FCC CFR47 PART 15 SUBPART E

CERTIFICATION TEST REPORT

FOR

802.11a/b/g/n 2.4/5GHz Radio

MODEL NUMBER: ID:093

FCC ID: DKNHG

REPORT NUMBER: 15U20961-E2

ISSUE DATE: AUG 10, 2015

Prepared for
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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
-	8/10/15	Initial Issue	P. Zhang

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: Echostar Technologies LLC

EUT DESCRIPTION: 802.11a/b/g/n 2.4/5GHz Radio

MODEL: ID:093

SERIAL NUMBER: 2161167 (Conducted); 2161165 (Radiated)

DATE TESTED: July 13 – August 10, 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.

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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, ANSI C63.10-2009 for FCC.

Testing for radiated emissions above 1GHz was performed with the EUT elevated at 1.5m instead of 0.8m. This test height has been permitted by FCC as discussed in FCC/TCB conference call in December 2014.

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(IC: 2324B-1)	☐ Chamber D(IC: 2324B-4)
☐ Chamber B(IC: 2324B-2)	☐ Chamber E(IC: 2324B-5)
☐ Chamber C(IC: 2324B-3)	☐ Chamber F(IC: 2324B-6)
	☐ Chamber G(IC: 2324B-7)
	☐ Chamber H(IC: 2324B-8)

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.

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 18000 MHz	4.94 dB

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

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is an 802.11a/b/g/n 2.4/5GHz Radio.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

Frequency Range (MHz)	Mode	Total Output Power (dBm)	Total Output Power (mW)
5180 - 5240	802.11a	15	31.62
5745 - 5825	802.11a	14	25.12
5180 - 5240	802.11n HT20	14.5	28.18
5745 - 5825	802.11n HT20	13.5	22.39
5190 - 5230	802.11n HT40	13	19.95
5755 - 5795	802.11n HT40	12	15.85

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an FPCB antenna, with a maximum gain of 5.2 dBi.

5.4. WORST-CASE CONFIGURATION AND MODE

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

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

Based on the baseline scan, the worst-case data rates were:

802.11a mode: 6 Mbps

802.11n HT20mode: MCS0

802.11n HT40mode: MCS0

5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
Laptop	HP	N/A	N/A	N/A
Laptop Charger	HP	N/A	N/A	N/A

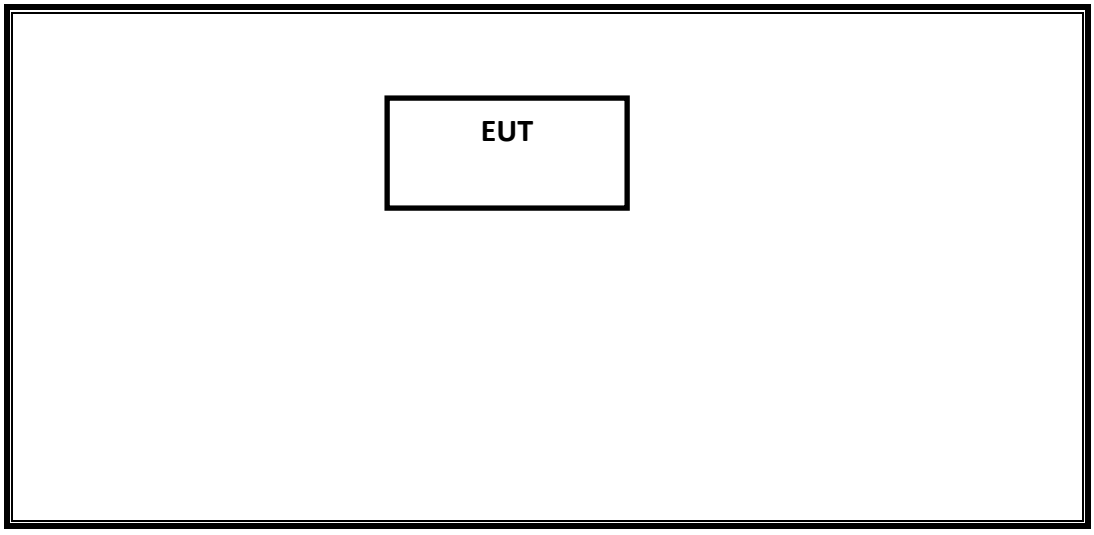
I/O CABLES

I/O Cable List						
Cable No	**Port**	**# of identical ports**	**Connector Type**	**Cable Type**	**Cable Length (m)**	**Remarks**
1	Ethernet	1	RJ-45	Unshielded	1m	N/A

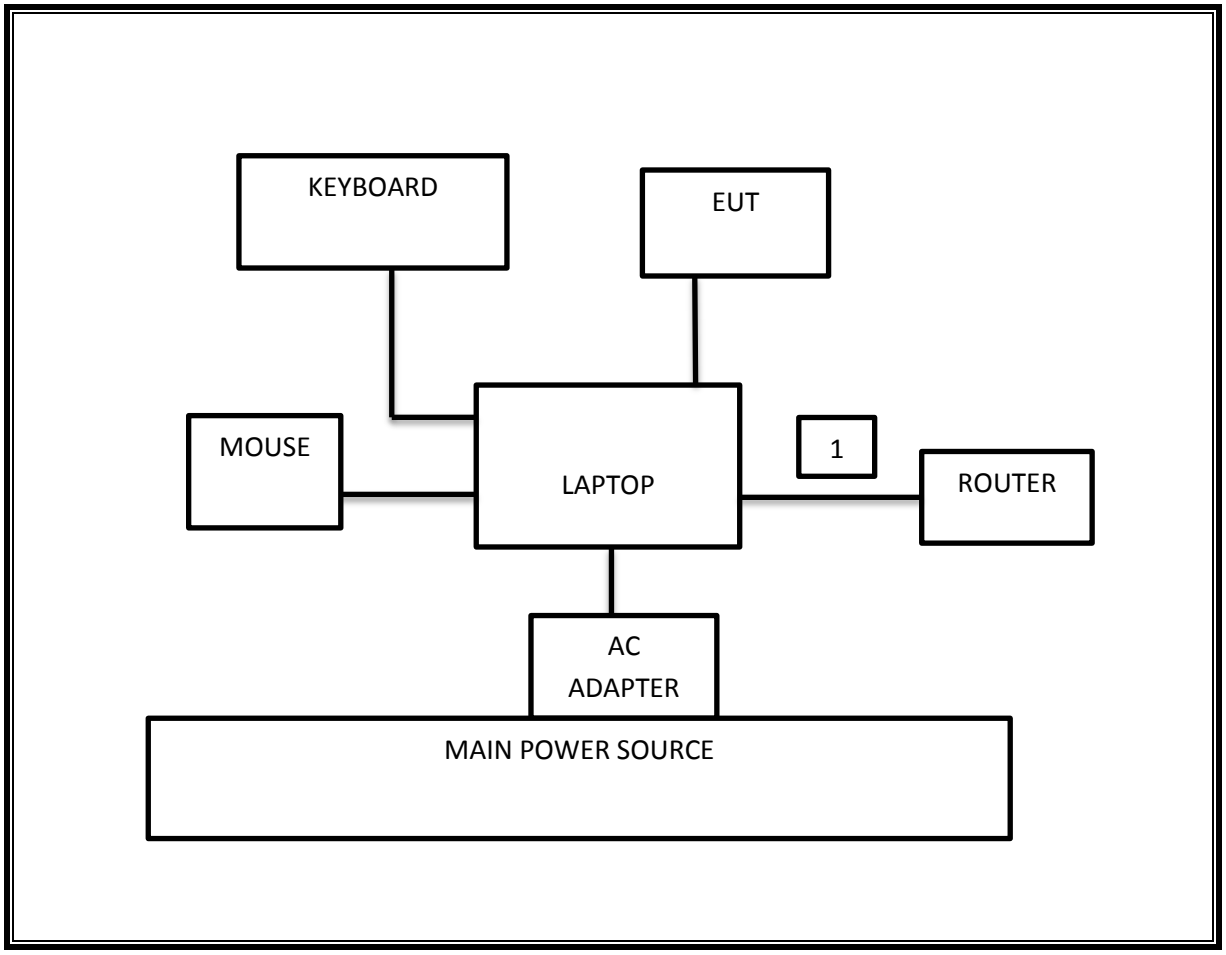
TEST SETUP

The EUT is setup as a stand-alone device.

SETUP DIAGRAM FOR TESTS



SETUP DIAGRAM FOR AC LINE TESTS



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**
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C01069	12/20/15
Spectrum Analyzer,9KHz-40GHz	HP	8564E	C00986	04/01/16
EMI Test Receiver, 9 kHz-7 GHz	R & S	ESCI 7	1000741	08/13/15
EMI Test Receiver, 30 MHz	R & S	ESHS 20	N02396	08/18/15
Peak Power Meter	Agilent / HP	E4416A	C00963	12/13/15
Peak / Average Power Sensor	Agilent / HP	E9327A	C00964	12/13/15
Antenna, Horn, 1-18 GHz	ETS	3117	C01022	02/21/16
Antenna, Horn,18- 26 GHz	ARA	MWH-1826/B	C00946	11/12/15
Antenna, Horn, 26-40 GHz	ARA	MWH-2640	C00891	06/28/16
Antenna, Bilog, 30MHz-1 GHz	Sunol Sciences	JB1	T243	03/06/16
RF Preamplifier, 100KHz -> 1300MHz	HP	TBD	C00825	06/01/16
RF Preamplifier, 1GHz - 18GHz	Miteq	NSP4000-SP2	924343	03/23/16
RF Preamplifier, 1GHz - 26.5GHz	HP	8449B	F00351	06/27/16
AC Power Supply, 2,500VA 45-500Hz	Elgar-Ametek	CW2501M	F00013	CNR
RF Preamplifier, 1GHz - 40GHz	Miteq	NSP4000-SP2	C00990	08/20/15
Attenuator / Switch driver	HP	11713A	F00204	CNR
Low Pass Filter 3GHz	Micro-Tronics	LPS17541	F00219	05/23/16
High Pass Filter 5GHz	Micro-Tronics	HPS17542	F00222	05/22/16
High Pass Filter 6GHz	Micro-Tronics	HPM17543	F00224	05/22/16
Radiated Software	UL	UL EMC	Ver 9.5, July 22, 2014	
Conducted Software	UL	UL EMC	Ver 9.5, May 17 2012	
CLT Software	UL	UL RF	Ver 1.0, Feb 2 2015	
Antenna Port Software	UL	UL RF	Ver 2.1.1.1, Jan 20 2015	

7. SUMMARY TABLE

FCC Part Section	RSS Section	Test Description	Test Limit	Test Condition	Test Result	Worst Case
15.407 (a)	RSS-247	Occupied Band width (26dB)	N/A	Conducted	Pass	50.74 MHz
15.407	RSS-247 6.2.4	6dB Band width (5.8Ghz)	500KHz		Pass	15.63 MHz
15.407 (a)(2)	RSS-247 6.2	TX Cond. Power5.15-2.25, 5.25-5.35 & 5.47-5.725	<24dBm or 11+10Log(OBW)		Pass	15 dBm
15.407 (a)(3)	RSS-247 6.2.4	TX Cond. Power 5.725-5.825	< 30dBm or 17+10Log(OBW)		Pass	14 dBm
15.407 (a)(5)	RSS-247 6.2	PSD (5.2,5.3,5.5GHz)	<11dBm		Pass	5.72 dBm
15.407 (a)(5)	RSS-247 6.2.4	PSD (5.8GHz)	30dBm per 500kHz		Pass	-0.69 dBm
15.207 (a)	RSS-GEN 8.8	AC Power Line conducted emissions	Section 10	Radiated	Pass	49.42dBuV(QP)
15.407 (b) & 15.209	RSS-GEN 8.9/7	Radiated Spurious Emission	< 54dBuV/m		Pass	52.64 dBuV/m
15.407 (h)(2)	RSS-247 6.3	Dynamic Frequency Selection	N/A	Radiated / Condcuted	Pass	N/A

8. ON TIME, DUTY CYCLE AND MEASUREMENT METHODS

LIMITS

None; for reporting purposes only.

PROCEDURE

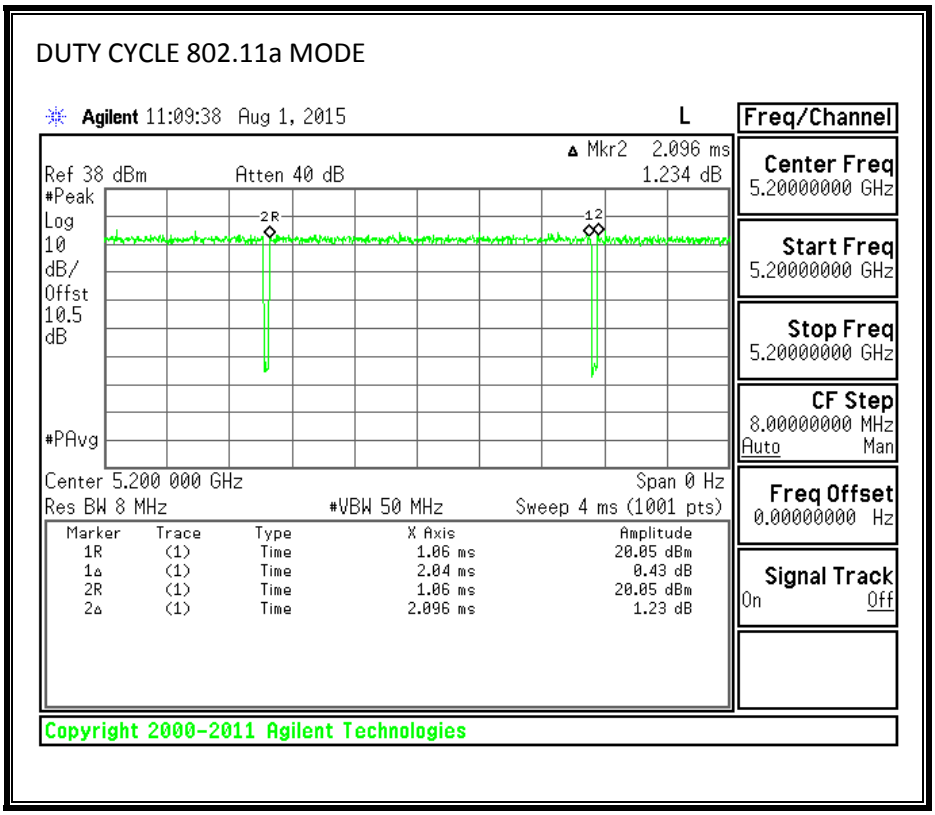
KDB 789033 Zero-Span Spectrum Analyzer Method.

8.1. ON TIME AND DUTY CYCLE RESULTS

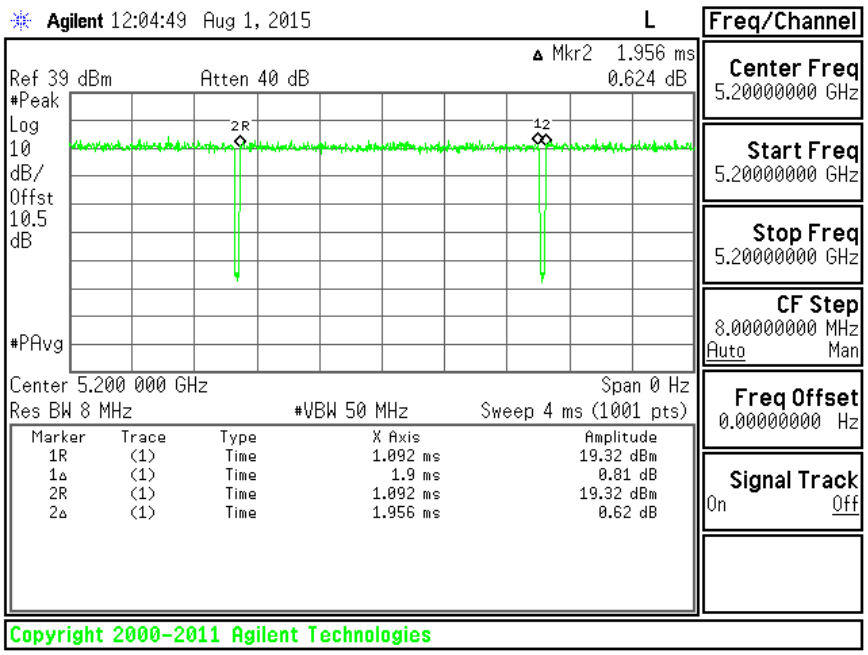
Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/T Minimum VBW (kHz)
802.11a	2.04	2.10	0.973	97.3%	0.12	0.490
802.11n HT20	1.90	2	0.971	97.1%	0.13	0.526
802.11n HT40	0.94	1	0.965	96.5%	0.15	1.059

8.2. DUTY CYCLE PLOTS

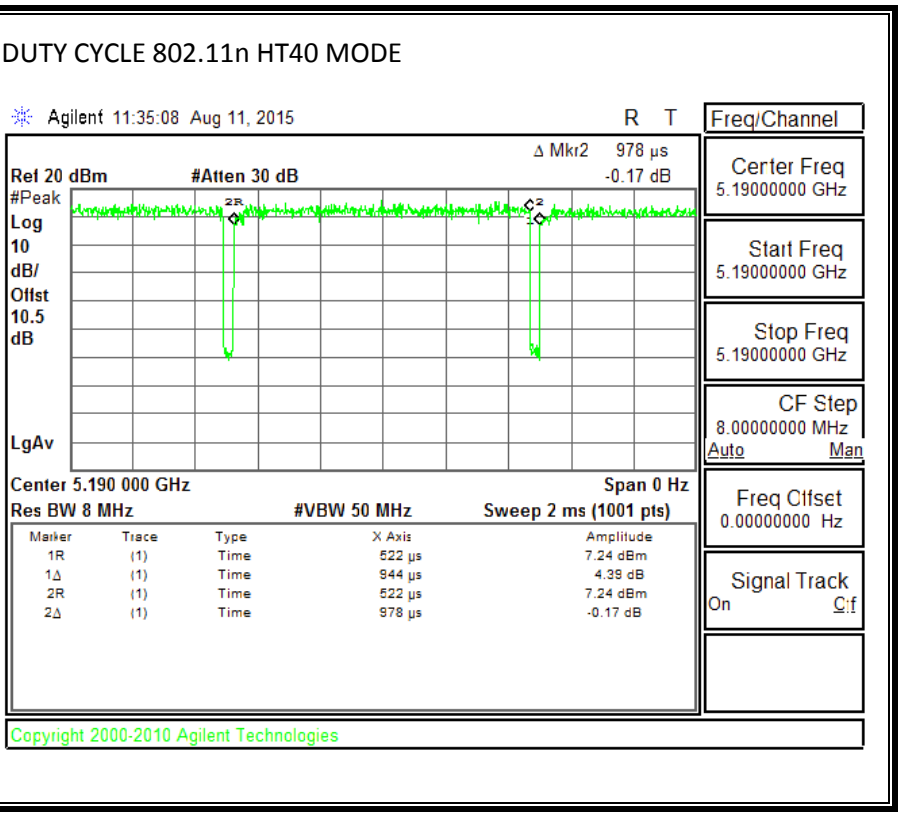
DUTY CYCLE 802.11a MODE



DUTY CYCLE 802.11n HT20 MODE



DUTY CYCLE 802.11n HT40 MODE



9. MEASUREMENT METHOD

789033 D02 General UNII Test Procedures New Rules v01

The Duty Cycle is less than 98% and consistent therefore KDB 789033 Method SA-2 is used for .power and PPSD

The Duty Cycle is less than 98% and consistent, KDB 789033 Method AD with Power RMS Averaging and duty cycle correction is used.

10. ANTENNA PORT TEST RESULTS

10.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407

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

TEST PROCEDURE

Reference to 789033 D02 General UNII Test Procedures New Rules v01: The transmitter output is connected to a spectrum analyzer with the RBW set to100KHz, the VBW >= 3 x RBW, peak detector and max hold.

RESULTS

10.1.1. 802.11a MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5745	16.290	0.5
Mid	5785	16.350	0.5
High	5825	15.930	0.5
Worst		16.350	

10.1.2. 802.11n HT20 MODE IN THE 5.8 GHz BAND

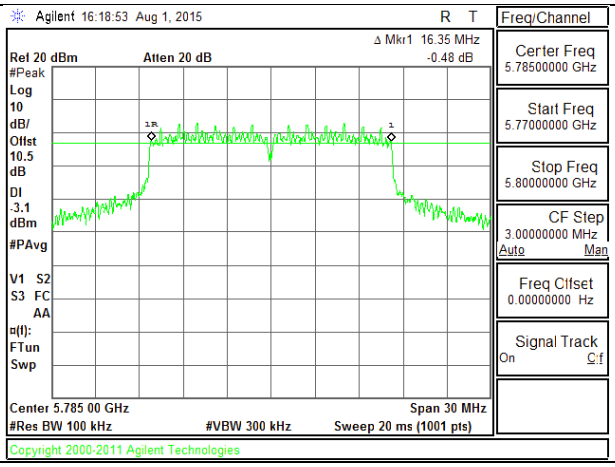
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5745	16.290	0.5
Mid	5785	16.290	0.5
High	5825	15.630	0.5
Worst		16.290	

10.1.3. 802.11n HT40 MODE IN THE 5.8 GHz BAND

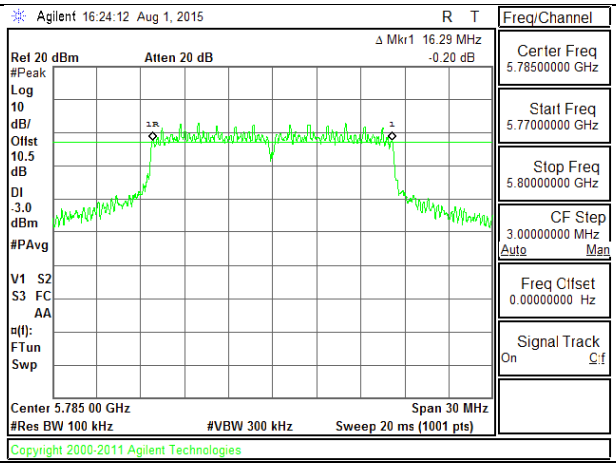
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5755	33.405	0.5
High	5795	33.405	0.5
Worst		33.405	

10.1.4. 6 dB BANDWIDTH MID CH PLOTS

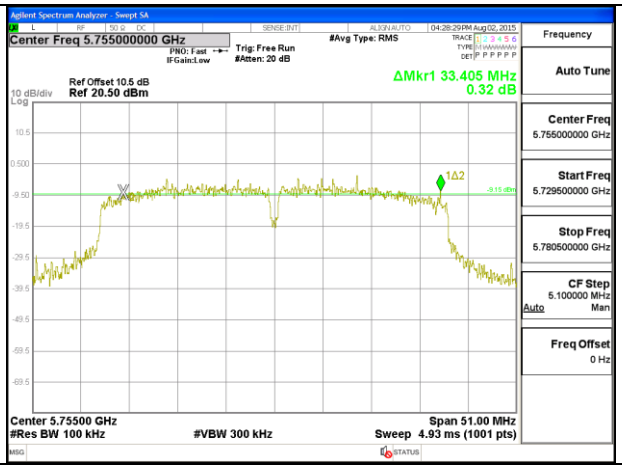
11a 5.8 Mid Ch



11n HT20 5.8 Mid Ch



11n HT40 5.8 Mid Ch



10.2. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

10.2.1. 802.11a MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5180	40.02
Mid	5200	37.85
High	5240	38.78
Worst		40.02

10.2.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5180	38.31
Mid	5200	41.94
High	5240	37.24
Worst		41.94

10.2.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	26dB Bandwidth (MHz)
Low	5190	46.34
Mid	5230	50.74
Worst		50.74

10.2.1. 802.11a MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5745	23.24
Mid	5785	25.90
High	5825	25.79
Worst		25.90

10.2.1. 802.11n HT20 MODE IN THE 5.8 GHz BAND

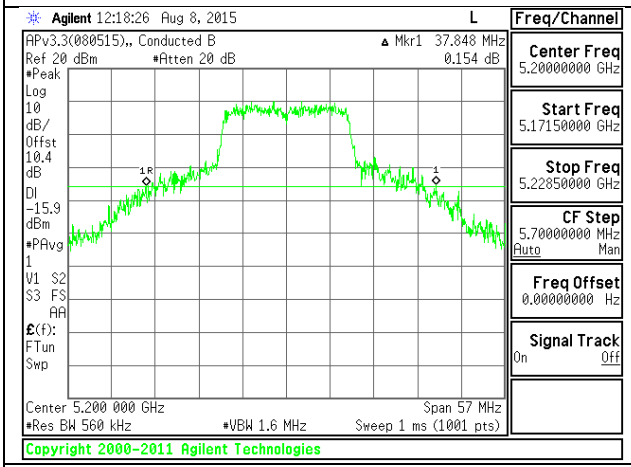
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5745	21.90
Mid	5785	24.12
High	5825	24.78
Worst		24.78

10.2.2. 802.11n HT40 MODE IN THE 5.8 GHz BAND

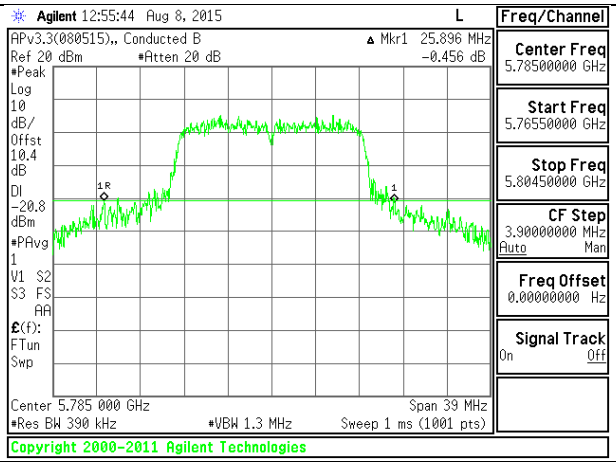
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5755	46.27
High	5795	47.88
Worst		47.88

10.2.1. 26 dB BANDWIDTH PLOTS

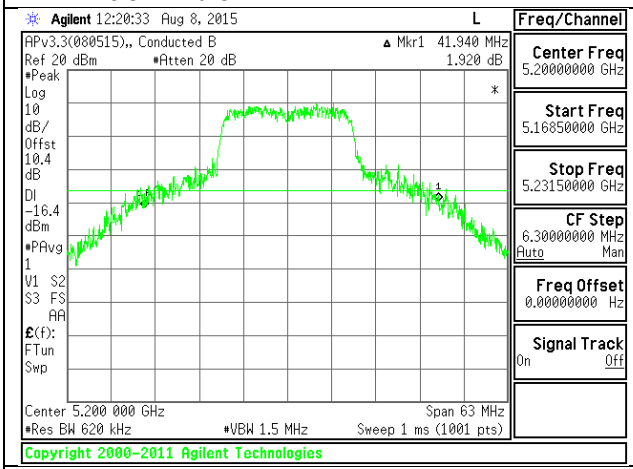
11a 5.2 Mid Ch



11a 5.8 Mid Ch



11n HT20 5.2 Mid Ch



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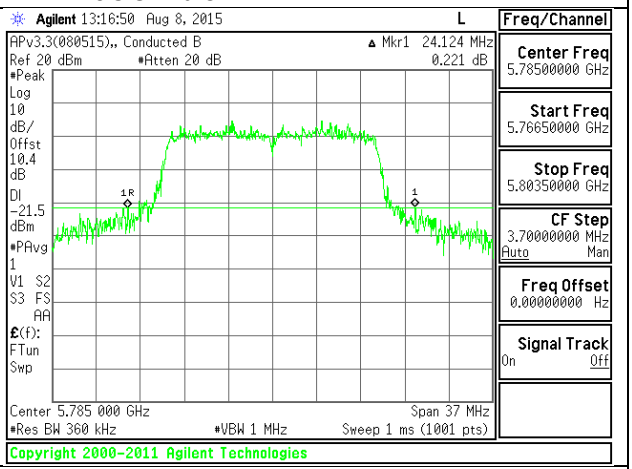
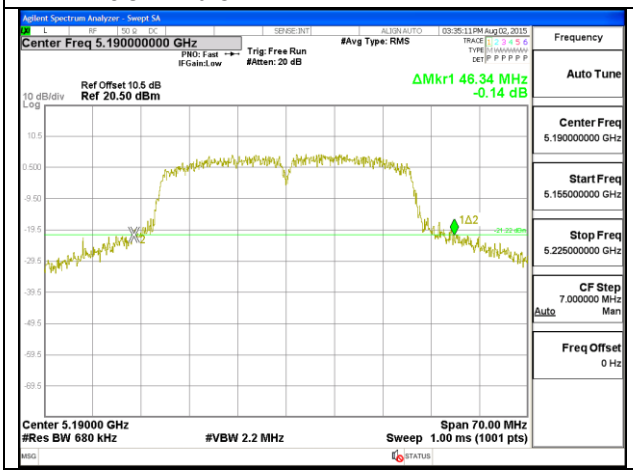
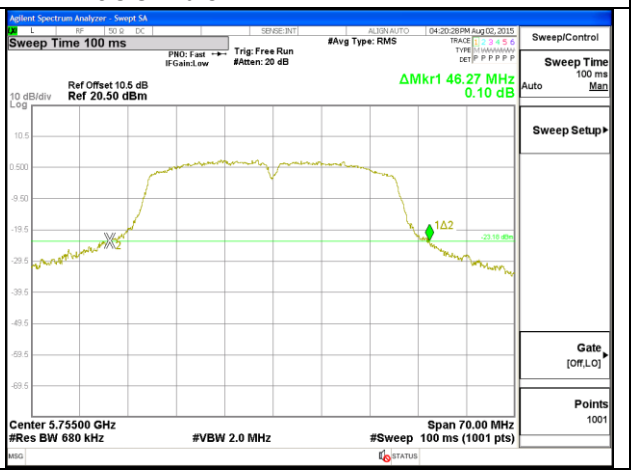


11n HT40 5.2 Mid Ch



11n HT40 5.8 Mid Ch



10.3. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

10.3.1. 802.11a MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5180	17.56
Mid	5200	19.25
High	5240	18.14
Worst		19.25

10.3.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5180	18.16
Mid	5200	18.34
High	5240	18.06
Worst		18.34

10.3.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5190	36.00
Mid	5230	35.93
Worst		36.00

10.3.4. 802.11a MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5745	16.39
Mid	5785	16.47
High	5825	16.59
Worst		16.59

10.3.5. 802.11n HT20 MODE IN THE 5.8 GHz BAND

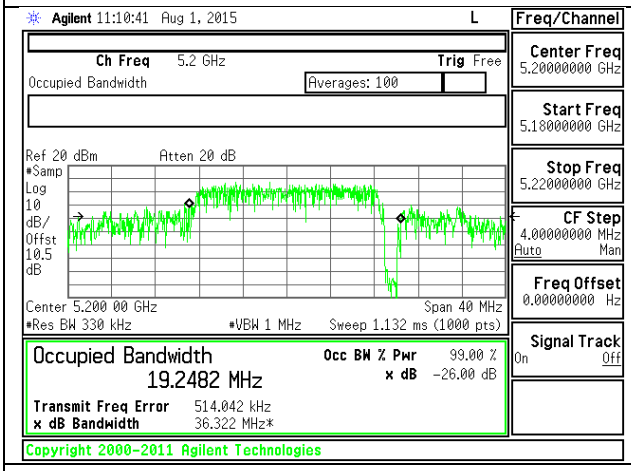
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5745	16.46
Mid	5785	16.48
High	5825	16.58
Worst		16.58

10.3.6. 802.11n HT40 MODE IN THE 5.8 GHz BAND

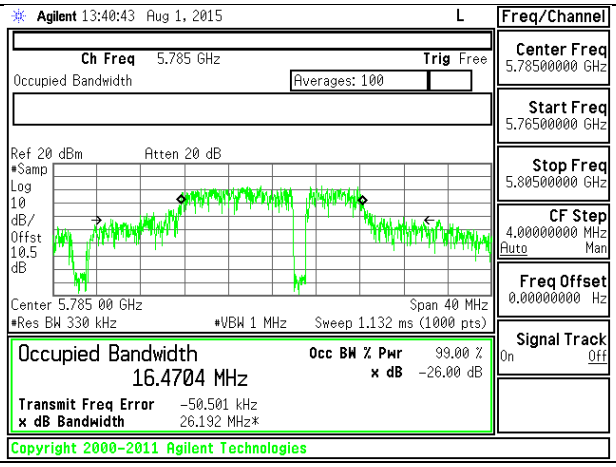
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5755	36.18
High	5795	36.05
Worst		36.18

10.3.1. 99% BANDWIDTH PLOTS

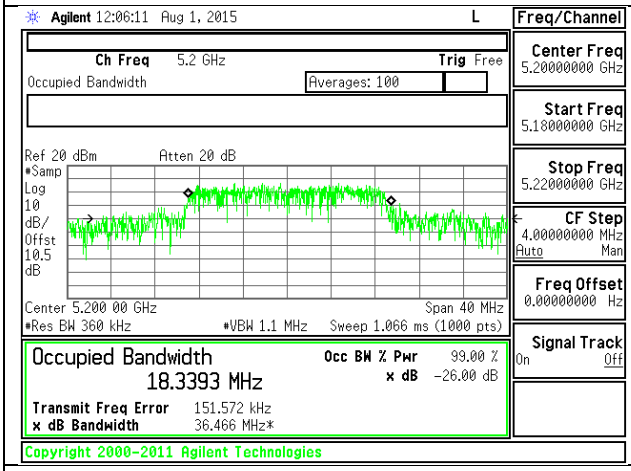
11a 5.2 Mid Ch



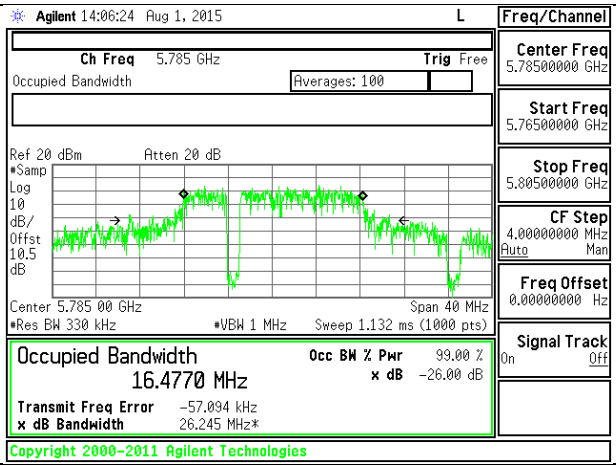
11a 5.8 Mid Ch



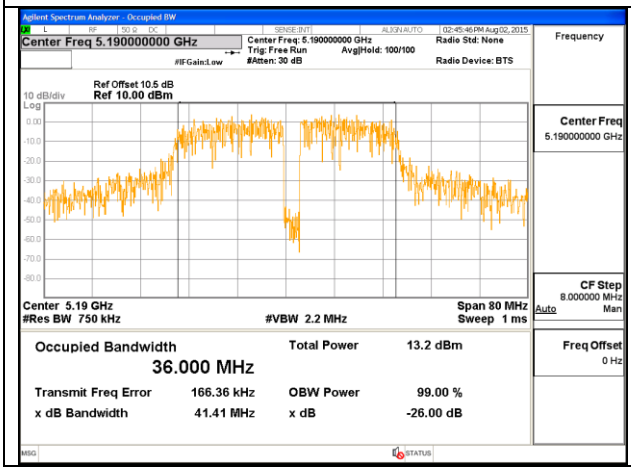
11n HT20 5.2 Mid Ch



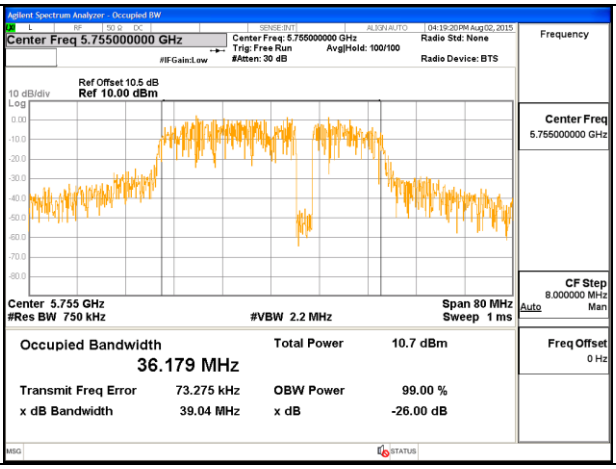
11n HT20 5.8 Mid Ch



11n HT40 5.2 Mid Ch



11n HT40 5.8 Mid Ch



10.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 11 dB (including 10 dB pad and 1 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS

10.4.1. 802.11a MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5180	15.00
Mid	5200	15.00
High	5240	15.00
Worst		15.00

10.4.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5180	14.50
Mid	5200	14.50
High	5240	14.00
Worst		14.50

10.4.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5190	13.00
Mid	5230	12.60
Worst		13.00

10.4.4. 802.11a MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5745	13.30
Mid	5785	13.60
High	5825	14.00
Worst		14.00

10.4.5. 802.11n HT20 MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5745	13.20
Mid	5785	13.40
High	5825	13.50
Worst		13.50

10.4.6. 802.11n HT40 MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5755	11.50
High	5795	12.00
Worst		12.00

10.5. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (1) (2) (3)

For the band 5.15–5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26–dB emission bandwidth in MHz. In addition, the peak power spectral density shall not exceed 4 dBm in any 1–MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz 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.

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.

DIRECTIONAL ANTENNA GAIN

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

RESULTS

10.5.1. 802.11a MODE IN THE 5.2 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5180	40.02	17.56	5.20
Mid	5200	37.85	19.25	5.20
High	5240	38.78	18.14	5.20

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC EIRP Limit (dBm)	Max IC Power (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC eirp PSD Limit (dBm)	PPSD Limit (dBm)
Low	5180	24.00	22.45	17.25	17.25	11.00	10.00	10.00
Mid	5200	24.00	22.84	17.64	17.64	11.00	10.00	10.00
High	5240	24.00	22.59	17.39	17.39	11.00	10.00	10.00

Duty Cycle CF (dB)	0.12	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5180	15.000	15.00	24.00	-9.00
Mid	5200	15.000	15.00	24.00	-9.00
High	5240	15.000	15.00	24.00	-9.00

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5180	5.600	5.72	11.00	-5.28
Mid	5200	5.108	5.23	11.00	-5.77
High	5240	3.871	3.99	11.00	-7.01

10.5.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5180	38.31	18.160	5.20
Mid	5200	41.94	18.340	5.20
High	5240	37.24	18.060	5.20

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC EIRP Limit (dBm)	Max IC Power (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC eirp PSD Limit (dBm)	PPSD Limit (dBm)
Low	5180	24.00	22.59	17.39	17.39	11.00	10.00	10.00
Mid	5200	24.00	22.63	17.43	17.43	11.00	10.00	10.00
High	5240	24.00	22.57	17.37	17.37	11.00	10.00	10.00

Duty Cycle CF (dB)	0.13	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5180	14.500	14.50	24.00	-9.50
Mid	5200	14.500	14.50	24.00	-9.50
High	5240	14.000	14.00	24.00	-10.00

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5180	5.119	5.25	11.00	-5.75
Mid	5200	4.471	4.60	11.00	-6.40
High	5240	3.258	3.39	11.00	-7.61

10.5.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5190	46.34	36.00	5.20
High	5230	50.74	35.93	5.20

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5190	24.00	23.00	23.00	17.80	11.00	10.00	10.00
High	5230	24.00	23.00	23.00	17.80	11.00	10.00	10.00

Duty Cycle CF (dB)	0.15	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5190	13.00	13.00	24.00	-11.00
High	5230	12.60	12.60	24.00	-11.40

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5190	-0.89	-0.74	11.00	-11.74
High	5230	-1.89	-1.74	11.00	-12.74

10.5.4. 802.11a MODE IN THE 5.8 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5745	23.24	16.4	5.20
Mid	5785	25.90	16.5	5.20
High	5825	25.79	16.6	5.20

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5745	30.00	29.15	35.15	29.15	30.00	17.00	17.00
Mid	5785	30.00	29.17	35.17	29.17	30.00	17.00	17.00
High	5825	30.00	29.20	35.20	29.20	30.00	17.00	17.00

Duty Cycle CF (dB)	0.12	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	13.30	13.30	30.00	-16.70
Mid	5785	13.60	13.60	30.00	-16.40
High	5825	14.00	14.00	30.00	-16.00

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5745	-0.81	-0.69	17.00	-17.69
Mid	5785	-1.55	-1.43	17.00	-18.43
High	5825	-1.03	-0.91	17.00	-17.91

10.5.5. 802.11n HT20 MODE IN THE 5.8 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5745	21.90	16.5	5.20
Mid	5785	24.12	16.5	5.20
High	5825	24.78	16.6	5.20

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5745	30.00	29.16	35.16	29.16	30.00	17.00	17.00
Mid	5785	30.00	29.17	35.17	29.17	30.00	17.00	17.00
High	5825	30.00	29.20	35.20	29.20	30.00	17.00	17.00

Duty Cycle CF (dB)	0.13	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	13.20	13.20	30.00	-16.80
Mid	5785	13.40	13.40	30.00	-16.60
High	5825	13.50	13.50	30.00	-16.50

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5745	-1.94	-1.81	17.00	-18.81
Mid	5785	-1.98	-1.85	17.00	-18.85
High	5825	-1.59	-1.46	17.00	-18.46

10.5.6. 802.11n HT40 MODE IN THE 5.8 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5755	46.27	36.2	5.20
High	5795	47.88	36.1	5.20

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5755	30.00	30.00	36.00	30.00	30.00	17.00	17.00
High	5795	30.00	30.00	36.00	30.00	30.00	17.00	17.00

Duty Cycle CF (dB)	0.15	Included in Calculations of Corr'd Power & PPSD

Output Power Results

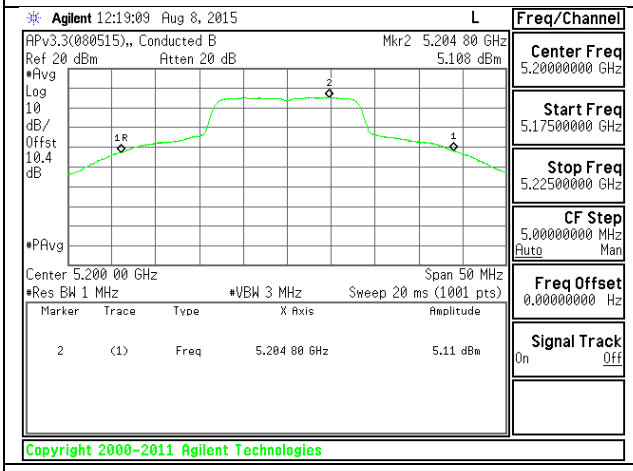
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5755	11.50	11.50	30.00	-18.50
High	5795	12.00	12.00	30.00	-18.00

PPSD Results

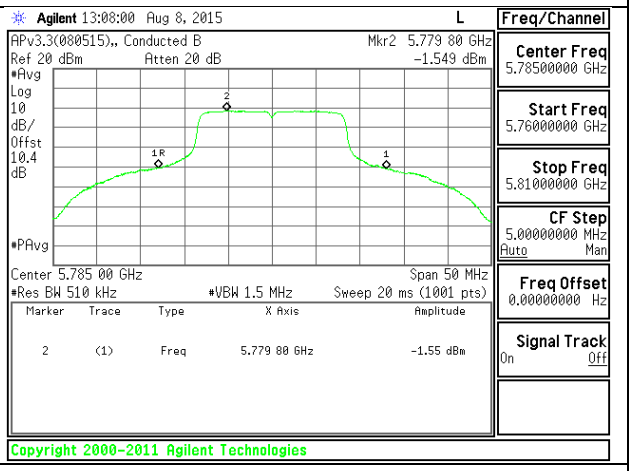
Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5755	-5.94	-5.79	17.00	-22.79
High	5795	-5.29	-5.14	17.00	-22.14

10.5.7. PPSD PLOTS

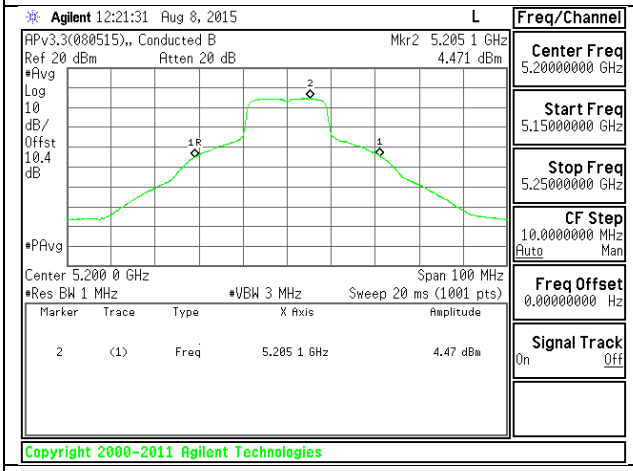
11a 5.2 Mid Ch



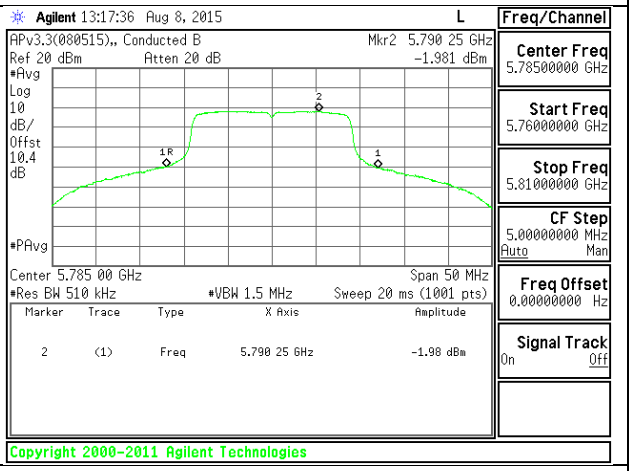
11a 5.8 Mid Ch



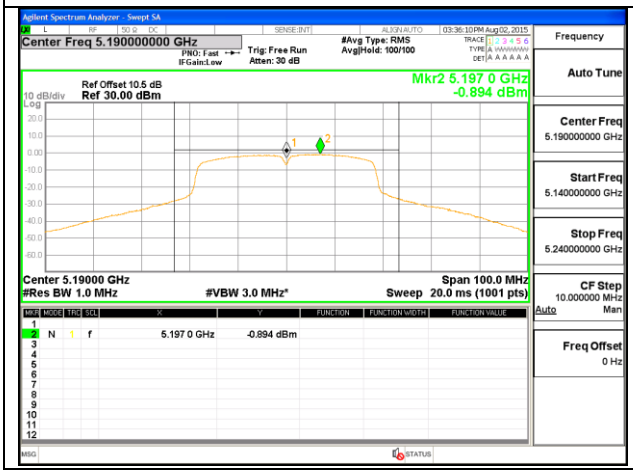
11n HT20 5.2 Mid Ch



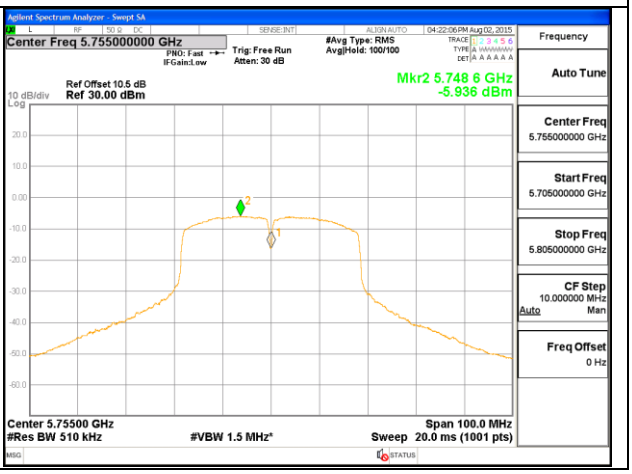
11n HT20 5.8 Mid Ch



11n HT40 5.2 Mid Ch



11n HT40 5.8 Mid Ch



11. TRANSMITTER ABOVE 1 GHz

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 below 1GHz and 150cm for above 1GHz. The antenna to EUT distance is 3 meters.

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.

Reference to KDB 789033 UNII part G) 6) d) Method AD:

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 add duty cycle factor to the reading offset for average measurements.

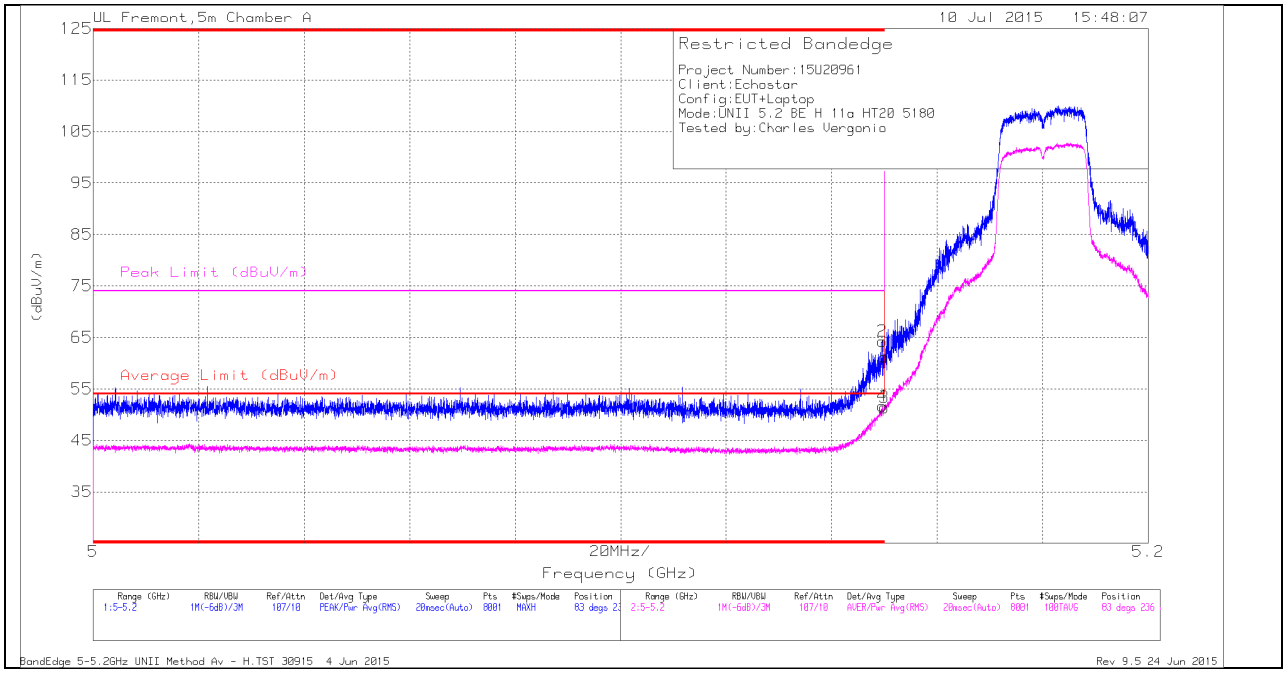
The spectrum from 1GHz to 40 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band.

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.

11.1. 5.2 GHz

11.1.1. TX ABOVE 1 GHz 802.11a MODE IN THE 5.2 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	48.54	Pk	34.2	-21.5	0	61.24	-	-	74	-12.76	83	236	H
2	* 5.15	51.53	Pk	34.2	-21.5	0	64.23	-	-	74	-9.77	83	236	H
3	* 5.15	38.59	RMS	34.2	-21.5	.12	51.39	54	-2.61	-	-	83	236	H
4	* 5.15	38.87	RMS	34.2	-21.5	.12	51.67	54	-2.33	-	-	83	236	H

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

Pk - Peak detector

RMS - RMS detection

BandEdge 5-5.2GHz UNII Method Av - H.TST 30915 4 Jun 2015

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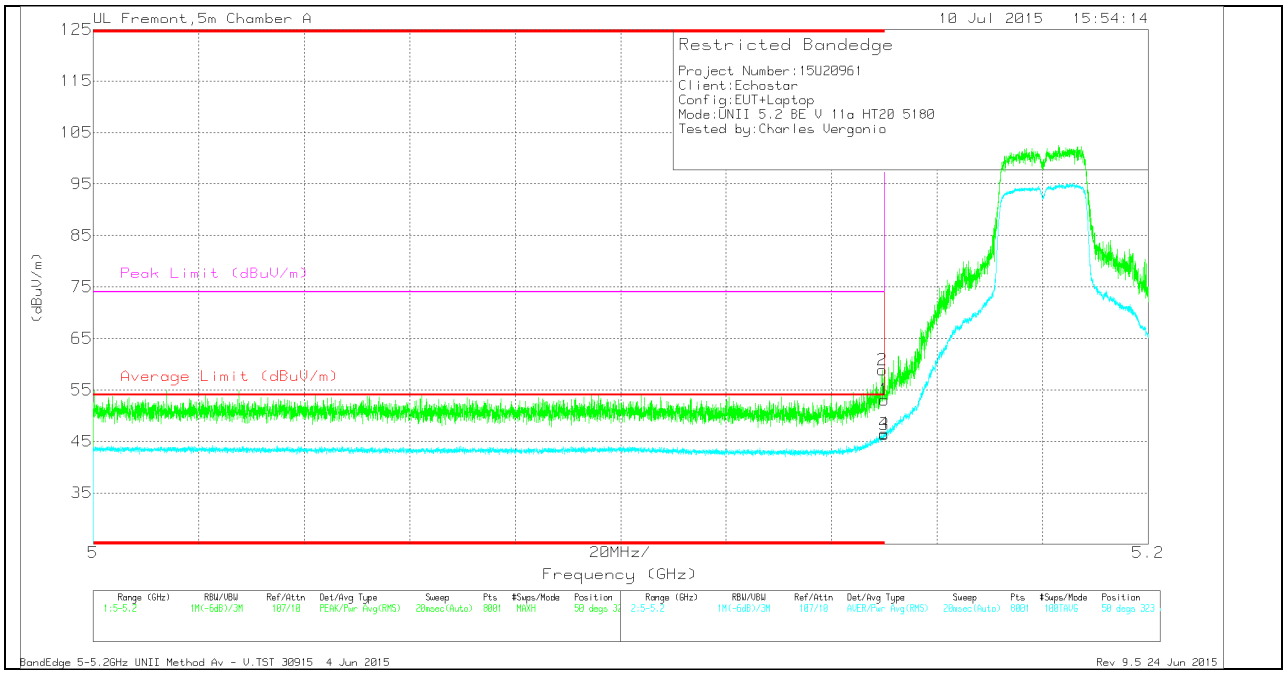
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	40.39	Pk	34.2	-21.5	0	53.09	-	-	74	-20.91	50	323	V
2	* 5.15	46.17	Pk	34.2	-21.5	0	58.87	-	-	74	-15.13	50	323	V
3	* 5.15	33.51	RMS	34.2	-21.5	.12	46.31	54	-7.69	-	-	50	323	V
4	* 5.15	33.71	RMS	34.2	-21.5	.12	46.51	54	-7.49	-	-	50	323	V

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

Pk - Peak detector

RMS - RMS detection

BandEdge 5-5.2GHz UNII Method Av - V.TST 30915 4 Jun 2015

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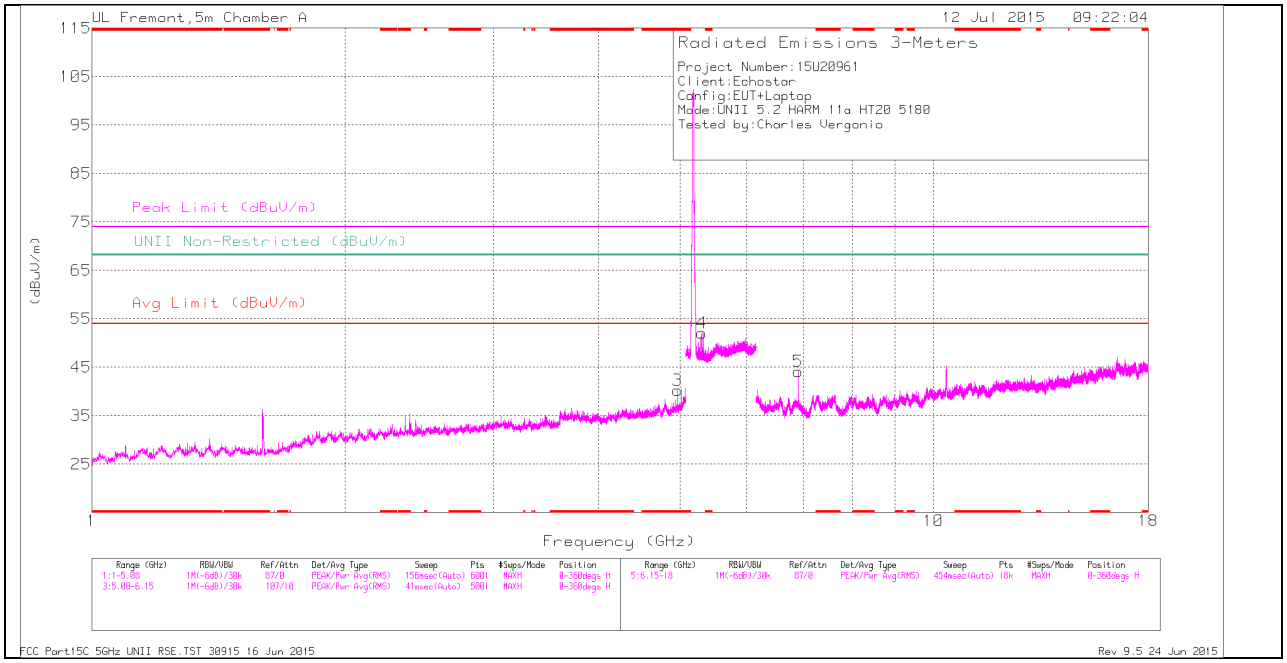
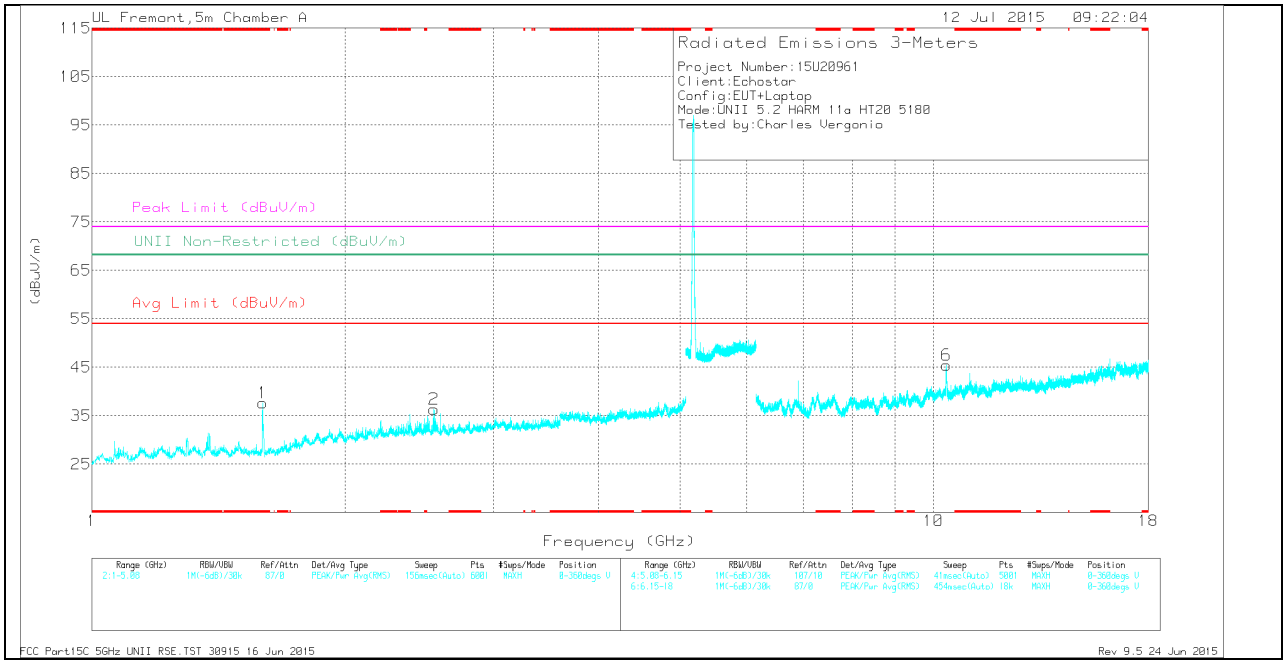
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 4.966	36.53	Pk	33.9	-30.2	0	40.23	-	-	74	-33.77	-	-	0-360	201	H
1	* 1.595	45.04	Pk	27.9	-35.3	0	37.64	-	-	74	-36.36	-	-	0-360	100	V
2	2.55	38.49	Pk	32.2	-34.3	0	36.39	-	-	-	-	68.2	-31.81	0-360	200	V
4	5.304	38.99	Pk	34.5	-21.4	0	52.09	-	-	-	-	68.2	-16.11	0-360	100	H
5	6.906	36.29	Pk	35.6	-27.8	0	44.09	-	-	-	-	68.2	-24.11	0-360	201	H
6	10.358	31.66	Pk	37.4	-23.6	0	45.46	-	-	-	-	68.2	-22.74	0-360	200	V

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

Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.965	42.86	PK-U	33.9	-30.2	0	46.56	-	-	74	-27.44	-	-	136	199	H
* 4.966	30.7	ADR	33.9	-30.2	.12	34.5	54	-19.5	-	-	-	-	136	199	H
* 1.597	49.7	PK-U	27.9	-35.3	0	42.3	-	-	74	-31.7	-	-	14	215	V
* 1.596	32.15	ADR	27.9	-35.3	.12	24.85	54	-29.15	-	-	-	-	14	215	V
2.548	31.38	ADR	32.2	-34.3	.12	29.38	-	-	-	-	-	-	14	200	V
2.551	42.91	PK-U	32.2	-34.3	0	40.81	-	-	-	-	68.2	-27.39	14	200	V
5.302	31.46	ADR	34.5	-21.4	.12	44.66	-	-	-	-	-	-	14	100	H
5.304	42.87	PK-U	34.5	-21.4	0	55.97	-	-	-	-	68.2	-12.23	14	100	H
6.907	41.15	PK-U	35.6	-27.8	0	48.95	-	-	-	-	68.2	-19.25	142	202	H
6.907	33.51	ADR	35.6	-27.8	.12	41.41	-	-	-	-	-	-	142	202	H
10.359	37.27	PK-U	37.4	-23.6	0	51.07	-	-	-	-	68.2	-17.13	142	202	V
10.36	26.57	ADR	37.4	-23.6	.12	40.47	-	-	-	-	-	-	142	202	V

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

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

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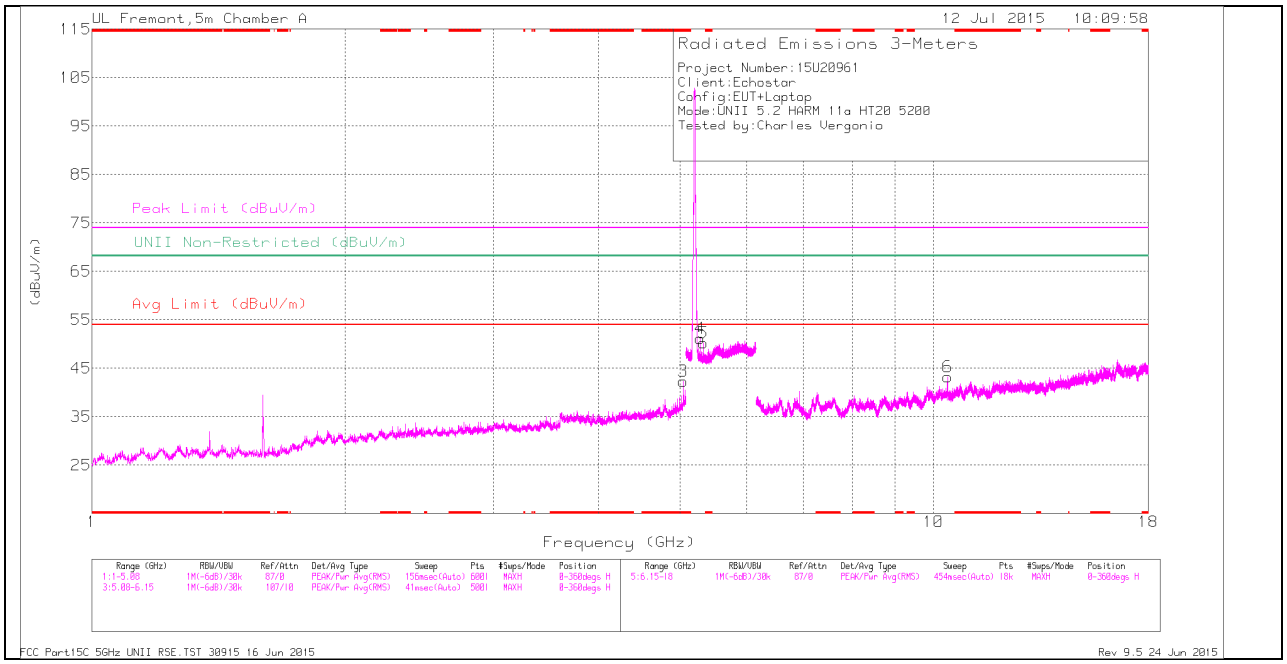
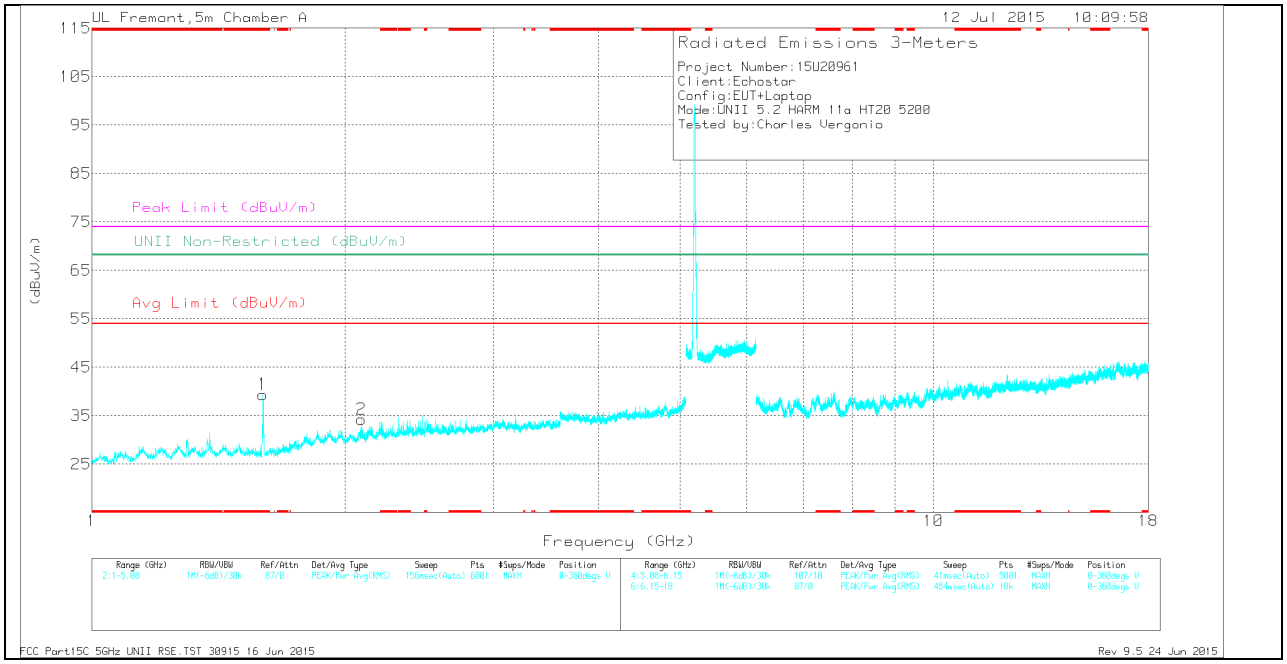
MID CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 5.044	37.33	Pk	34	-29	0	42.33	-	-	74	-31.67	-	-	0-360	201	H
1	* 1.597	46.8	Pk	27.9	-35.3	0	39.4	-	-	74	-34.6	-	-	0-360	100	V
2	2.091	37.95	Pk	31.4	-35.1	0	34.25	-	-	-	-	68.2	-33.95	0-360	200	V
4	5.278	38.1	Pk	34.5	-21.4	0	51.2	-	-	-	-	68.2	-17	0-360	100	H
5	5.33	36.83	Pk	34.6	-21.2	0	50.23	-	-	-	-	68.2	-17.97	0-360	201	H
6	10.403	29.48	Pk	37.4	-23.6	0	43.28	-	-	-	-	68.2	-24.92	0-360	201	H

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

Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 5.044	43.2	PK-U	34	-29	0	48.2	-	-	74	-25.8	-	-	140	227	H
* 5.044	32.26	ADR	34	-29	.12	37.36	54	-16.64	-	-	-	-	140	227	H
* 1.599	53.17	PK-U	27.9	-35.3	0	45.77	-	-	74	-28.23	-	-	75	101	V
* 1.599	33.26	ADR	27.9	-35.3	.12	25.96	54	-28.04	-	-	-	-	75	101	V
2.089	44.12	PK-U	31.4	-35.1	0	40.42	-	-	-	-	68.2	-27.78	75	201	V
2.091	32.05	ADR	31.4	-35.1	.12	28.45	-	-	-	-	-	-	75	201	V
5.278	43.62	PK-U	34.5	-21.3	0	56.82	-	-	-	-	68.2	-11.38	75	100	H
5.278	31.69	ADR	34.5	-21.4	.12	44.89	-	-	-	-	-	-	75	100	H
5.328	42.25	PK-U	34.6	-21.2	0	55.65	-	-	-	-	68.2	-12.55	75	202	H
5.33	31.25	ADR	34.6	-21.2	.12	44.75	-	-	-	-	-	-	75	202	H
10.403	23.01	ADR	37.4	-23.6	.12	36.91	-	-	-	-	-	-	75	202	H
10.404	33.88	PK-U	37.4	-23.6	0	47.68	-	-	-	-	68.2	-20.52	75	202	H

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

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

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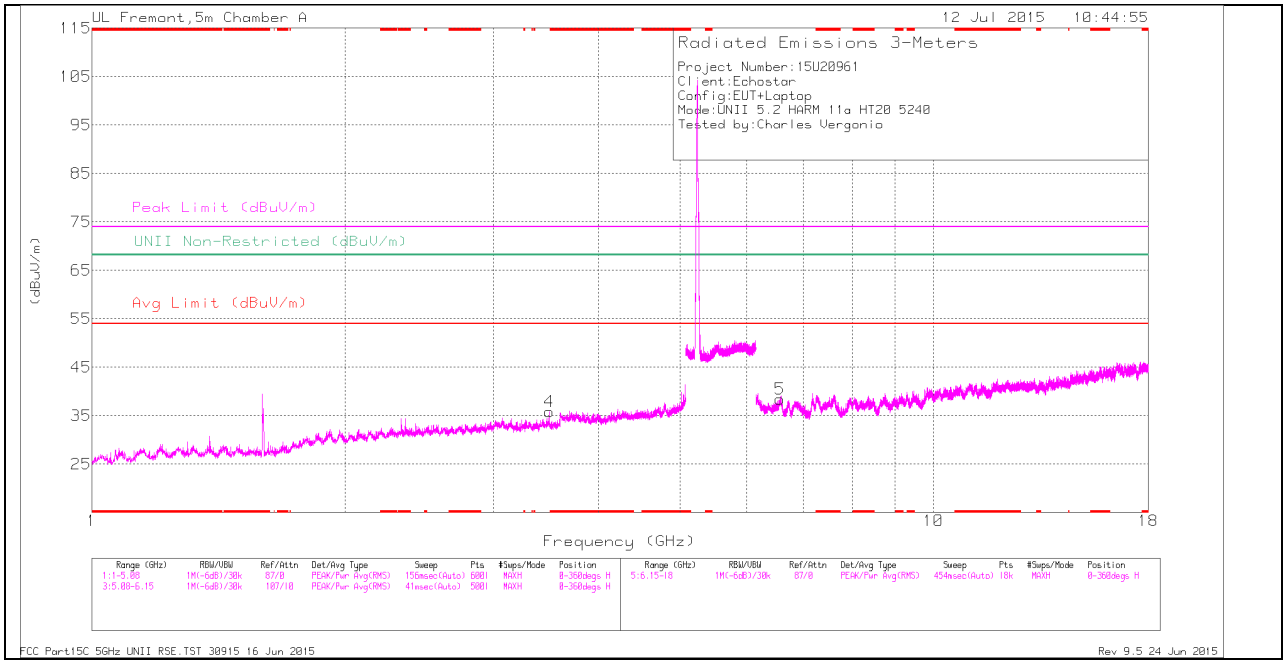
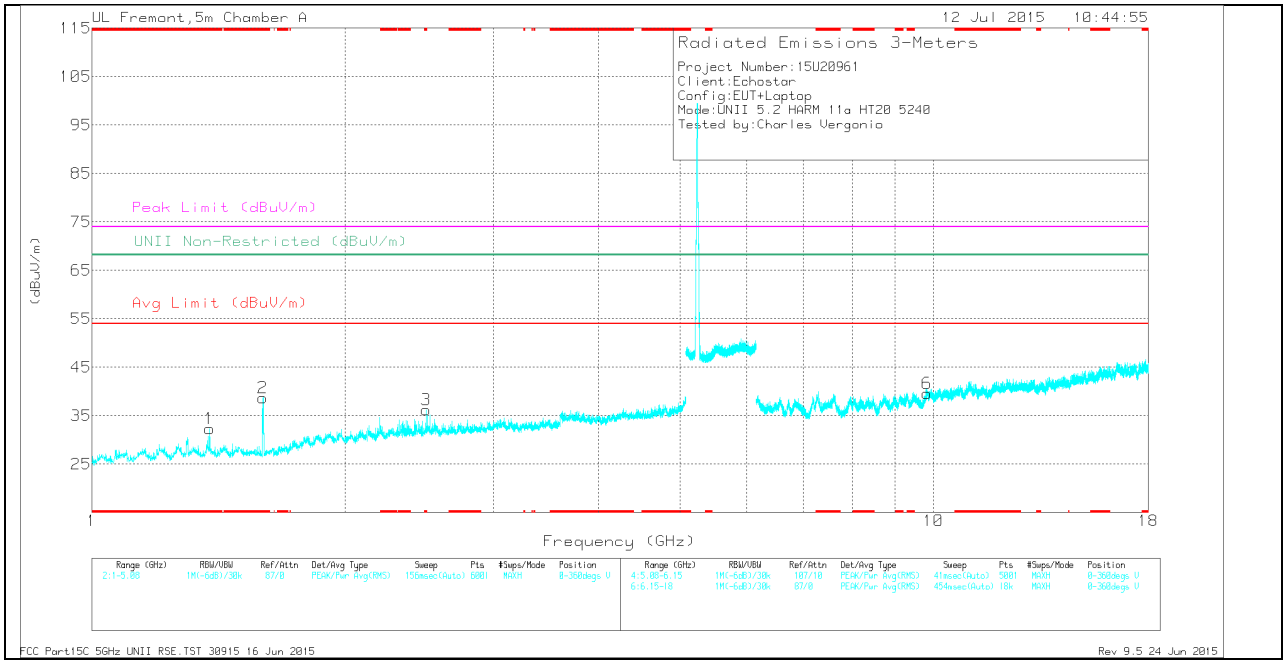
HIGH CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.38	39.49	Pk	28.6	-35.8	0	32.29	-	-	74	-41.71	-	-	0-360	100	V
2	* 1.595	46.03	Pk	27.9	-35.3	0	38.63	-	-	74	-35.37	-	-	0-360	100	V
3	* 2.496	38.26	Pk	32.1	-34.1	0	36.26	-	-	74	-37.74	-	-	0-360	100	V
4	3.494	35.41	Pk	33.1	-32.7	0	35.81	-	-	-	-	68.2	-32.39	0-360	100	H
5	6.571	30.39	Pk	35.6	-27.6	0	38.39	-	-	-	-	68.2	-29.81	0-360	201	H
6	9.821	26.95	Pk	37	-24.3	0	39.65	-	-	-	-	68.2	-28.55	0-360	200	V

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

Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.38	46.38	PK-U	28.6	-35.8	0	39.18	-	-	74	-34.82	-	-	88	105	V
* 1.38	37.78	ADR	28.6	-35.8	.12	30.68	54	-23.32	-	-	-	-	88	105	V
* 1.594	53.6	PK-U	27.9	-35.3	0	46.2	-	-	74	-27.8	-	-	7	200	V
* 1.595	33.39	ADR	27.9	-35.3	.12	26.09	54	-27.91	-	-	-	-	7	200	V
* 2.496	44.98	PK-U	32.1	-34.1	0	42.98	-	-	74	-31.02	-	-	7	100	V
* 2.498	31.47	ADR	32.1	-34.1	.12	29.57	54	-24.43	-	-	-	-	7	100	V
3.493	42.79	PK-U	33.1	-32.7	0	43.19	-	-	-	-	68.2	-25.01	7	100	H
3.493	31.81	ADR	33.1	-32.7	.12	32.31	-	-	-	-	-	-	7	100	H
6.573	38.5	PK-U	35.6	-27.6	0	46.5	-	-	-	-	68.2	-21.7	7	202	H
6.573	27.72	ADR	35.6	-27.6	.12	35.82	-	-	-	-	-	-	7	202	H
9.823	36.19	PK-U	37	-24.3	0	48.89	-	-	-	-	68.2	-19.31	7	202	V
9.823	24.49	ADR	37	-24.3	.12	37.29	-	-	-	-	-	-	7	202	V

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

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

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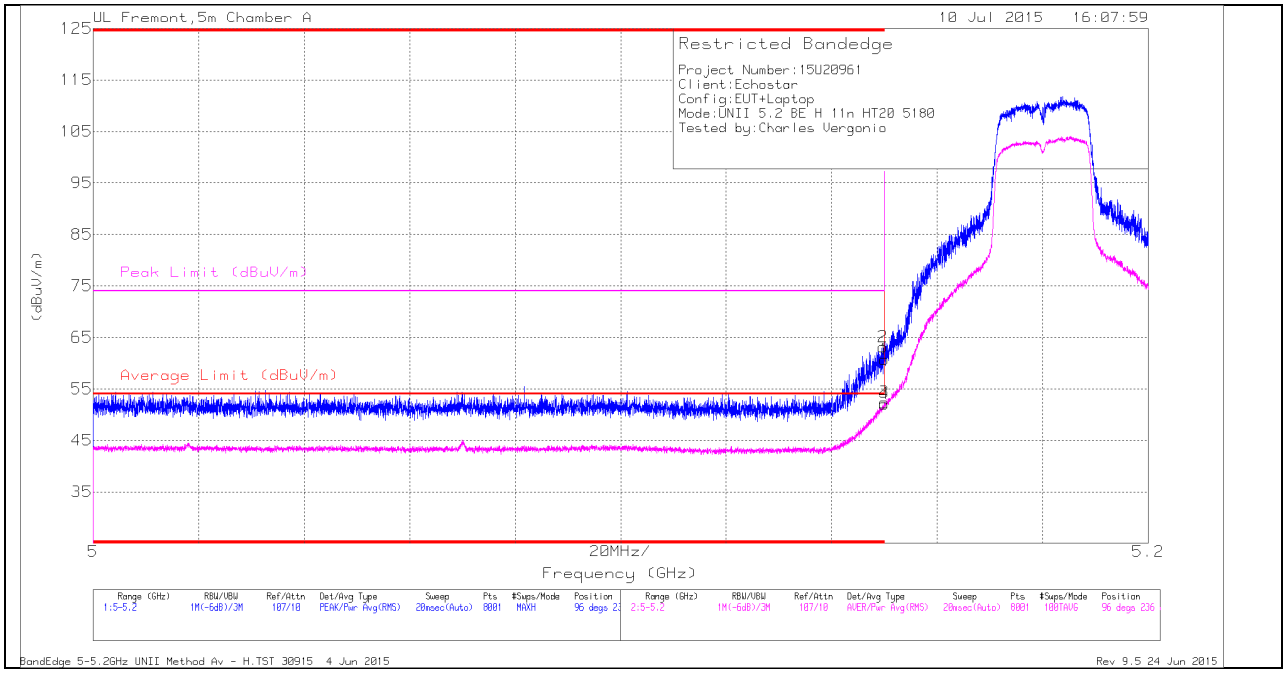
11.1.2. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.2 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	48	Pk	34.2	-21.5	0	60.7	-	-	74	-13.3	96	236	H
2	* 5.15	50.45	Pk	34.2	-21.5	0	63.15	-	-	74	-10.85	96	236	H
3	* 5.15	39.66	RMS	34.2	-21.5	.13	52.49	54	-1.51	-	-	96	236	H
4	* 5.15	39.4	RMS	34.2	-21.5	.13	52.23	54	-1.77	-	-	96	236	H

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

Pk - Peak detector

RMS - RMS detection

BandEdge 5-5.2GHz UNII Method Av - H.TST 30915 4 Jun 2015

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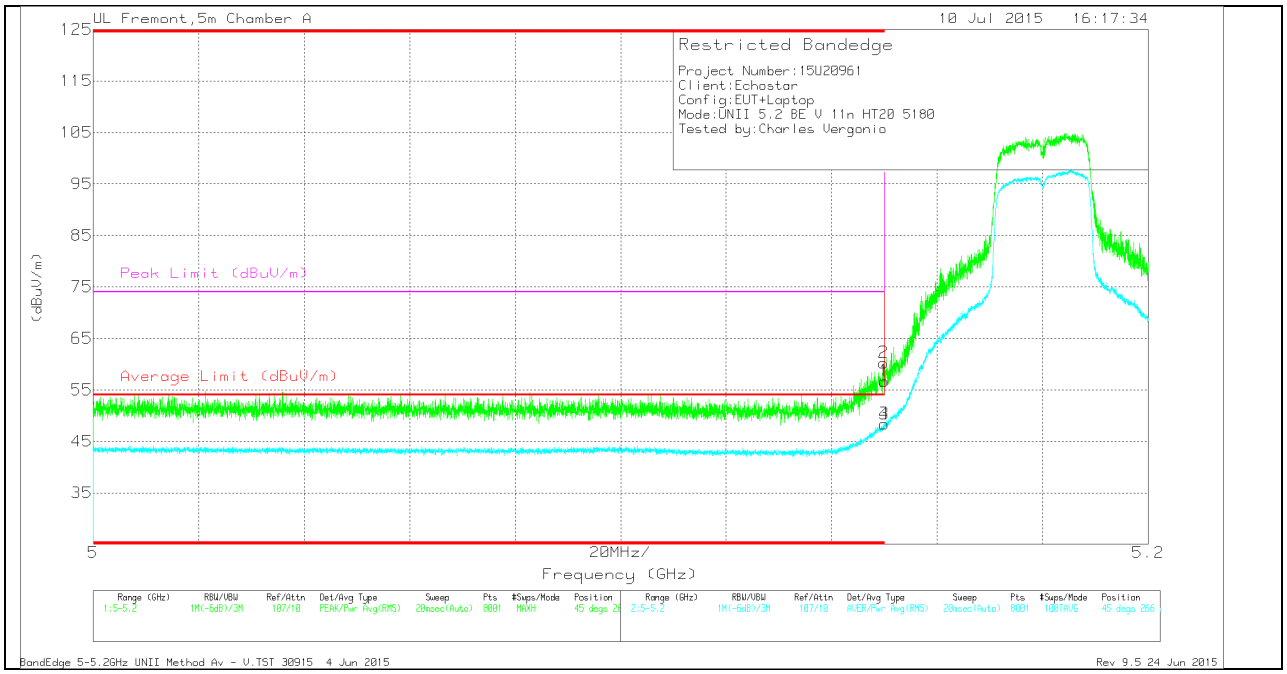
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	44.04	Pk	34.2	-21.5	0	56.74	-	-	74	-17.26	45	266	V
2	* 5.15	47.58	Pk	34.2	-21.5	0	60.28	-	-	74	-13.72	45	266	V
3	* 5.15	35.69	RMS	34.2	-21.5	.13	48.52	54	-5.48	-	-	45	266	V
4	* 5.15	35.64	RMS	34.2	-21.5	.13	48.47	54	-5.53	-	-	45	266	V

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

Pk - Peak detector

RMS - RMS detection

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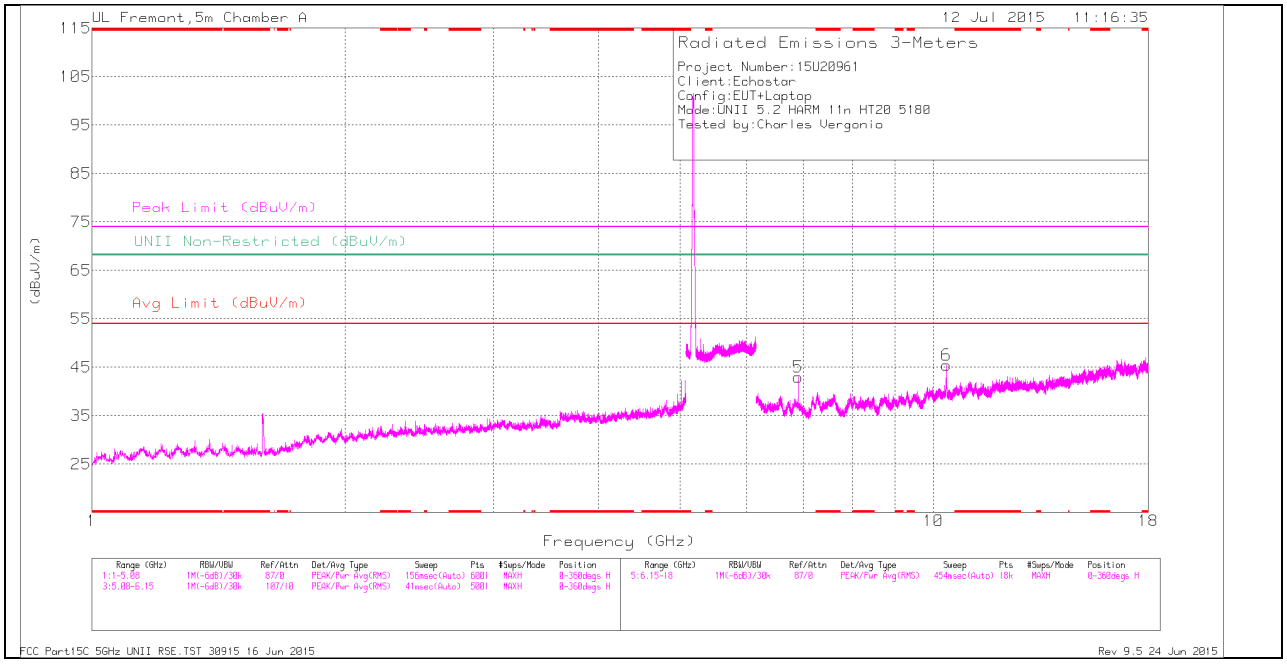
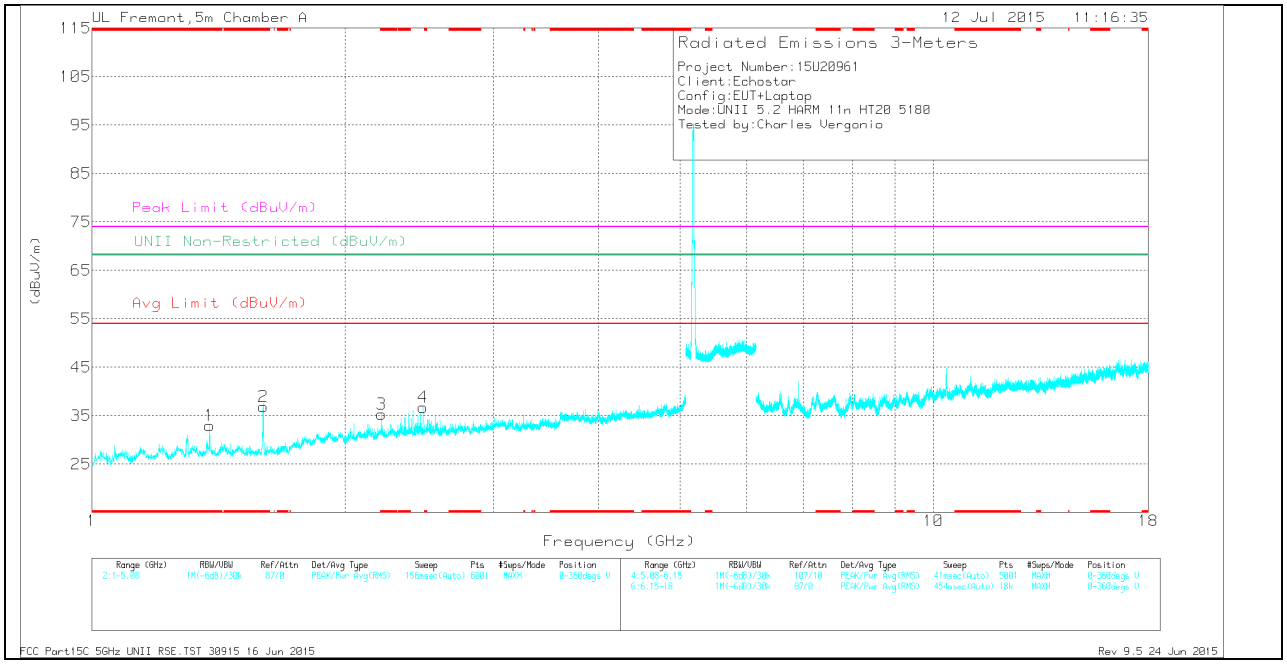
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (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	* 1.38	40.22	Pk	28.6	-35.8	33.02	-	-	74	-40.98	-	-	0-360	100	V
2	* 1.598	44.23	Pk	27.9	-35.3	36.83	-	-	74	-37.17	-	-	0-360	100	V
3	* 2.21	38	Pk	31.4	-34.1	35.3	-	-	74	-38.7	-	-	0-360	200	V
4	2.474	38.87	Pk	32.1	-34.2	36.77	-	-	-	-	68.2	-31.43	0-360	100	V
5	6.906	35.2	Pk	35.6	-27.8	43	-	-	-	-	68.2	-25.2	0-360	201	H
6	10.359	31.69	Pk	37.4	-23.6	45.49	-	-	-	-	68.2	-22.71	0-360	201	H

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

Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.38	46.79	PK-U	28.6	-35.8	0	39.59	-	-	74	-34.41	-	-	87	121	V
* 1.38	38.16	ADR	28.6	-35.8	.13	31.09	54	-22.91	-	-	-	-	87	121	V
* 1.598	53.21	PK-U	27.9	-35.3	0	45.81	-	-	74	-28.19	-	-	87	100	V
* 1.6	35.27	ADR	27.9	-35.3	.13	28	54	-26	-	-	-	-	87	100	V
* 2.209	43.04	PK-U	31.4	-34.1	0	40.34	-	-	74	-33.66	-	-	87	201	V
* 2.212	31.37	ADR	31.4	-34.1	.13	28.8	54	-25.2	-	-	-	-	87	201	V
2.473	43.69	PK-U	32	-34.2	0	41.49	-	-	-	-	68.2	-26.71	87	100	V
2.475	30.96	ADR	32.1	-34.2	.13	28.99	-	-	-	-	-	-	87	100	V
6.907	27.71	ADR	35.6	-27.8	.13	35.64	-	-	-	-	-	-	87	202	H
6.908	37.93	PK-U	35.6	-27.8	0	45.73	-	-	-	-	68.2	-22.47	87	202	H
10.358	34.36	PK-U	37.4	-23.6	0	48.16	-	-	-	-	68.2	-20.04	87	202	H
10.358	23.47	ADR	37.4	-23.6	.13	37.40	-	-	-	-	-	-	87	202	H

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

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

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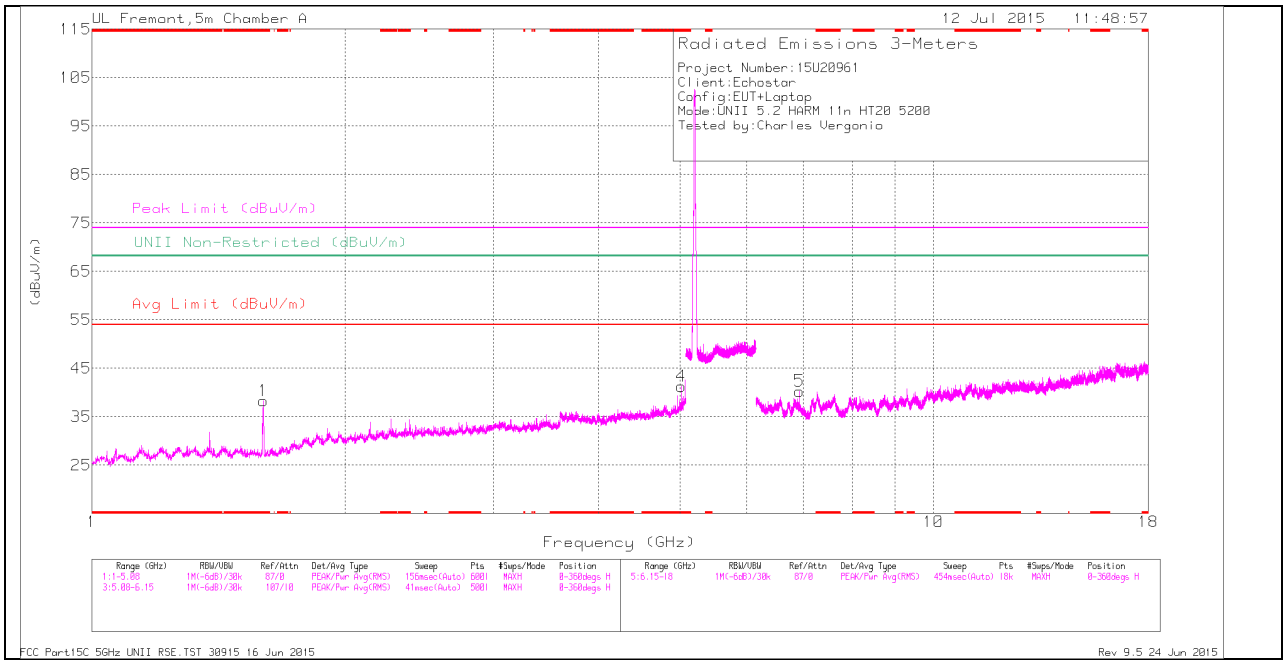
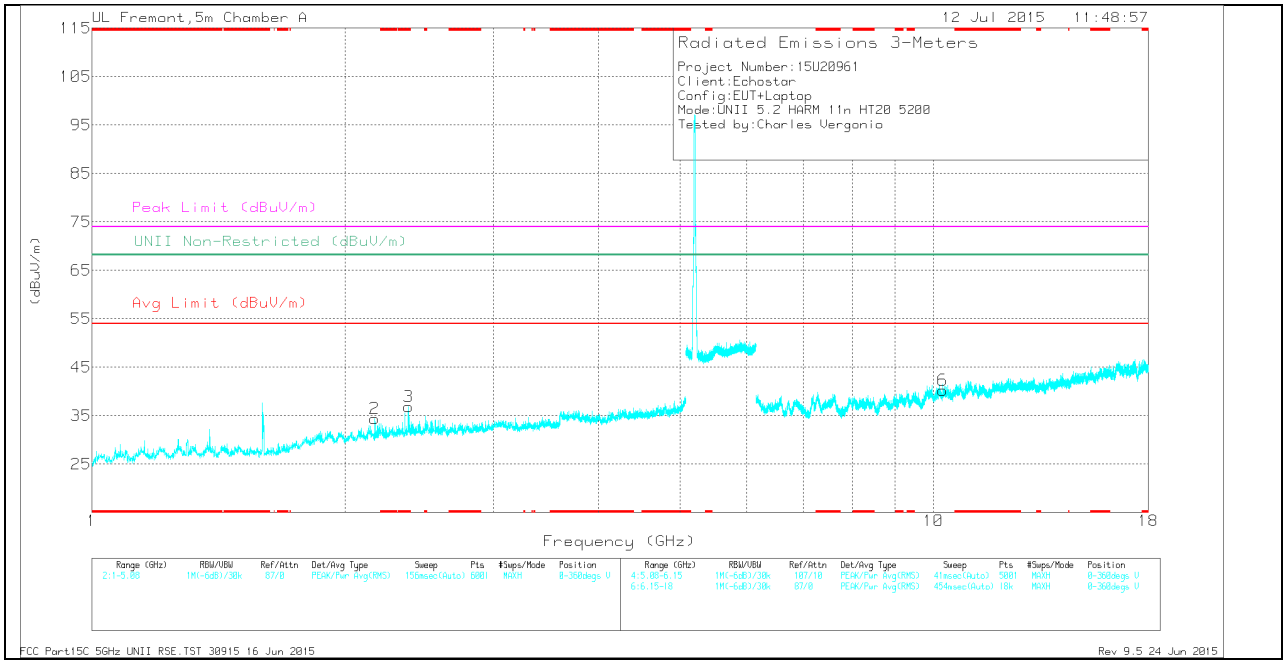
MID CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (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	* 1.598	45.73	Pk	27.9	-35.3	38.33	-	-	74	-35.67	-	-	0-360	100	H
4	* 5.018	37.02	Pk	34	-29.7	41.32	-	-	74	-32.68	-	-	0-360	201	H
3	* 2.378	39.8	Pk	31.9	-34.8	36.9	-	-	74	-37.1	-	-	0-360	100	V
2	2.169	37.53	Pk	31.3	-34.4	34.43	-	-	-	-	68.2	-33.77	0-360	200	V
5	6.933	32.21	Pk	35.6	-27.5	40.31	-	-	-	-	68.2	-27.89	0-360	201	H
6	10.256	27.27	Pk	37.3	-24.3	40.27	-	-	-	-	68.2	-27.93	0-360	100	V

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

Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.597	49.86	PK-U	27.9	-35.3	0	42.46	-	-	74	-31.54	-	-	1	100	H
* 1.597	33.26	ADR	27.9	-35.3	.13	25.99	54	-28.01	-	-	-	-	1	100	H
* 5.018	44.02	PK-U	34	-29.7	0	48.32	-	-	74	-25.68	-	-	143	202	H
* 5.018	35.64	ADR	34	-29.7	.13	40.07	54	-13.93	-	-	-	-	143	202	H
* 2.376	45.1	PK-U	31.9	-34.8	0	42.2	-	-	74	-31.8	-	-	143	100	V
* 2.377	31.8	ADR	31.9	-34.8	.13	29.03	54	-24.97	-	-	-	-	143	100	V
2.169	42.96	PK-U	31.3	-34.4	0	39.86	-	-	-	-	68.2	-28.34	143	202	V
2.169	31.05	ADR	31.3	-34.4	.13	28.08	-	-	-	-	-	-	143	202	V
6.933	30.71	ADR	35.6	-27.5	.13	38.94	-	-	-	-	-	-	143	202	H
6.934	39.23	PK-U	35.6	-27.5	0	47.33	-	-	-	-	68.2	-20.87	143	202	H
10.258	35.06	PK-U	37.3	-24.3	0	48.06	-	-	-	-	68.2	-20.14	143	100	V
10.258	23.85	ADR	37.3	-24.3	.13	36.98	-	-	-	-	-	-	143	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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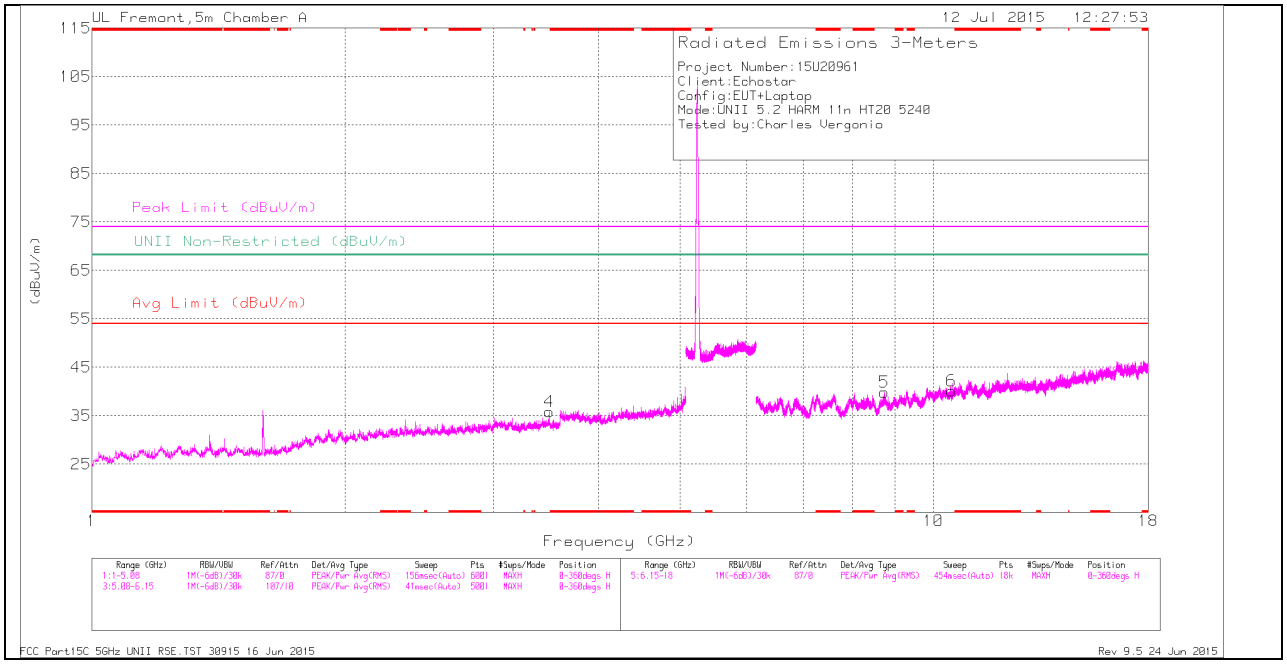
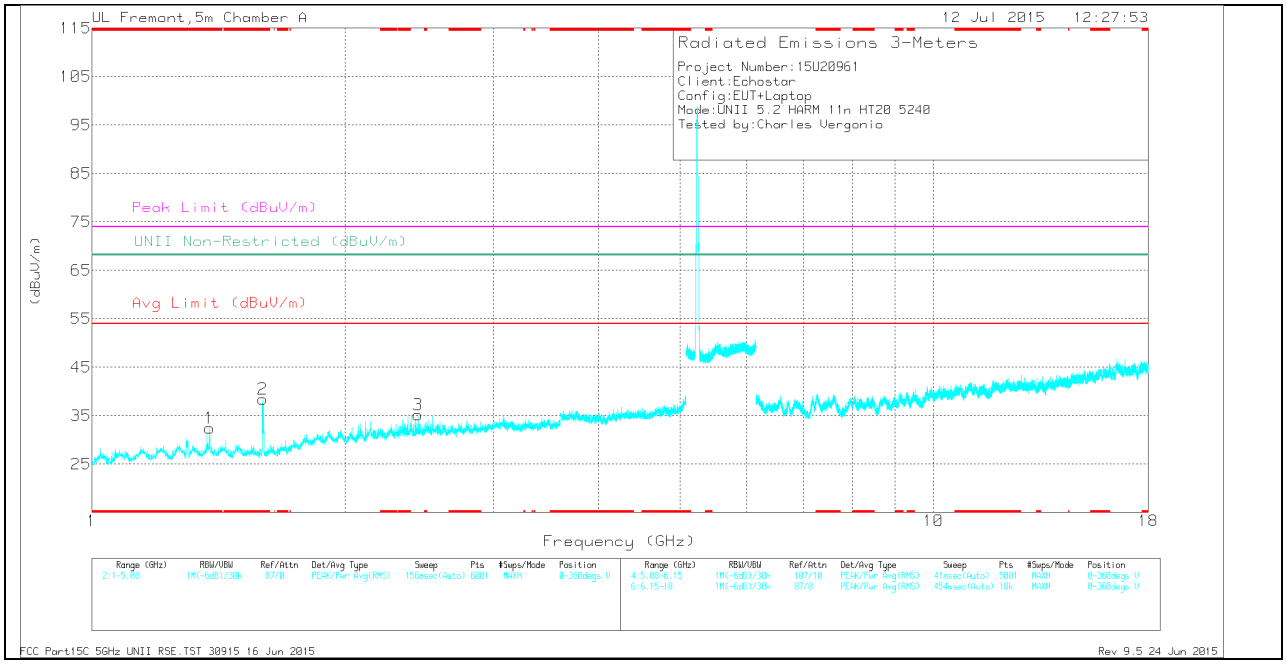
HIGH CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (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	* 1.38	39.69	Pk	28.6	-35.8	32.49	-	-	74	-41.51	-	-	0-360	100	V
2	* 1.595	45.88	Pk	27.9	-35.3	38.48	-	-	74	-35.52	-	-	0-360	100	V
3	2.442	37.55	Pk	32	-34.4	35.15	-	-	-	-	68.2	-33.05	0-360	200	V
4	3.493	35.49	Pk	33.1	-32.7	35.89	-	-	-	-	68.2	-32.31	0-360	201	H
5	8.738	29.52	Pk	36	-25.7	39.82	-	-	-	-	68.2	-28.38	0-360	201	H
6	10.508	26.16	Pk	37.5	-23.6	40.06	-	-	-	-	68.2	-28.14	0-360	100	H

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

Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.38	46.09	PK-U	28.6	-35.8	0	38.89	-	-	74	-35.11	-	-	1	100	V
* 1.38	35.75	ADR	28.6	-35.8	.13	28.68	54	-25.32	-	-	-	-	1	100	V
* 1.596	52.85	PK-U	27.9	-35.3	0	45.45	-	-	74	-28.55	-	-	1	100	V
* 1.596	34.83	ADR	27.9	-35.3	.13	27.56	54	-26.44	-	-	-	-	1	100	V
2.441	31.57	ADR	32	-34.4	.13	29.30	-	-	-	-	-	-	1	202	V
2.442	46.21	PK-U	32	-34.4	0	43.81	-	-	-	-	68.2	-24.39	1	202	V
3.493	42.53	PK-U	33.1	-32.7	0	42.93	-	-	-	-	68.2	-25.27	1	202	H
3.493	31.31	ADR	33.1	-32.7	.13	31.84	-	-	-	-	-	-	1	202	H
8.737	36.83	PK-U	36	-25.7	0	47.13	-	-	-	-	68.2	-21.07	1	202	H
8.737	25.6	ADR	36	-25.7	.13	36.03	-	-	-	-	-	-	1	202	H
10.507	22.65	ADR	37.5	-23.6	.13	36.68	-	-	-	-	-	-	1	100	H
10.509	34.52	PK-U	37.5	-23.6	0	48.42	-	-	-	-	68.2	-19.78	1	100	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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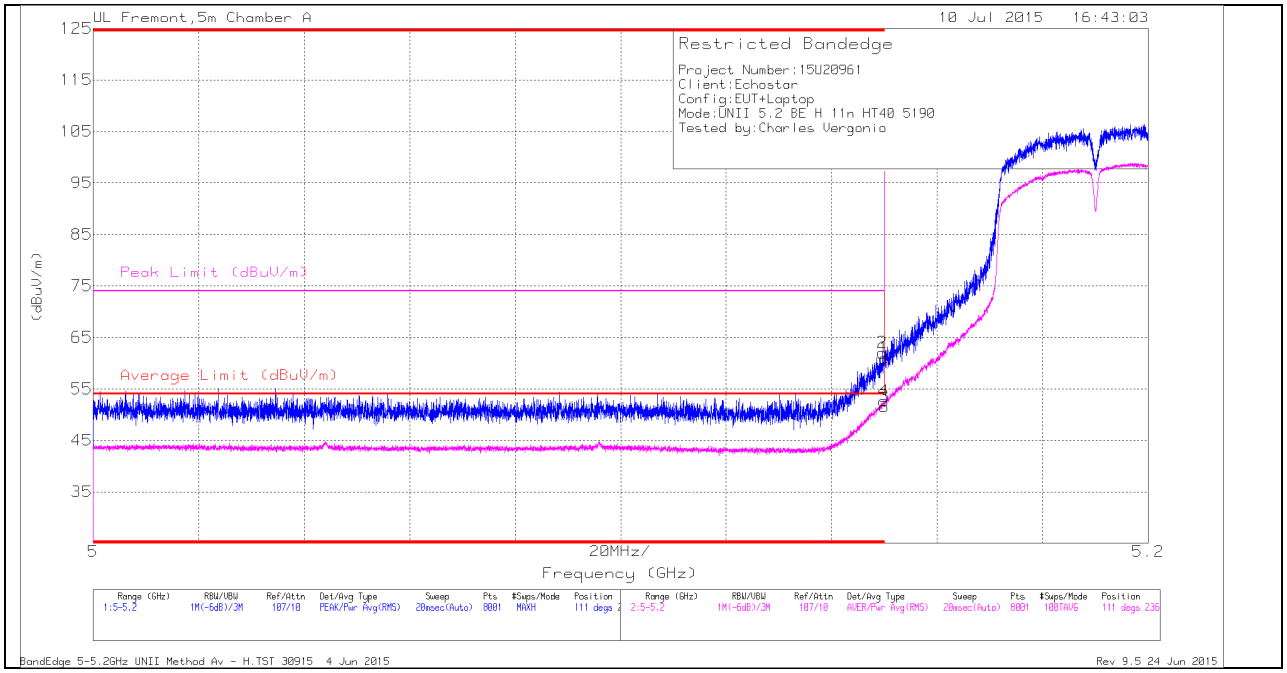
11.1.3. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.2 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	48.31	Pk	34.2	-21.5	0	61.01	-	-	74	-12.99	111	236	H
2	* 5.15	49.32	Pk	34.2	-21.5	0	62.02	-	-	74	-11.98	111	236	H
3	* 5.15	38.73	RMS	34.2	-21.5	.15	51.58	54	-2.45	-	-	111	236	H
4	* 5.15	39.79	RMS	34.2	-21.5	.15	52.64	54	-1.36	-	-	111	236	H

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

Pk - Peak detector

RMS - RMS detection

BandEdge 5-5.2GHz UNII Method Av - H.TST 30915 4 Jun 2015

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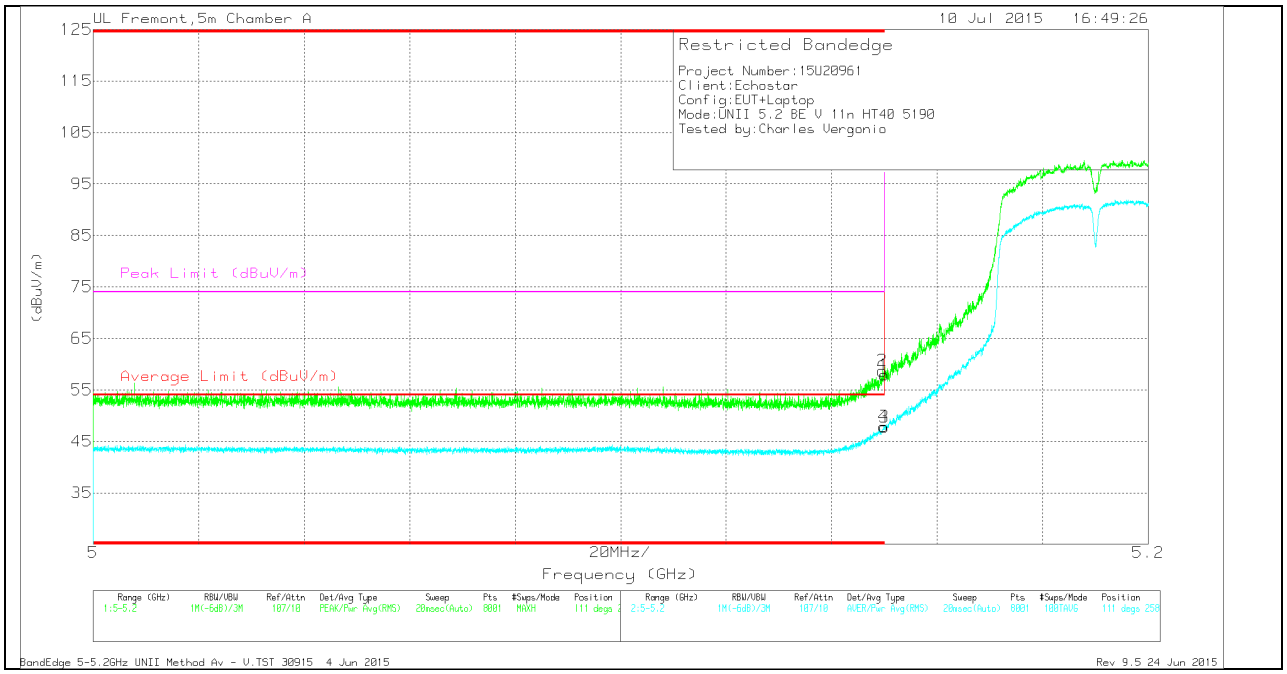
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	45.21	Pk	34.2	-21.5	0	57.91	-	-	74	-16.09	111	258	V
2	* 5.15	46.01	Pk	34.2	-21.5	0	58.71	-	-	74	-15.29	111	258	V
3	* 5.15	34.93	RMS	34.2	-21.5	.15	47.78	54	-6.22	-	-	111	258	V
4	* 5.15	35.01	RMS	34.2	-21.5	.15	47.86	54	-6.14	-	-	111	258	V

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

Pk - Peak detector

RMS - RMS detection

BandEdge 5-5.2GHz UNII Method Av - V.TST 30915 4 Jun 2015

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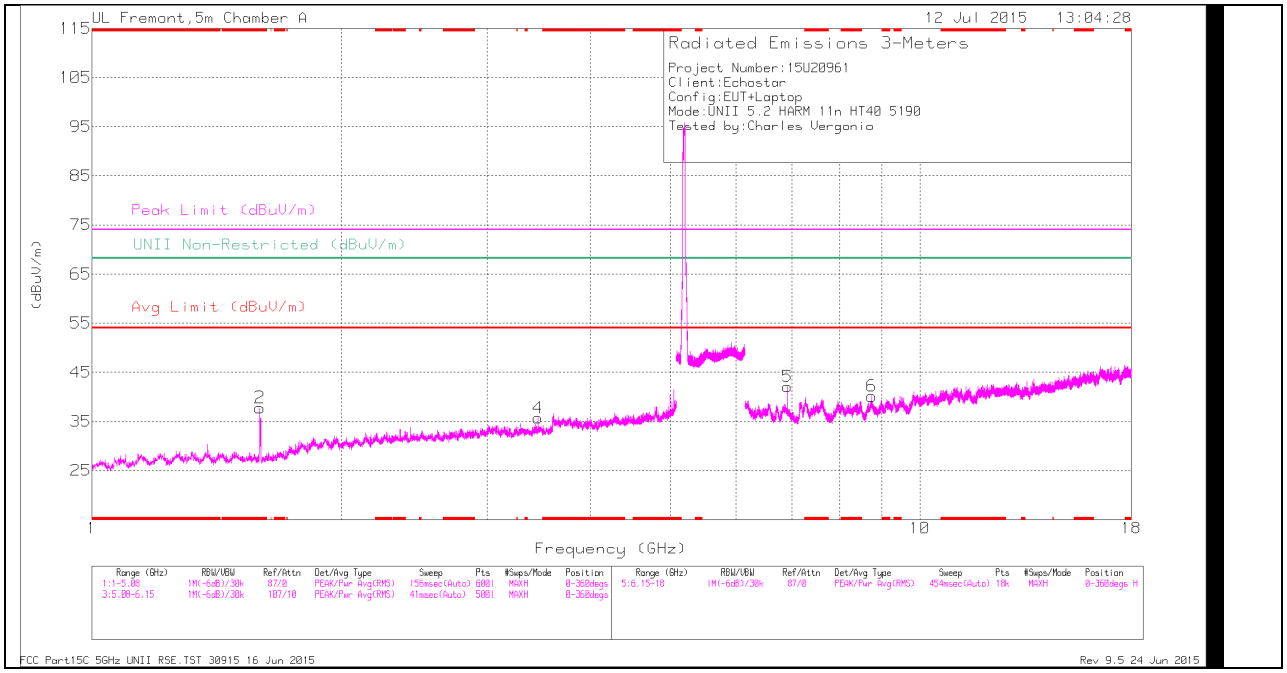
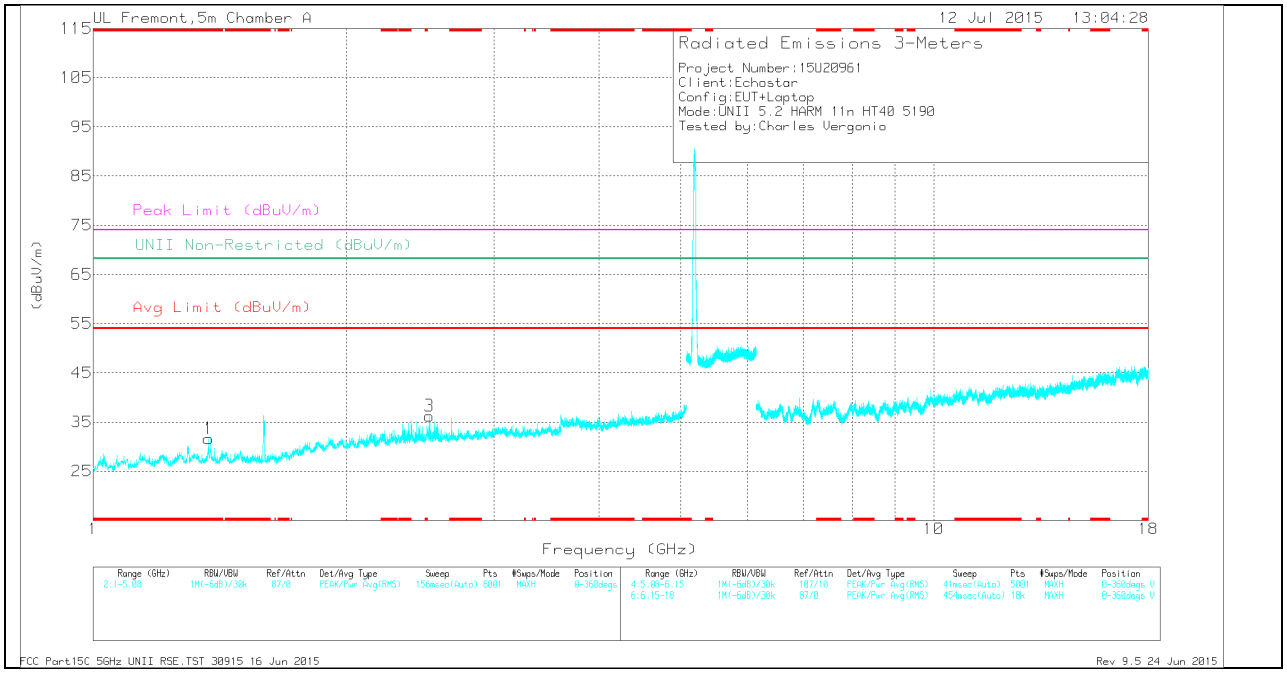
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 1.596	45.16	Pk	27.9	-35.3	0	37.76	-	-	74	-36.24	-	-	0-360	100	H
1	* 1.372	38.92	Pk	28.6	-35.9	0	31.62	-	-	74	-42.38	-	-	0-360	100	V
3	2.512	38.22	Pk	32.1	-34.1	0	36.22	-	-	-	-	68.2	-31.98	0-360	200	V
4	3.46	35.3	Pk	33	-32.6	0	35.7	-	-	-	-	68.2	-32.5	0-360	100	H
5	6.92	34.17	Pk	35.6	-27.7	0	42.07	-	-	-	-	68.2	-26.13	0-360	201	H
6	8.742	29.82	Pk	36	-25.7	0	40.12	-	-	-	-	68.2	-28.08	0-360	201	H

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

Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.597	50.81	PK-U	27.9	-35.3	0	43.41	-	-	74	-30.59	-	-	1	100	H
* 1.597	33.71	ADR	27.9	-35.3	.15	26.46	54	-27.54	-	-	-	-	1	100	H
* 1.371	44.37	PK-U	28.6	-35.9	0	37.07	-	-	74	-36.93	-	-	1	100	V
* 1.374	32.7	ADR	28.6	-35.9	.15	25.55	54	-28.45	-	-	-	-	1	100	V
2.511	44.87	PK-U	32.1	-34.1	0	42.87	-	-	-	-	68.2	-25.33	1	201	V
2.512	31.24	ADR	32.1	-34.1	.15	29.39	-	-	-	-	-	-	1	201	V
3.459	41.88	PK-U	33	-32.6	0	42.28	-	-	-	-	68.2	-25.92	1	100	H
3.46	30.98	ADR	33	-32.6	.15	31.53	-	-	-	-	-	-	1	100	H
6.92	39.08	PK-U	35.6	-27.7	0	46.98	-	-	-	-	68.2	-21.22	1	201	H
6.92	28.54	ADR	35.6	-27.7	.15	36.59	-	-	-	-	-	-	1	201	H
8.743	36.85	PK-U	36	-25.7	0	47.15	-	-	-	-	68.2	-21.05	1	201	H
8.744	25.49	ADR	36	-25.7	.15	35.94	-	-	-	-	-	-	1	201	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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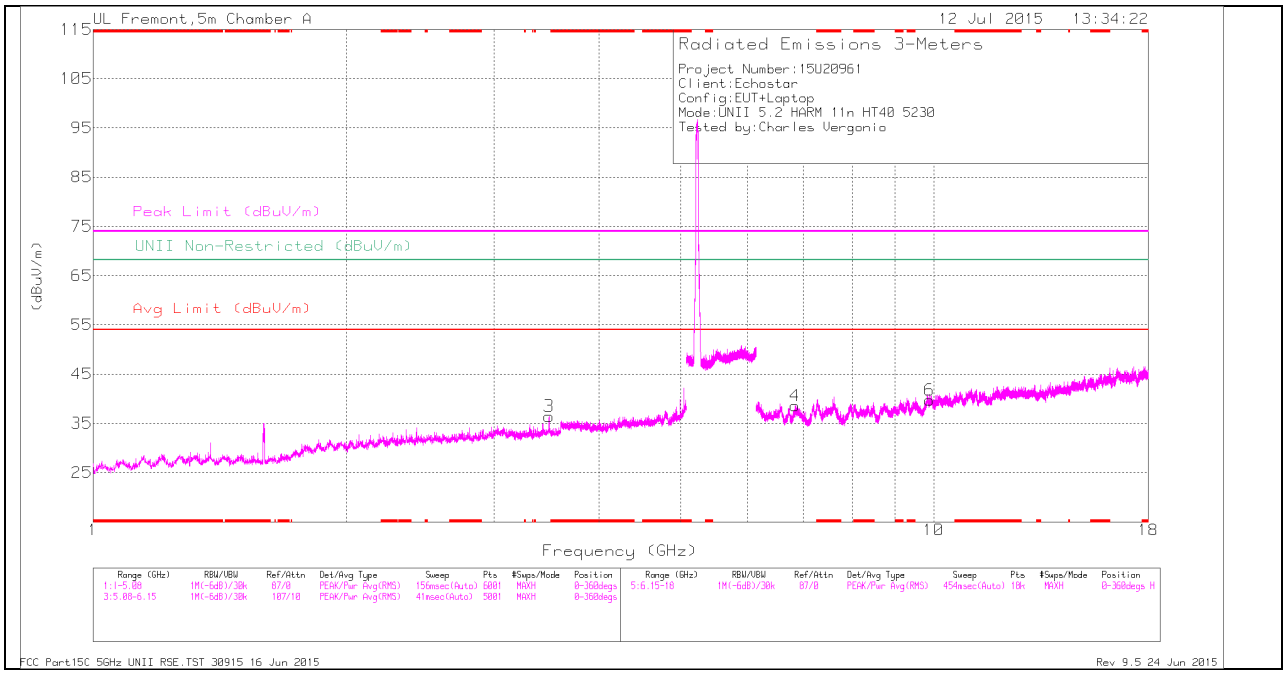
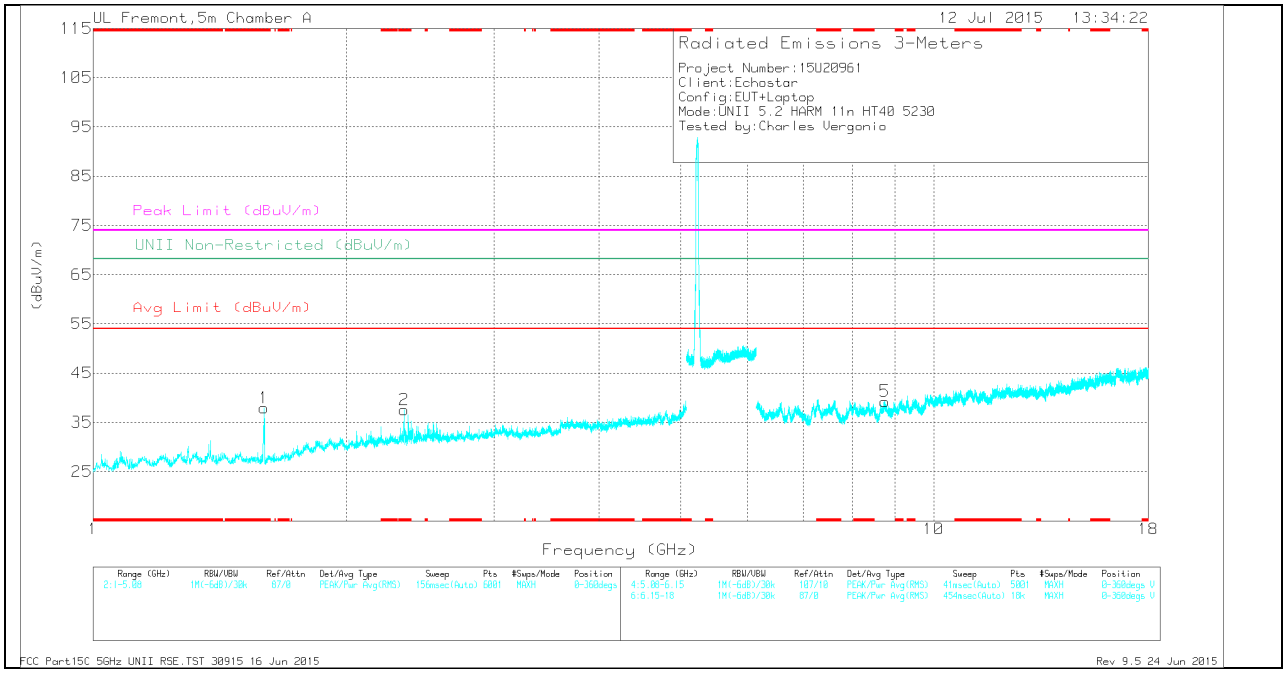
MID CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.598	45.33	Pk	27.9	-35.3	0	37.93	-	-	74	-36.07	-	-	0-360	200	V
2	* 2.346	40.45	Pk	31.9	-34.8	0	37.55	-	-	74	-36.45	-	-	0-360	200	V
3	3.487	35.93	Pk	33.1	-32.6	0	36.43	-	-	-	-	68.2	-31.77	0-360	201	H
4	6.841	30.57	Pk	35.6	-27.6	0	38.57	-	-	-	-	68.2	-29.63	0-360	100	H
5	8.747	28.93	Pk	36	-25.7	0	39.23	-	-	-	-	68.2	-28.97	0-360	200	V
6	9.886	26.9	Pk	37	-24.2	0	39.7	-	-	-	-	68.2	-28.5	0-360	201	H

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

Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.599	51.03	PK-U	27.9	-35.3	0	43.63	-	-	74	-30.37	-	-	1	202	V
* 1.596	33.79	ADR	27.9	-35.3	.15	26.54	54	-27.46	-	-	-	-	1	202	V
* 2.344	43.53	PK-U	31.9	-34.8	0	40.63	-	-	74	-33.37	-	-	1	202	V
* 2.345	31.67	ADR	31.9	-34.8	.15	28.92	54	-25.08	-	-	-	-	1	202	V
3.487	31.71	ADR	33.1	-32.6	.15	32.36	-	-	-	-	-	-	1	202	H
3.489	42.51	PK-U	33.1	-32.6	0	43.01	-	-	-	-	68.2	-25.19	1	202	H
6.841	37.99	PK-U	35.6	-27.6	0	45.99	-	-	-	-	68.2	-22.21	1	100	H
6.841	26.92	ADR	35.6	-27.6	.15	35.07	-	-	-	-	-	-	1	100	H
9.885	23.81	ADR	37	-24.2	.15	36.76	-	-	-	-	-	-	1	202	H
9.887	34.92	PK-U	37	-24.1	0	47.82	-	-	-	-	68.2	-20.38	1	202	H

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

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

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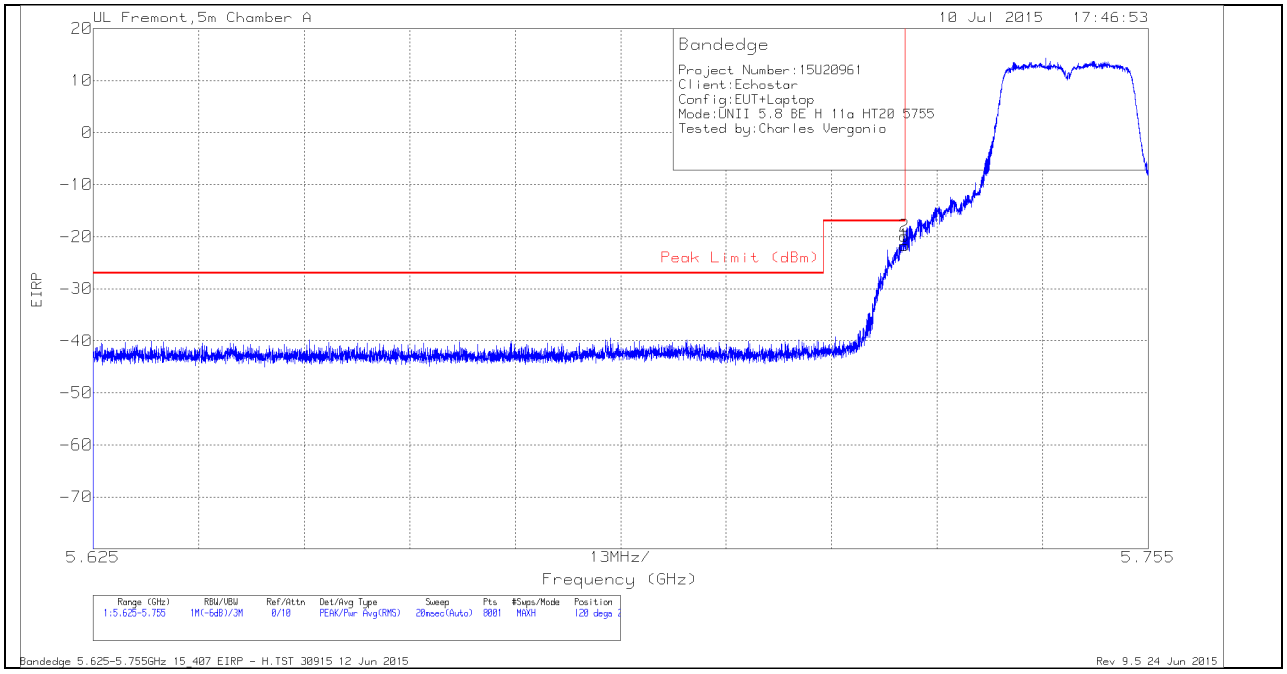
11.2. 5.8 GHz

11.2.1. TX ABOVE 1 GHz 802.11a MODE IN THE 5.8 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-47.49	Pk	34.7	-20.7	11.8	-21.69	-17	-4.69	120	220	H
2	5.725	-45.68	Pk	34.7	-20.7	11.8	-19.88	-17	-2.88	120	220	H

Pk - Peak detector

Bandedge 5.625-5.755GHz 15_407 EIRP - H.TST 30915 12 Jun 2015

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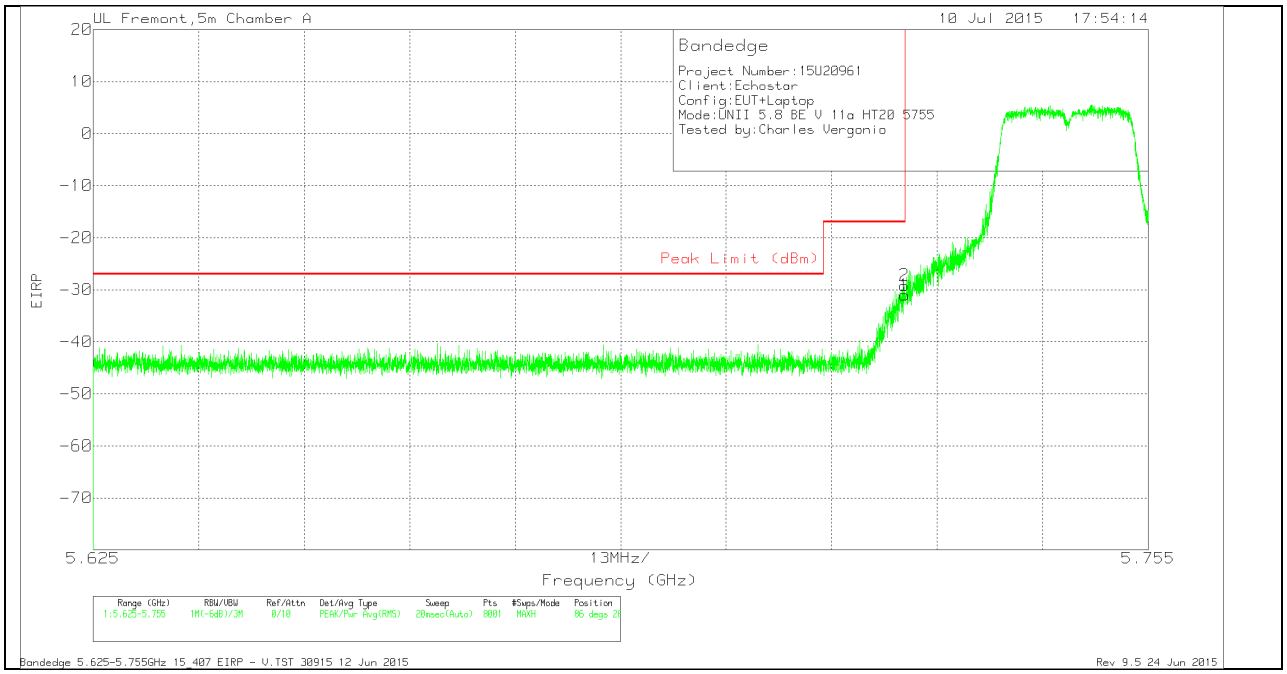
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-56.82	Pk	34.7	-20.7	11.8	-31.02	-17	-14.02	86	261	V
2	5.725	-54.98	Pk	34.7	-20.7	11.8	-29.18	-17	-12.18	86	261	V

Pk - Peak detector

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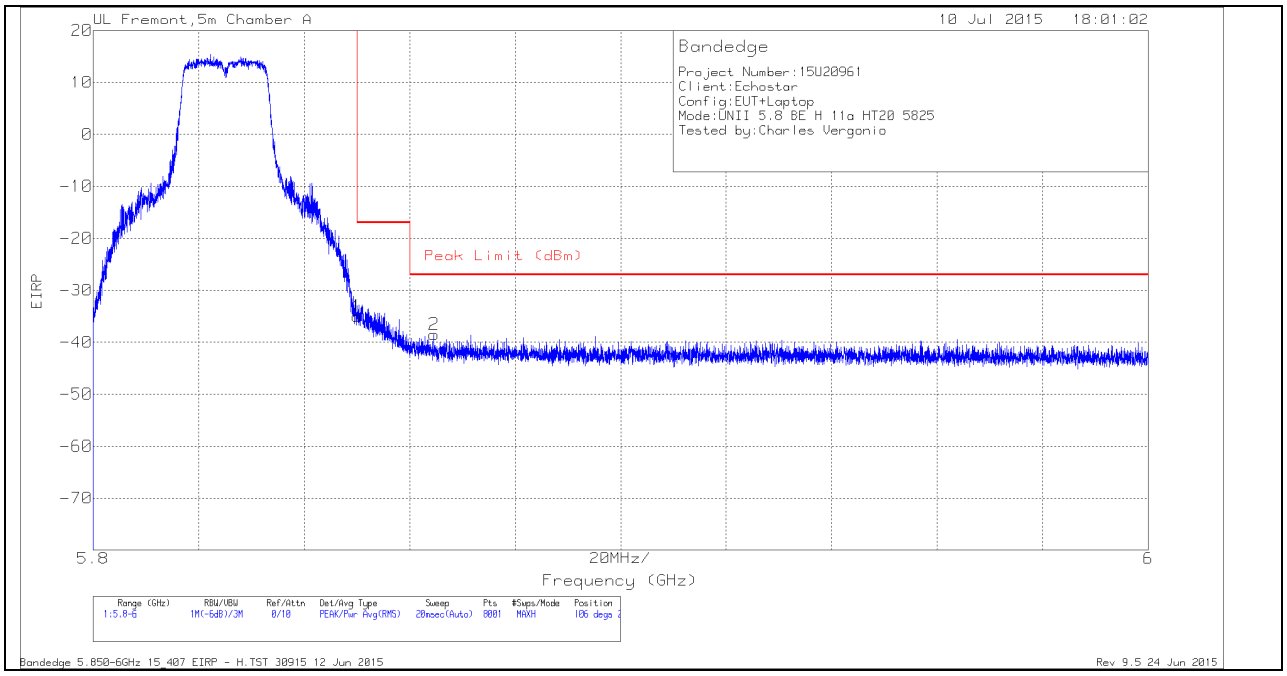
AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T136 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-61.56	Pk	35.1	-20.3	11.8	-34.96	-17	-17.96	106	216	H
2	5.865	-65.1	Pk	35.1	-20.3	11.8	-38.5	-27	-11.5	106	216	H

Pk - Peak detector

Bandedge 5.850-6GHz 15_407 EIRP - H.TST 30915 12 Jun 2015

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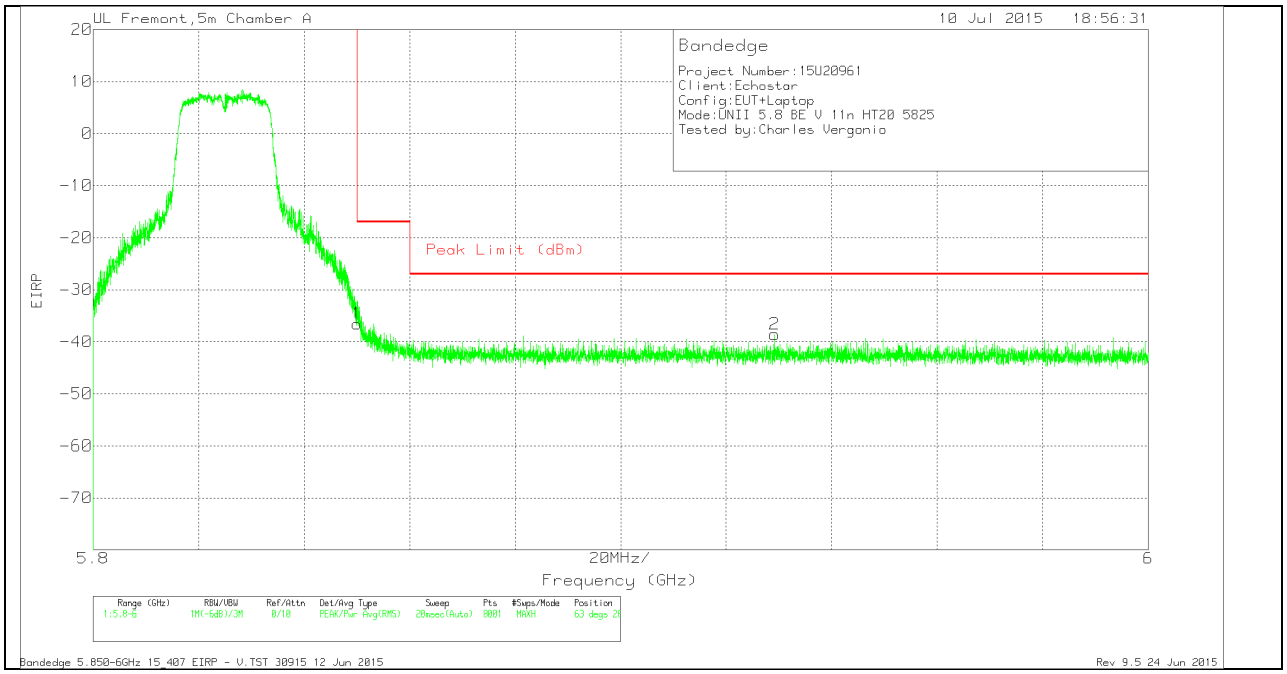
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-63.14	Pk	35.1	-20.3	11.8	-36.54	-17	-19.54	63	260	V
2	5.929	-65.57	Pk	35.2	-20	11.8	-38.57	-27	-11.57	63	260	V

Pk - Peak detector

Bandedge 5.850-6GHz 15_407 EIRP - V.TST 30915 12 Jun 2015

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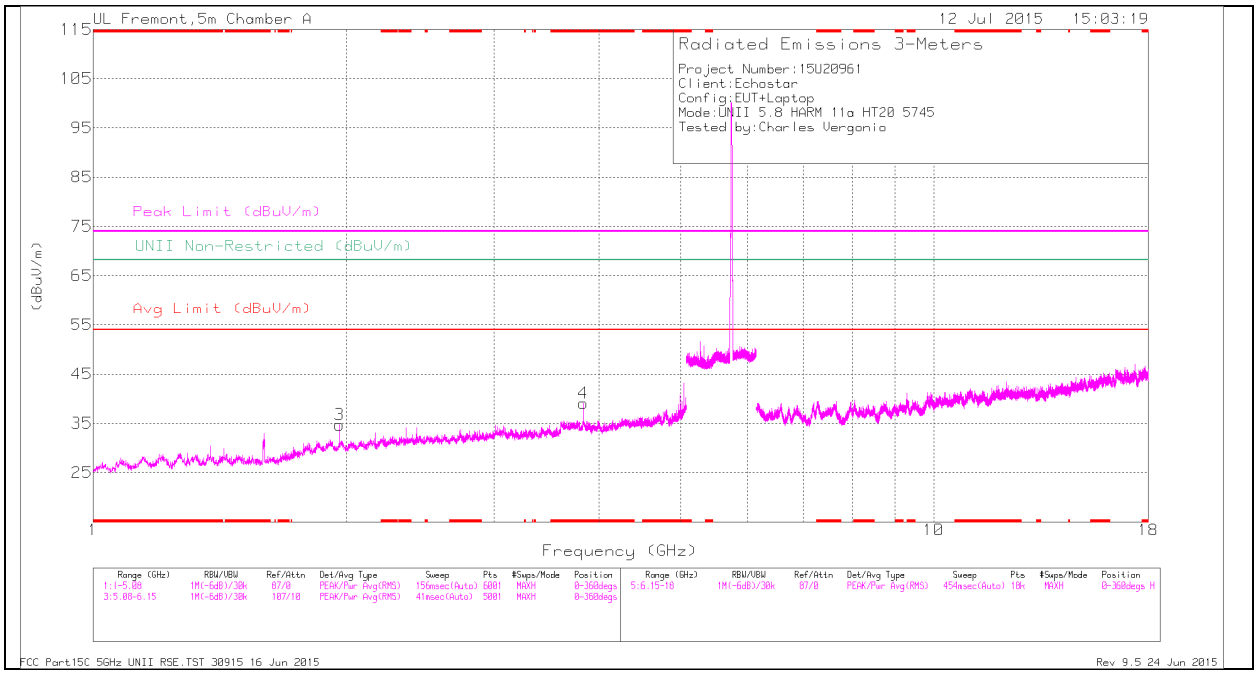
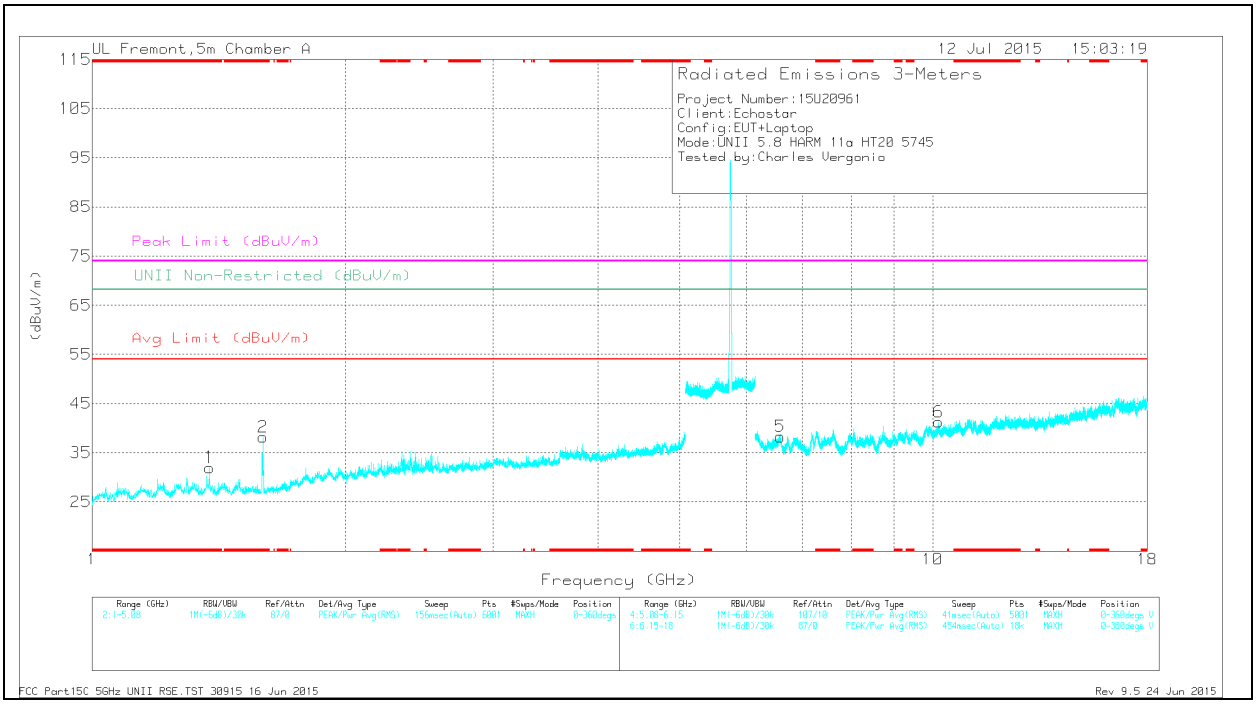
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 3.83	37.96	Pk	33.4	-32.3	0	39.06	-	-	74	-34.94	-	-	0-360	201	H
1	* 1.38	39.18	Pk	28.6	-35.8	0	31.98	-	-	74	-42.02	-	-	0-360	100	V
2	* 1.597	45.56	Pk	27.9	-35.3	0	38.16	-	-	74	-35.84	-	-	0-360	100	V
3	1.964	38.5	Pk	31	-34.8	0	34.7	-	-	-	-	68.2	-33.5	0-360	201	H
5	6.586	30.16	Pk	35.6	-27.5	0	38.26	-	-	-	-	68.2	-29.94	0-360	100	V
6	10.165	27.84	Pk	37.2	-23.8	0	41.24	-	-	-	-	68.2	-26.96	0-360	200	V

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

Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.83	44.05	PK-U	33.4	-32.3	0	45.15	-	-	74	-28.85	-	-	360	202	H
* 3.83	34.12	ADR	33.4	-32.3	.12	35.32	54	-18.68	-	-	-	-	360	202	H
* 1.38	44.77	PK-U	28.6	-35.8	0	37.57	-	-	74	-36.43	-	-	360	100	V
* 1.38	34.82	ADR	28.6	-35.8	.12	27.72	54	-26.28	-	-	-	-	360	100	V
* 1.599	50.76	PK-U	27.9	-35.3	0	43.36	-	-	74	-30.64	-	-	360	100	V
* 1.596	33.95	ADR	27.9	-35.3	.12	26.65	54	-27.35	-	-	-	-	360	100	V
1.963	43.71	PK-U	31	-34.8	0	39.91	-	-	-	-	68.2	-28.29	360	202	H
1.964	32.33	ADR	31	-34.8	.12	28.63	-	-	-	-	-	-	360	202	H
6.585	38.09	PK-U	35.6	-27.5	0	46.19	-	-	-	-	68.2	-22.01	360	100	V
6.585	26.92	ADR	35.6	-27.5	.12	35.12	-	-	-	-	-	-	360	100	V
10.165	35.05	PK-U	37.2	-23.8	0	48.45	-	-	-	-	68.2	-19.75	360	201	V
10.167	23.62	ADR	37.2	-23.8	.12	37.12	-	-	-	-	-	-	360	201	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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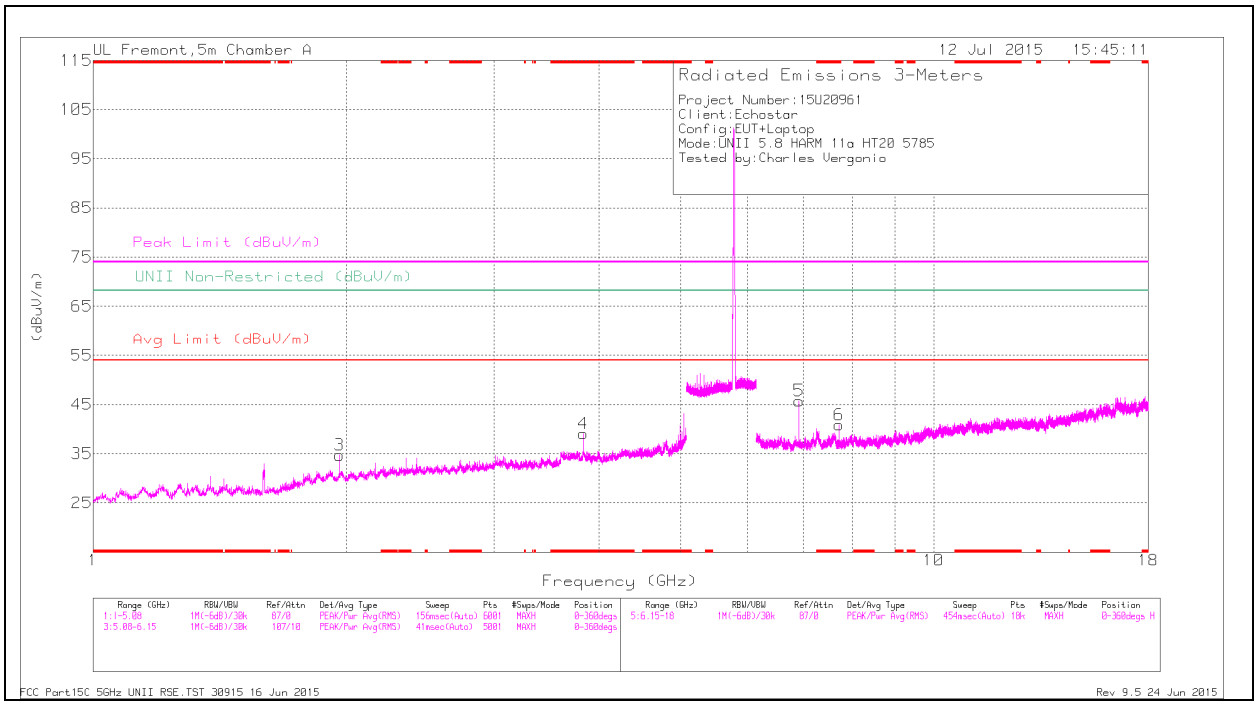
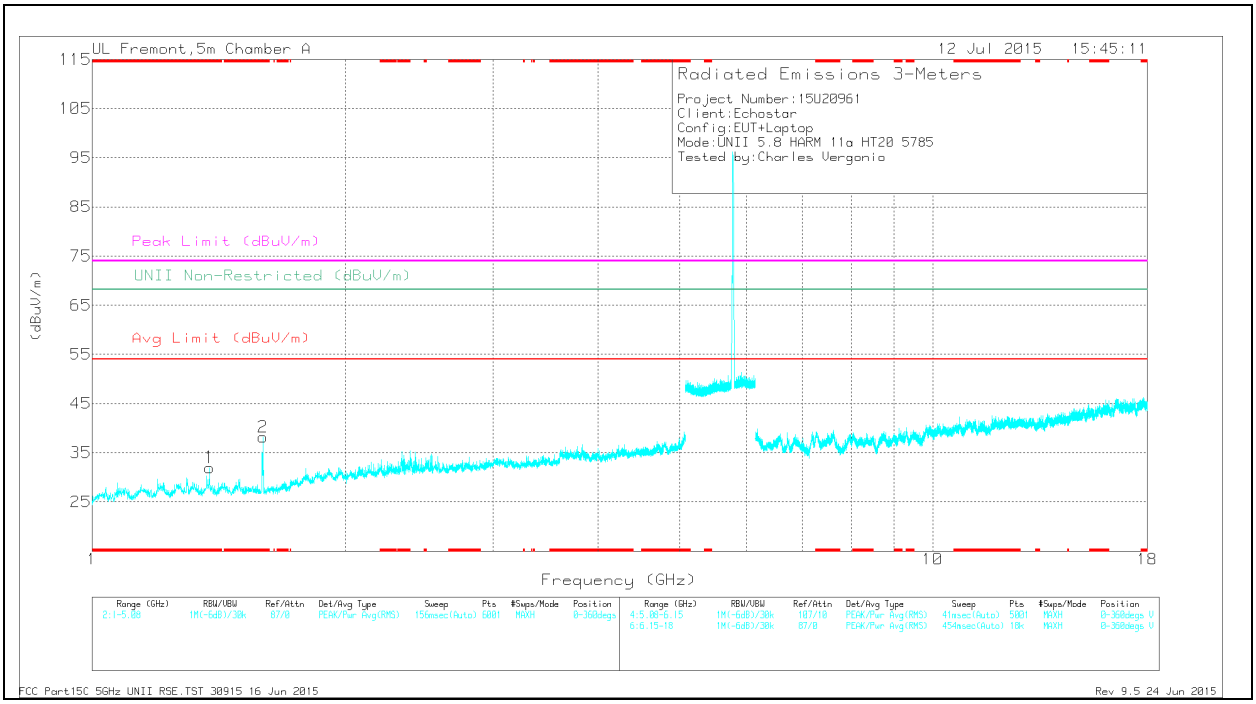
MID CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 3.83	37.96	Pk	33.4	-32.3	0	39.06	-	-	74	-34.94	-	-	0-360	201	H
1	* 1.38	39.18	Pk	28.6	-35.8	0	31.98	-	-	74	-42.02	-	-	0-360	100	V
2	* 1.597	45.56	Pk	27.9	-35.3	0	38.16	-	-	74	-35.84	-	-	0-360	100	V
6	* 7.713	32.05	Pk	35.7	-26.9	0	40.85	-	-	74	-33.15	-	-	0-360	200	H
3	1.964	38.5	Pk	31	-34.8	0	34.7	-	-	-	-	68.2	-33.5	0-360	201	H
5	6.916	37.95	Pk	35.6	-27.8	0	45.75	-	-	-	-	68.2	-22.45	0-360	200	H

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

Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.832	42.19	PK-U	33.4	-32.3	0	43.29	-	-	74	-30.71	-	-	359	202	H
* 3.832	31.03	ADR	33.4	-32.3	.12	32.23	54	-21.77	-	-	-	-	359	202	H
* 1.38	44.77	PK-U	28.6	-35.8	0	37.57	-	-	74	-36.43	-	-	360	100	V
* 1.38	34.82	ADR	28.6	-35.8	.12	27.72	54	-26.28	-	-	-	-	360	100	V
* 1.599	50.76	PK-U	27.9	-35.3	0	43.36	-	-	74	-30.64	-	-	360	100	V
* 1.596	33.95	ADR	27.9	-35.3	.12	26.65	54	-27.35	-	-	-	-	360	100	V
* 1.38	45.56	PK-U	28.6	-35.8	0	38.36	-	-	74	-35.64	-	-	359	100	V
* 1.38	35.31	ADR	28.6	-35.8	.12	28.21	54	-25.79	-	-	-	-	359	100	V
* 1.596	51.28	PK-U	27.9	-35.3	0	43.88	-	-	74	-30.12	-	-	359	100	V
* 1.599	33.46	ADR	27.9	-35.3	.12	26.16	54	-27.84	-	-	-	-	359	100	V
* 7.712	36.04	PK-U	35.7	-26.9	0	44.84	-	-	74	-29.16	-	-	359	201	H
* 7.713	25.03	ADR	35.7	-26.9	.12	33.93	54	-20.07	-	-	-	-	359	201	H
1.963	43.71	PK-U	31	-34.8	0	39.91	-	-	-	-	68.2	-28.29	360	202	H
1.964	32.33	ADR	31	-34.8	.12	28.63	-	-	-	-	-	-	360	202	H
1.964	32.26	ADR	31	-34.8	.12	28.56	-	-	-	-	-	-	359	202	H
1.965	43.86	PK-U	31	-34.8	0	40.06	-	-	-	-	68.2	-28.14	359	202	H
6.914	26.63	ADR	35.6	-27.8	.12	34.53	-	-	-	-	-	-	359	201	H
6.916	37.88	PK-U	35.6	-27.8	0	45.68	-	-	-	-	68.2	-22.52	359	201	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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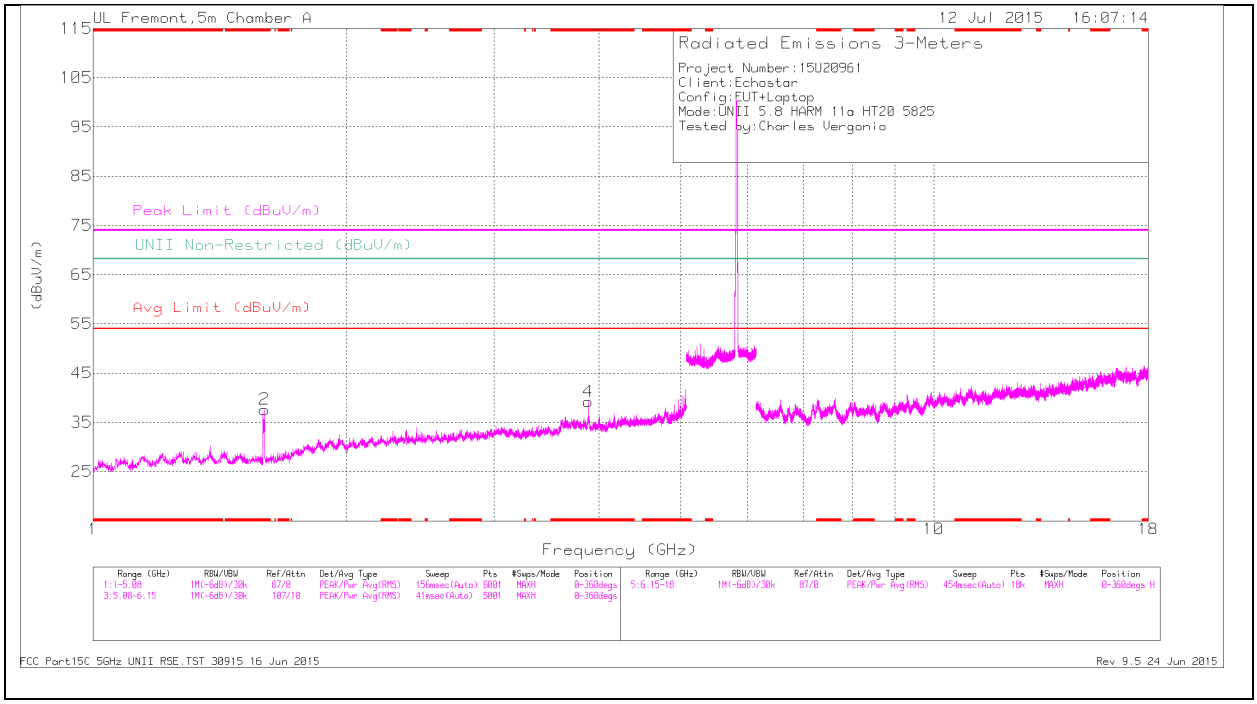
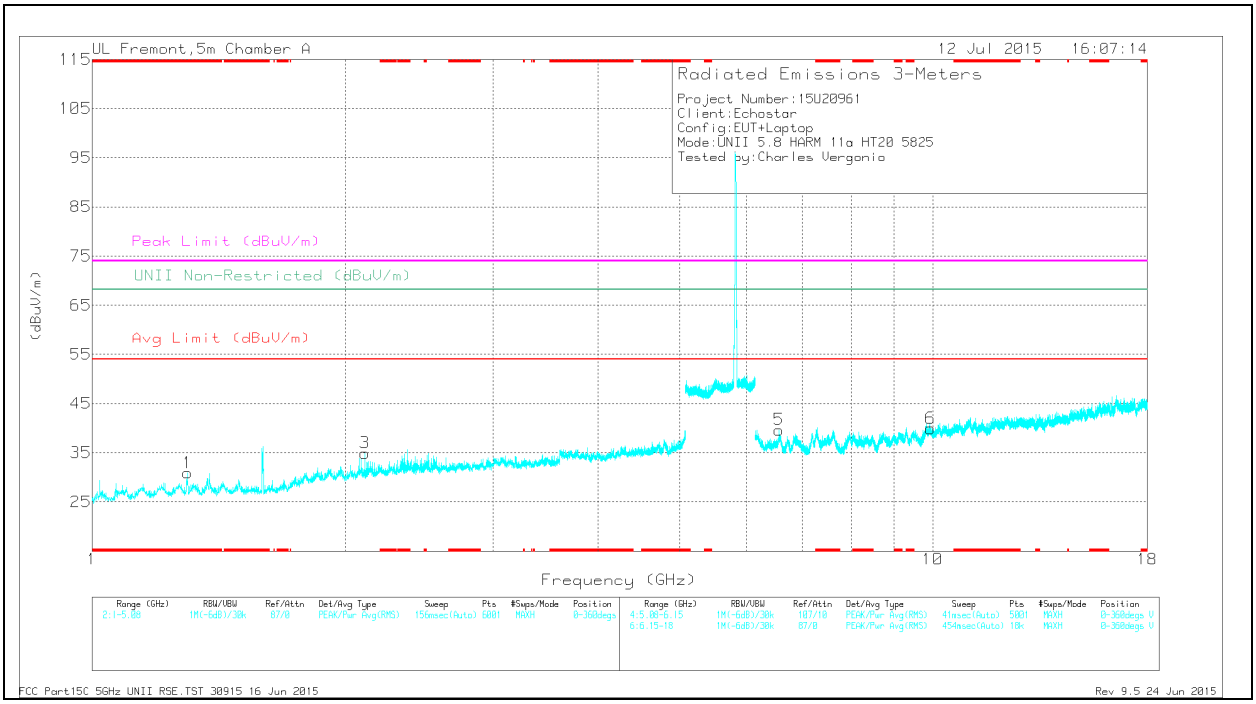
HIGH CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.299	38.07	Pk	28.8	-36	0	30.87	-	-	74	-43.13	-	-	0-360	200	V
2	* 1.599	45.01	Pk	27.9	-35.3	0	37.61	-	-	74	-36.39	-	-	0-360	100	H
4	* 3.883	38.51	Pk	33.5	-32.8	0	39.21	-	-	74	-34.79	-	-	0-360	201	H
3	2.11	38.53	Pk	31.4	-35	0	34.93	-	-	-	-	68.2	-33.27	0-360	200	V
5	6.563	31.66	Pk	35.6	-27.6	0	39.66	-	-	-	-	68.2	-28.54	0-360	200	V
6	9.941	27.23	Pk	37	-24.3	0	39.93	-	-	-	-	68.2	-28.27	0-360	200	V

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

Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.598	51.24	PK-U	27.9	-35.3	0	43.84	-	-	74	-30.16	-	-	360	100	H
* 1.597	33.67	ADR	27.9	-35.3	.12	26.37	54	-27.63	-	-	-	-	360	100	H
* 3.883	43.51	PK-U	33.5	-32.8	0	44.21	-	-	74	-29.79	-	-	360	202	H
* 3.883	32.77	ADR	33.5	-32.8	.12	33.57	54	-20.43	-	-	-	-	360	202	H
* 1.3	43.23	PK-U	28.8	-36	0	36.03	-	-	74	-37.97	-	-	360	202	V
* 1.299	31.51	ADR	28.8	-36	.12	24.41	54	-29.59	-	-	-	-	360	202	V
2.11	31.33	ADR	31.4	-35	.12	27.83	-	-	-	-	-	-	360	202	V
2.112	42.85	PK-U	31.4	-35	0	39.25	-	-	-	-	68.2	-28.95	360	202	V
6.564	38.72	PK-U	35.6	-27.6	0	46.72	-	-	-	-	68.2	-21.48	360	202	V
6.565	27.57	ADR	35.6	-27.6	.12	35.67	-	-	-	-	-	-	360	202	V
9.939	24.19	ADR	37	-24.3	.12	36.99	-	-	-	-	-	-	360	202	V
9.943	35.14	PK-U	37	-24.3	0	47.84	-	-	-	-	68.2	-20.36	360	202	V

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

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

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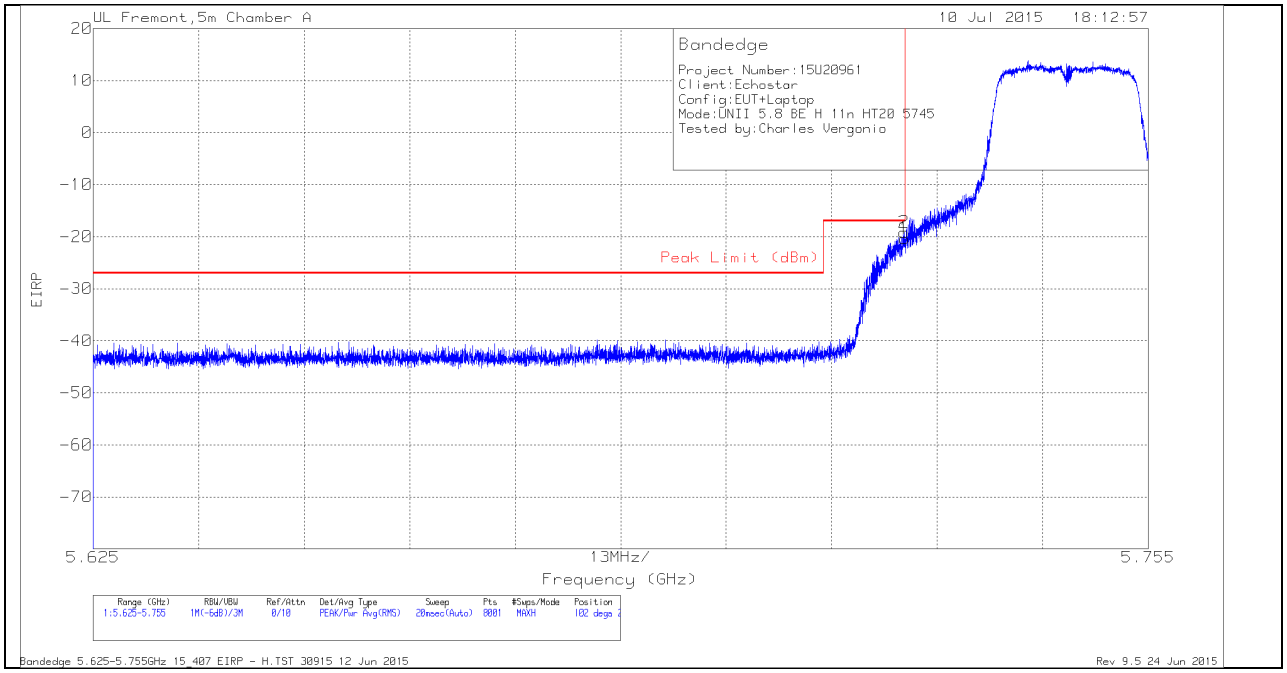
11.2.2. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.8 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-46.16	Pk	34.7	-20.7	11.8	-20.36	-17	-3.36	102	243	H
2	5.725	-44.94	Pk	34.7	-20.7	11.8	-19.14	-17	-2.14	102	243	H

Pk - Peak detector

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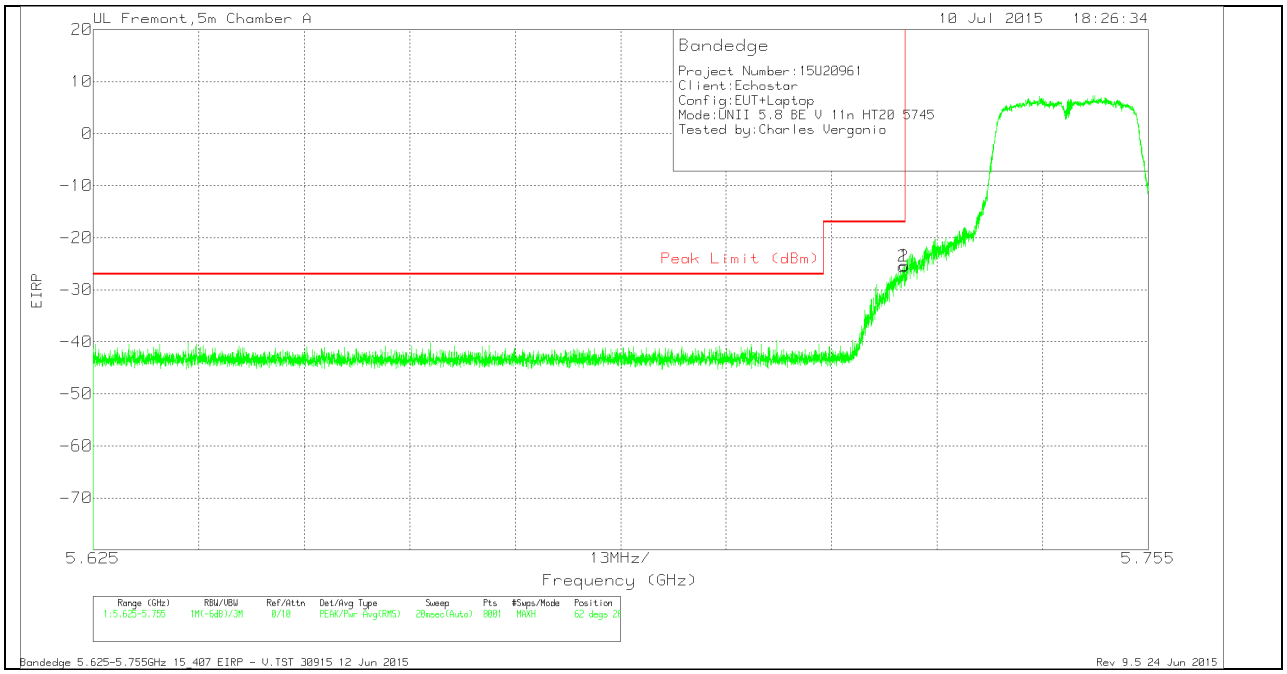
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-51.15	Pk	34.7	-20.7	11.8	-25.35	-17	-8.35	62	266	V
2	5.725	-51.33	Pk	34.7	-20.7	11.8	-25.53	-17	-8.53	62	266	V

Pk - Peak detector

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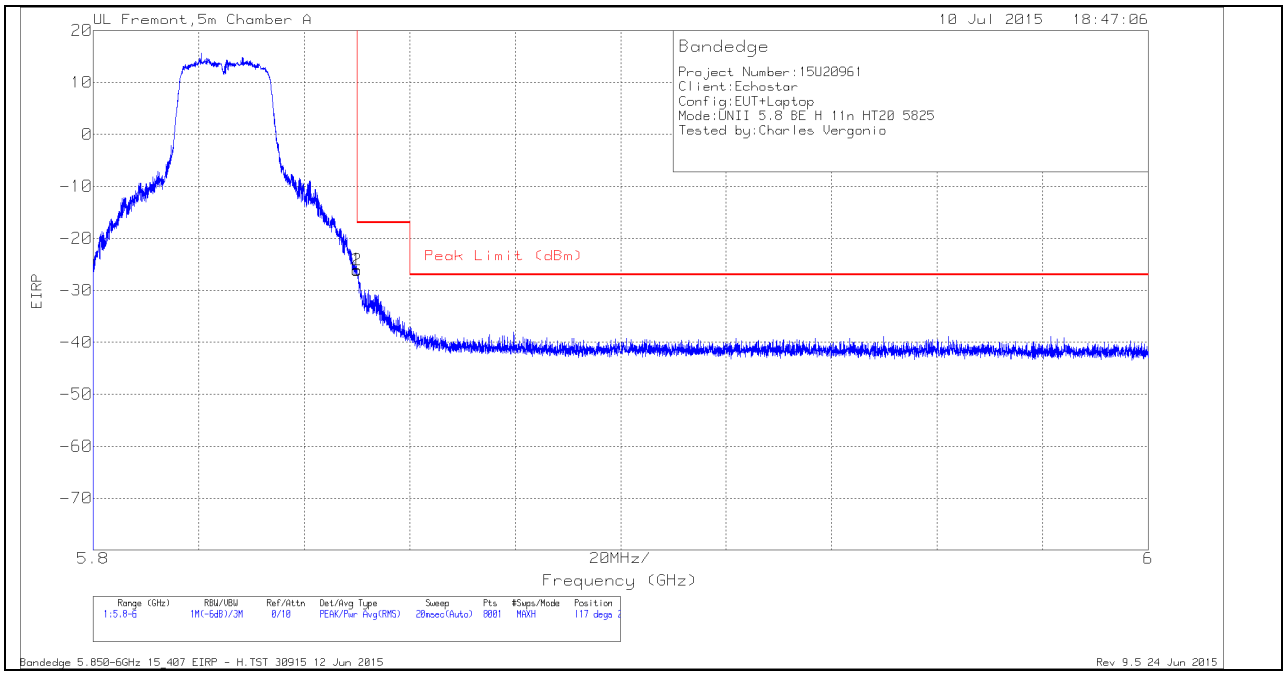
AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T136 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-52.64	Pk	35.1	-20.3	11.8	-26.04	-17	-9.04	117	237	H
2	5.85	-52.73	Pk	35.1	-20.3	11.8	-26.13	-17	-9.13	117	237	H

Pk - Peak detector

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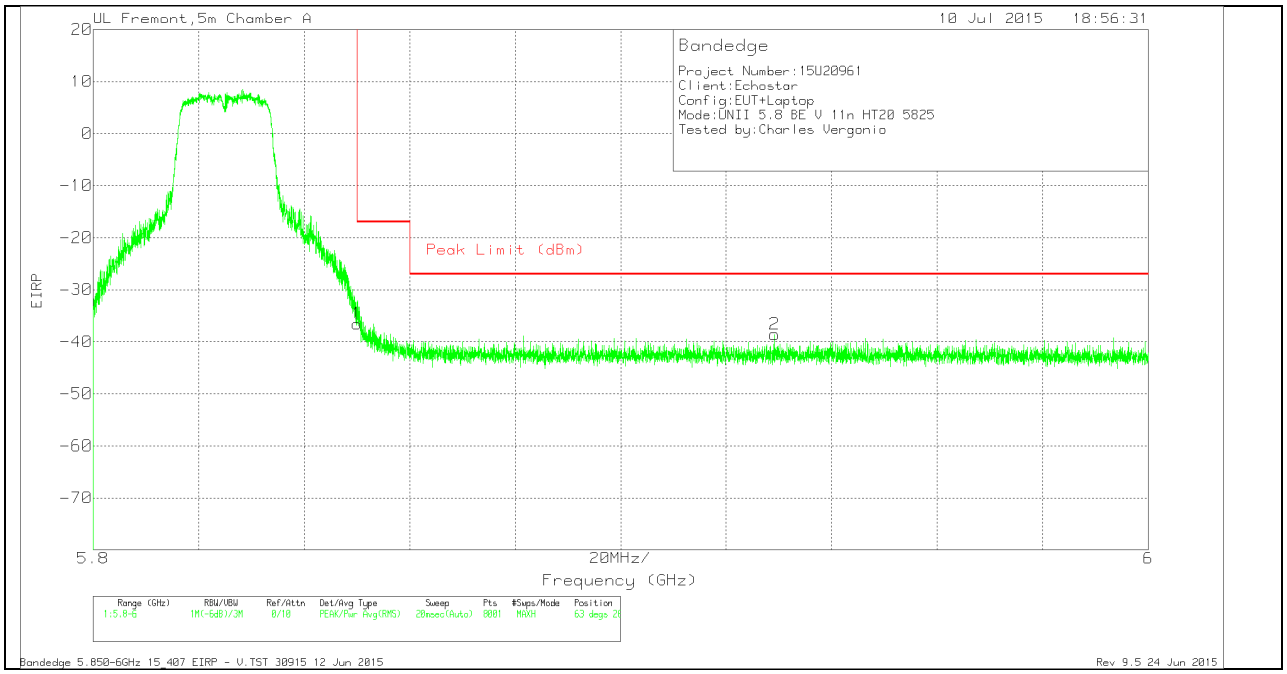
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-63.14	Pk	35.1	-20.3	11.8	-36.54	-17	-19.54	63	260	V
2	5.929	-65.57	Pk	35.2	-20	11.8	-38.57	-27	-11.57	63	260	V

Pk - Peak detector

Bandedge 5.850-6GHz 15_407 EIRP - V.TST 30915 12 Jun 2015

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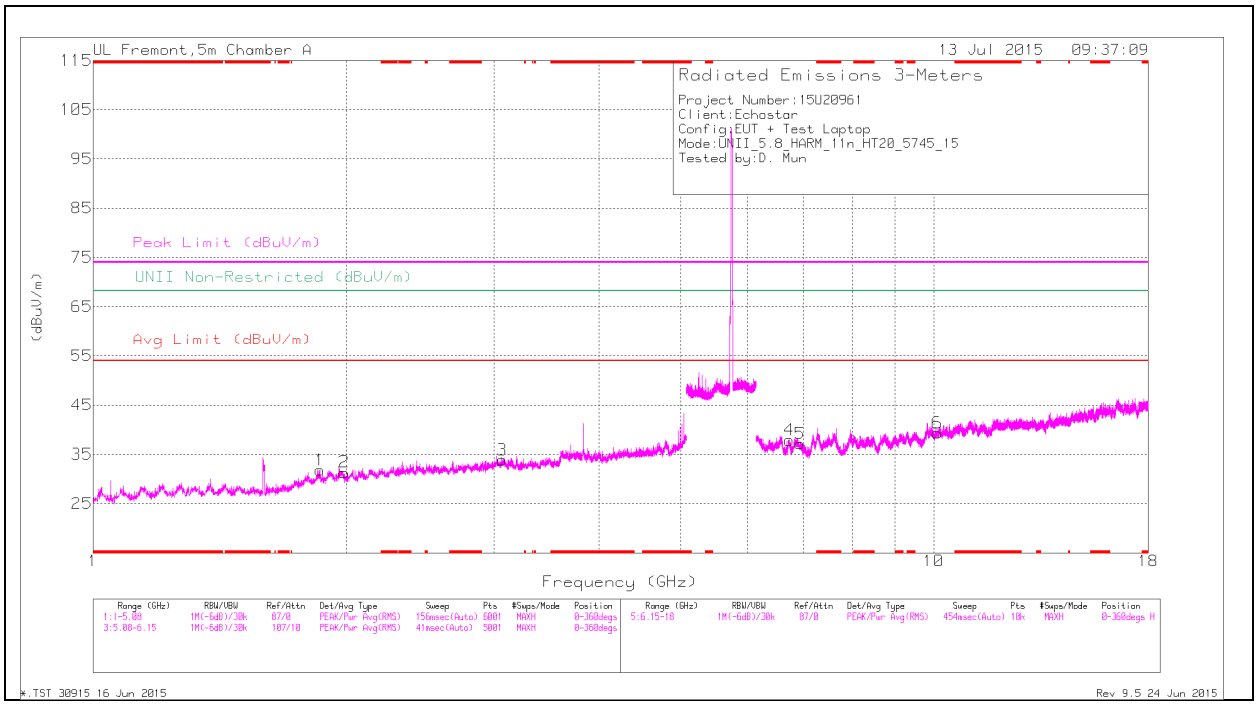
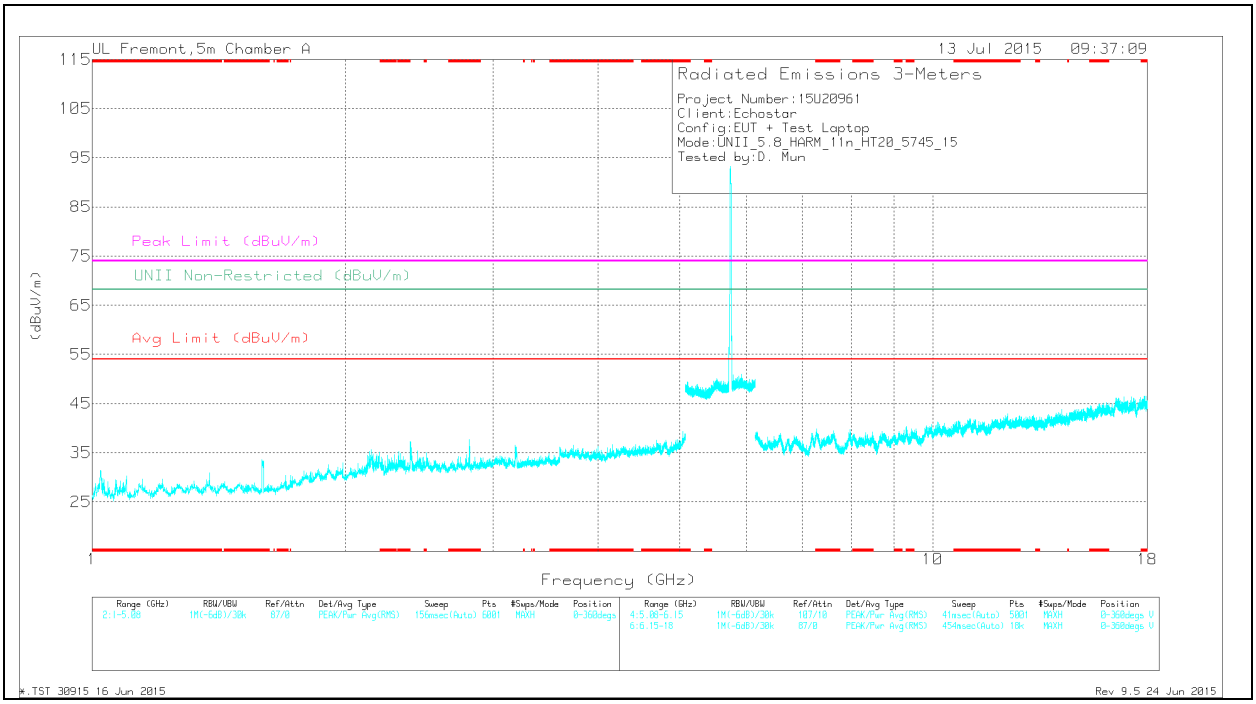
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.861	35.81	Pk	30.5	-34.5	0	31.81	-	-	-	-	68.2	-36.39	0-360	100	H
2	1.989	35.35	Pk	31.1	-35.1	0	31.35	-	-	-	-	68.2	-36.85	0-360	201	H
3	3.069	33.65	Pk	32.9	-32.7	0	33.85	-	-	-	-	68.2	-34.35	0-360	201	H
4	6.739	30.38	Pk	35.6	-28.1	0	37.88	-	-	-	-	68.2	-30.32	0-360	100	H
5	6.933	29.04	Pk	35.6	-27.5	0	37.14	-	-	-	-	68.2	-31.06	0-360	201	H
6	10.1	26.24	Pk	37.2	-24.1	0	39.34	-	-	-	-	68.2	-28.86	0-360	100	H

Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.86	31.87	ADR	30.5	-34.5	.13	28	-	-	-	-	-	-	360	100	H
1.862	43.28	PK-U	30.5	-34.5	0	39.28	-	-	-	-	68.2	-28.92	360	100	H
1.987	43.45	PK-U	31.1	-35	0	39.55	-	-	-	-	68.2	-28.65	360	202	H
1.987	31.6	ADR	31.1	-35	.13	27.83	-	-	-	-	-	-	360	202	H
3.068	30.42	ADR	32.9	-32.7	.13	30.75	-	-	-	-	-	-	360	202	H
3.069	41.63	PK-U	32.9	-32.7	0	41.83	-	-	-	-	68.2	-26.37	360	202	H
6.738	26.87	ADR	35.6	-28	.13	34.6	-	-	-	-	-	-	360	100	H
6.739	37.57	PK-U	35.6	-28.1	0	45.07	-	-	-	-	68.2	-23.13	360	100	H
6.931	37.94	PK-U	35.6	-27.6	0	45.94	-	-	-	-	68.2	-22.26	360	202	H
6.935	26.09	ADR	35.6	-27.5	.13	34.32	-	-	-	-	-	-	360	202	H
10.1	34.39	PK-U	37.2	-24.1	0	47.49	-	-	-	-	68.2	-20.71	360	100	H
10.102	23.72	ADR	37.2	-24.1	.13	36.95	-	-	-	-	-	-	360	100	H

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

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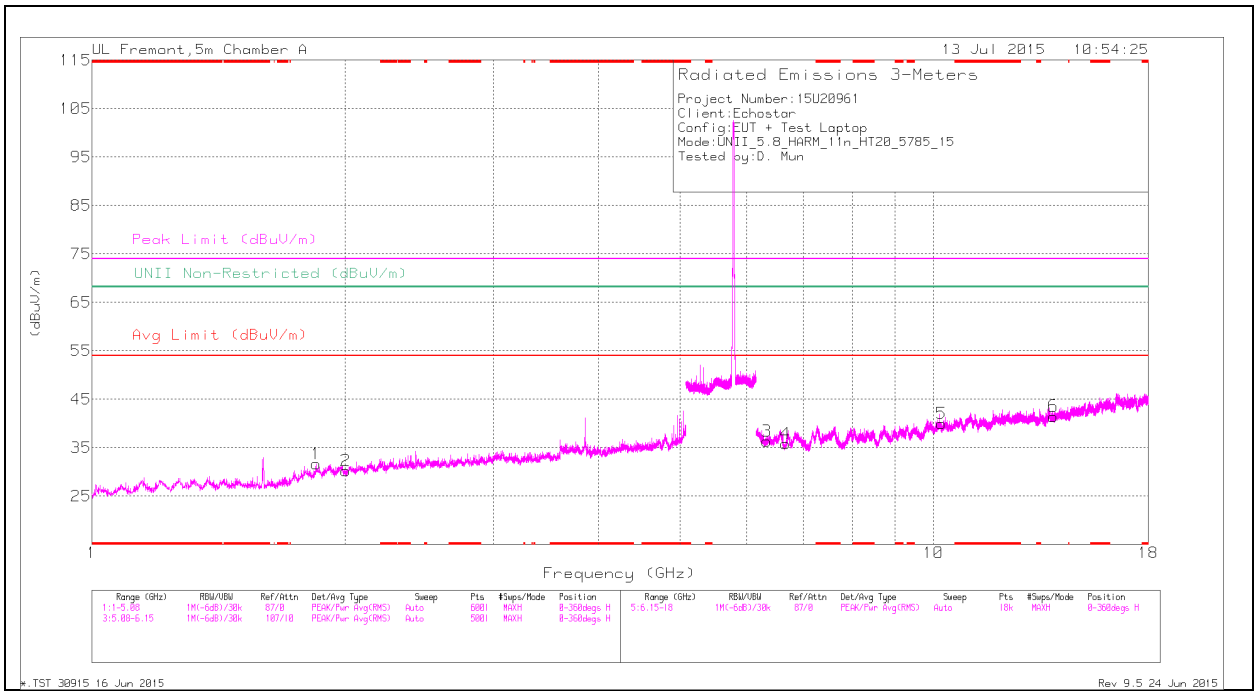
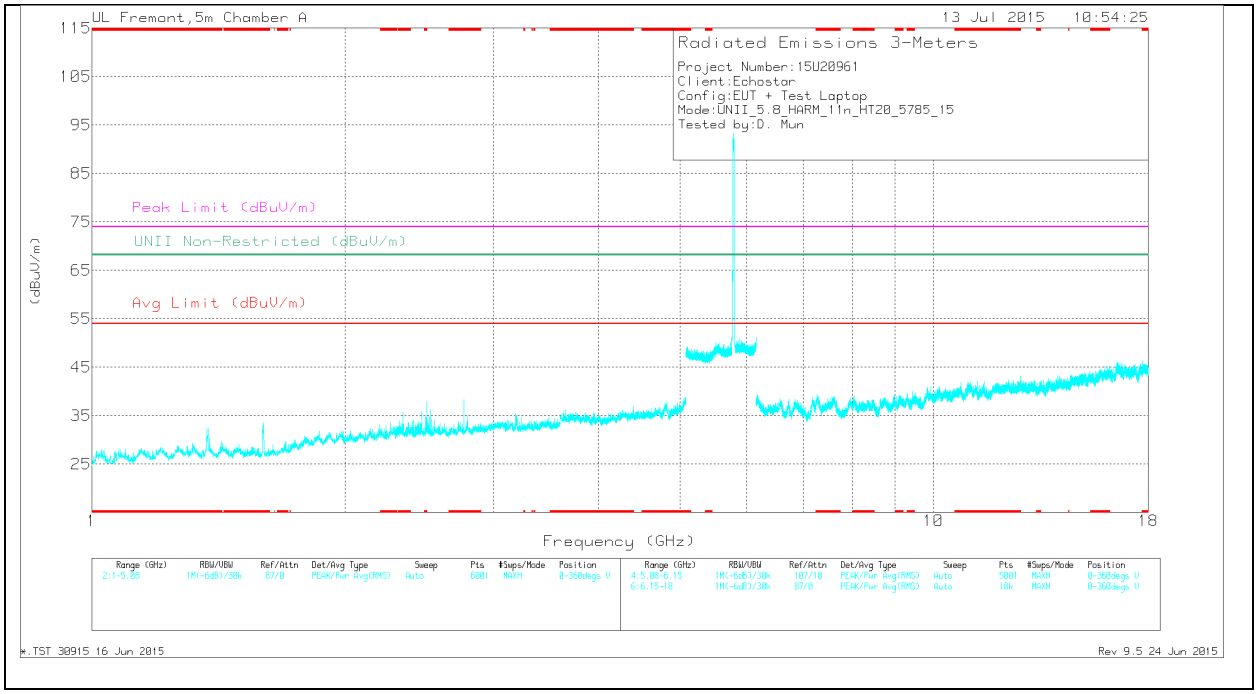
MID CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.846	35.83	Pk	30.4	-34.5	0	31.73	-	-	-	-	68.2	-36.47	0-360	100	H
2	2.004	34.35	Pk	31.1	-35.2	0	30.25	-	-	-	-	68.2	-37.95	0-360	201	H
3	6.332	29.29	Pk	35.5	-28.4	0	36.39	-	-	-	-	68.2	-31.81	0-360	100	H
4	6.668	27.29	Pk	35.6	-27.1	0	35.79	-	-	-	-	68.2	-32.41	0-360	100	H
5	10.214	26.73	Pk	37.2	-24	0	39.93	-	-	-	-	68.2	-28.27	0-360	100	H
6	13.878	26.38	Pk	38.7	-23.6	0	41.48	-	-	-	-	68.2	-26.72	0-360	201	H

Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.846	32.01	ADR	30.4	-34.5	.13	28.04	-	-	-	-	-	-	360	100	H
1.847	43.46	PK-U	30.4	-34.5	0	39.36	-	-	-	-	68.2	-28.84	360	100	H
2.003	43.02	PK-U	31.1	-35.2	0	38.92	-	-	-	-	68.2	-29.28	360	202	H
2.005	31.29	ADR	31.1	-35.2	.13	27.32	-	-	-	-	-	-	360	202	H
6.33	37.59	PK-U	35.5	-28.4	0	44.69	-	-	-	-	68.2	-23.51	360	100	H
6.334	26.31	ADR	35.5	-28.4	.13	33.54	-	-	-	-	-	-	360	100	H
6.667	36.03	PK-U	35.6	-27.2	0	44.43	-	-	-	-	68.2	-23.77	360	100	H
6.669	24.79	ADR	35.6	-27.2	.13	33.32	-	-	-	-	-	-	360	100	H
10.212	34.62	PK-U	37.2	-24	0	47.82	-	-	-	-	68.2	-20.38	360	100	H
10.215	23.45	ADR	37.2	-24	.13	36.78	-	-	-	-	-	-	360	100	H
13.88	34.45	PK-U	38.7	-23.6	0	49.55	-	-	-	-	68.2	-18.65	360	202	H
13.88	23.67	ADR	38.7	-23.6	.13	38.9	-	-	-	-	-	-	360	202	H

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

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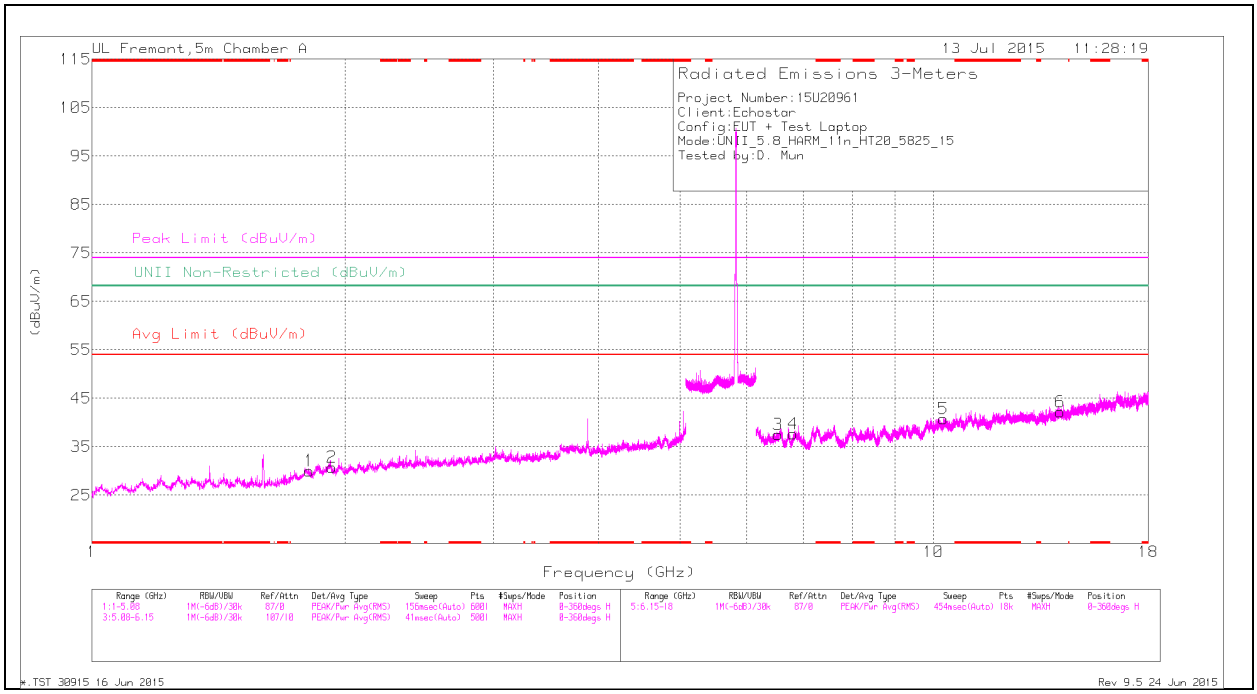
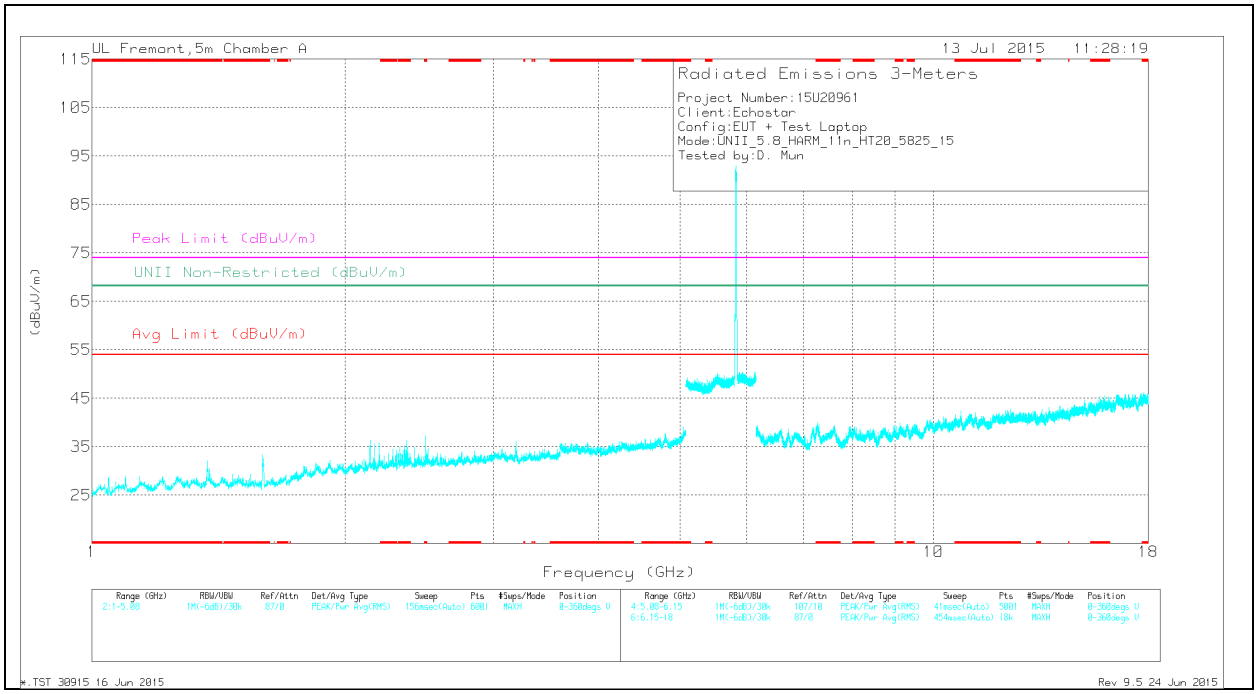
HIGH CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

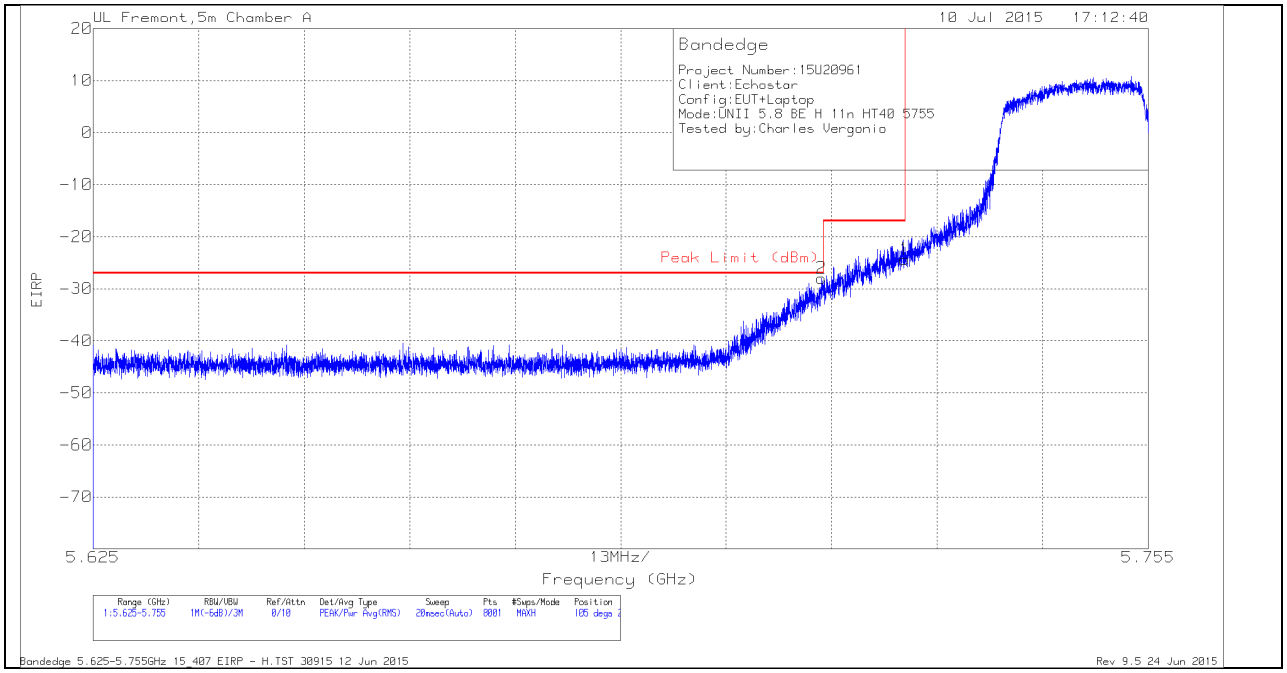
HIGH CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.812	34.55	Pk	30.1	-34.6	0	30.05	-	-	-	-	68.2	-38.15	0-360	100	H
2	1.93	34.44	Pk	30.9	-34.6	0	30.74	-	-	-	-	68.2	-37.46	0-360	100	H
3	6.536	29.67	Pk	35.6	-27.8	0	37.47	-	-	-	-	68.2	-30.73	0-360	100	H
4	6.809	29.86	Pk	35.6	-27.8	0	37.66	-	-	-	-	68.2	-30.54	0-360	100	H
5	10.276	27.77	Pk	37.3	-24.3	0	40.77	-	-	-	-	68.2	-27.43	0-360	201	H
6	14.142	27.04	Pk	38.8	-23.6	0	42.24	-	-	-	-	68.2	-25.96	0-360	201	H

11.2.3. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.8 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.715	-53.78	Pk	34.7	-20.7	11.8	-27.98	-27	-.98	105	241	H
1	5.725	-50.14	Pk	34.7	-20.7	11.8	-24.34	-17	-7.34	105	241	H

Pk - Peak detector

Bandedge 5.625-5.755GHz 15_407 EIRP - H.TST 30915 12 Jun 2015

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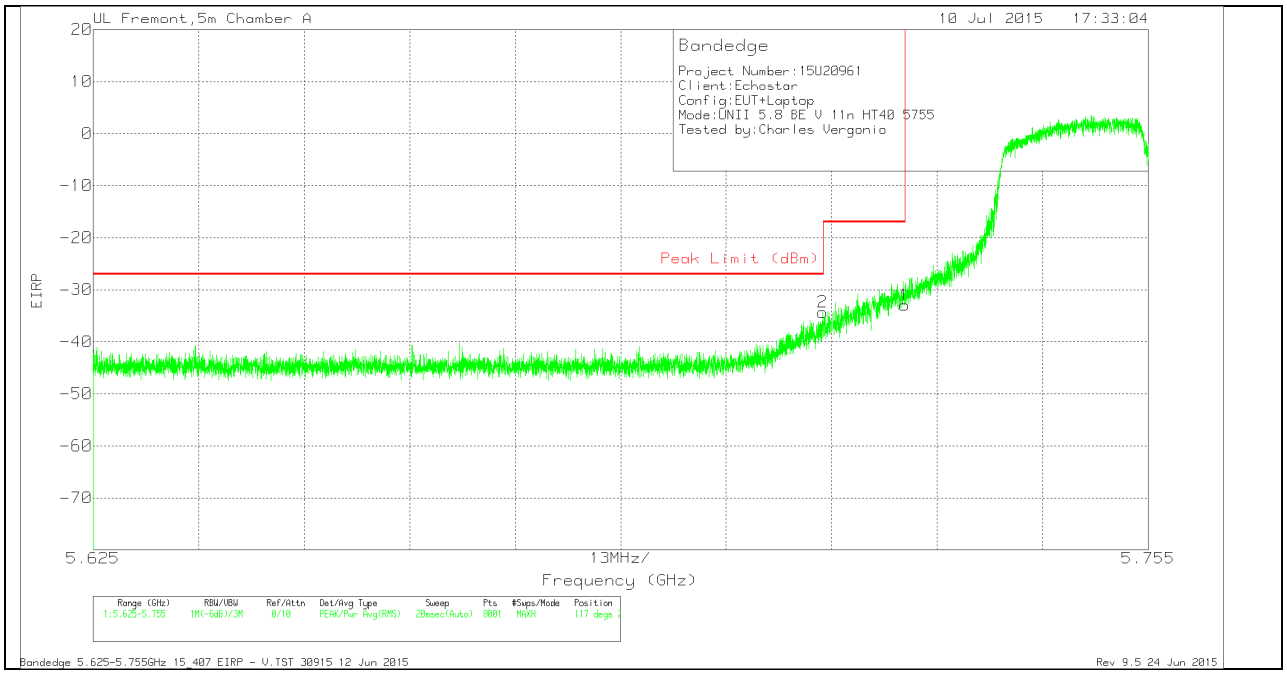
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.715	-60.13	Pk	34.7	-20.7	11.8	-34.33	-27	-7.33	117	257	V
1	5.725	-58.78	Pk	34.7	-20.7	11.8	-32.98	-17	-15.98	117	257	V

Pk - Peak detector

Bandedge 5.625-5.755GHz 15_407 EIRP - V.TST 30915 12 Jun 2015

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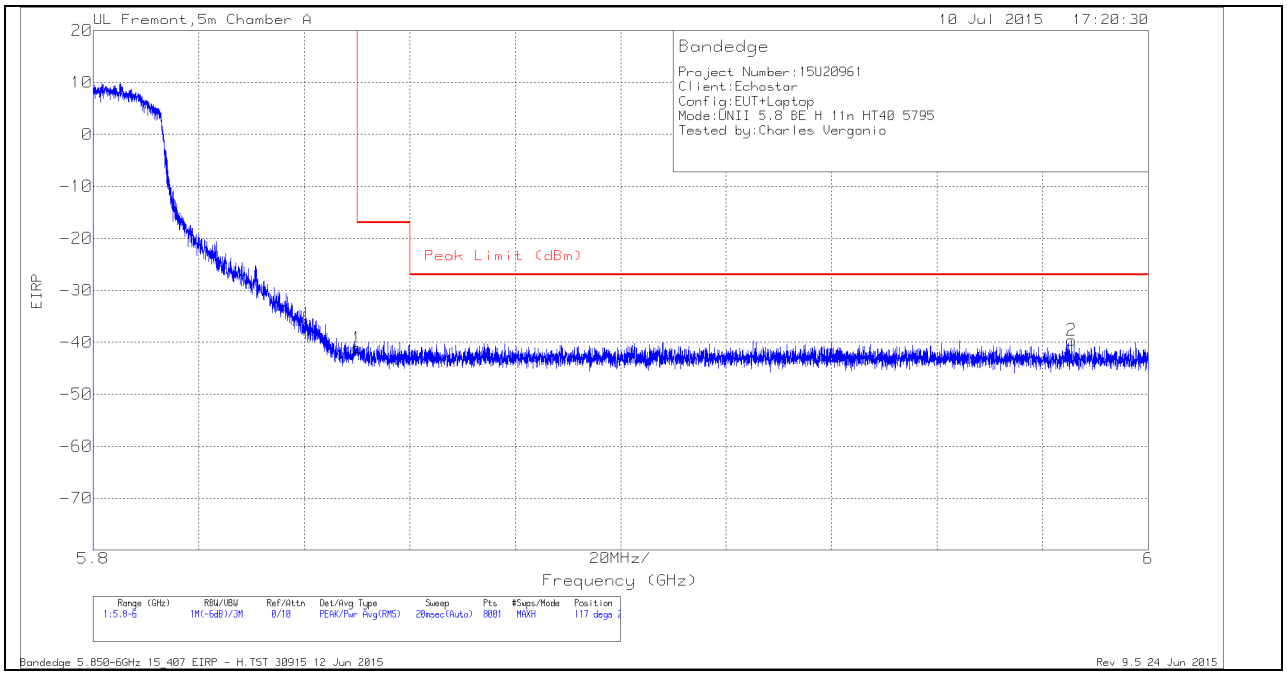
AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T136 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-67.69	Pk	35.1	-20.3	11.8	-41.09	-17	-24.09	117	237	H
2	5.986	-66.69	Pk	35.3	-20	11.8	-39.59	-27	-12.59	117	237	H

Pk - Peak detector

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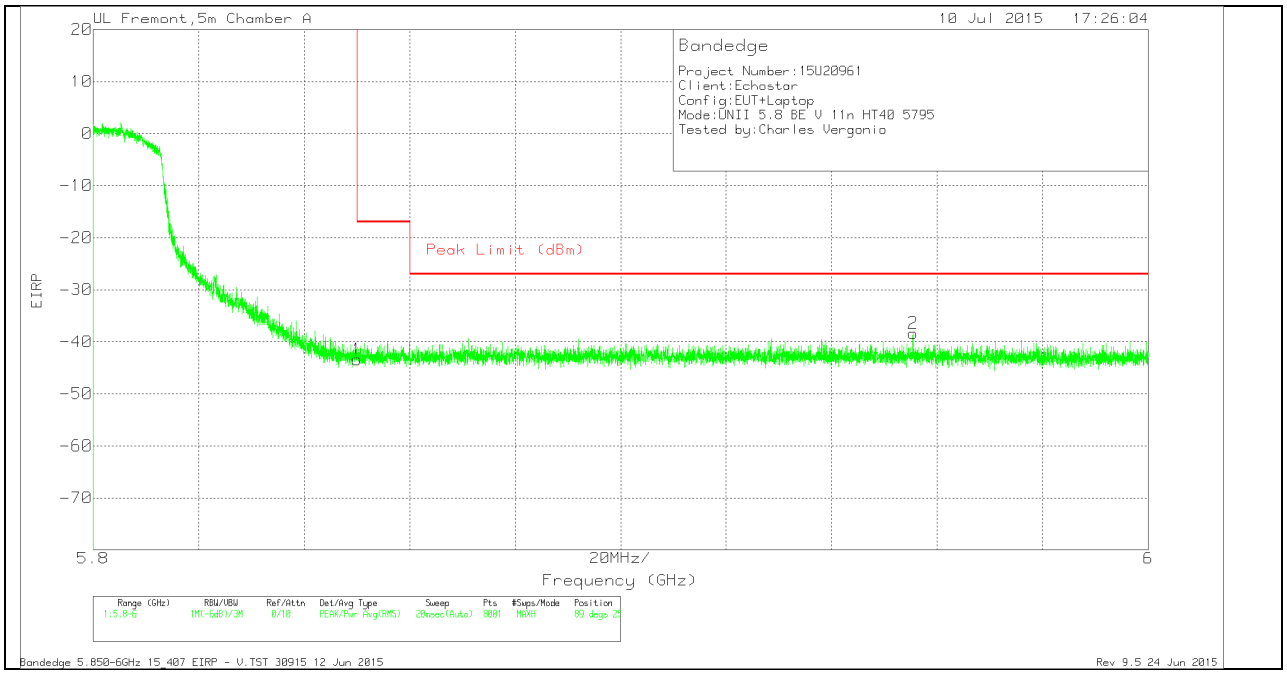
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-69.99	Pk	35.1	-20.3	11.8	-43.39	-17	-26.39	89	257	V
2	5.955	-65.47	Pk	35.3	-20	11.8	-38.37	-27	-11.37	89	257	V

Pk - Peak detector

Bandedge 5.850-6GHz 15_407 EIRP - V.TST 30915 12 Jun 2015

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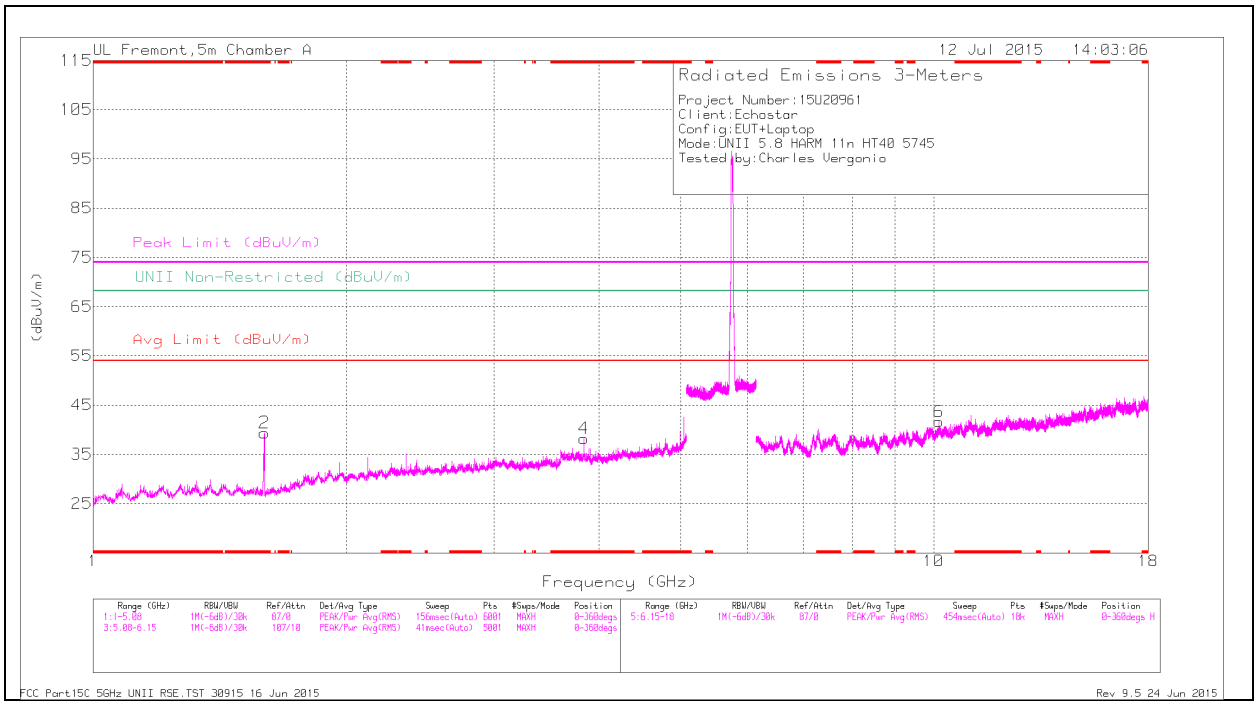
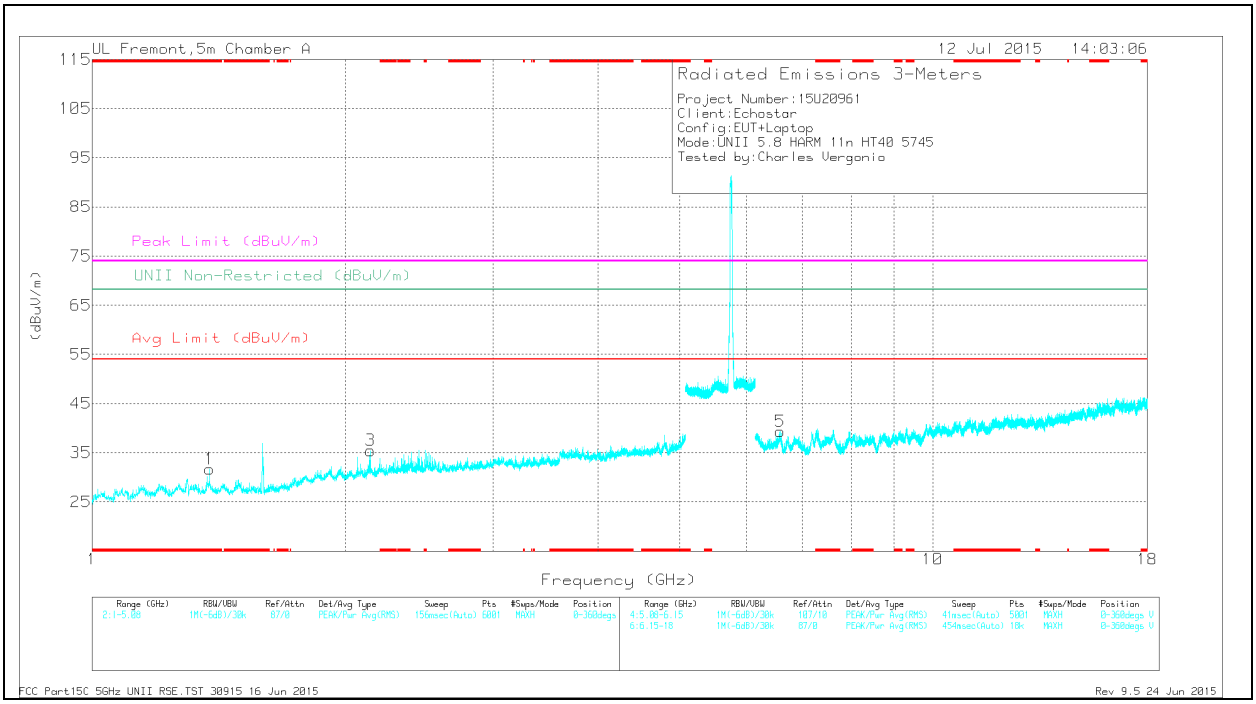
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 1.599	46.76	Pk	27.9	-35.3	0	39.36	-	-	74	-34.64	-	-	0-360	100	H
4	* 3.837	37.21	Pk	33.4	-32.4	0	38.21	-	-	74	-35.79	-	-	0-360	201	H
1	* 1.38	38.89	Pk	28.6	-35.8	0	31.69	-	-	74	-42.31	-	-	0-360	100	V
3	2.143	38.55	Pk	31.4	-34.5	0	35.45	-	-	-	-	68.2	-32.75	0-360	100	V
5	6.584	31.25	Pk	35.6	-27.5	0	39.35	-	-	-	-	68.2	-28.85	0-360	200	V
6	10.14	28.33	Pk	37.2	-23.9	0	41.63	-	-	-	-	68.2	-26.57	0-360	100	H

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

Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.597	50.34	PK-U	27.9	-35.3	0	42.94	-	-	74	-31.06	-	-	1	100	H
* 1.599	33.92	ADR	27.9	-35.3	.15	26.67	54	-27.33	-	-	-	-	1	100	H
* 3.837	44.76	PK-U	33.4	-32.4	0	45.76	-	-	74	-28.24	-	-	129	202	H
* 3.837	36.62	ADR	33.4	-32.4	.15	37.77	54	-16.23	-	-	-	-	129	202	H
* 1.38	45.55	PK-U	28.6	-35.8	0	38.35	-	-	74	-35.65	-	-	129	100	V
* 1.38	34.56	ADR	28.6	-35.8	.15	27.51	54	-26.49	-	-	-	-	129	100	V
2.141	31.75	ADR	31.4	-34.6	.15	28.70	-	-	-	-	-	-	129	100	V
2.143	43.25	PK-U	31.4	-34.5	0	40.15	-	-	-	-	68.2	-28.05	129	100	V
6.585	38.88	PK-U	35.6	-27.5	0	46.98	-	-	-	-	68.2	-21.22	129	201	V
6.585	27.65	ADR	35.6	-27.5	.15	35.90	-	-	-	-	-	-	129	201	V
10.14	34.95	PK-U	37.2	-23.9	0	48.25	-	-	-	-	68.2	-19.95	129	100	H
10.141	23.75	ADR	37.2	-23.9	.15	37.20	-	-	-	-	-	-	129	100	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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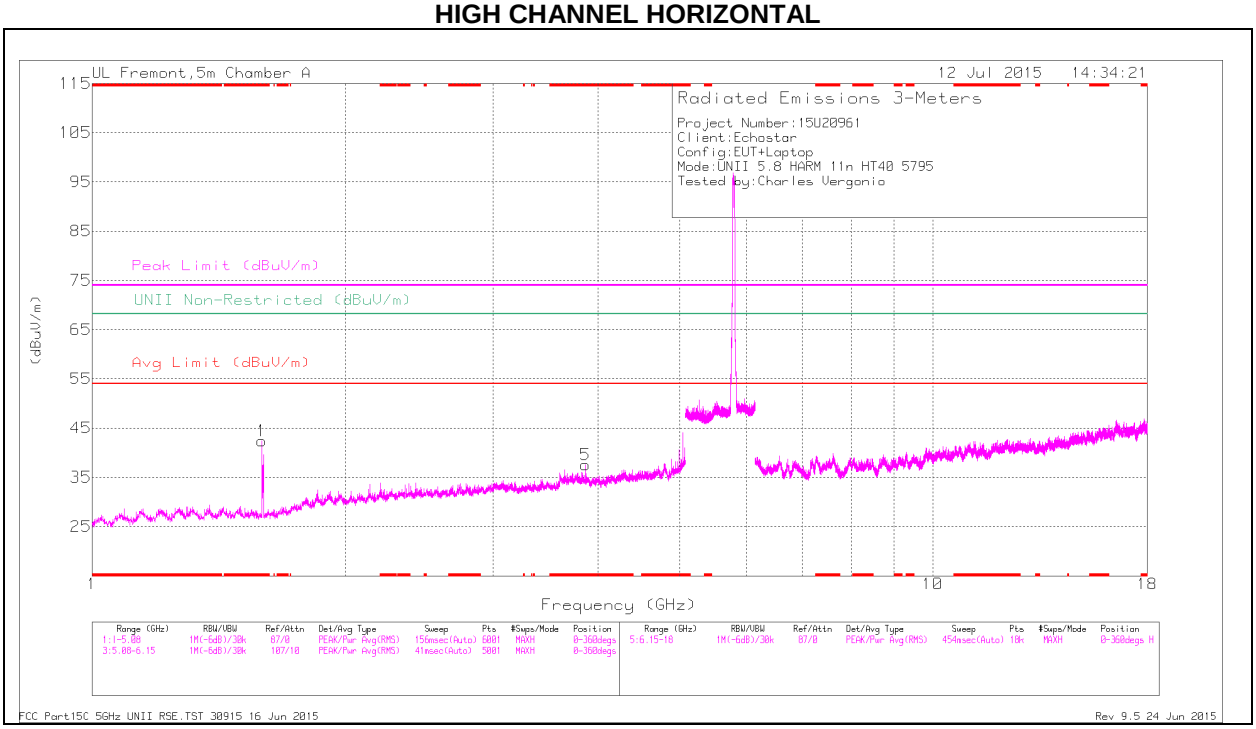
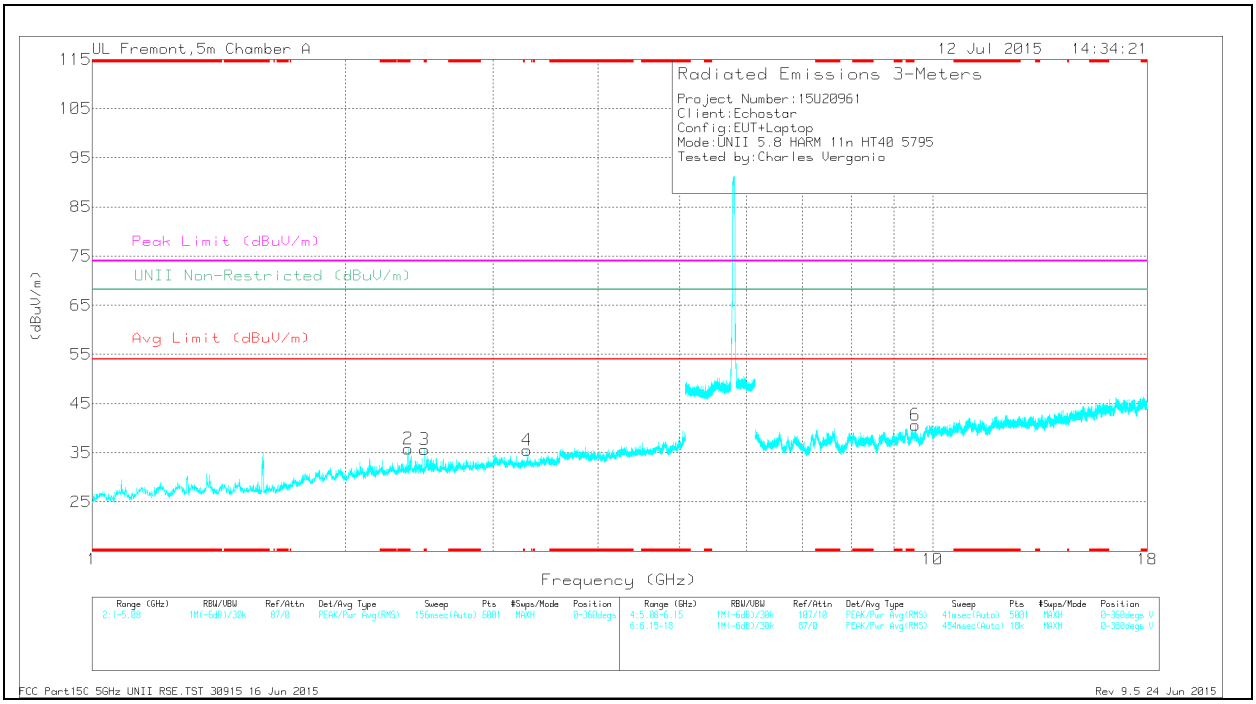
HIGH CHANNEL HORIZONTAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL VERTICAL



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.593	49.79	Pk	27.9	-35.3	0	42.39	-	-	74	-31.61	-	-	0-360	100	H
5	* 3.863	36.75	Pk	33.5	-32.7	0	37.55	-	-	74	-36.45	-	-	0-360	201	H
2	* 2.376	38.71	Pk	31.9	-34.8	0	35.81	-	-	74	-38.19	-	-	0-360	200	V
3	* 2.487	37.76	Pk	32.1	-34.2	0	35.66	-	-	74	-38.34	-	-	0-360	100	V
4	3.292	35.93	Pk	32.8	-33.2	0	35.53	-	-	-	-	68.2	-32.67	0-360	200	V
6	9.538	29.14	Pk	36.6	-25.1	0	40.64	-	-	-	-	68.2	-27.56	0-360	200	V

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

Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.595	52.38	PK-U	27.9	-35.3	0	44.98	-	-	74	-29.02	-	-	343	100	H
* 1.595	32.88	ADR	27.9	-35.3	.15	25.63	54	-28.37	-	-	-	-	343	100	H
* 3.864	44.08	PK-U	33.5	-32.7	0	44.88	-	-	74	-29.12	-	-	343	202	H
* 3.863	32.81	ADR	33.5	-32.7	.15	33.76	54	-20.24	-	-	-	-	343	202	H
* 2.375	44.23	PK-U	31.9	-34.8	0	41.33	-	-	74	-32.67	-	-	343	202	V
* 2.374	31.79	ADR	31.9	-34.8	.15	29.04	54	-24.96	-	-	-	-	343	202	V
* 2.489	42.89	PK-U	32.1	-34.2	0	40.79	-	-	74	-33.21	-	-	343	100	V
* 2.488	31.1	ADR	32.1	-34.2	.15	29.15	54	-24.85	-	-	-	-	343	100	V
3.29	42.31	PK-U	32.8	-33.2	0	41.91	-	-	-	-	68.2	-26.29	343	201	V
3.292	30.37	ADR	32.8	-33.2	.15	30.12	-	-	-	-	-	-	343	201	V
9.537	35.87	PK-U	36.6	-25.1	0	47.37	-	-	-	-	68.2	-20.83	343	201	V
9.539	24.6	ADR	36.6	-25.1	.15	36.25	-	-	-	-	-	-	343	201	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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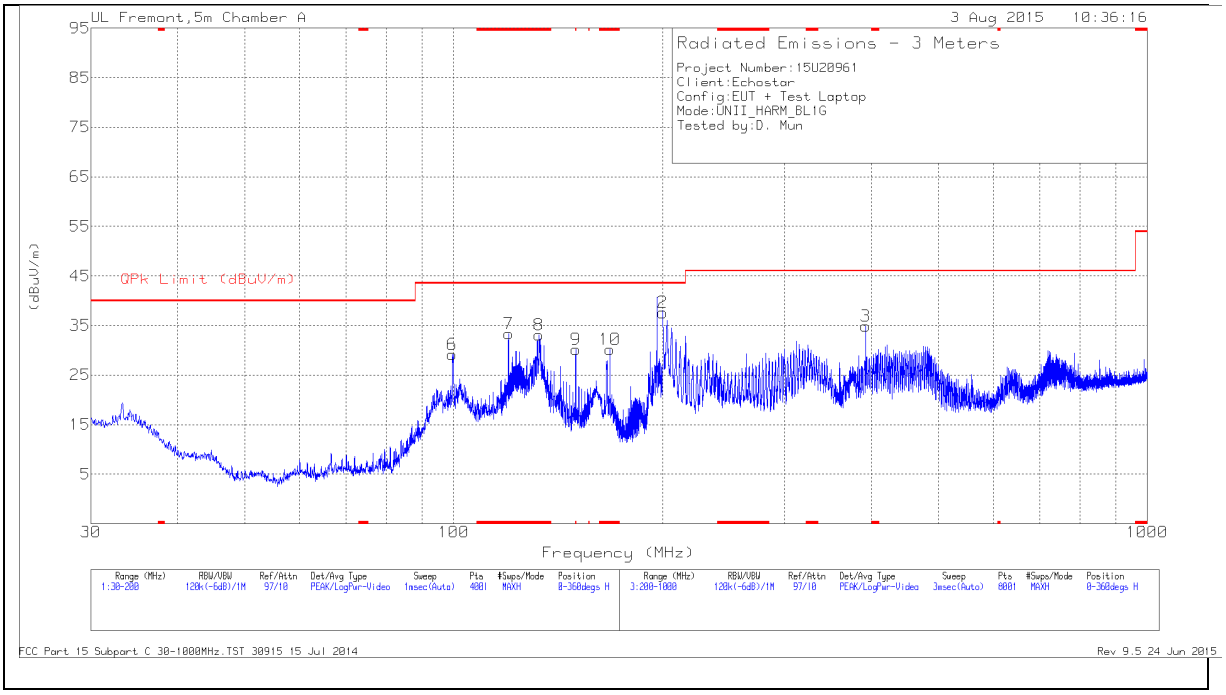
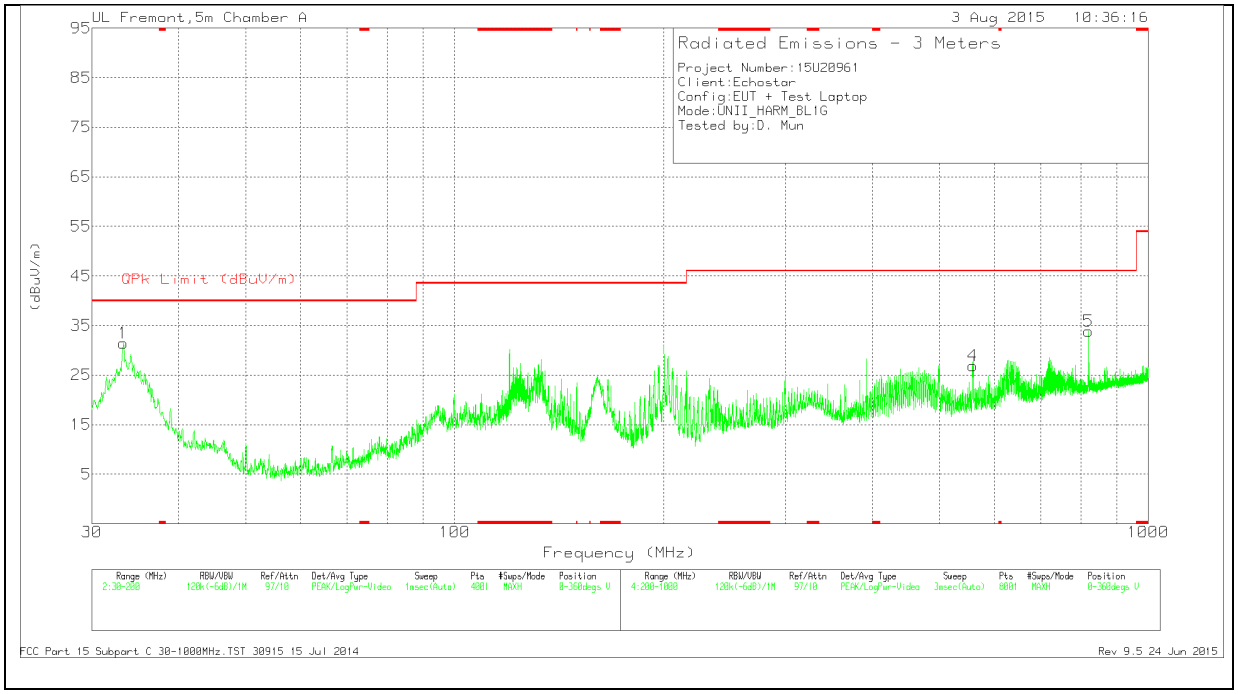
12. WORST-CASE BELOW 1 GHz (in the 5.3 GHz Band)

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



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



Below 1G Data

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T130 (dB/m)	Amp/Cbl (dB/m)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
7	* 119.9725	49.86	Pk	13.9	-30.4	33.36	43.52	-10.16	0-360	299	H
8	* 132.8075	49.29	Pk	14.1	-30.3	33.09	43.52	-10.43	0-360	199	H
9	* 149.9988	47.74	Pk	12.6	-30.2	30.14	43.52	-13.38	0-360	199	H
10	* 167.9975	48.62	Pk	11.7	-30.1	30.22	43.52	-13.3	0-360	199	H
1	33.315	43.69	Pk	18.9	-31.2	31.39	40	-8.61	0-360	101	V
6	99.615	50.51	Pk	9.3	-30.6	29.21	43.52	-14.31	0-360	299	H
2	200.1	54.9	Pk	12.6	-29.9	37.6	43.52	-5.92	0-360	101	H
3	392.7	48.93	Pk	15	-29.1	34.83	46.02	-11.19	0-360	101	H
4	558.3	36.95	Pk	18.5	-28.6	26.85	46.02	-19.17	0-360	101	V
5	820	40.21	Pk	21.6	-27.9	33.91	46.02	-12.11	0-360	101	V

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

Pk - Peak detector

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

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13. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

RSS-Gen 8.8

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	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.

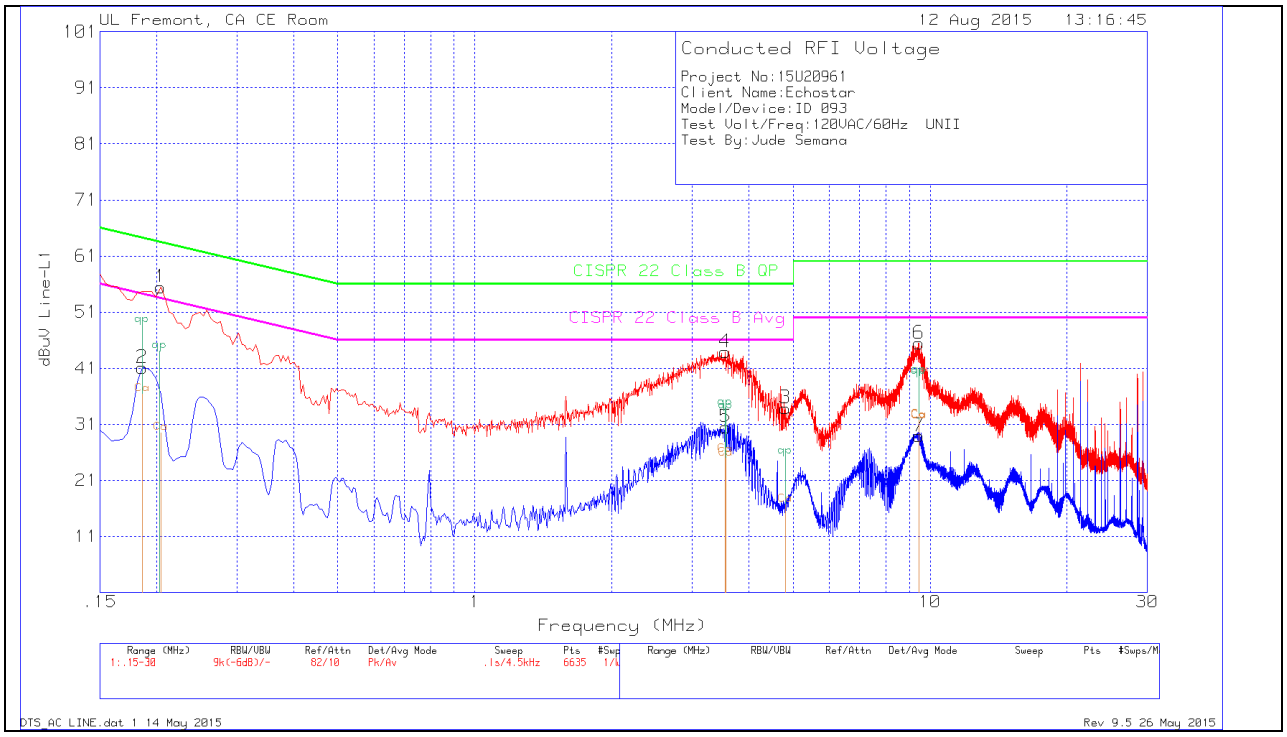
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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

RESULTS

6 WORST EMISSIONS

LINE 1 PLOT



LINE 1 RESULTS

Trace Markers

Range 1: Line-L1 .15 - 30MHz

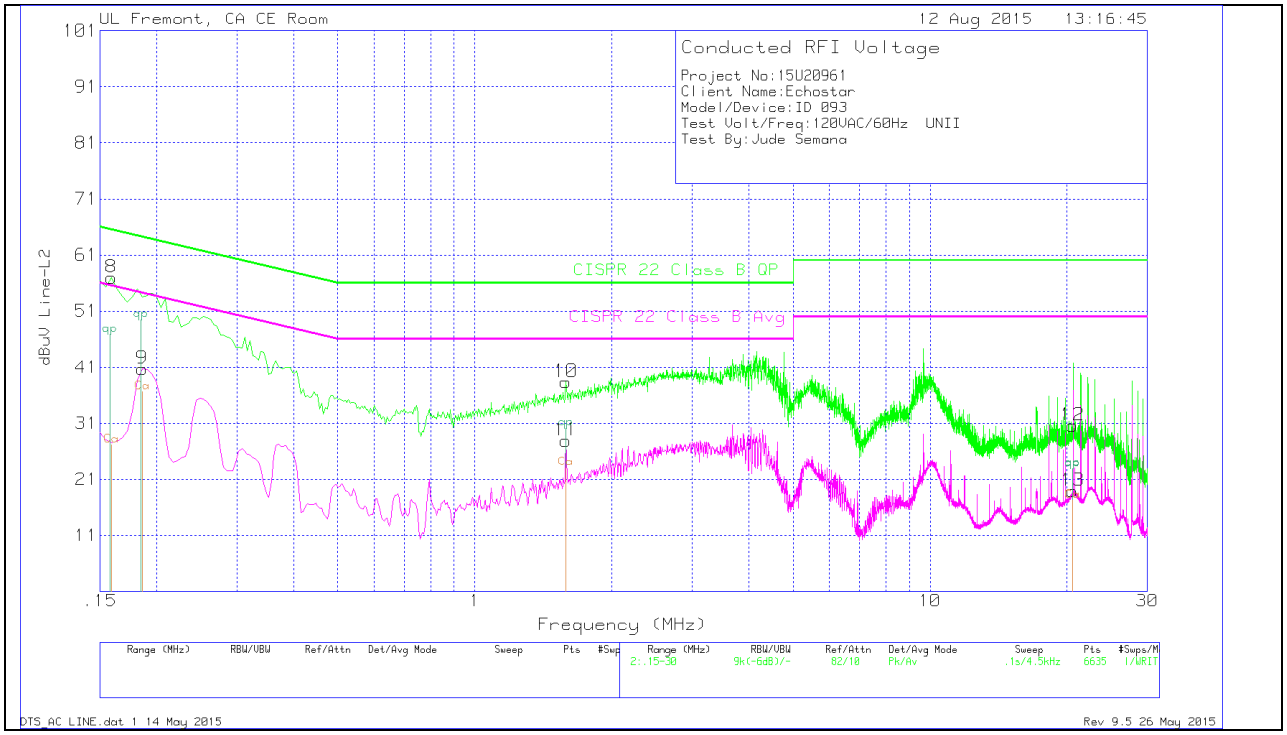
Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
.20288	28.55	Ca	.9	0	29.45	-	-	53.49	-24.04
.18578	35.38	Ca	1	0	36.38	-	-	54.22	-17.84
4.80638	16.34	Ca	.2	.1	16.64	-	-	46	-29.36
3.54638	25.26	Ca	.2	.1	25.56	-	-	46	-20.44
3.55538	24.62	Ca	.2	.1	24.92	-	-	46	-21.08
9.45128	31.4	Ca	.2	.1	31.7	-	-	50	-18.3
9.44138	31.24	Ca	.2	.1	31.54	-	-	50	-18.46

Ca - CISPR average detection

Range 1: Line-L1 .15 - 30MHz

Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
.20288	43.14	Qp	.9	0	44.04	63.49	-19.45	-	-
.18578	47.73	Qp	1	0	48.73	64.22	-15.49	-	-
4.80638	24.99	Qp	.2	.1	25.29	56	-30.71	-	-
3.54638	33.65	Qp	.2	.1	33.95	56	-22.05	-	-
3.55538	33.09	Qp	.2	.1	33.39	56	-22.61	-	-
9.45128	39.43	Qp	.2	.1	39.73	60	-20.27	-	-
9.44138	39.19	Qp	.2	.1	39.49	60	-20.51	-	-

LINE 2 PLOT



LINE 2 RESULTS

Range 2: Line-L2 .15 - 30MHz

Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
.15788	25.71	Ca	1.4	0	27.11	-	-	55.57	-28.46
.18488	35.48	Ca	1.1	0	36.58	-	-	54.26	-17.68
1.58663	22.73	Ca	.2	.1	23.03	-	-	46	-22.97
20.5609	16.68	Ca	.3	.2	17.18	-	-	50	-32.82
20.5753	16.73	Ca	.3	.2	17.23	-	-	50	-32.77

Ca - CISPR average detection

Range 2: Line-L2 .15 - 30MHz

Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
.15788	45.43	Qp	1.4	0	46.83	65.57	-18.74	-	-
.18488	48.32	Qp	1.1	0	49.42	64.26	-14.84	-	-
1.58663	29.83	Qp	.2	.1	30.13	56	-25.87	-	-
20.5609	22.43	Qp	.3	.2	22.93	60	-37.07	-	-
20.5753	22.36	Qp	.3	.2	22.86	60	-37.14	-	-

Qp - Quasi-Peak detector