



**FCC 47 CFR PART 15 SUBPART E
(C2PC CERTIFICATION TEST REPORT)**

**FOR
GSM/WCDMA/LTE Phone + Bluetooth, DTS/UNII a/b/g/n/ac, ANT+ and NFC**

FCC ID: PY7-PM0816

REPORT NUMBER: 15U19770-E5

ISSUE DATE: MARCH 18, 2015

**Prepared for
SONY MOBILE COMMUNICATIONS, INC.
NYA VATTENTORNET MOBILVAGEN 10
LUND 22188
SWEDEN**

**Prepared by
UL VERIFICATION SERVICES INC.
47173 BENICIA STREET
FREMONT, CA 94538, U.S.A.
TEL: (510) 771-1000
FAX: (510) 661-0888**



NVLAP LAB CODE 200065-0

Revision History

Issue			
Rev.	Date	Revisions	Revised By
-	03/18/13	Initial Issue	CHOON OOI

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS	5
2. TEST METHODOLOGY	6
3. FACILITIES AND ACCREDITATION	6
4. CALIBRATION AND UNCERTAINTY	6
4.1. MEASURING INSTRUMENT CALIBRATION	6
4.2. SAMPLE CALCULATION	7
4.3. MEASUREMENT UNCERTAINTY.....	7
5. EQUIPMENT UNDER TEST	8
5.1. DESCRIPTION OF EUT	8
5.2. MAXIMUM OUTPUT POWER.....	8
5.3. DESCRIPTION OF AVAILABLE ANTENNAS	8
5.4. WORST-CASE CONFIGURATION AND MODE.....	9
5.5. DESCRIPTION OF TEST SETUP.....	10
6. TEST AND MEASUREMENT EQUIPMENT	12
7. SUMMARY TABLE	13
8. ON TIME, DUTY CYCLE AND MEASUREMENT METHODS	14
8.1. ON TIME AND DUTY CYCLE RESULTS.....	14
8.2. DUTY CYCLE PLOTS	15
9. MEASUREMENT METHOD.....	19
10. TRANSMITTER ABOVE 1 GHz.....	20
10.1. 5.2 GHz.....	21
10.1.1. TX ABOVE 1 GHz 802.11a MODE IN THE 5.2 GHz BAND	21
10.1.2. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.2 GHz BAND.....	32
10.1.3. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.2 GHz BAND.....	43
10.1.5. TX ABOVE 1 GHz 802.11ac HT80 MODE IN THE 5.2 GHz BAND.....	51
10.2. 5.3 GHz.....	56
10.2.1. TX ABOVE 1 GHz 802.11a MODE IN THE 5.3 GHz BAND	56
10.2.2. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.3 GHz BAND.....	67
10.2.3. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.3 GHz BAND.....	78
10.2.4. TX ABOVE 1 GHz 802.11ac HT80 MODE IN THE 5.3 GHz BAND.....	86
10.3. 5.5-5.6 GHz.....	91
10.3.1. TX ABOVE 1 GHz 802.11a MODE IN THE 5.5 GHz BAND	91

10.3.2.	TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.5 GHz BAND.....	104
10.3.3.	TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.5 GHz BAND.....	117
10.3.4.	TX ABOVE 1 GHz 802.11ac HT80 MODE IN THE 5.5 GHz BAND.....	130
10.4.	5.8 GHz.....	135
10.4.1.	TX ABOVE 1 GHz 802.11a MODE IN THE 5.8 GHz BAND	135
10.4.2.	TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.8 GHz BAND.....	148
10.4.3.	TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.8 GHz BAND.....	161
10.4.4.	TX ABOVE 1 GHz 802.11ac HT80 MODE IN THE 5.8 GHz BAND	171
11.	WORST-CASE BELOW 1 GHz (in the 5.3 GHz Band).....	178
12.	Dynamic Frequency Section	181
12.1.	OVERVIEW.....	181
12.1.1.	LIMITS.....	181
12.1.4.	DESCRIPTION OF EUT	189
12.2.	RESULTS FOR 20 MHz BANDWIDTH.....	191
12.2.1.	TEST CHANNEL	191
12.2.2.	RADAR WAVEFORM AND TRAFFIC.....	191
12.2.3.	OVERLAPPING CHANNEL TESTS.....	194
12.2.4.	MOVE AND CLOSING TIME	194
12.3.	RESULTS FOR 40 MHz BANDWIDTH.....	198
12.3.1.	TEST CHANNEL	198
12.3.2.	RADAR WAVEFORM AND TRAFFIC.....	198
12.3.3.	OVERLAPPING CHANNEL TESTS.....	201
12.3.4.	MOVE AND CLOSING TIME	201
12.3.5.	10-MINUTE BEACON MONITORING PERIOD	205
12.4.	RESULTS FOR 80 MHz BANDWIDTH.....	206
12.4.1.	TEST CHANNEL	206
12.4.2.	RADAR WAVEFORM AND TRAFFIC.....	206
13.	SETUP PHOTOS.....	214

1. ATTESTATION OF TEST RESULTS

COMPANY NAME: SONY MOBILE COMMUNICATIONS, INC.
EUT DESCRIPTION: GSM/WCDMA/LTE PHONE + BLUETOOTH, DTS/UNII a/b/g/n/ac, ANT+ and NFC
SERIAL NUMBER: YT910Y2DZV (Radiated)
DATE TESTED: February 13-march 13, 2015

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

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

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

Approved & Released For
UL Verification Services Inc. By:

Tested By:



CHOON OOI
CONSUMER TECHNOLOGY DIVISION
WISE PROJECT LEAD
UL Verification Services Inc.

STEVEN TRAN
CONSUMER TECHNOLOGY DIVISION
WISE LAB ENGINEER
UL Verification Services Inc.

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 15, and ANSI C63.4-2009.

3. FACILITIES AND ACCREDITATION

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

47173 Benicia Street	47266 Benicia Street
☒ Chamber A(IC: 2324B-1)	☐ Chamber D(IC: 2324B-4)
☐ Chamber B(IC: 2324B-2)	☐ Chamber E(IC: 2324B-5)
☒ Chamber C(IC: 2324B-3)	☐ Chamber F(IC: 2324B-6)
	☐ Chamber G(IC: 2324B-7)
	☐ Chamber H(IC: 2324B-8)

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

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

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

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

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

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

4.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	3.52 dB
Radiated Disturbance, 30 to 18000 MHz	4.94 dB

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

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a GSM/WCDMA/LTE PHONE + BLUETOOTH, DTS/UNII a/b/g/n/ac, ANT+ and NFC.

5.2. MAXIMUM OUTPUT POWER

Please refer to test report 14U17919-5A (FCC ID: PY7PM-0813).

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an FPCB antenna, with a maximum gain of -1.5dBi.

5.4. WORST-CASE CONFIGURATION AND MODE

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

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

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

802.11a mode: 6 Mbps

802.11n HT20mode: MCS0

802.11n HT40mode: MCS0

802.11AC HT80mode: MCS0

5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
AC Adapter	SONY	EP880	3514W 01 S08328	N/A
Earphone	SONY	MH410C	N/A	N/A

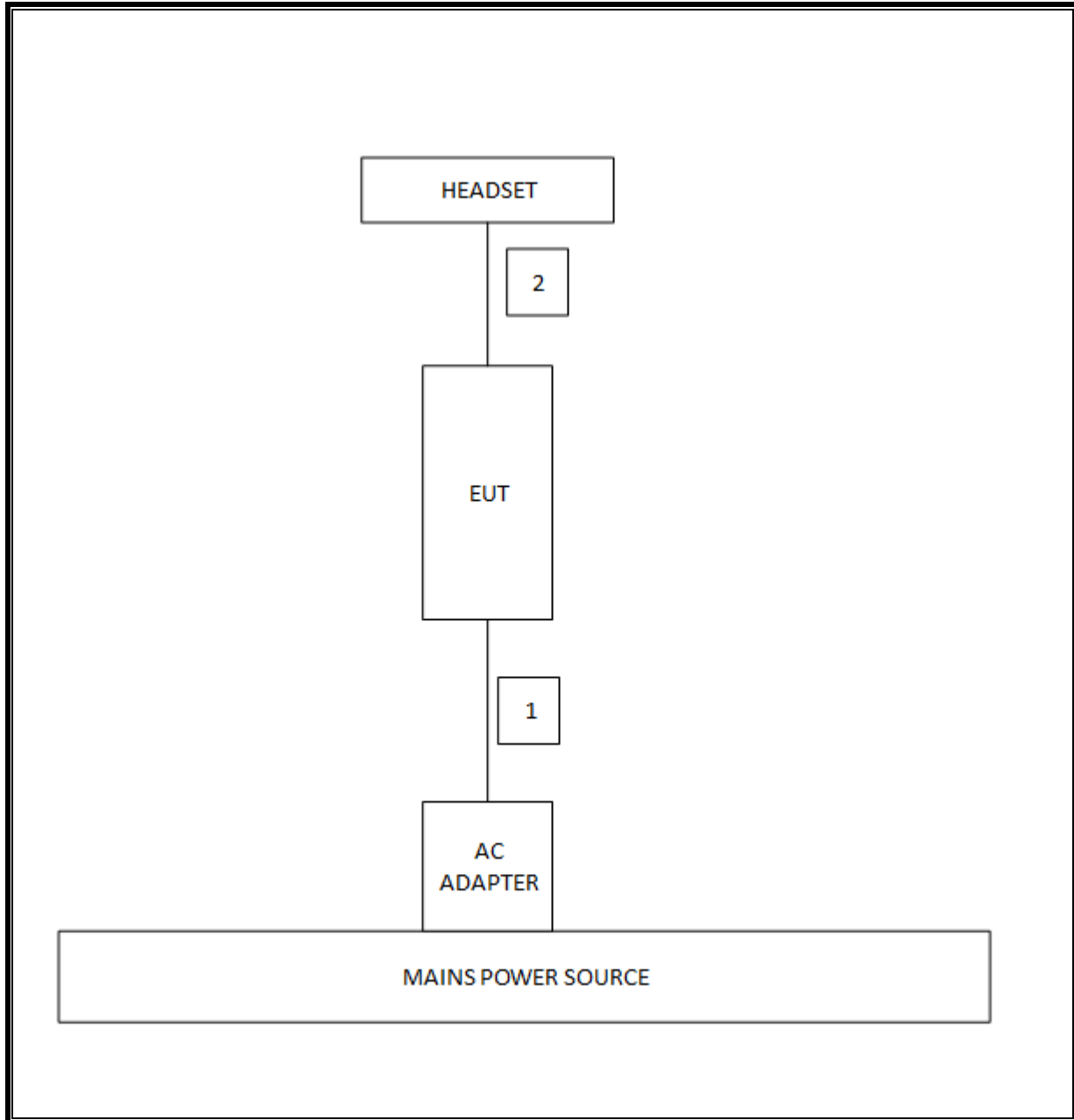
I/O CABLES

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	DC Power	1	Mini-USB	Shielded	1.2m	N/A
2	Audio	1	Mini-Jack	Unshielded	1.0m	N/A

TEST SETUP

The EUT is setup as a stand-alone device.

SETUP DIAGRAM FOR TESTS



6. TEST AND MEASUREMENT EQUIPMENT

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

Test Equipment List				
Description	Manufacturer	Model	Asset	Cal Due
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C01069	12/20/15
Spectrum Analyzer, 9KHz-40GHz	HP	8564E	C00986	04/01/15
EMI Test Receiver, 9 kHz-7 GHz	R & S	ESCI 7	100773	08/15/15
Peak Power Meter	Agilent / HP	E4416A	C00963	12/13/15
Peak / Average Power Sensor	Agilent / HP	E9327A	C00964	12/13/15
Antenna, Horn, 18GHz	EMCO	3115	C00783	10/25/15
Antenna, Horn, 18- 26 GHz	ARA	MWH-1826/B	C00946	11/12/15
Antenna, Horn, 26-40 GHz	ARA	MWH-2640	C00891	06/28/15
Antenna, Bilog, 30MHz-1 GHz	Sunol Sciences	JB1	T243	12/08/15
RF Preamplifier, 100KHz -> 1300MHz	HP	TBD	C00825	06/01/15
RF Preamplifier, 1GHz - 18GHz	Miteq	NSP4000-SP2	924343	03/23/15
RF Preamplifier, 1GHz - 26.5GHz	HP	8449B	F00351	06/27/15
AC Power Supply, 2,500VA 45-500Hz	Elgar-Ametek	CW2501M	F00013	CNR
RF Preamplifier, 1GHz - 18GHz	Miteq	AFS42-00101800-25-S-42	1818466	05/09/15
Attenuator / Switch driver	HP	11713A	F00204	CNR
Low Pass Filter 3GHz	Micro-Tronics	LPS17541	F00219	05/23/15
High Pass Filter 5GHz	Micro-Tronics	HPS17542	F00222	05/22/15
High Pass Filter 6GHz	Micro-Tronics	HPM17543	F00224	05/22/15

Test Software List			
Description	Manufacturer	Model	Version
Radiated Software	UL	UL EMC	Version 9.5, 07/22/14
Conducted Software	UL	UL EMC	Version 9.5, 05/17/14
CLT Software	UL	UL RF	Version 1.0, 02/02/15
Antenna Port Software	UL	UL RF	Version 2.1.1.1, 1/20/15

7. SUMMARY TABLE

FCC Part Section	Test Description	Test Limit	Test Condition	Test Result	Worst Case
15.407 (a)	Occupied Band width (26dB)	N/A	Conducted	Pass	See Original
15.407	6dB Band width (5.8Ghz)	500KHz		Pass	See Original
15.407 (a)(2)	TX Cond. Power 5.15-2.25, 5.25-5.35 & 5.47-5.725	<24dBm or 11+10Log(OBW)		Pass	See Original
15.407 (a)(3)	TX Cond. Power 5.725-5.825	< 30dBm or 17+10Log(OBW)		Pass	See Original
15.407 (a)(5)	PSD (5.2,5.3,5.5GHz)	<11dBm		Pass	See Original
15.407 (a)(5)	PSD (5.8GHz)	30dBm per 500kHz			See Original
15.207 (a)	AC Power Line conducted emissions	Section 10	Radiated	Pass	See Original
15.407 (b) & 15.209	Radiated Spurious Emission	< 54dBuV/m		Pass	41.6 dBuV/m
15.407 (h)(2)	Dynamic Frequency Selection	N/A	Radiated / Conducted	Pass	N/A

8. ON TIME, DUTY CYCLE AND MEASUREMENT METHODS

LIMITS

None; for reporting purposes only.

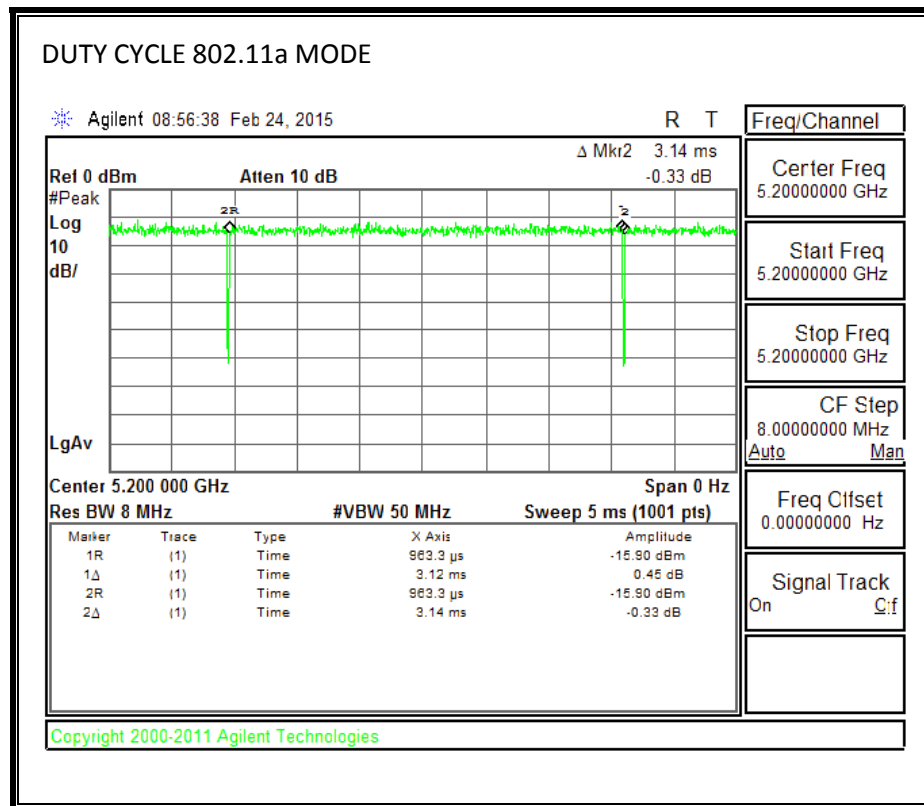
PROCEDURE

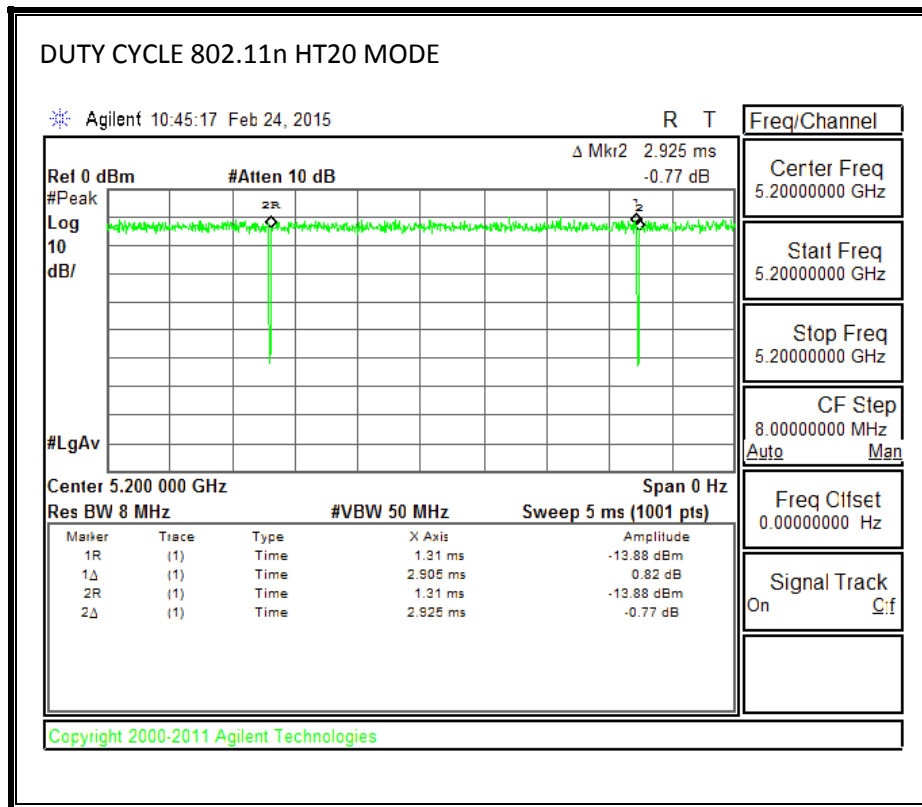
KDB 789033 Zero-Span Spectrum Analyzer Method.

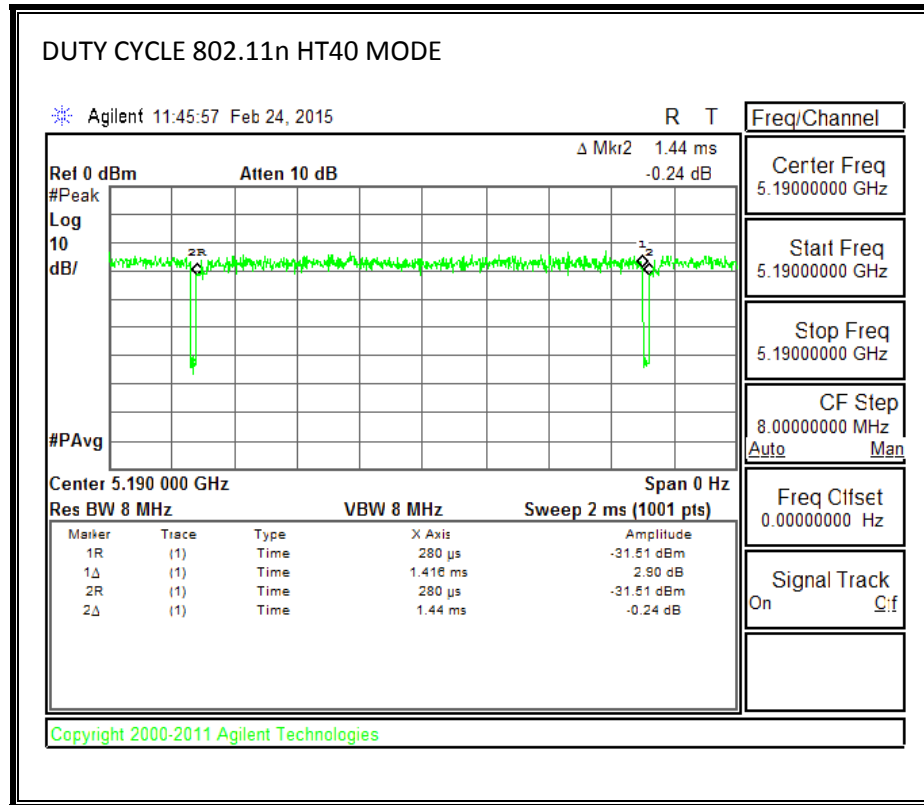
8.1. ON TIME AND DUTY CYCLE RESULTS

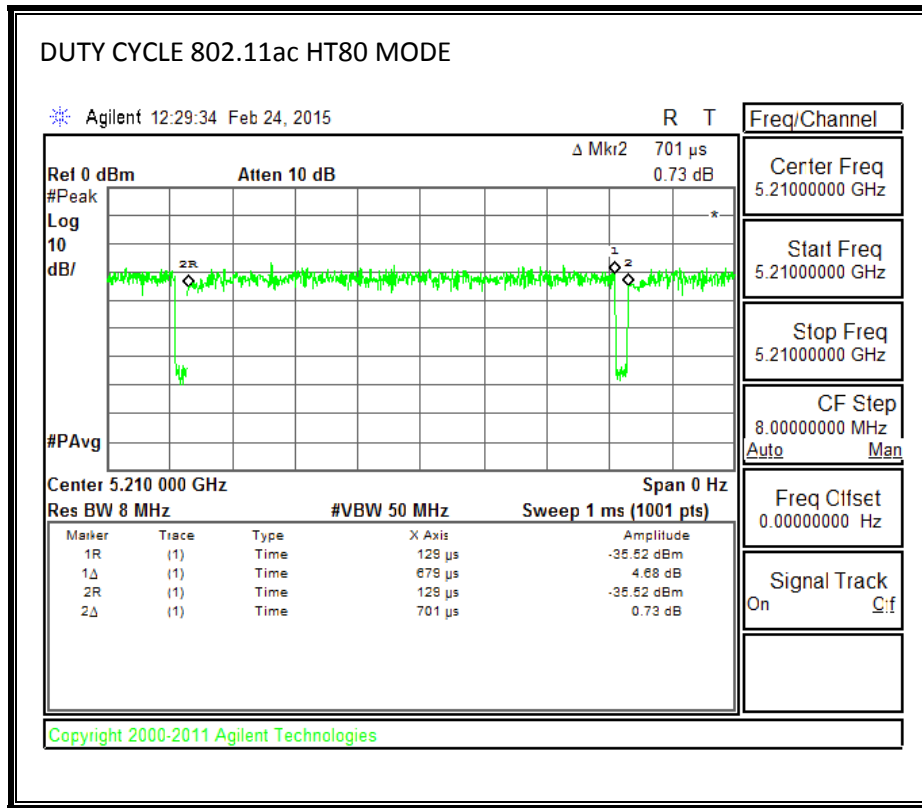
Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/T Minimum VBW (kHz)
802.11a	3.120	3.140	0.994	99.4%	0.00	0.010
802.11ac HT80	0.679	0.701	0.969	96.9%	0.14	1.473
802.11n HT20	2.905	2.925	0.993	99.3%	0.00	0.010
802.11n HT40	1.416	1.440	0.983	98.3%	0.00	0.010

8.2. DUTY CYCLE PLOTS









9. MEASUREMENT METHOD

789033 D02 General UNII Test Procedures New Rules v01

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

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

10. TRANSMITTER ABOVE 1 GHz LIMITS

FCC §15.205 and §15.209

Frequency Range (MHz)	Field Strength Limit ($\mu\text{V/m}$) at 3 m	Field Strength Limit (dB $\mu\text{V/m}$) at 3 m
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane. The antenna to EUT distance is 3 meters.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

Reference to KDB 789033 UNII part H) 6) d) Method VB:

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements and add duty cycle factor to the reading offset for average measurements.

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

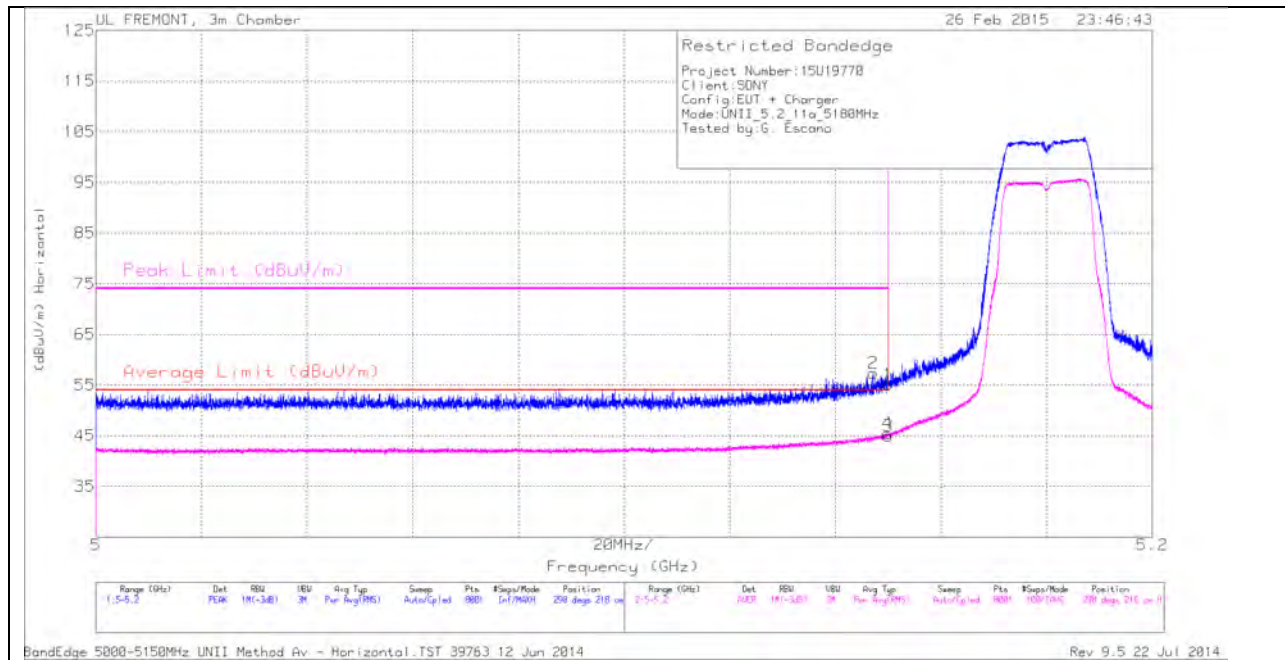
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized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

10.1. 5.2 GHz

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

RESTRICTED BANDEDGE (LOW CHANNEL)

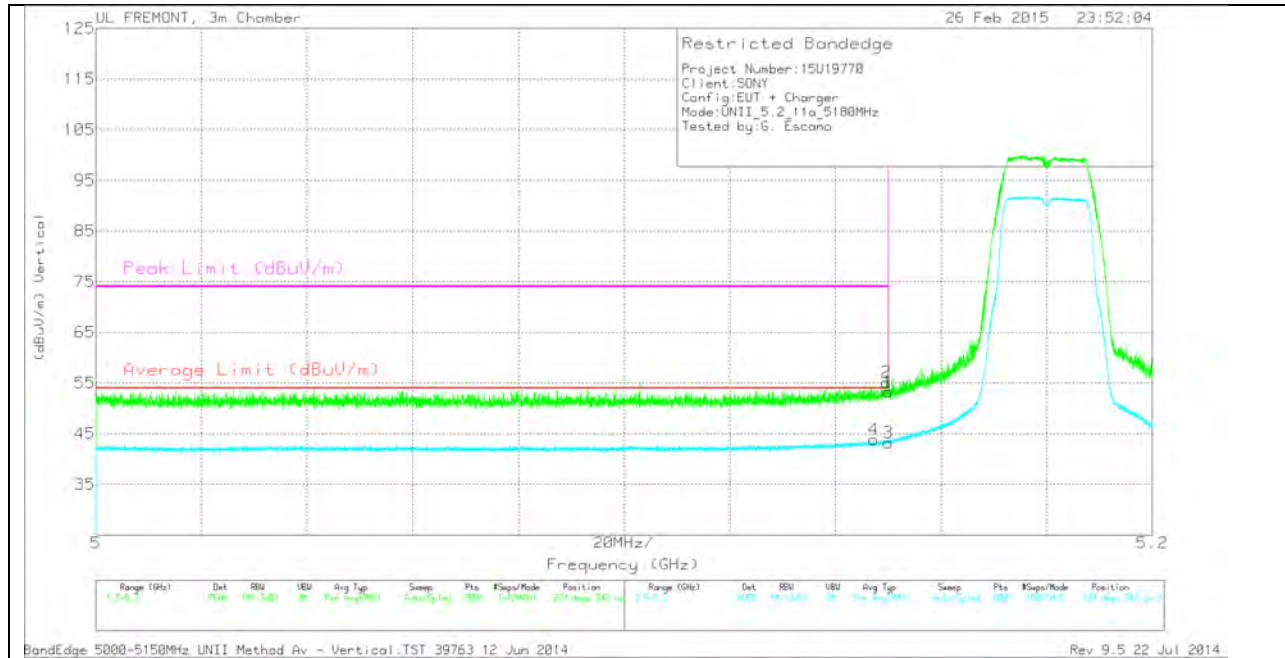
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.147	44.76	PK	34.2	-21.6	0	57.36	-	-	74	-16.64	298	218	H
1	5.15	42.56	PK	34.2	-21.6	0	55.16	-	-	74	-18.84	298	218	H
3	5.15	32.39	RMS	34.2	-21.6	0	44.99	54	-9.01	-	-	298	218	H
4	5.15	32.8	RMS	34.2	-21.6	0	45.4	54	-8.6	-	-	298	218	H

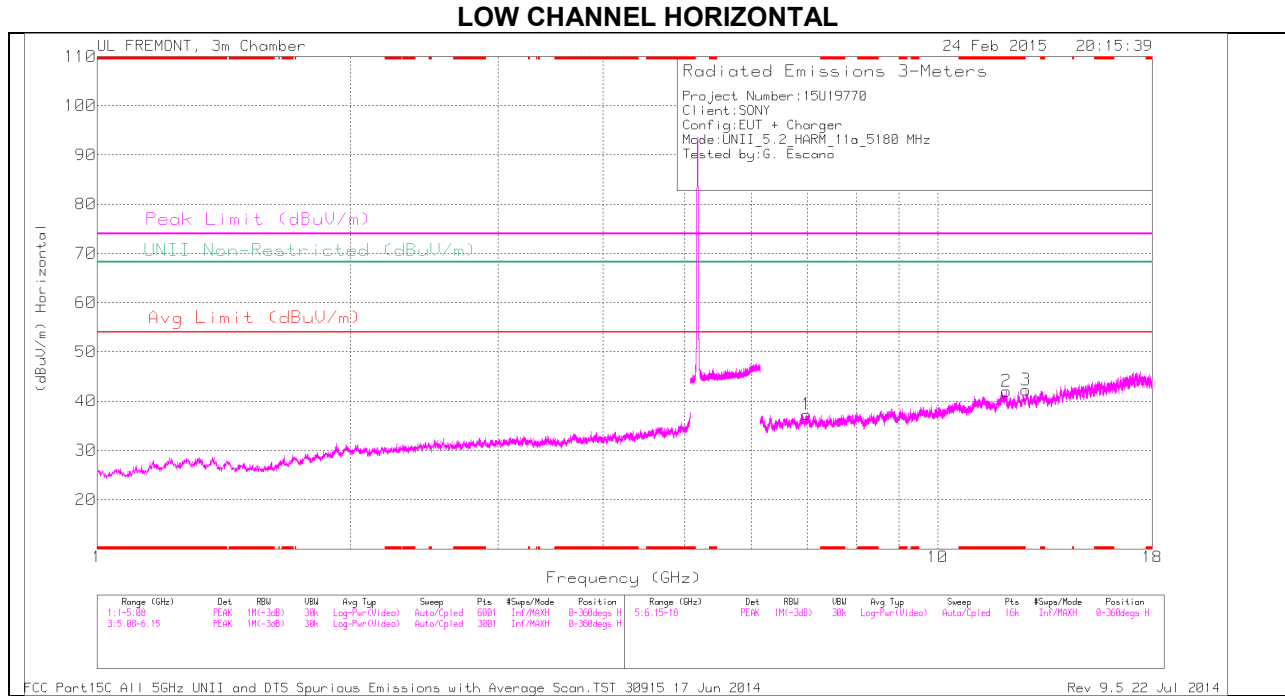
VERTICAL PEAK AND AVERAGE PLOT



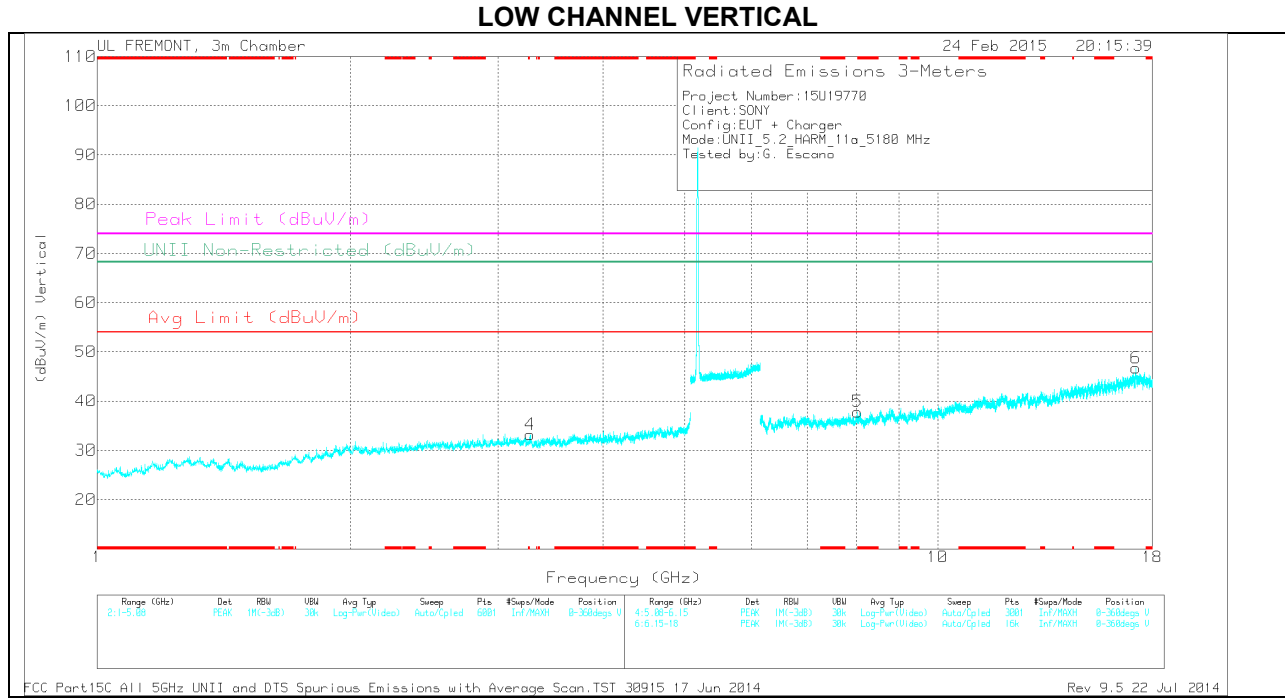
VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	5.147	31.21	RMS	34.2	-21.6	0	43.81	54	-10.19	-	-	234	242	V
1	5.15	40.66	PK	34.2	-21.6	0	53.26	-	-	74	-20.74	234	242	V
2	5.15	42.48	PK	34.2	-21.6	0	55.08	-	-	74	-18.92	234	242	V
3	5.15	30.57	RMS	34.2	-21.6	0	43.17	54	-10.83	-	-	234	242	V

HARMONICS AND SPURIOUS EMISSIONS



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



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

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 12.069	29.45	PK	39	-26.4	0	42.05	-	-	74	-31.95	-	-	0-360	100	H
4	3.277	32.61	PK	32.6	-32	0	33.21	-	-	-	-	68.2	-34.99	0-360	200	V
1	6.982	30.4	PK	35.6	-28.7	0	37.3	-	-	-	-	68.2	-30.9	0-360	200	H
5	8.024	29.85	PK	35.8	-27.8	0	37.85	-	-	-	-	68.2	-30.35	0-360	200	V
3	12.742	29.1	PK	39.1	-25.9	0	42.3	-	-	-	-	68.2	-25.9	0-360	200	H
6	17.202	28.3	PK	41.3	-22.9	0	46.7	-	-	-	-	68.2	-21.5	0-360	200	V

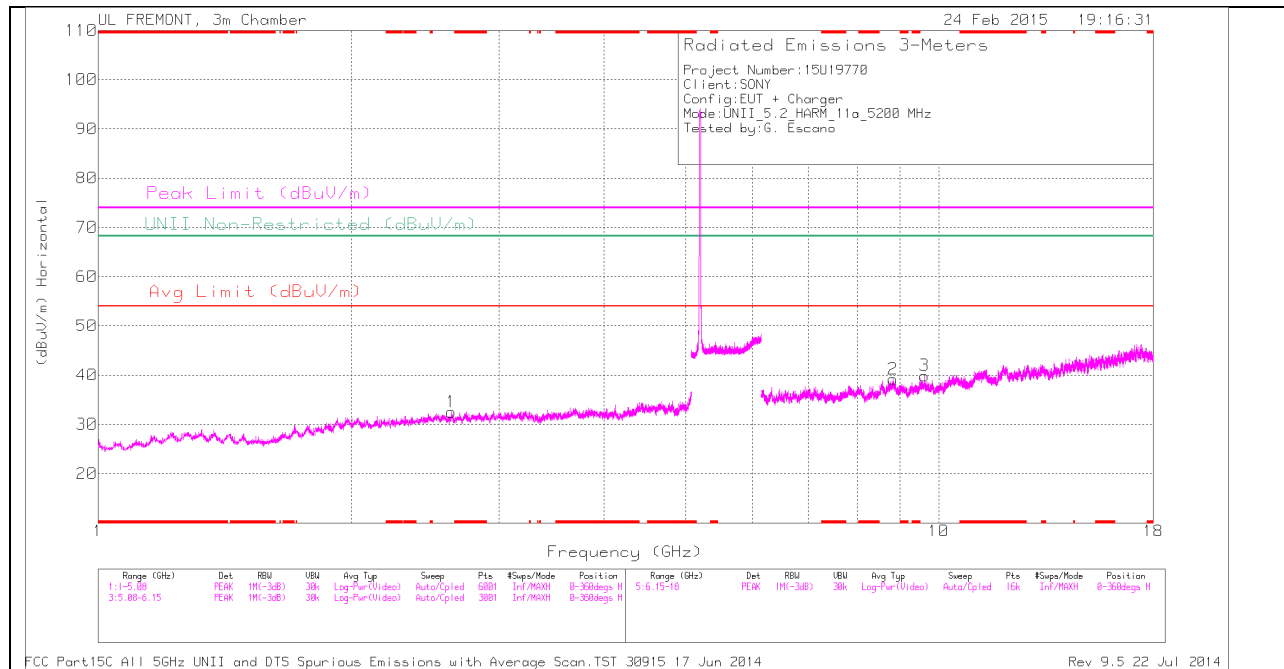
PK - Peak detector

RADIATED EMISSIONS

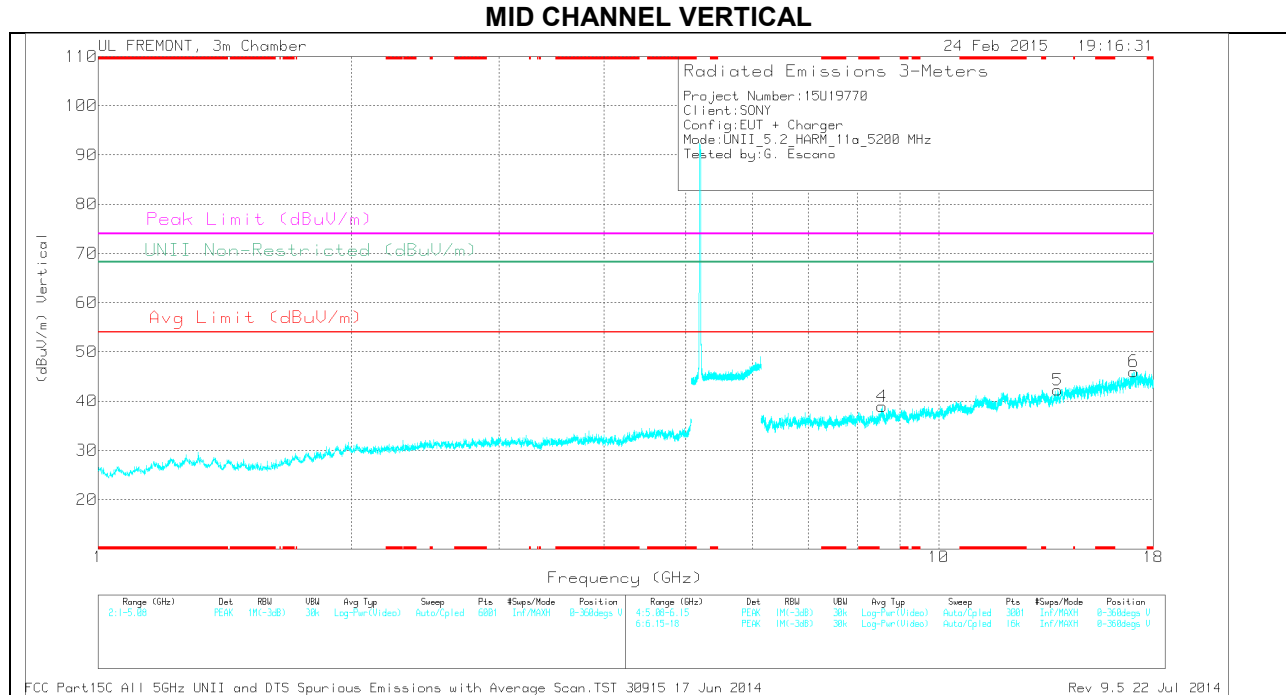
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 12.069	37.42	PK1	39	-26.4	0	50.02	-	-	74	-23.98	-	-	97	300	H
* 12.07	25.26	AD1	39	-26.4	0	37.86	54	-16.14	-	-	-	-	97	300	H

FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

MID CHANNEL HORIZONTAL



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



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

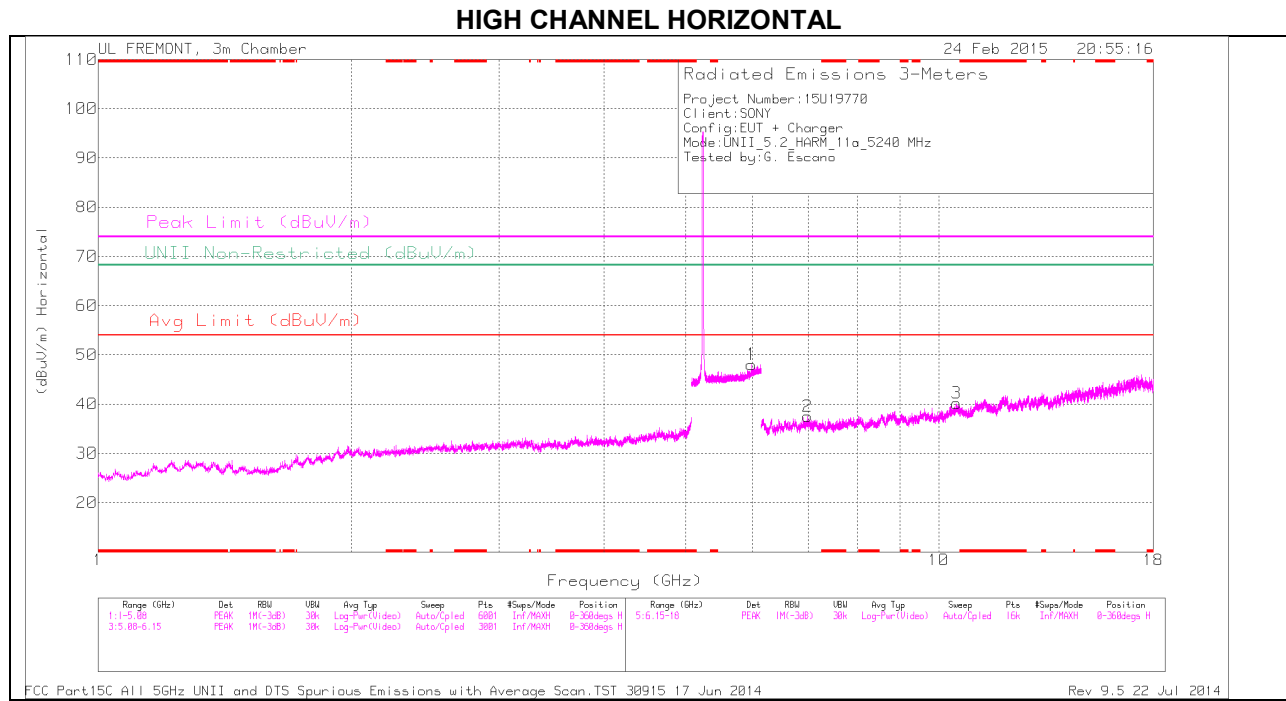
MID CHANNEL DATA

TRACE MARKERS

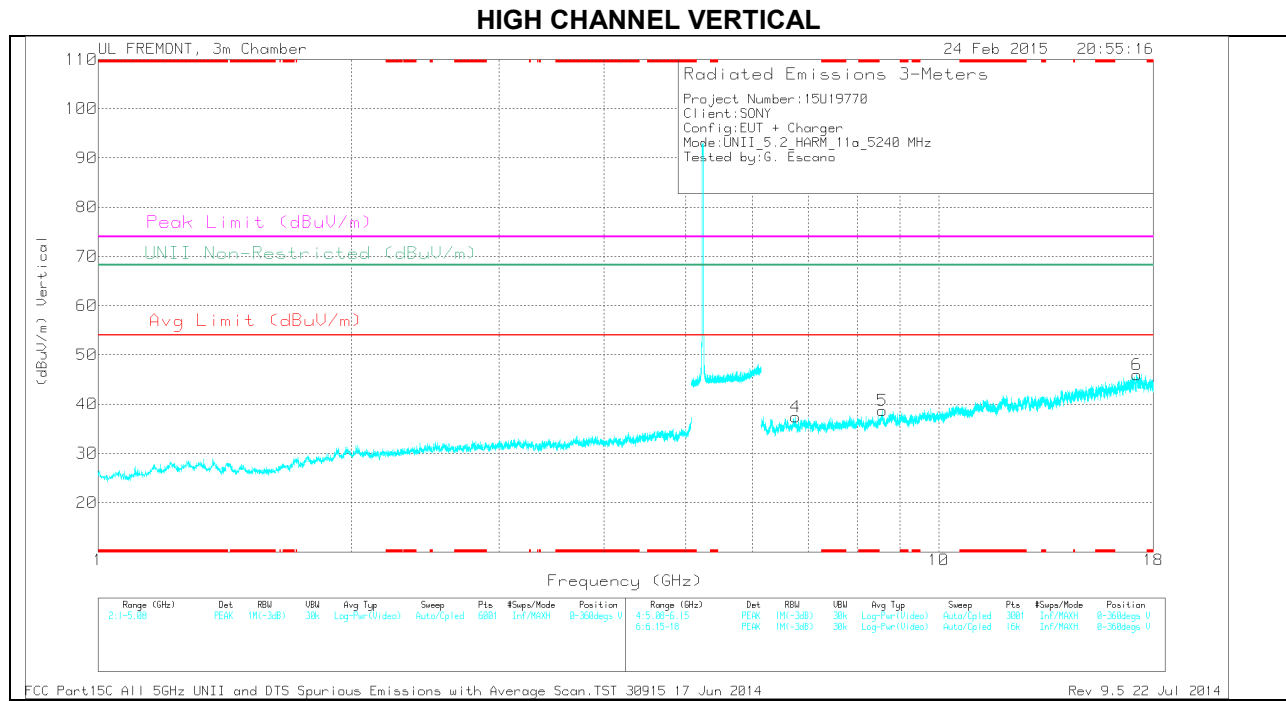
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Chl/ Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.633	32.51	PK	32.4	-32.4	0	32.51	-	-	-	-	68.2	-35.69	0-360	200	H
4	8.563	29.31	PK	35.8	-26.2	0	38.91	-	-	-	-	68.2	-29.29	0-360	100	V
2	8.821	29	PK	35.9	-25.7	0	39.2	-	-	-	-	68.2	-29	0-360	100	H
3	9.612	28.4	PK	36.7	-25.2	0	39.9	-	-	-	-	68.2	-28.3	0-360	100	H
5	13.858	31.05	PK	38.7	-27.5	0	42.25	-	-	-	-	68.2	-25.95	0-360	200	V
6	17.073	28.6	PK	41.4	-24	0	46	-	-	-	-	68.2	-22.2	0-360	200	V

PK - Peak detector

FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013



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



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

HIGH CHANNEL DATA

TRACE MARKERS

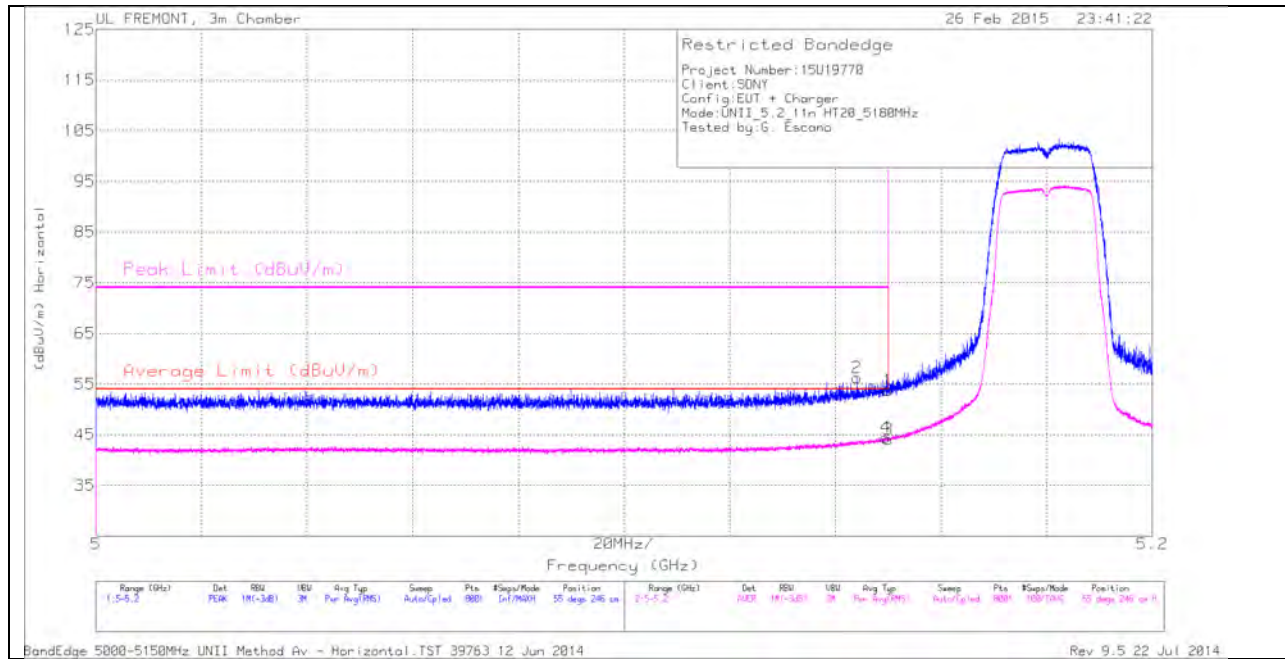
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non- Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.987	33.75	PK	35.2	-20.9	0	48.05	-	-	-	-	68.2	-20.15	0-360	100	H
4	6.755	31.4	PK	35.6	-29.6	0	37.4	-	-	-	-	68.2	-30.8	0-360	100	V
2	6.986	30.53	PK	35.6	-28.6	0	37.53	-	-	-	-	68.2	-30.67	0-360	200	H
5	8.569	29.08	PK	35.8	-26.2	0	38.68	-	-	-	-	68.2	-29.52	0-360	100	V
3	10.502	28.06	PK	37.5	-25.4	0	40.16	-	-	-	-	68.2	-28.04	0-360	100	H
6	17.199	27.63	PK	41.3	-23	0	45.93	-	-	-	-	68.2	-22.27	0-360	200	V

PK - Peak detector

FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

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

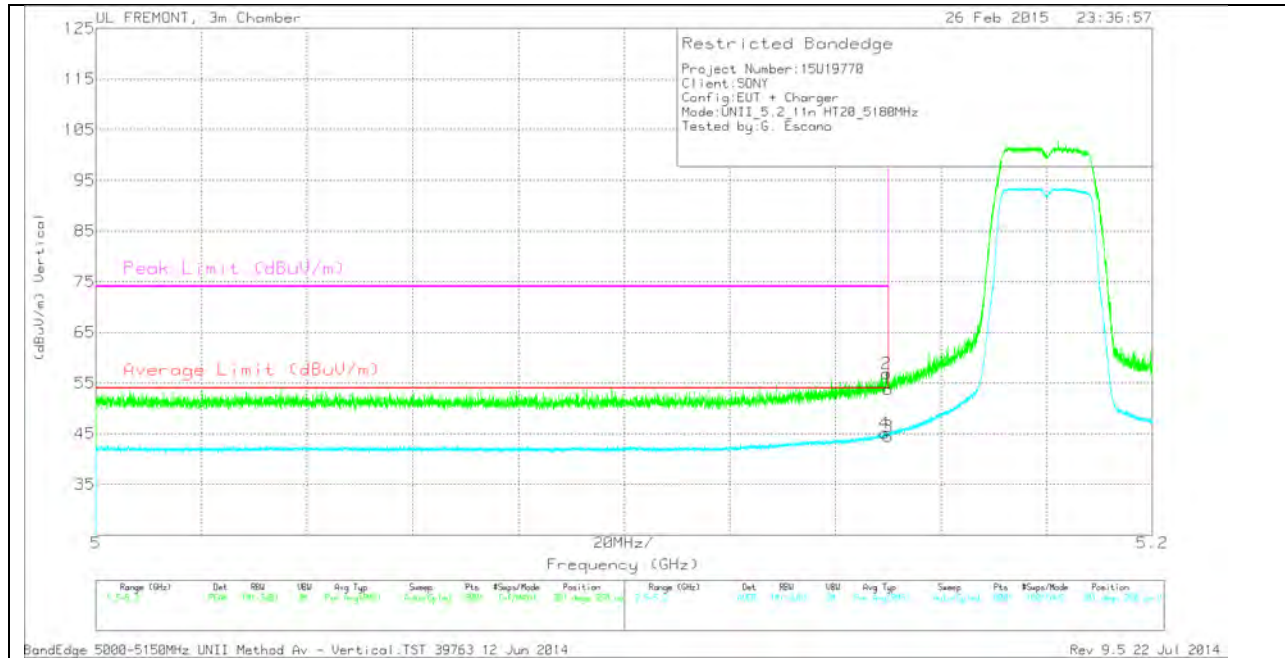
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fitter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.144	43.61	PK	34.2	-21.6	0	56.21	-	-	74	-17.79	55	246	H
1	5.15	41.22	PK	34.2	-21.6	0	53.82	-	-	74	-20.18	55	246	H
3	5.15	31.53	RMS	34.2	-21.6	0	44.13	54	-9.87	-	-	55	246	H
4	5.15	31.81	RMS	34.2	-21.6	0	44.41	54	-9.59	-	-	55	246	H

VERTICAL PEAK AND AVERAGE PLOT

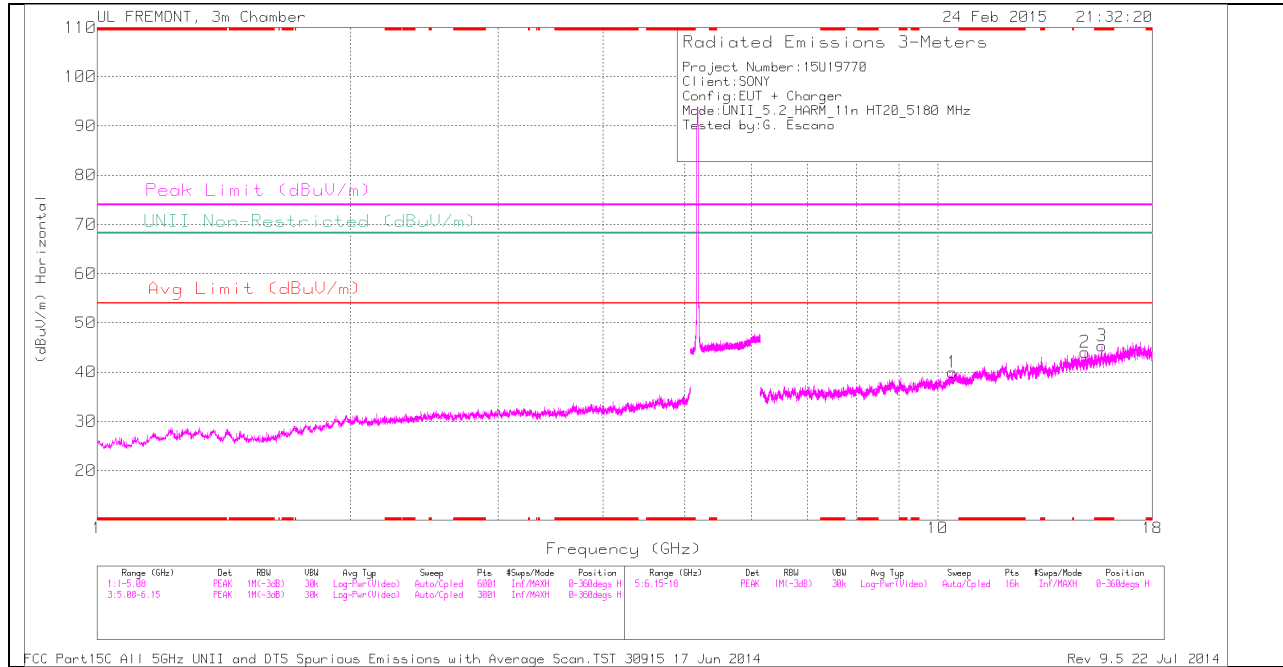


VERTICAL DATA

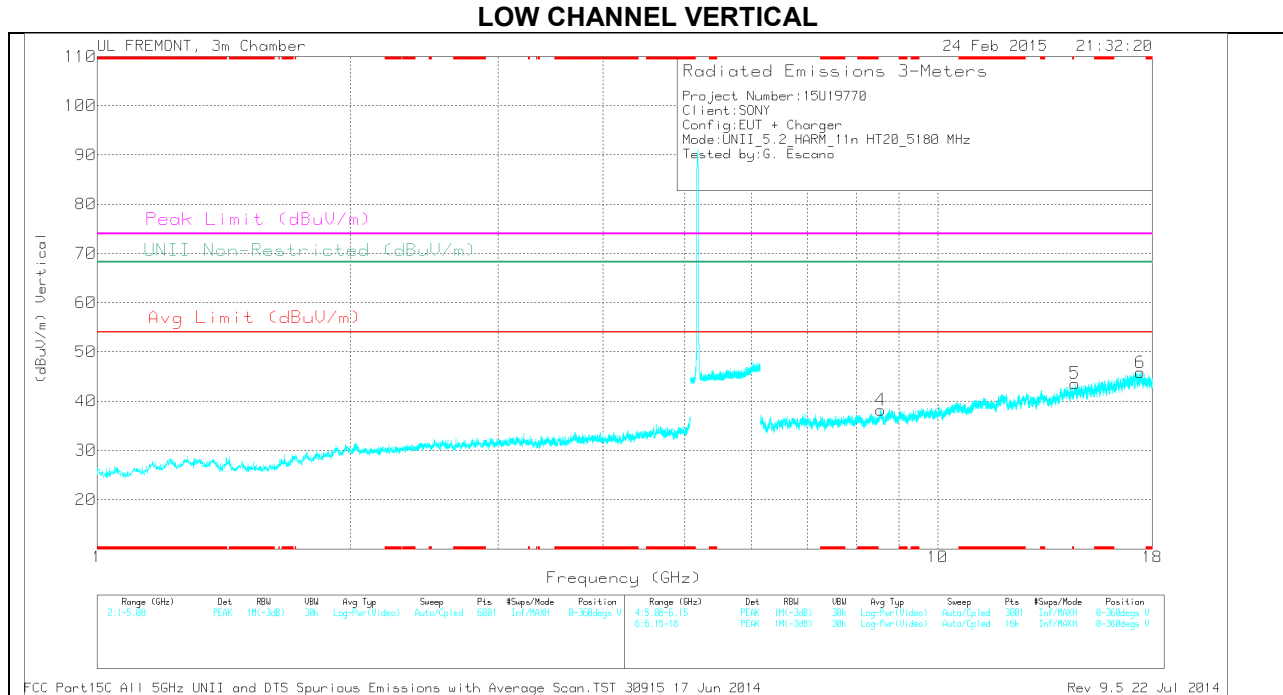
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Filt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	5.149	32.46	RMS	34.2	-21.6	0	45.06	54	-8.94	-	-	301	250	V
1	5.15	41.15	PK	34.2	-21.6	0	53.75	-	-	74	-20.25	301	250	V
2	5.15	44.3	PK	34.2	-21.6	0	56.9	-	-	74	-17.1	301	250	V
3	5.15	31.81	RMS	34.2	-21.6	0	44.41	54	-9.59	-	-	301	250	V

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



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



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

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 15.689	31.45	PK	40.4	-26.5	0	45.35	-	-	74	-28.65	-	-	0-360	100	H
4	8.551	28.4	PK	35.8	-26	0	38.2	-	-	-	-	68.2	-30	0-360	200	V
1	10.408	28.28	PK	37.3	-25.6	0	39.98	-	-	-	-	68.2	-28.22	0-360	100	H
5	14.558	31.09	PK	39.8	-27.3	0	43.59	-	-	-	-	68.2	-24.61	0-360	100	V
2	14.963	31.58	PK	39.8	-27.3	0	44.08	-	-	-	-	68.2	-24.12	0-360	100	H
6	17.413	26.84	PK	41.4	-22.4	0	45.84	-	-	-	-	68.2	-22.36	0-360	200	V

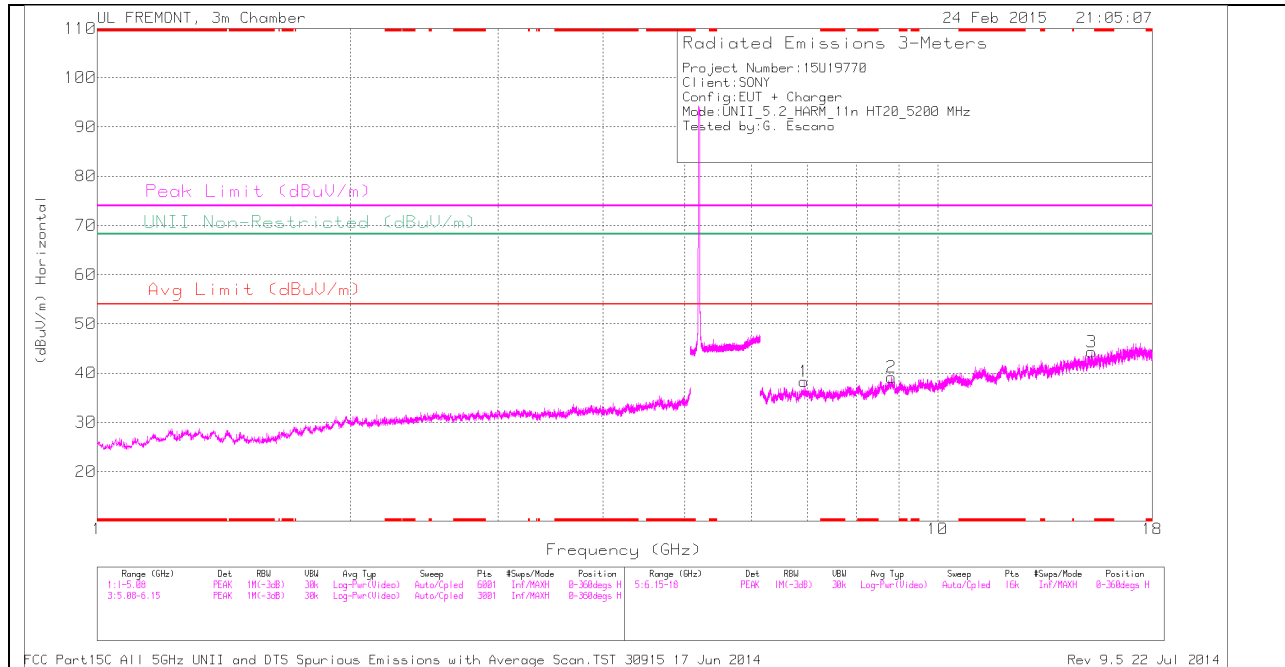
PK - Peak detector

RADIATED EMISSIONS

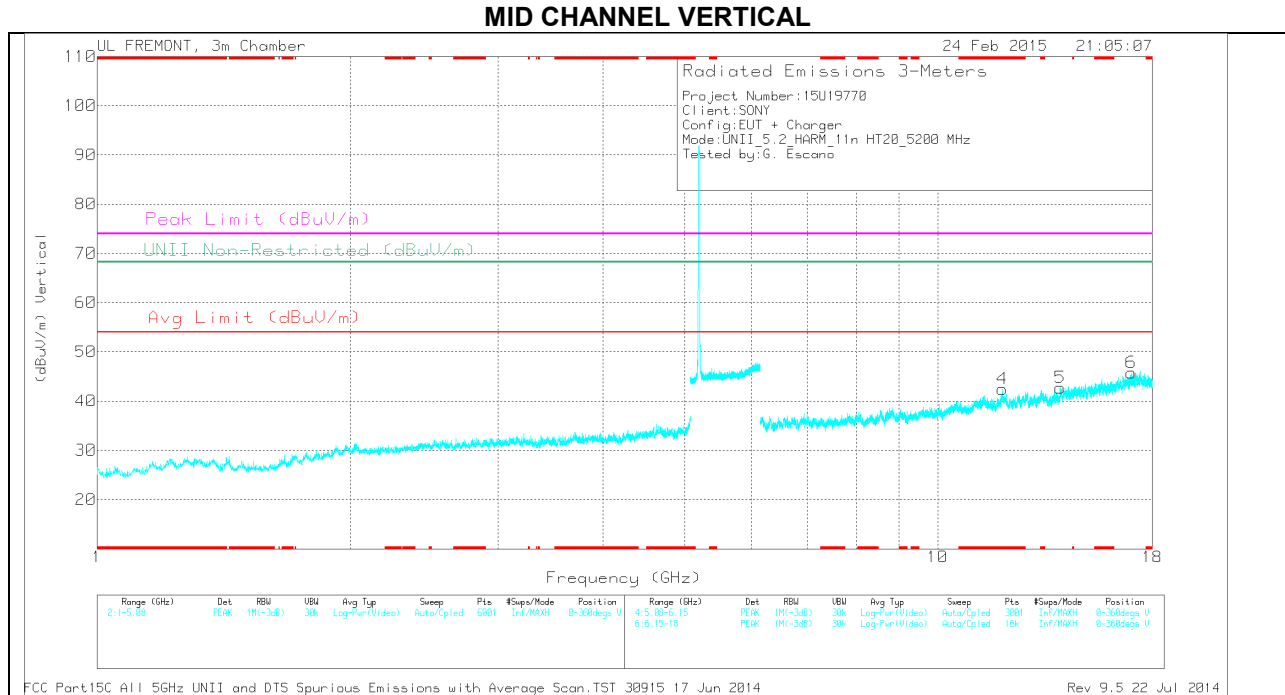
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 15.69	39.58	PK1	40.4	-26.5	0	53.48	-	-	74	-20.52	-	-	267	328	H
* 15.69	27.67	AD1	40.4	-26.5	0	41.57	54	-12.43	-	-	-	-	267	328	H

FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

MID CHANNEL HORIZONTAL



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



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

MID CHANNEL DATA

TRACE MARKERS

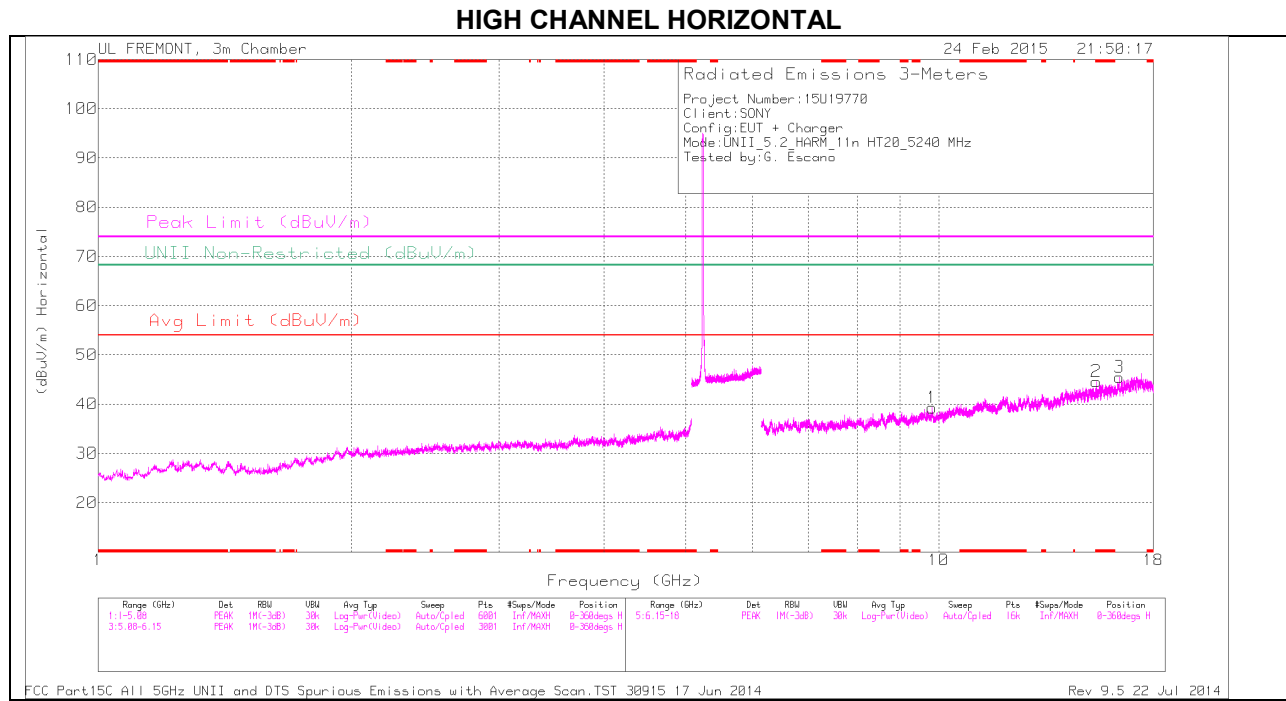
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 11.938	29.66	PK	39.1	-26.3	0	42.46	-	-	74	-31.54	-	-	0-360	200	V
1	6.934	31.4	PK	35.6	-28.7	0	38.3	-	-	-	-	68.2	-29.9	0-360	200	H
2	8.815	28.75	PK	35.9	-25.5	0	39.15	-	-	-	-	68.2	-29.05	0-360	200	H
5	13.986	31.62	PK	38.8	-27.7	0	42.72	-	-	-	-	68.2	-25.48	0-360	100	V
3	15.244	30.97	PK	39.9	-26.6	0	44.27	-	-	-	-	68.2	-23.93	0-360	100	H
6	16.991	28.18	PK	41.4	-23.8	0	45.78	-	-	-	-	68.2	-22.42	0-360	200	V

PK - Peak detector

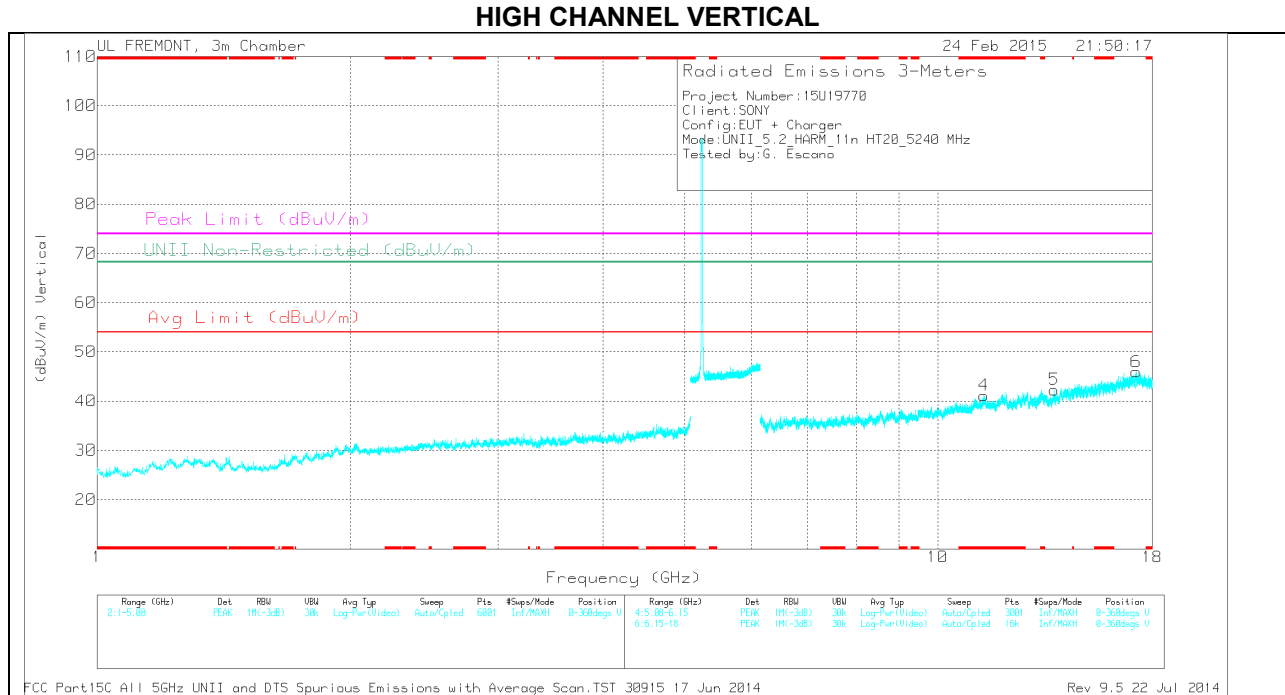
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.936	37.7	PK1	39.1	-26.3	0	50.5	-	-	74	-23.5	-	-	283	127	V
* 11.936	25.88	AD1	39.1	-26.3	0	38.68	54	-15.32	-	-	-	-	283	127	V

FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013



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



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

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 15.401	31.31	PK	40.1	-26.8	0	44.61	-	-	74	-29.39	-	-	0-360	200	H
4	* 11.345	28.67	PK	38.1	-25.6	0	41.17	-	-	74	-32.83	-	-	0-360	100	V
1	9.819	27.48	PK	36.9	-25.1	0	39.28	-	-	-	-	68.2	-28.92	0-360	100	H
5	13.763	30.42	PK	38.6	-26.7	0	42.32	-	-	-	-	68.2	-25.88	0-360	100	V
3	16.394	29	PK	40.7	-24.2	0	45.5	-	-	-	-	68.2	-22.7	0-360	200	H
6	17.225	28.04	PK	41.3	-23.4	0	45.94	-	-	-	-	68.2	-22.26	0-360	200	V

PK - Peak detector

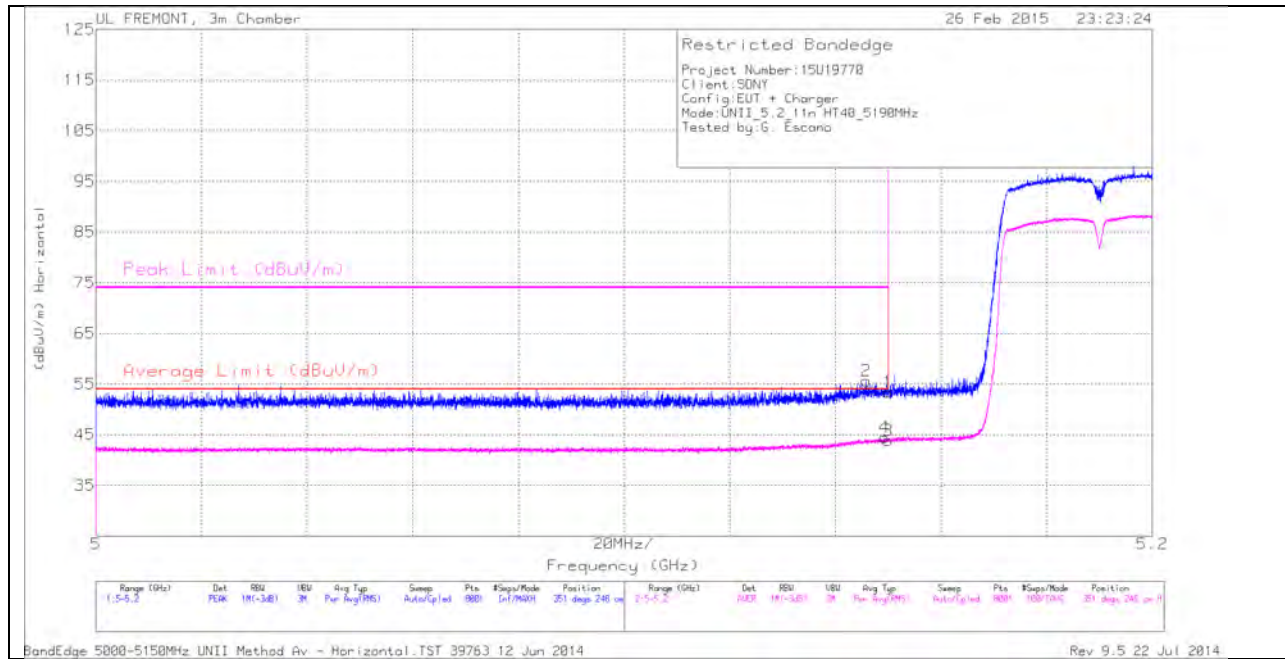
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 15.402	39.82	PK1	40.1	-26.7	0	53.22	-	-	74	-20.78	-	-	340	330	H
* 15.403	27.59	AD1	40.1	-26.7	0	40.99	54	-13.01	-	-	-	-	340	330	H
* 11.346	36.54	PK1	38.1	-25.6	0	49.04	-	-	74	-24.96	-	-	71	161	V
* 11.347	24.84	AD1	38.1	-25.6	0	37.34	54	-16.66	-	-	-	-	71	161	V

FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

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

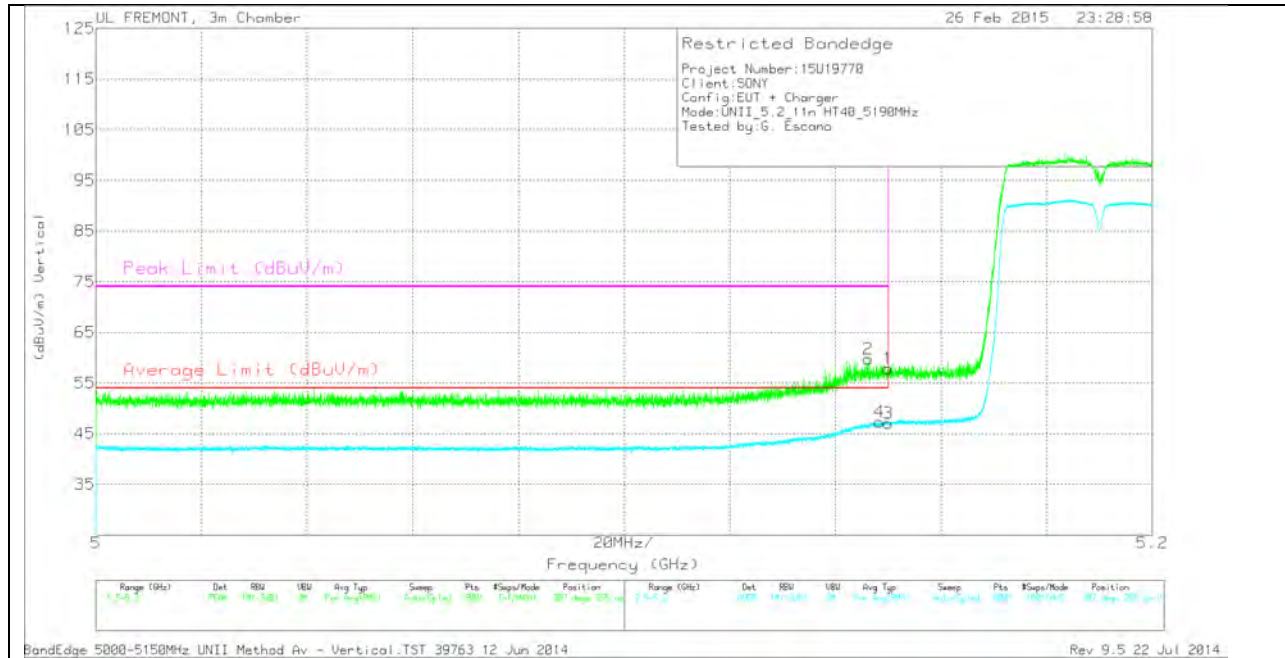
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cb/Filter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.146	43	PK	34.2	-21.6	0	55.6	-	-	74	-18.4	351	248	H
4	5.149	31.66	RMS	34.2	-21.6	.07	44.33	54	-9.67	-	-	351	248	H
1	5.15	40.78	PK	34.2	-21.6	0	53.38	-	-	74	-20.62	351	248	H
3	5.15	31.06	RMS	34.2	-21.6	.07	43.73	54	-10.27	-	-	351	248	H

VERTICAL PEAK AND AVERAGE PLOT

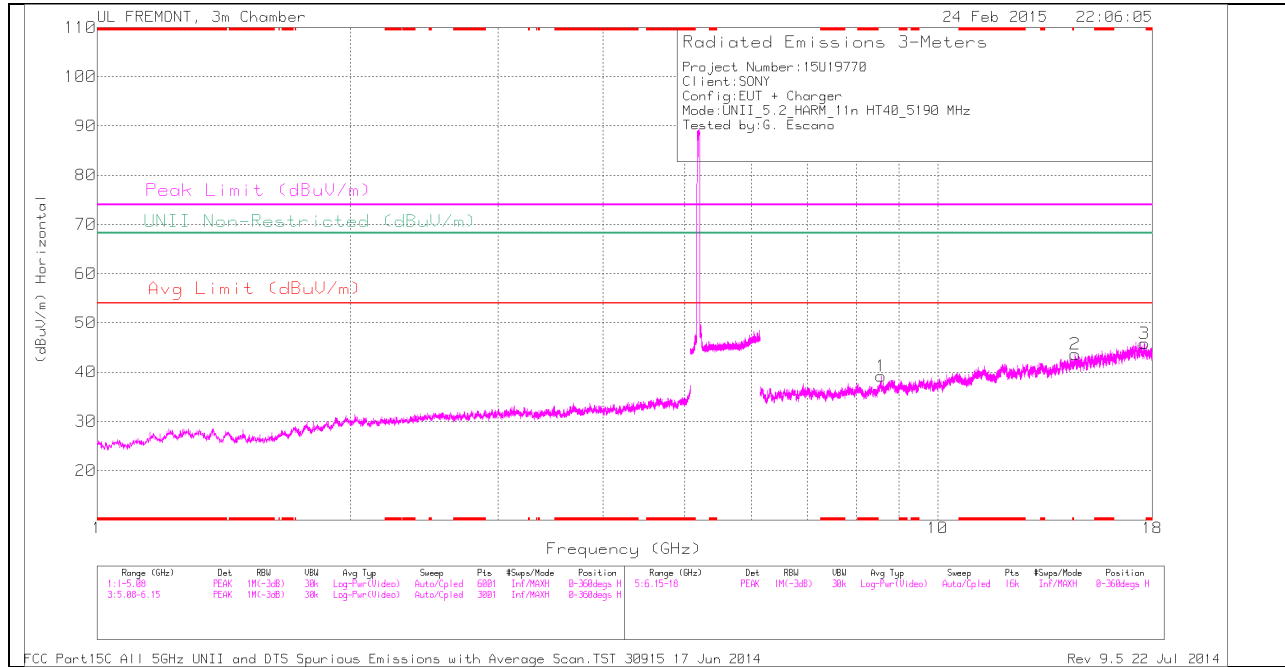


VERTICAL DATA

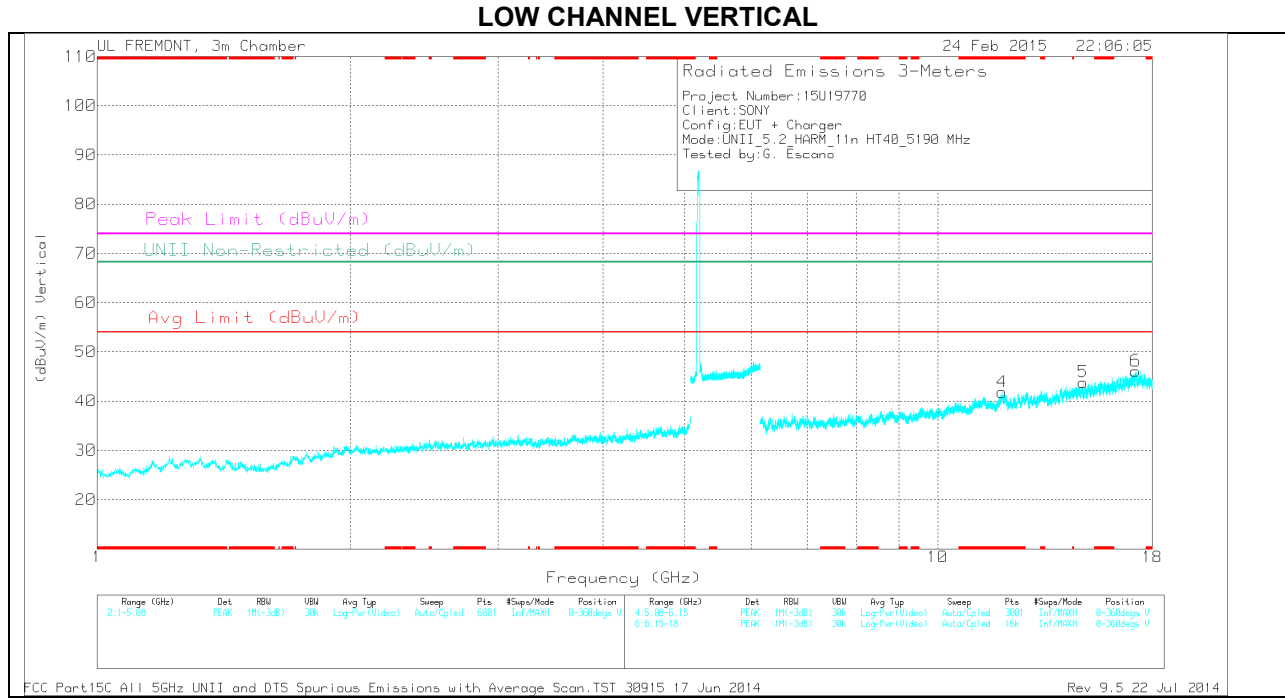
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Filt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.146	47.15	PK	34.2	-21.6	0	59.75	-	-	74	-14.25	307	255	V
4	5.148	34.75	RMS	34.2	-21.6	.07	47.42	54	-6.58	-	-	307	255	V
1	5.15	45.26	PK	34.2	-21.6	0	57.86	-	-	74	-16.14	307	255	V
3	5.15	34.42	RMS	34.2	-21.6	.07	47.09	54	-6.91	-	-	307	255	V

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



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



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

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 11.927	28.93	PK	39.1	-26.2	0	41.83	-	-	74	-32.17	-	-	0-360	200	V
1	8.564	29.58	PK	35.8	-26.2	0	39.18	-	-	-	-	68.2	-29.02	0-360	200	H
2	14.573	30.92	PK	39.8	-27.1	0	43.62	-	-	-	-	68.2	-24.58	0-360	100	H
5	14.893	31.26	PK	39.8	-27.2	0	43.86	-	-	-	-	68.2	-24.34	0-360	200	V
6	17.197	27.94	PK	41.3	-23.1	0	46.14	-	-	-	-	68.2	-22.06	0-360	100	V
3	17.613	28.12	PK	41.4	-23.7	0	45.82	-	-	-	-	68.2	-22.38	0-360	200	H

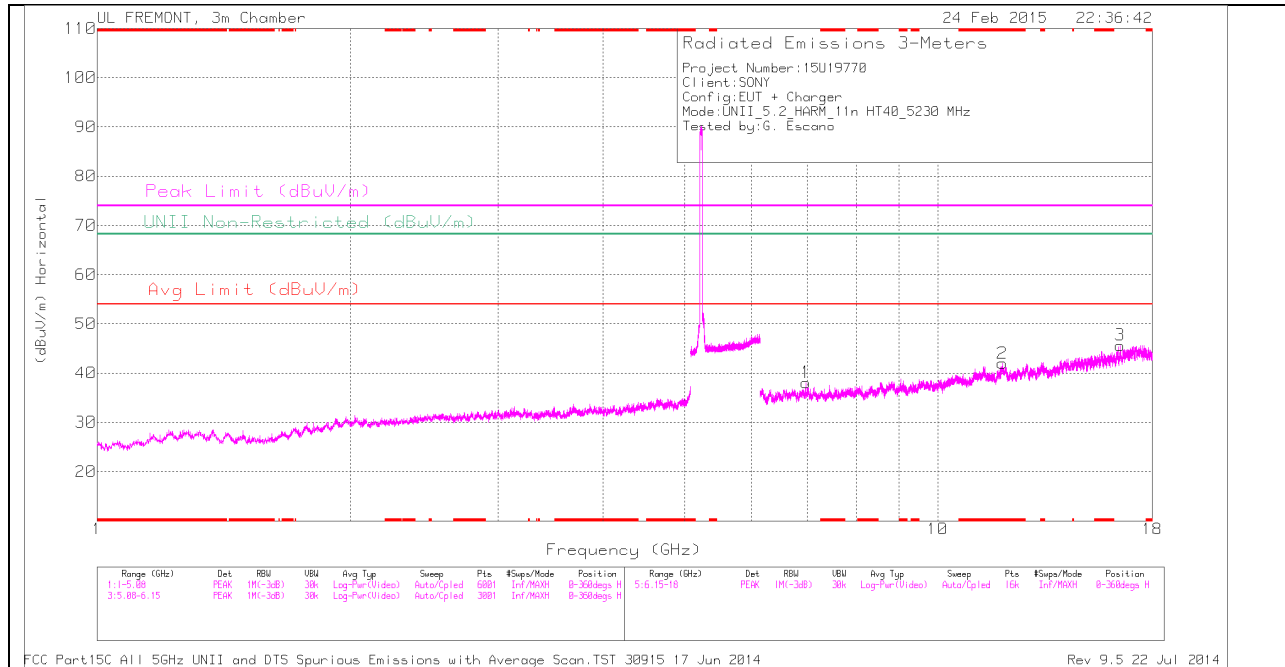
PK - Peak detector

RADIATED EMISSIONS

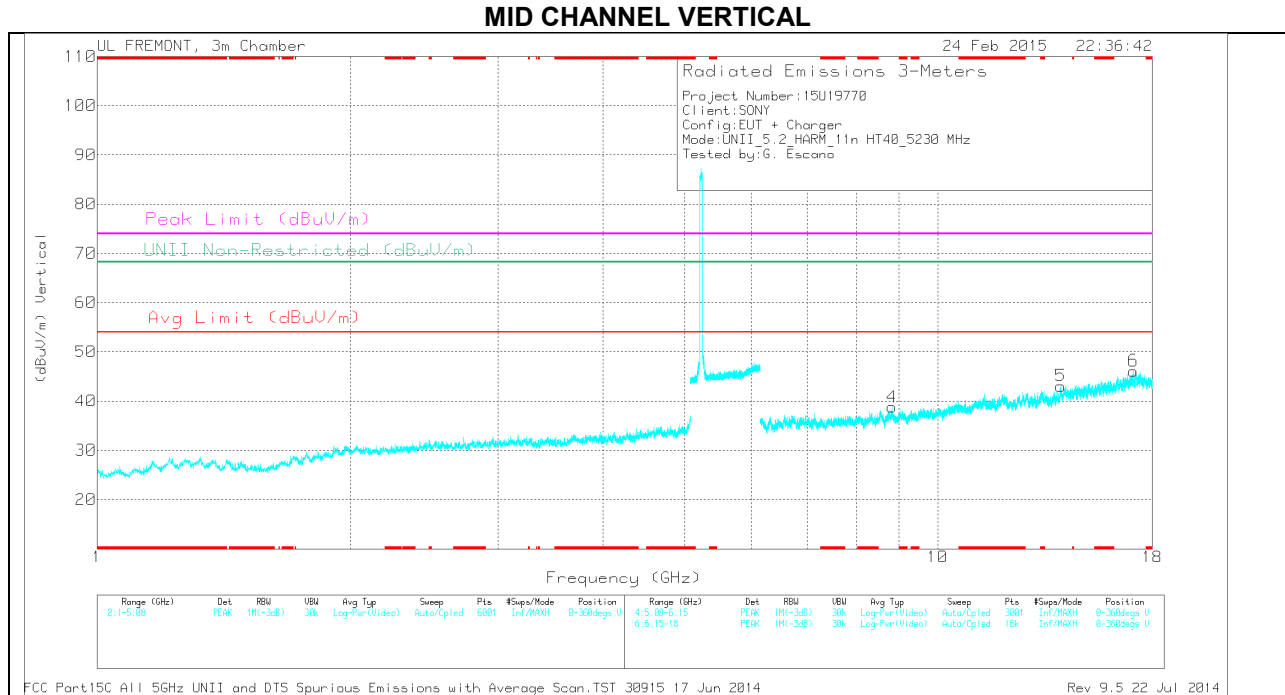
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.928	37.68	PK1	39.1	-26.2	0	50.58	-	-	74	-23.42	-	-	38	109	V
* 11.925	25.91	AD1	39.1	-26.2	.07	38.88	54	-15.12	-	-	-	-	38	109	V

FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

MID CHANNEL HORIZONTAL



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



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

MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 11.939	29.19	PK	39.1	-26.3	0	41.99	-	-	74	-32.01	-	-	0-360	100	H
1	6.974	31.08	PK	35.6	-28.6	0	38.08	-	-	-	-	68.2	-30.12	0-360	200	H
4	8.82	28.6	PK	35.9	-25.7	0	38.8	-	-	-	-	68.2	-29.4	0-360	100	V
5	14.011	31.99	PK	38.8	-27.7	0	43.09	-	-	-	-	68.2	-25.11	0-360	200	V
3	16.485	29.84	PK	40.9	-25.1	0	45.64	-	-	-	-	68.2	-22.56	0-360	200	H
6	17.082	28.44	PK	41.4	-23.7	0	46.14	-	-	-	-	68.2	-22.06	0-360	200	V

PK - Peak detector

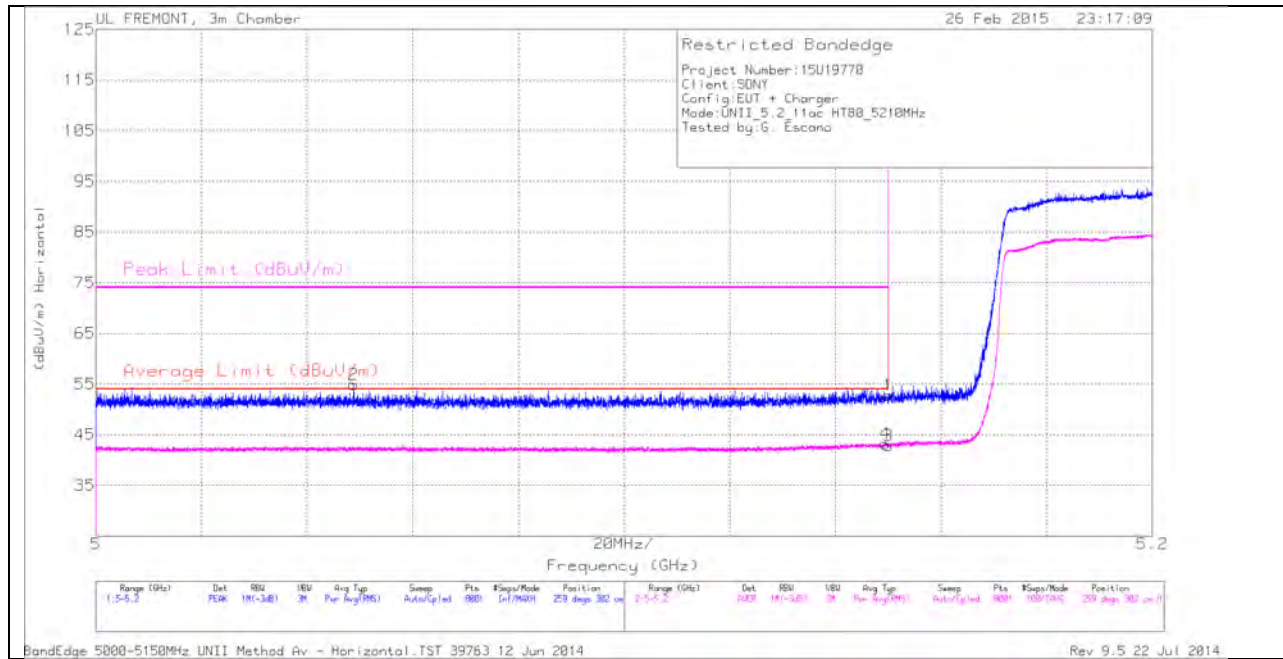
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.939	38.06	PK1	39.1	-26.3	0	50.86	-	-	74	-23.14	-	-	246	396	H
* 11.938	26.03	AD1	39.1	-26.3	.07	38.9	54	-15.1	-	-	-	-	246	396	H

FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

10.1.5. TX ABOVE 1 GHz 802.11ac HT80 MODE IN THE 5.2 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

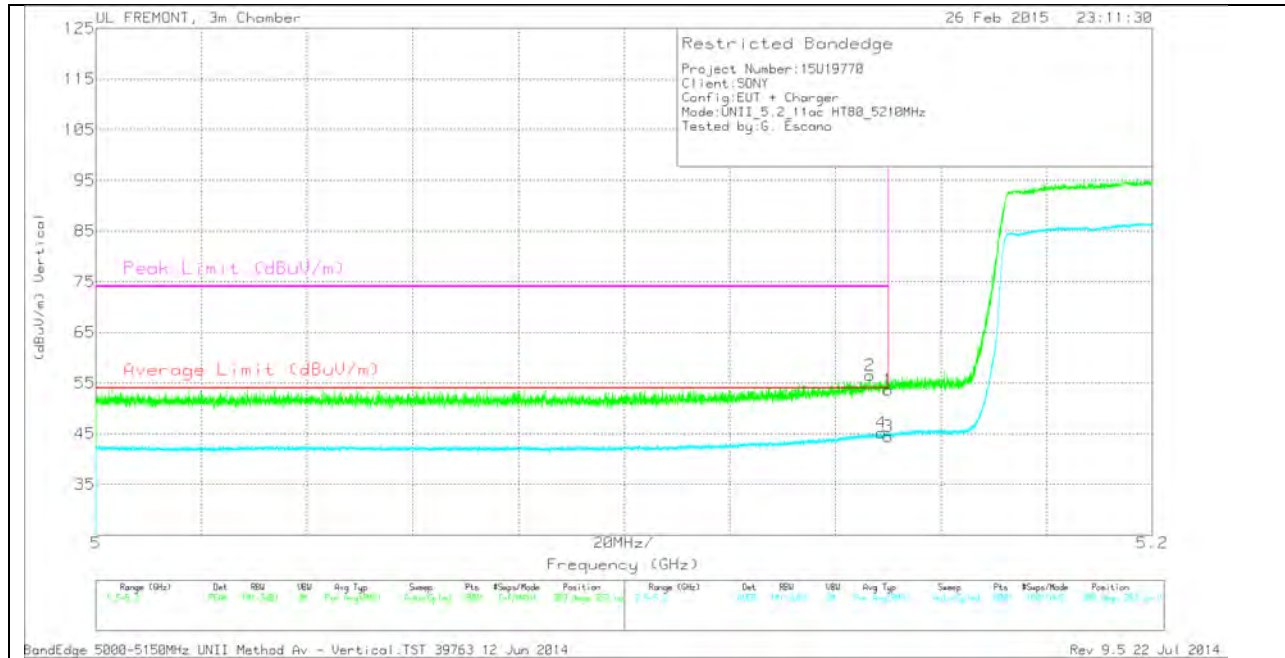
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cb/Filter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.049	42.23	PK	34.1	-21.5	0	54.83	-	-	74	-19.17	259	302	H
4	5.149	30.59	RMS	34.2	-21.6	.14	43.33	54	-10.67	-	-	259	302	H
1	5.15	40.2	PK	34.2	-21.6	0	52.8	-	-	74	-21.2	259	302	H
3	5.15	30.29	RMS	34.2	-21.6	.14	43.03	54	-10.97	-	-	259	302	H

VERTICAL PEAK AND AVERAGE PLOT

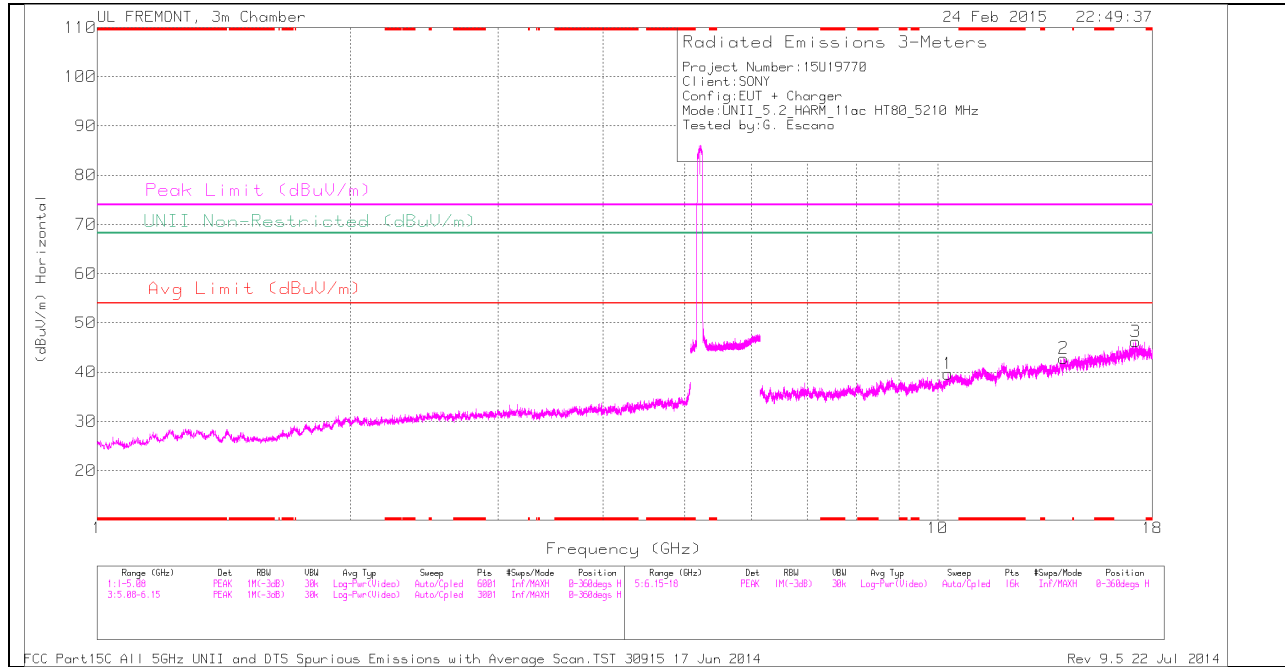


VERTICAL DATA

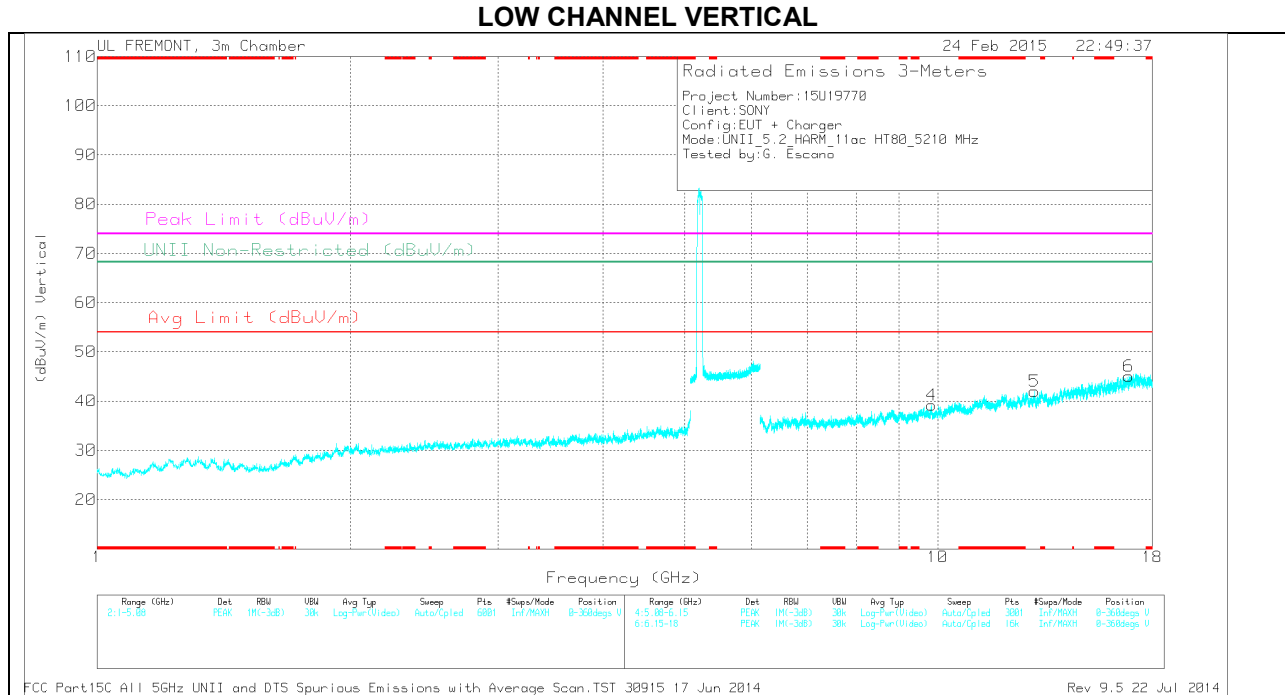
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Filt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.147	43.92	PK	34.2	-21.6	0	56.52	-	-	74	-17.48	309	252	V
4	5.149	32.56	RMS	34.2	-21.6	.14	45.3	54	-8.7	-	-	309	252	V
1	5.15	41.01	PK	34.2	-21.6	0	53.61	-	-	74	-20.39	309	252	V
3	5.15	31.8	RMS	34.2	-21.6	.14	44.54	54	-9.46	-	-	309	252	V

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



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



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

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non- Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	9.838	27.57	PK	36.9	-25.3	0	39.17	-	-	-	-	68.2	-29.03	0-360	200	V
1	10.288	27.86	PK	37.1	-25.3	0	39.66	-	-	-	-	68.2	-28.54	0-360	200	H
5	13.032	30.27	PK	39	-27.3	0	41.97	-	-	-	-	68.2	-26.23	0-360	100	V
2	14.128	31.4	PK	39	-27.6	0	42.8	-	-	-	-	68.2	-25.4	0-360	200	H
6	16.874	27.85	PK	41.1	-23.9	0	45.05	-	-	-	-	68.2	-23.15	0-360	200	V
3	17.193	28.13	PK	41.3	-23.2	0	46.23	-	-	-	-	68.2	-21.97	0-360	100	H

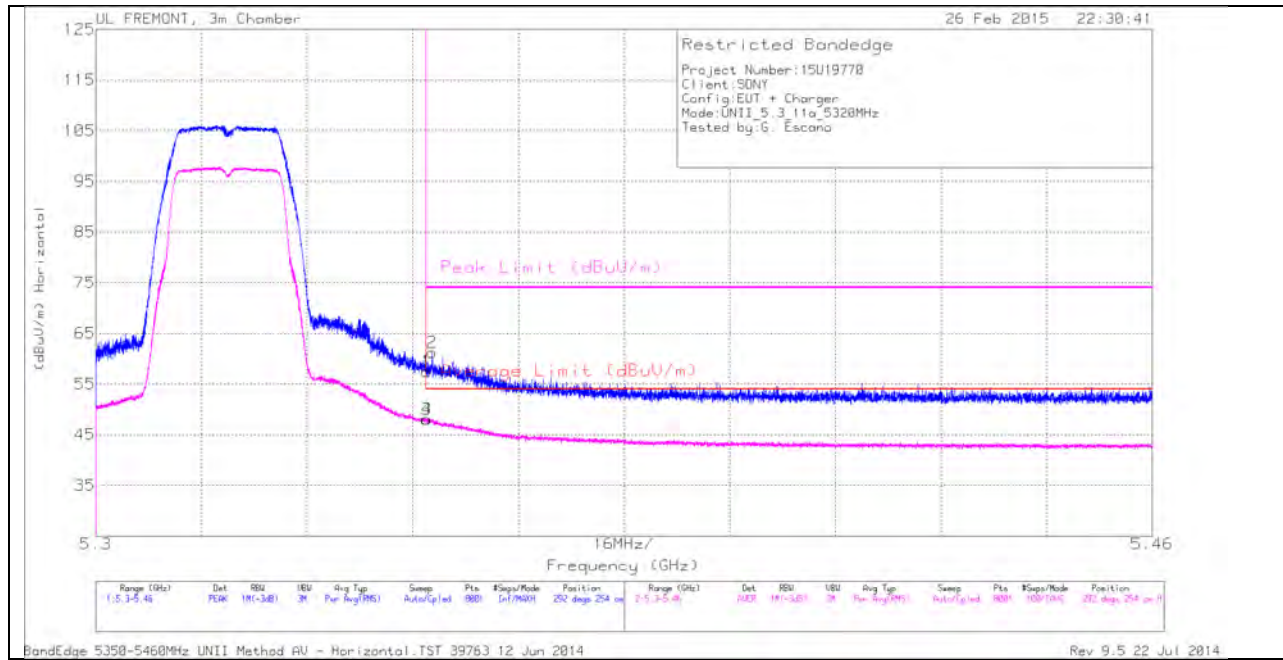
PK - Peak detector

FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

10.2. 5.3 GHz

10.2.1. TX ABOVE 1 GHz 802.11a MODE IN THE 5.3 GHz BAND AUTHORIZED BANDEDGE (HIGH CHANNEL)

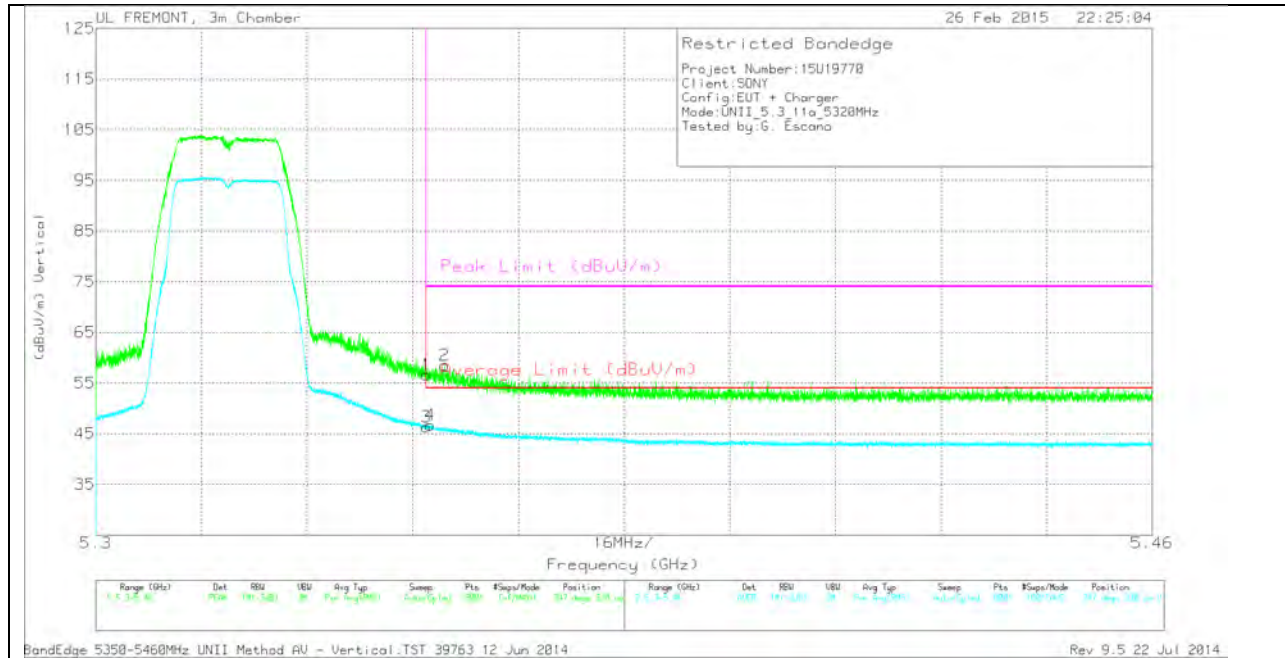
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.35	44.35	PK	34.5	-21.4	0	57.45	-	-	74	-16.55	292	254	H
3	5.35	34.98	RMS	34.5	-21.4	0	48.08	54	-5.92	-	-	292	254	H
4	5.35	35	RMS	34.5	-21.4	0	48.1	54	-5.9	-	-	292	254	H
2	5.351	48.13	PK	34.5	-21.4	0	61.23	-	-	74	-12.77	292	254	H

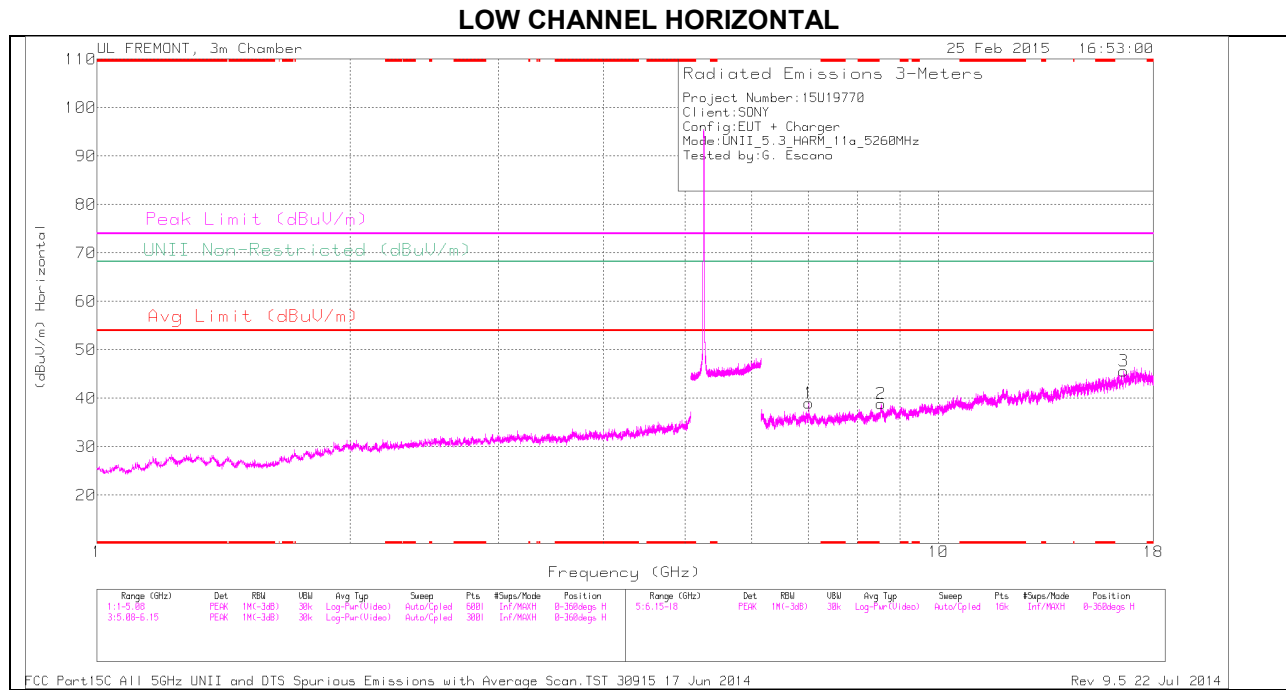
VERTICAL PEAK AND AVERAGE PLOT



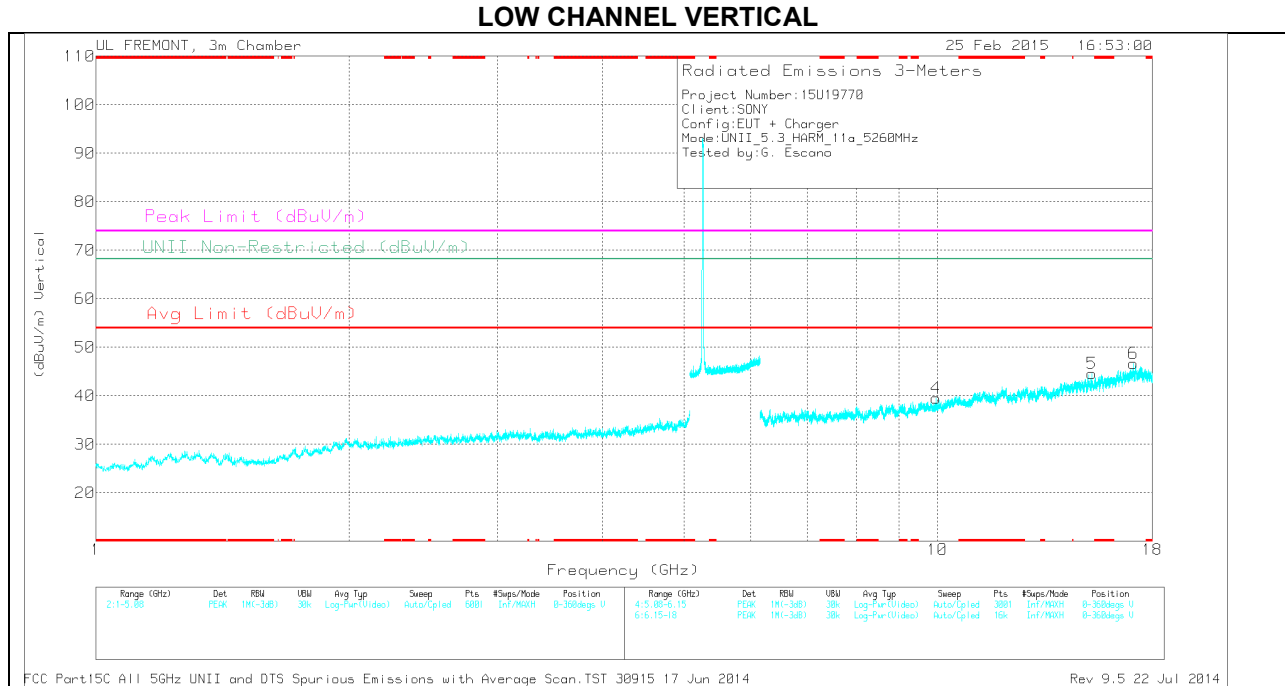
VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Filt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.35	43.49	PK	34.5	-21.4	0	56.59	-	-	74	-17.41	347	330	V
3	5.35	33.2	RMS	34.5	-21.4	0	46.3	54	-7.7	-	-	347	330	V
4	5.351	33.58	RMS	34.5	-21.4	0	46.68	54	-7.32	-	-	347	330	V
2	5.353	45.36	PK	34.5	-21.4	0	58.46	-	-	74	-15.54	347	330	V

HARMONICS AND SPURIOUS EMISSIONS



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



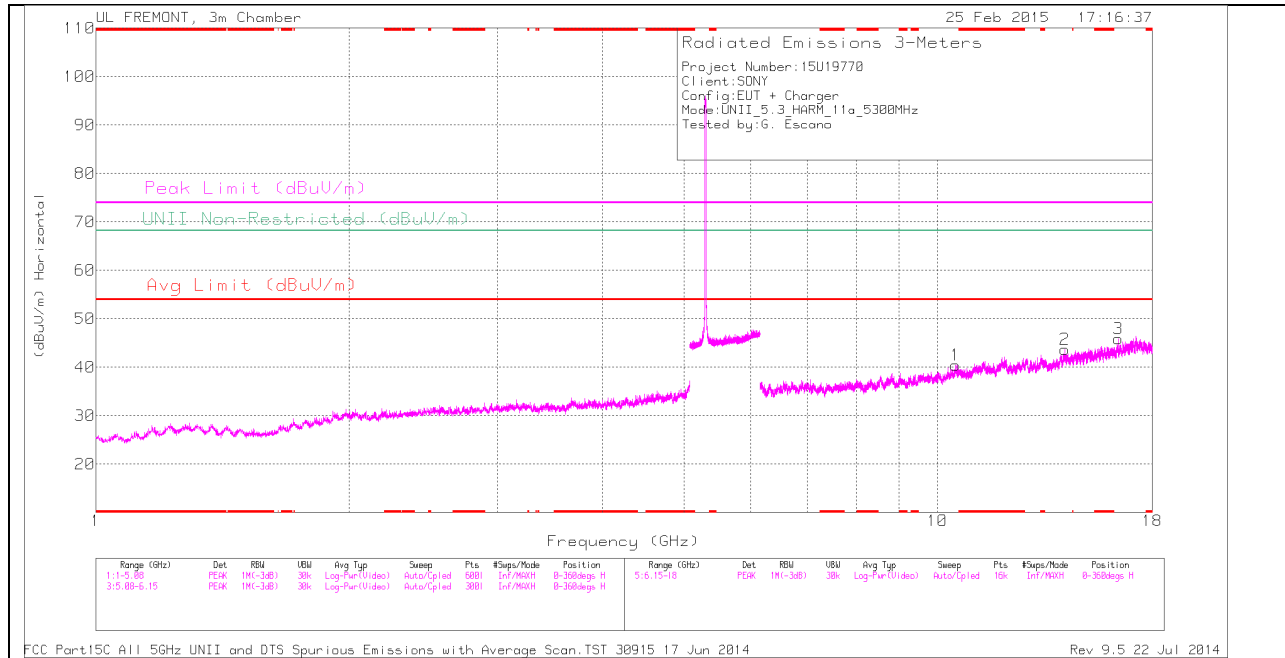
Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

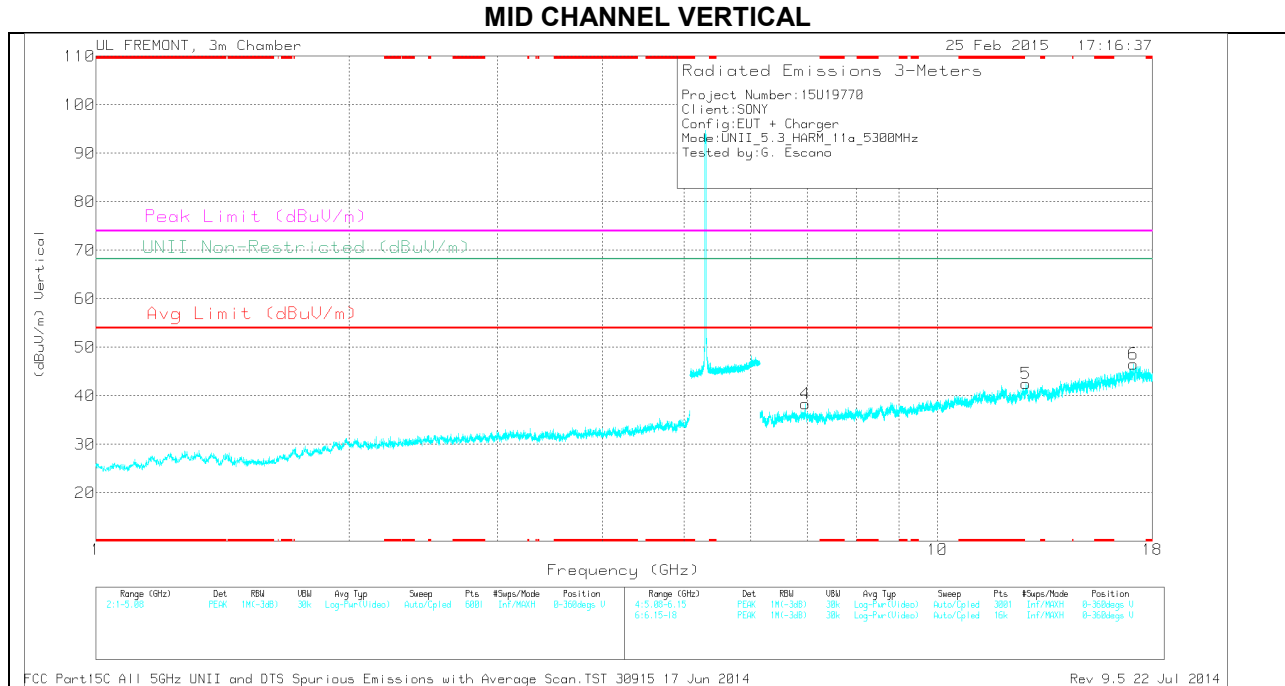
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	7.013	32.3	PK	35.6	-28.9	0	39	-	-	-	-	68.2	-29.2	0-360	200	H
2	8.553	29.22	PK	35.8	-26.1	0	38.92	-	-	-	-	68.2	-29.28	0-360	100	H
4	9.963	28.79	PK	36.9	-26.1	0	39.59	-	-	-	-	68.2	-28.61	0-360	200	V
5	15.247	31.23	PK	39.9	-26.5	0	44.63	-	-	-	-	68.2	-23.57	0-360	100	V
3	16.599	28.88	PK	41	-24.3	0	45.58	-	-	-	-	68.2	-22.62	0-360	200	H
6	17.078	29.09	PK	41.4	-23.8	0	46.69	-	-	-	-	68.2	-21.51	0-360	200	V

PK - Peak detector

MID CHANNEL HORIZONTAL



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

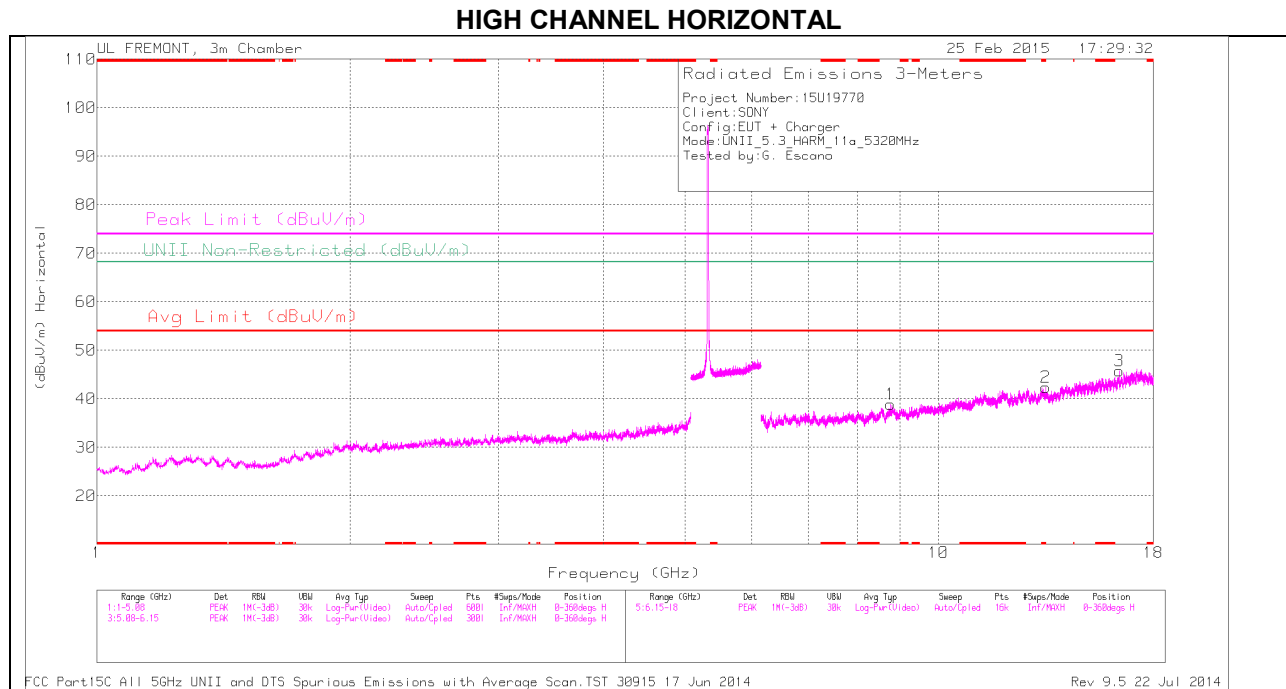


Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

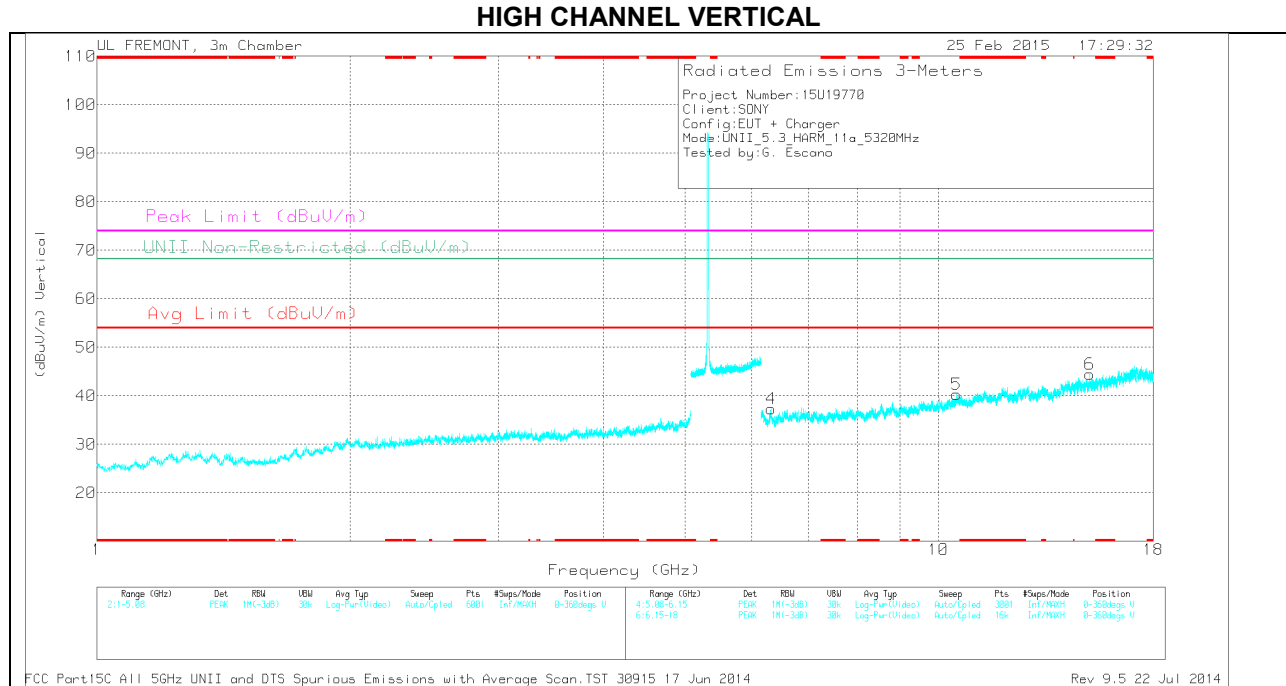
MID CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	6.96	31.21	PK	35.6	-28.4	0	38.41	-	-	-	-	68.2	-29.79	0-360	100	V
1	10.508	28.15	PK	37.5	-25.2	0	40.45	-	-	-	-	68.2	-27.75	0-360	200	H
5	12.732	29.19	PK	39.1	-25.8	0	42.49	-	-	-	-	68.2	-25.71	0-360	200	V
2	14.169	31.56	PK	39.1	-27	0	43.66	-	-	-	-	68.2	-24.54	0-360	100	H
3	16.397	29.36	PK	40.7	-24.2	0	45.86	-	-	-	-	68.2	-22.34	0-360	200	H
6	17.077	28.89	PK	41.4	-23.8	0	46.49	-	-	-	-	68.2	-21.71	0-360	100	V

PK - Peak detector



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



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

HIGH CHANNEL DATA

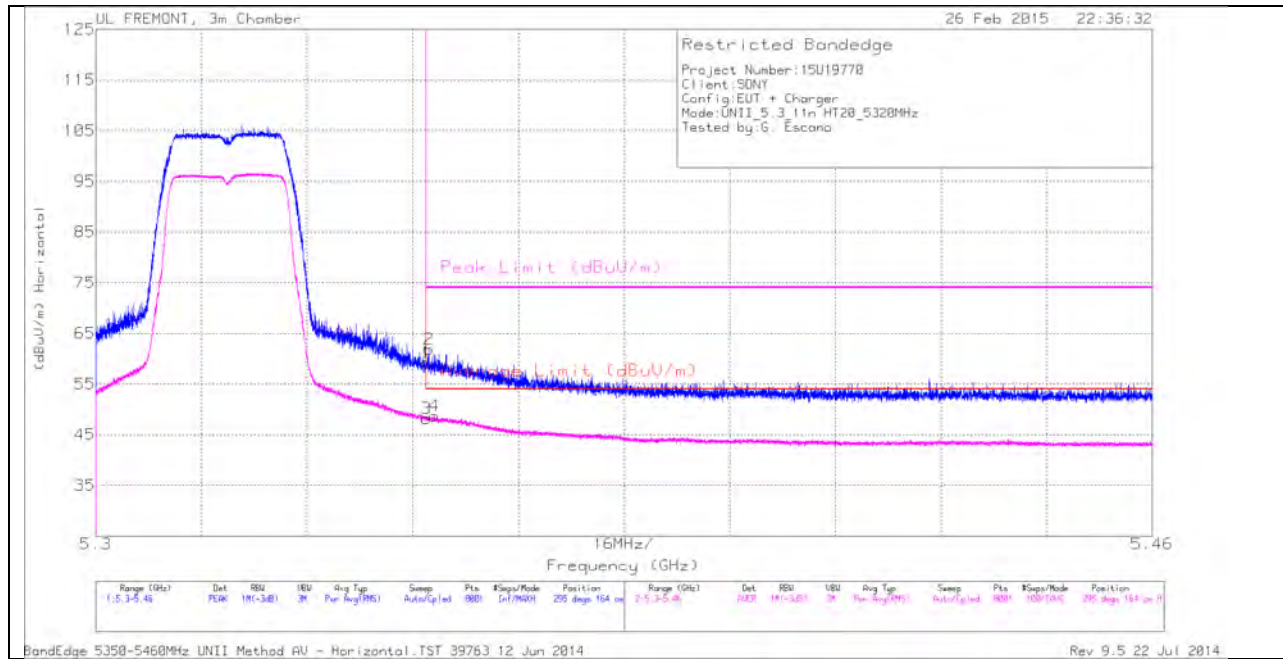
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	6.325	31.25	PK	35.4	-29.3	0	37.35	-	-	-	-	68.2	-30.85	0-360	200	V
1	8.764	28.99	PK	35.9	-26	0	38.89	-	-	-	-	68.2	-29.31	0-360	200	H
5	10.502	28.21	PK	37.5	-25.4	0	40.31	-	-	-	-	68.2	-27.89	0-360	100	V
2	13.403	30.94	PK	39	-27.6	0	42.34	-	-	-	-	68.2	-25.86	0-360	100	H
6	15.127	31.61	PK	39.8	-27	0	44.41	-	-	-	-	68.2	-23.79	0-360	200	V
3	16.391	29.22	PK	40.7	-24.2	0	45.72	-	-	-	-	68.2	-22.48	0-360	200	H

PK - Peak detector

10.2.2. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.3 GHz BAND

AUTHORIZED BANDEDGE (HIGH CHANNEL)

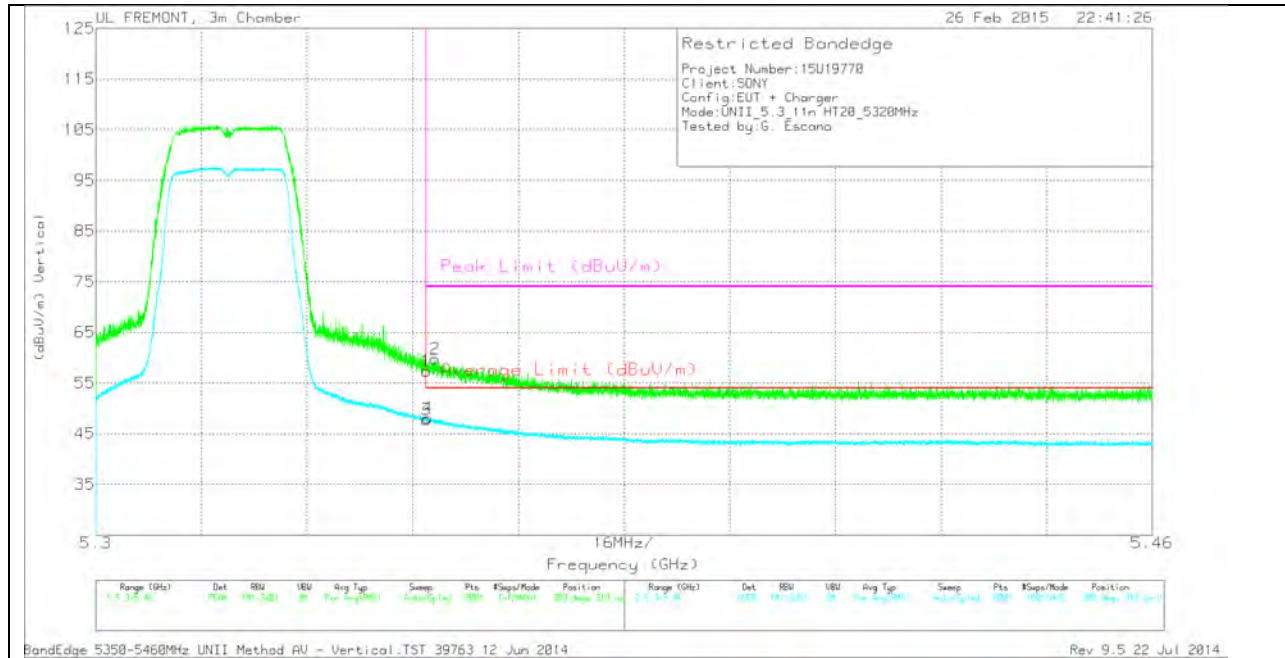
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Filtr/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	46.12	PK	34.5	-21.4	0	59.22	-	-	74	-14.78	295	164	H
2	5.35	48.71	PK	34.5	-21.4	0	61.81	-	-	74	-12.19	295	164	H
3	5.35	35.08	RMS	34.5	-21.4	0	48.18	54	-5.82	-	-	295	164	H
4	5.351	35.55	RMS	34.5	-21.4	0	48.65	54	-5.35	-	-	295	164	H

VERTICAL PEAK AND AVERAGE PLOT

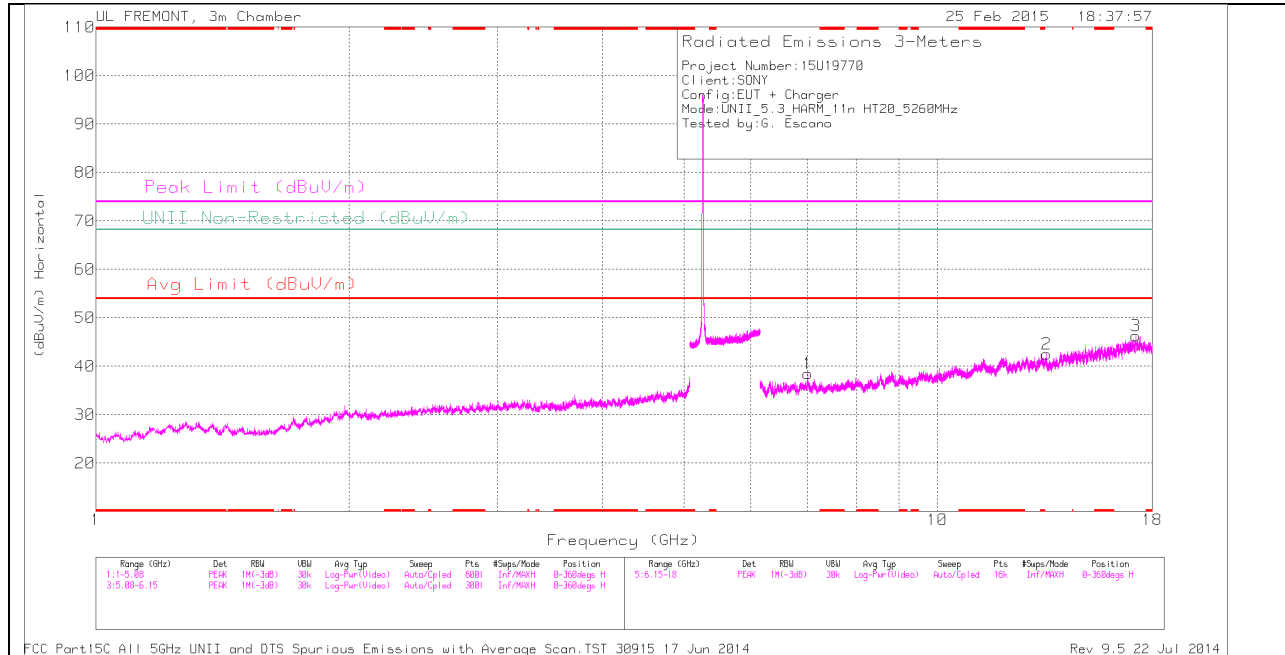


VERTICAL DATA

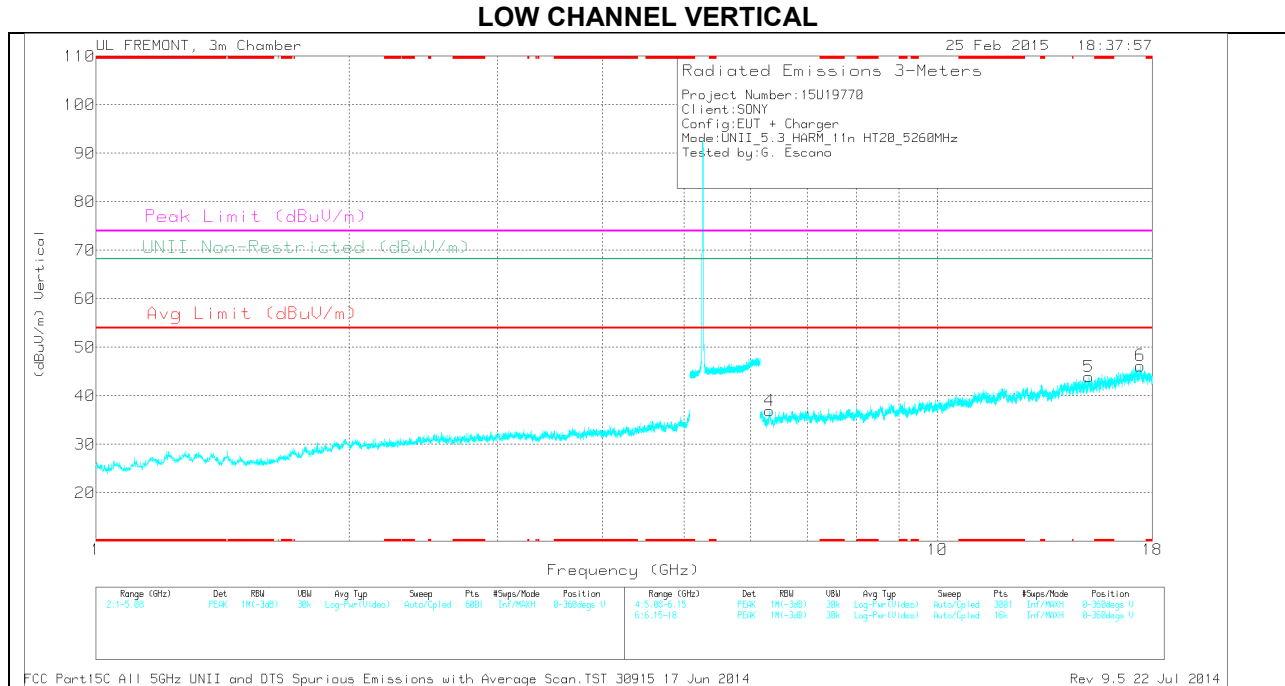
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Filt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.35	44.22	PK	34.5	-21.4	0	57.32	-	-	74	-16.68	309	318	V
3	5.35	34.71	RMS	34.5	-21.4	0	47.81	54	-6.19	-	-	309	318	V
4	5.35	34.96	RMS	34.5	-21.4	0	48.06	54	-5.94	-	-	309	318	V
2	5.351	46.63	PK	34.5	-21.4	0	59.73	-	-	74	-14.27	309	318	V

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



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



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

LOW CHANNEL DATA

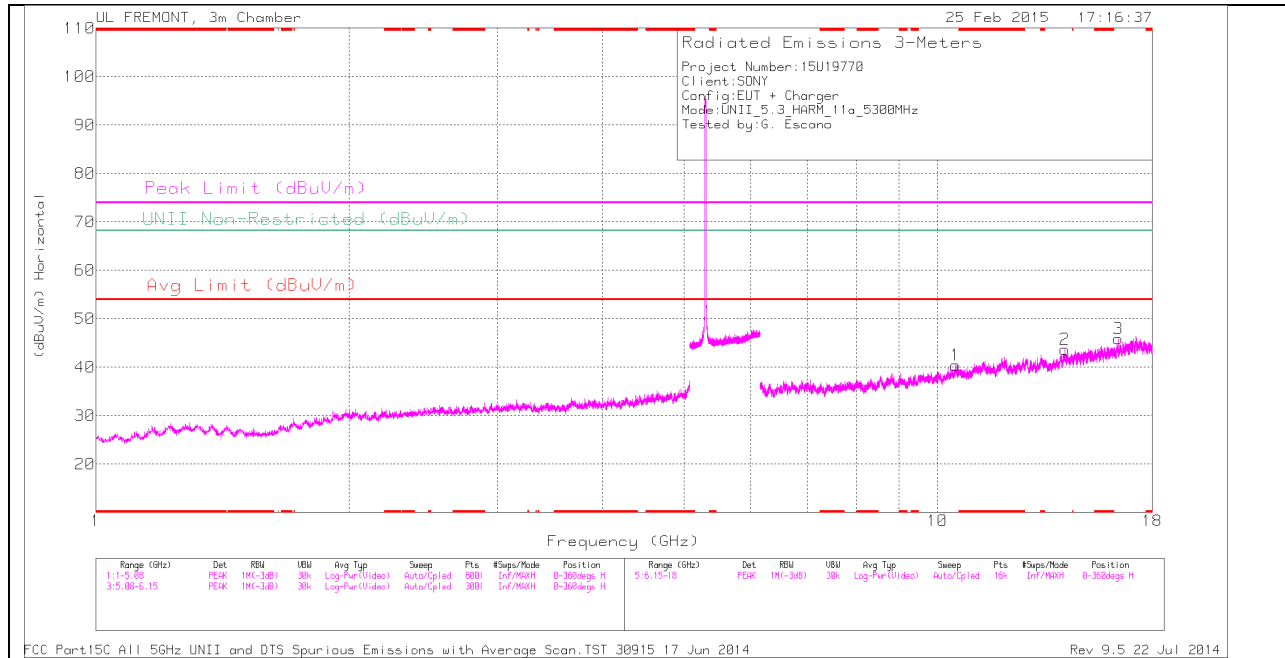
TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	7.013	32.3	PK	35.6	-28.9	0	39	-	-	-	-	68.2	-29.2	0-360	200	H
2	8.553	29.22	PK	35.8	-26.1	0	38.92	-	-	-	-	68.2	-29.28	0-360	100	H
4	9.963	28.79	PK	36.9	-26.1	0	39.59	-	-	-	-	68.2	-28.61	0-360	200	V
5	15.247	31.23	PK	39.9	-26.5	0	44.63	-	-	-	-	68.2	-23.57	0-360	100	V
3	16.599	28.88	PK	41	-24.3	0	45.58	-	-	-	-	68.2	-22.62	0-360	200	H
6	17.078	29.09	PK	41.4	-23.8	0	46.69	-	-	-	-	68.2	-21.51	0-360	200	V

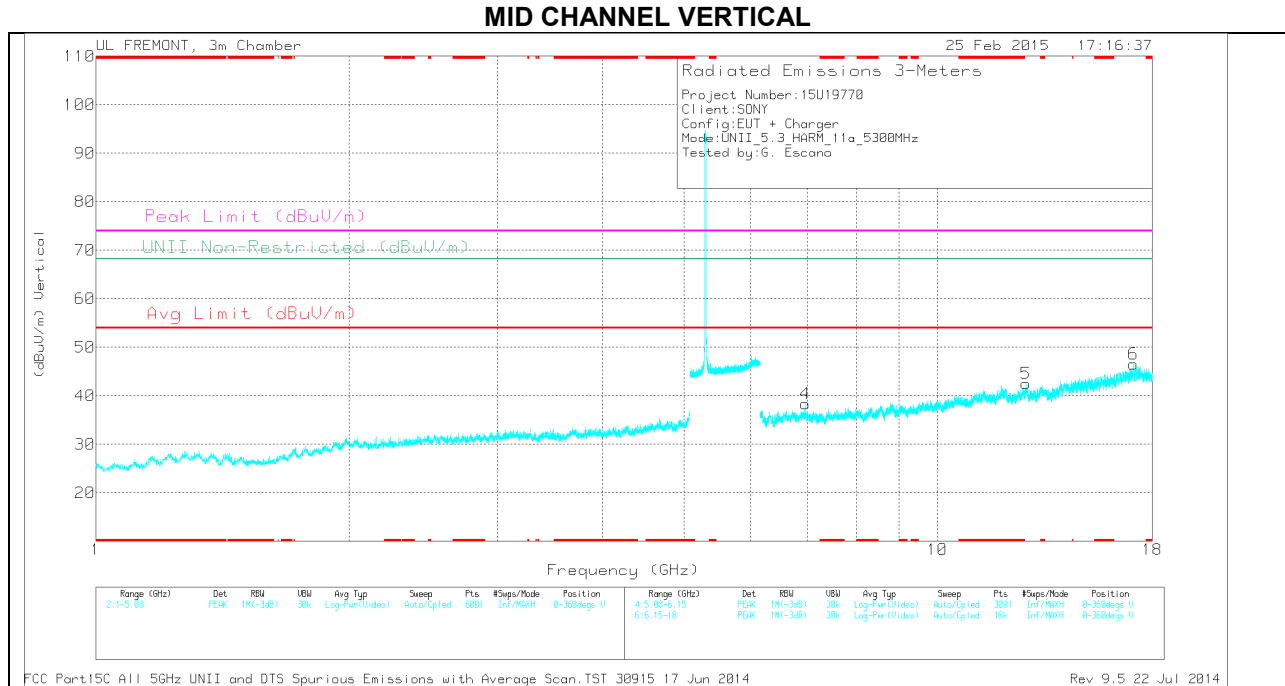
PK - Peak detector

FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

MID CHANNEL HORIZONTAL



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



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

MID CHANNEL DATA

TRACE MARKERS

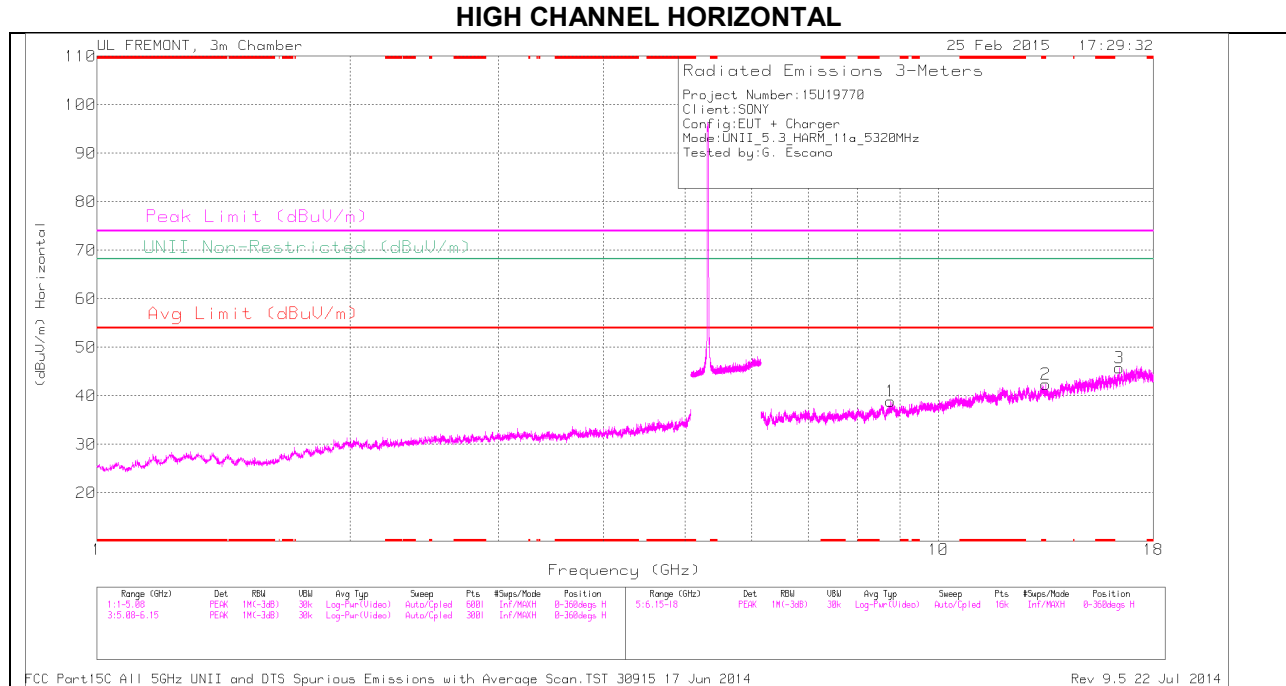
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	6.96	31.21	PK	35.6	-28.4	0	38.41	-	-	-	-	68.2	-29.79	0-360	100	V
1	10.508	28.15	PK	37.5	-25.2	0	40.45	-	-	-	-	68.2	-27.75	0-360	200	H
5	12.732	29.19	PK	39.1	-25.8	0	42.49	-	-	-	-	68.2	-25.71	0-360	200	V
2	14.169	31.56	PK	39.1	-27	0	43.66	-	-	-	-	68.2	-24.54	0-360	100	H
3	16.397	29.36	PK	40.7	-24.2	0	45.86	-	-	-	-	68.2	-22.34	0-360	200	H
6	17.077	28.89	PK	41.4	-23.8	0	46.49	-	-	-	-	68.2	-21.71	0-360	100	V

PK - Peak detector

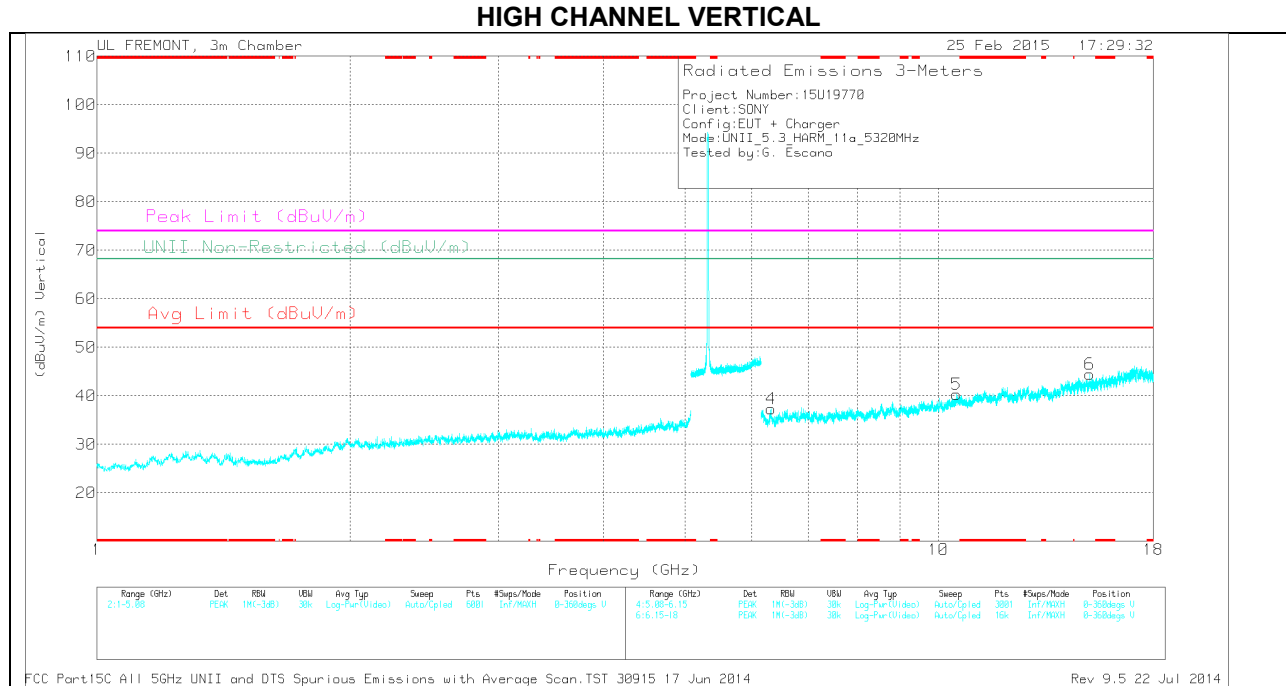
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.903	37.68	PK1	39.1	-26.3	0	50.48	-	-	74	-23.52	-	-	200	164	H
* 11.905	25.56	AD1	39.1	-26.3	0	38.36	54	-15.64	-	-	-	-	200	164	H

FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013



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



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

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	6.325	31.25	PK	35.4	-29.3	0	37.35	-	-	-	-	68.2	-30.85	0-360	200	V
1	8.764	28.99	PK	35.9	-26	0	38.89	-	-	-	-	68.2	-29.31	0-360	200	H
5	10.502	28.21	PK	37.5	-25.4	0	40.31	-	-	-	-	68.2	-27.89	0-360	100	V
2	13.403	30.94	PK	39	-27.6	0	42.34	-	-	-	-	68.2	-25.86	0-360	100	H
6	15.127	31.61	PK	39.8	-27	0	44.41	-	-	-	-	68.2	-23.79	0-360	200	V
3	16.391	29.22	PK	40.7	-24.2	0	45.72	-	-	-	-	68.2	-22.48	0-360	200	H

PK - Peak detector

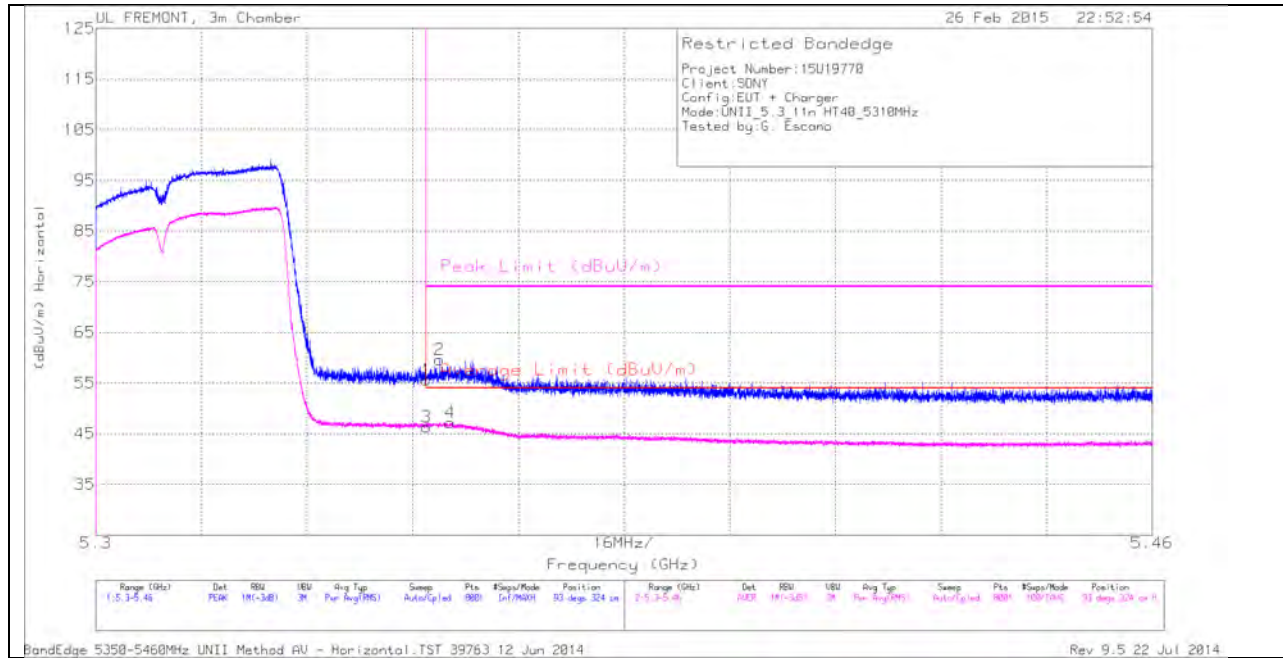
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.955	37.44	PK1	39.1	-26.4	0	50.14	-	-	74	-23.86	-	-	150	113	V
* 11.956	25.69	AD1	39.1	-26.3	0	38.49	54	-15.51	-	-	-	-	150	113	V

FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

10.2.3. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.3 GHz BAND AUTHORIZED BANDEDGE (HIGH CHANNEL)

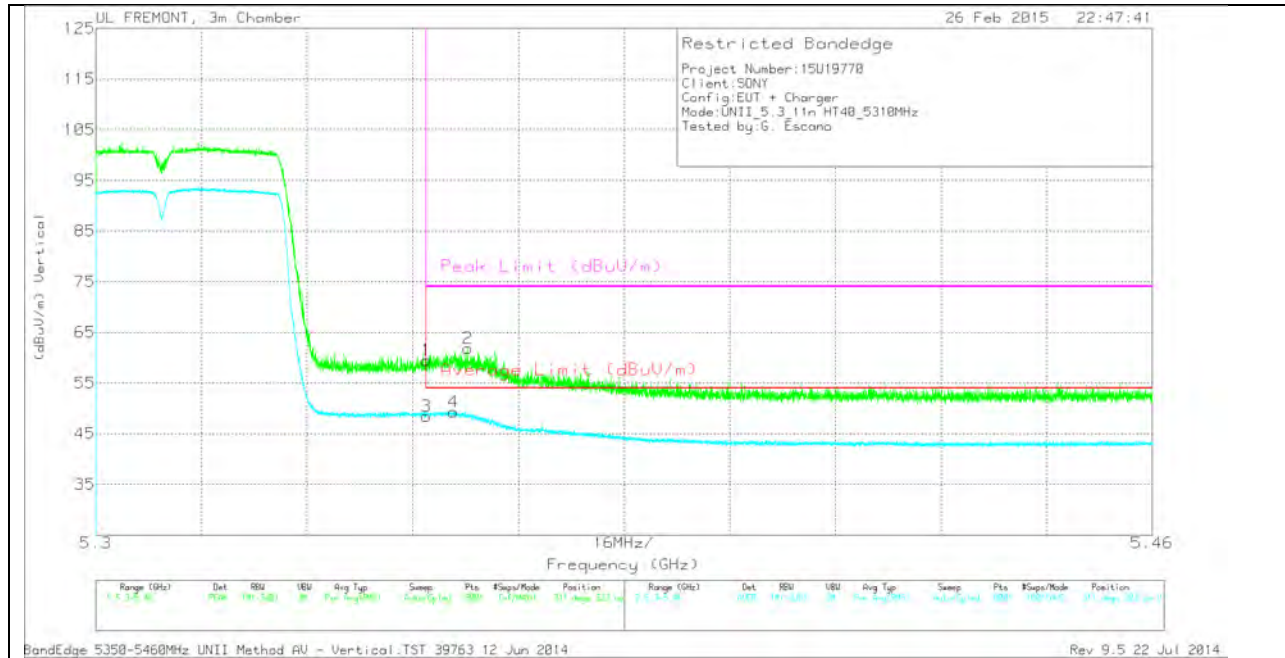
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.35	42.53	PK	34.5	-21.4	0	55.63	-	-	74	-18.37	93	324	H
3	5.35	33.26	RMS	34.5	-21.4	.07	46.43	54	-7.57	-	-	93	324	H
2	5.352	46.46	PK	34.5	-21.4	0	59.56	-	-	74	-14.44	93	324	H
4	5.354	34.08	RMS	34.5	-21.4	.07	47.25	54	-6.75	-	-	93	324	H

VERTICAL PEAK AND AVERAGE PLOT

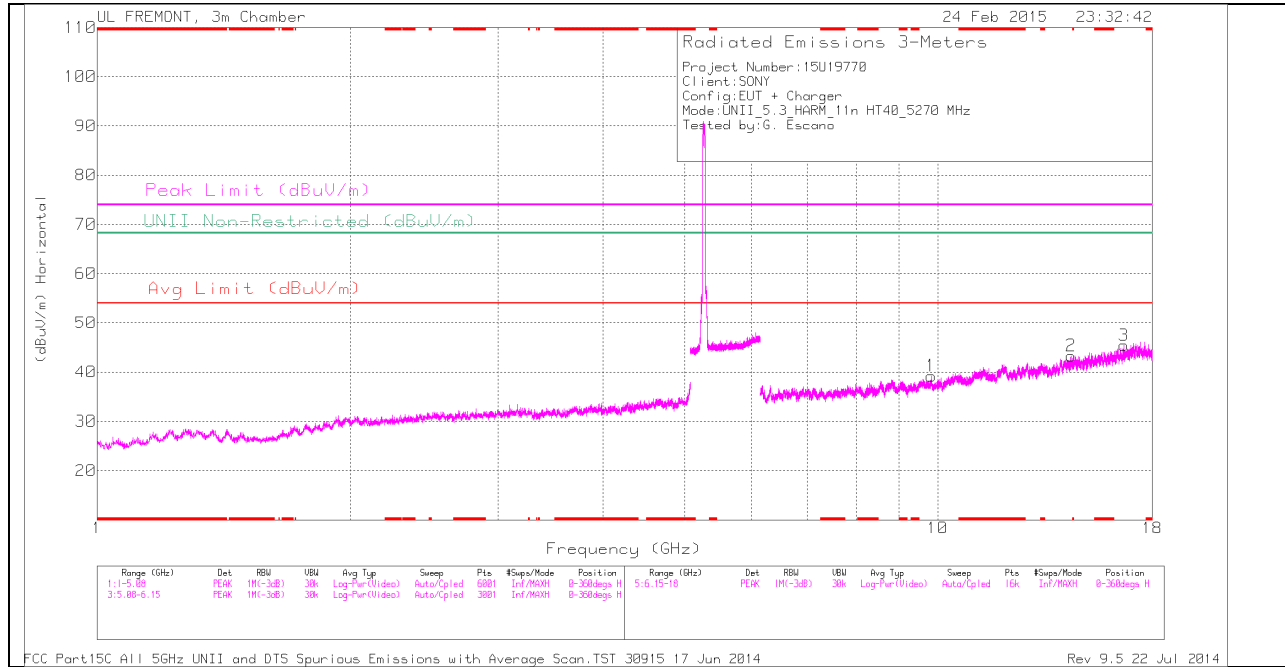


VERTICAL DATA

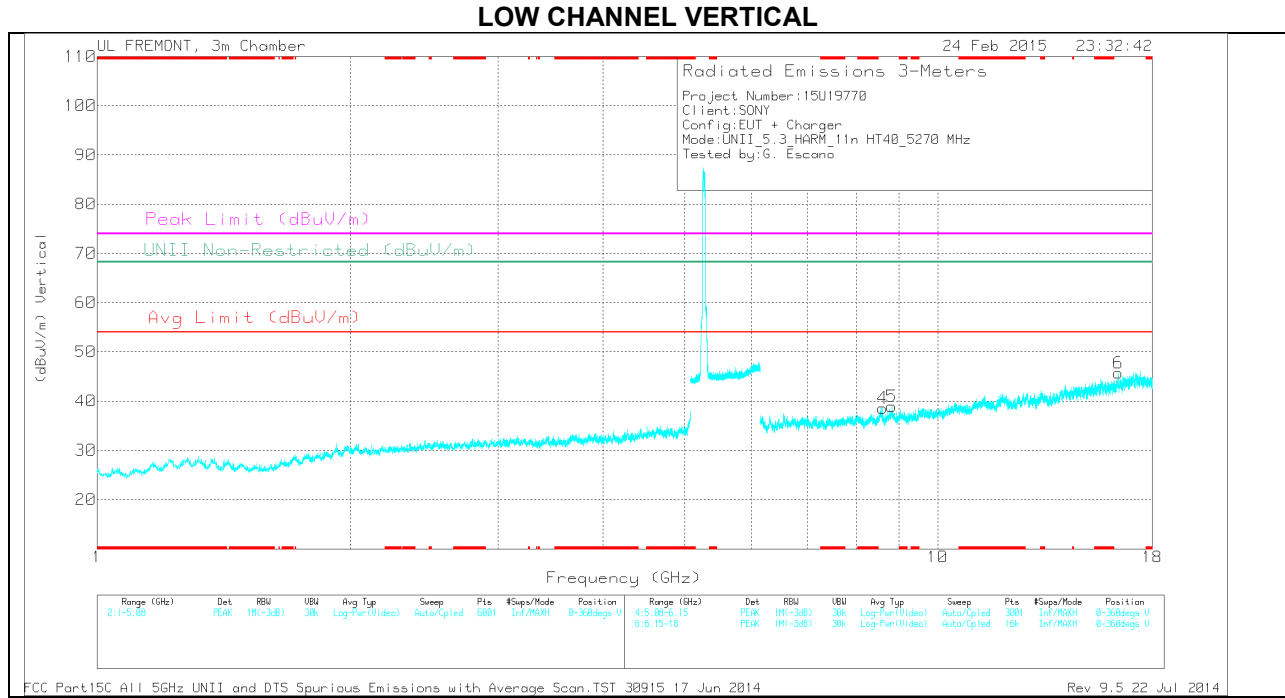
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AFT119 (dB/m)	Amp/Cbl/Fitter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.35	46.34	PK	34.5	-21.4	0	59.44	-	-	74	-14.56	311	323	V
3	5.35	35.37	RMS	34.5	-21.4	.07	48.54	54	-5.46	-	-	311	323	V
4	5.354	36.29	RMS	34.5	-21.5	.07	49.36	54	-4.64	-	-	311	323	V
2	5.356	48.81	PK	34.5	-21.5	0	61.81	-	-	74	-12.19	311	323	V

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



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



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

LOW CHANNEL DATA

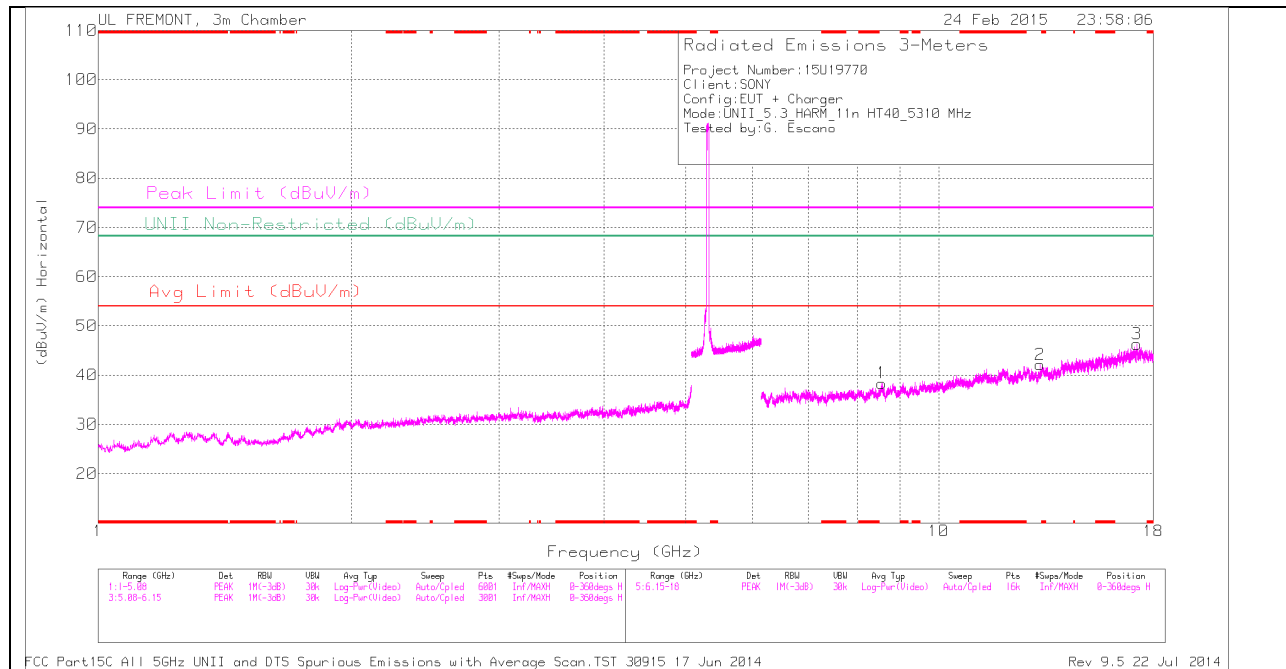
TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	8.601	29.18	PK	35.8	-26.4	0	38.58	-	-	-	-	68.2	-29.62	0-360	100	V
5	8.818	28.63	PK	35.9	-25.6	0	38.93	-	-	-	-	68.2	-29.27	0-360	200	V
1	9.827	27.42	PK	36.9	-25.1	0	39.22	-	-	-	-	68.2	-28.98	0-360	200	H
2	14.412	31.13	PK	39.6	-27.4	0	43.33	-	-	-	-	68.2	-24.87	0-360	100	H
6	16.397	29.19	PK	40.7	-24.2	0	45.69	-	-	-	-	68.2	-22.51	0-360	100	V
3	16.661	28.74	PK	41.1	-24.4	0	45.44	-	-	-	-	68.2	-22.76	0-360	100	H

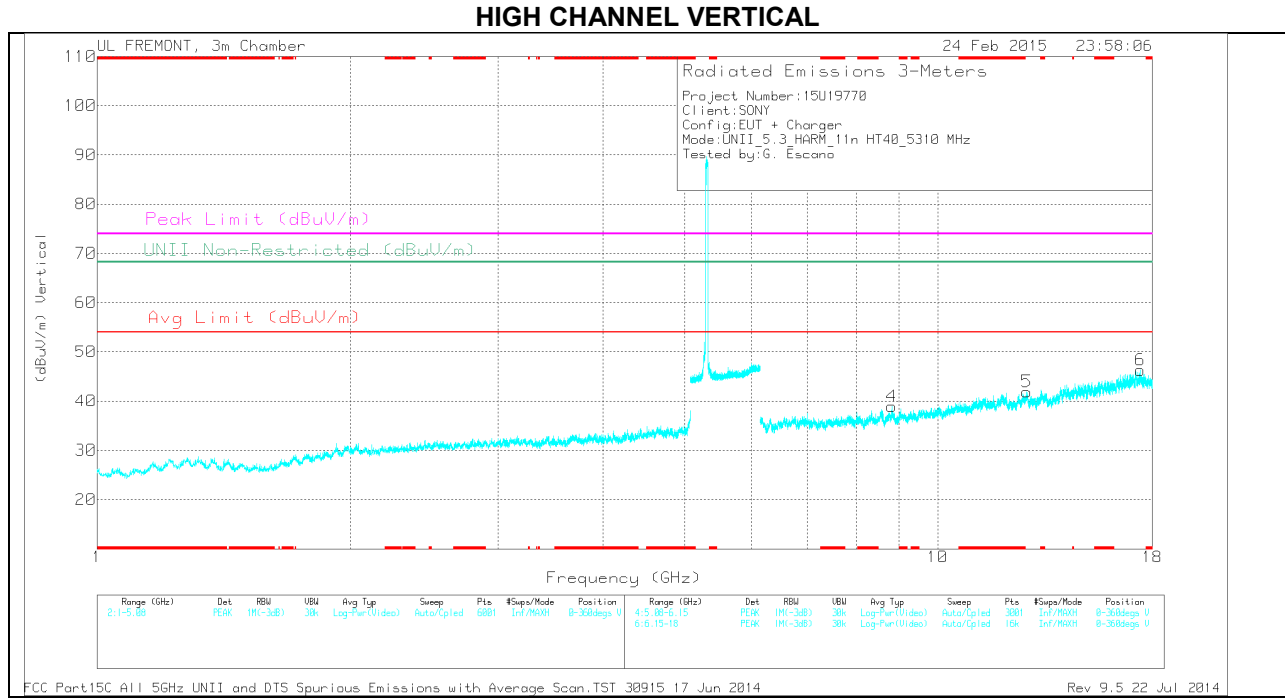
PK - Peak detector

FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

HIGH CHANNEL HORIZONTAL



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



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

HIGH CHANNEL DATA

TRACE MARKERS

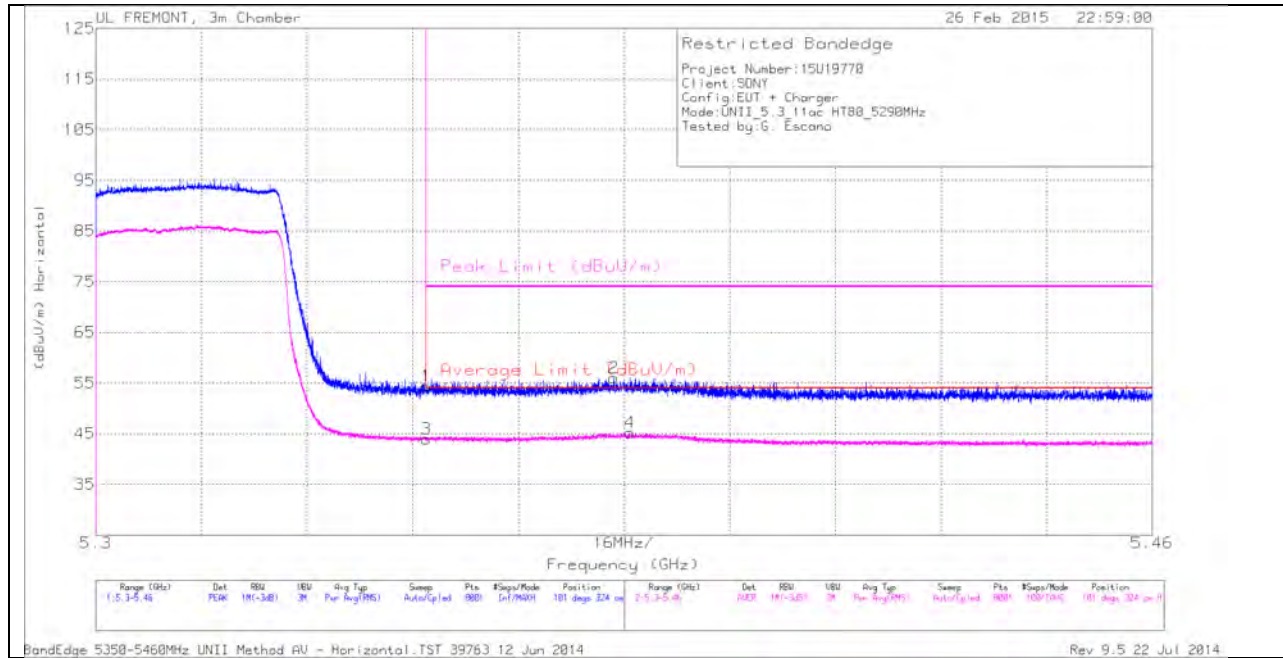
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Chl/ Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	8.55	28.56	PK	35.8	-26	0	38.36	-	-	-	-	68.2	-29.84	0-360	100	H
4	8.818	28.65	PK	35.9	-25.6	0	38.95	-	-	-	-	68.2	-29.25	0-360	100	V
5	12.764	28.91	PK	39.1	-26.1	0	41.91	-	-	-	-	68.2	-26.29	0-360	100	V
2	13.209	29.61	PK	39	-26.5	0	42.11	-	-	-	-	68.2	-26.09	0-360	100	H
3	17.202	27.9	PK	41.3	-22.9	0	46.3	-	-	-	-	68.2	-21.9	0-360	100	H
6	17.42	27	PK	41.4	-22.1	0	46.3	-	-	-	-	68.2	-21.9	0-360	200	V

PK - Peak detector

FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

10.2.4. TX ABOVE 1 GHz 802.11ac HT80 MODE IN THE 5.3 GHz BAND AUTHORIZED BANDEDGE (HIGH CHANNEL)

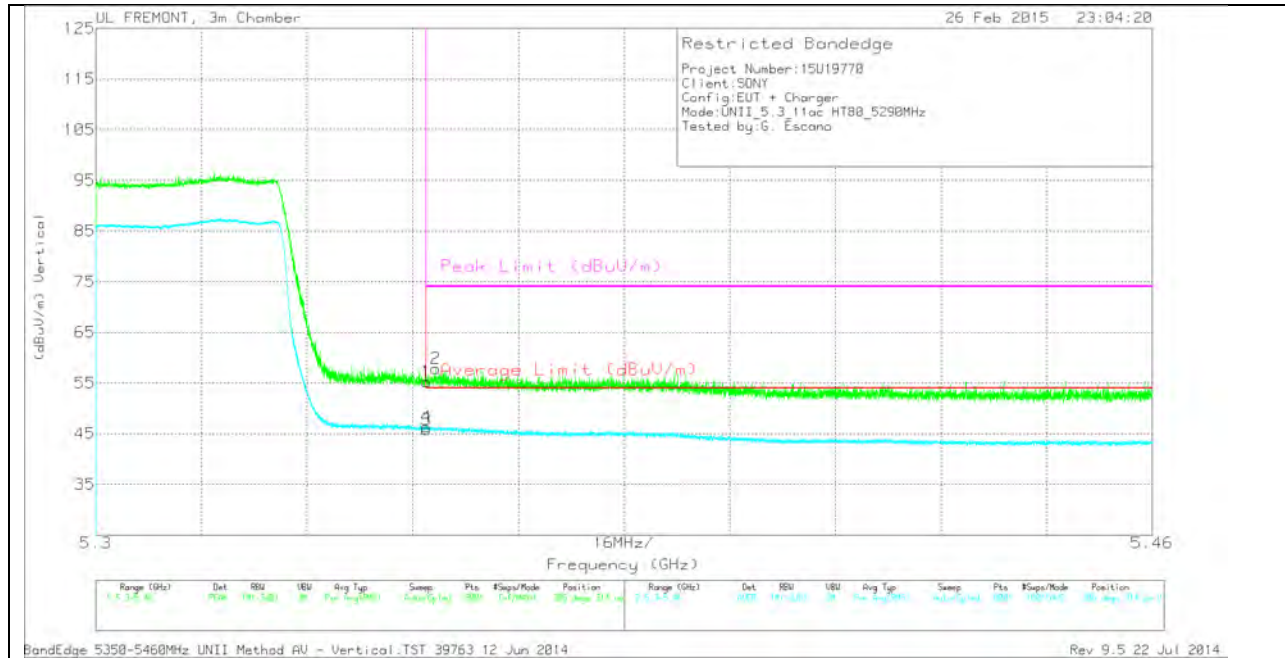
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.35	41.33	PK	34.5	-21.4	0	54.43	-	-	74	-19.57	101	324	H
3	5.35	30.82	RMS	34.5	-21.4	.14	44.06	54	-9.94	-	-	101	324	H
2	5.378	42.75	PK	34.6	-21.3	0	56.05	-	-	74	-17.95	101	324	H
4	5.381	31.89	RMS	34.6	-21.4	.14	45.23	54	-8.77	-	-	101	324	H

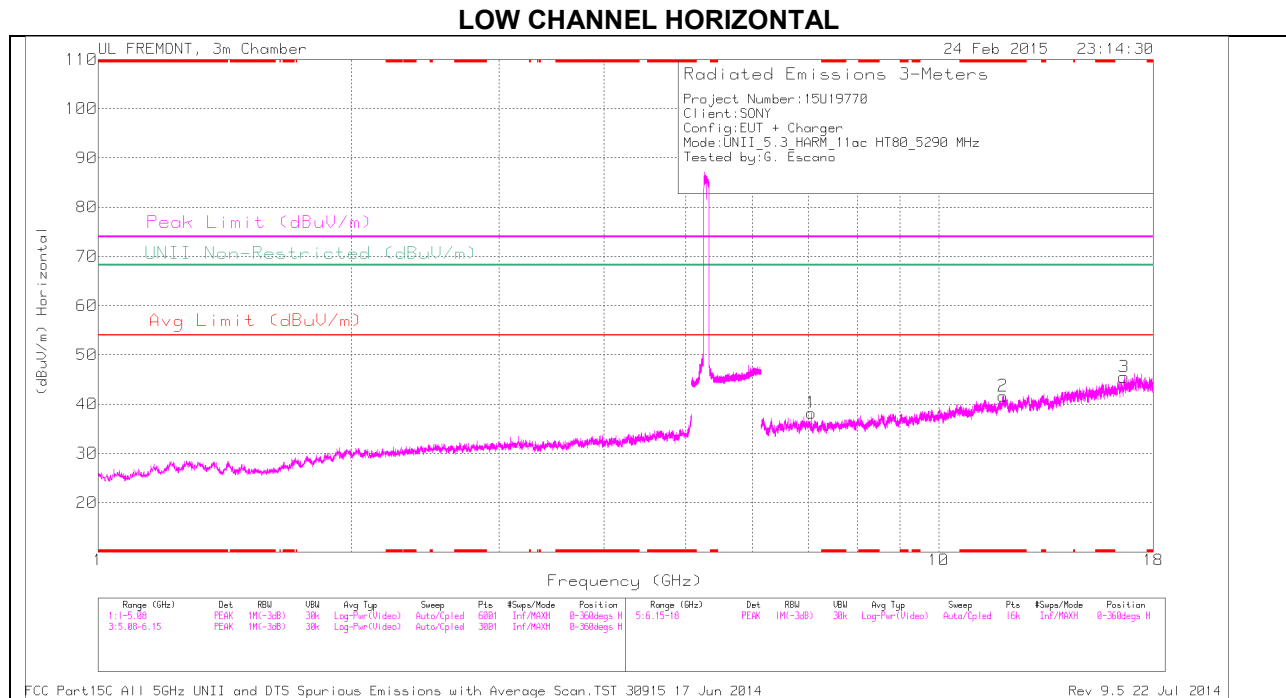
VERTICAL PEAK AND AVERAGE PLOT



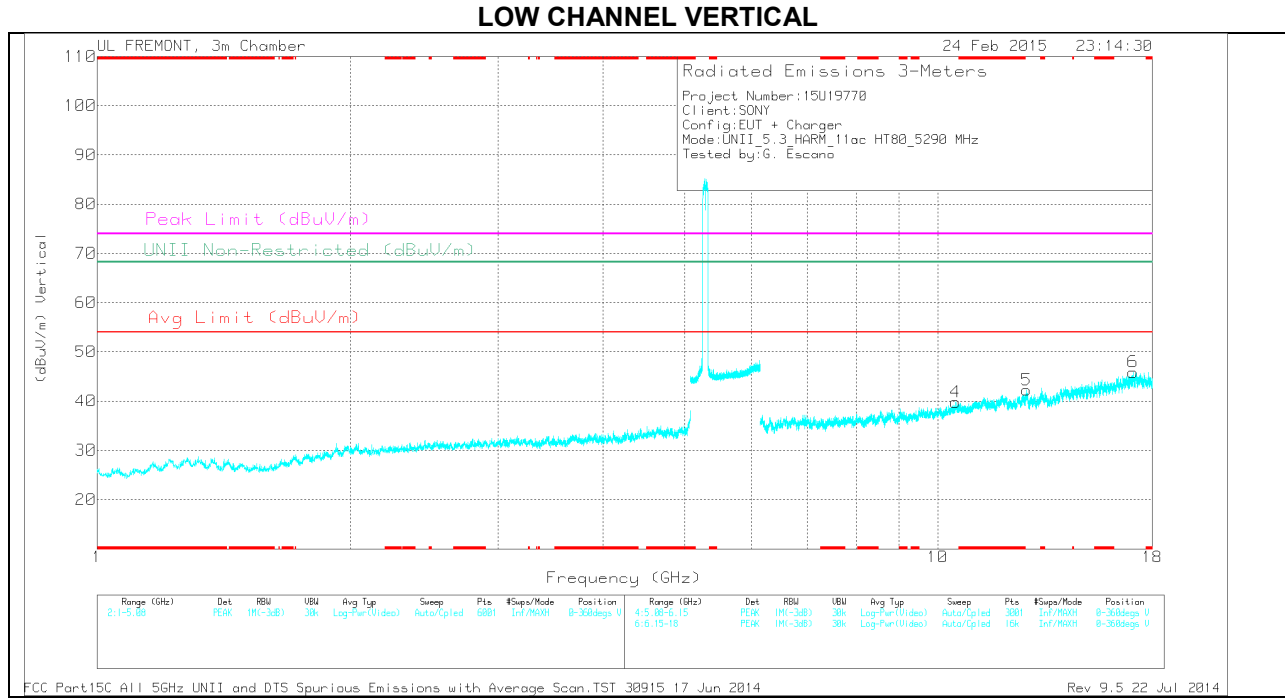
VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AFT119 (dB/m)	Amp/Cbl/Filt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.35	42.16	PK	34.5	-21.4	0	55.26	-	-	74	-18.74	306	314	V
3	5.35	32.75	RMS	34.5	-21.4	.14	45.99	54	-8.01	-	-	306	314	V
4	5.35	33.23	RMS	34.5	-21.4	.14	46.47	54	-7.53	-	-	306	314	V
2	5.352	44.81	PK	34.5	-21.4	0	57.91	-	-	74	-16.09	306	314	V

HARMONICS AND SPURIOUS EMISSIONS



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



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

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 11.93	28.77	PK	39.1	-26.2	0	41.67	-	-	74	-32.33	-	-	0-360	100	H
1	7.054	31.63	PK	35.6	-29	0	38.23	-	-	-	-	68.2	-29.97	0-360	200	H
4	10.506	27.49	PK	37.5	-25.2	0	39.79	-	-	-	-	68.2	-28.41	0-360	100	V
5	12.763	29.27	PK	39.1	-26.1	0	42.27	-	-	-	-	68.2	-25.93	0-360	200	V
3	16.612	29.14	PK	41	-24.6	0	45.54	-	-	-	-	68.2	-22.66	0-360	100	H
6	17.077	28.3	PK	41.4	-23.8	0	45.9	-	-	-	-	68.2	-22.3	0-360	100	V

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.932	37.7	PK1	39.1	-26.3	0	50.5	-	-	74	-23.5	-	-	222	152	H
* 11.929	25.85	AD1	39.1	-26.2	.14	38.89	54	-15.11	-	-	-	-	222	152	H

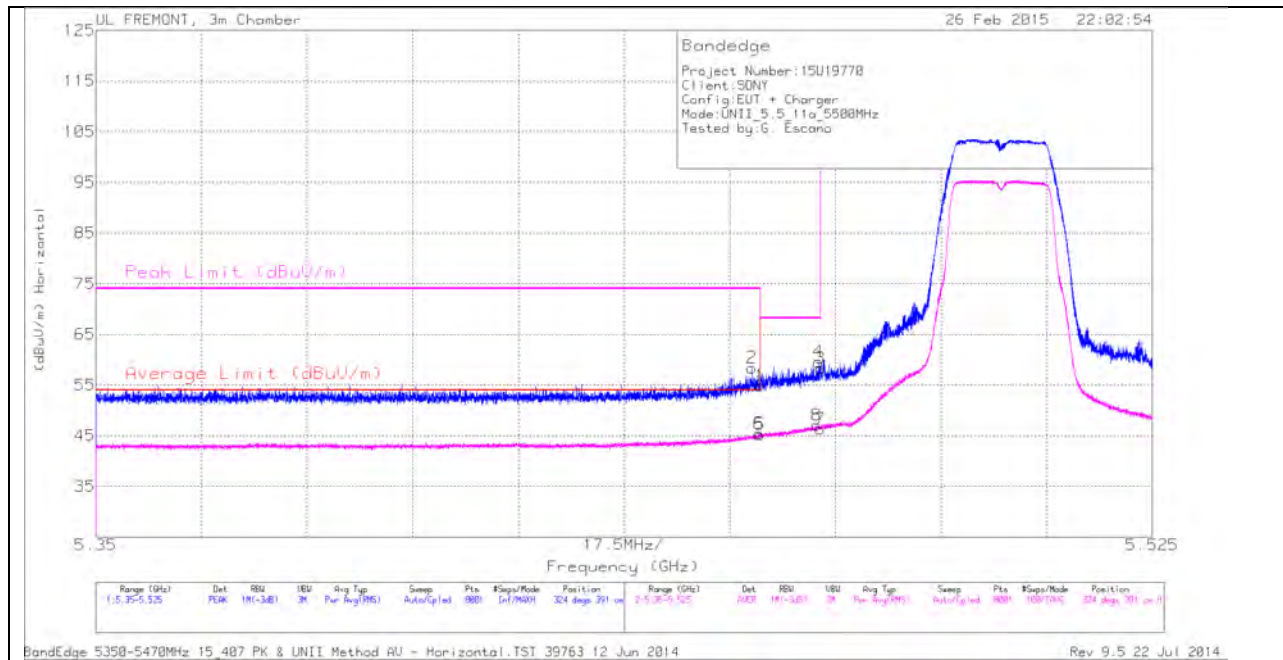
FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

10.3. 5.5-5.6 GHz

10.3.1. TX ABOVE 1 GHz 802.11a MODE IN THE 5.5 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

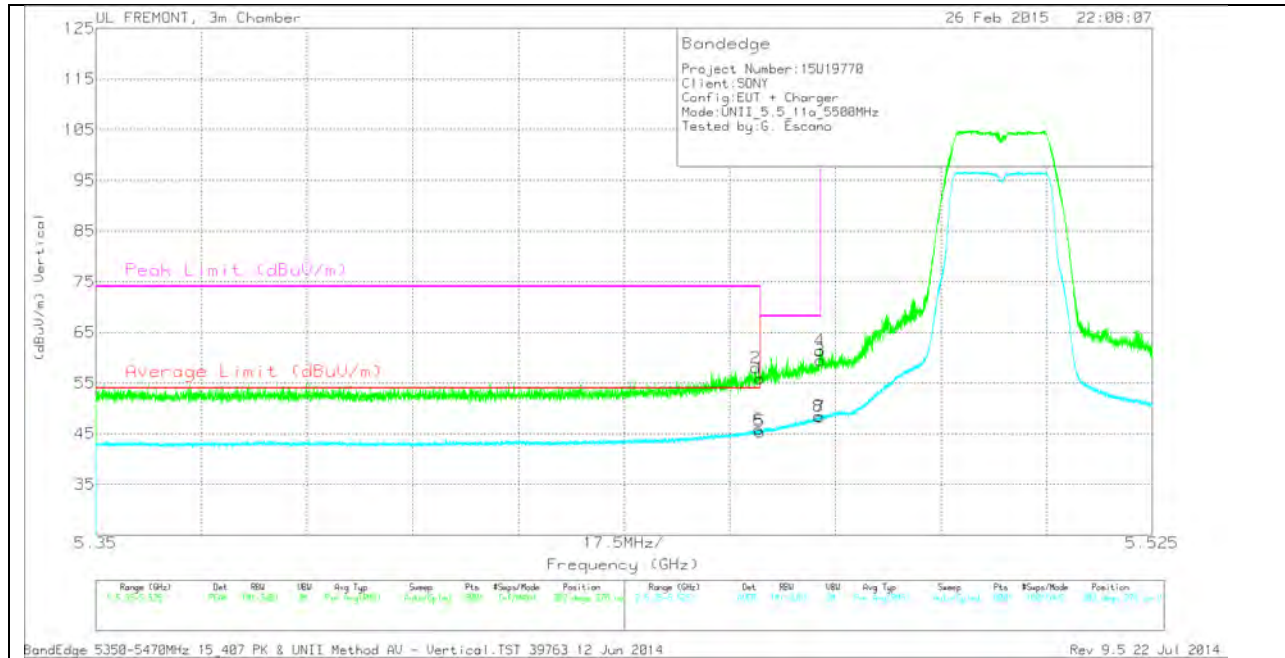
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.459	45.22	PK	34.6	-21.4	0	58.42	-	-	74	-15.58	324	391	H
1	5.46	41.67	PK	34.6	-21.4	0	54.87	-	-	74	-19.13	324	391	H
5	5.46	32.06	RMS	34.6	-21.4	0	45.26	54	-8.74	-	-	324	391	H
6	5.46	32.2	RMS	34.6	-21.4	0	45.4	54	-8.6	-	-	324	391	H
8	5.469	33.72	RMS	34.6	-21.3	0	47.02	-	-	-	-	324	391	H
3	5.47	45	PK	34.6	-21.3	0	58.3	-	-	68.2	-9.9	324	391	H
4	5.47	46.3	PK	34.6	-21.3	0	59.6	-	-	68.2	-8.6	324	391	H
7	5.47	33.06	RMS	34.6	-21.3	0	46.36	-	-	-	-	324	391	H

VERTICAL PEAK AND AVERAGE PLOT

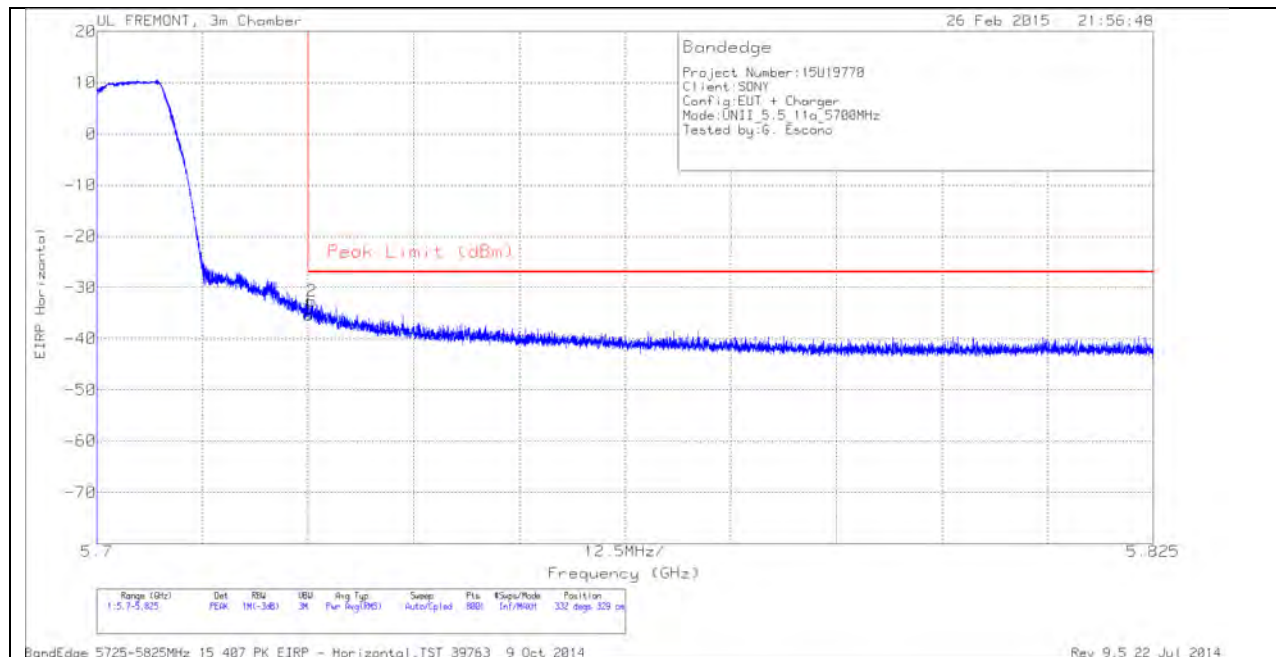


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fitter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.459	44.76	PK	34.6	-21.4	0	57.96	-	-	74	-16.04	302	278	V
1	5.46	42.71	PK	34.6	-21.4	0	55.91	-	-	74	-18.09	302	278	V
5	5.46	32.19	RMS	34.6	-21.4	0	45.39	54	-8.61	-	-	302	278	V
6	5.46	32.58	RMS	34.6	-21.4	0	45.78	54	-8.22	-	-	302	278	V
3	5.47	46.18	PK	34.6	-21.3	0	59.48	-	-	68.2	-8.72	302	278	V
4	5.47	48.1	PK	34.6	-21.3	0	61.4	-	-	68.2	-6.8	302	278	V
7	5.47	35.01	RMS	34.6	-21.3	0	48.31	-	-	-	-	302	278	V
8	5.47	35.08	RMS	34.6	-21.3	0	48.38	-	-	-	-	302	278	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

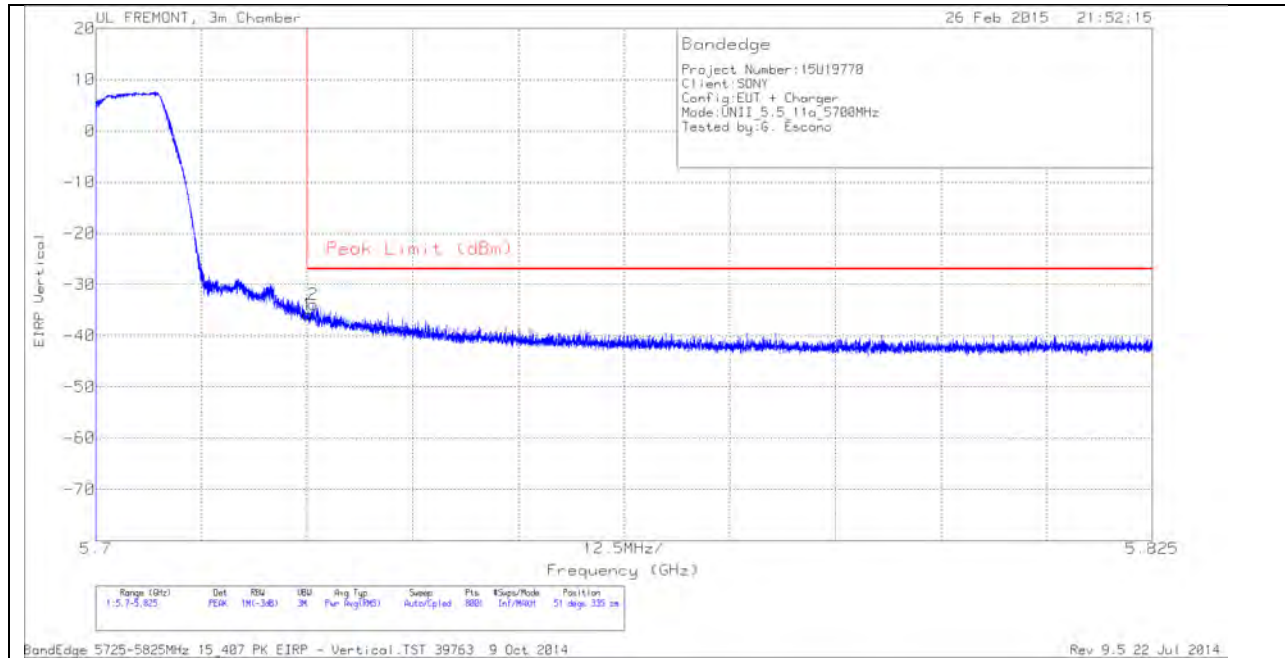
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-60.85	PK	34.8	-21.1	11.8	-35.35	-27	-8.35	332	329	H
2	5.725	-58.15	PK	34.8	-21.1	11.8	-32.65	-27	-5.65	332	329	H

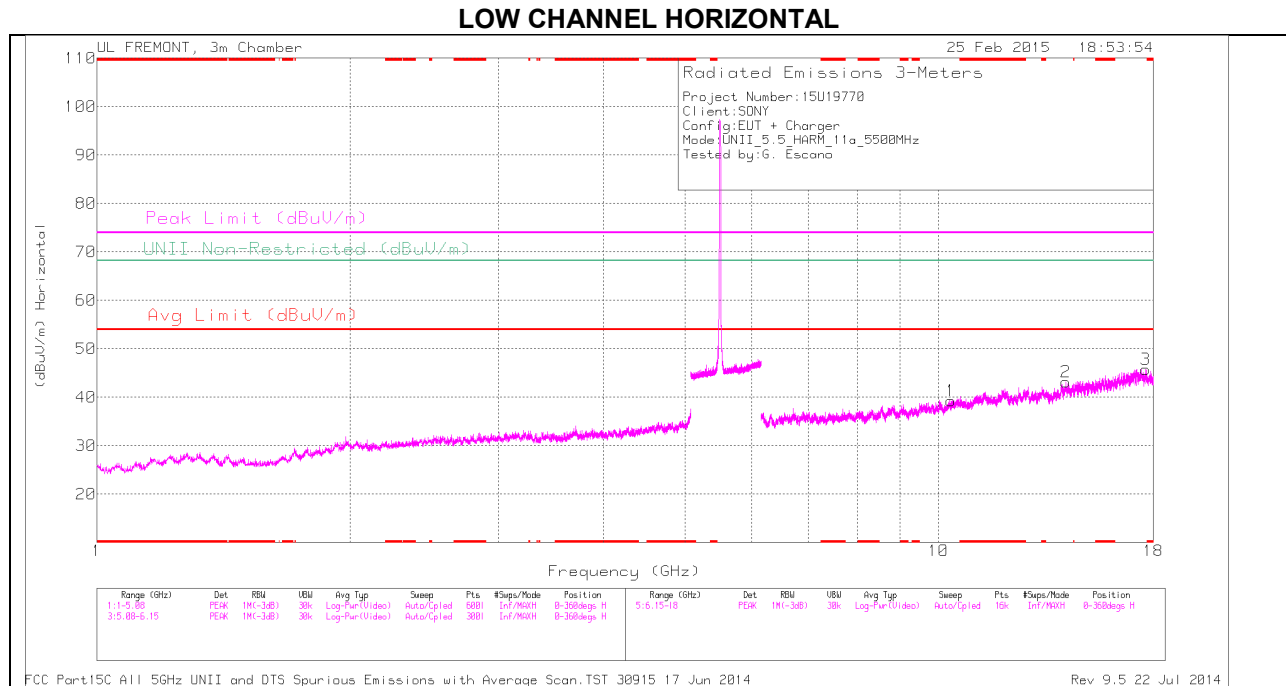
VERTICAL PEAK AND AVERAGE PLOT



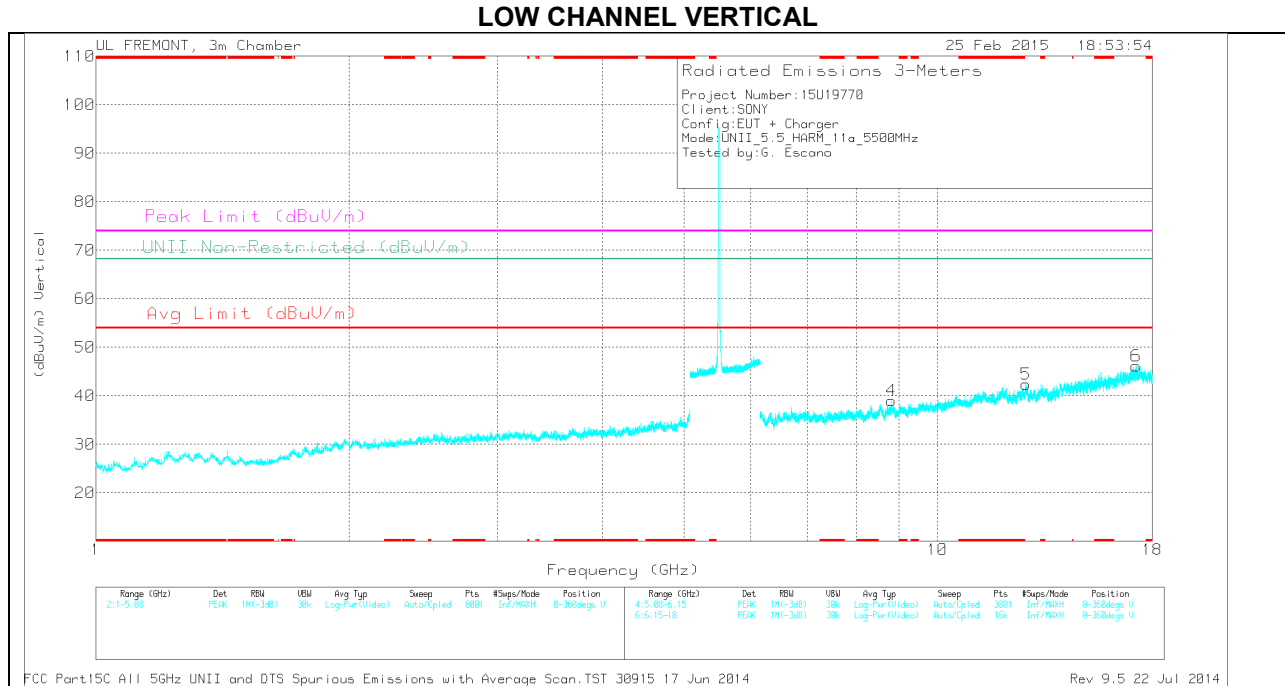
VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-61.33	PK	34.8	-21.1	11.8	-35.83	-27	-8.83	51	335	V
2	5.726	-59.37	PK	34.8	-21.1	11.8	-33.87	-27	-6.87	51	335	V

HARMONICS AND SPURIOUS EMISSIONS



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



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

LOW CHANNEL DATA

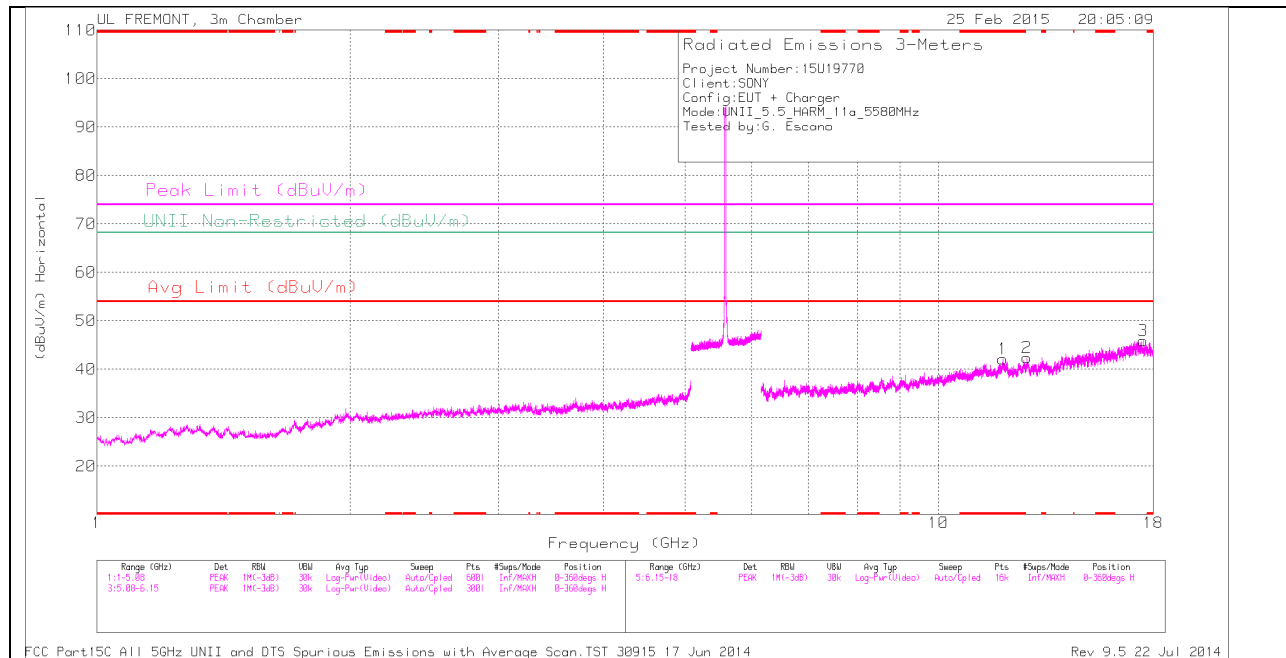
TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	8.82	28.78	PK	35.9	-25.7	0	38.98	-	-	-	-	68.2	-29.22	0-360	100	V
1	10.339	27.6	PK	37.2	-25.5	0	39.3	-	-	-	-	68.2	-28.9	0-360	100	H
5	12.747	29.38	PK	39.1	-26.1	0	42.38	-	-	-	-	68.2	-25.82	0-360	100	V
2	14.179	31	PK	39.1	-26.9	0	43.2	-	-	-	-	68.2	-25	0-360	100	H
6	17.223	28.07	PK	41.3	-23.2	0	46.17	-	-	-	-	68.2	-22.03	0-360	200	V
3	17.622	27.84	PK	41.4	-23.5	0	45.74	-	-	-	-	68.2	-22.46	0-360	200	H

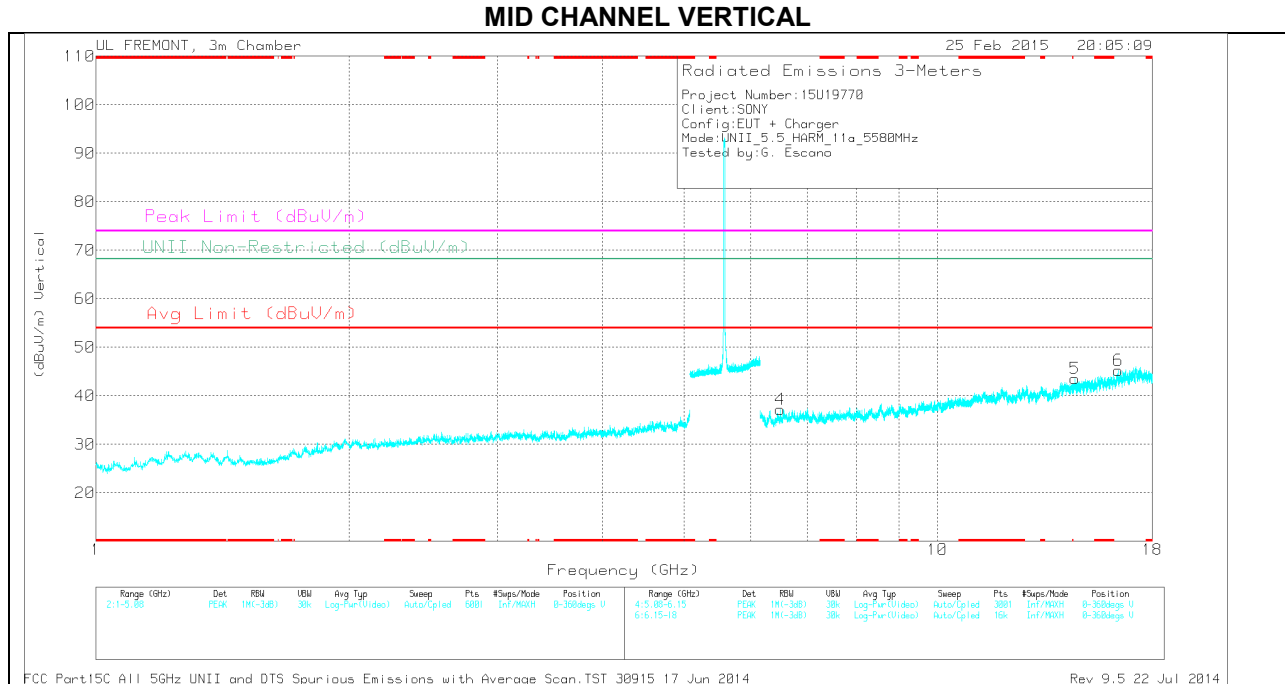
PK - Peak detector

FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

MID CHANNEL HORIZONTAL



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



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

MID CHANNEL DATA

TRACE MARKERS

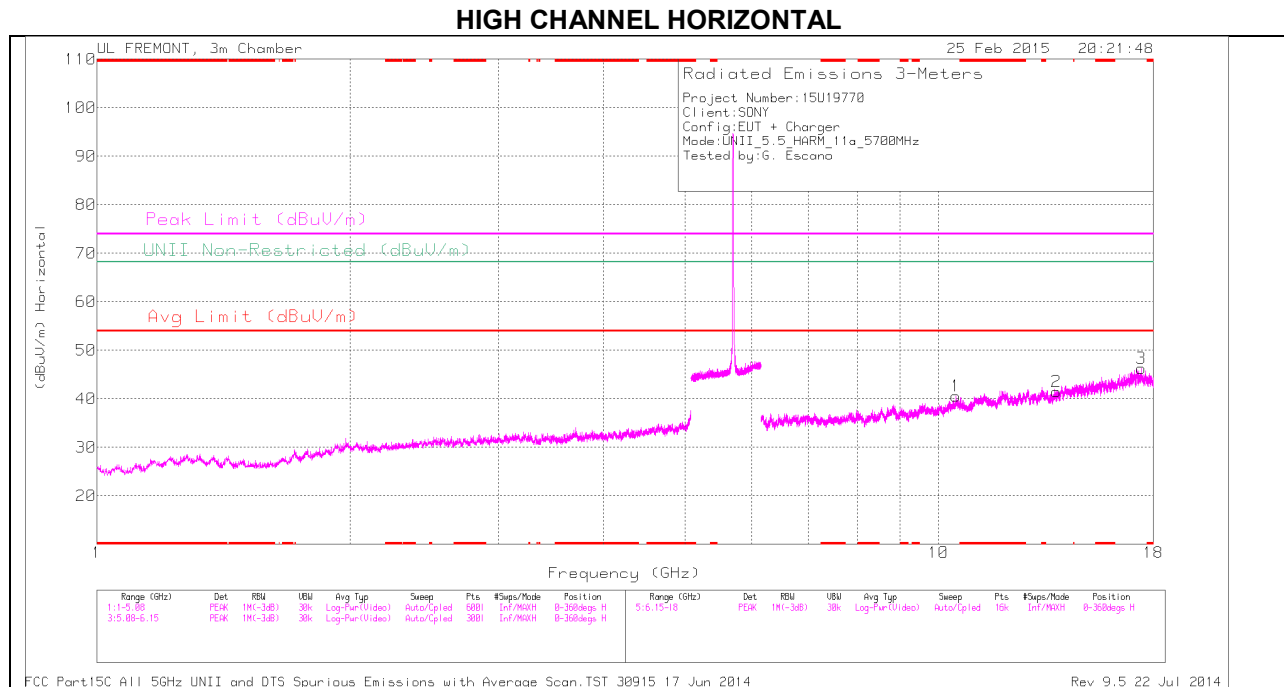
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 11.921	29.19	PK	39.1	-26.2	0	42.09	-	-	74	-31.91	-	-	0-360	200	H
2	12.734	29.07	PK	39.1	-25.8	0	42.37	-	-	-	-	68.2	-25.83	0-360	100	H
5	14.57	30.92	PK	39.8	-27.2	0	43.52	-	-	-	-	68.2	-24.68	0-360	200	V
6	16.389	28.77	PK	40.7	-24.2	0	45.27	-	-	-	-	68.2	-22.93	0-360	100	V
3	17.51	28.58	PK	41.4	-24.1	0	45.88	-	-	-	-	68.2	-22.32	0-360	200	H
4	6.508	31.03	PK	35.6	-29.4	0	37.23	-	-	-	-	68.2	-30.97	0-360	100	V

PK - Peak detector

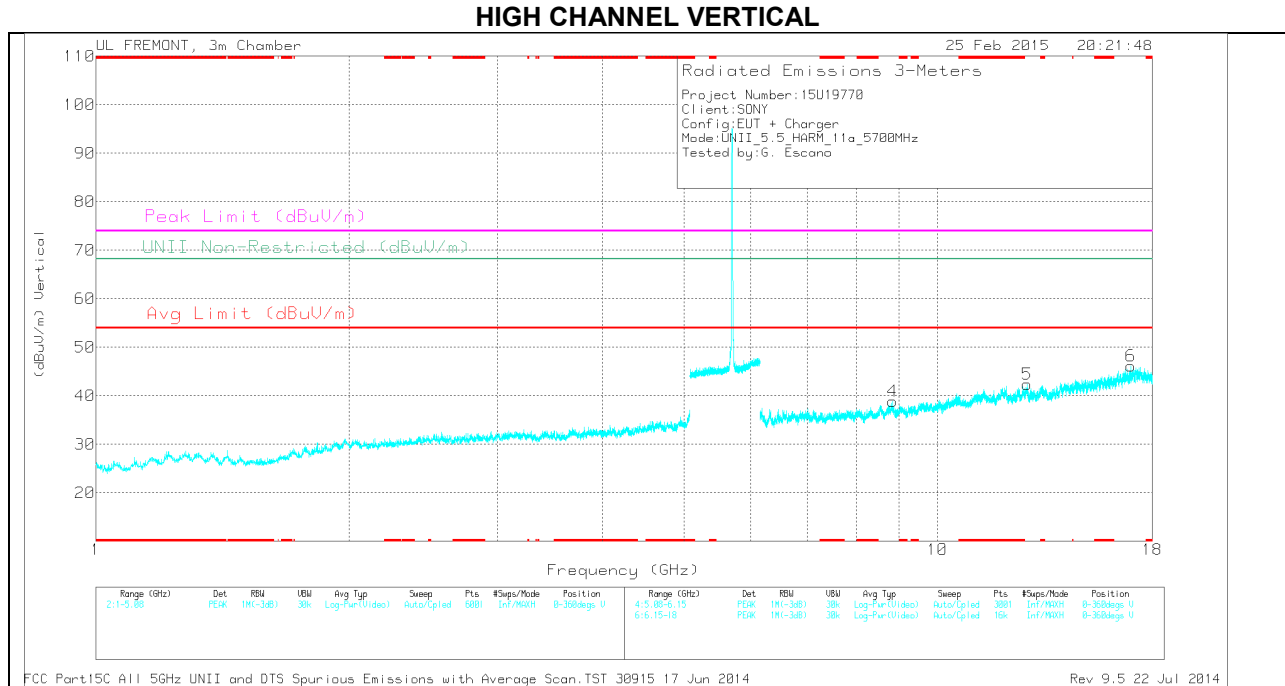
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.919	38	PK1	39.1	-26.2	0	50.9	-	-	74	-23.1	-	-	353	224	H
* 11.922	25.85	AD1	39.1	-26.2	0	38.75	54	-15.25	-	-	-	-	353	224	H

FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013



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



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

HIGH CHANNEL DATA

TRACE MARKERS

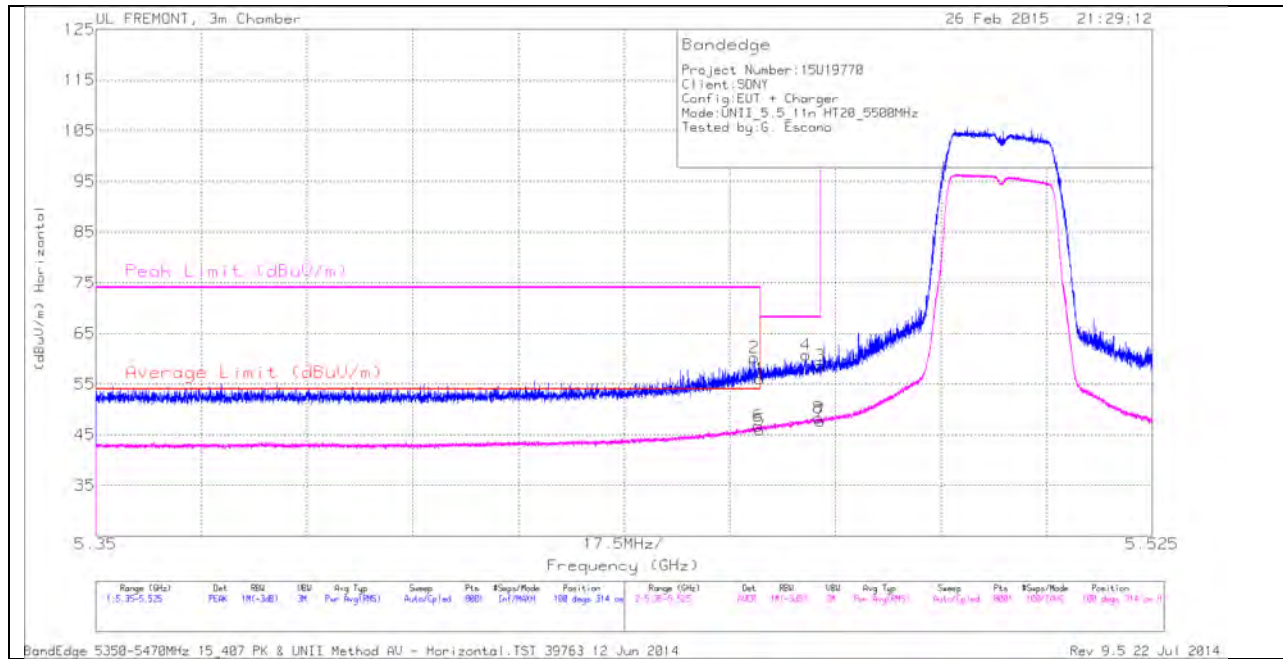
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	8.848	29.41	PK	35.9	-26.4	0	38.91	-	-	-	-	68.2	-29.29	0-360	100	V
1	10.494	28.72	PK	37.5	-25.7	0	40.52	-	-	-	-	68.2	-27.68	0-360	100	H
5	12.775	29.19	PK	39.1	-25.9	0	42.39	-	-	-	-	68.2	-25.81	0-360	200	V
2	13.811	30.09	PK	38.6	-27.2	0	41.49	-	-	-	-	68.2	-26.71	0-360	200	H
6	16.981	28.51	PK	41.3	-23.6	0	46.21	-	-	-	-	68.2	-21.99	0-360	100	V
3	17.413	27.23	PK	41.4	-22.4	0	46.23	-	-	-	-	68.2	-21.97	0-360	200	H

PK - Peak detector

FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

10.3.2. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.5 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

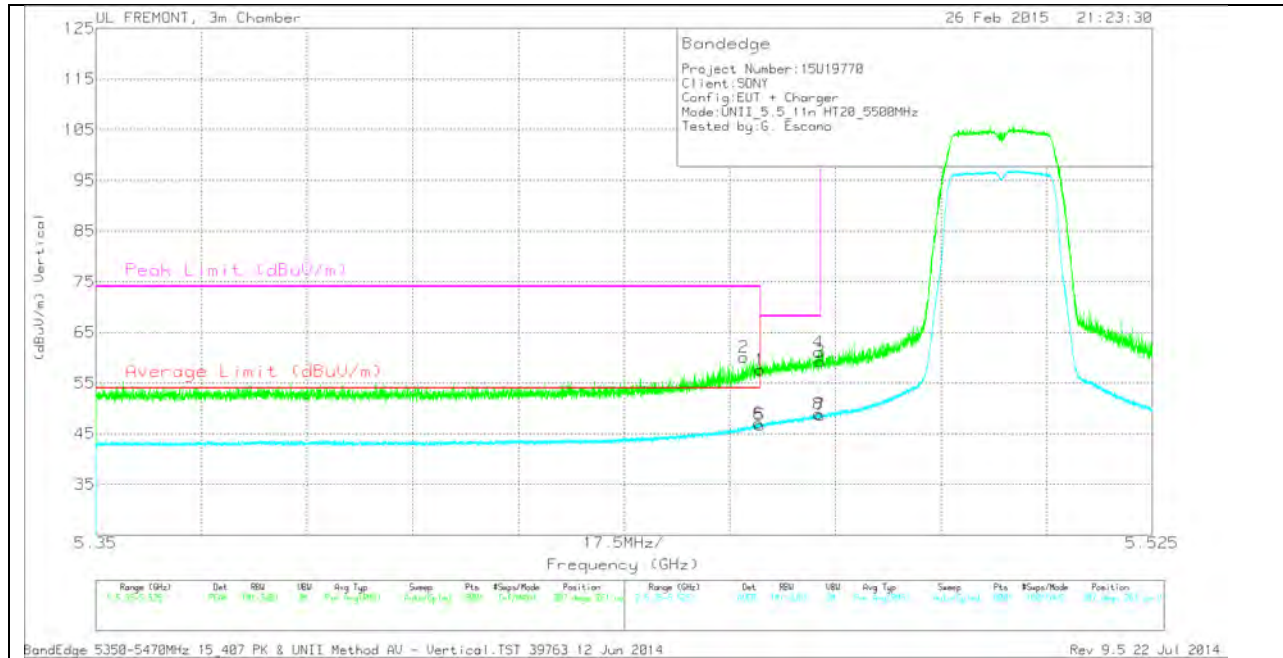
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Filt/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.459	47.04	PK	34.6	-21.4	60.24	-	-	74	-13.76	100	314	H
1	5.46	42.76	PK	34.6	-21.4	55.96	-	-	74	-18.04	100	314	H
5	5.46	32.75	RMS	34.6	-21.4	45.95	54	-8.05	-	-	100	314	H
6	5.46	33.51	RMS	34.6	-21.4	46.71	54	-7.29	-	-	100	314	H
4	5.468	47.37	PK	34.6	-21.3	60.67	-	-	68.2	-7.53	100	314	H
3	5.47	45.35	PK	34.6	-21.3	58.65	-	-	68.2	-9.55	100	314	H
7	5.47	34.44	RMS	34.6	-21.3	47.74	-	-	-	-	100	314	H
8	5.47	34.96	RMS	34.6	-21.3	48.26	-	-	-	-	100	314	H

VERTICAL PEAK AND AVERAGE PLOT

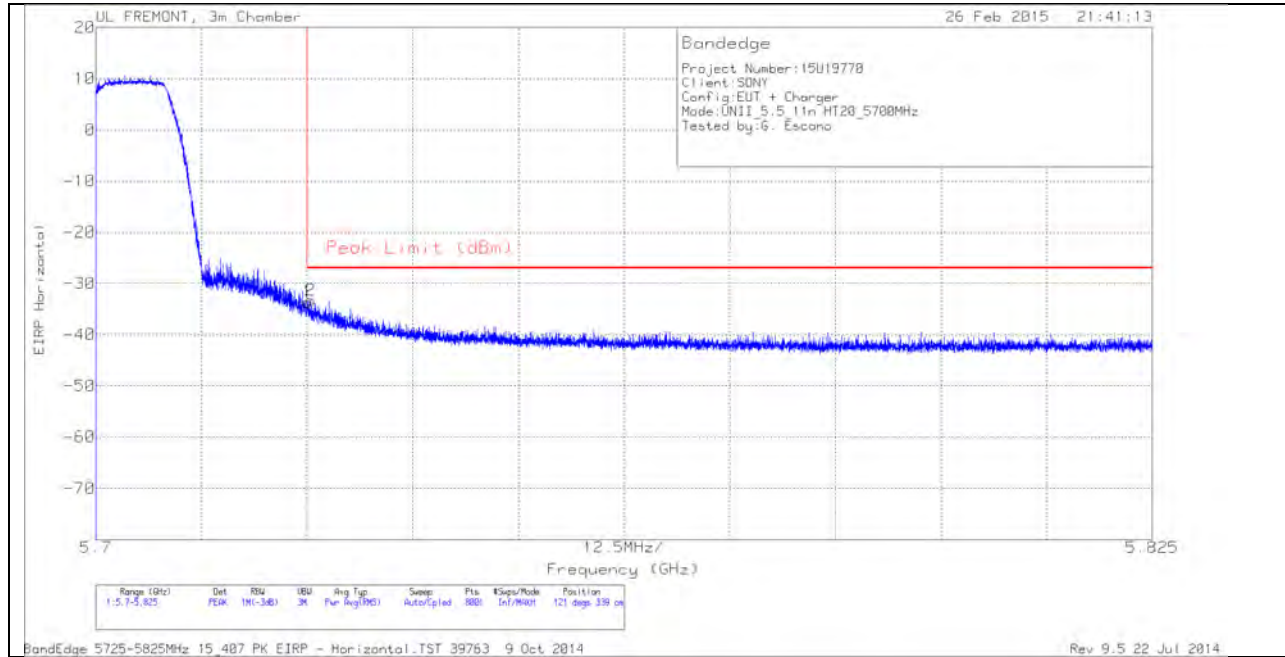


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fitter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.457	46.92	PK	34.6	-21.4	0	60.12	-	-	74	-13.88	307	261	V
1	5.46	44.37	PK	34.6	-21.4	0	57.57	-	-	74	-16.43	307	261	V
5	5.46	33.44	RMS	34.6	-21.4	0	46.64	54	-7.36	-	-	307	261	V
6	5.46	33.83	RMS	34.6	-21.4	0	47.03	54	-6.97	-	-	307	261	V
3	5.47	45.94	PK	34.6	-21.3	0	59.24	-	-	68.2	-8.96	307	261	V
4	5.47	47.78	PK	34.6	-21.3	0	61.08	-	-	68.2	-7.12	307	261	V
7	5.47	35.27	RMS	34.6	-21.3	0	48.57	-	-	-	-	307	261	V
8	5.47	35.58	RMS	34.6	-21.3	0	48.88	-	-	-	-	307	261	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

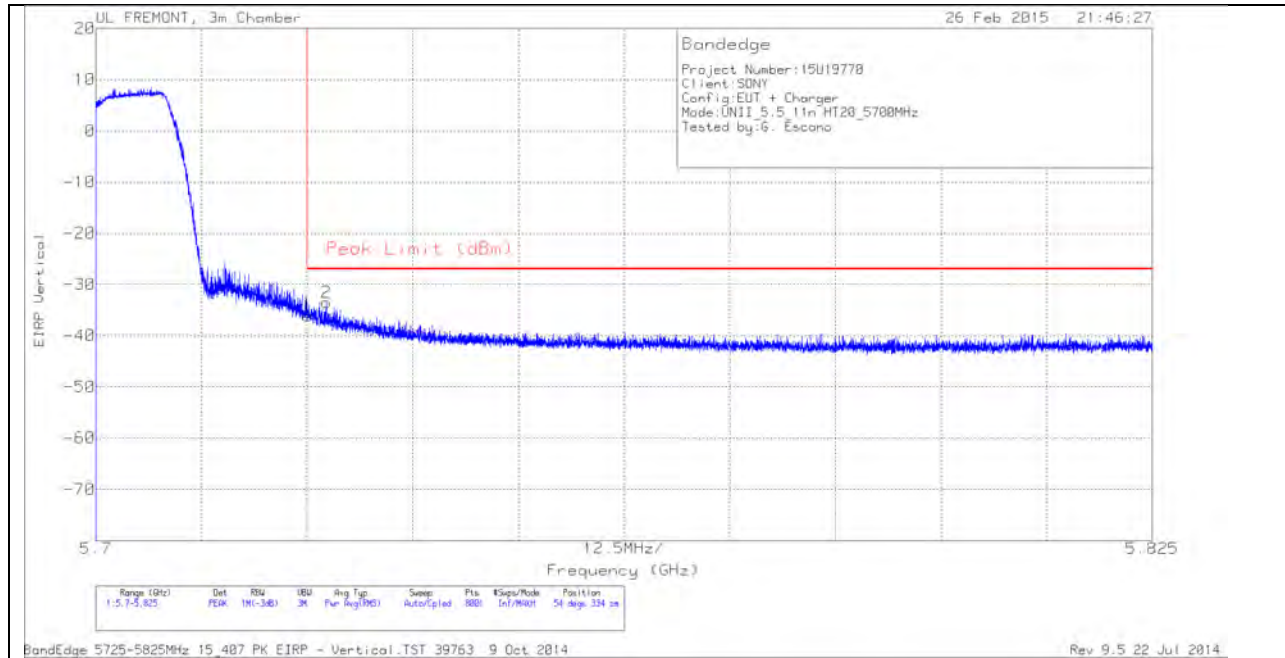
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/F Itr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-59.15	PK	34.8	-21.1	11.8	-33.65	-27	-6.65	121	339	H
2	5.725	-58.78	PK	34.8	-21.1	11.8	-33.28	-27	-6.28	121	339	H

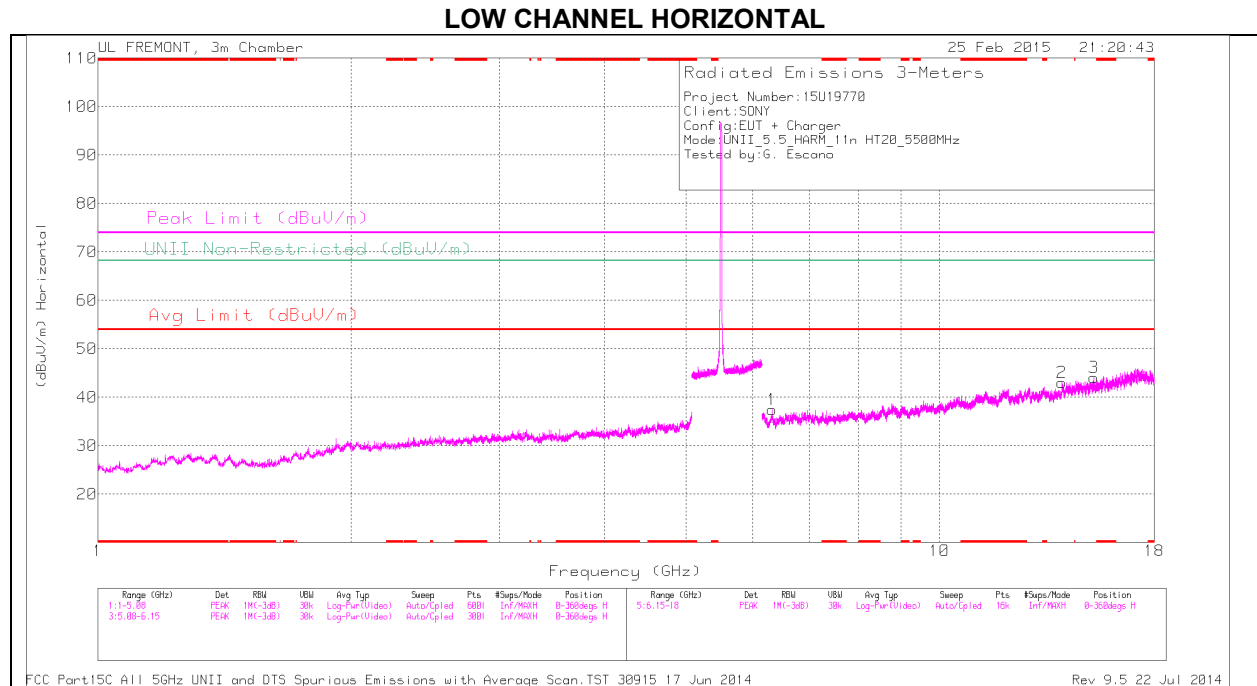
VERTICAL PEAK AND AVERAGE PLOT



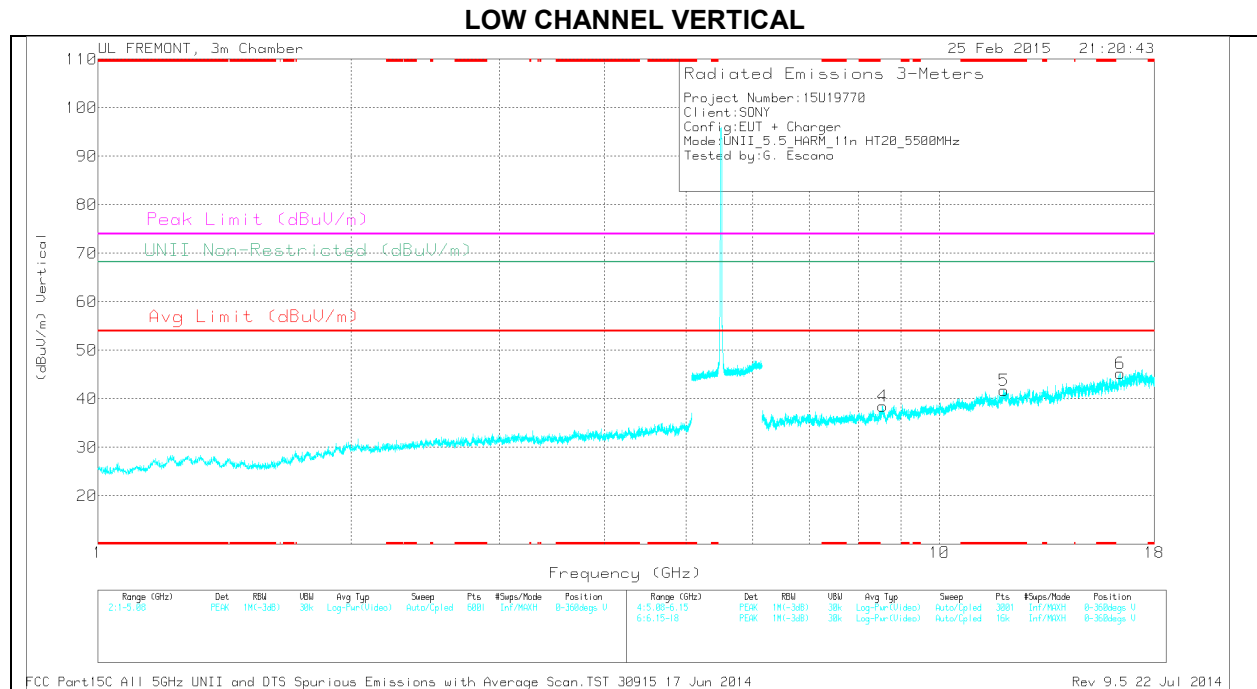
VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-61.64	PK	34.8	-21.1	11.8	-36.14	-27	-9.14	54	334	V
2	5.727	-58.97	PK	34.8	-21.1	11.8	-33.47	-27	-6.47	54	334	V

HARMONICS AND SPURIOUS EMISSIONS



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



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

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	* 11.927	28.88	PK	39.1	-26.2	0	41.78	-	-	74	-32.22	-	-	0-360	200	V
1	6.325	31.35	PK	35.4	-29.3	0	37.45	-	-	-	-	68.2	-30.75	0-360	100	H
4	8.555	28.77	PK	35.8	-26.1	0	38.47	-	-	-	-	68.2	-29.73	0-360	100	V
2	13.971	31.83	PK	38.8	-27.6	0	43.03	-	-	-	-	68.2	-25.17	0-360	200	H
3	15.244	30.74	PK	39.9	-26.6	0	44.04	-	-	-	-	68.2	-24.16	0-360	200	H
6	16.391	28.7	PK	40.7	-24.2	0	45.2	-	-	-	-	68.2	-23	0-360	200	V

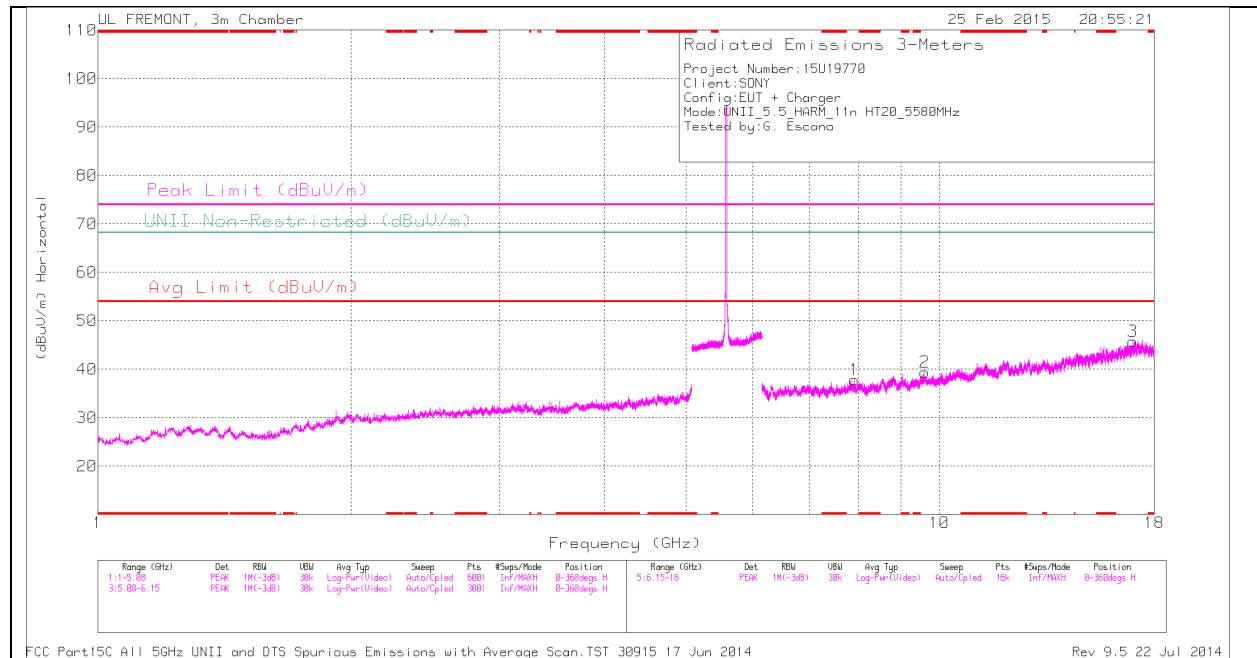
PK - Peak detector

RADIATED EMISSIONS

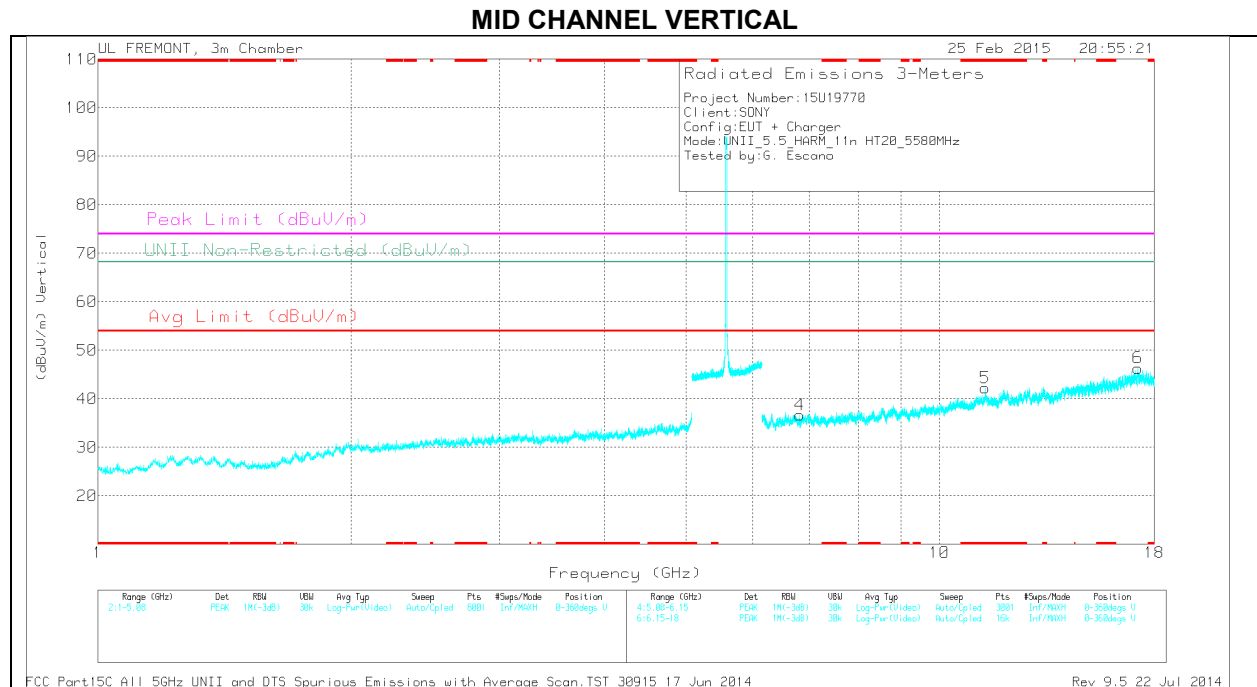
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.929	38.39	PK1	39.1	-26.2	0	51.29	-	-	74	-22.71	-	-	34	106	V
* 11.926	26.16	AD1	39.1	-26.2	0	39.06	54	-14.94	-	-	-	-	34	106	V

FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

MID CHANNEL HORIZONTAL



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



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

MID CHANNEL DATA

TRACE MARKERS

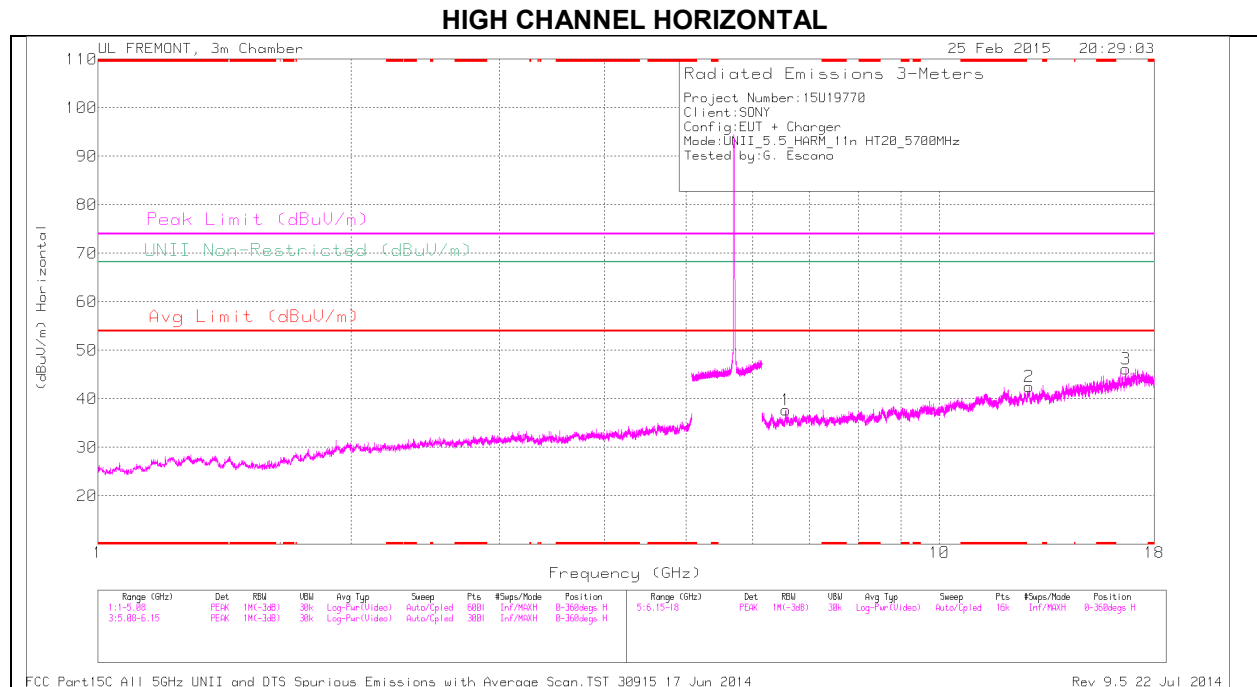
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Filr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	* 11.333	29.62	PK	38.1	-25.5	0	42.22	-	-	74	-31.78	-	-	0-360	100	V
4	6.827	30.44	PK	35.6	-29.4	0	36.64	-	-	-	-	68.2	-31.56	0-360	100	V
1	7.927	30.5	PK	35.8	-28.4	0	37.9	-	-	-	-	68.2	-30.3	0-360	100	H
2	9.613	27.9	PK	36.7	-25.2	0	39.4	-	-	-	-	68.2	-28.8	0-360	100	H
3	16.981	28.07	PK	41.3	-23.6	0	45.77	-	-	-	-	68.2	-22.43	0-360	100	H
6	17.198	28.15	PK	41.3	-23.1	0	46.35	-	-	-	-	68.2	-21.85	0-360	200	V

PK - Peak detector

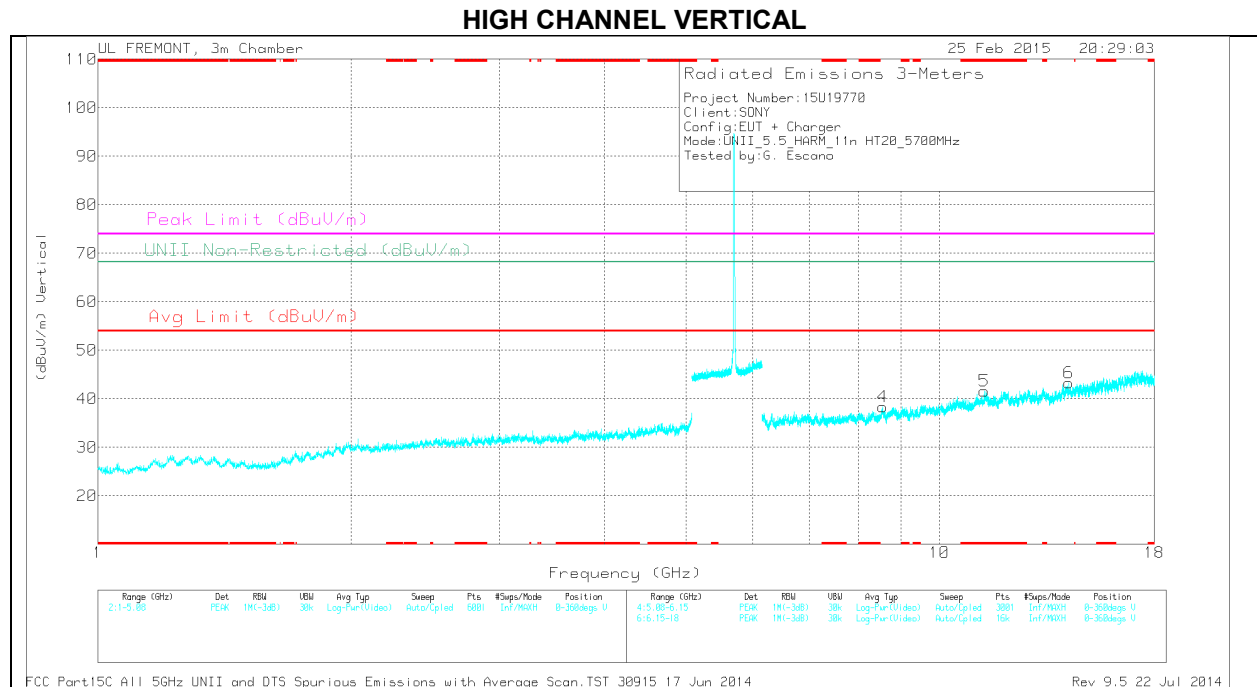
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Filr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.334	36.6	PK1	38.1	-25.5	0	49.2	-	-	74	-24.8	-	-	211	193	V
* 11.334	24.72	AD1	38.1	-25.5	0	37.32	54	-16.68	-	-	-	-	211	193	V

FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013



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



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

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	* 11.302	29.21	PK	38.1	-25.7	0	41.61	-	-	74	-32.39	-	-	0-360	100	V
1	6.572	31.42	PK	35.6	-29.3	0	37.72	-	-	-	-	68.2	-30.48	0-360	200	H
4	8.56	28.61	PK	35.8	-26.1	0	38.31	-	-	-	-	68.2	-29.89	0-360	200	V
2	12.787	29.35	PK	39.1	-25.9	0	42.55	-	-	-	-	68.2	-25.65	0-360	100	H
6	14.24	30.72	PK	39.2	-26.6	0	43.32	-	-	-	-	68.2	-24.88	0-360	200	V
3	16.66	29.41	PK	41.1	-24.4	0	46.11	-	-	-	-	68.2	-22.09	0-360	200	H

PK - Peak detector

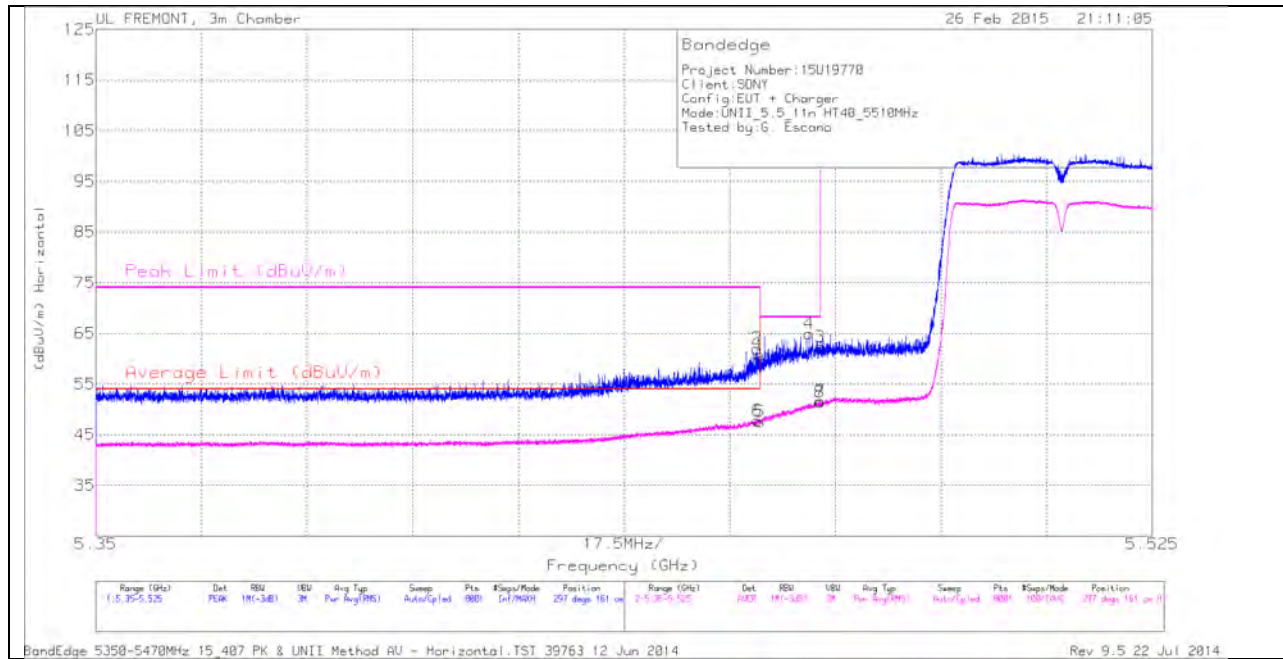
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.303	37.35	PK1	38.1	-25.8	0	49.65	-	-	74	-24.35	-	-	194	102	V
* 11.304	24.67	AD1	38.1	-25.8	0	36.97	54	-17.03	-	-	-	-	194	102	V

FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

10.3.3. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.5 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

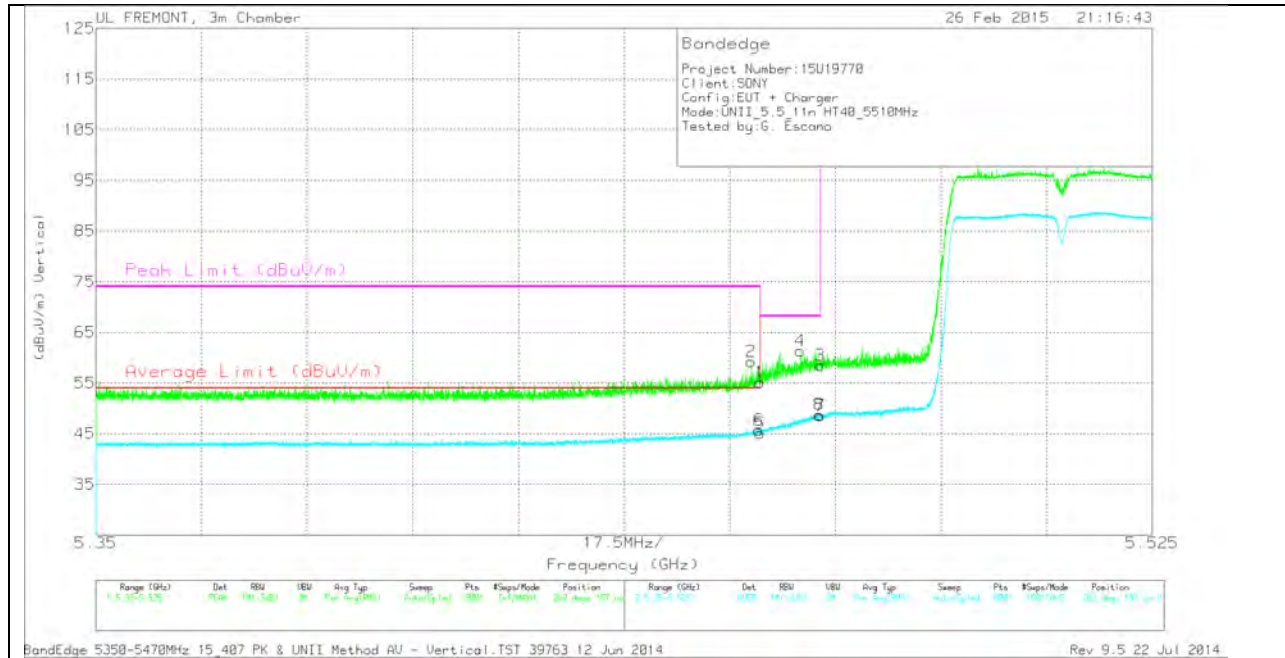
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.46	47.54	PK	34.6	-21.4	0	60.74	-	-	74	-13.26	297	161	H
2	5.46	48.82	PK	34.6	-21.4	0	62.02	-	-	74	-11.98	297	161	H
5	5.46	34.38	RMS	34.6	-21.4	.07	47.65	54	-6.35	-	-	297	161	H
6	5.46	34.6	RMS	34.6	-21.4	.07	47.87	54	-6.13	-	-	297	161	H
4	5.468	51.66	PK	34.6	-21.3	0	64.96	-	-	68.2	-3.24	297	161	H
3	5.47	49.07	PK	34.6	-21.3	0	62.37	-	-	68.2	-5.83	297	161	H
7	5.47	38.31	RMS	34.6	-21.3	.07	51.68	-	-	-	-	297	161	H
8	5.47	38.1	RMS	34.6	-21.3	.07	51.47	-	-	-	-	297	161	H

VERTICAL PEAK AND AVERAGE PLOT

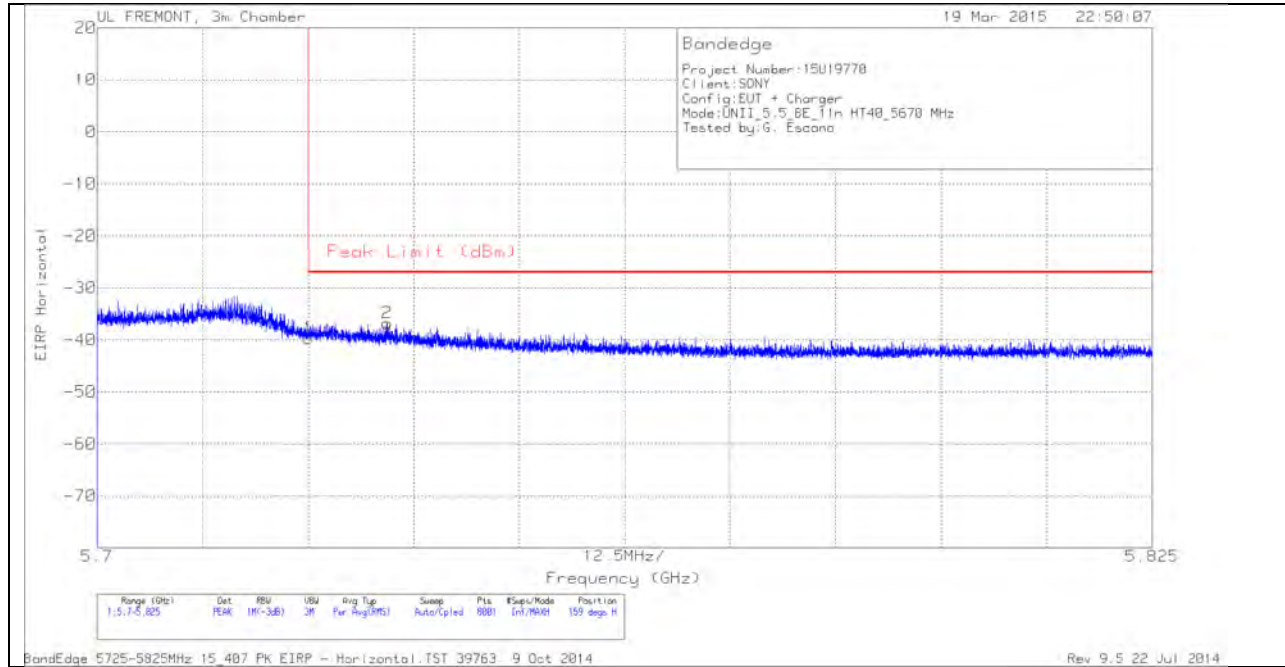


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fitter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.459	46.06	PK	34.6	-21.4	0	59.26	-	-	74	-14.74	262	197	V
1	5.46	41.95	PK	34.6	-21.4	0	55.15	-	-	74	-18.85	262	197	V
5	5.46	31.92	RMS	34.6	-21.4	.07	45.19	54	-8.81	-	-	262	197	V
6	5.46	32.52	RMS	34.6	-21.4	.07	45.79	54	-8.21	-	-	262	197	V
4	5.467	48.08	PK	34.6	-21.3	0	61.38	-	-	68.2	-6.82	262	197	V
3	5.47	45.2	PK	34.6	-21.3	0	58.5	-	-	68.2	-9.7	262	197	V
7	5.47	35.21	RMS	34.6	-21.3	.07	48.58	-	-	-	-	262	197	V
8	5.47	35.44	RMS	34.6	-21.3	.07	48.81	-	-	-	-	262	197	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT

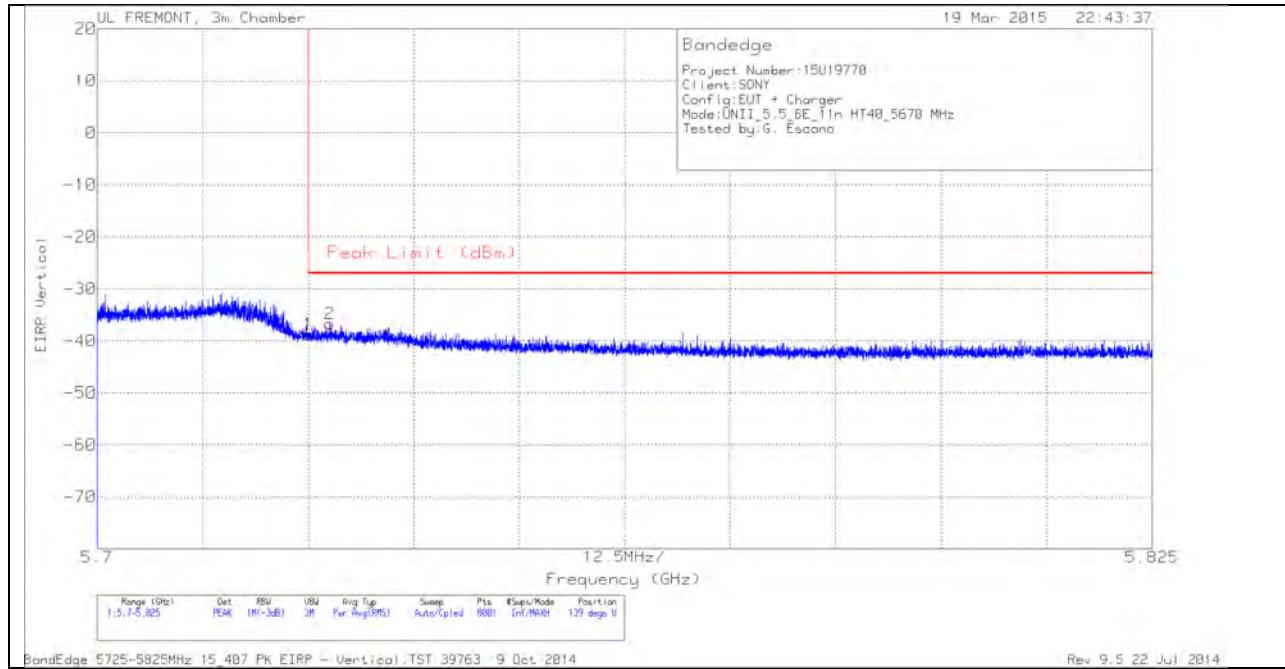


HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-65.21	PK	34.8	-21.1	11.8	-39.71	-27	-12.71	159	278	H
2	5.734	-62.27	PK	34.8	-21.1	11.8	-36.77	-27	-9.77	159	278	H

PK - Peak detector

VERTICAL PEAK AND AVERAGE PLOT

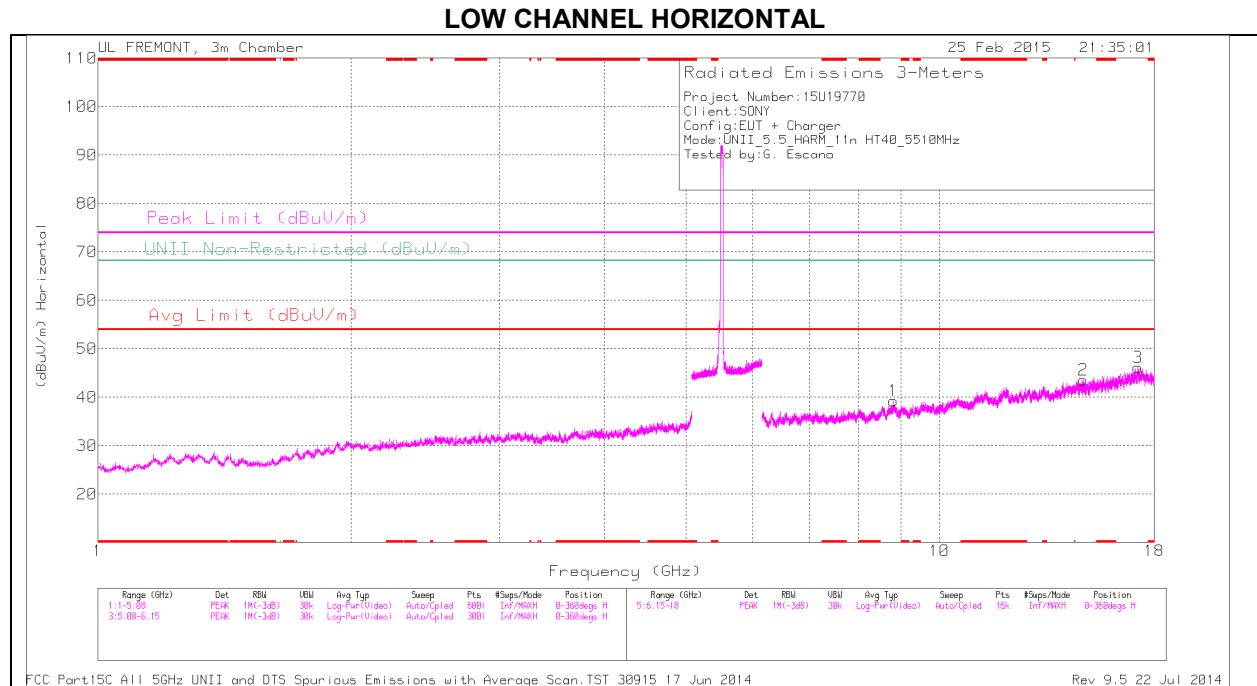


VERTICAL DATA

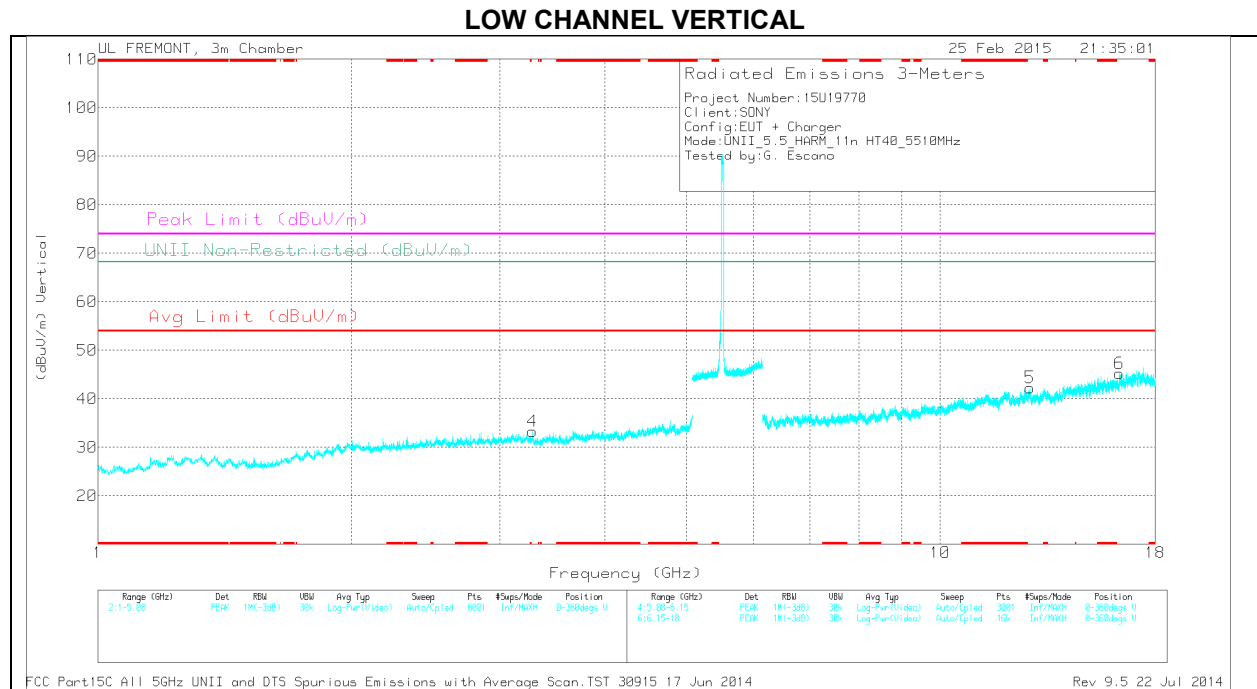
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-64.27	PK	34.8	-21.1	11.8	-38.77	-27	-11.77	139	314	V
2	5.728	-62.12	PK	34.8	-21.2	11.8	-36.72	-27	-9.72	139	314	V

PK - Peak detector

HARMONICS AND SPURIOUS EMISSIONS



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



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

LOW CHANNEL DATA

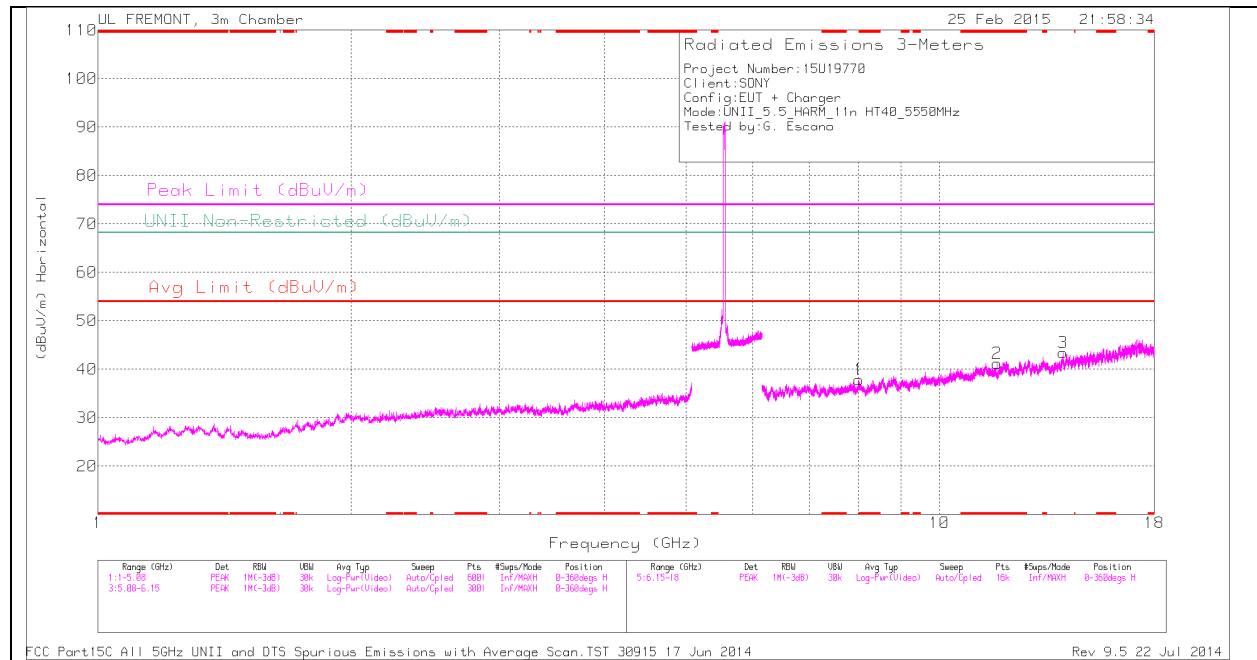
TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	3.279	32.79	PK	32.6	-32.1	0	33.29	-	-	-	-	68.2	-34.91	0-360	200	V
1	8.817	28.94	PK	35.9	-25.6	0	39.24	-	-	-	-	68.2	-28.96	0-360	200	H
5	12.783	29.02	PK	39.1	-25.8	0	42.32	-	-	-	-	68.2	-25.88	0-360	200	V
2	14.814	31.23	PK	39.8	-27.5	0	43.53	-	-	-	-	68.2	-24.67	0-360	200	H
6	16.322	29.64	PK	40.6	-25	0	45.24	-	-	-	-	68.2	-22.96	0-360	100	V
3	17.195	27.99	PK	41.3	-23.1	0	46.19	-	-	-	-	68.2	-22.01	0-360	100	H

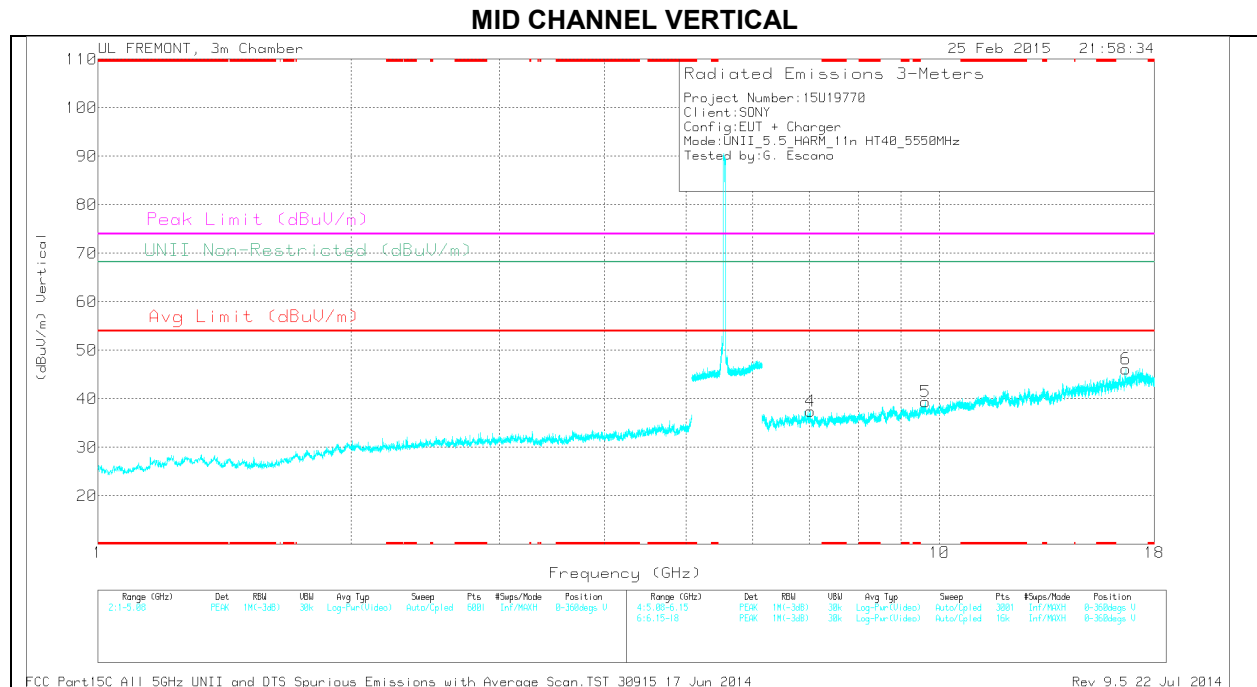
PK - Peak detector

FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

MID CHANNEL HORIZONTAL



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



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

MID CHANNEL DATA

TRACE MARKERS

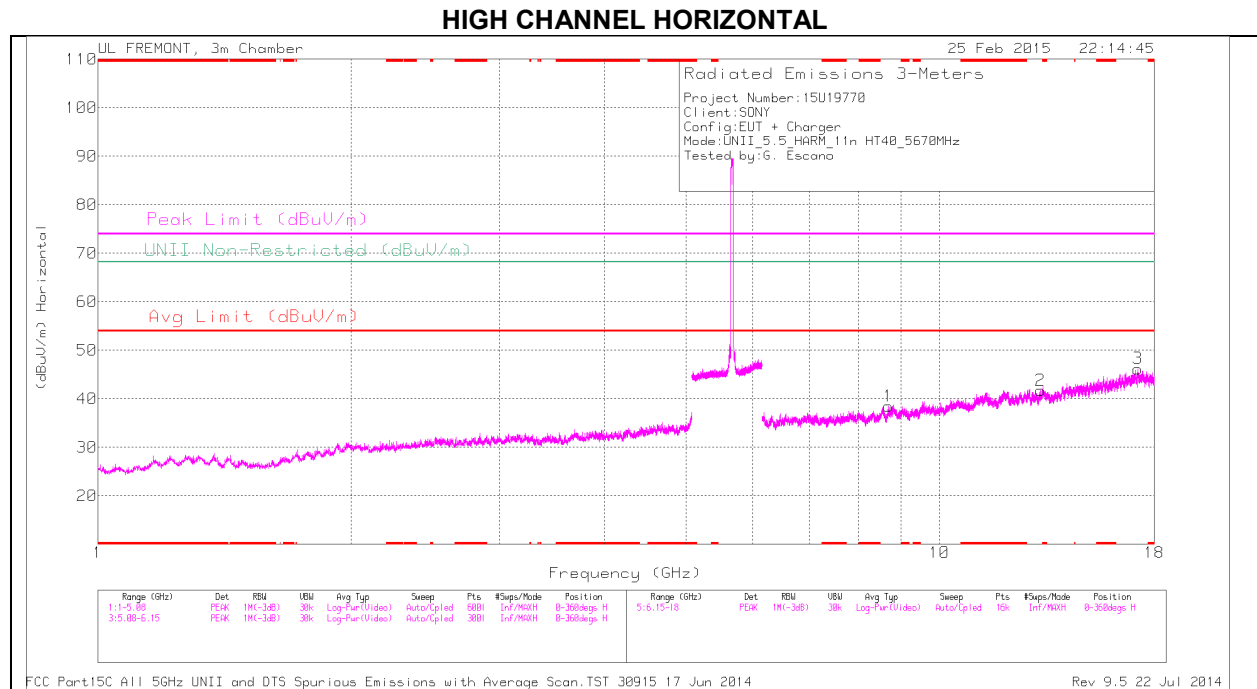
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 11.701	28.77	PK	38.8	-26.3	0	41.27	-	-	74	-32.73	-	-	0-360	100	H
4	7.02	30.61	PK	35.6	-28.7	0	37.51	-	-	-	-	68.2	-30.69	0-360	200	V
1	8.018	29.89	PK	35.8	-27.9	0	37.79	-	-	-	-	68.2	-30.41	0-360	200	H
5	9.625	28.25	PK	36.7	-25.5	0	39.45	-	-	-	-	68.2	-28.75	0-360	200	V
3	14.018	32.17	PK	38.8	-27.5	0	43.47	-	-	-	-	68.2	-24.73	0-360	100	H
6	16.662	29.44	PK	41.1	-24.4	0	46.14	-	-	-	-	68.2	-22.06	0-360	100	V

PK - Peak detector

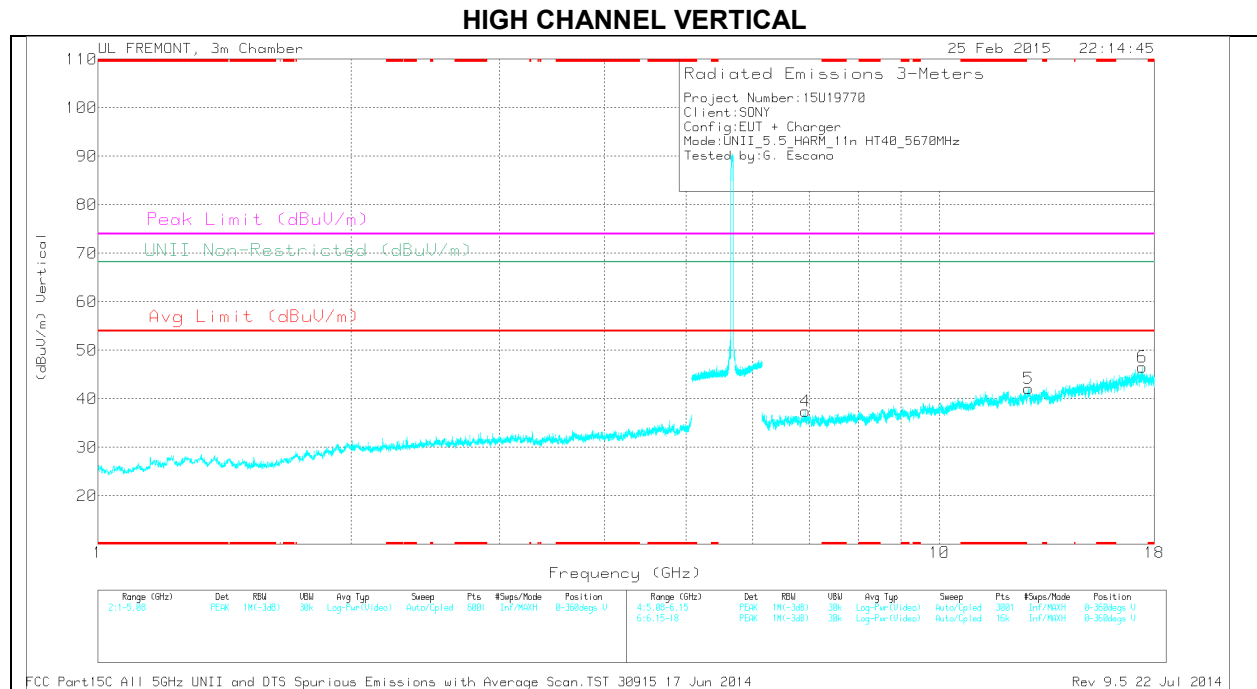
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.701	37.23	PK1	38.8	-26.3	0	49.73	-	-	74	-24.27	-	-	211	201	H
* 11.699	25.44	AD1	38.8	-26.3	.07	38.01	54	-15.99	-	-	-	-	211	201	H

FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013



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



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

HIGH CHANNEL DATA

TRACE MARKERS

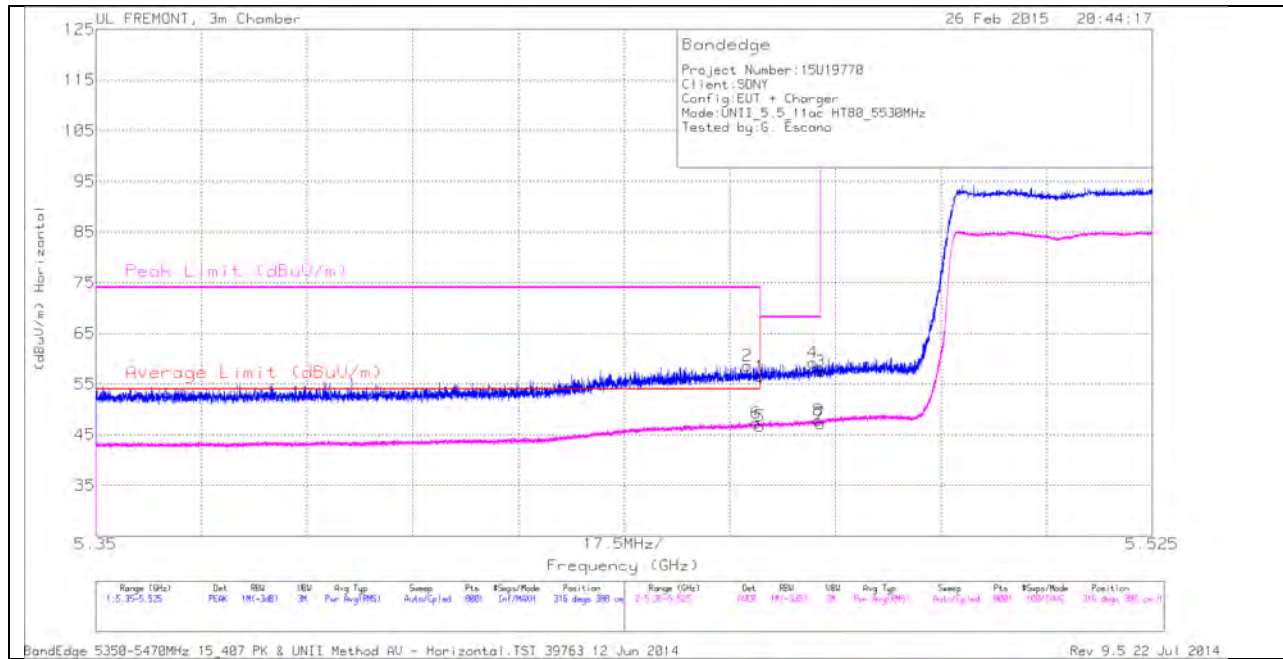
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non- Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	6.93	30.36	PK	35.6	-28.5	0	37.46	-	-	-	-	68.2	-30.74	0-360	200	V
1	8.692	30.66	PK	35.9	-28.1	0	38.46	-	-	-	-	68.2	-29.74	0-360	100	H
5	12.765	29.15	PK	39.1	-26.1	0	42.15	-	-	-	-	68.2	-26.05	0-360	200	V
2	13.173	30.06	PK	39	-27.3	0	41.76	-	-	-	-	68.2	-26.44	0-360	100	H
3	17.194	28.12	PK	41.3	-23.2	0	46.22	-	-	-	-	68.2	-21.98	0-360	100	H
6	17.416	27.52	PK	41.4	-22.4	0	46.52	-	-	-	-	68.2	-21.68	0-360	100	V

PK - Peak detector

FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

10.3.4. TX ABOVE 1 GHz 802.11ac HT80 MODE IN THE 5.5 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

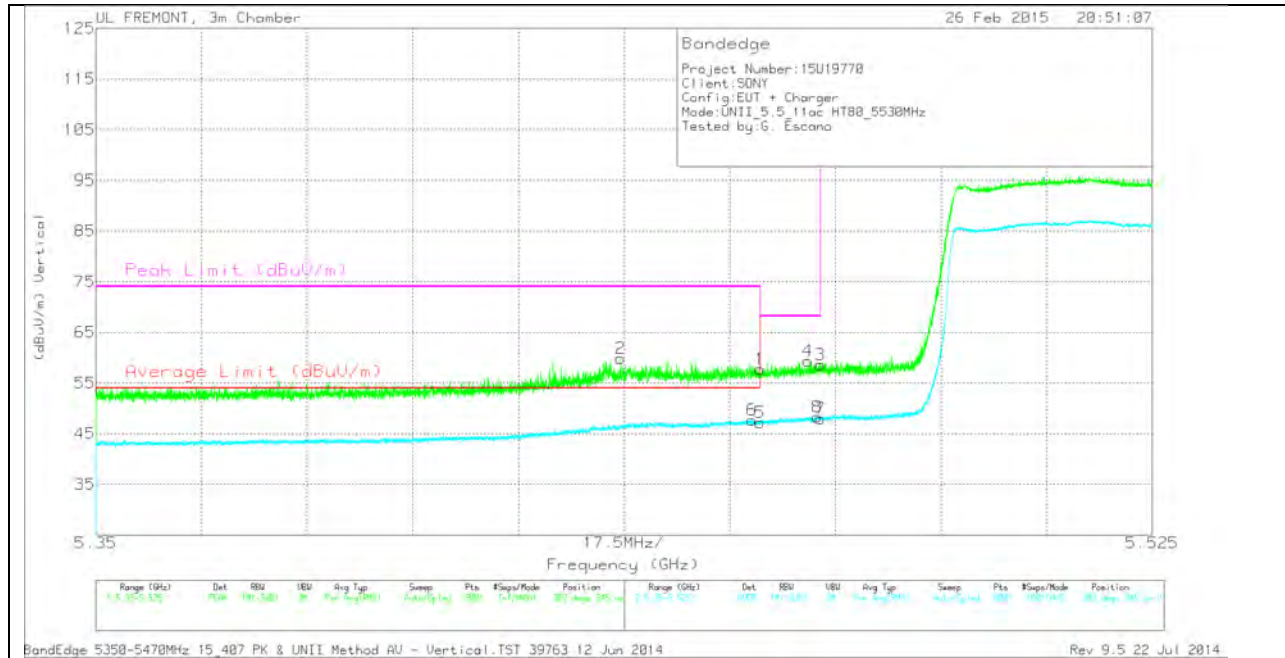
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.458	45.37	PK	34.6	-21.4	0	58.57	-	-	74	-15.43	316	388	H
6	5.459	34.09	RMS	34.6	-21.4	.14	47.43	54	-6.57	-	-	316	388	H
1	5.46	43.26	PK	34.6	-21.4	0	56.46	-	-	74	-17.54	316	388	H
5	5.46	33.51	RMS	34.6	-21.4	.14	46.85	54	-7.15	-	-	316	388	H
4	5.469	45.93	PK	34.6	-21.3	0	59.23	-	-	68.2	-8.97	316	388	H
3	5.47	44.21	PK	34.6	-21.3	0	57.51	-	-	68.2	-10.69	316	388	H
7	5.47	33.87	RMS	34.6	-21.3	.14	47.31	-	-	-	-	316	388	H
8	5.47	34.47	RMS	34.6	-21.3	.14	47.91	-	-	-	-	316	388	H

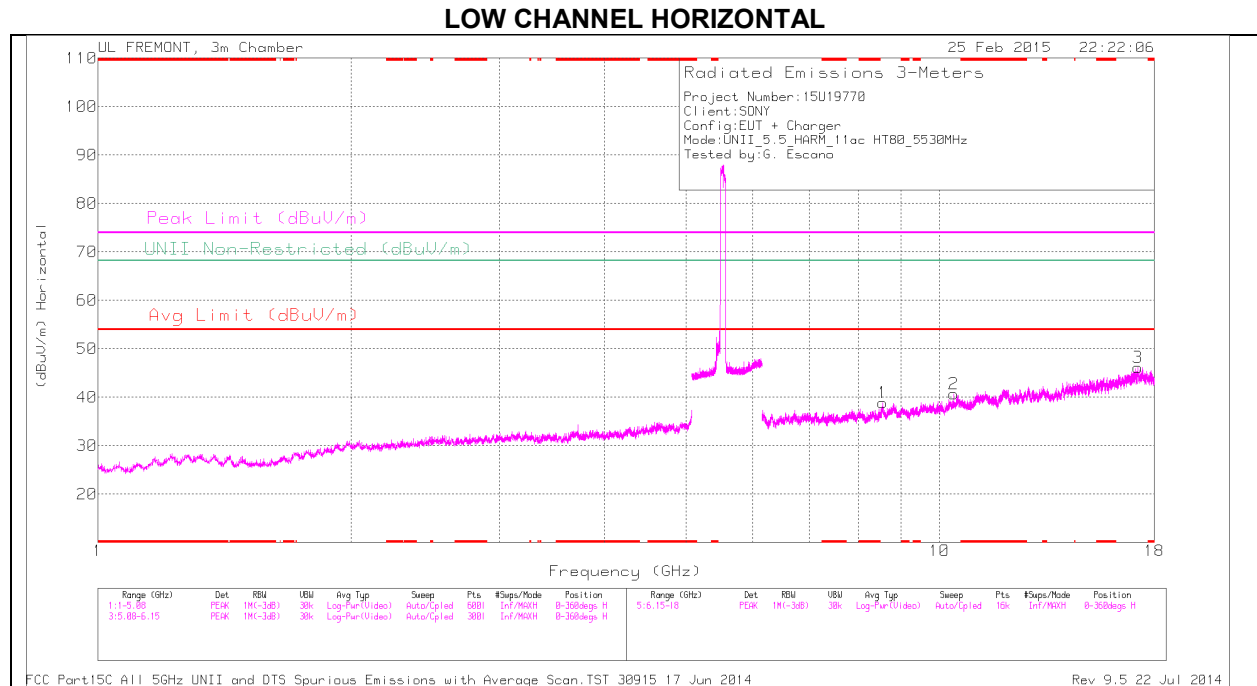
VERTICAL PEAK AND AVERAGE PLOT



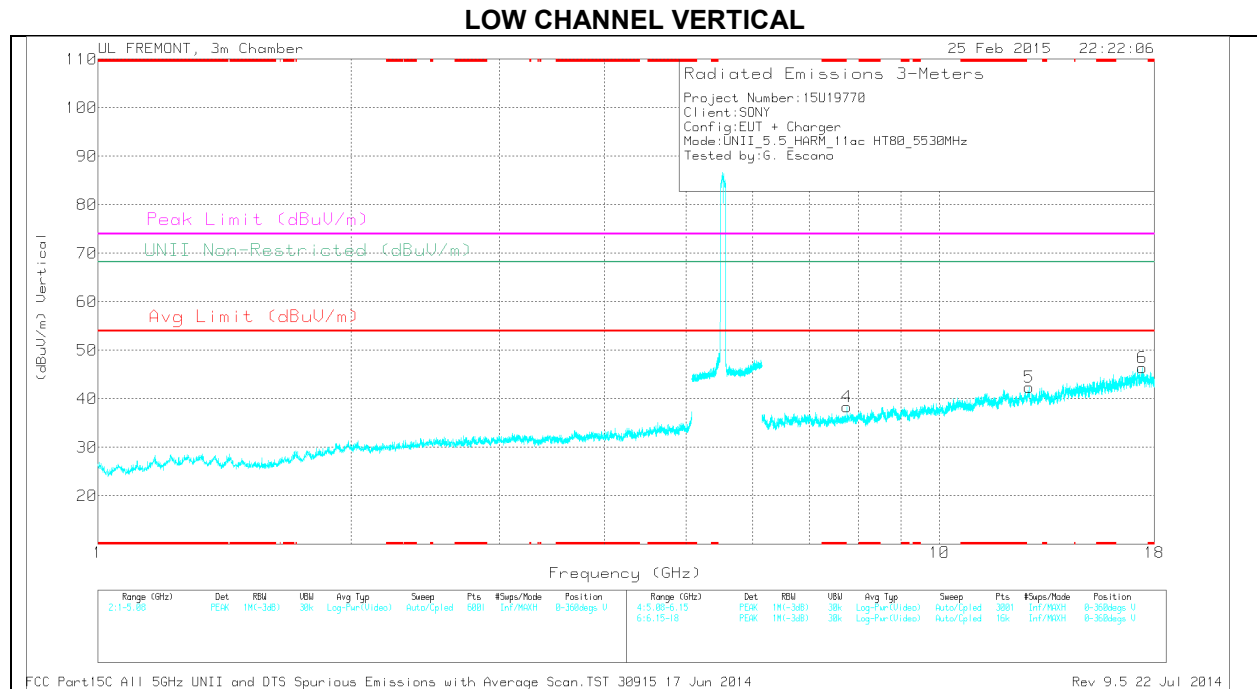
VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AFT119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.437	46.67	PK	34.6	-21.4	0	59.87	-	-	74	-14.13	302	345	V
6	5.459	34.46	RMS	34.6	-21.4	.14	47.8	54	-6.2	-	-	302	345	V
1	5.46	44.57	PK	34.6	-21.4	0	57.77	-	-	74	-16.23	302	345	V
5	5.46	33.96	RMS	34.6	-21.4	.14	47.3	54	-6.7	-	-	302	345	V
4	5.468	46.07	PK	34.6	-21.3	0	59.37	-	-	68.2	-8.83	302	345	V
3	5.47	45.28	PK	34.6	-21.3	0	58.58	-	-	68.2	-9.62	302	345	V
7	5.47	34.59	RMS	34.6	-21.3	.14	48.03	-	-	-	-	302	345	V
8	5.47	35.02	RMS	34.6	-21.3	.14	48.46	-	-	-	-	302	345	V

HARMONICS AND SPURIOUS EMISSIONS



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



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

LOW CHANNEL DATA

TRACE MARKERS

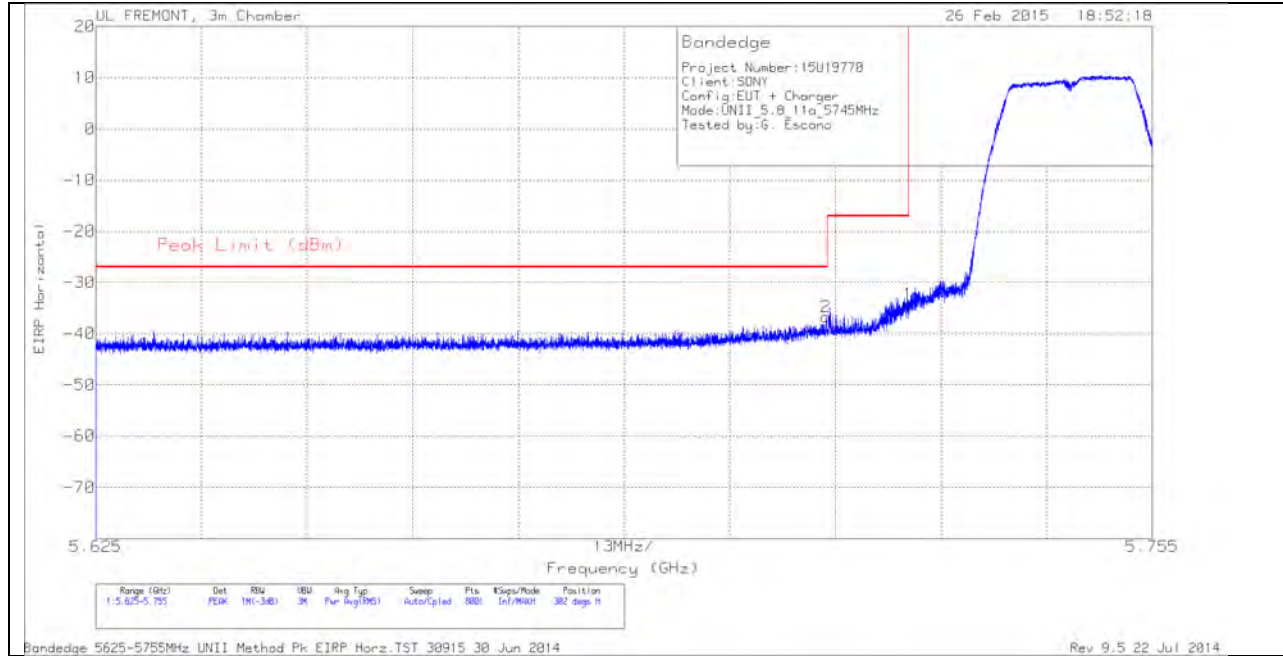
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	7.766	31.66	PK	35.8	-29.1	0	38.36	-	-	-	-	68.2	-29.84	0-360	200	V
1	8.564	29.29	PK	35.8	-26.2	0	38.89	-	-	-	-	68.2	-29.31	0-360	100	H
2	10.402	29.17	PK	37.3	-25.8	0	40.67	-	-	-	-	68.2	-27.53	0-360	100	H
5	12.777	29.14	PK	39.1	-25.9	0	42.34	-	-	-	-	68.2	-25.86	0-360	100	V
3	17.199	27.91	PK	41.3	-23	0	46.21	-	-	-	-	68.2	-21.99	0-360	200	H
6	17.423	27.34	PK	41.4	-22.3	0	46.44	-	-	-	-	68.2	-21.76	0-360	200	V

PK - Peak detector

FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

10.4. 5.8 GHz

10.4.1. TX ABOVE 1 GHz 802.11a MODE IN THE 5.8 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL) HORIZONTAL PEAK AND AVERAGE PLOT

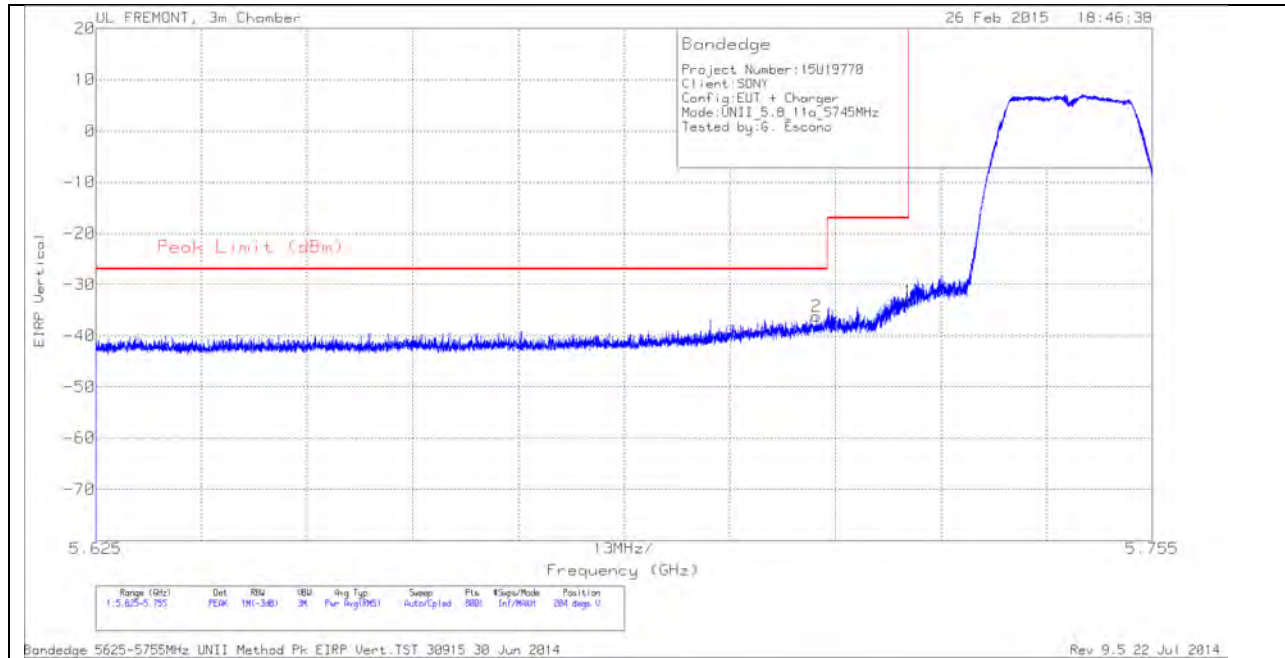


HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.715	-62.24	PK	34.8	-21.1	11.8	-36.74	-27	-9.74	302	245	H
1	5.725	-59.77	PK	34.8	-21.1	11.8	-34.27	-17	-17.27	302	245	H

PK - Peak detector

VERTICAL PEAK AND AVERAGE PLOT



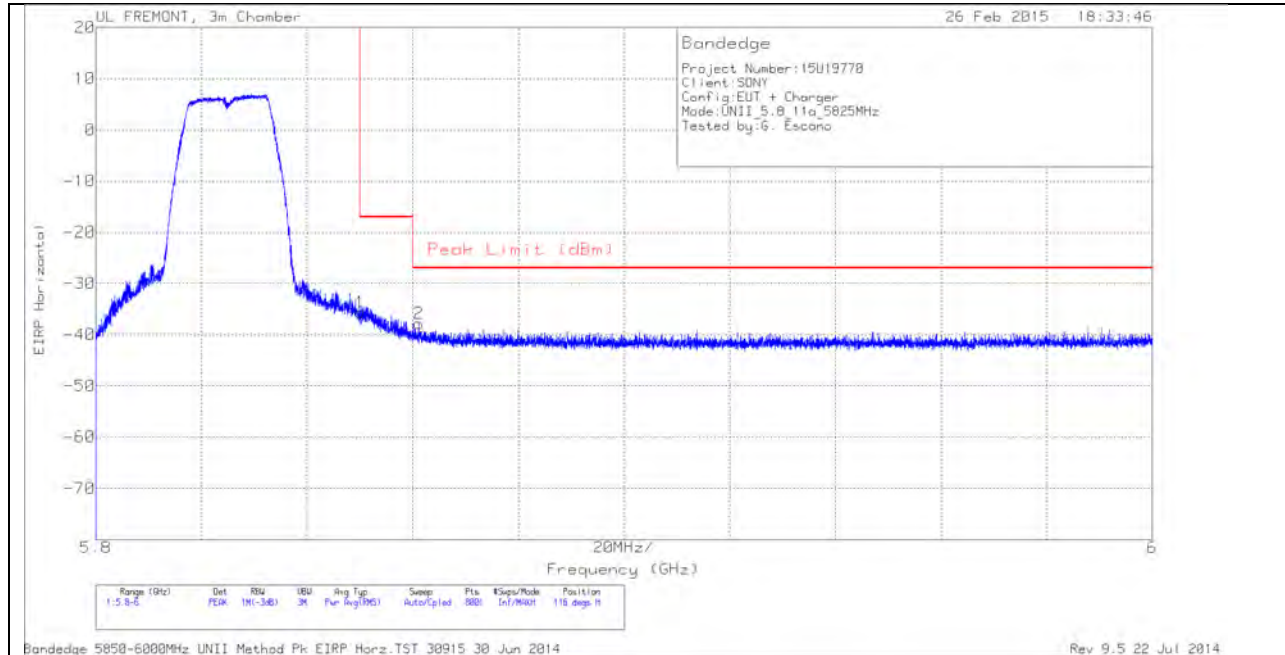
VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.714	-61.79	PK	34.8	-21	11.8	-36.19	-27	-9.19	204	319	V
1	5.725	-58.8	PK	34.8	-21.1	11.8	-33.3	-17	-16.3	204	319	V

PK - Peak detector

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT

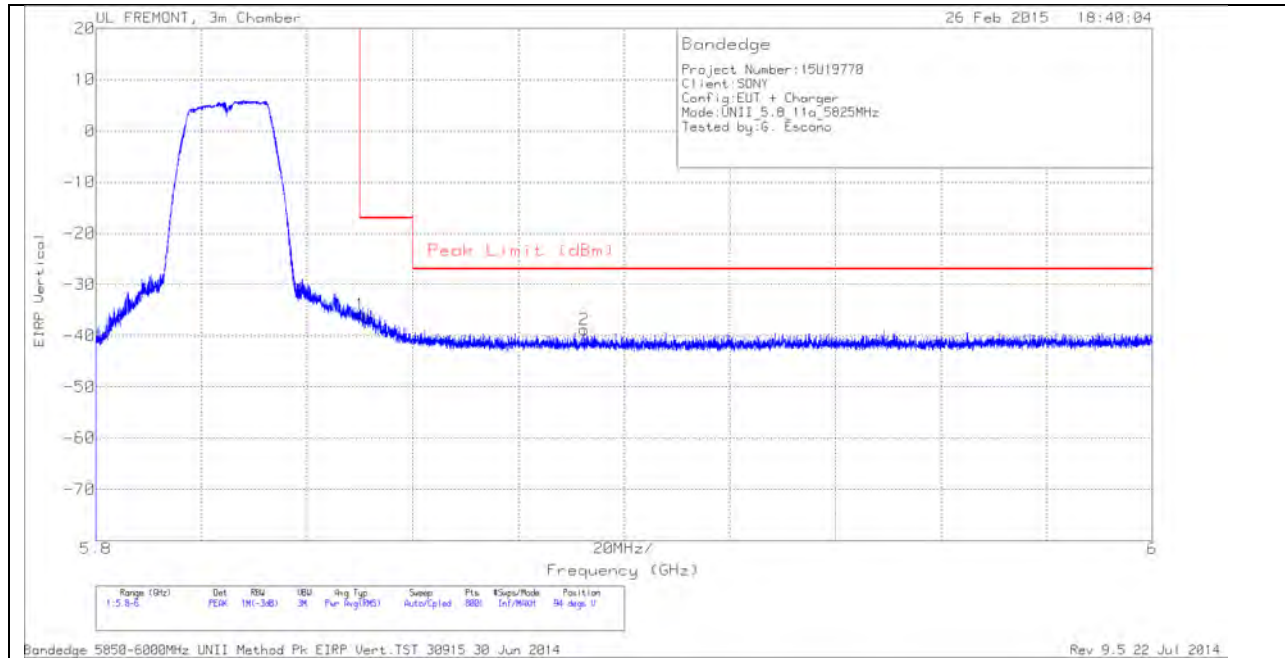


HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-60.96	PK	34.9	-21.3	11.8	-35.56	-17	-18.56	116	322	H
2	5.861	-63.25	PK	34.9	-21.3	11.8	-37.85	-27	-10.85	116	322	H

PK - Peak detector

VERTICAL PEAK AND AVERAGE PLOT

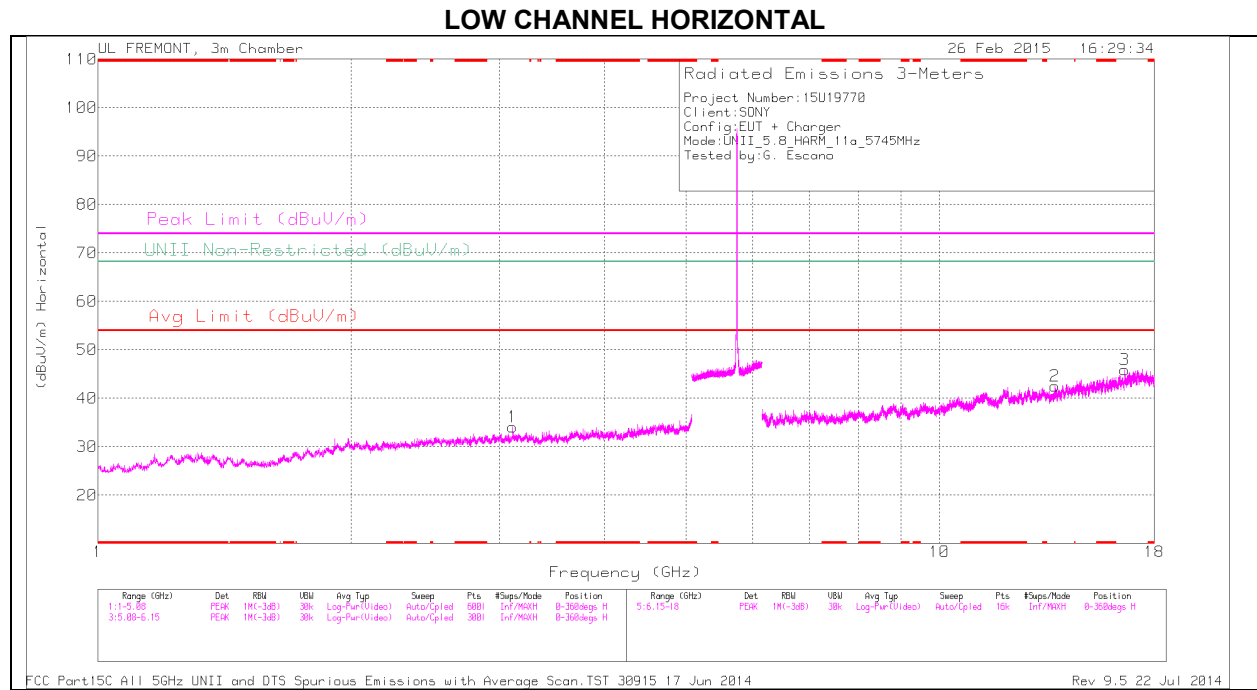


VERTICAL DATA

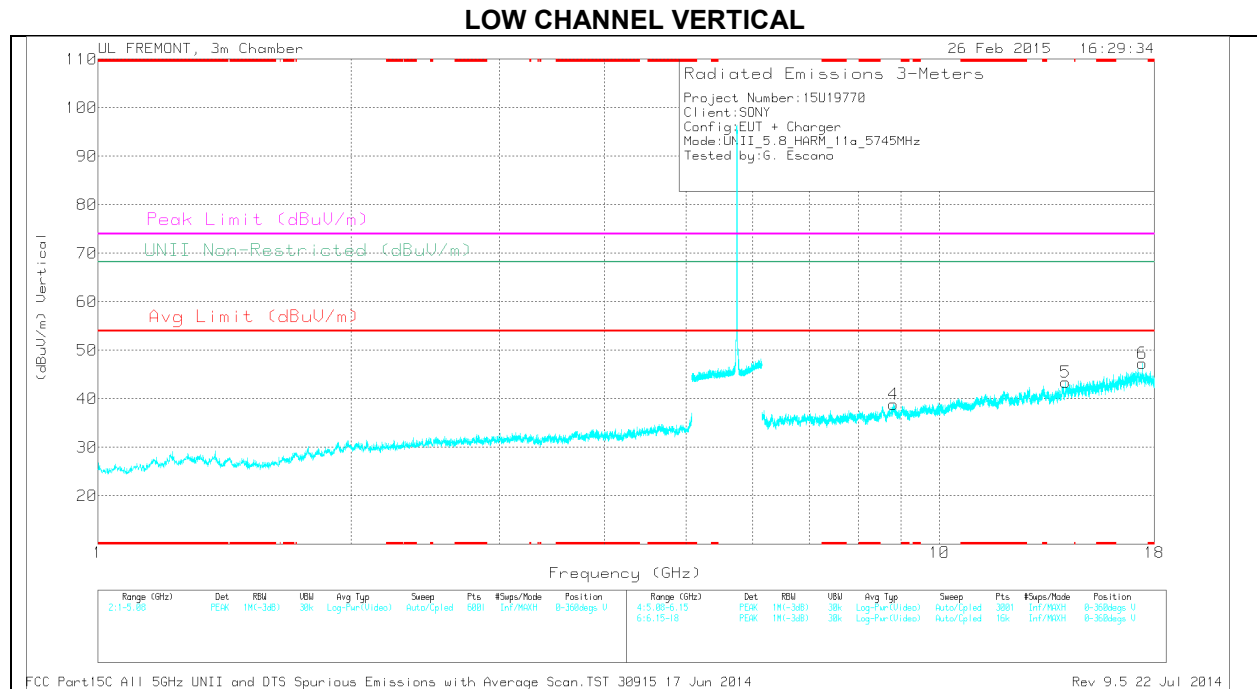
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cb/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-61.3	PK	34.9	-21.3	11.8	-35.9	-17	-18.9	94	321	V
2	5.892	-64.5	PK	35	-21.1	11.8	-38.8	-27	-11.8	94	321	V

PK - Peak detector

HARMONICS AND SPURIOUS EMISSIONS



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



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

LOW CHANNEL DATA

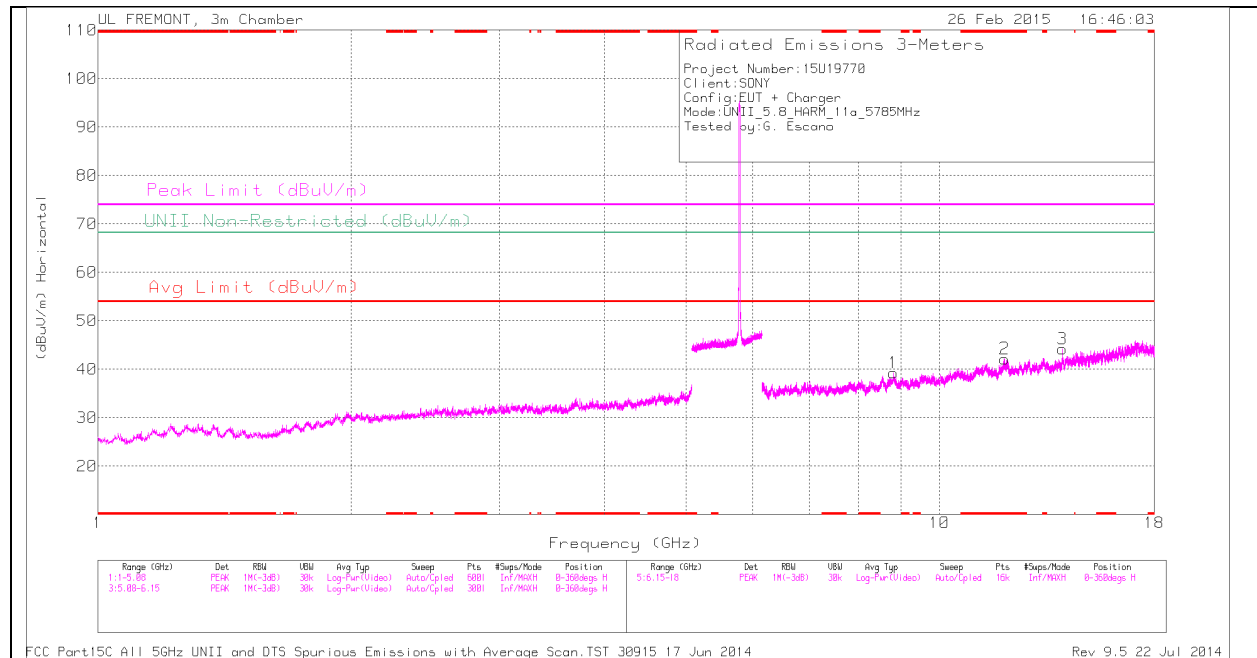
TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non- Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	3.112	33.47	PK	32.7	-32.1	0	34.07	-	-	-	-	68.2	-34.13	0-360	100	H
4	8.82	28.73	PK	35.9	-25.7	0	38.93	-	-	-	-	68.2	-29.27	0-360	200	V
2	13.713	30.8	PK	38.6	-26.9	0	42.5	-	-	-	-	68.2	-25.7	0-360	200	H
5	14.127	31.97	PK	39	-27.6	0	43.37	-	-	-	-	68.2	-24.83	0-360	100	V
3	16.604	29.07	PK	41	-24.2	0	45.87	-	-	-	-	68.2	-22.33	0-360	100	H
6	17.42	28.02	PK	41.4	-22.1	0	47.32	-	-	-	-	68.2	-20.88	0-360	100	V

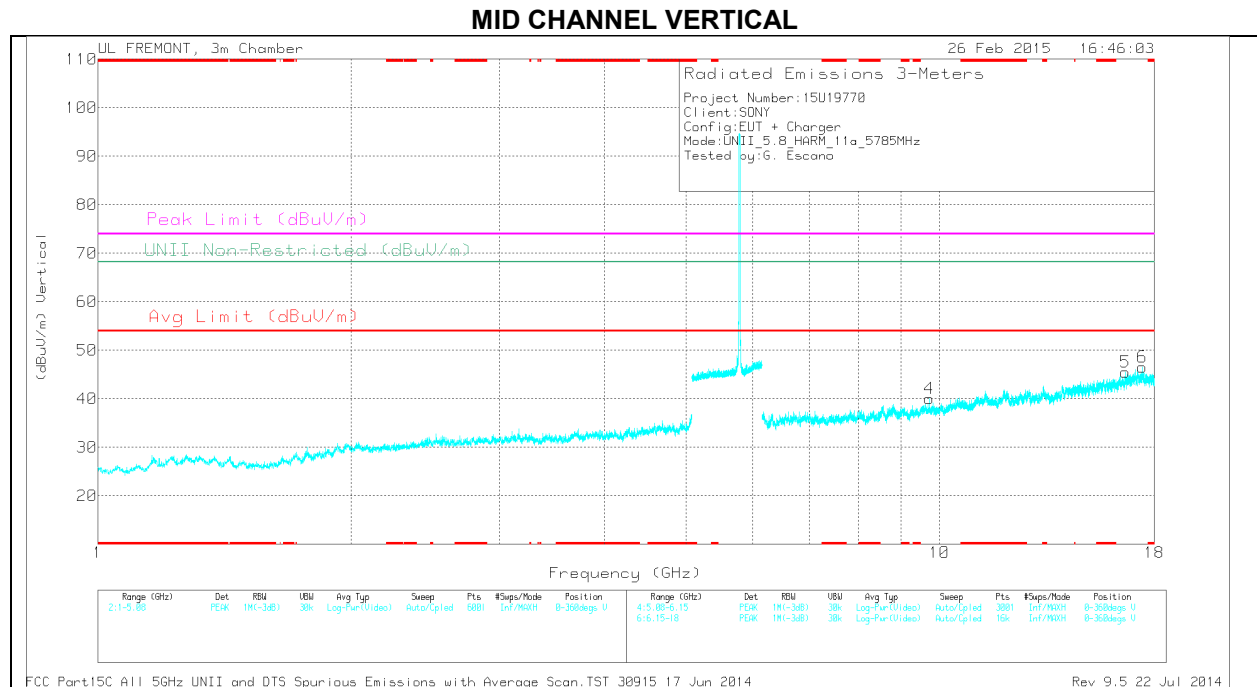
PK - Peak detector

FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

MID CHANNEL HORIZONTAL



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



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

MID CHANNEL DATA

TRACE MARKERS

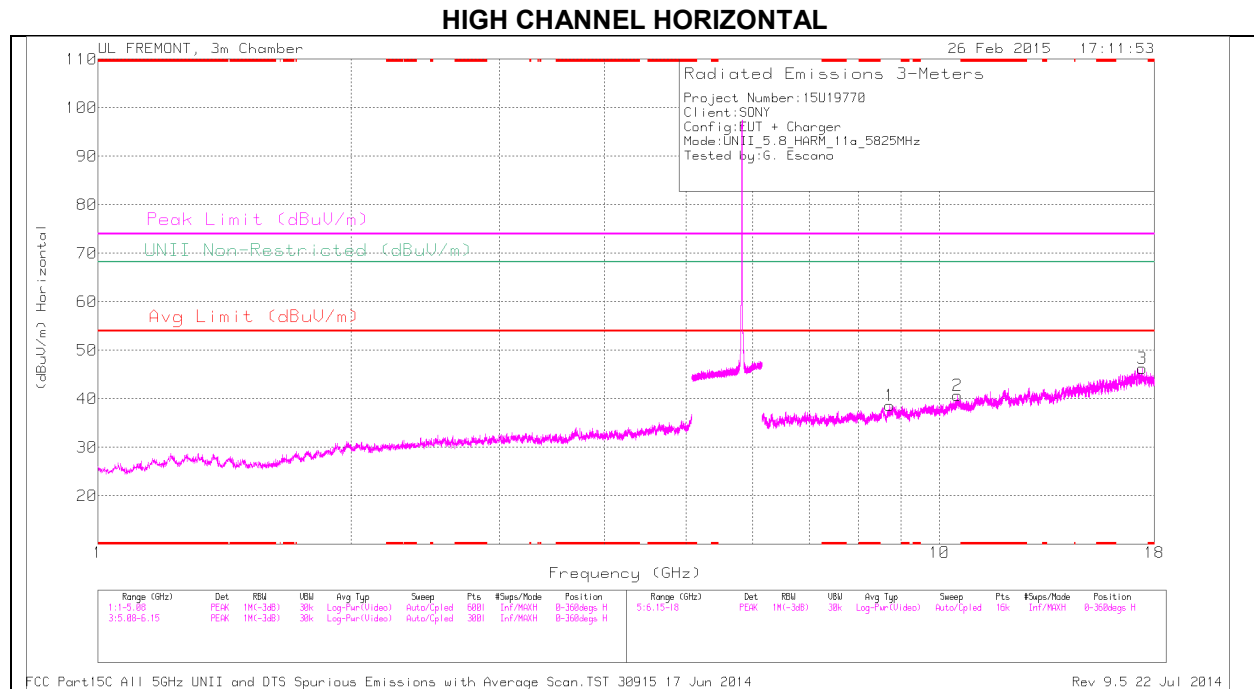
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 11.943	29.39	PK	39.1	-26.3	0	42.19	-	-	74	-31.81	-	-	0-360	100	H
1	8.809	29.12	PK	35.9	-25.7	0	39.32	-	-	-	-	68.2	-28.88	0-360	100	H
4	9.72	29.3	PK	36.8	-26.1	0	40	-	-	-	-	68.2	-28.2	0-360	100	V
3	14.002	33.22	PK	38.8	-27.8	0	44.22	-	-	-	-	68.2	-23.98	0-360	100	H
5	16.613	29.11	PK	41	-24.6	0	45.51	-	-	-	-	68.2	-22.69	0-360	200	V
6	17.421	27.26	PK	41.4	-22.1	0	46.56	-	-	-	-	68.2	-21.64	0-360	200	V

PK - Peak detector

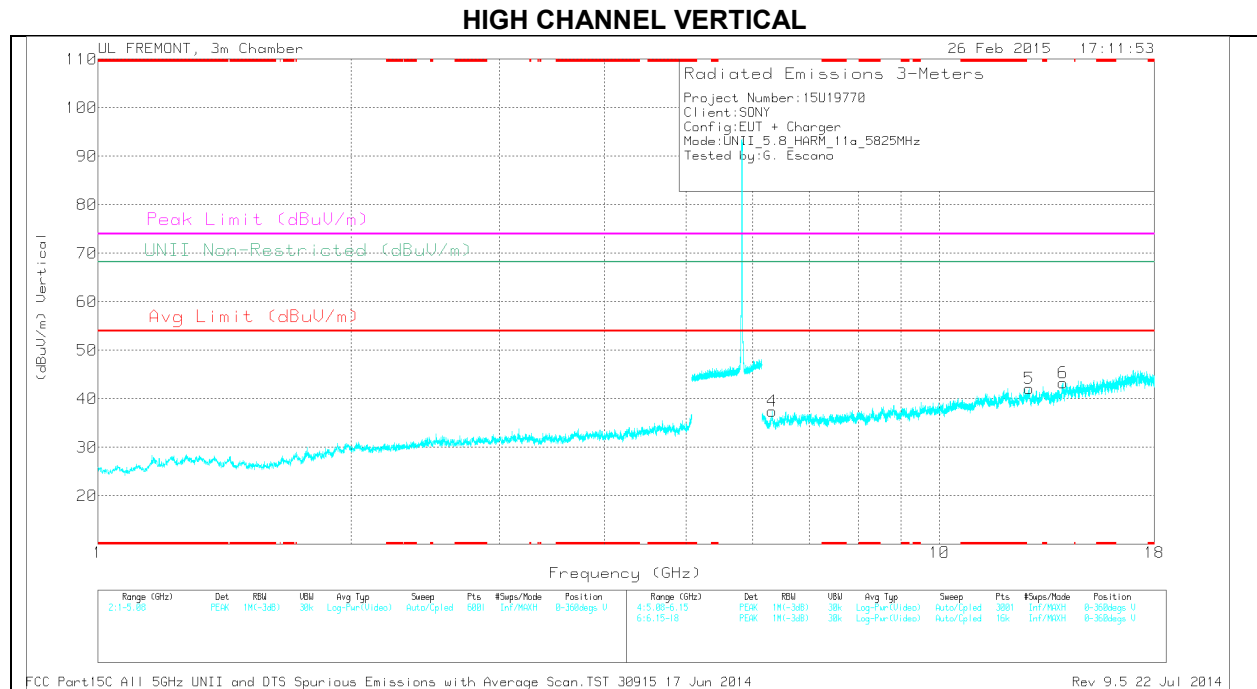
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.941	37.88	PK1	39.1	-26.3	0	50.68	-	-	74	-23.32	-	-	267	110	H
* 11.944	25.88	AD1	39.1	-26.3	0	38.68	54	-15.32	-	-	-	-	267	110	H

FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013



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



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

HIGH CHANNEL DATA

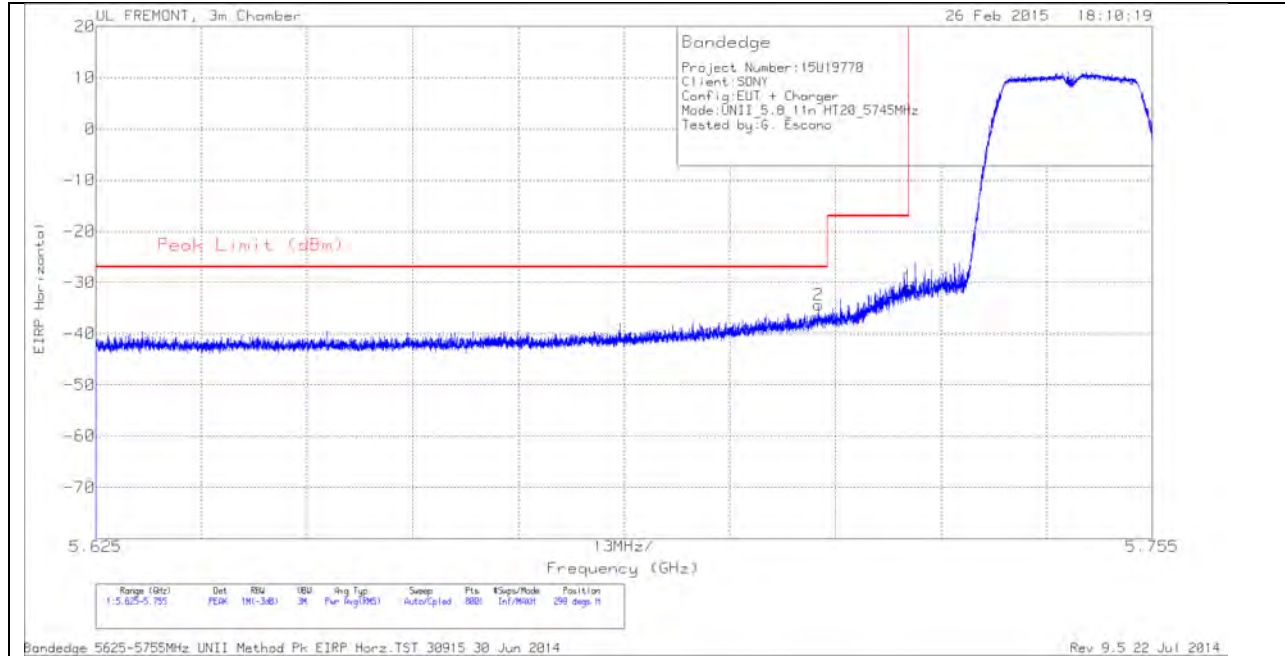
TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	6.322	31.41	PK	35.4	-29.4	0	37.41	-	-	-	-	68.2	-30.79	0-360	100	V
1	8.724	30.4	PK	35.9	-27.7	0	38.6	-	-	-	-	68.2	-29.6	0-360	100	H
2	10.497	28.75	PK	37.5	-25.6	0	40.65	-	-	-	-	68.2	-27.55	0-360	100	H
5	12.777	28.92	PK	39.1	-25.9	0	42.12	-	-	-	-	68.2	-26.08	0-360	200	V
6	14.033	31.7	PK	38.9	-27.3	0	43.3	-	-	-	-	68.2	-24.9	0-360	100	V
3	17.42	26.97	PK	41.4	-22.1	0	46.27	-	-	-	-	68.2	-21.93	0-360	200	H

PK - Peak detector

FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

10.4.2. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.8 GHz BAND **RESTRICTED BANDEDGE (LOW CHANNEL)** **HORIZONTAL PEAK AND AVERAGE PLOT**

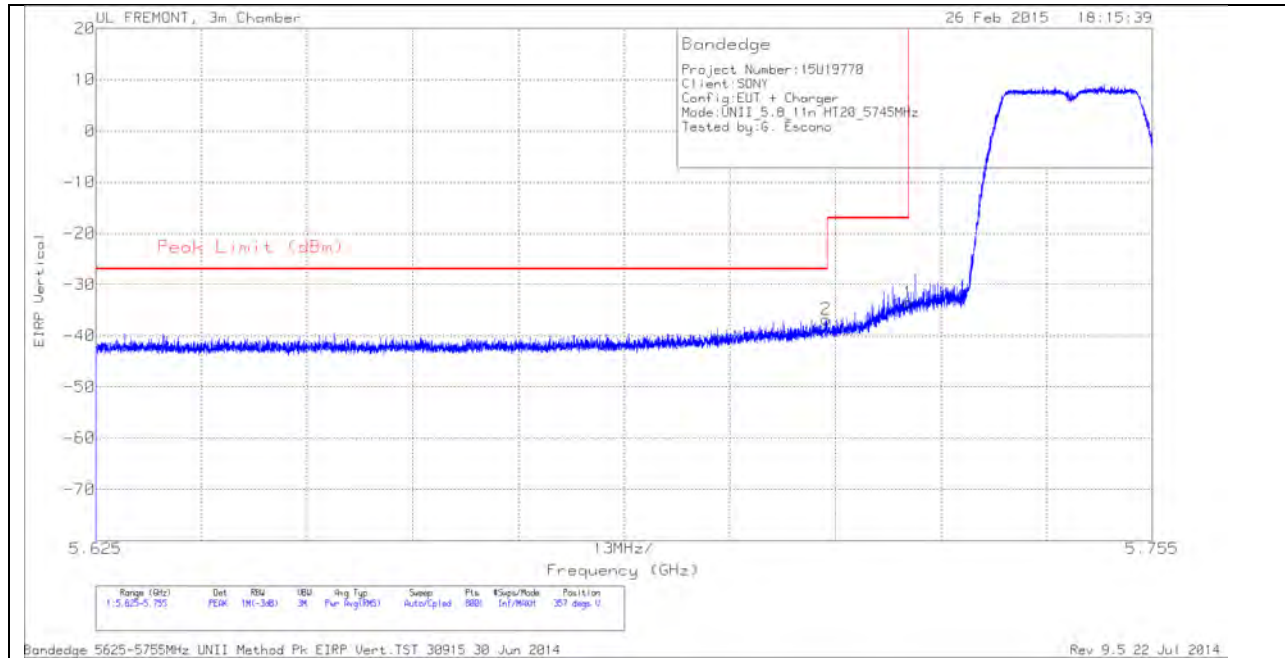


HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.714	-60.01	PK	34.8	-21	11.8	-34.41	-27	-7.41	299	320	H
1	5.725	-56.48	PK	34.8	-21.1	11.8	-30.98	-17	-13.98	299	320	H

PK - Peak detector

VERTICAL PEAK AND AVERAGE PLOT



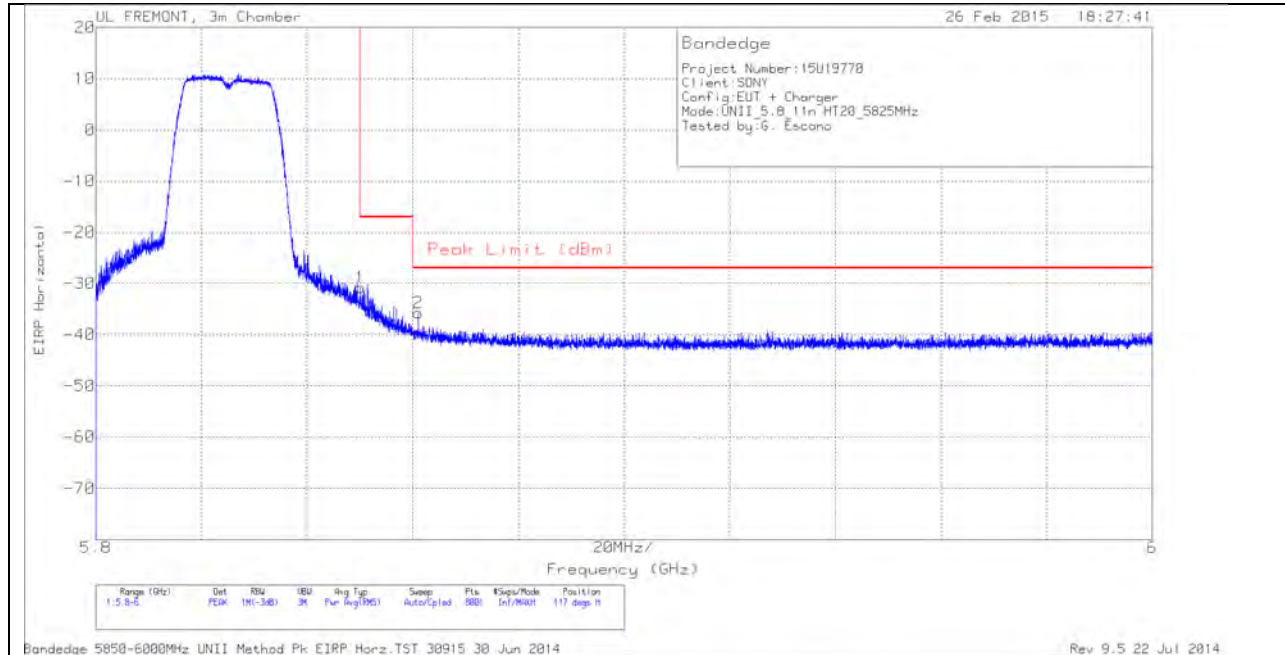
VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.715	-62.27	PK	34.8	-21.1	11.8	-36.77	-27	-9.77	357	342	V
1	5.725	-59.04	PK	34.8	-21.1	11.8	-33.54	-17	-16.54	357	342	V

PK - Peak detector

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT

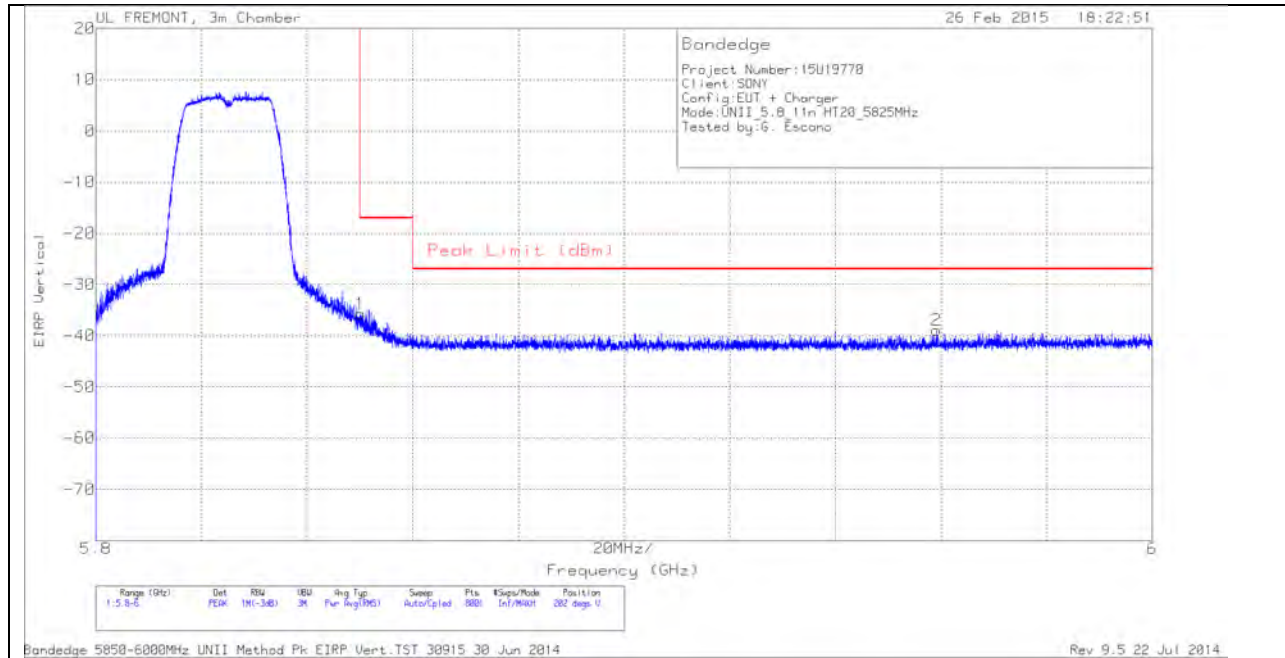


HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-56.19	PK	34.9	-21.3	11.8	-30.79	-17	-13.79	117	328	H
2	5.861	-61.09	PK	34.9	-21.3	11.8	-35.69	-27	-8.69	117	328	H

PK - Peak detector

VERTICAL PEAK AND AVERAGE PLOT

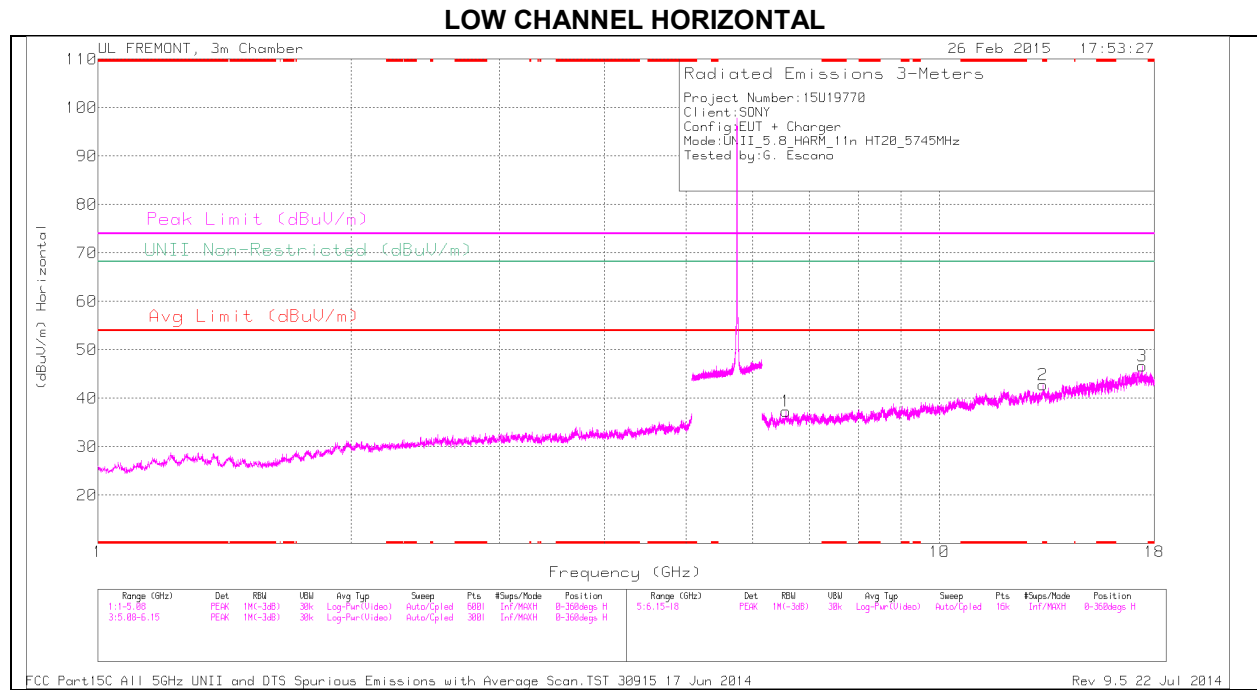


VERTICAL DATA

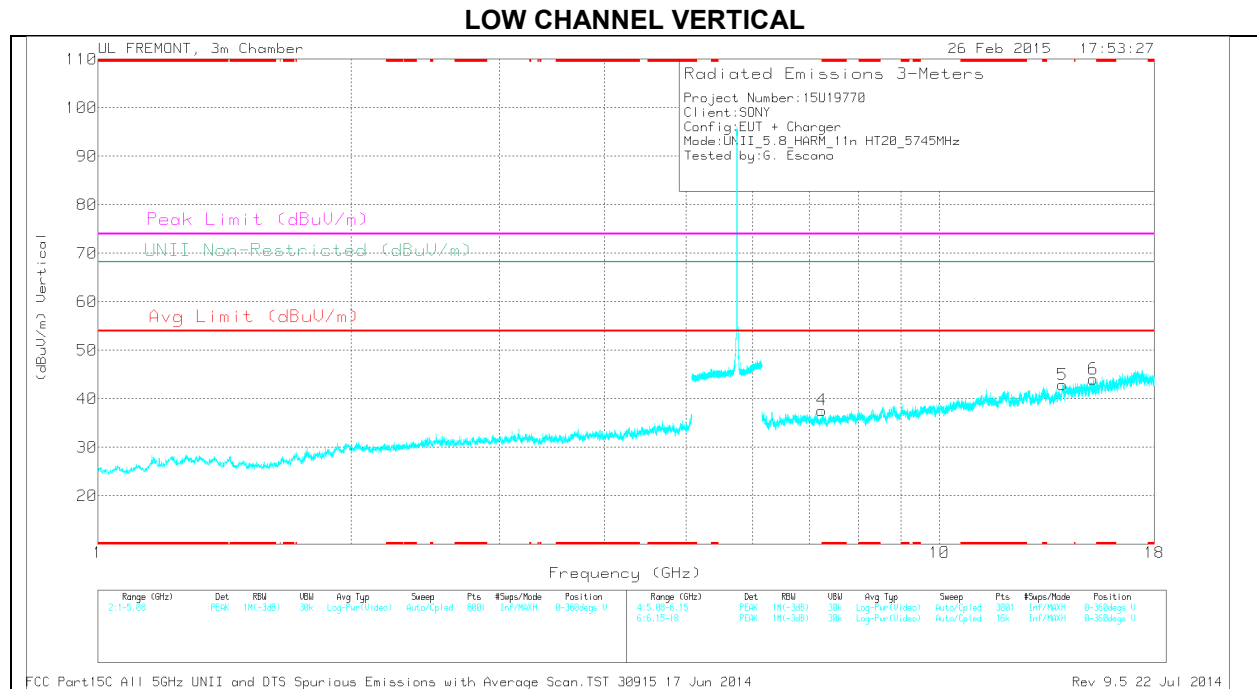
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-61.09	PK	34.9	-21.3	11.8	-35.69	-17	-18.69	202	279	V
2	5.959	-64.86	PK	35.1	-21	11.8	-38.96	-27	-11.96	202	279	V

PK - Peak detector

HARMONICS AND SPURIOUS EMISSIONS



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



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

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 13.278	29.89	PK	39	-26.1	0	42.79	-	-	74	-31.21	-	-	0-360	100	H
1	6.571	31.09	PK	35.6	-29.4	0	37.29	-	-	-	-	68.2	-30.91	0-360	100	H
4	7.245	31.25	PK	35.6	-29.2	0	37.65	-	-	-	-	68.2	-30.55	0-360	100	V
5	14.004	31.95	PK	38.8	-27.8	0	42.95	-	-	-	-	68.2	-25.25	0-360	100	V
6	15.241	30.93	PK	39.9	-26.8	0	44.03	-	-	-	-	68.2	-24.17	0-360	100	V
3	17.42	27.32	PK	41.4	-22.1	0	46.62	-	-	-	-	68.2	-21.58	0-360	200	H

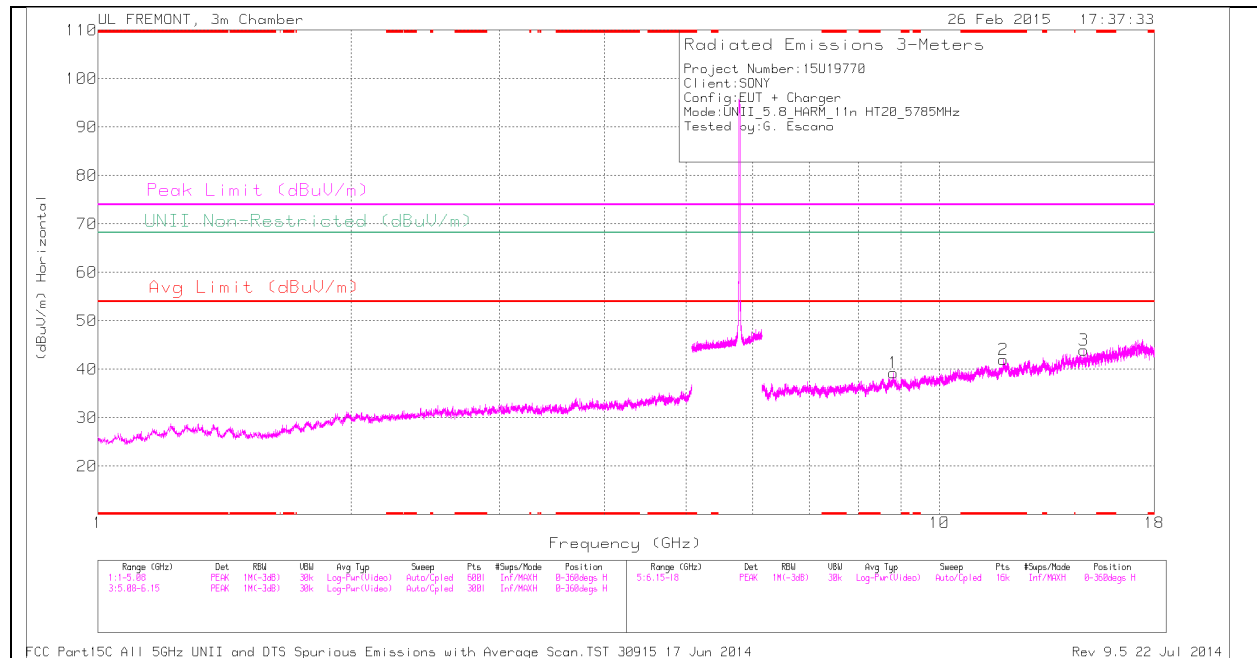
PK - Peak detector

RADIATED EMISSIONS

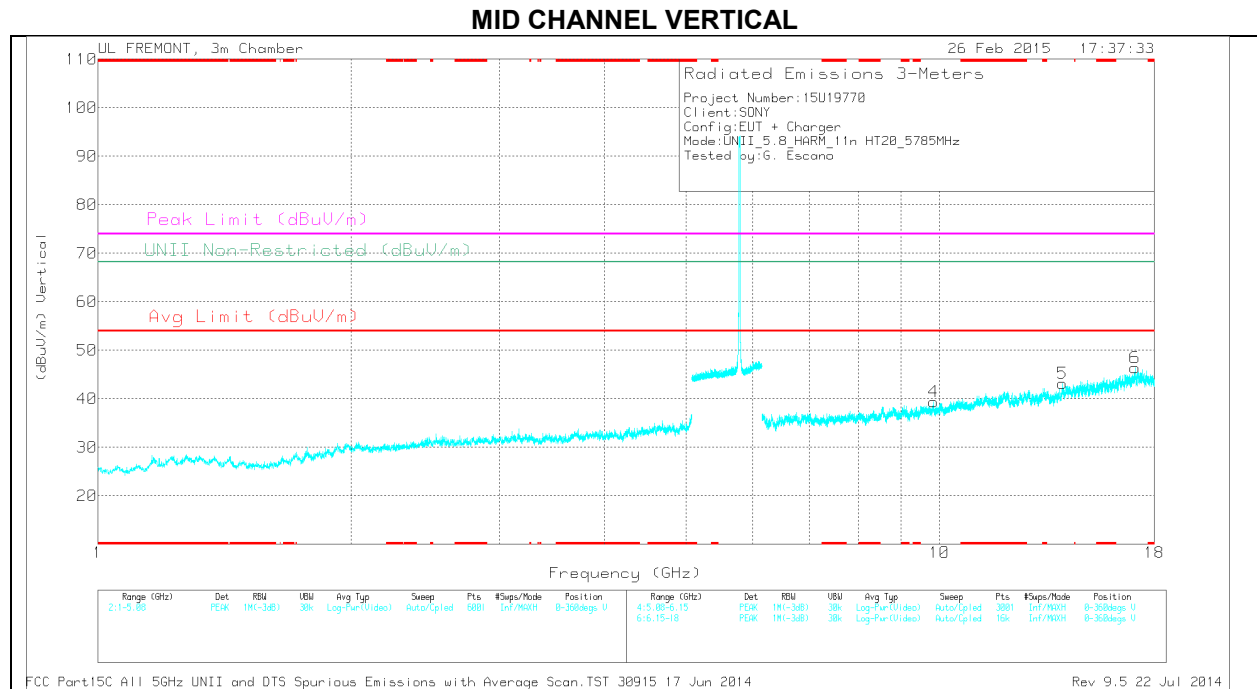
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 13.279	38.85	PK1	39	-26.1	0	51.75	-	-	74	-22.25	-	-	108	169	H
* 13.279	26.89	AD1	39	-26.1	0	39.79	54	-14.21	-	-	-	-	108	169	H

FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

MID CHANNEL HORIZONTAL



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



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

MID CHANNEL DATA

TRACE MARKERS

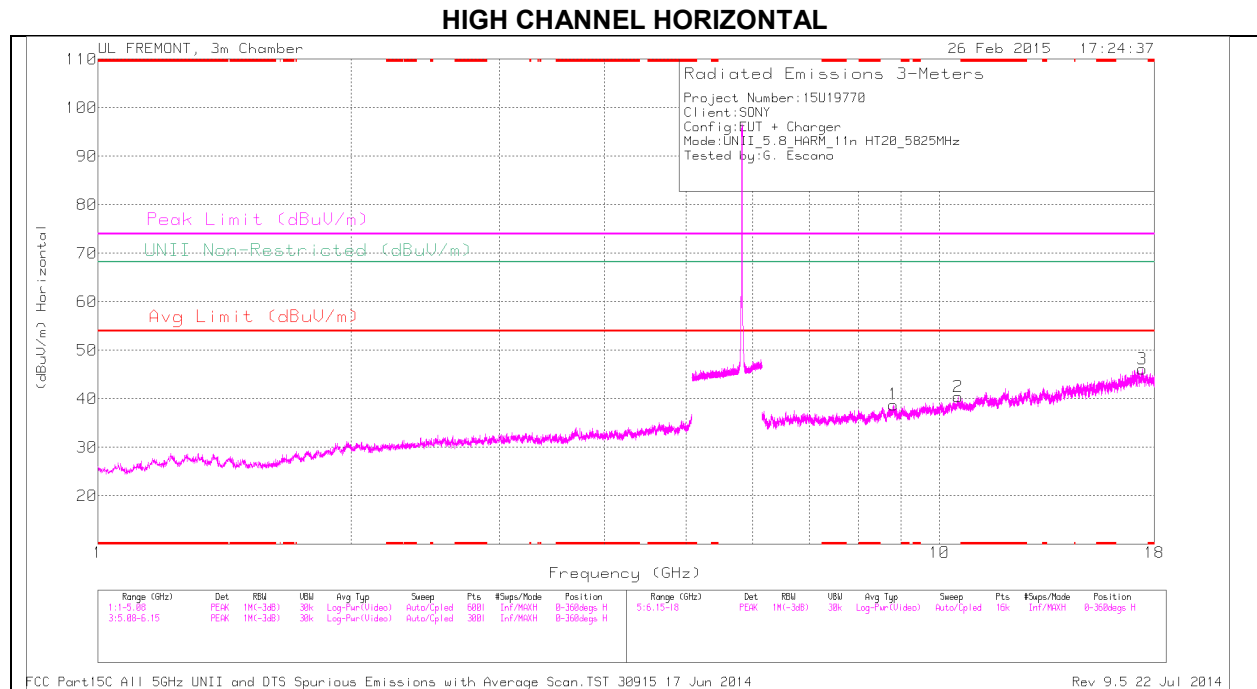
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 11.917	29.14	PK	39.1	-26.2	0	42.04	-	-	74	-31.96	-	-	0-360	100	H
1	8.821	29.03	PK	35.9	-25.7	0	39.23	-	-	-	-	68.2	-28.97	0-360	100	H
4	9.838	27.76	PK	36.9	-25.3	0	39.36	-	-	-	-	68.2	-28.84	0-360	200	V
5	13.993	32.01	PK	38.8	-27.7	0	43.11	-	-	-	-	68.2	-25.09	0-360	100	V
3	14.841	31.44	PK	39.8	-27.3	0	43.94	-	-	-	-	68.2	-24.26	0-360	200	H
6	17.076	28.84	PK	41.4	-23.8	0	46.44	-	-	-	-	68.2	-21.76	0-360	200	V

PK - Peak detector

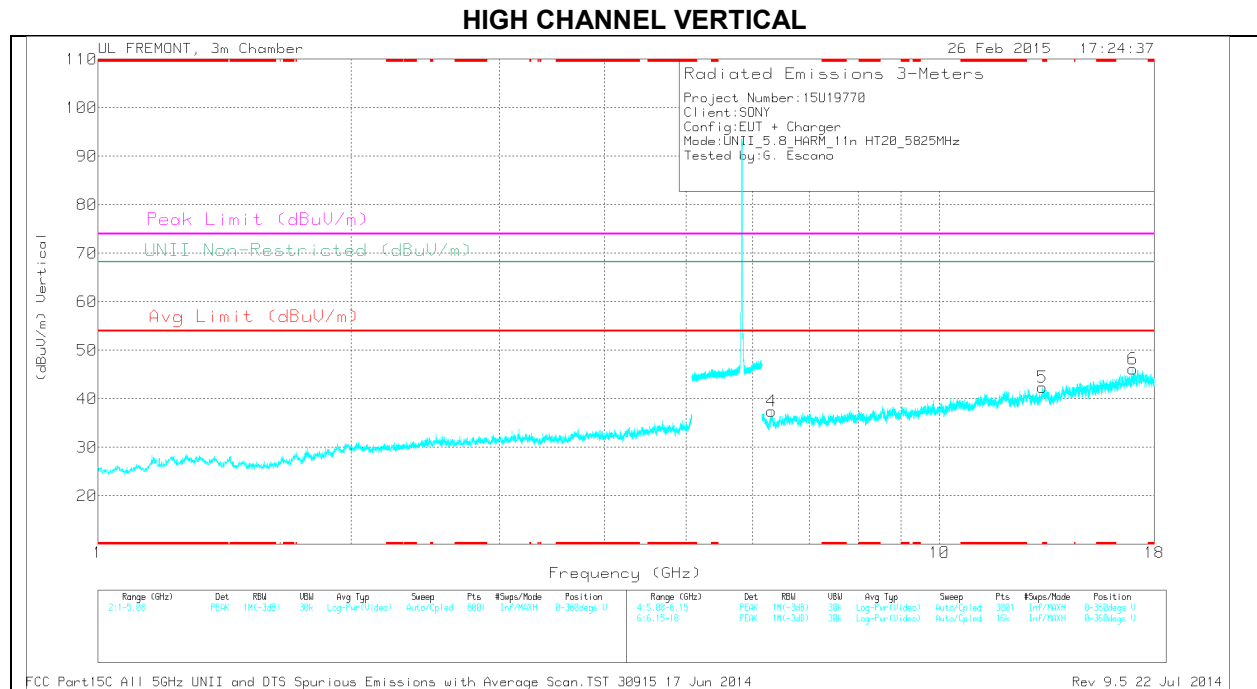
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.916	38.7	PK1	39.1	-26.2	0	51.6	-	-	74	-22.4	-	-	206	386	H
* 11.917	25.92	AD1	39.1	-26.2	0	38.82	54	-15.18	-	-	-	-	206	386	H

FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013



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



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

HIGH CHANNEL DATA

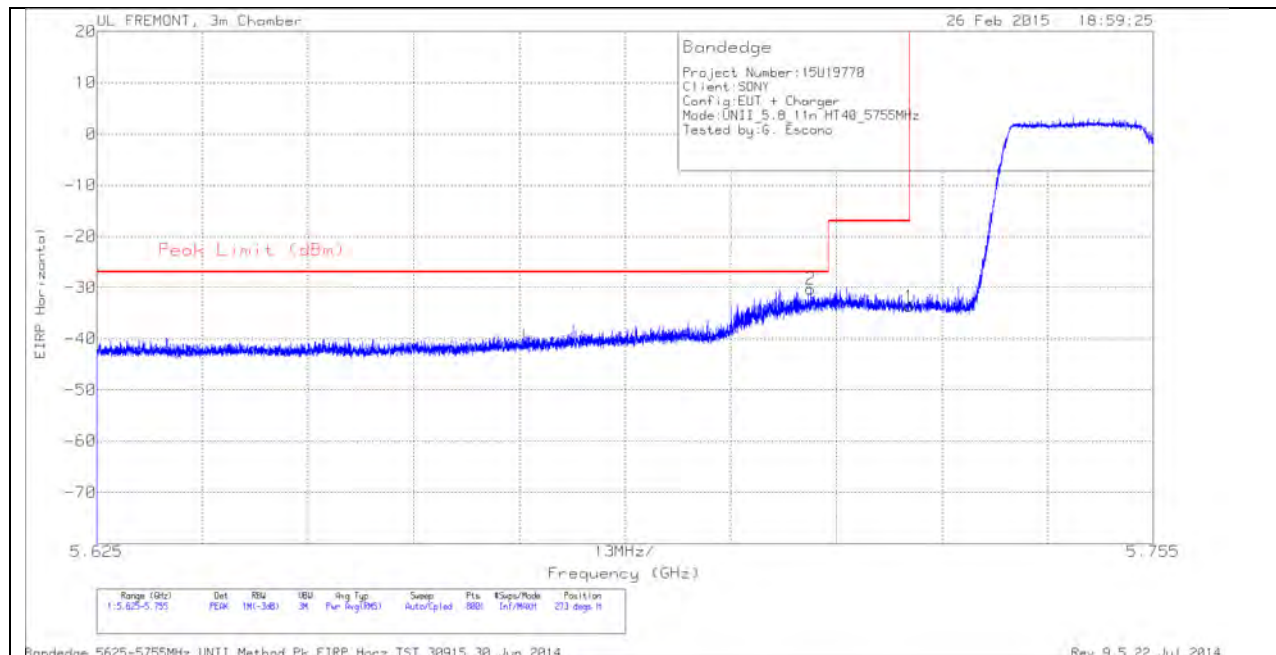
TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	6.316	31.58	PK	35.4	-29.5	0	37.48	-	-	-	-	68.2	-30.72	0-360	200	V
1	8.817	28.52	PK	35.9	-25.6	0	38.82	-	-	-	-	68.2	-29.38	0-360	100	H
2	10.531	28	PK	37.5	-25.1	0	40.4	-	-	-	-	68.2	-27.8	0-360	100	H
5	13.248	30.01	PK	39	-26.6	0	42.41	-	-	-	-	68.2	-25.79	0-360	200	V
6	16.982	28.46	PK	41.3	-23.6	0	46.16	-	-	-	-	68.2	-22.04	0-360	100	V
3	17.413	27.11	PK	41.4	-22.4	0	46.11	-	-	-	-	68.2	-22.09	0-360	100	H

PK - Peak detector

FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

10.4.3. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.8 GHz BAND RESTRICTED BANDEGE (LOW CHANNEL) HORIZONTAL PEAK AND AVERAGE PLOT

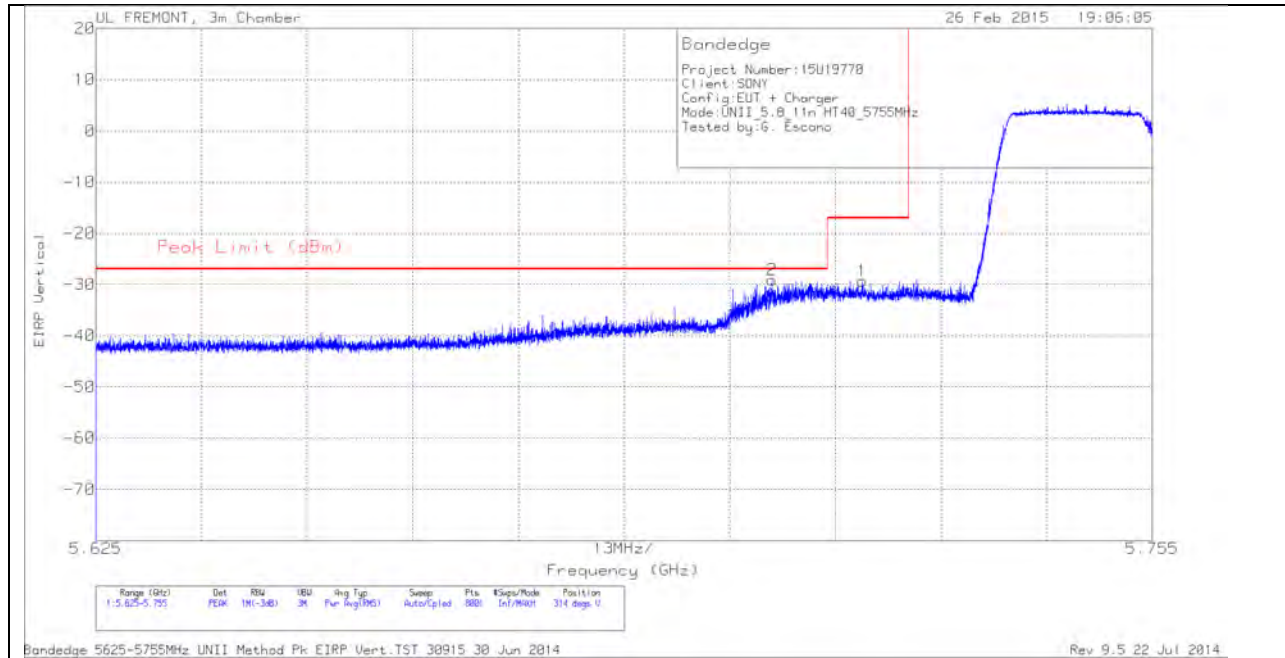


HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.713	-55.86	PK	34.8	-21	11.8	-30.26	-27	-3.26	273	268	H
1	5.725	-59.16	PK	34.8	-21.1	11.8	-33.66	-17	-16.66	273	268	H

PK - Peak detector

VERTICAL PEAK AND AVERAGE PLOT



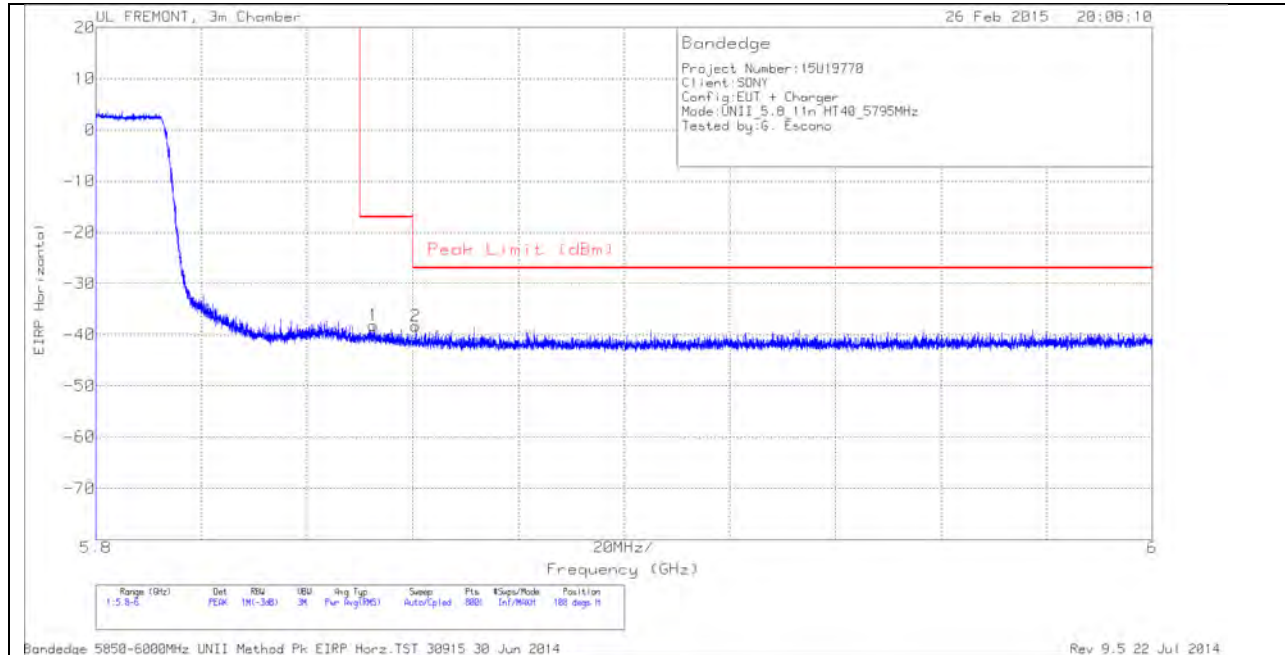
VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cb/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.708	-54.6	PK	34.7	-21	11.8	-29.1	-27	-2.1	314	290	V
1	5.719	-54.79	PK	34.8	-21.1	11.8	-29.29	-17	-12.29	314	290	V

PK - Peak detector

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT

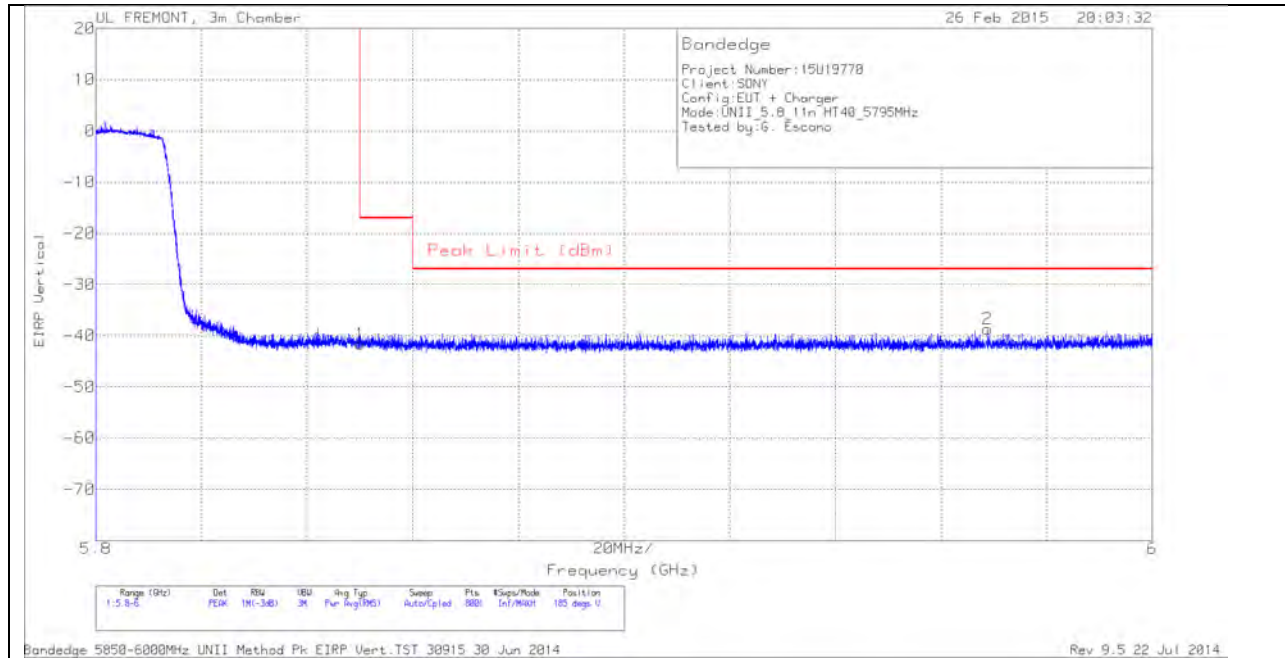


HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.853	-63.55	PK	34.9	-21.3	11.8	-38.15	-17	-21.15	108	363	H
2	5.861	-63.73	PK	34.9	-21.3	11.8	-38.33	-27	-11.33	108	363	H

PK - Peak detector

VERTICAL PEAK AND AVERAGE PLOT

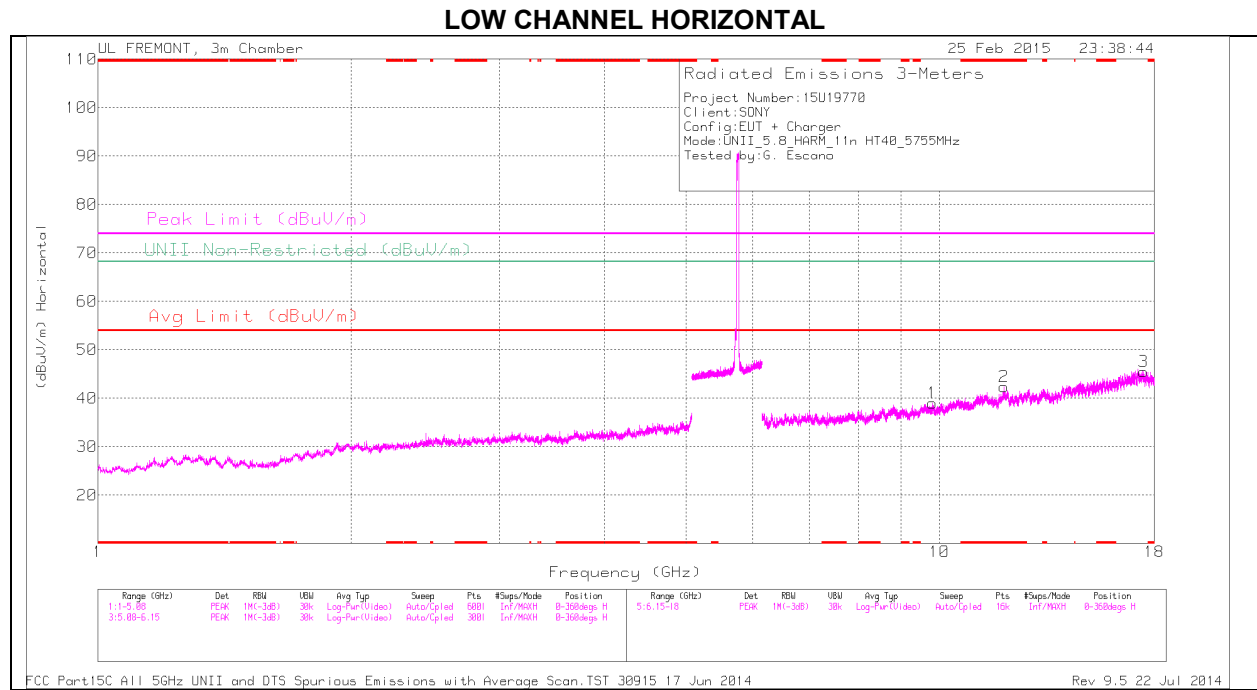


VERTICAL DATA

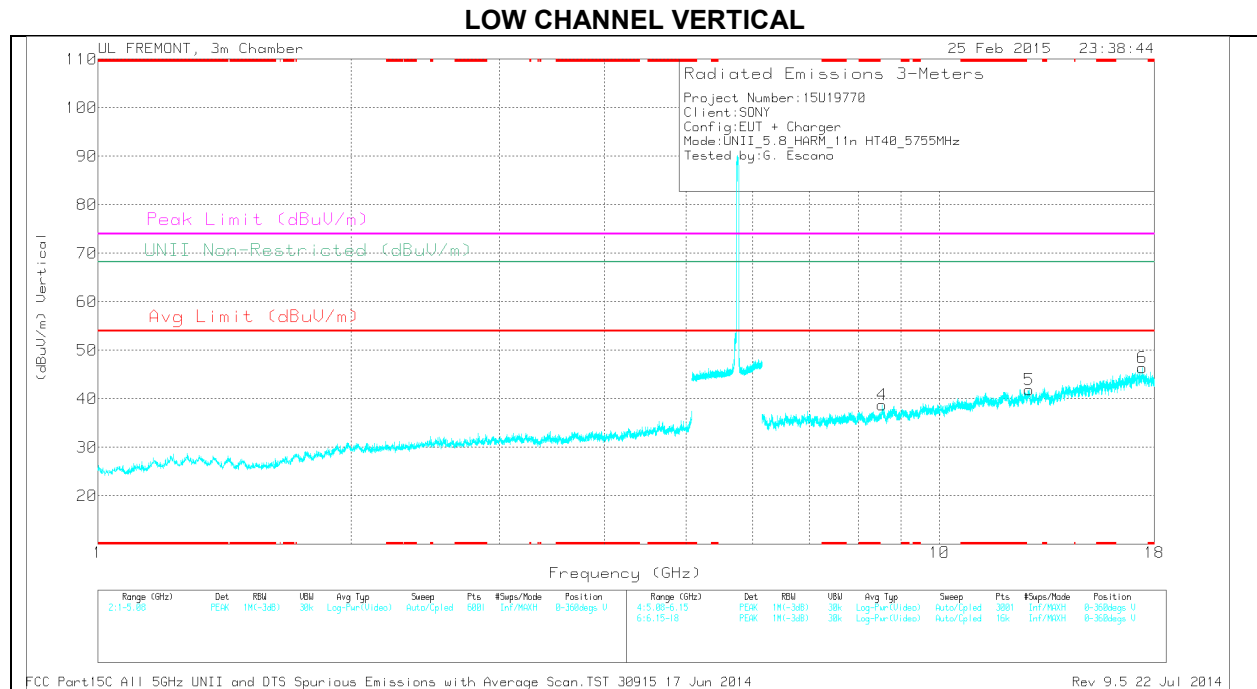
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cb/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-67.05	PK	34.9	-21.3	11.8	-41.65	-17	-24.65	185	367	V
2	5.969	-64.72	PK	35.1	-20.9	11.8	-38.72	-27	-11.72	185	367	V

PK - Peak detector

HARMONICS AND SPURIOUS EMISSIONS



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



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

LOW CHANNEL DATA

TRACE MARKERS

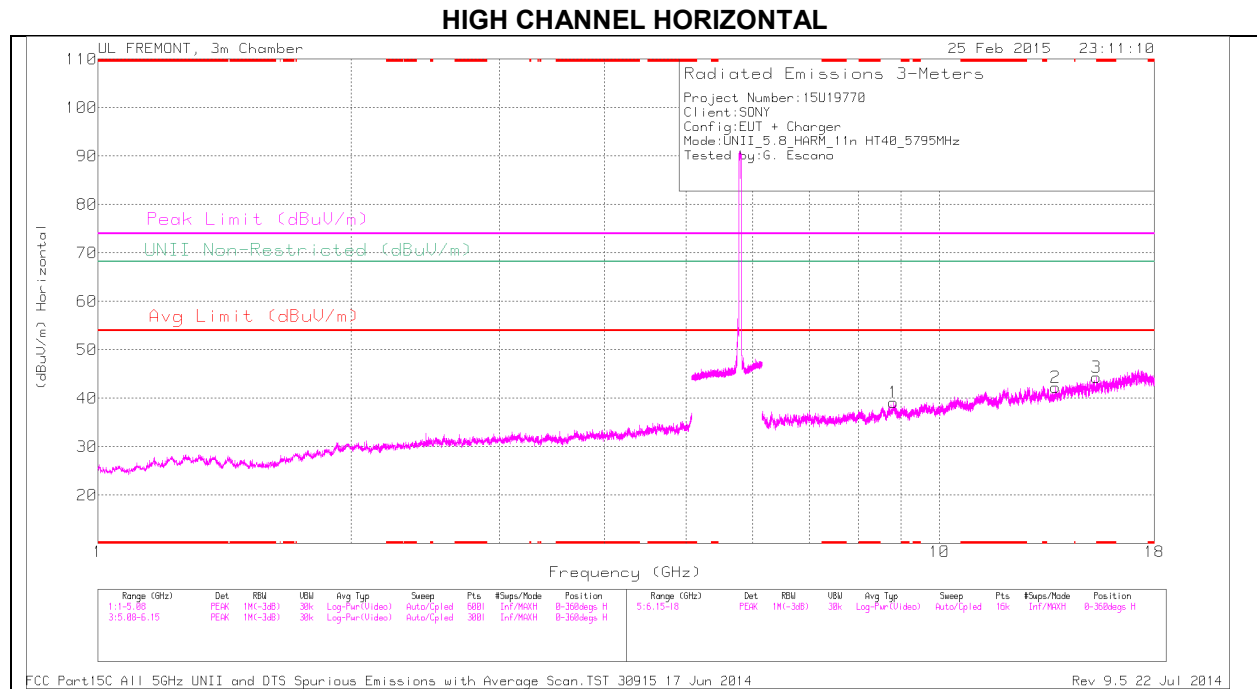
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 11.93	29.46	PK	39.1	-26.2	0	42.36	-	-	74	-31.64	-	-	0-360	200	H
4	8.544	29.03	PK	35.8	-26.1	0	38.73	-	-	-	-	68.2	-29.47	0-360	100	V
1	9.81	27.28	PK	36.9	-25.2	0	38.98	-	-	-	-	68.2	-29.22	0-360	100	H
5	12.787	28.61	PK	39.1	-25.9	0	41.81	-	-	-	-	68.2	-26.39	0-360	200	V
6	17.411	27.44	PK	41.4	-22.4	0	46.44	-	-	-	-	68.2	-21.76	0-360	200	V
3	17.489	28.38	PK	41.4	-24.3	0	45.48	-	-	-	-	68.2	-22.72	0-360	100	H

PK - Peak detector

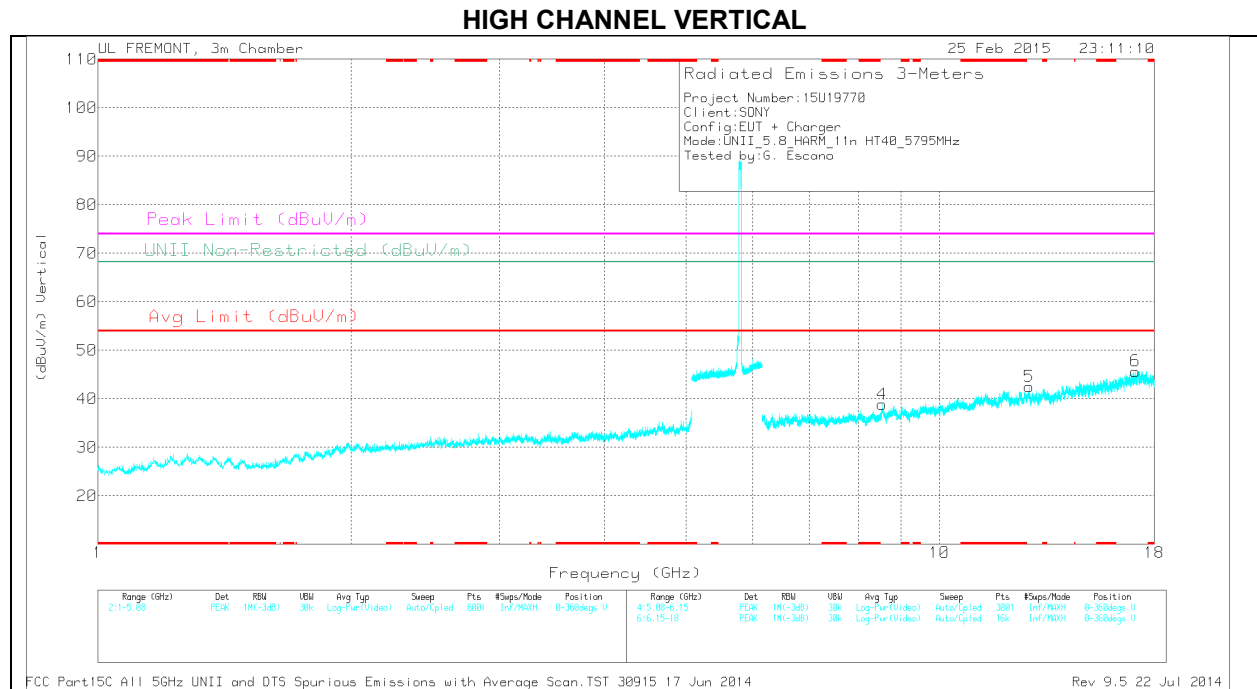
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.929	38.27	PK1	39.1	-26.2	0	51.17	-	-	74	-22.83	-	-	328	332	H
* 11.929	26.08	AD1	39.1	-26.2	.07	39.05	54	-14.95	-	-	-	-	328	332	H

FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013



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



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

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 15.363	31.27	PK	40	-26.9	0	44.37	-	-	74	-29.63	-	-	0-360	100	H
4	8.551	29.04	PK	35.8	-26	0	38.84	-	-	-	-	68.2	-29.36	0-360	200	V
1	8.813	28.79	PK	35.9	-25.5	0	39.19	-	-	-	-	68.2	-29.01	0-360	100	H
5	12.781	29.34	PK	39.1	-25.9	0	42.54	-	-	-	-	68.2	-25.66	0-360	200	V
2	13.745	30.29	PK	38.6	-26.6	0	42.29	-	-	-	-	68.2	-25.91	0-360	100	H
6	17.091	27.8	PK	41.5	-23.6	0	45.7	-	-	-	-	68.2	-22.5	0-360	200	V

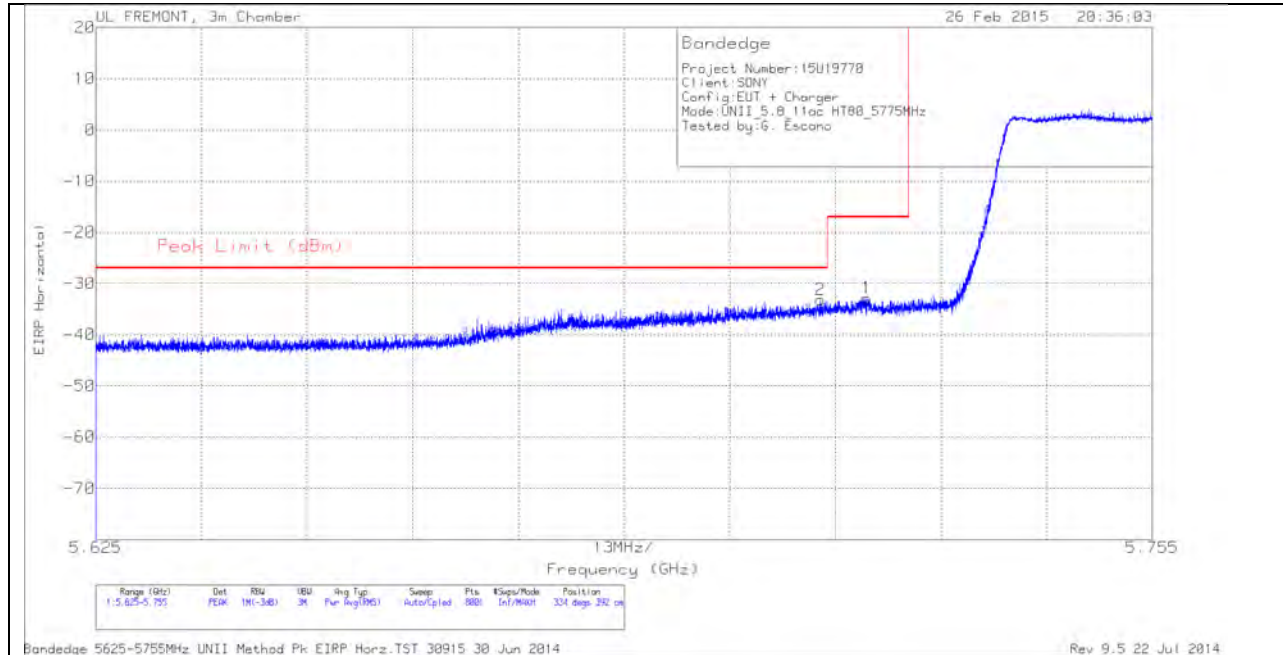
PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 15.361	39.29	PK1	40	-26.9	0	52.39	-	-	74	-21.61	-	-	211	132	H
* 15.364	27.33	AD1	40	-26.9	.07	40.5	54	-13.5	-	-	-	-	211	132	H

FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

10.4.4. TX ABOVE 1 GHz 802.11ac HT80 MODE IN THE 5.8 GHz BAND **RESTRICTED BANDEDGE (LOW CHANNEL)** **HORIZONTAL PEAK AND AVERAGE PLOT**

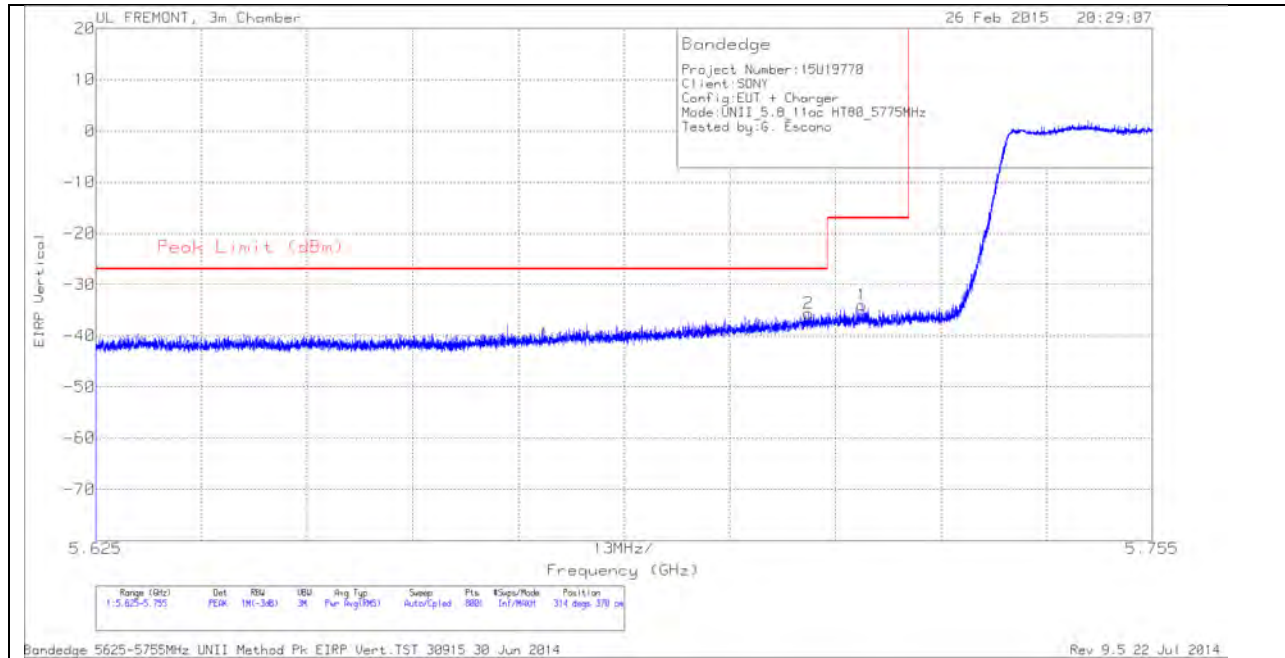


HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.714	-58.79	PK	34.8	-21	11.8	-33.19	-27	-6.19	334	392	H
1	5.72	-58.34	PK	34.8	-21.1	11.8	-32.84	-17	-15.84	334	392	H

PK - Peak detector

VERTICAL PEAK AND AVERAGE PLOT



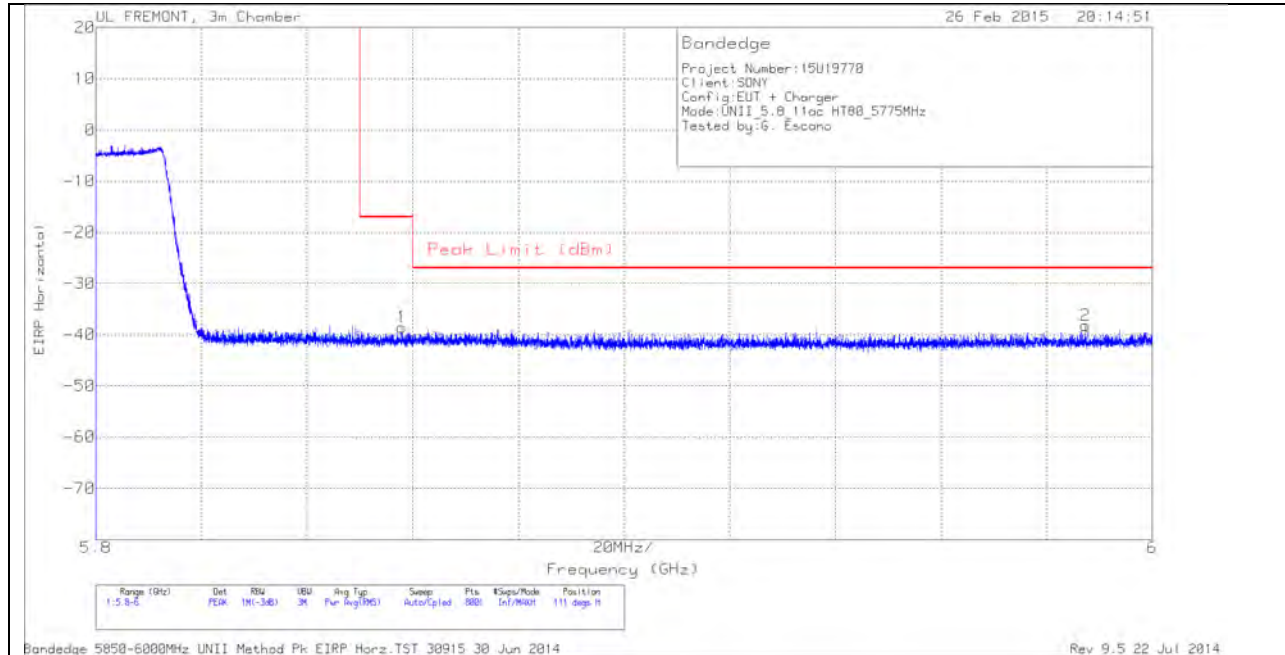
VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.713	-61.16	PK	34.8	-21	11.8	-35.56	-27	-8.56	314	370	V
1	5.719	-59.47	PK	34.8	-21.1	11.8	-33.97	-17	-16.97	314	370	V

PK - Peak detector

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT

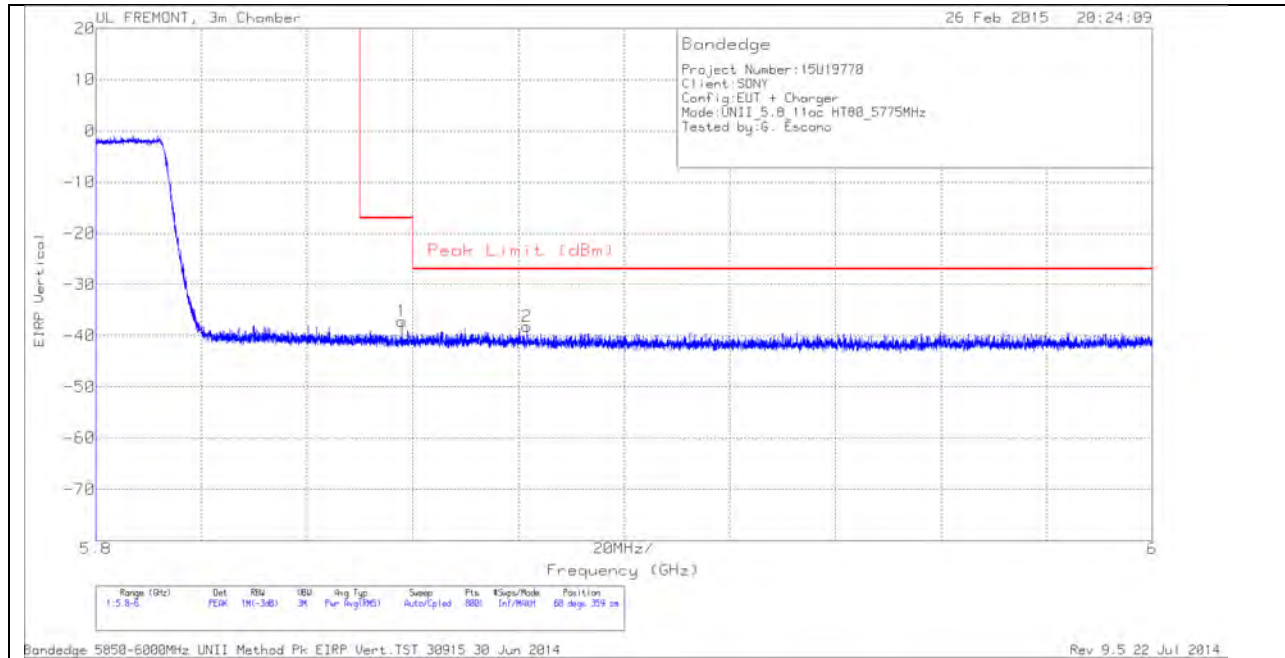


HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.858	-63.99	PK	34.9	-21.3	11.8	-38.59	-17	-21.59	111	395	H
2	5.987	-64.28	PK	35.2	-20.9	11.8	-38.18	-27	-11.18	111	395	H

PK - Peak detector

VERTICAL PEAK AND AVERAGE PLOT

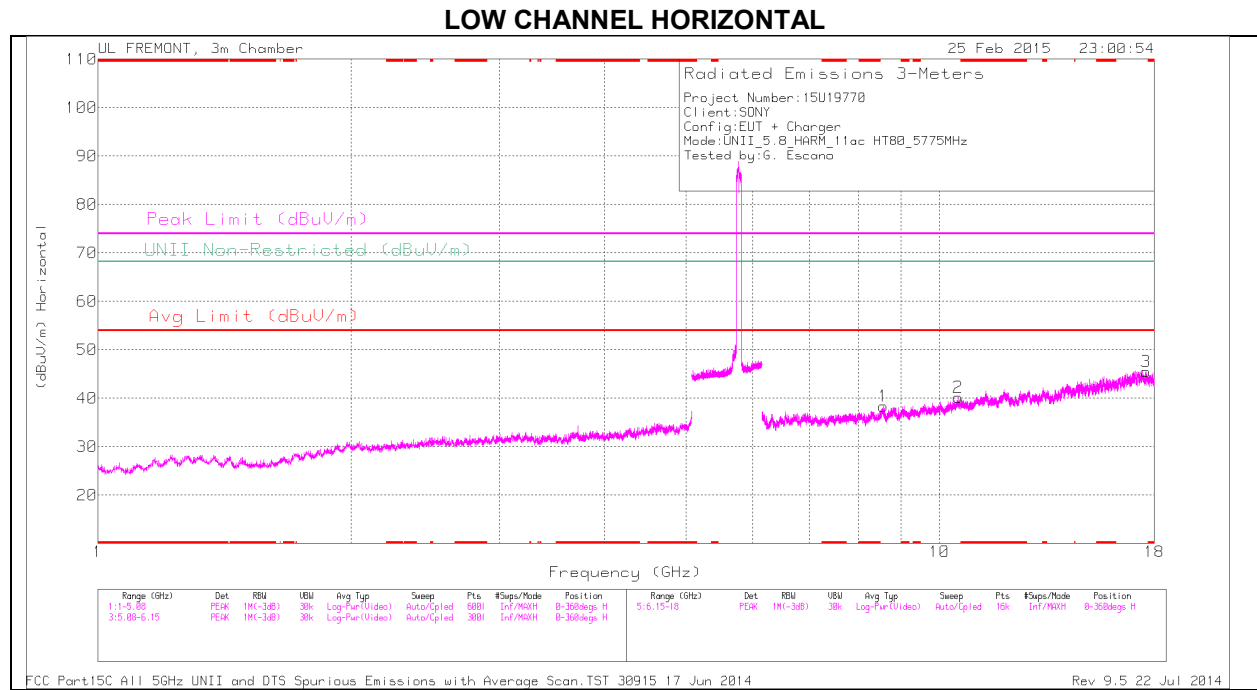


VERTICAL DATA

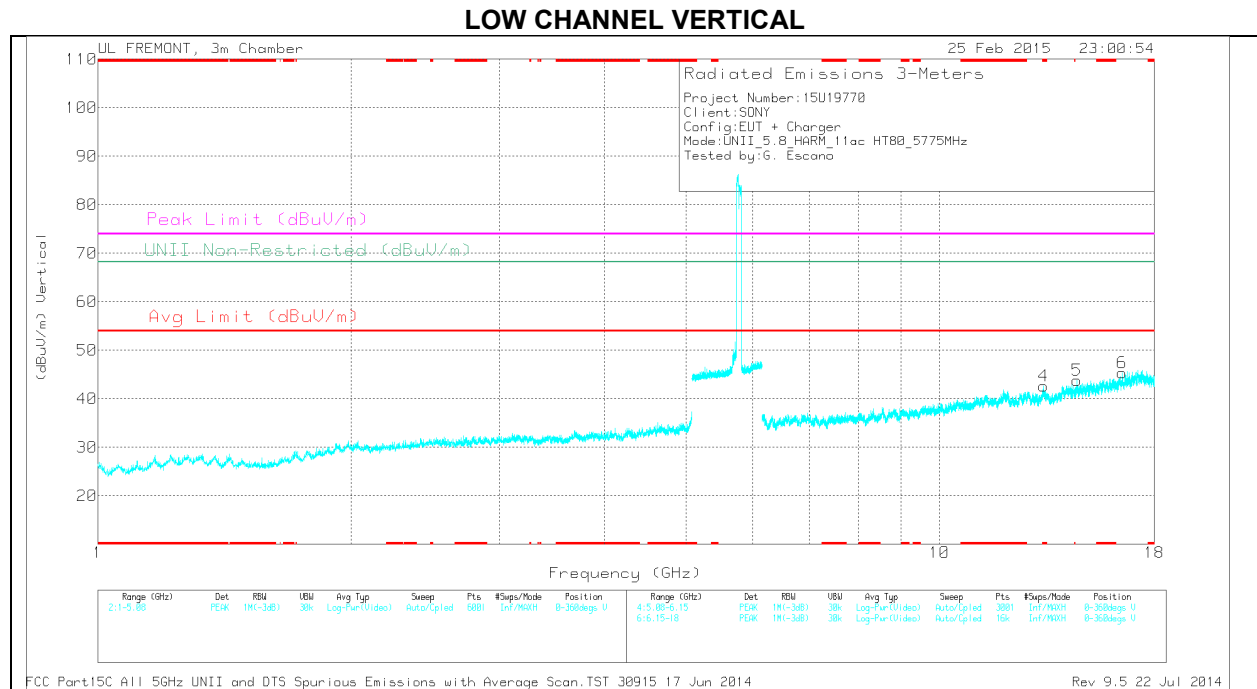
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cb/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.858	-62.56	PK	34.9	-21.3	11.8	-37.16	-17	-20.16	60	359	V
2	5.882	-63.77	PK	35	-21.2	11.8	-38.17	-27	-11.17	60	359	V

PK - Peak detector

HARMONICS AND SPURIOUS EMISSIONS



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



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

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 13.286	30.08	PK	39	-26.4	0	42.68	-	-	74	-31.32	-	-	0-360	100	V
1	8.574	28.87	PK	35.8	-26.3	0	38.37	-	-	-	-	68.2	-29.83	0-360	100	H
2	10.525	27.7	PK	37.5	-25	0	40.2	-	-	-	-	68.2	-28	0-360	100	H
5	14.572	31.19	PK	39.8	-27.2	0	43.79	-	-	-	-	68.2	-24.41	0-360	200	V
6	16.488	29.44	PK	40.9	-25	0	45.34	-	-	-	-	68.2	-22.86	0-360	200	V
3	17.607	28.07	PK	41.5	-24.1	0	45.47	-	-	-	-	68.2	-22.73	0-360	100	H

PK - Peak detector

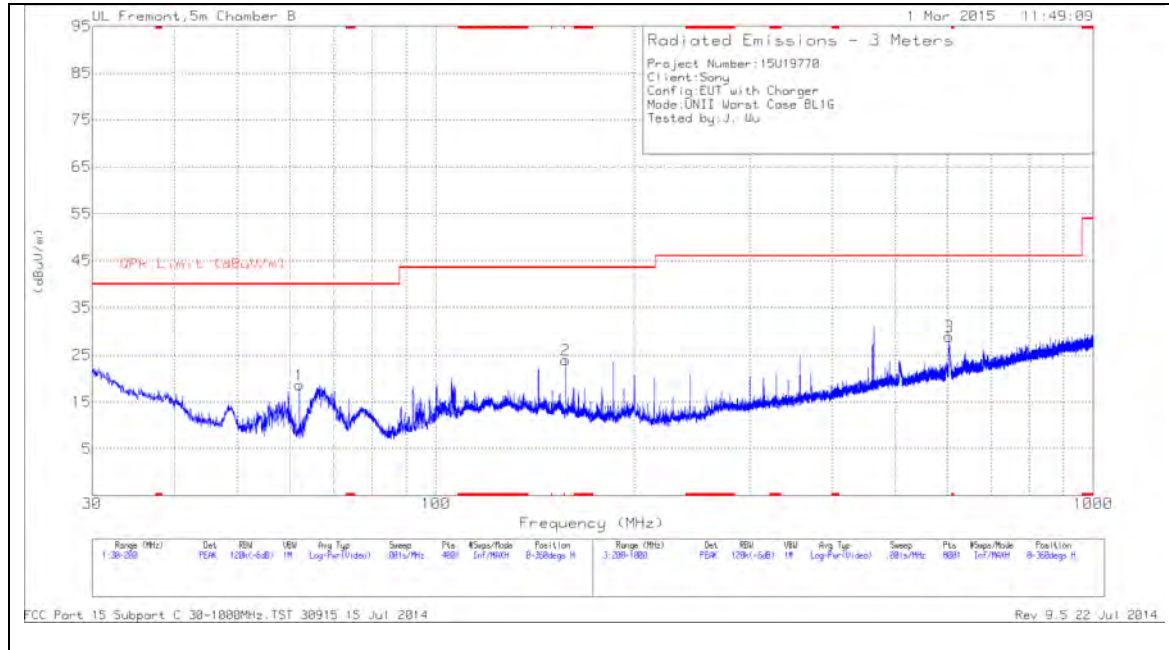
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 13.286	39.1	PK1	39	-26.4	0	51.7	-	-	74	-22.3	-	-	304	169	V
* 13.288	26.96	AD1	39	-26.5	.14	39.6	54	-14.4	-	-	-	-	304	169	V

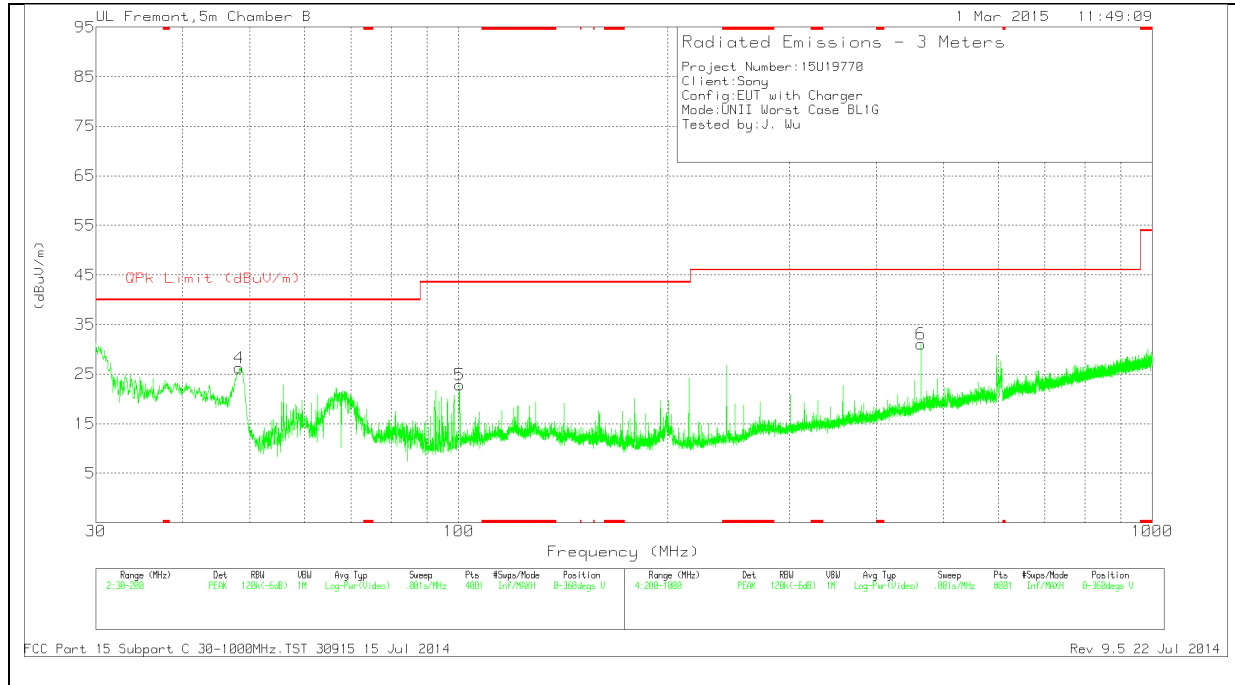
FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

11. WORST-CASE BELOW 1 GHz (in the 5.3 GHz Band)

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



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



Below 1G Data

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T243 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	48.275	46.09	PK	8.9	-28.7	26.29	40	-13.71	0-360	101	V
1	62.0025	39.47	PK	7.6	-28.5	18.57	40	-21.43	0-360	300	H
5	100.3375	40.57	PK	10.3	-28.1	22.77	43.52	-20.75	0-360	101	V
2	157.5	39	PK	12.3	-27.4	23.9	43.52	-19.62	0-360	200	H
6	463.7	39.71	PK	17.2	-25.9	31.01	46.02	-15.01	0-360	300	V
3	603.7	35.55	PK	18.7	-25.3	28.95	46.02	-17.07	0-360	101	H

PK - Peak detector

12. Dynamic Frequency Section

12.1. OVERVIEW

12.1.1. LIMITS

INDUSTRY CANADA

IC RSS-210 is closely harmonized with FCC Part 15 DFS rules. The deviations are as follows:

RSS-210 Issue 8 A9.3

Note: For the band 5600–5650 MHz, no operation is permitted.

Until further notice, devices subject to this annex shall not be capable of transmitting in the band 5600–5650 MHz. This restriction is for the protection of Environment Canada weather radars operating in this band.

FCC

§15.407 (h), FCC KDB 905462 D02 “COMPLIANCE MEASUREMENT PROCEDURES FOR UNLICENSED-NATIONAL INFORMATION INFRASTRUCTURE DEVICES OPERATING IN THE 5250-5350 MHz AND 5470-5725 MHz BANDS INCORPORATING DYNAMIC FREQUENCY SELECTION” and KDB 905462 D03 “U-NII CLIENT DEVICES WITHOUT RADAR DETECTION CAPABILITY”.

Table 1: Applicability of DFS requirements prior to use of a channel

Requirement	Operational Mode		
	Master	Client (without radar detection)	Client (with radar detection)
Non-Occupancy Period	Yes	Not required	Yes
DFS Detection Threshold	Yes	Not required	Yes
Channel Availability Check Time	Yes	Not required	Not required
U-NII Detection Bandwidth	Yes	Not required	Yes

Table 2: Applicability of DFS requirements during normal operation

Requirement	Operational Mode		
	Master	Client (without DFS)	Client (with DFS)
DFS Detection Threshold	Yes	Not required	Yes
Channel Closing Transmission Time	Yes	Yes	Yes
Channel Move Time	Yes	Yes	Yes
U-NII Detection Bandwidth	Yes	Not required	Yes

Additional requirements for devices with multiple bandwidth modes	Master Device or Client with Radar DFS	Client (without DFS)
<i>U-NII Detection Bandwidth and Statistical Performance Check</i>	All BW modes must be tested	Not required
<i>Channel Move Time and Channel Closing Transmission Time</i>	Test using widest BW mode available	Test using the widest BW mode available for the link
<i>All other tests</i>	Any single BW mode	Not required
Note: Frequencies selected for statistical performance check (Section 7.8.4) should include several frequencies within the radar detection bandwidth and frequencies near the edge of the radar detection bandwidth. For 802.11 devices it is suggested to select frequencies in all 20 MHz channel blocks and a null frequency between the bonded 20 MHz channel blocks.		

Table 3: Interference Threshold values, Master or Client incorporating In-Service Monitoring

Maximum Transmit Power	Value (see notes)
E.I.R.P. $\geq$ 200 mill watt	-64 dBm
E.I.R.P. < 200 mill watt and power spectral density < 10 dBm/MHz	-62 dBm
E.I.R.P. < 200 mill watt that do not meet power spectral density requirement	-64 dBm
Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna Note 2: Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response. Note 3: E.I.R.P. is based on the highest antenna gain. For MIMO devices refer to KDB publication 662911 D01.	

Table 4: DFS Response requirement values

Parameter	Value
<i>Non-occupancy period</i>	30 minutes
<i>Channel Availability Check Time</i>	60 seconds
<i>Channel Move Time</i>	10 seconds (See Note 1)
<i>Channel Closing Transmission Time</i>	200 milliseconds + approx. 60 milliseconds over remaining 10 second period. (See Notes 1 and 2)
<i>U-NII Detection Bandwidth</i>	Minimum 100% of the U-NII 99% transmission power bandwidth. (See Note 3)
Note 1: <i>Channel Move Time</i> and the <i>Channel Closing Transmission Time</i> should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst. Note 2: The <i>Channel Closing Transmission Time</i> is comprised of 200 milliseconds starting at the beginning of the <i>Channel Move Time</i> plus any additional intermittent control signals required to facilitate a <i>Channel</i> move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions. Note 3: During the <i>U-NII Detection Bandwidth</i> detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.	

Table 5 – Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (usec)	PRI (usec)	Pulses	Minimum Percentage of Successful Detection	Minimum Trials
0	1	1428	18	See Note 1	See Note 1
1	1	Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in table 5a	Roundup: $\{(1/360) \times (19 \times 10^6 \text{ PRI}_{\text{usec}})\}$	60%	30
		Test B: 15 unique PRI values randomly selected within the range of 518-3066 usec. With a minimum increment of 1 usec, excluding PRI values selected in Test A			
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Radar Types 1-4)				80%	120
Note 1: Short Pulse Radar Type 0 should be used for the <i>Detection Bandwidth</i> test, <i>Channel Move Time</i> , and <i>Channel Closing Time</i> tests.					

Table 6 – Long Pulse Radar Test Signal

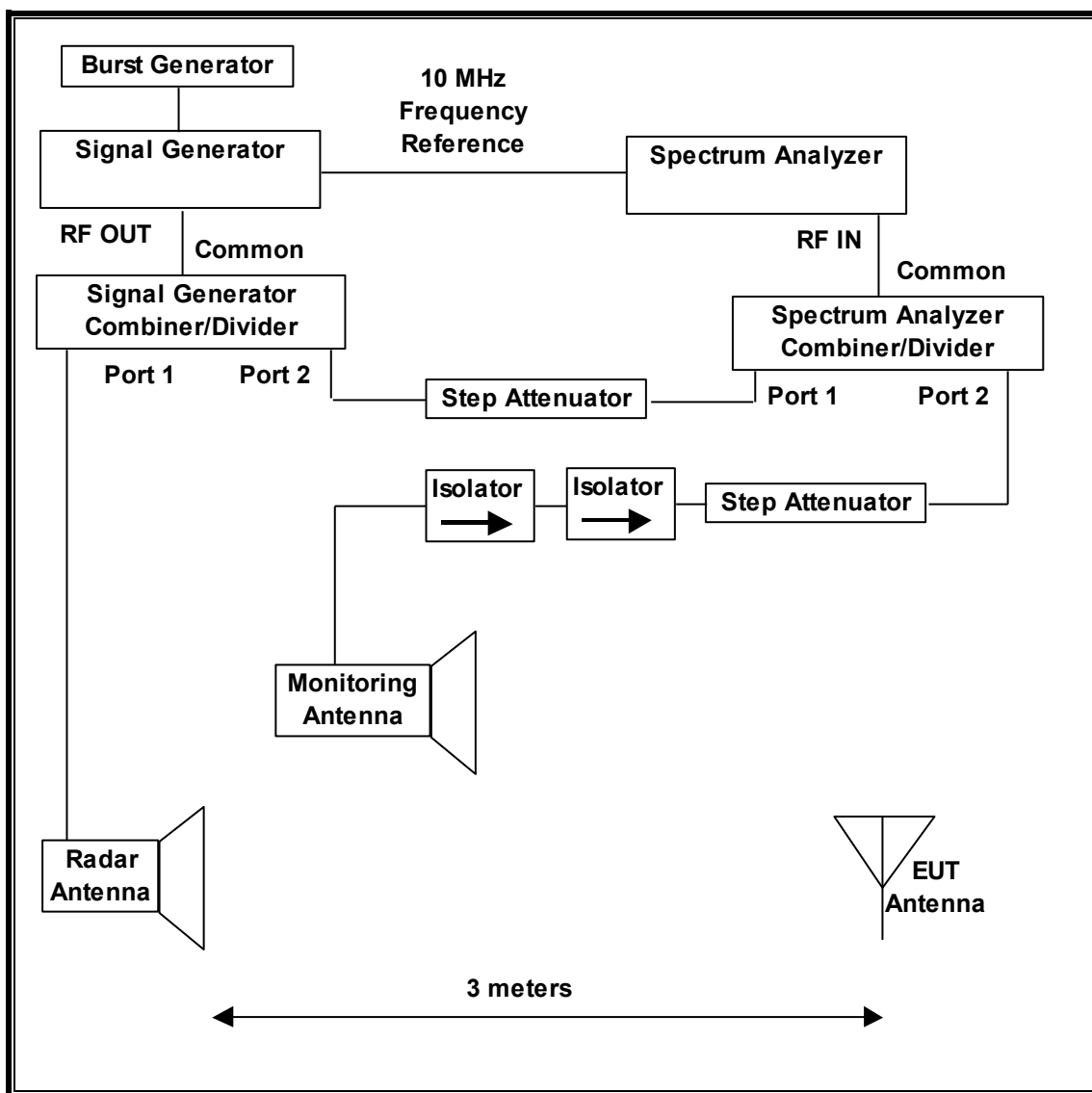
Radar Waveform Type	Pulse Width (μsec)	Chirp Width (MHz)	PRI (μsec)	Pulses per Burst	Number of Bursts	Minimum Percentage of Successful Detection	Minimum Trials
5	50-100	5-20	1000-2000	1-3	8-20	80%	30

Table 7 – Frequency Hopping Radar Test Signal

Radar Waveform Type	Pulse Width (μsec)	PRI (μsec)	Pulses per Hop	Hopping Rate (kHz)	Hopping Sequence Length (msec)	Minimum Percentage of Successful Detection	Minimum Trials
6	1	333	9	0.333	300	70%	30

12.1.2. TEST AND MEASUREMENT SYSTEM

RADIATED METHOD SYSTEM BLOCK DIAGRAM



SYSTEM OVERVIEW

The short pulse and long pulse signal generating system utilizes the NTIA software. The Vector Signal Generator has been validated by the NTIA. The hopping signal generating system utilizes the CCS simulated hopping method and system, which has been validated by the DoD, FCC and NTIA. The software selects waveform parameters from within the bounds of the signal type on a random basis using uniform distribution.

The short pulse types 1, 2, 3 and 4, and the long pulse type 5 parameters are randomized at run-time.

The hopping type 6 pulse parameters are fixed while the hopping sequence is based on the August 2005 NTIA Hopping Frequency List. The initial starting point randomized at run-time and each subsequent starting point is incremented by 475. Each frequency in the 100-length segment is compared to the boundaries of the EUT Detection Bandwidth and the software creates a hopping burst pattern in accordance with Section 7.4.1.3 Method #2 Simulated Frequency Hopping Radar Waveform Generating Subsystem of KDB 905462 D02. The frequency of the signal generator is incremented in 1 MHz steps from F_L to F_H for each successive trial. This incremental sequence is repeated as required to generate a minimum of 30 total trials and to maintain a uniform frequency distribution over the entire Detection Bandwidth.

The signal monitoring equipment consists of a spectrum analyzer. The aggregate ON time is calculated by multiplying the number of bins above a threshold during a particular observation period by the dwell time per bin, with the analyzer set to peak detection and max hold.

SYSTEM CALIBRATION

A 50-ohm load is connected in place of the spectrum analyzer, and the spectrum analyzer is connected to a horn antenna via a coaxial cable, with the reference level offset set to (horn antenna gain – coaxial cable loss). The signal generator is set to CW mode. The amplitude of the signal generator is adjusted to yield a level of –64 dBm as measured on the spectrum analyzer.

Without changing any of the instrument settings, the spectrum analyzer is reconnected to the Common port of the Spectrum Analyzer Combiner/Divider. The Reference Level Offset of the spectrum analyzer is adjusted so that the displayed amplitude of the signal is –64 dBm.

The spectrum analyzer displays the level of the signal generator as received at the antenna ports of the Master Device. The interference detection threshold may be varied from the calibrated value of –64 dBm and the spectrum analyzer will still indicate the level as received by the Master Device.

ADJUSTMENT OF DISPLAYED TRAFFIC LEVEL

A link is established between the Master and Slave and the distance between the units is adjusted as needed to provide a suitable received level at the Master and Slave devices. The video test file is streamed to generate WLAN traffic. The monitoring antenna is adjusted so that the WLAN traffic level, as displayed on the spectrum analyzer, is at lower amplitude than the radar detection threshold.

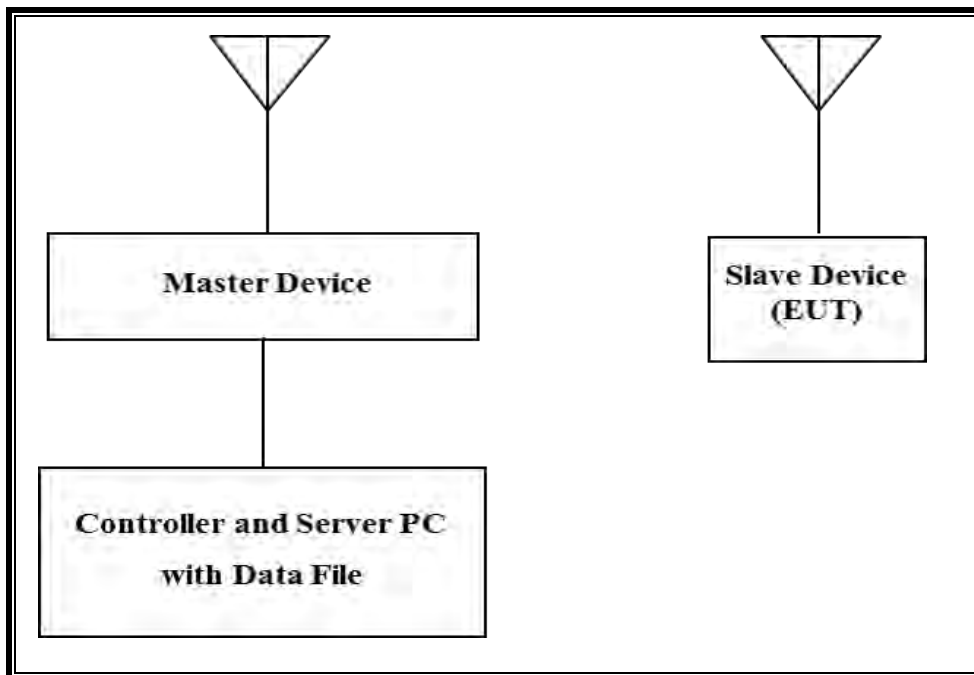
TEST AND MEASUREMENT EQUIPMENT

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

TEST EQUIPMENT LIST				
Description	Manufacturer	Model	Asset Number	Cal Due
Spectrum Analyzer, 26.5 GHz	Agilent / HP	E4440A	C01178	09/05/15
Vector Signal Generator, 20GHz	Agilent / HP	E8267C	C01066	09/03/15
Arbitrary Waveform Generator	Agilent / HP	33220A	C01146	04/03/15

12.1.3. SETUP OF EUT

RADIATED METHOD EUT TEST SETUP



SUPPORT EQUIPMENT

The following support equipment was utilized for the DFS tests documented in this report:

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	Manufacturer	Model	Serial Number	FCC ID
802.11ac Access Point (Master Device)	Cisco	AIR-CAP3702E-A-K9	FTX181570A6	LDK102087
P.O.E. Injector (AP)	Phihong	POE30U-560(G)	PHI170102N2	DoC
Notebook PC (Controller/Server)	Lenovo	Type 20B7-S0A200	PF-02JN9J 14/06	DoC
AC Adapter (Controller/Server PC)	Lenovo	ADLX65NLC2A	11S45N0259Z1ZS 974594A9	DoC

12.1.4. DESCRIPTION OF EUT

For FCC the EUT operates over the 5250-5350 MHz and 5470-5725 MHz ranges.

For IC the EUT operates over the 5250-5350 MHz and 5470-5725 MHz ranges, excluding the 5600-5650 MHz range.

The EUT is a Slave Device without Radar Detection.

The highest power level within these bands is 15.47 dBm EIRP in the 5250-5350 MHz band and 15.69 dBm EIRP in the 5470-5725 MHz band.

The highest gain antenna assembly utilized with the EUT has a gain of -1.7 dBi in the 5250-5350 MHz band and -1.5 dBi in the 5470-5725 MHz band. The lowest gain antenna assembly utilized with the EUT has a gain of -3.2 dBi in the 5250-5350 MHz band and -2.2 dBi in the 5470-5725 MHz band.

The only antenna assembly utilized with the EUT has a gain of -1.5 dBi.

The rated output power of the Master unit is > 23dBm (EIRP). Therefore the required interference threshold level is -64 dBm. After correction for procedural adjustments, the required radiated threshold at the antenna port is $-64 + 1 = -63$ dBm.

The calibrated radiated DFS Detection Threshold level is set to -64 dBm. The tested level is lower than the required level hence it provides a margin to the limit.

The EUT uses one transmitter/receiver chains connected to an antenna to perform radiated tests.

WLAN traffic that meets or exceeds the minimum required loading was generated by transferring a data stream from the controller/server PC to the EUT using iPerf version 2.0.5 software package.

TPC is not required since the maximum EIRP is less than 500 mW (27 dBm).

The EUT utilizes the 802.11ac architecture. Three nominal channel bandwidths are implemented: 20 MHz, 40 MHz and 80 MHz.

The EUT utilizes the 802.11ac architecture. Three nominal channel bandwidths are implemented: 20 MHz, 40 MHz and 80 MHz. Therefore, pursuant to FCC KDB Publication 905462 D3, "Client devices with 80 MHz BW mode can be tested with an approved master operating in 40 MHz BW mode".

The software installed in the access point is AP3G2-K9W7-M revision 15.2(4)JB4.

UNIFORM CHANNEL SPREADING

This is a requirement not applicable to Slave Devices.

OVERVIEW OF MASTER DEVICE WITH RESPECT TO §15.407 (h) REQUIREMENTS

The Master Device is a Cisco Access Point, FCC ID: LDK102087. The minimum antenna gain for the Master Device is 6 dBi.

The rated output power of the Master unit is $> 23\text{dBm}$ (EIRP). Therefore the required interference threshold level is -64 dBm . After correction for procedural adjustments, the required radiated threshold at the antenna port is $-64 + 1 = -63\text{ dBm}$.

The calibrated radiated DFS Detection Threshold level is set to -64 dBm . The tested level is lower than the required level hence it provides a margin to the limit.

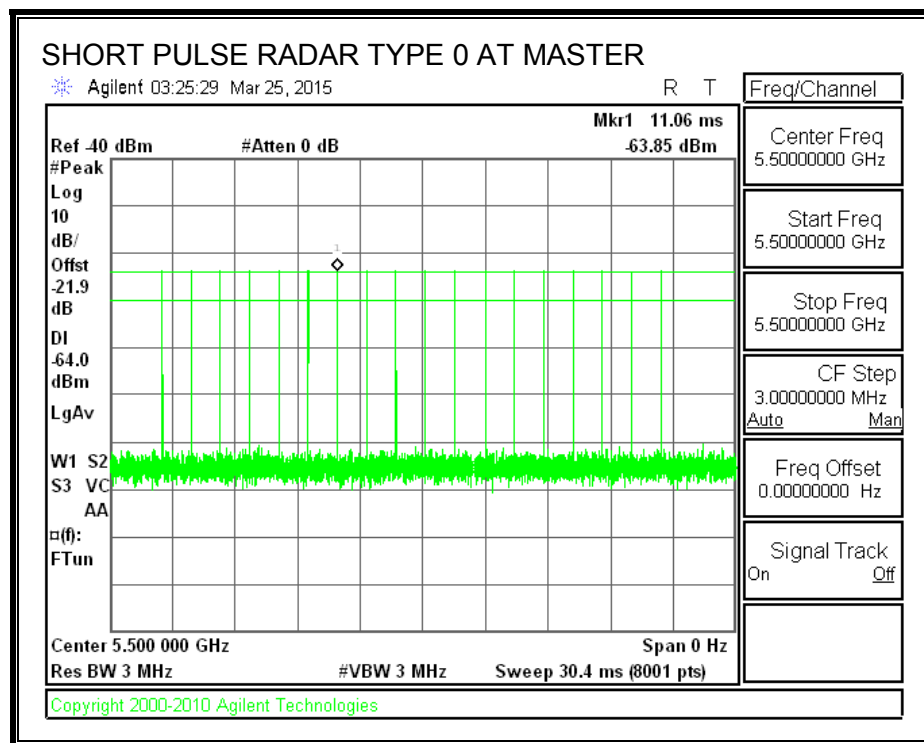
12.2. RESULTS FOR 20 MHz BANDWIDTH

12.2.1. TEST CHANNEL

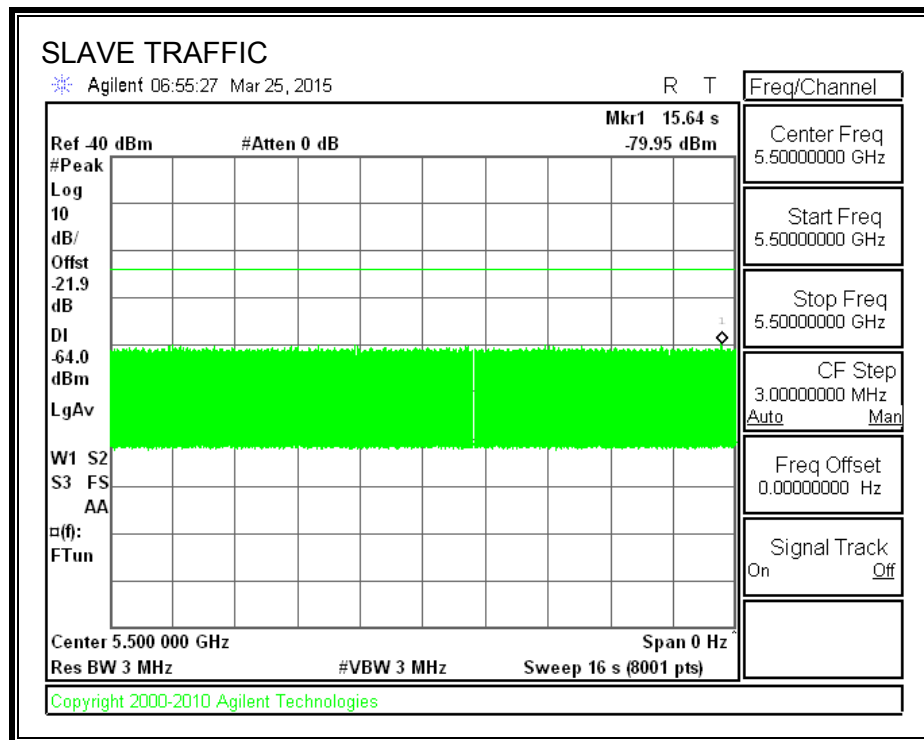
All tests were performed at a channel center frequency of 5500 MHz.

12.2.2. RADAR WAVEFORM AND TRAFFIC

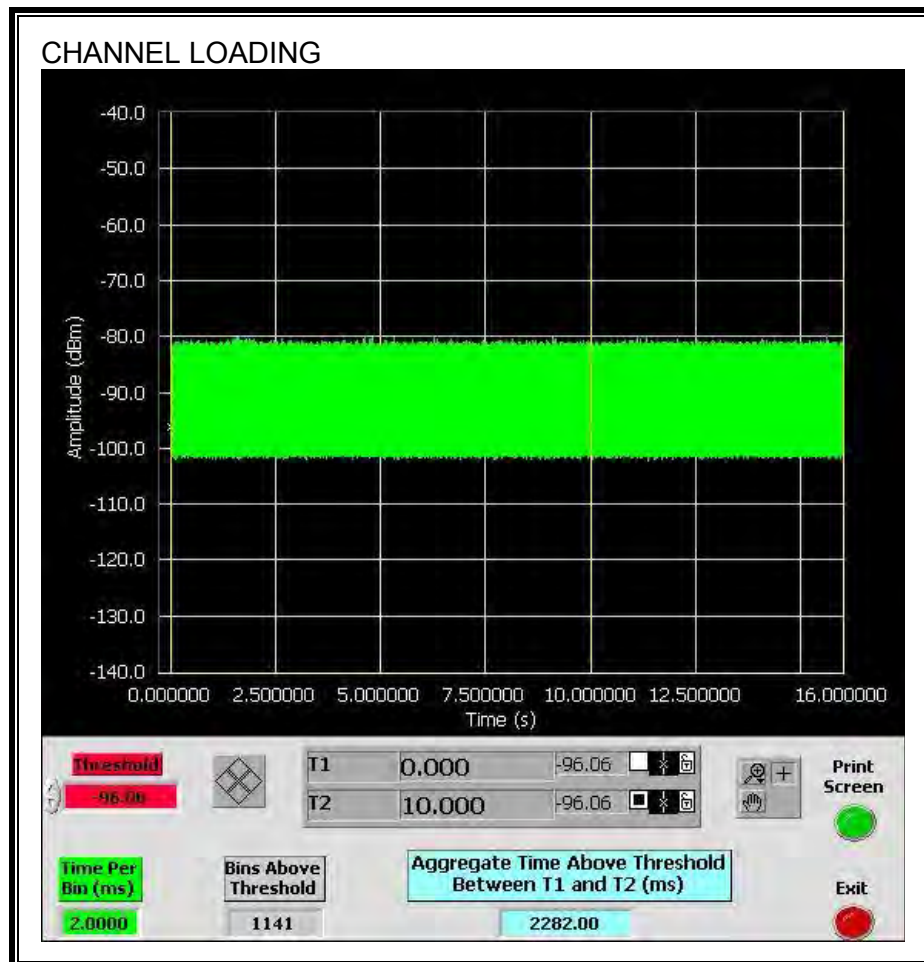
RADAR WAVEFORM



TRAFFIC



CHANNEL LOADING



The level of traffic loading on the channel by the EUT is 22.82%

12.2.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

12.2.4. MOVE AND CLOSING TIME

REPORTING NOTES

The reference marker is set at the end of last radar pulse.

The delta marker is set at the end of the last WLAN transmission following the radar pulse. This delta is the channel move time.

The aggregate channel closing transmission time is calculated as follows:

Aggregate Transmission Time =
(Number of analyzer bins showing transmission) * (dwell time per bin)

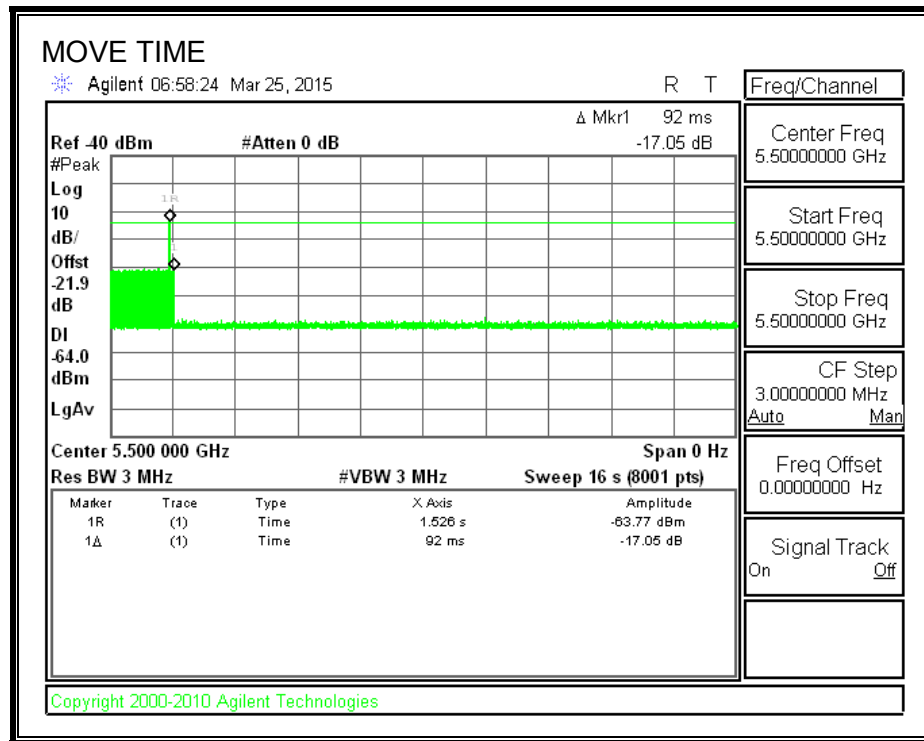
The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

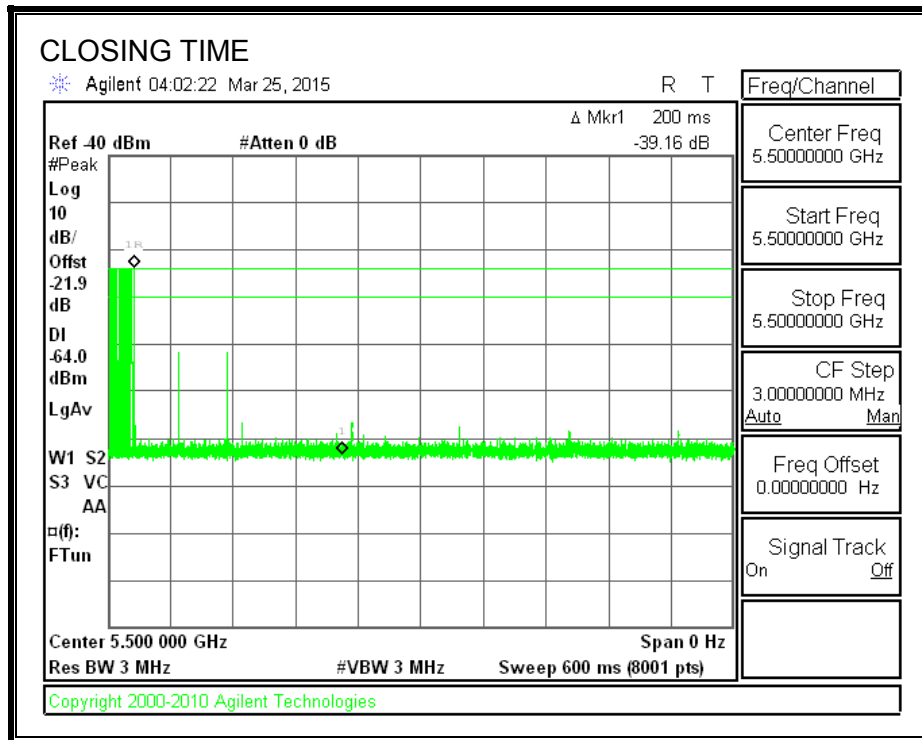
Channel Move Time (sec)	Limit (sec)
0.920	10

Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
0.0	60

MOVE TIME

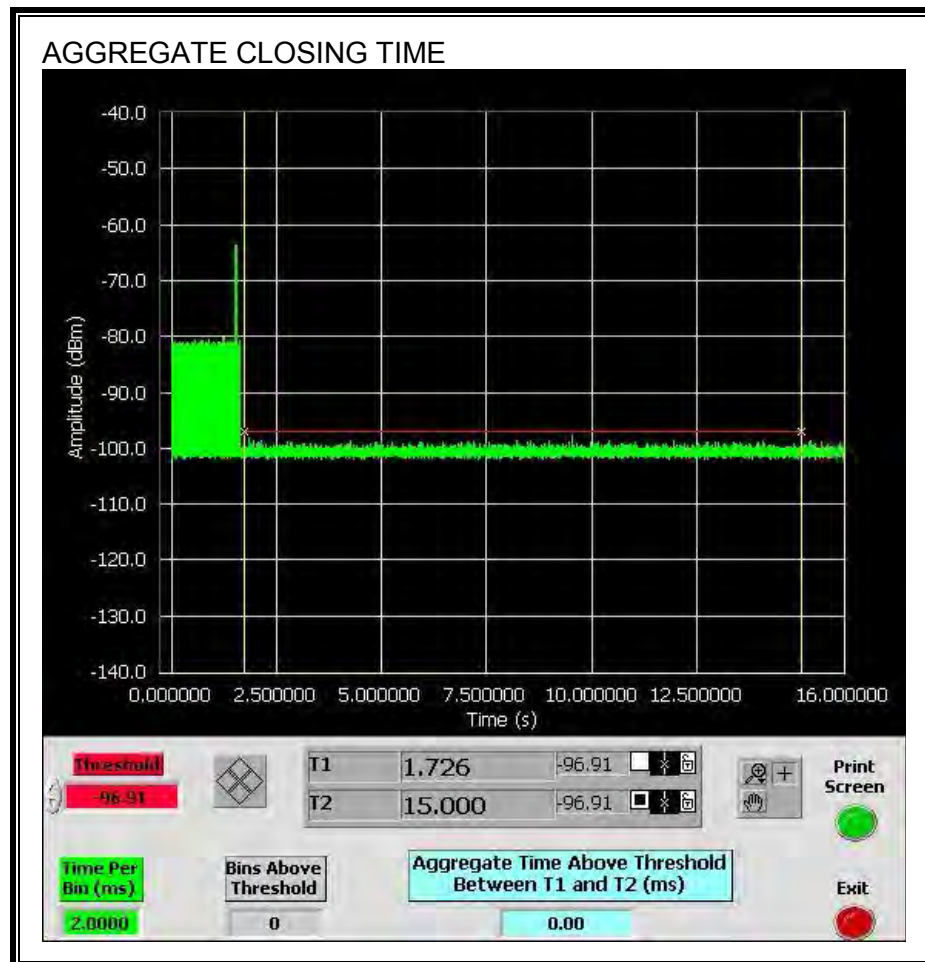


CHANNEL CLOSING TIME



AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

Only intermittent transmissions are observed during the aggregate monitoring period.



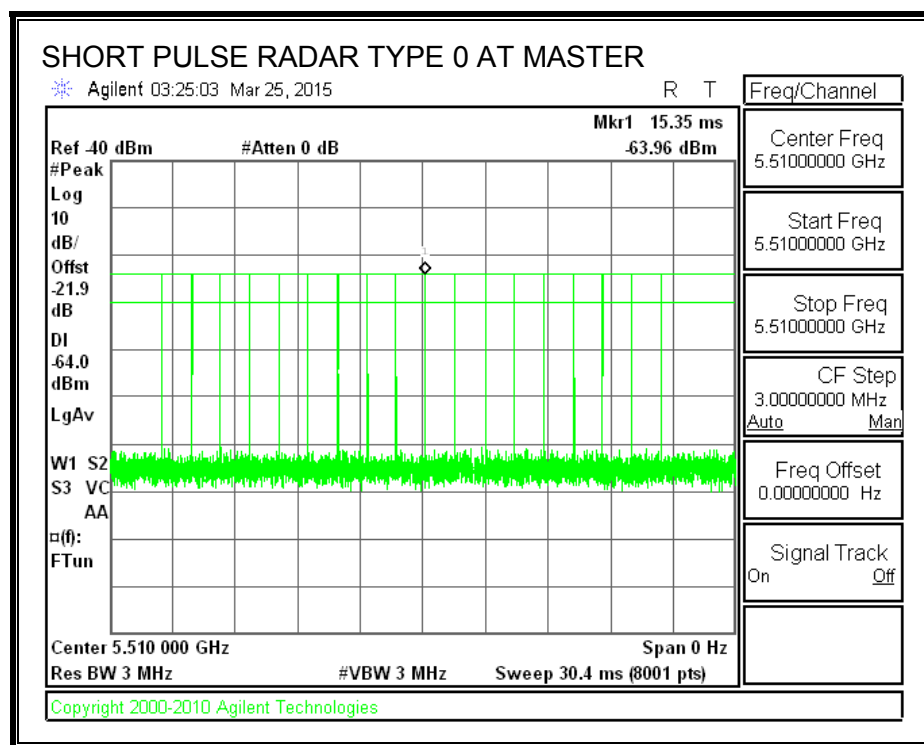
12.3. RESULTS FOR 40 MHz BANDWIDTH

12.3.1. TEST CHANNEL

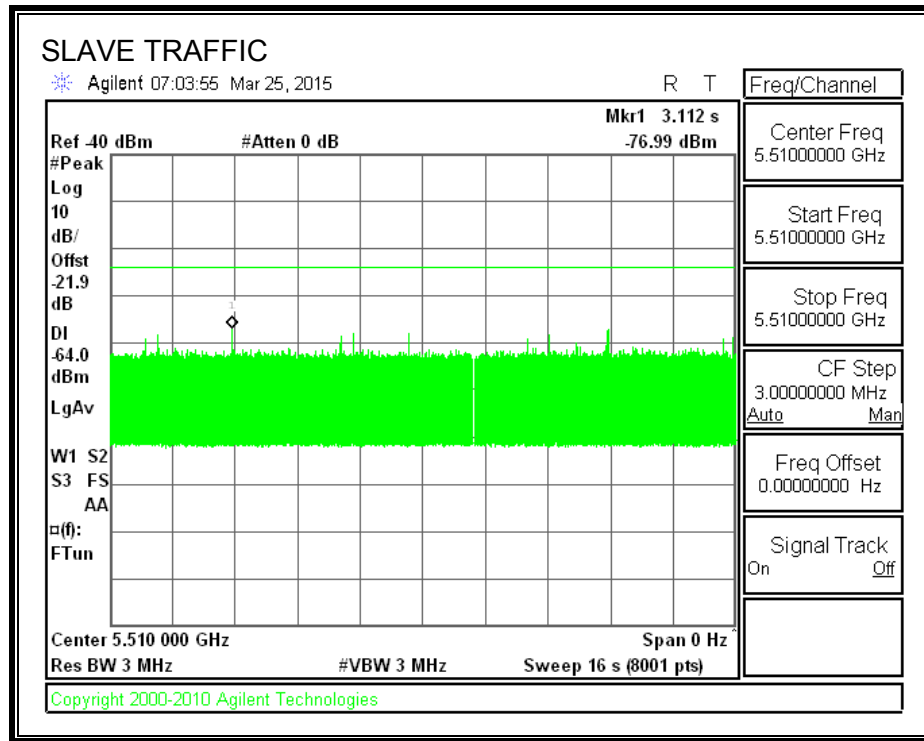
All tests were performed at a channel center frequency of 5510 MHz.

12.3.2. RADAR WAVEFORM AND TRAFFIC

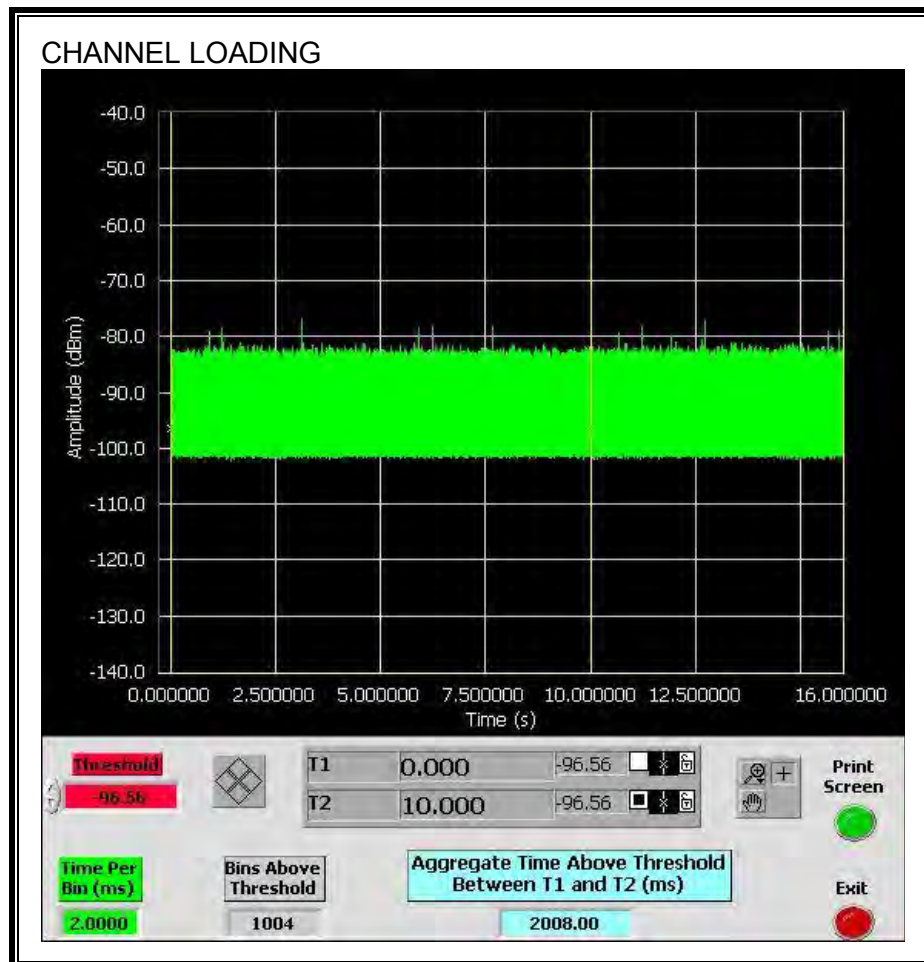
RADAR WAVEFORM



TRAFFIC



CHANNEL LOADING



The level of traffic loading on the channel by the EUT is 20.08%

12.3.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

12.3.4. MOVE AND CLOSING TIME

REPORTING NOTES

The reference marker is set at the end of last radar pulse.

The delta marker is set at the end of the last WLAN transmission following the radar pulse. This delta is the channel move time.

The aggregate channel closing transmission time is calculated as follows:

Aggregate Transmission Time =
(Number of analyzer bins showing transmission) * (dwell time per bin)

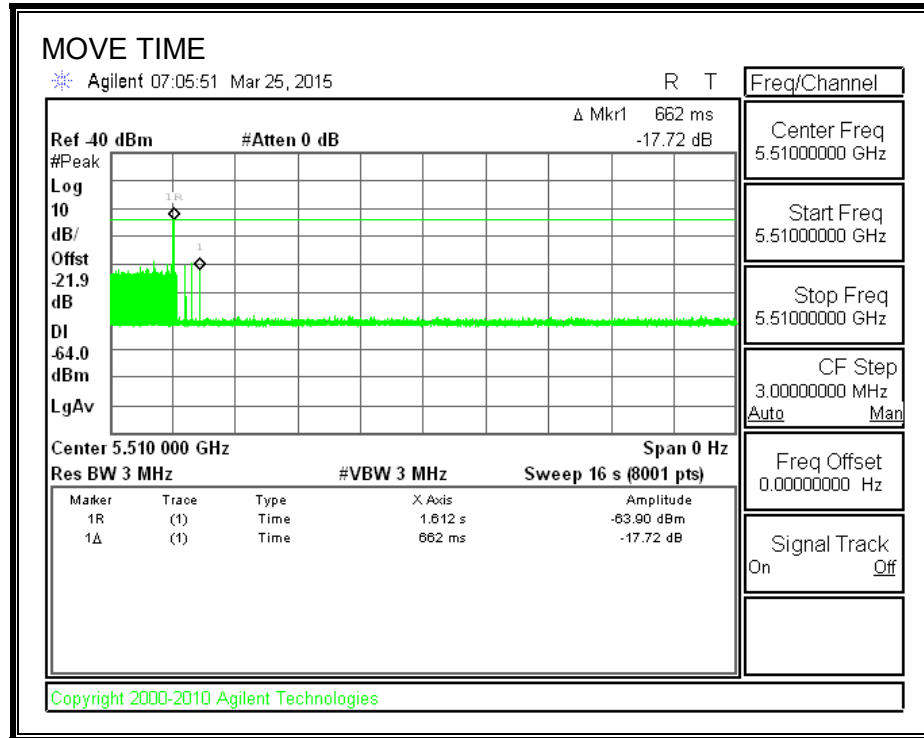
The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

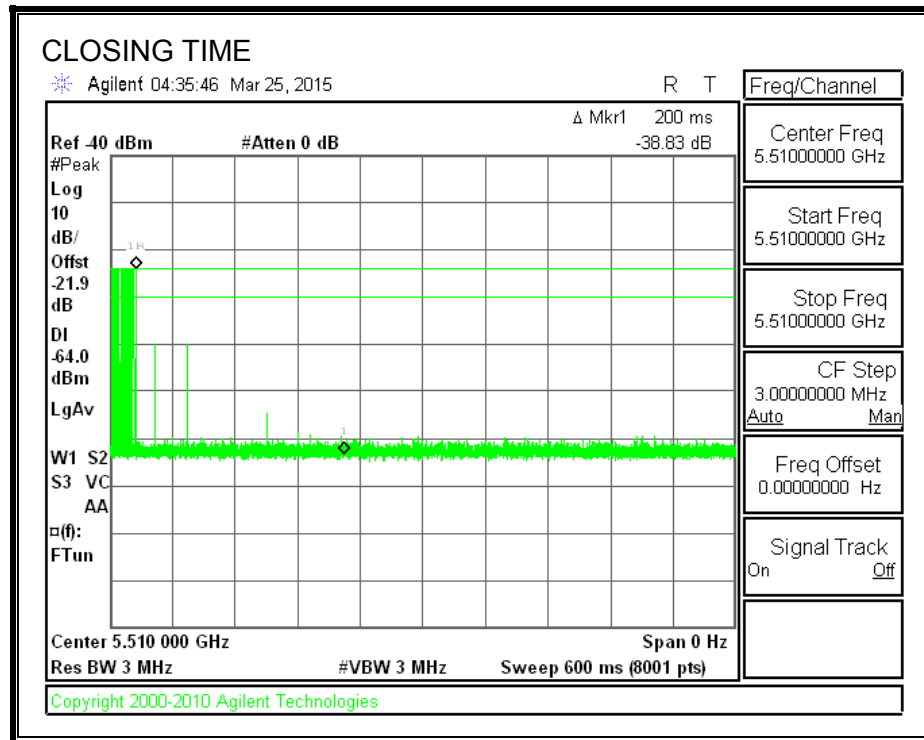
Channel Move Time (sec)	Limit (sec)
0.662	10

Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
14.0	60

MOVE TIME

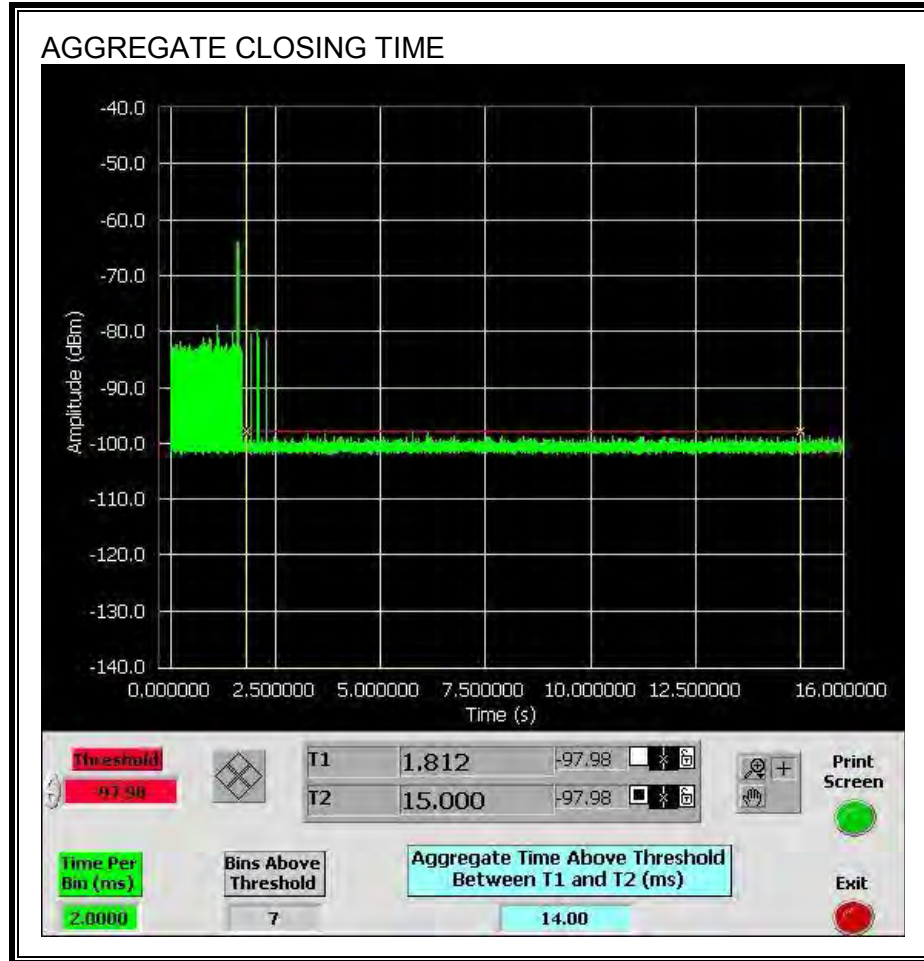


CHANNEL CLOSING TIME



AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

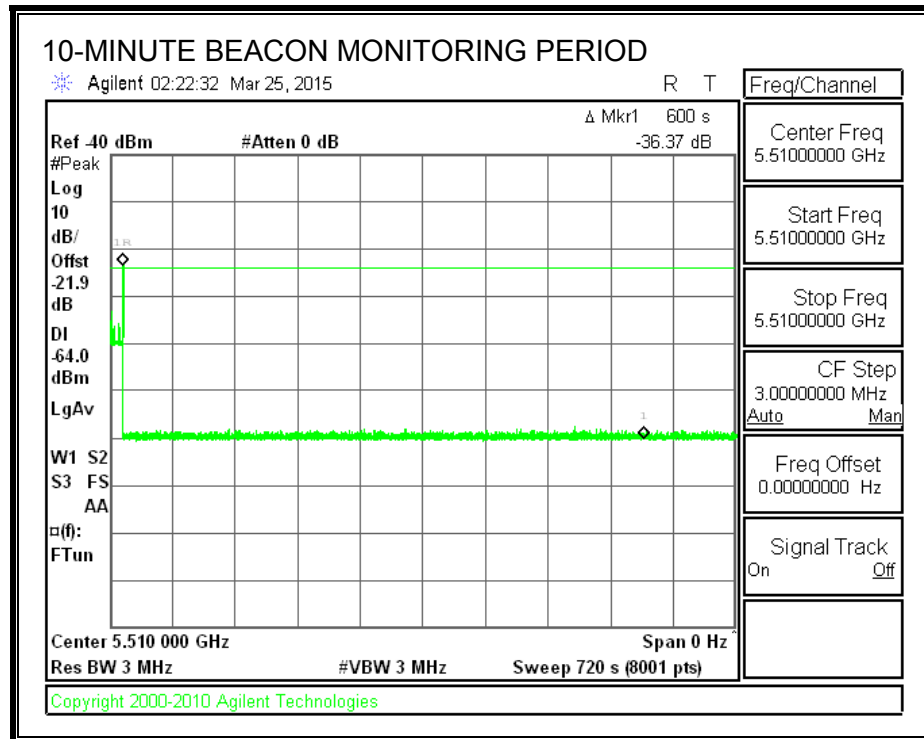
Only intermittent transmissions are observed during the aggregate monitoring period.



12.3.5. 10-MINUTE BEACON MONITORING PERIOD

RESULTS

No EUT transmissions were observed on the test channel during the 10-minute observation time.



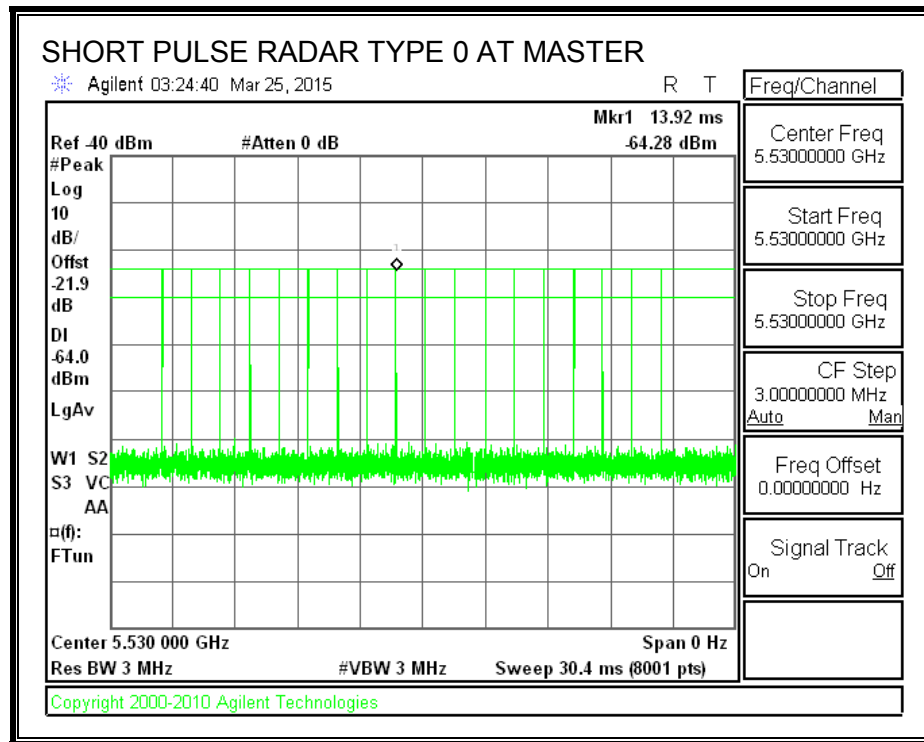
12.4. RESULTS FOR 80 MHz BANDWIDTH

12.4.1. TEST CHANNEL

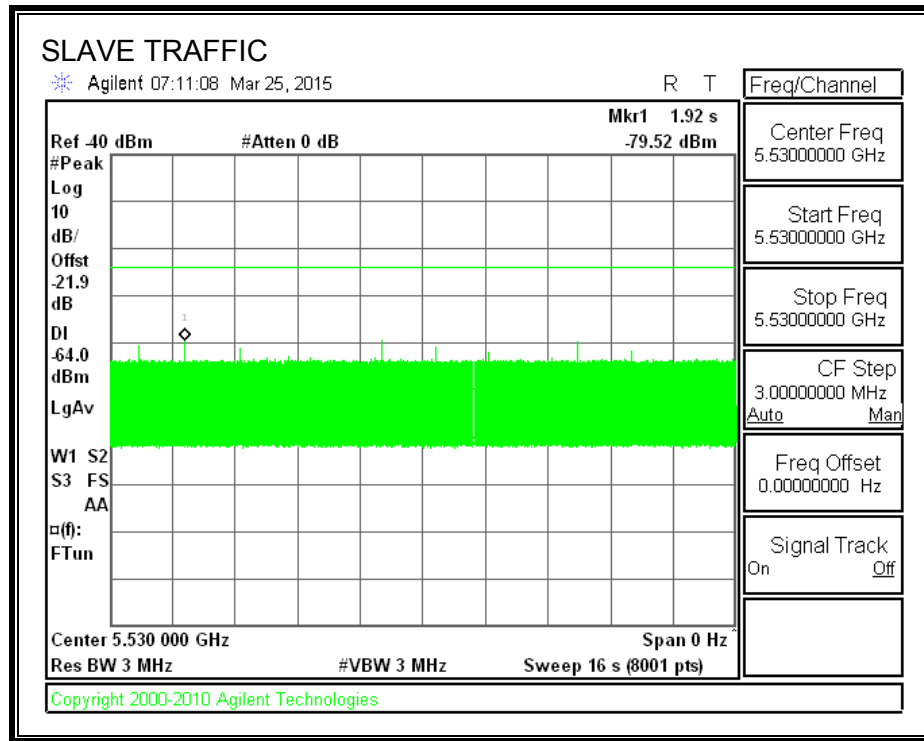
All tests were performed at a channel center frequency of 5530 MHz.

12.4.2. RADAR WAVEFORM AND TRAFFIC

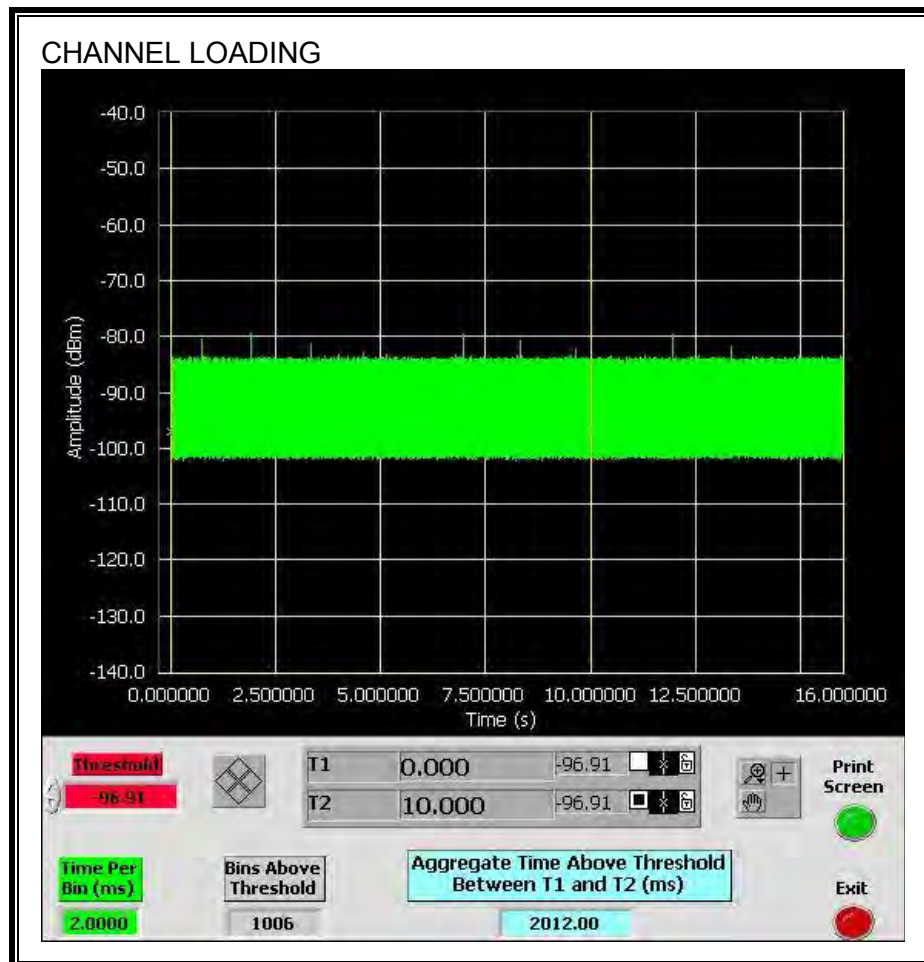
RADAR WAVEFORM



TRAFFIC



CHANNEL LOADING



The level of traffic loading on the channel by the EUT is 20.12%

12.4.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

12.4.4. MOVE AND CLOSING TIME

REPORTING NOTES

The reference marker is set at the end of last radar pulse.

The delta marker is set at the end of the last WLAN transmission following the radar pulse. This delta is the channel move time.

The aggregate channel closing transmission time is calculated as follows:

Aggregate Transmission Time =
(Number of analyzer bins showing transmission) * (dwell time per bin)

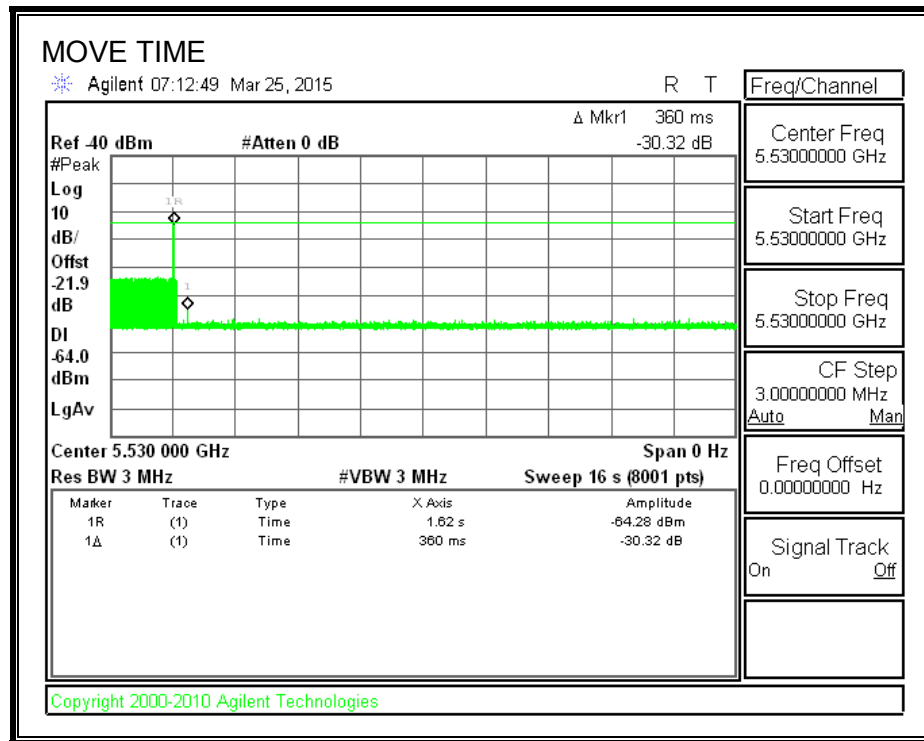
The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

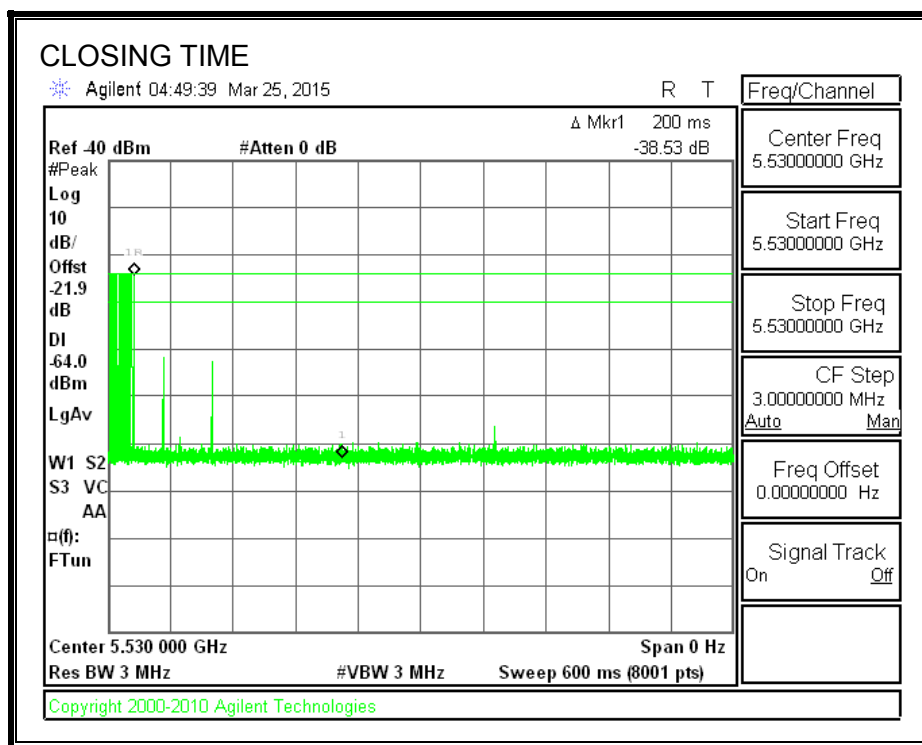
Channel Move Time (sec)	Limit (sec)
0.360	10

Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
2.0	60

MOVE TIME

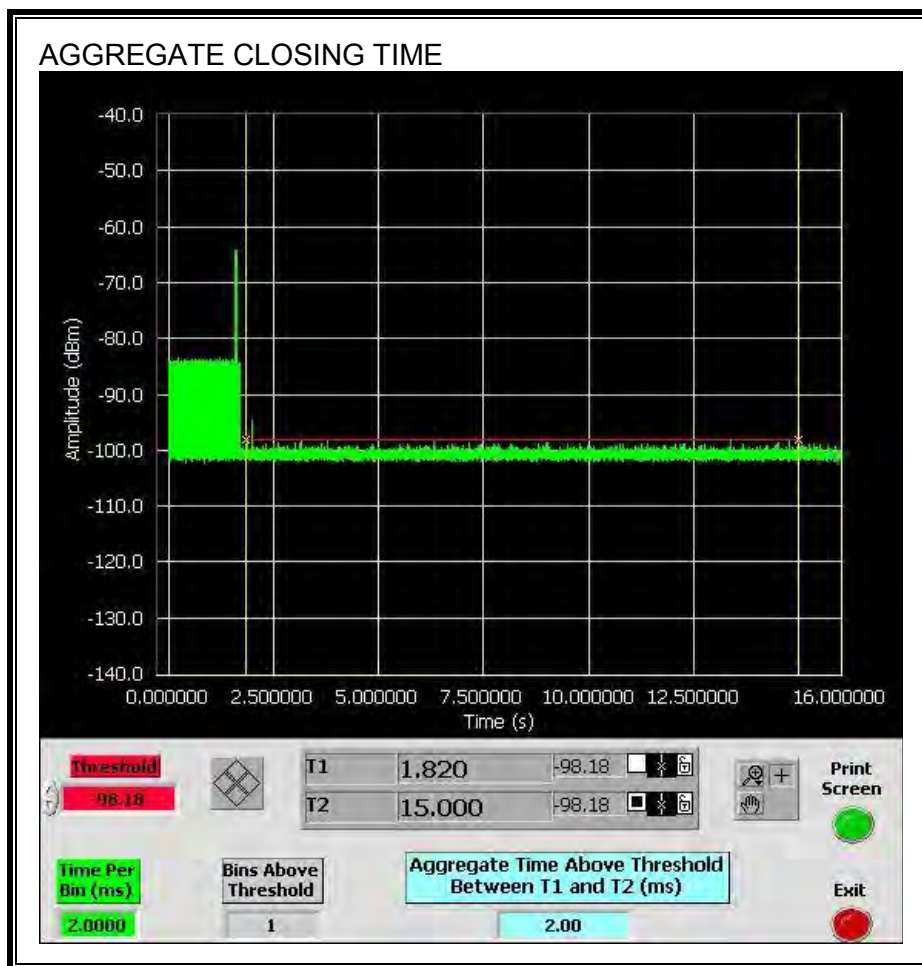


CHANNEL CLOSING TIME



AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

Only intermittent transmissions are observed during the aggregate monitoring period.



12.4.5. 10-MINUTE BEACON MONITORING PERIOD

RESULTS

No EUT transmissions were observed on the test channel during the 10-minute observation time.

