) According to § 15.205 (b) Except as provided in paragraphs (d) and (e), the field strength of emissions appearing within these frequency bands shall not exceed the limits shown is Section 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

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

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 – 0.490	2400/F(KHz)	300
0.490 – 1.705	24000/F(KHz)	30
1.705 – 30.0	30	30
30 - 88	100 **	3
88 - 216	150 **	3
216 - 960	200 **	3
Above 960	500	3

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

(4) According to § 15.209 (b) In the emission table above, the tighter limit applies at the band edges.

TEST EQUIPMENT

Radiated Emission / 966Chamber_B

Name of Equipment	Manufacture	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4446A	MY46180323	04/14/2016
EMI Test Receiver	ROHDE & SCHWARZ	ESCS 30	835418/008	10/14/2015
Bi-log Antenna	SCHWARZBECK	VULB 9168	9168-250	08/21/2015
Double-Ridged Waveguide Horn	ETS-LINDGREN	3117	00078733	12/02/2015
Horn Antenna	COM-POWER	AH-840	03077	12/17/2015
Pre-Amplifier	Agilent	8447D	2944A10052	07/15/2015
Pre-Amplifier	Agilent	8449B	3008A01916	07/15/2015
LOOP Antenna	EMCO	6502	8905-2356	09/23/2015
Notch Filters Band Reject	Micro-Tronics	BRM05702-01	026	N.C.R.
Band Reject Filter	Micro-Tronics	BRC50703-01	004	N.C.R.
Band Reject Filter	Micro-Tronics	BRC50705-01	007	N.C.R.

Remark: *1. Each piece of equipment is scheduled for calibration once a year.*
2. N.C.R = No Calibration Request.

Radiated Emission / 966Chamber_C

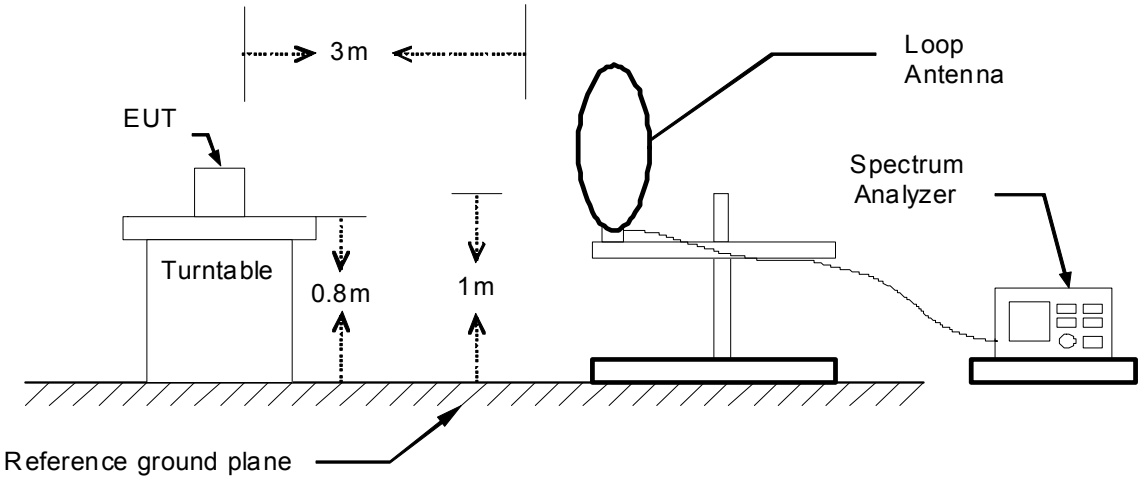
Name of Equipment	Manufacture	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4446A	MY45280064	03/26/2016
EMI Test Receiver	ROHDE & SCHWARZ	ESCI	101387	10/05/2015
Bi-log Antenna	TESEQ	CBL 6112D	35404	02/24/2016
Double-Ridged Waveguide Horn	ETS-LINDGREN	3117	00078732	07/23/2015
Horn Antenna	COM-POWER	AH-840	03077	12/17/2015
Pre-Amplifier	EMCI	EMC001625	980243	04/12/2016
Pre-Amplifier	COM-POWER	PAM-118A	551043	04/12/2016
Notch Filters Band Reject	Micro-Tronics	BRM50702-01	009	N.C.R.
Band Reject Filter	Micro-Tronics	BRC50703-01	004	N.C.R.
Band Reject Filter	Micro-Tronics	BRC50705-01	007	N.C.R.

Remark: *1. Each piece of equipment is scheduled for calibration once a year.*
2. N.C.R = No Calibration Request.

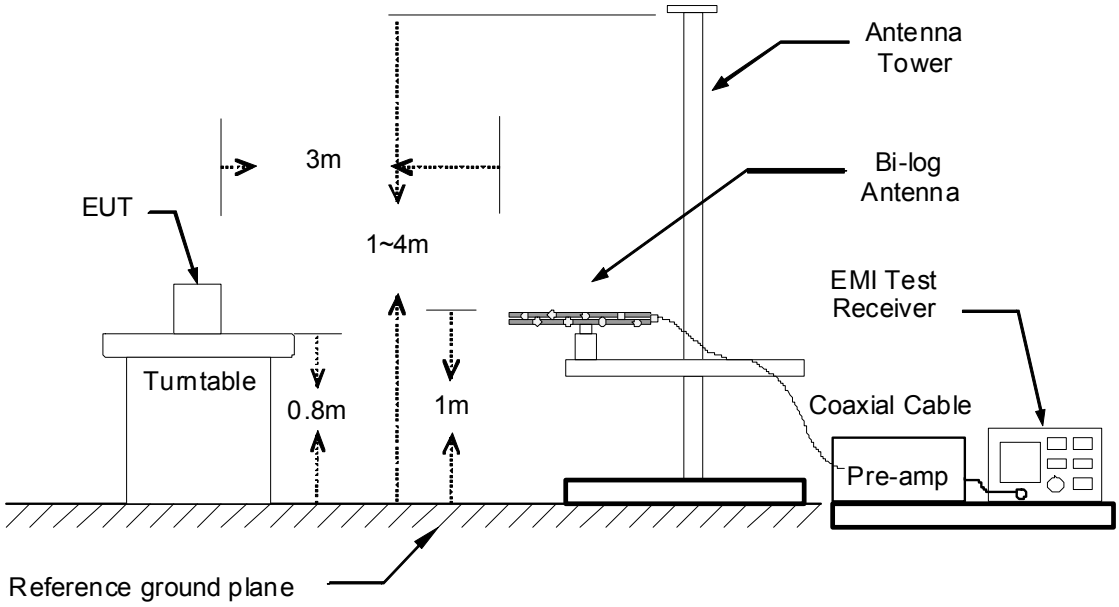
TEST SETUP

The diagram below shows the test setup that is utilized to make the measurements for emission below 1GHz.

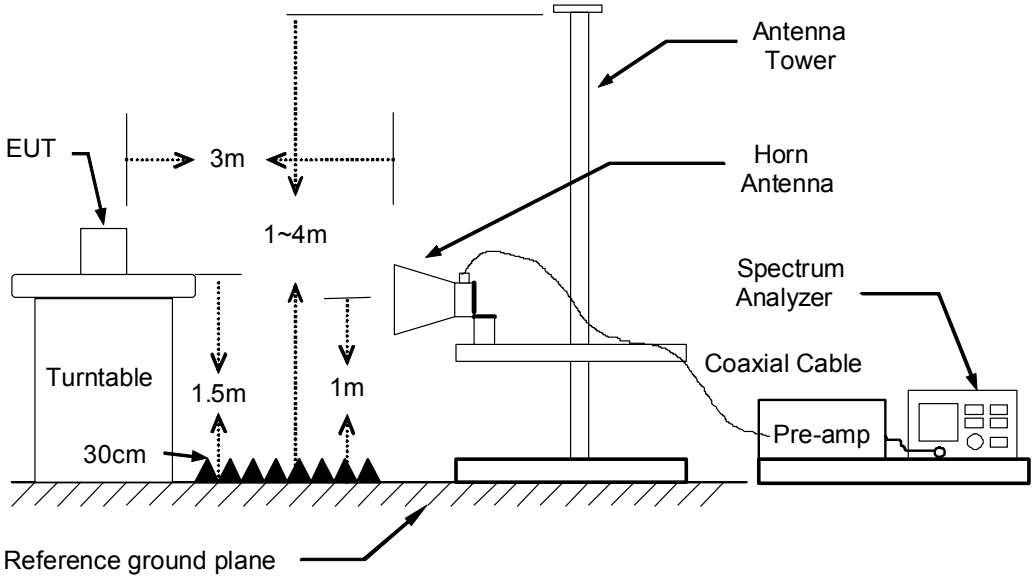
9kHz ~ 30MHz



30MHz ~ 1GHz



The diagram below shows the test setup that is utilized to make the measurements for emission above 1GHz.



TEST PROCEDURE

1. The EUT was placed on the top of a rotating table 0.8 and 1.5 meters above the ground. The table was rotated 360 degrees to determine the position of the highest radiation.
2. While measuring the radiated emission below 1GHz, the EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. While measuring the radiated emission above 1GHz, the EUT was set 3 meters away from the interference-receiving antenna.
3. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarization of the antenna are set to make the measurement.
4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the table was turned from 0 degrees to 360 degrees to find the maximum reading.
5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. If the emission level of the EUT in peak mode was 10 dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10 dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

Remark：

1. *The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 KHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.*
2. *The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz for Peak detection and frequency above 1GHz.*
3. *The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10 Hz for Average detection (AV) at frequency above 1GHz.*

TEST RESULTS

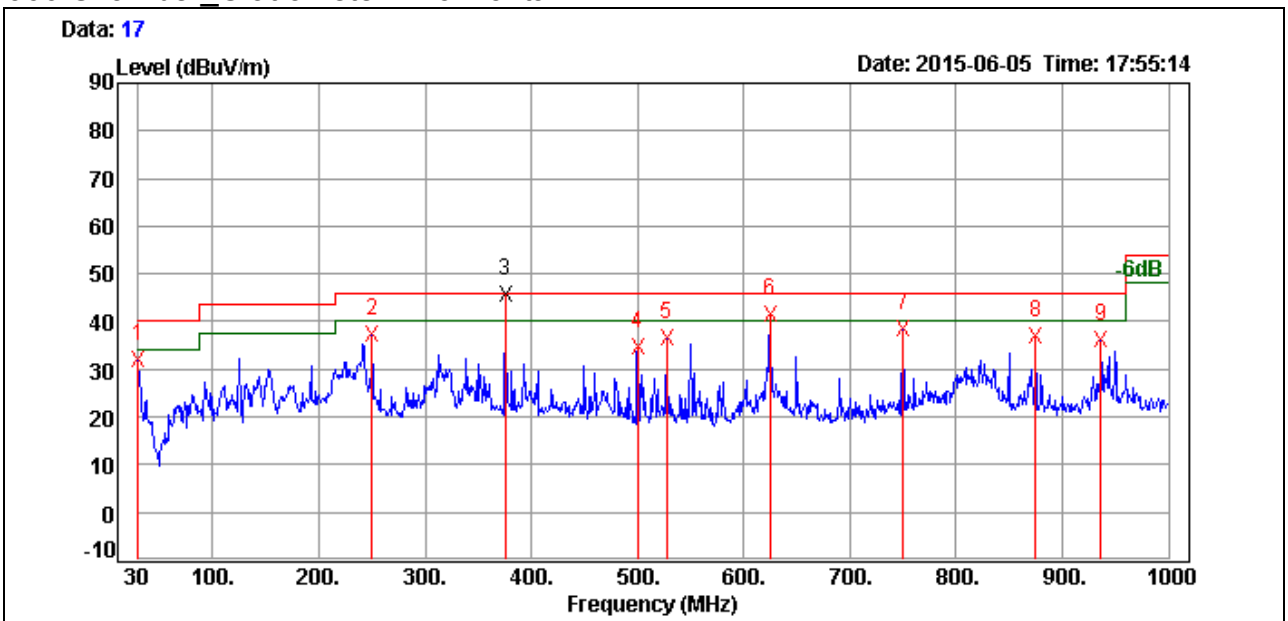
Below 1 GHz (9kHz ~ 30MHz)

No emission found between lowest internal used/generated frequency to 30MHz.

Below 1 GHz (30MHz ~ 1GHz)

Product Name	MoCA to WiFi extender	Test By	Crystal Wu
Test Model	HT-EMN2	Test Date	2015/06/05
Test Mode	Normal Operating	Temp. & Humidity	25°C, 57%

966 Chamber_C at 3Meter / Horizontal



Trace:

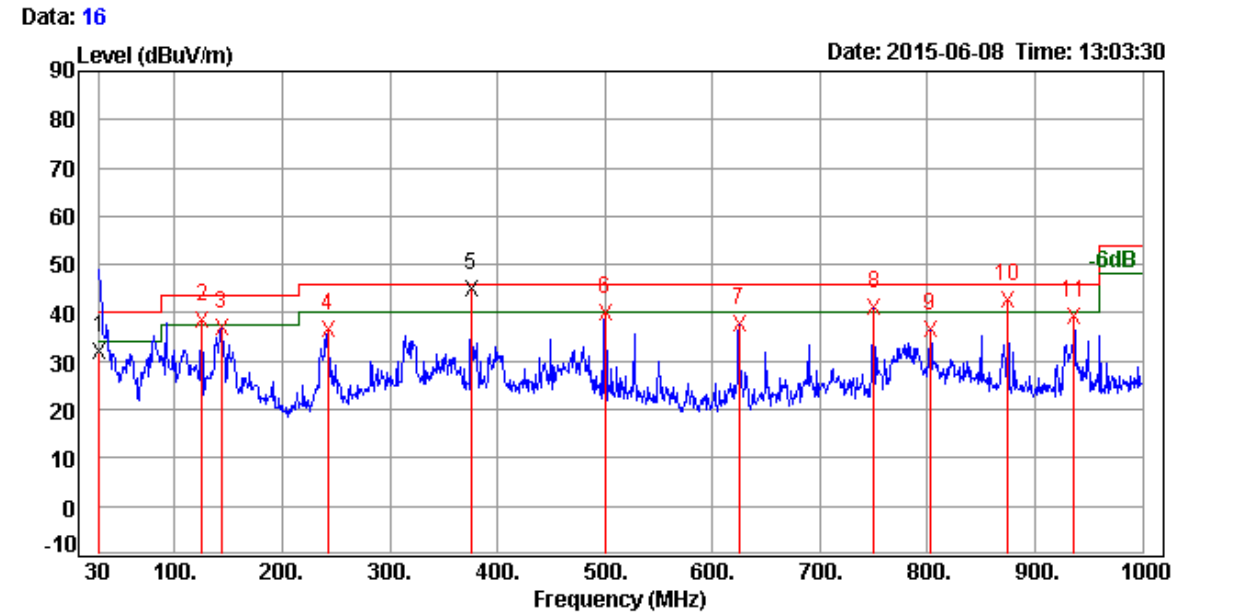
Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
30.00	43.12	-11.11	32.01	40.00	-7.99	354	100	Peak
250.19	54.80	-17.50	37.30	46.00	-8.70	166	100	Peak
375.32	60.00	-14.13	45.87	46.00	-0.13	251	100	QP
500.45	46.70	-11.92	34.78	46.00	-11.22	114	200	Peak
527.61	47.99	-11.47	36.52	46.00	-9.48	34	200	Peak
624.61	51.85	-10.28	41.57	46.00	-4.43	153	100	Peak
749.74	47.43	-9.12	38.31	46.00	-7.69	232	100	Peak
874.87	44.87	-7.77	37.10	46.00	-8.90	360	100	Peak
935.98	43.45	-7.29	36.16	46.00	-9.84	11	100	Peak

Remark:

1. *Quasi-peak test would be performed if the peak result were greater than the quasi-peak limit.*
2. *Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB) – PreAmp.Gain (dB)*
3. *Result (dBuV/m) = Reading (dBuV) + Correction Factor (dB/m)*
4. *Margin (dB) = Remark result (dBuV/m) - Quasi-peak limit (dBuV/m).*

Product Name	MoCA to WiFi extender	Test By	Crystal Wu
Test Model	HT-EMN2	Test Date	2015/06/02
Test Mode	Normal Operating	Temp. & Humidity	25°C, 57%

966 Chamber_C at 3Meter / Vertical



Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
30.00	43.00	-11.11	31.89	40.00	-8.11	173	100	QP
125.06	56.89	-18.39	38.50	43.50	-5.00	360	100	Peak
143.49	56.02	-19.17	36.85	43.50	-6.65	154	100	Peak
242.43	54.75	-18.08	36.67	46.00	-9.33	19	200	Peak
375.32	59.10	-14.13	44.97	46.00	-1.03	203	141	QP
500.45	51.94	-11.92	40.02	46.00	-5.98	175	100	Peak
624.61	47.89	-10.28	37.61	46.00	-8.39	99	100	Peak
749.74	50.19	-9.12	41.07	46.00	-4.93	148	100	Peak
802.12	45.04	-8.51	36.53	46.00	-9.47	148	100	Peak
874.87	50.44	-7.77	42.67	46.00	-3.33	154	100	Peak
935.98	46.62	-7.29	39.33	46.00	-6.67	160	100	Peak

Remark:

1. *Quasi-peak test would be performed if the peak result were greater than the quasi-peak limit.*
2. *Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB) – PreAmp.Gain (dB)*
3. *Result (dBuV/m) = Reading (dBuV) + Correction Factor (dB/m)*
4. *Margin (dB) = Remark result (dBuV/m) - Quasi-peak limit (dBuV/m).*

Above 1 GHz

Product Name	MoCA to WiFi extender	Test By	Rex Chiu
Test Model	HT-EMN2	Test Date	2015/06/04
Test Mode	IEEE 802.11b TX / CH Low	Temp. & Humidity	24°C, 55%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1976.00	49.03	---	1.56	50.59	---	74.00	54.00	-3.41	Peak
2150.00	48.61	---	2.15	50.76	---	74.00	54.00	-3.24	Peak
2526.00	48.20	---	3.06	51.26	---	74.00	54.00	-2.74	Peak
3210.00	43.24	---	4.45	47.69	---	74.00	54.00	-6.31	Peak
4830.00	45.33	43.29	8.00	53.34	51.29	74.00	54.00	-2.71	AVG
4995.00	44.17	---	8.14	52.31	---	74.00	54.00	-1.69	Peak

966 Chamber_B at 3Meter / Vertical									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1962.00	49.34	---	1.43	50.77	---	74.00	54.00	-3.23	Peak
2294.00	50.63	40.28	2.50	53.13	42.78	74.00	54.00	-11.22	AVG
2542.00	49.84	39.54	3.10	52.94	42.64	74.00	54.00	-11.36	AVG
3150.00	42.96	---	4.33	47.29	---	74.00	54.00	-6.71	Peak
4815.00	40.69	---	7.99	48.68	---	74.00	54.00	-5.32	Peak
6930.00	39.39	---	12.22	51.61	---	74.00	54.00	-2.39	Peak

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Average test would be performed if the peak result were greater than the average limit.*
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. *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.*
5. *Result = Reading + Correction Factor*
   Margin = Result – Limit
   Remark Peak = Result(PK) – Limit(AV)
   Remark AVG = Result(AV) – Limit(AV)

Product Name	MoCA to WiFi extender	Test By	Rex Chiu
Test Model	HT-EMN2	Test Date	2015/06/04
Test Mode	IEEE 802.11b TX / CH Middle	Temp. & Humidity	24°C, 55%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
2080.00	49.31	---	1.98	51.29	---	74.00	54.00	-2.71	Peak
2312.00	48.64	---	2.55	51.19	---	74.00	54.00	-2.81	Peak
2540.00	48.69	---	3.09	51.79	---	74.00	54.00	-2.21	Peak
3255.00	43.71	---	4.54	48.25	---	74.00	54.00	-5.75	Peak
4875.00	44.61	43.64	8.04	52.65	51.68	74.00	54.00	-2.32	AVG
4995.00	43.93	---	8.14	52.06	---	74.00	54.00	-1.94	Peak

966 Chamber_B at 3Meter / Vertical									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1938.00	49.11	---	1.20	50.32	---	74.00	54.00	-3.68	Peak
2280.00	50.33	40.19	2.47	52.80	42.66	74.00	54.00	-11.34	AVG
2540.00	48.49	---	3.09	51.59	---	74.00	54.00	-2.41	Peak
3300.00	42.33	---	4.63	46.96	---	74.00	54.00	-7.04	Peak
4515.00	41.15	---	7.75	48.90	---	74.00	54.00	-5.10	Peak
7050.00	39.64	---	12.20	51.84	---	74.00	54.00	-2.16	Peak

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Average test would be performed if the peak result were greater than the average limit.*
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. *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.*
5. *Result = Reading + Correction Factor*
   Margin = Result – Limit
   Remark Peak = Result(PK) – Limit(AV)
   Remark AVG = Result(AV) – Limit(AV)

Product Name	MoCA to WiFi extender	Test By	Rex Chiu
Test Model	HT-EMN2	Test Date	2015/06/04
Test Mode	IEEE 802.11b TX / CH High	Temp. & Humidity	24°C, 55%

966 Chamber_B at 3Meter / Horizontal

Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1908.00	48.99	---	0.93	49.91	---	74.00	54.00	-4.09	Peak
2292.00	49.81	---	2.50	52.31	---	74.00	54.00	-1.69	Peak
2568.00	48.61	---	3.15	51.76	---	74.00	54.00	-2.24	Peak
3285.00	44.09	---	4.60	48.69	---	74.00	54.00	-5.31	Peak
4920.00	44.33	43.60	8.08	52.41	51.68	74.00	54.00	-2.32	AVG
6930.00	40.05	---	12.22	52.27	---	74.00	54.00	-1.73	Peak

966 Chamber_B at 3Meter / Vertical

Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
2138.00	49.53	---	2.12	51.65	---	74.00	54.00	-2.35	Peak
2290.00	49.50	---	2.49	52.00	---	74.00	54.00	-2.00	Peak
2540.00	48.85	---	3.09	51.94	---	74.00	54.00	-2.06	Peak
3225.00	42.59	---	4.48	47.07	---	74.00	54.00	-6.93	Peak
4920.00	40.25	---	8.08	48.32	---	74.00	54.00	-5.68	Peak
6375.00	40.08	---	11.62	51.70	---	74.00	54.00	-2.30	Peak

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Average test would be performed if the peak result were greater than the average limit.*
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. *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.*
5. *Result = Reading + Correction Factor*
   Margin = Result – Limit
   Remark Peak = Result(PK) – Limit(AV)
   Remark AVG = Result(AV) – Limit(AV)

Product Name	MoCA to WiFi extender	Test By	Rex Chiu
Test Model	HT-EMN2	Test Date	2015/06/04
Test Mode	IEEE 802.11g TX / CH Low	Temp. & Humidity	24°C, 55%

966 Chamber_B at 3Meter / Horizontal

Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1796.00	49.81	---	-0.11	49.70	---	74.00	54.00	-4.30	Peak
2088.00	48.36	---	2.00	50.36	---	74.00	54.00	-3.64	Peak
2538.00	48.42	---	3.09	51.51	---	74.00	54.00	-2.49	Peak
4815.00	44.97	34.82	7.99	52.96	42.81	74.00	54.00	-11.19	AVG
4995.00	43.55	---	8.14	51.69	---	74.00	54.00	-2.31	Peak
5655.00	41.04	---	10.54	51.58	---	74.00	54.00	-2.42	Peak

966 Chamber_B at 3Meter / Vertical

Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1776.00	49.59	---	-0.30	49.29	---	74.00	54.00	-4.71	Peak
2256.00	53.27	43.52	2.41	55.68	45.93	74.00	54.00	-8.07	AVG
2576.00	50.93	40.63	3.17	54.10	43.80	74.00	54.00	-10.20	AVG
3660.00	42.52	---	5.33	47.85	---	74.00	54.00	-6.15	Peak
4815.00	41.00	---	7.99	48.99	---	74.00	54.00	-5.01	Peak
6300.00	39.70	---	11.61	51.31	---	74.00	54.00	-2.69	Peak

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Average test would be performed if the peak result were greater than the average limit.*
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. *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.*
5. *Result = Reading + Correction Factor*
   Margin = Result – Limit
   Remark Peak = Result(PK) – Limit(AV)
   Remark AVG = Result(AV) – Limit(AV)

Product Name	MoCA to WiFi extender	Test By	Rex Chiu
Test Model	HT-EMN2	Test Date	2015/06/04
Test Mode	IEEE 802.11g TX / CH Middle	Temp. & Humidity	24°C, 55%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1126.00	53.12	---	-3.26	49.87	---	74.00	54.00	-4.13	Peak
2362.00	52.86	39.37	2.67	55.53	42.04	74.00	54.00	-11.96	AVG
2538.00	52.04	38.81	3.09	55.13	41.90	74.00	54.00	-12.10	AVG
3255.00	43.76	---	4.54	48.30	---	74.00	54.00	-5.70	Peak
4875.00	47.83	37.10	8.04	55.87	45.14	74.00	54.00	-8.86	AVG
7320.00	42.58	31.75	11.57	54.15	43.32	74.00	54.00	-10.68	AVG

966 Chamber_B at 3Meter / Vertical									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1446.00	51.40	---	-2.92	48.48	---	74.00	54.00	-5.52	Peak
2256.00	56.60	44.39	2.41	59.01	46.80	74.00	54.00	-7.20	AVG
2528.00	53.12	40.85	3.07	56.19	43.92	74.00	54.00	-10.08	AVG
3375.00	42.17	---	4.78	46.95	---	74.00	54.00	-7.05	Peak
4890.00	42.09	---	8.05	50.14	---	74.00	54.00	-3.86	Peak
7320.00	41.48	30.58	11.57	53.05	42.15	74.00	54.00	-11.85	AVG

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Average test would be performed if the peak result were greater than the average limit.*
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. *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.*
5. *Result = Reading + Correction Factor*
   Margin = Result – Limit
   Remark Peak = Result(PK) – Limit(AV)
   Remark AVG = Result(AV) – Limit(AV)

Product Name	MoCA to WiFi extender	Test By	Rex Chiu
Test Model	HT-EMN2	Test Date	2015/06/04
Test Mode	IEEE 802.11g TX / CH High	Temp. & Humidity	24°C, 55%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1816.00	49.51	---	0.07	49.59	---	74.00	54.00	-4.41	Peak
2266.00	51.48	40.75	2.43	53.91	43.18	74.00	54.00	-10.82	AVG
2562.00	49.87	39.29	3.14	53.01	42.43	74.00	54.00	-11.57	AVG
3285.00	42.59	---	4.60	47.19	---	74.00	54.00	-6.81	Peak
4920.00	45.61	35.40	8.08	53.69	43.48	74.00	54.00	-10.52	AVG
6870.00	39.69	---	12.14	51.83	---	74.00	54.00	-2.17	Peak

966 Chamber_B at 3Meter / Vertical									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1872.00	49.18	---	0.59	49.77	---	74.00	54.00	-4.23	Peak
2284.00	57.29	44.15	2.48	59.77	46.63	74.00	54.00	-7.37	AVG
2540.00	53.40	40.24	3.09	56.49	43.33	74.00	54.00	-10.67	AVG
3075.00	42.47	---	4.18	46.65	---	74.00	54.00	-7.35	Peak
4920.00	43.04	---	8.08	51.12	---	74.00	54.00	-2.88	Peak
7395.00	40.78	---	11.40	52.19	---	74.00	54.00	-1.81	Peak

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Average test would be performed if the peak result were greater than the average limit.*
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. *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.*
5. *Result = Reading + Correction Factor*
   Margin = Result – Limit
   Remark Peak = Result(PK) – Limit(AV)
   Remark AVG = Result(AV) – Limit(AV)

Product Name	MoCA to WiFi extender	Test By	Rex Chiu
Test Model	HT-EMN2	Test Date	2015/06/04
Test Mode	IEEE 802.11gn HT20 TX / CH Low	Temp. & Humidity	24°C, 55%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1996.00	48.95	---	1.74	50.70	---	74.00	54.00	-3.30	Peak
2294.00	49.42	---	2.50	51.93	---	74.00	54.00	-2.07	Peak
2488.00	48.65	---	2.98	51.63	---	74.00	54.00	-2.37	Peak
3285.00	43.05	---	4.60	47.65	---	74.00	54.00	-6.35	Peak
4920.00	43.19	---	8.08	51.26	---	74.00	54.00	-2.74	Peak
4995.00	43.38	---	8.14	51.51	---	74.00	54.00	-2.49	Peak

966 Chamber_B at 3Meter / Vertical									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1942.00	48.99	---	1.24	50.23	---	74.00	54.00	-3.77	Peak
2250.00	52.28	42.17	2.39	54.68	44.56	74.00	54.00	-9.44	AVG
2566.00	49.63	39.46	3.14	52.78	42.60	74.00	54.00	-11.40	AVG
3225.00	42.38	---	4.48	46.86	---	74.00	54.00	-7.14	Peak
4920.00	41.94	---	8.08	50.02	---	74.00	54.00	-3.98	Peak
7110.00	39.75	---	12.06	51.81	---	74.00	54.00	-2.19	Peak

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Average test would be performed if the peak result were greater than the average limit.*
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. *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.*
5. *Result = Reading + Correction Factor*
   Margin = Result – Limit
   Remark Peak = Result(PK) – Limit(AV)
   Remark AVG = Result(AV) – Limit(AV)

Product Name	MoCA to WiFi extender	Test By	Rex Chiu
Test Model	HT-EMN2	Test Date	2015/06/04
Test Mode	IEEE 802.11gn HT20 TX / CH Middle	Temp. & Humidity	24°C, 55%

966 Chamber_B at 3Meter / Horizontal

Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
2272.00	52.16	40.15	2.45	54.61	42.60	74.00	54.00	-11.40	AVG
2358.00	52.13	39.92	2.66	54.79	42.58	74.00	54.00	-11.42	AVG
2518.00	50.21	38.36	3.05	53.26	41.41	74.00	54.00	-12.59	AVG
4875.00	46.30	36.24	8.04	54.34	44.28	74.00	54.00	-9.72	AVG
4995.00	43.66	---	8.14	51.80	---	74.00	54.00	-2.20	Peak
7305.00	42.03	32.25	11.61	53.64	43.86	74.00	54.00	-10.14	AVG

966 Chamber_B at 3Meter / Vertical

Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1920.00	50.27	---	1.04	51.31	---	74.00	54.00	-2.69	Peak
2260.00	57.15	44.56	2.42	59.57	46.98	74.00	54.00	-7.02	AVG
2554.00	52.83	40.23	3.12	55.95	43.35	74.00	54.00	-10.65	AVG
3210.00	41.99	---	4.45	46.44	---	74.00	54.00	-7.56	Peak
4860.00	42.57	---	8.03	50.60	---	74.00	54.00	-3.40	Peak
7320.00	41.36	31.41	11.57	52.93	42.98	74.00	54.00	-11.02	AVG

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Average test would be performed if the peak result were greater than the average limit.*
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. *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.*
5. *Result = Reading + Correction Factor*
   Margin = Result – Limit
   Remark Peak = Result(PK) – Limit(AV)
   Remark AVG = Result(AV) – Limit(AV)

Product Name	MoCA to WiFi extender	Test By	Rex Chiu
Test Model	HT-EMN2	Test Date	2015/06/04
Test Mode	IEEE 802.11gn HT20 TX / CH High	Temp. & Humidity	24°C, 55%

966 Chamber_B at 3Meter / Horizontal

Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
2098.00	49.32	---	2.02	51.35	---	74.00	54.00	-2.65	Peak
2390.00	49.14	---	2.74	51.88	---	74.00	54.00	-2.12	Peak
2550.00	48.63	---	3.11	51.74	---	74.00	54.00	-2.26	Peak
4920.00	43.10	---	8.08	51.17	---	74.00	54.00	-2.83	Peak
4995.00	43.39	---	8.14	51.53	---	74.00	54.00	-2.47	Peak
7110.00	39.14	---	12.06	51.19	---	74.00	54.00	-2.81	Peak

966 Chamber_B at 3Meter / Vertical

Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1916.00	48.59	---	1.00	49.59	---	74.00	54.00	-4.41	Peak
2242.00	51.78	40.93	2.38	54.16	43.31	74.00	54.00	-10.69	AVG
2556.00	49.82	38.71	3.12	52.95	41.83	74.00	54.00	-12.17	AVG
3120.00	41.65	---	4.27	45.92	---	74.00	54.00	-8.08	Peak
4740.00	40.91	---	7.93	48.84	---	74.00	54.00	-5.16	Peak
6930.00	37.89	---	12.22	50.11	---	74.00	54.00	-3.89	Peak

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Average test would be performed if the peak result were greater than the average limit.*
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. *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.*
5. *Result = Reading + Correction Factor*
   Margin = Result – Limit
   Remark Peak = Result(PK) – Limit(AV)
   Remark AVG = Result(AV) – Limit(AV)

Product Name	MoCA to WiFi extender	Test By	Rex Chiu
Test Model	HT-EMN2	Test Date	2015/06/04
Test Mode	IEEE 802.11gn HT40 TX / CH Low	Temp. & Humidity	24°C, 55%

966 Chamber_B at 3Meter / Horizontal

Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1132.00	53.28	---	-3.25	50.03	---	74.00	54.00	-3.97	Peak
1936.00	49.62	---	1.19	50.80	---	74.00	54.00	-3.20	Peak
2510.00	49.49	---	3.03	52.52	---	74.00	54.00	-1.48	Peak
4485.00	42.34	---	7.69	50.03	---	74.00	54.00	-3.97	Peak
4995.00	43.80	---	8.14	51.94	---	74.00	54.00	-2.06	Peak
5580.00	41.55	---	10.32	51.87	---	74.00	54.00	-2.13	Peak

966 Chamber_B at 3Meter / Vertical

Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1752.00	50.03	---	-0.52	49.50	---	74.00	54.00	-4.50	Peak
2278.00	52.47	40.39	2.46	54.94	42.85	74.00	54.00	-11.15	AVG
2538.00	51.19	39.28	3.09	54.27	42.37	74.00	54.00	-11.63	AVG
3195.00	41.94	---	4.42	46.36	---	74.00	54.00	-7.64	Peak
4530.00	41.33	---	7.76	49.09	---	74.00	54.00	-4.91	Peak
6930.00	39.44	---	12.22	51.66	---	74.00	54.00	-2.34	Peak

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Average test would be performed if the peak result were greater than the average limit.*
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. *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.*
5. *Result = Reading + Correction Factor*
   Margin = Result – Limit
   Remark Peak = Result(PK) – Limit(AV)
   Remark AVG = Result(AV) – Limit(AV)

Product Name	MoCA to WiFi extender	Test By	Rex Chiu
Test Model	HT-EMN2	Test Date	2015/06/04
Test Mode	IEEE 802.11gn HT40 TX / CH Middle	Temp. & Humidity	24°C, 55%

966 Chamber_B at 3Meter / Horizontal

Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
2076.00	49.73	---	1.97	51.70	---	74.00	54.00	-2.30	Peak
2388.00	53.88	38.72	2.73	56.61	41.45	74.00	54.00	-12.55	AVG
2484.00	52.33	37.26	2.97	55.30	40.23	74.00	54.00	-13.77	AVG
3255.00	44.71	---	4.54	49.25	---	74.00	54.00	-4.75	Peak
4875.00	44.10	---	8.04	52.14	---	74.00	54.00	-1.86	Peak
7080.00	40.08	---	12.13	52.21	---	74.00	54.00	-1.79	Peak

966 Chamber_B at 3Meter / Vertical

Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
2266.00	57.73	44.56	2.43	60.17	46.99	74.00	54.00	-7.01	AVG
2388.00	60.37	43.42	2.73	63.11	46.15	74.00	54.00	-7.85	AVG
2484.00	57.75	42.80	2.97	60.72	45.77	74.00	54.00	-8.23	AVG
3255.00	42.34	---	4.54	46.88	---	74.00	54.00	-7.12	Peak
4740.00	40.21	---	7.93	48.14	---	74.00	54.00	-5.86	Peak
6525.00	39.67	---	11.68	51.35	---	74.00	54.00	-2.65	Peak

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Average test would be performed if the peak result were greater than the average limit.*
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. *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.*
5. *Result = Reading + Correction Factor*
   Margin = Result – Limit
   Remark Peak = Result(PK) – Limit(AV)
   Remark AVG = Result(AV) – Limit(AV)

Product Name	MoCA to WiFi extender	Test By	Rex Chiu
Test Model	HT-EMN2	Test Date	2015/06/04
Test Mode	IEEE 802.11gn HT40 TX / CH High	Temp. & Humidity	24°C, 55%

966 Chamber_B at 3Meter / Horizontal

Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
2076.00	48.81	---	1.97	50.78	---	74.00	54.00	-3.22	Peak
2388.00	50.47	38.63	2.73	53.20	41.36	74.00	54.00	-12.64	AVG
2566.00	48.91	---	3.14	52.05	---	74.00	54.00	-1.95	Peak
3270.00	43.61	---	4.57	48.18	---	74.00	54.00	-5.82	Peak
4995.00	43.96	---	8.14	52.09	---	74.00	54.00	-1.91	Peak
7020.00	39.23	---	12.26	51.50	---	74.00	54.00	-2.50	Peak

966 Chamber_B at 3Meter / Vertical

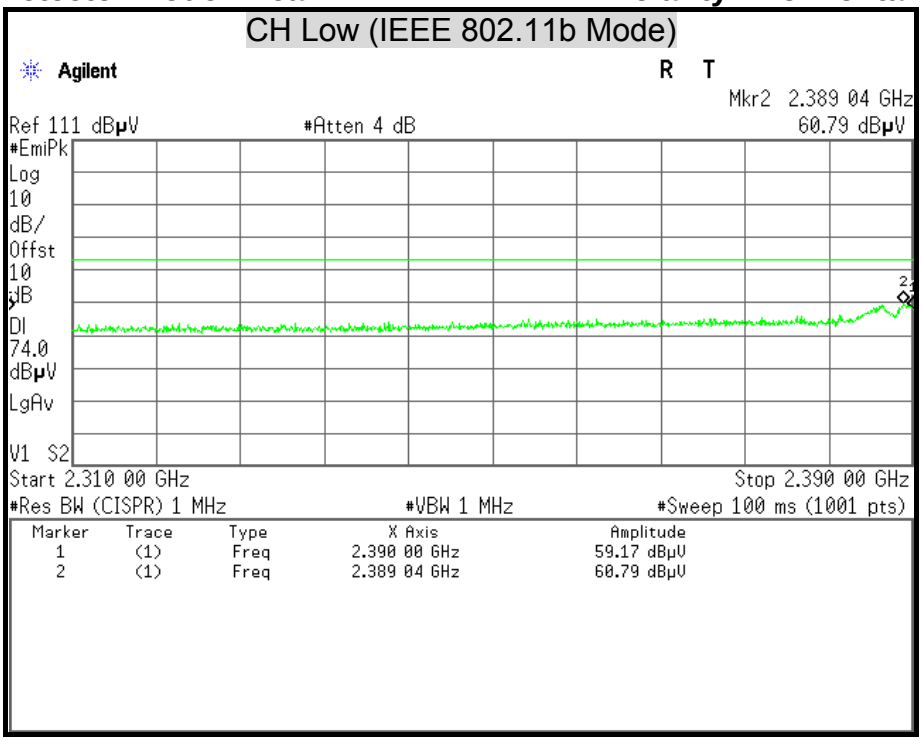
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1968.00	48.88	---	1.48	50.36	---	74.00	54.00	-3.64	Peak
2286.00	53.30	41.43	2.48	55.78	43.91	74.00	54.00	-10.09	AVG
2504.00	55.03	43.15	3.02	58.05	46.17	74.00	54.00	-7.83	AVG
3165.00	42.01	---	4.36	46.37	---	74.00	54.00	-7.63	Peak
4800.00	40.14	---	7.98	48.12	---	74.00	54.00	-5.88	Peak
7005.00	39.23	---	12.30	51.53	---	74.00	54.00	-2.47	Peak

Remark:

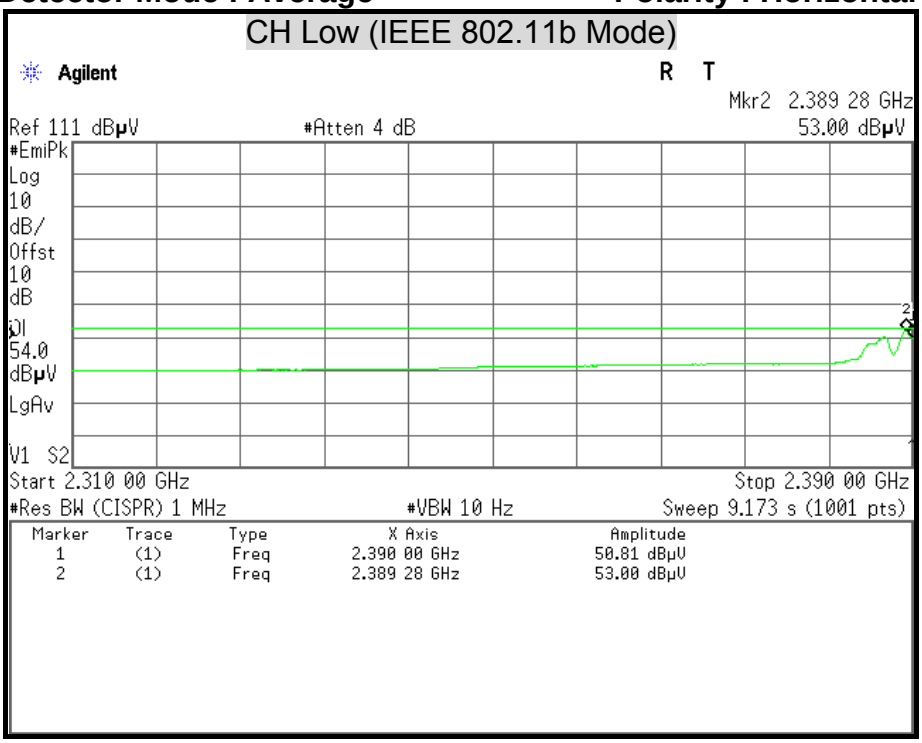
1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Average test would be performed if the peak result were greater than the average limit.*
3. *Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.*
4. *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.*
5. *Result = Reading + Correction Factor*
   Margin = Result – Limit
   Remark Peak = Result(PK) – Limit(AV)
   Remark AVG = Result(AV) – Limit(AV)

Restricted Band Edges

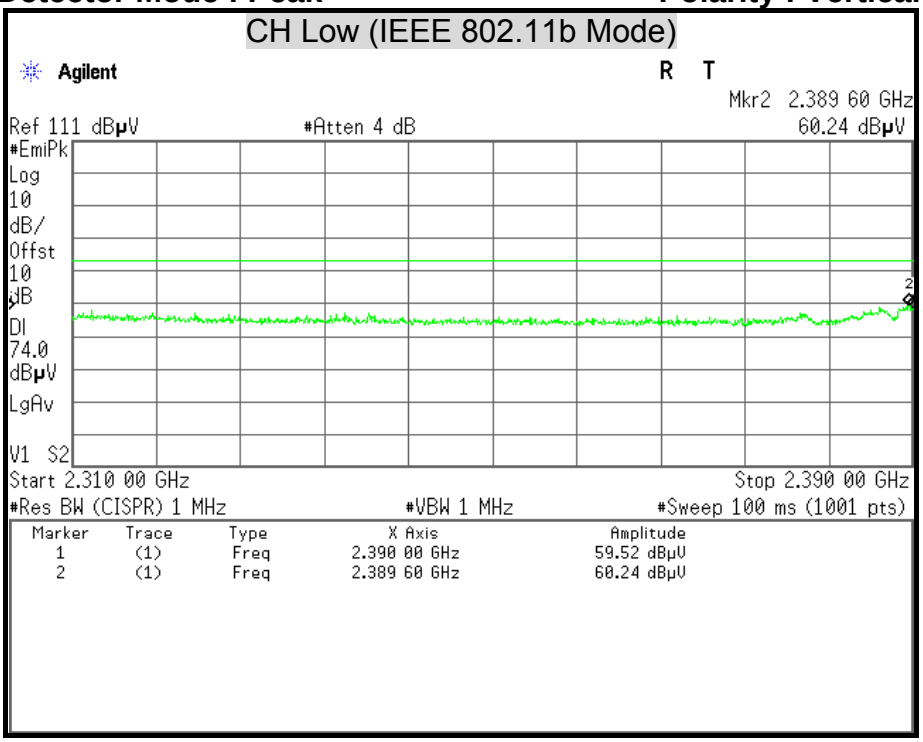
Detector Mode : Peak **Polarity : Horizontal**



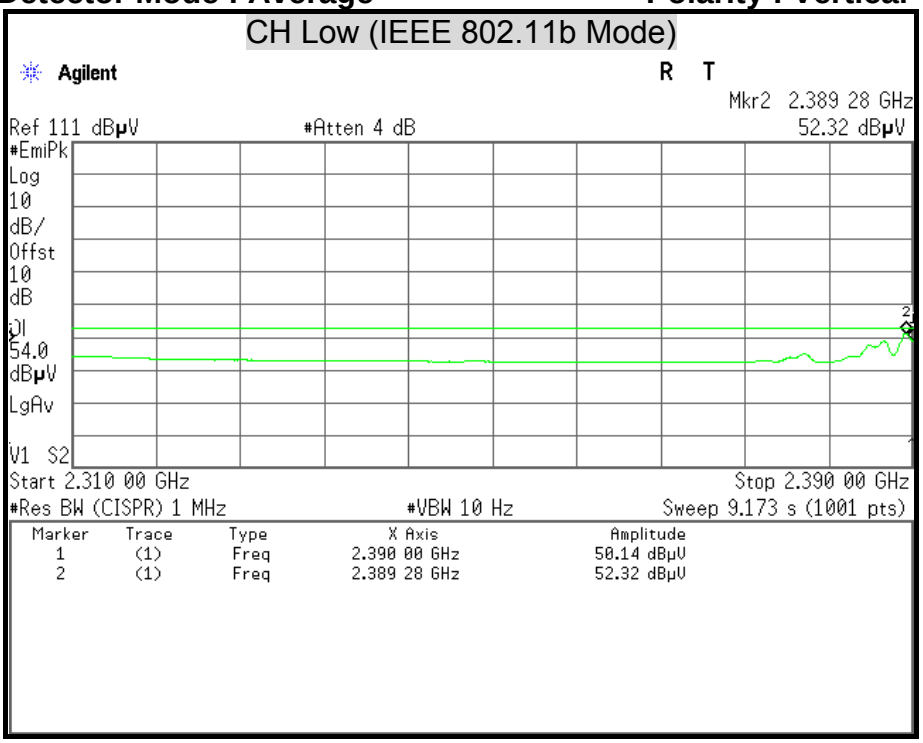
Detector Mode : Average **Polarity : Horizontal**



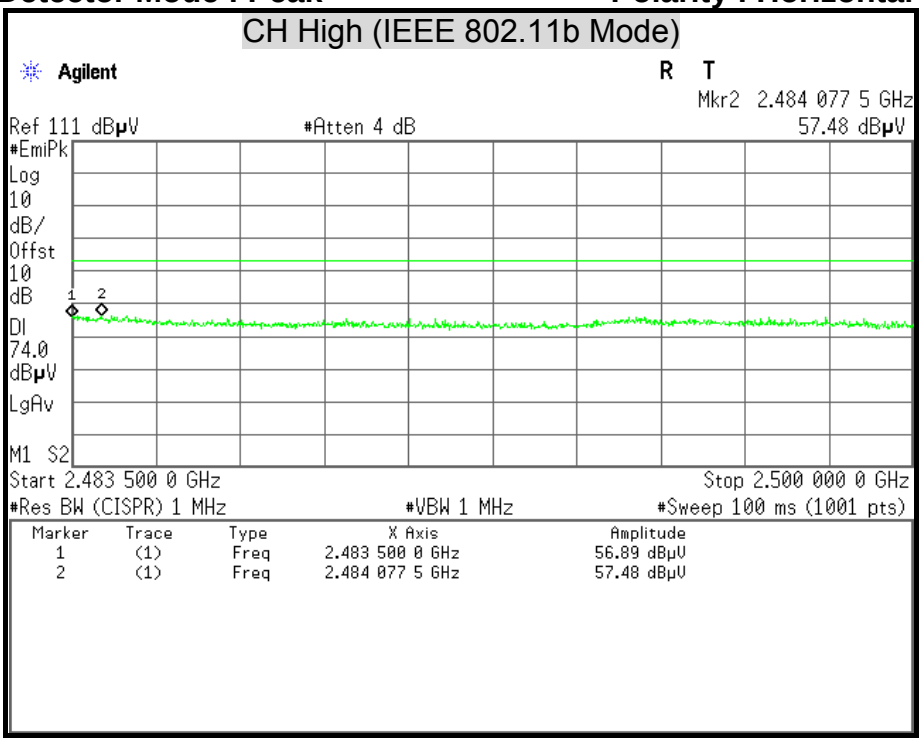
Detector Mode : Peak **Polarity : Vertical**



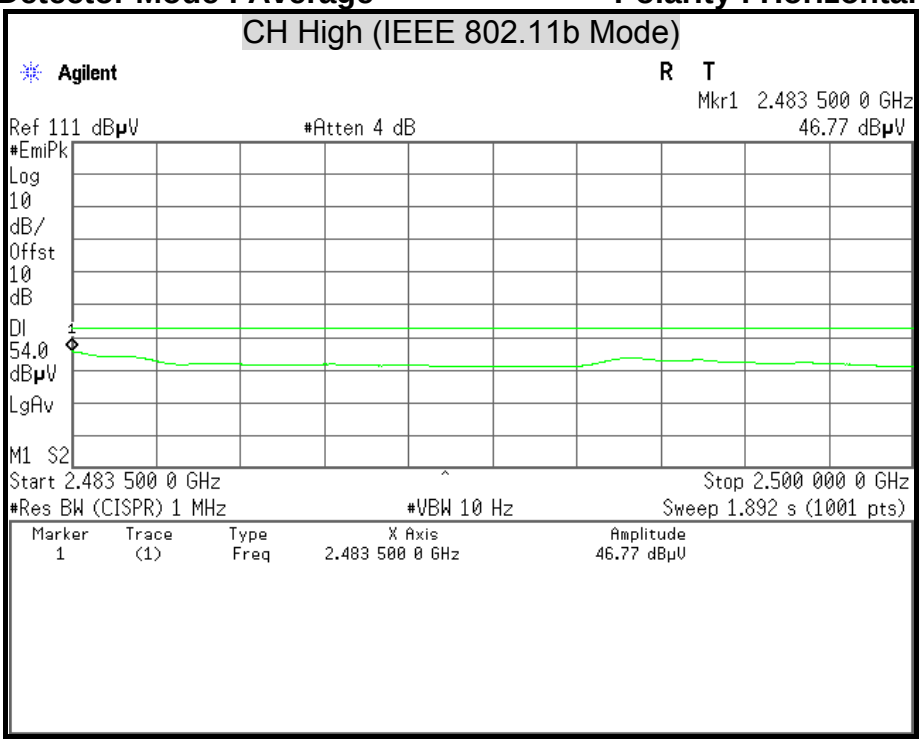
Detector Mode : Average **Polarity : Vertical**



Detector Mode : Peak **Polarity : Horizontal**

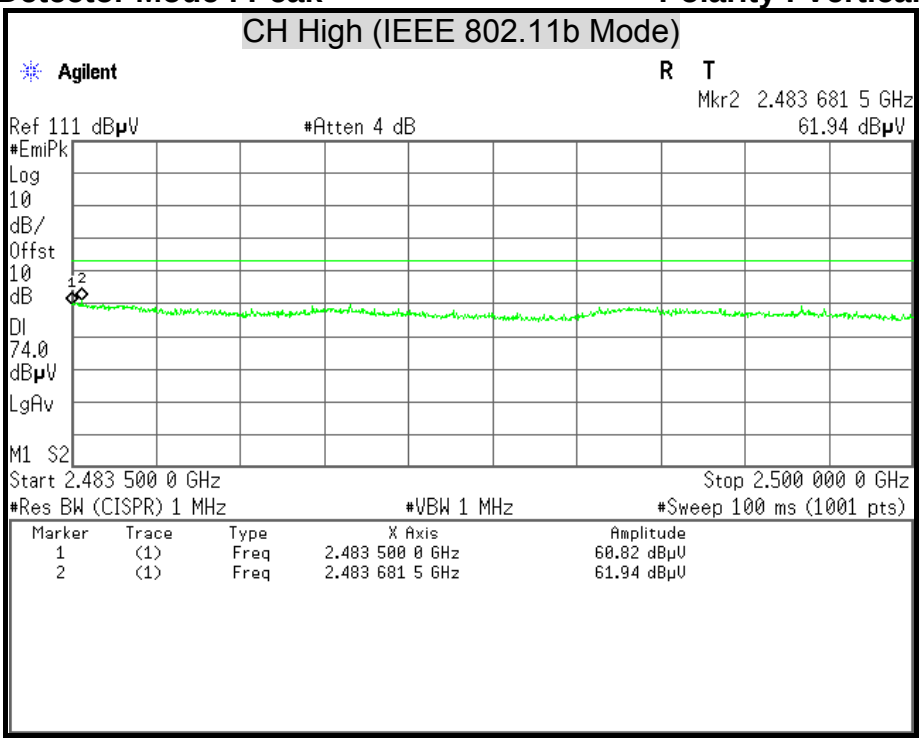


Detector Mode : Average **Polarity : Horizontal**



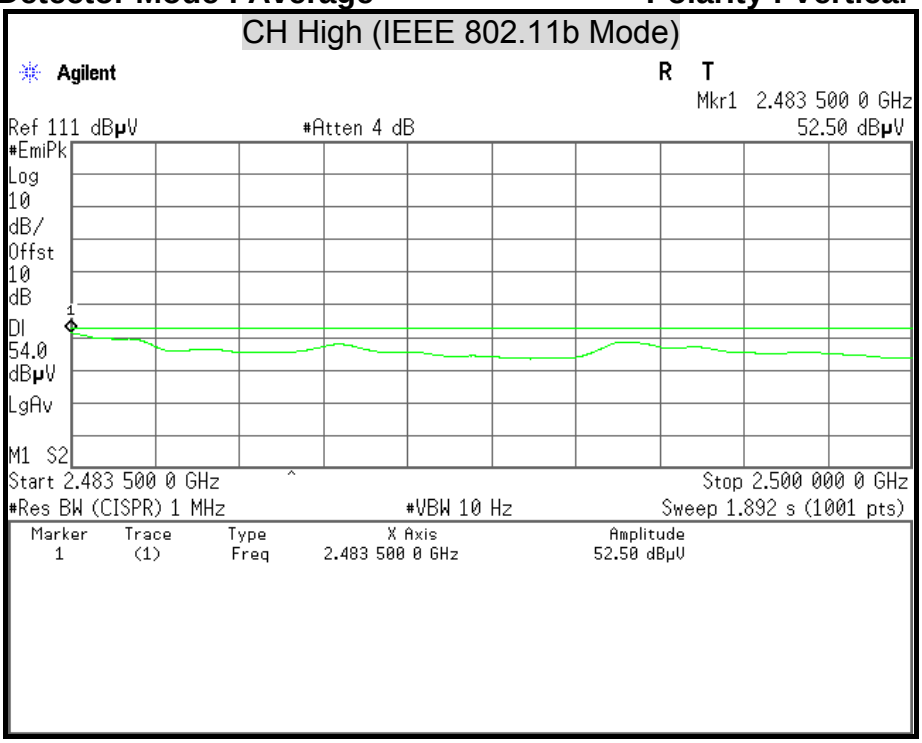
Detector Mode : Peak **Polarity : Vertical**

CH High (IEEE 802.11b Mode)

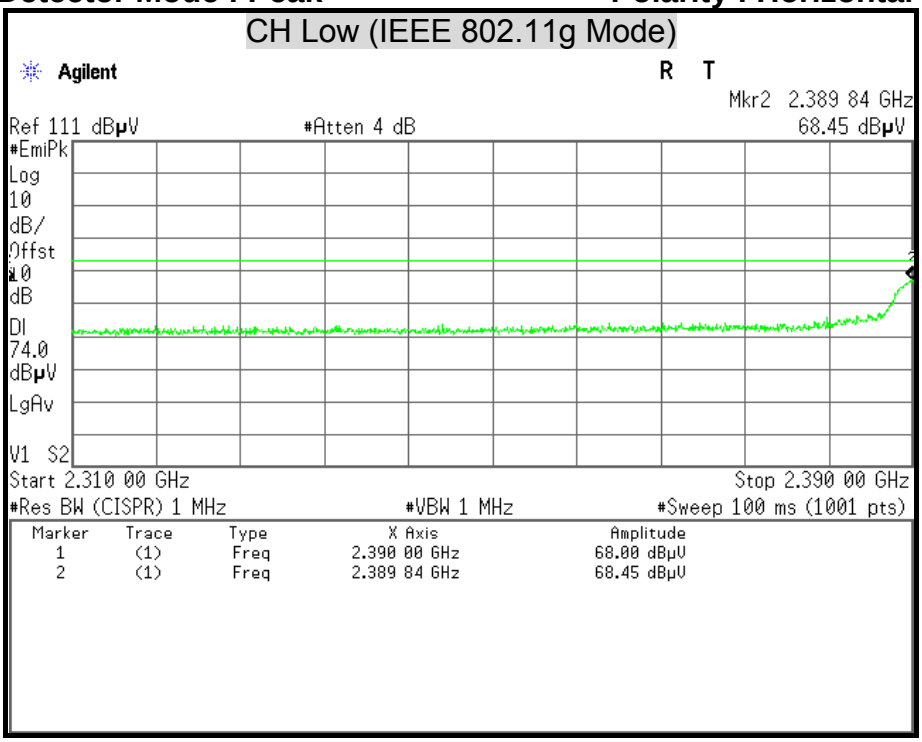


Detector Mode : Average **Polarity : Vertical**

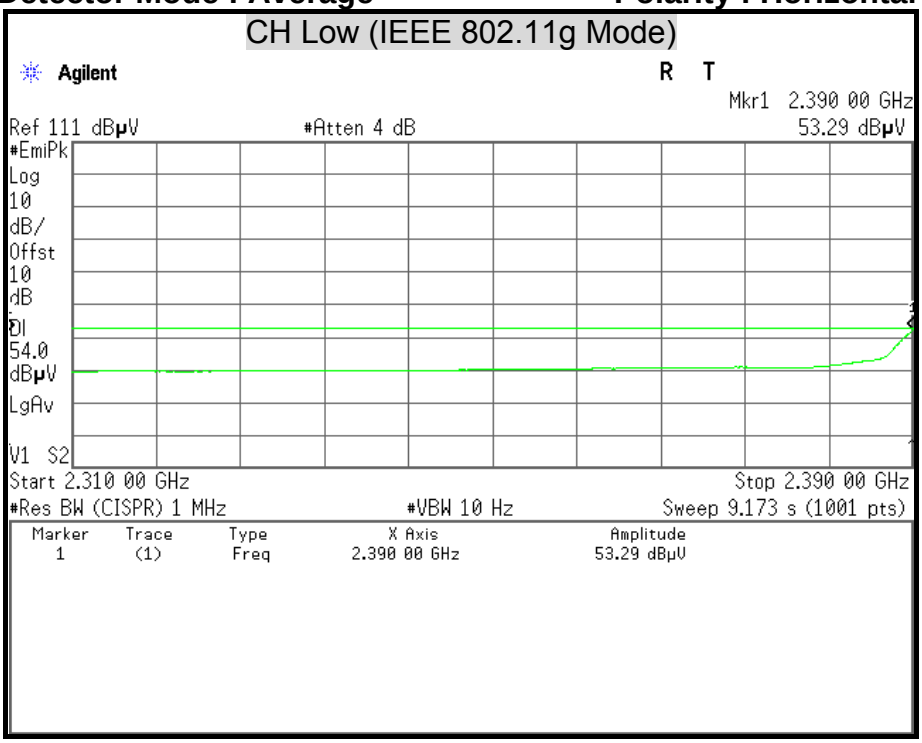
CH High (IEEE 802.11b Mode)



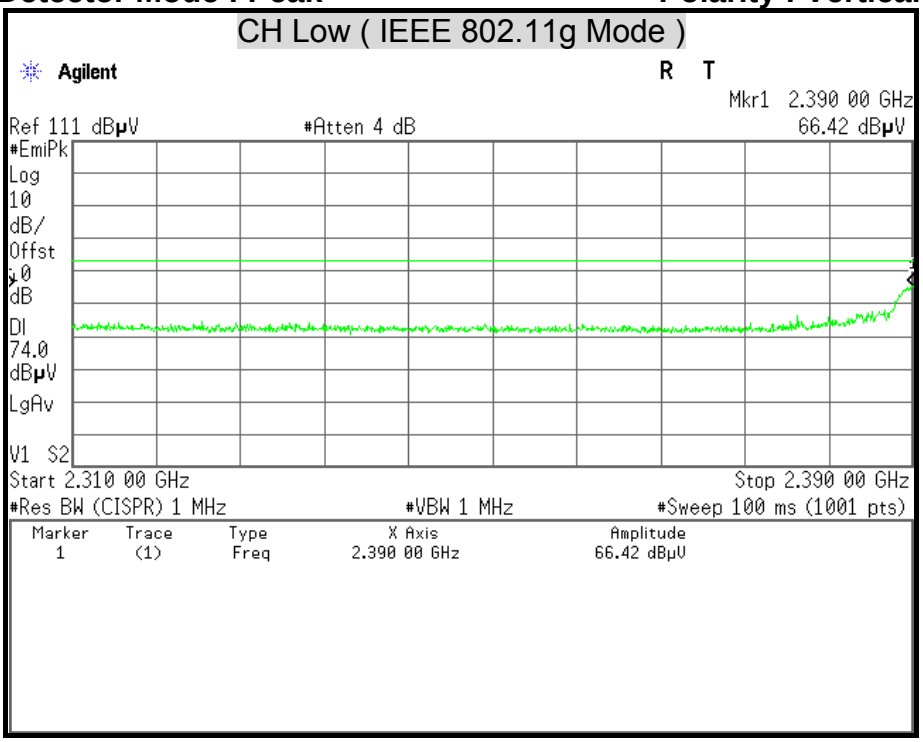
Detector Mode : Peak **Polarity : Horizontal**



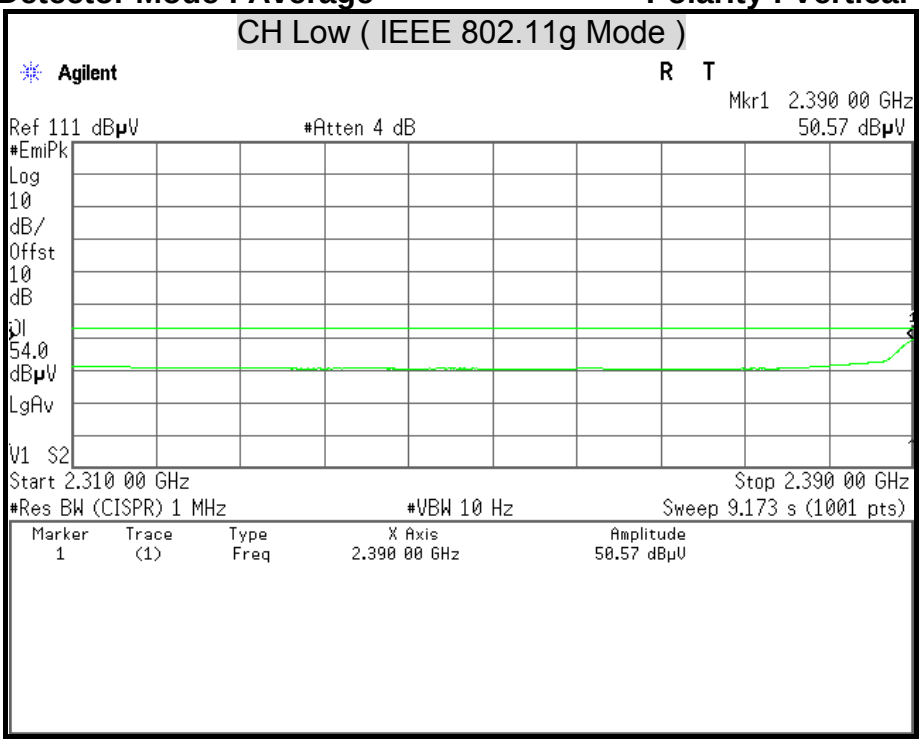
Detector Mode : Average **Polarity : Horizontal**



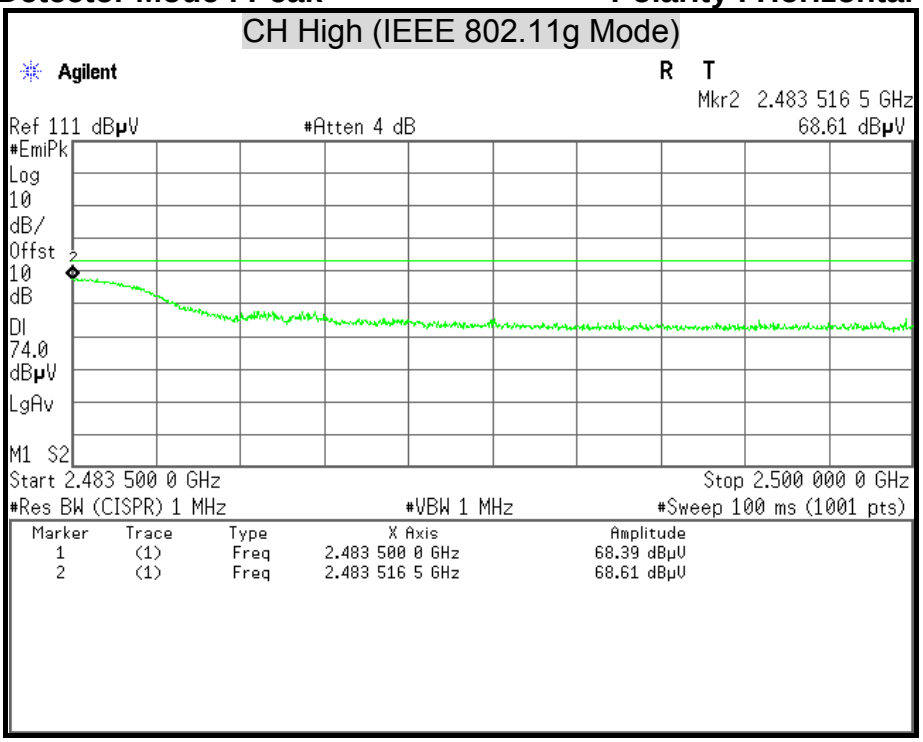
Detector Mode : Peak **Polarity : Vertical**



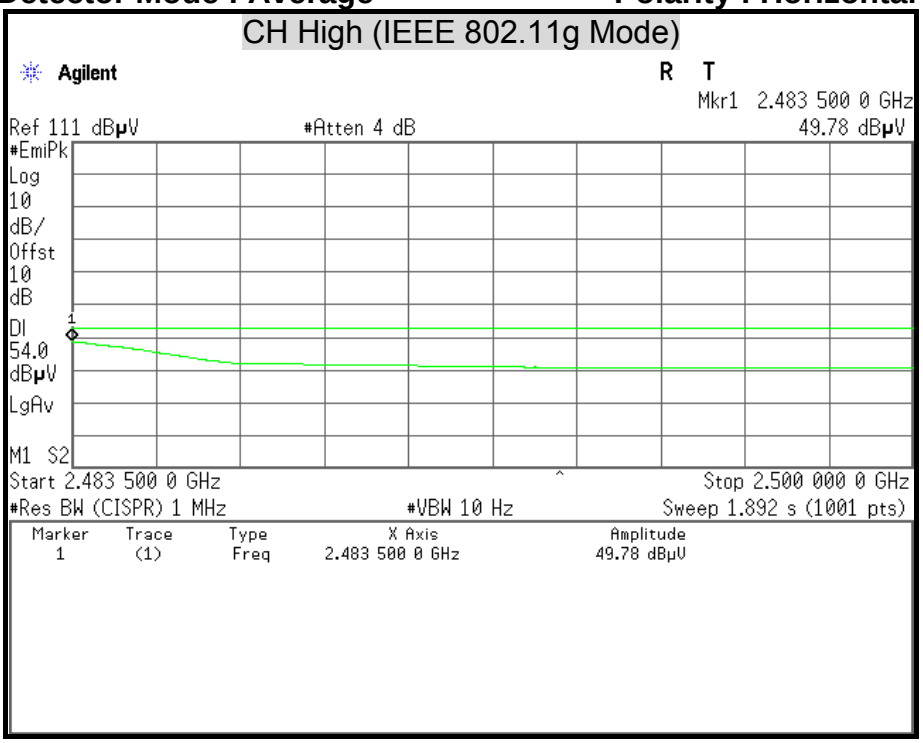
Detector Mode : Average **Polarity : Vertical**



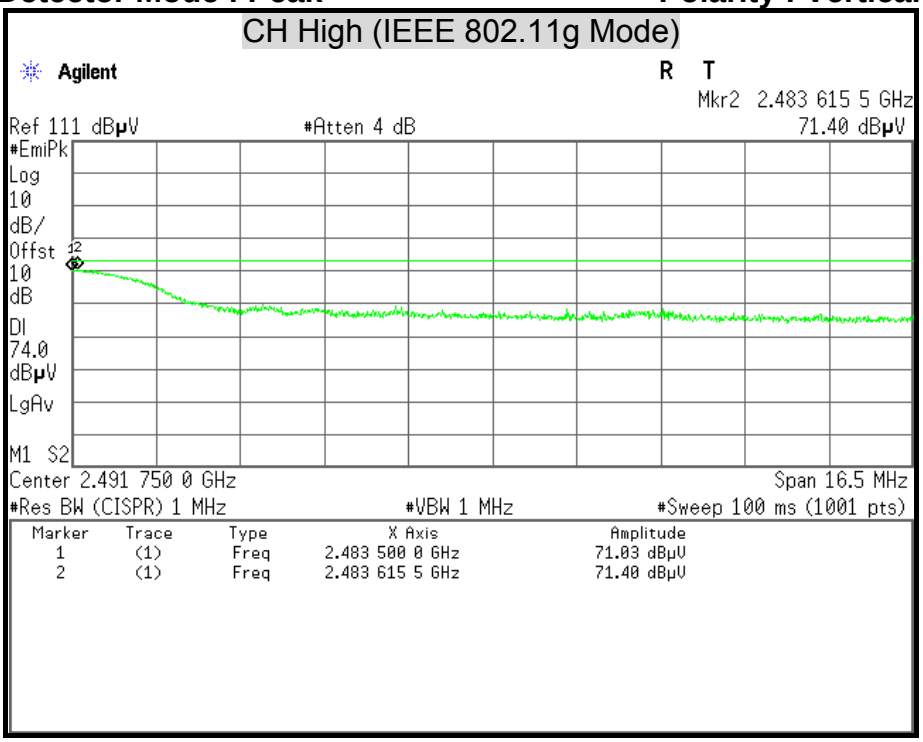
Detector Mode : Peak **Polarity : Horizontal**



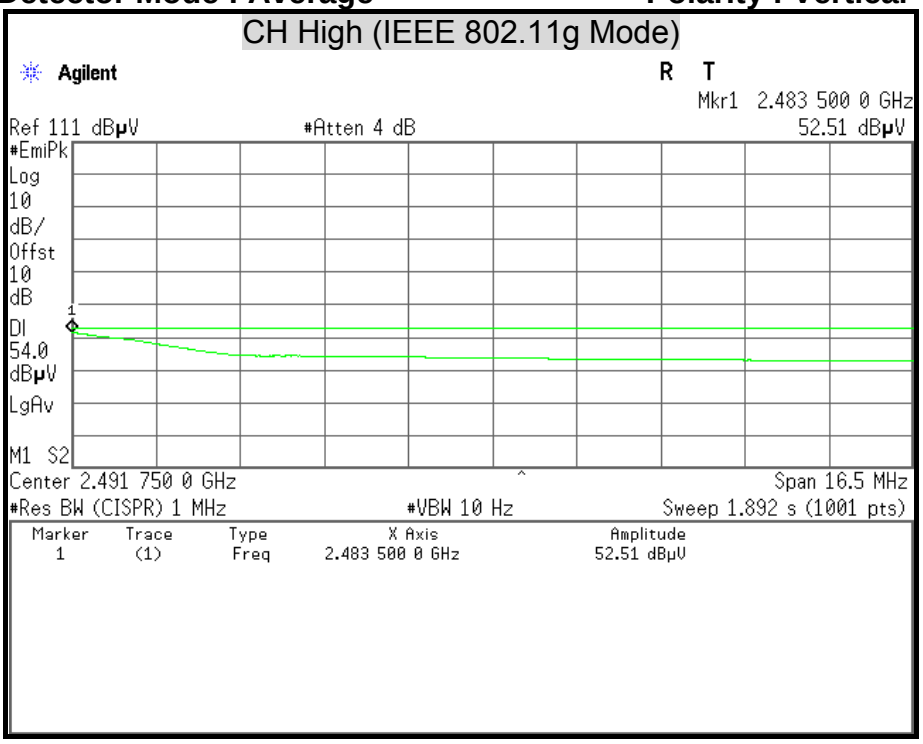
Detector Mode : Average **Polarity : Horizontal**



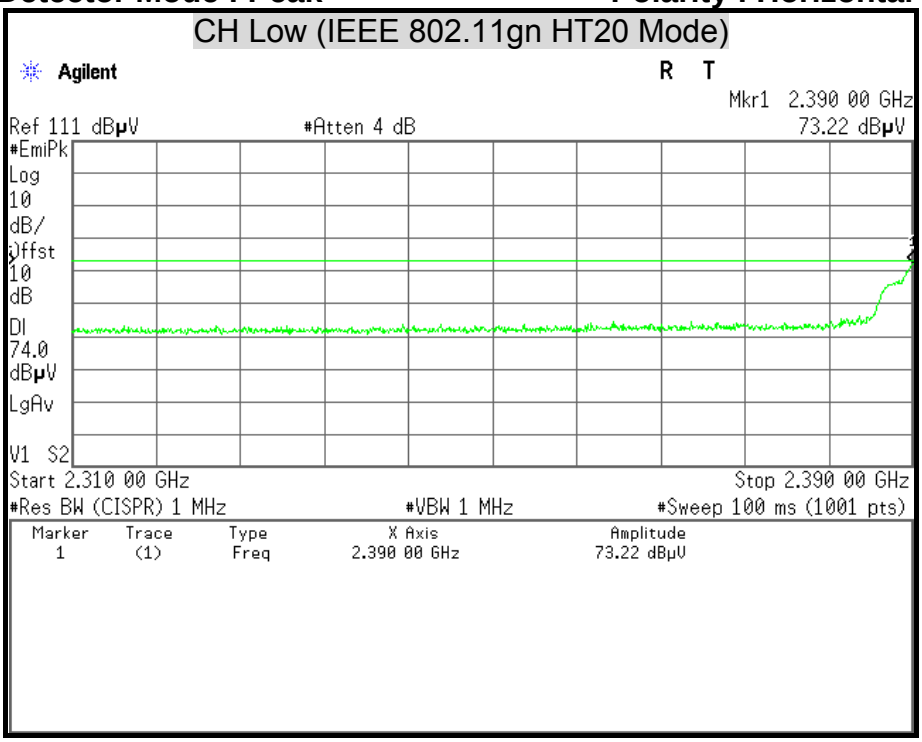
Detector Mode : Peak **Polarity : Vertical**



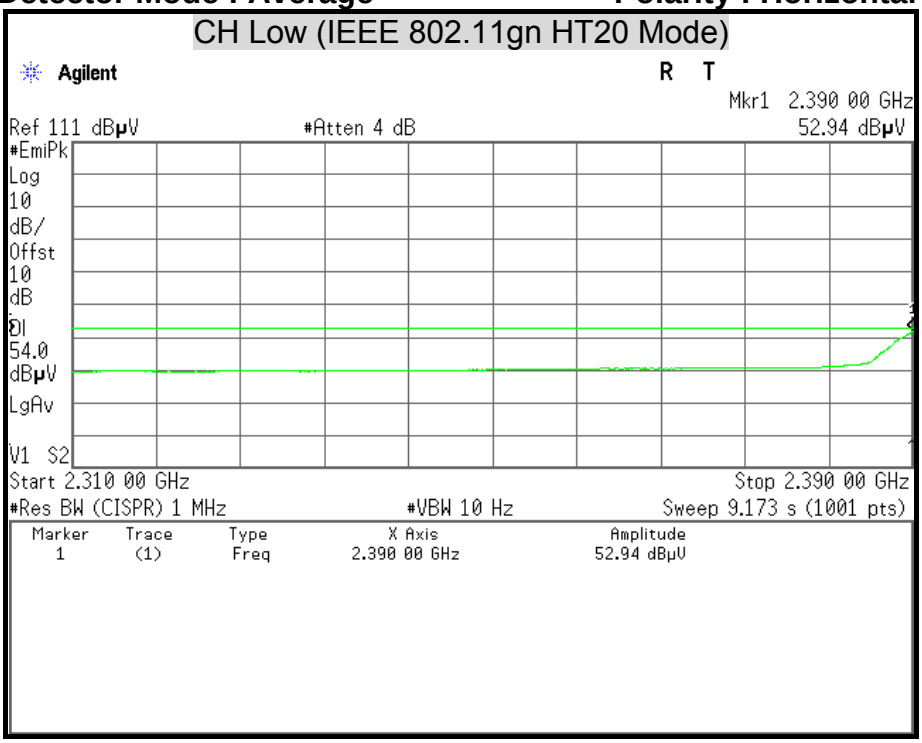
Detector Mode : Average **Polarity : Vertical**



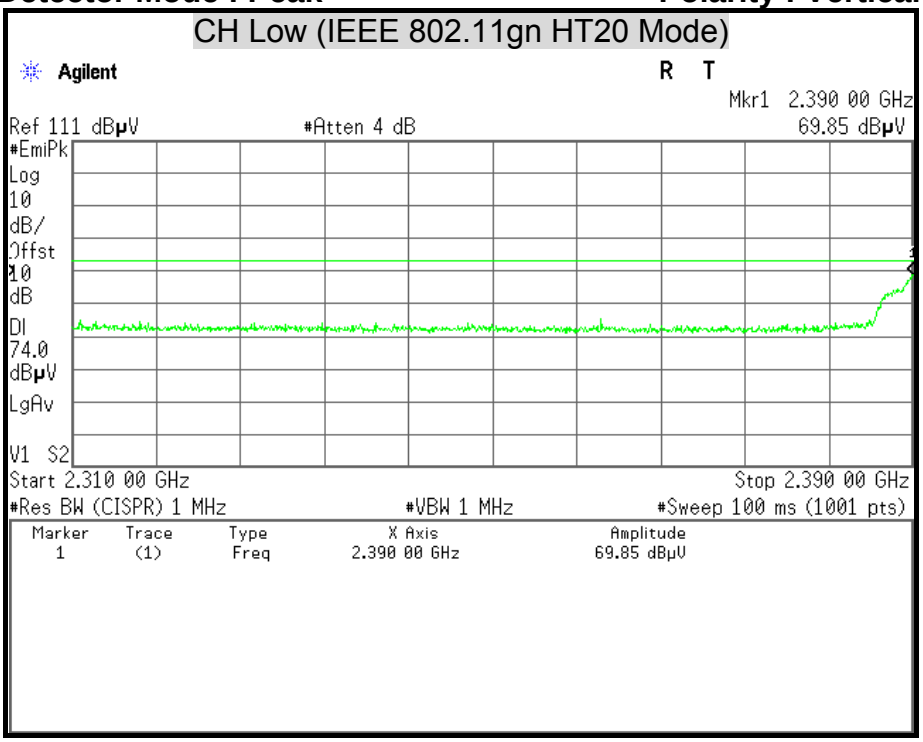
Detector Mode : Peak **Polarity : Horizontal**



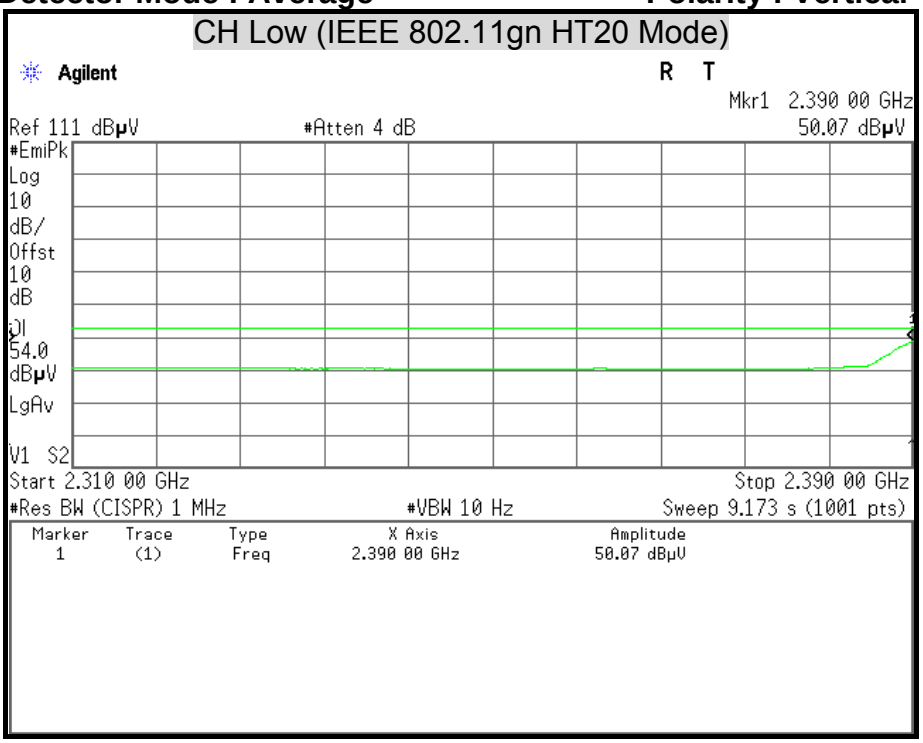
Detector Mode : Average **Polarity : Horizontal**



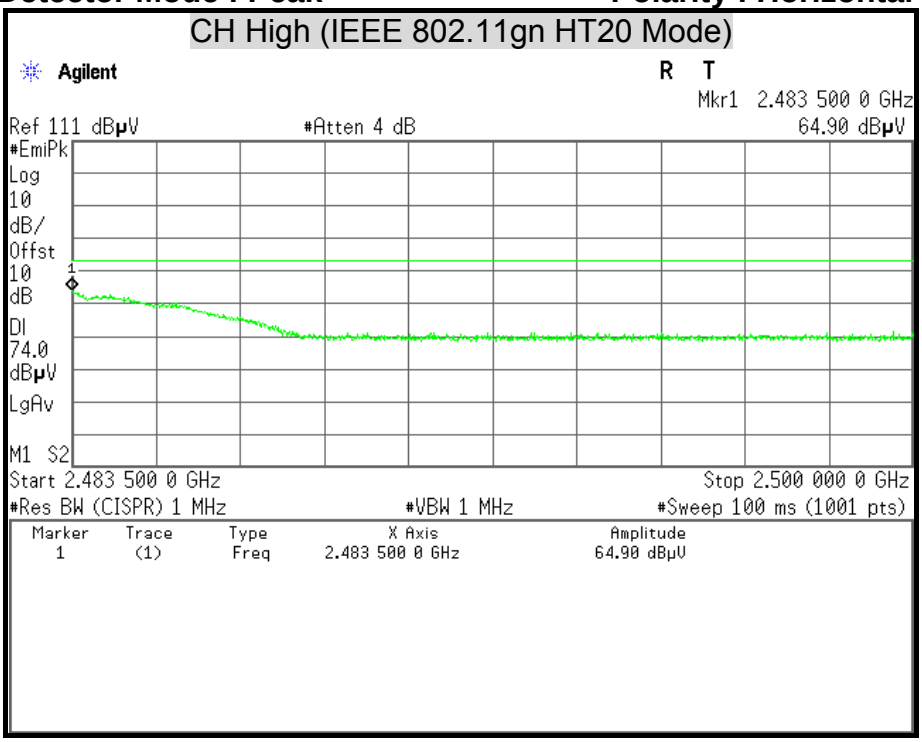
Detector Mode : Peak **Polarity : Vertical**



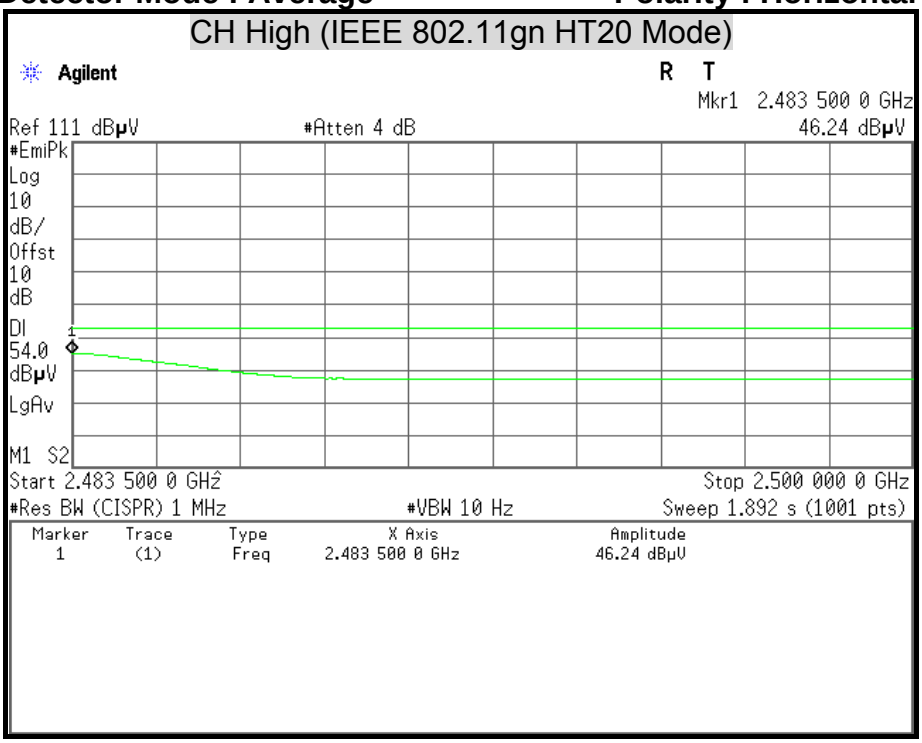
Detector Mode : Average **Polarity : Vertical**



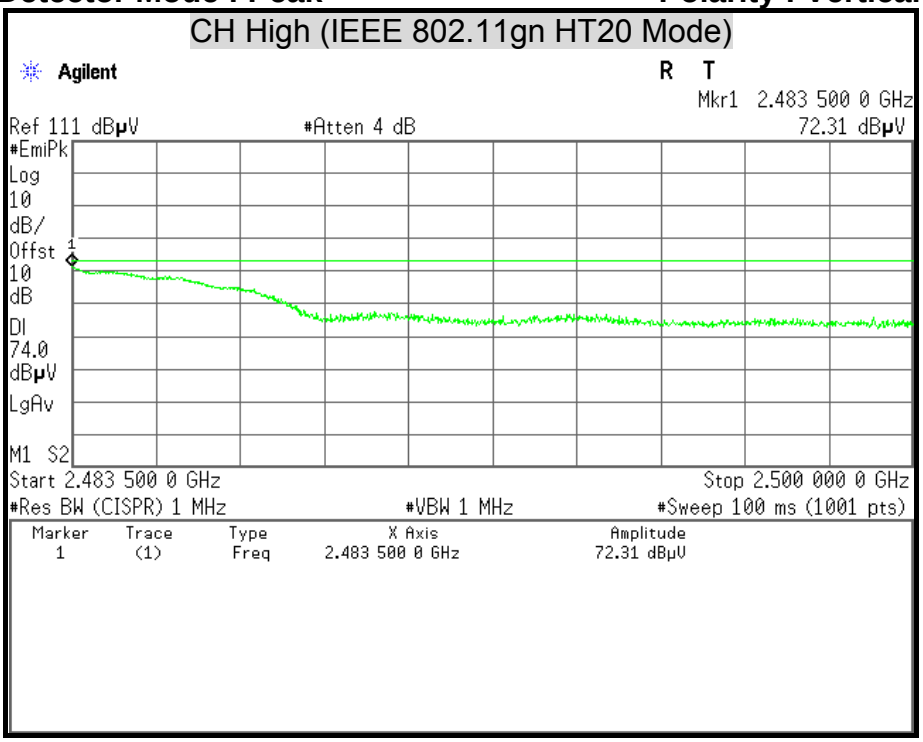
Detector Mode : Peak **Polarity : Horizontal**



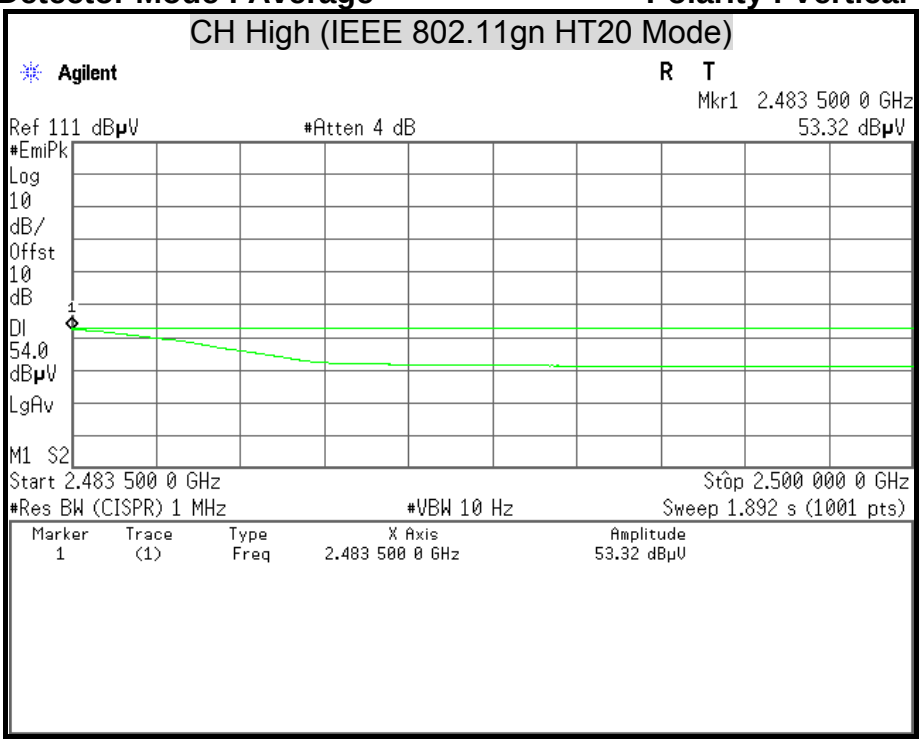
Detector Mode : Average **Polarity : Horizontal**



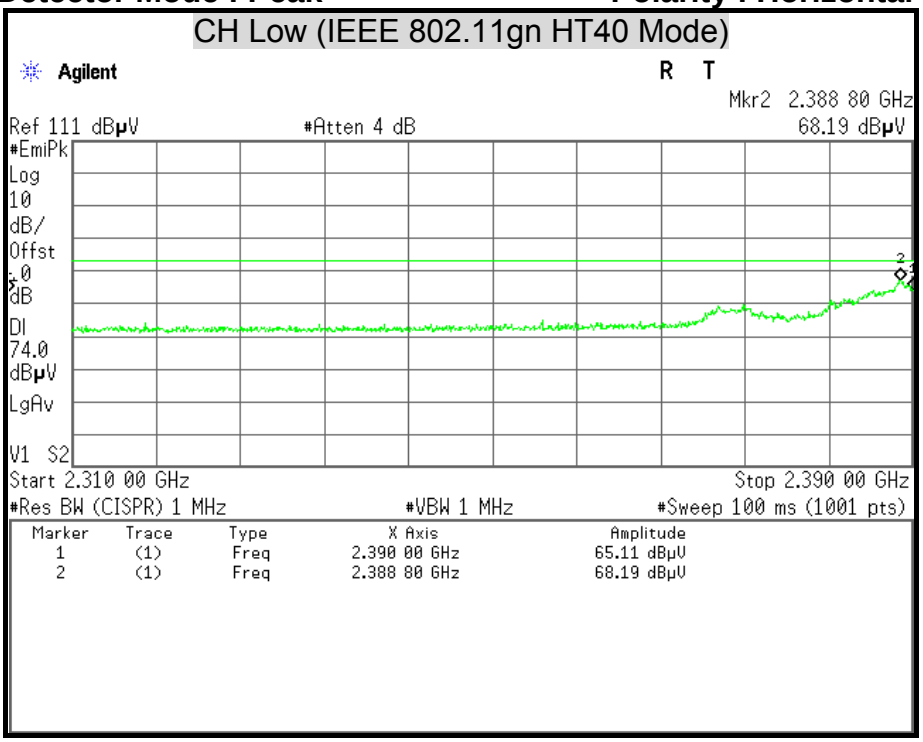
Detector Mode : Peak **Polarity : Vertical**



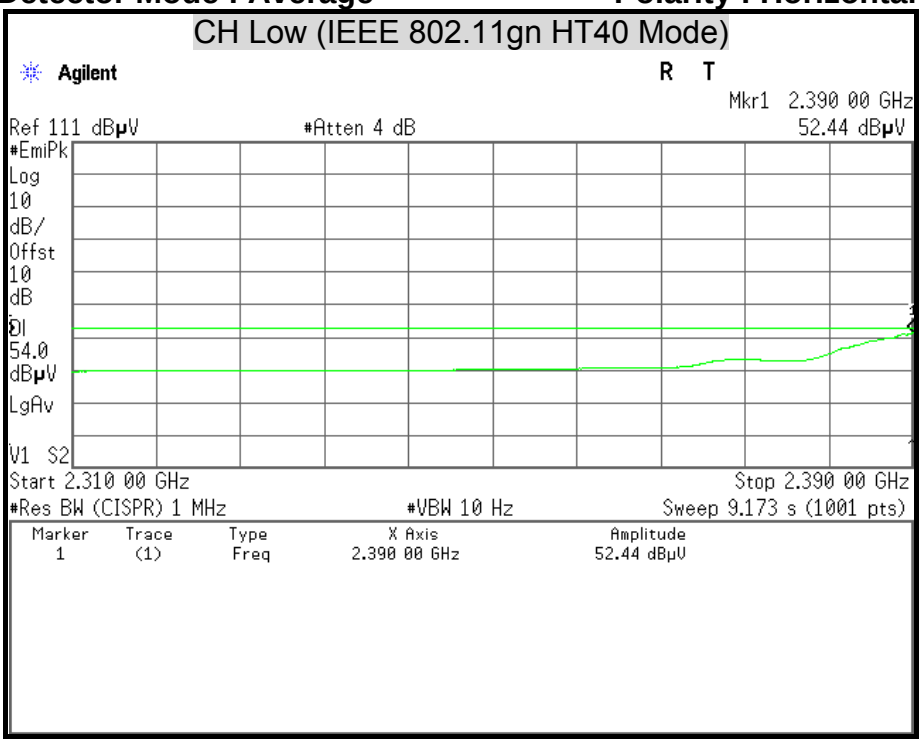
Detector Mode : Average **Polarity : Vertical**



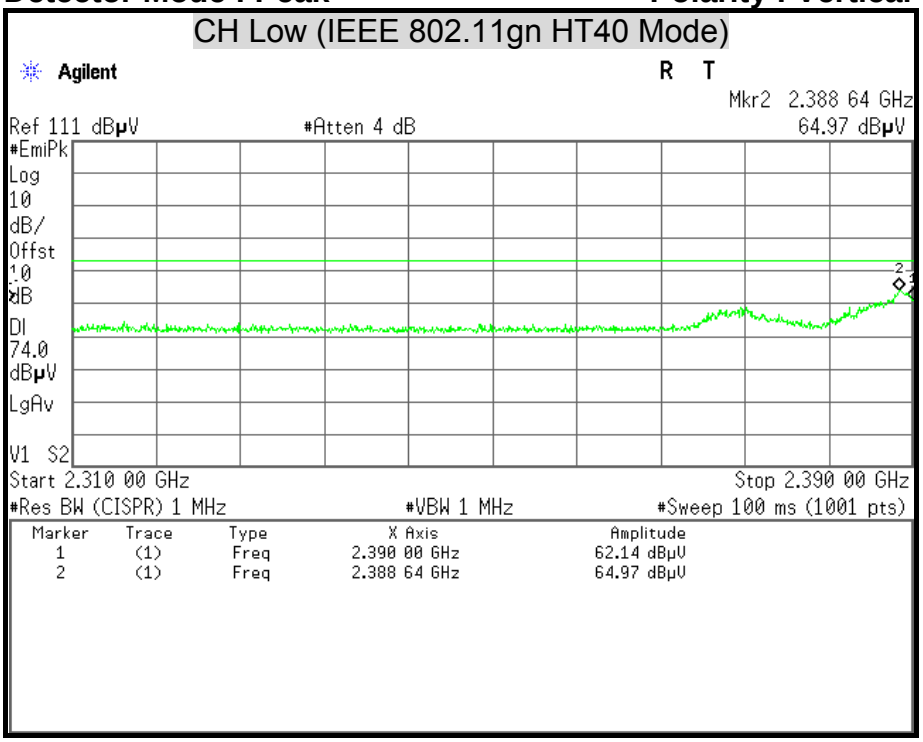
Detector Mode : Peak **Polarity : Horizontal**



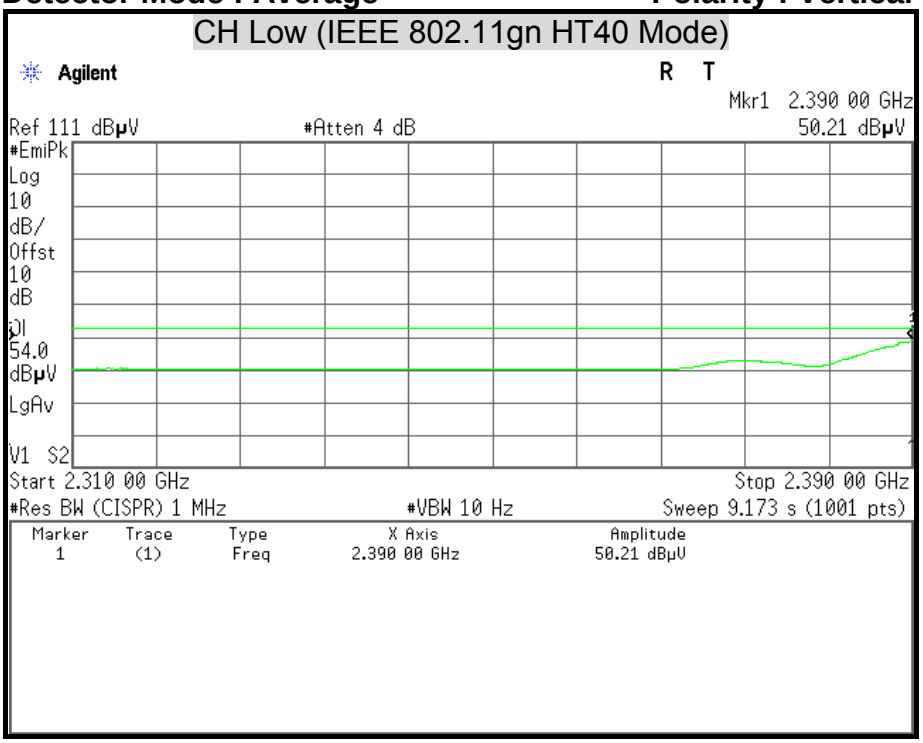
Detector Mode : Average **Polarity : Horizontal**



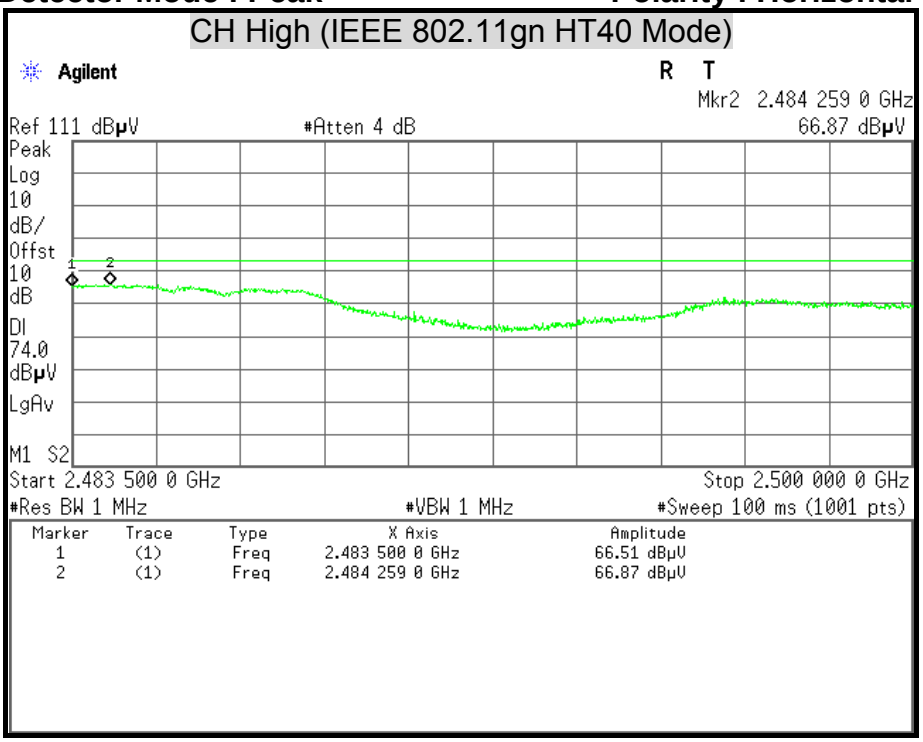
Detector Mode : Peak **Polarity : Vertical**



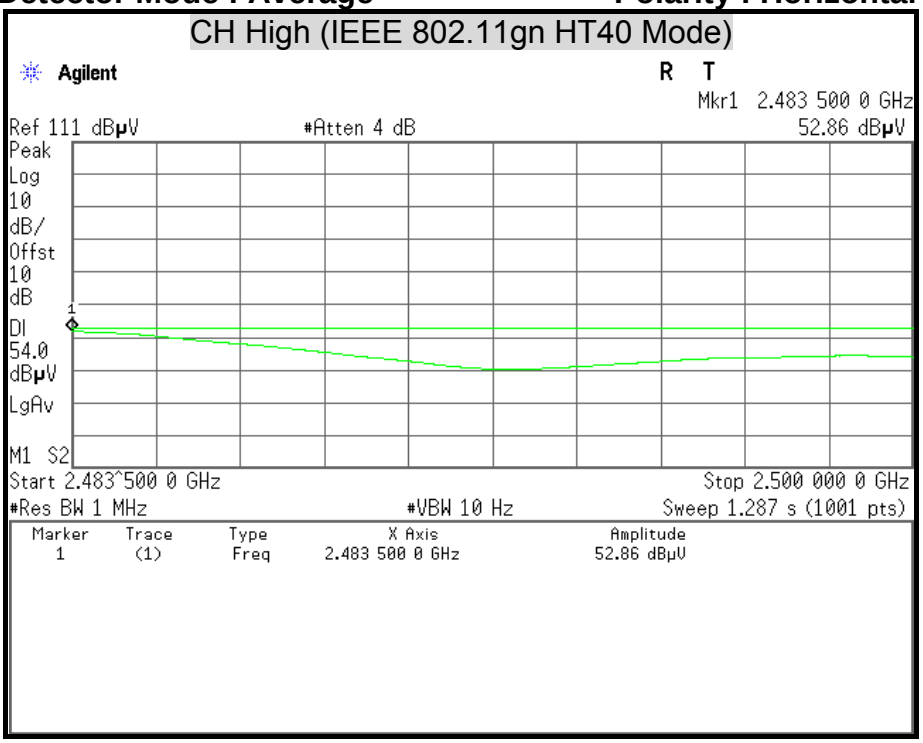
Detector Mode : Average **Polarity : Vertical**



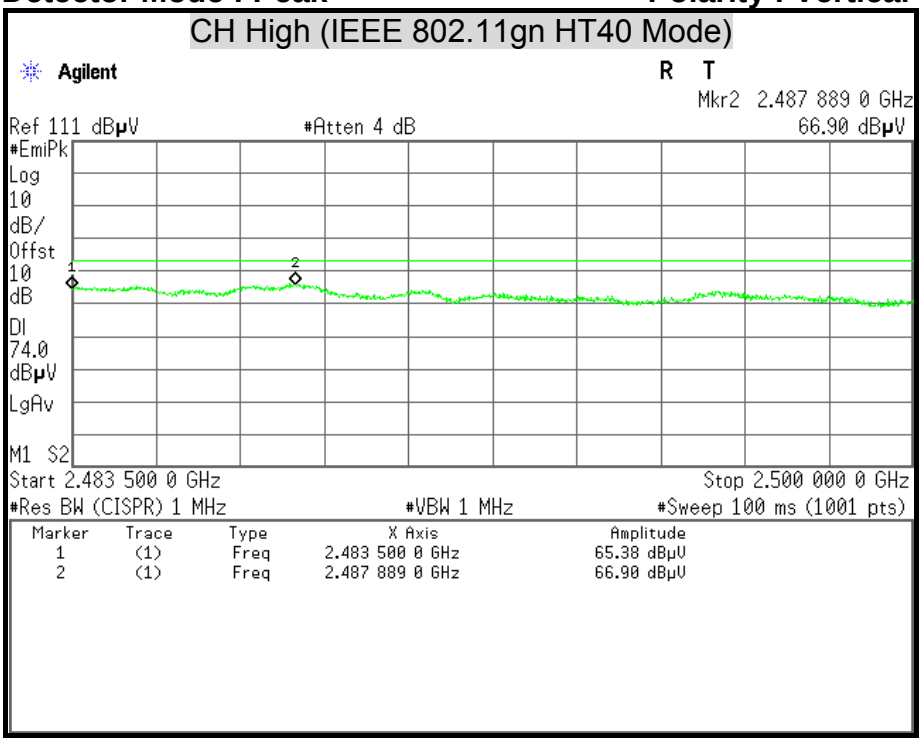
Detector Mode : Peak **Polarity : Horizontal**



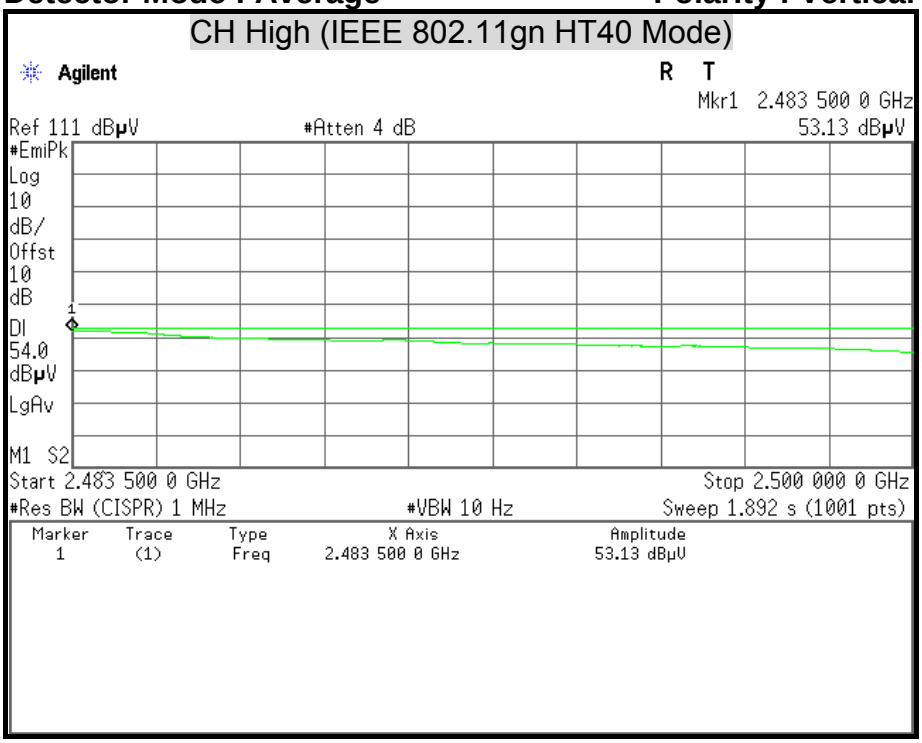
Detector Mode : Average **Polarity : Horizontal**



Detector Mode : Peak **Polarity : Vertical**



Detector Mode : Average **Polarity : Vertical**



7.7 CONDUCTED EMISSION

LIMITS

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

Frequency Range (MHz)	Conducted Limit (dBμv)	
	Quasi-peak	Average
0.15 - 0.50	66 - 56*	56 - 46*
0.50 - 5.00	56	46
5.00 - 30.0	60	50

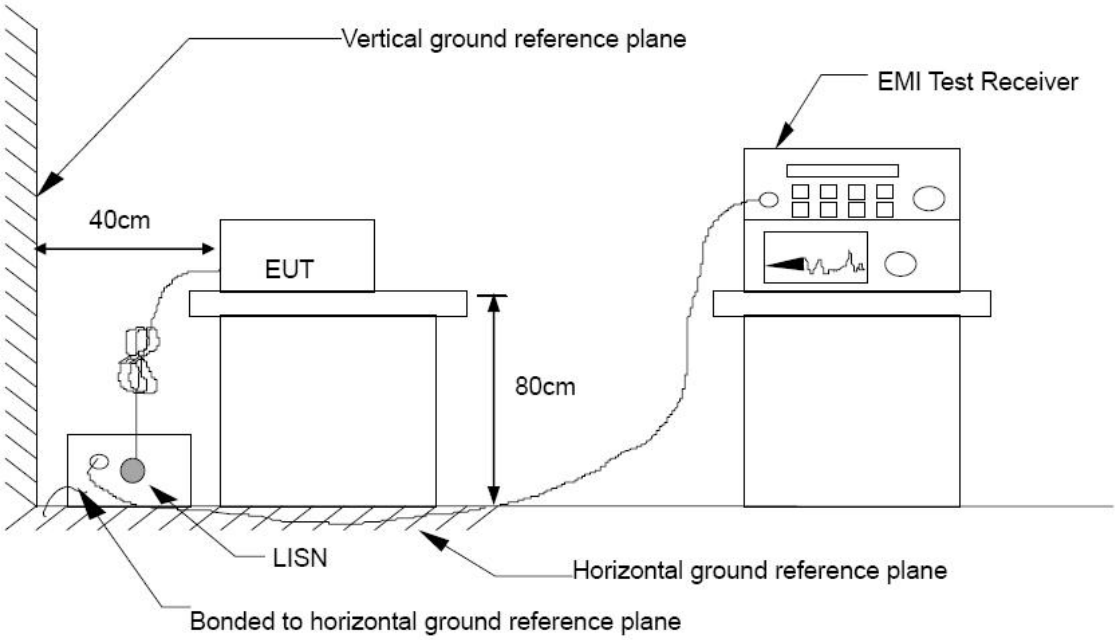
Remark: ** Decreasing linearly with the logarithm of the frequency.*

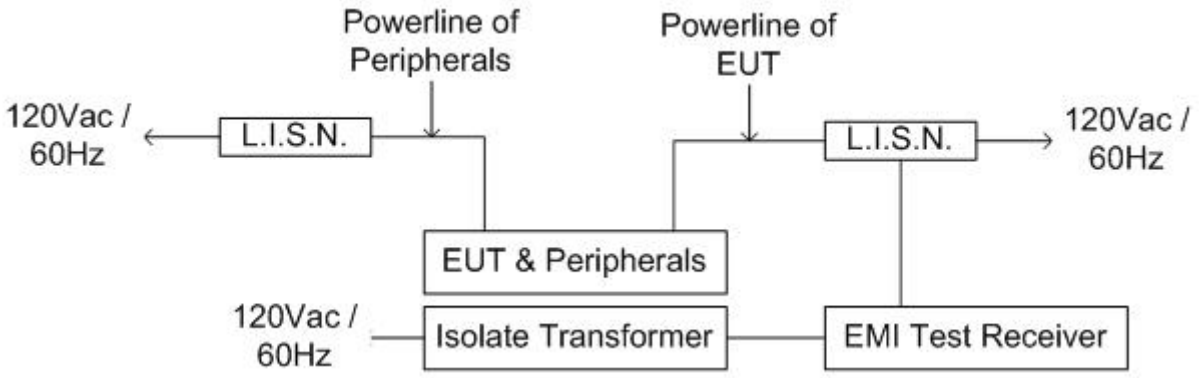
TEST EQUIPMENT

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
L.I.S.N	SCHWARZBECK	NSLK 8127	8127465	08/06/2015
L.I.S.N	SCHWARZBECK	NSLK 8127	8127473	03/09/2016
EMI Test Receiver	ROHDE & SCHWARZ	ESHS 30	838550/003	11/02/2015
Pulse Limiter	ROHDE & SCHWARZ	ESH3-Z2	100111	06/30/2015

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

TEST SETUP





TEST PROCEDURE

The basic test procedure was in accordance with ANSI C63.10:2013.

The test procedure is performed in a 4m × 3m × 2.4m (L×W×H) shielded room.

The EUT along with its peripherals were placed on a 1.0m (W) × 1.5m (L) and 0.8m in height wooden table and the EUT was adjusted to maintain a 0.4 meter space from a vertical reference plane.

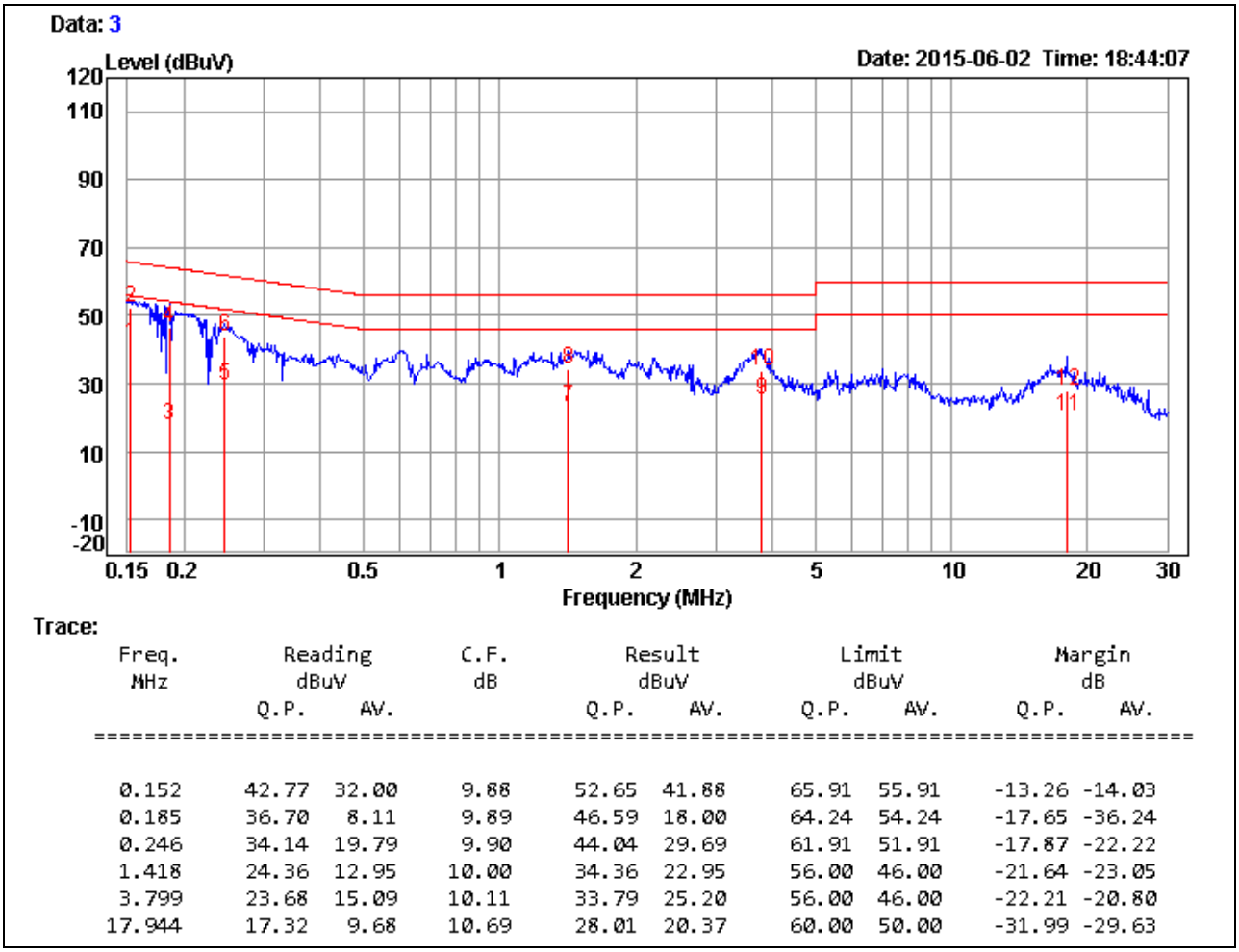
The EUT was connected to power mains through a line impedance stabilization network (LISN) which provides 50 ohm coupling impedance for measuring instrument and the chassis ground was bounded to the horizontal ground plane of shielded room. All peripherals were connected to the second LISN and the chassis ground also bounded to the horizontal ground plane of shielded room.

The EUT was located so that the distance between the boundary of the EUT and the closest surface of the LISN is 0.8 m. Where a mains flexible cord was provided by the manufacturer shall be 1 m long, or if in excess of 1 m, the excess cable was folded back and forth as far as possible so as to form a bundle not exceeding 0.4 m in length.

TEST RESULTS

Product Name	MoCA to WiFi extender	Test By	Crystal Wu
Test Model	HT-EMN2	Test Date	2015/06/02
Test Mode	Normal Operating	Temp. & Humidity	27.5°C, 54%

LINE



Trace:

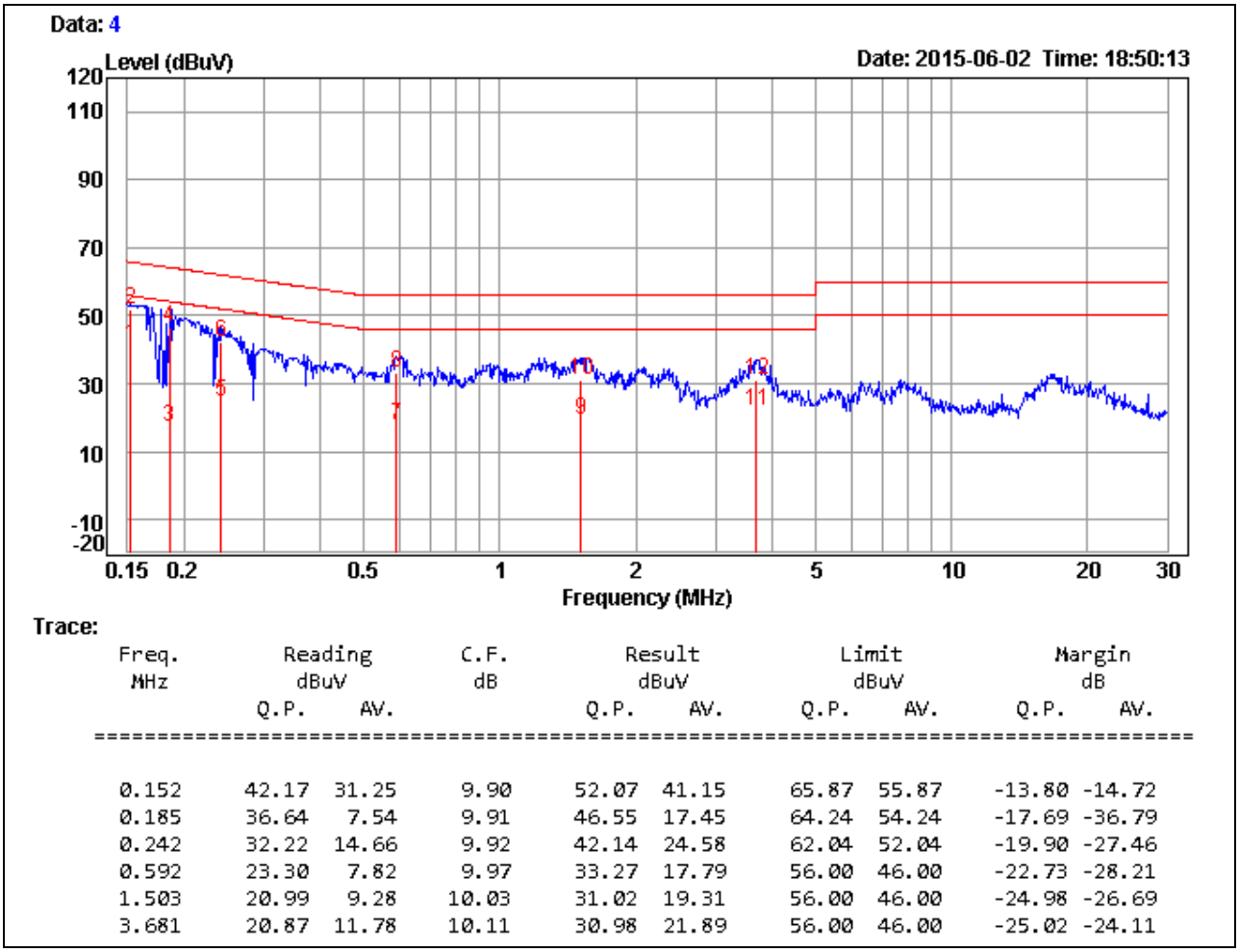
Freq. MHz	Reading dBuV Q.P.	Reading dBuV AV.	C.F. dB	Result dBuV Q.P.	Result dBuV AV.	Limit dBuV Q.P.	Limit dBuV AV.	Margin dB Q.P.	Margin dB AV.
0.152	42.77	32.00	9.88	52.65	41.88	65.91	55.91	-13.26	-14.03
0.185	36.70	8.11	9.89	46.59	18.00	64.24	54.24	-17.65	-36.24
0.246	34.14	19.79	9.90	44.04	29.69	61.91	51.91	-17.87	-22.22
1.418	24.36	12.95	10.00	34.36	22.95	56.00	46.00	-21.64	-23.05
3.799	23.68	15.09	10.11	33.79	25.20	56.00	46.00	-22.21	-20.80
17.944	17.32	9.68	10.69	28.01	20.37	60.00	50.00	-31.99	-29.63

Remark:

1. *Correction Factor = Insertion loss + Cable loss*
2. *Emission level = Reading Value + Correction factor*
3. *Margin value = Emission level – Limit value*

Product Name	MoCA to WiFi extender	Test By	Crystal Wu
Test Model	HT-EMN2	Test Date	2015/06/02
Test Mode	Normal Operating	Temp. & Humidity	27.5°C, 54%

NEUTRAL



Trace:

Freq. MHz	Reading dBuV Q.P.	Reading dBuV AV.	C.F. dB	Result dBuV Q.P.	Result dBuV AV.	Limit dBuV Q.P.	Limit dBuV AV.	Margin dB Q.P.	Margin dB AV.
0.152	42.17	31.25	9.90	52.07	41.15	65.87	55.87	-13.80	-14.72
0.185	36.64	7.54	9.91	46.55	17.45	64.24	54.24	-17.69	-36.79
0.242	32.22	14.66	9.92	42.14	24.58	62.04	52.04	-19.90	-27.46
0.592	23.30	7.82	9.97	33.27	17.79	56.00	46.00	-22.73	-28.21
1.503	20.99	9.28	10.03	31.02	19.31	56.00	46.00	-24.98	-26.69
3.681	20.87	11.78	10.11	30.98	21.89	56.00	46.00	-25.02	-24.11

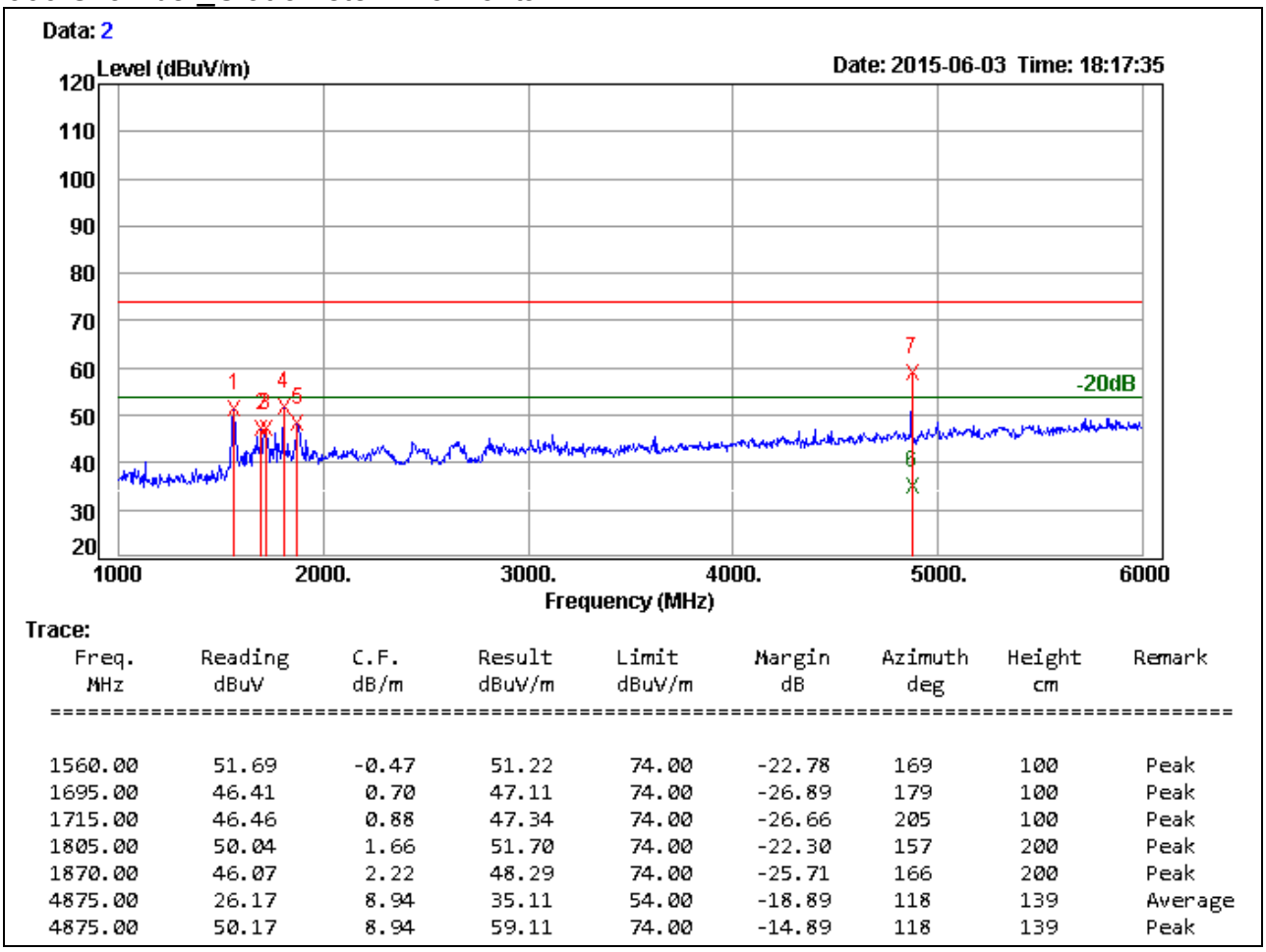
Remark:

1. *Correction Factor = Insertion loss + Cable loss*
2. *Emission level = Reading Value + Correction factor*
3. *Margin value = Emission level – Limit value*

APPENDIX I CO-LOCATION

Product Name	MoCA to WiFi extender	Test By	Crystal Wu
Test Model	HT-EMN2	Test Date	2015/06/03
Test Mode	Normal Operating	Temp. & Humidity	25°C, 57%

966 Chamber_C at 3Meter / Horizontal



Trace:

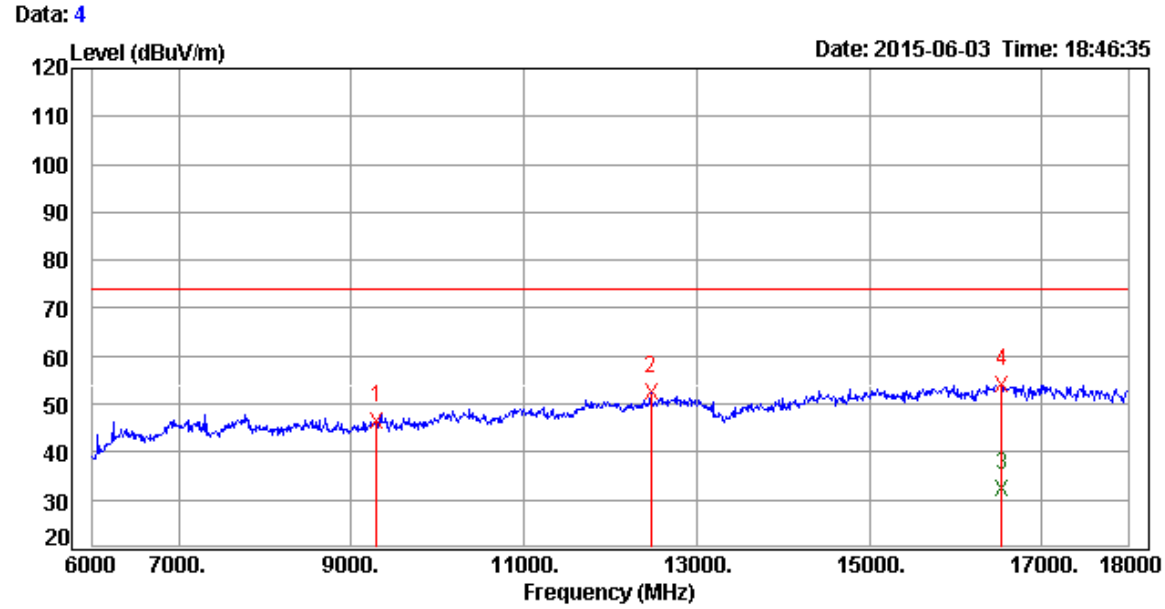
Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
1560.00	51.69	-0.47	51.22	74.00	-22.78	169	100	Peak
1695.00	46.41	0.70	47.11	74.00	-26.89	179	100	Peak
1715.00	46.46	0.88	47.34	74.00	-26.66	205	100	Peak
1805.00	50.04	1.66	51.70	74.00	-22.30	157	200	Peak
1870.00	46.07	2.22	48.29	74.00	-25.71	166	200	Peak
4875.00	26.17	8.94	35.11	54.00	-18.89	118	139	Average
4875.00	50.17	8.94	59.11	74.00	-14.89	118	139	Peak

Remark:

1. *Average test would be performed if the peak result were greater than the average limit.*
3. *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.*
3. *Result = Reading + Correction Factor*
   Margin = Result – Limit
   Remark Peak = Result(PK) – Limit(PK)
   Remark AVG = Result(AV) – Limit(AV)

Product Name	MoCA to WiFi extender	Test By	Crystal Wu
Test Model	HT-EMN2	Test Date	2015/06/03
Test Mode	Normal Operating	Temp. & Humidity	25°C, 57%

966 Chamber_C at 3Meter / Horizontal



Trace:

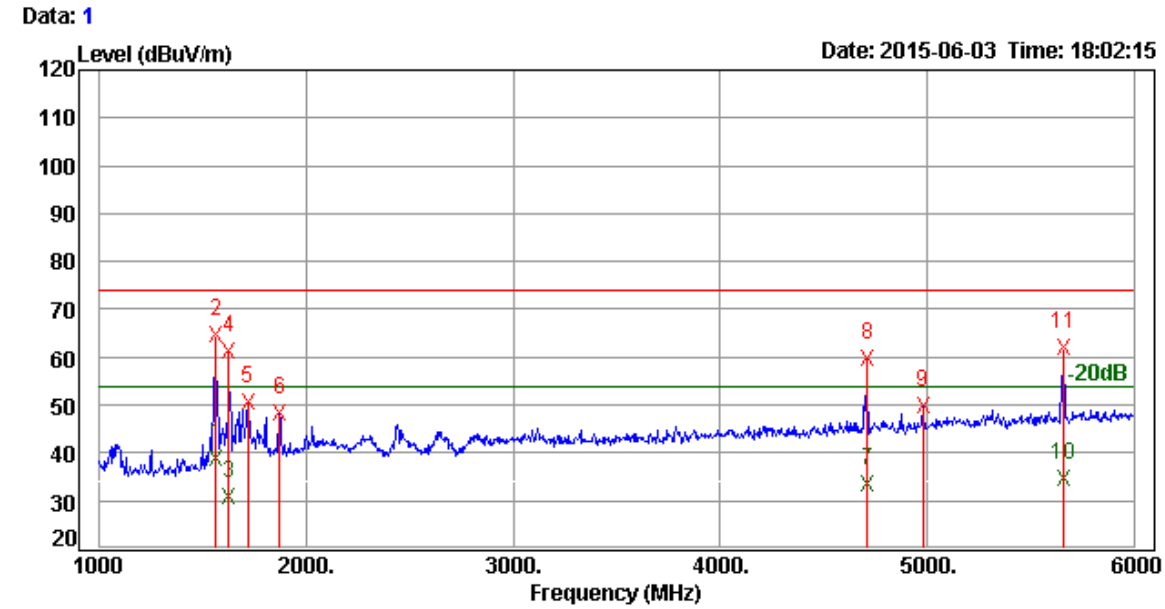
Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
9288.00	42.37	4.09	46.46	74.00	-27.54	222	100	Peak
12468.00	44.27	8.13	52.40	74.00	-21.60	0	300	Peak
16536.00	21.80	10.62	32.42	54.00	-21.58	70	300	Average
16536.00	43.42	10.62	54.04	74.00	-19.96	70	300	Peak

Remark:

1. *Average test would be performed if the peak result were greater than the average limit.*
3. *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.*
3. *Result = Reading + Correction Factor*
   Margin = Result – Limit
   Remark Peak = Result(PK) – Limit(PK)
   Remark AVG = Result(AV) – Limit(AV)

Product Name	MoCA to WiFi extender	Test By	Crystal Wu
Test Model	HT-EMN2	Test Date	2015/06/03
Test Mode	Normal Operating	Temp. & Humidity	25°C, 57%

966 Chamber_C at 3Meter / Vertical



Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
1560.00	39.33	-0.47	38.86	54.00	-15.14	185	100	Average
1560.00	65.11	-0.47	64.64	74.00	-9.36	185	100	Peak
1625.00	30.76	0.10	30.86	54.00	-23.14	164	100	Average
1625.00	61.32	0.10	61.42	74.00	-12.58	164	100	Peak
1715.00	49.78	0.88	50.66	74.00	-23.34	184	200	Peak
1870.00	46.04	2.22	48.26	74.00	-25.74	215	100	Peak
4710.00	24.92	8.52	33.44	54.00	-20.56	285	100	Average
4710.00	51.36	8.52	59.88	74.00	-14.12	285	100	Peak
4980.00	40.55	9.20	49.75	74.00	-24.25	289	100	Peak
5660.00	23.30	11.34	34.64	54.00	-19.36	262	100	Average
5660.00	50.55	11.34	61.89	74.00	-12.11	262	100	Peak

Remark:

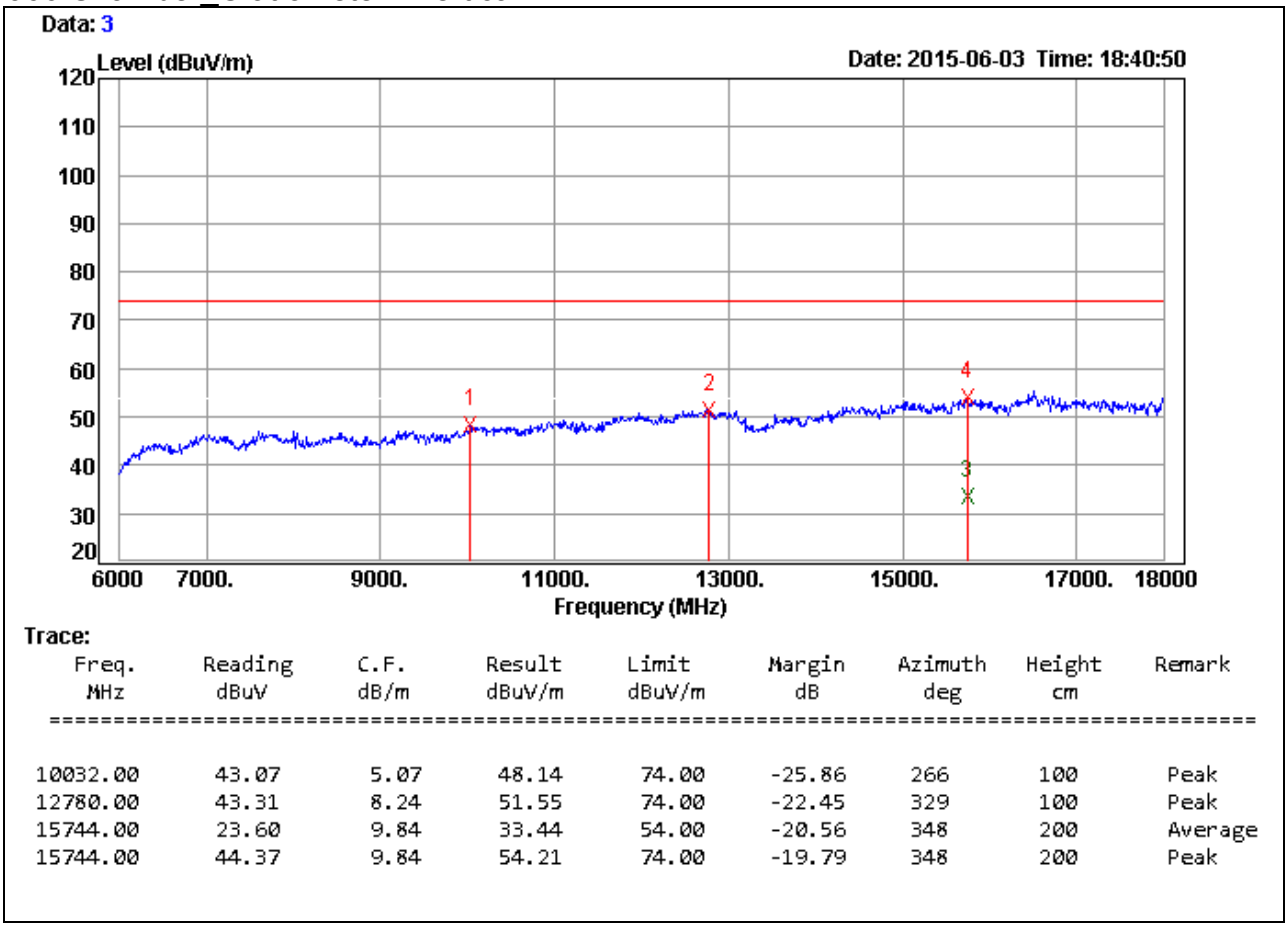
1. Average test would be performed if the peak result were greater than the average limit.

3. 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.

3. Result = Reading + Correction Factor
Margin = Result – Limit
Remark Peak = Result(PK) – Limit(PK)
Remark AVG = Result(AV) – Limit(AV)

Product Name	MoCA to WiFi extender	Test By	Crystal Wu
Test Model	HT-EMN2	Test Date	2015/06/03
Test Mode	Normal Operating	Temp. & Humidity	25°C, 57%

966 Chamber_C at 3Meter / Vertical



Trace:

Freq. MHz	Reading dBuV	C.F. dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Azimuth deg	Height cm	Remark
10032.00	43.07	5.07	48.14	74.00	-25.86	266	100	Peak
12780.00	43.31	8.24	51.55	74.00	-22.45	329	100	Peak
15744.00	23.60	9.84	33.44	54.00	-20.56	348	200	Average
15744.00	44.37	9.84	54.21	74.00	-19.79	348	200	Peak

Remark:

1. *Average test would be performed if the peak result were greater than the average limit.*
3. *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.*
3. *Result = Reading + Correction Factor*
   Margin = Result – Limit
   Remark Peak = Result(PK) – Limit(PK)
   Remark AVG = Result(AV) – Limit(AV)