8.74. 802.11n HT40 2Tx STBC MODE IN THE 5.8 GHz BAND

Note: Covered by 802.11n HT40 2Tx CDD MODE IN THE 5.8 GHz BAND

This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

8.75. 802.11n HT40 2Tx SDM MODE IN THE 5.8 GHz BAND

Note: Covered by 802.11n HT40 2Tx CDD MODE IN THE 5.8 GHz BAND

This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

8.76. 802.11ac VHT80 ANTENNA - B MODE IN THE 5.8 GHz BAND

8.76.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

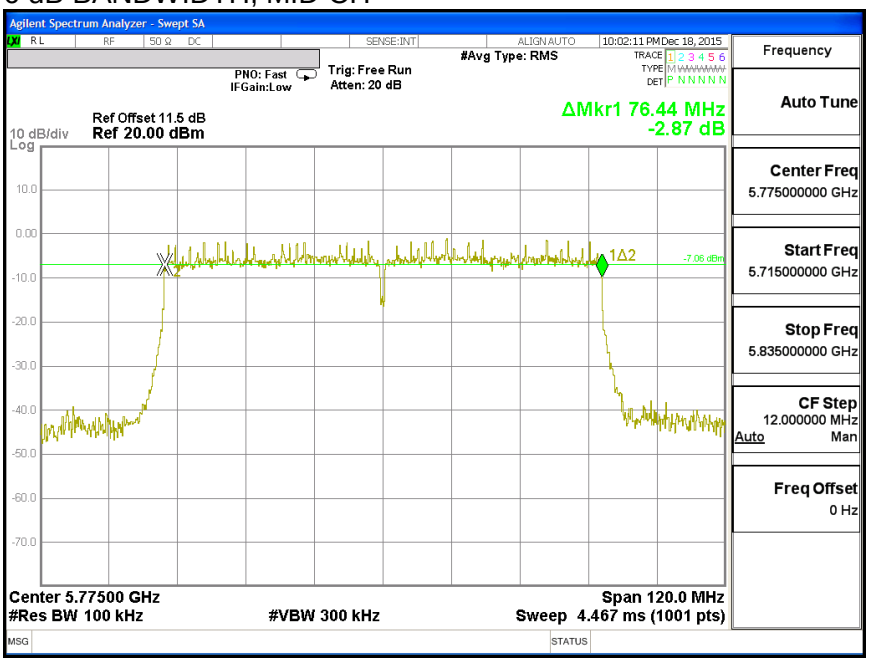
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Mid	5775	76.44	0.5

6 dB BANDWIDTH

6 dB BANDWIDTH, MID CH



This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

8.76.2. 26 dB BANDWIDTH

LIMITS

None, for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Mid	5775	82.68

26 dB BANDWIDTH

26 dB BANDWIDTH, MID CH

This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

8.76.3. 99% BANDWIDTH

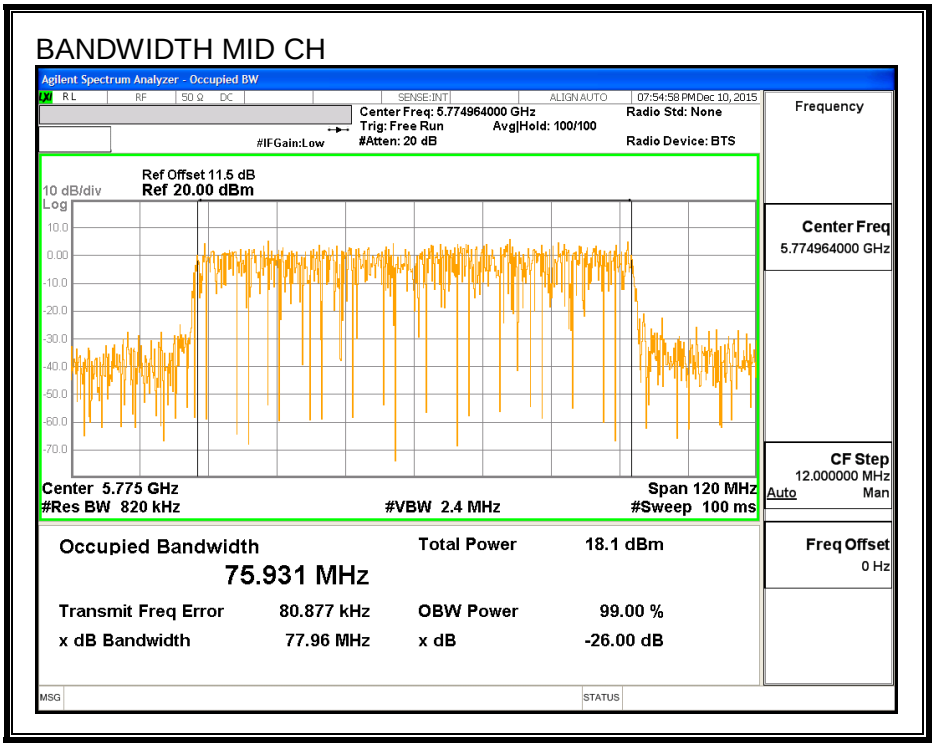
LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Mid	5775	75.931

99% BANDWIDTH



This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

8.76.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

Channel	Frequency (MHz)	Power (dBm)
Mid	5775	13.37

This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

8.76.5. OUTPUT POWER

LIMITS

FCC §15.407 (a) (3)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Mid	5775	2.42	30.00

Output Power Results

Channel	Frequency (MHz)	Antenna B Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid	5775	13.37	13.37	30.00	-16.63

This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

8.76.6. PSD

LIMITS

FCC §15.407 (a) (3)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Mid	5775	2.42	30.00

Duty Cycle CF (dB)	0.16	Included in Calculations of Corr'd PSD

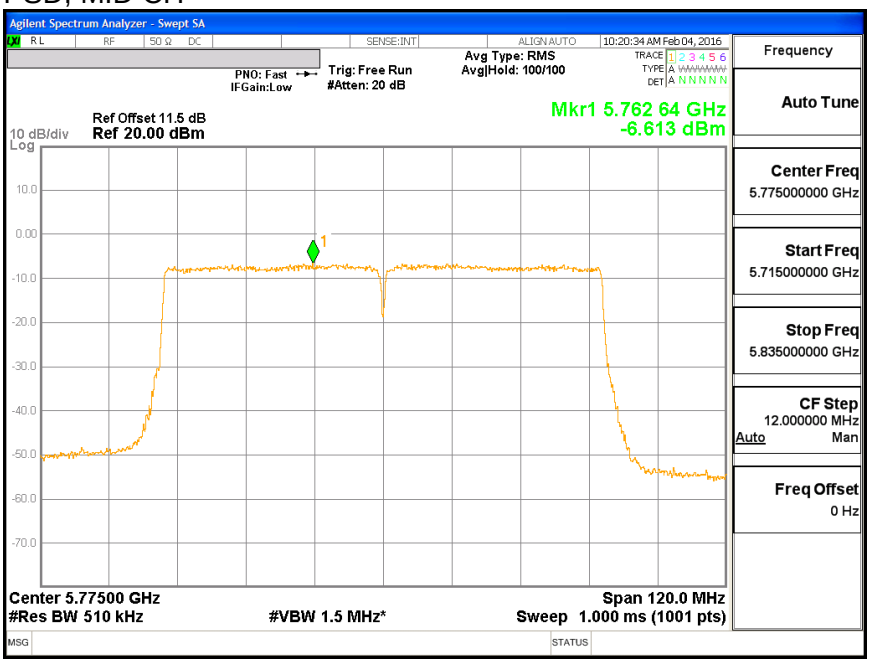
PSD Results

Channel	Frequency (MHz)	Antenna B Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Mid	5775	-6.61	-6.453	30.00	-36.45

UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701J
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

PSD,

PSD, MID CH



This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

8.77. 802.11ac VHT80 ANTENNA - A MODE IN THE 5.8 GHz BAND

8.77.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

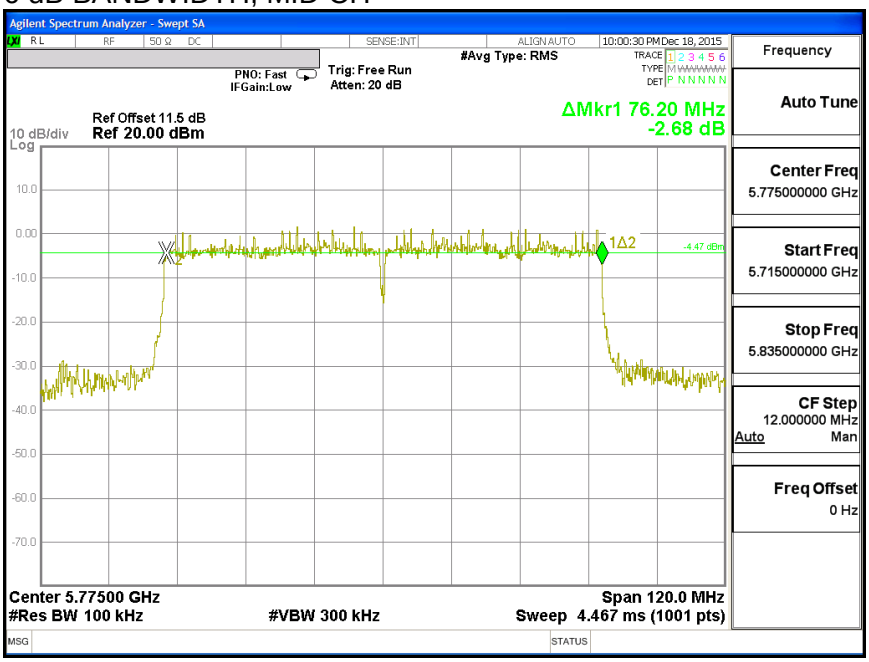
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Mid	5775	76.20	0.5

6 dB BANDWIDTH

6 dB BANDWIDTH, MID CH



This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

8.77.2. 26 dB BANDWIDTH

LIMITS

None, for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Mid	5775	82.92

26 dB BANDWIDTH

26 dB BANDWIDTH, MID CH

This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

8.77.3. 99% BANDWIDTH

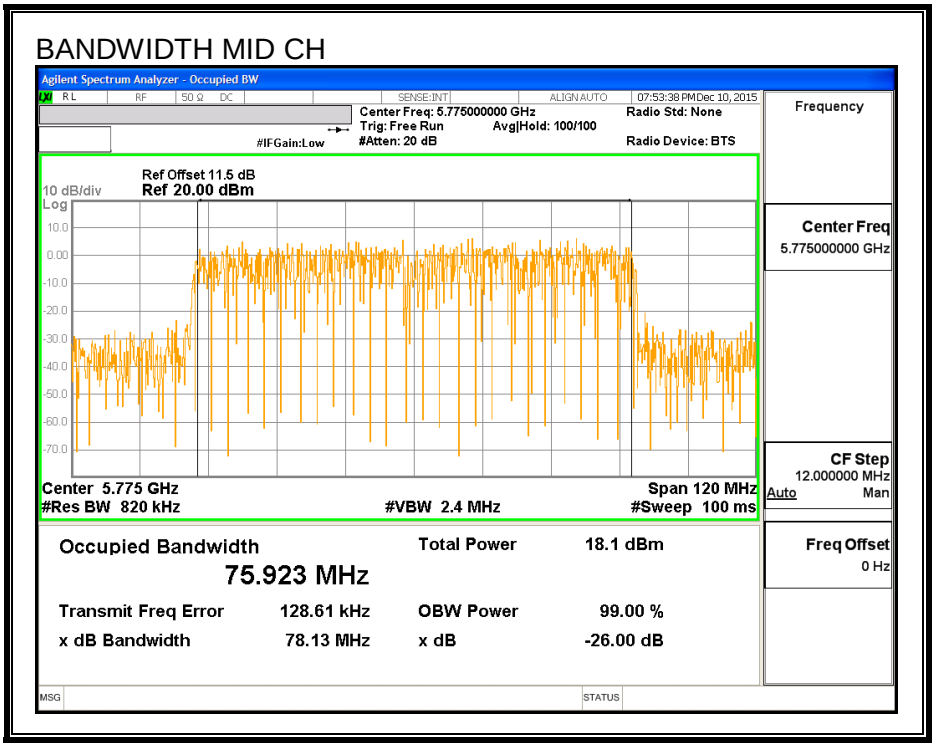
LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Mid	5775	75.923

99% BANDWIDTH



This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

8.77.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

Channel	Frequency (MHz)	Power (dBm)
Mid	5775	13.42

This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

8.77.5. OUTPUT POWER

LIMITS

FCC §15.407 (a) (3)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Mid	5775	4.16	30.00

Output Power Results

Channel	Frequency (MHz)	Antenna A Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid	5775	13.42	13.42	30.00	-16.58

UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701J
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

8.77.6. PSD

LIMITS

FCC §15.407 (a) (3)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Mid	5775	4.16	30.00

Duty Cycle CF (dB)	0.16	Included in Calculations of Corr'd PSD

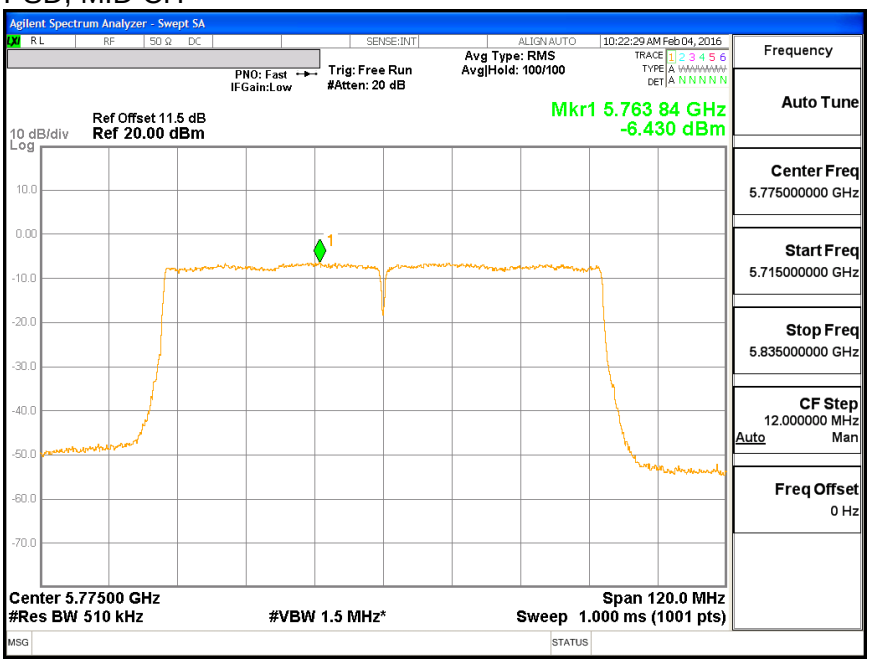
PSD Results

Channel	Frequency (MHz)	Antenna A Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Mid	5775	-6.43	-6.270	30.00	-36.27

UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701J
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

PSD,

PSD, MID CH



This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

8.78. 802.11ac VHT80 2Tx CDD MODE IN THE 5.8 GHz BAND

8.78.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

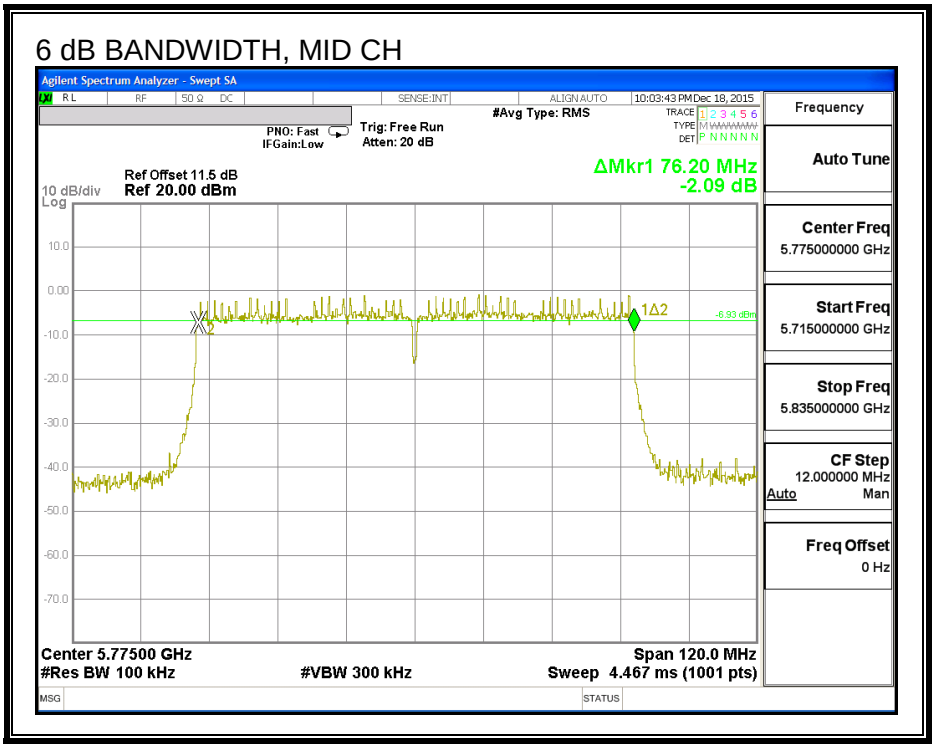
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

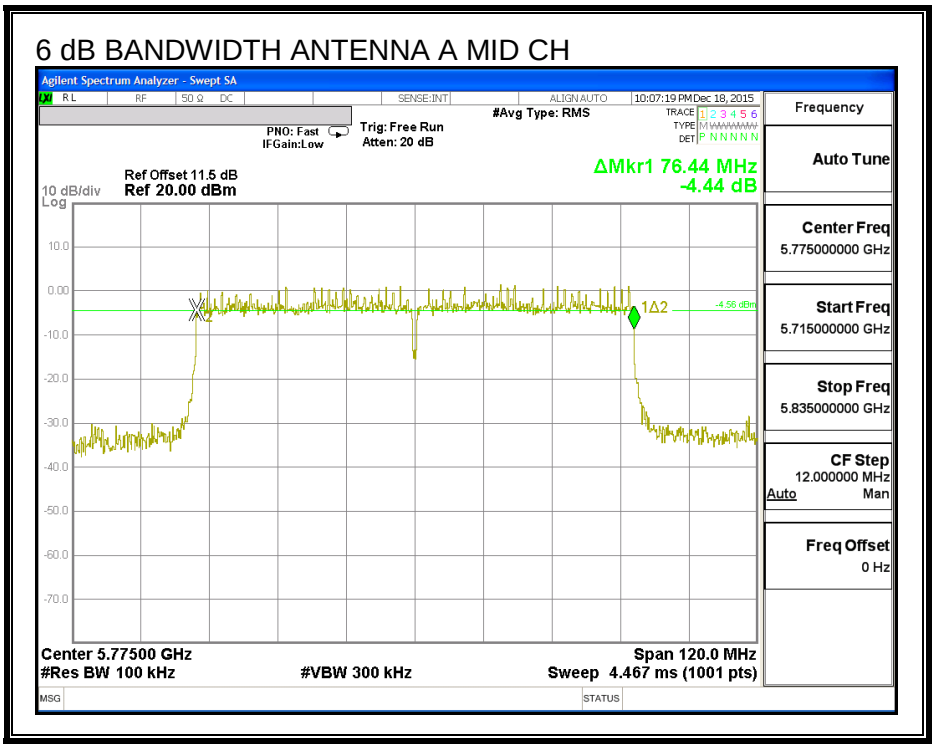
Channel	Frequency (MHz)	6 dB BW Antenna B (MHz)	6 dB BW Antenna A (MHz)	Minimum Limit (MHz)
Mid	5775	76.20	76.44	0.5

This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

6 dB BANDWIDTH, ANTENNA - B



6 DB BANDWIDTH, ANTENNA - A



This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

8.78.2. 26 dB BANDWIDTH

LIMITS

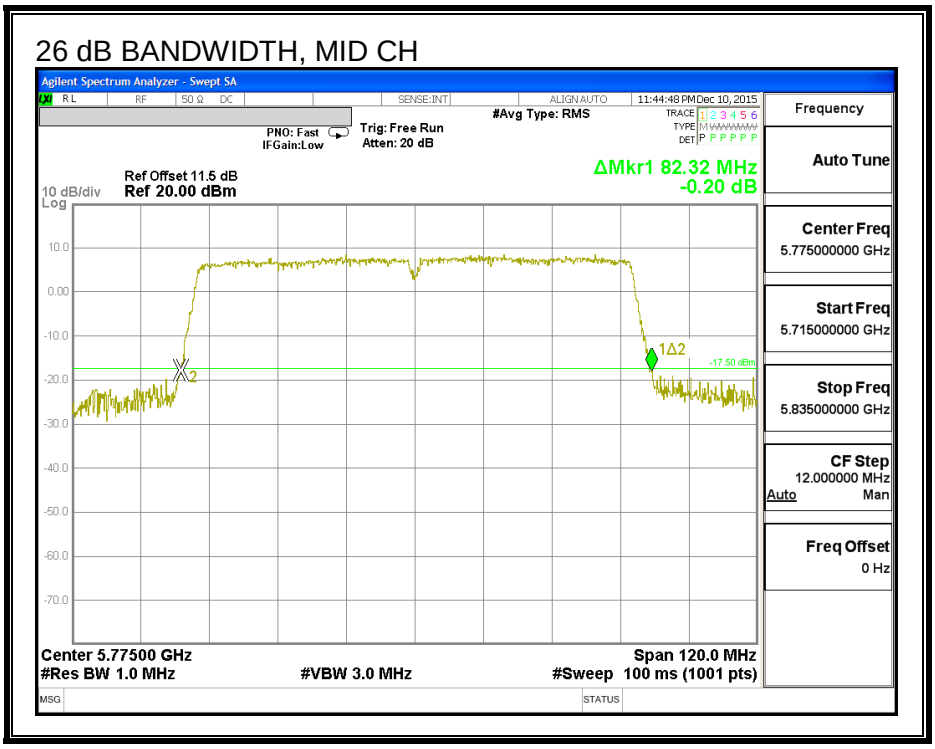
None, for reporting purposes only.

RESULTS

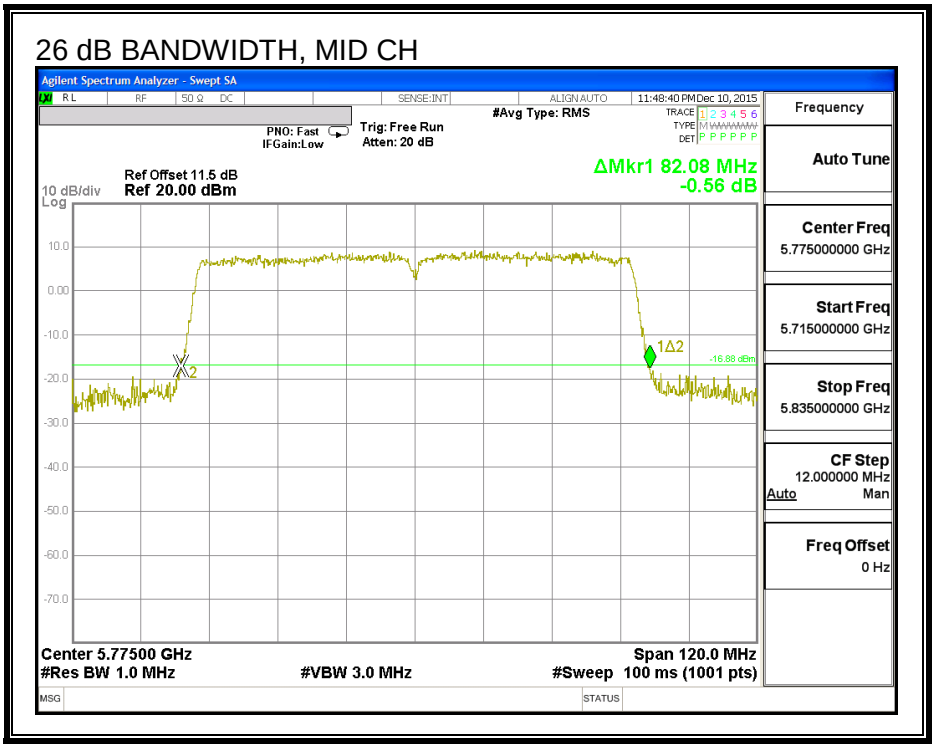
Channel	Frequency (MHz)	26 dB BW Antenna B (MHz)	26 dB BW Antenna A (MHz)
Mid	5775	82.32	82.08

UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701J
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

26 dB BANDWIDTH, ANTENNA - B



26 dB BANDWIDTH, ANTENNA - A



This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

8.78.3. 99% BANDWIDTH

LIMITS

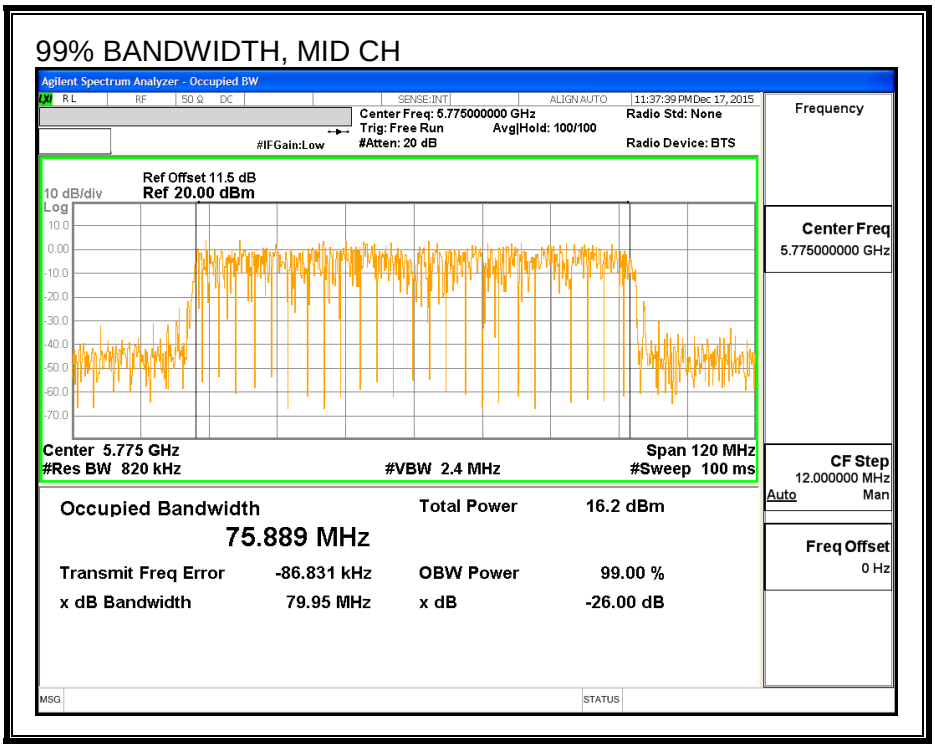
None; for reporting purposes only.

RESULTS

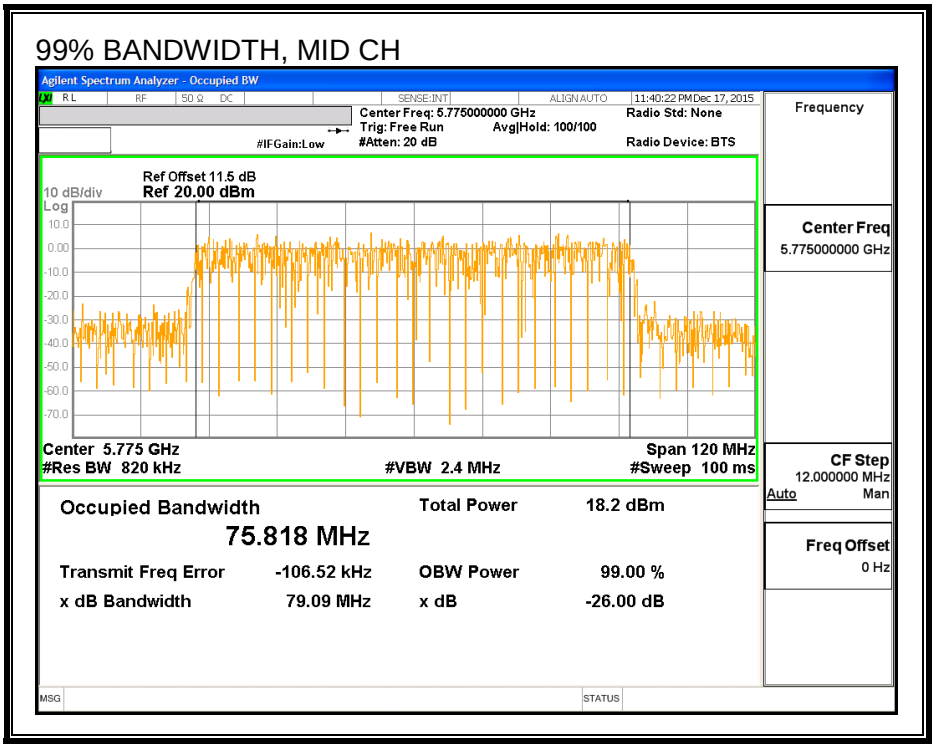
Channel	Frequency (MHz)	99% BW Antenna B (MHz)	99% BW Antenna A (MHz)
Mid	5775	75.889	75.818

UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701J
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

99% BANDWIDTH, ANTENNA - B



99% BANDWIDTH, ANTENNA - A



This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

8.78.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

Channel	Frequency (MHz)	Antenna B Power (dBm)	Antenna A Power (dBm)	Total Power (dBm)
Mid	5775	12.45	12.39	15.43

UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701J
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

8.78.5. OUTPUT POWER

LIMITS

FCC §15.407 (a) (3)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

DIRECTIONAL ANTENNA GAIN

The TX chains are uncorrelated and the antenna gain is unequal among the chains. The directional gain is:

Antenna B Gain (dBi)	Antenna A Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
2.42	4.16	3.38

UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701J
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Mid	5775	3.38	30.00

Output Power Results

Channel	Frequency (MHz)	Antenna B Meas Power (dBm)	Antenna A Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid	5775	12.45	12.39	15.43	30.00	-14.57

UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701J
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

8.78.6. PSD

LIMITS

FCC §15.407 (a) (3)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

The TX chains are correlated and the antenna gain is unequal among the chains. The directional gain is:

Antenna B Gain (dBi)	Antenna A Gain (dBi)	Correlated Chains Directional Gain (dBi)
2.42	4.16	6.34

This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Mid	5775	6.34	29.66

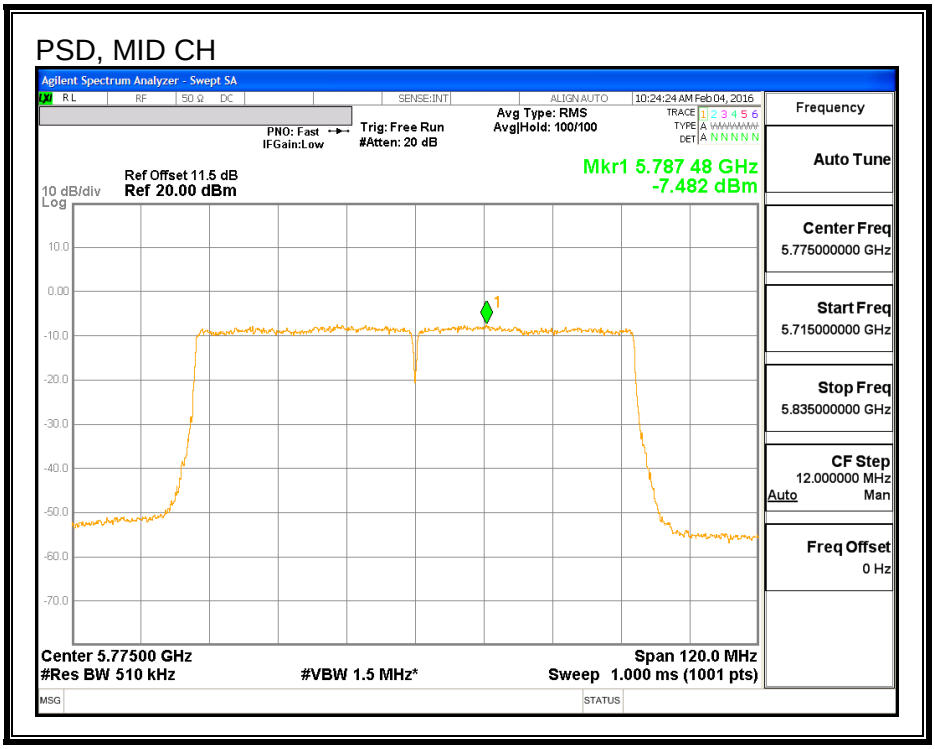
Duty Cycle CF (dB)	0.20	Included in Calculations of Corr'd PSD

PSD Results

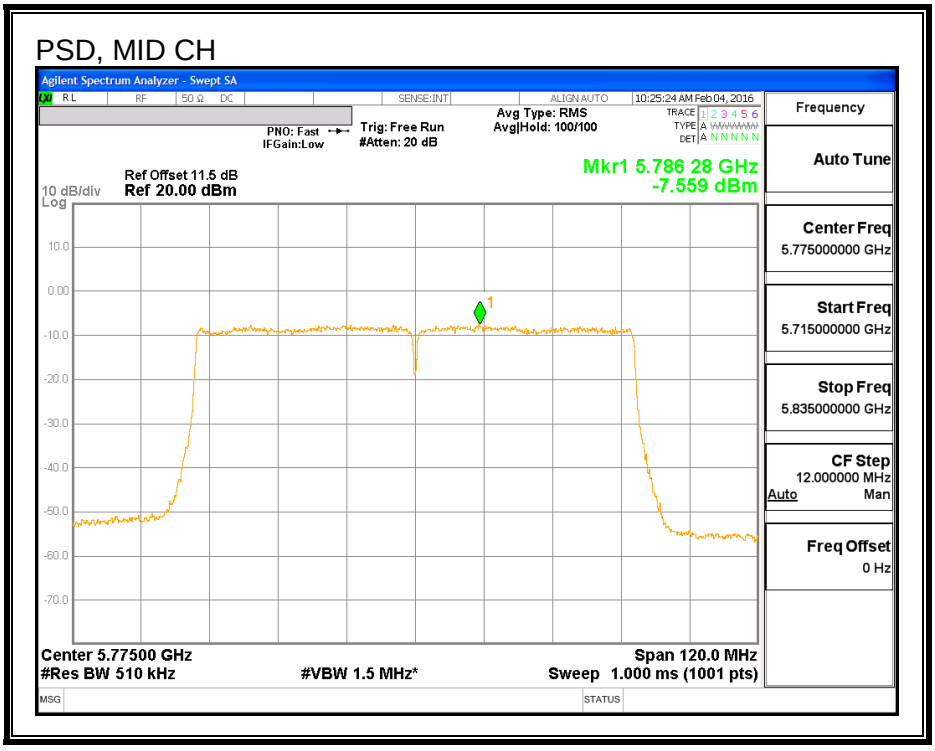
Channel	Frequency (MHz)	Antenna B Meas PSD (dBm)	Antenna A Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Mid	5775	-7.48	-7.56	-4.310	29.66	-33.97

UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701J
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

PSD, ANTENNA - B



PSD, ANTENNA - A



This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

8.79. 802.11ac VHT80 2Tx STBC MODE IN THE 5.8 GHz BAND

Note: Covered by 802.11ac VHT80 2Tx CDD MODE IN THE 5.8 GHz BAND

This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

8.80. 802.11ac VHT80 2Tx SDM MODE IN THE 5.8 GHz BAND

Note: Covered by 802.11ac VHT80 2Tx CDD MODE IN THE 5.8 GHz BAND

This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

9. RADIATED TEST RESULTS

9.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane for measurement below 1GHz; 1.5 m above the ground plane for measurement above 1GHz. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.10. The EUT is set to transmit in a continuous mode.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements and as applicable for average measurements.

The spectrum from 30 MHz to 40 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band.

The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

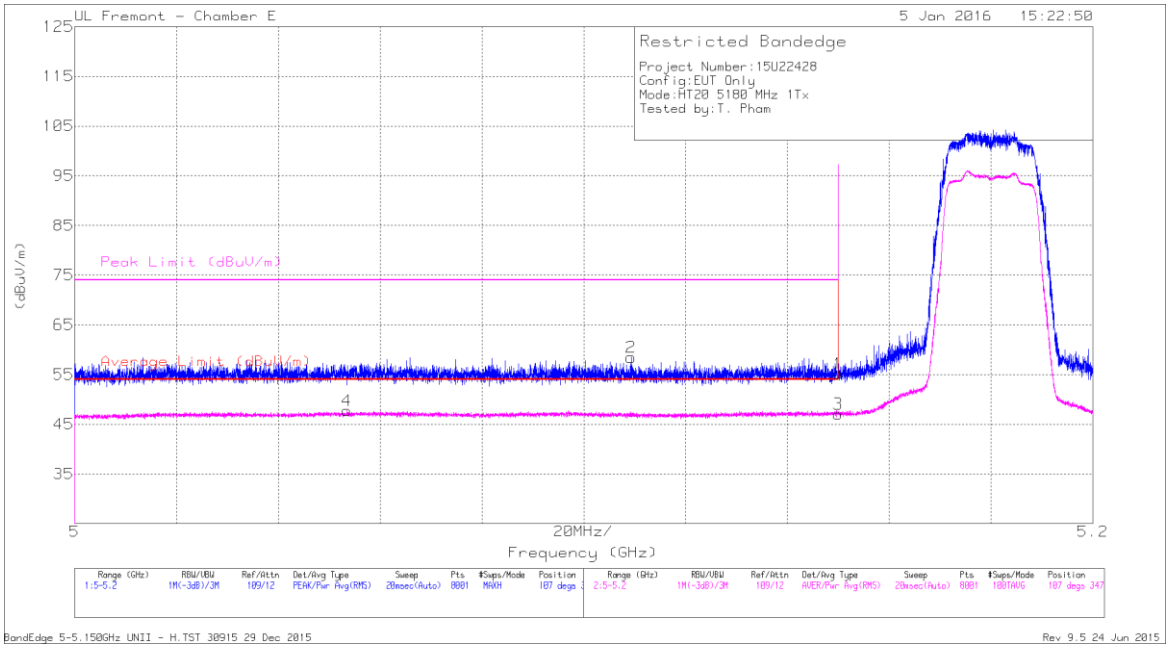
Radiated emission were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario.

This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

9.2. 802.11n HT20 1Tx WF1 MODE IN THE 5.2 GHz BAND

RESTRICTED BANDEDGE, ANTENNA - B (LOW CHANNEL)

LOW CHANNEL HORIZONTAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 5.053	32.07	RMS	34.2	-18.5	47.77	54	-6.23	-	-	107	347	H
2	* 5.109	43.06	Pk	34.2	-18.8	58.46	-	-	74	-15.54	107	347	H
1	* 5.15	39.9	Pk	34.3	-19	55.2	-	-	74	-18.8	107	347	H
3	* 5.15	31.76	RMS	34.3	-19	47.06	54	-6.94	-	-	107	347	H

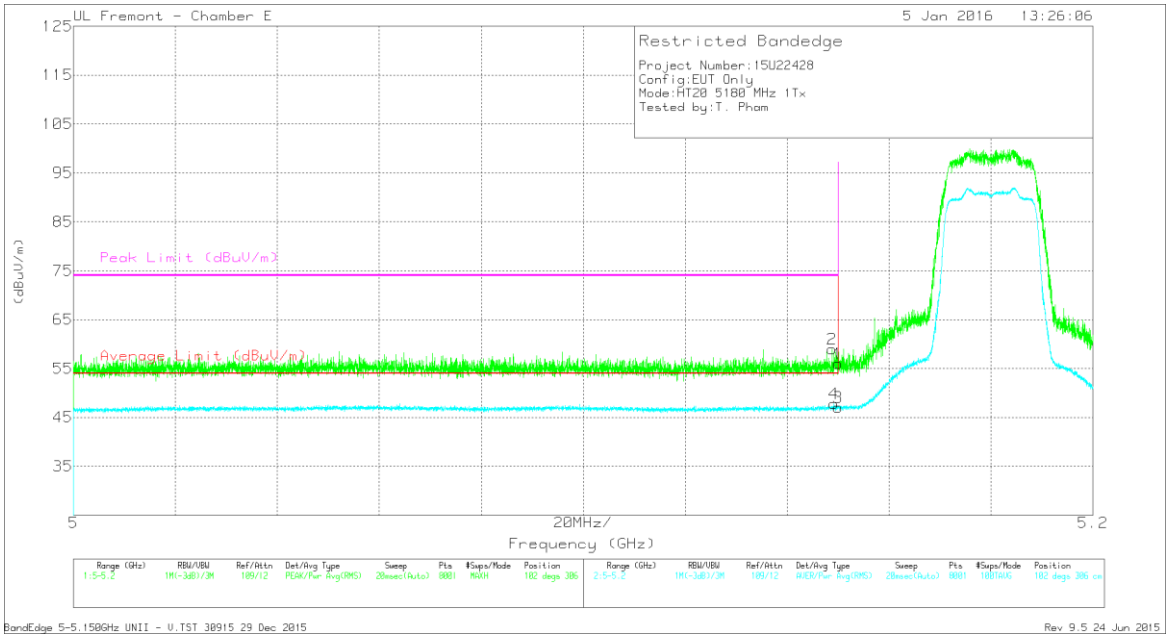
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

LOW CHANNEL VERTICAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.149	43.58	Pk	34.3	-18.9	58.98	-	-	74	-15.02	102	306	V
4	* 5.149	32.45	RMS	34.3	-18.9	47.85	54	-6.15	-	-	102	306	V
1	* 5.15	40.68	Pk	34.3	-19	55.98	-	-	74	-18.02	102	306	V
3	* 5.15	31.8	RMS	34.3	-19	47.1	54	-6.9	-	-	102	306	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

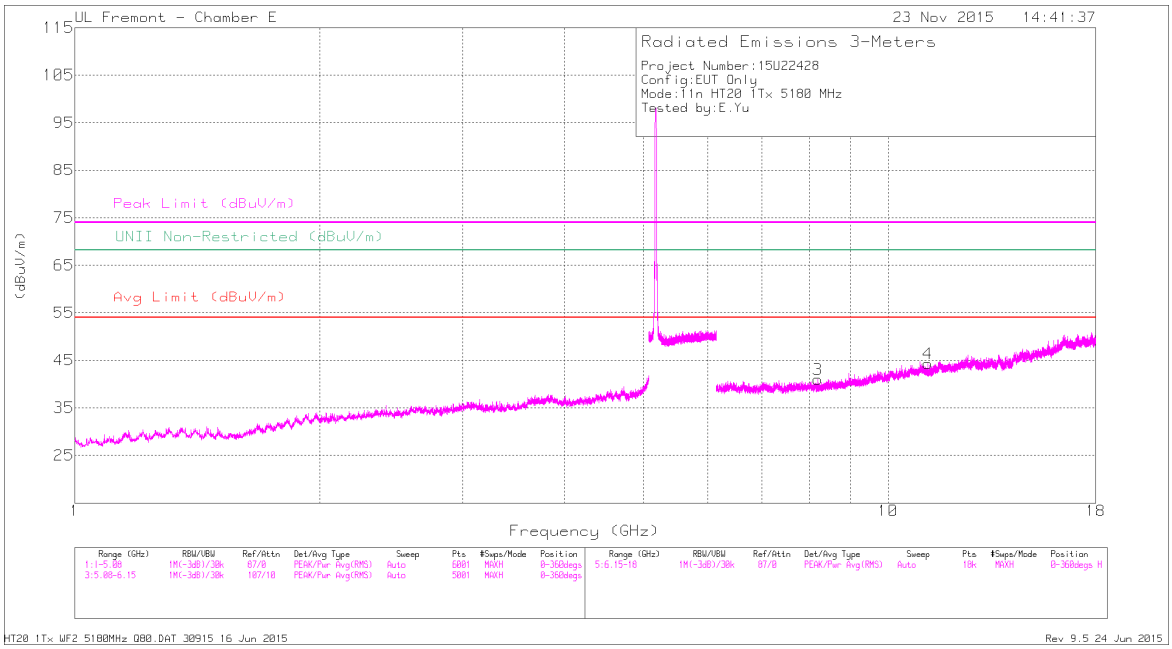
Pk - Peak detector

RMS - RMS detection

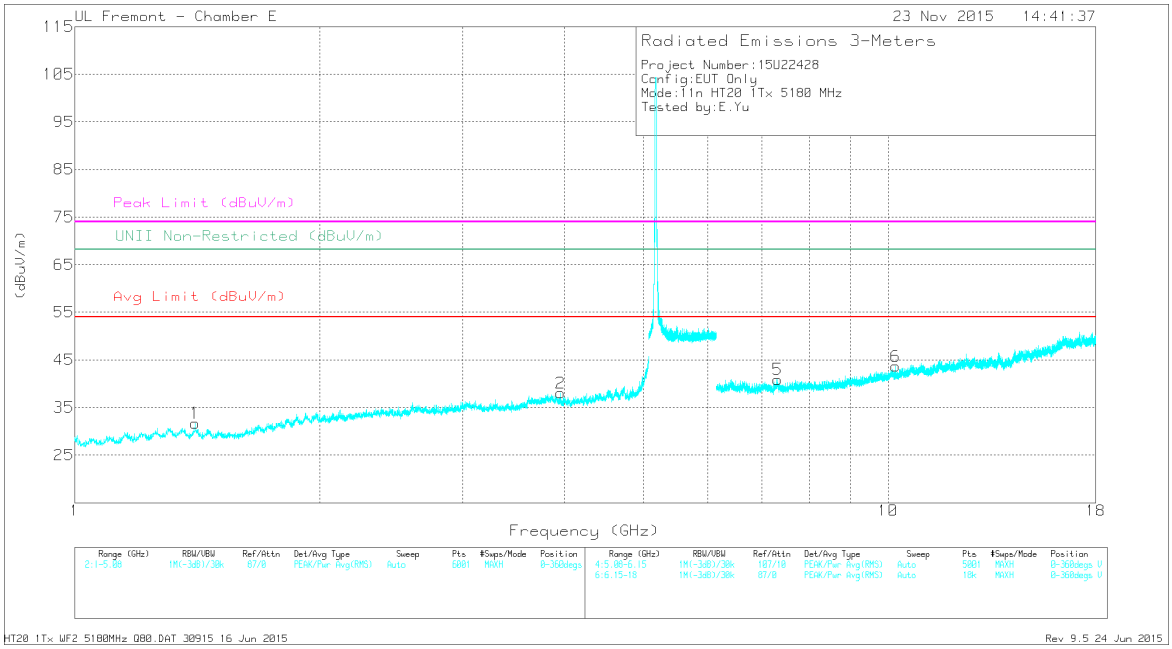
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

LOW CHANNEL HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.406	44.87	PK-U	28.5	-34.6	38.77	-	-	74	-35.23	-	-	271	285	V
	* 1.407	32.68	ADR	28.5	-34.6	26.58	54	-27.42	-	-	-	-	271	285	V
2	* 3.955	41.86	PK-U	33.4	-31.1	44.16	-	-	74	-29.84	-	-	267	372	V
	* 3.956	30.27	ADR	33.4	-31.1	32.57	54	-21.43	-	-	-	-	267	372	V
3	* 8.193	38.04	PK-U	35.7	-26.8	46.94	-	-	74	-27.06	-	-	327	127	H
	* 8.193	26.47	ADR	35.7	-26.8	35.37	54	-18.63	-	-	-	-	327	127	H
4	* 11.189	36.66	PK-U	37.8	-24.5	49.96	-	-	74	-24.04	-	-	209	276	H
	* 11.187	25.32	ADR	37.8	-24.5	38.62	54	-15.38	-	-	-	-	209	276	H
5	* 7.317	37.89	PK-U	35.5	-26.2	47.19	-	-	74	-26.81	-	-	121	347	V
	* 7.316	26.29	ADR	35.5	-26.1	35.69	54	-18.31	-	-	-	-	121	347	V
6	10.211	36.48	PK-U	37.2	-24.5	49.18	-	-	-	-	68.2	-19.02	298	172	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

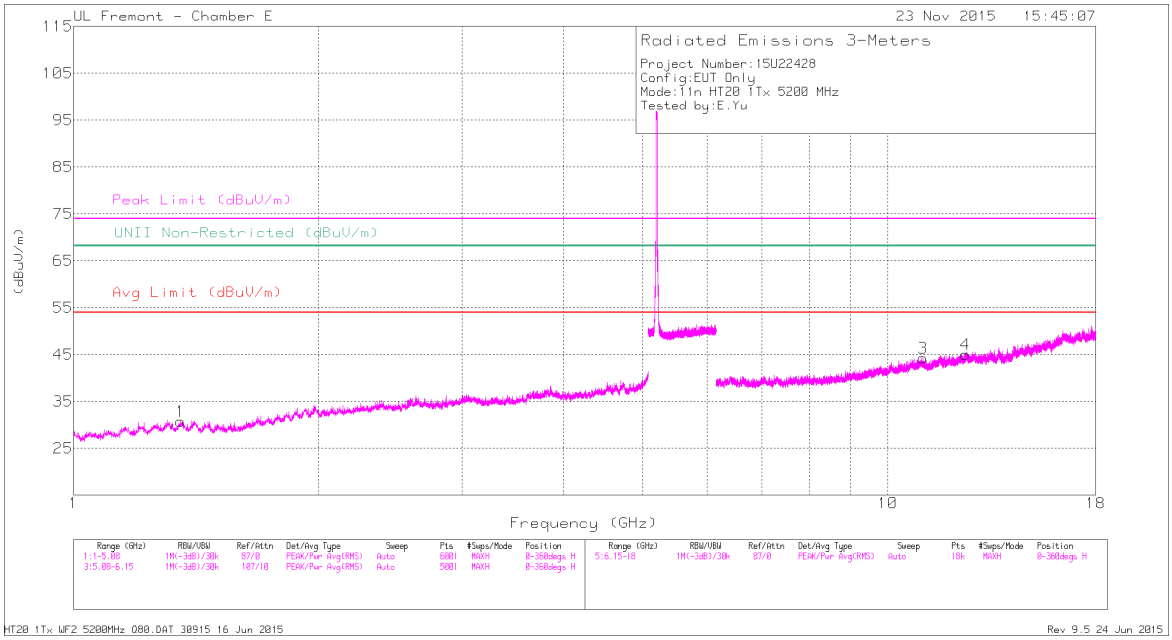
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

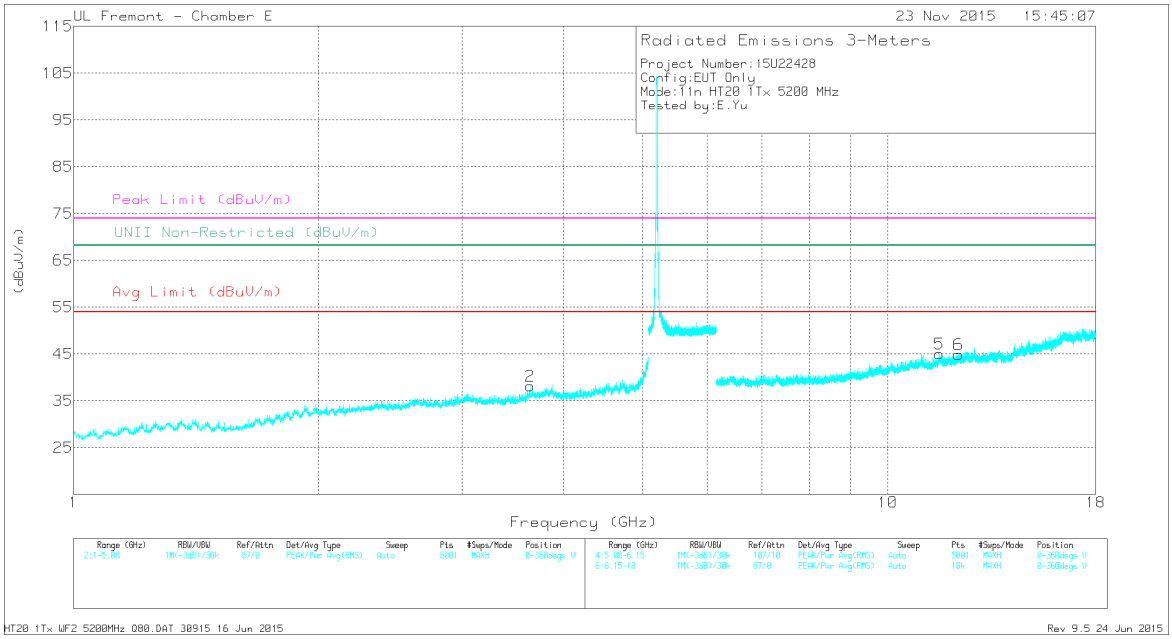
UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701J
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

MID CHANNEL HARMONICS AND SPURIOUS EMISSIONS

MID CHANNEL HORIZONTAL PLOT



MID CHANNEL VERTICAL PLOT



This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

DATA

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.353	44.68	PK-U	28.7	-35	38.38	-	-	74	-35.62	-	-	146	242	H
	* 1.354	33.15	ADR	28.7	-35	26.85	54	-27.15	-	-	-	-	146	242	H
2	* 3.634	40.88	PK-U	33.1	-30.8	43.18	-	-	74	-30.82	-	-	60	367	V
	* 3.632	29.97	ADR	33.1	-30.8	32.27	54	-21.73	-	-	-	-	60	367	V
3	* 11.05	37.14	PK-U	37.9	-23.7	51.34	-	-	74	-22.66	-	-	82	158	H
	* 11.049	25.42	ADR	37.9	-23.6	39.72	54	-14.28	-	-	-	-	82	158	H
4	* 12.463	37.12	PK-U	38.9	-23.6	52.42	-	-	74	-21.58	-	-	118	299	H
	* 12.461	25.83	ADR	38.9	-23.7	41.03	54	-12.97	-	-	-	-	118	299	H
5	* 11.568	35.5	PK-U	38.1	-22.3	51.3	-	-	74	-22.7	-	-	142	329	V
	* 11.567	24.82	ADR	38.1	-22.3	40.62	54	-13.38	-	-	-	-	142	329	V
6	* 12.211	37.05	PK-U	38.8	-24.4	51.45	-	-	74	-22.55	-	-	212	207	V
	* 12.212	26.13	ADR	38.8	-24.4	40.53	54	-13.47	-	-	-	-	212	207	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

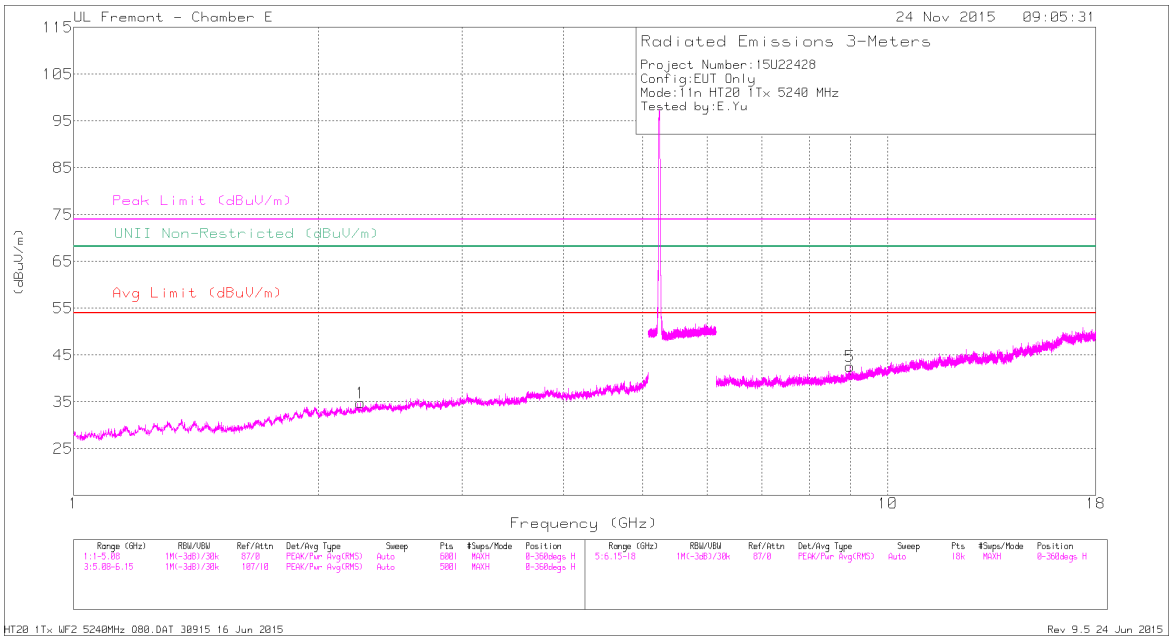
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

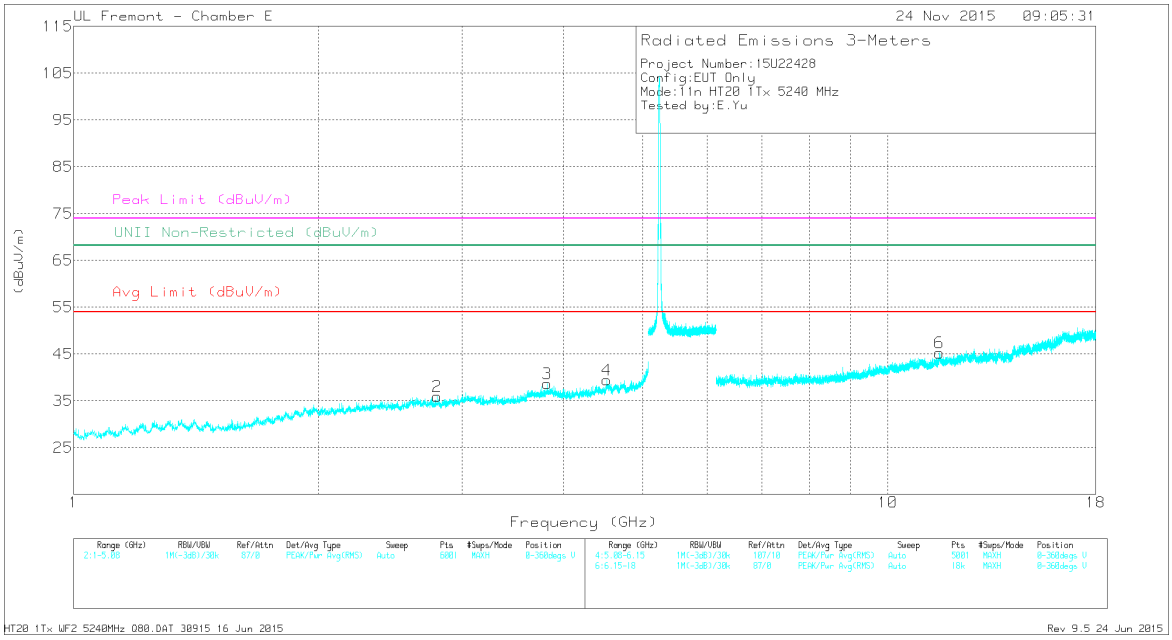
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

HIGH CHANNEL HARMONICS AND SPURIOUS EMISSIONS

HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

DATA

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.252	43.05	PK-U	31.6	-33	41.65	-	-	74	-32.35	-	-	202	252	H
	* 2.251	30.92	ADR	31.6	-32.9	29.62	54	-24.38	-	-	-	-	202	252	H
2	* 2.798	42.41	PK-U	32.4	-32	42.81	-	-	74	-31.19	-	-	88	157	V
	* 2.798	30.62	ADR	32.4	-32	31.02	54	-22.98	-	-	-	-	88	157	V
3	* 3.815	41.22	PK-U	33.5	-30	44.72	-	-	74	-29.28	-	-	158	251	V
	* 3.816	30.19	ADR	33.5	-30	33.69	54	-20.31	-	-	-	-	158	251	V
4	* 4.516	41.54	PK-U	34	-29.8	45.74	-	-	74	-28.26	-	-	175	199	V
	* 4.513	30.19	ADR	34	-29.8	34.39	54	-19.61	-	-	-	-	175	199	V
6	* 11.567	35.93	PK-U	38.1	-22.3	51.73	-	-	74	-22.27	-	-	308	247	V
	* 11.567	24.83	ADR	38.1	-22.3	40.63	54	-13.37	-	-	-	-	308	247	V
5	8.99	38.35	PK-U	36.2	-26.2	48.35	-	-	-	-	68.2	-19.85	324	202	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

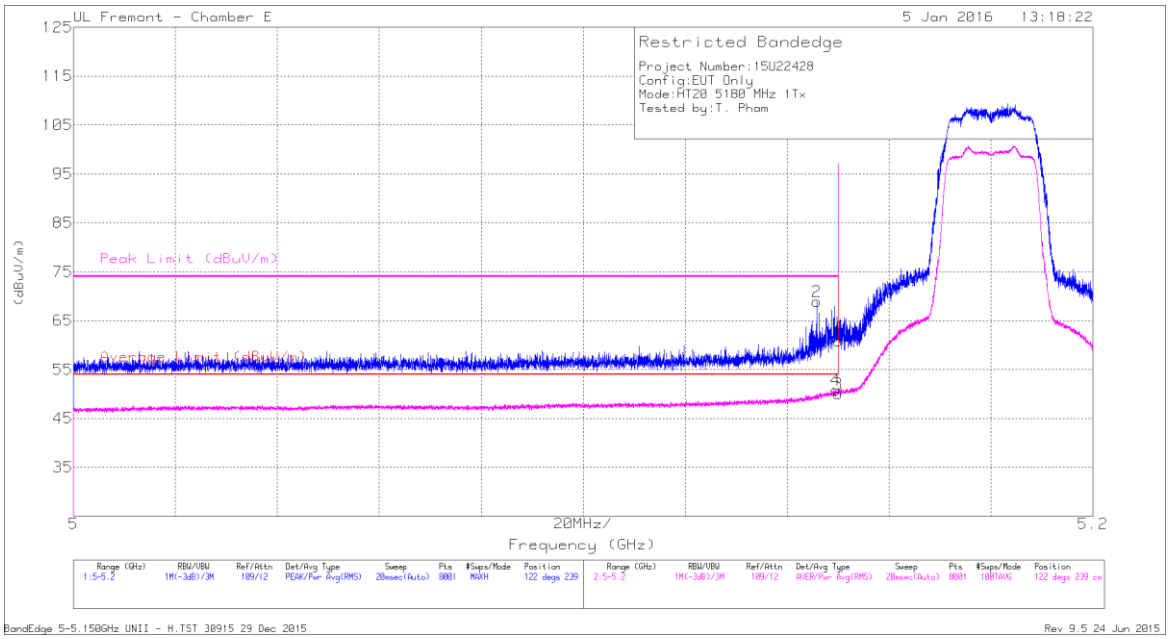
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701J
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

RESTRICTED BANDEDGE, ANTENNA - A (LOW CHANNEL)

LOW CHANNEL HORIZONTAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.146	53.51	Pk	34.3	-18.9	68.91	-	-	74	-5.09	122	239	H
1	* 5.15	45.5	Pk	34.3	-19	60.8	-	-	74	-13.2	122	239	H
3	* 5.15	34.75	RMS	34.3	-19	50.05	54	-3.95	-	-	122	239	H
4	* 5.15	35.49	RMS	34.3	-19	50.79	54	-3.21	-	-	122	239	H

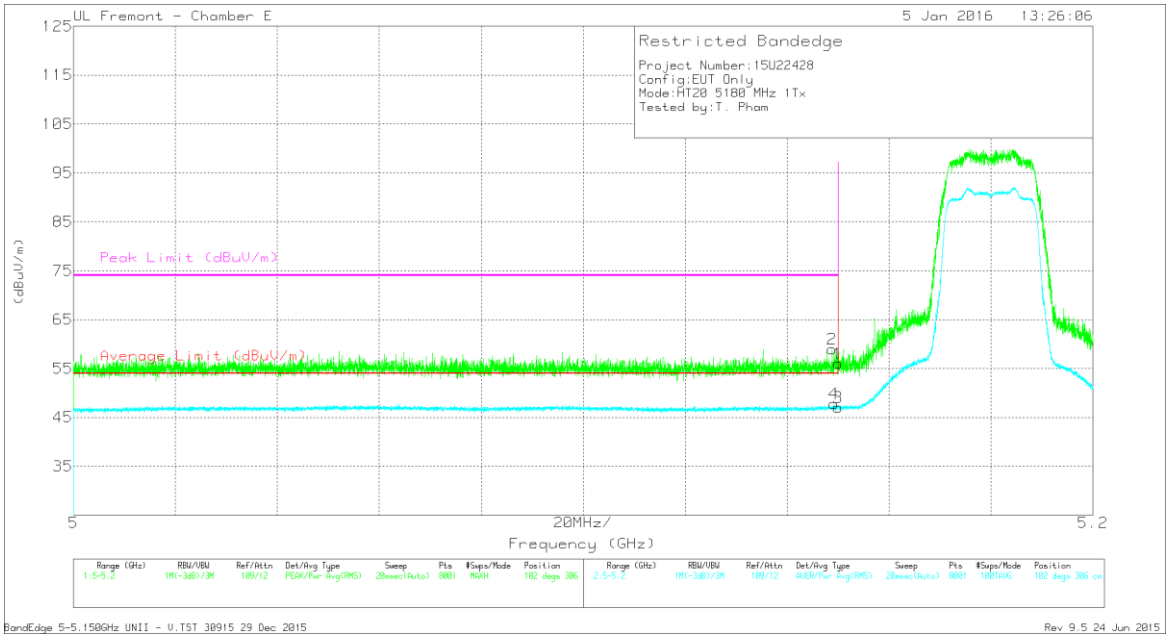
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

LOW CHANNEL VERTICAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.149	43.58	Pk	34.3	-18.9	58.98	-	-	74	-15.02	102	306	V
4	* 5.149	32.45	RMS	34.3	-18.9	47.85	54	-6.15	-	-	102	306	V
1	* 5.15	40.68	Pk	34.3	-19	55.98	-	-	74	-18.02	102	306	V
3	* 5.15	31.8	RMS	34.3	-19	47.1	54	-6.9	-	-	102	306	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

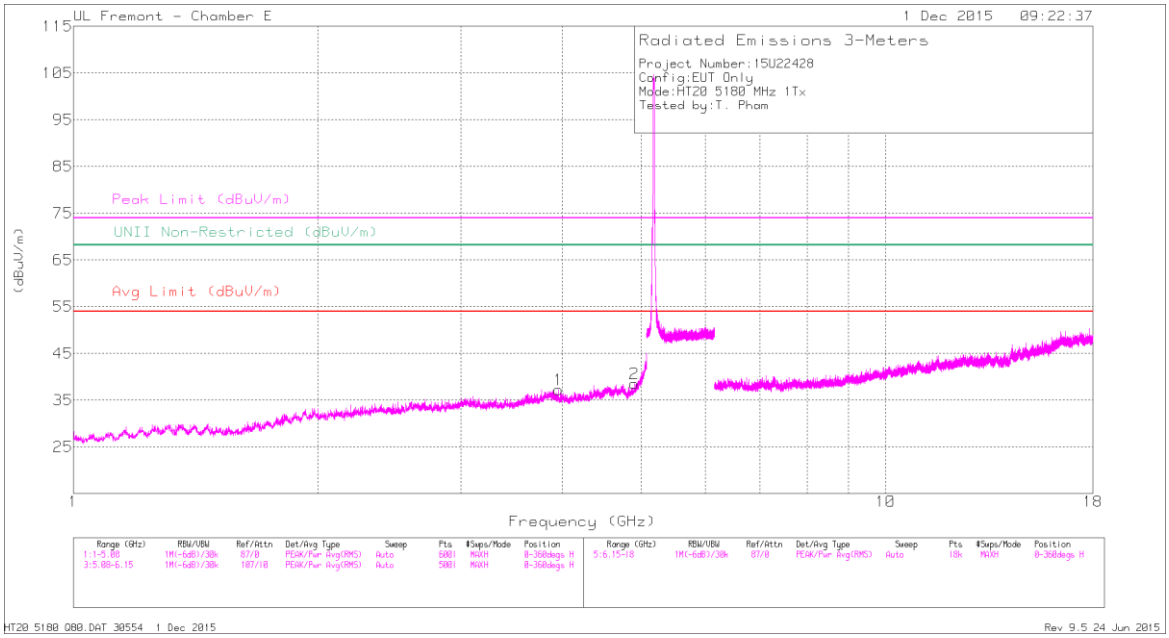
Pk - Peak detector

RMS - RMS detection

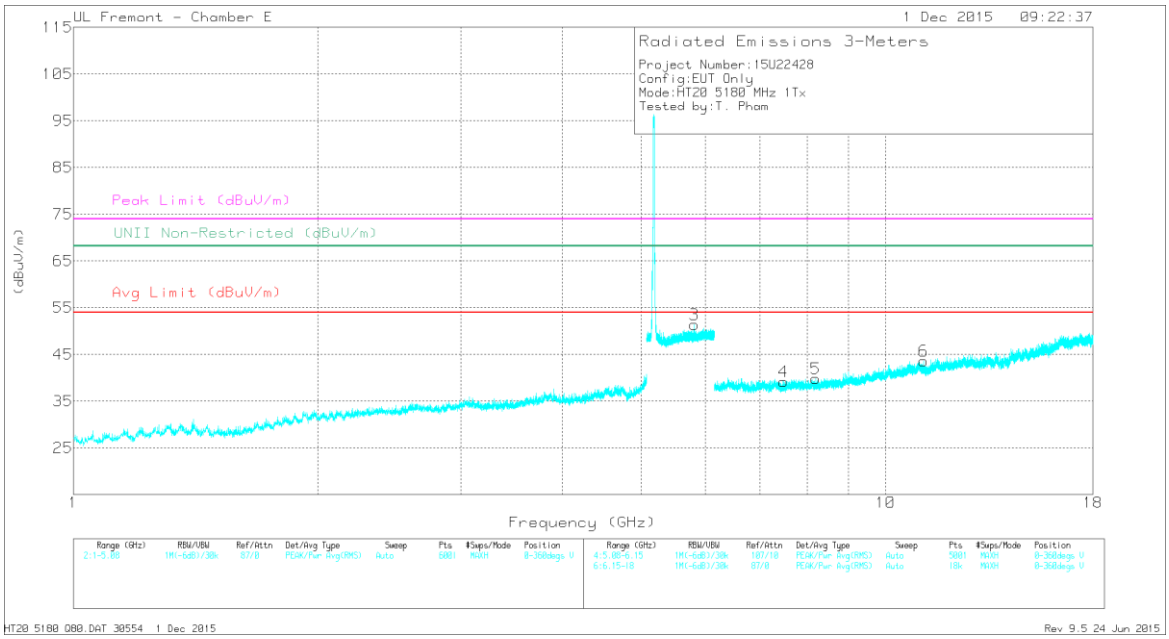
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

LOW CHANNEL HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

DATA

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.956	42.29	PK-U	33.4	-31.1	44.59	-	-	74	-29.41	-	-	46	273	H
	* 3.956	30.22	ADR	33.4	-31.1	32.52	54	-21.48	-	-	-	-	46	273	H
2	* 4.904	41.19	PK-U	34.1	-29.5	45.79	-	-	74	-28.21	-	-	90	299	H
	* 4.903	29.8	ADR	34.1	-29.6	34.3	54	-19.7	-	-	-	-	90	299	H
4	* 7.484	38.25	PK-U	35.6	-27.5	46.35	-	-	74	-27.65	-	-	161	319	V
	* 7.485	27.21	ADR	35.6	-27.5	35.31	54	-18.69	-	-	-	-	161	319	V
5	* 8.203	38.07	PK-U	35.7	-26.9	46.87	-	-	74	-27.13	-	-	112	290	V
	* 8.203	27.03	ADR	35.7	-26.9	35.83	54	-18.17	-	-	-	-	112	290	V
6	* 11.134	36.31	PK-U	37.8	-24	50.11	-	-	74	-23.89	-	-	127	280	V
	* 11.135	25.48	ADR	37.8	-24	39.28	54	-14.72	-	-	-	-	127	280	V
3	5.814	42.66	PK-U	34.9	-20.1	57.46	-	-	-	-	68.2	-10.74	129	309	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

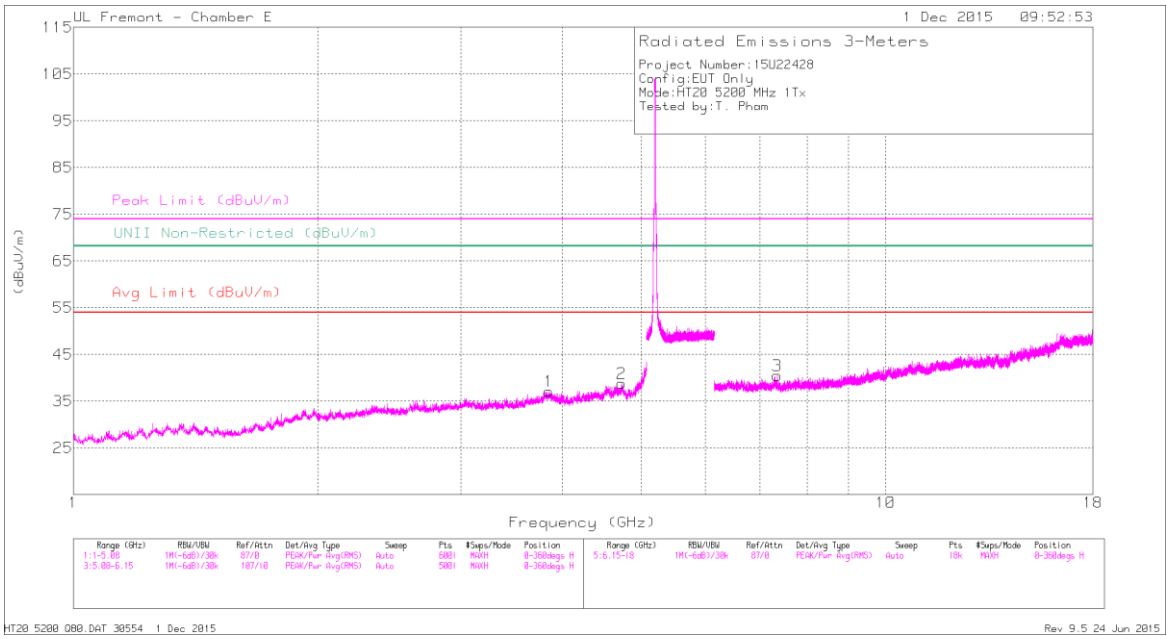
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

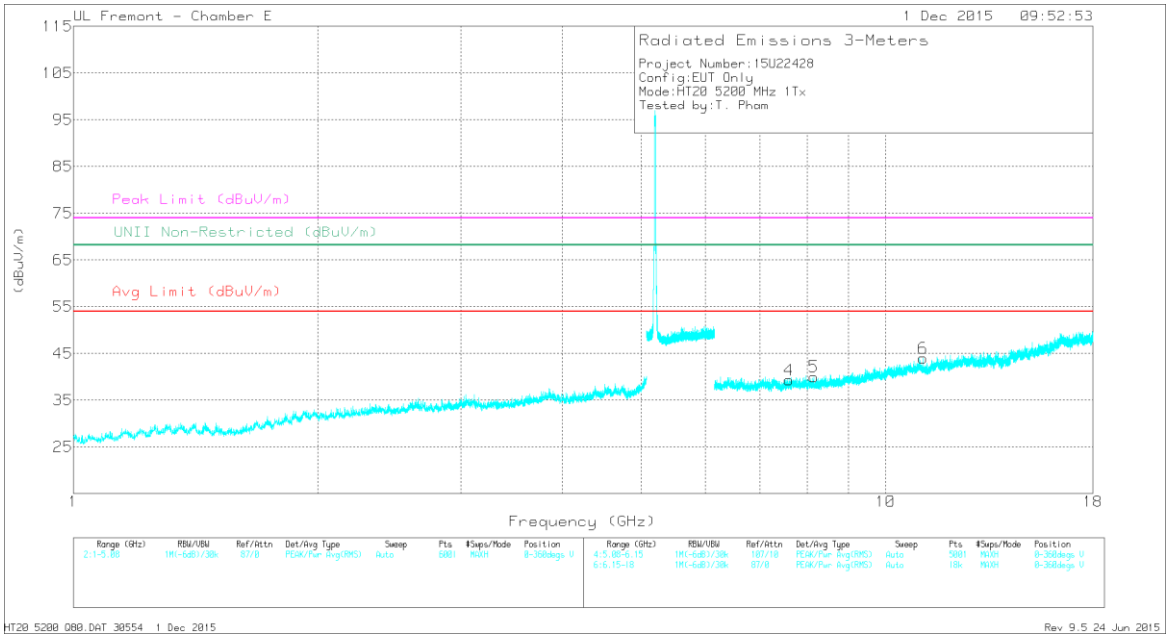
UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701J
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

MID CHANNEL HARMONICS AND SPURIOUS EMISSIONS

MID CHANNEL HORIZONTAL PLOT



MID CHANNEL VERTICAL PLOT



This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

DATA

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.853	41.87	PK-U	33.5	-29.8	45.57	-	-	74	-28.43	-	-	47	127	H
	* 3.852	29.72	ADR	33.5	-29.8	33.42	54	-20.58	-	-	-	-	47	127	H
2	* 4.731	41.07	PK-U	34.2	-28.9	46.37	-	-	74	-27.63	-	-	95	102	H
	* 4.731	29.57	ADR	34.2	-28.9	34.87	54	-19.13	-	-	-	-	95	102	H
3	* 7.355	38.52	PK-U	35.5	-27.4	46.62	-	-	74	-27.38	-	-	74	135	H
	* 7.354	27.67	ADR	35.5	-27.4	35.77	54	-18.23	-	-	-	-	74	135	H
4	* 7.598	38.12	PK-U	35.7	-26.8	47.02	-	-	74	-26.98	-	-	135	172	V
	* 7.6	27.14	ADR	35.7	-26.9	35.94	54	-18.06	-	-	-	-	135	172	V
5	* 8.159	37.87	PK-U	35.7	-26.7	46.87	-	-	74	-27.13	-	-	146	162	V
	* 8.16	26.86	ADR	35.7	-26.7	35.86	54	-18.14	-	-	-	-	146	162	V
6	* 11.111	37.39	PK-U	37.9	-24.2	51.09	-	-	74	-22.91	-	-	138	177	V
	* 11.11	25.72	ADR	37.9	-24.2	39.42	54	-14.58	-	-	-	-	138	177	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

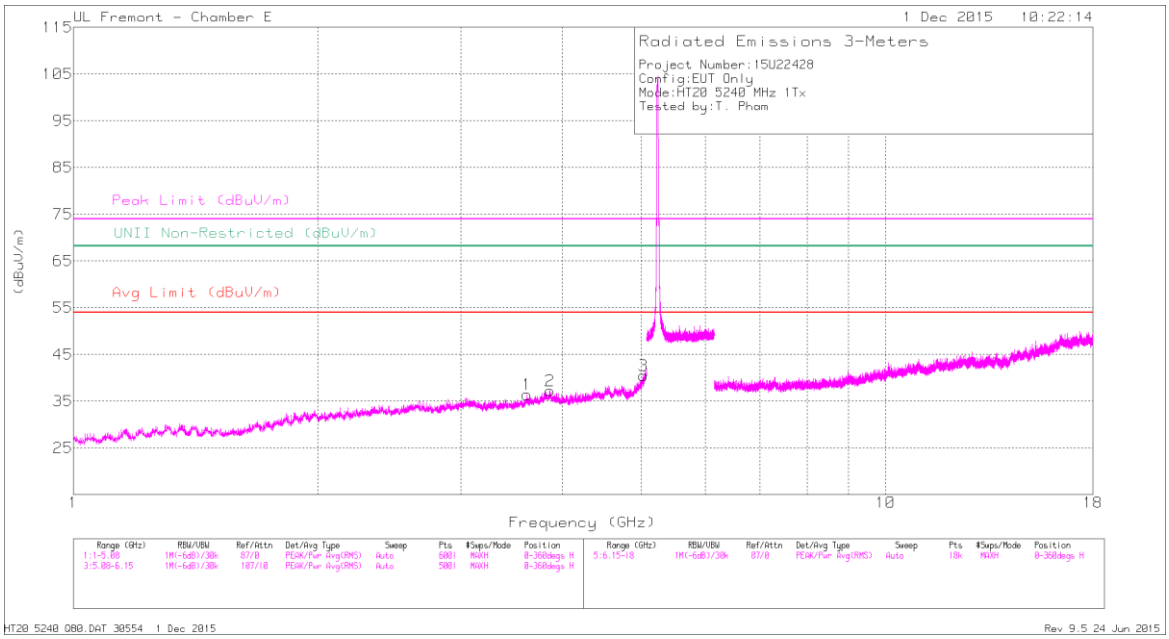
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

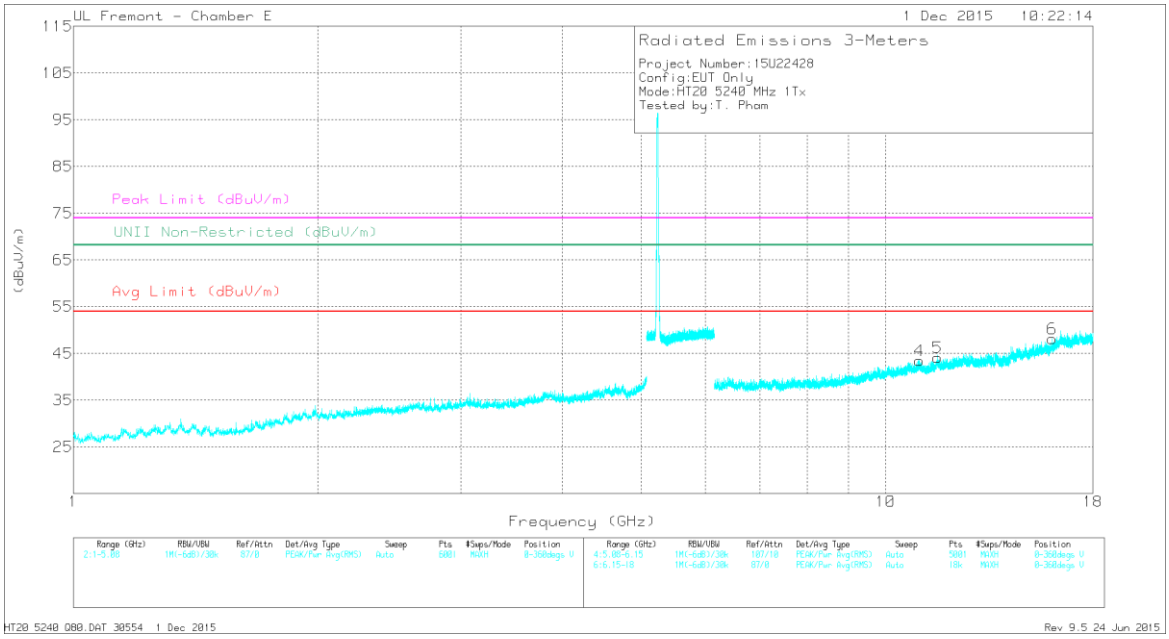
UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701J
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

HIGH CHANNEL HARMONICS AND SPURIOUS EMISSIONS

HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

DATA

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.614	42.11	PK-U	33.1	-30.8	44.41	-	-	74	-29.59	-	-	55	353	H
	* 3.618	29.77	ADR	33.1	-30.8	32.07	54	-21.93	-	-	-	-	55	353	H
2	* 3.864	41.95	PK-U	33.5	-29.9	45.55	-	-	74	-28.45	-	-	88	313	H
	* 3.861	30.16	ADR	33.5	-29.9	33.76	54	-20.24	-	-	-	-	88	313	H
3	* 5.034	43.31	PK-U	34.2	-28.5	49.01	-	-	74	-24.99	-	-	82	148	H
	* 5.034	31.7	ADR	34.2	-28.5	37.4	54	-16.6	-	-	-	-	82	148	H
4	* 10.997	36.7	PK-U	37.9	-22.6	52	-	-	74	-22	-	-	120	211	V
	* 10.995	24.26	ADR	37.9	-22.6	39.56	54	-14.44	-	-	-	-	120	211	V
5	* 11.589	36.5	PK-U	38.1	-22.5	52.1	-	-	74	-21.9	-	-	143	195	V
	* 11.588	24.91	ADR	38.1	-22.5	40.51	54	-13.49	-	-	-	-	143	195	V
6	* 16.033	37.27	PK-U	40.7	-22.7	55.27	-	-	74	-18.73	-	-	190	180	V
	* 16.033	26.35	ADR	40.7	-22.6	44.45	54	-9.55	-	-	-	-	190	180	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK-U - U-NII: Maximum Peak

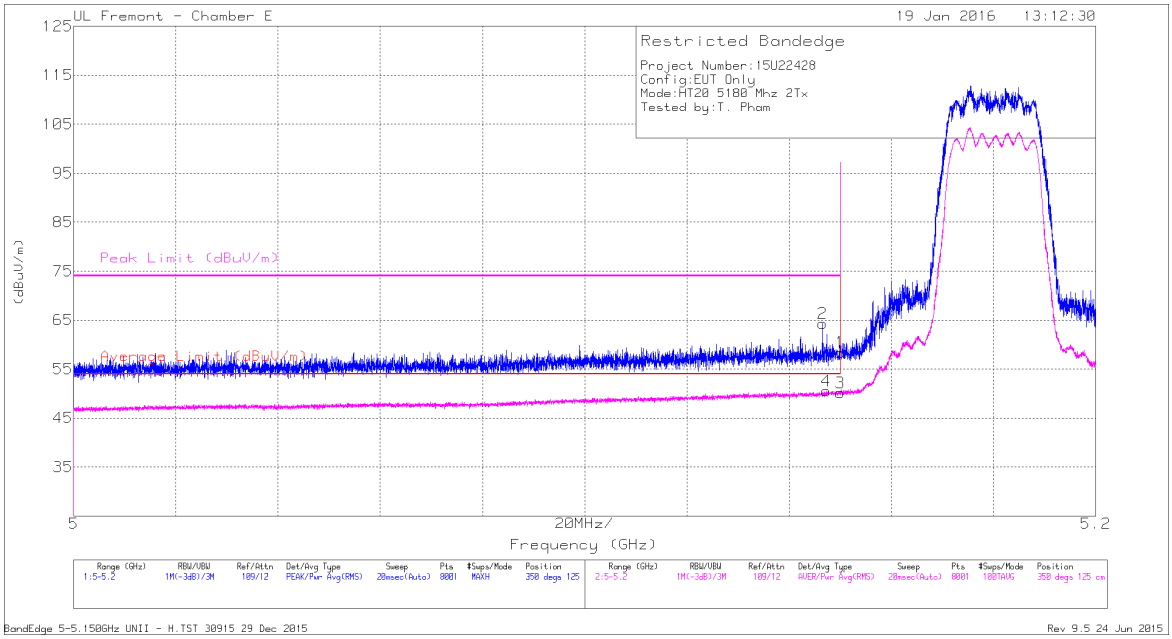
ADR - U-NII AD primary method, RMS average

UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701J
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

9.3. 802.11n HT20 2Tx CDD MODE IN THE 5.2 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

LOW CHANNEL HORIZONTAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.147	48.91	Pk	34.3	-18.9	64.31	-	-	74	-9.69	350	125	H
4	* 5.147	35.14	RMS	34.3	-18.9	50.54	54	-3.46	-	-	350	125	H
1	* 5.15	43.12	Pk	34.3	-19	58.42	-	-	74	-15.58	350	125	H
3	* 5.15	34.82	RMS	34.3	-19	50.12	54	-3.88	-	-	350	125	H

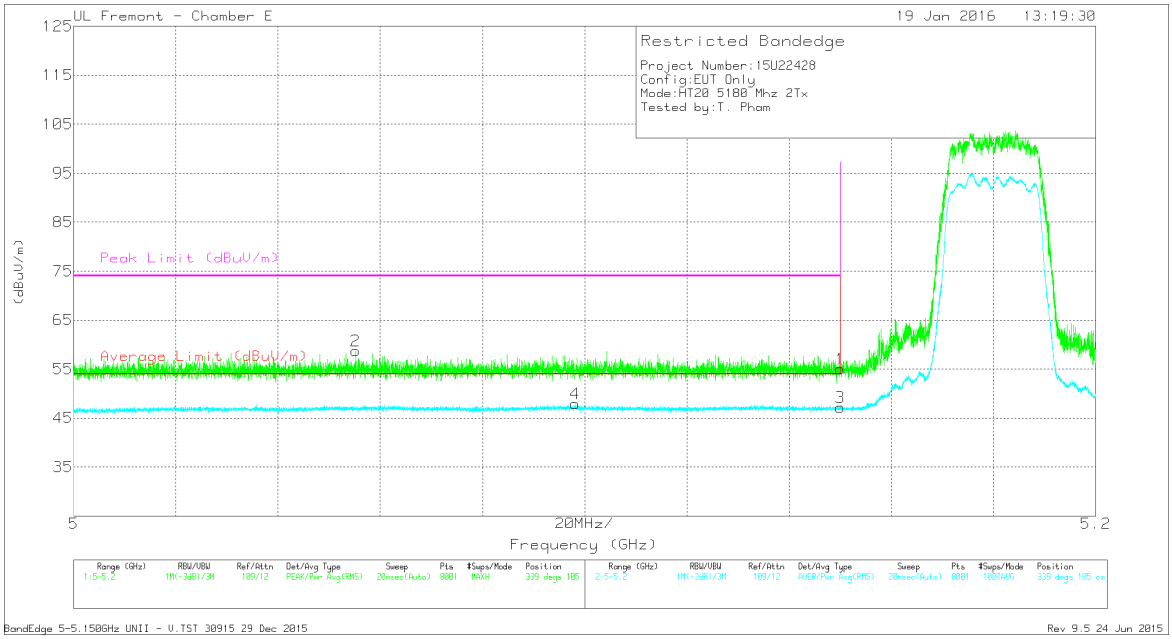
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

LOW CHANNEL VERTICAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.055	43.02	Pk	34.2	-18.5	58.72	-	-	74	-15.28	339	105	V
4	* 5.098	32.34	RMS	34.2	-18.6	47.94	54	-6.06	-	-	339	105	V
1	* 5.15	39.76	Pk	34.3	-19	55.06	-	-	74	-18.94	339	105	V
3	* 5.15	31.85	RMS	34.3	-19	47.15	54	-6.85	-	-	339	105	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

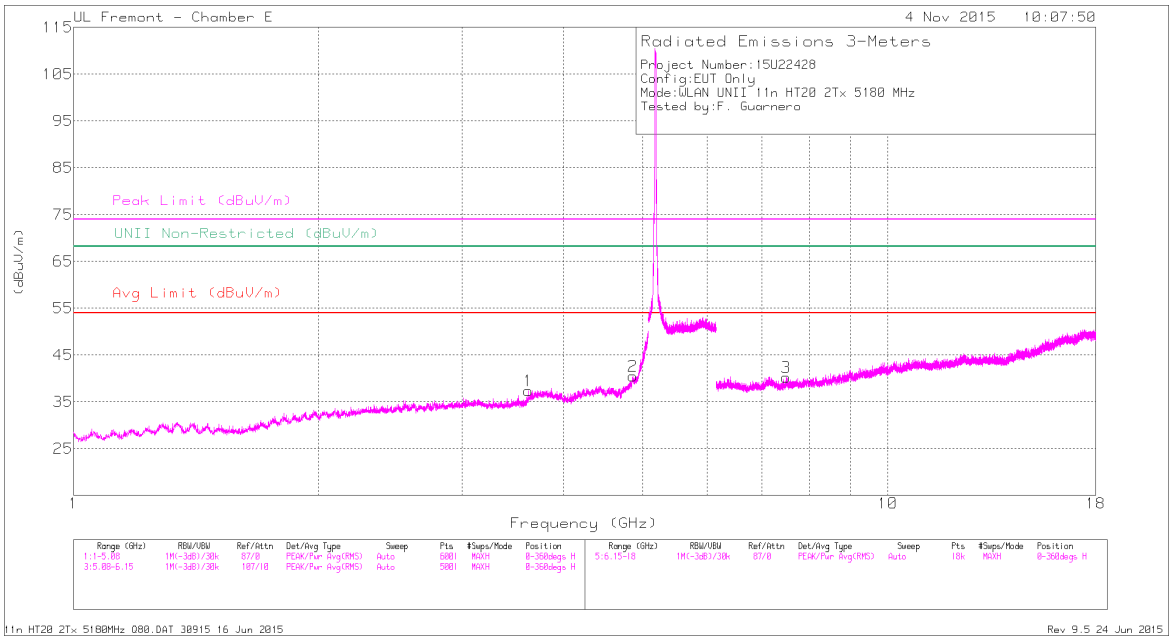
Pk - Peak detector

RMS - RMS detection

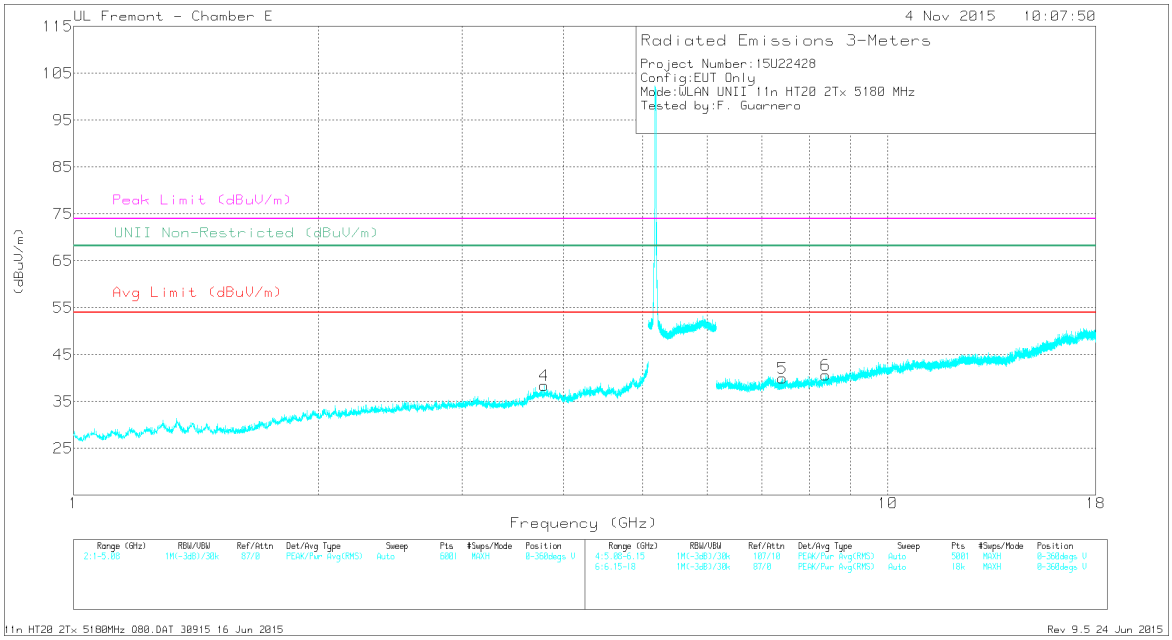
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

LOW CHANNEL HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.621	38.47	PK-U	33.1	-29.2	42.37	-	-	74	-31.63	-	-	265	215	H
	* 3.622	26.83	ADR	33.1	-29.2	30.73	54	-23.27	-	-	-	-	265	215	H
2	* 4.857	38.2	PK-U	34.1	-25.6	46.7	-	-	74	-27.3	-	-	269	130	H
	* 4.858	26.65	ADR	34.1	-25.6	35.15	54	-18.85	-	-	-	-	269	130	H
3	* 7.5	35.85	PK-U	35.5	-24.3	47.05	-	-	74	-26.95	-	-	128	284	H
	* 7.5	23.79	ADR	35.5	-24.4	34.89	54	-19.11	-	-	-	-	128	284	H
4	* 3.782	38.36	PK-U	33.3	-28.9	42.76	-	-	74	-31.24	-	-	99	255	V
	* 3.782	26.81	ADR	33.3	-28.9	31.21	54	-22.79	-	-	-	-	99	255	V
5	* 7.419	35.76	PK-U	35.5	-25.3	45.96	-	-	74	-28.04	-	-	66	181	V
	* 7.419	24.22	ADR	35.5	-25.3	34.42	54	-19.58	-	-	-	-	66	181	V
6	* 8.381	36.19	PK-U	35.7	-23.5	48.39	-	-	74	-25.61	-	-	96	202	V
	* 8.379	24.22	ADR	35.7	-23.6	36.32	54	-17.68	-	-	-	-	96	202	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

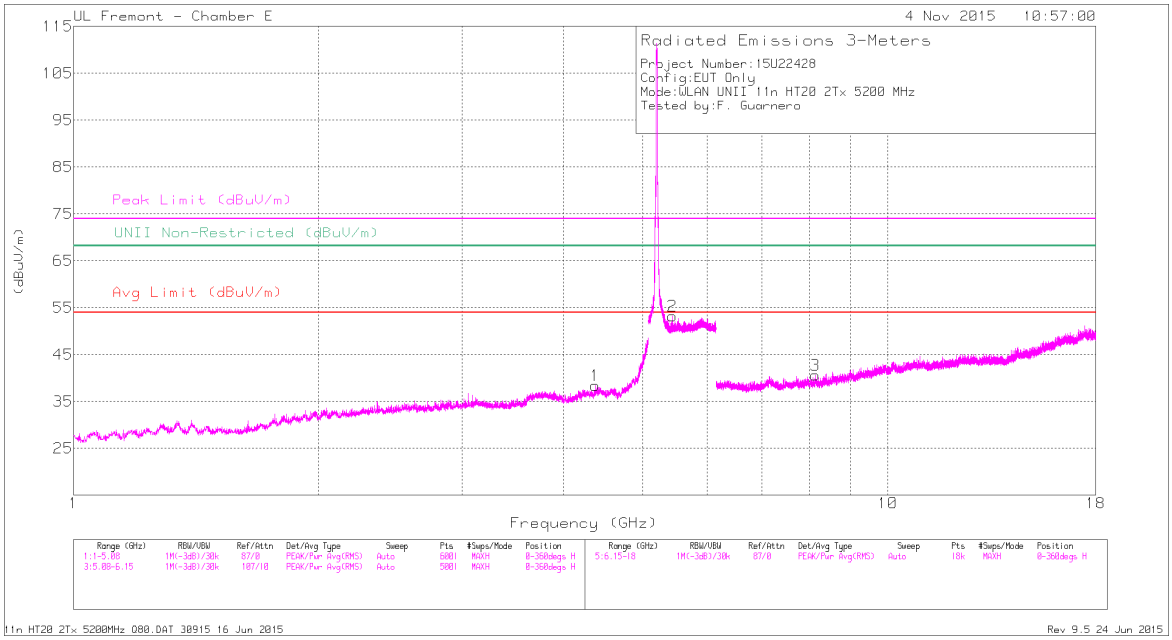
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

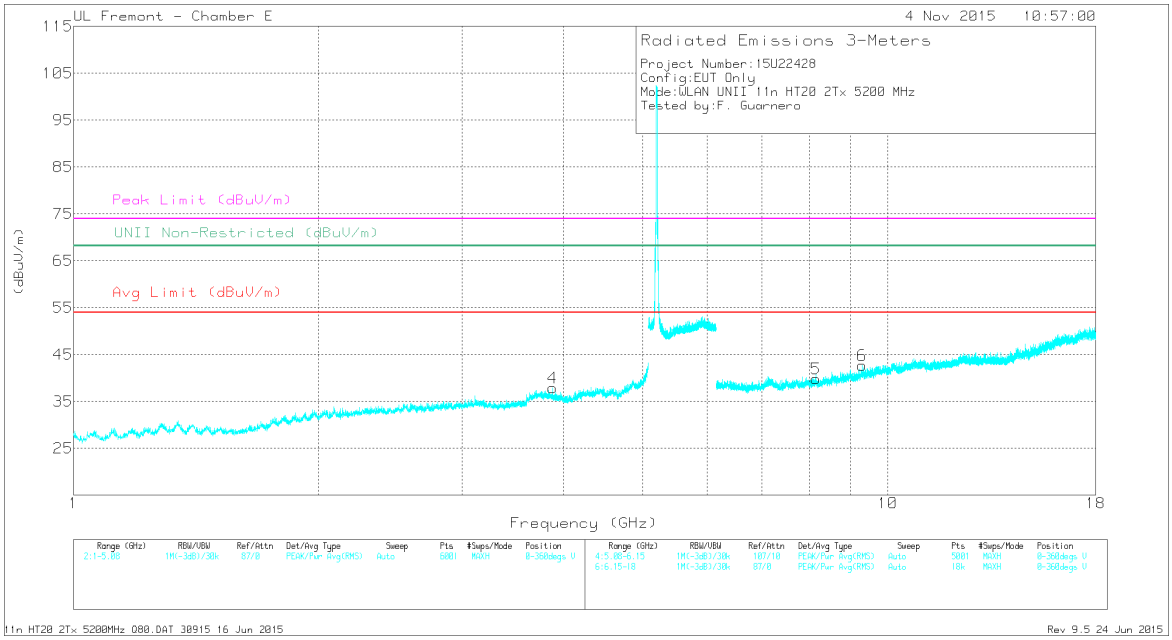
UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701J
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

MID CHANNEL HARMONICS AND SPURIOUS EMISSIONS

MID CHANNEL HORIZONTAL PLOT



MID CHANNEL VERTICAL PLOT



This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.373	38.06	PK-U	33.8	-28	43.86	-	-	74	-30.14	-	-	236	261	H
	* 4.373	26.51	ADR	33.8	-28	32.31	54	-21.69	-	-	-	-	236	261	H
2	* 5.439	43.46	PK-U	34.4	-18.3	59.56	-	-	74	-14.44	-	-	265	165	H
	* 5.432	31.9	ADR	34.4	-18.3	48	54	-6	-	-	-	-	265	165	H
3	* 8.153	35.6	PK-U	35.6	-23.9	47.3	-	-	74	-26.7	-	-	251	169	H
	* 8.153	23.69	ADR	35.6	-23.9	35.39	54	-18.61	-	-	-	-	251	169	H
4	* 3.878	39.15	PK-U	33.4	-29	43.55	-	-	74	-30.45	-	-	239	304	V
	* 3.876	27.26	ADR	33.4	-29	31.66	54	-22.34	-	-	-	-	239	304	V
5	* 8.157	35.6	PK-U	35.6	-24.1	47.1	-	-	74	-26.9	-	-	213	243	V
	* 8.157	23.85	ADR	35.6	-24.1	35.35	54	-18.65	-	-	-	-	213	243	V
6	9.295	34.2	PK-U	36.4	-22.3	48.3	-	-	-	-	68.2	-19.9	150	133	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

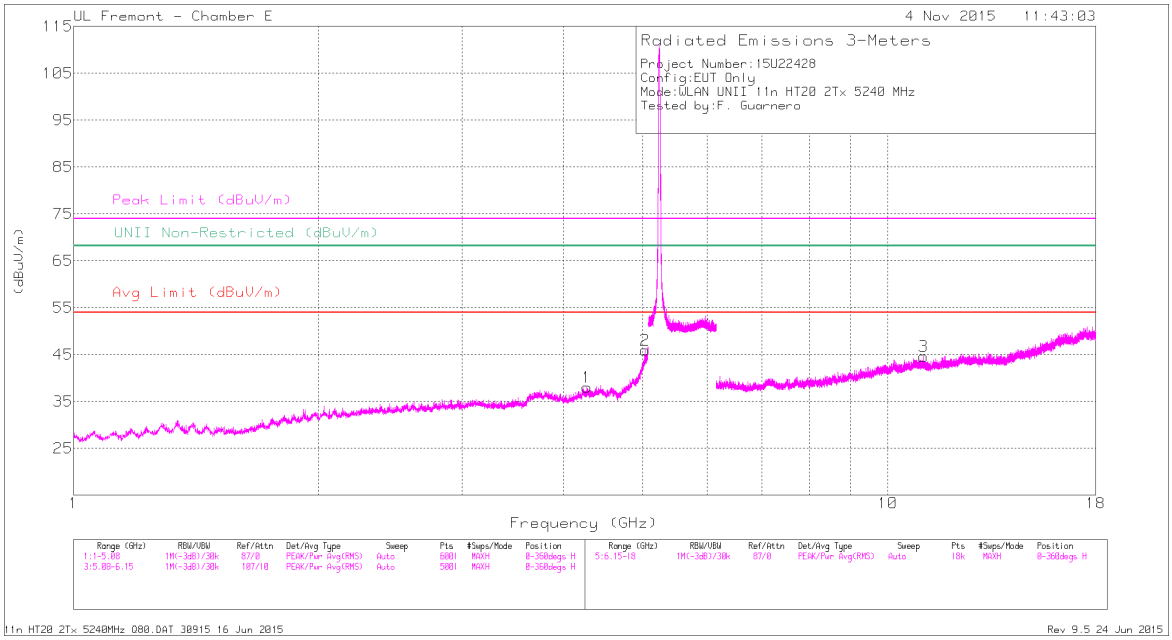
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

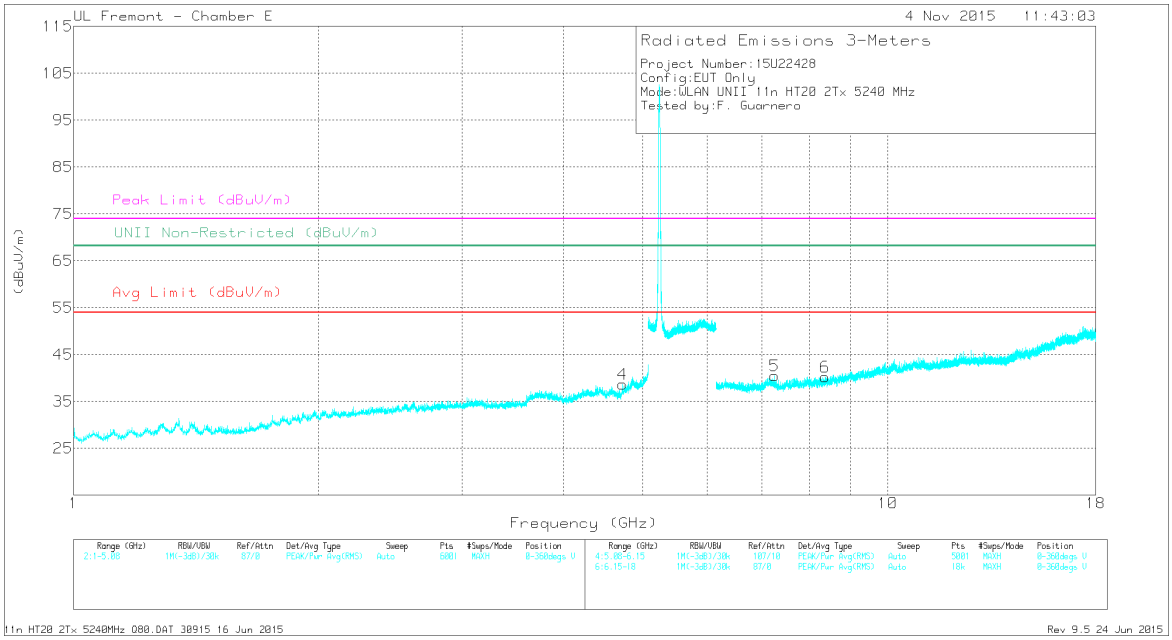
UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701J
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

HIGH CHANNEL HARMONICS AND SPURIOUS EMISSIONS

HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.27	38.07	PK-U	33.5	-27.8	43.77	-	-	74	-30.23	-	-	355	233	H
	* 4.269	26.56	ADR	33.5	-27.8	32.26	54	-21.74	-	-	-	-	355	233	H
2	* 5.036	43.78	PK-U	34.3	-25.6	52.48	-	-	74	-21.52	-	-	86	120	H
	* 5.034	31.34	ADR	34.3	-25.7	39.94	54	-14.06	-	-	-	-	86	120	H
3	* 11.061	34.86	PK-U	38	-21.3	51.56	-	-	74	-22.44	-	-	182	131	H
	* 11.062	22.43	ADR	38	-21.3	39.13	54	-14.87	-	-	-	-	182	131	H
4	* 4.722	38.81	PK-U	34.2	-28	45.01	-	-	74	-28.99	-	-	87	252	V
	* 4.722	27.14	ADR	34.2	-28	33.34	54	-20.66	-	-	-	-	87	252	V
5	* 7.257	35.72	PK-U	35.5	-25	46.22	-	-	74	-27.78	-	-	63	239	V
	* 7.257	24.19	ADR	35.5	-25	34.69	54	-19.31	-	-	-	-	63	239	V
6	* 8.38	35	PK-U	35.7	-23.6	47.1	-	-	74	-26.9	-	-	183	306	V
	* 8.379	23.64	ADR	35.7	-23.6	35.74	54	-18.26	-	-	-	-	183	306	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK-U - U-NII: Maximum Peak

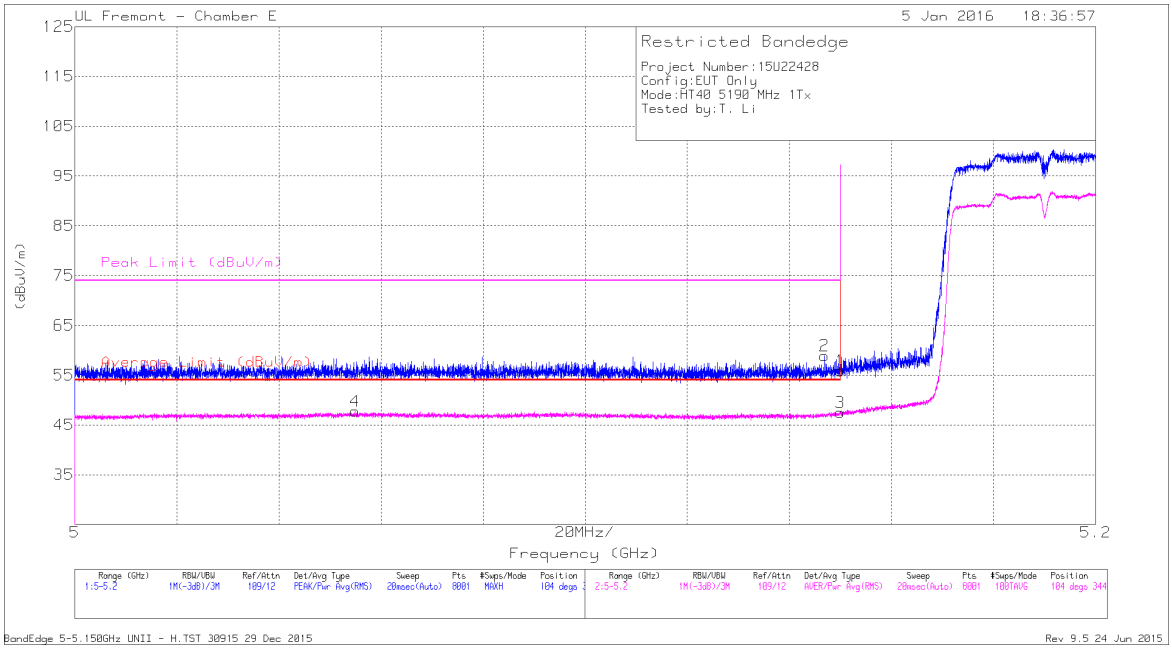
ADR - U-NII AD primary method, RMS average

UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701J
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

9.4. 802.11n HT40 1Tx MODE IN THE 5.2 GHz BAND

RESTRICTED BANDEDGE, ANTENNA - B (LOW CHANNEL)

LOW CHANNEL HORIZONTAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	40.61	Pk	34.3	-19	55.91	-	-	74	-18.09	104	344	H
2	* 5.147	43.52	Pk	34.3	-18.9	58.92	-	-	74	-15.08	104	344	H
3	* 5.15	32.2	RMS	34.3	-19	47.5	54	-6.5	-	-	104	344	H
4	* 5.055	32.05	RMS	34.2	-18.5	47.75	54	-6.25	-	-	104	344	H

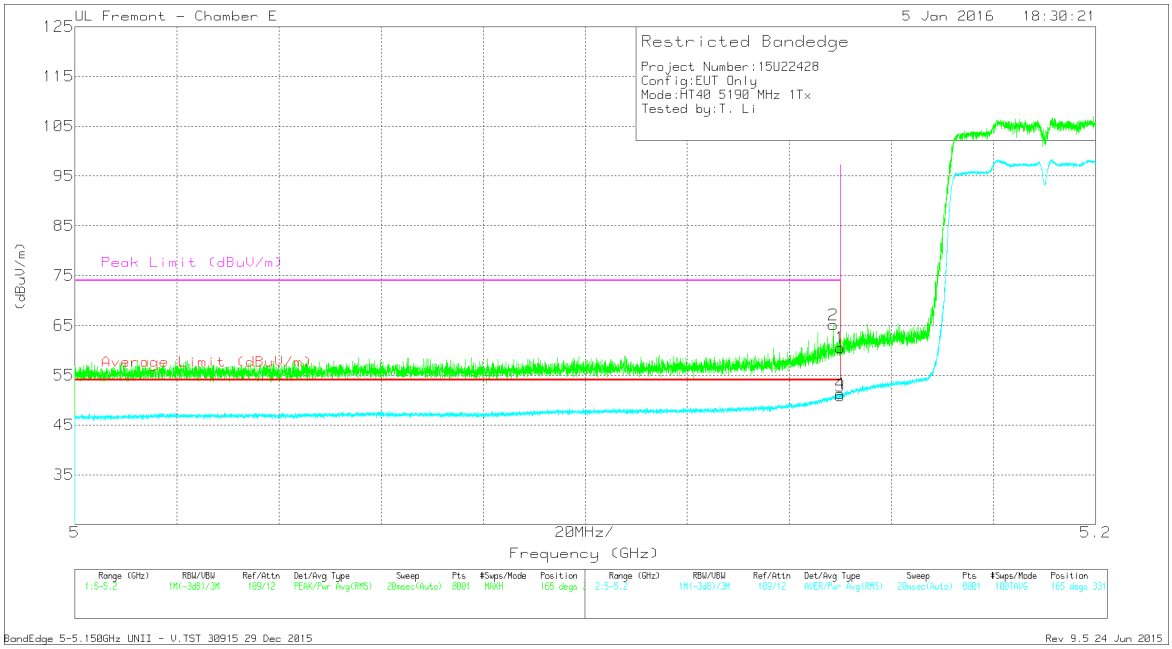
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

LOW CHANNEL VERTICAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	45.21	Pk	34.3	-19	60.51	-	-	74	-13.49	165	331	V
2	* 5.149	49.72	Pk	34.3	-18.9	65.12	-	-	74	-8.88	165	331	V
3	* 5.15	35.54	RMS	34.3	-19	50.84	54	-3.16	-	-	165	331	V
4	* 5.15	35.99	RMS	34.3	-19	51.29	54	-2.71	-	-	165	331	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

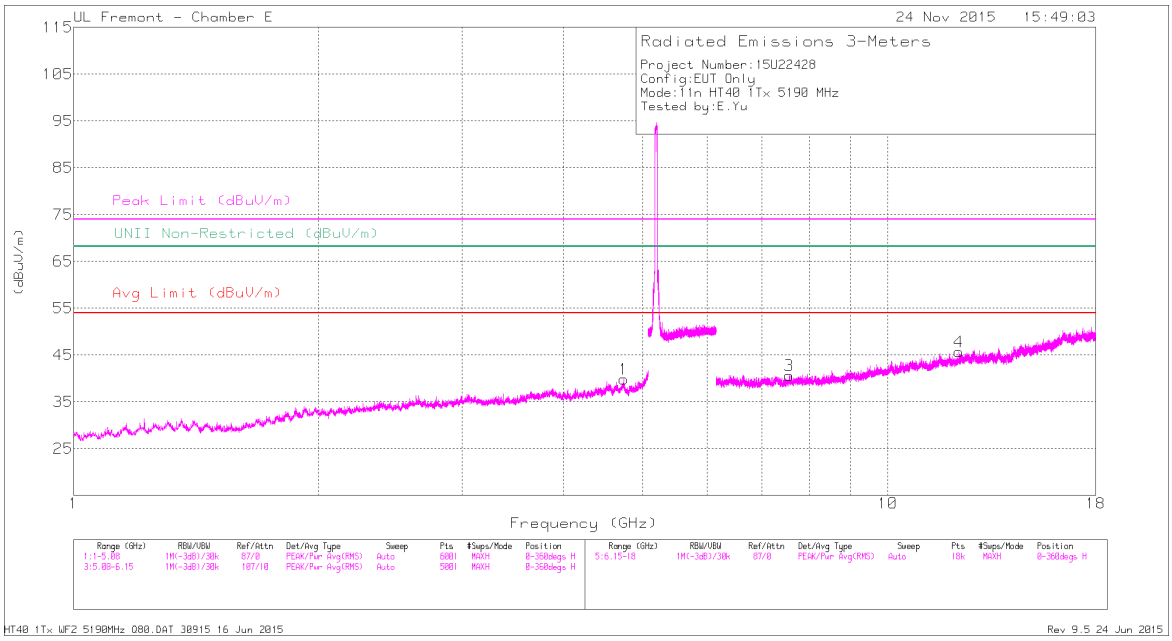
Pk - Peak detector

RMS - RMS detection

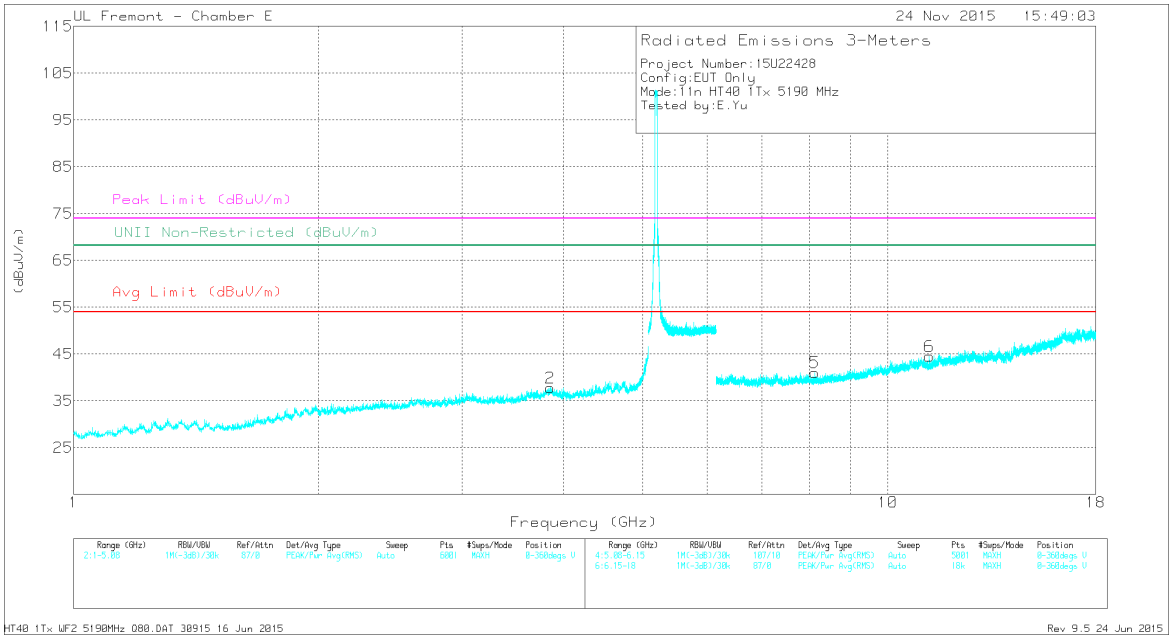
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

LOW CHANNEL HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

DATA

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.736	40.61	PK-U	34.1	-28.9	45.81	-	-	74	-28.19	-	-	151	157	H
	* 4.737	29.31	ADR	34.1	-29	34.41	54	-19.59	-	-	-	-	151	157	H
2	* 3.849	41.03	PK-U	33.5	-29.8	44.73	-	-	74	-29.27	-	-	88	140	V
	* 3.85	30.1	ADR	33.5	-29.8	33.8	54	-20.2	-	-	-	-	88	140	V
3	* 7.56	38.12	PK-U	35.7	-26.4	47.42	-	-	74	-26.58	-	-	302	113	H
	* 7.56	26.93	ADR	35.7	-26.4	36.23	54	-17.77	-	-	-	-	302	113	H
4	* 12.222	37.47	PK-U	38.8	-24.6	51.67	-	-	74	-22.33	-	-	103	189	H
	* 12.222	26.29	ADR	38.8	-24.6	40.49	54	-13.51	-	-	-	-	103	189	H
5	* 8.137	38.83	PK-U	35.7	-26.5	48.03	-	-	74	-25.97	-	-	61	124	V
	* 8.134	26.55	ADR	35.7	-26.5	35.75	54	-18.25	-	-	-	-	61	124	V
6	* 11.243	36.72	PK-U	37.9	-24.1	50.52	-	-	74	-23.48	-	-	180	184	V
	* 11.243	24.8	ADR	37.9	-24.1	38.6	54	-15.4	-	-	-	-	180	184	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

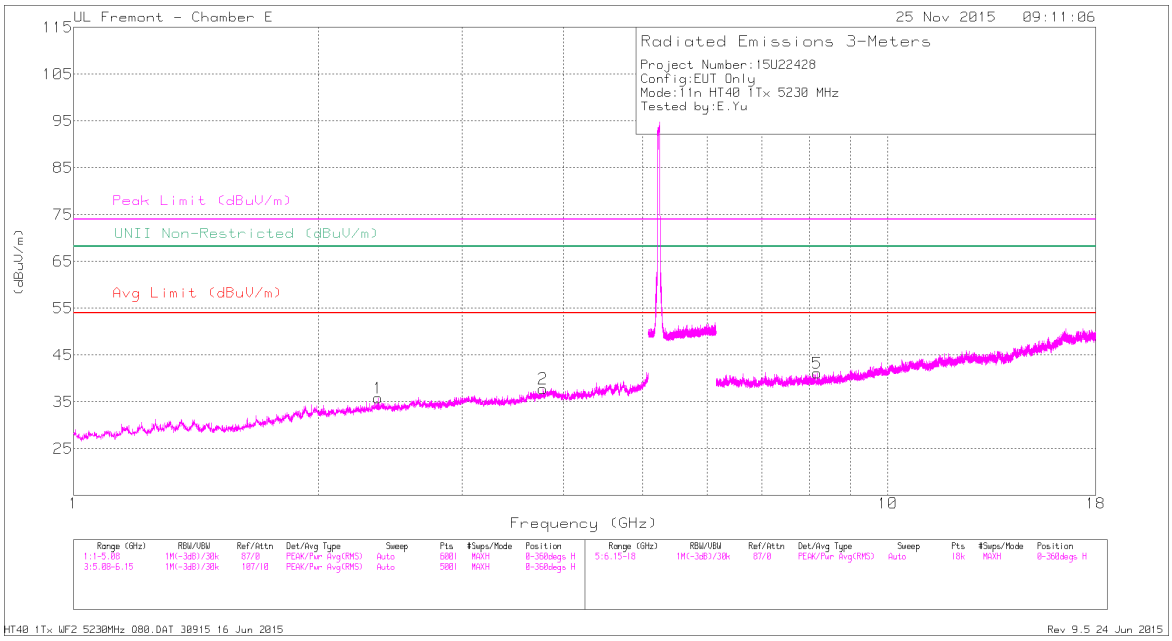
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

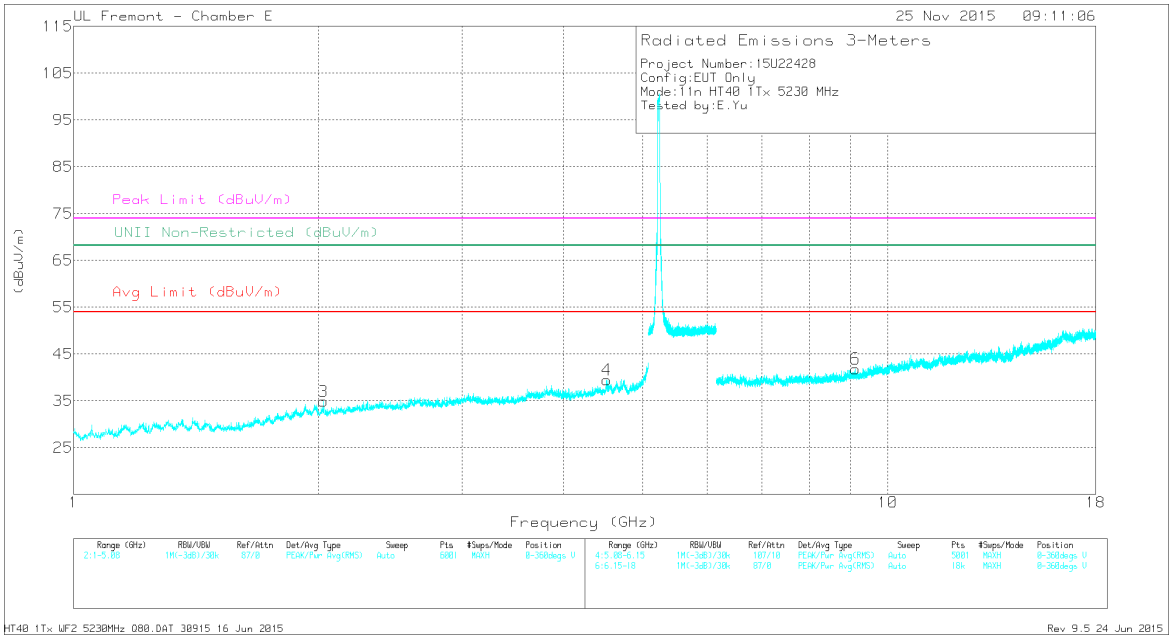
UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701J
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

HIGH CHANNEL HARMONICS AND SPURIOUS EMISSIONS

HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

DATA

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.364	41.98	PK-U	32	-32.2	41.78	-	-	74	-32.22	-	-	55	170	H
	* 2.364	30.58	ADR	32	-32.2	30.38	54	-23.62	-	-	-	-	55	170	H
2	* 3.773	41.91	PK-U	33.4	-31	44.31	-	-	74	-29.69	-	-	157	157	H
	* 3.773	30.66	ADR	33.4	-31	33.06	54	-20.94	-	-	-	-	157	157	H
4	* 4.515	41.87	PK-U	34	-29.8	46.07	-	-	74	-27.93	-	-	123	202	V
	* 4.518	30.29	ADR	34	-29.7	34.59	54	-19.41	-	-	-	-	123	202	V
5	* 8.183	38.44	PK-U	35.7	-26.8	47.34	-	-	74	-26.66	-	-	247	163	H
	* 8.182	27.28	ADR	35.7	-26.8	36.18	54	-17.82	-	-	-	-	247	163	H
6	* 9.12	37.93	PK-U	36.4	-26	48.33	-	-	74	-25.67	-	-	351	247	V
	* 9.118	26.48	ADR	36.4	-26.1	36.78	54	-17.22	-	-	-	-	351	247	V
3	2.028	43.76	PK-U	31.3	-34	41.06	-	-	-	-	68.2	-27.14	47	170	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

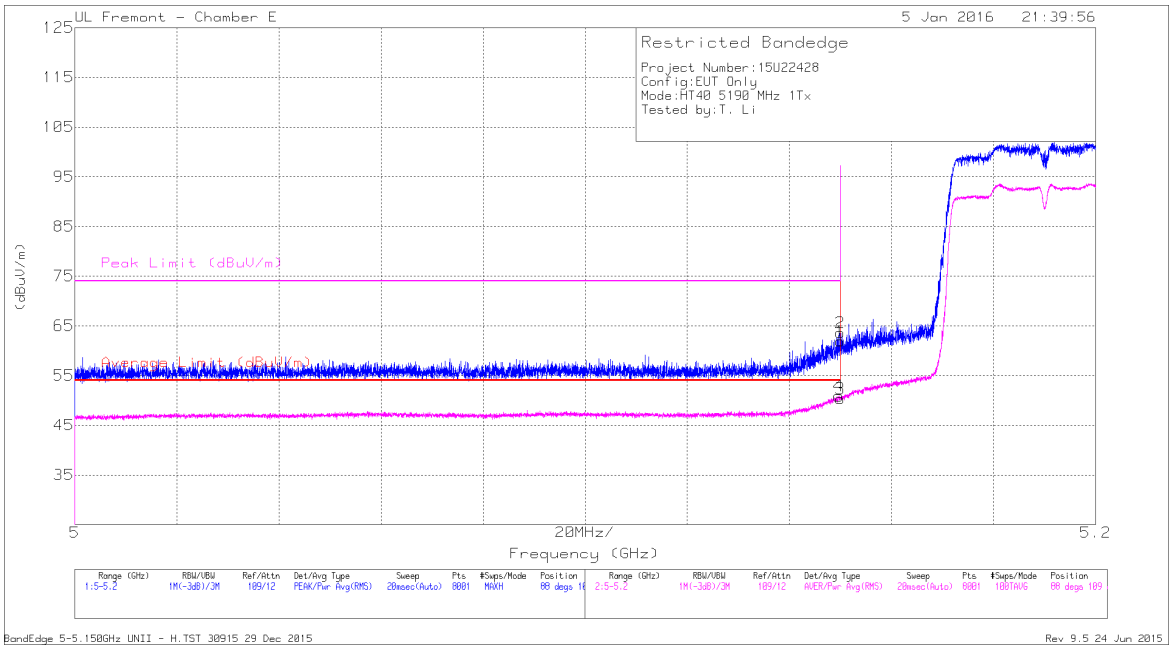
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701J
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

RESTRICTED BANDEDGE, ANTENNA - A (LOW CHANNEL)

LOW CHANNEL HORIZONTAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	46.62	Pk	34.3	-19	61.92	-	-	74	-12.08	88	109	H
2	* 5.15	48.33	Pk	34.3	-19	63.63	-	-	74	-10.37	88	109	H
3	* 5.15	35.04	RMS	34.3	-19	50.34	54	-3.66	-	-	88	109	H
4	* 5.15	35.59	RMS	34.3	-19	50.89	54	-3.11	-	-	88	109	H

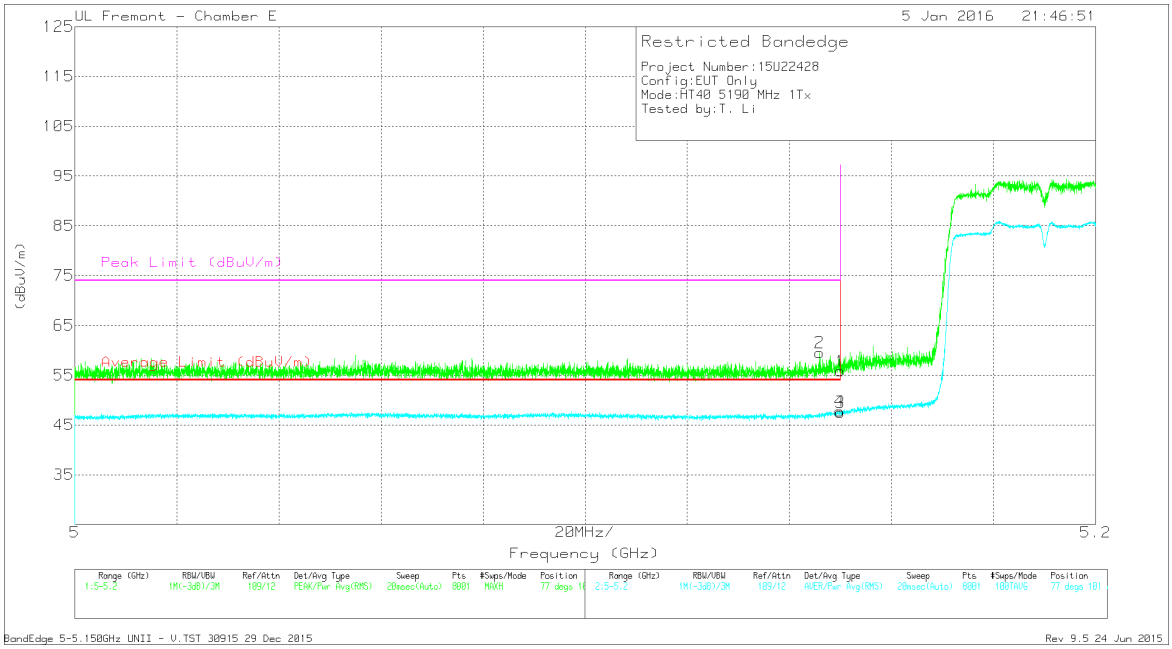
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

LOW CHANNEL VERTICAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	40.53	Pk	34.3	-19	55.83	-	-	74	-18.17	77	101	V
2	* 5.146	44.12	Pk	34.3	-18.9	59.52	-	-	74	-14.48	77	101	V
3	* 5.15	32.24	RMS	34.3	-19	47.54	54	-6.46	-	-	77	101	V
4	* 5.15	32.45	RMS	34.3	-19	47.75	54	-6.25	-	-	77	101	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

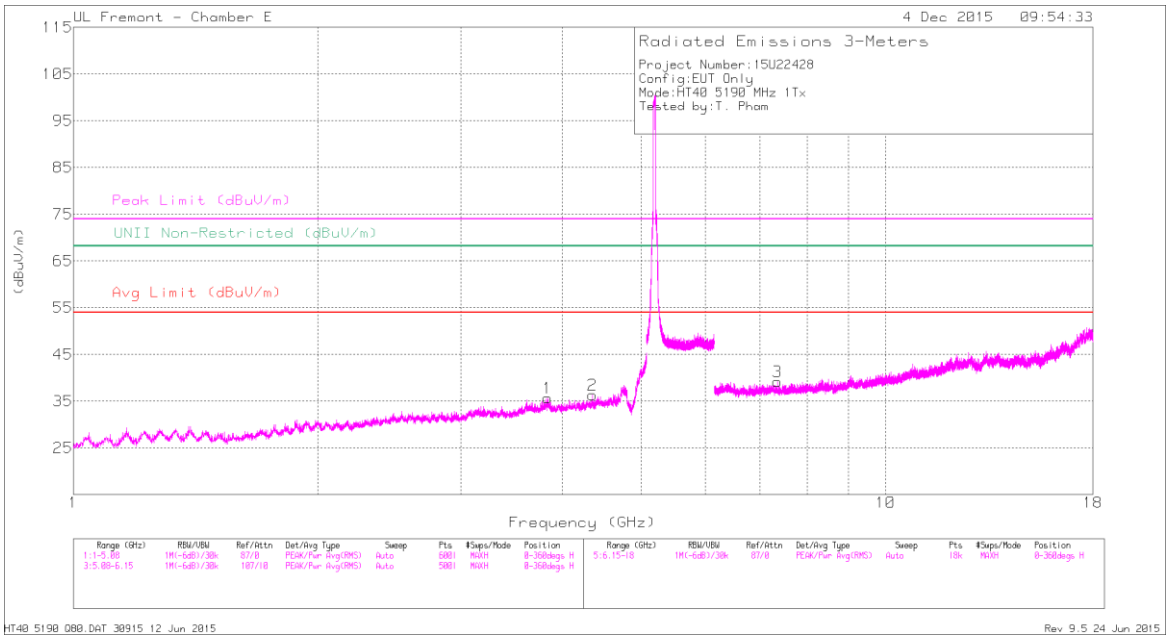
Pk - Peak detector

RMS - RMS detection

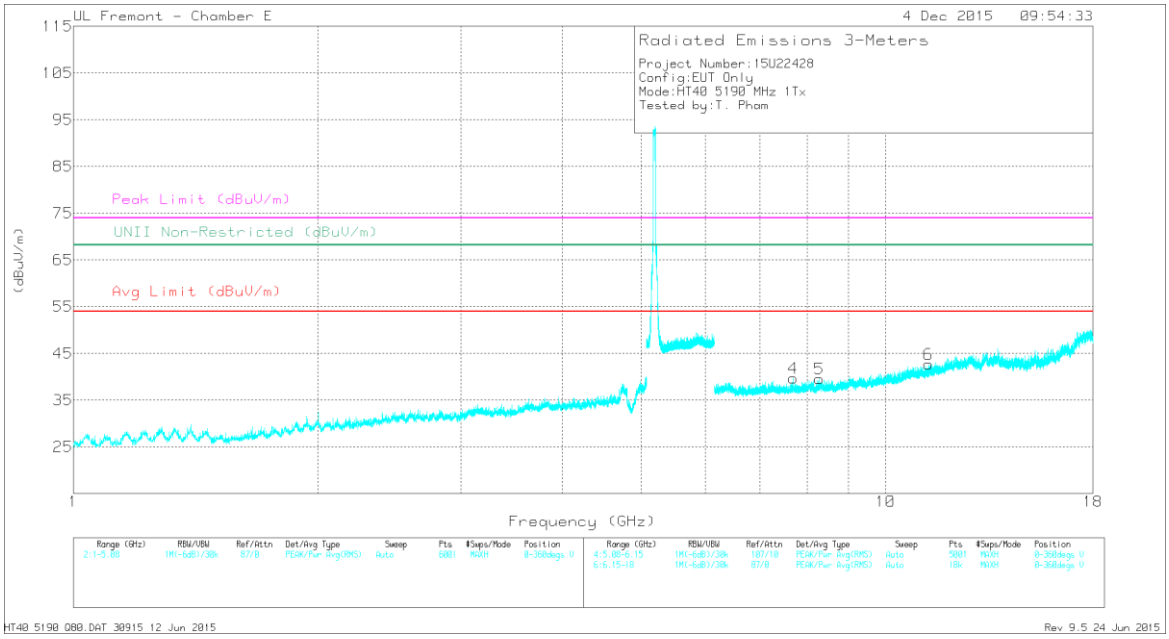
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

LOW CHANNEL HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

DATA

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.838	42.98	PK-U	33.1	-32.7	43.38	-	-	74	-30.62	-	-	236	165	H
	* 3.84	31.58	ADR	33.1	-32.7	31.98	54	-22.02	-	-	-	-	236	165	H
2	* 4.357	41.96	PK-U	33.6	-32.2	43.36	-	-	74	-30.64	-	-	15	125	H
	* 4.356	30.68	ADR	33.6	-32.2	32.08	54	-21.92	-	-	-	-	15	125	H
3	* 7.365	41.27	PK-U	35.6	-30.6	46.27	-	-	74	-27.73	-	-	56	142	H
	* 7.365	30.25	ADR	35.6	-30.6	35.25	54	-18.75	-	-	-	-	56	142	H
4	* 7.693	40.63	PK-U	35.6	-30	46.23	-	-	74	-27.77	-	-	114	134	V
	* 7.69	29.65	ADR	35.6	-30.1	35.15	54	-18.85	-	-	-	-	114	134	V
5	* 8.28	40.41	PK-U	35.7	-29	47.11	-	-	74	-26.89	-	-	79	264	V
	* 8.282	28.83	ADR	35.7	-29	35.53	54	-18.47	-	-	-	-	79	264	V
6	* 11.301	37.61	PK-U	38	-26.4	49.21	-	-	74	-24.79	-	-	58	187	V
	* 11.301	26.97	ADR	38	-26.4	38.57	54	-15.43	-	-	-	-	58	187	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

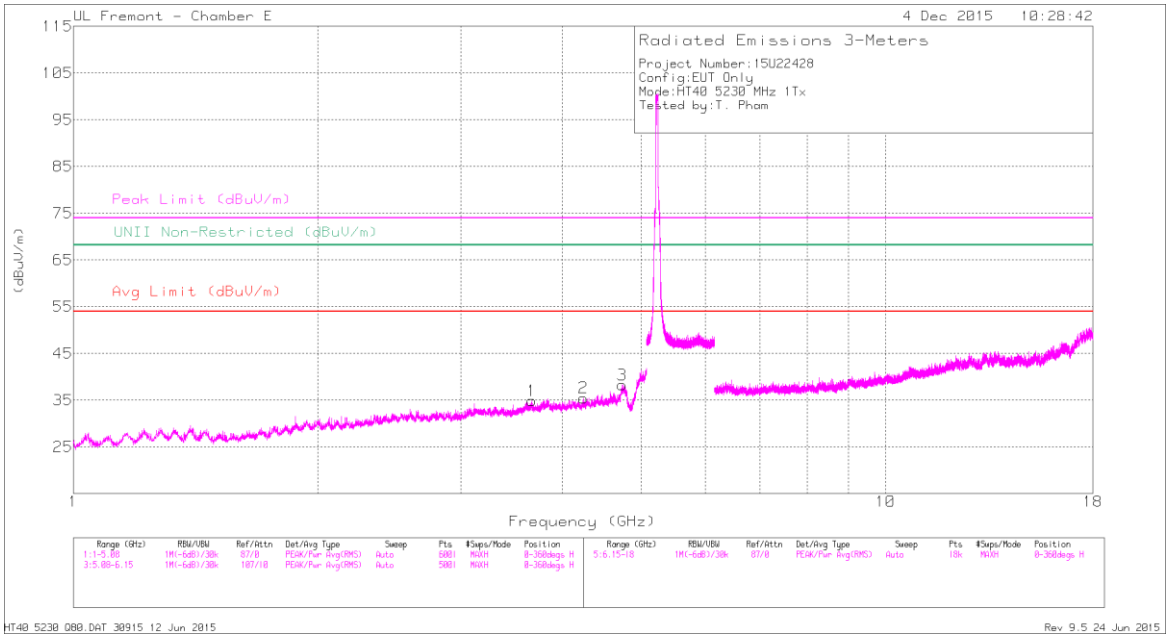
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

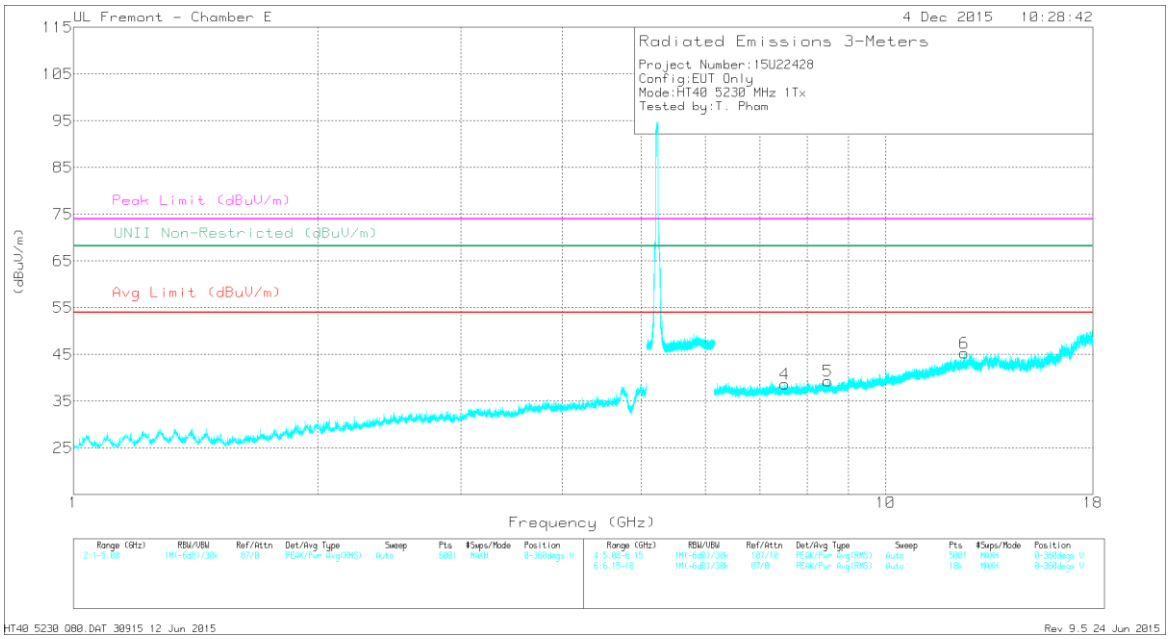
UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701J
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

HIGH CHANNEL HARMONICS AND SPURIOUS EMISSIONS

HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

DATA

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.667	42.46	PK-U	33	-32.9	42.56	-	-	74	-31.44	-	-	13	118	H
	* 3.668	31.15	ADR	33	-32.9	31.25	54	-22.75	-	-	-	-	13	118	H
2	* 4.247	42.09	PK-U	33.4	-32.8	42.69	-	-	74	-31.31	-	-	45	165	H
	* 4.245	31.1	ADR	33.4	-32.8	31.7	54	-22.3	-	-	-	-	45	165	H
3	* 4.74	44.58	PK-U	33.9	-31.8	46.68	-	-	74	-27.32	-	-	115	223	H
	* 4.74	33.14	ADR	33.9	-31.8	35.24	54	-18.76	-	-	-	-	115	223	H
4	* 7.512	40.75	PK-U	35.5	-30.5	45.75	-	-	74	-28.25	-	-	112	215	V
	* 7.51	29.96	ADR	35.5	-30.6	34.86	54	-19.14	-	-	-	-	112	215	V
5	* 8.484	41.05	PK-U	35.7	-29.8	46.95	-	-	74	-27.05	-	-	354	164	V
	* 8.482	29.53	ADR	35.7	-29.9	35.33	54	-18.67	-	-	-	-	354	164	V
6	* 12.506	37.9	PK-U	39.1	-25.1	51.9	-	-	74	-22.1	-	-	235	123	V
	* 12.506	26.91	ADR	39.1	-25.1	40.91	54	-13.09	-	-	-	-	235	123	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK-U - U-NII: Maximum Peak

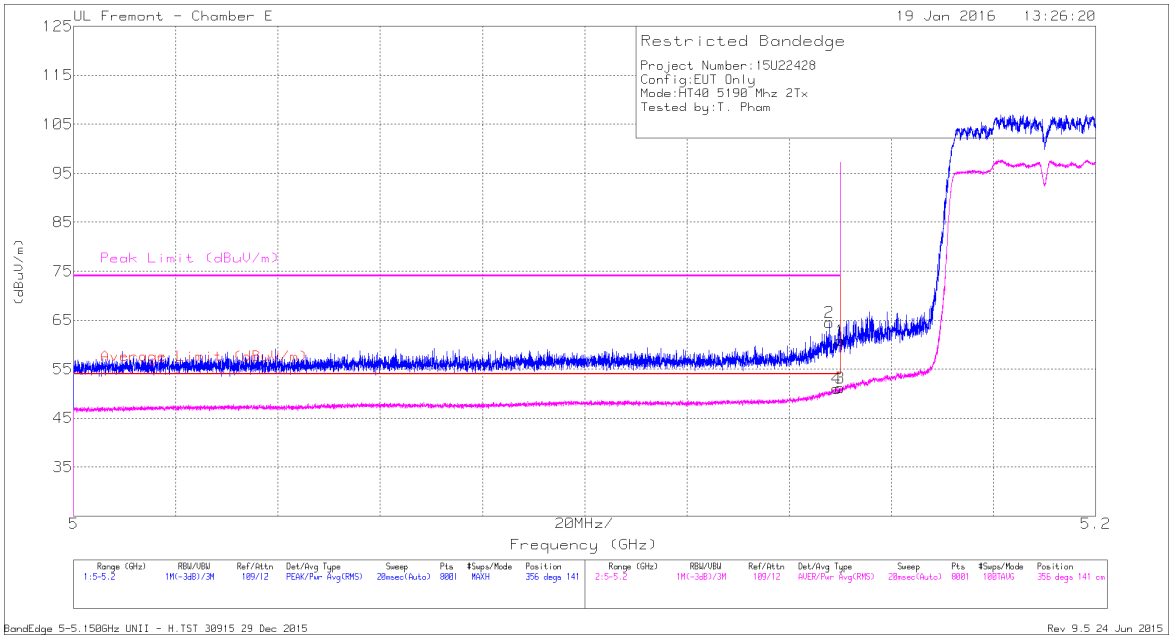
ADR - U-NII AD primary method, RMS average

UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701J
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

9.5. 802.11n HT40 2Tx CDD MODE IN THE 5.2 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

LOW CHANNEL HORIZONTAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.148	49.11	Pk	34.3	-18.9	64.51	-	-	74	-9.49	356	141	H
4	* 5.149	35.66	RMS	34.3	-18.9	51.06	54	-2.94	-	-	356	141	H
1	* 5.15	45.53	Pk	34.3	-19	60.83	-	-	74	-13.17	356	141	H
3	* 5.15	35.81	RMS	34.3	-19	51.11	54	-2.89	-	-	356	141	H

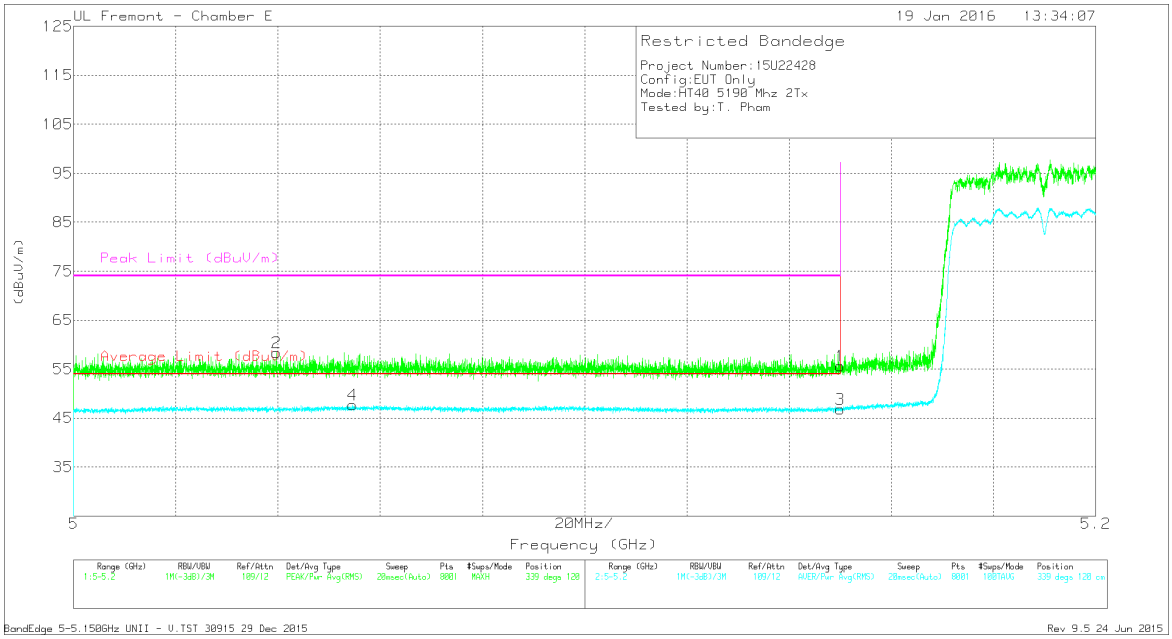
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

LOW CHANNEL VERTICAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.04	42.81	Pk	34.2	-18.6	58.41	-	-	74	-15.59	339	120	V
4	* 5.055	31.96	RMS	34.2	-18.5	47.66	54	-6.34	-	-	339	120	V
1	* 5.15	40.38	Pk	34.3	-19	55.68	-	-	74	-18.32	339	120	V
3	* 5.15	31.54	RMS	34.3	-19	46.84	54	-7.16	-	-	339	120	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

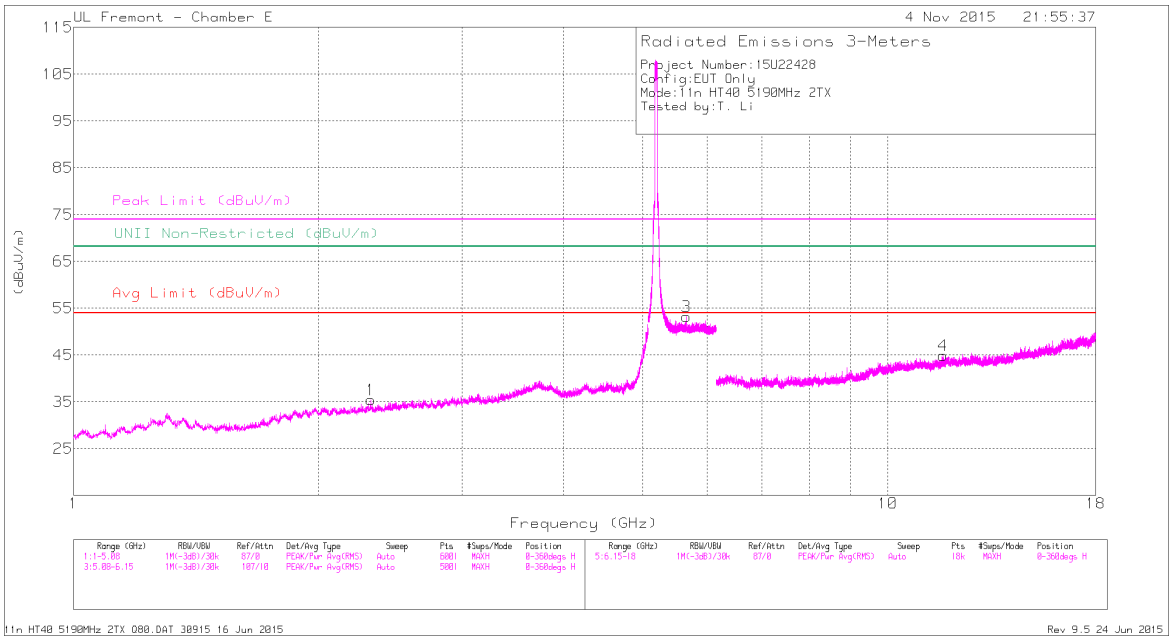
Pk - Peak detector

RMS - RMS detection

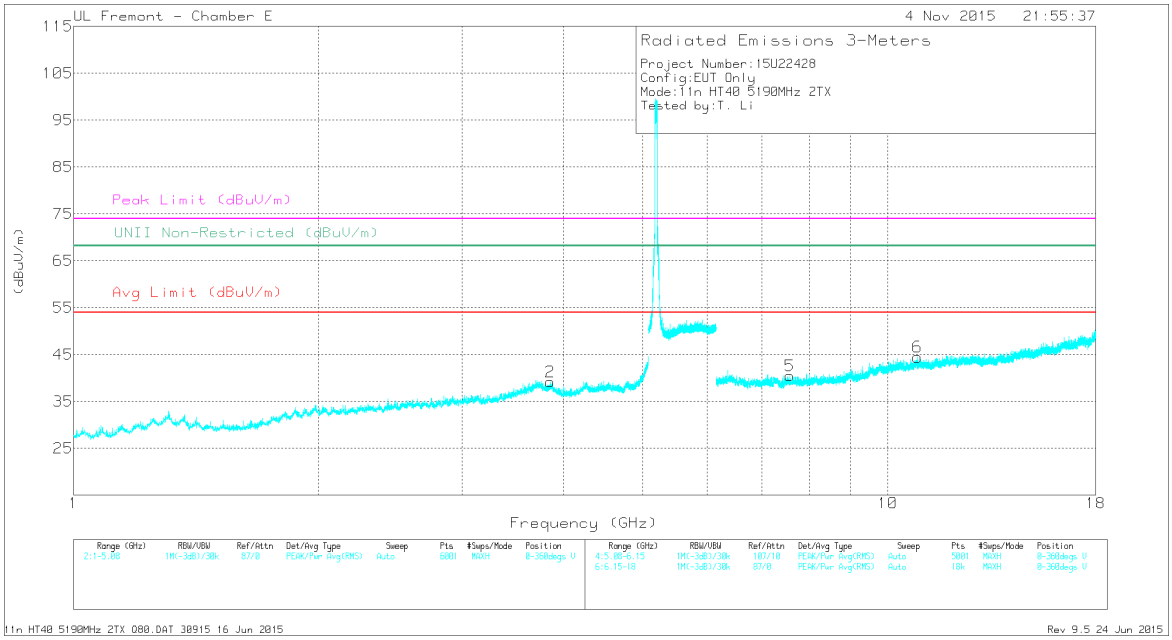
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

LOW CHANNEL HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.315	40.16	PK-U	31.8	-30.6	41.36	-	-	74	-32.64	-	-	138	257	H
	* 2.315	28.85	ADR	31.8	-30.6	30.05	54	-23.95	-	-	-	-	138	257	H
2	* 3.851	38.71	PK-U	34	-28.6	44.11	-	-	74	-29.89	-	-	125	269	V
	* 3.849	27.56	ADR	34	-28.6	32.96	54	-21.04	-	-	-	-	125	269	V
3	5.661	41.92	PK-U	34.8	-18.5	58.22	-	-	-	-	68.2	-9.98	108	351	H
4	* 11.68	35.02	PK-U	38.8	-22.6	51.22	-	-	74	-22.78	-	-	250	332	H
	* 11.677	23.28	ADR	38.8	-22.6	39.48	54	-14.52	-	-	-	-	250	332	H
5	* 7.582	36.06	PK-U	35.8	-25.3	46.56	-	-	74	-27.44	-	-	166	213	V
	* 7.581	25.08	ADR	35.8	-25.3	35.58	54	-18.42	-	-	-	-	166	213	V
6	* 10.869	34.03	PK-U	38.1	-22.1	50.03	-	-	74	-23.97	-	-	293	367	V
	* 10.87	23.07	ADR	38.1	-22.1	39.07	54	-14.93	-	-	-	-	293	367	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

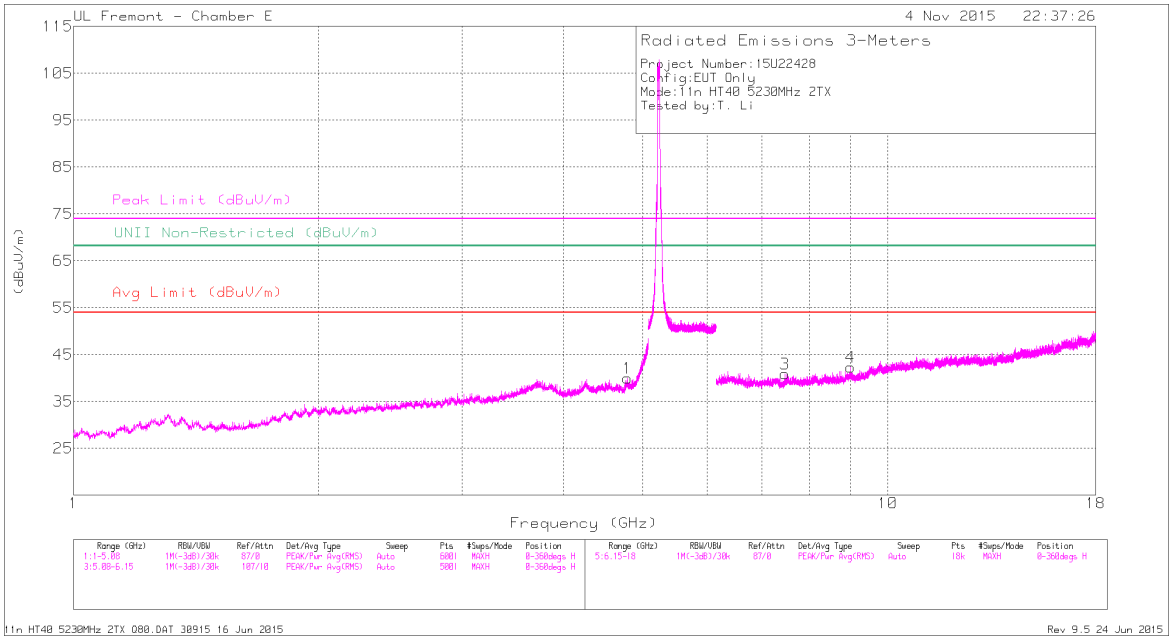
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

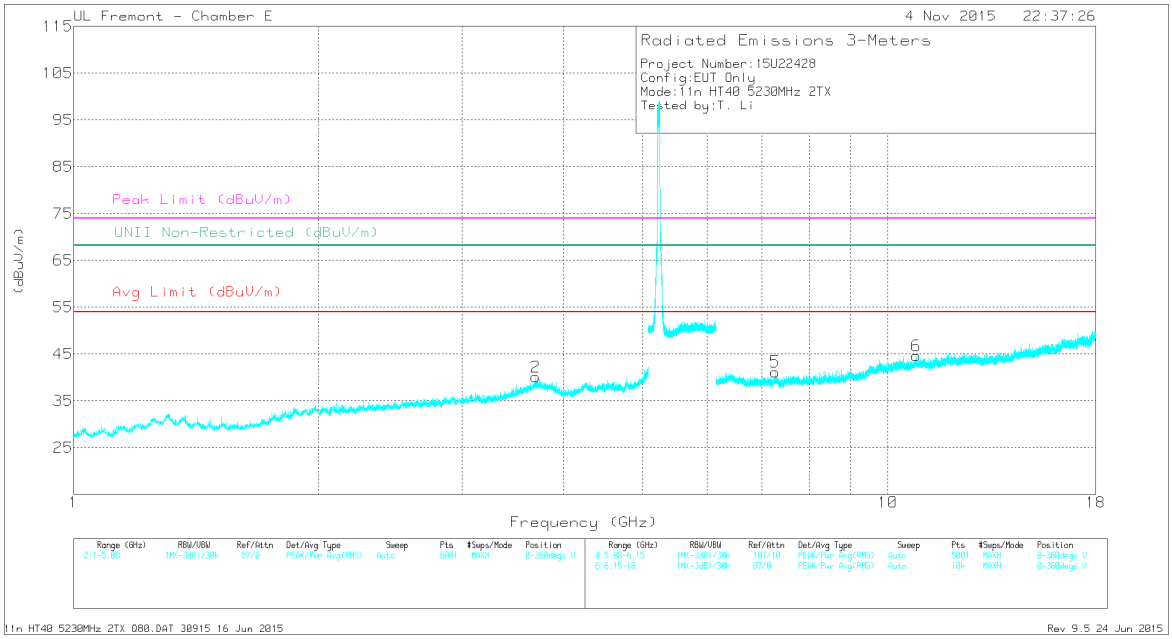
UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701J
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

HIGH CHANNEL HARMONICS AND SPURIOUS EMISSIONS

HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.785	39.1	PK-U	34.1	-27.6	45.6	-	-	74	-28.4	-	-	168	199	H
	* 4.787	27.81	ADR	34.1	-27.6	34.31	54	-19.69	-	-	-	-	168	199	H
2	* 3.697	38.75	PK-U	34.7	-29.1	44.35	-	-	74	-29.65	-	-	210	273	V
	* 3.696	27.66	ADR	34.7	-29.1	33.26	54	-20.74	-	-	-	-	210	273	V
3	* 7.473	37.19	PK-U	35.7	-25.9	46.99	-	-	74	-27.01	-	-	312	315	H
	* 7.471	26.11	ADR	35.7	-25.9	35.91	54	-18.09	-	-	-	-	312	315	H
4	8.997	34.69	PK-U	36.1	-23	47.79	-	-	-	-	68.2	-20.41	169	129	H
5	* 7.267	37.04	PK-U	35.7	-25.4	47.34	-	-	74	-26.66	-	-	148	347	V
	* 7.265	25.51	ADR	35.7	-25.4	35.81	54	-18.19	-	-	-	-	148	347	V
6	* 10.828	33.88	PK-U	38.1	-21.7	50.28	-	-	74	-23.72	-	-	251	157	V
	* 10.83	23.01	ADR	38.1	-21.7	39.41	54	-14.59	-	-	-	-	251	157	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK-U - U-NII: Maximum Peak

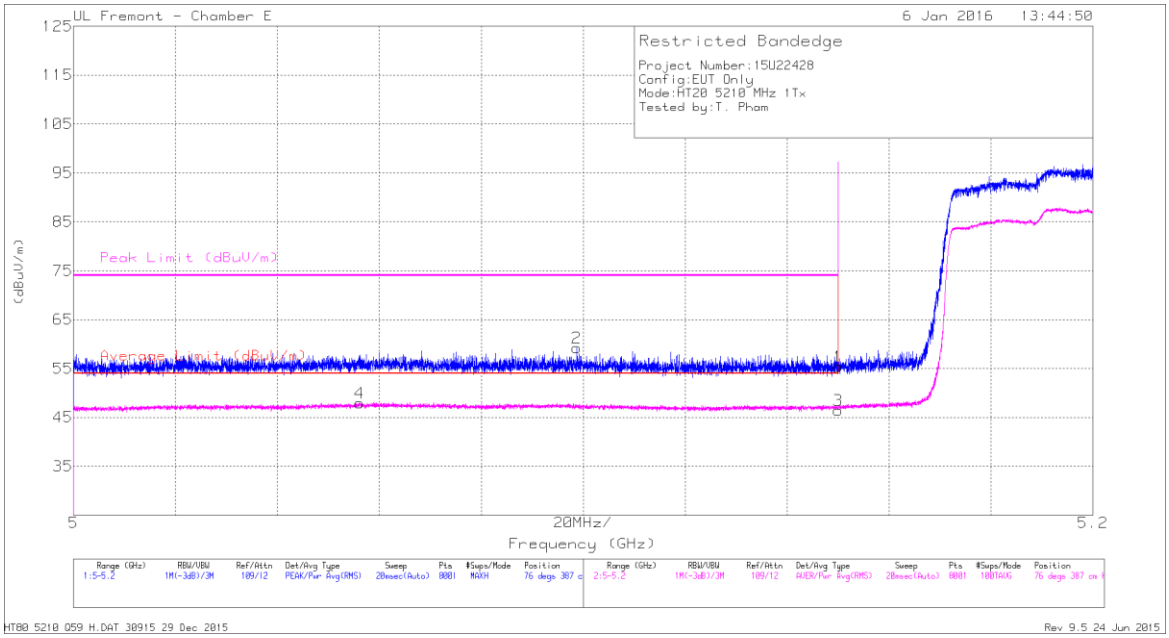
ADR - U-NII AD primary method, RMS average

UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701J
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

9.6. 802.11ac VHT80 1Tx MODE IN THE 5.2 GHz BAND

RESTRICTED BANDEDGE, ANTENNA - B (LOW CHANNEL, CH 42)

LOW CHANNEL HORIZONTAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 5.056	32.21	RMS	34.2	-18.5	.16	48.07	54	-5.93	-	-	76	387	H
2	* 5.099	43.6	Pk	34.2	-18.6	0	59.2	-	-	74	-14.8	76	387	H
1	* 5.15	40.12	Pk	34.3	-19	0	55.42	-	-	74	-18.58	76	387	H
3	* 5.15	31.17	RMS	34.3	-19	.16	46.63	54	-7.37	-	-	76	387	H

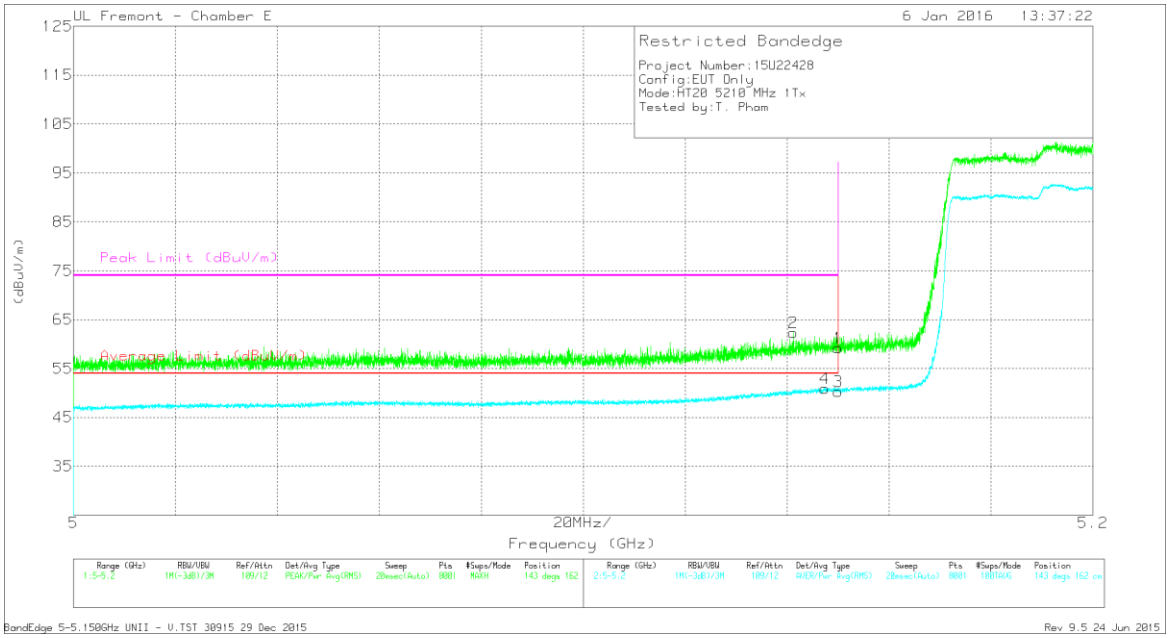
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

LOW CHANNEL VERTICAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.141	46.92	Pk	34.3	-18.9	0	62.32	-	-	74	-11.68	143	162	V
4	* 5.147	35.53	RMS	34.3	-18.9	.16	51.09	54	-2.91	-	-	143	162	V
1	* 5.15	43.93	Pk	34.3	-19	0	59.23	-	-	74	-14.77	143	162	V
3	* 5.15	34.99	RMS	34.3	-19	.16	50.45	54	-3.55	-	-	143	162	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

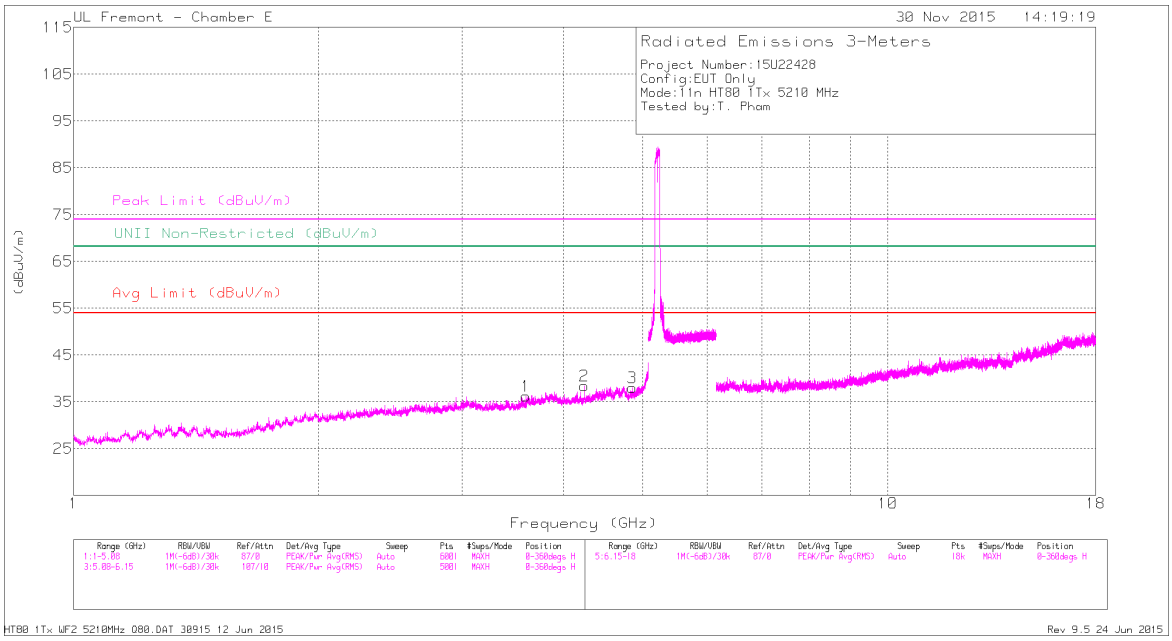
Pk - Peak detector

RMS - RMS detection

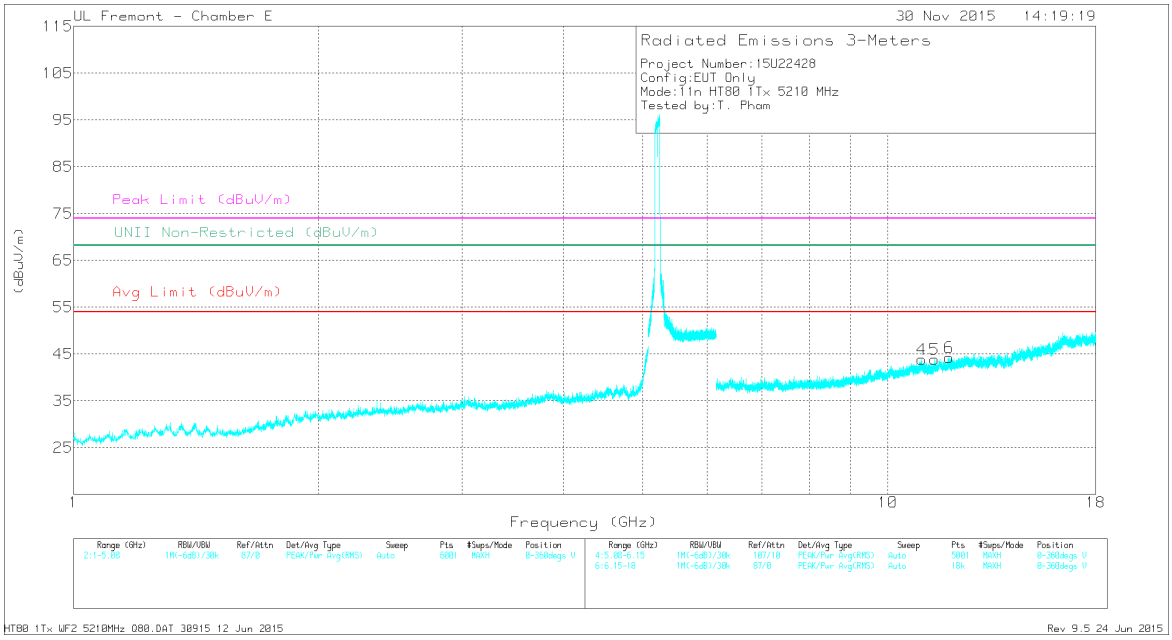
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

LOW CHANNEL HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.595	41.1	PK-U	33	-30.7	0	43.4	-	-	74	-30.6	-	-	166	301	H
	* 3.594	29.11	ADR	33	-30.7	.16	31.57	54	-22.43	-	-	-	-	166	301	H
2	* 4.24	40.86	PK-U	33.5	-29.9	0	44.46	-	-	74	-29.54	-	-	203	289	H
	* 4.241	29.84	ADR	33.5	-29.9	.16	33.6	54	-20.4	-	-	-	-	203	289	H
3	* 4.856	40.38	PK-U	34.1	-29.2	0	45.28	-	-	74	-28.72	-	-	196	273	H
	* 4.857	28.88	ADR	34.1	-29.2	.16	33.94	54	-20.06	-	-	-	-	196	273	H
4	* 11.001	35.78	PK-U	37.9	-22.7	0	50.98	-	-	74	-23.02	-	-	215	229	V
	* 11.002	24.82	ADR	37.9	-22.8	.16	40.08	54	-13.92	-	-	-	-	215	229	V
5	* 11.41	35.96	PK-U	38	-23.3	0	50.66	-	-	74	-23.34	-	-	181	196	V
	* 11.407	25.2	ADR	38	-23.3	.16	40.06	54	-13.94	-	-	-	-	181	196	V
6	* 11.898	37.75	PK-U	38.4	-23.4	0	52.75	-	-	74	-21.25	-	-	200	172	V
	* 11.895	25.5	ADR	38.4	-23.3	.16	40.76	54	-13.24	-	-	-	-	200	172	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

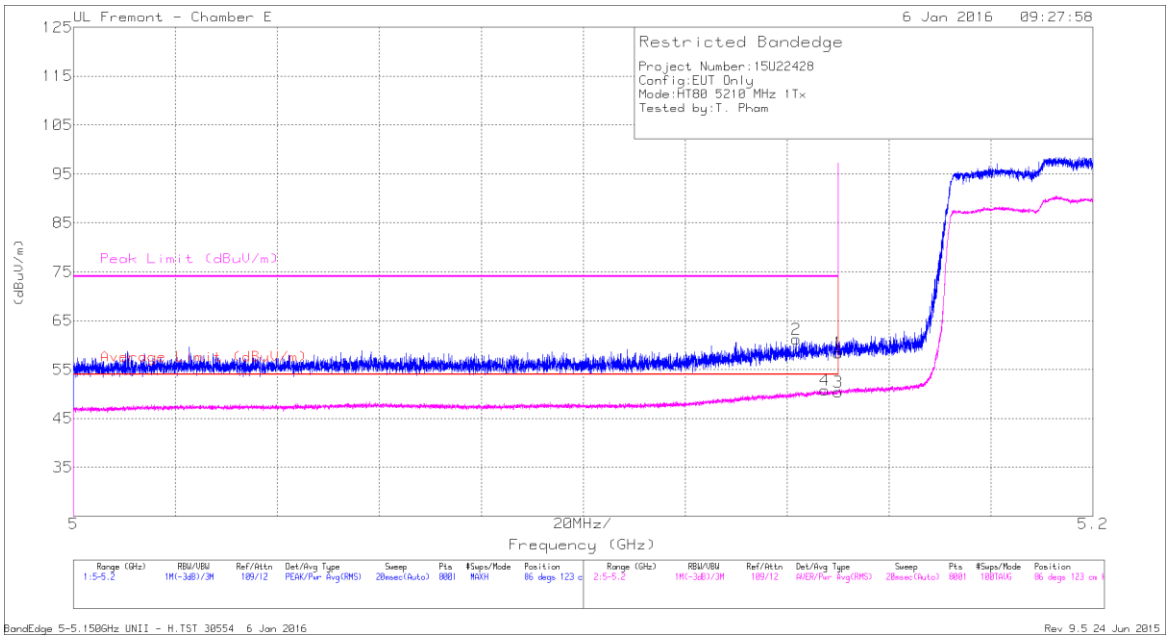
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

RESTRICTED BANDEDGE, ANTENNA - A (LOW CHANNEL, CH 42)

LOW CHANNEL HORIZONTAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	43.12	Pk	34.3	-19	0	58.42	-	-	74	-15.58	86	123	H
2	* 5.142	45.83	Pk	34.3	-18.9	0	61.23	-	-	74	-12.77	86	123	H
3	* 5.15	34.92	RMS	34.3	-19	.16	50.38	54	-3.62	-	-	86	123	H
4	* 5.147	35.19	RMS	34.3	-18.9	.16	50.75	54	-3.25	-	-	86	123	H

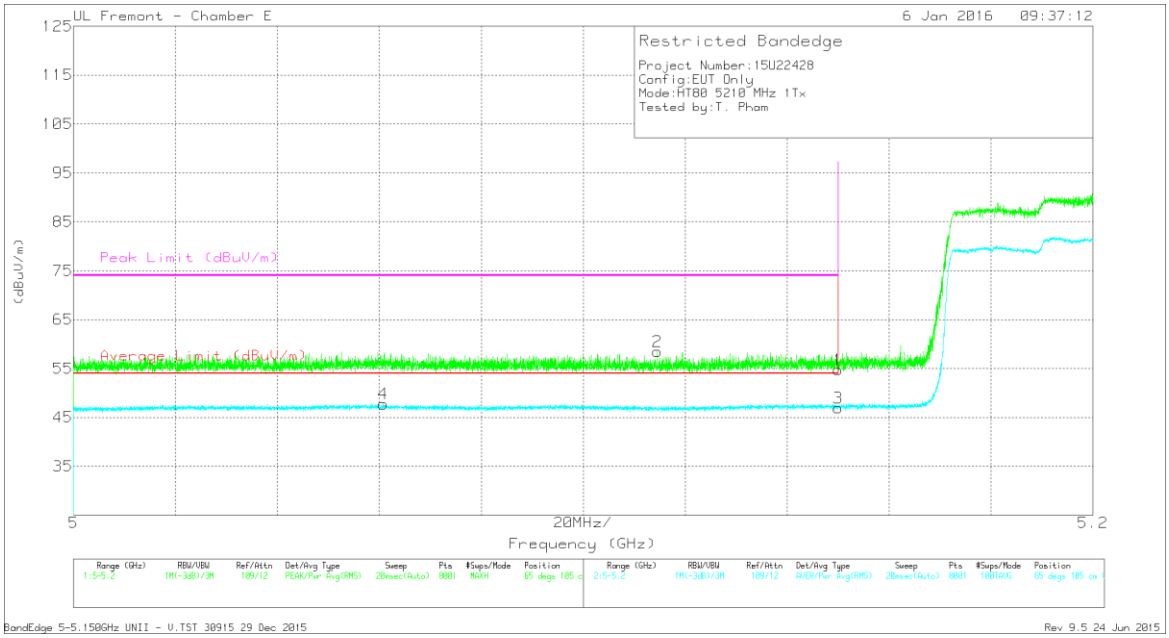
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

LOW CHANNEL VERTICAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	39.49	Pk	34.3	-19	0	54.79	-	-	74	-19.21	65	105	V
2	* 5.115	43.23	Pk	34.2	-18.9	0	58.53	-	-	74	-15.47	65	105	V
3	* 5.15	31.69	RMS	34.3	-19	.16	47.15	54	-6.85	-	-	65	105	V
4	* 5.061	32.05	RMS	34.2	-18.5	.16	47.91	54	-6.09	-	-	65	105	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

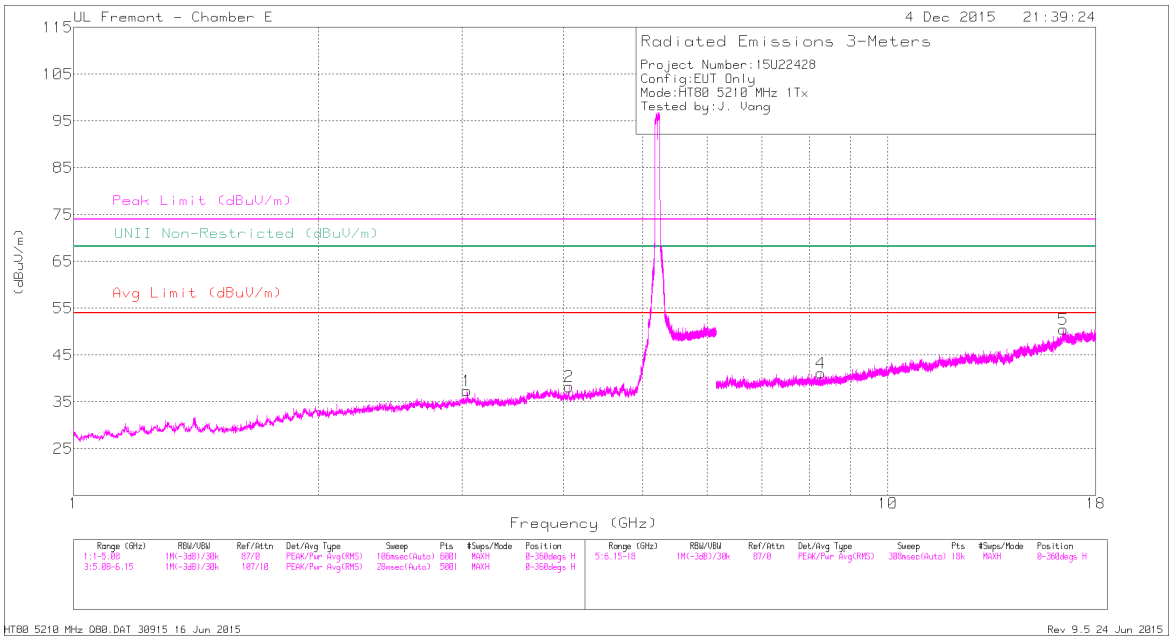
Pk - Peak detector

RMS - RMS detection

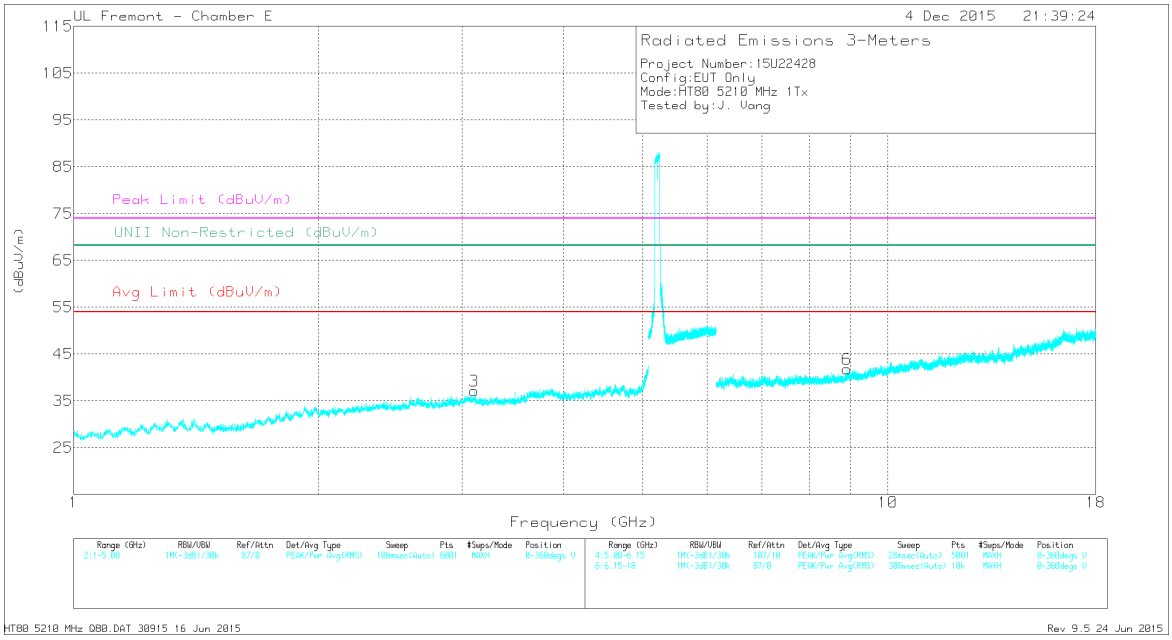
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

LOW CHANNEL HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 4.06	40	PK-U	33.4	-30	0	43.4	-	-	74	-30.6	-	-	258	168	H
	* 4.06	28.45	ADR	33.4	-30	.16	32.01	54	-21.99	-	-	-	-	258	168	H
4	* 8.266	38	PK-U	35.7	-26.9	0	46.8	-	-	74	-27.2	-	-	70	338	H
	* 8.269	26.38	ADR	35.7	-27	.16	35.24	54	-18.76	-	-	-	-	70	338	H
1	3.044	41.69	PK-U	32.9	-30.7	0	43.89	-	-	-	-	68.2	-24.31	48	200	H
3	3.103	41.82	PK-U	32.9	-31	0	43.72	-	-	-	-	68.2	-24.48	165	101	V
6	8.911	37.76	PK-U	36.2	-26.1	0	47.86	-	-	-	-	68.2	-20.34	185	217	V
5	16.421	37.27	PK-U	41.1	-21.5	0	56.87	-	-	-	-	68.2	-11.33	222	101	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK-U - U-NII: Maximum Peak

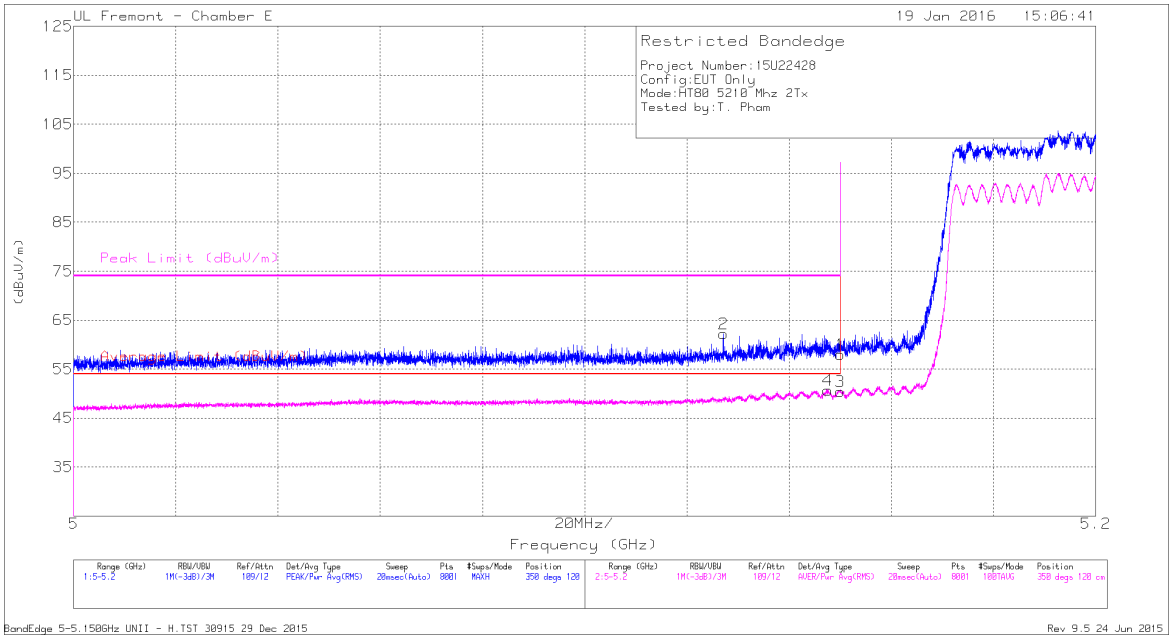
ADR - U-NII AD primary method, RMS average

UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701J
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

9.7. 802.11ac VHT80 2Tx CDD MODE IN THE 5.2 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL, CH 42)

LOW CHANNEL HORIZONTAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.127	46.77	Pk	34.3	-18.9	0	62.17	-	-	74	-11.83	350	120	H
4	* 5.148	35.25	RMS	34.3	-18.9	.16	50.81	54	-3.19	-	-	350	120	H
1	* 5.15	42.74	Pk	34.3	-19	0	58.04	-	-	74	-15.96	350	120	H
3	* 5.15	35.12	RMS	34.3	-19	.16	50.58	54	-3.42	-	-	350	120	H

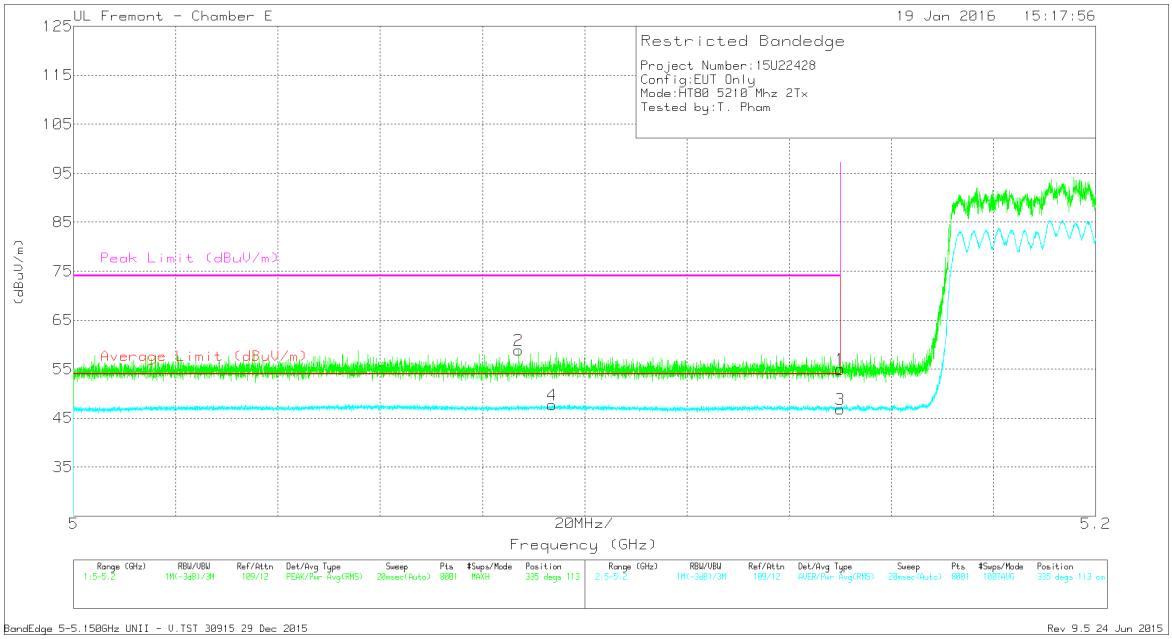
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

LOW CHANNEL VERTICAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.087	43.31	Pk	34.2	-18.7	0	58.81	-	-	74	-15.19	335	113	V
4	* 5.094	32.1	RMS	34.2	-18.6	.16	47.86	54	-6.14	-	-	335	113	V
1	* 5.15	39.65	Pk	34.3	-19	0	54.95	-	-	74	-19.05	335	113	V
3	* 5.15	31.46	RMS	34.3	-19	.16	46.92	54	-7.08	-	-	335	113	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

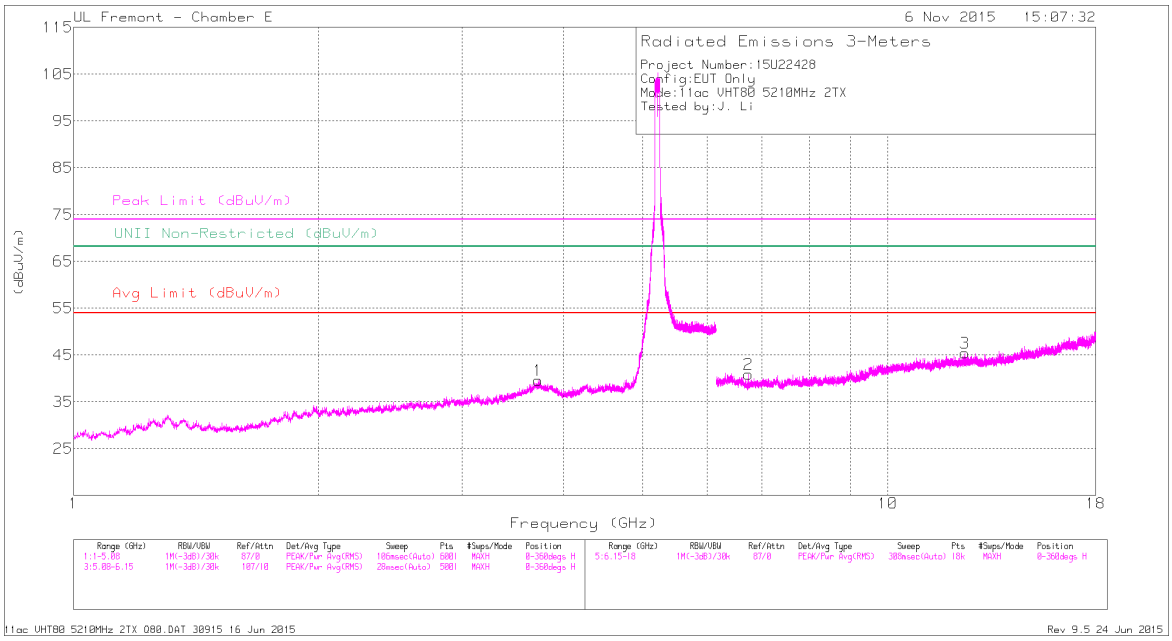
Pk - Peak detector

RMS - RMS detection

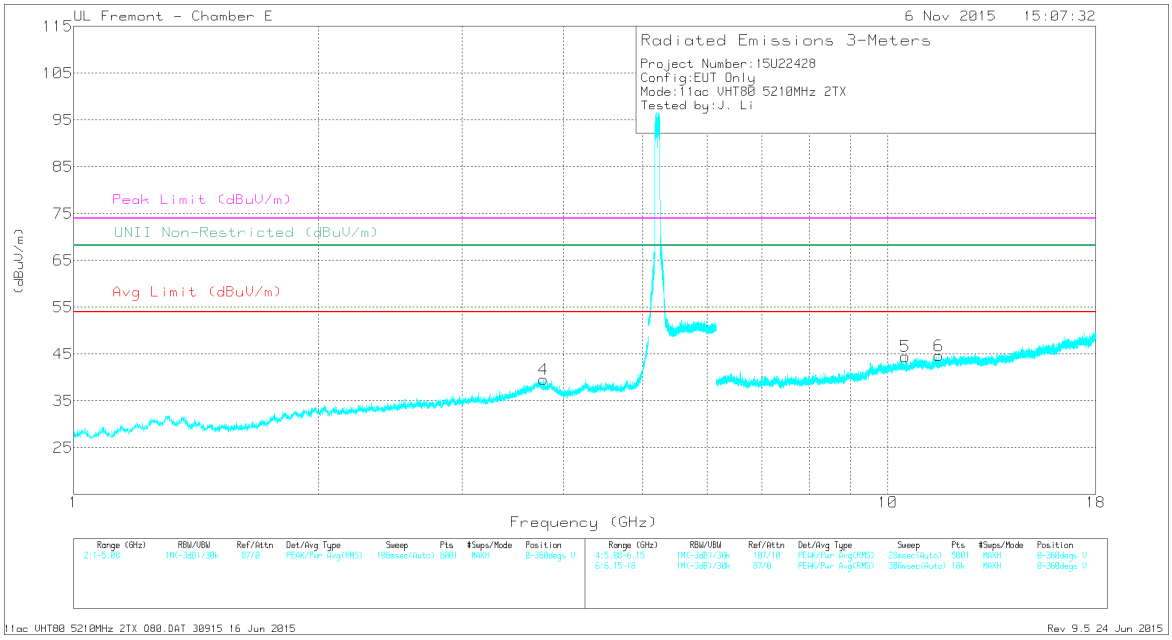
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

LOW CHANNEL HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.723	39.13	PK-U	34.6	-29.2	0	44.53	-	-	74	-29.47	-	-	44	328	H
	* 3.722	27.66	ADR	34.6	-29.2	.2	33.26	54	-20.74	-	-	-	-	44	328	H
4	* 3.776	39.01	PK-U	34.3	-29.5	0	43.81	-	-	74	-30.19	-	-	223	188	V
	* 3.774	27.79	ADR	34.3	-29.5	.2	32.79	54	-21.21	-	-	-	-	223	188	V
3	* 12.435	35.36	PK-U	39.1	-23.2	0	51.26	-	-	74	-22.74	-	-	190	162	H
	* 12.435	24.15	ADR	39.1	-23.2	.2	40.25	54	-13.75	-	-	-	-	190	162	H
6	* 11.545	34.5	PK-U	38.6	-22.6	0	50.5	-	-	74	-23.5	-	-	356	301	V
	* 11.543	23.37	ADR	38.6	-22.7	.2	39.47	54	-14.53	-	-	-	-	356	301	V
2	6.738	37.48	PK-U	35.7	-27	0	46.18	-	-	-	-	68.2	-22.02	245	190	H
5	10.496	35.17	PK-U	37.5	-21.6	0	51.07	-	-	-	-	68.2	-17.13	180	181	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK-U - U-NII: Maximum Peak

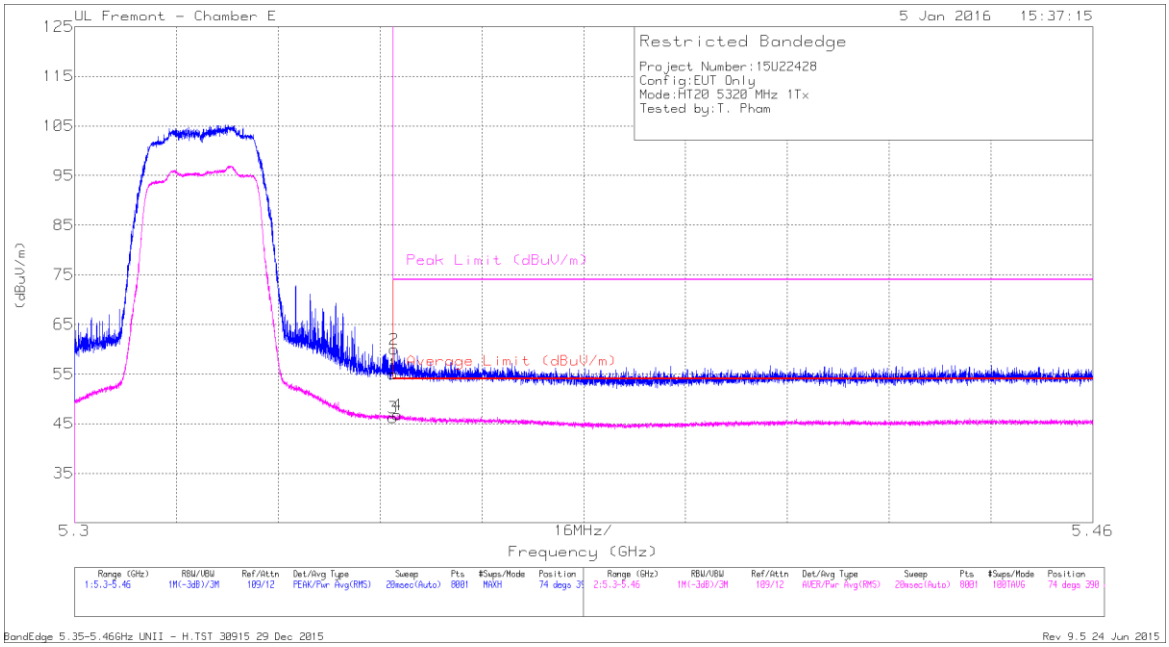
ADR - U-NII AD primary method, RMS average

UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701J
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

9.8. 802.11n HT20 1Tx MODE IN THE 5.3 GHz BAND

RESTRICTED BANDEDGE, ANTENNA - B (HIGH CHANNEL)

HIGH CHANNEL HORIZONTAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	40.06	Pk	34.5	-19.6	54.96	-	-	74	-19.04	74	390	H
2	* 5.35	45.09	Pk	34.5	-19.6	59.99	-	-	74	-14.01	74	390	H
3	* 5.35	31.32	RMS	34.5	-19.6	46.22	54	-7.78	-	-	74	390	H
4	* 5.351	31.88	RMS	34.5	-19.6	46.78	54	-7.22	-	-	74	390	H

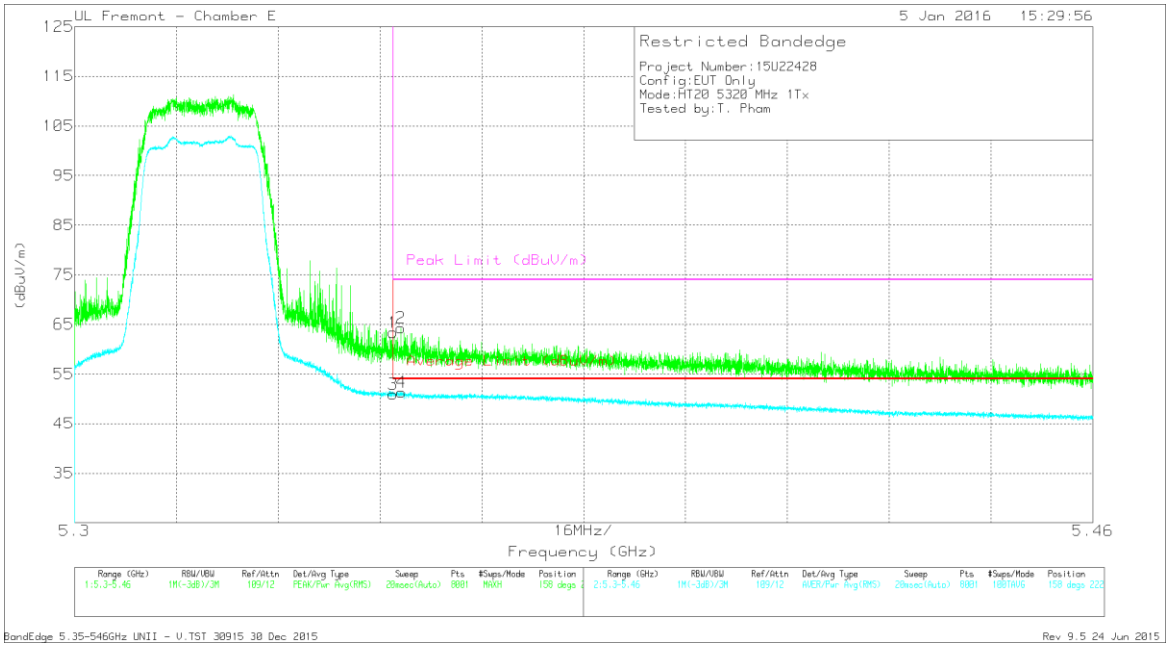
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

HIGH CHANNEL VERTICAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	48.46	Pk	34.5	-19.6	63.36	-	-	74	-10.64	158	222	V
3	* 5.35	36.07	RMS	34.5	-19.6	50.97	54	-3.03	-	-	158	222	V
2	* 5.351	49.38	Pk	34.5	-19.6	64.28	-	-	74	-9.72	158	222	V
4	* 5.351	36.45	RMS	34.5	-19.6	51.35	54	-2.65	-	-	158	222	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

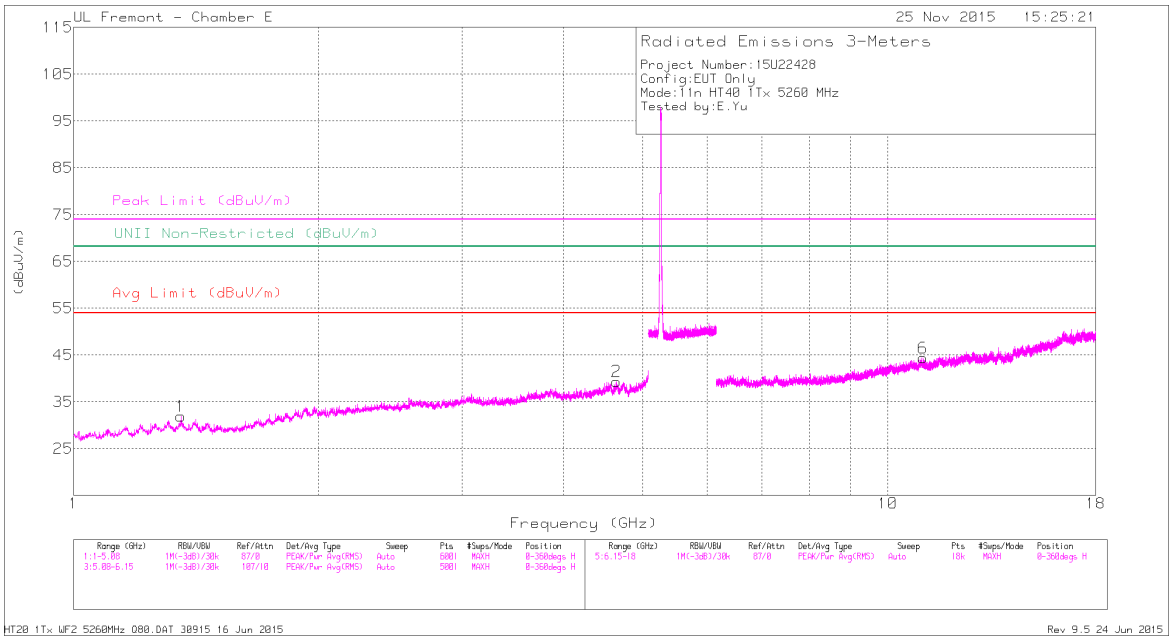
Pk - Peak detector

RMS - RMS detection

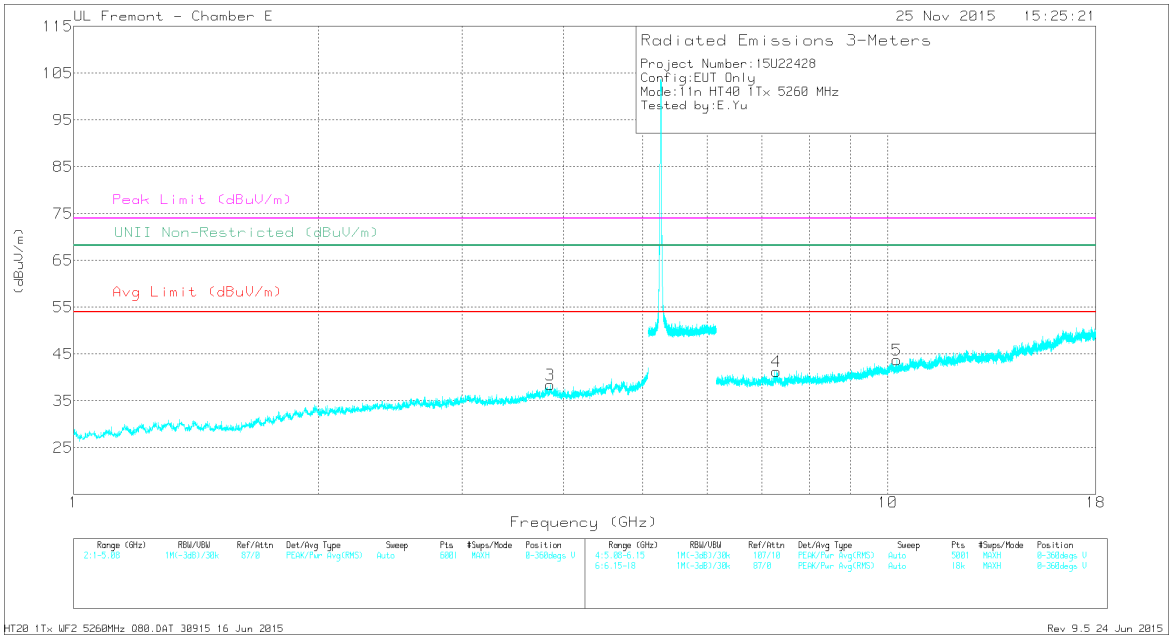
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

LOW CHANNEL HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701J
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

DATA

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.356	44.76	PK-U	28.7	-35	38.46	-	-	74	-35.54	-	-	251	163	H
	* 1.355	33.19	ADR	28.7	-35	26.89	54	-27.11	-	-	-	-	251	163	H
2	* 4.645	41.8	PK-U	34.1	-30	45.9	-	-	74	-28.1	-	-	307	269	H
	* 4.645	30.88	ADR	34.1	-30	34.98	54	-19.02	-	-	-	-	307	269	H
3	* 3.852	42.01	PK-U	33.5	-29.8	45.71	-	-	74	-28.29	-	-	83	303	V
	* 3.852	30.1	ADR	33.5	-29.8	33.8	54	-20.2	-	-	-	-	83	303	V
6	* 11.052	36.6	PK-U	37.9	-23.7	50.8	-	-	74	-23.2	-	-	92	247	H
	* 11.052	25.52	ADR	37.9	-23.7	39.72	54	-14.28	-	-	-	-	92	247	H
4	* 7.296	38.32	PK-U	35.5	-26.2	47.62	-	-	74	-26.38	-	-	360	157	V
	* 7.295	27.15	ADR	35.5	-26.3	36.35	54	-17.65	-	-	-	-	360	157	V
5	10.256	37.04	PK-U	37.2	-24.2	50.04	-	-	-	-	68.2	-18.16	325	200	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

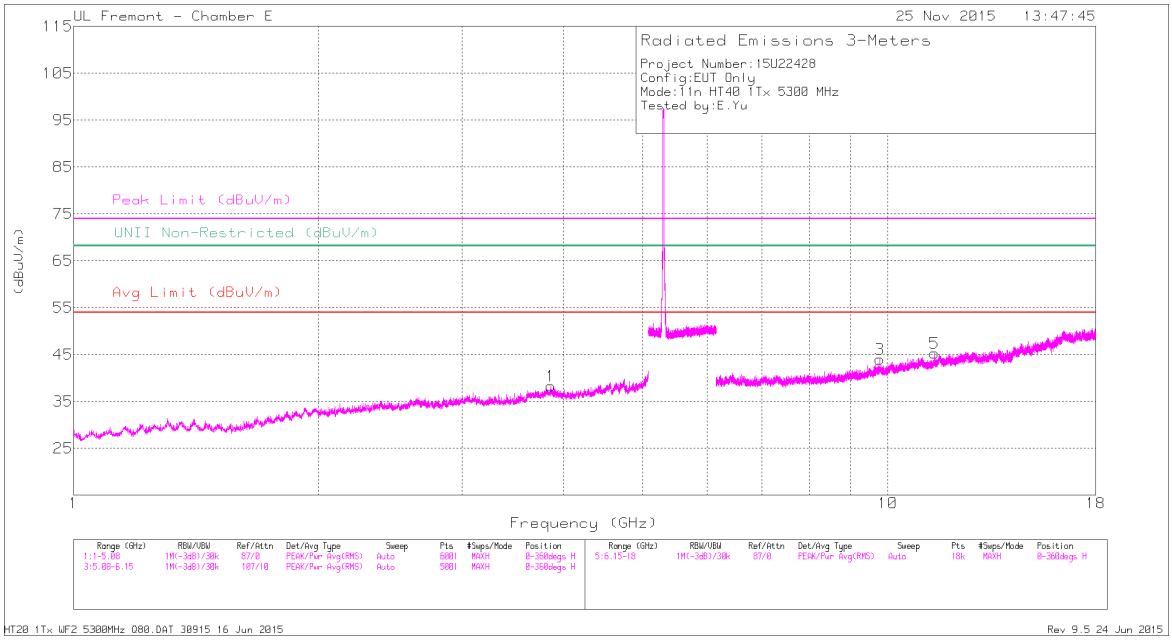
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

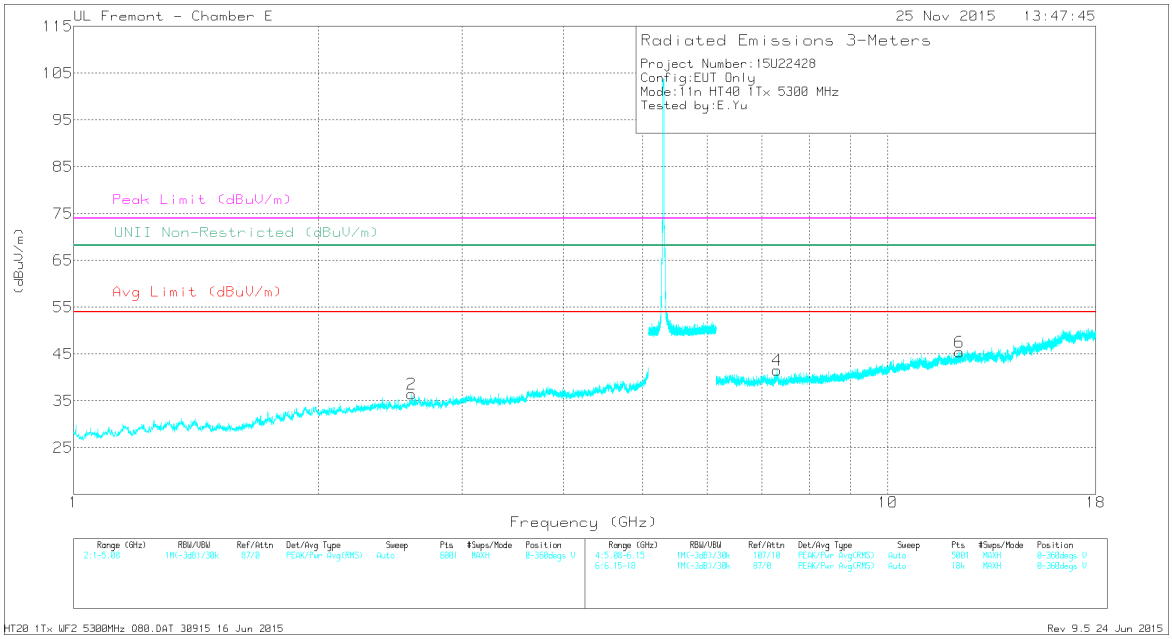
UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701J
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

MID CHANNEL HARMONICS AND SPURIOUS EMISSIONS

MID CHANNEL HORIZONTAL PLOT



MID CHANNEL VERTICAL PLOT



This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.857	41.65	PK-U	33.5	-29.9	45.25	-	-	74	-28.75	-	-	111	344	H
	* 3.855	29.88	ADR	33.5	-29.8	33.58	54	-20.42	-	-	-	-	111	344	H
5	* 11.408	36.72	PK-U	38	-23.3	51.42	-	-	74	-22.58	-	-	295	263	H
	* 11.407	24.61	ADR	38	-23.3	39.31	54	-14.69	-	-	-	-	295	263	H
4	* 7.309	37.98	PK-U	35.5	-26.1	47.38	-	-	74	-26.62	-	-	159	157	V
	* 7.309	26.98	ADR	35.5	-26.1	36.38	54	-17.62	-	-	-	-	159	157	V
6	* 12.246	37.63	PK-U	38.8	-24.6	51.83	-	-	74	-22.17	-	-	263	202	V
	* 12.245	26.55	ADR	38.8	-24.6	40.75	54	-13.25	-	-	-	-	263	202	V
2	2.604	42.01	PK-U	32.4	-31.5	42.91	-	-	-	-	68.2	-25.29	227	355	V
3	9.77	37.84	PK-U	37	-25	49.84	-	-	-	-	68.2	-18.36	329	112	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

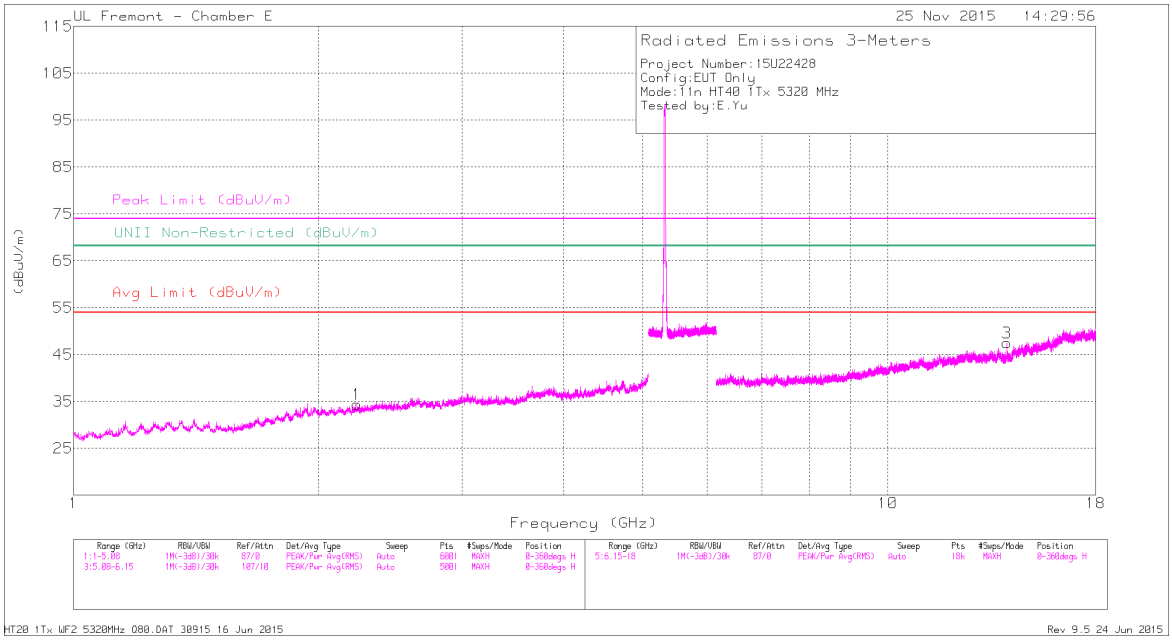
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

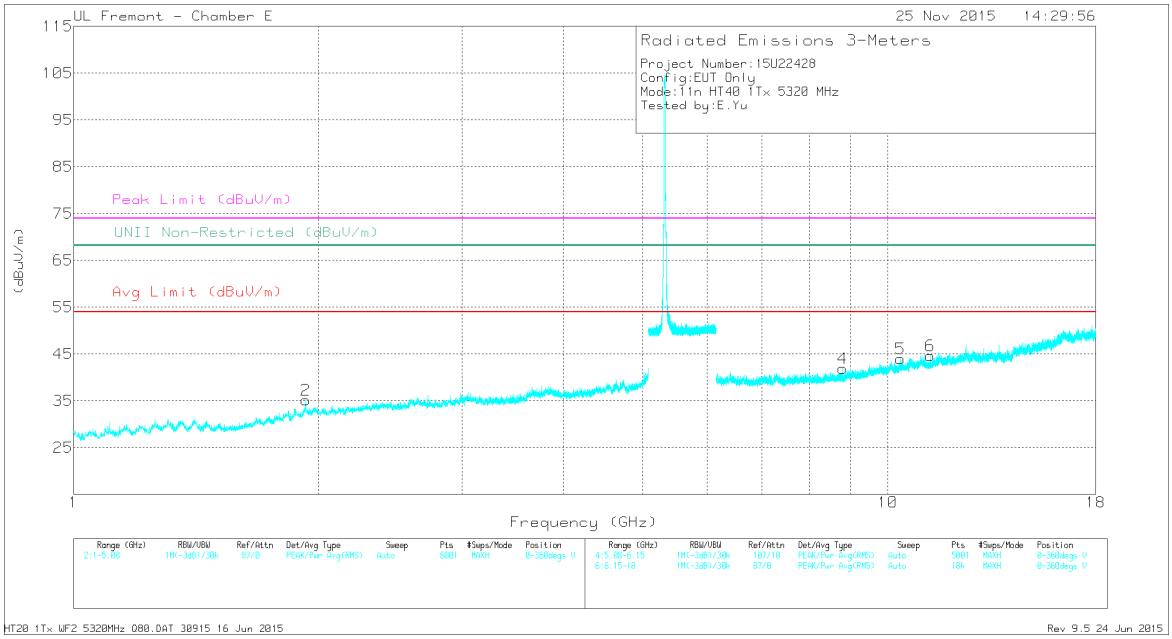
UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701J
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

HIGH CHANNEL HARMONICS AND SPURIOUS EMISSIONS

HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

DATA

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.231	42.61	PK-U	31.5	-32.6	41.51	-	-	74	-32.49	-	-	236	155	H
	* 2.229	31	ADR	31.5	-32.6	29.9	54	-24.1	-	-	-	-	236	155	H
6	* 11.267	36.58	PK-U	37.9	-24	50.48	-	-	74	-23.52	-	-	153	179	V
	* 11.268	25.11	ADR	37.9	-24	39.01	54	-14.99	-	-	-	-	153	179	V
2	1.926	44.5	PK-U	31	-33	42.5	-	-	-	-	68.2	-25.7	263	202	V
4	8.807	38.77	PK-U	36.1	-27	47.87	-	-	-	-	68.2	-20.33	147	351	V
5	10.357	36.76	PK-U	37.3	-24	50.06	-	-	-	-	68.2	-18.14	58	257	V
3	13.996	37.62	PK-U	38.5	-23.9	52.22	-	-	-	-	68.2	-15.98	93	189	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

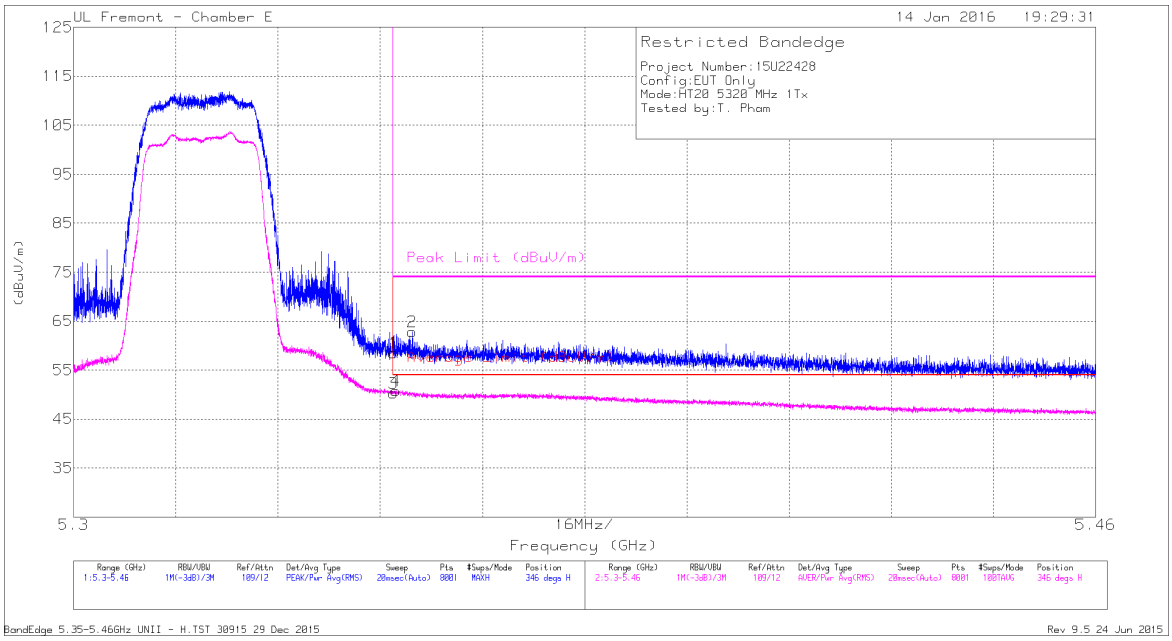
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

RESTRICTED BANDEDGE, ANTENNA - A (HIGH CHANNEL)

HIGH CHANNEL HORIZONTAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	43.56	Pk	34.5	-19.6	58.46	-	-	74	-15.54	346	201	H
2	* 5.353	47.92	Pk	34.5	-19.6	62.82	-	-	74	-11.18	346	201	H
3	* 5.35	35.37	RMS	34.5	-19.6	50.27	54	-3.73	-	-	346	201	H
4	* 5.35	35.92	RMS	34.5	-19.6	50.82	54	-3.18	-	-	346	201	H

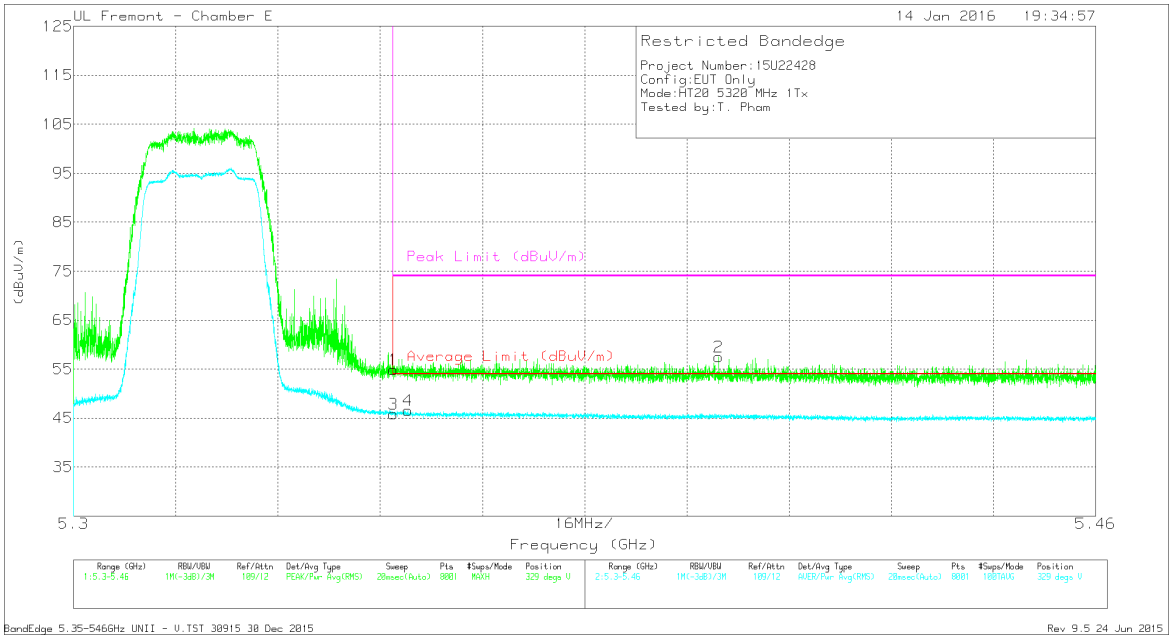
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

HIGH CHANNEL VERTICAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	40.02	Pk	34.5	-19.6	54.92	-	-	74	-19.08	329	101	V
3	* 5.35	30.91	RMS	34.5	-19.6	45.81	54	-8.19	-	-	329	101	V
4	* 5.352	31.72	RMS	34.5	-19.6	46.62	54	-7.38	-	-	329	101	V
2	* 5.401	42.3	Pk	34.6	-19.4	57.5	-	-	74	-16.5	329	101	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

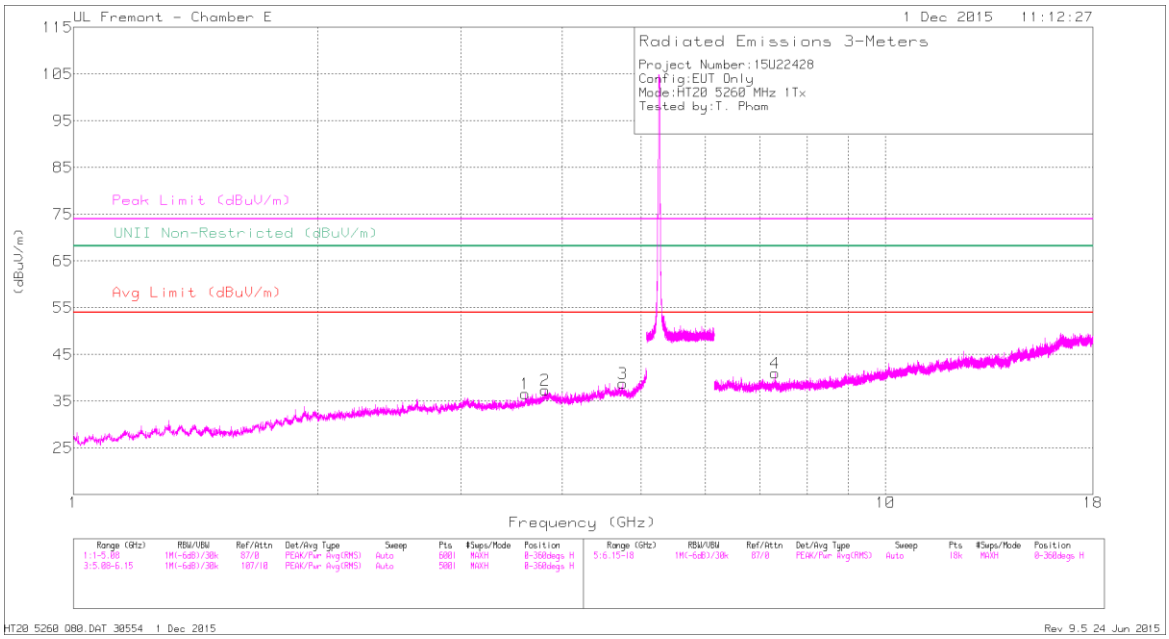
Pk - Peak detector

RMS - RMS detection

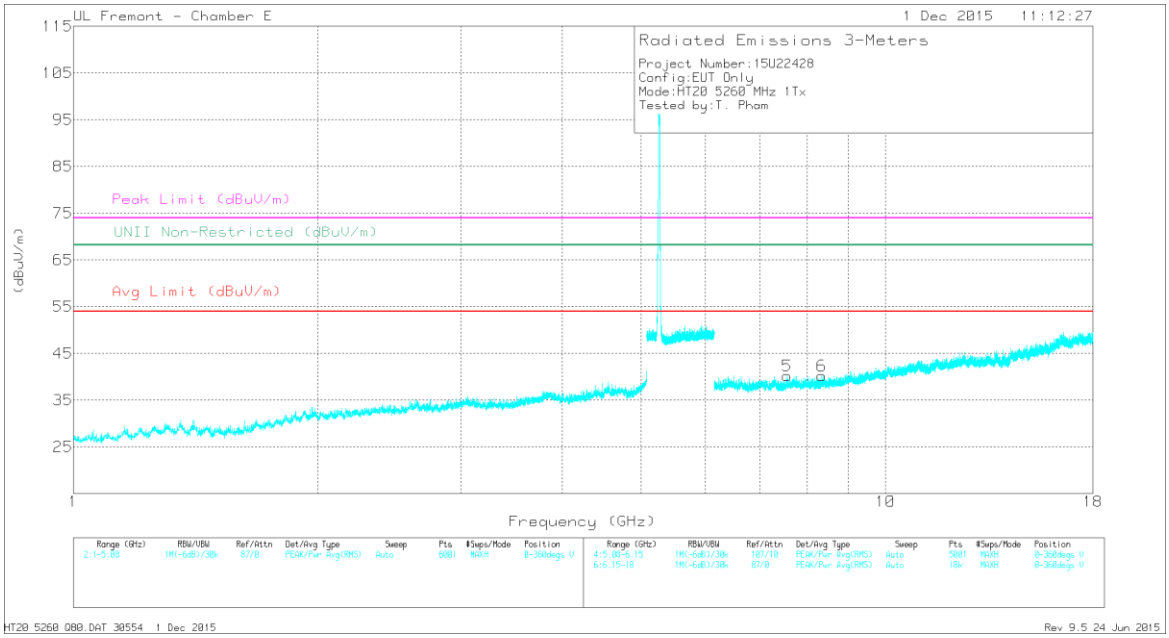
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

LOW CHANNEL HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

DATA

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.599	41.24	PK-U	33	-30.8	43.44	-	-	74	-30.56	-	-	121	101	H
	* 3.601	29.64	ADR	33	-30.8	31.84	54	-22.16	-	-	-	-	121	101	H
2	* 3.809	41.96	PK-U	33.5	-30.1	45.36	-	-	74	-28.64	-	-	154	131	H
	* 3.81	30.38	ADR	33.5	-30.1	33.78	54	-20.22	-	-	-	-	154	131	H
3	* 4.746	40.74	PK-U	34.1	-29.2	45.64	-	-	74	-28.36	-	-	220	150	H
	* 4.744	29.52	ADR	34.1	-29.1	34.52	54	-19.48	-	-	-	-	220	150	H
4	* 7.307	38.15	PK-U	35.5	-26	47.65	-	-	74	-26.35	-	-	239	173	H
	* 7.305	26.93	ADR	35.5	-26	36.43	54	-17.57	-	-	-	-	239	173	H
5	* 7.564	38.73	PK-U	35.7	-26.3	48.13	-	-	74	-25.87	-	-	271	198	V
	* 7.562	26.8	ADR	35.7	-26.3	36.2	54	-17.8	-	-	-	-	271	198	V
6	* 8.35	38.24	PK-U	35.7	-26.7	47.24	-	-	74	-26.76	-	-	261	209	V
	* 8.352	27.37	ADR	35.7	-26.7	36.37	54	-17.63	-	-	-	-	261	209	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

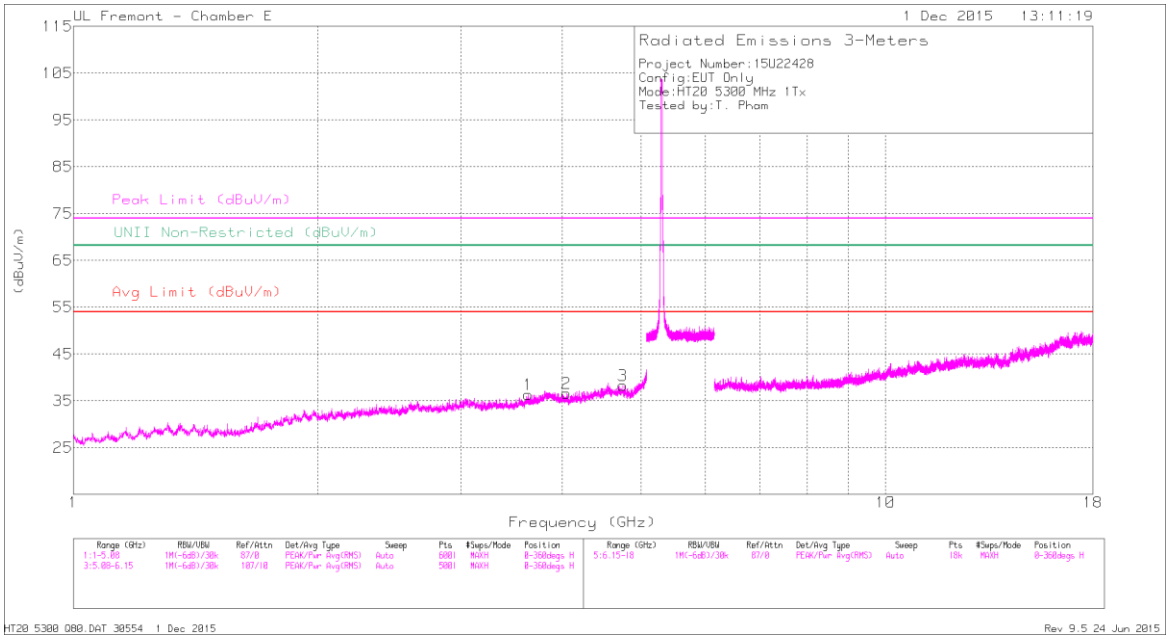
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

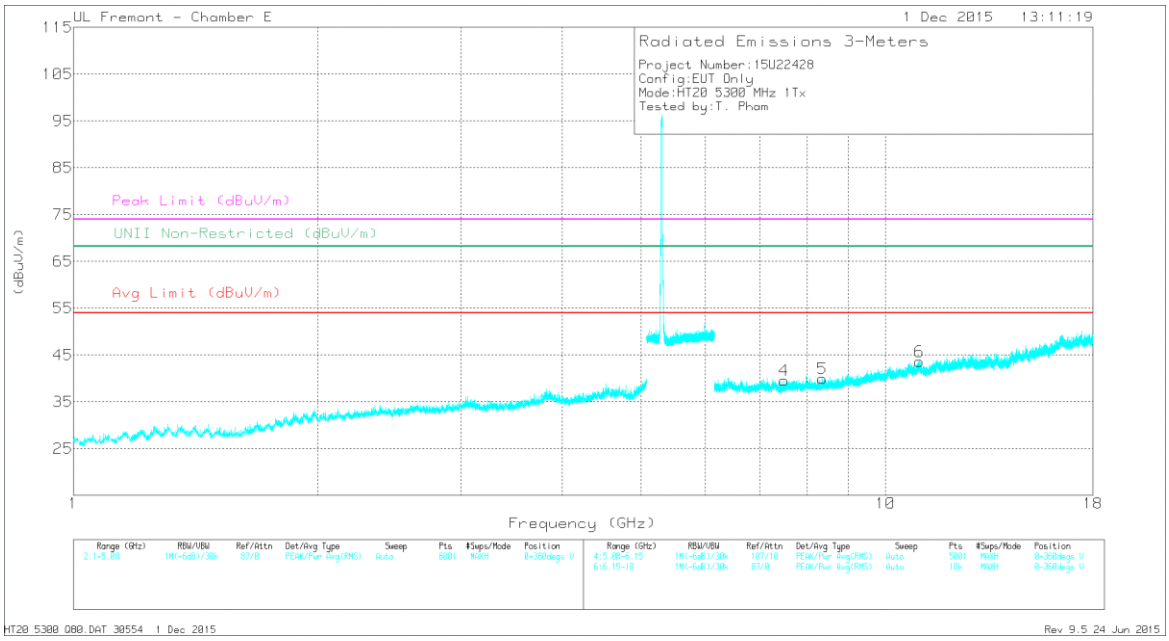
UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701J
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

MID CHANNEL HARMONICS AND SPURIOUS EMISSIONS

MID CHANNEL HORIZONTAL PLOT



MID CHANNEL VERTICAL PLOT



This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.