



FCC 47 CFR PART 15 SUBPART E

CERTIFICATION TEST REPORT

FOR

WLAN DTS/UNII a/b/g/n MIMO Satellite Setup Box

MODEL NUMBER: ID:091

FCC ID: DKN-MJS79

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Issue			
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V1	10/3/15	Initial Issue	P. ZHANG
V2	10/9/15	Updated Section 11.4.3, 11.5.3, 16 and Antenna gain info.	C. VERGONIO

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: Echostar Technologies LLC
EUT DESCRIPTION: WLAN DTS/UNII a/b/g/n MIMO Satellite setup box
MODEL: ID:091
SERIAL NUMBER: P1B51 (Conducted), P1B29 (Radiated)
DATE TESTED: SEPTEMBER 18 – OCTOBER 5, 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 C63.10-2013 for FCC.

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 a DTS/UNII a/b/g/n MIMO Satellite setup box.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum total conducted output power as follows:

Frequency Range (MHz)	Mode	Total Output Power (dBm)	Total Output Power (mW)
5180 - 5240	802.11a	14.2	26.30
5745 - 5825	802.11a	13	19.95
5180 - 5240	802.11n HT20	18.2	66.07
5745 - 5825	802.11n HT20	19.28	84.72
5190 - 5230	802.11n HT40	16.93	49.32
5755 - 5795	802.11n HT40	17.07	50.93

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes two Printed antennas, with maximum gain of 3.52dBi C0 and 3.29dBi C1.

List of test reduction and modes covering other modes:

Authorized Frequency Band (Antenna port & Radiated Testing)	
Mode	Covered by
802.11a legacy 1TX	
802.11HT20 1TX	
802.11HT20 2TX STBC	802.11n HT20 2TX CDD
802.11n HT40 1TX	
802.11n HT40 2TX STBC	802.11n HT40 2TX CDD

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.

For SISO mode, chain 1 was the worst case determined during pre-scan. So all radiated and conducted measurement based on chain 1.

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

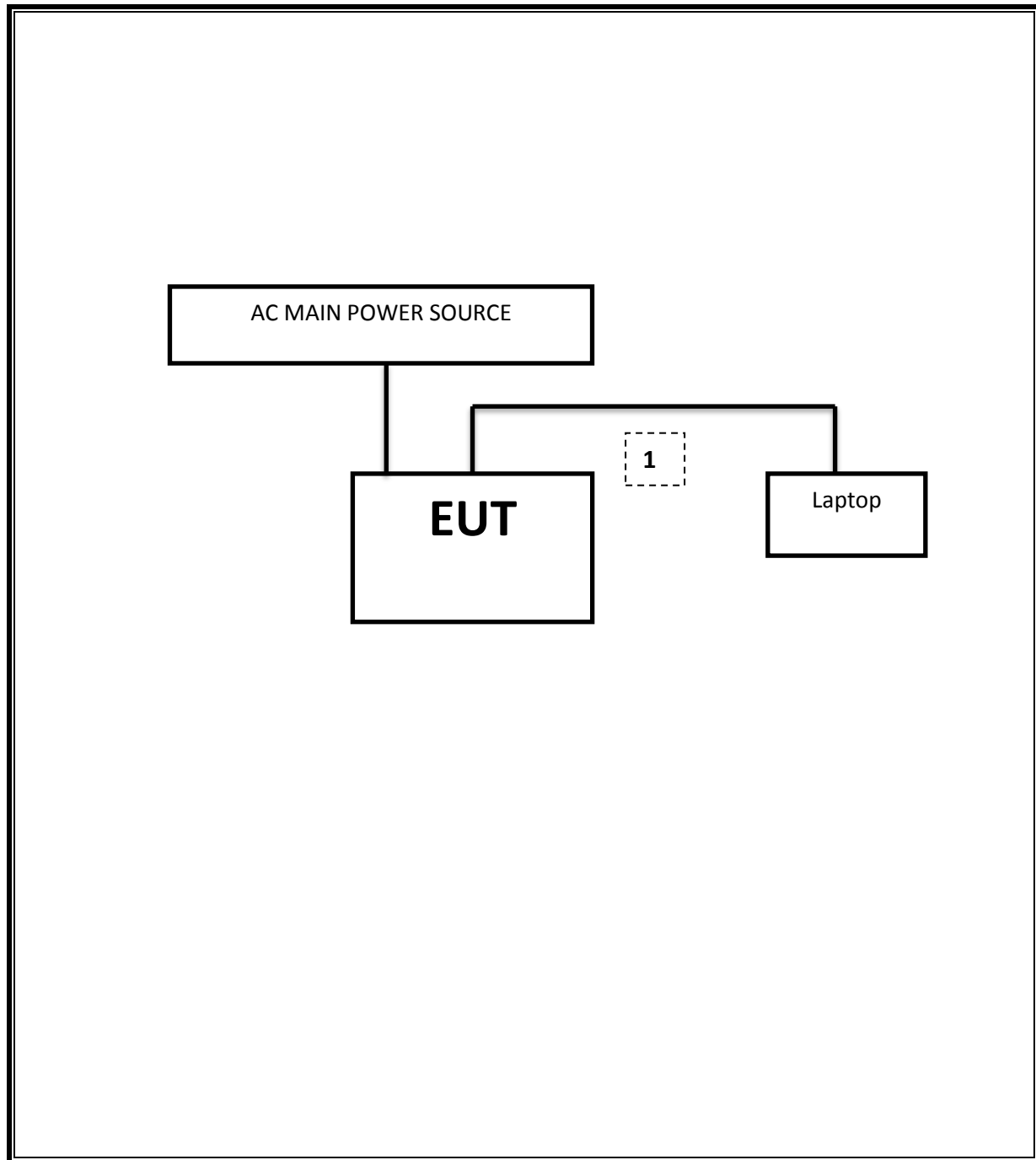
Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Laptop	HP	EliteBook 740	N/A	N/A

I/O CABLES

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	USB	1	USB	un-shielded	1.5	N/A

TEST SETUP

The EUT is setup as a stand-alone device.

SETUP DIAGRAM FOR 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	08/13/16
EMI Test Receiver, 30 MHz	R & S	ESHS 20	N02396	08/18/16
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	T404	06/29/16
AC Power Supply, 2,500VA 45-500Hz	Elgar-Ametek	CW2501M	F00013	CNR
RF Preamplifier, 1GHz - 40GHz	Miteq	NSP4000-SP2	C00990	08/20/16
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 24, 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	47.4MHz
15.407	RSS-247 6.2.4	6dB Band width (5.8Ghz)	500KHz		Pass	16.5MHz
15.407 (a)(2)	RSS-247 6.2	TX Cond. Power 5.15-5.25	<24dBm or 11+10Log(OBW)		Pass	18.7dBm
15.407 (a)(3)	RSS-247 6.2.4	TX Cond. Power 5.725-5.825	< 30dBm or 17+10Log(OBW)		Pass	19.28 dBm
15.407 (a)(5)	RSS-247 6.2	PSD (5.2GHz)	<11dBm		Pass	5.08dBm
15.407 (a)(5)	RSS-247 6.2.4	PSD (5.8GHz)	30dBm per 500kHz			2.17dBm
15.207 (a)	RSS-GEN 8.8	AC Power Line conducted emissions	Section 10	Radiated	Pass	51.54dBuV
15.407 (b) & 15.209	RSS-GEN 8.9/7	Radiated Spurious Emission	< 54dBuV/m		Pass	53.32dBuV/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.

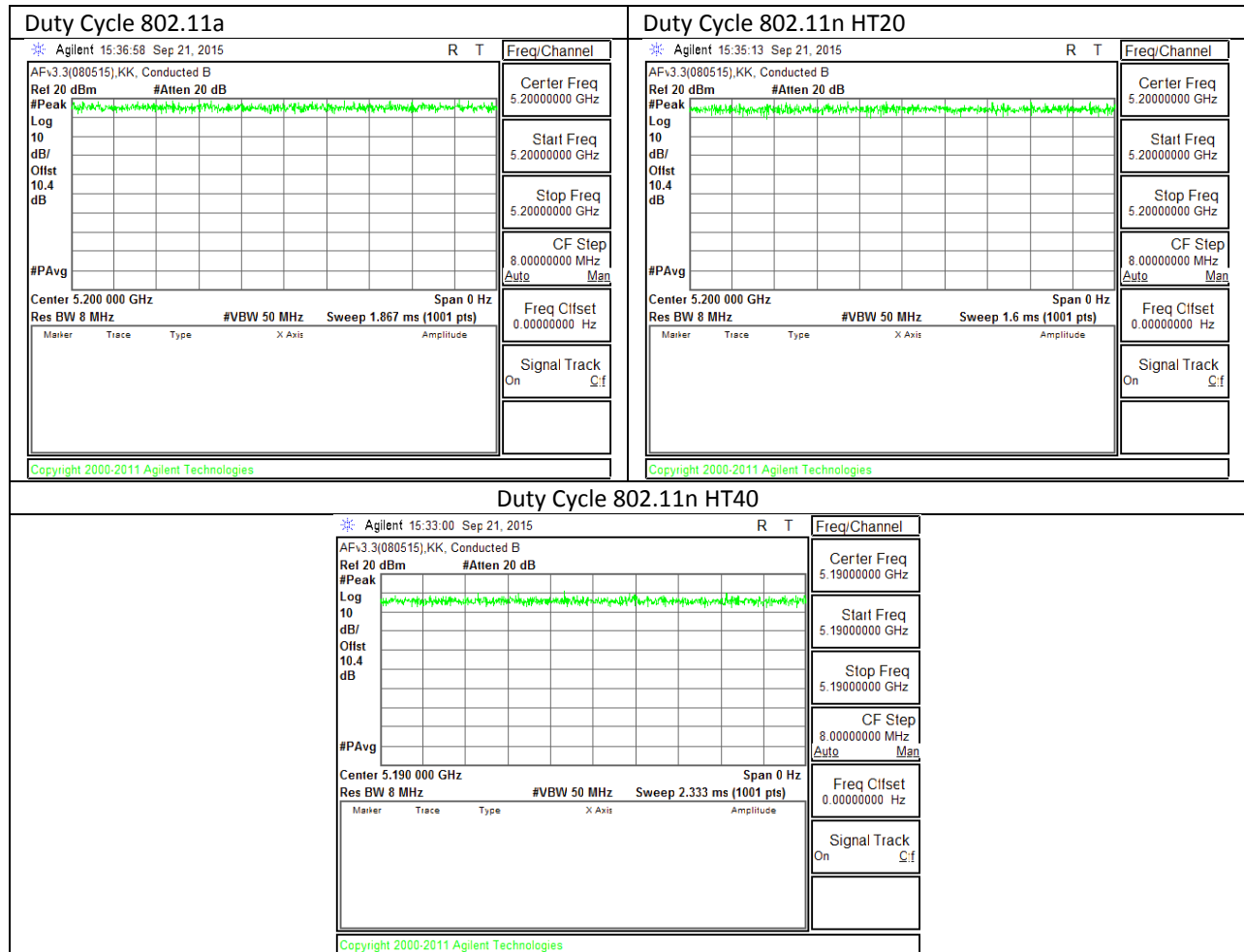
PROCEDURE

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	100.00	100.00	1.000	100.0%	0.00	0.010
802.11n HT20	100.00	100	1.000	100.0%	0.00	0.010
802.11n HT40	100.00	100	1.000	100.0%	0.00	0.010

8.2. DUTY CYCLE PLOTS



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 SISO

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 to 100 kHz, the VBW $\geq 3 \times$ 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	16.575	0.5
Mid	5785	16.525	0.5
High	5825	16.500	0.5
Worst		16.500	

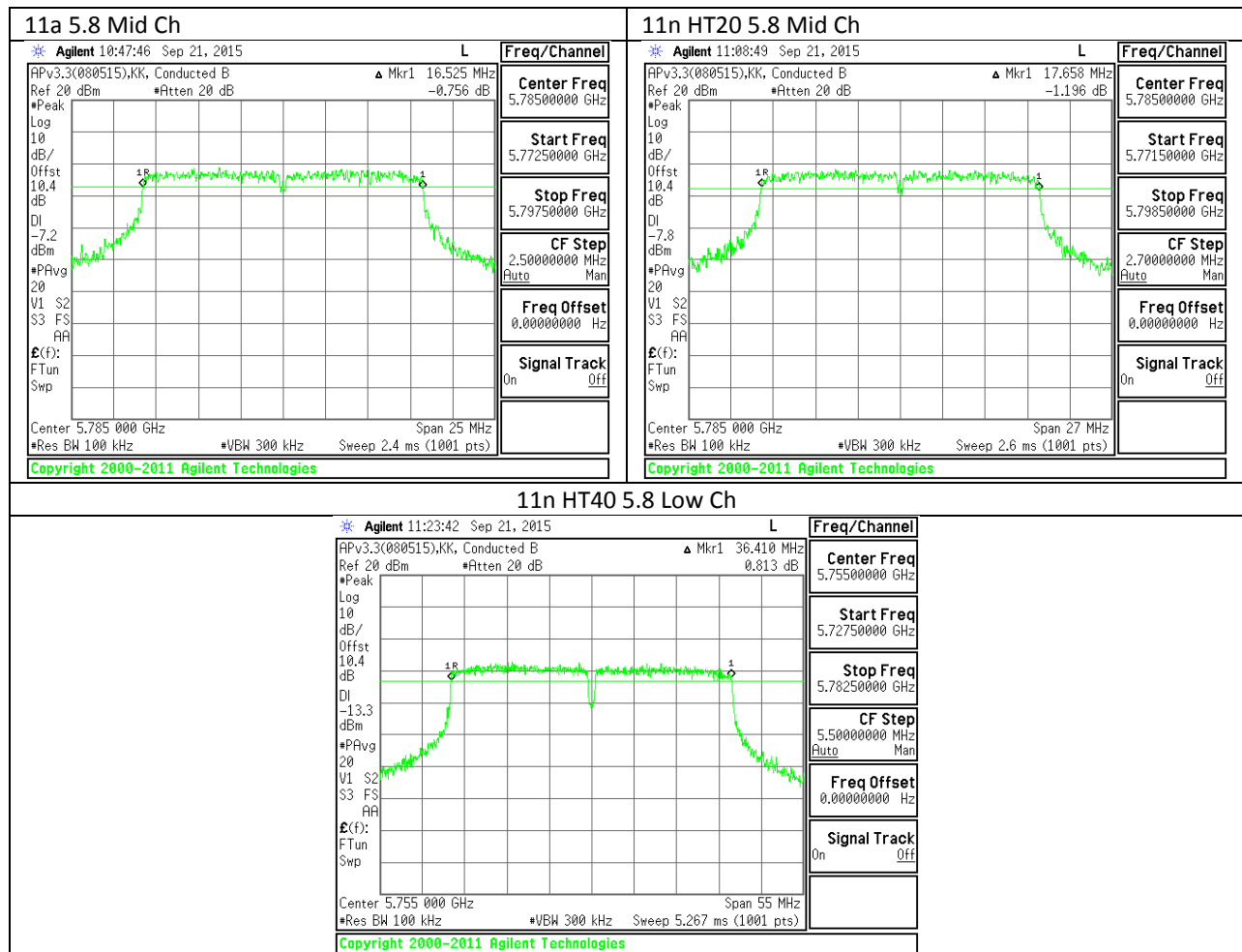
10.1.2. 802.11n HT20 MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5745	17.712	0.5
Mid	5785	17.658	0.5
High	5825	17.685	0.5
Worst		17.658	

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	36.410	0.5
High	5795	36.465	0.5
Worst		36.410	

10.1.4. 6 dB BANDWIDTH MID CH PLOTS



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	26.28
Mid	5200	23.21
High	5240	25.47
Worst		26.28

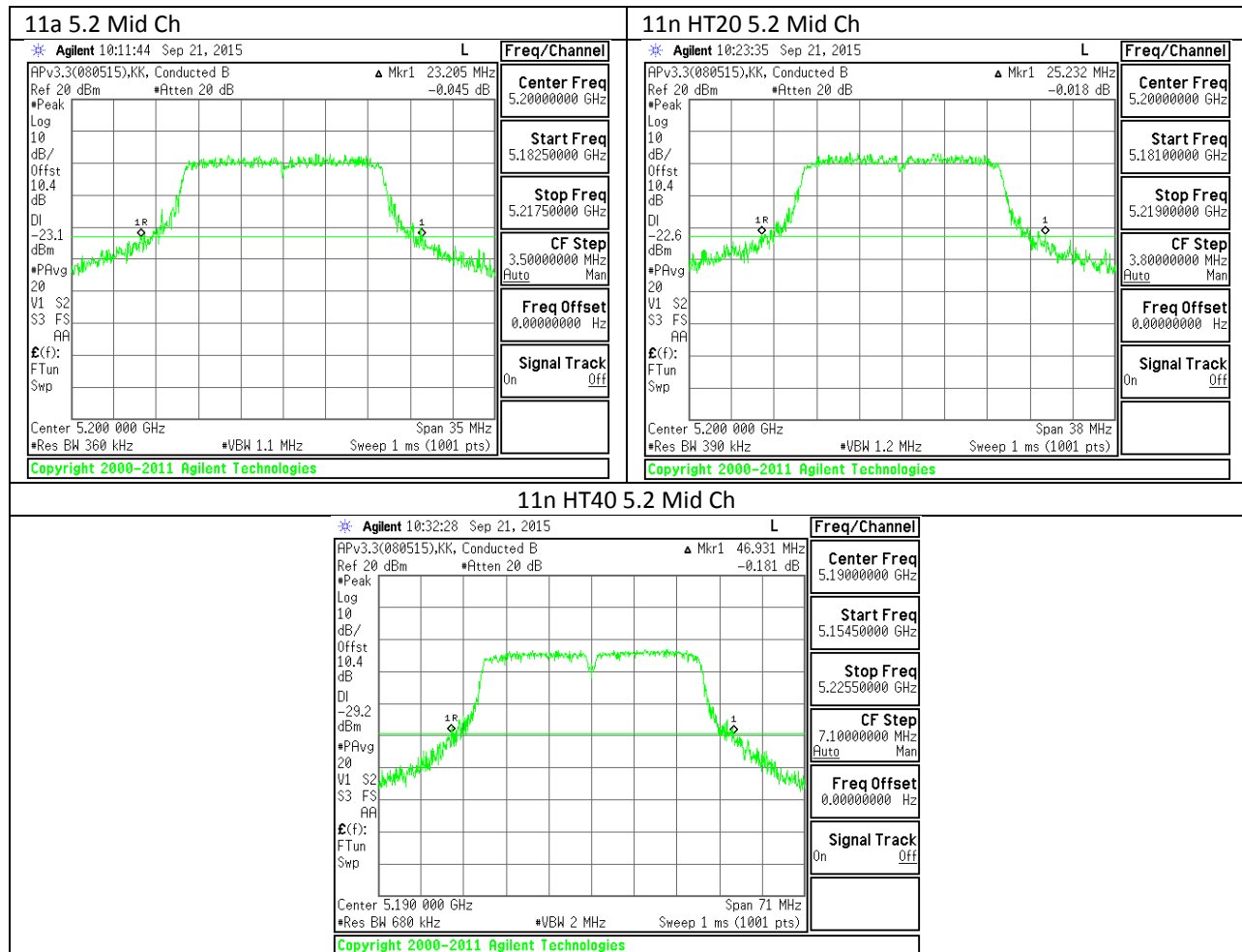
10.2.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5180	25.27
Mid	5200	25.23
High	5240	24.93
Worst		25.27

10.2.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	26dB Bandwidth (MHz)
Low	5190	46.93
Mid	5230	48.77
Worst		48.77

10.2.4. 26 dB BANDWIDTH PLOTS



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	16.576
Mid	5200	16.523
High	5240	16.541
Worst		16.576

10.3.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5180	17.751
Mid	5200	17.719
High	5240	17.730
Worst		17.751

10.3.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5190	36.239
Mid	5230	36.306
Worst		36.306

10.3.4. 802.11a MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5745	16.514
Mid	5785	16.529
High	5825	16.545
Worst		16.545

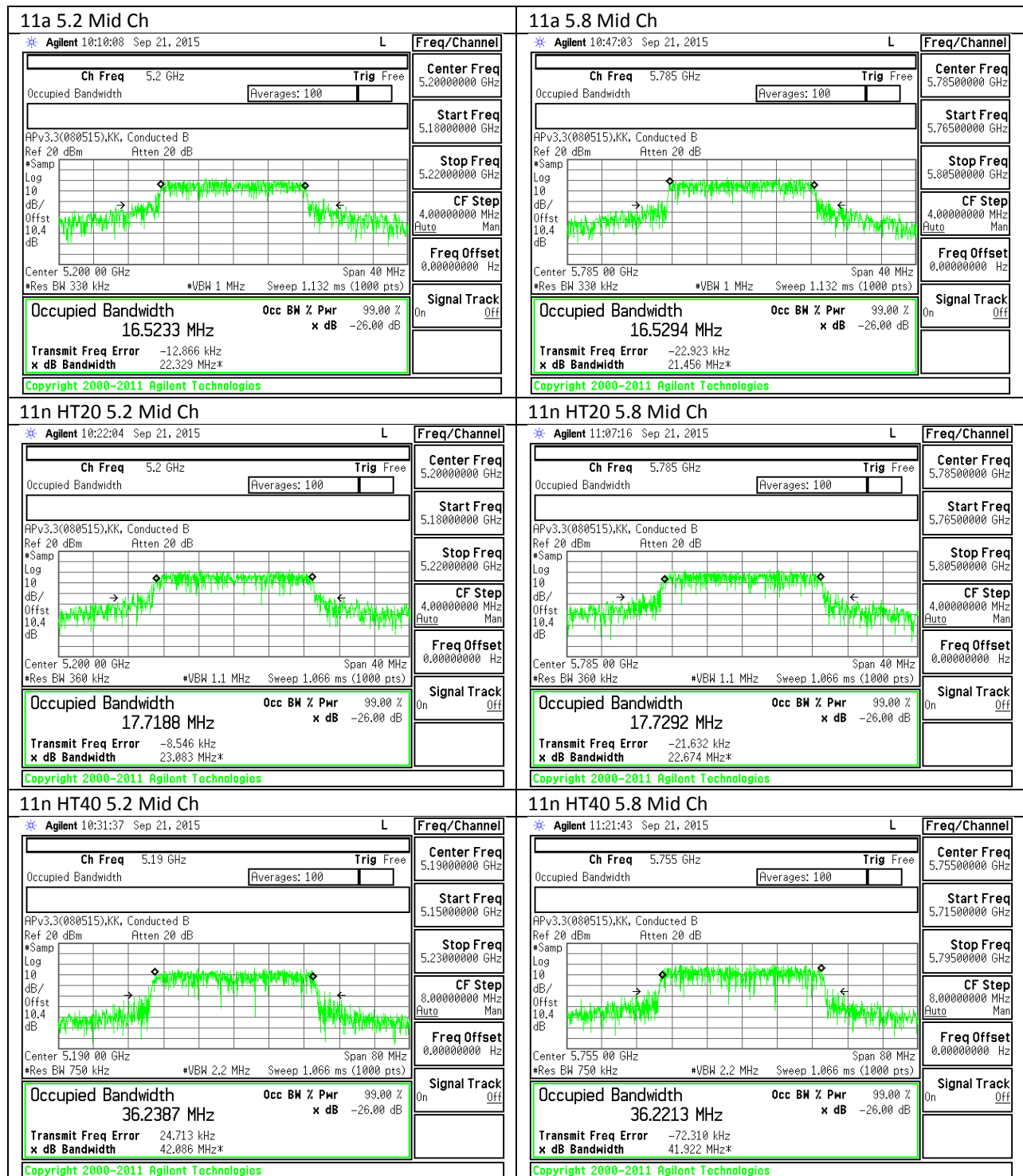
10.3.5. 802.11n HT20 MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5745	17.721
Mid	5785	17.729
High	5825	17.746
Worst		17.746

10.3.6. 802.11n HT40 MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5755	36.221
High	5795	36.246
Worst		36.246

10.3.7. 99% BANDWIDTH PLOTS



10.1. 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.

10.1.1. 802.11a MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5180	14.00
Mid	5200	14.00
High	5240	14.20
Worst		14.20

10.1.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5180	13.00
Mid	5200	15.92
High	5240	15.92
Worst		15.92

10.1.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5190	7.50
Mid	5230	14.00
Worst		14.00

10.1.4. 802.11a MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5745	12.35
Mid	5785	13.00
High	5825	13.00
Worst		13.00

10.1.5. 802.11n HT20 MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5745	12.00
Mid	5785	16.00
High	5825	16.00
Worst		16.00

10.1.1. 802.11n HT40 MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5755	9.00
High	5795	14.00
Worst		14.00

10.2. 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

10.2.1. 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	26.28	16.576	3.29
Mid	5200	23.21	16.523	3.29
High	5240	25.47	16.541	3.29

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	22.19	18.90	24.00	11.00	10.00	11.00
Mid	5200	24.00	22.18	18.89	24.00	11.00	10.00	11.00
High	5240	24.00	22.19	18.90	24.00	11.00	10.00	11.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power & PSD
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Output Power Results

Channel	Frequency (MHz)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5180	14.000	14.00	24.00	-10.00
Mid	5200	14.000	14.00	24.00	-10.00
High	5240	14.200	14.20	24.00	-9.80

PPSD Results

Channel	Frequency (MHz)	Chain 1 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5180	2.855	2.86	11.00	-8.15
Mid	5200	1.983	1.98	11.00	-9.02
High	5240	2.880	2.88	11.00	-8.12

10.2.2. 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	25.27	17.751	3.29
Mid	5200	25.23	17.719	3.29
High	5240	24.93	17.730	3.29

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	22.49	19.20	24.00	11.00	10.00	11.00
Mid	5200	24.00	22.48	19.19	24.00	11.00	10.00	11.00
High	5240	24.00	22.49	19.20	24.00	11.00	10.00	11.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power & PPSP
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Output Power Results

Channel	Frequency (MHz)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5180	13.000	13.00	24.00	-11.00
Mid	5200	15.920	15.92	24.00	-8.08
High	5240	15.920	15.92	24.00	-8.08

PPSD Results

Channel	Frequency (MHz)	Chain 1 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5180	0.578	0.58	11.00	-10.42
Mid	5200	3.231	3.23	11.00	-7.77
High	5240	3.622	3.62	11.00	-7.38

10.2.3. 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	46.93	36.24	3.29
High	5230	48.77	36.31	3.29

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	24.00	11.00	10.00	11.00
High	5230	24.00	23.00	23.00	24.00	11.00	10.00	11.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power & PSD
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Output Power Results

Channel	Frequency (MHz)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5190	7.50	7.50	24.00	-16.50
High	5230	14.00	14.00	24.00	-10.00

PPSD Results

Channel	Frequency (MHz)	Chain 1 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5190	-8.47	-8.47	11.00	-19.47
High	5230	0.04	0.04	11.00	-10.96

10.2.4. 802.11a MODE IN THE 5.8 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 6 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5745	16.58	16.514	3.29
Mid	5785	16.53	16.529	3.29
High	5825	16.50	16.545	3.29

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	29.19	29.18	35.18	30.00	30.00	17.00	30.00
Mid	5785	29.18	29.18	35.18	30.00	30.00	17.00	30.00
High	5825	29.17	29.19	35.19	30.00	30.00	17.00	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power & PSD
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Output Power Results

Channel	Frequency (MHz)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	12.35	12.35	30.00	-17.65
Mid	5785	13.00	13.00	30.00	-17.00
High	5825	13.00	13.00	30.00	-17.00

PPSD Results

Channel	Frequency (MHz)	Chain 1 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5745	-2.65	-2.65	30.00	-32.65
Mid	5785	-0.97	-0.97	30.00	-30.97
High	5825	-1.33	-1.33	30.00	-31.33

10.2.5. 802.11n HT20 MODE IN THE 5.8 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 6 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5745	17.71	17.721	3.29
Mid	5785	17.66	17.729	3.29
High	5825	17.69	17.746	3.29

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	29.48	29.48	35.48	30.00	30.00	17.00	30.00
Mid	5785	29.47	29.49	35.49	30.00	30.00	17.00	30.00
High	5825	29.48	29.49	35.49	30.00	30.00	17.00	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power & PSD
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Output Power Results

Channel	Frequency (MHz)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	12.00	12.00	30.00	-18.00
Mid	5785	16.00	16.00	30.00	-14.00
High	5825	16.00	16.00	30.00	-14.00

PPSD Results

Channel	Frequency (MHz)	Chain 1 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5745	-2.49	-2.49	30.00	-32.49
Mid	5785	0.88	0.88	30.00	-29.12
High	5825	1.84	1.84	30.00	-28.17

10.2.6. 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	36.41	36.221	3.29
High	5795	36.47	36.246	3.29

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	30.00
High	5795	30.00	30.00	36.00	30.00	30.00	17.00	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power & PSD
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Output Power Results

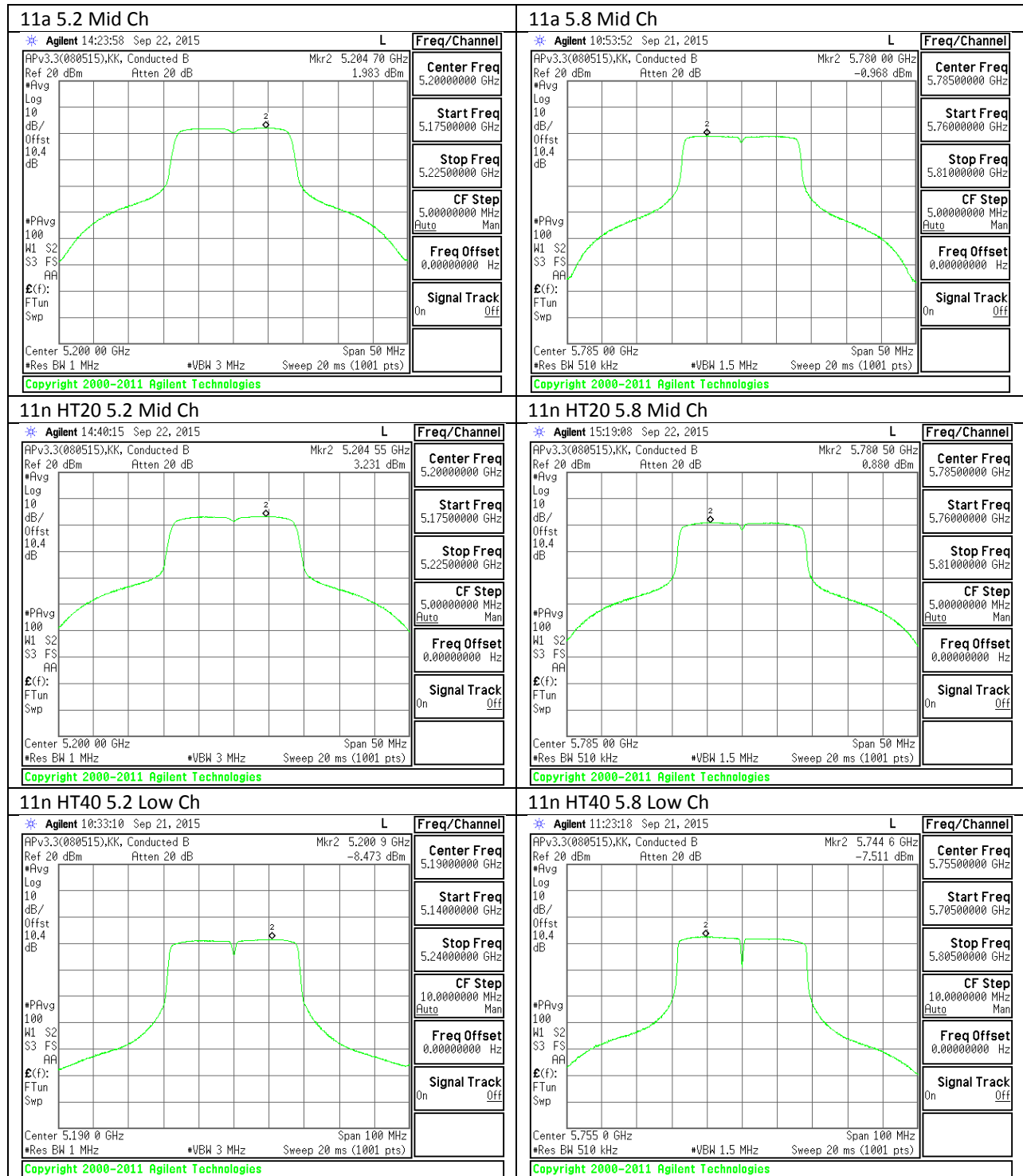
Channel	Frequency (MHz)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5755	9.00	9.00	30.00	-21.00
High	5795	14.00	14.00	30.00	-16.00

PPSD Results

Channel	Frequency (MHz)	Chain 1 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5755	-7.51	-7.51	30.00	-37.51
High	5795	-3.13	-3.13	30.00	-33.13

10.2.7. OUTPUT POWER AND PPSD PLOTS, Chain 1

PSD



11. ANTENNA PORT TEST RESULTS MIMO

11.1. 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 to 100 kHz, the VBW $\geq 3 \times$ RBW, peak detector and max hold.

RESULTS

11.1.1. 802.11n HT20 MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	6 dB Bandwidth CHAIN 0(MHz)	6 dB Bandwidth CHAIN 1(MHz)	Minimum Limit (MHz)
Low	5745	17.69	17.71	0.5
Mid	5785	17.66	17.74	0.5
High	5825	17.71	17.77	0.5
Worst		17.66	17.71	

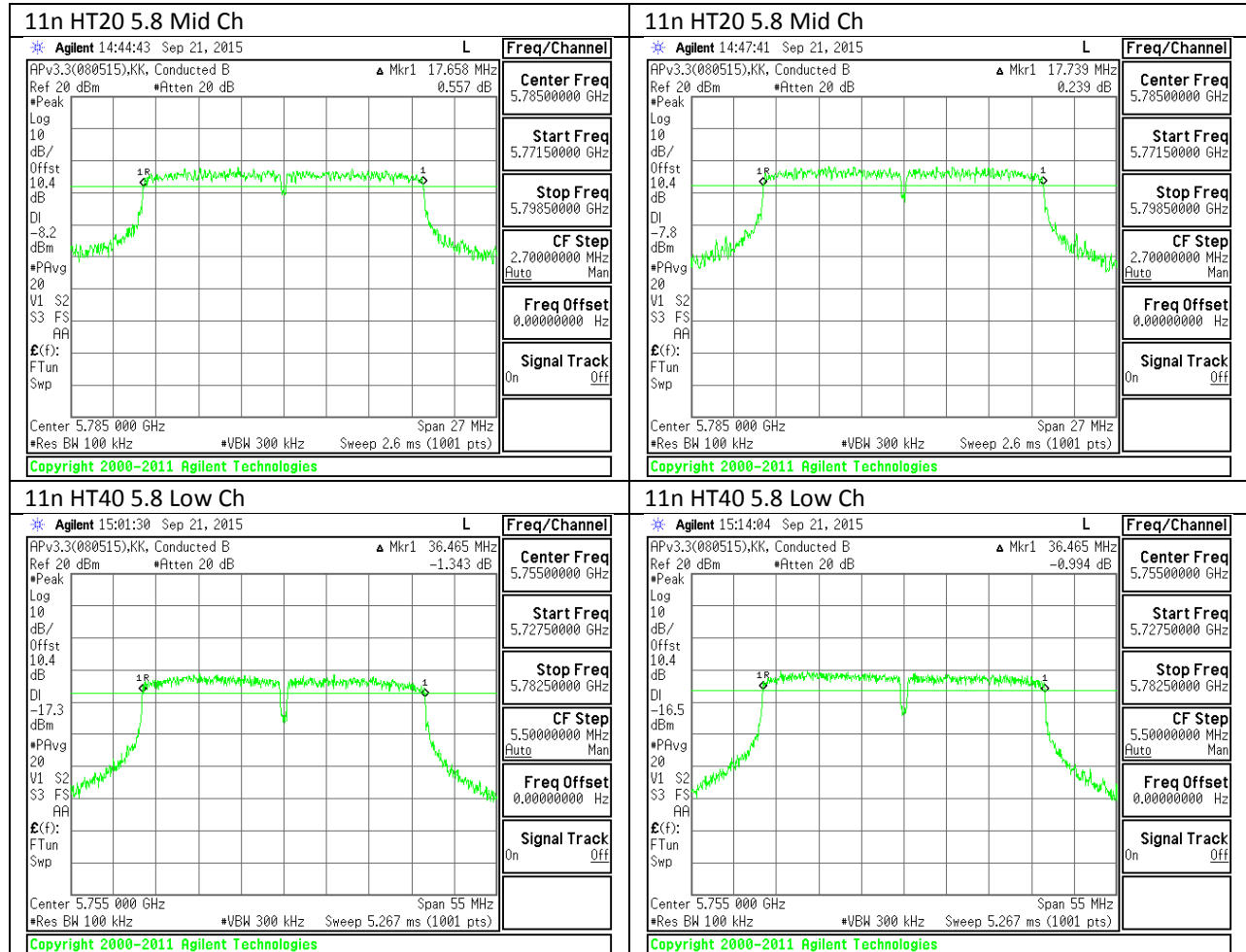
11.1.2. 802.11n HT40 MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	6 dB Bandwidth CHAIN 0(MHz)	6 dB Bandwidth CHAIN 1(MHz)	Minimum Limit (MHz)
Low	5755	36.47	36.47	0.5
High	5795	36.41	36.52	0.5
Worst		36.41	36.47	0.5

11.1.3. 6 dB BANDWIDTH MID CH PLOTS

CHAIN 0

CHAIN 1



11.2. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

11.2.1. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	26 dB BW Chain 0 (MHz)	26 dB BW Chain 1 (MHz)
Low	5180	24.9	24.0
Mid	5200	24.1	24.6
High	5240	23.4	23.7

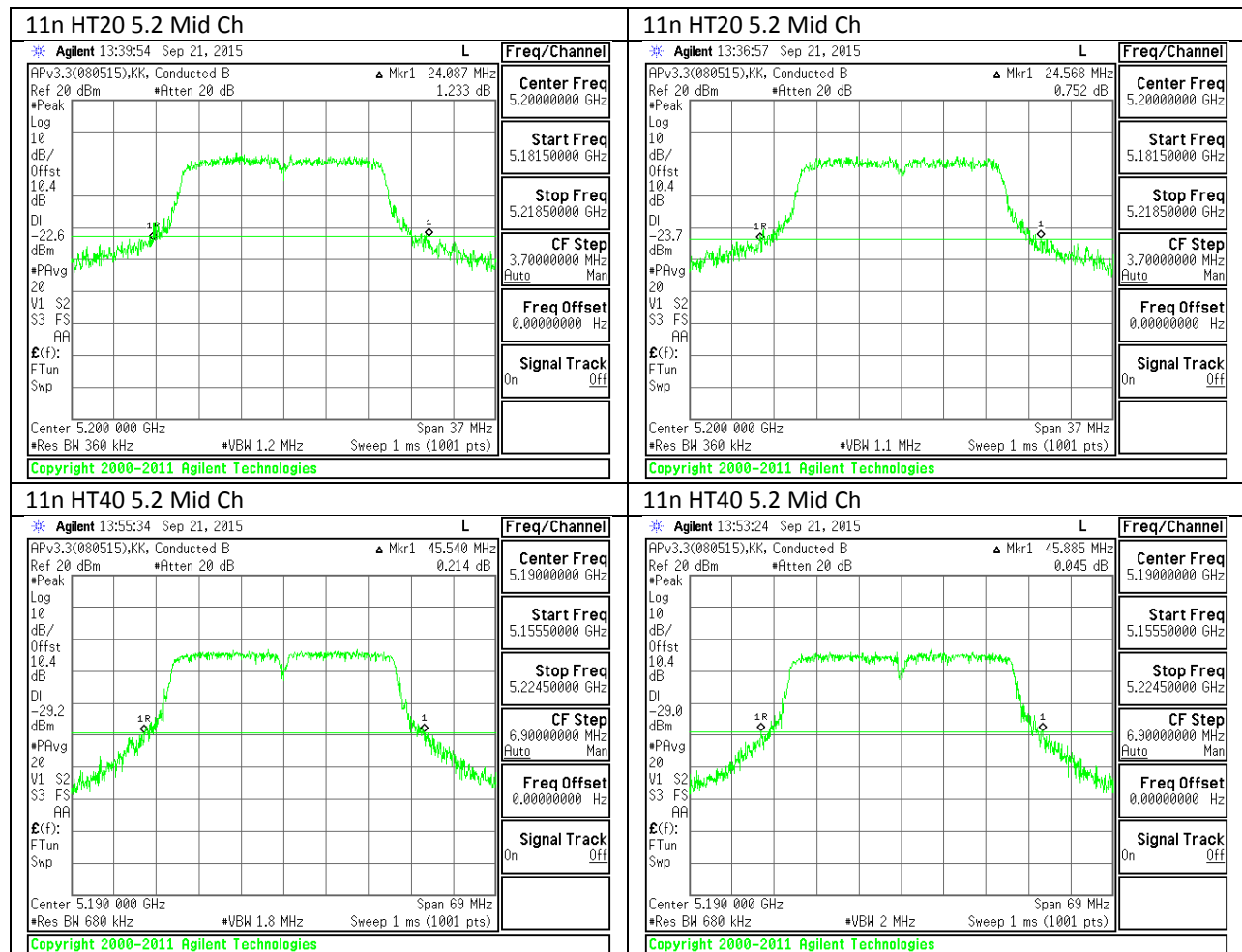
11.2.2. 802.11n HT40 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	26 dB BW Chain 0 (MHz)	26 dB BW Chain 1 (MHz)
Low	5190	45.5	45.9
High	5230	47.0	47.4

11.2.1. 26 dB BANDWIDTH PLOTS

CHAIN 0

CHAIN 1



11.3. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

11.3.1. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)
Low	5180	17.7	17.7
Mid	5200	17.7	17.7
High	5240	17.7	17.7

11.3.2. 802.11n HT40 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)
Low	5190	36.2	36.2
High	5230	36.3	36.3

11.3.1. 802.11n HT20 MODE IN THE 5.8 GHz BAND

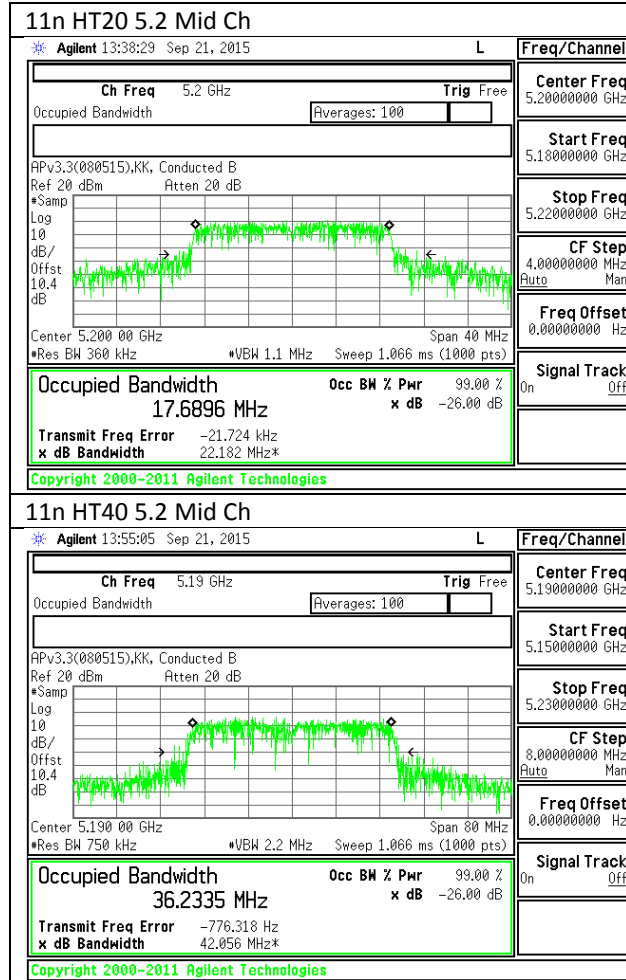
Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)
Low	5745	17.7	17.7
Mid	5785	17.8	17.7
High	5825	17.8	17.7

11.3.2. 802.11n HT40 MODE IN THE 5.8 GHz BAND

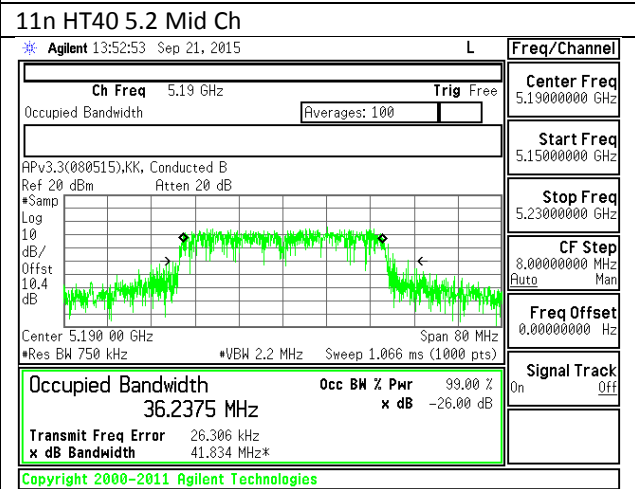
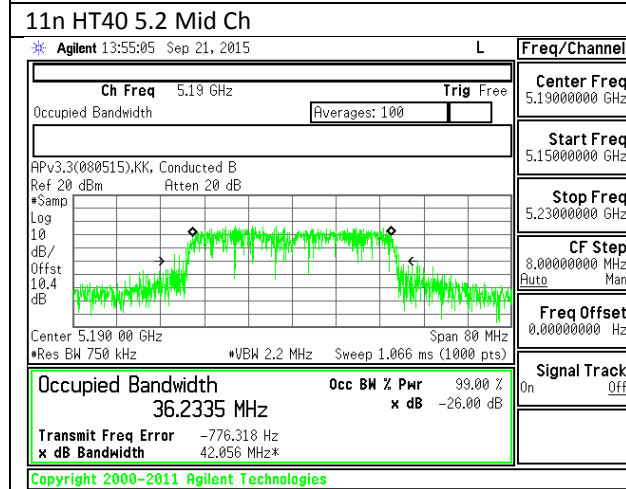
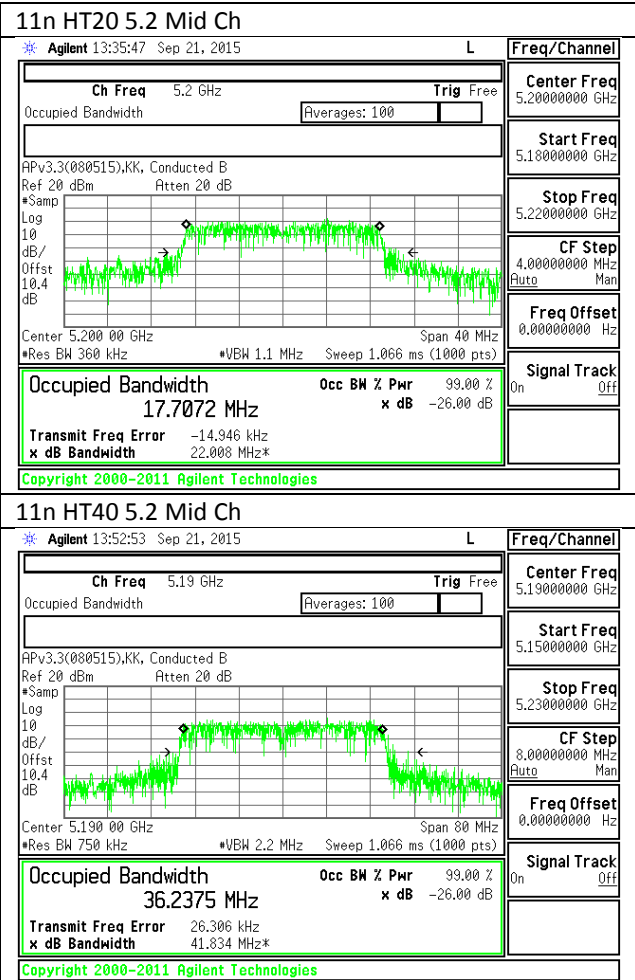
Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)
Low	5755	36.2	36.2
High	5795	36.2	36.2

11.3.1. 99% BANDWIDTH PLOTS

CHAIN 0

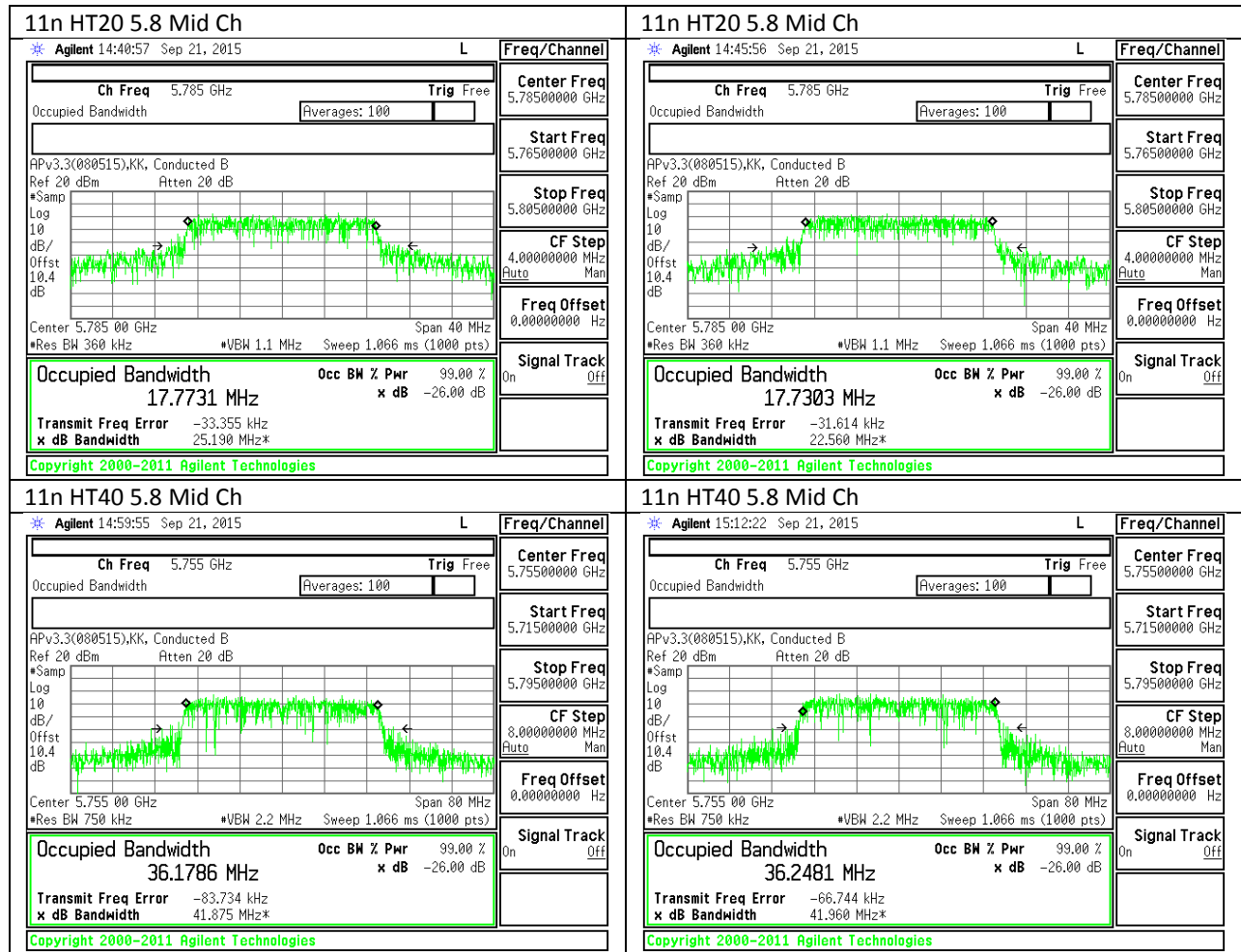


CHAIN 1



CHAIN 0

CHAIN 1



11.4. 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

11.4.1. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Average Power Results

Channel	Frequency (MHz)	Chain 0 Power (dBm)	Chain 1 Power (dBm)	Total Power (dBm)
Low	5180	13.11	13.01	16.07
Mid	5200	15.12	15.10	18.12
High	5240	15.15	15.12	18.15

11.4.2. 802.11n HT40 MODE IN THE 5.2 GHz BAND

Average Power Results

Channel	Frequency (MHz)	Chain 0 Power (dBm)	Chain 1 Power (dBm)	Total Power (dBm)
Low	5190	8.00	7.67	10.85
High	5230	13.83	14.00	16.93

11.4.3. 802.11n HT20 MODE IN THE 5.8 GHz BAND

Average Power Results

Channel	Frequency (MHz)	Chain 0 Power (dBm)	Chain 1 Power (dBm)	Total Power (dBm)
Low	5745	11.75	11.81	14.79
Mid	5785	15.65	16.82	19.28
High	5825	15.61	16.45	19.06

11.4.4. 802.11n HT40 MODE IN THE 5.8 GHz BAND

Average Power Results

Channel	Frequency (MHz)	Chain 0 Power (dBm)	Chain 1 Power (dBm)	Total Power (dBm)
Low	5755	8.25	8.50	11.39
High	5795	14.00	14.11	17.07

11.5. 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 $11 \text{ dBm} + 10 \log B$, 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 $11 \text{ dBm} + 10 \log B$, 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

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

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
3.52	3.29	3.41

For PSD, The TX chains are correlated and the antenna gain is the same for each chain. The directional gain is:

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
3.52	3.29	6.42

11.5.1. 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 for Power (dBi)	Directional Gain for PPSD (dBi)
Low	5180	24.85	17.7436	3.41	6.42
Mid	5200	24.57	17.7072	3.41	6.42
High	5240	23.69	17.7233	3.41	6.42

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	22.49	24.00	24.00	10.58	10.00	10.00
Mid	5200	24.00	22.48	24.00	24.00	10.58	10.00	10.00
High	5240	24.00	22.49	24.00	24.00	10.58	10.00	10.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power & PPSD
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Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5180	13.11	13.01	16.07	24.00	-7.93
Mid	5200	15.12	15.10	18.12	24.00	-5.88
High	5240	15.25	15.12	18.20	24.00	-5.80

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Chain 1 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5180	-0.37	-0.82	2.42	10.58	-8.16
Mid	5200	1.50	1.77	4.65	10.58	-5.93
High	5240	1.55	2.54	5.08	10.58	-5.50

11.5.2. 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 for Power (dBi)	Directional Gain for PPSD (dBi)
Low	5190	45.54	45.8850	3.41	6.42
High	5230	47.00	47.4480	3.41	6.42

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	5190	24.00	23.00	24.00	24.00	10.58	10.00	10.00
High	5230	24.00	23.00	24.00	24.00	10.58	10.00	10.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power & PPSP
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Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5190	8.00	7.67	10.85	24.00	-13.15
High	5230	13.83	14.00	16.93	24.00	-7.07

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Chain 1 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5190	-8.42	-8.70	-5.55	10.58	-16.13
High	5230	-2.87	-2.11	0.54	10.58	-10.04

11.5.3. 802.11n HT20 MODE IN THE 5.8 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 6 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PPSD (dBi)
Low	5745	17.71	17.7023	3.41	6.42
Mid	5785	17.74	17.7731	3.41	6.42
High	5825	17.77	17.7509	3.41	6.42

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	29.48	30.00	30.00	30.00	29.58	17.00	28.99
Mid	5785	29.49	30.00	30.00	30.00	29.58	17.00	28.99
High	5825	29.50	30.00	30.00	30.00	29.58	17.00	28.99

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power & PPSD
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Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	11.75	11.81	14.79	30.00	-15.21
Mid	5785	15.65	16.82	19.28	30.00	-10.72
High	5825	15.61	16.45	19.06	30.00	-10.94

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Chain 1 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5745	-6.75	-7.50	-4.10	29.58	-33.68
Mid	5785	-1.48	-0.28	2.17	29.58	-27.41
High	5825	-2.26	-1.12	1.35	29.58	-28.23

11.5.4. 802.11n HT40 MODE IN THE 5.8 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 6 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PPSD (dBi)
Low	5755	36.5	36.2481	3.41	6.42
High	5795	36.5	36.2124	3.41	6.42

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	30.00	30.00	29.58	17.00	28.99
High	5795	30.00	30.00	30.00	30.00	29.58	17.00	28.99

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power & PPSD
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Output Power Results

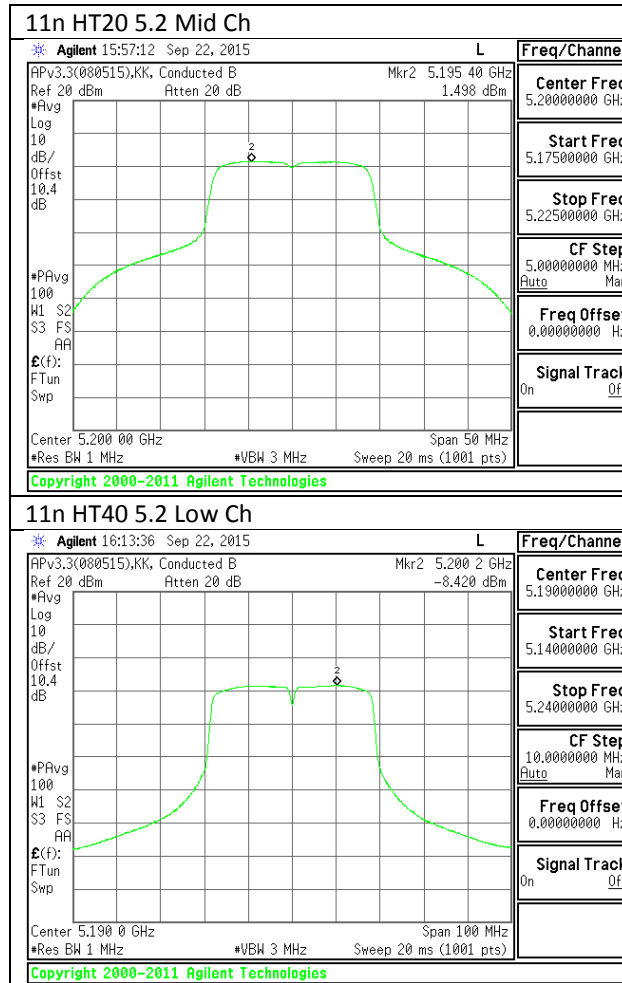
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5755	8.25	8.50	11.39	30.00	-18.61
High	5795	14.00	14.11	17.07	30.00	-12.93

PPSD Results

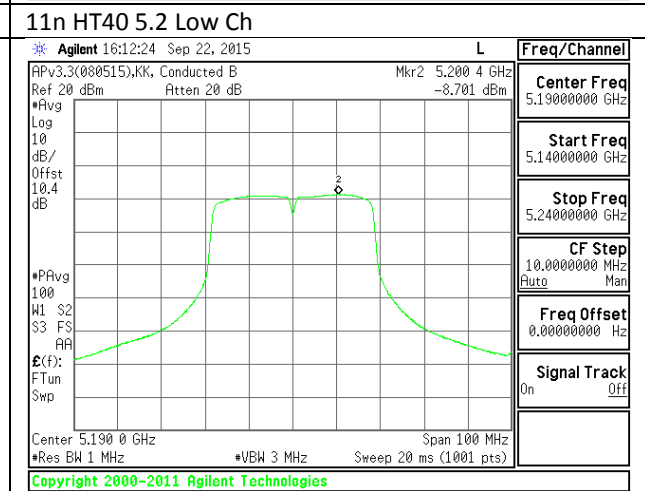
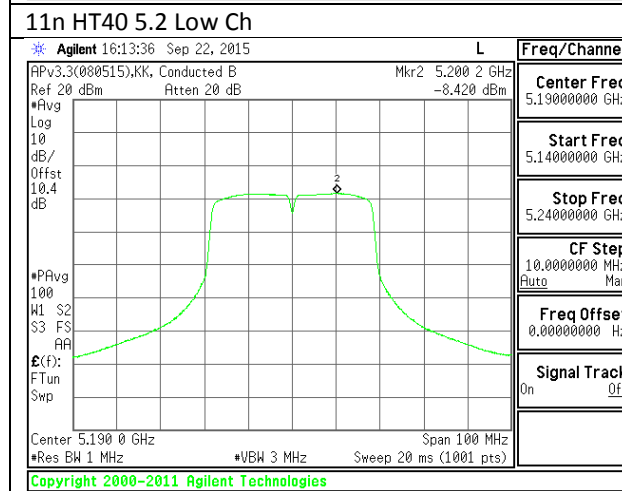
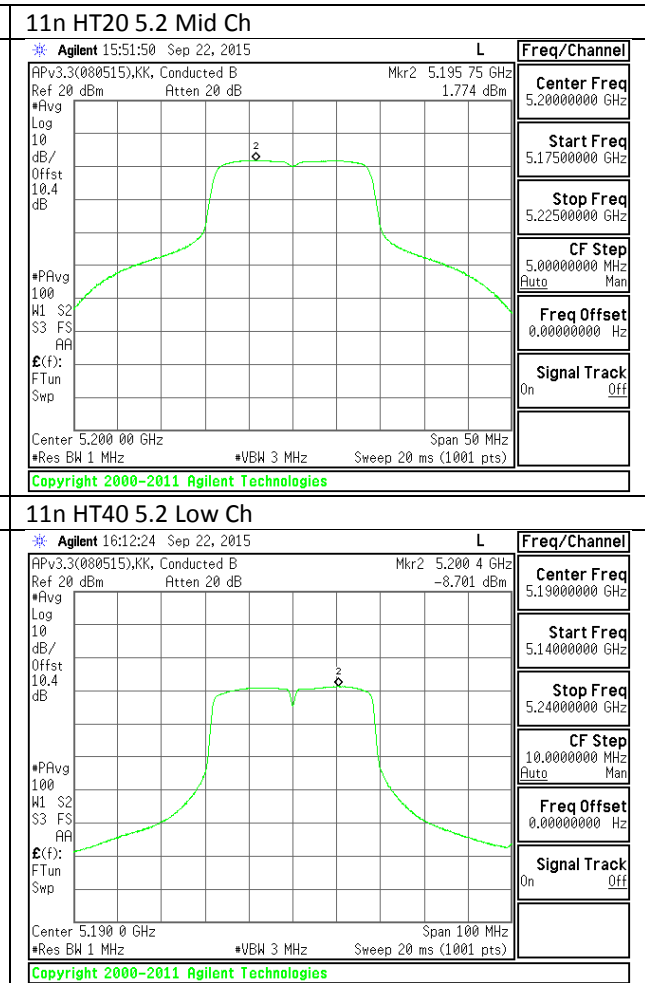
Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Chain 1 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5755	-12.46	-12.00	-9.22	29.58	-38.80
High	5795	-5.90	-5.11	-2.48	29.58	-32.06

11.5.5. OUTPUT POWER AND PPSD PLOTS PSD PLOTS

CHAIN 0

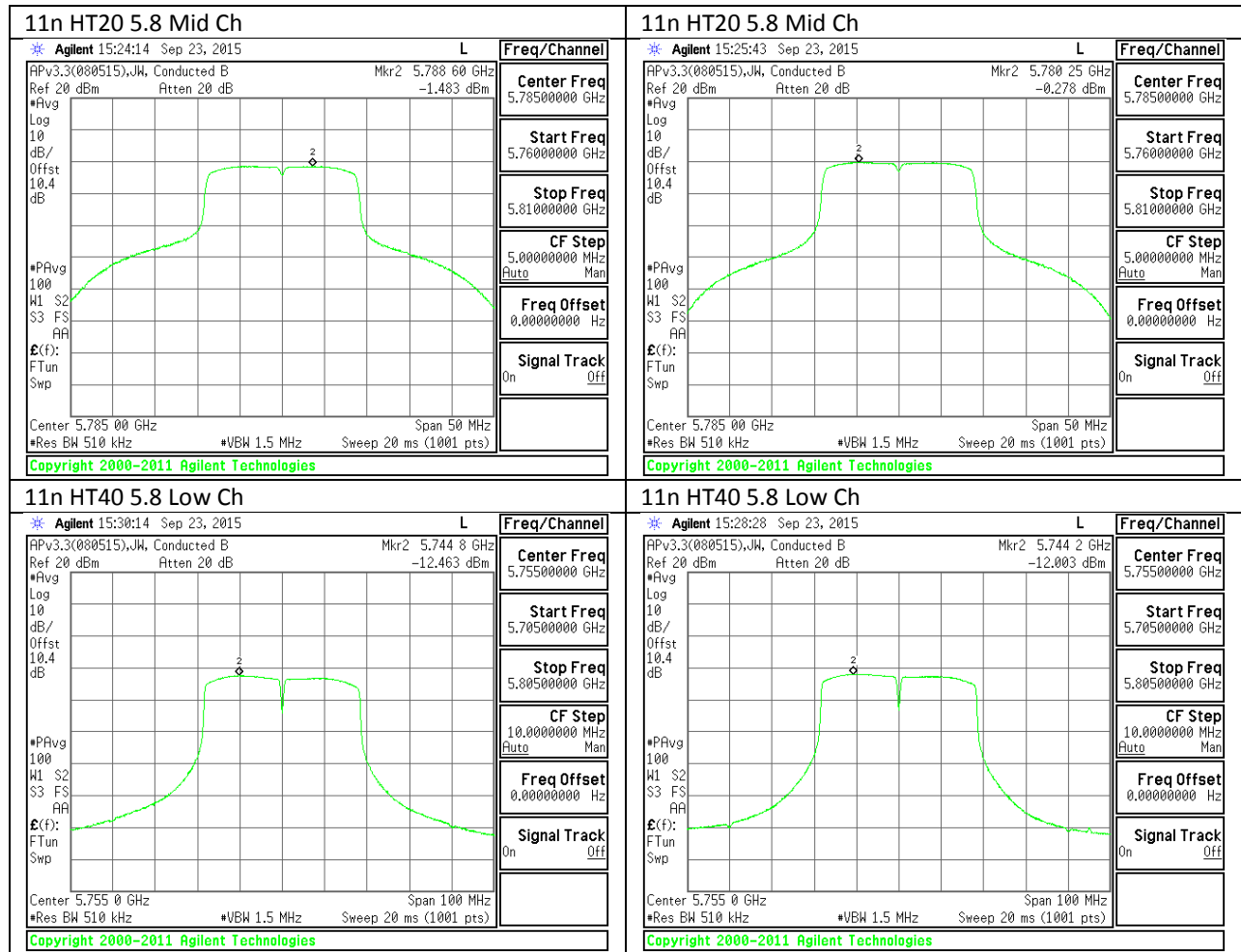


CHAIN 1



CHAIN 0

CHAIN 1



12. TRANSMITTER ABOVE 1 GHz SISO

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.

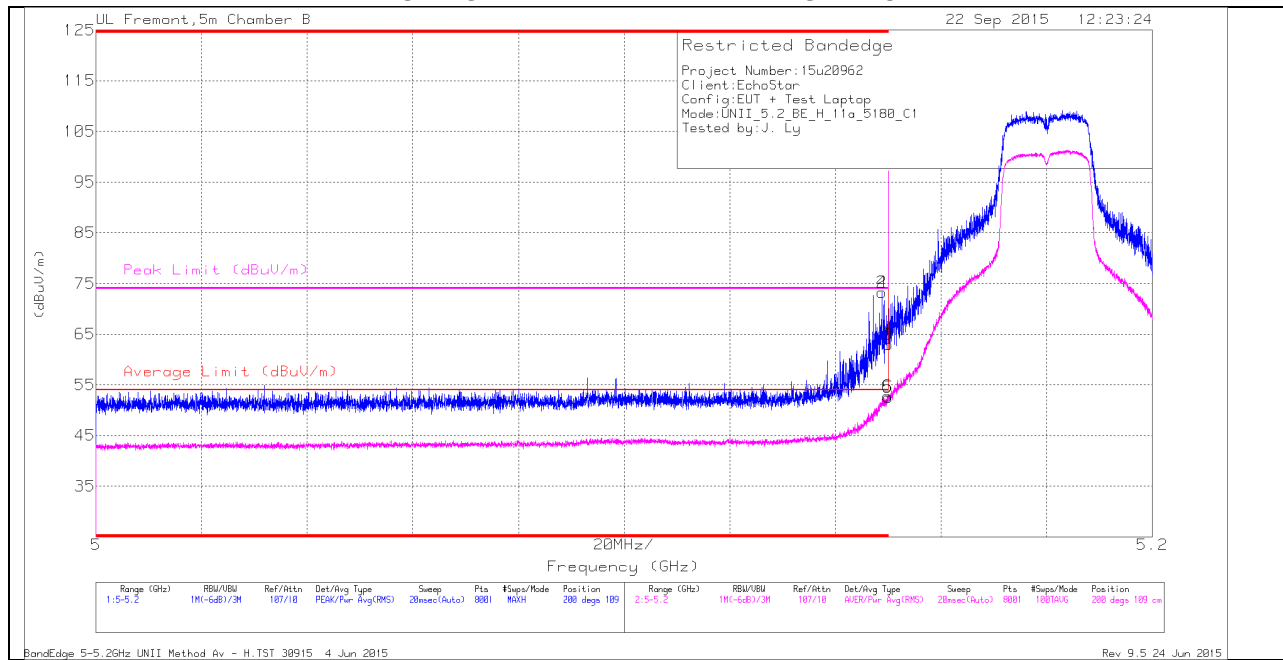
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized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

12.1. 5.2 GHz

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

RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT

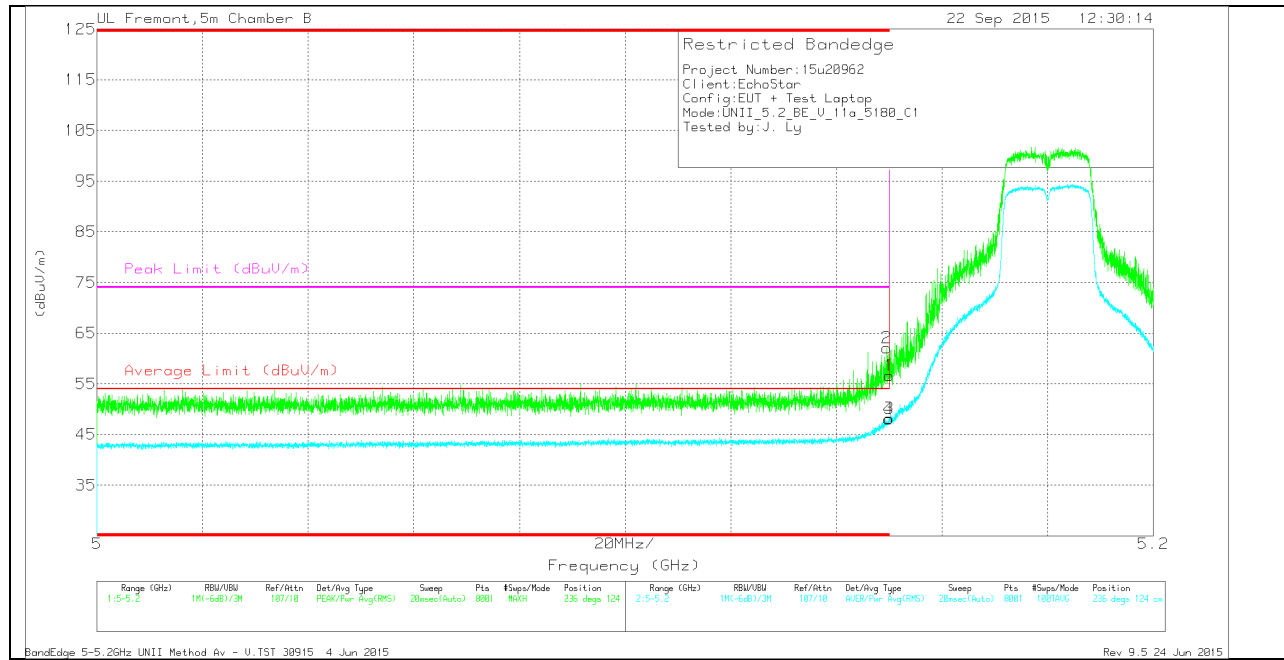


HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Ftr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.149	61.12	Pk	34.1	-22	73.22	-	-	74	-.78	200	109	H
4	* 5.149	61.12	Pk	34.1	-22	73.22	-	-	74	-.78	200	109	H
1	* 5.15	50.85	Pk	34.1	-22	62.95	-	-	74	-11.05	200	109	H
3	* 5.15	50.85	Pk	34.1	-22	62.95	-	-	74	-11.05	200	109	H
5	* 5.15	40.44	RMS	34.1	-22	52.54	54	-1.46	-	-	200	109	H
6	* 5.15	40.68	RMS	34.1	-22	52.78	54	-1.22	-	-	200	109	H

VERTICAL PEAK AND AVERAGE PLOT

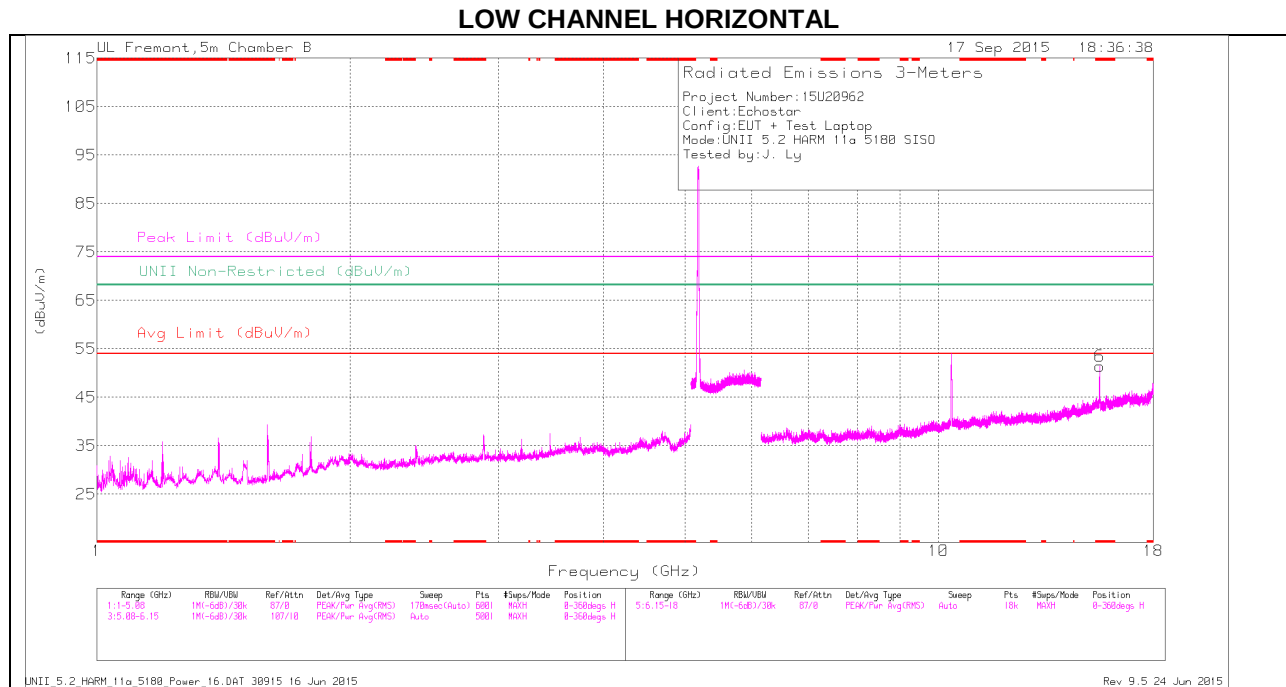


VERTICAL DATA

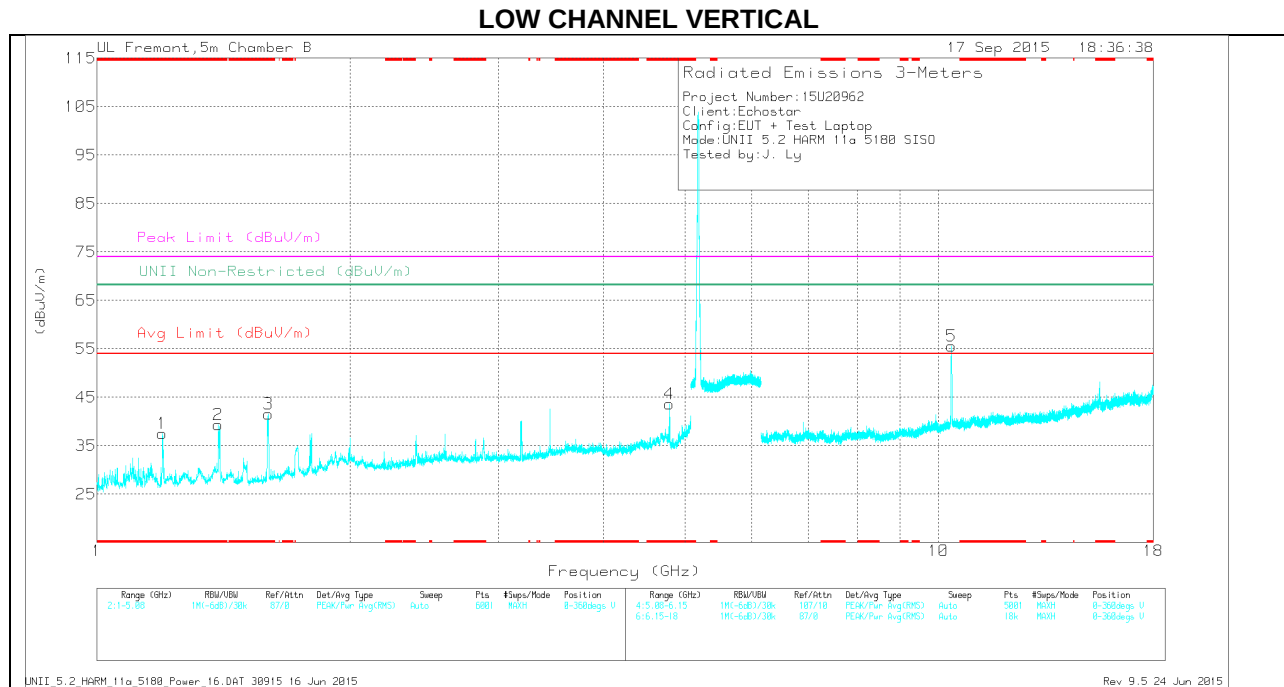
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Filt/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	44.52	Pk	34.1	-22	56.62	-	-	74	-17.38	236	124	V
2	* 5.15	49.93	Pk	34.1	-22	62.03	-	-	74	-11.97	236	124	V
3	* 5.15	36.08	RMS	34.1	-22	48.18	54	-5.82	-	-	236	124	V
4	* 5.15	35.97	RMS	34.1	-22	48.07	54	-5.93	-	-	236	124	V

HARMONICS AND SPURIOUS EMISSIONS



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



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 T345 (dB/m)	Amp/Cbl/Ftr/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	* 1.197	44.65	Pk	28.5	-35.6	0	37.55	-	-	74	-36.45	-	-	0-360	101	V
2	* 1.394	44.58	Pk	29.4	-34.7	0	39.28	-	-	74	-34.72	-	-	0-360	101	V
3	* 1.599	47.83	Pk	28.8	-35.1	0	41.53	-	-	74	-32.47	-	-	0-360	199	V
4	* 4.79	40.95	Pk	34.3	-31.6	0	43.65	-	-	74	-30.35	-	-	0-360	199	V
6	* 15.543	33.46	Pk	40.8	-22.9	0	51.36	-	-	74	-22.64	-	-	0-360	199	H
5	10.362	43.79	Pk	37.4	-25.6	0	55.59	-	-	-	-	68.2	-12.61	0-360	101	V

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

Pk - Peak detector

Radiated Emissions

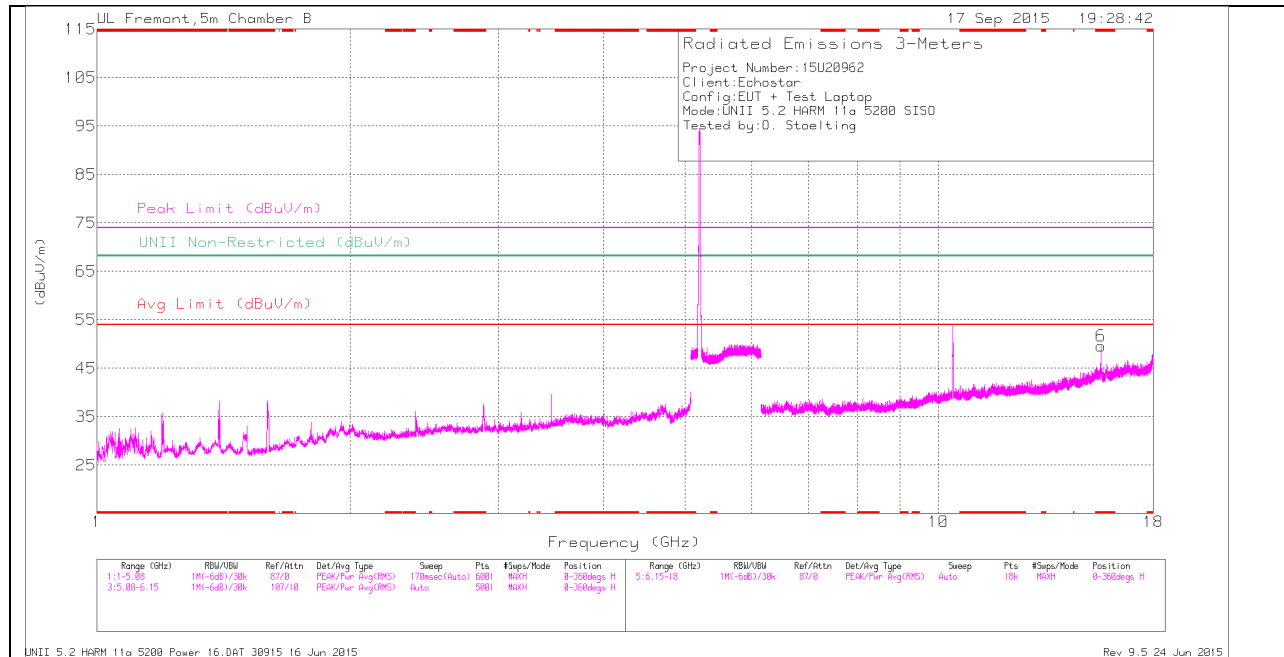
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.196	52.46	PK-U	28.4	-35.6	0	45.26	-	-	74	-28.74	-	-	336	288	V
* 1.197	33.94	ADR	28.5	-35.6	0	26.84	54	-27.16	-	-	-	-	336	288	V
* 1.394	55.49	PK-U	29.4	-34.7	0	50.19	-	-	74	-23.81	-	-	217	350	V
* 1.399	32.93	ADR	29.4	-34.7	0	27.63	54	-26.37	-	-	-	-	217	350	V
* 1.598	56.33	PK-U	28.8	-35.2	0	49.93	-	-	74	-24.07	-	-	35	350	V
* 1.598	35.32	ADR	28.8	-35.2	0	28.92	54	-25.08	-	-	-	-	35	350	V
* 4.788	43.33	PK-U	34.3	-31.6	0	46.03	-	-	74	-27.97	-	-	263	159	V
* 4.788	30.11	ADR	34.3	-31.6	0	32.81	54	-21.19	-	-	-	-	263	159	V
* 15.545	37.51	PK-U	40.8	-22.9	0	55.41	-	-	74	-18.59	-	-	184	282	H
* 15.543	25.18	ADR	40.8	-22.9	0	43.08	54	-10.92	-	-	-	-	184	282	H
10.362	52.36	PK-U	37.4	-25.6	0	64.16	-	-	-	-	68.2	-4.04	210	101	V

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

PK-U - U-NII: Maximum Peak

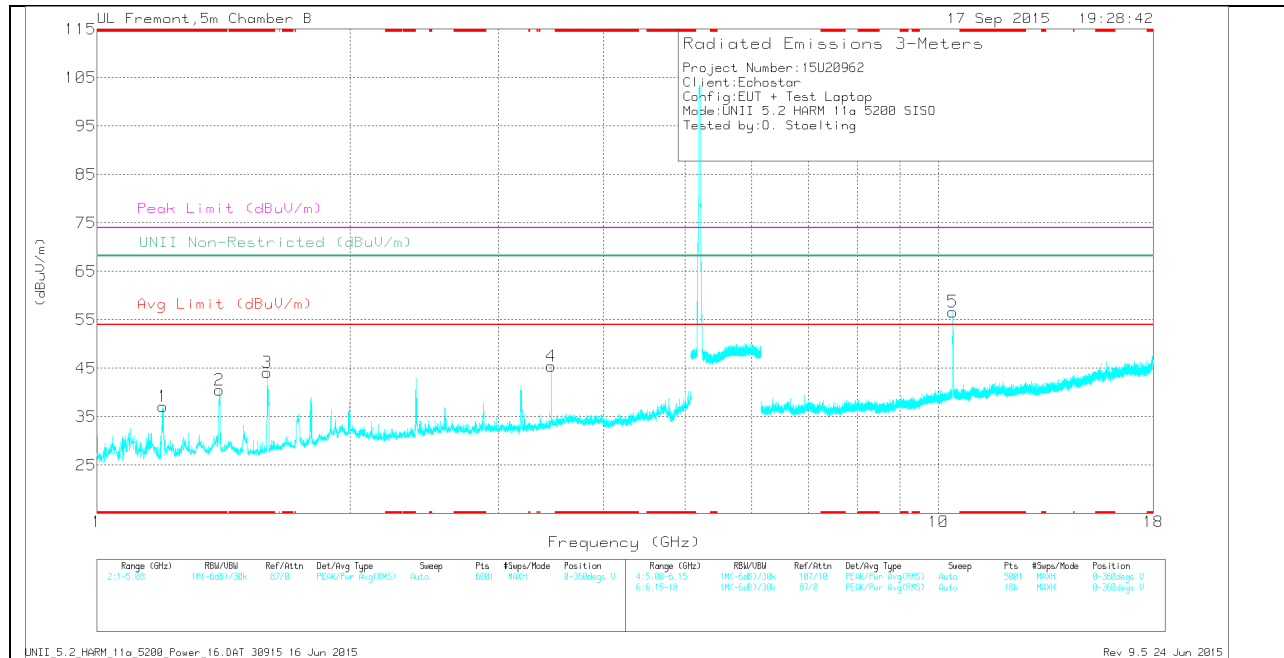
ADR - U-NII AD primary method, RMS average

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 T345 (dB/m)	Amp/Cbl/Fil tr/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	* 1.199	44.39	Pk	28.5	-35.7	0	37.19	-	-	74	-36.81	-	-	0-360	101	V
2	* 1.399	45.79	Pk	29.4	-34.7	0	40.49	-	-	74	-33.51	-	-	0-360	200	V
3	* 1.593	50.62	Pk	28.8	-35.3	0	44.12	-	-	74	-29.88	-	-	0-360	101	V
6	* 15.599	32.22	Pk	40.8	-23.4	0	49.62	-	-	74	-24.38	-	-	0-360	199	H
4	3.467	45.44	Pk	33.4	-33.4	0	45.44	-	-	-	-	68.2	-22.76	0-360	101	V
5	10.397	44.47	Pk	37.4	-25.2	0	56.67	-	-	-	-	68.2	-11.53	0-360	199	V

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

Pk - Peak detector

Radiated Emissions

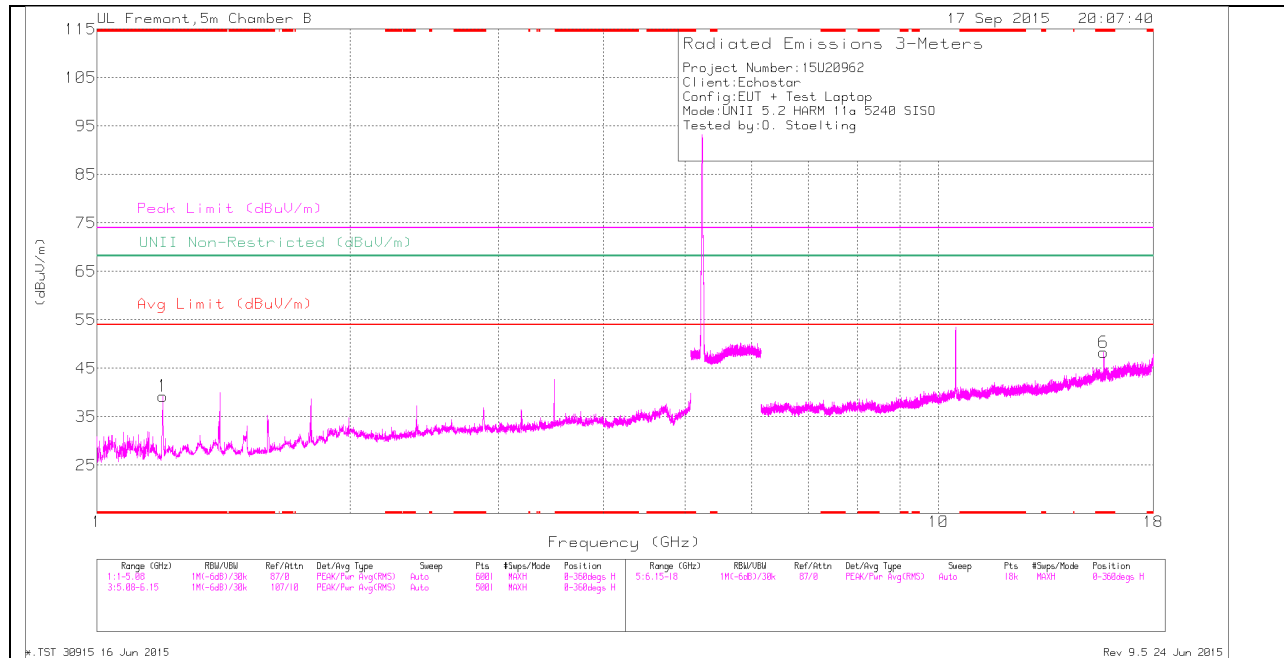
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fil tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.199	53.07	PK-U	28.5	-35.7	0	45.87	-	-	74	-28.13	-	-	195	261	V
* 1.2	32.36	ADR	28.5	-35.7	0	25.16	54	-28.84	-	-	-	-	195	261	V
* 1.594	56.64	PK-U	28.8	-35.2	0	50.24	-	-	74	-23.76	-	-	35	105	V
* 1.594	34.83	ADR	28.8	-35.3	0	28.33	54	-25.67	-	-	-	-	35	105	V
* 1.394	55.49	PK-U	29.4	-34.7	0	50.19	-	-	74	-23.81	-	-	217	350	V
* 1.399	32.93	ADR	29.4	-34.7	0	27.63	54	-26.37	-	-	-	-	217	350	V
* 15.6	35.21	PK-U	40.8	-23.3	0	52.71	-	-	74	-21.29	-	-	65	209	H
* 15.598	23.6	ADR	40.8	-23.4	0	41	54	-13	-	-	-	-	65	209	H
3.467	44.91	PK-U	33.4	-33.4	0	44.91	-	-	-	-	68.2	-23.29	136	101	V
10.398	51.07	PK-U	37.4	-25.1	0	63.37	-	-	-	-	68.2	-4.83	177	200	V

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

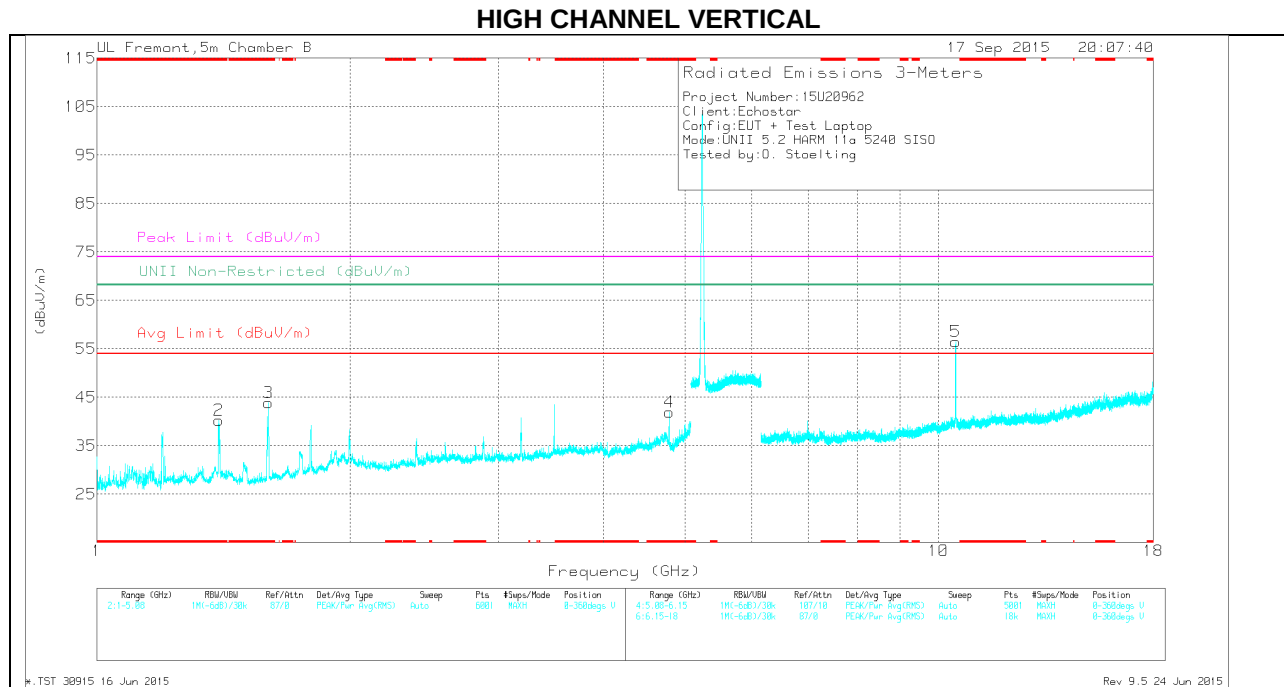
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

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.



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 T345 (dB/m)	Amp/Cbl/Ftr/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	* 1.198	46.47	Pk	28.5	-35.7	0	39.27	-	-	74	-34.73	-	-	0-360	199	H
2	* 1.396	45.49	Pk	29.4	-34.7	0	40.19	-	-	74	-33.81	-	-	0-360	101	V
3	* 1.6	50.22	Pk	28.8	-35.1	0	43.92	-	-	74	-30.08	-	-	0-360	101	V
4	* 4.785	39.09	Pk	34.3	-31.5	0	41.89	-	-	74	-32.11	-	-	0-360	200	V
6	* 15.716	31.2	Pk	40.6	-23.5	0	48.3	-	-	74	-25.7	-	-	0-360	199	H
5	10.479	44.37	Pk	37.4	-25.3	0	56.47	-	-	-	-	68.2	-11.73	0-360	101	V

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

Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.2	54.29	PK-U	28.5	-35.7	0	47.09	-	-	74	-26.91	-	-	256	144	H
* 1.197	32.61	ADR	28.5	-35.6	0	25.51	54	-28.49	-	-	-	-	256	144	H
* 1.394	56	PK-U	29.4	-34.7	0	50.7	-	-	74	-23.3	-	-	15	297	V
* 1.394	33.04	ADR	29.4	-34.7	0	27.74	54	-26.26	-	-	-	-	15	297	V
* 1.598	55.31	PK-U	28.8	-35.2	0	48.91	-	-	74	-25.09	-	-	31	159	V
* 1.599	33.88	ADR	28.8	-35.1	0	27.58	54	-26.42	-	-	-	-	31	159	V
* 4.787	50.67	PK-U	34.3	-31.5	0	53.47	-	-	74	-20.53	-	-	242	270	V
* 4.784	30.89	ADR	34.3	-31.5	0	33.69	54	-20.31	-	-	-	-	242	270	V
* 15.715	34.76	PK-U	40.6	-23.5	0	51.86	-	-	74	-22.14	-	-	198	265	H
* 15.717	23.3	ADR	40.6	-23.5	0	40.4	54	-13.6	-	-	-	-	198	265	H
10.48	50.12	PK-U	37.4	-25.4	0	62.12	-	-	-	-	68.2	-6.08	203	117	V

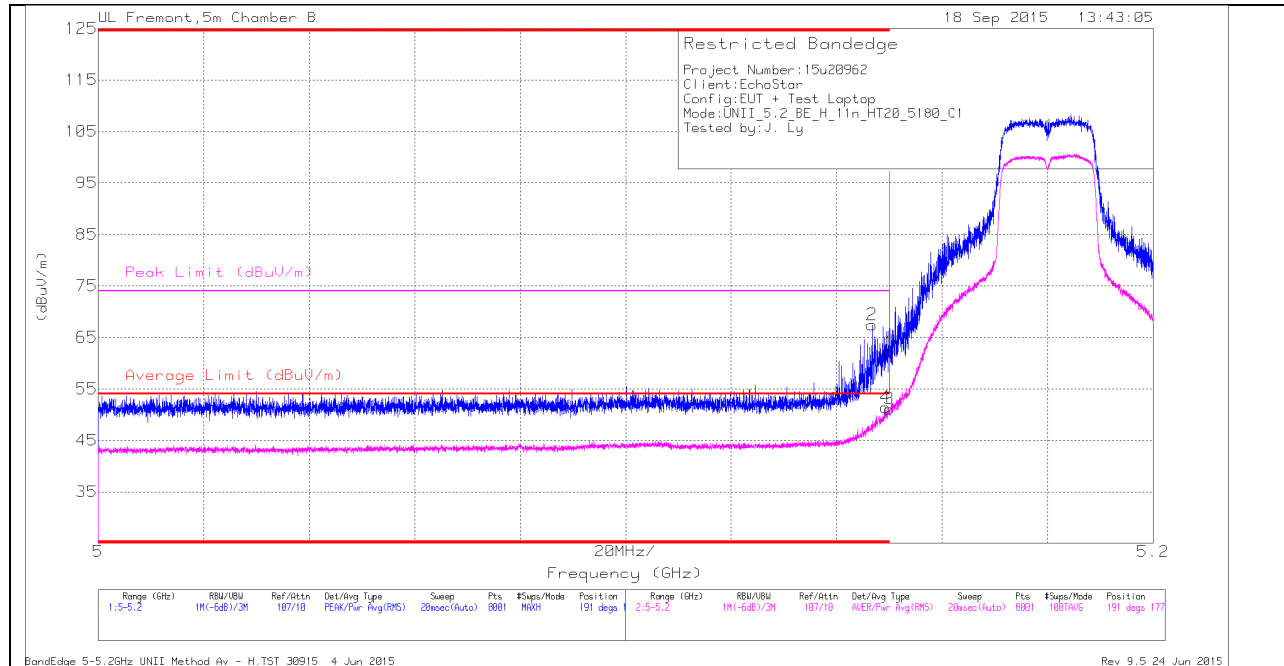
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

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

HORIZONTAL PEAK AND AVERAGE PLOT

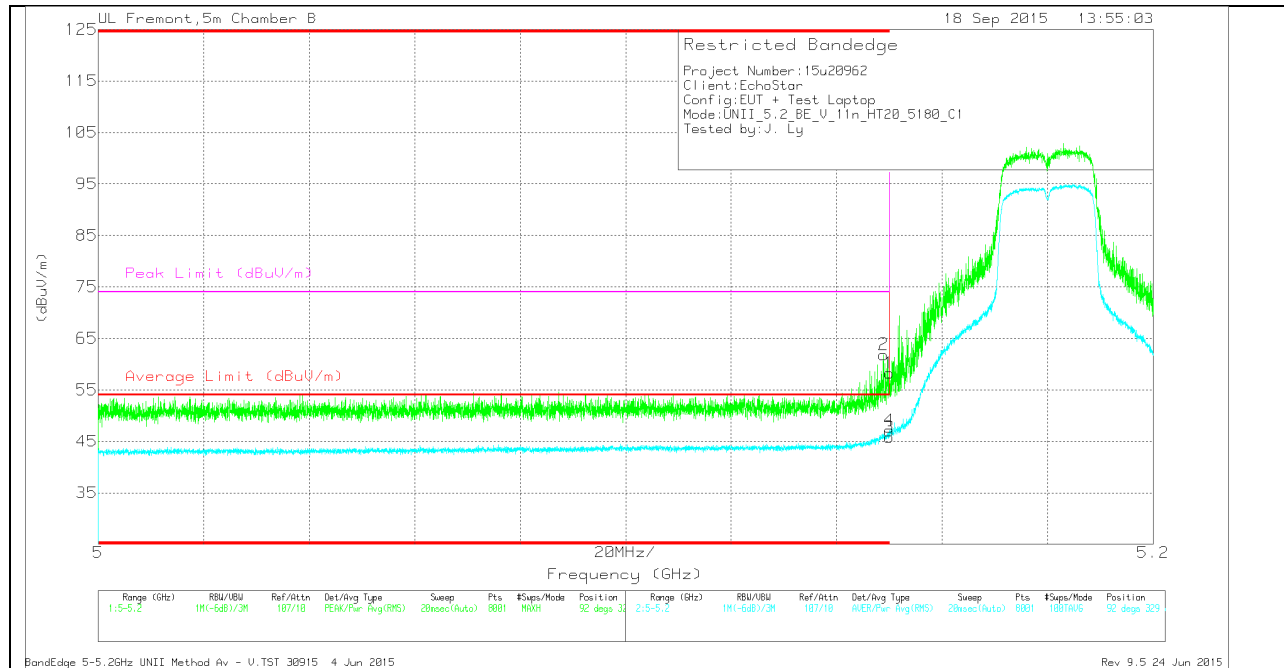


HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.147	55.35	Pk	34.1	-22	0	67.45	-	-	74	-6.55	191	177	H
4	* 5.149	39.35	RMS	34.1	-22	0	51.45	54	-2.55	-	-	191	177	H
1	* 5.15	50.09	PK	34.1	-22	0	62.19	-	-	74	-11.81	191	177	H
3	* 5.15	39.02	RMS	34.1	-22	0	51.12	54	-2.88	-	-	191	177	H

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

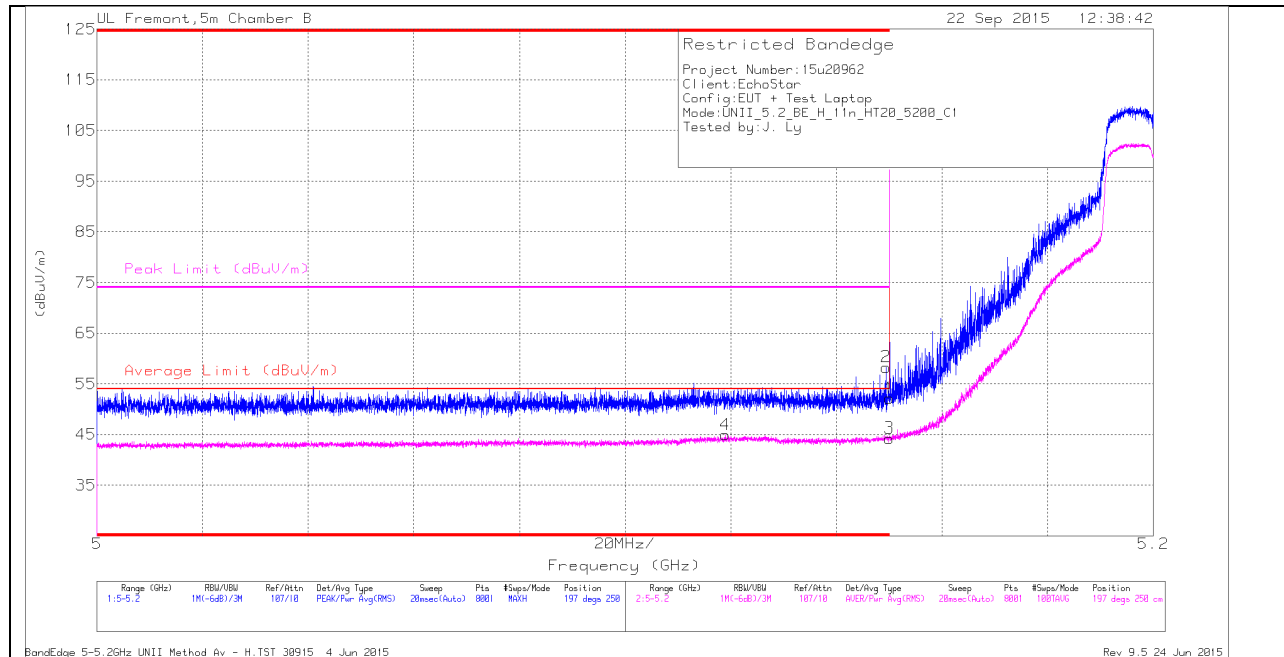
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.149	49.76	Pk	34.1	-22	0	61.86	-	-	74	-12.14	92	329	V
1	* 5.15	46.18	Pk	34.1	-22	0	58.28	-	-	74	-15.72	92	329	V
3	* 5.15	33.7	RMS	34.1	-22	0	45.8	54	-8.2	-	-	92	329	V
4	* 5.15	35	RMS	34.1	-22	0	47.1	54	-6.9	-	-	92	329	V

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

Pk - Peak detector

RMS - RMS detection

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

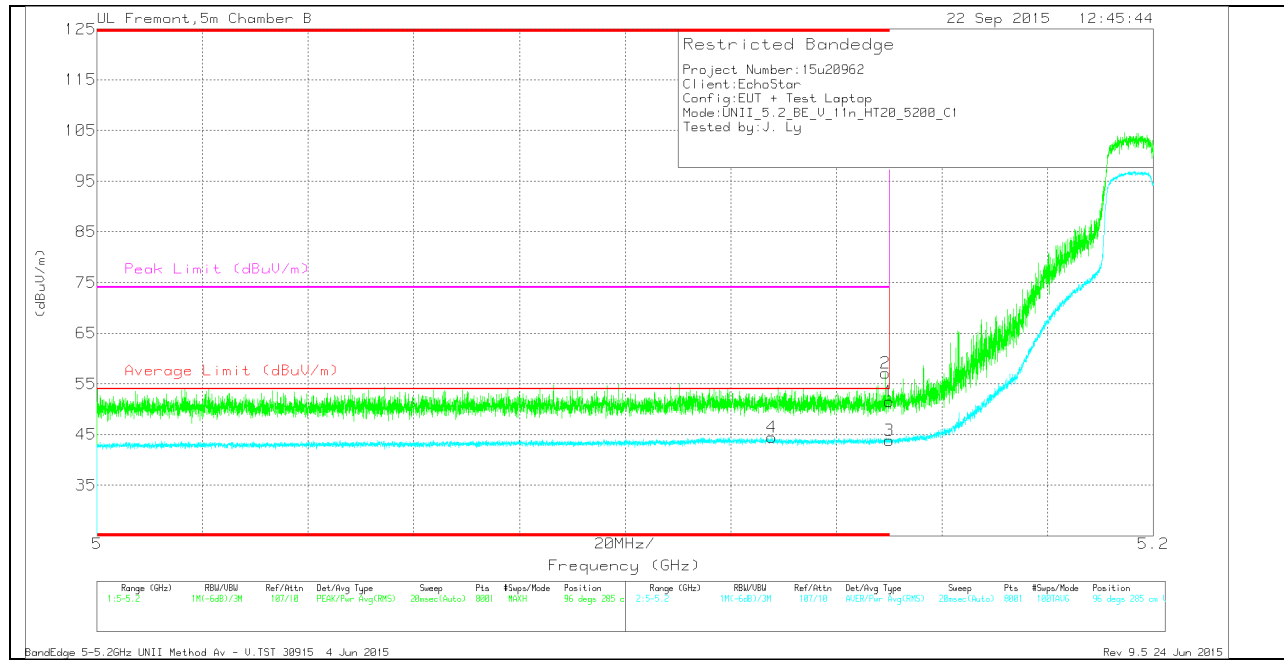
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 5.119	32.99	RMS	34	-22	44.99	54	-9.01	-	-	197	250	H
2	* 5.149	46.2	Pk	34.1	-22	58.3	-	-	74	-15.7	197	250	H
1	* 5.15	40.1	Pk	34.1	-22	52.2	-	-	74	-21.8	197	250	H
3	* 5.15	32.17	RMS	34.1	-22	44.27	54	-9.73	-	-	197	250	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

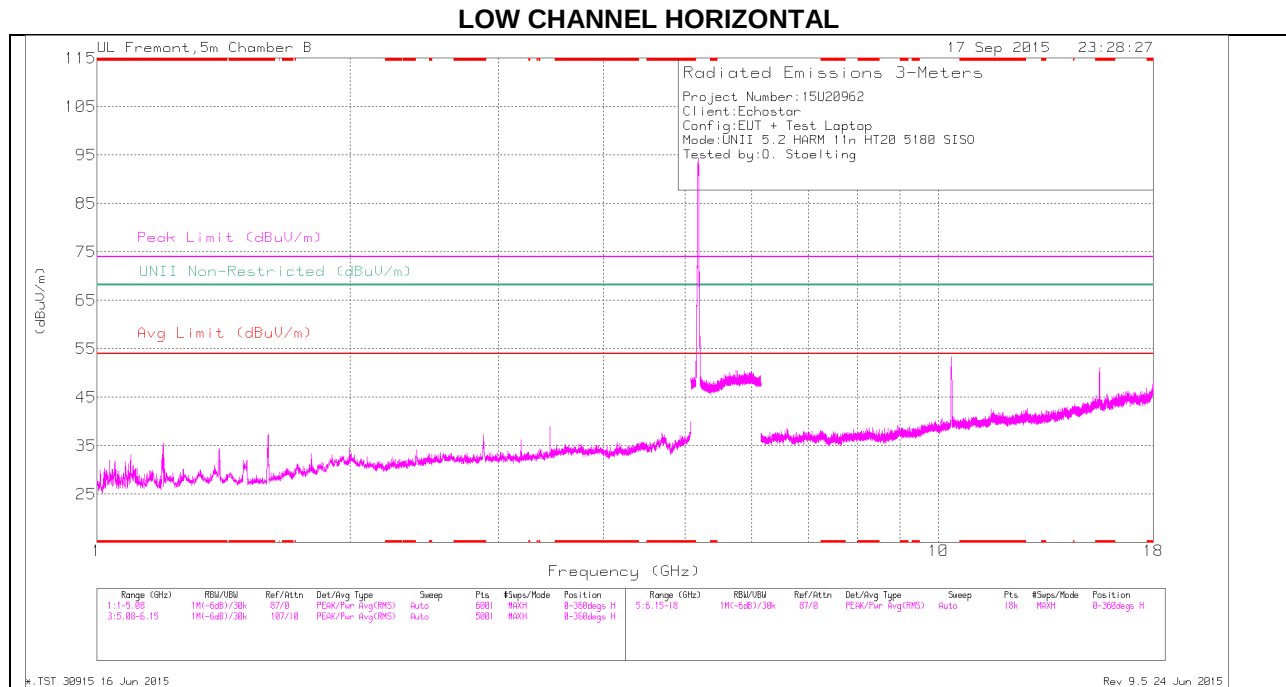
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Filt/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 5.128	32.33	RMS	34.1	-22	44.43	54	-9.57	-	-	96	285	V
2	* 5.149	44.98	Pk	34.1	-22	57.08	-	-	74	-16.92	96	285	V
1	* 5.15	39.46	Pk	34.1	-22	51.56	-	-	74	-22.44	96	285	V
3	* 5.15	31.73	RMS	34.1	-22	43.83	54	-10.17	-	-	96	285	V

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

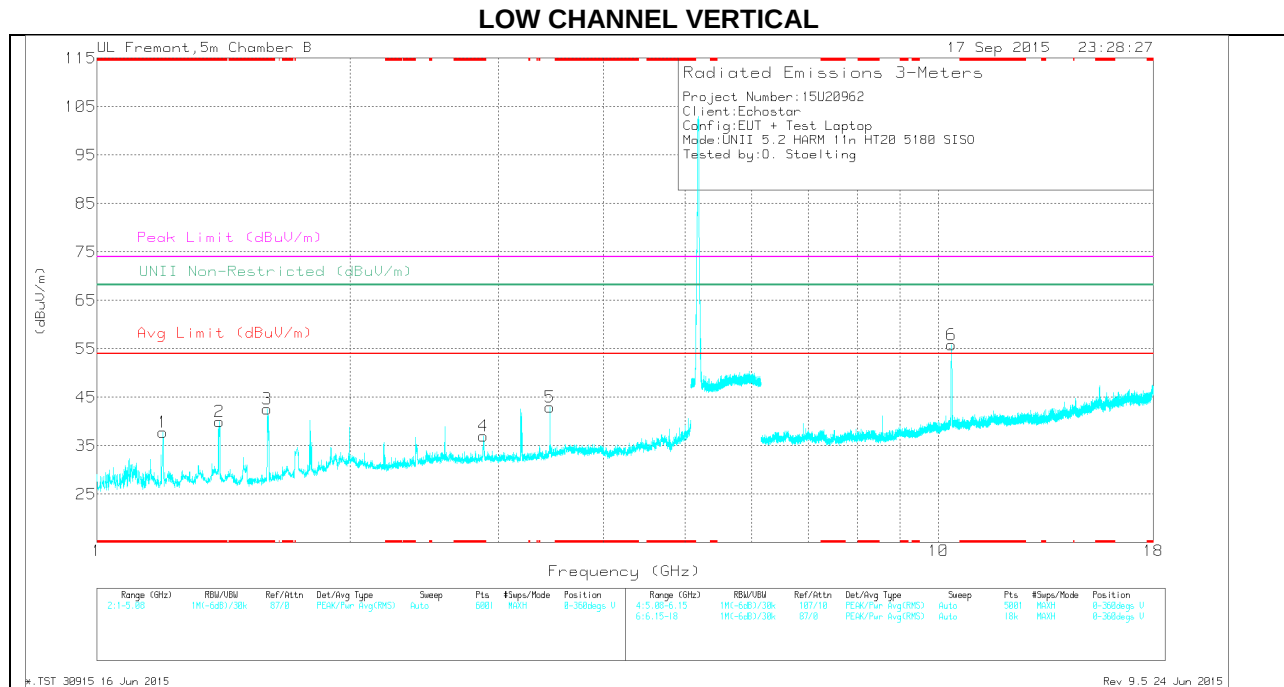
Pk - Peak detector

RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS



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



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 T345 (dB/m)	Amp/Cbl/Ftr/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	* 1.199	45.03	Pk	28.5	-35.7	0	37.83	-	-	74	-36.17	-	-	0-360	101	V
2	* 1.399	45.23	Pk	29.4	-34.7	0	39.93	-	-	74	-34.07	-	-	0-360	101	V
3	* 1.594	49.03	Pk	28.8	-35.3	0	42.53	-	-	74	-31.47	-	-	0-360	101	V
4	* 2.88	37.72	Pk	32.6	-33.3	0	37.02	-	-	74	-36.98	-	-	0-360	200	V
5	3.453	43.25	Pk	33.3	-33.6	0	42.95	-	-	-	-	68.2	-25.25	0-360	101	V
6	10.36	44.02	Pk	37.4	-25.6	0	55.82	-	-	-	-	68.2	-12.38	0-360	199	V

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

Pk - Peak detector

Radiated Emissions

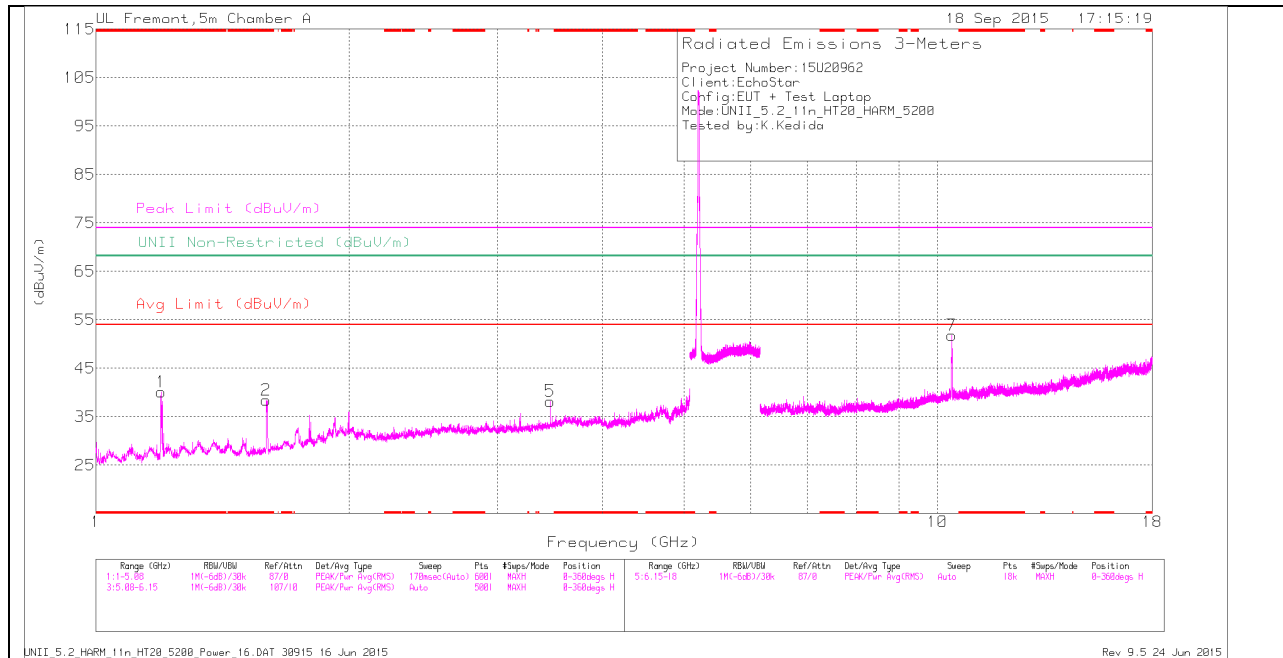
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.2	54.97	PK-U	28.5	-35.7	0	47.77	-	-	74	-26.23	-	-	178	263	V
* 1.2	32.91	ADR	28.5	-35.7	0	25.71	54	-28.29	-	-	-	-	178	263	V
* 1.398	55.71	PK-U	29.4	-34.7	0	50.41	-	-	74	-23.59	-	-	18	297	V
* 1.398	33.43	ADR	29.4	-34.7	0	28.13	54	-25.87	-	-	-	-	18	297	V
* 1.593	55.48	PK-U	28.8	-35.3	0	48.98	-	-	74	-25.02	-	-	16	182	V
* 1.594	34.54	ADR	28.8	-35.3	0	28.04	54	-25.96	-	-	-	-	16	182	V
* 2.88	58.03	PK-U	32.6	-33.3	0	57.33	-	-	74	-16.67	-	-	176	324	V
* 2.88	34.4	ADR	32.6	-33.3	0	33.7	54	-20.3	-	-	-	-	176	324	V
3.453	44.66	PK-U	33.3	-33.6	0	44.36	-	-	-	-	68.2	-23.84	131	154	V
10.359	51.83	PK-U	37.4	-25.6	0	63.63	-	-	-	-	68.2	-4.57	267	378	V

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

PK-U - U-NII: Maximum Peak

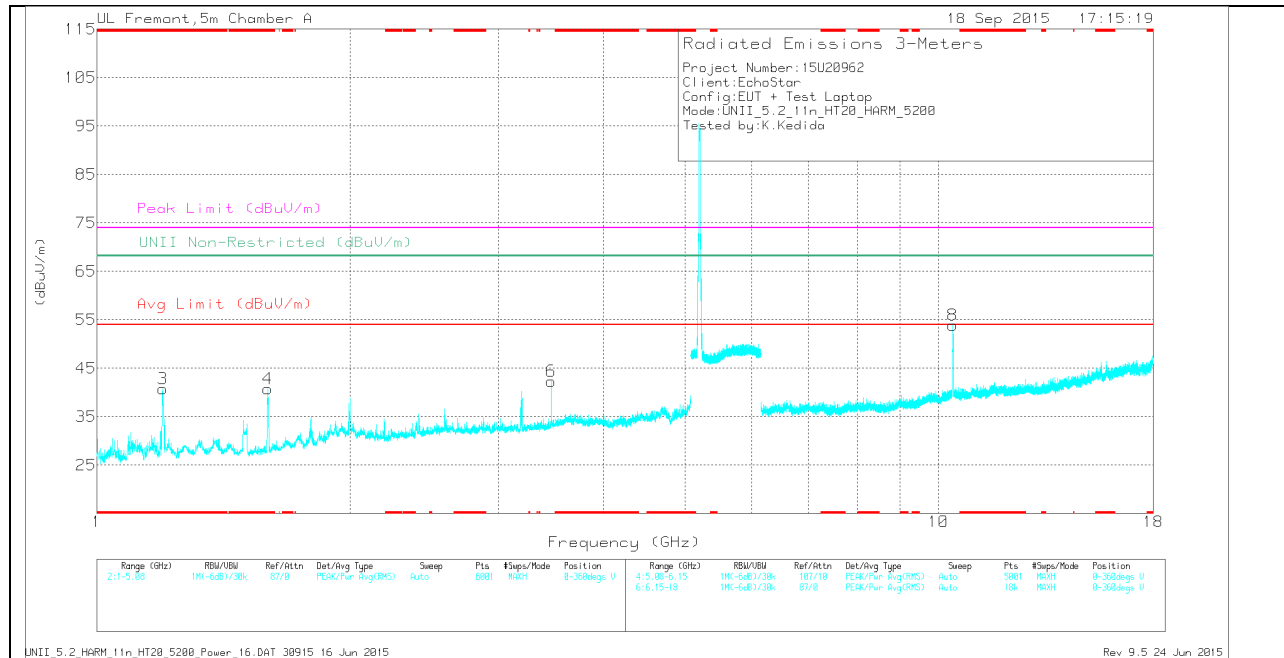
ADR - U-NII AD primary method, RMS average

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 T34S (dB/m)	Amp/Cbl/Filr/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	* 1.197	47.18	Pk	28.5	-35.6	0	40.08	-	-	74	-33.92	-	-	0-360	199	H
2	* 1.593	44.94	Pk	28.8	-35.3	0	38.44	-	-	74	-35.56	-	-	0-360	101	H
3	* 1.198	47.91	Pk	28.5	-35.7	0	40.71	-	-	74	-33.29	-	-	0-360	101	V
4	* 1.597	47.17	Pk	28.8	-35.2	0	40.77	-	-	74	-33.23	-	-	0-360	101	V
5	3.466	38.33	Pk	33.4	-33.5	0	38.23	-	-	-	-	68.2	-29.97	0-360	199	H
6	3.466	42.45	Pk	33.4	-33.5	0	42.35	-	-	-	-	68.2	-25.85	0-360	199	V
8	10.398	41.61	Pk	37.4	-25.1	0	53.91	-	-	-	-	68.2	-14.29	0-360	101	V
7	10.399	39.64	Pk	37.4	-25.2	0	51.84	-	-	-	-	68.2	-16.36	0-360	101	H

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

Pk - Peak detector

Radiated Emissions

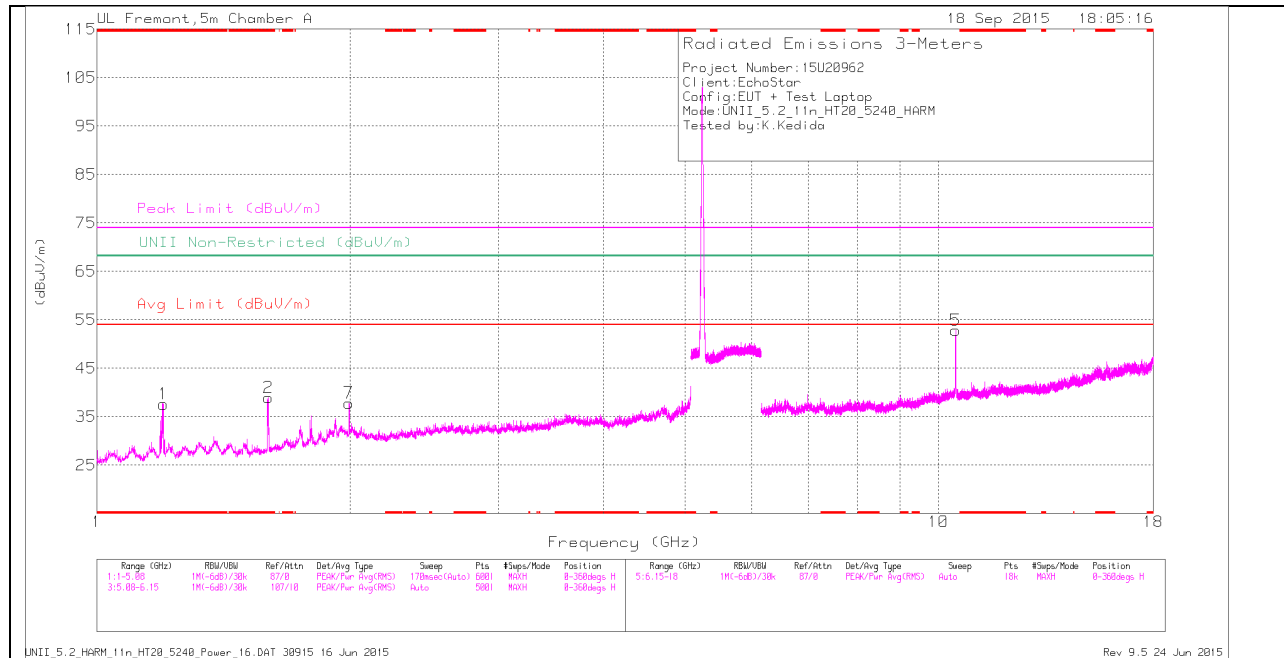
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T34S (dB/m)	Amp/Cbl/Filr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.197	55.01	PK-U	28.5	-35.6	0	47.91	-	-	74	-26.09	-	-	21	268	H
* 1.196	32.7	ADR	28.4	-35.6	0	25.5	54	-28.5	-	-	-	-	21	268	H
* 1.595	53.95	PK-U	28.8	-35.2	0	47.55	-	-	74	-26.45	-	-	150	118	H
* 1.593	33.86	ADR	28.8	-35.3	0	27.36	54	-26.64	-	-	-	-	150	118	H
* 1.198	58.07	PK-U	28.5	-35.7	0	50.87	-	-	74	-23.13	-	-	278	102	V
* 1.2	37.65	ADR	28.5	-35.7	0	30.45	54	-23.55	-	-	-	-	278	102	V
* 1.599	53.29	PK-U	28.8	-35.1	0	46.99	-	-	74	-27.01	-	-	278	102	V
* 1.598	35.56	ADR	28.8	-35.2	0	29.16	54	-24.84	-	-	-	-	278	102	V
10.399	51.91	PK-U	37.4	-25.2	0	64.11	-	-	-	-	68.2	-4.09	34	297	H
10.399	51.47	PK-U	37.4	-25.2	0	63.67	-	-	-	-	68.2	-4.53	34	297	H

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

PK-U - U-NII: Maximum Peak

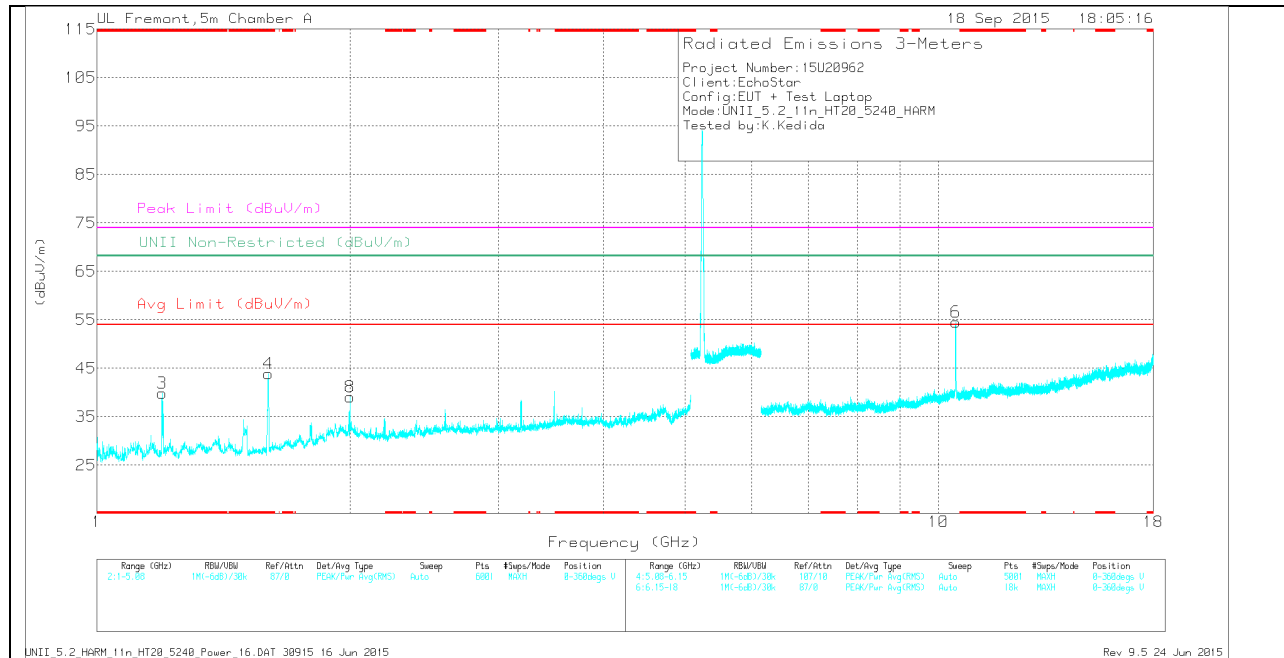
ADR - U-NII AD primary method, RMS average

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 T345 (dB/m)	Amp/Cbl/Ftr/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	* 1.2	44.79	Pk	28.5	-35.7	0	37.59	-	-	74	-36.41	-	-	0-360	200	H
2	* 1.599	45.27	Pk	28.8	-35.1	0	38.97	-	-	74	-35.03	-	-	0-360	200	H
3	* 1.195	47.07	Pk	28.4	-35.6	0	39.87	-	-	74	-34.13	-	-	0-360	101	V
4	* 1.598	50.33	Pk	28.8	-35.2	0	43.93	-	-	74	-30.07	-	-	0-360	101	V
7	1.993	39.44	Pk	32.3	-33.9	0	37.84	-	-	-	-	68.2	-30.36	0-360	101	H
8	1.998	40.78	Pk	32.3	-34	0	39.08	-	-	-	-	68.2	-29.12	0-360	101	V
5	10.479	40.72	Pk	37.4	-25.3	0	52.82	-	-	-	-	68.2	-15.38	0-360	199	H
6	10.482	42.48	Pk	37.4	-25.4	0	54.48	-	-	-	-	68.2	-13.72	0-360	199	V

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

Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Ftr/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
* 1.196	49.66	PK-U	28.4	-35.6	0	42.46	-	-	74	-31.54	-	-	109	102	V
* 1.195	32.38	ADR	28.4	-35.6	0	25.18	54	-28.82	-	-	-	-	109	102	V
* 1.598	55.88	PK-U	28.8	-35.2	0	49.48	-	-	74	-24.52	-	-	176	113	V
* 1.6	34.29	ADR	28.8	-35.1	0	27.99	54	-26.01	-	-	-	-	176	113	V
10.48	46.31	PK-U	37.4	-25.4	0	58.31	-	-	-	-	68.2	-9.89	220	231	H
10.481	36.67	PK-U	37.4	-25.4	0	48.67	-	-	-	-	68.2	-19.53	220	231	V

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

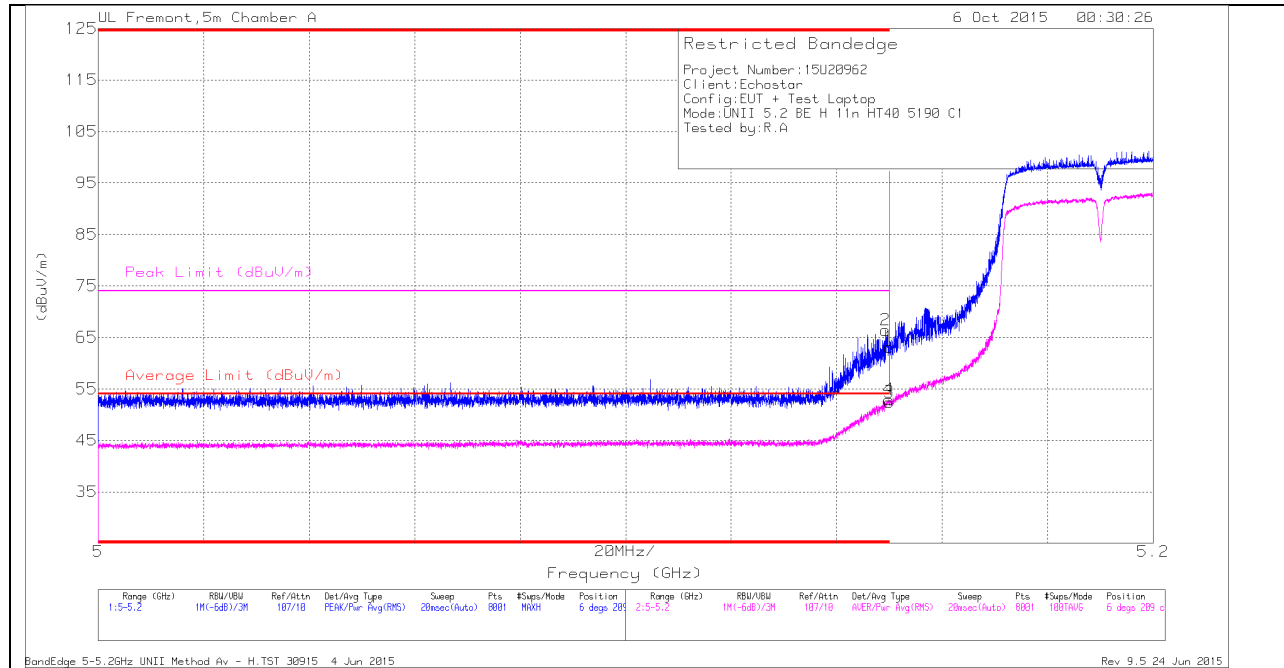
Av - Average detection

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

12.1.3. 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

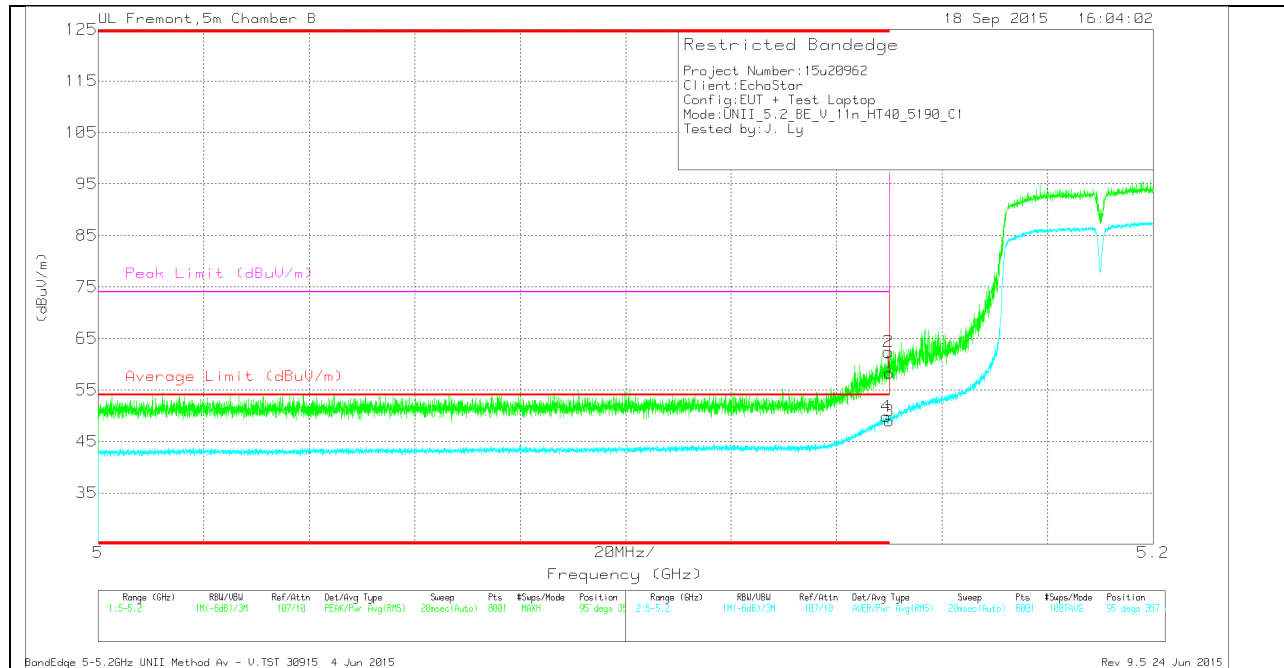
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Ftr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	49.61	Pk	34.2	-20.7	63.11	-	-	74	-10.89	6	209	H
2	* 5.149	52.91	Pk	34.2	-20.7	66.41	-	-	74	-7.59	6	209	H
3	* 5.15	38.92	RMS	34.2	-20.7	52.42	54	-1.58	-	-	6	209	H
4	* 5.15	39.44	RMS	34.2	-20.7	52.94	54	-1.06	-	-	6	209	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

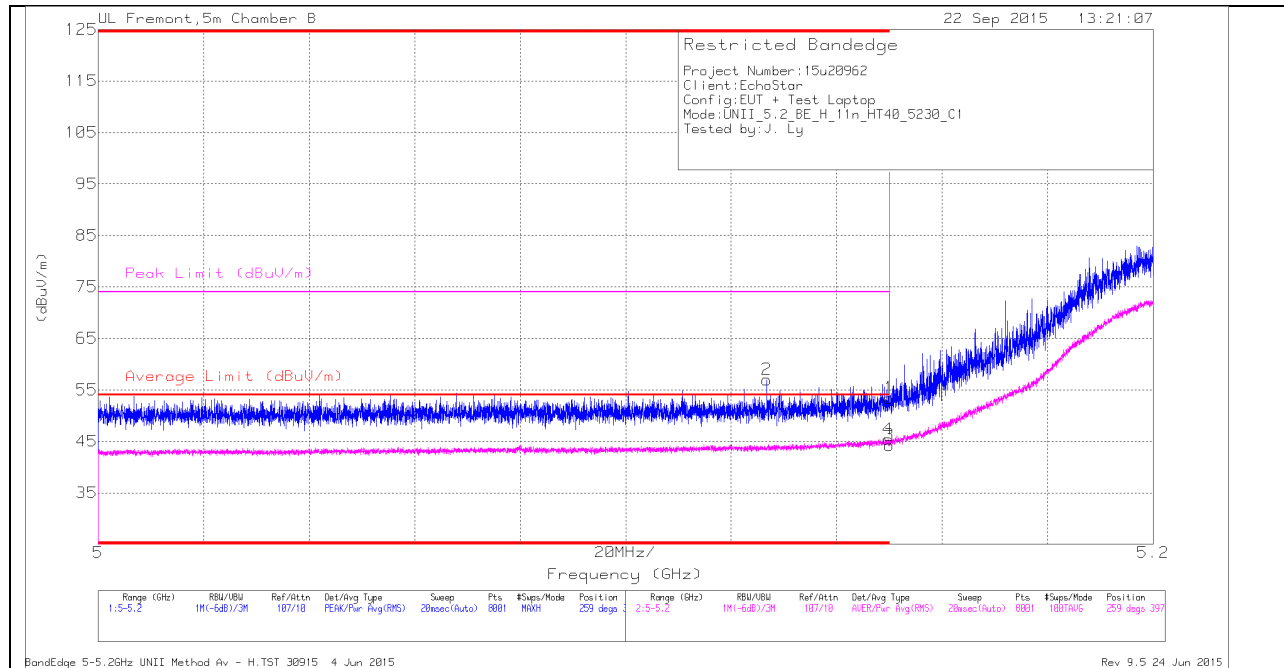
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 5.149	37.72	RMS	34.1	-22	0	49.82	54	-4.18	-	-	95	357	V
1	* 5.15	46.22	Pk	34.1	-22	0	58.32	-	-	74	-15.68	95	357	V
2	* 5.15	50.28	Pk	34.1	-22	0	62.38	-	-	74	-11.62	95	357	V
3	* 5.15	36.87	RMS	34.1	-22	0	48.97	54	-5.03	-	-	95	357	V

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

Pk - Peak detector

RMS - RMS detection

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

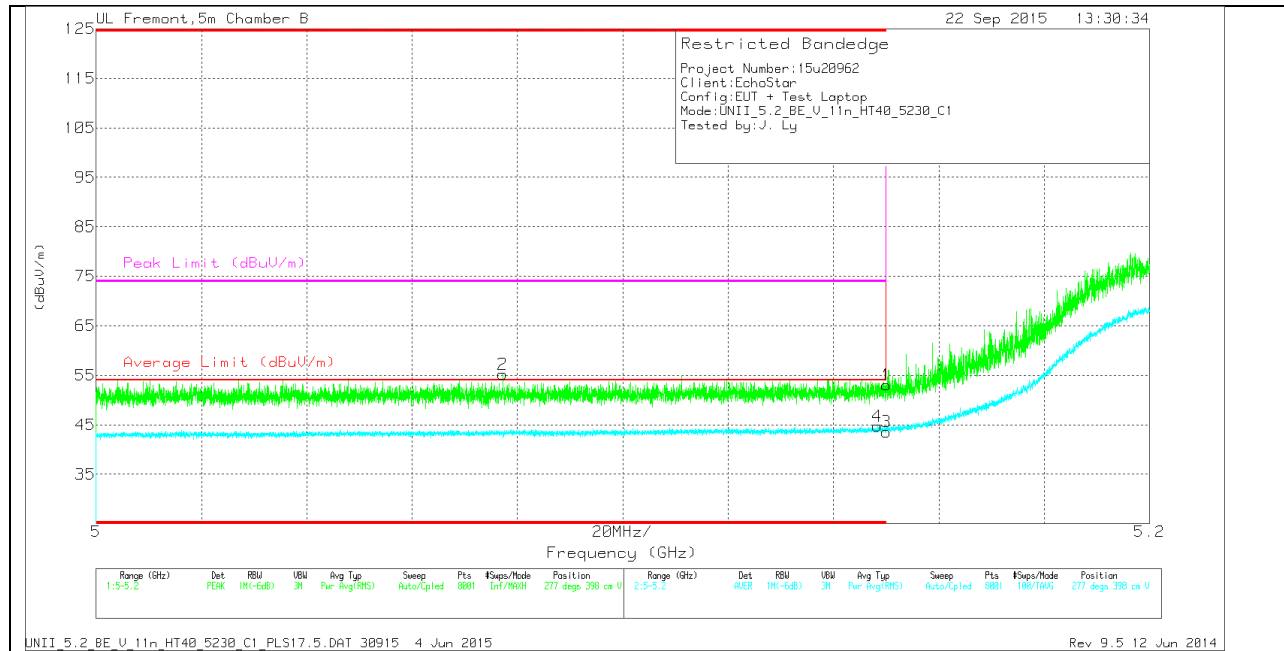
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	41.34	Pk	34.1	-22	53.44	-	-	74	-20.56	259	397	H
2	* 5.127	44.89	Pk	34.1	-22	56.99	-	-	74	-17.01	259	397	H
3	* 5.15	32.17	RMS	34.1	-22	44.27	54	-9.73	-	-	259	397	H
4	* 5.15	33.35	RMS	34.1	-22	45.45	54	-8.55	-	-	259	397	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Filt/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	40.92	PK	34.1	-22	53.02	-	-	74	-20.98	277	398	V
2	* 5.077	43.41	PK	34	-22.2	55.21	-	-	74	-18.79	277	398	V
3	* 5.15	31.47	RMS	34.1	-22	43.57	54	-10.43	-	-	277	398	V
4	* 5.148	32.63	RMS	34.1	-22	44.73	54	-9.27	-	-	277	398	V

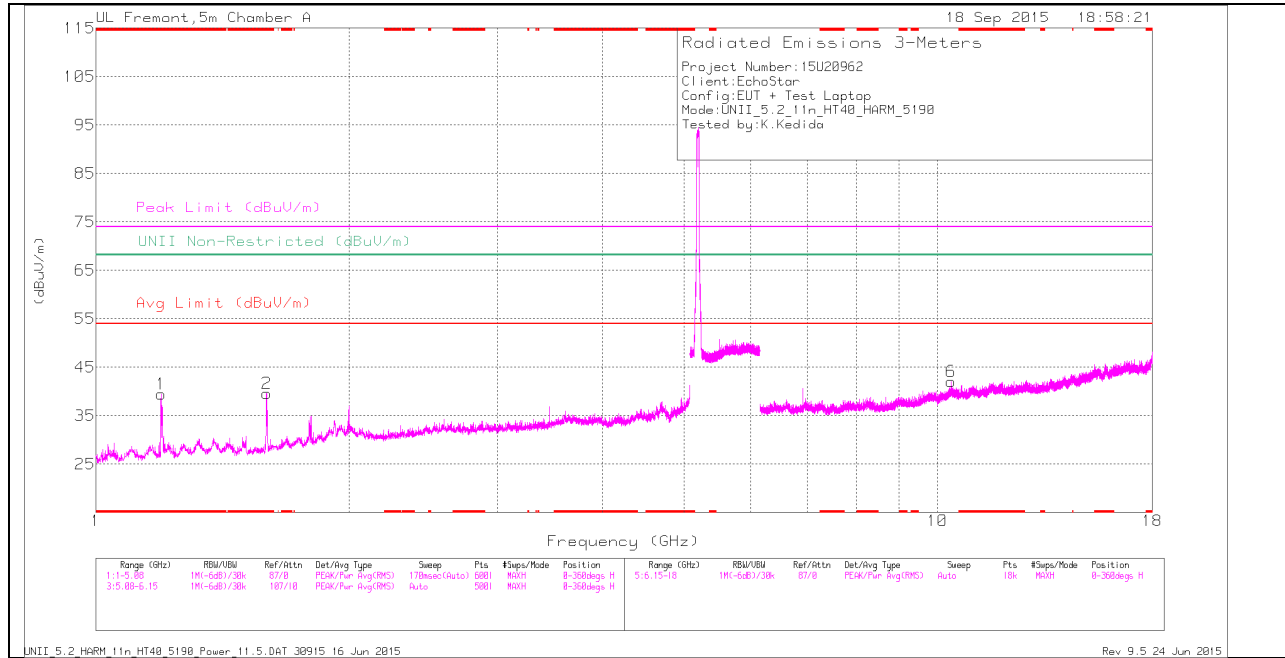
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

RMS - RMS detection

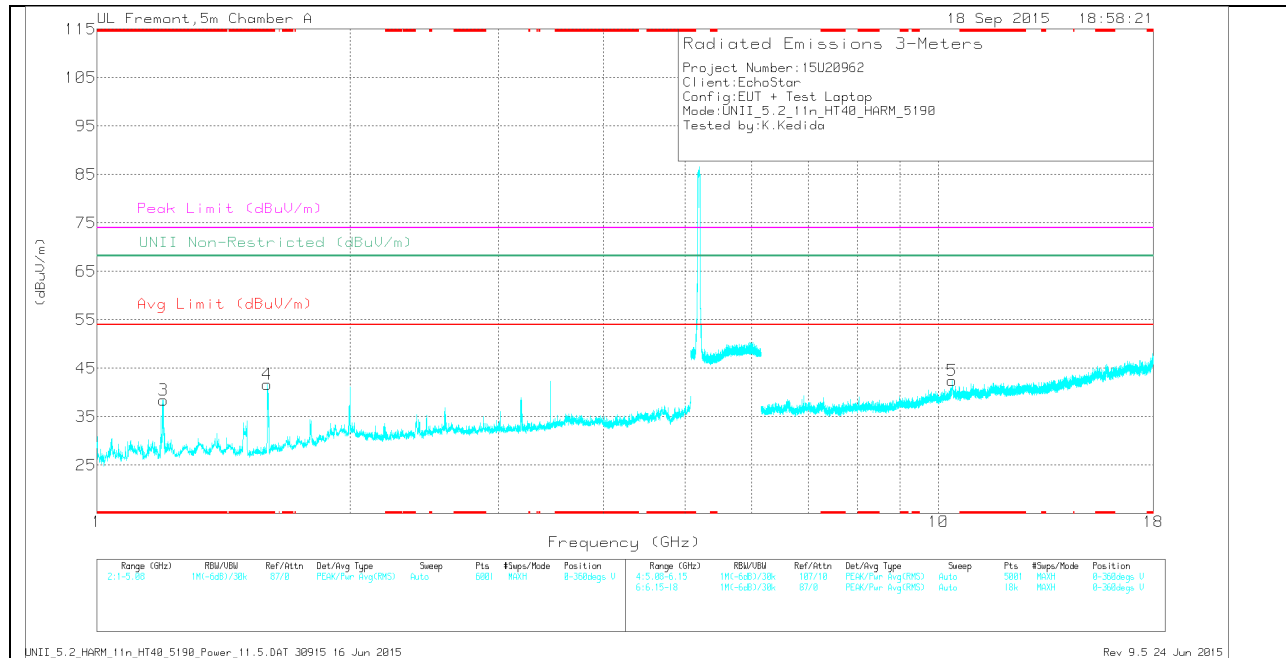
HARMONICS AND SPURIOUS EMISSIONS

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 T345 (dB/m)	Amp/Cbl/Ftr/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	* 1.195	46.7	Pk	28.4	-35.6	0	39.5	-	-	74	-34.5	-	-	0-360	101	H
2	* 1.595	46.04	Pk	28.8	-35.2	0	39.64	-	-	74	-34.36	-	-	0-360	199	H
3	* 1.2	45.61	Pk	28.5	-35.7	0	38.41	-	-	74	-35.59	-	-	0-360	101	V
4	* 1.594	48.07	Pk	28.8	-35.2	0	41.67	-	-	74	-32.33	-	-	0-360	101	V
6	10.38	30.02	Pk	37.4	-25.4	0	42.02	-	-	-	-	68.2	-26.18	0-360	101	H
5	10.381	30.5	Pk	37.4	-25.4	0	42.5	-	-	-	-	68.2	-25.7	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 T345 (dB/m)	Amp/Cbl/Ftr/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
* 1.195	49.93	PK-U	28.4	-35.6	0	42.73	-	-	74	-31.27	-	-	1	101	H
* 1.197	32.12	ADR	28.5	-35.6	0	25.02	54	-28.98	-	-	-	-	1	101	H
* 1.595	48.71	PK-U	28.8	-35.2	0	42.31	-	-	74	-31.69	-	-	1	199	H
* 1.596	32.84	ADR	28.8	-35.2	0	26.44	54	-27.56	-	-	-	-	1	199	H
* 1.2	56.03	PK-U	28.5	-35.7	0	48.83	-	-	74	-25.17	-	-	322	356	V
* 1.199	33.27	ADR	28.5	-35.7	0	26.07	54	-27.93	-	-	-	-	322	356	V
* 1.595	47.52	PK-U	28.8	-35.2	0	41.12	-	-	74	-32.88	-	-	322	102	V
* 1.595	31.94	ADR	28.8	-35.2	0	25.54	54	-28.46	-	-	-	-	322	102	V
10.38	36.36	PK-U	37.4	-25.4	0	48.36	-	-	-	-	68.2	-19.84	80	331	H
10.381	36.04	PK-U	37.4	-25.3	0	48.14	-	-	-	-	68.2	-20.06	80	331	V

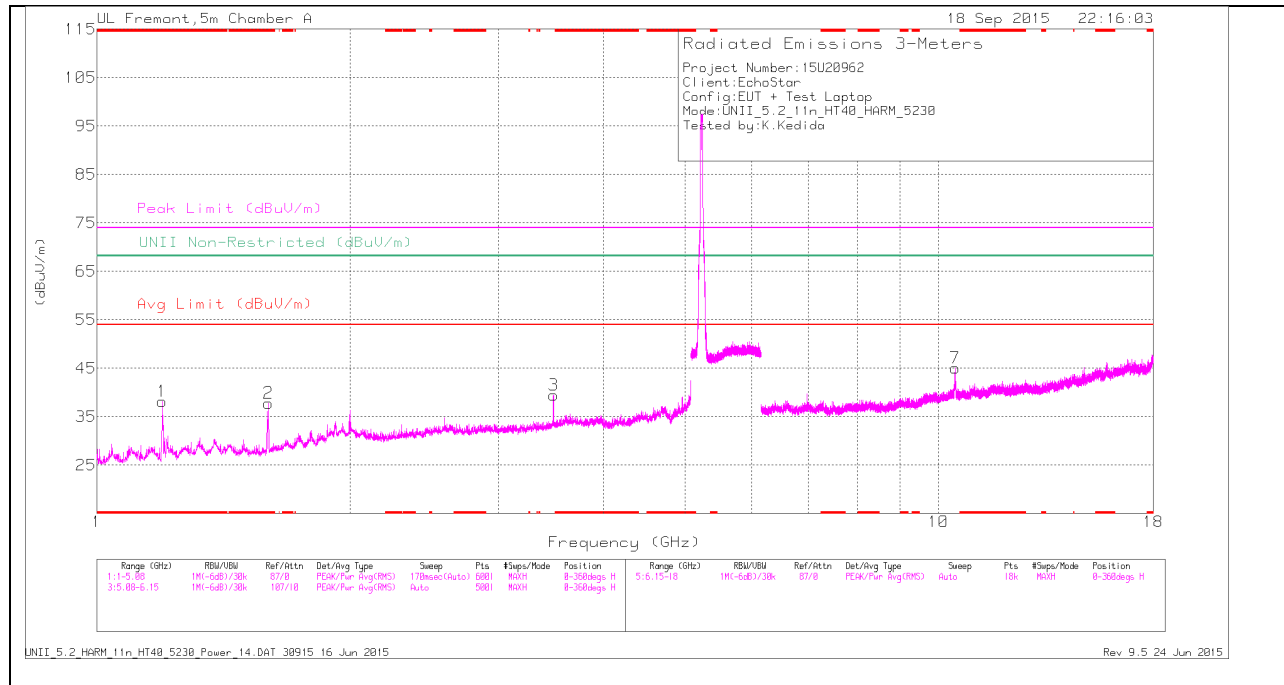
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Av - Average detection

PK-U - U-NII: Maximum Peak

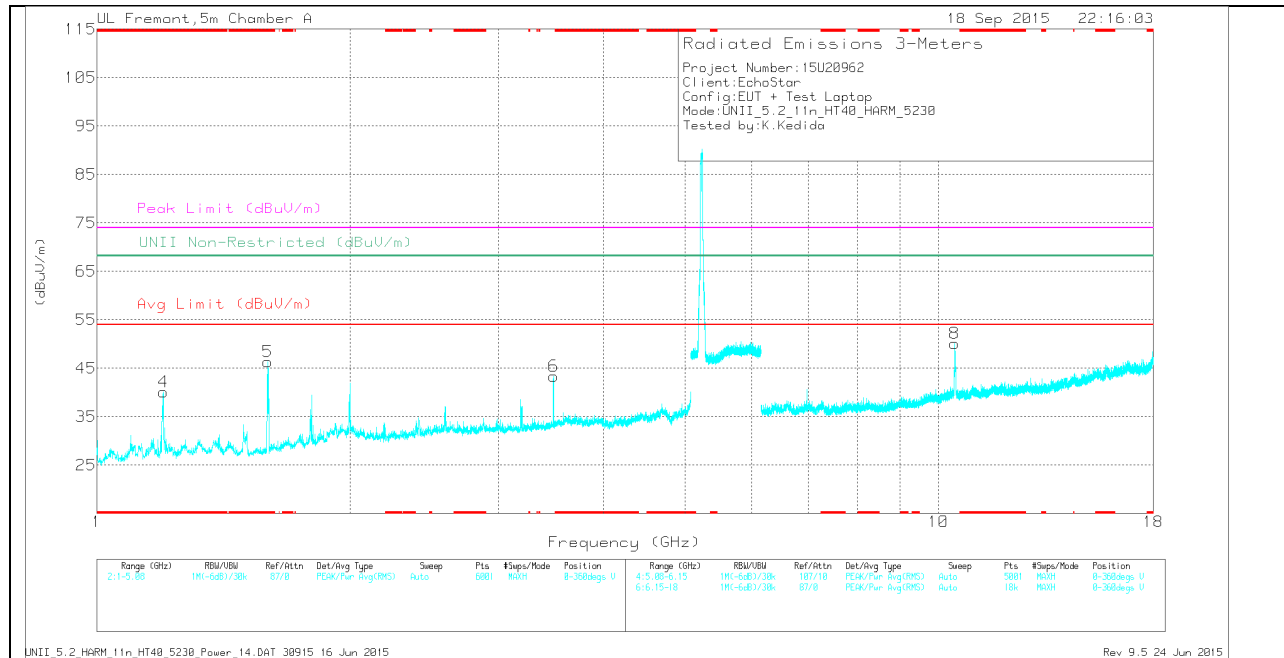
ADR - U-NII AD primary method, RMS average

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 T345 (dB/m)	Amp/Cbl/Ftr /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	* 1.196	45.32	Pk	28.4	-35.6	38.12	-	-	74	-35.88	-	-	0-360	199	H
2	* 1.599	44.14	Pk	28.8	-35.1	37.84	-	-	74	-36.16	-	-	0-360	101	H
4	* 1.199	47.35	Pk	28.5	-35.7	40.15	-	-	74	-33.85	-	-	0-360	199	V
5	* 1.597	52.79	Pk	28.8	-35.2	46.39	-	-	74	-27.61	-	-	0-360	101	V
3	3.487	39.11	Pk	33.5	-33.1	39.51	-	-	-	-	68.2	-28.69	0-360	199	H
6	3.487	42.98	Pk	33.5	-33.1	43.38	-	-	-	-	68.2	-24.82	0-360	199	V
8	10.46	37.77	Pk	37.4	-25.1	50.07	-	-	-	-	68.2	-18.13	0-360	101	V
7	10.462	32.77	Pk	37.4	-25.1	45.07	-	-	-	-	68.2	-23.13	0-360	199	H

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

Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AFT345 (dB/m)	Amp/Cbl/Ftr /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
* 1.195	49.91	PK-U	28.4	-35.6	42.71	-	-	74	-31.29	-	-	167	200	H
* 1.194	29.89	VA1T	28.4	-35.6	22.69	54	-31.31	-	-	-	-	167	200	H
* 1.598	30.25	VA1T	28.8	-35.2	23.85	54	-30.15	-	-	-	-	167	102	H
* 1.598	43.32	PK-U	28.8	-35.2	36.92	-	-	74	-37.08	-	-	167	102	H
* 1.596	46.73	PK-U	28.8	-35.2	40.33	-	-	74	-33.67	-	-	167	102	V
* 1.595	32.17	ADR	28.8	-35.2	25.77	54	-28.23	-	-	-	-	167	102	V
10.46	34.86	PK-U	37.4	-25.1	47.16	-	-	-	-	68.2	-21.04	220	266	V
10.461	43.9	PK-U	37.4	-25.1	56.2	-	-	-	-	68.2	-12	220	266	H

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

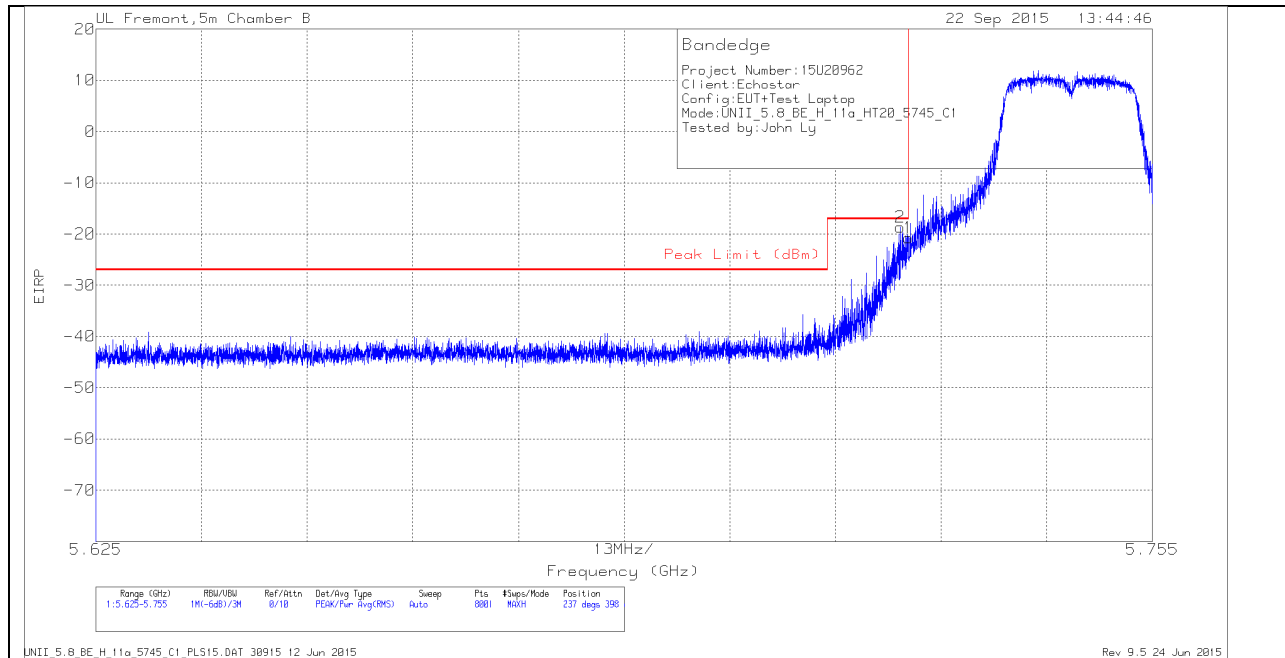
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

12.2. 5.8 GHz

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

HORIZONTAL PEAK PLOT

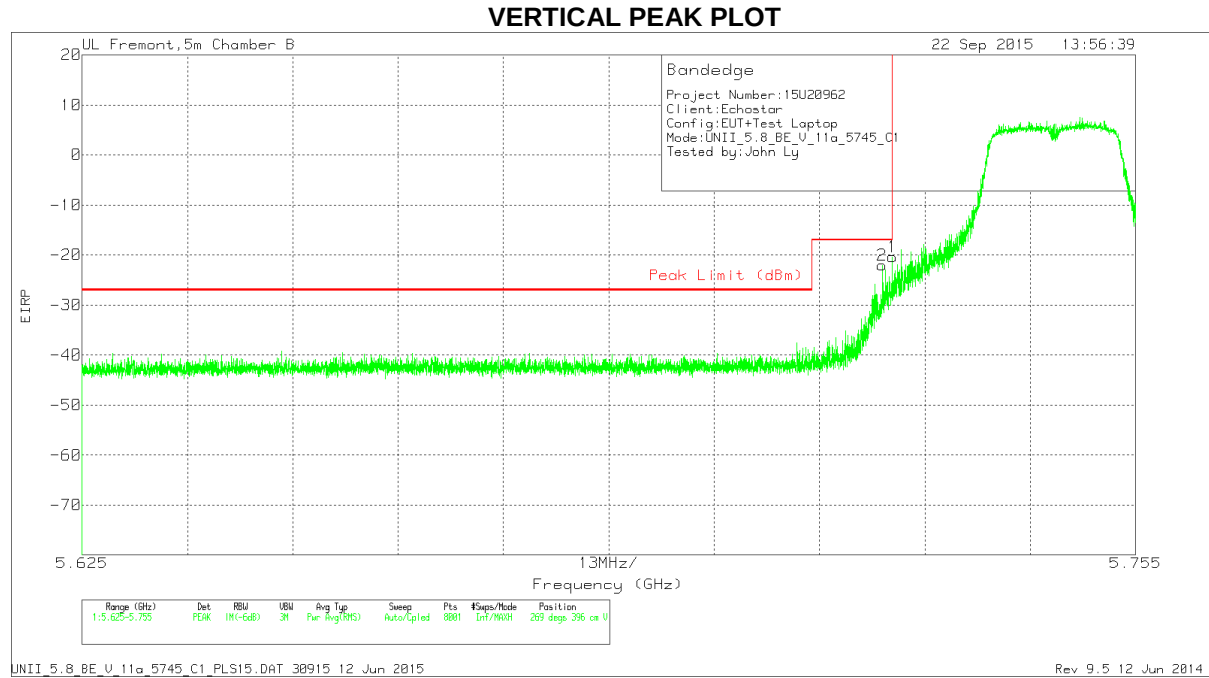


CH 149 HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (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
2	5.724	-43.72	Pk	35	-21.7	11.8	-18.62	-17	-1.62	237	398	H
1	5.725	-45.83	Pk	35	-21.7	11.8	-20.73	-17	-3.73	237	398	H

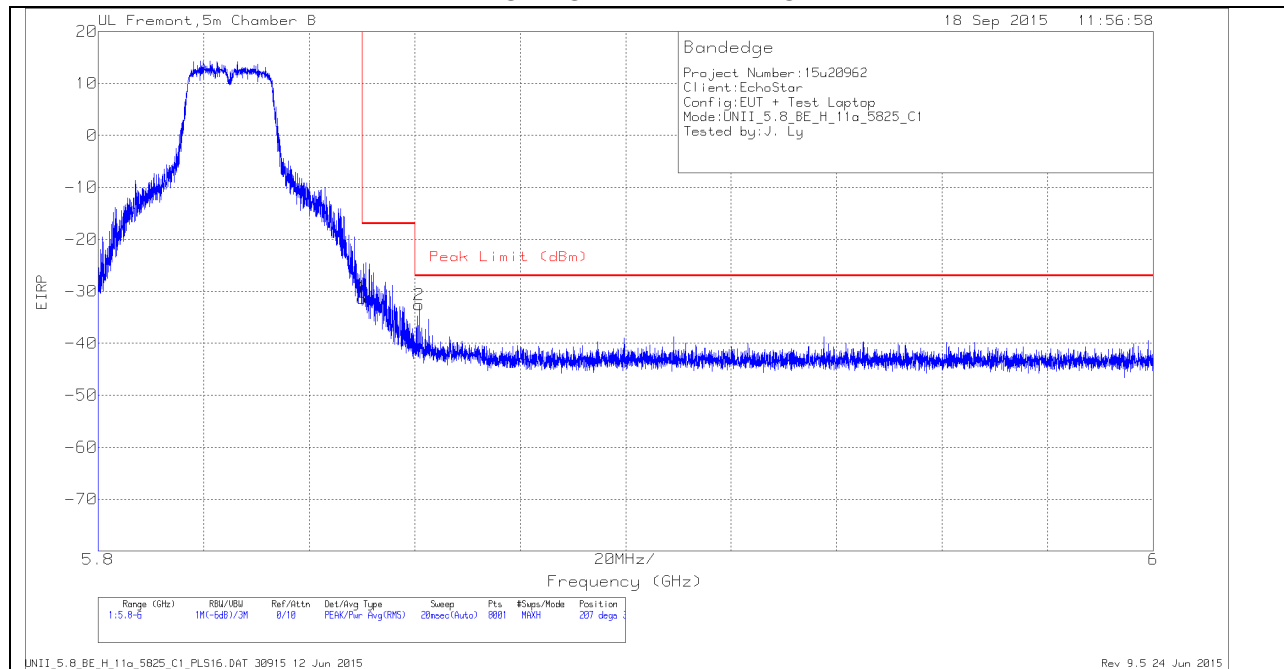
Pk - Peak detector

**CH 149 VERTICAL DATA**

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (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
2	5.724	-47.11	PK	35	-21.7	11.8	-22.01	-17	-5.01	269	396	V
1	5.725	-45.47	PK	35	-21.7	11.8	-20.37	-17	-3.37	269	396	V

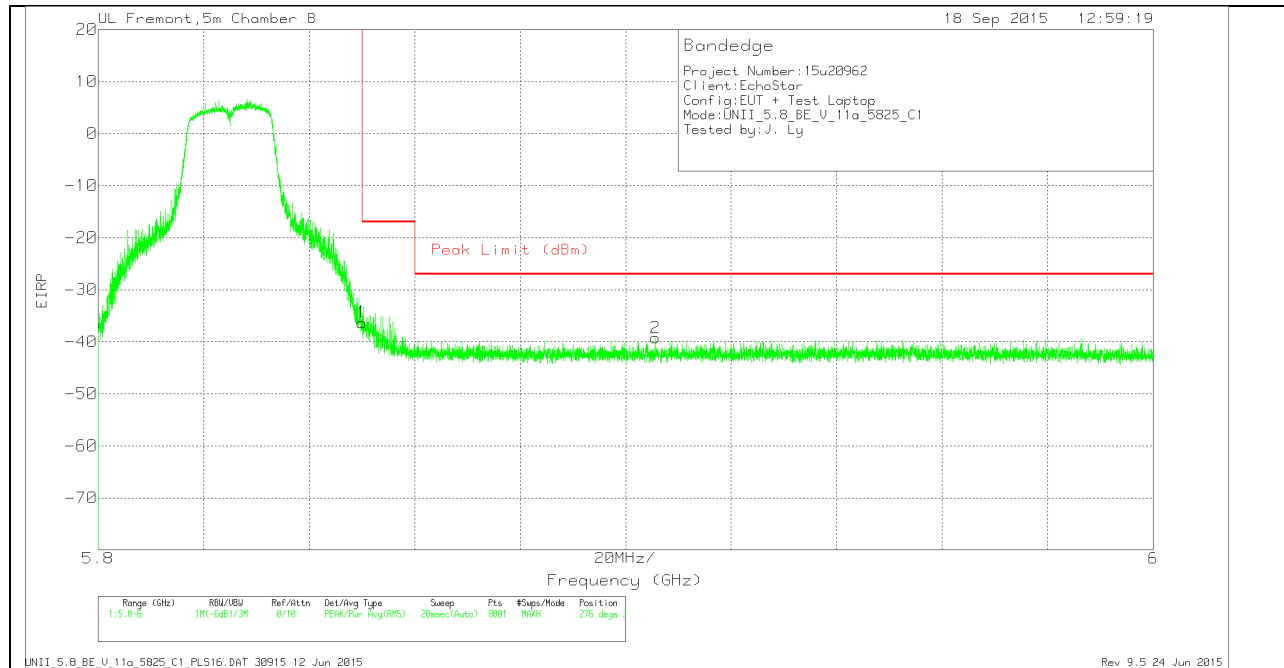
PK - Peak detector

AUTHORIZED BANDEDGE (HIGH CHANNEL)**HORIZONTAL PEAK PLOT****CH 165 HORIZONTAL DATA****Trace Markers**

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AFT345 (dB/m)	Amp/Cbl/ Fitr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-56.94	Pk	35.4	-21.6	11.8	0	-31.34	-17	-14.34	207	311	H
2	5.861	-58.22	Pk	35.4	-21.6	11.8	0	-32.62	-27	-5.62	207	311	H

Pk - Peak detector

VERTICAL PEAK PLOT



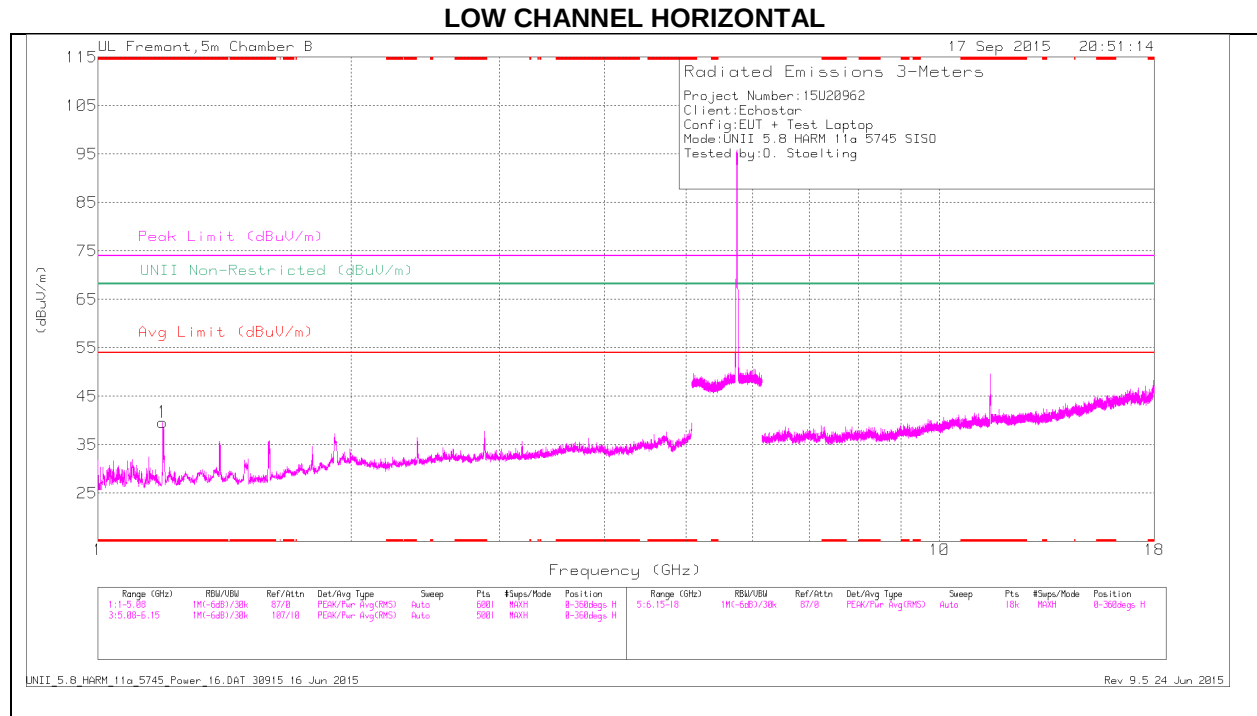
CH 165 HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (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	-61.92	Pk	35.4	-21.6	11.8	-36.32	-17	-19.32	276	382	V
2	5.906	-64.93	Pk	35.5	-21.6	11.8	-39.23	-27	-12.23	276	382	V

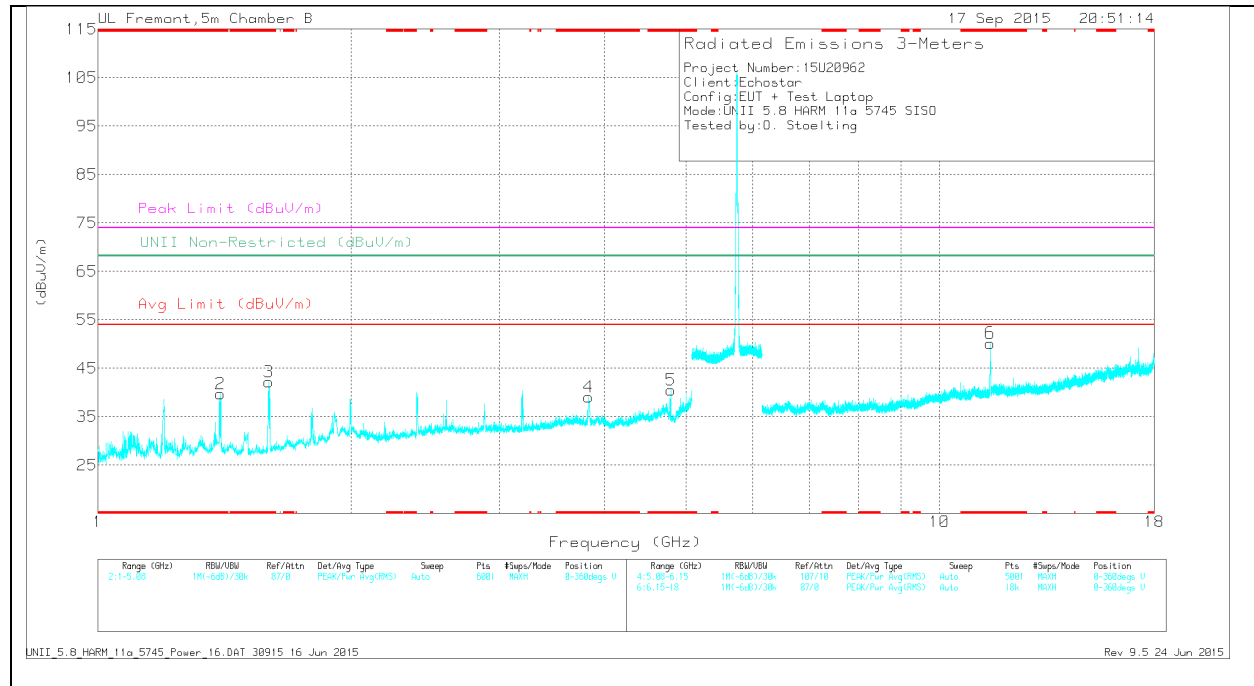
Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS



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 T345 (dB/m)	Amp/Cbl/Ftr/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	* 1.194	46.86	Pk	28.4	-35.6	0	39.66	-	-	74	-34.34	-	-	0-360	199	H
2	* 1.399	45.03	Pk	29.4	-34.7	0	39.73	-	-	74	-34.27	-	-	0-360	199	V
3	* 1.597	48.57	Pk	28.8	-35.2	0	42.17	-	-	74	-31.83	-	-	0-360	101	V
4	* 3.83	38.64	Pk	33.4	-33	0	39.04	-	-	74	-34.96	-	-	0-360	199	V
5	* 4.795	37.86	Pk	34.3	-31.7	0	40.46	-	-	74	-33.54	-	-	0-360	199	V
6	* 11.491	37.28	Pk	38.3	-25.4	0	50.18	-	-	74	-23.82	-	-	0-360	101	V

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

Pk - Peak detector

Radiated Emissions

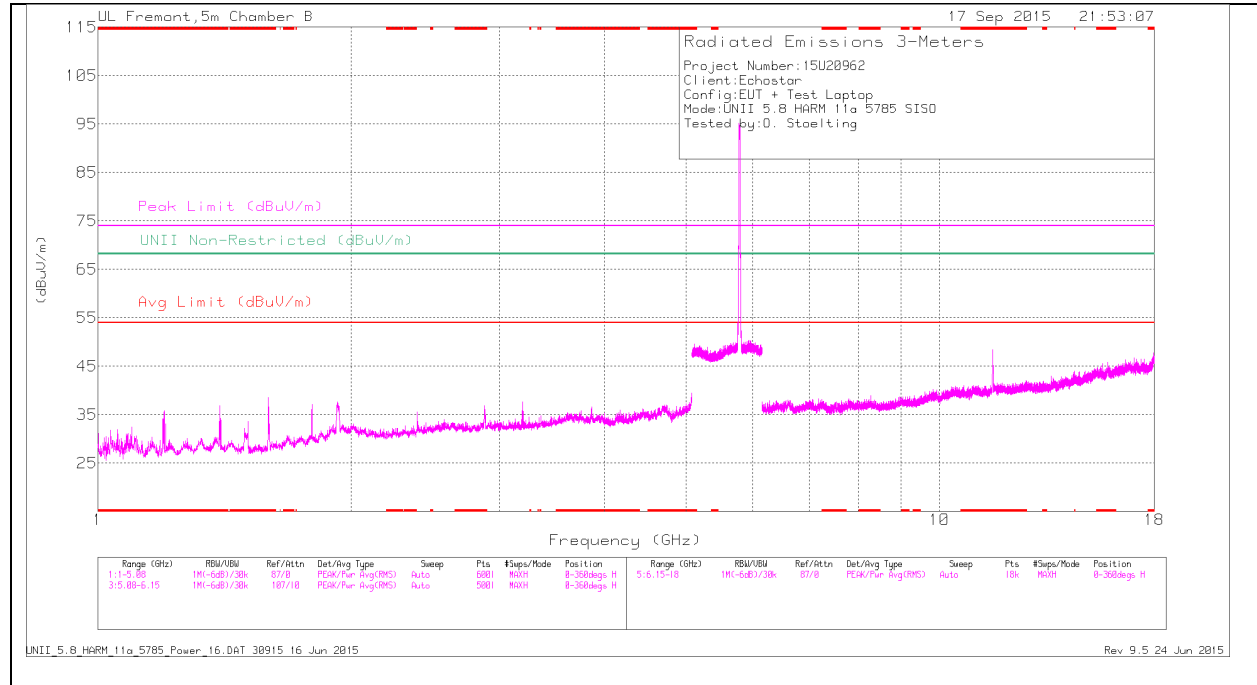
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.195	54.28	PK-U	28.4	-35.6	0	47.08	-	-	74	-26.92	-	-	261	137	H
* 1.195	32.44	ADR	28.4	-35.6	0	25.24	54	-28.76	-	-	-	-	261	137	H
* 1.4	54.59	PK-U	29.3	-34.7	0	49.19	-	-	74	-24.81	-	-	193	112	V
* 1.397	32.94	ADR	29.4	-34.7	0	27.64	54	-26.36	-	-	-	-	193	112	V
* 1.598	57.12	PK-U	28.8	-35.2	0	50.72	-	-	74	-23.28	-	-	13	393	V
* 1.596	35.46	ADR	28.8	-35.2	0	29.06	54	-24.94	-	-	-	-	13	393	V
* 3.83	43.78	PK-U	33.4	-33	0	44.18	-	-	74	-29.82	-	-	140	290	V
* 3.83	35.21	ADR	33.4	-33	0	35.61	54	-18.39	-	-	-	-	140	290	V
* 4.794	45.19	PK-U	34.3	-31.7	0	47.79	-	-	74	-26.21	-	-	221	251	V
* 4.794	29.13	ADR	34.3	-31.7	0	31.73	54	-22.27	-	-	-	-	221	251	V
* 11.493	43.37	PK-U	38.3	-25.4	0	56.27	-	-	74	-17.73	-	-	197	335	V
* 11.49	30.37	ADR	38.3	-25.4	0	43.27	54	-10.73	-	-	-	-	197	335	V

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

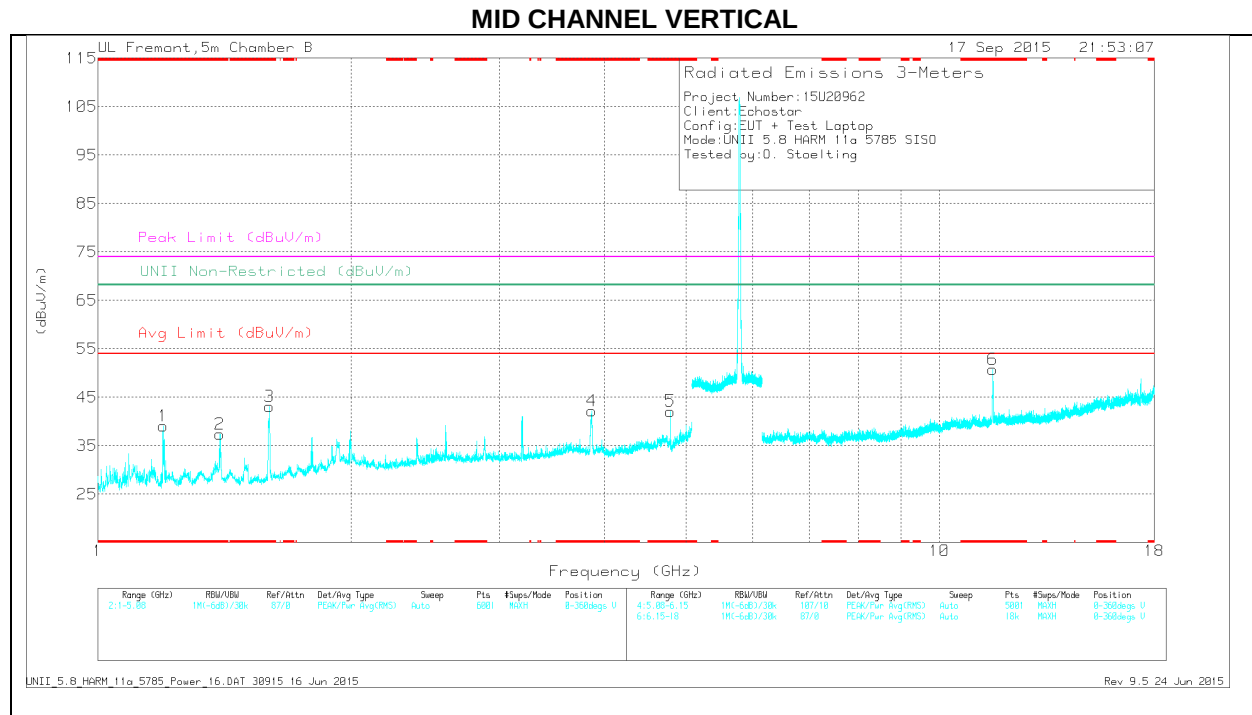
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

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.



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 T345 (dB/m)	Amp/Cbl/Fil tr/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	* 1.195	46.24	Pk	28.4	-35.6	0	39.04	-	-	74	-34.96	-	-	0-360	101	V
2	* 1.396	42.71	Pk	29.4	-34.7	0	37.41	-	-	74	-36.59	-	-	0-360	200	V
3	* 1.6	49.36	Pk	28.8	-35.1	0	43.06	-	-	74	-30.94	-	-	0-360	200	V
4	* 3.861	41.65	Pk	33.4	-32.8	0	42.25	-	-	74	-31.75	-	-	0-360	200	V
5	* 4.785	39.33	Pk	34.3	-31.5	0	42.13	-	-	74	-31.87	-	-	0-360	101	V
6	* 11.572	36.92	Pk	38.4	-24.6	0	50.72	-	-	74	-23.28	-	-	0-360	101	V

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

Pk - Peak detector

Radiated Emissions

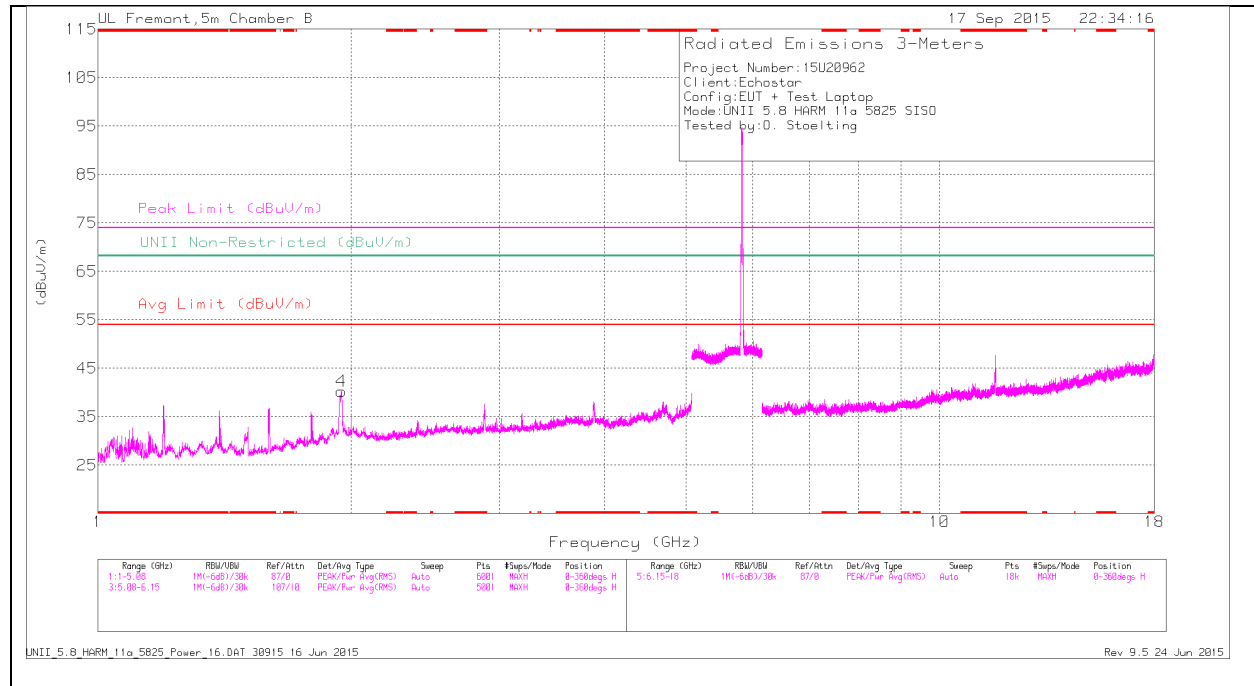
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fil tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.197	52.71	PK-U	28.5	-35.6	0	45.61	-	-	74	-28.39	-	-	185	283	V
* 1.197	32.25	ADR	28.5	-35.6	0	25.15	54	-28.85	-	-	-	-	185	283	V
* 1.394	55.75	PK-U	29.4	-34.7	0	50.45	-	-	74	-23.55	-	-	188	382	V
* 1.394	33.02	ADR	29.4	-34.7	0	27.72	54	-26.28	-	-	-	-	188	382	V
* 3.861	44.37	PK-U	33.4	-32.8	0	44.97	-	-	74	-29.03	-	-	295	376	V
* 3.861	32.16	ADR	33.4	-32.9	0	32.66	54	-21.34	-	-	-	-	295	376	V
* 4.787	44.1	PK-U	34.3	-31.5	0	46.9	-	-	74	-27.1	-	-	69	171	V
* 4.787	29.88	ADR	34.3	-31.5	0	32.68	54	-21.32	-	-	-	-	69	171	V
* 11.573	37.99	PK-U	38.4	-24.5	0	51.89	-	-	74	-22.11	-	-	191	282	V
* 11.57	26.23	ADR	38.4	-24.6	0	40.03	54	-13.97	-	-	-	-	191	282	V
* 11.493	43.37	PK-U	38.3	-25.4	0	56.27	-	-	74	-17.73	-	-	197	335	V
* 11.49	30.37	ADR	38.3	-25.4	0	43.27	54	-10.73	-	-	-	-	197	335	V

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

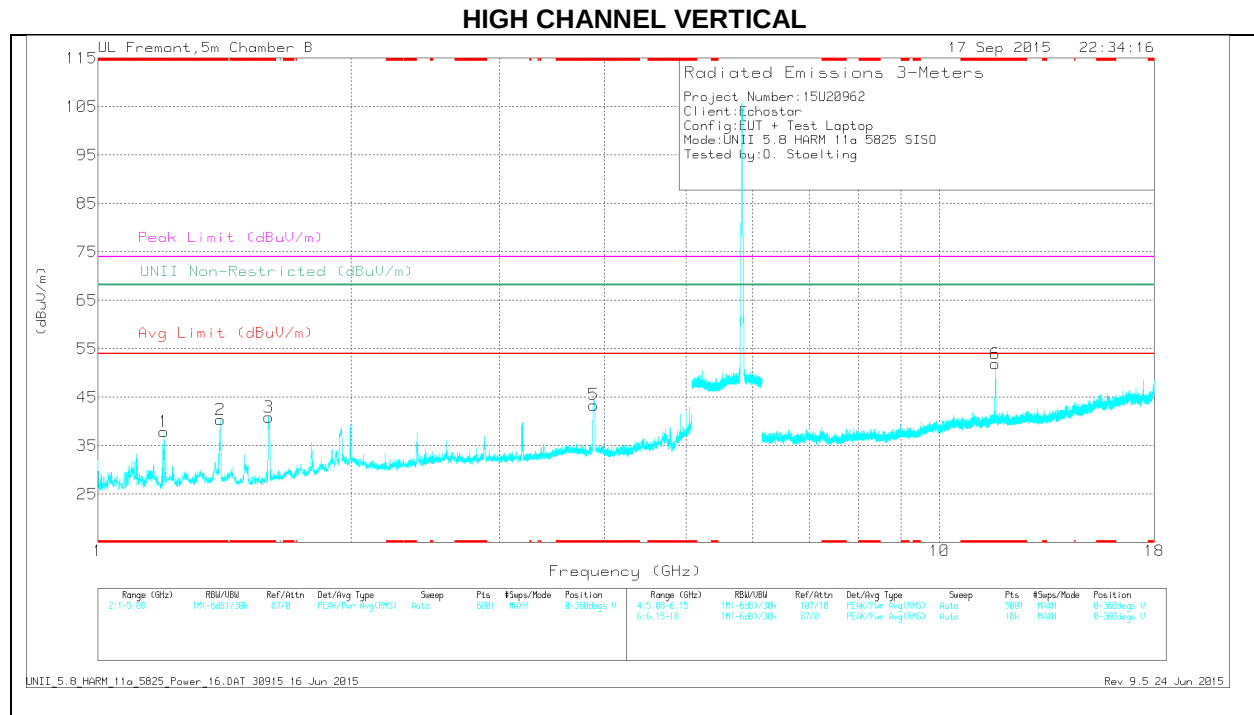
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

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.



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 T345 (dB/m)	Amp/Cbl/Ftr/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	* 1.199	45.13	Pk	28.5	-35.7	0	37.93	-	-	74	-36.07	-	-	0-360	101	V
2	* 1.398	45.73	Pk	29.4	-34.7	0	40.43	-	-	74	-33.57	-	-	0-360	199	V
3	* 1.596	47.3	Pk	28.8	-35.2	0	40.9	-	-	74	-33.1	-	-	0-360	199	V
5	* 3.879	42.53	Pk	33.5	-32.6	0	43.43	-	-	74	-30.57	-	-	0-360	199	V
6	* 11.645	38.17	Pk	38.5	-24.7	0	51.97	-	-	74	-22.03	-	-	0-360	101	V
4	1.947	41.89	Pk	32.1	-33.8	0	40.19	-	-	-	-	68.2	-28.01	0-360	199	H

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

Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Ftr/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
* 1.199	54.34	PK-U	28.5	-35.7	0	47.14	-	-	74	-26.86	-	-	186	146	V
* 1.198	32.63	ADR	28.5	-35.7	0	25.43	54	-28.57	-	-	-	-	186	146	V
* 1.398	54.97	PK-U	29.4	-34.7	0	49.67	-	-	74	-24.33	-	-	192	386	V
* 1.397	32.89	ADR	29.4	-34.7	0	27.59	54	-26.41	-	-	-	-	192	386	V
* 1.597	57.63	PK-U	28.8	-35.2	0	51.23	-	-	74	-22.77	-	-	209	283	V
* 1.594	35.59	ADR	28.8	-35.2	0	29.19	54	-24.81	-	-	-	-	209	283	V
* 3.881	47.23	PK-U	33.5	-32.6	0	48.13	-	-	74	-25.87	-	-	270	400	V
* 3.881	34.85	ADR	33.5	-32.6	0	35.75	54	-18.25	-	-	-	-	270	400	V
* 11.646	37.76	PK-U	38.5	-24.7	0	51.56	-	-	74	-22.44	-	-	79	101	V
* 11.647	25.96	ADR	38.5	-24.7	0	39.76	54	-14.24	-	-	-	-	79	101	V
* 11.49	30.37	ADR	38.3	-25.4	0	43.27	54	-10.73	-	-	-	-	197	335	V
1.946	48.86	PK-U	32.1	-33.8	0	47.16	-	-	-	-	68.2	-21.04	230	327	H

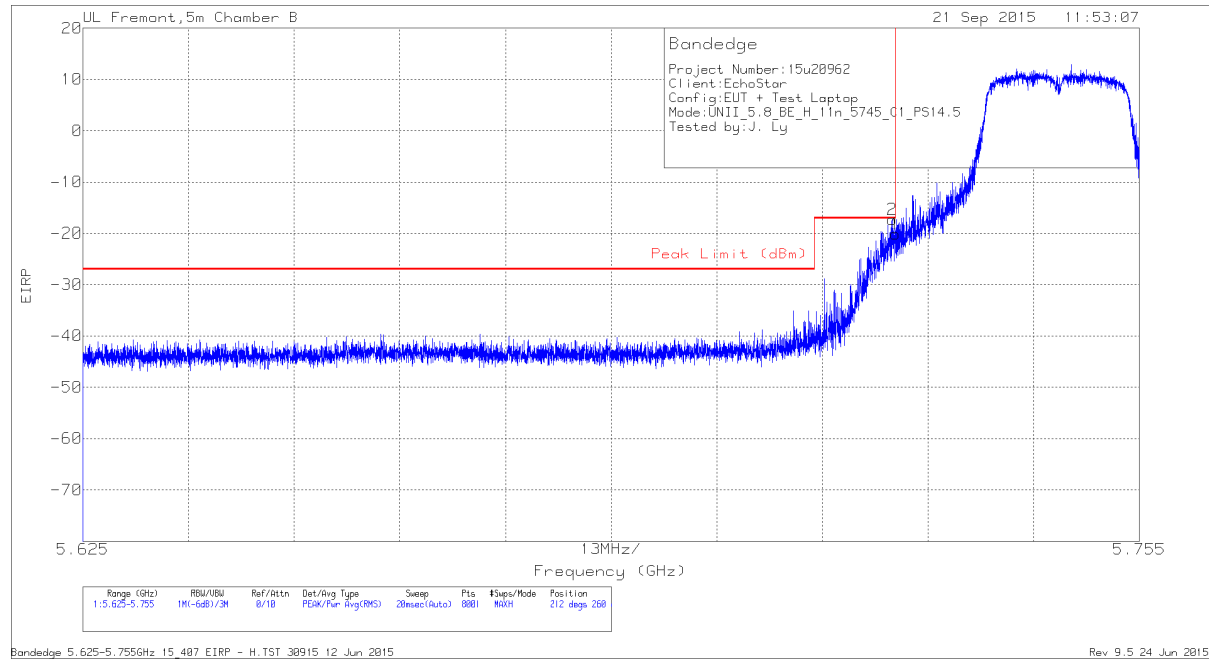
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

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

HORIZONTAL DATA

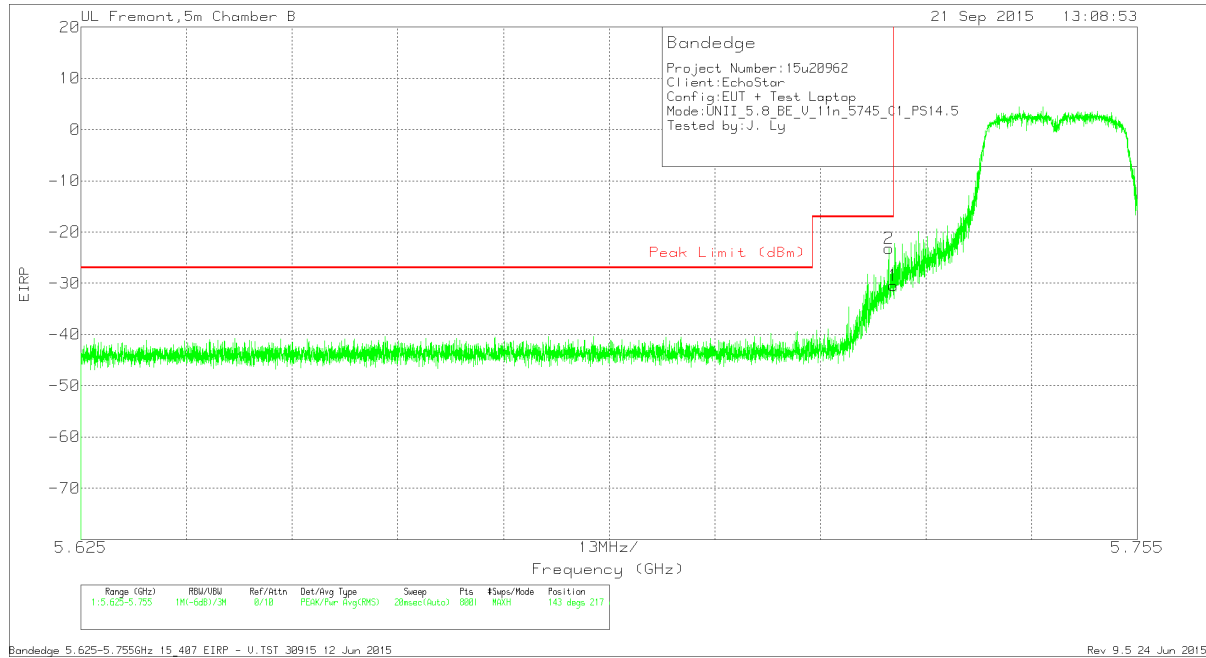


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AFT345 (dB/m)	Amp/Cbl/ Fitr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-45.18	Pk	35	-21.7	11.8	0	-20.08	-17	-3.08	212	260	H
2	5.725	-42.45	Pk	35	-21.7	11.8	0	-17.35	-17	-.35	212	260	H

Pk - Peak detector

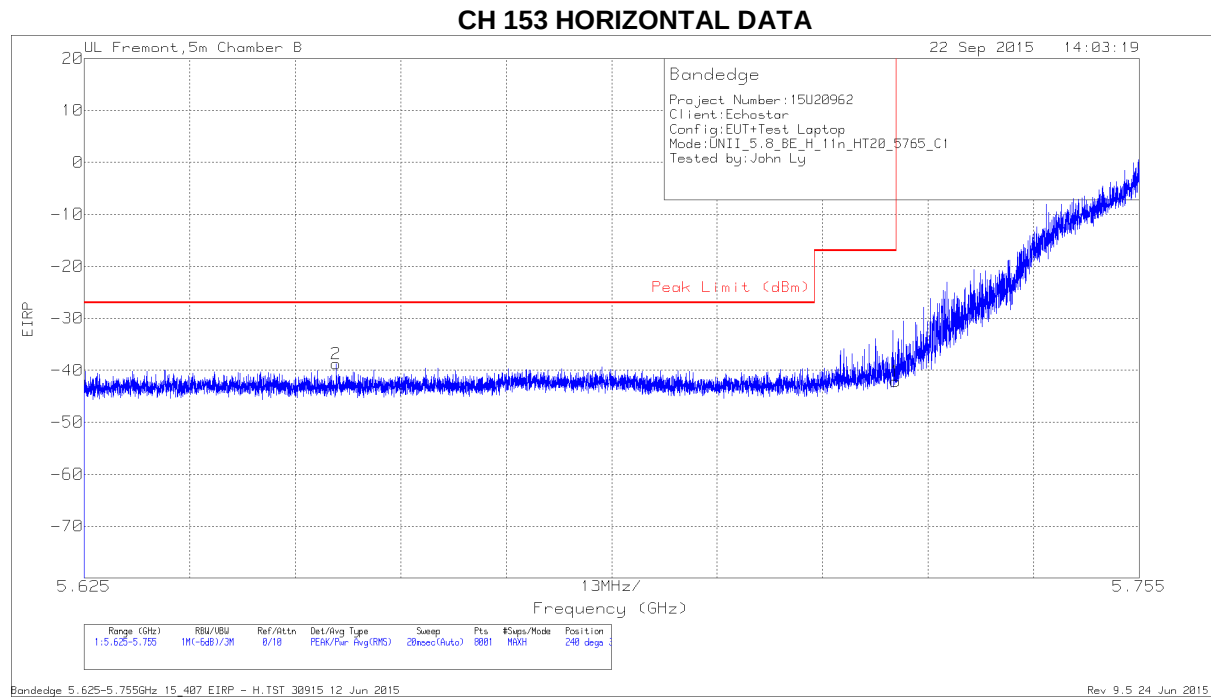
VERTICAL DATA



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cbl/ Ftr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.724	-48.3	Pk	35	-21.7	11.8	0	-23.2	-17	-6.2	143	217	V
1	5.725	-55.5	Pk	35	-21.7	11.8	0	-30.4	-17	-13.4	143	217	V

Pk - Peak detector

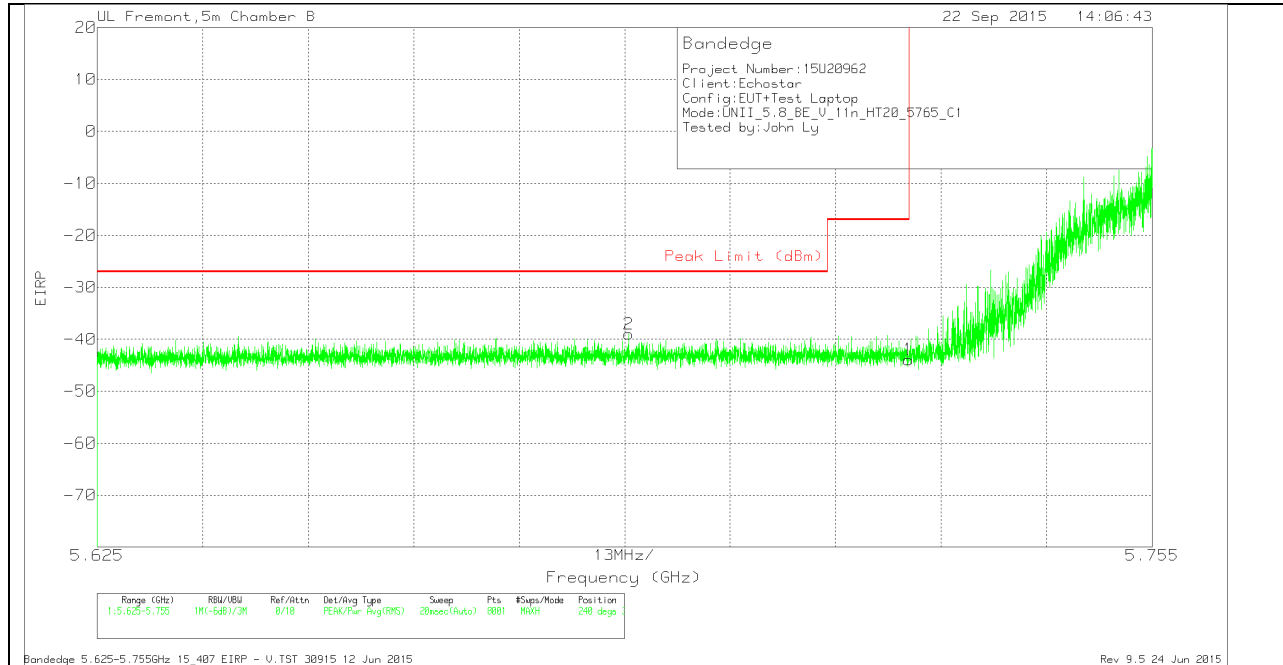


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (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
2	5.656	-63.55	Pk	34.9	-21.9	11.8	-38.75	-27	-11.75	240	369	H
1	5.725	-67.25	Pk	35	-21.7	11.8	-42.15	-17	-25.15	240	369	H

Pk - Peak detector

CH 153 VERTICAL DATA

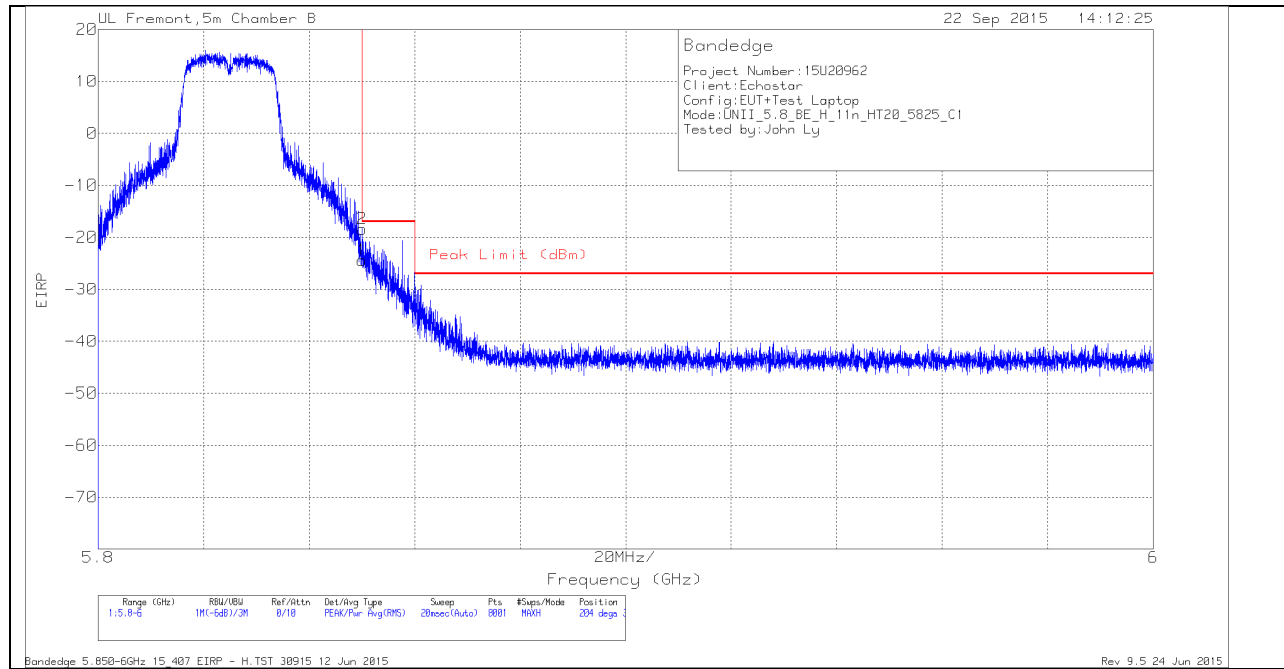


CH 153 VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (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
2	5.691	-63.91	Pk	34.9	-21.8	11.8	-39.01	-27	-12.01	240	369	V
1	5.725	-69.01	Pk	35	-21.7	11.8	-43.91	-17	-26.91	240	369	V

Pk - Peak detector

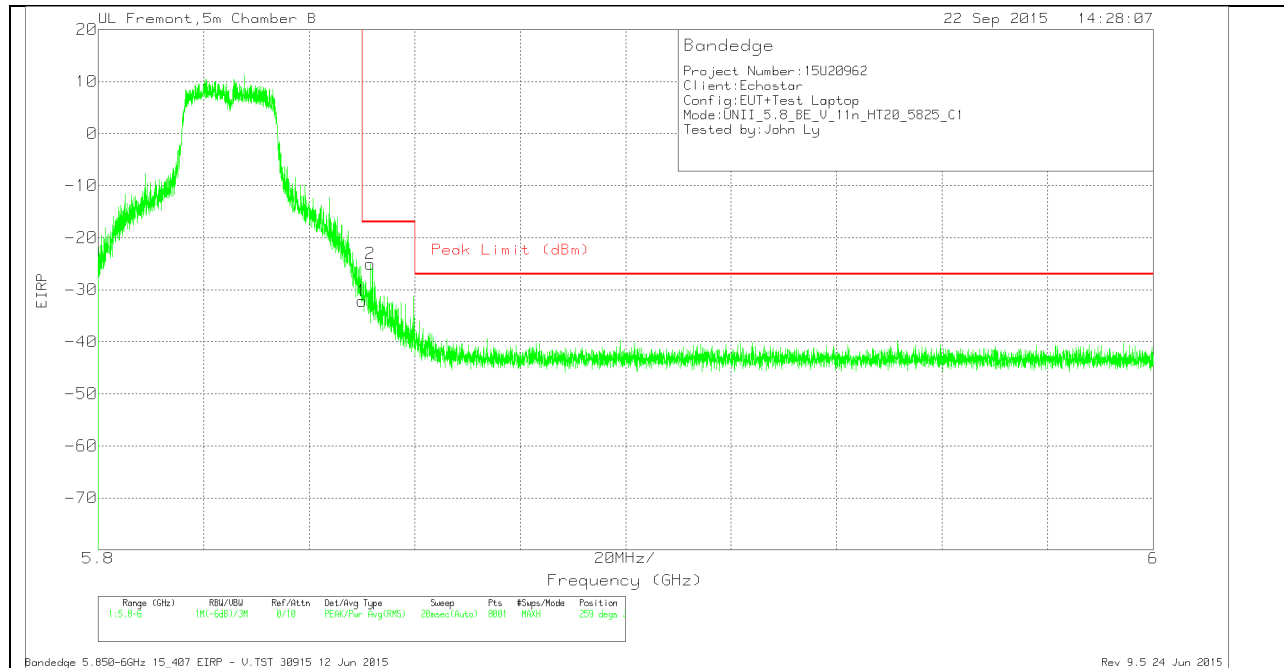
AUTHORIZED BANDEDGE (HIGH CHANNEL)**HORIZONTAL PEAK PLOT****CH 165 HORIZONTAL DATA**

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (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	-50.02	Pk	35.4	-21.6	11.8	-24.42	-17	-7.42	204	300	H
2	5.85	-43.98	Pk	35.4	-21.6	11.8	-18.38	-17	-1.38	204	300	H

Pk - Peak detector

VERTICAL PEAK PLOT



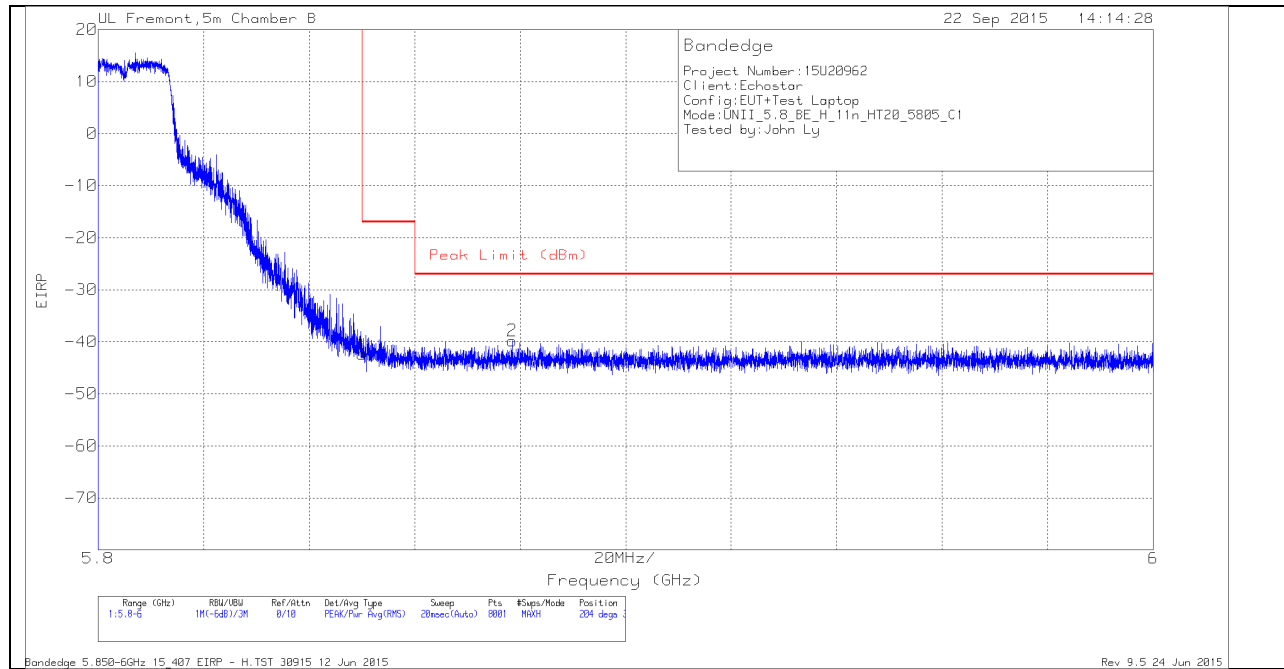
CH 165 HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (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	-57.75	Pk	35.4	-21.6	11.8	-32.15	-17	-15.15	259	351	V
2	5.852	-50.62	Pk	35.4	-21.6	11.8	-25.02	-17	-8.02	259	351	V

Pk - Peak detector

HORIZONTAL PEAK PLOT



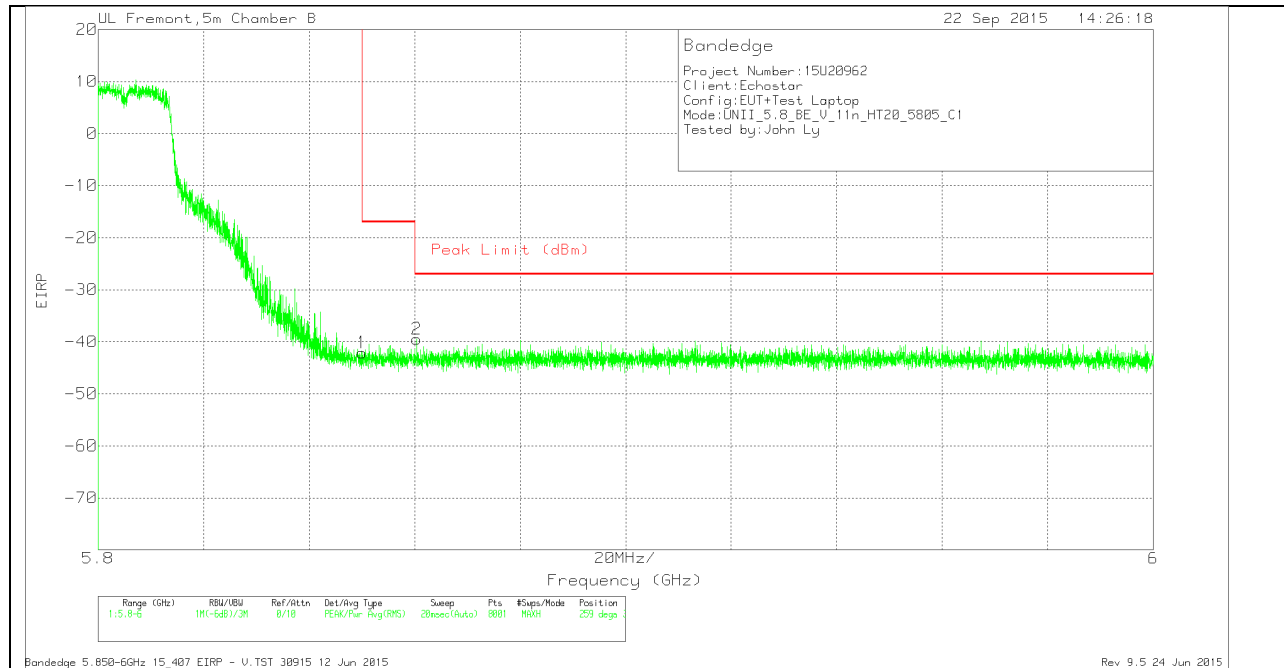
CH 161 HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (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	-67.95	Pk	35.4	-21.6	11.8	-42.35	-17	-25.35	204	300	H
2	5.879	-65.51	Pk	35.5	-21.6	11.8	-39.81	-27	-12.81	204	300	H

Pk - Peak detector

VERTICAL PEAK PLOT



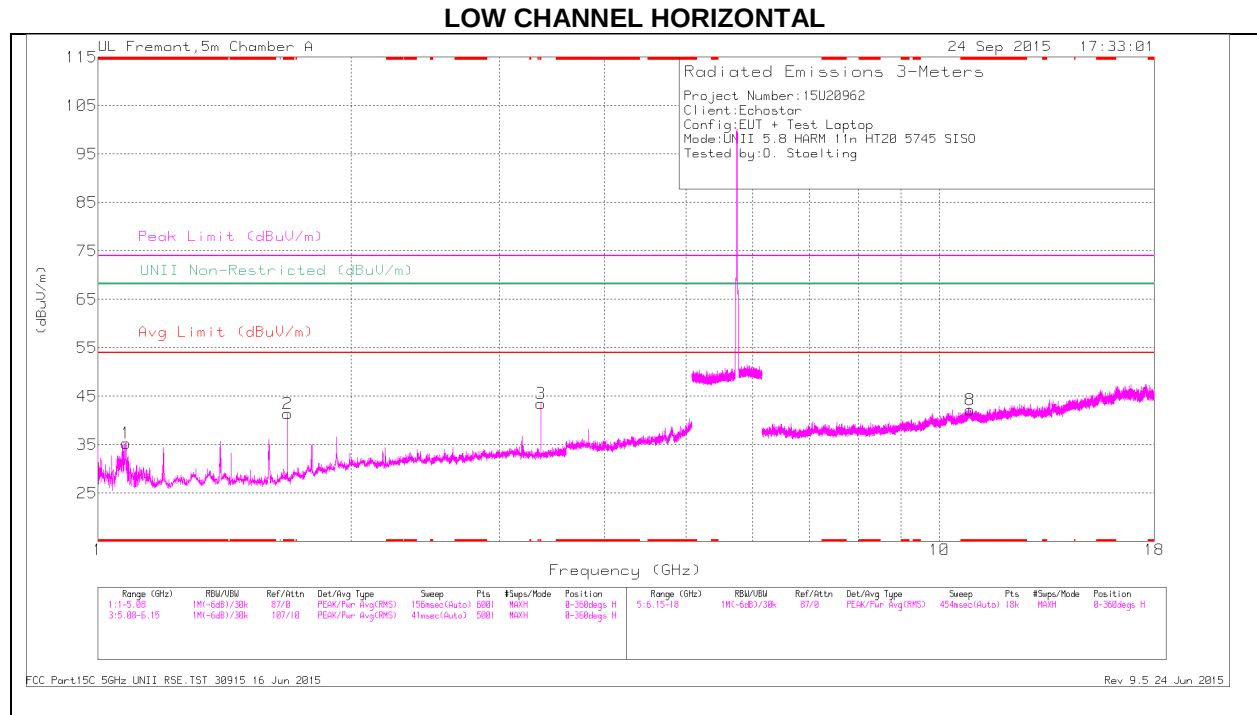
CH 161 VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (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	-67.7	Pk	35.4	-21.6	11.8	-42.1	-17	-25.1	259	351	V
2	5.86	-65.07	Pk	35.4	-21.6	11.8	-39.47	-27	-12.47	259	351	V

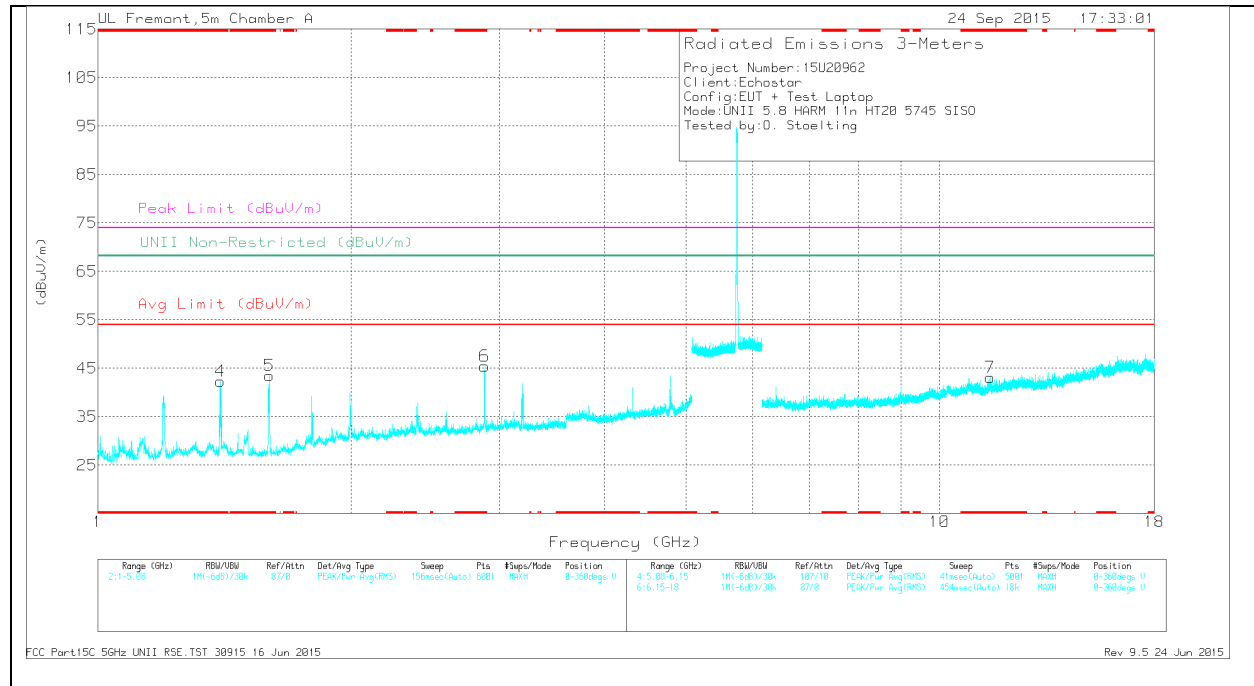
Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS



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/Fitr /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	* 1.08	43.59	Pk	27.2	-35.5	35.29	-	-	74	-38.71	-	-	0-360	100	H
2	* 1.68	47.84	Pk	28.5	-34.9	41.44	-	-	74	-32.56	-	-	0-360	201	H
4	* 1.399	49.02	Pk	28.5	-35.2	42.32	-	-	74	-31.68	-	-	0-360	100	V
5	* 1.598	51.05	Pk	27.9	-35.5	43.45	-	-	74	-30.55	-	-	0-360	200	V
6	* 2.881	45.9	Pk	32.6	-33.1	45.4	-	-	74	-28.6	-	-	0-360	200	V
8	* 10.873	26.49	Pk	37.8	-22.1	42.19	-	-	74	-31.81	-	-	0-360	100	H
7	* 11.493	27.74	Pk	38	-22.6	43.14	-	-	74	-30.86	-	-	0-360	100	V
3	3.36	43.81	Pk	32.9	-33.2	43.51	-	-	-	-	68.2	-24.69	0-360	100	H

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

Pk - Peak detector

Radiated Emissions

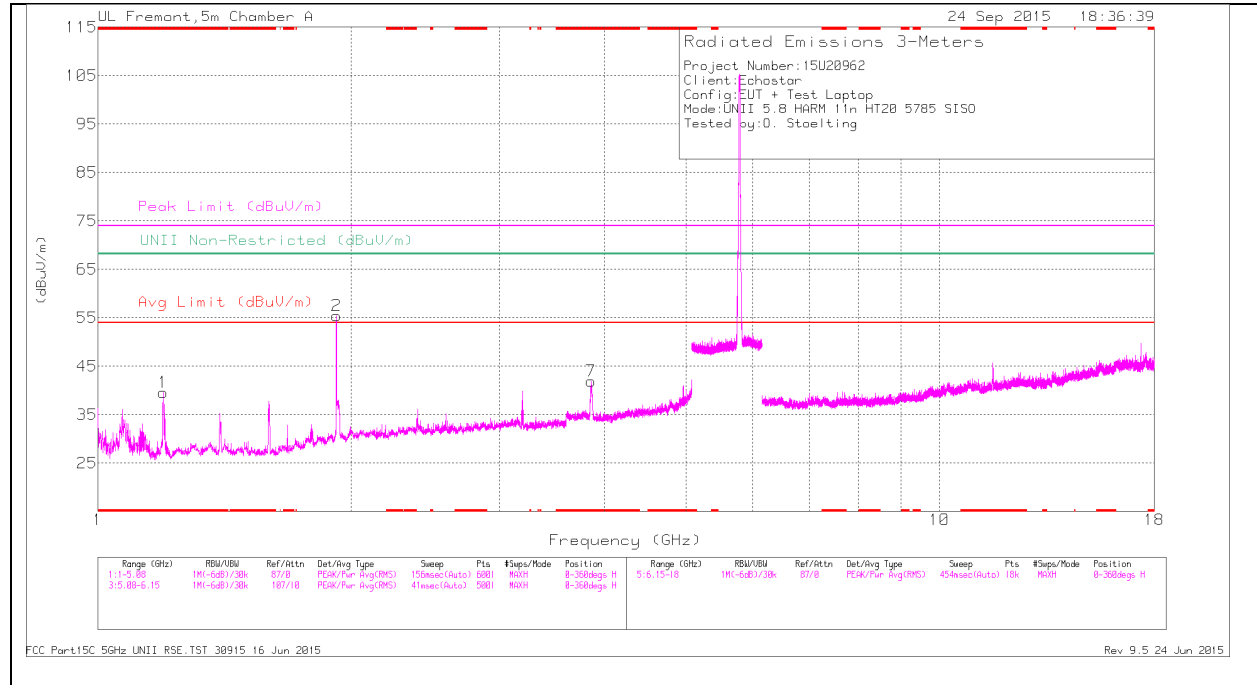
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fitr /Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.082	53.76	PK-U	27.2	-35.5	45.46	-	-	74	-28.54	-	-	250	197	H
* 1.079	33.35	ADR	27.2	-35.5	25.05	54	-28.95	-	-	-	-	250	197	H
* 1.68	53.49	PK-U	28.5	-34.9	47.09	-	-	74	-26.91	-	-	4	235	H
* 1.68	32.17	ADR	28.5	-34.9	25.77	54	-28.23	-	-	-	-	4	235	H
* 1.4	56.77	PK-U	28.5	-35.2	50.07	-	-	74	-23.93	-	-	180	245	V
* 1.398	33.93	ADR	28.5	-35.2	27.23	54	-26.77	-	-	-	-	180	245	V
* 1.597	56.74	PK-U	27.9	-35.5	49.14	-	-	74	-24.86	-	-	47	100	V
* 1.597	34.71	ADR	27.9	-35.5	27.11	54	-26.89	-	-	-	-	47	100	V
* 2.88	59.75	PK-U	32.6	-33.2	59.15	-	-	74	-14.85	-	-	154	163	V
* 2.88	37.02	ADR	32.6	-33.2	36.42	54	-17.58	-	-	-	-	154	163	V
* 10.873	34.23	PK-U	37.8	-22.1	49.93	-	-	74	-24.07	-	-	188	276	H
* 10.871	22.3	ADR	37.8	-22.1	38	54	-16	-	-	-	-	188	276	H
* 11.492	35.9	PK-U	38	-22.6	51.3	-	-	74	-22.7	-	-	289	374	V
* 11.491	24.05	ADR	38	-22.6	39.45	54	-14.55	-	-	-	-	289	374	V
3.36	47.08	PK-U	32.9	-33.2	46.78	-	-	-	-	68.2	-21.42	167	134	H
3.36	30.55	ADR	32.9	-33.2	30.25	-	-	-	-	-	-	167	134	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

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 DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fitr /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	* 1.197	47.72	Pk	28	-36.1	39.62	-	-	74	-34.38	-	-	0-360	201	H
3	* 1.397	47.37	Pk	28.5	-35.2	40.67	-	-	74	-33.33	-	-	0-360	200	V
4	* 1.599	50.76	Pk	27.9	-35.5	43.16	-	-	74	-30.84	-	-	0-360	200	V
8	* 11.566	35.52	Pk	38.1	-22.9	50.72	-	-	74	-23.28	-	-	0-360	200	V
7	* 3.857	40.4	Pk	33.4	-31.9	41.9	-	-	74	-32.1	-	-	0-360	100	H
6	* 4.79	38.99	Pk	34	-30	42.99	-	-	74	-31.01	-	-	0-360	100	V
2	1.92	59.77	Pk	30.9	-35.2	55.47	-	-	-	-	68.2	-12.73	0-360	201	H
9	17.354	32.33	Pk	41.3	-23	50.63	-	-	-	-	68.2	-17.57	0-360	200	V
5	3.199	44.64	Pk	32.7	-33.2	44.14	-	-	-	-	68.2	-24.06	0-360	100	V

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

Pk - Peak detector

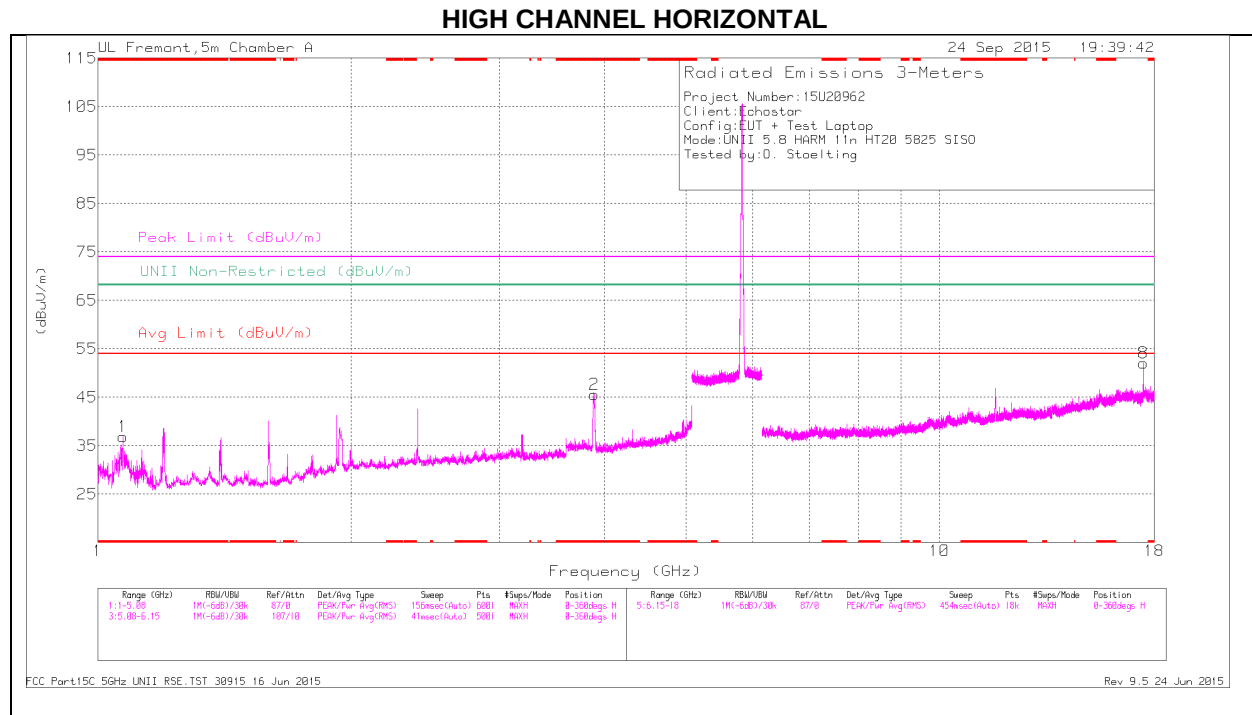
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/FI tr/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
* 1.197	55.93	PK-U	28	-36	47.93	-	-	74	-26.07	-	-	255	153	H
* 1.198	35.43	ADR	28	-36	27.43	54	-26.57	-	-	-	-	255	153	H
* 3.856	50.65	PK-U	33.4	-31.9	52.15	-	-	74	-21.85	-	-	301	181	H
* 3.857	40.17	ADR	33.4	-31.9	41.67	54	-12.33	-	-	-	-	301	181	H
* 1.399	57.21	PK-U	28.5	-35.2	50.51	-	-	74	-23.49	-	-	183	194	V
* 1.398	35.36	ADR	28.5	-35.2	28.66	54	-25.34	-	-	-	-	183	194	V
* 1.6	57.19	PK-U	27.9	-35.5	49.59	-	-	74	-24.41	-	-	28	201	V
* 1.599	37.56	ADR	27.9	-35.5	29.96	54	-24.04	-	-	-	-	28	201	V
* 4.791	49.02	PK-U	34	-30	53.02	-	-	74	-20.98	-	-	220	148	V
* 4.788	30.02	ADR	34	-30	34.02	54	-19.98	-	-	-	-	220	148	V
* 11.567	47.68	PK-U	38.1	-22.9	62.88	-	-	74	-11.12	-	-	49	398	V
* 11.568	33.75	ADR	38.1	-22.9	48.95	54	-5.05	-	-	-	-	49	398	V
1.92	60.92	PK-U	30.9	-35.2	56.62	-	-	-	-	68.2	-11.58	306	326	H
3.2	51.44	PK-U	32.7	-33.2	50.94	-	-	-	-	68.2	-17.26	204	120	V
17.354	43.26	PK-U	41.3	-23	61.56	-	-	-	-	68.2	-6.64	320	216	V

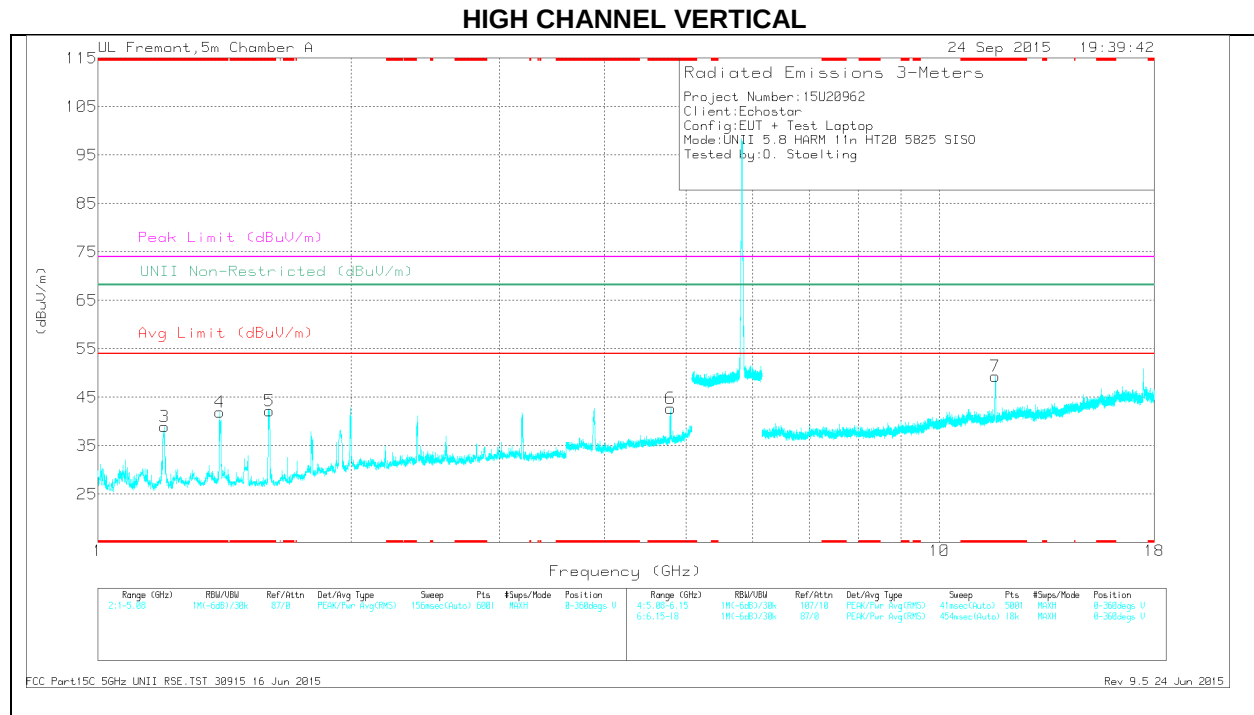
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average



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



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/Fitr /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	* 1.071	45.25	Pk	27.2	-35.6	36.85	-	-	74	-37.15	-	-	0-360	201	H
2	* 3.888	44.46	Pk	33.5	-32.4	45.56	-	-	74	-28.44	-	-	0-360	201	H
3	* 1.2	47	Pk	28	-36	39	-	-	74	-35	-	-	0-360	100	V
4	* 1.396	48.51	Pk	28.5	-35.1	41.91	-	-	74	-32.09	-	-	0-360	100	V
5	* 1.599	49.79	Pk	27.9	-35.5	42.19	-	-	74	-31.81	-	-	0-360	100	V
6	* 4.792	38.72	Pk	34	-30	42.72	-	-	74	-31.28	-	-	0-360	200	V
7	* 11.657	33.53	Pk	38.2	-22.4	49.33	-	-	74	-24.67	-	-	0-360	200	V
8	17.473	33.2	Pk	41.5	-22.6	52.1	-	-	-	-	68.2	-16.1	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/Fitr /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
* 1.072	55.83	PK-U	27.2	-35.6	47.43	-	-	74	-26.57	-	-	258	129	H
* 1.073	35.07	ADR	27.2	-35.6	26.67	54	-27.33	-	-	-	-	258	129	H
* 3.886	54.82	PK-U	33.5	-32.4	55.92	-	-	74	-18.08	-	-	296	265	H
* 3.886	42.51	ADR	33.5	-32.4	43.61	54	-10.39	-	-	-	-	296	265	H
* 1.2	54.09	PK-U	28	-36	46.09	-	-	74	-27.91	-	-	227	126	V
* 1.198	33.99	ADR	28	-36	25.99	54	-28.01	-	-	-	-	227	126	V
* 1.398	56.53	PK-U	28.5	-35.2	49.83	-	-	74	-24.17	-	-	214	241	V
* 1.398	35.11	ADR	28.5	-35.2	28.41	54	-25.59	-	-	-	-	214	241	V
* 1.599	58.1	PK-U	27.9	-35.5	50.5	-	-	74	-23.5	-	-	209	361	V
* 1.597	38.51	ADR	27.9	-35.5	30.91	54	-23.09	-	-	-	-	209	361	V
* 4.79	52.2	PK-U	34	-30	56.2	-	-	74	-17.8	-	-	232	231	V
* 4.793	31.31	ADR	34	-30	35.31	54	-18.69	-	-	-	-	232	231	V
* 11.656	47.45	PK-U	38.2	-22.4	63.25	-	-	74	-10.75	-	-	42	384	V
* 11.655	33.58	ADR	38.2	-22.4	49.38	54	-4.62	-	-	-	-	42	384	V
17.471	44.05	PK-U	41.5	-22.6	62.95	-	-	-	-	68.2	-5.25	318	394	H

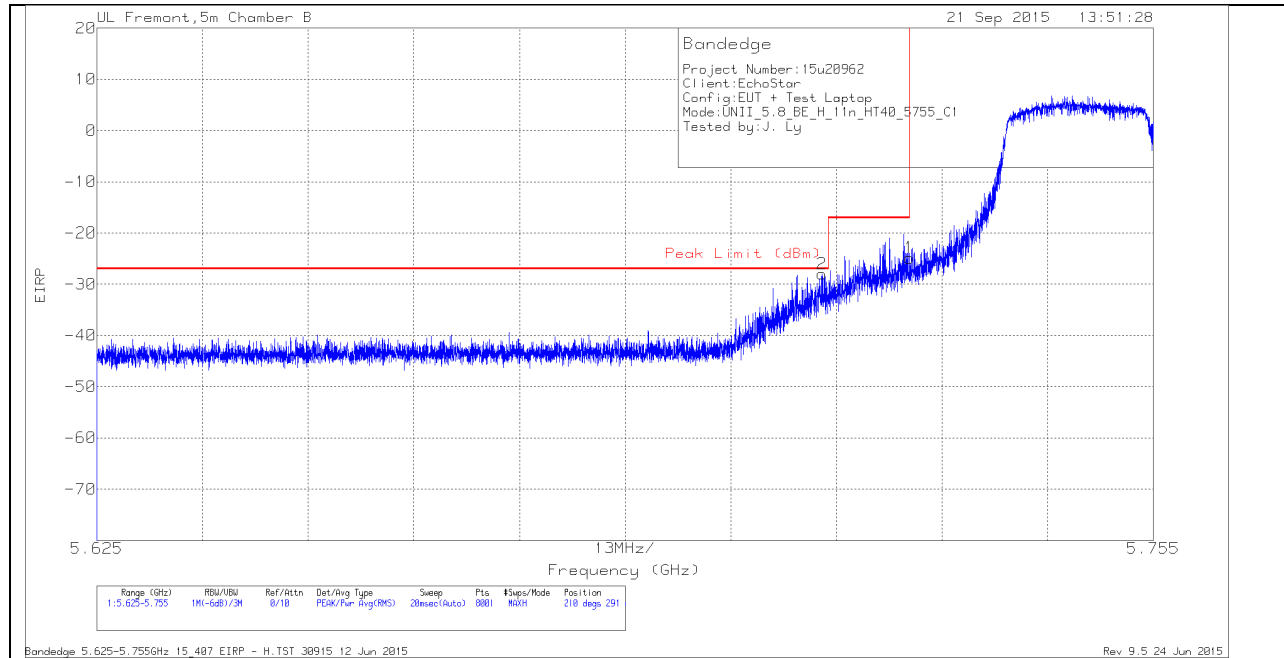
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

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

HORIZONTAL PEAK PLOT

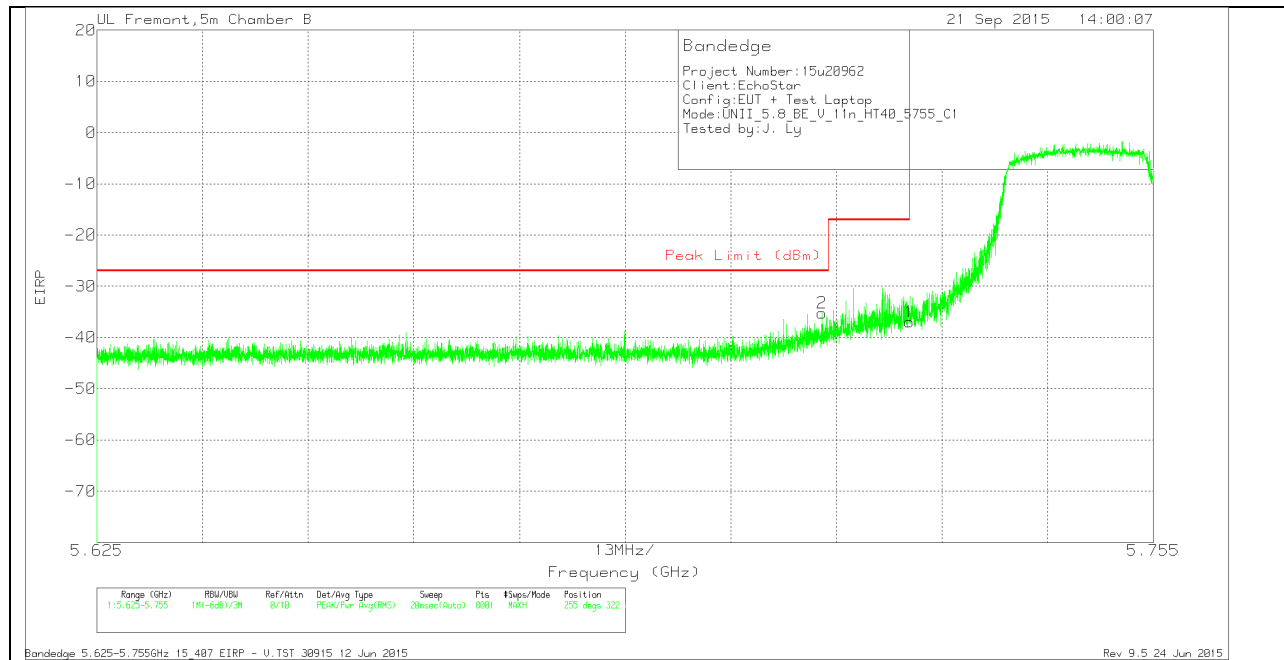


CH 151 HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cb/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.714	-53.08	Pk	35	-21.7	11.8	-27.98	-27	-.98	210	291	H
1	5.725	-49.95	Pk	35	-21.7	11.8	-24.85	-17	-7.85	210	291	H

Pk - Peak detector



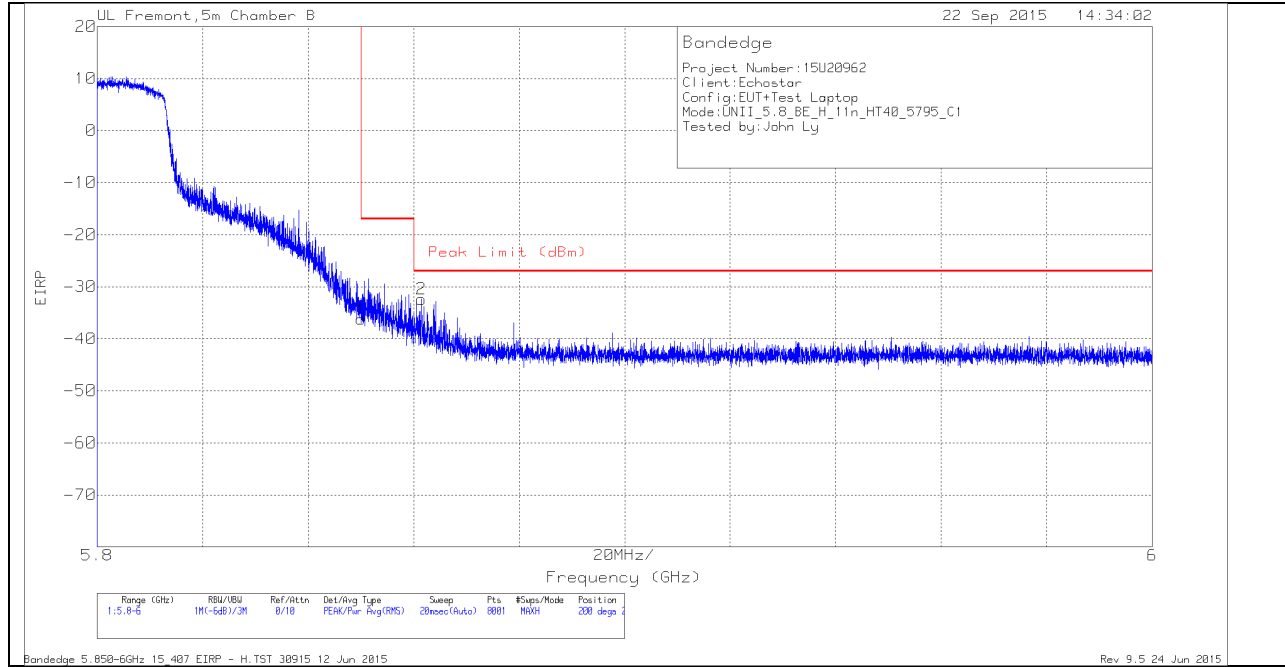
CH 151 VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (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
2	5.714	-60.36	Pk	35	-21.7	11.8	-35.26	-27	-8.26	255	322	V
1	5.725	-62.05	Pk	35	-21.7	11.8	-36.95	-17	-19.95	255	322	V

Pk - Peak detector

AUTHORIZED BANDEDGE (HIGH CHANNEL) HORIZONTAL PEAK PLOT



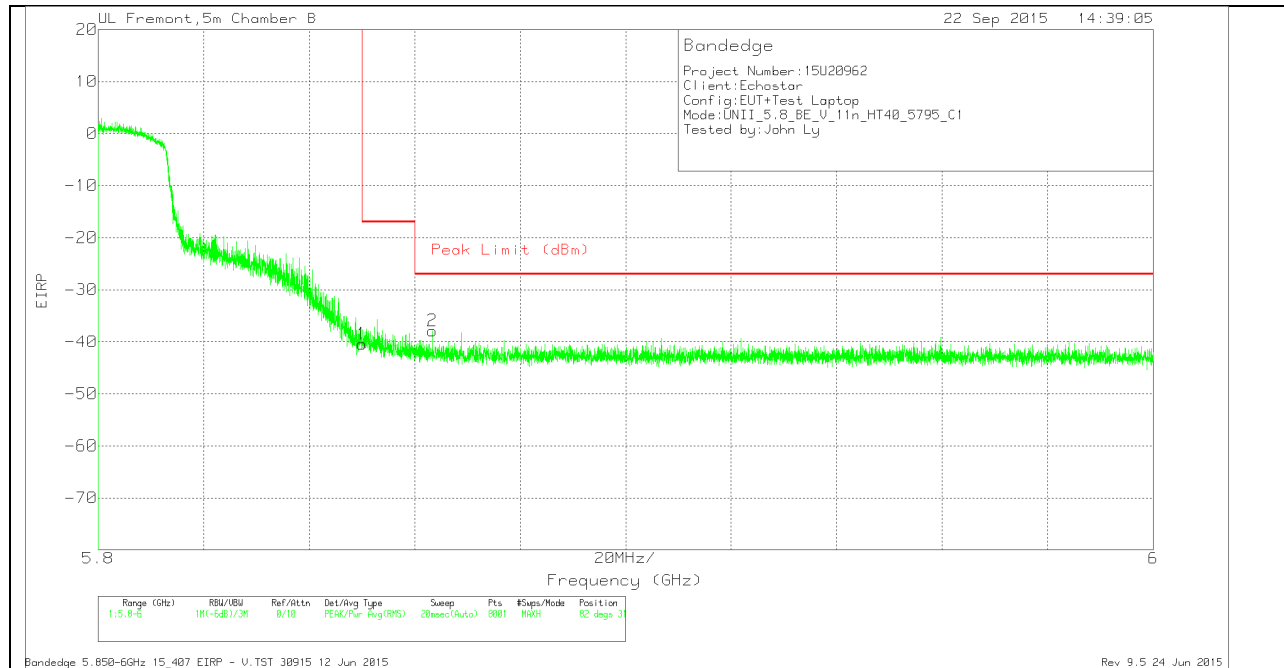
CH 159 HORIZONTAL DATA

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	5.725	-54.87	Pk	34.7	-19.8	11.8	-28.17	-17	-11.17	86	128	V
2	5.725	-46.27	Pk	34.7	-19.8	11.8	-19.57	-17	-2.57	86	128	V

Pk - Peak detector

VERTICAL PEAK PLOT



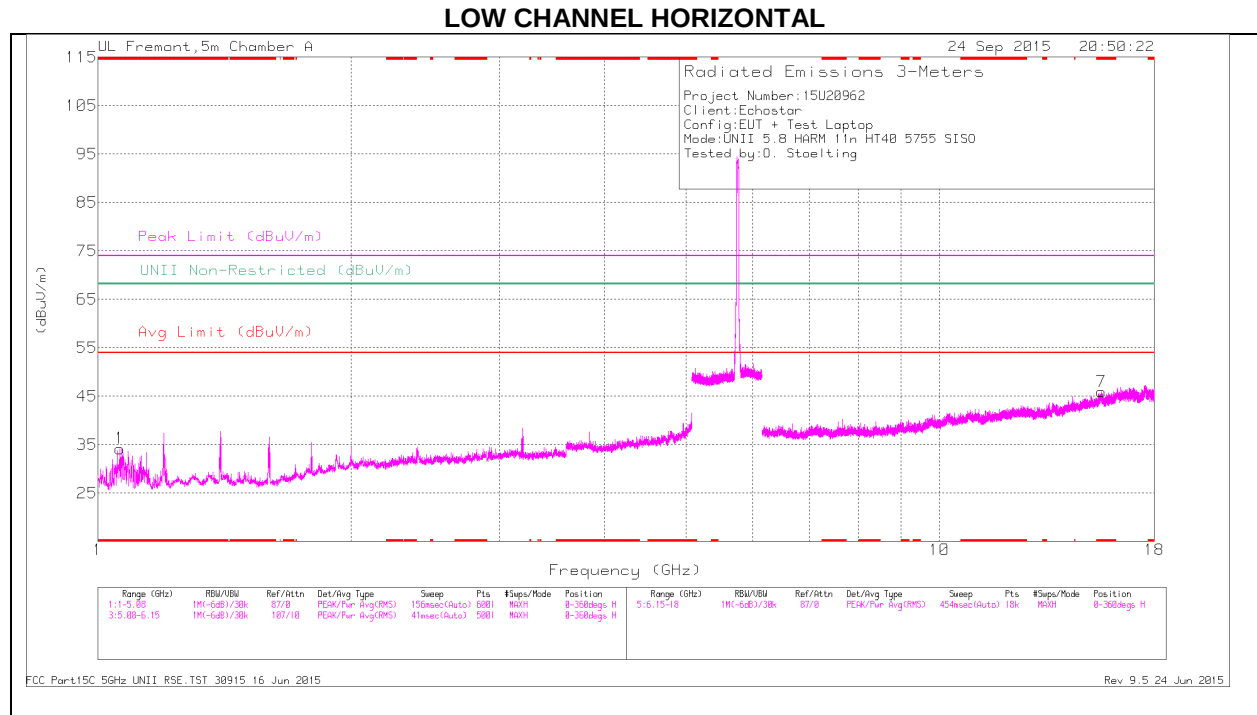
CH 159 VERTICAL DATA

Trace Markers

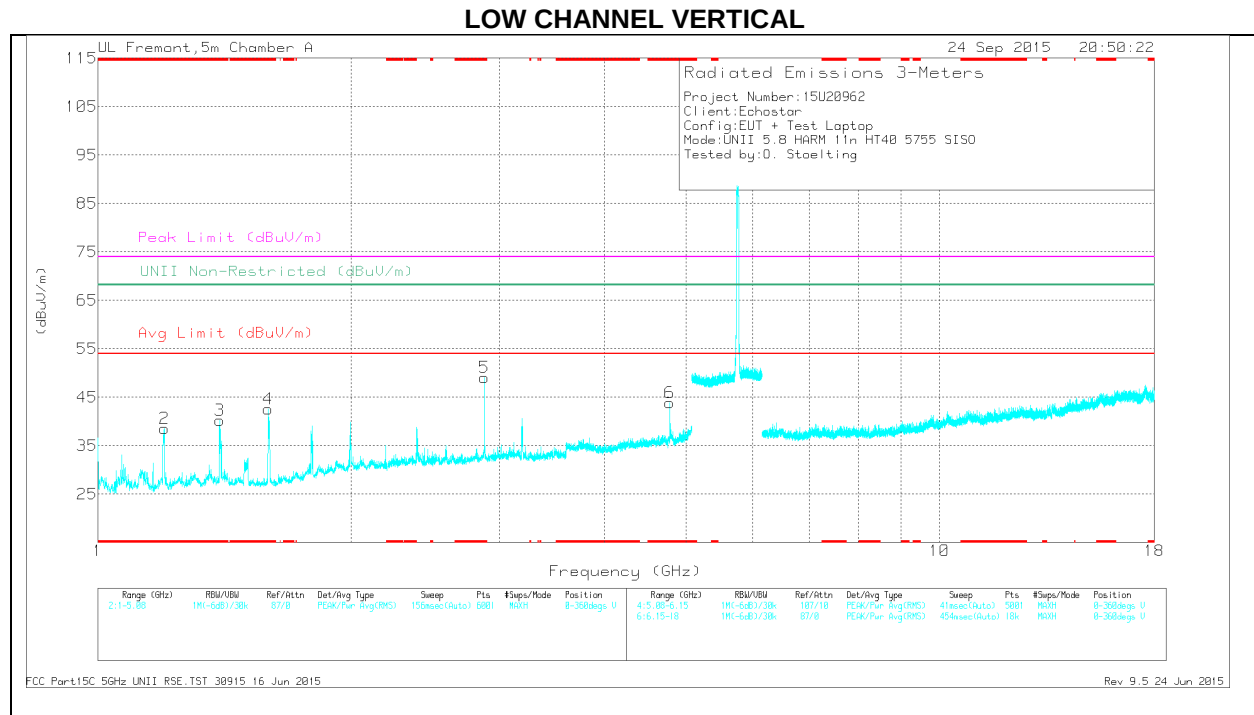
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-66	Pk	35.4	-21.6	11.8	-40.4	-17	-23.4	82	314	V
2	5.863	-63.47	Pk	35.4	-21.6	11.8	-37.87	-27	-10.87	82	314	V

Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS



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



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/Fitr /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	* 1.061	42.81	Pk	27.1	-35.7	34.21	-	-	74	-39.79	-	-	0-360	100	H
2	* 1.199	46.53	Pk	28	-36	38.53	-	-	74	-35.47	-	-	0-360	100	V
3	* 1.396	46.87	Pk	28.5	-35.1	40.27	-	-	74	-33.73	-	-	0-360	100	V
4	* 1.593	50.22	Pk	27.9	-35.5	42.62	-	-	74	-31.38	-	-	0-360	200	V
5	* 2.88	49.72	Pk	32.6	-33.2	49.12	-	-	74	-24.88	-	-	0-360	100	V
6	* 4.779	39.9	Pk	34	-30	43.9	-	-	74	-30.1	-	-	0-360	200	V
7	* 15.568	26.8	Pk	40.4	-21.2	46	-	-	74	-28	-	-	0-360	201	H

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

Pk - Peak detector

Radiated Emissions

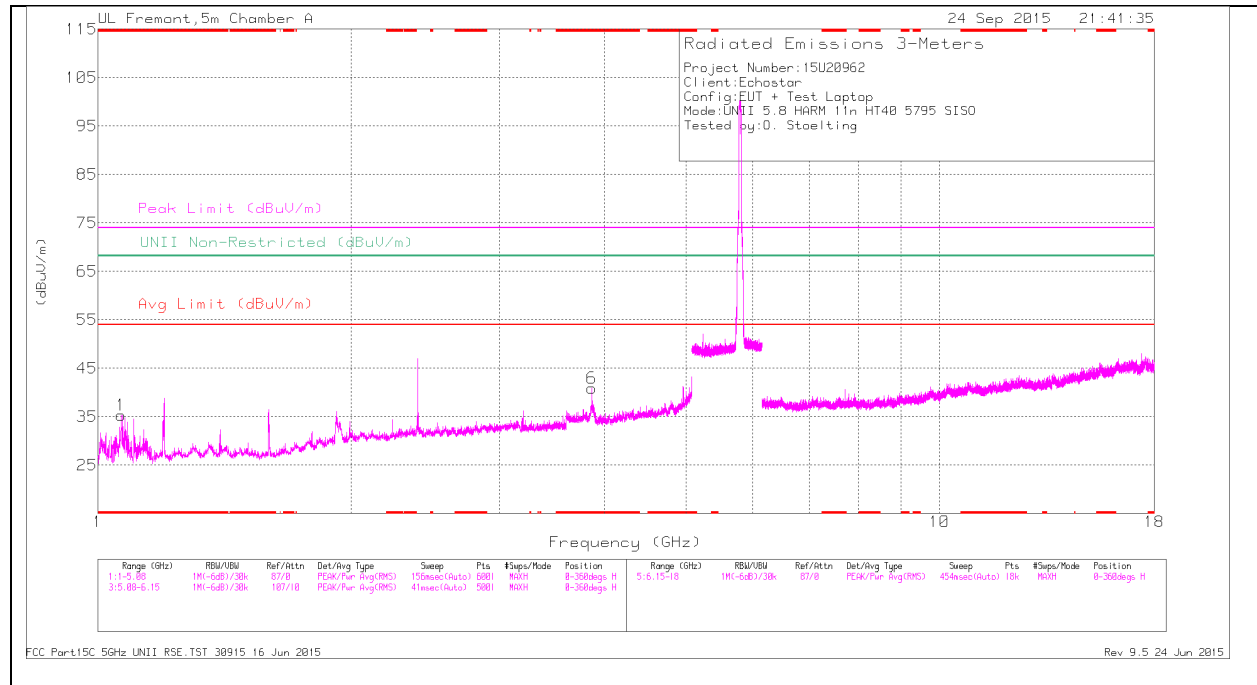
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.061	54.61	PK-U	27.1	-35.7	46.01	-	-	74	-27.99	-	-	258	142	H
* 1.062	33.62	ADR	27.1	-35.7	25.02	54	-28.98	-	-	-	-	258	142	H
* 1.199	57	PK-U	28	-36	49	-	-	74	-25	-	-	191	155	V
* 1.199	34.59	ADR	28	-36	26.59	54	-27.41	-	-	-	-	191	155	V
* 1.396	56.07	PK-U	28.5	-35.1	49.47	-	-	74	-24.53	-	-	213	230	V
* 1.397	33.14	ADR	28.5	-35.2	26.44	54	-27.56	-	-	-	-	213	230	V
* 1.594	57.39	PK-U	27.9	-35.5	49.79	-	-	74	-24.21	-	-	209	362	V
* 1.595	36.17	ADR	27.9	-35.5	28.57	54	-25.43	-	-	-	-	209	362	V
* 2.88	61.64	PK-U	32.6	-33.2	61.04	-	-	74	-12.96	-	-	31	265	V
* 2.88	38.72	ADR	32.6	-33.2	38.12	54	-15.88	-	-	-	-	31	265	V
* 4.779	48.05	PK-U	34	-30	52.05	-	-	74	-21.95	-	-	190	319	V
* 4.781	29.41	ADR	34	-30	33.41	54	-20.59	-	-	-	-	190	319	V
* 15.569	33.96	PK-U	40.4	-21.3	53.06	-	-	74	-20.94	-	-	0	174	H
* 15.568	22.81	ADR	40.4	-21.2	42.01	54	-11.99	-	-	-	-	0	174	H

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

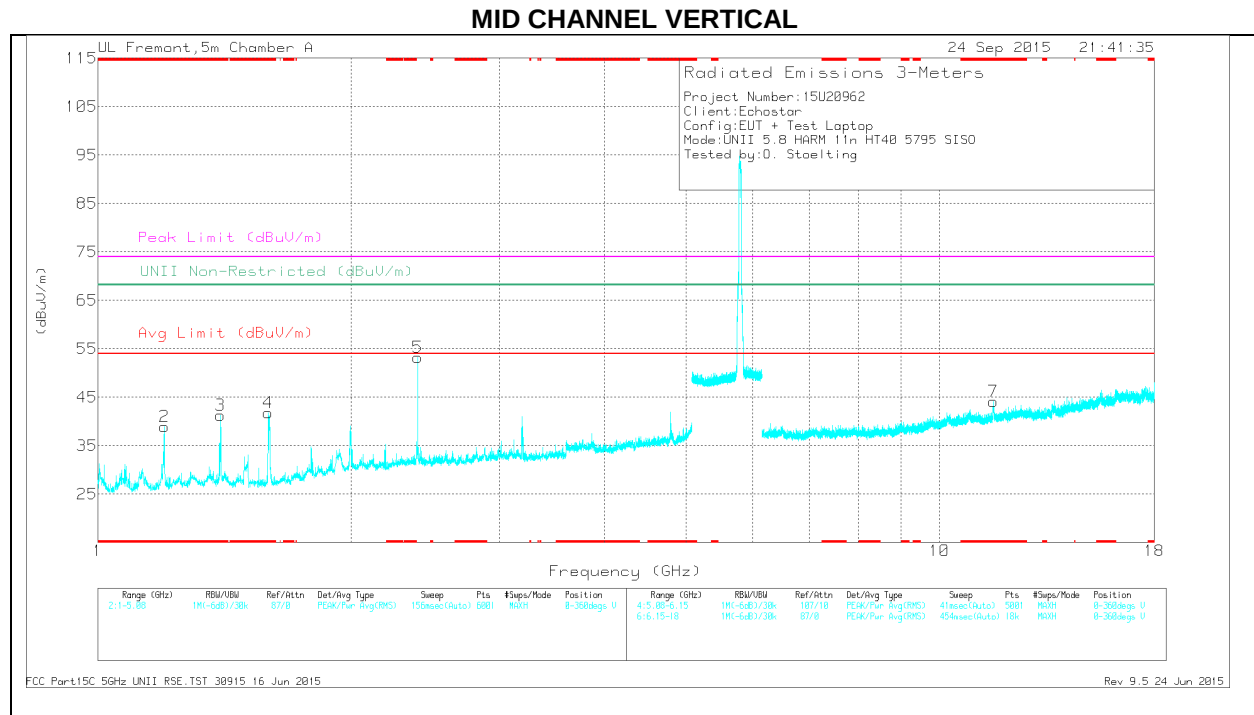
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

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.



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/Fitr /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	* 1.066	43.82	Pk	27.2	-35.7	35.32	-	-	74	-38.68	-	-	0-360	100	H
6	* 3.863	39.34	Pk	33.5	-32	40.84	-	-	74	-33.16	-	-	0-360	201	H
2	* 1.2	46.92	Pk	28	-36	38.92	-	-	74	-35.08	-	-	0-360	200	V
3	* 1.399	48.03	Pk	28.5	-35.2	41.33	-	-	74	-32.67	-	-	0-360	200	V
4	* 1.594	49.4	Pk	27.9	-35.5	41.8	-	-	74	-32.2	-	-	0-360	100	V
7	* 11.588	28.89	Pk	38.1	-22.8	44.19	-	-	74	-29.81	-	-	0-360	200	V
5	2.4	55.28	Pk	32	-34.1	53.18	-	-	-	-	68.2	-15.02	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/Fitr /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
* 1.068	55	PK-U	27.2	-35.6	46.6	-	-	74	-27.4	-	-	267	130	H
* 1.068	33.55	ADR	27.2	-35.6	25.15	54	-28.85	-	-	-	-	267	130	H
* 3.863	48.56	PK-U	33.5	-32	50.06	-	-	74	-23.94	-	-	309	265	H
* 3.863	39.1	ADR	33.5	-32	40.6	54	-13.4	-	-	-	-	309	265	H
* 1.2	54.84	PK-U	28	-36	46.84	-	-	74	-27.16	-	-	111	137	V
* 1.2	33.21	ADR	28	-36	25.21	54	-28.79	-	-	-	-	111	137	V
* 1.399	55.69	PK-U	28.5	-35.2	48.99	-	-	74	-25.01	-	-	184	246	V
* 1.399	33.15	ADR	28.5	-35.2	26.45	54	-27.55	-	-	-	-	184	246	V
* 1.596	56.83	PK-U	27.9	-35.5	49.23	-	-	74	-24.77	-	-	218	158	V
* 1.595	35.95	ADR	27.9	-35.5	28.35	54	-25.65	-	-	-	-	218	158	V
* 11.588	40.62	PK-U	38.1	-22.8	55.92	-	-	74	-18.08	-	-	55	239	V
* 11.59	27.9	ADR	38.1	-22.8	43.2	54	-10.8	-	-	-	-	55	239	V
2.4	57.71	PK-U	32	-34.1	55.61	-	-	-	-	68.2	-12.59	351	256	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

13. TRANSMITTER ABOVE 1 GHz MIMO

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.

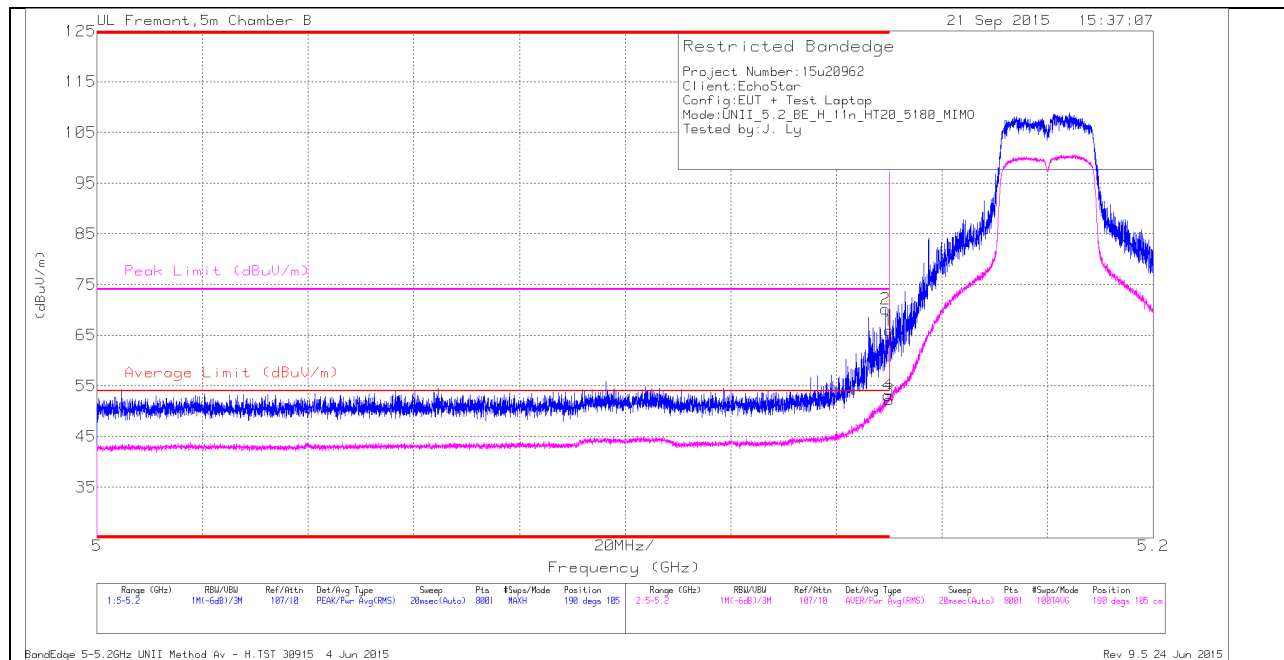
The spectrum from 30 MHz to 40 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band.

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

13.1. 5.2 GHz

13.1.1. 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

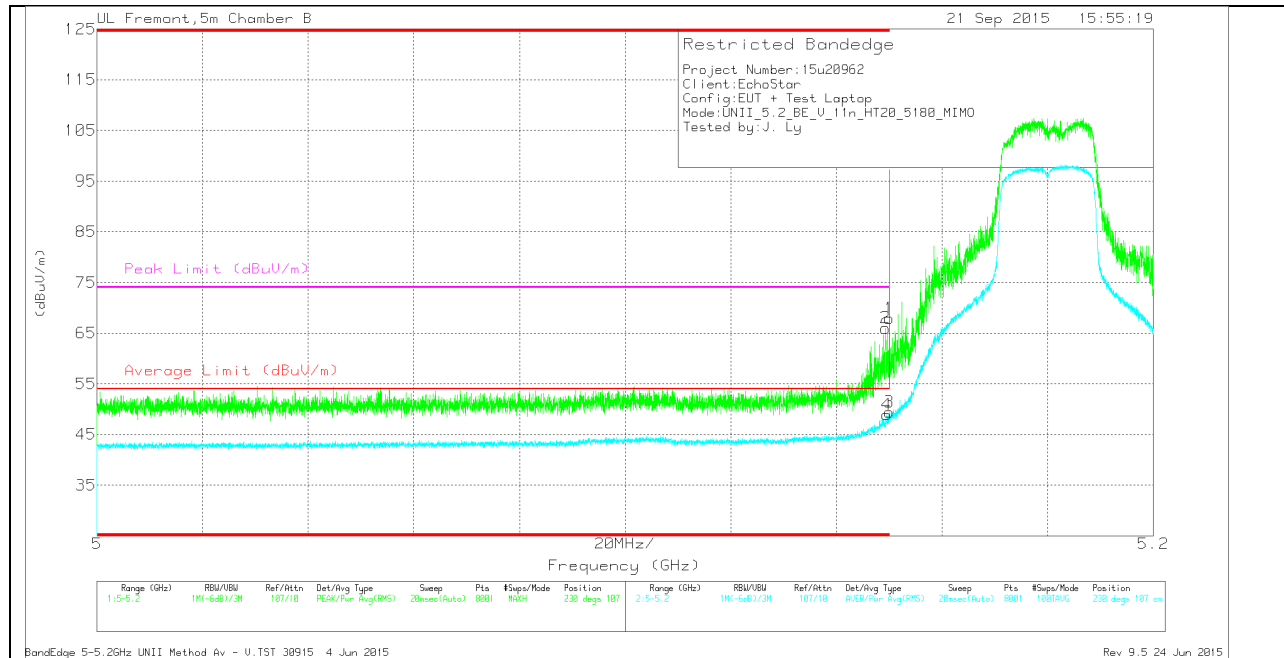
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.149	58.03	Pk	34.1	-22	0	70.13	-	-	74	-3.87	190	105	H
1	* 5.15	53.79	Pk	34.1	-22	0	65.89	-	-	74	-8.11	190	105	H
3	* 5.15	40.15	RMS	34.1	-22	0	52.25	54	-1.75	-	-	190	105	H
4	* 5.15	41.1	RMS	34.1	-22	0	53.2	54	-0.8	-	-	190	105	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

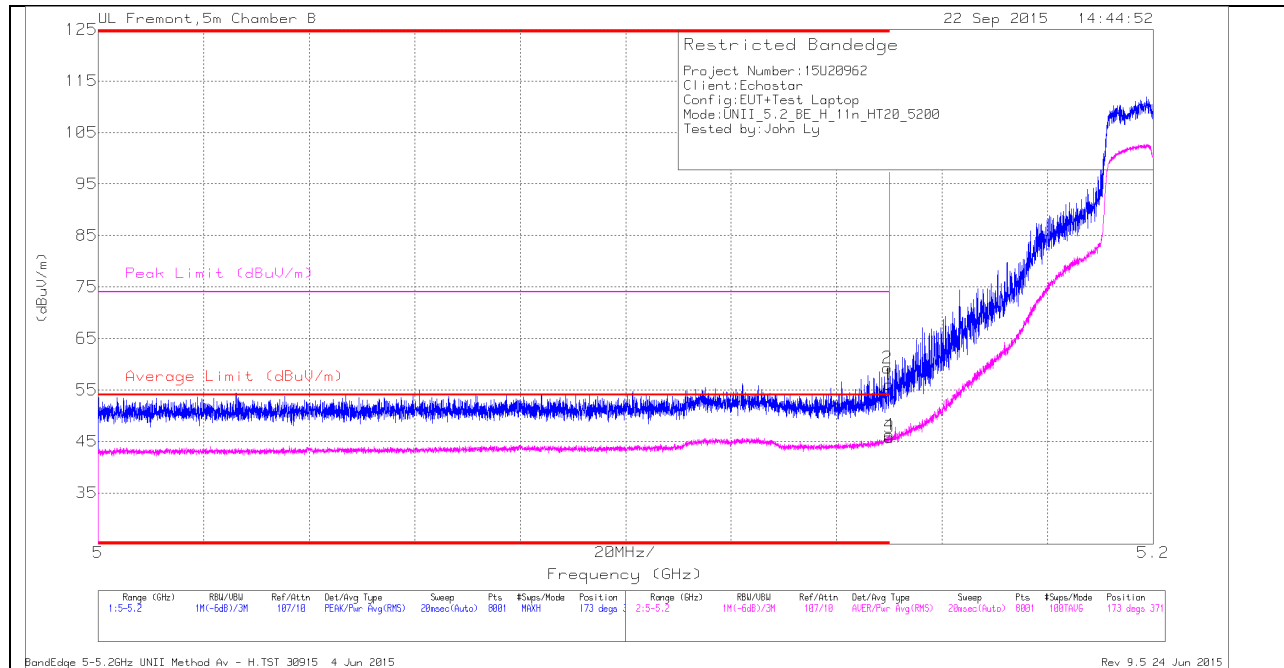
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.149	53.9	Pk	34.1	-22	66	-	-	74	-8	230	107	V
1	* 5.15	55.79	Pk	34.1	-22	67.89	-	-	74	-6.11	230	107	V
3	* 5.15	37.3	RMS	34.1	-22	49.4	54	-4.6	-	-	230	107	V
4	* 5.15	36.85	RMS	34.1	-22	48.95	54	-5.05	-	-	230	107	V

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

Pk - Peak detector

RMS - RMS detection

Ch. 40 HORIZONTAL PEAK AND AVERAGE PLOT**HORIZONTAL DATA****Trace Markers**

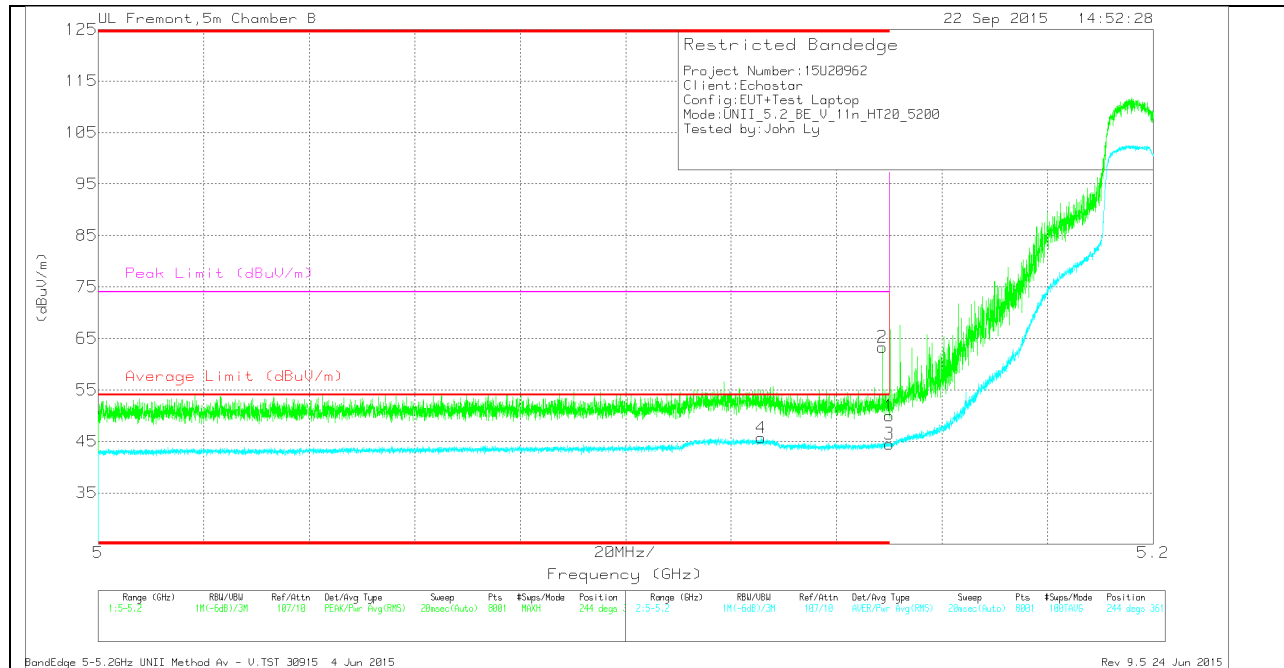
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	43.94	Pk	34.1	-22	56.04	-	-	74	-17.96	173	371	H
2	* 5.15	47.16	Pk	34.1	-22	59.26	-	-	74	-14.74	173	371	H
3	* 5.15	33.73	RMS	34.1	-22	45.83	54	-8.17	-	-	173	371	H
4	* 5.15	34.17	RMS	34.1	-22	46.27	54	-7.73	-	-	173	371	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

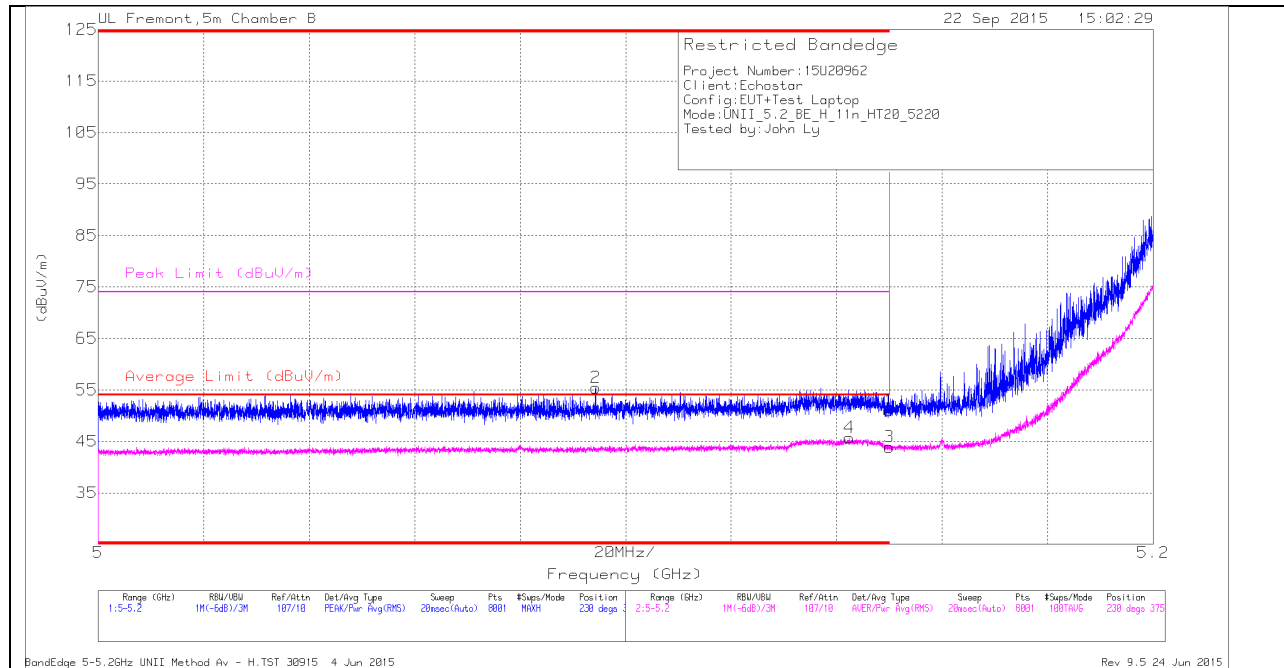
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Filt/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 5.126	33.58	RMS	34.1	-22	45.68	54	-8.32	-	-	244	361	V
2	* 5.149	51.2	Pk	34.1	-22	63.3	-	-	74	-10.7	244	361	V
1	* 5.15	37.87	Pk	34.1	-22	49.97	-	-	74	-24.03	244	361	V
3	* 5.15	32.41	RMS	34.1	-22	44.51	54	-9.49	-	-	244	361	V

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

Pk - Peak detector

RMS - RMS detection

Ch. 44 HORIZONTAL PEAK AND AVERAGE PLOT**HORIZONTAL DATA****Trace Markers**

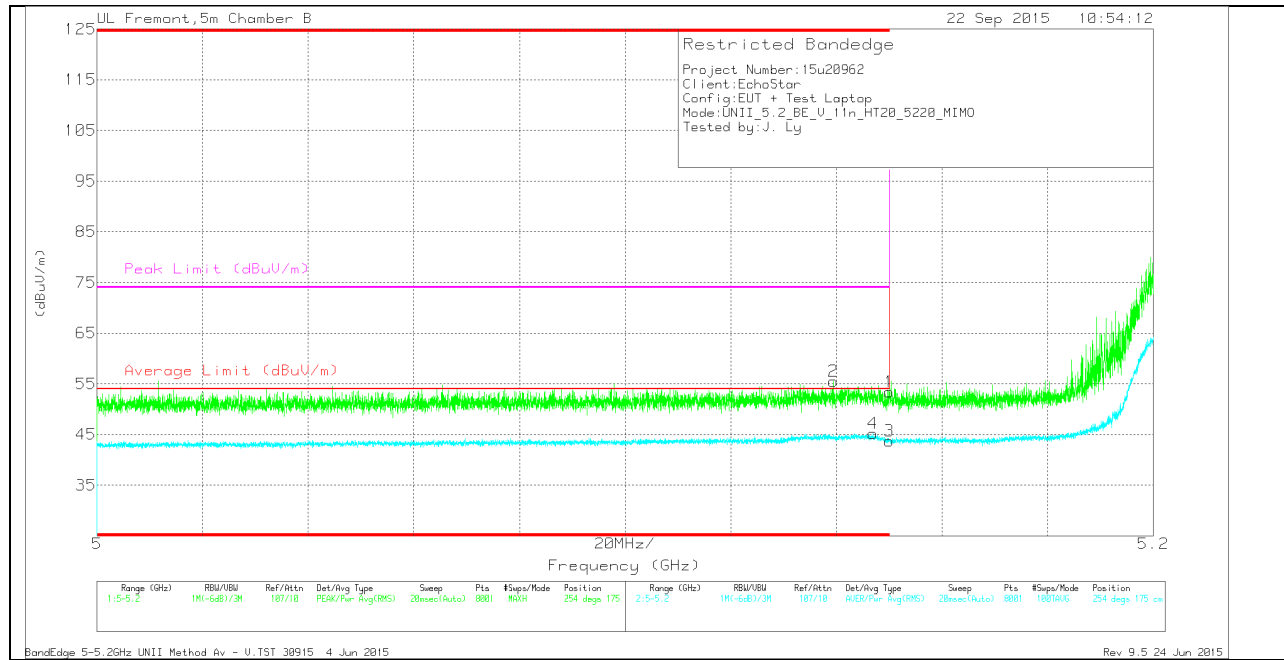
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Ftr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	38.87	Pk	34.1	-22	50.97	-	-	74	-23.03	230	375	H
2	* 5.094	43.62	Pk	34	-22.2	55.42	-	-	74	-18.58	230	375	H
3	* 5.15	31.83	RMS	34.1	-22	43.93	54	-10.07	-	-	230	375	H
4	* 5.142	33.61	RMS	34.1	-22	45.71	54	-8.29	-	-	230	375	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

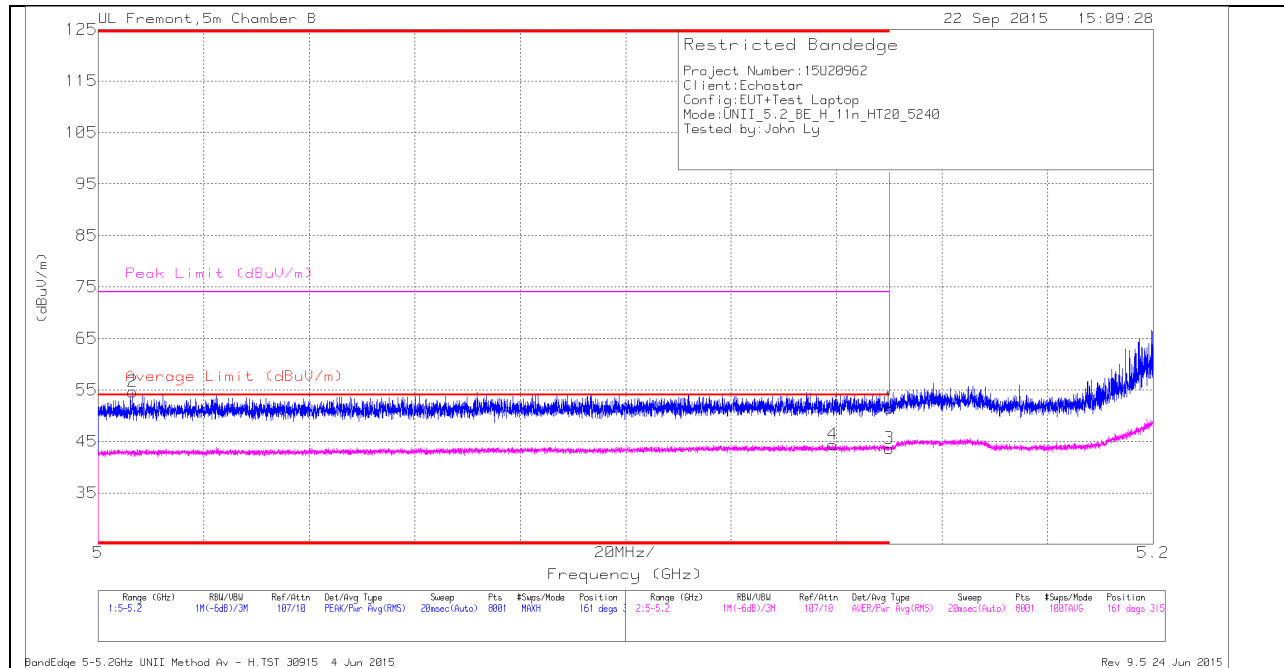
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	41.25	Pk	34.1	-22	53.35	-	-	74	-20.65	254	175	V
2	* 5.139	43.41	Pk	34.1	-22	55.51	-	-	74	-18.49	254	175	V
3	* 5.15	31.57	RMS	34.1	-22	43.67	54	-10.33	-	-	254	175	V
4	* 5.147	33.08	RMS	34.1	-22	45.18	54	-8.82	-	-	254	175	V

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

Pk - Peak detector

RMS - RMS detection

CH 48 HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

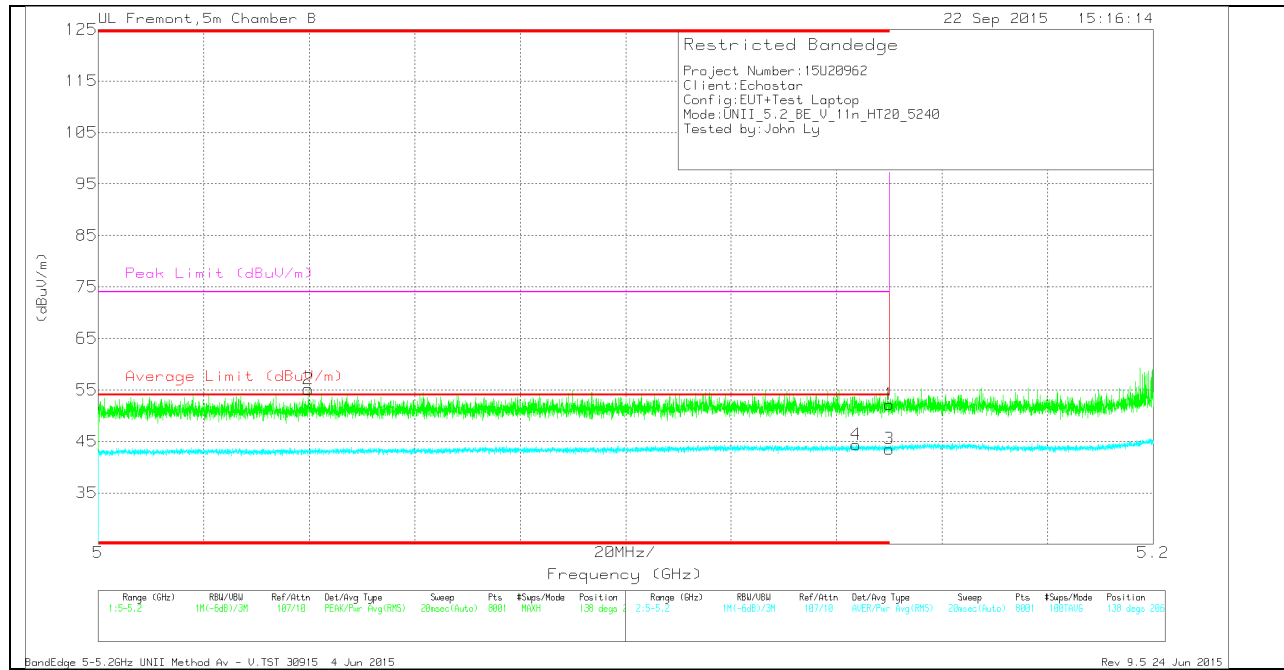
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	39.35	Pk	34.1	-22	51.45	-	-	74	-22.55	161	315	H
2	* 5.007	42.77	Pk	34	-22.1	54.67	-	-	74	-19.33	161	315	H
3	* 5.15	31.55	RMS	34.1	-22	43.65	54	-10.35	-	-	161	315	H
4	* 5.139	32.3	RMS	34.1	-22	44.4	54	-9.6	-	-	161	315	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

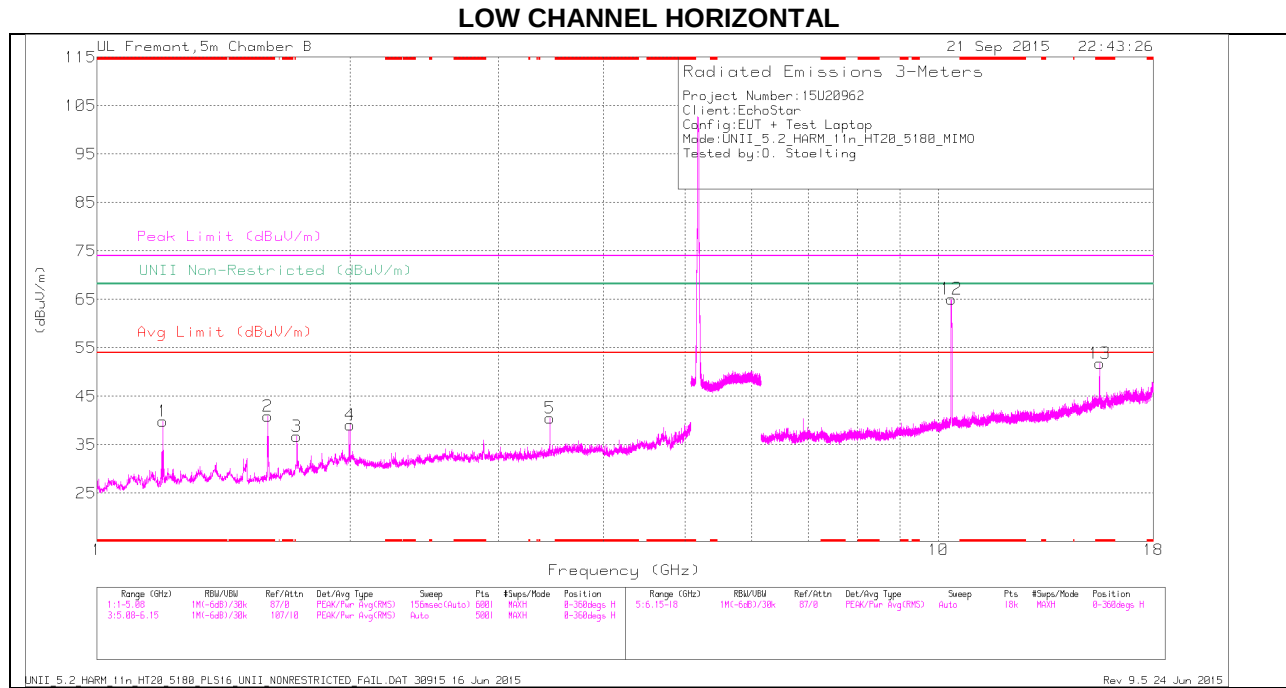
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Ftr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	40.1	Pk	34.1	-22	52.2	-	-	74	-21.8	138	206	V
2	* 5.04	43.46	Pk	34	-22.3	55.16	-	-	74	-18.84	138	206	V
3	* 5.15	31.45	RMS	34.1	-22	43.55	54	-10.45	-	-	138	206	V
4	* 5.144	32.29	RMS	34.1	-22	44.39	54	-9.61	-	-	138	206	V

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

Pk - Peak detector

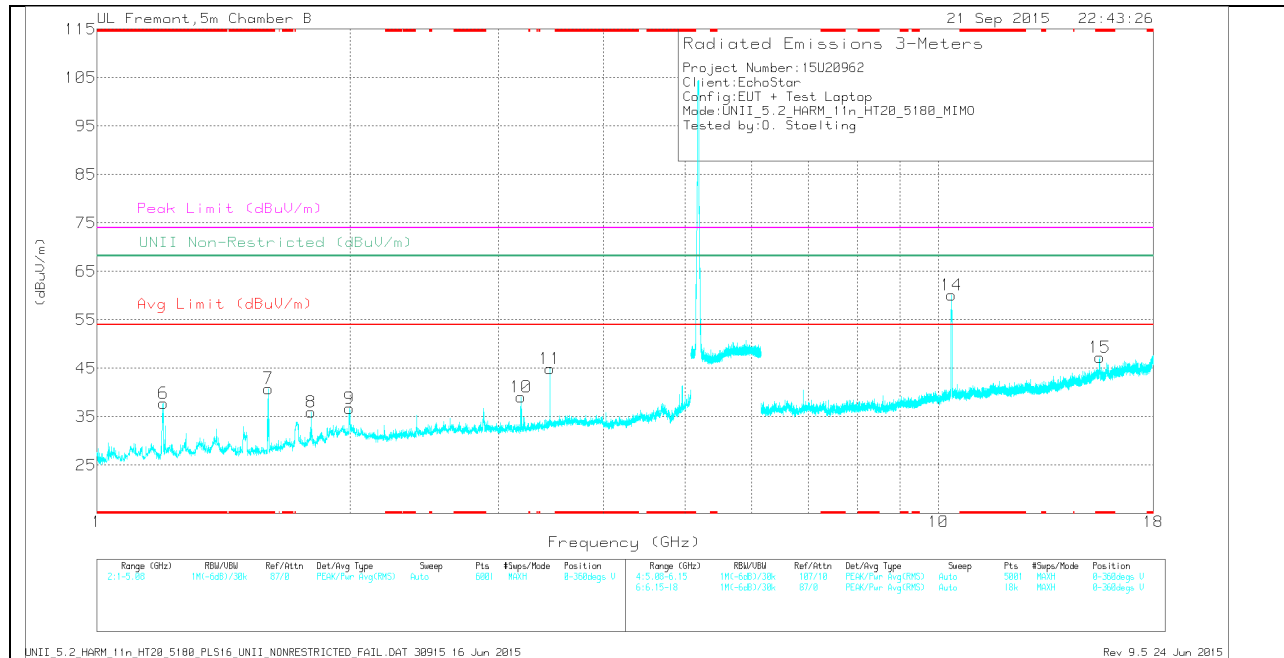
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS



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 T345 (dB/m)	Amp/Cbl/Fil tr/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	* 1.198	47.07	Pk	28.5	-35.7	0	39.87	-	-	74	-34.13	-	-	0-360	101	H
2	* 1.597	47.25	Pk	28.8	-35.2	0	40.85	-	-	74	-33.15	-	-	0-360	101	H
6	* 1.199	45	Pk	28.5	-35.7	0	37.8	-	-	74	-36.2	-	-	0-360	101	V
7	* 1.6	47.13	Pk	28.8	-35.1	0	40.83	-	-	74	-33.17	-	-	0-360	101	V
13	* 15.542	33.96	Pk	40.8	-22.9	0	51.86	-	-	74	-22.14	-	-	0-360	199	H
15	* 15.541	29.37	Pk	40.8	-22.9	0	47.27	-	-	74	-26.73	-	-	0-360	199	V
3	1.728	41.13	Pk	30	-34.4	0	36.73	-	-	-	-	68.2	-31.47	0-360	101	H
8	1.796	40.39	Pk	30.7	-35.1	0	35.99	-	-	-	-	68.2	-32.21	0-360	101	V
9	1.994	38.3	Pk	32.3	-33.9	0	36.7	-	-	-	-	68.2	-31.5	0-360	200	V
4	1.998	40.74	Pk	32.3	-34	0	39.04	-	-	-	-	68.2	-29.16	0-360	200	H
10	3.192	39.63	Pk	32.4	-32.9	0	39.13	-	-	-	-	68.2	-29.07	0-360	101	V
5	3.453	40.77	Pk	33.3	-33.6	0	40.47	-	-	-	-	68.2	-27.73	0-360	101	H
11	3.453	45.23	Pk	33.3	-33.6	0	44.93	-	-	-	-	68.2	-23.27	0-360	200	V
12	10.36	53.31	Pk	37.4	-25.6	0	65.11	-	-	-	-	68.2	-3.09	0-360	101	H
14	10.365	48.27	Pk	37.4	-25.6	0	60.07	-	-	-	-	68.2	-8.13	0-360	101	V

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

Pk - Peak detector

Radiated Emissions

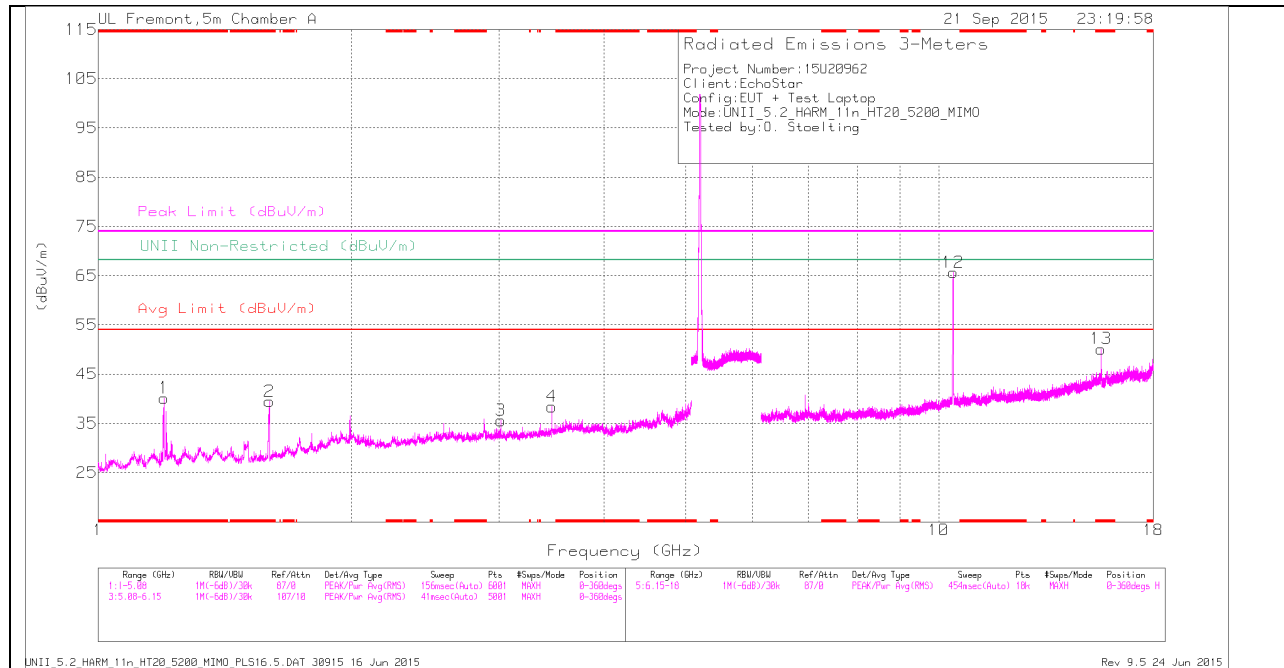
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fil tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.199	54.04	PK-U	28.5	-35.7	0	46.84	-	-	74	-27.16	-	-	263	129	H
* 1.198	32.59	ADR	28.5	-35.6	0	25.49	54	-28.51	-	-	-	-	263	129	H
* 1.598	54.27	PK-U	28.8	-35.2	0	47.87	-	-	74	-26.13	-	-	157	328	H
* 1.598	33.66	ADR	28.8	-35.2	0	27.26	54	-26.74	-	-	-	-	157	328	H
* 15.543	42.75	PK-U	40.8	-22.9	0	60.65	-	-	74	-13.35	-	-	249	196	H
* 15.54	28.44	ADR	40.8	-22.9	0	46.34	54	-7.66	-	-	-	-	249	196	H
3.453	49.49	PK-U	33.3	-33.6	0	49.19	-	-	-	-	68.2	-19.01	158	263	V
10.359	54	PK-U	37.4	-25.6	0	65.8	-	-	-	-	68.2	-2.4	113	102	H

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

PK-U - U-NII: Maximum Peak

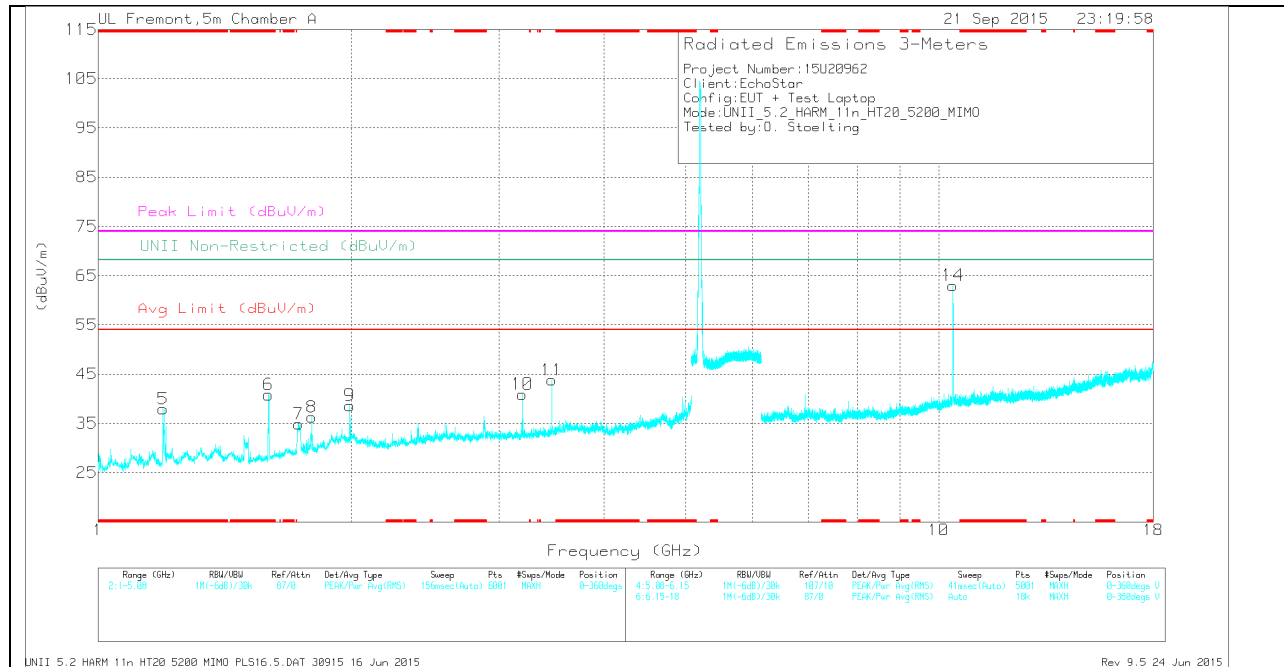
ADR - U-NII AD primary method, RMS average

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 T345 (dB/m)	Amp/Cbl/Fil tr/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	* 1.198	47.34	Pk	28.5	-35.7	0	40.14	54	-13.86	74	-33.86	-	-	0-360	101	H
2	* 1.599	45.74	Pk	28.8	-35.1	0	39.44	54	-14.56	74	-34.56	-	-	0-360	101	H
5	* 1.195	45.14	Pk	28.4	-35.6	0	37.94	54	-16.06	74	-36.06	-	-	0-360	101	V
6	* 1.594	47.23	Pk	28.8	-35.2	0	40.83	54	-13.17	74	-33.17	-	-	0-360	199	V
13	* 15.597	32.73	Pk	40.8	-23.4	0	50.13	54	-3.87	74	-23.87	-	-	0-360	199	H
7	1.733	39.18	Pk	30.1	-34.4	0	34.88	-	-	-	-	68.2	-33.32	0-360	199	V
8	1.796	40.67	Pk	30.7	-35.1	0	36.27	-	-	-	-	68.2	-31.93	0-360	199	V
9	1.993	40.2	Pk	32.3	-33.9	0	38.6	-	-	-	-	68.2	-29.6	0-360	199	V
3	3.016	36.59	Pk	32.6	-33.6	0	35.59	-	-	-	-	68.2	-32.61	0-360	101	H
10	3.197	41.32	Pk	32.4	-32.8	0	40.92	-	-	-	-	68.2	-27.28	0-360	101	V
4	3.466	38.5	Pk	33.4	-33.5	0	38.4	-	-	-	-	68.2	-29.8	0-360	199	H
11	3.467	43.78	Pk	33.4	-33.4	0	43.78	-	-	-	-	68.2	-24.42	0-360	199	V
14	10.399	50.7	Pk	37.4	-25.1	0	63	-	-	-	-	68.2	-5.2	0-360	199	V
12	10.404	53.47	Pk	37.4	-25.2	0	65.67	-	-	-	-	68.2	-2.53	0-360	101	H

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

Pk - Peak detector

Radiated Emissions

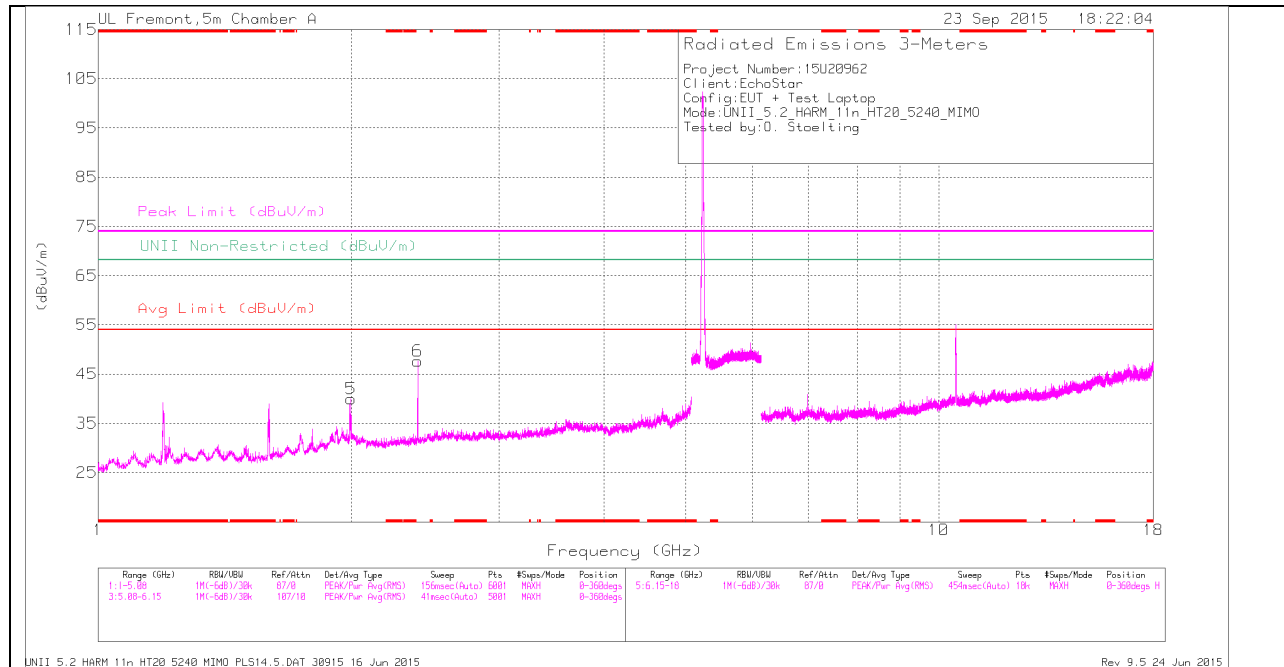
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fil tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.199	53.13	PK-U	28.5	-35.7	0	45.93	54	-8.07	74	-28.07	-	-	267	116	H
* 1.199	32.39	ADR	28.5	-35.7	0	25.19	54	-28.81	-	-	-	-	267	116	H
* 1.596	55.59	PK-U	28.8	-35.2	0	49.19	54	-4.81	74	-24.81	-	-	203	235	V
* 1.596	34.87	ADR	28.8	-35.2	0	28.47	54	-25.53	-	-	-	-	203	235	V
* 1.195	52.02	PK-U	28.4	-35.6	0	44.82	54	-9.18	74	-29.18	-	-	296	108	V
* 1.195	33.94	ADR	28.4	-35.6	0	26.74	54	-27.26	-	-	-	-	296	108	V
* 15.595	34.58	PK-U	40.8	-23.4	0	51.98	54	-2.02	74	-22.02	-	-	64	200	H
* 15.596	23.24	ADR	40.8	-23.4	0	40.64	54	-13.36	-	-	-	-	64	200	H
3.467	48.88	PK-U	33.4	-33.4	0	48.88	-	-	-	-	68.2	-19.32	215	227	V
10.401	55.43	PK-U	37.4	-25.2	0	67.63	-	-	-	-	68.2	-5.7	296	108	H

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

PK-U - U-NII: Maximum Peak

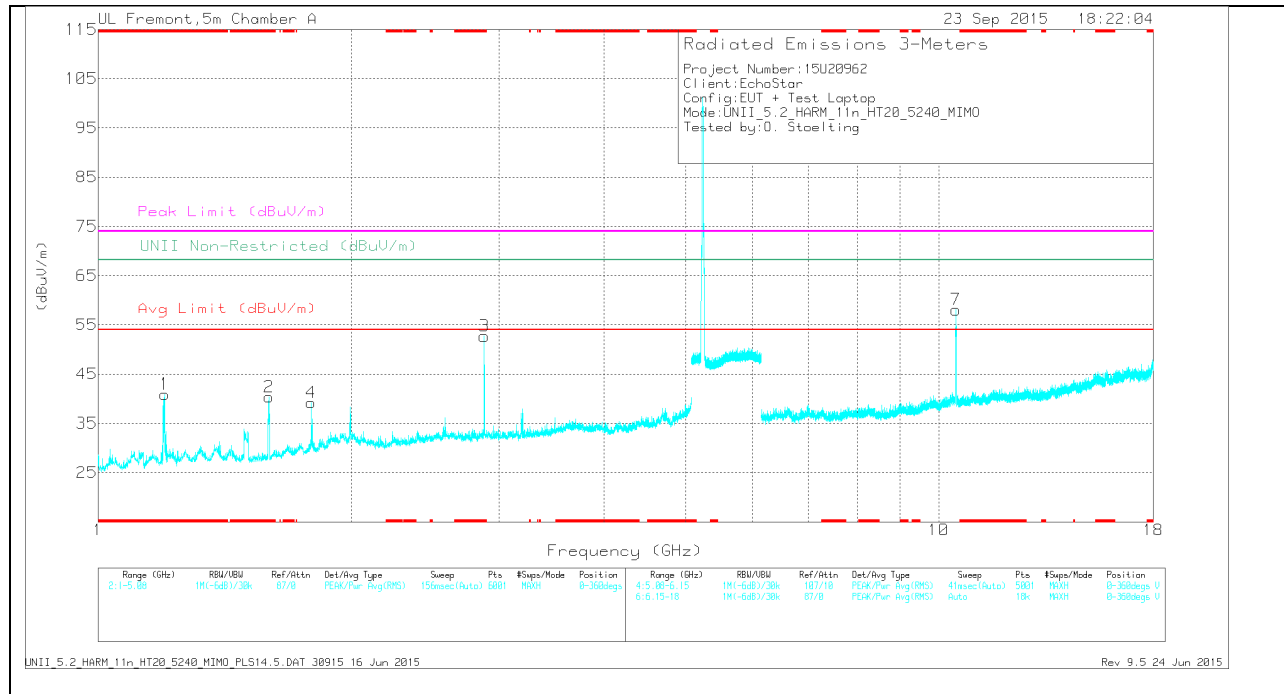
ADR - U-NII AD primary method, RMS average

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 T345 (dB/m)	Amp/Cbl/Fitr /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	* 1.2	48.11	Pk	28.5	-35.7	40.91	-	-	74	-33.09	-	-	0-360	101	V
2	* 1.597	46.73	Pk	28.8	-35.2	40.33	-	-	74	-33.67	-	-	0-360	101	V
3	* 2.88	53.4	Pk	32.6	-33.3	52.7	-	-	74	-21.3	-	-	0-360	200	V
4	1.794	43.58	Pk	30.7	-35.1	39.18	-	-	-	-	68.2	-29.02	0-360	101	V
5	2	41.79	Pk	32.3	-34.1	39.99	-	-	-	-	68.2	-28.21	0-360	101	H
6	2.4	50.03	Pk	32.1	-34.5	47.63	-	-	-	-	68.2	-20.57	0-360	200	H
7	10.479	45.97	Pk	37.4	-25.3	58.07	-	-	-	-	68.2	-10.13	0-360	101	V

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

Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fitr /Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.2	54.8	PK-U	28.5	-35.7	47.6	-	-	74	-26.4	-	-	0	115	V
* 1.2	32.76	ADR	28.5	-35.7	25.56	54	-28.44	-	-	-	-	0	115	V
* 1.595	53.43	PK-U	28.8	-35.2	47.03	-	-	74	-26.97	-	-	266	109	V
* 1.596	33.48	ADR	28.8	-35.2	27.08	54	-26.92	-	-	-	-	266	109	V
* 2.88	56.19	PK-U	32.6	-33.3	55.49	-	-	74	-18.51	-	-	345	107	V
* 2.88	32.57	ADR	32.6	-33.3	31.87	54	-22.13	-	-	-	-	345	107	V
1.793	46.95	PK-U	30.7	-35.1	42.55	-	-	-	-	68.2	-25.65	345	102	V
1.999	49.74	PK-U	32.3	-34	48.04	-	-	-	-	68.2	-20.16	360	101	H
2.4	49.92	PK-U	32.1	-34.5	47.52	-	-	-	-	68.2	-20.68	360	199	H
10.481	55.31	PK-U	37.4	-25.4	67.31	-	-	-	-	68.2	-.89	226	208	V

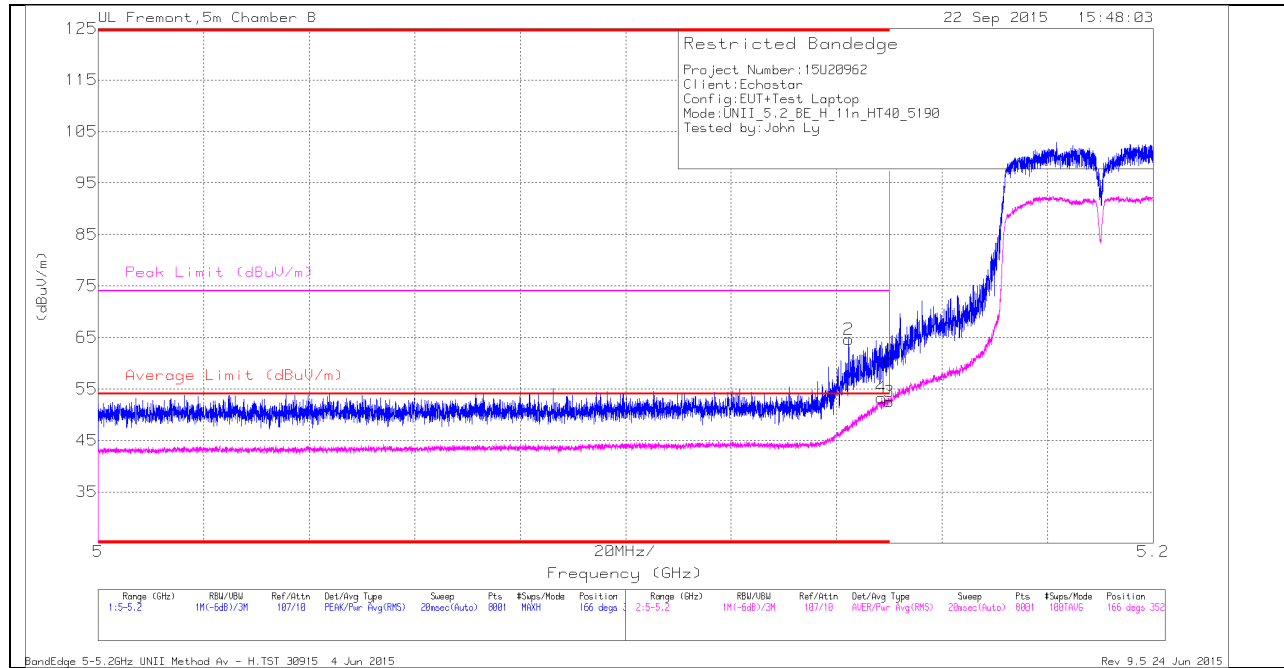
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

13.1.2. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.2 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

Ch. 38 HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

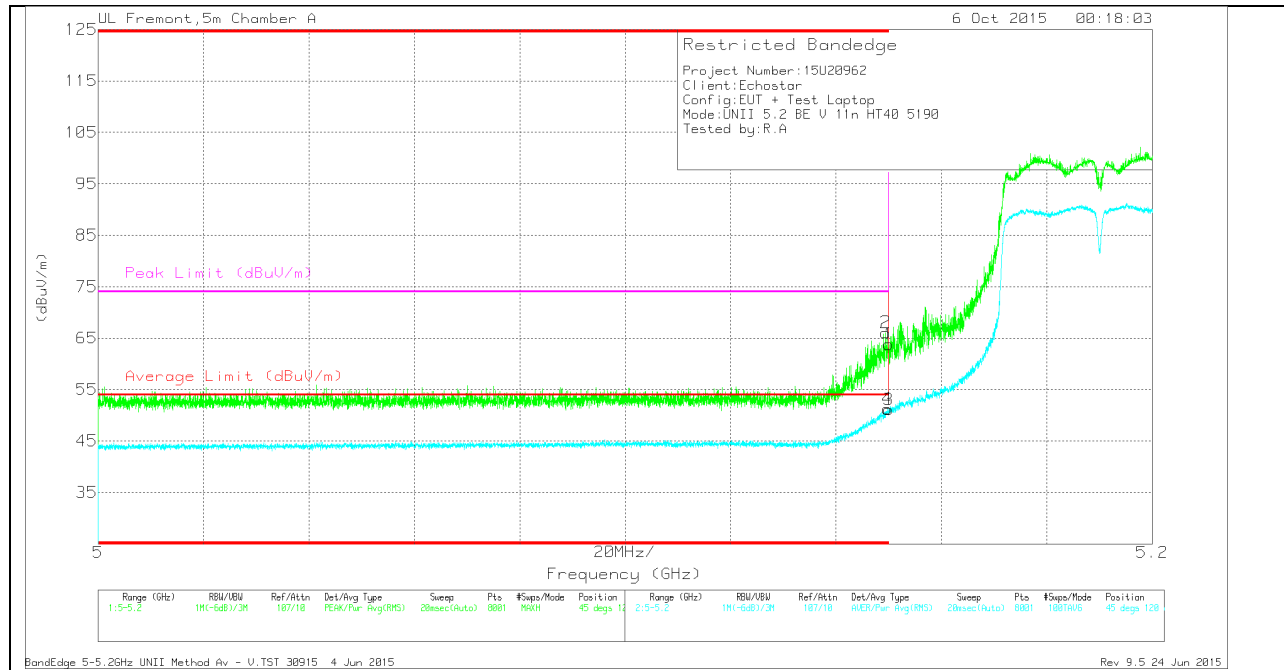
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Fitr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	48.46	Pk	34.1	-22	60.56	-	-	74	-13.44	166	352	H
2	* 5.142	52.52	Pk	34.1	-22	64.62	-	-	74	-9.38	166	352	H
3	* 5.15	40.43	RMS	34.1	-22	52.53	54	-1.47	-	-	166	352	H
4	* 5.148	41.22	RMS	34.1	-22	53.32	54	-.68	-	-	166	352	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

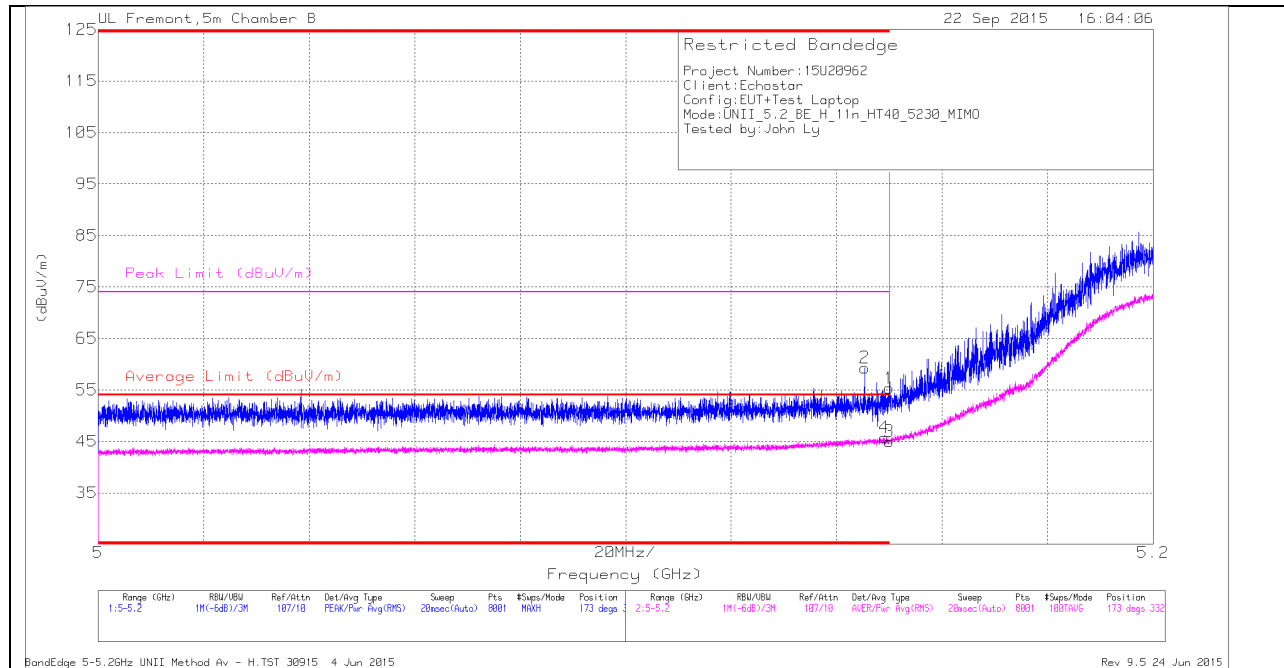
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Fitr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	50.3	Pk	34.2	-20.7	63.8	-	-	74	-10.2	45	120	V
2	* 5.149	52.59	Pk	34.2	-20.7	66.09	-	-	74	-7.91	45	120	V
3	* 5.15	37.62	RMS	34.2	-20.7	51.12	54	-2.88	-	-	45	120	V
4	* 5.15	37.76	RMS	34.2	-20.7	51.26	54	-2.74	-	-	45	120	V

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

Pk - Peak detector

RMS - RMS detection

CH 46 HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

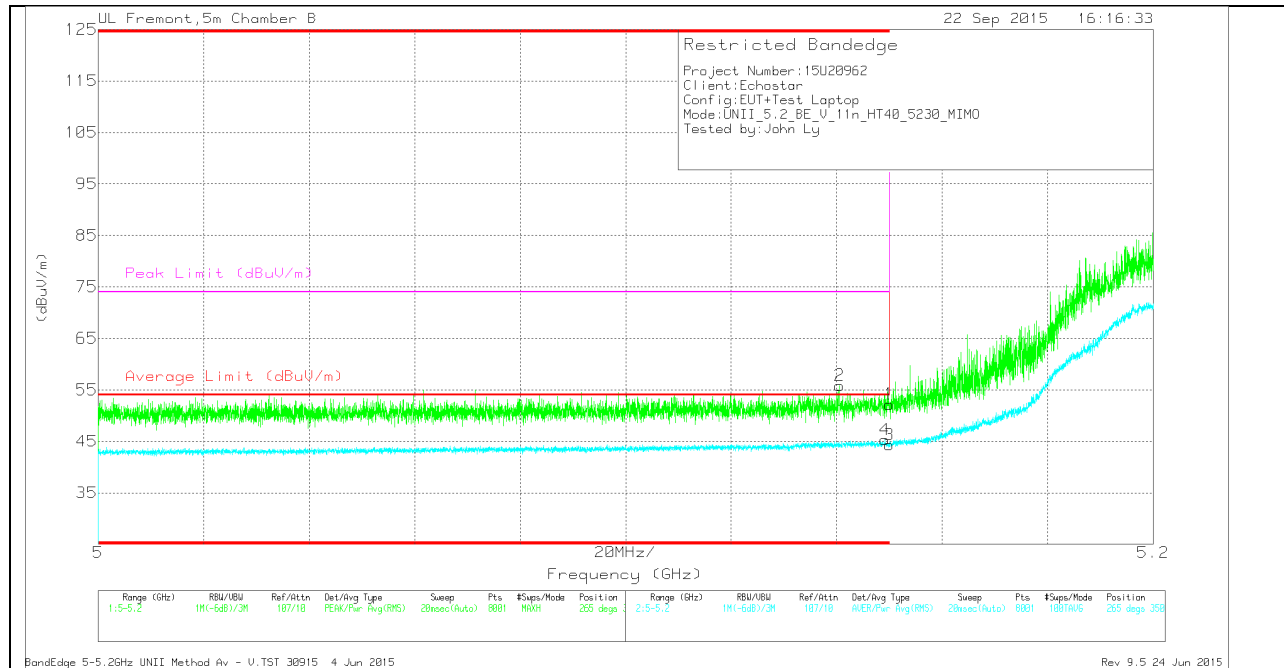
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	43.24	Pk	34.1	-22	55.34	-	-	74	-18.66	173	332	H
2	* 5.145	47.18	Pk	34.1	-22	59.28	-	-	74	-14.72	173	332	H
3	* 5.15	32.88	RMS	34.1	-22	44.98	54	-9.02	-	-	173	332	H
4	* 5.149	33.63	RMS	34.1	-22	45.73	54	-8.27	-	-	173	332	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

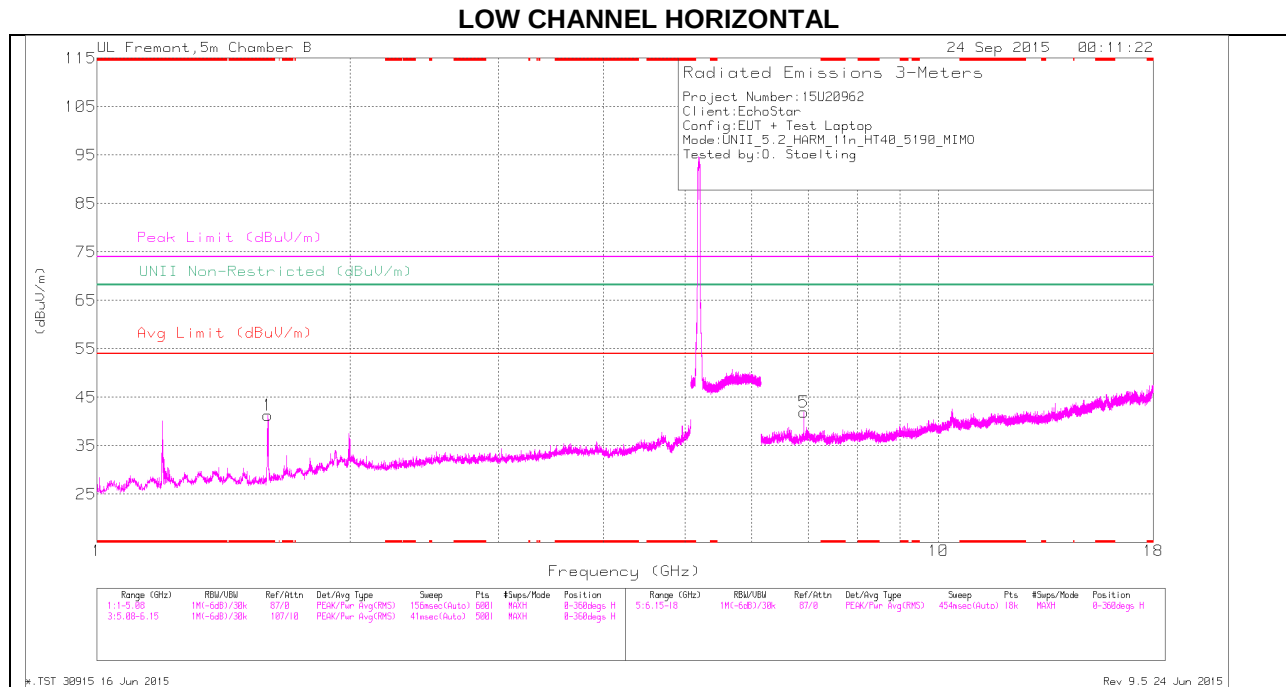
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Filt/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	40.11	Pk	34.1	-22	52.21	-	-	74	-21.79	265	350	V
2	* 5.141	43.74	Pk	34.1	-22	55.84	-	-	74	-18.16	265	350	V
3	* 5.15	32.23	RMS	34.1	-22	44.33	54	-9.67	-	-	265	350	V
4	* 5.149	33.2	RMS	34.1	-22	45.3	54	-8.7	-	-	265	350	V

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

Pk - Peak detector

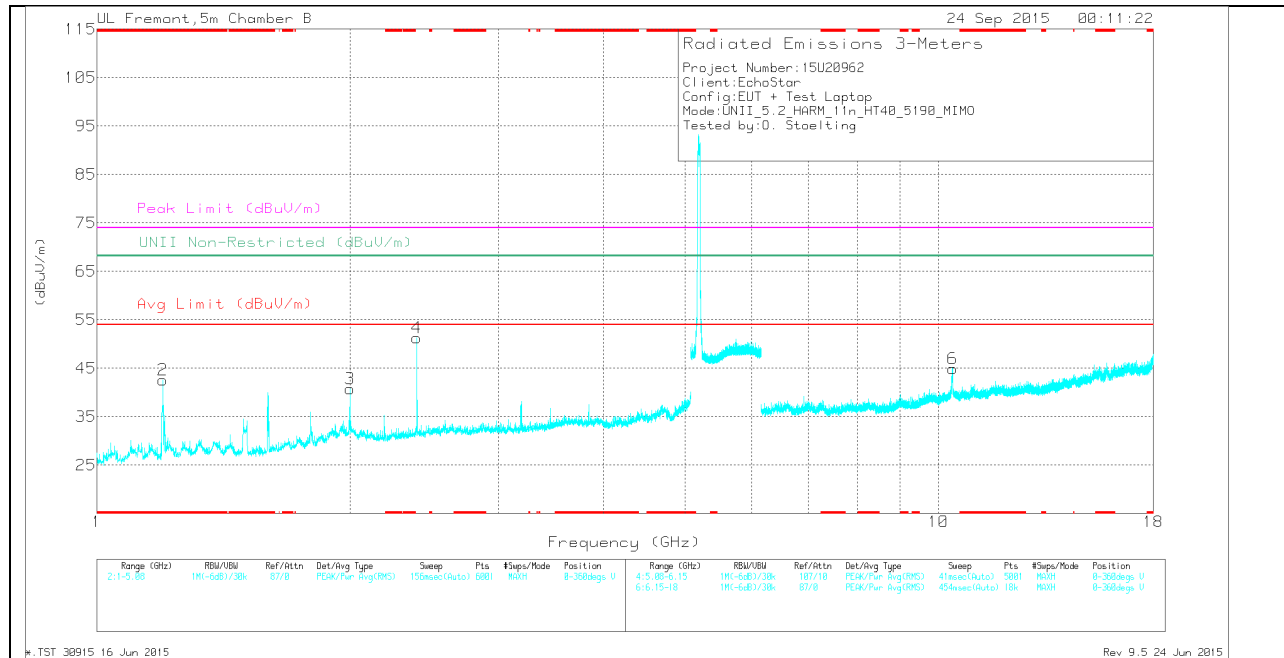
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS



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 T345 (dB/m)	Amp/Cbl/Ftr /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	* 1.596	47.65	Pk	28.8	-35.2	41.25	-	-	74	-32.75	-	-	0-360	101	H
2	* 1.198	49.77	Pk	28.5	-35.7	42.57	-	-	74	-31.43	-	-	0-360	101	V
3	2	42.55	Pk	32.3	-34.1	40.75	-	-	-	-	68.2	-27.45	0-360	200	V
4	2.4	53.63	Pk	32.1	-34.5	51.23	-	-	-	-	68.2	-16.97	0-360	200	V
5	6.92	36.53	Pk	36.1	-30.7	41.93	-	-	-	-	68.2	-26.27	0-360	101	H
6	10.395	32.73	Pk	37.4	-25.2	44.93	-	-	-	-	68.2	-23.27	0-360	200	V

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

Pk - Peak detector

Radiated Emissions

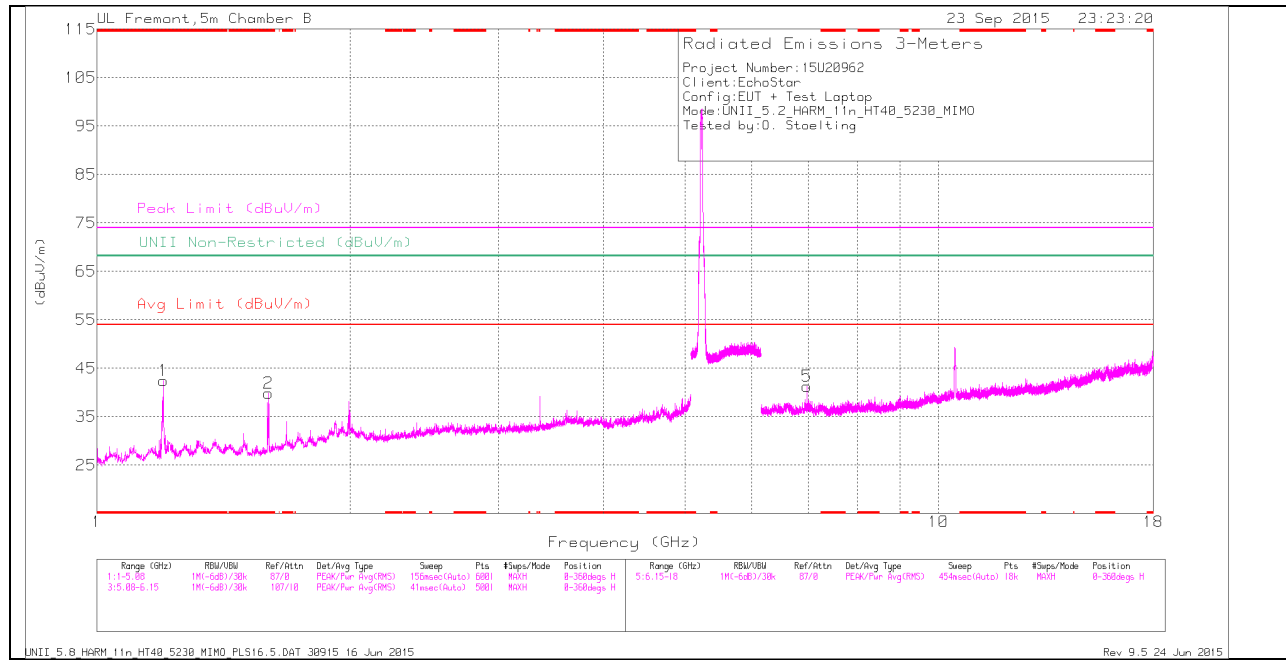
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Ftr /Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.595	55.2	PK-U	28.8	-35.2	48.8	-	-	74	-25.2	-	-	274	122	H
* 1.597	33.91	ADR	28.8	-35.2	27.51	54	-26.49	-	-	-	-	274	122	H
* 1.2	55.32	PK-U	28.5	-35.7	48.12	-	-	74	-25.88	-	-	239	168	V
* 1.199	33.02	ADR	28.5	-35.7	25.82	54	-28.18	-	-	-	-	239	168	V
1.999	31.12	ADR	32.3	-34	29.42	-	-	-	-	-	-	290	311	V
2	51.76	PK-U	32.3	-34.1	49.96	-	-	-	-	68.2	-18.24	290	311	V
2.4	57.1	PK-U	32.1	-34.5	54.7	-	-	-	-	68.2	-13.5	17	159	V
6.92	41.99	PK-U	36.1	-30.7	47.39	-	-	-	-	68.2	-20.81	40	108	H
10.394	41.57	PK-U	37.4	-25.2	53.77	-	-	-	-	68.2	-14.43	359	216	V

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

PK-U - U-NII: Maximum Peak

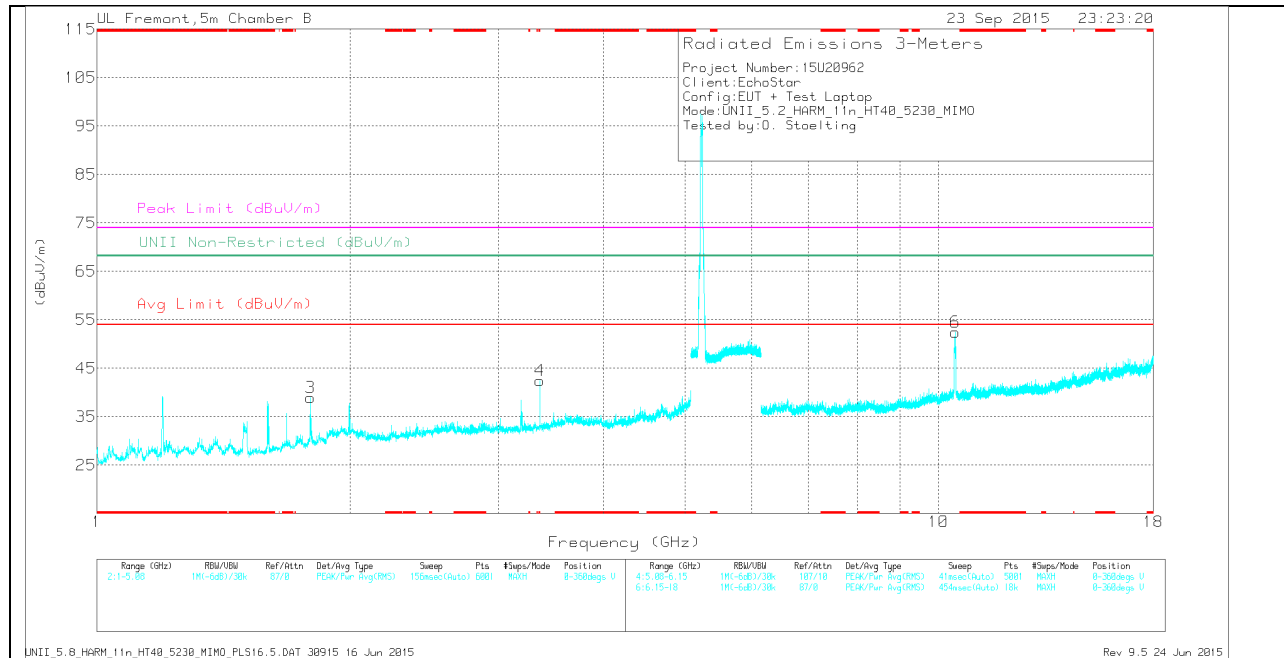
ADR - U-NII AD primary method, RMS average

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 T345 (dB/m)	Amp/Cb/Fitr/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	* 1.2	49.65	Pk	28.5	-35.7	42.45	-	-	74	-31.55	-	-	0-360	101	H
2	* 1.6	46.18	Pk	28.8	-35.1	39.88	-	-	74	-34.12	-	-	0-360	101	H
3	1.794	43.34	Pk	30.7	-35.1	38.94	-	-	-	-	68.2	-29.26	0-360	101	V
4	3.36	42.55	Pk	32.9	-33	42.45	-	-	-	-	68.2	-25.75	0-360	101	V
5	6.974	35.24	Pk	36	-30	41.24	-	-	-	-	68.2	-26.96	0-360	101	H
6	10.464	40.11	Pk	37.4	-25.1	52.41	-	-	-	-	68.2	-15.79	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 T345 (dB/m)	Amp/Cb/Fitr/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
* 1.199	57.72	PK-U	28.5	-35.7	50.52	-	-	74	-23.48	-	-	352	133	H
* 1.198	33.91	ADR	28.5	-35.7	26.71	54	-27.29	-	-	-	-	352	133	H
* 1.599	52.89	PK-U	28.8	-35.1	46.59	-	-	74	-27.41	-	-	337	192	H
* 1.599	32.69	ADR	28.8	-35.1	26.39	54	-27.61	-	-	-	-	337	192	H
1.793	52.96	PK-U	30.7	-35.1	48.56	-	-	-	-	68.2	-19.64	248	102	V
3.36	50.64	PK-U	32.9	-33	50.54	-	-	-	-	68.2	-17.66	160	234	V
6.973	42.34	PK-U	36	-30	48.34	-	-	-	-	68.2	-19.86	45	108	H
10.464	51.91	PK-U	37.4	-25.1	64.21	-	-	-	-	68.2	-3.99	352	224	V

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

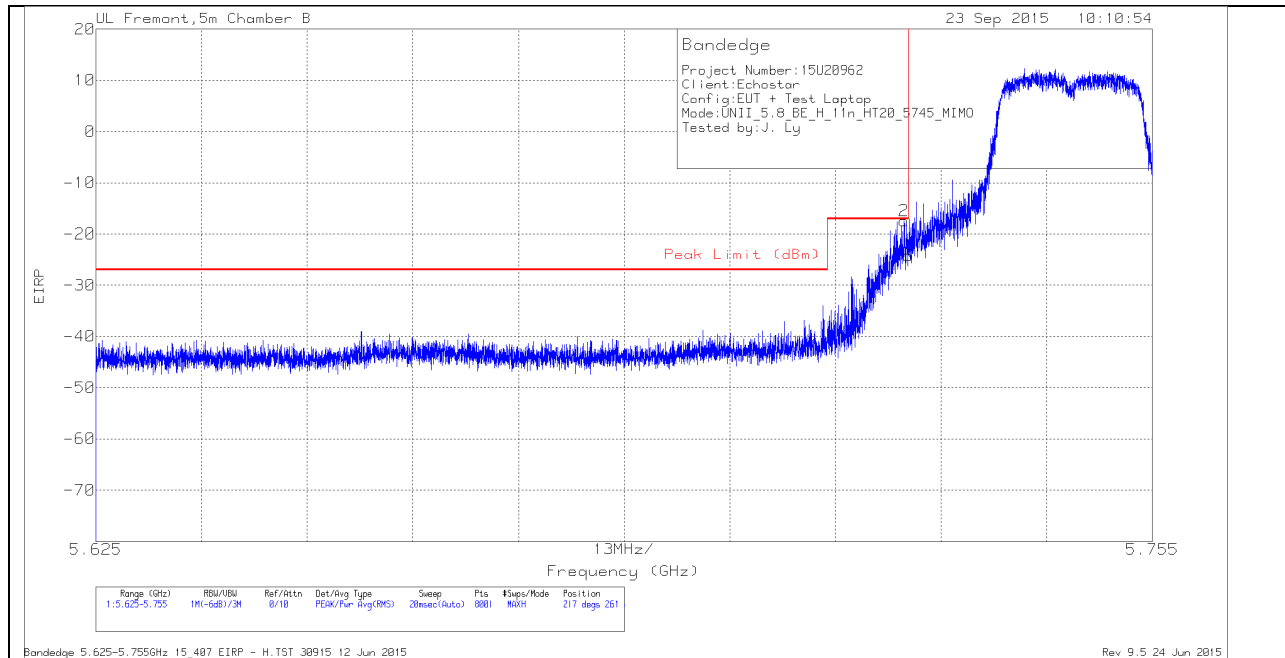
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

13.2. 5.8 GHz

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

HORIZONTAL PEAK PLOT



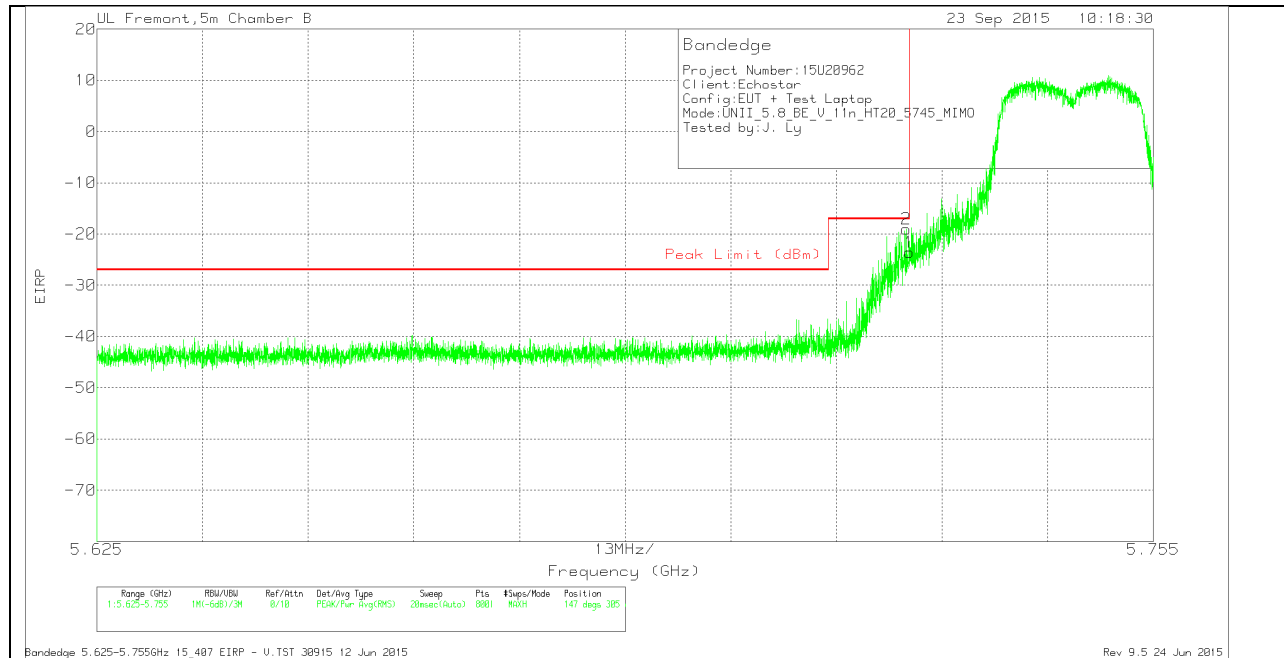
CH 149 HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (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
2	5.724	-42.57	Pk	35	-21.7	11.8	-17.47	-17	-.47	217	261	H
1	5.725	-49.22	Pk	35	-21.7	11.8	-24.12	-17	-7.12	217	261	H

Pk - Peak detector

VERTICAL PEAK PLOT



CH 149 VERTICAL DATA

Trace Markers

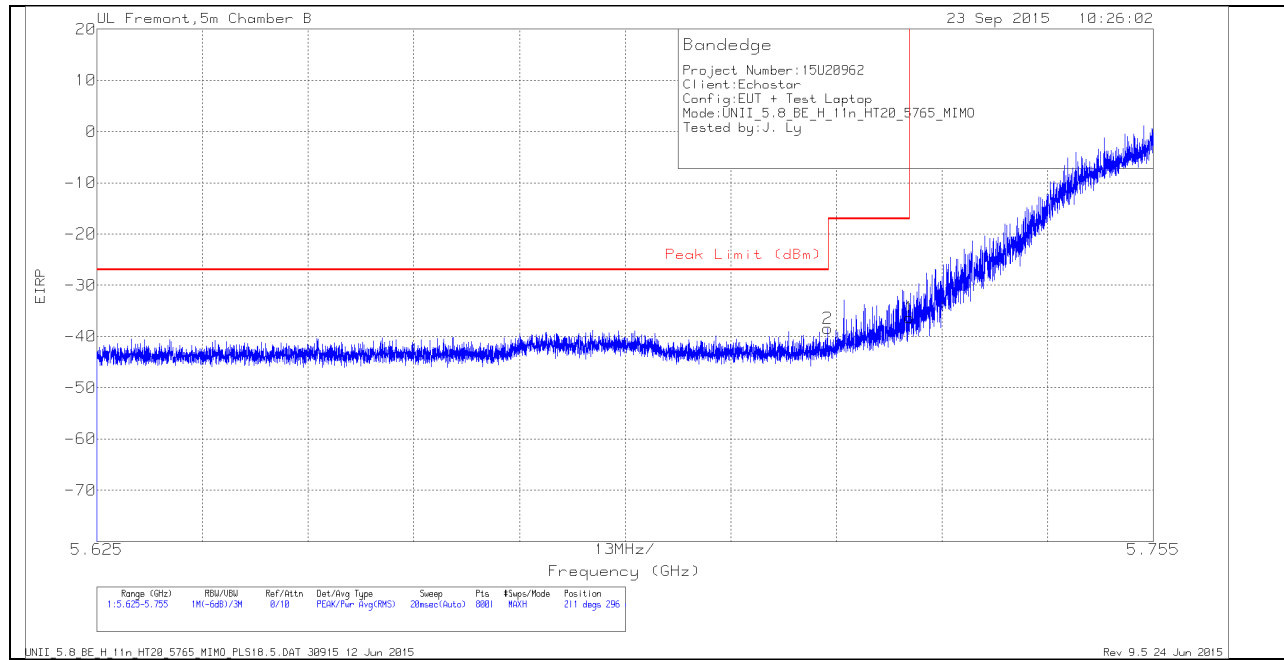
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T136 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.711	-66.3	Pk	34.7	-20.7	11.8	-40.5	-27	-13.5	108	270	H
1	5.725	-65.25	Pk	34.7	-20.7	11.8	-39.45	-17	-22.45	108	270	H

Pk - Peak detector

Bandedge 5.625-5.755GHz 15_407 EIRP - H.TST 39763 24 Nov 2014

Rev 9.5 24 Jun 2015

CH 153 HORIZONTAL PEAK PLOT



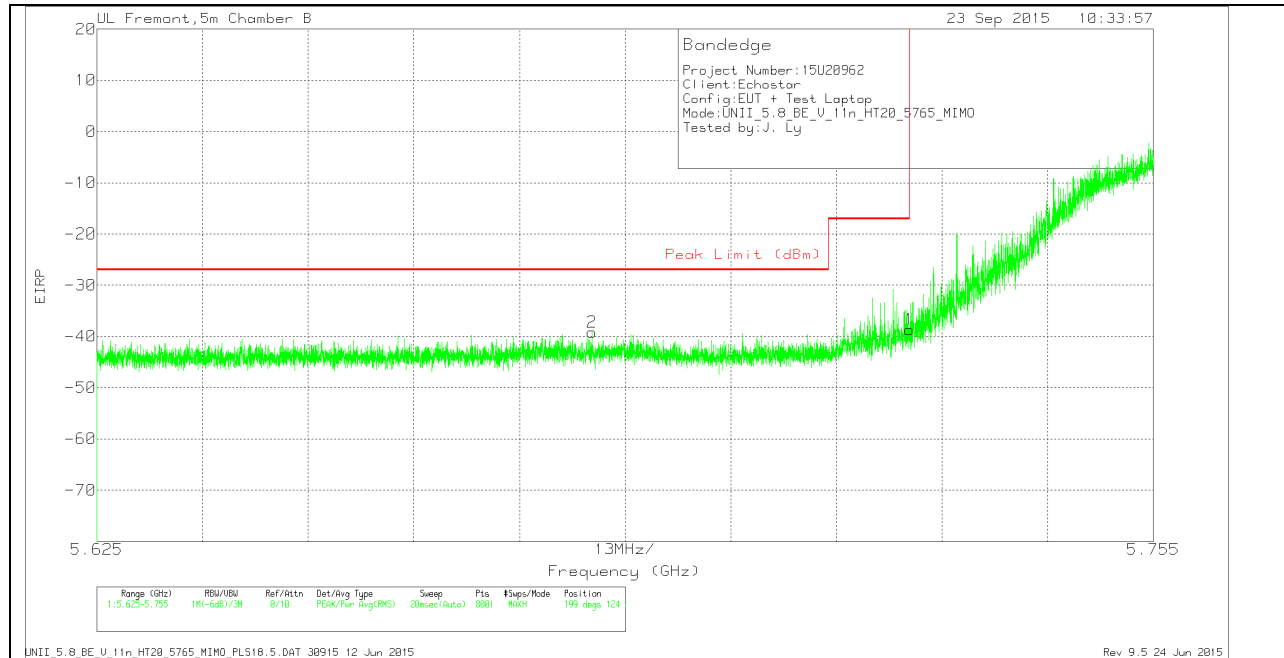
VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (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
2	5.715	-63.53	Pk	35	-21.7	11.8	-38.43	-27	-11.43	211	296	H
1	5.725	-61.44	Pk	35	-21.7	11.8	-36.34	-17	-19.34	211	296	H

Pk - Peak detector

CH 153 VERTICAL PEAK PLOT

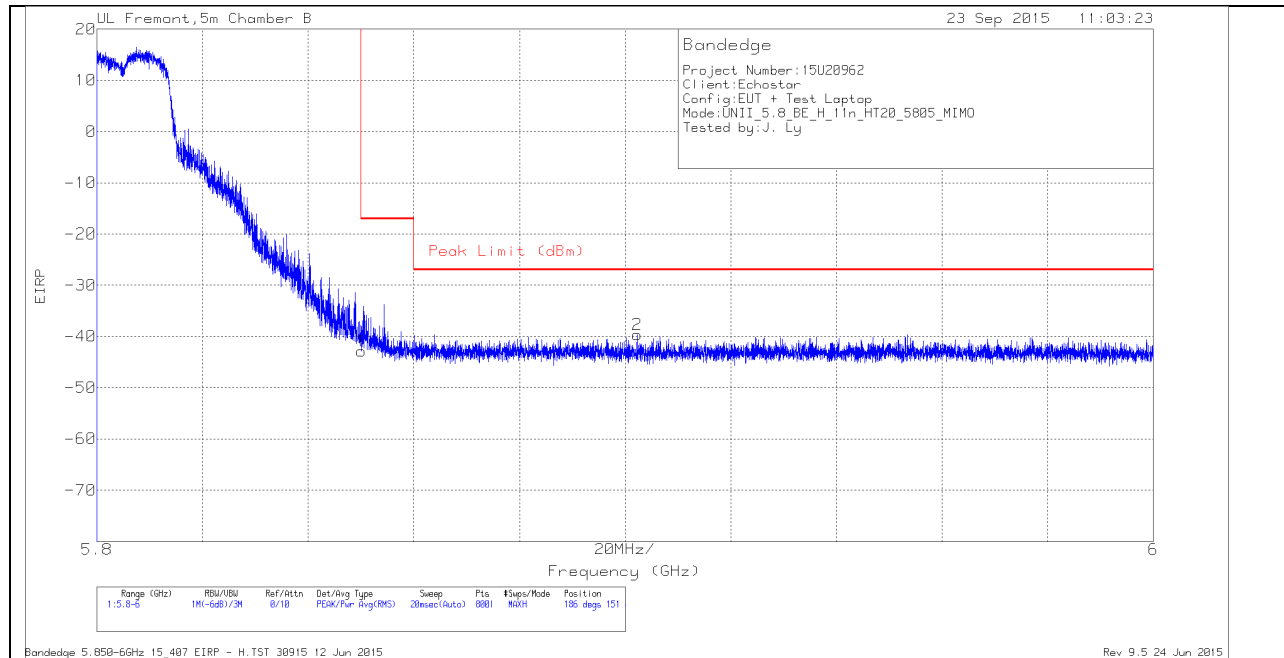


CH 153 VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (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
2	5.686	-64.18	Pk	34.9	-21.7	11.8	-39.18	-27	-12.18	199	124	V
1	5.725	-63.77	Pk	35	-21.7	11.8	-38.67	-17	-21.67	199	124	V

Pk - Peak detector

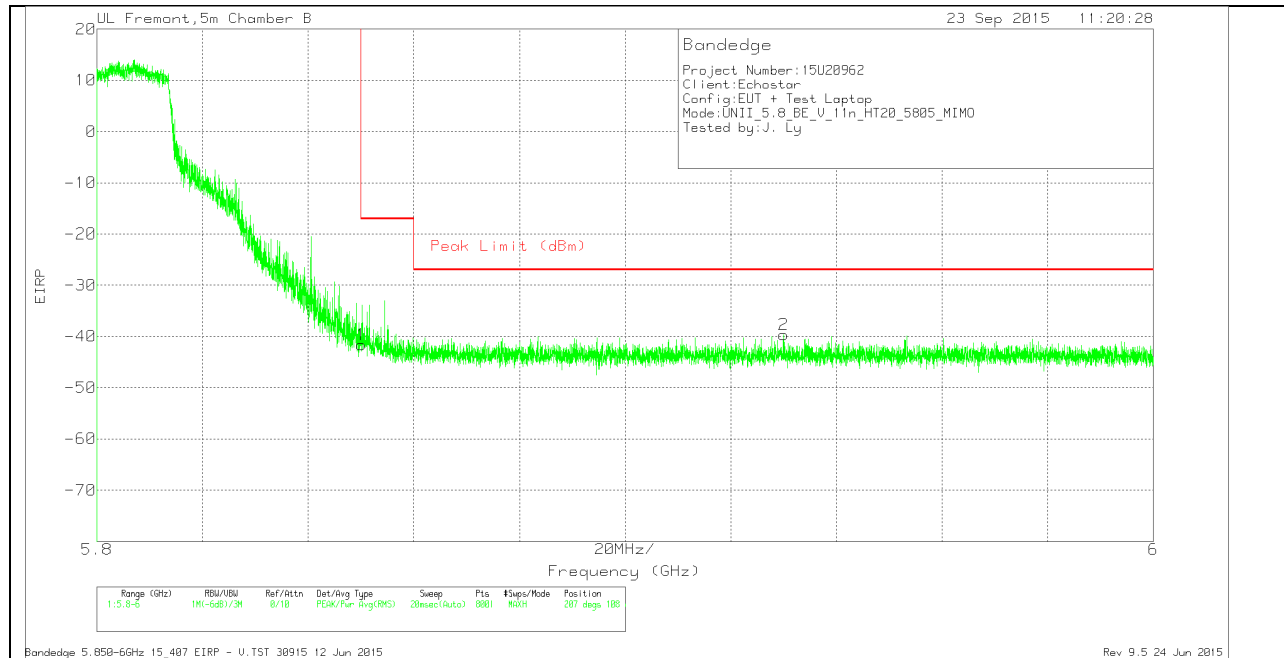
AUTHORIZED BANDEDGE (HIGH CHANNEL)**HORIZONTAL PEAK PLOT****CH 161 HORIZONTAL DATA**

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (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	-68.4	Pk	35.4	-21.6	11.8	-42.8	-17	-25.8	186	151	H
2	5.902	-65.3	Pk	35.5	-21.6	11.8	-39.6	-27	-12.6	186	151	H

Pk - Peak detector

VERTICAL PEAK PLOT

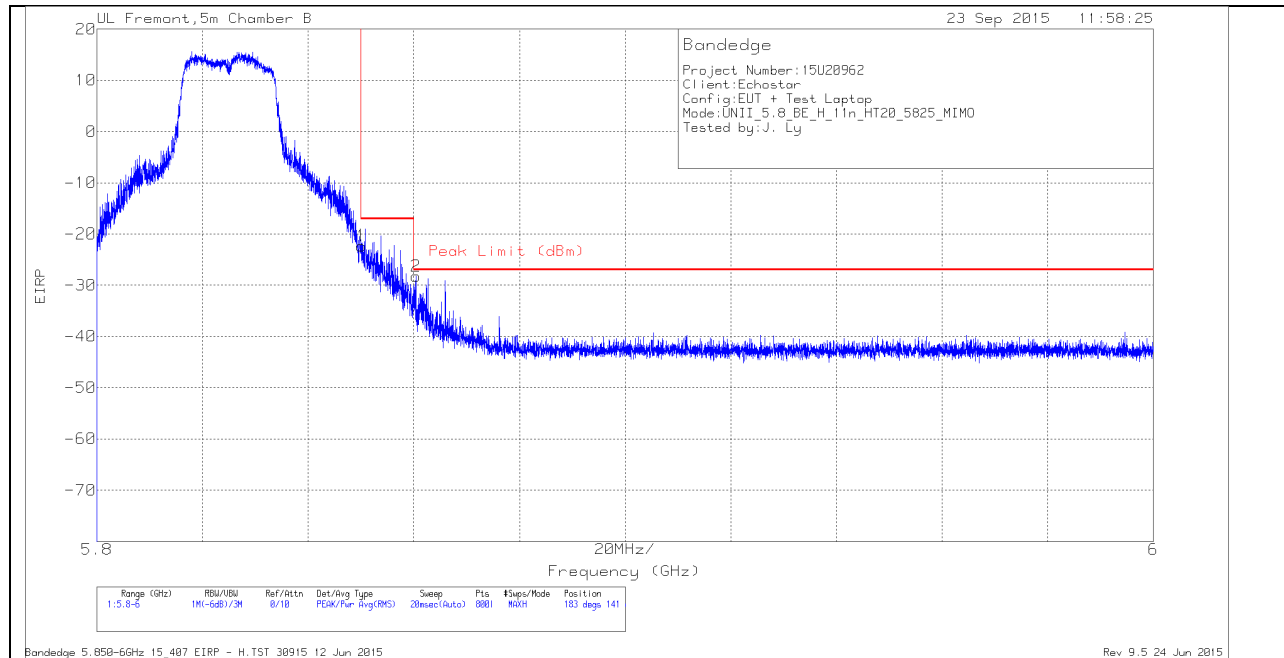


CH 161 HORIZONTAL DATA

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	-57.34	Pk	35.1	-20.3	11.8	-30.74	-17	-13.74	0	152	H
2	5.861	-57.82	Pk	35.1	-20.3	11.8	-31.22	-27	-4.22	0	152	H

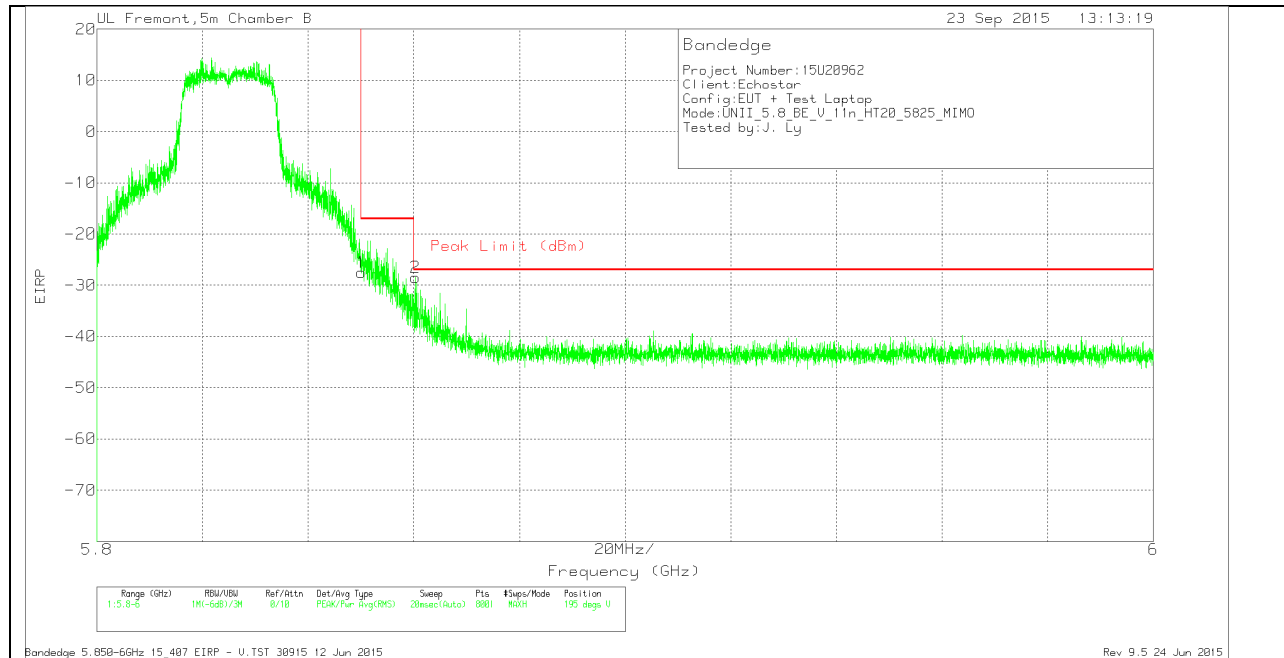
Pk - Peak detector

HORIZONTAL PLOT**CH 165 HORIZONTAL DATA****Trace Markers**

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (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	-47.88	Pk	35.4	-21.6	11.8	-22.28	-17	-5.28	183	141	H
2	5.86	-53.8	Pk	35.4	-21.6	11.8	-28.2	-27	-1.2	183	141	H

Pk - Peak detector

VERTICAL PLOT



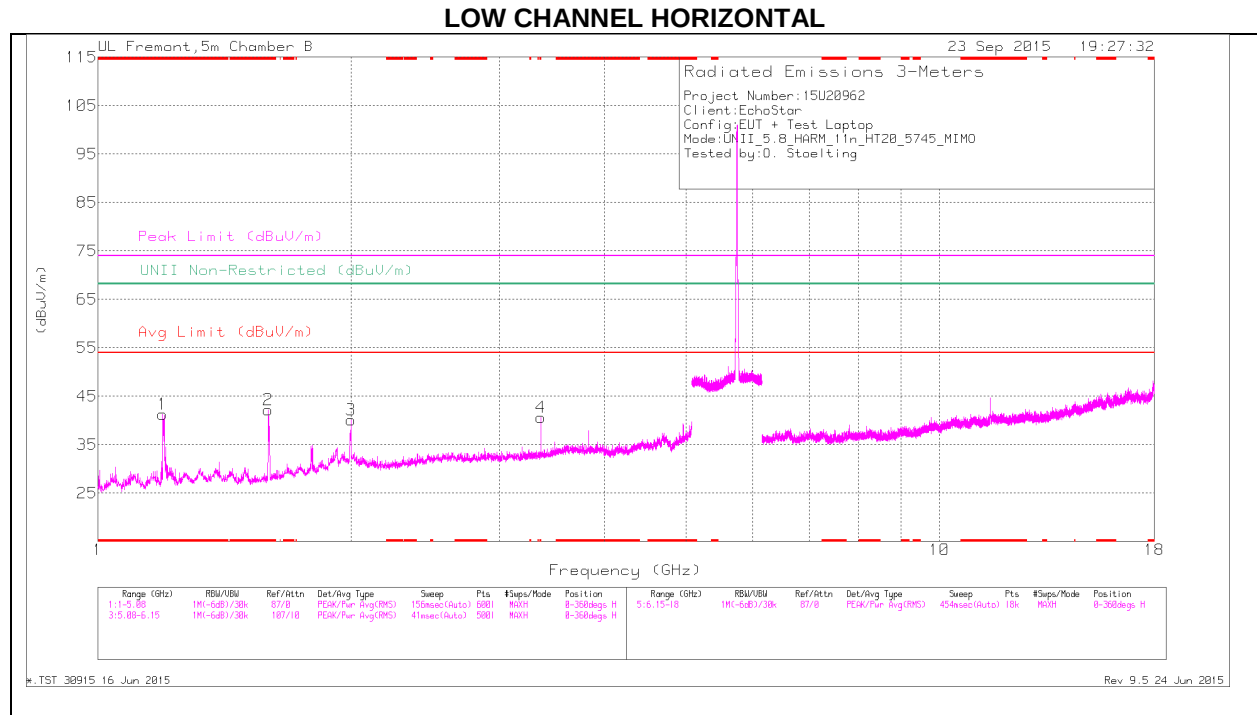
CH 165 VERTICAL DATA

Trace Markers

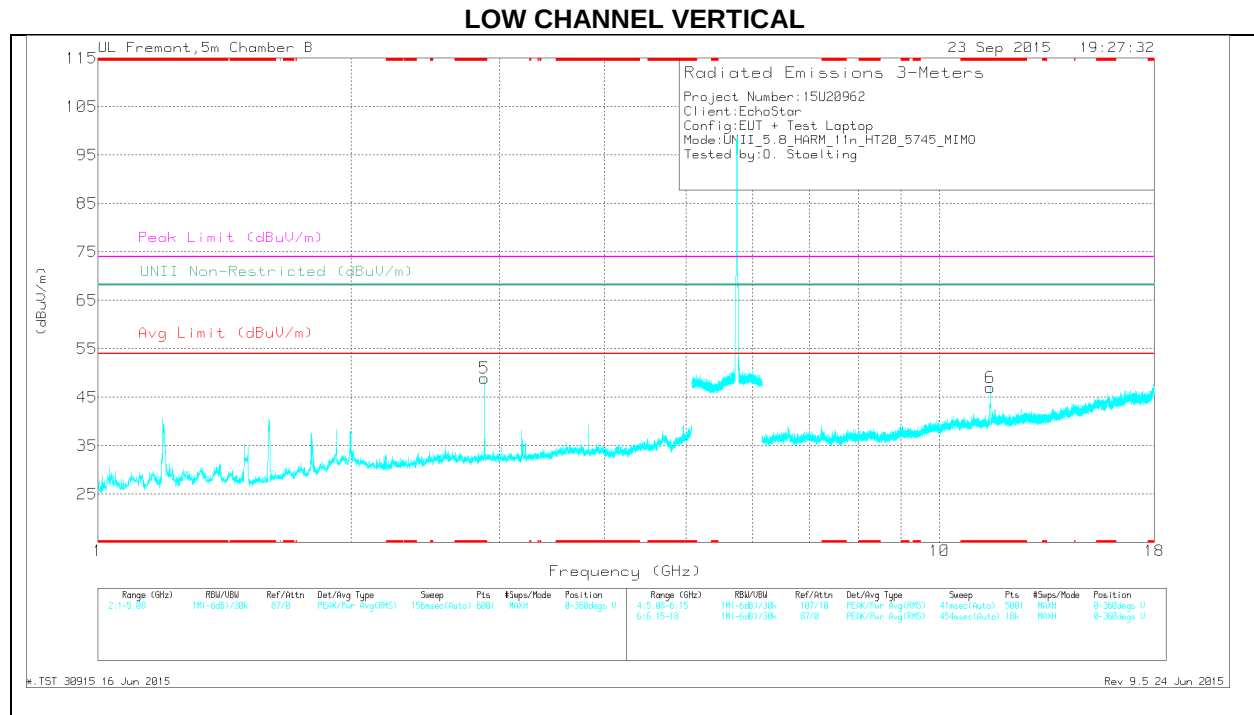
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-53.14	Pk	35.4	-21.6	11.8	-27.54	-17	-10.54	195	114	V
2	5.86	-54.07	Pk	35.4	-21.6	11.8	-28.47	-27	-1.47	195	114	V

Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS



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



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 T345 (dB/m)	Amp/Cbl/Fitr /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	* 1.194	48.43	Pk	28.4	-35.6	41.23	-	-	74	-32.77	-	-	0-360	102	H
2	* 1.593	48.71	Pk	28.8	-35.3	42.21	-	-	74	-31.79	-	-	0-360	102	H
5	* 2.88	49.64	Pk	32.6	-33.3	48.94	-	-	74	-25.06	-	-	0-360	101	V
6	* 11.487	34.19	Pk	38.2	-25.4	46.99	-	-	74	-27.01	-	-	0-360	101	V
3	1.999	41.81	Pk	32.3	-34	40.11	-	-	-	-	68.2	-28.09	0-360	102	H
4	3.36	40.68	Pk	32.9	-33	40.58	-	-	-	-	68.2	-27.62	0-360	200	H

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

Pk - Peak detector

Radiated Emissions

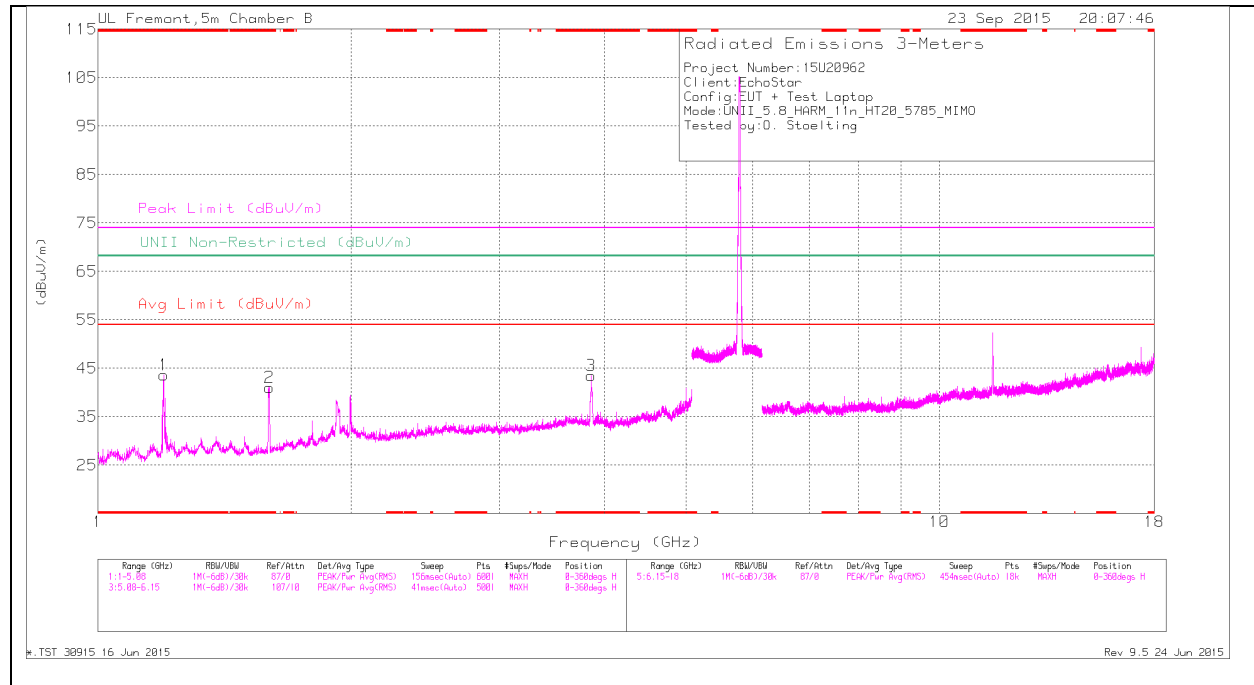
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fitr /Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.195	58.16	PK-U	28.4	-35.6	50.96	-	-	74	-23.04	-	-	345	108	H
* 1.195	35.6	ADR	28.4	-35.6	28.4	54	-25.6	-	-	-	-	345	108	H
* 1.594	54.5	PK-U	28.8	-35.3	48	-	-	74	-26	-	-	244	146	H
* 1.593	35.06	ADR	28.8	-35.3	28.56	54	-25.44	-	-	-	-	244	146	H
* 2.88	55.46	PK-U	32.6	-33.3	54.76	-	-	74	-19.24	-	-	299	242	V
* 2.88	33.03	ADR	32.6	-33.3	32.33	54	-21.67	-	-	-	-	299	242	V
* 11.489	44.88	PK-U	38.3	-25.4	57.78	-	-	74	-16.22	-	-	59	322	V
* 11.489	31.6	ADR	38.3	-25.4	44.5	54	-9.5	-	-	-	-	59	322	V
2	49.08	PK-U	32.3	-34	47.38	-	-	-	-	68.2	-20.82	244	103	H
3.359	42.5	PK-U	32.9	-33	42.4	-	-	-	-	68.2	-25.8	244	200	H

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

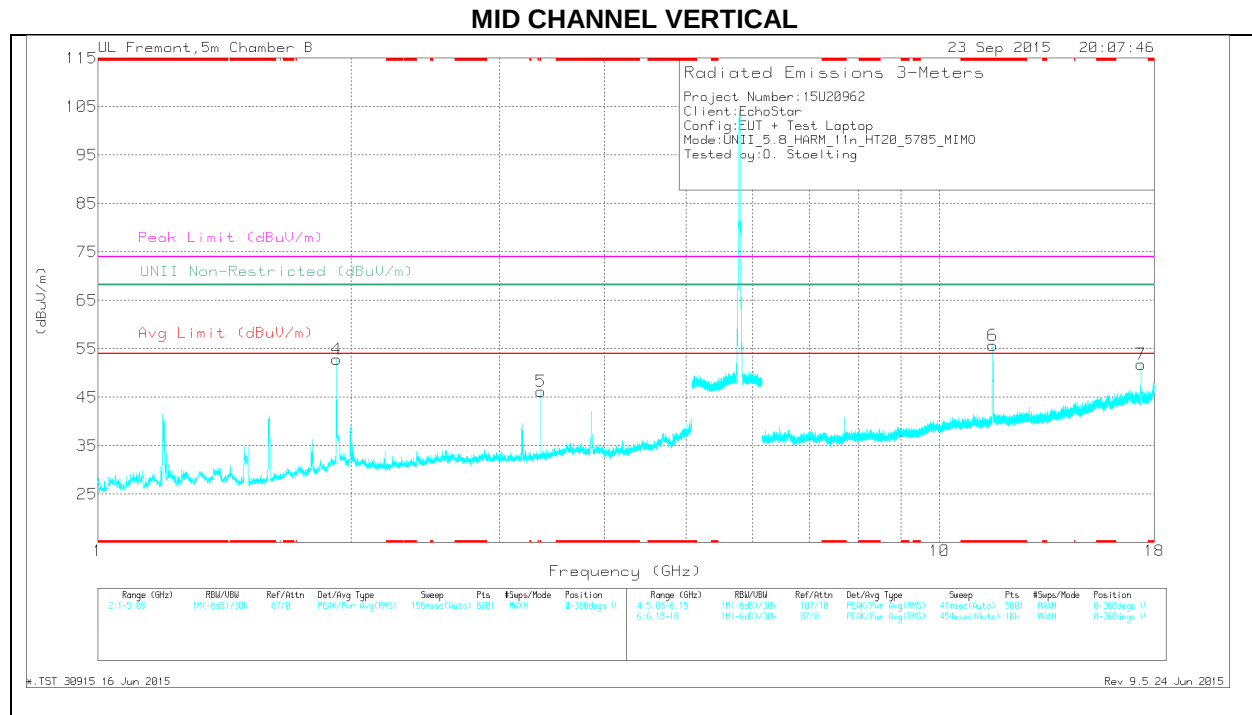
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

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.



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 T345 (dB/m)	Amp/Cbl/Fitr /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	* 1.197	50.68	Pk	28.5	-35.6	43.58	-	-	74	-30.42	-	-	0-360	101	H
2	* 1.599	47.38	Pk	28.8	-35.1	41.08	-	-	74	-32.92	-	-	0-360	101	H
3	* 3.857	42.99	Pk	33.4	-32.9	43.49	-	-	74	-30.51	-	-	0-360	199	H
6	* 11.563	41.84	Pk	38.4	-24.6	55.64	-	-	74	-18.36	-	-	0-360	101	V
4	1.92	54.79	Pk	31.9	-33.9	52.79	-	-	-	-	68.2	-15.41	0-360	199	V
5	3.36	46.28	Pk	32.9	-33	46.18	-	-	-	-	68.2	-22.02	0-360	199	V
7	17.354	32.25	Pk	40.8	-21.3	51.75	-	-	-	-	68.2	-16.45	0-360	101	V

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

Pk - Peak detector

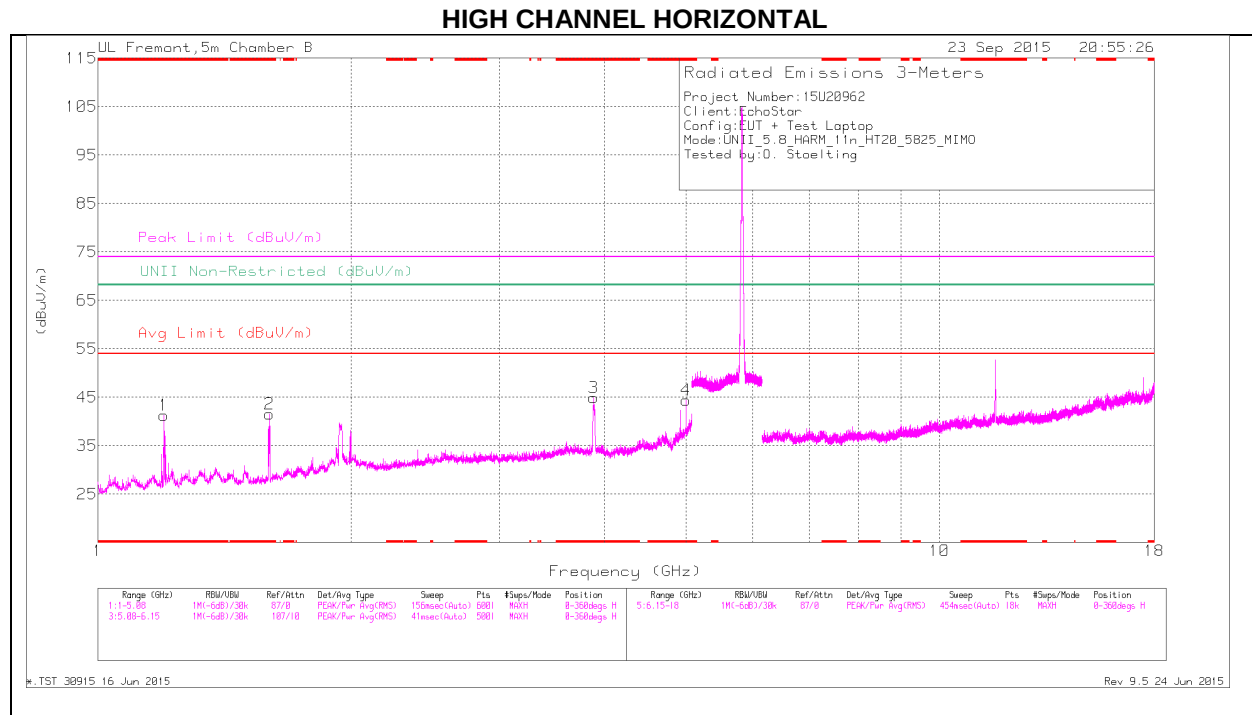
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/FI tr/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
* 1.198	58.5	PK-U	28.5	-35.7	51.3	-	-	74	-22.7	-	-	350	110	H
* 1.198	36.77	ADR	28.5	-35.7	29.57	54	-24.43	-	-	-	-	350	110	H
* 1.598	54.96	PK-U	28.8	-35.2	48.56	-	-	74	-25.44	-	-	242	130	H
* 1.598	35.38	ADR	28.8	-35.2	28.98	54	-25.02	-	-	-	-	242	130	H
* 3.856	52.98	PK-U	33.4	-32.9	53.48	-	-	74	-20.52	-	-	25	222	H
* 3.857	41.96	ADR	33.4	-32.9	42.46	54	-11.54	-	-	-	-	25	222	H
* 11.565	52.52	PK-U	38.4	-24.6	66.32	-	-	74	-7.68	-	-	210	374	V
* 11.565	38.94	ADR	38.4	-24.6	52.74	54	-1.26	-	-	-	-	210	374	V
1.92	55.6	PK-U	31.9	-33.9	53.6	-	-	-	-	68.2	-14.6	25	200	V
3.36	49.94	PK-U	32.9	-33	49.84	-	-	-	-	68.2	-18.36	25	200	V
17.353	34.98	PK-U	40.8	-21.3	54.48	-	-	-	-	68.2	-13.72	210	102	V

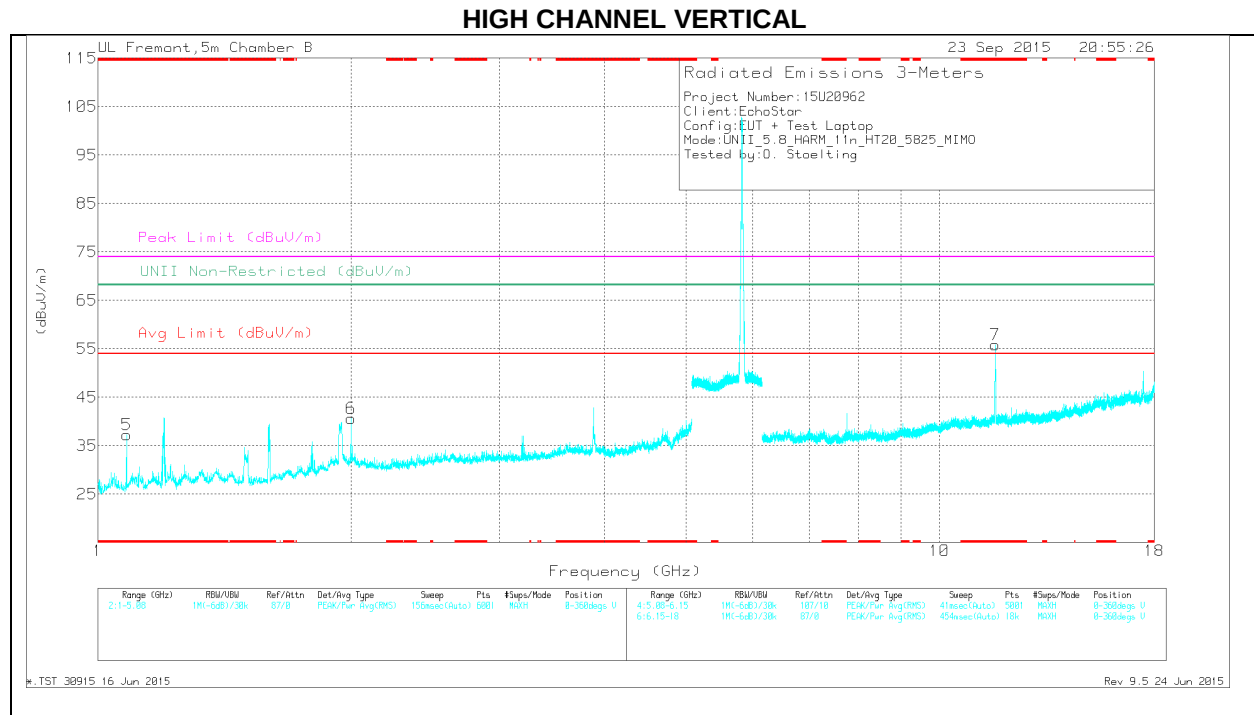
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average



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



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 T345 (dB/m)	Amp/Cbl/Fitr/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	* 1.198	48.54	Pk	28.5	-35.7	41.34	-	-	74	-32.66	-	-	0-360	102	H
2	* 1.6	47.87	Pk	28.8	-35.1	41.57	-	-	74	-32.43	-	-	0-360	199	H
3	* 3.883	44.08	Pk	33.5	-32.6	44.98	-	-	74	-29.02	-	-	0-360	199	H
4	* 5	40.31	Pk	34	-29.9	44.41	-	-	74	-29.59	-	-	0-360	102	H
5	* 1.082	45.39	Pk	27.6	-35.7	37.29	-	-	74	-36.71	-	-	0-360	199	V
7	* 11.648	42.1	Pk	38.5	-24.8	55.8	-	-	74	-18.2	-	-	0-360	101	V
6	2	42.47	Pk	32.3	-34.1	40.67	-	-	-	-	68.2	-27.53	0-360	199	V

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

Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fitr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.2	58.88	PK-U	28.5	-35.7	51.68	-	-	74	-22.32	-	-	348	139	H
* 1.199	34.3	ADR	28.5	-35.7	27.1	54	-26.9	-	-	-	-	348	139	H
* 1.6	54.86	PK-U	28.8	-35.1	48.56	-	-	74	-25.44	-	-	246	110	H
* 1.598	34.02	ADR	28.8	-35.2	27.62	54	-26.38	-	-	-	-	246	110	H
* 3.882	54.12	PK-U	33.5	-32.6	55.02	-	-	74	-18.98	-	-	25	238	H
* 3.883	44.41	ADR	33.5	-32.6	45.31	54	-8.69	-	-	-	-	25	238	H
* 5	48.33	PK-U	34	-29.9	52.43	-	-	74	-21.57	-	-	51	288	H
* 5	40.38	ADR	34	-29.9	44.48	54	-9.52	-	-	-	-	51	288	H
* 1.083	44.15	PK-U	27.6	-35.7	36.05	-	-	74	-37.95	-	-	69	237	V
* 1.083	31.43	ADR	27.6	-35.7	23.33	54	-30.67	-	-	-	-	69	237	V
* 11.65	51.41	PK-U	38.5	-24.8	65.11	-	-	74	-8.89	-	-	322	101	V
* 11.649	37.93	ADR	38.5	-24.8	51.63	54	-2.37	-	-	-	-	322	101	V
2	53.08	PK-U	32.3	-34.1	51.28	-	-	-	-	68.2	-16.92	299	334	V

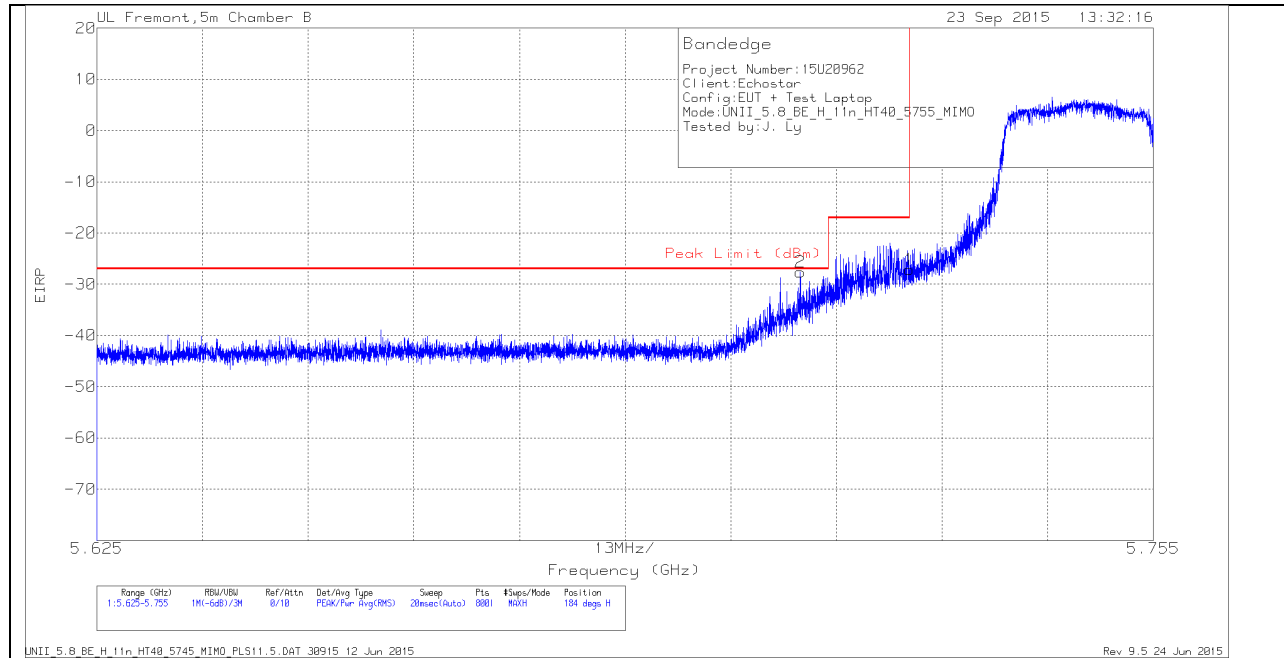
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

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

HORIZONTAL PEAK AND AVERAGE PLOT



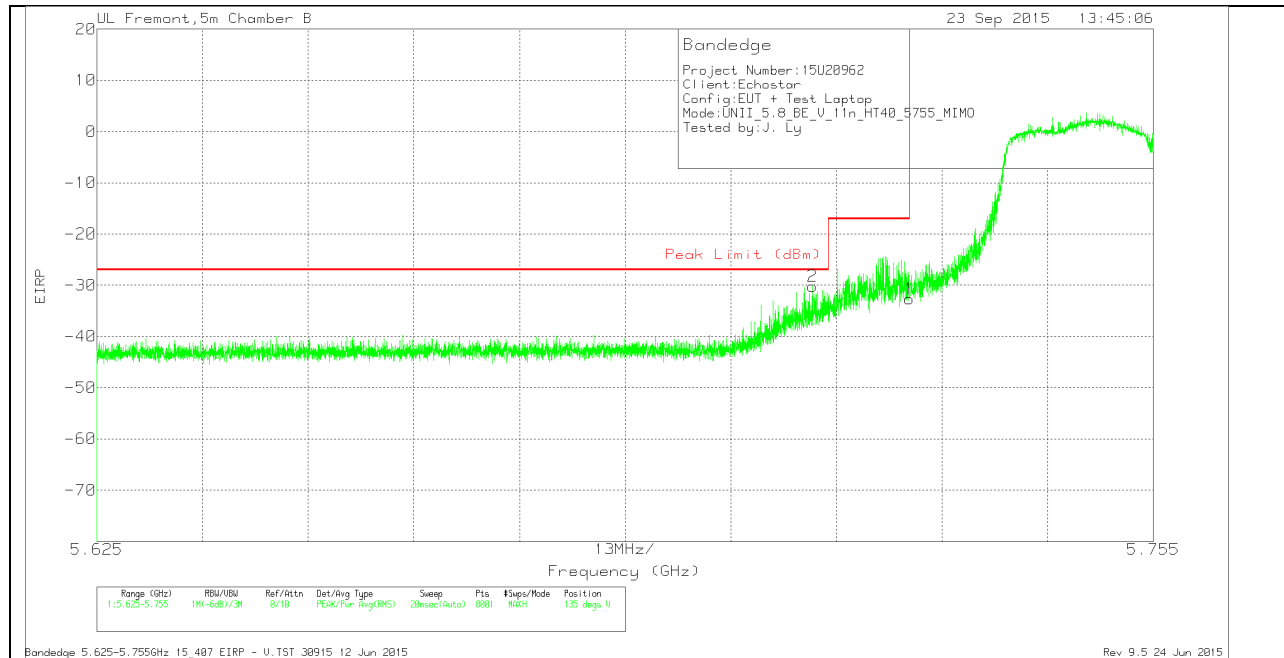
CH 151 HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cb/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.712	-52.77	Pk	35	-21.7	11.8	-27.67	-27	-.67	184	172	H
1	5.725	-52.26	Pk	35	-21.7	11.8	-27.16	-17	-10.16	184	172	H

Pk - Peak detector

VERTICAL PEAK AND AVERAGE PLOT



CH 151 VERTICAL DATA

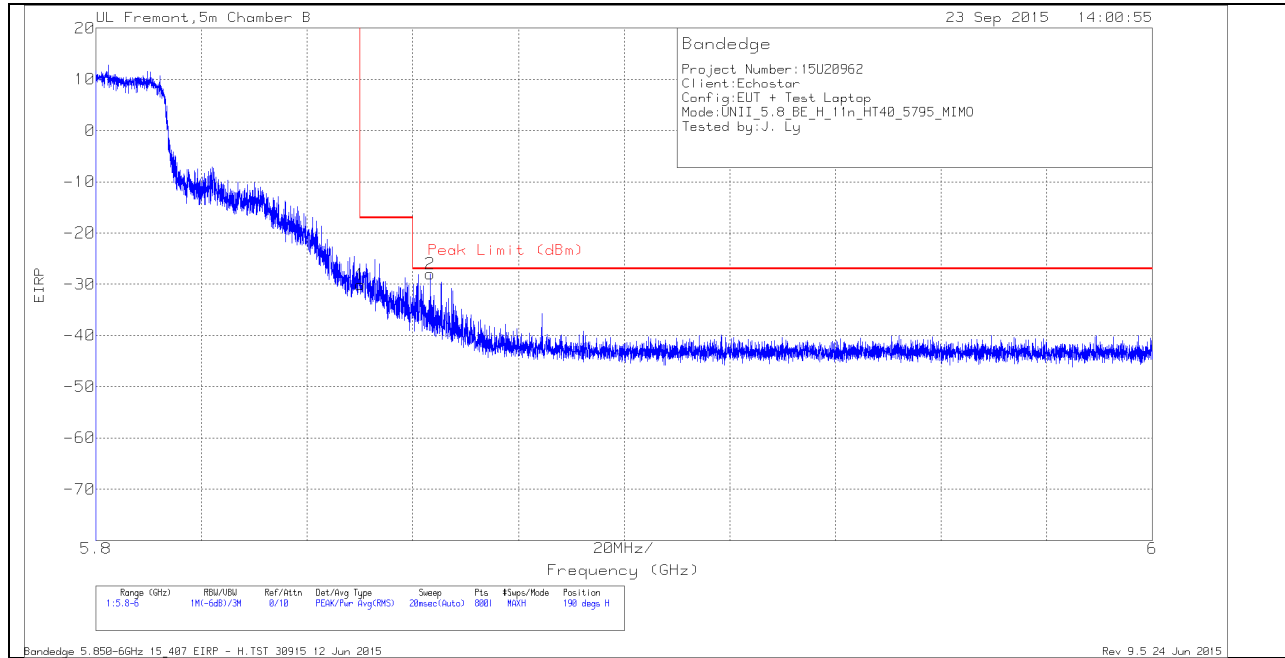
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (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
2	5.713	-55.32	Pk	35	-21.7	11.8	-30.22	-27	-3.22	135	103	V
1	5.725	-57.79	Pk	35	-21.7	11.8	-32.69	-17	-15.69	135	103	V

Pk - Peak detector

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



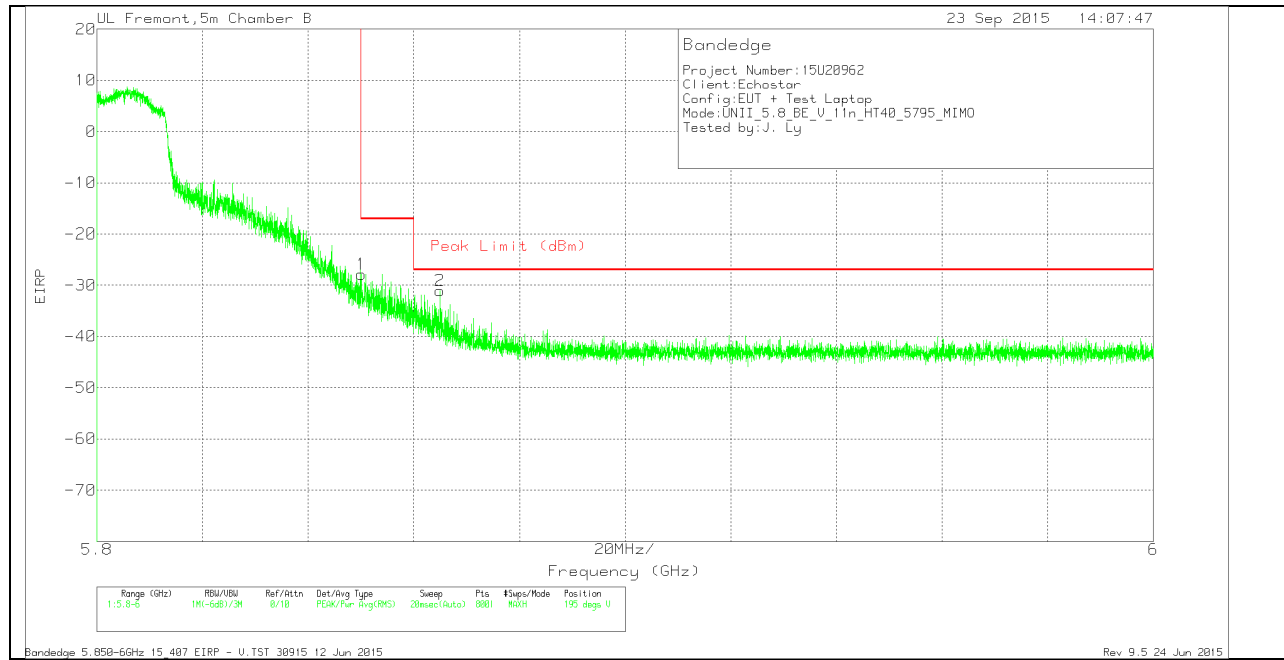
HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (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	-55.67	Pk	35.4	-21.6	11.8	-30.07	-17	-13.07	190	168	H
2	5.863	-53.63	Pk	35.4	-21.6	11.8	-28.03	-27	-1.03	190	168	H

Pk - Peak detector

VERTICAL PEAK AND AVERAGE PLOT



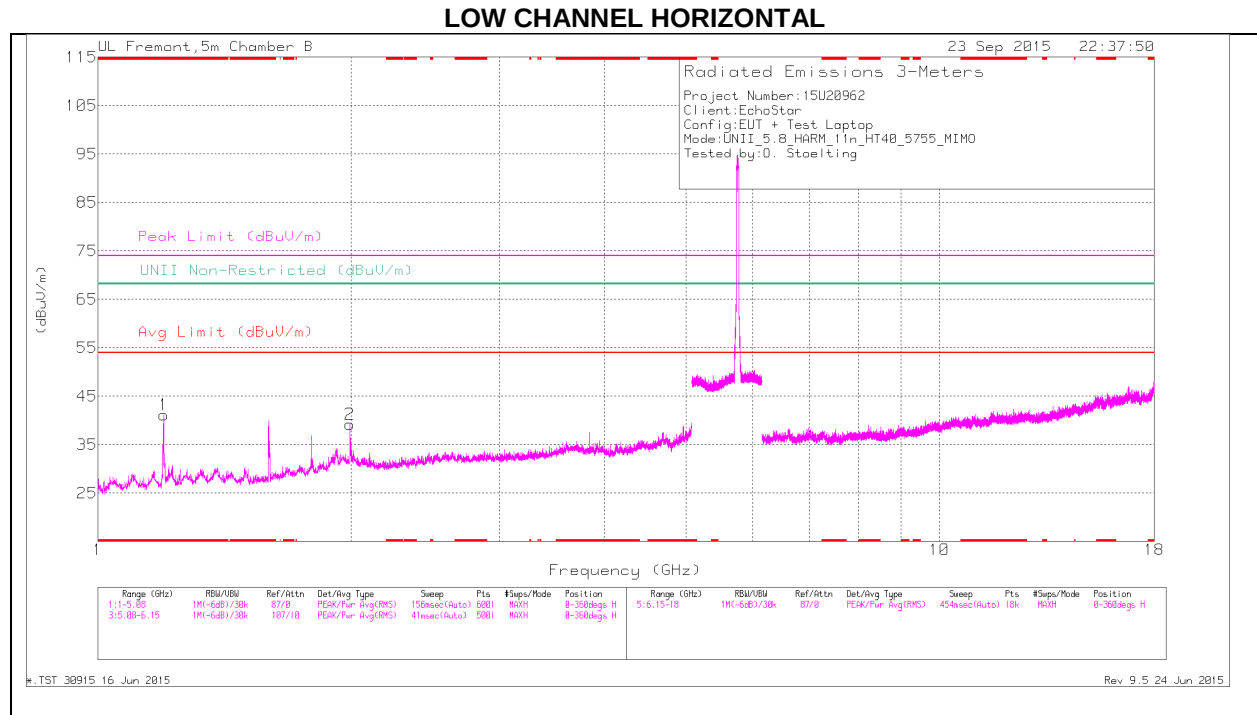
VERTICAL DATA

Trace Markers

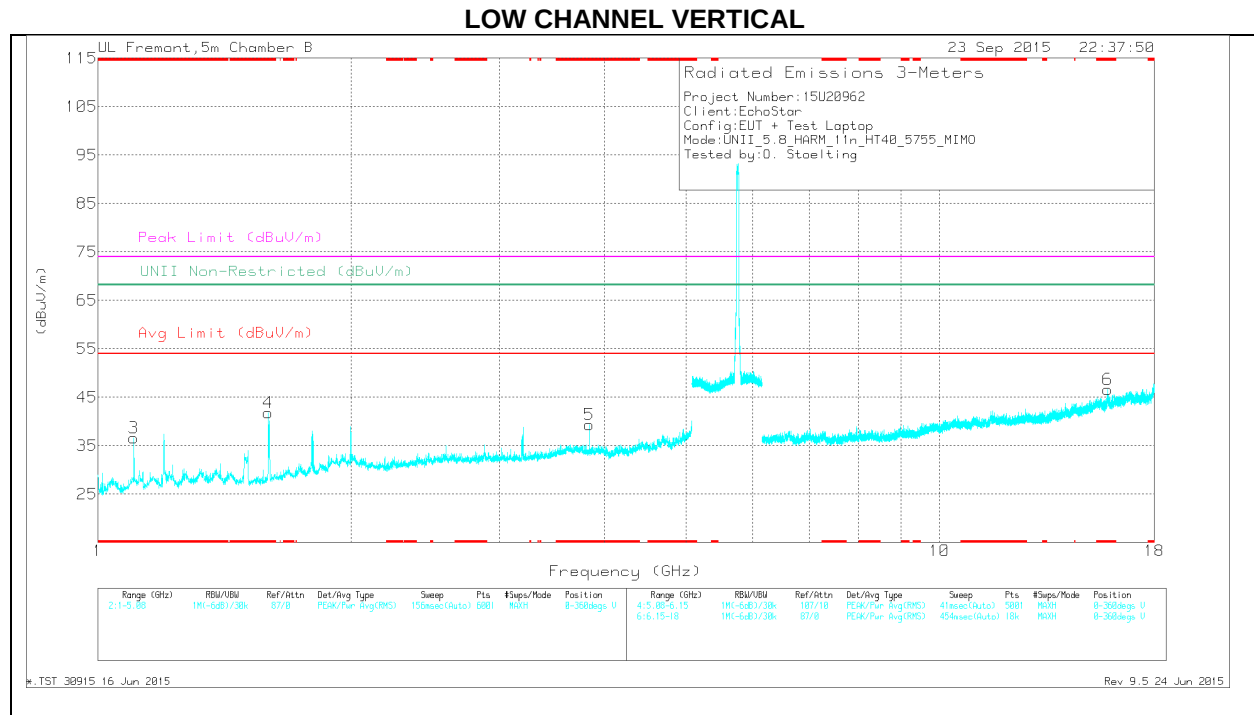
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-53.51	Pk	35.4	-21.6	11.8	-27.91	-17	-10.91	195	206	V
2	5.865	-56.61	Pk	35.4	-21.6	11.8	-31.01	-27	-4.01	195	206	V

Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS



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



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 T345 (dB/m)	Amp/Cbl/Fitr/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	* 1.198	48.3	Pk	28.5	-35.7	41.1	-	-	74	-32.9	-	-	0-360	102	H
3	* 1.103	44.42	Pk	27.7	-35.5	36.62	-	-	74	-37.38	-	-	0-360	199	V
4	* 1.594	48.17	Pk	28.8	-35.2	41.77	-	-	74	-32.23	-	-	0-360	101	V
5	* 3.836	38.89	Pk	33.4	-33	39.29	-	-	74	-34.71	-	-	0-360	199	V
6	* 15.85	26.78	Pk	40.6	-20.8	46.58	-	-	74	-27.42	-	-	0-360	101	V
2	1.992	40.75	Pk	32.3	-33.9	39.15	-	-	-	-	68.2	-29.05	0-360	102	H

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

Pk - Peak detector

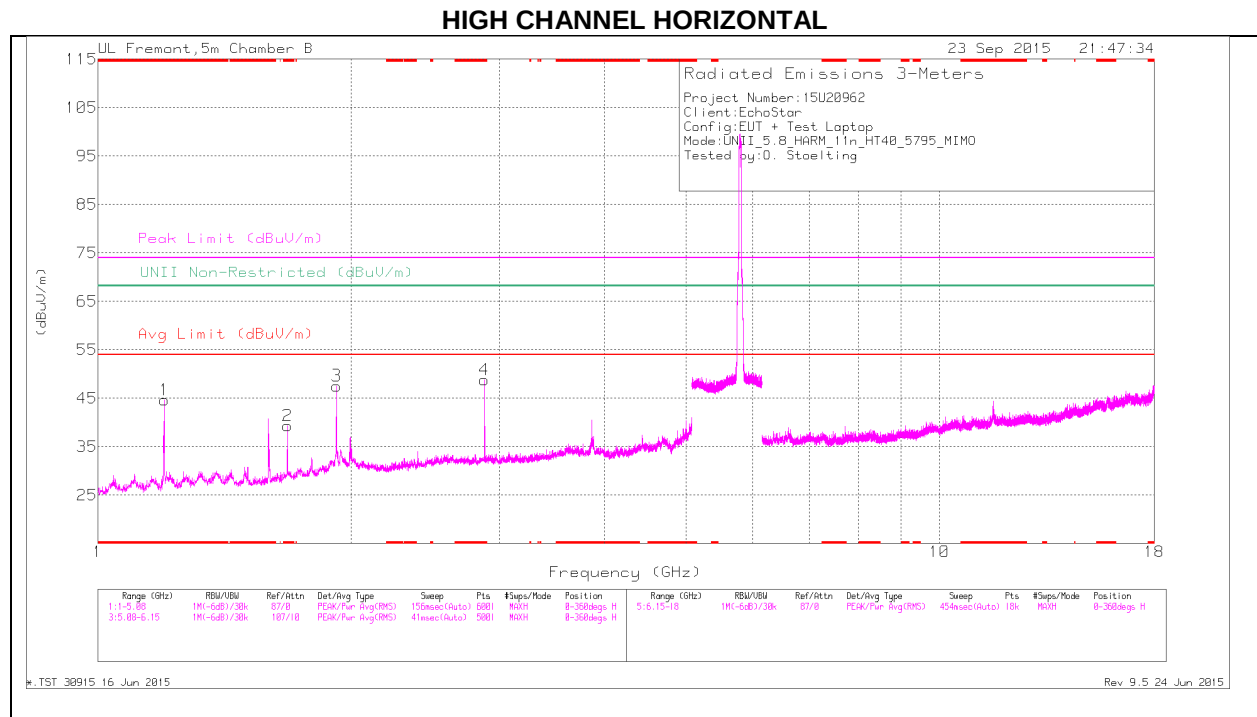
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fitr/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
* 1.199	58.12	PK-U	28.5	-35.7	50.92	-	-	74	-23.08	-	-	352	134	H
* 1.199	34.96	ADR	28.5	-35.7	27.76	54	-26.24	-	-	-	-	352	134	H
* 1.105	48.66	PK-U	27.7	-35.5	40.86	-	-	74	-33.14	-	-	238	310	V
* 1.105	33.21	ADR	27.7	-35.5	25.41	54	-28.59	-	-	-	-	238	310	V
* 1.593	54.3	PK-U	28.8	-35.3	47.8	-	-	74	-26.2	-	-	266	119	V
* 1.596	33.51	ADR	28.8	-35.2	27.11	54	-26.89	-	-	-	-	266	119	V
* 3.837	44.78	PK-U	33.4	-33	45.18	-	-	74	-28.82	-	-	332	217	V
* 3.837	37.45	ADR	33.4	-33	37.85	54	-16.15	-	-	-	-	332	217	V
* 15.848	33.45	PK-U	40.6	-20.9	53.15	-	-	74	-20.85	-	-	128	211	V
* 15.851	22.16	ADR	40.6	-20.7	42.06	54	-11.94	-	-	-	-	128	211	V
1.993	48.46	PK-U	32.3	-33.9	46.86	-	-	-	-	68.2	-21.34	334	386	H

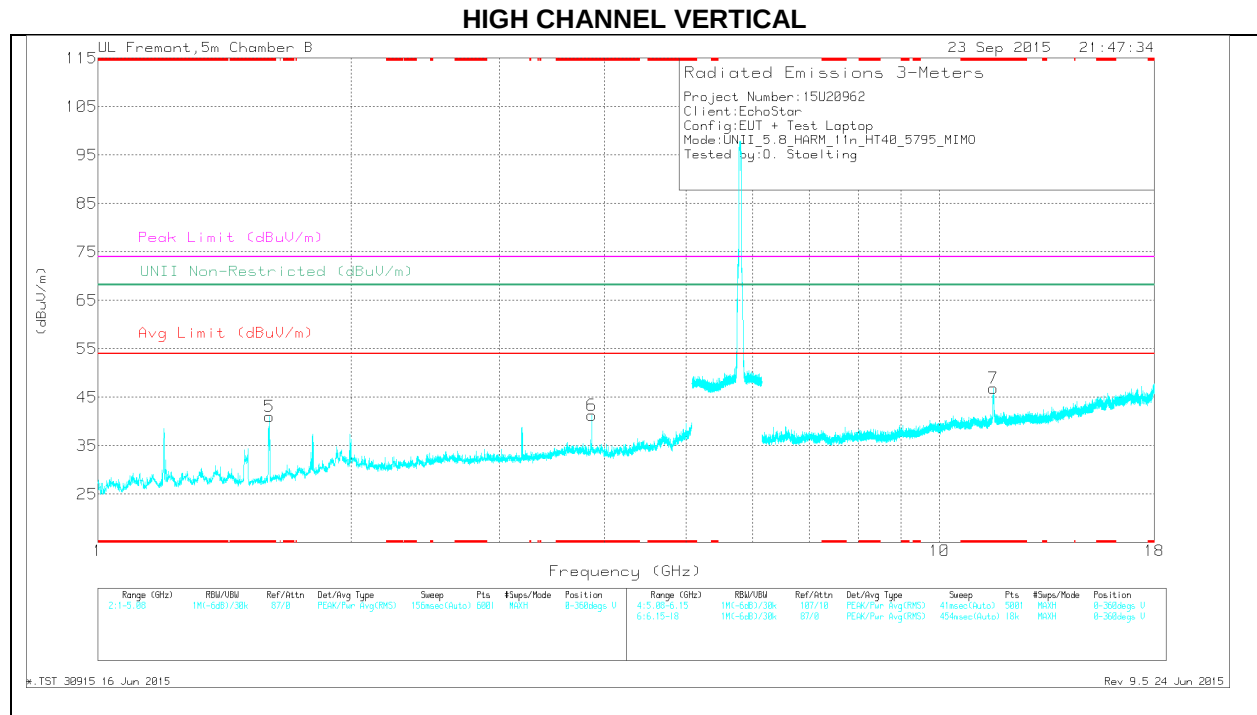
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average



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



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 T345 (dB/m)	Amp/Cbl/Fitr/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	* 1.2	51.84	Pk	28.5	-35.7	44.64	-	-	74	-29.36	-	-	0-360	101	H
2	* 1.679	43.96	Pk	29.6	-34.2	39.36	-	-	74	-34.64	-	-	0-360	199	H
4	* 2.88	49.46	Pk	32.6	-33.3	48.76	-	-	74	-25.24	-	-	0-360	101	H
5	* 1.6	47.28	Pk	28.8	-35.1	40.98	-	-	74	-33.02	-	-	0-360	101	V
6	* 3.863	40.63	Pk	33.4	-32.8	41.23	-	-	74	-32.77	-	-	0-360	101	V
7	* 11.584	33.08	Pk	38.4	-24.6	46.88	-	-	74	-27.12	-	-	0-360	101	V
3	1.92	49.58	Pk	31.9	-33.9	47.58	-	-	-	-	68.2	-20.62	0-360	199	H

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

Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fitr/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
* 1.198	59.14	PK-U	28.5	-35.7	51.94	-	-	74	-22.06	-	-	342	133	H
* 1.199	34.47	ADR	28.5	-35.7	27.27	54	-26.73	-	-	-	-	342	133	H
* 1.68	50.83	PK-U	29.6	-34.2	46.23	-	-	74	-27.77	-	-	244	318	H
* 1.68	31.7	ADR	29.6	-34.2	27.1	54	-26.9	-	-	-	-	244	318	H
* 2.88	50.5	PK-U	32.6	-33.3	49.8	-	-	74	-24.2	-	-	287	397	H
* 2.88	30.69	ADR	32.6	-33.3	29.99	54	-24.01	-	-	-	-	287	397	H
* 1.598	54.72	PK-U	28.8	-35.2	48.32	-	-	74	-25.68	-	-	262	103	V
* 1.598	33.84	ADR	28.8	-35.2	27.44	54	-26.56	-	-	-	-	262	103	V
* 3.863	46.75	PK-U	33.4	-32.8	47.35	-	-	74	-26.65	-	-	133	107	V
* 3.863	40.46	ADR	33.4	-32.8	41.06	54	-12.94	-	-	-	-	133	107	V
* 11.584	45.07	PK-U	38.4	-24.6	58.87	-	-	74	-15.13	-	-	208	102	V
* 11.583	31.78	ADR	38.4	-24.6	45.58	54	-8.42	-	-	-	-	208	102	V
1.92	63.47	PK-U	31.9	-33.9	61.47	-	-	-	-	68.2	-6.73	353	145	H

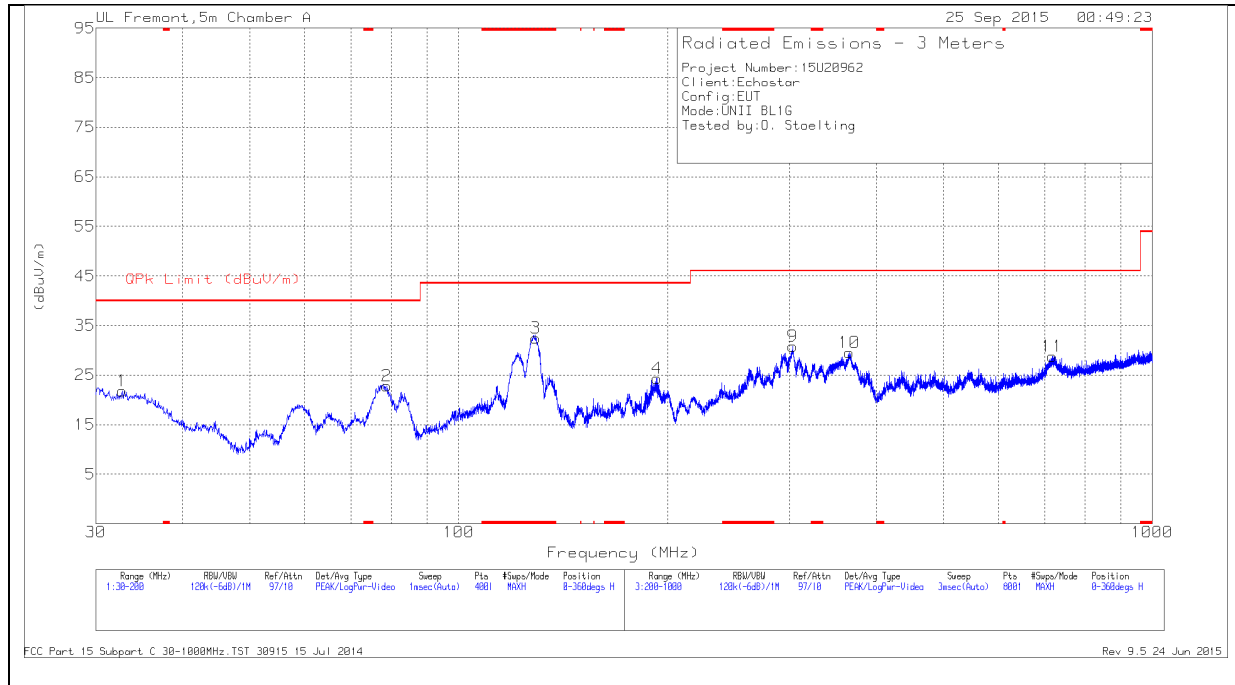
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

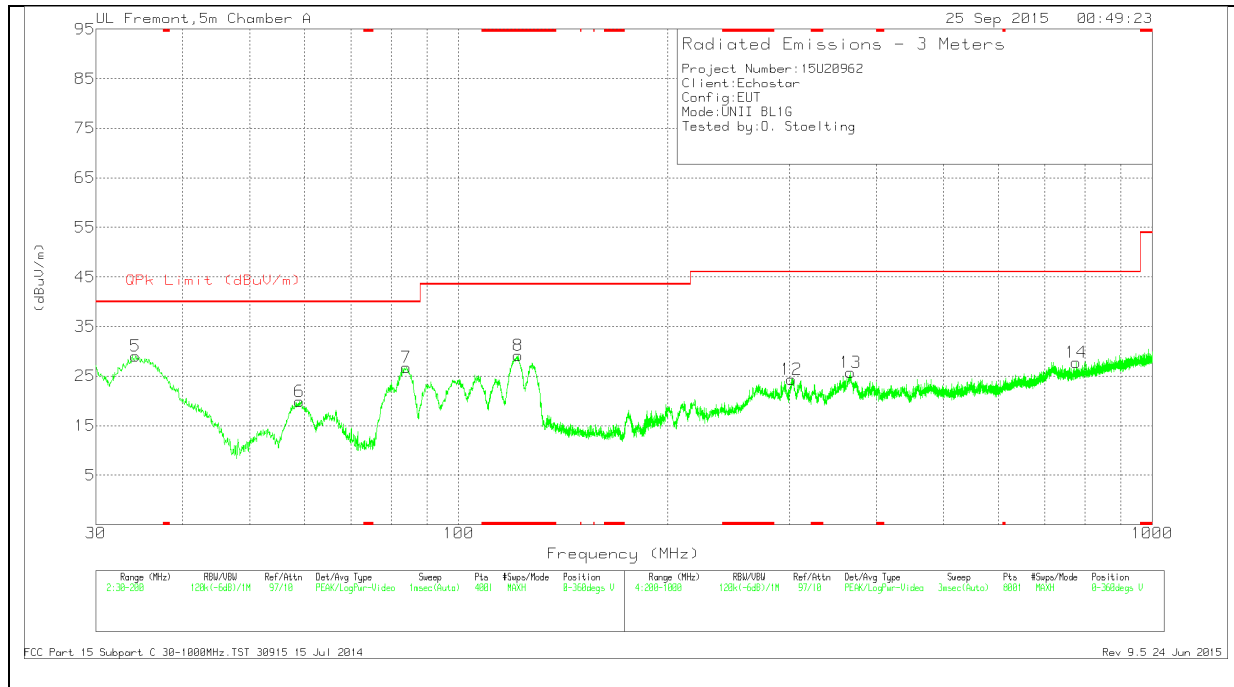
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

14. 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 T477 (dB/m)	Amp/Cbl (dB/m)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 129.0463	45.1	Pk	17.7	-30.3	32.5	43.52	-11.02	0-360	199	H
8	* 121.7575	41.83	Pk	17.7	-30.4	29.13	43.52	-14.39	0-360	101	V
1	32.72	29.69	Pk	23.3	-31.2	21.79	40	-18.21	0-360	199	H
5	34.2075	38.16	Pk	22.1	-31.2	29.06	40	-10.94	0-360	101	V
6	58.985	39.63	Pk	11.2	-30.9	19.93	40	-20.07	0-360	101	V
2	78.7475	41.99	Pk	11.5	-30.7	22.79	40	-17.21	0-360	199	H
7	84.06	46.4	Pk	11.1	-30.7	26.8	40	-13.2	0-360	101	V
4	193.03	38.83	Pk	15.5	-30	24.33	43.52	-19.19	0-360	101	H
12	302.1	36.38	Pk	17.4	-29.4	24.38	46.02	-21.64	0-360	101	V
9	303	42.66	Pk	17.5	-29.4	30.76	46.02	-15.26	0-360	100	H
10	366	39.89	Pk	18.9	-29.2	29.59	46.02	-16.43	0-360	100	H
13	367.3	35.99	Pk	18.9	-29.2	25.69	46.02	-20.33	0-360	101	V
11	718	32.69	Pk	24.4	-28.3	28.79	46.02	-17.23	0-360	100	H
14	777.2	30.89	Pk	25.1	-28.2	27.79	46.02	-18.23	0-360	299	V

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

Pk - Peak detector

Radiated Emissions

Frequency (MHz)	Meter Reading (dBuV)	Det	AF T477 (dB/m)	Amp/Cbl (dB/m)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
34.343	34.7	Qp	22	-31.2	25.5	40	-14.5	338	114	V

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

Qp - Quasi-Peak detector

15. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

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.

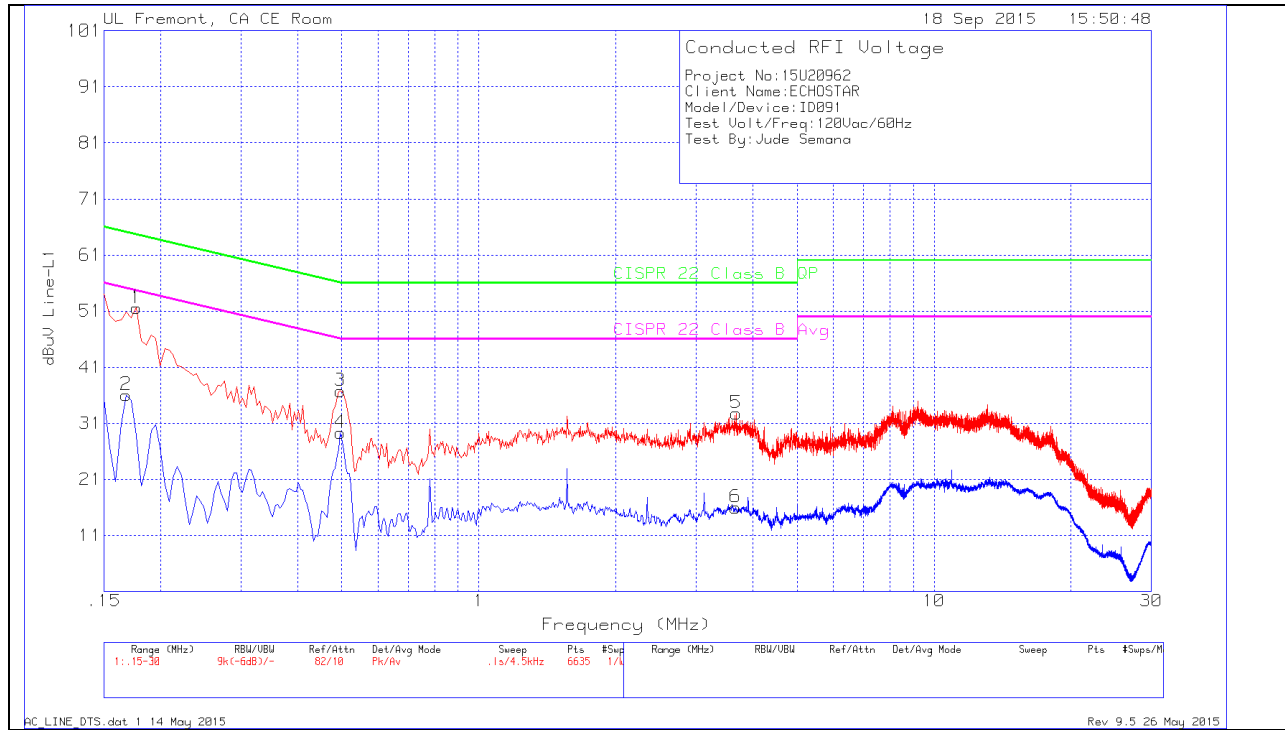
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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

RESULTS

6 WORST EMISSIONS

LINE 1 PLOT



LINE 1 RESULTS

Trace Markers

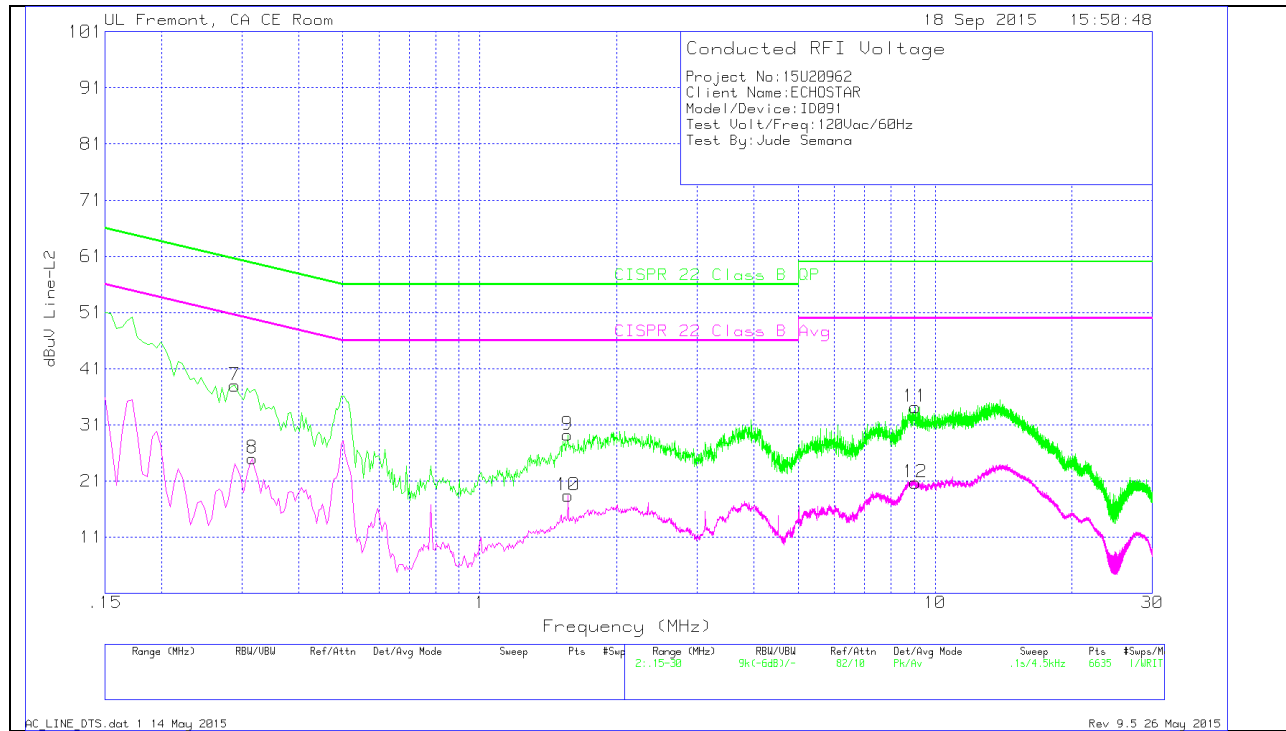
Range 1: Line-L1 .15 - 30MHz

Marker	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)
1	.177	50.44	Pk	1.1	0	51.54	64.63	-13.09		
2	.168	34.84	Av	1.2	0	36.04	-	-	55.06	-19.02
3	.4965	36.45	Pk	.3	0	36.75	56.06	-19.31		
4	.4965	29	Av	.3	0	29.3	-	-	46.06	-16.76
5	3.678	32.45	Pk	.2	.1	32.75	56	-23.25		
6	3.6645	15.7	Av	.2	.1	16	-	-	46	-30

Pk - Peak detector

Av - Average detection

LINE 2 PLOT



LINE 2 RESULTS

Trace Markers

Range 2: Line-L2 .15 - 30MHz

Marker	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)
7	.2895	37.42	Pk	.6	0	38.02	60.54	-22.52		
8	.3165	24.42	Av	.6	0	25.02	-	-	49.8	-24.78
9	1.5585	28.93	Pk	.2	.1	29.23	56	-26.77		
10	1.563	18.1	Av	.2	.1	18.4	-	-	46	-27.6
11	9.0465	33.88	Pk	.2	.1	34.18	60	-25.82		
12	9.0465	20.41	Av	.2	.1	20.71	-	-	50	-29.29

Pk - Peak detector

Av - Average detection

16. POWER SETTING TABLE

SISO

All Power setting numbers in dBm

	Channel ID	36	40	44	48	149	153	157	161	165
	Center Freq.	5180	5200	5220	5240	5745	5765	5785	5805	5825
SISO	11a	16.5	16.5	16.5	16.5	15	15	15	15	15
	11n 20	15.5	18.5	18.5	18.5	14.5	18.5	18.5	18.5	18.5
	Channel ID	38		46		151		159		
	Center Freq.	5190		5230		5755		5795		
	11n 40	11.5		17.5		12.5		16.5		

MIMO

All Power setting numbers in dBm

	Channel ID	36	40	44	48	149	153	157	161	165
	Center Freq.	5180	5200	5220	5240	5745	5765	5785	5805	5825
MIMO	11a									
	11n 20	15.5	17.5	18.5	17.5	13.5	18.5	18.5	18.5	17.5
	Channel ID	38		46		151		159		
	Center Freq.	5190		5230		5755		5795		
	11n 40	11.5		16.5		11.5		16.5		