CERTIFICATION TEST REPORT

Report Number. : 11616858-E5V5

Applicant	:	Verifone, Inc. 1400 West Stanford Ranch Road Rocklin, CA 95765, U.S.A.
Model	:	V200t Plus 3G/D/E
FCC ID	:	B32V200TPLUS
IC	:	787C-V200TPLUS
EUT Description	:	Point of Sale Terminal
Test Standard(s)	:	FCC 47 CFR PART 15 SUBPART E (EXCEPT DFS) INDUSTRY CANADA RSS - 247 ISSUE 2 INDUSTRY CANADA RSS - GEN ISSUE 4

Date Of Issue:
April 03, 2018

Prepared by:
UL Verification Services Inc.
47173 Benicia Street
Fremont, CA 94538, U.S.A.
TEL: (510) 771-1000
FAX: (510) 661-0888

NVLAP TESTING
NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
V1	12/14/17	Initial Issue	--
V2	01/30/18	Revised Test Methodology section. Revised Description of EUT section. Revised Scope of Testing section. Revised Measurement Method section. Revised HT40 Radiated data tables with correct DCCF for HT40.	Frank Ibrahim
V3	02/19/18	Added Maximum Output Power Table in section 5.2 Added Antenna Port Test Results in Section 8 Revised AG	G. Escano
V4	03/02/18	Revised Scope of Testing section	Frank Ibrahim
V5	04/03/18	Revised Scope of Testing section	Glenn Escano

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS

COMPANY NAME: Verifone, Inc.
1400 West Stanford Ranch Road Suite 200
Rocklin, CA 95765, U.S.A.

EUT DESCRIPTION: Point of Sale Terminal.

MODEL: V200t Plus 3G/D/E

SERIAL NUMBER: 401-431-543

DATE TESTED: NOVEMBER 13 - 29, 2017

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 Part 15 Subpart E	Pass
INDUSTRY CANADA RSS-247 Issue 2	Pass
INDUSTRY CANADA RSS-GEN Issue 4	Pass

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

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

Approved & Released For
UL Verification Services Inc. By:

FRANK IBRAHIM
CONSUMER TECHNOLOGY DIVISION
OPERATIONS LEADER
UL VERIFICATION SERVICES INC

Prepared By:

GLENN ESCANO
CONSUMER TECHNOLOGY DIVISION
TEST ENGINEER
UL VERIFICATION SERVICES INC

2. TEST METHODOLOGY

FCC: The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 15, FCC 14-30, FCC KDB 662911 D01 v02r01, FCC KDB 789033 D02 v02r01, and ANSI C63.10-2013.

IC: The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 15, FCC 14-30, FCC KDB 662911 D01 v02r01, FCC KDB 789033 D02 v02r01, ANSI C63.10-2013, RSS-GEN Issue 4, and RSS-247 Issue 2.

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:22541-1)
☐ Chamber B (IC:2324B-2)	☐ Chamber E (IC:22541-2)
☒ Chamber C (IC:2324B-3)	☐ Chamber F (IC:22541-3)
	☐ Chamber G (IC:22541-4)
	☐ Chamber H (IC:22541-5)

The above test sites and facilities are covered under FCC Test Firm Registration # 208313.
UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0.
Chambers A through C are covered under Industry Canada company address code 2324B with site numbers 2324B -1 through 2324B-3, respectively. Chambers D through H are covered under Industry Canada company address code 22541 with site numbers 22541 -1 through 22541-5, respectively.

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:

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

Parameter	Uncertainty
Worst Case Conducted Disturbance, 9KHz to 0.15 MHz	3.84 dB
Worst Case Conducted Disturbance, 0.15 to 30 MHz	3.65 dB
Worst Case Radiated Disturbance, 9KHz to 30 MHz	3.15 dB
Worst Case Radiated Disturbance, 30 to 1000 MHz	5.36 dB
Worst Case Radiated Disturbance, 1000 to 18000 MHz	4.32 dB
Worst Case Radiated Disturbance, 18000 to 26000 MHz	4.45 dB
Worst Case Radiated Disturbance, 26000 to 40000 MHz	5.24 dB

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

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a Mobile Point of Sale Terminal which supports the following technologies WLAN 2.4 GHz and 5 GHz, Bluetooth, GSM 850 / GSM 1900, WCDMA Band II / WCDMA Band V, and NFC.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power for SISO modes as follows:

5.2GHz Band

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
5180 - 5240	802.11a	8.2	6.61
	802.11n HT20 SISO	7.7	5.89
5190 - 5230	802.11n HT40 SISO	8.0	6.31
5210	802.11ac VHT80 SISO	6.7	4.68

5.3GHz Band

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
5260 - 5320	802.11a	8.4	6.92
	802.11n HT20 SISO	8.0	6.31
5270 - 5310	802.11n HT40 SISO	7.6	5.75
5290	802.11ac VHT80 SISO	7.1	5.13

5.6GHz Band

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
5500 - 5700	802.11a	8.8	7.59
	802.11n HT20 SISO	8.3	6.76
5510 - 5670	802.11n HT40 SISO	8.0	6.31
5530 - 5610	802.11ac VHT80 SISO	7.2	5.25

5.8GHz Band

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
5745 - 5825	802.11a	8.7	7.41
	802.11n HT20 SISO	8.6	7.24
5755 - 5795	802.11n HT40 SISO	8.5	7.08
5775	802.11ac VHT80 SISO	7.1	5.13

5.3. SCOPE OF TESTING

This report covers radiated emissions portion. For antenna port data refer to report number 11631998-E4V4 (FCC ID: B32V240MPLUS, IC 787C-V240MPLUS) that covered model V240m Plus 3GBW as the WLAN radio module covered by this report is identical to the WLAN radio module of model V240m Plus 3GBW except that model V200t Plus 3G/D/E has lower output power values. Output power was confirmed prior to making radiated spurious measurements.

5.4. DESCRIPTION OF AVAILABLE ANTENNAS

The EUT utilizes Chip Multilayer Antenna, with maximum gain as table below;

Frequency Band (GHz)	Antenna Gain (dBi)
	Chain 0
5150-5250	3.30
5250-5350	2.30
5500-5825	2.80

5.5. SOFTWARE AND FIRMWARE

The firmware installed in the EUT during testing was VOS2 30640xxx.

5.6. WORST-CASE CONFIGURATION AND MODE

Radiated emission below 1GHz, above 18GHz, and power line conducted emission were performed with the EUT was 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 X orientation was worst-case orientation. Therefore, all final radiated testing was performed with the EUT in X orientation.

Worst-case data rates as provided by the client were:

802.11a mode: 6 Mbps
802.11n HT20 mode: MCS0
802.11n HT40 mode: MCS0
802.11n VHT80 mode: MCS0

5.7. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

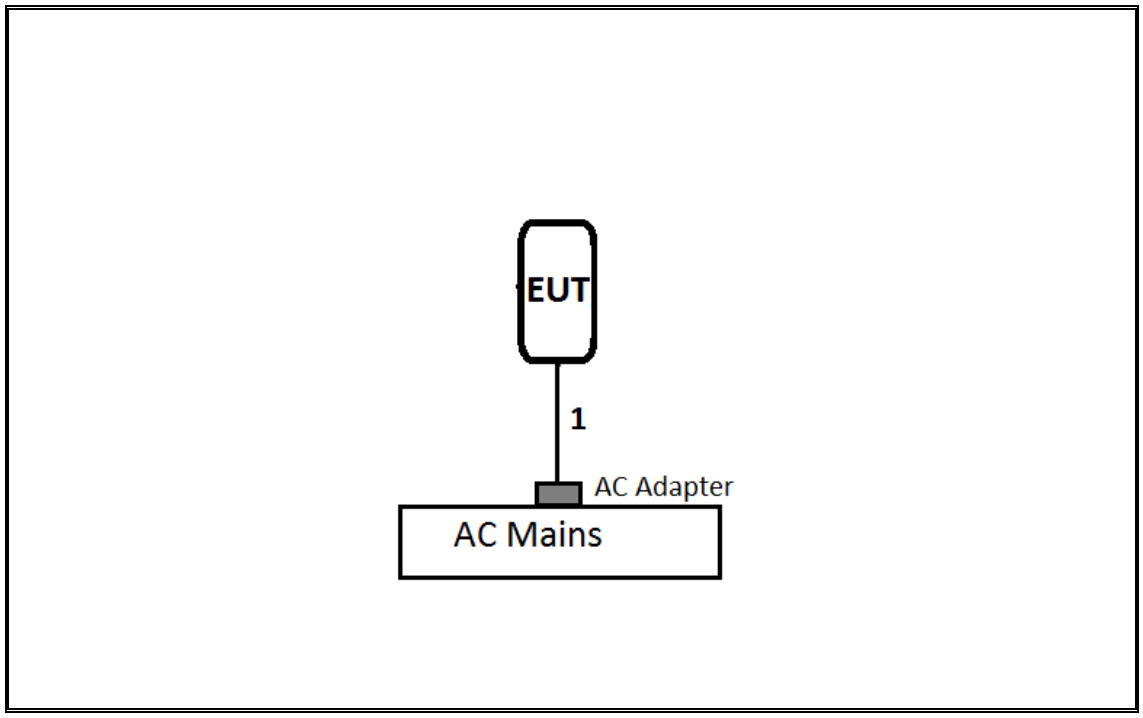
Support Equipment List			
Description	Manufacturer	Model	Serial Number
AC Adapter	Verifone	PSA18A-082A	5A00170801207

I/O CABLES (RADIATED EMISSIONS)

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	DC	1	AC	Un-shielded	2	N/A

TEST SETUP

RADIATED EMISSIONS SETUP DIAGRAM



6. TEST AND MEASUREMENT EQUIPMENT

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

TEST EQUIPMENT LIST				
Description	**Manufacturer**	**Model**	**Asset**	**Cal Due**
Antenna, Broadband Hybrid, 30MHz to 2000MHz w/4dB Pad	Sunol Sciences Corp.	JB3	T899	06/09/2018
Antenna, Active Loop 9kHz-30MHz	Com-Power Corp.	AL-130R	T1866	10/10/2018
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	T712	01/30/2018
Antenna, Horn 18-26.5GHz	ARA	MWH-1826/B	T449	06/12/2018
Antenna, Horn 26.5 - 40GHz	ARA	MWH-1826/B	T446	06/12/2018
Amplifier, 1-26.5GHz	MITEQ	AFS42-00101800-25-S-42	T1165	08/01/2018
Amplifier, 1-26.5GHz	Agilent (Keysight) Technologies	8449B	T404	06/12/2018
Amplifier, 10kHz-1GHz	Agilent (Keysight) Technologies	8447D	T15	08/14/2018
Amplifier, 1-8 GHz	MITEQ	AFS42-00101800-25-S-42	T931	08/26/2018
Pre-Amp, 26-40GHz	MITEQ	TTA2640-35-HG	1864	09/21/2018
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent (Keysight) Technologies	N9030A	T1454	12/15/2017
Spectrum Analyzer, PSA, 3Hz to 26.5GHz	Agilent (Keysight) Technologies	E9030A	T1466	04/11/2018

NOTE: *testing is completed before equipment calibration expiration date.

Test Software List			
Description	**Manufacturer**	**Model**	**Version**
Radiated Software	UL	UL EMC	Ver 9.5, Dec 01, 2016

7. MEASUREMENT METHODS

Unwanted emissions in restricted bands: KDB 789033 D02 v02r01, Sections G.3, G.4, G.5, and G.6.

Unwanted emissions in non-restricted bands: KDB 789033 D02 v02r01, Sections G.3, G.4, and G.5.

8. ANTENNA PORT TEST RESULTS

8.1. ON TIME AND DUTY CYCLE

LIMITS

None; for reporting purposes only.

PROCEDURE

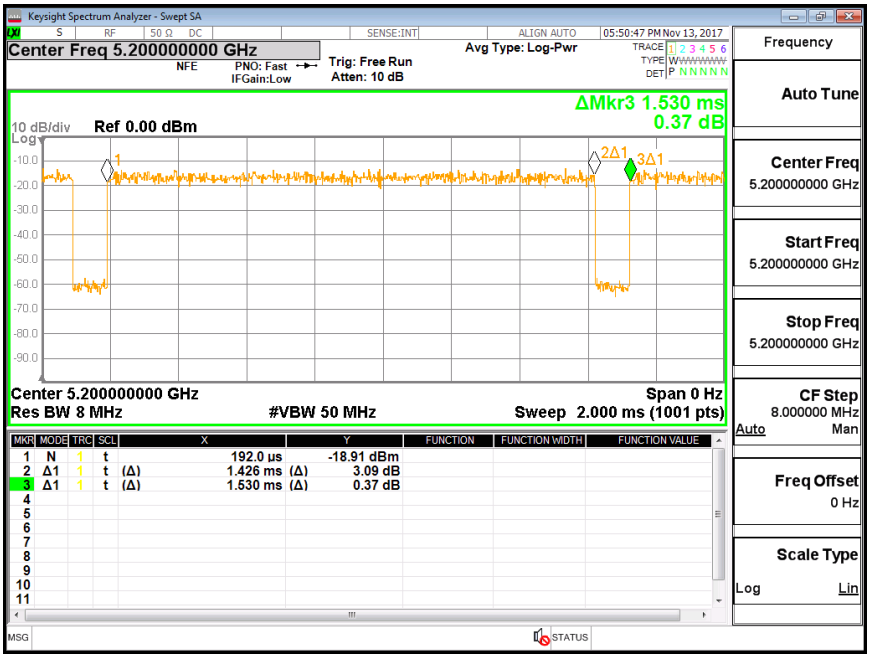
KDB 789033 Zero-Span Spectrum Analyzer Method.

RESULTS

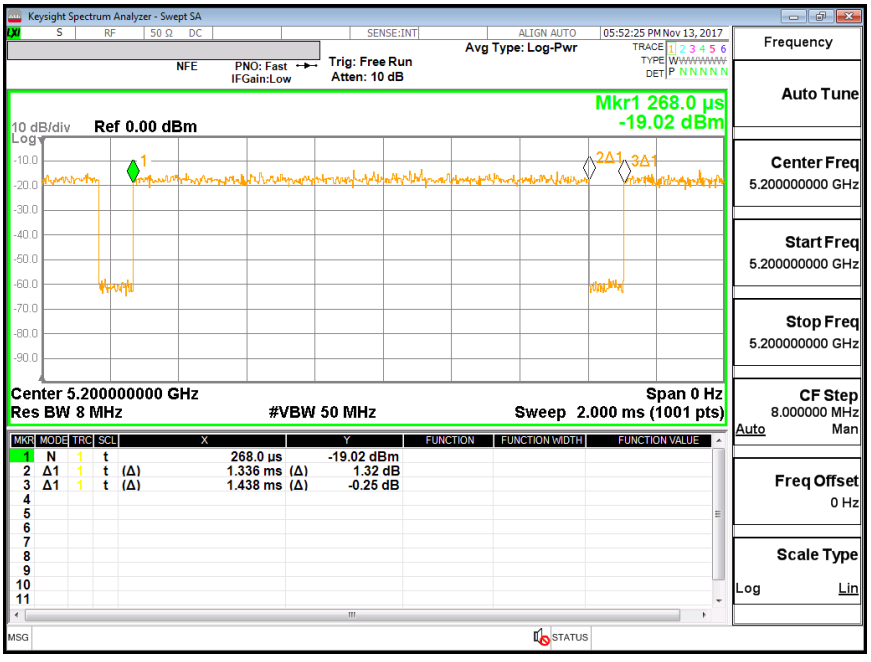
Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/T Minimum VBW (kHz)
802.11a	1.426	1.530	0.932	93.2%	0.31	0.701
802.11n HT20	1.336	1.438	0.929	92.9%	0.32	0.749
802.11n HT40	0.968	1.070	0.905	90.5%	0.44	1.033
802.11ac VHT80	0.324	0.435	0.745	74.5%	1.28	3.086

DUTY CYCLE PLOTS

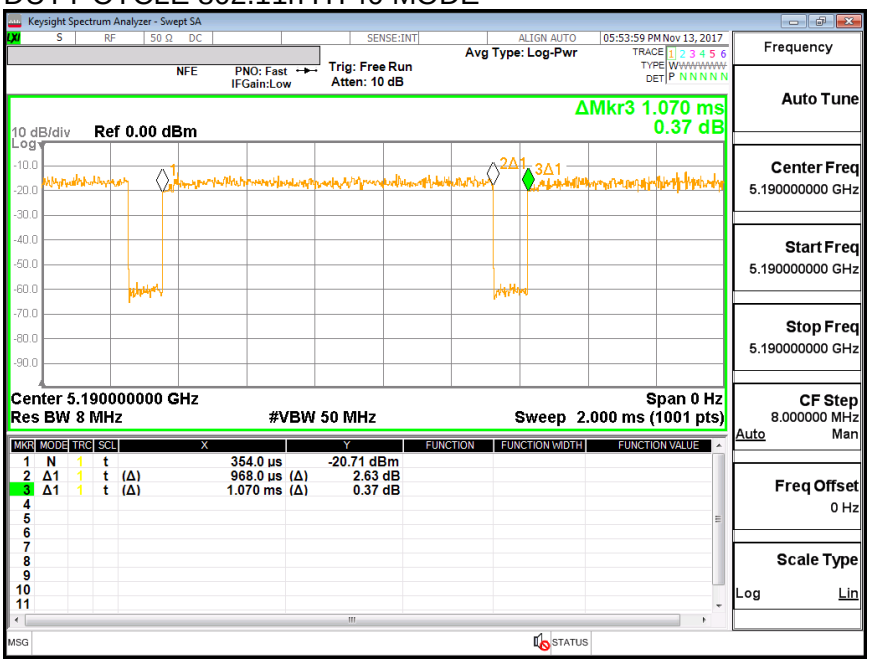
DUTY CYCLE 802.11a MODE



DUTY CYCLE 802.11n HT20 MODE



DUTY CYCLE 802.11n HT40 MODE



DUTY CYCLE 802.11ac VHT80 MODE

8.2. 11a MODE IN THE 5.2GHz BAND

8.2.1. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.2.1.

8.2.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.2.2.

8.2.3. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (1)

(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 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. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 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.

(iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. 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.

IC RSS-247 (6.2.1.1)

The maximum EIRP shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

TEST PROCEDURE

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

DIRECTIONAL ANTENNA GAIN

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

RESULTS

ID:	GE43578	Date:	2/16/18

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	21.80	16.0984	3.30	3.30
Mid	5200	21.80	16.5000	3.30	3.30
High	5240	22.95	16.3097	3.30	3.30

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	22.07	18.77	18.77	11.00	10.00	6.70
Mid	5200	24.00	22.17	18.87	18.87	11.00	10.00	6.70
High	5240	24.00	22.12	18.82	18.82	11.00	10.00	6.70

Duty Cycle CF (dB)	0.31	Included in Calculations of Corr'd PPSD

Output Power Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5180	8.0	8.00	18.77	-10.77
Mid	5200	8.2	8.20	18.87	-10.67
High	5240	7.7	7.70	18.82	-11.12

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

For PPSD results, please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.2.2.

8.3. 11n HT20 MODE IN THE 5.2GHz BAND

8.3.1. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.3.1.

8.3.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.3.2.

8.3.3. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (1)

(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 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. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 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.

(iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. 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.

IC RSS-247 (6.2.1.1)

The maximum EIRP shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

TEST PROCEDURE

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

DIRECTIONAL ANTENNA GAIN

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

RESULTS

ID:	GE43578	Date:	2/16/18

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	21.90	17.3390	3.30	3.30
Mid	5200	21.90	17.3036	3.30	3.30
High	5240	22.05	17.3256	3.30	3.30

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	22.39	19.09	19.09	11.00	10.00	6.70
Mid	5200	24.00	22.38	19.08	19.08	11.00	10.00	6.70
High	5240	24.00	22.39	19.09	19.09	11.00	10.00	6.70

Duty Cycle CF (dB)	0.32	Included in Calculations of Corr'd PPSD

Output Power Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5180	7.6	7.60	19.09	-11.49
Mid	5200	7.7	7.70	19.08	-11.38
High	5240	6.9	6.90	19.09	-12.19

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

For PPSD results, please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.3.3.

8.4. 11n HT40 MODE IN THE 5.2GHz BAND

8.4.1. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.4.1.

8.4.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.4.2.

8.4.3. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (1)

(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 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. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 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.

(iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. 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.

IC RSS-247 (6.2.1) (1)

The maximum EIRP shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

TEST PROCEDURE

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

DIRECTIONAL ANTENNA GAIN

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

RESULTS

ID:	GE43578	Date:	2/16/18

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	40.80	35.546	3.30	3.30
High	5230	40.70	36.270	3.30	3.30

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	19.70	19.70	11.00	10.00	6.70
High	5230	24.00	23.00	19.70	19.70	11.00	10.00	6.70

Duty Cycle CF (dB)	0.44	Included in Calculations of Corr'd PPSD

Output Power Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5190	7.7	7.70	19.70	-12.00
High	5230	8.0	8.00	19.70	-11.70

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

For PPSD results, please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.4.3.

8.5. 11ac VHT80 MODE IN THE 5.2GHz BAND

8.5.1. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.5.1.

8.5.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.5.2.

8.5.3. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (1)

(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 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. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 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.

(iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. 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.

IC RSS-247 (6.2.1) (1)

The maximum EIRP shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

TEST PROCEDURE

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

DIRECTIONAL ANTENNA GAIN

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

RESULTS

ID:	GE43578	Date:	2/16/18

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)
Mid	5210	82.40	75.4805	3.30	3.30

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)
Mid	5210	24.00	23.00	19.70	19.70	11.00	10.00	6.70

Duty Cycle CF (dB)	1.28	Included in Calculations of Corr'd PPSD

Output Power Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid	5210	6.7	6.70	19.70	-13.00

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

For PPSD results, please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.5.3.

8.6. 11a MODE IN THE 5.3GHz BAND

8.6.1. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.6.1.

8.6.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.6.2.

8.6.3. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.25–5.35 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 maximum power spectral density shall not exceed 11 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.

IC RSS-247 (6.2.2.1)

The maximum conducted output power shall not exceed 250 mW or 11 + 10 log10B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log10B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

TEST PROCEDURE

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

DIRECTIONAL ANTENNA GAIN

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

RESULTS

ID:	GE43578	Date:	2/16/18

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	5260	21.80	16.019	2.30	2.30
Mid	5300	21.90	16.446	2.30	2.30
High	5320	21.85	16.275	2.30	2.30

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	5260	24.00	23.05	29.05	23.05	11.00	11.00	11.00
Mid	5300	24.00	23.16	29.16	23.16	11.00	11.00	11.00
High	5320	24.00	23.12	29.12	23.12	11.00	11.00	11.00

Duty Cycle CF (dB)	0.31	Included in Calculations of Corr'd PPSD

Output Power Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	8.4	8.40	23.05	-14.65
Mid	5300	8.4	8.40	23.16	-14.76
High	5320	8.1	8.10	23.12	-15.02

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

For PPSD results, please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.6.3.

8.7. 11n HT20 MODE IN THE 5.3GHz BAND

8.7.1. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.7.1.

8.7.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.7.2.

8.7.3. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.25–5.35 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 maximum power spectral density shall not exceed 11 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.

IC RSS-247 (6.2.2) (1)

The maximum conducted output power shall not exceed 250 mW or 11 + 10 log10B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log10B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

TEST PROCEDURE

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

DIRECTIONAL ANTENNA GAIN

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

RESULTS

ID:	GE43578	Date:	2/16/18

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	5260	22.00	17.470	2.30	2.30
Mid	5300	21.95	17.205	2.30	2.30
High	5320	21.95	17.102	2.30	2.30

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	5260	24.00	23.42	29.42	23.42	11.00	11.00	11.00
Mid	5300	24.00	23.36	29.36	23.36	11.00	11.00	11.00
High	5320	24.00	23.33	29.33	23.33	11.00	11.00	11.00

Duty Cycle CF (dB)	0.32	Included in Calculations of Corr'd PPSD

Output Power Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	8.0	8.00	23.42	-15.42
Mid	5300	7.9	7.90	23.36	-15.46
High	5320	7.8	7.80	23.33	-15.53

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

For PPSD results, please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.7.3.

8.8. 11n HT40 MODE IN THE 5.3GHz BAND

8.8.1. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.8.1.

8.8.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.8.2.

8.8.3. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.25–5.35 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 maximum power spectral density shall not exceed 11 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.

IC RSS-247 (6.2.2.1)

The maximum conducted output power shall not exceed 250 mW or 11 + 10 log10B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log10B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

TEST PROCEDURE

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

DIRECTIONAL ANTENNA GAIN

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

RESULTS

ID:	GE43578	Date:	2/16/18

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	5270	40.80	34.778	2.30	2.30
High	5310	40.80	36.305	2.30	2.30

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	5270	24.00	24.00	30.00	24.00	11.00	11.00	11.00
High	5310	24.00	24.00	30.00	24.00	11.00	11.00	11.00

Duty Cycle CF (dB)	0.44	Included in Calculations of Corr'd PPSD

Output Power Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5270	7.5	7.50	24.00	-16.50
High	5310	7.6	7.60	24.00	-16.40

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

For PPSD results, please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.8.3.

8.9. 11ac VHT80 MODE IN THE 5.3GHz BAND

8.9.1. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.9.1.

8.9.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.9.2.

8.9.3. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.25–5.35 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 maximum power spectral density shall not exceed 11 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.

IC RSS-247 (6.2.2.1)

The maximum conducted output power shall not exceed 250 mW or 11 + 10 log10B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log10B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

TEST PROCEDURE

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

DIRECTIONAL ANTENNA GAIN

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

RESULTS

ID:	GE43578	Date:	2/16/18

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)
Mid	5290	82.60	75.4797	2.30	2.30

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)
Mid	5290	24.00	24.00	30.00	24.00	11.00	11.00	11.00

Duty Cycle CF (dB)	1.28	Included in Calculations of Corr'd PPSD

Output Power Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid	5290	7.10	7.10	24.00	-16.90

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

For PPSD results, please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.9.3.

8.10. 11a MODE IN THE 5.6GHz BAND

8.10.1. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.10.1.

8.10.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.10.2.

8.10.3. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.47–5.725 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 maximum power spectral density shall not exceed 11 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.

IC RSS-247 (6.2.3) (1)

The maximum conducted output power shall not exceed 250 mW or 11 + 10 log10B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log10B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

TEST PROCEDURE

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

Straddle channel power is measured using PXA spectrum analyzer, duty cycle correction factor is required.

DIRECTIONAL ANTENNA GAIN

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

RESULTS

ID:	GE43578	Date:	2/16/18

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	5500	21.850	16.359	2.80	2.80
Mid	5580	21.900	15.896	2.80	2.80
High	5700	22.050	16.327	2.80	2.80

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	5500	24.00	23.14	29.14	23.14	11.00	11.00	11.00
Mid	5580	24.00	23.01	29.01	23.01	11.00	11.00	11.00
High	5700	24.00	23.13	29.13	23.13	11.00	11.00	11.00

Duty Cycle CF (dB)	0.31	Included in Calculations of Corr'd PPSD

Output Power Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	7.4	7.40	23.14	-15.74
Mid	5580	8.3	8.30	23.01	-14.71
High	5700	8.8	8.80	23.13	-14.33

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

For PPSD results, please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.10.3.

8.11. 11n HT20 MODE IN THE 5.6GHz BAND

8.11.1. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.11.1.

8.11.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.11.2.

8.11.3. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.47–5.725 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 maximum power spectral density shall not exceed 11 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.

IC RSS-247 (6.2.3.1)

The maximum conducted output power shall not exceed 250 mW or 11 + 10 log10B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log10B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

TEST PROCEDURE

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

Straddle channel power is measured using PXA spectrum analyzer, duty cycle correction factor is required.

DIRECTIONAL ANTENNA GAIN

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

RESULTS

ID:	GE43578	Date:	2/16/18

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	5500	22.000	17.533	2.80	2.80
Mid	5580	21.950	17.437	2.80	2.80
High	5700	22.000	17.361	2.80	2.80

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	5500	24.00	23.44	29.44	23.44	11.00	11.00	11.00
Mid	5580	24.00	23.41	29.41	23.41	11.00	11.00	11.00
High	5700	24.00	23.40	29.40	23.40	11.00	11.00	11.00

Duty Cycle CF (dB)	0.32	Included in Calculations of Corr'd PPSD

Output Power Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	8.1	8.10	23.44	-15.34
Mid	5580	8.3	8.30	23.41	-15.11
High	5700	7.9	7.90	23.40	-15.50

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

For PPSD results, please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.11.3.

8.12. 11n HT40 MODE IN THE 5.6GHz BAND

8.12.1. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.12.1.

8.12.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.12.2.

8.12.3. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.47–5.725 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 maximum power spectral density shall not exceed 11 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.

IC RSS-247 (6.2.3.1)

The maximum conducted output power shall not exceed 250 mW or 11 + 10 log10B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log10B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

TEST PROCEDURE

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

Straddle channel power is measured using PXA spectrum analyzer, duty cycle correction factor is required.

DIRECTIONAL ANTENNA GAIN

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

RESULTS

ID:	GE43578	Date:	2/16/18

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	5510	40.700	35.493	2.80	2.80
Mid	5550	40.600	35.774	2.80	2.80
High	5670	40.400	36.199	2.80	2.80

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	5510	24.00	24.00	30.00	24.00	11.00	11.00	11.00
Mid	5550	24.00	24.00	30.00	24.00	11.00	11.00	11.00
High	5670	24.00	24.00	30.00	24.00	11.00	11.00	11.00

Duty Cycle CF (dB)	0.44	Included in Calculations of Corr'd PPSD

Output Power Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5510	7.8	7.80	24.00	-16.20
Mid	5550	8.0	8.00	24.00	-16.00
High	5670	7.7	7.70	24.00	-16.30

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

For PPSD results, please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.12.3.

8.13. 11ac VHT80 MODE IN THE 5.6GHz BAND

8.13.1. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.13.1.

8.13.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.13.2.

8.13.3. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.47–5.725 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 maximum power spectral density shall not exceed 11 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.

IC RSS-247 (6.2.3.1)

The maximum conducted output power shall not exceed 250 mW or 11 + 10 log10B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log10B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

TEST PROCEDURE

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

Straddle channel power is measured using PXA spectrum analyzer, duty cycle correction factor is required.

DIRECTIONAL ANTENNA GAIN

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

RESULTS

ID:	GE43578	Date:	2/16/18

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	5530	82.800	75.642	2.80	2.80
Mid	5610	82.600	75.453	2.80	2.80

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	5530	24.00	24.00	30.00	24.00	11.00	11.00	11.00
Mid	5610	24.00	24.00	30.00	24.00	11.00	11.00	11.00

Duty Cycle CF (dB)	1.28	Included in Calculations of Corr'd PPSD

Output Power Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5530	7.2	7.20	24.00	-16.80
Mid	5610	7.1	7.10	24.00	-16.90

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

For PPSD results, please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.13.3.

8.14. 11a MODE IN THE 5.8GHz BAND

8.14.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)

IC RSS-247 (6.2.4) (1)

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

RESULTS

Please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.14.1.

8.14.2. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.14.2.

8.14.3. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.14.3.

8.14.4. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (3)
IC RSS-247 (6.2.4.1)

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

TEST PROCEDURE

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

DIRECTIONAL ANTENNA GAIN

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

RESULTS

ID:	GE43578	Date:	2/16/18

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	Power Limit (dBm)
Low	5745	2.80	2.80	30.00	30.00
Mid	5785	2.80	2.80	30.00	30.00
High	5825	2.80	2.80	30.00	30.00

Duty Cycle CF (dB)	0.31	Included in Calculations of Corr'd PSD

Output Power Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	8.7	8.70	30.00	-21.30
Mid	5785	8.4	8.40	30.00	-21.60
High	5825	8.2	8.20	30.00	-21.80

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

For PSD results, please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.14.4.

8.15. 11n HT20 MODE IN THE 5.8GHz BAND

8.15.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)
IC RSS-247 (6.2.4.1)

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

RESULTS

Please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.15.1.

8.15.2. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.15.2.

8.15.3. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.15.3.

8.15.4. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (3)
IC RSS-247 (6.2.4.1)

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

TEST PROCEDURE

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

DIRECTIONAL ANTENNA GAIN

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

RESULTS

ID:	GE43578	Date:	2/16/18

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	Power Limit (dBm)
Low	5745	2.80	2.80	30.00	30.00
Mid	5785	2.80	2.80	30.00	30.00
High	5825	2.80	2.80	30.00	30.00

Duty Cycle CF (dB)	0.32	Included in Calculations of Corr'd PSD

Output Power Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	8.6	8.60	30.00	-21.40
Mid	5785	8.4	8.40	30.00	-21.60
High	5825	8.3	8.30	30.00	-21.70

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

Please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.15.4.

8.16. 11n HT40 MODE IN THE 5.8GHz BAND

8.16.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)
IC RSS-247 (6.2.4.1)

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

RESULTS

Please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.16.1.

8.16.2. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.16.2.

8.16.3. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.16.3.

8.16.4. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (3)

IC RSS-247 (6.2.4.1)

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

TEST PROCEDURE

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

DIRECTIONAL ANTENNA GAIN

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

RESULTS

ID:	GE43578	Date:	2/16/18

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain For Power (dBi)	Directional Gain For PSD (dBi)	Power Limit (dBm)	Power Limit (dBm)
Low	5755	2.80	2.80	30.00	30.00
High	5795	2.80	2.80	30.00	30.00

Duty Cycle CF (dB)	0.44	Included in Calculations of Corr'd PSD

Output Power Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5755	8.2	8.20	30.00	-21.80
High	5795	8.5	8.50	30.00	-21.50

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

For PSD results, please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.16.4.

8.17. 11ac VHT80 MODE IN THE 5.8GHz BAND

8.17.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407 (e)
IC RSS-247 (6.2.4.1)

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

RESULTS

Please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.17.1.

8.17.2. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.17.2.

8.17.3. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.17.3.

8.17.4. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (3)

IC RSS-247 (6.2.4.1)

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

TEST PROCEDURE

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

DIRECTIONAL ANTENNA GAIN

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

RESULTS

ID:	GE43578	Date:	2/16/18

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain For Power (dBi)	Directional Gain For PSD (dBi)	Power Limit (dBm)	Power Limit (dBm)
Mid	5775	2.80	2.80	30.00	30.00

Duty Cycle CF (dB)	1.28	Included in Calculations of Corr'd PSD

Output Power Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid	5775	7.1	7.10	30.00	-22.90

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

Please refer to UL report “11631998-E4V4 FCCIC Report UNII WLAN” section 8.17.4.

9. RADIATED TEST RESULTS

9.1. 5.2 GHz BAND TEST RESULTS

LIMITS

§15.407 General technical requirements

(b) Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

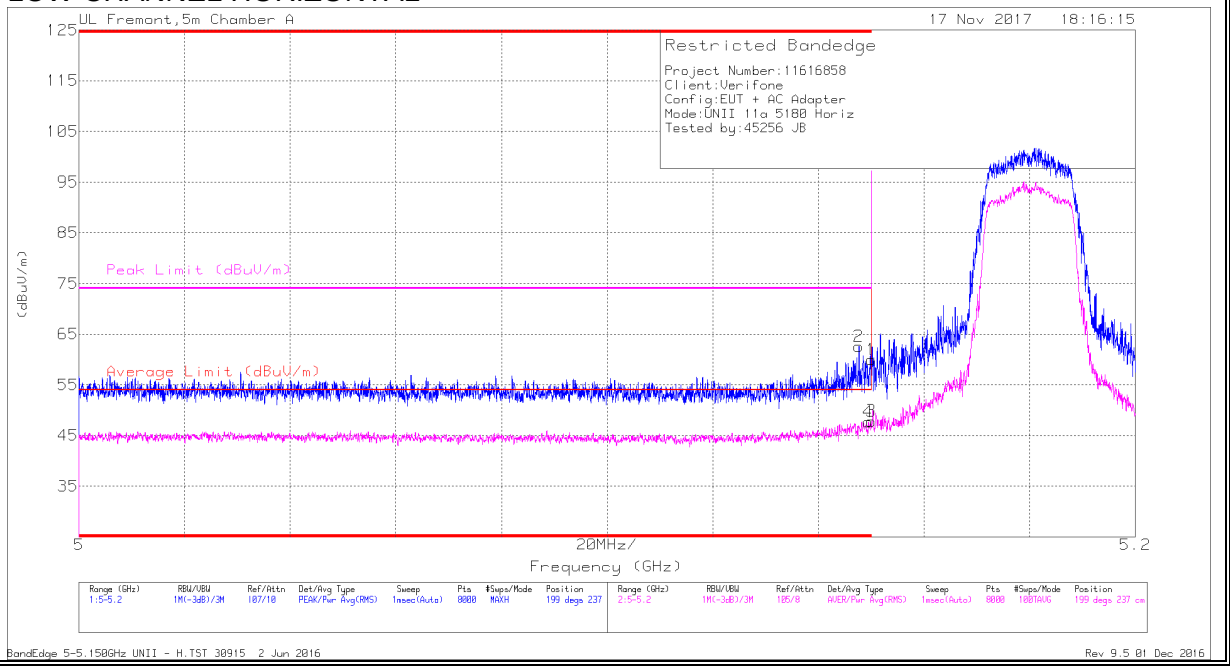
(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(7) The provisions of §15.205 apply to intentional radiators operating under this section.

8.2.1 802.11a MODE IN THE 5.2GHz BAND

BANDEDGE (LOW CHANNEL)

LOW CHANNEL HORIZONTAL

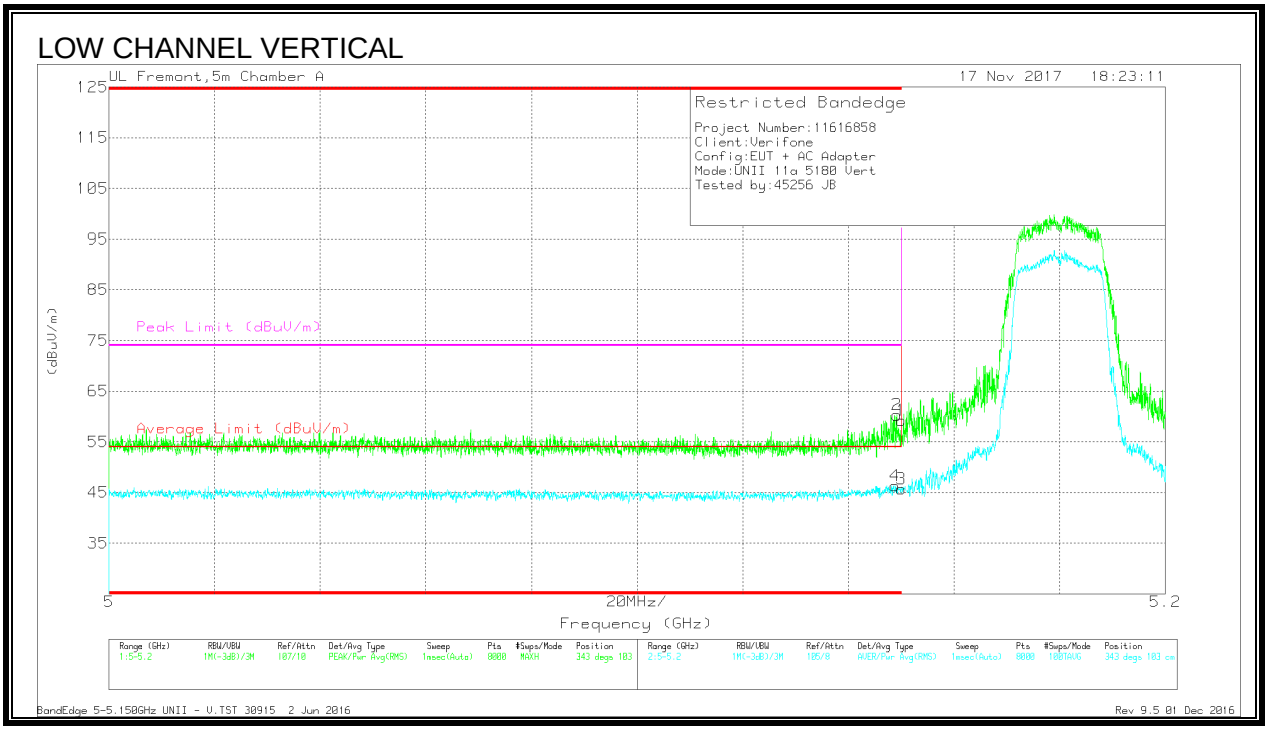


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	43.53	Pk	34.4	-18	0	59.93	-	-	74	-14.07	199	237	H
2	* 5.148	46.14	Pk	34.4	-18	0	62.54	-	-	74	-11.46	199	237	H
3	* 5.15	31.16	RMS	34.4	-18	.31	47.87	54	-6.13	-	-	199	237	H
4	* 5.149	30.96	RMS	34.4	-18	.31	47.67	54	-6.33	-	-	199	237	H

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

LOW CHANNEL VERTICAL



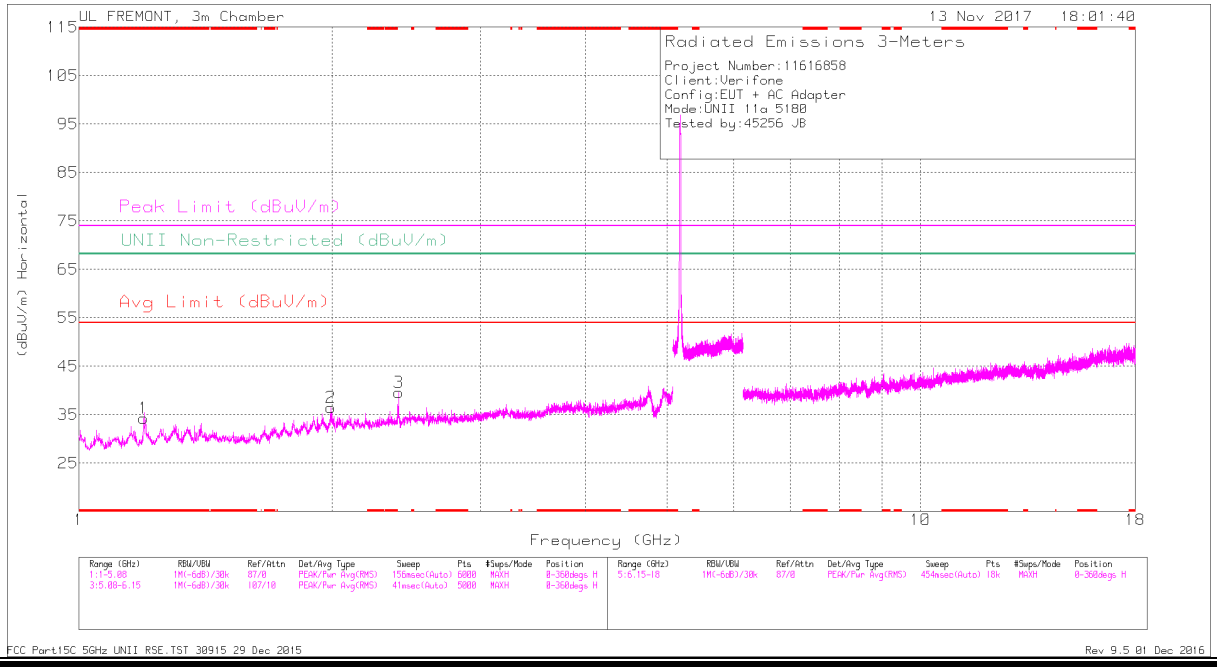
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	42.8	Pk	34.4	-18	0	59.2	-	-	74	-14.8	343	103	V
2	* 5.149	43.89	Pk	34.4	-18	0	60.29	-	-	74	-13.71	343	103	V
3	* 5.15	28.96	RMS	34.4	-18	.31	45.67	54	-8.33	-	-	343	103	V
4	* 5.149	29.62	RMS	34.4	-18	.31	46.33	54	-7.67	-	-	343	103	V

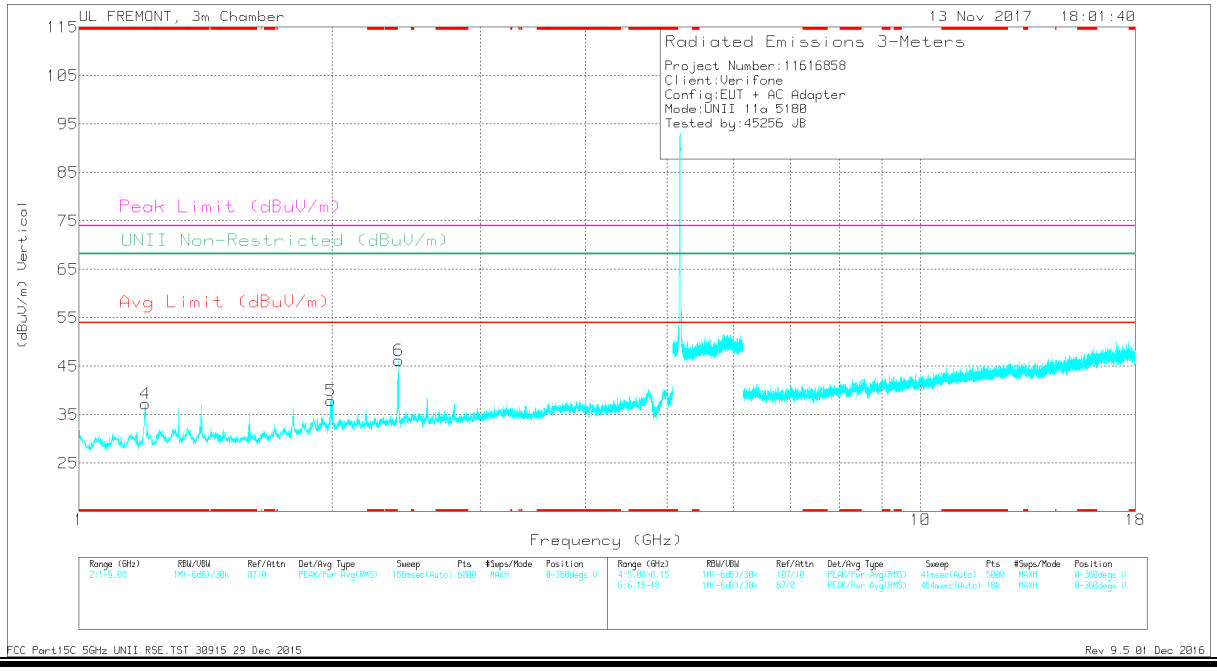
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



Radiated Emissions

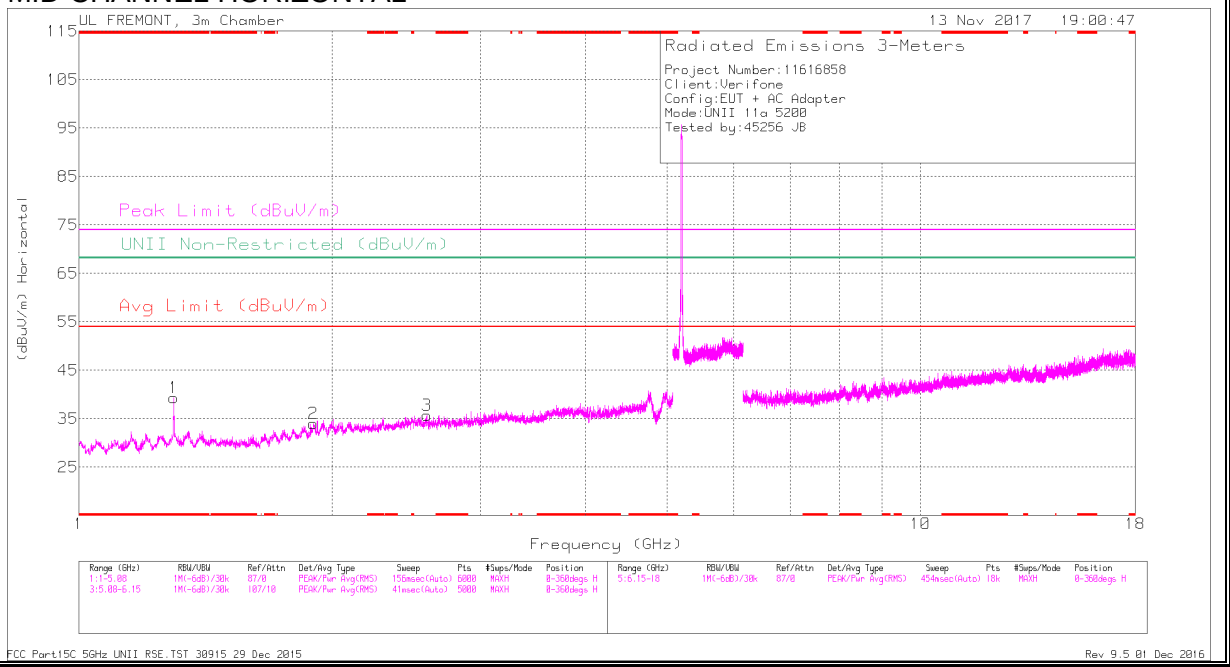
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.193	42.29	PK-U	28.1	-32.5	0	37.89	-	-	74	-36.11	-	-	232	144	H
	* 1.196	30.58	ADR	28.1	-32.5	.31	26.49	54	-27.51	-	-	-	-	232	144	H
4	* 1.198	43.5	PK-U	28.1	-32.5	0	39.1	-	-	74	-34.9	-	-	1	317	V
	* 1.199	32.28	ADR	28.1	-32.5	.31	28.19	54	-25.81	-	-	-	-	1	317	V
5	1.993	41.84	PK-U	31.2	-31.7	0	41.34	-	-	-	-	68.2	-26.86	30	103	V
2	1.994	46.13	PK-U	31.2	-31.6	0	45.73	-	-	-	-	68.2	-22.47	92	247	H
3	2.4	40.46	PK-U	32	-30.7	0	41.76	-	-	-	-	68.2	-26.44	288	396	V
6	2.402	39.93	PK-U	32	-30.9	0	41.03	-	-	-	-	68.2	-27.17	119	391	H

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

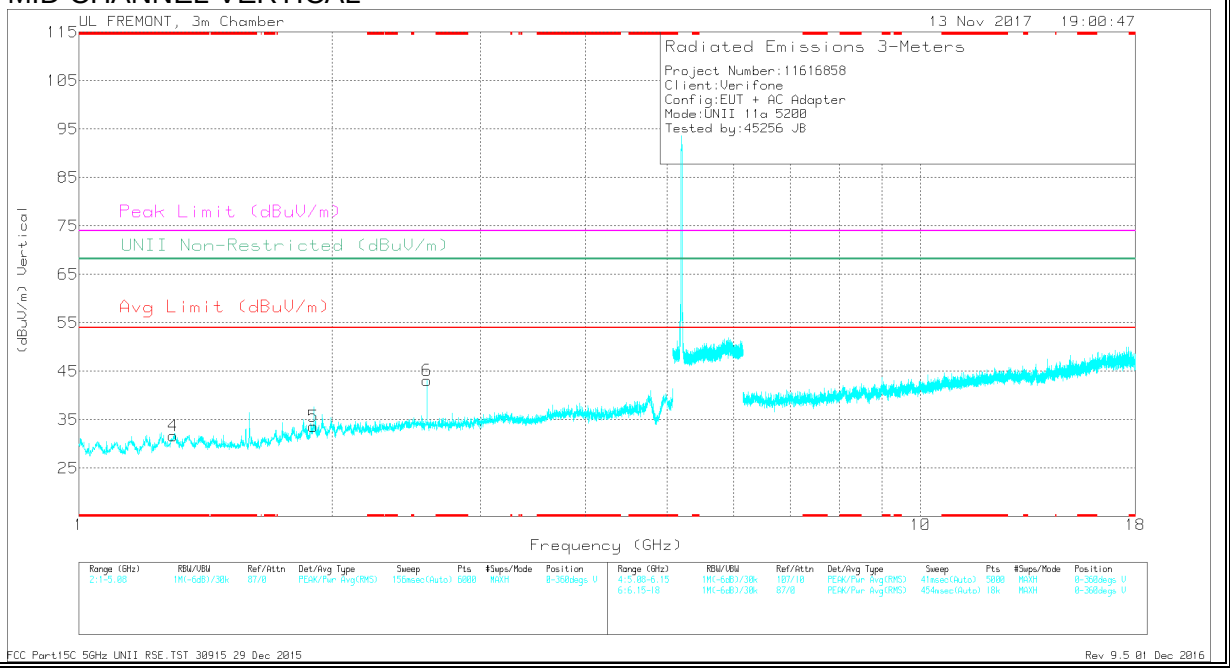
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

MID CHANNEL HORIZONTAL



MID CHANNEL VERTICAL



Radiated Emissions

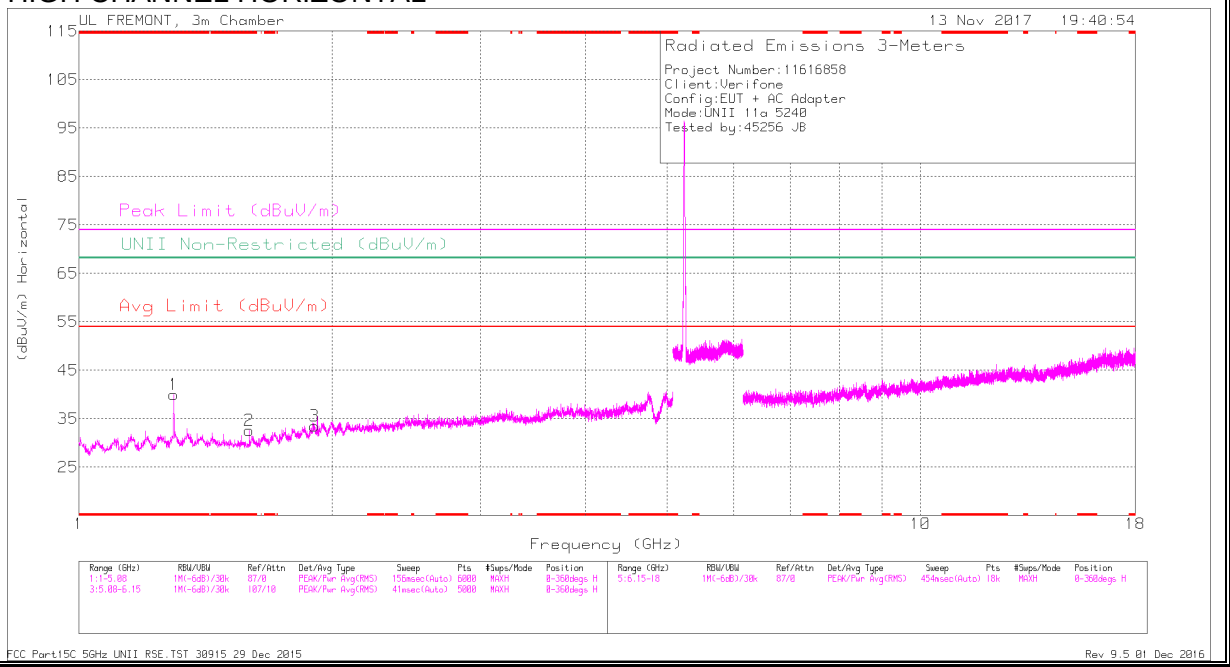
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.296	54.14	PK-U	29.1	-31.9	0	51.34	-	-	74	-22.66	-	-	255	313	H
	* 1.296	31.42	ADR	29.1	-31.9	.31	28.93	54	-25.07	-	-	-	-	255	313	H
4	* 1.294	56.56	PK-U	29.1	-31.9	0	53.76	-	-	74	-20.24	-	-	8	256	V
	* 1.295	33.25	ADR	29.1	-31.9	.31	30.76	54	-23.24	-	-	-	-	8	256	V
5	1.898	42.9	PK-U	30.8	-30.8	0	42.9	-	-	-	-	68.2	-25.3	219	243	V
2	1.899	41.34	PK-U	30.8	-30.8	0	41.34	-	-	-	-	68.2	-26.86	229	231	H
3	2.591	46.76	PK-U	32.3	-30.6	0	48.46	-	-	-	-	68.2	-19.74	77	228	H
6	2.591	53.99	PK-U	32.3	-30.6	0	55.69	-	-	-	-	68.2	-12.51	357	194	V

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

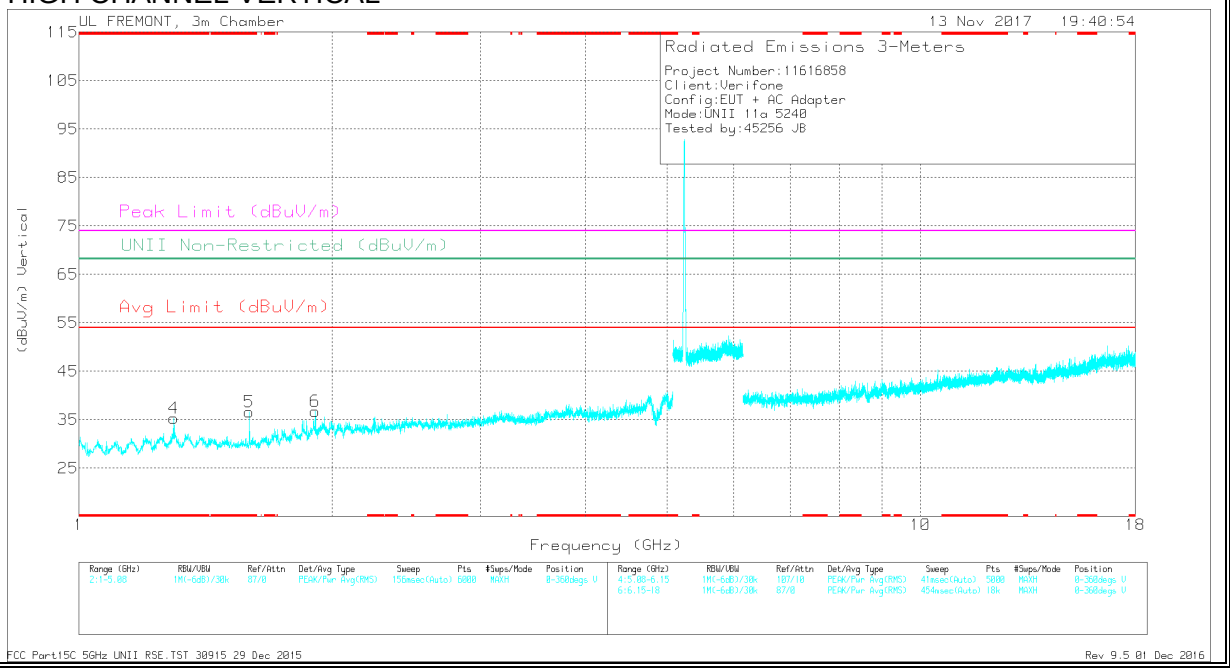
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.295	51.26	PK-U	29.1	-31.9	0	48.46	-	-	74	-25.54	-	-	180	358	H
	* 1.296	31.61	ADR	29.1	-31.9	.31	29.12	54	-24.88	-	-	-	-	180	358	H
2	* 1.593	47.29	PK-U	28.3	-31.2	0	44.39	-	-	74	-29.61	-	-	189	319	H
	* 1.593	28.72	ADR	28.3	-31.2	.31	26.13	54	-27.87	-	-	-	-	189	319	H
4	* 1.295	56.12	PK-U	29.1	-31.9	0	53.32	-	-	74	-20.68	-	-	341	131	V
	* 1.296	32.9	ADR	29.1	-31.9	.31	30.41	54	-23.59	-	-	-	-	341	131	V
5	* 1.593	49.15	PK-U	28.3	-31.2	0	46.25	-	-	74	-27.75	-	-	5	166	V
	* 1.593	29.17	ADR	28.3	-31.2	.31	26.58	54	-27.42	-	-	-	-	5	166	V
3	1.905	41.54	PK-U	30.8	-30.9	0	41.44	-	-	-	-	68.2	-26.76	144	272	H
6	1.907	28.66	ADR	30.8	-31	.31	28.77	-	-	-	-	-	-	212	272	V

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

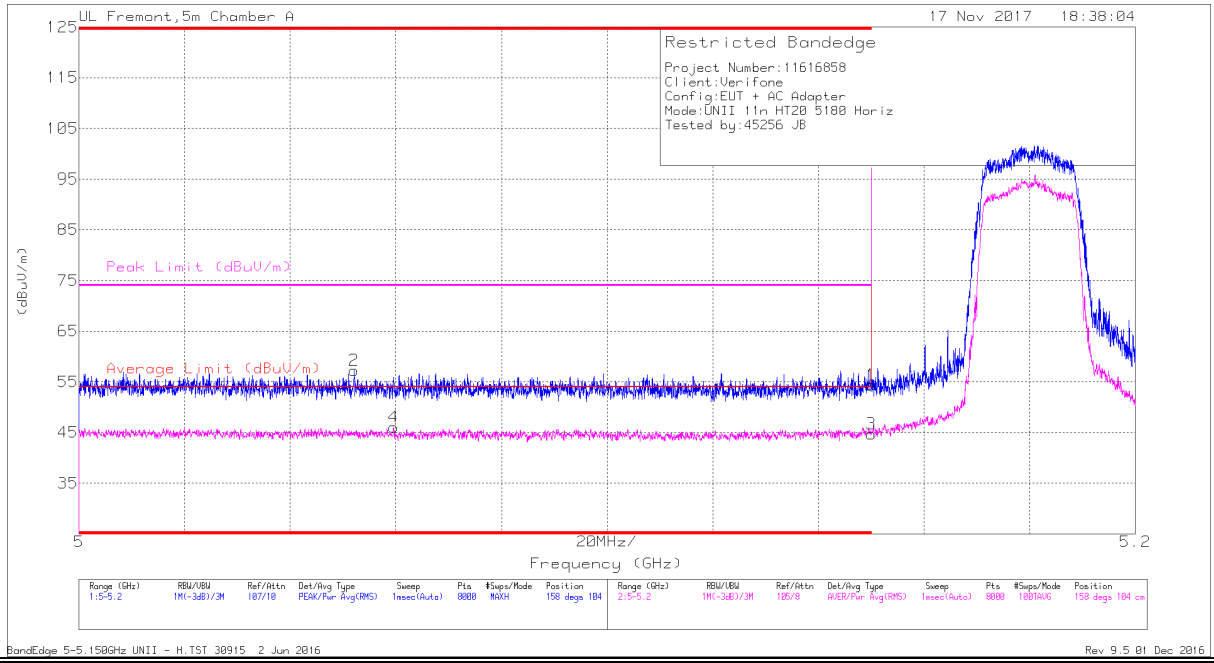
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

8.2.2 802.11n HT20 MODE IN THE 5.2GHz BAND

BANDEDGE (LOW CHANNEL)

LOW CHANNEL HORIZONTAL

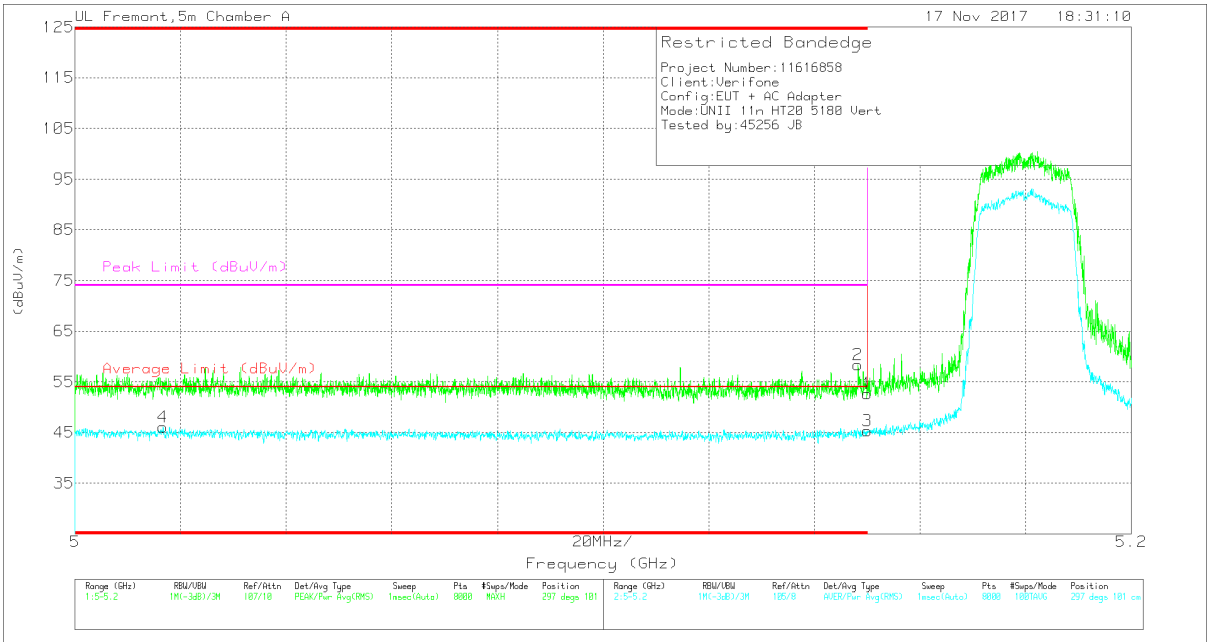


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	37.98	Pk	34.4	-18	0	54.38	-	-	74	-19.62	158	104	H
2	* 5.052	40.52	Pk	34.4	-17.7	0	57.22	-	-	74	-16.78	158	104	H
3	* 5.15	28.04	RMS	34.4	-18	.32	44.76	54	-9.24	-	-	158	104	H
4	* 5.06	29.17	RMS	34.4	-17.8	.32	46.09	54	-7.91	-	-	158	104	H

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

LOW CHANNEL VERTICAL



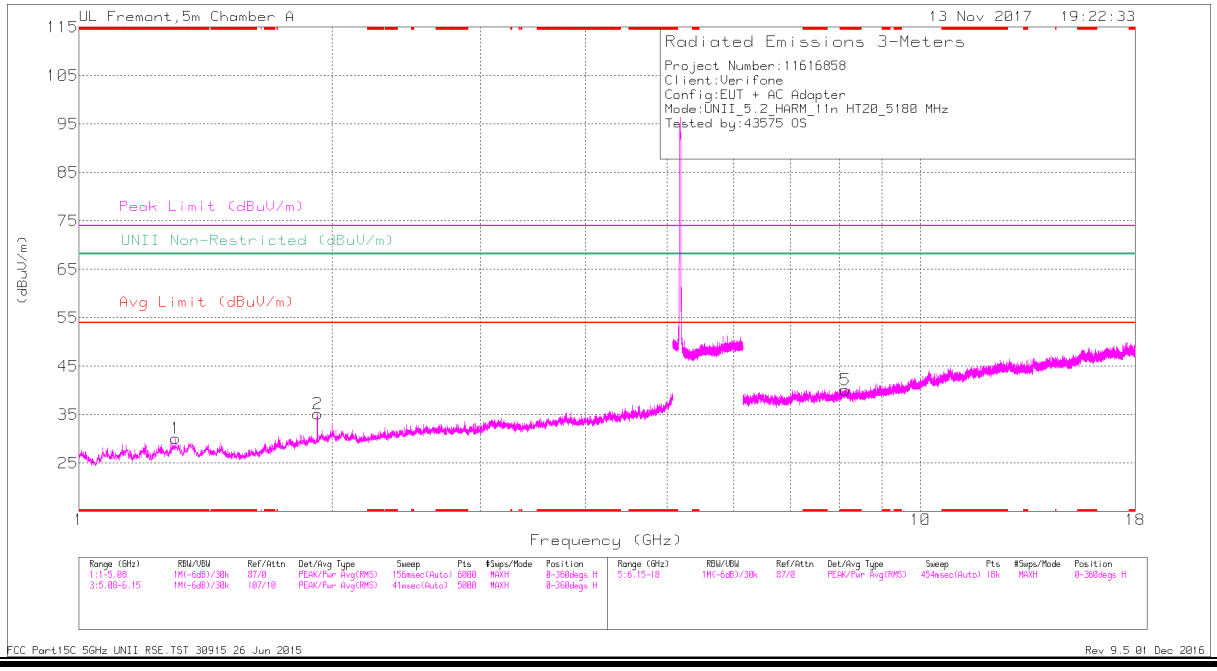
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	36.3	Pk	34.4	-18	0	52.7	-	-	74	-21.3	297	101	V
2	* 5.148	42.01	Pk	34.4	-18	0	58.41	-	-	74	-15.59	297	101	V
3	* 5.15	28.59	RMS	34.4	-18	.32	45.31	54	-8.69	-	-	297	101	V
4	* 5.017	29.18	RMS	34.3	-17.7	.32	46.1	54	-7.9	-	-	297	101	V

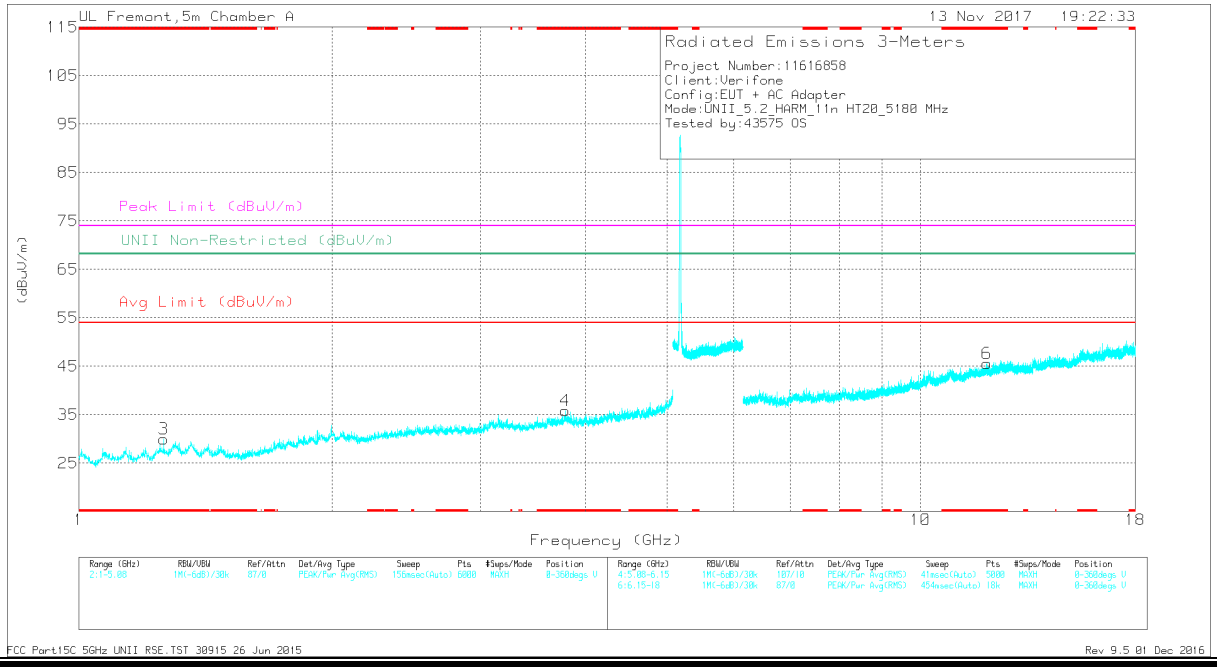
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



Radiated Emissions

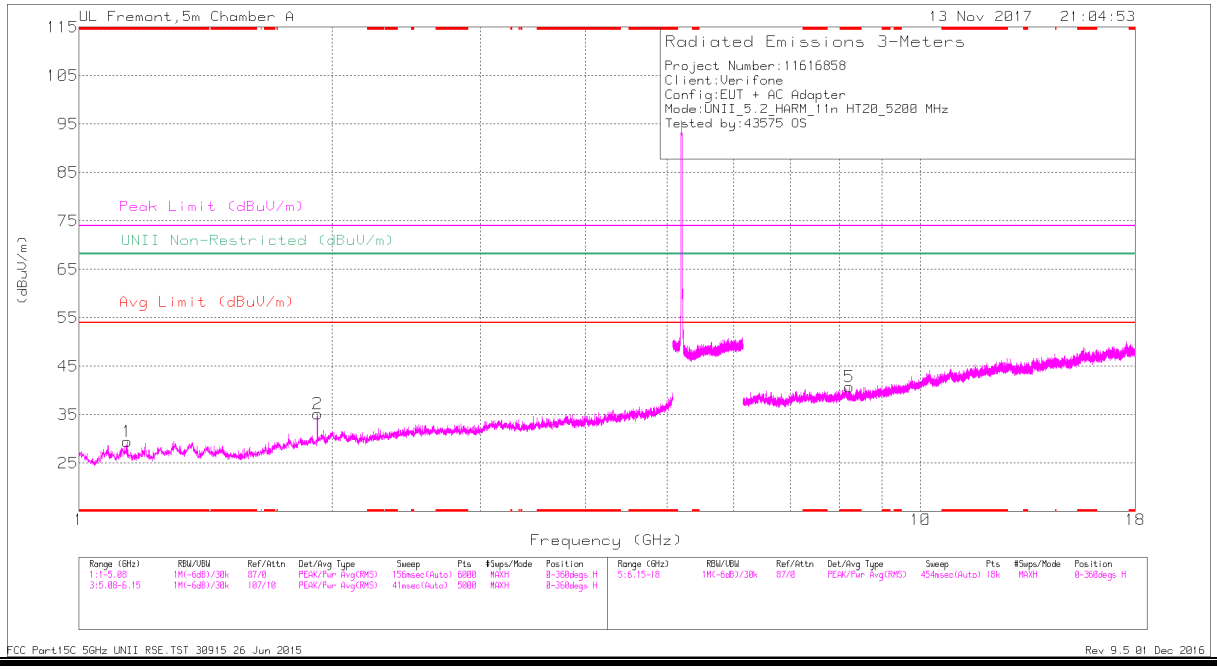
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.303	39.29	PK-U	29.4	-33.1	0	35.59	-	-	74	-38.41	-	-	342	268	H
	* 1.303	27.33	ADR	29.4	-33.1	.32	23.95	54	-30.05	-	-	-	-	342	268	H
3	* 1.259	38.68	PK-U	29.2	-33.5	0	34.38	-	-	74	-39.62	-	-	93	106	V
	* 1.259	26.84	ADR	29.2	-33.5	.32	22.86	54	-31.14	-	-	-	-	93	106	V
4	* 3.779	37.05	PK-U	33.2	-29	0	41.25	-	-	74	-32.75	-	-	239	200	V
	* 3.782	25.33	ADR	33.2	-28.9	.32	29.95	54	-24.05	-	-	-	-	239	200	V
5	* 8.144	33.12	PK-U	35.8	-22.3	0	46.62	-	-	74	-27.38	-	-	310	250	H
	* 8.142	21.38	ADR	35.8	-22.4	.32	35.1	54	-18.9	-	-	-	-	310	250	H
6	* 11.995	31.1	PK-U	38.9	-19.2	0	50.8	-	-	74	-23.2	-	-	114	101	V
	* 11.995	19.86	ADR	38.9	-19.2	.32	39.88	54	-14.12	-	-	-	-	114	101	V
2	1.92	41.92	PK-U	31.2	-32.7	0	40.42	-	-	-	-	68.2	-27.78	149	111	H

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

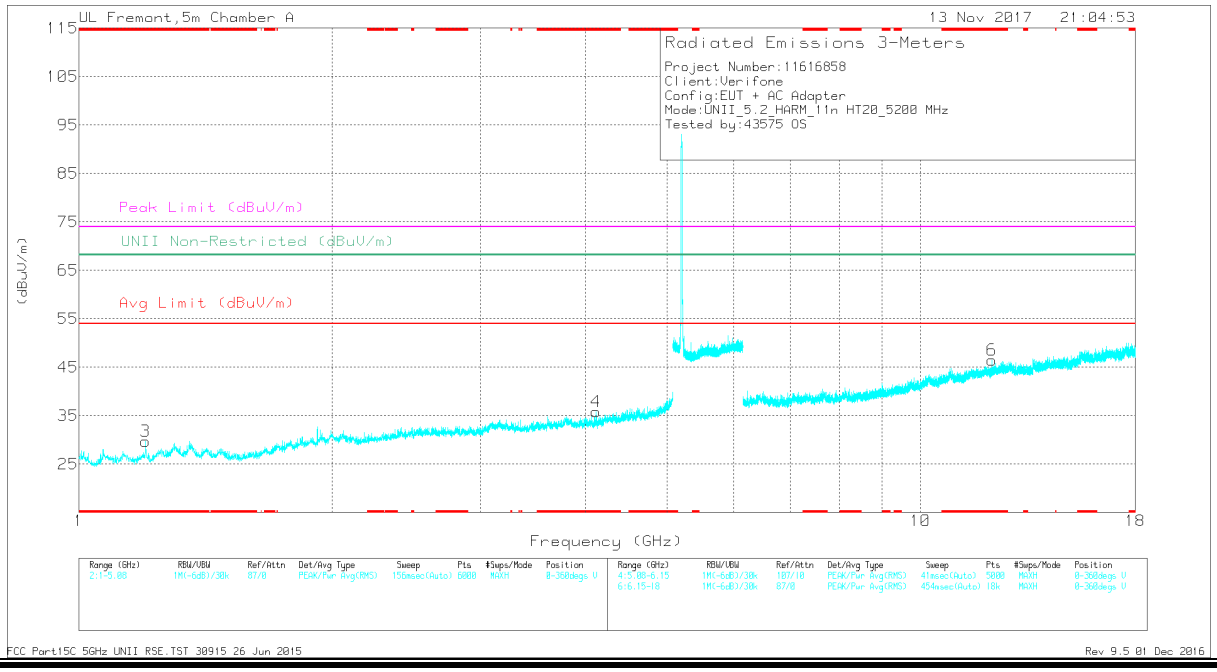
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

MID CHANNEL HORIZONTAL



MID CHANNEL VERTICAL



Radiated Emissions

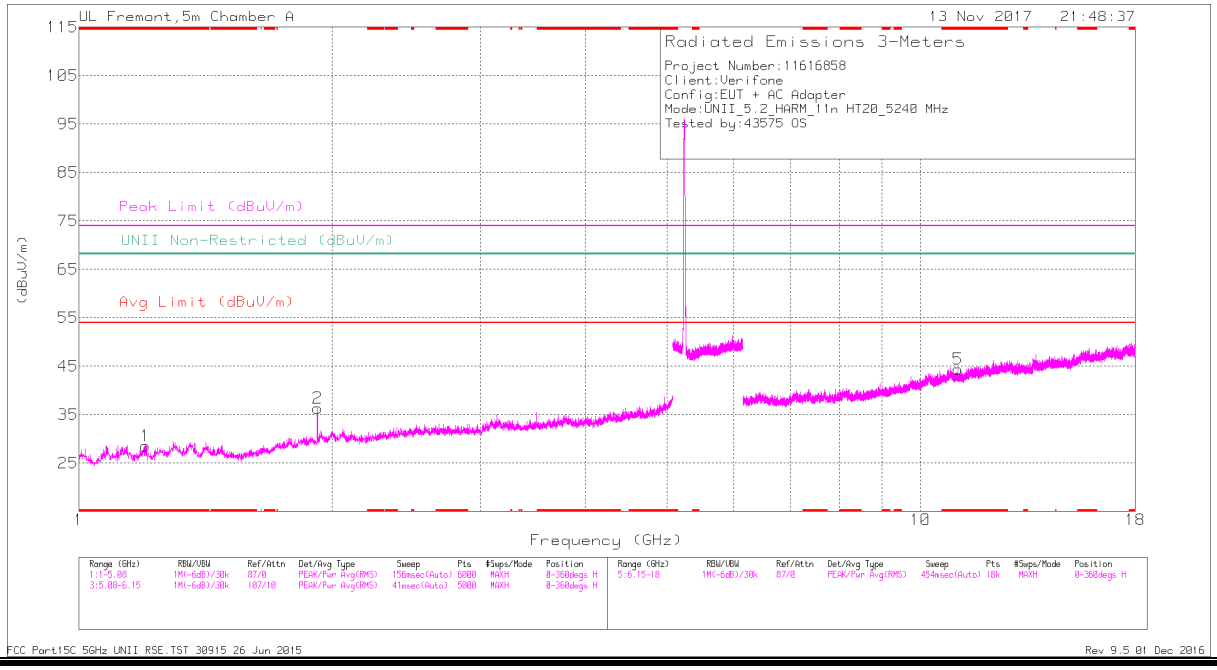
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.142	40.53	PK-U	27.6	-33.2	0	34.93	-	-	74	-39.07	-	-	123	149	H
	* 1.139	28.97	ADR	27.7	-33.2	.32	23.79	54	-30.21	-	-	-	-	123	149	H
3	* 1.198	43.14	PK-U	28.2	-33.7	0	37.64	-	-	74	-36.36	-	-	331	354	V
	* 1.2	30.94	ADR	28.2	-33.7	.32	25.76	54	-28.24	-	-	-	-	331	354	V
4	* 4.115	36.98	PK-U	33.4	-29.3	0	41.08	-	-	74	-32.92	-	-	23	113	V
	* 4.114	25.16	ADR	33.4	-29.3	.32	29.58	54	-24.42	-	-	-	-	23	113	V
5	* 8.23	32.17	PK-U	35.8	-22.7	0	45.27	-	-	74	-28.73	-	-	247	346	H
	* 8.231	20.8	ADR	35.8	-22.7	.32	34.22	54	-19.78	-	-	-	-	247	346	H
6	* 12.17	31.07	PK-U	39	-19.5	0	50.57	-	-	74	-23.43	-	-	333	127	V
	* 12.167	19.85	ADR	39	-19.5	.32	39.67	54	-14.33	-	-	-	-	333	127	V
2	1.92	42.01	PK-U	31.2	-32.7	0	40.51	-	-	-	-	68.2	-27.69	148	109	H

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

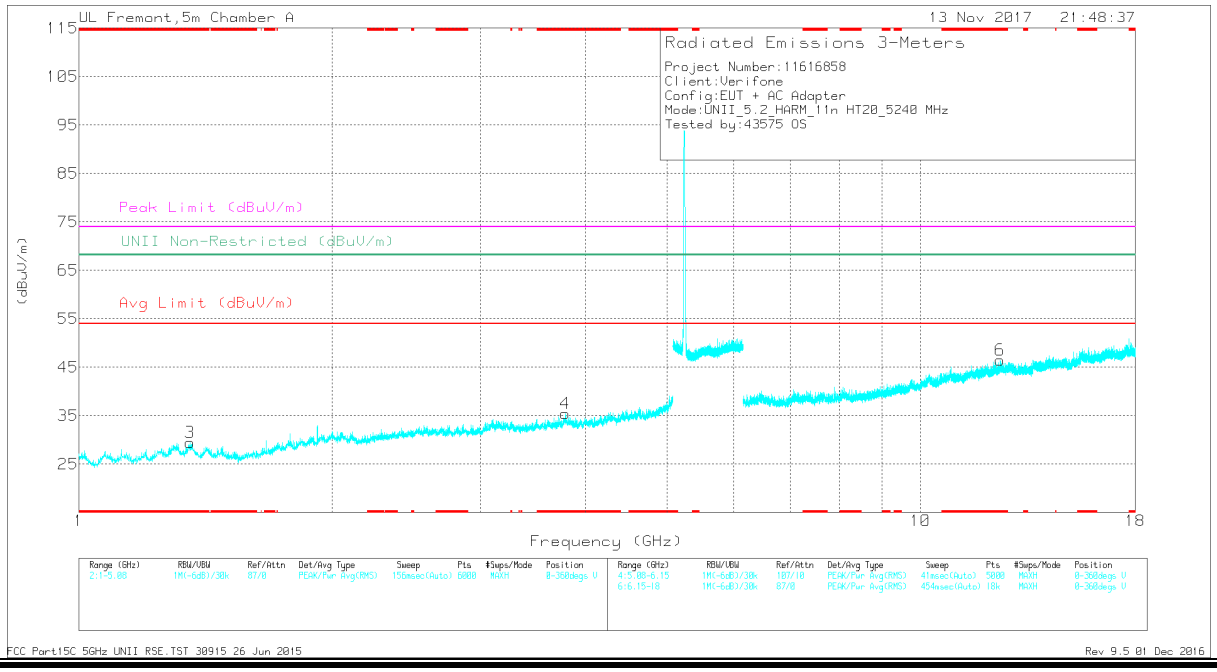
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.198	42.42	PK-U	28.2	-33.7	0	36.92	-	-	74	-37.08	-	-	232	206	H
	* 1.201	30.54	ADR	28.2	-33.7	.32	25.36	54	-28.64	-	-	-	-	232	206	H
3	* 1.356	39.75	PK-U	29.4	-32.9	0	36.25	-	-	74	-37.75	-	-	179	108	V
	* 1.355	27.54	ADR	29.4	-32.9	.32	24.36	54	-29.64	-	-	-	-	179	108	V
4	* 3.786	36.88	PK-U	33.2	-28.9	0	41.18	-	-	74	-32.82	-	-	97	161	V
	* 3.788	25.21	ADR	33.2	-28.9	.32	29.83	54	-24.17	-	-	-	-	97	161	V
5	* 11.083	31.4	PK-U	37.9	-20	0	49.3	-	-	74	-24.7	-	-	107	258	H
	* 11.085	20.1	ADR	37.9	-20	.32	38.32	54	-15.68	-	-	-	-	107	258	H
6	* 12.437	31.23	PK-U	39	-18.8	0	51.43	-	-	74	-22.57	-	-	257	351	V
	* 12.434	19.73	ADR	39	-18.8	.32	40.25	54	-13.75	-	-	-	-	257	351	V
2	1.92	42.16	PK-U	31.2	-32.7	0	40.66	-	-	-	-	68.2	-27.54	149	111	H

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

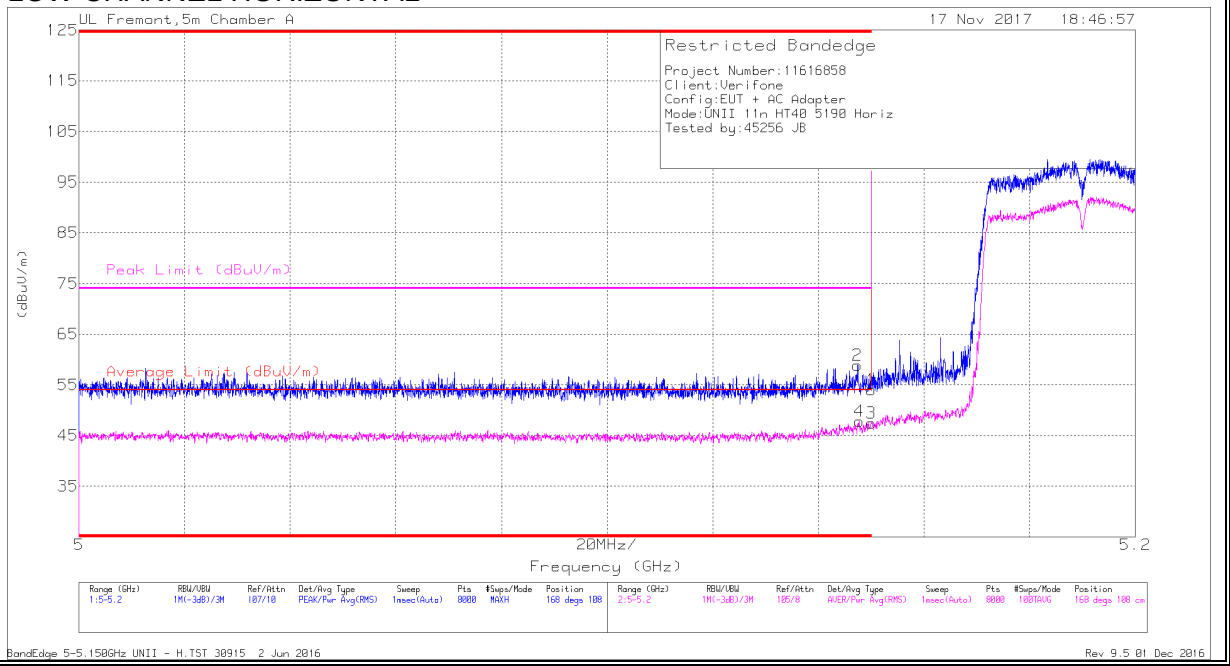
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

8.2.3 802.11n HT40 MODE IN THE 5.2GHz BAND

BANDEDGE (LOW CHANNEL)

LOW CHANNEL HORIZONTAL

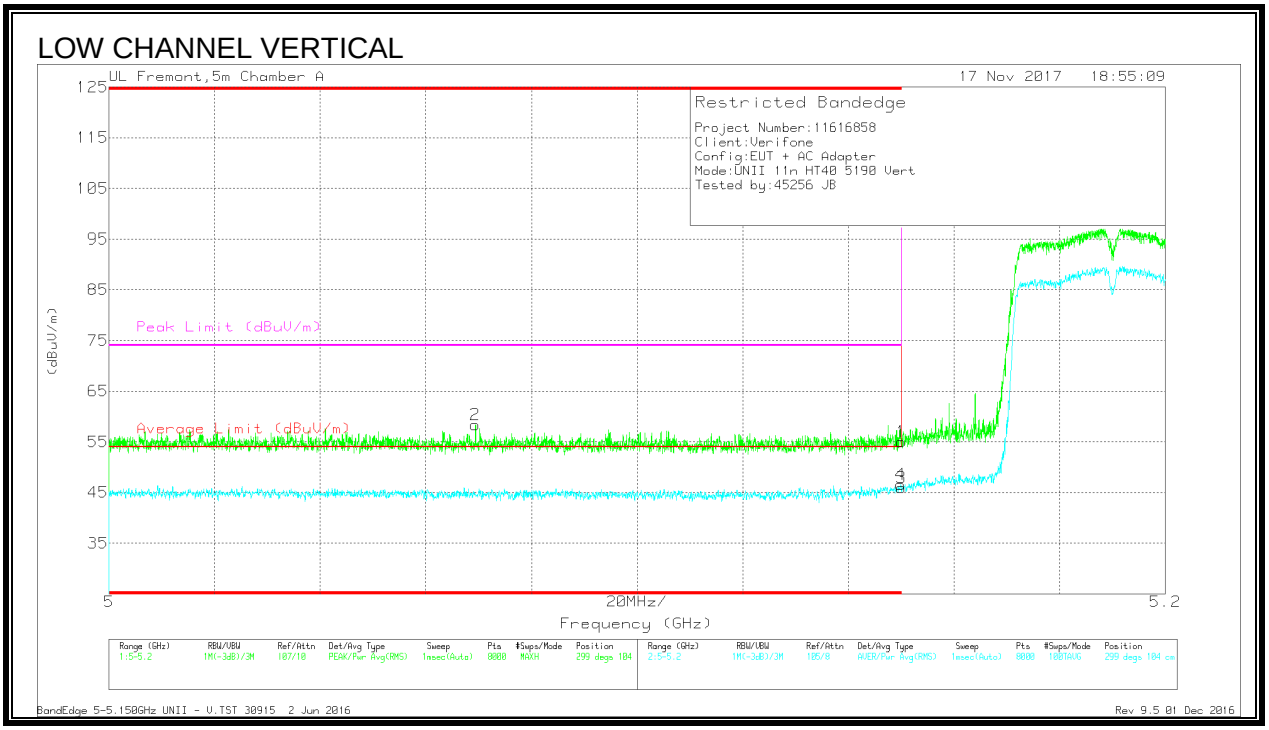


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	37.63	Pk	34.4	-18	0	54.03	-	-	74	-19.97	168	108	H
2	* 5.147	42.47	Pk	34.4	-18	0	58.87	-	-	74	-15.13	168	108	H
3	* 5.15	30.63	RMS	34.4	-18	.44	47.47	54	-6.53	-	-	168	108	H
4	* 5.148	30.94	RMS	34.4	-18	.44	47.78	54	-6.22	-	-	168	108	H

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

LOW CHANNEL VERTICAL



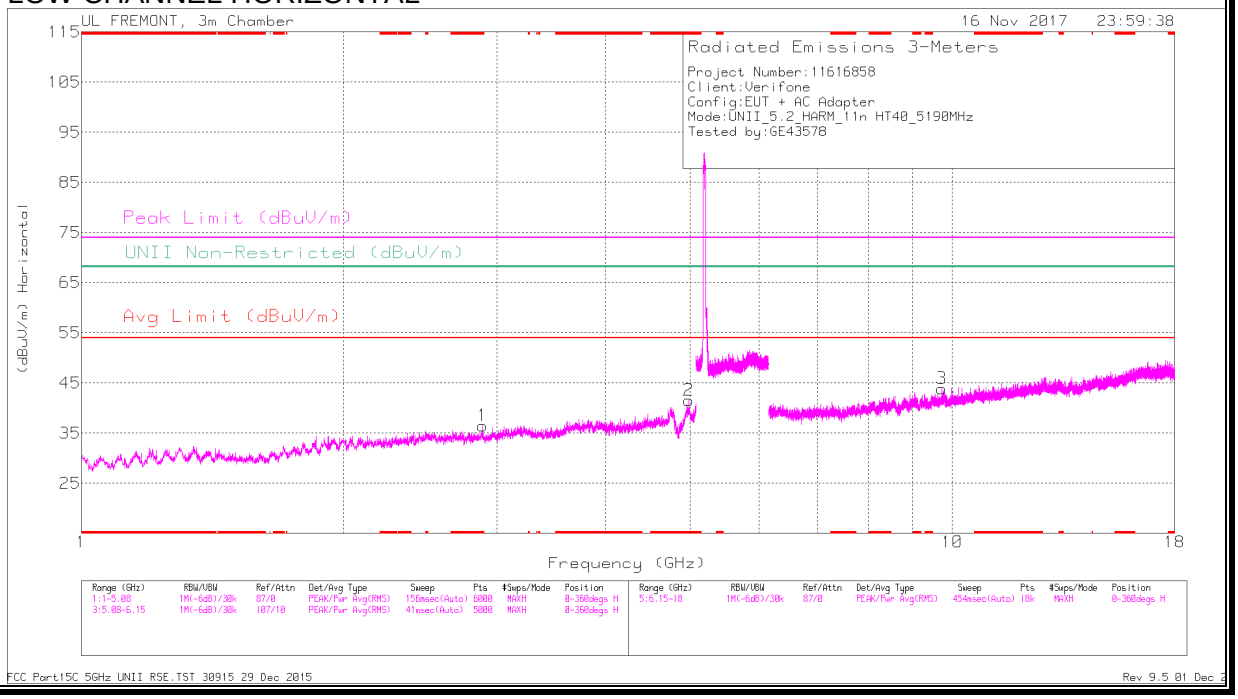
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	38.62	Pk	34.4	-18	0	55.02	-	-	74	-18.98	299	104	V
2	* 5.069	41.81	Pk	34.4	-17.8	0	58.41	-	-	74	-15.59	299	104	V
3	* 5.15	29.16	RMS	34.4	-18	.44	46.00	54	-8.00	-	-	299	104	V
4	* 5.15	29.79	RMS	34.4	-18	.44	46.63	54	-7.37	-	-	299	104	V

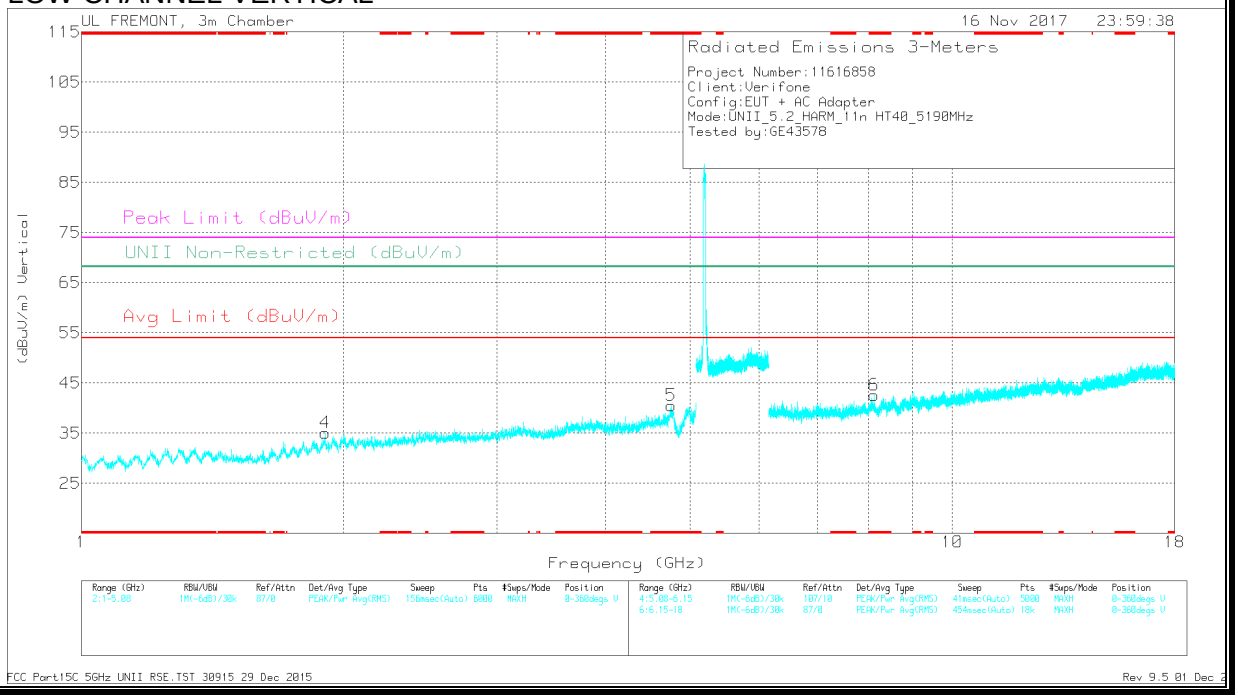
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



Radiated Emissions

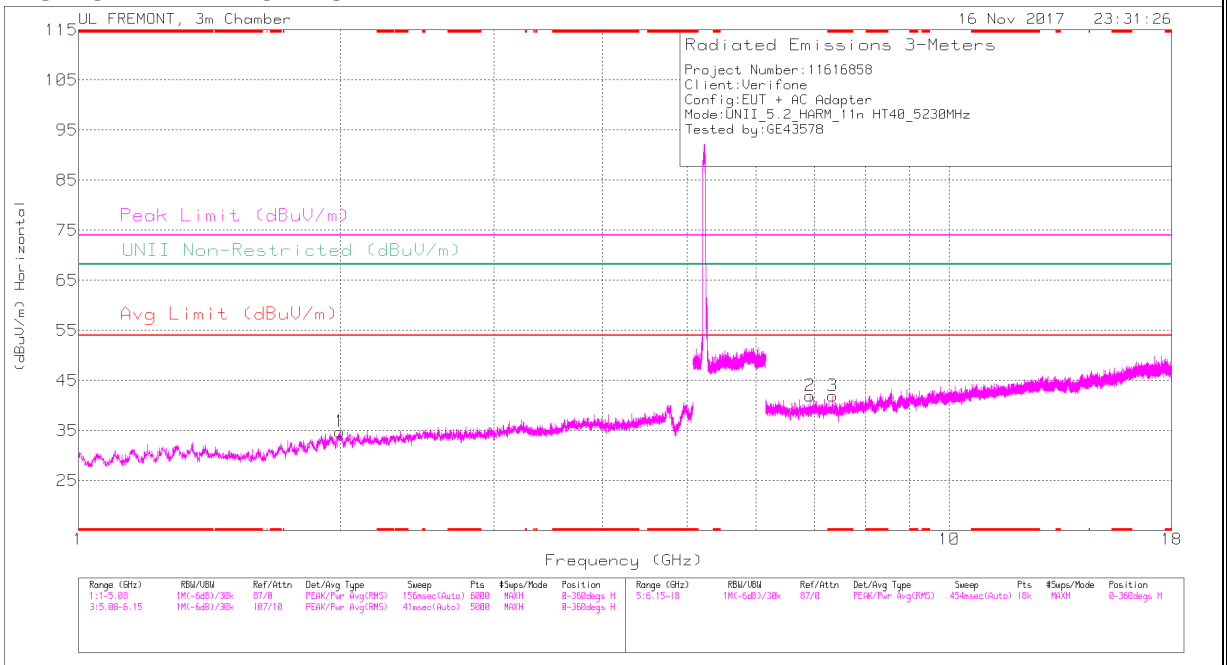
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.886	40.43	PK-U	32.3	-30.4	0	42.33	-	-	74	-31.67	-	-	213	100	H
	* 2.885	27.85	ADR	32.3	-30.4	.44	30.19	54	-23.81	-	-	-	-	213	100	H
2	* 4.981	40.83	PK-U	34.1	-27.9	0	47.03	-	-	74	-26.97	-	-	160	100	H
	* 4.981	28.61	ADR	34.1	-27.9	.44	35.25	54	-18.75	-	-	-	-	160	100	H
5	* 4.757	41.46	PK-U	34	-28.4	0	47.07	-	-	74	-26.93	-	-	112	100	V
	* 4.756	29.44	ADR	34	-28.4	.44	35.47	54	-18.53	-	-	-	-	112	100	V
6	* 8.132	36.7	PK-U	35.8	-23.3	0	49.2	-	-	74	-24.8	-	-	41	200	V
	* 8.132	23.76	ADR	35.8	-23.2	.44	36.80	54	-17.20	-	-	-	-	41	200	V
4	1.906	41.28	PK-U	30.8	-30.9	0	41.18	-	-	-	-	68.2	-27.02	141	100	V
3	9.726	33.58	PK-U	36.8	-21.6	0	48.78	-	-	-	-	68.2	-19.42	70	100	H

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

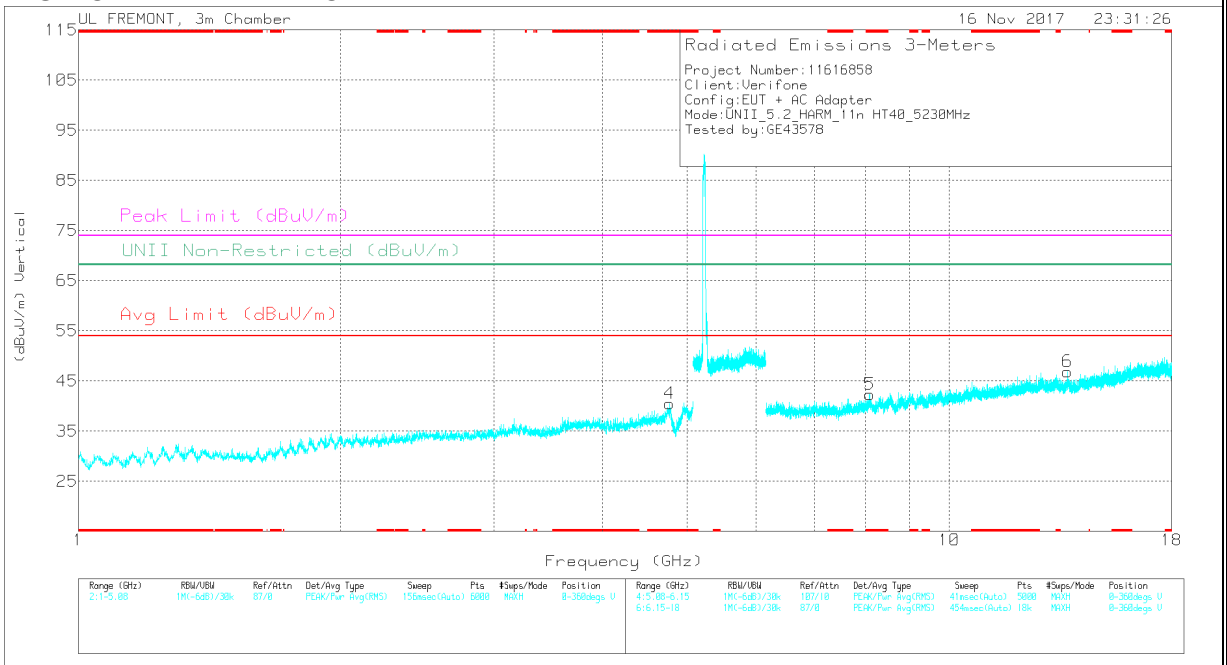
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 4.773	41.78	PK-U	34	-28.3	0	47.48	-	-	74	-26.52	-	-	89	200	V
	* 4.773	29.22	ADR	34	-28.3	.44	35.36	54	-18.64	-	-	-	-	89	200	V
3	* 7.348	36.76	PK-U	35.5	-24.9	0	47.36	-	-	74	-26.64	-	-	42	100	H
	* 7.347	24.07	ADR	35.5	-25.1	.44	34.91	54	-19.0	-	-	-	-	42	100	H
5	* 8.101	36.11	PK-U	35.7	-23.2	0	48.61	-	-	74	-25.39	-	-	21	200	V
	* 8.1	23.58	ADR	35.7	-23.2	.44	36.50	54	-17.48	-	-	-	-	21	200	V
1	1.996	45.49	PK-U	31.2	-31.7	0	44.99	-	-	-	-	68.2	-23.21	74	100	H
2	6.918	36.77	PK-U	35.6	-26	0	46.37	-	-	-	-	68.2	-21.83	112	100	H
6	13.666	35.92	PK-U	38.6	-21.9	0	52.62	-	-	-	-	68.2	-15.58	107	200	V

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

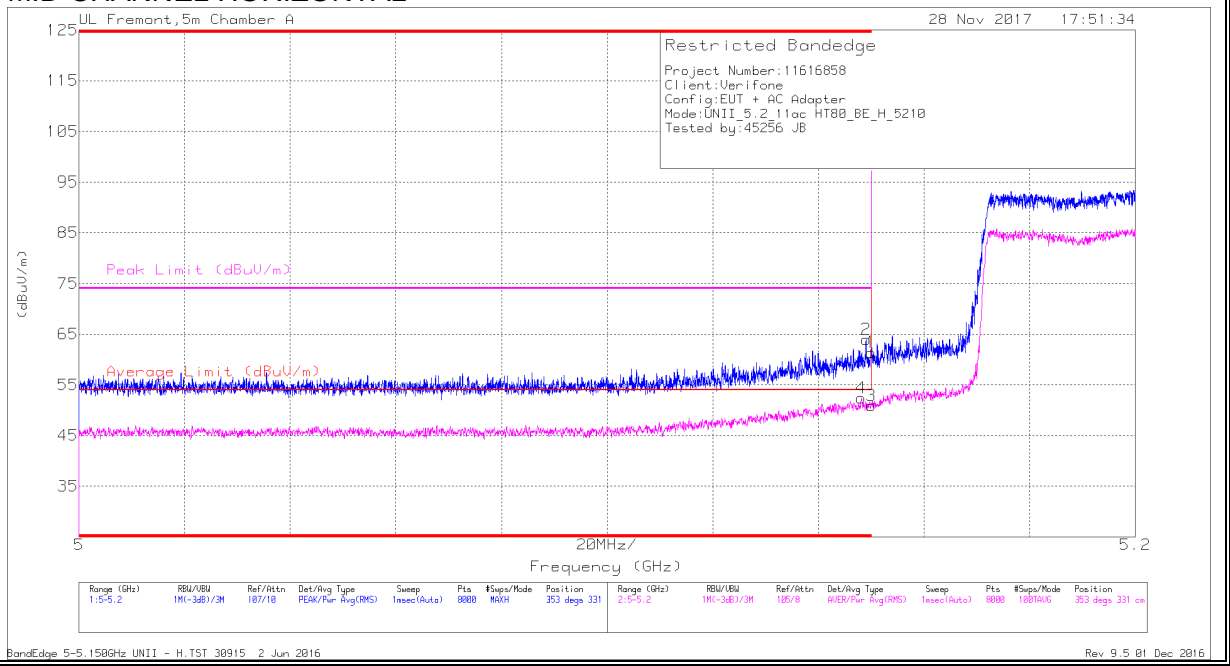
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

8.2.4 802.11ac VHT80 MODE IN THE 5.2GHz BAND

BANDEDGE (MID CHANNEL)

MID CHANNEL HORIZONTAL

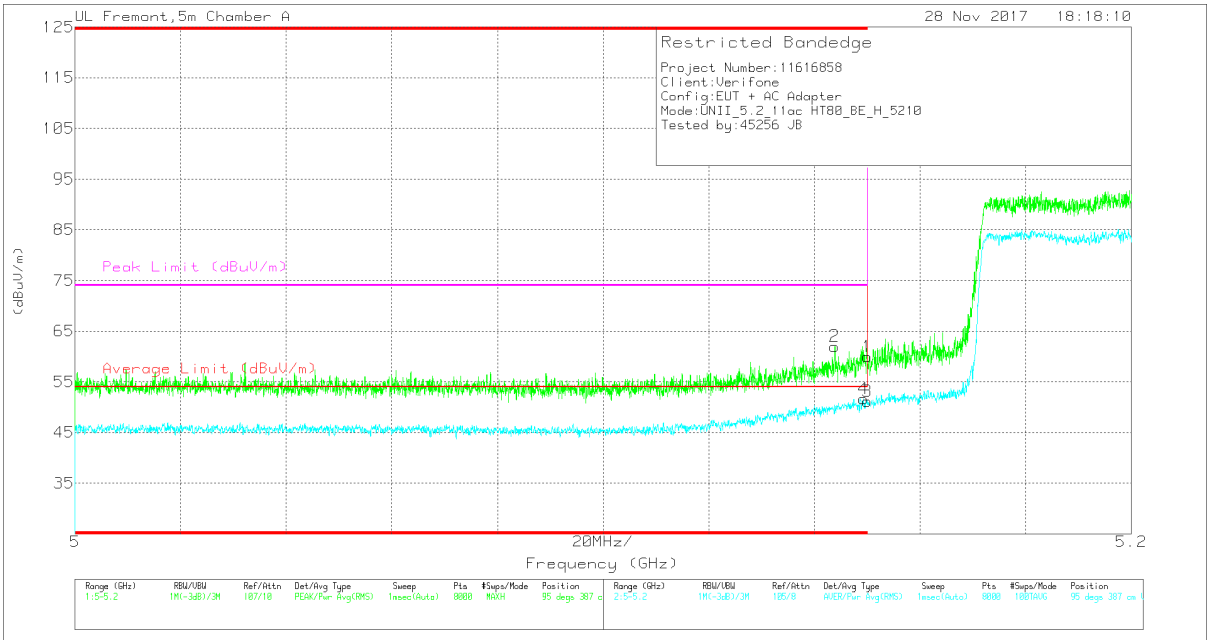


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	45	Pk	34.4	-18	0	61.4	-	-	74	-12.6	353	331	H
2	* 5.149	47.57	Pk	34.4	-18	0	63.97	-	-	74	-10.03	353	331	H
3	* 5.15	33.18	RMS	34.4	-18	1.28	50.86	54	-3.14	-	-	353	331	H
4	* 5.148	34.68	RMS	34.4	-18	1.28	52.36	54	-1.64	-	-	353	331	H

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

MID CHANNEL VERTICAL



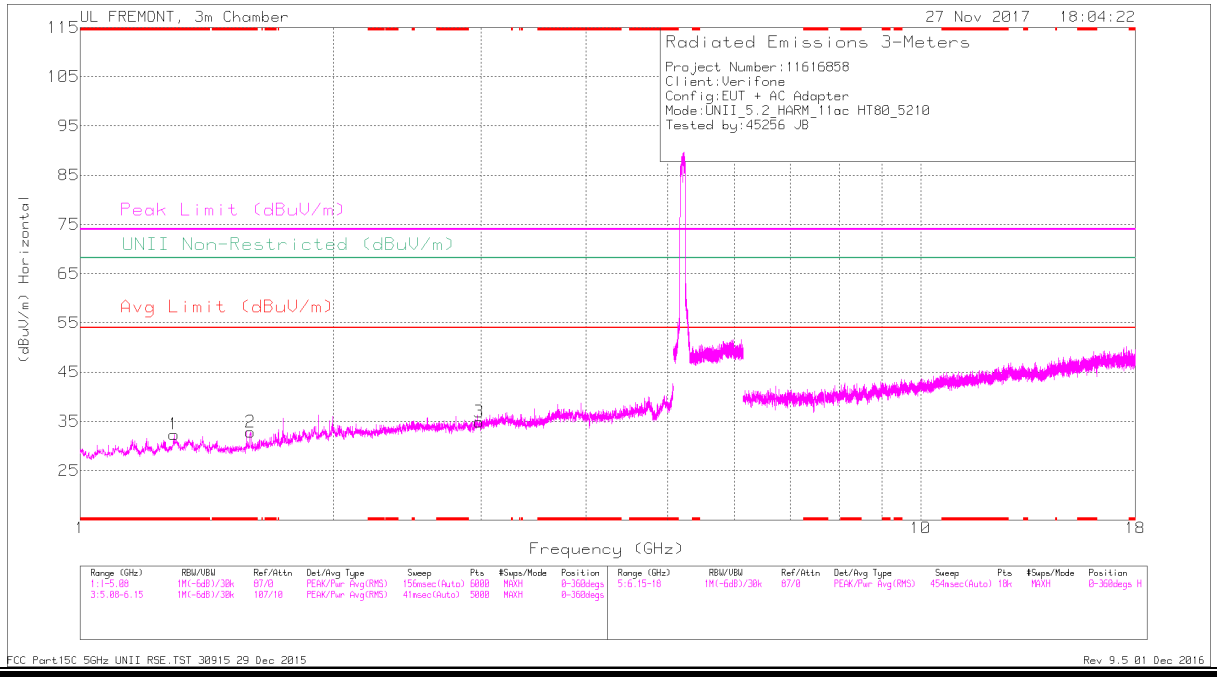
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	43.55	Pk	34.4	-18	0	59.95	-	-	74	-14.05	95	387	V
2	* 5.144	45.62	Pk	34.4	-18	0	62.02	-	-	74	-11.98	95	387	V
3	* 5.15	33.48	RMS	34.4	-18	1.28	51.16	54	-2.84	-	-	95	387	V
4	* 5.149	33.98	RMS	34.4	-18	1.28	51.66	54	-2.34	-	-	95	387	V

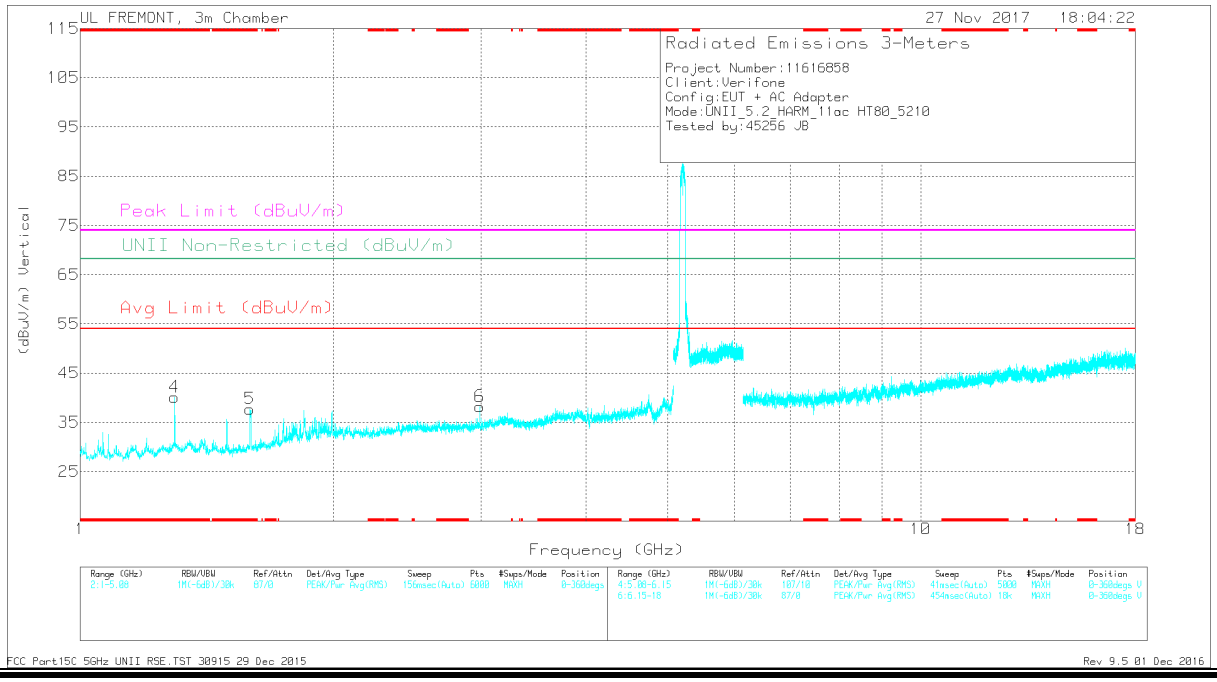
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

MID CHANNEL HORIZONTAL



MID CHANNEL VERTICAL



Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.294	53.09	PK-U	29.1	-31.9	0	50.29	-	-	74	-23.71	-	-	38	104	H
	* 1.295	30.16	ADR	29.1	-31.9	1.28	28.64	54	-25.36	-	-	-	-	38	104	H
2	* 1.595	45.93	PK-U	28.3	-31.1	0	43.13	-	-	74	-30.87	-	-	214	207	H
	* 1.593	28.63	ADR	28.3	-31.2	1.28	27.01	54	-26.99	-	-	-	-	214	207	H
4	* 1.295	47.87	PK-U	29.1	-31.9	0	45.07	-	-	74	-28.93	-	-	158	287	V
	* 1.295	29.3	ADR	29.1	-31.9	1.28	27.78	54	-26.22	-	-	-	-	158	287	V
5	* 1.594	49.7	PK-U	28.3	-31.1	0	46.9	-	-	74	-27.1	-	-	285	130	V
	* 1.593	30.48	ADR	28.3	-31.2	1.28	28.86	54	-25.14	-	-	-	-	285	130	V
3	2.982	39.42	PK-U	32.7	-30.5	0	41.62	-	-	-	-	68.2	-26.58	268	342	H
6	2.99	39.51	PK-U	32.7	-30.4	0	41.81	-	-	-	-	68.2	-26.39	183	308	V

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

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

8.3 5.3 GHz BAND TEST RESULTS

LIMITS

§15.407 General technical requirements

(b) Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

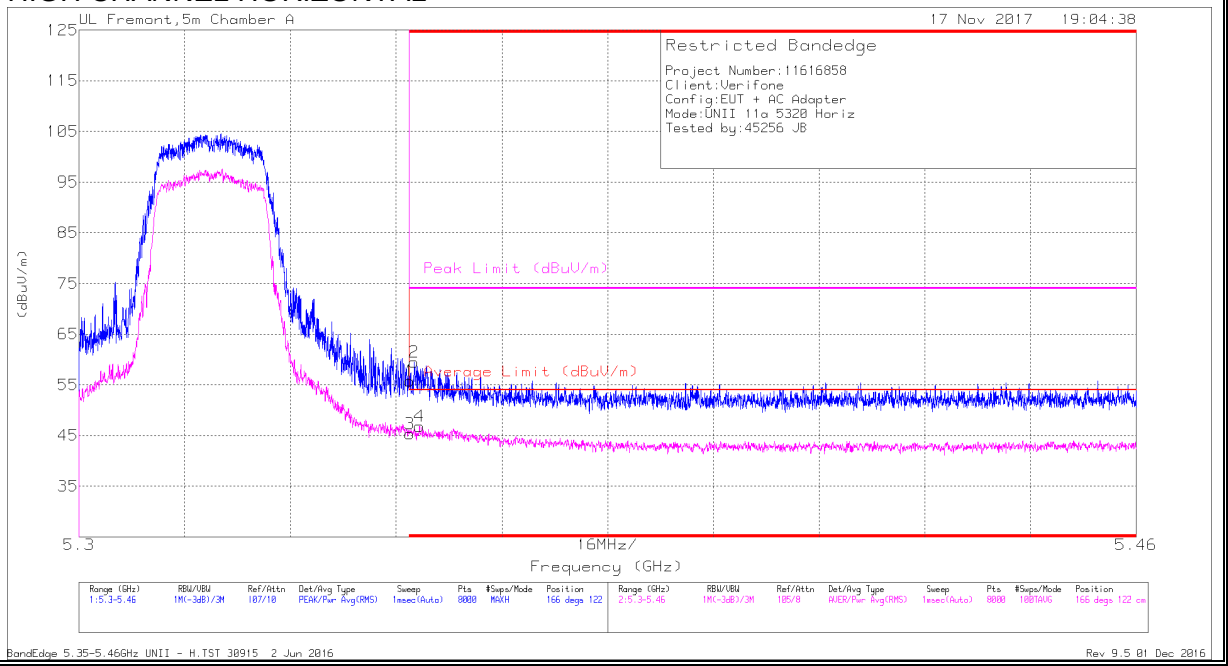
(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(7) The provisions of §15.205 apply to intentional radiators operating under this section.

8.3.1 802.11a MODE IN THE 5.3GHz BAND

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HIGH CHANNEL HORIZONTAL

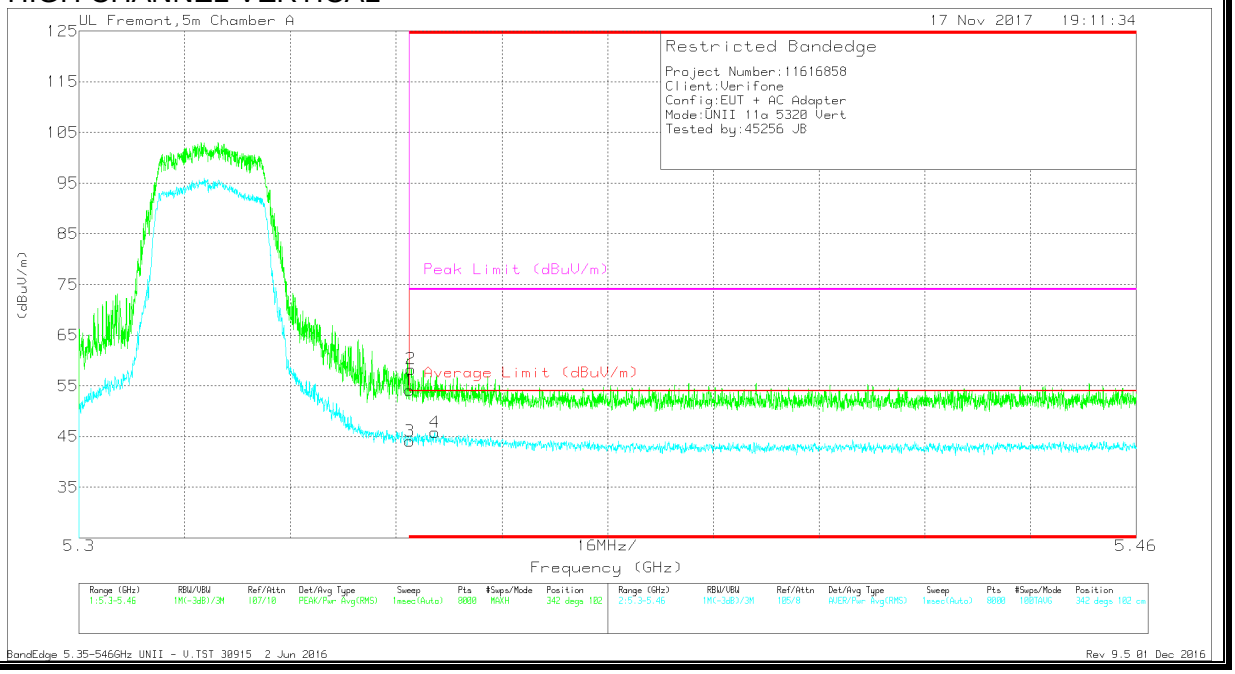


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	39.48	Pk	34.6	-18.3	0	55.78	-	-	74	-18.22	166	122	H
2	* 5.351	43.26	Pk	34.6	-18.4	0	59.46	-	-	74	-14.54	166	122	H
3	* 5.35	28.73	RMS	34.6	-18.3	.31	45.34	54	-8.66	-	-	166	122	H
4	* 5.352	30.25	RMS	34.6	-18.3	.31	46.86	54	-7.14	-	-	166	122	H

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

HIGH CHANNEL VERTICAL



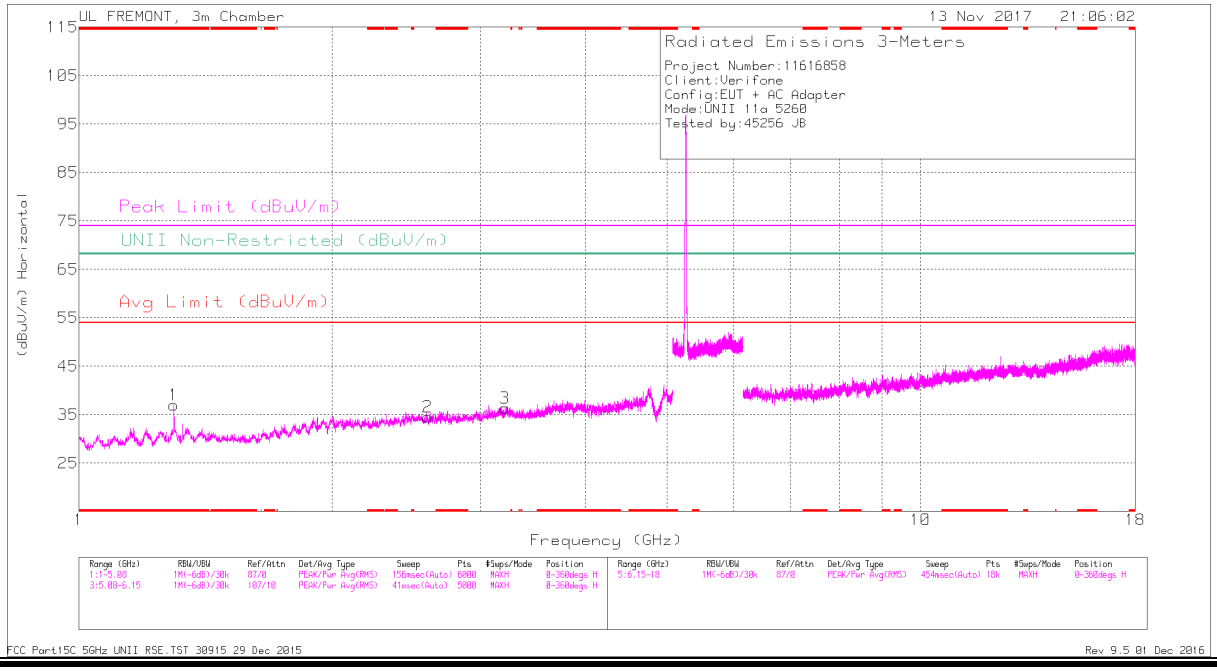
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	37.8	Pk	34.6	-18.3	0	54.1	-	-	74	-19.9	342	102	V
2	* 5.35	42	Pk	34.6	-18.3	0	58.3	-	-	74	-15.7	342	102	V
3	* 5.35	27.5	RMS	34.6	-18.3	.31	44.11	54	-9.89	-	-	342	102	V
4	* 5.354	29.22	RMS	34.6	-18.3	.31	45.83	54	-8.17	-	-	342	102	V

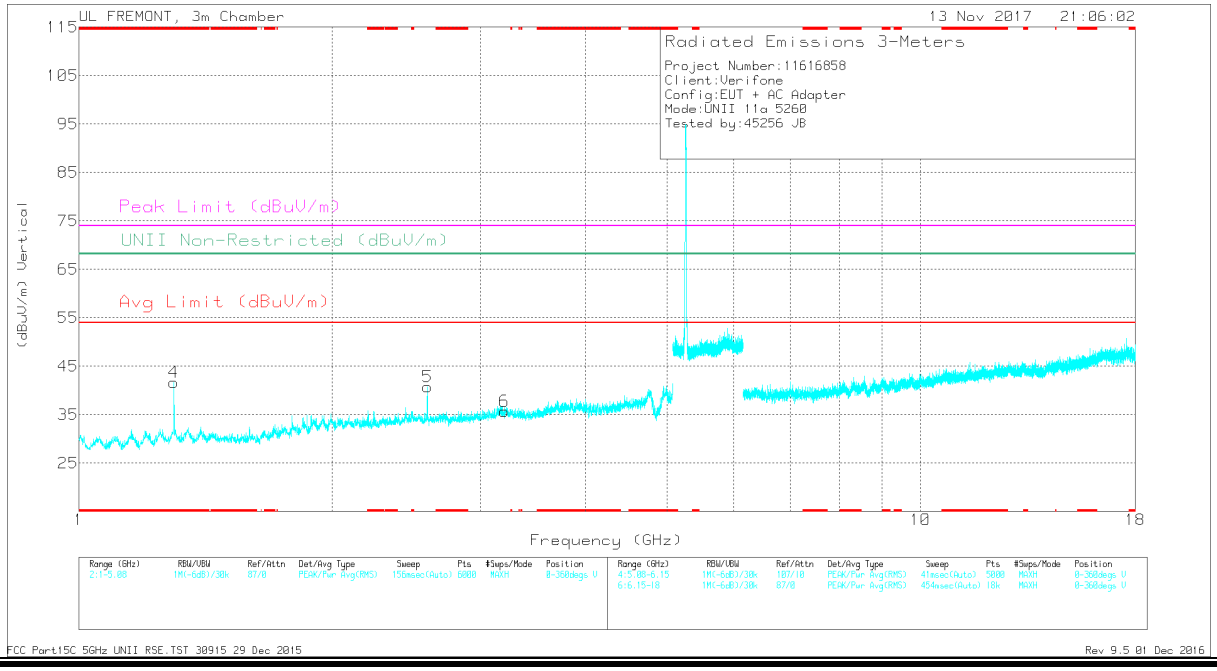
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



Radiated Emissions

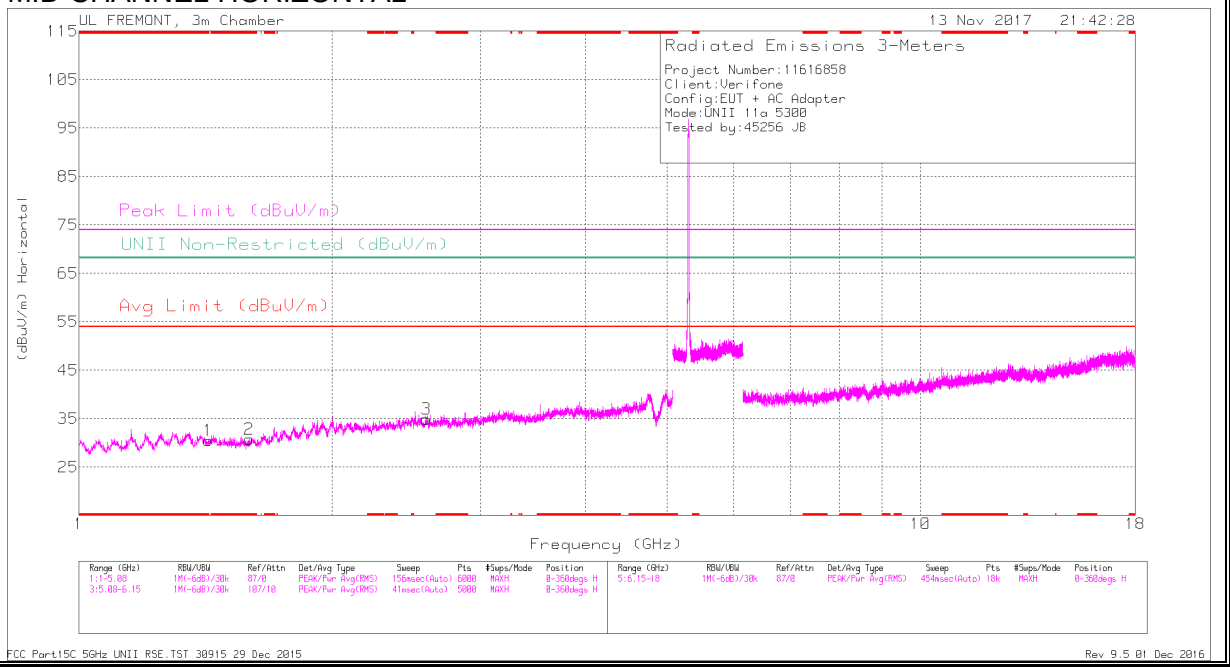
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.296	52.06	PK-U	29.1	-31.9	0	49.26	-	-	74	-24.74	-	-	268	287	H
	* 1.297	31.14	ADR	29.1	-31.9	.31	28.65	54	-25.35	-	-	-	-	268	287	H
4	* 1.296	53.6	PK-U	29.1	-31.9	0	50.8	-	-	74	-23.2	-	-	202	258	V
	* 1.296	31.76	ADR	29.1	-31.9	.31	29.27	54	-24.73	-	-	-	-	202	258	V
5	2.594	53.01	PK-U	32.3	-30.5	0	54.81	-	-	-	-	68.2	-13.39	43	300	V
2	2.599	39.85	PK-U	32.2	-30.5	0	41.55	-	-	-	-	68.2	-26.65	333	140	H
6	3.201	38.97	PK-U	33.4	-29.7	0	42.67	-	-	-	-	68.2	-25.53	310	321	V
3	3.206	38.93	PK-U	33.4	-29.7	0	42.63	-	-	-	-	68.2	-25.57	67	127	H

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

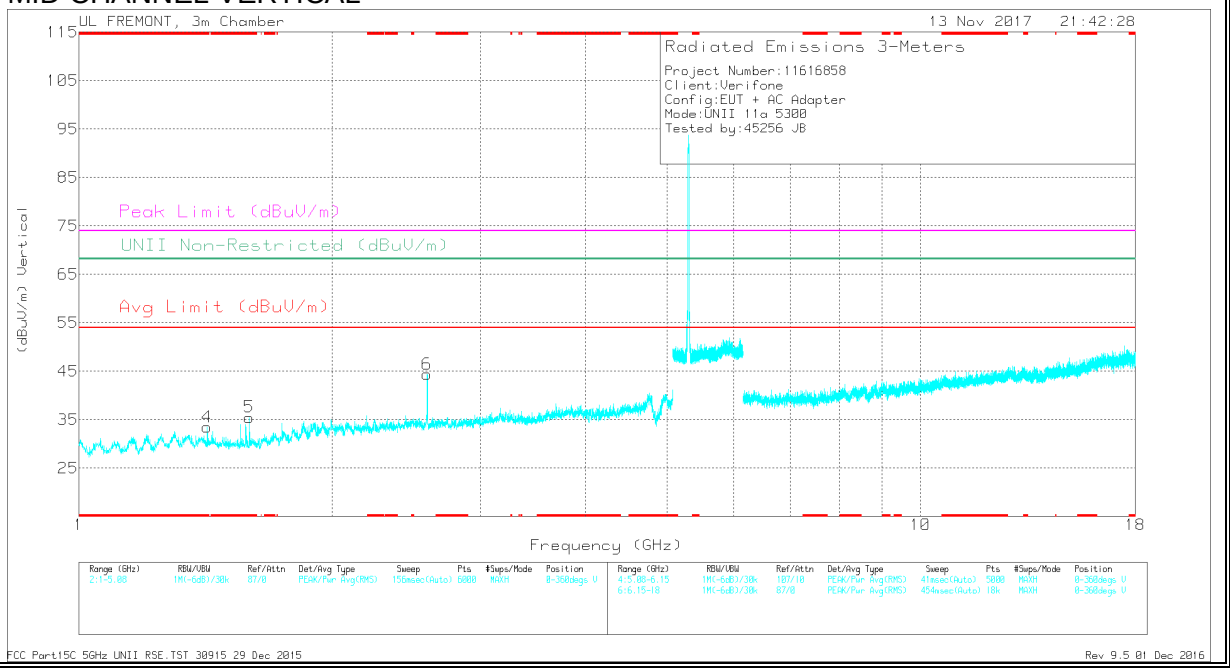
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

MID CHANNEL HORIZONTAL



MID CHANNEL VERTICAL



Radiated Emissions

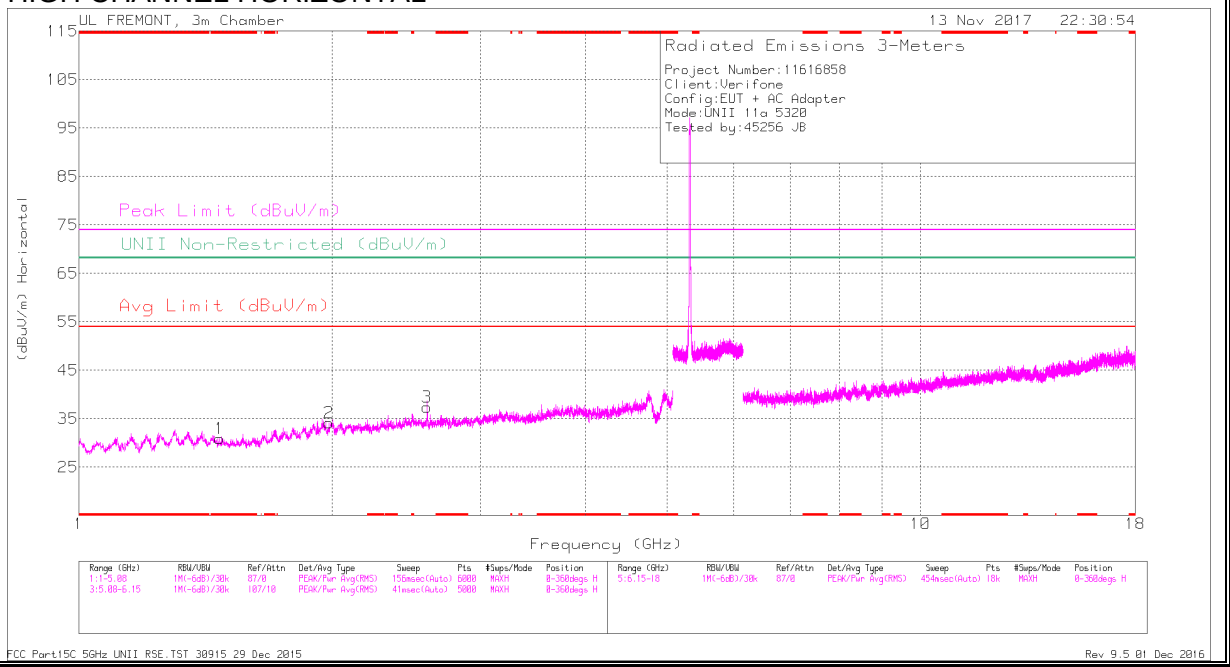
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.423	41.17	PK-U	28.6	-31.8	0	37.97	-	-	74	-36.03	-	-	141	262	H
	* 1.425	28.88	ADR	28.6	-31.7	.31	26.09	54	-27.91	-	-	-	-	141	262	H
2	* 1.593	42	PK-U	28.3	-31.2	0	39.1	-	-	74	-34.9	-	-	27	231	H
	* 1.592	28.24	ADR	28.3	-31.3	.31	25.55	54	-28.45	-	-	-	-	27	231	H
4	* 1.419	47.17	PK-U	28.7	-31.9	0	43.97	-	-	74	-30.03	-	-	347	206	V
	* 1.422	28.46	ADR	28.7	-31.8	.31	25.67	54	-28.33	-	-	-	-	347	206	V
5	* 1.593	50.64	PK-U	28.3	-31.2	0	47.74	-	-	74	-26.26	-	-	333	266	V
	* 1.595	30.06	ADR	28.3	-31.1	.31	27.57	54	-26.43	-	-	-	-	333	266	V
3	2.589	43.04	PK-U	32.3	-30.7	0	44.64	-	-	-	-	68.2	-23.56	280	360	H
6	2.592	50.36	PK-U	32.3	-30.6	0	52.06	-	-	-	-	68.2	-16.14	358	246	V

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

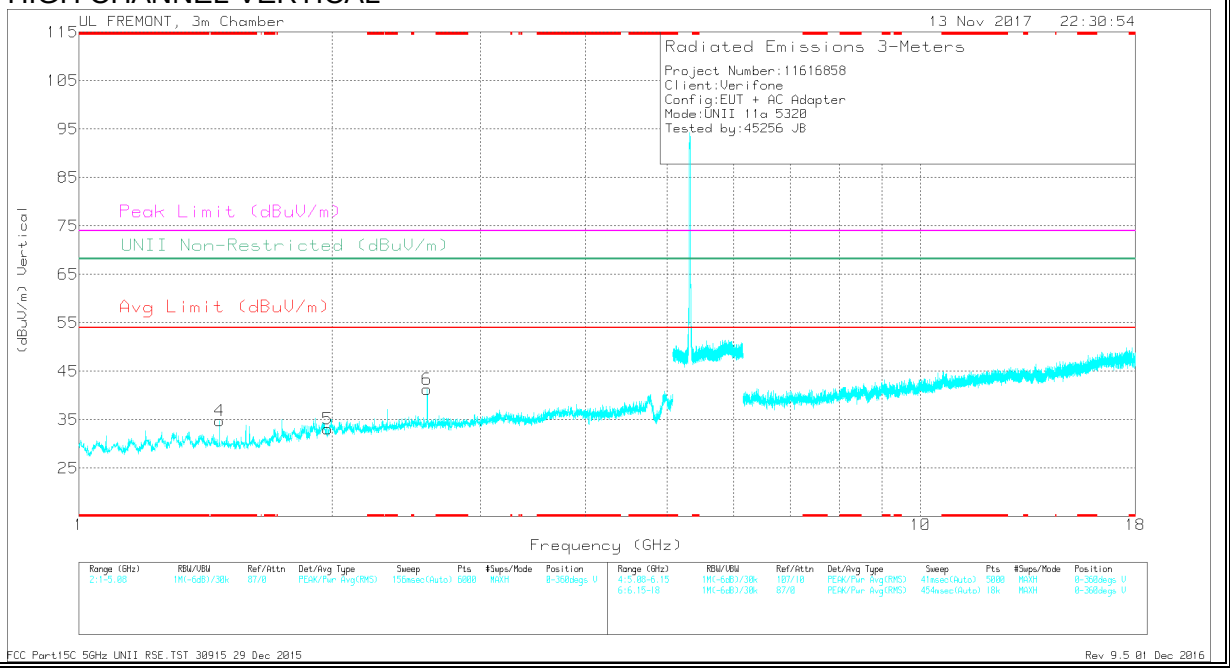
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.472	41.35	PK-U	28.3	-32.1	0	37.55	-	-	74	-36.45	-	-	73	159	H
	* 1.47	29.23	ADR	28.4	-32.1	.31	25.84	54	-28.16	-	-	-	-	73	159	H
4	* 1.468	46.89	PK-U	28.4	-32.1	0	43.19	-	-	74	-30.81	-	-	312	308	V
	* 1.469	29.22	ADR	28.4	-32.1	.31	25.83	54	-28.17	-	-	-	-	312	308	V
5	1.976	43.08	PK-U	31.1	-31.4	0	42.78	-	-	-	-	68.2	-25.42	206	249	V
2	1.985	40.96	PK-U	31.2	-31.6	0	40.56	-	-	-	-	68.2	-27.64	16	214	H
3	2.592	52.22	PK-U	32.3	-30.6	0	53.92	-	-	-	-	68.2	-14.28	25	151	V
6	2.594	45.57	PK-U	32.3	-30.5	0	47.37	-	-	-	-	68.2	-20.83	57	264	H

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

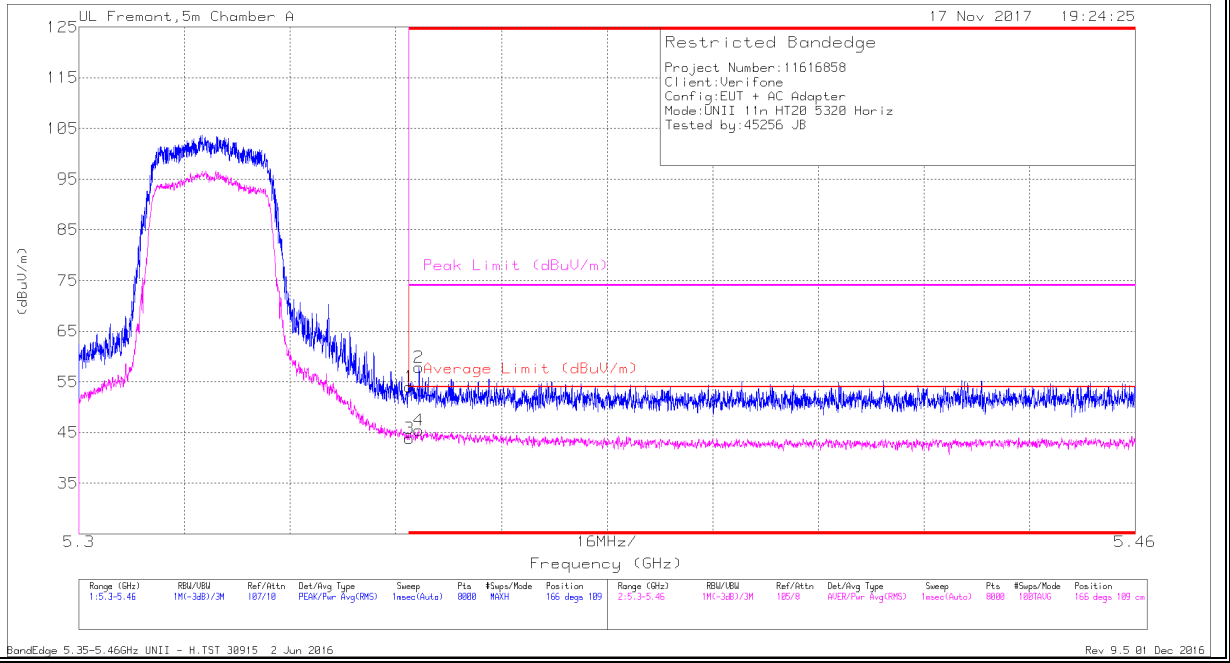
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

8.3.2 802.11n HT20 MODE IN THE 5.3GHz BAND

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HIGH CHANNEL HORIZONTAL

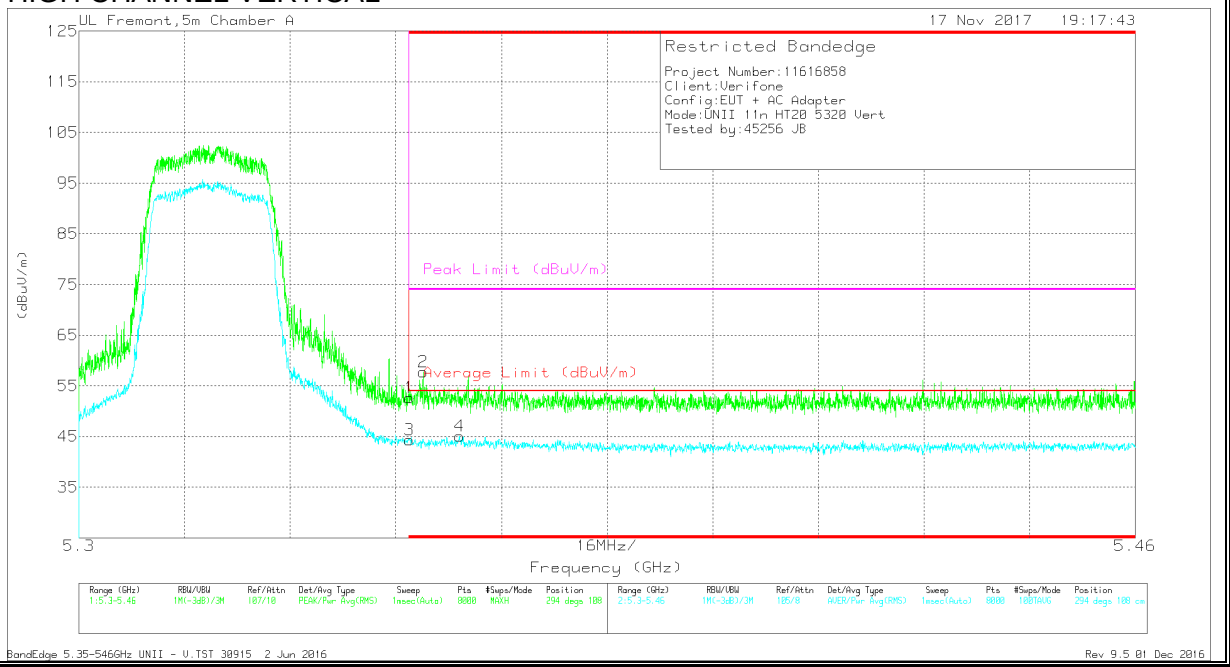


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	37.75	Pk	34.6	-18.3	0	54.05	-	-	74	-19.95	166	109	H
2	* 5.352	41.58	Pk	34.6	-18.3	0	57.88	-	-	74	-16.12	166	109	H
3	* 5.35	27.25	RMS	34.6	-18.3	.32	43.87	54	-10.13	-	-	166	109	H
4	* 5.351	28.81	RMS	34.6	-18.3	.32	45.43	54	-8.57	-	-	166	109	H

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

HIGH CHANNEL VERTICAL



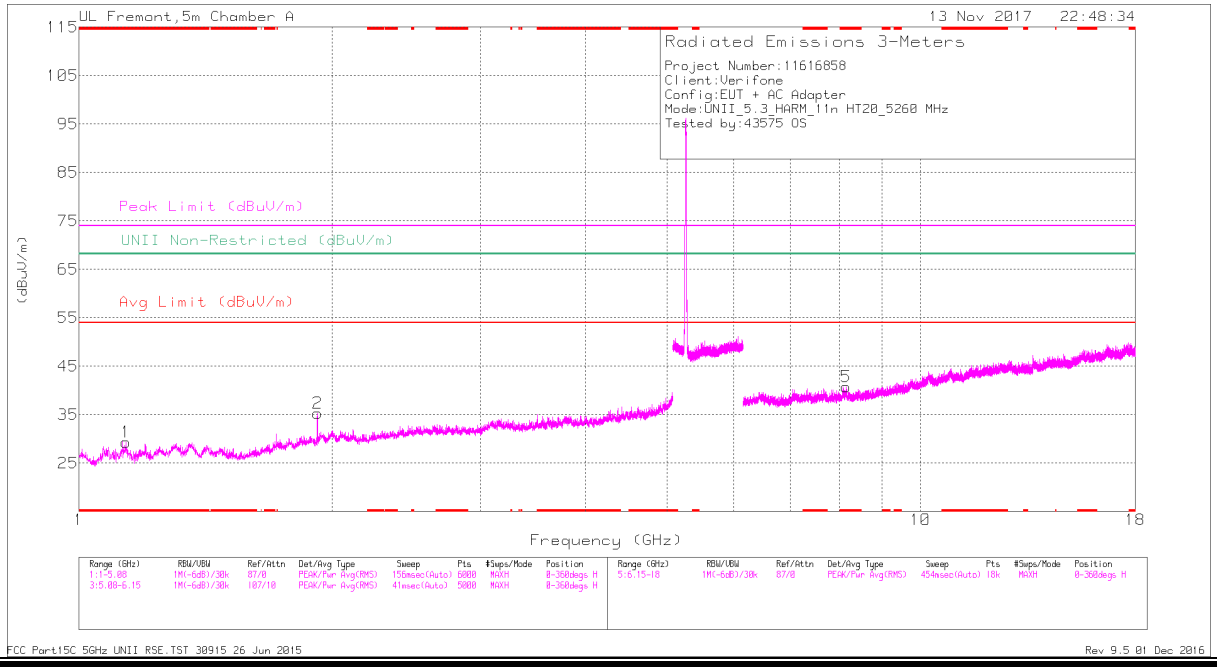
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	36.39	Pk	34.6	-18.3	0	52.69	-	-	74	-21.31	294	108	V
2	* 5.352	41.48	Pk	34.6	-18.3	0	57.78	-	-	74	-16.22	294	108	V
3	* 5.35	27.76	RMS	34.6	-18.3	.32	44.38	54	-9.62	-	-	294	108	V
4	* 5.358	28.45	RMS	34.6	-18.3	.32	45.07	54	-8.93	-	-	294	108	V

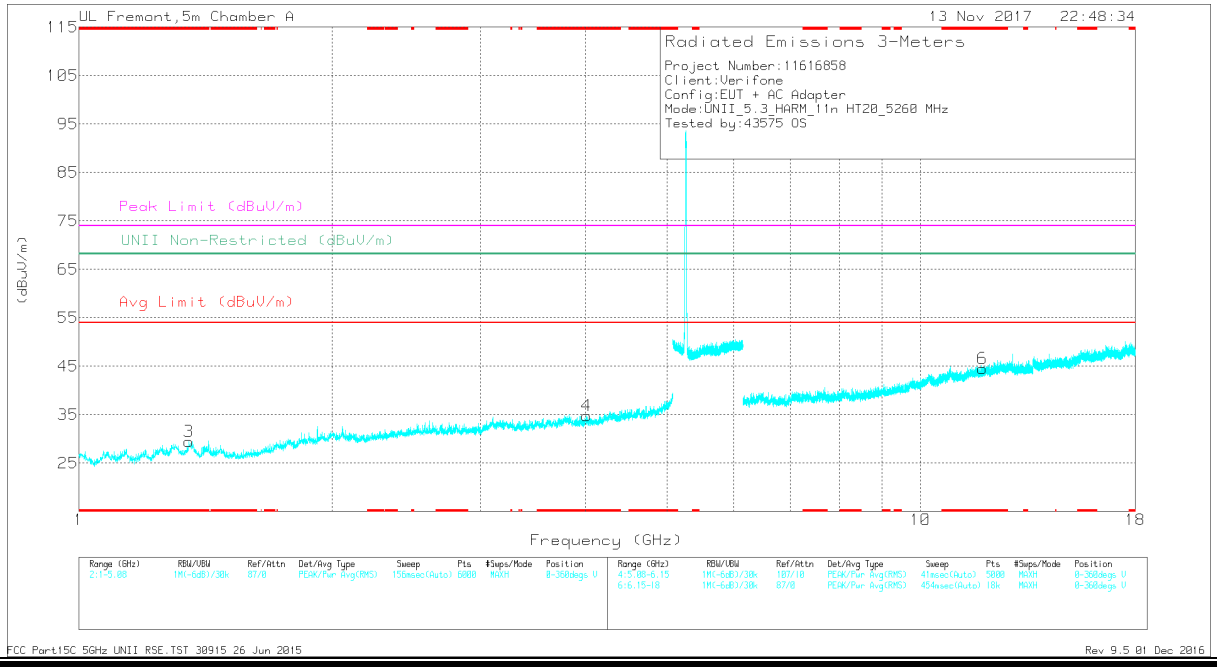
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



Radiated Emissions

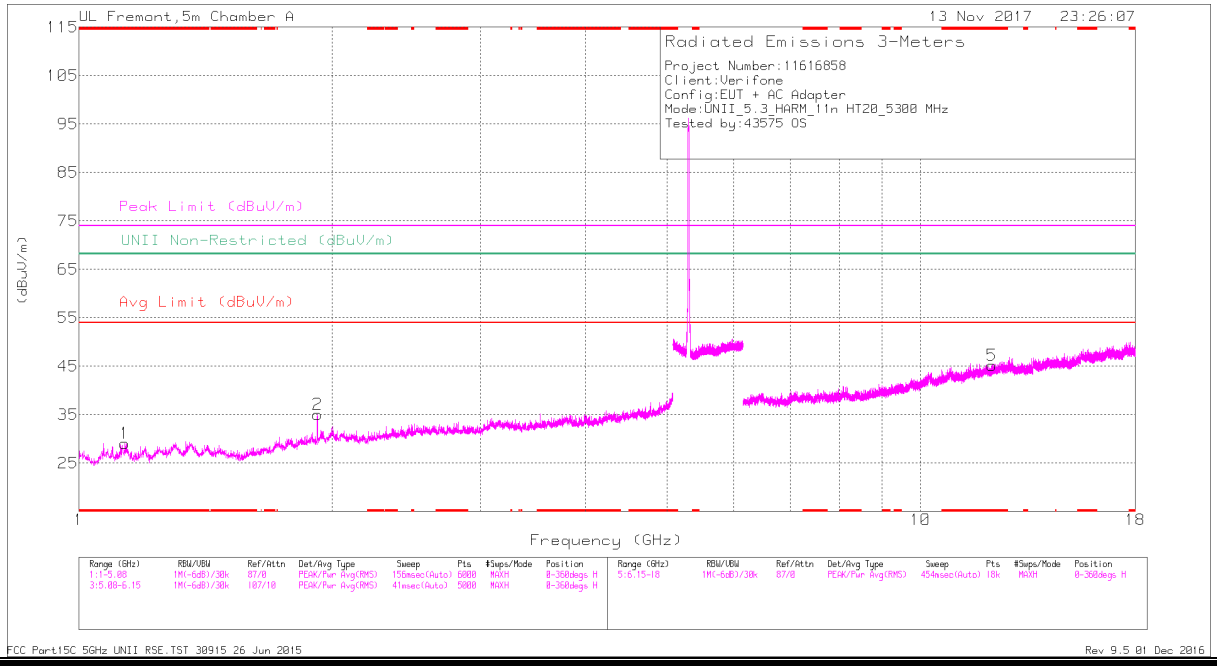
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.139	42.13	PK-U	27.7	-33.2	0	36.63	-	-	74	-37.37	-	-	141	228	H
	* 1.137	31.85	ADR	27.7	-33.2	.32	26.67	54	-27.33	-	-	-	-	141	228	H
3	* 1.352	39.02	PK-U	29.5	-32.9	0	35.62	-	-	74	-38.38	-	-	287	125	V
	* 1.353	27.43	ADR	29.5	-32.9	.32	24.35	54	-29.65	-	-	-	-	287	125	V
4	* 4.008	37.12	PK-U	33.4	-28.7	0	41.82	-	-	74	-32.18	-	-	116	216	V
	* 4.011	24.68	ADR	33.4	-28.7	.32	29.7	54	-24.3	-	-	-	-	116	216	V
5	* 8.154	33.18	PK-U	35.8	-22.3	0	46.68	-	-	74	-27.32	-	-	116	237	H
	* 8.155	21.3	ADR	35.8	-22.3	.32	35.12	54	-18.88	-	-	-	-	116	237	H
6	* 11.85	32.28	PK-U	38.8	-19.6	0	51.48	-	-	74	-22.52	-	-	63	187	V
	* 11.85	19.93	ADR	38.8	-19.6	.32	39.45	54	-14.55	-	-	-	-	63	187	V
2	1.92	42.07	PK-U	31.2	-32.7	0	40.57	-	-	-	-	68.2	-27.63	150	109	H

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

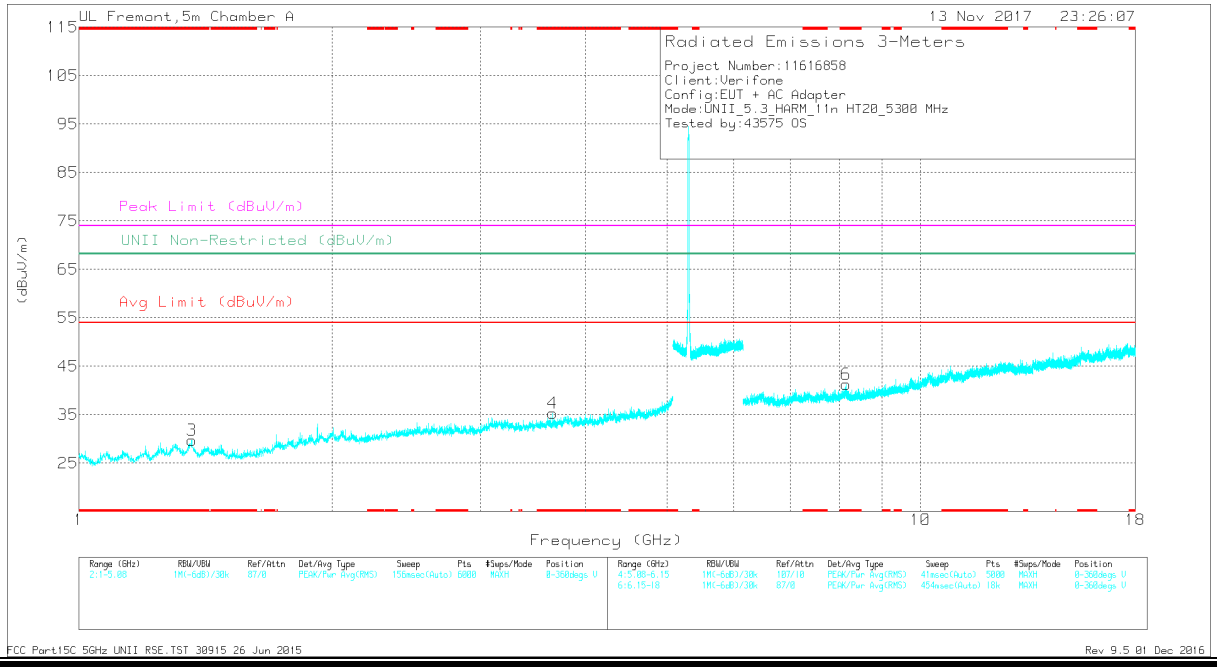
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

MID CHANNEL HORIZONTAL



MID CHANNEL VERTICAL



Radiated Emissions

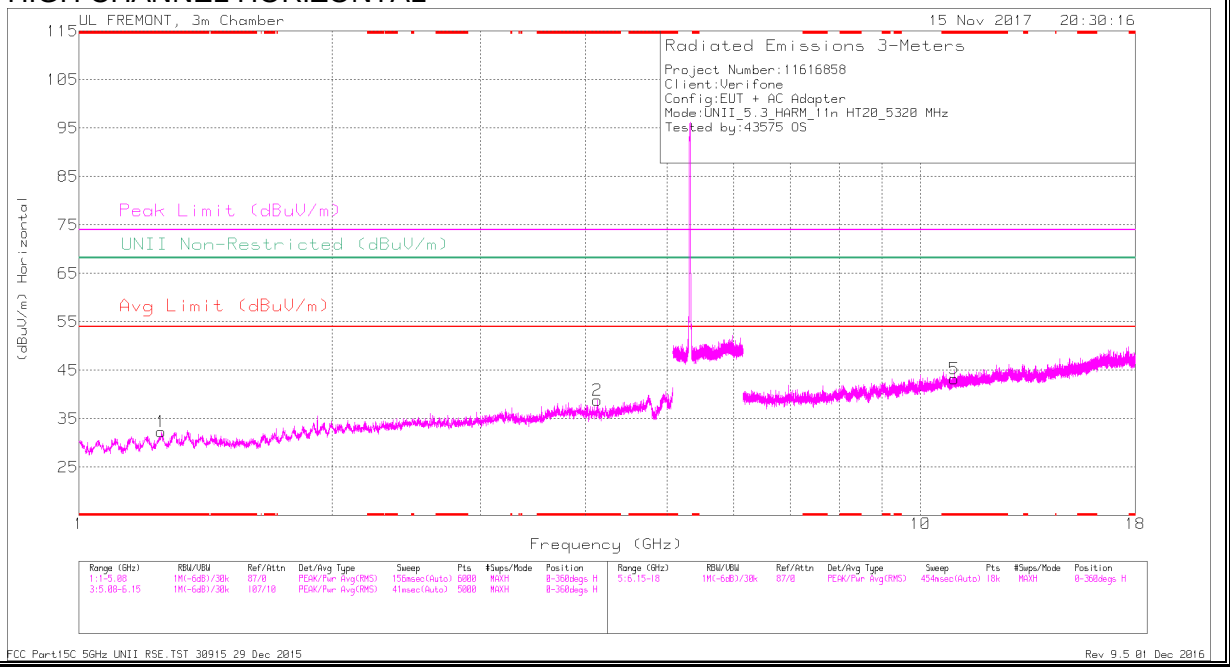
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.134	41.95	PK-U	27.7	-33.3	0	36.35	-	-	74	-37.65	-	-	143	213	H
	* 1.134	30.53	ADR	27.7	-33.3	.32	25.25	54	-28.75	-	-	-	-	143	213	H
3	* 1.362	39.71	PK-U	29.3	-32.8	0	36.21	-	-	74	-37.79	-	-	51	237	V
	* 1.361	27.53	ADR	29.3	-32.8	.32	24.35	54	-29.65	-	-	-	-	51	237	V
4	* 3.653	37.02	PK-U	32.9	-30.2	0	39.72	-	-	74	-34.28	-	-	1	148	V
	* 3.653	25.55	ADR	32.9	-30.2	.32	28.57	54	-25.43	-	-	-	-	1	148	V
5	* 12.168	31.73	PK-U	39	-19.5	0	51.23	-	-	74	-22.77	-	-	165	102	H
	* 12.171	19.86	ADR	39	-19.5	.32	39.68	54	-14.32	-	-	-	-	165	102	H
6	* 8.166	33.24	PK-U	35.8	-22.4	0	46.64	-	-	74	-27.36	-	-	283	124	V
	* 8.163	21.2	ADR	35.8	-22.4	.32	34.92	54	-19.08	-	-	-	-	283	124	V
2	1.92	42.53	PK-U	31.2	-32.7	0	41.03	-	-	-	-	68.2	-27.17	86	102	H

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

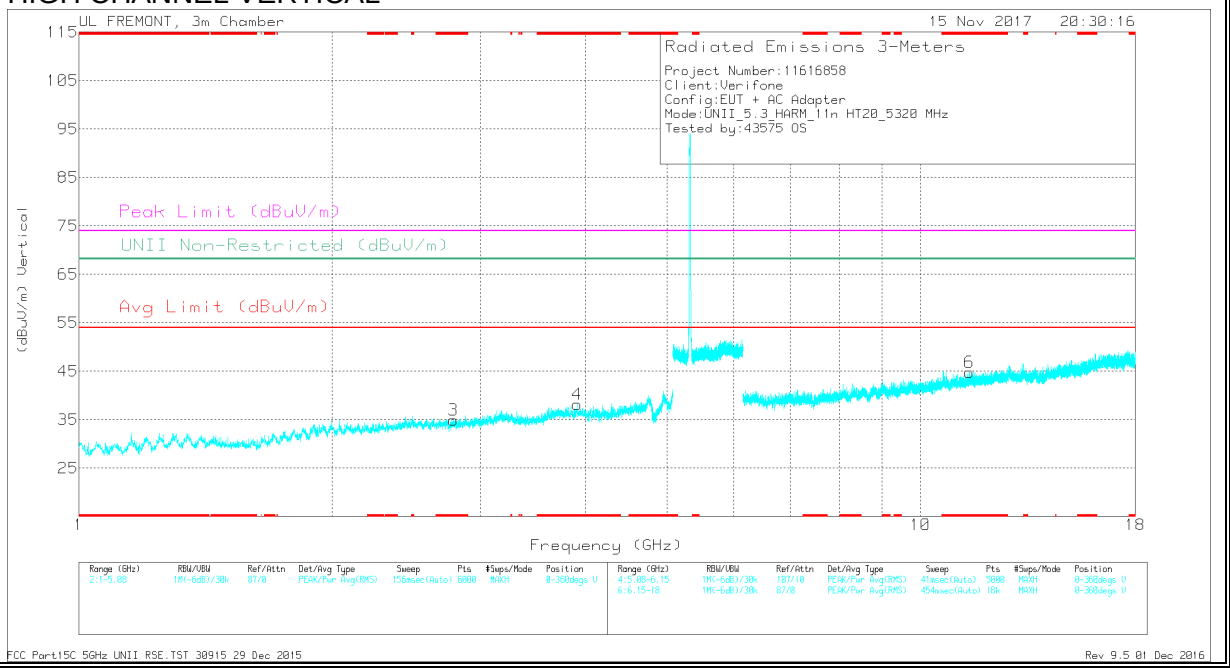
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.251	42.59	PK-U	28.6	-32.4	0	38.79	-	-	74	-35.21	-	-	201	392	H
	* 1.251	30.43	ADR	28.6	-32.4	.32	26.95	54	-27.05	-	-	-	-	201	392	H
2	* 4.133	39.03	PK-U	33.3	-28.8	0	43.53	-	-	74	-30.47	-	-	224	288	H
	* 4.133	27.34	ADR	33.3	-28.8	.32	32.16	54	-21.84	-	-	-	-	224	288	H
3	* 2.787	40.04	PK-U	32.3	-30.5	0	41.84	-	-	74	-32.16	-	-	49	170	V
	* 2.784	27.98	ADR	32.3	-30.5	.32	30.1	54	-23.9	-	-	-	-	49	170	V
4	* 3.909	39.67	PK-U	33.4	-29.1	0	43.97	-	-	74	-30.03	-	-	101	221	V
	* 3.91	27.3	ADR	33.4	-29.1	.32	31.92	54	-22.08	-	-	-	-	101	221	V
5	* 10.972	33.69	PK-U	37.8	-21.6	0	49.89	-	-	74	-24.11	-	-	176	342	H
	* 10.968	20.81	ADR	37.8	-21.7	.32	37.23	54	-16.77	-	-	-	-	176	342	H
6	* 11.43	34.16	PK-U	38.1	-22.1	0	50.16	-	-	74	-23.84	-	-	293	191	V
	* 11.429	21.85	ADR	38.1	-22.1	.32	38.17	54	-15.83	-	-	-	-	293	191	V

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

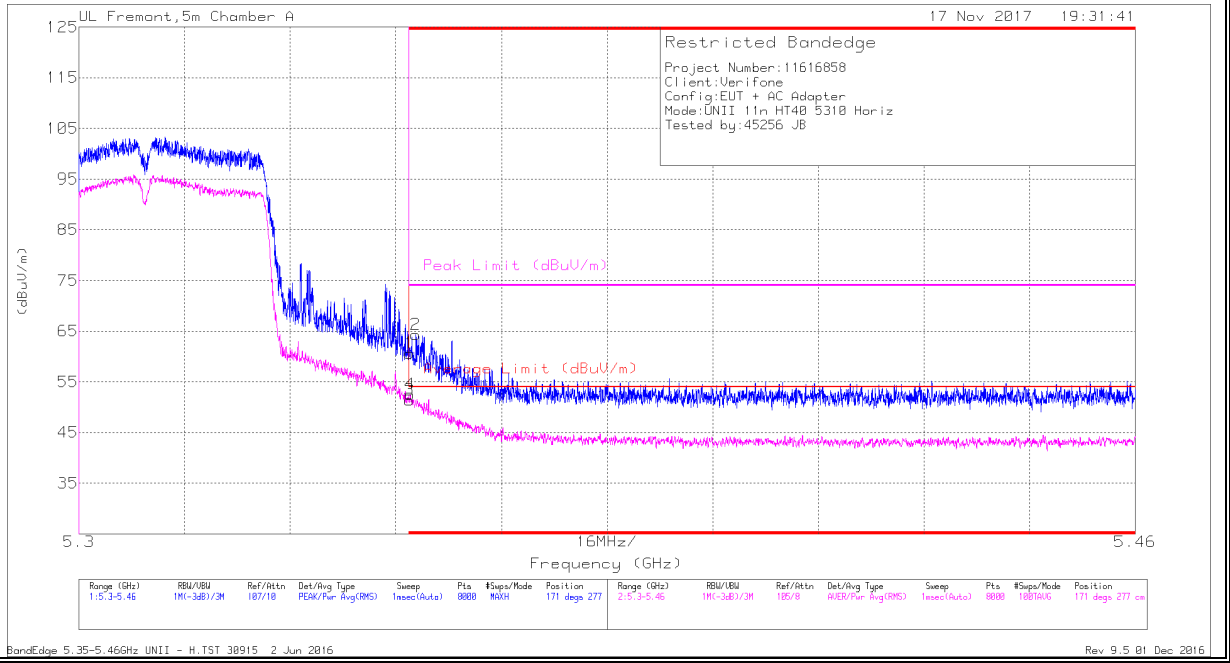
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

8.3.3 802.11n HT40 MODE IN THE 5.3GHz BAND

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HIGH CHANNEL HORIZONTAL

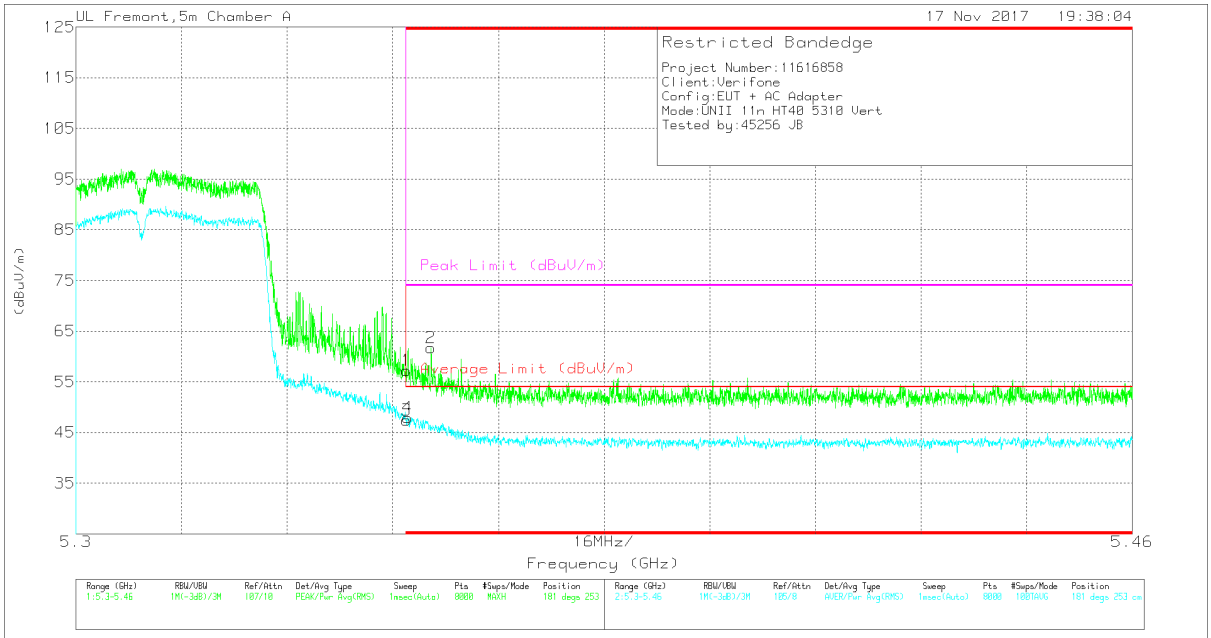


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	44.36	Pk	34.6	-18.3	0	60.66	-	-	74	-13.34	171	277	H
2	* 5.351	48.1	Pk	34.6	-18.4	0	64.3	-	-	74	-9.7	171	277	H
3	* 5.35	34.68	RMS	34.6	-18.3	.44	51.42	54	-2.58	-	-	171	277	H
4	* 5.35	35.75	RMS	34.6	-18.3	.44	52.49	54	-1.51	-	-	171	277	H

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

HIGH CHANNEL VERTICAL



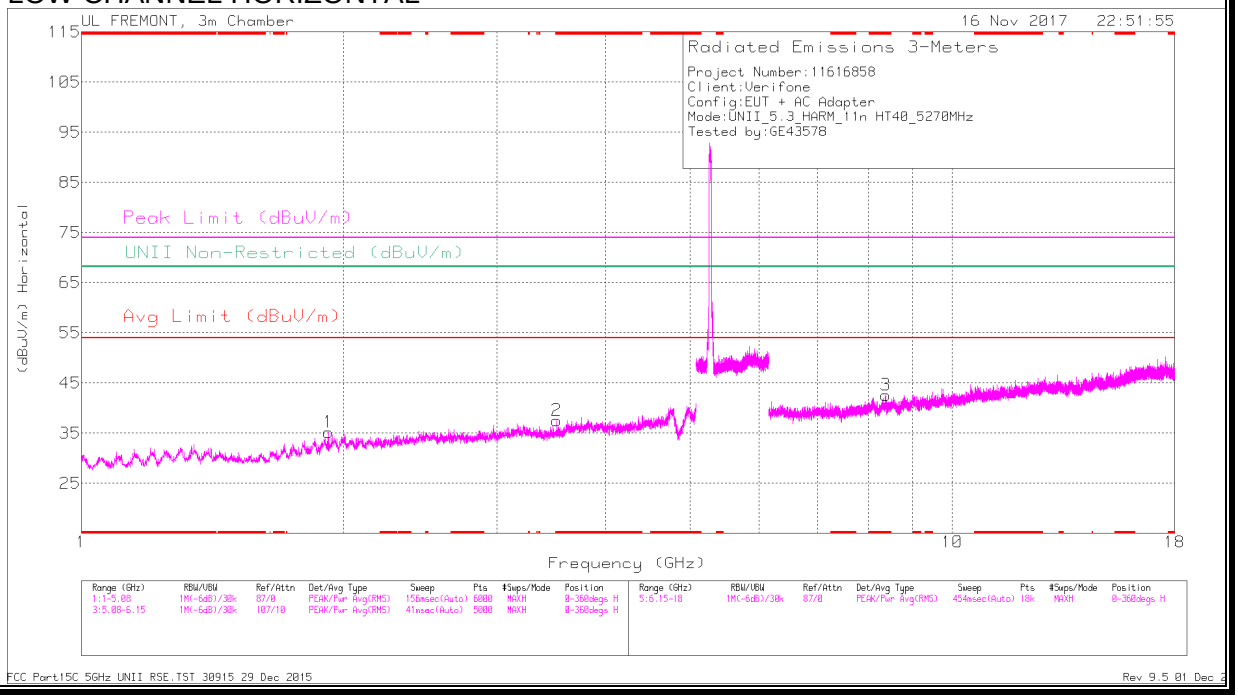
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	40.9	Pk	34.6	-18.3	0	57.2	-	-	74	-16.8	181	253	V
2	* 5.354	45.36	Pk	34.6	-18.3	0	61.66	-	-	74	-12.34	181	253	V
3	* 5.35	30.72	RMS	34.6	-18.3	.44	47.46	54	-6.54	-	-	181	253	V
4	* 5.35	31.23	RMS	34.6	-18.3	.44	47.97	54	-6.03	-	-	181	253	V

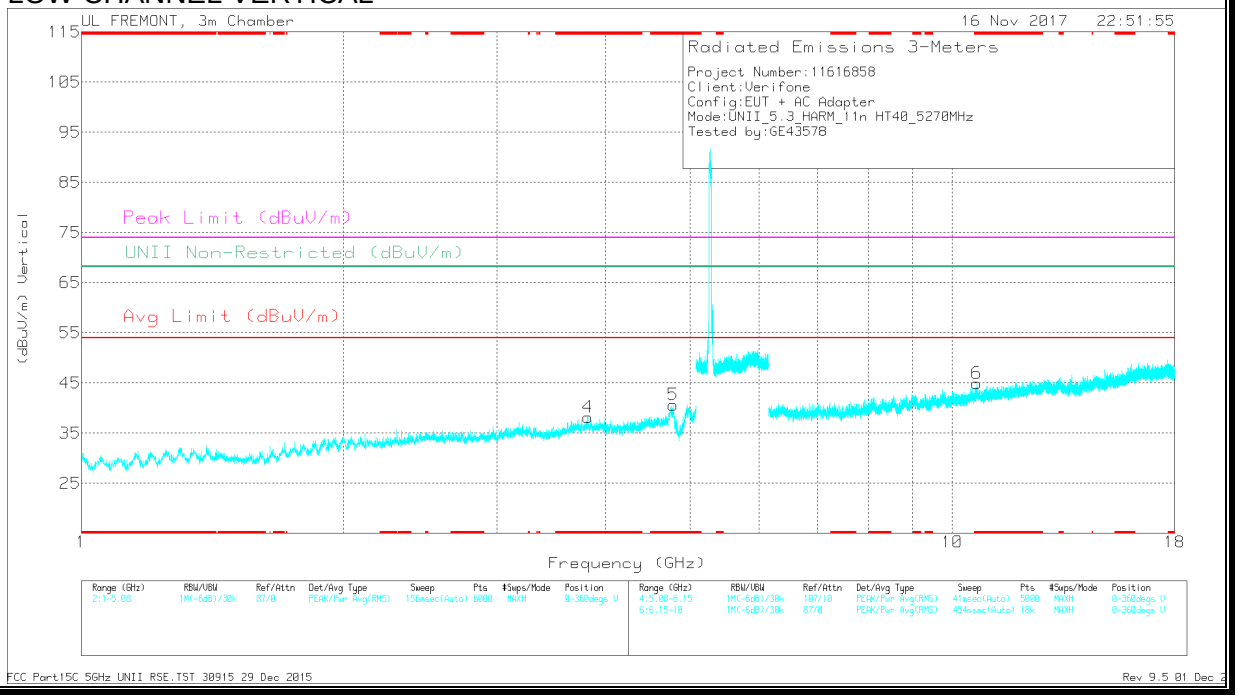
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



Radiated Emissions

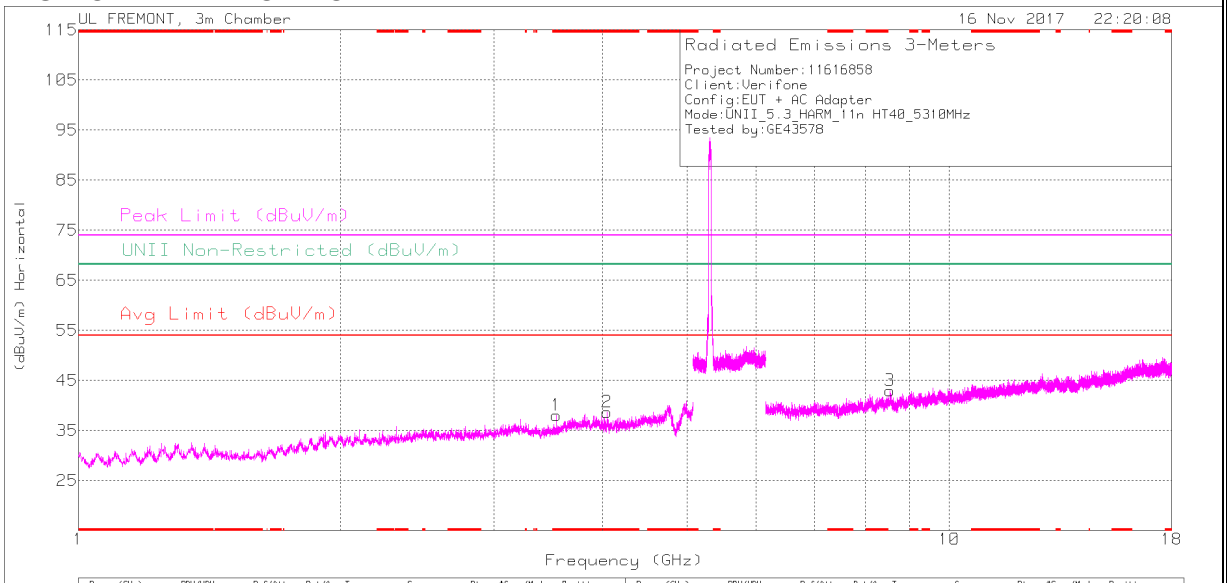
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 3.513	41.58	PK-U	32.9	-30	0	44.48	-	-	74	-29.52	-	-	79	100	H
	* 3.513	32.6	ADR	32.9	-30	.44	35.94	54	-18.06	-	-	-	-	79	100	H
4	* 3.817	40.42	PK-U	33.4	-29.3	0	44.52	-	-	74	-29.48	-	-	146	200	V
	* 3.817	28.04	ADR	33.4	-29.3	.44	32.58	54	-21.42	-	-	-	-	146	200	V
5	* 4.779	41.17	PK-U	34	-28.3	0	46.87	-	-	74	-27.13	-	-	260	100	V
	* 4.778	29	ADR	34	-28.3	.44	35.14	54	-18.86	-	-	-	-	260	100	V
3	* 8.391	35.14	PK-U	35.8	-22.6	0	48.34	-	-	74	-25.66	-	-	211	200	H
	* 8.391	22.9	ADR	35.8	-22.5	.44	36.64	54	-17.36	-	-	-	-	211	200	H
6	* 10.669	34.79	PK-U	37.8	-21.5	0	51.09	-	-	74	-22.91	-	-	162	100	V
	* 10.668	22.12	ADR	37.8	-21.6	.44	38.76	54	-15.24	-	-	-	-	162	100	V
1	1.92	40.95	PK-U	30.9	-30.8	0	41.05	-	-	-	-	68.2	-27.15	235	100	H

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

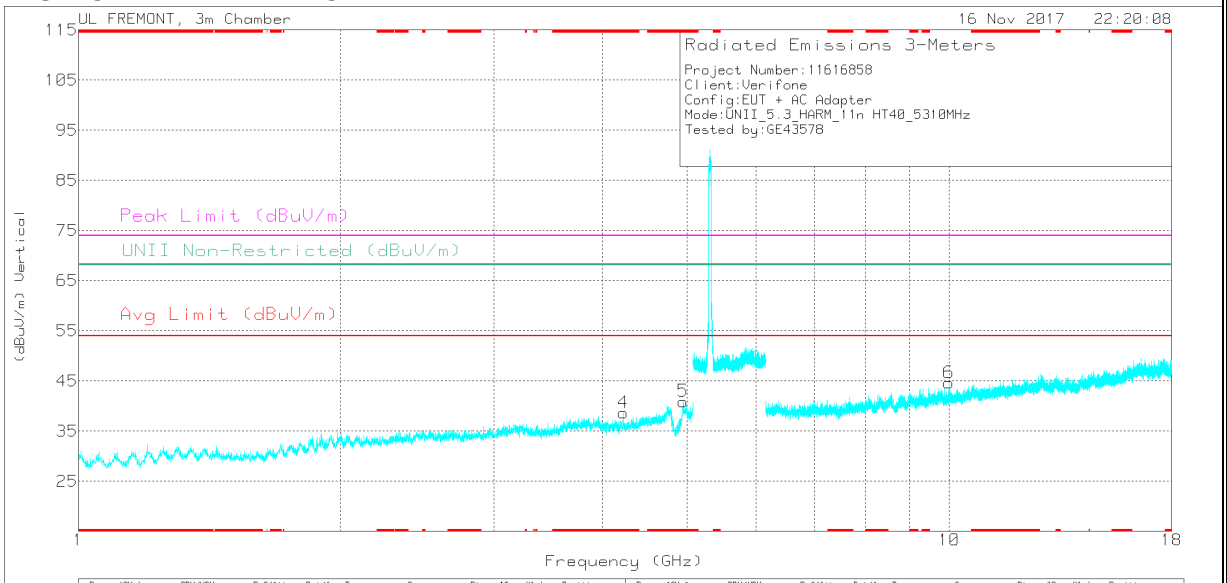
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.54	41.38	PK-U	33	-29.8	0	44.58	-	-	74	-29.42	-	-	80	107	H
	* 3.54	31.48	ADR	33	-29.8	.44	35.12	54	-18.88	-	-	-	-	80	107	H
2	* 4.049	39.69	PK-U	33.4	-29.1	0	43.99	-	-	74	-30.01	-	-	164	100	H
	* 4.049	27.28	ADR	33.4	-29.1	.44	32.02	54	-21.98	-	-	-	-	164	100	H
4	* 4.225	40.01	PK-U	33.3	-29.3	0	44.01	-	-	74	-29.99	-	-	358	100	V
	* 4.225	27.7	ADR	33.3	-29.3	.44	32.14	54	-21.86	-	-	-	-	358	100	V
5	* 4.943	39.26	PK-U	34.1	-27.5	0	45.86	-	-	74	-28.14	-	-	310	200	V
	* 4.942	27.75	ADR	34.1	-27.5	.44	34.79	54	-19.21	-	-	-	-	310	200	V
3	8.542	35.51	PK-U	35.8	-22.8	0	48.51	-	-	-	-	68.2	-19.69	225	100	H
6	9.988	34.11	PK-U	37	-21.3	0	49.81	-	-	-	-	68.2	-18.39	180	100	V

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

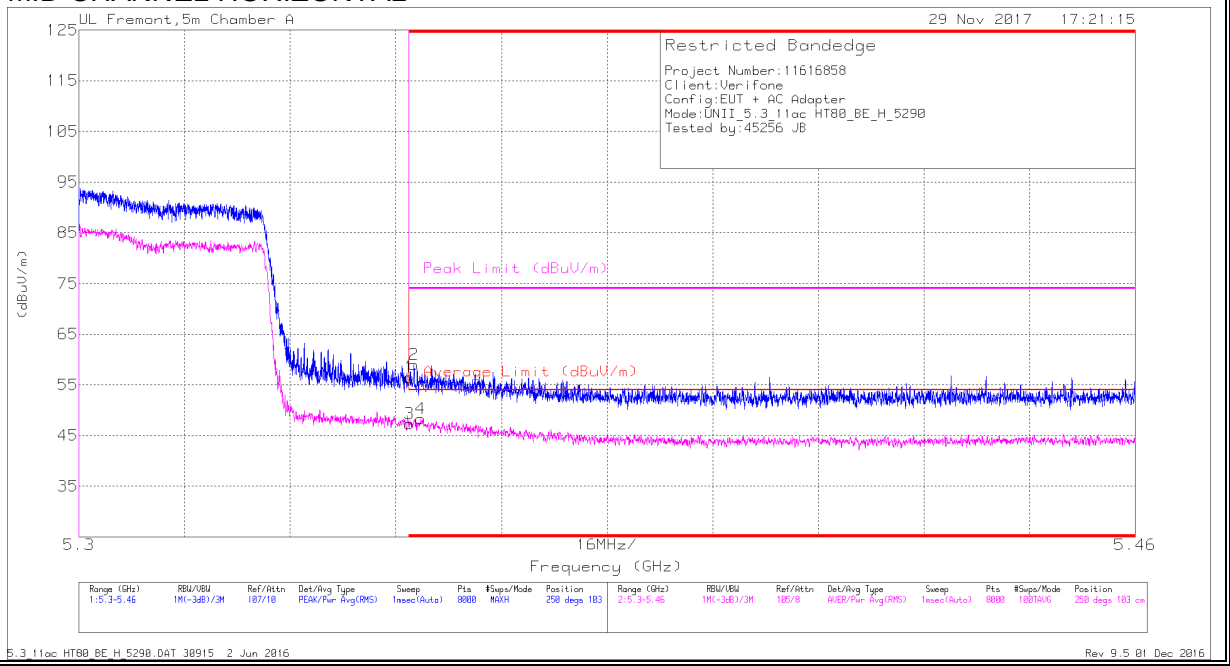
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

8.3.4 802.11ac VHT80 MODE IN THE 5.3GHz BAND

AUTHORIZED BANDEDGE (MID CHANNEL)

MID CHANNEL HORIZONTAL

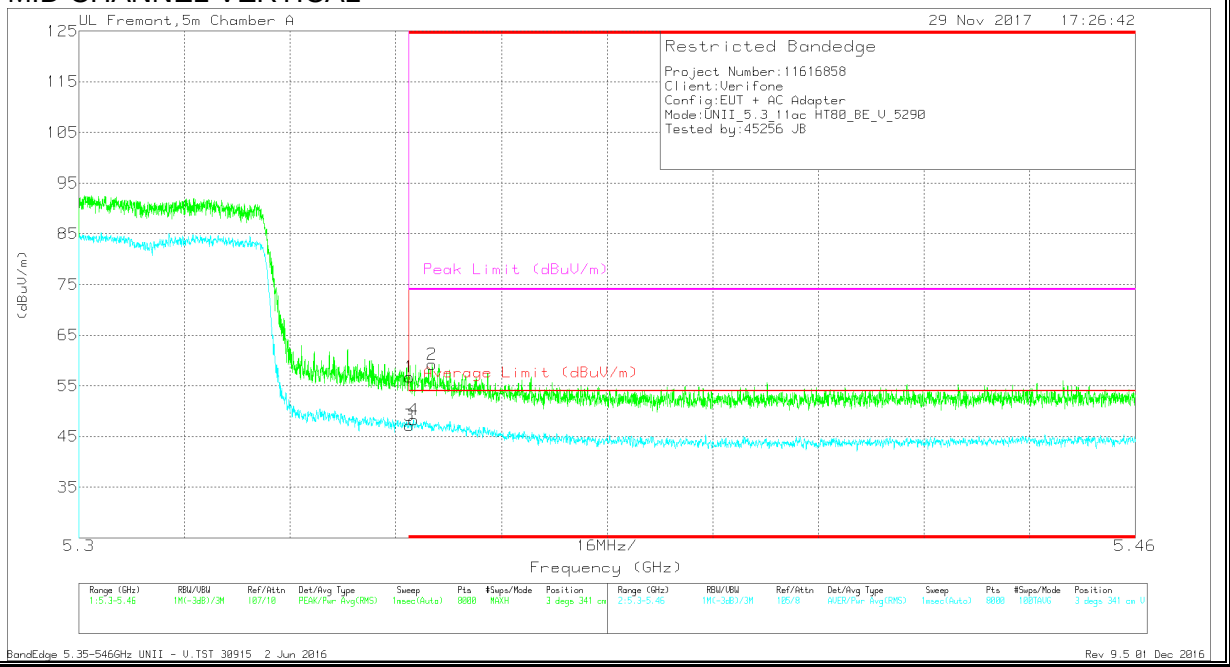


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	40.24	Pk	34.6	-18.3	0	56.54	-	-	74	-17.46	250	103	H
2	* 5.351	42.64	Pk	34.6	-18.3	0	58.94	-	-	74	-15.06	250	103	H
3	* 5.35	29.75	RMS	34.6	-18.3	1.28	47.33	54	-6.67	-	-	250	103	H
4	* 5.352	30.69	RMS	34.6	-18.3	1.28	48.27	54	-5.73	-	-	250	103	H

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

MID CHANNEL VERTICAL



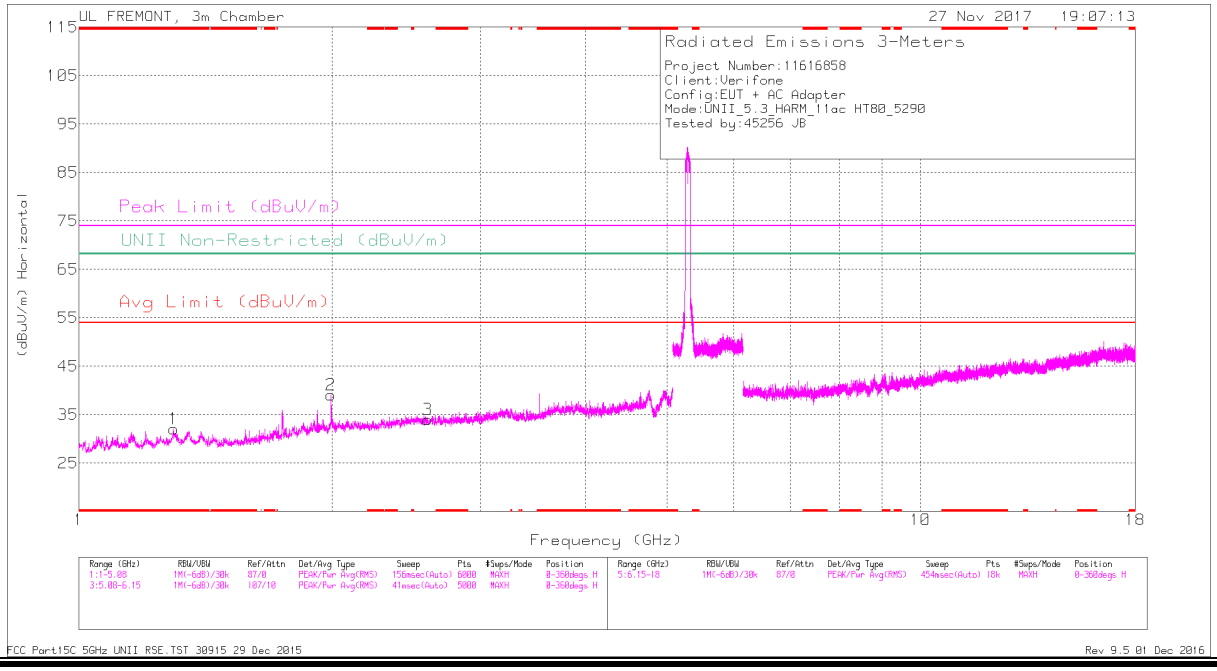
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	40.49	Pk	34.6	-18.3	0	56.79	-	-	74	-17.21	3	341	V
2	* 5.353	42.96	Pk	34.6	-18.3	0	59.26	-	-	74	-14.74	3	341	V
3	* 5.35	29.57	RMS	34.6	-18.3	1.28	47.15	54	-6.85	-	-	3	341	V
4	* 5.351	30.68	RMS	34.6	-18.3	1.28	48.26	54	-5.74	-	-	3	341	V

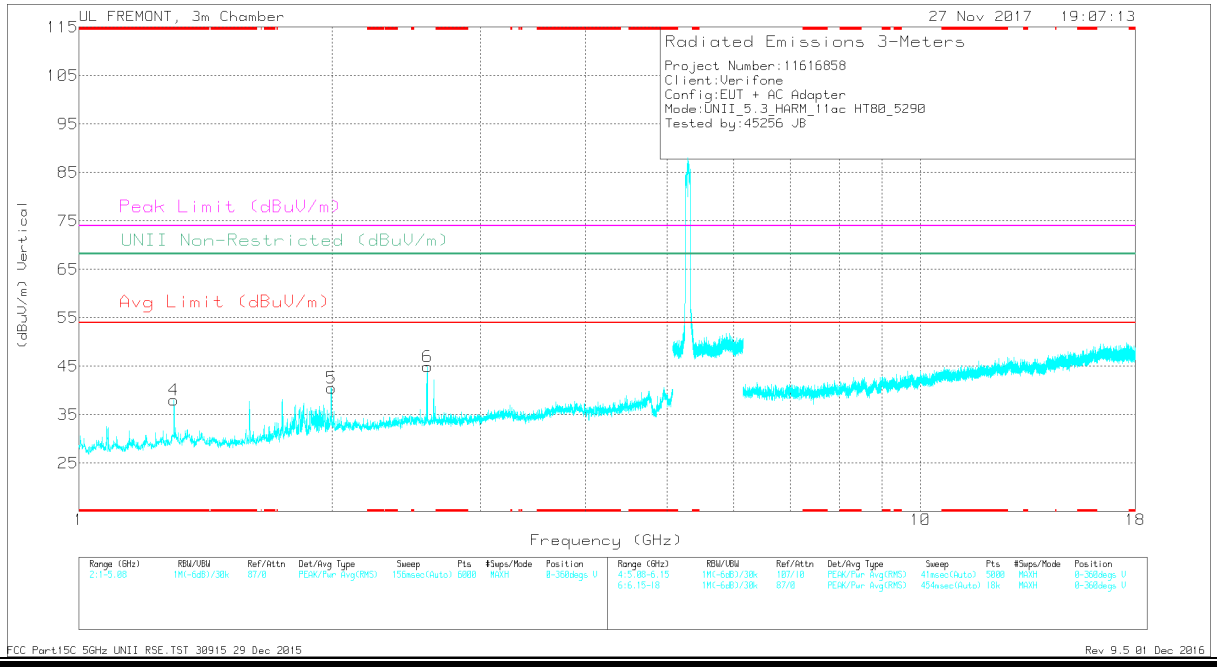
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

MID CHANNEL HORIZONTAL



MID CHANNEL VERTICAL



Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.297	50.27	PK-U	29.1	-31.9	0	47.47	-	-	74	-26.53	-	-	44	347	H
	* 1.297	30.18	ADR	29.1	-31.9	1.28	28.66	54	-25.34	-	-	-	-	44	347	H
4	* 1.295	52.58	PK-U	29.1	-31.9	0	49.78	-	-	74	-24.22	-	-	315	220	V
	* 1.295	30.88	ADR	29.1	-31.9	1.28	29.36	54	-24.64	-	-	-	-	315	220	V
2	1.993	48.67	PK-U	31.2	-31.6	0	48.27	-	-	-	-	68.2	-19.93	80	225	H
5	1.994	49.86	PK-U	31.2	-31.6	0	49.46	-	-	-	-	68.2	-18.74	240	249	V
6	2.594	44.6	PK-U	32.3	-30.5	0	46.4	-	-	-	-	68.2	-21.8	278	354	V
3	2.594	45.95	PK-U	32.3	-30.6	0	47.65	-	-	-	-	68.2	-20.55	152	254	H

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

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

8.4 5.6 GHz TEST RESULTS

LIMITS

§15.407 General technical requirements

(b) Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

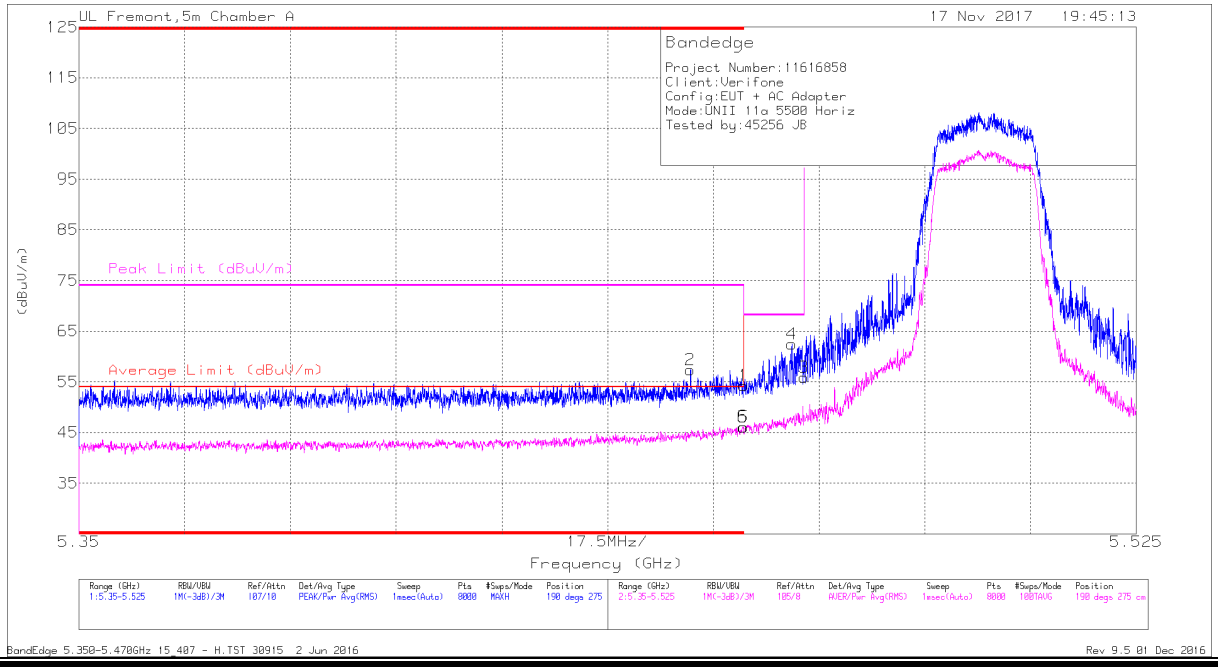
(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(7) The provisions of §15.205 apply to intentional radiators operating under this section.

8.4.1 802.11a MODE IN THE 5.6GHz BAND

BANDEDGE (LOW CHANNEL)

LOW CHANNEL HORIZONTAL

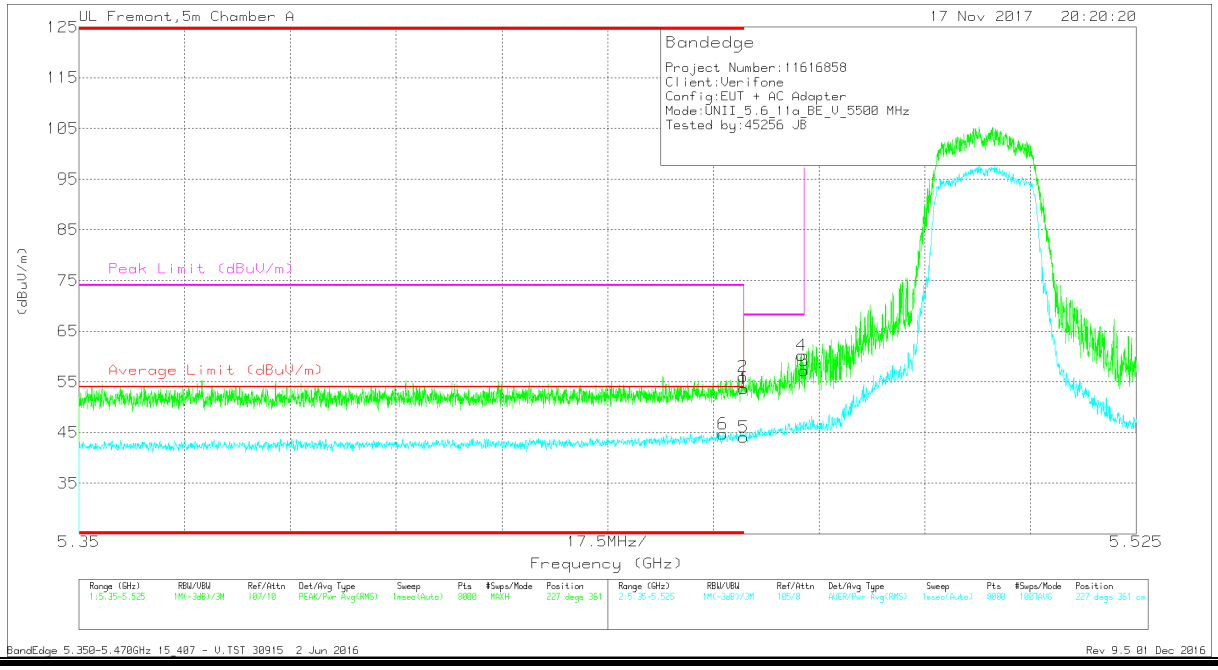


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.46	38.02	Pk	34.7	-18.4	0	54.32	-	-	74	-19.68	190	275	H
2	* 5.451	40.93	Pk	34.7	-18.3	0	57.33	-	-	74	-16.67	190	275	H
5	* 5.46	29.41	RMS	34.7	-18.4	.31	46.02	54	-7.98	-	-	190	275	H
6	* 5.46	29.52	RMS	34.7	-18.4	.31	46.13	54	-7.87	-	-	190	275	H
4	5.468	45.82	Pk	34.8	-18.2	0	62.42	-	-	68.2	-5.78	190	275	H
3	5.47	39.33	Pk	34.8	-18.2	0	55.93	-	-	68.2	-12.27	190	275	H

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

LOW CHANNEL VERTICAL



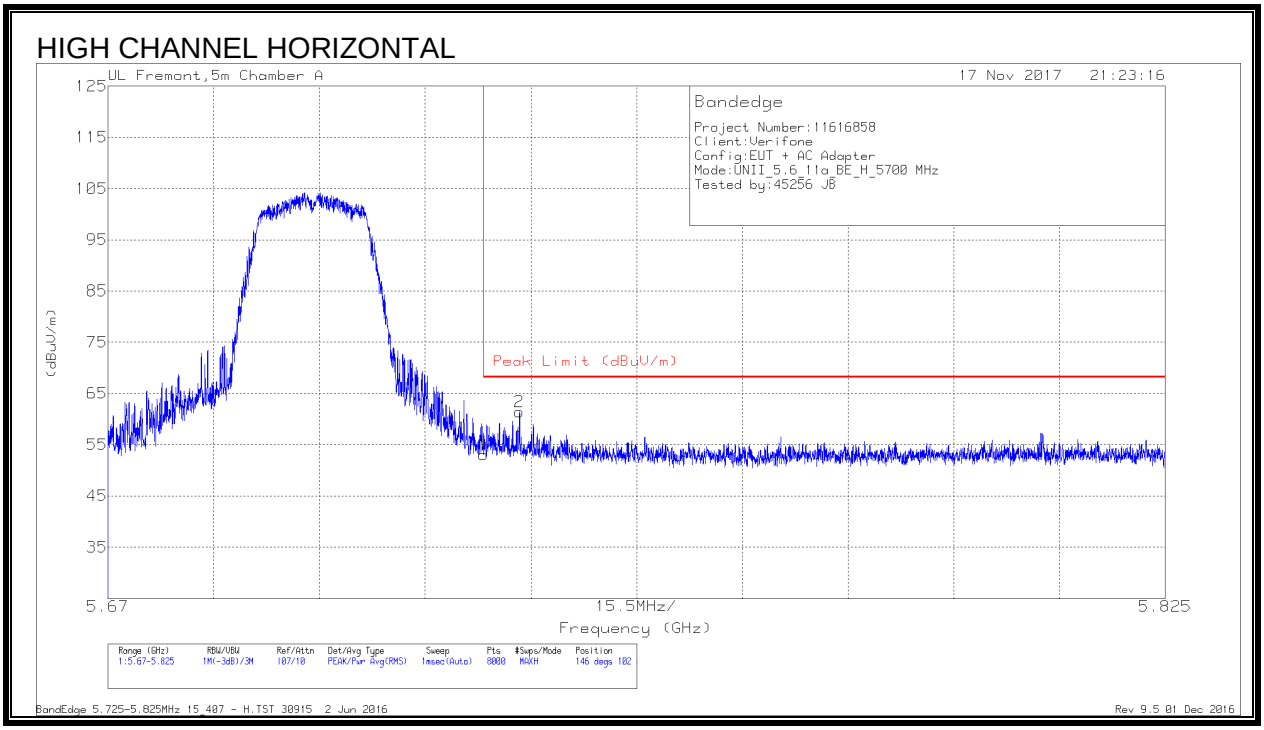
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.46	37.34	Pk	34.7	-18.4	0	53.64	-	-	74	-20.36	227	361	V
2	* 5.46	39.74	Pk	34.7	-18.4	0	56.04	-	-	74	-17.96	227	361	V
5	* 5.46	27.81	RMS	34.7	-18.4	.31	44.42	54	-9.58	-	-	227	361	V
6	* 5.457	28.36	RMS	34.7	-18.3	.31	45.07	54	-8.93	-	-	227	361	V
3	5.47	40.63	Pk	34.8	-18.2	0	57.23	-	-	68.2	-10.97	227	361	V
4	5.47	43.68	Pk	34.8	-18.2	0	60.28	-	-	68.2	-7.92	227	361	V

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

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HIGH CHANNEL HORIZONTAL

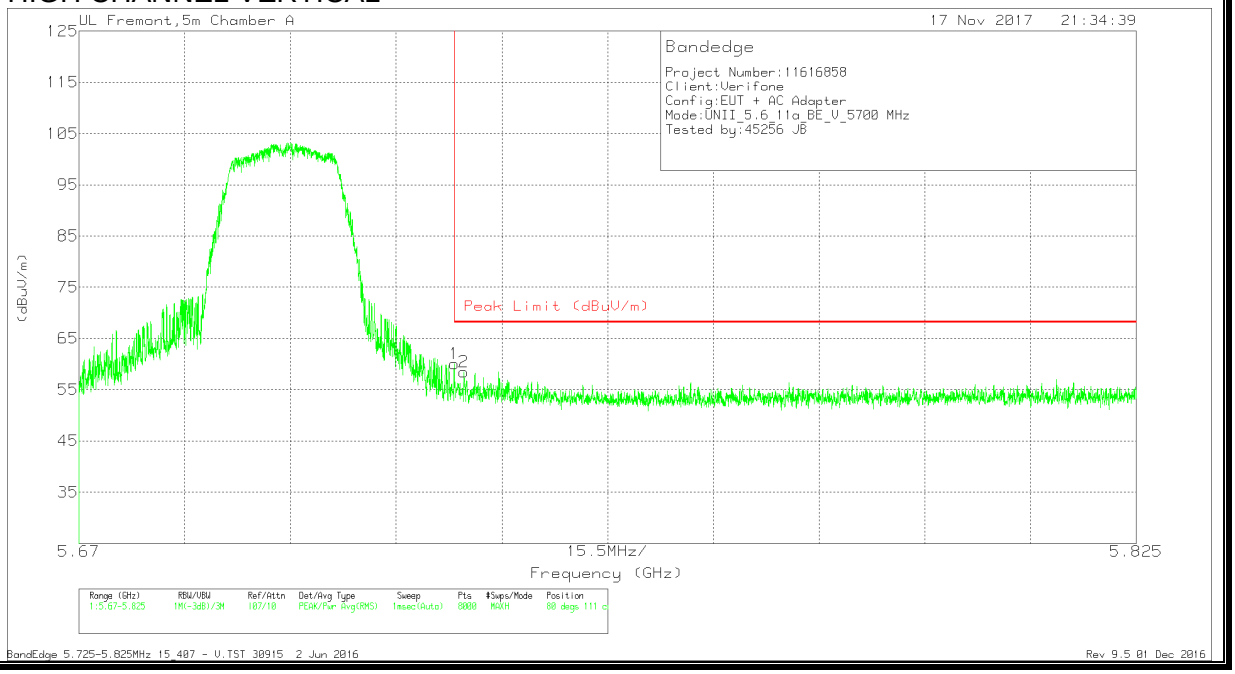


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	36.44	Pk	35	-18.4	0	53.04	68.2	-15.16	146	102	H
2	5.73	44.69	Pk	35	-18.3	0	61.39	68.2	-6.81	146	102	H

Pk - Peak detector

HIGH CHANNEL VERTICAL



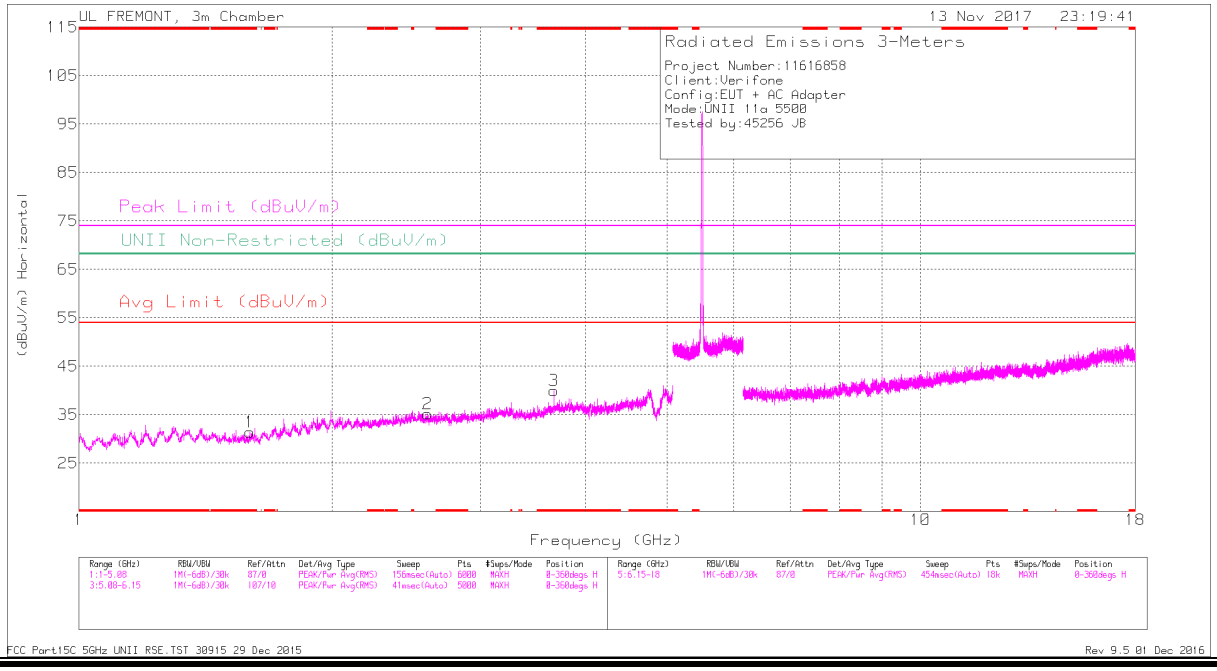
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	43.45	Pk	35	-18.4	0	60.05	68.2	-8.15	80	111	V
2	5.726	41.79	Pk	35	-18.3	0	58.49	68.2	-9.71	80	111	V

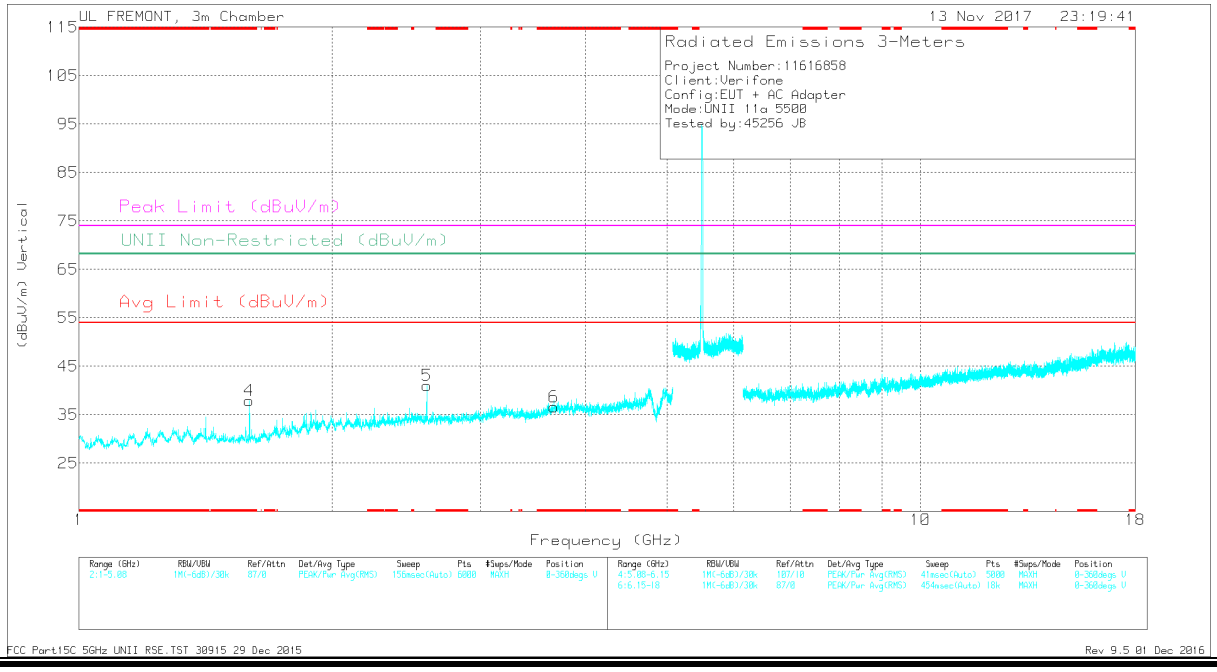
Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



Radiated Emissions

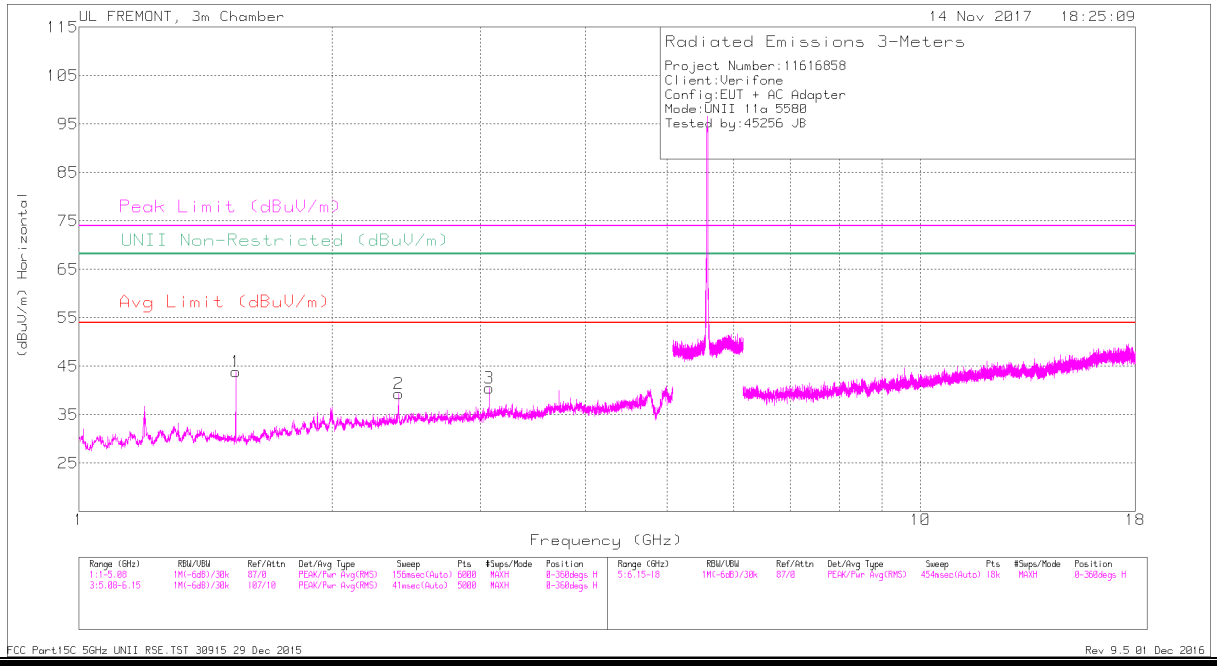
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.595	47.53	PK-U	28.3	-31.1	0	44.73	-	-	74	-29.27	-	-	195	303	H
	* 1.595	28.64	ADR	28.3	-31.1	.31	26.15	54	-27.85	-	-	-	-	195	303	H
3	* 3.667	42.45	PK-U	33.3	-29.1	0	46.65	-	-	74	-27.35	-	-	86	100	H
	* 3.667	33.97	ADR	33.3	-29.1	.31	38.48	54	-15.52	-	-	-	-	86	100	H
4	* 1.594	47.65	PK-U	28.3	-31.1	0	44.85	-	-	74	-29.15	-	-	207	366	V
	* 1.594	28.88	ADR	28.3	-31.1	.31	26.39	54	-27.61	-	-	-	-	207	366	V
6	* 3.666	40.13	PK-U	33.3	-29.1	0	44.33	-	-	74	-29.67	-	-	297	113	V
	* 3.667	29.72	ADR	33.3	-29.1	.31	34.23	54	-19.77	-	-	-	-	297	113	V
5	2.589	52.56	PK-U	32.3	-30.7	0	54.16	-	-	-	-	68.2	-14.04	56	111	V
2	2.595	41.13	PK-U	32.3	-30.5	0	42.93	-	-	-	-	68.2	-25.27	190	156	H

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

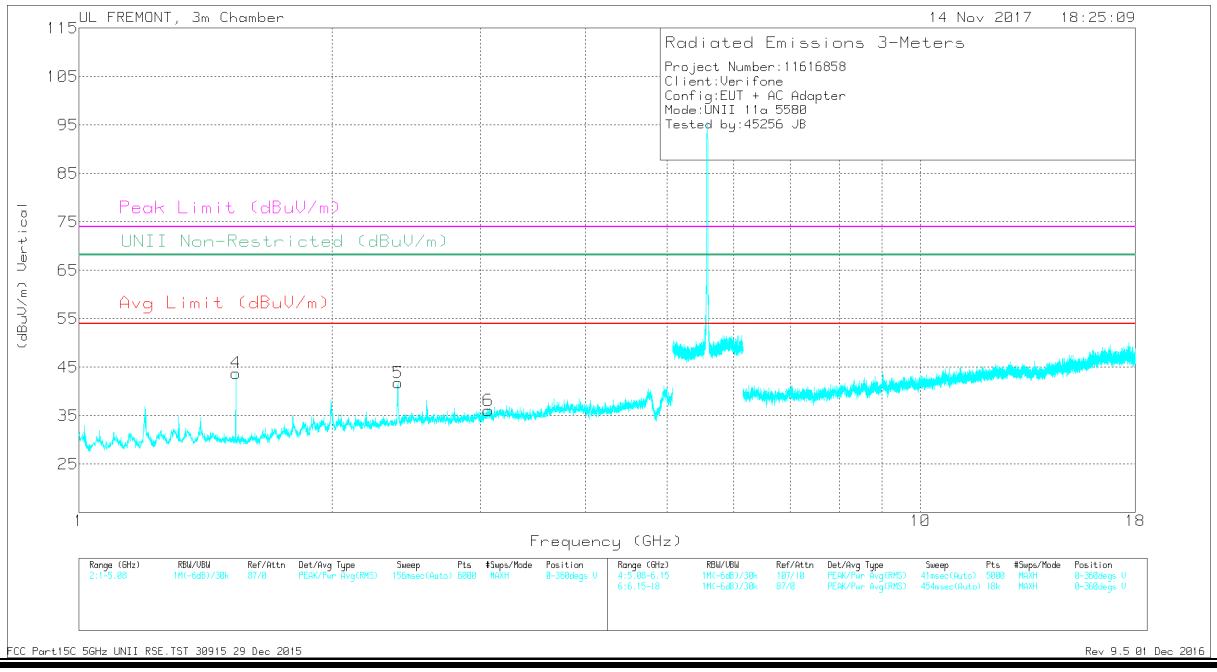
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

MID CHANNEL HORIZONTAL



MID CHANNEL VERTICAL



Radiated Emissions

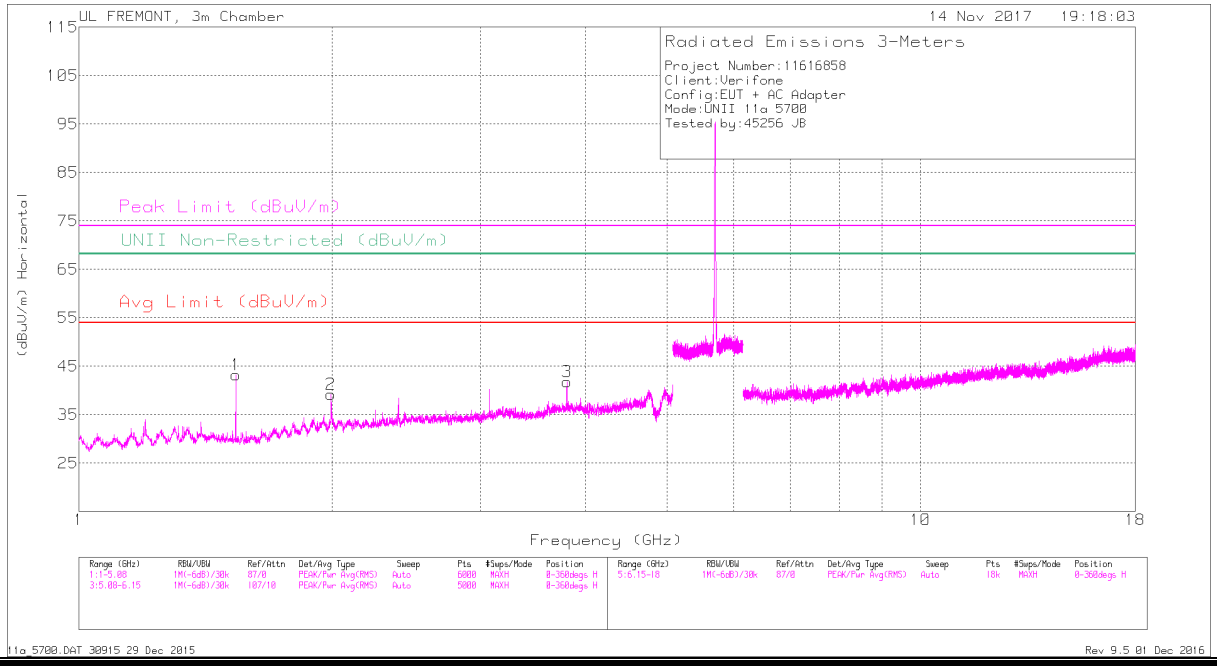
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.536	46.99	ADR	28.2	-31.8	43.39	54	-10.61	-	-	-	-	218	245	H
	1.537	49.91	PK-U	28.2	-31.8	46.31	-	-	74	-27.69	-	-	218	245	H
4	1.536	50.4	PK-U	28.2	-31.8	46.8	-	-	74	-27.2	-	-	30	119	V
	1.537	47.78	ADR	28.2	-31.8	44.18	54	-9.82	-	-	-	-	30	119	V
5	2.392	49.4	PK-U	31.9	-30.6	50.7	-	-	-	-	68.2	-17.5	306	203	V
2	2.4	46.27	PK-U	32	-30.8	47.47	-	-	-	-	68.2	-20.73	26	269	H
6	3.064	39.79	PK-U	32.9	-30.1	42.59	-	-	-	-	68.2	-25.61	188	113	V
3	3.073	42.63	PK-U	33	-30.2	45.43	-	-	-	-	68.2	-22.77	245	215	H

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

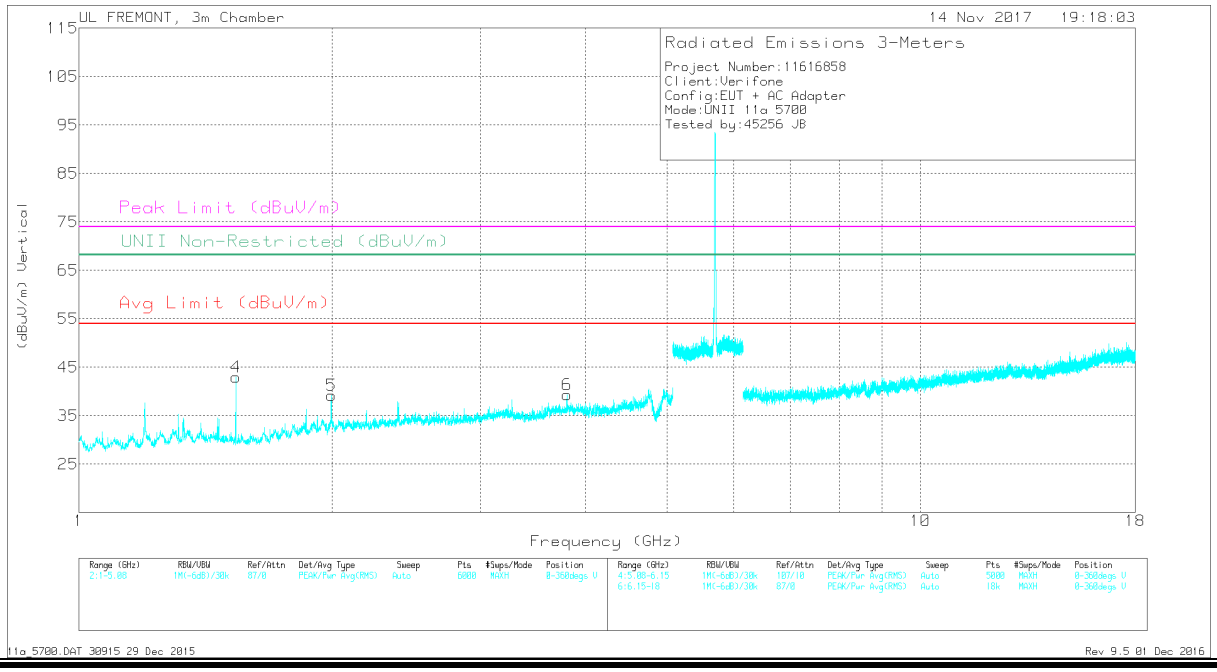
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.536	49.58	PK-U	28.2	-31.8	0	45.98	-	-	74	-28.02	-	-	219	249	H
	1.537	46.87	ADR	28.2	-31.8	.31	43.58	54	-10.42	-	-	-	-	219	249	H
4	1.536	51.74	PK-U	28.2	-31.8	0	48.14	-	-	74	-25.86	-	-	10	100	V
	1.537	49.4	ADR	28.2	-31.8	.31	46.11	54	-7.89	-	-	-	-	10	100	V
2	1.995	48.11	PK-U	31.2	-31.7	0	47.61	-	-	-	-	68.2	-20.59	215	105	H
5	1.995	48.48	PK-U	31.2	-31.7	0	47.98	-	-	-	-	68.2	-20.22	8	106	V
3	3.8	44.65	PK-U	33.4	-30	0	48.05	-	-	74	-25.95	-	-	117	163	H
	3.8	38.72	ADR	33.4	-30	.31	42.43	54	-11.57	-	-	-	-	117	163	H
6	3.8	42.7	PK-U	33.4	-30	0	46.1	-	-	74	-27.9	-	-	308	169	V
	3.8	33.57	ADR	33.4	-30	.31	37.28	54	-16.72	-	-	-	-	308	169	V

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

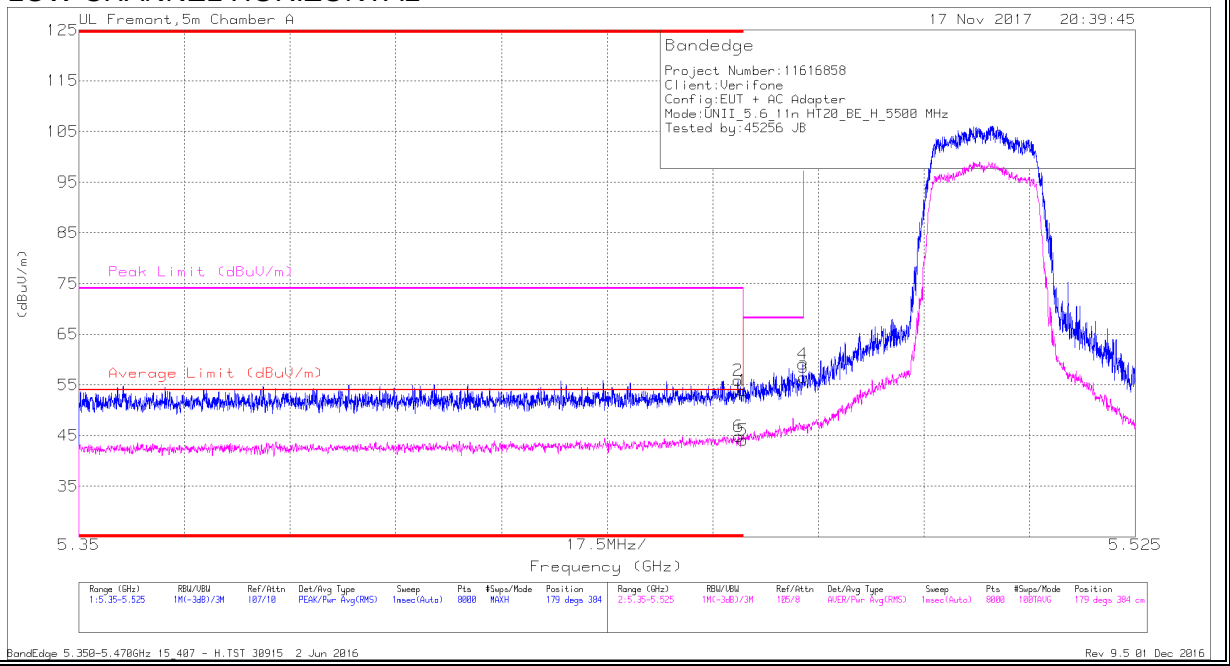
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

8.4.2 802.11n HT20 MODE IN THE 5.6GHz BAND

BANDEDGE (LOW CHANNEL)

LOW CHANNEL HORIZONTAL

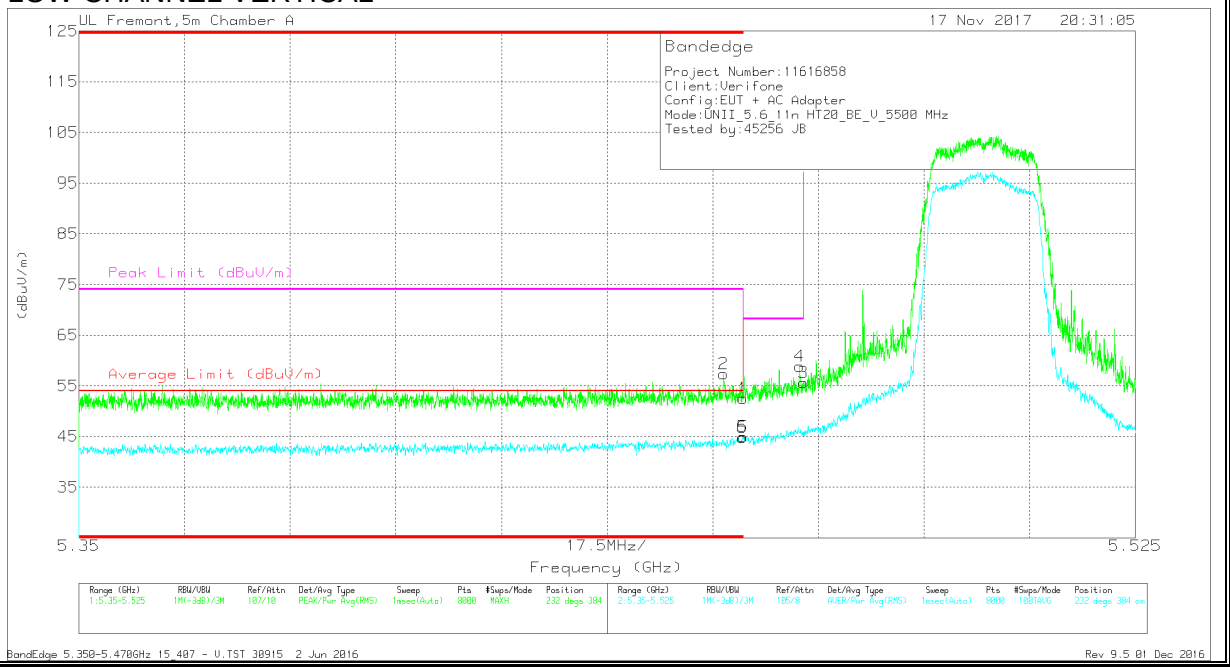


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.46	37.55	Pk	34.7	-18.4	0	53.85	-	-	74	-20.15	179	384	H
2	* 5.459	39.6	Pk	34.7	-18.4	0	55.9	-	-	74	-18.1	179	384	H
5	* 5.46	27.5	RMS	34.7	-18.4	.32	44.12	54	-9.88	-	-	179	384	H
6	* 5.459	28.2	RMS	34.7	-18.4	.32	44.82	54	-9.18	-	-	179	384	H
3	5.47	39.89	Pk	34.8	-18.2	0	56.49	-	-	68.2	-11.71	179	384	H
4	5.47	42.49	Pk	34.8	-18.2	0	59.09	-	-	68.2	-9.11	179	384	H

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

LOW CHANNEL VERTICAL



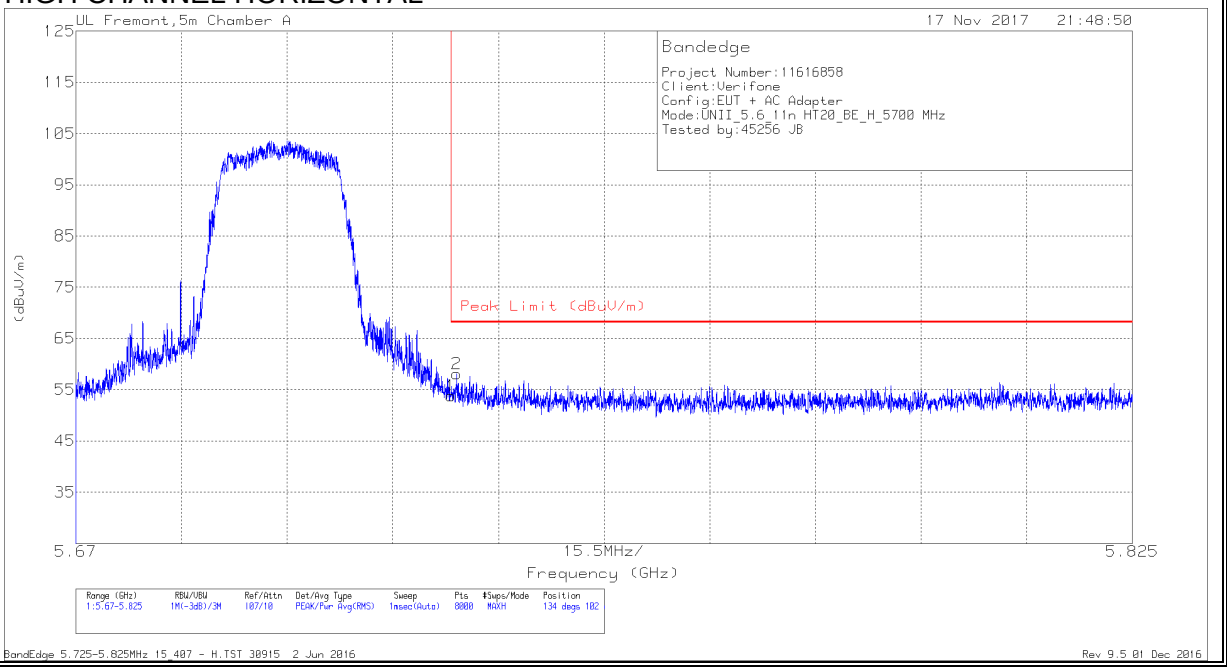
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.46	36.26	Pk	34.7	-18.4	0	52.56	-	-	74	-21.44	232	384	V
2	* 5.457	41.01	Pk	34.7	-18.3	0	57.41	-	-	74	-16.59	232	384	V
5	* 5.46	28.34	RMS	34.7	-18.4	.32	44.96	54	-9.04	-	-	232	384	V
6	* 5.46	28.17	RMS	34.7	-18.4	.32	44.79	54	-9.21	-	-	232	384	V
4	5.469	42.22	Pk	34.8	-18.2	0	58.82	-	-	68.2	-9.38	232	384	V
3	5.47	39.08	Pk	34.8	-18.2	0	55.68	-	-	68.2	-12.52	232	384	V

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

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HIGH CHANNEL HORIZONTAL

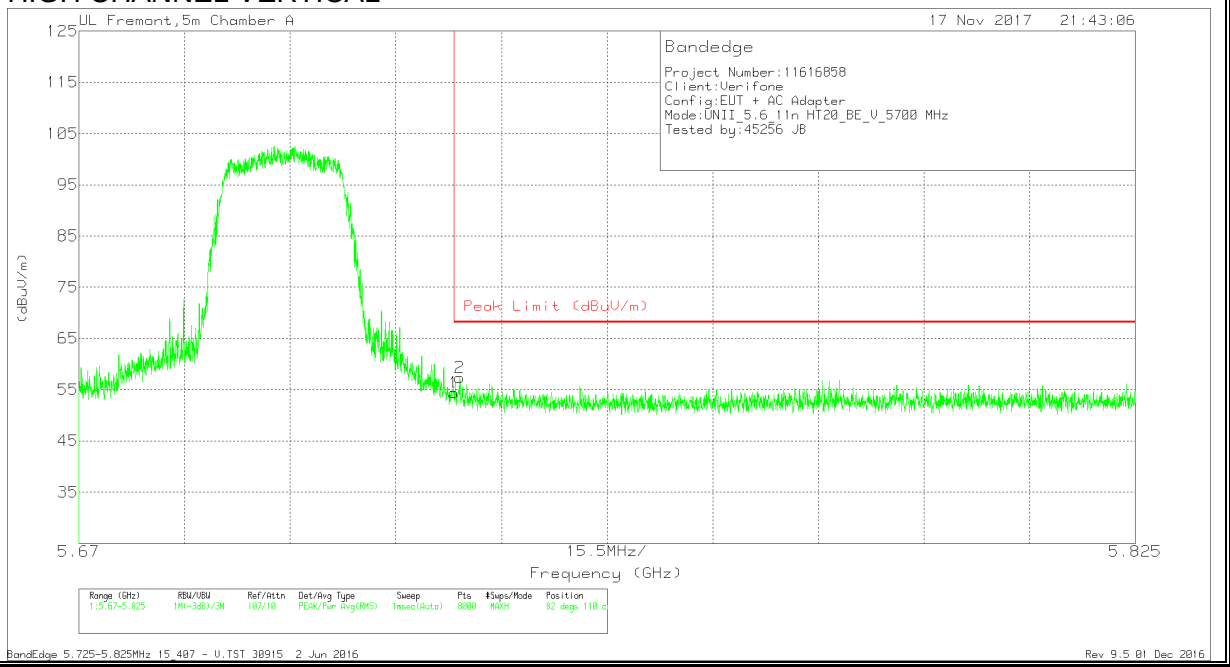


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	37.18	Pk	35	-18.4	0	53.78	68.2	-14.42	134	102	H
2	5.726	41.54	Pk	35	-18.4	0	58.14	68.2	-10.06	134	102	H

Pk - Peak detector

HIGH CHANNEL VERTICAL



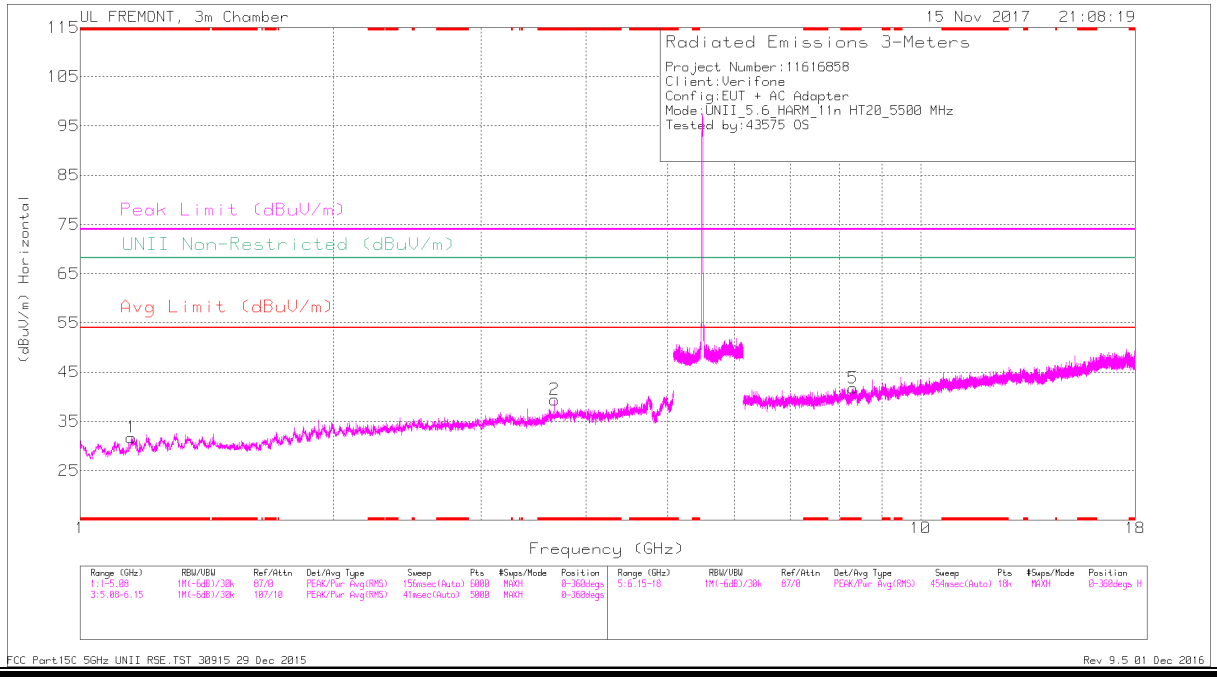
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	37.82	Pk	35	-18.4	0	54.42	68.2	-13.78	82	110	V
2	5.726	40.71	Pk	35	-18.4	0	57.31	68.2	-10.89	82	110	V

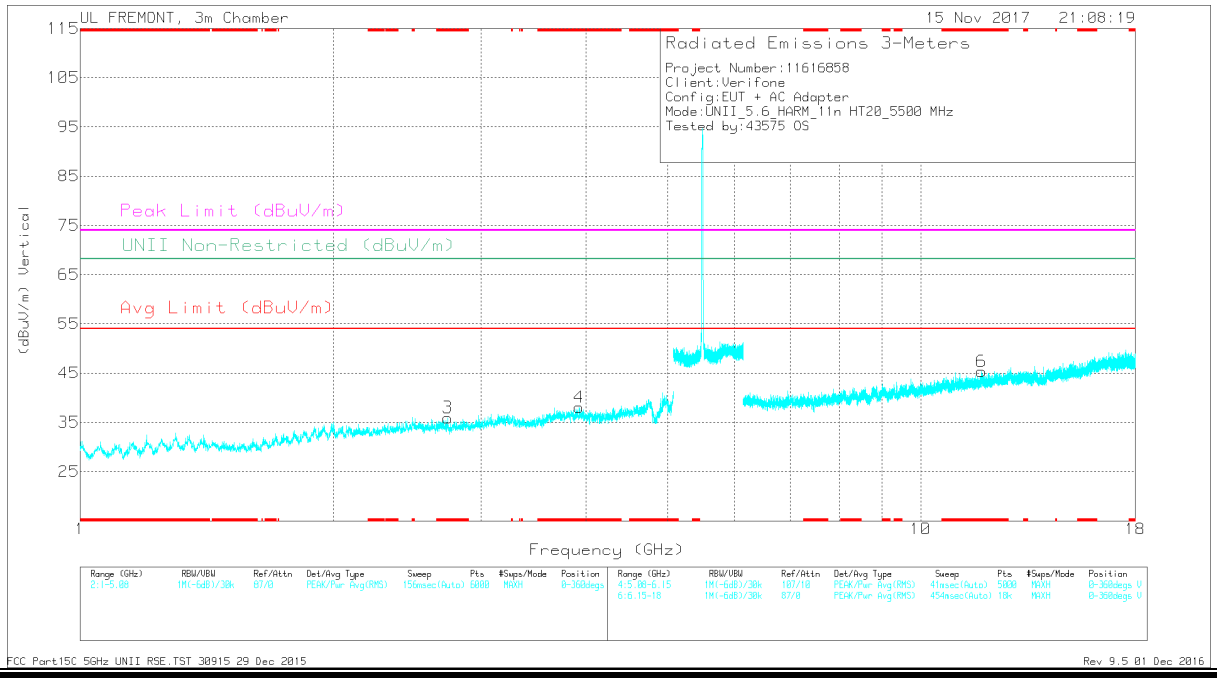
Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



Radiated Emissions

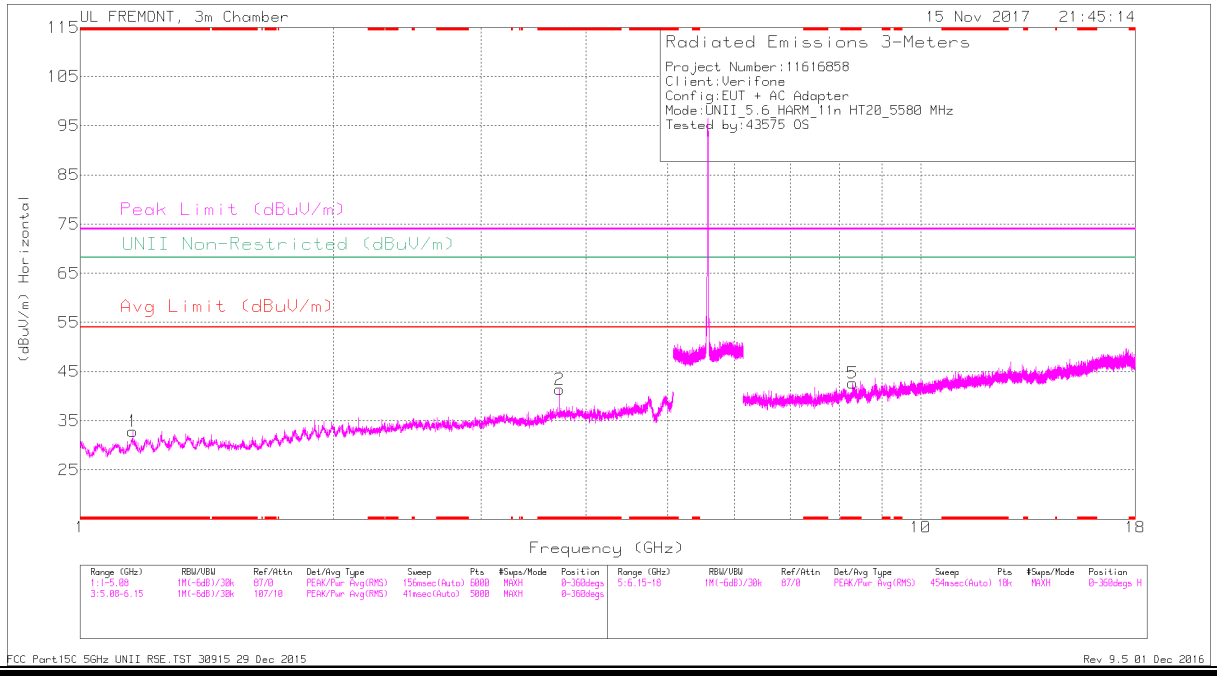
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.152	42.23	PK-U	27.8	-32.2	0	37.83	-	-	74	-36.17	-	-	284	250	H
	* 1.153	30.81	ADR	27.8	-32.3	.32	26.63	54	-27.37	-	-	-	-	284	250	H
2	* 3.667	41.7	PK-U	33.3	-29.1	0	45.9	-	-	74	-28.1	-	-	86	113	H
	* 3.667	33.69	ADR	33.3	-29.1	.32	38.21	54	-15.79	-	-	-	-	86	113	H
3	* 2.737	40.71	PK-U	32.4	-30.7	0	42.41	-	-	74	-31.59	-	-	353	143	V
	* 2.737	28.1	ADR	32.4	-30.7	.32	30.12	54	-23.88	-	-	-	-	353	143	V
4	* 3.924	39.61	PK-U	33.4	-29.2	0	43.81	-	-	74	-30.19	-	-	176	257	V
	* 3.927	27.29	ADR	33.4	-29.2	.32	31.81	54	-22.19	-	-	-	-	176	257	V
5	* 8.308	35.71	PK-U	35.8	-23.5	0	48.01	-	-	74	-25.99	-	-	323	138	H
	* 8.306	23.29	ADR	35.8	-23.6	.32	35.81	54	-18.19	-	-	-	-	323	138	H
6	* 11.814	34.43	PK-U	38.5	-22.1	0	50.83	-	-	74	-23.17	-	-	327	357	V
	* 11.815	21.96	ADR	38.5	-22.2	.32	38.58	54	-15.42	-	-	-	-	327	357	V

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

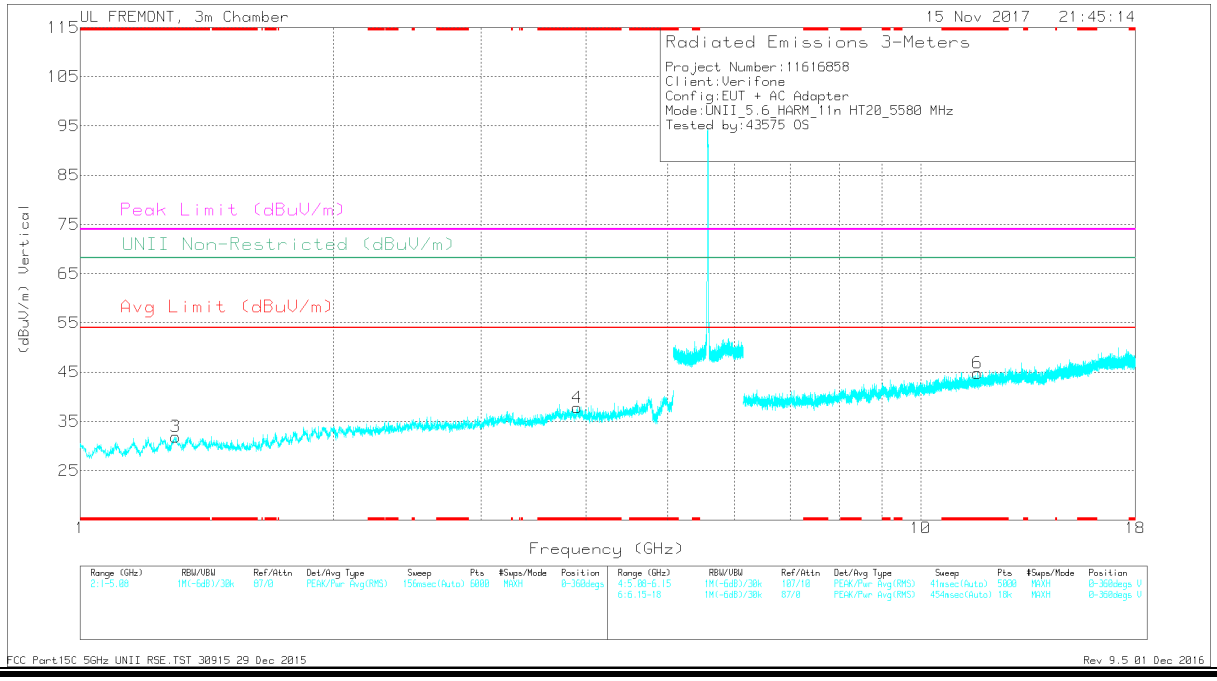
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

MID CHANNEL HORIZONTAL



MID CHANNEL VERTICAL



Radiated Emissions

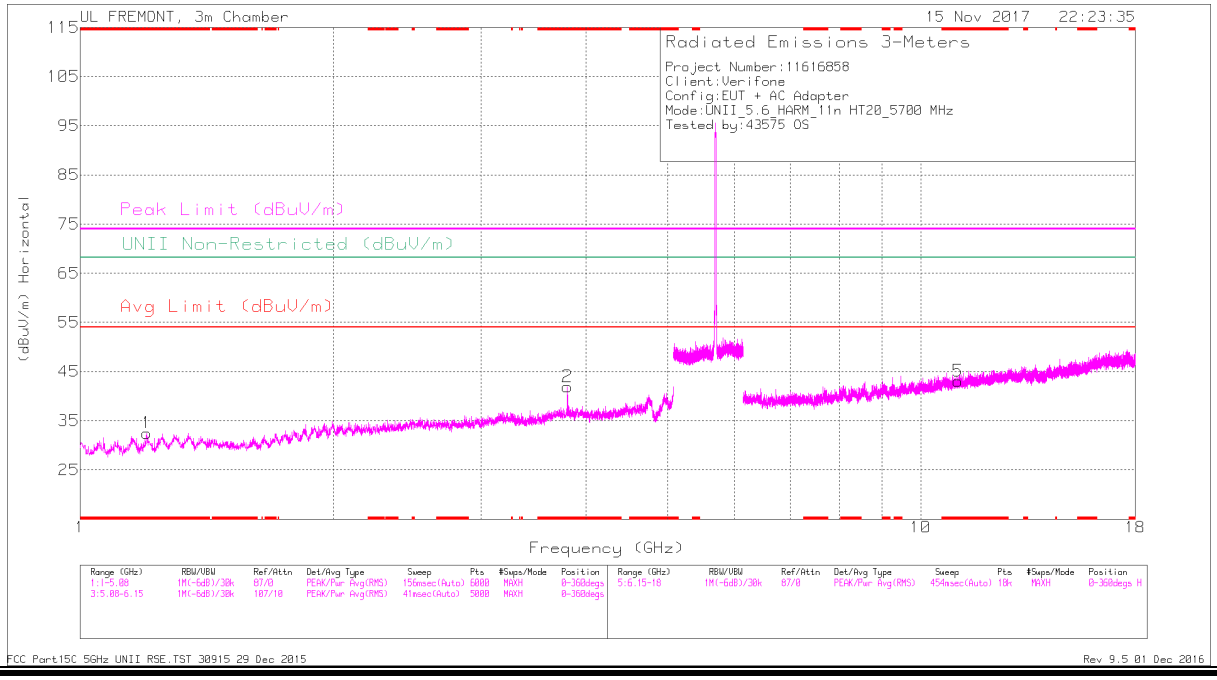
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.156	44.27	PK-U	27.8	-32.4	0	39.67	-	-	74	-34.33	-	-	259	104	H
	* 1.155	33.07	ADR	27.8	-32.4	.32	28.79	54	-25.21	-	-	-	-	259	104	H
2	* 3.72	41.93	PK-U	33.3	-29.1	0	46.13	-	-	74	-27.87	-	-	124	233	H
	* 3.72	34.34	ADR	33.3	-29.1	.32	38.86	54	-15.14	-	-	-	-	124	233	H
3	* 1.299	42.29	PK-U	29.1	-31.9	0	39.49	-	-	74	-34.51	-	-	91	158	V
	* 1.299	29.68	ADR	29.1	-31.9	.32	27.2	54	-26.8	-	-	-	-	91	158	V
4	* 3.904	39.5	PK-U	33.4	-28.7	0	44.2	-	-	74	-29.8	-	-	103	164	V
	* 3.903	26.91	ADR	33.4	-28.7	.32	31.93	54	-22.07	-	-	-	-	103	164	V
5	* 8.3	36.06	PK-U	35.8	-23.4	0	48.46	-	-	74	-25.54	-	-	33	200	H
	* 8.303	23.3	ADR	35.8	-23.6	.32	35.82	54	-18.18	-	-	-	-	33	200	H
6	* 11.68	35.37	PK-U	38.3	-22.4	0	51.27	-	-	74	-22.73	-	-	77	109	V
	* 11.681	22.25	ADR	38.3	-22.5	.32	38.37	54	-15.63	-	-	-	-	77	109	V

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

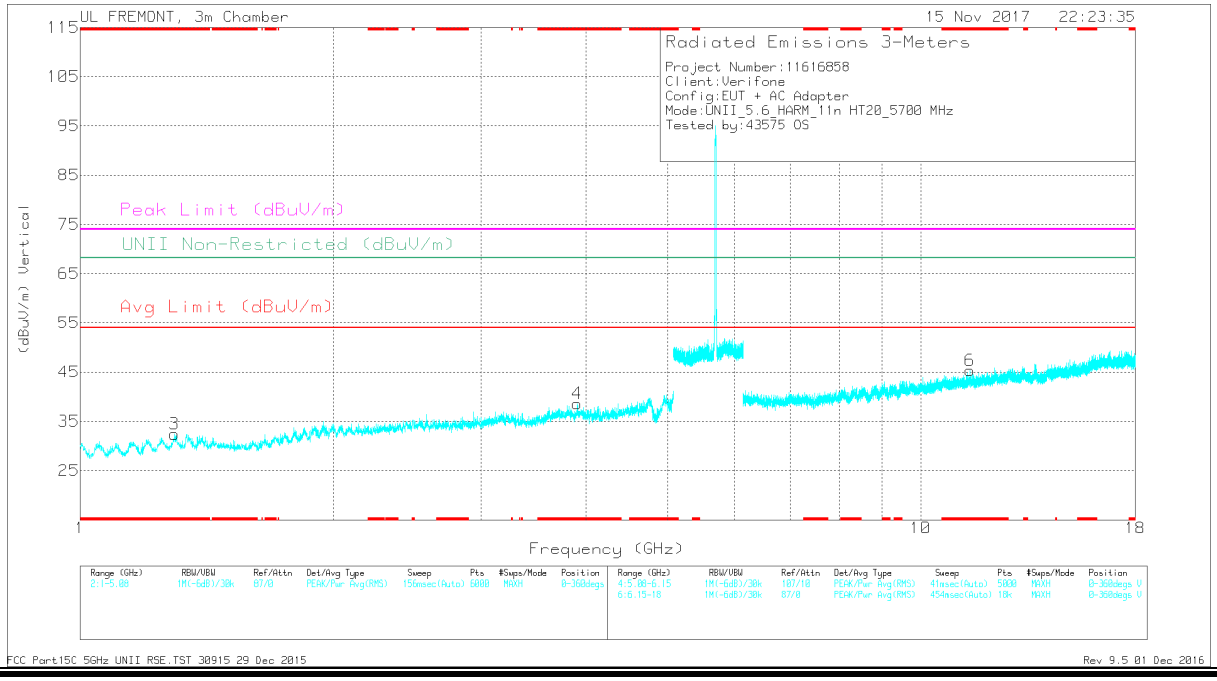
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.198	43.77	PK-U	28.1	-32.5	0	39.37	-	-	74	-34.63	-	-	87	308	H
	* 1.2	32.8	ADR	28.1	-32.5	.32	28.72	54	-25.28	-	-	-	-	87	308	H
2	* 3.8	43.92	PK-U	33.4	-30	0	47.32	-	-	74	-26.68	-	-	120	225	H
	* 3.8	37.71	ADR	33.4	-30	.32	41.43	54	-12.57	-	-	-	-	120	225	H
3	* 1.295	41.91	PK-U	29.1	-31.9	0	39.11	-	-	74	-34.89	-	-	113	396	V
	* 1.294	29.87	ADR	29.1	-32	.32	27.29	54	-26.71	-	-	-	-	113	396	V
4	* 3.905	39.58	PK-U	33.4	-28.8	0	44.18	-	-	74	-29.82	-	-	160	400	V
	* 3.905	27.05	ADR	33.4	-28.8	.32	31.97	54	-22.03	-	-	-	-	160	400	V
5	* 11.076	34.83	PK-U	37.7	-22.2	0	50.33	-	-	74	-23.67	-	-	122	115	H
	* 11.078	21.55	ADR	37.7	-22.3	.32	37.27	54	-16.73	-	-	-	-	122	115	H
6	* 11.442	34.47	PK-U	38.1	-21.8	0	50.77	-	-	74	-23.23	-	-	188	394	V
	* 11.439	21.78	ADR	38.1	-21.9	.32	38.3	54	-15.7	-	-	-	-	188	394	V

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

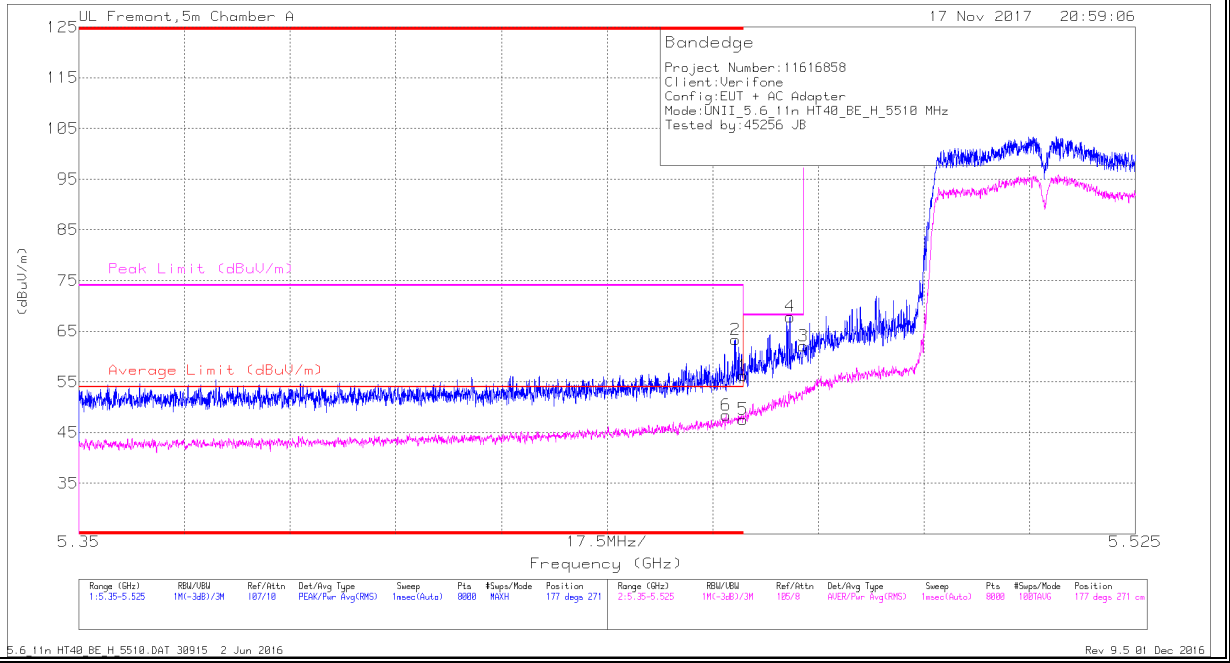
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

8.4.3 802.11n HT40 MODE IN THE 5.6GHz BAND

BANDEDGE (LOW CHANNEL)

LOW CHANNEL HORIZONTAL

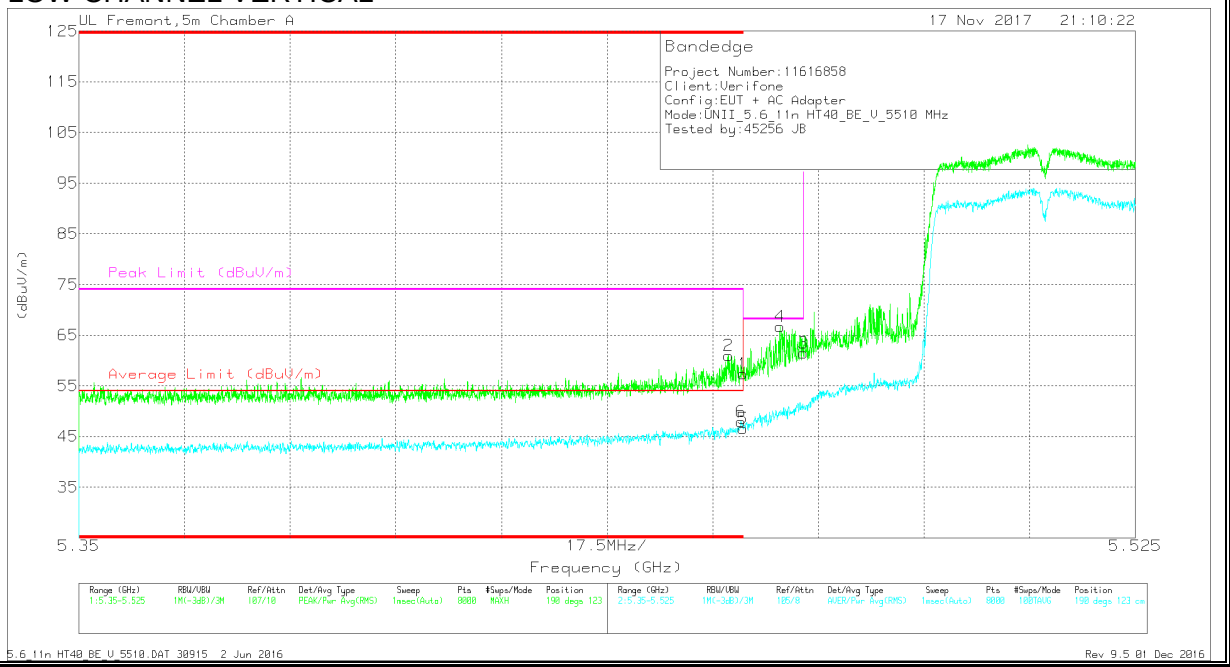


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.46	39.93	Pk	34.7	-18.4	0	56.23	-	-	74	-17.77	177	271	H
2	* 5.459	47.04	Pk	34.7	-18.4	0	63.34	-	-	74	-10.66	177	271	H
5	* 5.46	31	RMS	34.7	-18.4	.44	47.74	54	-6.26	-	-	177	271	H
6	* 5.457	31.7	RMS	34.7	-18.3	.44	48.54	54	-5.46	-	-	177	271	H
4	5.468	51.26	Pk	34.8	-18.2	0	67.86	-	-	68.2	-.34	177	271	H
3	5.47	45.5	Pk	34.8	-18.2	0	62.1	-	-	68.2	-6.1	177	271	H

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

LOW CHANNEL VERTICAL



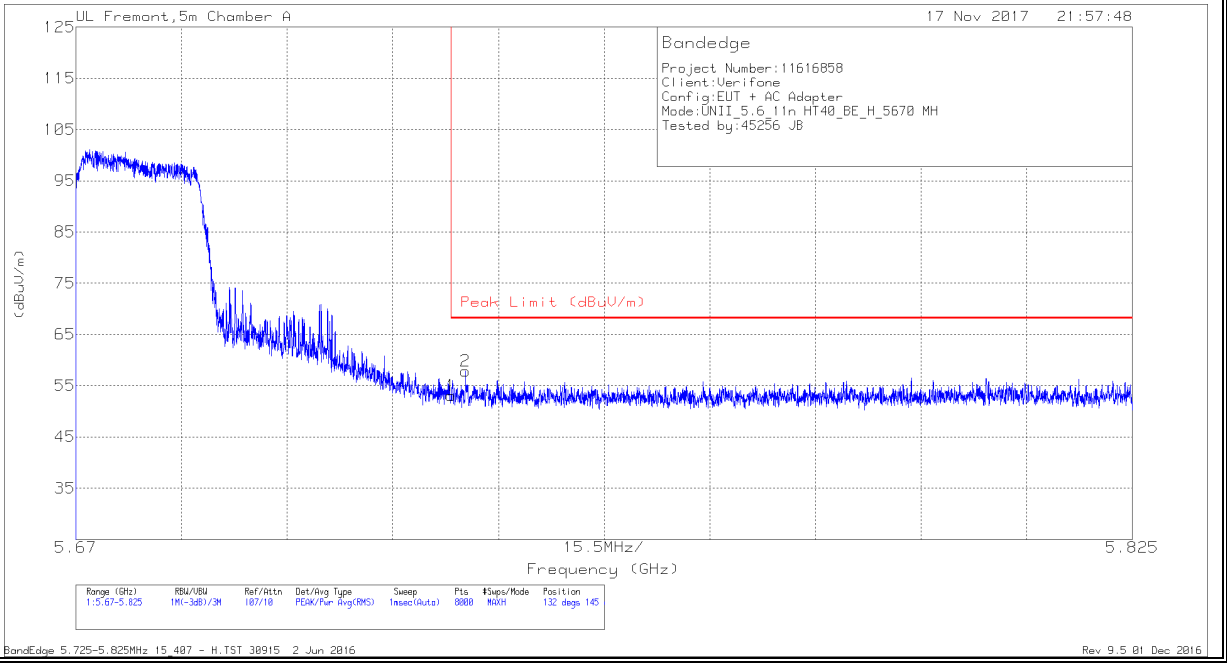
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.46	41.05	Pk	34.7	-18.4	0	57.35	-	-	74	-16.65	190	123	V
2	* 5.458	44.59	Pk	34.7	-18.3	0	60.99	-	-	74	-13.01	190	123	V
5	* 5.46	29.87	RMS	34.7	-18.4	.44	46.61	54	-7.39	-	-	190	123	V
6	* 5.46	31.22	RMS	34.7	-18.4	.44	47.96	54	-6.04	-	-	190	123	V
4	5.466	50.17	Pk	34.7	-18.2	0	66.67	-	-	68.2	-1.53	190	123	V
3	5.47	44.92	Pk	34.8	-18.2	0	61.52	-	-	68.2	-6.68	190	123	V

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

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HIGH CHANNEL HORIZONTAL

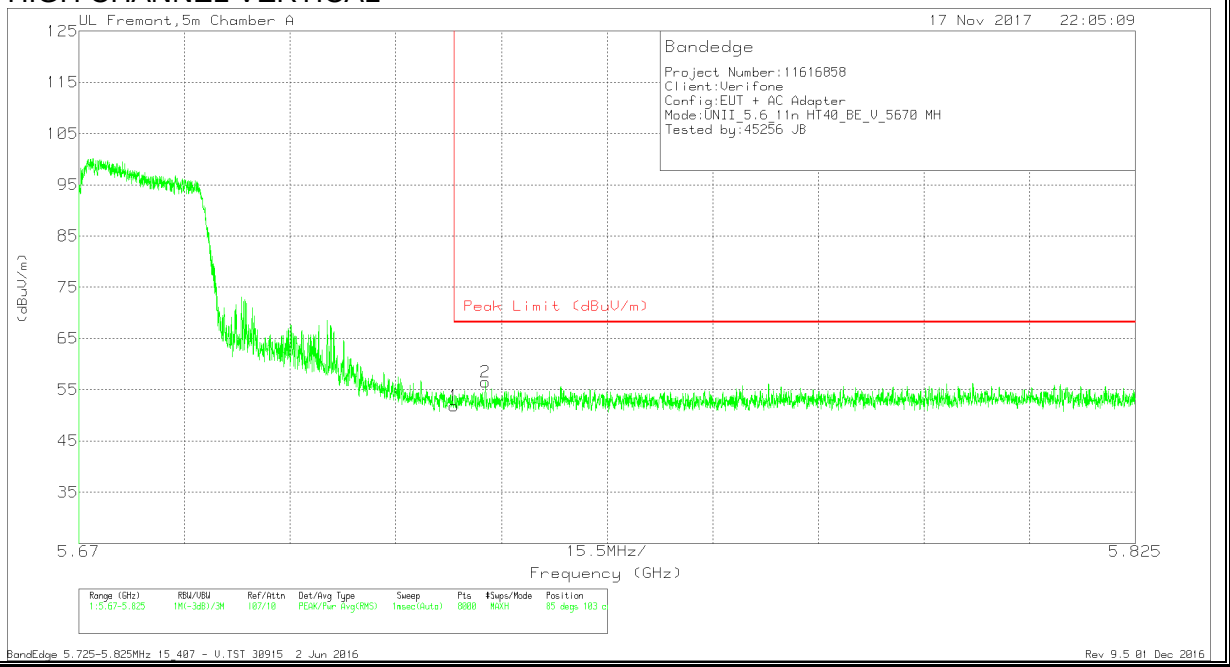


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	36.44	Pk	35	-18.4	0	53.04	68.2	-15.16	132	145	H
2	5.727	41.11	Pk	35	-18.3	0	57.81	68.2	-10.39	132	145	H

Pk - Peak detector

HIGH CHANNEL VERTICAL



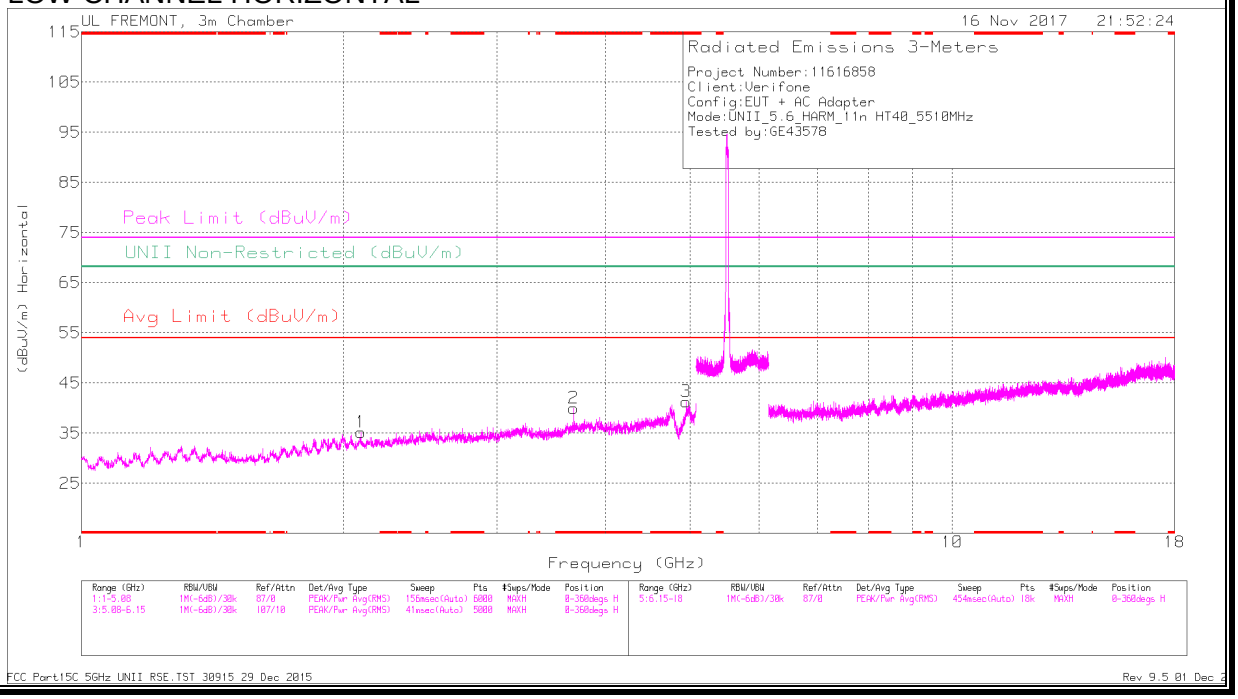
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	35.29	Pk	35	-18.4	0	51.89	68.2	-16.31	85	103	V
2	5.73	39.8	Pk	35	-18.3	0	56.5	68.2	-11.7	85	103	V

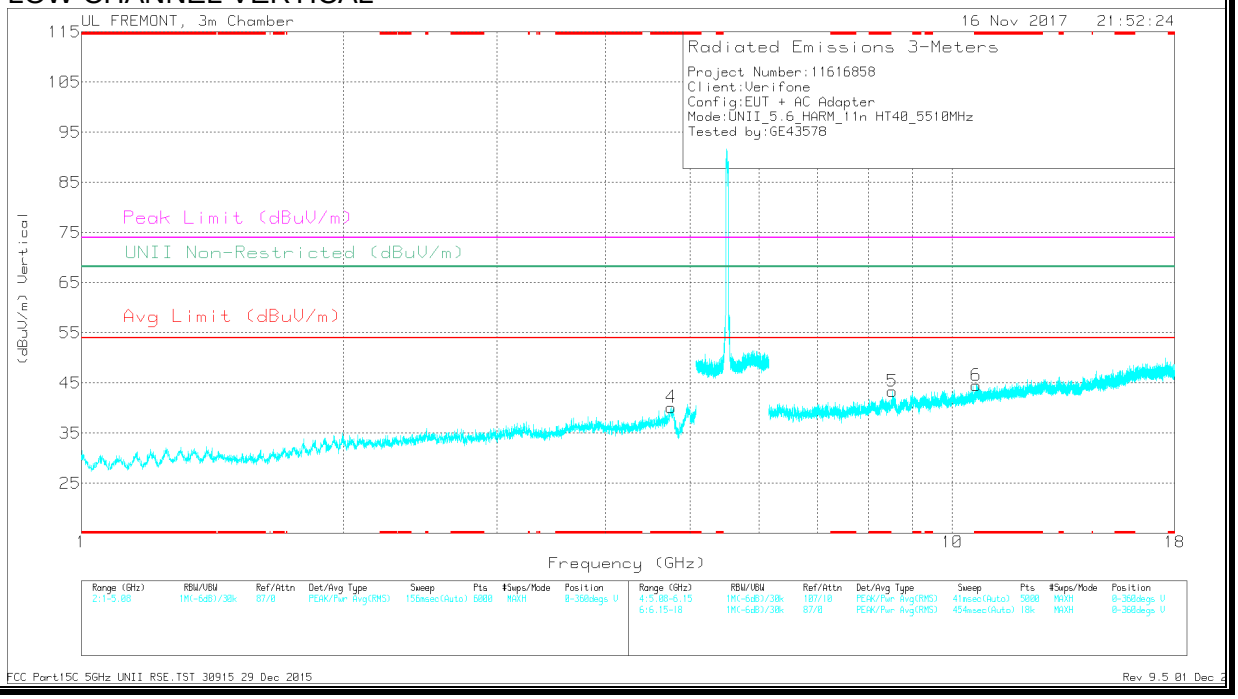
Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



Radiated Emissions

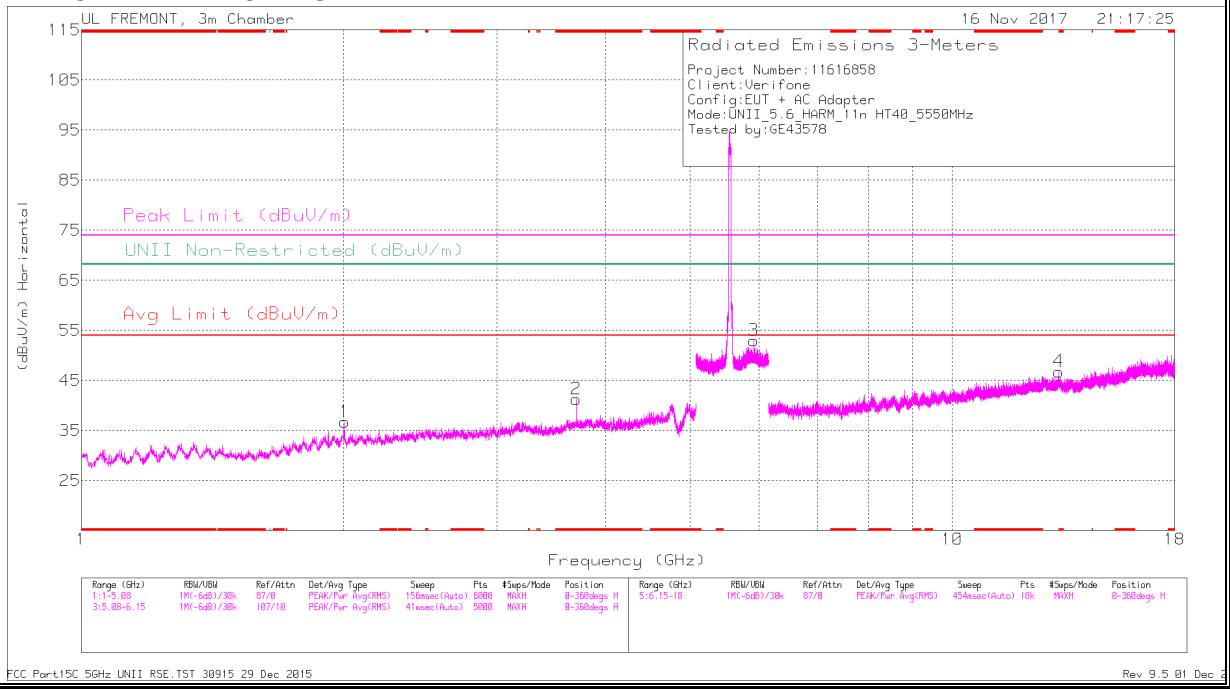
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 3.673	42.62	PK-U	33.3	-29.1	0	46.82	-	-	74	-27.18	-	-	112	100	H
	* 3.673	34.02	ADR	33.3	-29.1	.44	38.66	54	-15.34	-	-	-	-	112	100	H
3	* 4.949	40.15	PK-U	34.1	-27.5	0	46.75	-	-	74	-27.25	-	-	69	200	H
	* 4.948	28.03	ADR	34.1	-27.5	.44	35.07	54	-18.93	-	-	-	-	69	200	H
4	* 4.753	42	PK-U	34	-28.4	0	47.6	-	-	74	-26.4	-	-	140	100	V
	* 4.754	29.22	ADR	34	-28.4	.44	35.26	54	-18.74	-	-	-	-	140	100	V
6	* 10.658	35.18	PK-U	37.8	-22.1	0	50.88	-	-	74	-23.12	-	-	193	200	V
	* 10.659	22.46	ADR	37.8	-22.1	.44	38.60	54	-15.40	-	-	-	-	193	200	V
1	2.093	40.87	PK-U	31.3	-31	0	41.17	-	-	-	-	68.2	-27.03	45	100	H
5	8.537	35.85	PK-U	35.8	-23.3	0	48.35	-	-	-	-	68.2	-19.85	167	100	V

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

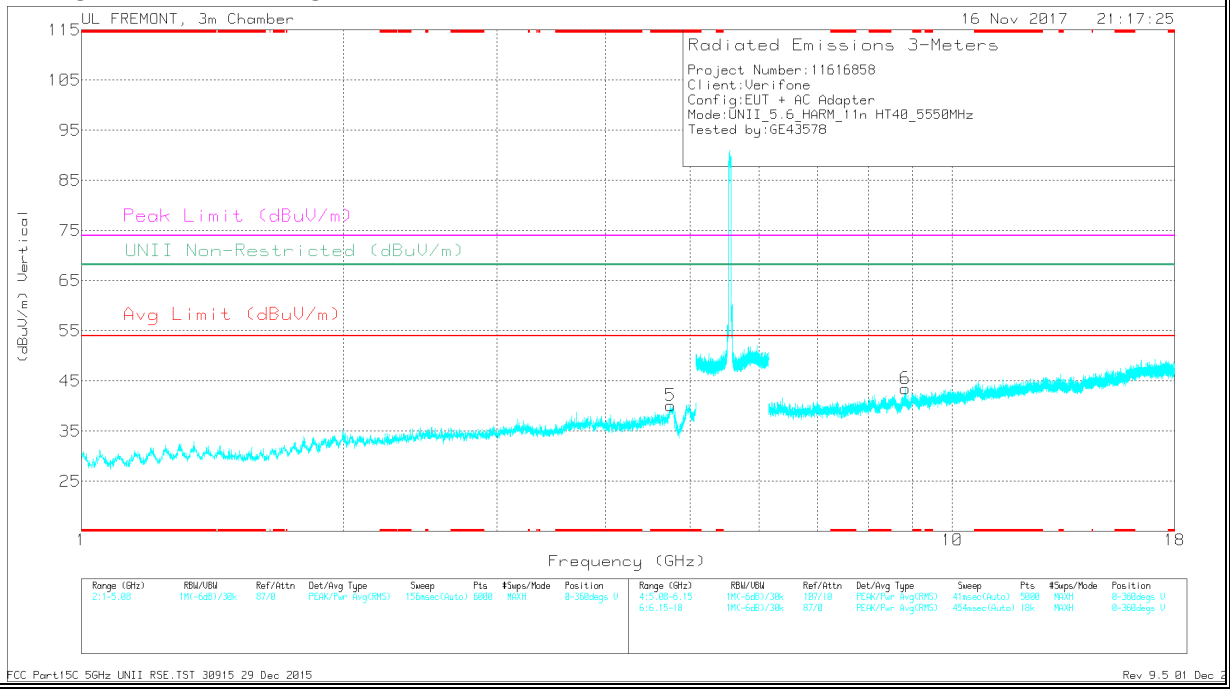
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

MID CHANNEL HORIZONTAL



MID CHANNEL VERTICAL



Radiated Emissions

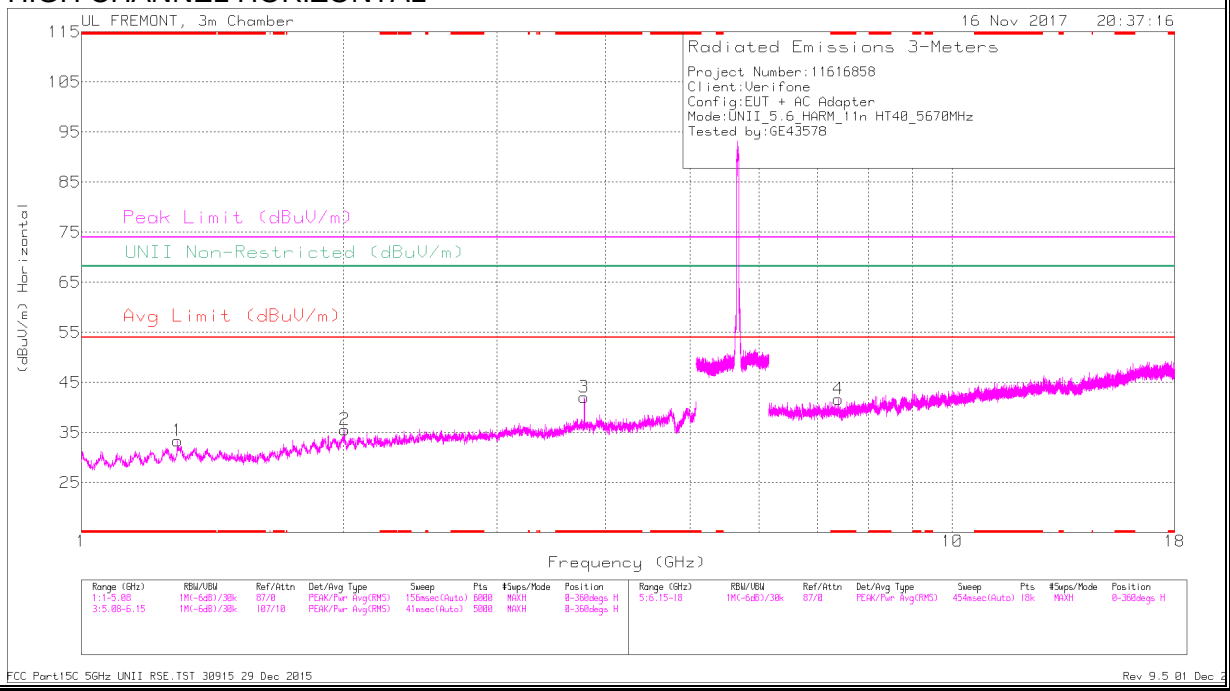
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 3.7	42.43	PK-U	33.3	-28.9	0	46.83	-	-	74	-27.17	-	-	89	100	H
	* 3.7	34.75	ADR	33.3	-28.9	.44	39.59	54	-14.41	-	-	-	-	89	100	H
5	* 4.749	41.53	PK-U	34	-28.3	0	47.23	-	-	74	-26.77	-	-	113	200	V
	* 4.751	29.09	ADR	34	-28.5	.44	35.03	54	-18.97	-	-	-	-	113	200	V
4	* 13.26	35.84	PK-U	39.1	-22.3	0	52.64	-	-	74	-21.36	-	-	55	100	H
	* 13.261	23.45	ADR	39.1	-22.3	.44	40.69	54	-13.31	-	-	-	-	55	100	H
1	2.005	46.7	PK-U	31.2	-31.7	0	46.2	-	-	-	-	68.2	-22	74	100	H
3	5.914	41.28	PK-U	34.9	-18.3	0	57.88	-	-	-	-	68.2	-10.32	91	200	H
6	8.834	34.92	PK-U	36	-22	0	48.92	-	-	-	-	68.2	-19.28	12	200	V

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

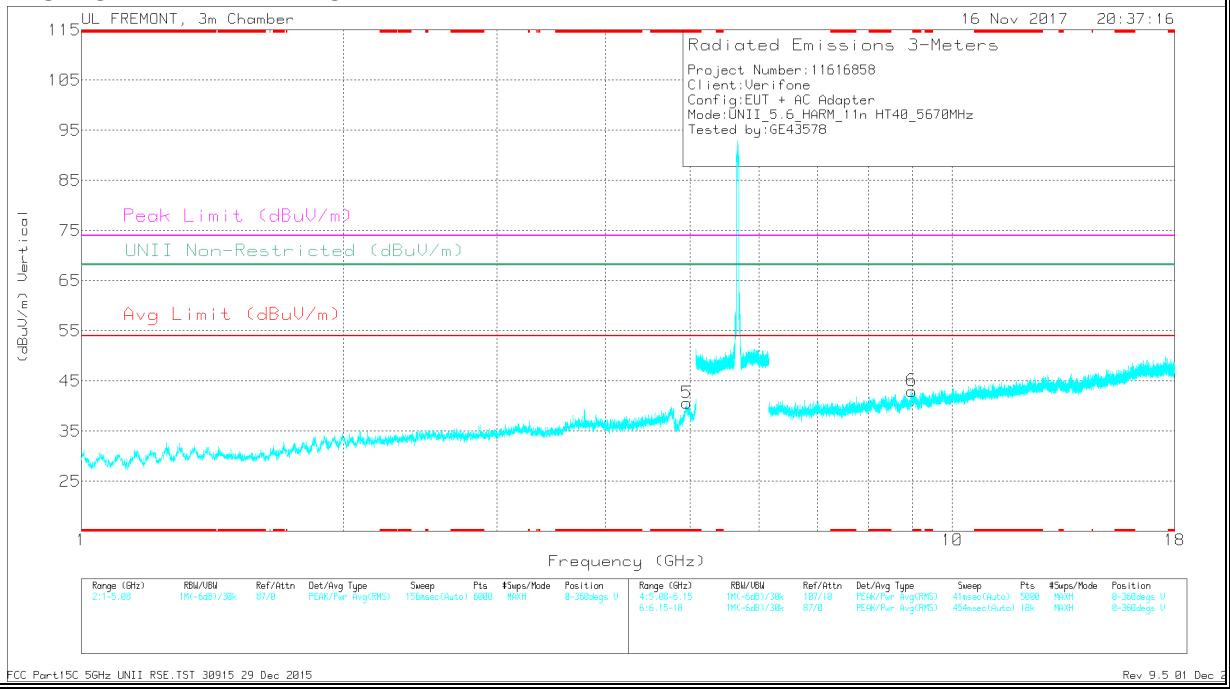
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.29	41.96	PK-U	29	-32	0	38.96	-	-	74	-35.04	-	-	12	200	H
	* 1.291	29.5	ADR	29	-32	.44	26.94	54	-27.06	-	-	-	-	12	200	H
3	* 3.78	44.21	PK-U	33.4	-29.7	0	47.91	-	-	74	-26.09	-	-	117	289	H
	* 3.78	36.82	ADR	33.4	-29.7	.44	40.96	54	-13.04	-	-	-	-	117	289	H
5	* 4.952	40.39	PK-U	34.1	-27.4	0	47.09	-	-	74	-26.91	-	-	253	200	V
	* 4.951	27.88	ADR	34.1	-27.4	.44	35.02	54	-18.98	-	-	-	-	253	200	V
4	* 7.395	37.08	PK-U	35.5	-25.2	0	47.38	-	-	74	-26.62	-	-	58	200	H
	* 7.396	24.27	ADR	35.5	-25.2	.44	35.01	54	-18.99	-	-	-	-	58	200	H
2	2.004	48.38	PK-U	31.2	-31.7	0	47.88	-	-	-	-	68.2	-20.32	92	200	H
6	8.977	35.58	PK-U	36	-23.1	0	48.48	-	-	-	-	68.2	-19.72	25	100	V

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

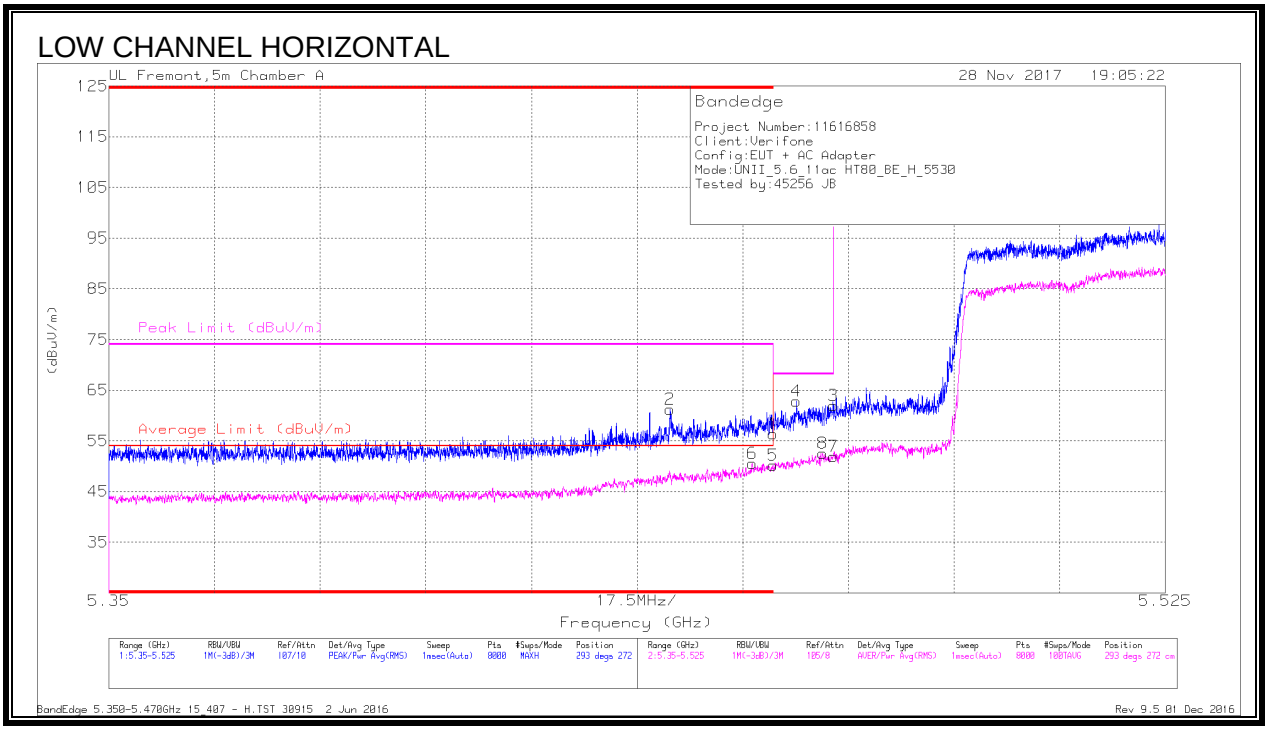
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

8.4.4 802.11ac VHT80 MODE IN THE 5.6GHz BAND

BANDEDGE (LOW CHANNEL)

LOW CHANNEL HORIZONTAL

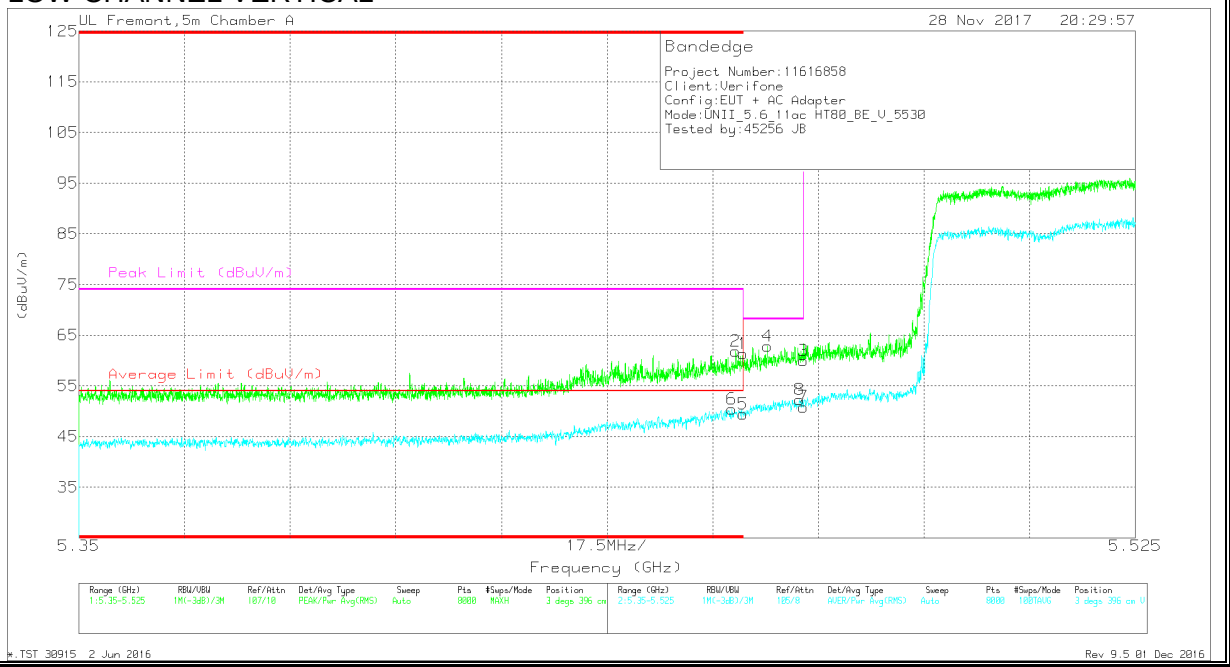


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.46	40.07	Pk	34.7	-18.4	0	56.37	-	-	74	-17.63	293	272	H
2	* 5.443	44.68	Pk	34.7	-18.2	0	61.18	-	-	74	-12.82	293	272	H
5	* 5.46	32.54	RMS	34.7	-18.4	1.28	50.12	54	-3.88	-	-	293	272	H
6	* 5.457	32.82	RMS	34.7	-18.3	1.28	50.5	54	-3.5	-	-	293	272	H
4	5.464	46.42	Pk	34.7	-18.3	0	62.82	-	-	68.2	-5.38	293	272	H
8	5.468	34.65	RMS	34.8	-18.2	1.28	52.53	-	-	-	-	293	272	H
3	5.47	45.38	Pk	34.8	-18.2	0	61.98	-	-	68.2	-6.22	293	272	H
7	5.47	34.04	RMS	34.8	-18.2	1.28	51.92	-	-	-	-	293	272	H

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

LOW CHANNEL VERTICAL



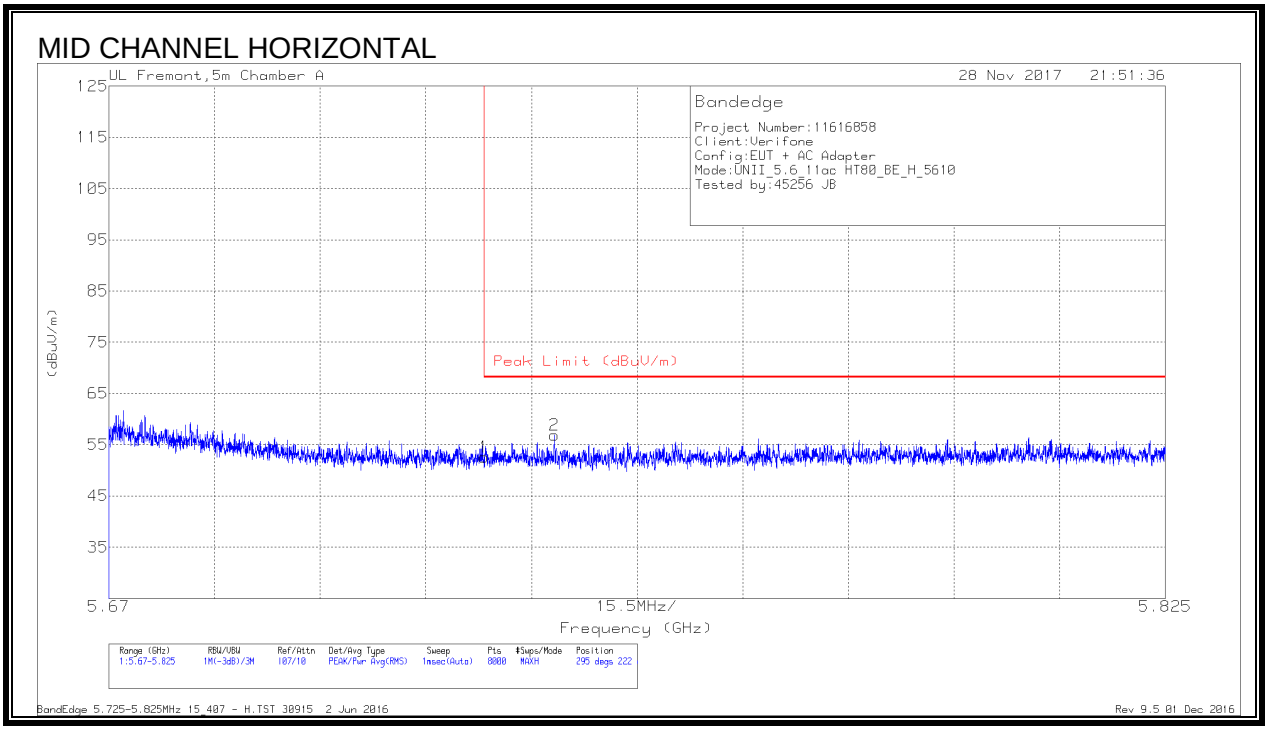
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.46	45.01	Pk	34.7	-18.4	0	61.31	-	-	74	-12.69	3	396	V
2	* 5.459	45.52	Pk	34.7	-18.4	0	61.82	-	-	74	-12.18	3	396	V
5	* 5.46	31.88	RMS	34.7	-18.4	1.28	49.46	54	-4.54	-	-	3	396	V
6	* 5.458	32.77	RMS	34.7	-18.3	1.28	50.45	54	-3.55	-	-	3	396	V
4	5.464	46.4	Pk	34.7	-18.3	0	62.8	-	-	68.2	-5.4	3	396	V
8	5.469	34.42	RMS	34.8	-18.2	1.28	52.3	-	-	-	-	3	396	V
3	5.47	43.37	Pk	34.8	-18.2	0	59.97	-	-	68.2	-8.23	3	396	V
7	5.47	32.97	RMS	34.8	-18.2	1.28	50.85	-	-	-	-	3	396	V

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

AUTHORIZED BANDEDGE (MID CHANNEL)- APPLICABLE TO ISED ONLY

MID CHANNEL HORIZONTAL

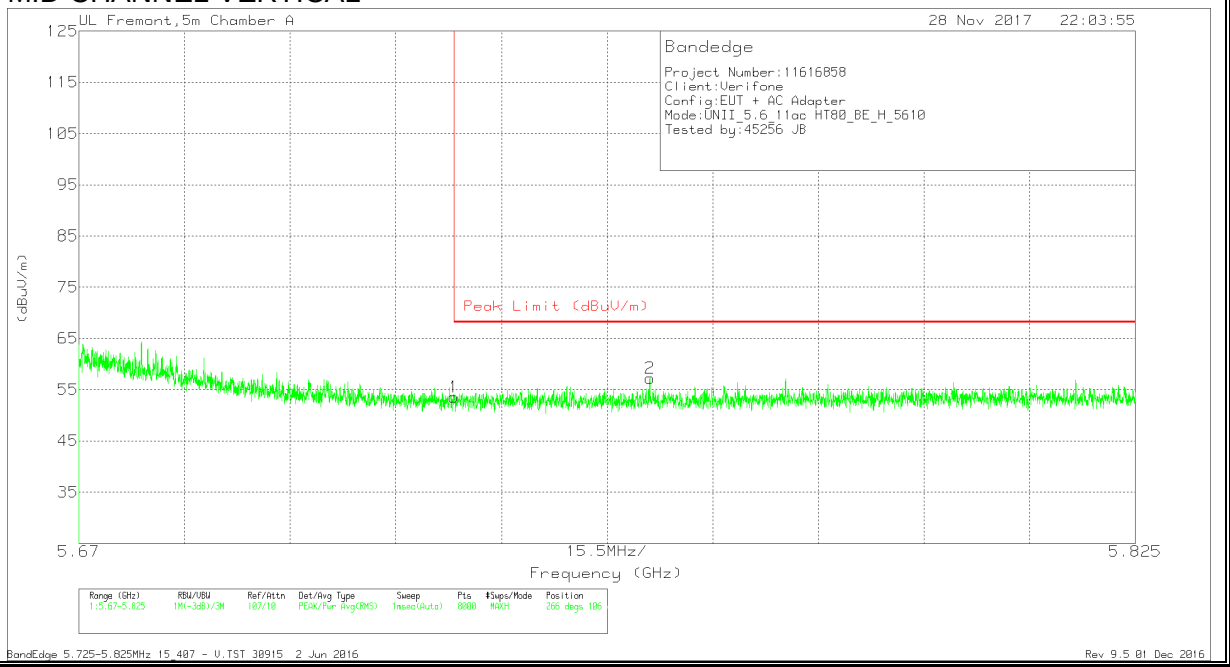


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	35.97	Pk	35	-18.4	0	52.57	68.2	-15.63	295	222	H
2	5.735	40.17	Pk	35	-18.3	0	56.87	68.2	-11.33	295	222	H

Pk - Peak detector

MID CHANNEL VERTICAL



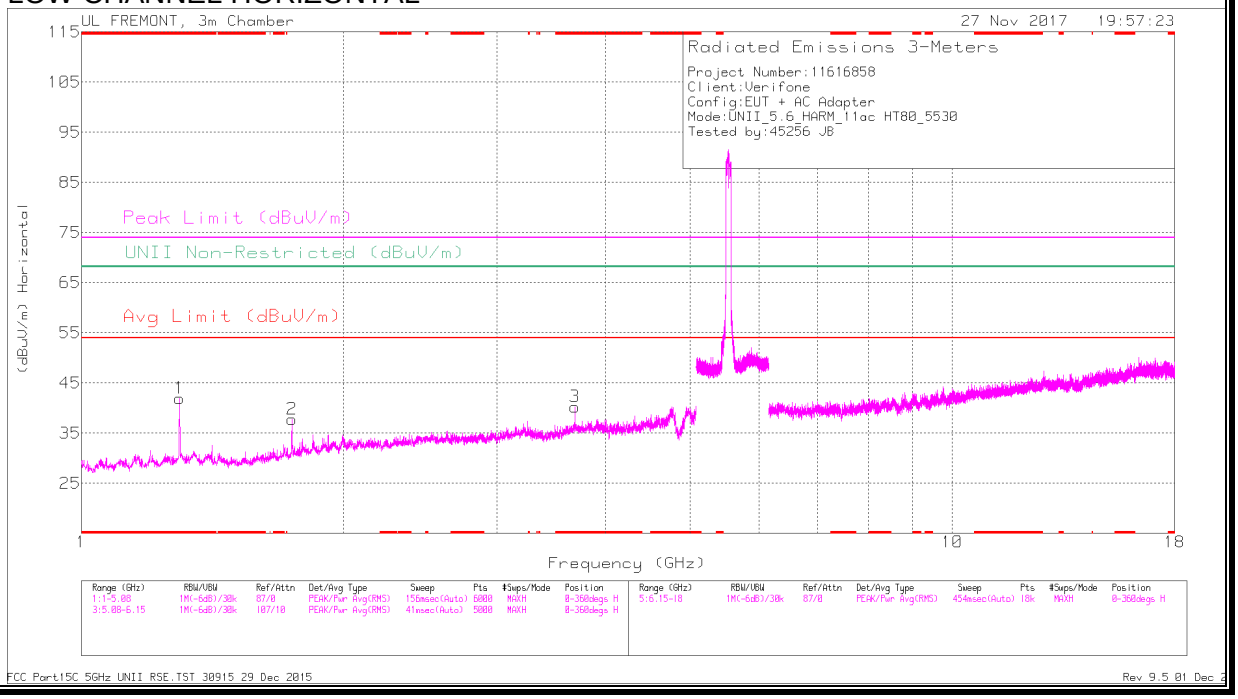
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	36.92	Pk	35	-18.4	0	53.52	68.2	-14.68	266	106	V
2	5.754	40.56	Pk	35	-18.3	0	57.26	68.2	-10.94	266	106	V

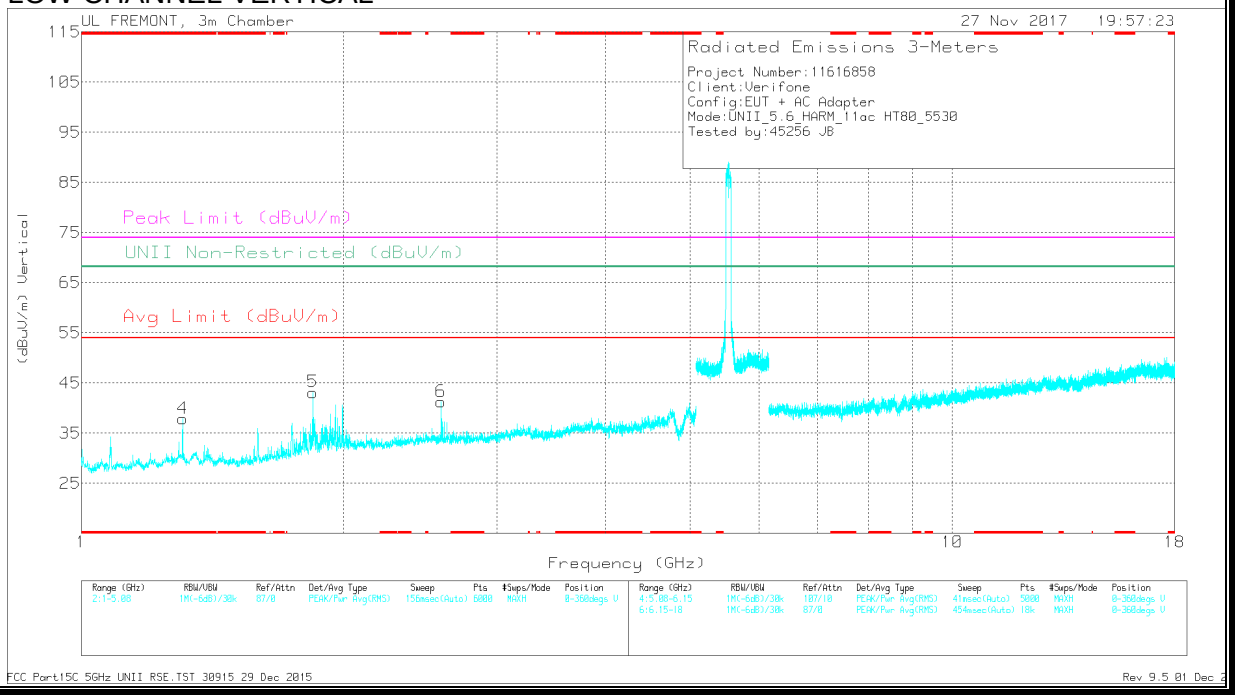
Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.296	52.5	PK-U	29.1	-31.9	0	49.7	-	-	74	-24.3	-	-	62	192	H
	* 1.297	29.87	ADR	29.1	-31.9	1.28	28.35	54	-25.65	-	-	-	-	62	192	H
3	* 3.687	42.16	PK-U	33.3	-28.8	0	46.66	-	-	74	-27.34	-	-	91	108	H
	* 3.687	34.79	ADR	33.3	-28.8	1.28	40.57	54	-13.43	-	-	-	-	91	108	H
4	* 1.305	40.35	PK-U	29.1	-31.9	0	37.55	-	-	74	-36.45	-	-	294	330	V
	* 1.305	28.46	ADR	29.1	-31.9	1.28	26.94	54	-27.06	-	-	-	-	294	330	V
2	1.744	40.94	PK-U	29.5	-32	0	38.44	-	-	-	-	68.2	-29.76	264	378	H
5	1.844	40.41	PK-U	30.4	-31	0	39.81	-	-	-	-	68.2	-28.39	308	113	V
6	2.591	51.34	PK-U	32.3	-30.6	0	53.04	-	-	-	-	68.2	-15.16	73	148	V

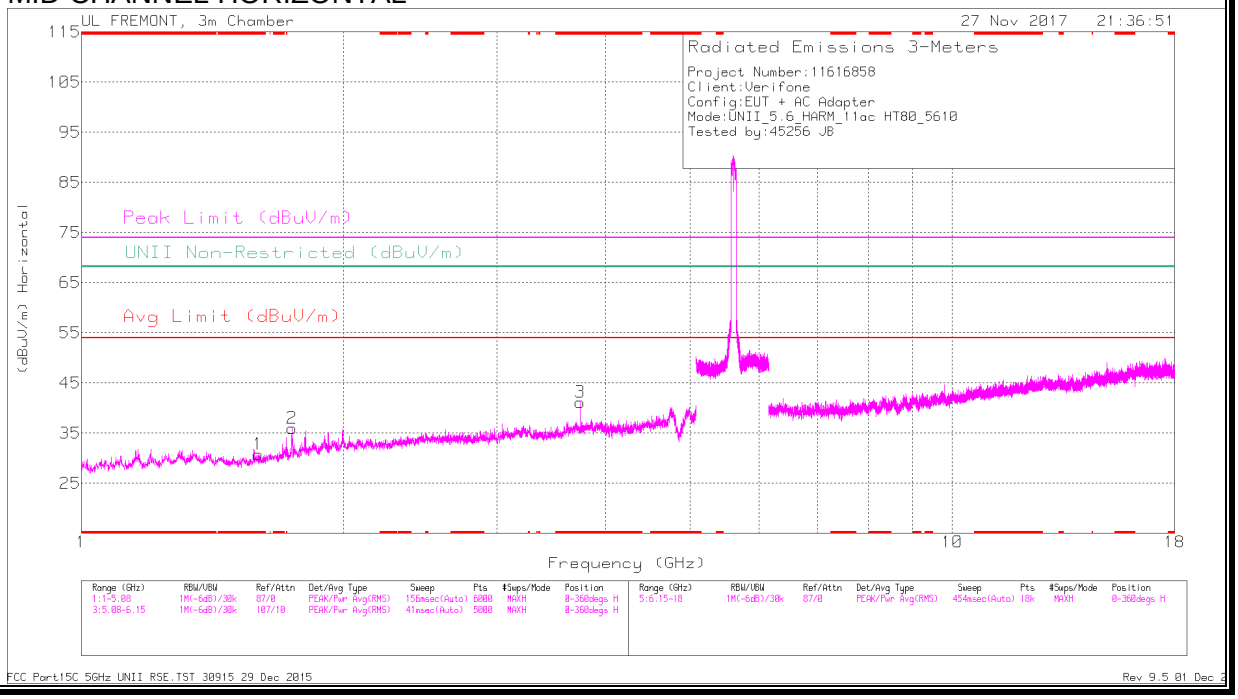
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK-U - U-NII: Maximum Peak

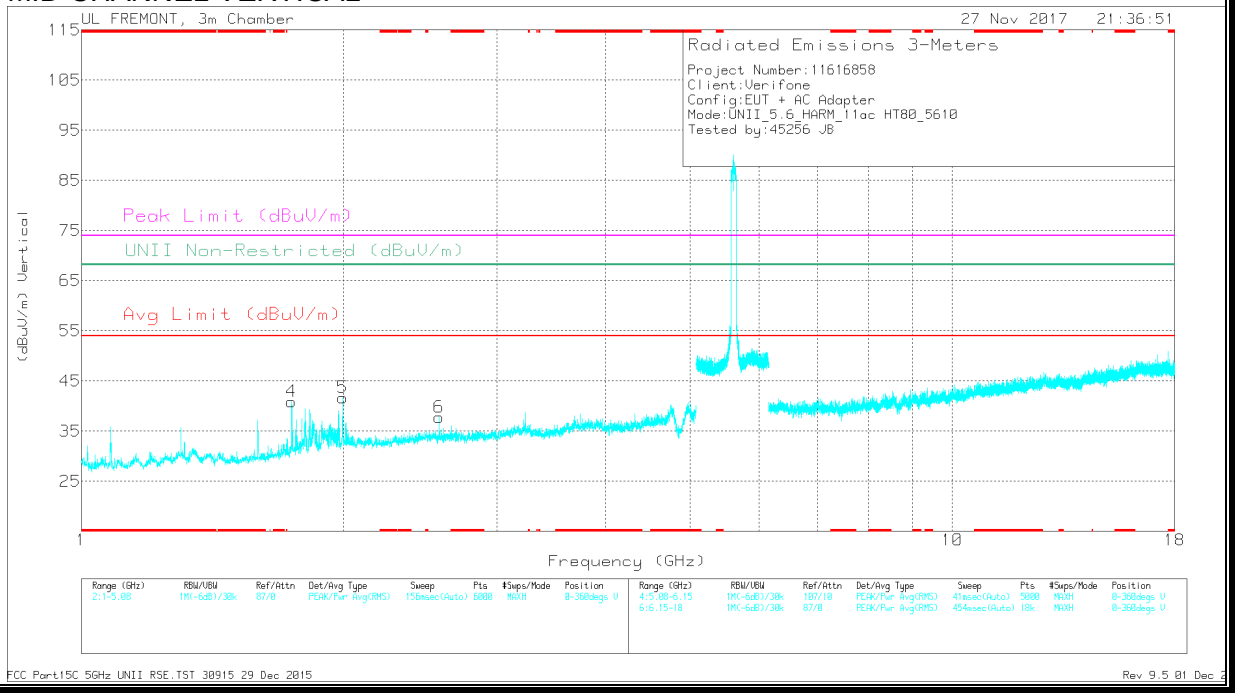
ADR - U-NII AD primary method, RMS average

APPLICABLE TO ISED ONLY

MID CHANNEL HORIZONTAL



MID CHANNEL VERTICAL



Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.595	45.01	PK-U	28.3	-31.1	0	42.21	-	-	74	-31.79	-	-	262	290	H
	* 1.596	28.24	ADR	28.3	-31.2	1.28	26.62	54	-27.38	-	-	-	-	262	290	H
3	* 3.74	42.6	PK-U	33.4	-29.3	0	46.7	-	-	74	-27.3	-	-	98	102	H
	* 3.74	35.93	ADR	33.4	-29.3	1.28	41.31	54	-12.69	-	-	-	-	98	102	H
4	1.744	51.6	PK-U	29.5	-32	0	49.1	-	-	-	-	68.2	-19.1	246	104	V
2	1.744	47.25	PK-U	29.5	-32	0	44.75	-	-	-	-	68.2	-23.45	7	138	H
5	1.995	50.69	PK-U	31.2	-31.7	0	50.19	-	-	-	-	68.2	-18.01	233	252	V
6	2.575	44.51	PK-U	32.3	-30.8	0	46.01	-	-	-	-	68.2	-22.19	243	145	V

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

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

8.5 5.8 GHz TEST RESULTS

LIMITS

§15.407 General technical requirements

(b) Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

(4) For transmitters operating in the 5.725-5.85 GHz band:

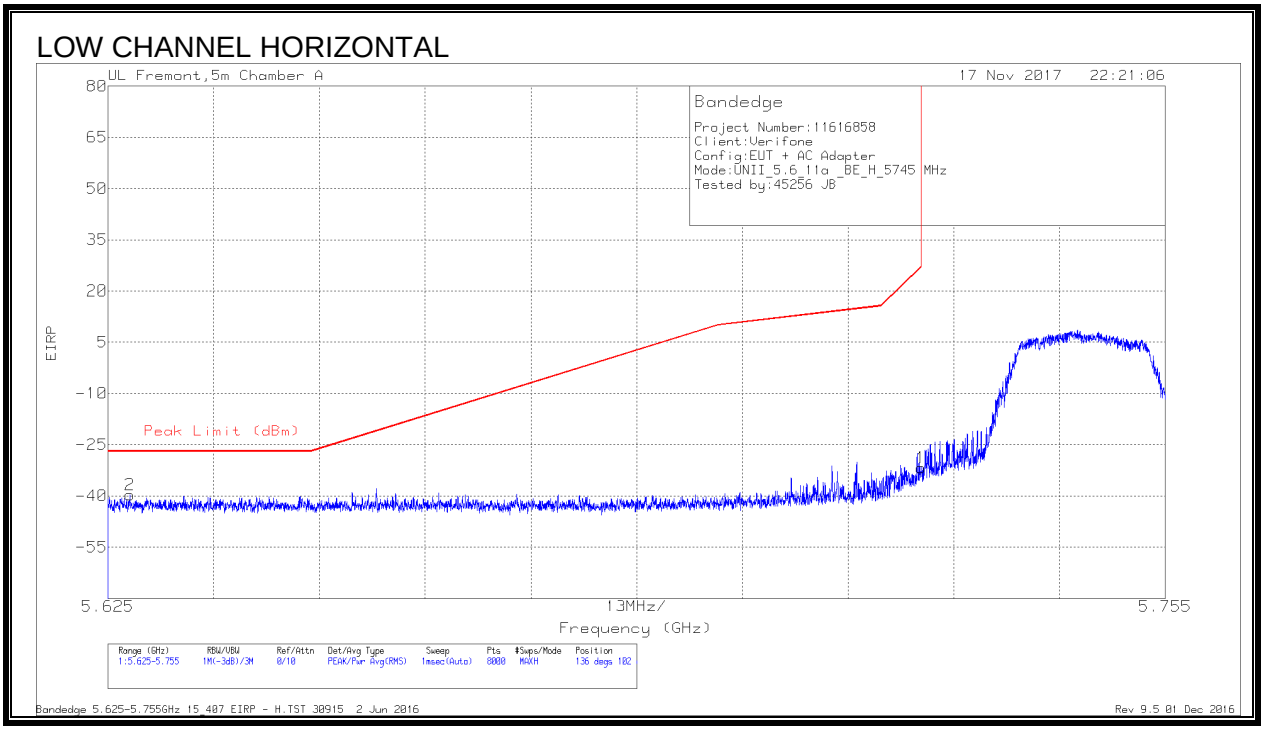
(i) All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

(7) The provisions of §15.205 apply to intentional radiators operating under this section.

8.5.1 802.11a MODE IN THE 5.8GHz BAND

BANDEDGE (LOW CHANNEL)

LOW CHANNEL HORIZONTAL

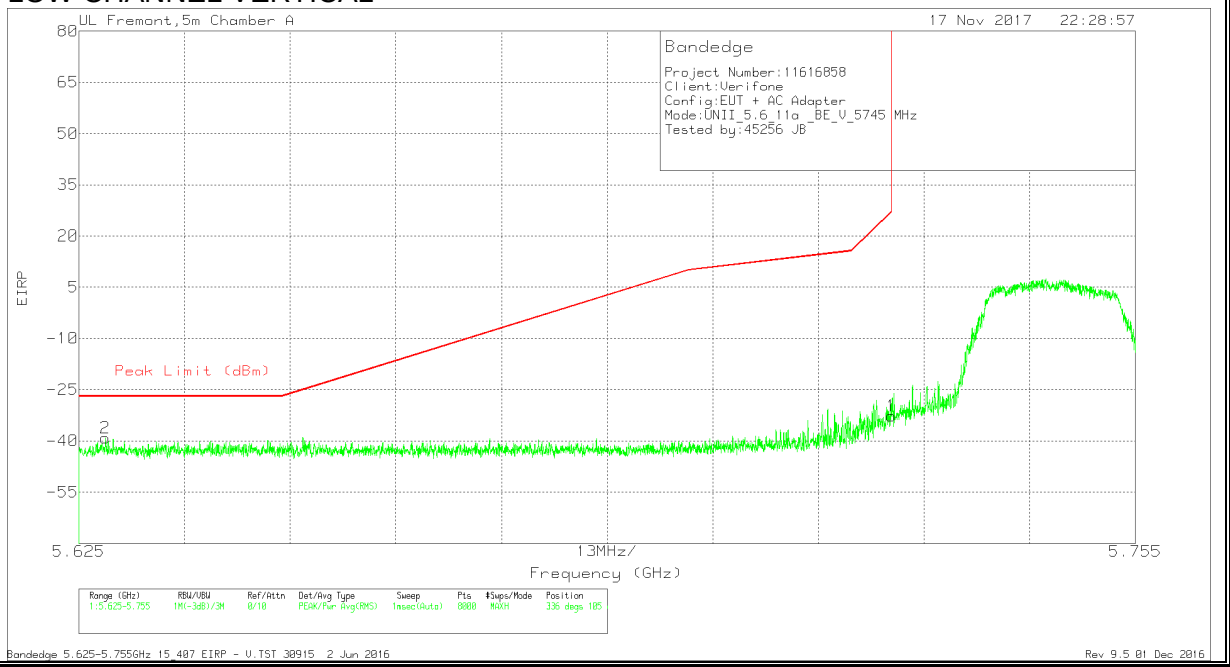


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.628	-68.18	Pk	35.1	-18.4	11.8	0	-39.68	-27	-12.68	136	102	H
1	5.725	-60.1	Pk	35	-18.4	11.8	0	-31.7	27	-58.7	136	102	H

Pk - Peak detector

LOW CHANNEL VERTICAL



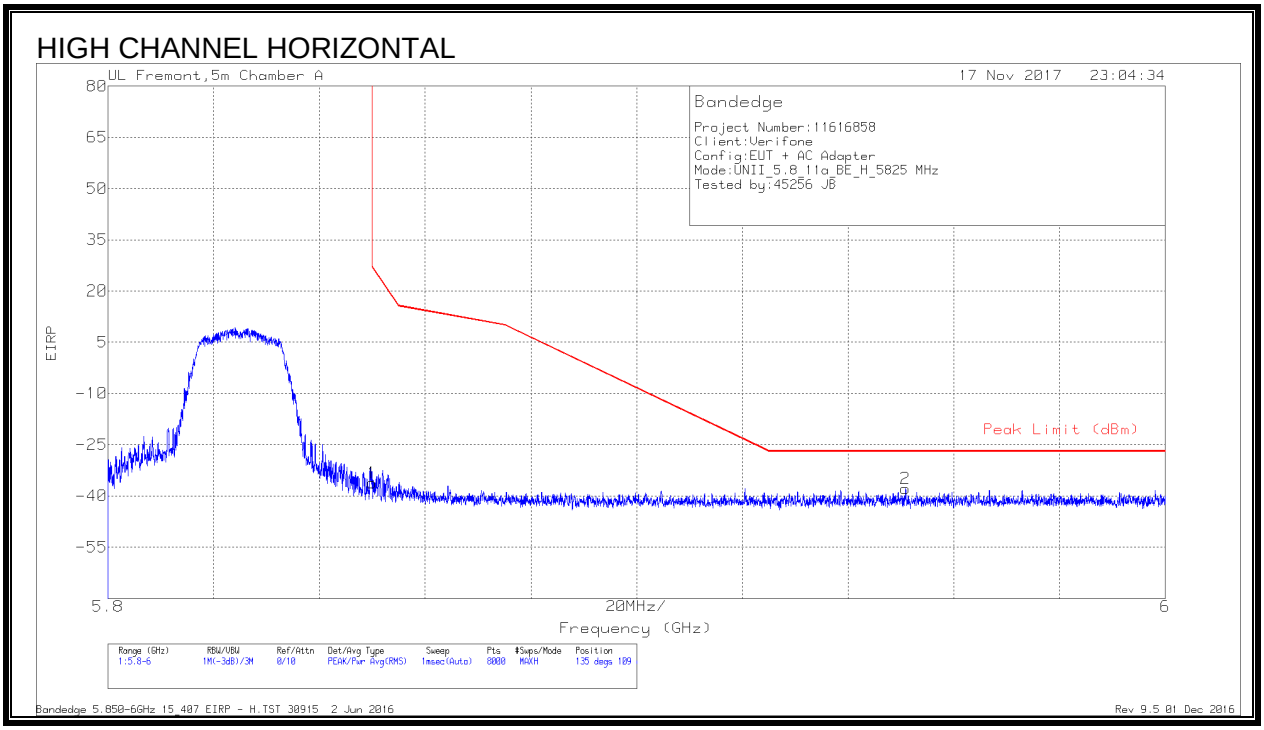
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.628	-67.6	Pk	35.1	-18.4	11.8	0	-39.1	-27	-12.1	336	105	V
1	5.725	-61.09	Pk	35	-18.4	11.8	0	-32.69	27	-59.69	336	105	V

Pk - Peak detector

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HIGH CHANNEL HORIZONTAL

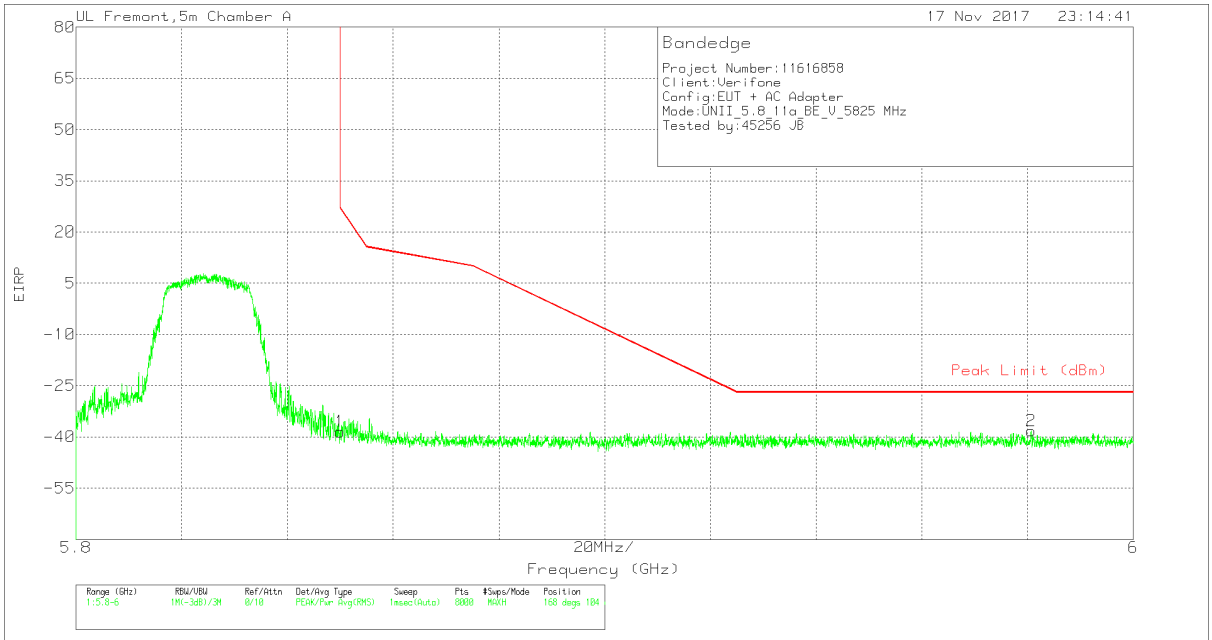


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/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	-64.95	Pk	35.1	-18.1	11.8	0	-36.15	26.99	-63.14	135	109	H
2	5.951	-67.12	Pk	35.3	-17.9	11.8	0	-37.92	-27	-10.92	135	109	H

Pk - Peak detector

HIGH CHANNEL VERTICAL



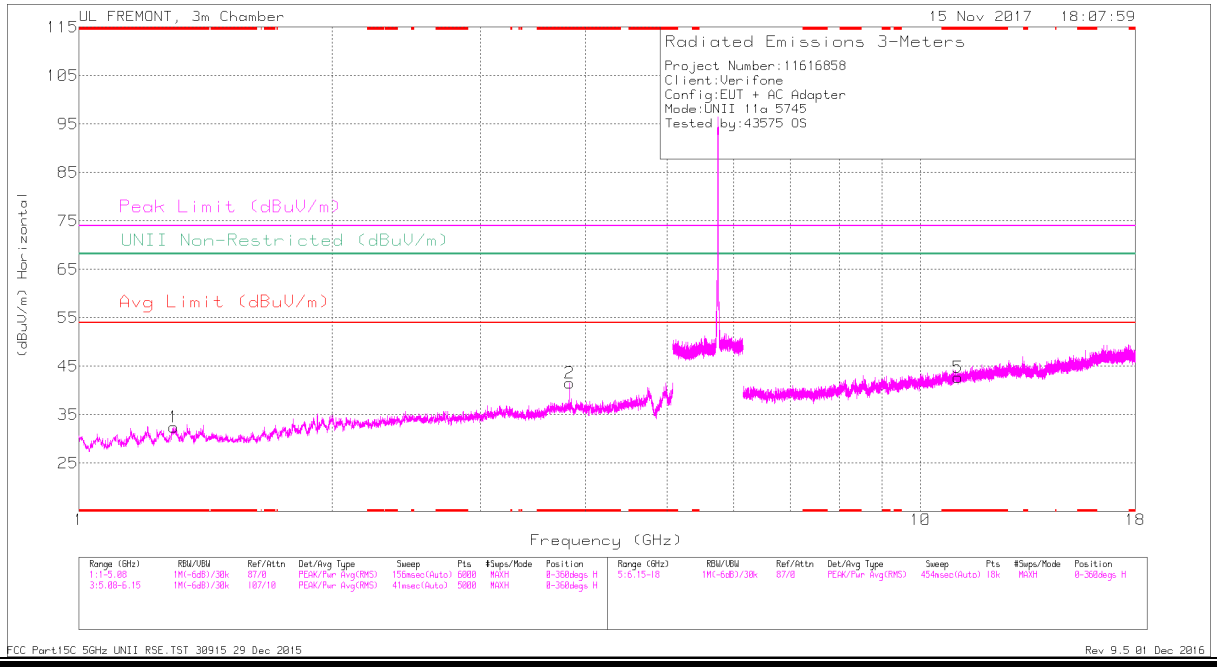
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/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	-67.29	Pk	35.1	-18.1	11.8	0	-38.49	26.99	-65.48	168	104	V
2	5.981	-67.54	Pk	35.3	-17.7	11.8	0	-38.14	-27	-11.14	168	104	V

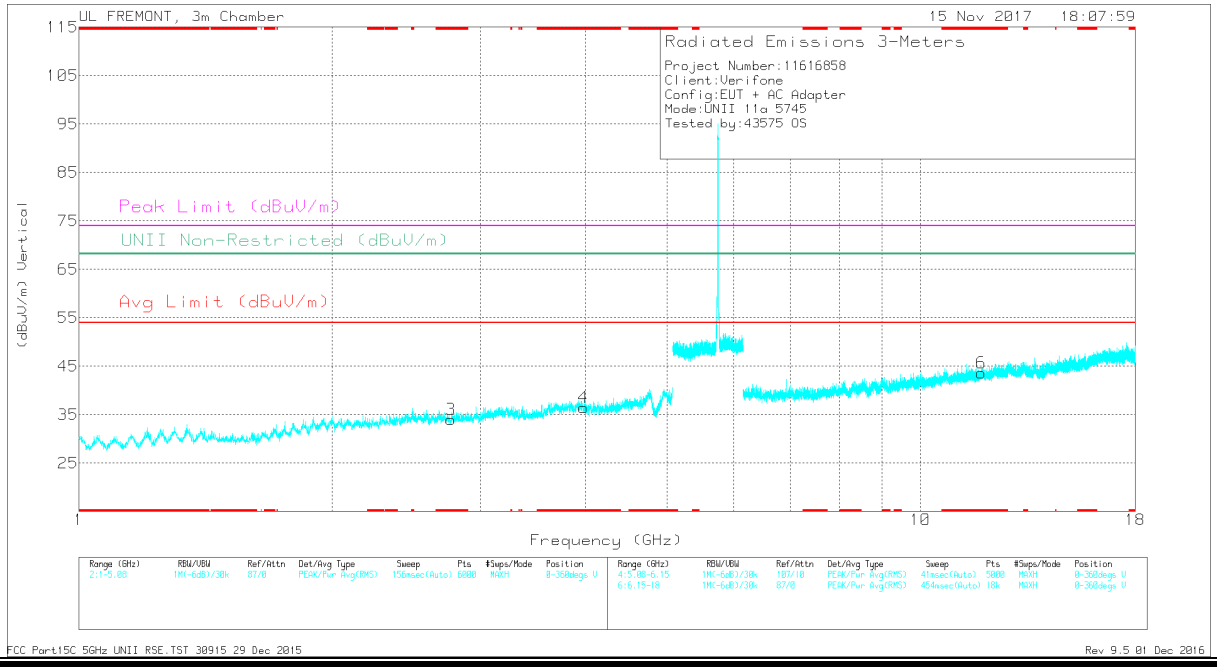
Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



Radiated Emissions

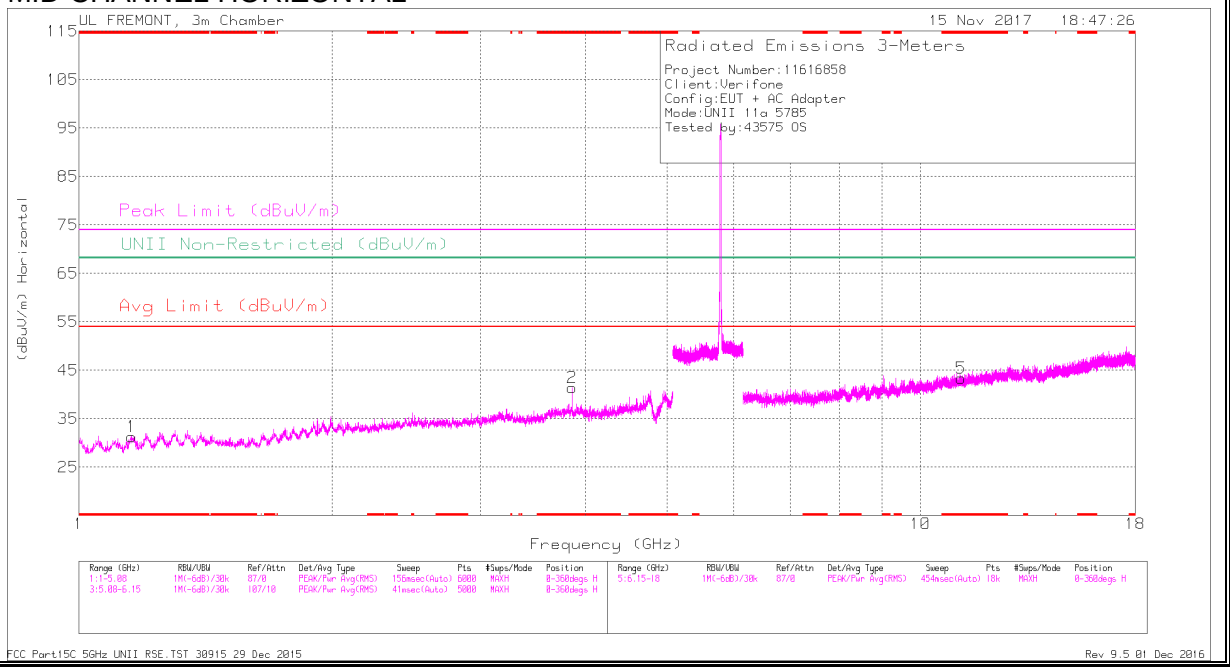
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.297	42.37	PK-U	29.1	-31.9	0	39.57	-	-	74	-34.43	-	-	318	194	H
	* 1.295	30.16	ADR	29.1	-31.9	.31	27.67	54	-26.33	-	-	-	-	318	194	H
2	* 3.83	43.37	PK-U	33.4	-29.5	0	47.27	-	-	74	-26.73	-	-	115	182	H
	* 3.83	36.75	ADR	33.4	-29.5	.31	40.96	54	-13.04	-	-	-	-	115	182	H
3	* 2.764	38.93	PK-U	32.4	-30.5	0	40.83	-	-	74	-33.17	-	-	186	299	V
	* 2.764	27.33	ADR	32.4	-30.6	.31	29.44	54	-24.56	-	-	-	-	186	299	V
4	* 3.976	39.15	PK-U	33.5	-29.8	0	42.85	-	-	74	-31.15	-	-	253	321	V
	* 3.974	27.58	ADR	33.5	-29.7	.31	31.69	54	-22.31	-	-	-	-	253	321	V
5	* 11.082	34.08	PK-U	37.7	-22.3	0	49.48	-	-	74	-24.52	-	-	274	195	H
	* 11.083	21.64	ADR	37.7	-22.3	.31	37.35	54	-16.65	-	-	-	-	274	195	H
6	* 11.81	34.14	PK-U	38.5	-22.1	0	50.54	-	-	74	-23.46	-	-	306	397	V
	* 11.811	21.84	ADR	38.5	-22.1	.31	38.55	54	-15.45	-	-	-	-	306	397	V

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

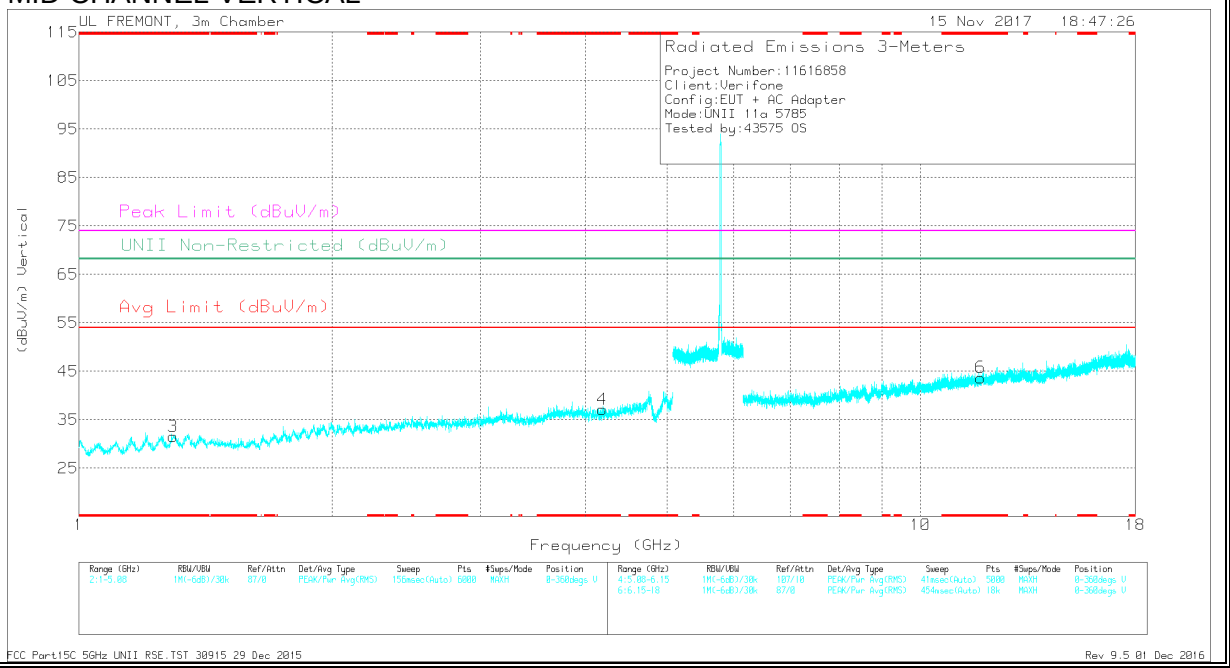
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

MID CHANNEL HORIZONTAL



MID CHANNEL VERTICAL



Radiated Emissions

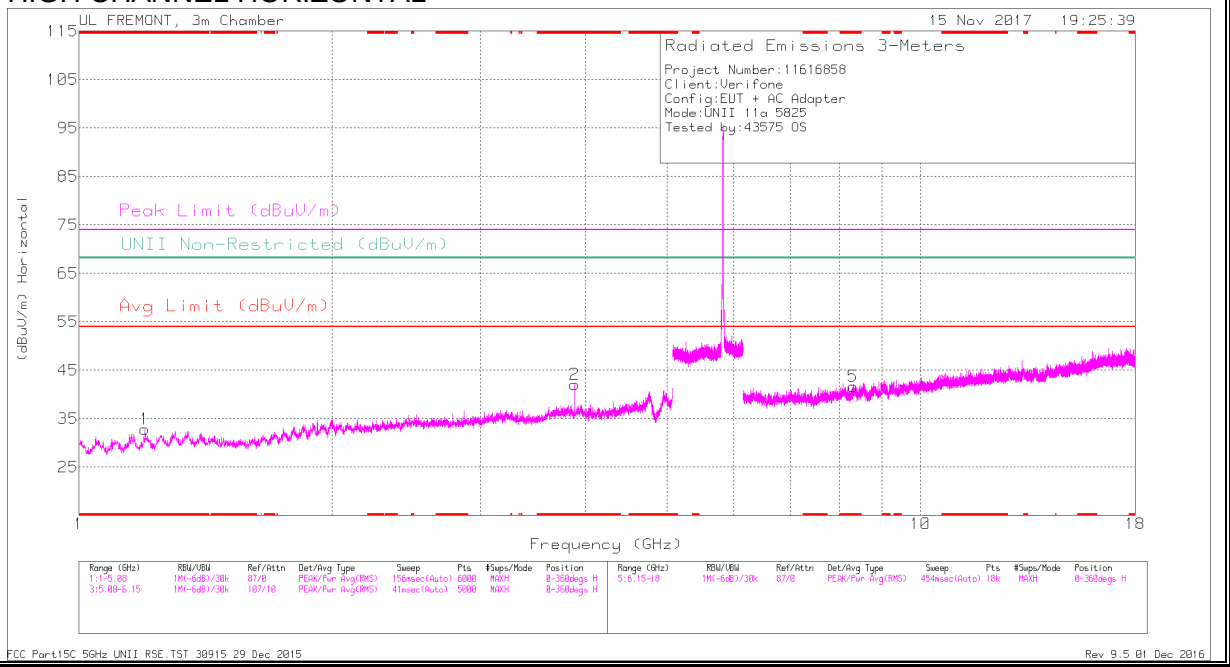
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.155	44.14	PK-U	27.8	-32.4	0	39.54	-	-	74	-34.46	-	-	269	132	H
	* 1.155	32.56	ADR	27.8	-32.4	.31	28.27	54	-25.73	-	-	-	-	269	132	H
2	* 3.857	43.45	PK-U	33.4	-29.6	0	47.25	-	-	74	-26.75	-	-	114	152	H
	* 3.857	36.98	ADR	33.4	-29.6	.31	41.09	54	-12.91	-	-	-	-	114	152	H
3	* 1.295	41.72	PK-U	29.1	-31.9	0	38.92	-	-	74	-35.08	-	-	329	150	V
	* 1.294	29.9	ADR	29.1	-31.9	.31	27.41	54	-26.59	-	-	-	-	329	150	V
4	* 4.191	40.04	PK-U	33.3	-29.7	0	43.64	-	-	74	-30.36	-	-	47	159	V
	* 4.19	27.88	ADR	33.3	-29.7	.31	31.79	54	-22.21	-	-	-	-	47	159	V
5	* 11.179	33.88	PK-U	37.8	-21.7	0	49.98	-	-	74	-24.02	-	-	144	396	H
	* 11.18	21.43	ADR	37.8	-21.7	.31	37.84	54	-16.16	-	-	-	-	144	396	H
6	* 11.788	34.51	PK-U	38.5	-22.4	0	50.61	-	-	74	-23.39	-	-	6	159	V
	* 11.787	22.03	ADR	38.5	-22.4	.31	38.44	54	-15.56	-	-	-	-	6	159	V

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

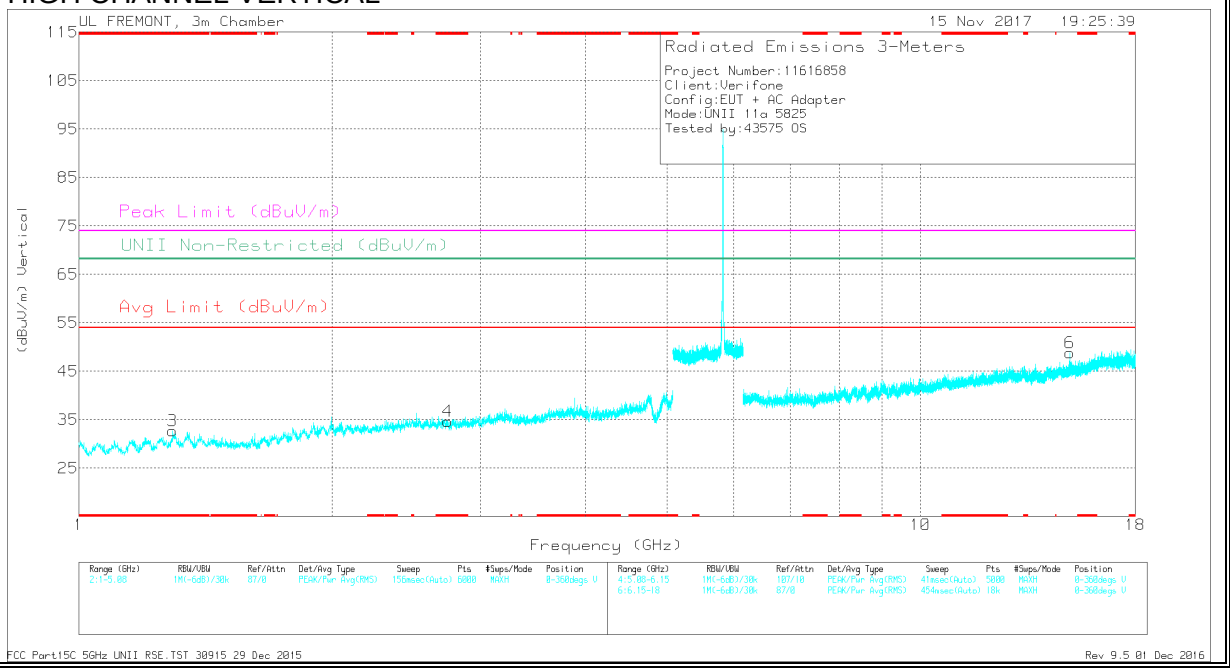
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.197	43.73	PK-U	28.1	-32.5	0	39.33	-	-	74	-34.67	-	-	93	127	H
	* 1.199	31.47	ADR	28.1	-32.5	.31	27.38	54	-26.62	-	-	-	-	93	127	H
2	* 3.883	43.8	PK-U	33.4	-29.1	0	48.1	-	-	74	-25.9	-	-	118	141	H
	* 3.883	37.72	ADR	33.4	-29.1	.31	42.33	54	-11.67	-	-	-	-	118	141	H
3	* 1.291	41.44	PK-U	29	-32	0	38.44	-	-	74	-35.56	-	-	289	154	V
	* 1.294	29.87	ADR	29.1	-32	.31	27.28	54	-26.72	-	-	-	-	289	154	V
4	* 2.745	40.48	PK-U	32.4	-30.6	0	42.28	-	-	74	-31.72	-	-	244	392	V
	* 2.744	27.83	ADR	32.4	-30.6	.31	29.94	54	-24.06	-	-	-	-	244	392	V
5	* 8.312	35.47	PK-U	35.8	-23.3	0	47.97	-	-	74	-26.03	-	-	242	145	H
	* 8.313	23.03	ADR	35.8	-23.3	.31	35.84	54	-18.16	-	-	-	-	242	145	H
6	15.059	35.96	PK-U	39.7	-21.6	0	54.06	-	-	-	-	68.2	-14.14	345	384	V

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

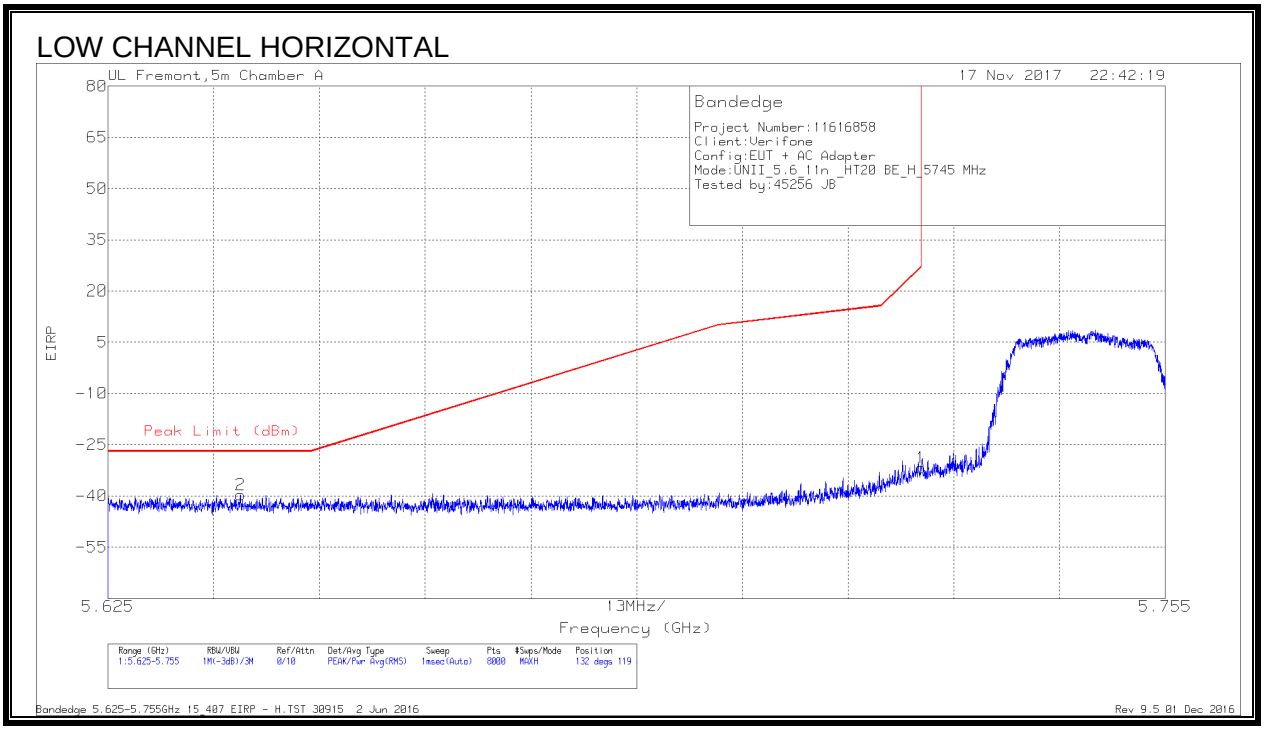
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

8.5.2 802.11n HT20 MODE IN THE 5.8GHz BAND

BANDEDGE (LOW CHANNEL)

LOW CHANNEL HORIZONTAL

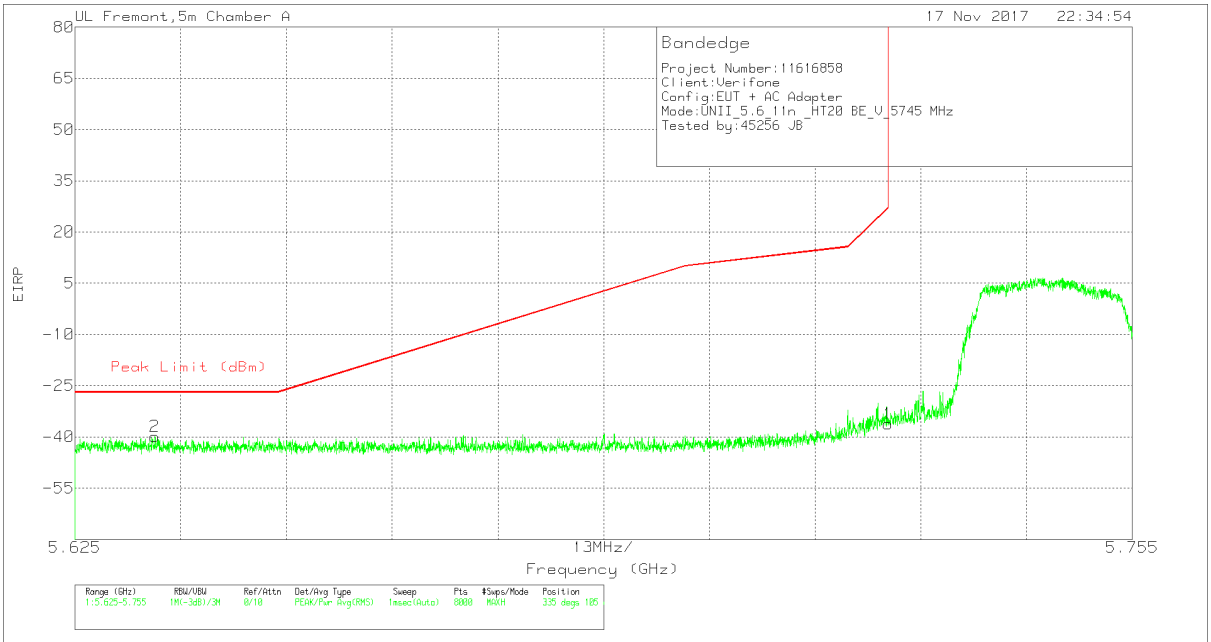


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.641	-68.14	Pk	35.1	-18.5	11.8	0	-39.74	-27	-12.74	132	119	H
1	5.725	-60.18	Pk	35	-18.4	11.8	0	-31.78	27	-58.78	132	119	H

Pk - Peak detector

LOW CHANNEL VERTICAL



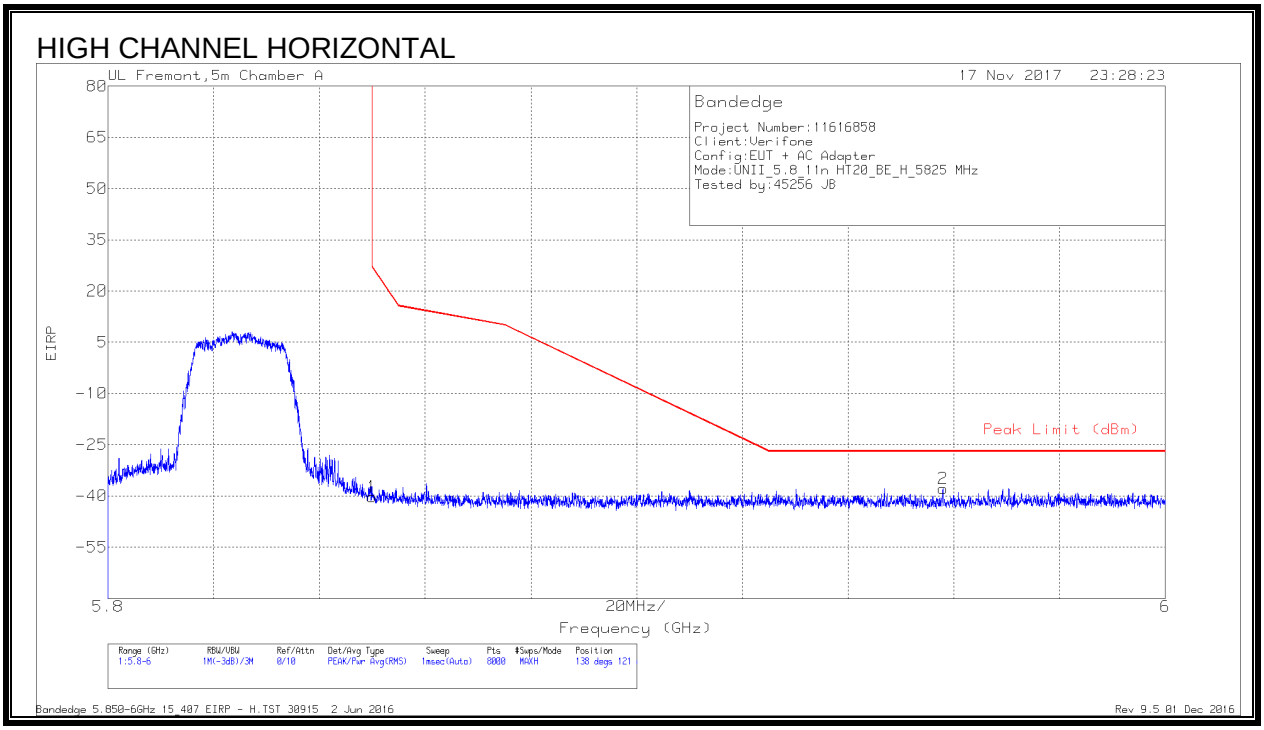
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.635	-68.31	Pk	35.1	-18.5	11.8	0	-39.91	-27	-12.91	335	105	V
1	5.725	-64.67	Pk	35	-18.4	11.8	0	-36.27	27	-63.27	335	105	V

Pk - Peak detector

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HIGH CHANNEL HORIZONTAL

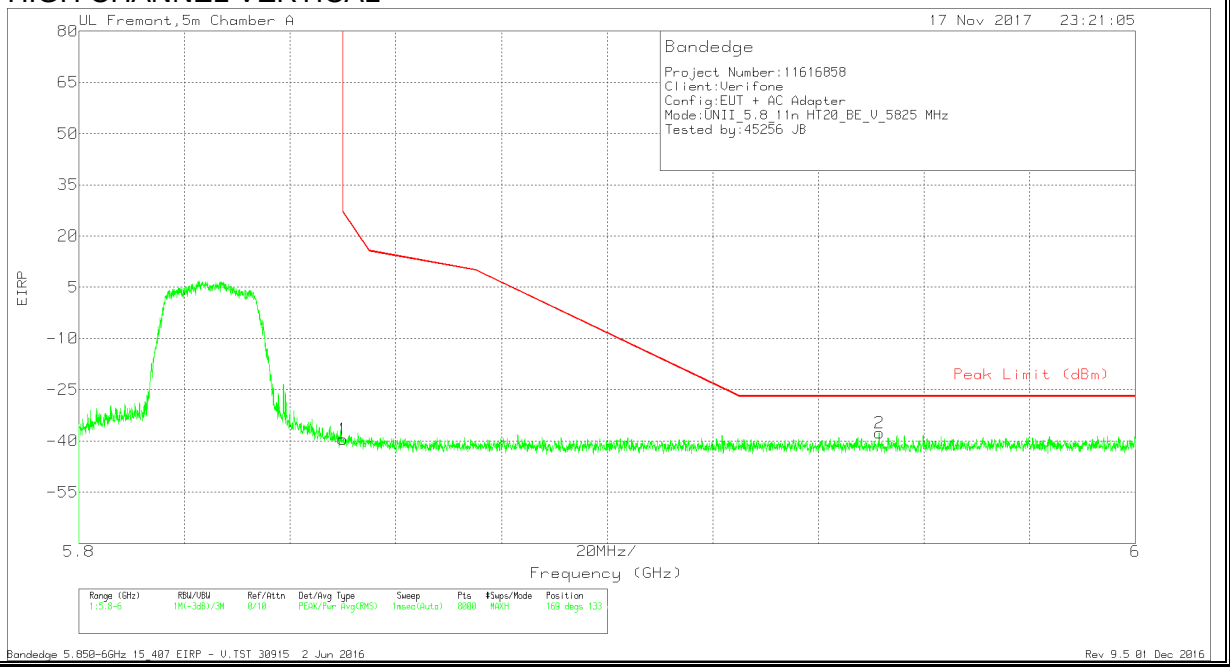


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/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	-69.05	Pk	35.1	-18.1	11.8	0	-40.25	26.99	-67.24	138	121	H
2	5.958	-67	Pk	35.3	-17.9	11.8	0	-37.8	-27	-10.8	138	121	H

Pk - Peak detector

HIGH CHANNEL VERTICAL



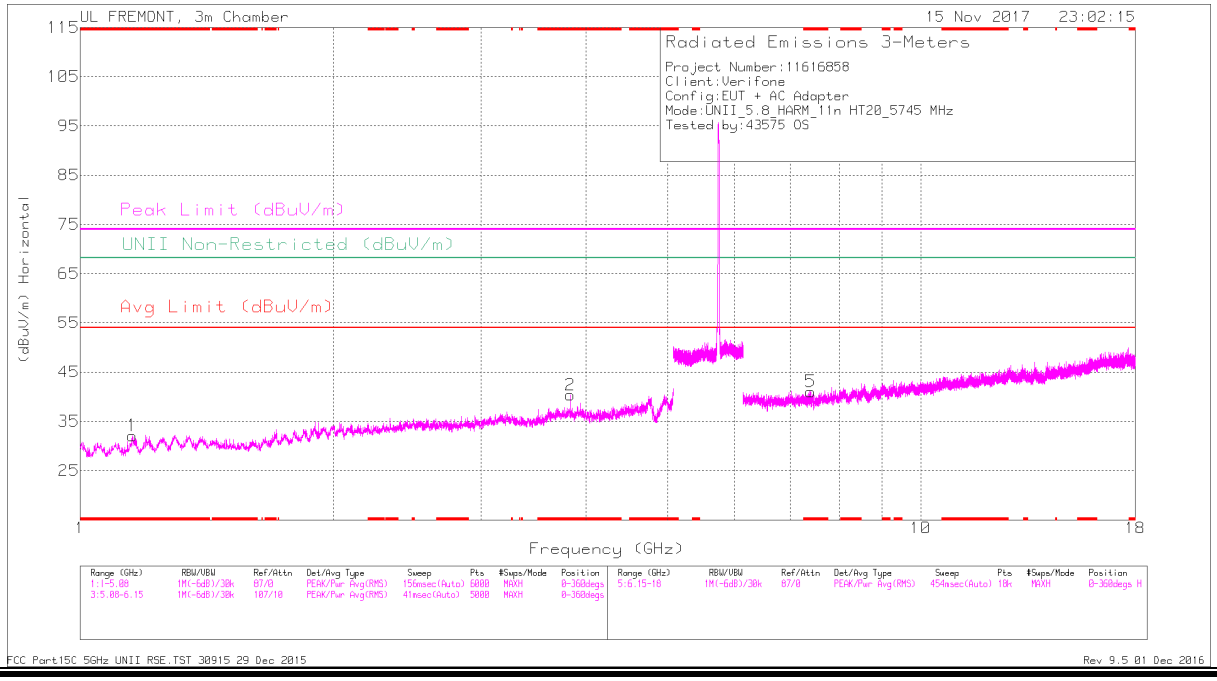
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/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	-68.26	Pk	35.1	-18.1	11.8	0	-39.46	26.99	-66.45	169	133	V
2	5.952	-66.85	Pk	35.3	-17.9	11.8	0	-37.65	-27	-10.65	169	133	V

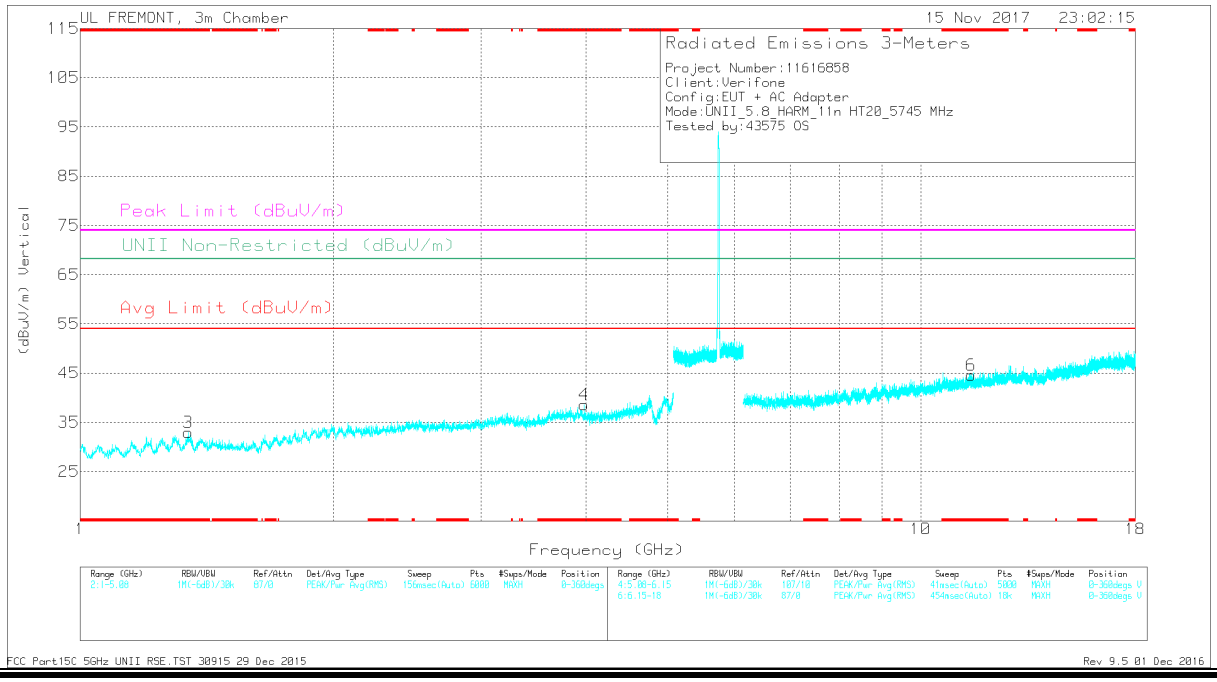
Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



Radiated Emissions

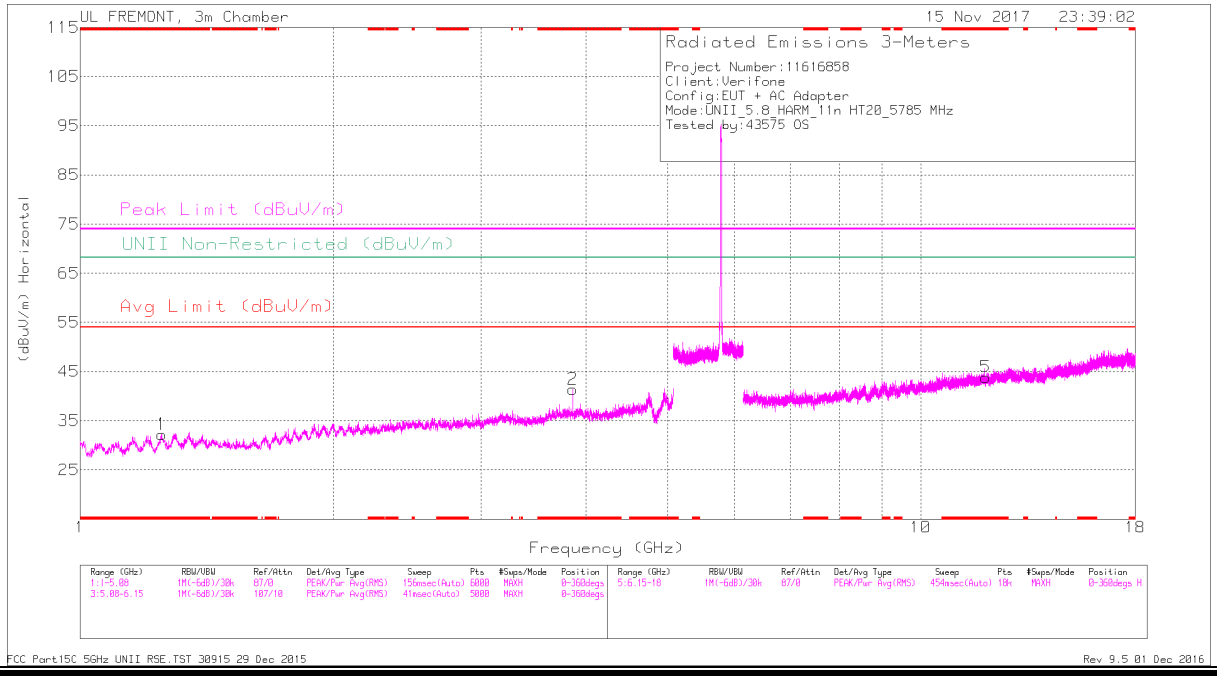
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.155	43.65	PK-U	27.8	-32.4	0	39.05	-	-	74	-34.95	-	-	234	356	H
	* 1.153	31.83	ADR	27.8	-32.3	.32	27.65	54	-26.35	-	-	-	-	234	356	H
2	* 3.83	43.55	PK-U	33.4	-29.5	0	47.45	-	-	74	-26.55	-	-	116	181	H
	* 3.83	35.91	ADR	33.4	-29.5	.32	40.13	54	-13.87	-	-	-	-	116	181	H
3	* 1.347	41.58	PK-U	29	-31.6	0	38.98	-	-	74	-35.02	-	-	253	100	V
	* 1.346	29.64	ADR	29	-31.6	.32	27.36	54	-26.64	-	-	-	-	253	100	V
4	* 3.974	39.62	PK-U	33.5	-29.7	0	43.42	-	-	74	-30.58	-	-	54	205	V
	* 3.975	27.58	ADR	33.5	-29.8	.32	31.6	54	-22.4	-	-	-	-	54	205	V
5	* 7.397	36.35	PK-U	35.5	-25.3	0	46.55	-	-	74	-27.45	-	-	337	176	H
	* 7.395	24.33	ADR	35.5	-25.2	.32	34.95	54	-19.05	-	-	-	-	337	176	H
6	* 11.484	36.2	PK-U	38.1	-22.1	0	52.2	-	-	74	-21.8	-	-	14	214	V
	* 11.484	23.53	ADR	38.1	-22.1	.32	39.85	54	-14.15	-	-	-	-	14	214	V

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

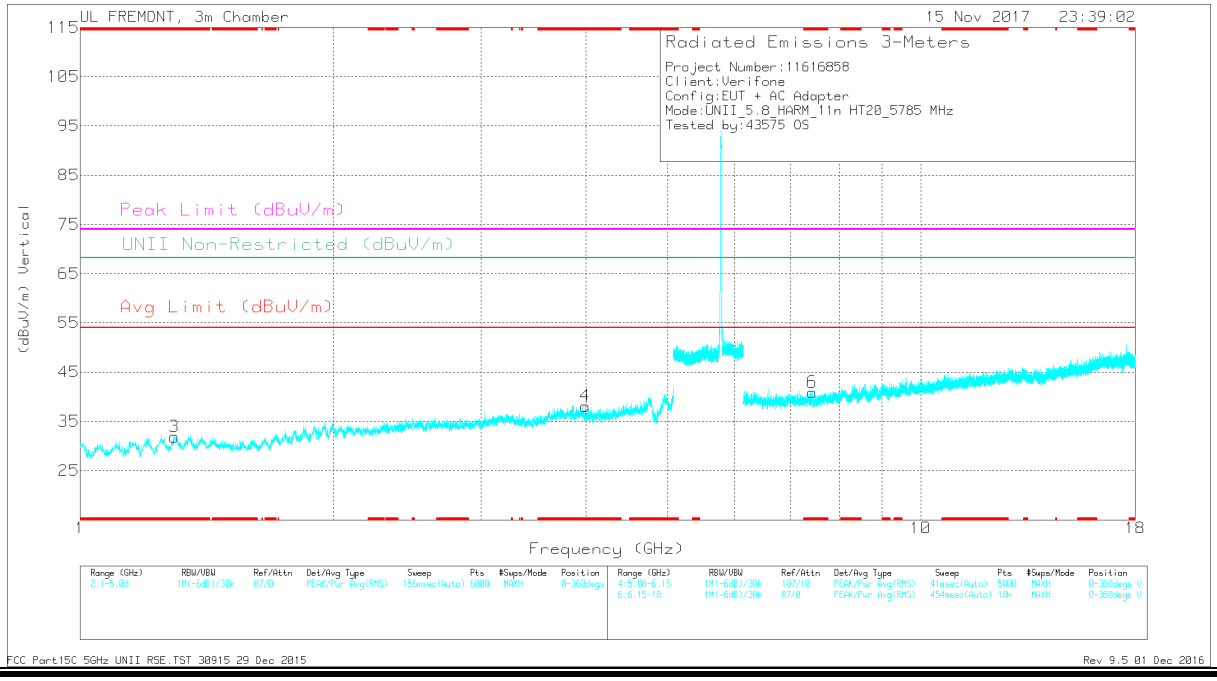
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

MID CHANNEL HORIZONTAL



MID CHANNEL VERTICAL



Radiated Emissions

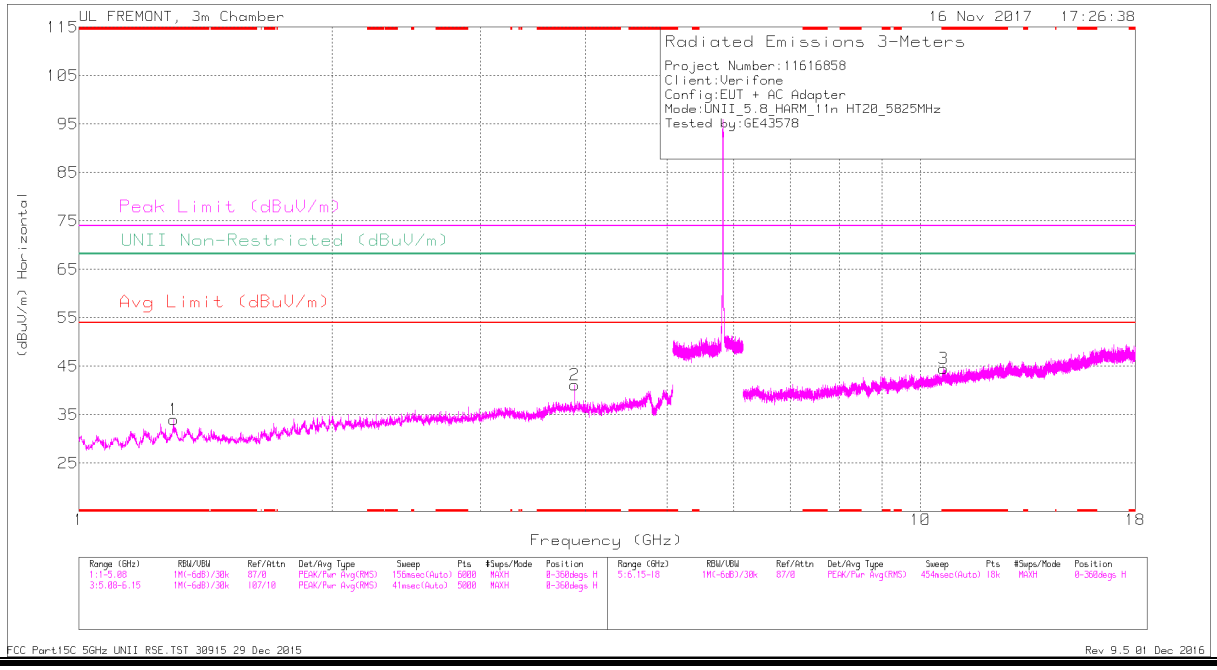
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.251	43.45	PK-U	28.6	-32.4	0	39.65	-	-	74	-34.35	-	-	275	157	H
	* 1.25	30.93	ADR	28.6	-32.4	.32	27.45	54	-26.55	-	-	-	-	275	157	H
2	* 3.857	43.62	PK-U	33.4	-29.6	0	47.42	-	-	74	-26.58	-	-	117	182	H
	* 3.857	36.9	ADR	33.4	-29.6	.32	41.02	54	-12.98	-	-	-	-	117	182	H
3	* 1.294	42	PK-U	29.1	-31.9	0	39.2	-	-	74	-34.8	-	-	175	156	V
	* 1.296	29.83	ADR	29.1	-31.9	.32	27.35	54	-26.65	-	-	-	-	175	156	V
4	* 3.991	39.66	PK-U	33.5	-29.7	0	43.46	-	-	74	-30.54	-	-	87	183	V
	* 3.993	27.79	ADR	33.5	-29.7	.32	31.91	54	-22.09	-	-	-	-	87	183	V
5	* 11.948	35.36	PK-U	38.6	-22.7	0	51.26	-	-	74	-22.74	-	-	326	100	H
	* 11.946	22.01	ADR	38.6	-22.8	.32	38.13	54	-15.87	-	-	-	-	326	100	H
6	* 7.436	37.87	PK-U	35.5	-25.6	0	47.77	-	-	74	-26.23	-	-	146	107	V
	* 7.433	24.2	ADR	35.5	-25.6	.32	34.42	54	-19.58	-	-	-	-	146	107	V

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

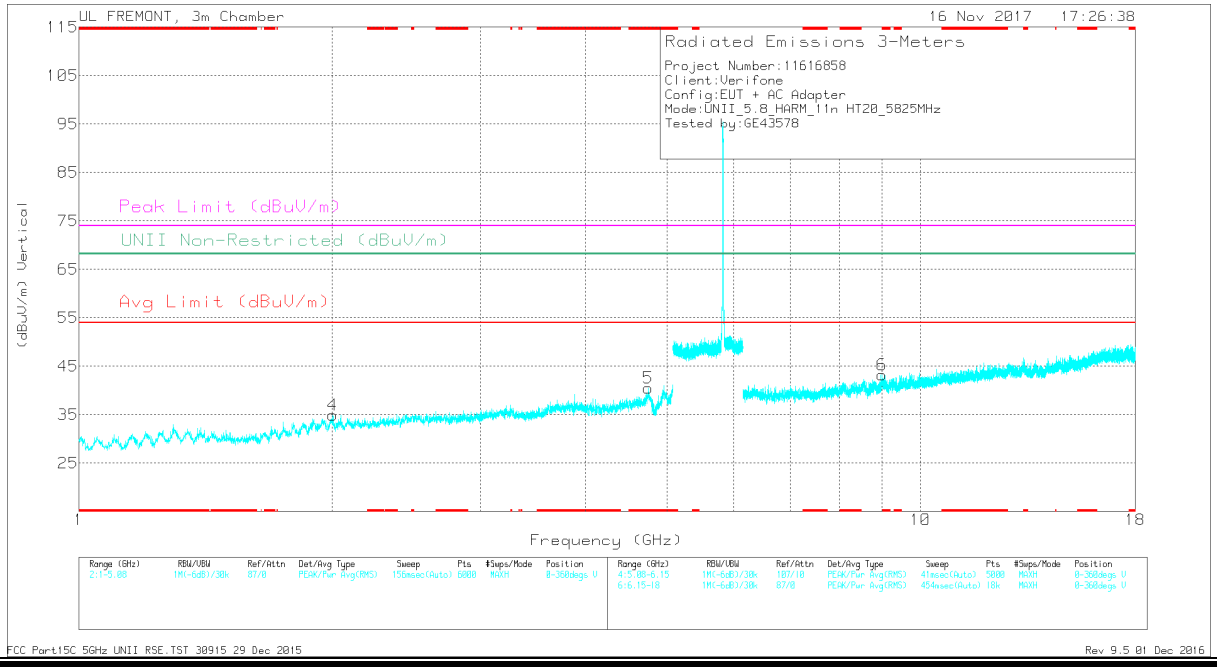
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.297	42.66	PK-U	29.1	-31.9	0	39.86	-	-	74	-34.14	-	-	296	100	H
	* 1.297	30.58	ADR	29.1	-31.9	.32	28.1	54	-25.9	-	-	-	-	296	100	H
2	* 3.883	42.52	PK-U	33.4	-29.1	0	46.82	-	-	74	-27.18	-	-	150	109	H
	* 3.883	34.63	ADR	33.4	-29.1	.32	39.25	54	-14.75	-	-	-	-	150	109	H
5	* 4.744	42.29	PK-U	34	-28.1	0	48.19	-	-	74	-25.81	-	-	187	200	V
	* 4.746	28.89	ADR	34	-28	.32	35.21	54	-18.79	-	-	-	-	187	200	V
3	* 10.646	34.76	PK-U	37.8	-21.8	0	50.76	-	-	74	-23.24	-	-	217	200	H
	* 10.647	21.37	ADR	37.8	-21.8	.32	37.69	54	-16.31	-	-	-	-	217	200	H
6	* 9.002	36.1	PK-U	36.1	-21.9	0	50.3	-	-	74	-23.7	-	-	0	100	V
	* 9.002	22.47	ADR	36.1	-21.9	.32	36.99	54	-17.01	-	-	-	-	0	100	V
4	2.004	46.44	PK-U	31.2	-31.7	0	45.94	-	-	-	-	68.2	-22.26	313	200	V

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

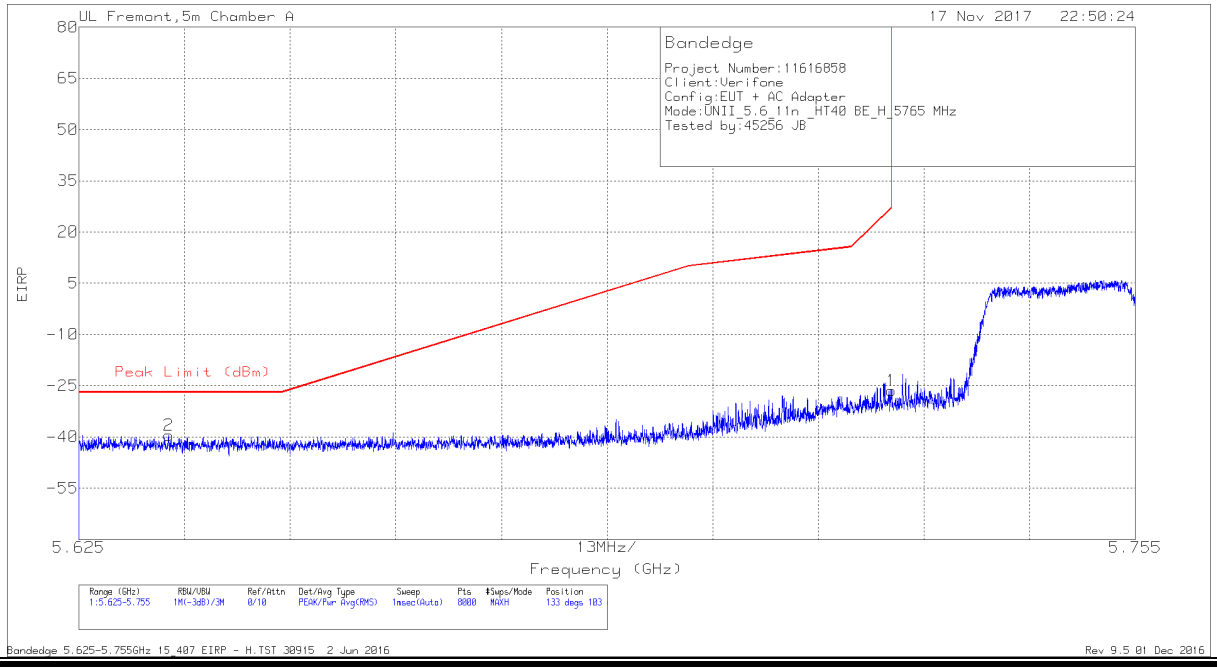
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

8.5.3 802.11n HT40 MODE IN THE 5.8GHz BAND

BANDEDGE (LOW CHANNEL)

LOW CHANNEL HORIZONTAL

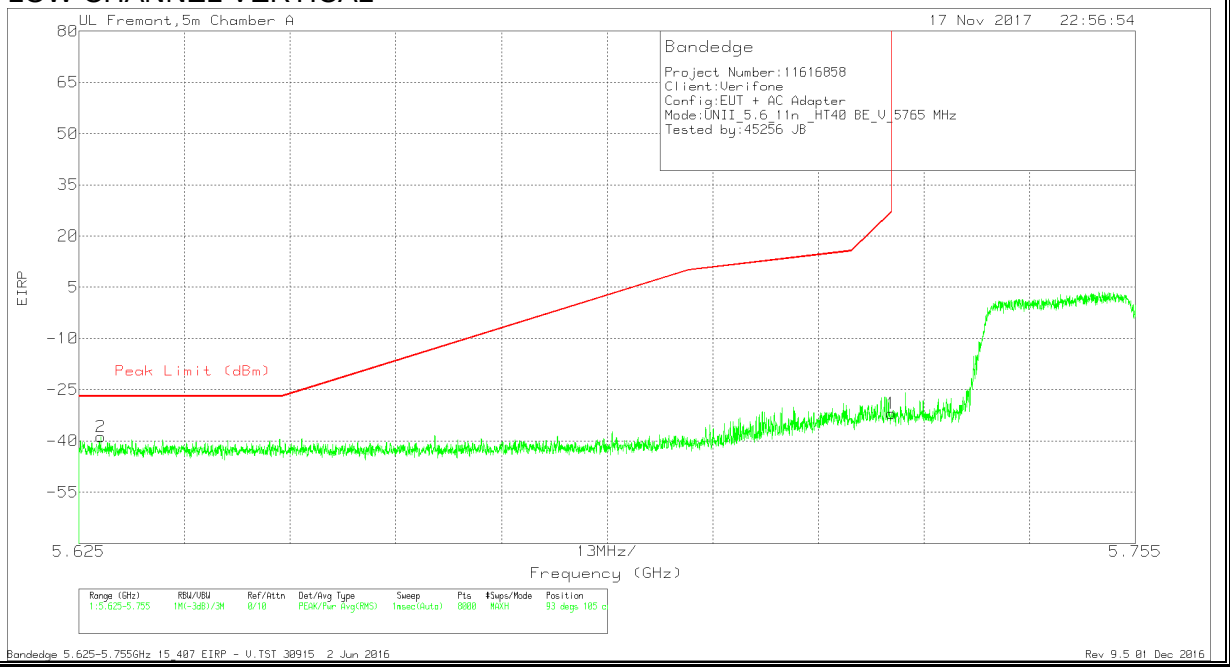


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.636	-67.91	Pk	35.1	-18.5	11.8	0	-39.51	-27	-12.51	133	103	H
1	5.725	-54.78	Pk	35	-18.4	11.8	0	-26.38	27	-53.38	133	103	H

Pk - Peak detector

LOW CHANNEL VERTICAL



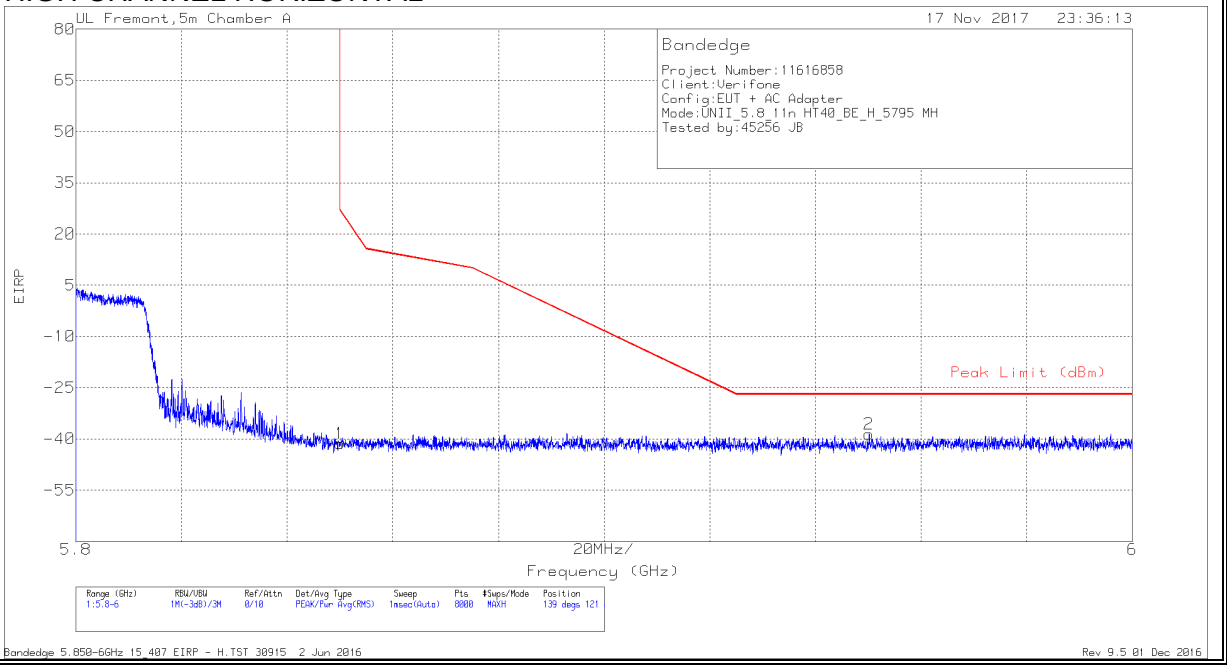
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.628	-67.29	Pk	35.1	-18.4	11.8	0	-38.79	-27	-11.79	93	105	V
1	5.725	-60.4	Pk	35	-18.4	11.8	0	-32	27	-59	93	105	V

Pk - Peak detector

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HIGH CHANNEL HORIZONTAL

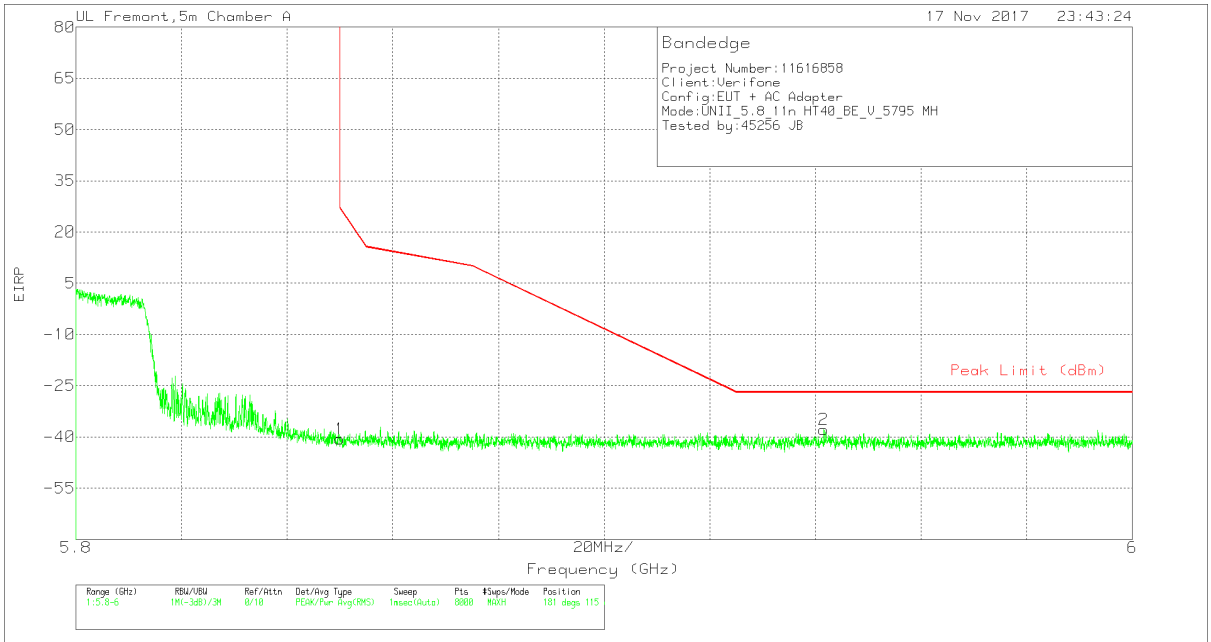


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/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	-70.07	Pk	35.1	-18.1	11.8	0	-41.27	26.99	-68.26	139	121	H
2	5.95	-67.81	Pk	35.3	-17.8	11.8	0	-38.51	-27	-11.51	139	121	H

Pk - Peak detector

HIGH CHANNEL VERTICAL



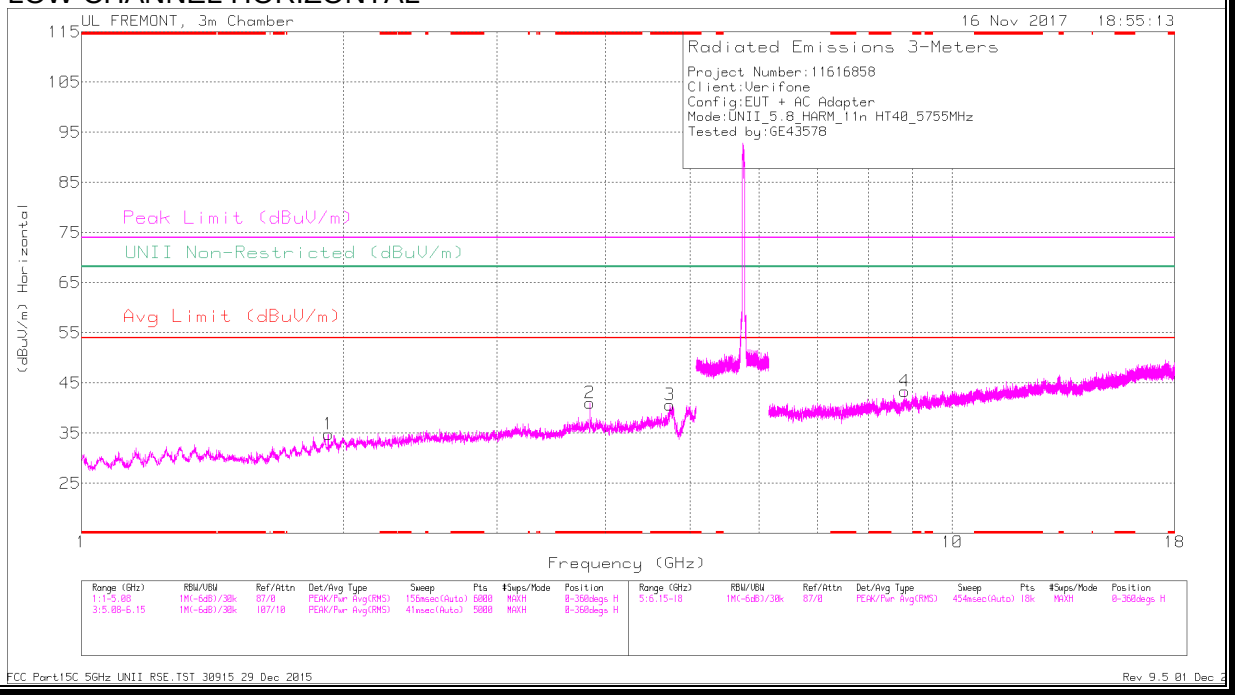
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/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	-69.34	Pk	35.1	-18.1	11.8	0	-40.54	26.99	-67.53	181	115	V
2	5.942	-67.04	Pk	35.3	-17.9	11.8	0	-37.84	-27	-10.84	181	115	V

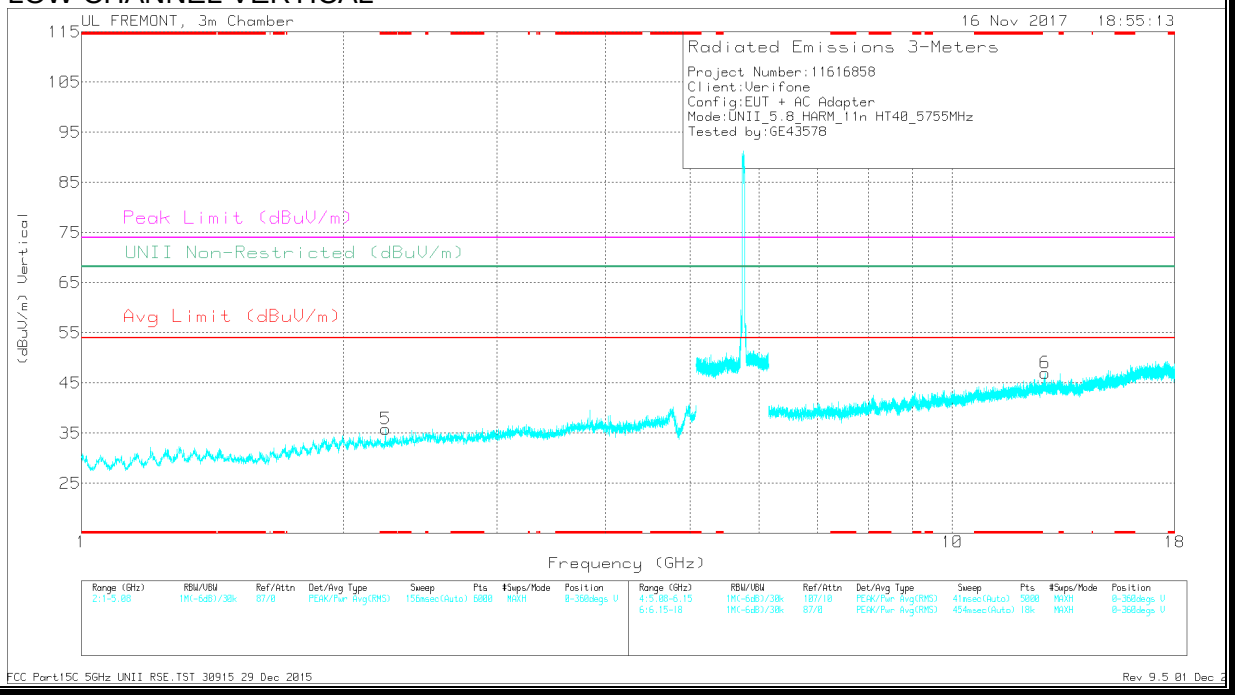
Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



Radiated Emissions

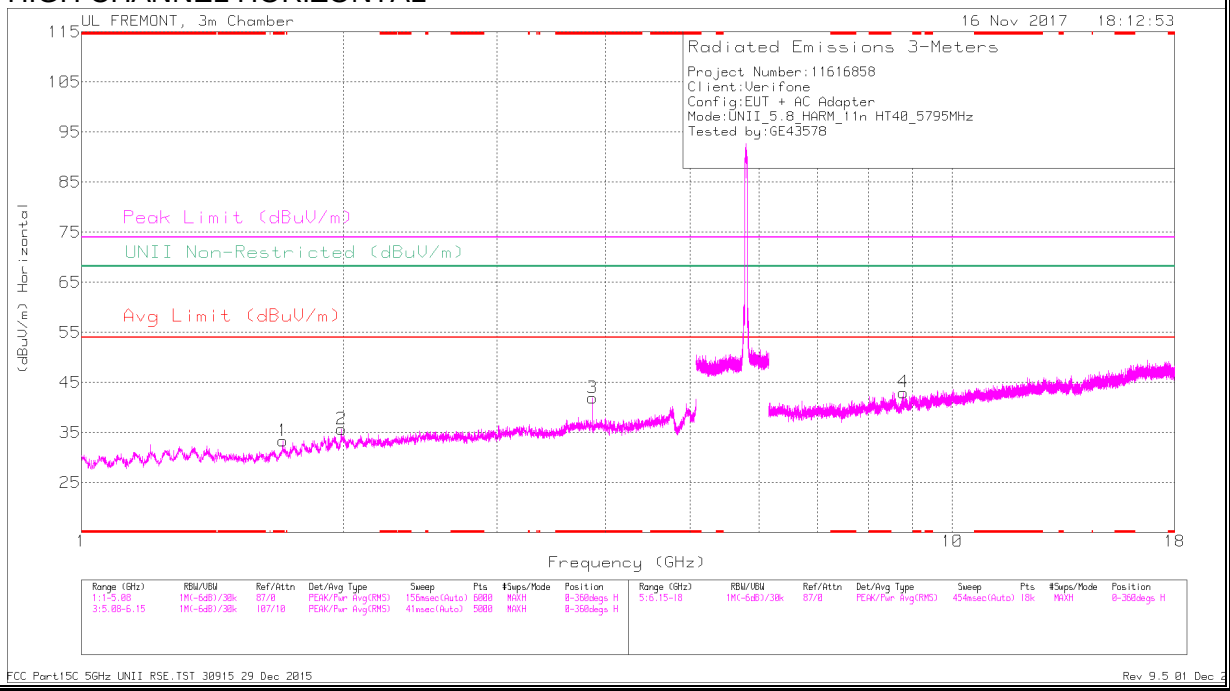
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 3.837	43.67	PK-U	33.4	-29.4	0	47.67	-	-	74	-26.33	-	-	115	100	H
	* 3.837	35.29	ADR	33.4	-29.4	.44	39.71	54	-14.27	-	-	-	-	115	100	H
3	* 4.736	40.88	PK-U	34	-28.4	0	46.48	-	-	74	-27.52	-	-	99	200	H
	* 4.736	28.6	ADR	34	-28.4	.44	34.64	54	-19.36	-	-	-	-	99	200	H
5	* 2.234	40.72	PK-U	31.4	-31.2	0	40.92	-	-	74	-33.08	-	-	48	100	V
	* 2.234	28.59	ADR	31.4	-31.2	.44	29.23	54	-24.77	-	-	-	-	48	100	V
1	1.92	41.63	PK-U	30.9	-30.8	0	41.73	-	-	-	-	68.2	-26.47	256	100	H
4	8.822	34.49	PK-U	36	-22.1	0	48.39	-	-	-	-	68.2	-19.81	139	100	H
6	12.788	34.72	PK-U	39	-21.8	0	51.92	-	-	-	-	68.2	-16.28	97	100	V

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

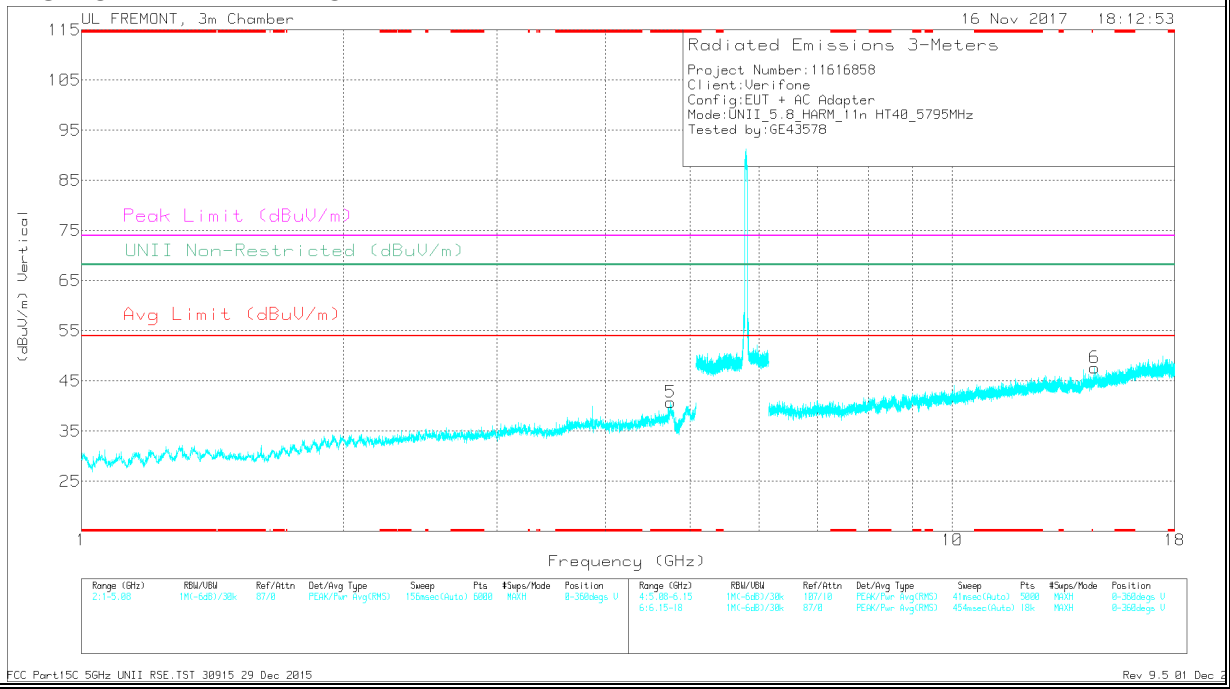
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.704	42.63	PK-U	29	-31.6	0	40.03	-	-	74	-33.97	-	-	61	100	H
	* 1.705	29.63	ADR	29	-31.6	.44	27.47	54	-26.55	-	-	-	-	61	100	H
3	* 3.863	44.77	PK-U	33.4	-29.5	0	48.67	-	-	74	-25.33	-	-	122	142	H
	* 3.863	38.25	ADR	33.4	-29.5	.44	42.59	54	-11.41	-	-	-	-	122	142	H
5	* 4.748	42.24	PK-U	34	-28.2	0	48.04	-	-	74	-25.96	-	-	76	100	V
	* 4.748	29.2	ADR	34	-28.2	.44	35.44	54	-18.56	-	-	-	-	76	100	V
2	1.99	47.56	PK-U	31.2	-31.7	0	47.06	-	-	-	-	68.2	-21.14	278	100	H
4	8.79	34.72	PK-U	36	-22	0	48.72	-	-	-	-	68.2	-19.48	4	100	H
6	14.566	36.68	PK-U	39.6	-22.9	0	53.38	-	-	-	-	68.2	-14.82	14	100	V

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

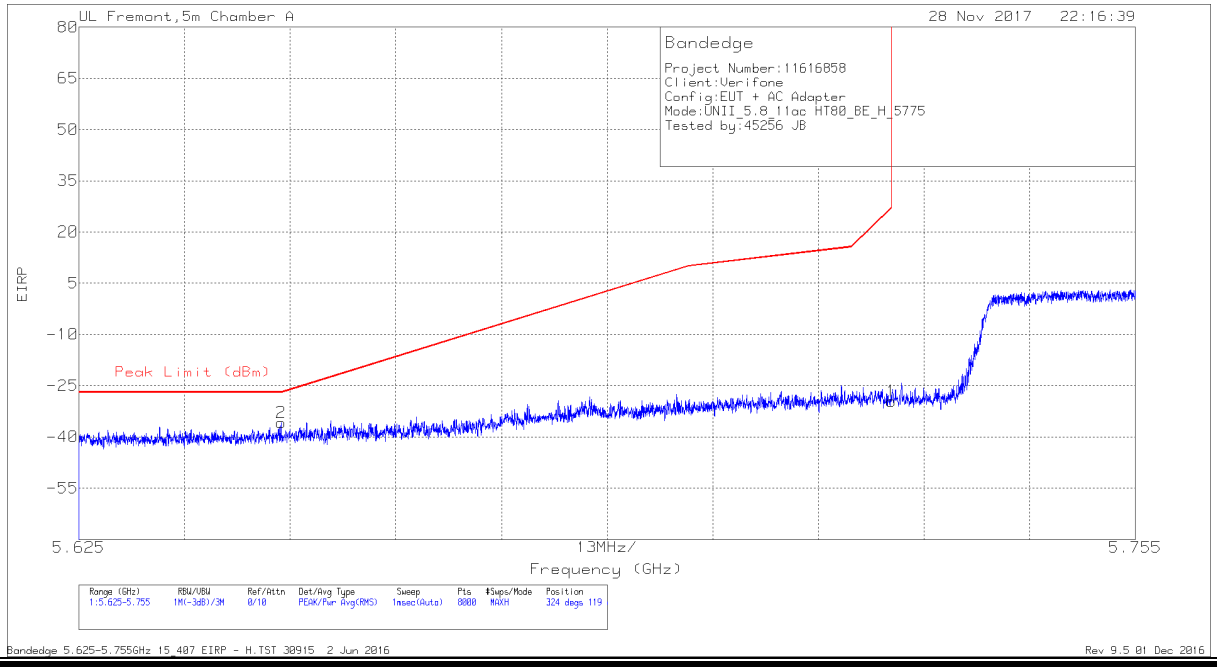
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

8.5.4 802.11ac VHT80 MODE IN THE 5.8GHz BAND

BANDEDGE (LOW CHANNEL)

LOW CHANNEL HORIZONTAL

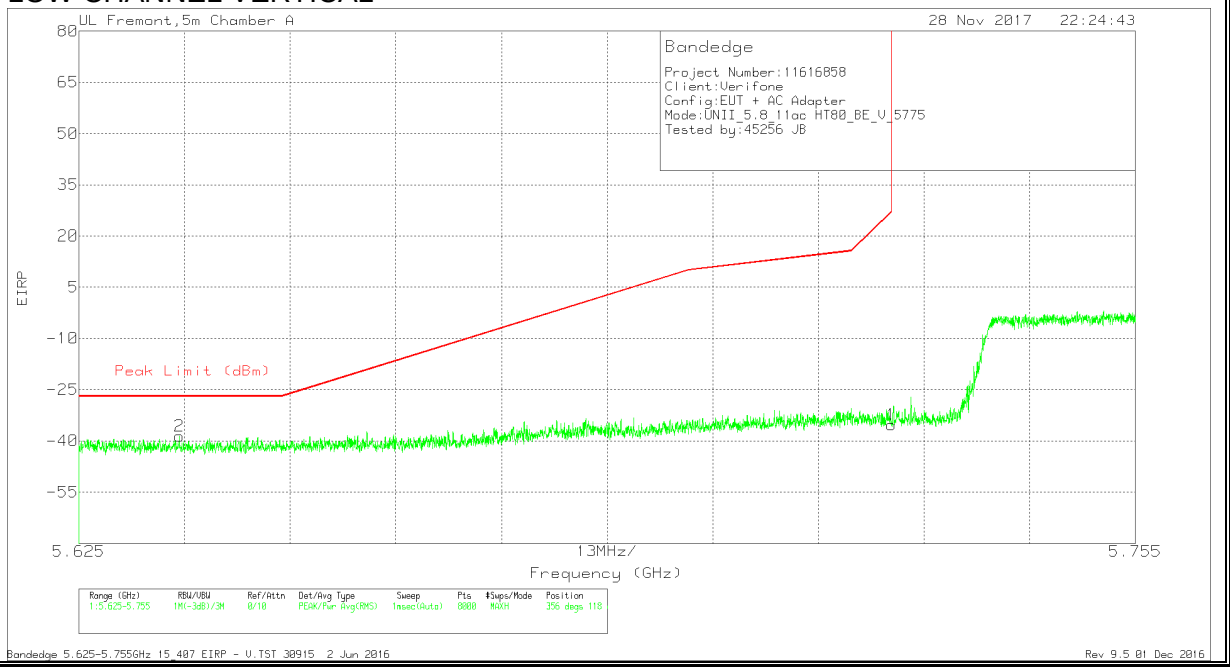


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.65	-64.33	Pk	35.1	-18.4	11.8	0	-35.83	-27	-8.83	324	119	H
1	5.725	-57.99	Pk	35	-18.4	11.8	0	-29.59	27	-56.59	324	119	H

Pk - Peak detector

LOW CHANNEL VERTICAL



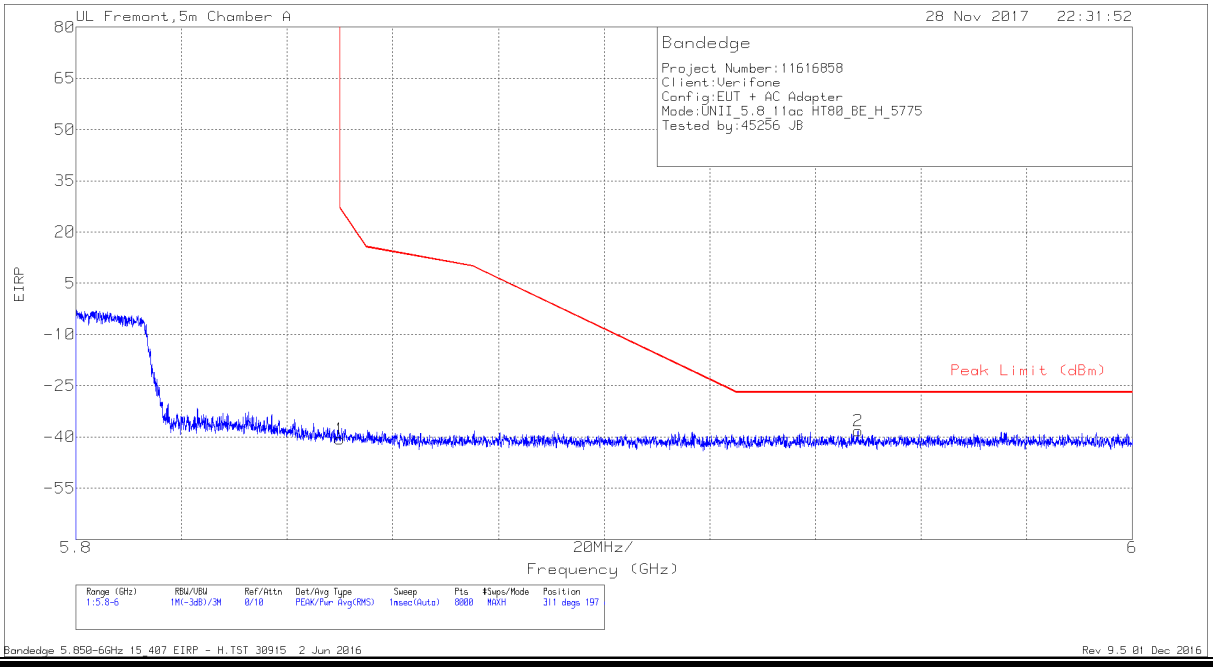
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.637	-67	Pk	35.1	-18.5	11.8	0	-38.6	-27	-11.6	356	118	V
1	5.725	-63.59	Pk	35	-18.4	11.8	0	-35.19	27	-62.19	356	118	V

Pk - Peak detector

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HIGH CHANNEL HORIZONTAL

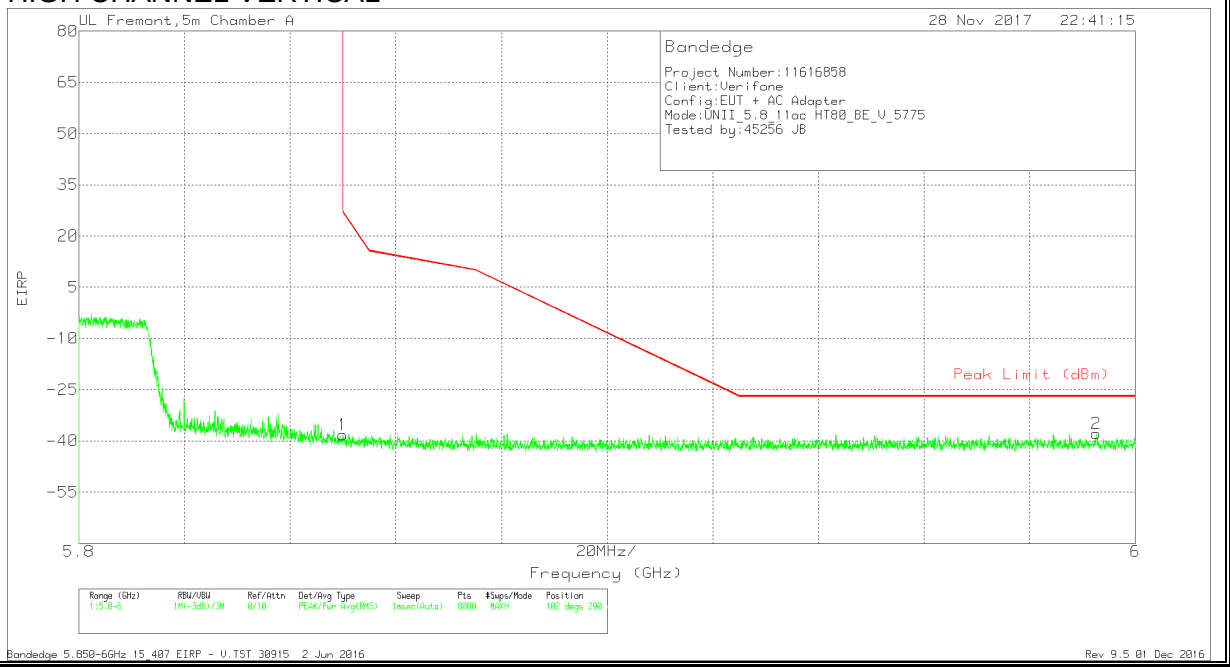


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/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	-69.35	Pk	35.1	-18.1	11.8	0	-40.55	26.99	-67.54	311	197	H
2	5.948	-67.45	Pk	35.3	-17.8	11.8	0	-38.15	-27	-11.15	311	197	H

Pk - Peak detector

HIGH CHANNEL VERTICAL



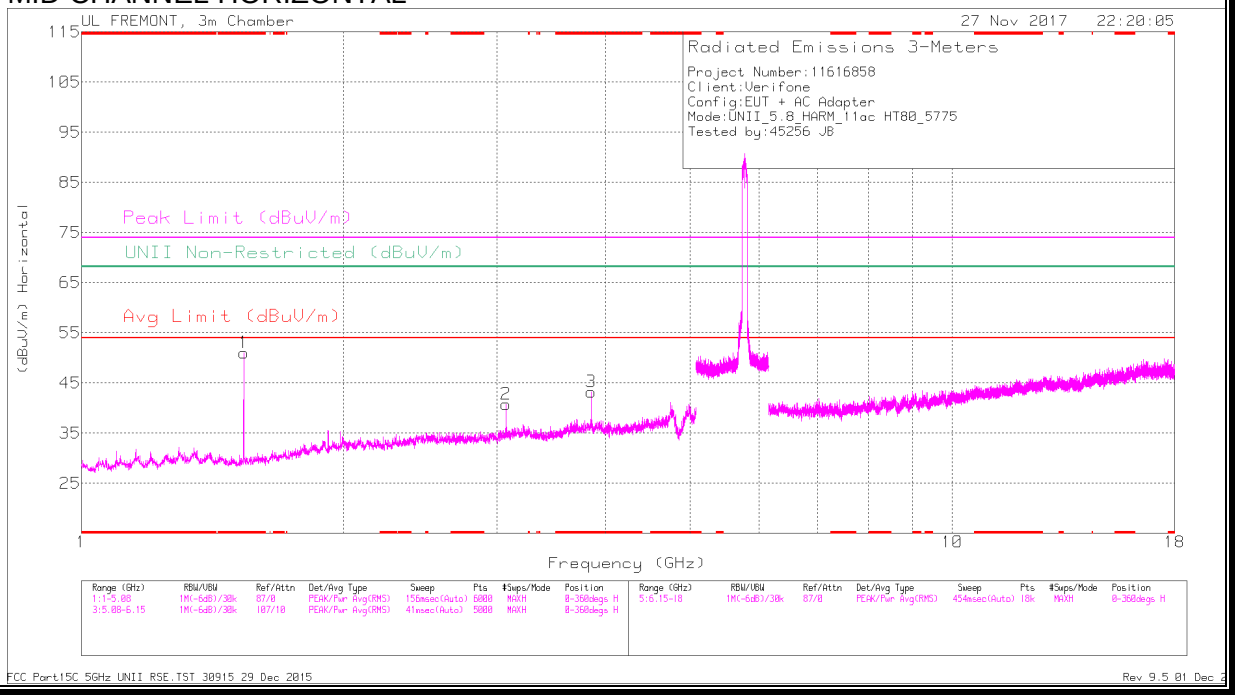
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/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	-66.96	Pk	35.1	-18.1	11.8	0	-38.16	26.99	-65.15	102	290	V
2	5.993	-67.33	Pk	35.3	-17.7	11.8	0	-37.93	-27	-10.93	102	290	V

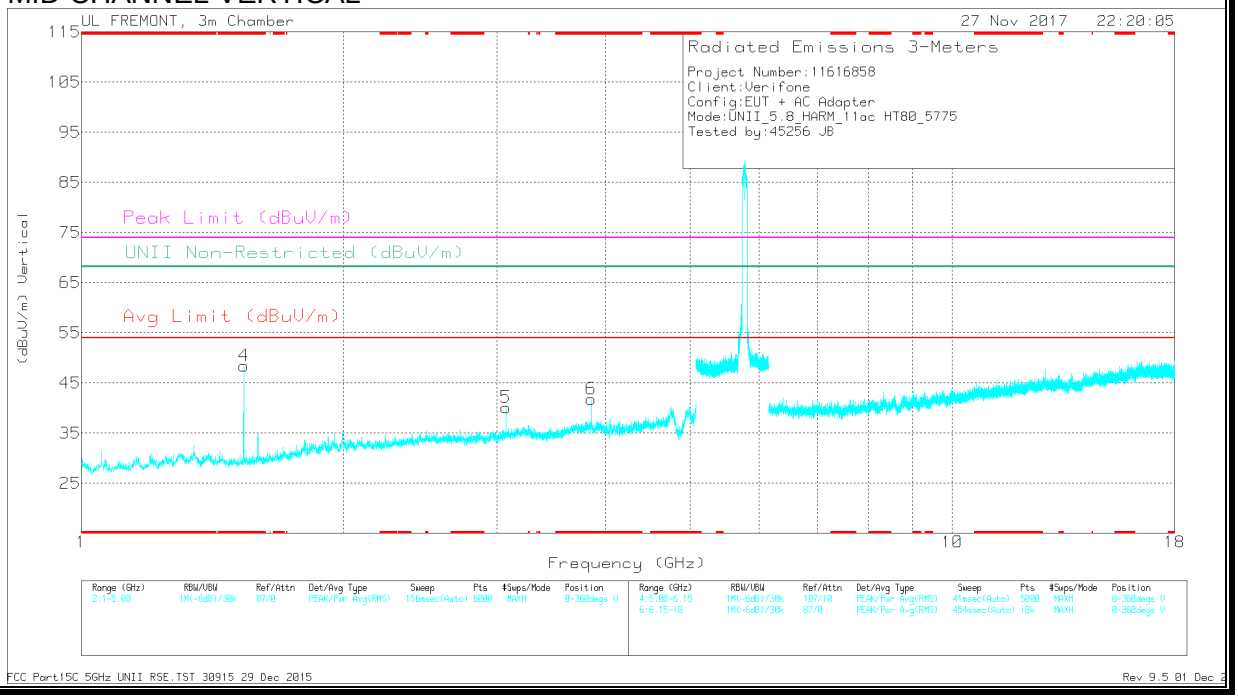
Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS

MID CHANNEL HORIZONTAL



MID CHANNEL VERTICAL



Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.538	40.88	PK-U	28.2	-31.8	0	37.28	-	-	74	-36.72	-	-	11	174	H
	* 1.538	28.46	ADR	28.2	-31.8	1.28	26.14	54	-27.86	-	-	-	-	11	174	H
3	* 3.85	44.14	PK-U	33.4	-29.2	0	48.34	-	-	74	-25.66	-	-	116	287	H
	* 3.85	37.76	ADR	33.4	-29.2	1.28	43.24	54	-10.76	-	-	-	-	116	287	H
4	* 1.538	40.5	PK-U	28.2	-31.8	0	36.9	-	-	74	-37.1	-	-	329	321	V
	* 1.538	28.43	ADR	28.2	-31.8	1.28	26.11	54	-27.89	-	-	-	-	329	321	V
6	* 3.85	42.86	PK-U	33.4	-29.2	0	47.06	-	-	74	-26.94	-	-	311	100	V
	* 3.85	34.7	ADR	33.4	-29.2	1.28	40.18	54	-13.82	-	-	-	-	311	100	V
2	3.074	39.51	PK-U	33	-30.2	0	42.31	-	-	-	-	68.2	-25.89	28	229	H
5	3.075	39.56	PK-U	33	-30.2	0	42.36	-	-	-	-	68.2	-25.84	342	320	V

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

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

8.6 WORST-CASE BELOW 30 MHz

LIMITS

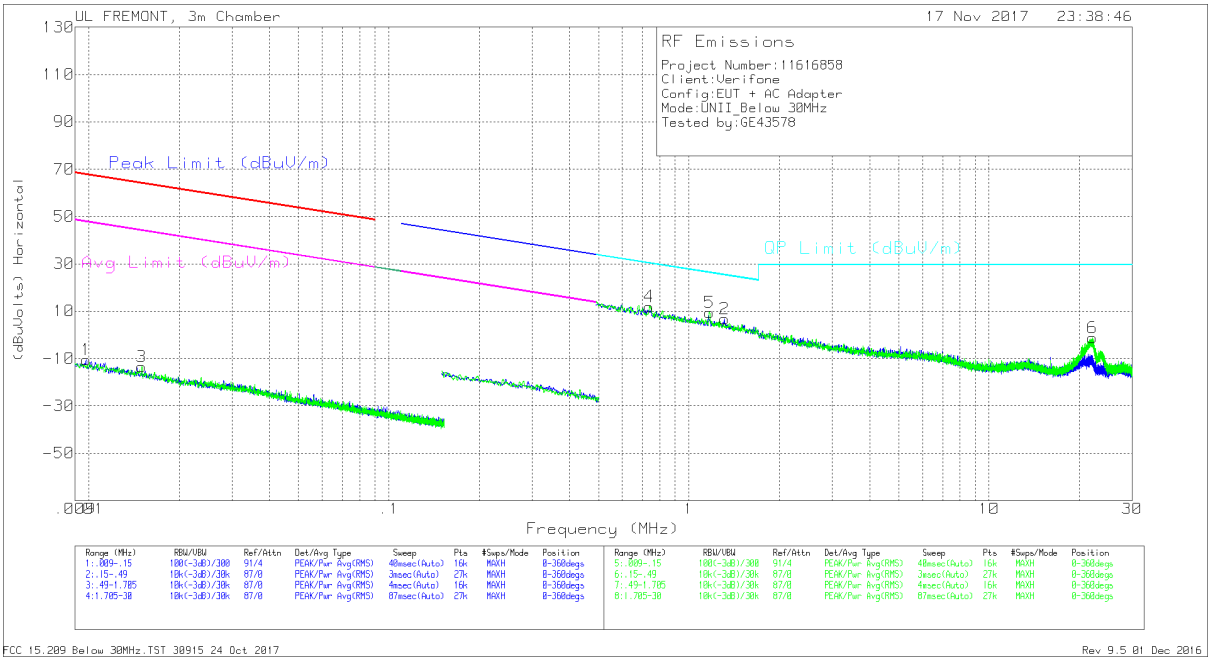
§15.407 General technical requirements

(6) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209. Further, any U-NII devices using an AC power line are required to comply also with the conducted limits set forth in §15.207.

(7) The provisions of §15.205 apply to intentional radiators operating under this section

SPURIOUS EMISSIONS 9kHz TO 30 MHz (WORST-CASE CONFIGURATION)

HORIZONTAL AND VERTICAL PLOT



NOTE: KDB 414788 OATS and Chamber Correlation Justification

- Based on FCC 15.31 (f) (2): measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field.
- OATs and chamber correlation testing had been performed and chamber measured test result is the worst case test result.

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	.00981	52.28	Pk	15.8	1.4	-80	-10.52	67.75	-78.27	47.75	-58.27	-	-	-	-	0-360
3	.01503	50.06	Pk	15.2	1.4	-80	-13.34	64.05	-77.39	44.05	-57.39	-	-	-	-	0-360

Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr 30m	Corrected Reading (dBuVolts)	QP Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
4	.73723	36.43	Pk	14	1.5	-40	11.93	30.26	-18.33	-	-	-	-	0-360
5	1.17115	33.72	Pk	14.3	1.5	-40	9.52	26.25	-16.73	-	-	-	-	0-360
2	1.31437	30.9	Pk	14.3	1.5	-40	6.7	25.25	-18.55	-	-	-	-	0-360
6	22.1258	22.95	Pk	14.1	1.7	-40	-1.25	29.5	-30.75	-	-	-	-	0-360

Pk - Peak detector

8.7 WORST-CASE 30-1000 MHz

LIMITS

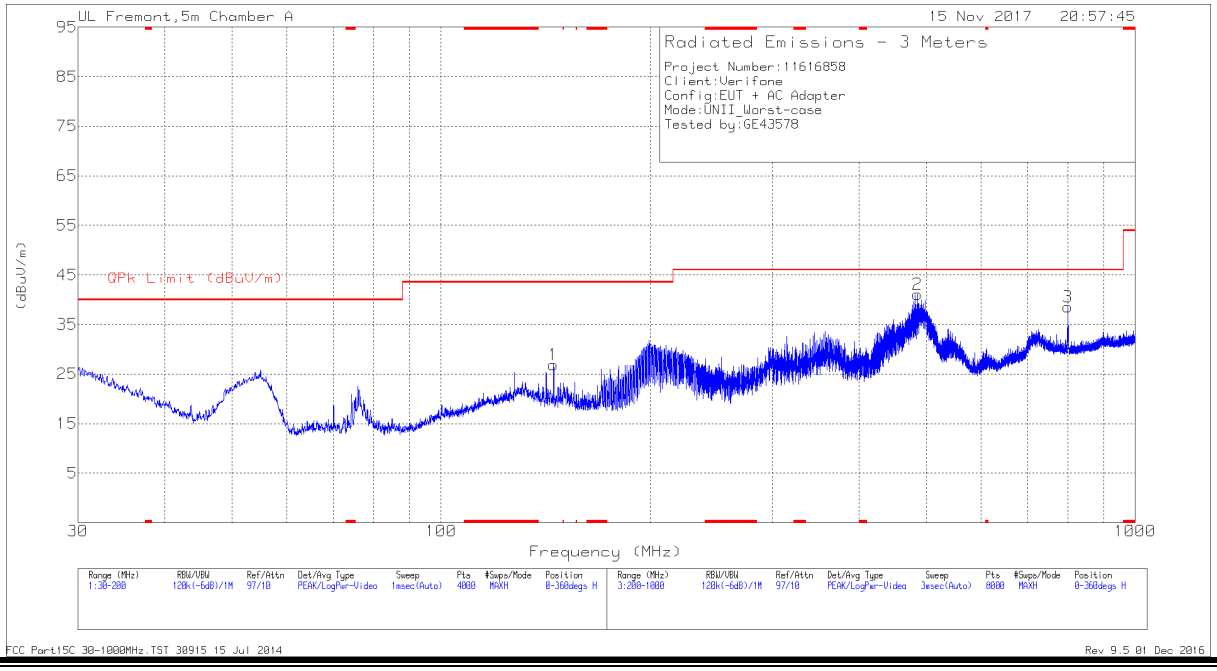
§15.407 General technical requirements

(6) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209. Further, any U-NII devices using an AC power line are required to comply also with the conducted limits set forth in §15.207.

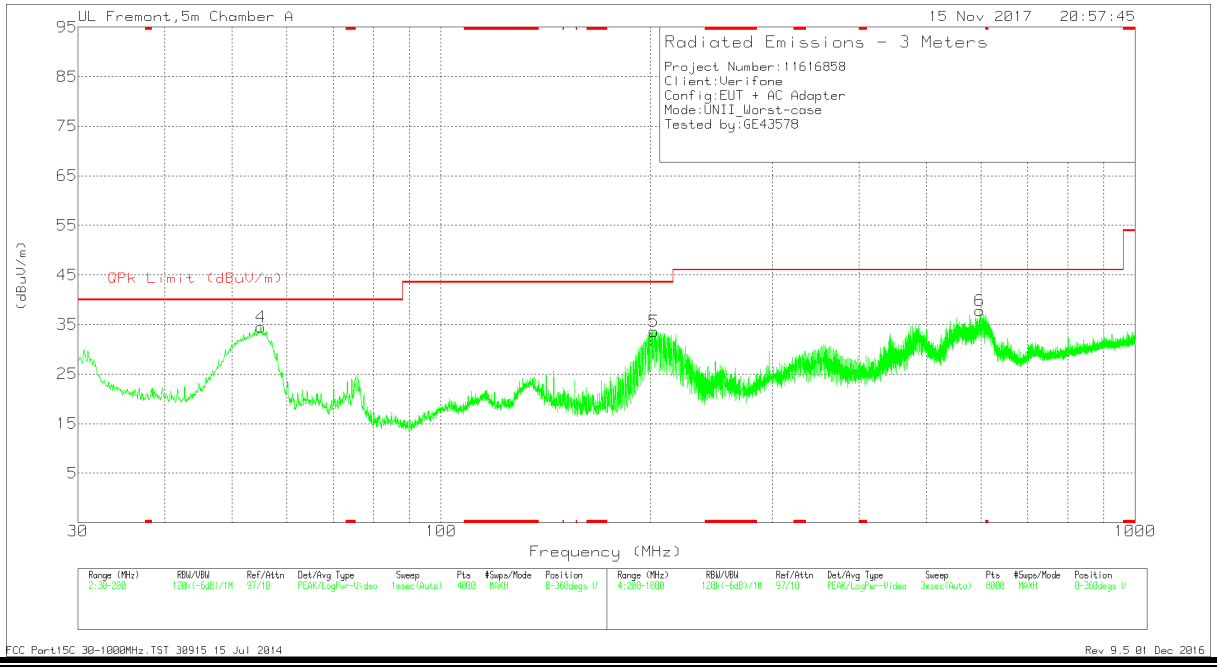
(7) The provisions of §15.205 apply to intentional radiators operating under this section.

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

HORIZONTAL PLOT



VERTICAL PLOT



Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T130 (dB/m)	Amp/Cbl (dB/m)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	54.9965	50.34	Pk	11.1	-26.9	34.54	40	-5.46	0-360	100	V
1	145.2898	35.97	Pk	16.8	-25.9	26.87	43.52	-16.65	0-360	200	H
5	202.7004	43.05	Pk	15.8	-25.2	33.65	43.52	-9.87	0-360	100	V
2	486.0372	44.54	Pk	21.7	-25.2	41.04	46.02	-4.98	0-360	200	H
6	597.0516	40.44	Pk	22.3	-25	37.74	46.02	-8.28	0-360	100	V
3	799.878	36.94	Pk	25.4	-23.8	38.54	46.02	-7.48	0-360	100	H

Pk - Peak detector

Radiated Emissions

Frequency (MHz)	Meter Reading (dBuV)	Det	AF T130 (dB/m)	Amp/Cbl (dB/m)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
55.0071	45.33	Qp	11.1	-26.9	29.53	40	-10.47	254	109	V
486.1154	40.32	Qp	21.7	-25.2	36.82	46.02	-9.2	243	187	H

Qp - Quasi-Peak detector

8.8 WORST-CASE 18 to 26 GHz

LIMITS

§15.407 General technical requirements

(b) Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

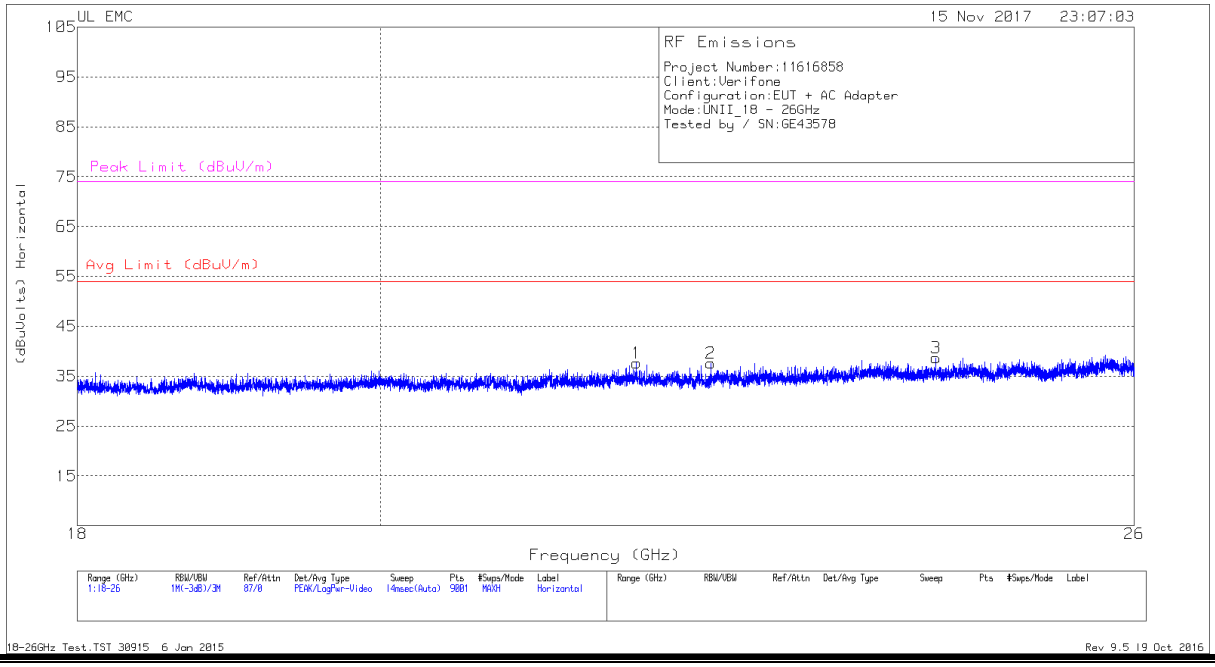
(4) For transmitters operating in the 5.725-5.85 GHz band:

(i) All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

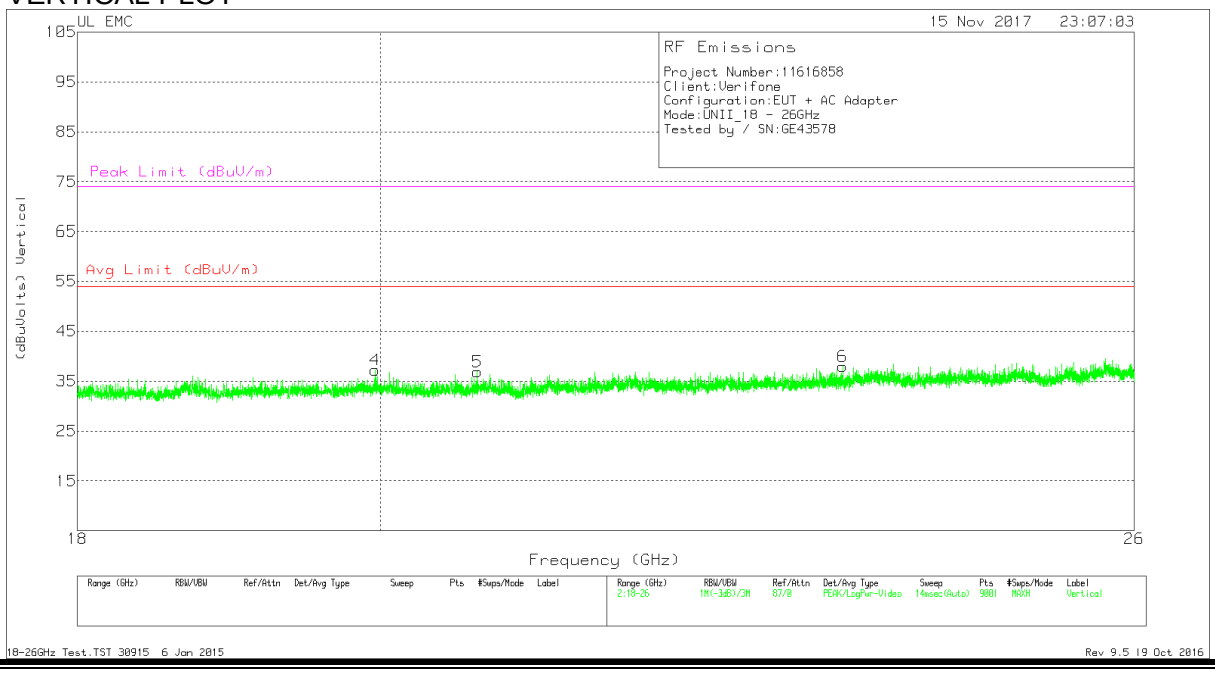
(7) The provisions of §15.205 apply to intentional radiators operating under this section.

SPURIOUS EMISSIONS 18 TO 26 GHz (WORST-CASE CONFIGURATION, HORIZONTAL & VERTICAL)

HORIZONTAL PLOT



VERTICAL PLOT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	T89 AF (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Corrected Reading (dBuVolts)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)
1	21.864	38.45	Pk	33.3	-24.6	-9.5	37.65	54	-16.35	74	-36.35
2	22.437	38.57	Pk	33.2	-24.7	-9.5	37.57	54	-16.43	74	-36.43
3	24.265	38.75	Pk	33.6	-24.2	-9.5	38.65	54	-15.35	74	-35.35
4	19.965	38.83	Pk	33	-25.1	-9.5	37.23	54	-16.77	74	-36.77
5	20.686	38.76	Pk	32.8	-25.2	-9.5	36.86	54	-17.14	74	-37.14
6	23.492	38.63	Pk	33.2	-24.4	-9.5	37.93	54	-16.07	74	-36.07

Pk - Peak detector

8.9 WORST-CASE 26 to 40 GHz

LIMITS

§15.407 General technical requirements

(b) Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

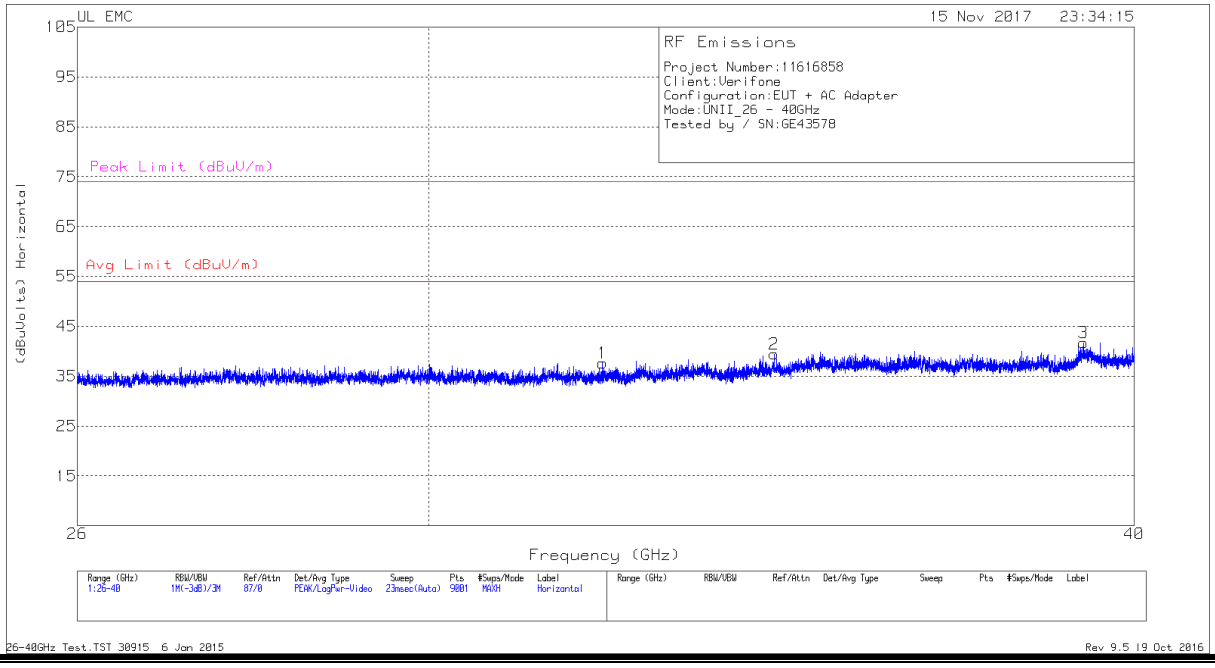
(4) For transmitters operating in the 5.725-5.85 GHz band:

(i) All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

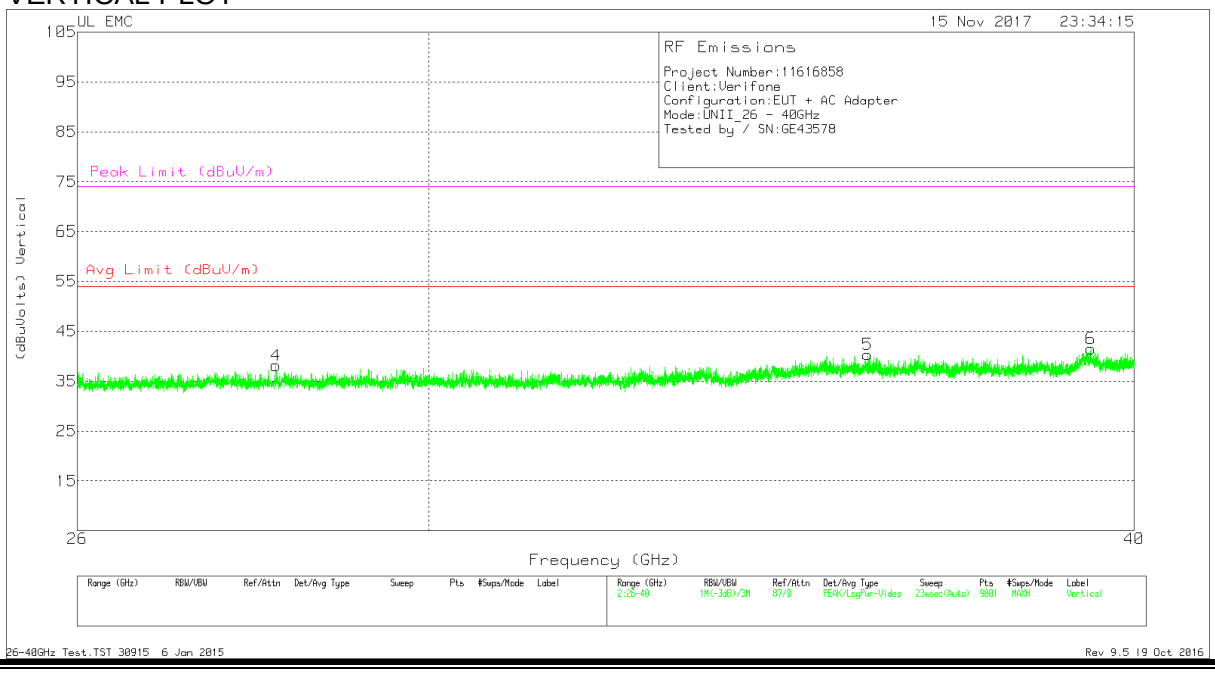
(7) The provisions of §15.205 apply to intentional radiators operating under this section.

SPURIOUS EMISSIONS 26 TO 40 GHz (WORST-CASE CONFIGURATION)

HORIZONTAL PLOT



VERTICAL PLOT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	T90 AF (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Corrected Reading (dBuVolts)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)
1	32.205	43.02	Pk	36.4	-32.3	-9.5	37.62	54	-16.38	74	-36.38
2	34.538	43.14	Pk	37.4	-31.6	-9.5	39.44	54	-14.56	74	-34.56
3	39.179	43.49	Pk	38.2	-30.5	-9.5	41.69	54	-12.31	74	-32.31
4	28.19	44.54	Pk	35.9	-32.8	-9.5	38.14	54	-15.86	74	-35.86
5	35.878	43.32	Pk	37.2	-30.7	-9.5	40.32	54	-13.68	74	-33.68
6	39.295	43.2	Pk	38.4	-30.6	-9.5	41.5	54	-12.5	74	-32.5

Pk - Peak detector