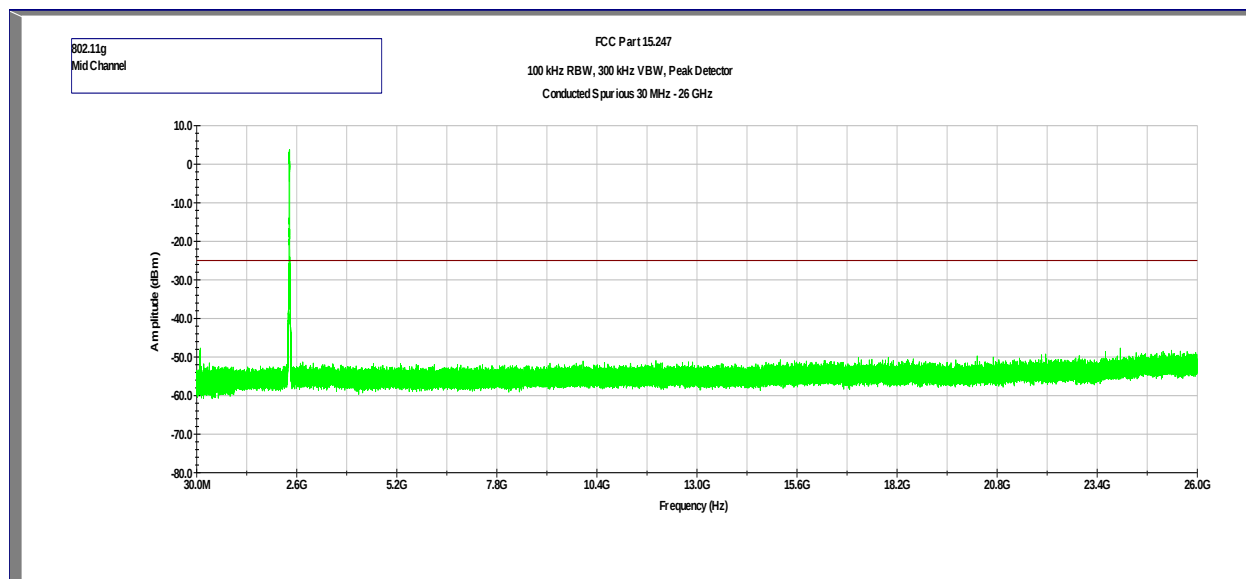
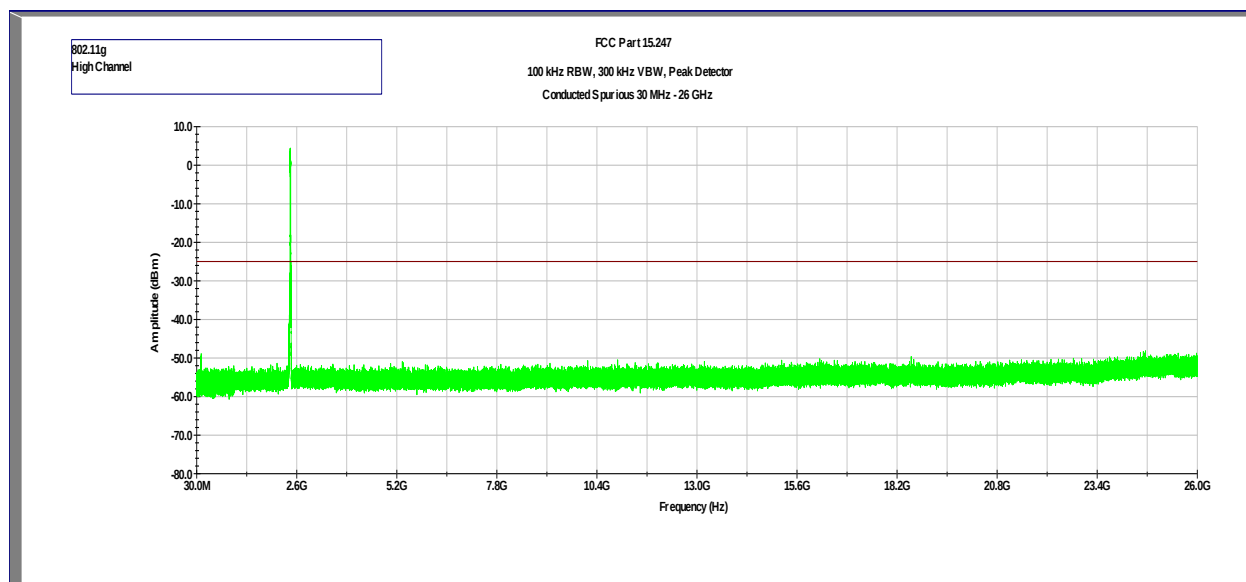


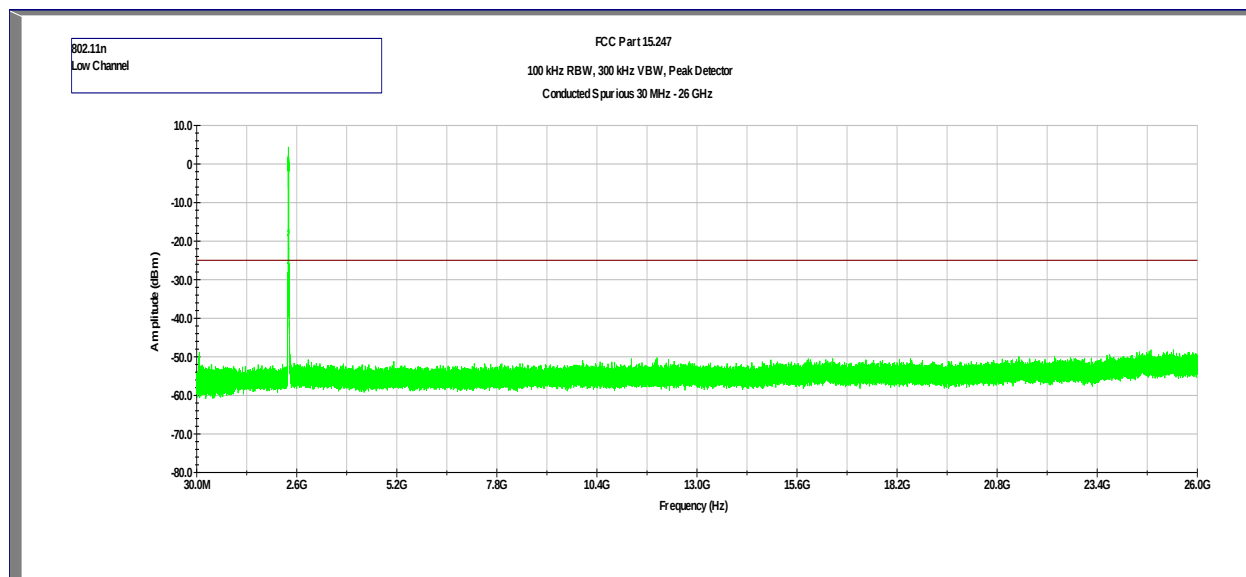
Plot 4.5
Tx @ 2437MHz 802.11g



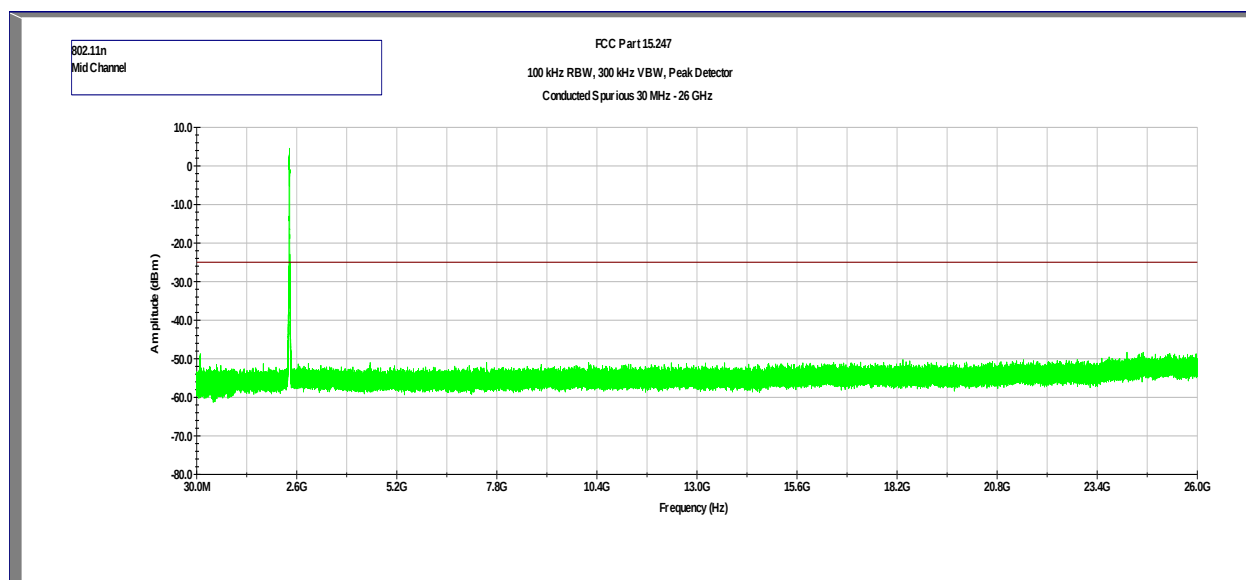
Plot 4.6
Tx @ 2462MHz 802.11g



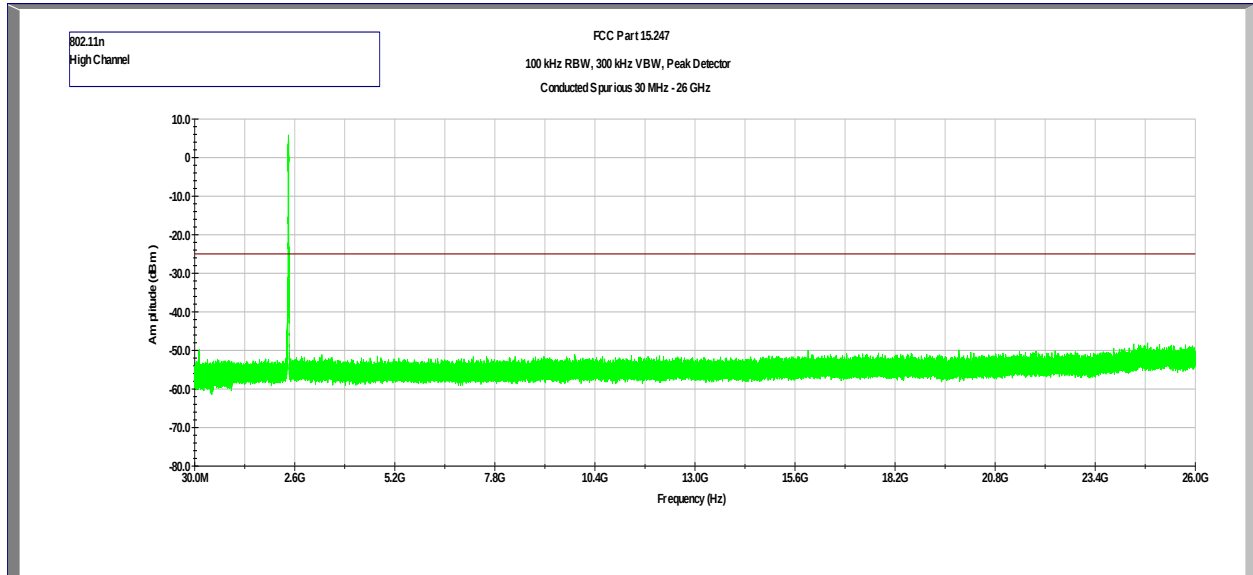
Plot 4.7
Tx @ 2412MHz 802.11n



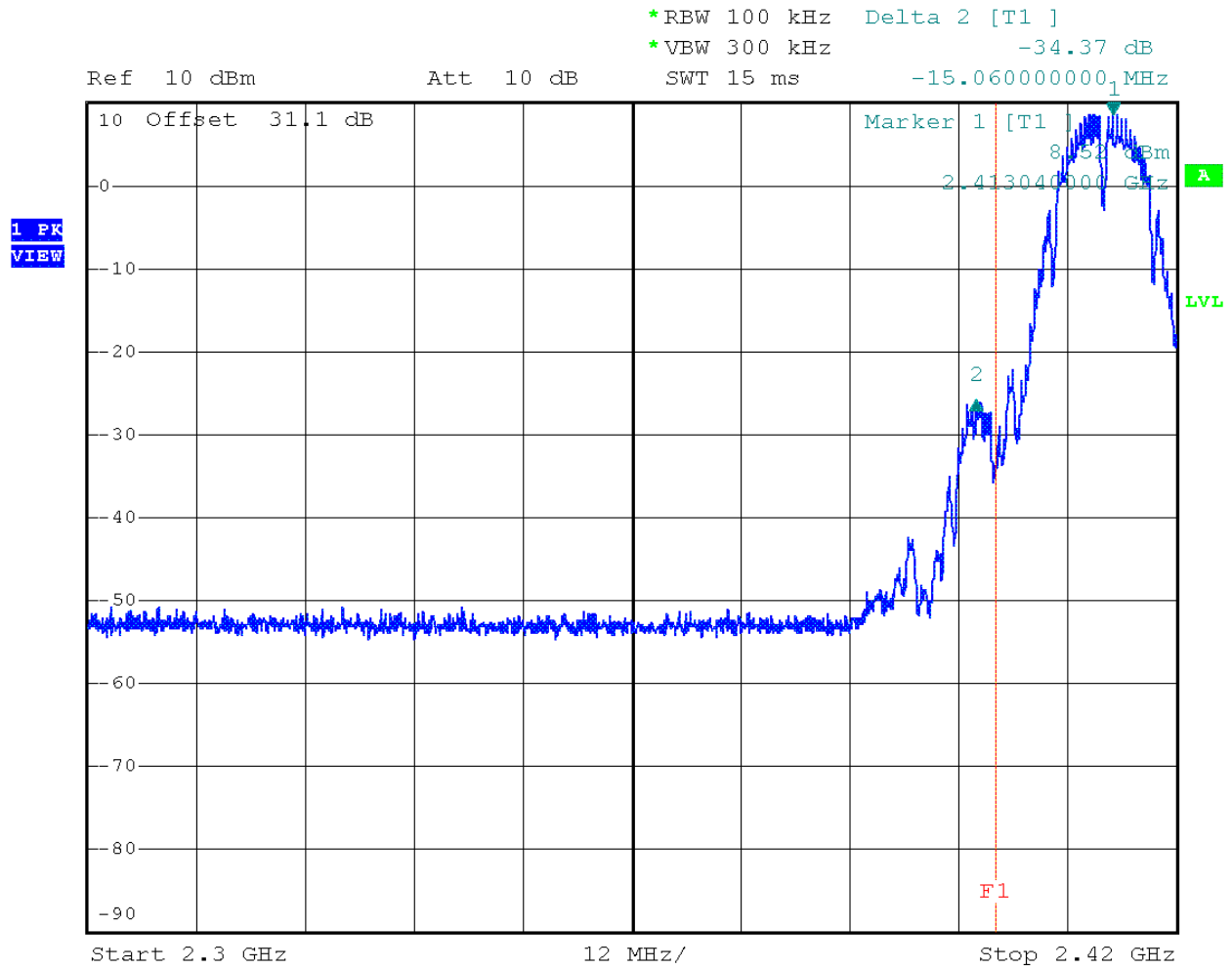
Plot 4.8
Tx @ 2437MHz 802.11n



Plot 4.9
Tx @ 2462MHz 802.11n

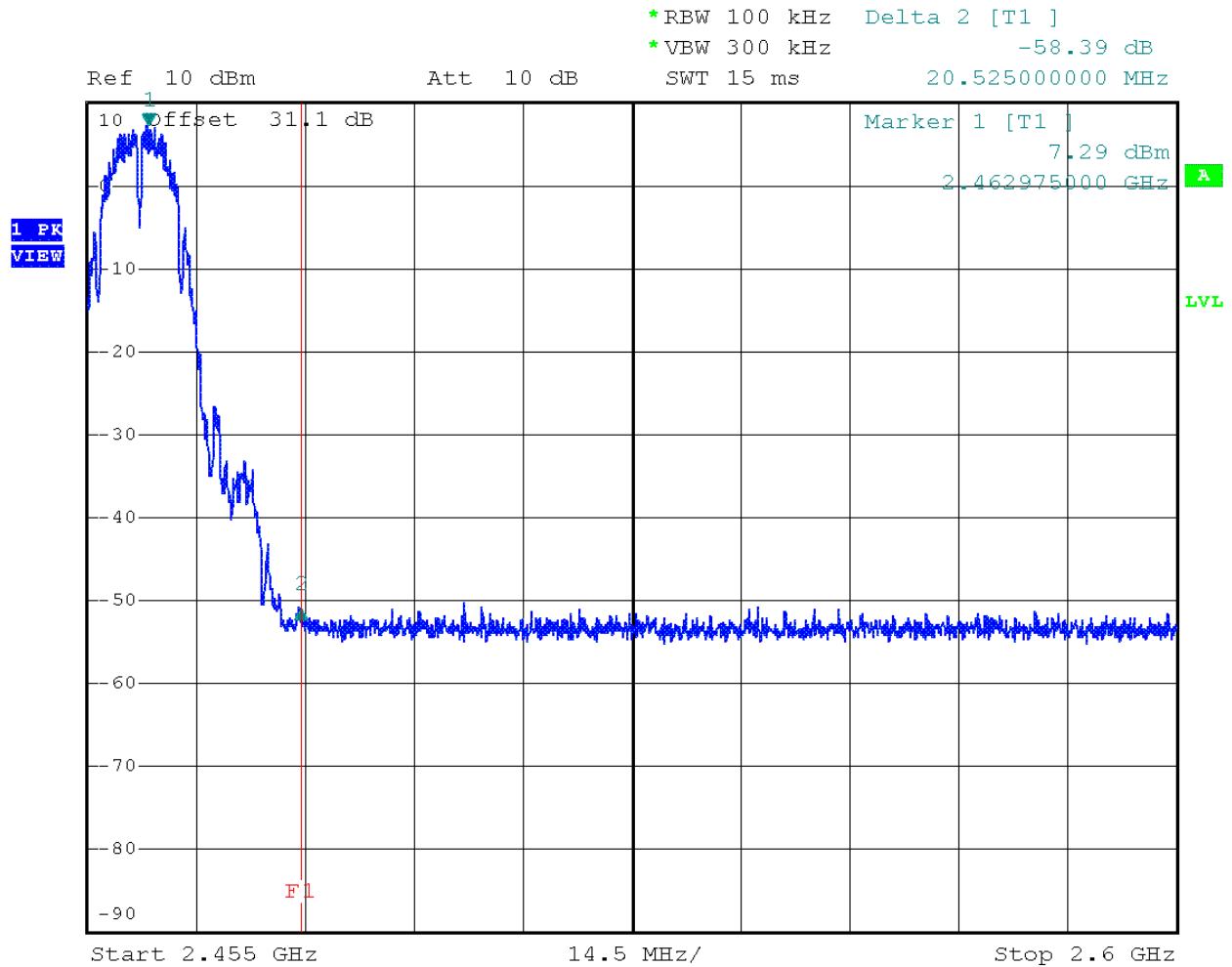


Plot 4.10
Conducted Band Edge, Tx @ 2412MHz 802.11b



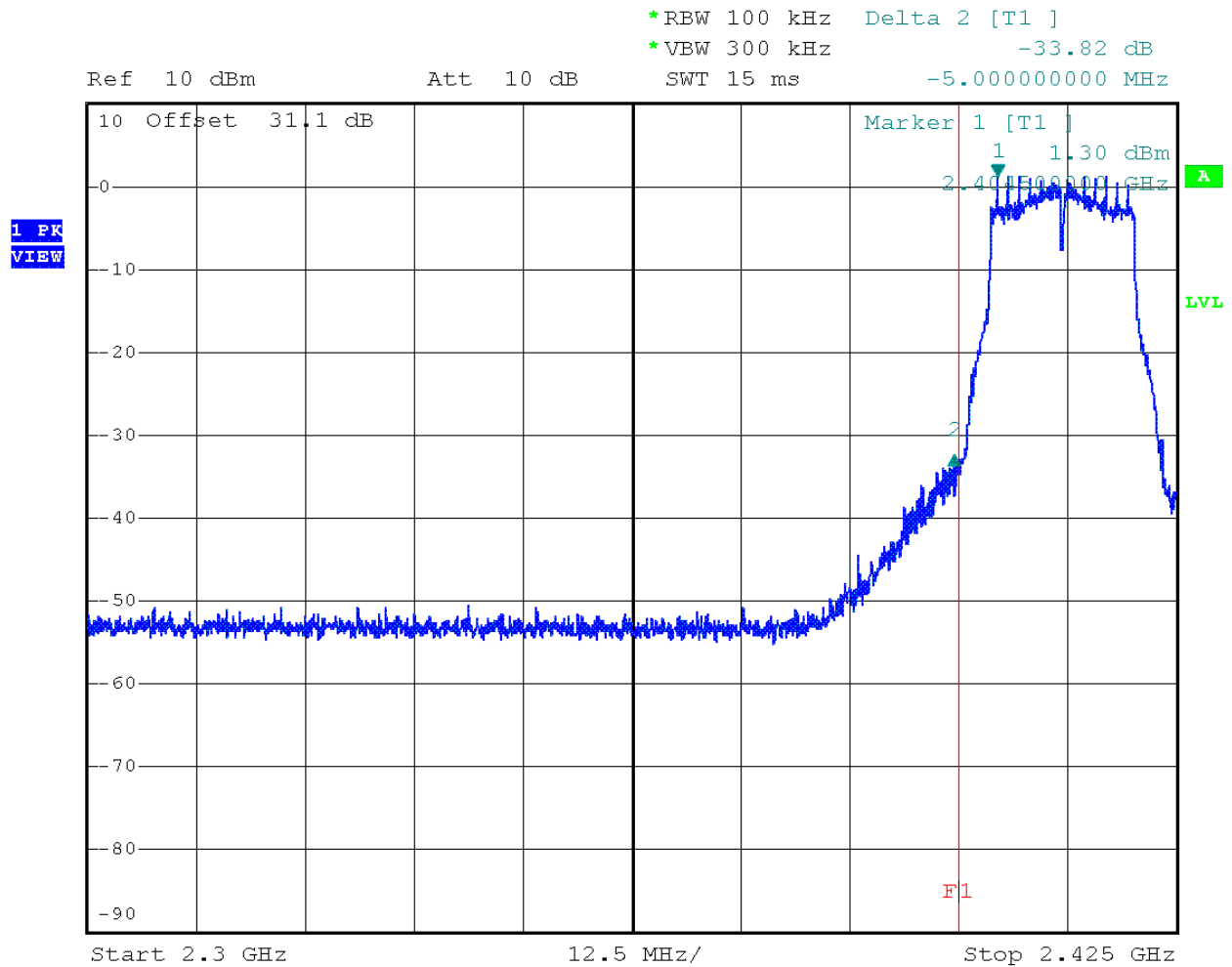
Date: 18.SEP.2018 14:29:02

Plot 4.11
Conducted Band Edge, Tx @ 2462MHz 802.11b



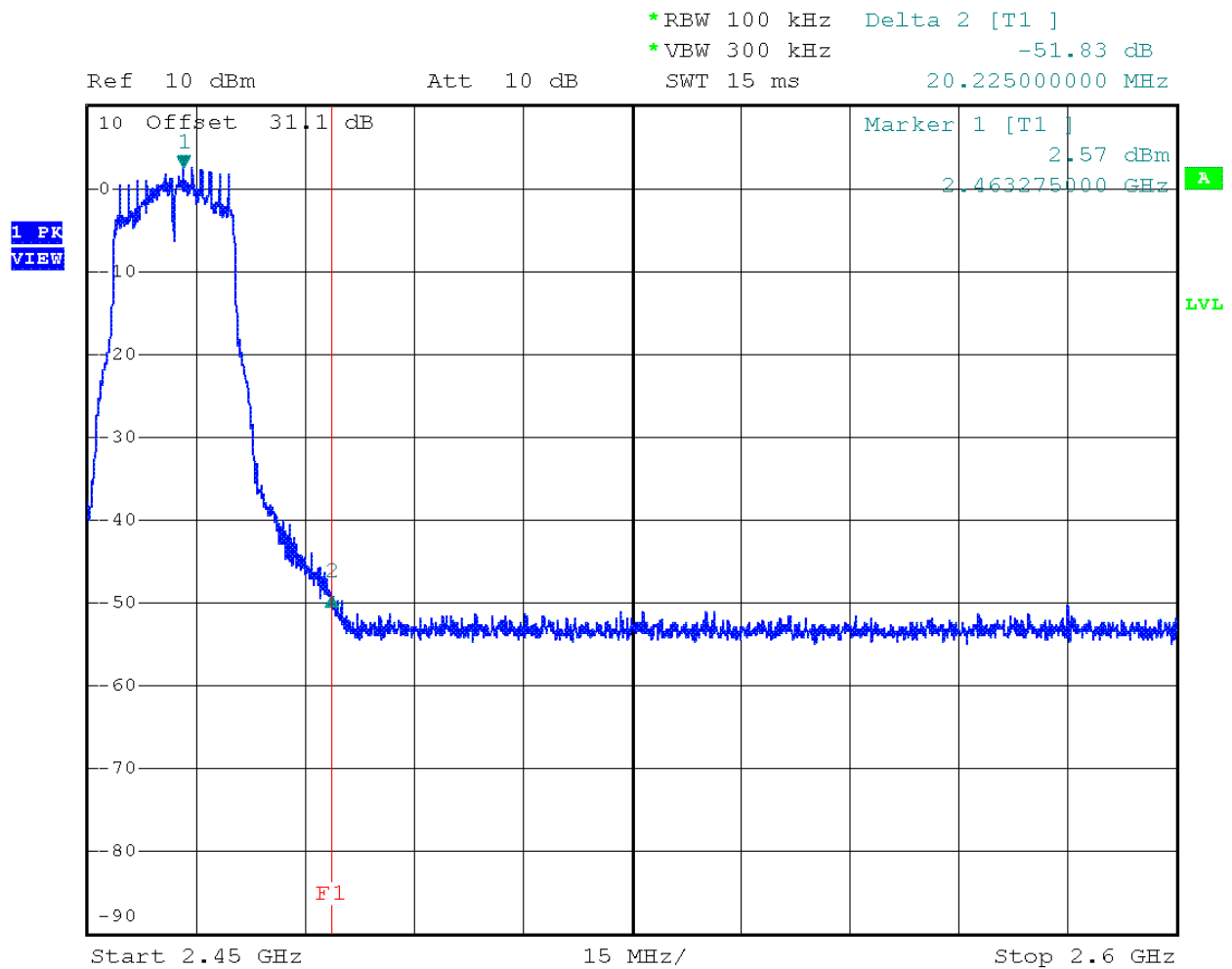
Date: 18.SEP.2018 14:31:11

Plot 4.12
Conducted Band Edge, Tx @ 2412MHz 802.11g



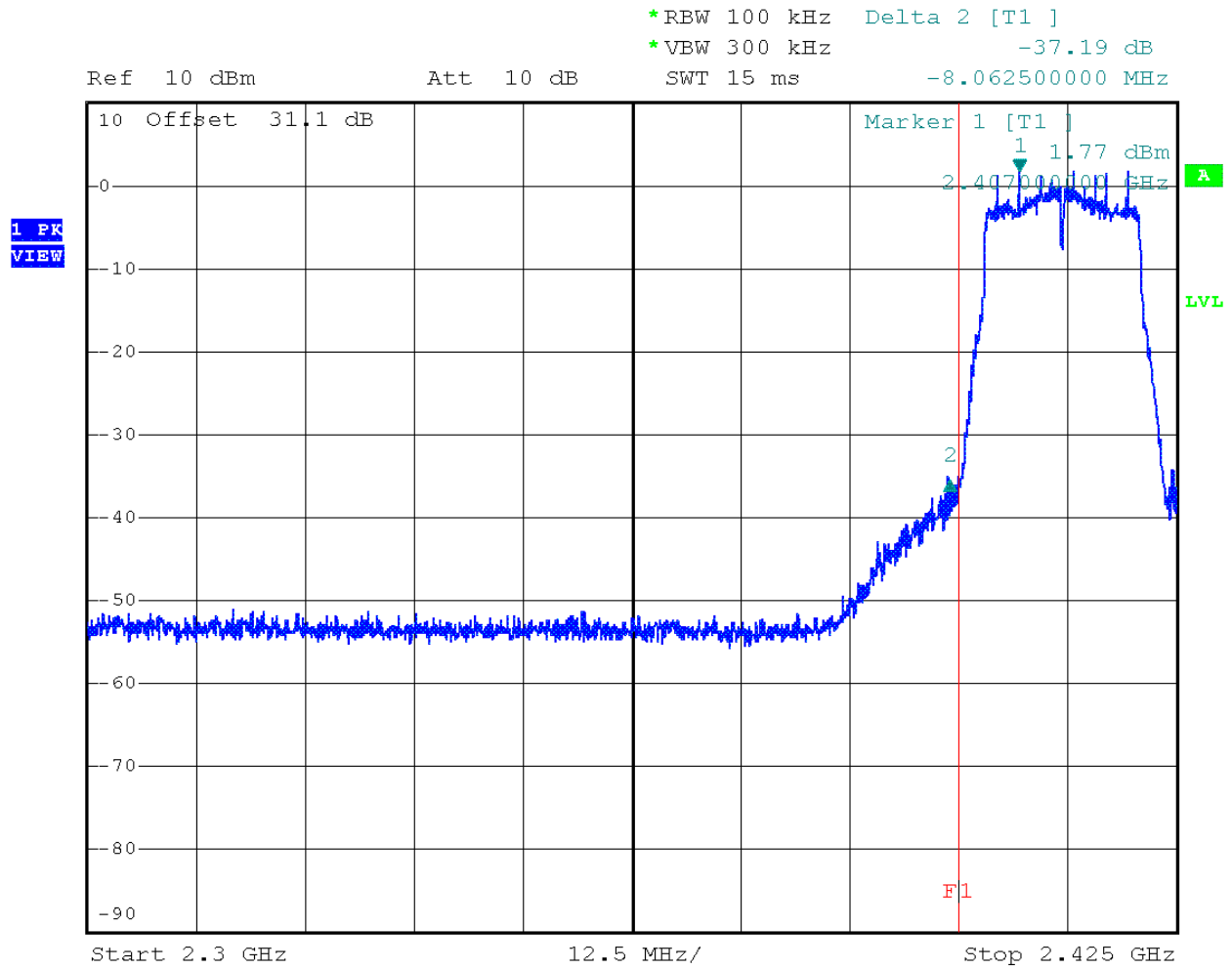
Date: 20.SEP.2018 14:24:08

Plot 4.13
Conducted Band Edge, Tx @ 2462MHz 802.11g



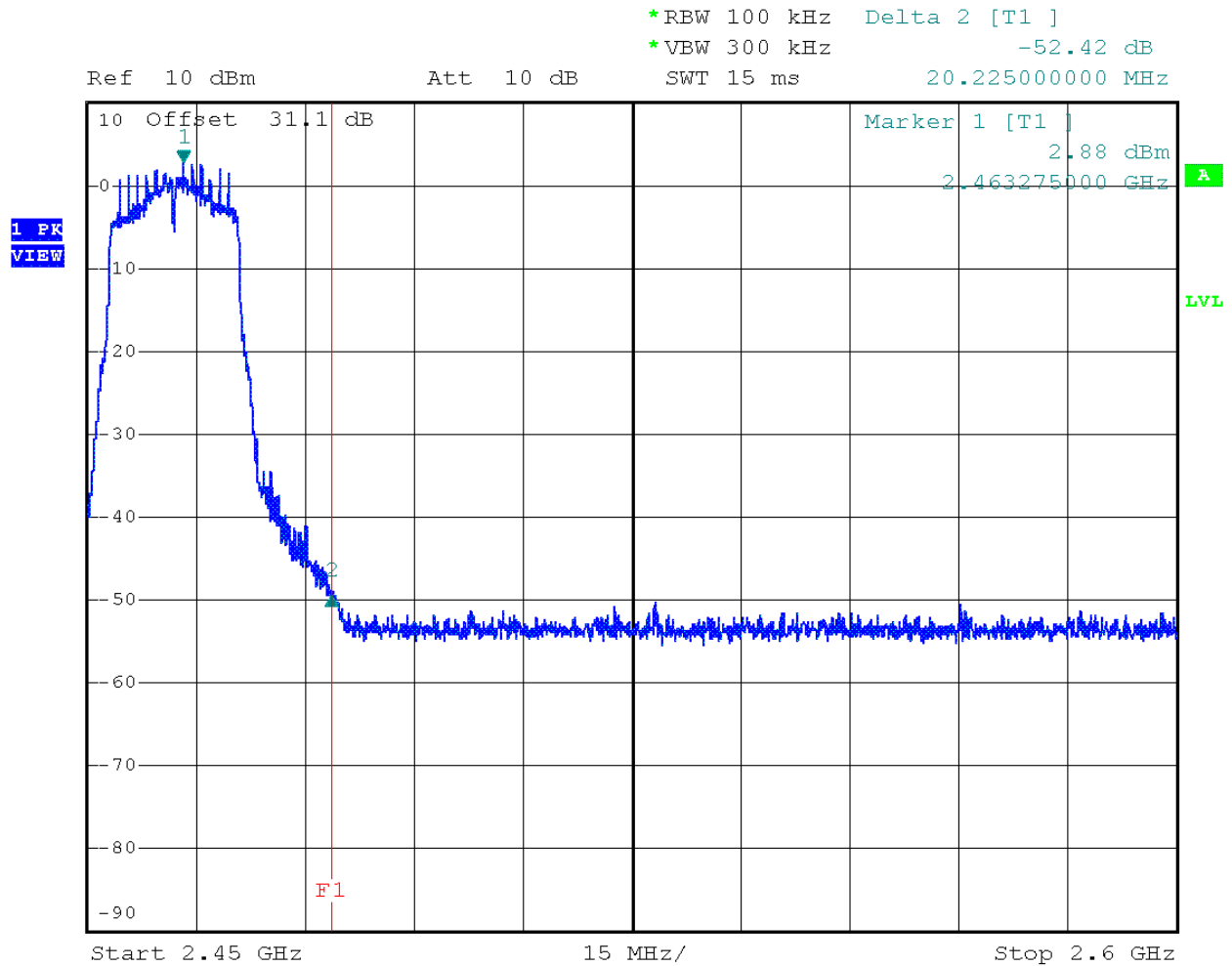
Date: 20.SEP.2018 14:26:35

Plot 4.14
Conducted Band Edge, Tx @ 2412MHz 802.11n



Date: 19.SEP.2018 13:18:52

Plot 4.15
Conducted Band Edge, Tx @ 2462MHz 802.11n



Date: 19.SEP.2018 13:20:57

4.5 Transmitter Radiated Emissions & Antenna Port Emissions FCC Rule 15.247(d), 15.209, 15.205; RSS-247

4.5.1 Requirement

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)).

For out of band radiated emissions (except for frequencies in restricted bands), in any 100 kHz bandwidths outside the EUT pass-band, the RF power shall be at least 20dB (peak) or 30 dB (average) below that of the maximum in-band 100 kHz emissions.

4.5.2 Procedure – Radiated Emissions

Radiated emission measurements were performed from 30 MHz to 25 GHz according to the procedure described in ANSI C64.10. Spectrum Analyzer Resolution Bandwidth is 100 kHz or greater for frequencies 30 MHz to 1000 MHz, 1 MHz for frequencies above 1000 MHz. Above 1000 MHz Peak and Average measurements were performed.

The EUT is placed on a plastic turntable that is 80 cm in height for below 1000MHz and 1.5m in height for above 1GHz. If the EUT attaches to peripherals, they are connected and operational (as typical as possible). During testing, all cables were manipulated to produce worst-case emissions. The signal is maximized through rotation. The antenna height and polarization are varied during the search for maximum signal level. The antenna height is varied from 1 to 4 meters.

Radiated emissions are taken at 3 meters for frequencies above 1 GHz and at 10 meters for frequencies below 1 GHz.

Measurements made from 1 GHz to 18GHz had a 2.4-2.5GHz notch filter in place. A preamp was used from 30MHz to 26GHz.

All measurements were made with a Peak Detector and compared to QP limits for 30MHz – 1GHz and Average limits for 1GHz – 26GHz.

Data is included of the worst-case configuration (the configuration which resulted in the highest emission levels).

4.5.3 Field Strength Calculation

Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$FS = RA + AF + CF - AG$; if measurement is performed at a distance other than specified in the rule, a Distance Correction Factor (DCF) shall be added.

Where FS = Field Strength in $dB(\mu V/m)$

RA = Receiver Amplitude (including preamplifier) in $dB(\mu V)$; AF = Antenna Factor in $dB(1/m)$

CF = Cable Attenuation Factor in dB ; AG = Amplifier Gain in dB

Assume a receiver reading of $52.0\text{ dB}(\mu V)$ is obtained. The antennas factor of $7.4\text{ dB}(1/m)$ and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted, giving field strength of $32\text{ dB}(\mu V/m)$. This value in $dB(\mu V/m)$ was converted to its corresponding level in $\mu V/m$.

$RA = 52.0\text{ dB}(\mu V)$

$AF = 7.4\text{ dB}(1/m)$

$CF = 1.6\text{ dB}$

$AG = 29.0\text{ dB}$

$FS = 52.0 + 7.4 + 1.6 - 29.0 = 32\text{ dB}(\mu V/m)$.

Level in $\mu V/m$ = Com

mon Antilogarithm $[(32\text{ dB}\mu V/m)/20] = 39.8\text{ }\mu V/m$.

Tested By	Test Date
Anderson Soungpanya	September 18 – 24, 2018

4.5.4 Antenna-port conducted measurements

Antenna-port conducted measurements may also be used as an alternative to radiated measurements for demonstrating compliance in the restricted frequency bands. If conducted measurements are performed, then proper impedance matching must be ensured and an additional radiated test for cabinet/case spurious emissions is required.

4.5.6 General Procedure for conducted measurements in restricted bands

a) Measure the conducted output power (in dBm) using the detector specified for determining quasi-peak, peak, and average conducted output power, respectively.

b) Add the maximum transmit antenna gain (in dBi) to the measured output power level to determine the EIRP level (see 12.2.5 for guidance on determining the applicable antenna gain)

c) Add the appropriate maximum ground reflection factor to the EIRP level (6 dB for frequencies ≤ 30 MHz, 4.7 dB for frequencies between 30 MHz and 1000 MHz, inclusive and 0 dB for frequencies > 1000 MHz).

d) For devices with multiple antenna-ports, measure the power of each individual chain and sum the EIRP of all chains in linear terms (*e.g.*, Watts, mW).

e) Convert the resultant EIRP level to an equivalent electric field strength using the following relationship:

$$E = \text{EIRP} - 20\log D + 104.8 + \text{DCF} \quad (\text{DCF for Average measurements})$$

where:

E = electric field strength in dB μ V/m,

EIRP = equivalent isotropic radiated power in dBm

D = specified measurement distance in meters.

DCF = Duty Cycle Correction Factor

f) Compare the resultant electric field strength level to the applicable limit.

g) Perform radiated spurious emission test

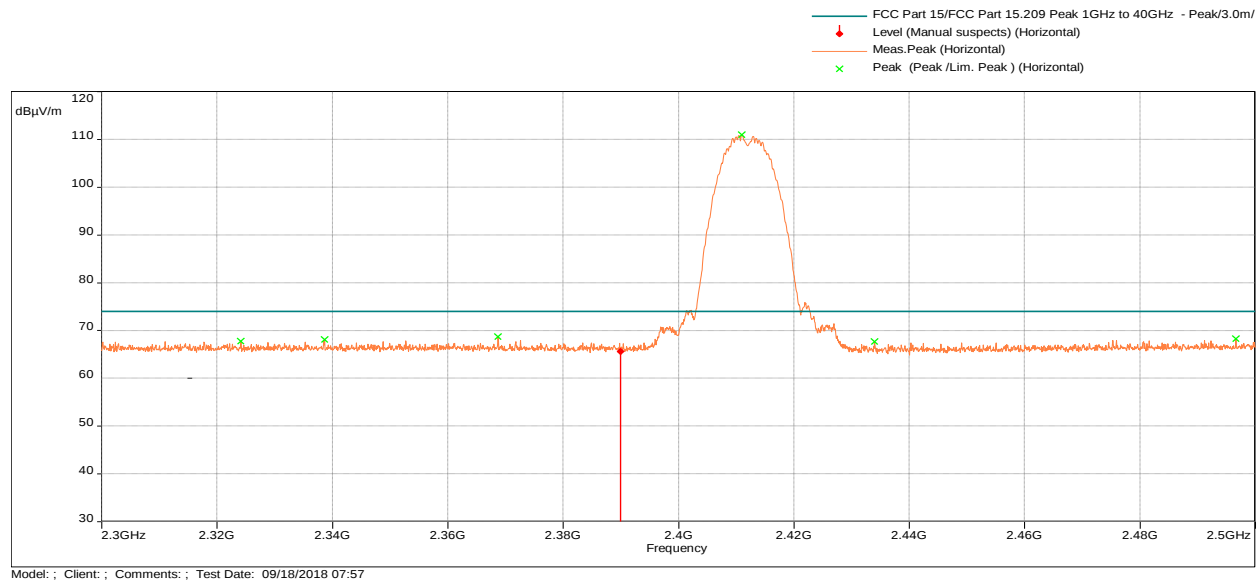
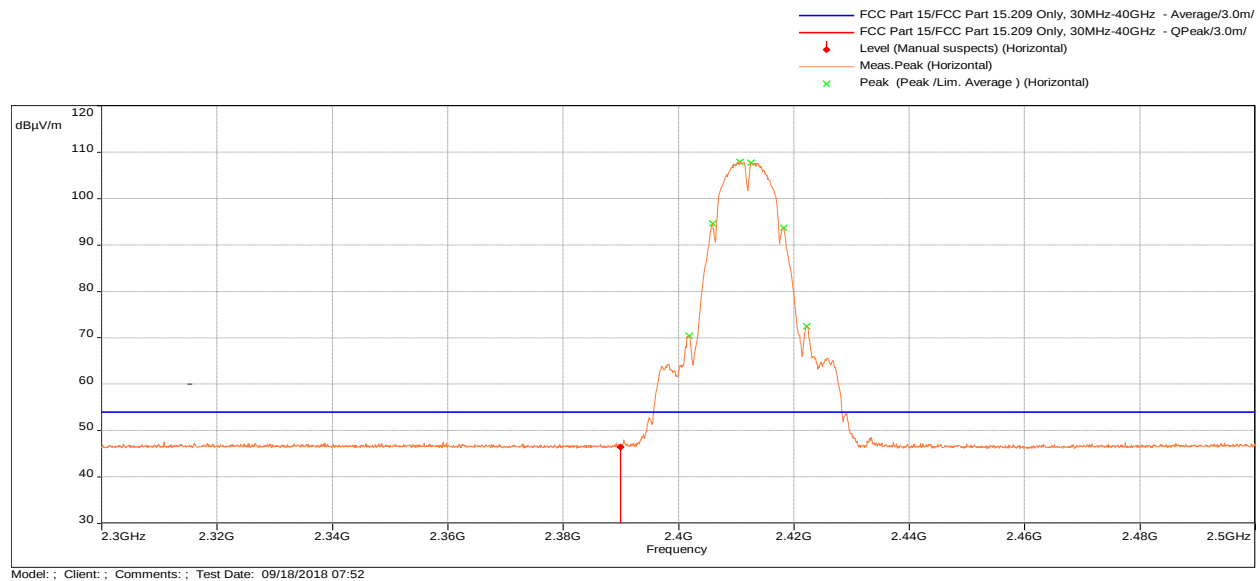
4.5.7 Test Results

The data on the following pages list the significant emission frequencies, the limit and the margin of compliance.

Radiated emission measurements were performed up to 25GHz. No Emissions were identified when scanned from 18-25 GHz.

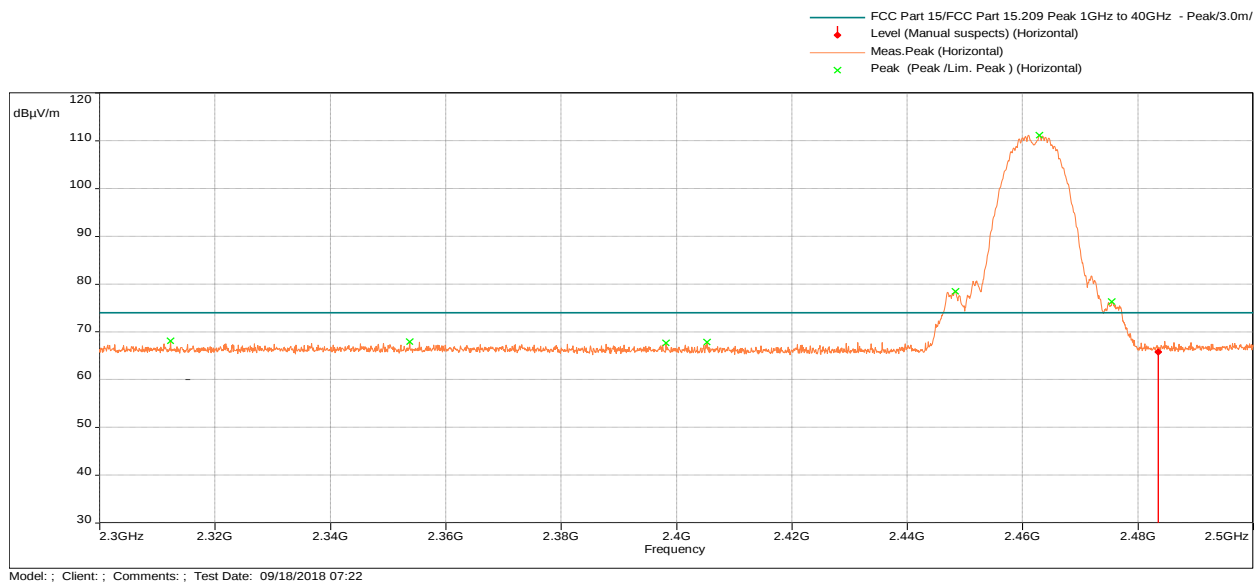
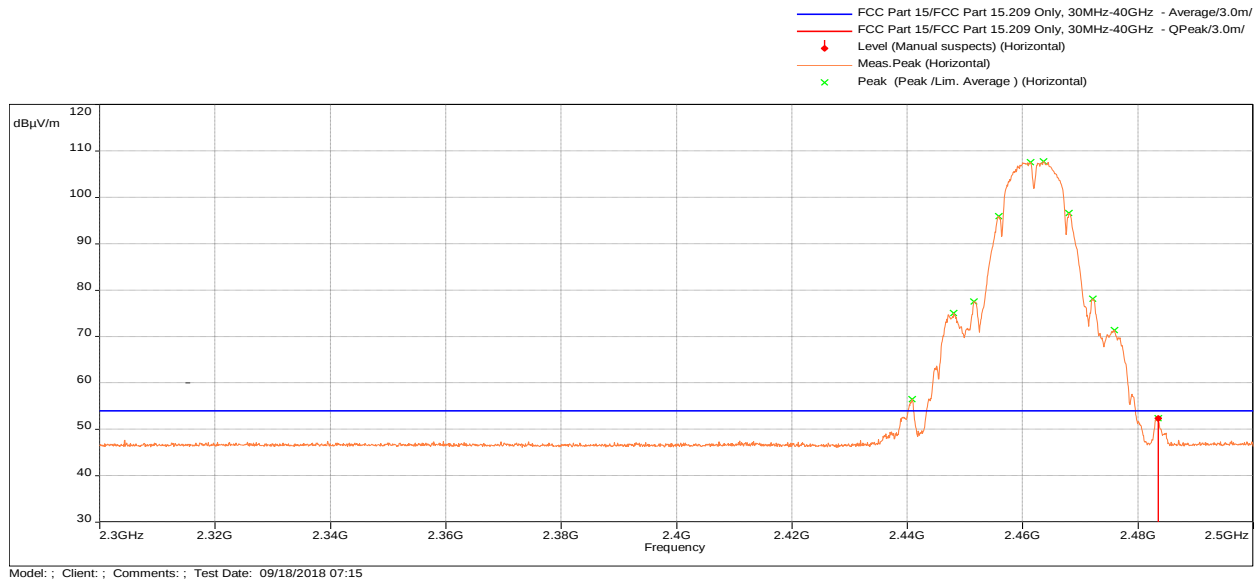
Test Results: 15.209/15.205 Radiated Restricted Band Emissions

Out-of-Band Spurious Emissions at the Band Edge - 802.11b, 2412 MHz



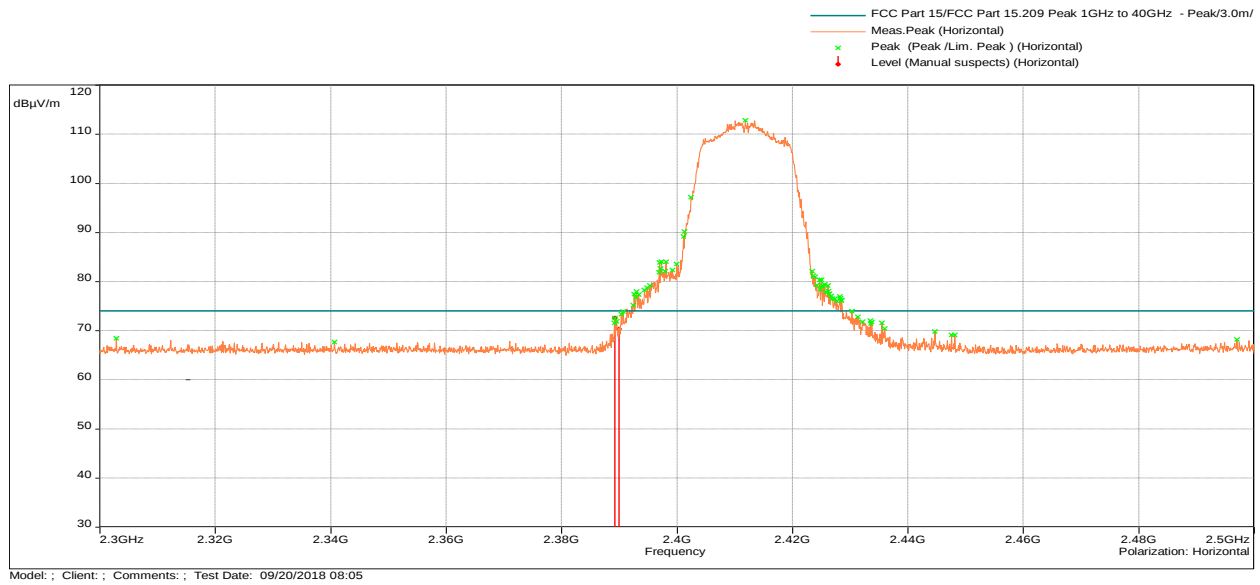
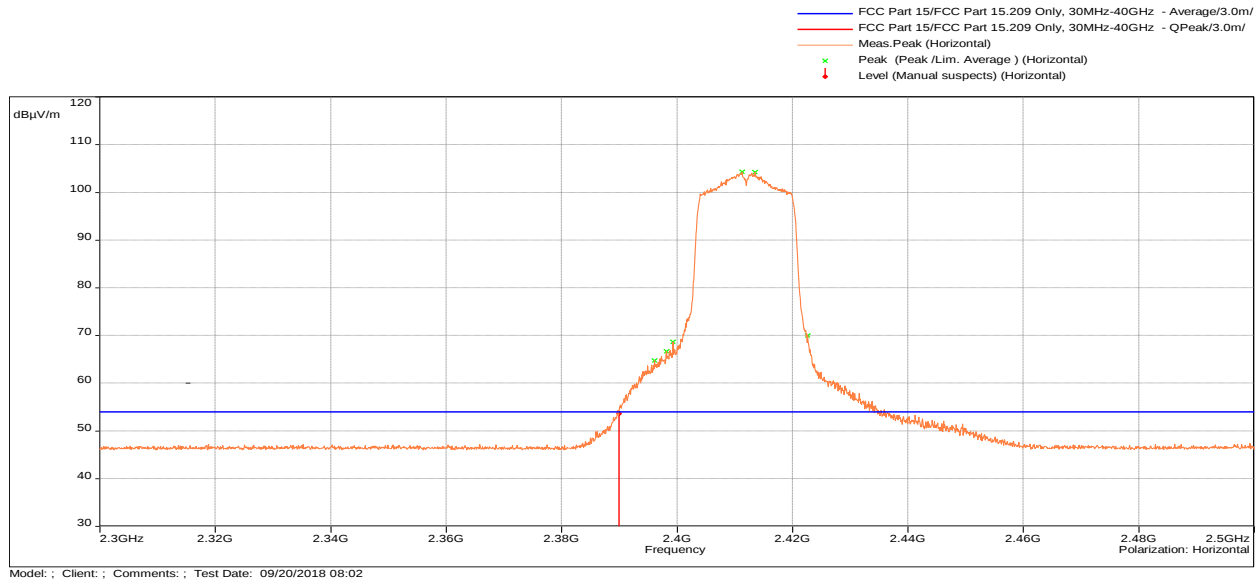
Frequency	Detector	Amplitude	Margin	Limit	Height	Angle
(MHz)		(dBμV/m)	(dB)	(dBμV/m)	(m)	(°)
2390.0	Average	46.40	-7.60	54	1.27	296
2390.0	Peak	65.55	-8.45	74		

Out-of-Band Spurious Emissions at the Band Edge - 802.11b, 2462 MHz



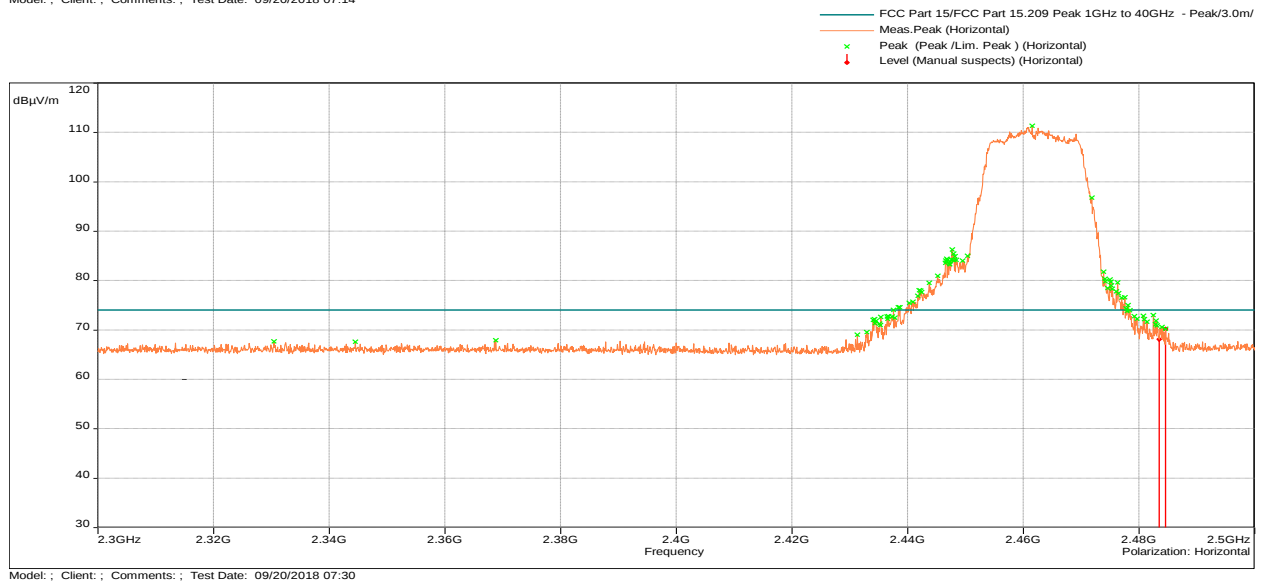
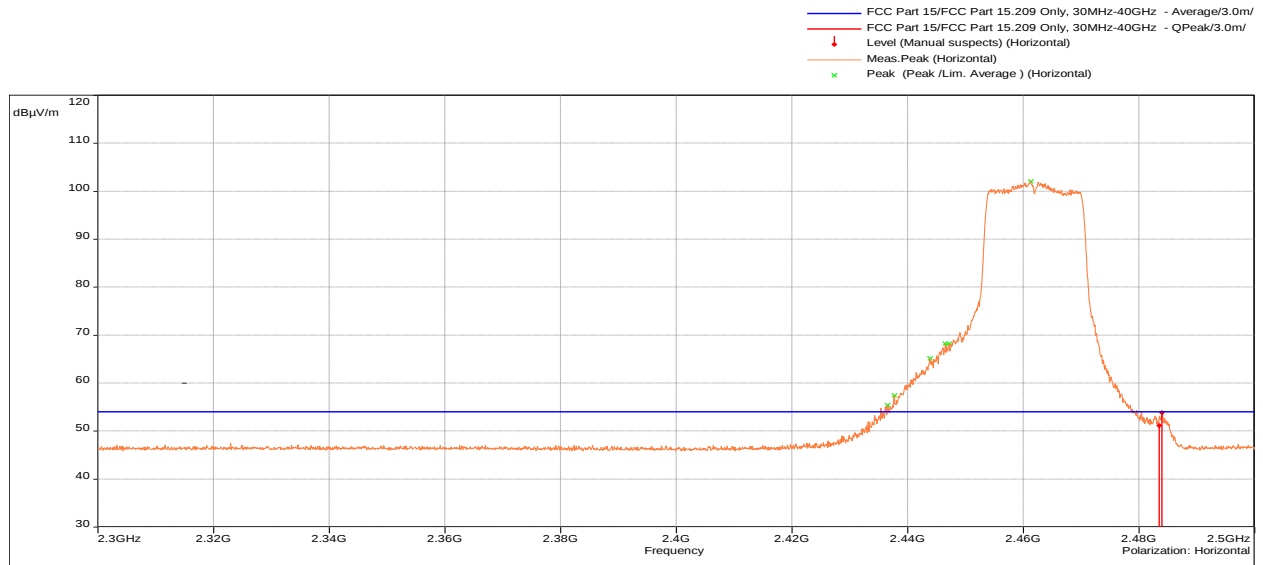
Frequency (MHz)	Detector	Amplitude (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Height (m)	Angle (°)
2483.5	Average	52.37	-1.63	54	1.26	53
2483.5	Peak	65.76	-8.24	74		

Out-of-Band Spurious Emissions at the Band Edge - 802.11g, 2412 MHz



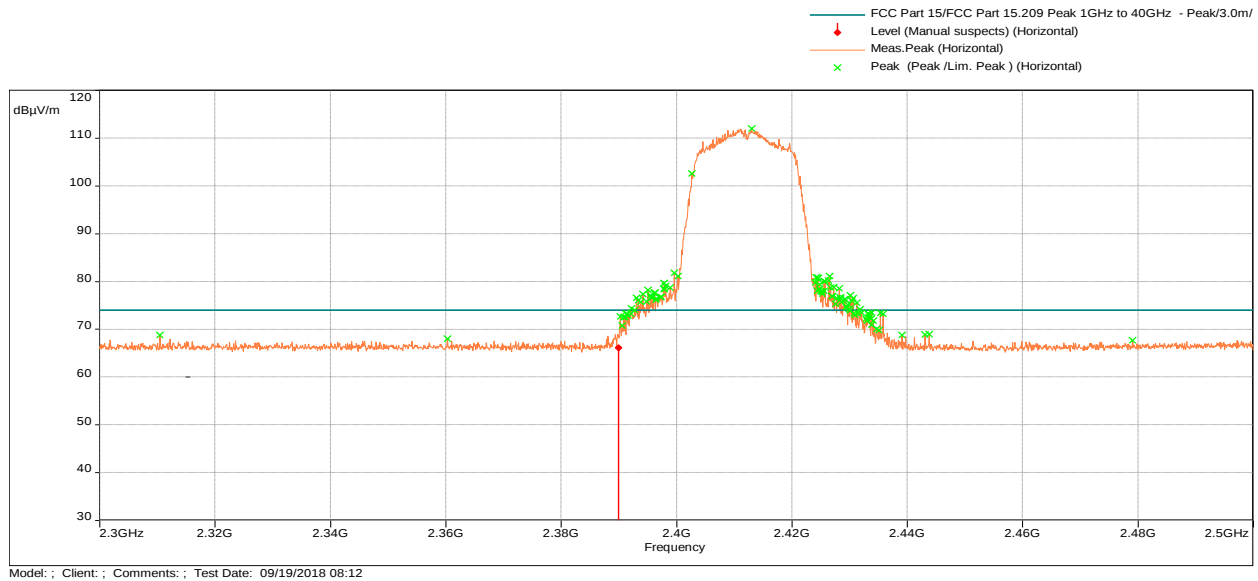
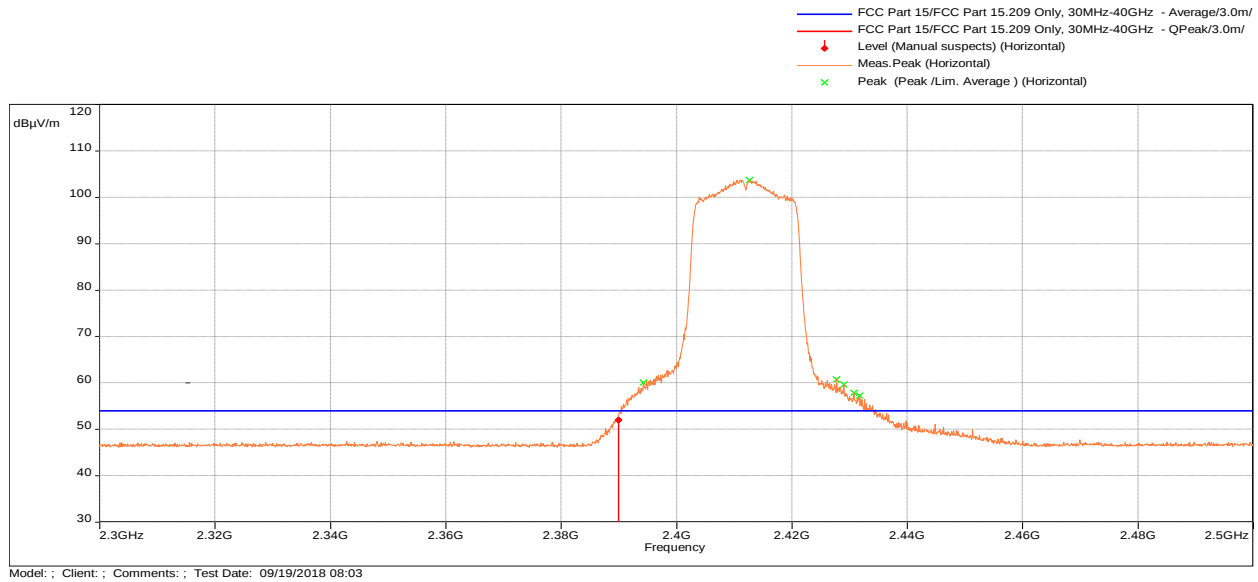
Frequency (MHz)	Detector	Amplitude (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Height (m)	Angle (°)
2390.0	Average	53.61	-0.39	54	1.48	70
2390.0	Peak	70.34	-3.66	74		
2389.3	Peak	72.53	-1.47	74		

Out-of-Band Spurious Emissions at the Band Edge - 802.11g, 2462 MHz



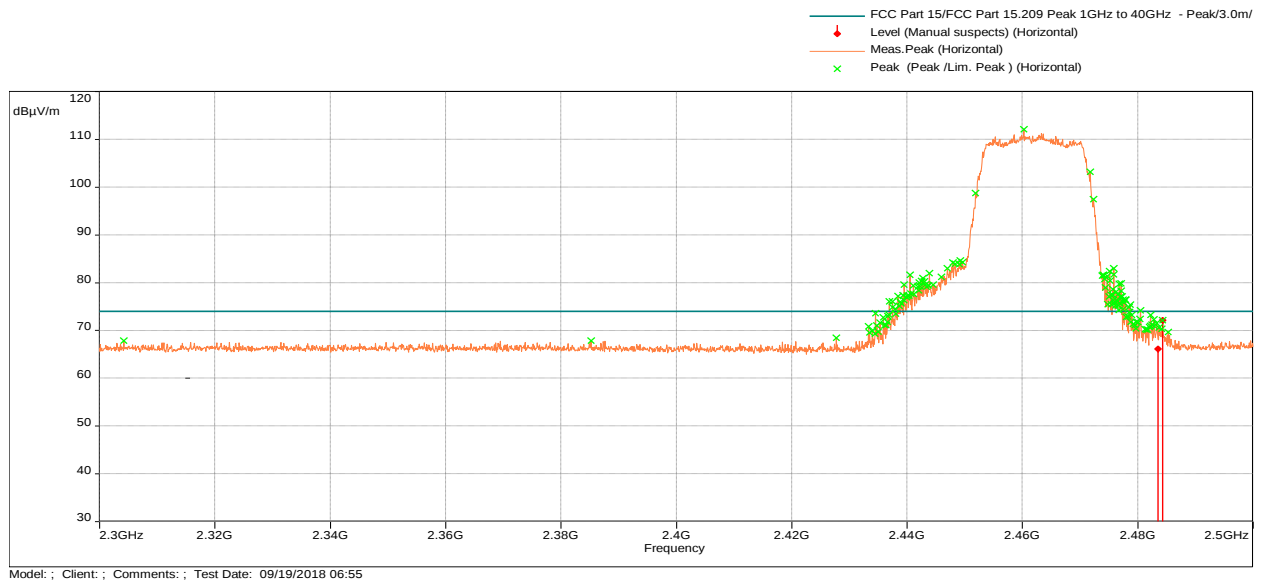
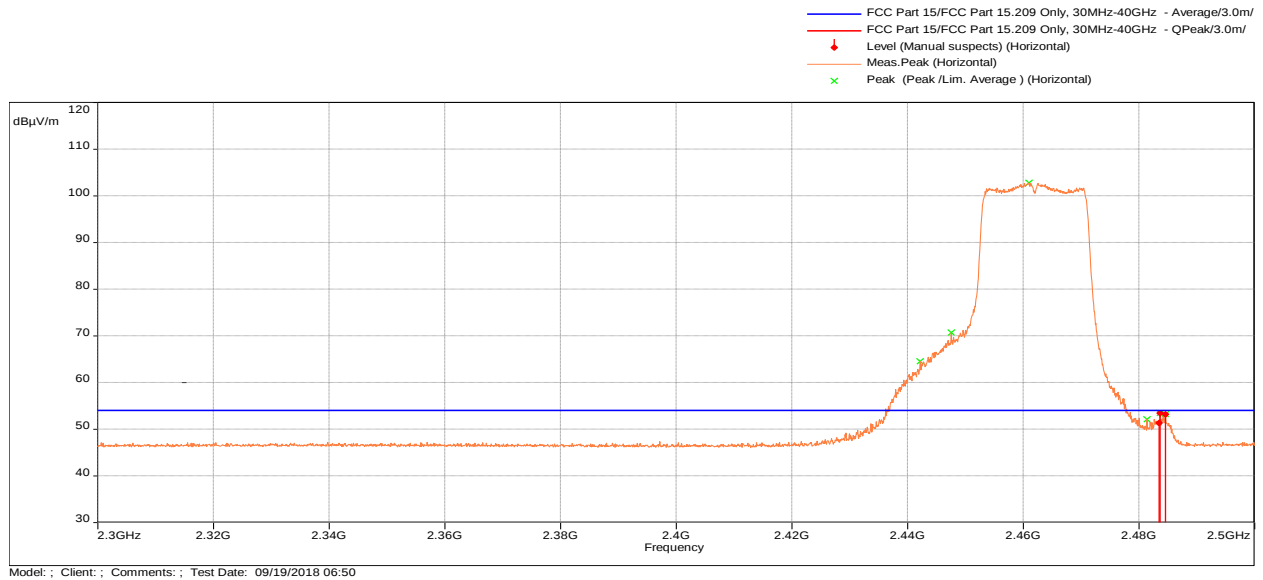
Frequency (MHz)	Detector	Amplitude (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Height (m)	Angle (°)
2484.0	Average	53.84	-0.16	54	1.42	100
2483.5	Average	51.14	-2.86	54		
2483.5	Peak	68.07	-5.93	74		
2484.6	Peak	70.19	-3.87	74		

Out-of-Band Spurious Emissions at the Band Edge - 802.11n, 2412 MHz



Frequency (MHz)	Detector	Amplitude (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Height (m)	Angle (°)
2390.0	Average	51.97	-2.03	54	1.50	58
2390.0	Peak	66.12	-7.88	74		

Out-of-Band Spurious Emissions at the Band Edge - 802.11n, 2462 MHz

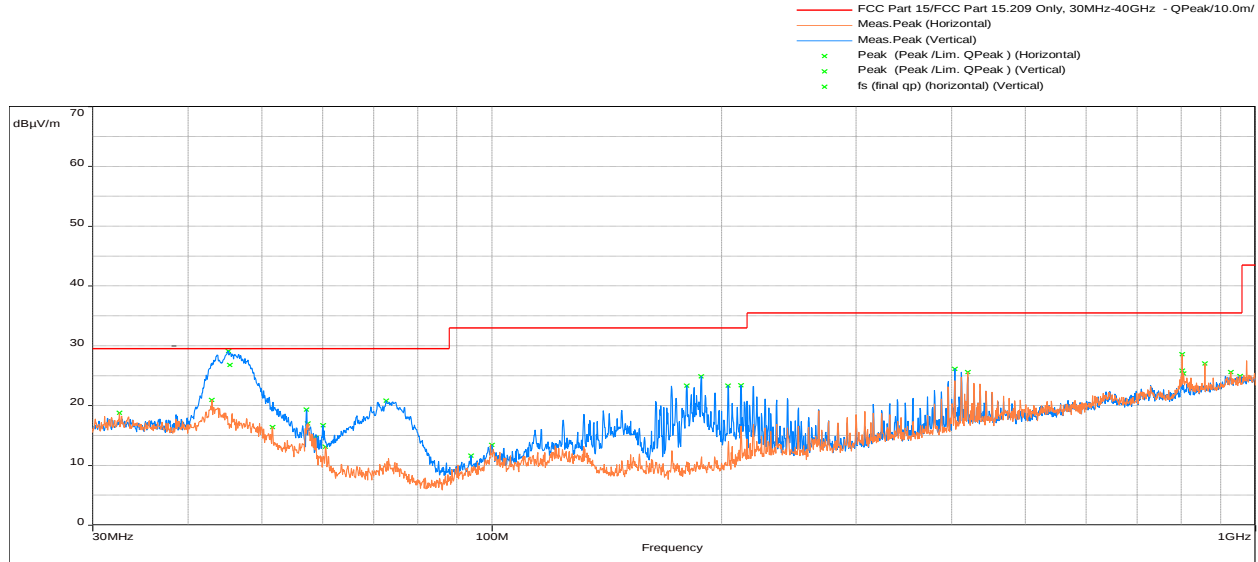


Frequency (MHz)	Detector	Amplitude (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Height (m)	Angle (°)
2483.6	Average	53.39	-0.61	54	1.30	43
2483.7	Average	53.18	-0.82	54		
2483.5	Average	51.31	-2.69	54		
2483.5	Peak	66.09	-7.91	74		
2484.3	Peak	72.09	-1.91	74		

Out-of-Band Radiated Spurious Emissions (Charge Mode)

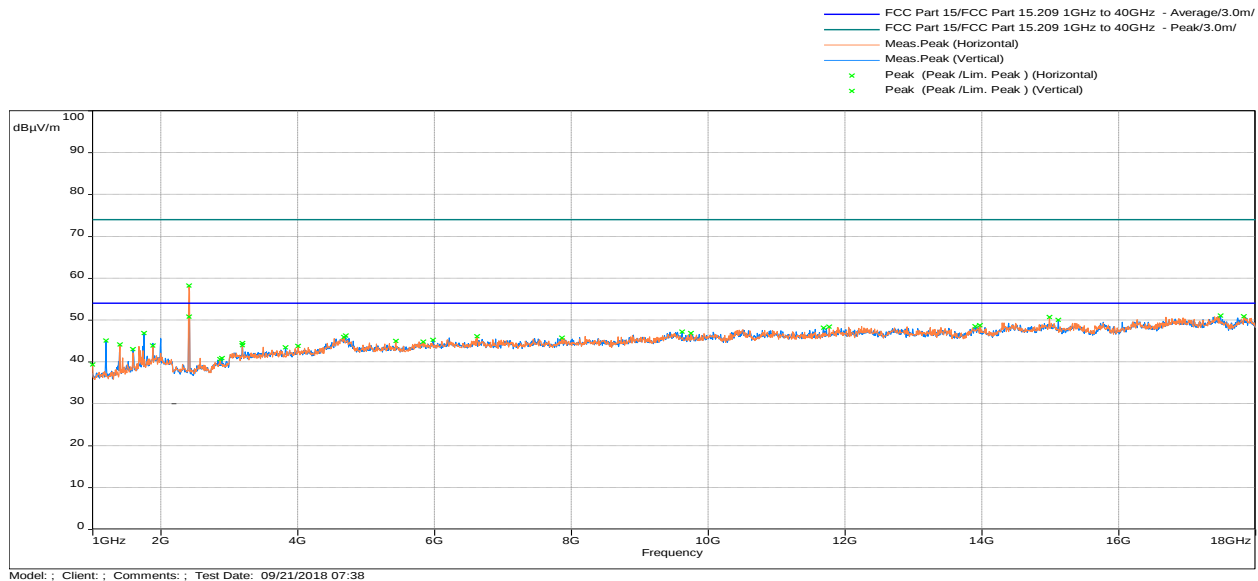
Test Results: 15.209 Radiated Spurious Emissions Low Channel, Tx at 802.11b 2412MHz

Out-of-Band Radiated Spurious Emissions - 30 MHz to 1000 MHz



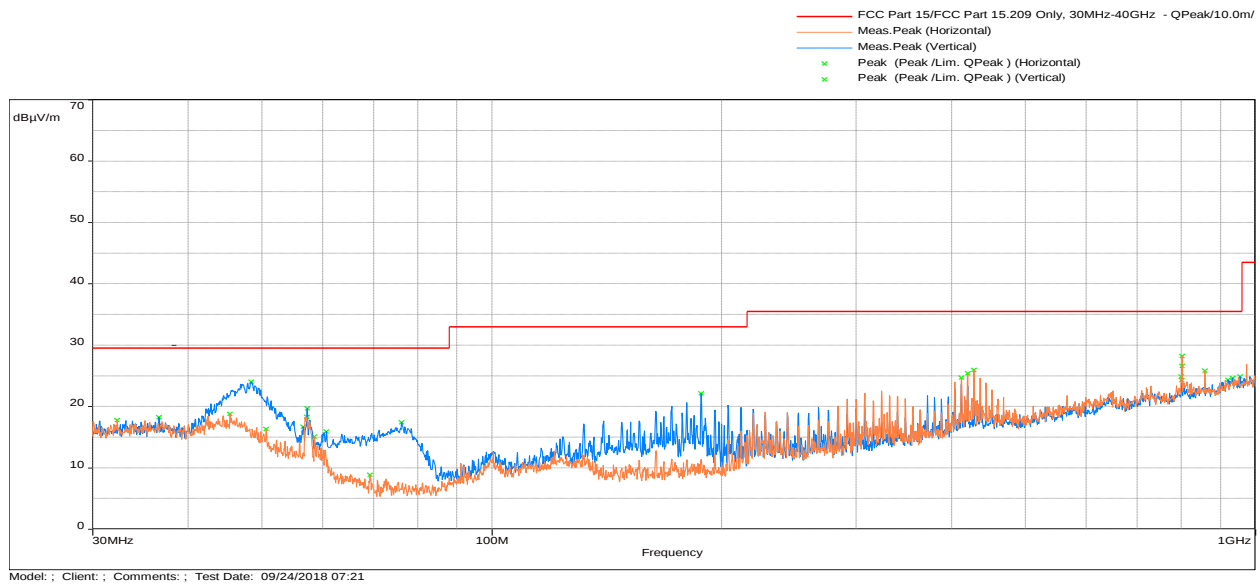
Frequency (MHz)	FS@10m (dBμV/m)	Limit@10m (dB(uV/m))	Margin (dB)	Azimuth (deg)	Height (m)	Polarity	RA (dBuV)	Correction (dB)
45.380	26.79	29.5	-2.71	99	1.45	Vertical	36.65	-9.88

Radiated Spurious Emissions 1000 - 18000 MHz, Peak Scan vs Peak & Avg Limit

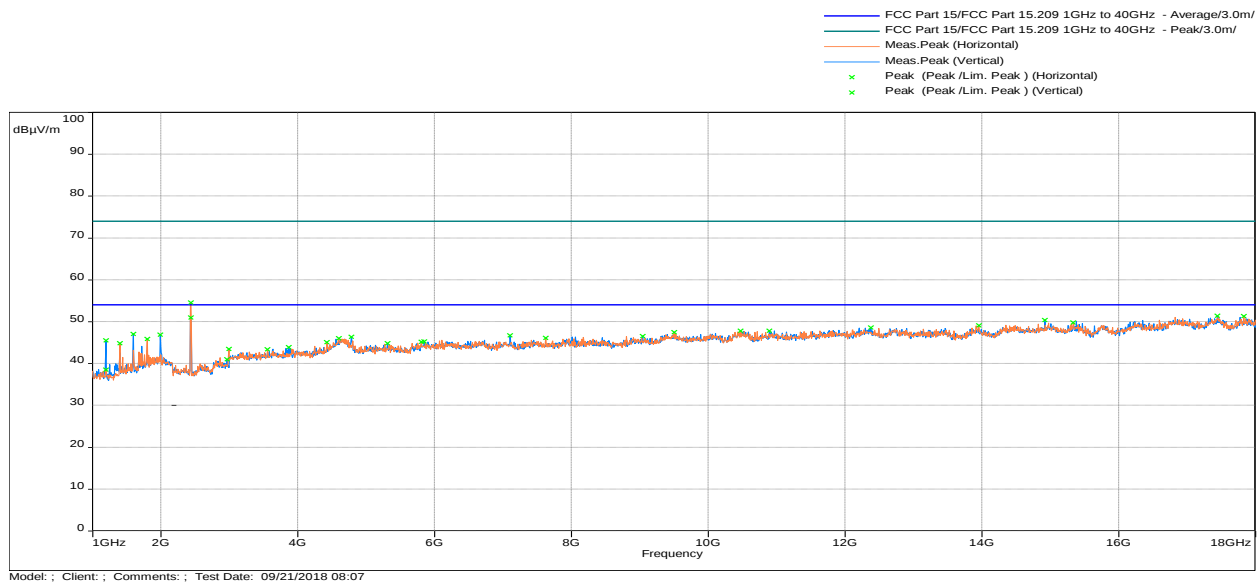


Test Results: 15.209 Radiated Spurious Emissions Low Channel, Tx at 802.11b 2437MHz

Out-of-Band Radiated Spurious Emissions - 30 MHz to 1000 MHz

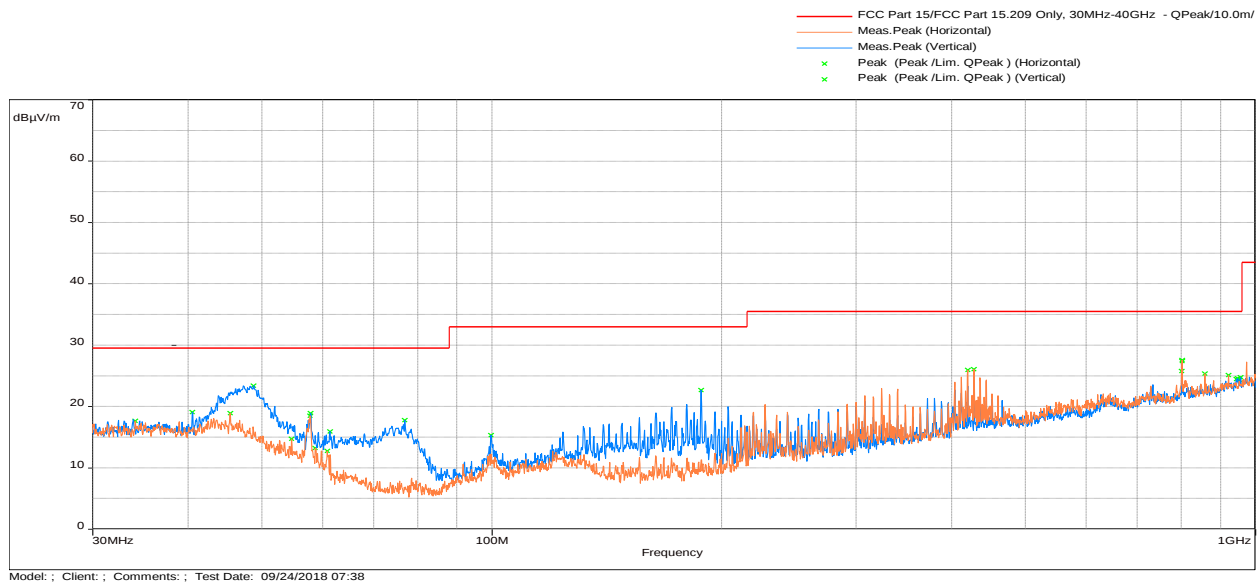


Radiated Spurious Emissions 1000 - 18000 MHz, Peak Scan vs Peak & Avg Limit

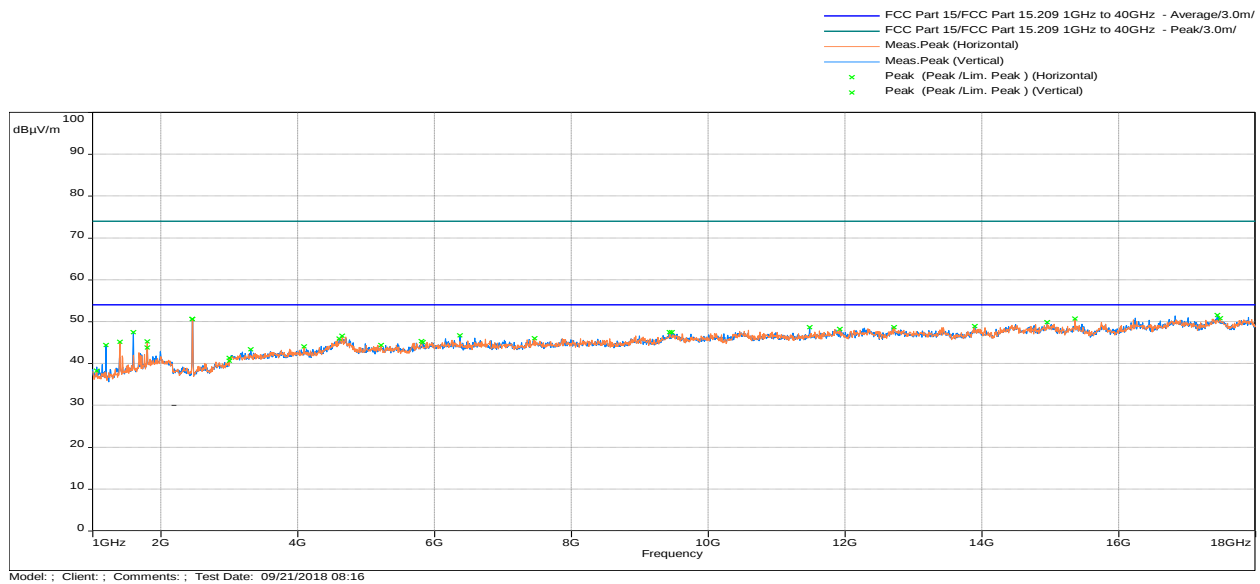


Test Results: 15.209 Radiated Spurious Emissions Low Channel, Tx at 802.11b 2462MHz

Out-of-Band Radiated Spurious Emissions - 30 MHz to 1000 MHz

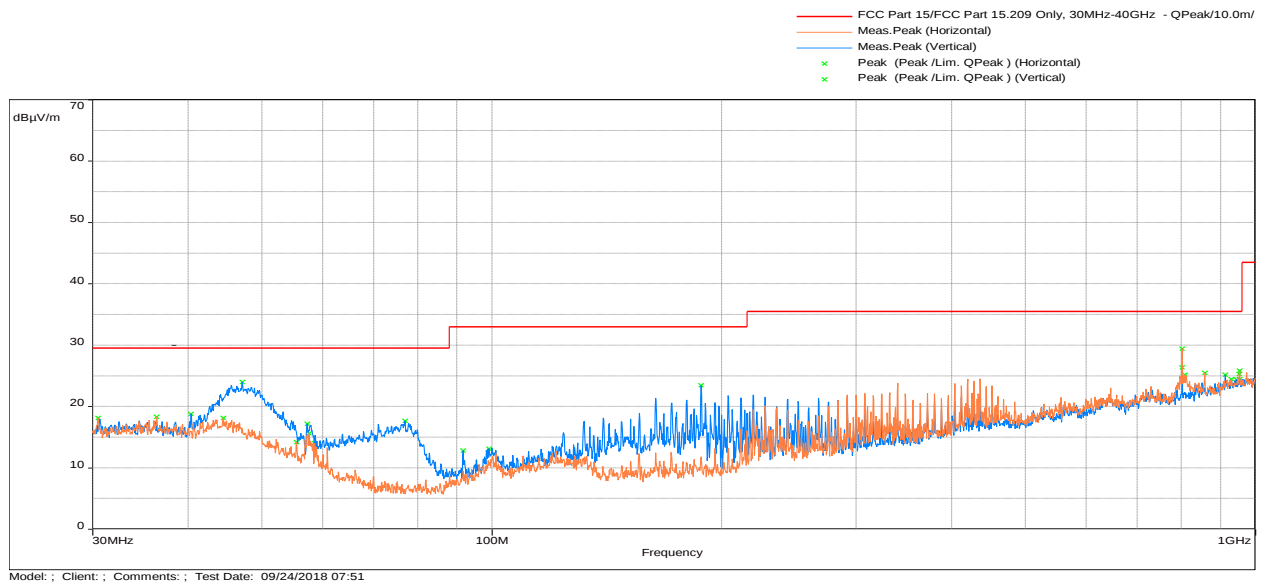


Radiated Spurious Emissions 1000 - 18000 MHz, Peak Scan vs Peak & Avg Limit

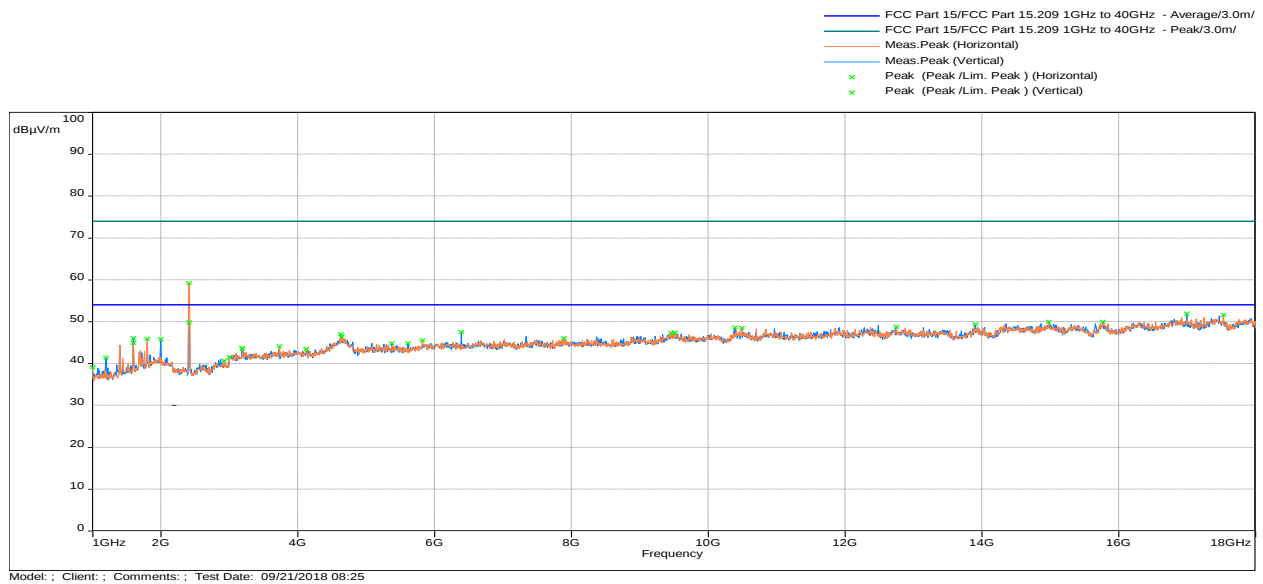


Test Results: 15.209 Radiated Spurious Emissions Low Channel, Tx at 802.11g 2412MHz

Out-of-Band Radiated Spurious Emissions - 30 MHz to 1000 MHz

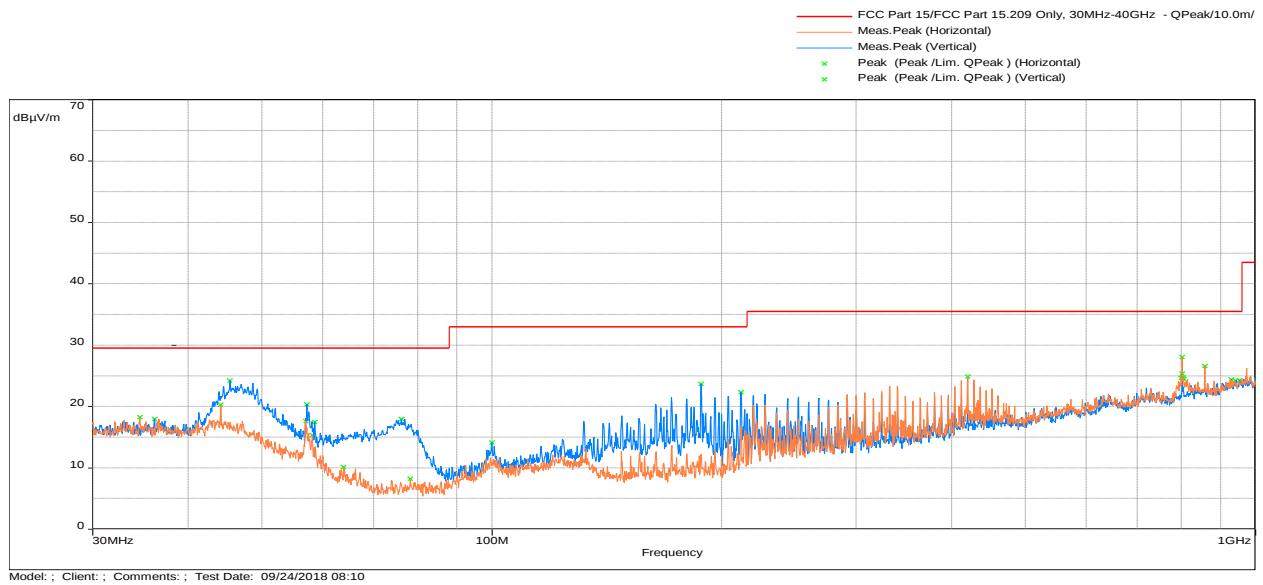


Radiated Spurious Emissions 1000 - 18000 MHz, Peak Scan vs Peak & Avg Limit

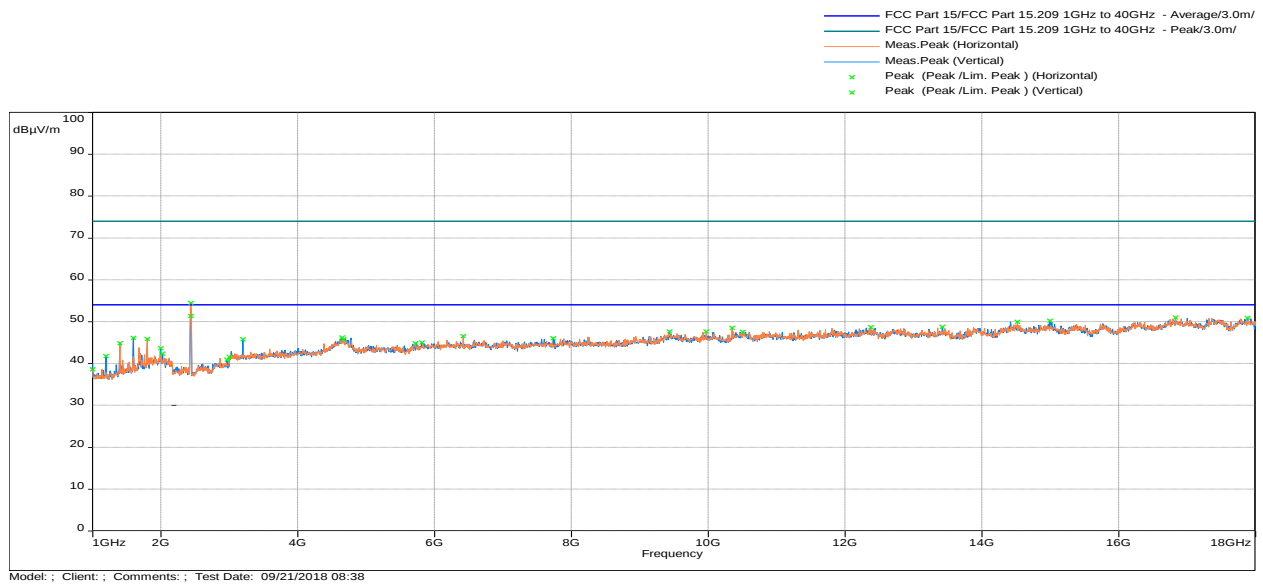


Test Results: 15.209 Radiated Spurious Emissions Low Channel, Tx at 802.11g 2437MHz

Out-of-Band Radiated Spurious Emissions - 30 MHz to 1000 MHz

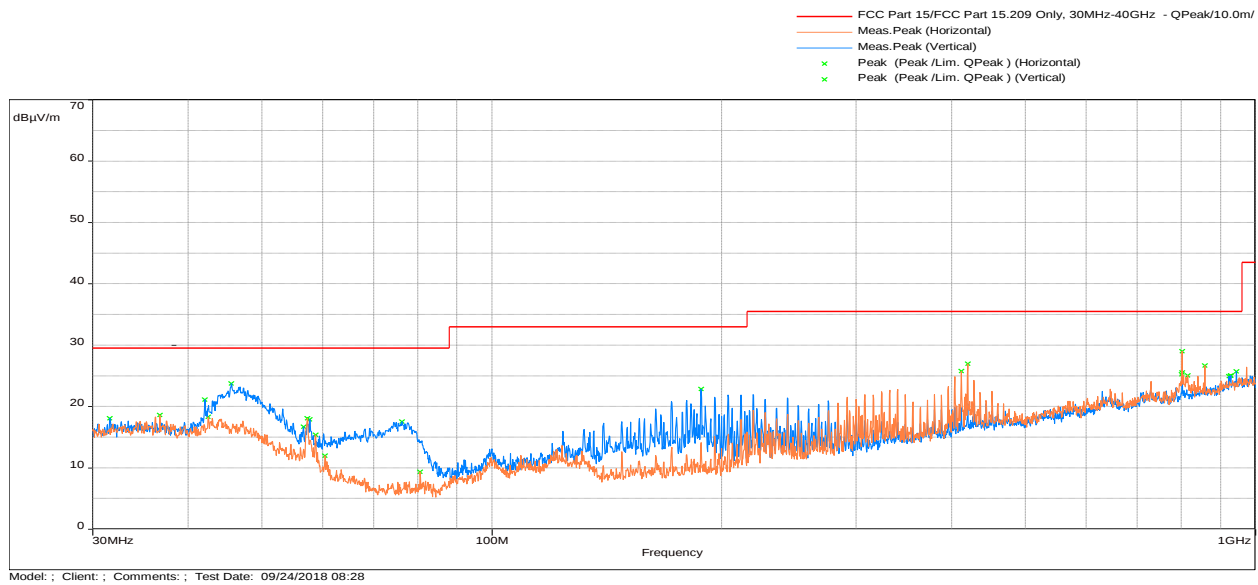


Radiated Spurious Emissions 1000 - 18000 MHz, Peak Scan vs Peak & Avg Limit

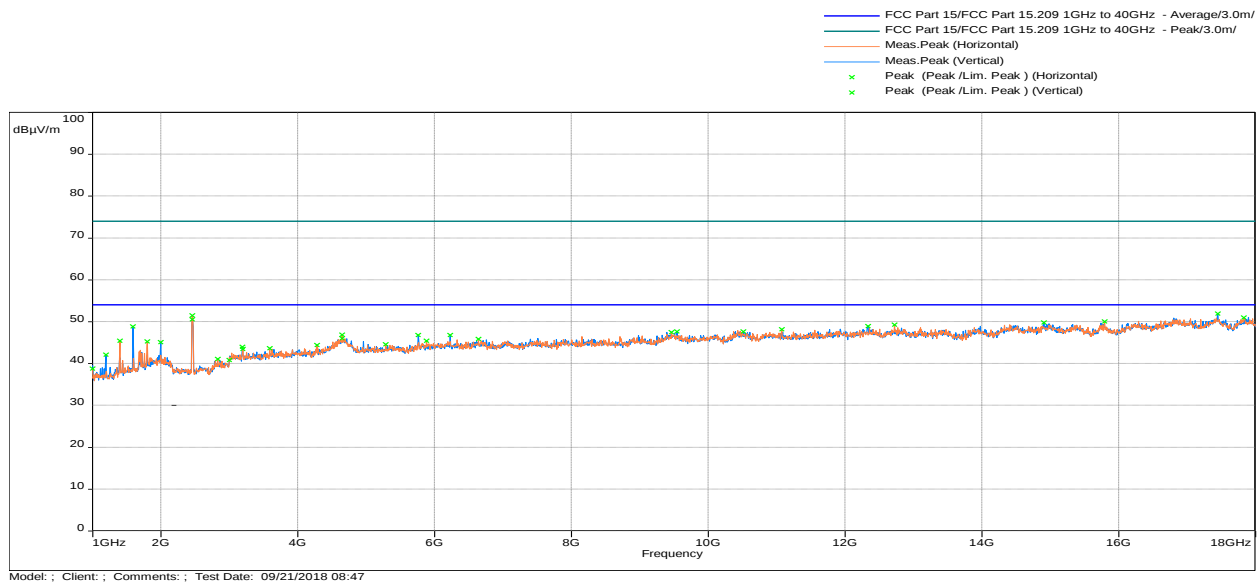


Test Results: 15.209 Radiated Spurious Emissions Low Channel, Tx at 802.11g 2462MHz

Out-of-Band Radiated Spurious Emissions - 30 MHz to 1000 MHz



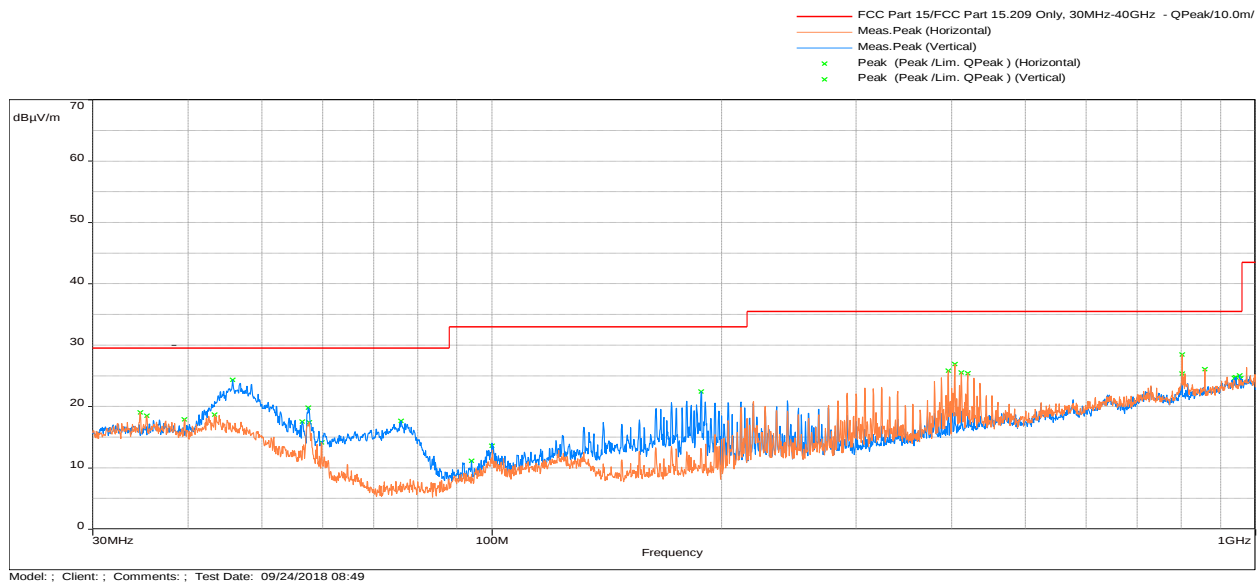
Radiated Spurious Emissions 1000 - 18000 MHz, Peak Scan vs Peak & Avg Limit



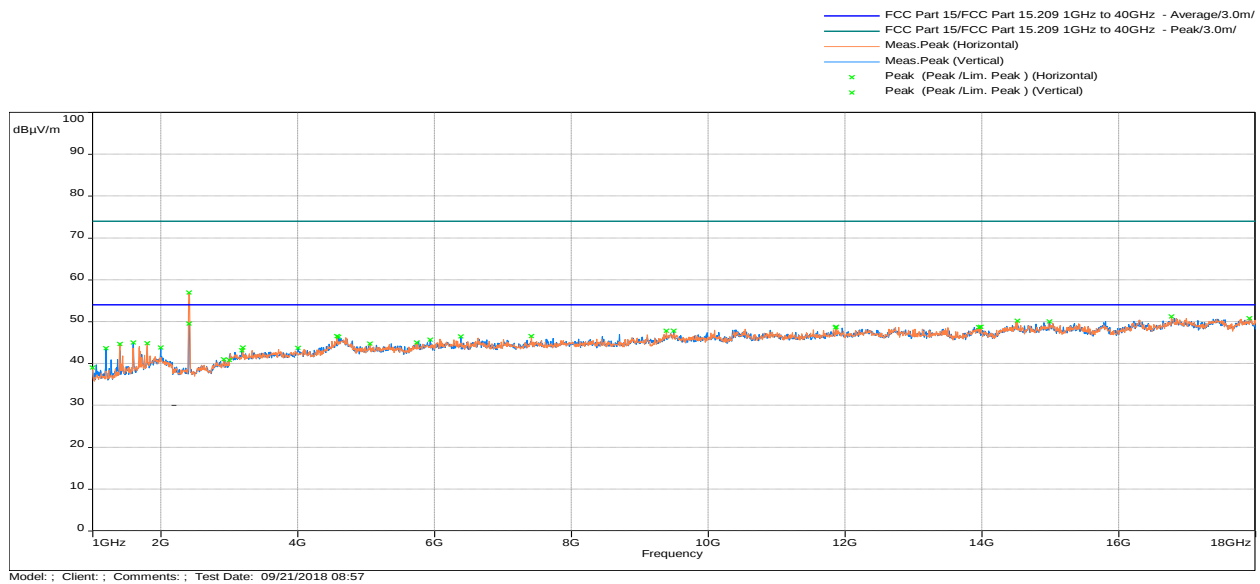
Frequency	Detector	FS@3m	Limit@3m	Margin	Azimuth	Height	Polarity	Correction
MHz		dBuV/m	dBuV/m	(dB)	(deg)	(m)		dB
17479.80	Peak	48.56	54	-5.44	318	1.65	Vertical	4.45
17479.80	Peak	60.69	74	-13.31	277	1.70	Vertical	4.45

Test Results: 15.209 Radiated Spurious Emissions Low Channel, Tx at 802.11n, 2412MHz

Out-of-Band Radiated Spurious Emissions - 30 MHz to 1000 MHz

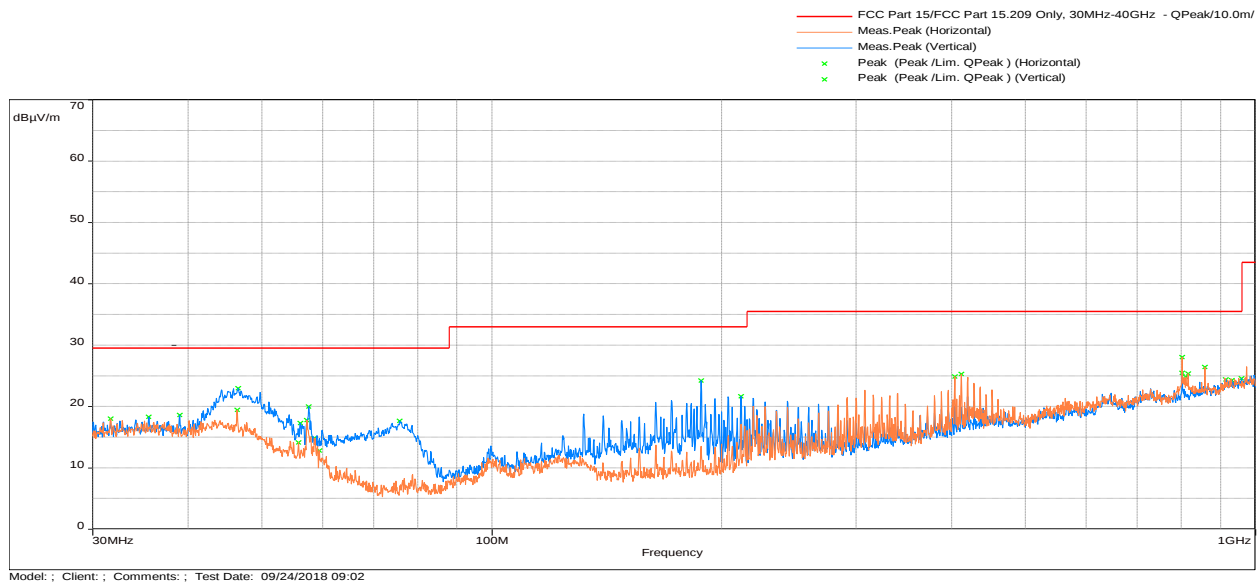


Radiated Spurious Emissions 1000 - 18000 MHz, Peak Scan vs Peak & Avg Limit

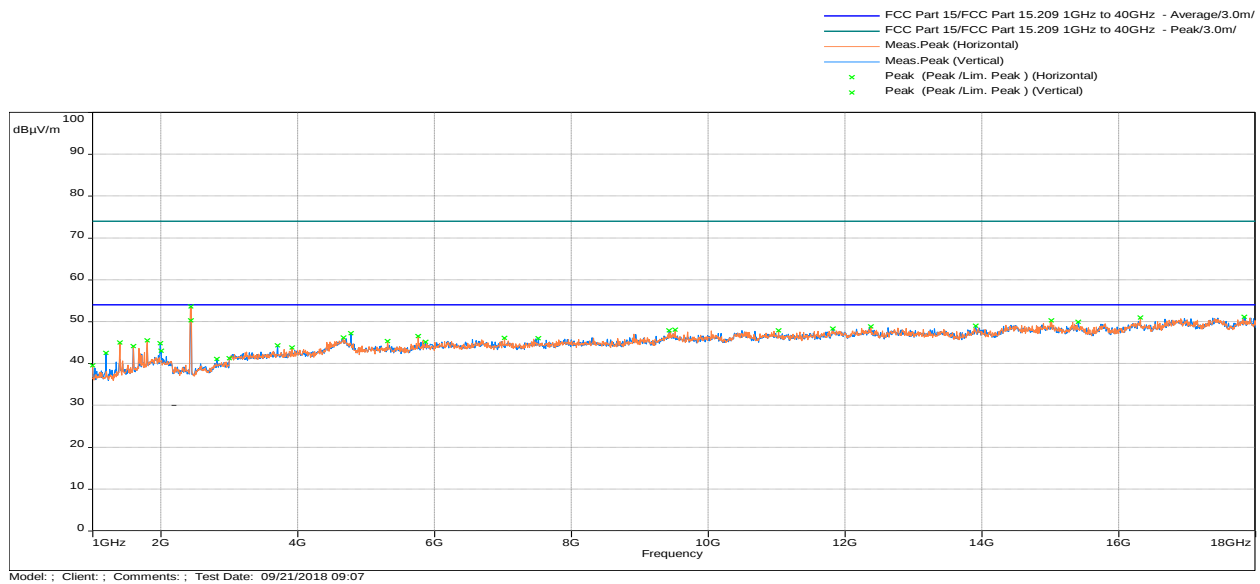


Test Results: 15.209 Radiated Spurious Emissions Low Channel, Tx at 802.11n, 2437MHz

Out-of-Band Radiated Spurious Emissions - 30 MHz to 1000 MHz

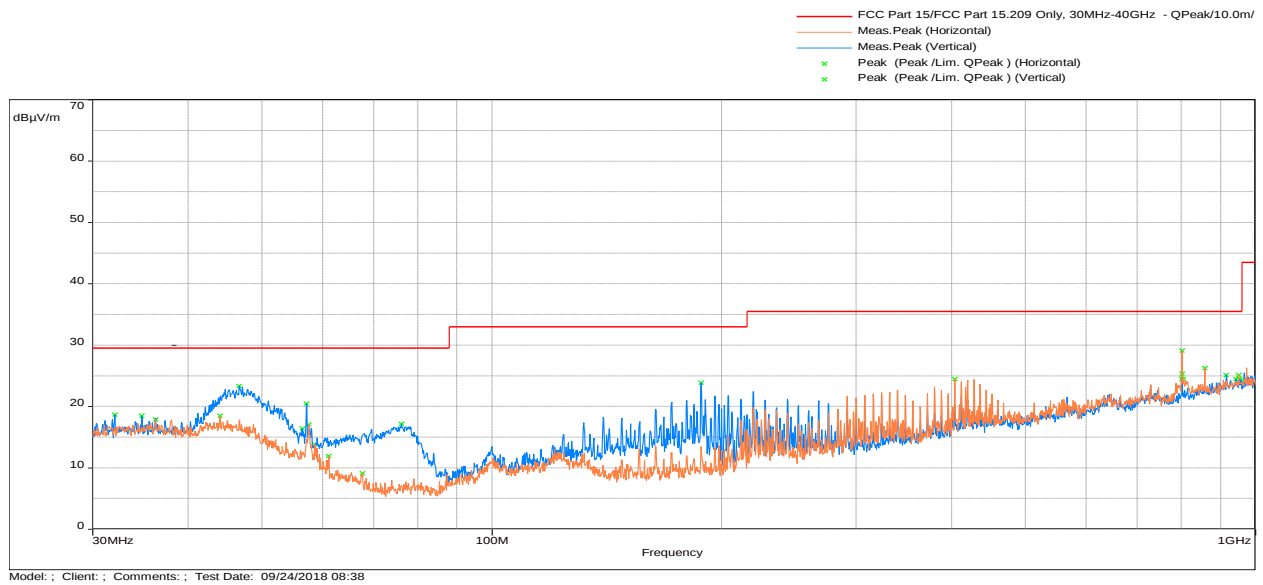


Radiated Spurious Emissions 1000 - 18000 MHz, Peak Scan vs Peak & Avg Limit

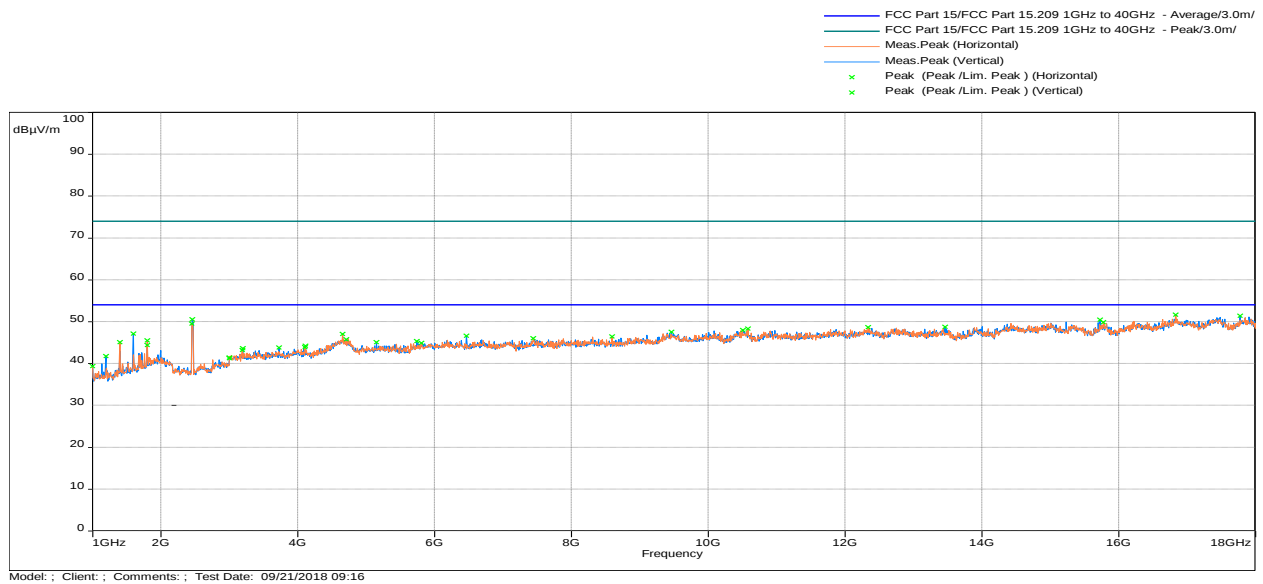


Test Results: 15.209 Radiated Spurious Emissions Low Channel, Tx at 802.11n, 2462MHz

Out-of-Band Radiated Spurious Emissions - 30 MHz to 1000 MHz



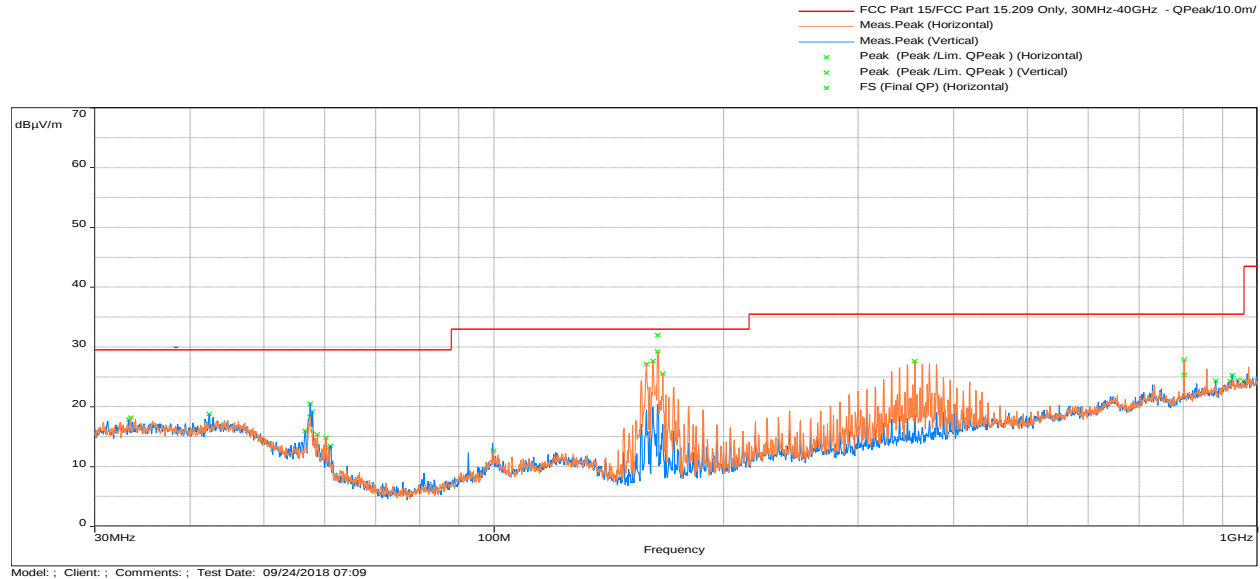
Radiated Spurious Emissions 1000 - 18000 MHz, Peak Scan vs Peak & Avg Limit



Out-of-Band Radiated Spurious Emissions (Normal Mode)

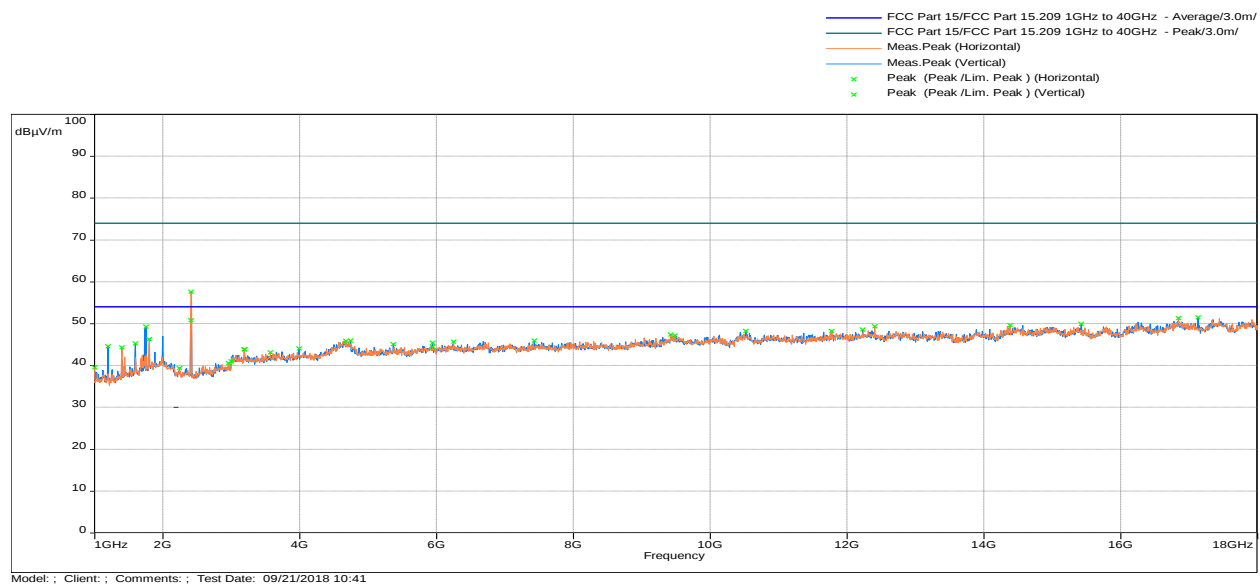
Test Results: 15.209 Radiated Spurious Emissions Low Channel, Tx at 802.11b 2412MHz

Out-of-Band Radiated Spurious Emissions - 30 MHz to 1000 MHz



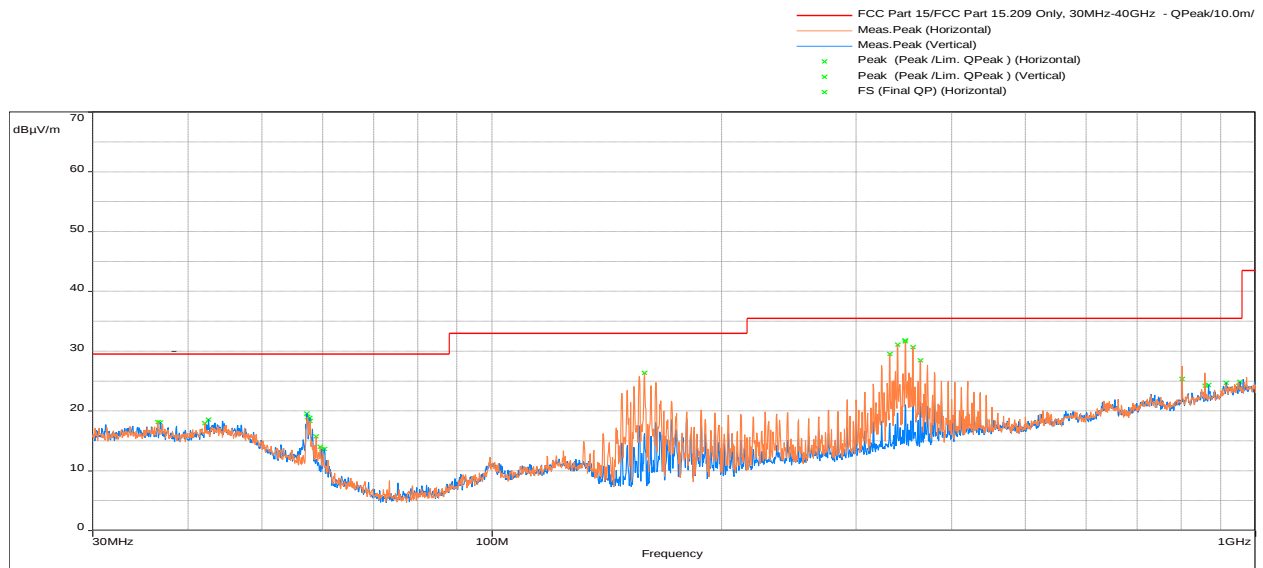
Frequency (MHz)	FS@10m (dBμV/m)	Limit@10m (dB(uV/m))	Margin (dB)	Azimuth (deg)	Height (m)	Polarity	RA (dBuV)	Correction (dB)
163.965	31.96	33	-1.04	310	4.0	Horizontal	49.66	-17.71

Radiated Spurious Emissions 1000 - 18000 MHz, Peak Scan vs Peak & Avg Limit



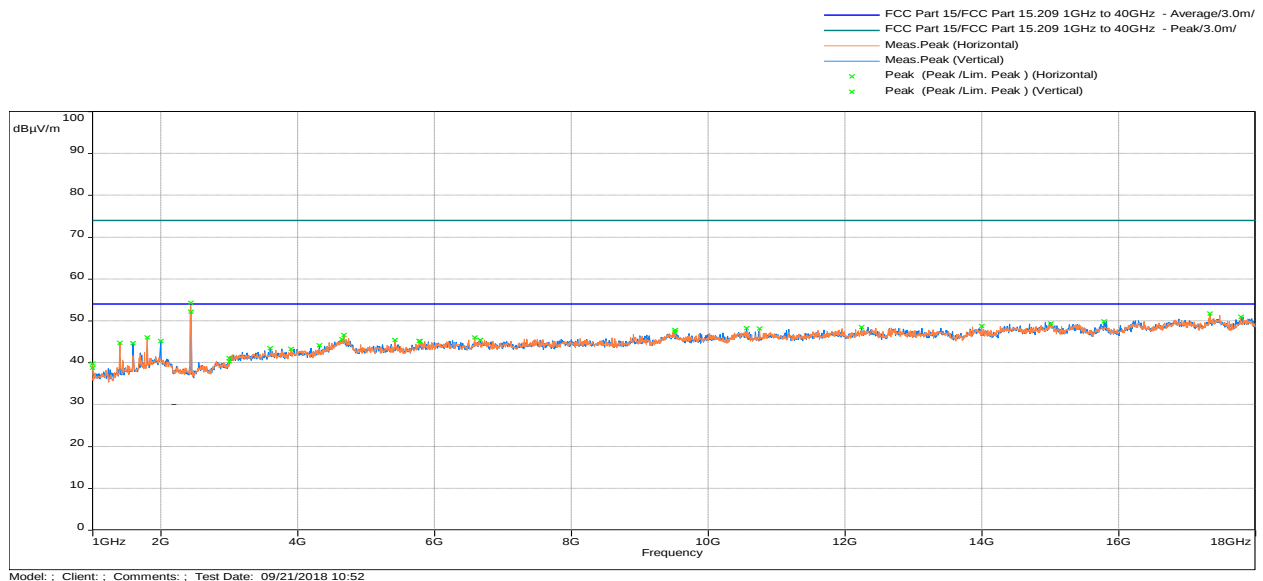
Test Results: 15.209 Radiated Spurious Emissions Low Channel, Tx at 802.11b 2437MHz

Out-of-Band Radiated Spurious Emissions - 30 MHz to 1000 MHz



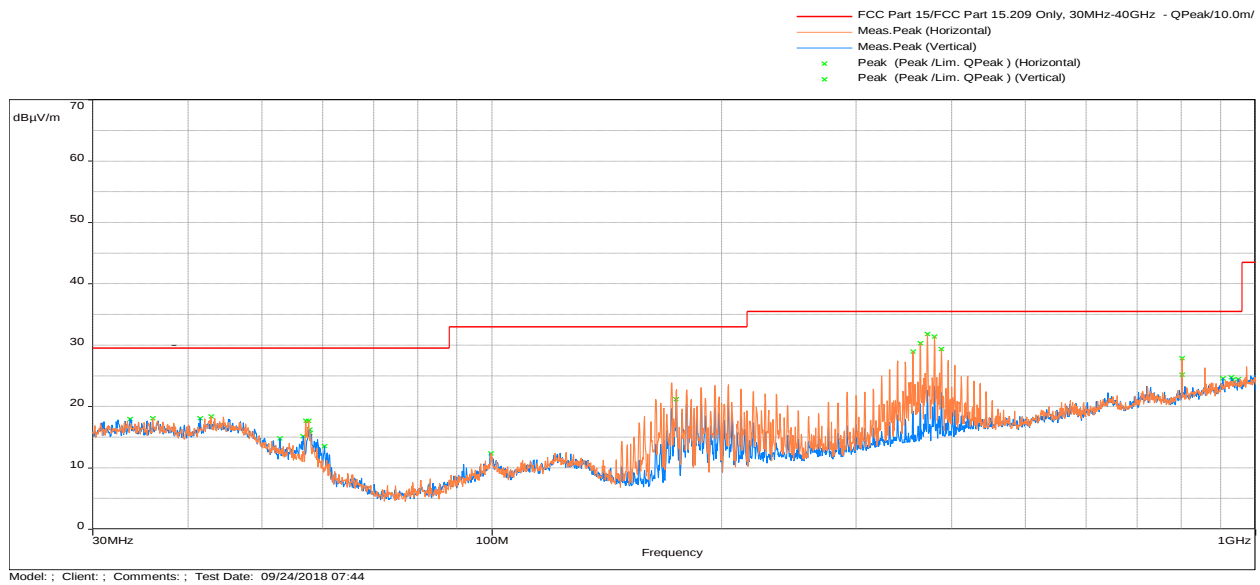
Frequency (MHz)	FS@10m (dBμV/m)	Limit@10m (dB(uV/m))	Margin (dB)	Azimuth (deg)	Height (m)	Polarity	RA (dBuV)	Correction (dB)
347.960	31.8	35.5	-3.7	338	2.43	Horizontal	43.05	-11.24

Radiated Spurious Emissions 1000 - 18000 MHz, Peak Scan vs Peak & Avg Limit

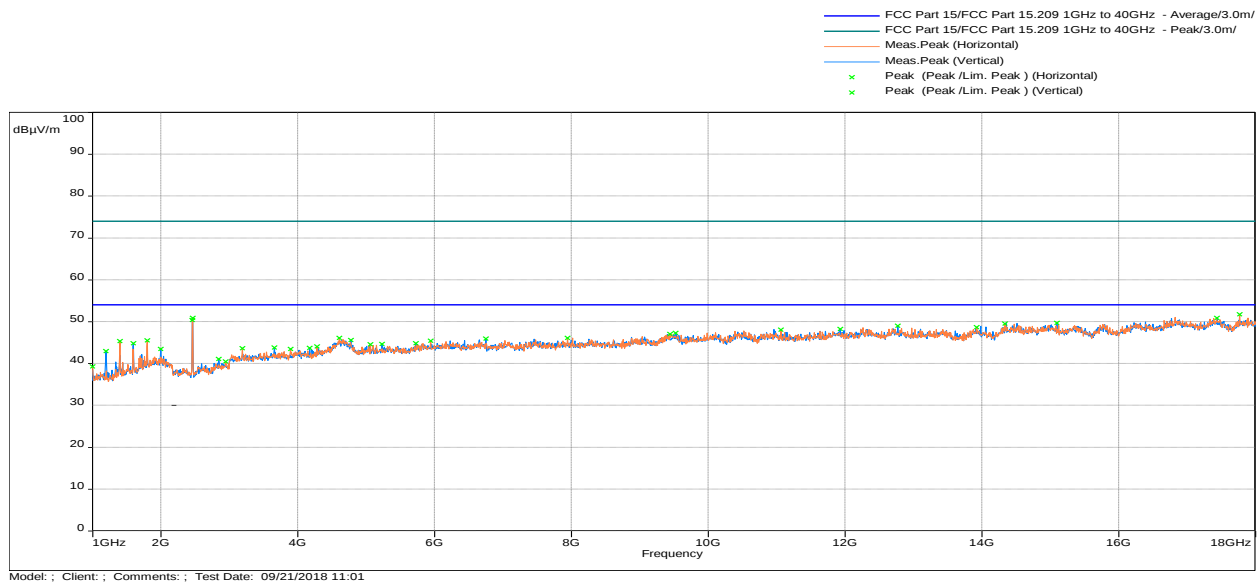


Test Results: 15.209 Radiated Spurious Emissions Low Channel, Tx at 802.11b 2462MHz

Out-of-Band Radiated Spurious Emissions - 30 MHz to 1000 MHz

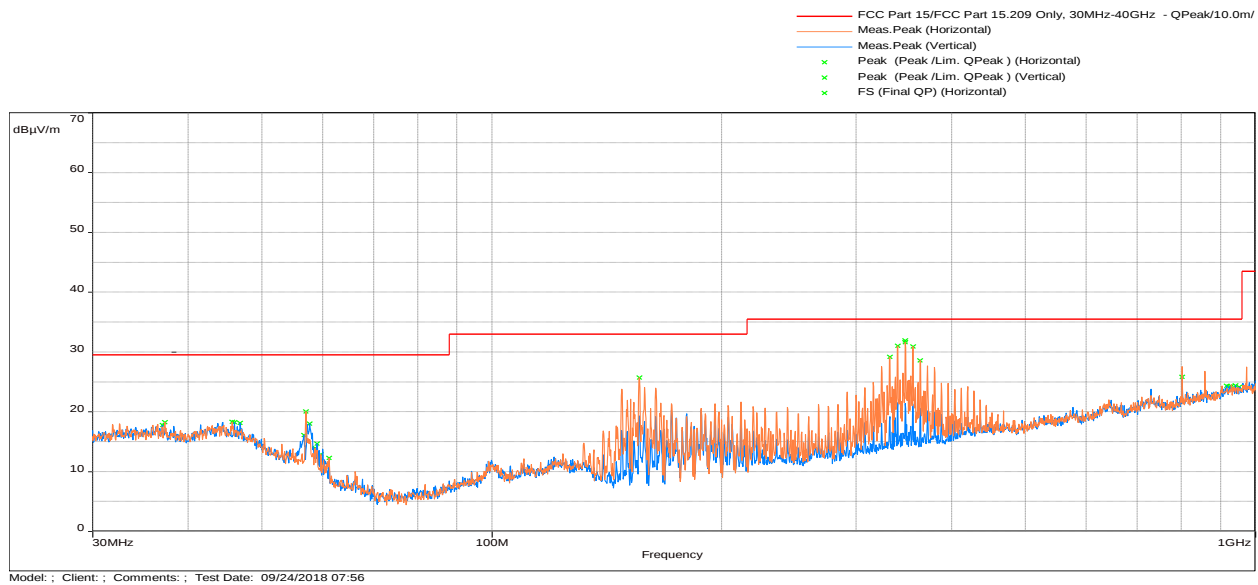


Radiated Spurious Emissions 1000 - 18000 MHz, Peak Scan vs Peak & Avg Limit



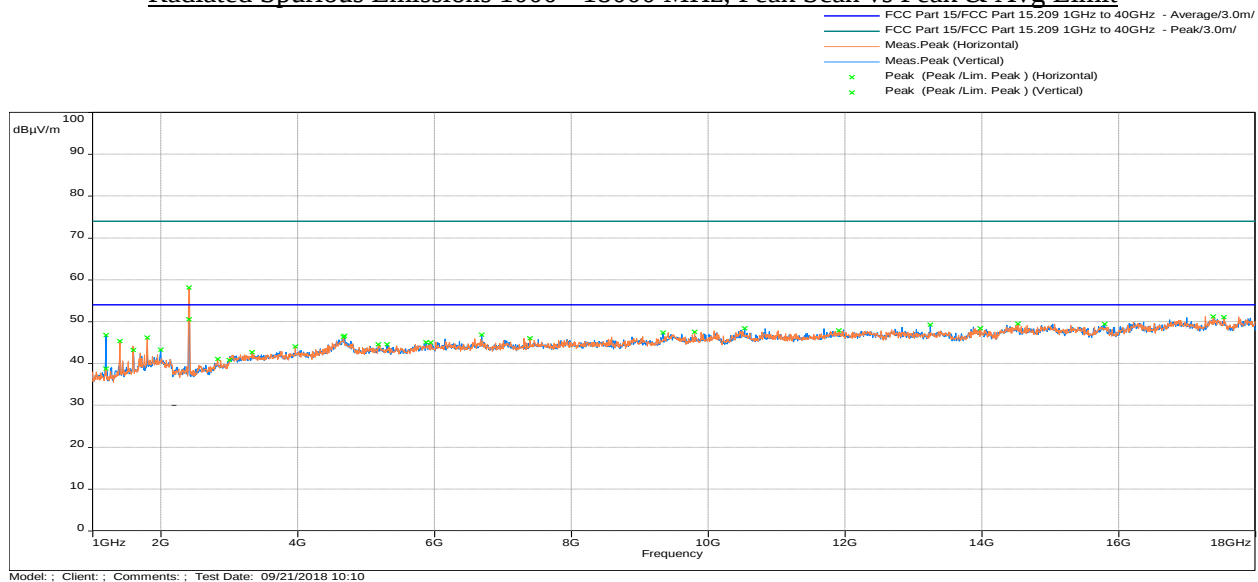
Test Results: 15.209 Radiated Spurious Emissions Low Channel, Tx at 802.11g 2412MHz

Out-of-Band Radiated Spurious Emissions - 30 MHz to 1000 MHz



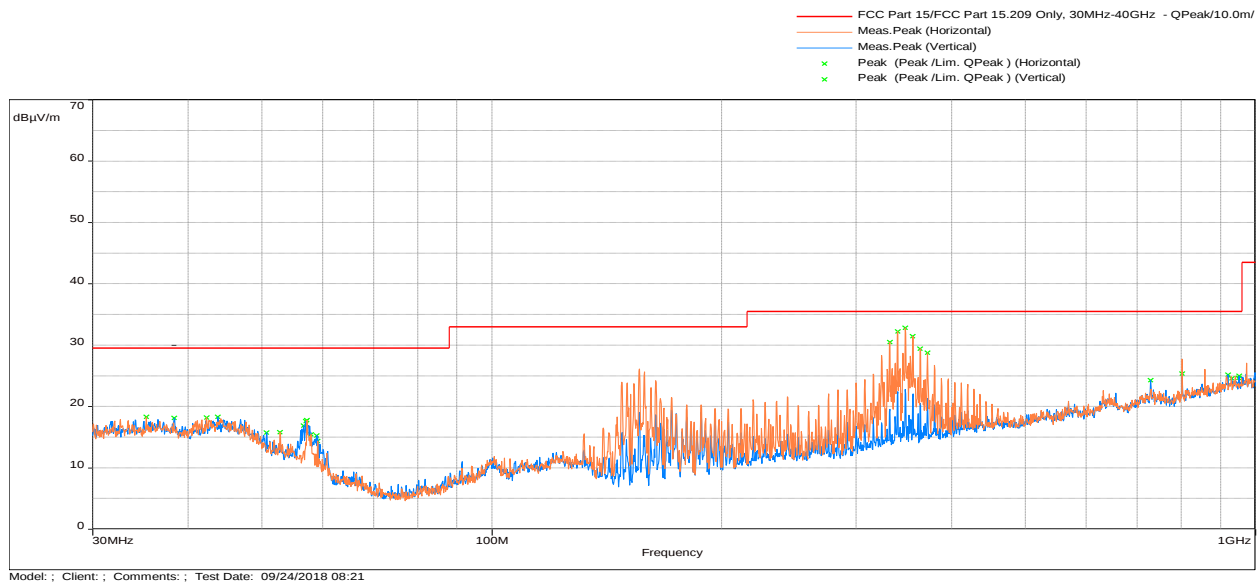
Frequency (MHz)	FS@10m (dBμV/m)	Limit@10m (dB(uV/m))	Margin (dB)	Azimuth (deg)	Height (m)	Polarity	RA (dBuV)	Correction (dB)
347.962	31.87	35.5	-3.63	344	2.45	Horizontal	43.11	-11.24

Radiated Spurious Emissions 1000 - 18000 MHz, Peak Scan vs Peak & Avg Limit

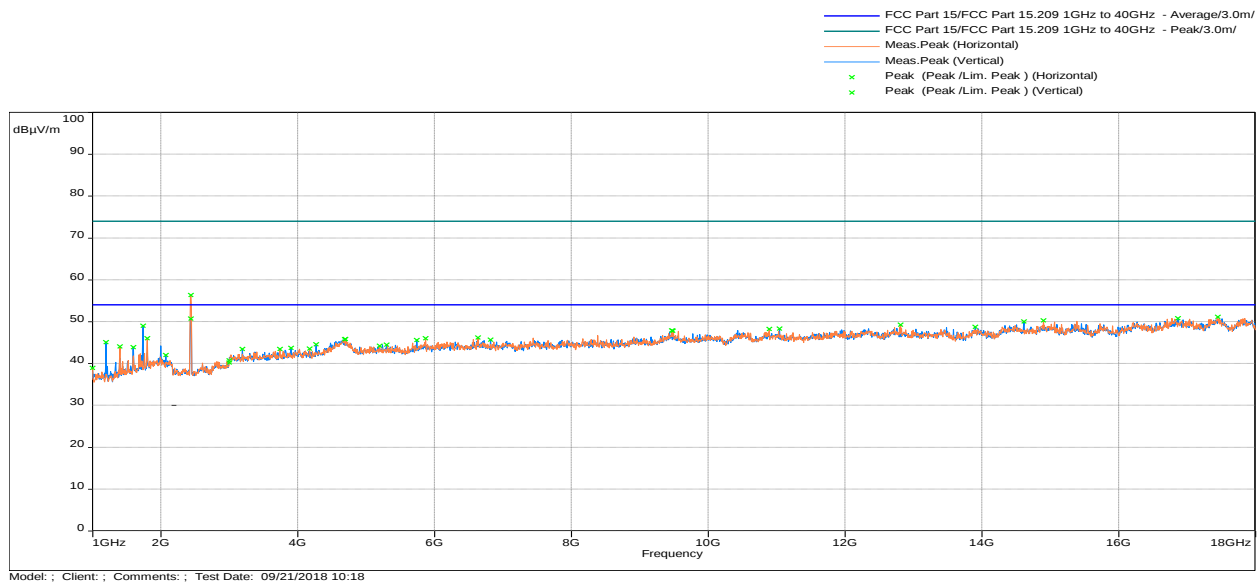


Test Results: 15.209 Radiated Spurious Emissions Low Channel, Tx at 802.11g 2437MHz

Out-of-Band Radiated Spurious Emissions - 30 MHz to 1000 MHz



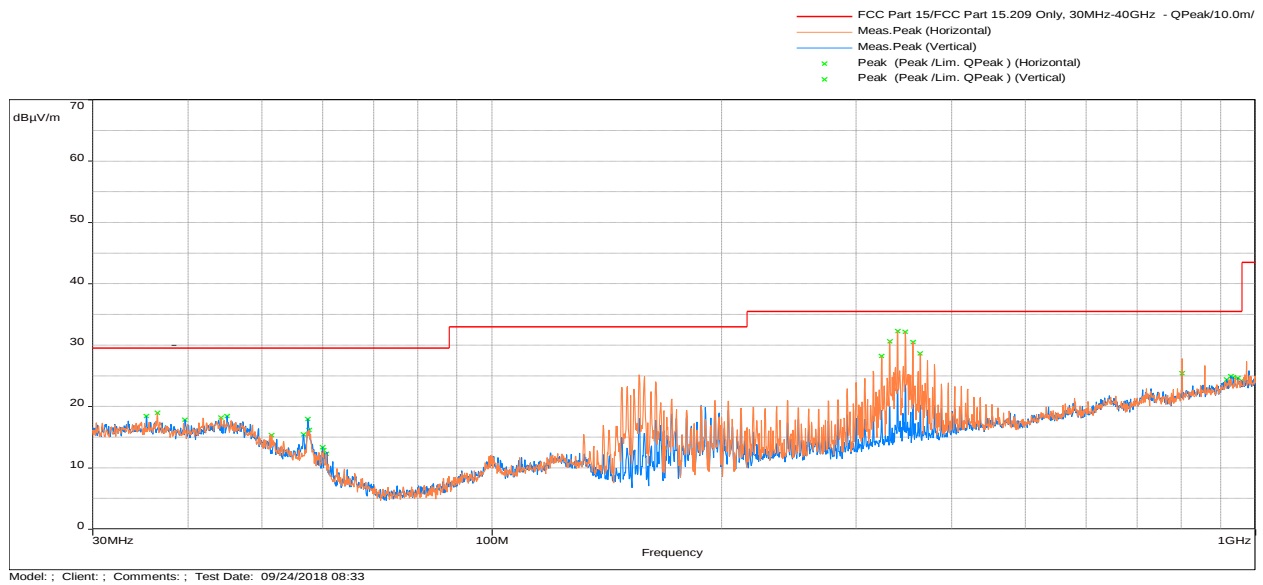
Radiated Spurious Emissions 1000 - 18000 MHz, Peak Scan vs Peak & Avg Limit



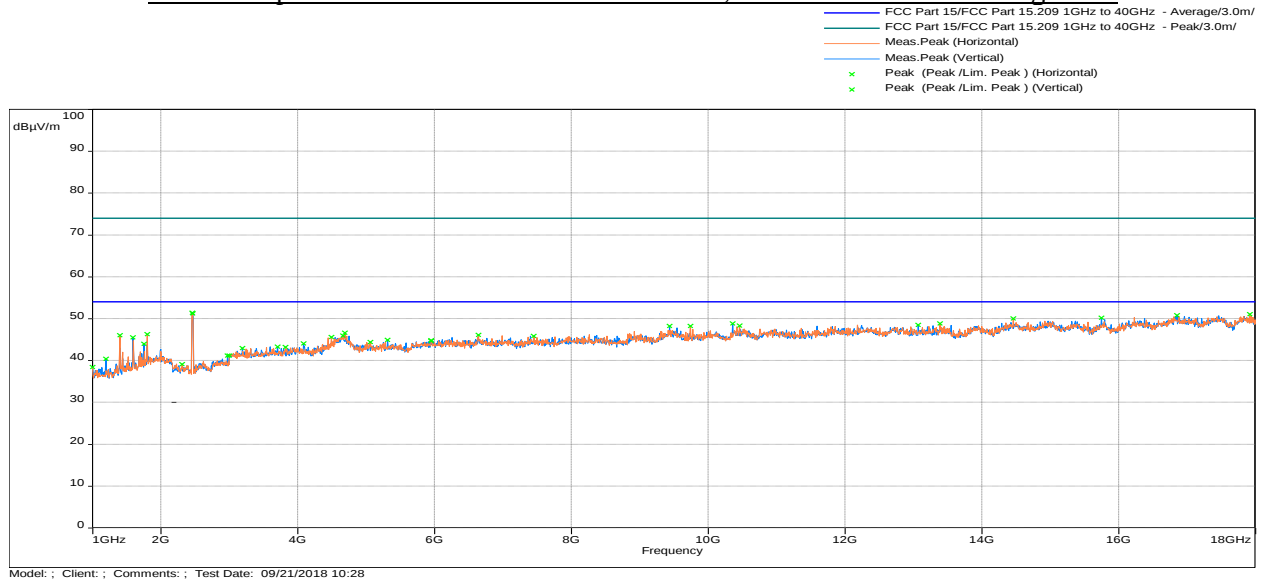
Frequency	Detector	FS@3m	Limit@3m	Margin	Azimuth	Height	Polarity	Correction
MHz		dBuV/m	dBuV/m	(dB)	(deg)	(m)		dB
1736.10	Peak	48.95	54	-5.44	0	1.26	Vertical	-14.72
16866.10	Peak	50.8	54	-3.20	29	1.32	Vertical	6.95

Test Results: 15.209 Radiated Spurious Emissions Low Channel, Tx at 802.11g 2462MHz

Out-of-Band Radiated Spurious Emissions - 30 MHz to 1000 MHz

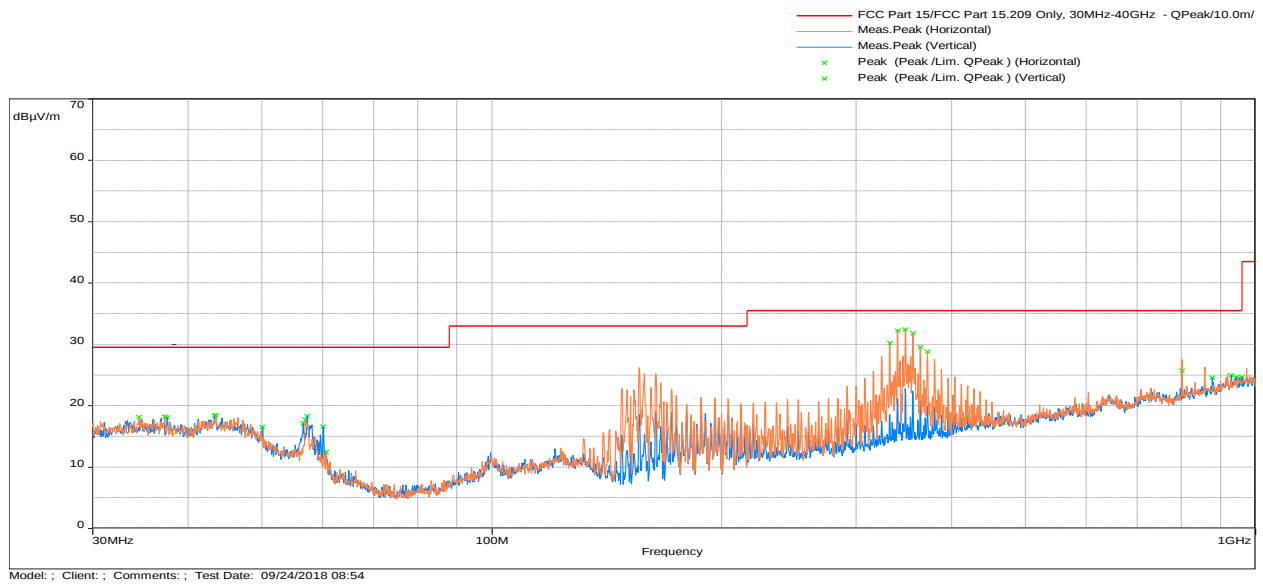


Radiated Spurious Emissions 1000 - 18000 MHz, Peak Scan vs Peak & Avg Limit

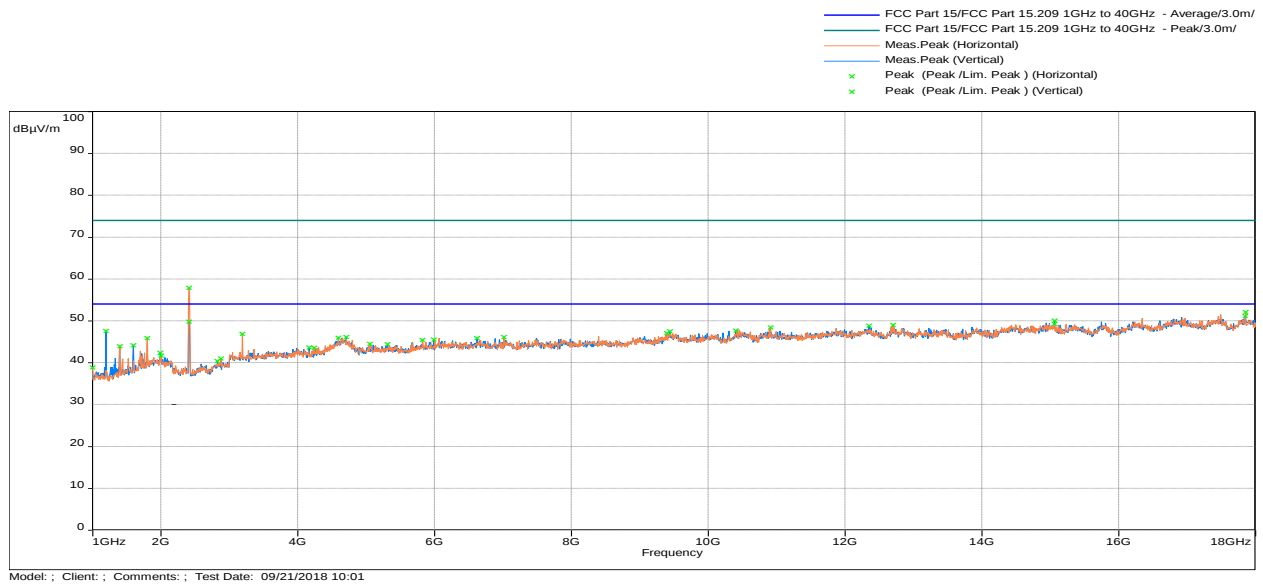


Test Results: 15.209 Radiated Spurious Emissions Low Channel, Tx at 802.11n, 2412MHz

Out-of-Band Radiated Spurious Emissions - 30 MHz to 1000 MHz

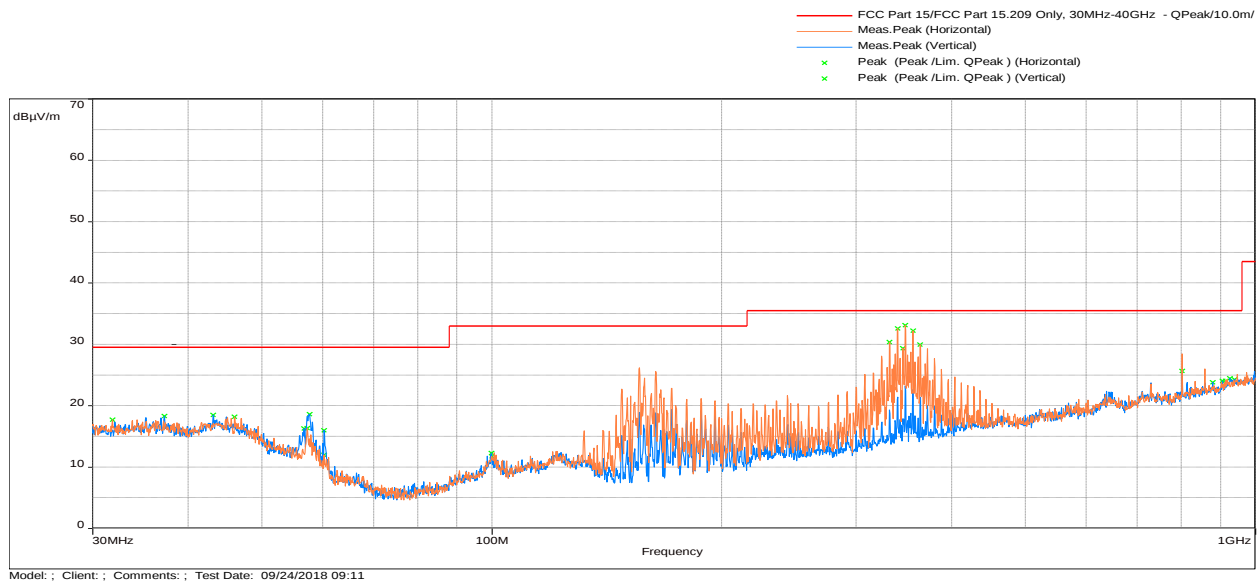


Radiated Spurious Emissions 1000 - 18000 MHz, Peak Scan vs Peak & Avg Limit

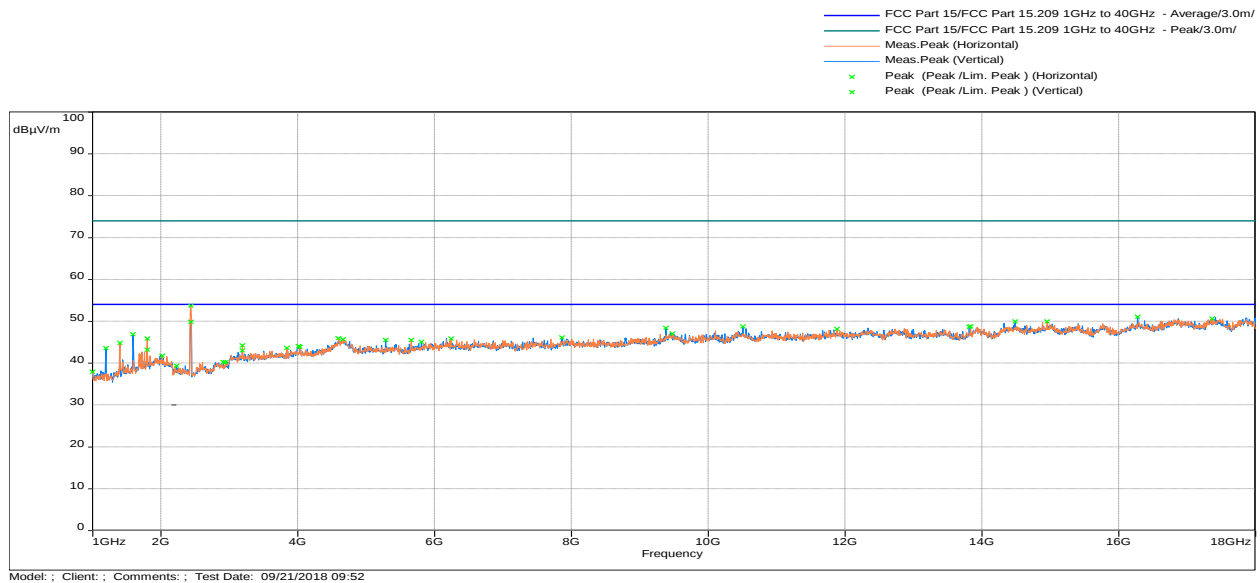


Test Results: 15.209 Radiated Spurious Emissions Low Channel, Tx at 802.11n, 2437MHz

Out-of-Band Radiated Spurious Emissions - 30 MHz to 1000 MHz

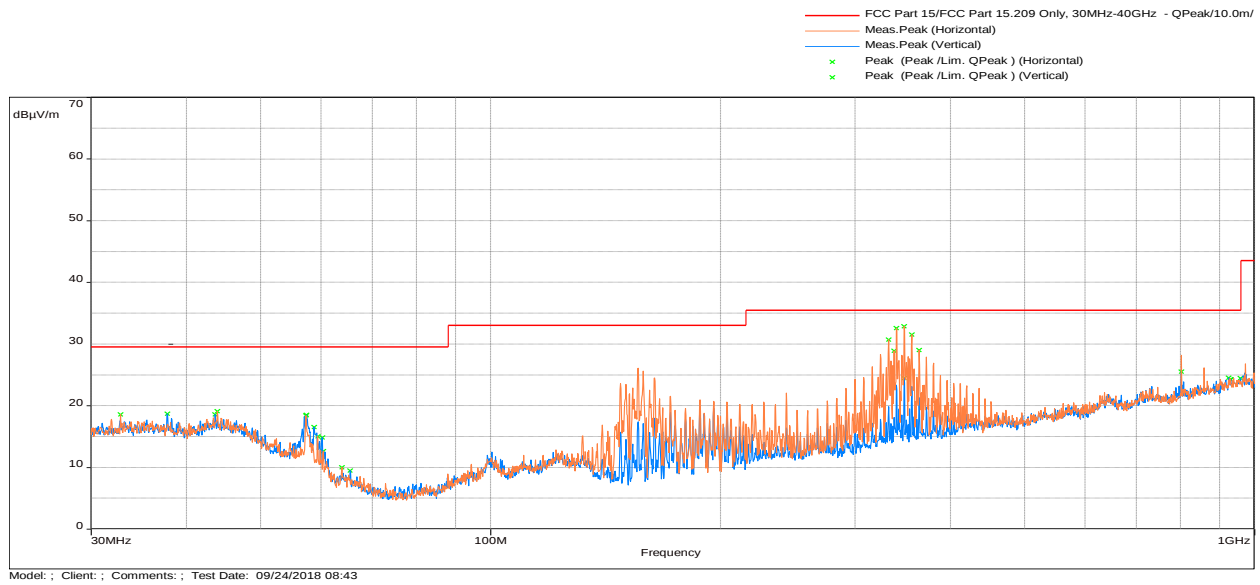


Radiated Spurious Emissions 1000 - 18000 MHz, Peak Scan vs Peak & Avg Limit

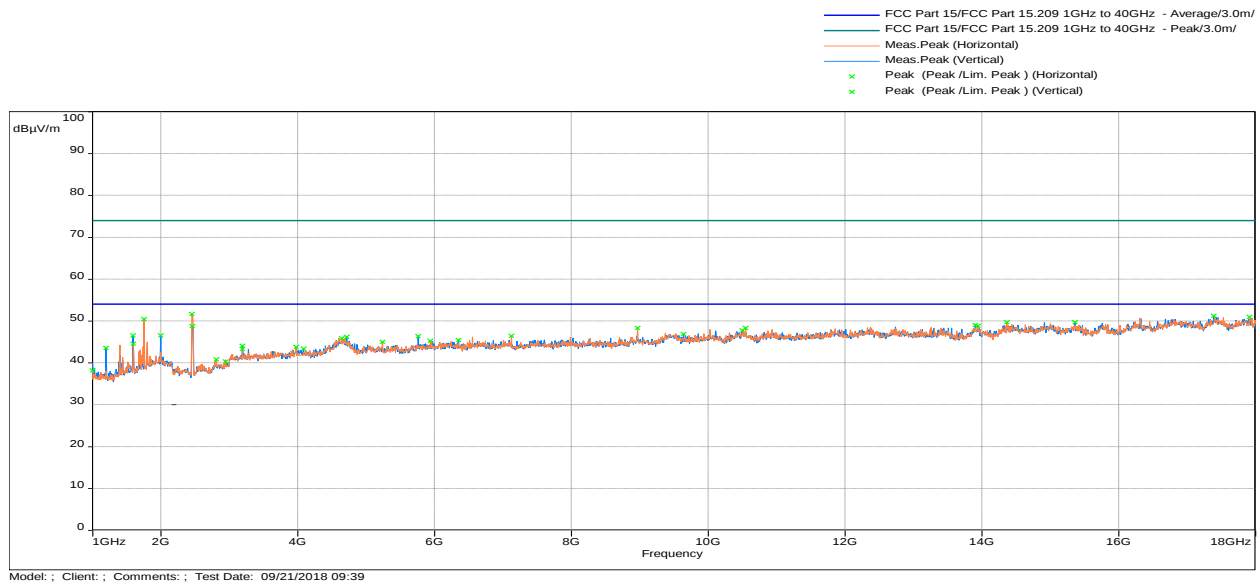


Test Results: 15.209 Radiated Spurious Emissions Low Channel, Tx at 802.11n, 2462MHz

Out-of-Band Radiated Spurious Emissions - 30 MHz to 1000 MHz



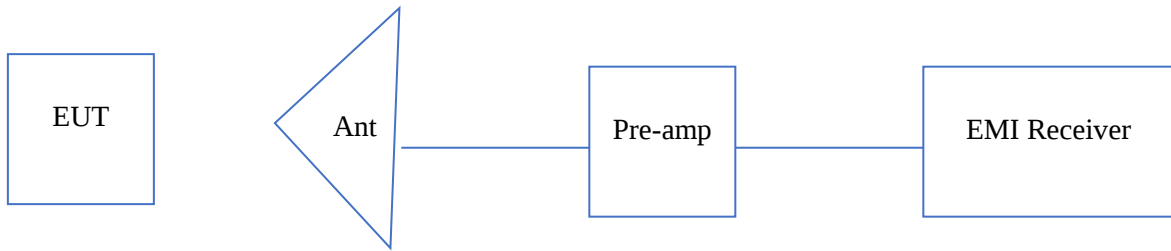
Radiated Spurious Emissions 1000 - 18000 MHz, Peak Scan vs Peak & Avg Limit



Frequency	Detector	FS@3m	Limit@3m	Margin	Azimuth	Height	Polarity	Correction
MHz		dBuV/m	dBuV/m	(dB)	(deg)	(m)		dB
1753.10	Peak	50.46	54	-3.54	331	1.76	Horizontal	-14.66

4.5.8 Test Setup Photographs

The following photographs show the testing configurations used.



4.6 AC Line Conducted Emission
FCC: 15.207; RSS-GEN

4.6.1 Requirement

Frequency Band MHz	FCC Part 15.207 Limits	
	Quasi-Peak	Average
0.15-0.50	66 to 56 *	56 to 46 *
0.50-5.00	56	46
5.00-30.00	60	50

*Note: *Decreases linearly with the logarithm of the frequency
At the transition frequency the lower limit applies.*

4.6.2 Procedure

Measurements are carried out using quasi-peak and average detector receivers in accordance with CISPR 16. An AMN is required to provide a defined impedance at high frequencies across the power feed at the point of measurement of terminal voltage and also to provide isolation of the circuit under test from the ambient noise on the power lines. An AMN as defined in CISPR 16 shall be used.

The EUT is located so that the distance between the boundary of the EUT and the closest surface of the AMN is 0.8m.

Where a flexible mains cord is provided by the manufacturer, this shall be 1m long or if in excess of 1m, the excess cable is folded back and forth as far as possible so as to form a bundle not exceeding 0.4m in length.

The EUT is arranged and connected with cables terminated in accordance with the product specification.

Conducted disturbance is measured between the phase lead and the reference ground, and between the neutral lead and the reference ground. Both measured values are reported.

The EUT, where intended for tabletop use, is placed on a table whose top is 0.8m above the ground plane. A vertical, metal reference plane is placed 0.4m from the EUT. The vertical metal reference-plane is at least 2m by 2m. The EUT shall be kept at least 0.8m from any other metal surface or other ground plane not being part of the EUT. The table is constructed of non-conductive materials. Its dimensions are 1m by 1.5m, but may be extended for larger EUT.

Floor standing EUT are placed on a horizontal metal ground plane and isolated from the ground plane by resting on an insulating material. The metal ground plane extends at least 0.5m beyond the boundaries of the EUT and has minimum dimensions of 2m by 2m.

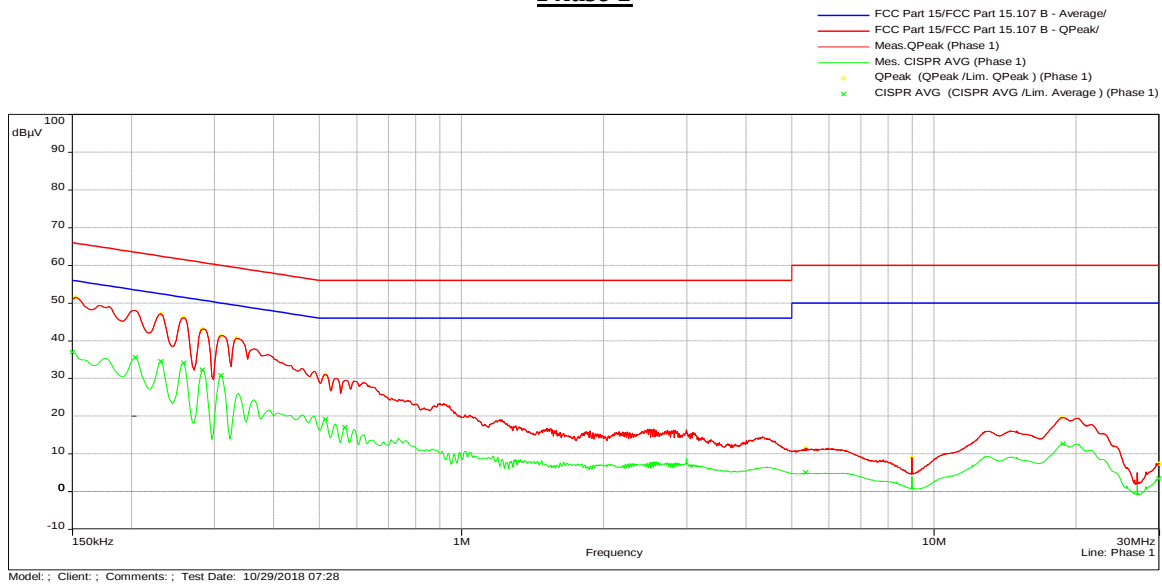
Equipment setup for conducted disturbance tests followed the guidelines of ANSI C63.4:2014.

Tested By	Test Date
Anderson Soungpanya	October 29, 2018

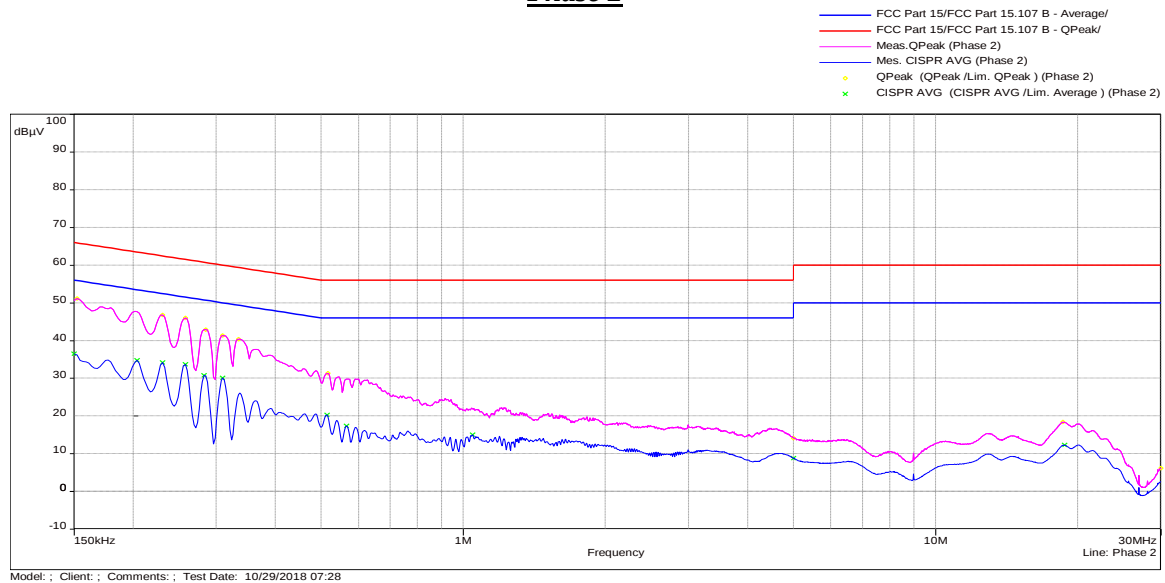
4.6.3 Test Results

15.207: Conducted Emissions 120VAC 60Hz

Phase 1



Phase 2



4.6.3 Test Results (Continued)

Quasi Peak Table					
Frequency (MHz)	QPeak (dBμV)	Lim. QPeak (dBμV)	QPeak-Lim (dB)	Phase	Correction (dB)
0.152	51.11	65.88	-14.76	Phase 2	1.05
0.152	51.52	65.88	-14.36	Phase 1	1.05
0.231	46.80	62.41	-15.62	Phase 2	1.06
0.231	47.10	62.41	-15.32	Phase 1	1.06
0.258	46.08	61.50	-15.41	Phase 1	1.08
0.258	45.93	61.50	-15.56	Phase 2	1.08
0.283	43.11	60.73	-17.62	Phase 1	1.07
0.285	42.89	60.67	-17.78	Phase 2	1.07
0.310	41.30	59.98	-18.68	Phase 2	1.09
0.310	41.33	59.98	-18.64	Phase 1	1.09
0.335	40.36	59.34	-18.98	Phase 2	1.07
0.335	40.59	59.34	-18.75	Phase 1	1.07
0.515	31.04	56.00	-24.96	Phase 1	1.10
0.517	31.30	56.00	-24.70	Phase 2	1.10
5.001	14.12	60.00	-45.88	Phase 2	1.33
5.348	11.52	60.00	-48.48	Phase 1	1.33
8.988	8.99	60.00	-51.01	Phase 1	1.43
18.598	18.38	60.00	-41.62	Phase 2	1.61
18.620	19.68	60.00	-40.32	Phase 1	1.61
29.974	7.44	60.00	-52.56	Phase 1	1.78
30.000	6.14	60.00	-53.86	Phase 2	1.78

4.6.3 Test Results (Continued)

Average Table					
Frequency (MHz)	AVG (dBμV)	Lim. Average (dBμV)	AVG-Lim (dB)	Phase	Correction (dB)
0.150	36.90	56.00	-19.10	Phase 1	1.05
0.150	36.48	56.00	-19.52	Phase 2	1.05
0.204	35.60	53.45	-17.85	Phase 1	1.05
0.204	34.70	53.45	-18.75	Phase 2	1.05
0.231	34.52	52.41	-17.90	Phase 1	1.06
0.231	34.17	52.41	-18.25	Phase 2	1.06
0.258	34.17	51.50	-17.32	Phase 1	1.08
0.258	33.67	51.50	-17.83	Phase 2	1.08
0.283	30.68	50.73	-20.05	Phase 2	1.07
0.283	32.24	50.73	-18.50	Phase 1	1.07
0.310	30.81	49.98	-19.17	Phase 1	1.09
0.310	30.06	49.98	-19.92	Phase 2	1.09
0.515	19.17	46.00	-26.83	Phase 1	1.10
0.515	20.22	46.00	-25.78	Phase 2	1.10
0.566	17.01	46.00	-28.99	Phase 1	1.10
0.566	17.31	46.00	-28.69	Phase 2	1.10
1.048	14.96	46.00	-31.04	Phase 2	1.15
5.006	8.77	50.00	-41.23	Phase 2	1.33
5.348	5.10	50.00	-44.90	Phase 1	1.33
18.751	12.25	50.00	-37.75	Phase 2	1.61
18.760	12.63	50.00	-37.37	Phase 1	1.61
29.967	3.44	50.00	-46.56	Phase 1	1.78

Results: Complies by 14.36 dB

5.0 List of Test Equipment

Measurement equipment used for emission compliance testing utilized the equipment on the following list:

Equipment	Manufacturer	Model/Type	Asset #	Cal Int	Cal Due
Spectrum Analyzer	Rohde and Schwarz	FSU	ITS 00913	12	01/24/19
Horn Antenna (10-40 GHz)	ETS-Lindgren	3116C	ITS 01376	12	04/25/19
Pre-Amplifier (18-40GHz)	Miteq	TTA1840-35-S-M	ITS 01393	12	01/19/19
Active Horn Antenna (1-18GHz)	ETS-Lindgren	3117-PA	ITS 00982	12	01/25/19
Horn Antenna	ETS-Lindgren	3115	ITS 01325	12	02/08/19
EMI Receiver	Rohde and Schwarz	ESR7	ITS 01607	12	10/09/18
LISN	FCC	FCC-LISN-50-50-M-	ITS 00551	12	10/04/19
BI-Log Antenna	Antenna Research	LPB-2513	ITS 00355	12	02/21/19
Pre-Amplifier	Sonoma Instrument	310N	ITS 01493	12	10/20/18
Notch Filter	Micro-Tronics	BRM50702	ITS 01166	12	03/10/19
RF Cable	Megaphase	EMC1-K1K1-236	ITS 01538	12	06/25/19
RF Cable	Megaphase	TM40-K1K1-59	ITS 01657	12	06/26/19
RF Cable	TRU Corporation	TRU CORE 300	ITS 01330	12	11/29/18
RF Cable	TRU Corporation	TRU CORE 300	ITS 01465	12	08/16/19
RF Cable	TRU Corporation	TRU CORE 300	ITS 01470	12	08/16/19
Attenuator	Fairview	SA 18H-30	ITS 01633	12	#

Verify before use

Software used for emission compliance testing utilized the following:

Name	Manufacturer	Version	Template/Profile
Tile	Quantum Change	3.4.K.22	Conducted Spurious_30M-26GHz
BAT-EMC	Nexio	3.16.0.64	103615308_Vocera 2.4GWIFI.bpp
RS Commander	Rohde Schwarz	1.6.4	Not Applicable (Screen grabber)

6.0 Document History

Revision/ Job Number	Writer Initials	Reviewers Initials	Date	Change
1.0 / G103615308	AS	KV	October 30, 2018	Original document