FCC 47 CFR PART 15 SUBPART E

CERTIFICATION TEST REPORT
CLASS II PERMISSIVE CHANGE

FOR

TABLET WITH CELLULAR GSM/GPRS/EGPRS/WCDMA/HSPA+/ DC-HSDPA / CDMA 1XRTT /1X ADVANCED/EV-DO REV 0, A, B/ LTE/ IEEE 802.11a/b/g/n (MIMO 2x2) AND BLUETOOTH RADIO

MODEL NUMBER: A1475

FCC ID: BCGA1475

REPORT NUMBER: 15U21850-E11V2

ISSUE DATE: DECEMBER 03, 2015

Prepared for
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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
V1	11/16/2015	Initial Issue	M. Mekuria
V2	12/03/2015	Revised report to address TCB's questions	T. Chu

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: APPLE, INC.
1 INFINITE LOOP
CUPERTINO, CA 95014, U.S.A.

EUT DESCRIPTION: TABLET WITH CELLULAR GSM/GPRS/EGPRS/WCDMA/HSPA+/ DC-HSDPA/CDMA1XRTT/1X ADVANCED/EV-DO REV 0, A, B/ LTE/IEEE 802.11a/b/g/n (MIMO 2X2) AND BLUETOOTH RADIO

MODEL: A1475

SERIAL NUMBER: DLXL100PFMNL (Conducted); DLXL104MFMNJ (Radiated)

DATE TESTED: OCTOBER 06- 22, 2015, DECEMBER 03, 2015

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 Part 15 Subpart E	Pass

UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL Verification Services Inc. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

Approved & Released For
UL Verification Services Inc. By:

Mengistu Mekuria

MENGISTU MEKURIA
SENIOR ENGINEER
UL VERIFICATION SERVICES INC.

Tested By:

ERIC YU
EMC LAB ENGINEER
UL VERIFICATION SERVICES INC.

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2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 15, FCC 14-30, FCC KDB 662911 D01 v02r01, FCC KDB 905462 D02 v01r01/D03 v01r01/D06 v01, FCC KDB 789033 D02 v01, ANSI C63.10-2013.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 and 47266 Benicia Street, Fremont, California, USA. Line conducted emissions are measured only at the 47173 address. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

47173 Benicia Street	47266 Benicia Street
☐ Chamber A	☒ Chamber D
☐ Chamber B	☐ Chamber E
☐ Chamber C	☒ Chamber F
	☒ Chamber G
	☒ Chamber H

The above test sites and facilities are covered under FCC Test Firm Registration # 208313. Chambers A through H are covered under Industry Canada company address code 2324B with site numbers 2324B -1 through 2324B-8, respectively.

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at http://ts.nist.gov/standards/scopes/2000650.htm.

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4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)

36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	± 3.52 dB
Radiated Disturbance, 30 to 1000 MHz	± 4.94 dB
Radiated Disturbance, 1 to 6 GHz	± 3.86 dB
Radiated Disturbance, 6 to 18 GHz	± 4.23 dB
Radiated Disturbance, 18 to 26 GHz	± 5.30 dB
Radiated Disturbance, 26 to 40 GHz	± 5.23 dB

Uncertainty figures are valid to a confidence level of 95%.

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5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The Apple iPad Model A1475 is a tablet device with multimedia functions (music, application support, and video), cellular GSM/GPRS/EGPRS/WCDMA/HSPA+/DC-HSDPA/CDMA 1xRTT/EV-DO Rev 0, A, B /LTE radio, WIFI 802.11a/b/g/n MIMO and Bluetooth. The rechargeable battery is not user accessible.

5.2. DESCRIPTION OF CLASS II PERMISSIVE CHANGE

Upgrade 5.8GHz band to new rule per KDB 789033 D02 v01.

5.3. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

5.8GHz Band

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
5745 - 5825	802.11a 1TX	16.00	39.81
5745 - 5825	802.11n HT20 SISO	Covered by 802.11a	
5745 - 5825	802.11a 2TX CDD	Covered by 802.11n HT20 CDD 2TX	
5745 - 5825	802.11n HT20 CDD 2TX	18.87	77.09
5745 - 5825	802.11n HT20 STBC/SDM 2TX	Covered by 802.11n HT20 CDD 2TX	
5755 - 5795	802.11n HT40 1TX	15.94	39.26
5755 - 5795	802.11n HT40 CDD 2TX	18.87	77.09
5755 - 5795	802.11n HT40 STBC/SDM 2TX	Covered by 802.11n HT40 CDD 2TX	

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5.4. DESCRIPTION OF AVAILABLE ANTENNAS

Frequency Band (GHz)	Antenna Gain	
	Chain 0	Chain 1
5.8	4.21	3.92

5.5. SOFTWARE AND FIRMWARE

The test utility software used during testing was Broadcom WL Tool Version 6.25.86.

5.6. WORST-CASE CONFIGURATION AND MODE

There are two vendors of the WiFi/Bluetooth radio modules: BOM #1, vender1 and BOM #2, vender 2, and they have the same mechanical outline, same on board antenna, matching circuit, antenna structure and same specification and baseline was performed on both venders to determine the worst case.

The fundamental of the EUT was investigated in three orthogonal orientations X,Y,Z, it was determined that Z orientation was worst-case orientation for 5GHz; therefore, all final radiated testing was performed with the EUT in Z orientation for 5GHz.

Worst-Case data rates, as provided by the client, were as follows:

802.11a mode: 6 Mbps
802.11n HT20mode: MCS0
802.11n HT40mode: MCS0

Worst-case mode and channel used for 30-1000 MHz radiated and power line conducted emissions was including headset, AC charger and the mode and channel with the highest output power.

For all modes with single chain, chain 0 was selected per the software provided by the client. Based on the client a preliminary investigation was performed on the two chains and chain 0 was found to be worst-case.

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5.7. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Description	Manufacturer	Model	Serial Number	FCC ID
Laptop	Apple	MacBook Pro	73043BDQAGU	N/A
Laptop AC/DC adapter	Apple	A1172	MV7211FJAX4XA	N/A
Earphone	Apple	NA	NA	N/A
EUT AC/DC adapter	Apple	A1357	W010A051	N/A

I/O CABLES (CONDUCTED TEST)

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	Antenna	1	SMA	Un-Shielded	0.2	To spectrum Analyzer
2	USB	1	USB	Shielded	1	N/A
3	AC	1	AC	Un-shielded	3	N/A

I/O CABLES (RADIATED ABOVE 1 GHZ)

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
None Used						

I/O CABLES (RADAITED BELOW 1 GHZ)

I/O Cable List						
Cable No	Port	# of identical	Connector Type	Cable Type	Cable Length (m)	Remarks
1	Headphones Jack	1	3.5mm Audio	Shielded	0.9	N/A
2	AC	1	AC	Un-shielded	3	N/A

I/O CABLES (AC LINE CONDUCTED: AC/DC ADAPTER)

I/O Cable List						
Cable No	Port	# of identical	Connector Type	Cable Type	Cable Length (m)	Remarks
1	Headphones Jack	1	3.5mm Audio	Shielded	0.9	N/A
2	AC	1	AC	Un-shielded	3	N/A

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I/O CABLES (AC LINE CONDUCTED: LAPTOP CONFIGUARTION)

I/O Cable List						
Cable No	Port	# of identical	Connector Type	Cable Type	Cable Length (m)	Remarks
1	Headphones Jack	1	3.5mm Audio	Shielded	0.9	N/A
2	USB	1	USB	Shielded	1	N/A
3	AC	1	AC	Un-shielded	3	N/A

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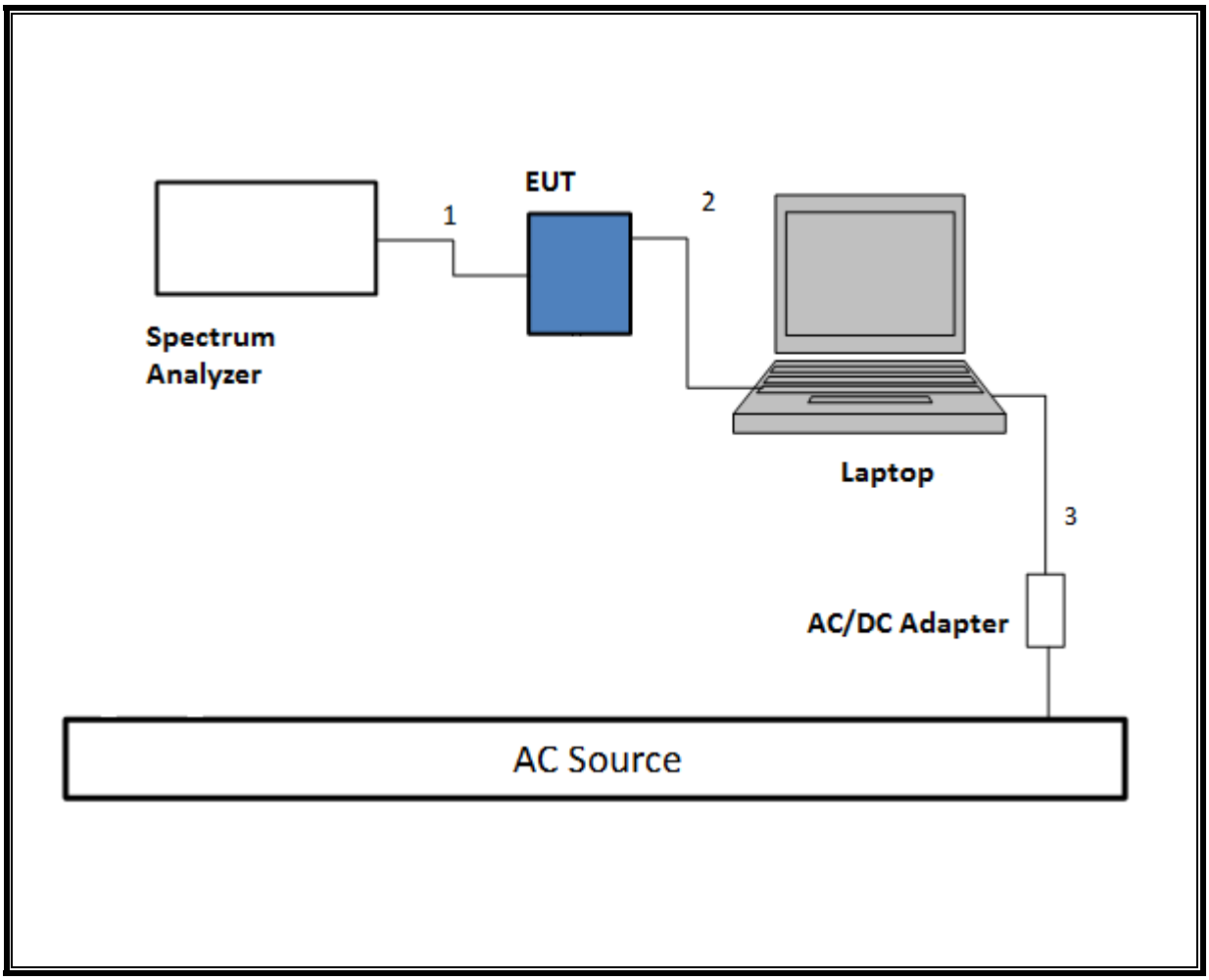
TEST SETUP - CONDUCTED TESTS

The EUT was tested connected to a host Laptop via USB cable adapter and spectrum analyzer to antenna port. Test software exercised the EUT.

SETUP DIAGRAM



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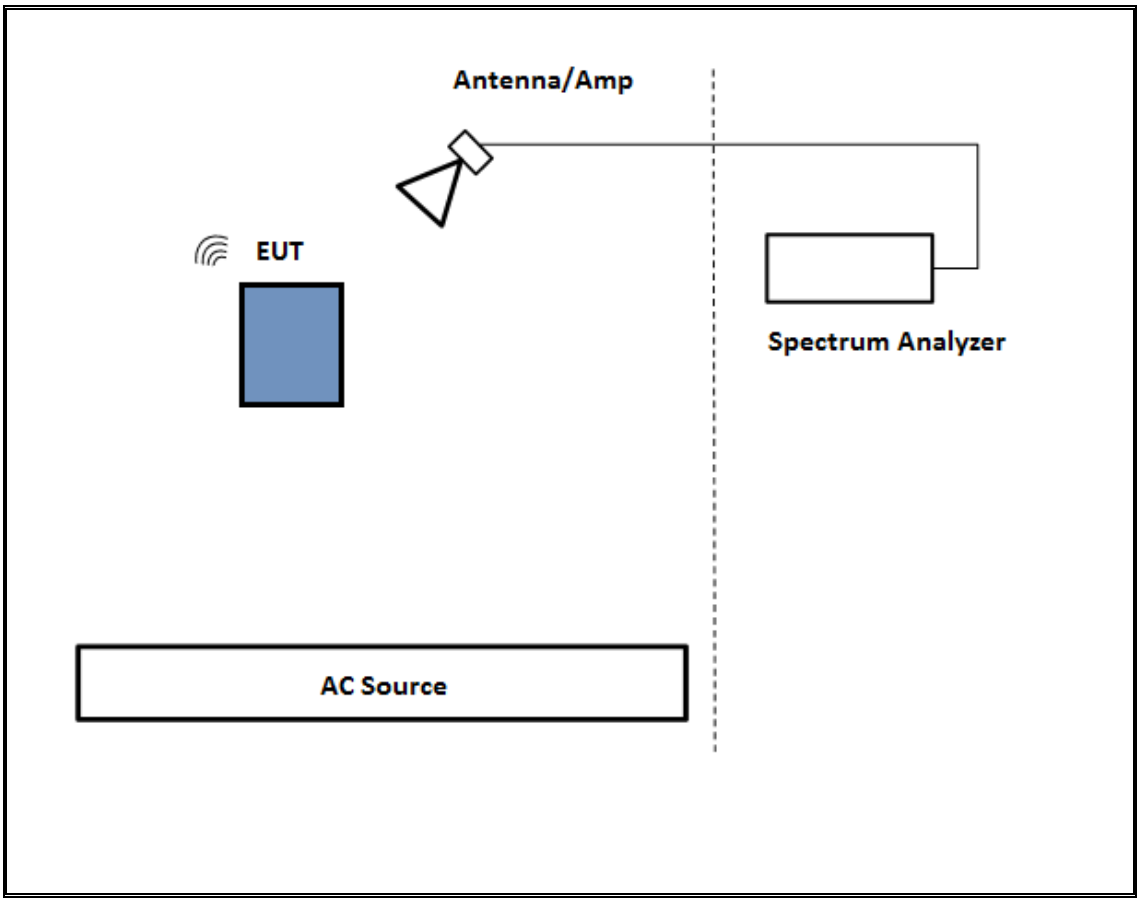
TEST SETUP- RADIATED-ABOVE 1 GHZ

The EUT was tested battery powered. Test software exercised the EUT.

SETUP DIAGRAM



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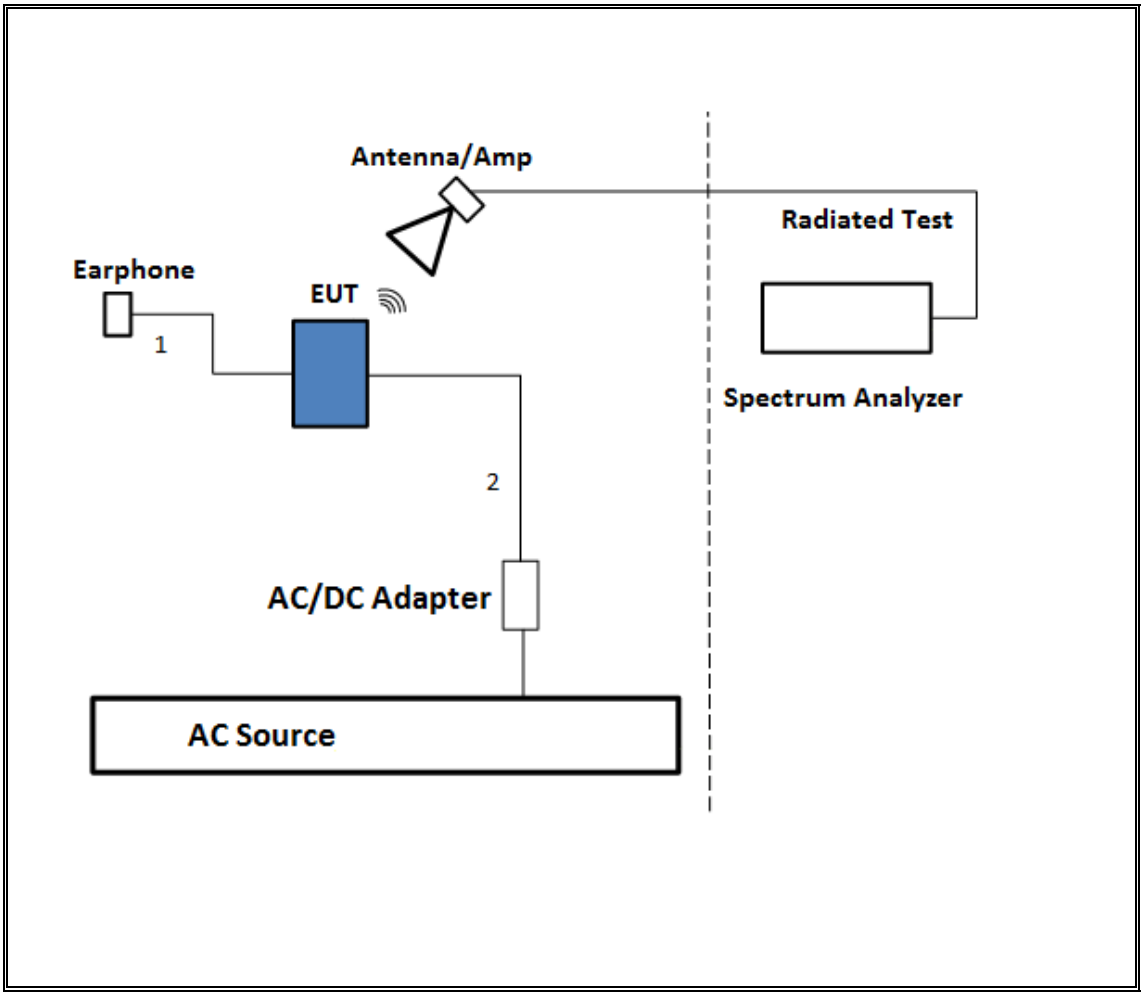
TEST SETUP- BELOW 1GHz

The EUT was tested with earphone connected and powered by AC adapter. Test software exercised the EUT.

SETUP DIAGRAM



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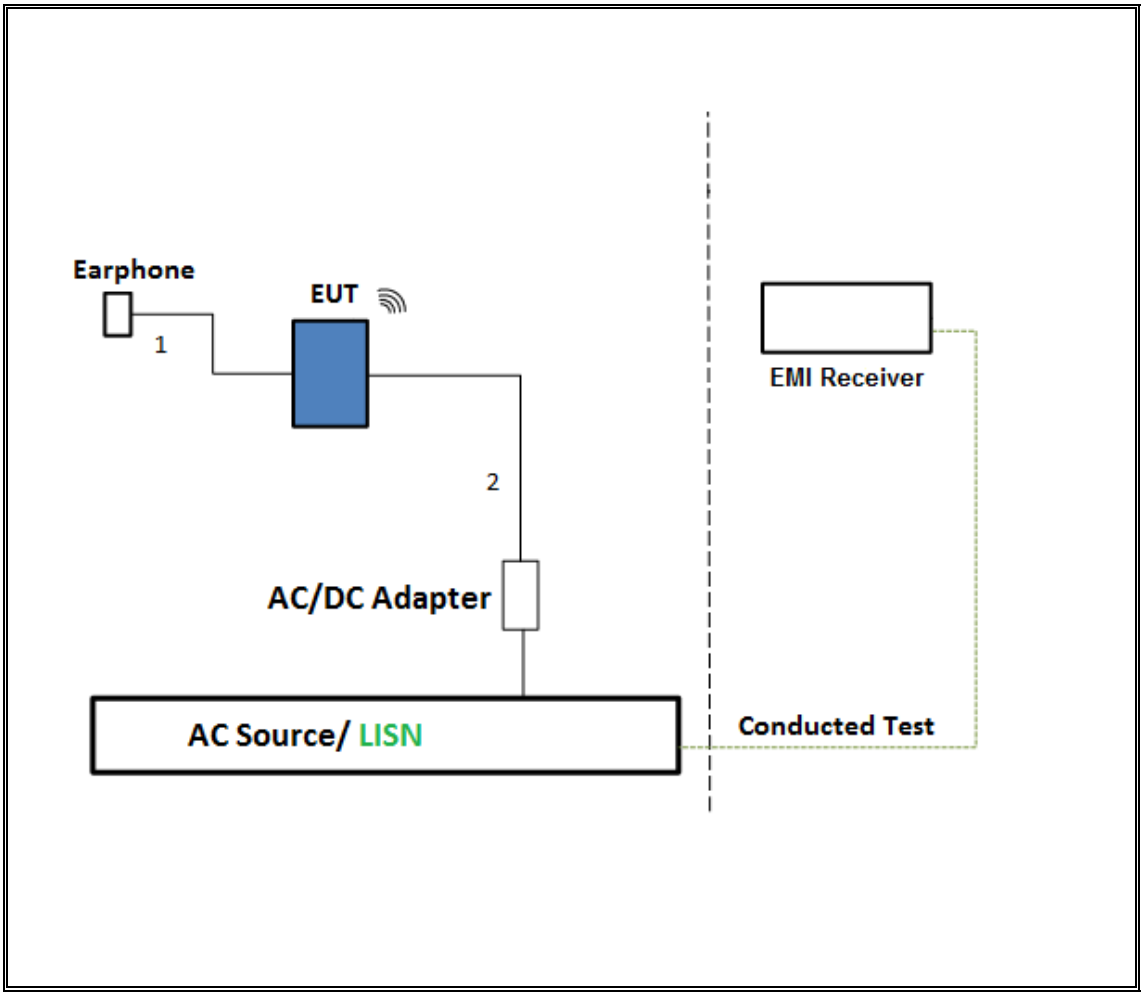
TEST SETUP- AC LINE CONDUCTED: AC/DC ADAPTER

The EUT was tested with earphone connected and powered by AC/DC adapter via USB cable. Test software exercised the EUT.

SETUP DIAGRAM



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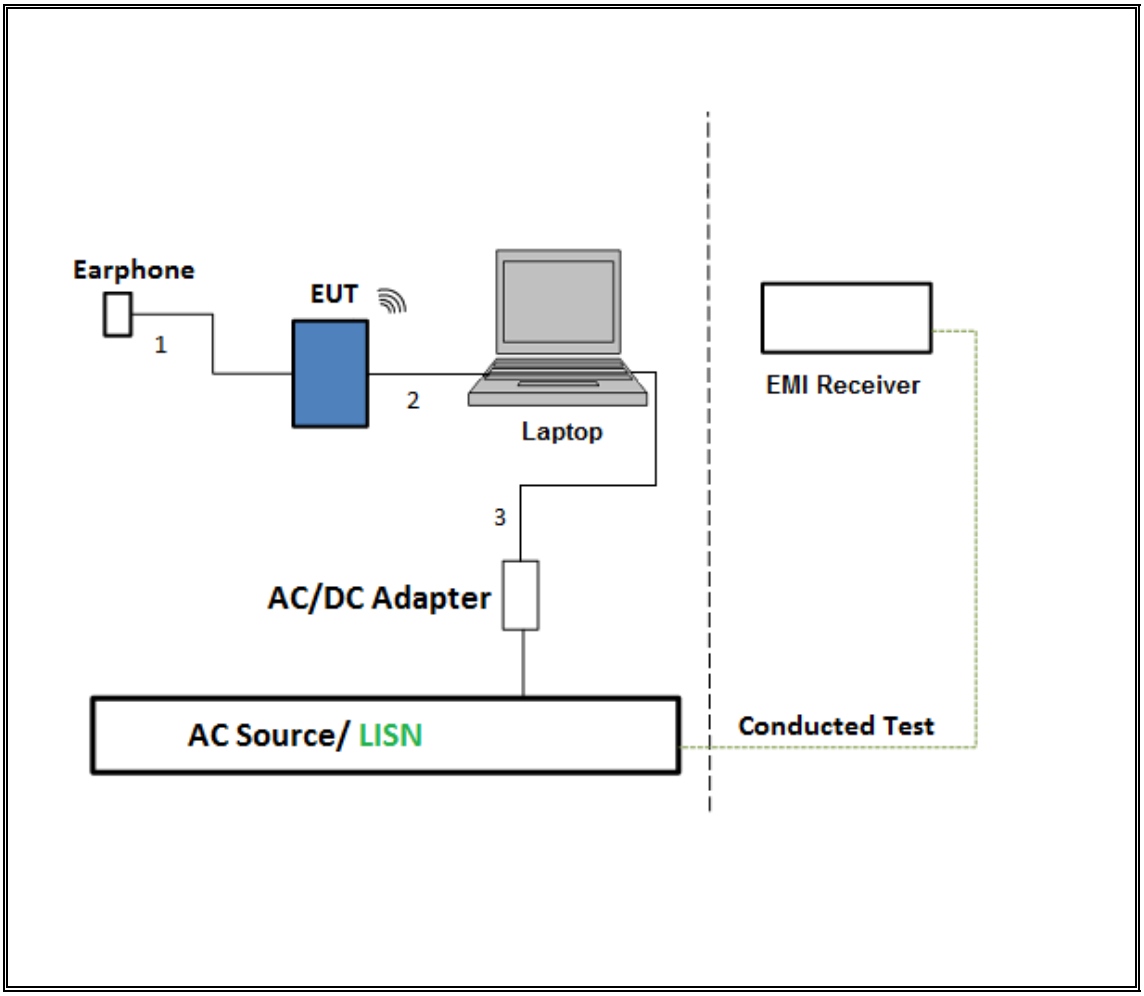
TEST SETUP- AC LINE CONDUCTED: LAPTOP CONFIGURATION

The EUT was tested with earphone connected and powered by host PC via USB cable. Test software exercised the EUT.

SETUP DIAGRAM



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6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

Test Equipment List				
Description	**Manufacturer**	**Model**	**Asset**	**Cal Due**
Antenna, Horn 1-18GHz	ETS Lindgren	3117	00143448	2/10/2016
Antenna, Broadband Hybrid, 30MHz to 2000MHz	Sunol Sciences	JB3	A022813-1	1/14/2016
Amplifier, 1 - 18GHz	Miteq	AFS42-00101800-25-S-42	1782158	1/26/2016
Amplifier, 10KHz to 1GHz, 32dB	Sonoma	310N	323561	6/8/2016
Spectrum Analyzer, PXA, 3Hz to 50GHz	Agilent	N9030A	MY52350427	8/4/2016
Amplifier, 10KHz to 1GHz, 32dB	Sonoma	310N	325117	6/9/2016
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent	N9030A-544	US51160264	12/23/2015
Power Meter, P-series single channel	Agilent	N1911A	MY45100242	7/30/2016
Power Sensor, P - series, 50MHz to 18GHz, Wideband	Agilent	N1921A	MY53260010	7/12/2016
Antenna, Horn 18 to 26.5GHz	ARA	MWH-1826	1049	12/17/2015
Horn Antenna, 40GHz	ARA	MWH-2640/B	1029	7/15/2016
Spectrum Analyzer, 40 GHz	Agilent	8564E	3943A01643	8/6/2016
Amplifier, 1 to 26.5GHz, 23.5dB Gain minimum	Agilent	8449B	3008A04710	6/29/2016
Amplifier, 26 to 40GHz	Miteq	NSP4000-SP2	88	4/7/2016
AC Line Conducted				
EMI Test Receiver 9Khz-7GHz	Rohde & Schwarz	ESCI7	100773	8/7/2016
LISN for Conducted Emissions CISPR-16	FCC	50/250-25-2	114	1/16/2016
Power Cable, Line Conducted Emissions ANSI 63.4	UL	PG1	N/A	7/28/2016
UL SOFTWARE				
*Radiated Software	UL	UL EMC	Ver 9.5, July 22, 2014	
*Conducted Software	UL	UL EMC	Ver 2.2, March 31, 2015	
*AC Line Conducted Software	UL	UL EMC	Ver 9.5, April 3, 2015	

Note: * indicates automation software version used in the compliance certification testing

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7. ON TIME, DUTY CYCLE AND MEASUREMENT METHODS

7.1. ON TIME AND DUTY CYCLE

LIMITS

None; for reporting purposes only.

PROCEDURE

KDB 789033 Zero-Span Spectrum Analyzer Method.

RESULTS

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/B Minimum VBW (kHz)
802.11a 1TX	2.064	2.092	0.987	98.66%	0.00	0.010
802.11n HT20 CDD	1.908	1.940	0.984	98.35%	0.00	0.010
802.11n HT40 1TX	0.932	0.958	0.973	97.29%	0.12	1.073
802.11n HT40 CDD	0.932	0.958	0.973	97.29%	0.12	1.073

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DUTY CYCLE PLOTS

DUTY CYCLE 802.11a 1TX

DUTY CYCLE 802.11n HT20 CDD MODE

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DUTY CYCLE 802.11n HT40 1TX MODE

DUTY CYCLE 802.11n HT40 CDD MODE

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7.2. MEASUREMENT METHODS

26 dB Emission BW & 6 dB Emission BW: KDB 789033 D02 v01, Section C.

99% Occupied BW: KDB 789033 D02 v01, Section D.

Conducted Output Power: KDB 789033 D02 v01, Section E.3.b (Method PM-G).

Power Spectral Density: KDB 789033 D02 v01, Section F.

Unwanted emissions in restricted bands: KDB 789033 D02 v01, Sections G.3, G.4, G.5, and G.6.

Unwanted emissions in non-restricted bands: KDB 789033 D02 v01, Sections G.3, G.4, and G.5.

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8. ANTENNA PORT TEST RESULTS

8.1. 802.11a 1Tx MODE IN THE 5.8 GHz BAND

8.1.1. 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)
Low	5745	16.38	0.5
Mid	5785	16.38	0.5
High	5825	16.41	0.5

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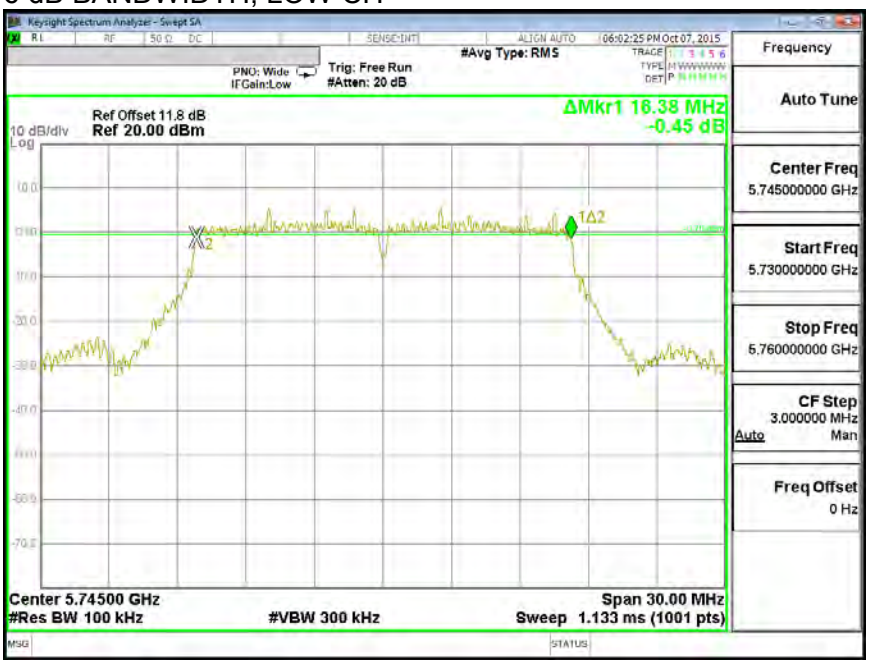
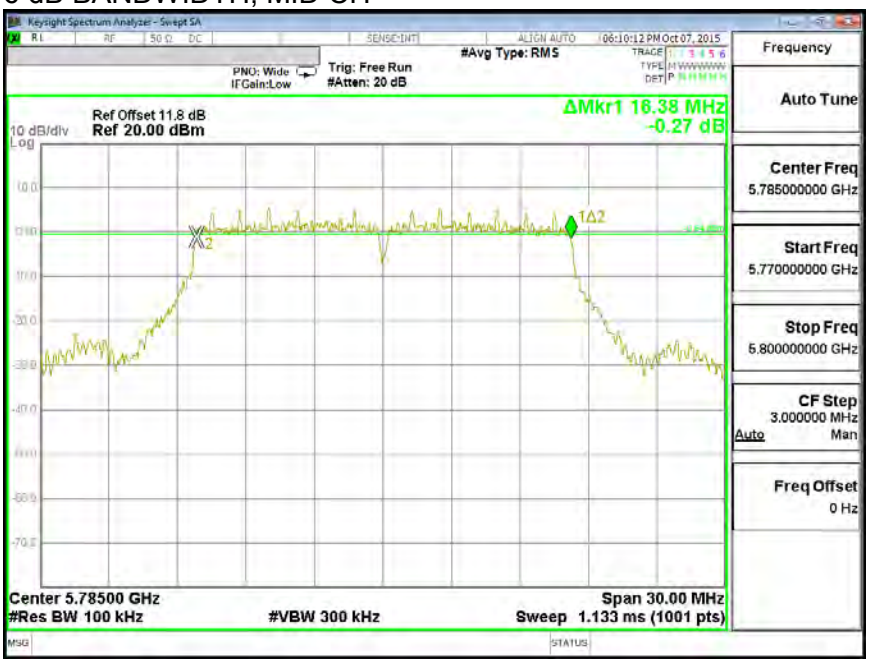
6 dB BANDWIDTH

6 dB BANDWIDTH, LOW CH



6 dB BANDWIDTH, MID CH



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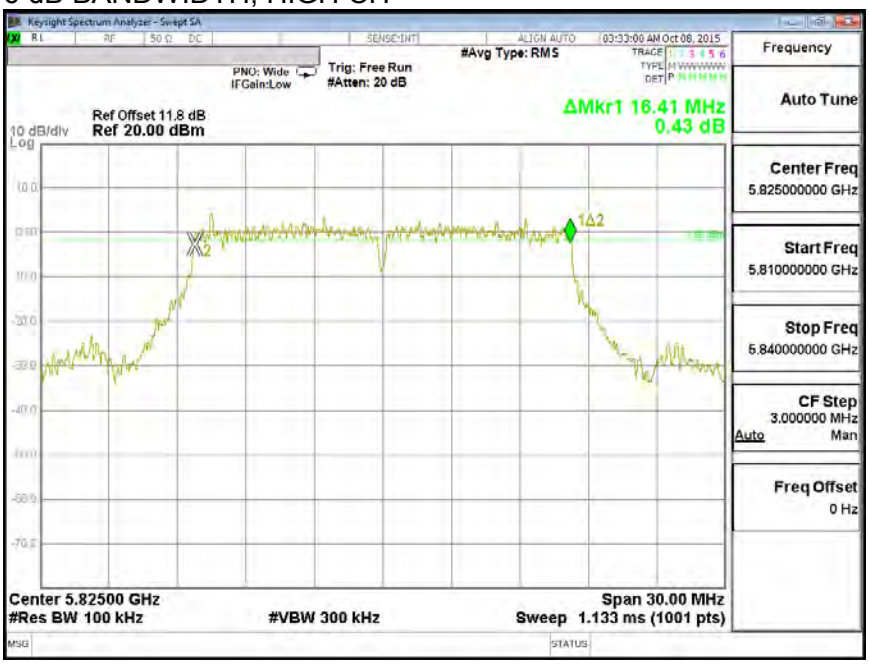
6 dB BANDWIDTH, HIGH CH



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8.1.2. 26 dB BANDWIDTH

LIMITS

None, for reporting purposes only

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5745	20.16
Mid	5785	20.52
High	5825	20.28

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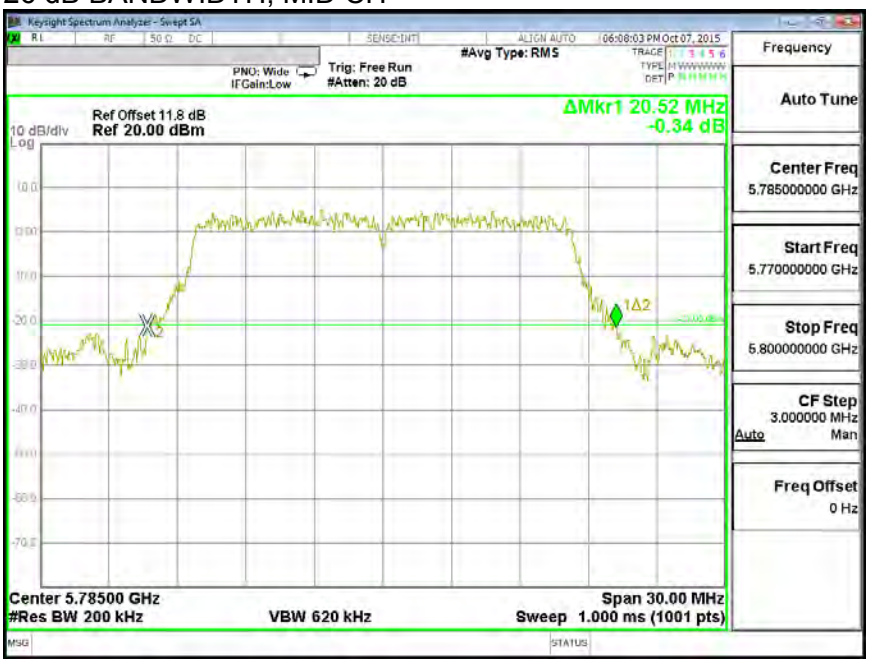
26 dB BANDWIDTH

26 dB BANDWIDTH, LOW CH

26 dB BANDWIDTH, MID CH



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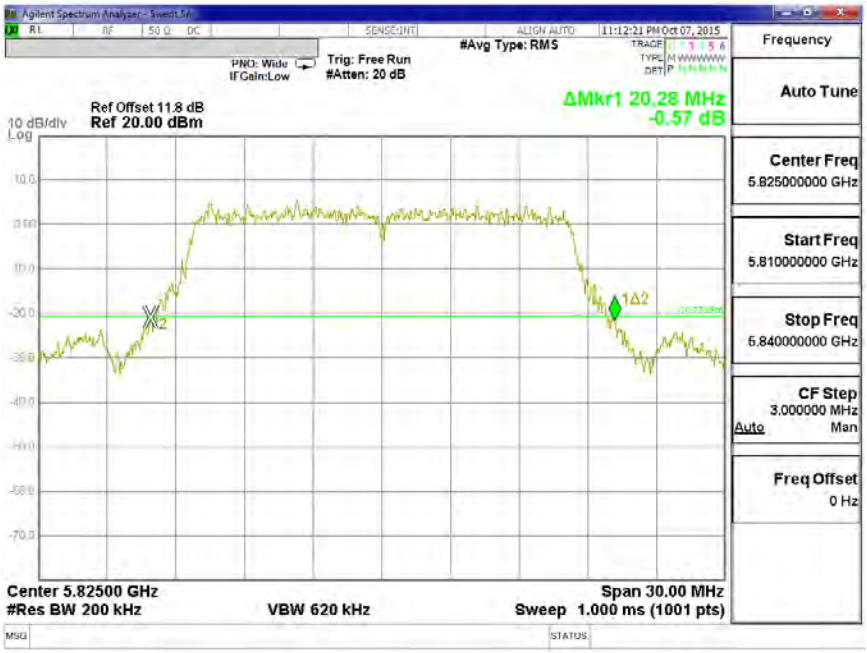
26 dB BANDWIDTH, HIGH CH



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8.1.3. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Frequency (MHz)	99% Bandwidth (MHz)
5745	16.454
5785	16.540
5825	16.457

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99% BANDWIDTH

BANDWIDTH, LOW CH

BANDWIDTH, MID CH

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BANDWIDTH, HIGH CH

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8.1.4. 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)
Low	5745	15.92
Mid	5785	16.00
High	5825	15.98

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8.1.5. 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.

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RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Power Limit (dBm)
Low	5745	4.21	30.00
Mid	5785	4.21	30.00
High	5825	4.21	30.00

Output Power Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	15.92	15.92	30.00	-14.08
Mid	5785	16.00	16.00	30.00	-14.00
High	5825	15.98	15.98	30.00	-14.02

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8.1.6. 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)
Low	5745	4.21	30.00
Mid	5785	4.21	30.00
High	5825	4.21	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD

PSD Results

Channel	Frequency (MHz)	Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5745	2.11	2.11	30.00	-27.89
Mid	5785	2.17	2.17	30.00	-27.83
High	5825	2.13	2.13	30.00	-27.87

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PSD,

PSD, LOW CH

PSD, MID CH

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PSD, HIGH CH

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8.2. 802.11n HT20 2Tx CDD MODE IN THE 5.8 GHz BAND

8.2.1. 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 Chain 0 (MHz)	6 dB BW Chain 1 (MHz)	Minimum Limit (MHz)
Low	5745	17.67	17.61	0.5
Mid	5785	17.61	17.61	0.5
High	5825	17.61	17.52	0.5

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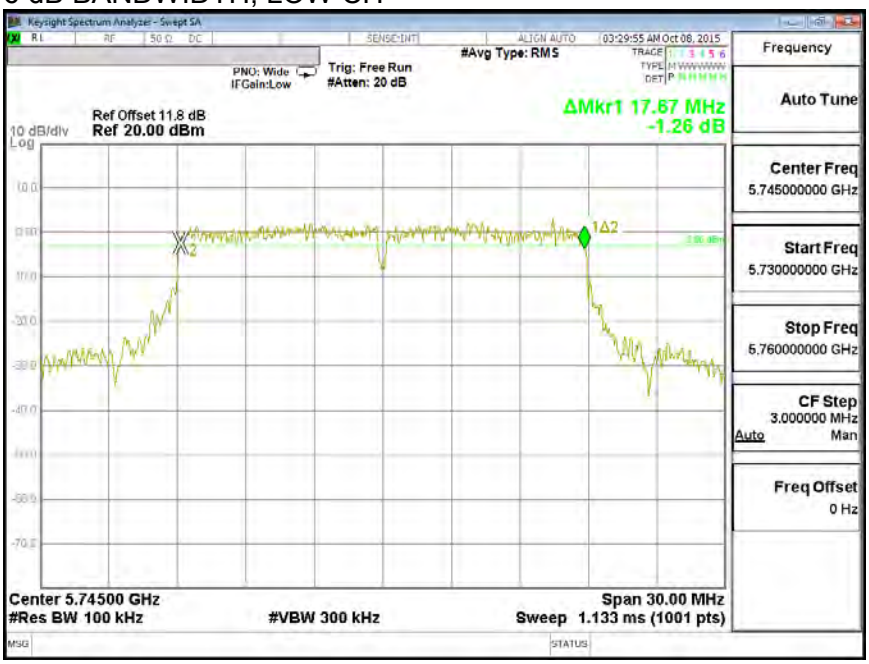
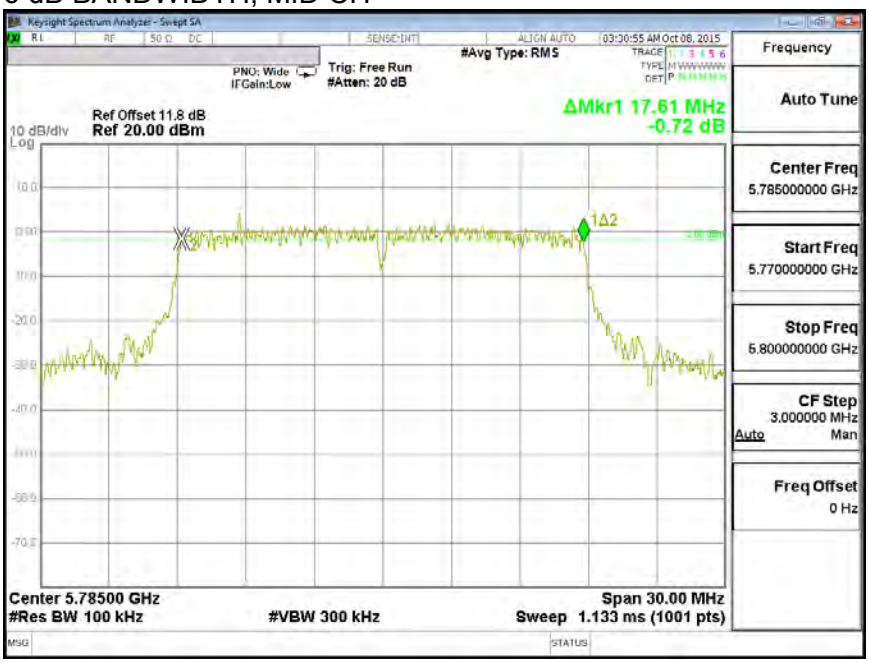
6 dB BANDWIDTH, CHAIN 0

6 dB BANDWIDTH, LOW CH



6 dB BANDWIDTH, MID CH



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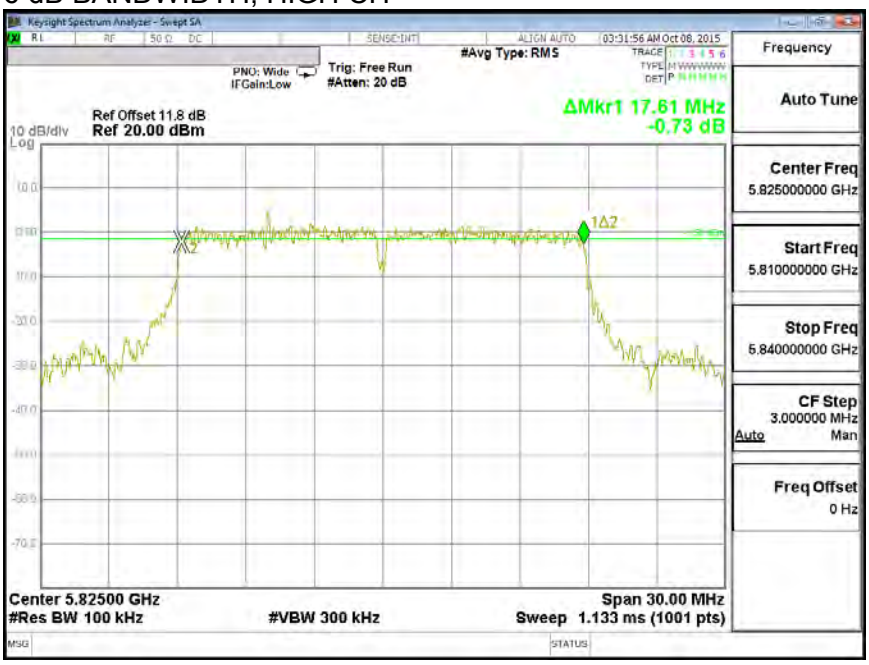
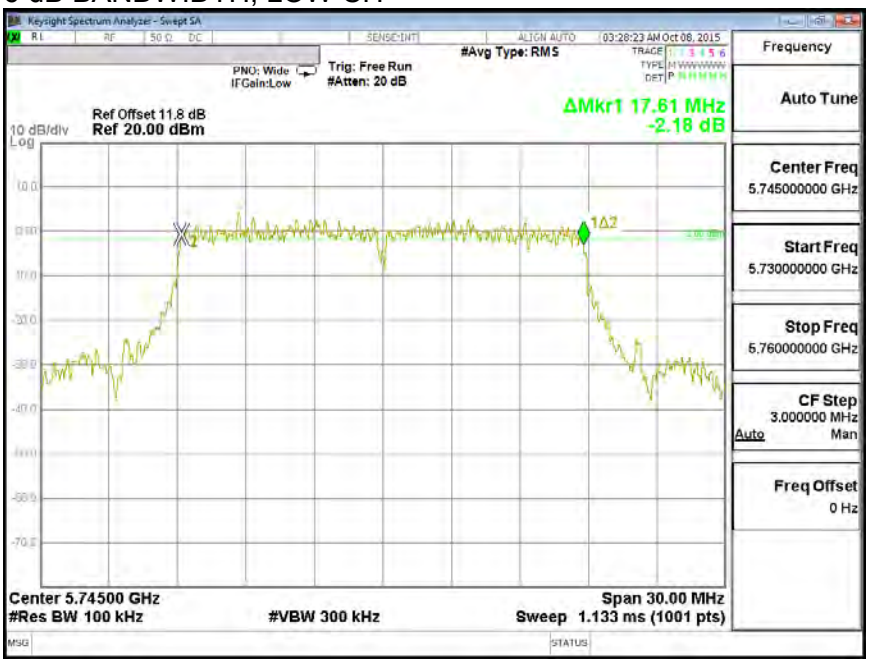
6 dB BANDWIDTH, HIGH CH



6 dB BANDWIDTH, CHAIN 1

6 dB BANDWIDTH, LOW CH



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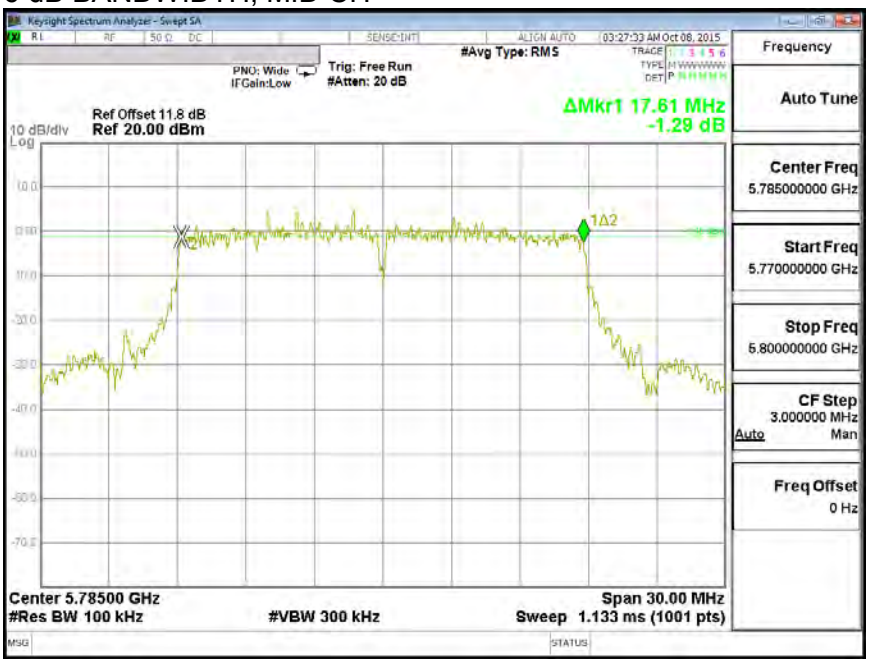
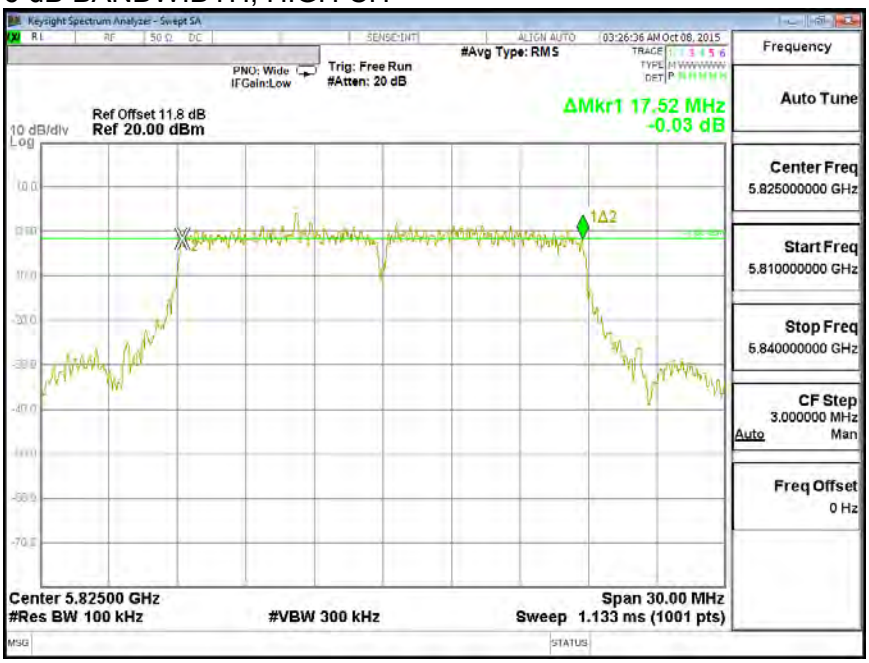
6 dB BANDWIDTH, MID CH



6 dB BANDWIDTH, HIGH CH



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8.2.2. 26 dB BANDWIDTH

LIMITS

None, for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB BW Chain 0 (MHz)	26 dB BW Chain 1 (MHz)
Low	5745	20.25	20.55
Mid	5785	20.64	20.46
High	5825	20.52	20.73

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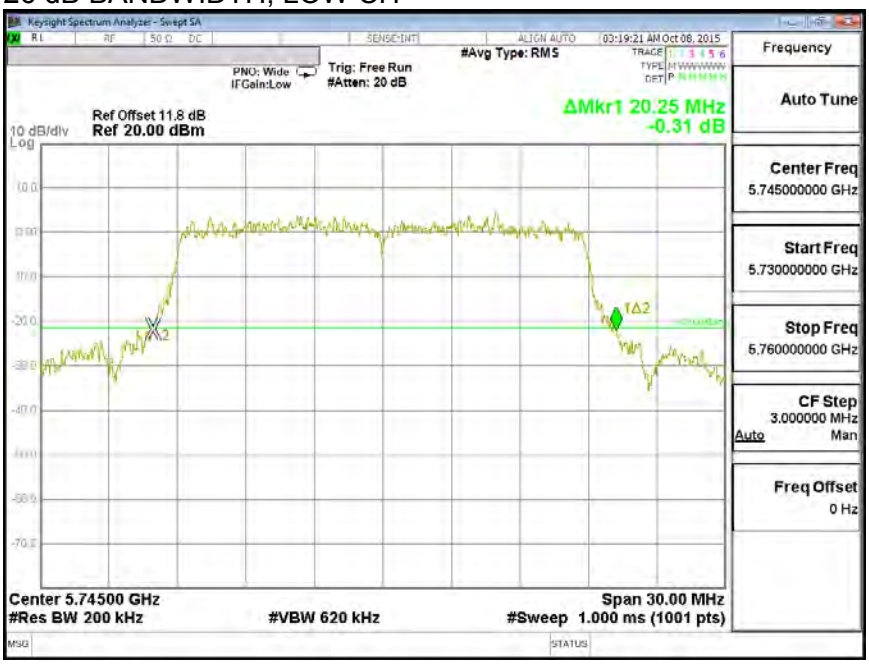
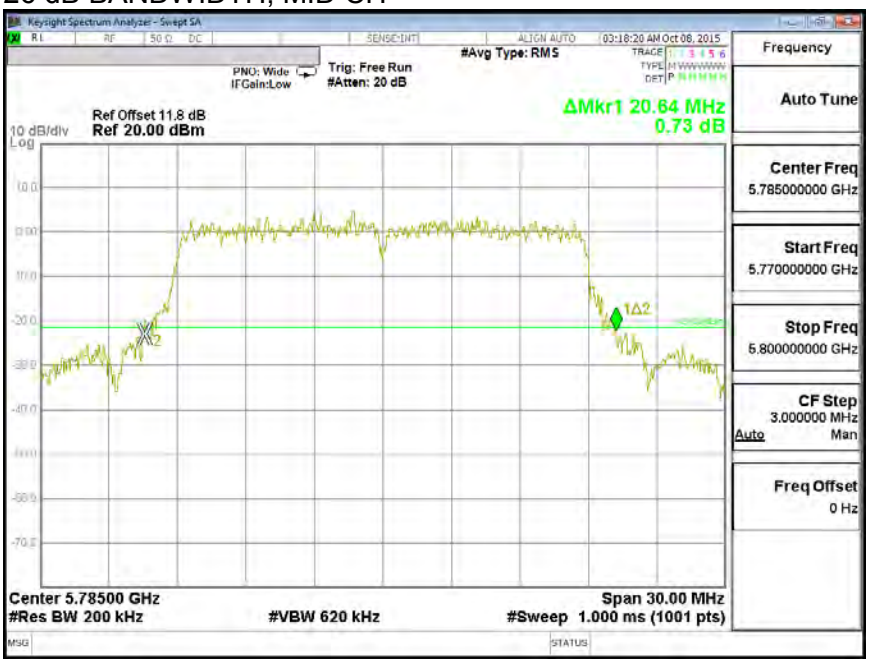
26 dB BANDWIDTH, CHAIN 0

26 dB BANDWIDTH, LOW CH



26 dB BANDWIDTH, MID CH



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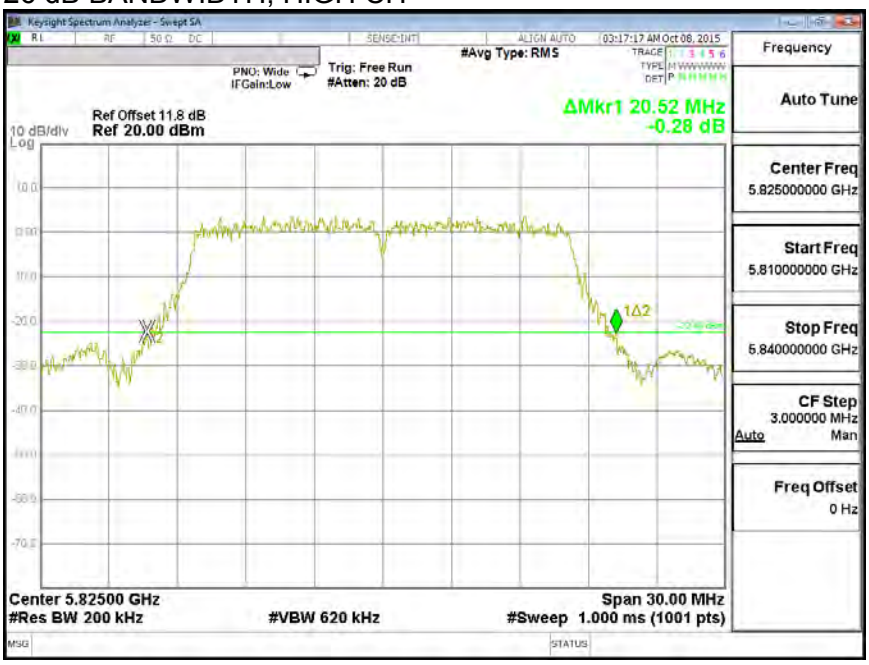
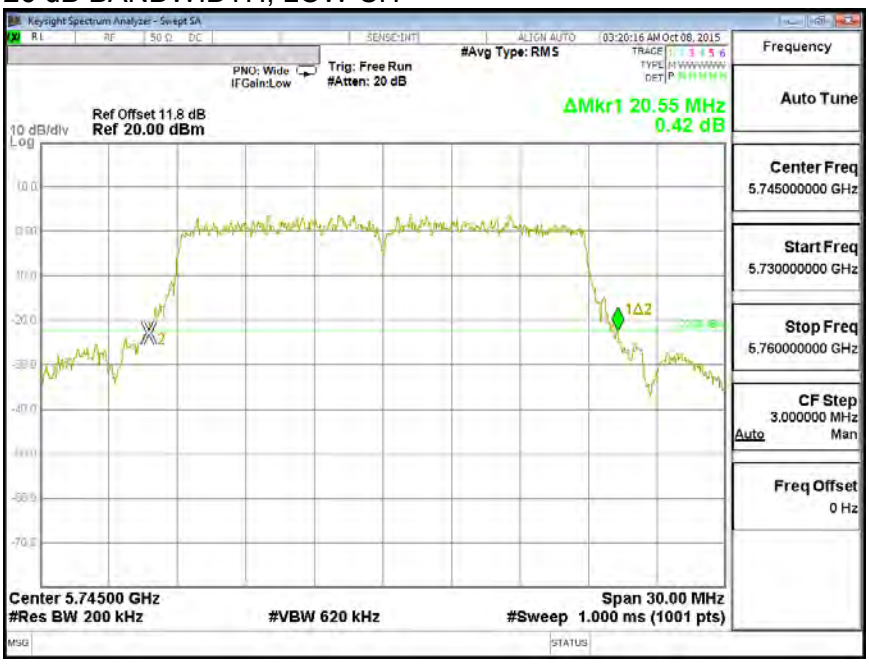
26 dB BANDWIDTH, HIGH CH



26 dB BANDWIDTH, CHAIN 1

26 dB BANDWIDTH, LOW CH



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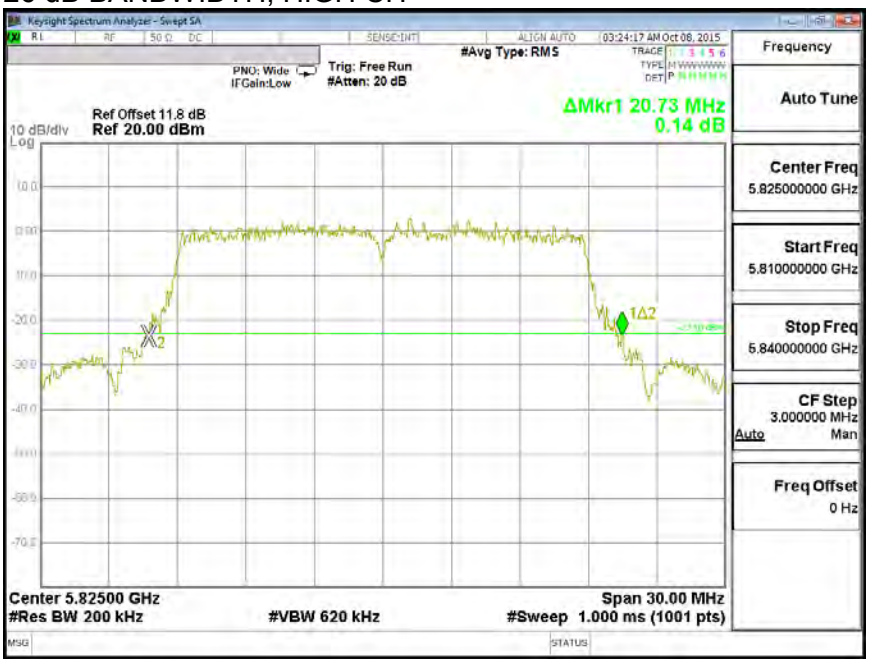
26 dB BANDWIDTH, MID CH

26 dB BANDWIDTH, HIGH CH



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8.2.3. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)
Low	5745	17.615	17.642
Mid	5785	17.625	17.636
High	5825	16.377	17.691

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99% BANDWIDTH, CHAIN 0

99% BANDWIDTH, LOW CH

99% BANDWIDTH, MID CH

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99% BANDWIDTH, HIGH CH

99% BANDWIDTH, CHAIN 1

99% BANDWIDTH, LOW CH

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99% BANDWIDTH, MID CH

99% BANDWIDTH, HIGH CH

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8.2.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

Test Procedure

Measurements perform using a wideband gated RF power meter.

RESULTS

Channel	Frequency (MHz)	Chain 0 Power (dBm)	Chain 1 Power (dBm)	Total Power (dBm)
Low	5745	14.21	14.13	17.18
Mid	5785	15.95	15.75	18.86
High	5825	15.99	15.72	18.87

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8.2.5. 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:

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
4.21	3.92	4.07

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RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Power Limit (dBm)
Low	5745	4.07	30.00
Mid	5785	4.07	30.00
High	5825	4.07	30.00

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	14.21	14.13	17.18	30.00	-12.82
Mid	5785	15.95	15.75	18.86	30.00	-11.14
High	5825	15.99	15.72	18.87	30.00	-11.13

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8.2.6. 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:

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
4.21	3.92	7.08

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RESULTS

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5745	7.08	28.92
Mid	5785	7.08	28.92
High	5825	7.08	28.92

Duty Cycle CF (dB)	0.00	**Included in Calculations of Corr'd PSD**

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5745	0.40	0.37	3.39	28.92	-25.53
Mid	5785	1.93	2.03	4.99	28.92	-23.93
High	5825	1.93	1.98	4.97	28.92	-23.95

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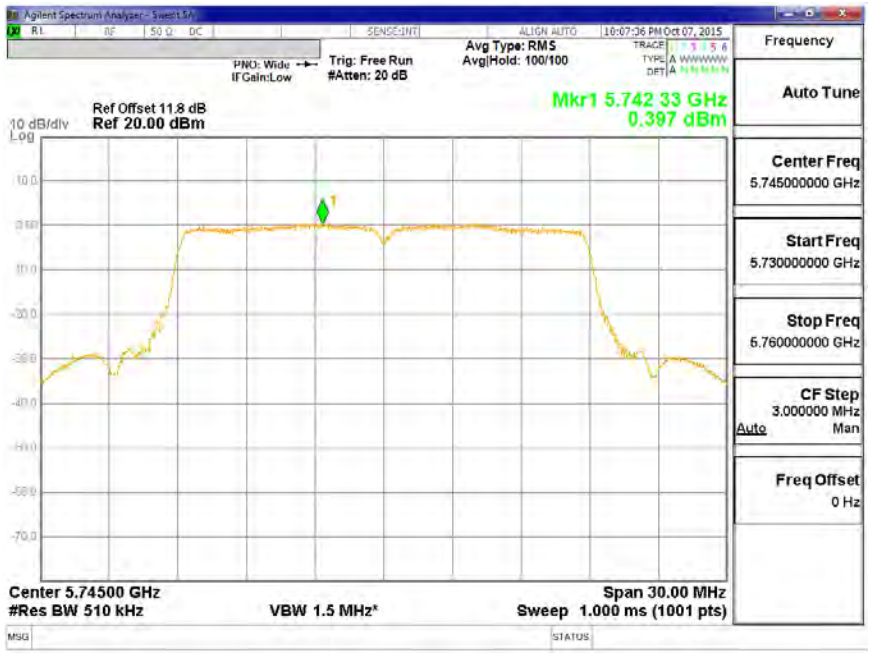
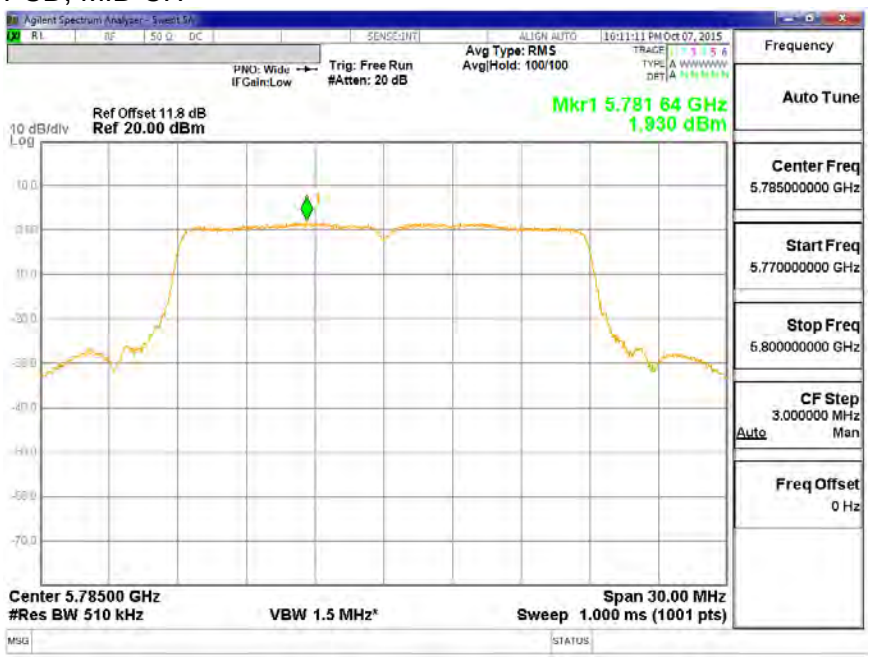
PSD,

PSD, LOW CH



PSD, MID CH



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PSD, HIGH CH

PSD, CHAIN 1

PSD, LOW CH

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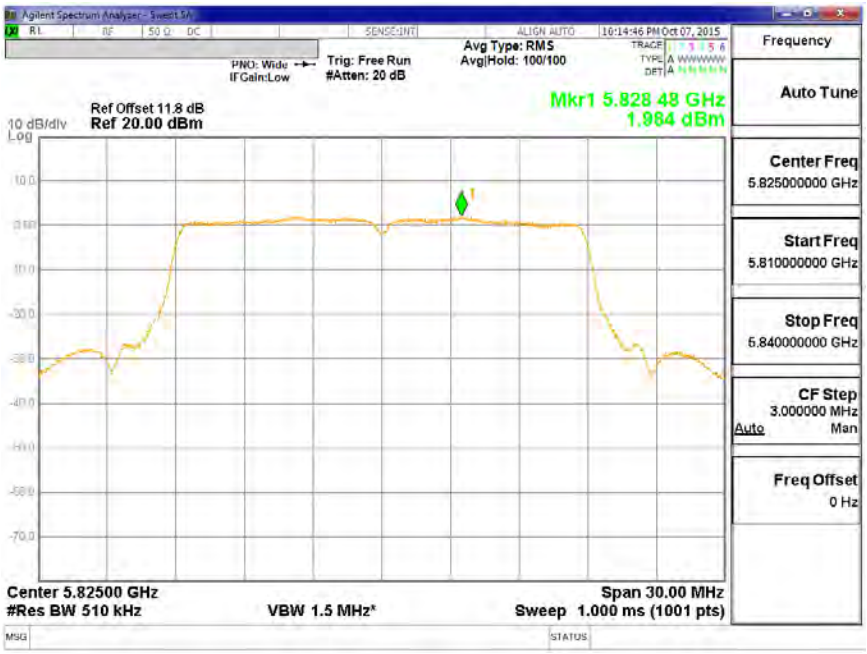
PSD, MID CH

PSD, HIGH CH



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8.3. 802.11n HT40 1Tx MODE IN THE 5.8 GHz BAND

8.3.1. 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)
Low	5755	36.30	0.5
High	5795	36.24	0.5

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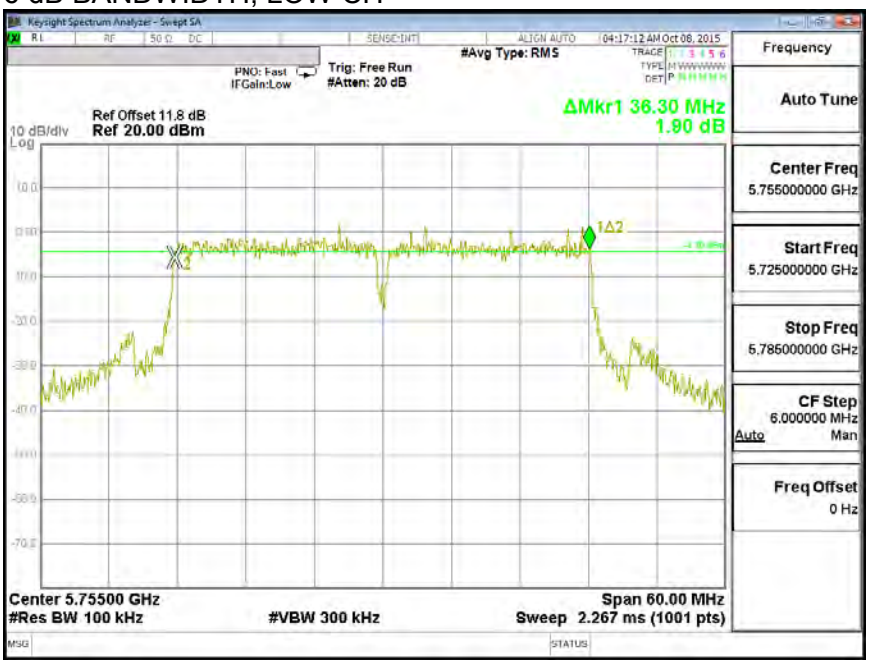
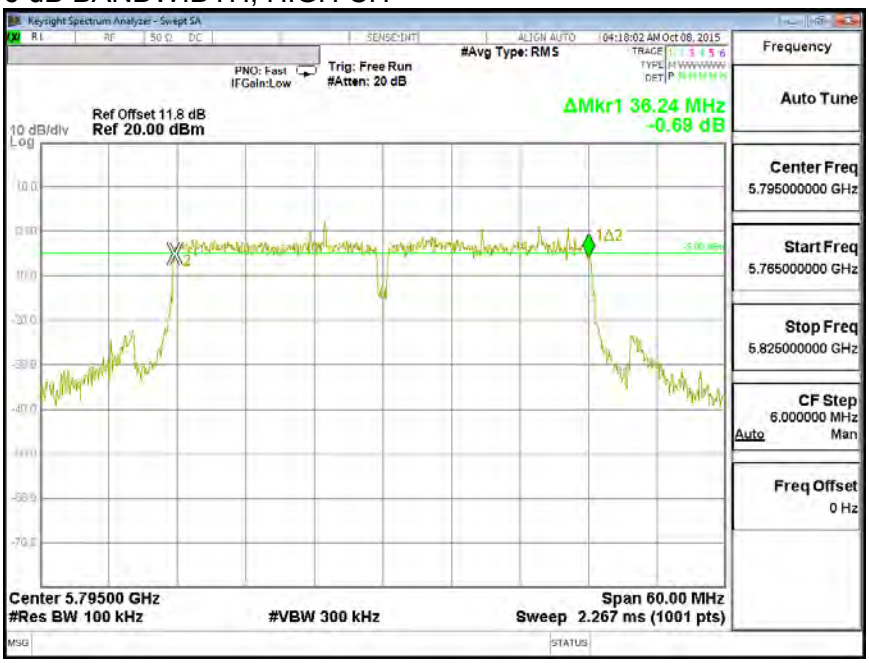
6 dB BANDWIDTH

6 dB BANDWIDTH, LOW CH



6 dB BANDWIDTH, HIGH CH



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8.3.2. 26 dB BANDWIDTH

LIMITS

None, for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5755	39.72
High	5795	39.66

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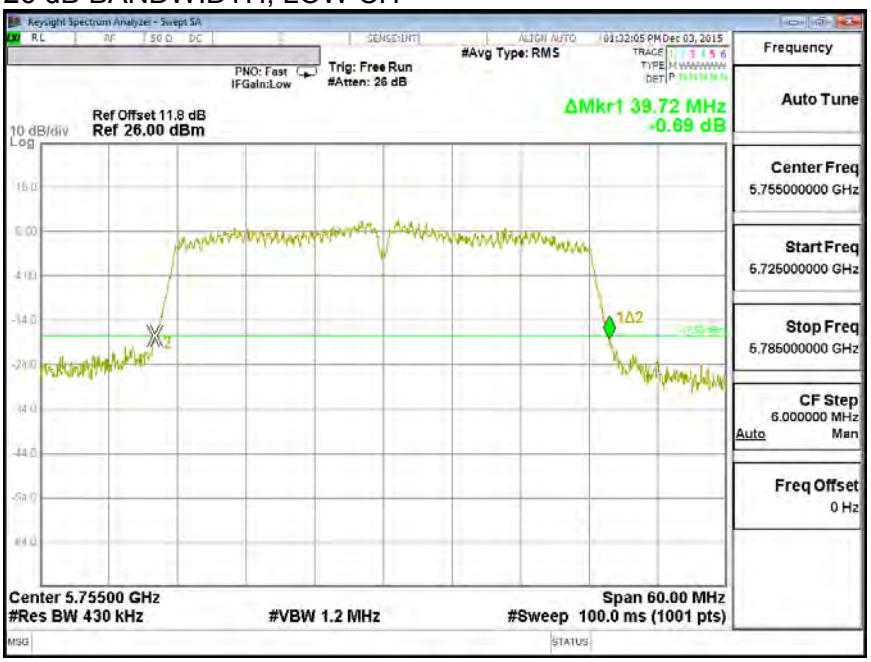
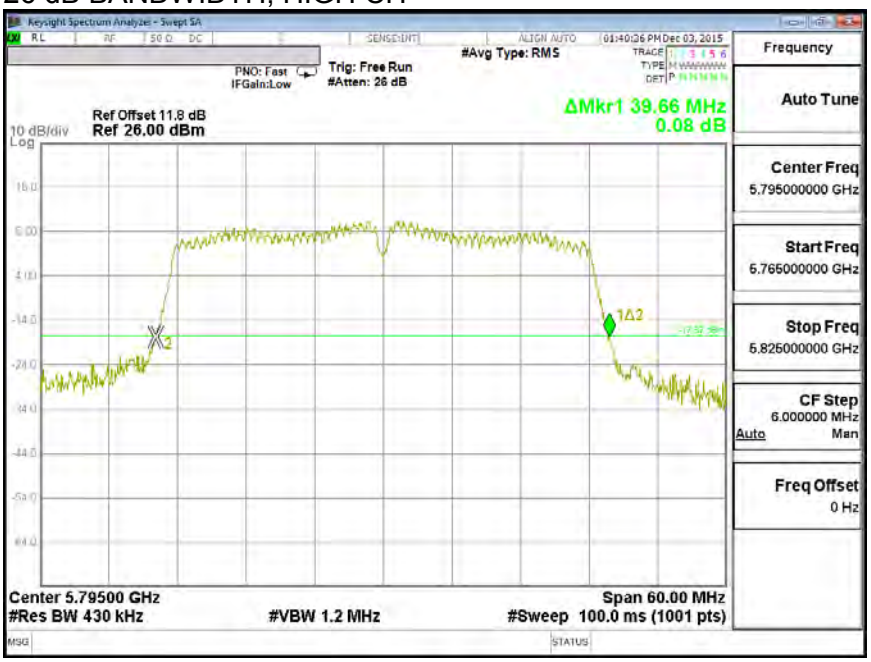
26 dB BANDWIDTH

26 dB BANDWIDTH, LOW CH



26 dB BANDWIDTH, HIGH CH



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8.3.3. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5755	36.132
High	5795	36.461

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99% BANDWIDTH

99% BANDWIDTH, LOW CH

99% BANDWIDTH, HIGH CH

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8.3.4. 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)
Low	5755	13.80
High	5795	15.94

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8.3.5. 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.

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RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Low	5755	4.21	30.00
High	5795	4.21	30.00

Output Power Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5755	13.80	13.80	30.00	-16.20
High	5795	15.94	15.94	30.00	-14.06

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8.3.6. 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.

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RESULTS

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5755	4.21	30.00
High	5795	4.21	30.00

Duty Cycle CF (dB)	0.12	**Included in Calculations of Corr'd PSD**

PSD Results

Channel	Frequency (MHz)	Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5755	-6.84	-6.72	30.00	-36.72
High	5795	-1.16	-1.04	30.00	-31.04

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PSD,

PSD, LOW CH

PSD, HIGH CH

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8.4. 802.11n HT40 2Tx CDD MODE IN THE 5.8 GHz BAND

8.4.1. 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 Chain 0 (MHz)	6 dB BW Chain 1 (MHz)	Minimum Limit (MHz)
Low	5755	36.30	36.36	0.5
High	5795	36.24	36.36	0.5

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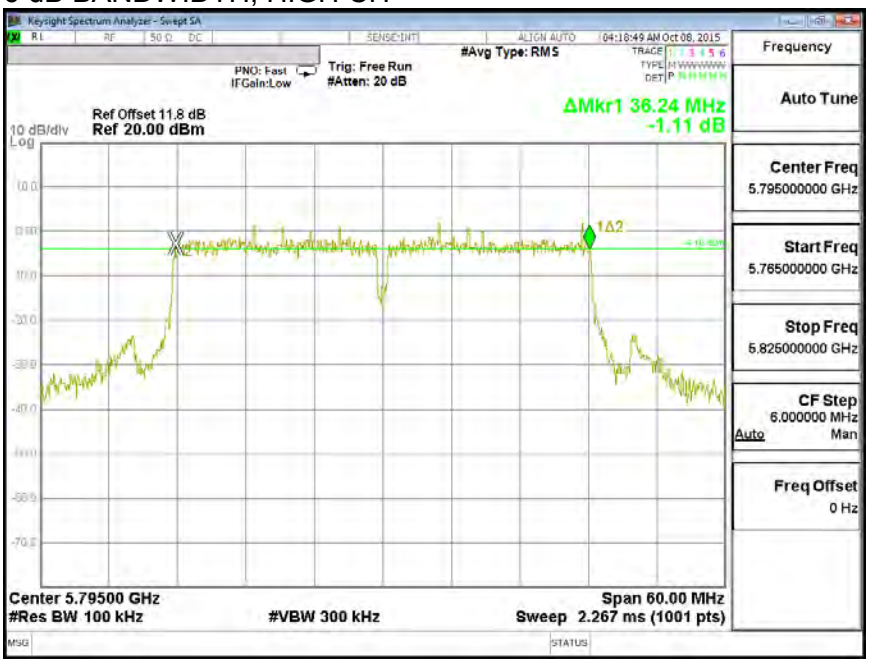
6 dB BANDWIDTH, CHAIN 0

6 dB BANDWIDTH, LOW CH

6 dB BANDWIDTH, HIGH CH



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6 dB BANDWIDTH, CHAIN 1

6 dB BANDWIDTH, LOW CH

6 dB BANDWIDTH, HIGH CH

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8.4.2. 26 dB BANDWIDTH

LIMITS

None, for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB BW Chain 0 (MHz)	26 dB BW Chain 1 (MHz)
Low	5755	39.48	39.60
High	5795	39.78	39.60

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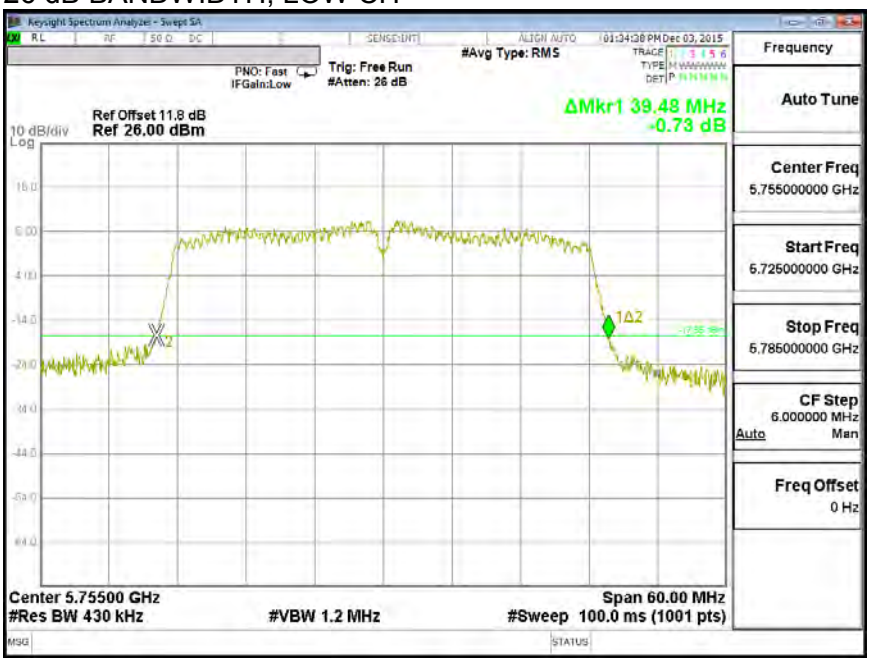
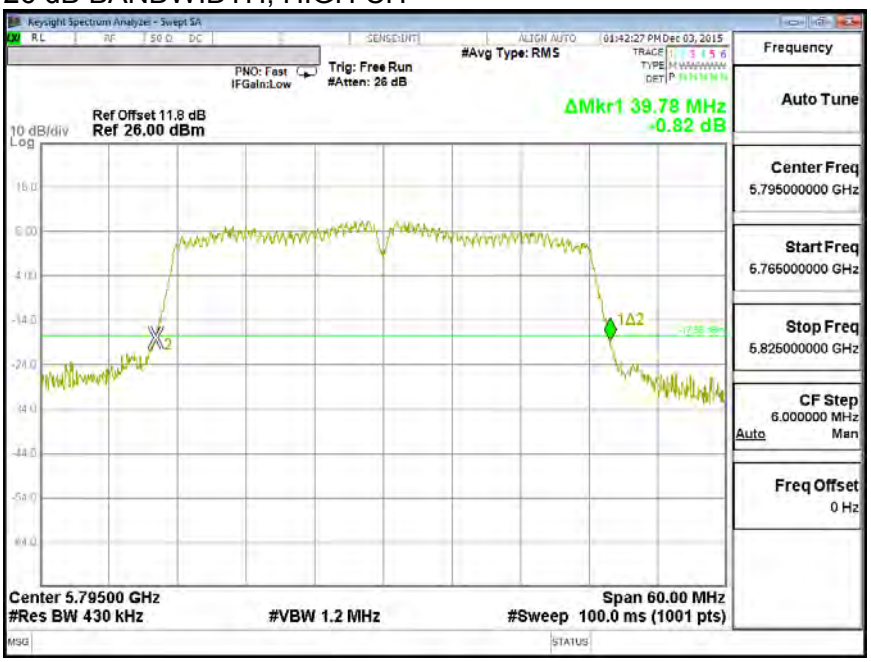
26 dB BANDWIDTH, CHAIN 0

26 dB BANDWIDTH, LOW CH



26 dB BANDWIDTH, HIGH CH



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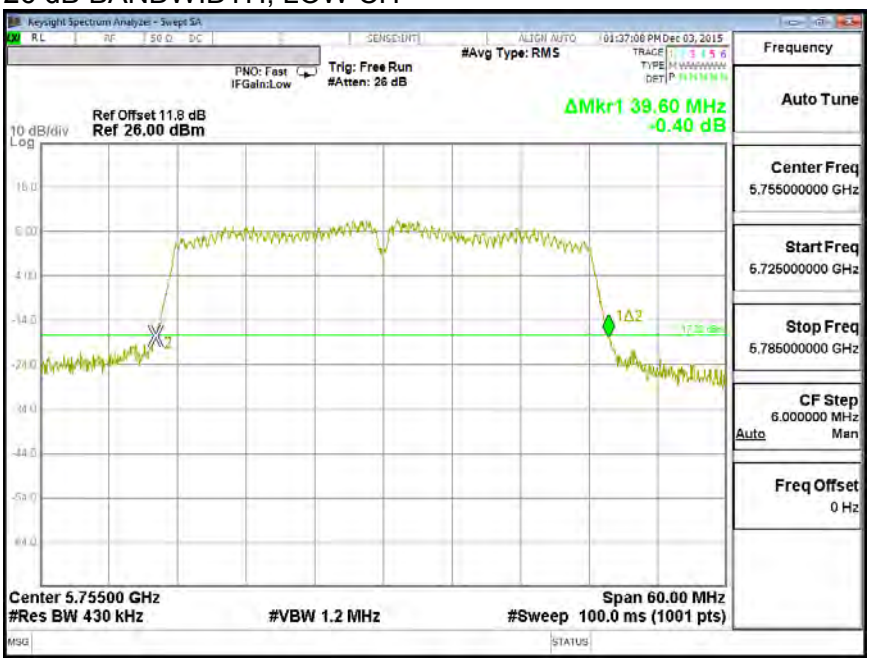
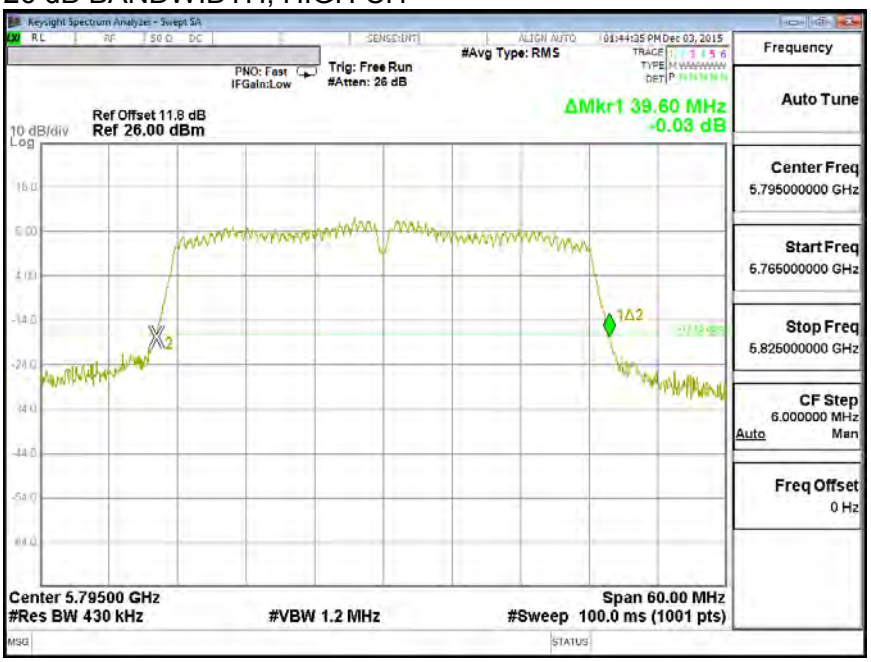
26 dB BANDWIDTH, CHAIN 1

26 dB BANDWIDTH, LOW CH



26 dB BANDWIDTH, HIGH CH



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8.4.3. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)
Low	5755	36.210	36.243
High	5795	36.358	36.062

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99% BANDWIDTH, CHAIN 0

99% BANDWIDTH, LOW CH

99% BANDWIDTH, HIGH CH

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99% BANDWIDTH, CHAIN 1

99% BANDWIDTH, LOW CH

99% BANDWIDTH, HIGH CH

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8.4.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

Test Procedure

Measurements perform using a wideband gated RF power meter.

RESULTS

Channel	Frequency (MHz)	Chain 0 Power (dBm)	Chain 1 Power (dBm)	Total Power (dBm)
Low	5755	11.82	11.70	14.77
High	5795	15.94	15.77	18.87

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8.4.5. 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:

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
4.21	3.92	4.07

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RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Low	5755	4.07	30.00
High	5795	4.07	30.00

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5755	11.82	11.70	14.77	30.00	-15.23
High	5795	15.94	15.77	18.87	30.00	-11.13

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8.4.6. 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:

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
4.21	3.92	7.08

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RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5755	7.08	28.92
High	5795	7.08	28.92

Duty Cycle CF (dB)	0.12	**Included in Calculations of Corr'd PSD**

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5755	-9.01	-8.87	-5.81	28.92	-34.73
High	5795	-1.24	-0.94	2.04	28.92	-26.88

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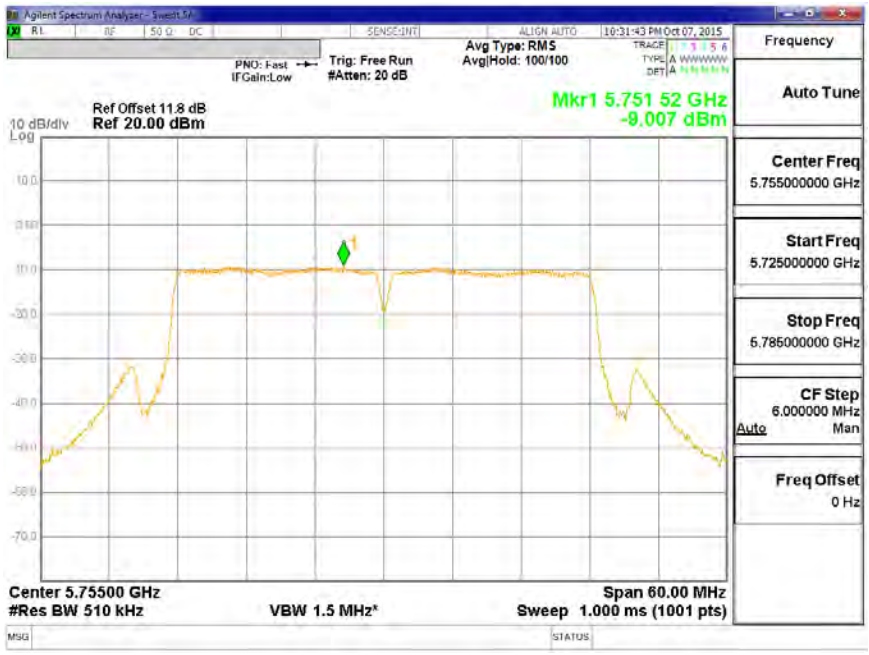
PSD, CHAIN 0

PSD, LOW CH



PSD, HIGH CH

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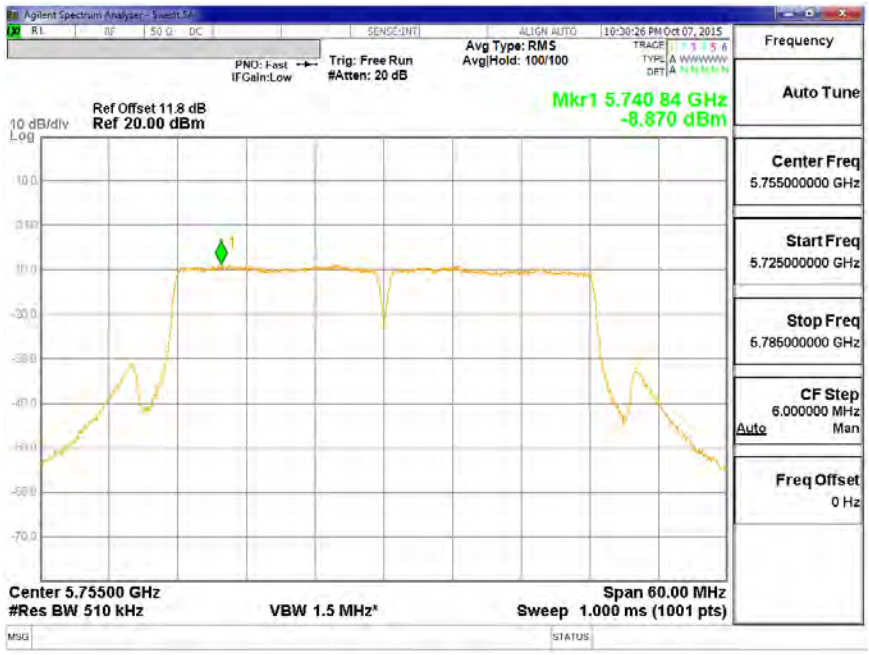
PSD, CHAIN 1

PSD, LOW CH



PSD, HIGH CH

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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.

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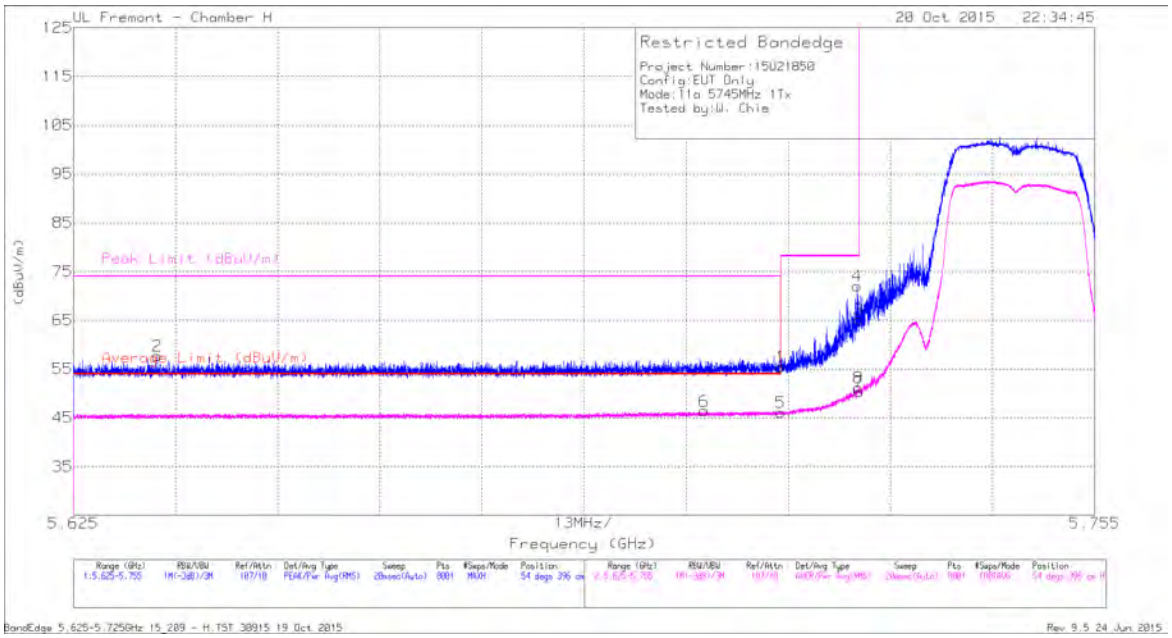
9.2. 802.11a 1Tx MODE IN THE 5.8 GHz BAND

9.2.1. CHAIN 0, RESTRICTED BANDEDGE AND HARMONIC SPURIOUS

LOW CHANNEL

LOW CHANNEL HORIZONTAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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	5.636	44.33	Pk	34.9	-21.5	57.73	-	-	74	-16.27	54	396	H
6	5.705	33.02	RMS	34.8	-21.4	46.42	54	-7.58	-	-	54	396	H
1	5.715	41.92	Pk	34.8	-21.3	55.42	-	-	74	-18.58	54	396	H
5	5.715	32.64	RMS	34.8	-21.3	46.14	54	-7.86	-	-	54	396	H
3	5.725	51.7	Pk	34.8	-21.3	65.2	-	-	78.2	-13	54	396	H
4	5.725	58.53	Pk	34.8	-21.3	72.03	-	-	78.2	-6.17	54	396	H
7	5.725	36.83	RMS	34.8	-21.3	50.33	-	-	-	-	54	396	H
8	5.725	37.71	RMS	34.8	-21.3	51.21	-	-	-	-	54	396	H

Pk - Peak detector

RMS - RMS detection

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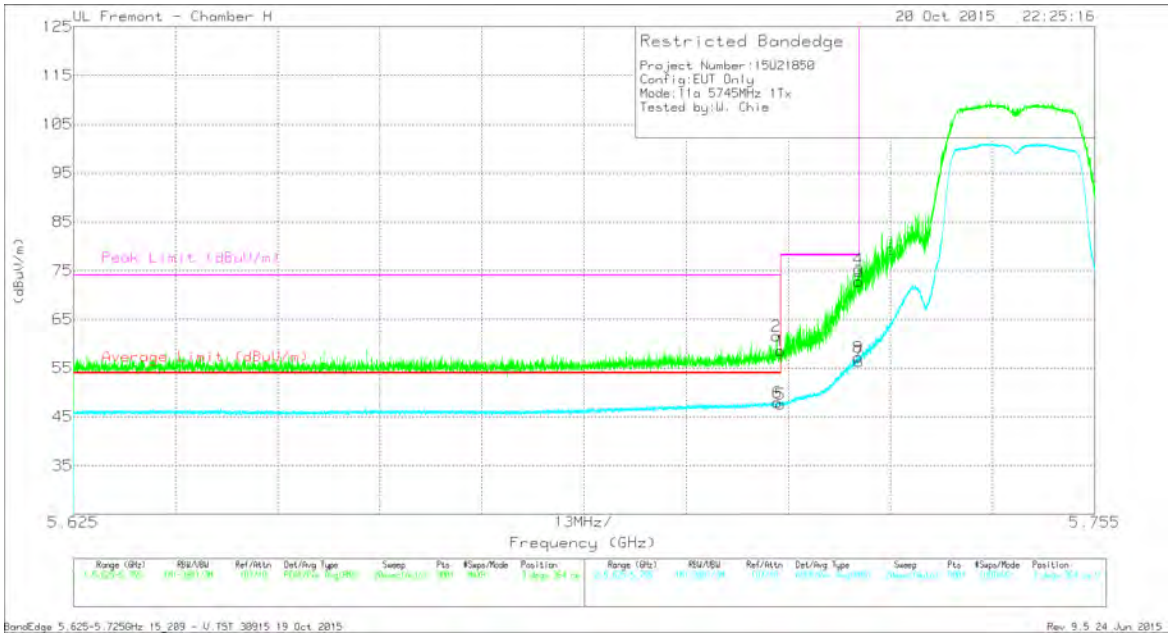
LOW CHANNEL VERTICAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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	5.714	48.03	Pk	34.8	-21.3	61.53	-	-	74	-12.47	3	364	V
1	5.715	45.04	Pk	34.8	-21.3	58.54	-	-	74	-15.46	3	364	V
5	5.715	34.09	RMS	34.8	-21.3	47.59	54	-6.41	-	-	3	364	V
6	5.715	34.53	RMS	34.8	-21.3	48.03	54	-5.97	-	-	3	364	V
3	5.725	59.25	Pk	34.8	-21.3	72.75	-	-	78.2	-5.45	3	364	V
4	5.725	61.82	Pk	34.8	-21.3	75.32	-	-	78.2	-2.88	3	364	V
7	5.725	42.78	RMS	34.8	-21.3	56.28	-	-	-	-	3	364	V
8	5.725	43.69	RMS	34.8	-21.3	57.19	-	-	-	-	3	364	V

Pk - Peak detector

RMS - RMS detection

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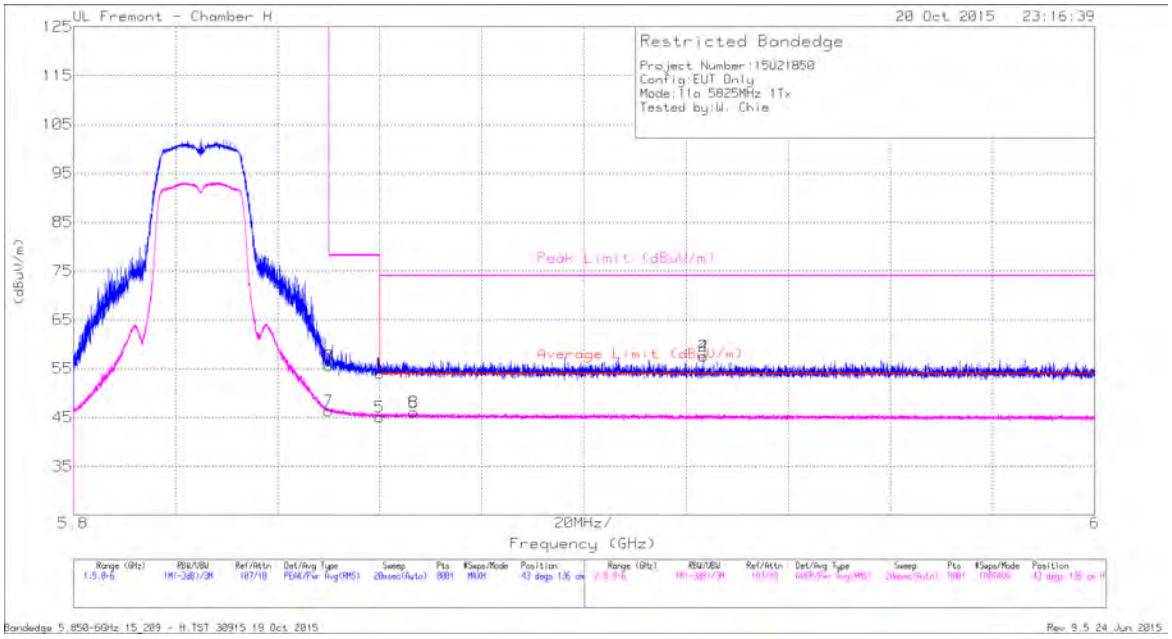
RESTRICTED BANDEDGE, CHAIN 0 (HIGH CHANNEL)

HIGH CHANNEL HORIZONTAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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
3	5.85	41.91	Pk	34.9	-21.2	55.61	-	-	78.2	-22.59	43	136	H
7	5.85	32.66	RMS	34.9	-21.2	46.36	-	-	-	-	43	136	H
1	5.86	40.39	Pk	34.9	-21.2	54.09	-	-	74	-19.91	43	136	H
5	5.86	31.41	RMS	34.9	-21.2	45.11	54	-8.89	-	-	43	136	H
6	5.867	32.45	RMS	34.9	-21.2	46.15	54	-7.85	-	-	43	136	H
8	5.867	32.45	RMS	34.9	-21.2	46.15	54	-7.85	-	-	43	136	H
2	5.923	43.75	Pk	35	-21.2	57.55	-	-	74	-16.45	43	136	H
4	5.923	43.75	Pk	35	-21.2	57.55	-	-	74	-16.45	43	136	H

Pk - Peak detector

RMS - RMS detection

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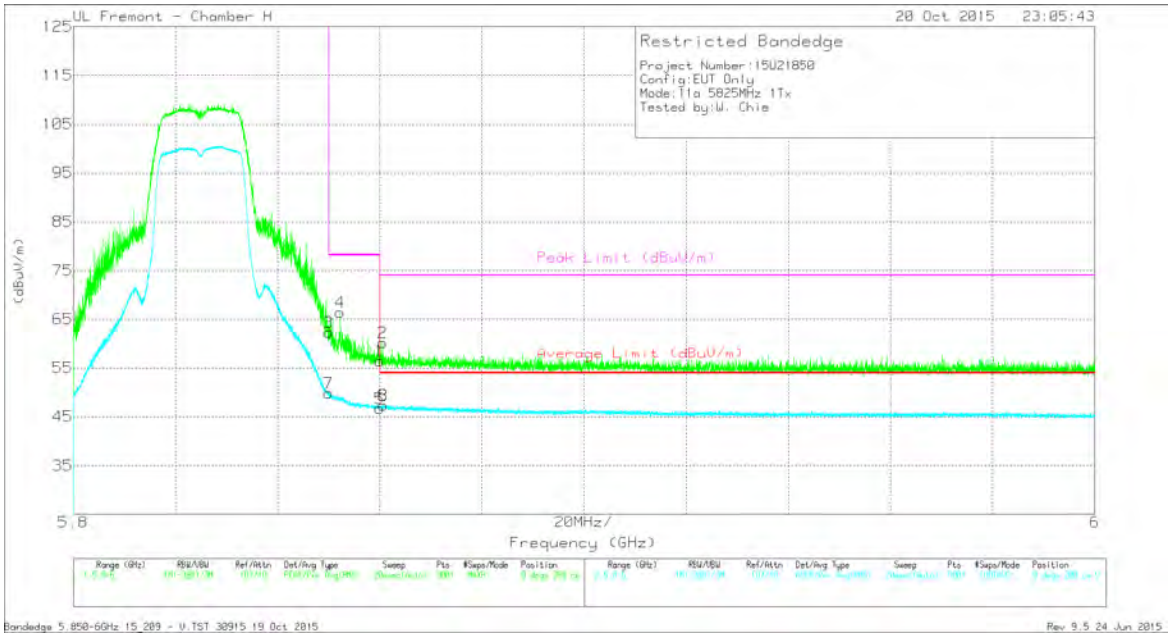
HIGH CHANNEL VERTICAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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
3	5.85	48.6	Pk	34.9	-21.2	62.3	-	-	78.2	-15.9	0	200	V
7	5.85	36.15	RMS	34.9	-21.2	49.85	-	-	-	-	0	200	V
4	5.852	52.77	Pk	34.9	-21.2	66.47	-	-	78.2	-11.73	0	200	V
1	5.86	42.73	Pk	34.9	-21.2	56.43	-	-	74	-17.57	0	200	V
5	5.86	33.07	RMS	34.9	-21.2	46.77	54	-7.23	-	-	0	200	V
2	5.861	46.47	Pk	34.9	-21.2	60.17	-	-	74	-13.83	0	200	V
6	5.861	33.68	RMS	34.9	-21.2	47.38	54	-6.62	-	-	0	200	V
8	5.861	33.68	RMS	34.9	-21.2	47.38	54	-6.62	-	-	0	200	V

Pk - Peak detector

RMS - RMS detection

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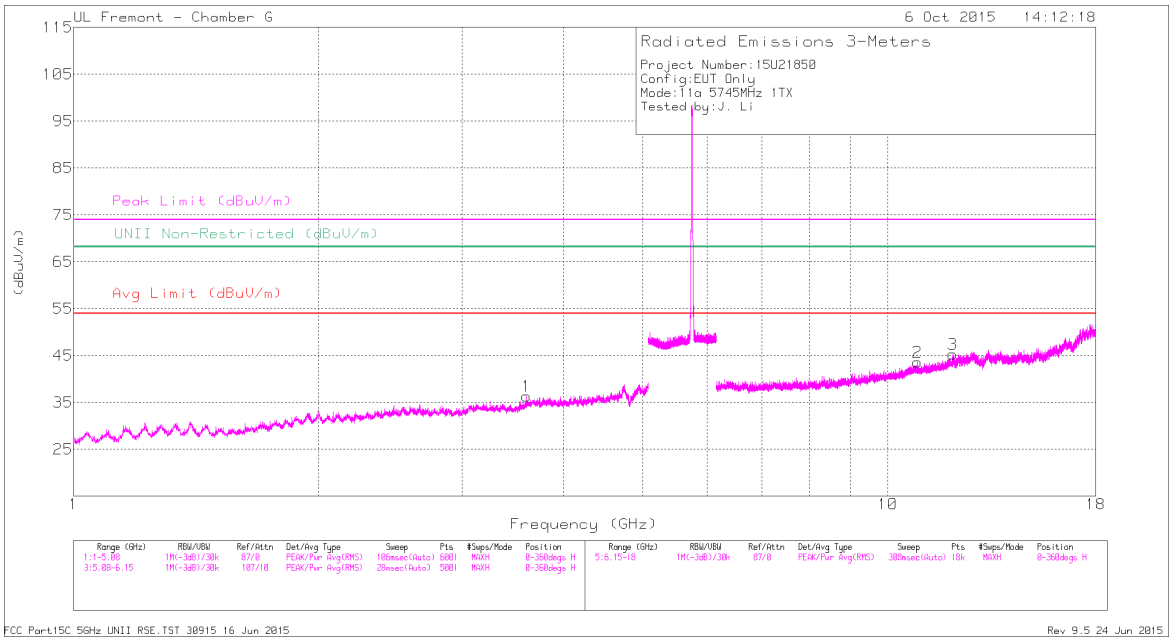
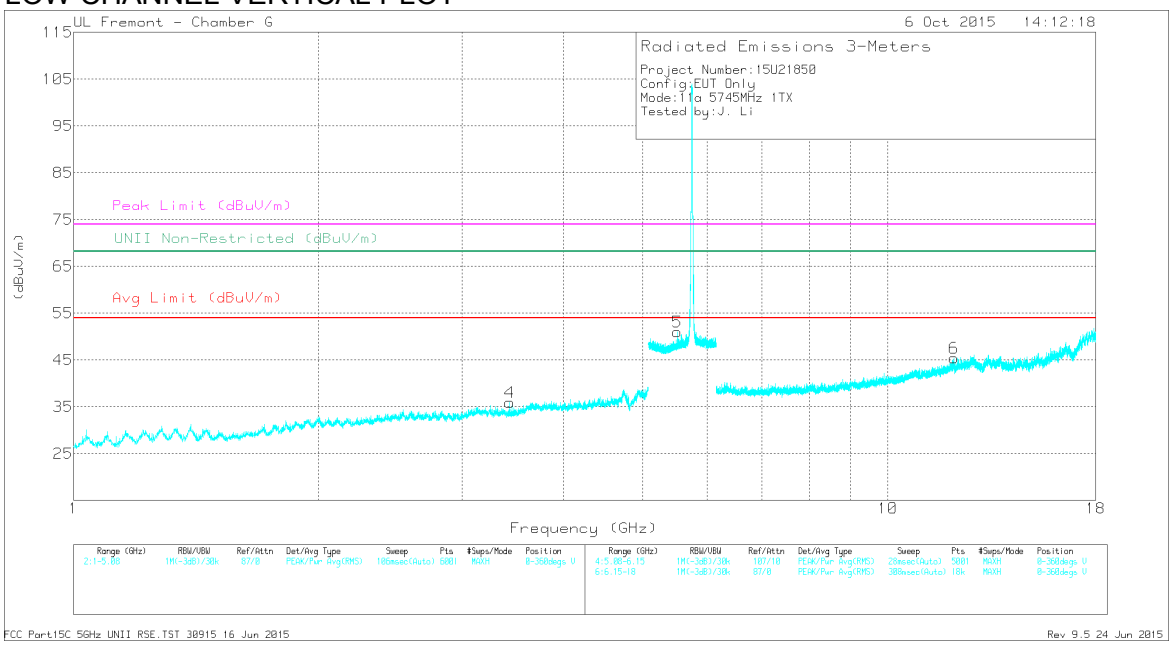
LOW CHANNEL HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



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DATA

Marker	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	* 3.599	42.32	PK-U	33.1	-32.8	42.62	-	-	74	-31.38	-	-	0	101	H
	* 3.6	30.66	ADR	33.1	-32.8	30.96	54	-23.04	-	-	-	-	0	101	H
2	* 10.879	38.51	PK-U	37.9	-26.6	49.81	-	-	74	-24.19	-	-	0	101	H
	* 10.879	27	ADR	37.9	-26.6	38.3	54	-15.7	-	-	-	-	0	101	H
3	* 12.012	38.46	PK-U	38.9	-25.7	51.66	-	-	74	-22.34	-	-	0	202	H
	* 12.014	26.8	ADR	38.9	-25.7	40	54	-14	-	-	-	-	0	202	H
6	* 12.049	38.01	PK-U	38.9	-25.1	51.81	-	-	74	-22.19	-	-	0	102	V
	* 12.051	26.78	ADR	38.9	-25.1	40.58	54	-13.42	-	-	-	-	0	102	V
4	3.432	41.08	PK-U	32.8	-33.5	40.38	-	-	74	-33.62	-	-	121	215	V
	3.433	29.26	ADR	32.8	-33.5	28.56	54	-25.44	-	-	-	-	121	215	V
5	5.514	43.01	PK-U	34.7	-23	54.71	-	-	74	-19.29	-	-	229	164	V
	5.514	31.99	ADR	34.7	-23	43.69	54	-10.04	-	-	-	-	229	164	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

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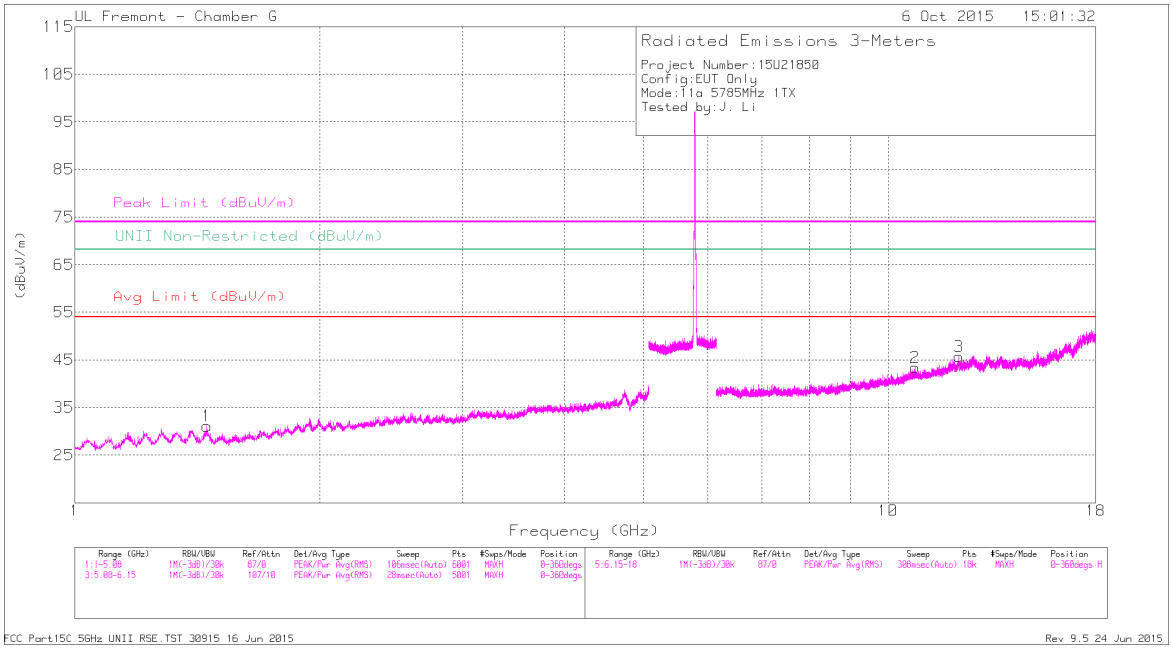
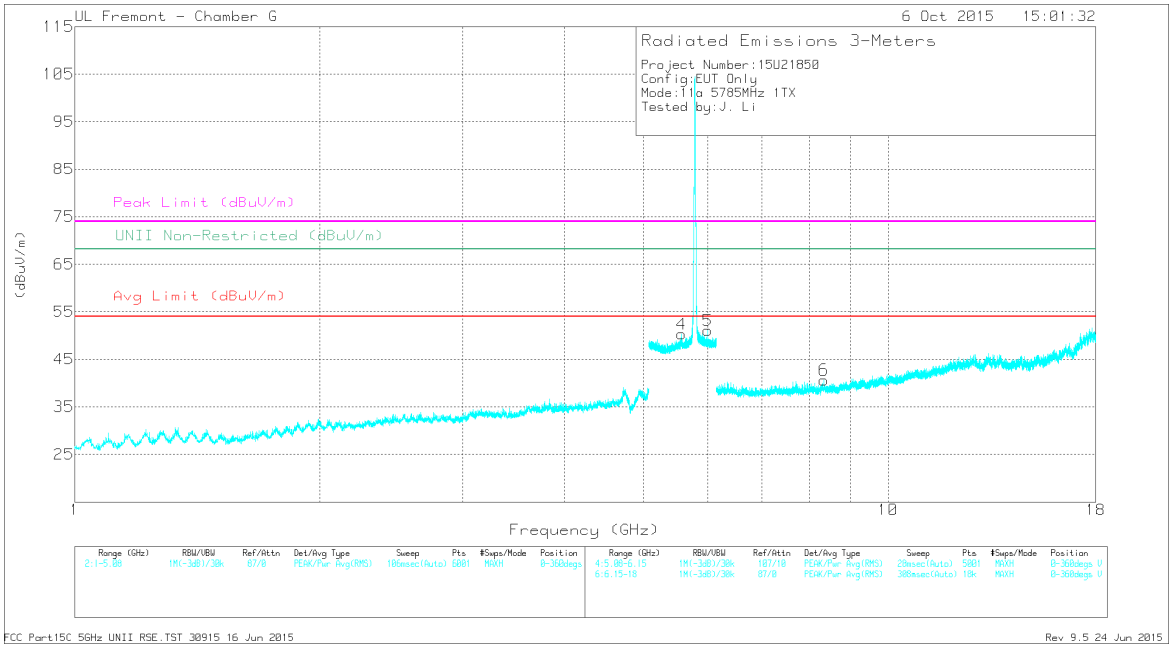
MID CHANNEL HARMONICS AND SPURIOUS EMISSIONS

MID CHANNEL HORIZONTAL PLOT



MID CHANNEL VERTICAL PLOT



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DATA

Marker	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	* 1.455	43.22	PK-U	28.5	-34.4	37.32	-	-	74	-36.68	-	-	0	101	H
	* 1.455	31.73	ADR	28.5	-34.4	25.83	54	-28.17	-	-	-	-	0	101	H
2	* 10.791	38.23	PK-U	38	-26.3	49.93	-	-	74	-24.07	-	-	0	202	H
	* 10.79	26.72	ADR	38	-26.3	38.42	54	-15.58	-	-	-	-	0	202	H
3	* 12.222	37.37	PK-U	39	-24.8	51.57	-	-	74	-22.43	-	-	0	202	H
	* 12.221	26.5	ADR	39	-24.8	40.7	54	-13.3	-	-	-	-	0	202	H
6	* 8.338	39.92	PK-U	35.7	-29.1	46.52	-	-	74	-27.48	-	-	0	202	V
	* 8.337	28.92	ADR	35.7	-29.1	35.52	54	-18.48	-	-	-	-	0	202	V
4	5.57	43.53	PK-U	34.8	-23	55.33	-	-	74	-18.67	-	-	263	134	V
	5.57	31.86	ADR	34.8	-23	43.66	54	-10.34	-	-	-	-	263	134	V
5	5.999	42.7	PK-U	35.3	-23	55	-	-	74	-19.00	-	-	226	227	V
	5.999	31.79	ADR	35.3	-23	44.09	54	-9.91	-	-	-	-	226	227	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

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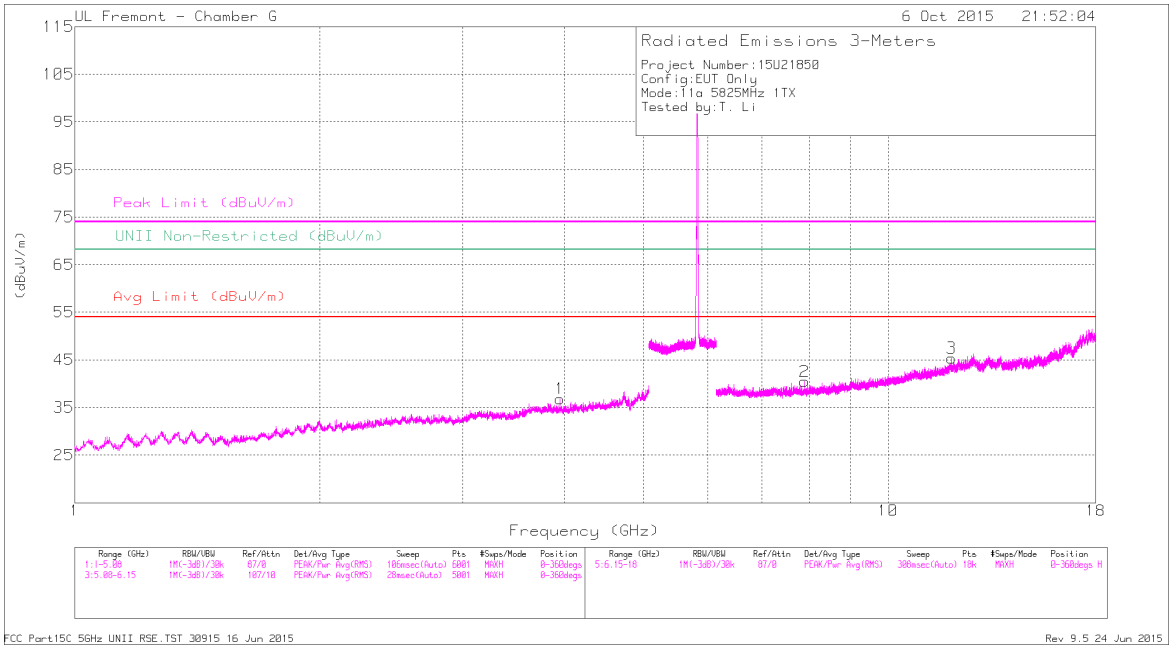
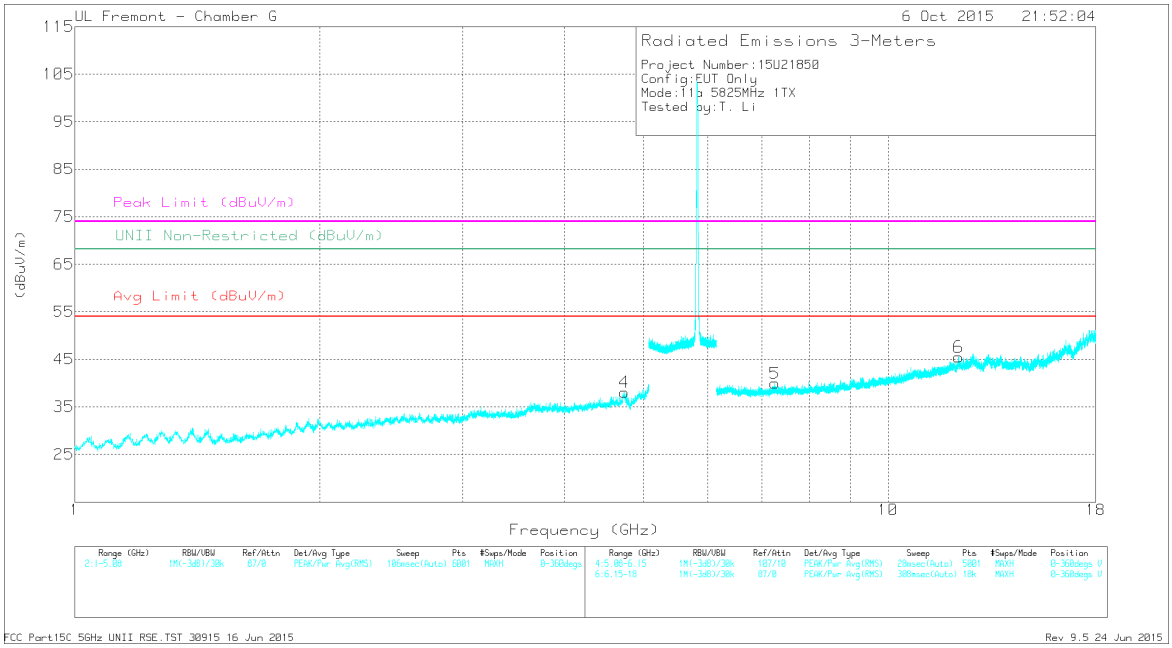
HIGH CHANNEL HARMONICS AND SPURIOUS EMISSIONS

HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



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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	* 3.95	42.33	PK-U	33.2	-33.1	42.43	-	-	74	-31.57	-	-	266	135	H
	* 3.949	30.82	ADR	33.2	-33.1	30.92	54	-23.08	-	-	-	-	266	135	H
4	* 4.739	44	PK-U	33.9	-31.8	46.1	-	-	74	-27.9	-	-	121	229	V
	* 4.741	32.86	ADR	33.9	-31.8	34.96	54	-19.04	-	-	-	-	121	229	V
3	* 11.973	37.83	PK-U	38.8	-25.4	51.23	-	-	74	-22.77	-	-	235	341	H
	* 11.971	26.96	ADR	38.8	-25.5	40.26	54	-13.74	-	-	-	-	235	341	H
5	* 7.26	40.91	PK-U	35.6	-30.4	46.11	-	-	74	-27.89	-	-	223	102	V
	* 7.259	30.16	ADR	35.6	-30.3	35.46	54	-18.54	-	-	-	-	223	102	V
6	* 12.205	38.12	PK-U	39	-24.9	52.22	-	-	74	-21.78	-	-	167	143	V
	* 12.205	27.15	ADR	39	-24.9	41.25	54	-12.75	-	-	-	-	167	143	V
2	7.897	40.65	PK-U	35.7	-30.1	46.25	-	-	74	-27.75	-	-	206	332	H
	7.898	29.27	ADR	35.7	-30.1	34.87	54	-19.13	-	-	-	-	206	332	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

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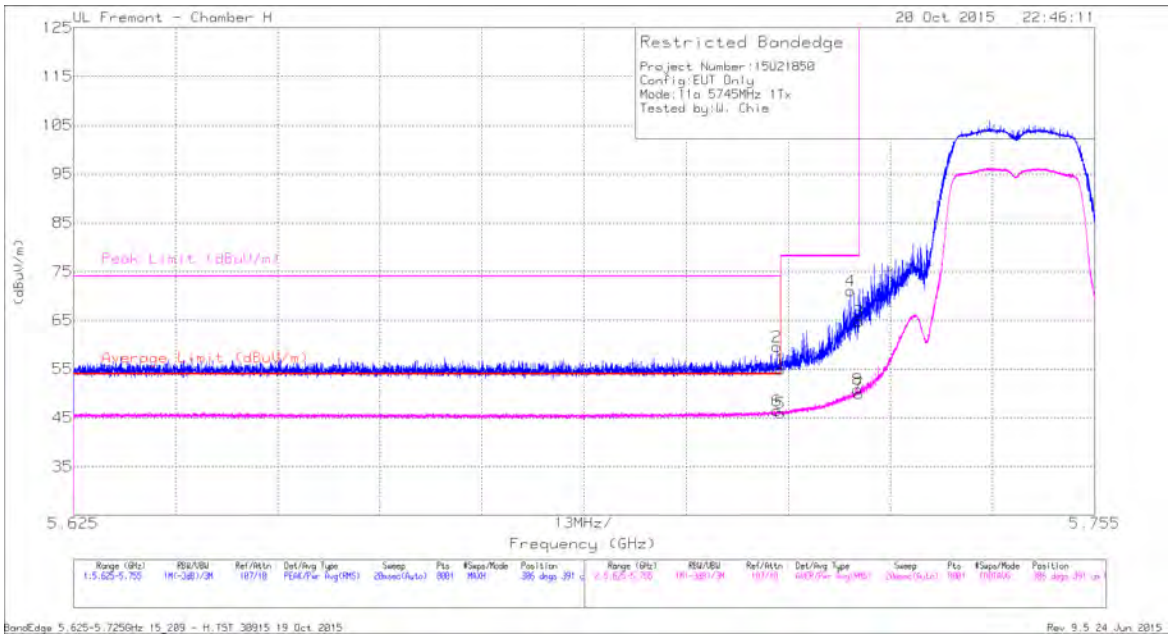
9.2.2. CHAIN 1, RESTRICTED BANDEDGE AND HARMONIC SPURIOUS

LOW CHANNEL

LOW CHANNEL HORIZONTAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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	5.715	41.49	Pk	34.8	-21.3	54.99	-	-	74	-19.01	306	391	H
2	5.715	46.04	Pk	34.8	-21.3	59.54	-	-	74	-14.46	306	391	H
5	5.715	32.52	RMS	34.8	-21.3	46.02	54	-7.98	-	-	306	391	H
6	5.715	32.94	RMS	34.8	-21.3	46.44	54	-7.56	-	-	306	391	H
4	5.724	57.54	Pk	34.8	-21.3	71.04	-	-	78.2	-7.16	306	391	H
3	5.725	51.31	Pk	34.8	-21.3	64.81	-	-	78.2	-13.39	306	391	H
7	5.725	36.42	RMS	34.8	-21.3	49.92	-	-	-	-	306	391	H
8	5.725	37.4	RMS	34.8	-21.3	50.9	-	-	-	-	306	391	H

Pk - Peak detector

RMS - RMS detection

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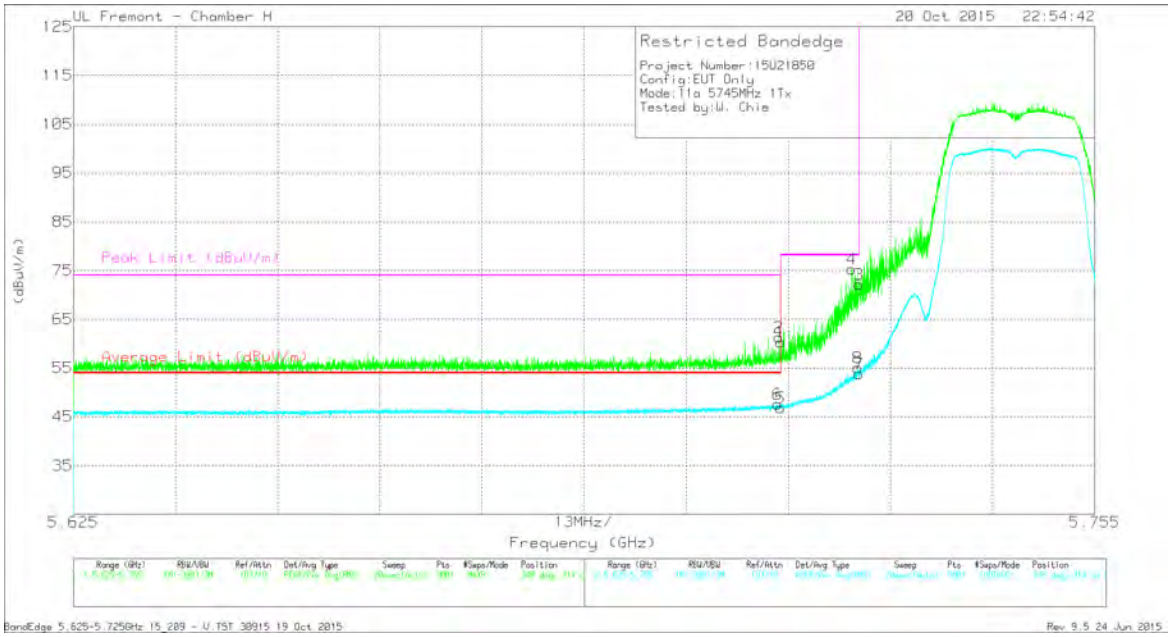
LOW CHANNEL VERTICAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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	5.715	46.81	Pk	34.8	-21.3	60.31	-	-	74	-13.69	348	314	V
2	5.715	47.81	Pk	34.8	-21.3	61.31	-	-	74	-12.69	348	314	V
5	5.715	33.38	RMS	34.8	-21.3	46.88	54	-7.12	-	-	348	314	V
6	5.715	34.14	RMS	34.8	-21.3	47.64	54	-6.36	-	-	348	314	V
4	5.724	61.81	Pk	34.8	-21.3	75.31	-	-	78.2	-2.89	348	314	V
3	5.725	58.71	Pk	34.8	-21.3	72.21	-	-	78.2	-5.99	348	314	V
7	5.725	40.32	RMS	34.8	-21.3	53.82	-	-	-	-	348	314	V
8	5.725	41.54	RMS	34.8	-21.3	55.04	-	-	-	-	348	314	V

Pk - Peak detector

RMS - RMS detection

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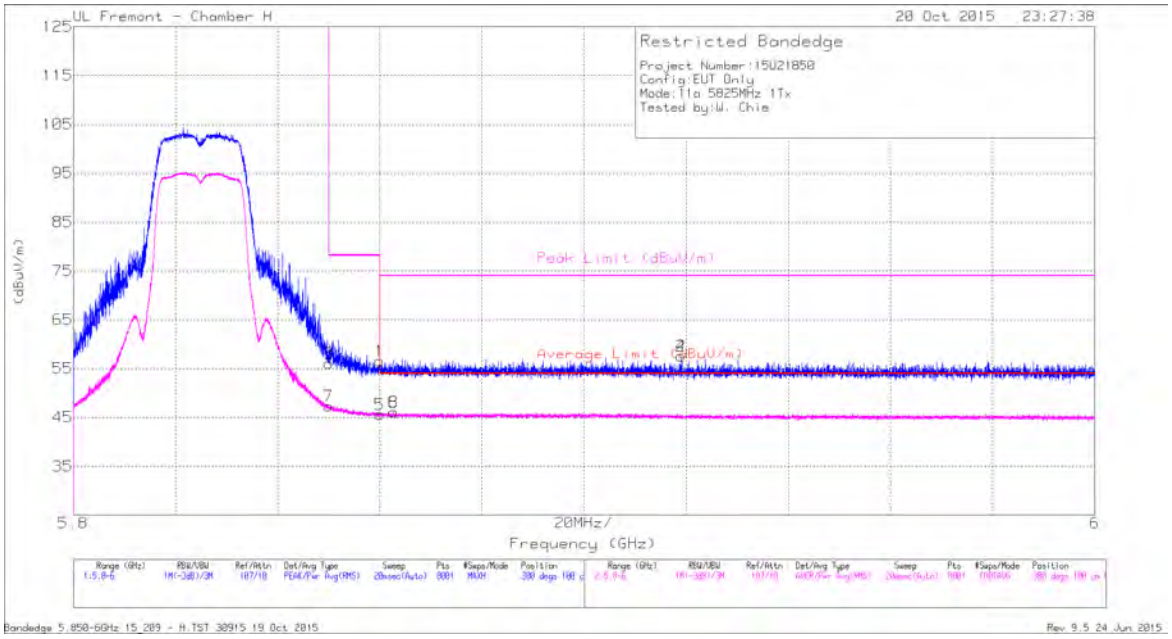
RESTRICTED BANDEDGE, CHAIN 1 (HIGH CHANNEL)

HIGH CHANNEL HORIZONTAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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
3	5.85	42.36	Pk	34.9	-21.2	56.06	-	-	78.2	-22.14	300	100	H
7	5.85	33.64	RMS	34.9	-21.2	47.34	-	-	-	-	300	100	H
1	5.86	42.86	Pk	34.9	-21.2	56.56	-	-	74	-17.44	300	100	H
5	5.86	31.87	RMS	34.9	-21.2	45.57	54	-8.43	-	-	300	100	H
6	5.863	32.35	RMS	34.9	-21.2	46.05	54	-7.95	-	-	300	100	H
8	5.863	32.35	RMS	34.9	-21.2	46.05	54	-7.95	-	-	300	100	H
2	5.919	43.74	Pk	35	-21.2	57.54	-	-	74	-16.46	300	100	H
4	5.919	43.74	Pk	35	-21.2	57.54	-	-	74	-16.46	300	100	H

Pk - Peak detector

RMS - RMS detection

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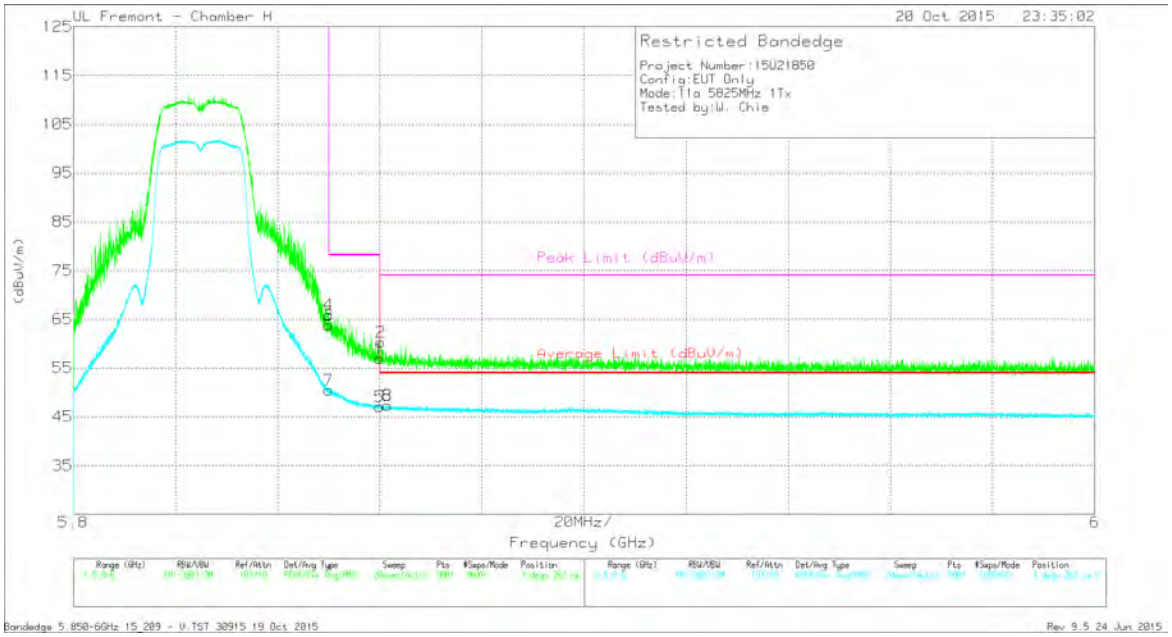
HIGH CHANNEL VERTICAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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
3	5.85	50.12	Pk	34.9	-21.2	63.82	-	-	78.2	-14.38	4	262	V
4	5.85	52.26	Pk	34.9	-21.2	65.96	-	-	78.2	-12.24	4	262	V
7	5.85	36.72	RMS	34.9	-21.2	50.42	-	-	-	-	4	262	V
1	5.86	43.3	Pk	34.9	-21.2	57	-	-	74	-17	4	262	V
2	5.86	46.57	Pk	34.9	-21.2	60.27	-	-	74	-13.73	4	262	V
5	5.86	33.38	RMS	34.9	-21.2	47.08	54	-6.92	-	-	4	262	V
6	5.862	33.68	RMS	34.9	-21.2	47.38	54	-6.62	-	-	4	262	V
8	5.862	33.68	RMS	34.9	-21.2	47.38	54	-6.62	-	-	4	262	V

Pk - Peak detector

RMS - RMS detection

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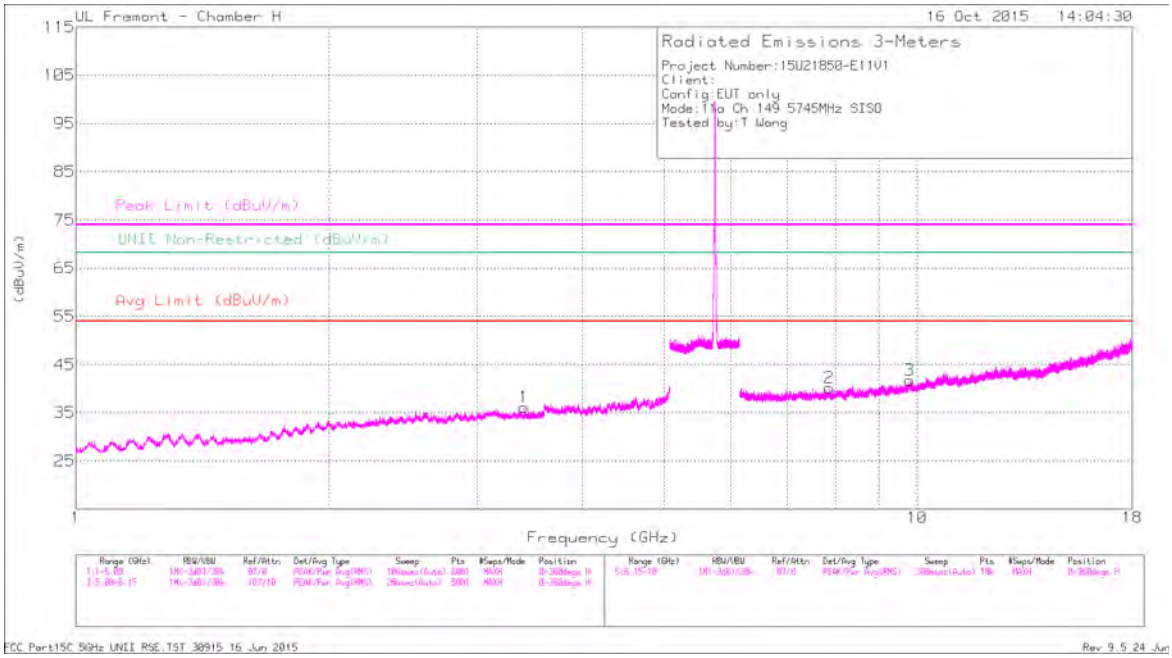
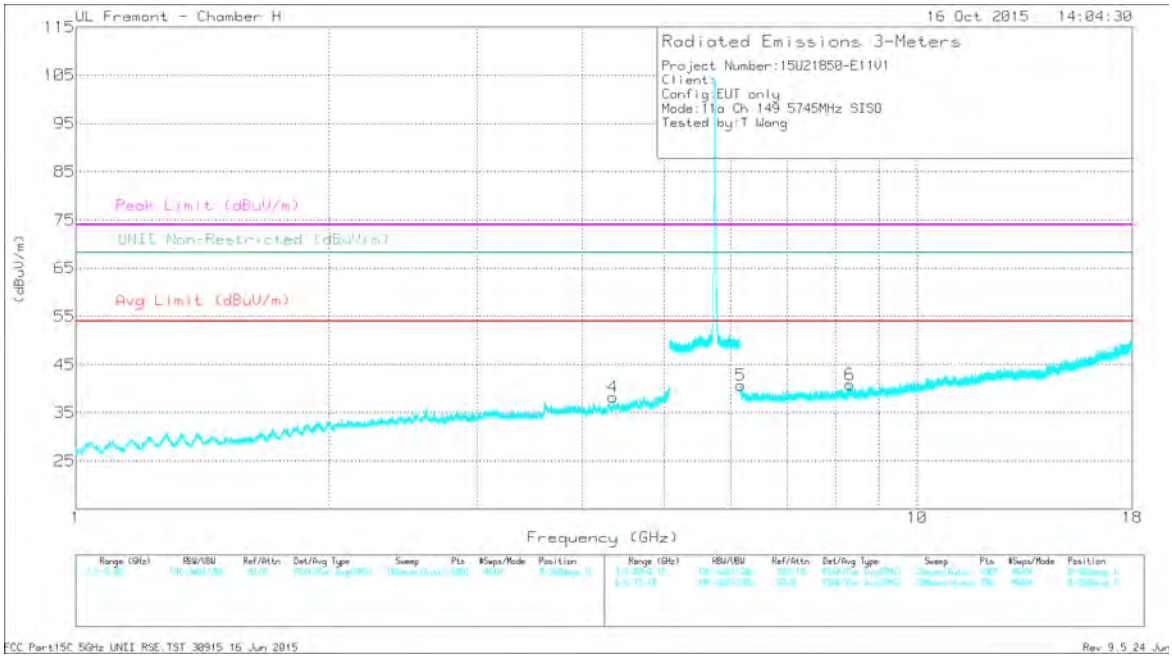
LOW CHANNEL HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



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DATA

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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
* 4.349	40.91	PK-U	33.6	-30.3	44.21	-	-	74	-29.79	-	-	101	172	V
* 4.351	29.06	ADR	33.6	-30.2	32.46	54	-21.54	-	-	-	-	101	172	V
* 8.319	37.18	PK-U	35.9	-26.3	46.78	-	-	74	-27.22	-	-	7	187	V
* 8.32	25.52	ADR	35.9	-26.3	35.12	54	-18.88	-	-	-	-	7	187	V
3.405	40.71	PK-U	32.8	-32	41.51	-	-	74	-32.49	-	-	250	118	H
3.409	28.95	ADR	32.8	-32	29.75	54	-24.25	-	-	-	-	250	118	H
6.17	39.19	PK-U	35.4	-29.3	45.29	-	-	74	-28.71	-	-	97	119	V
6.17	28.16	ADR	35.4	-29.3	34.26	54	-19.74	-	-	-	-	97	119	V
7.86	38.56	PK-U	35.9	-27.8	46.66	-	-	74	-27.34	-	-	212	230	H
7.861	26.73	ADR	35.9	-27.9	34.73	54	-19.27	-	-	-	-	212	230	H
9.788	25.33	ADR	36.8	-25.1	37.03	-	-	74	-36.97	-	-	80	145	H
9.789	36.23	PK-U	36.8	-25.2	47.83	54	-6.17	-	-	-	-	80	145	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

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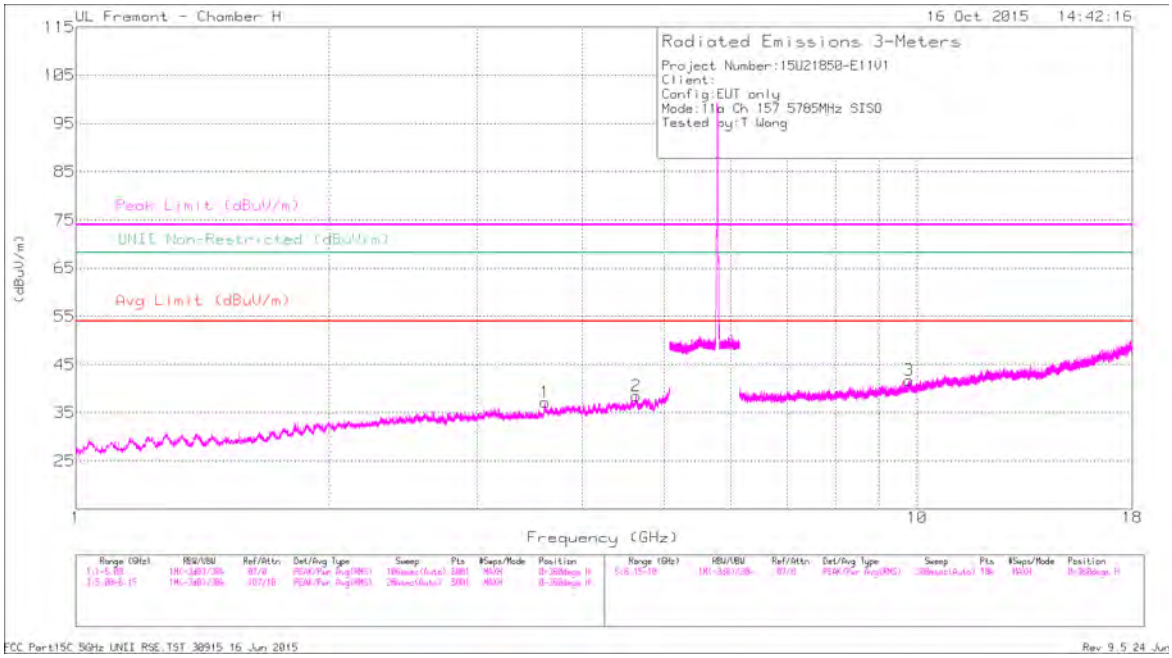
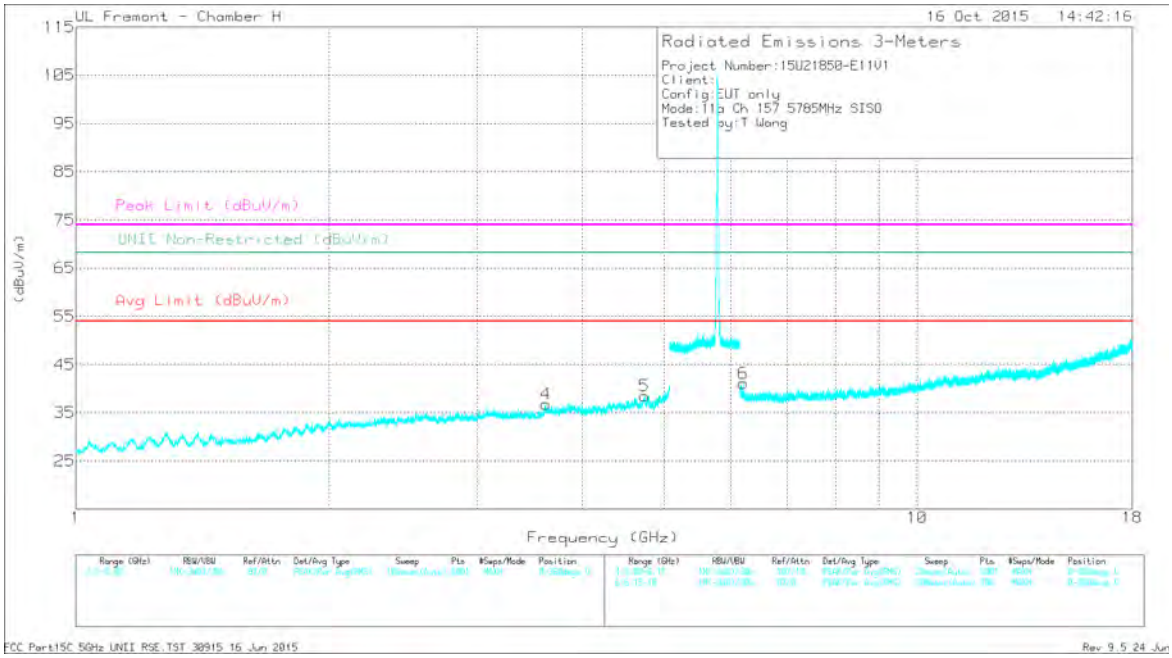
MID CHANNEL HARMONICS AND SPURIOUS EMISSIONS

MID CHANNEL HORIZONTAL PLOT



MID CHANNEL VERTICAL PLOT



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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	* 3.613	41.97	PK-U	33.1	-31.6	43.47	-	-	74	-30.53	-	-	193	138	H
	* 3.612	30.27	ADR	33.1	-31.6	31.77	54	-22.23	-	-	-	-	193	138	H
2	* 4.633	42.2	PK-U	34.1	-31	45.3	-	-	74	-28.7	-	-	193	138	H
	* 4.632	31.16	ADR	34.1	-31	34.26	54	-19.74	-	-	-	-	193	138	H
4	* 3.619	41.26	PK-U	33.1	-31.5	42.86	-	-	74	-31.14	-	-	258	372	V
	* 3.618	30.1	ADR	33.1	-31.5	31.7	54	-22.3	-	-	-	-	258	372	V
5	* 4.744	41.05	PK-U	34.2	-30.3	44.95	-	-	74	-29.05	-	-	258	372	V
	* 4.742	29.87	ADR	34.2	-30.3	33.77	54	-20.23	-	-	-	-	258	372	V
6	6.213	39.7	PK-U	35.5	-29.5	45.7	-	-	74	-28.3	-	-	70	144	V
	6.215	28.75	ADR	35.5	-29.5	34.75	54	-19.25	-	-	-	-	70	144	V
3	9.774	25.2	ADR	36.7	-25.3	36.6	54	-17.4	-	-	-	-	24	125	H
	9.775	36.02	PK-U	36.7	-25.3	47.42	-	-	74	-26.58	-	-	24	125	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

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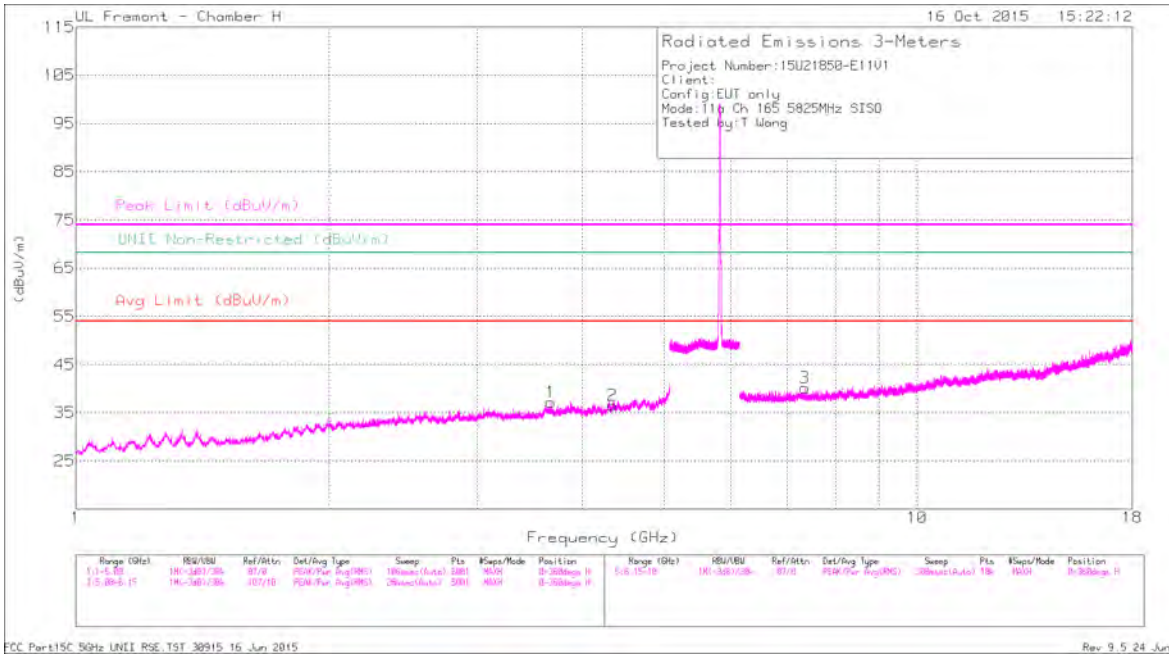
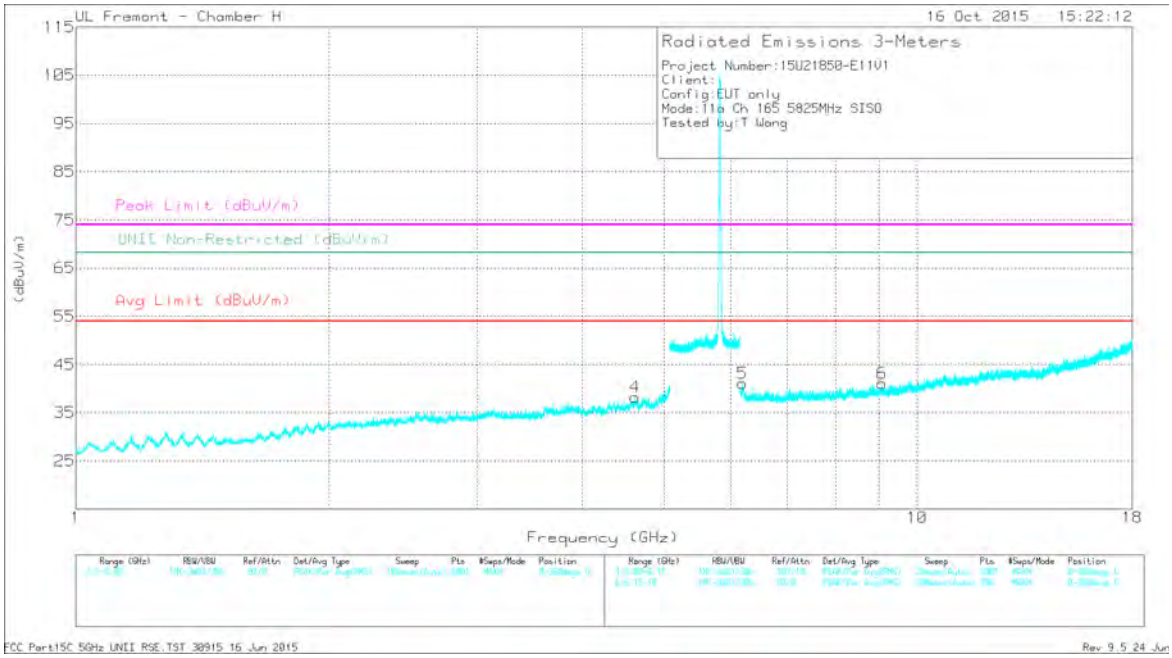
HIGH CHANNEL HARMONICS AND SPURIOUS EMISSIONS

HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



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DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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	42.24	PK-U	33.2	-31.1	44.34	-	-	74	-29.66	-	-	60	355	H
	* 3.67	29.87	ADR	33.2	-31	32.07	54	-21.93	-	-	-	-	60	355	H
2	* 4.346	41.34	PK-U	33.6	-30.3	44.64	-	-	74	-29.36	-	-	75	343	H
	* 4.347	30.1	ADR	33.6	-30.3	33.4	54	-20.6	-	-	-	-	75	343	H
4	* 4.615	41.89	PK-U	34	-30.9	44.99	-	-	74	-29.01	-	-	171	142	V
	* 4.619	30.38	ADR	34	-30.9	33.48	54	-20.52	-	-	-	-	171	142	V
3	* 7.342	39.69	PK-U	36	-29	46.69	-	-	74	-27.31	-	-	112	367	H
	* 7.346	28.31	ADR	36	-29	35.31	54	-18.69	-	-	-	-	112	367	H
6	* 9.082	37.79	PK-U	36.2	-25.9	48.09	-	-	74	-25.91	-	-	224	168	V
	* 9.082	26.01	ADR	36.2	-25.9	36.31	54	-17.69	-	-	-	-	224	168	V
5	6.204	39.67	PK-U	35.5	-29.5	45.67	-	-	74	-28.33	-	-	76	121	V
	6.205	28.39	ADR	35.5	-29.5	34.39	54	-19.61	-	-	-	-	76	121	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

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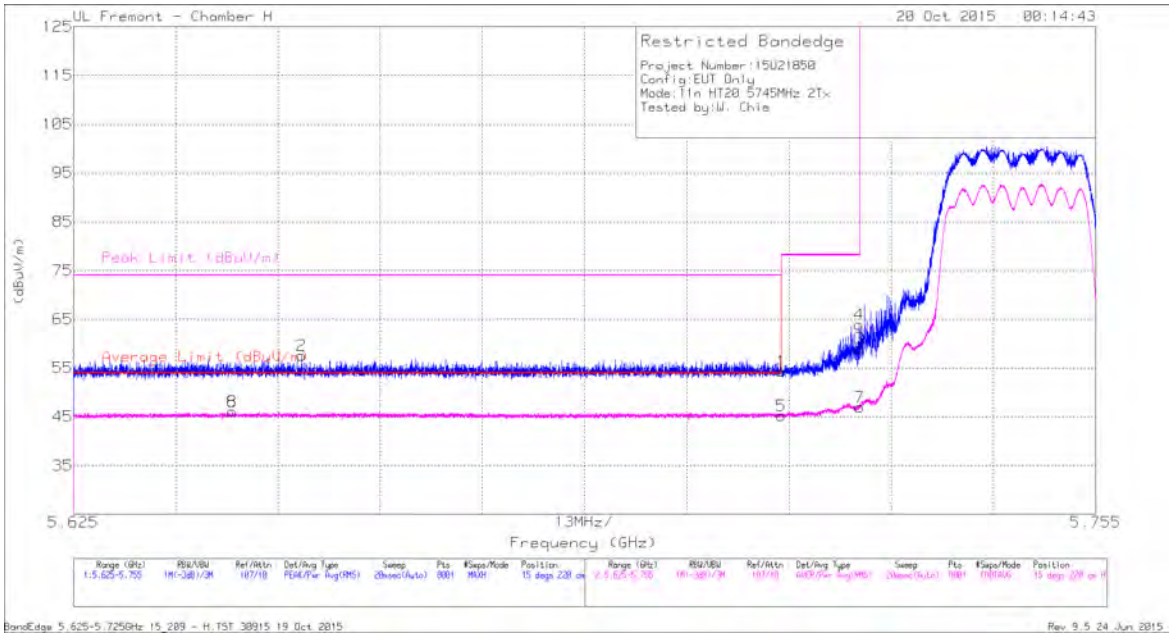
9.3. 802.11n HT20 2Tx CDD MODE IN THE 5.8 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

LOW CHANNEL HORIZONTAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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
6	5.645	32.71	RMS	34.9	-21.5	46.11	54	-7.89	-	-	15	220	H
8	5.645	32.71	RMS	34.9	-21.5	46.11	54	-7.89	-	-	15	220	H
2	5.654	44.07	Pk	34.9	-21.4	57.57	-	-	74	-16.43	15	220	H
1	5.715	40.85	Pk	34.8	-21.3	54.35	-	-	74	-19.65	15	220	H
5	5.715	31.69	RMS	34.8	-21.3	45.19	54	-8.81	-	-	15	220	H
3	5.725	45.52	Pk	34.8	-21.3	59.02	-	-	78.2	-19.18	15	220	H
4	5.725	50.4	Pk	34.8	-21.3	63.9	-	-	78.2	-14.3	15	220	H
7	5.725	33.45	RMS	34.8	-21.3	46.95	-	-	-	-	15	220	H

Pk - Peak detector

RMS - RMS detection

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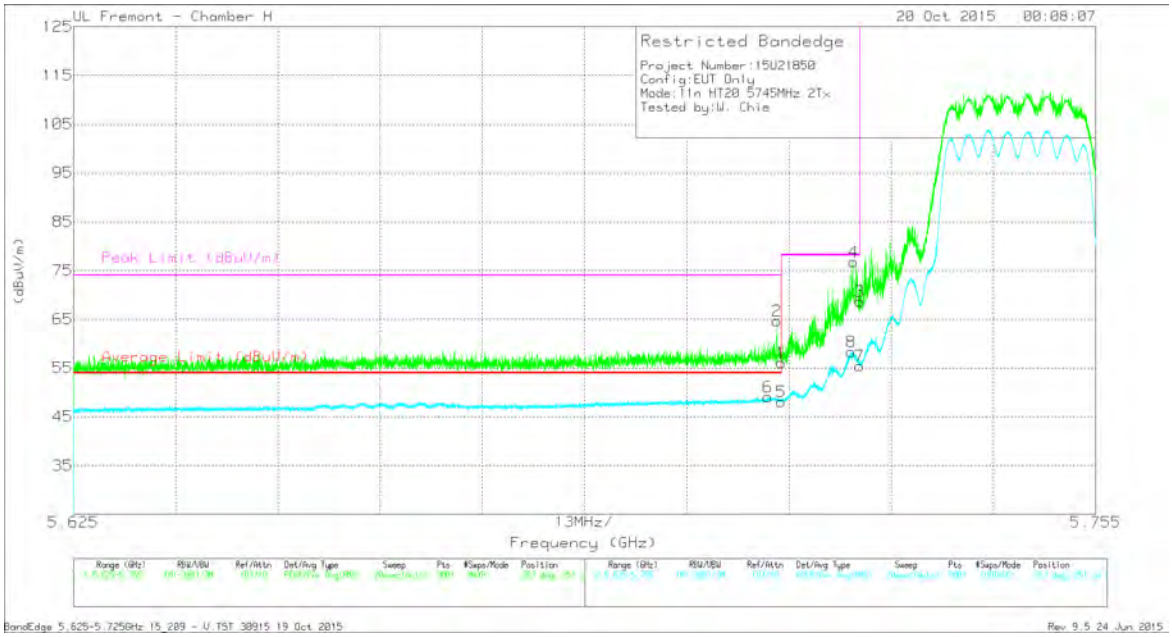
LOW CHANNEL VERTICAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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
6	5.713	35.56	RMS	34.8	-21.3	49.06	54	-4.94	-	-	353	251	V
2	5.714	51.17	Pk	34.8	-21.3	64.67	-	-	74	-9.33	353	251	V
1	5.715	42.61	Pk	34.8	-21.3	56.11	-	-	74	-17.89	353	251	V
5	5.715	34.65	RMS	34.8	-21.3	48.15	54	-5.85	-	-	353	251	V
4	5.724	63.33	Pk	34.8	-21.3	76.83	-	-	78.2	-1.37	353	251	V
8	5.724	44.85	RMS	34.8	-21.3	58.35	-	-	-	-	353	251	V
3	5.725	55.2	Pk	34.8	-21.3	68.7	-	-	78.2	-9.5	353	251	V
7	5.725	41.96	RMS	34.8	-21.3	55.46	-	-	-	-	353	251	V

Pk - Peak detector

RMS - RMS detection

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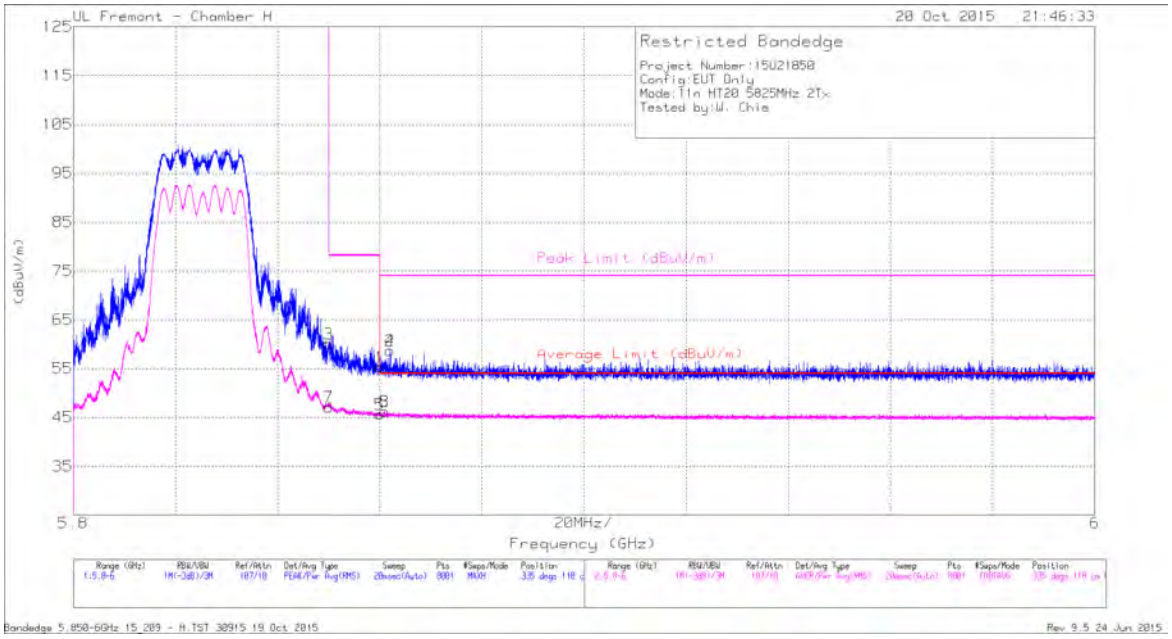
RESTRICTED BANDEDGE (HIGH CHANNEL)

HIGH CHANNEL HORIZONTAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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
3	5.85	46.37	Pk	34.9	-21.2	60.07	-	-	78.2	-18.13	335	118	H
7	5.85	33.46	RMS	34.9	-21.2	47.16	-	-	-	-	335	118	H
1	5.86	41.67	Pk	34.9	-21.2	55.37	-	-	74	-18.63	335	118	H
5	5.86	31.97	RMS	34.9	-21.2	45.67	54	-8.33	-	-	335	118	H
6	5.861	32.58	RMS	34.9	-21.2	46.28	54	-7.72	-	-	335	118	H
8	5.861	32.58	RMS	34.9	-21.2	46.28	54	-7.72	-	-	335	118	H
2	5.862	44.98	Pk	34.9	-21.2	58.68	-	-	74	-15.32	335	118	H
4	5.862	44.98	Pk	34.9	-21.2	58.68	-	-	74	-15.32	335	118	H

Pk - Peak detector

RMS - RMS detection

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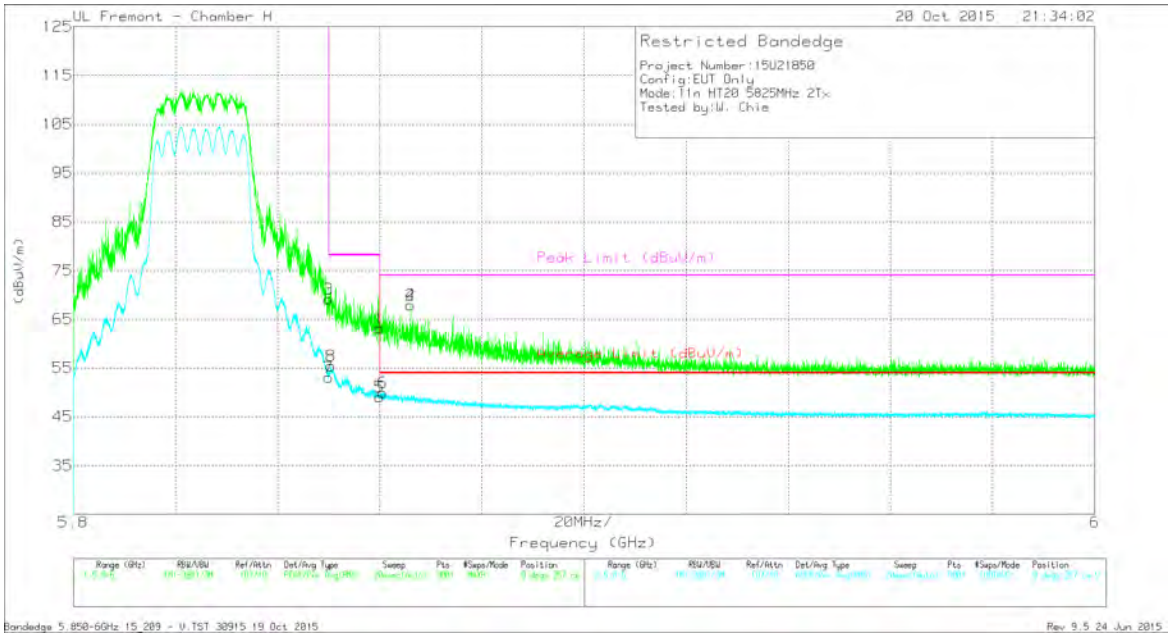
HIGH CHANNEL VERTICAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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
3	5.85	55.52	Pk	34.9	-21.2	69.22	-	-	78.2	-8.98	0	257	V
7	5.85	39.43	RMS	34.9	-21.2	53.13	-	-	-	-	0	257	V
8	5.85	41.75	RMS	34.9	-21.2	55.45	-	-	-	-	0	257	V
1	5.86	49.45	Pk	34.9	-21.2	63.15	-	-	74	-10.85	0	257	V
5	5.86	35.42	RMS	34.9	-21.2	49.12	54	-4.88	-	-	0	257	V
6	5.861	36.3	RMS	34.9	-21.2	50	54	-4	-	-	0	257	V
2	5.866	54.24	Pk	34.9	-21.2	67.94	-	-	74	-6.06	0	257	V
4	5.866	54.24	Pk	34.9	-21.2	67.94	-	-	74	-6.06	0	257	V

Pk - Peak detector

RMS - RMS detection

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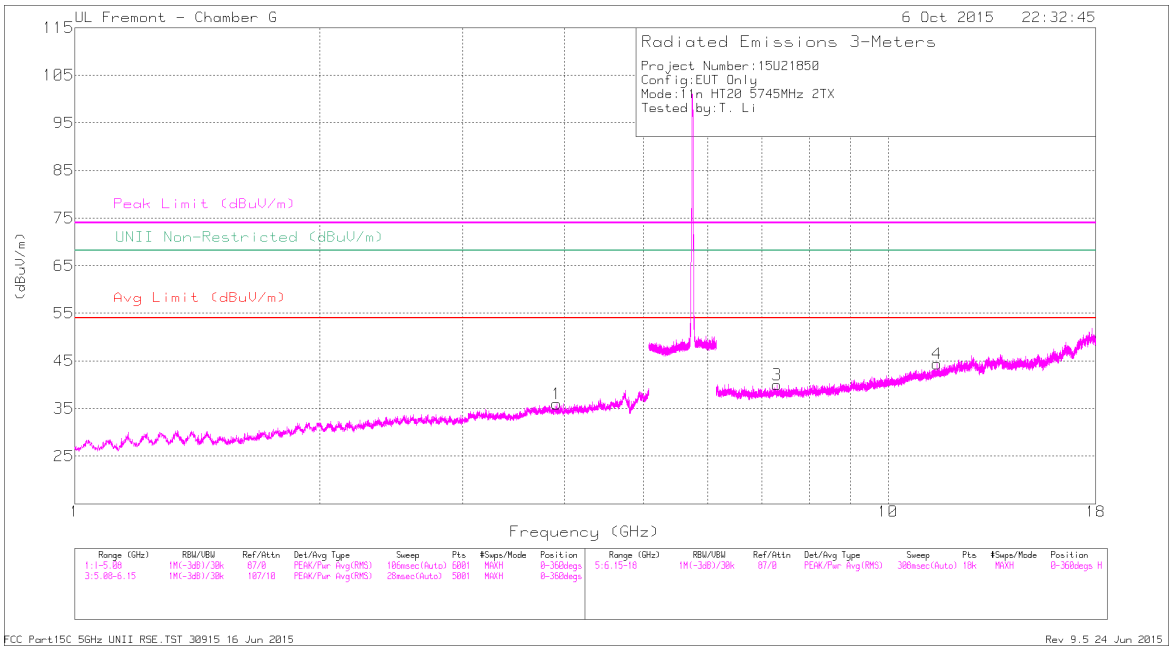
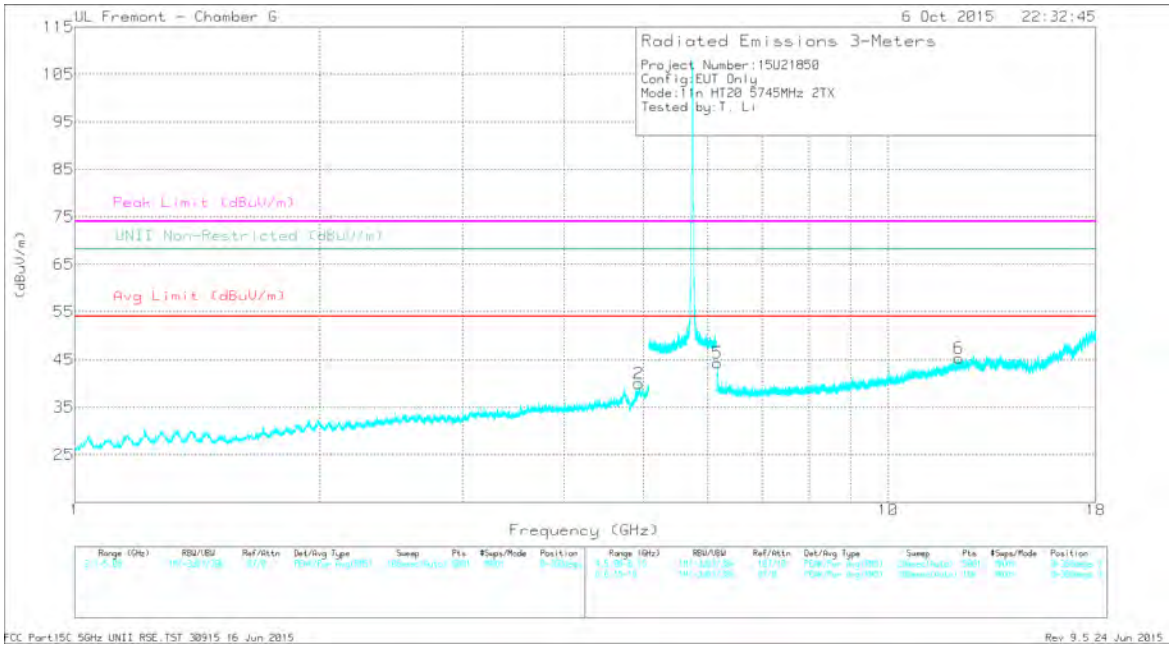
LOW CHANNEL HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



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DATA

Marker	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	* 3.912	41.53	PK-U	33.2	-33.1	41.63	-	-	74	-32.37	-	-	228	298	H
	* 3.914	30.44	ADR	33.2	-33.1	30.54	54	-23.46	-	-	-	-	228	298	H
2	* 4.935	42.33	PK-U	34.1	-31.2	45.23	-	-	74	-28.77	-	-	192	226	V
	* 4.937	31.06	ADR	34.1	-31.2	33.96	54	-20.04	-	-	-	-	192	226	V
3	* 7.307	41.08	PK-U	35.6	-30.9	45.78	-	-	74	-28.22	-	-	102	302	H
	* 7.307	29.89	ADR	35.6	-30.9	34.59	54	-19.41	-	-	-	-	102	302	H
4	* 11.486	38.7	PK-U	38.2	-26	50.9	-	-	74	-23.1	-	-	66	259	H
	* 11.486	27.01	ADR	38.2	-26	39.21	54	-14.79	-	-	-	-	66	259	H
6	* 12.225	37.63	PK-U	39	-24.8	51.83	-	-	74	-22.17	-	-	120	347	V
	* 12.222	26.56	ADR	39	-24.8	40.76	54	-13.24	-	-	-	-	120	347	V
5	6.168	47.37	PK-U	35.4	-31.7	51.07	-	-	74	-22.93	-	-	128	116	V
	6.17	37.71	ADR	35.5	-31.7	41.51	54	-12.49	-	-	-	-	128	116	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

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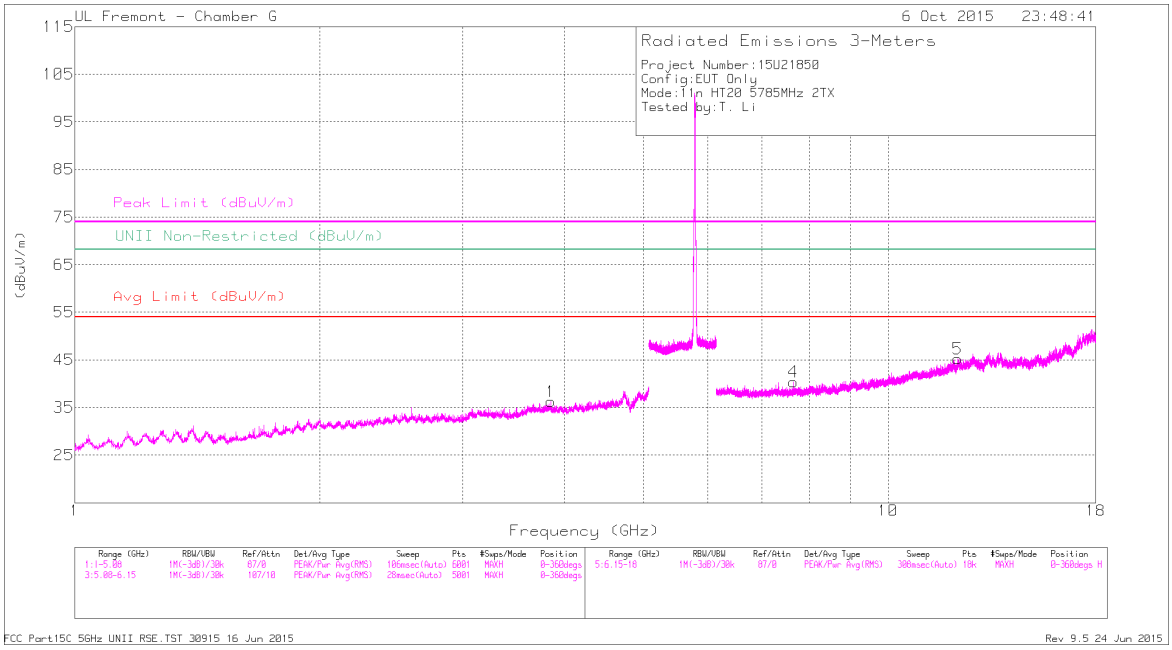
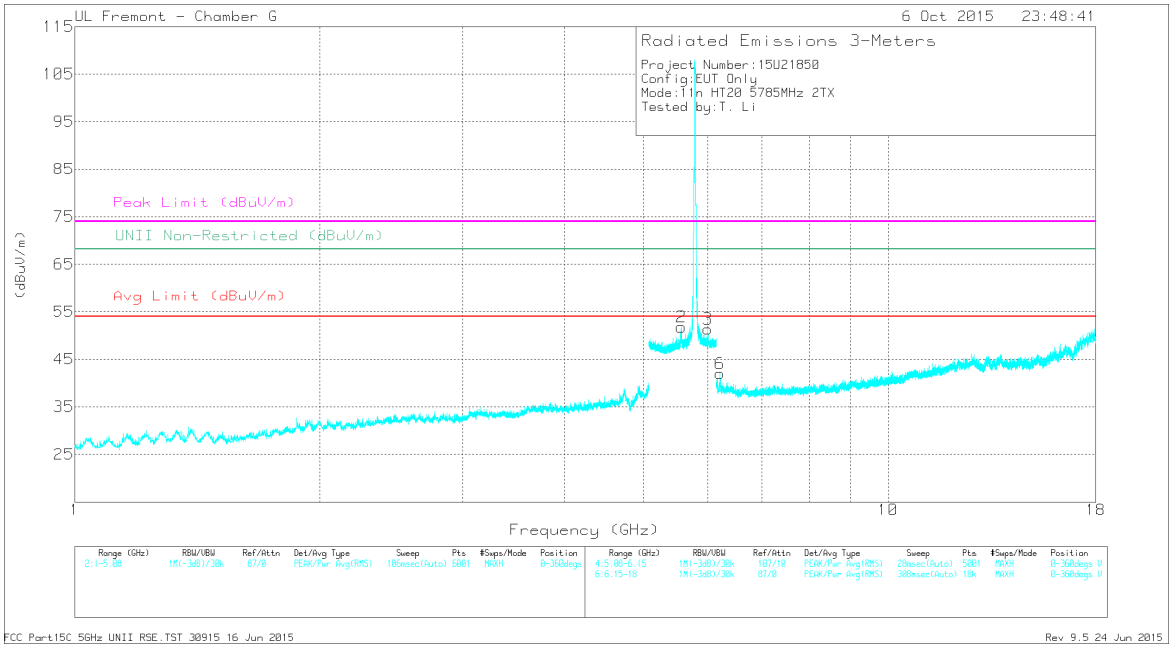
MID CHANNEL HARMONICS AND SPURIOUS EMISSIONS

MID CHANNEL HORIZONTAL PLOT



MID CHANNEL VERTICAL PLOT



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DATA

Marker	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	* 3.849	42.32	PK-U	33.1	-32.7	42.72	-	-	74	-31.28	-	-	0	100	H
	* 3.85	31.01	ADR	33.1	-32.7	31.41	54	-22.59	-	-	-	-	0	100	H
4	* 7.648	41.91	PK-U	35.6	-30.1	47.41	-	-	74	-26.59	-	-	0	100	H
	* 7.649	29.37	ADR	35.6	-30.1	34.87	54	-19.13	-	-	-	-	0	100	H
5	* 12.17	37.85	PK-U	39	-25.5	51.35	-	-	74	-22.65	-	-	0	100	H
	* 12.168	26.96	ADR	39	-25.5	40.46	54	-13.54	-	-	-	-	0	100	H
2	5.57	44.39	PK-U	34.8	-23	56.19	-	-	74	-17.81	-	-	0	100	V
	5.571	33.12	ADR	34.8	-23	44.92	54	-9.08	-	-	-	-	0	100	V
3	6.004	43.68	PK-U	35.3	-22.9	56.08	-	-	74	-17.92	-	-	0	100	V
	6.004	32.44	ADR	35.3	-22.9	44.84	54	-9.16	-	-	-	-	0	100	V
6	6.214	31.18	ADR	35.5	-31.7	34.98	54	-19.02	-	-	-	-	0	100	V
	6.215	42.55	PK-U	35.5	-31.7	46.35	-	-	74	-27.65	-	-	0	100	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

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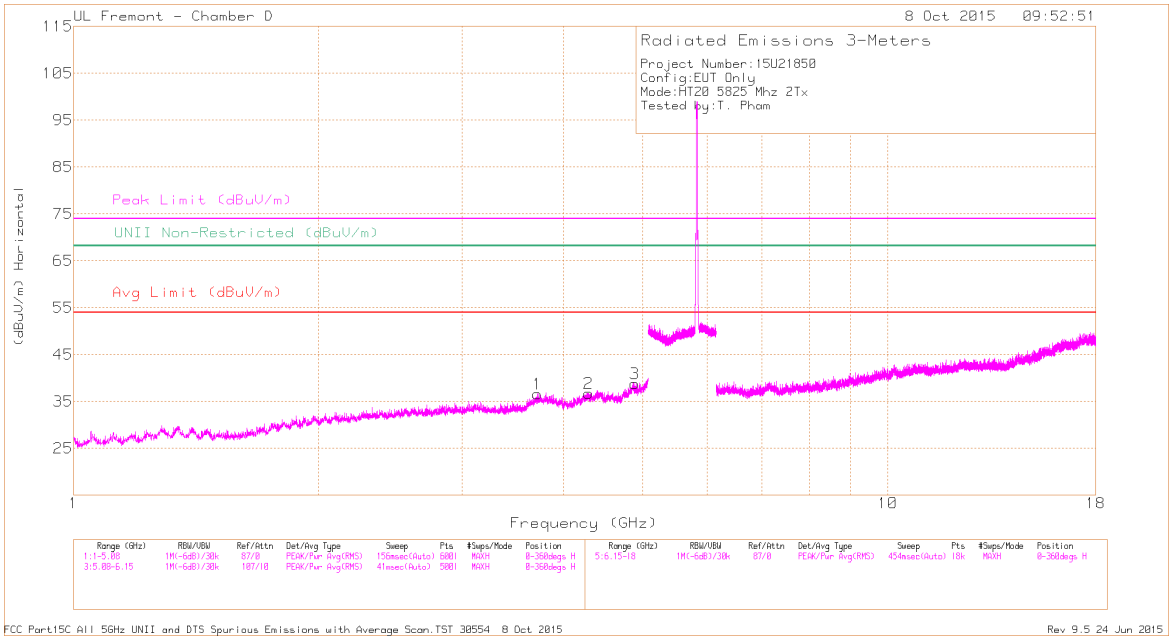
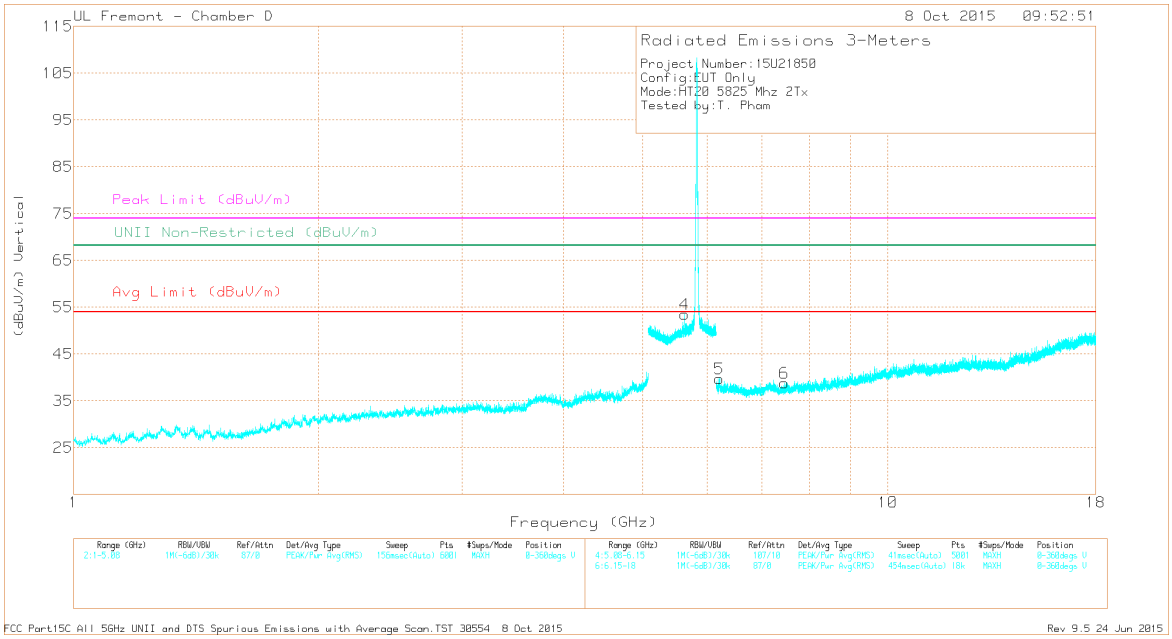
HIGH CHANNEL HARMONICS AND SPURIOUS EMISSIONS

HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



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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	* 3.711	38.94	PK-U	33.2	-29.3	42.84	-	-	74	-31.16	-	-	0	101	H
	* 3.712	27.23	ADR	33.2	-29.3	31.13	54	-22.87	-	-	-	-	0	101	H
2	* 4.288	38.69	PK-U	33.6	-28	44.29	-	-	74	-29.71	-	-	0	101	H
	* 4.289	26.81	ADR	33.6	-28	32.41	54	-21.59	-	-	-	-	0	101	H
3	* 4.886	36.78	PK-U	34.1	-25.5	45.38	-	-	74	-28.62	-	-	0	101	H
	* 4.885	25.35	ADR	34.1	-25.5	33.95	54	-20.05	-	-	-	-	0	101	H
6	* 7.464	36.04	PK-U	35.5	-24.9	46.64	-	-	74	-27.36	-	-	0	101	V
	* 7.465	24.5	ADR	35.5	-24.9	35.1	54	-18.9	-	-	-	-	0	101	V
4	5.63	42.71	PK-U	34.4	-17.6	59.51	-	-	74	-27.36	-	-	0	101	V
	5.63	30.09	ADR	34.4	-17.7	46.79	54	-7.21	-	-	-	-	0	101	V
5	6.204	37.78	PK-U	35.4	-26.7	46.48	-	-	74	-27.52	-	-	0	101	V
	6.204	26.15	ADR	35.4	-26.7	34.85	54	-19.15	-	-	-	-	0	101	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

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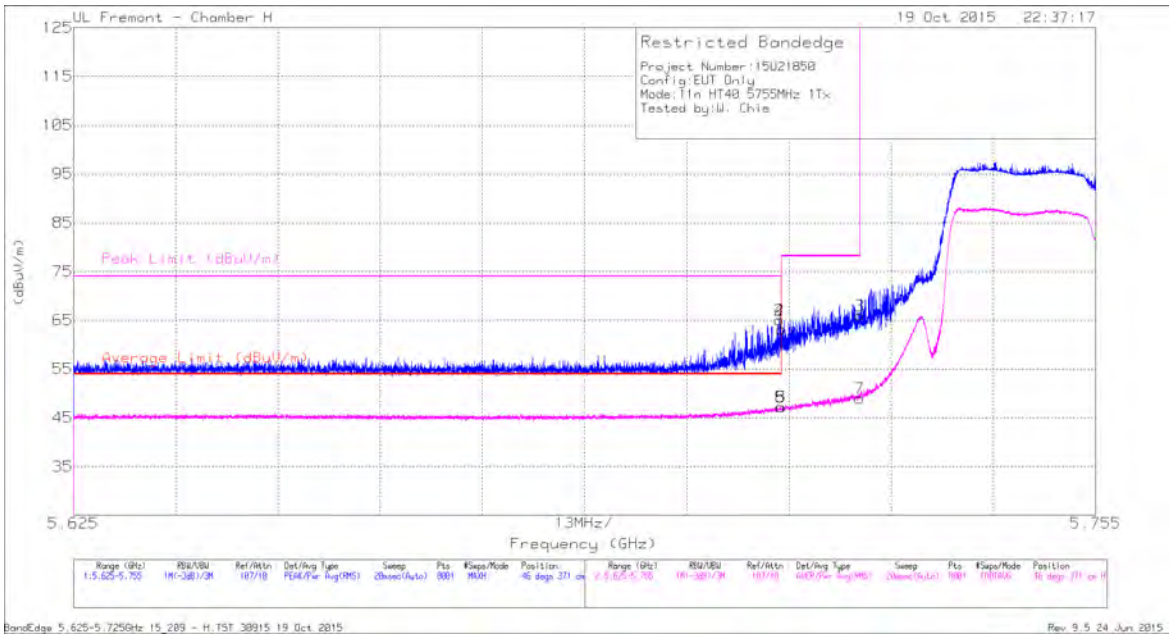
9.4. 802.11n HT40 1Tx MODE IN THE 5.8 GHz BAND

9.4.1. CHAIN 0, RESTRICTED BANDEDGE AND HARMONIC SPURIOUS

LOW CHANNEL

LOW CHANNEL HORIZONTAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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	5.715	49.71	Pk	34.8	-21.3	63.21	-	-	74	-10.79	46	371	H
2	5.715	51.5	Pk	34.8	-21.3	65	-	-	74	-9	46	371	H
4	5.715	51.5	Pk	34.8	-21.3	65	-	-	74	-9	46	371	H
5	5.715	33.73	RMS	34.8	-21.3	47.23	54	-6.77	-	-	46	371	H
6	5.715	33.77	RMS	34.8	-21.3	47.27	54	-6.73	-	-	46	371	H
8	5.715	33.77	RMS	34.8	-21.3	47.27	54	-6.73	-	-	46	371	H
3	5.725	52.49	Pk	34.8	-21.3	65.99	-	-	78.2	-12.21	46	371	H
7	5.725	35.46	RMS	34.8	-21.3	48.96	-	-	-	-	46	371	H

Pk - Peak detector

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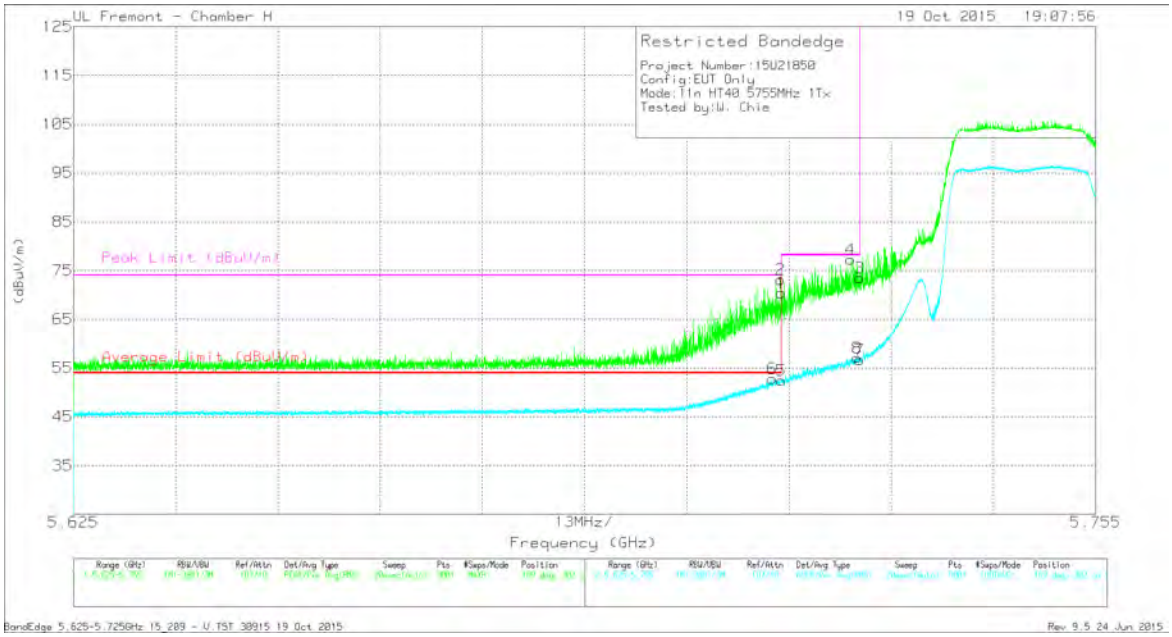
LOW CHANNEL VERTICAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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
6	5.714	39.32	RMS	34.8	-21.3	52.82	54	-1.18	-	-	189	302	V
1	5.715	56.9	Pk	34.8	-21.3	70.4	-	-	74	-3.6	189	302	V
2	5.715	59.61	Pk	34.8	-21.3	73.11	-	-	74	-.89	189	302	V
5	5.715	38.92	RMS	34.8	-21.3	52.42	54	-1.58	-	-	189	302	V
4	5.724	63.81	Pk	34.8	-21.3	77.31	-	-	78.2	-.89	189	302	V
3	5.725	60.02	Pk	34.8	-21.3	73.52	-	-	78.2	-4.68	189	302	V
7	5.725	43.26	RMS	34.8	-21.3	56.76	-	-	-	-	189	302	V
8	5.725	43.64	RMS	34.8	-21.3	57.14	-	-	-	-	189	302	V

Pk - Peak detector

RMS - RMS detection

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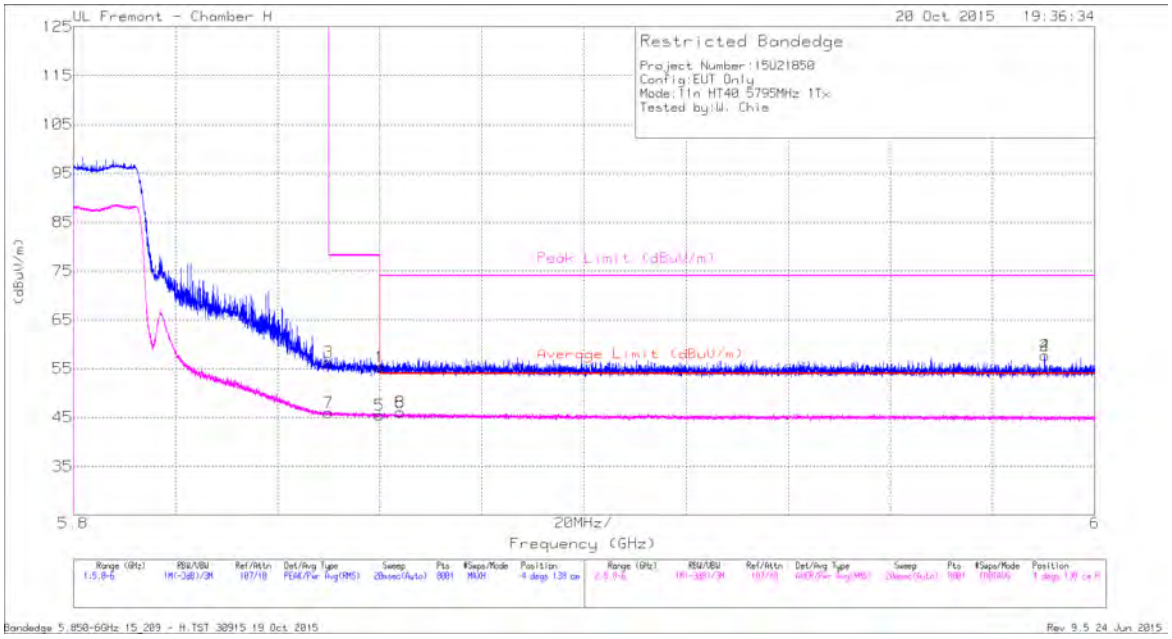
RESTRICTED BANDEDGE, CHAIN 0 (HIGH CHANNEL)

HIGH CHANNEL HORIZONTAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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
3	5.85	42.65	Pk	34.9	-21.2	56.35	-	-	78.2	-21.85	4	138	H
7	5.85	32.29	RMS	34.9	-21.2	45.99	-	-	-	-	4	138	H
1	5.86	41.69	Pk	34.9	-21.2	55.39	-	-	74	-18.61	4	138	H
5	5.86	31.79	RMS	34.9	-21.2	45.49	54	-8.51	-	-	4	138	H
6	5.864	32.35	RMS	34.9	-21.2	46.05	54	-7.95	-	-	4	138	H
8	5.864	32.35	RMS	34.9	-21.2	46.05	54	-7.95	-	-	4	138	H
2	5.99	43.61	Pk	35.2	-21.1	57.71	-	-	74	-16.29	4	138	H
4	5.99	43.61	Pk	35.2	-21.1	57.71	-	-	74	-16.29	4	138	H

Pk - Peak detector

RMS - RMS detection

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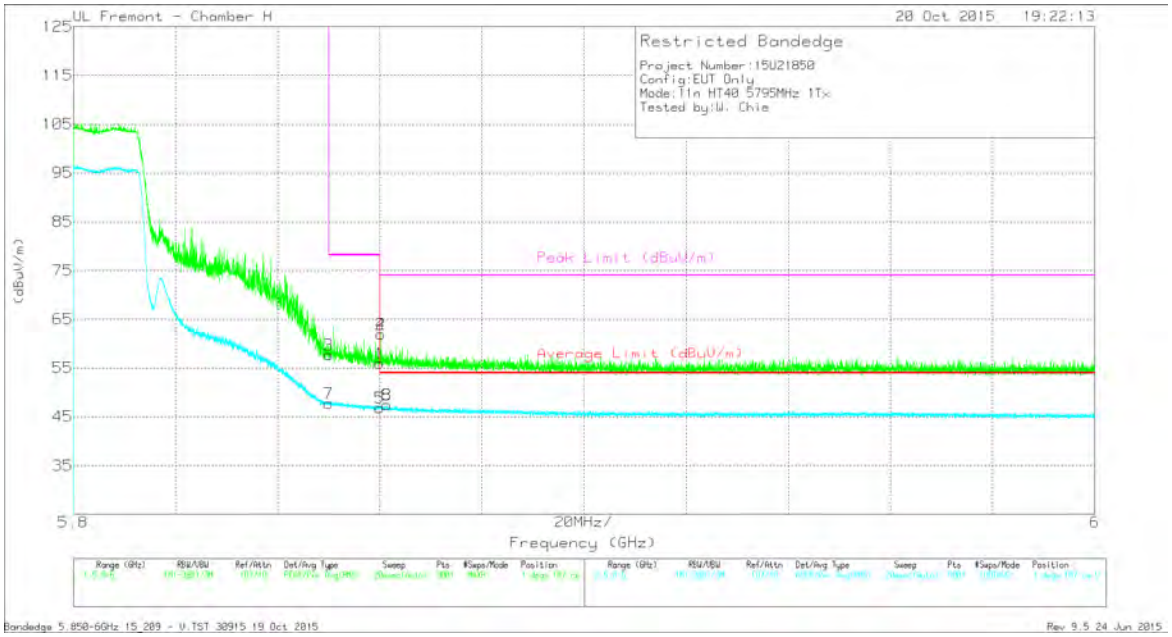
HIGH CHANNEL VERTICAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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
3	5.85	44.06	Pk	34.9	-21.2	57.76	-	-	78.2	-20.44	1	187	V
7	5.85	33.99	RMS	34.9	-21.2	47.69	-	-	-	-	1	187	V
1	5.86	42.25	Pk	34.9	-21.2	55.95	-	-	74	-18.05	1	187	V
2	5.86	48.22	Pk	34.9	-21.2	61.92	-	-	74	-12.08	1	187	V
4	5.86	48.22	Pk	34.9	-21.2	61.92	-	-	74	-12.08	1	187	V
5	5.86	33.19	RMS	34.9	-21.2	46.89	54	-7.11	-	-	1	187	V
6	5.861	33.76	RMS	34.9	-21.2	47.46	54	-6.54	-	-	1	187	V
8	5.861	33.76	RMS	34.9	-21.2	47.46	54	-6.54	-	-	1	187	V

Pk - Peak detector

RMS - RMS detection

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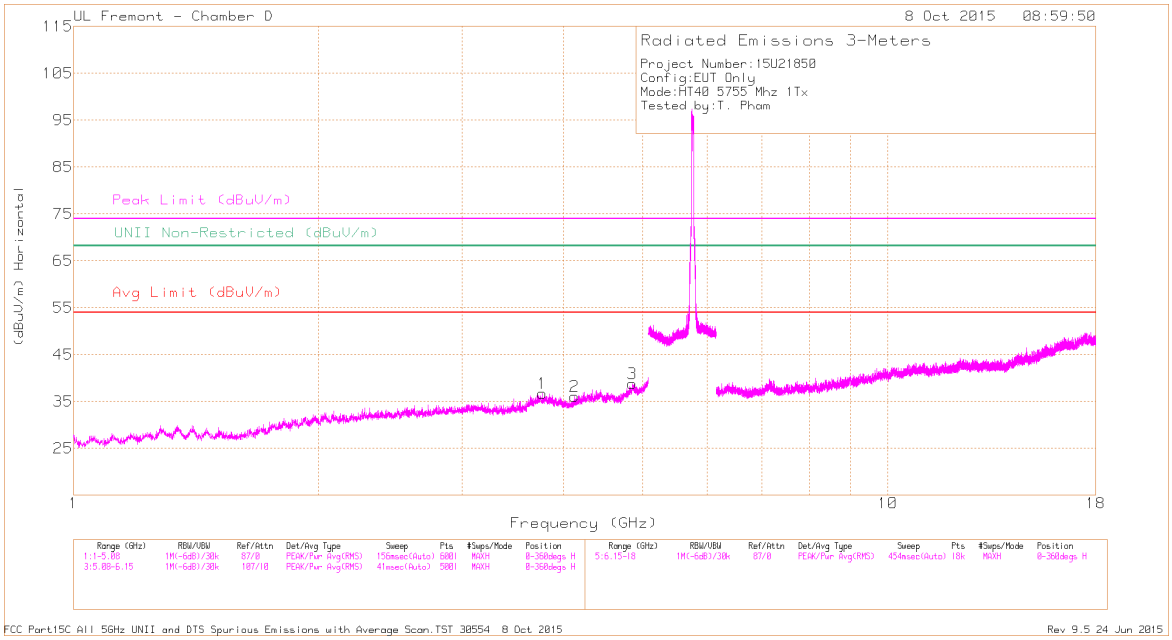
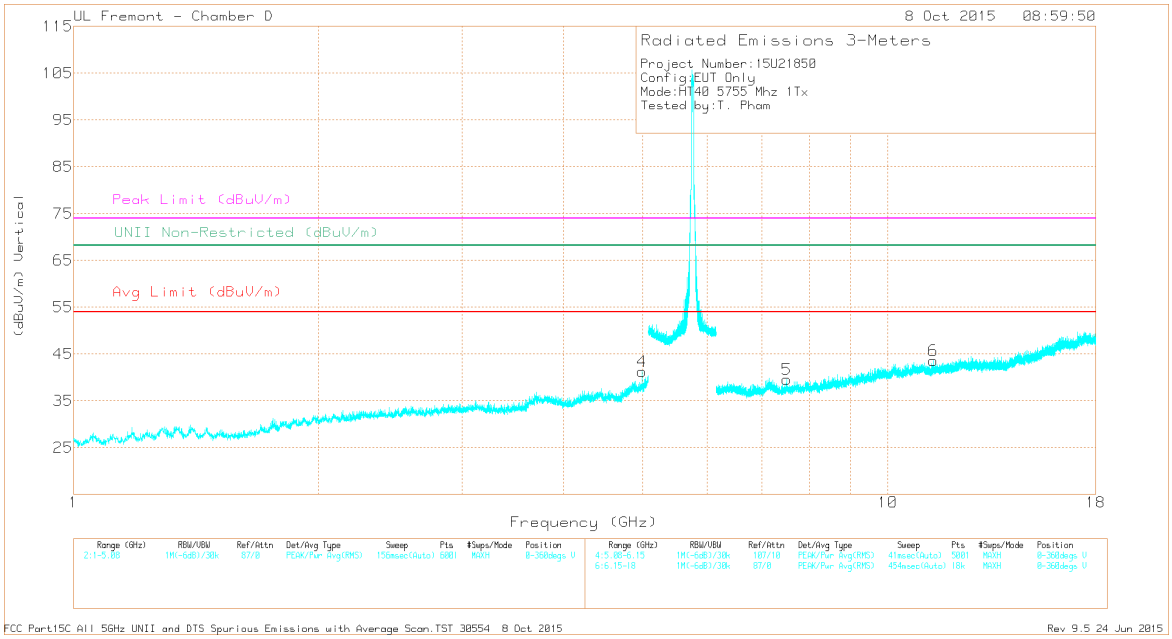
LOW CHANNEL HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



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DATA

Markers	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	* 3.766	39.28	PK-U	33.3	-28.9	0	43.68	-	-	74	-30.32	-	-	276	161	H
	* 3.766	26.96	ADR	33.3	-28.9	.12	31.48	54	-22.52	-	-	-	-	276	161	H
2	* 4.121	38.98	PK-U	33.4	-28.5	0	43.88	-	-	74	-30.12	-	-	259	150	H
	* 4.12	26.96	ADR	33.4	-28.5	.12	31.98	54	-22.02	-	-	-	-	259	150	H
3	* 4.856	37.72	PK-U	34.1	-25.6	0	46.22	-	-	74	-27.78	-	-	274	132	H
	* 4.855	25.86	ADR	34.1	-25.7	.12	34.38	54	-19.62	-	-	-	-	274	132	H
4	* 4.987	38.71	PK-U	34.2	-26.9	0	46.01	-	-	74	-27.99	-	-	285	157	V
	* 4.988	27.21	ADR	34.2	-26.9	.12	34.63	54	-19.37	-	-	-	-	285	157	V
5	* 7.509	35.54	PK-U	35.5	-24.4	0	46.64	-	-	74	-27.36	-	-	276	145	V
	* 7.511	24.44	ADR	35.5	-24.4	.12	35.66	54	-18.34	-	-	-	-	276	145	V
6	* 11.363	35.16	PK-U	38	-21.7	0	51.46	-	-	74	-22.54	-	-	256	166	V
	* 11.362	23.3	ADR	38	-21.7	.12	39.72	54	-14.28	-	-	-	-	256	166	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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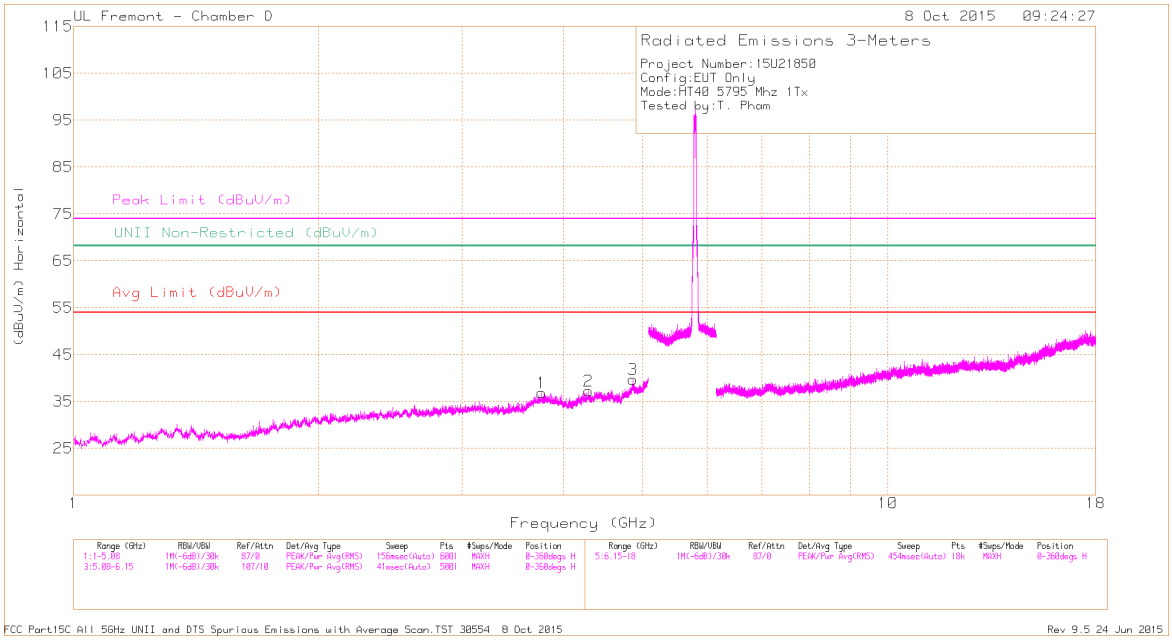
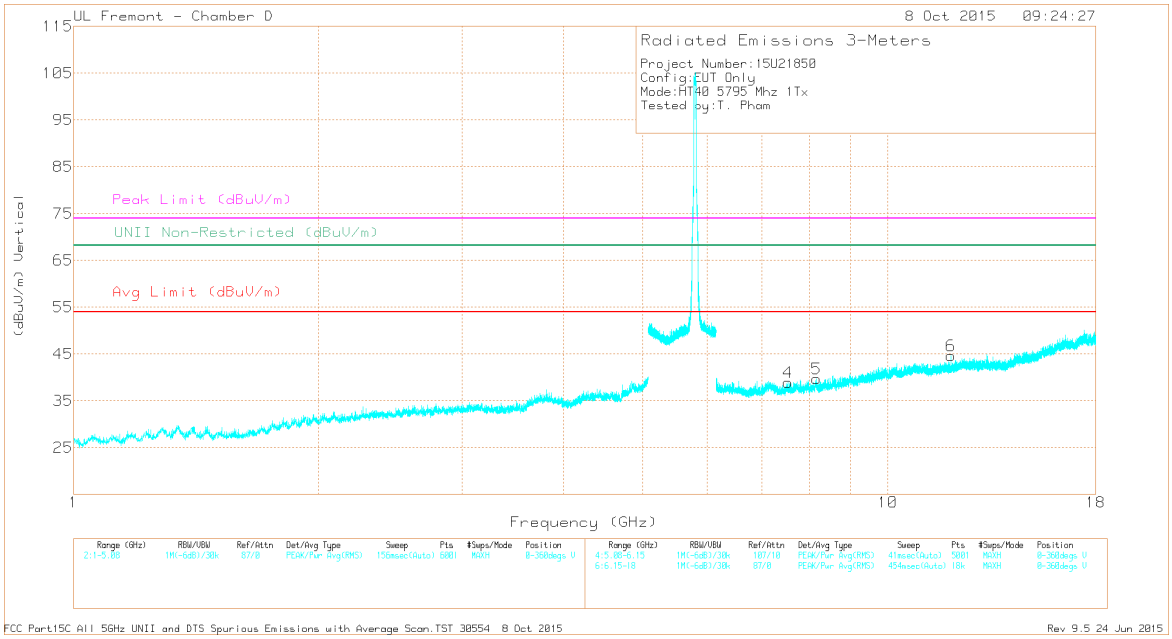
HIGH CHANNEL HARMONICS AND SPURIOUS EMISSIONS

HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



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DATA

Markers	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	* 3.759	38.85	PK-U	33.3	-28.9	0	43.25	-	-	74	-30.75	-	-	132	226	H
	* 3.758	27.07	ADR	33.3	-28.9	.12	31.59	54	-22.41	-	-	-	-	132	226	H
2	* 4.289	38.81	PK-U	33.6	-28	0	44.41	-	-	74	-29.59	-	-	158	365	H
	* 4.287	26.71	ADR	33.6	-28	.12	32.43	54	-21.57	-	-	-	-	158	365	H
3	* 4.864	37.56	PK-U	34.1	-25.3	0	46.36	-	-	74	-27.64	-	-	144	158	H
	* 4.864	25.74	ADR	34.1	-25.3	.12	34.66	54	-19.34	-	-	-	-	144	158	H
4	* 7.536	36.2	PK-U	35.5	-25	0	46.7	-	-	74	-27.3	-	-	214	117	V
	* 7.538	24.62	ADR	35.5	-25	.12	35.24	54	-18.76	-	-	-	-	214	117	V
5	* 8.172	36.09	PK-U	35.7	-24.4	0	47.39	-	-	74	-26.61	-	-	285	168	V
	* 8.172	24.44	ADR	35.7	-24.4	.12	35.86	54	-18.14	-	-	-	-	285	168	V
6	* 11.952	34.88	PK-U	38.6	-22.2	0	51.28	-	-	74	-22.72	-	-	65	223	V
	* 11.952	23.37	ADR	38.6	-22.2	.12	39.89	54	-14.11	-	-	-	-	65	223	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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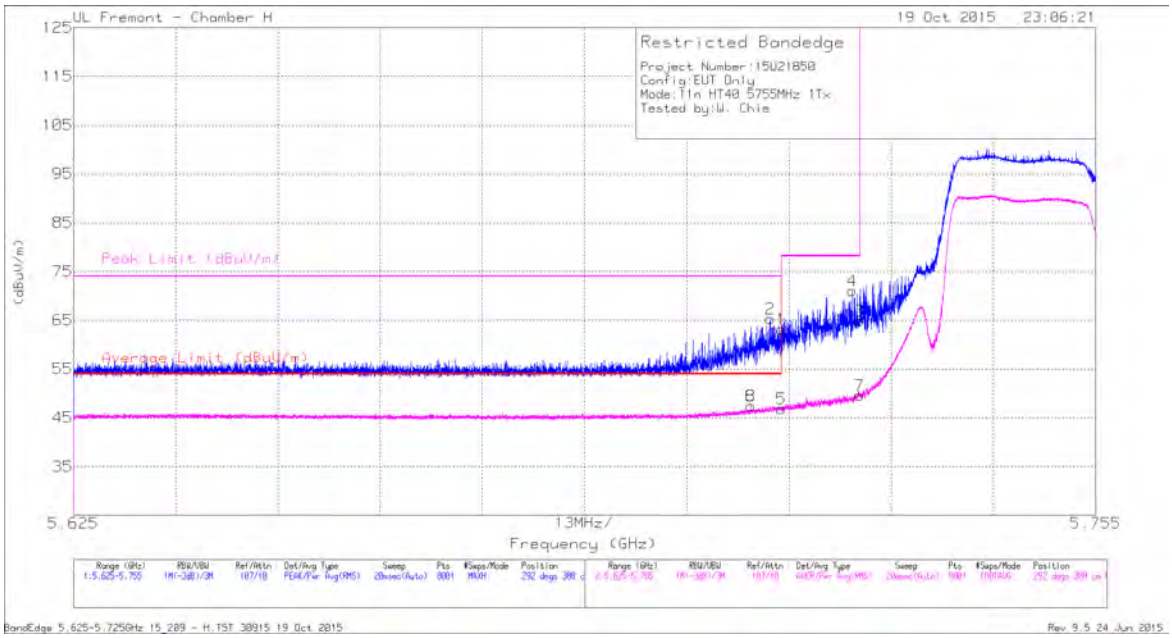
9.4.2. CHAIN 1, RESTRICTED BANDEDGE AND HARMONIC SPURIOUS

LOW CHANNEL

LOW CHANNEL HORIZONTAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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
6	5.711	33.97	RMS	34.8	-21.3	47.47	54	-6.53	-	-	292	388	H
8	5.711	33.97	RMS	34.8	-21.3	47.47	54	-6.53	-	-	292	388	H
2	5.714	51.78	Pk	34.8	-21.3	65.28	-	-	74	-8.72	292	388	H
1	5.715	49.63	Pk	34.8	-21.3	63.13	-	-	74	-10.87	292	388	H
5	5.715	33.35	RMS	34.8	-21.3	46.85	54	-7.15	-	-	292	388	H
4	5.724	57.59	Pk	34.8	-21.3	71.09	-	-	78.2	-7.11	292	388	H
3	5.725	51.44	Pk	34.8	-21.3	64.94	-	-	78.2	-13.26	292	388	H
7	5.725	36.11	RMS	34.8	-21.3	49.61	-	-	-	-	292	388	H

Pk - Peak detector

RMS - RMS detection

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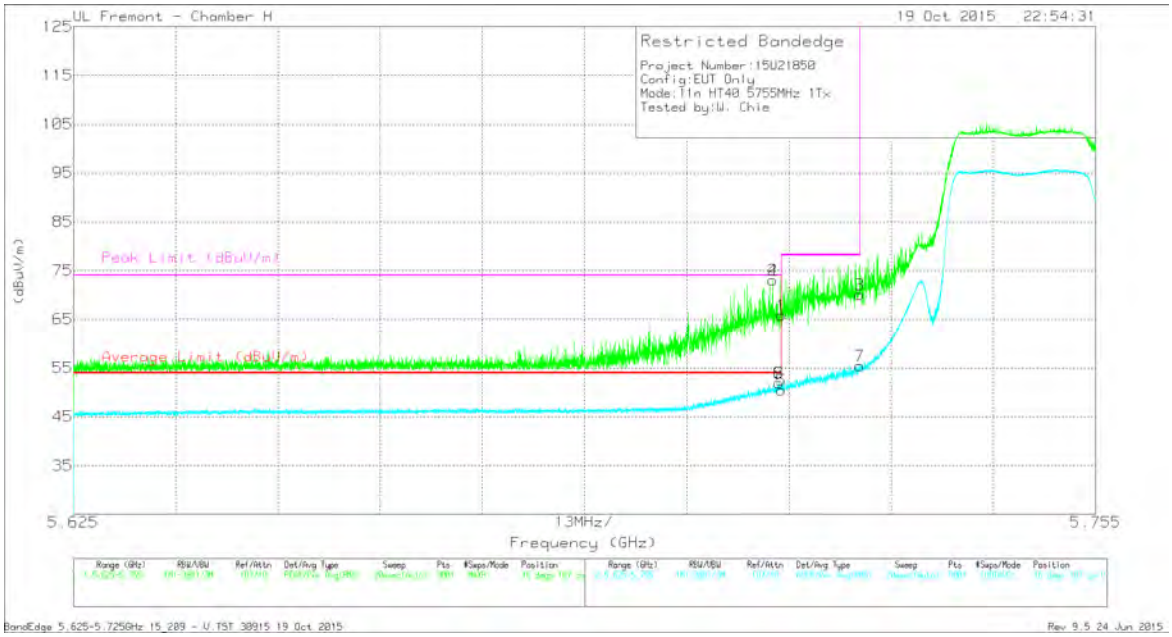
LOW CHANNEL VERTICAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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	5.714	59.55	Pk	34.8	-21.3	73.05	-	-	74	-.95	16	107	V
4	5.714	59.55	Pk	34.8	-21.3	73.05	-	-	74	-.95	16	107	V
1	5.715	52.34	Pk	34.8	-21.3	65.84	-	-	74	-8.16	16	107	V
5	5.715	36.96	RMS	34.8	-21.3	50.46	54	-3.54	-	-	16	107	V
6	5.715	38.41	RMS	34.8	-21.3	51.91	54	-2.09	-	-	16	107	V
8	5.715	38.41	RMS	34.8	-21.3	51.91	54	-2.09	-	-	16	107	V
3	5.725	56.59	Pk	34.8	-21.3	70.09	-	-	78.2	-8.11	16	107	V
7	5.725	41.93	RMS	34.8	-21.3	55.43	-	-	-	-	16	107	V

Pk - Peak detector

RMS - RMS detection

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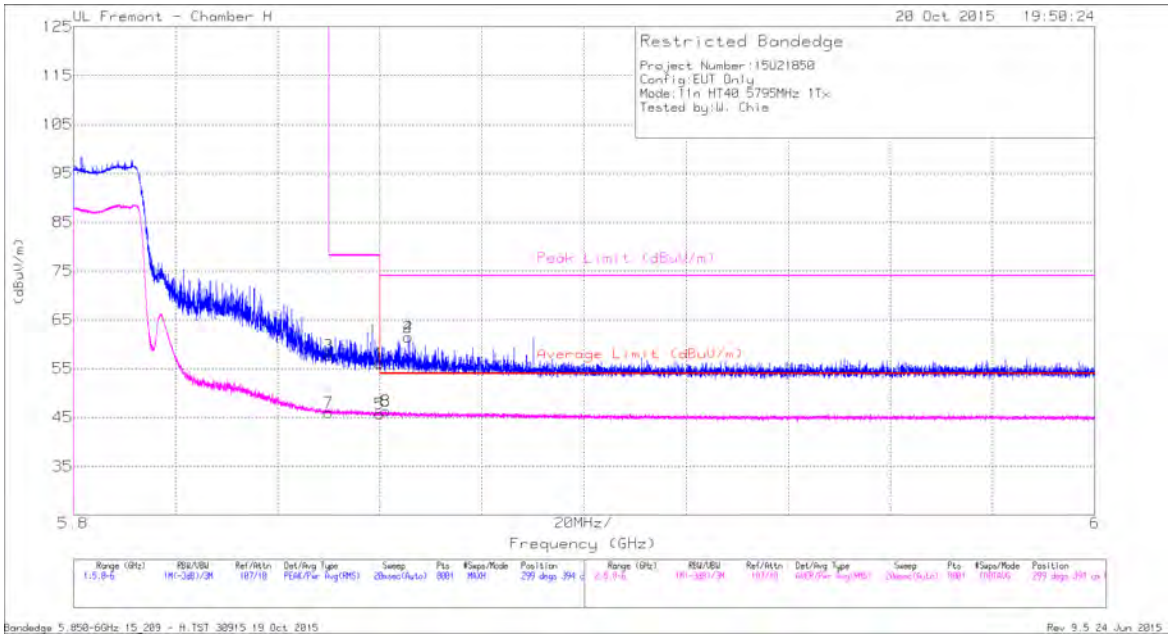
RESTRICTED BANDEDGE, CHAIN 1 (HIGH CHANNEL)

HIGH CHANNEL HORIZONTAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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
3	5.85	43.99	Pk	34.9	-21.2	57.69	-	-	78.2	-20.51	299	394	H
7	5.85	32.32	RMS	34.9	-21.2	46.02	-	-	-	-	299	394	H
1	5.86	42.44	Pk	34.9	-21.2	56.14	-	-	74	-17.86	299	394	H
5	5.86	32.01	RMS	34.9	-21.2	45.71	54	-8.29	-	-	299	394	H
6	5.861	32.6	RMS	34.9	-21.2	46.3	54	-7.7	-	-	299	394	H
8	5.861	32.6	RMS	34.9	-21.2	46.3	54	-7.7	-	-	299	394	H
2	5.866	47.78	Pk	34.9	-21.2	61.48	-	-	74	-12.52	299	394	H
4	5.866	47.78	Pk	34.9	-21.2	61.48	-	-	74	-12.52	299	394	H

Pk - Peak detector

RMS - RMS detection

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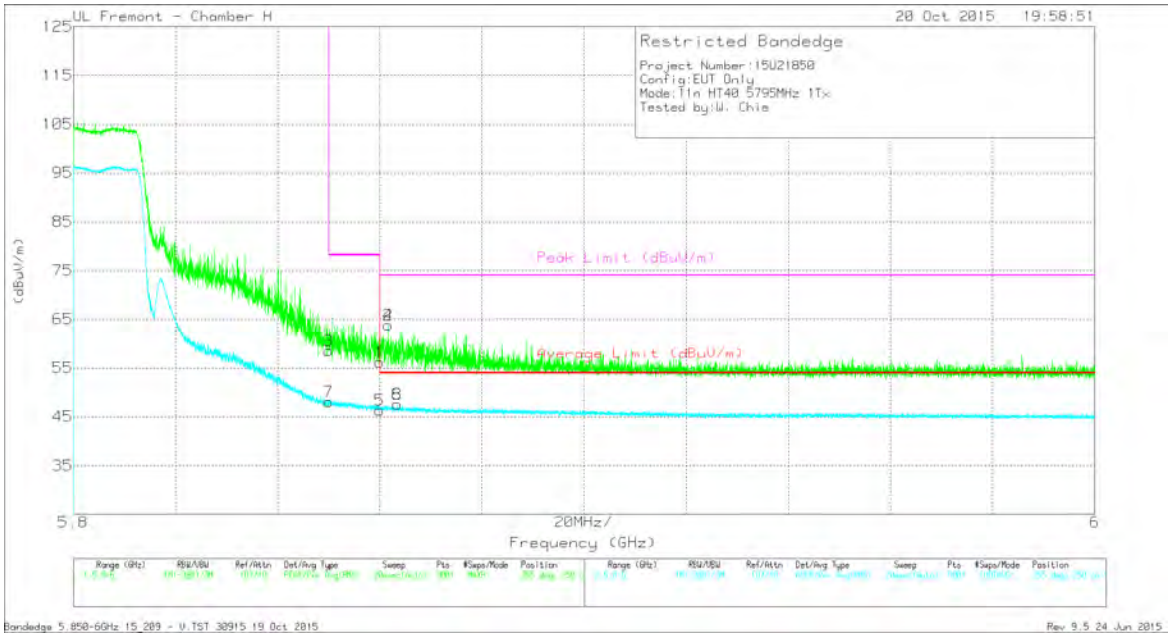
HIGH CHANNEL VERTICAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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
3	5.85	44.92	Pk	34.9	-21.2	58.62	-	-	78.2	-19.58	355	250	V
7	5.85	34.46	RMS	34.9	-21.2	48.16	-	-	-	-	355	250	V
1	5.86	42.52	Pk	34.9	-21.2	56.22	-	-	74	-17.78	355	250	V
5	5.86	32.67	RMS	34.9	-21.2	46.37	54	-7.63	-	-	355	250	V
2	5.862	50.06	Pk	34.9	-21.2	63.76	-	-	74	-10.24	355	250	V
4	5.862	50.06	Pk	34.9	-21.2	63.76	-	-	74	-10.24	355	250	V
6	5.863	33.92	RMS	34.9	-21.2	47.62	54	-6.38	-	-	355	250	V
8	5.863	33.92	RMS	34.9	-21.2	47.62	54	-6.38	-	-	355	250	V

Pk - Peak detector

RMS - RMS detection

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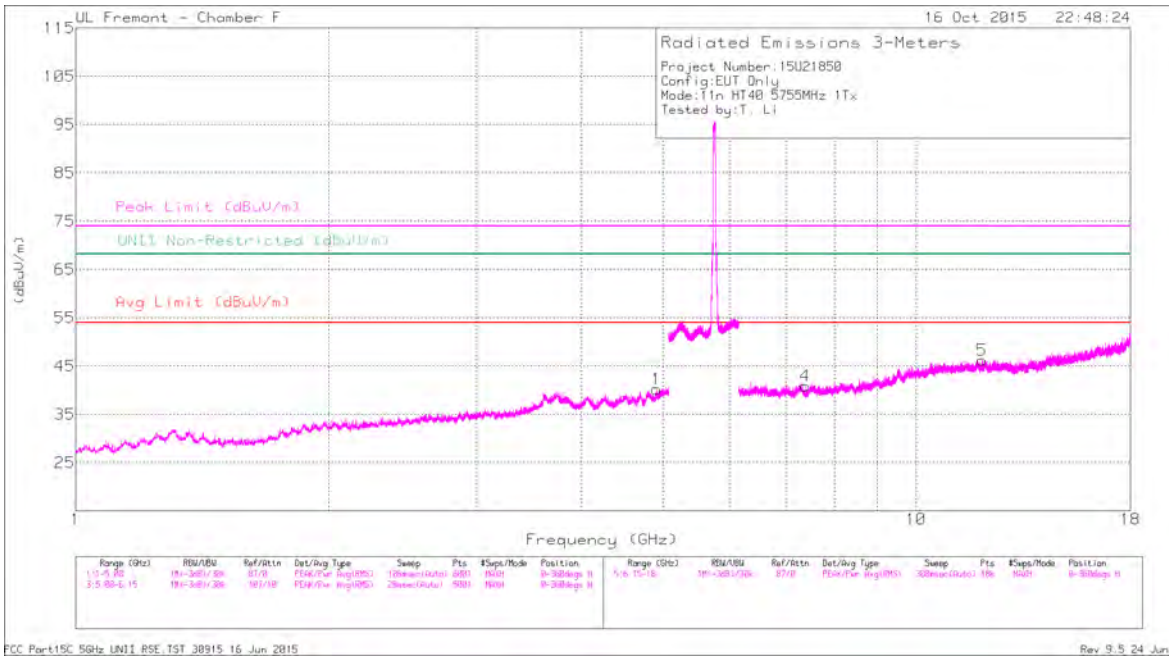
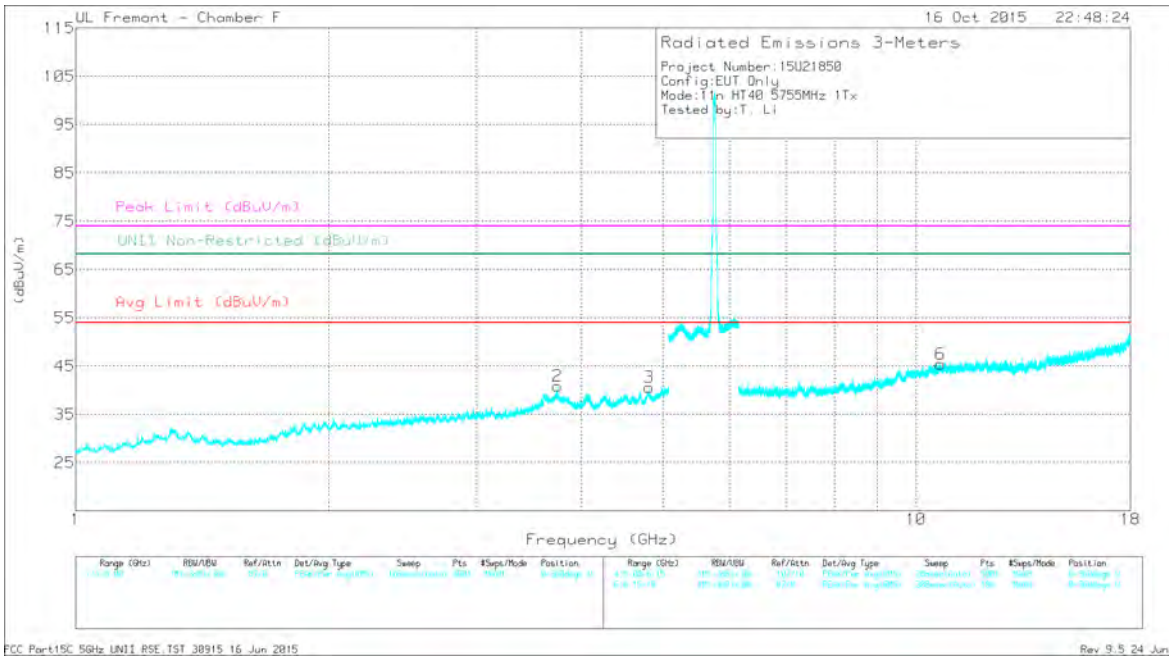
LOW CHANNEL HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



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DATA

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
* 4.918	39.59	PK-U	34.1	-26.9	0	46.79	-	-	74	-27.21	-	-	166	194	H
* 4.917	27.88	ADR	34.1	-26.9	.12	35.2	54	-18.8	-	-	-	-	166	194	H
* 3.744	41.27	PK-U	34.4	-29.3	0	46.37	-	-	74	-27.63	-	-	247	291	V
* 3.744	29.59	ADR	34.4	-29.3	.12	34.81	54	-19.19	-	-	-	-	247	291	V
* 4.808	41.36	PK-U	34.1	-28	0	47.46	-	-	74	-26.54	-	-	147	223	V
* 4.809	29.59	ADR	34.1	-28	.12	35.81	54	-18.19	-	-	-	-	147	223	V
* 7.384	37.92	PK-U	35.7	-26.5	0	47.12	-	-	74	-26.88	-	-	182	300	H
* 7.382	26.62	ADR	35.7	-26.5	.12	35.94	54	-18.06	-	-	-	-	182	300	H
* 11.978	35.64	PK-U	39.1	-22.9	0	51.84	-	-	74	-22.16	-	-	94	126	H
* 11.979	24.85	ADR	39.1	-22.9	.12	41.17	54	-12.83	-	-	-	-	94	126	H
* 10.691	35.78	PK-U	37.9	-21.8	0	51.88	-	-	74	-22.12	-	-	108	286	V
* 10.693	24.7	ADR	37.9	-21.8	.12	40.92	54	-13.08	-	-	-	-	108	286	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

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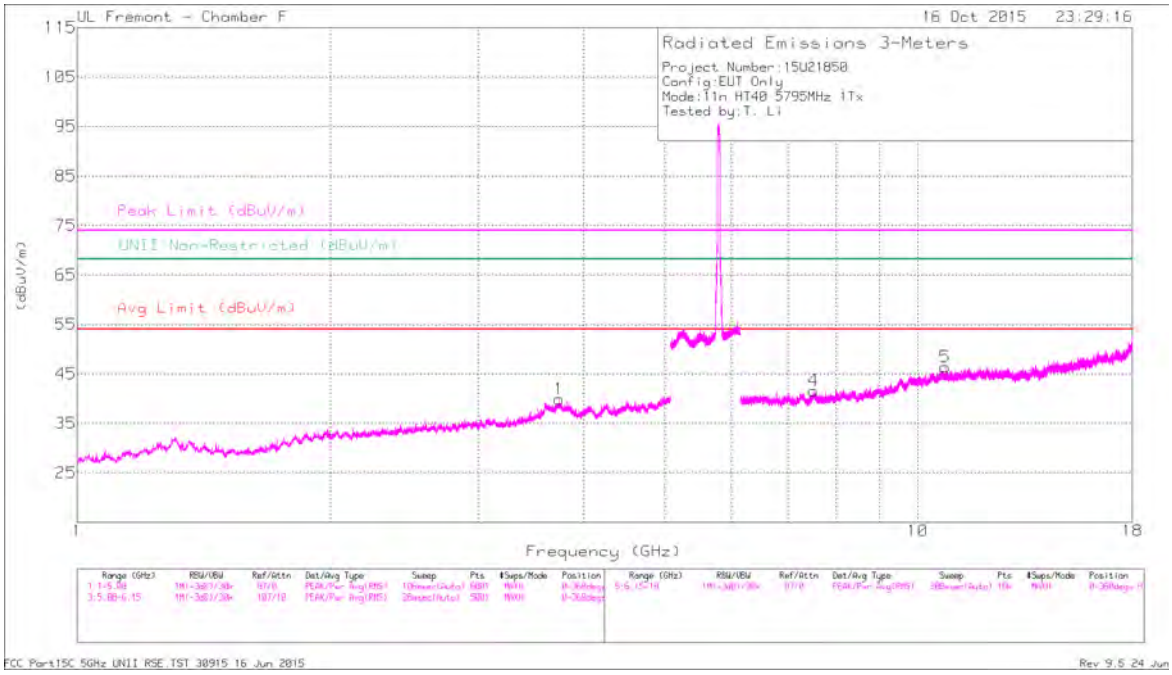
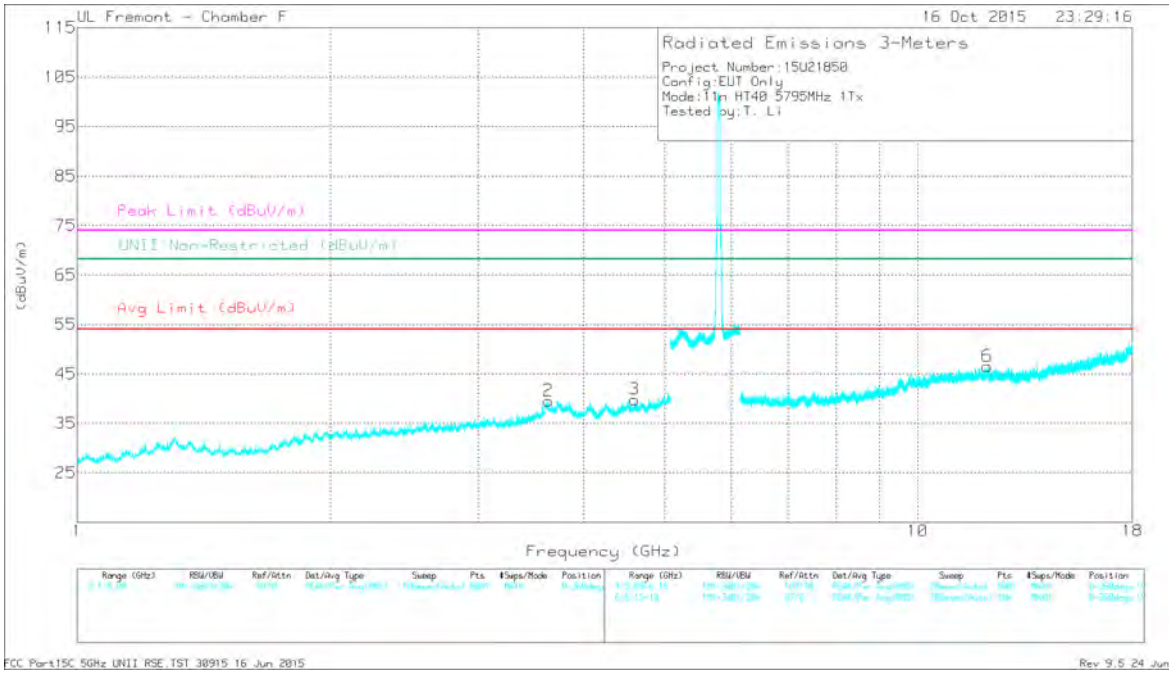
HIGH CHANNEL HARMONICS AND SPURIOUS EMISSIONS

HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



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DATA

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
* 3.747	40.69	PK-U	34.4	-29.3	0	45.79	-	-	74	-28.21	-	-	179	312	H
* 3.747	29.45	ADR	34.4	-29.3	.12	34.67	54	-19.33	-	-	-	-	179	312	H
* 3.633	40.46	PK-U	34.9	-29.5	0	45.86	-	-	74	-28.14	-	-	167	183	V
* 3.635	29.45	ADR	34.9	-29.4	.12	35.07	54	-18.93	-	-	-	-	167	183	V
* 4.601	40.88	PK-U	34	-27.7	0	47.18	-	-	74	-26.82	-	-	223	337	V
* 4.602	29.32	ADR	34	-27.7	.12	35.74	54	-18.26	-	-	-	-	223	337	V
* 7.522	37.93	PK-U	35.7	-25.2	0	48.43	-	-	74	-25.57	-	-	195	258	H
* 7.522	26.45	ADR	35.7	-25.2	.12	37.07	54	-16.93	-	-	-	-	195	258	H
* 10.786	36.33	PK-U	38	-22	0	52.33	-	-	74	-21.67	-	-	73	137	H
* 10.787	25.11	ADR	38	-22	.12	41.23	54	-12.77	-	-	-	-	73	137	H
* 12.102	36.27	PK-U	39.1	-22.5	0	52.87	-	-	74	-21.13	-	-	123	340	V
* 12.102	25.07	ADR	39.1	-22.5	.12	41.79	54	-12.21	-	-	-	-	123	340	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

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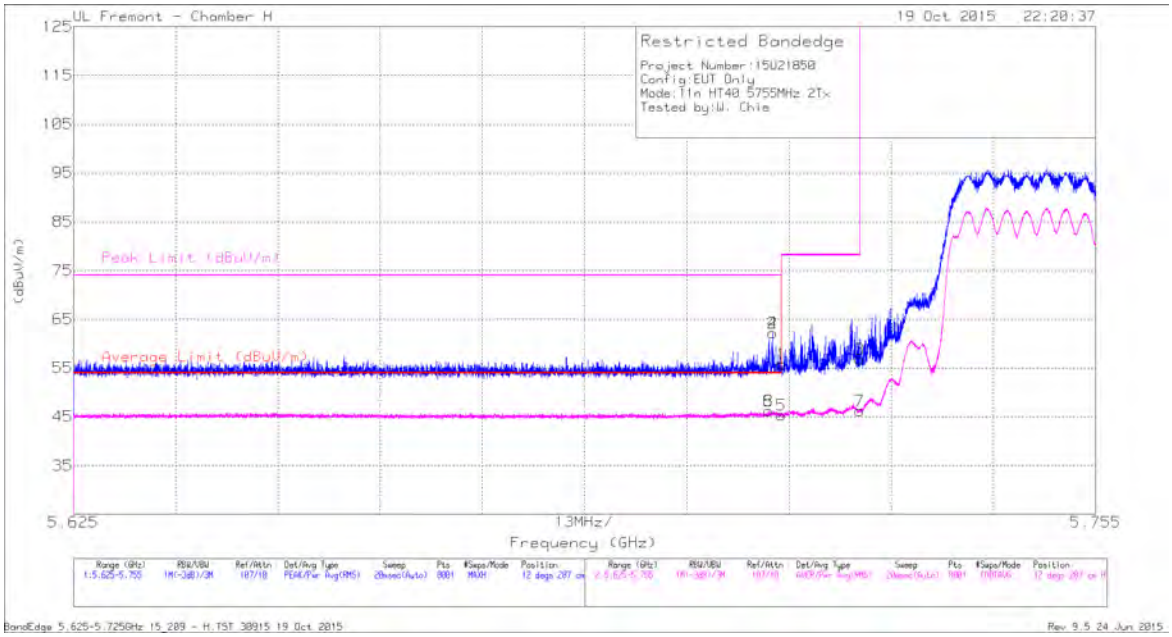
9.5. 802.11n HT40 2Tx CDD MODE IN THE 5.8 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

LOW CHANNEL HORIZONTAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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
6	5.713	32.72	RMS	34.8	-21.3	46.22	54	-7.78	-	-	12	287	H
8	5.713	32.72	RMS	34.8	-21.3	46.22	54	-7.78	-	-	12	287	H
2	5.714	48.72	Pk	34.8	-21.3	62.22	-	-	74	-11.78	12	287	H
4	5.714	48.72	Pk	34.8	-21.3	62.22	-	-	74	-11.78	12	287	H
1	5.715	42.39	Pk	34.8	-21.3	55.89	-	-	74	-18.11	12	287	H
5	5.715	31.82	RMS	34.8	-21.3	45.32	54	-8.68	-	-	12	287	H
3	5.725	43.31	Pk	34.8	-21.3	56.81	-	-	78.2	-21.39	12	287	H
7	5.725	32.79	RMS	34.8	-21.3	46.29	-	-	-	-	12	287	H

Pk - Peak detector

RMS - RMS detection

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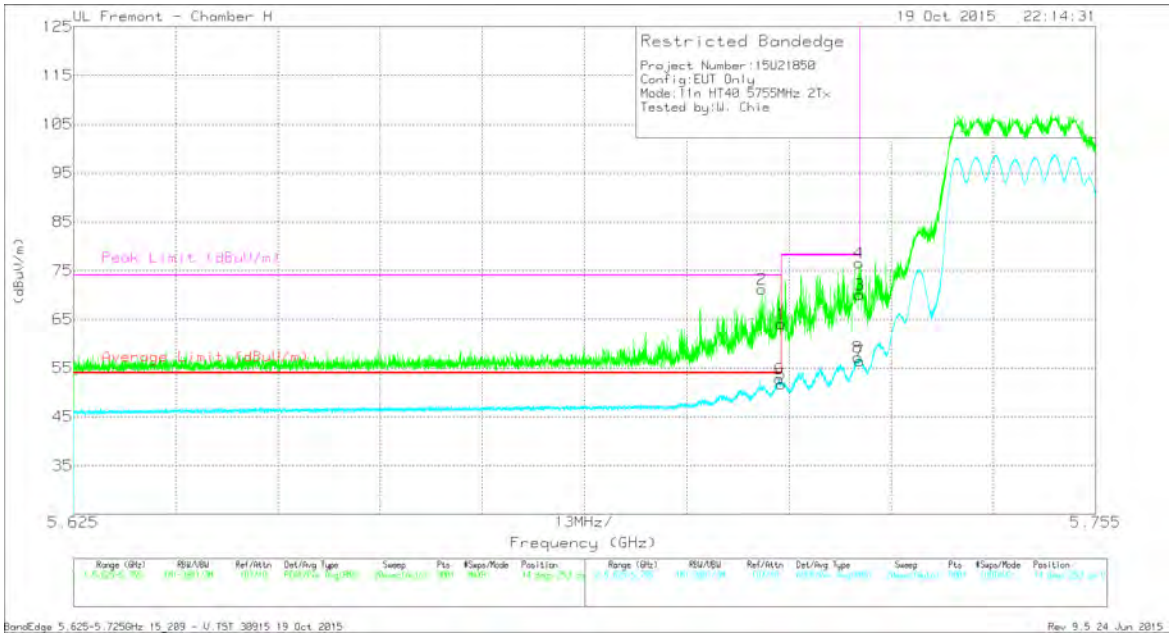
LOW CHANNEL VERTICAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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	5.713	57.69	Pk	34.8	-21.3	71.19	-	-	74	-2.81	14	253	V
1	5.715	50.57	Pk	34.8	-21.3	64.07	-	-	74	-9.93	14	253	V
5	5.715	38.22	RMS	34.8	-21.3	51.72	54	-2.28	-	-	14	253	V
6	5.715	39.28	RMS	34.8	-21.3	52.78	54	-1.22	-	-	14	253	V
3	5.725	56.54	Pk	34.8	-21.3	70.04	-	-	78.2	-8.16	14	253	V
4	5.725	63.06	Pk	34.8	-21.3	76.56	-	-	78.2	-1.64	14	253	V
7	5.725	42.99	RMS	34.8	-21.3	56.49	-	-	-	-	14	253	V
8	5.725	43.65	RMS	34.8	-21.3	57.15	-	-	-	-	14	253	V

Pk - Peak detector

RMS - RMS detection

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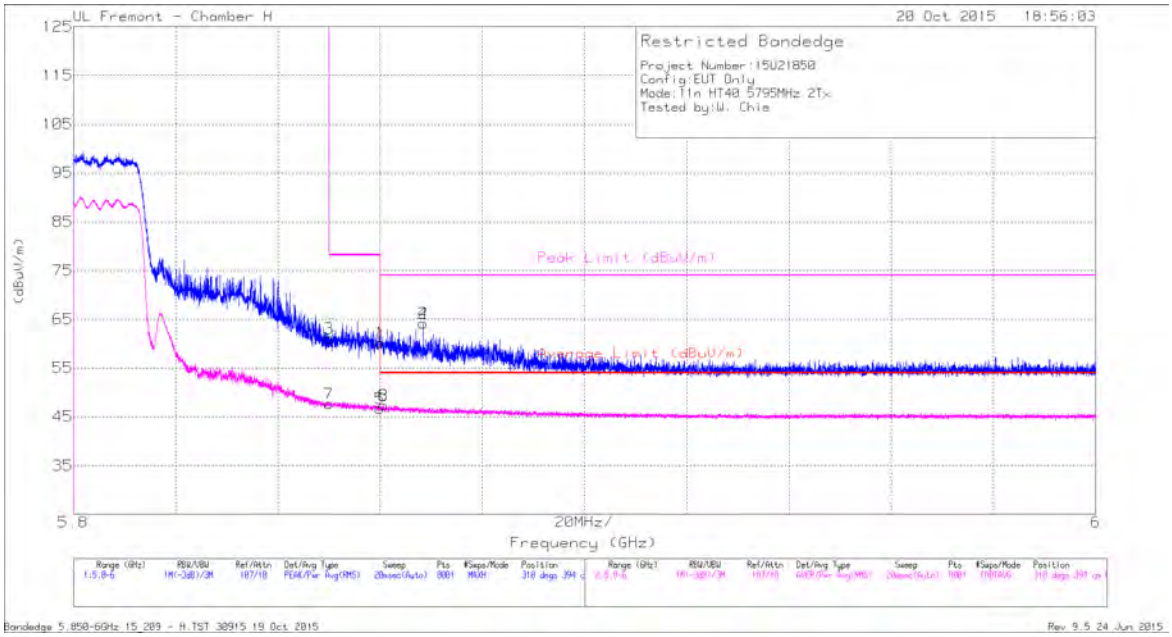
RESTRICTED BANDEDGE (HIGH CHANNEL)

HIGH CHANNEL HORIZONTAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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
3	5.85	47.31	Pk	34.9	-21.2	61.01	-	-	78.2	-17.19	310	394	H
7	5.85	33.97	RMS	34.9	-21.2	47.67	-	-	-	-	310	394	H
1	5.86	46.54	Pk	34.9	-21.2	60.24	-	-	74	-13.76	310	394	H
5	5.86	32.99	RMS	34.9	-21.2	46.69	54	-7.31	-	-	310	394	H
6	5.861	33.68	RMS	34.9	-21.2	47.38	54	-6.62	-	-	310	394	H
8	5.861	33.68	RMS	34.9	-21.2	47.38	54	-6.62	-	-	310	394	H
2	5.868	50.46	Pk	34.9	-21.2	64.16	-	-	74	-9.84	310	394	H
4	5.868	50.46	Pk	34.9	-21.2	64.16	-	-	74	-9.84	310	394	H

Pk - Peak detector

RMS - RMS detection

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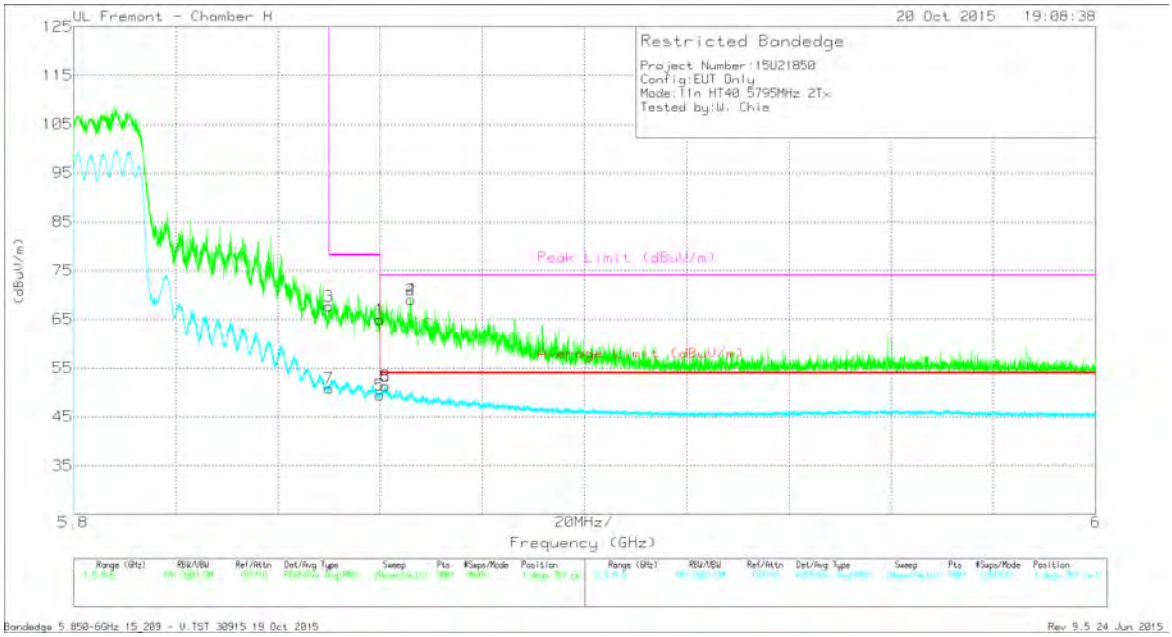
HIGH CHANNEL VERTICAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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
3	5.85	54.01	Pk	34.9	-21.2	67.71	-	-	78.2	-10.49	1	387	V
7	5.85	37.16	RMS	34.9	-21.2	50.86	-	-	-	-	1	387	V
1	5.86	51.21	Pk	34.9	-21.2	64.91	-	-	74	-9.09	1	387	V
5	5.86	35.79	RMS	34.9	-21.2	49.49	54	-4.51	-	-	1	387	V
6	5.861	37.59	RMS	34.9	-21.2	51.29	54	-2.71	-	-	1	387	V
8	5.861	37.59	RMS	34.9	-21.2	51.29	54	-2.71	-	-	1	387	V
2	5.866	55.39	Pk	34.9	-21.2	69.09	-	-	74	-4.91	1	387	V
4	5.866	55.39	Pk	34.9	-21.2	69.09	-	-	74	-4.91	1	387	V

Pk - Peak detector

RMS - RMS detection

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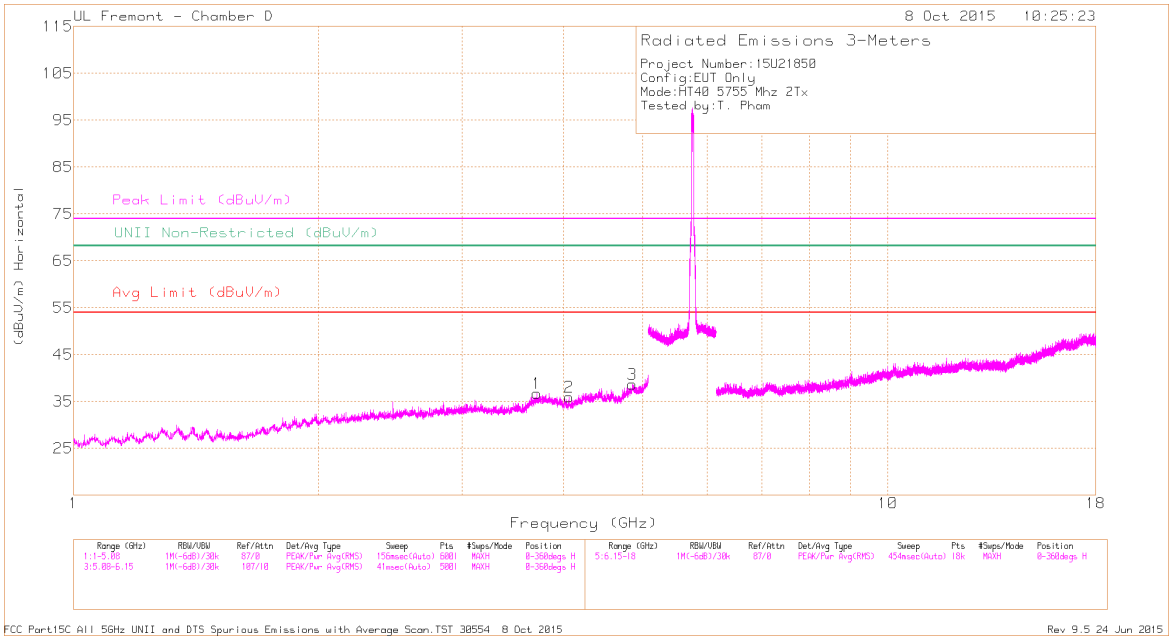
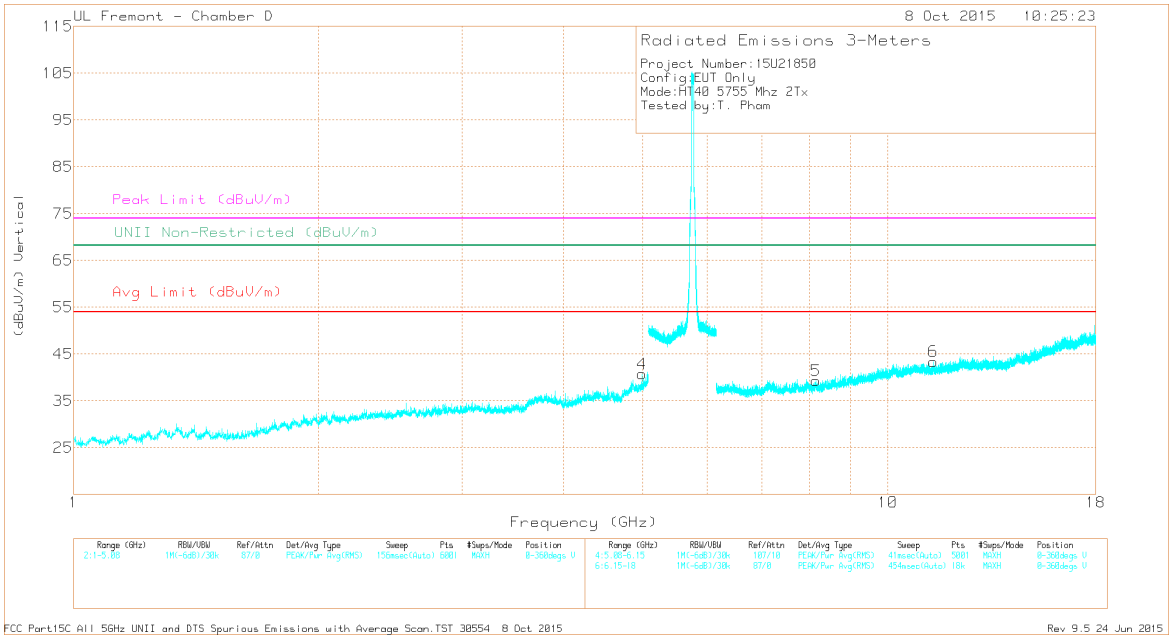
LOW CHANNEL HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



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DATA

Markers	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	* 3.705	38.94	PK-U	33.2	-29.2	0	42.94	-	-	74	-31.06	-	-	26	125	H
	* 3.706	27.37	ADR	33.2	-29.2	.12	31.49	54	-22.51	-	-	-	-	26	125	H
2	* 4.057	39.06	PK-U	33.4	-28.9	0	43.56	-	-	74	-30.44	-	-	65	144	H
	* 4.058	27.12	ADR	33.4	-28.9	.12	31.74	54	-22.26	-	-	-	-	65	144	H
3	* 4.852	37.87	PK-U	34.1	-25.8	0	46.17	-	-	74	-27.83	-	-	158	269	H
	* 4.852	25.99	ADR	34.1	-25.8	.12	34.41	54	-19.59	-	-	-	-	158	269	H
4	* 4.987	38.8	PK-U	34.2	-26.9	0	46.1	-	-	74	-27.9	-	-	78	228	V
	* 4.987	27.27	ADR	34.2	-26.9	.12	34.69	54	-19.31	-	-	-	-	78	228	V
5	* 8.164	35.7	PK-U	35.6	-24.3	0	47	-	-	74	-27	-	-	225	148	V
	* 8.163	24.28	ADR	35.6	-24.2	.12	35.8	54	-18.2	-	-	-	-	225	148	V
6	* 11.374	35.04	PK-U	38	-21.7	0	51.34	-	-	74	-22.66	-	-	36	159	V
	* 11.374	23.34	ADR	38	-21.7	.12	39.76	54	-14.24	-	-	-	-	36	159	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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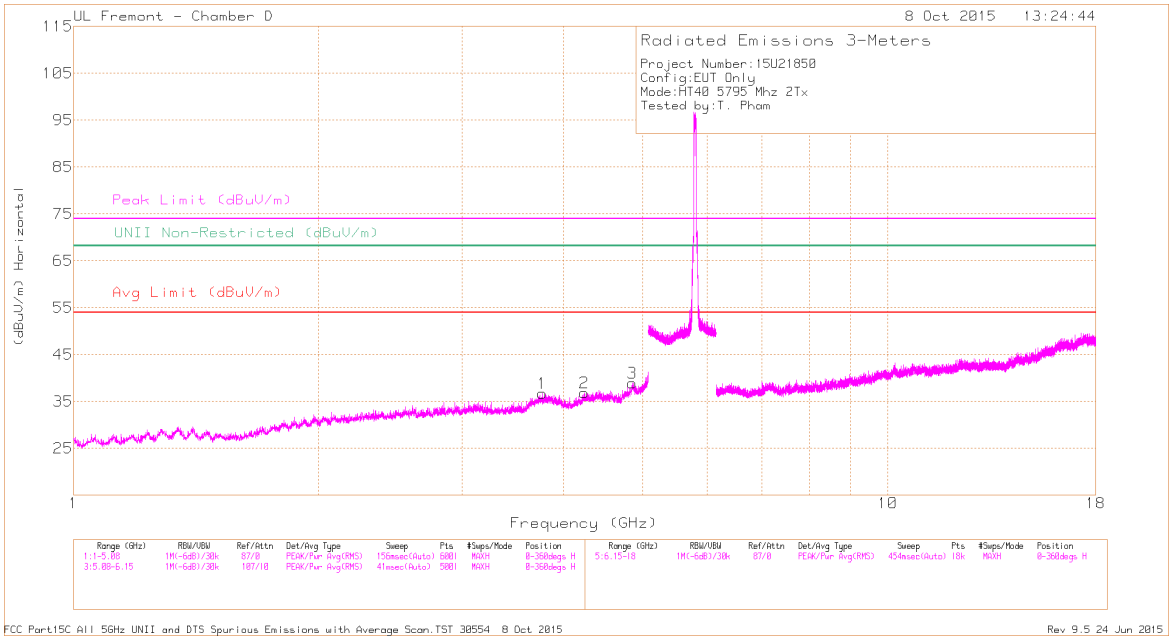
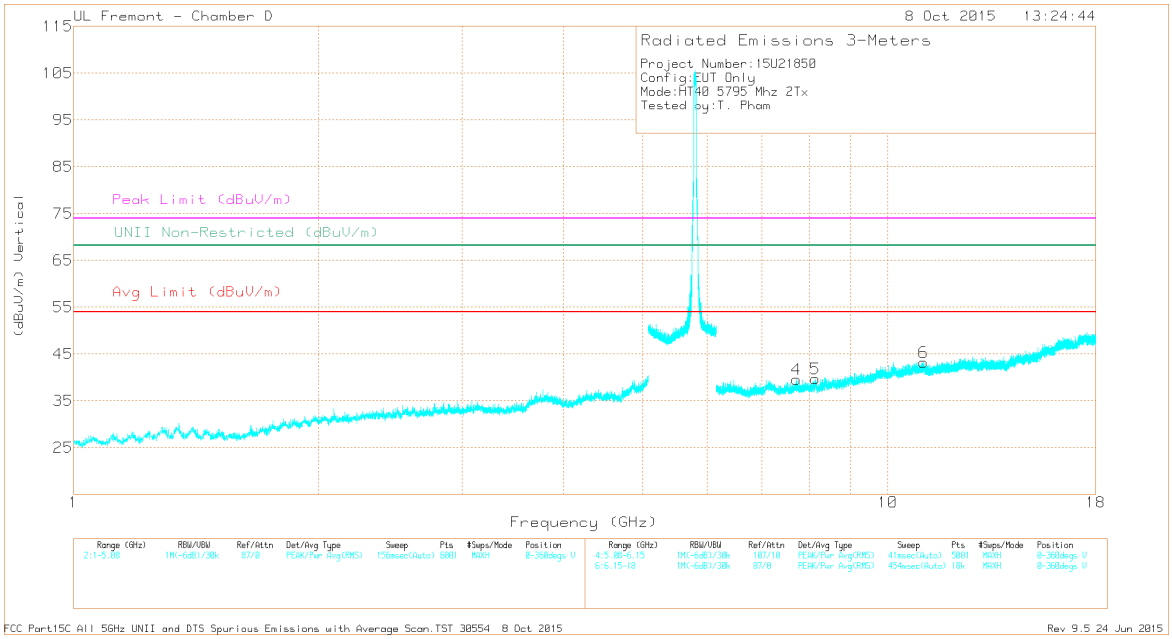
HIGH CHANNEL HARMONICS AND SPURIOUS EMISSIONS

HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



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DATA

Markers	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	* 3.768	38.39	PK-U	33.3	-28.9	0	42.79	-	-	74	-31.21	-	-	345	105	H
	* 3.768	26.91	ADR	33.3	-28.9	.12	31.43	54	-22.57	-	-	-	-	345	105	H
2	* 4.238	38.52	PK-U	33.5	-27.7	0	44.32	-	-	74	-29.68	-	-	0	131	H
	* 4.238	26.42	ADR	33.5	-27.7	.12	32.34	54	-21.66	-	-	-	-	0	131	H
3	* 4.855	38.59	PK-U	34.1	-25.7	0	46.99	-	-	74	-27.01	-	-	34	143	H
	* 4.855	26.12	ADR	34.1	-25.7	.12	34.64	54	-19.36	-	-	-	-	34	143	H
4	* 7.727	36.53	PK-U	35.6	-24.3	0	47.83	-	-	74	-26.17	-	-	86	158	V
	* 7.726	24.58	ADR	35.6	-24.3	.12	36	54	-18	-	-	-	-	86	158	V
5	* 8.143	35.63	PK-U	35.6	-23.9	0	47.33	-	-	74	-26.67	-	-	119	194	V
	* 8.144	24.36	ADR	35.6	-23.9	.12	36.18	54	-17.82	-	-	-	-	119	194	V
6	* 11.063	34.74	PK-U	38	-21.3	0	51.44	-	-	74	-22.56	-	-	109	173	V
	* 11.062	23.11	ADR	38	-21.3	.12	39.93	54	-14.07	-	-	-	-	109	173	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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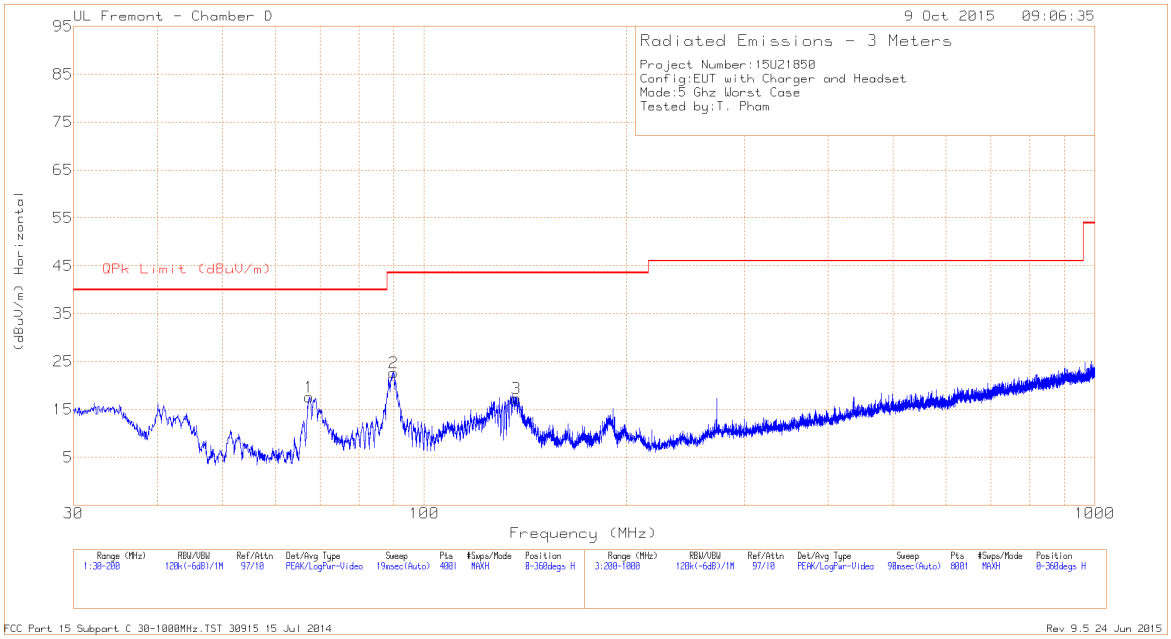
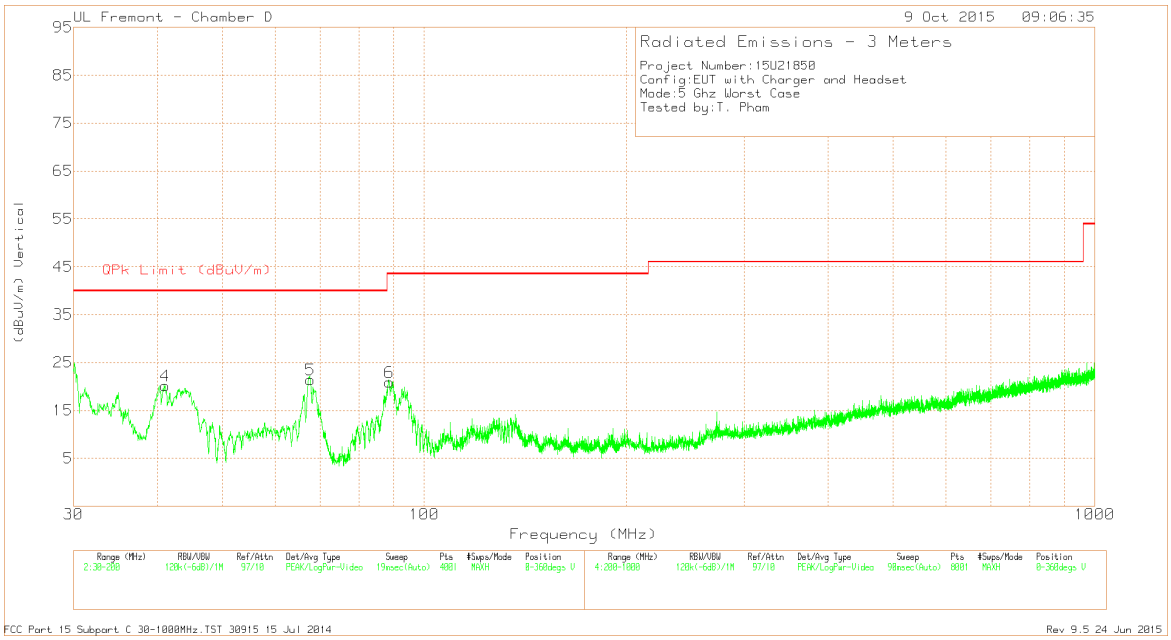
9.6. WORST-CASE BELOW 1 GHz

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL & VERTICAL)

HORIZONTAL PLOT



VERTICAL PLOT



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HORIZONTAL AND VERTICAL DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T407 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 137.1425	35.38	Pk	13.1	-31.1	17.38	43.52	-26.14	0-360	201	H
4	41.135	38.57	Pk	13.4	-31.8	20.17	40	-19.83	0-360	100	V
1	67.4	41	Pk	8.1	-31.5	17.6	40	-22.4	0-360	301	H
5	67.6125	44.72	Pk	8.2	-31.5	21.42	40	-18.58	0-360	100	V
6	88.735	44.72	Pk	7.6	-31.4	20.92	43.52	-22.6	0-360	100	V
2	90.0525	46.3	Pk	7.8	-31.4	22.7	43.52	-20.82	0-360	201	H

* - indicates frequency in CFR15.205/IC8.10 Restricted Band

Pk - Peak detector

FCC Part 15 Subpart C 30-1000MHz.TST 30915 15 Jul 2014

Rev 9.5 24 Jun 2015

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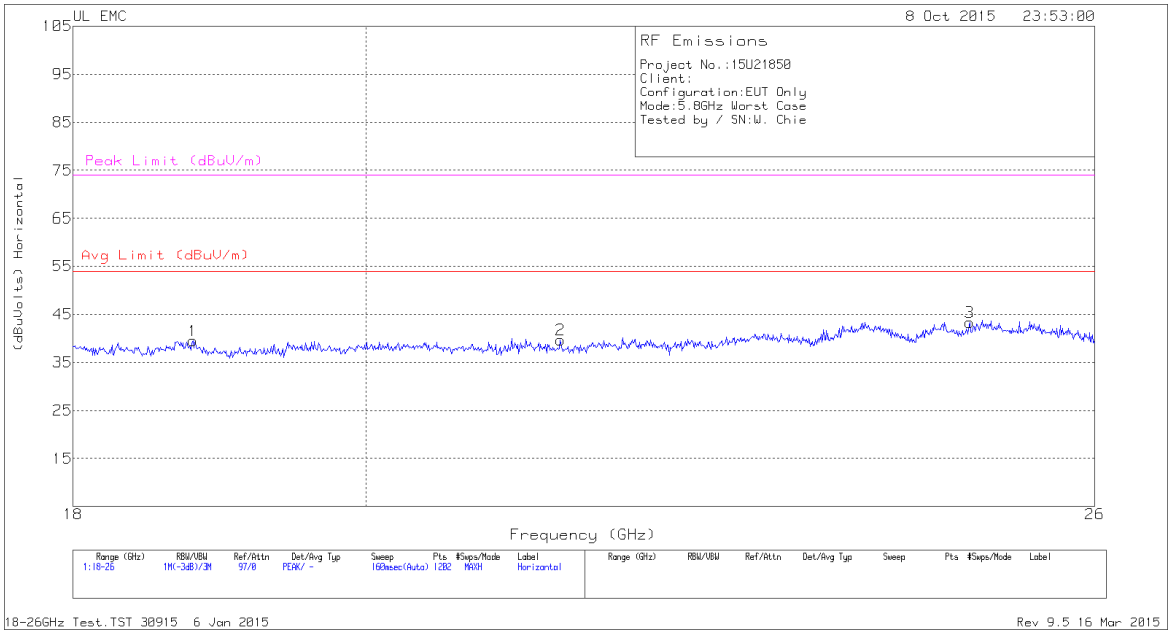
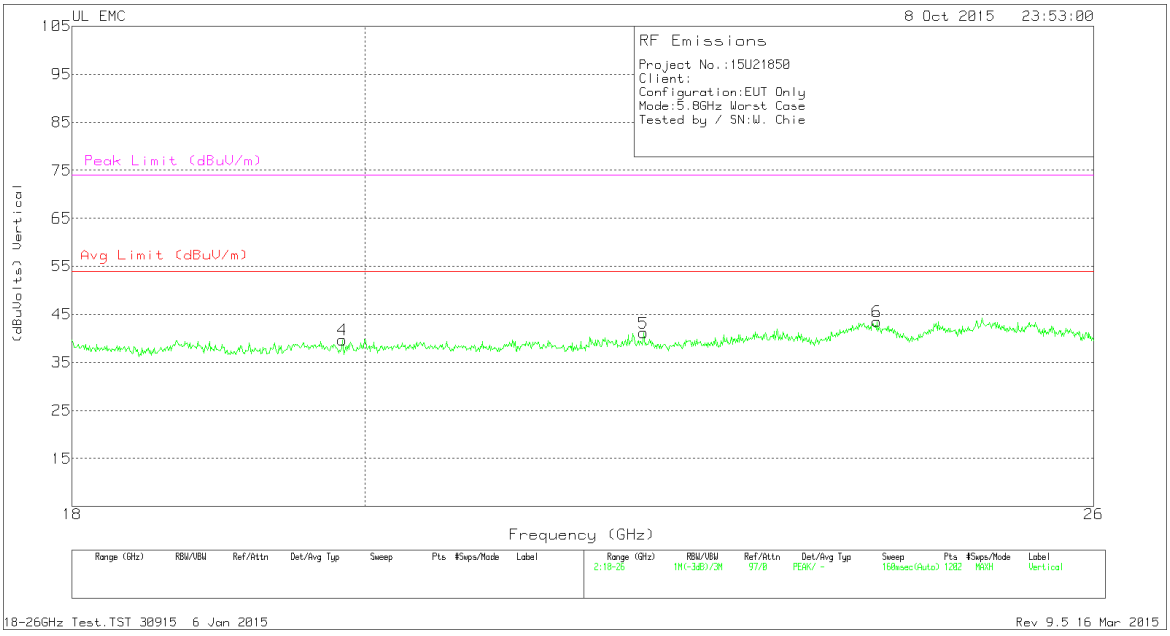
9.7. WORST-CASE ABOVE 18 GHz

SPURIOUS EMISSIONS 18000 TO 26000 MHz (WORST-CASE CONFIGURATION)

HORIZONTAL PLOT



VERTICAL PLOT



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HORIZONTAL AND VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	T89 AF (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Corrected Reading (dBuVolts)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)
1	18.793	41.4	Pk	32.5	-24.9	-9.5	39.5	54	-14.5	74	-34.5
2	21.45	41.77	Pk	33	-25.6	-9.5	39.67	54	-14.33	74	-34.33
3	24.854	43.13	Pk	34	-24.3	-9.5	43.33	54	-10.67	74	-30.67
4	19.838	41.47	Pk	32.7	-25	-9.5	39.67	54	-14.33	74	-34.33
5	22.11	42.47	Pk	33	-24.8	-9.5	41.17	54	-12.83	74	-32.83
6	24.048	44.1	Pk	33.3	-24.4	-9.5	43.5	54	-10.5	74	-30.5

Pk - Peak detector

18-26GHz Test.TST 30915 6 Jan 2015

Rev 9.5 16 Mar 2015

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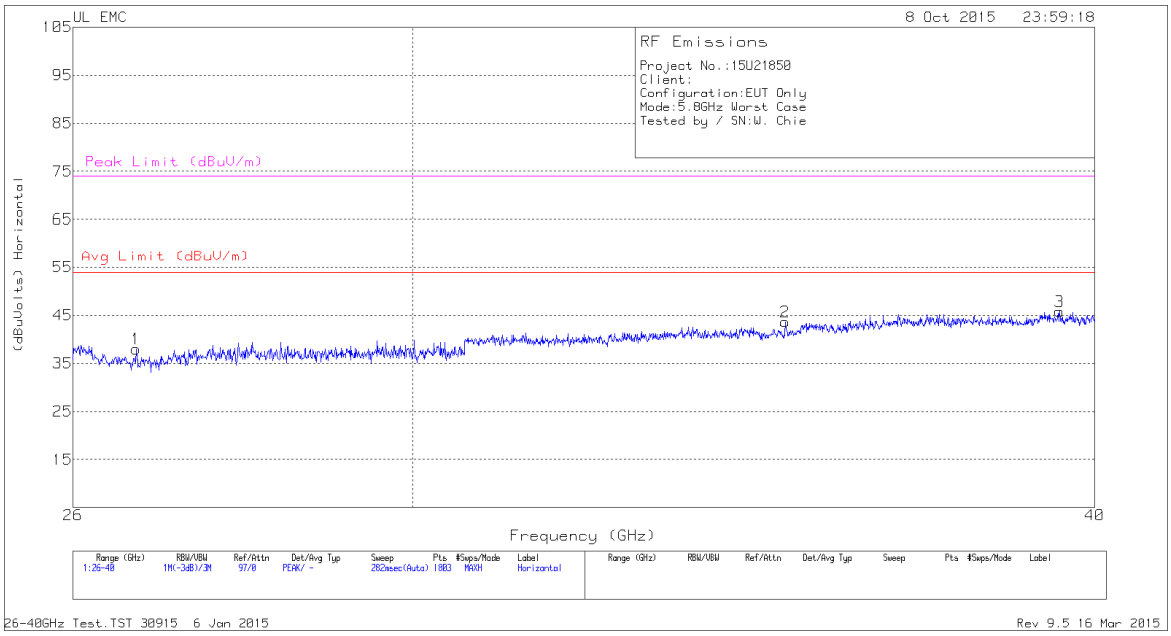
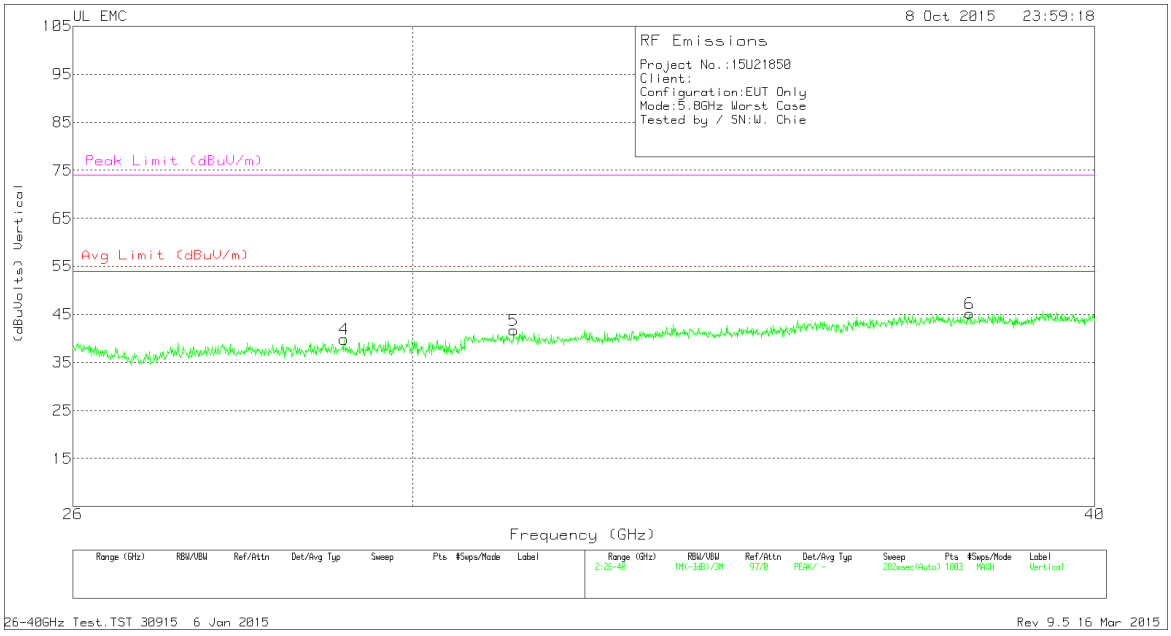
SPURIOUS EMISSIONS 26000 TO 40000 MHz (WORST-CASE CONFIGURATION)

HORIZONTAL PLOT



VERTICAL PLOT



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HORIZONTAL AND VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	T90 AF (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Corrected Reading (dBuVolts)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)
1	26.699	42.7	Pk	35.3	-30.5	-9.5	38	54	-16	74	-36
2	35.105	48.97	Pk	37.4	-33.2	-9.5	43.67	54	-10.33	74	-30.33
3	39.41	49.33	Pk	37.8	-31.8	-9.5	45.83	54	-8.17	74	-28.17
4	29.147	45.73	Pk	35.9	-32.3	-9.5	39.83	54	-14.17	74	-34.17
5	31.306	47.97	Pk	36	-32.8	-9.5	41.67	54	-12.33	74	-32.33
6	37.941	50.07	Pk	37.2	-32.6	-9.5	45.17	54	-8.83	74	-28.83

Pk - Peak detector

26-40GHz Test.TST 30915 6 Jan 2015

Rev 9.5 16 Mar 2015

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10. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

Frequency of Emission (MHz)	Conducted Limit (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56 *	56 to 46 *
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

TEST PROCEDURE

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.10.

The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

Line conducted data is recorded for both NEUTRAL and HOT lines.

RESULTS

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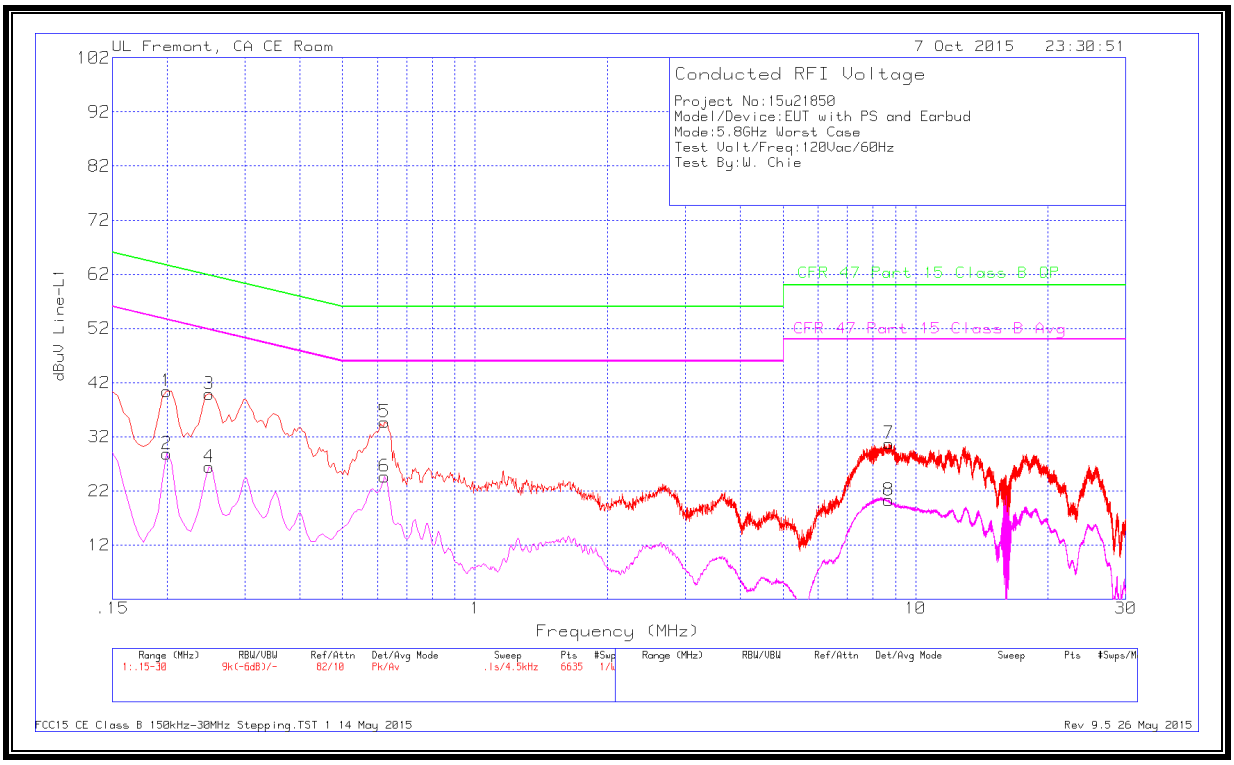
10.1. EUT POWERED BY AC ADAPTER

LINE 1 RESULTS



WORST EMISSIONS

Range 1: Line-L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	Margin (dB)	CFR 47 Part 15 Class B Avg	Margin (dB)
1	.1995	39.54	Pk	.9	0	40.44	63.63	-23.19	-	-
2	.1995	27.96	Av	.9	0	28.86	-	-	53.63	-24.77
3	.249	39.21	Pk	.7	0	39.91	61.79	-21.88	-	-
4	.249	25.74	Av	.7	0	26.44	-	-	51.79	-25.35
5	.6225	34.42	Pk	.3	0	34.72	56	-21.28	-	-
6	.6225	24.37	Av	.3	0	24.67	-	-	46	-21.33
7	8.7045	30.44	Pk	.2	.1	30.74	60	-29.26	-	-
8	8.6865	19.98	Av	.2	.1	20.28	-	-	50	-29.72

Pk - Peak detector

Av - Average detection

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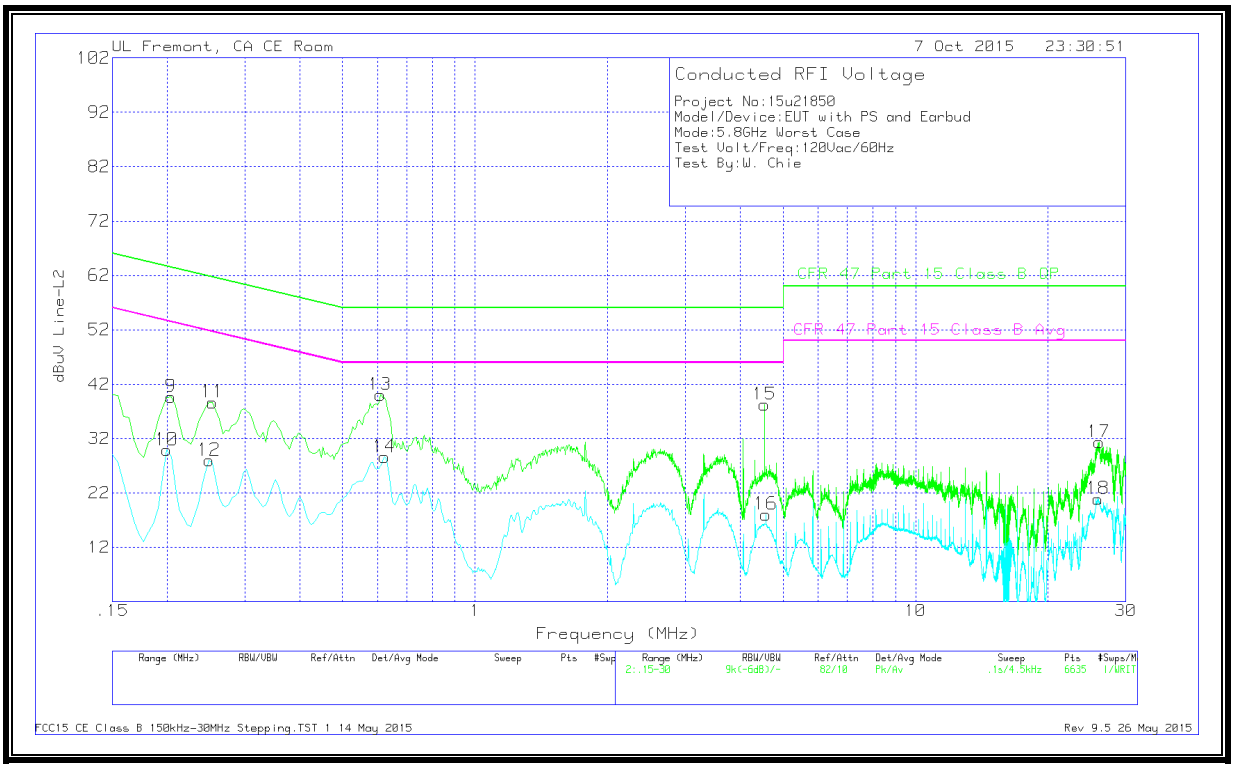
LINE 2 RESULTS



WORST EMISSIONS

Range 2: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	Margin (dB)	CFR 47 Part 15 Class B Avg	Margin (dB)
9	.204	38.69	Pk	1	0	39.69	63.45	-23.76	-	-
10	.1995	28.89	Av	1	0	29.89	-	-	53.63	-23.74
11	.2535	37.97	Pk	.7	0	38.67	61.64	-22.97	-	-
12	.249	27.27	Av	.7	0	27.97	-	-	51.79	-23.82
13	.609	39.75	Pk	.3	0	40.05	56	-15.95	-	-5.95
14	.6225	28.31	Av	.3	0	28.61	-	-	46	-17.39
15	4.542	37.96	Pk	.2	.1	38.26	56	-17.74	-	-
16	4.5735	17.76	Av	.2	.1	18.06	-	-	46	-27.94
17	26.088	30.75	Pk	.3	.3	31.35	60	-28.65	-	-
18	25.962	20.28	Av	.3	.3	20.88	-	-	50	-29.12

Pk - Peak detector

Av - Average detection

FCC15 CE Class B 150kHz-30MHz Stepping.TST 1 14 May 2015

Rev 9.5 26 May 2015

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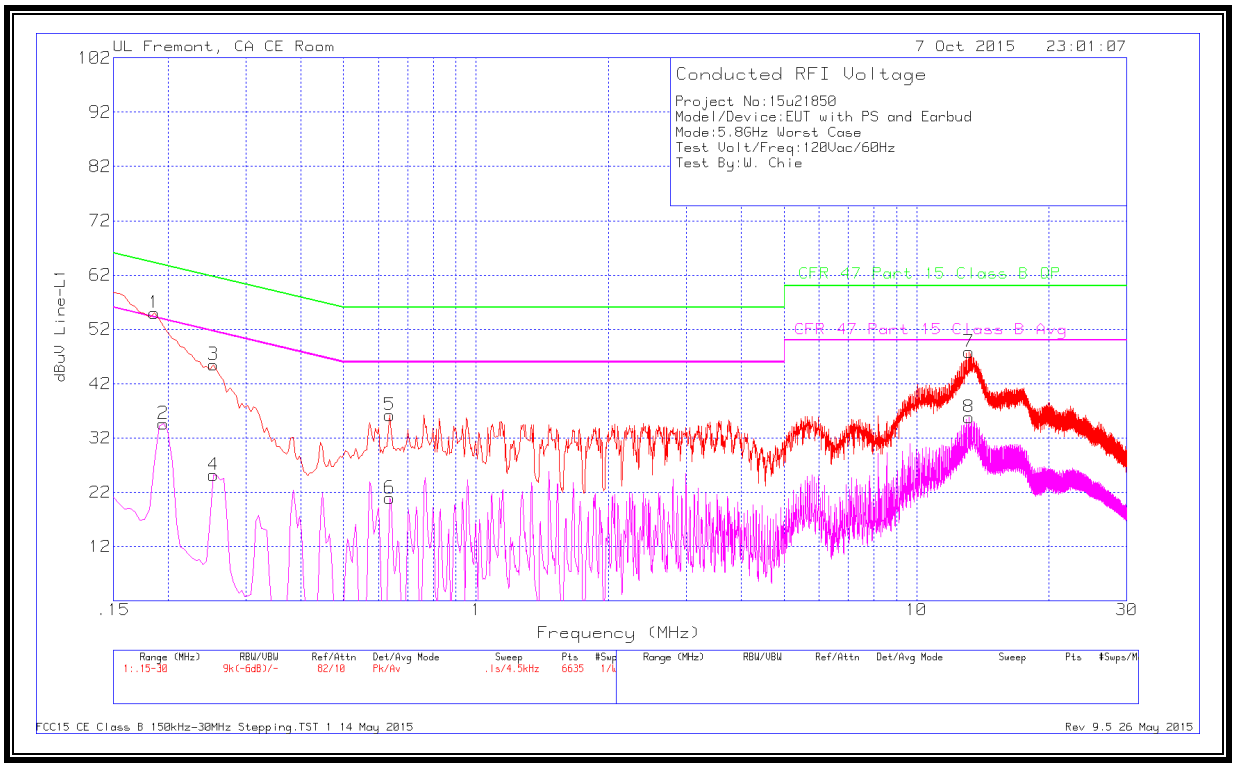
10.2. EUT POWERED BY HOST PC VIA USB CABLE

LINE 1 RESULTS



WORST EMISSIONS

Range 1: Line-L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	Margin (dB)	CFR 47 Part 15 Class B Avg	Margin (dB)
1	.186	54.02	Pk	1	0	55.02	64.21	-9.19	-	-
2	.195	33.61	Av	1	0	34.61	-	-	53.82	-19.21
3	.2535	44.78	Pk	.7	0	45.48	61.64	-16.16	-	-
4	.2535	24.47	Av	.7	0	25.17	-	-	51.64	-26.47
5	.636	35.92	Pk	.3	0	36.22	56	-19.78	-	-
6	.636	20.63	Av	.3	0	20.93	-	-	46	-25.07
7	13.1595	47.45	Pk	.2	.2	47.85	60	-12.15	-	-
8	13.1595	35.41	Av	.2	.2	35.81	-	-	50	-14.19

Pk - Peak detector

Av - Average detection

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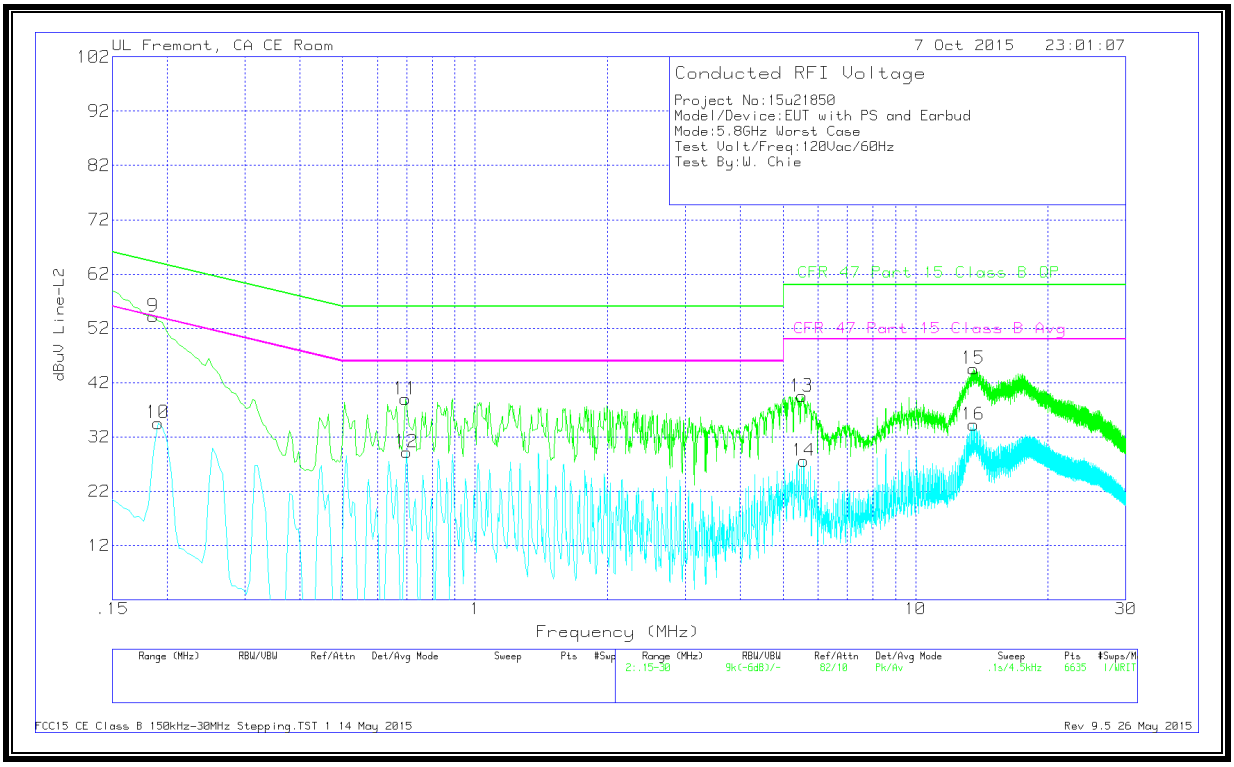
LINE 2 RESULTS



WORST EMISSIONS

Range 2: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	Margin (dB)	CFR 47 Part 15 Class B Avg	Margin (dB)
9	.186	53.09	Pk	1.1	0	54.19	64.21	-10.02	-	-
10	.1905	33.48	Av	1.1	0	34.58	-	-	54.01	-19.43
11	.6945	38.68	Pk	.3	0	38.98	56	-17.02	-	-
12	.699	28.91	Av	.3	0	29.21	-	-	46	-16.79
13	5.5185	39.19	Pk	.2	.1	39.49	60	-20.51	-	-
14	5.5725	27.3	Av	.2	.1	27.6	-	-	50	-22.4
15	13.524	44.17	Pk	.2	.2	44.57	60	-15.43	-	-
16	13.524	33.86	Av	.2	.2	34.26	-	-	50	-15.74

Pk - Peak detector

Av - Average detection

FCC15 CE Class B 150kHz-30MHz Stepping.TST 1 14 May 2015

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