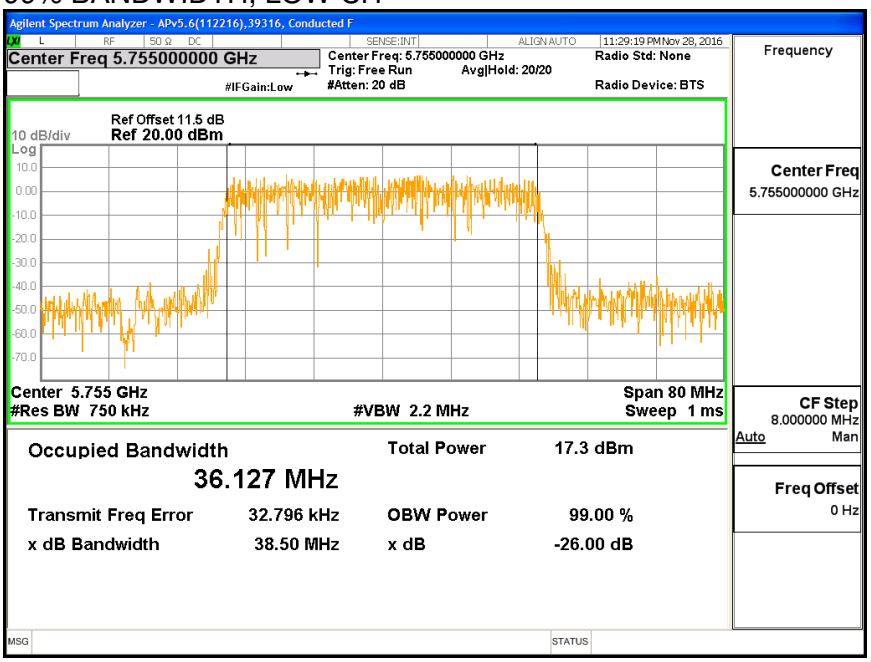
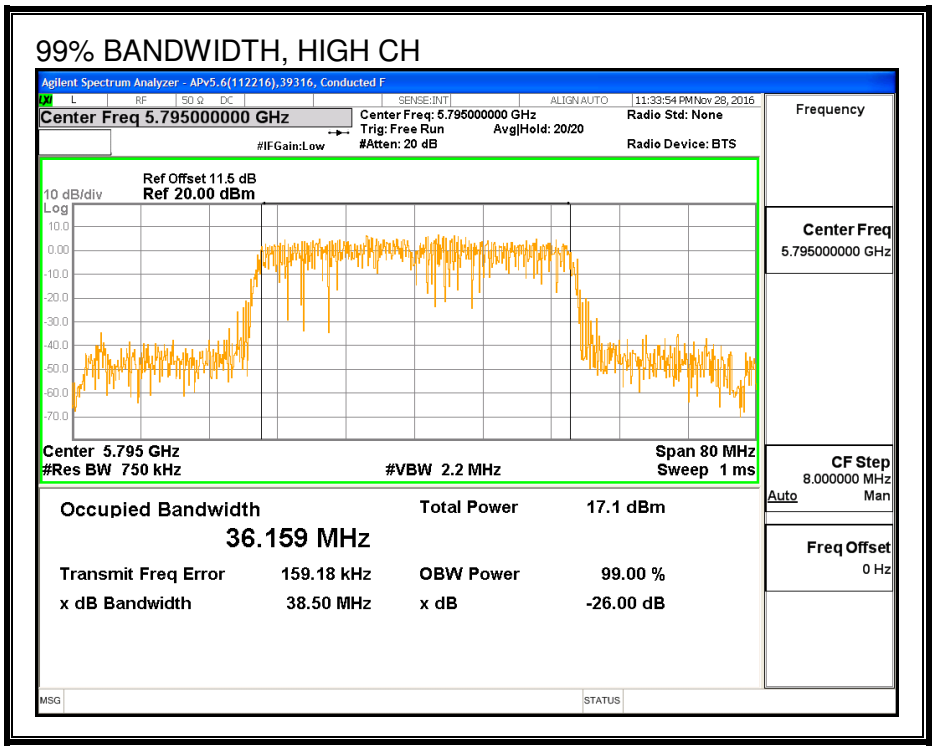
99% BANDWIDTH

99% BANDWIDTH, LOW CH



99% BANDWIDTH, HIGH CH



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

8.46.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

ID:	45256	Date:	1/31/17

Channel	Frequency (MHz)	Power (dBm)
Low	5755	15.49
High	5795	15.48

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

8.46.5. 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

ID:	39919	Date:	2/14/17

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Low	5755	4.32	30.00
High	5795	4.32	30.00

Output Power Results

Channel	Frequency (MHz)	Antenna B Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5755	15.49	15.49	30.00	-14.51
High	5795	15.48	15.48	30.00	-14.52

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

8.46.6. 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.

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

RESULTS

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5755	4.32	30.00
High	5795	4.32	30.00

Duty Cycle CF (dB)	0.11	Included in Calculations of Corr'd PSD

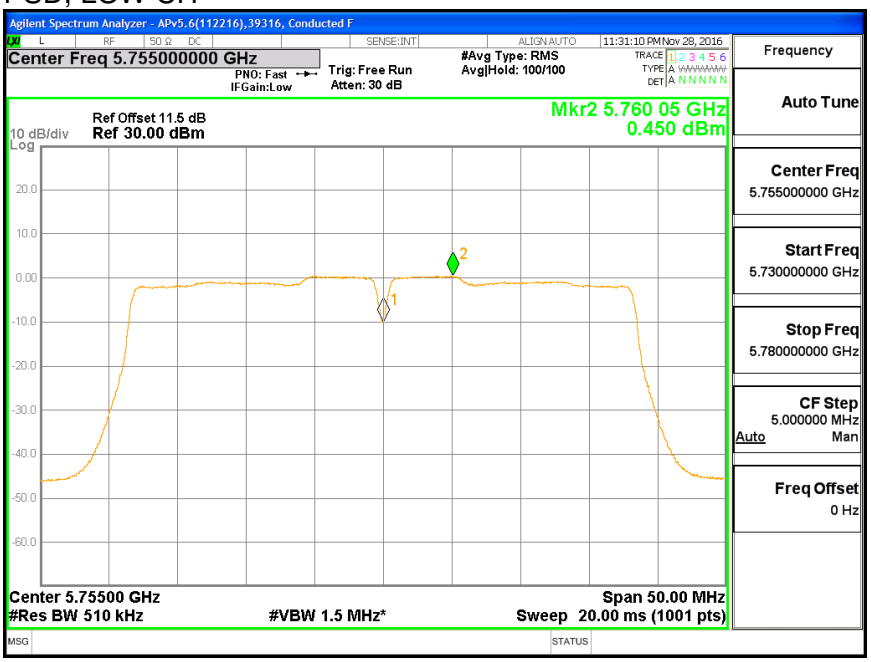
PSD Results

Channel	Frequency (MHz)	Antenna B Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5755	0.45	0.56	30.00	-29.44
High	5795	0.31	0.42	30.00	-29.58

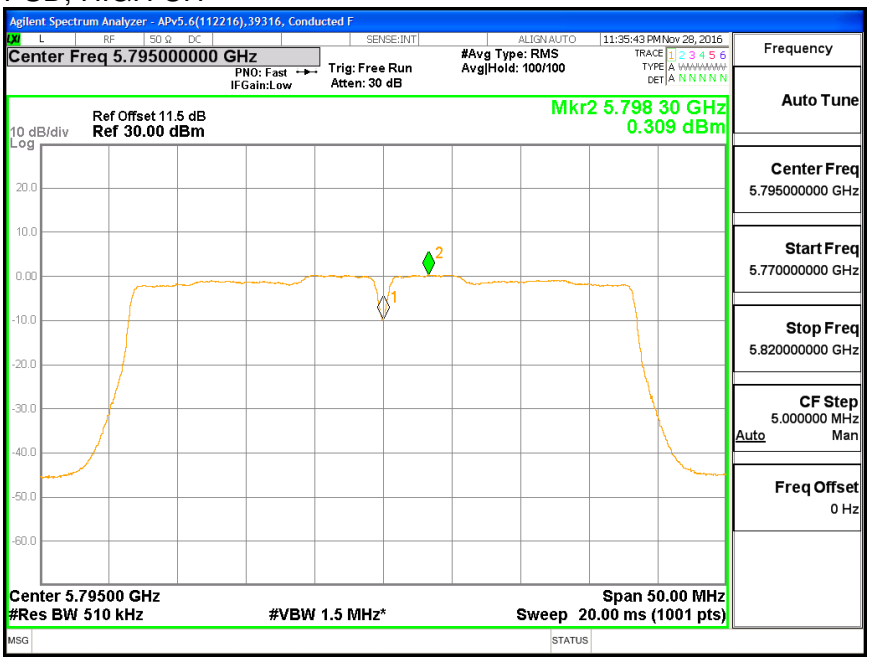
UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701J
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

PSD

PSD, LOW CH



PSD, HIGH CH



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.

8.47. 802.11n HT40 2Tx (ANTENNA A + ANTENNA B) CDD MODE IN THE 5.8 GHz BAND

8.47.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

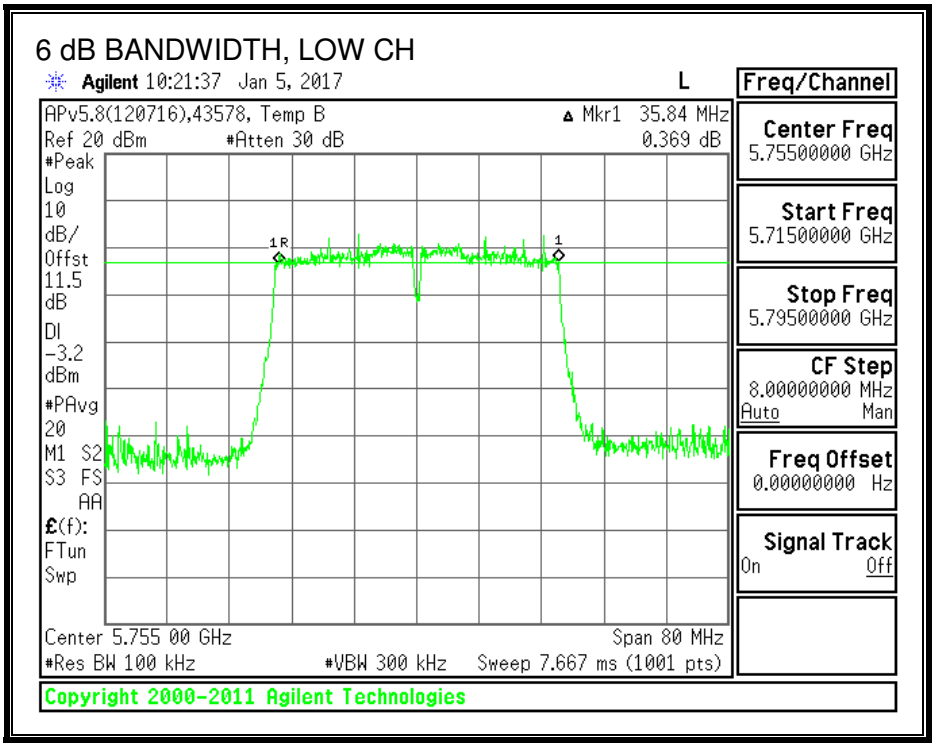
The minimum 6 dB bandwidth shall be at least 500 kHz.

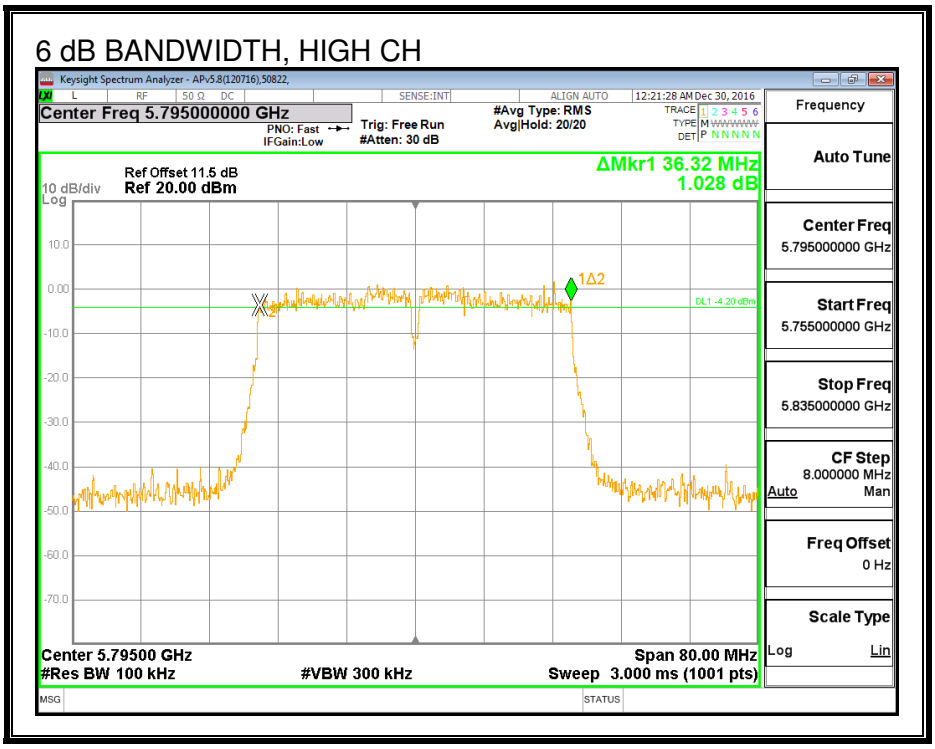
RESULTS

Channel	Frequency (MHz)	6 dB BW Antenna A (MHz)	6 dB BW Antenna B (MHz)	Minimum Limit (MHz)
Low	5755	35.840	35.680	0.5
High	5795	36.320	36.080	0.5

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

6 dB BANDWIDTH, ANTENNA A

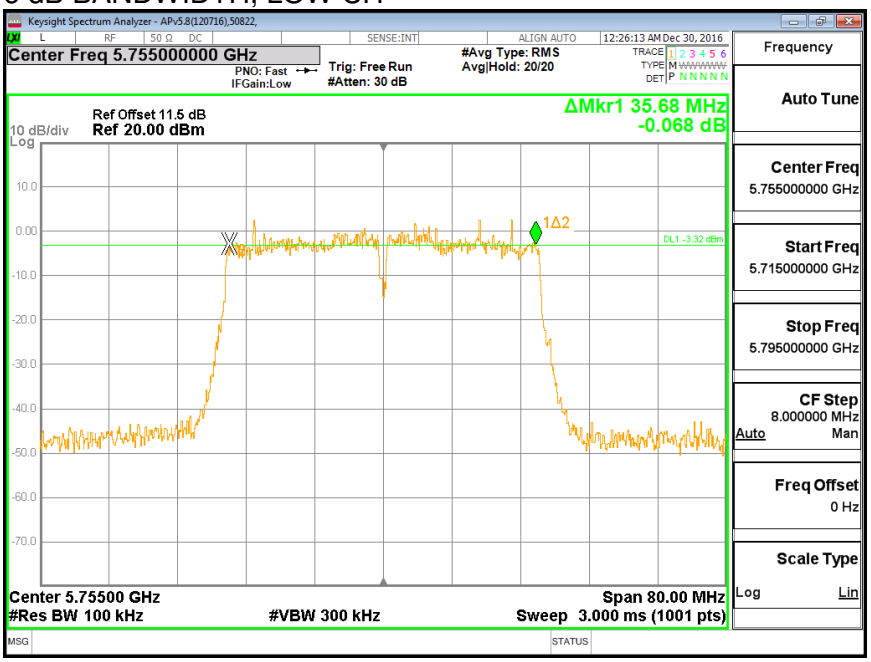




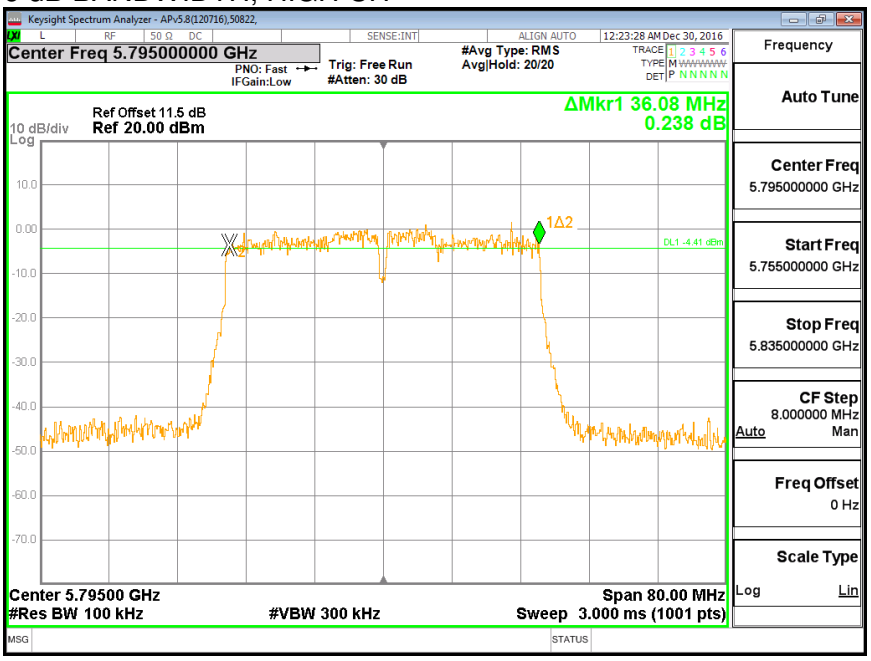
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

6 dB BANDWIDTH, ANTENNA B

6 dB BANDWIDTH, LOW CH



6 dB BANDWIDTH, HIGH CH



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

8.47.2. 26 dB BANDWIDTH

LIMITS

None, for reporting purposes only.

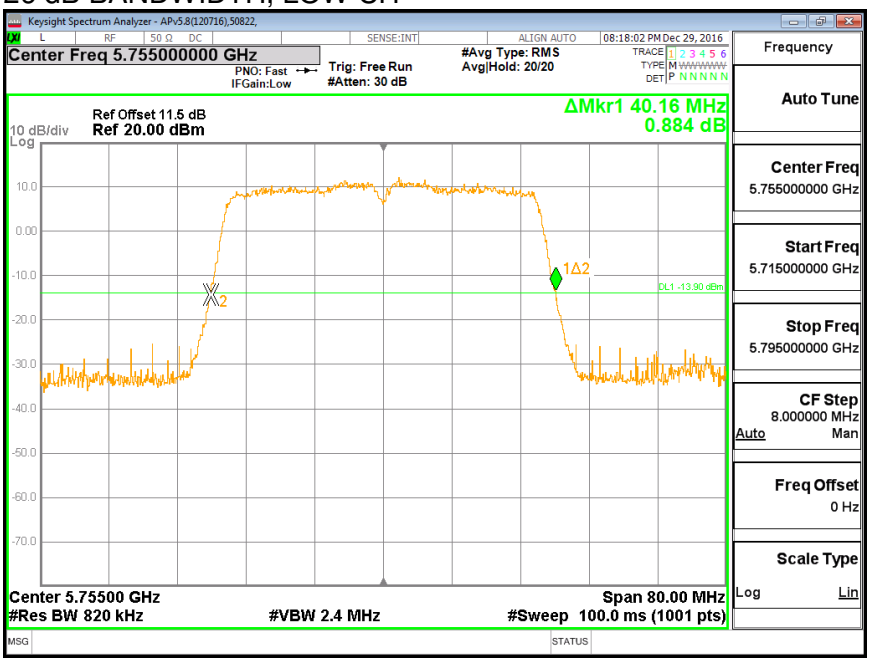
RESULTS

Channel	Frequency (MHz)	26 dB BW Antenna A (MHz)	26 dB BW Antenna B (MHz)
Low	5755	40.160	40.720
High	5795	40.240	40.800

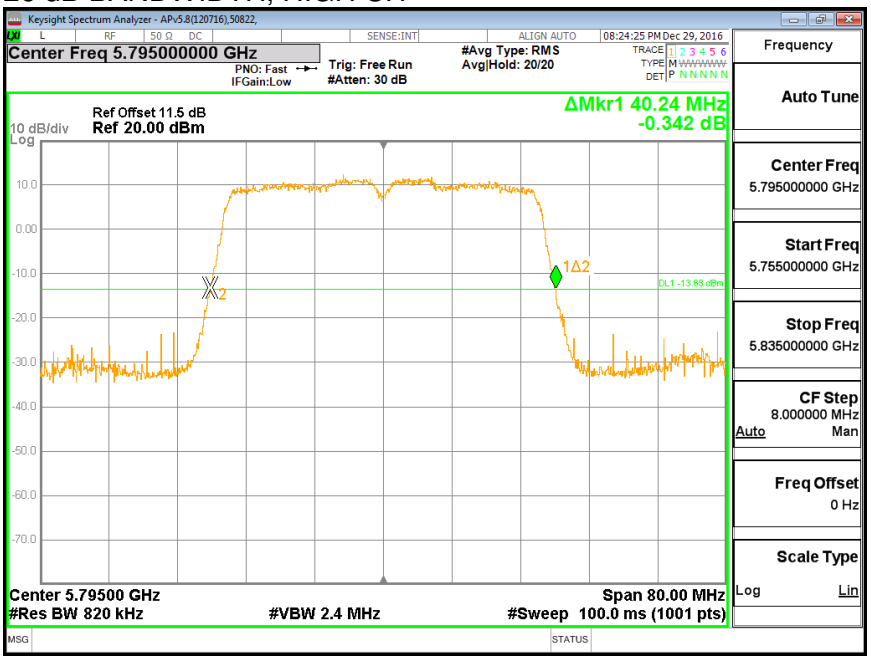
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

26 dB BANDWIDTH, ANTENNA A

26 dB BANDWIDTH, LOW CH



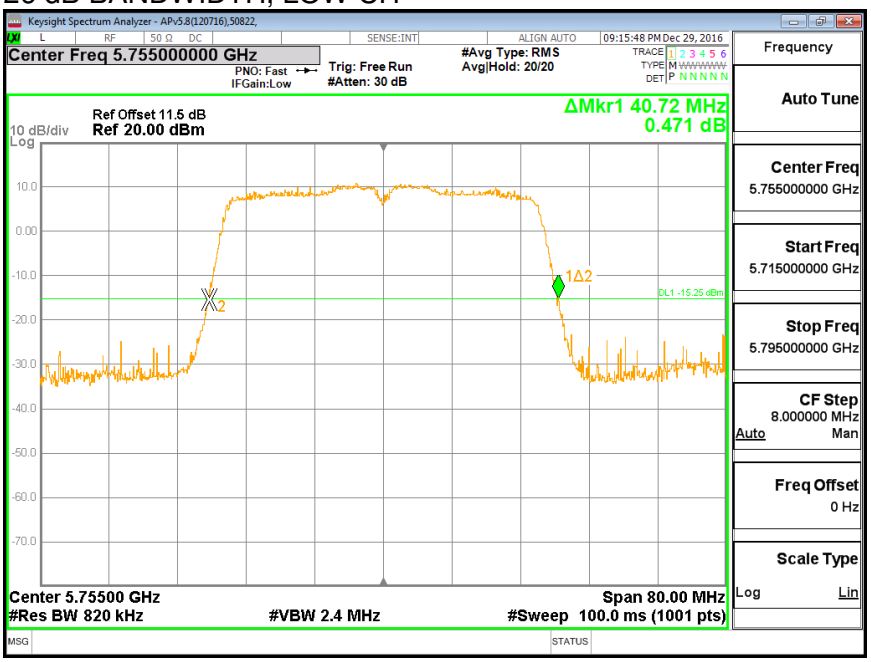
26 dB BANDWIDTH, HIGH CH



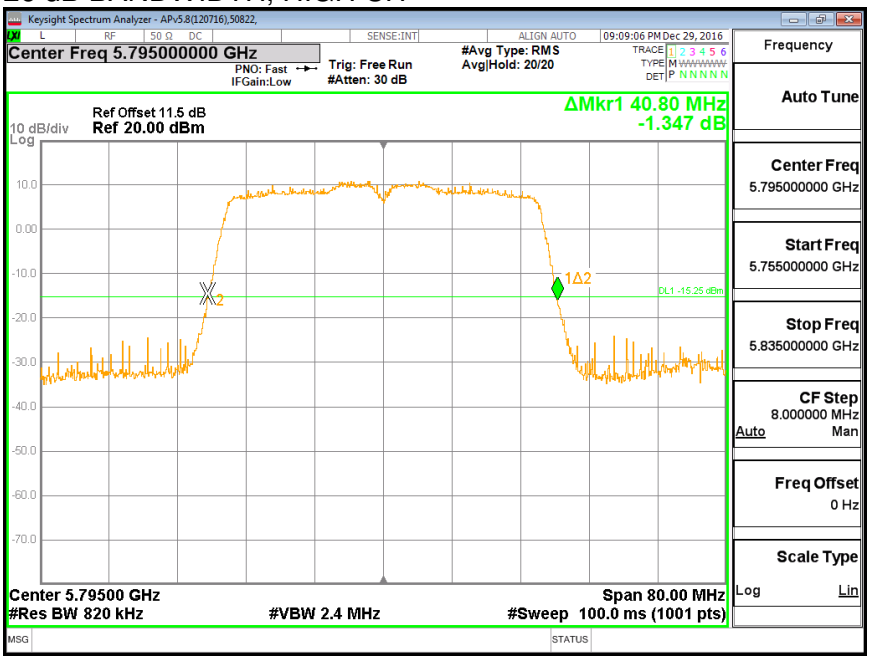
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

26 dB BANDWIDTH, ANTENNA B

26 dB BANDWIDTH, LOW CH



26 dB BANDWIDTH, HIGH CH



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

8.47.3. 99% BANDWIDTH

LIMITS

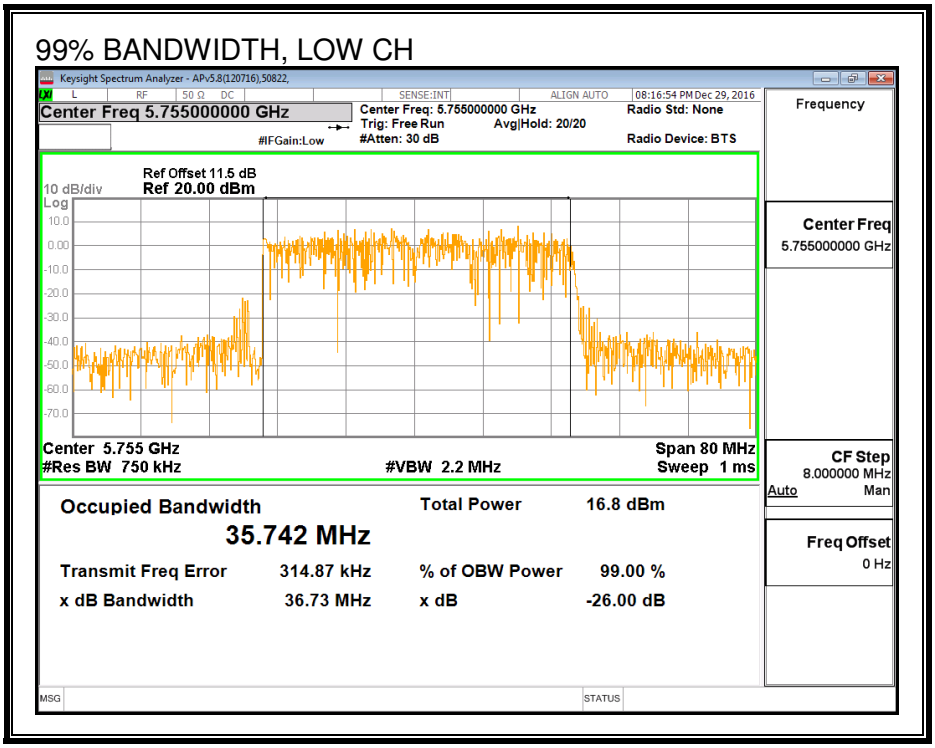
None; for reporting purposes only.

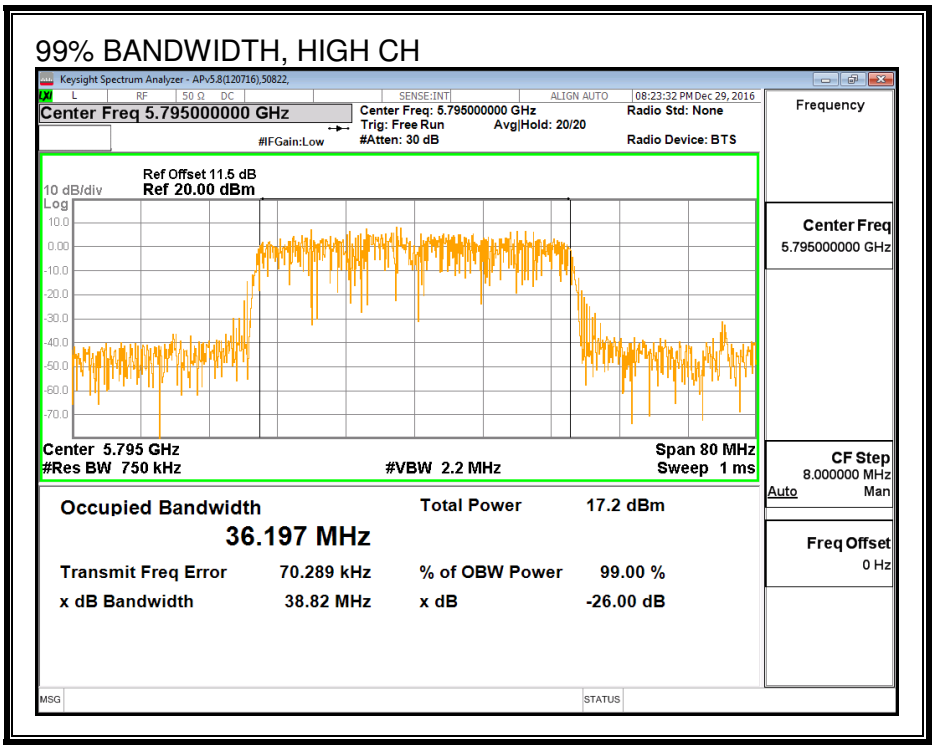
RESULTS

Channel	Frequency (MHz)	99% BW Antenna A (MHz)	99% BW Antenna B (MHz)
Low	5755	35.742	36.152
High	5795	36.197	36.100

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

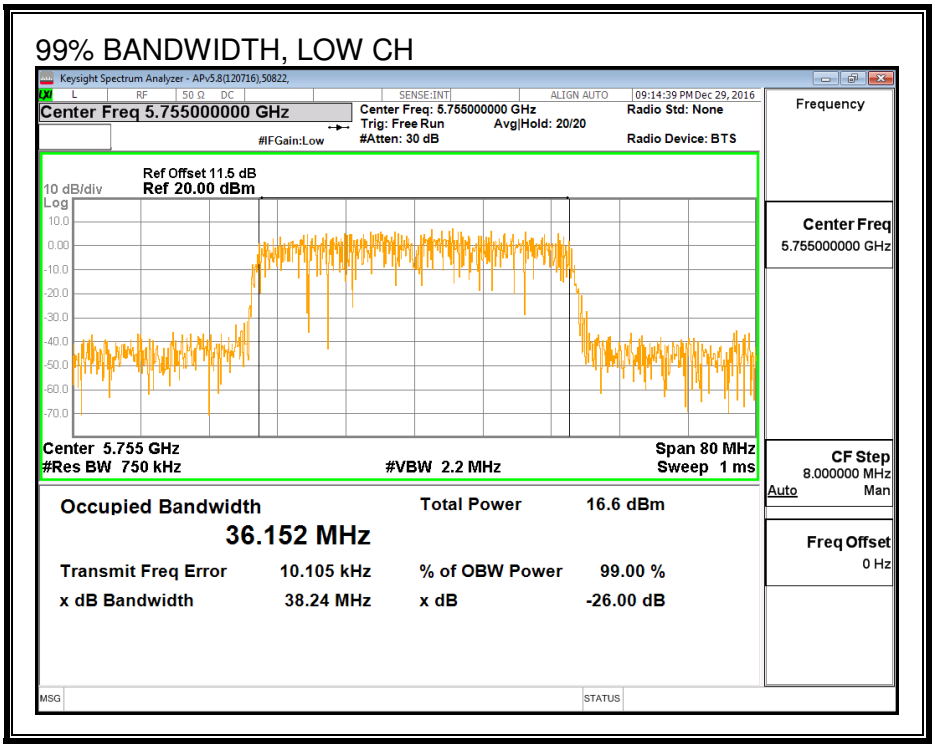
99% BANDWIDTH, ANTENNA A

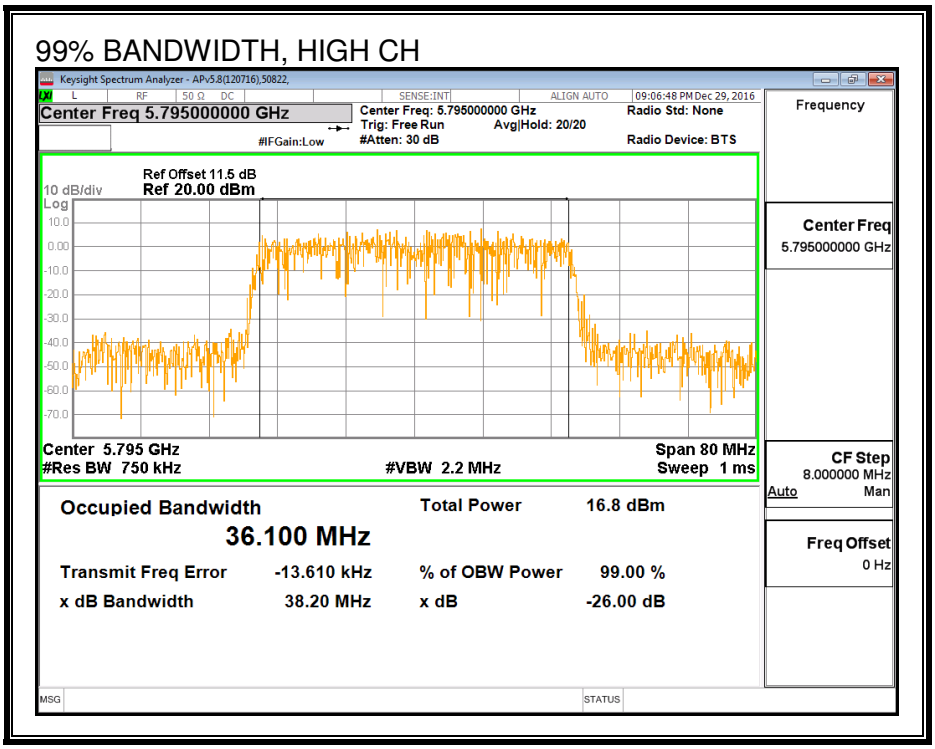




This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

99% BANDWIDTH, ANTENNA B





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

8.47.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

ID:	45256	Date:	1/31/17

Channel	Frequency (MHz)	Antenna A Power (dBm)	Antenna B Power (dBm)	Total Power (dBm)
Low	5755	14.98	15.45	18.23
High	5795	14.99	15.44	18.23

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

8.47.5. 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 A Gain (dBi)	Antenna B Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
4.20	4.32	4.26

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

RESULTS

ID:	39919	Date:	2/14/17

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Low	5755	4.26	30.00
High	5795	4.26	30.00

Output Power Results

Channel	Frequency (MHz)	Antenna A Meas Power (dBm)	Antenna B Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5755	14.98	15.45	18.23	30.00	-11.77
High	5795	14.99	15.44	18.23	30.00	-11.77

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

8.47.6. 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 A Gain (dBi)	Antenna B Gain (dBi)	Correlated Chains Directional Gain (dBi)
4.20	4.32	7.27

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)
Low	5755	7.27	28.73
High	5795	7.27	28.73

Duty Cycle CF (dB)	0.10	**Included in Calculations of Corr'd PSD**

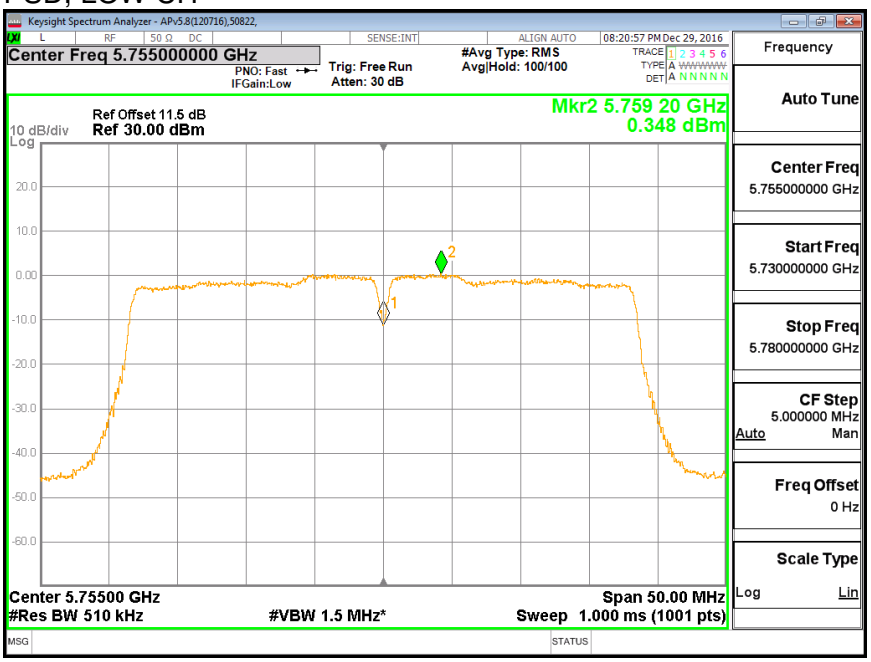
PSD Results

Channel	Frequency (MHz)	Antenna A Meas PSD (dBm)	Antenna B Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5755	0.35	0.39	3.48	28.73	-25.25
High	5795	0.60	0.20	3.51	28.73	-25.22

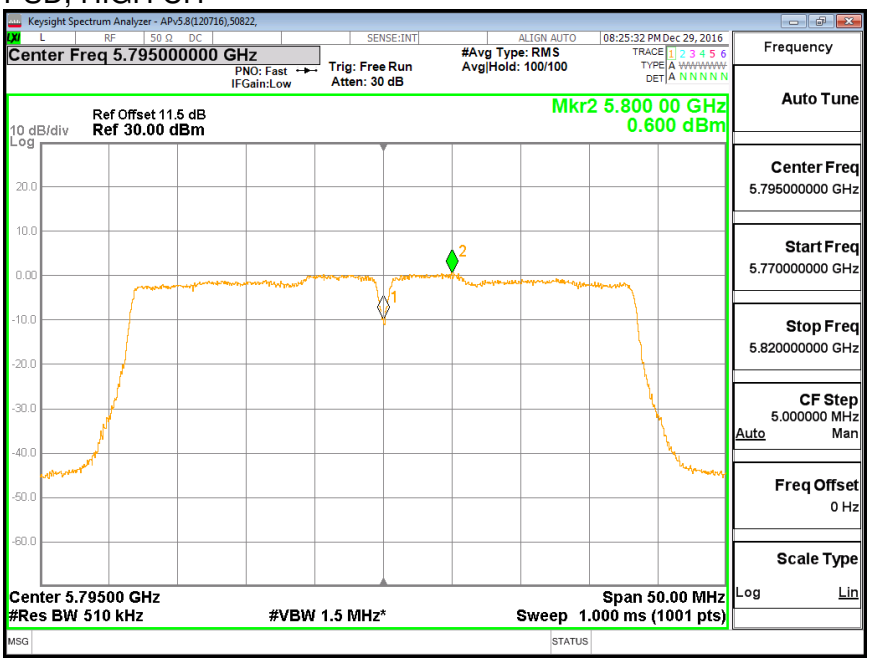
UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701J
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

PSD, ANTENNA A

PSD, LOW CH



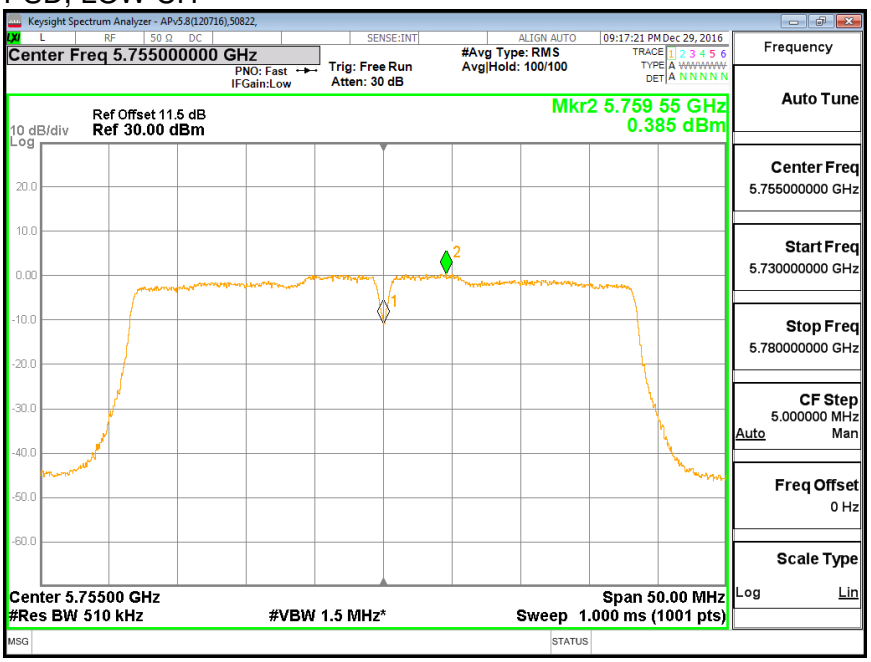
PSD, HIGH CH



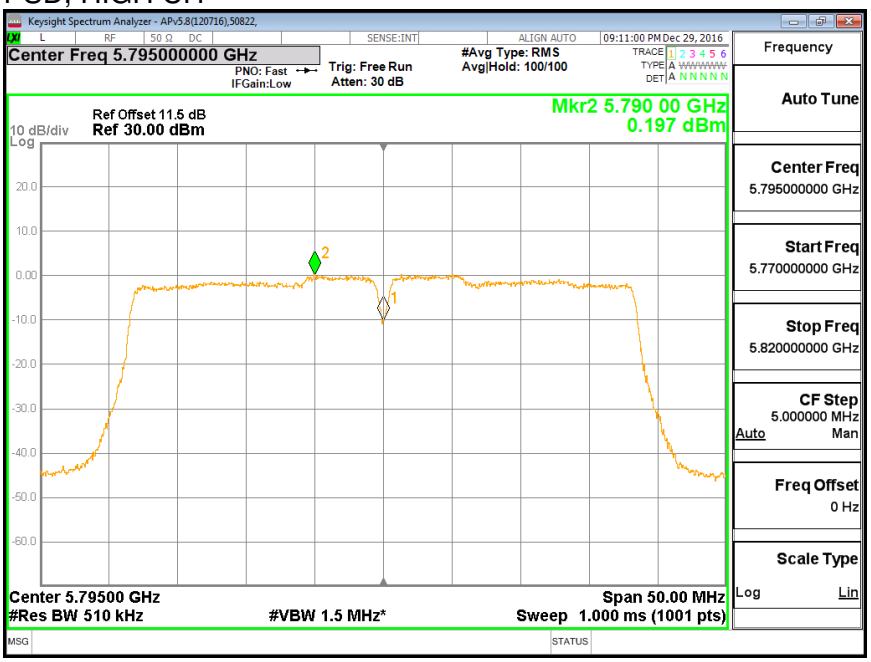
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

PSD, ANTENNA B

PSD, LOW CH



PSD, HIGH CH



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

8.48. 802.11ac VHT80 ANTENNA A MODE IN THE 5.8 GHz BAND

8.48.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

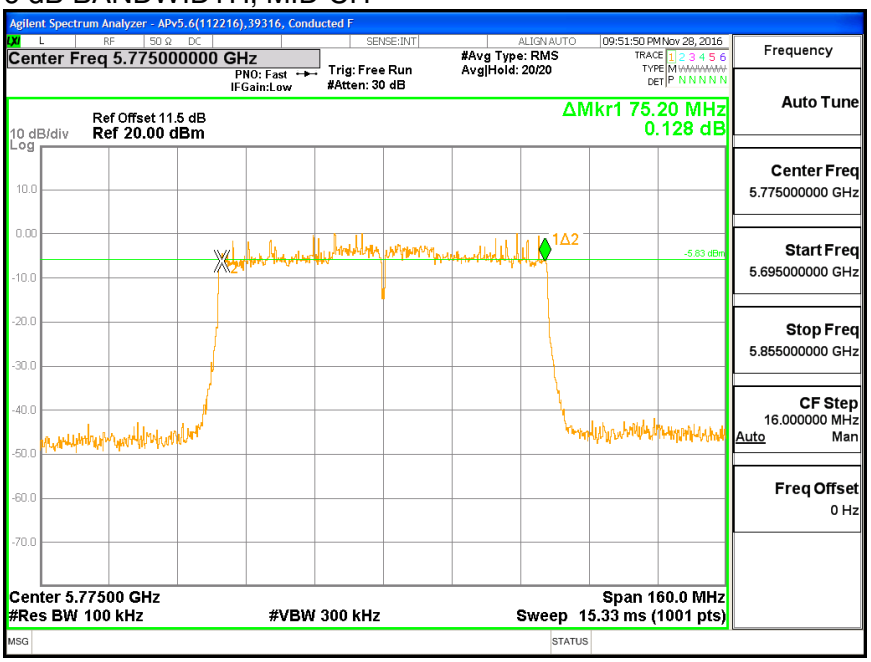
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Mid	5775	75.200	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.

8.48.2. 26 dB BANDWIDTH

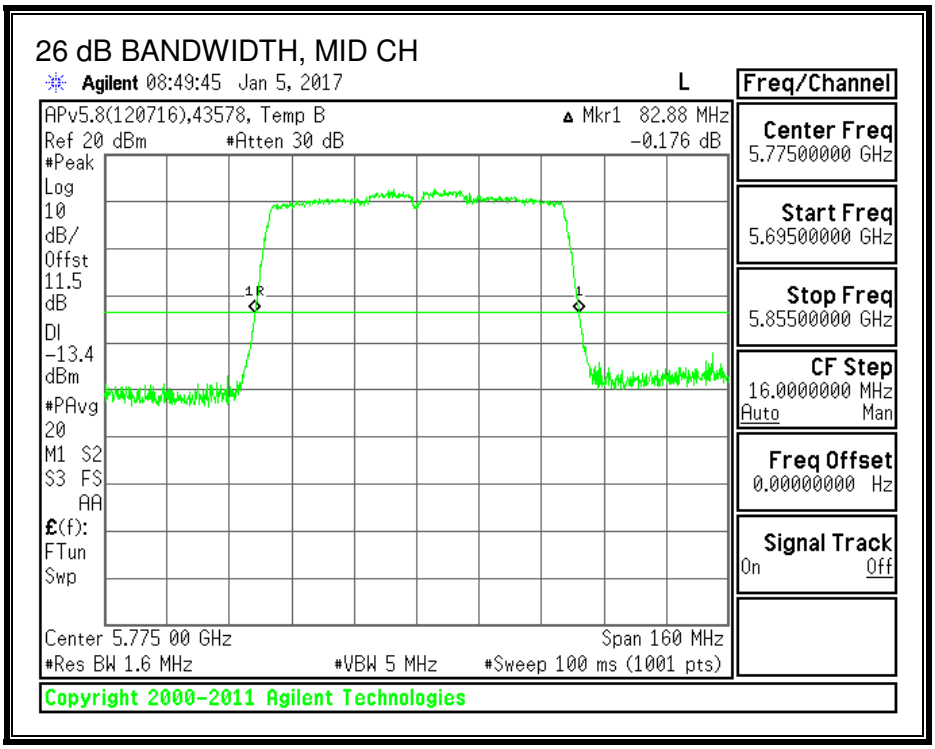
LIMITS

None, for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Mid	5775	82.880

26 dB BANDWIDTH



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

8.48.3. 99% BANDWIDTH

LIMITS

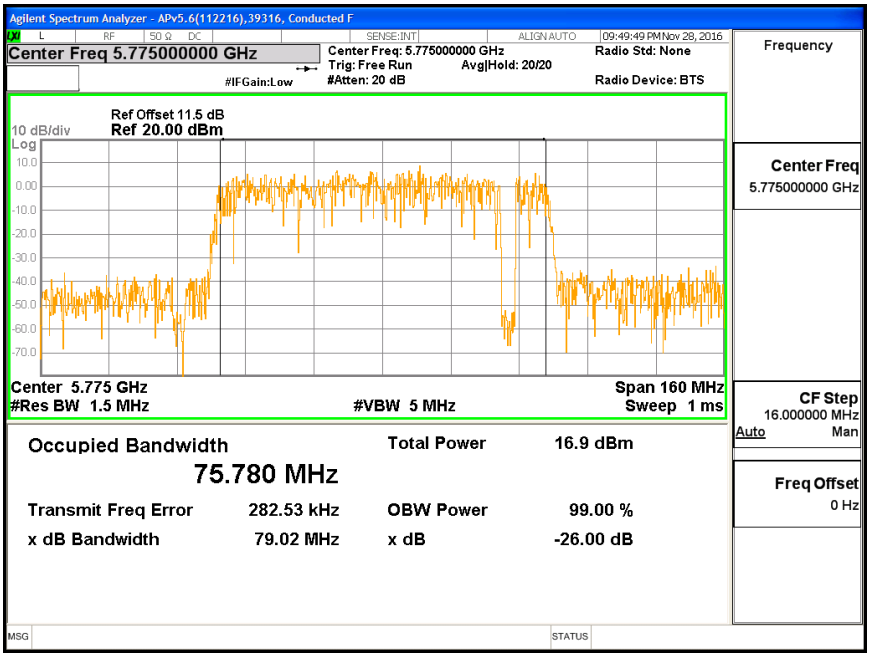
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Mid	5775	75.780

99% BANDWIDTH

BANDWIDTH MID CH



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.

8.48.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

ID:	45256	Date:	1/31/17

Channel	Frequency (MHz)	Power (dBm)
Mid	5775	14.92

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

8.48.5. 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

ID:	39919	Date:	2/14/17

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Mid	5775	4.20	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	14.92	14.92	30.00	-15.08

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.

8.48.6. 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	4.20	30.00

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

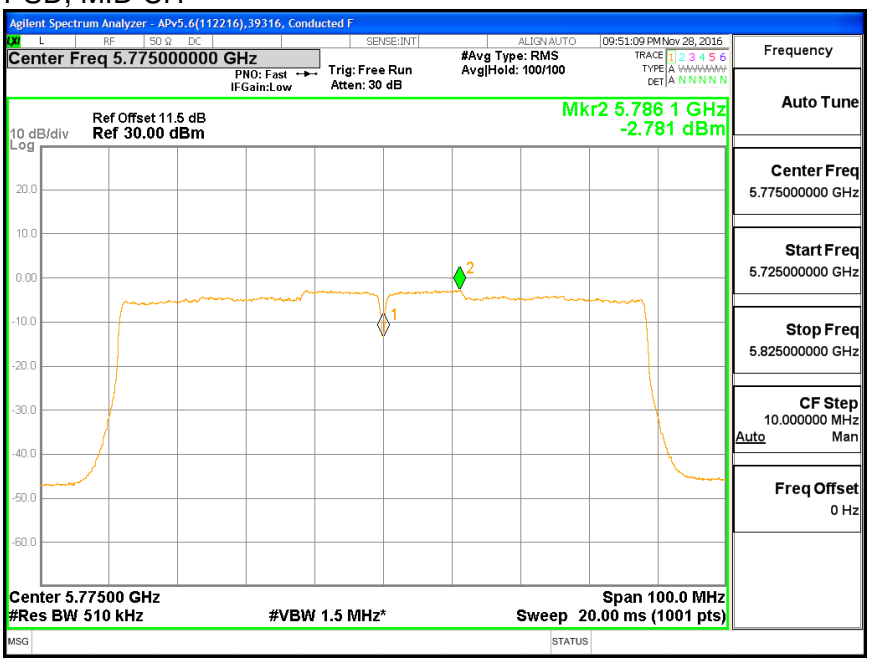
PSD Results

Channel	Frequency (MHz)	Antenna A Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Mid	5775	-2.78	-2.58	30.00	-32.58

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.

8.49. 802.11ac VHT80 ANTENNA B MODE IN THE 5.8 GHz BAND

8.49.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

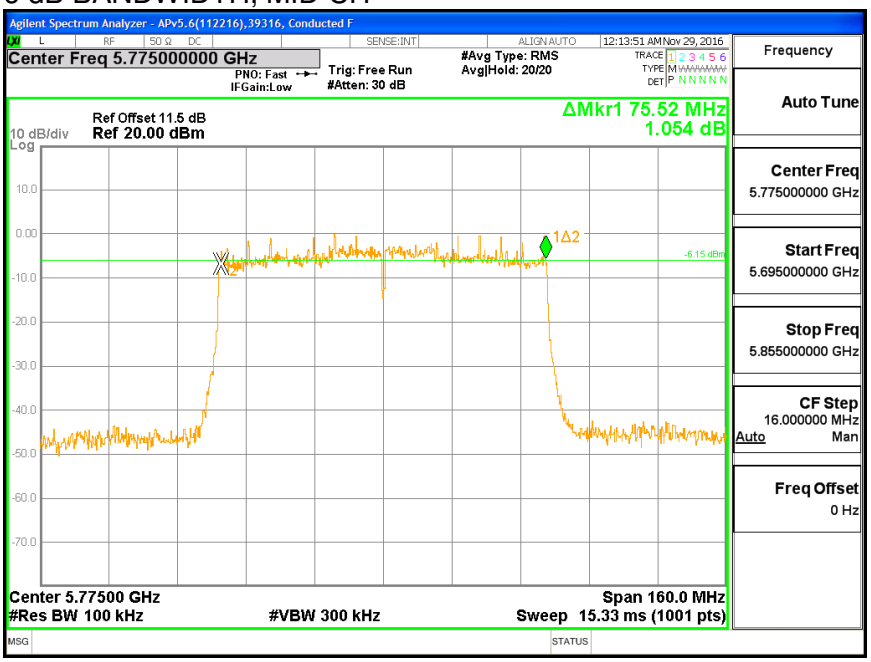
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Mid	5775	75.520	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.

8.49.2. 26 dB BANDWIDTH

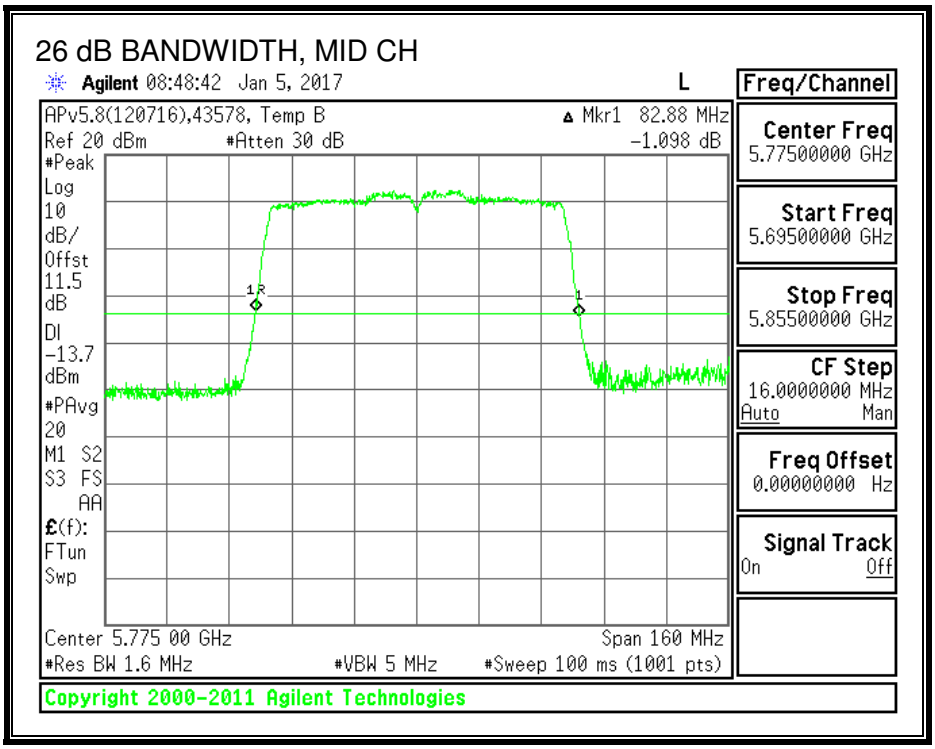
LIMITS

None, for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Mid	5775	82.880

26 dB BANDWIDTH



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

8.49.3. 99% BANDWIDTH

LIMITS

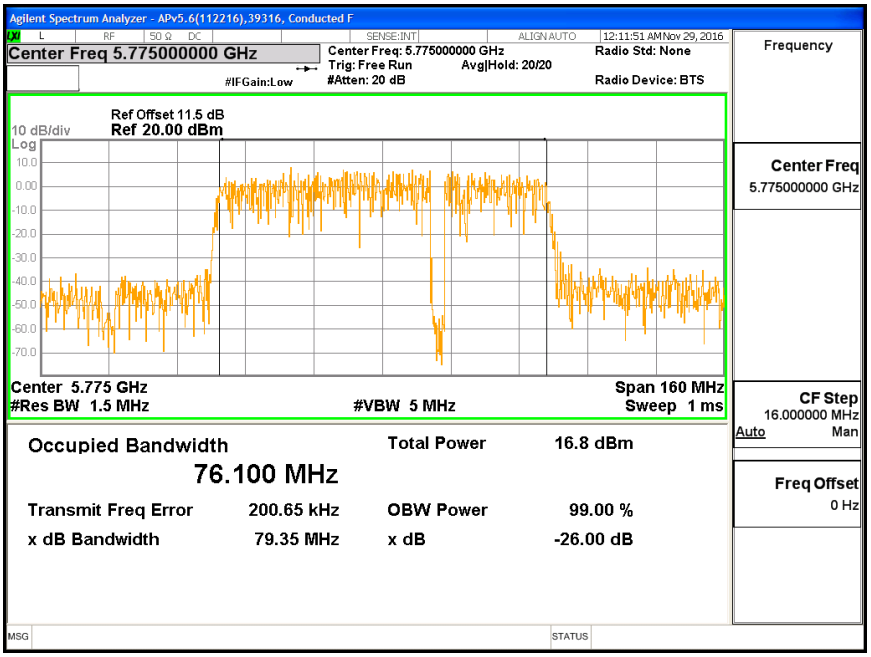
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Mid	5775	76.100

99% BANDWIDTH

BANDWIDTH MID CH



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.

8.49.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

ID:	45256	Date:	1/31/17

Channel	Frequency (MHz)	Power (dBm)
Mid	5775	15.49

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.

8.49.5. 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

ID:	39919	Date:	2/14/17

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Mid	5775	4.32	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	15.49	15.49	30.00	-14.51

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

8.49.6. 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	4.32	30.00

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

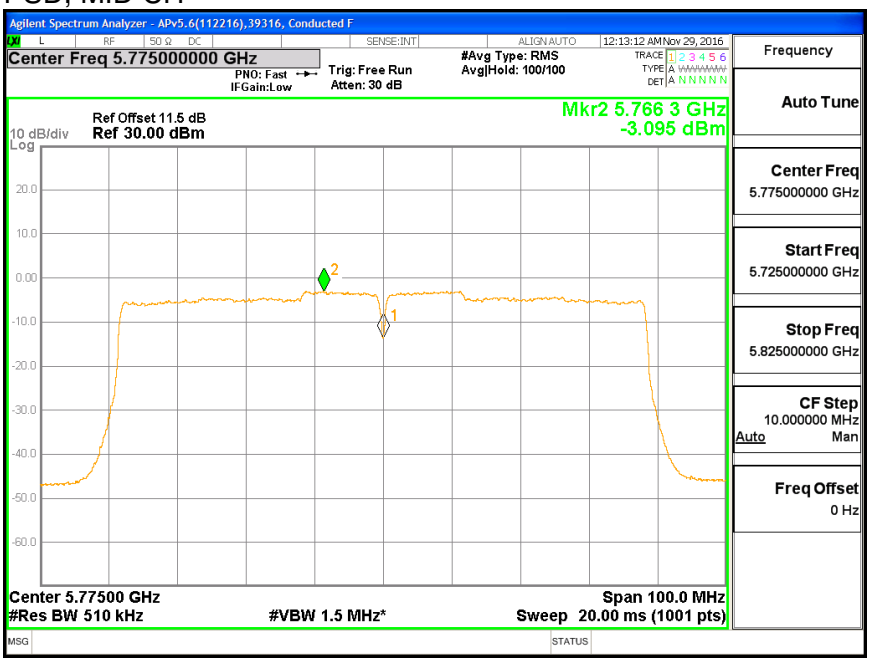
PSD Results

Channel	Frequency (MHz)	Antenna B Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Mid	5775	-3.10	-2.90	30.00	-32.90

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.

8.50. 802.11ac VHT80 2Tx (ANTENNA A + ANTENNA B) CDD MODE IN THE 5.8 GHz BAND

8.50.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

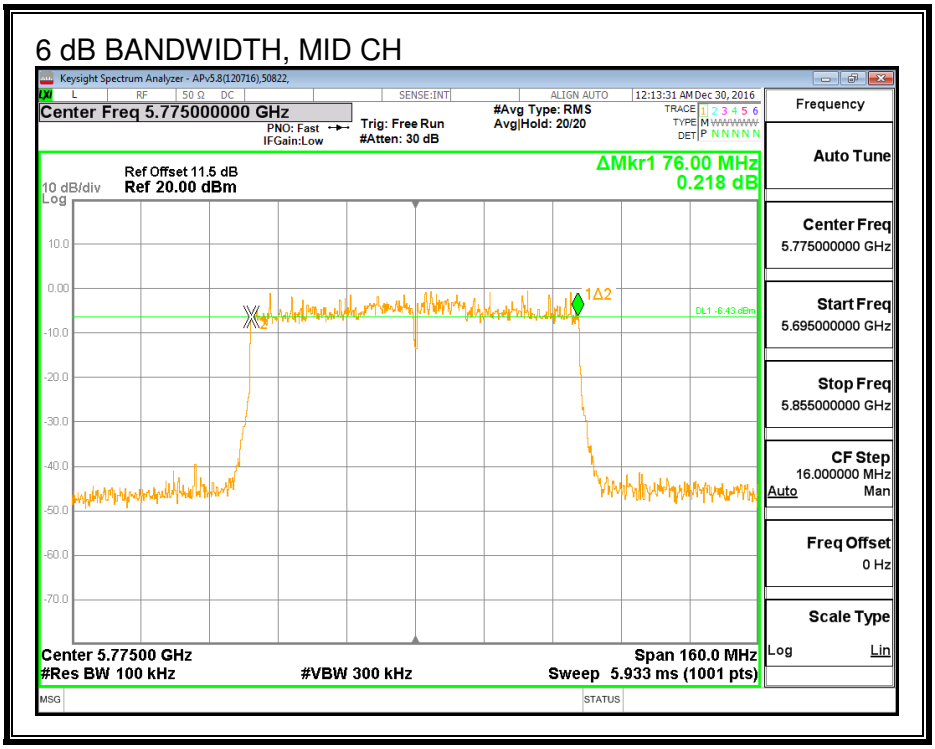
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

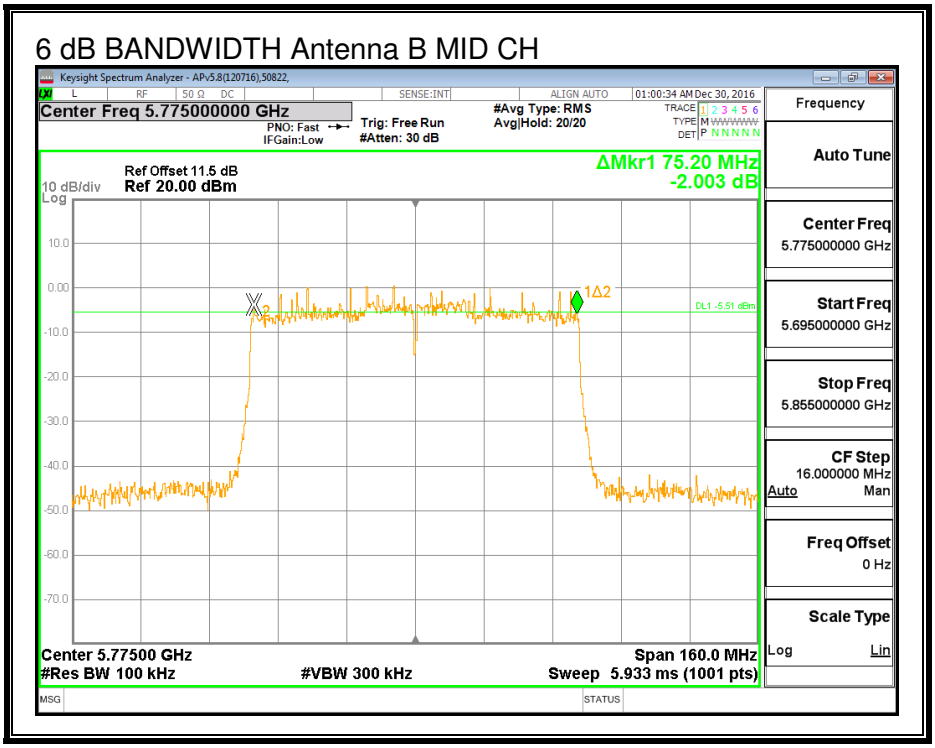
Channel	Frequency (MHz)	6 dB BW Antenna A (MHz)	6 dB BW Antenna B (MHz)	Minimum Limit (MHz)
Mid	5775	76.000	75.200	0.5

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

6 dB BANDWIDTH, ANTENNA A



6 DB BANDWIDTH, ANTENNA B



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

8.50.2. 26 dB BANDWIDTH

LIMITS

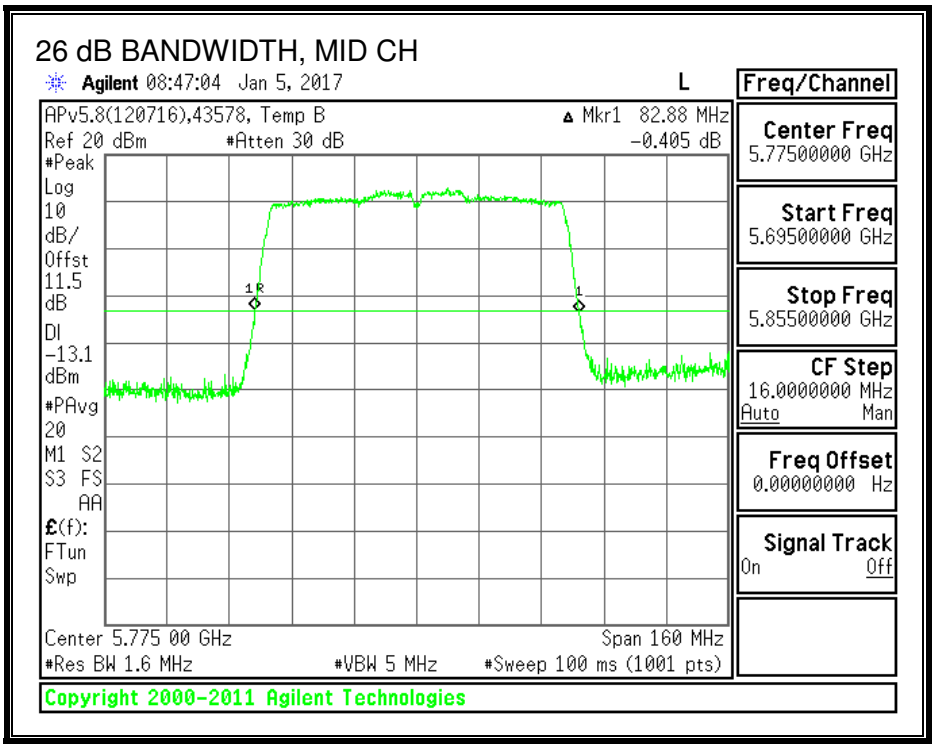
None, for reporting purposes only.

RESULTS

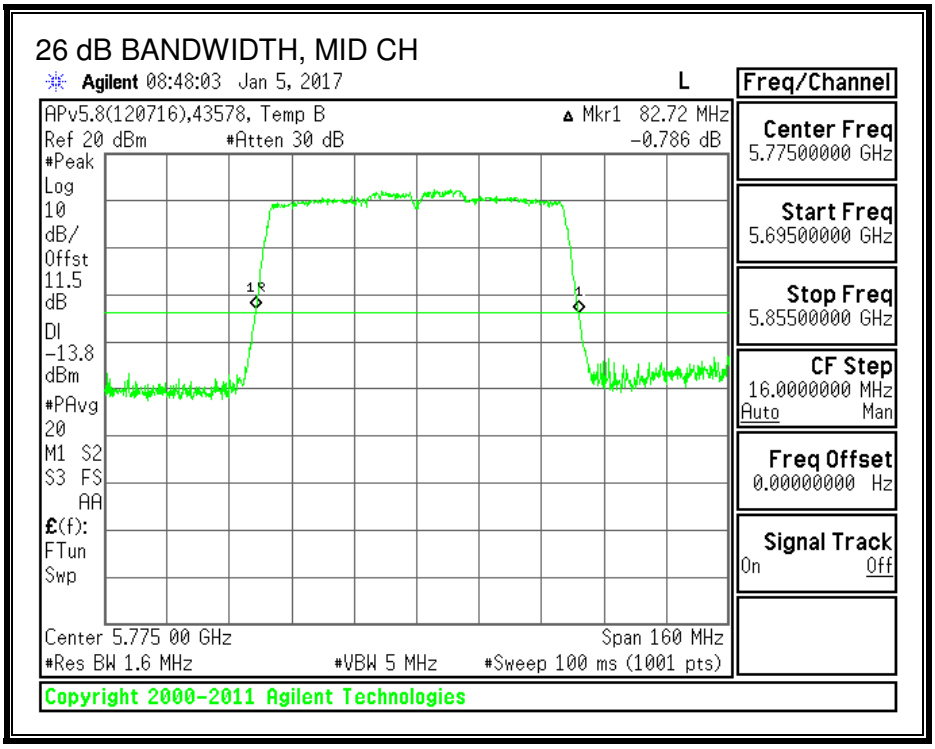
Channel	Frequency (MHz)	26 dB BW Antenna A (MHz)	26 dB BW Antenna B (MHz)
Mid	5775	82.880	82.720

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 A



26 dB BANDWIDTH, ANTENNA B



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

8.50.3. 99% BANDWIDTH

LIMITS

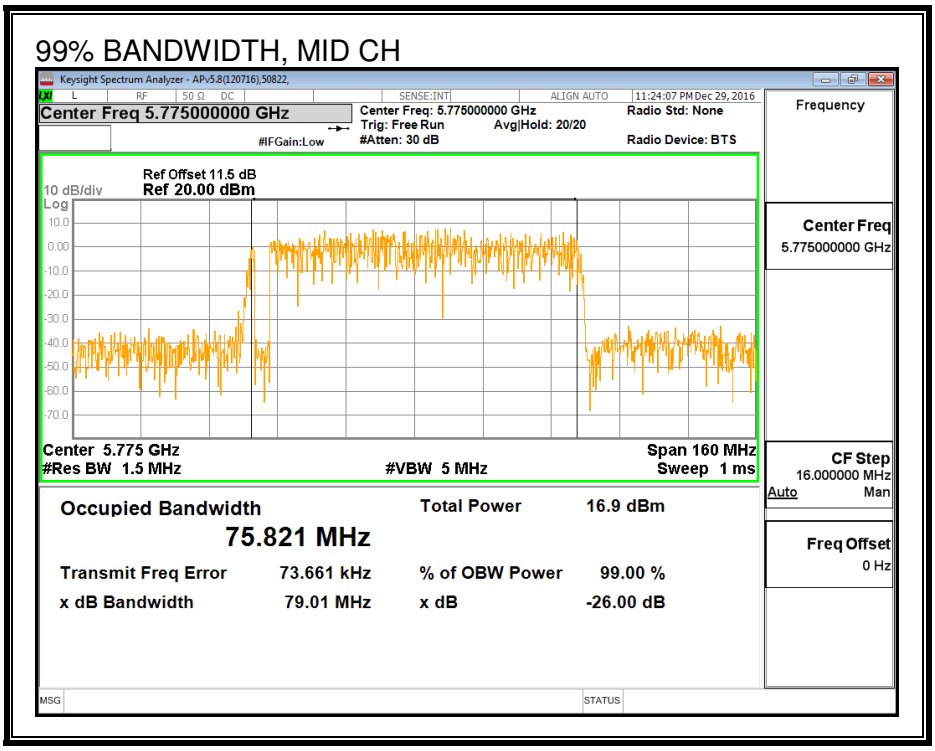
None; for reporting purposes only.

RESULTS

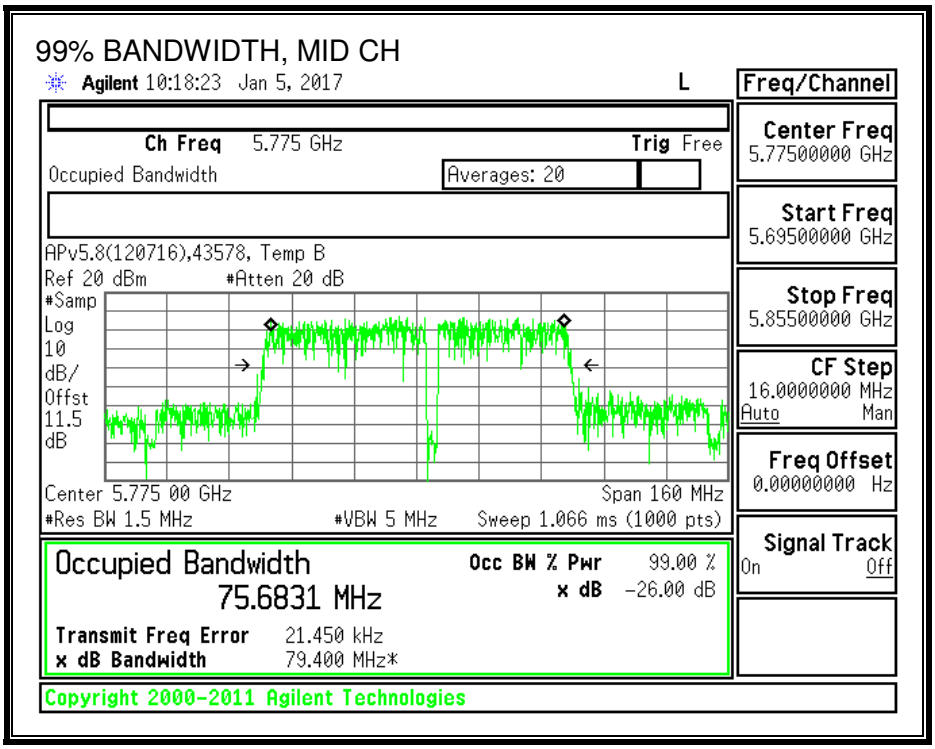
Channel	Frequency (MHz)	99% BW Antenna A (MHz)	99% BW Antenna B (MHz)
Mid	5775	75.821	75.683

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 A



99% BANDWIDTH, ANTENNA B



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

8.50.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

ID:	45256	Date:	1/31/17

Channel	Frequency (MHz)	Antenna A Power (dBm)	Antenna B Power (dBm)	Total Power (dBm)
Mid	5775	14.96	15.48	18.24

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

8.50.5. 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 A Gain (dBi)	Antenna B Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
4.20	4.32	4.26

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

ID:	39919	Date:	2/14/17

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Mid	5775	4.26	30.00

Output Power Results

Channel	Frequency (MHz)	Antenna A Meas Power (dBm)	Antenna B Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid	5775	14.96	15.48	18.24	30.00	-11.76

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

8.50.6. 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 A Gain (dBi)	Antenna B Gain (dBi)	Correlated Chains Directional Gain (dBi)
4.20	4.32	7.27

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	7.27	28.73

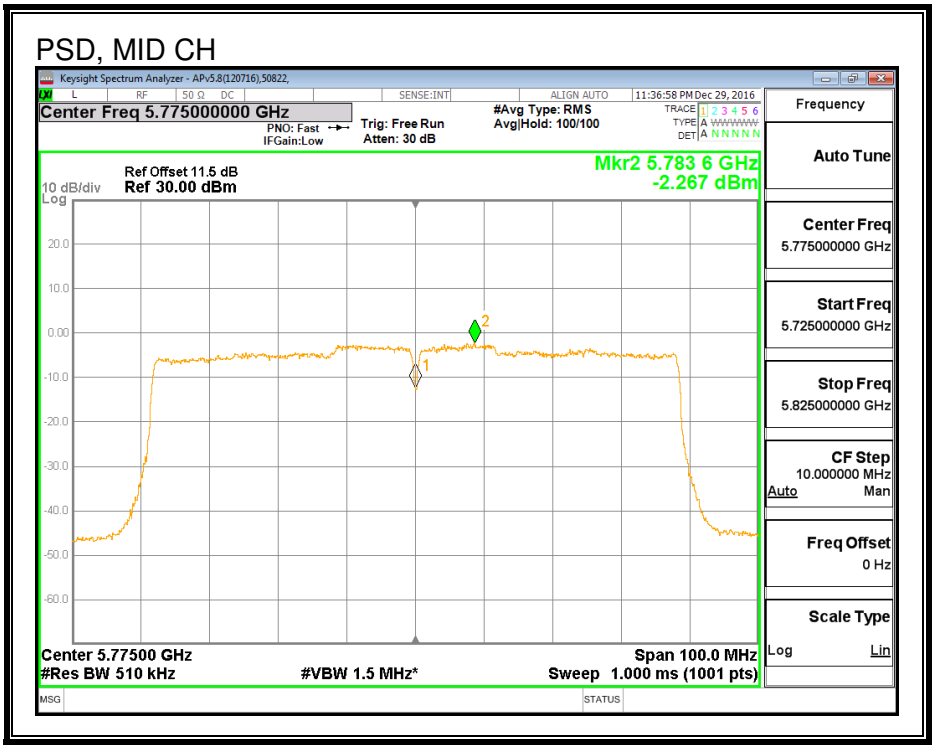
Duty Cycle CF (dB)	0.21	Included in Calculations of Corr'd PSD

PSD Results

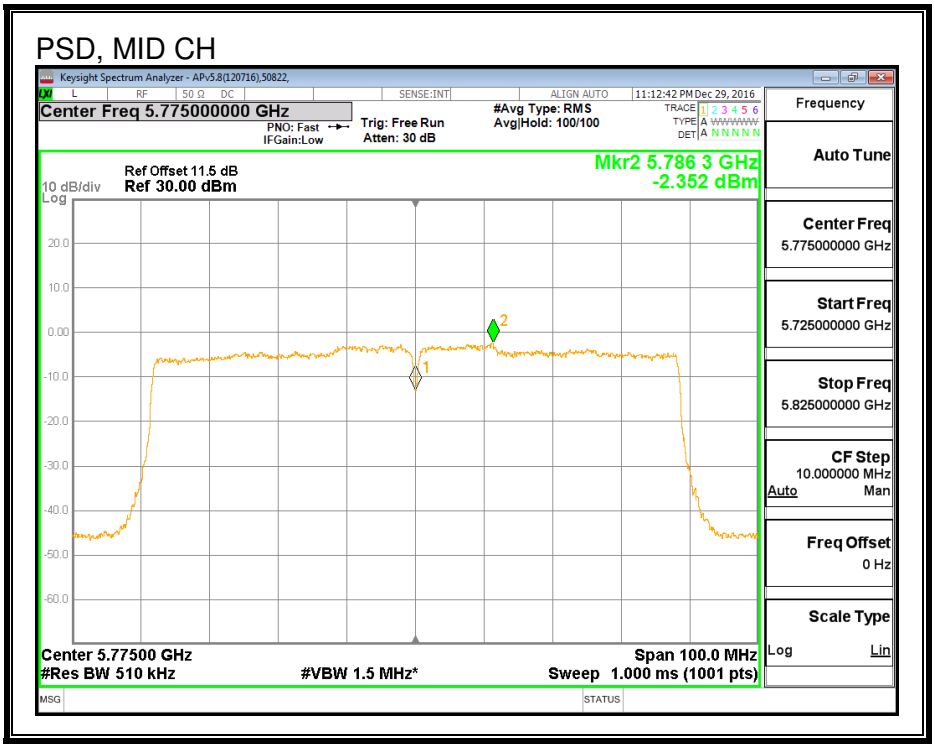
Channel	Frequency (MHz)	Antenna A Meas PSD (dBm)	Antenna B Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Mid	5775	-2.27	-2.35	0.91	28.73	-27.82

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 A



PSD, ANTENNA B



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

9. RADIATED 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 pre-scans above 1GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 30 KHz for peak measurements.

For final 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.

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 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.

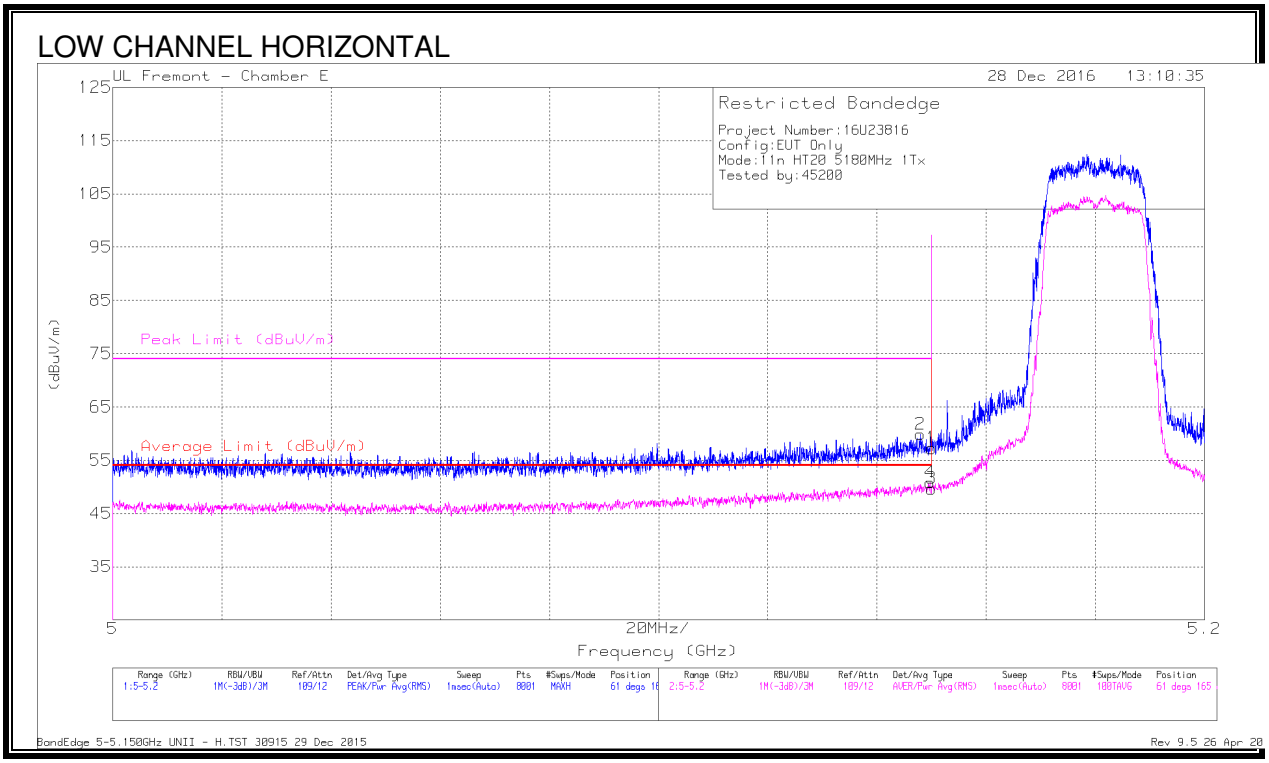
Radiated emission were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario.

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

9.2. TRANSMITTER ABOVE 1 GHz

9.2.1. 11n HT20 ANTENNA A SISO MODE IN THE 5.2GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

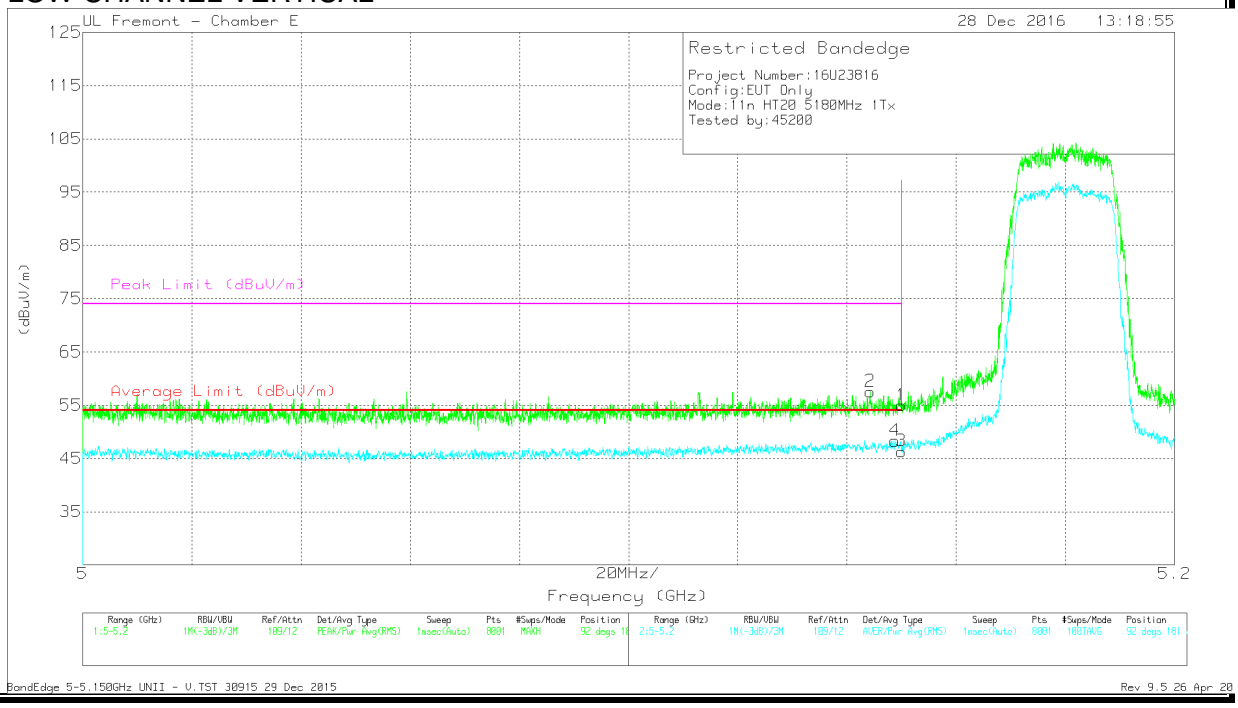


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
7	5.15	41.94	Pk	34.1	-18.8	57.24	-	-	74	-16.76	61	165	H
2	* 5.148	44.55	Pk	34.1	-18.8	59.85	-	-	74	-14.15	61	165	H
3	5.15	34.36	RMS	34.1	-18.8	49.66	54	-4.34	-	-	61	165	H
4	* 5.15	35.5	RMS	34.1	-18.8	50.8	54	-3.2	-	-	61	165	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-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



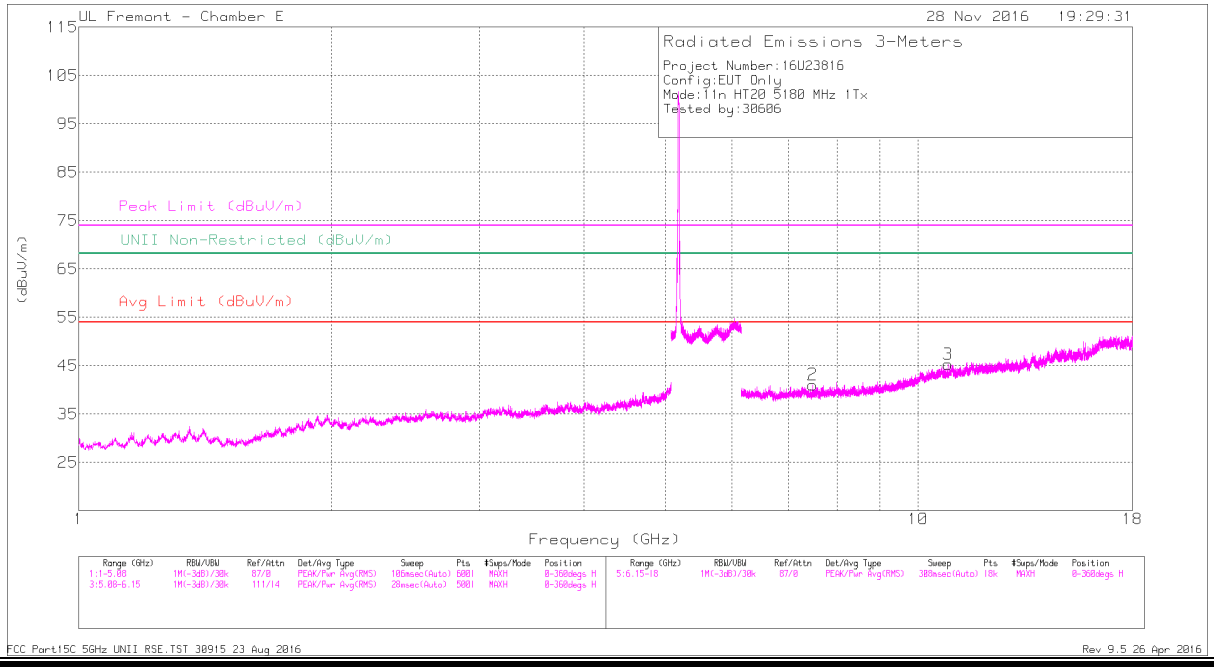
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.15	39.66	Pk	34.1	-18.8	54.96	-	-	74	-19.04	92	181	V
2	* 5.144	42.26	Pk	34.1	-18.8	57.56	-	-	74	-16.44	92	181	V
3	5.15	31.05	RMS	34.1	-18.8	46.35	54	-7.65	-	-	92	181	V
4	* 5.149	33.03	RMS	34.1	-18.8	48.33	54	-5.67	-	-	92	181	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

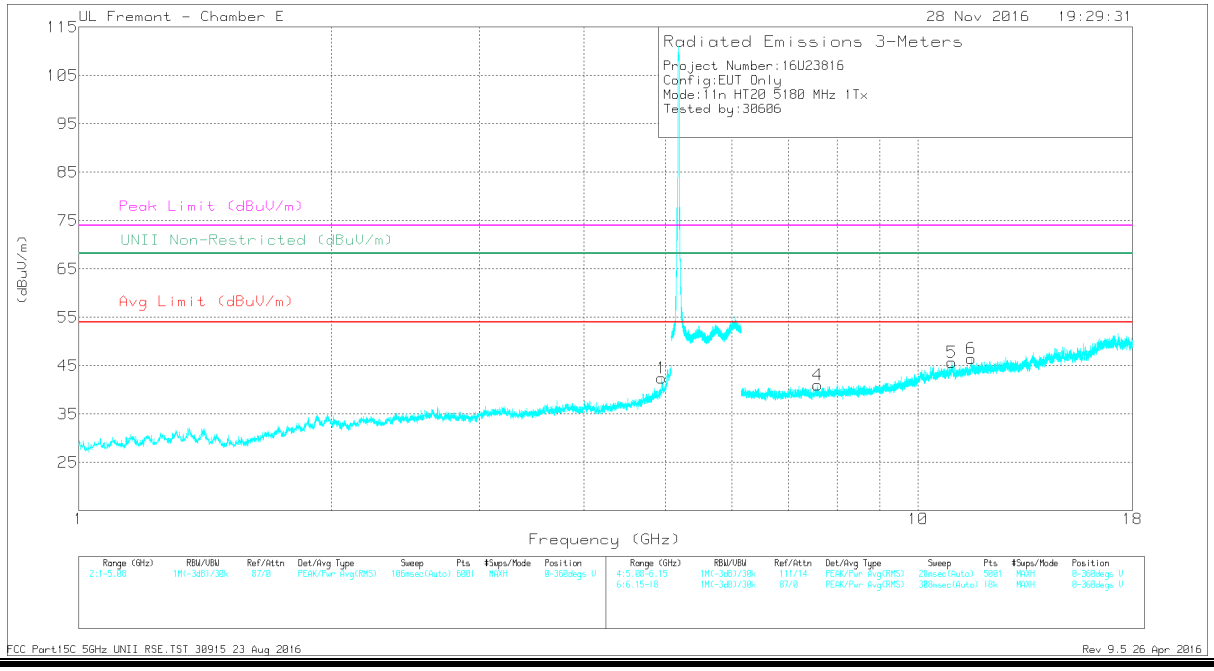
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



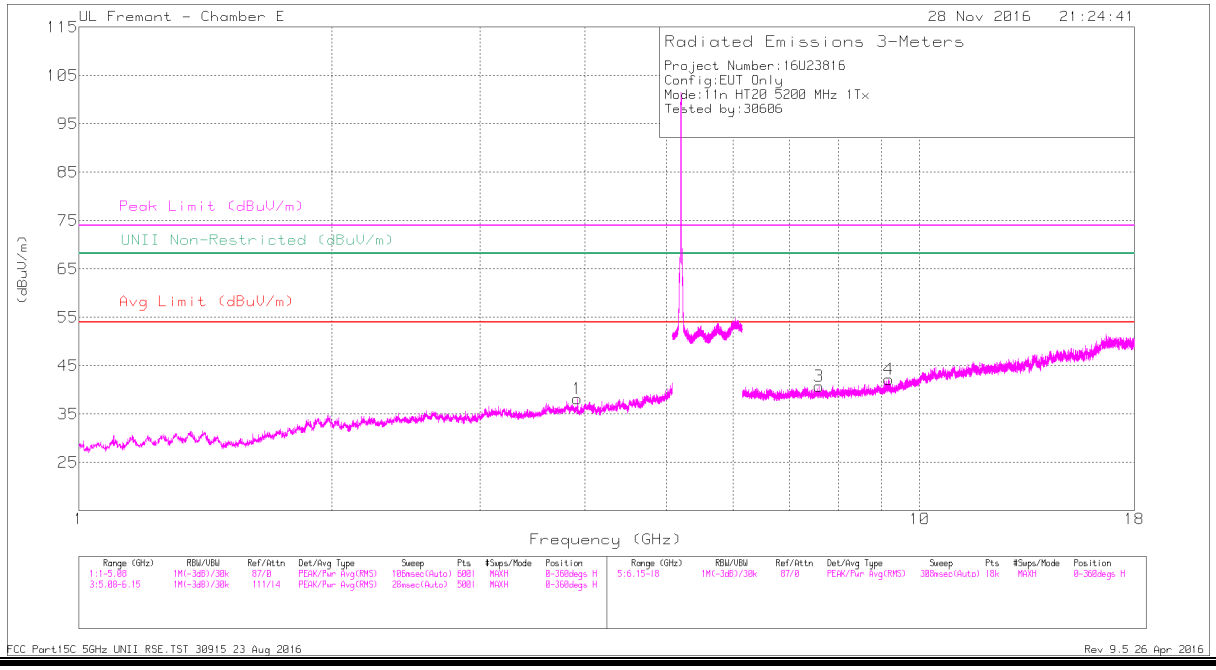
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.952	42.2	PK-U	34	-29.4	46.8	-	-	74	-27.2	190	200	V
	* 4.951	31.83	ADR	34	-29.4	36.43	54	-17.57	-	-	190	200	V
2	* 7.488	38.51	PK-U	35.5	-27.4	46.61	-	-	74	-27.39	330	200	H
	* 7.49	27.58	ADR	35.5	-27.3	35.78	54	-18.22	-	-	330	200	H
3	* 10.853	36.53	PK-U	38	-24.1	50.43	-	-	74	-23.57	105	222	H
	* 10.854	25.9	ADR	38	-24.1	39.8	54	-14.2	-	-	105	222	H
4	* 7.595	37.32	PK-U	35.7	-26.4	46.62	-	-	74	-27.38	103	138	V
	* 7.592	26.89	ADR	35.7	-26.3	36.29	54	-17.71	-	-	103	138	V
5	* 10.973	35.8	PK-U	38	-22.1	51.7	-	-	74	-22.3	291	350	V
	* 10.973	25.07	ADR	38	-22.2	40.87	54	-13.13	-	-	291	350	V
6	* 11.574	36.06	PK-U	38.4	-21.9	52.56	-	-	74	-21.44	130	278	V
	* 11.573	24.98	ADR	38.4	-21.9	41.48	54	-12.52	-	-	130	278	V

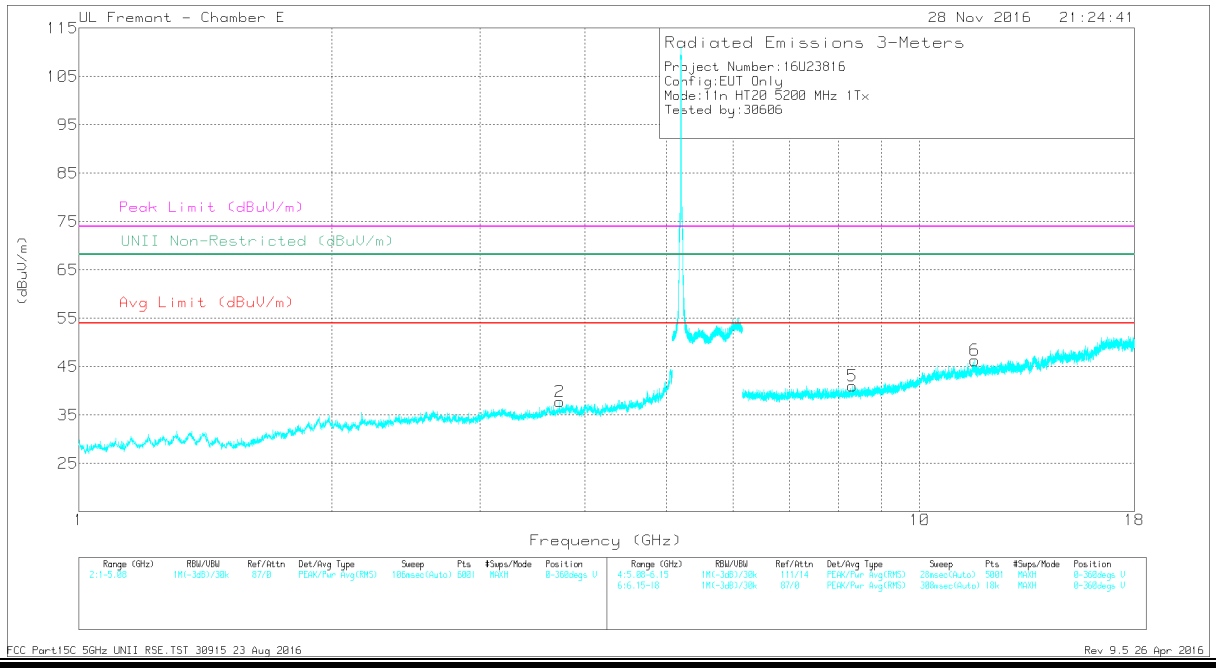
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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 HORIZONTAL



MID CHANNEL VERTICAL



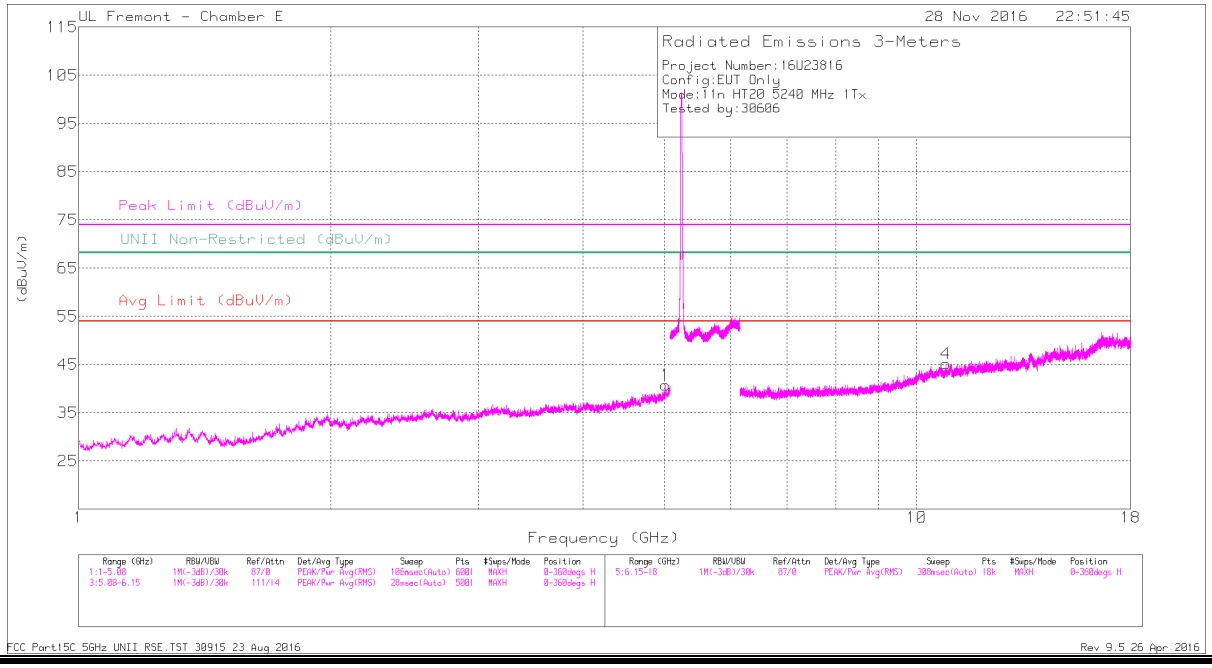
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/ Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.916	40.5	PK-U	33.3	-30.8	43	-	-	74	-31	129	146	H
	* 3.915	29.93	ADR	33.3	-30.8	32.43	54	-21.57	-	-	129	146	H
2	* 3.73	40.16	PK-U	33.1	-31.1	42.16	-	-	74	-31.84	51	305	V
	* 3.729	29.79	ADR	33.1	-31.1	31.79	54	-22.21	-	-	51	305	V
3	* 7.593	37.58	PK-U	35.7	-26.3	46.98	-	-	74	-27.02	30	370	H
	* 7.594	26.91	ADR	35.7	-26.3	36.31	54	-17.69	-	-	30	370	H
4	* 9.195	37.28	PK-U	36.2	-25.9	47.58	-	-	74	-26.42	91	261	H
	* 9.192	26.57	ADR	36.2	-25.8	36.97	54	-17.03	-	-	91	261	H
5	* 8.312	39.27	PK-U	35.7	-26.8	48.17	-	-	74	-25.83	131	351	V
	* 8.312	27.52	ADR	35.7	-26.8	36.42	54	-17.58	-	-	131	351	V
6	* 11.62	35.98	PK-U	38.5	-23.1	51.38	-	-	74	-22.62	191	150	V
	* 11.62	25.36	ADR	38.5	-23.1	40.76	54	-13.24	-	-	191	150	V

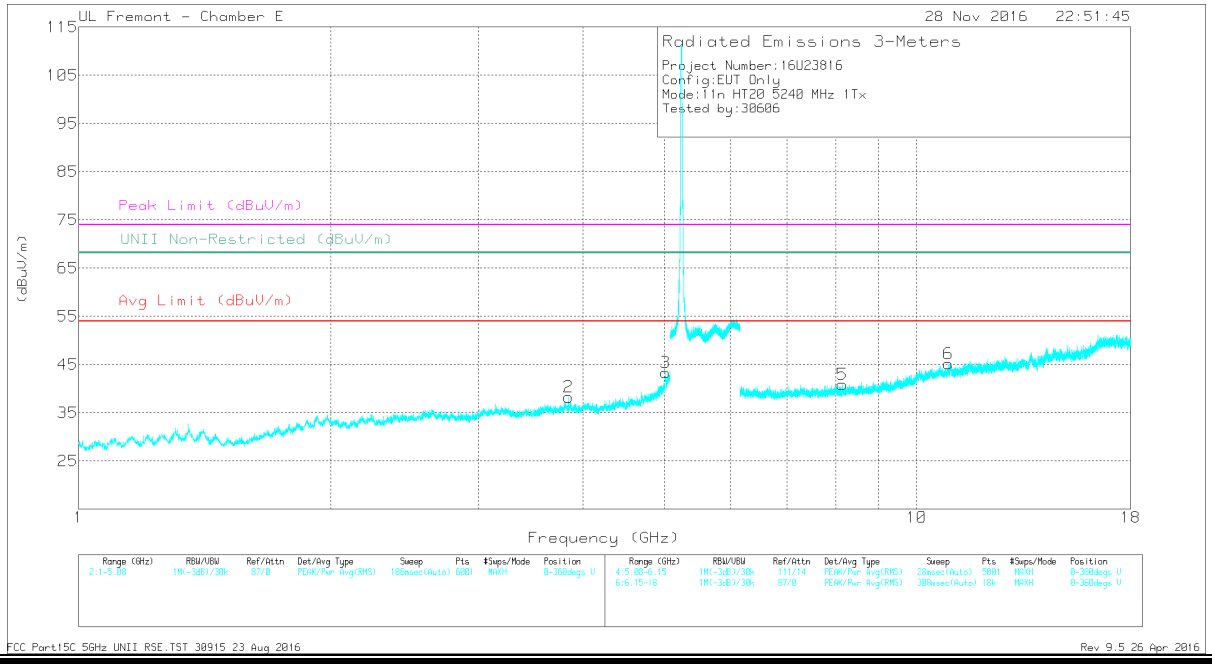
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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 HORIZONTAL



HIGH CHANNEL VERTICAL



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

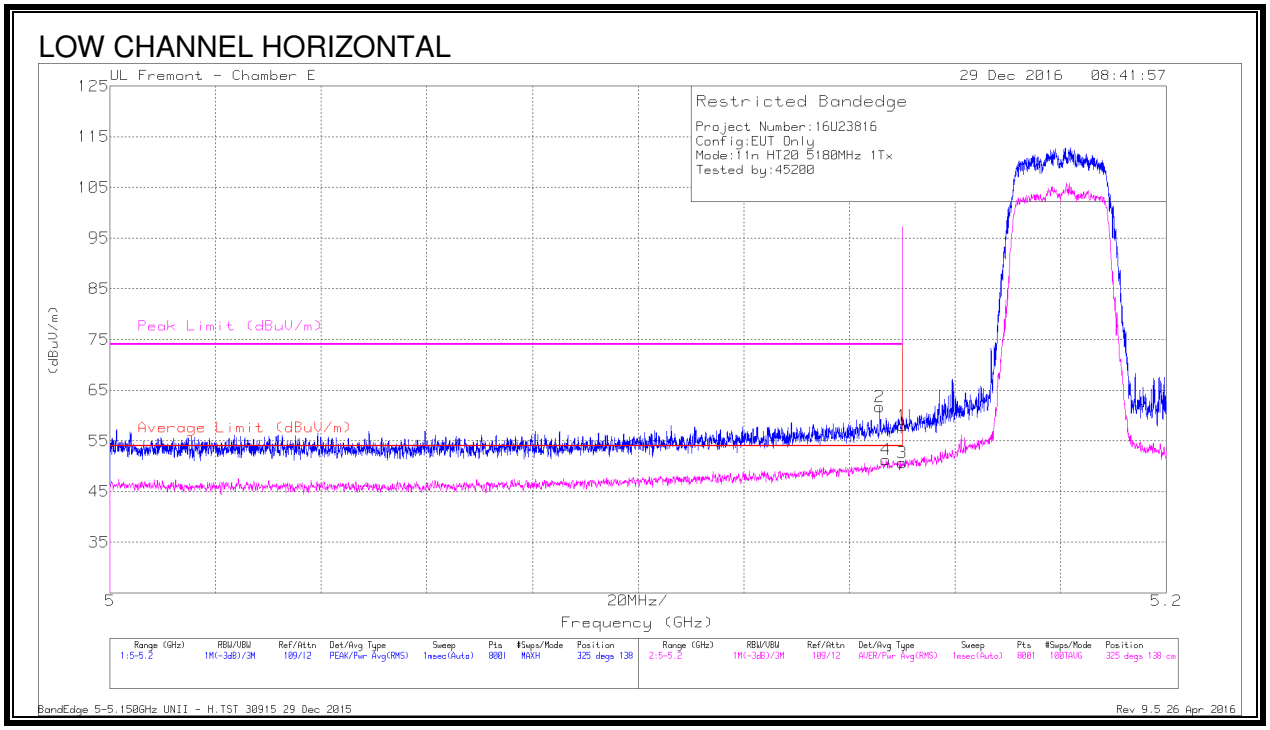
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.017	42.81	PK-U	33.9	-28.3	48.41	-	-	74	-25.59	146	107	H
	* 5.017	31.42	ADR	33.9	-28.3	37.02	54	-16.98	-	-	146	107	H
2	* 3.841	40.44	PK-U	33.2	-30	43.64	-	-	74	-30.36	326	132	V
	* 3.84	29.18	ADR	33.2	-30	32.38	54	-21.62	-	-	326	132	V
3	* 5.016	45.55	PK-U	33.9	-28.3	51.15	-	-	74	-22.85	157	270	V
	* 5.017	34.51	ADR	33.9	-28.3	40.11	54	-13.89	-	-	157	270	V
4	* 10.832	36.13	PK-U	37.9	-23.6	50.43	-	-	74	-23.57	274	278	H
	* 10.834	25.75	ADR	37.9	-23.6	40.05	54	-13.95	-	-	274	278	H
5	* 8.152	37.58	PK-U	35.7	-26.1	47.18	-	-	74	-26.82	278	101	V
	* 8.152	26.96	ADR	35.7	-26.1	36.56	54	-17.44	-	-	278	101	V
6	* 10.902	37.13	PK-U	38	-24.2	50.93	-	-	74	-23.07	320	200	V
	* 10.902	26.38	ADR	38	-24.2	40.18	54	-13.82	-	-	320	200	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-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.

9.2.2. 11n HT20 ANTENNA B SISO MODE IN THE 5.2GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

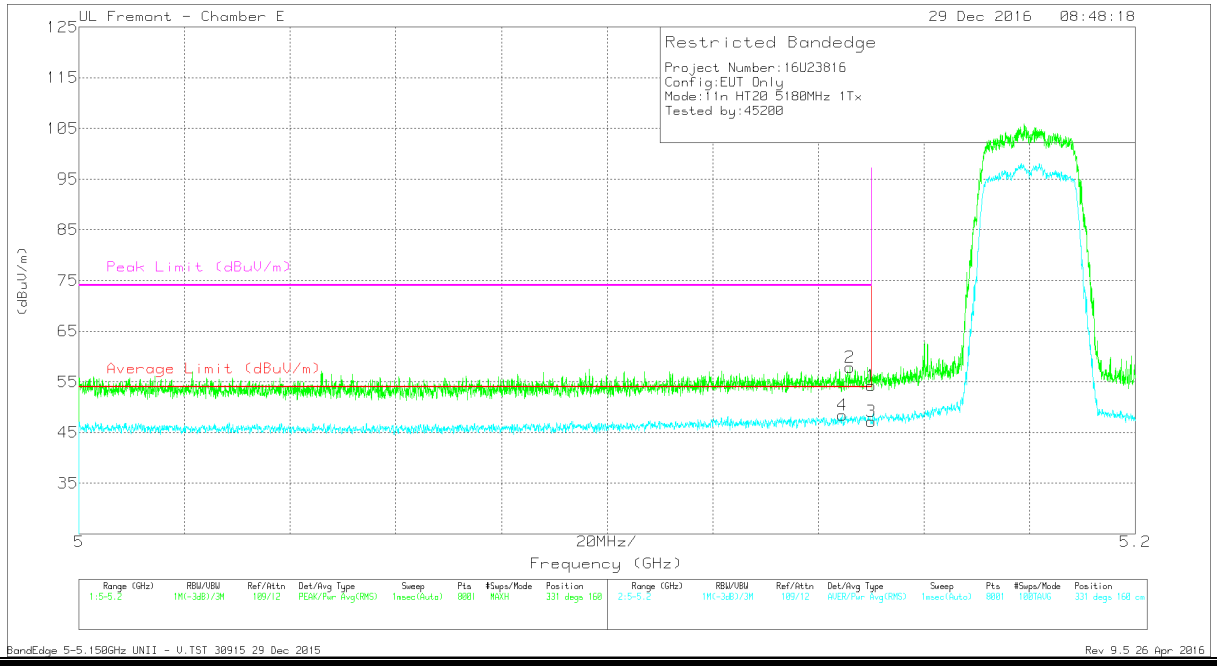


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.15	42.66	Pk	34.1	-18.8	57.96	-	-	74	-16.04	325	138	H
2	* 5.146	46.44	Pk	34.1	-18.8	61.74	-	-	74	-12.26	325	138	H
3	5.15	35.38	RMS	34.1	-18.8	50.68	54	-3.32	-	-	325	138	H
4	* 5.147	35.97	RMS	34.1	-18.8	51.27	54	-2.73	-	-	325	138	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-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



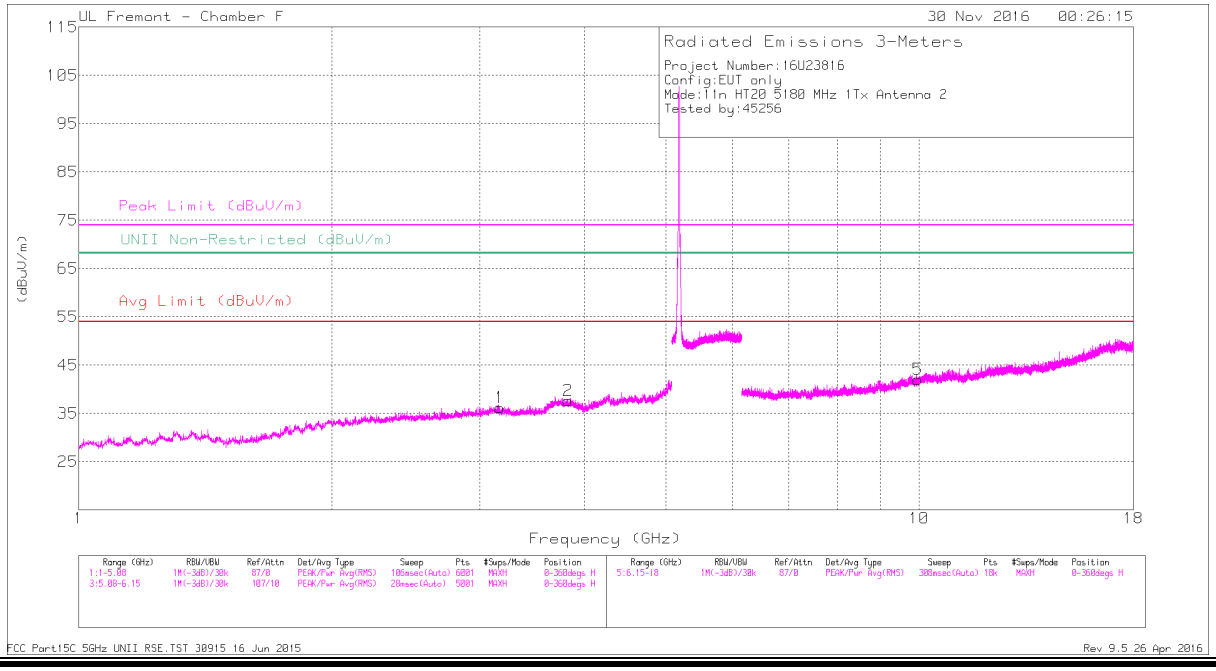
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.15	39.02	Pk	34.1	-18.8	54.32	-	-	74	-19.68	331	160	V
2	* 5.146	42.62	Pk	34.1	-18.8	57.92	-	-	74	-16.08	331	160	V
3	5.15	31.85	RMS	34.1	-18.8	47.15	54	-6.85	-	-	331	160	V
4	* 5.145	33.09	RMS	34.1	-18.8	48.39	54	-5.61	-	-	331	160	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

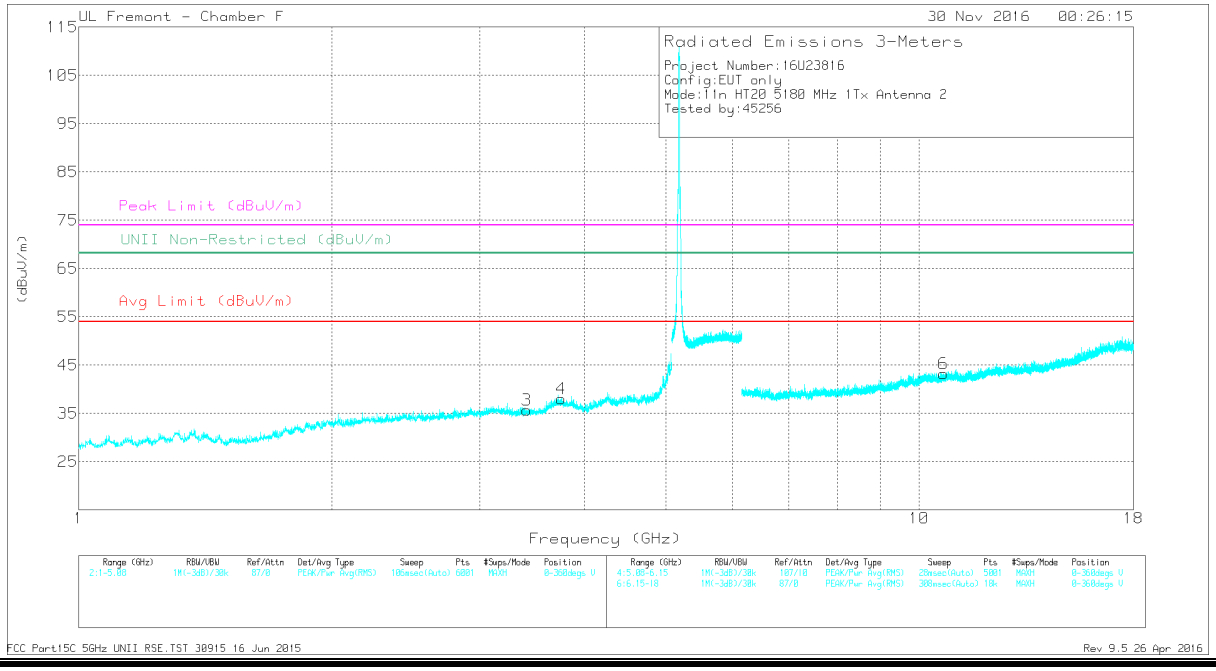
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



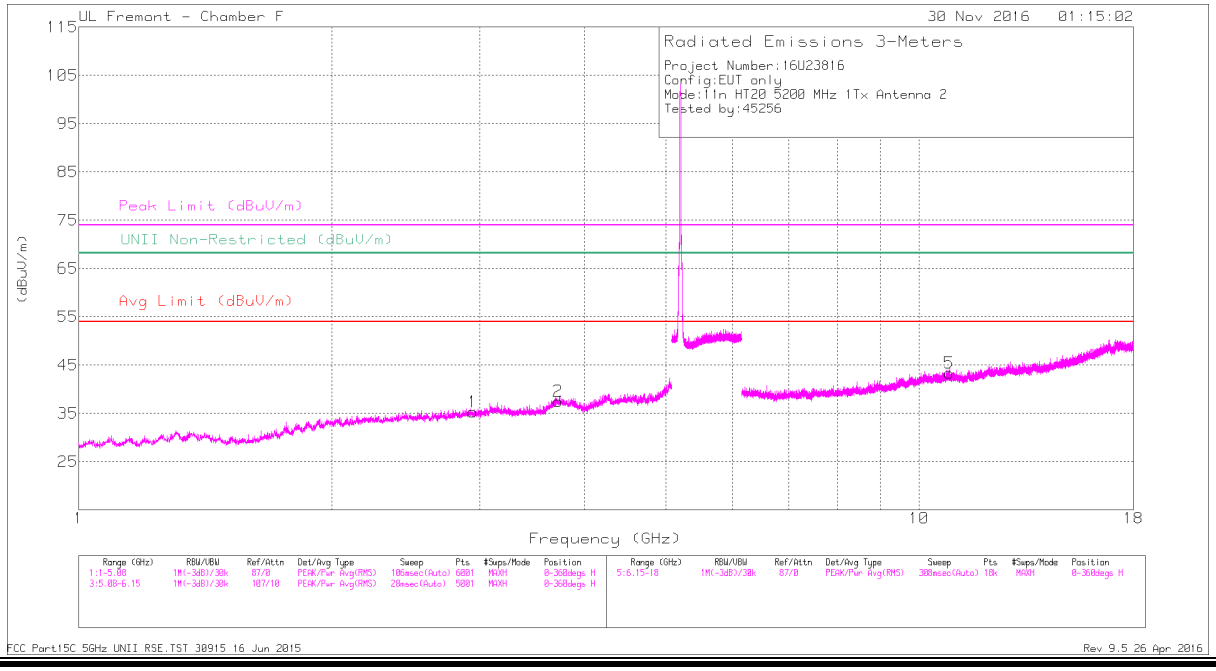
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

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	3.169	39.8	PK-U	33.2	-29.8	43.2	-	-	-	-	68.2	-25	118	127	H
2	* 3.82	38.22	PK-U	33.4	-28.9	42.72	-	-	74	-31.28	-	-	313	174	H
	* 3.82	27.84	ADR	33.4	-28.9	32.34	54	-21.66	-	-	-	-	313	174	H
3	3.413	39.63	PK-U	32.9	-29.3	43.23	-	-	-	-	68.2	-24.97	95	110	V
4	* 3.753	39.14	PK-U	33.4	-29.2	43.34	-	-	74	-30.66	-	-	279	124	V
	* 3.752	27.96	ADR	33.4	-29.2	32.16	54	-21.84	-	-	-	-	279	124	V
5	9.969	33.58	PK-U	37.1	-21.8	48.88	-	-	-	-	68.2	-19.32	12	355	H
6	* 10.695	34.37	PK-U	37.7	-21.8	50.27	-	-	74	-23.73	-	-	90	269	V
	* 10.693	22.91	ADR	37.7	-21.8	38.81	54	-15.19	-	-	-	-	90	269	V

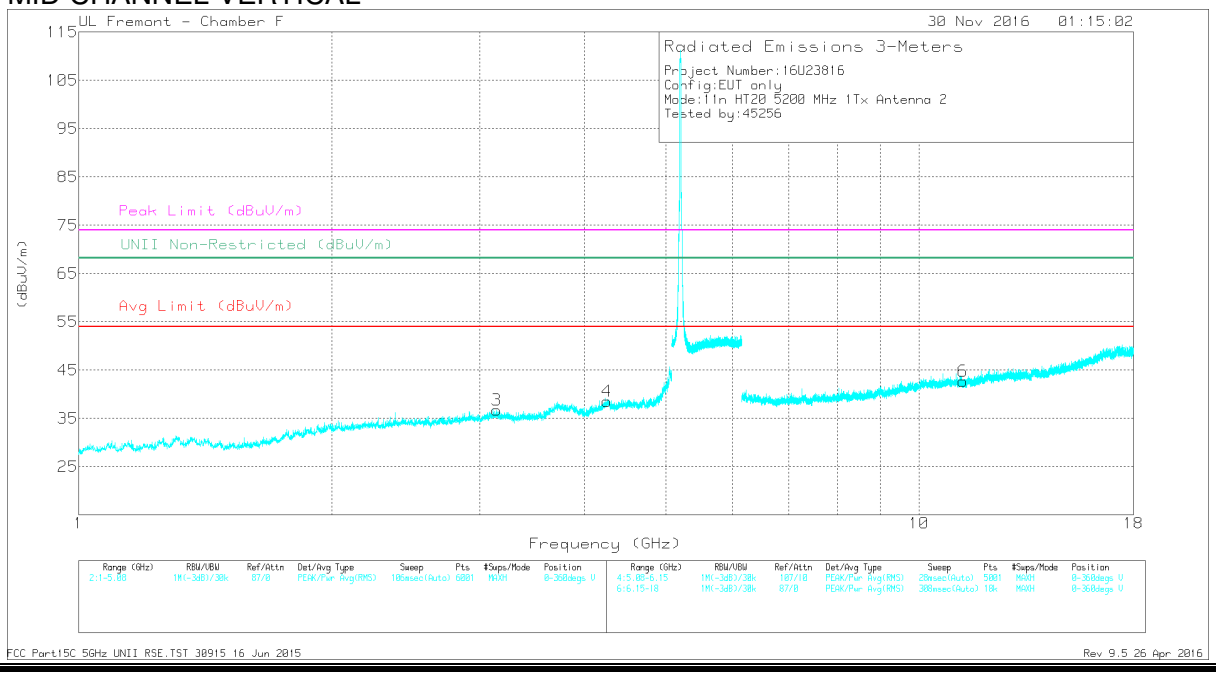
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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

MID CHANNEL HORIZONTAL



MID CHANNEL VERTICAL



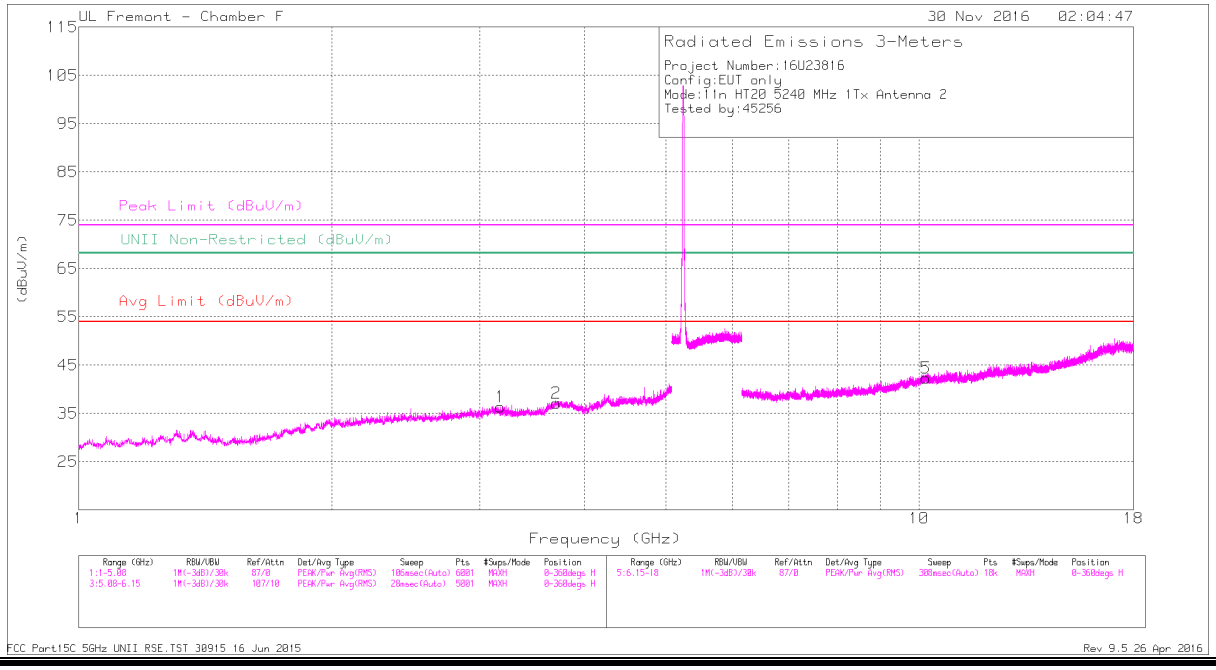
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

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	2.942	39.13	PK-U	32.7	-29.6	42.23	-	-	-	-	68.2	-25.97	180	285	H
2	* 3.718	37.88	PK-U	33.4	-29.1	42.18	-	-	74	-31.82	-	-	77	147	H
	* 3.719	27.68	ADR	33.4	-29.1	31.98	54	-22.02	-	-	-	-	77	147	H
3	3.145	39.08	PK-U	33.2	-29.5	42.78	-	-	-	-	68.2	-25.42	13	319	V
4	* 4.256	37.03	PK-U	33.7	-26.5	44.23	-	-	74	-29.77	-	-	186	213	V
	* 4.256	26.3	ADR	33.7	-26.5	33.5	54	-20.5	-	-	-	-	186	213	V
5	* 10.862	33.47	PK-U	37.8	-21.9	49.37	-	-	74	-24.63	-	-	88	279	H
	* 10.86	23.04	ADR	37.8	-21.9	38.94	54	-15.06	-	-	-	-	88	279	H
6	* 11.28	34.2	PK-U	38	-22.2	50	-	-	74	-24	-	-	239	238	V
	* 11.282	22.91	ADR	38	-22.3	38.61	54	-15.39	-	-	-	-	239	238	V

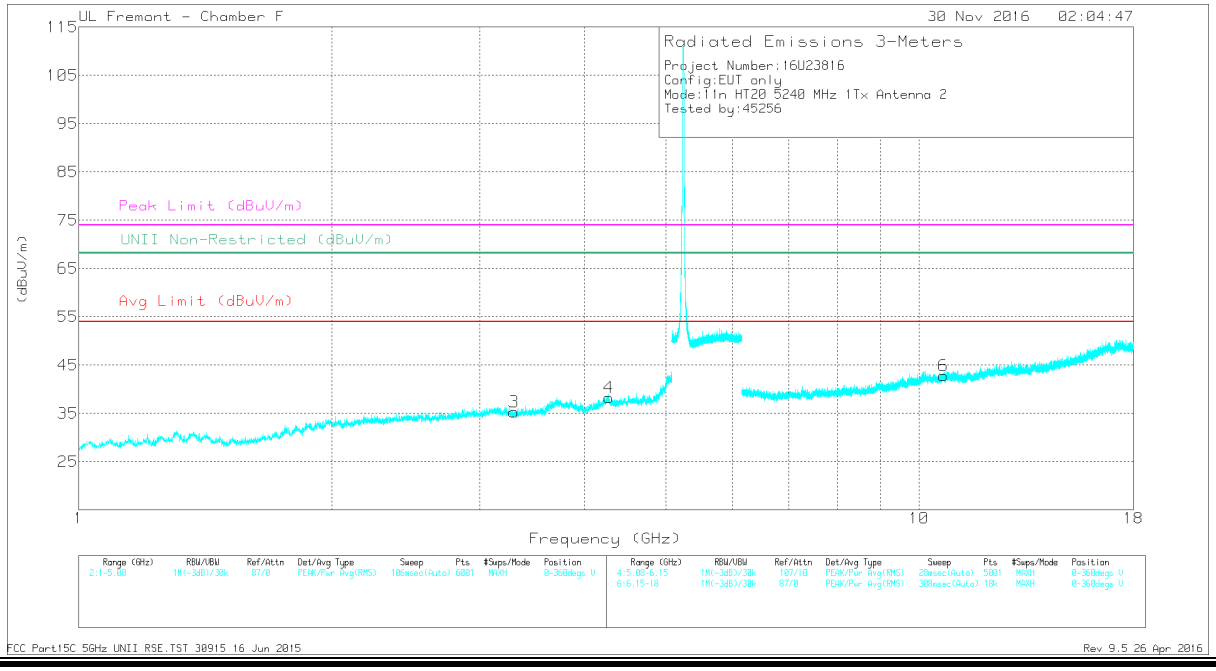
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



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

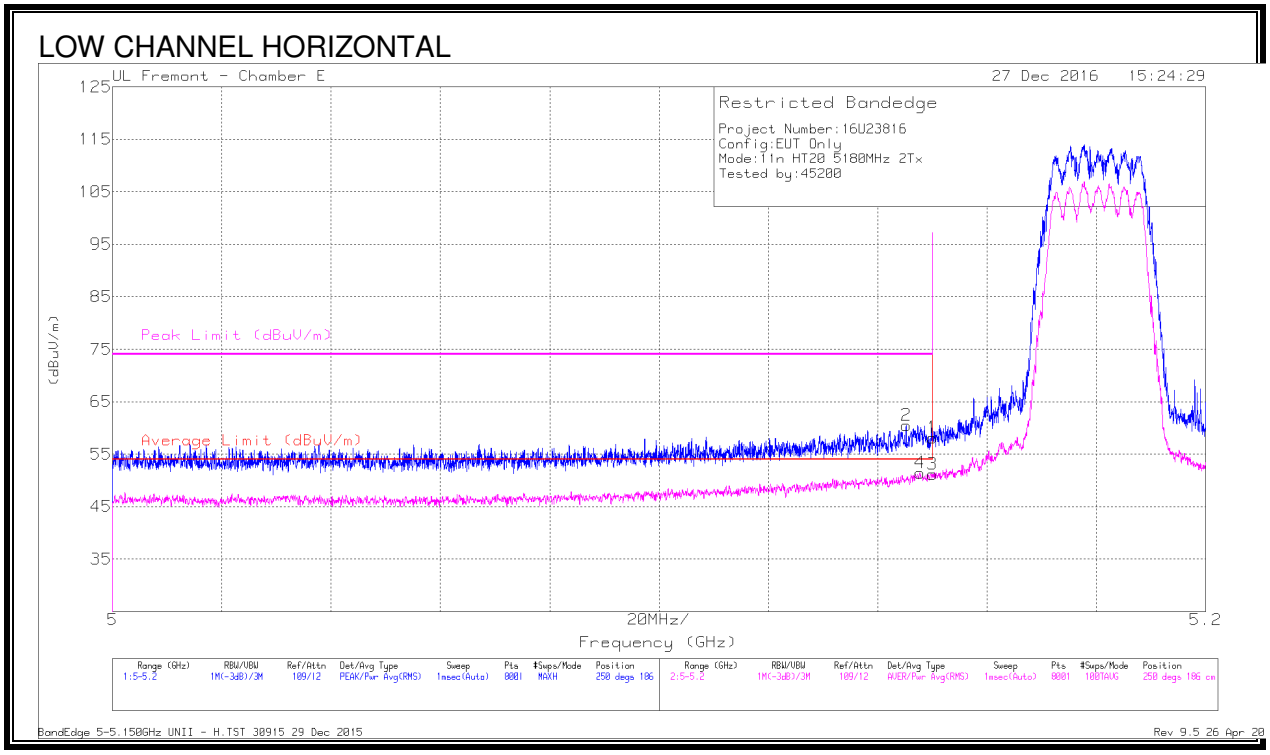
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	3.174	39.28	PK-U	33.2	-29.9	42.58	-	-	-	-	68.2	-25.62	327	177	H
2	* 3.704	38.76	PK-U	33.3	-28.9	43.16	-	-	74	-30.84	-	-	347	340	H
	* 3.702	27.82	ADR	33.3	-28.9	32.22	54	-21.78	-	-	-	-	347	340	H
3	3.295	39.95	PK-U	32.6	-29.8	42.75	-	-	-	-	68.2	-25.45	14	105	V
4	* 4.272	37.17	PK-U	33.7	-26.6	44.27	-	-	74	-29.73	-	-	301	128	V
	* 4.271	26.75	ADR	33.7	-26.5	33.95	54	-20.05	-	-	-	-	301	128	V
5	10.192	33.19	PK-U	37.2	-21.5	48.89	-	-	-	-	68.2	-19.31	319	109	H
6	* 10.697	33.1	PK-U	37.7	-21.8	49	-	-	74	-25	-	-	274	233	V
	* 10.697	22.96	ADR	37.7	-21.8	38.86	54	-15.14	-	-	-	-	274	233	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-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.

9.2.3. 11n HT20 2TX CDD MIMO MODE IN THE 5.2GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

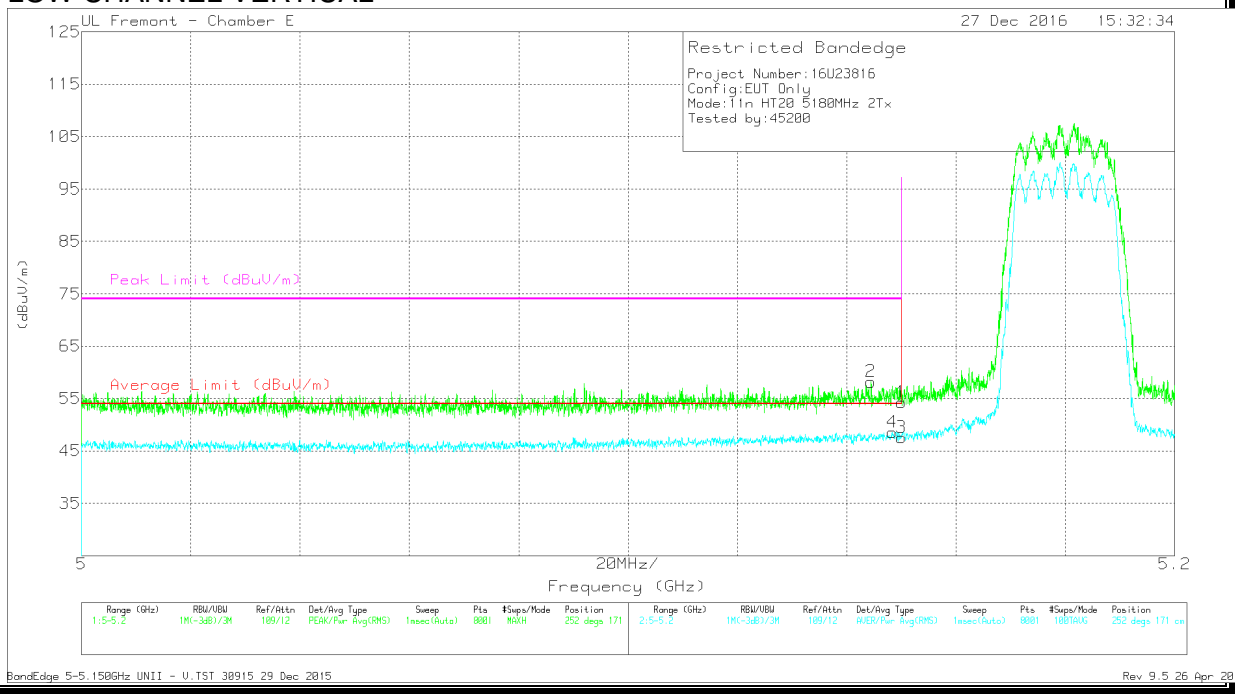


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.15	42.77	Pk	34.1	-18.8	58.07	-	-	74	-15.93	250	186	H
2	* 5.145	45.2	Pk	34.1	-18.8	60.5	-	-	74	-13.5	250	186	H
3	5.15	35.83	RMS	34.1	-18.8	51.13	54	-2.87	-	-	250	186	H
4	* 5.148	36.09	RMS	34.1	-18.8	51.39	54	-2.61	-	-	250	186	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-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



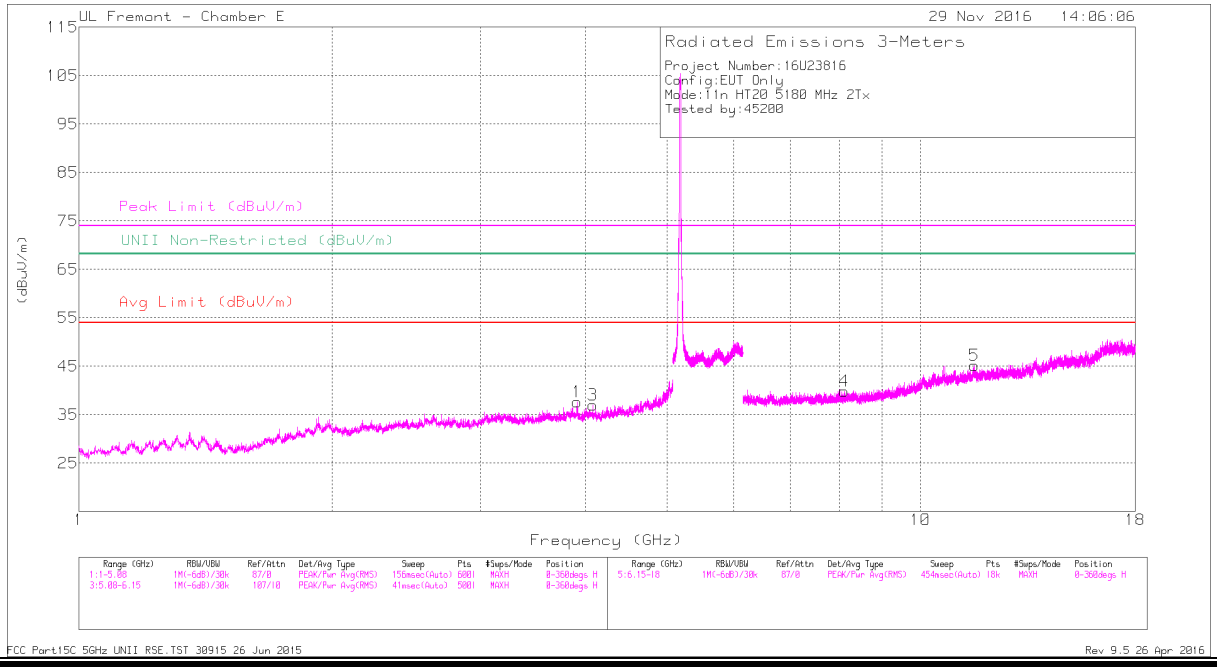
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.15	38.93	Pk	34.1	-18.8	54.23	-	-	74	-19.77	252	171	V
2	* 5.144	42.88	Pk	34.1	-18.8	58.18	-	-	74	-15.82	252	171	V
3	5.15	32.29	RMS	34.1	-18.8	47.59	54	-6.41	-	-	252	171	V
4	* 5.148	33.29	RMS	34.1	-18.8	48.59	54	-5.41	-	-	252	171	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

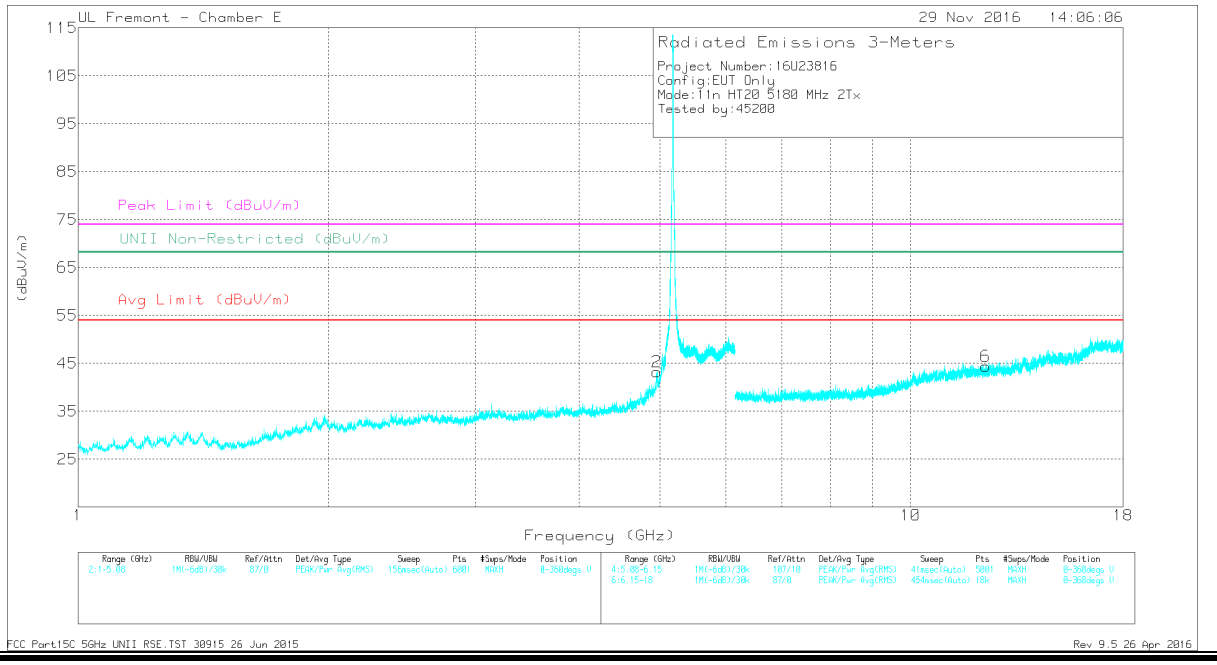
UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701J
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



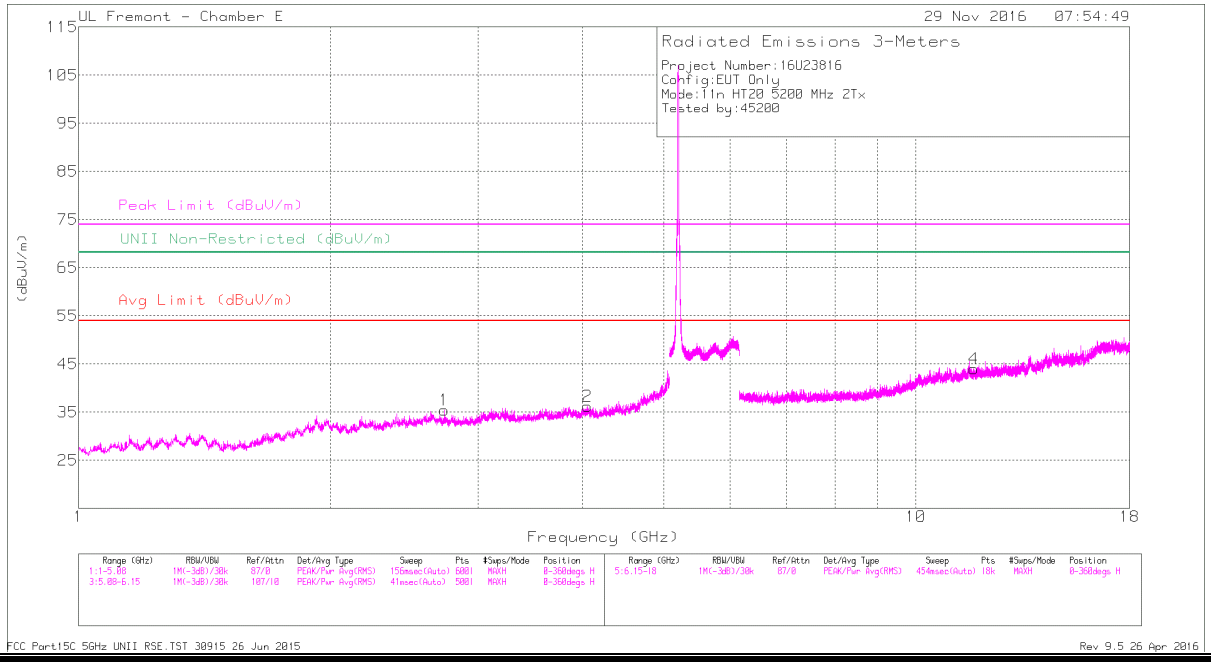
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl /Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.704	38.42	PK-U	33.1	-30.8	40.72	-	-	74	-33.28	176	355	H
	* 3.707	28.76	ADR	33.1	-30.9	30.96	54	-23.04	-	-	176	355	H
3	* 4.702	38.89	PK-U	34	-28.9	43.99	-	-	74	-30.01	58	177	H
	* 4.702	28.75	ADR	34	-28.8	33.95	54	-20.05	-	-	58	177	H
2	* 4.249	38.38	PK-U	33.3	-29.7	41.98	-	-	74	-32.02	297	269	V
	* 4.25	28.04	ADR	33.3	-29.7	31.64	54	-22.36	-	-	297	269	V
4	* 8.226	36.05	PK-U	35.8	-26.9	44.95	-	-	74	-29.05	47	309	H
	* 8.224	26.12	ADR	35.8	-26.9	35.02	54	-18.98	-	-	47	309	H
5	* 11.569	33.68	PK-U	38.4	-21.9	50.18	-	-	74	-23.82	218	200	H
	* 11.57	23.95	ADR	38.4	-22	40.35	54	-13.65	-	-	218	200	H
6	* 12.313	35.1	PK-U	38.9	-24	50	-	-	74	-24	150	244	V
	* 12.315	25.27	ADR	38.9	-23.9	40.27	54	-13.73	-	-	150	244	V

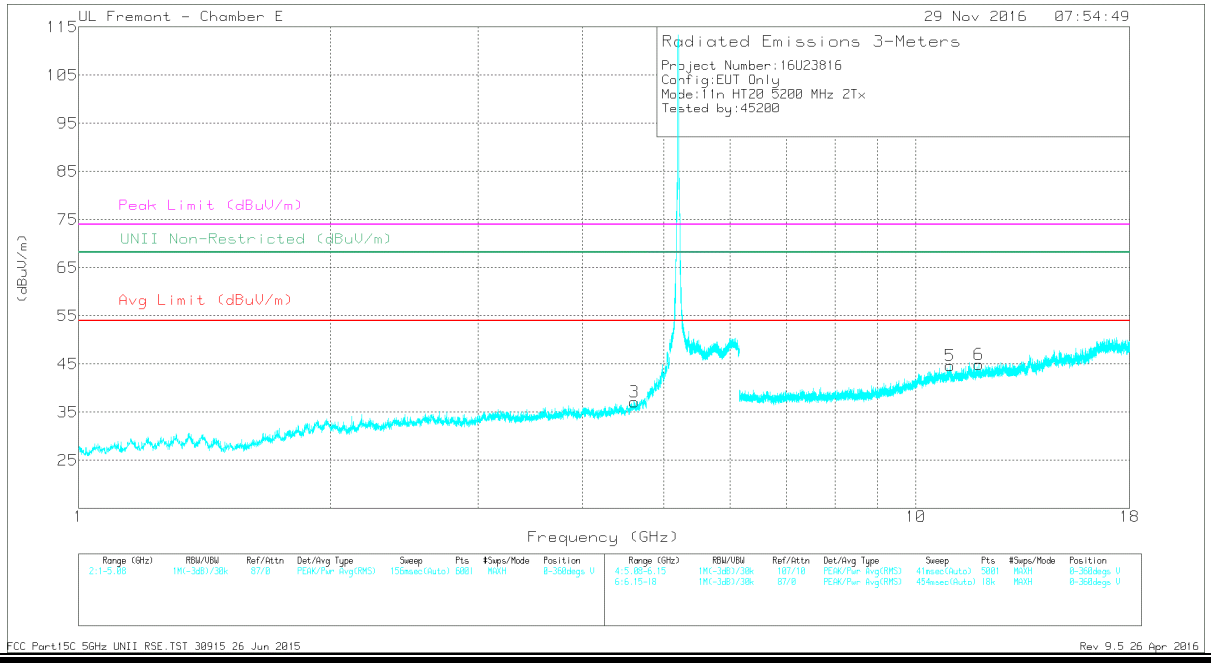
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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 HORIZONTAL



MID CHANNEL VERTICAL



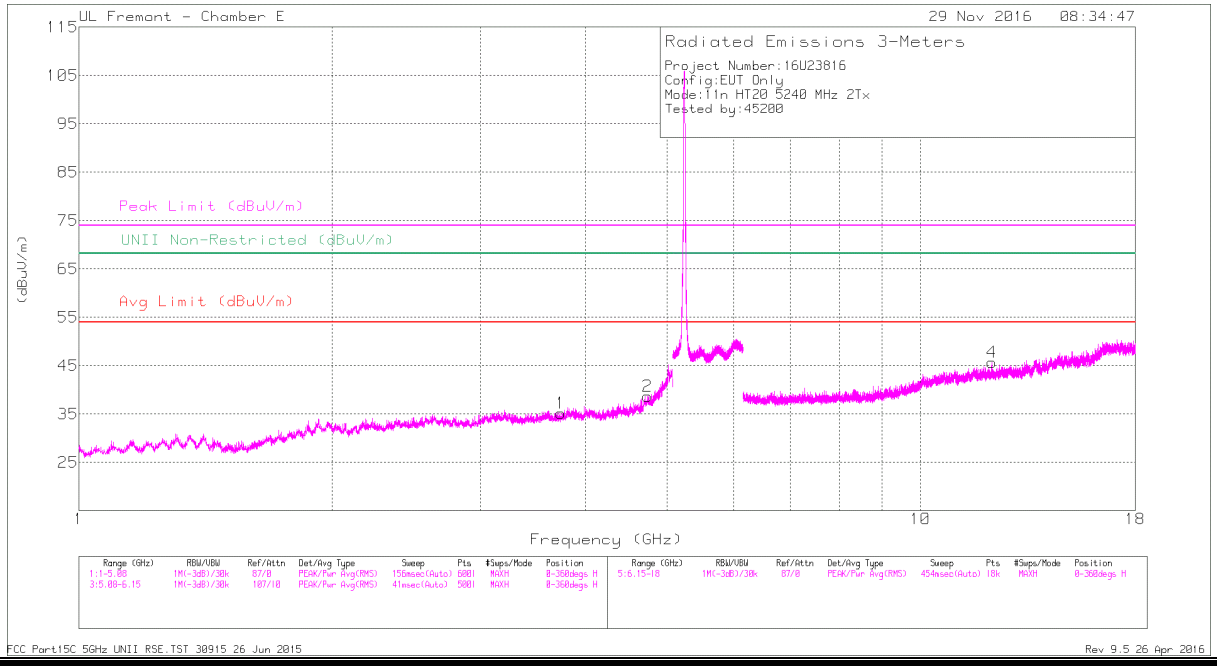
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.732	40.52	PK-U	32.5	-32.4	40.62	-	-	74	-33.38	353	177	H
	* 2.732	29.21	ADR	32.5	-32.4	29.31	54	-24.69	-	-	353	177	H
2	* 4.058	38.56	PK-U	33.3	-29.7	42.16	-	-	74	-31.84	112	255	H
	* 4.058	28.39	ADR	33.3	-29.7	31.99	54	-22.01	-	-	112	255	H
3	* 4.607	38.72	PK-U	33.9	-29.5	43.12	-	-	74	-30.88	209	321	V
	* 4.61	28.49	ADR	33.9	-29.4	32.99	54	-21.01	-	-	209	321	V
4	* 11.724	35.66	PK-U	38.7	-23.6	50.76	-	-	74	-23.24	62	127	H
	* 11.722	25.13	ADR	38.7	-23.7	40.13	54	-13.87	-	-	62	127	H
5	* 10.985	33.61	PK-U	38	-22.1	49.51	-	-	74	-24.49	223	244	V
	* 10.986	23.89	ADR	38	-22.1	39.79	54	-14.21	-	-	223	244	V
6	* 11.894	34.52	PK-U	38.8	-23.3	50.02	-	-	74	-23.98	264	247	V
	* 11.896	24.22	ADR	38.8	-23.3	39.72	54	-14.28	-	-	264	247	V

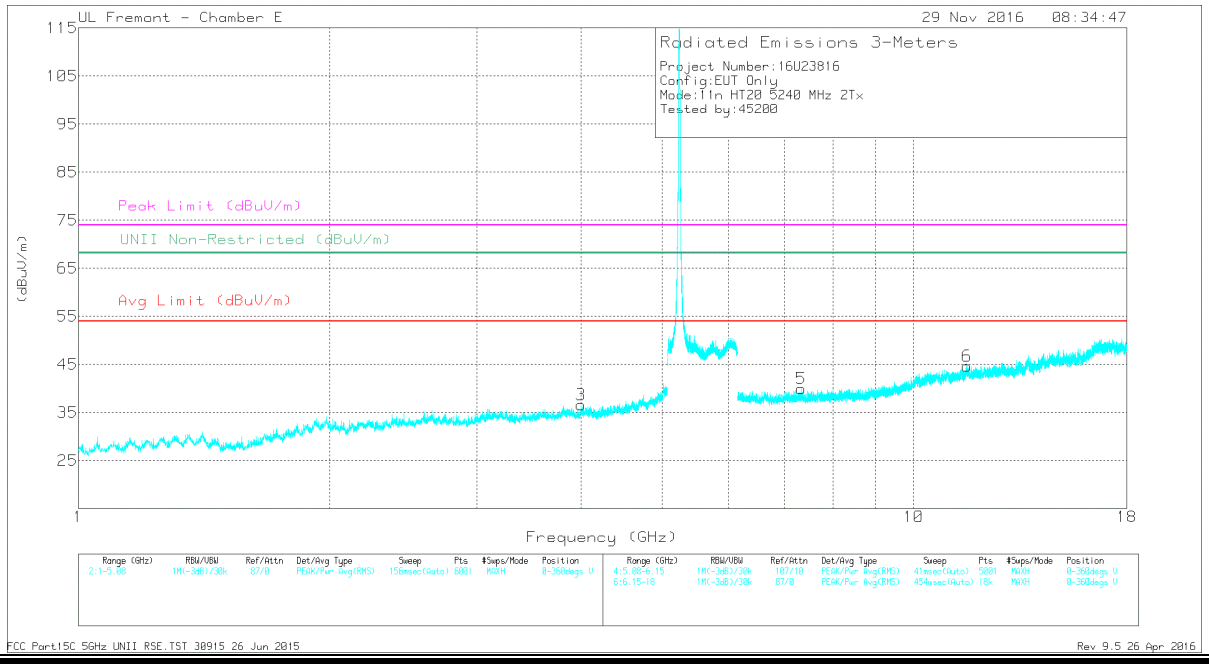
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



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

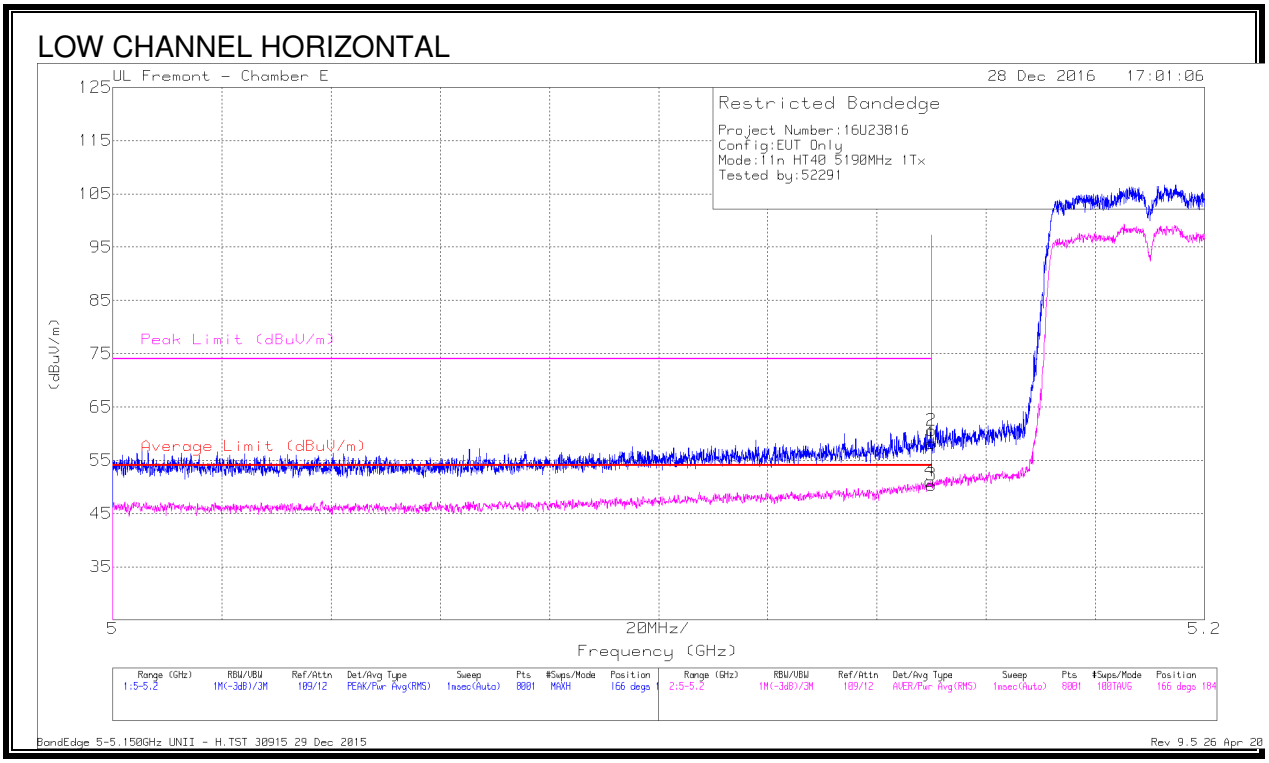
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.738	38.93	PK-U	33.1	-31.3	40.73	-	-	74	-33.27	4	184	H
	* 3.738	28.5	ADR	33.1	-31.3	30.3	54	-23.7	-	-	4	184	H
2	* 4.738	39.68	PK-U	34	-28.9	44.78	-	-	74	-29.22	285	142	H
	* 4.739	29.34	ADR	34	-28.9	34.44	54	-19.56	-	-	285	142	H
3	* 4	38.24	PK-U	33.1	-29.8	41.54	-	-	74	-32.46	273	199	V
	* 3.999	27.97	ADR	33.1	-29.9	31.17	54	-22.83	-	-	273	199	V
4	* 12.166	34.73	PK-U	39	-23.5	50.23	-	-	74	-23.77	120	207	H
	* 12.166	24.43	ADR	39	-23.5	39.93	54	-14.07	-	-	120	207	H
5	* 7.337	35.99	PK-U	35.6	-26.6	44.99	-	-	74	-29.01	274	293	V
	* 7.334	25.55	ADR	35.6	-26.6	34.55	54	-19.45	-	-	274	293	V
6	* 11.581	34.8	PK-U	38.4	-22	51.2	-	-	74	-22.8	344	314	V
	* 11.581	23.44	ADR	38.4	-22	39.84	54	-14.16	-	-	344	314	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-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.

9.2.4. 11n HT40 ANTENNA A SISO MODE IN THE 5.2GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

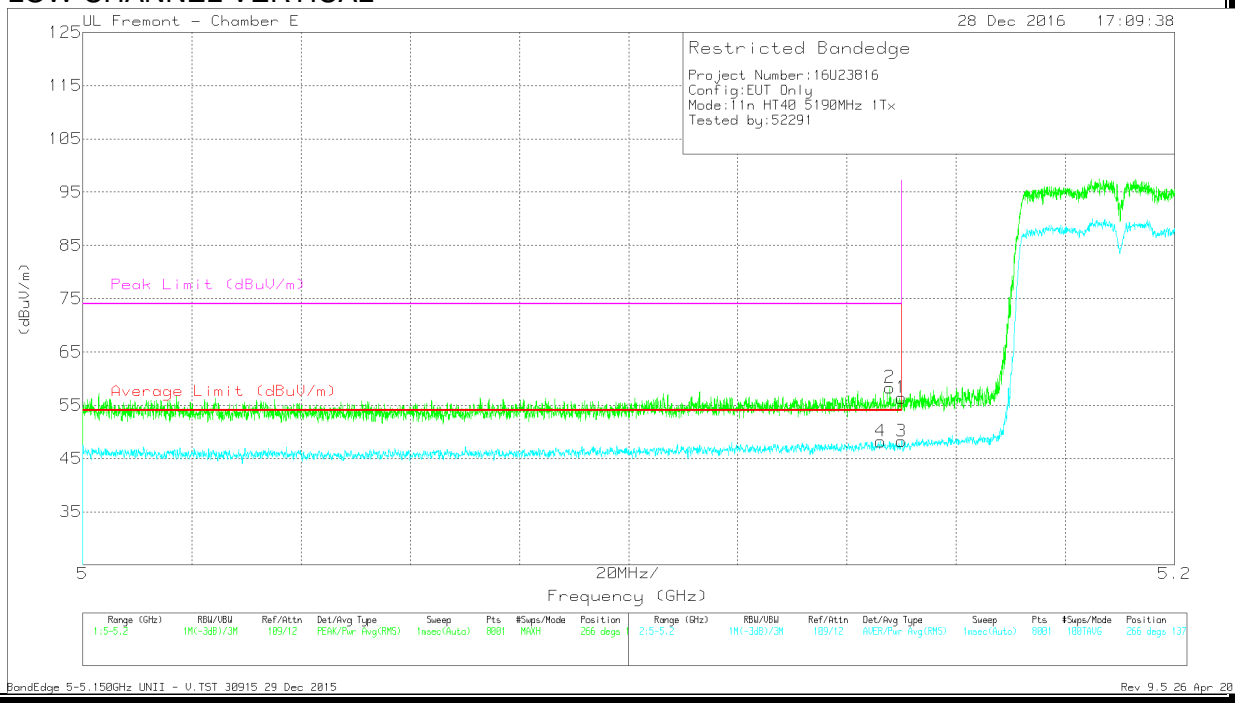


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/ Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.15	42.82	Pk	34.1	-18.8	0	58.12	-	-	74	-15.88	166	184	H
2	* 5.15	45.29	Pk	34.1	-18.8	0	60.59	-	-	74	-13.41	166	184	H
3	5.15	34.97	RMS	34.1	-18.8	.1	50.37	54	-3.63	-	-	166	184	H
4	* 5.15	35.7	RMS	34.1	-18.8	.1	51.1	54	-2.9	-	-	166	184	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-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



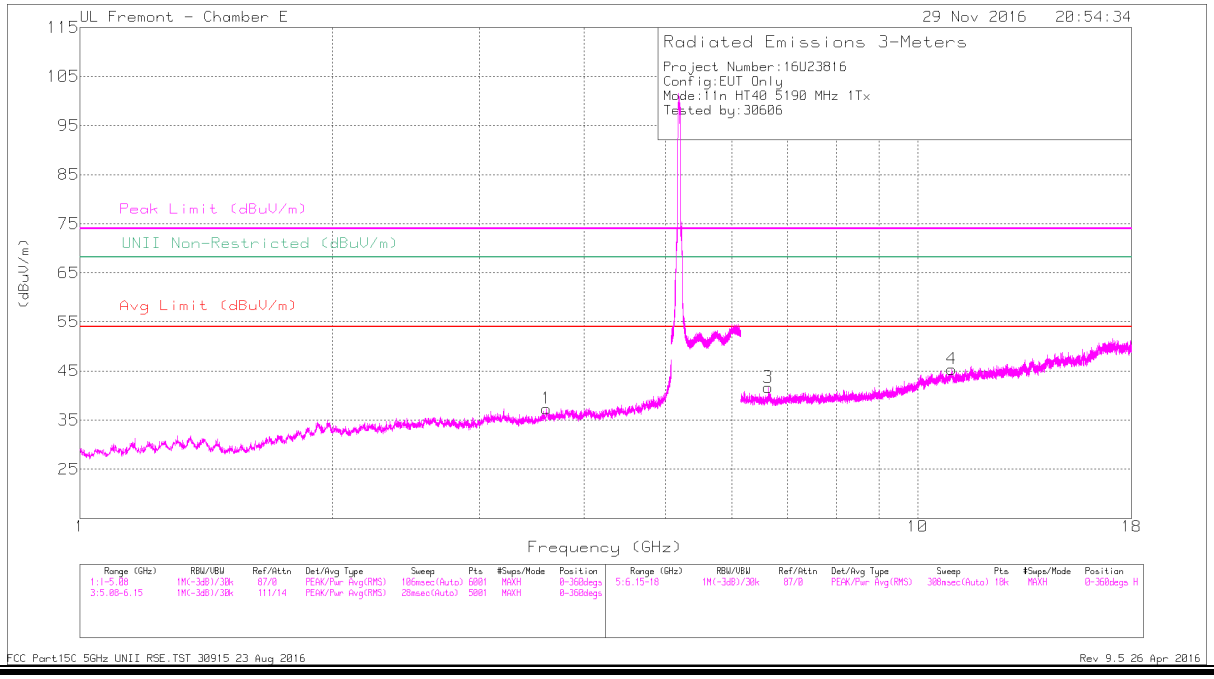
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/ Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.15	41.09	Pk	34.1	-18.8	0	56.39	-	-	74	-17.61	266	137	V
2	* 5.148	43.01	Pk	34.1	-18.8	0	58.31	-	-	74	-15.69	266	137	V
3	5.15	32.84	RMS	34.1	-18.8	.1	48.24	54	-5.76	-	-	266	137	V
4	* 5.146	32.81	RMS	34.1	-18.8	.1	48.21	54	-5.79	-	-	266	137	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

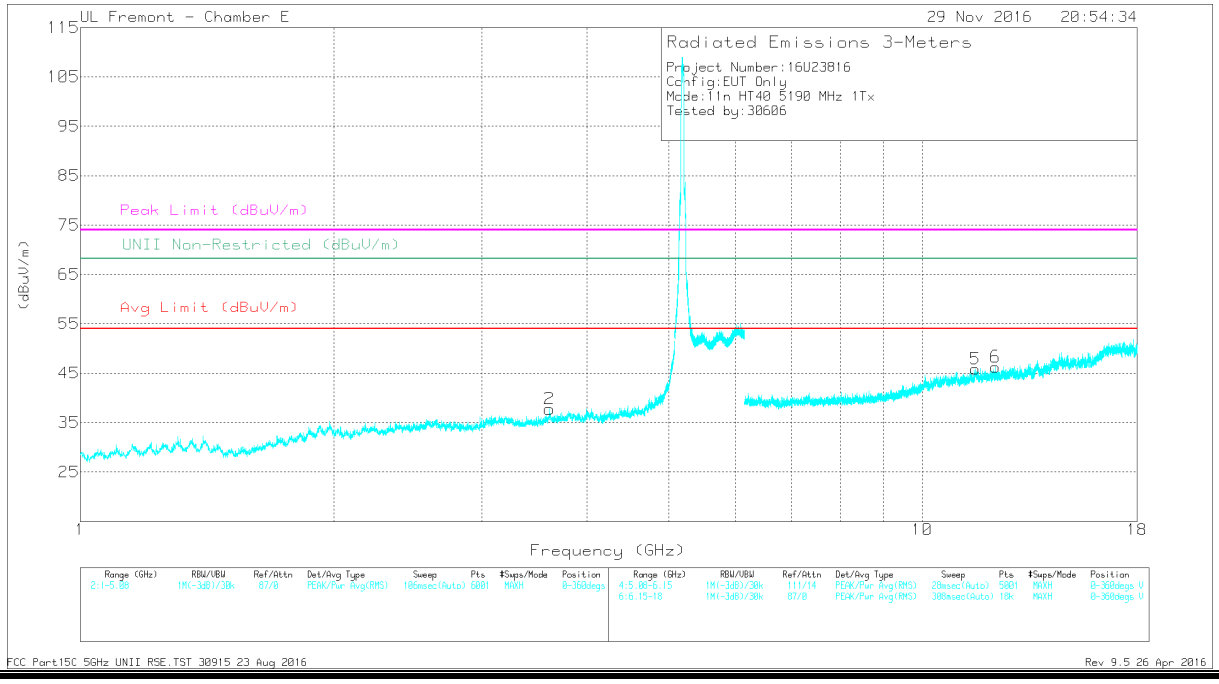
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



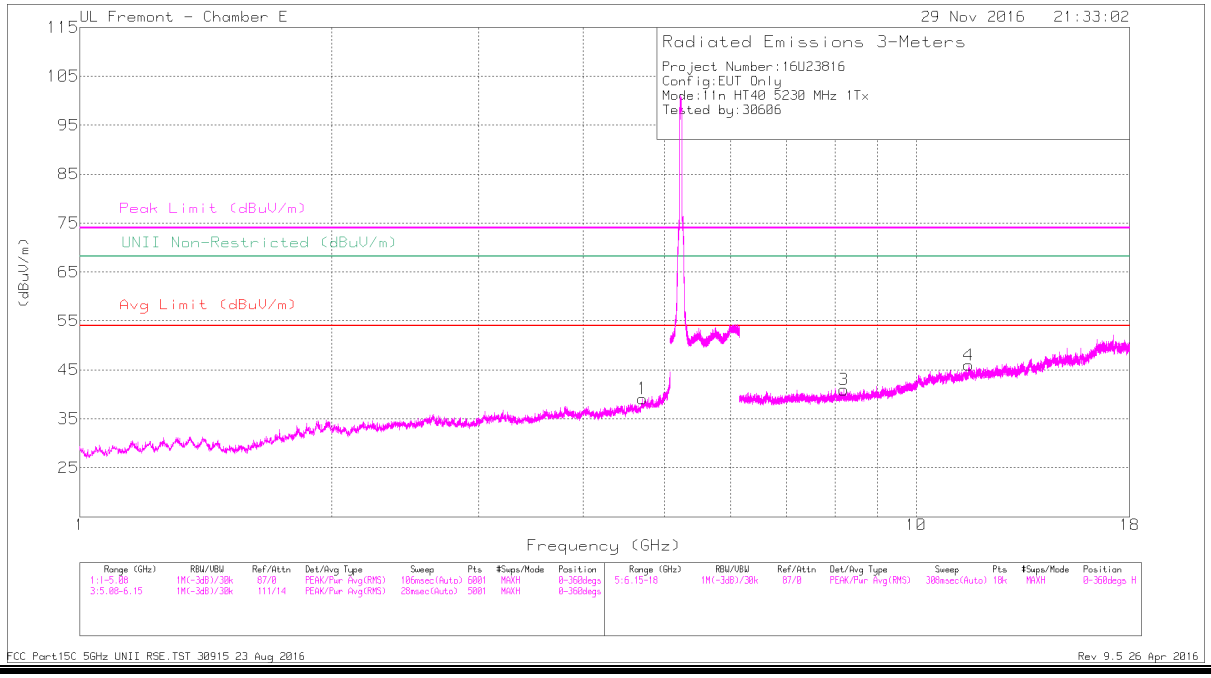
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (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	* 3.605	39.84	PK-U	33	-30.5	0	42.34	-	-	74	-31.66	-	-	77	357	H
	* 3.606	29.54	ADR	33	-30.6	0.11	32.05	54	-21.95	-	-	-	-	77	357	H
2	* 3.609	40.57	PK-U	33	-30.6	0	42.97	-	-	74	-31.03	-	-	112	156	V
	* 3.61	29.66	ADR	33	-30.5	0.11	32.27	54	-21.73	-	-	-	-	112	156	V
3	6.632	38.65	PK-U	35.6	-26.7	0	47.55	-	-	-	-	68.2	-20.65	69	388	H
4	* 10.984	35.72	PK-U	38	-22.1	0	51.62	-	-	74	-22.38	-	-	325	118	H
	* 10.981	24.83	ADR	38	-22.1	0.11	40.84	54	-13.16	-	-	-	-	325	118	H
5	* 11.564	35.29	PK-U	38.4	-22	0	51.69	-	-	74	-22.31	-	-	210	326	V
	* 11.561	25.04	ADR	38.4	-22.1	0.11	41.45	54	-12.55	-	-	-	-	210	326	V
6	* 12.217	37.38	PK-U	39	-24.5	0	51.88	-	-	74	-22.12	-	-	162	214	V
	* 12.218	26.48	ADR	39	-24.5	0.11	41.09	54	-12.91	-	-	-	-	162	214	V

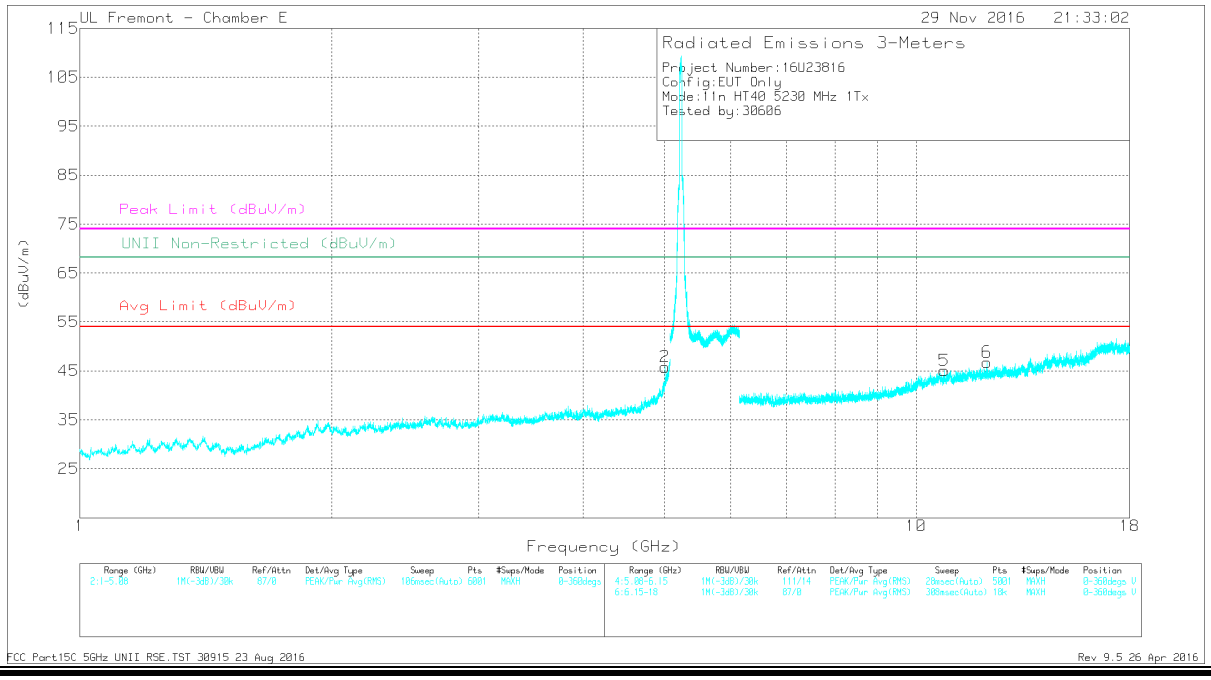
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



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

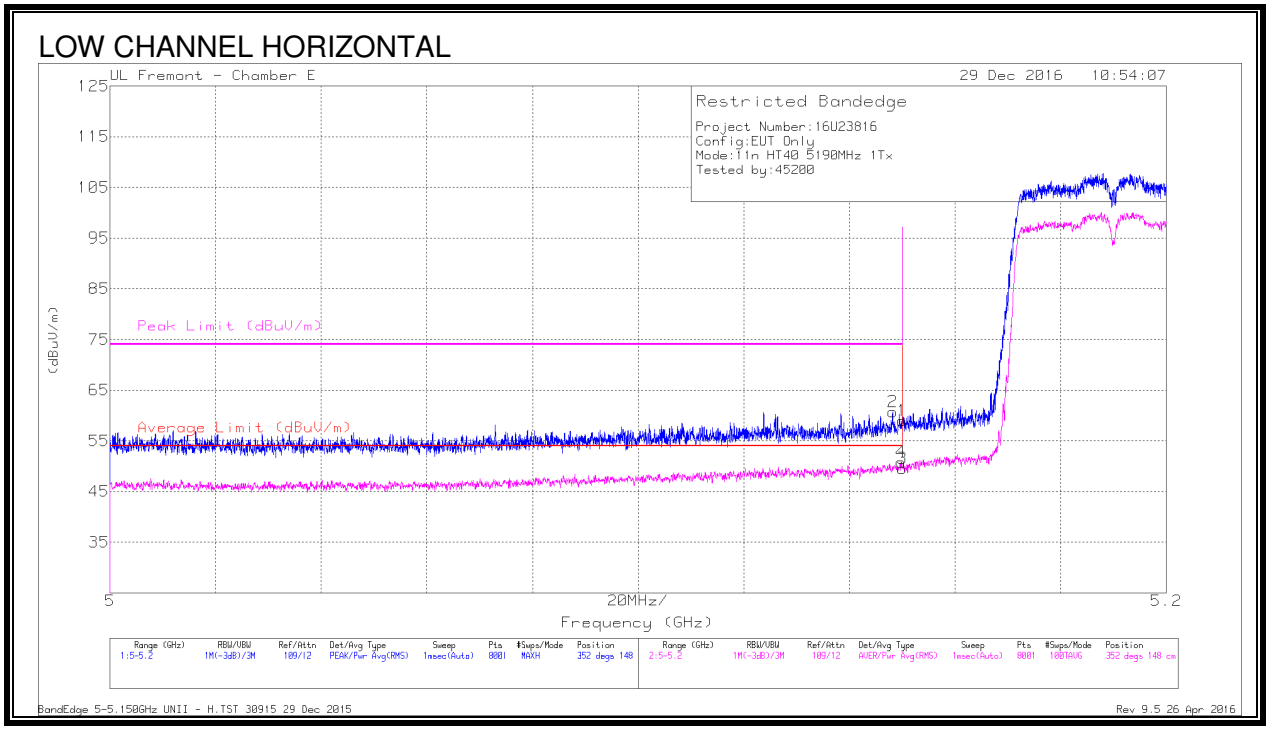
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.706	40.09	PK-U	34	-28.9	0	45.19	-	-	74	-28.81	161	229	H
	* 4.709	29.73	ADR	34	-29	0.11	34.84	54	-19.16	-	-	161	229	H
2	* 5.011	46.18	PK-U	33.9	-28.5	0	51.58	-	-	74	-22.42	145	159	V
	* 5.01	35.08	ADR	33.9	-28.6	0.11	40.49	54	-13.51	-	-	145	159	V
3	* 8.194	37.99	PK-U	35.8	-27	0	46.79	-	-	74	-27.21	262	218	H
	* 8.193	27.04	ADR	35.8	-27	0.11	35.95	54	-18.05	-	-	262	218	H
4	* 11.554	35.36	PK-U	38.4	-22.3	0	51.46	-	-	74	-22.54	88	100	H
	* 11.554	25.01	ADR	38.4	-22.3	0.11	41.22	54	-12.78	-	-	88	100	H
5	* 10.802	36.43	PK-U	37.9	-23.8	0	50.53	-	-	74	-23.47	30	366	V
	* 10.801	25.81	ADR	37.9	-23.8	0.11	40.02	54	-13.98	-	-	30	366	V
6	* 12.158	36.47	PK-U	39	-23.6	0	51.87	-	-	74	-22.13	110	188	V
	* 12.16	25.84	ADR	39	-23.5	0.11	41.45	54	-12.55	-	-	110	188	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-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.

9.2.5. 11n HT40 ANTENNA B SISO MODE IN THE 5.2GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

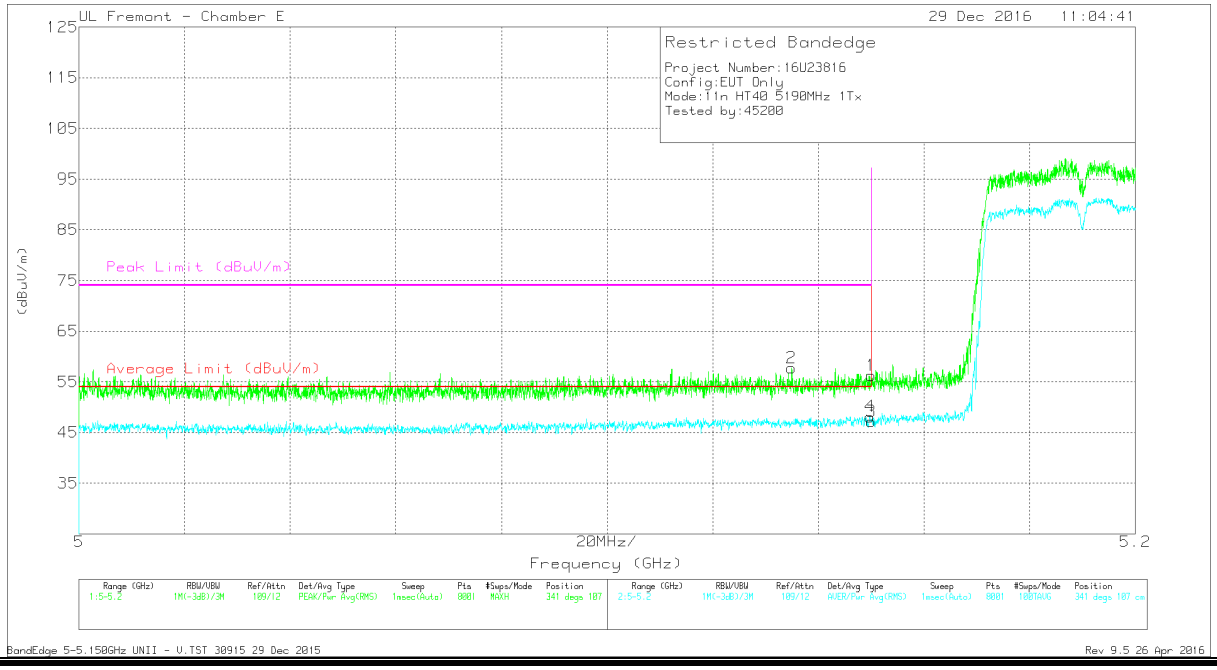


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl /Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.15	43.65	Pk	34.1	-18.8	0	58.95	-	-	74	-15.05	352	148	H
2	* 5.148	45.41	Pk	34.1	-18.8	0	60.71	-	-	74	-13.29	352	148	H
3	5.15	34.1	RMS	34.1	-18.8	.1	49.5	54	-4.5	-	-	352	148	H
4	* 5.15	35.34	RMS	34.1	-18.8	.1	50.74	54	-3.26	-	-	352	148	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-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



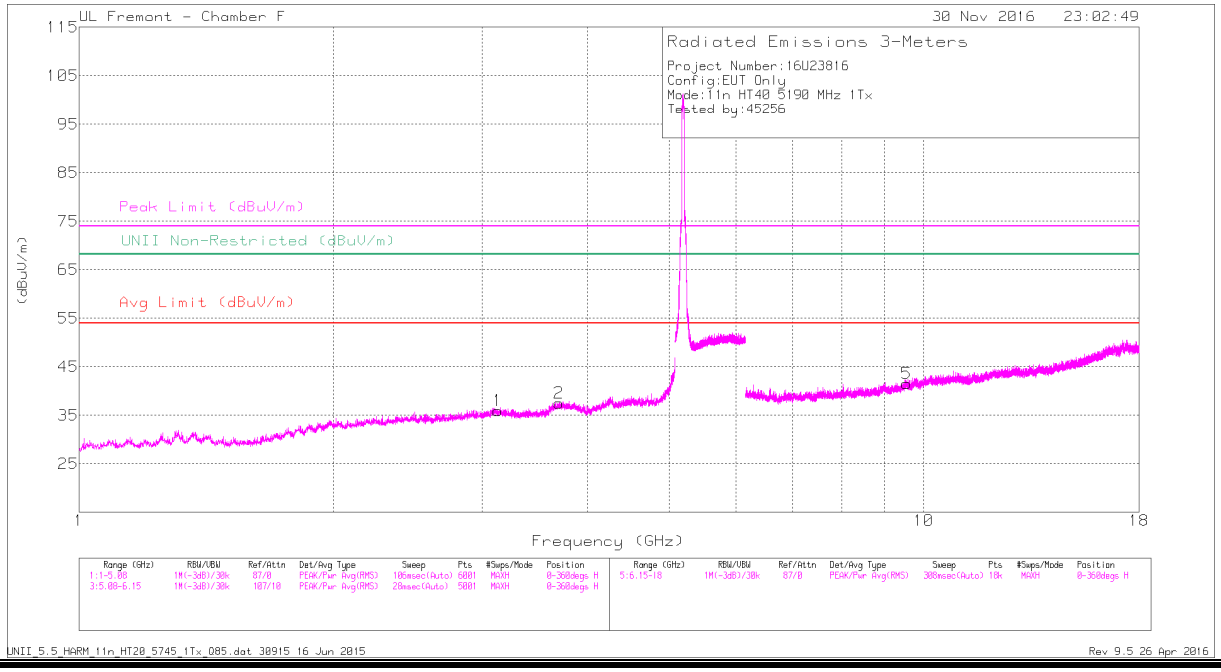
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.15	40.97	Pk	34.1	-18.8	0	56.27	-	-	74	-17.73	341	107	V
2	* 5.135	42.3	Pk	34.1	-18.7	0	57.7	-	-	74	-16.3	341	107	V
3	5.15	31.91	RMS	34.1	-18.8	.1	47.31	54	-6.69	-	-	341	107	V
4	* 5.15	32.82	RMS	34.1	-18.8	.1	48.22	54	-5.78	-	-	341	107	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

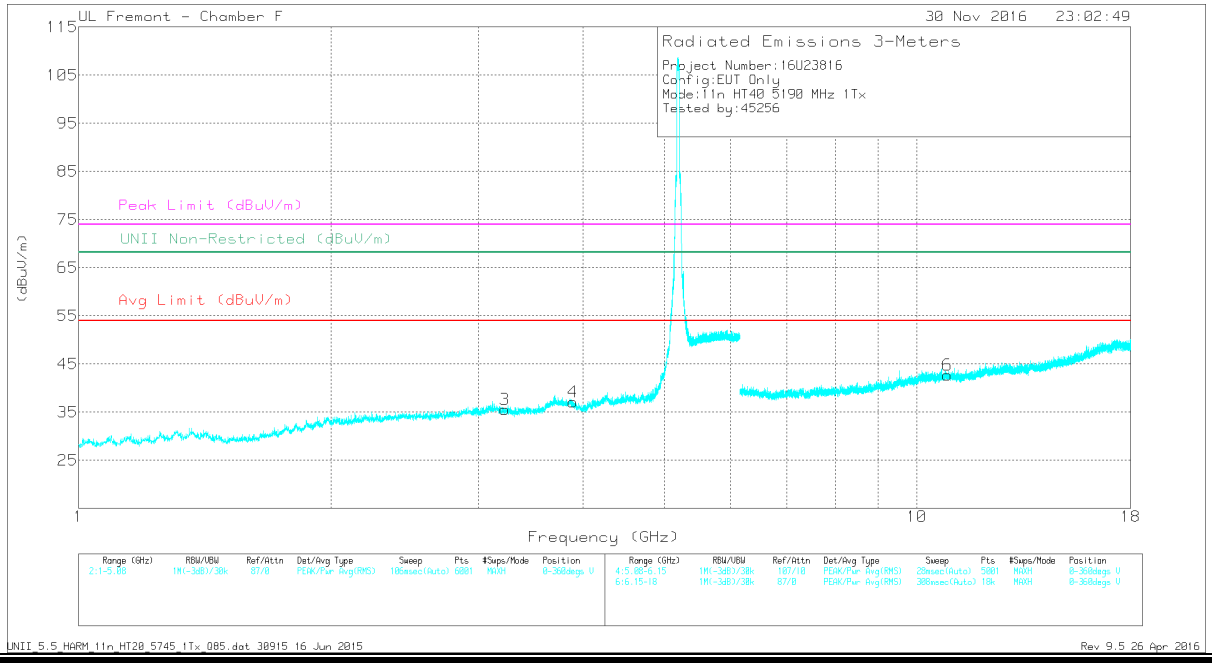
UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701J
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



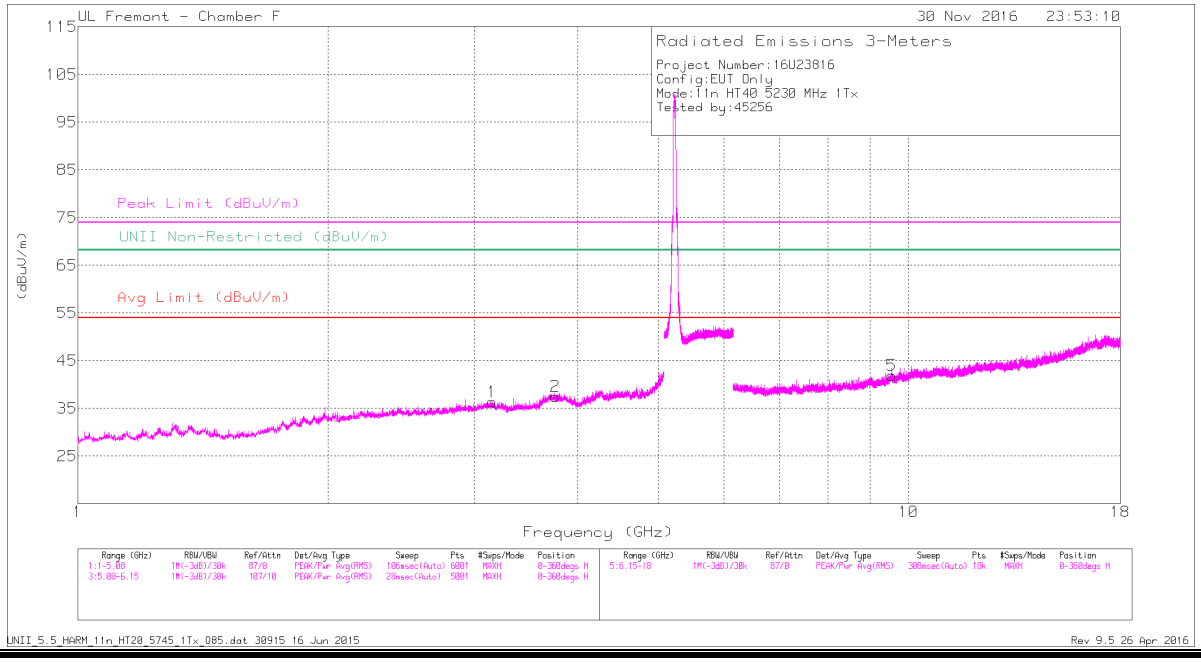
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (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	3.135	40	PK-U	33.2	-29.3	0	43.9	-	-	-	-	68.2	-24.3	146	197	H
2	* 3.698	38.92	PK-U	33.3	-28.9	0	43.32	-	-	74	-30.68	-	-	205	103	H
	* 3.699	28.04	ADR	33.3	-28.9	.11	32.55	54	-21.45	-	-	-	-	205	103	H
3	3.229	39.53	PK-U	33	-29.7	0	42.83	-	-	-	-	68.2	-25.37	210	187	V
4	* 3.891	38.86	PK-U	33.5	-29	0	43.36	-	-	74	-30.64	-	-	345	292	V
	* 3.888	27.83	ADR	33.5	-28.9	.11	32.54	54	-21.46	-	-	-	-	345	292	V
5	9.548	33.82	PK-U	36.5	-21.5	0	48.82	-	-	-	-	68.2	-19.38	194	179	H
6	* 10.882	33.57	PK-U	37.8	-22.2	0	49.17	-	-	74	-24.83	-	-	131	217	V
	* 10.883	23.01	ADR	37.8	-22.2	.11	38.72	54	-15.28	-	-	-	-	131	217	V

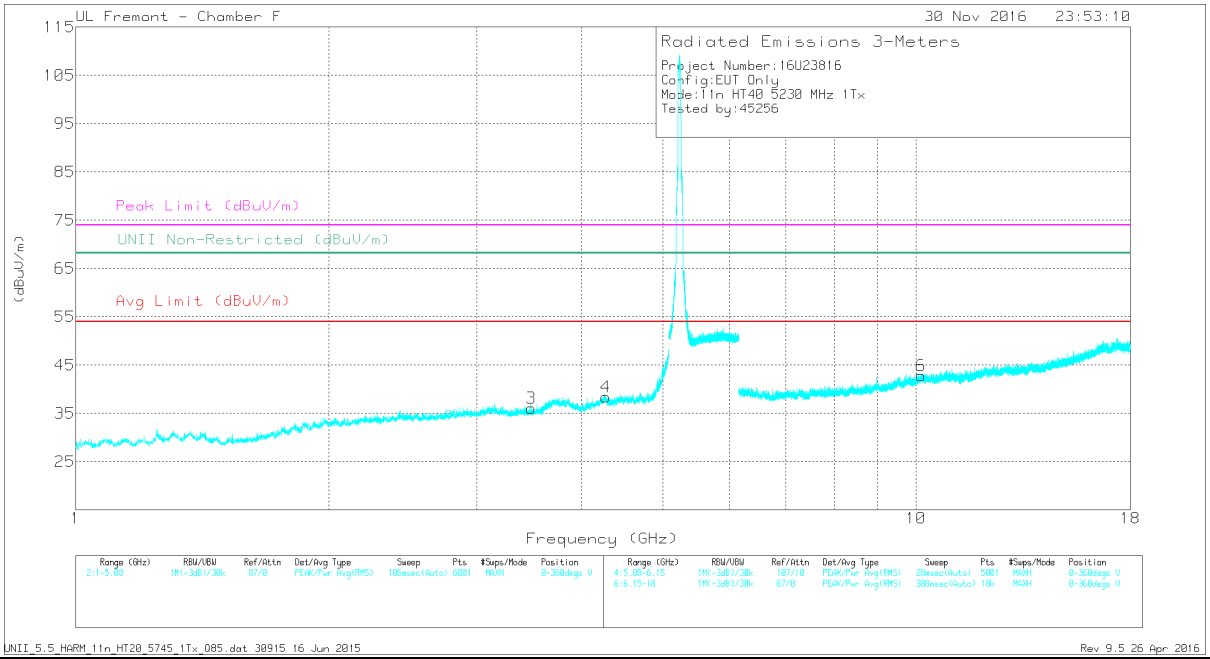
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



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

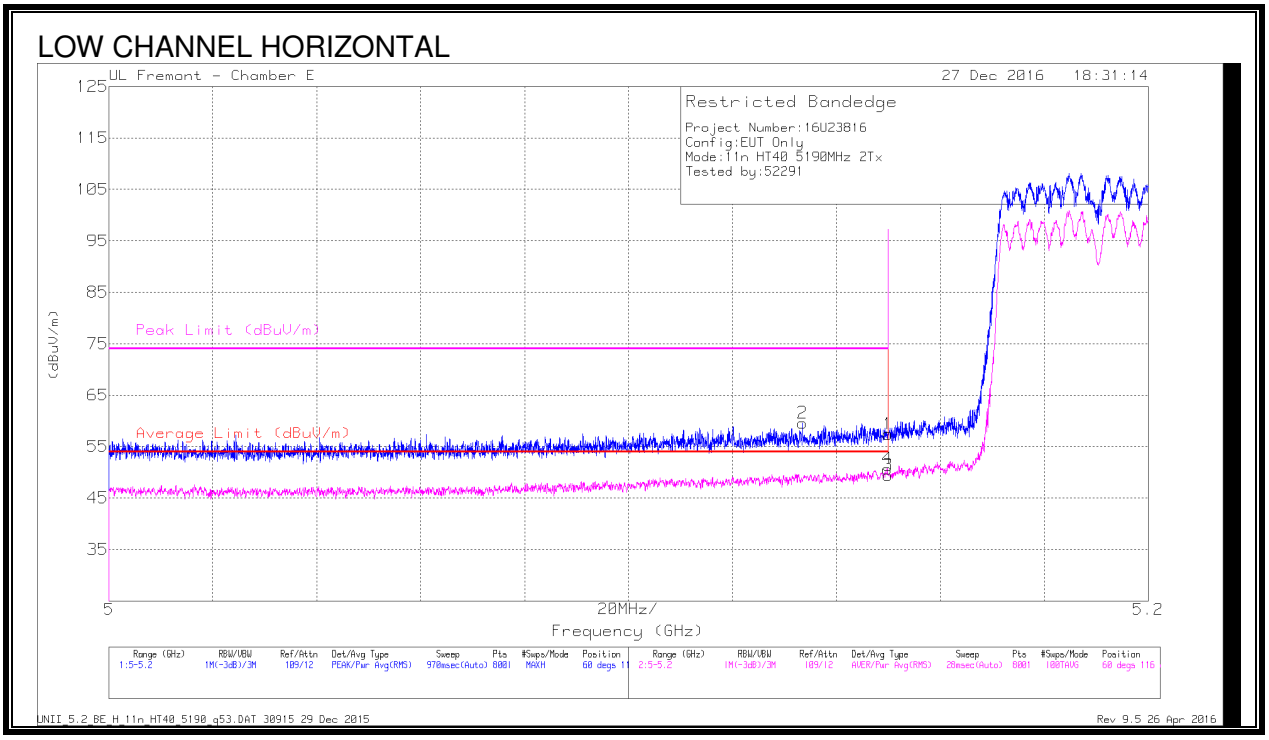
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl /Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	3.156	40.4	PK-U	33.2	-29.6	0	44	-	-	-	-	68.2	-24.2	4	202	H
2	* 3.757	38.4	PK-U	33.4	-29.2	0	42.6	-	-	74	-31.4	-	-	171	259	H
	* 3.757	27.88	ADR	33.4	-29.2	.11	32.19	54	-21.81	-	-	-	-	171	259	H
3	3.481	39.32	PK-U	32.9	-29.7	0	42.52	-	-	-	-	68.2	-25.68	335	208	V
4	* 4.276	37.1	PK-U	33.7	-26.7	0	44.1	-	-	74	-29.9	-	-	345	228	V
	* 4.273	26.71	ADR	33.7	-26.6	.11	33.92	54	-20.08	-	-	-	-	345	228	V
5	9.554	33.33	PK-U	36.5	-21.6	0	48.23	-	-	-	-	68.2	-19.97	27	160	H
6	10.144	33.92	PK-U	37.2	-21.7	0	49.42	-	-	-	-	68.2	-18.78	0	120	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-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.

9.2.6. 11n HT40 2TX CDD MIMO MODE IN THE 5.2GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

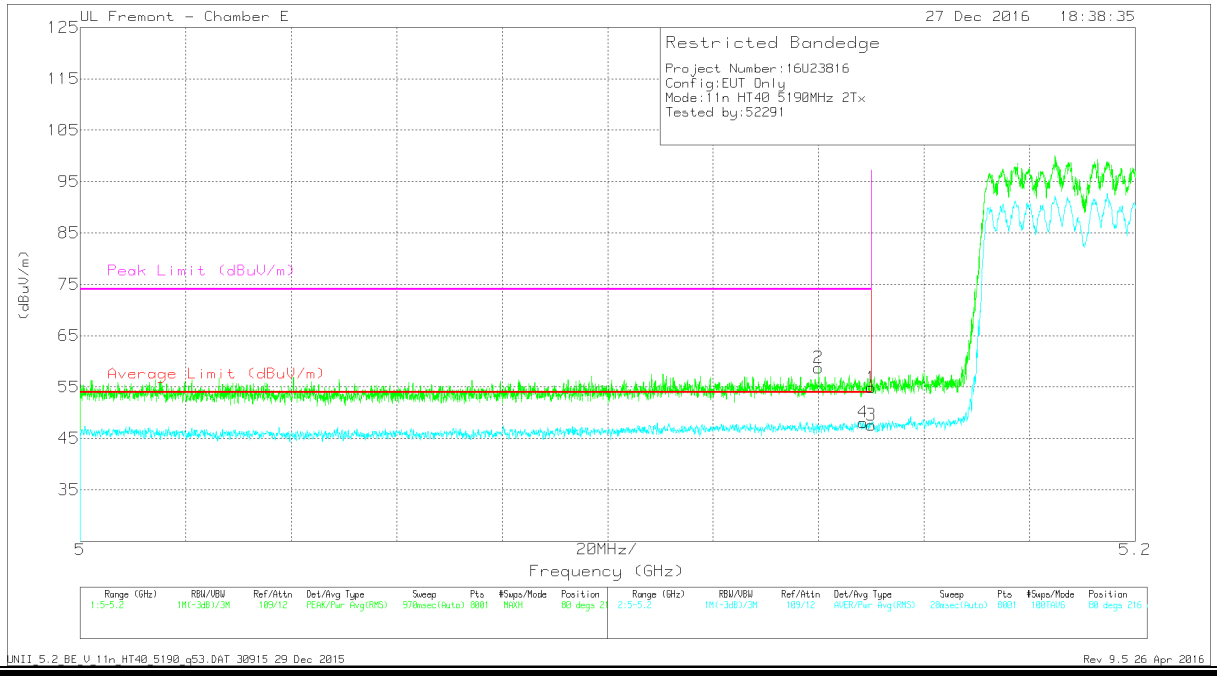


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/ Cbl/Fl tr/Pad (dB)	DC Corr (dB)	Correct ed Readin g (dBuV/ m)	Averag e Limit (dBuV/ m)	Margin (dB)	Peak Limit (dBuV/ m)	PK Margin (dB)	Azimut h (Degs)	Height (cm)	Polarity
1	5.15	42.13	Pk	34.1	-18.8	0	57.43	-	-	74	-16.57	60	116	H
2	* 5.134	44.18	Pk	34.1	-18.7	0	59.58	-	-	74	-14.42	60	116	H
3	5.15	34.15	RMS	34.1	-18.8	.1	49.55	54	-4.45	-	-	60	116	H
4	* 5.15	35.39	RMS	34.1	-18.8	.1	50.79	54	-3.21	-	-	60	116	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-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



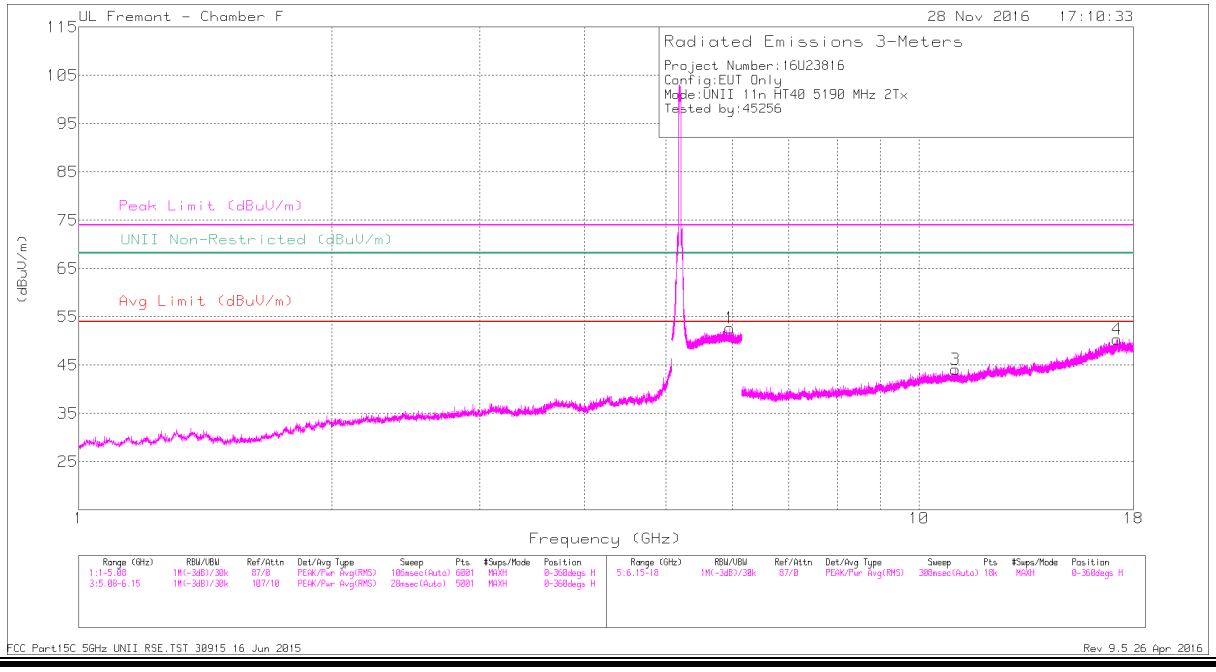
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.15	39.61	Pk	34.1	-18.8	0	54.91	-	-	74	-19.09	80	216	V
2	* 5.14	43.46	Pk	34.1	-18.8	0	58.76	-	-	74	-15.24	80	216	V
3	5.15	32.31	RMS	34.1	-18.8	.1	47.71	54	-6.29	-	-	80	216	V
4	* 5.148	32.82	RMS	34.1	-18.8	.1	48.22	54	-5.78	-	-	80	216	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

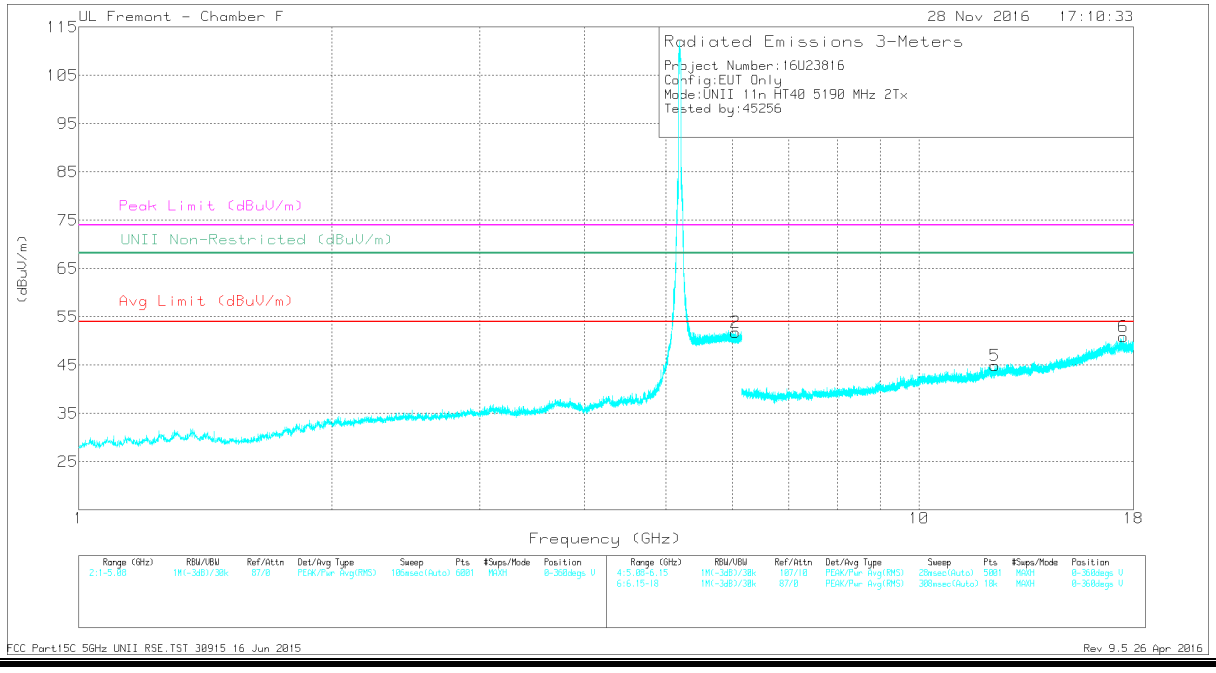
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



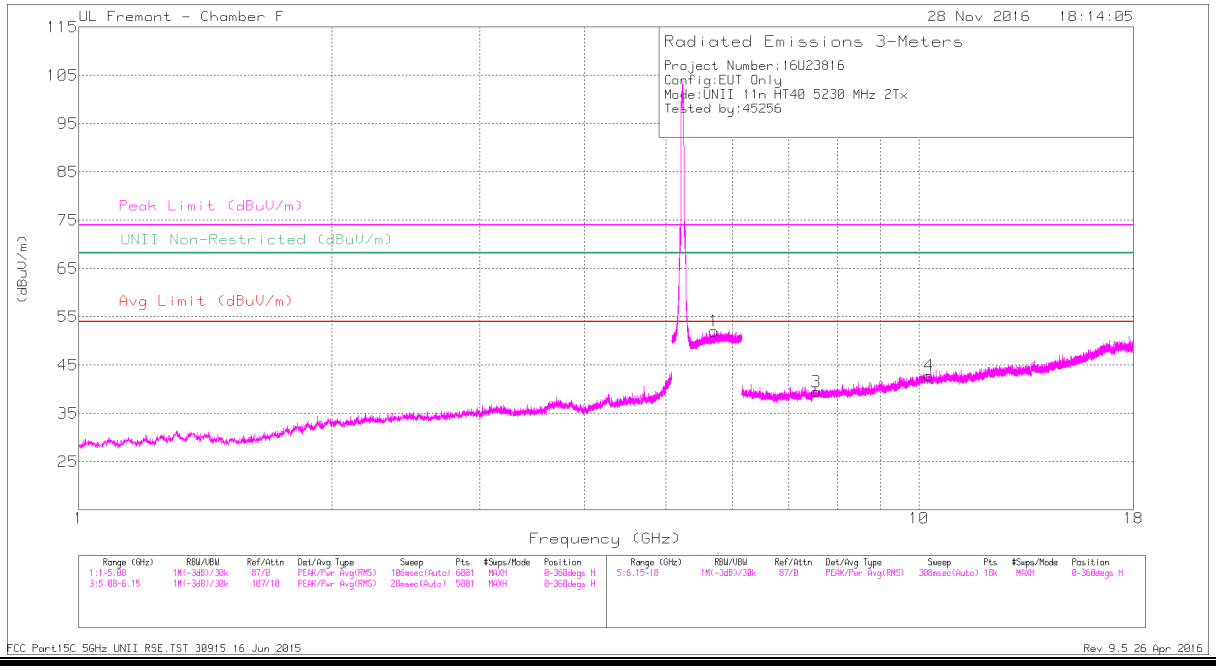
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (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	5.959	41.2	PK-U	35.4	-18.4	0	58.2	-	-	-	-	68.2	-10	214	127	H
2	6.051	40.58	PK-U	35.5	-18.1	0	57.98	-	-	-	-	68.2	-10.22	235	210	V
3	* 11.058	33.73	PK-U	37.9	-21.9	0	49.73	-	-	74	-24.27	-	-	164	350	H
	* 11.058	23.17	ADR	37.9	-21.9	.1	39.27	54	-14.73	-	-	-	-	164	350	H
4	17.226	34.61	PK-U	41.4	-19.8	0	56.21	-	-	-	-	68.2	-11.99	179	203	H
5	* 12.312	34.51	PK-U	38.9	-22.6	0	50.81	-	-	74	-23.19	-	-	311	376	V
	* 12.312	23.84	ADR	38.9	-22.6	.1	40.24	54	-13.76	-	-	-	-	311	376	V
6	17.513	35.47	PK-U	41.1	-20.1	0	56.47	-	-	-	-	68.2	-11.73	94	388	V

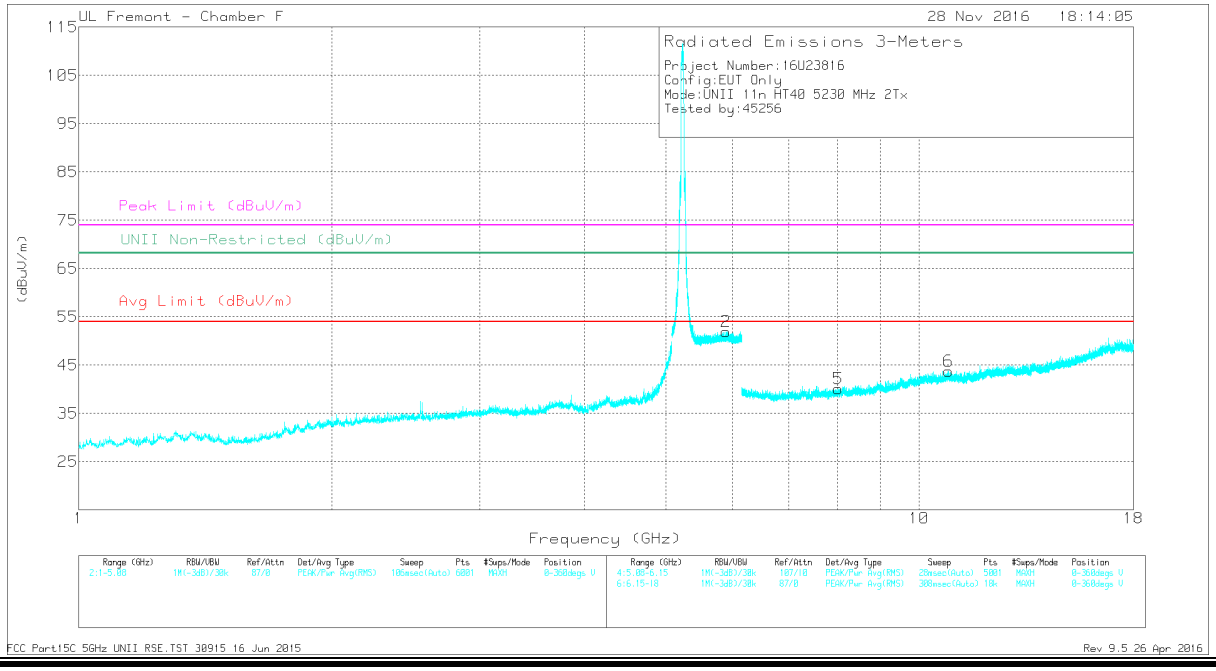
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



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

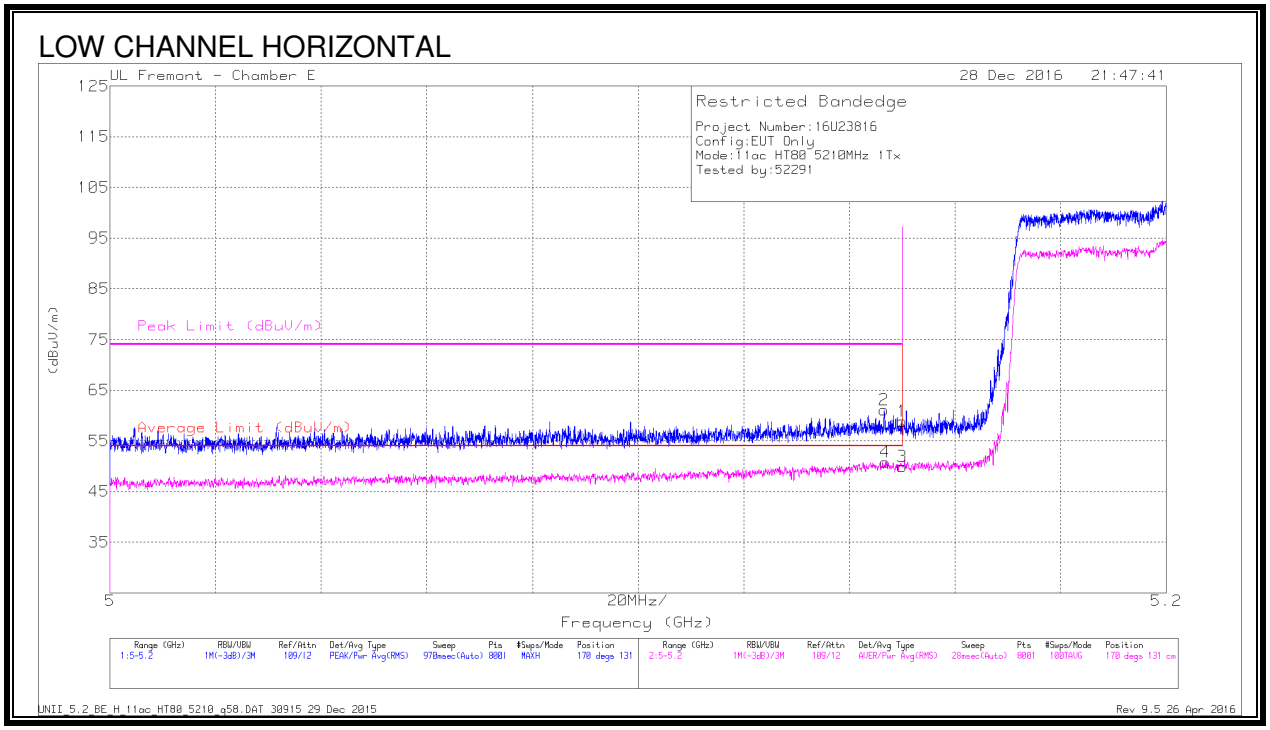
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.706	40.54	PK-U	34.8	-18	0	57.34	-	-	-	-	68.2	-10.86	156	167	H
2	5.892	41.2	PK-U	35.3	-18.4	0	58.1	-	-	-	-	68.2	-10.1	184	337	V
3	* 7.545	35.52	PK-U	35.6	-24.6	0	46.52	-	-	74	-27.48	-	-	197	202	H
	* 7.546	24.76	ADR	35.6	-24.6	.1	35.86	54	-18.14	-	-	-	-	197	202	H
4	10.286	33.86	PK-U	37.2	-21.8	0	49.26	-	-	-	-	68.2	-18.94	110	153	H
5	8.017	35.4	PK-U	35.8	-24.9	0	46.3	-	-	-	-	68.2	-21.9	49	201	V
6	* 10.841	33.51	PK-U	37.8	-21.8	0	49.51	-	-	74	-24.49	-	-	6	235	V
	* 10.843	22.87	ADR	37.8	-21.8	.1	38.97	54	-15.03	-	-	-	-	6	235	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-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.

9.2.7. 11ac HT80 ANTENNA A SISO MODE IN THE 5.2GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

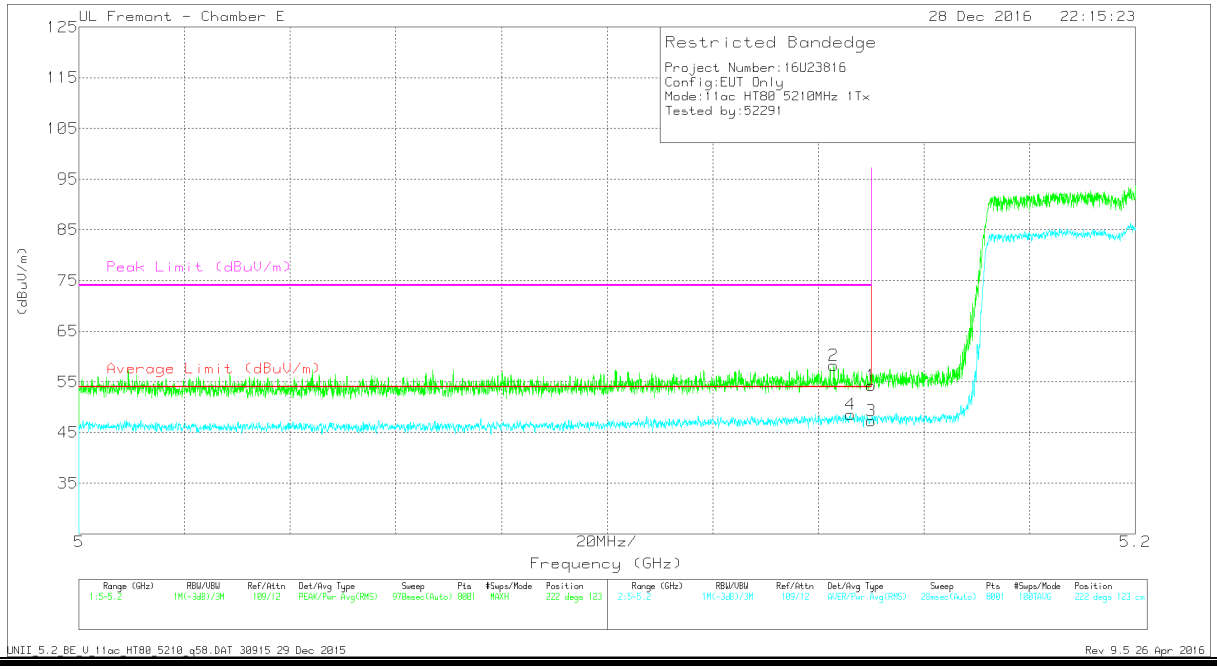


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.15	43.53	Pk	34.1	-18.8	0	58.83	-	-	74	-15.17	170	131	H
2	* 5.147	45.74	Pk	34.1	-18.8	0	61.04	-	-	74	-12.96	170	131	H
3	5.15	34.46	RMS	34.1	-18.8	.19	49.95	54	-4.05	-	-	170	131	H
4	* 5.147	35.3	RMS	34.1	-18.8	.19	50.79	54	-3.21	-	-	170	131	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-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



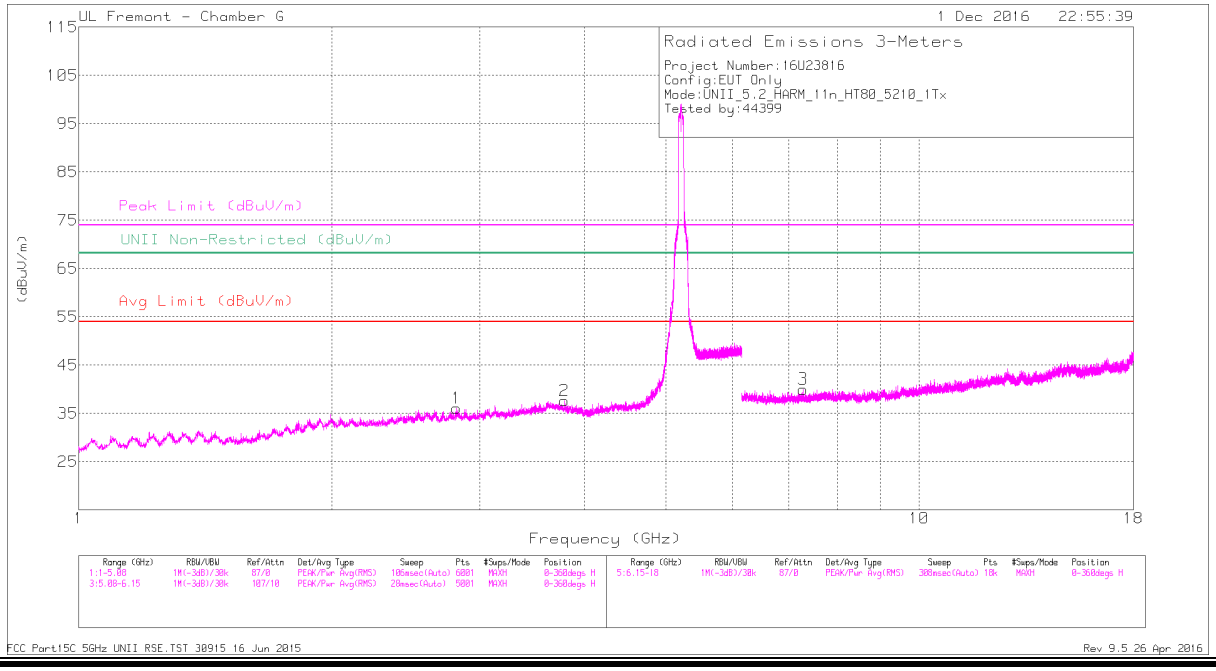
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.15	39	Pk	34.1	-18.8	0	54.3	-	-	74	-19.7	222	123	V
2	* 5.143	42.96	Pk	34.1	-18.8	0	58.26	-	-	74	-15.74	222	123	V
3	5.15	31.99	RMS	34.1	-18.8	.19	47.48	54	-6.52	-	-	222	123	V
4	* 5.146	33.3	RMS	34.1	-18.8	.19	48.79	54	-5.21	-	-	222	123	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

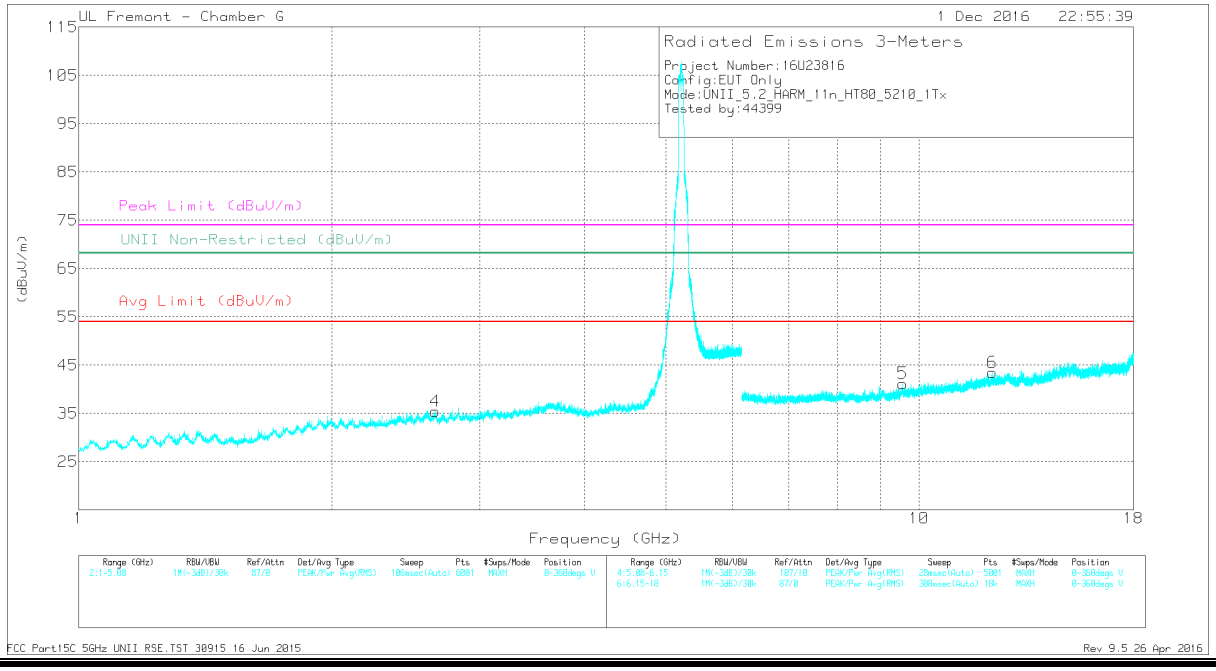
This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



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

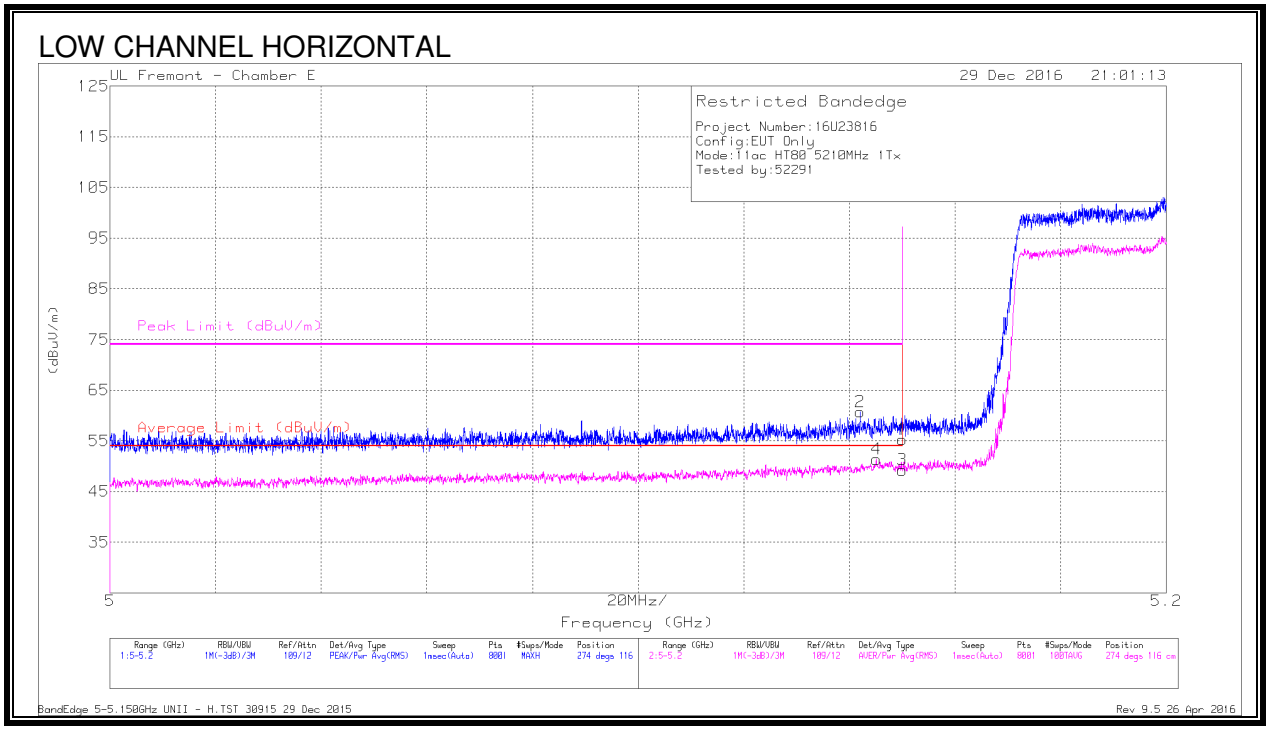
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.82	42.15	PK-U	32.7	-32.6	0	42.25	-	-	74	-31.75	-	-	185	320	H
	* 2.818	31.1	ADR	32.7	-32.6	.20	31.40	54	-22.6	-	-	-	-	185	320	H
2	* 3.783	41.36	PK-U	33.9	-32.1	0	43.16	-	-	74	-30.84	-	-	288	175	H
	* 3.782	31	ADR	33.9	-32.1	.20	33.0	54	-21.0	-	-	-	-	288	175	H
3	* 7.273	40.6	PK-U	35.8	-30.2	0	46.2	-	-	74	-27.8	-	-	285	253	H
	* 7.276	30.03	ADR	35.8	-30.3	.20	35.73	54	-18.27	-	-	-	-	285	253	H
4	* 2.658	43.18	PK-U	32.6	-33.2	0	42.58	-	-	74	-31.42	-	-	110	258	V
	* 2.657	32.32	ADR	32.6	-33.1	.20	32.02	54	-21.98	-	-	-	-	110	258	V
5	9.559	27.57	PK-U	36.7	-27.3	0	36.97	-	-	-	-	68.2	-31.23	232	104	V
6	* 12.223	35.84	PK-U	39.2	-25.5	0	49.54	-	-	74	-24.46	-	-	347	307	V
	* 12.227	25.44	ADR	39.2	-25.5	.20	39.34	54	-14.66	-	-	-	-	347	307	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-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.

9.2.8. 11ac HT80 ANTENNA B SISO MODE IN THE 5.2GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

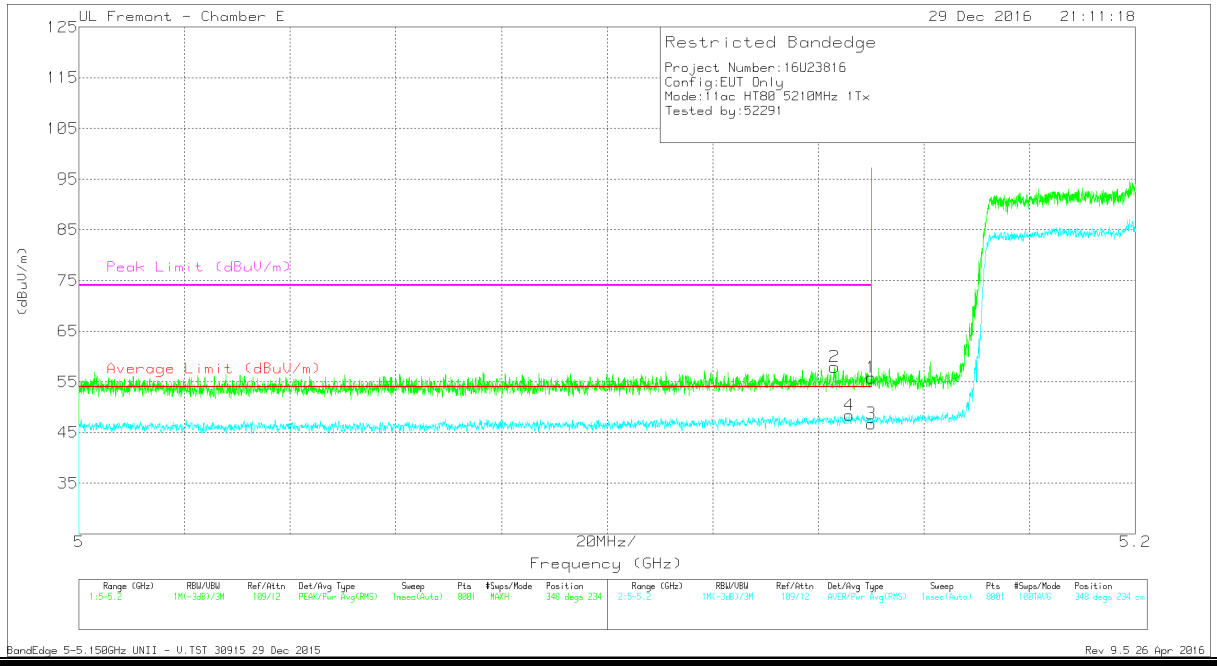


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.142	45.38	Pk	34.1	-18.8	0	60.68	-	-	74	-13.32	274	116	H
4	* 5.145	35.86	RMS	34.1	-18.8	.19	51.35	54	-2.65	-	-	274	116	H
1	5.15	39.93	Pk	34.1	-18.8	0	55.23	-	-	74	-18.77	274	116	H
3	5.15	33.75	RMS	34.1	-18.8	.19	49.24	54	-4.76	-	-	274	116	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-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



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/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	* 5.143	42.63	Pk	34.1	-18.8	0	57.93	-	-	74	-16.07	348	234	V
4	* 5.146	32.98	RMS	34.1	-18.8	.19	48.47	54	-5.53	-	-	348	234	V
1	5.15	40.52	Pk	34.1	-18.8	0	55.82	-	-	74	-18.18	348	234	V
3	5.15	31.26	RMS	34.1	-18.8	.19	46.75	54	-7.25	-	-	348	234	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

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.