FCC 47 CFR PART 15 SUBPART E

CERTIFICATION TEST REPORT

FOR

GSM/WCDMA/LTE Phone + Bluetooth, DTS/UNII a/b/g/n, ANT+ & NFC

MODEL NUMBER: SM-G7508W

FCC ID: A3LSMG7508W

REPORT NUMBER: 14I18943-E5 REVISION B

ISSUE DATE: October 31, 2014

Prepared for
SAMSUNG ELECTRONICS CO., LTD.
416, MAETAN 3-DONG, YEONGTONG-GU
SUWON-CITY, GYEONGGI-DO 443-742, SOUTH KOREA

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

Rev.	Issue Date	Revisions	Revised By
--	10/01/14	Initial Issue	D. Coronia
A	10/27/14	Updated DFS section	P. Zhang
B	10/31/14	Updated statement and radiated BE for 5.8GHz band	P. Zhang

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS

COMPANY NAME:	SAMSUNG ELECTRONICS CO., LTD.
EUT DESCRIPTION:	GSM/WCDMA/LTE Phone + Bluetooth, DTS/UNII a/b/g/n, ANT+ & NFC
MODEL:	SM-G7508W
SERIAL NUMBER:	SP1D7293146L, SP1D7293147D
DATE TESTED:	October 1, 2014

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:

DAN CORONIA
CONSUMER TECHNOLOGY DIVISION
PROJECT LEAD
UL Verification Services Inc.

Tested By:

JAMES JACKSON
CONSUMER TECHNOLOGY DIVISION
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.
U-NII procedures and limits were applied for operations in the frequency band from 5.725-5.850 GHz in accordance with this KDB 644545 D01 Guidance for IEEE 802.11ac v01r01; 644545 D02 Alternative Guidance for 802.11ac v01 publication to demonstrate compliance with 15.247 requirements in that band.

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 40000 MHz	4.94 dB

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

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

GSM/WCDMA/LTE Phone + Bluetooth, DTS/UNII a/b/g/n, ANT+ & NFC

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
5180 - 5240	802.11n HT20	12.4	17.38
5260 - 5320	802.11n HT20	13.39	21.83
5500 - 5700	802.11n HT20	12.81	19.10
5745 - 5825	802.11n HT20	13.36	21.68
5190 - 5230	802.11n HT40	11.99	15.81
5270 - 5310	802.11n HT40	13.5	22.39
5510 - 5670	802.11n HT40	13.58	22.80
5755 - 5795	802.11n HT40	13.49	22.34
5180 - 5240	802.11a	12.69	18.58
5260 - 5320	802.11a	13.47	22.23
5500 - 5700	802.11a	12.78	18.97
5745 - 5825	802.11a	13.2	20.89

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an FPCB antenna, with a maximum gain of 1.02dBi.

5.4. WORST-CASE CONFIGURATION AND MODE

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

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

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

802.11a mode: 6 Mbps

802.11n HT20mode: MCS0

802.11n HT40mode: MCS0

5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
AC Adapter	Samsung	EP-TA50CBC	N/A	N/A
Earphone	Samsung	EHS61ASFWE	N/A	N/A

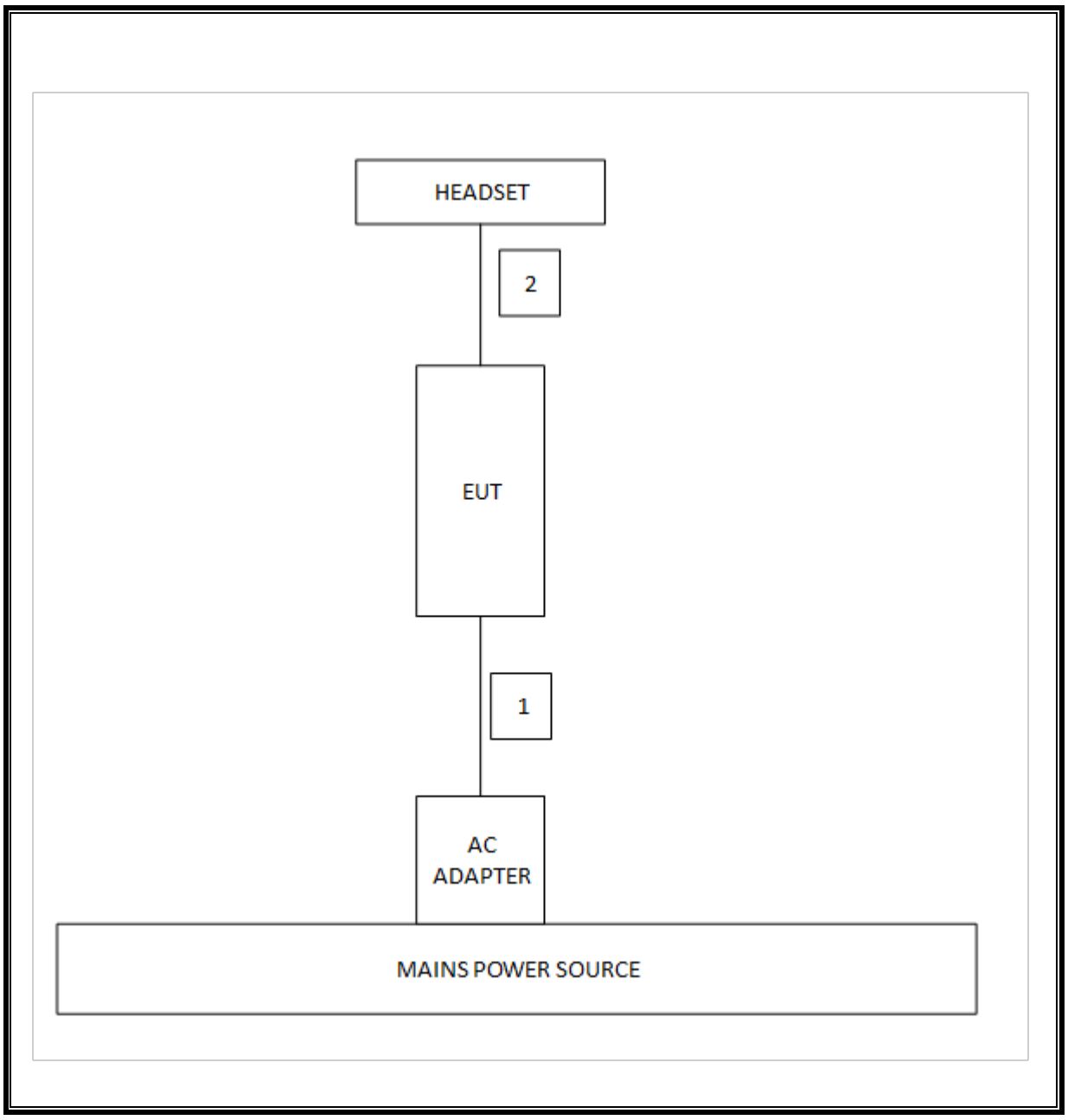
I/O CABLES

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	C00986	4/1/2015
Spectrum Analyzer, 26.5 GHz	Agilent / HP	E4440A	C01179	2/26/2015
EMI Test Receiver, 30 MHz	R & S	ESHS 20	N02396	8/8/2015
Preamplifier, 1300 MHz	Agilent / HP	8447D	C00580	1/28/2015
Preamplifier, 26.5 GHz	Agilent / HP	8449B	C01063	10/22/2014
Preamplifier, 40 GHz	Miteq	NSP4000-SP2	C00990	8/2/2015
Antenna, Bilog, 30MHz-1 GHz	Sunol Sciences	JB1	N/A	3/6/2015
Antenna, Horn, 18 GHz	ETS	3117	C01022	2/21/2015
Antenna, Horn, 26.5 GHz	ARA	MWH-1826/B	C00589	12/17/2014
Peak Power Meter	Agilent / HP	E4416A	C00963	12/13/2014
Peak / Average Power Sensor	Agilent / HP	E9327A	C00964	12/13/2014
LISN, 30 MHz	FCC	50/250-25-2	C00626	01/14/15
Reject Filter, 5.725-5.825 GHz	Micro-Tronics	BRC13192	N02676	CNR

7. SUMMARY TABLE

FCC Part Section	Test Description	Test Limit	Test Condition	Test Result	Worst Case
15.247 (a)	Occupied Band width (26dB)	N/A	Conducted	Pass	93.2MHz
15.407 (a)(1)	TX Cond. Power 5.15-2.25	<17dBm or 4+10Log(OBW)		Pass	12.69dBm
15.407 (a)(2)	TX Cond. Power 5.25-5.35 & 5.47-5.725	<24dBm or 11+10Log(OBW)		Pass	13.58dBm
15.407 (a)(3)	TX Cond. Power 5.725-5.825	< 30dBm or 17+10Log(OBW)		Pass	13.49dBm
15.407 (a)(6)	Peak Excursion Ratio	13dB		Pass	9.74dBm
15.207 (a)	AC Power Line conducted emissions	Section 10	Radiated	Pass	49.04dBmV
15.407 (b) & 15.209	Radiated Spurious Emission	< 54dBuV/m		Pass	50.45
15.407 (h)(2)	Dynamic Frequency Selection	N/A	Radiated / Condcuted	Pass	N/A

8. ON TIME, DUTY CYCLE AND MEASUREMENT METHODS

LIMITS

None; for reporting purposes only.

PROCEDURE

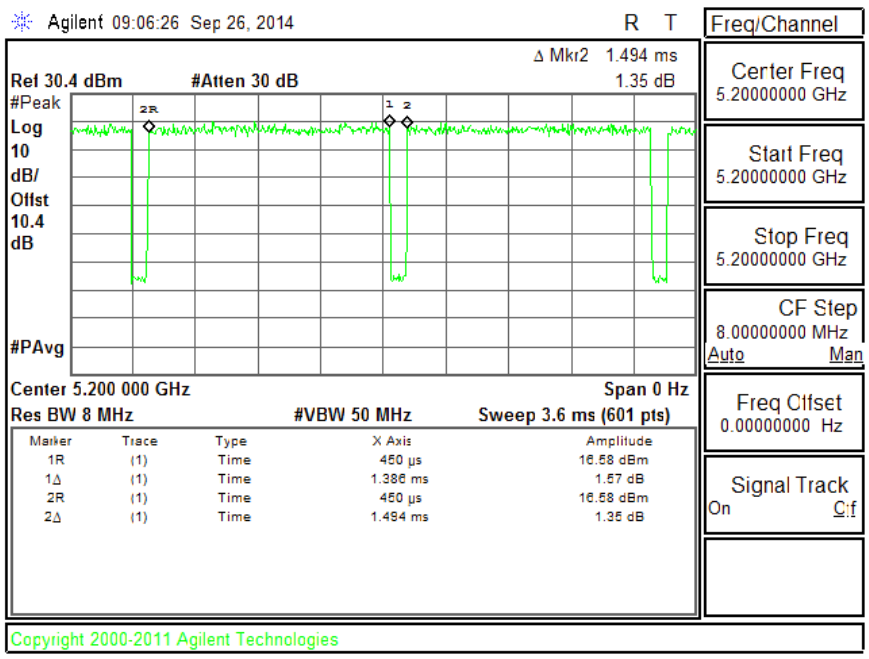
KDB 789033 Zero-Span Spectrum Analyzer Method.

8.1. ON TIME AND DUTY CYCLE RESULTS

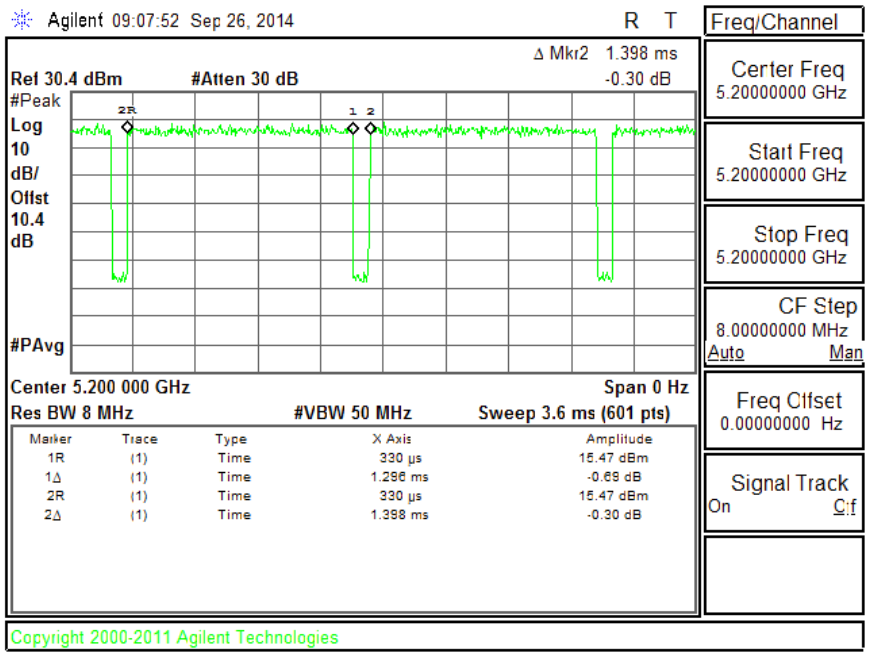
Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/T Minimum VBW (kHz)
802.11a	1.3860	1.4940	0.928	92.8%	0.33	0.722
802.11n HT20	1.2360	1.3980	0.884	88.4%	0.53	0.809
802.11n HT40	0.6270	0.7290	0.860	86.0%	0.65	1.595

8.2. DUTY CYCLE PLOTS

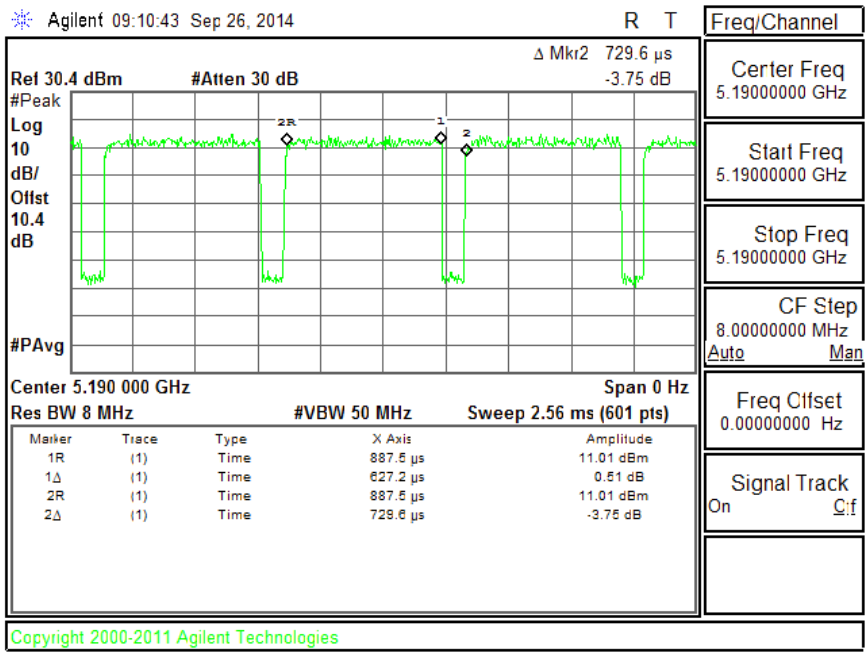
DUTY CYCLE 802.11a MODE



DUTY CYCLE 802.11n HT20 MODE



DUTY CYCLE 802.11n HT40 MODE



9. MEASUREMENT METHOD

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

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

10. ANTENNA PORT TEST RESULTS

10.1. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

10.1.1. 802.11a MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5180	34.58
Mid	5200	37.08
High	5240	35.83
Worst		37.08

10.1.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5180	32.17
Mid	5200	37.17
High	5240	35.00
Worst		37.17

10.1.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5190	58.930
Mid	5230	59.600
Worst		59.600

10.1.1. 802.11a MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5260	38.33
Mid	5300	39.92
High	5320	40.00
Worst		40.00

10.1.1. 802.11n HT20 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5260	40.58
Mid	5300	43.08
High	5320	42.75
Worst		43.08

10.1.2. 802.11n HT40 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5270	79.2
High	5310	75.5
Worst		79.2

10.1.3. 802.11a MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5500	31.330
Mid	5580	37.250
High	5700	42.830
Worst		42.830

10.1.4. 802.11n HT20 MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5500	35.500
Mid	5580	39.500
High	5700	45.500
Worst		45.500

10.1.5. 802.11n HT40 MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5510	74.8
Mid	5550	78.4
High	5670	78.9
Worst		78.9

10.1.6. 802.11a MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5745	42.830
Mid	5785	42.750
High	5825	42.670
Worst		42.830

10.1.7. 802.11n HT20 MODE IN THE 5.8 GHz BAND

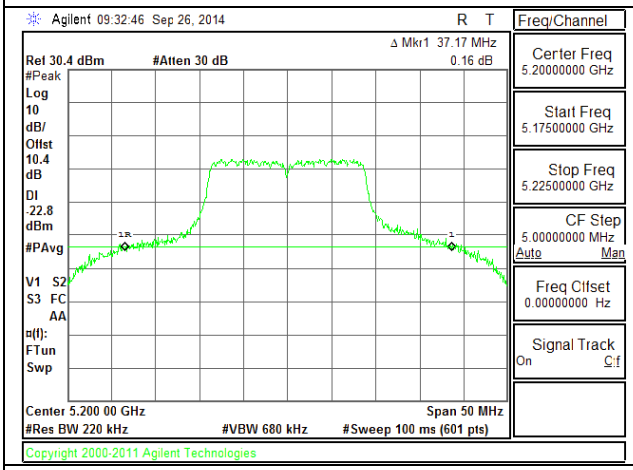
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5745	48.680
Mid	5785	48.490
High	5825	48.680
Worst		48.680

10.1.8. 802.11n HT40 MODE IN THE 5.8 GHz BAND

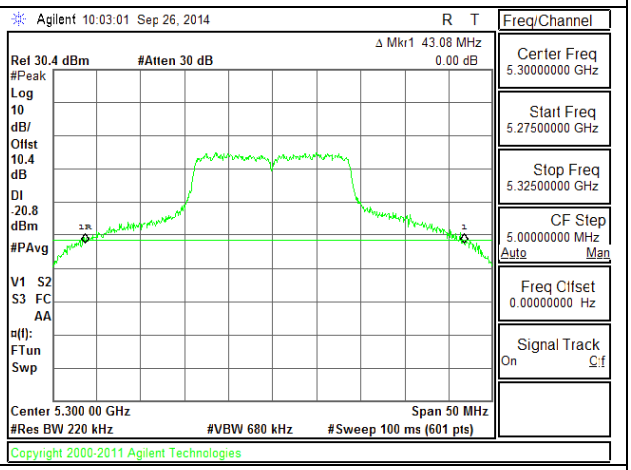
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5755	90.5
High	5795	93.2
Worst		93.2

10.1.9. 26 dB BANDWIDTH PLOTS

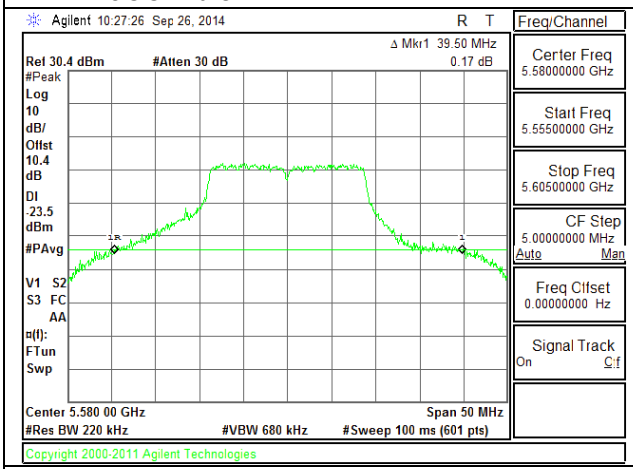
11n HT20 5.2 Mid Ch



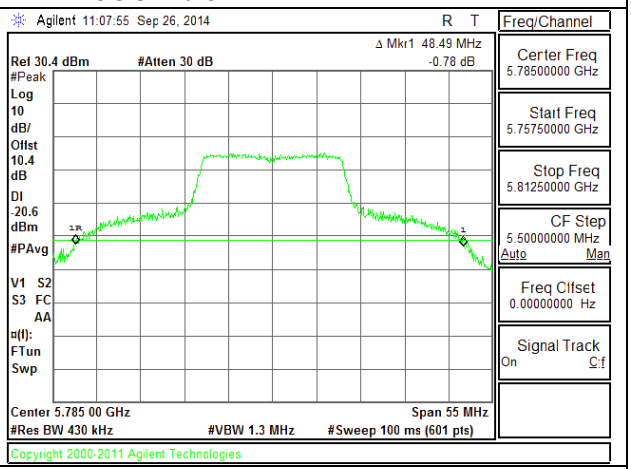
11n HT20 5.3 Mid Ch



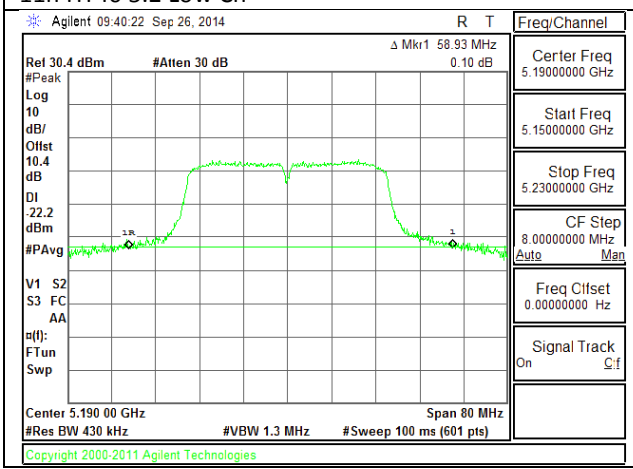
11n HT20 5.5 Mid Ch



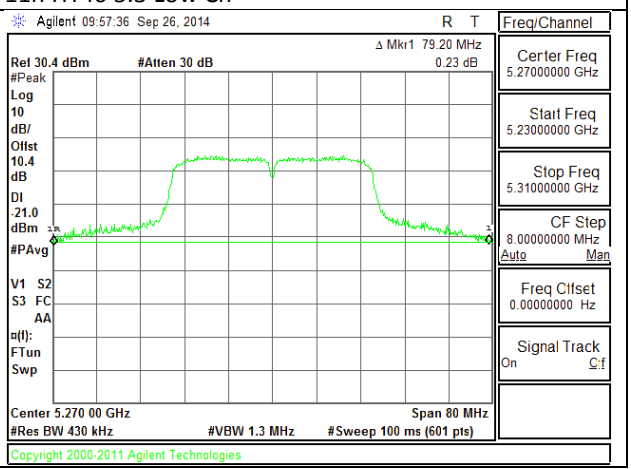
11n HT20 5.8 Mid Ch



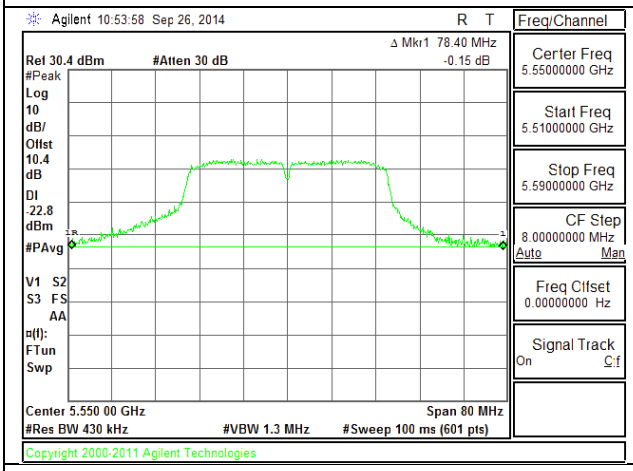
11n HT40 5.2 Low Ch



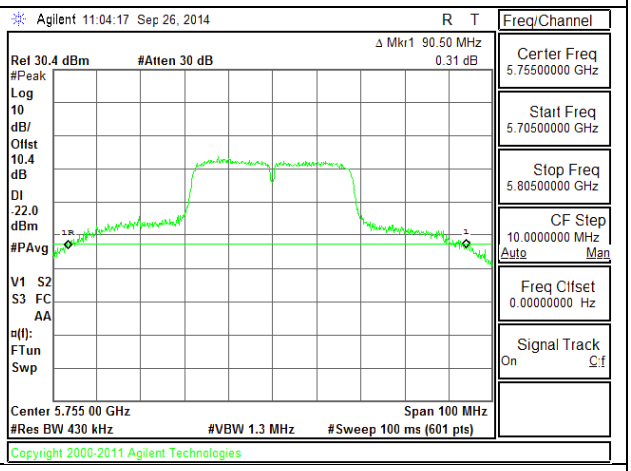
11n HT40 5.3 Low Ch



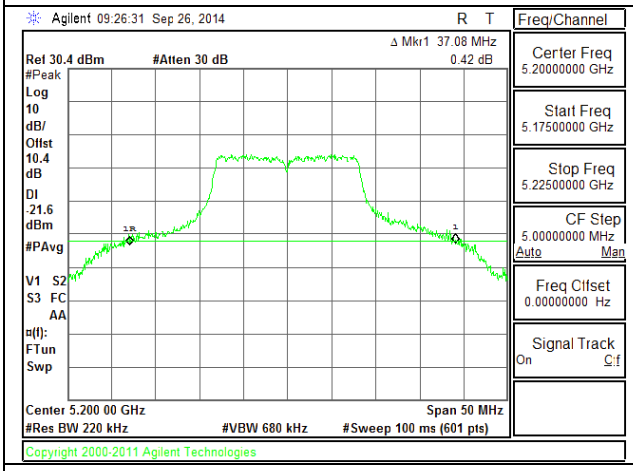
11n HT40 5.5 Mid Ch



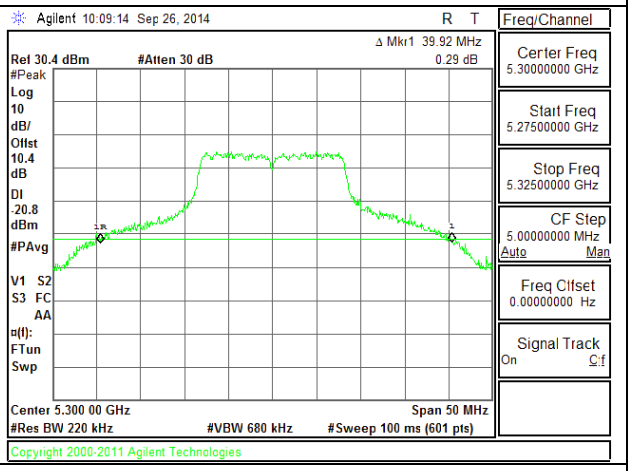
11n HT40 5.8 Low Ch



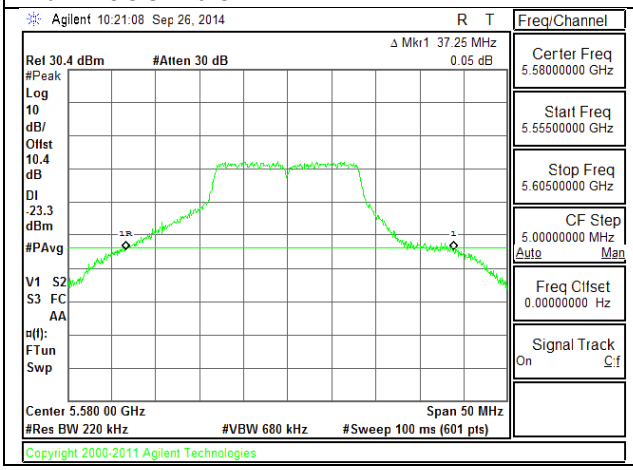
11a HT20 5.2 Mid Ch



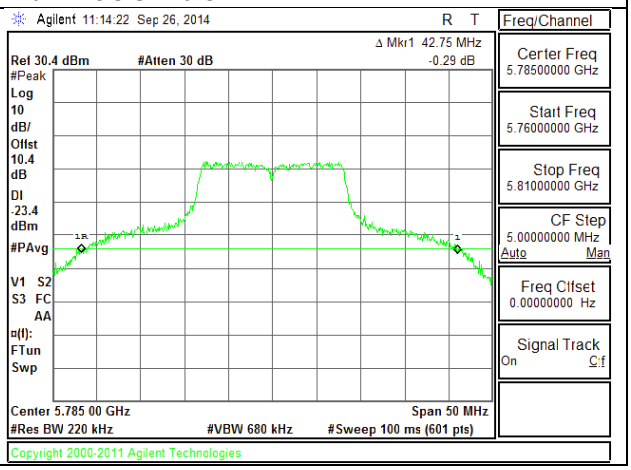
11a HT20 5.3 Mid Ch



11a HT20 5.5 Mid Ch



11a HT20 5.8 Mid Ch



10.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

10.2.1. 802.11a MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5180	16.83
Mid	5200	16.89
High	5240	16.99
Worst		16.99

10.2.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5180	17.91
Mid	5200	17.92
High	5240	17.91
Worst		17.92

10.2.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5190	36.230
Mid	5230	36.270
Worst		36.270

10.2.4. 802.11a MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5260	16.93
Mid	5300	17.44
High	5320	17.23
Worst		17.44

10.2.5. 802.11n HT20 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5260	18.03
Mid	5300	18.34
High	5320	18.29
Worst		18.34

10.2.6. 802.11n HT40 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5270	36.5
High	5310	36.5
Worst		36.5

10.2.7. 802.11a MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5500	17.110
Mid	5580	17.750
High	5700	17.020
Worst		17.750

10.2.8. 802.11n HT20 MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5500	18.120
Mid	5580	18.520
High	5700	18.180
Worst		18.520

10.2.9. 802.11n HT40 MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5510	36.6
Mid	5550	37.0
High	5670	38.5
Worst		38.5

10.2.10. 802.11a MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5745	17.330
Mid	5785	17.210
High	5825	17.390
Worst		17.390

10.2.11. 802.11n HT20 MODE IN THE 5.8 GHz BAND

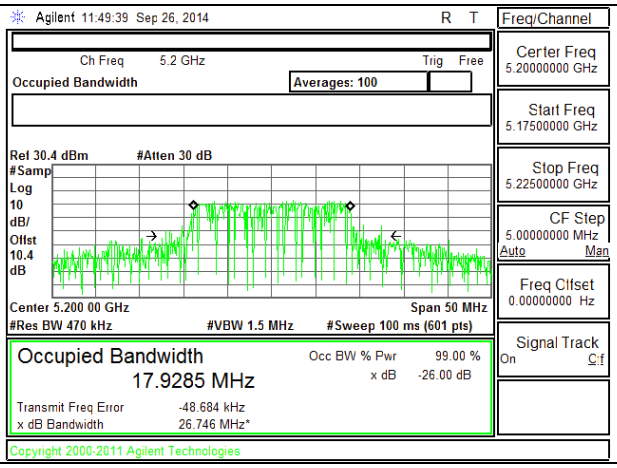
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5745	18.440
Mid	5785	18.390
High	5825	18.490
Worst		18.490

10.2.12. 802.11n HT40 MODE IN THE 5.8 GHz BAND

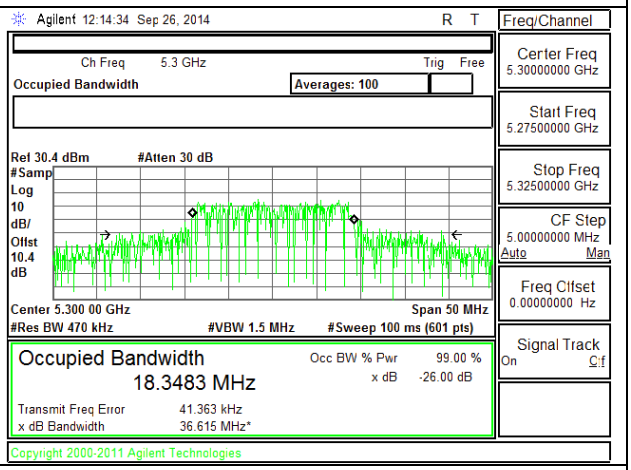
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5755	37.0
High	5795	37.3
Worst		37.3

10.2.13. 99% BANDWIDTH PLOTS

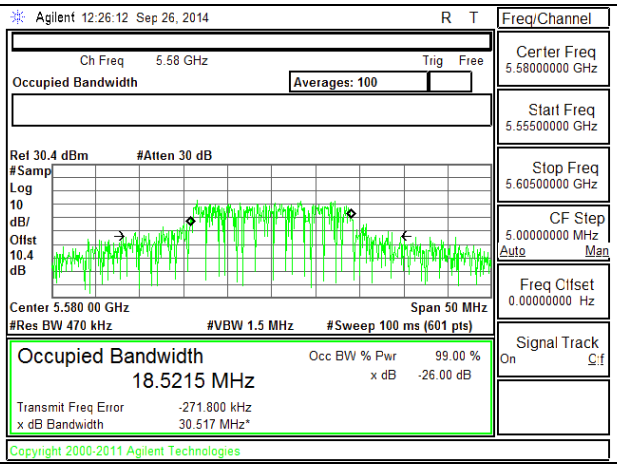
11n HT20 5.2 Mid Ch



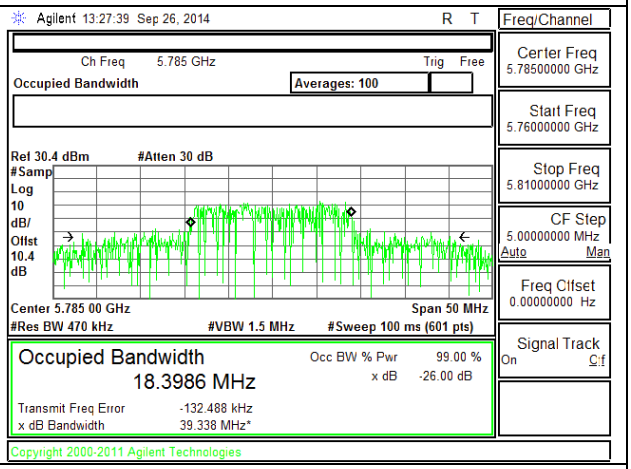
11n HT20 5.3 Mid Ch



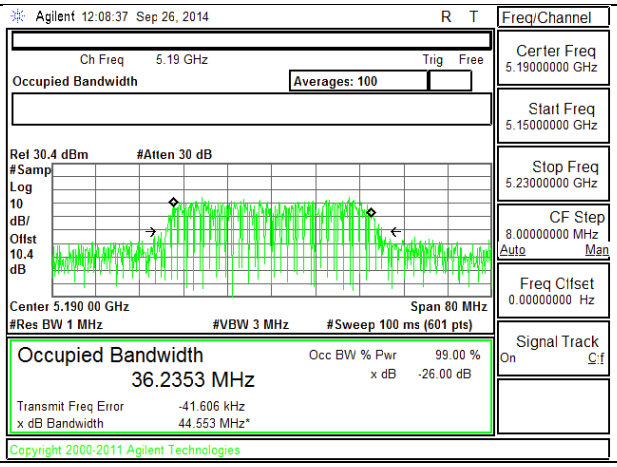
11n HT20 5.5 Mid Ch



11n HT20 5.8 Mid Ch



11n HT40 5.2 Low Ch



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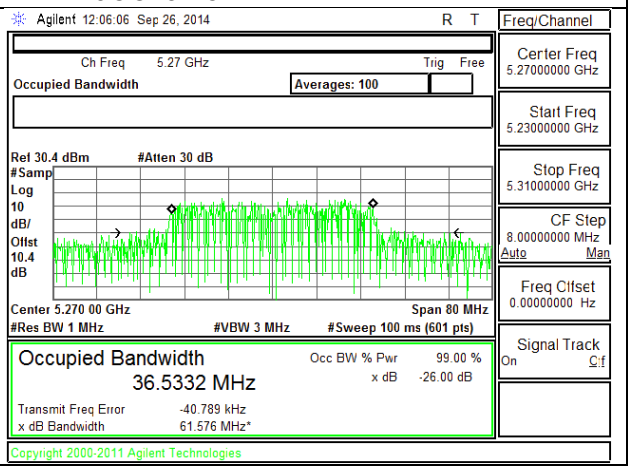

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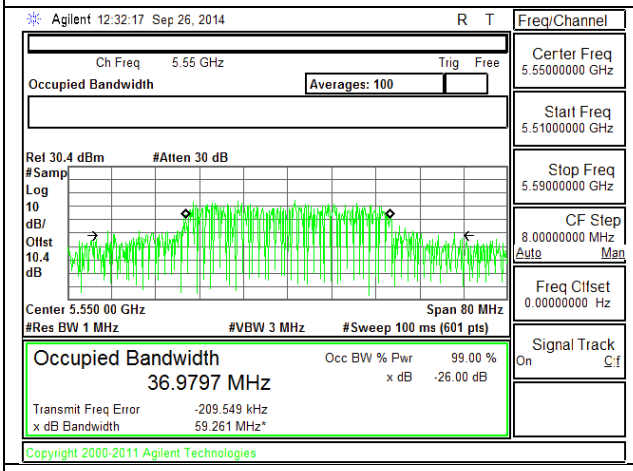

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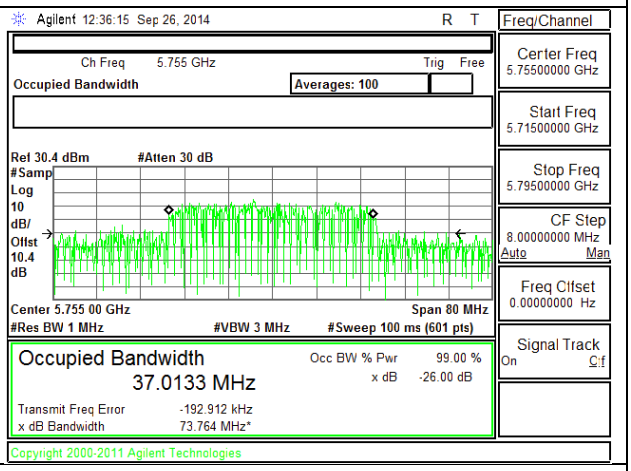
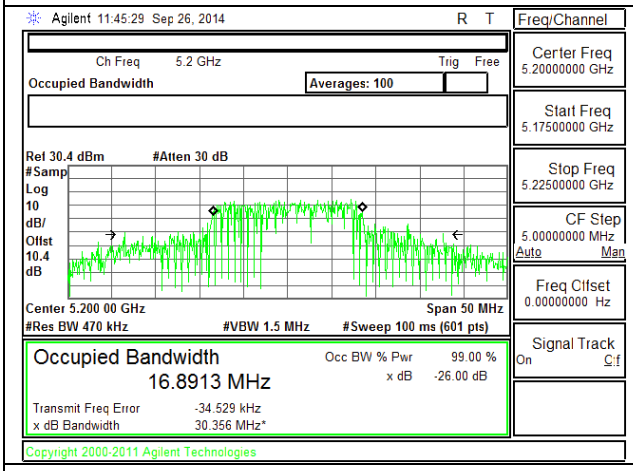


11a HT20 5.2 Mid Ch



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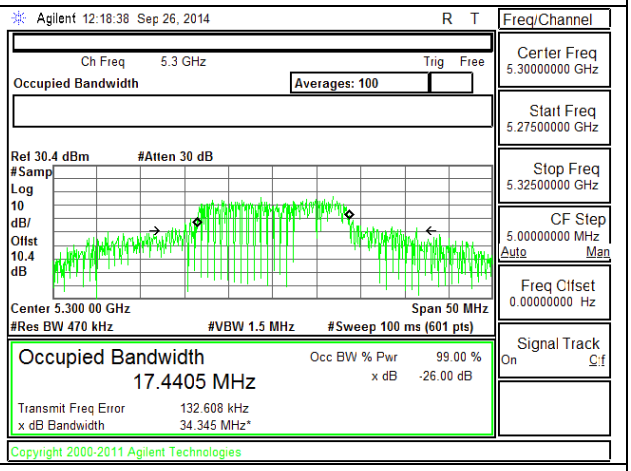

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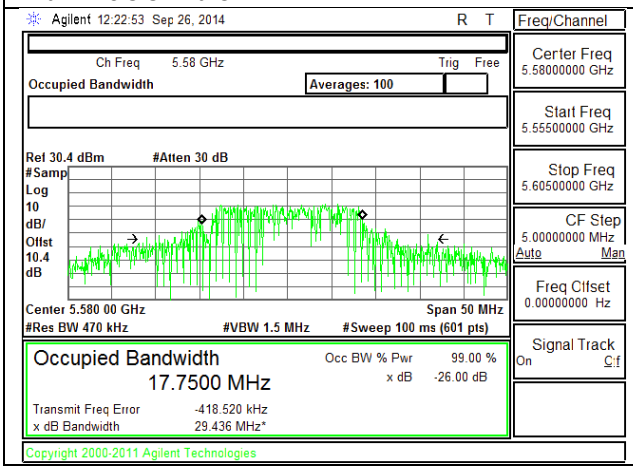

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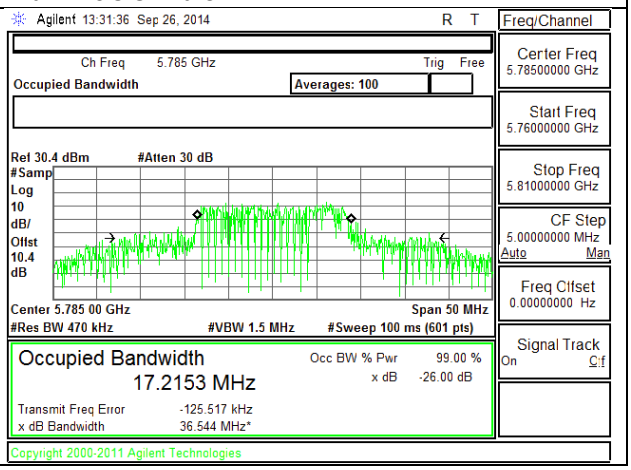


10.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

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

RESULTS

10.3.1. 802.11a MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5180	12.60
Mid	5200	13.20
High	5240	12.80
Worst		13.20

10.3.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5180	11.60
Mid	5200	12.10
High	5240	11.80
Worst		12.10

10.3.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5190	11.70
Mid	5230	11.80
Worst		11.80

10.3.4. 802.11a MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5260	13.20
Mid	5300	13.30
High	5320	12.80
Worst		13.30

10.3.5. 802.11n HT20 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5260	11.90
Mid	5300	12.00
High	5320	12.50
Worst		12.50

10.3.6. 802.11n HT40 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5270	11.90
High	5310	11.70
Worst		11.90

10.3.7. 802.11a MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5500	13.10
Mid	5580	13.30
High	5700	13.40
Worst		13.40

10.3.8. 802.11n HT20 MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5500	12.00
Mid	5580	12.50
High	5700	12.50
Worst		12.50

10.3.9. 802.11n HT40 MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5510	11.70
Mid	5550	12.30
High	5670	12.20
Worst		12.30

10.3.10. 802.11a MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5745	13.000
Mid	5785	12.700
High	5825	13.200
Worst		13.200

10.3.11. 802.11n HT20 MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5745	12.30
Mid	5785	12.00
High	5825	11.90
Worst		12.30

10.3.12. 802.11n HT40 MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5755	11.80
High	5795	12.50
Worst		12.50

10.4. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (1)

For the band 5.15–5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 50 mW or 4 dBm + 10 log B, where B is the 26–dB emission bandwidth in MHz. In addition, the peak power spectral density shall not exceed 4 dBm in any 1–MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

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

DIRECTIONAL ANTENNA GAIN

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

Test Methodology

RESULTS

10.4.1. 802.11a MODE IN THE 5.2 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5180	34.58	16.83	1.02
Mid	5200	37.08	16.89	1.02
High	5240	35.83	16.99	1.02

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC EIRP Limit (dBm)	Max IC Power (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC eirp PSD Limit (dBm)	PPSD Limit (dBm)
Low	5180	17.00	22.26	21.24	17.00	4.00	10.00	4.00
Mid	5200	17.00	22.28	21.26	17.00	4.00	10.00	4.00
High	5240	17.00	22.30	21.28	17.00	4.00	10.00	4.00

Duty Cycle CF (dB)	0.33	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5180	11.91	12.24	17.00	-4.76
Mid	5200	12.36	12.69	17.00	-4.31
High	5240	12.36	12.69	17.00	-4.31

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5180	0.480	0.81	4.00	-3.19
Mid	5200	1.200	1.53	4.00	-2.47
High	5240	0.940	1.27	4.00	-2.73

10.4.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5180	32.17	17.91	1.02
Mid	5200	37.17	17.92	1.02
High	5240	35.00	17.91	1.02

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC EIRP Limit (dBm)	Max IC Power (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC eirp PSD Limit (dBm)	PPSD Limit (dBm)
Low	5180	17.00	22.53	21.51	17.00	4.00	10.00	4.00
Mid	5200	17.00	22.53	21.51	17.00	4.00	10.00	4.00
High	5240	17.00	22.53	21.51	17.00	4.00	10.00	4.00

Duty Cycle CF (dB)	0.53	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5180	10.920	11.45	17.00	-5.55
Mid	5200	11.865	12.40	17.00	-4.61
High	5240	11.650	12.18	17.00	-4.82

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5180	-0.710	-0.18	4.00	-4.18
Mid	5200	0.350	0.88	4.00	-3.12
High	5240	0.250	0.78	4.00	-3.22

10.4.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5190	58.930	36.230	1.02
Mid	5230	59.600	36.270	1.02

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC EIRP Limit (dBm)	Max IC Power (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC eirp PSD Limit (dBm)	PPSD Limit (dBm)
Low	5190	17.00	23.00	21.98	17.00	4.00	10.00	4.00
Mid	5230	17.00	23.00	21.98	17.00	4.00	10.00	4.00
Duty Cycle CF (dB)		0.65	Included in Calculations of Corr'd Power & PPSD					

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5190	11.162	11.81	17.00	-5.19
Mid	5230	11.340	11.99	17.00	-5.01

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5190	-3.380	-2.73	4.00	-6.73
Mid	5230	-3.220	-2.57	4.00	-6.57

10.4.4. 802.11a MODE IN THE 5.3 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5260	38.33	16.93	1.02
Mid	5300	39.92	17.44	1.02
High	5320	40.00	17.23	1.02

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5260	24.00	23.29	29.29	23.29	11.00	11.00	11.00
Mid	5300	24.00	23.42	29.42	23.42	11.00	11.00	11.00
High	5320	24.00	23.36	29.36	23.36	11.00	11.00	11.00

Duty Cycle CF (dB)	0.33	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	13.135	13.47	23.29	-9.82
Mid	5300	12.670	13.00	23.42	-10.42
High	5320	12.450	12.78	23.36	-10.58

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5260	1.520	1.85	11.00	-9.15
Mid	5300	0.880	1.21	11.00	-9.79
High	5320	0.920	1.25	11.00	-9.75

10.4.5. 802.11n HT20 MODE IN THE 5.3 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5260	40.58	18.03	1.02
Mid	5300	43.08	18.34	1.02
High	5320	42.75	18.29	1.02

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5260	24.00	23.56	29.56	23.56	11.00	11.00	11.00
Mid	5300	24.00	23.63	29.63	23.63	11.00	11.00	11.00
High	5320	24.00	23.62	29.62	23.62	11.00	11.00	11.00

Duty Cycle CF (dB)	0.53	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	12.860	13.39	23.56	-10.17
Mid	5300	12.790	13.32	23.63	-10.31
High	5320	12.360	12.89	23.62	-10.73

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5260	0.890	1.42	11.00	-9.58
Mid	5300	1.240	1.77	11.00	-9.23
High	5320	0.880	1.41	11.00	-9.59

10.4.6. 802.11n HT40 MODE IN THE 5.3 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5270	79.2	36.5	1.02
High	5310	75.5	36.5	1.02

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5270	24.00	24.00	30.00	24.00	11.00	11.00	11.00
High	5310	24.00	24.00	30.00	24.00	11.00	11.00	11.00

Duty Cycle CF (dB)	0.65	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5270	12.9	13.50	24.00	-10.50
High	5310	12.1	12.72	24.00	-11.28

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5270	-1.54	-0.89	11.00	-11.89
High	5310		0.65	11.00	-10.35

10.4.7. 802.11a MODE IN THE 5.5 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5500	31.330	17.110	1.02
Mid	5580	37.250	17.750	1.02
High	5700	42.830	17.020	1.02

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5500	24.00	23.33	29.33	23.33	11.00	11.00	11.00
Mid	5580	24.00	23.49	29.49	23.49	11.00	11.00	11.00
High	5700	24.00	23.31	29.31	23.31	11.00	11.00	11.00

Duty Cycle CF (dB)	0.33	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	12.134	12.46	23.33	-10.87
Mid	5580	11.812	12.14	23.49	-11.35
High	5700	12.452	12.78	23.31	-10.53

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5500	0.870	1.20	11.00	-9.80
Mid	5580	0.540	0.87	11.00	-10.13
High	5700	1.330	1.66	11.00	-9.34

10.4.8. 802.11n HT20 MODE IN THE 5.5 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5500	35.500	18.120	1.02
Mid	5580	39.500	18.520	1.02
High	5700	45.500	18.180	1.02

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5500	24.00	23.58	29.58	23.58	11.00	11.00	11.00
Mid	5580	24.00	23.68	29.68	23.68	11.00	11.00	11.00
High	5700	24.00	23.60	29.60	23.60	11.00	11.00	11.00

Duty Cycle CF (dB)	0.53	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	12.211	12.74	23.58	-10.84
Mid	5580	12.036	12.57	23.68	-11.11
High	5700	12.280	12.81	23.60	-10.79

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5500	0.380	0.91	11.00	-10.09
Mid	5580	0.360	0.89	11.00	-10.11
High	5700	0.370	0.90	11.00	-10.10

10.4.9. 802.11n HT40 MODE IN THE 5.5 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5510	74.8	36.6	1.02
Mid	5550	78.4	37.0	1.02
High	5670	78.9	38.5	1.02

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5510	24.00	24.00	30.00	24.00	11.00	11.00	11.00
Mid	5550	24.00	24.00	30.00	24.00	11.00	11.00	11.00
High	5670	24.00	24.00	30.00	24.00	11.00	11.00	11.00

Duty Cycle CF (dB)	0.65	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5510	11.904	12.55	24.00	-11.45
Mid	5550	12.925	13.58	24.00	-10.43
High	5670	12.100	12.75	24.00	-11.25

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5510	-2.330	-1.68	11.00	-12.68
Mid	5550	-1.640	-0.99	11.00	-11.99
High	5670		0.65	11.00	-10.35

10.4.10. 802.11a MODE IN THE 5.8 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5745	42.830	17.330	1.02
Mid	5785	42.750	17.210	1.02
High	5825	42.670	17.390	1.02

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5745	30.00	29.39	35.39	29.39	17.00	17.00	17.00
Mid	5785	30.00	29.36	35.36	29.36	17.00	17.00	17.00
High	5825	30.00	29.40	35.40	29.40	17.00	17.00	17.00

Duty Cycle CF (dB)	0.33	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	12.85	13.18	29.39	-16.21
Mid	5785	12.02	12.35	29.36	-17.00
High	5825	12.87	13.20	29.40	-16.20

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5745	0.88	1.21	17.00	-15.79
Mid	5785	0.60	0.93	17.00	-16.07
High	5825	1.41	1.74	17.00	-15.26

10.4.11. 802.11n HT20 MODE IN THE 5.8 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5745	48.680	18.440	1.02
Mid	5785	48.490	18.390	1.02
High	5825	48.680	18.490	1.02

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5745	30.00	29.66	35.66	29.66	17.00	17.00	17.00
Mid	5785	30.00	29.65	35.65	29.65	17.00	17.00	17.00
High	5825	30.00	29.67	35.67	29.67	17.00	17.00	17.00

Duty Cycle CF (dB)	1.02	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	12.83	13.85	29.66	-15.80
Mid	5785	11.92	12.94	29.65	-16.71
High	5825	12.83	13.85	29.67	-15.82

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5745	0.86	1.88	17.00	-15.12
Mid	5785	0.51	1.53	17.00	-15.47
High	5825	0.80	1.82	17.00	-15.18

10.4.12. 802.11n HT40 MODE IN THE 5.8 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5755	90.5	37.0	1.02
High	5795	93.2	37.3	1.02

Limits

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

Duty Cycle CF (dB)	0.65	Included in Calculations of Corr'd Power & PPSD

Output Power Results

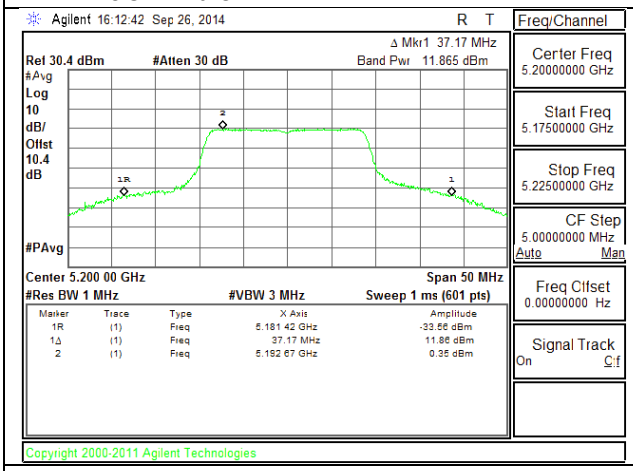
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5755	12.39	13.04	30.00	-16.97
High	5795	12.84	13.49	30.00	-16.51

PPSD Results

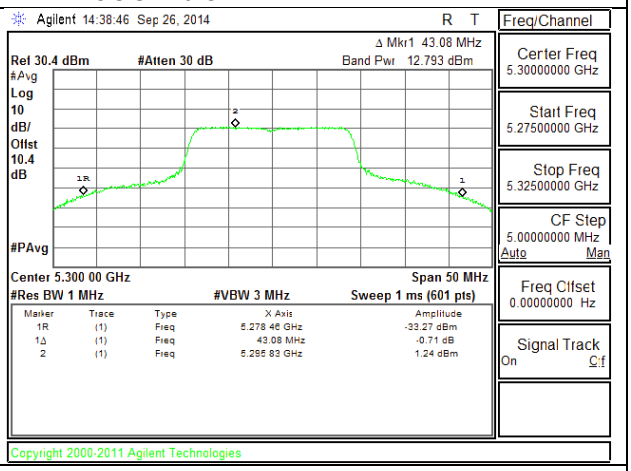
Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5755	-2.00	-1.35	17.00	-18.35
High	5795		0.65	17.00	-16.35

10.4.13. OUTPUT POWER AND PPSD PLOTS, Chain 0

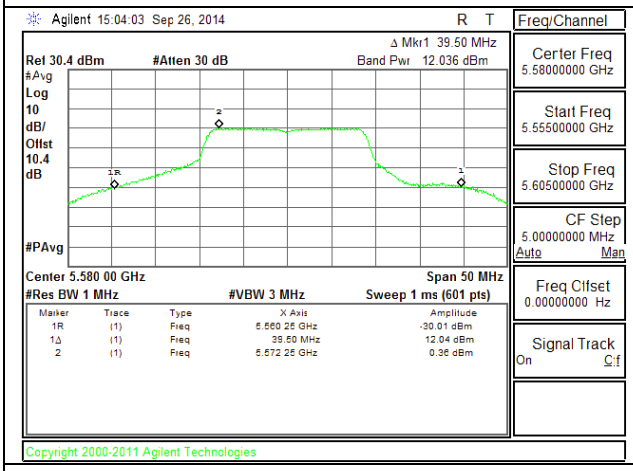
11n HT20 5.2 Mid Ch



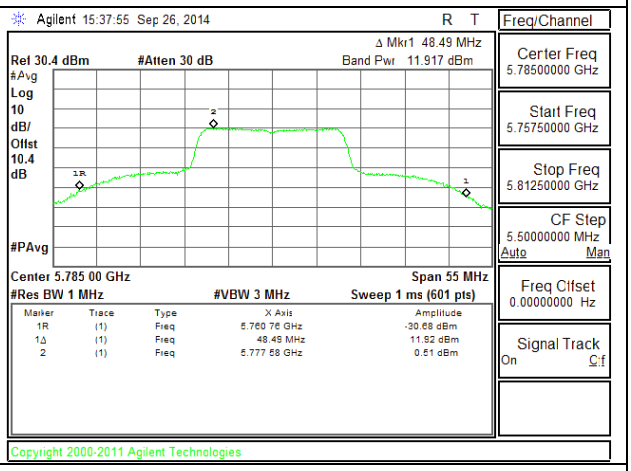
11n HT20 5.3 Mid Ch



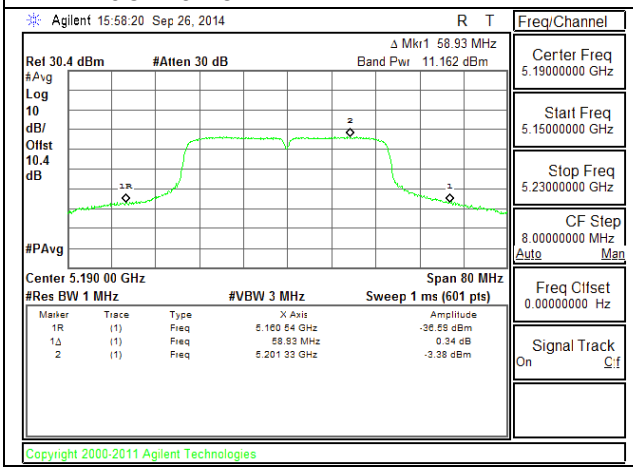
11n HT20 5.5 Mid Ch



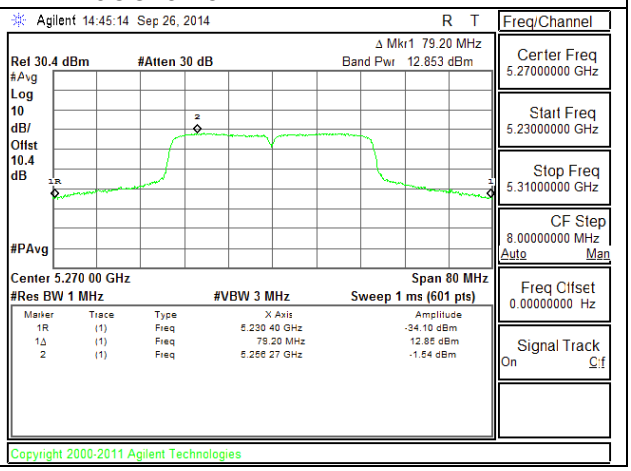
11n HT20 5.8 Mid Ch



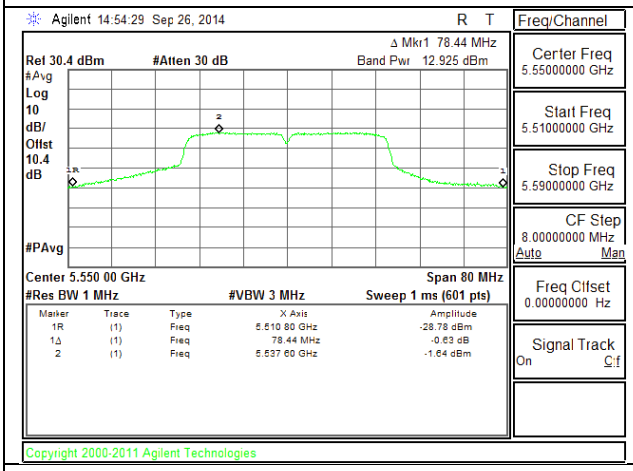
11n HT40 5.2 Low Ch



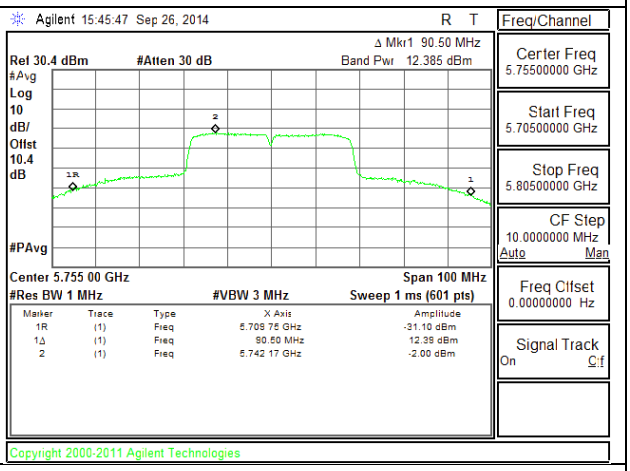
11n HT40 5.3 Low Ch



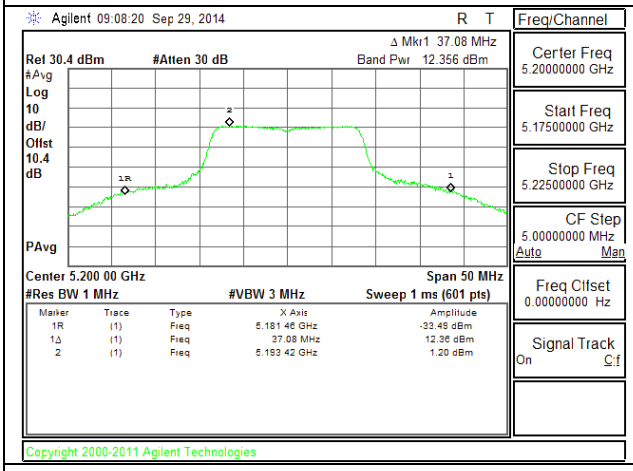
11n HT40 5.5 Mid Ch



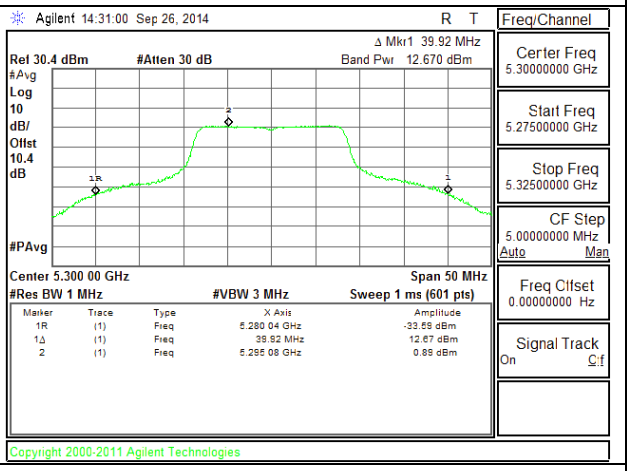
11n HT40 5.8 Low Ch



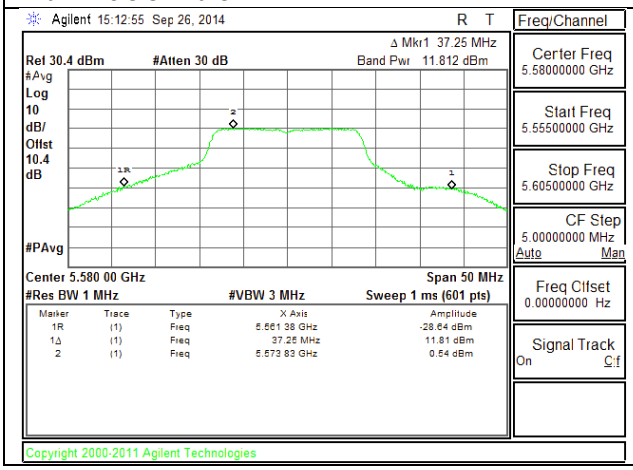
11a HT20 5.2 Mid Ch



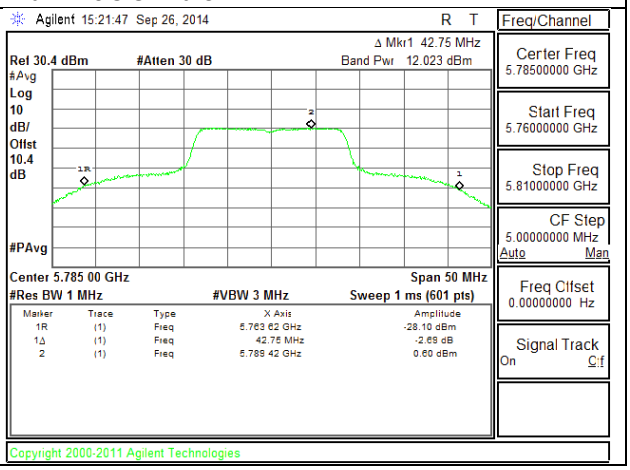
11a HT20 5.3 Mid Ch



11a HT20 5.5 Mid Ch



11a HT20 5.8 Mid Ch



10.5. PEAK EXCURSION

LIMITS

FCC §15.407 (a) (6)

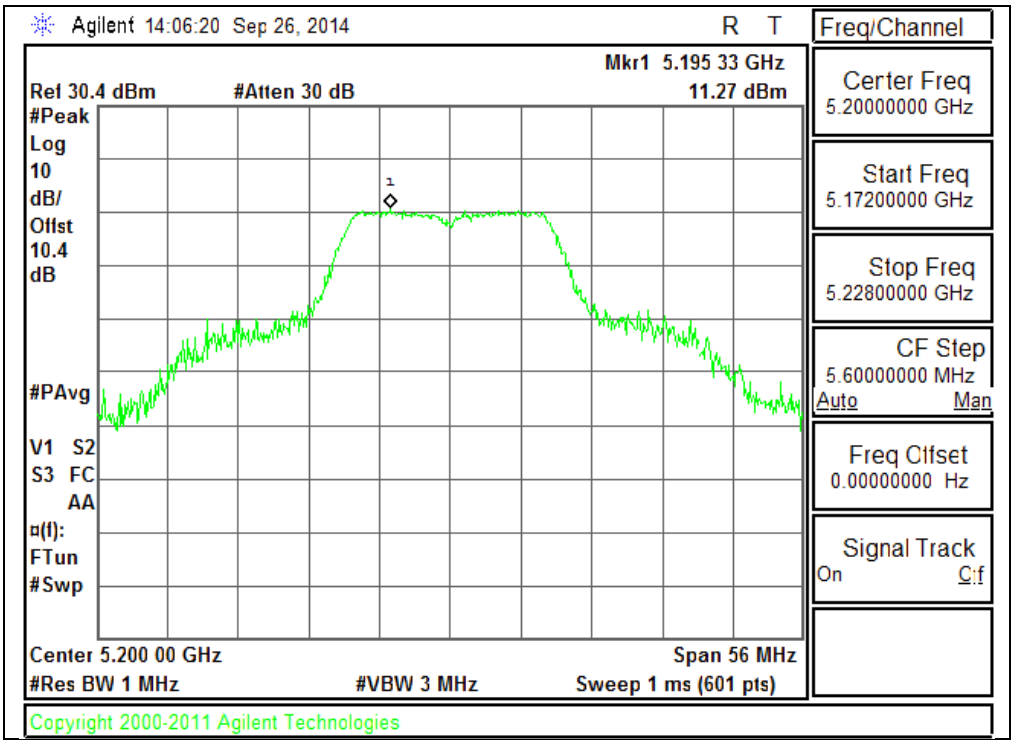
The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the peak transmit power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

RESULTS

10.5.1. 802.11a MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	PK Level (dBm)	PSD (dBm)	DCCF (dB)	Peak Excursion (dB)	Limit (dB)	Margin (dB)
Mid	5200	11.270	1.20	0.33	9.74	13	-3.26

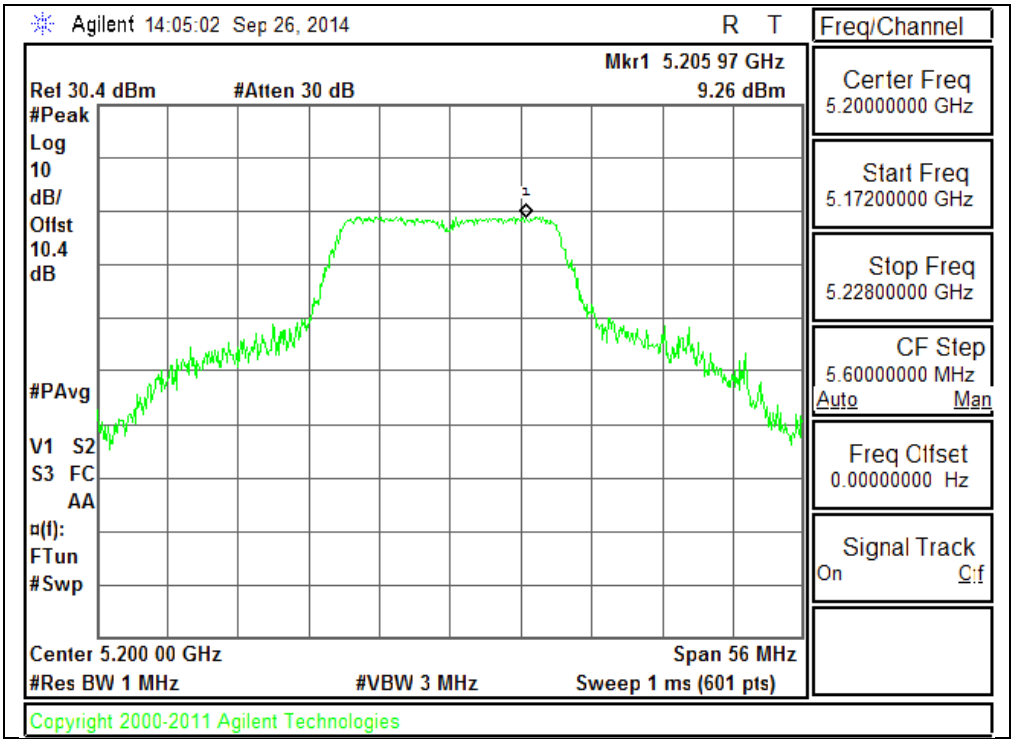
PEAK EXCURSION



10.5.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	PK Level (dBm)	PSD (dBm)	DCCF (dB)	Peak Excursion (dB)	Limit (dB)	Margin (dB)
Mid	5200	9.260	0.35	0.53	8.38	13	-4.62

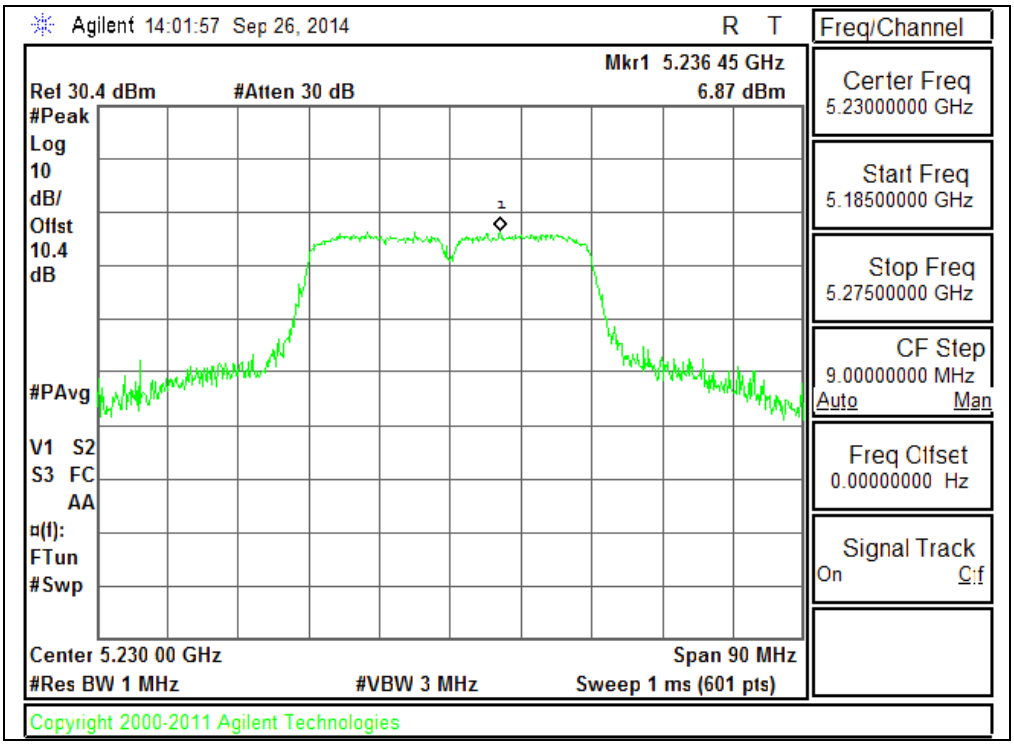
PEAK EXCURSION



10.5.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	PK Level (dBm)	PSD (dBm)	DCCF (dB)	Peak Excursion (dB)	Limit (dB)	Margin (dB)
Mid	5230	6.870	-3.22	0.65	9.44	13	-3.56

PEAK EXCURSION



11. TRANSMITTER ABOVE 1 GHz

LIMITS

FCC §15.205 and §15.209

Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane. 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.

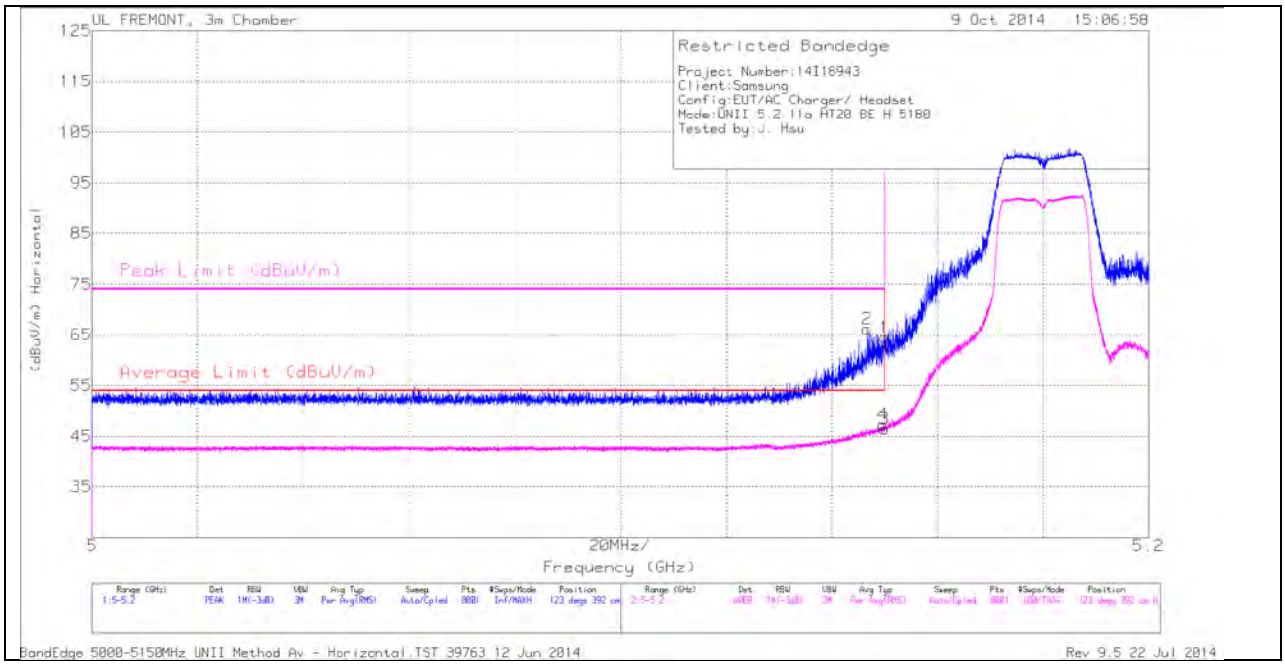
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized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

11.1. 5.2 GHz

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

RESTRICTED BANDEDGE (LOW CHANNEL)

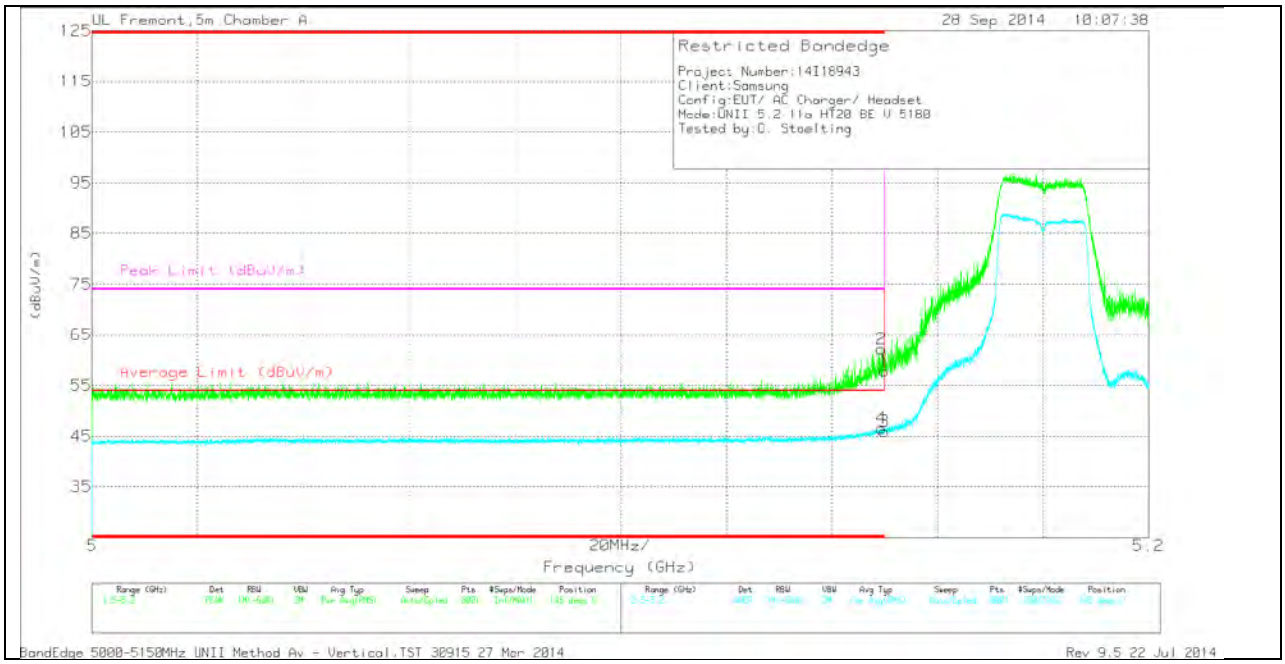
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.147	53.63	PK	34.2	-21.6	66.23	-	-	74	-7.77	123	392	H
1	5.15	51.87	PK	34.2	-21.6	64.47	-	-	74	-9.53	123	392	H
3	5.15	33.82	RMS	34.2	-21.6	46.42	54	-7.58	-	-	123	392	H
4	5.15	34.72	RMS	34.2	-21.6	47.32	54	-6.68	-	-	123	392	H

VERTICAL PEAK AND AVERAGE PLOT

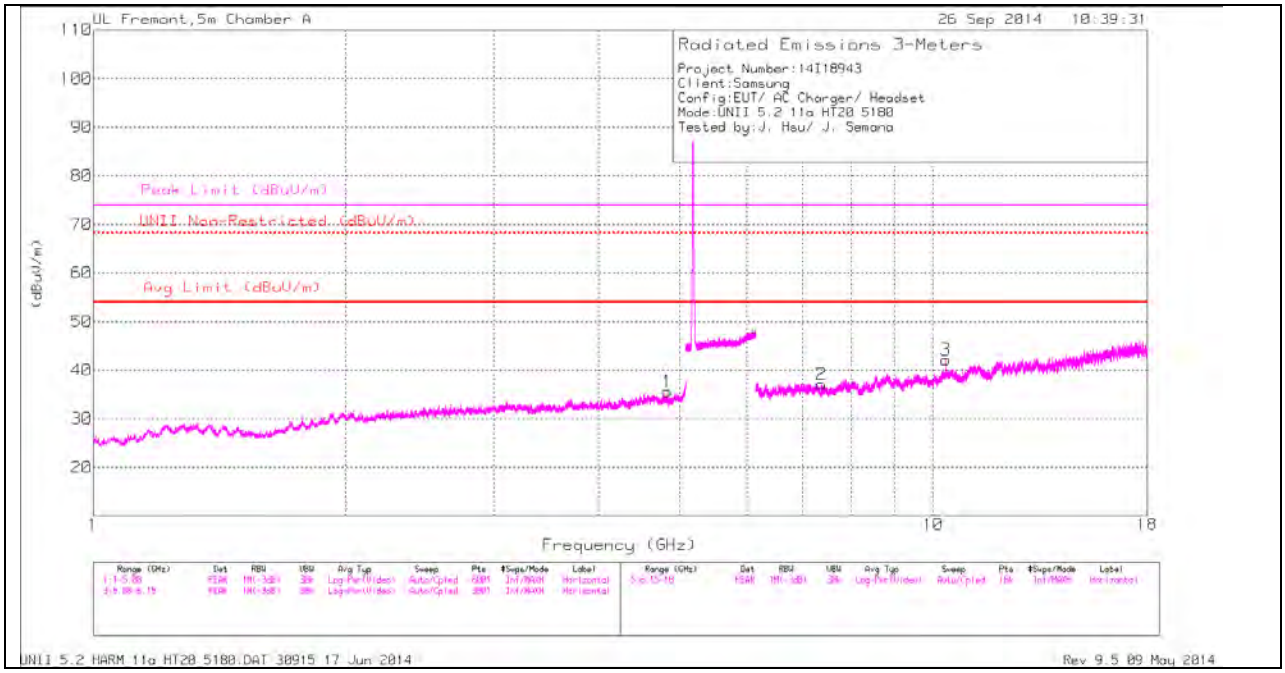


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	44.43	PK	34	-20.6	0	57.83	-	-	74	-16.17	145	394	V
2	* 5.149	48.81	PK	34	-20.6	0	62.21	-	-	74	-11.79	145	394	V
3	* 5.15	32.27	RMS	34	-20.6	.33	46	54	-8	-	-	145	394	V
4	* 5.149	32.82	RMS	34	-20.6	.33	46.55	54	-7.45	-	-	145	394	V

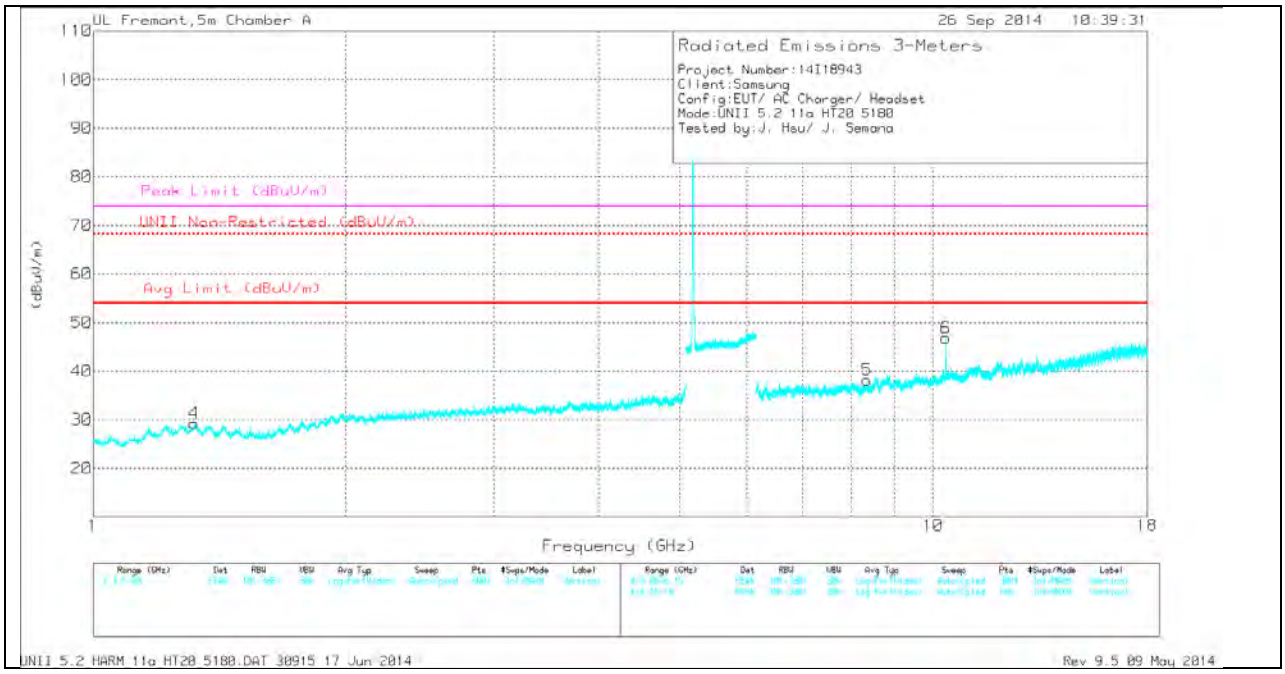
HARMONICS AND SPURIOUS EMISSIONS

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.

LOW CHANNEL VERTICAL



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

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	4.83	31.7	PK	34	-30.1	0	35.6	-	-	74	-38.4	-	-	0-360	100	H
4	1.32	32.83	PK	30	-33.6	0	29.23	-	-	74	-44.77	-	-	0-360	200	V
2	7.365	30.4	PK	35.6	-28.9	0	37.1	-	-	74	-36.9	-	-	0-360	100	H
3	10.359	30.22	PK	37.3	-25.4	0	42.12	-	-	-	-	68.2	-26.08	0-360	200	H
5	8.346	28.95	PK	35.8	-26.6	0	38.15	-	-	74	-35.85	-	-	0-360	100	V
6	10.359	34.9	PK	37.3	-25.4	0	46.8	-	-	-	-	68.2	-21.4	0-360	200	V

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Flt r/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
10.361	37.34	PK1	37.3	-25.4	0	49.24	-	-	-	-	68.2	-18.96	115	299	H
10.36	26.14	AD1	37.3	-25.4	.3	38.34	-	-	-	-	-	-	115	299	H
10.36	41.06	PK1	37.3	-25.4	0	52.96	-	-	-	-	68.2	-15.24	115	299	V
10.36	32.88	AD1	37.3	-25.4	.3	45.08	-	-	-	-	-	-	115	299	V

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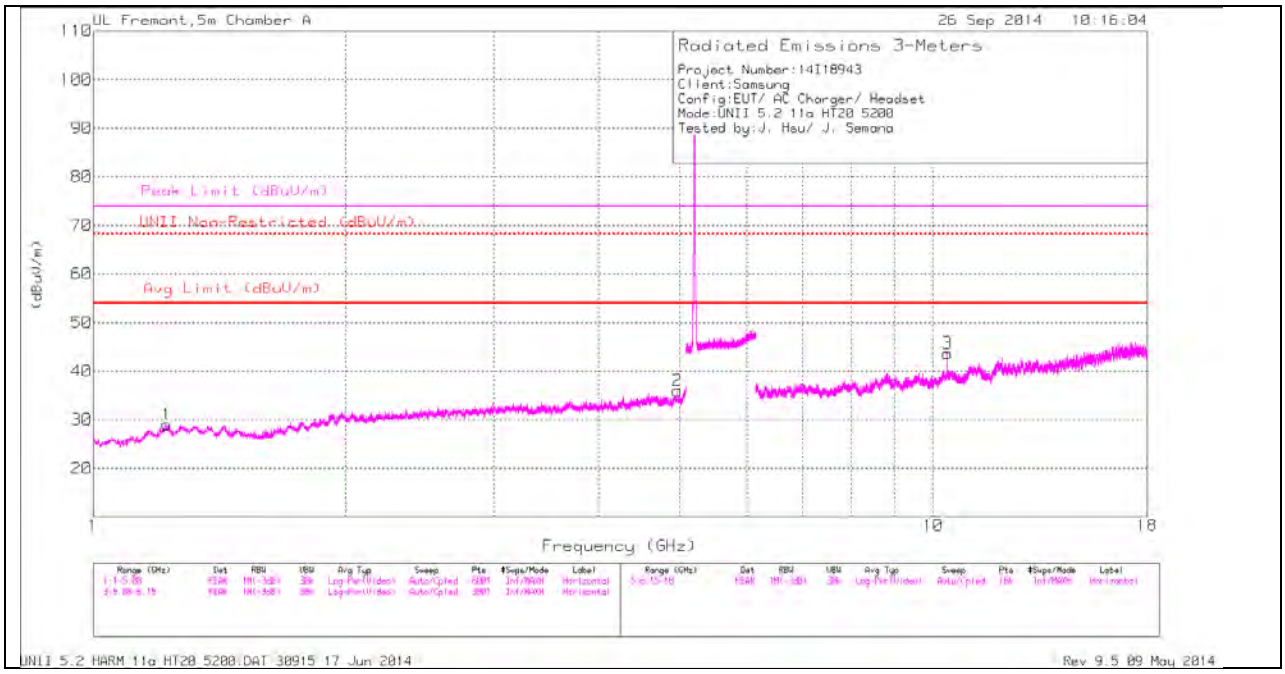
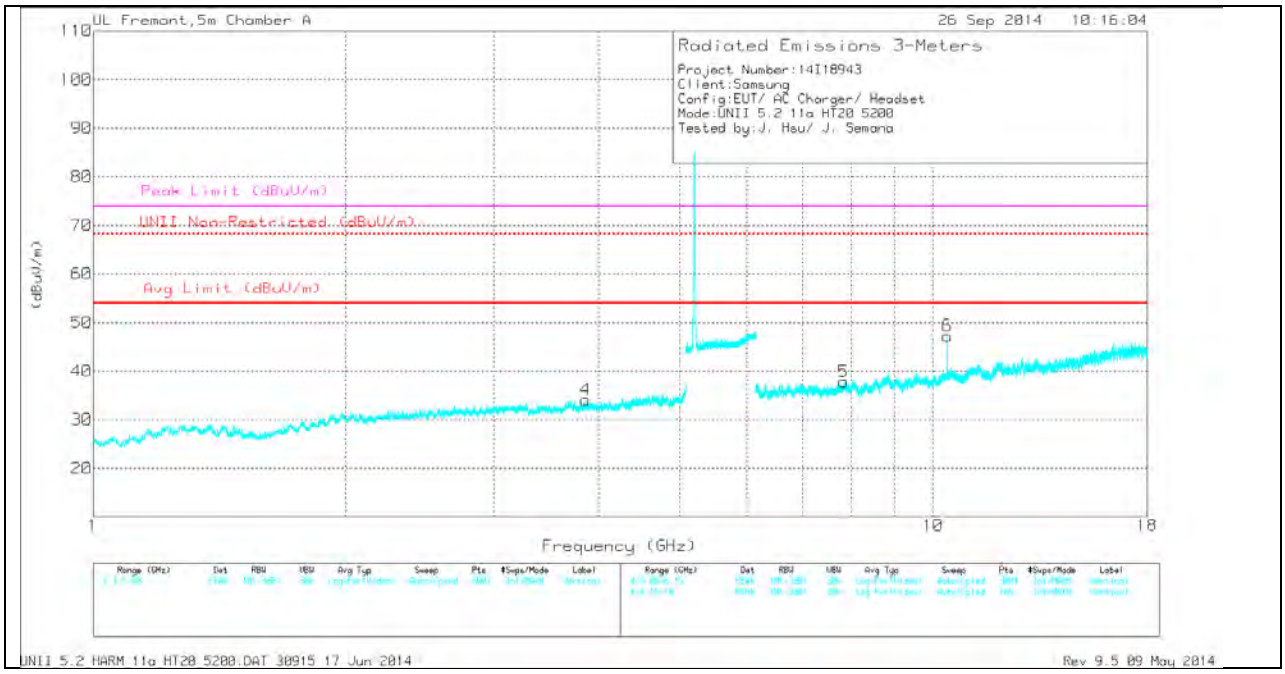
MID CHANNEL HORIZONTAL



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

MID CHANNEL VERTICAL



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

MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.224	32.83	PK	29.5	-33.3	0	29.03	-	-	74	-44.97	-	-	0-360	200	H
2	4.964	31.51	PK	34	-29.5	0	36.01	-	-	74	-37.99	-	-	0-360	100	H
4	3.86	31.8	PK	33.2	-30.9	0	34.1	-	-	74	-39.9	-	-	0-360	200	V
3	10.399	32.15	PK	37.3	-25.8	0	43.65	-	-	-	-	68.2	-24.55	0-360	200	H
5	7.833	29.81	PK	35.8	-27.8	0	37.81	-	-	-	-	68.2	-30.39	0-360	200	V
6	10.4	35.71	PK	37.3	-25.8	0	47.21	-	-	-	-	68.2	-20.99	0-360	200	V

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
10.4	40.99	PK1	37.3	-25.8	0	52.49	-	-	-	-	68.2	-15.71	103	302	H
10.4	33.04	AD1	37.3	-25.8	.3	44.84	-	-	-	-	-	-	103	302	H
10.4	42.62	PK1	37.3	-25.8	0	54.12	-	-	-	-	68.2	-14.08	98	272	V
10.4	35.38	AD1	37.3	-25.8	.3	47.18	-	-	-	-	-	-	98	272	V

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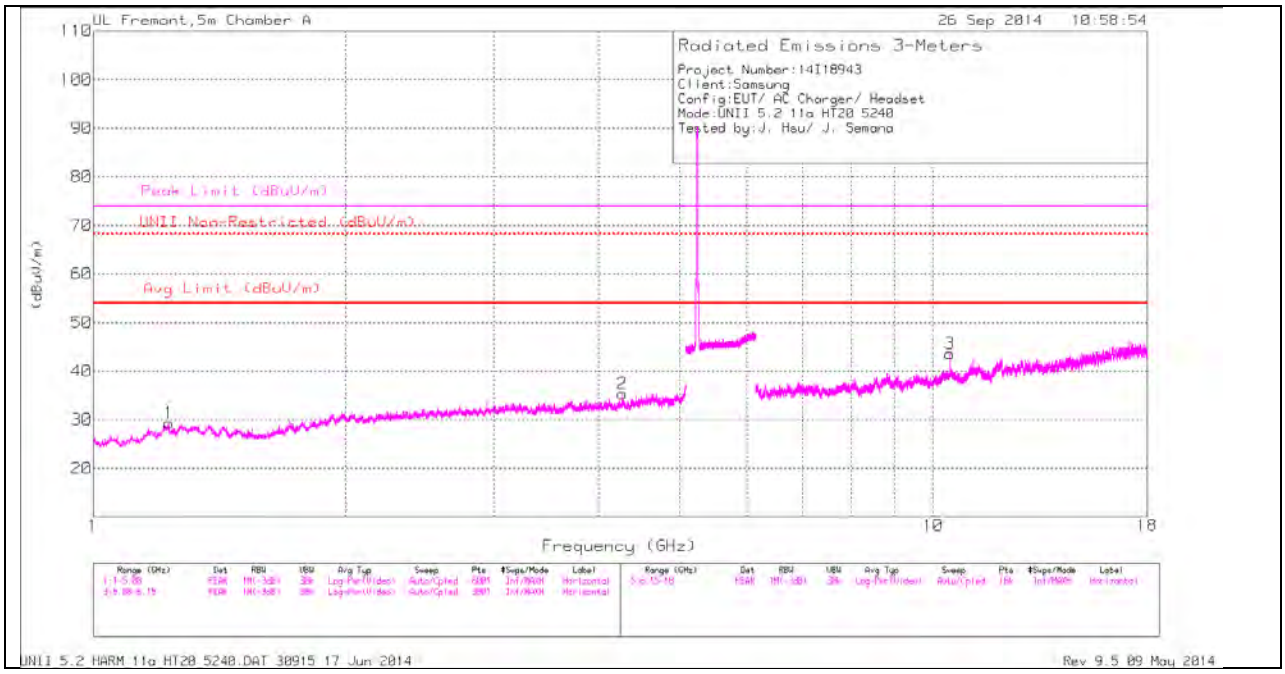
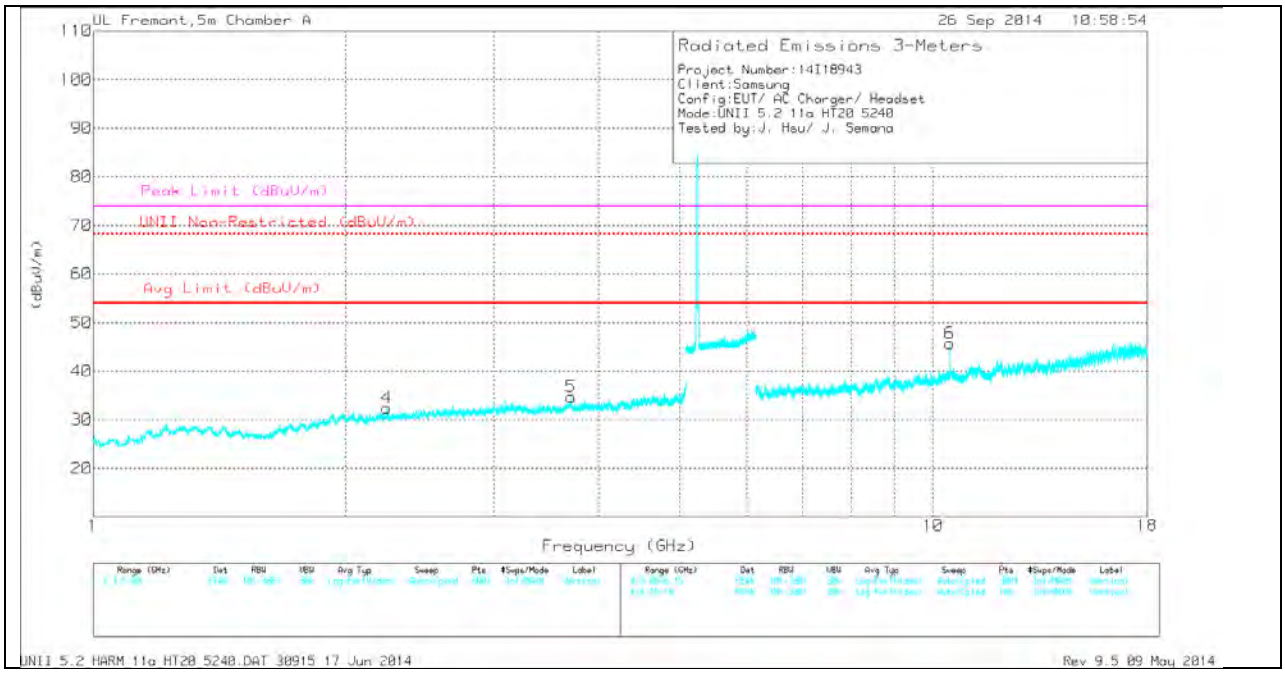
HIGH CHANNEL HORIZONTAL



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

HIGH CHANNEL VERTICAL



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

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.231	33.02	PK	29.6	-33.3	0	29.32	-	-	74	-44.68	-	-	0-360	200	H
2	4.269	32.15	PK	33.5	-30.3	0	35.35	-	-	74	-38.65	-	-	0-360	100	H
4	2.239	33.1	PK	31.7	-32.4	0	32.4	-	-	74	-41.6	-	-	0-360	200	V
5	3.711	32.4	PK	33.2	-30.9	0	34.7	-	-	74	-39.3	-	-	0-360	200	V
3	10.48	31.82	PK	37.5	-25.7	0	43.62	-	-	-	-	68.2	-24.58	0-360	200	H
6	10.479	33.93	PK	37.5	-25.7	0	45.73	-	-	-	-	68.2	-22.47	0-360	200	V

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
10.48	40.92	PK1	37.5	-25.7	0	52.72	-	-	-	-	68.2	-15.48	102	272	H
10.48	32.19	AD1	37.5	-25.7	.3	44.29	-	-	-	-	-	-	102	272	H
10.48	40.61	PK1	37.5	-25.7	0	52.41	-	-	-	-	68.2	-15.79	120	186	V
10.48	34.55	AD1	37.5	-25.7	.3	46.65	-	-	-	-	-	-	120	186	V

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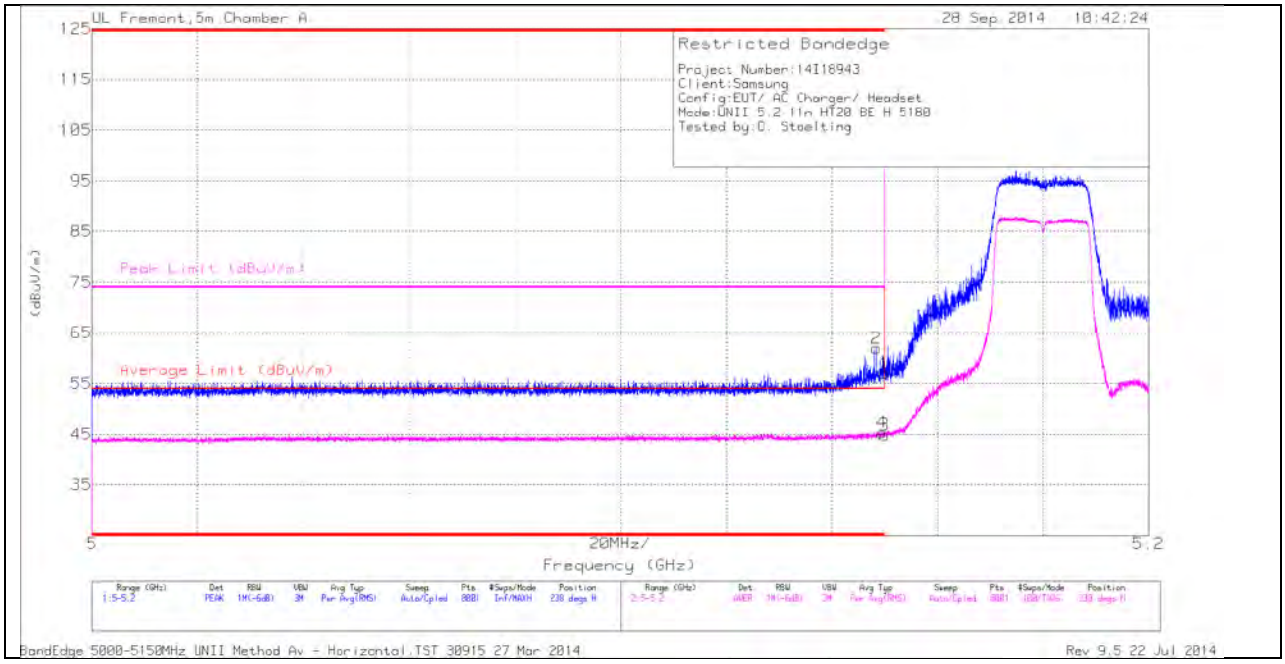
11.1.2. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.2 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

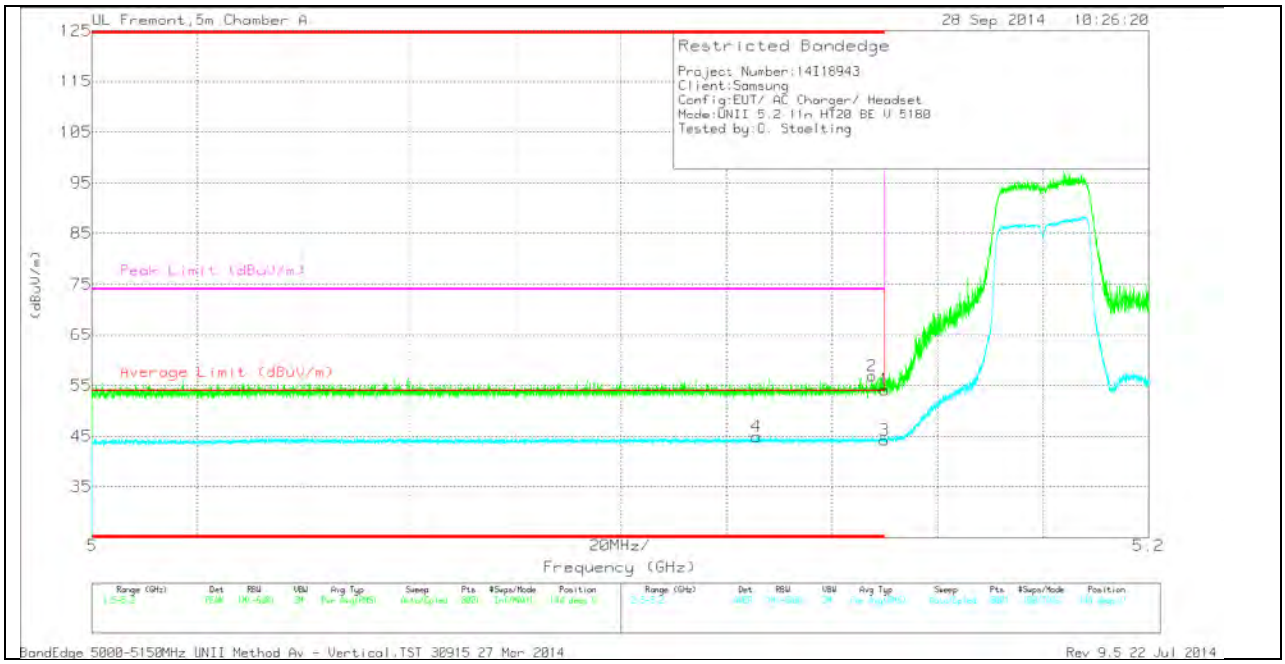
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	43.56	PK	34	-20.6	0	56.96	-	-	74	-17.04	238	340	H
2	* 5.148	48.58	PK	34	-20.6	0	61.98	-	-	74	-12.02	238	340	H
3	* 5.15	31.16	RMS	34	-20.6	.33	44.89	54	-9.11	-	-	238	340	H
4	* 5.15	31.62	RMS	34	-20.6	.33	45.35	54	-8.65	-	-	238	340	H

VERTICAL PEAK AND AVERAGE PLOT

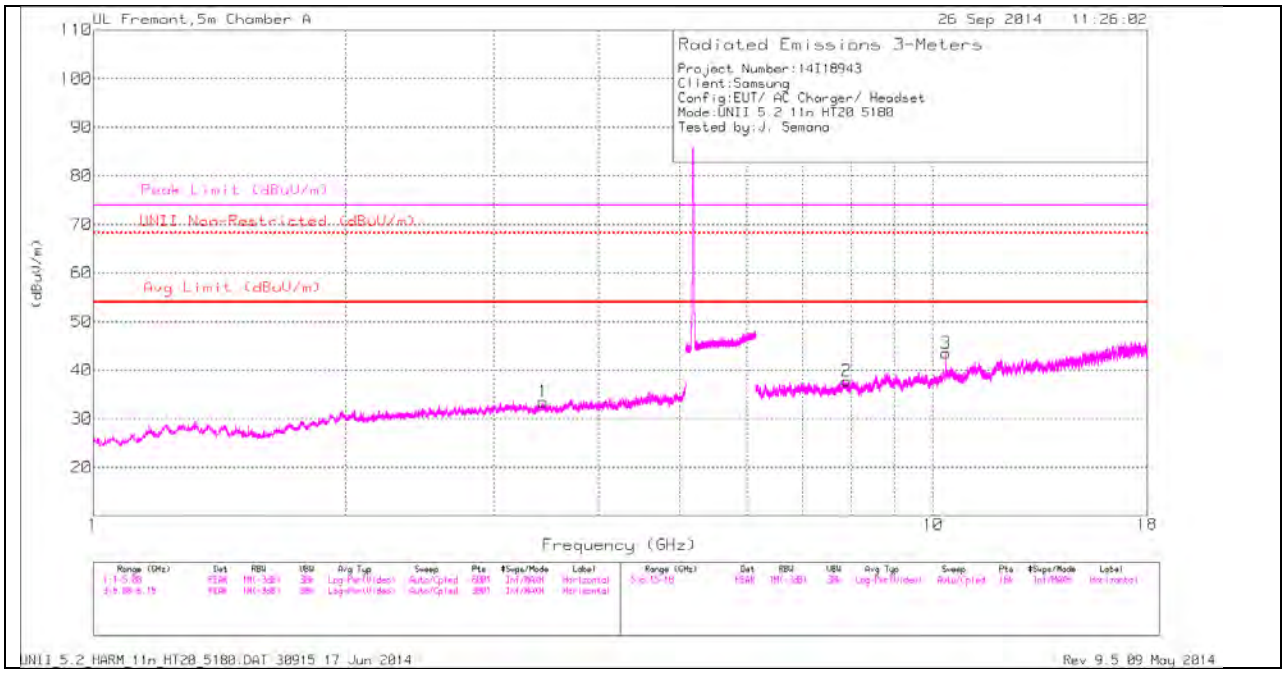


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	40.72	PK	34	-20.6	0	54.12	-	-	74	-19.88	144	345	V
2	* 5.148	43.44	PK	34	-20.6	0	56.84	-	-	74	-17.16	144	345	V
3	* 5.15	30.5	RMS	34	-20.6	.33	44.23	54	-9.77	-	-	144	345	V
4	* 5.126	31.18	RMS	33.9	-20.5	.33	44.91	54	-9.09	-	-	144	345	V

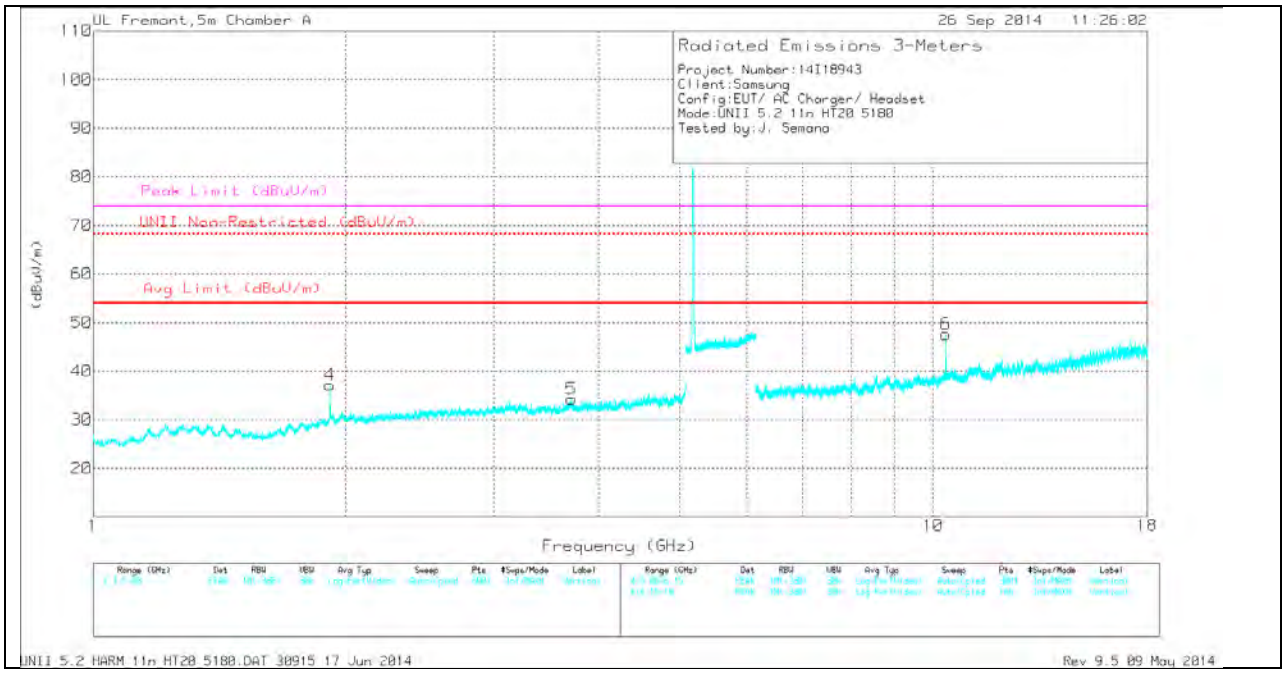
HARMONICS AND SPURIOUS EMISSIONS

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.

LOW CHANNEL VERTICAL



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

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	3.435	31.99	PK	32.9	-31.4	0	33.49	-	-	-	-	68.2	-34.71	0-360	200	H
4	1.915	38.63	PK	31.3	-32.8	0	37.13	-	-	-	-	68.2	-31.07	0-360	100	V
5	3.713	32.03	PK	33.2	-31	0	34.23	-	-	74	-39.77	-	-	0-360	100	V
2	7.893	29.88	PK	35.8	-27.9	0	37.78	-	-	-	-	68.2	-30.42	0-360	100	H
3	10.359	31.62	PK	37.3	-25.4	0	43.52	-	-	-	-	68.2	-24.68	0-360	200	H
6	10.359	35.74	PK	37.3	-25.4	0	47.64	-	-	-	-	68.2	-20.56	0-360	200	V

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.912	46.58	PK1	31.3	-32.8	0	45.08	-	-	-	-	68.2	-23.12	0	100	V
1.911	31.79	AD1	31.3	-32.7	.3	30.69	-	-	-	-	-	-	0	100	V
1.916	41.88	PK1	31.3	-32.7	0	40.48	-	-	-	-	68.2	-27.72	184	367	V
1.916	29.73	AD1	31.3	-32.7	.3	28.63	-	-	-	-	-	-	184	367	V
10.36	39.49	PK1	37.3	-25.4	0	51.39	-	-	-	-	68.2	-16.81	49	281	V
10.36	32.48	AD1	37.3	-25.4	.3	44.68	-	-	-	-	-	-	49	281	V

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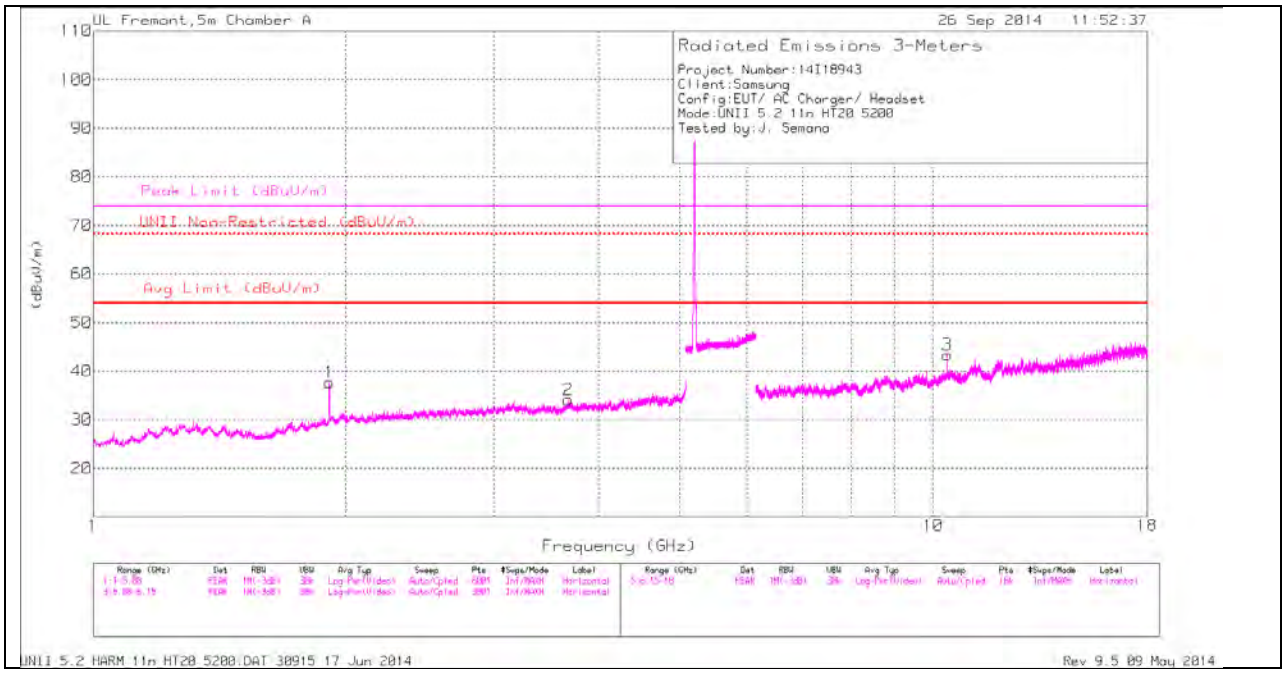
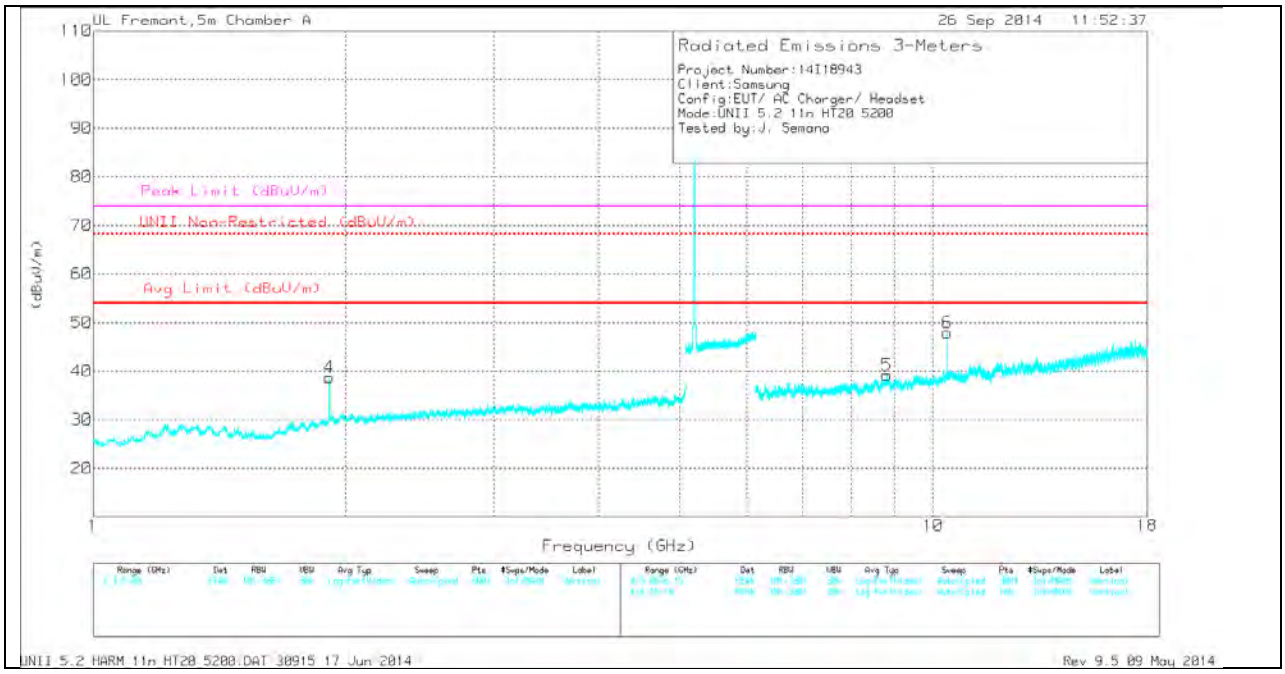
MID CHANNEL HORIZONTAL



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

MID CHANNEL VERTICAL



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

MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.911	39.18	PK	31.3	-32.8	0	37.68	-	-	-	-	68.2	-30.52	0-360	200	H
2	3.68	31.41	PK	33.2	-30.5	0	34.11	-	-	74	-39.89	-	-	0-360	100	H
4	1.911	40.2	PK	31.3	-32.8	0	38.7	-	-	-	-	68.2	-29.5	0-360	200	V
3	10.399	31.87	PK	37.3	-25.8	0	43.37	-	-	-	-	68.2	-24.83	0-360	200	H
5	8.816	28.68	PK	36	-25.5	0	39.18	-	-	-	-	68.2	-29.02	0-360	200	V
6	10.399	36.42	PK	37.3	-25.8	0	47.92	-	-	-	-	68.2	-20.28	0-360	200	V

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.911	41.4	PK1	31.3	-32.7	0	40	-	-	-	-	68.2	-28.2	264	147	V
1.912	29.42	AD1	31.3	-32.8	.3	28.22	-	-	-	-	-	-	264	147	V
10.4	41.31	PK1	37.3	-25.8	0	52.81	-	-	-	-	68.2	-15.39	127	174	V
10.4	34.39	AD1	37.3	-25.8	.3	46.19	-	-	-	-	-	-	127	174	V
10.36	39.49	PK1	37.3	-25.4	0	51.39	-	-	-	-	68.2	-16.81	49	281	V
10.36	32.48	AD1	37.3	-25.4	.3	44.68	-	-	-	-	-	-	49	281	V

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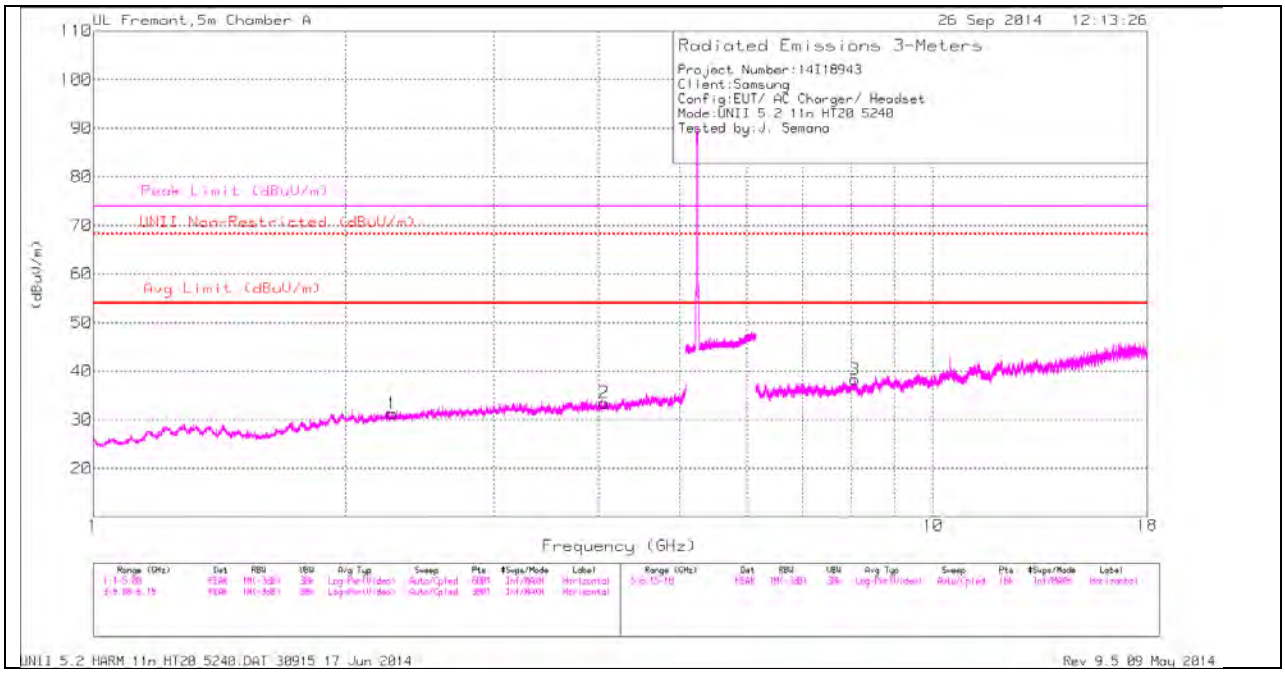
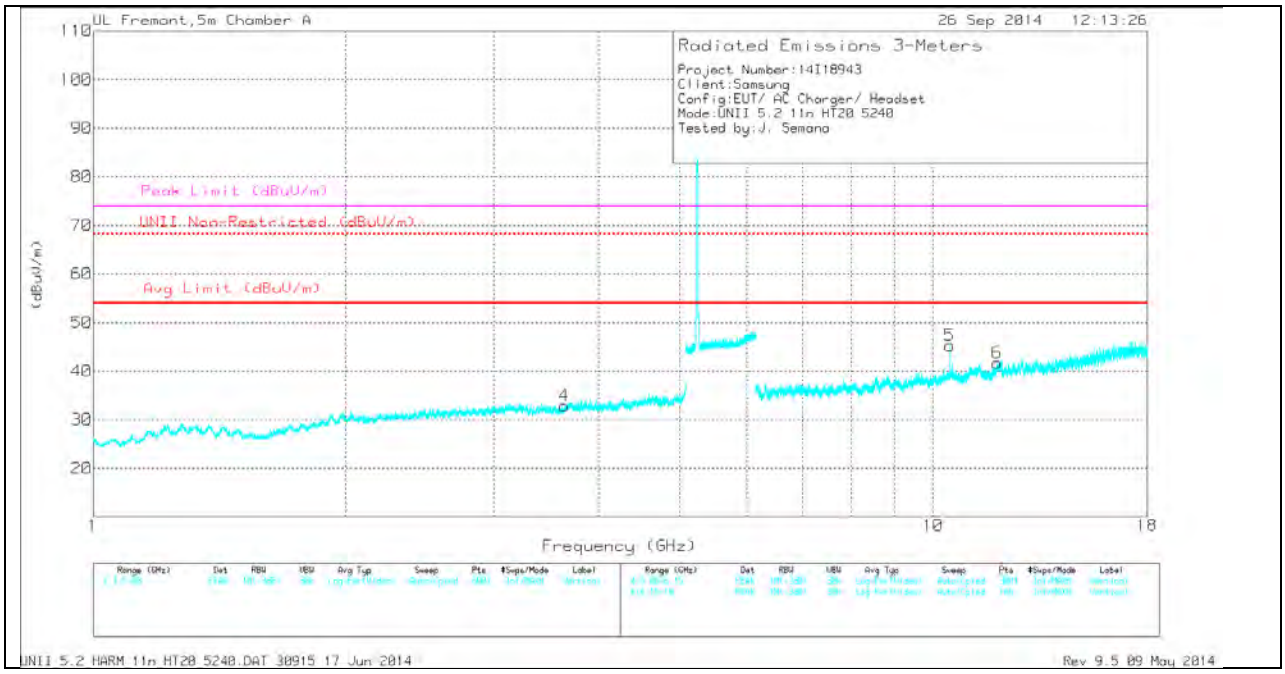
HIGH CHANNEL HORIZONTAL



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

HIGH CHANNEL VERTICAL



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

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.272	31.64	PK	31.8	-32.2	0	31.24	-	-	74	-42.76	-	-	0-360	100	H
2	4.064	31.32	PK	33.4	-31.2	0	33.52	-	-	74	-40.48	-	-	0-360	100	H
4	3.641	30.74	PK	33.1	-31	0	32.84	-	-	74	-41.16	-	-	0-360	100	V
3	8.072	29.77	PK	35.7	-27.2	0	38.27	-	-	74	-35.73	-	-	0-360	200	H
5	10.479	33.46	PK	37.5	-25.7	0	45.26	-	-	-	-	68.2	-22.94	0-360	200	V
6	11.926	28.92	PK	39	-26.2	0	41.72	-	-	74	-32.28	-	-	0-360	100	V

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
10.48	39.9	PK1	37.5	-25.7	0	51.7	-	-	-	-	68.2	-16.5	126	150	V
10.48	32.97	AD1	37.5	-25.7	.3	45.07	-	-	-	-	-	-	126	150	V
10.4	41.31	PK1	37.3	-25.8	0	52.81	-	-	-	-	68.2	-15.39	127	174	V
10.4	34.39	AD1	37.3	-25.8	.3	46.19	-	-	-	-	-	-	127	174	V
10.36	39.49	PK1	37.3	-25.4	0	51.39	-	-	-	-	68.2	-16.81	49	281	V
10.36	32.48	AD1	37.3	-25.4	.3	44.68	-	-	-	-	-	-	49	281	V

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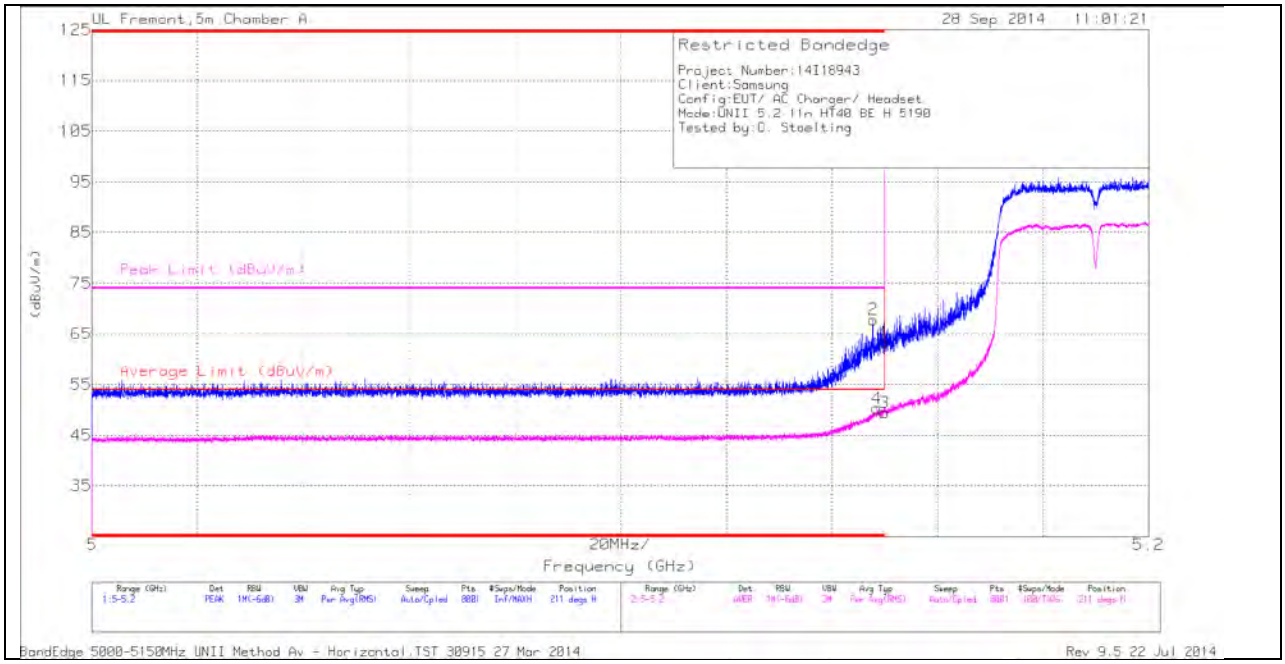
11.1.3. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.2 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

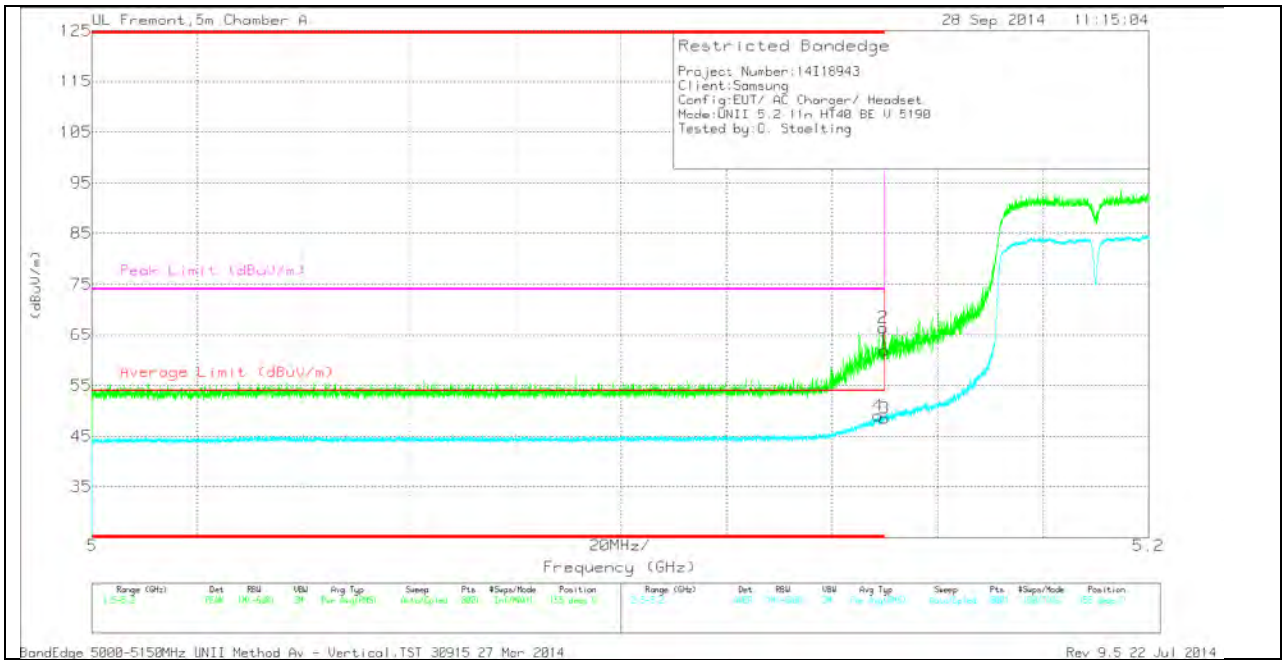
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	49.87	PK	34	-20.6	0	63.27	-	-	74	-10.73	211	371	H
2	* 5.148	54.36	PK	34	-20.6	0	67.76	-	-	74	-6.24	211	371	H
3	* 5.15	35.31	RMS	34	-20.6	.66	49.37	54	-4.63	-	-	211	371	H
4	* 5.149	36.26	RMS	34	-20.6	.66	50.32	54	-3.68	-	-	211	371	H

VERTICAL PEAK AND AVERAGE PLOT

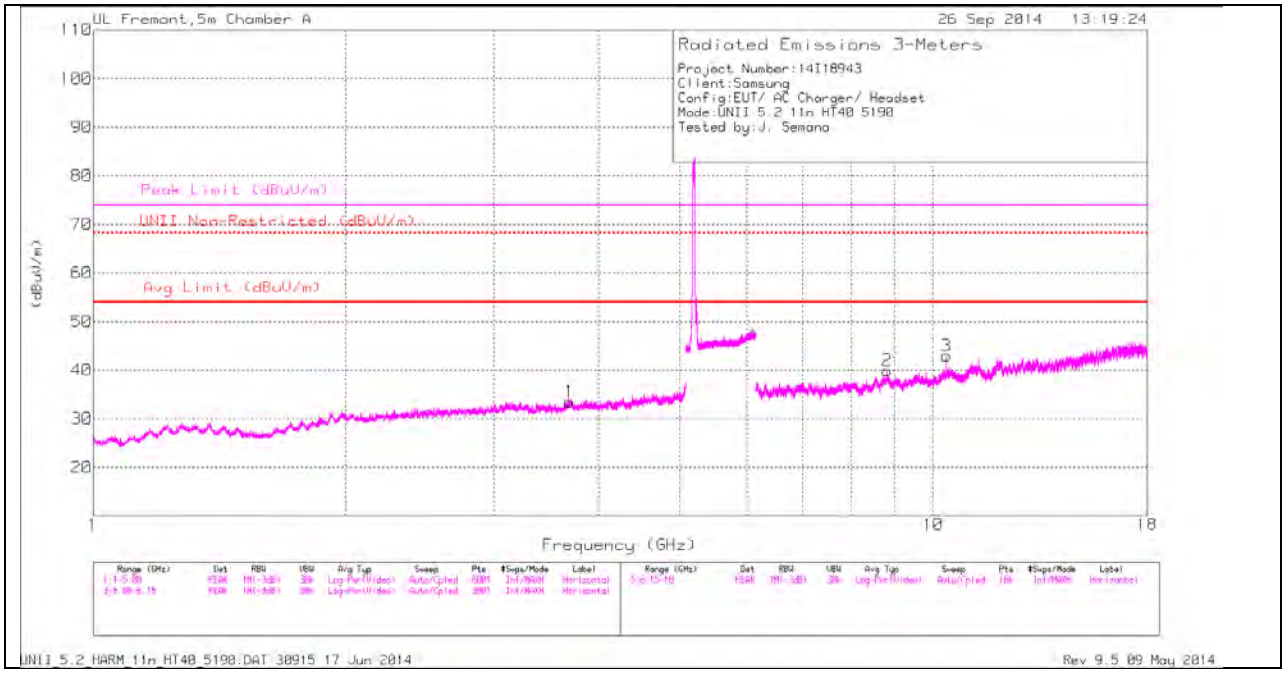


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	48.52	PK	34	-20.6	0	61.92	-	-	74	-12.08	155	313	V
2	* 5.15	53.08	PK	34	-20.6	0	66.48	-	-	74	-7.52	155	313	V
3	* 5.15	34.46	RMS	34	-20.6	.66	48.52	54	-5.48	-	-	155	313	V
4	* 5.149	34.96	RMS	34	-20.6	.66	49.02	54	-4.98	-	-	155	313	V

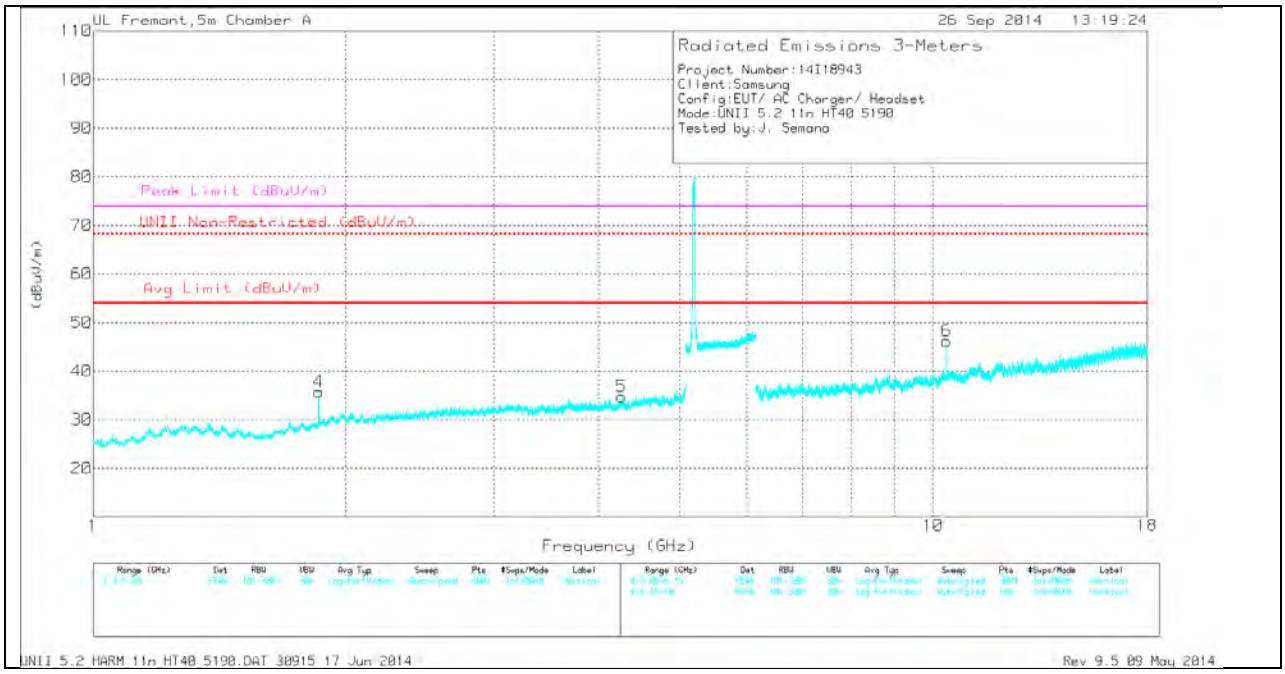
HARMONICS AND SPURIOUS EMISSIONS

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.

LOW CHANNEL VERTICAL



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

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	3.692	30.89	PK	33.2	-30.6	0	33.49	-	-	74	-40.51	-	-	0-360	200	H
4	1.857	38.25	PK	30.8	-33.3	0	35.75	-	-	-	-	68.2	-32.45	0-360	100	V
5	4.259	31.85	PK	33.5	-30.6	0	34.75	-	-	74	-39.25	-	-	0-360	100	V
2	8.82	29.62	PK	36	-25.7	0	39.92	-	-	-	-	68.2	-28.28	0-360	200	H
3	10.379	31.23	PK	37.3	-25.6	0	42.93	-	-	-	-	68.2	-25.27	0-360	100	H
6	10.379	34.51	PK	37.3	-25.6	0	46.21	-	-	-	-	68.2	-21.99	0-360	200	V

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.858	42.63	PK1	30.8	-33.3	0	40.13	-	-	-	-	68.2	-28.07	150	210	V
1.859	29.57	AD1	30.8	-33.3	.3	27.37	-	-	-	-	-	-	150	210	V
10.38	40.9	PK1	37.3	-25.6	0	52.6	-	-	-	-	68.2	-15.6	116	153	V
10.38	33.92	AD1	37.3	-25.6	.3	45.92	-	-	-	-	-	-	116	153	V
10.36	39.49	PK1	37.3	-25.4	0	51.39	-	-	-	-	68.2	-16.81	49	281	V
10.36	32.48	AD1	37.3	-25.4	.3	44.68	-	-	-	-	-	-	49	281	V

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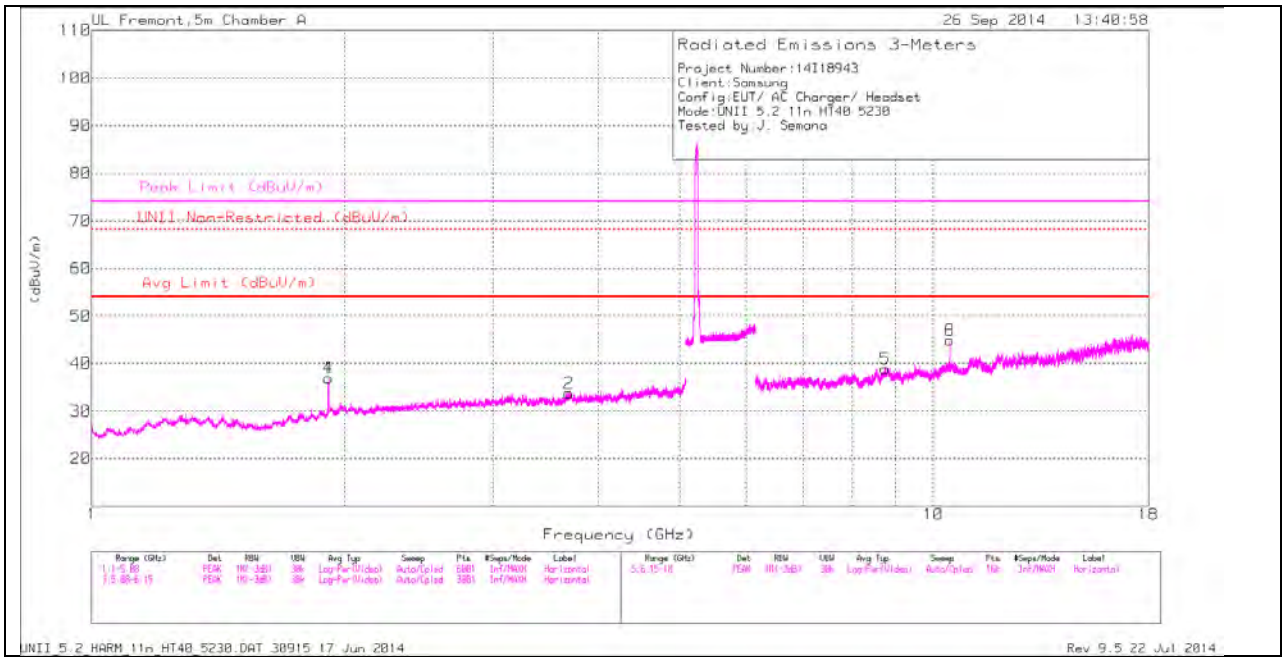
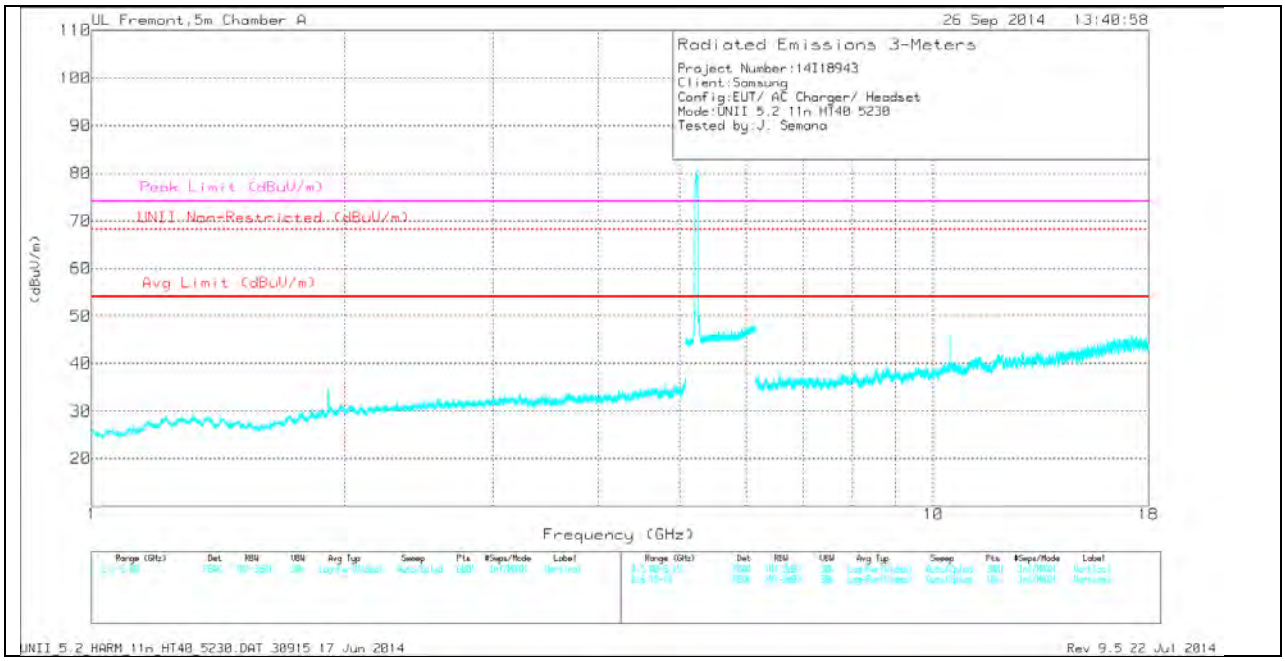
MID CHANNEL HORIZONTAL



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

MID CHANNEL VERTICAL



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

MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.912	38.44	PK	31.3	-32.8	0	36.94	-	-	-	-	68.2	-31.26	0-360	200	H
2	3.689	31.15	PK	33.2	-30.6	0	33.75	-	-	74	-40.25	-	-	0-360	100	H
4	1.912	38.44	PK	31.3	-32.8	0	36.94	-	-	-	-	68.2	-31.26	0-360	200	H
3	10.459	33.18	PK	37.4	-25.7	0	44.88	-	-	-	-	68.2	-23.32	0-360	200	H
5	8.769	28.89	PK	35.9	-25.9	0	38.89	-	-	-	-	68.2	-29.31	0-360	100	H
6	10.459	33.18	PK	37.4	-25.7	0	44.88	-	-	-	-	68.2	-23.32	0-360	200	H

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
10.46	39.65	PK1	37.4	-25.7	0	51.35	-	-	-	-	68.2	-16.85	106	272	H
10.46	32.37	AD1	37.4	-25.7	.3	44.37	-	-	-	-	-	-	106	272	H
10.64	38.98	PK1	37.8	-25.1	0	51.68	-	-	74	-22.32	-	-	118	124	V
10.64	30.74	AD1	37.8	-25.1	.3	43.74	54	-10.26	-	-	-	-	118	124	V

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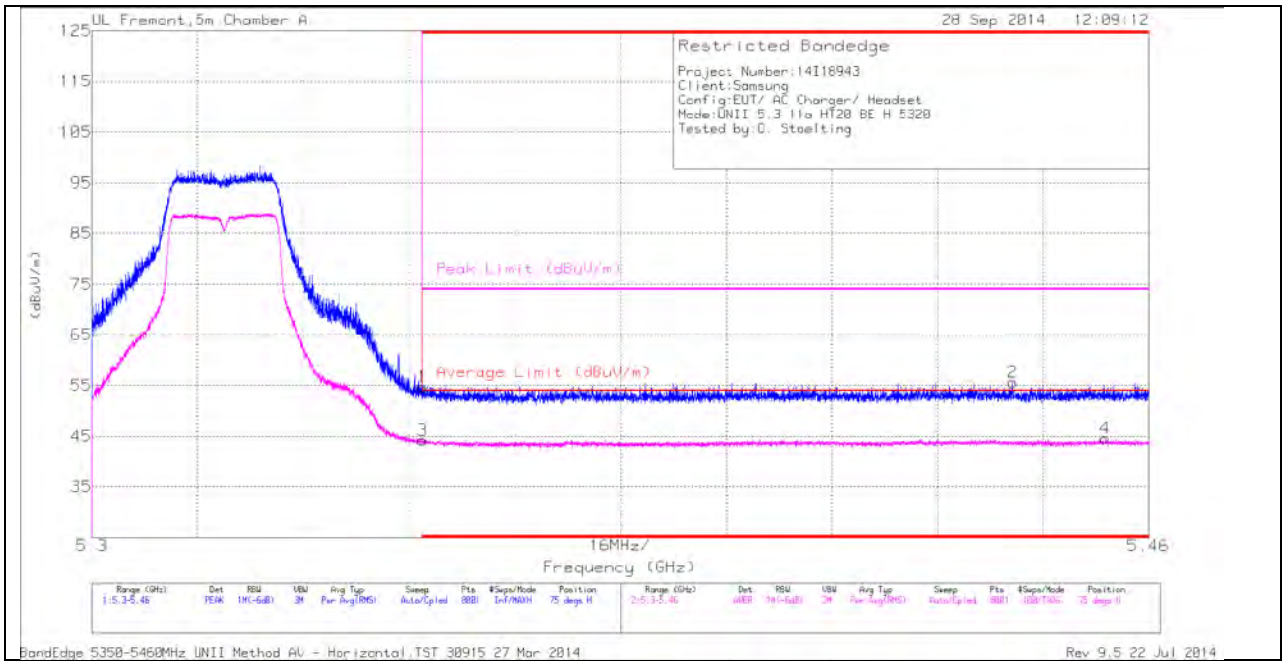
11.2. 5.3 GHz

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

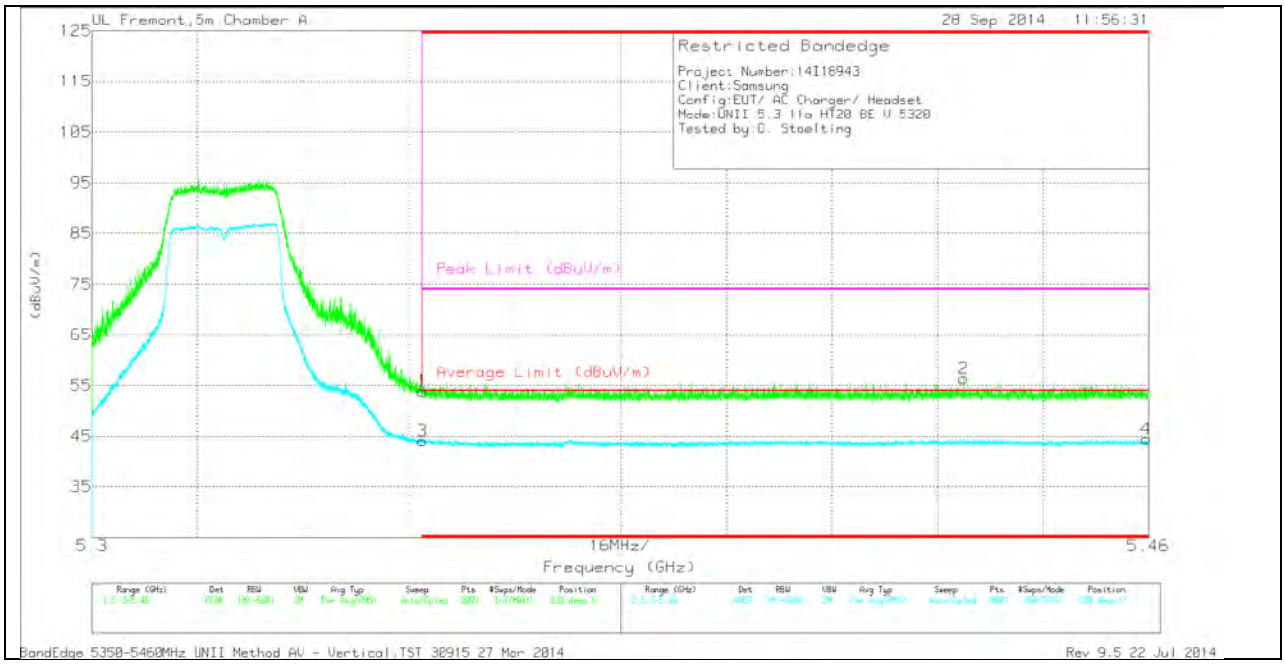
ORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	40.48	PK	34.3	-20.1	0	54.68	-	-	74	-19.32	75	302	H
2	* 5.439	40.93	PK	34.4	-19.7	0	55.63	-	-	74	-18.37	75	302	H
3	* 5.35	29.7	RMS	34.3	-20.1	.32	44.22	54	-9.78	-	-	75	302	H
4	* 5.453	29.69	RMS	34.4	-19.8	.32	44.61	54	-9.39	-	-	75	302	H

VERTICAL PEAK AND AVERAGE PLOT

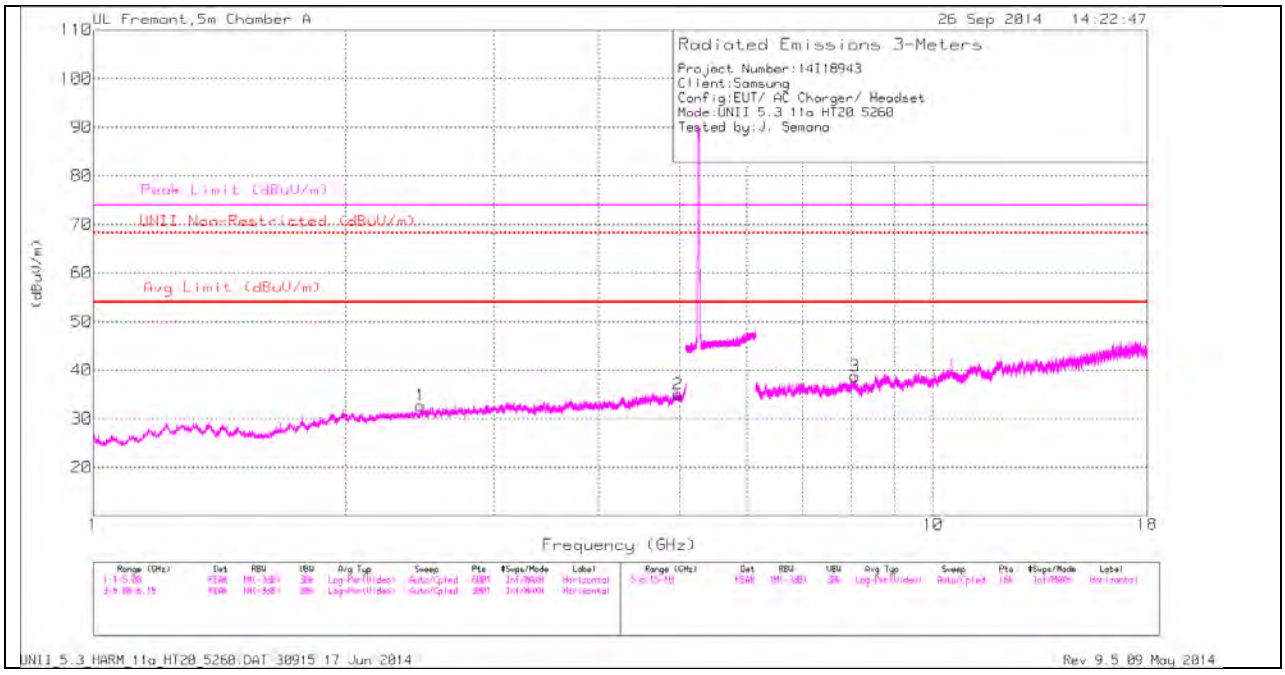


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	39.74	PK	34.3	-20.1	0	53.94	-	-	74	-20.06	338	333	V
2	* 5.432	41.57	PK	34.4	-19.6	0	56.37	-	-	74	-17.63	338	333	V
3	* 5.35	29.51	RMS	34.3	-20.1	.32	44.03	54	-9.97	-	-	338	333	V
4	* 5.46	29.58	RMS	34.4	-19.8	.32	44.5	54	-9.5	-	-	338	333	V

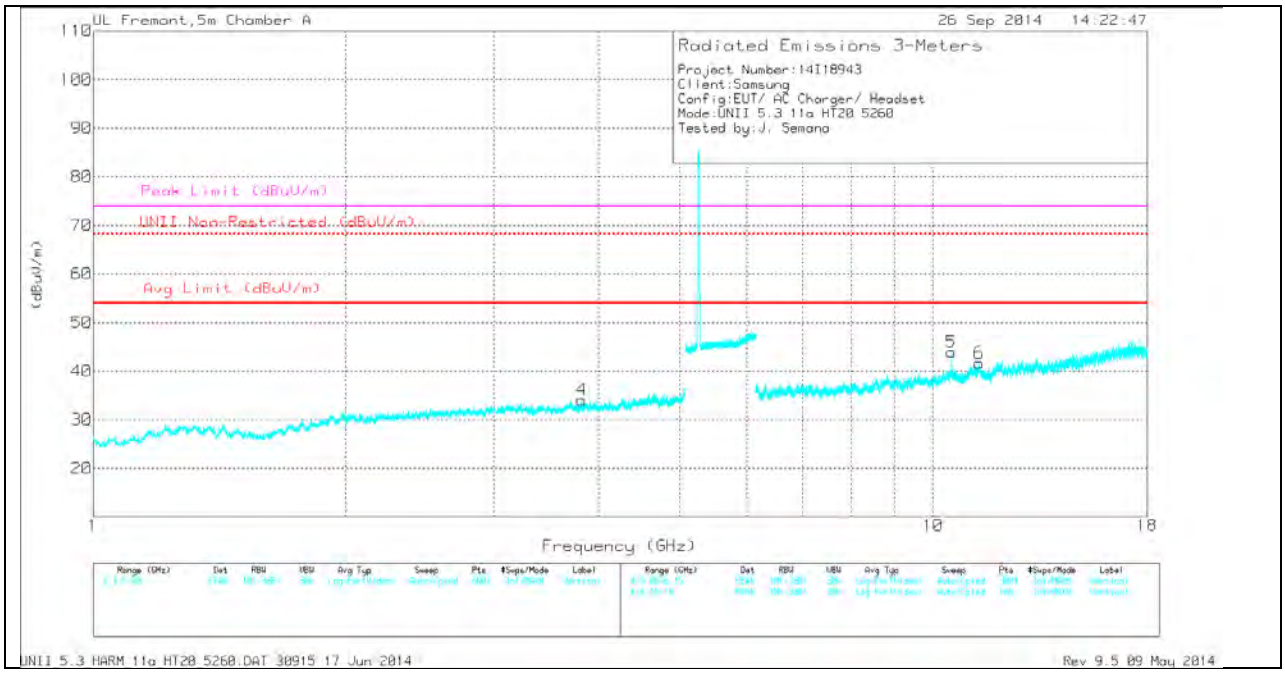
HARMONICS AND SPURIOUS EMISSIONS

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.

LOW CHANNEL VERTICAL



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

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.455	33	PK	32.2	-32.5	0	32.7	-	-	-	-	68.2	-35.5	0-360	100	H
2	* 4.968	30.62	PK	34	-29.6	0	35.02	-	-	74	-38.98	-	-	0-360	100	H
4	* 3.819	32.27	PK	33.2	-31.4	0	34.07	-	-	74	-39.93	-	-	0-360	100	V
3	* 8.08	30.47	PK	35.7	-27.4	0	38.77	-	-	74	-35.23	-	-	0-360	100	H
5	10.519	31.45	PK	37.5	-25	0	43.95	-	-	-	-	68.2	-24.25	0-360	200	V
6	* 11.35	29.34	PK	38	-25.7	0	41.64	-	-	74	-32.36	-	-	0-360	200	V

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.858	42.63	PK1	30.8	-33.3	0	40.13	-	-	-	-	68.2	-28.07	150	210	V
1.859	29.57	AD1	30.8	-33.3	.3	27.37	-	-	-	-	-	-	150	210	V
10.38	40.9	PK1	37.3	-25.6	0	52.6	-	-	-	-	68.2	-15.6	116	153	V
10.38	33.92	AD1	37.3	-25.6	.3	45.92	-	-	-	-	-	-	116	153	V
10.36	39.49	PK1	37.3	-25.4	0	51.39	-	-	-	-	68.2	-16.81	49	281	V
10.36	32.48	AD1	37.3	-25.4	.3	44.68	-	-	-	-	-	-	49	281	V

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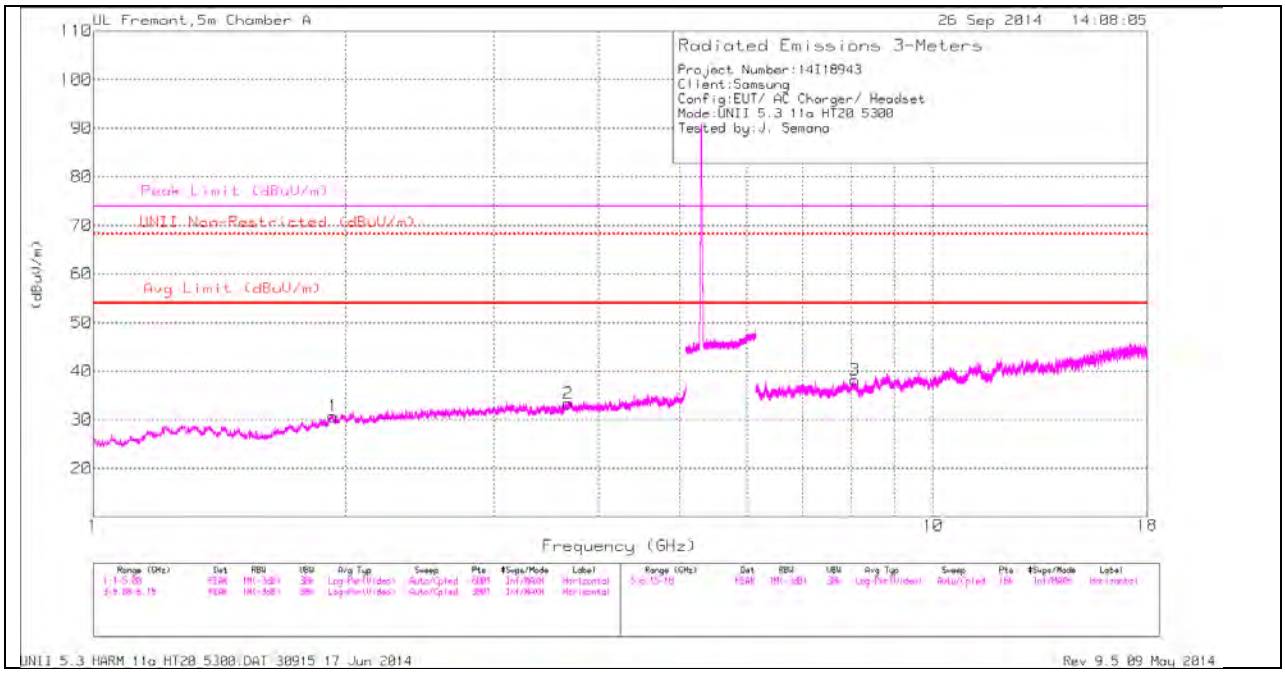
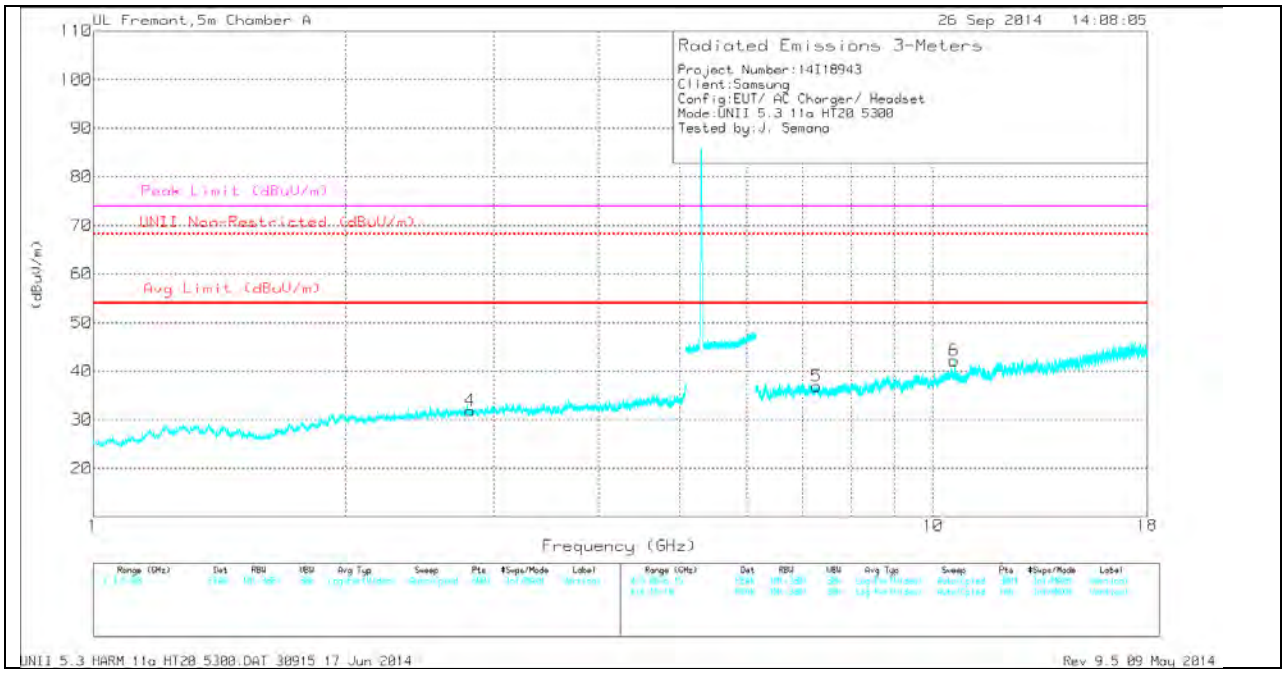
MID CHANNEL HORIZONTAL



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

MID CHANNEL VERTICAL



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

MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.931	31.68	PK	31.4	-32.4	0	30.68	-	-	-	-	68.2	-37.52	0-360	200	H
2	* 3.676	30.62	PK	33.2	-30.5	0	33.32	-	-	74	-40.68	-	-	0-360	200	H
4	* 2.812	31.67	PK	32.7	-32.5	0	31.87	-	-	74	-42.13	-	-	0-360	200	V
3	* 8.069	29.71	PK	35.7	-27.2	0	38.21	-	-	74	-35.79	-	-	0-360	200	H
5	* 7.27	30.63	PK	35.6	-29.3	0	36.93	-	-	74	-37.07	-	-	0-360	200	V
6	10.599	29.81	PK	37.7	-25.3	0	42.21	-	-	-	-	68.2	-25.99	0-360	200	V

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.858	42.63	PK1	30.8	-33.3	0	40.13	-	-	-	-	68.2	-28.07	150	210	V
1.859	29.57	AD1	30.8	-33.3	.3	27.37	-	-	-	-	-	-	150	210	V
10.38	40.9	PK1	37.3	-25.6	0	52.6	-	-	-	-	68.2	-15.6	116	153	V
10.38	33.92	AD1	37.3	-25.6	.3	45.92	-	-	-	-	-	-	116	153	V
10.36	39.49	PK1	37.3	-25.4	0	51.39	-	-	-	-	68.2	-16.81	49	281	V
10.36	32.48	AD1	37.3	-25.4	.3	44.68	-	-	-	-	-	-	49	281	V

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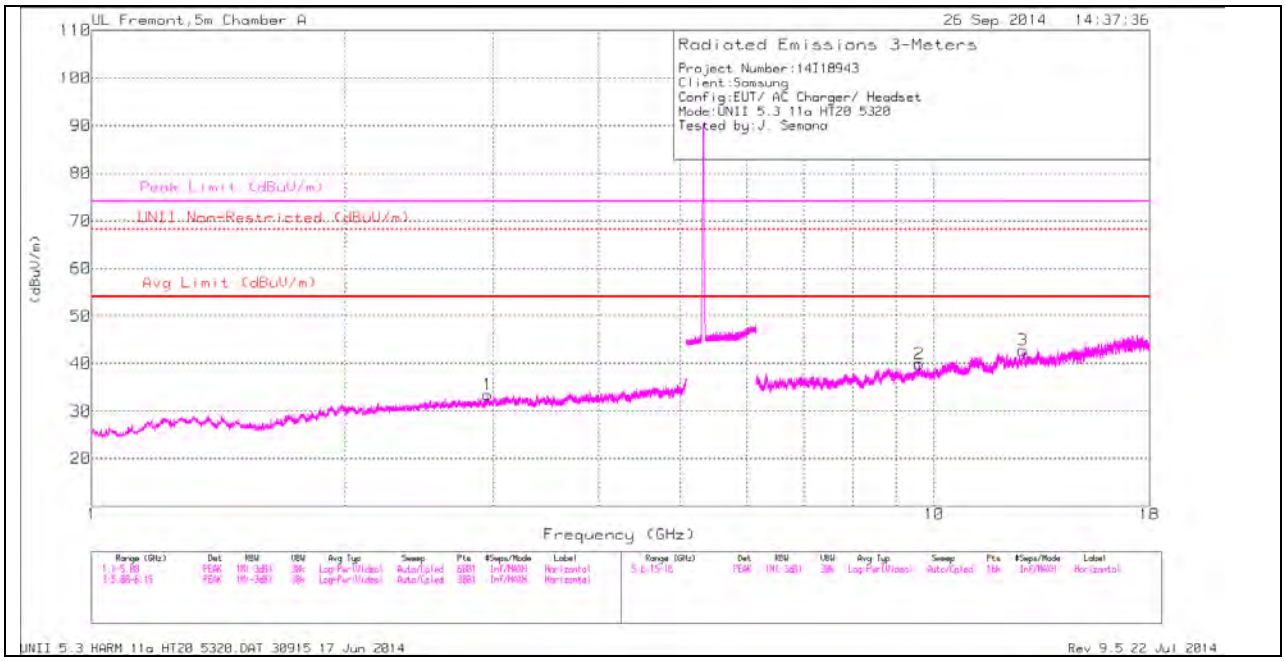
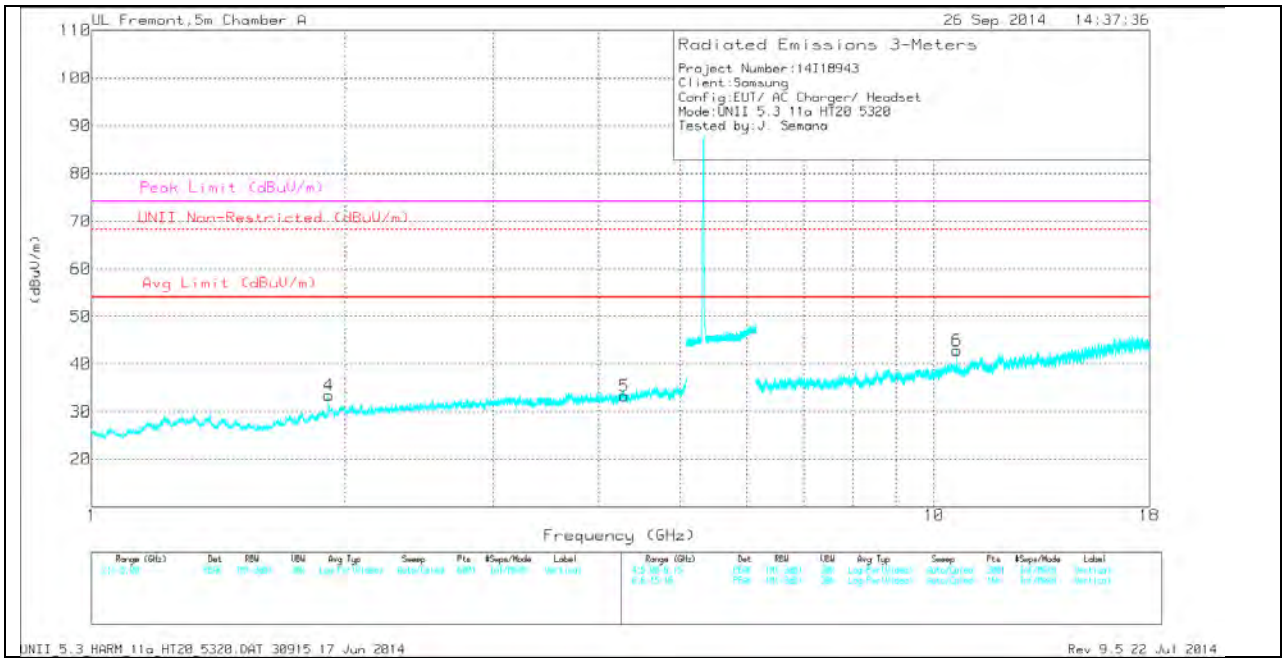
HIGH CHANNEL HORIZONTAL



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

HIGH CHANNEL VERTICAL



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

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.951	32.73	PK	32.8	-32.1	0	33.43	-	-	-	-	68.2	-34.77	0-360	200	H
4	1.911	34.83	PK	31.3	-32.7	0	33.43	-	-	-	-	68.2	-34.77	0-360	200	V
5	4.288	30.18	PK	33.6	-30.5	0	33.28	-	-	74	-40.72	-	-	0-360	100	V
2	9.591	28.39	PK	36.7	-25.2	0	39.89	-	-	-	-	68.2	-28.31	0-360	100	H
3	12.737	29.41	PK	39.2	-25.8	0	42.81	-	-	-	-	68.2	-25.39	0-360	100	H
6	10.639	30.15	PK	37.8	-25.1	0	42.85	-	-	74	-31.15	-	-	0-360	100	V

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.912	41.68	PK1	31.3	-32.8	0	40.18	-	-	-	-	68.2	-28.02	62	100	V
1.913	29.36	AD1	31.3	-32.8	.3	28.16	-	-	-	-	-	-	62	100	V
10.64	38.98	PK1	37.8	-25.1	0	51.68	-	-	74	-22.32	-	-	118	124	V
10.64	30.74	AD1	37.8	-25.1	.3	43.74	54	-10.26	-	-	-	-	118	124	V

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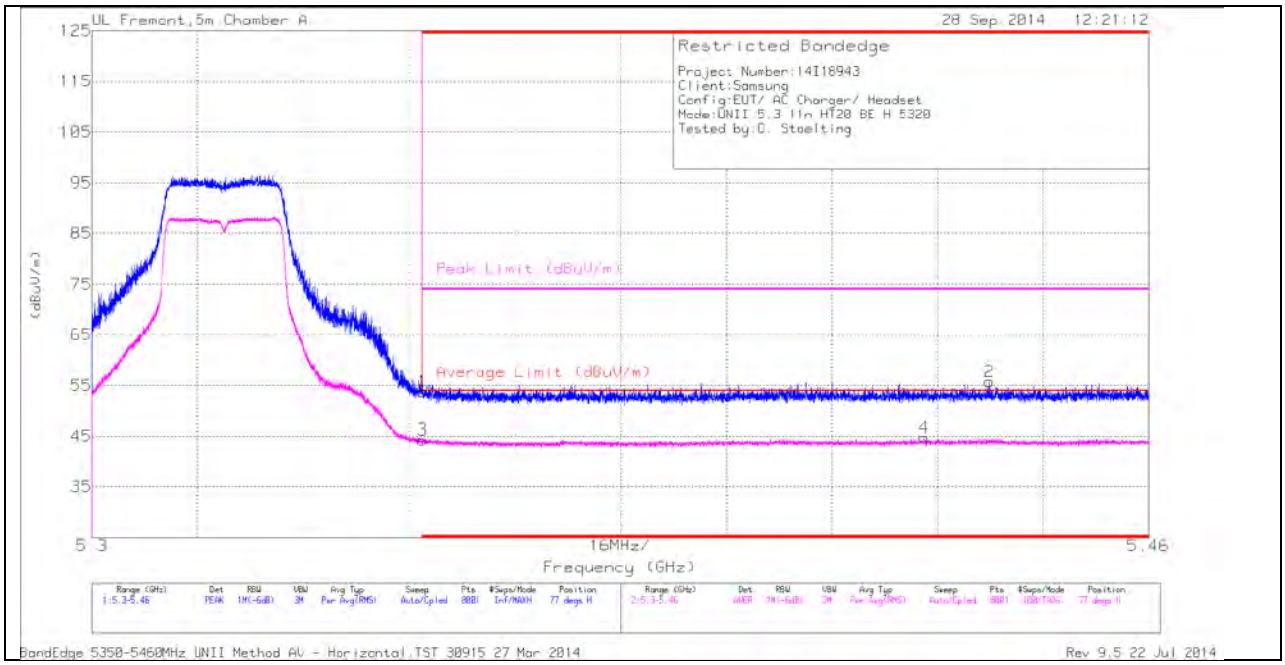
11.2.2. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.3 GHz BAND

AUTHORIZED BANDEDGE (HIGH CHANNEL)

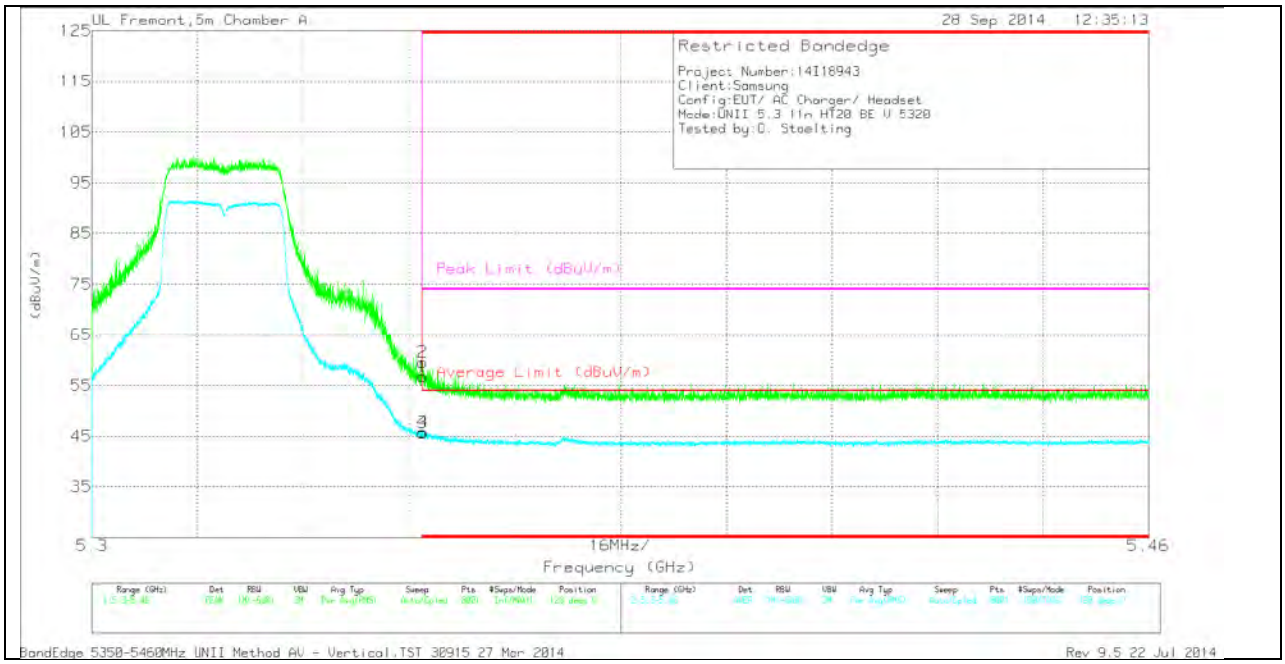
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	39.55	PK	34.3	-20.1	0	53.75	-	-	74	-20.25	77	302	H
2	* 5.436	40.97	PK	34.4	-19.6	0	55.77	-	-	74	-18.23	77	302	H
3	* 5.35	29.66	RMS	34.3	-20.1	.41	44.27	54	-9.73	-	-	77	302	H
4	* 5.426	29.49	RMS	34.4	-19.6	.41	44.7	54	-9.3	-	-	77	302	H

VERTICAL PEAK AND AVERAGE PLOT

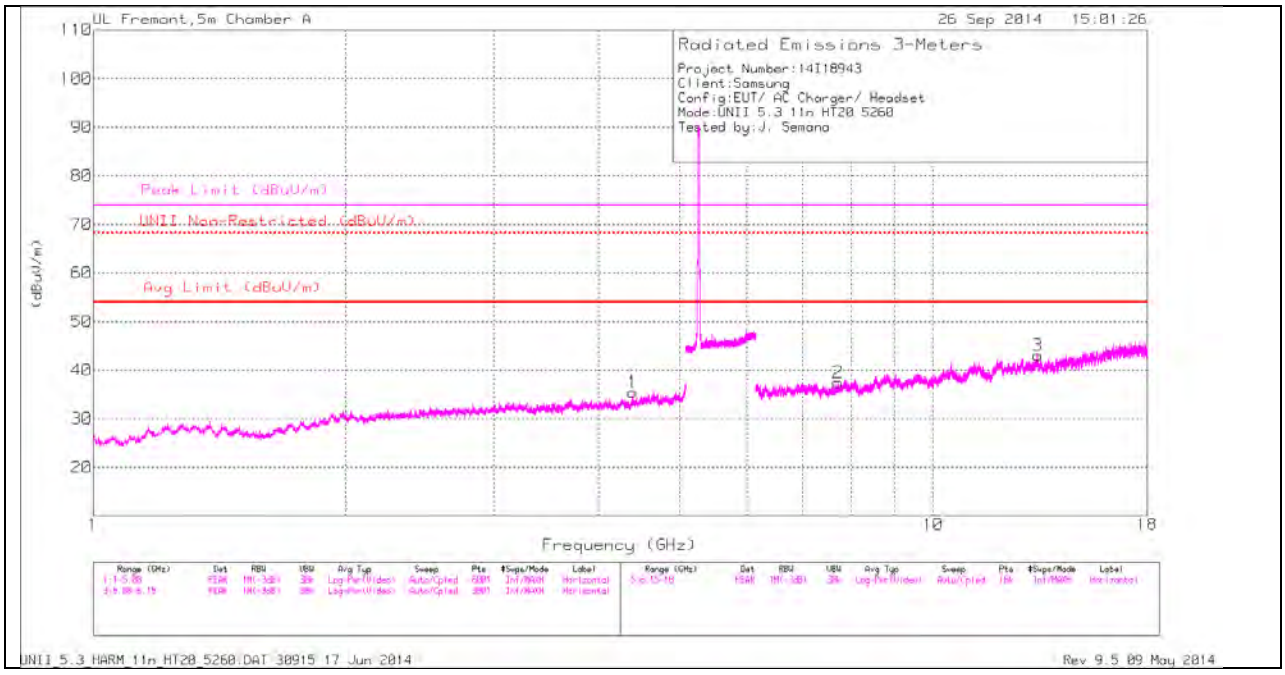


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	42.57	PK	34.3	-20.1	0	56.77	-	-	74	-17.23	128	302	V
2	* 5.35	45.41	PK	34.3	-20.1	0	59.61	-	-	74	-14.39	128	302	V
3	* 5.35	31.11	RMS	34.3	-20.1	.41	45.72	54	-8.28	-	-	128	302	V
4	* 5.35	31.24	RMS	34.3	-20.1	.41	45.85	54	-8.15	-	-	128	302	V

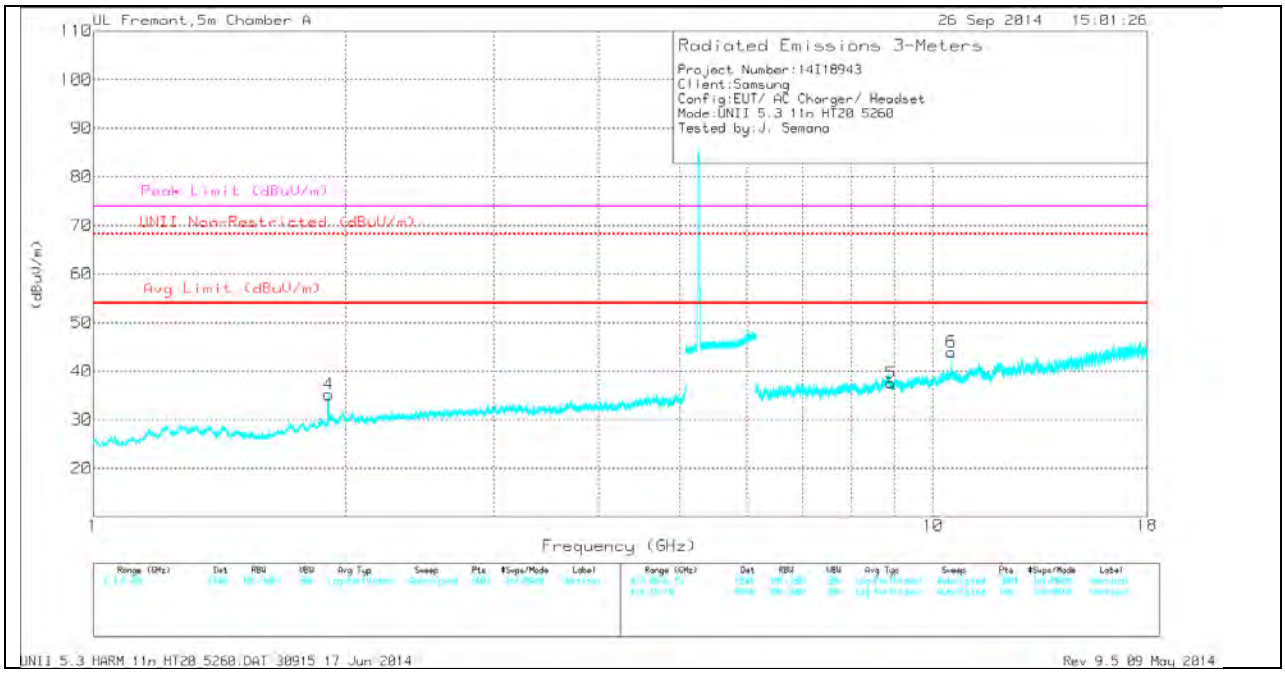
HARMONICS AND SPURIOUS EMISSIONS

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.

LOW CHANNEL VERTICAL



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

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.931	31.68	PK	31.4	-32.4	0	30.68	-	-	-	-	68.2	-37.52	0-360	200	H
2	* 3.676	30.62	PK	33.2	-30.5	0	33.32	-	-	74	-40.68	-	-	0-360	200	H
4	* 2.812	31.67	PK	32.7	-32.5	0	31.87	-	-	74	-42.13	-	-	0-360	200	V
3	* 8.069	29.71	PK	35.7	-27.2	0	38.21	-	-	74	-35.79	-	-	0-360	200	H
5	* 7.27	30.63	PK	35.6	-29.3	0	36.93	-	-	74	-37.07	-	-	0-360	200	V
6	10.599	29.81	PK	37.7	-25.3	0	42.21	-	-	-	-	68.2	-25.99	0-360	200	V

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.858	42.63	PK1	30.8	-33.3	0	40.13	-	-	-	-	68.2	-28.07	150	210	V
1.859	29.57	AD1	30.8	-33.3	.3	27.37	-	-	-	-	-	-	150	210	V
10.38	40.9	PK1	37.3	-25.6	0	52.6	-	-	-	-	68.2	-15.6	116	153	V
10.38	33.92	AD1	37.3	-25.6	.3	45.92	-	-	-	-	-	-	116	153	V
10.36	39.49	PK1	37.3	-25.4	0	51.39	-	-	-	-	68.2	-16.81	49	281	V
10.36	32.48	AD1	37.3	-25.4	.3	44.68	-	-	-	-	-	-	49	281	V

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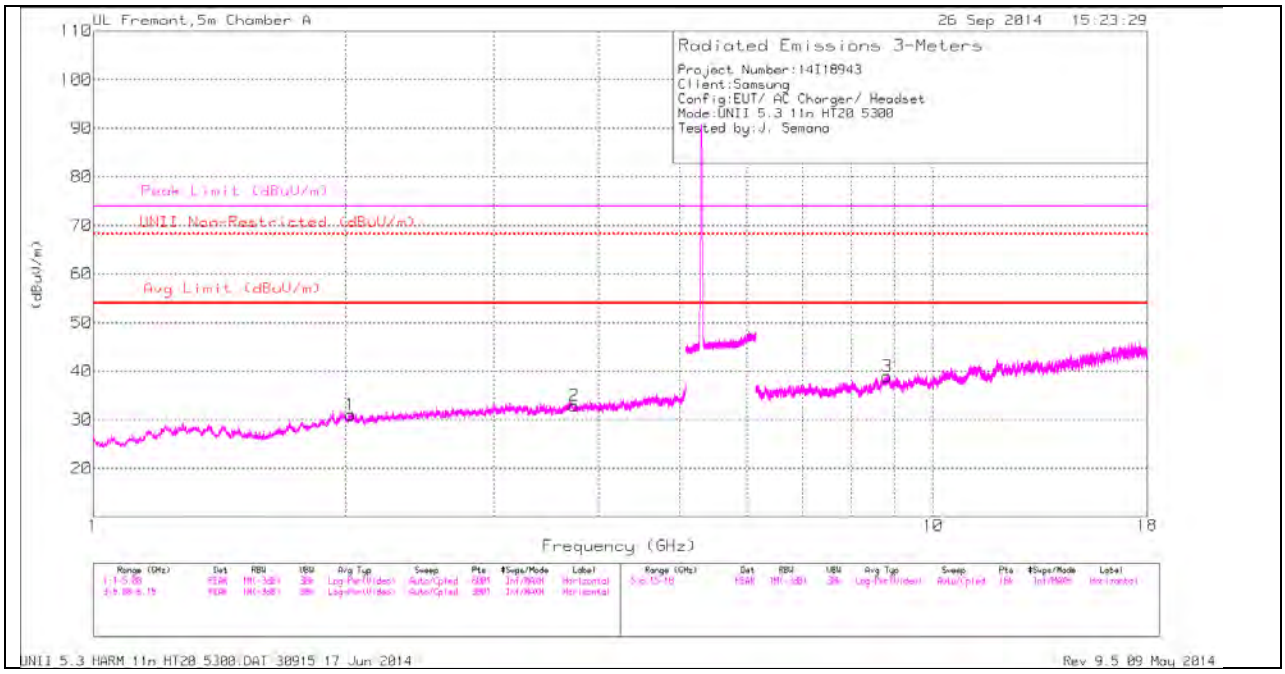
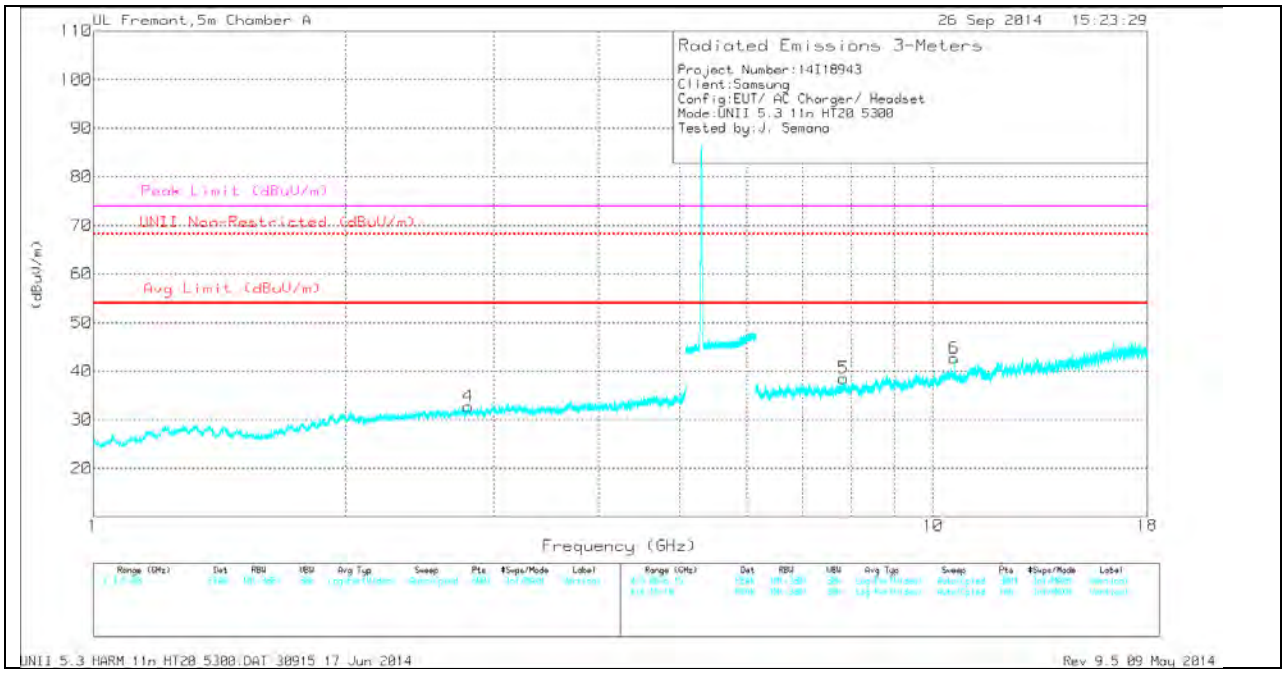
MID CHANNEL HORIZONTAL



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

MID CHANNEL VERTICAL



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

MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.027	31.7	PK	31.6	-32.3	0	31	-	-	-	-	68.2	-37.2	0-360	100	H
2	* 3.741	31.11	PK	33.2	-31.4	0	32.91	-	-	74	-41.09	-	-	0-360	100	H
4	* 2.799	32.41	PK	32.7	-32.4	0	32.71	-	-	74	-41.29	-	-	0-360	100	V
3	8.821	28.65	PK	36	-25.7	0	38.95	-	-	-	-	68.2	-29.25	0-360	100	H
5	7.824	30.85	PK	35.8	-28.1	0	38.55	-	-	-	-	68.2	-29.65	0-360	200	V
6	10.599	30.3	PK	37.7	-25.3	0	42.7	-	-	-	-	68.2	-25.5	0-360	100	V

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.909	41.2	PK1	31.3	-32.7	0	39.8	-	-	-	-	68.2	-28.4	122	241	V
1.91	29.19	AD1	31.3	-32.7	.3	28.09	-	-	-	-	-	-	122	241	V
10.52	41.24	PK1	37.5	-25	0	53.74	-	-	-	-	68.2	-14.46	97	291	V
10.52	32.93	AD1	37.5	-25	.3	45.73	-	-	-	-	-	-	97	291	V
10.36	39.49	PK1	37.3	-25.4	0	51.39	-	-	-	-	68.2	-16.81	49	281	V
10.36	32.48	AD1	37.3	-25.4	.3	44.68	-	-	-	-	-	-	49	281	V

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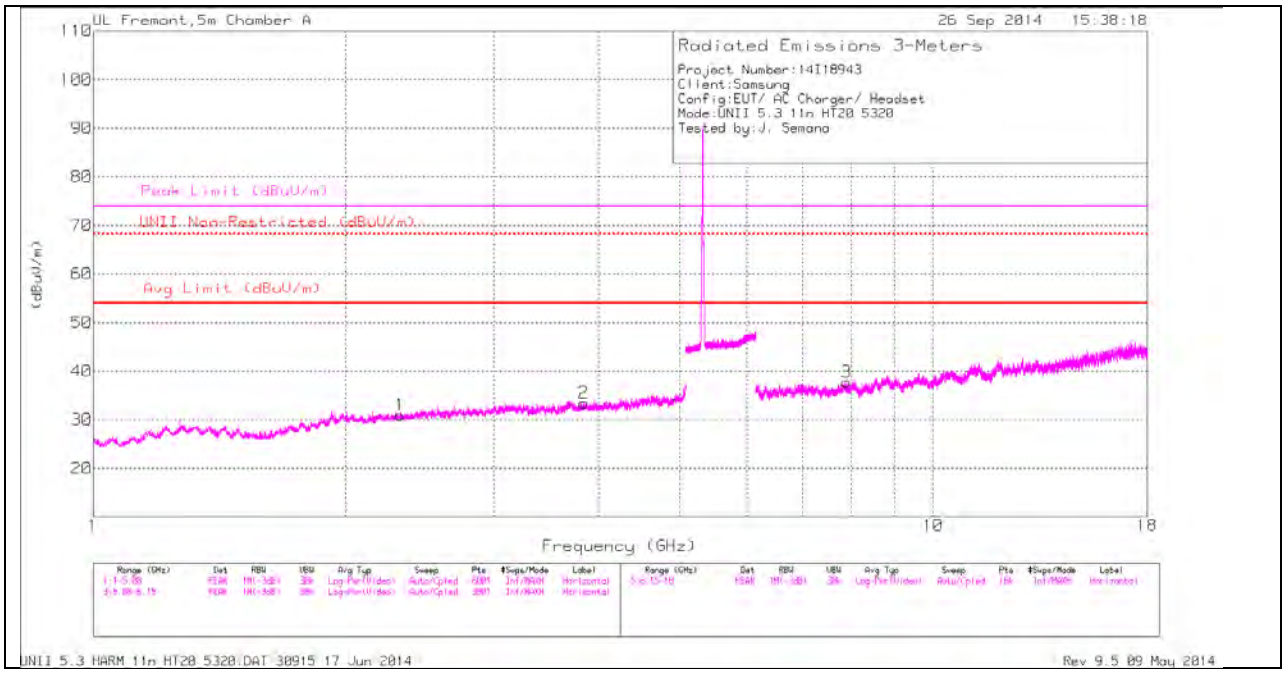
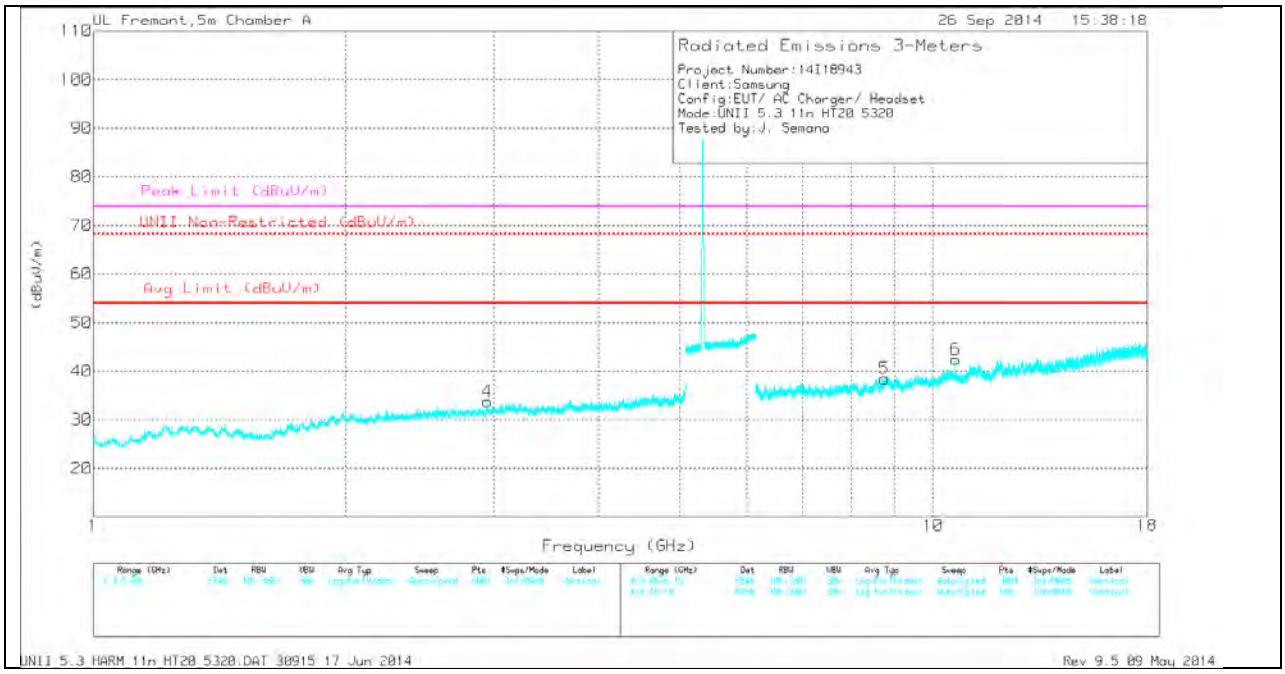
HIGH CHANNEL HORIZONTAL



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

HIGH CHANNEL VERTICAL



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

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.321	31.6	PK	31.9	-32.6	0	30.9	-	-	74	-43.1	-	-	0-360	200	H
2	* 3.84	31.14	PK	33.2	-30.9	0	33.44	-	-	74	-40.56	-	-	0-360	200	H
4	2.948	32.94	PK	32.8	-32	0	33.74	-	-	-	-	68.2	-34.46	0-360	200	V
3	7.892	29.85	PK	35.8	-27.9	0	37.75	-	-	-	-	68.2	-30.45	0-360	200	H
5	8.755	28.93	PK	35.9	-26.4	0	38.43	-	-	-	-	68.2	-29.77	0-360	100	V
6	* 10.639	29.68	PK	37.8	-25.1	0	42.38	-	-	74	-31.62	-	-	0-360	200	V

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.909	41.2	PK1	31.3	-32.7	0	39.8	-	-	-	-	68.2	-28.4	122	241	V
1.91	29.19	AD1	31.3	-32.7	.3	28.09	-	-	-	-	-	-	122	241	V
10.52	41.24	PK1	37.5	-25	0	53.74	-	-	-	-	68.2	-14.46	97	291	V
10.52	32.93	AD1	37.5	-25	.3	45.73	-	-	-	-	-	-	97	291	V
10.36	39.49	PK1	37.3	-25.4	0	51.39	-	-	-	-	68.2	-16.81	49	281	V
10.36	32.48	AD1	37.3	-25.4	.3	44.68	-	-	-	-	-	-	49	281	V

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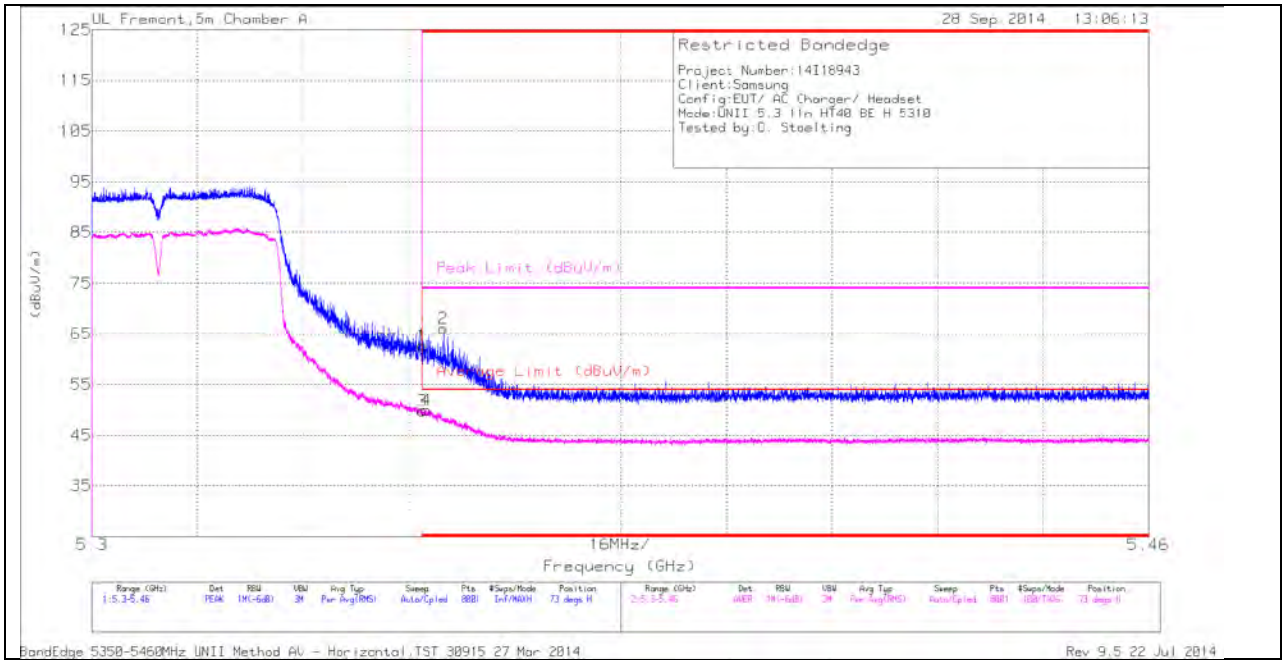
11.2.3. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.3 GHz BAND AUTHORIZED BANDEDGE (HIGH CHANNEL)

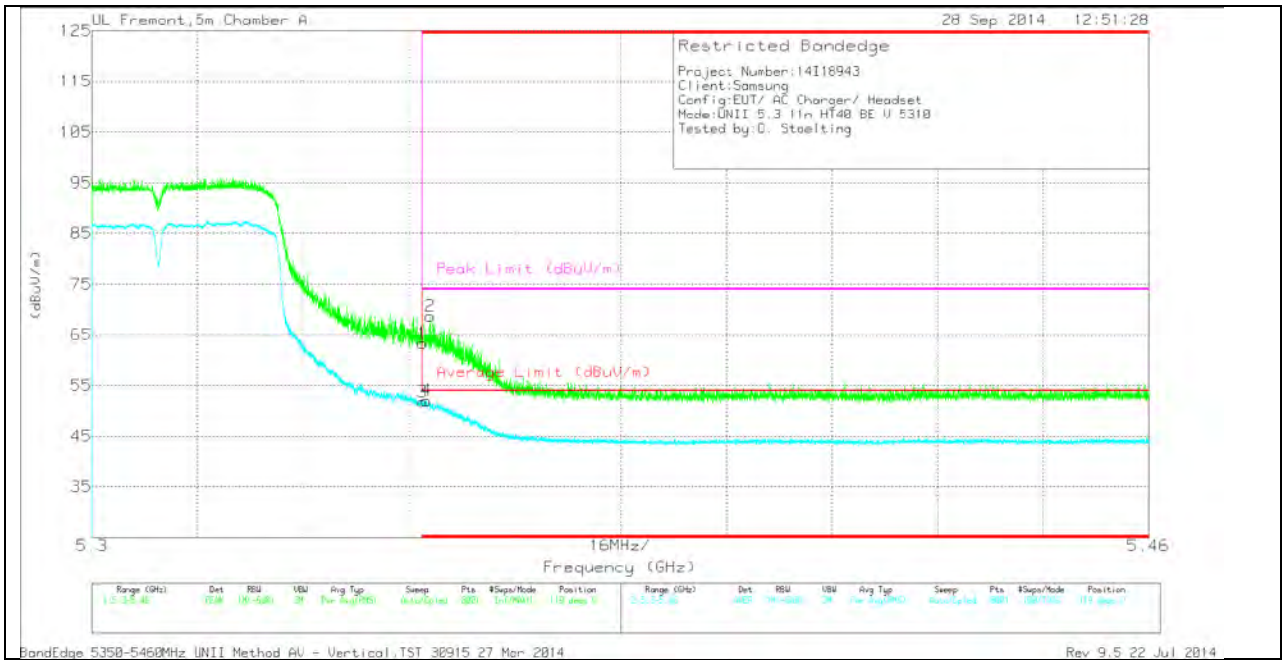
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	48.48	PK	34.3	-20.1	0	62.68	-	-	74	-11.32	73	302	H
2	* 5.353	51.91	PK	34.3	-20.1	0	66.11	-	-	74	-7.89	73	302	H
3	* 5.35	35	RMS	34.3	-20.1	.63	49.83	54	-4.17	-	-	73	302	H
4	* 5.351	35.1	RMS	34.3	-20.1	.63	49.93	54	-4.07	-	-	73	302	H

VERTICAL PEAK AND AVERAGE PLOT

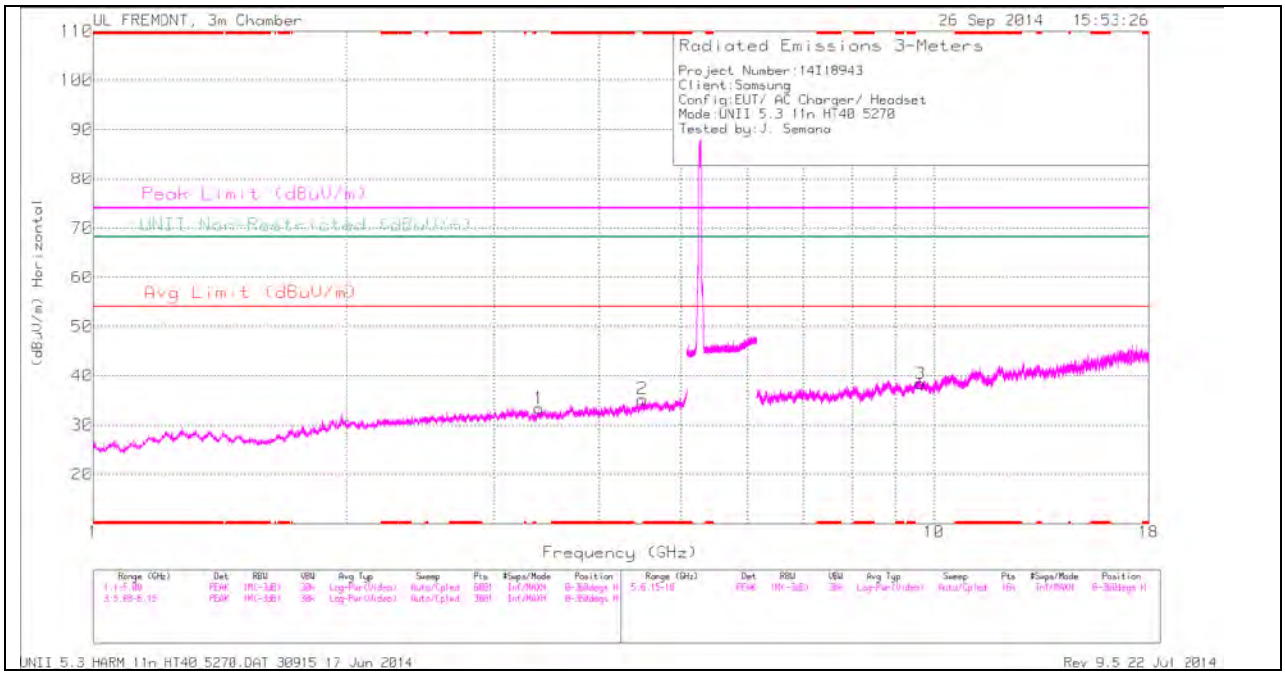


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	49.16	PK	34.3	-20.1	0	63.36	-	-	74	-10.64	119	302	V
3	* 5.35	36.99	RMS	34.3	-20.1	.63	51.82	54	-2.18	-	-	119	302	V
2	* 5.351	54.46	PK	34.3	-20.1	0	68.66	-	-	74	-5.34	119	302	V
4	* 5.351	37.21	RMS	34.3	-20.1	.63	52.04	54	-1.96	-	-	119	302	V

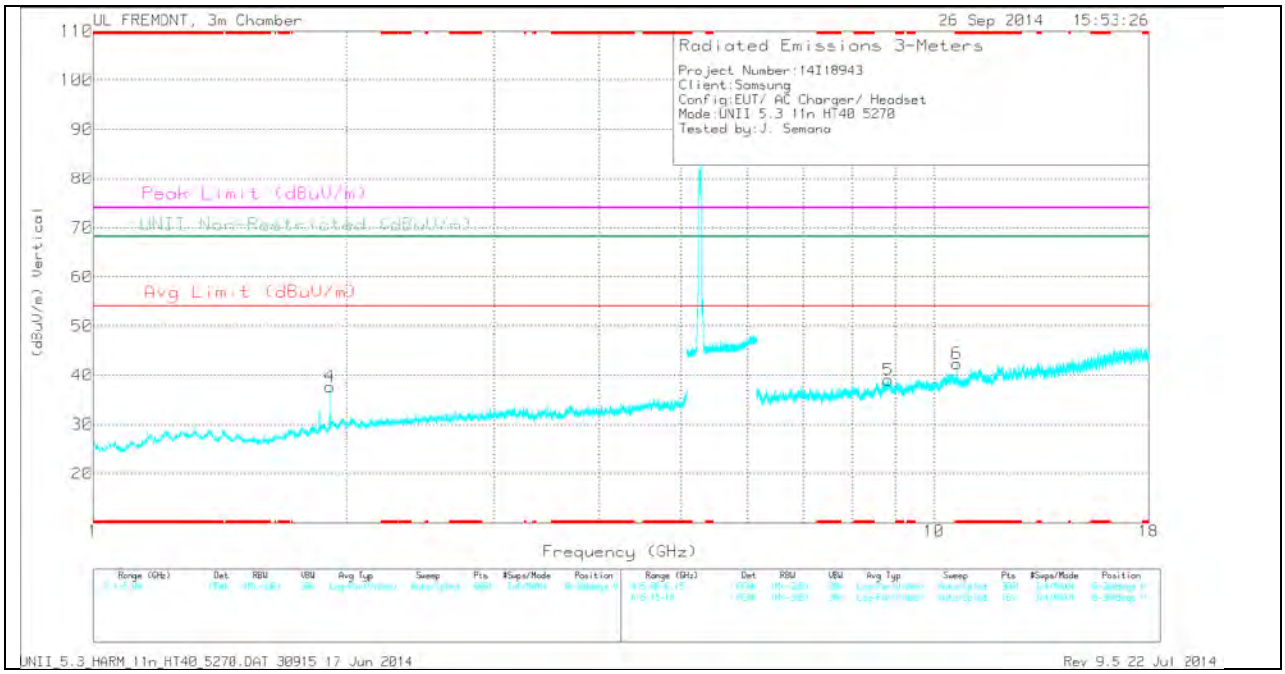
HARMONICS AND SPURIOUS EMISSIONS

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.

LOW CHANNEL VERTICAL



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

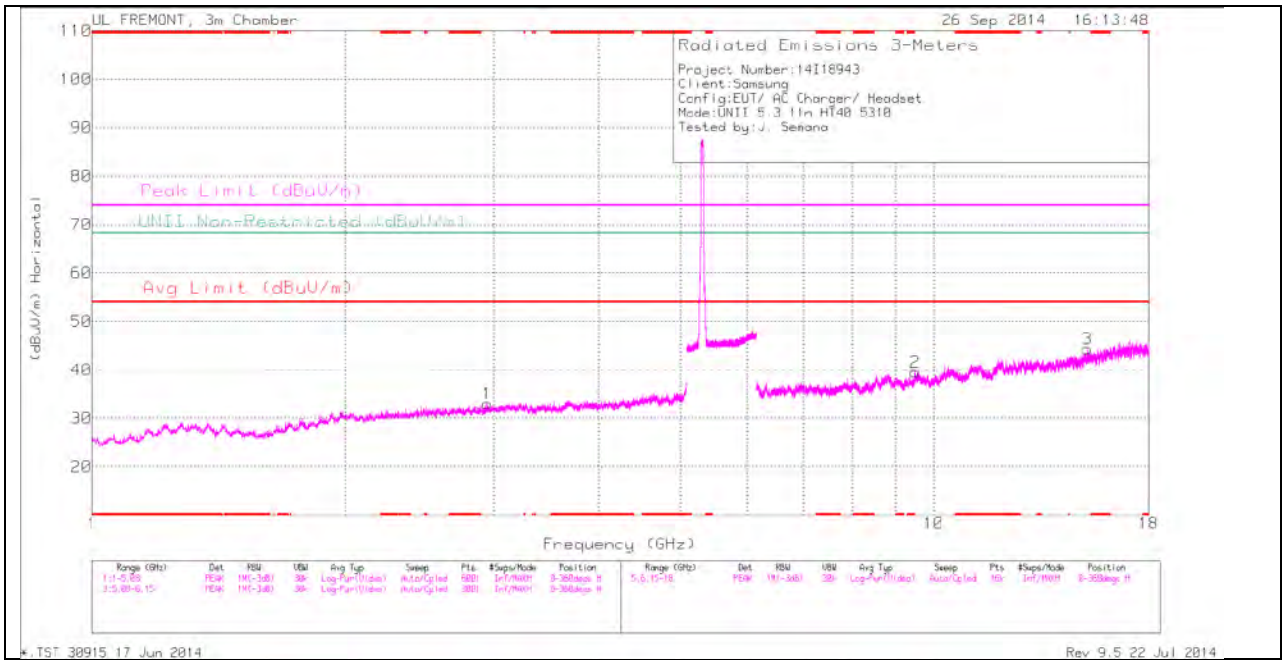
LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	* 10.639	29.68	PK	37.8	-25.1	0	42.38	-	-	74	-31.62	-	-	0-360	200	V
4	1.911	39.11	PK	31.3	-32.7	0	37.71	-	-	-	-	68.2	-30.49	0-360	200	V
1	3.389	32.26	PK	32.9	-31.8	0	33.36	-	-	-	-	68.2	-34.84	0-360	200	H
2	4.499	32.49	PK	33.9	-31.1	0	35.29	-	-	-	-	68.2	-32.91	0-360	100	H
5	8.826	28.81	PK	36	-25.8	0	39.01	-	-	-	-	68.2	-29.19	0-360	200	V
3	9.633	27.52	PK	36.8	-25.9	0	38.42	-	-	-	-	68.2	-29.78	0-360	100	H

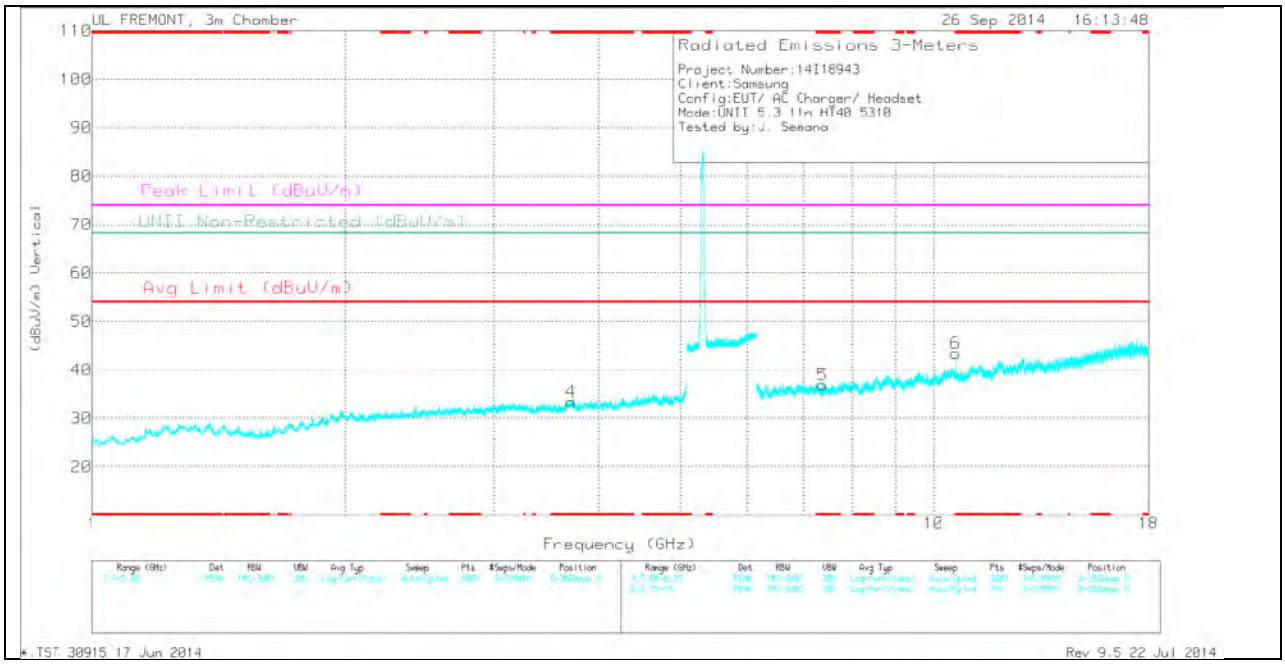
PK - Peak detector

HIGH CHANNEL HORIZONTAL



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

HIGH CHANNEL VERTICAL



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

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 3.708	31.08	PK	33.2	-30.8	0	33.48	-	-	74	-40.52	-	-	0-360	100	V
5	* 7.368	30.32	PK	35.6	-29	0	36.92	-	-	74	-37.08	-	-	0-360	100	V
6	* 10.619	30.86	PK	37.7	-25.1	0	43.46	-	-	74	-30.54	-	-	0-360	200	V
1	2.946	32.25	PK	32.8	-32	0	33.05	-	-	-	-	68.2	-35.15	0-360	100	H
2	9.513	28.69	PK	36.6	-25.8	0	39.49	-	-	-	-	68.2	-28.71	0-360	200	H
3	15.241	31.17	PK	40	-26.8	0	44.37	-	-	-	-	68.2	-23.83	0-360	200	H

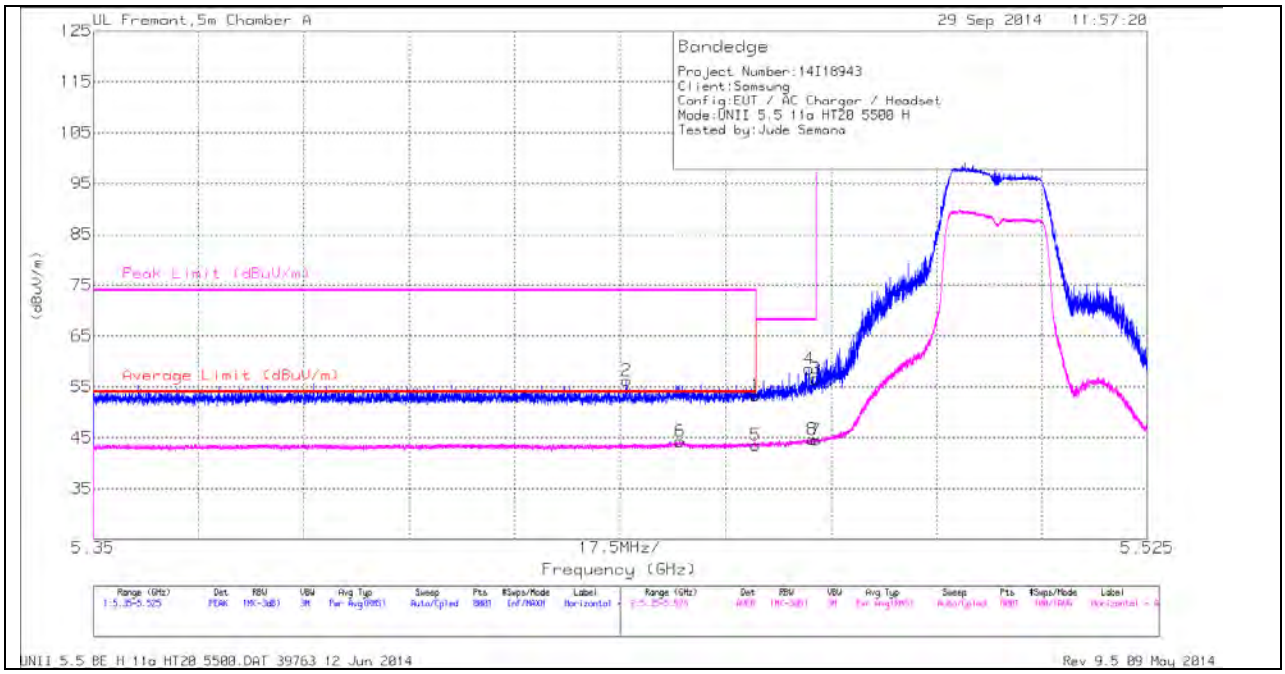
PK - Peak detector

11.3. 5.5-5.6 GHz

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

RESTRICTED BANDEDGE (LOW CHANNEL)

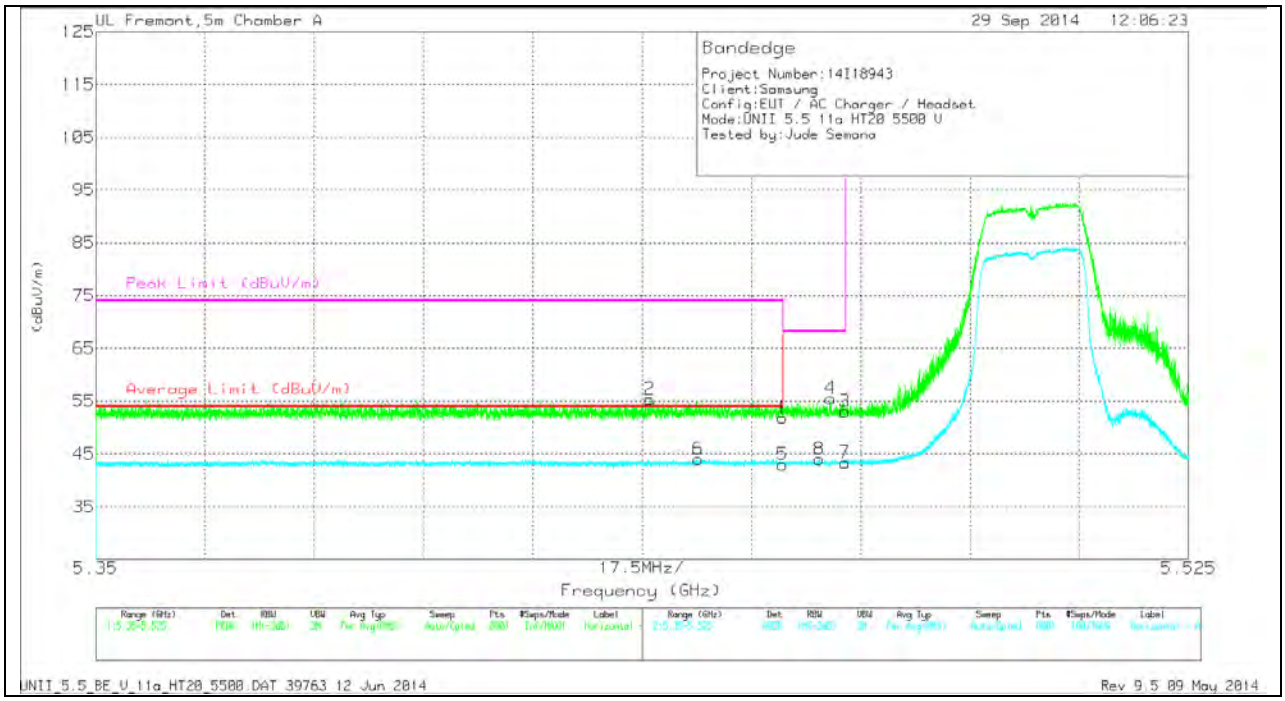
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.46	39.94	PK	34.8	-21.4	53.34	-	-	74	-20.66	250	257	H
2	5.439	42.96	PK	34.7	-21.4	56.26	-	-	74	-17.74	250	257	H
3	5.47	43.12	PK	34.8	-21.3	56.62	-	-	68.2	-11.58	250	257	H
4	5.469	45.03	PK	34.8	-21.3	58.53	-	-	68.2	-9.67	250	257	H
5	5.46	30.13	RMS	34.8	-21.4	43.53	54	-10.47	-	-	250	257	H
6	5.447	30.92	RMS	34.8	-21.4	44.32	54	-9.68	-	-	250	257	H
7	5.47	31.07	RMS	34.8	-21.3	44.57	-	-	-	-	250	257	H
8	5.469	31.18	RMS	34.8	-21.3	44.68	-	-	-	-	250	257	H

VERTICAL PEAK AND AVERAGE PLOT

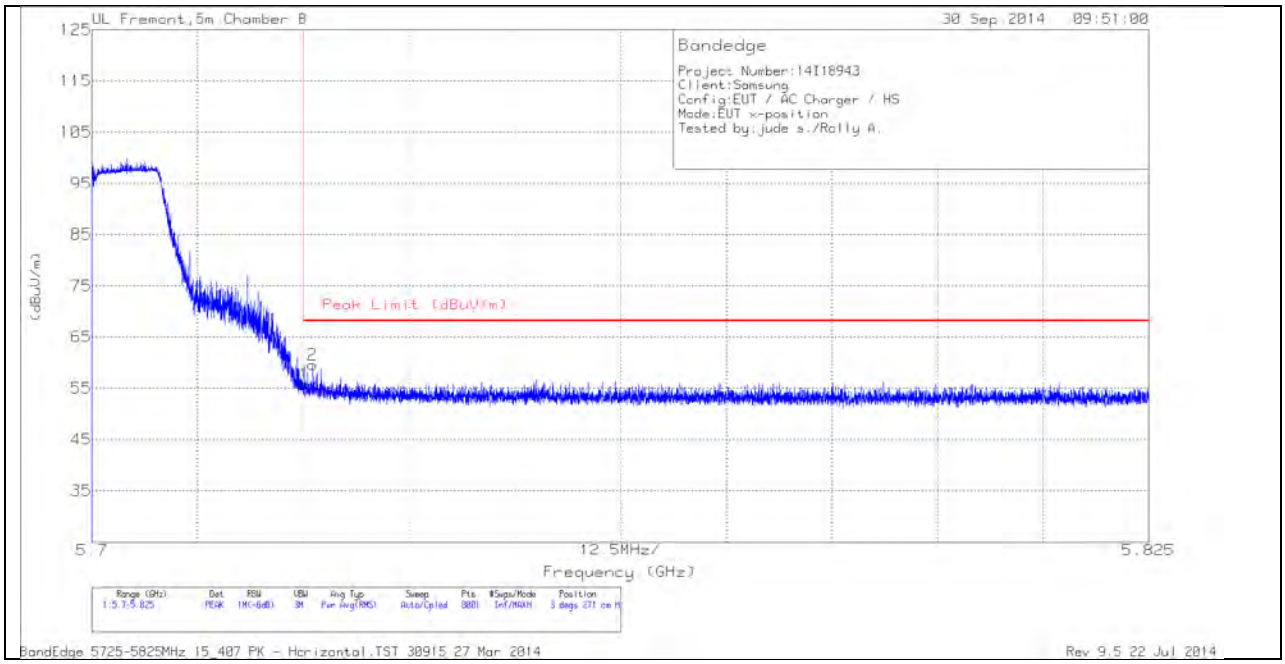


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.46	38.41	PK	34.8	-21.4	51.81	-	-	74	-22.19	79	181	V
2	5.439	42.05	PK	34.7	-21.4	55.35	-	-	74	-18.65	79	181	V
3	5.47	39.57	PK	34.8	-21.3	53.07	-	-	68.2	-15.13	79	181	V
4	5.468	42	PK	34.8	-21.3	55.5	-	-	68.2	-12.7	79	181	V
5	5.46	29.61	RMS	34.8	-21.4	43.01	54	-10.99	-	-	79	181	V
6	5.446	30.61	RMS	34.8	-21.4	44.01	54	-9.99	-	-	79	181	V
7	5.47	29.85	RMS	34.8	-21.3	43.35	-	-	-	-	79	181	V
8	5.466	30.52	RMS	34.8	-21.3	44.02	-	-	-	-	79	181	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

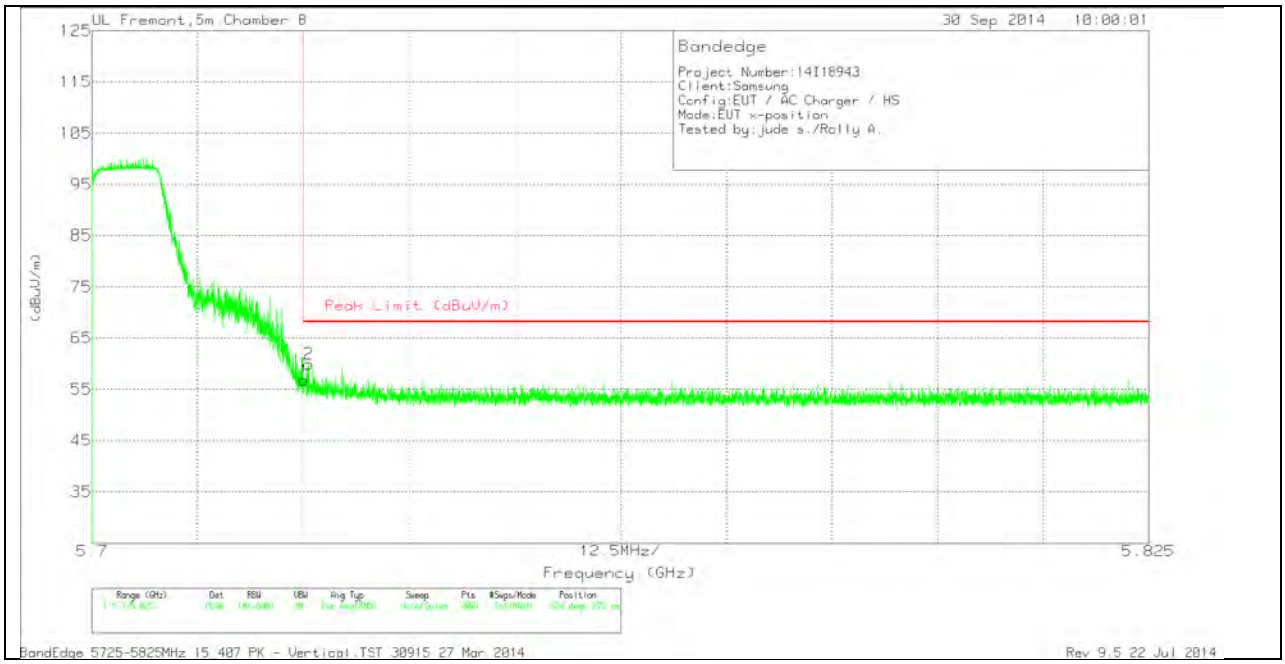
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	41.26	PK	34.6	-20.1	0	55.76	68.2	-12.44	3	271	H
2	5.726	45.06	PK	34.6	-20.1	0	59.56	68.2	-8.64	3	271	H

VERTICAL PEAK AND AVERAGE PLOT

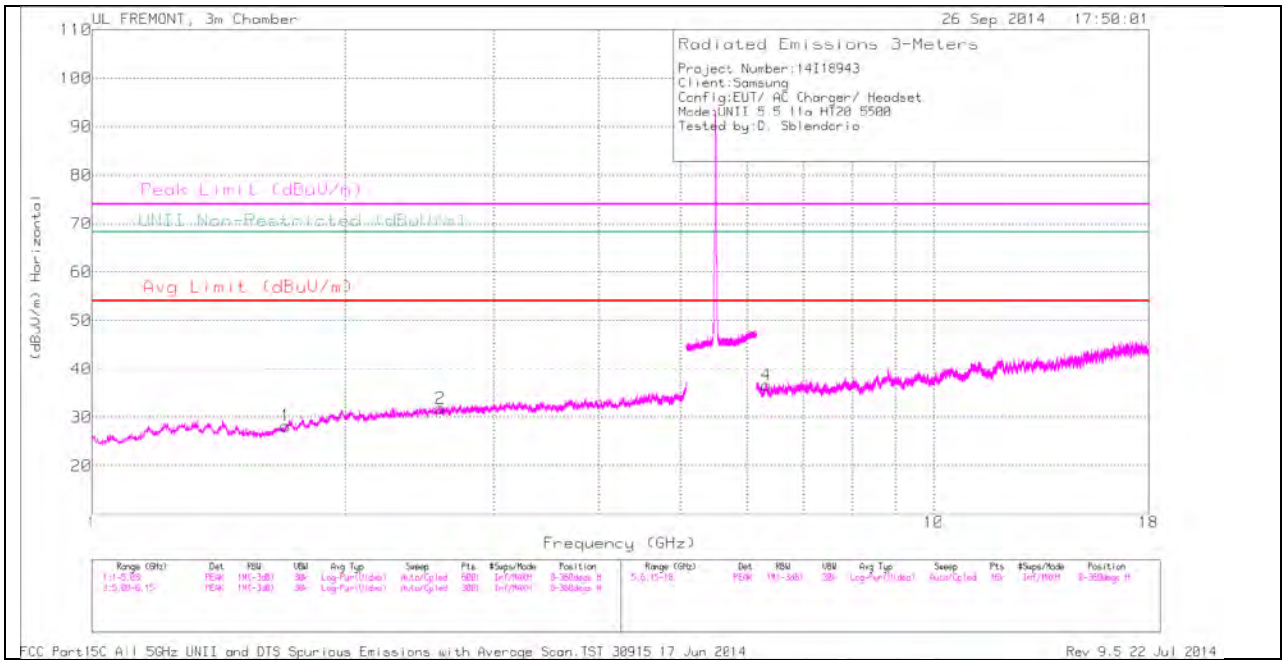


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	42.24	PK	34.6	-20.1	0	56.74	68.2	-11.46	324	275	V
2	5.726	45.44	PK	34.6	-20.1	0	59.94	68.2	-8.26	324	275	V

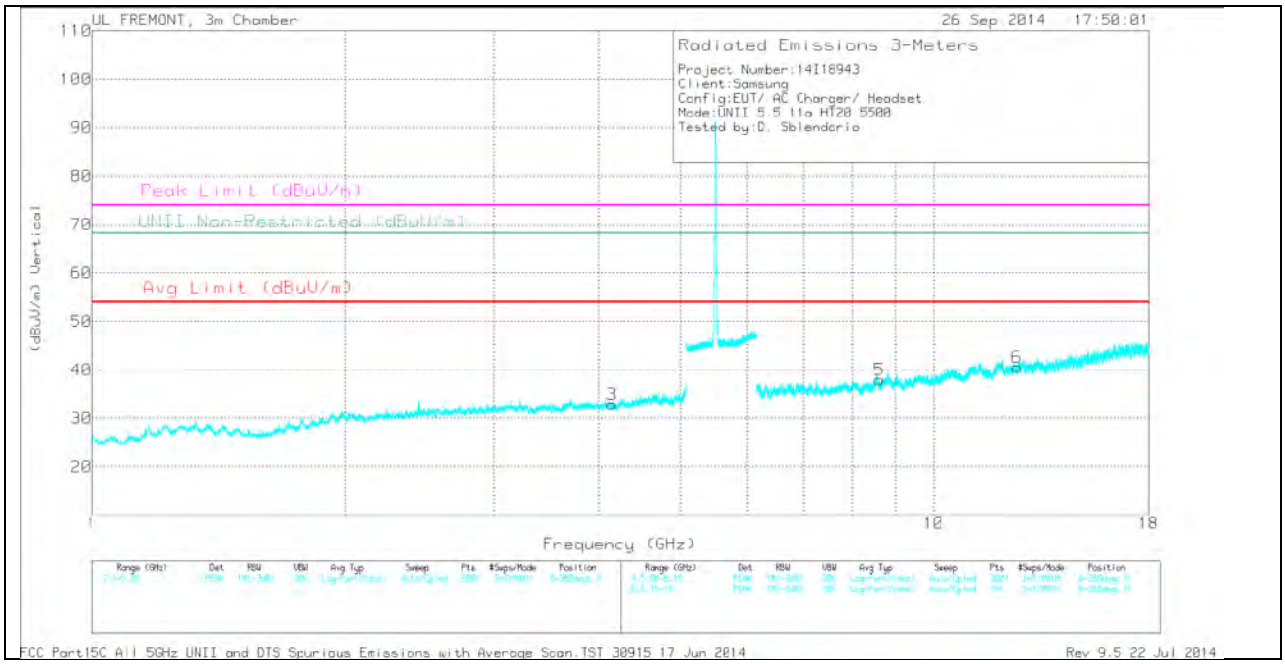
HARMONICS AND SPURIOUS EMISSIONS

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.

LOW CHANNEL VERTICAL



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

LOW CHANNEL DATA

TRACE MARKERS

PK - Peak detector

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.698	31.44	PK	29	-32.2	0	28.24	-	-	74	-45.76	-	-	0-360	100	H
2	2.593	31.95	PK	32.5	-32.6	0	31.85	-	-	-	-	68.2	-36.35	0-360	100	H
3	4.142	30.59	PK	33.5	-31.2	0	32.89	-	-	74	-41.11	-	-	0-360	200	V
4	6.328	30.34	PK	35.4	-29.1	0	36.64	-	-	-	-	68.2	-31.56	0-360	100	H
5	8.619	28.81	PK	35.8	-26.6	0	38.01	-	-	-	-	68.2	-30.19	0-360	200	V
6	12.571	28.11	PK	39.2	-26.7	0	40.61	-	-	74	-33.39	-	-	0-360	200	V

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.698	29.49	AD1	29	-32.2	.3	26.59	54	-27.41	-	-	-	-	360	100	H
1.699	41.9	PK1	29	-32.2	0	38.7	-	-	74	-35.3	-	-	360	100	H

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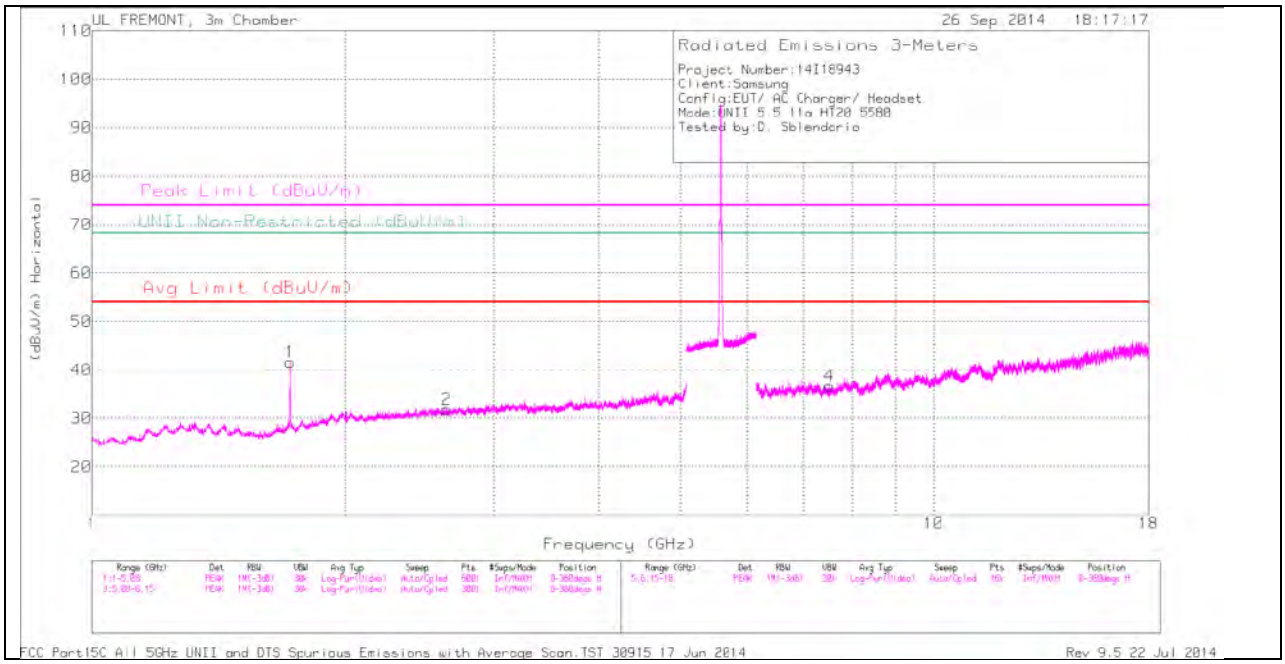
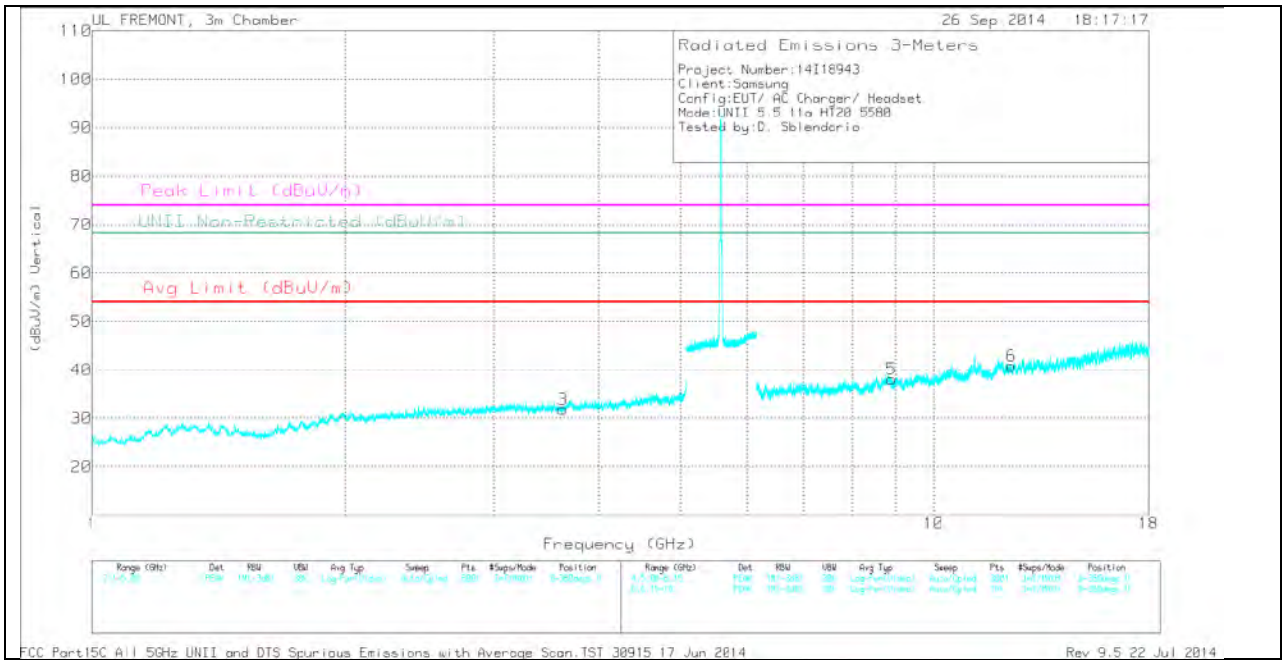
MID CHANNEL HORIZONTAL



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

MID CHANNEL VERTICAL



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

MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.719	44.39	PK	29.2	-32	0	41.59	-	-	-	-	68.2	-26.61	0-360	100	H
2	2.637	31.77	PK	32.6	-32.5	0	31.87	-	-	-	-	68.2	-36.33	0-360	100	H
3	3.625	30.13	PK	33.1	-31.3	0	31.93	-	-	74	-42.07	-	-	0-360	200	V
4	7.513	29.82	PK	35.7	-28.9	0	36.62	-	-	74	-37.38	-	-	0-360	200	H
5	8.912	29.44	PK	36	-27.3	0	38.14	-	-	-	-	68.2	-30.06	0-360	200	V
6	12.36	28.57	PK	39.1	-26.8	0	40.87	-	-	74	-33.13	-	-	0-360	200	V

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.717	29.95	AD1	29.2	-32	.3	27.45	-	-	-	-	-	-	360	100	H
1.72	41.42	PK1	29.3	-32	0	38.72	-	-	74	-35.28	-	-	360	100	H

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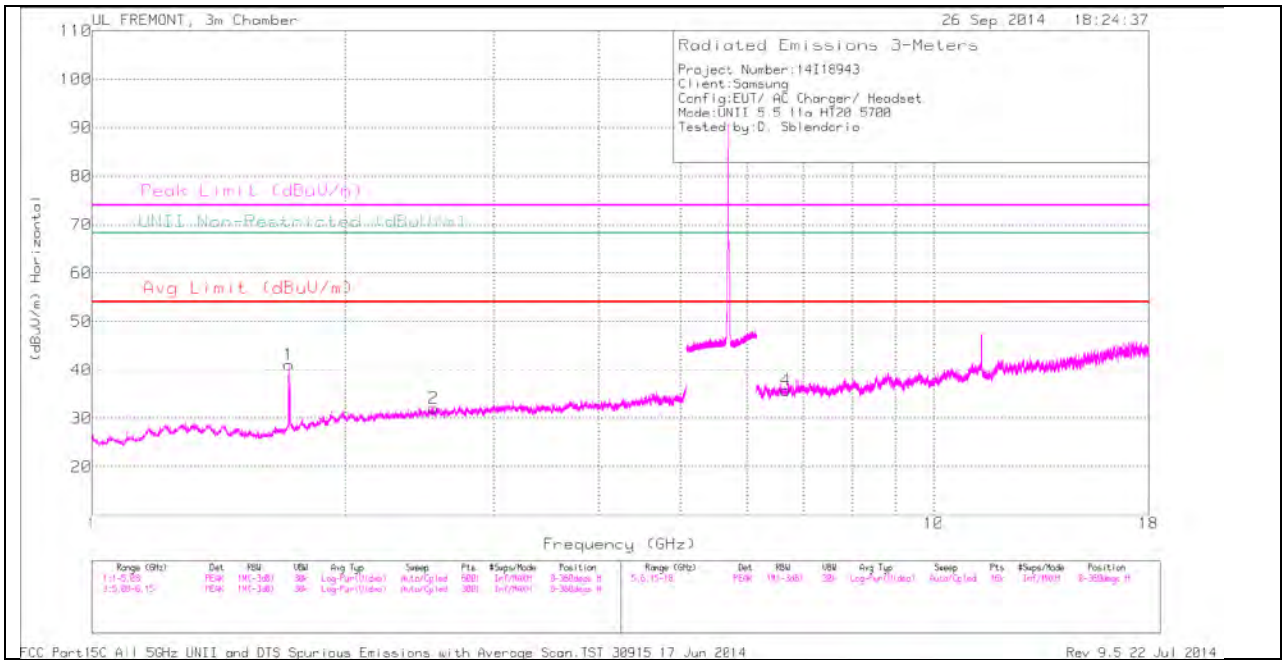
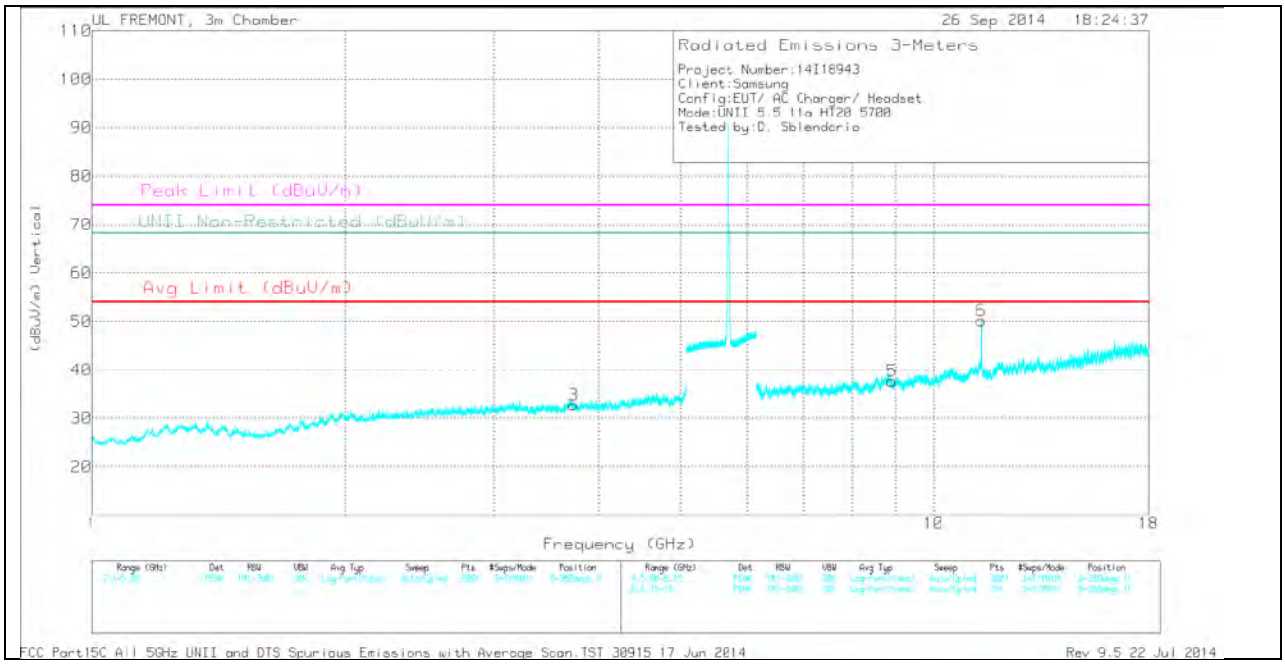
HIGH CHANNEL HORIZONTAL



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

HIGH CHANNEL VERTICAL



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

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.711	43.94	PK	29.2	-32.1	0	41.04	-	-	-	-	68.2	-27.16	0-360	100	H
2	2.542	31.73	PK	32.4	-32	0	32.13	-	-	-	-	68.2	-36.07	0-360	100	H
3	3.734	30.84	PK	33.2	-31.3	0	32.74	-	-	74	-41.26	-	-	0-360	100	V
4	6.676	29.6	PK	35.6	-29.4	0	35.8	-	-	-	-	68.2	-32.4	0-360	100	H
5	8.917	29.14	PK	36	-27.4	0	37.74	-	-	-	-	68.2	-30.46	0-360	100	V
6	11.398	38.13	PK	38.1	-26	0	50.23	-	-	74	-23.77	-	-	0-360	100	V

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.711	47.91	PK1	29.2	-32.1	0	45.01	-	-	-	-	68.2	-23.19	360	100	H
1.713	29.87	AD1	29.2	-32.1	.3	27.27	-	-	-	-	-	-	360	100	H
11.4	51.06	PK1	38.1	-26	0	63.16	-	-	74	-10.84	-	-	178	267	V
11.4	35.77	AD1	38.1	-26	.3	48.17	54	-5.83	-	-	-	-	178	267	V

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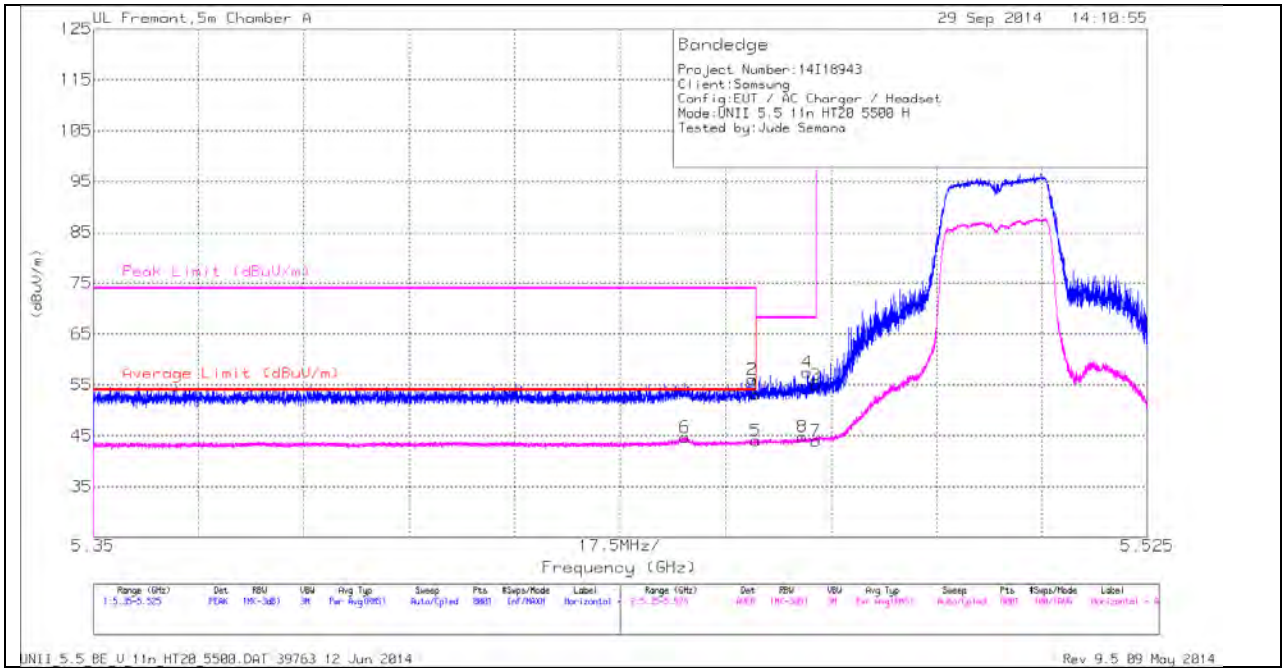
11.3.2. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.5 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

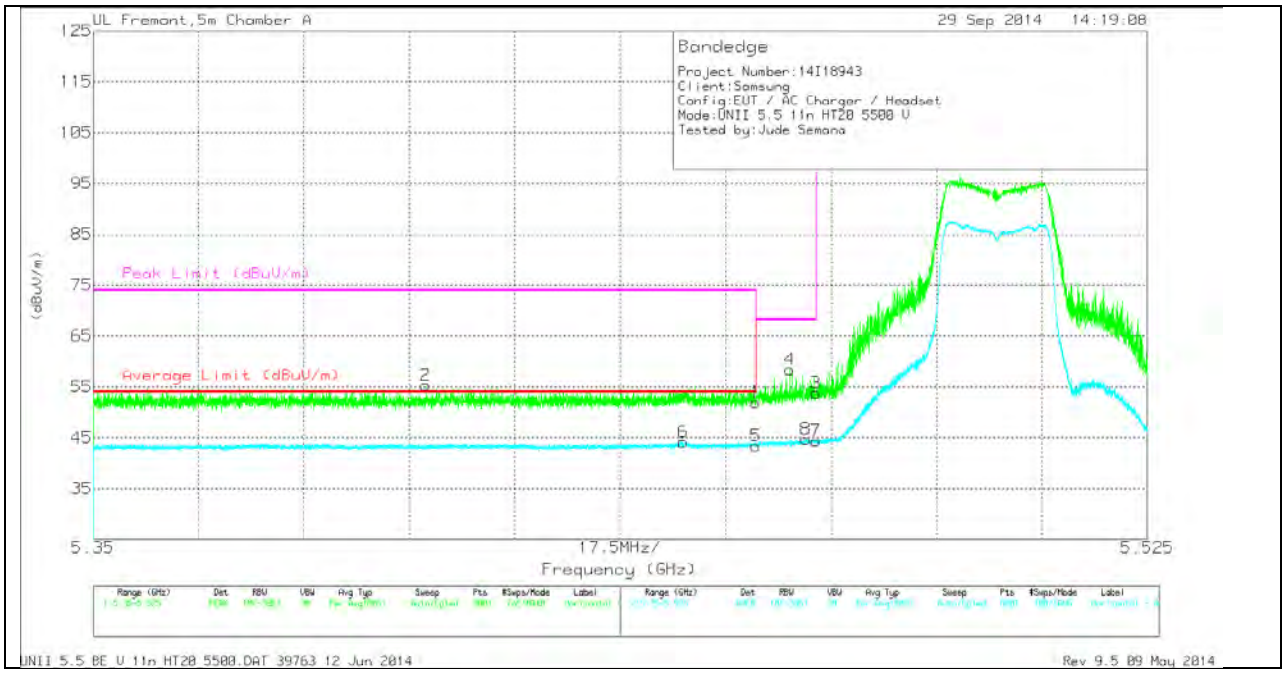
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.46	39.7	PK	34.8	-21.4	53.1	-	-	74	-20.9	2	399	H
2	5.459	42.68	PK	34.8	-21.4	56.08	-	-	74	-17.92	2	399	H
3	5.47	41.46	PK	34.8	-21.3	54.96	-	-	68.2	-13.24	2	399	H
4	5.469	43.97	PK	34.8	-21.3	57.47	-	-	68.2	-10.73	2	399	H
5	5.46	30.67	RMS	34.8	-21.4	44.07	54	-9.93	-	-	2	399	H
6	5.448	31.31	RMS	34.8	-21.4	44.71	54	-9.29	-	-	2	399	H
7	5.47	30.55	RMS	34.8	-21.3	44.05	-	-	-	-	2	399	H
8	5.468	31.3	RMS	34.8	-21.3	44.8	-	-	-	-	2	399	H

VERTICAL PEAK AND AVERAGE PLOT

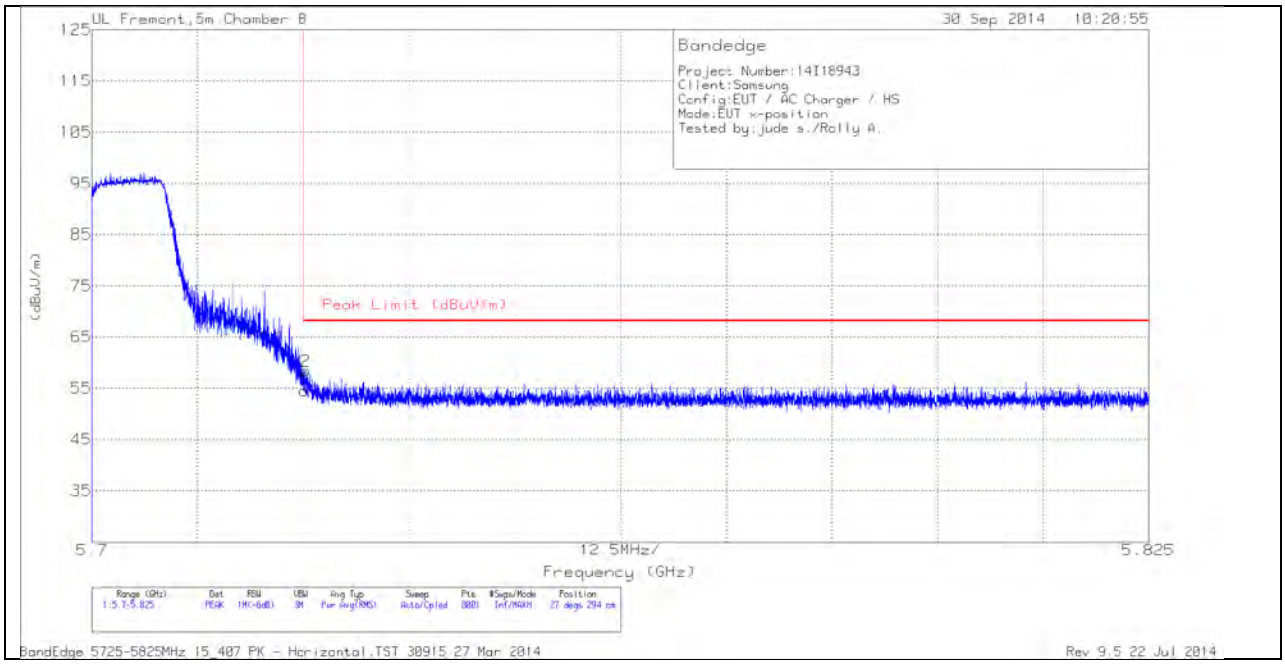


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.46	38.56	PK	34.8	-21.4	51.96	-	-	74	-22.04	248	393	V
2	5.405	42.04	PK	34.7	-21.4	55.34	-	-	74	-18.66	248	393	V
3	5.47	40.32	PK	34.8	-21.3	53.82	-	-	68.2	-14.38	248	393	V
4	5.466	44.89	PK	34.8	-21.3	58.39	-	-	68.2	-9.81	248	393	V
5	5.46	29.99	RMS	34.8	-21.4	43.39	54	-10.61	-	-	248	393	V
6	5.448	30.77	RMS	34.8	-21.4	44.17	54	-9.83	-	-	248	393	V
7	5.47	30.91	RMS	34.8	-21.3	44.41	-	-	-	-	248	393	V
8	5.468	31.2	RMS	34.8	-21.3	44.7	-	-	-	-	248	393	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

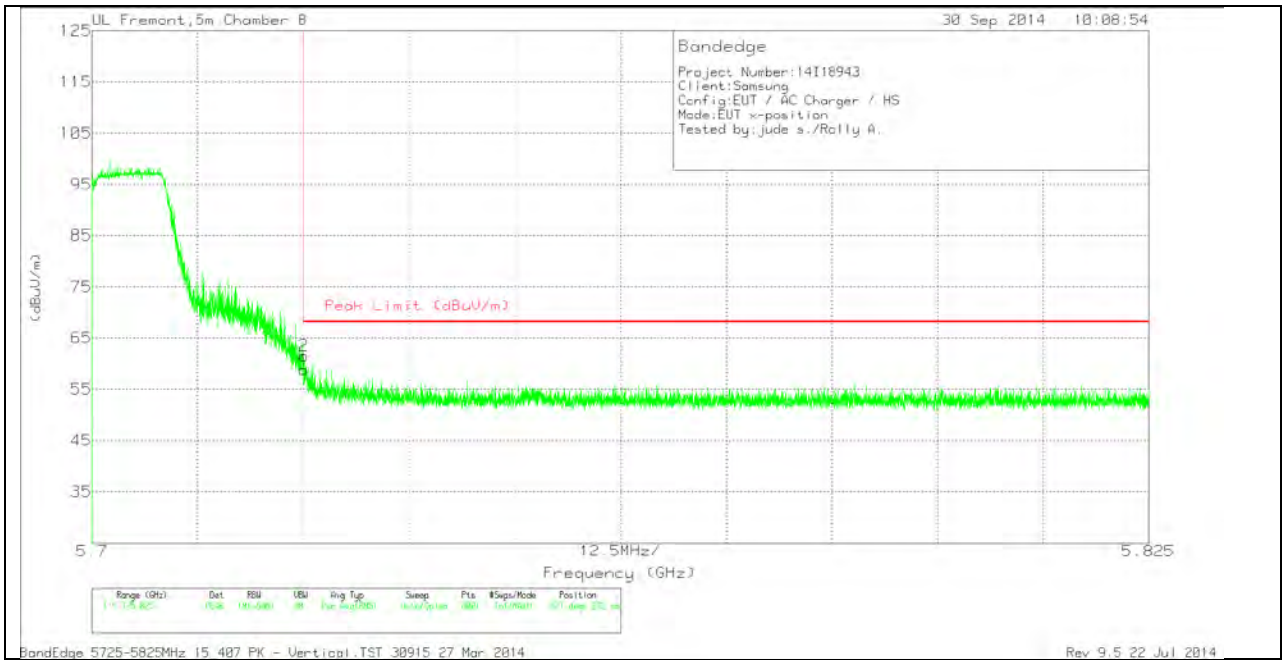
HORIZONTAL PEAK PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	40.07	PK	34.6	-20.1	0	54.57	68.2	-13.63	27	294	H
2	5.725	43.79	PK	34.6	-20.1	0	58.29	68.2	-9.91	27	294	H

VERTICAL PEAK PLOT

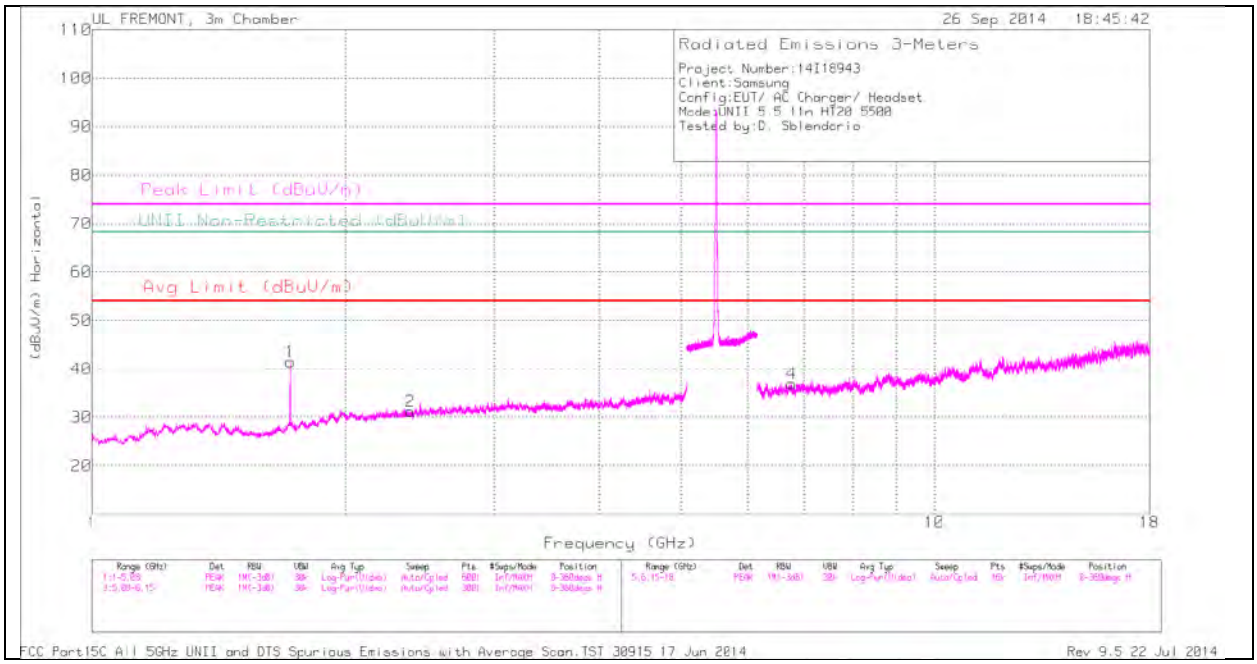


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	44.35	PK	34.6	-20.1	0	58.85	68.2	-9.35	327	272	V
2	5.725	47.02	PK	34.6	-20.1	0	61.52	68.2	-6.68	327	272	V

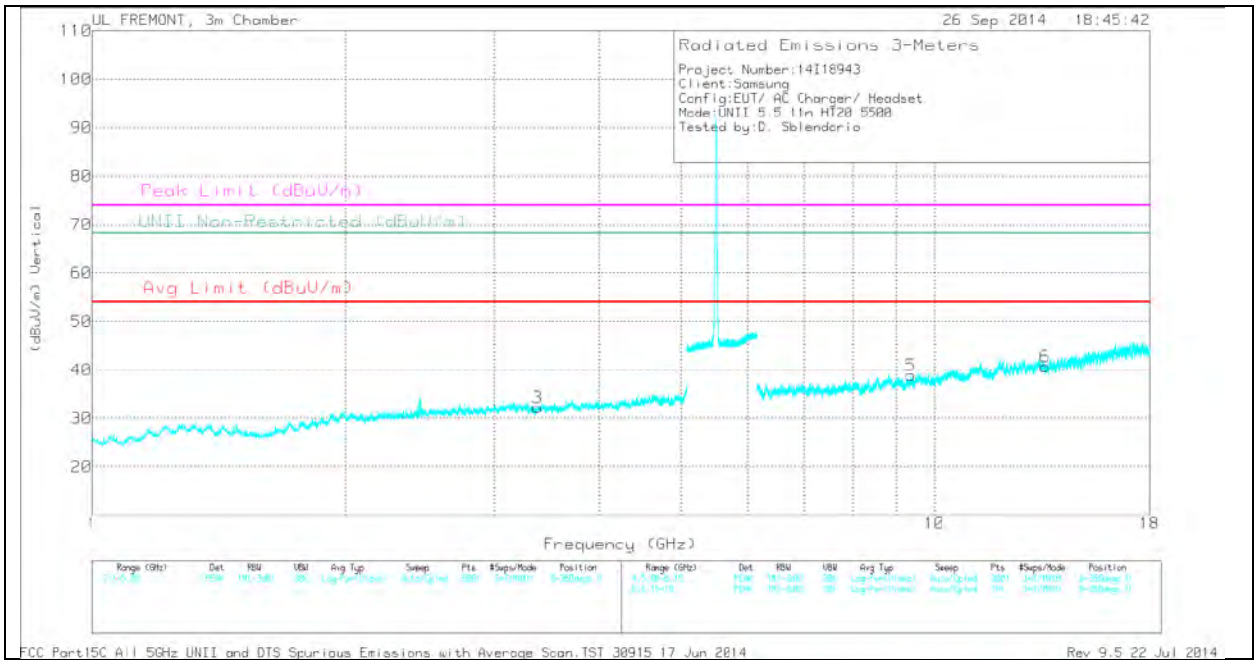
HARMONICS AND SPURIOUS EMISSIONS

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.

LOW CHANNEL VERTICAL



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

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.718	44.29	PK	29.2	-32	0	41.49	-	-	-	-	68.2	-26.71	0-360	100	H
2	2.388	31.77	PK	32.1	-32.6	0	31.27	-	-	74	-42.73	-	-	0-360	100	H
3	3.379	31.16	PK	32.9	-31.8	0	32.26	-	-	-	-	68.2	-35.94	0-360	200	V
4	6.767	30.99	PK	35.6	-29.6	0	36.99	-	-	-	-	68.2	-31.21	0-360	200	H
5	9.384	28.89	PK	36.4	-26.4	0	38.89	-	-	74	-35.11	-	-	0-360	100	V
6	13.526	29.22	PK	38.9	-27.4	0	40.72	-	-	-	-	68.2	-27.48	0-360	200	V

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.716	30.05	AD1	29.2	-32	.3	27.55	-	-	-	-	-	-	0	100	H
1.718	41.56	PK1	29.2	-32	0	38.76	-	-	-	-	68.2	-29.44	0	100	H

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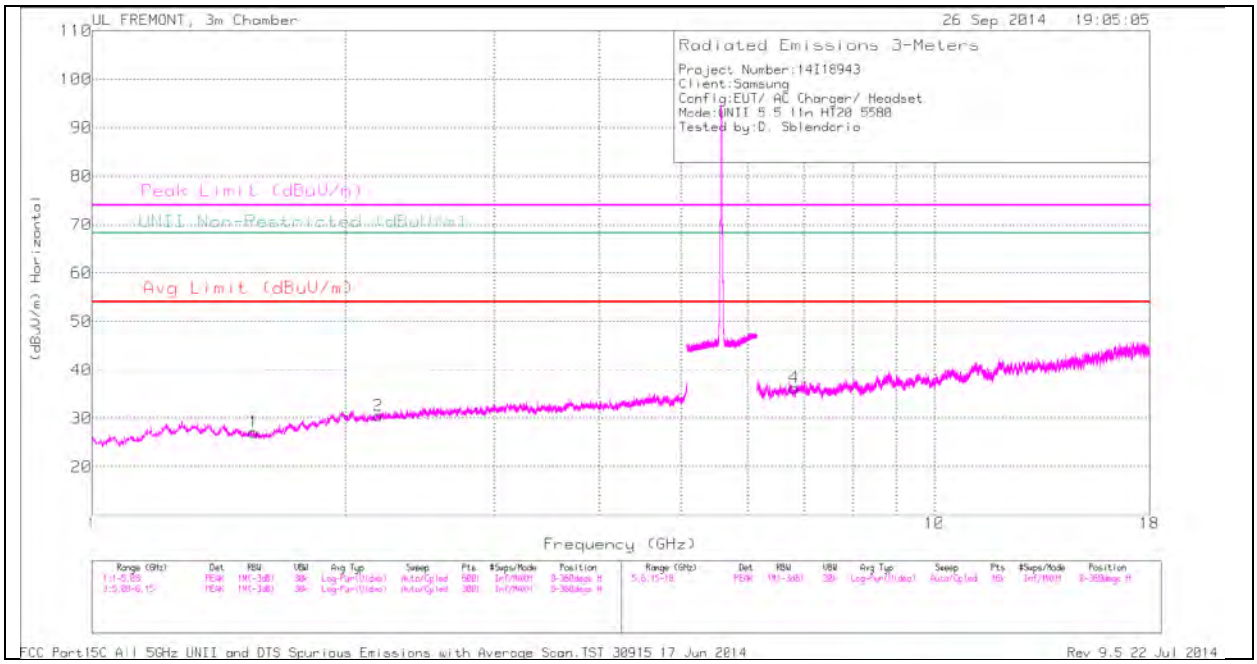
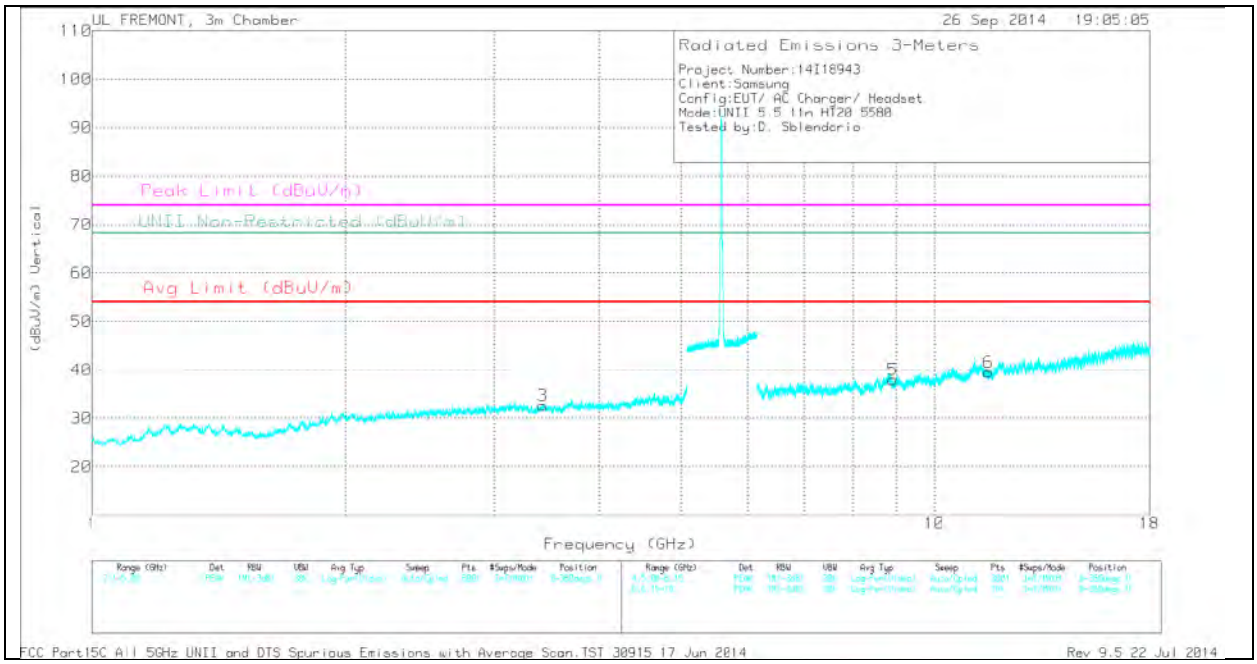
MID CHANNEL HORIZONTAL



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

MID CHANNEL VERTICAL



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

MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.556	32.32	PK	28.3	-33.4	0	27.22	-	-	74	-46.78	-	-	0-360	200	H
2	2.186	31.48	PK	31.7	-32.6	0	30.58	-	-	-	-	68.2	-37.62	0-360	100	H
3	3.423	31.17	PK	32.9	-31.4	0	32.67	-	-	-	-	68.2	-35.53	0-360	200	V
4	6.809	30.34	PK	35.6	-29.7	0	36.24	-	-	-	-	68.2	-31.96	0-360	200	H
5	8.926	29.47	PK	36	-27.5	0	37.97	-	-	-	-	68.2	-30.23	0-360	200	V
6	11.587	26.99	PK	38.4	-25.9	0	39.49	-	-	74	-34.51	-	-	0-360	200	V

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Filt r/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
1.554	30.18	AD1	28.3	-33.3	.3	25.48	54	-28.52	-	-	-	-	0	200	H
1.558	41.69	PK1	28.3	-33.4	0	36.59	-	-	74	-37.41	-	-	0	200	H

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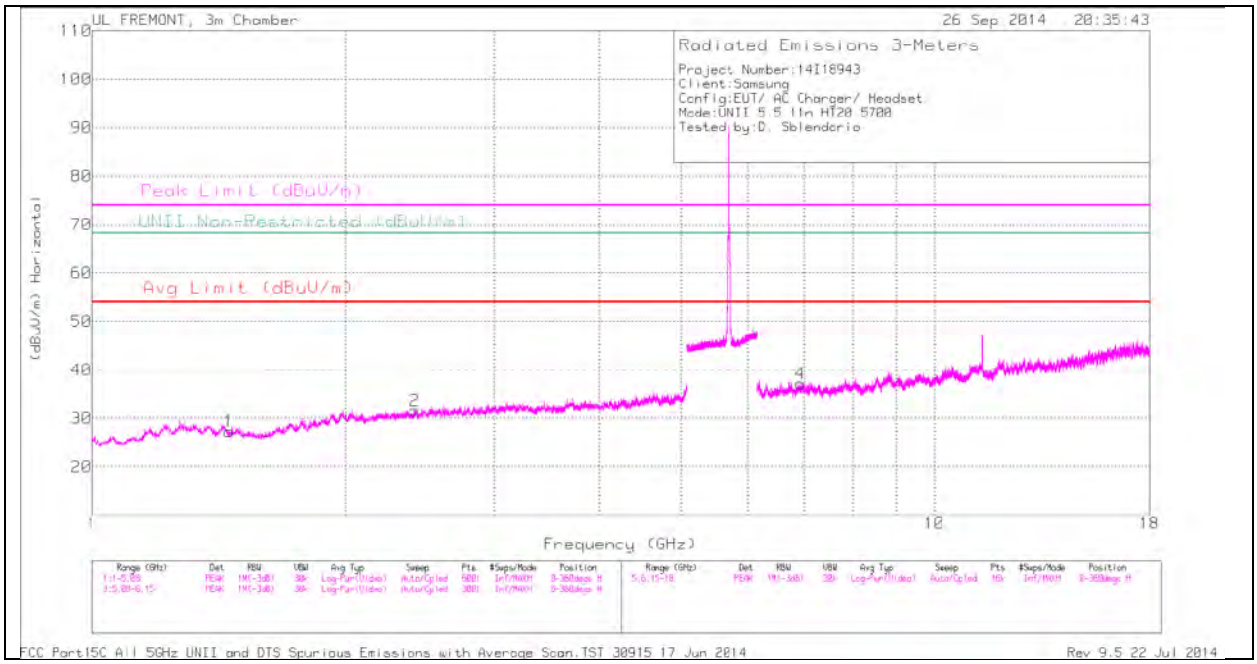
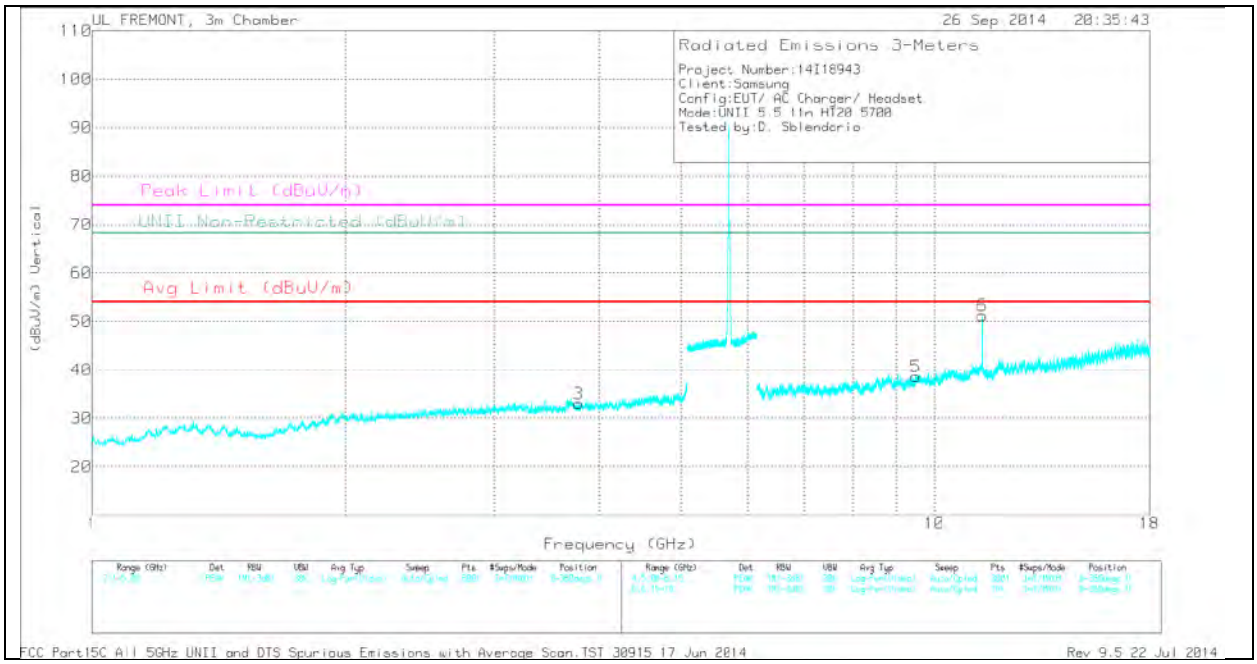
HIGH CHANNEL HORIZONTAL



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

HIGH CHANNEL VERTICAL



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

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.452	31.2	PK	28.8	-32.7	0	27.3	-	-	74	-46.7	-	-	0-360	200	H
2	2.416	32.25	PK	32.1	-32.7	0	31.65	-	-	-	-	68.2	-36.55	0-360	100	H
3	3.778	31.64	PK	33.2	-31.8	0	33.04	-	-	74	-40.96	-	-	0-360	100	V
4	6.928	30.12	PK	35.6	-28.5	0	37.22	-	-	-	-	68.2	-30.98	0-360	200	H
5	9.503	27.83	PK	36.6	-25.8	0	38.63	-	-	-	-	68.2	-29.57	0-360	200	V
6	11.4	39.12	PK	38.1	-26	0	51.22	-	-	74	-22.78	-	-	0-360	200	V

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
11.398	53.54	PK1	38.1	-26	0	65.64	-	-	74	-8.36	-	-	160	129	V
11.4	38.01	AD1	38.1	-26	.3	50.41	54	-3.59	-	-	-	-	160	129	V

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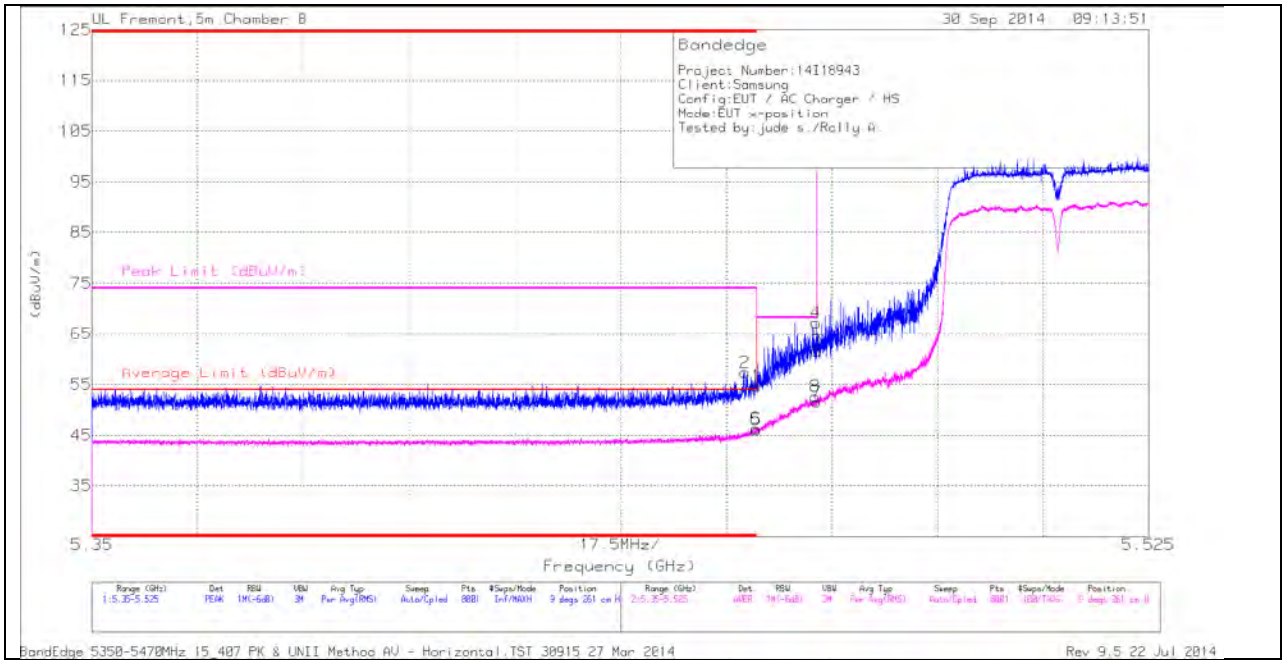
11.3.3. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.5 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

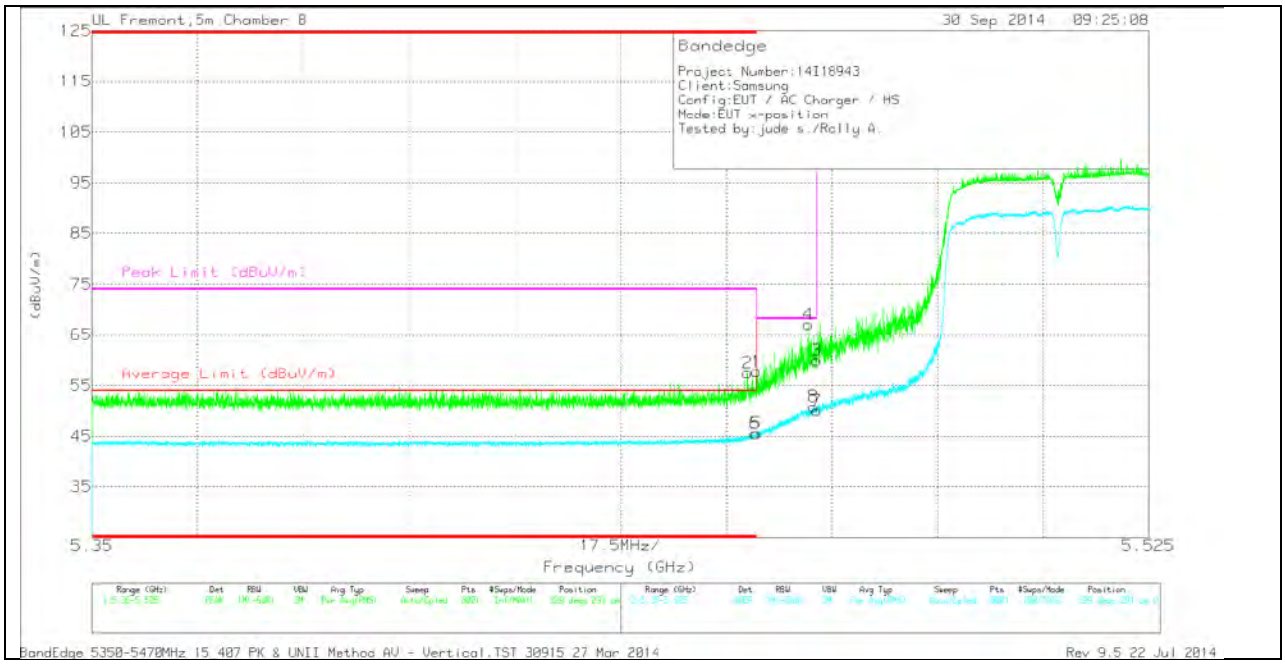
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.46	40.45	PK	34.5	-20.3	0	54.65	-	-	74	-19.35	9	261	H
2	* 5.458	43.22	PK	34.5	-20.3	0	57.42	-	-	74	-16.58	9	261	H
5	* 5.46	31.5	RMS	34.5	-20.3	.33	46.03	54	-7.97	-	-	9	261	H
6	* 5.46	31.76	RMS	34.5	-20.3	.33	46.29	54	-7.71	-	-	9	261	H
3	5.47	47.44	PK	34.5	-20.3	0	61.64	-	-	68.2	-6.56	9	261	H
4	5.47	52.96	PK	34.5	-20.3	0	67.16	-	-	68.2	-1.04	9	261	H
7	5.47	36.97	RMS	34.5	-20.3	.33	51.5	-	-	-	-	9	261	H
8	5.47	38.11	RMS	34.5	-20.3	.33	52.64	-	-	-	-	9	261	H

VERTICAL PEAK AND AVERAGE PLOT

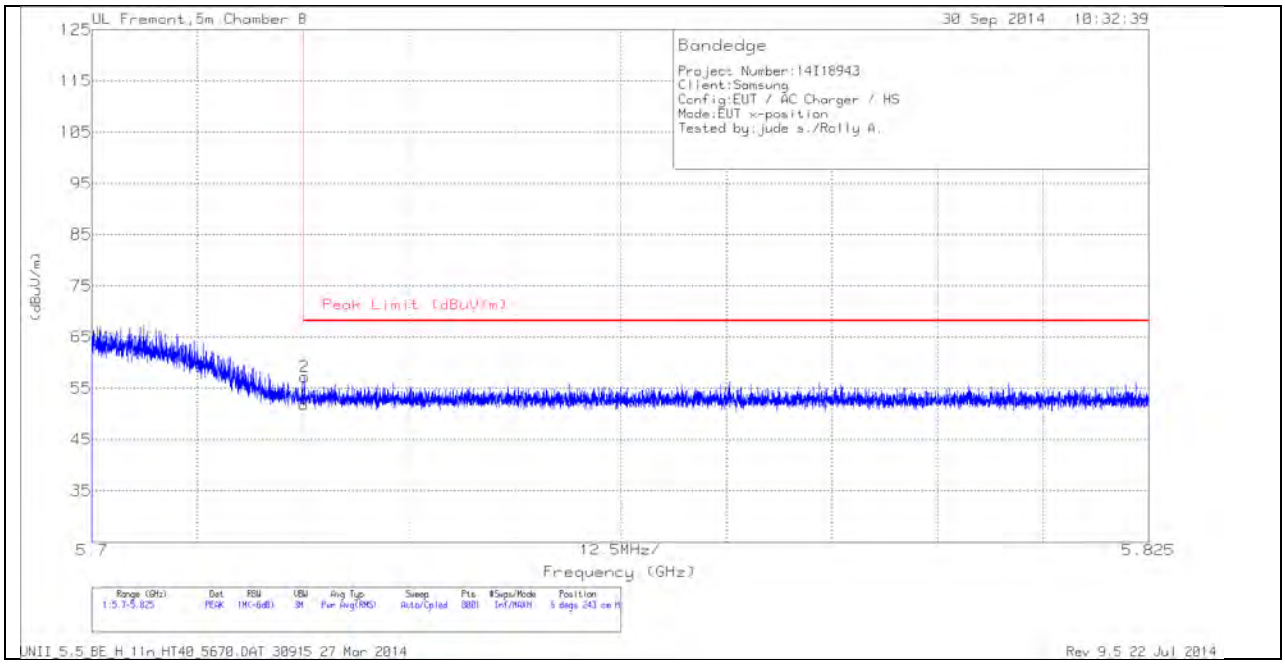


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.459	43.24	PK	34.5	-20.3	0	57.44	-	-	74	-16.56	329	291	V
1	* 5.46	43.55	PK	34.5	-20.3	0	57.75	-	-	74	-16.25	329	291	V
5	* 5.46	31.06	RMS	34.5	-20.3	.33	45.59	54	-8.41	-	-	329	291	V
6	* 5.46	31.05	RMS	34.5	-20.3	.33	45.58	54	-8.42	-	-	329	291	V
4	5.469	52.81	PK	34.5	-20.3	0	67.01	-	-	68.2	-1.19	329	291	V
3	5.47	45.73	PK	34.5	-20.3	0	59.93	-	-	68.2	-8.27	329	291	V
7	5.47	35.55	RMS	34.5	-20.3	.33	50.08	-	-	-	-	329	291	V
8	5.47	36.32	RMS	34.5	-20.3	.33	50.85	-	-	-	-	329	291	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

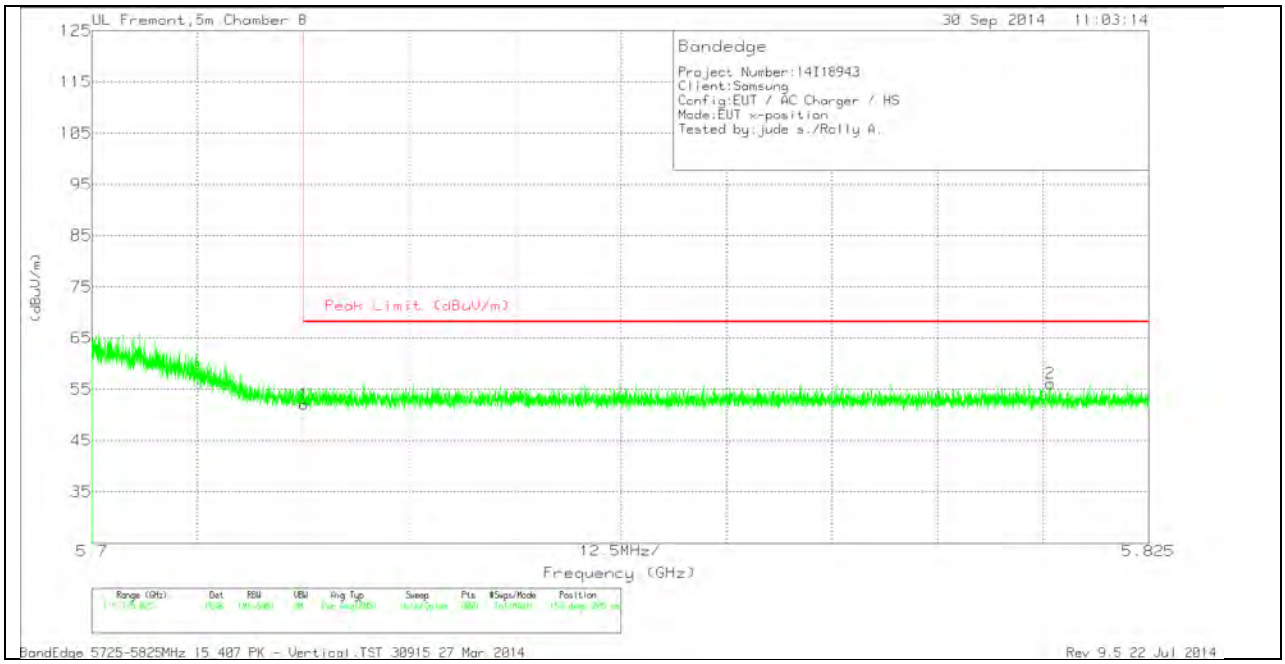
HORIZONTAL PEAK PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	37.39	PK	34.6	-20.1	0	51.89	68.2	-16.31	6	243	H
2	5.725	42.71	PK	34.6	-20.1	0	57.21	68.2	-10.99	6	243	H

VERTICAL PEAK PLOT

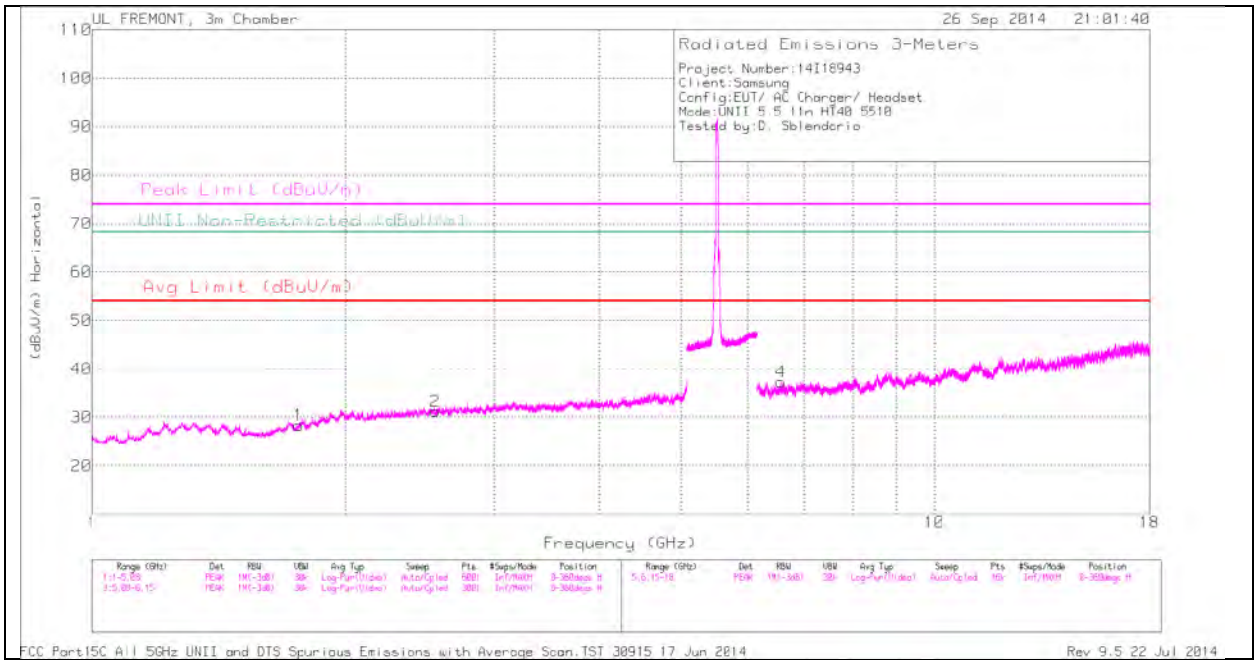


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	37.57	PK	34.6	-20.1	0	52.07	68.2	-16.13	158	205	V
2	5.813	41.36	PK	34.7	-19.9	0	56.16	68.2	-12.04	158	205	V

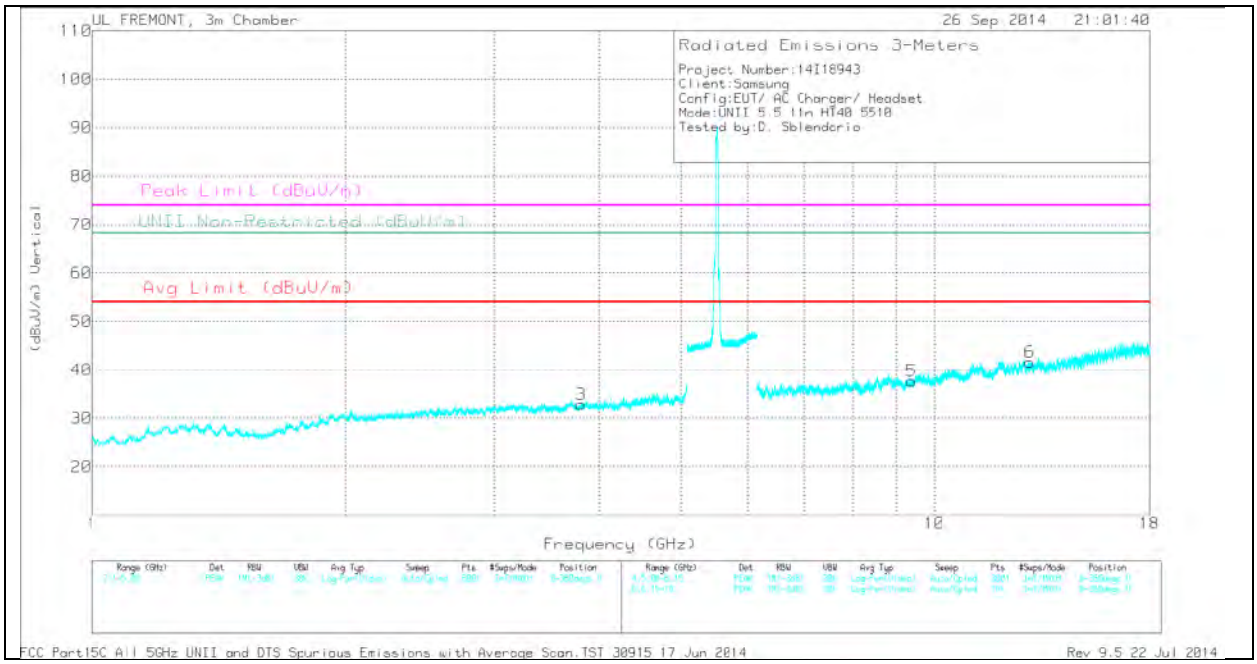
HARMONICS AND SPURIOUS EMISSIONS

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.

LOW CHANNEL VERTICAL



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

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.756	31.12	PK	29.7	-32.4	0	28.42	-	-	-	-	68.2	-39.78	0-360	200	H
2	2.55	30.9	PK	32.4	-32.1	0	31.2	-	-	-	-	68.2	-37	0-360	200	H
3	3.8	31.33	PK	33.2	-31.6	0	32.93	-	-	74	-41.07	-	-	0-360	200	V
4	6.57	31.08	PK	35.6	-29.4	0	37.28	-	-	-	-	68.2	-30.92	0-360	200	H
5	9.389	27.72	PK	36.4	-26.4	0	37.72	-	-	74	-36.28	-	-	0-360	100	V
6	12.979	29.75	PK	39.1	-27.2	0	41.65	-	-	-	-	68.2	-26.55	0-360	100	V

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.755	41.15	PK1	29.7	-32.4	0	38.45	-	-	-	-	68.2	-29.75	0	200	H
1.758	29.31	AD1	29.7	-32.4	.7	27.31	-	-	-	-	-	-	0	200	H

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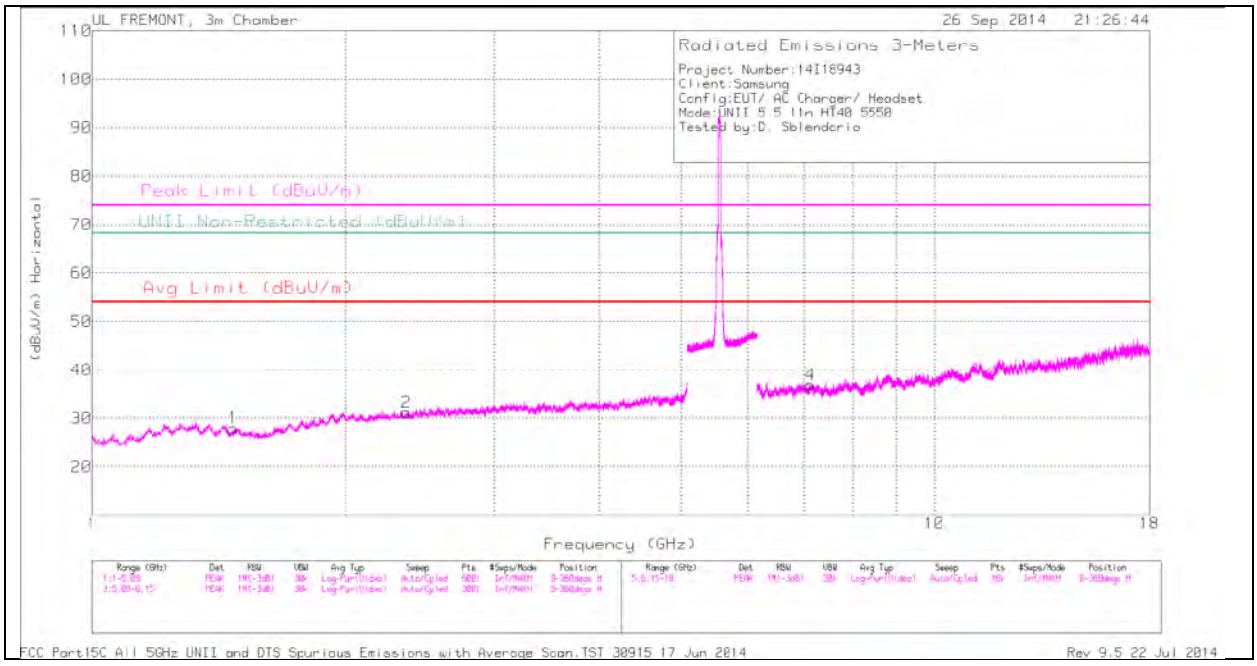
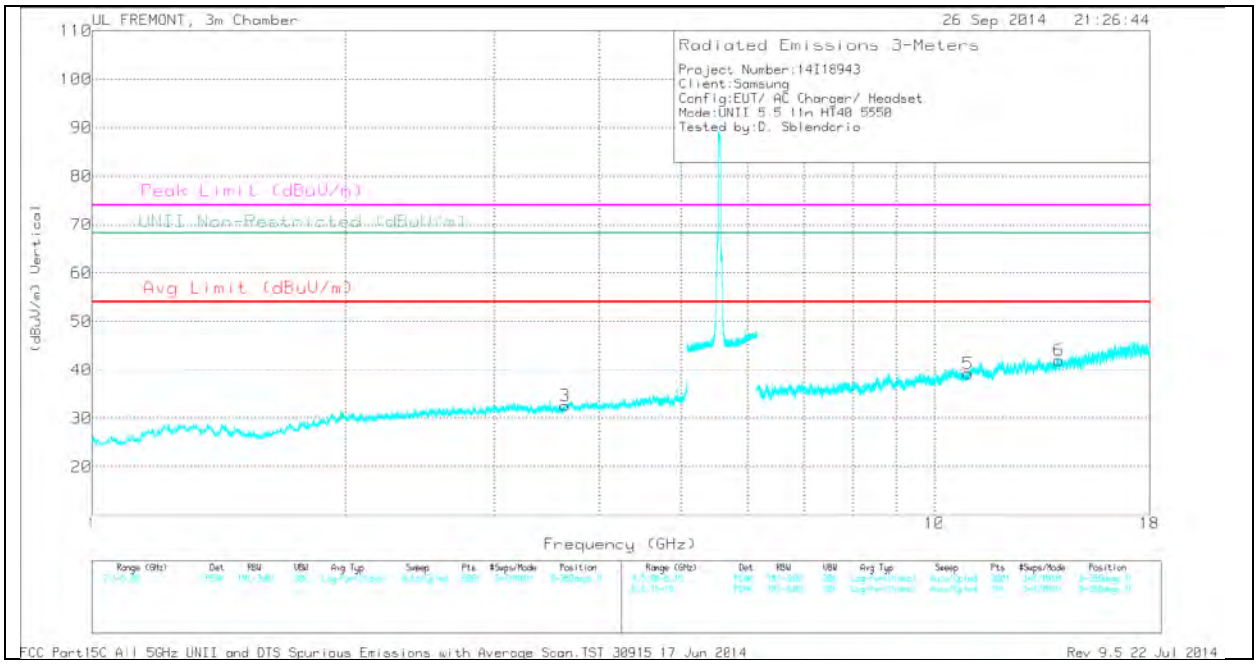
MID CHANNEL HORIZONTAL



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

MID CHANNEL VERTICAL



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

MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.469	32.12	PK	28.7	-32.9	0	27.92	-	-	74	-46.08	-	-	0-360	200	H
2	2.359	32.05	PK	32	-32.8	0	31.25	-	-	74	-42.75	-	-	0-360	100	H
3	3.645	30.63	PK	33.1	-31.1	0	32.63	-	-	74	-41.37	-	-	0-360	100	V
4	7.119	30.38	PK	35.6	-29	0	36.98	-	-	-	-	68.2	-31.22	0-360	200	H
5	10.958	27.39	PK	37.9	-26	0	39.29	-	-	74	-34.71	-	-	0-360	100	V
6	14.045	30.55	PK	38.9	-27.5	0	41.95	-	-	-	-	68.2	-26.25	0-360	200	V

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.468	29.66	AD1	28.7	-32.9	.7	26.16	54	-27.84	-	-	-	-	0	200	H
1.469	40.85	PK1	28.7	-32.9	0	36.65	-	-	74	-37.35	-	-	0	200	H

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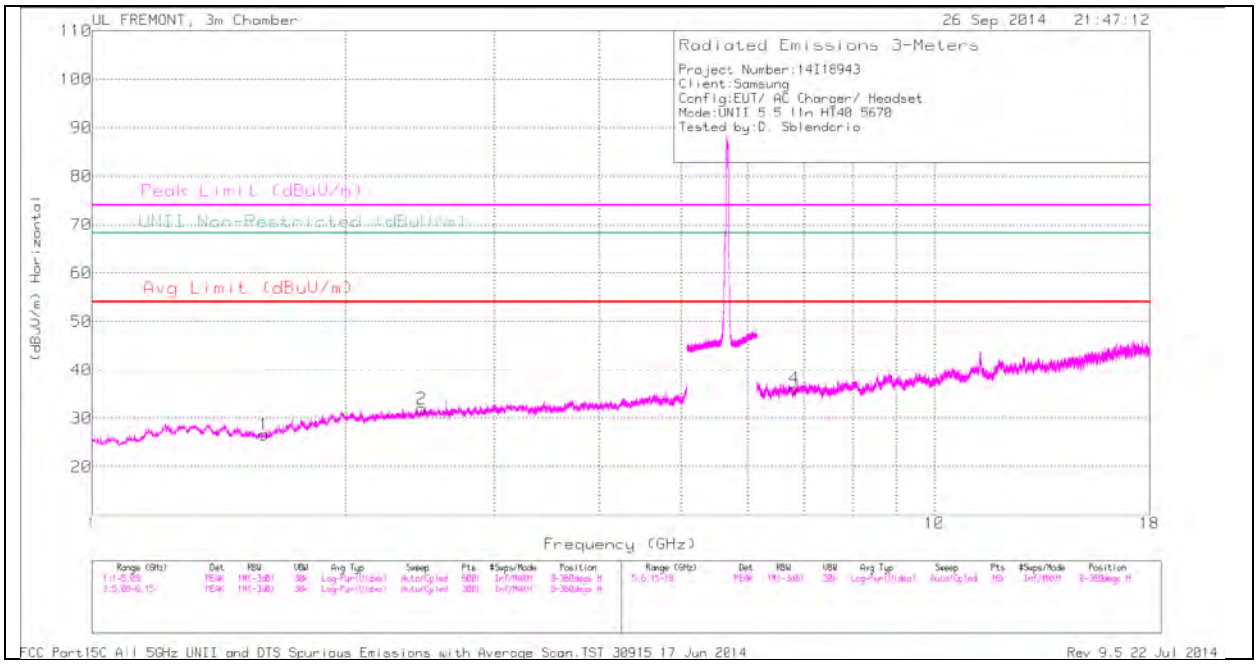
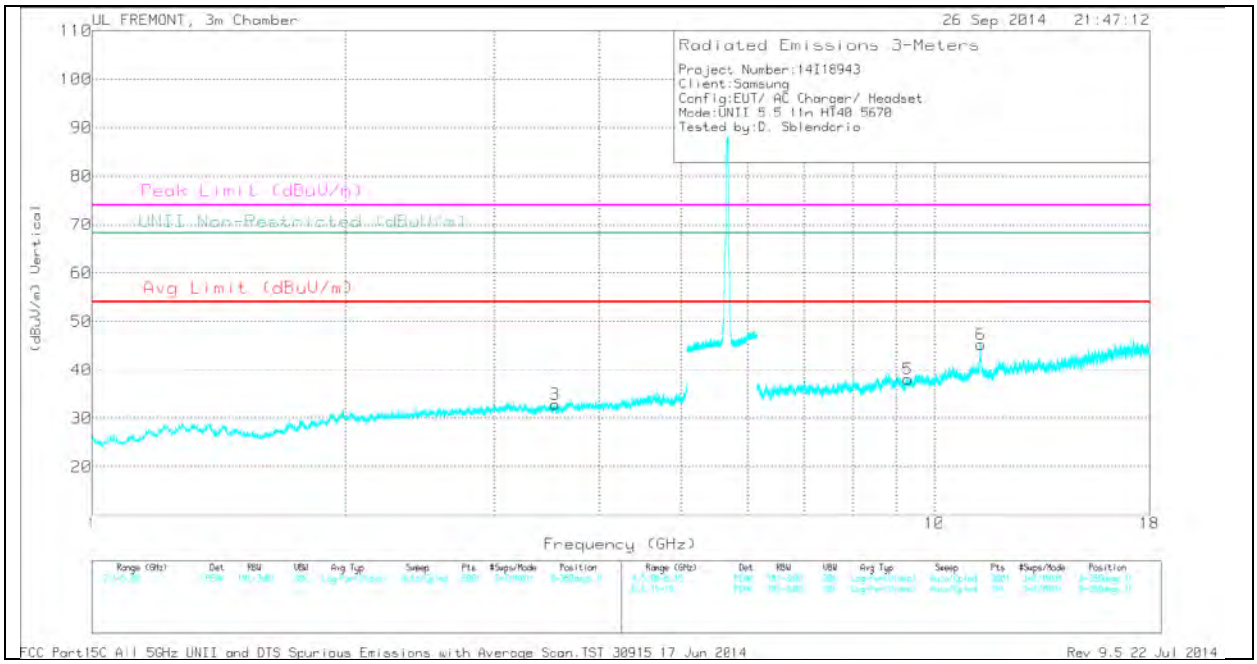
HIGH CHANNEL HORIZONTAL



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

HIGH CHANNEL VERTICAL



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

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.6	31.95	PK	28	-33.3	0	26.65	-	-	74	-47.35	-	-	0-360	200	H
2	2.46	32.24	PK	32.2	-32.5	0	31.94	-	-	-	-	68.2	-36.26	0-360	200	H
3	3.545	31.86	PK	33	-32	0	32.86	-	-	74	-41.14	-	-	0-360	200	V
4	6.811	30.3	PK	35.6	-29.7	0	36.2	-	-	-	-	68.2	-32	0-360	200	H
5	9.291	27.59	PK	36.3	-25.8	0	38.09	-	-	-	-	68.2	-30.11	0-360	200	V
6	11.344	32.89	PK	38	-25.6	0	45.29	-	-	74	-28.71	-	-	0-360	200	V

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
11.346	37.61	PK1	38	-25.6	0	50.01	-	-	74	-23.99	-	-	3	200	V
11.346	26.46	AD1	38	-25.6	.7	39.56	54	-14.44	-	-	-	-	3	200	V

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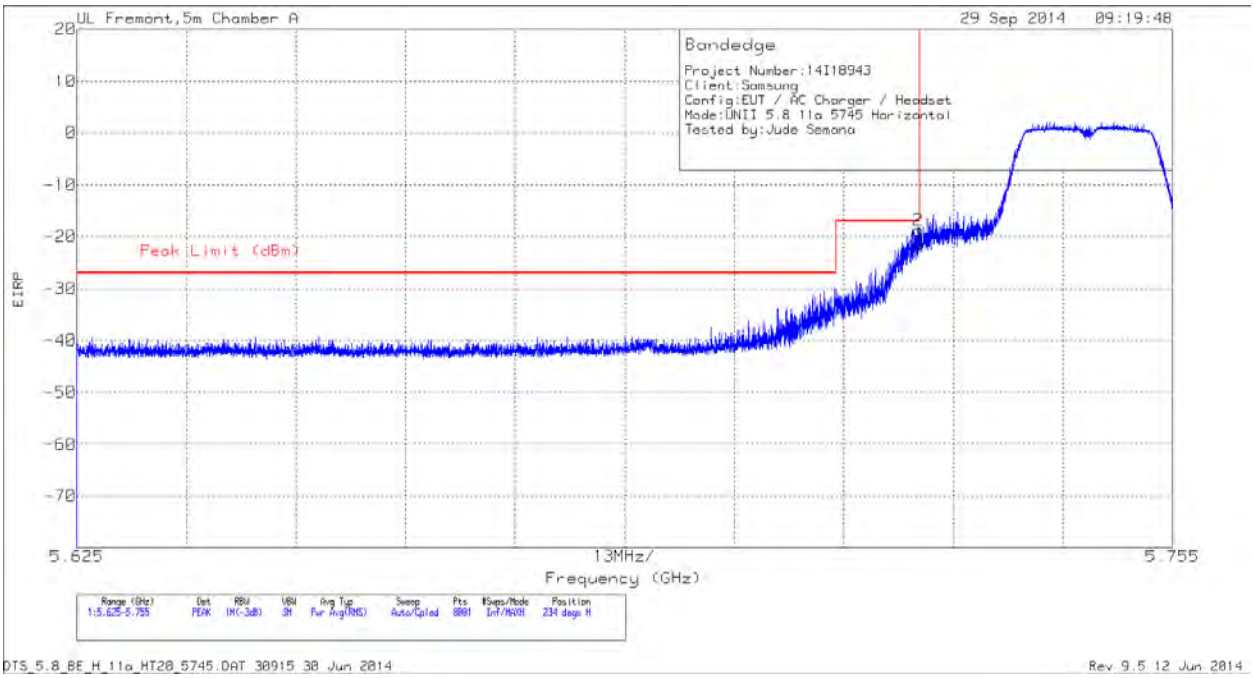
11.4. 5.8 GHz

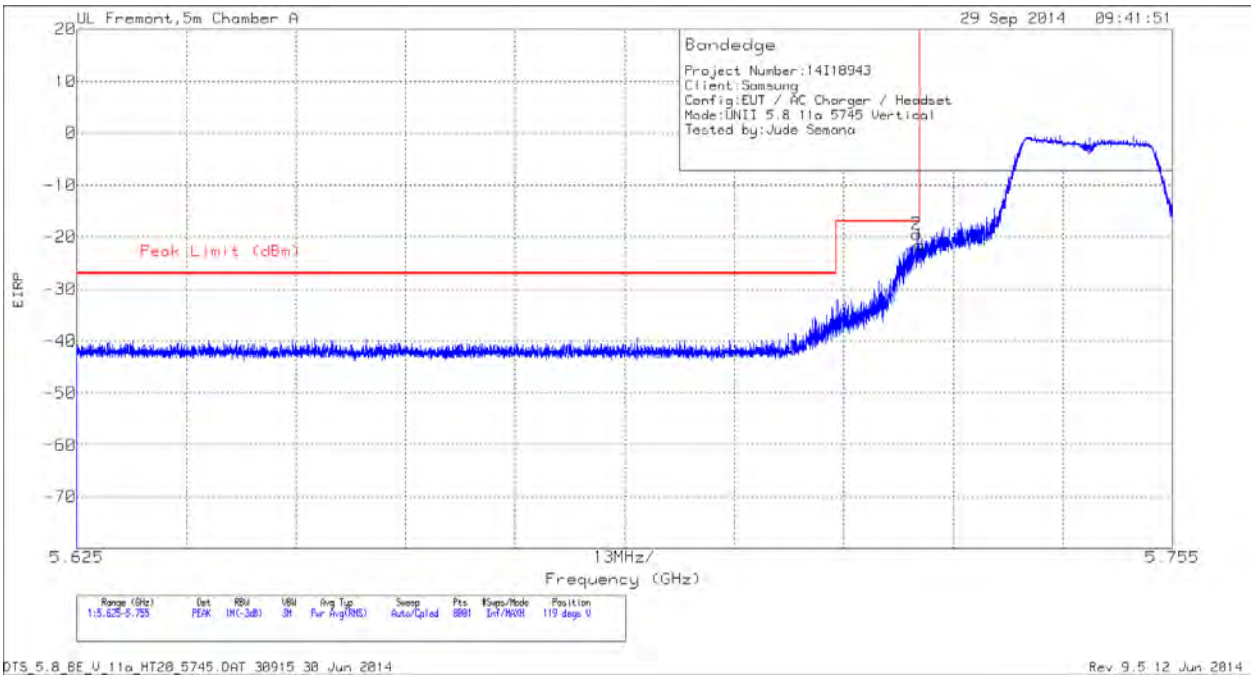
11.4.1. TX ABOVE 1 GHz 802.11a MODE IN THE 5.8 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK PLOT



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-46.94	PK	34.8	-21.1	11.8	-21.44	-17	-4.44	234	305	H
2	5.725	-44.28	PK	34.8	-21.1	11.8	-18.78	-17	-1.78	234	305	H

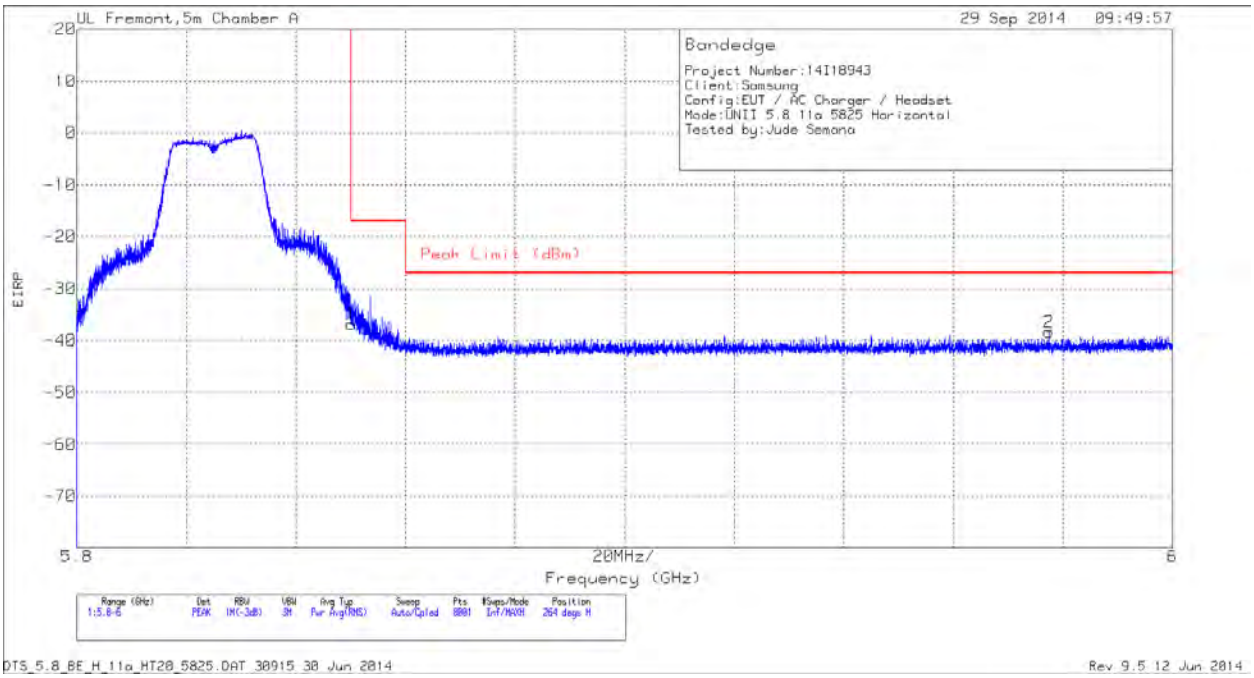
VERTICAL PEAK PLOT



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-47.06	PK	34.8	-21.1	11.8	-21.56	-17	-4.56	119	167	V
2	5.725	-44.9	PK	34.8	-21.1	11.8	-19.4	-17	-2.4	119	167	V

RESTRICTED BANDEDGE (HIGH CHANNEL)

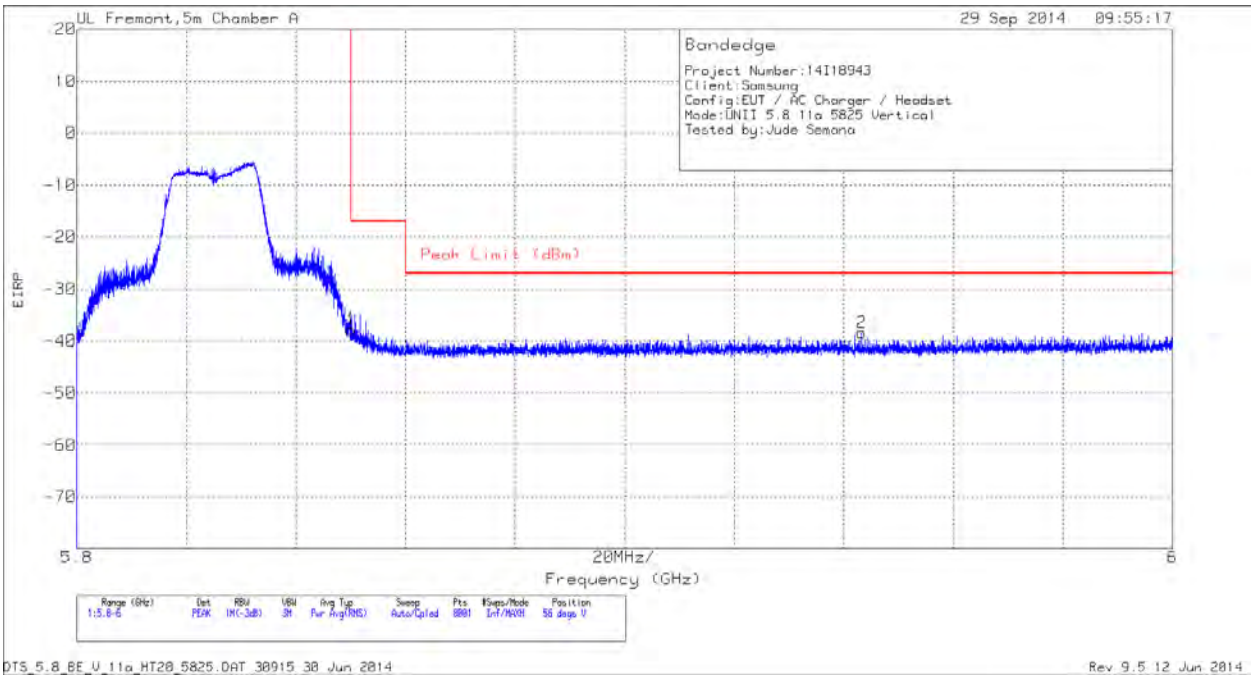
HORIZONTAL PEAK PLOT



Note: Plot get from pre-scan. Final data refer to data table below.

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/Filt r/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-62.37	PK	35	-21.3	11.8	-36.87	-27	-9.87	264	305	H
2	5.977	-64.47	PK	35.2	-20.9	11.8	-38.37	-27	-11.37	264	305	H

VERTICAL PEAK PLOT

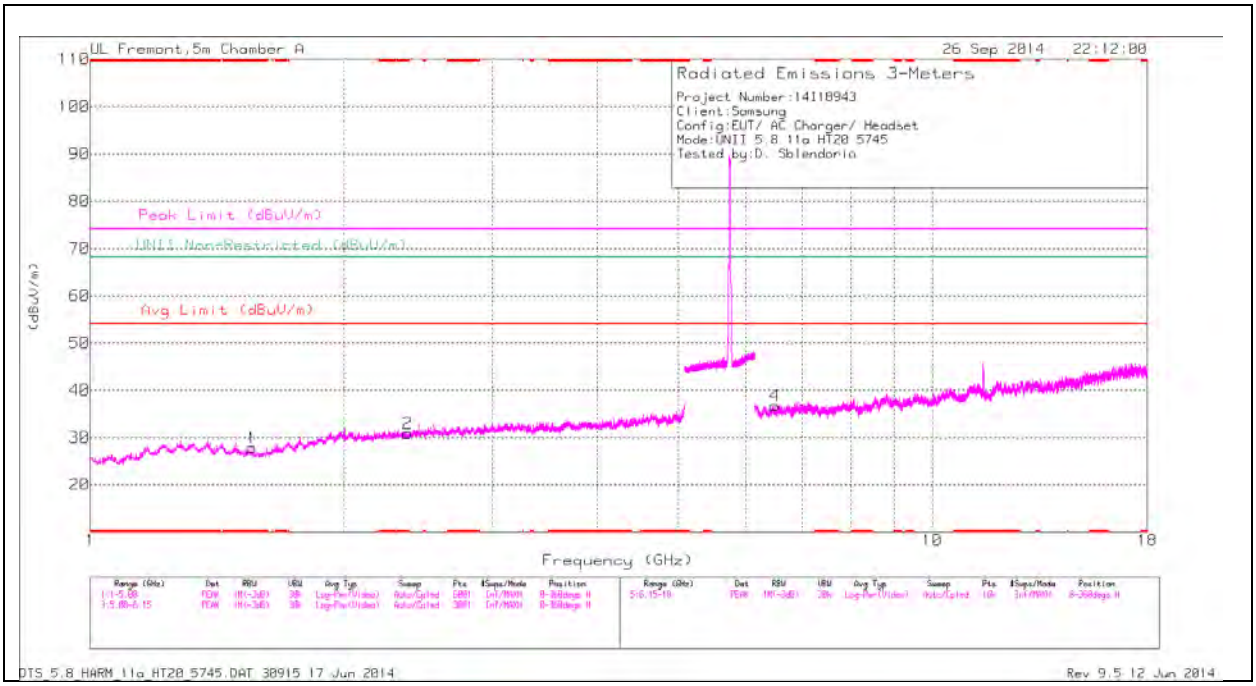


Note: Plot get from pre-scan. Final data refer to data table below.

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-63.37	PK	35	-21.3	11.8	-37.87	-27	-10.87	56	361	V
2	5.943	-64.43	PK	35.2	-21	11.8	-38.43	-27	-11.43	56	361	V

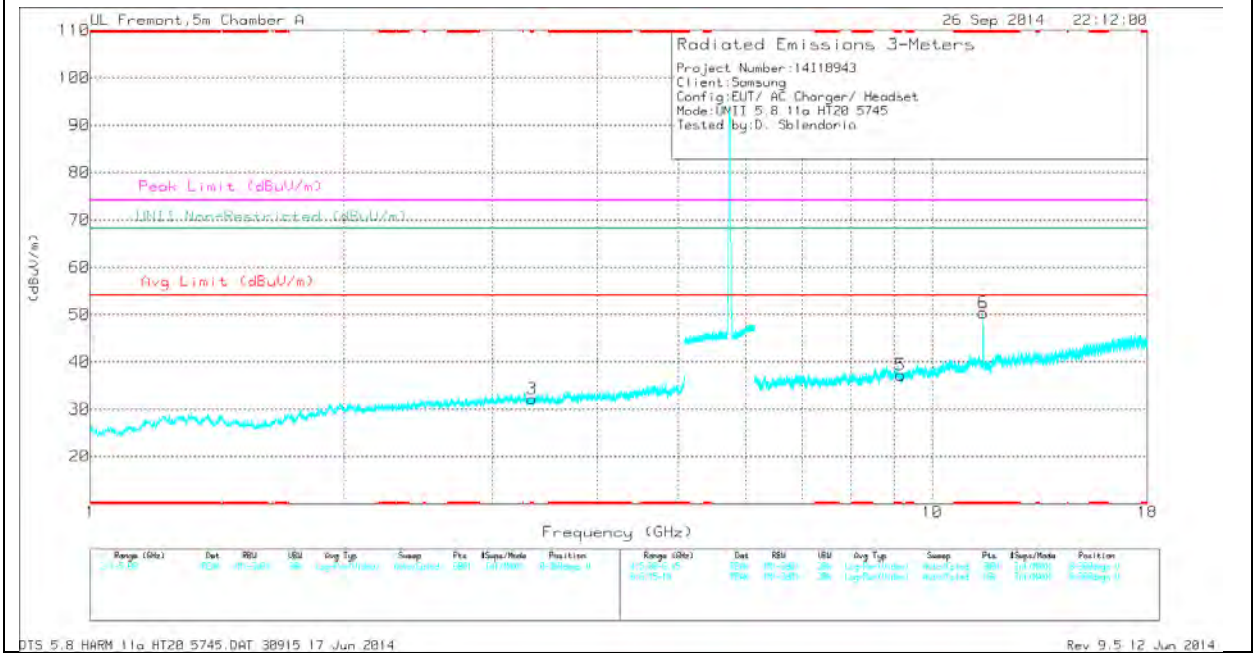
HARMONICS AND SPURIOUS EMISSIONS

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.

LOW CHANNEL VERTICAL



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

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.556	32.94	PK	28.3	-33.4	0	27.84	-	-	74	-46.16	-	-	0-360	100	H
2	* 2.381	31.54	PK	32.1	-32.7	0	30.94	-	-	74	-43.06	-	-	0-360	100	H
3	* 3.347	31.4	PK	32.9	-32.1	0	32.2	-	-	74	-41.8	-	-	0-360	200	V
5	* 9.175	28.09	PK	36.2	-27.1	0	37.19	-	-	74	-36.81	-	-	0-360	100	V
6	* 11.49	38.19	PK	38.2	-26	0	50.39	-	-	74	-23.61	-	-	0-360	100	V
4	6.501	30.65	PK	35.5	-29.4	0	36.75	-	-	-	-	68.2	-31.45	0-360	200	H

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.49	51.78	PK1	38.2	-26	0	63.98	-	-	74	-10.02	-	-	176	129	V
* 11.49	37.37	AD1	38.2	-26	.3	49.87	54	-4.13	-	-	-	-	176	129	V

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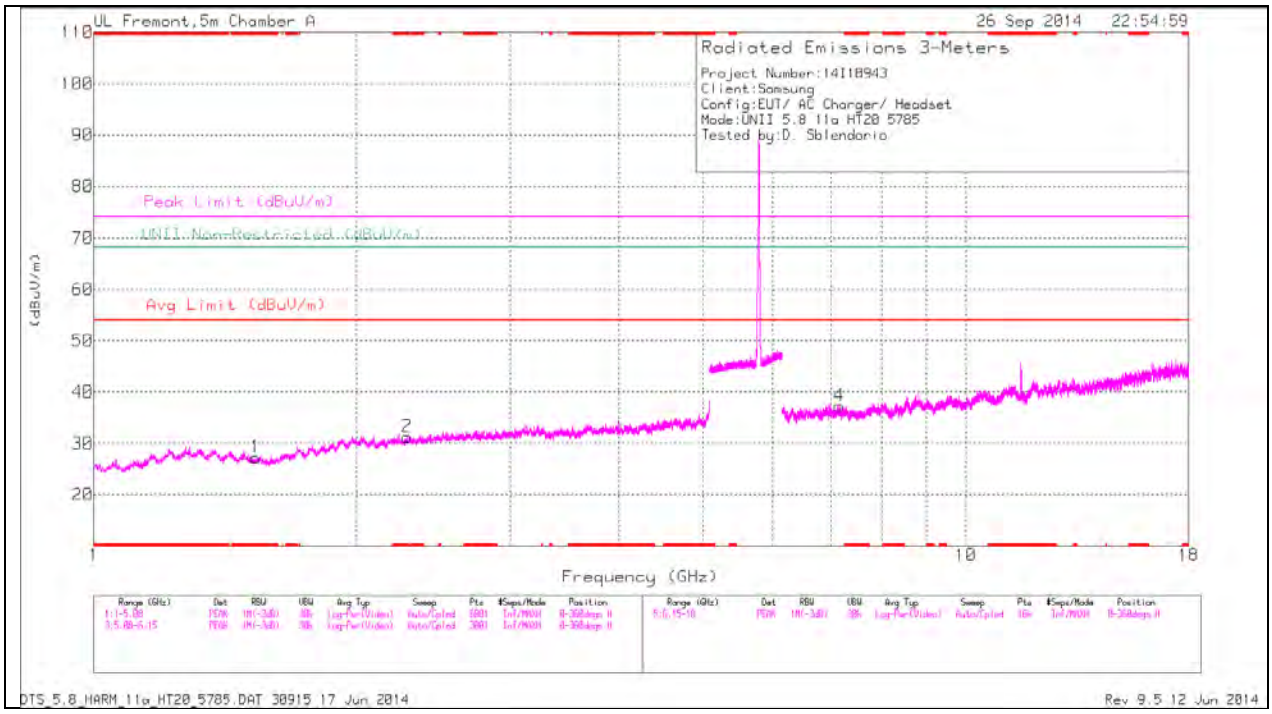
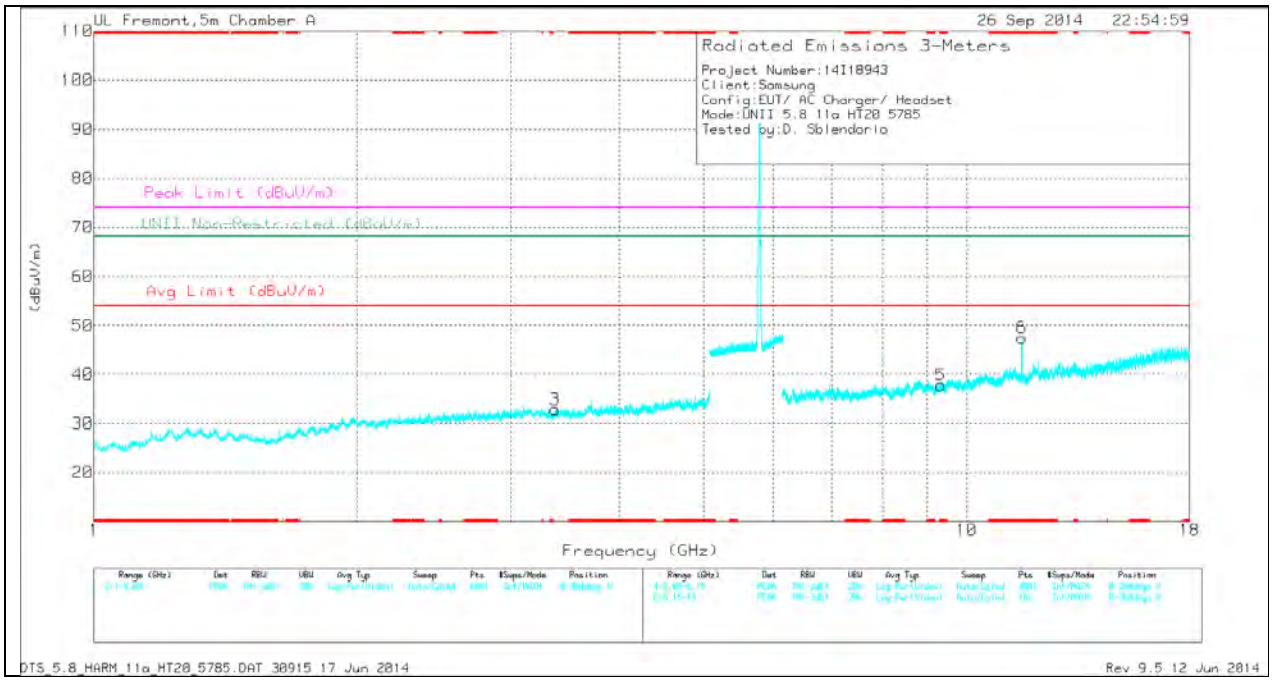
MID CHANNEL HORIZONTAL



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

MID CHANNEL VERTICAL



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

MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.532	32.04	PK	28.4	-33.2	0	27.24	-	-	74	-46.76	-	-	0-360	100	H
2	* 2.286	31.67	PK	31.8	-32.2	0	31.27	-	-	74	-42.73	-	-	0-360	200	H
5	* 9.334	27.12	PK	36.4	-25.7	0	37.82	-	-	74	-36.18	-	-	0-360	200	V
6	* 11.57	35.18	PK	38.4	-26.1	0	47.48	-	-	74	-26.52	-	-	0-360	100	V
3	3.377	31.88	PK	32.9	-31.9	0	32.88	-	-	-	-	68.2	-35.32	0-360	200	V
4	7.159	30.71	PK	35.6	-29	0	37.31	-	-	-	-	68.2	-30.89	0-360	200	H

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.57	48.79	PK2	38.4	-26.1	0	61.09	-	-	74	-12.91	-	-	208	146	V
* 11.57	34.31	MAv1	38.4	-26.1	0	46.61	54	-7.39	-	-	-	-	208	146	V

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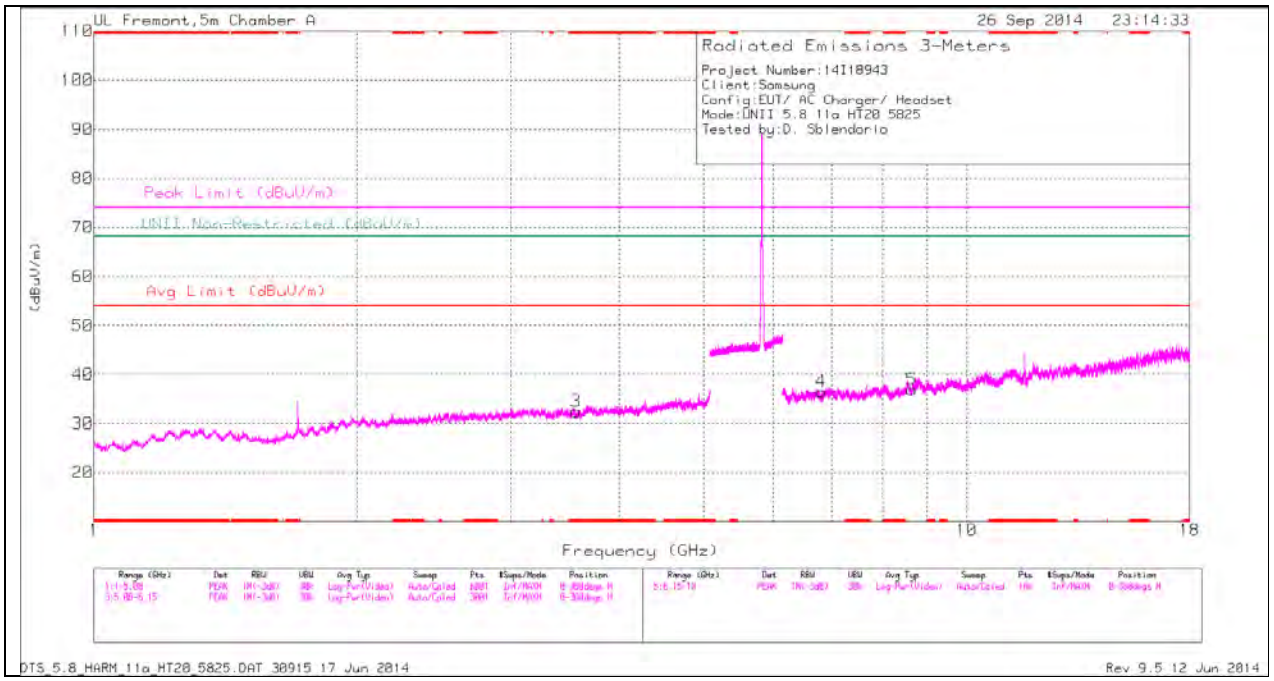
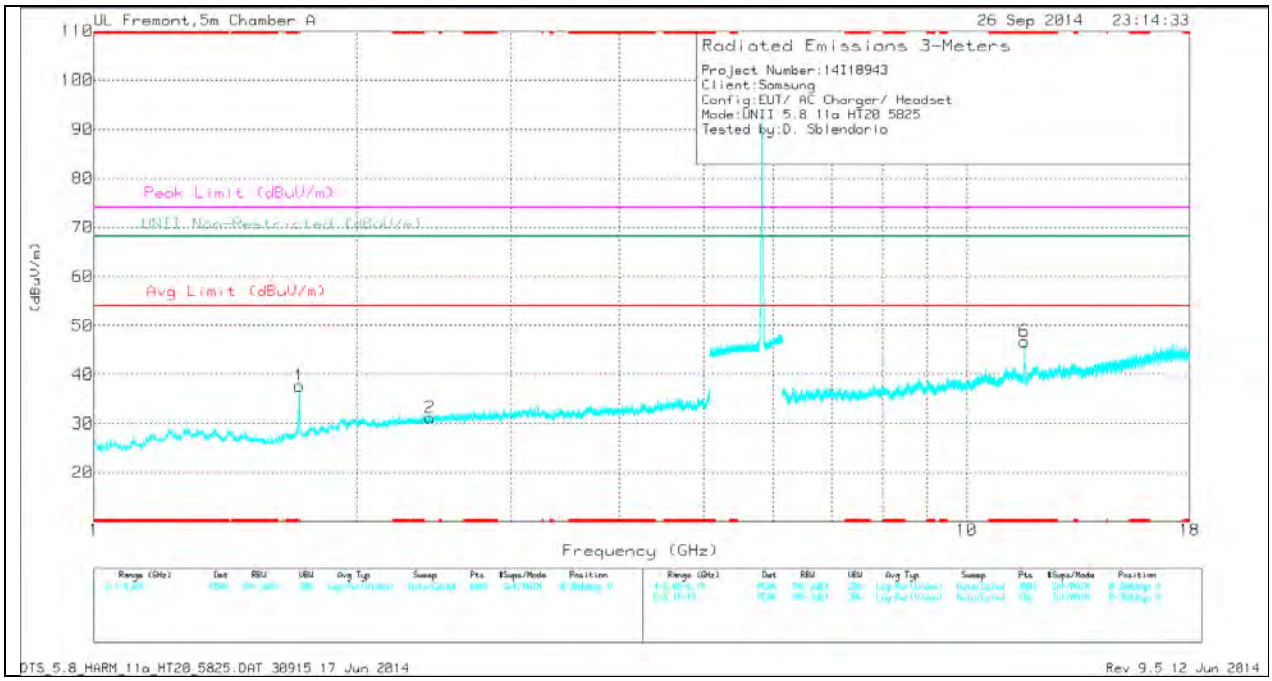
HIGH CHANNEL HORIZONTAL



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

HIGH CHANNEL VERTICAL



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

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 3.567	31.33	PK	33	-31.9	0	32.43	-	-	74	-41.57	-	-	0-360	200	H
1	* 1.719	40.38	PK	29.3	-32	0	37.68	-	-	74	-36.32	-	-	0-360	200	V
6	* 11.651	34.35	PK	38.6	-26.2	0	46.75	-	-	74	-27.25	-	-	0-360	100	V
2	2.427	31.6	PK	32.2	-32.6	0	31.2	-	-	-	-	68.2	-37	0-360	200	V
4	6.814	30.51	PK	35.6	-29.6	0	36.51	-	-	-	-	68.2	-31.69	0-360	100	H
5	8.647	28.6	PK	35.8	-27.5	0	36.9	-	-	-	-	68.2	-31.3	0-360	100	H

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.651	48.71	PK2	38.6	-26.2	0	61.11	-	-	74	-12.89	-	-	177	143	V
* 11.65	34.05	MAv1	38.6	-26.2	0	46.45	54	-7.55	-	-	-	-	177	143	V
1.717	29.54	MAv1	29.2	-32	0	26.74	-	-	-	-	-	-	2	391	V
1.718	42.09	PK2	29.2	-32	0	39.29	-	-	-	-	68.2	-28.91	2	391	V

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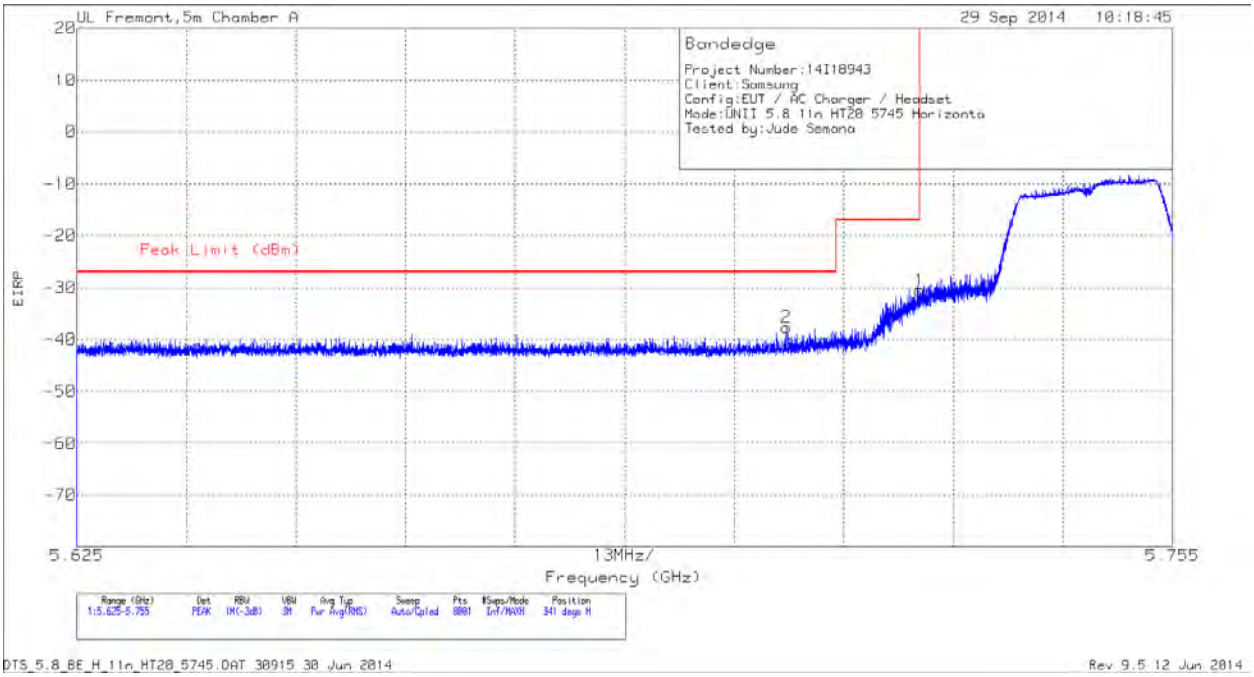
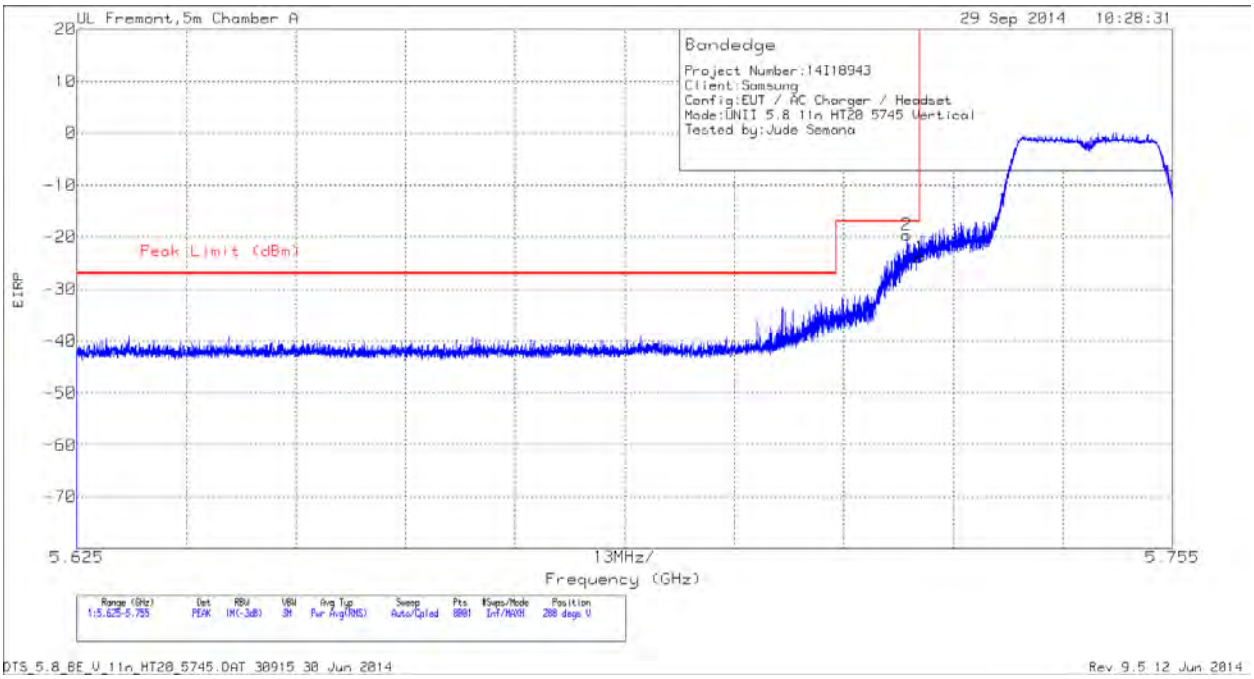
11.4.2. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.8 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK PLOT



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.709	-63.25	PK	34.8	-21	11.8	-37.65	-27	-10.65	341	391	H
1	5.725	-56	PK	34.8	-21.1	11.8	-30.5	-17	-13.5	341	391	H

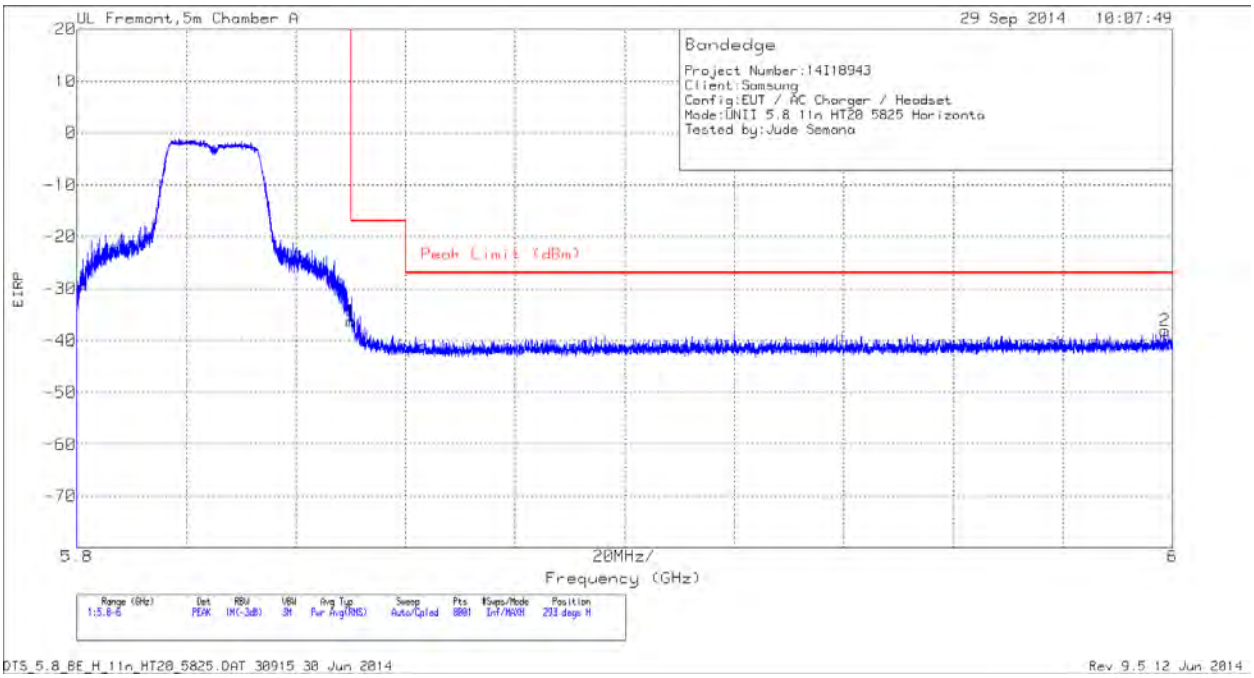
VERTICAL PEAK PLOT



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.723	-45.22	PK	34.8	-21	11.8	-19.62	-17	-2.62	288	162	V
1	5.725	-49.43	PK	34.8	-21.1	11.8	-23.93	-17	-6.93	288	162	V

RESTRICTED BANDEDGE (HIGH CHANNEL)

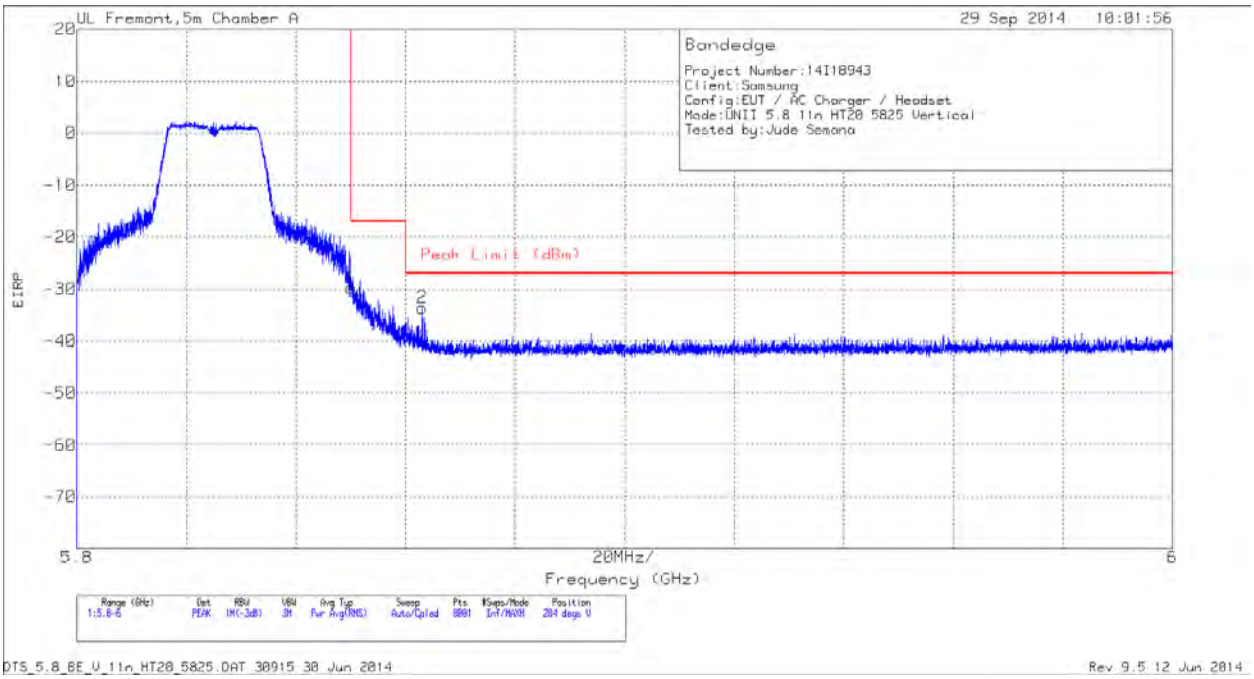
HORIZONTAL PEAK PLOT



Note: Plot get from pre-scan. Final data refer to data table below.

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/Filt r/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-61.76	PK	35	-21.3	11.8	-36.26	-27	-9.26	293	378	H
2	5.999	-64.49	PK	35.3	-20.7	11.8	-38.09	-27	-11.09	293	378	H

VERTICAL PEAK PLOT

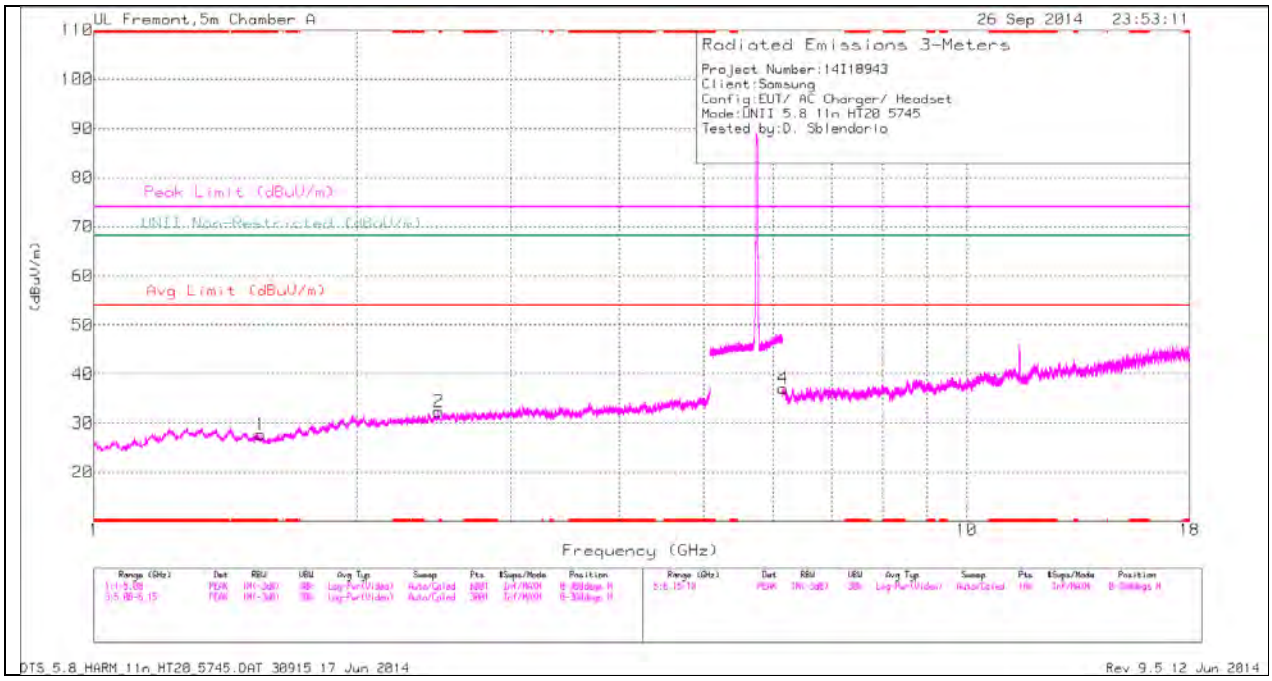


Note: Plot get from pre-scan. Final data refer to data table below.

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-55.24	PK	35	-21.3	11.8	-29.74	-27	-2.74	284	219	V
2	5.863	-59.15	PK	35	-21.3	11.8	-33.65	-27	-6.65	284	219	V

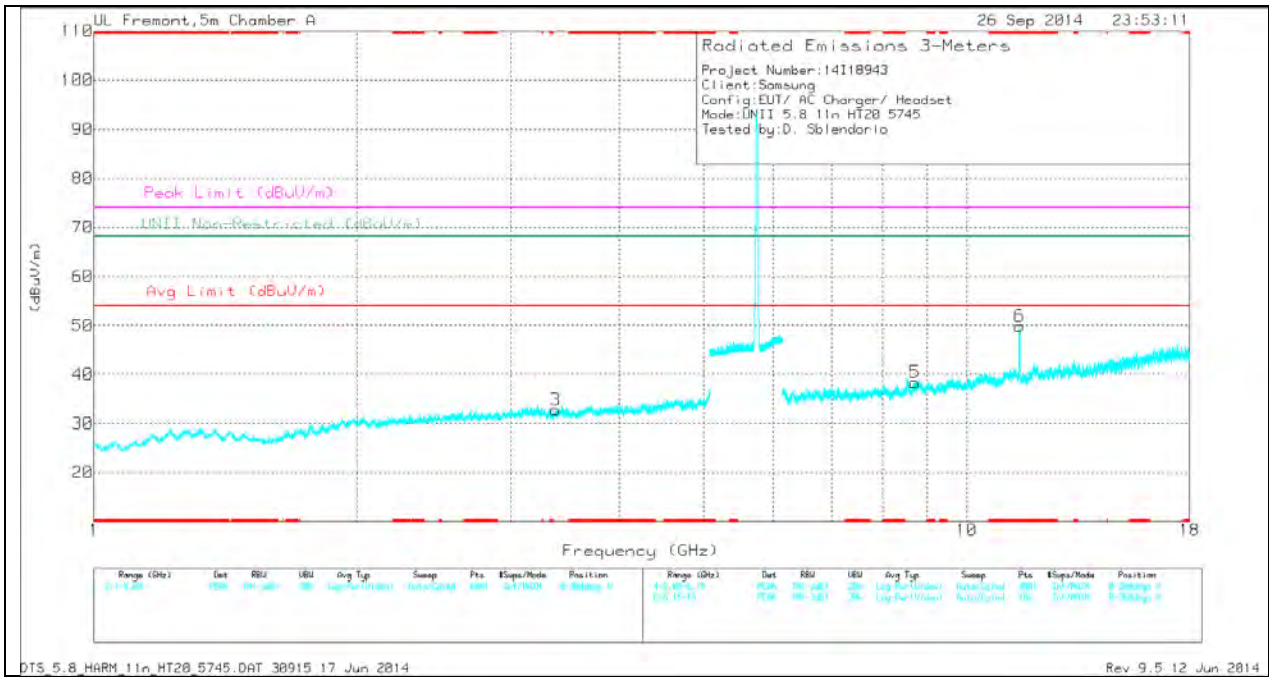
HARMONICS AND SPURIOUS EMISSIONS

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.

LOW CHANNEL VERTICAL



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

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.553	32.78	PK	28.3	-33.3	0	27.78	-	-	74	-46.22	-	-	0-360	200	H
6	* 11.489	37.68	PK	38.2	-26	0	49.88	-	-	74	-24.12	-	-	0-360	100	V
2	2.482	32.27	PK	32.3	-32.2	0	32.37	-	-	-	-	68.2	-35.83	0-360	100	H
3	3.379	31.77	PK	32.9	-31.9	0	32.77	-	-	-	-	68.2	-35.43	0-360	200	V
4	6.161	30.59	PK	35.3	-28.8	0	37.09	-	-	-	-	68.2	-31.11	0-360	100	H
5	8.718	30.15	PK	35.9	-27.7	0	38.35	-	-	-	-	68.2	-29.85	0-360	200	V

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.49	52.21	PK2	38.2	-26	0	64.41	-	-	74	-9.59	-	-	177	100	V
* 11.49	37.16	MAv1	38.2	-26	0	49.36	54	-4.64	-	-	-	-	177	100	V
* 11.651	48.71	PK2	38.6	-26.2	0	61.11	-	-	74	-12.89	-	-	177	143	V
* 11.65	34.05	MAv1	38.6	-26.2	0	46.45	54	-7.55	-	-	-	-	177	143	V

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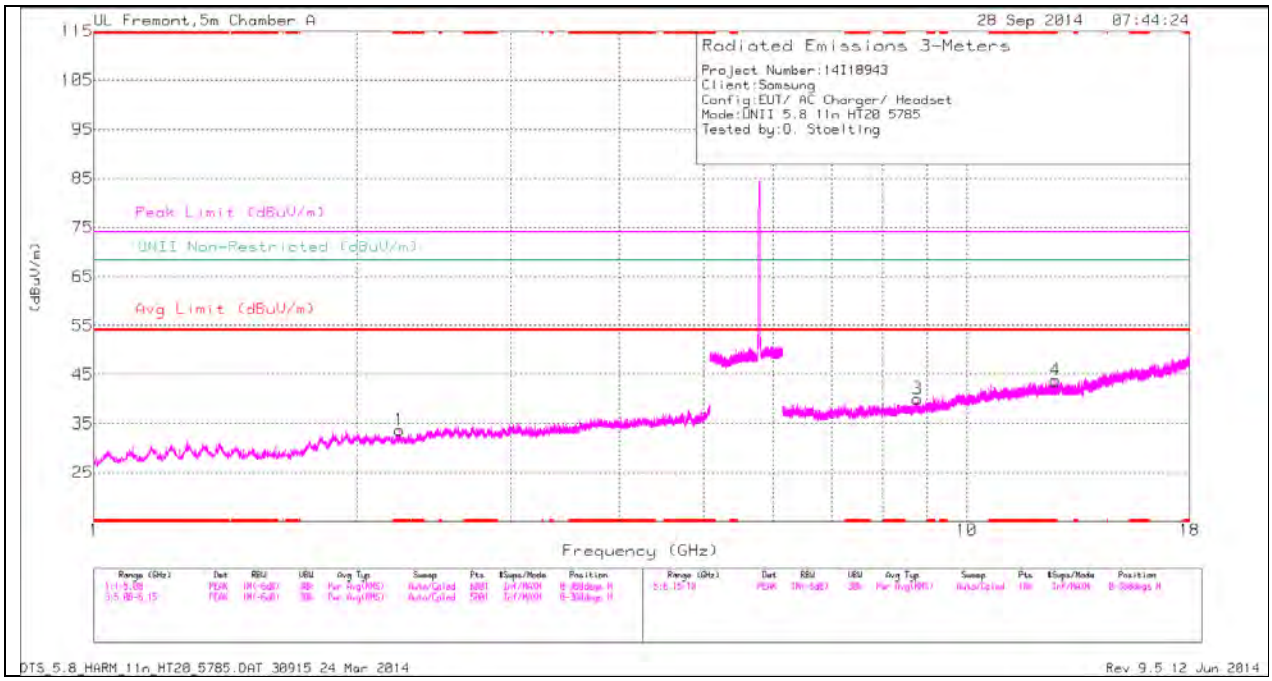
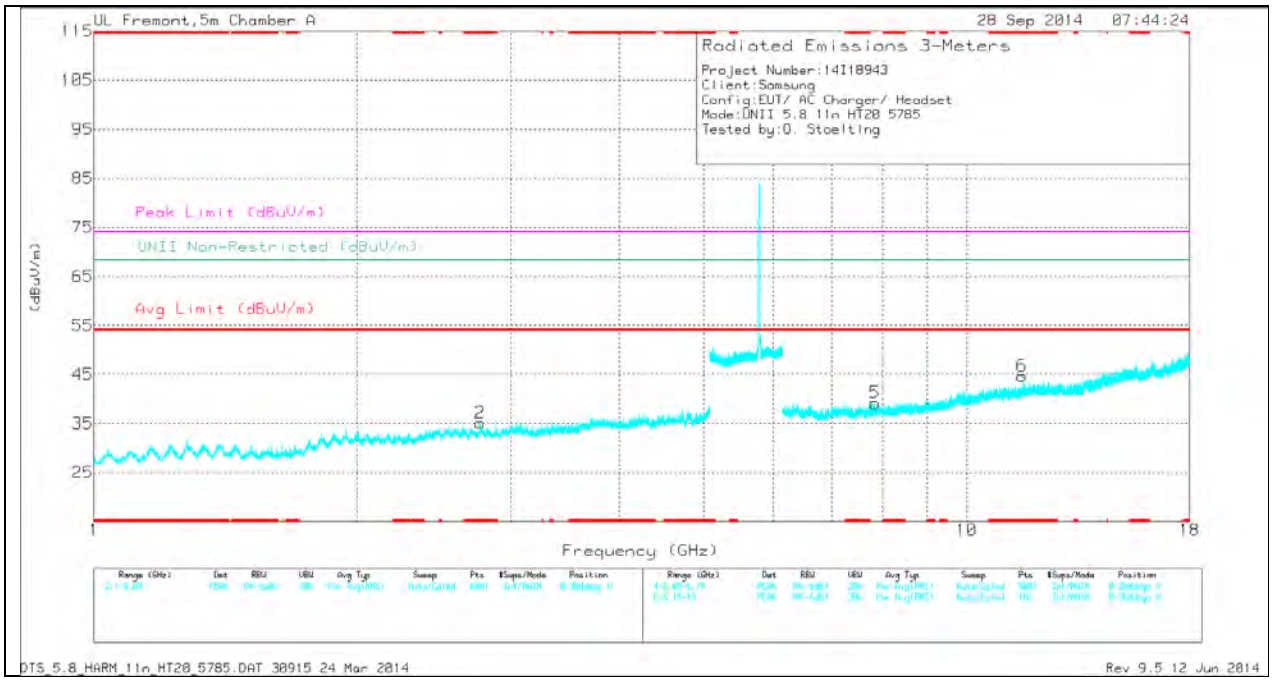
MID CHANNEL HORIZONTAL



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

MID CHANNEL VERTICAL



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

MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.239	34.86	PK	31.3	-32.5	0	33.66	-	-	74	-40.34	-	-	0-360	100	H
2	* 2.77	34.09	PK	32.7	-31.7	0	35.09	-	-	74	-38.91	-	-	0-360	201	V
4	* 12.635	27.18	PK	39	-22.4	0	43.78	-	-	74	-30.22	-	-	0-360	201	H
6	* 11.57	28.81	PK	38.4	-22.5	0	44.71	-	-	74	-29.29	-	-	0-360	201	V
5	7.848	28.97	PK	35.5	-25.3	0	39.17	-	-	-	-	68.2	-29.03	0-360	201	V
3	8.781	29.2	PK	35.8	-25	0	40	-	-	-	-	68.2	-28.2	0-360	100	H

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.57	34.81	PK2	38.4	-22.5	0	50.71	-	-	74	-23.29	-	-	325	229	V
* 11.57	25.79	MAv1	38.4	-22.5	.3	41.99	54	-12.01	-	-	-	-	325	229	V
* 11.651	48.71	PK2	38.6	-22.4	0	64.91	-	-	74	-9.09	-	-	177	143	V
* 11.65	34.05	MAv1	38.6	-22.5	.3	50.45	54	-3.55	-	-	-	-	177	143	V

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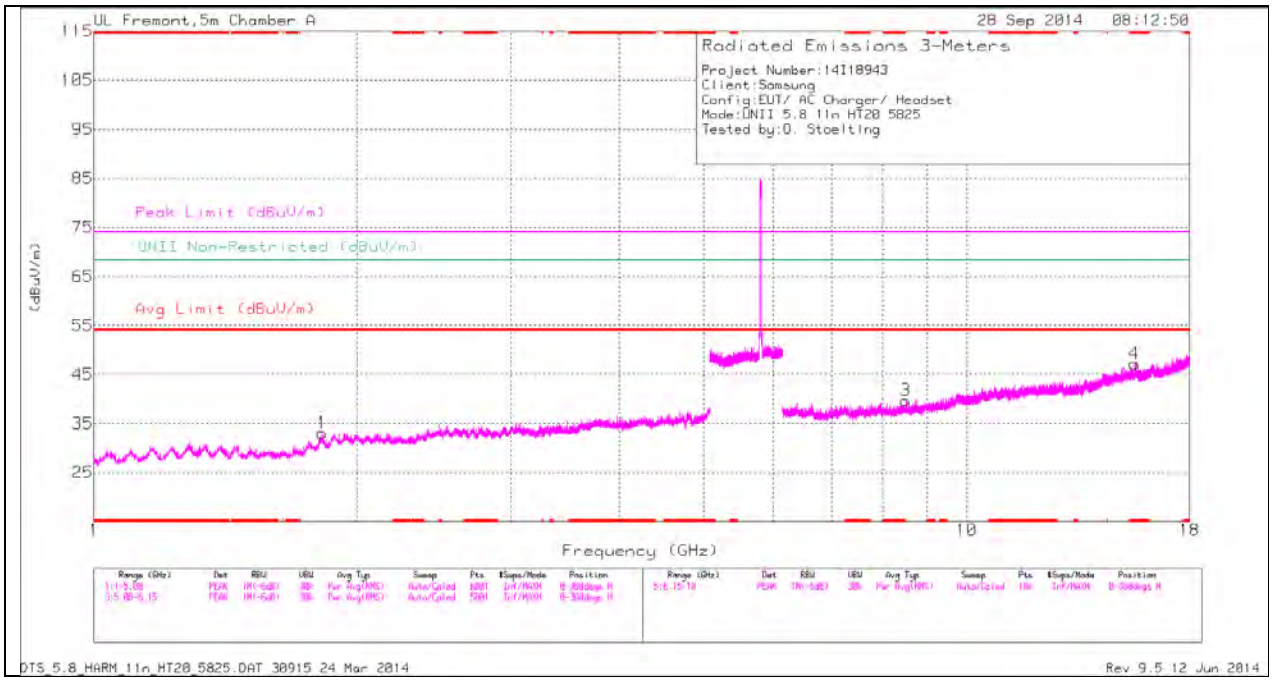
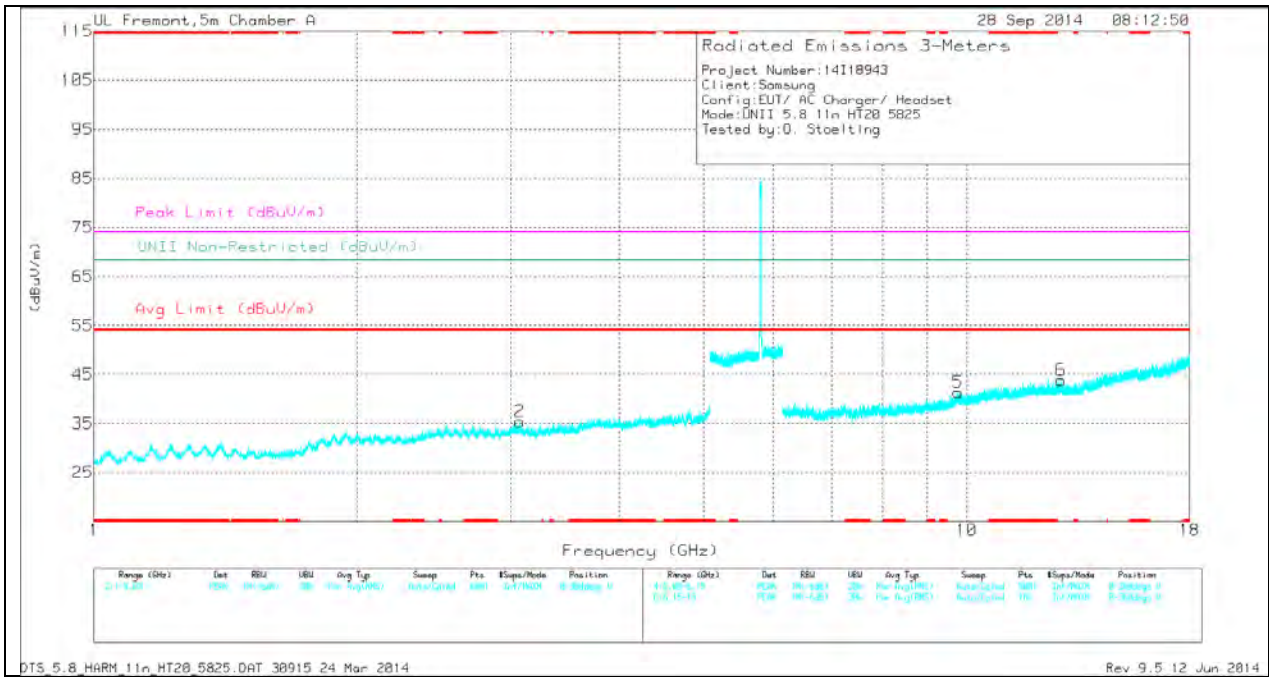
HIGH CHANNEL HORIZONTAL



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

HIGH CHANNEL VERTICAL



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

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 15.566	27.35	PK	40.5	-20.6	0	47.25	-	-	74	-26.75	-	-	0-360	201	H
1	1.825	35.22	PK	30.8	-33	0	33.02	-	-	-	-	68.2	-35.18	0-360	100	H
2	3.073	33.48	PK	32.8	-30.9	0	35.38	-	-	-	-	68.2	-32.82	0-360	201	V
3	8.514	29.7	PK	35.7	-25.7	0	39.7	-	-	-	-	68.2	-28.5	0-360	100	H
5	9.776	27.86	PK	36.9	-23.4	0	41.36	-	-	-	-	68.2	-26.84	0-360	201	V
6	12.815	26.75	PK	39	-21.9	0	43.85	-	-	-	-	68.2	-24.35	0-360	100	V

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.651	48.71	PK2	38.6	-22.4	0	64.91	-	-	74	-9.09	-	-	177	143	V
* 11.65	34.05	MAv1	38.6	-22.5	.3	50.45	54	-3.55	-	-	-	-	177	143	V
12.815	34.21	PK2	39	-21.9	0	51.31	-	-	-	-	68.2	-16.89	359	100	V
12.816	22.82	MAv1	39	-21.9	.3	40.22	-	-	-	-	-	-	359	100	V

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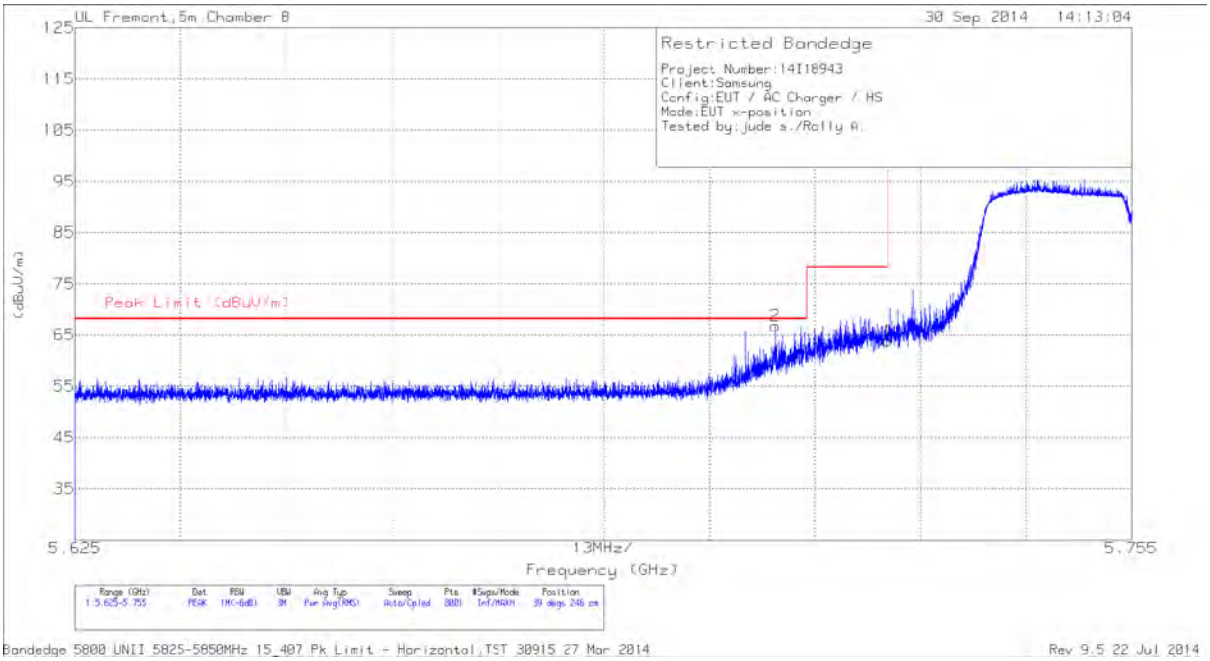
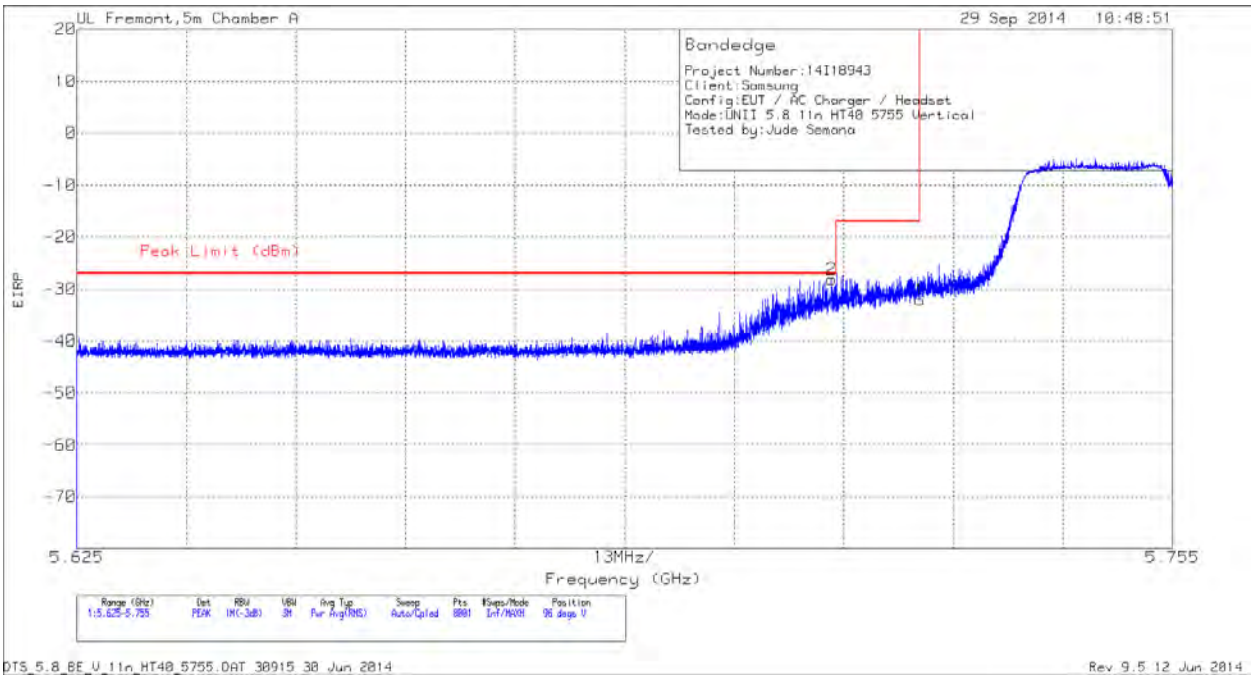
11.4.3. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.8 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK PLOT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.711	52.41	PK	34.5	-20.1	66.81	68.2	-1.39	39	246	H
1	5.725	49.32	PK	34.6	-20.1	63.82	78.2	-14.38	39	246	H

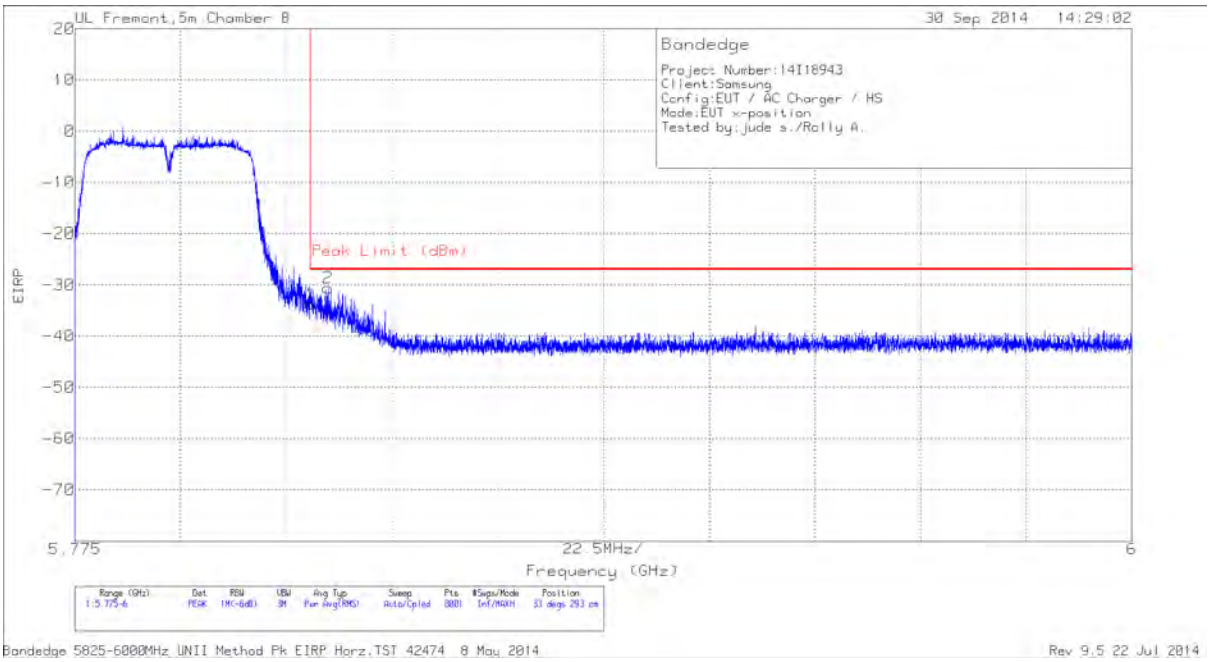
VERTICAL PEAK PLOT



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.715	-53.65	PK	34.8	-21.1	11.8	-28.15	-27	-1.15	96	344	V
1	5.725	-57.6	PK	34.8	-21.1	11.8	-32.1	-17	-15.1	96	344	V

RESTRICTED BANDEDGE (HIGH CHANNEL)

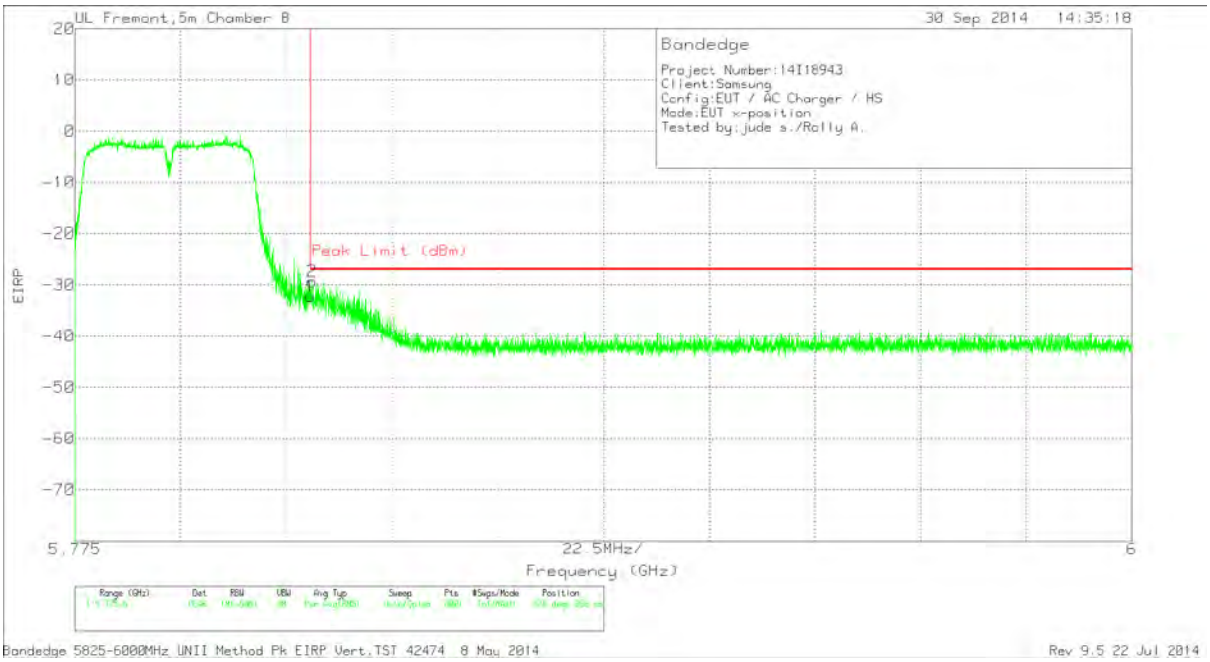
HORIZONTAL PEAK PLOT



Note: Plot get from pre-scan. Final data refer to data table below.

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.825	-60.37	PK	34.8	-20	11.8	-33.77	-27	-6.77	33	293	H
2	5.829	-57.31	PK	34.8	-19.9	11.8	-30.61	-27	-3.61	33	293	H

VERTICAL PEAK PLOT

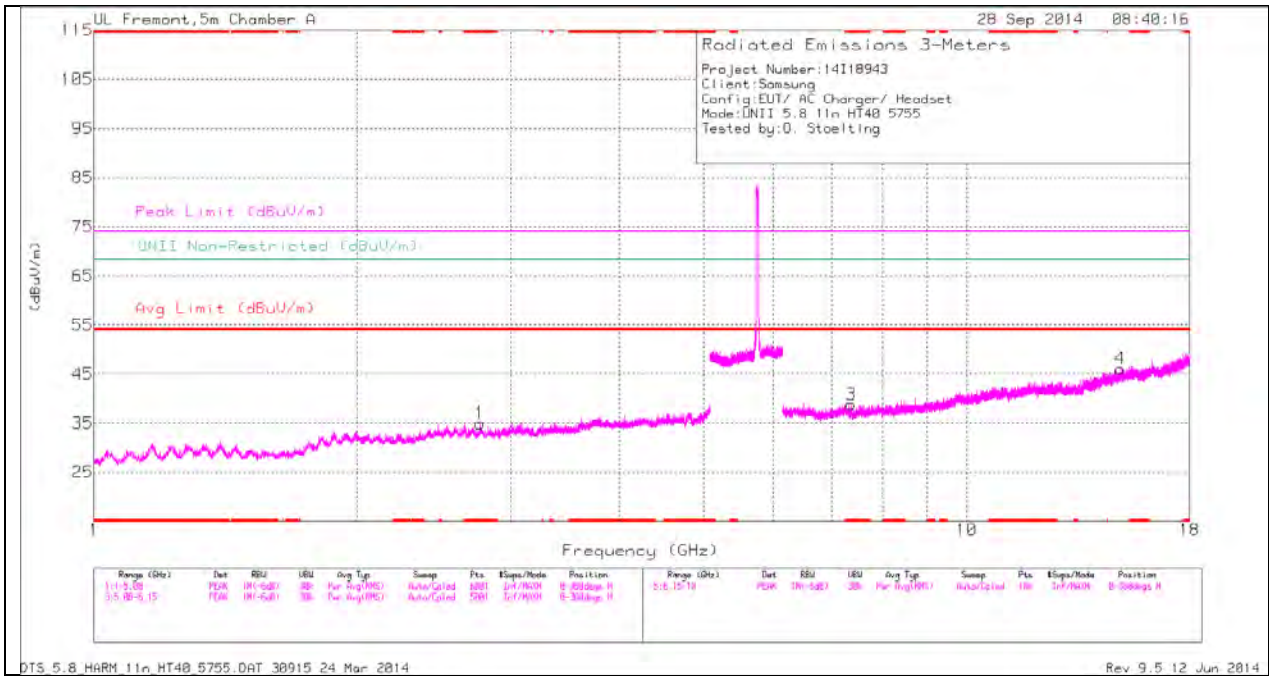


Note: Plot get from pre-scan. Final data refer to data table below.

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.825	-58.86	PK	34.8	-20	11.8	-32.26	-27	-5.26	328	266	V
2	5.825	-55.89	PK	34.8	-20	11.8	-29.29	-27	-2.29	328	266	V

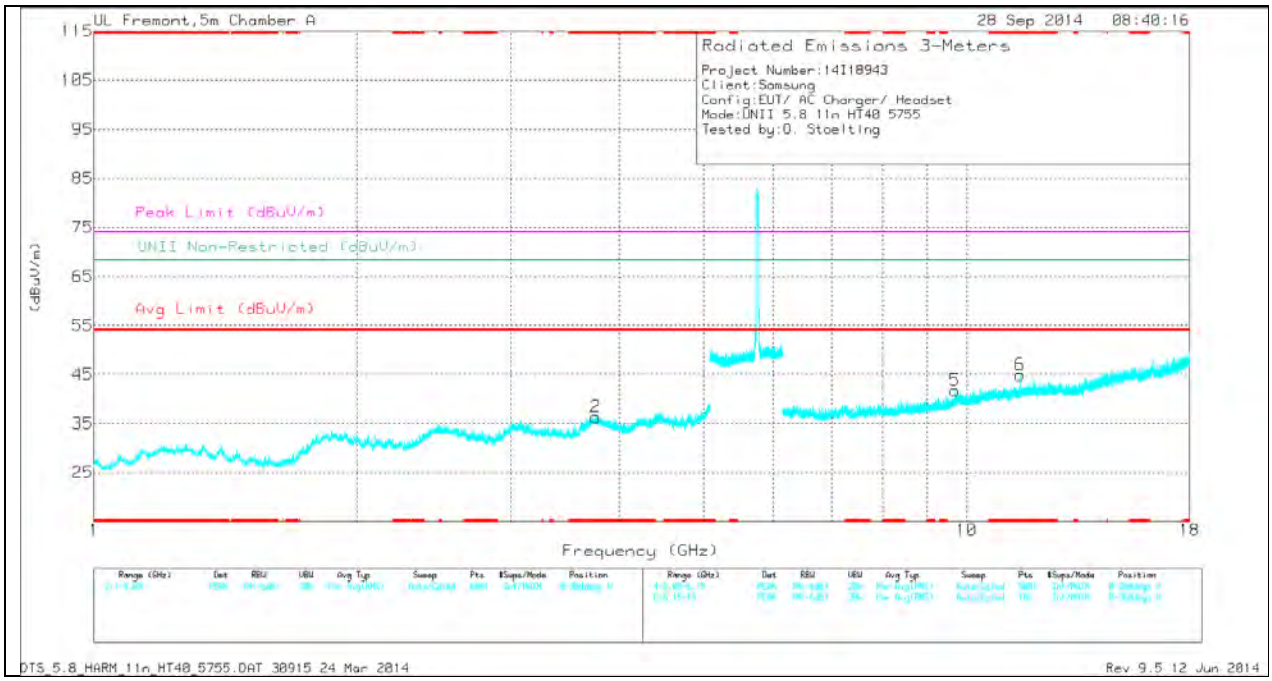
HARMONICS AND SPURIOUS EMISSIONS

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.

LOW CHANNEL VERTICAL



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

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.769	33.88	PK	32.7	-31.7	0	34.88	-	-	74	-39.12	-	-	0-360	100	H
2	* 3.759	33.21	PK	33.5	-30.4	0	36.31	-	-	74	-37.69	-	-	0-360	100	V
3	* 7.374	30.3	PK	35.3	-26.8	0	38.8	-	-	74	-35.2	-	-	0-360	100	H
6	* 11.51	28.79	PK	38.3	-22.2	0	44.89	-	-	74	-29.11	-	-	0-360	201	V
5	9.697	29.13	PK	36.8	-24.2	0	41.73	-	-	-	-	68.2	-26.47	0-360	100	V
4	14.994	27.45	PK	40.2	-21.6	0	46.05	-	-	-	-	68.2	-22.15	0-360	100	H

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.51	35.66	PK2	38.3	-22.2	0	51.76	-	-	74	-22.24	-	-	319	232	V
* 11.51	28.04	MAv1	38.3	-22.2	.69	44.83	54	-9.17	-	-	-	-	319	232	V
* 11.651	48.71	PK2	38.6	-22.4	0	64.91	-	-	74	-9.09	-	-	177	143	V
* 11.65	34.05	MAv1	38.6	-22.5	.69	50.84	54	-3.16	-	-	-	-	177	143	V

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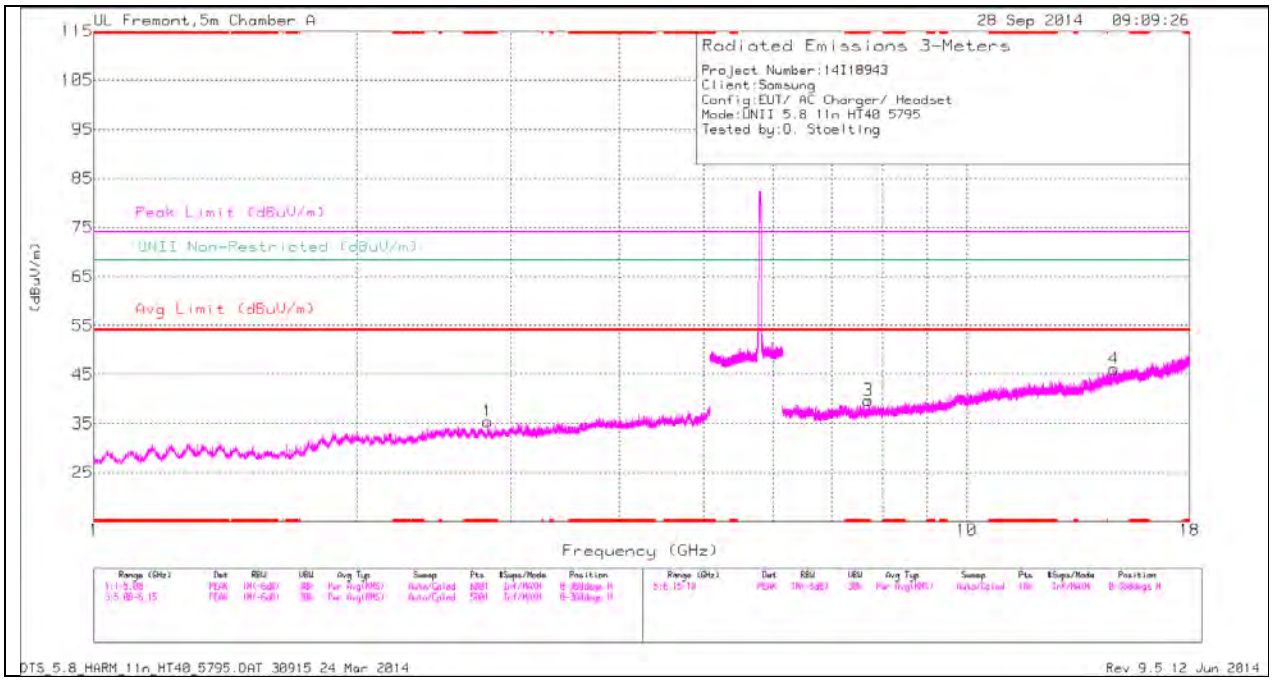
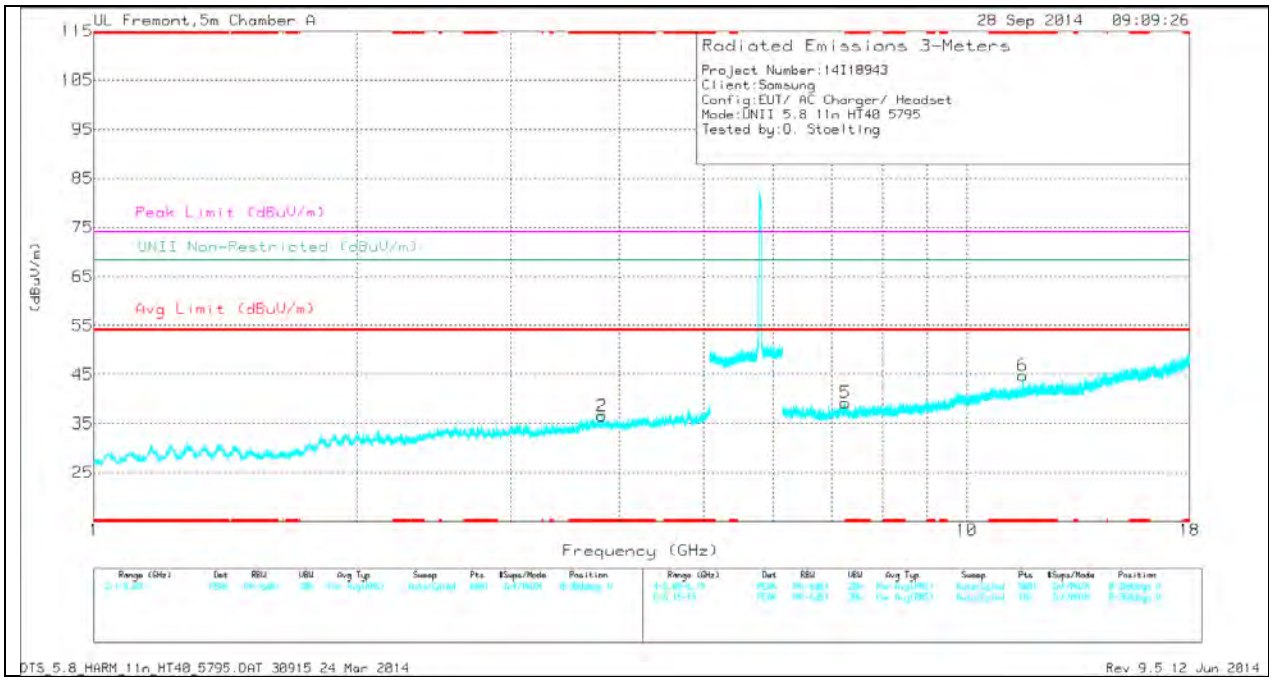
HIGH CHANNEL HORIZONTAL



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

HIGH CHANNEL VERTICAL



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

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.824	34.88	PK	32.6	-32.1	0	35.38	-	-	74	-38.62	-	-	0-360	100	H
2	* 3.822	33.26	PK	33.7	-30.4	0	36.56	-	-	74	-37.44	-	-	0-360	201	V
3	* 7.716	30.77	PK	35.4	-26.5	0	39.67	-	-	74	-34.33	-	-	0-360	201	H
5	* 7.258	29.31	PK	35.2	-25.3	0	39.21	-	-	74	-34.79	-	-	0-360	100	V
6	* 11.59	28.77	PK	38.4	-22.4	0	44.77	-	-	74	-29.23	-	-	0-360	100	V
4	14.753	27.55	PK	40	-21.4	0	46.15	-	-	-	-	68.2	-22.05	0-360	201	H

PK - Peak detector

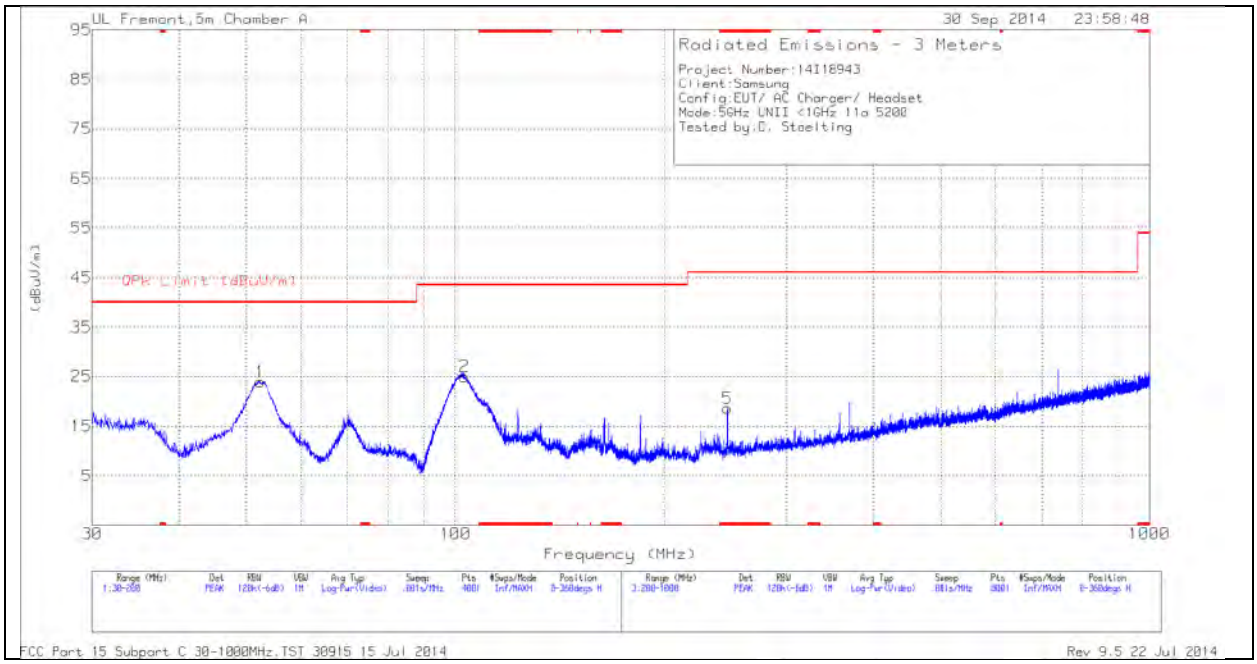
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.59	35.37	PK2	38.4	-22.4	0	51.37	-	-	74	-22.63	-	-	309	101	V
* 11.59	26.47	MAv1	38.4	-22.4	.69	43.16	54	-10.84	-	-	-	-	309	101	V
* 11.651	48.71	PK2	38.6	-22.4	0	64.91	-	-	74	-9.09	-	-	177	143	V
* 11.65	34.05	MAv1	38.6	-22.5	.69	50.84	54	-3.16	-	-	-	-	177	143	V

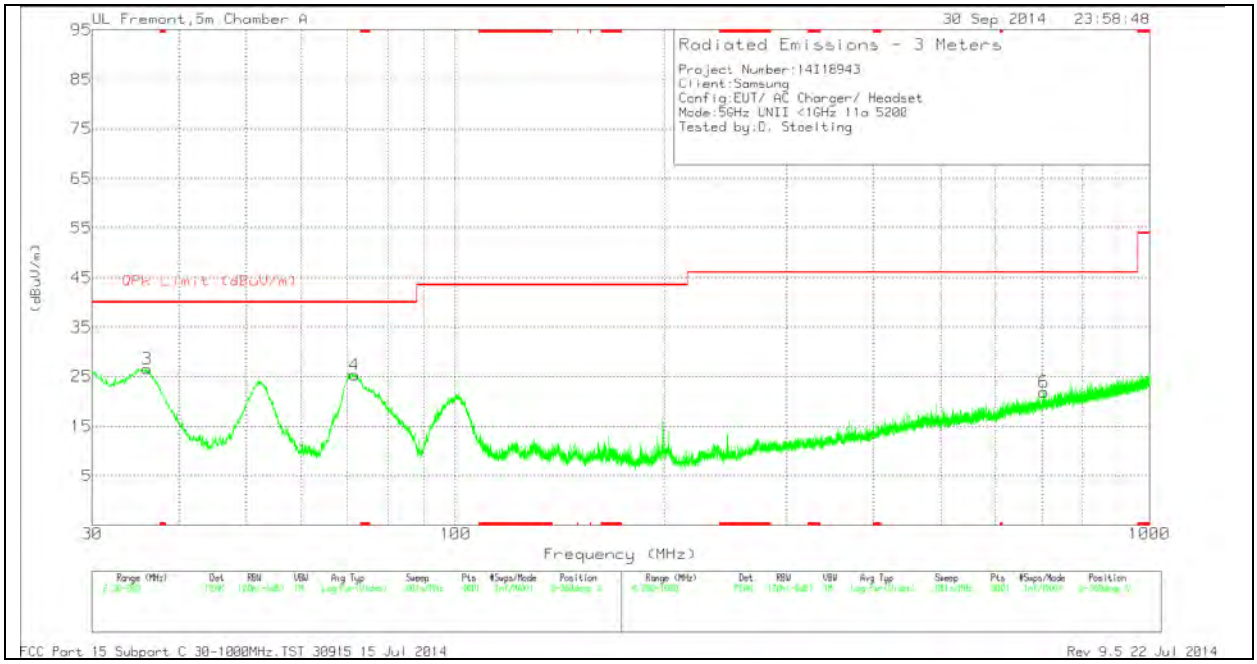
FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

12. WORST-CASE BELOW 1 GHz

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



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



Below 1G Data

TRACE MARKERS

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T477 (dB/m)	Amp/Cbl (dB/m)	DC Corr (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	* 246.4	36.58	PK	11.5	-29.5	0	18.58	46.02	-27.44	0-360	101	H
3	35.95	40.77	PK	16.9	-31.1	0	26.57	40	-13.43	0-360	101	V
1	52.355	47.31	PK	7.4	-30.7	0	24.01	40	-15.99	0-360	400	H
4	71.6075	47.88	PK	8.2	-30.7	0	25.38	40	-14.62	0-360	101	V
2	103.1425	44.23	PK	11.1	-30.3	0	25.03	43.52	-18.49	0-360	300	H
6	704.6	29.41	PK	20.3	-27.8	0	21.91	46.02	-24.11	0-360	101	V

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

PK - Peak detector

13. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

RSS-Gen 7.2.2

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

* Decreases with the logarithm of the frequency.

TEST PROCEDURE

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.4.

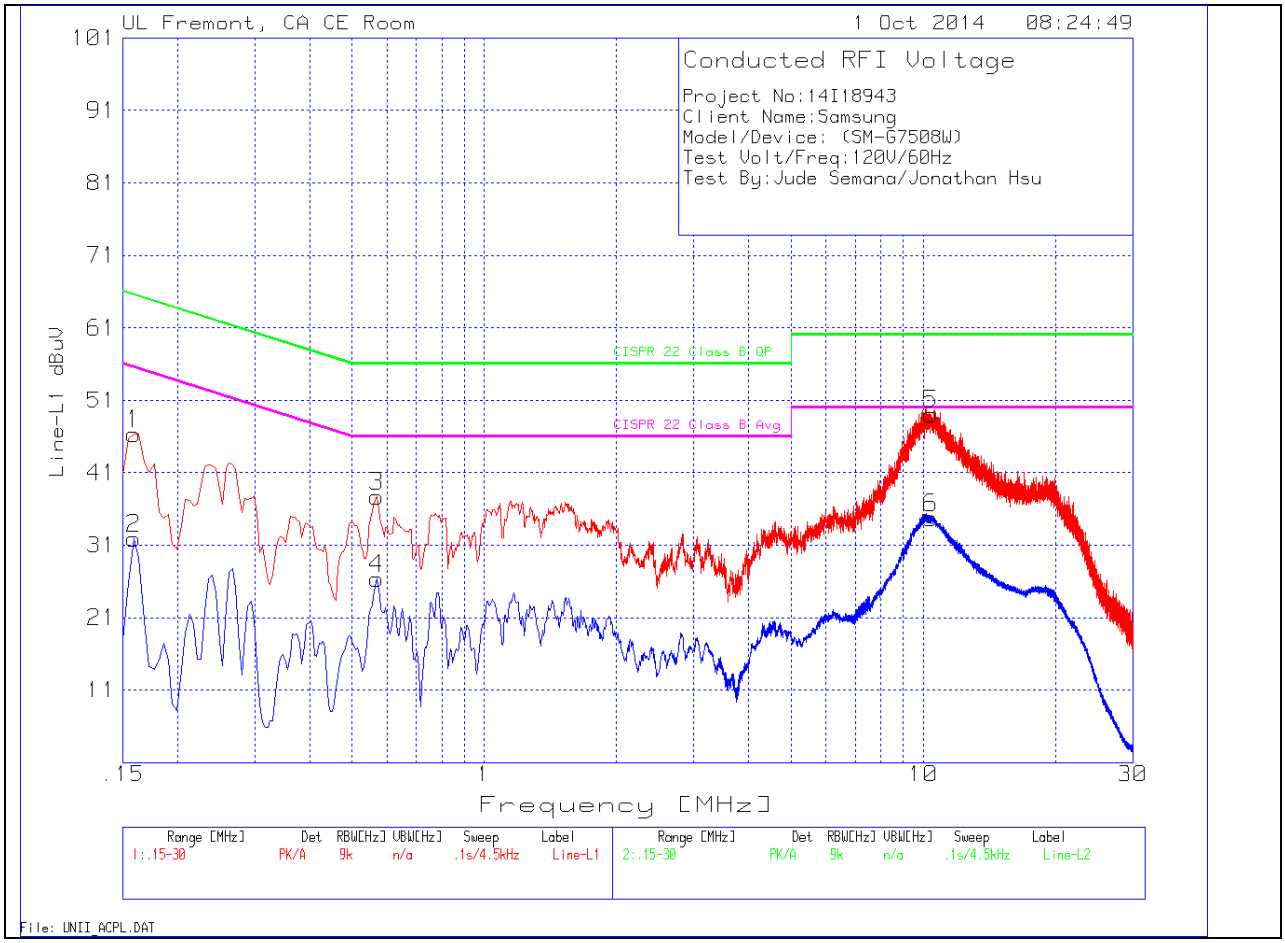
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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

RESULTS

6 WORST EMISSIONS

LINE 1 PLOT

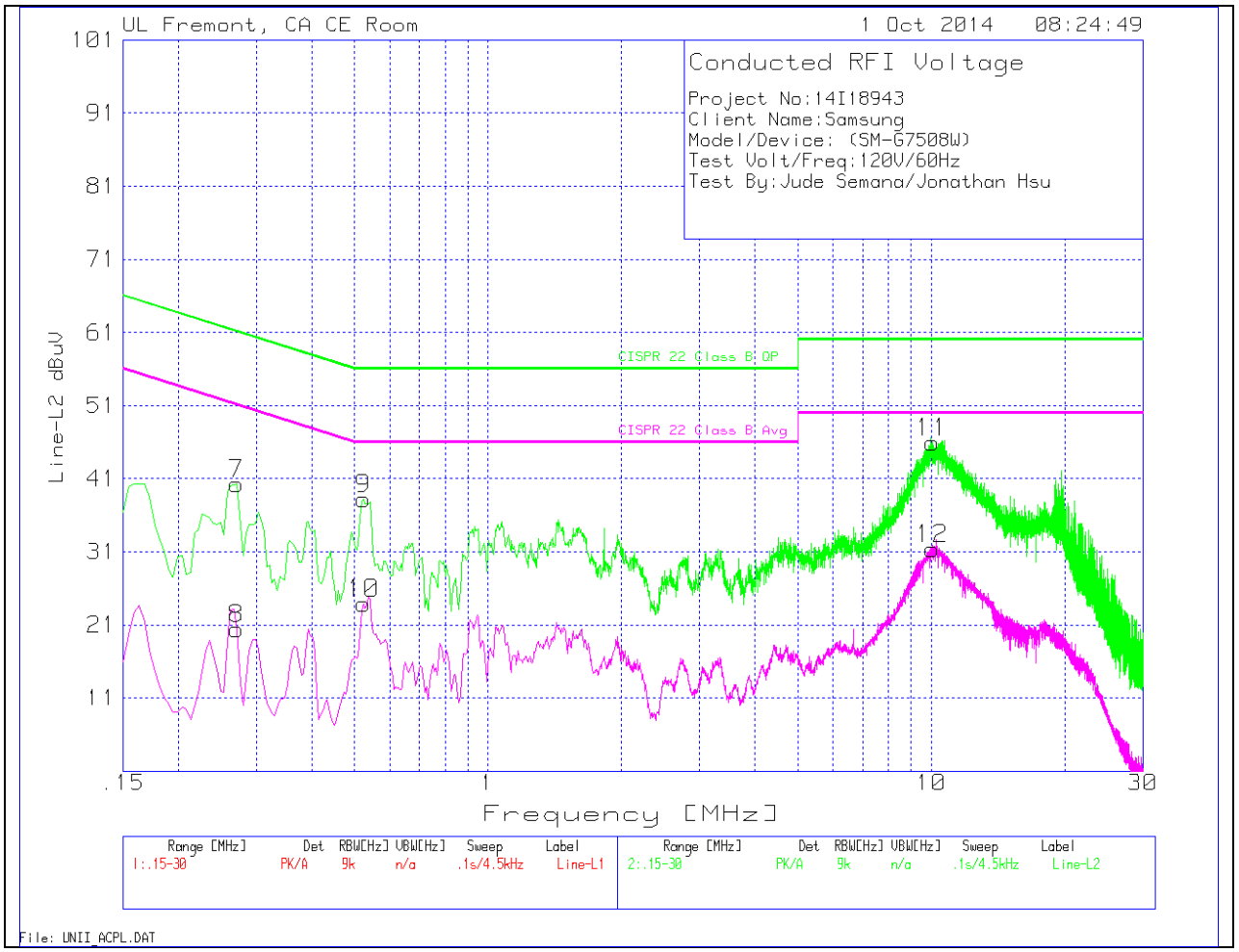


LINE 1 RESULTS

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1 (dB)	LC Cables 1&3 (dB)	Corrected Reading dBuV	CISPR 22 Class B QP	Margin to Limit (dB)	CISPR 22 Class B Avg	Margin to Limit (dB)
1	.159	45.05	PK	1.3	0	46.35	65.5	-19.15	-	-
2	.159	30.57	Av	1.3	0	31.87	-	-	55.5	-23.63
3	.5685	37.4	PK	.3	0	37.7	56	-18.3	-	-
4	.5685	26.05	Av	.3	0	26.35	-	-	46	-19.65
5	10.3965	48.64	PK	.2	.2	49.04	60	-10.96	-	-
6	10.3965	34.33	Av	.2	.2	34.73	-	-	50	-15.27

LINE 2 PLOT



LINE 2 RESULTS

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2 (dB)	LC Cables 2&3 (dB)	Corrected Reading dBuV	CISPR 22 Class B QP	Margin to Limit (dB)	CISPR 22 Class B Avg	Margin to Limit (dB)
7	.2715	39.61	PK	.7	0	40.31	61.1	-20.79	-	-
8	.2715	19.7	Av	.7	0	20.4	-	-	51.1	-30.7
9	.5235	37.77	PK	.4	0	38.17	56	-17.83	-	-
10	.5235	23.51	Av	.4	0	23.91	-	-	46	-22.09
11	10.0455	45.58	PK	.2	.2	45.98	60	-14.02	-	-
12	10.0455	30.93	Av	.2	.2	31.33	-	-	50	-18.67

14. DYNAMIC FREQUENCY SELECTION

14.1. OVERVIEW

14.1.1. LIMITS

INDUSTRY CANADA

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

RSS-210 Issue 7 A9.4 (b) (ii) **Channel Availability Check Time:** …

Additional requirements for the band 5600-5650 MHz: Until further notice, devices subject to this Section shall not be capable of transmitting in the band 5600-5650 MHz, so that Environment Canada weather radars operating in this band are protected.

FCC

§15.407 (h) and FCC 06-96 APPENDIX “COMPLIANCE MEASUREMENT PROCEDURES FOR UNLICENSED-NATIONAL INFORMATION INFRASTRUCTURE DEVCIES OPERATING IN THE 5250-5350 MHz AND 5470-5725 MHz BANDS INCORPORATING DYNAMIC FREQUENCY SELECTION”.

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
Uniform Spreading	Yes	Not required	Not required

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

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

Maximum Transmit Power	Value (see note)
≥ 200 milliwatt	-64 dBm
< 200 milliwatt	-62 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.		

Table 4: DFS Response requirement values

Parameter	Value
Non-occupancy period	30 minutes
Channel Availability Check Time	60 seconds
Channel Move Time	10 seconds
Channel Closing Transmission Time	200 milliseconds + approx. 60 milliseconds over remaining 10 second period
The instant that the *Channel Move Time* and the *Channel Closing Transmission Time* begins is as follows: For the Short pulse radar Test Signals this instant is the end of the *Burst*. For the Frequency Hopping radar Test Signal, this instant is the end of the last radar burst generated. For the Long Pulse radar Test Signal this instant is the end of the 12-second period defining the radar transmission. The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate channel changes (an aggregate of approximately 60 milliseconds) during the remainder of the 10-second period. The aggregate duration of control signals will not count quiet periods in between transmissions.	

Table 5 – Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (Microseconds)	PRI (Microseconds)	Pulses	Minimum Percentage of Successful Detection	Minimum Trials
1	1	1428	18	60%	30
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

Table 6 – Long Pulse Radar Test Signal

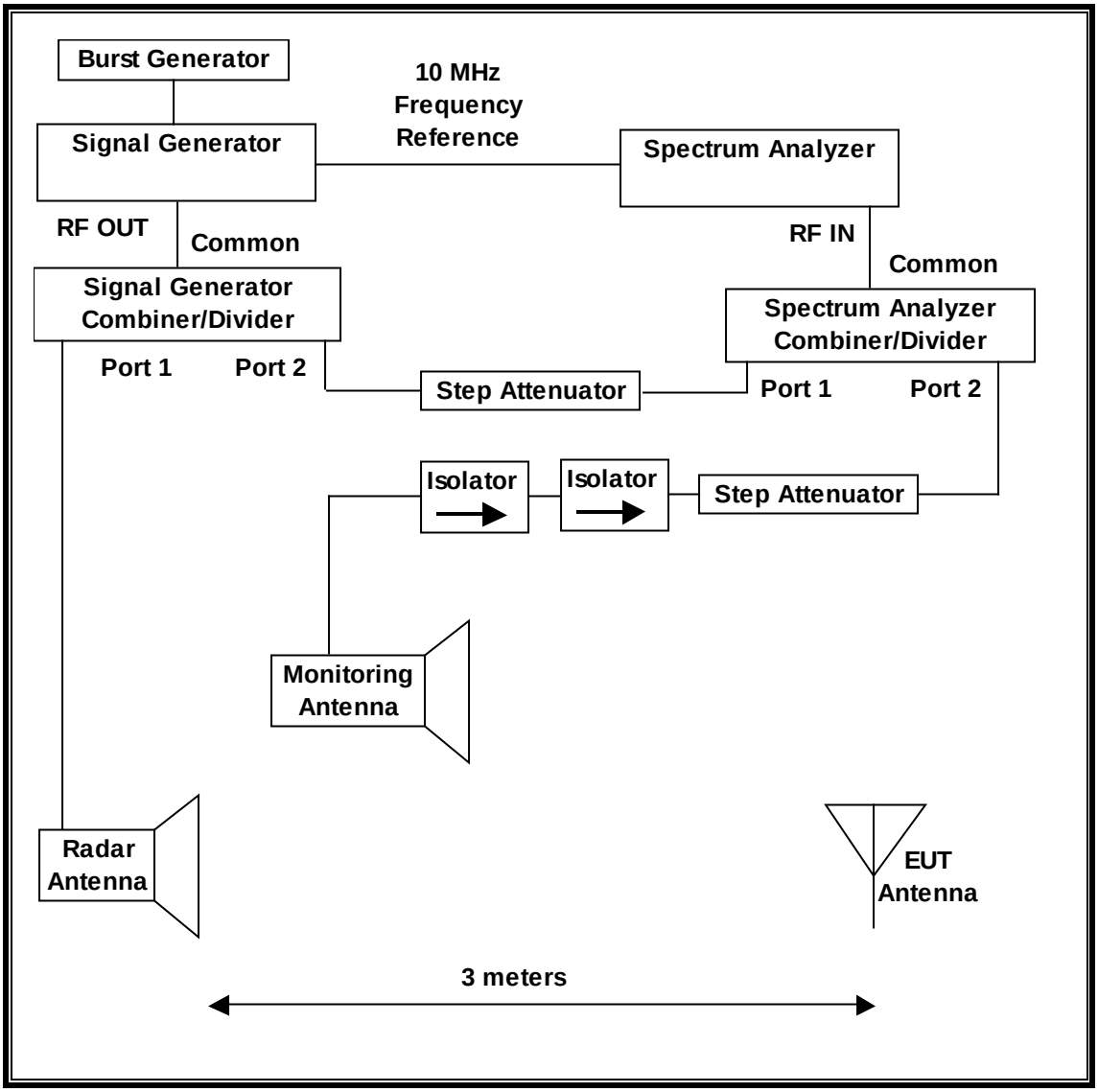
Radar Waveform	Bursts	Pulses per Burst	Pulse Width (µsec)	Chirp Width (MHz)	PRI (µsec)	Minimum Percentage of Successful Detection	Minimum Trials
5	8-20	1-3	50-100	5-20	1000-2000	80%	30

Table 7 – Frequency Hopping Radar Test Signal

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

14.1.2. 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 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.

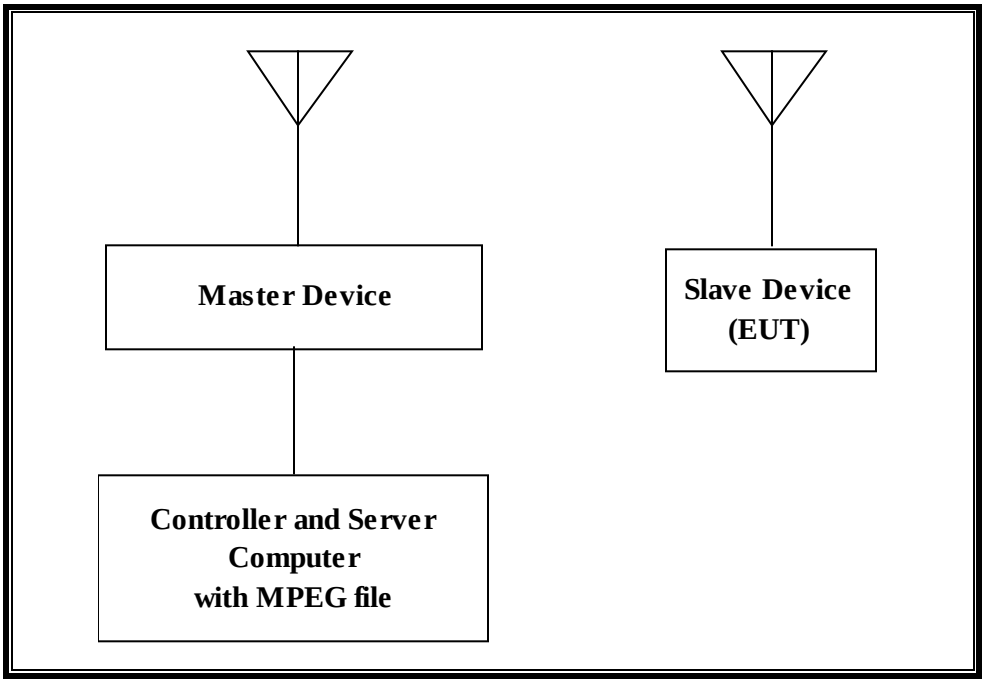
TEST AND MEASUREMENT EQUIPMENT

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

14.1.3. 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 1)	Cisco	AIR-CAP3702E-A-K9	FTX181570A6	LDK102087
P.O.E. Injector (Master 1)	Phihong	POE30U-560(G)	PHI170102N2	DoC
Notebook PC (Controller/Server)	Dell	PP18L	10657517725	DoC
AC Adapter (Controller/Server PC)	Dell	LA65SN0-00	CN-ODF263-71615-6AU-1019	DoC

14.1.5. DESCRIPTION OF EUT

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

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

The EUT is a Slave Device without Radar Detection.

The highest power level within these bands is 14.41 dBm EIRP in the 5250-5350 MHz band and 14.60 dBm EIRP in the 5470-5725 MHz band.

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 chain connected to an antenna to perform radiated tests.

WLAN traffic is generated by streaming the video file TestFile.mp2 “6 ½ Magic Hours” from the Master to the Slave in full motion video mode using the MP4 Player version 1.7.21 media play.

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

The EUT utilizes the 802.11a/n architecture. Two nominal channel bandwidths are implemented: 20 MHz and 40 MHz

The software installed in the access point is 12.4(25d) JA1.

UNIFORM CHANNEL SPREADING

This requirement is not applicable to Slave radio devices.

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

The Master Device is a Cisco Access Point, FCC ID: LDK102061. The minimum antenna gain for the Master Device is 3.5 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.

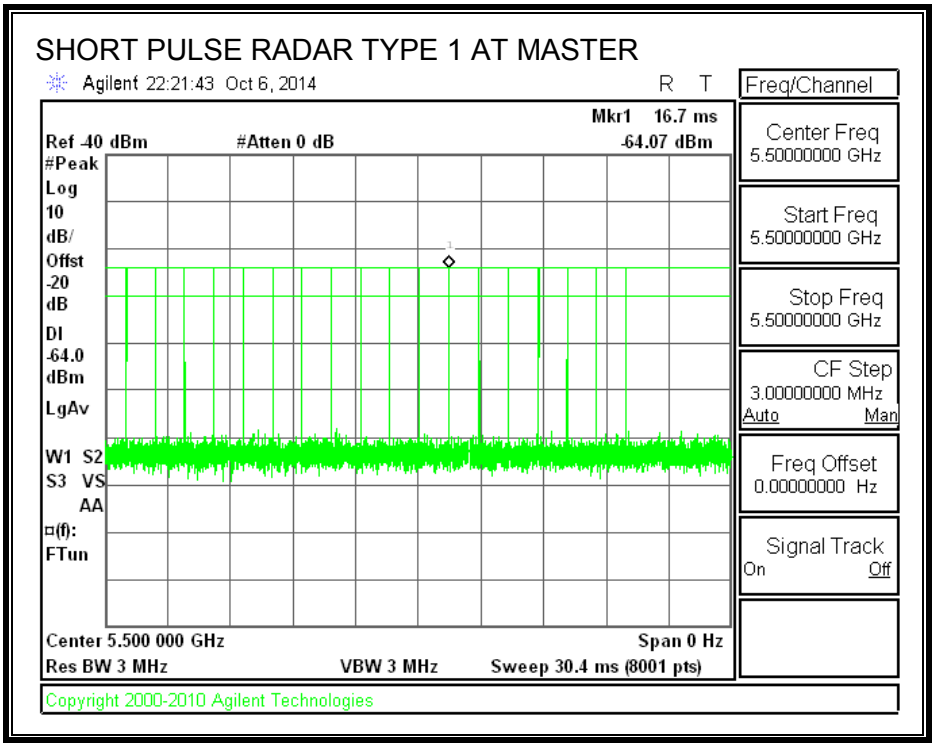
14.2. RESULTS FOR 20 MHz BANDWIDTH

14.2.1. TEST CHANNEL

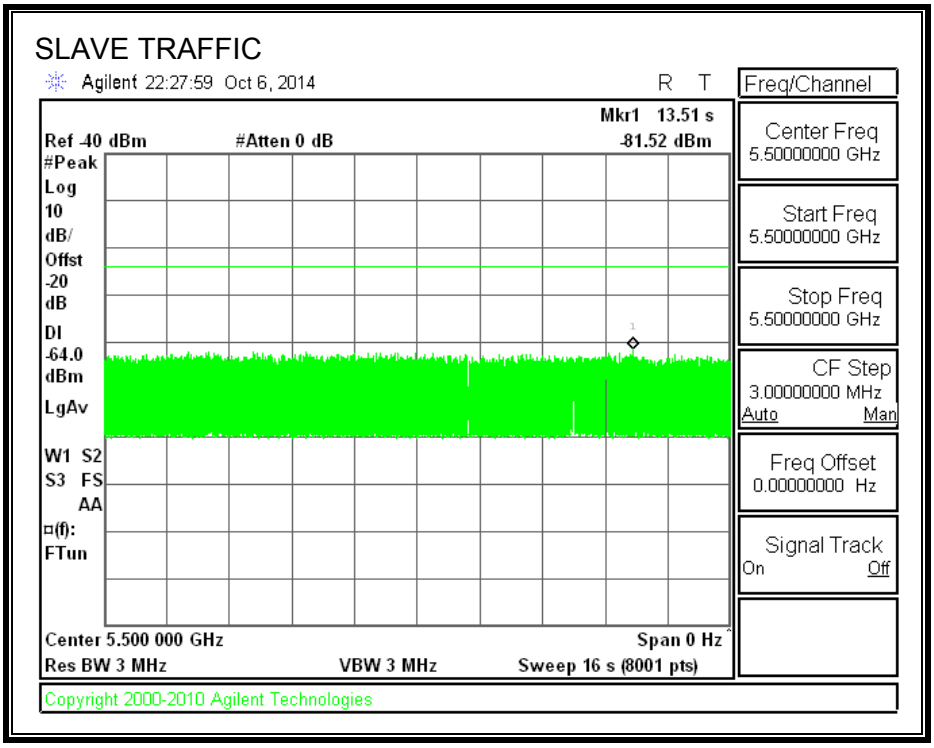
All tests were performed at a channel center frequency of 5500 MHz.

14.2.2. RADAR WAVEFORM AND TRAFFIC

RADAR WAVEFORM



TRAFFIC



14.2.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

14.2.4. 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)

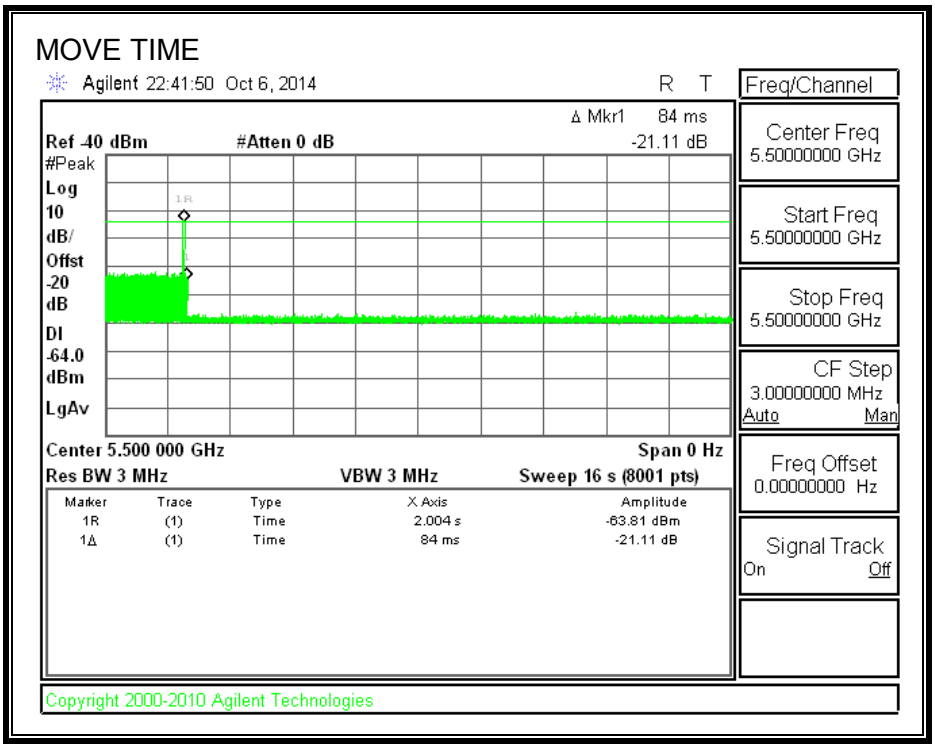
The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

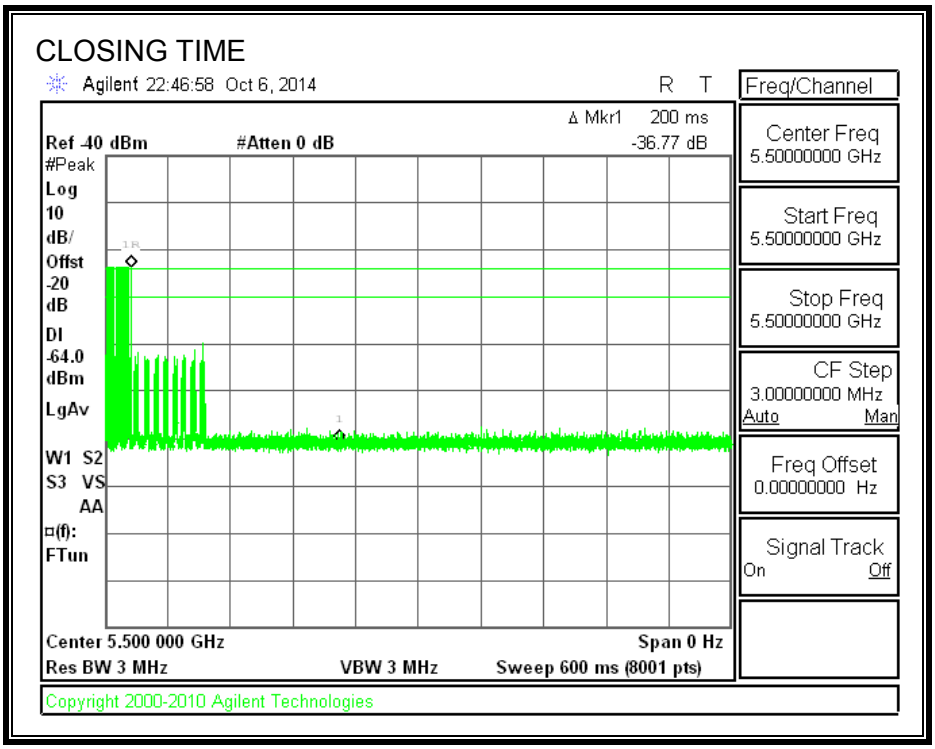
Channel Move Time (sec)	Limit (sec)
0.084	10

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

MOVE TIME

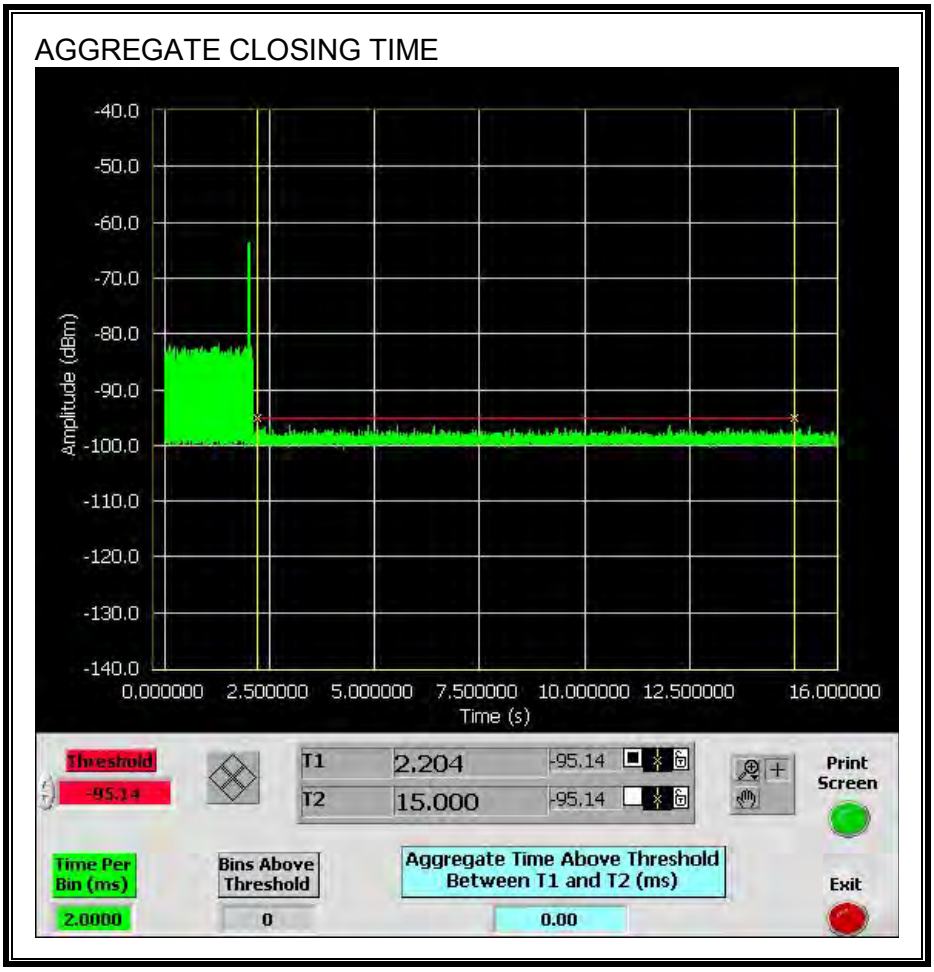


CHANNEL CLOSING TIME



AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

No transmissions are observed during the aggregate monitoring period.



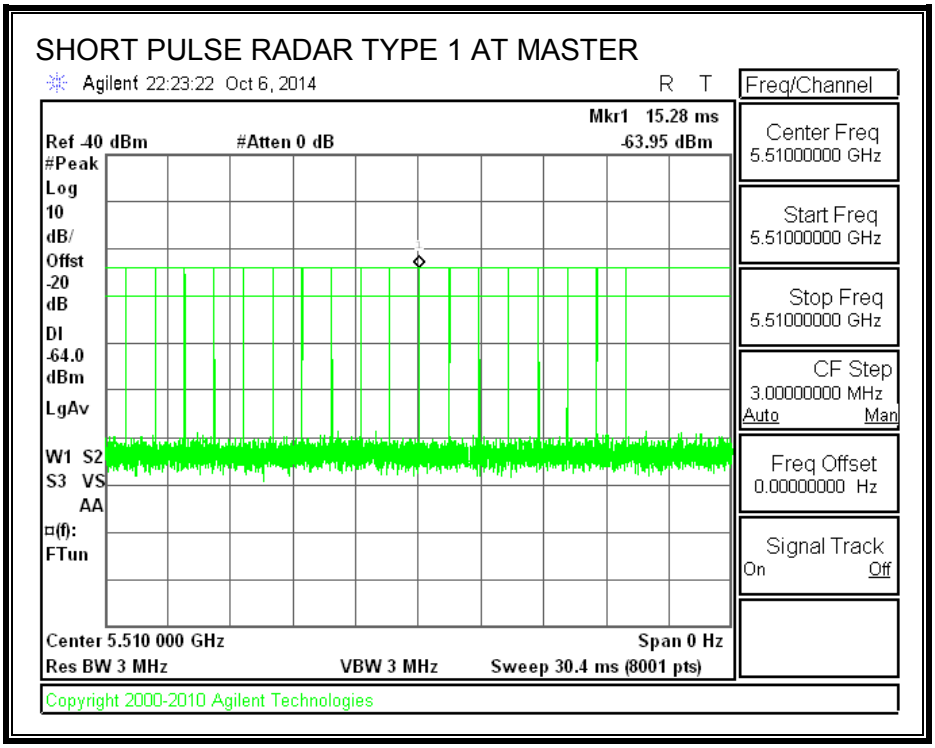
14.3. RESULTS FOR 40 MHz BANDWIDTH

14.3.1. TEST CHANNEL

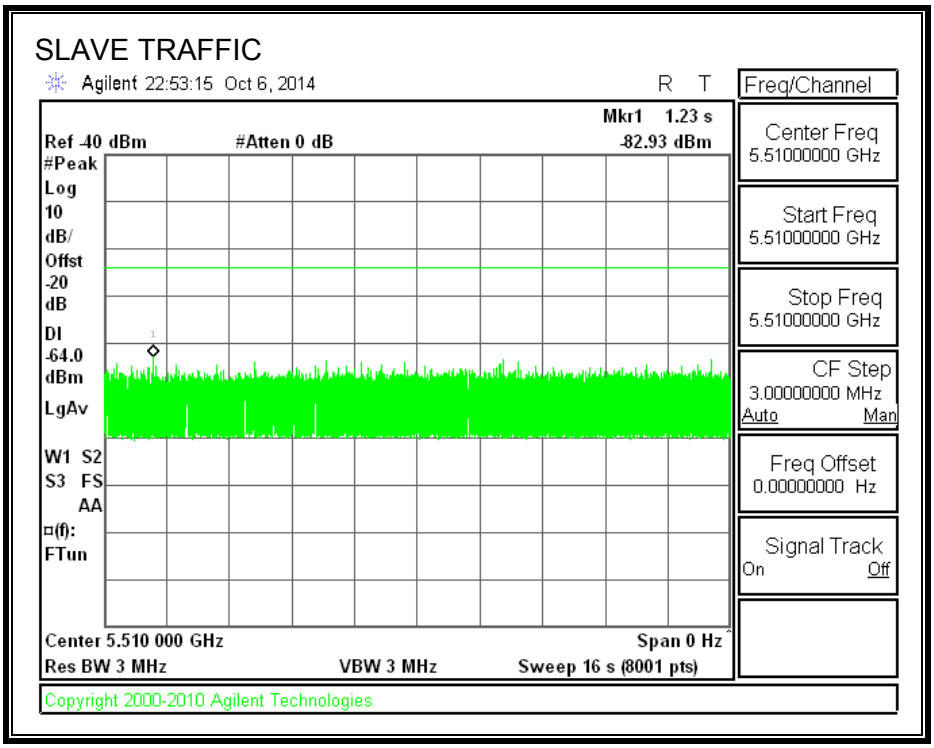
All tests were performed at a channel center frequency of 5510 MHz.

14.3.2. RADAR WAVEFORM AND TRAFFIC

RADAR WAVEFORM



TRAFFIC



14.3.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

14.3.4. 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)

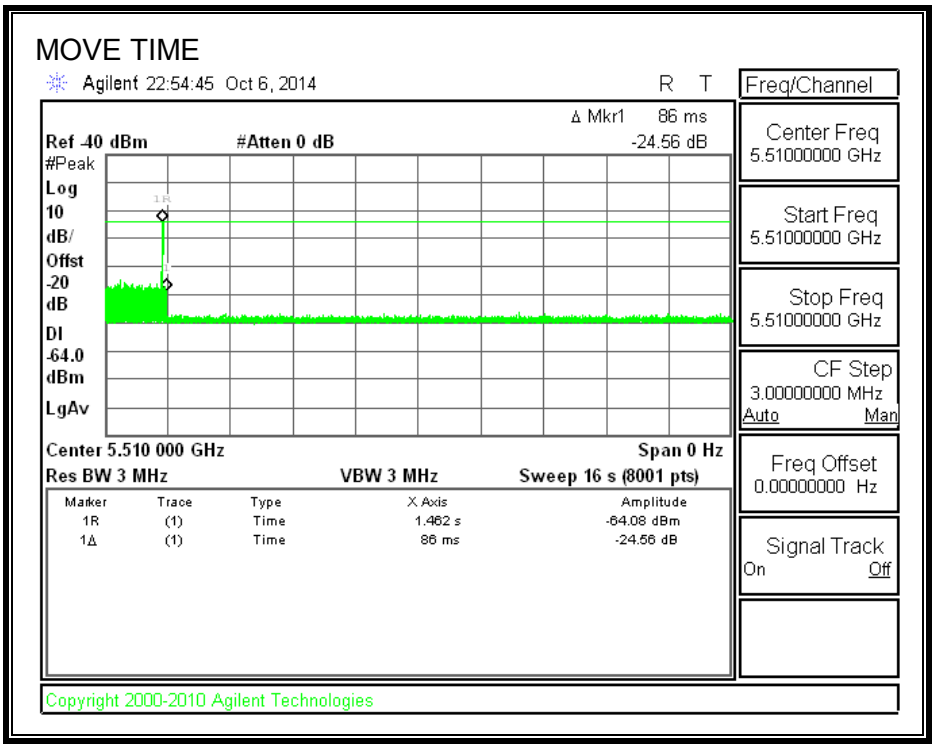
The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

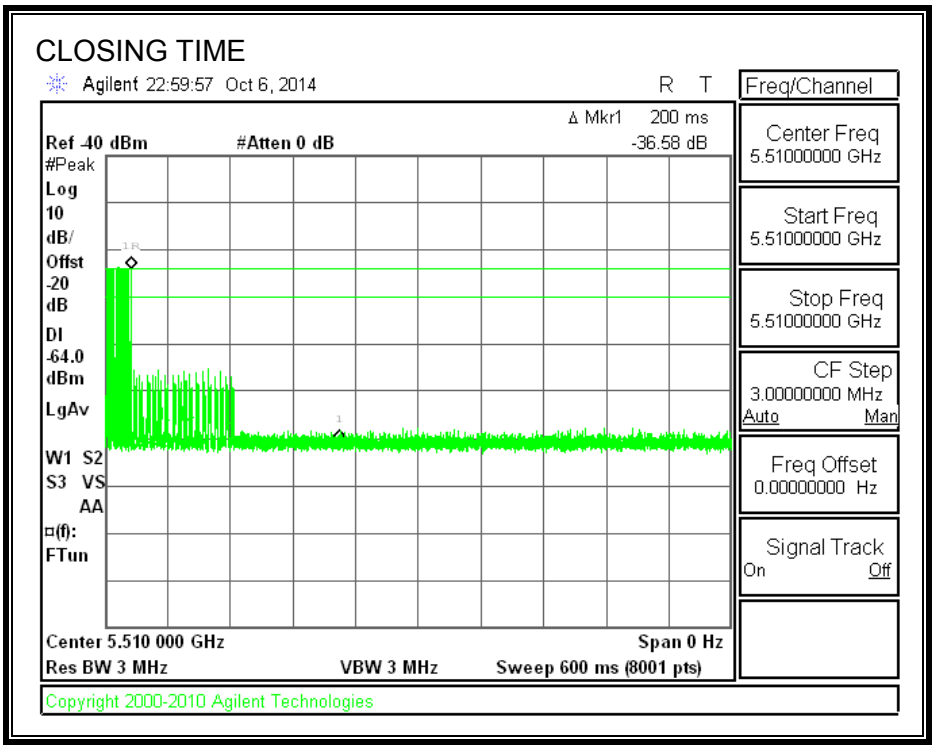
Channel Move Time (sec)	Limit (sec)
0.086	10

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

MOVE TIME

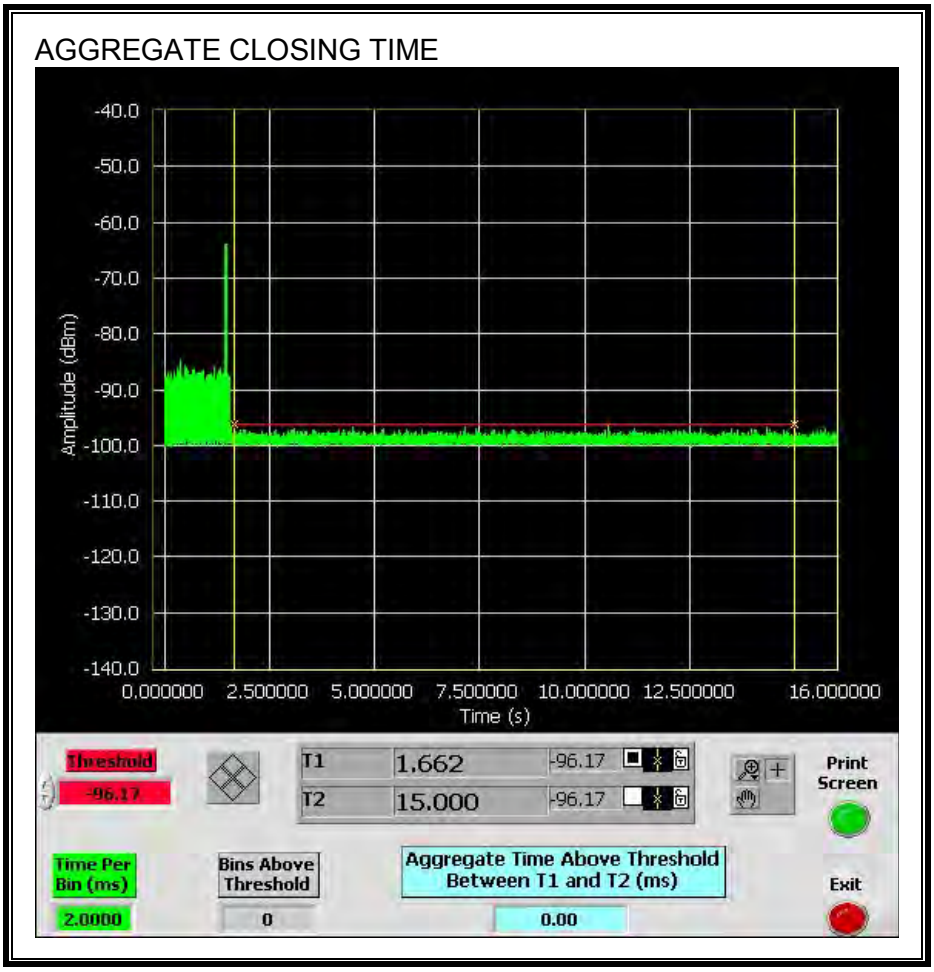


CHANNEL CLOSING TIME



AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

No transmissions are observed during the aggregate monitoring period.



14.3.5. NON-OCCUPANCY PERIOD

RESULTS

No EUT transmissions were observed on the test channel during the 30-minute observation time.