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-A700S, SM-A700K, SM-A700L

FCC ID: A3LSMA700KOR

REPORT NUMBER: 14U19434-E4

ISSUE DATE: December 2, 2014

Prepared for
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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
--	12/2/14	Initial Issue	P. Zhang

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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-A700K, SM-A700L, SM-A700S

SERIAL NUMBER: 2001221 (Conducted), 2001222 (Conducted), 2001223 (Radiated), 2001224 (Radiated)

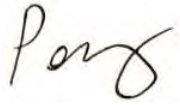
DATE TESTED: NOVEMBER 18- DECEMBER 2, 2014

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:



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1. TEST METHODOLOGY

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

KDB 789033 D01 General UNII Test Procedures Old Rules v01r04 is used for demonstrate compliance. 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.

2. 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.

3. CALIBRATION AND UNCERTAINTY

3.1. 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.

3.2. 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

3.3. 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%.

4. EQUIPMENT UNDER TEST

4.1. DESCRIPTION OF EUT

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

4.2. 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	802.11a	12.75	18.84
5180 - 5240	802.11n HT20	12.75	18.84
5190 - 5230	802.11n HT40	13.13	20.56
5260 - 5320	802.11a	12.87	19.36
5260 - 5320	802.11n HT20	12.53	17.91
5270 - 5310	802.11n HT40	13.37	21.73
5500 - 5700	802.11a	12.55	17.99
5500 - 5700	802.11n HT20	12.58	18.11
5510 - 5670	802.11n HT40	12.84	19.23
5745 - 5825	802.11a	12.86	19.32
5745 - 5825	802.11n HT20	12.78	18.97
5755 - 5795	802.11n HT40	13.72	23.55

4.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an FPCB antenna, with a maximum gain of 0.86 dBi.

4.4. 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

4.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
AC Adapter	Samsung	EP-TA50WKW	N/A	N/A
Earphone	Samsung	N/A	N/A	N/A

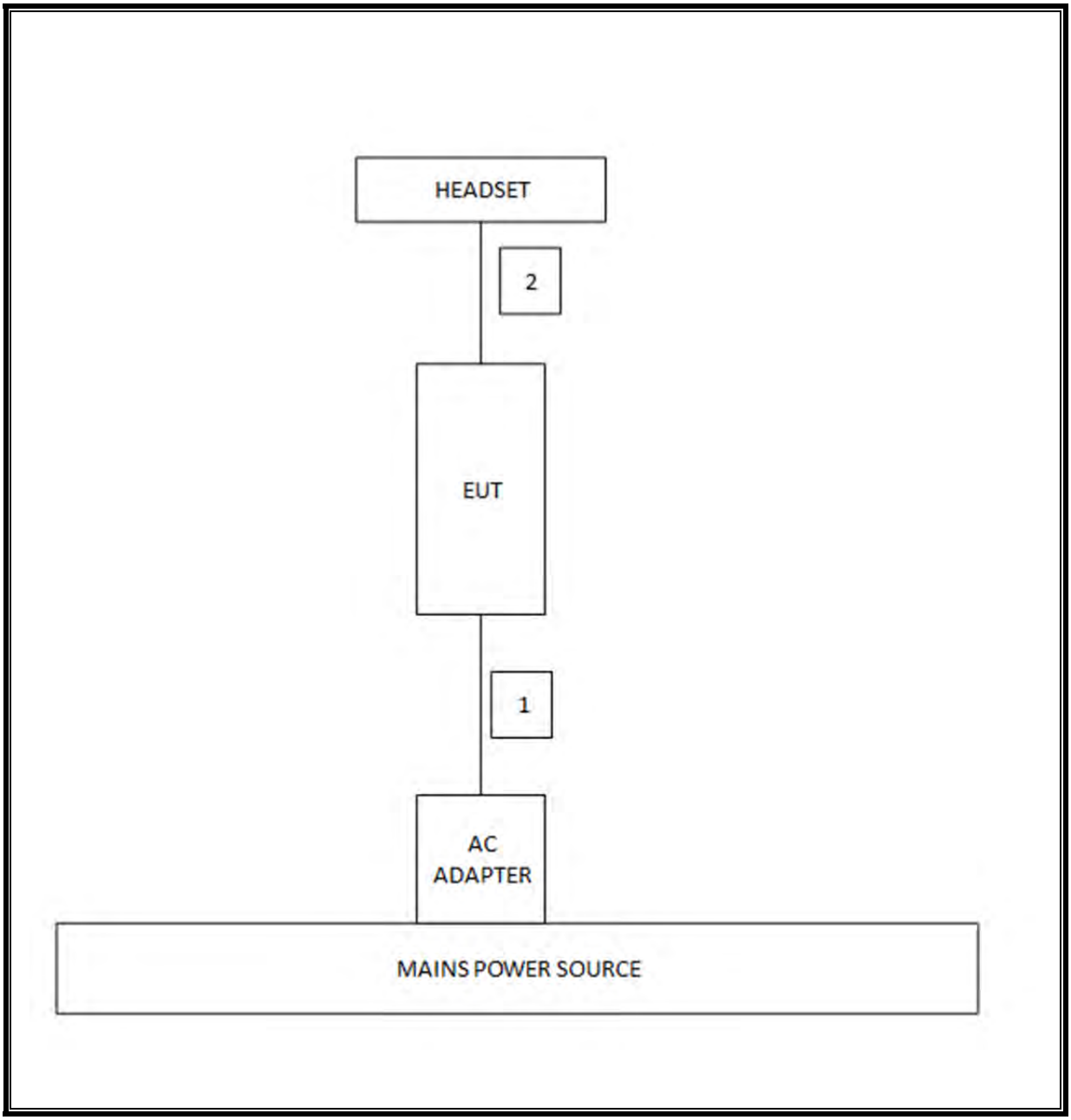
I/O CABLES

I/O Cable List						
Cable No	**Port**	**# of identical ports**	**Connector Type**	**Cable Type**	**Cable Length (m)**	**Remarks**
1	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



5. TEST AND MEASUREMENT EQUIPMENT

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

Test Equipment List				
Description	**Manufacturer**	**Model**	**Asset**	**Cal Due**
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C01069	12/20/14
Spectrum Analyzer,9KHz-40GHz	HP	8564E	C00986	04/01/15
EMI Test Receiver, 9 kHz-7 GHz	R & S	ESCI 7	1000741	08/13/15
EMI Test Receiver, 30 MHz	R & S	ESHS 20	N02396	08/18/15
Peak Power Meter	Agilent / HP	E4416A	C00963	12/13/14
Peak / Average Power Sensor	Agilent / HP	E9327A	C00964	12/13/14
Antenna, Horn, 1-18 GHz	ETS	3117	C01022	02/21/15
Antenna, Horn,18- 26 GHz	ARA	MWH-1826/B	C00946	11/12/15
Antenna, Horn, 26-40 GHz	ARA	MWH-2640	C00891	06/28/15
Antenna, Bilog, 30MHz-1 GHz	Sunol Sciences	JB1	T243	03/06/15
RF Preamplifier, 100KHz -> 1300MHz	HP	TBD	C00825	06/01/15
RF Preamplifier, 1GHz - 18GHz	Miteq	NSP4000-SP2	924343	03/23/15
RF Preamplifier, 1GHz - 26.5GHz	HP	8449B	F00351	06/27/15
AC Power Supply, 2,500VA 45-500Hz	Elgar-Ametek	CW2501M	F00013	CNR
RF Preamplifier, 1GHz - 40GHz	Miteq	NSP4000-SP2	C00990	08/20/15
Attenuator / Switch driver	HP	11713A	F00204	CNR
Low Pass Filter 3GHz	Micro-Tronics	LPS17541	F00219	05/23/15
High Pass Filter 5GHz	Micro-Tronics	HPS17542	F00222	05/22/15
High Pass Filter 6GHz	Micro-Tronics	HPM17543	F00224	05/22/15

6. SUMMARY TABLE

FCC Part Section	Test Description	Test Limit	Test Condition	Test Result	Worst Case
2.1051, 15.407 (b)	Occupied Band width (26dB)	N/A	Conducted	Pass	45.3 MHz
15.407 (a)(1)	TX Cond. Power 5.15-5.25	<17dBm or 4+10Log(OBW)		Pass	13.13 dBm
15.407 (a)(2)	TX Cond. Power 5.25-5.35 & 5.47-5.725	<24dBm or 11+10Log(OBW)		Pass	13.37 dBm
15.407 (a)(3)	TX Cond. Power 5.725-5.825	< 30dBm or 17+10Log(OBW)		Pass	13.72 dBm
15.407 (a)(5)	PSD	<8dBm		Pass	1.75 dBm
15.407 (a)(6)	Peak Excursion Ratio	13dB		Pass	8.17 dBm
15.207 (a)	AC Power Line conducted emissions	Section 10	Radiated	Pass	44.35 dBuV
15.407 (b) & 15.209	Radiated Spurious Emission	< 54dBuV/m		Pass	53.98 dBuV/m
15.407 (h)(2)	Dynamic Frequency Selection	N/A	Radiated	Pass	N/A

7. ON TIME, DUTY CYCLE AND MEASUREMENT METHODS

LIMITS

None; for reporting purposes only.

PROCEDURE

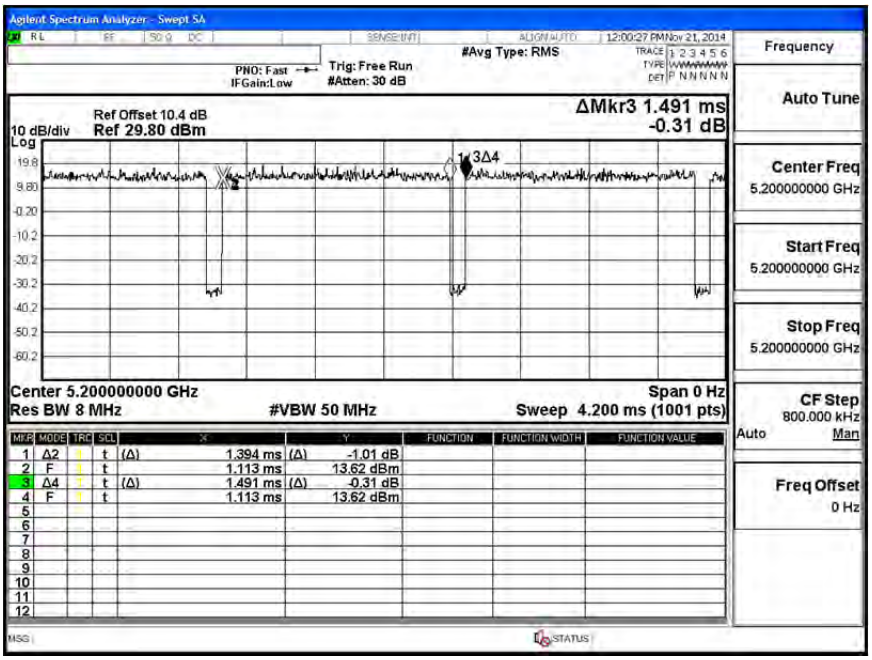
KDB 789033 Zero-Span Spectrum Analyzer Method.

7.1. ON TIME AND DUTY CYCLE RESULTS

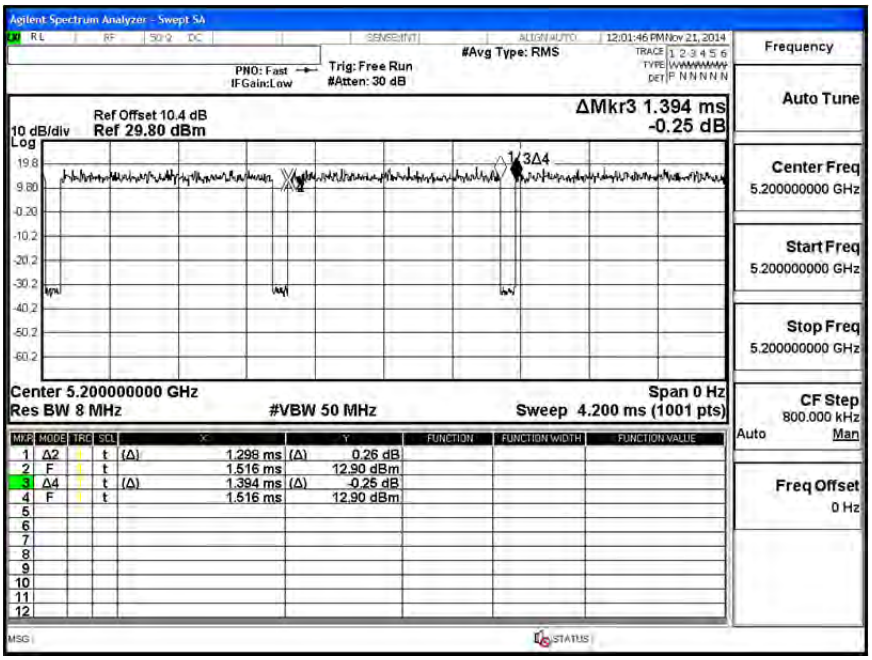
Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/T Minimum VBW (kHz)
802.11a	1.39	1.49	0.935	93.5%	0.29	0.717
802.11n HT20	1.30	1.39	0.931	93.1%	0.31	0.770
802.11n HT40	0.63	0.73	0.865	86.5%	0.63	1.580

7.2. DUTY CYCLE PLOTS

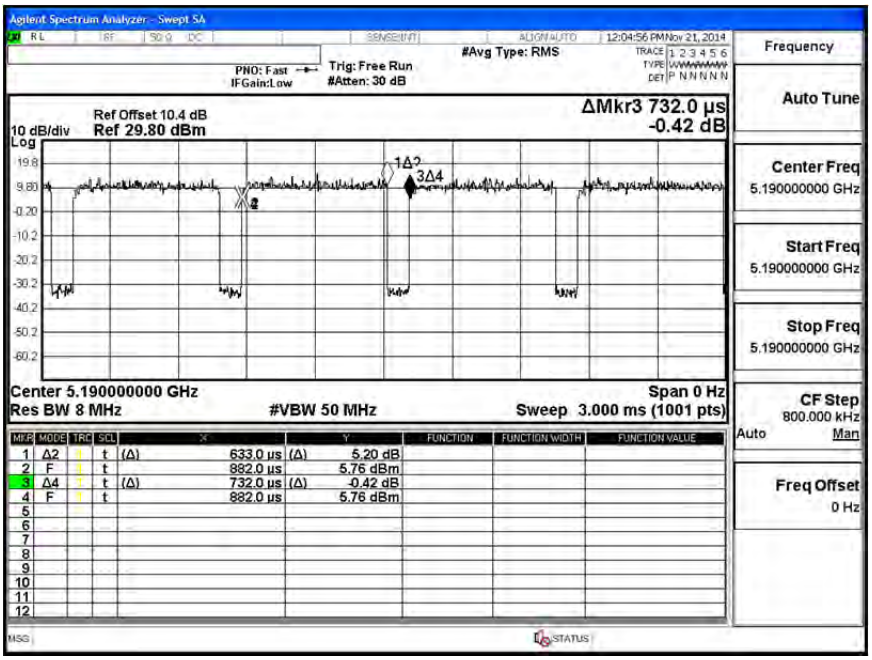
DUTY CYCLE 802.11a MODE



DUTY CYCLE 802.11n HT20 MODE



DUTY CYCLE 802.11n HT40 MODE



8. 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.

9. ANTENNA PORT TEST RESULTS

9.1. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

9.1.1. 802.11a MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5180	22.98
Mid	5200	22.53
High	5240	22.71
Worst		22.98

9.1.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5180	22.95
Mid	5200	22.68
High	5240	22.98
Worst		22.98

9.1.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5190	44.940
Mid	5230	45.300
Worst		45.300

9.1.1. 802.11a MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5260	22.74
Mid	5300	22.92
High	5320	22.83
Worst		22.92

9.1.1. 802.11n HT20 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5260	22.98
Mid	5300	23.01
High	5320	22.98
Worst		23.01

9.1.2. 802.11n HT40 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5270	44.34
High	5310	44.82
Worst		44.82

9.1.3. 802.11a MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5500	21.400
Mid	5580	21.900
High	5700	21.500
Worst		21.900

9.1.4. 802.11n HT20 MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5500	21.850
Mid	5580	22.150
High	5700	22.000
Worst		22.150

9.1.5. 802.11n HT40 MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5510	42.58
Mid	5550	42.82
High	5670	42.82
Worst		42.82

9.1.6. 802.11a MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5745	21.850
Mid	5785	21.550
High	5825	21.650
Worst		21.850

9.1.7. 802.11n HT20 MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5745	22.200
Mid	5785	22.550
High	5825	22.200
Worst		22.550

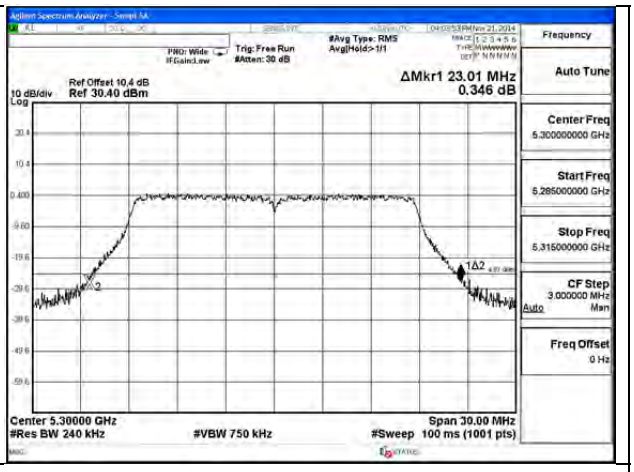
9.1.8. 802.11n HT40 MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5755	43.28
High	5795	43.87
Worst		43.87

9.1.9. 26 dB BANDWIDTH PLOTS

11n HT20 5.2 Mid Ch	11n HT20 5.3 Mid Ch

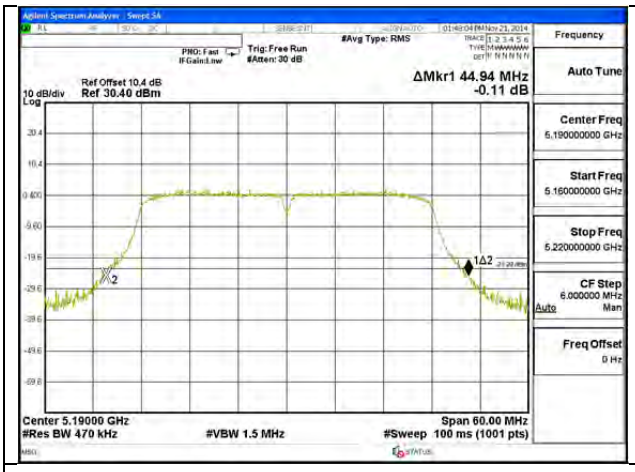
11n HT20 5.5 Mid Ch



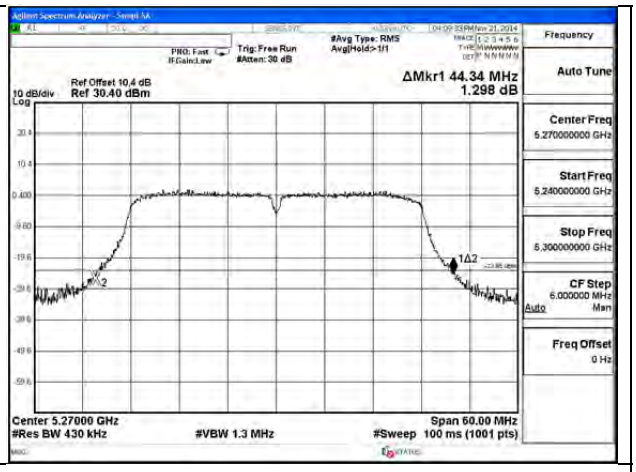
11n HT20 5.8 Mid Ch

11n HT40 5.2 Low Ch

11n HT40 5.3 Low Ch



11n HT40 5.5 Mid Ch

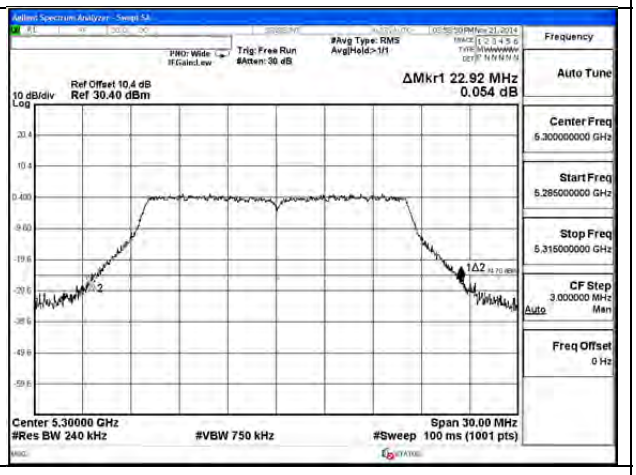


11n HT40 5.8 Low Ch

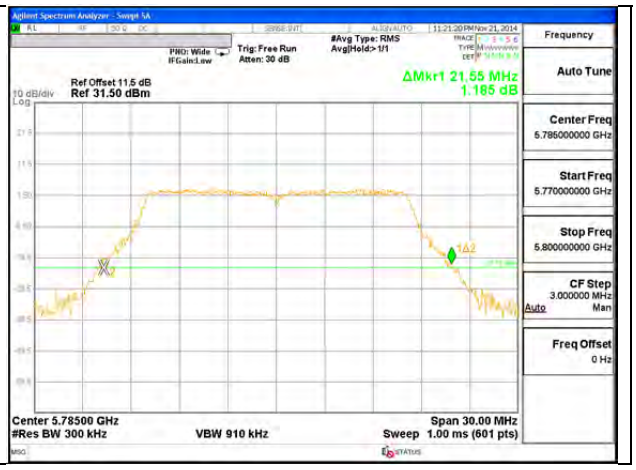
11a HT20 5.2 Mid Ch

11a HT20 5.3 Mid Ch

11a HT20 5.5 Mid Ch



11a HT20 5.8 Mid Ch



9.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

9.2.1. 802.11a MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5180	16.57
Mid	5200	16.61
High	5240	16.54
Worst		16.61

9.2.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5180	17.69
Mid	5200	17.89
High	5240	17.82
Worst		17.89

9.2.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5190	36.316
Mid	5230	35.803
Worst		36.316

9.2.4. 802.11a MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5260	16.55
Mid	5300	16.64
High	5320	16.83
Worst		16.83

9.2.5. 802.11n HT20 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5260	17.76
Mid	5300	17.72
High	5320	17.68
Worst		17.76

9.2.6. 802.11n HT40 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5270	35.9
High	5310	36.2
Worst		36.2

9.2.7. 802.11a MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5500	16.454
Mid	5580	16.576
High	5700	16.514
Worst		16.576

9.2.8. 802.11n HT20 MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5500	17.766
Mid	5580	17.816
High	5700	17.680
Worst		17.816

9.2.9. 802.11n HT40 MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5510	36.0
Mid	5550	36.1
High	5670	36.0
Worst		36.1

9.2.10. 802.11a MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5745	16.526
Mid	5785	16.656
High	5825	16.493
Worst		16.656

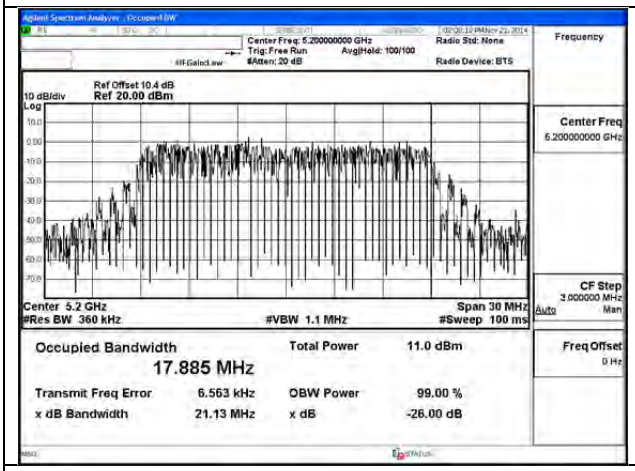
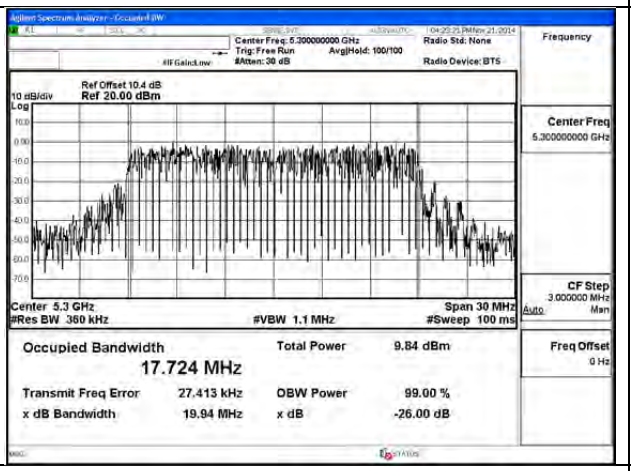
9.2.11. 802.11n HT20 MODE IN THE 5.8 GHz BAND

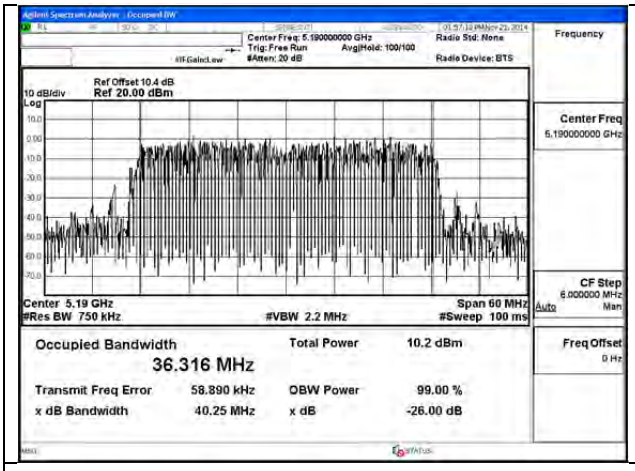
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5745	17.658
Mid	5785	17.832
High	5825	17.778
Worst		17.832

9.2.12. 802.11n HT40 MODE IN THE 5.8 GHz BAND

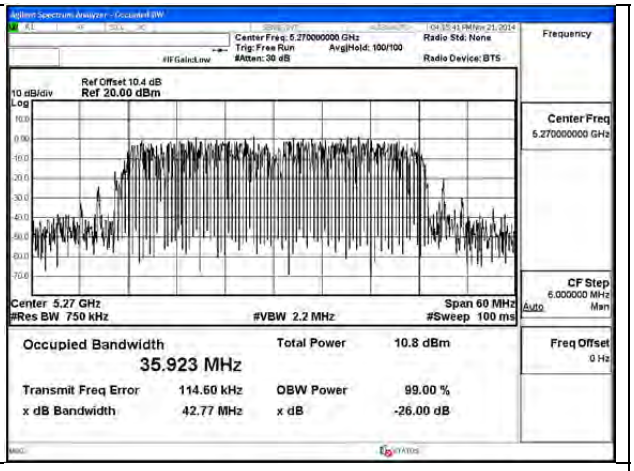
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5755	36.0
High	5795	36.1
Worst		36.1

9.2.13. 99% BANDWIDTH PLOTS

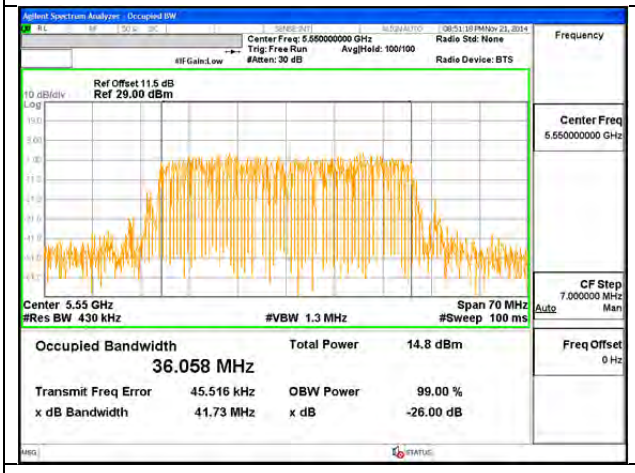
11n HT20 5.2 Mid Ch	11n HT20 5.3 Mid Ch
	
11n HT20 5.5 Mid Ch	11n HT20 5.8 Mid Ch
	
11n HT40 5.2 Low Ch	11n HT40 5.3 Low Ch



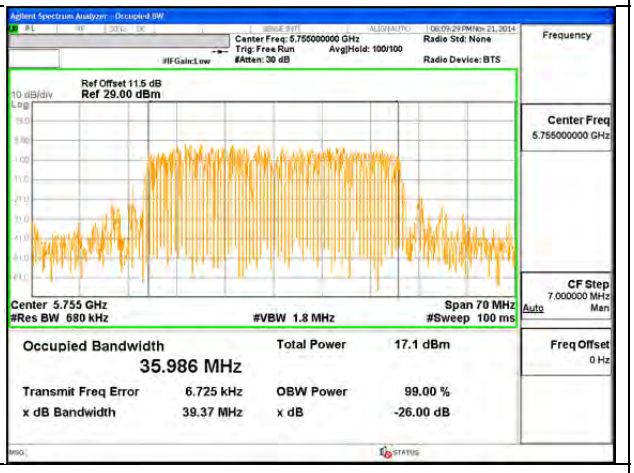
11n HT40 5.5 Mid Ch



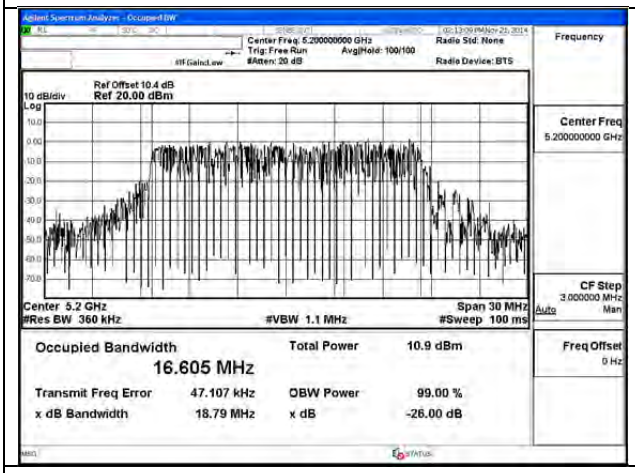
11n HT40 5.8 Low Ch



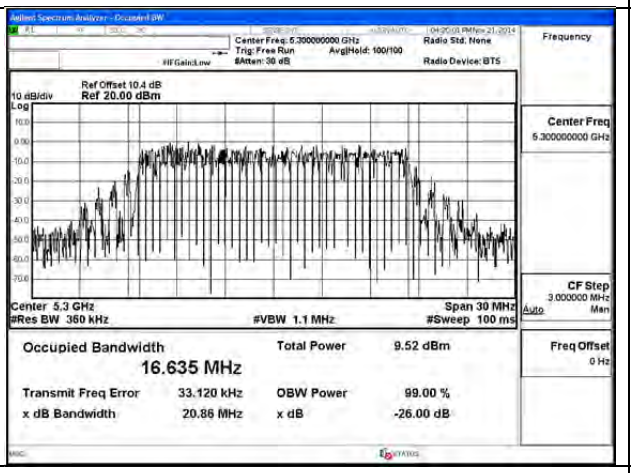
11a HT20 5.2 Mid Ch



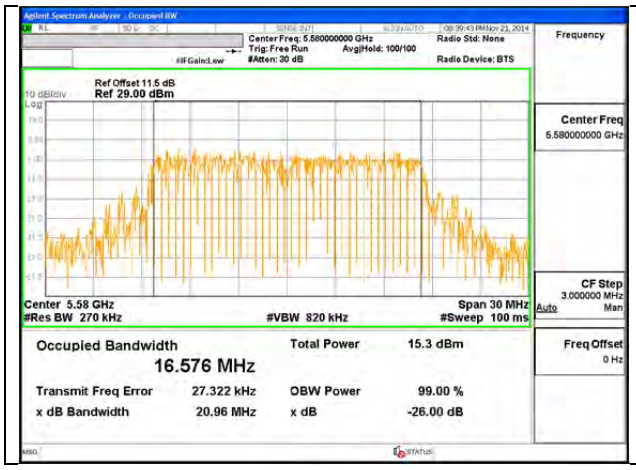
11a HT20 5.3 Mid Ch

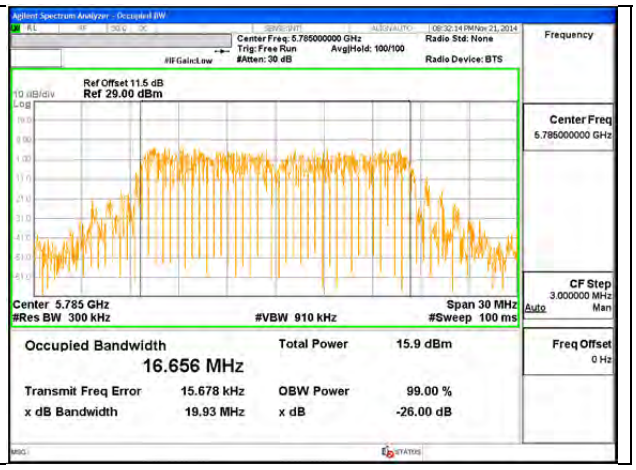


11a HT20 5.5 Mid Ch



11a HT20 5.8 Mid Ch





9.3. 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

9.3.1. 802.11a MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5180	11.90
Mid	5200	11.80
High	5240	11.70
Worst		11.90

9.3.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5180	12.00
Mid	5200	11.80
High	5240	11.60
Worst		12.00

9.3.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5190	11.700
Mid	5230	12.300
Worst		12.300

9.3.4. 802.11a MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5260	12.00
Mid	5300	11.70
High	5320	12.00
Worst		12.00

9.3.5. 802.11n HT20 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5260	11.70
Mid	5300	11.80
High	5320	11.60
Worst		11.80

9.3.6. 802.11n HT40 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5270	12.3
High	5310	12.0
Worst		12.3

9.3.7. 802.11a MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5500	12.200
Mid	5580	12.100
High	5700	11.800
Worst		12.200

9.3.8. 802.11n HT20 MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5500	12.300
Mid	5580	12.200
High	5700	11.700
Worst		12.300

9.3.9. 802.11n HT40 MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5510	11.6
Mid	5550	12.1
High	5670	12.0
Worst		12.1

9.3.10. 802.11a MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5745	12.000
Mid	5785	11.700
High	5825	11.700
Worst		12.000

9.3.11. 802.11n HT20 MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5745	11.800
Mid	5785	11.600
High	5825	11.500
Worst		11.800

9.3.12. 802.11n HT40 MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5755	12.3
High	5795	11.7
Worst		12.3

9.4. 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

9.4.1. 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	22.980	16.566	0.86
Mid	5200	22.530	16.605	0.86
High	5240	22.710	16.544	0.86

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	22.19	21.33	17.00	4.00	10.00	4.00
Mid	5200	17.00	22.20	21.34	17.00	4.00	10.00	4.00
High	5240	17.00	22.19	21.33	17.00	4.00	10.00	4.00

Duty Cycle CF (dB)	0.29	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	12.457	12.75	17.00	-4.25
Mid	5200	12.447	12.74	17.00	-4.26
High	5240	12.329	12.62	17.00	-4.38

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5180	1.303	1.59	4.00	-2.41
Mid	5200	1.229	1.52	4.00	-2.48
High	5240	1.084	1.37	4.00	-2.63

9.4.2. 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	22.950	17.694	0.86
Mid	5200	22.680	17.885	0.86
High	5240	22.980	17.816	0.86

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	22.48	21.62	17.00	4.00	10.00	4.00
Mid	5200	17.00	22.52	21.66	17.00	4.00	10.00	4.00
High	5240	17.00	22.51	21.65	17.00	4.00	10.00	4.00

Duty Cycle CF (dB)	0.31	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	12.438	12.75	17.00	-4.25
Mid	5200	12.272	12.58	17.00	-4.42
High	5240	12.219	12.53	17.00	-4.47

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5180	0.834	1.14	4.00	-2.86
Mid	5200	0.711	1.02	4.00	-2.98
High	5240	0.622	0.93	4.00	-3.07

9.4.3. 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	44.94	36.316	0.86
Mid	5230	45.3	35.803	0.86

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	22.14	17.00	4.00	10.00	4.00
Mid	5230	17.00	23.00	22.14	17.00	4.00	10.00	4.00
Duty Cycle CF (dB)		0.63	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	11.651	12.28	17.00	-4.72
Mid	5230	12.504	13.13	17.00	-3.87

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5190	-2.589	-1.96	4.00	-5.96
Mid	5230	-1.866	-1.24	4.00	-5.24

9.4.4. 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	22.74	16.546	0.86
Mid	5300	22.92	16.635	0.86
High	5320	22.83	16.832	0.86

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	23.19	29.19	23.19	11.00	11.00	11.00
Mid	5300	24.00	23.21	29.21	23.21	11.00	11.00	11.00
High	5320	24.00	23.26	29.26	23.26	11.00	11.00	11.00

Duty Cycle CF (dB)	0.29	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	12.054	12.34	23.19	-10.84
Mid	5300	12.104	12.39	23.21	-10.82
High	5320	12.575	12.87	23.26	-10.40

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5260	0.817	1.11	11.00	-9.89
Mid	5300	0.843	1.13	11.00	-9.87
High	5320	1.332	1.62	11.00	-9.38

9.4.5. 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	22.98	17.759	0.86
Mid	5300	23.01	17.724	0.86
High	5320	22.98	17.684	0.86

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	23.49	29.49	23.49	11.00	11.00	11.00
Mid	5300	24.00	23.49	29.49	23.49	11.00	11.00	11.00
High	5320	24.00	23.48	29.48	23.48	11.00	11.00	11.00

Duty Cycle CF (dB)	0.31	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	12.025	12.34	23.49	-11.16
Mid	5300	12.222	12.53	23.49	-10.95
High	5320	11.922	12.23	23.48	-11.24

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5260	0.699	1.01	11.00	-9.99
Mid	5300	0.753	1.06	11.00	-9.94
High	5320	0.549	0.86	11.00	-10.14

9.4.6. 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	44.3	35.9	0.86
High	5310	44.8	36.2	0.86

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)	0.63	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	12.43	13.06	24.00	-10.94
High	5310	12.74	13.37	24.00	-10.63

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5270	-1.68	-1.05	11.00	-12.05
High	5310	-1.68	-1.05	11.00	-12.05

9.4.7. 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	21.40	16.454	0.86
Mid	5580	21.90	16.576	0.86
High	5700	21.50	16.514	0.86

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	23.16	29.16	23.16	11.00	11.00	11.00
Mid	5580	24.00	23.19	29.19	23.19	11.00	11.00	11.00
High	5700	24.00	23.18	29.18	23.18	11.00	11.00	11.00

Duty Cycle CF (dB)	0.29	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	11.735	12.03	23.16	-11.14
Mid	5580	12.127	12.42	23.19	-10.78
High	5700	12.255	12.55	23.18	-10.63

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5500	0.463	0.75	11.00	-10.25
Mid	5580	0.882	1.17	11.00	-9.83
High	5700	0.972	1.26	11.00	-9.74

9.4.8. 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	21.85	17.766	0.86
Mid	5580	22.15	17.816	0.86
High	5700	22.00	17.680	0.86

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	23.50	29.50	23.50	11.00	11.00	11.00
Mid	5580	24.00	23.51	29.51	23.51	11.00	11.00	11.00
High	5700	24.00	23.47	29.47	23.47	11.00	11.00	11.00

Duty Cycle CF (dB)	0.31	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	11.787	12.10	23.50	-11.40
Mid	5580	12.188	12.50	23.51	-11.01
High	5700	12.265	12.58	23.47	-10.90

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5500	0.207	0.52	11.00	-10.48
Mid	5580	0.759	1.07	11.00	-9.93
High	5700	0.594	0.90	11.00	-10.10

9.4.9. 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	42.6	36.046	0.86
Mid	5550	42.8	36.058	0.86
High	5670	42.8	36.029	0.86

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)	0.63	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	11.529	12.16	24.00	-11.84
Mid	5550	12.142	12.77	24.00	-11.23
High	5670	12.205	12.84	24.00	-11.17

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5510	-2.733	-2.10	11.00	-13.10
Mid	5550	-2.205	-1.58	11.00	-12.58
High	5670	-1.999	-1.37	11.00	-12.37

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	21.9	16.5	0.86
Mid	5785	21.6	16.7	0.86
High	5825	21.7	16.5	0.86

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	29.18	35.18	29.18	17.00	17.00	17.00
Mid	5785	30.00	29.22	35.22	29.22	17.00	17.00	17.00
High	5825	30.00	29.17	35.17	29.17	17.00	17.00	17.00

Duty Cycle CF (dB)	0.29	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	12.57	12.86	29.18	-16.32
Mid	5785	12.32	12.61	29.22	-16.61
High	5825	12.47	12.76	29.17	-16.41

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5745	1.46	1.75	17.00	-15.25
Mid	5785	1.17	1.46	17.00	-15.54
High	5825	1.28	1.57	17.00	-15.43

9.4.10. 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	22.2	17.7	0.86
Mid	5785	22.6	17.8	0.86
High	5825	22.2	17.8	0.86

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	29.47	35.47	29.47	17.00	17.00	17.00
Mid	5785	30.00	29.51	35.51	29.51	17.00	17.00	17.00
High	5825	30.00	29.50	35.50	29.50	17.00	17.00	17.00

Duty Cycle CF (dB)	0.31	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	12.47	12.78	29.47	-16.69
Mid	5785	12.12	12.43	29.51	-17.08
High	5825	12.36	12.67	29.50	-16.83

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5745	0.82	1.13	17.00	-15.87
Mid	5785	0.53	0.84	17.00	-16.16
High	5825	0.92	1.23	17.00	-15.77

9.4.11. 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	43.3	36.0	0.86
High	5795	43.9	36.1	0.86

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)	0.63	Included in Calculations of Corr'd Power & PPSD

Output Power Results

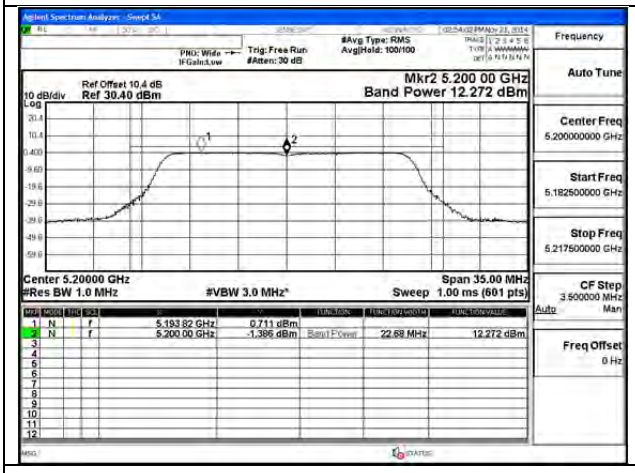
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5755	13.09	13.72	30.00	-16.28
High	5795	11.87	12.50	30.00	-17.50

PPSD Results

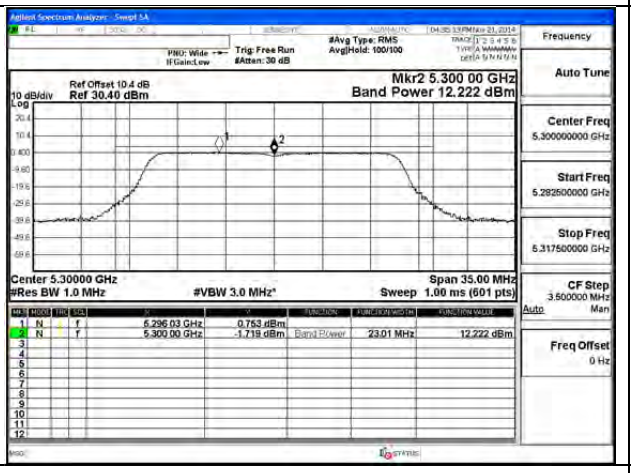
Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5755	-1.48	-0.85	17.00	-17.85
High	5795	-2.28	-1.65	17.00	-18.65

9.4.12. OUTPUT POWER AND PPSD PLOTS, Chain 0

11n HT20 5.2 Mid Ch



11n HT20 5.3 Mid Ch

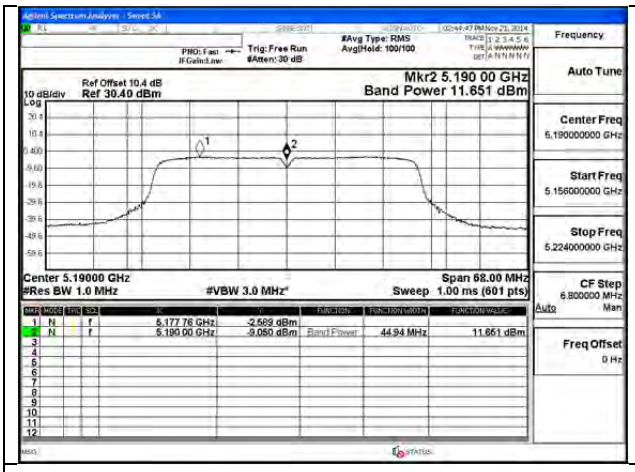


11n HT20 5.5 Mid Ch

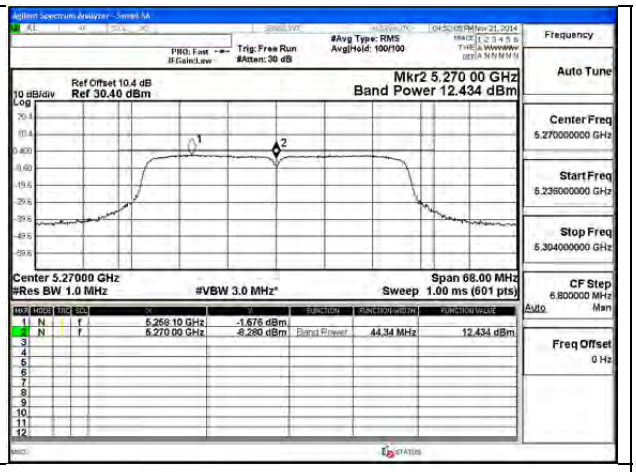
11n HT20 5.8 Mid Ch

11n HT40 5.2 Low Ch

11n HT40 5.3 Low Ch

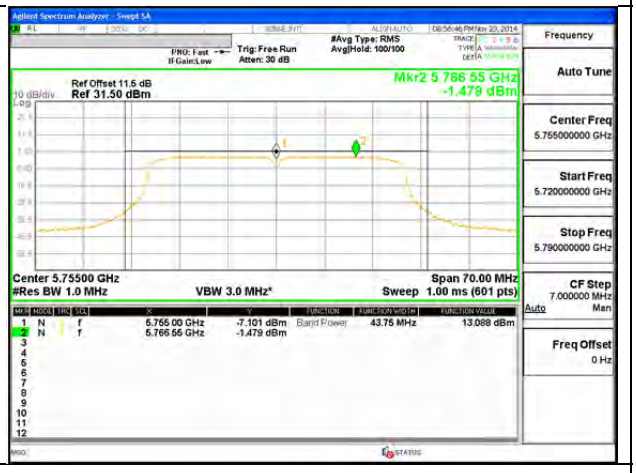


11n HT40 5.5 Mid Ch

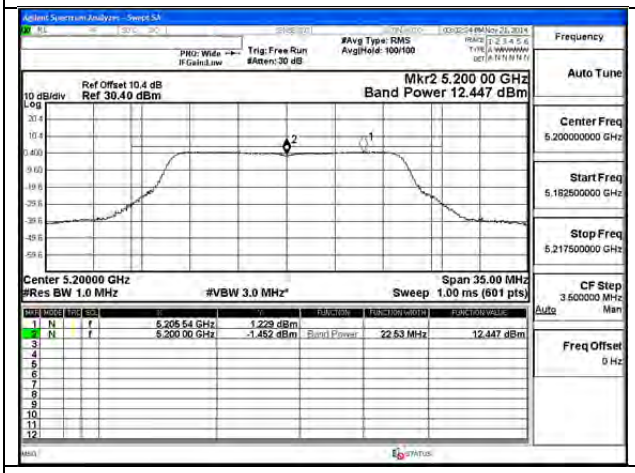


11n HT40 5.8 Low Ch

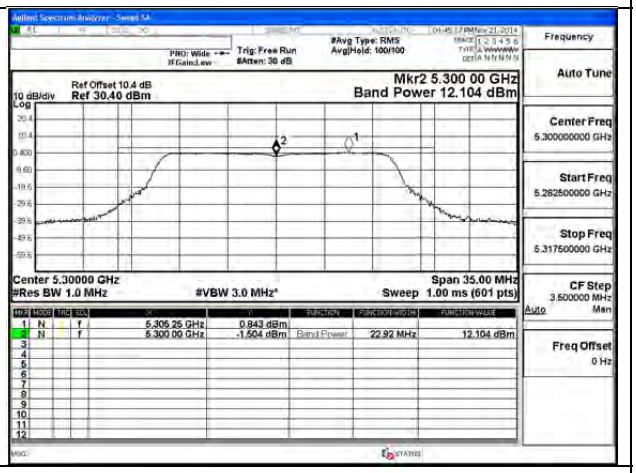
11a HT20 5.2 Mid Ch



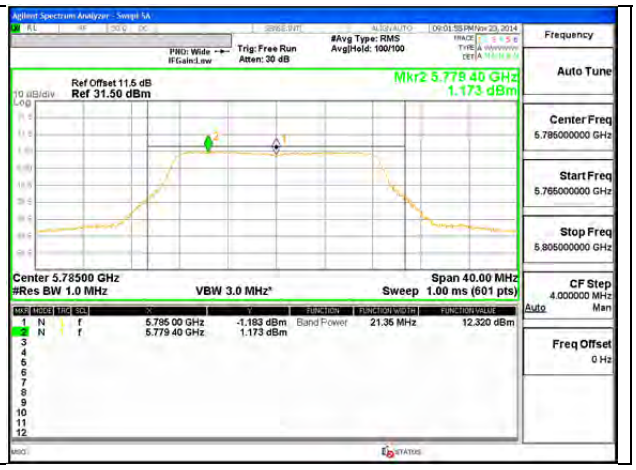
11a HT20 5.3 Mid Ch



11a HT20 5.5 Mid Ch



11a HT20 5.8 Mid Ch



9.5. PEAK EXCURSION

LIMITS

FCC §15.407 (a) (6)

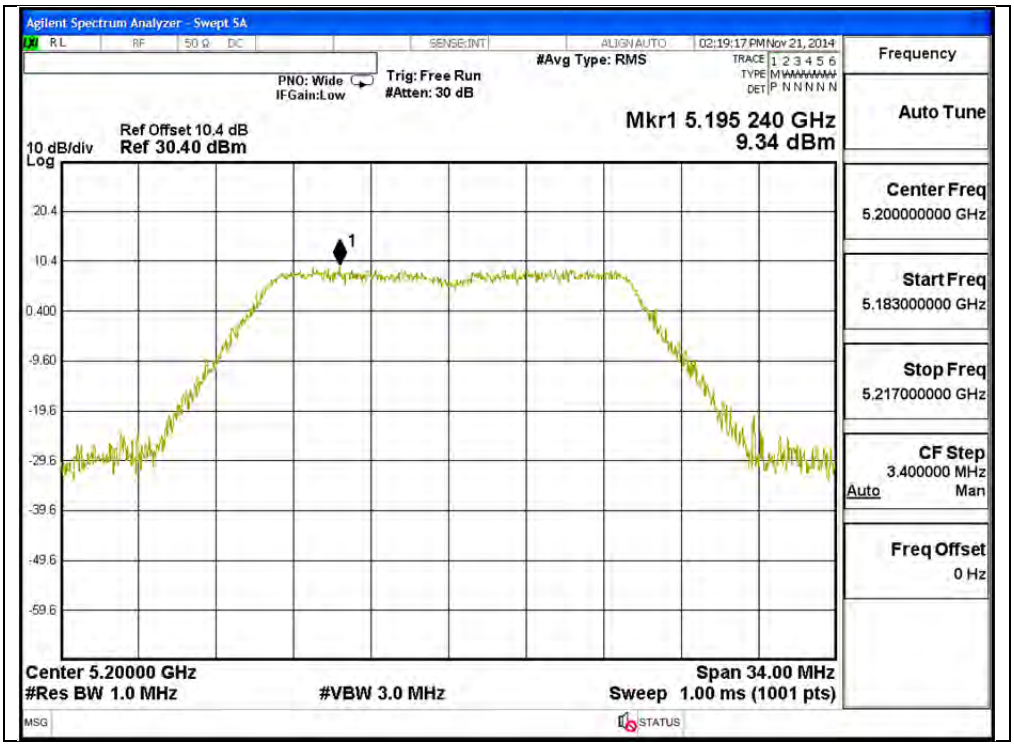
The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the peak transmit power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

RESULTS

9.5.1. 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	9.340	1.59	0.29	7.46	13	-5.54

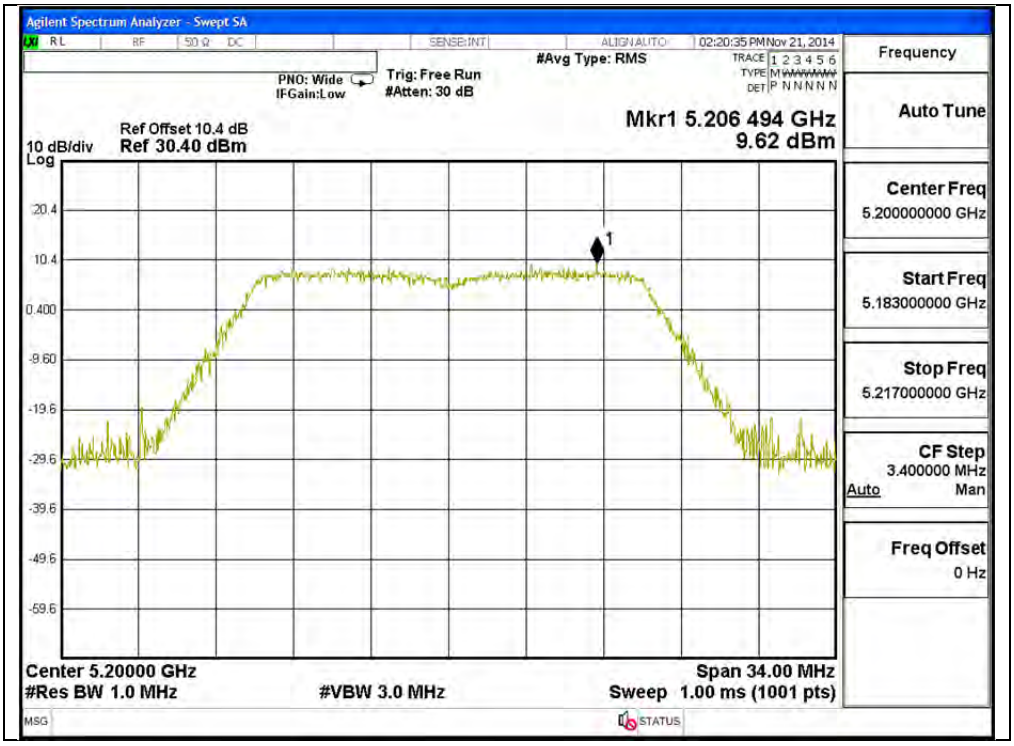
PEAK EXCURSION



9.5.2. 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	9.620	1.14	0.31	8.17	13	-4.83

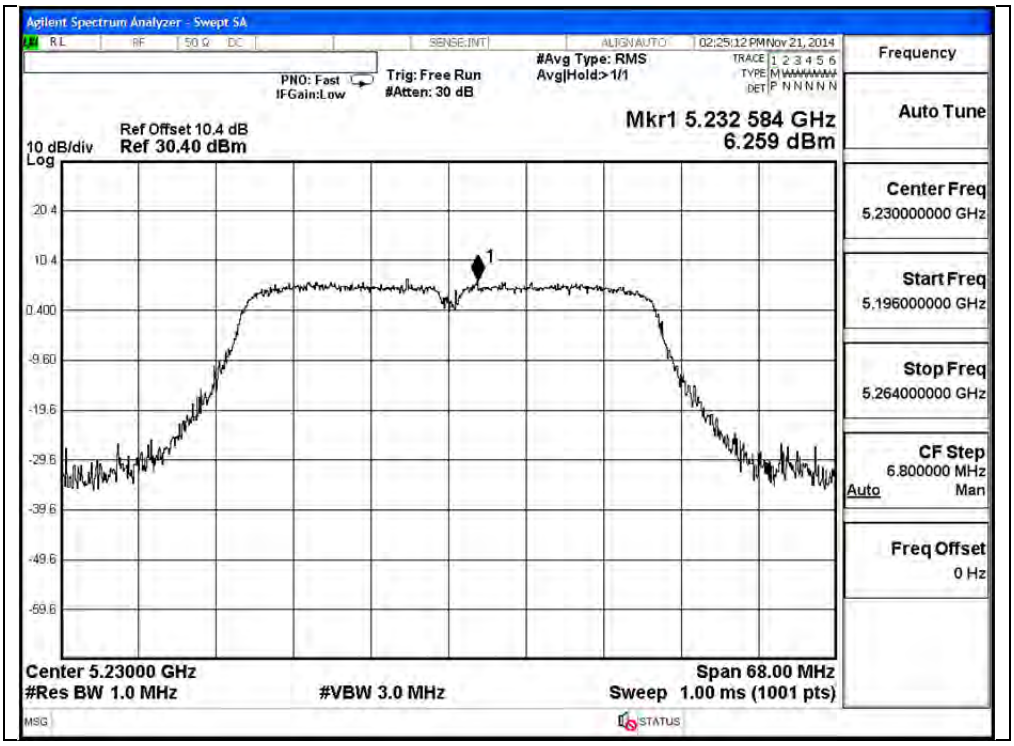
PEAK EXCURSION



9.5.3. 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	6.259	-1.24	0.63	6.87	13	-6.13

PEAK EXCURSION



10. 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.

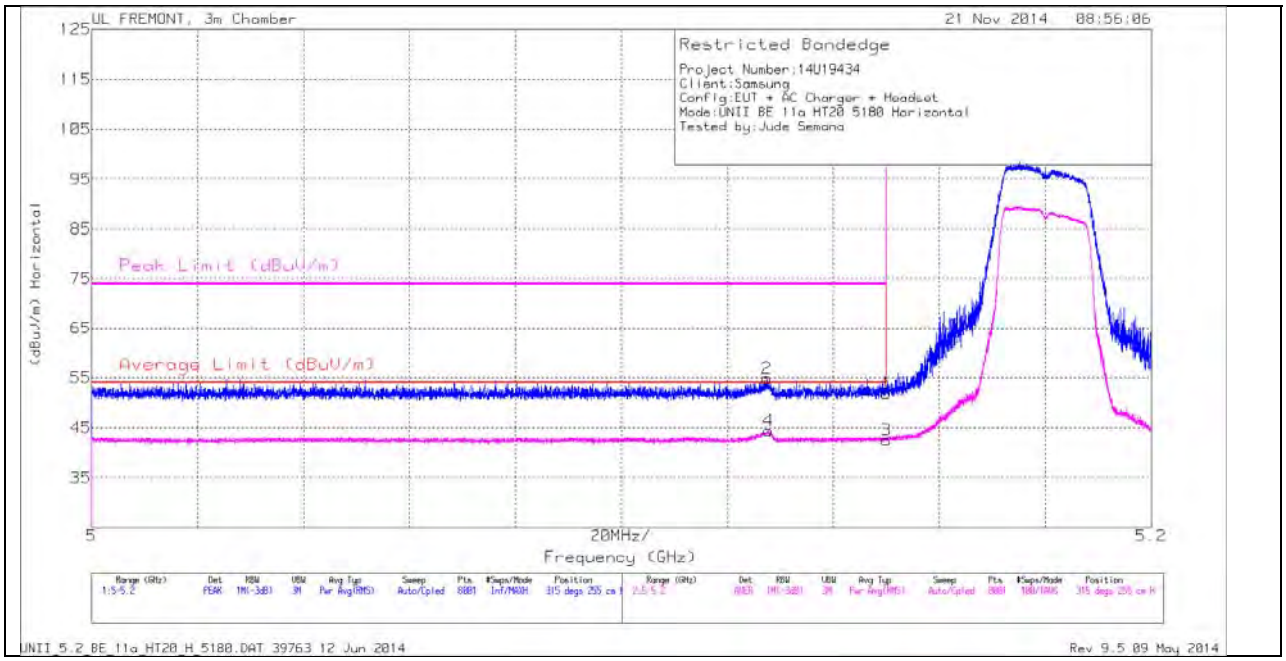
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized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

10.1. 5.2 GHz

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

RESTRICTED BANDEDGE (LOW CHANNEL)

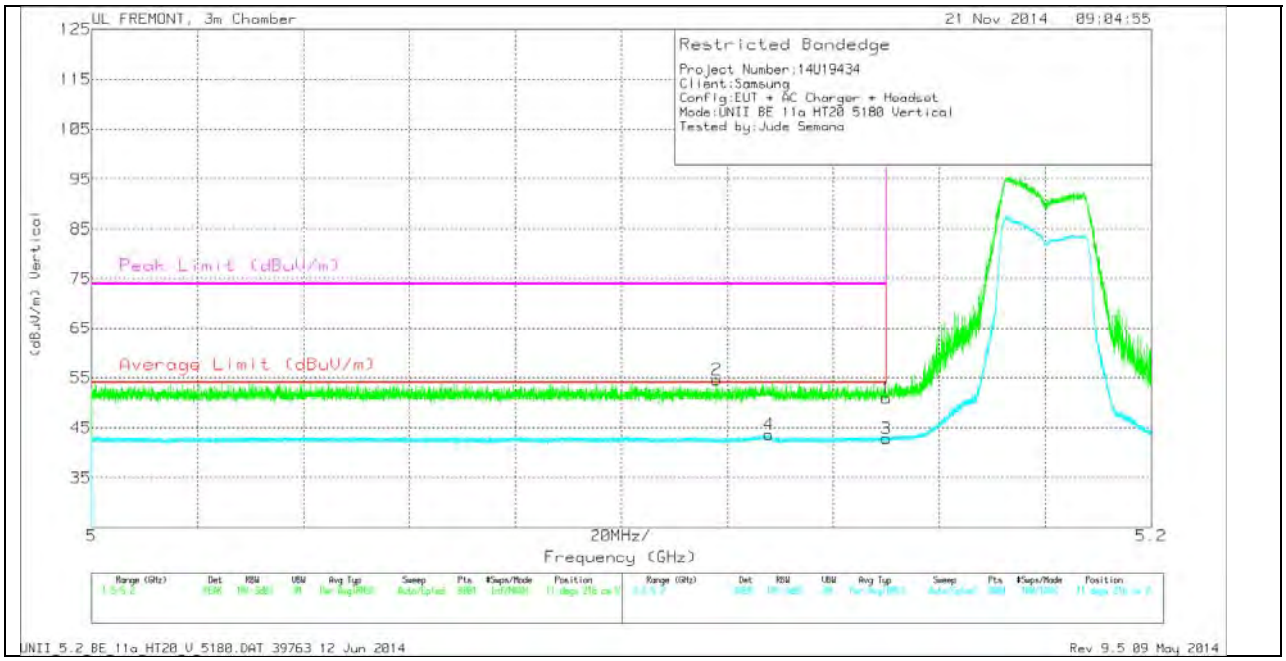
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/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
2	5.127	42.11	PK	34.2	-21.5	0	54.81	-	-	74	-19.19	315	255	H
4	5.128	31.4	RMS	34.2	-21.5	.29	44.4	54	-9.6	-	-	315	255	H
1	5.15	39.31	PK	34.2	-21.6	0	51.91	-	-	74	-22.09	315	255	H
3	5.15	29.63	RMS	34.2	-21.6	.29	42.53	54	-11.47	-	-	315	255	H

VERTICAL PEAK AND AVERAGE PLOT

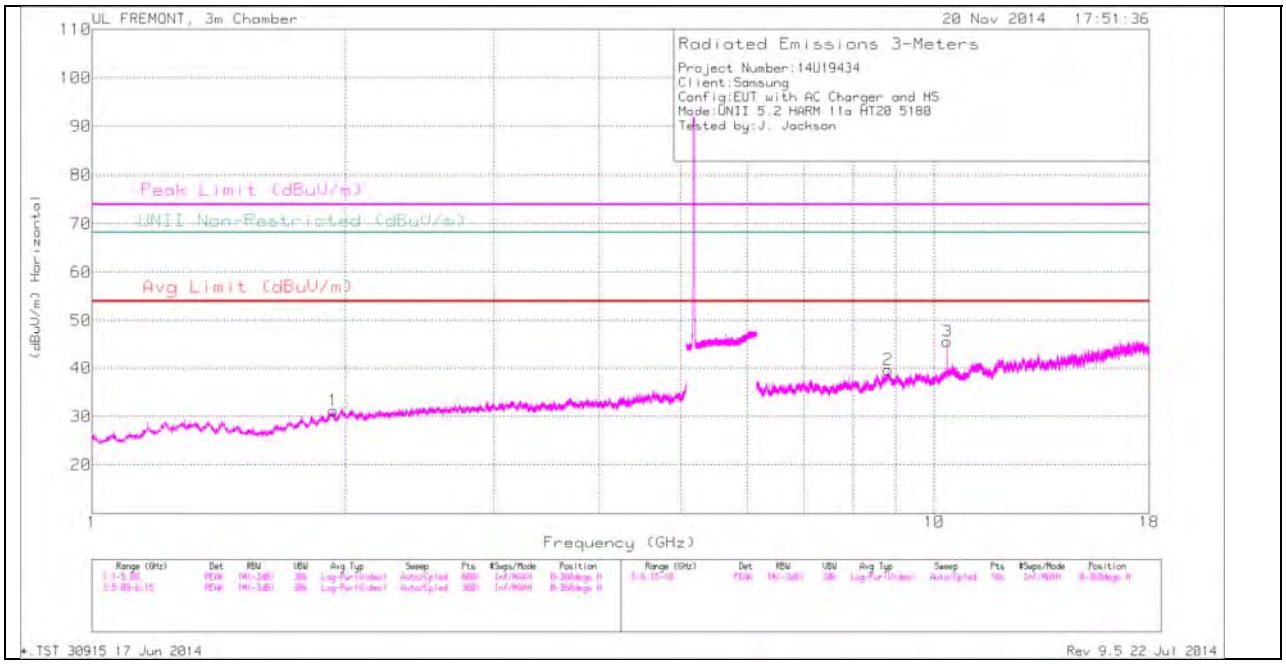


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
2	5.118	42	PK	34.2	-21.6	0	54.6	-	-	74	-19.4	11	216	V
4	5.128	30.62	RMS	34.2	-21.5	.29	43.62	54	-10.38	-	-	11	216	V
1	5.15	38.29	PK	34.2	-21.6	0	50.89	-	-	74	-23.11	11	216	V
3	5.15	29.95	RMS	34.2	-21.6	.29	42.85	54	-11.15	-	-	11	216	V

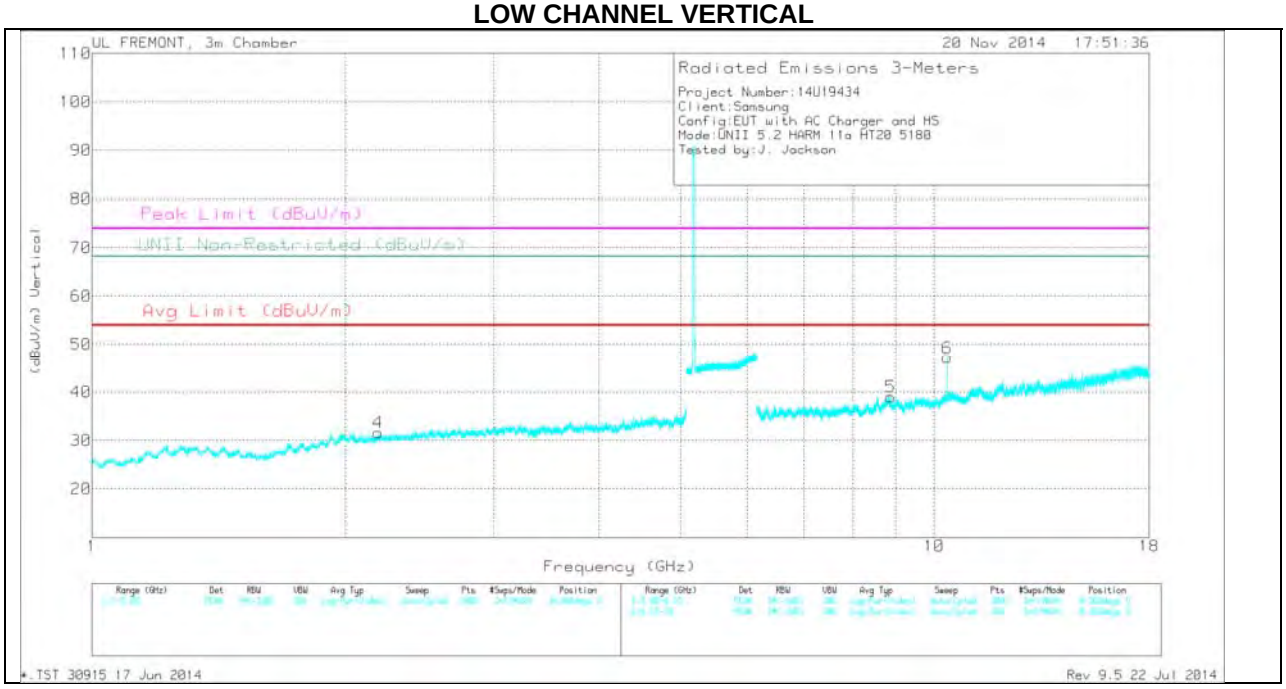
HARMONICS AND SPURIOUS EMISSIONS

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	1.936	32.13	PK	31.4	-32.3	0	31.23	-	-	-	-	68.2	-36.97	0-360	100	H
4	2.186	32.52	PK	31.7	-32.6	0	31.62	-	-	-	-	68.2	-36.58	0-360	200	V
2	8.817	29.25	PK	36	-25.6	0	39.65	-	-	-	-	68.2	-28.55	0-360	200	H
5	8.88	29.57	PK	36	-26.5	0	39.07	-	-	-	-	68.2	-29.13	0-360	200	V
3	10.359	33.67	PK	37.3	-25.4	0	45.57	-	-	-	-	68.2	-22.63	0-360	200	H
6	10.36	35.3	PK	37.3	-25.4	0	47.2	-	-	-	-	68.2	-21	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
10.36	40	PK1	37.3	-25.4	0	51.9	-	-	-	-	68.2	-16.3	98	312	H
10.36	31.73	AD1	37.3	-25.4	.29	43.93	-	-	-	-	-	-	98	312	H
10.36	43.29	PK1	37.3	-25.4	0	55.19	-	-	-	-	68.2	-13.01	285	310	V
10.36	35.48	AD1	37.3	-25.4	.29	47.68	-	-	-	-	-	-	285	310	V

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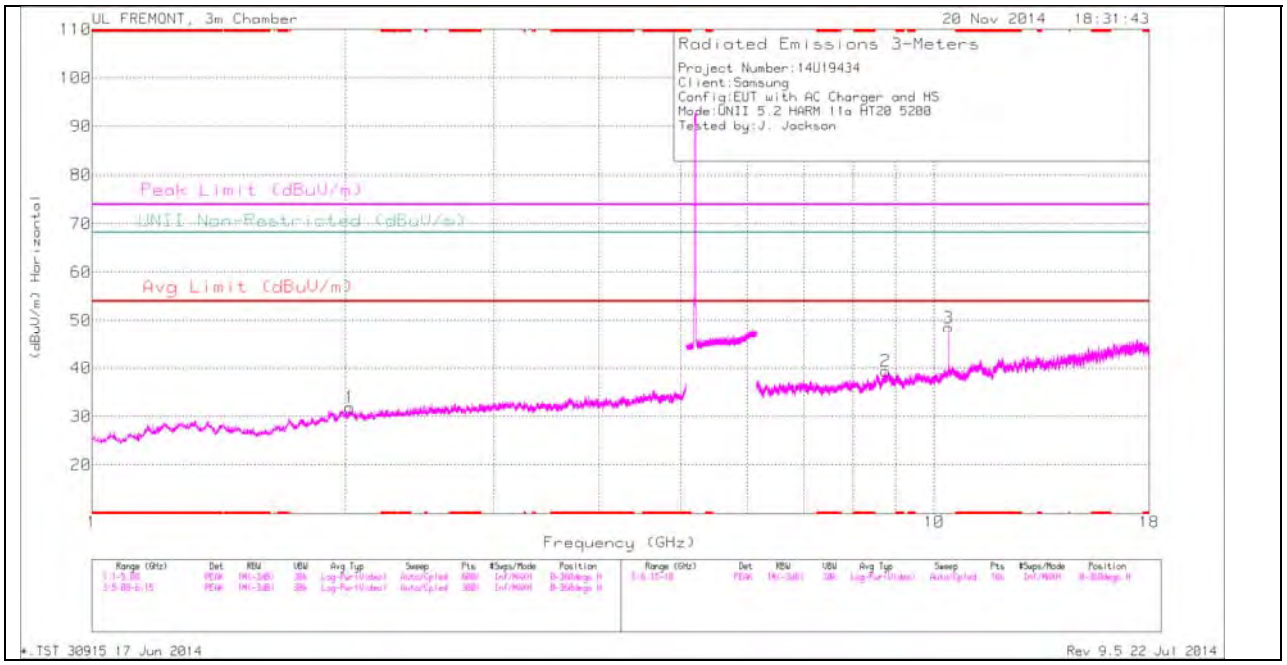
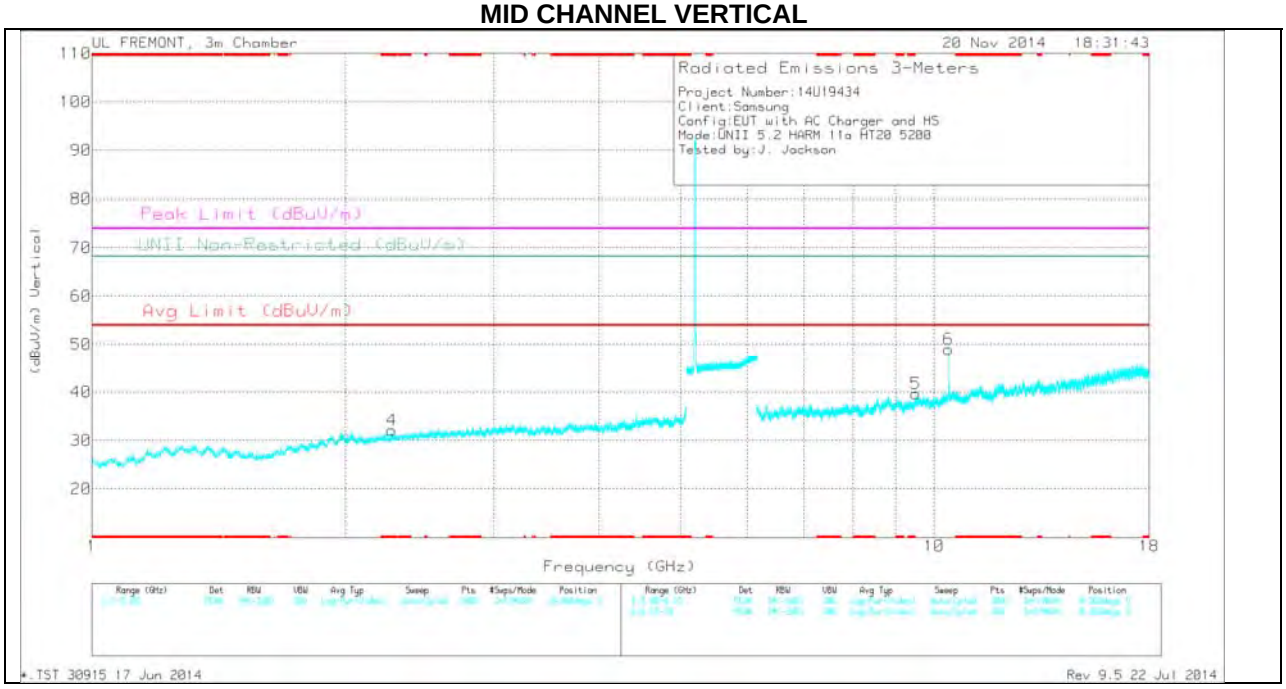
MID CHANNEL HORIZONTAL



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
4	* 2.271	32.51	PK	31.8	-32.2	0	32.11	-	-	74	-41.89	-	-	0-360	100	V
1	2.024	32.54	PK	31.6	-32.3	0	31.84	-	-	-	-	68.2	-36.36	0-360	100	H
2	8.761	29.59	PK	35.9	-26.1	0	39.39	-	-	-	-	68.2	-28.81	0-360	100	H
5	9.505	28.88	PK	36.6	-25.8	0	39.68	-	-	-	-	68.2	-28.52	0-360	200	V
3	10.4	36.95	PK	37.3	-25.8	0	48.45	-	-	-	-	68.2	-19.75	0-360	200	H
6	10.4	37.49	PK	37.3	-25.8	0	48.99	-	-	-	-	68.2	-19.21	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	42.67	PK1	37.3	-25.8	0	54.17	-	-	-	-	68.2	-14.03	98	222	H
10.4	35.08	AD1	37.3	-25.8	.29	46.88	-	-	-	-	-	-	98	222	H
10.4	45.98	PK1	37.3	-25.8	0	57.48	-	-	-	-	68.2	-10.72	126	299	V
10.4	38.88	AD1	37.3	-25.8	.29	50.68	-	-	-	-	-	-	126	299	V

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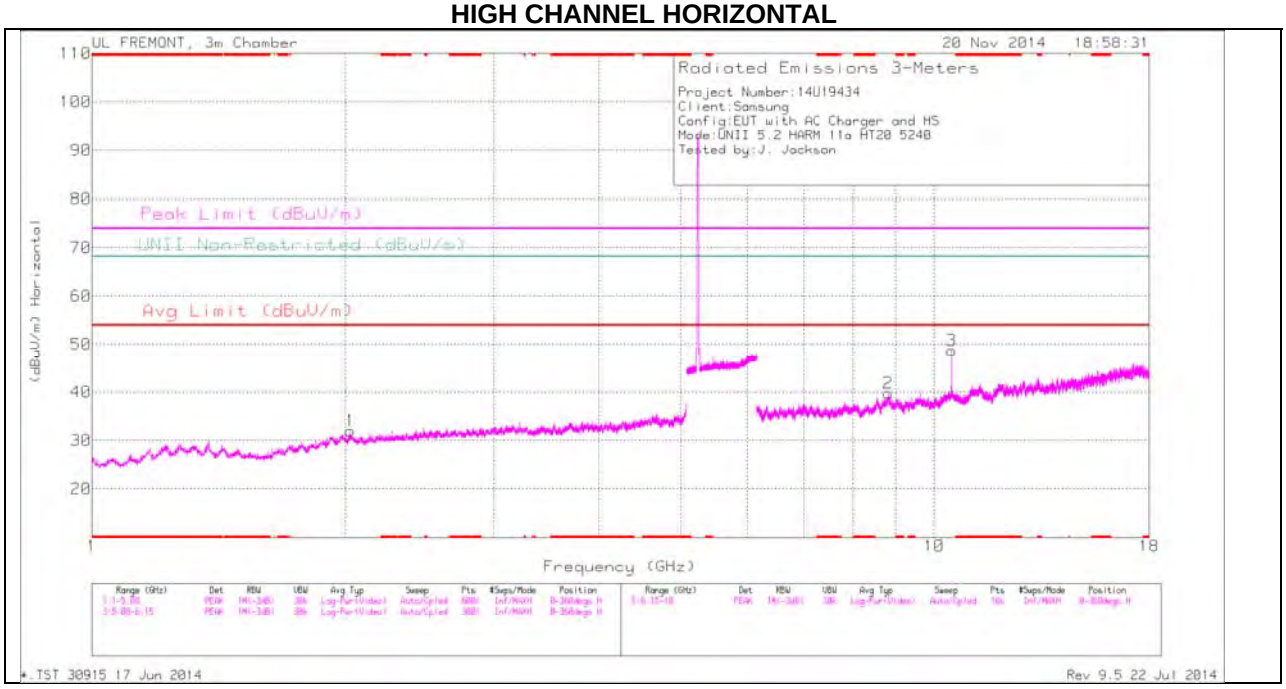
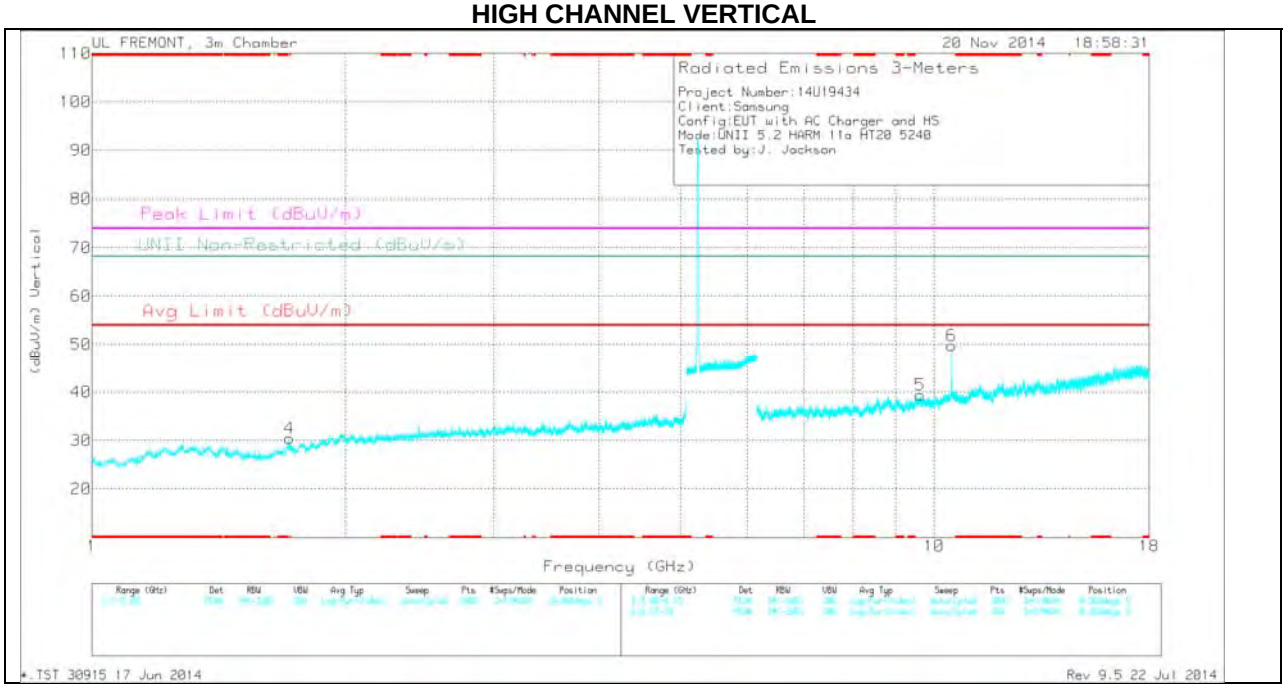
HIGH CHANNEL HORIZONTAL



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
4	1.715	33.33	PK	29.2	-32.1	0	30.43	-	-	-	-	68.2	-37.77	0-360	100	V
1	2.026	32.75	PK	31.6	-32.3	0	32.05	-	-	-	-	68.2	-36.15	0-360	100	H
2	8.812	29.36	PK	36	-25.6	0	39.76	-	-	-	-	68.2	-28.44	0-360	100	H
5	9.623	28.15	PK	36.7	-25.4	0	39.45	-	-	-	-	68.2	-28.75	0-360	200	V
3	10.479	36.9	PK	37.5	-25.7	0	48.7	-	-	-	-	68.2	-19.5	0-360	200	H
6	10.48	38.01	PK	37.5	-25.7	0	49.81	-	-	-	-	68.2	-18.39	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	41.71	PK1	37.5	-25.7	0	53.51	-	-	-	-	68.2	-14.69	256	244	H
10.48	33.78	AD1	37.5	-25.7	.29	45.88	-	-	-	-	-	-	256	244	H
10.48	45.46	PK1	37.5	-25.7	0	57.26	-	-	-	-	68.2	-10.94	129	325	V
10.48	38.96	AD1	37.5	-25.7	.29	51.06	-	-	-	-	-	-	129	325	V

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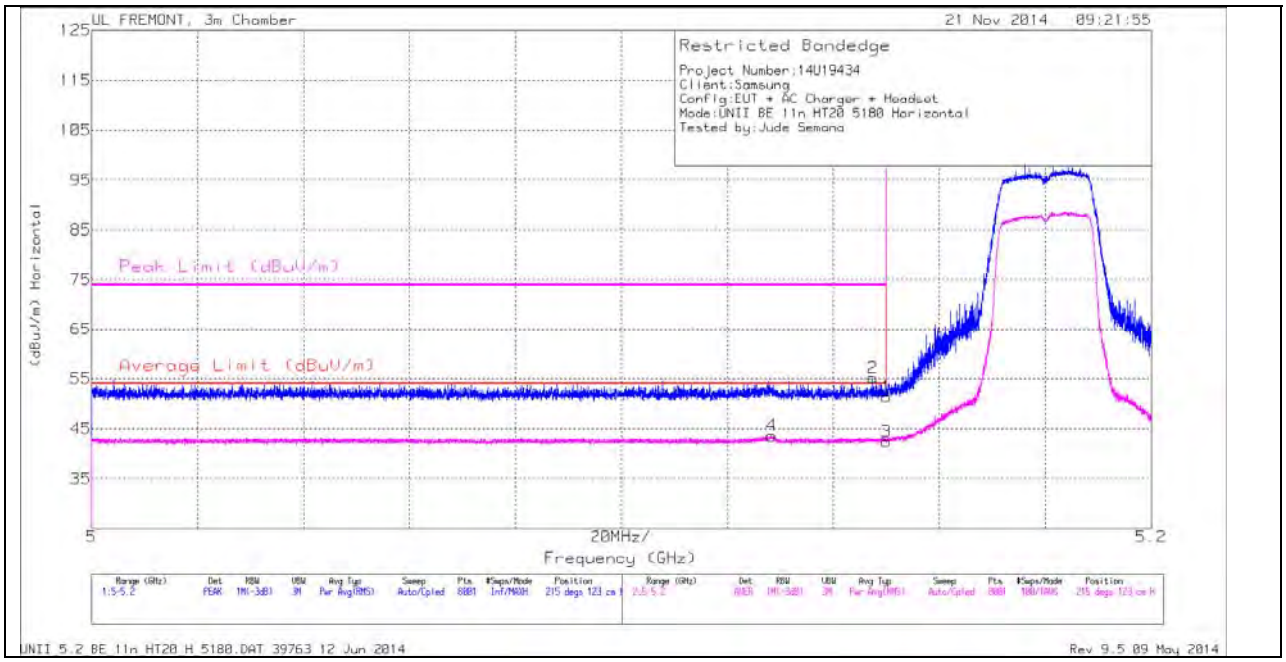
10.1.2. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.2 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

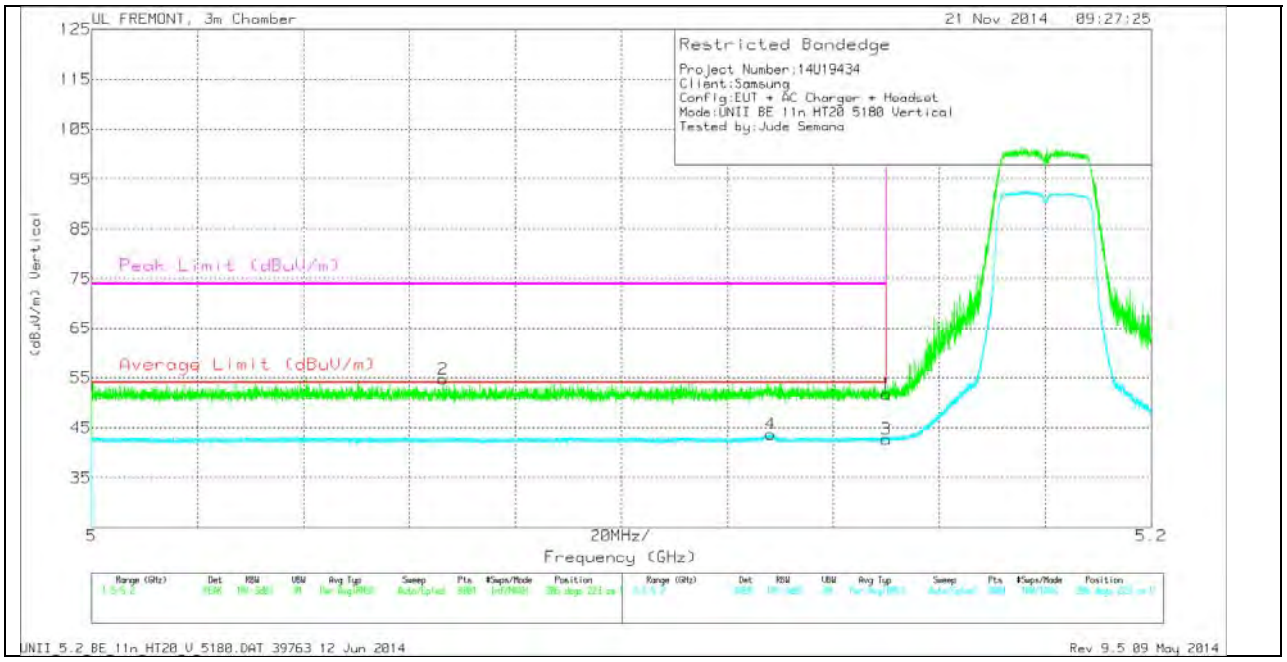
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/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
4	5.128	30.58	RMS	34.2	-21.5	.31	43.58	54	-10.42	-	-	215	123	H
2	5.147	42.55	PK	34.2	-21.6	0	55.15	-	-	74	-18.85	215	123	H
1	5.15	38.81	PK	34.2	-21.6	0	51.41	-	-	74	-22.59	215	123	H
3	5.15	29.54	RMS	34.2	-21.6	.31	42.44	54	-11.56	-	-	215	123	H

VERTICAL PEAK AND AVERAGE PLOT

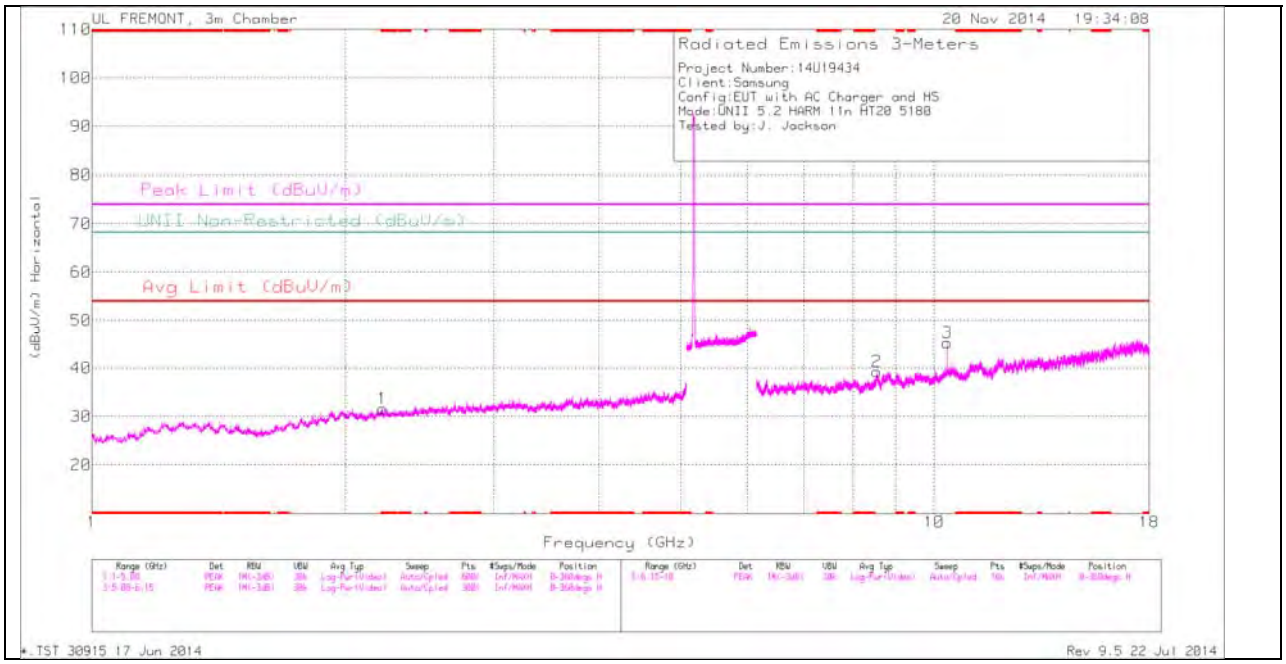


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
2	5.066	42.09	PK	34.1	-21.5	0	54.69	-	-	74	-19.31	206	223	V
4	5.128	30.72	RMS	34.2	-21.5	.31	43.72	54	-10.28	-	-	206	223	V
1	5.15	39.1	PK	34.2	-21.6	0	51.7	-	-	74	-22.3	206	223	V
3	5.15	29.8	RMS	34.2	-21.6	.31	42.7	54	-11.3	-	-	206	223	V

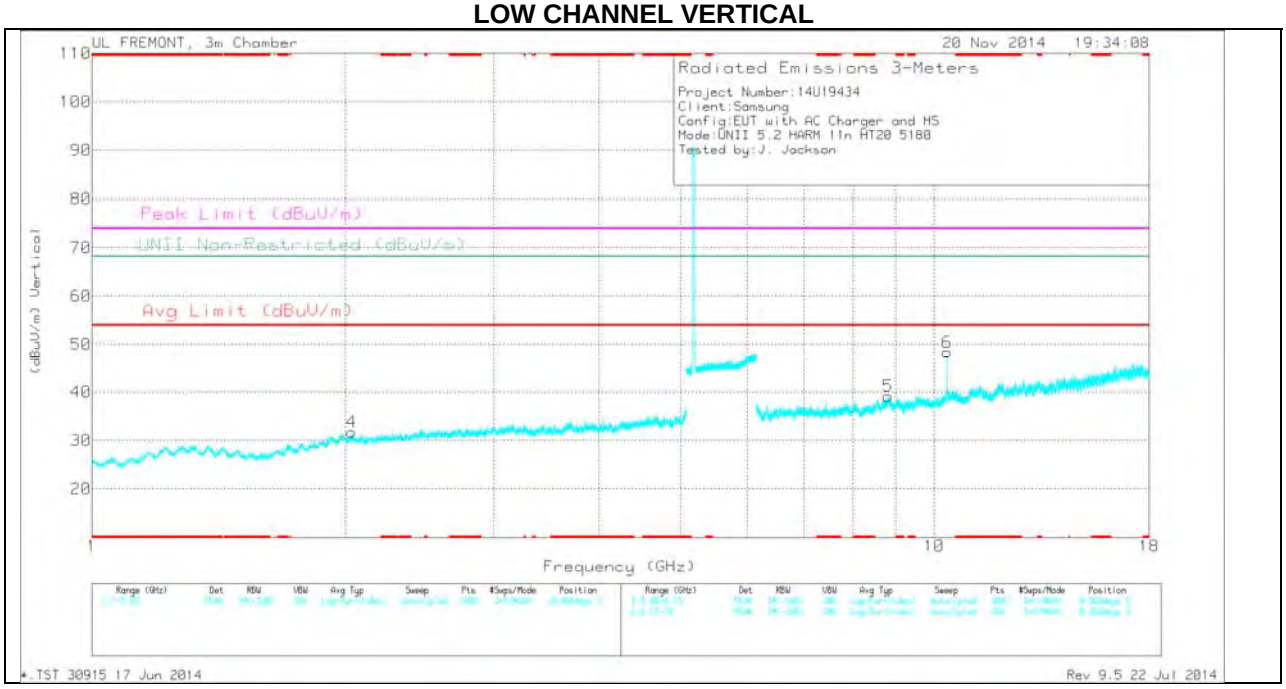
HARMONICS AND SPURIOUS EMISSIONS

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	* 2.211	32.21	PK	31.7	-32.3	0	31.61	-	-	74	-42.39	-	-	0-360	200	H
4	2.034	32.56	PK	31.6	-32.4	0	31.76	-	-	-	-	68.2	-36.44	0-360	100	V
2	8.546	29.53	PK	35.8	-26	0	39.33	-	-	-	-	68.2	-28.87	0-360	100	H
5	8.815	28.67	PK	36	-25.5	0	39.17	-	-	-	-	68.2	-29.03	0-360	100	V
3	10.36	33.41	PK	37.3	-25.4	0	45.31	-	-	-	-	68.2	-22.89	0-360	200	H
6	10.36	36.51	PK	37.3	-25.4	0	48.41	-	-	-	-	68.2	-19.79	0-360	100	V

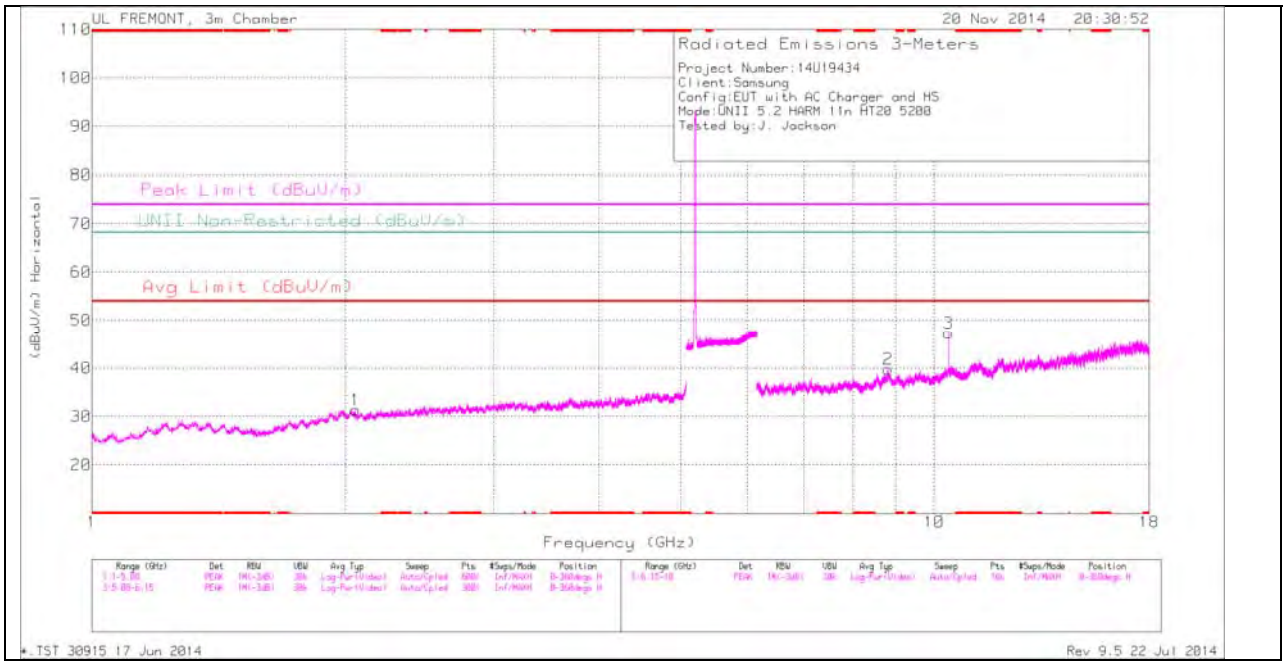
PK - Peak detector

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
10.36	41.23	PK1	37.3	-25.4	0	53.13	-	-	-	-	68.2	-15.07	101	203	H
10.36	33.98	AD1	37.3	-25.4	.31	46.19	-	-	-	-	-	-	101	203	H
10.36	41.62	PK1	37.3	-25.4	0	53.52	-	-	-	-	68.2	-14.68	204	101	V
10.36	35.03	AD1	37.3	-25.4	.31	47.24	-	-	-	-	-	-	204	101	V

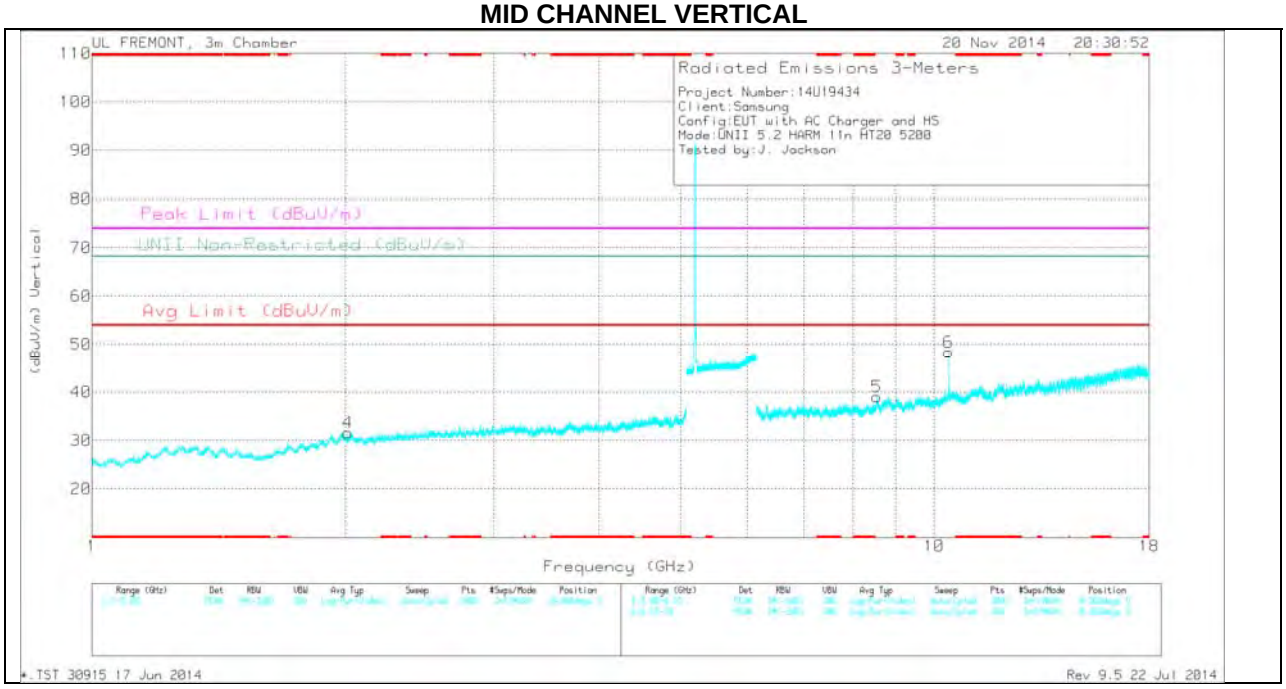
FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

MID CHANNEL HORIZONTAL



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

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
4	2.015	32.07	PK	31.6	-32.1	0	31.57	-	-	-	-	68.2	-36.63	0-360	100	V
1	2.056	32.13	PK	31.6	-32.4	0	31.33	-	-	-	-	68.2	-36.87	0-360	100	H
5	8.547	29.2	PK	35.8	-26	0	39	-	-	-	-	68.2	-29.2	0-360	200	V
2	8.818	29.38	PK	36	-25.6	0	39.78	-	-	-	-	68.2	-28.42	0-360	100	H
6	10.399	36.85	PK	37.3	-25.8	0	48.35	-	-	-	-	68.2	-19.85	0-360	200	V
3	10.4	35.87	PK	37.3	-25.8	0	47.37	-	-	-	-	68.2	-20.83	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
10.4	42.05	PK1	37.3	-25.8	0	53.55	-	-	-	-	68.2	-14.65	106	200	H
10.4	34.67	AD1	37.3	-25.8	.31	46.48	-	-	-	-	-	-	106	200	H
10.4	35.35	RMS	37.3	-25.8	.31	47.16	-	-	-	-	-	-	106	200	H
10.4	45.38	PK1	37.3	-25.8	0	56.88	-	-	-	-	68.2	-11.32	134	205	V
10.4	37.48	AD1	37.3	-25.8	.31	49.29	-	-	-	-	-	-	134	205	V

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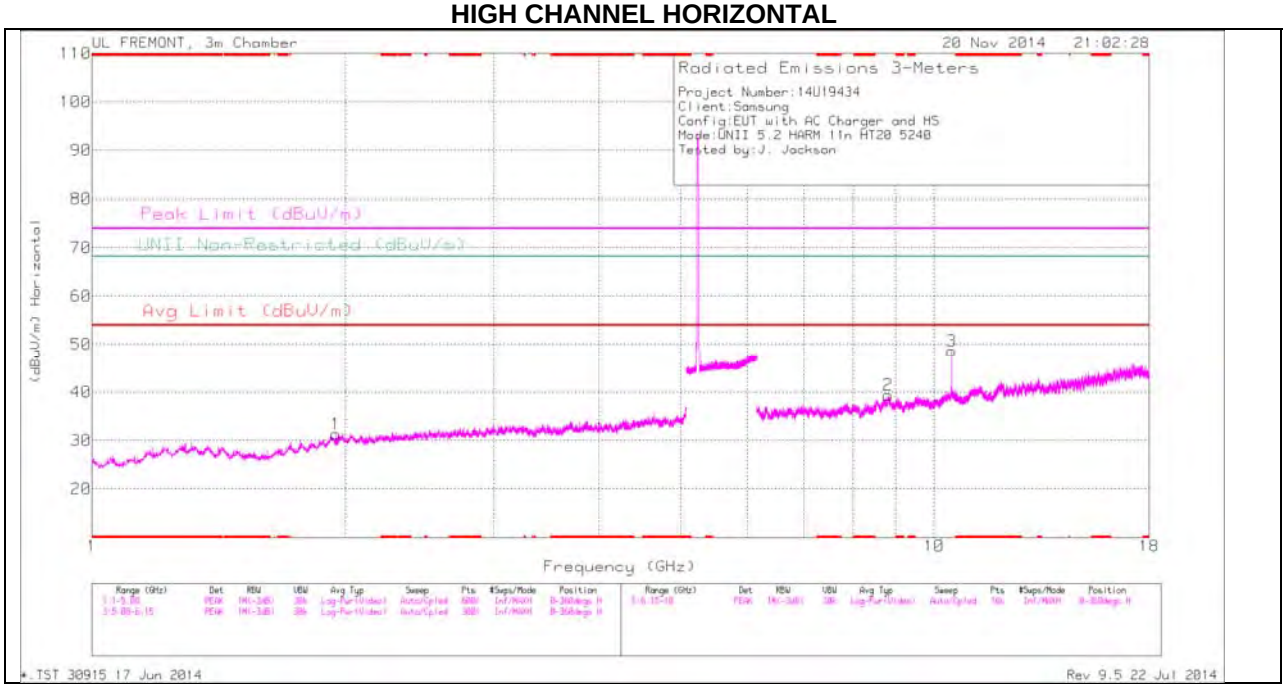
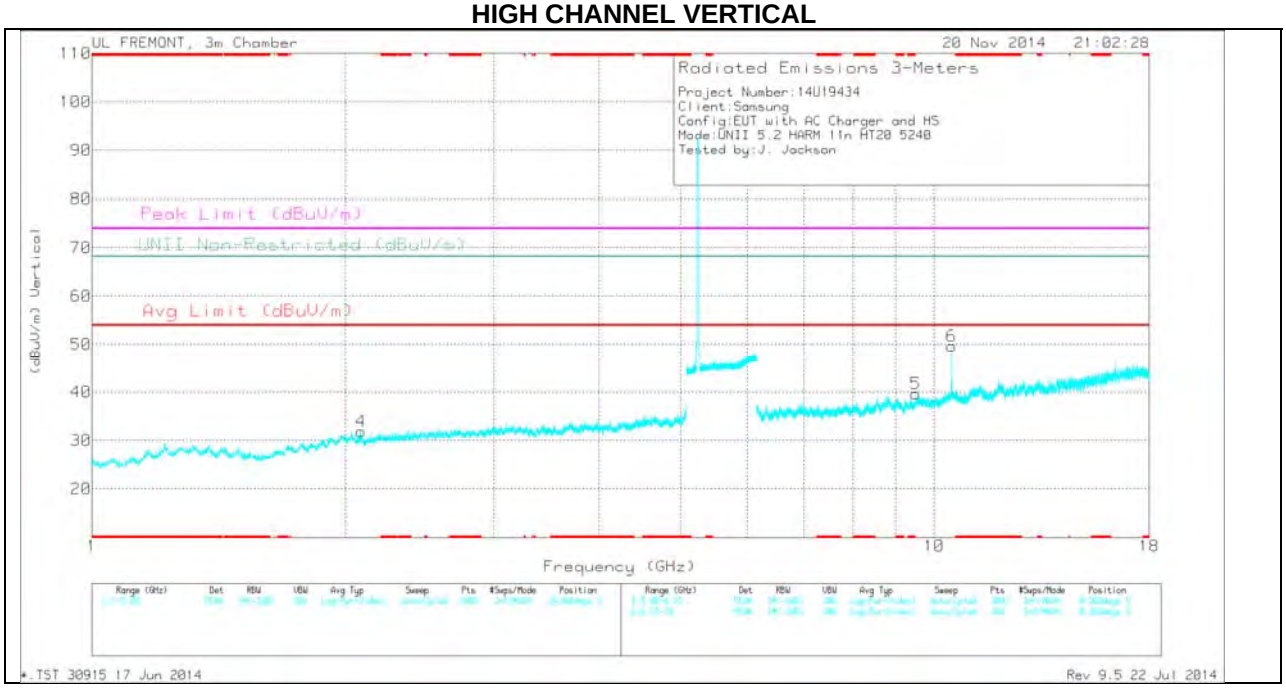
HIGH CHANNEL HORIZONTAL



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	1.949	32.25	PK	31.4	-32.3	0	31.35	-	-	-	-	68.2	-36.85	0-360	100	H
4	2.085	33.19	PK	31.5	-32.8	0	31.89	-	-	-	-	68.2	-36.31	0-360	200	V
2	8.813	28.93	PK	36	-25.5	0	39.43	-	-	-	-	68.2	-28.77	0-360	100	H
5	9.508	28.87	PK	36.6	-25.8	0	39.67	-	-	-	-	68.2	-28.53	0-360	100	V
6	10.479	37.83	PK	37.5	-25.7	0	49.63	-	-	-	-	68.2	-18.57	0-360	200	V
3	10.48	36.86	PK	37.5	-25.7	0	48.66	-	-	-	-	68.2	-19.54	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
10.48	41.26	PK1	37.5	-25.7	0	53.06	-	-	-	-	68.2	-15.14	93	229	H
10.48	34.29	AD1	37.5	-25.7	.31	46.4	-	-	-	-	-	-	93	229	H
10.48	44.67	PK1	37.5	-25.7	0	56.47	-	-	-	-	68.2	-11.73	123	358	V
10.48	38.32	AD1	37.5	-25.7	.31	50.43	-	-	-	-	-	-	123	358	V

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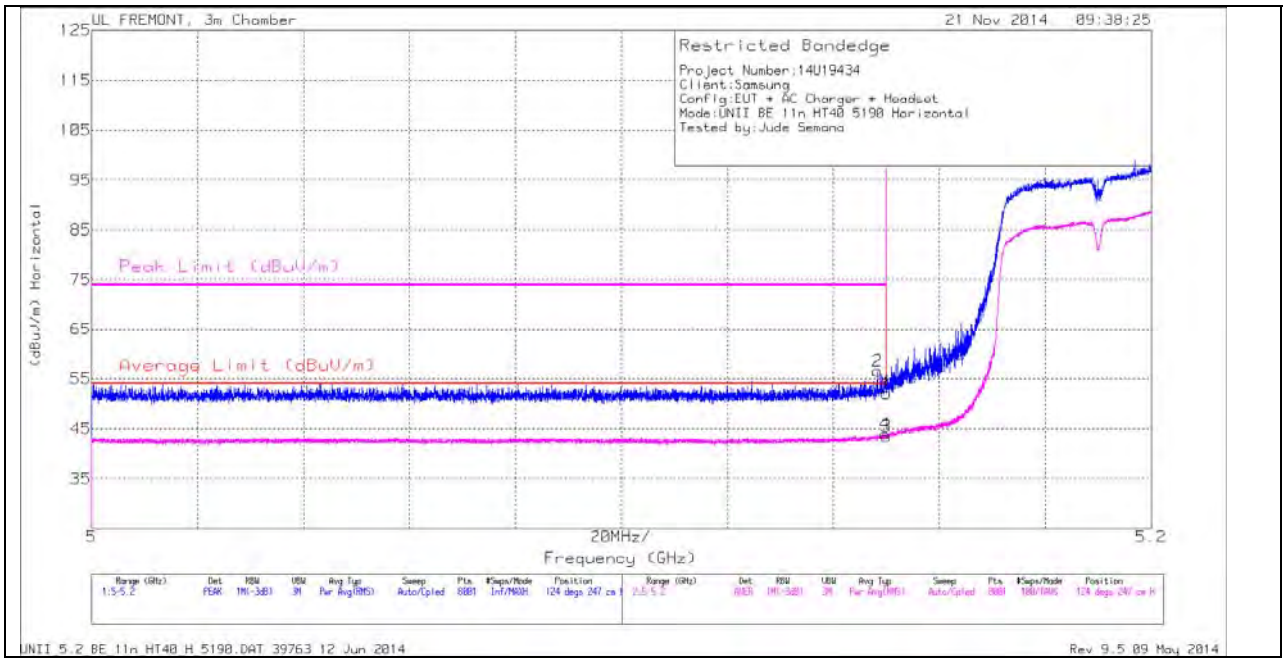
10.1.3. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.2 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

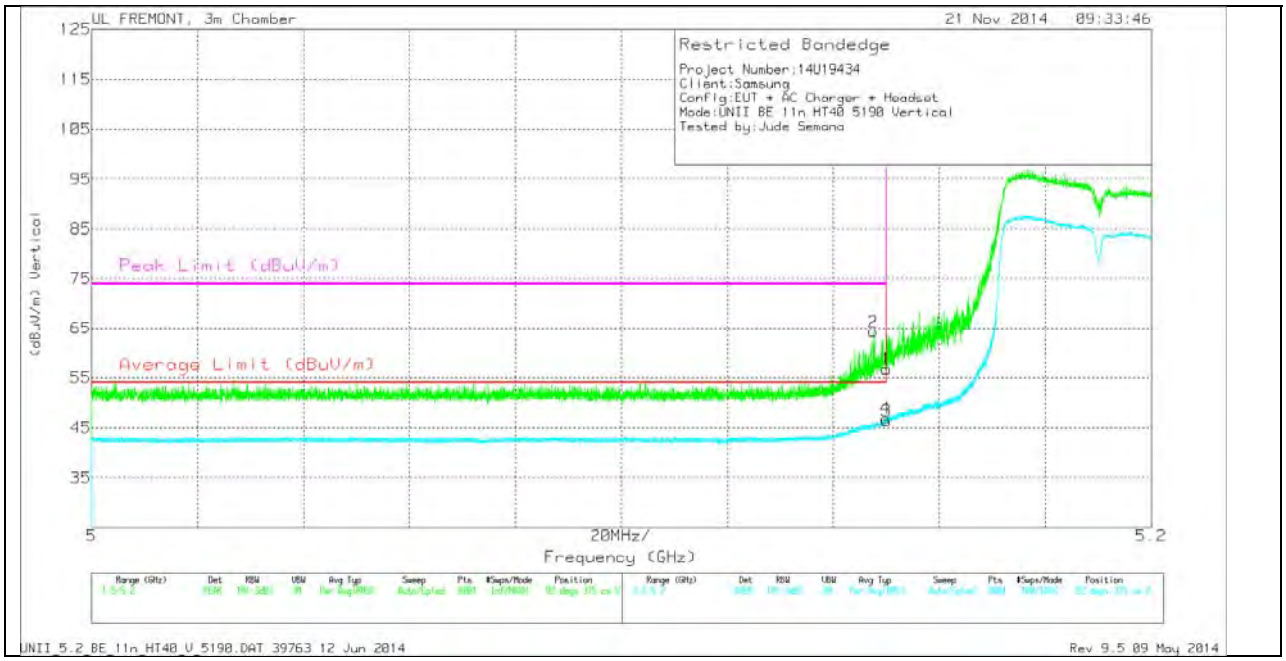
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/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	5.148	43.9	PK	34.2	-21.6	0	56.5	-	-	74	-17.5	124	247	H
1	5.15	39.45	PK	34.2	-21.6	0	52.05	-	-	74	-21.95	124	247	H
3	5.15	30.64	RMS	34.2	-21.6	.63	43.54	54	-10.46	-	-	124	247	H
4	5.15	31.03	RMS	34.2	-21.6	.63	43.93	54	-10.07	-	-	124	247	H

VERTICAL PEAK AND AVERAGE PLOT

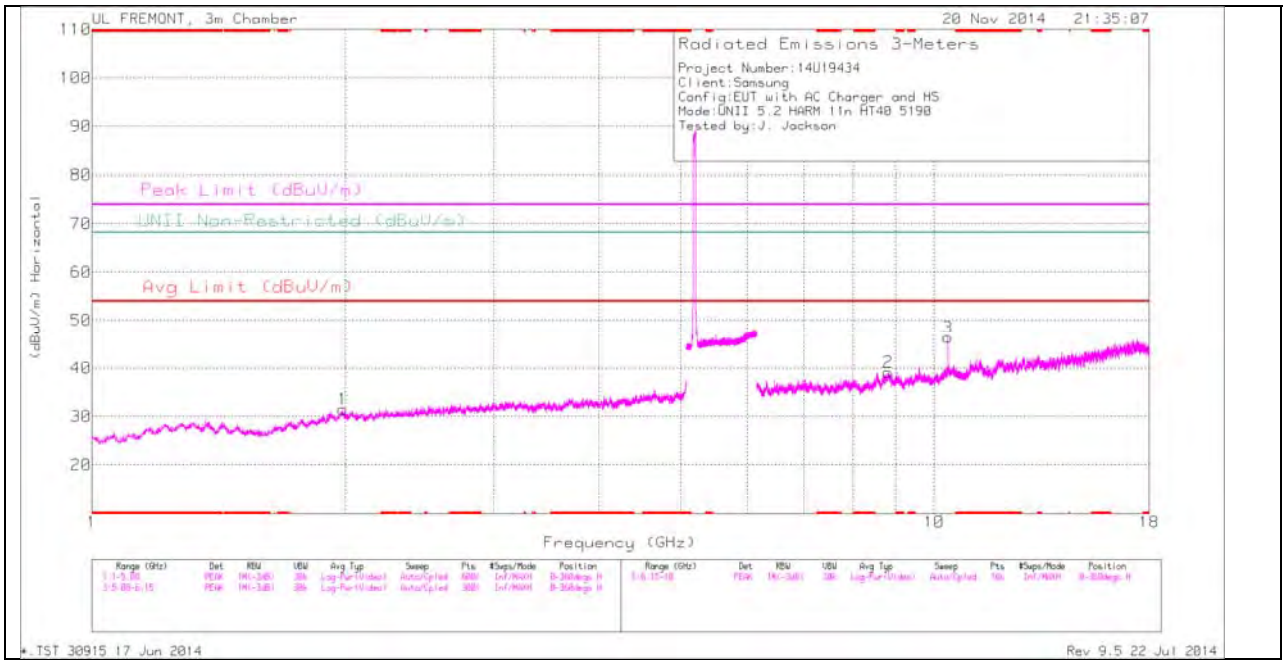


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
2	5.148	51.67	PK	34.2	-21.6	0	64.27	-	-	74	-9.73	92	375	V
1	5.15	44.1	PK	34.2	-21.6	0	56.7	-	-	74	-17.3	92	375	V
3	5.15	33.45	RMS	34.2	-21.6	.63	46.35	54	-7.65	-	-	92	375	V
4	5.15	33.94	RMS	34.2	-21.6	.63	46.84	54	-7.16	-	-	92	375	V

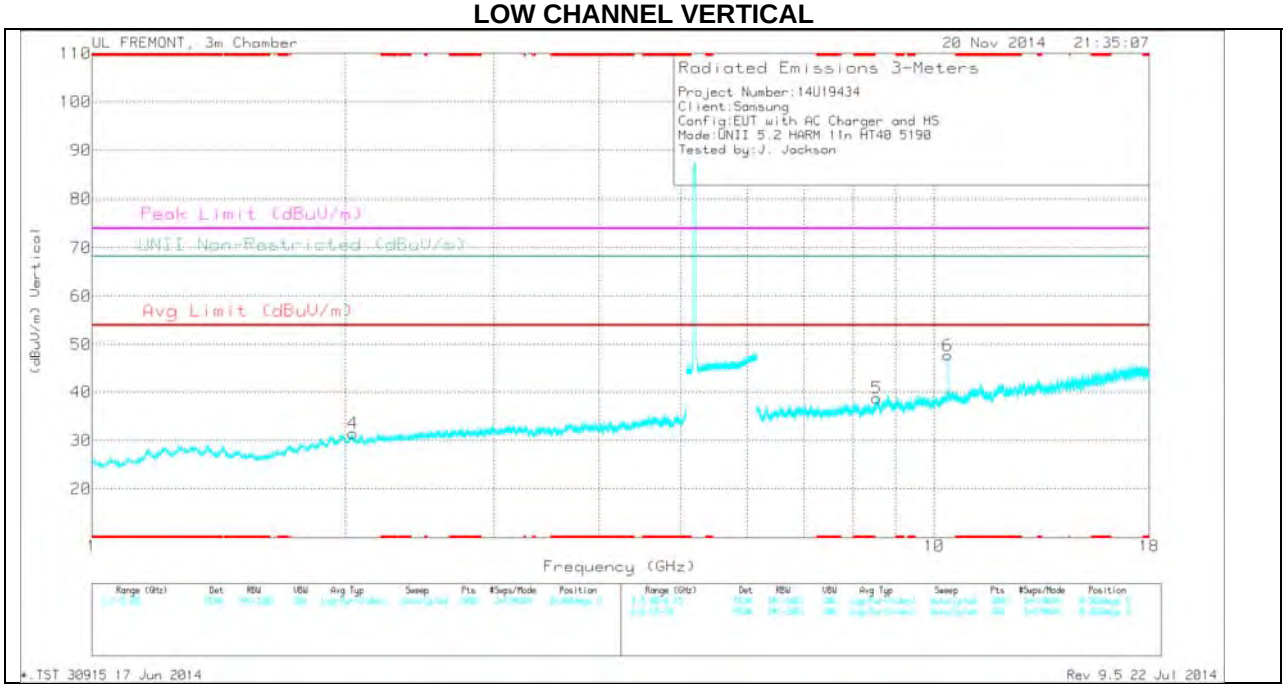
HARMONICS AND SPURIOUS EMISSIONS

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	1.986	31.98	PK	31.5	-32	0	31.48	-	-	-	-	68.2	-36.72	0-360	100	H
4	2.041	32.23	PK	31.6	-32.3	0	31.53	-	-	-	-	68.2	-36.67	0-360	100	V
5	8.544	29.09	PK	35.8	-26.1	0	38.79	-	-	-	-	68.2	-29.41	0-360	100	V
2	8.812	28.72	PK	36	-25.6	0	39.12	-	-	-	-	68.2	-29.08	0-360	200	H
6	10.379	35.96	PK	37.3	-25.6	0	47.66	-	-	-	-	68.2	-20.54	0-360	100	V
3	10.38	34.68	PK	37.3	-25.6	0	46.38	-	-	-	-	68.2	-21.82	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
10.38	41.33	PK1	37.3	-25.6	0	53.03	-	-	-	-	68.2	-15.17	94	245	H
10.38	33.94	AD1	37.3	-25.6	.63	46.29	-	-	-	-	-	-	94	245	H
10.38	42.39	PK1	37.3	-25.6	0	54.09	-	-	-	-	68.2	-14.11	208	102	V
10.38	34.9	AD1	37.3	-25.6	.63	47.25	-	-	-	-	-	-	208	102	V

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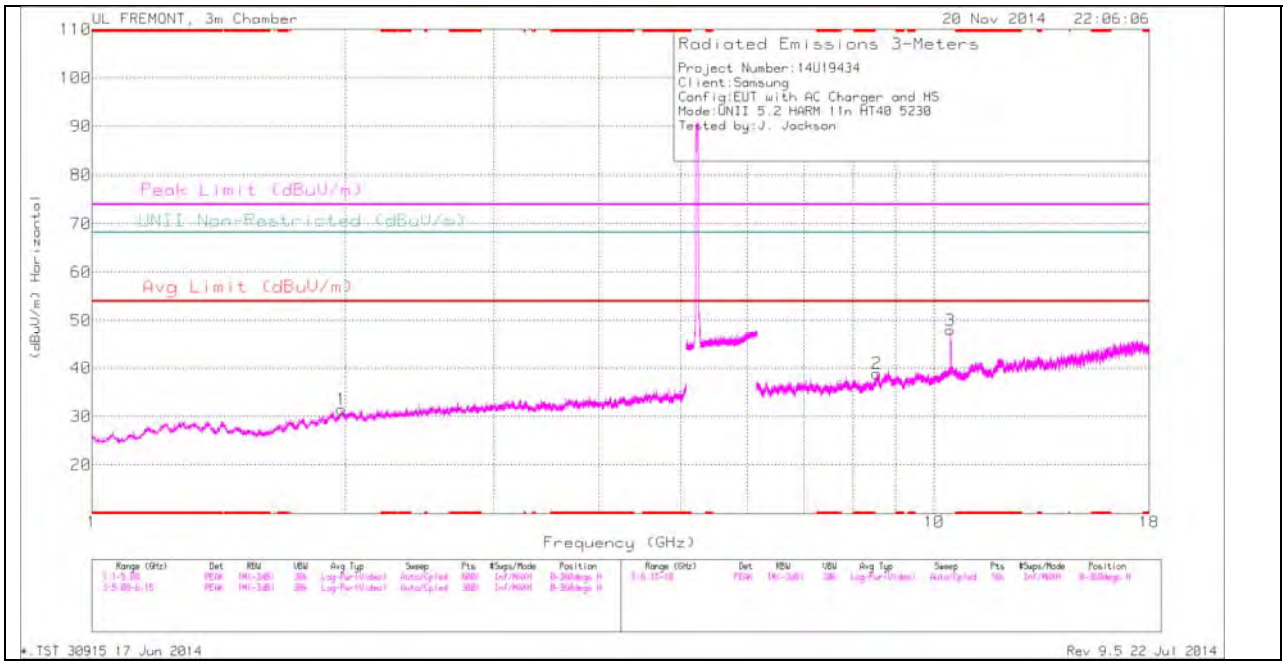
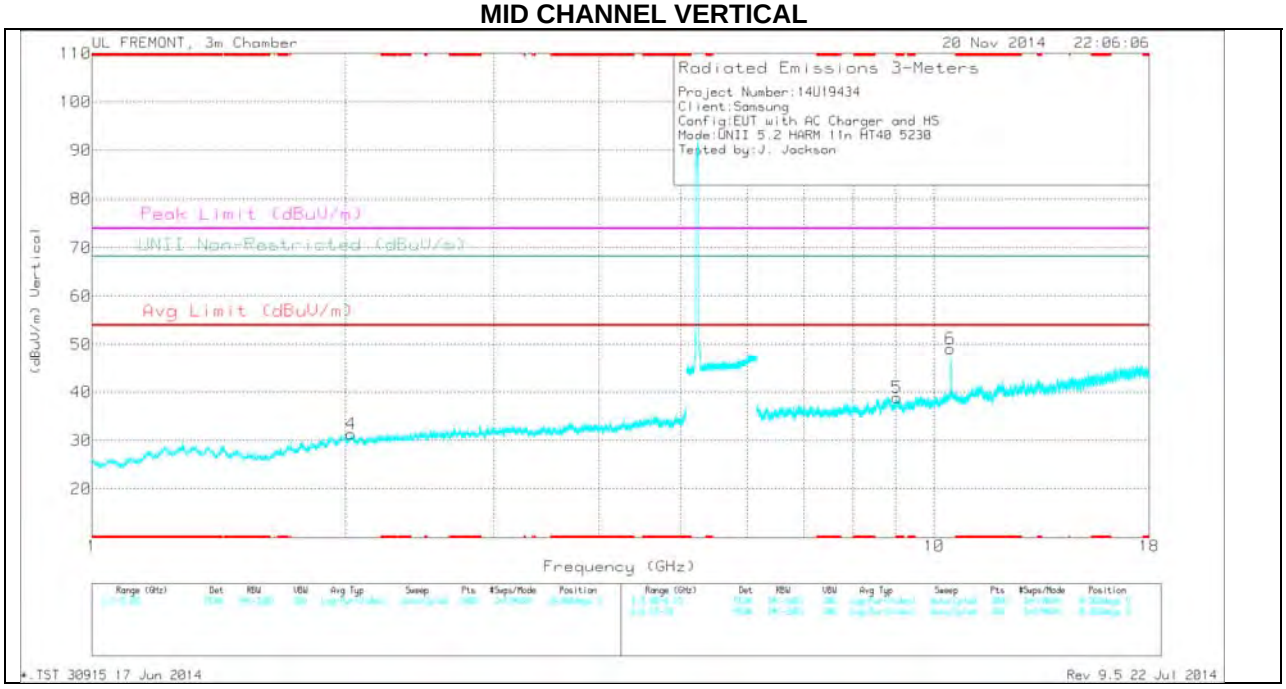
MID CHANNEL HORIZONTAL



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
5	* 9.035	28.17	PK	36.1	-25.4	0	38.87	-	-	74	-35.13	-	-	0-360	200	V
1	1.978	32.24	PK	31.5	-32.2	0	31.54	-	-	-	-	68.2	-36.66	0-360	100	H
4	2.03	32.09	PK	31.6	-32.3	0	31.39	-	-	-	-	68.2	-36.81	0-360	200	V
2	8.549	29.12	PK	35.8	-26	0	38.92	-	-	-	-	68.2	-29.28	0-360	100	H
3	10.46	36.32	PK	37.4	-25.7	0	48.02	-	-	-	-	68.2	-20.18	0-360	200	H
6	10.46	37.41	PK	37.4	-25.7	0	49.11	-	-	-	-	68.2	-19.09	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
10.46	41.51	PK1	37.4	-25.7	0	53.21	-	-	-	-	68.2	-14.99	101	280	H
10.46	34.62	AD1	37.4	-25.7	.63	46.97	-	-	-	-	-	-	101	280	H
10.46	43.76	PK1	37.4	-25.7	0	55.46	-	-	-	-	68.2	-12.74	128	282	V
10.46	36.84	AD1	37.4	-25.7	.63	49.19	-	-	-	-	-	-	128	282	V

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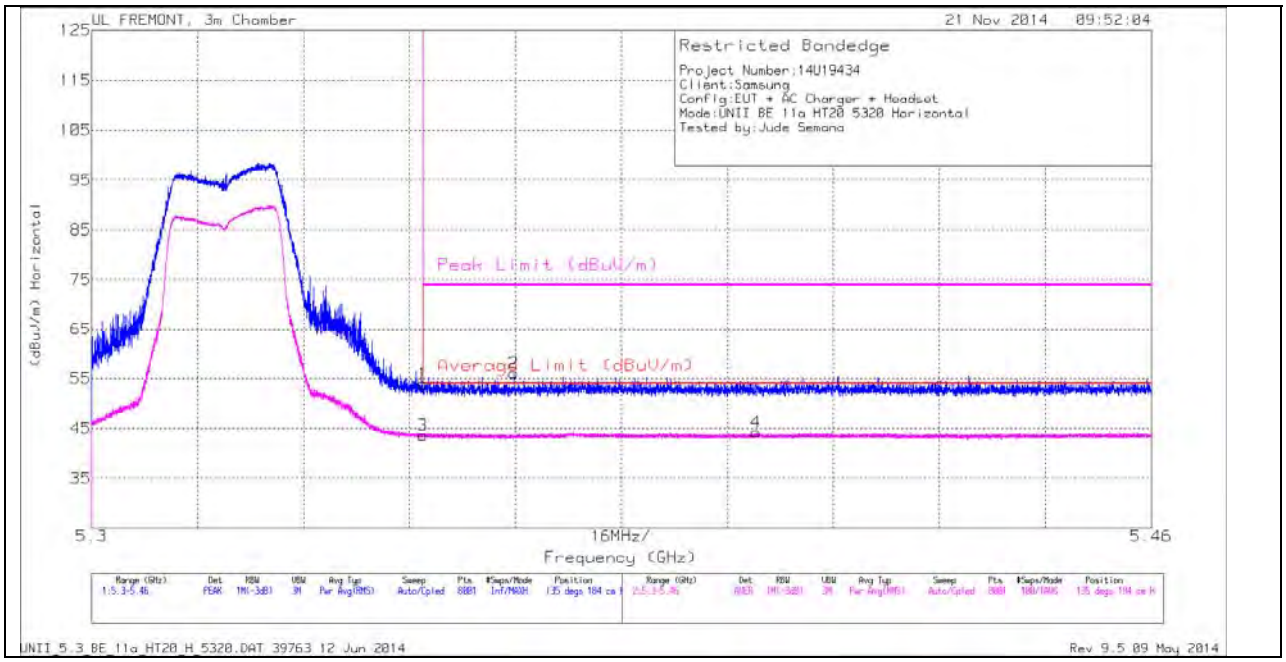
10.2. 5.3 GHz

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

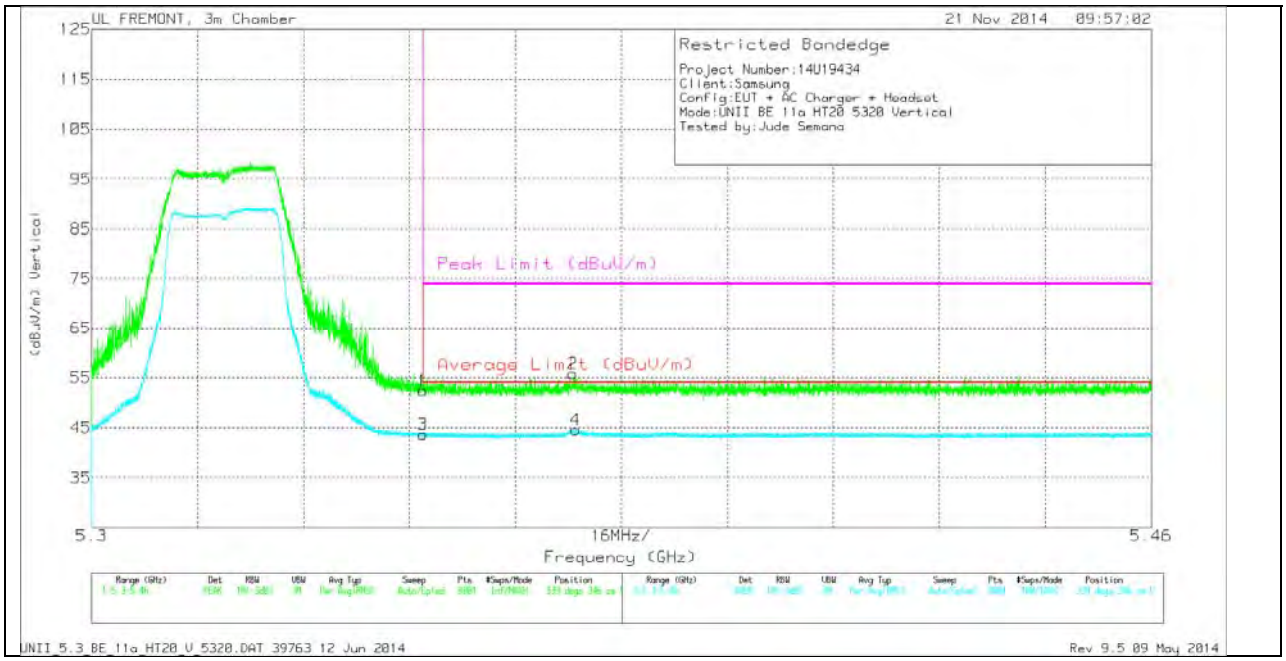
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/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	40.87	PK	34.5	-21.4	0	53.97	-	-	74	-20.03	135	184	H
3	5.35	30.2	RMS	34.5	-21.4	.29	43.6	54	-10.4	-	-	135	184	H
2	5.364	42.87	PK	34.6	-21.4	0	56.07	-	-	74	-17.93	135	184	H
4	5.4	30.74	RMS	34.7	-21.5	.29	44.24	54	-9.76	-	-	135	184	H

VERTICAL PEAK AND AVERAGE PLOT

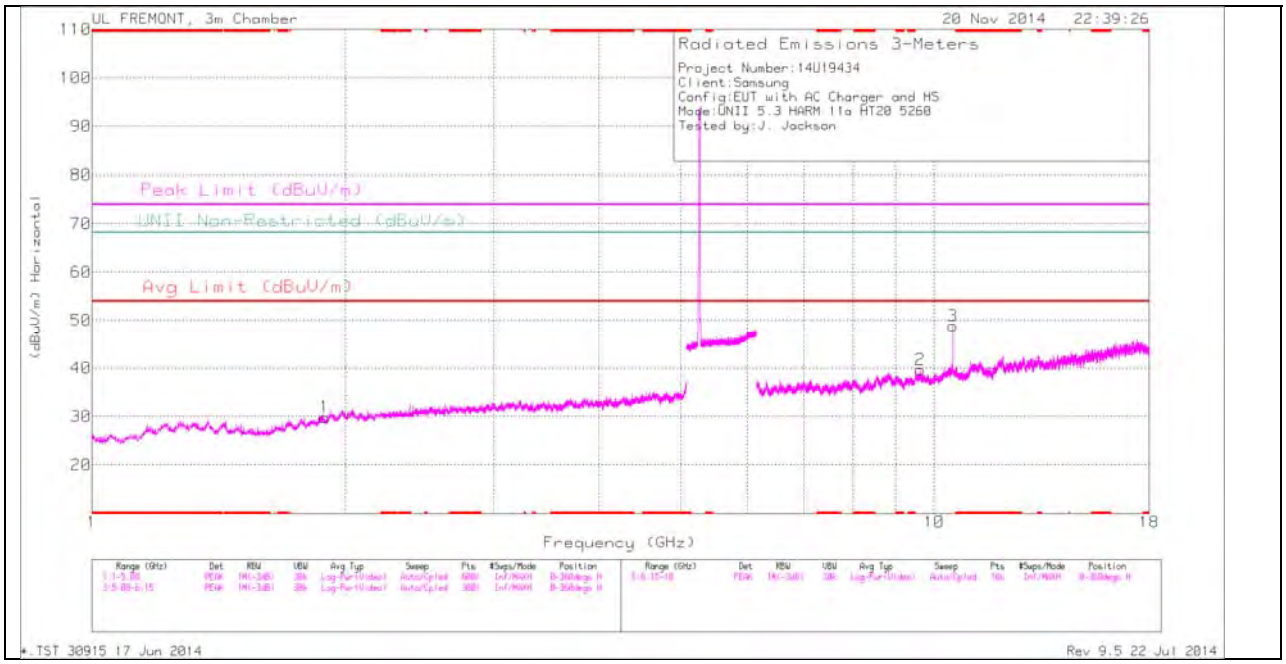


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.35	39.33	PK	34.5	-21.4	0	52.43	-	-	74	-21.57	339	346	V
3	5.35	30.26	RMS	34.5	-21.4	.29	43.66	54	-10.34	-	-	339	346	V
2	5.373	42.65	PK	34.6	-21.5	0	55.75	-	-	74	-18.25	339	346	V
4	5.373	31.07	RMS	34.6	-21.4	.29	44.57	54	-9.43	-	-	339	346	V

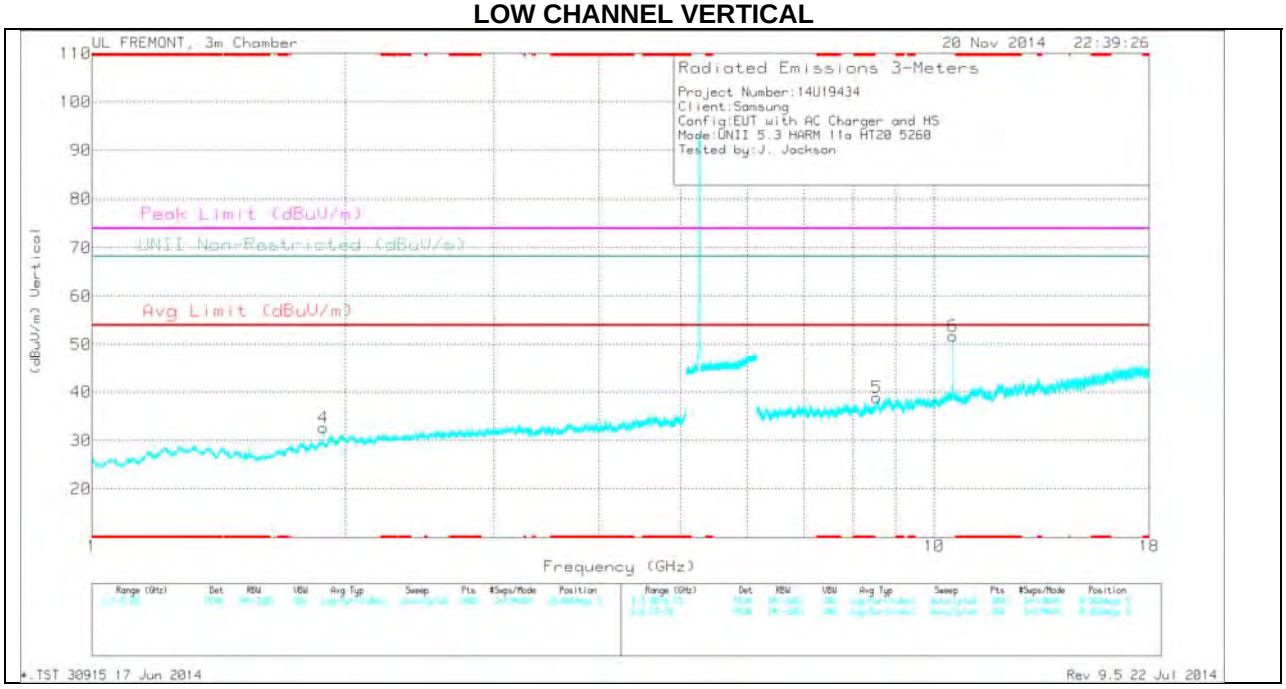
HARMONICS AND SPURIOUS EMISSIONS

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
4	1.882	34.63	PK	31	-33	0	32.63	-	-	-	-	68.2	-35.57	0-360	200	V
1	1.889	31.76	PK	31.1	-33	0	29.86	-	-	-	-	68.2	-38.34	0-360	100	H
5	8.547	29.05	PK	35.8	-26	0	38.85	-	-	-	-	68.2	-29.35	0-360	200	V
2	9.626	28.62	PK	36.7	-25.6	0	39.72	-	-	-	-	68.2	-28.48	0-360	100	H
6	10.519	39.25	PK	37.5	-25	0	51.75	-	-	-	-	68.2	-16.45	0-360	200	V
3	10.52	36.4	PK	37.5	-25	0	48.9	-	-	-	-	68.2	-19.3	0-360	200	H

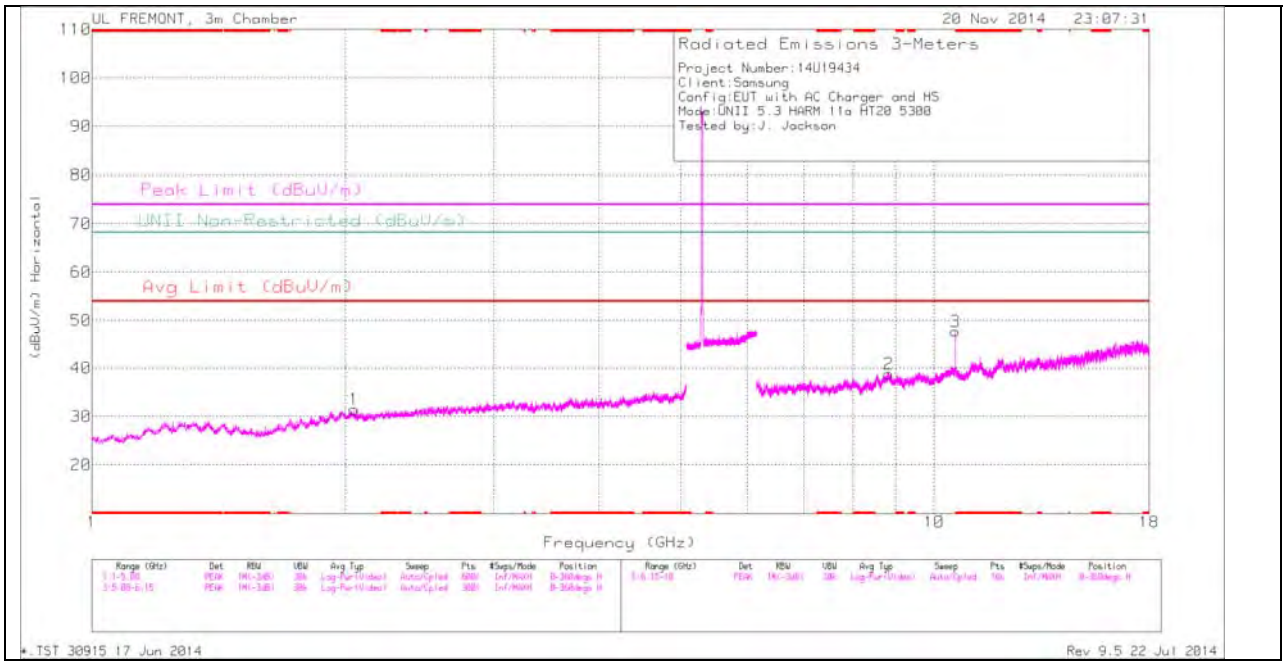
PK - Peak detector

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
10.52	42.59	PK1	37.5	-25	0	55.09	-	-	-	-	68.2	-13.11	107	255	H
10.52	36.12	AD1	37.5	-25	.29	48.91	-	-	-	-	-	-	107	255	H
10.52	37.61	AD1	37.5	-25	.29	50.4	-	-	-	-	-	-	129	338	V
10.521	44.05	PK1	37.5	-25	0	56.55	-	-	-	-	68.2	-11.65	129	338	V

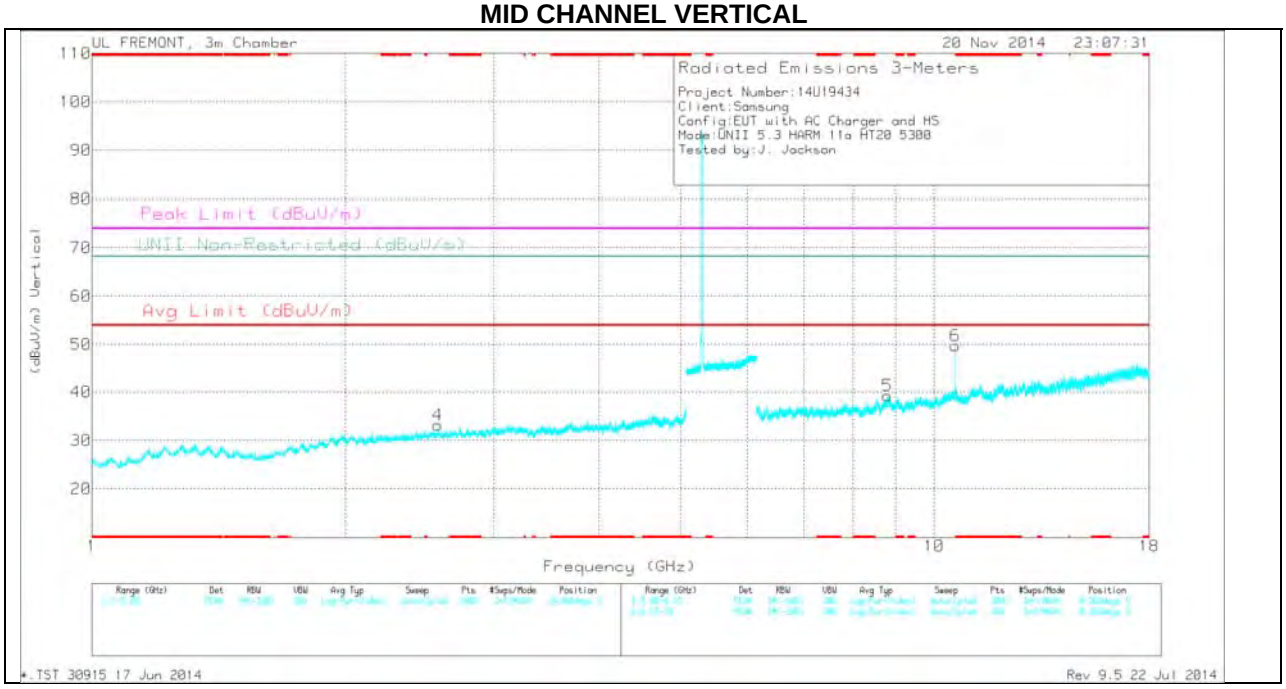
FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

MID CHANNEL HORIZONTAL



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

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
3	* 10.6	35.28	PK	37.7	-25.3	0	47.68	-	-	74	-26.32	-	-	0-360	200	H
6	* 10.6	37.43	PK	37.7	-25.3	0	49.83	-	-	74	-24.17	-	-	0-360	200	V
1	2.049	32.13	PK	31.6	-32.3	0	31.43	-	-	-	-	68.2	-36.77	0-360	100	H
4	2.573	32.92	PK	32.5	-32.3	0	33.12	-	-	-	-	68.2	-35.08	0-360	100	V
5	8.808	28.83	PK	36	-25.6	0	39.23	-	-	-	-	68.2	-28.97	0-360	100	V
2	8.825	28.51	PK	36	-25.8	0	38.71	-	-	-	-	68.2	-29.49	0-360	100	H

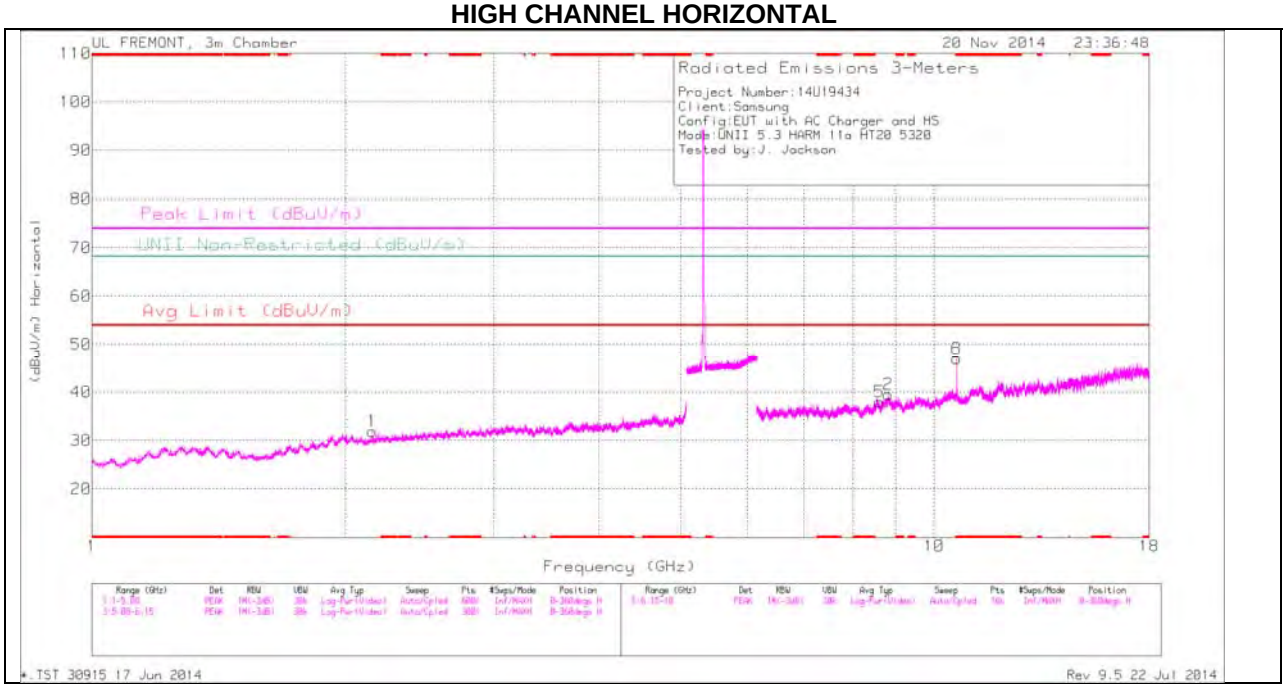
PK - Peak detector

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
* 10.6	42.59	PK1	37.7	-25.3	0	54.99	-	-	74	-19.01	-	-	108	255	H
* 10.6	35.85	AD1	37.7	-25.3	.29	48.54	54	-5.46	-	-	-	-	108	255	H
* 10.6	46.05	PK1	37.7	-25.3	0	58.45	-	-	74	-15.55	-	-	126	348	V
* 10.6	38.95	AD1	37.7	-25.3	.29	51.64	54	-2.36	-	-	-	-	126	348	V

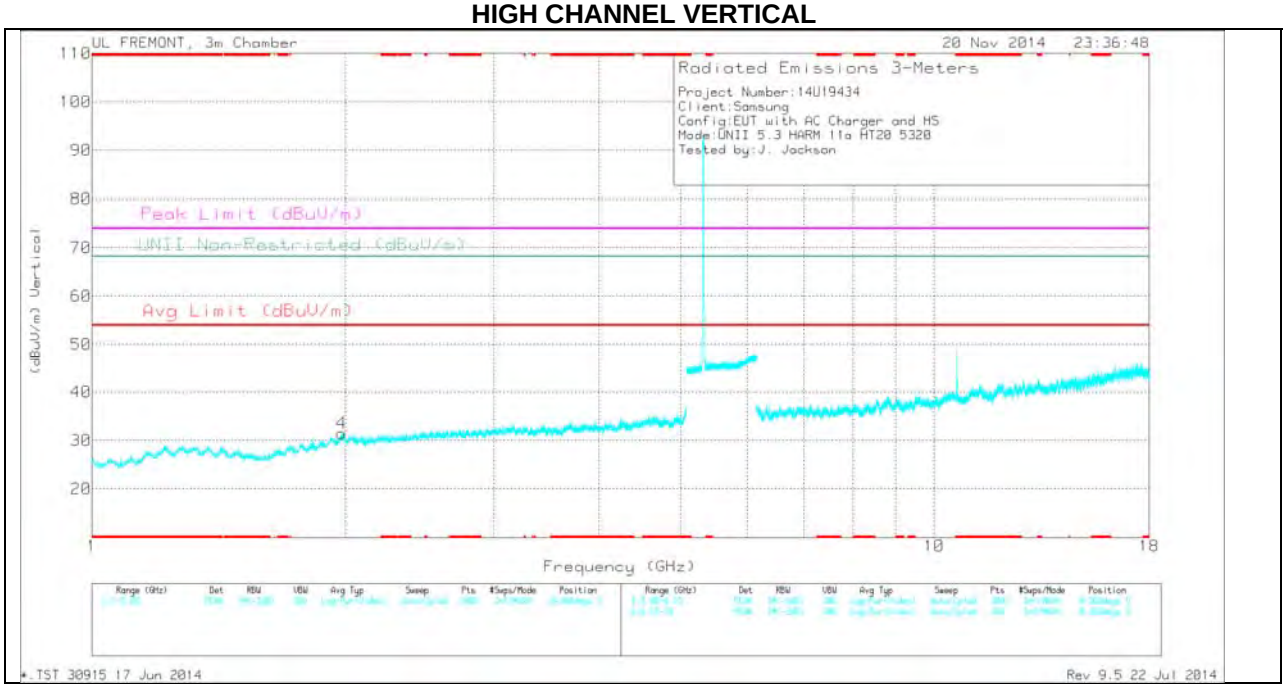
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

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	* 10.64	34.4	PK	37.8	-25.2	0	47	-	-	74	-27	-	-	0-360	200	H
6	* 10.64	34.4	PK	37.8	-25.2	0	47	-	-	74	-27	-	-	0-360	200	H
4	1.978	32.17	PK	31.5	-32.2	0	31.47	-	-	-	-	68.2	-36.73	0-360	100	V
1	2.154	32.96	PK	31.6	-32.7	0	31.86	-	-	-	-	68.2	-36.34	0-360	100	H
5	8.609	28.53	PK	35.8	-26.4	0	37.93	-	-	-	-	68.2	-30.27	0-360	200	H
2	8.814	28.99	PK	36	-25.5	0	39.49	-	-	-	-	68.2	-28.71	0-360	100	H

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

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF 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
* 10.641	36.58	PK1	37.8	-25.2	0	49.18	-	-	74	-24.82	-	-	0	200	H
* 10.64	25.82	AD1	37.8	-25.1	.29	38.81	54	-15.19	-	-	-	-	0	200	H
* 10.64	41.88	PK1	37.8	-25.1	0	54.58	-	-	74	-19.42	-	-	106	239	H
* 10.64	34.64	AD1	37.8	-25.2	.29	47.53	54	-6.47	-	-	-	-	106	239	H

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

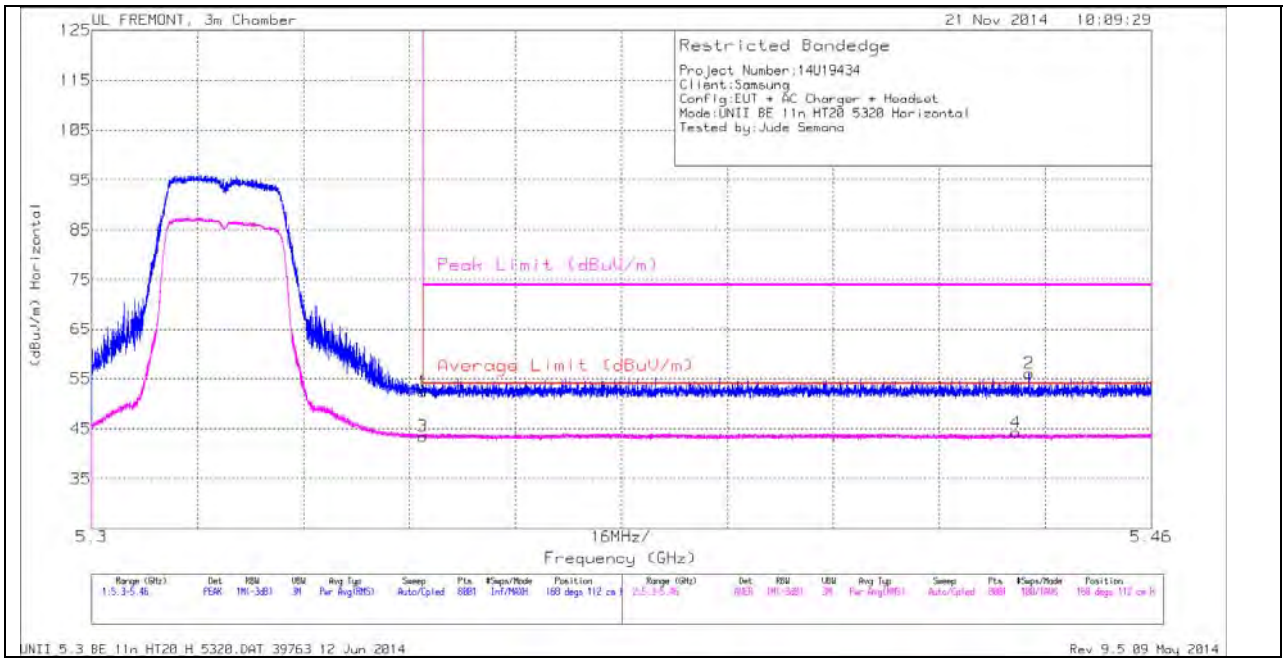
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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

AUTHORIZED BANDEDGE (HIGH CHANNEL)

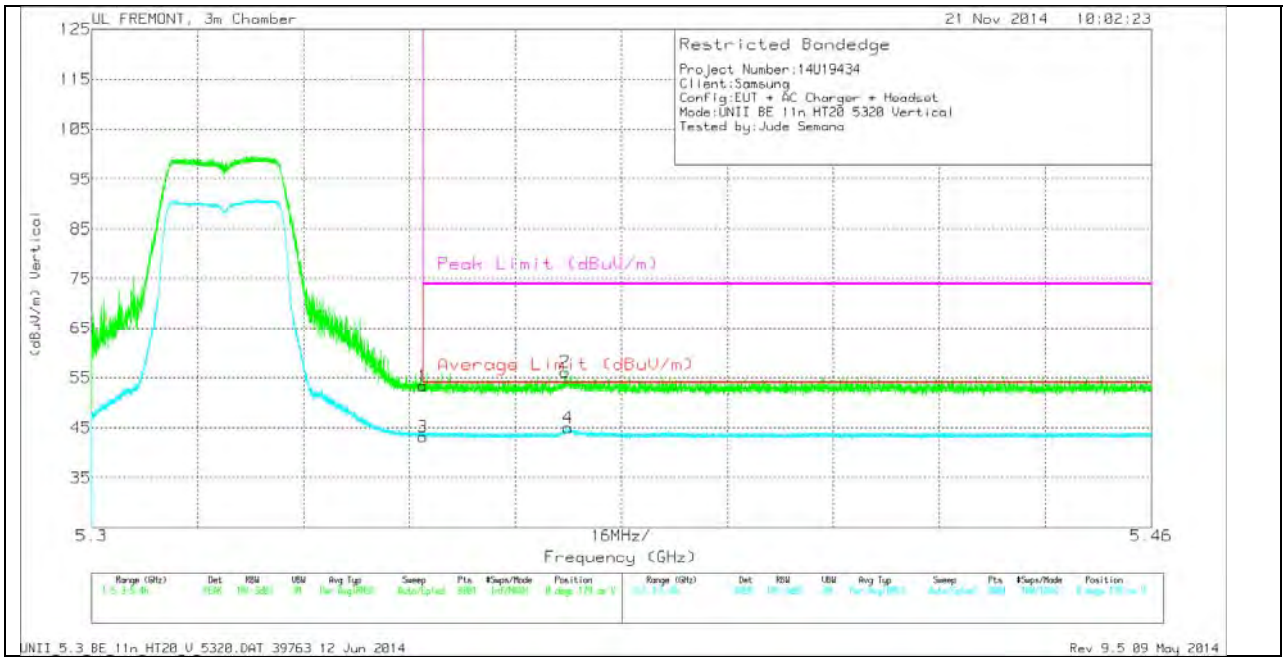
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/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	39.37	PK	34.5	-21.4	0	52.47	-	-	74	-21.53	168	112	H
3	5.35	30.12	RMS	34.5	-21.4	.31	43.52	54	-10.48	-	-	168	112	H
4	5.44	30.63	RMS	34.7	-21.4	.31	44.23	54	-9.77	-	-	168	112	H
2	5.442	42.87	PK	34.7	-21.5	0	56.07	-	-	74	-17.93	168	112	H

VERTICAL PEAK AND AVERAGE PLOT

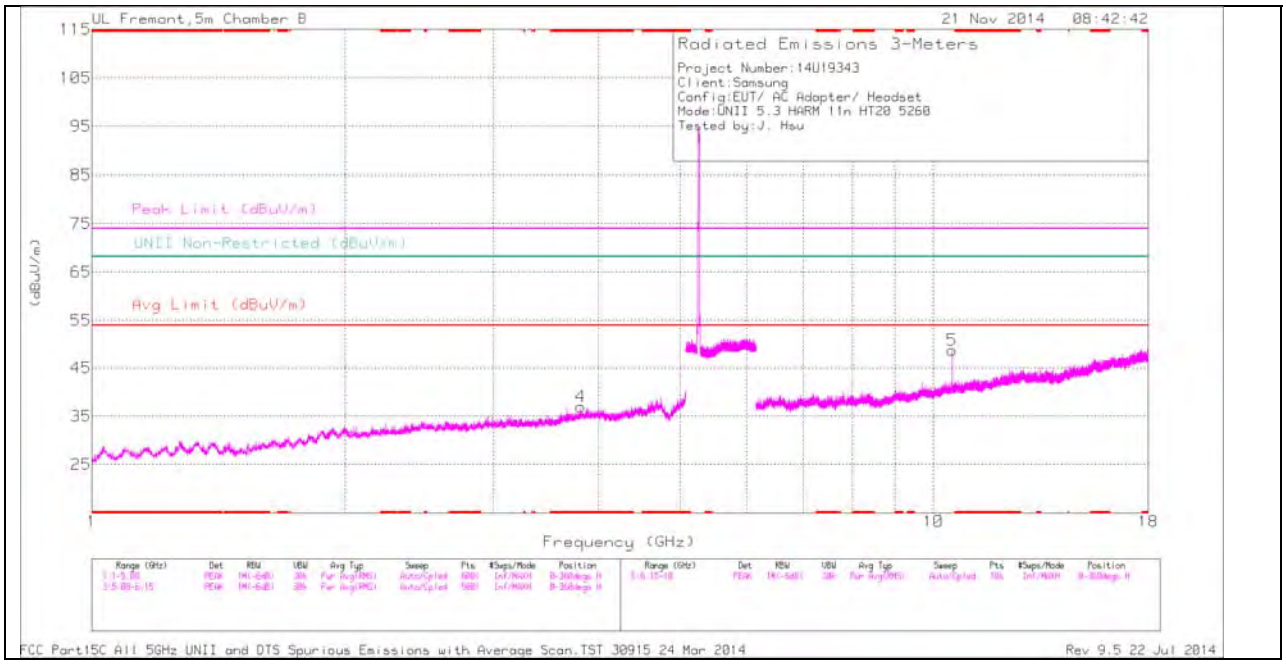


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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	40.29	PK	34.5	-21.4	0	53.39	-	-	74	-20.61	0	179	V
3	5.35	29.78	RMS	34.5	-21.4	.31	43.18	54	-10.82	-	-	0	179	V
2	5.372	43.04	PK	34.6	-21.5	0	56.14	-	-	74	-17.86	0	179	V
4	5.372	31.58	RMS	34.6	-21.5	.31	44.98	54	-9.02	-	-	0	179	V

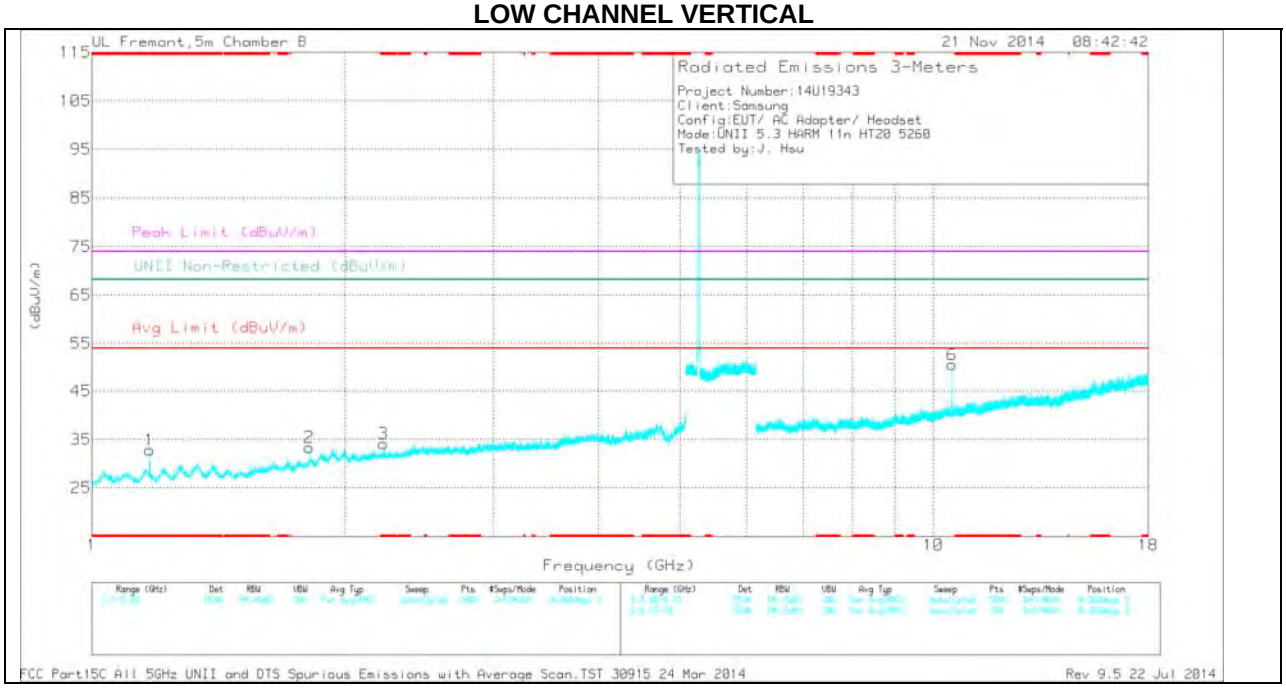
HARMONICS AND SPURIOUS EMISSIONS

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 T345 (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	* 3.809	34.35	PK	33.7	-31	0	37.05	-	-	74	-36.95	-	-	0-360	101	H
1	* 1.172	39.42	PK	28	-34.6	0	32.82	-	-	74	-41.18	-	-	0-360	101	V
3	* 2.222	35.11	PK	31.4	-32.4	0	34.11	-	-	74	-39.89	-	-	0-360	200	V
2	1.813	36.82	PK	30.3	-33.7	0	33.42	-	-	-	-	68.2	-34.78	0-360	101	V
5	10.52	34.96	PK	37.5	-23.8	0	48.66	-	-	-	-	68.2	-19.54	0-360	200	H
6	10.52	36.85	PK	37.5	-23.8	0	50.55	-	-	-	-	68.2	-17.65	0-360	200	V

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (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
* 1.172	44.04	PK1	28	-34.6	0	37.44	-	-	74	-36.56	-	-	22	108	V
* 1.172	31.31	AD1	28	-34.6	.31	25.01	54	-28.99	-	-	-	-	22	108	V
10.52	42.14	PK1	37.5	-23.8	0	55.84	-	-	-	-	68.2	-12.36	33	231	V
10.52	35.75	AD1	37.5	-23.8	.31	49.75	-	-	-	-	-	-	33	231	V

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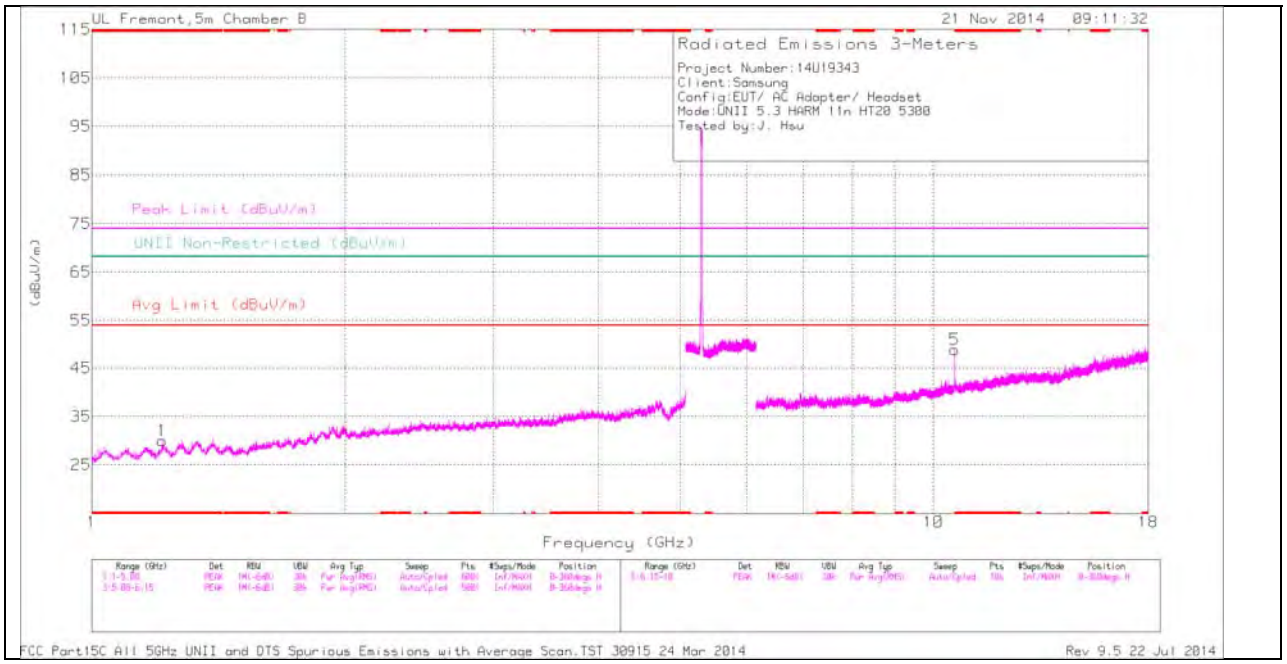
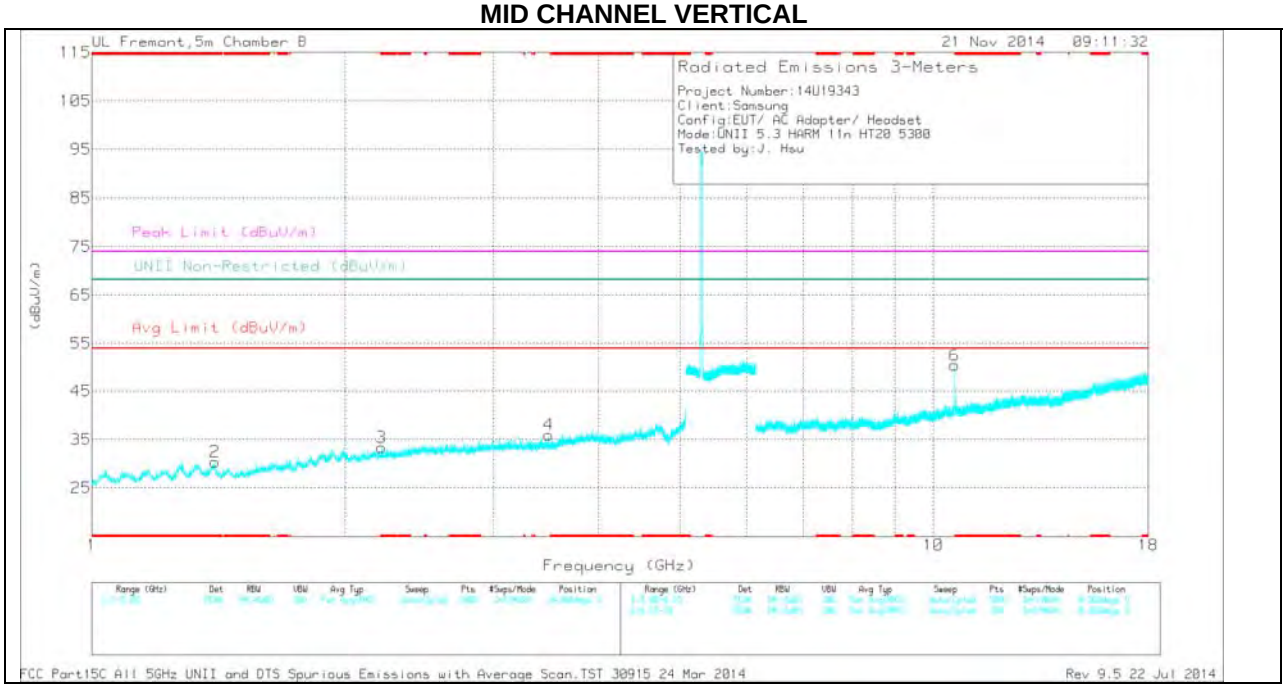
MID CHANNEL HORIZONTAL



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 T345 (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	* 1.211	36.24	PK	28.3	-34.6	0	29.94	-	-	74	-44.06	-	-	0-360	200	H
2	* 1.4	35.67	PK	28.5	-33.8	0	30.37	-	-	74	-43.63	-	-	0-360	200	V
3	* 2.21	34.31	PK	31.3	-32.3	0	33.31	-	-	74	-40.69	-	-	0-360	101	V
5	* 10.6	34.37	PK	37.7	-23.3	0	48.77	-	-	74	-25.23	-	-	0-360	199	H
6	* 10.6	35.97	PK	37.7	-23.3	0	50.37	-	-	74	-23.63	-	-	0-360	199	V
4	3.487	34.71	PK	32.8	-31.5	0	36.01	-	-	-	-	68.2	-32.19	0-360	101	V

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (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
* 10.6	43.57	PK1	37.7	-23.3	0	57.97	-	-	74	-16.03	-	-	326	347	V
* 10.6	37.34	AD1	37.7	-23.3	.31	52.04	54	-1.96	-	-	-	-	326	347	V

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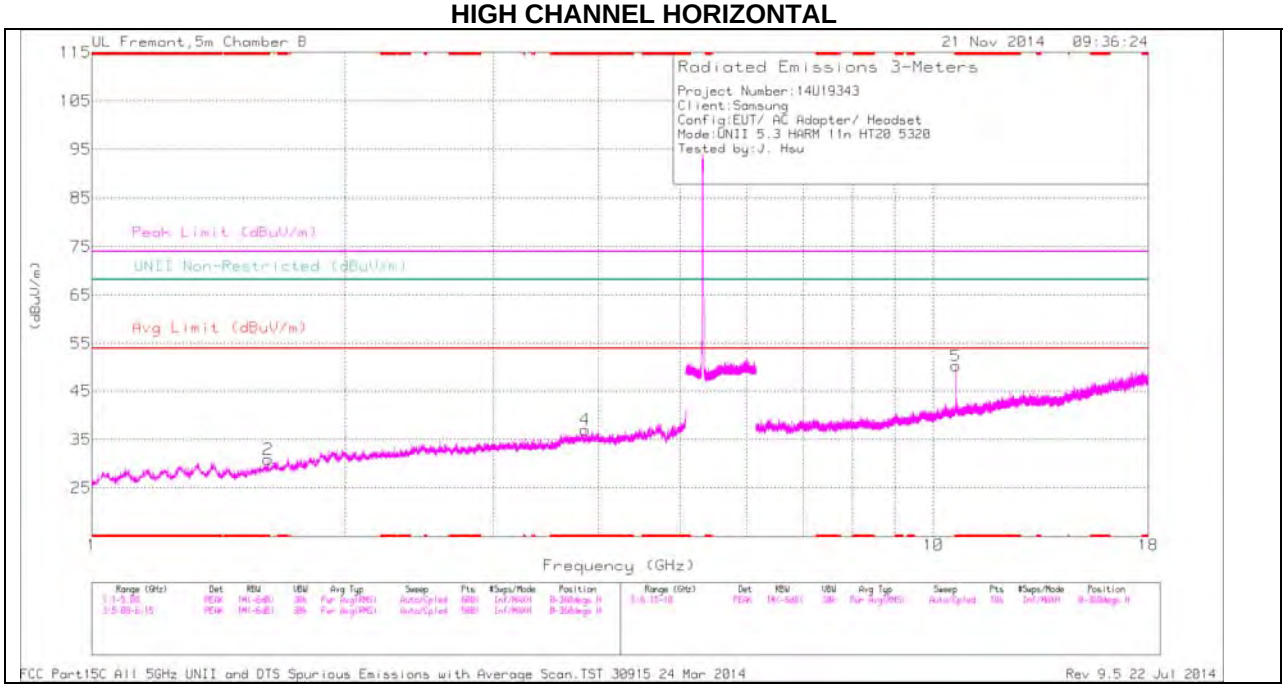
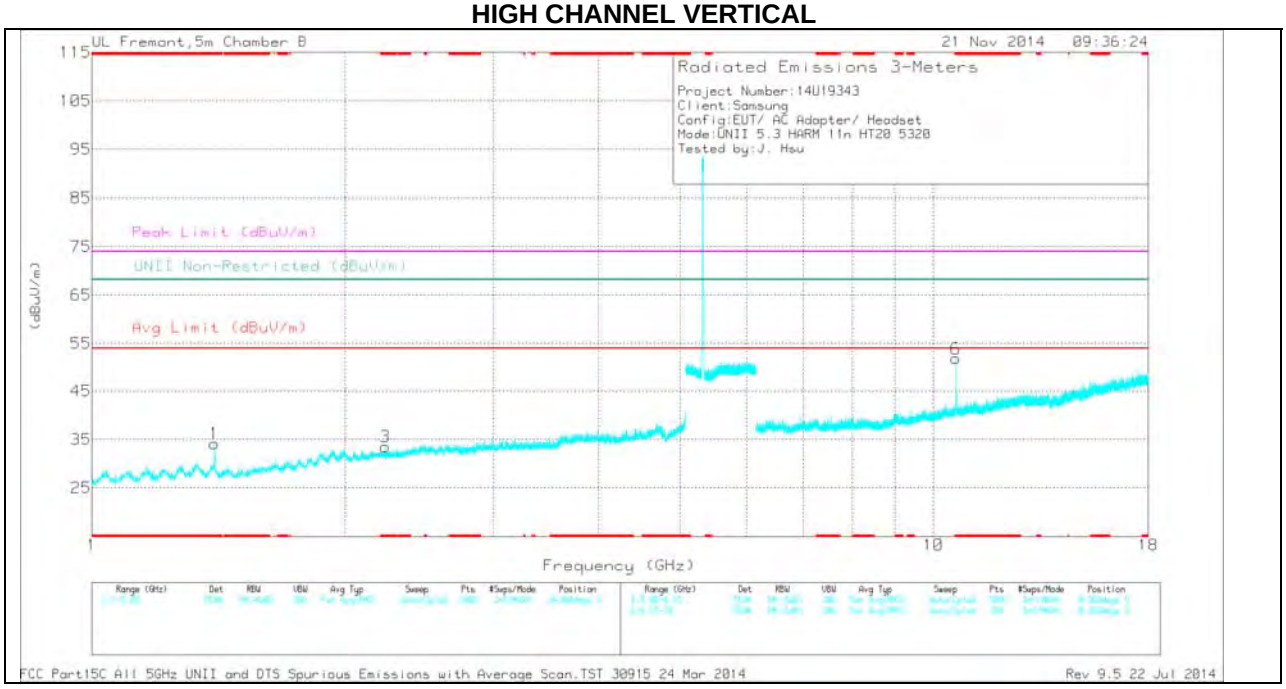
HIGH CHANNEL HORIZONTAL



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 T345 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 1.619	35.3	PK	28.6	-33	0	30.9	-	-	74	-43.1	-	-	0-360	200	H
4	* 3.857	34.82	PK	33.7	-31.5	0	37.02	-	-	74	-36.98	-	-	0-360	200	H
1	* 1.399	39.42	PK	28.5	-33.8	0	34.12	-	-	74	-39.88	-	-	0-360	200	V
3	* 2.231	34.65	PK	31.4	-32.5	0	33.55	-	-	74	-40.45	-	-	0-360	200	V
5	* 10.64	35.53	PK	37.7	-23	0	50.23	-	-	74	-23.77	-	-	0-360	200	H
6	* 10.64	37.06	PK	37.7	-23	0	51.76	-	-	74	-22.24	-	-	0-360	200	V

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (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
* 1.399	43.45	PK1	28.5	-33.8	0	38.15	-	-	74	-35.85	-	-	359	100	V
* 1.397	31.92	AD1	28.5	-33.7	.31	27.02	54	-26.98	-	-	-	-	359	100	V
* 10.64	43.2	PK1	37.7	-23	0	57.9	-	-	74	-16.1	-	-	322	243	V
* 10.64	37.5	AD1	37.7	-23	.31	52.5	54	-1.5	-	-	-	-	322	243	V

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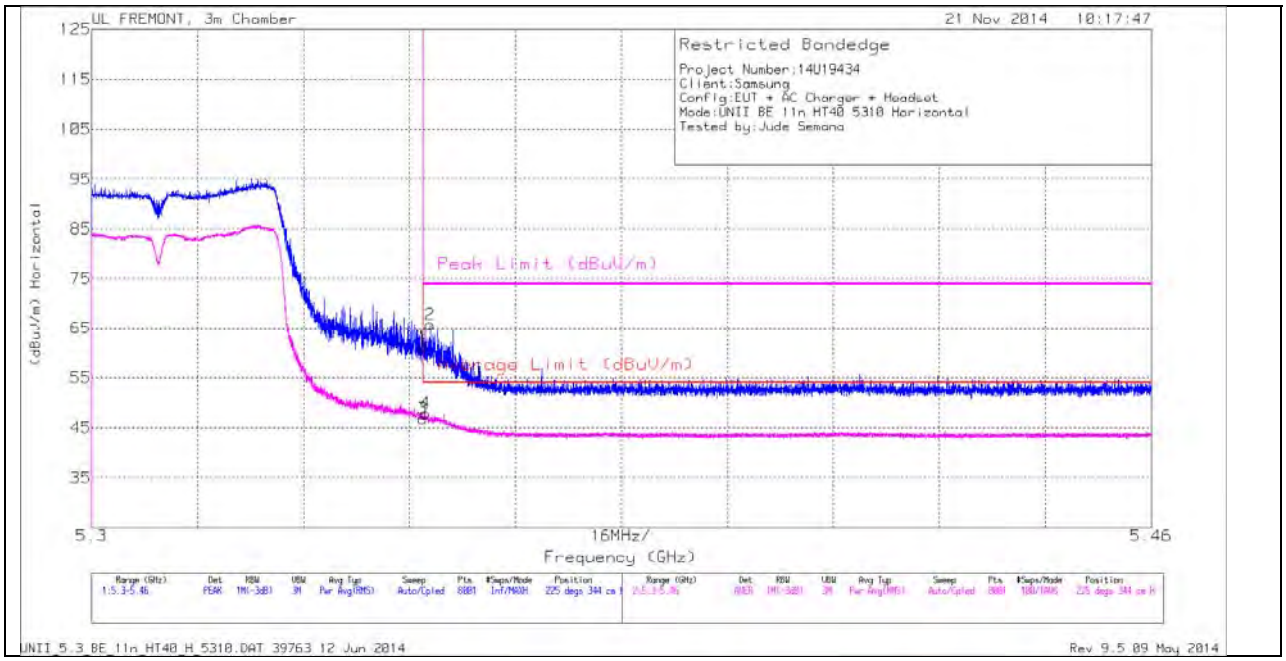
10.2.3. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.3 GHz BAND AUTHORIZED BANDEDGE (HIGH CHANNEL)

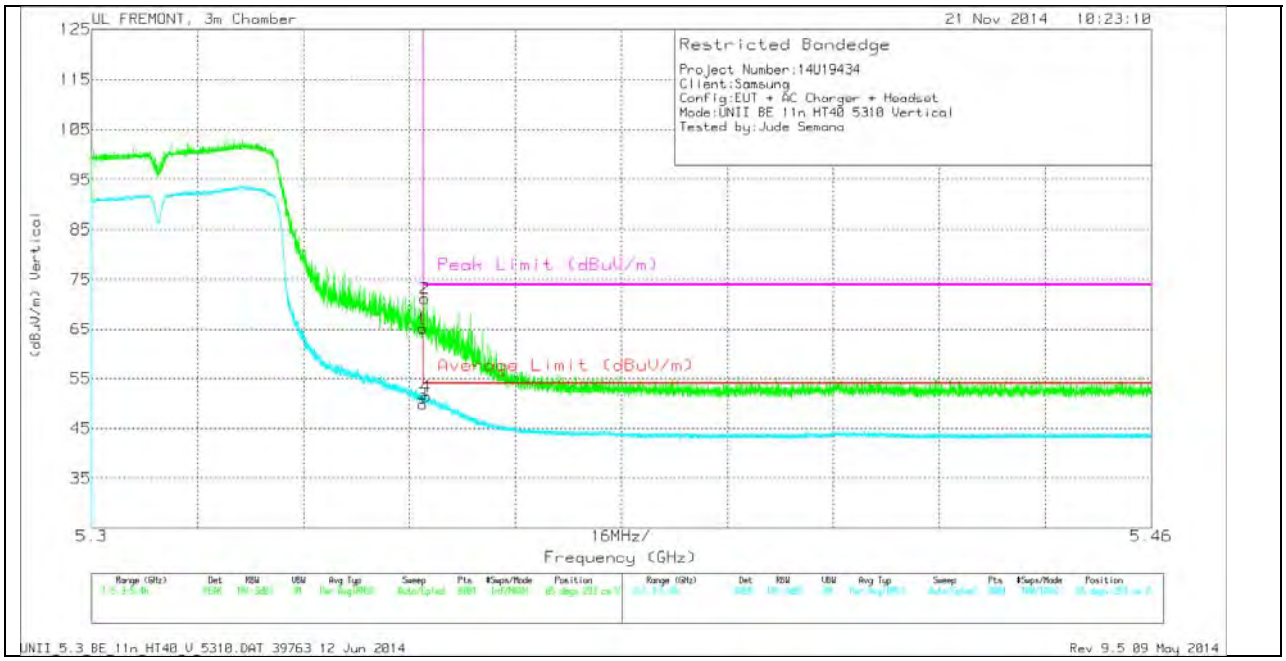
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/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	48.1	PK	34.5	-21.4	0	61.2	-	-	74	-12.8	225	344	H
3	5.35	33.45	RMS	34.5	-21.4	.63	46.85	54	-7.15	-	-	225	344	H
4	5.35	34.42	RMS	34.5	-21.4	.63	47.82	54	-6.18	-	-	225	344	H
2	5.351	52.72	PK	34.5	-21.4	0	65.82	-	-	74	-8.18	225	344	H

VERTICAL PEAK AND AVERAGE PLOT

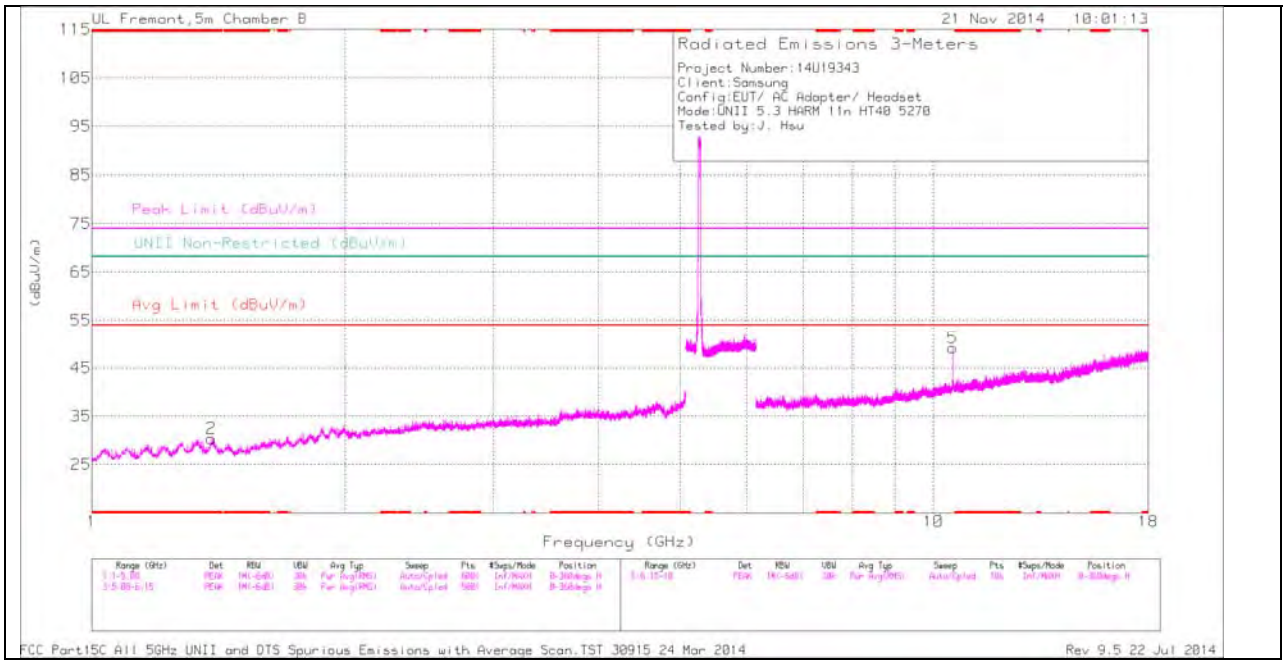


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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	52.05	PK	34.5	-21.4	0	65.15	-	-	74	-8.85	65	293	V
2	5.35	58.1	PK	34.5	-21.4	0	71.2	-	-	74	-2.8	65	293	V
3	5.35	36.47	RMS	34.5	-21.4	.63	49.87	54	-4.13	-	-	65	293	V
4	5.351	38.01	RMS	34.5	-21.4	.63	51.41	54	-2.59	-	-	65	293	V

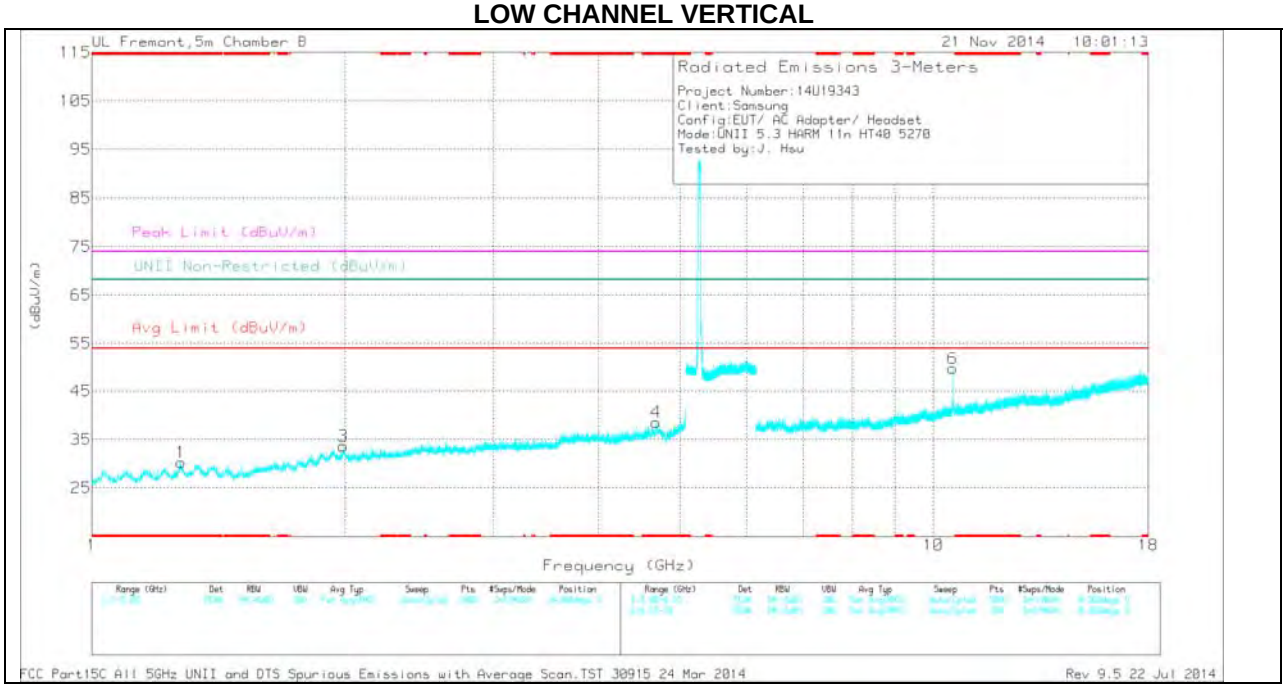
HARMONICS AND SPURIOUS EMISSIONS

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 T345 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 1.386	35.49	PK	28.6	-33.7	0	30.39	-	-	74	-43.61	-	-	0-360	101	H
1	* 1.277	35.89	PK	28.7	-34.3	0	30.29	-	-	74	-43.71	-	-	0-360	199	V
4	* 4.683	34.18	PK	34.2	-29.8	0	38.58	-	-	74	-35.42	-	-	0-360	199	V
3	1.989	35.31	PK	31.3	-33	0	33.61	-	-	-	-	68.2	-34.59	0-360	199	V
5	10.54	35.62	PK	37.5	-23.9	0	49.22	-	-	-	-	68.2	-18.98	0-360	199	H
6	10.54	36.18	PK	37.5	-23.9	0	49.78	-	-	-	-	68.2	-18.42	0-360	199	V

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (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
10.54	43.14	PK1	37.5	-23.9	0	56.74	-	-	-	-	68.2	-11.46	32	290	V
10.54	37.03	AD1	37.5	-23.9	.63	51.28	-	-	-	-	-	-	32	290	V

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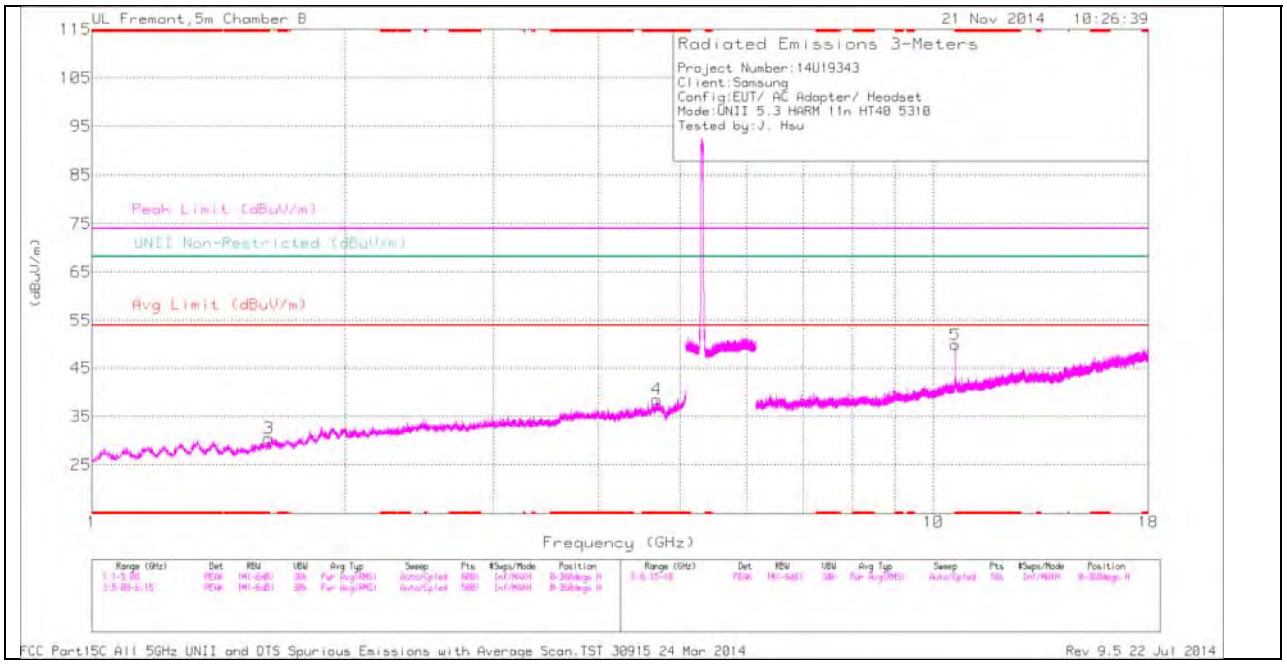
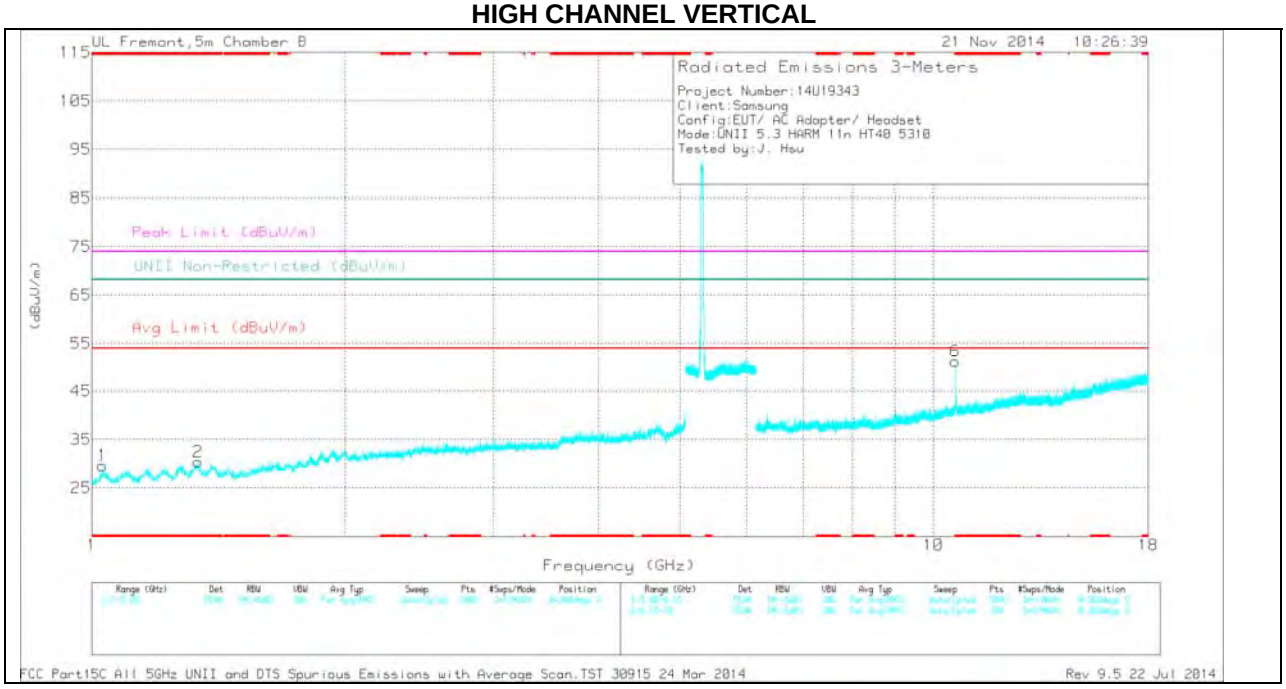
HIGH CHANNEL HORIZONTAL



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 T345 (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	* 1.622	34.96	PK	28.6	-33	0	30.56	-	-	74	-43.44	-	-	0-360	200	H
4	* 4.691	34.4	PK	34.2	-30	0	38.6	-	-	74	-35.4	-	-	0-360	200	H
1	* 1.03	36.86	PK	27.1	-34.3	0	29.66	-	-	74	-44.34	-	-	0-360	200	V
2	* 1.337	35.42	PK	28.7	-33.8	0	30.32	-	-	74	-43.68	-	-	0-360	200	V
5	* 10.62	35.22	PK	37.7	-23.1	0	49.82	-	-	74	-24.18	-	-	0-360	199	H
6	* 10.62	36.62	PK	37.7	-23.1	0	51.22	-	-	74	-22.78	-	-	0-360	199	V

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (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
* 10.62	40.28	PK1	37.7	-23.1	0	54.88	-	-	74	-19.12	-	-	66	232	V
* 10.62	34.76	AD1	37.7	-23.1	.63	50.01	54	-3.99	-	-	-	-	66	232	V

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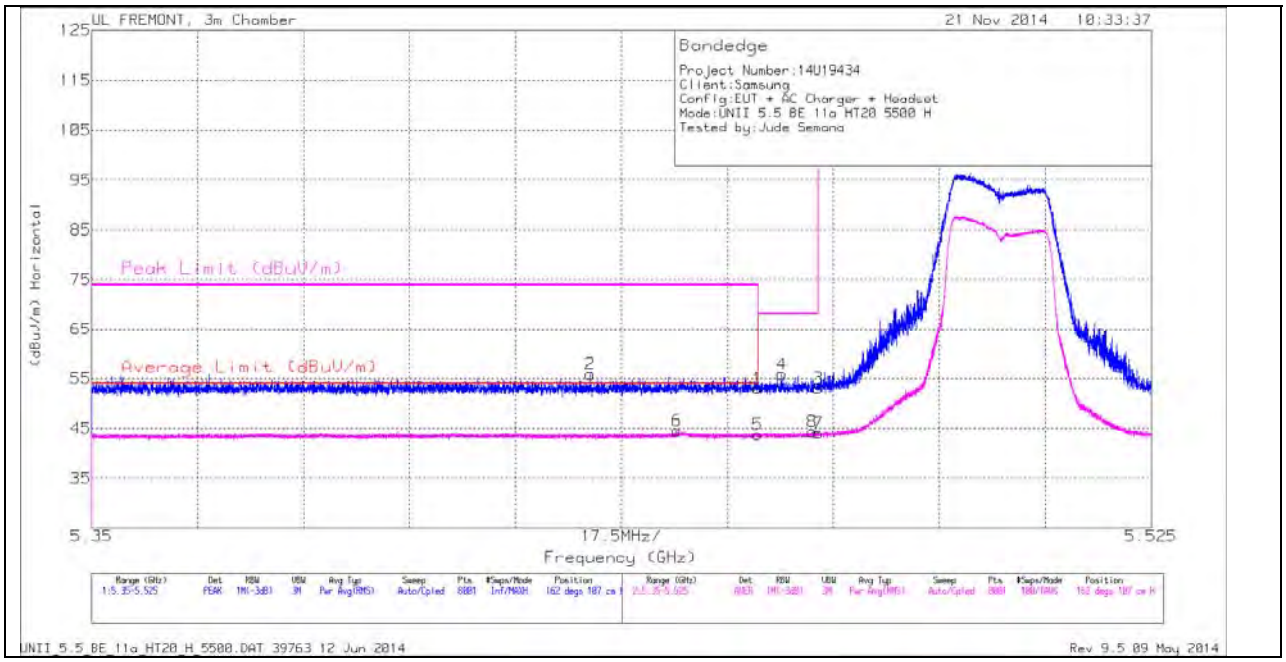
10.3. 5.5-5.6 GHz

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

RESTRICTED BANDEDGE (LOW CHANNEL)

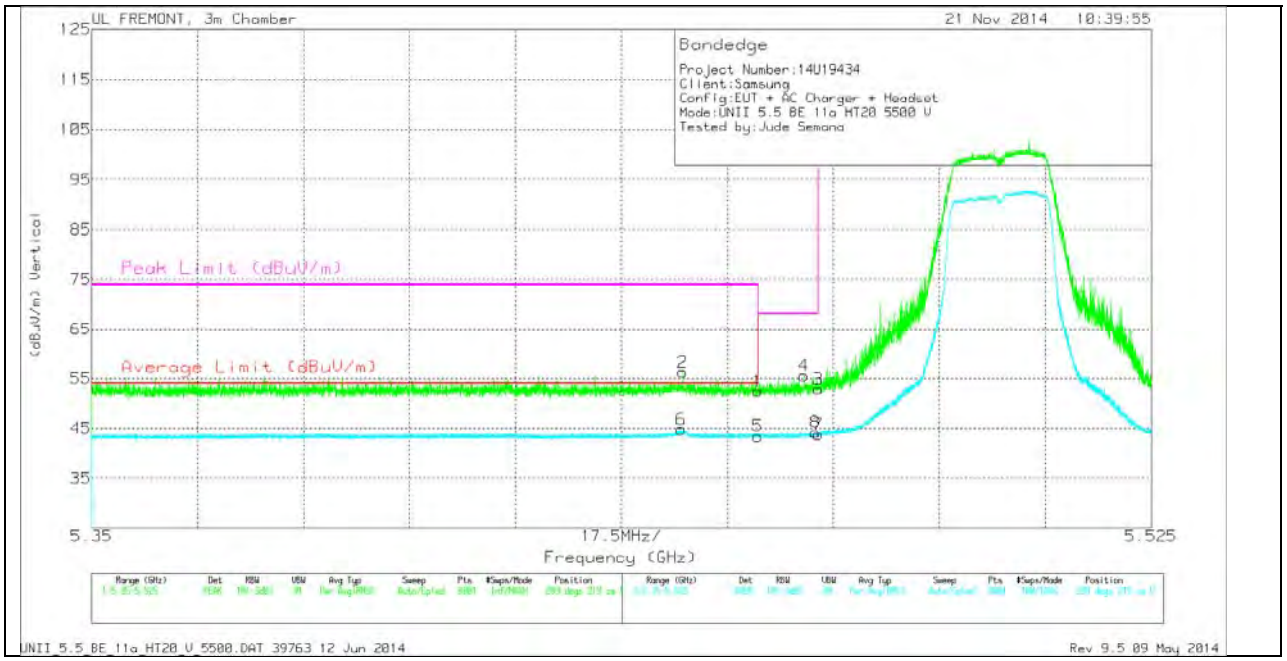
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/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
2	5.432	42.57	PK	34.7	-21.4	0	55.87	-	-	74	-18.13	162	107	H
6	5.447	30.87	RMS	34.8	-21.4	.29	44.57	54	-9.43	-	-	162	107	H
1	5.46	39.61	PK	34.8	-21.4	0	53.01	-	-	74	-20.99	162	107	H
5	5.46	30.08	RMS	34.8	-21.4	.29	43.78	54	-10.22	-	-	162	107	H
4	5.464	42.46	PK	34.8	-21.4	0	55.86	-	-	68.2	-12.34	162	107	H
8	5.469	30.51	RMS	34.8	-21.3	.29	44.31	-	-	-	-	162	107	H
3	5.47	39.61	PK	34.8	-21.3	0	53.11	-	-	68.2	-15.09	162	107	H
7	5.47	30.24	RMS	34.8	-21.3	.29	44.04	-	-	-	-	162	107	H

VERTICAL PEAK AND AVERAGE PLOT

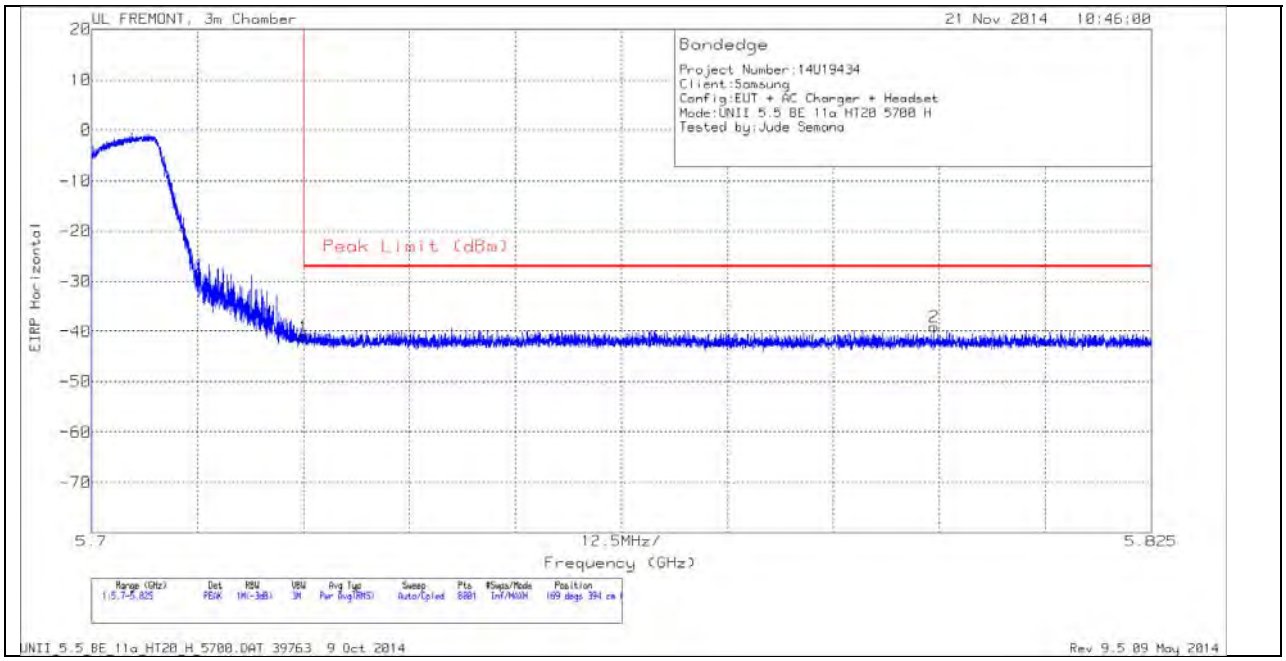


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
6	5.447	31.08	RMS	34.8	-21.4	.29	44.78	54	-9.22	-	-	289	219	V
2	5.448	42.86	PK	34.8	-21.4	0	56.26	-	-	74	-17.74	289	219	V
1	5.46	39.08	PK	34.8	-21.4	0	52.48	-	-	74	-21.52	289	219	V
5	5.46	29.72	RMS	34.8	-21.4	.29	43.42	54	-10.58	-	-	289	219	V
4	5.468	42.08	PK	34.8	-21.3	0	55.58	-	-	68.2	-12.62	289	219	V
3	5.47	39.39	PK	34.8	-21.3	0	52.89	-	-	68.2	-15.31	289	219	V
7	5.47	30.01	RMS	34.8	-21.3	.29	43.81	-	-	-	-	289	219	V
8	5.47	30.43	RMS	34.8	-21.3	.29	44.23	-	-	-	-	289	219	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

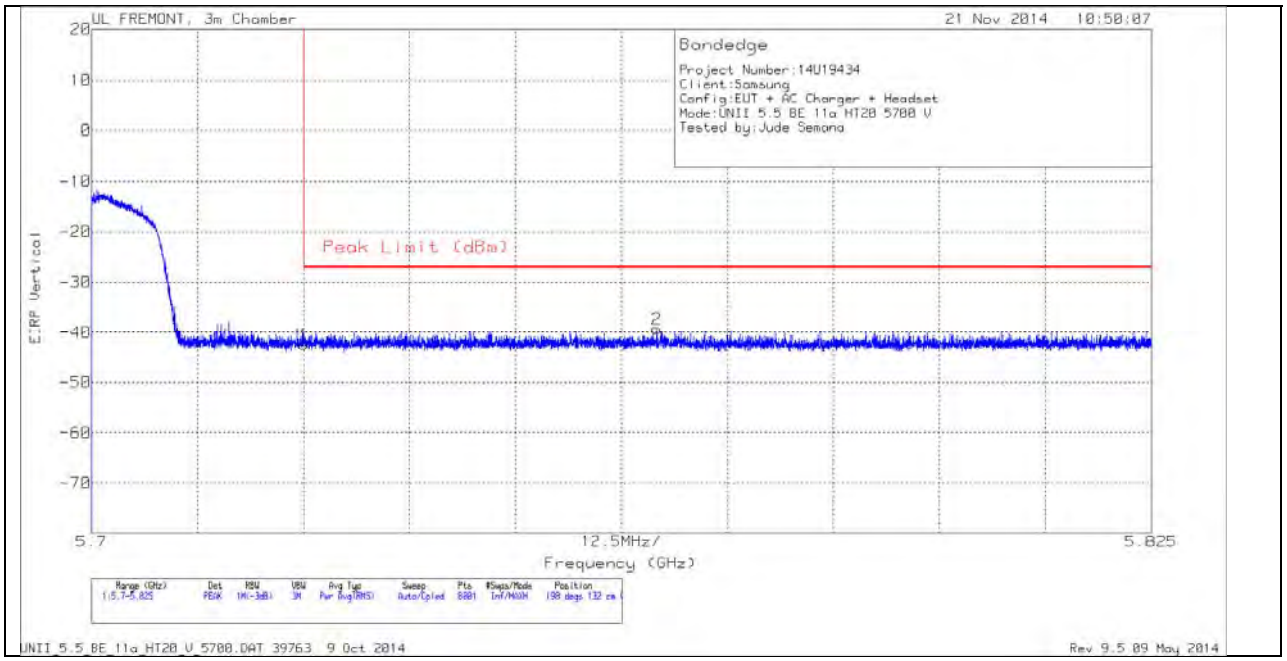
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-66.51	PK	34.8	-21.1	11.8	0	-41.01	-27	-14.01	169	394	H
2	5.799	-64.44	PK	34.9	-21.3	11.8	0	-39.04	-27	-12.04	169	394	H

VERTICAL PEAK AND AVERAGE PLOT

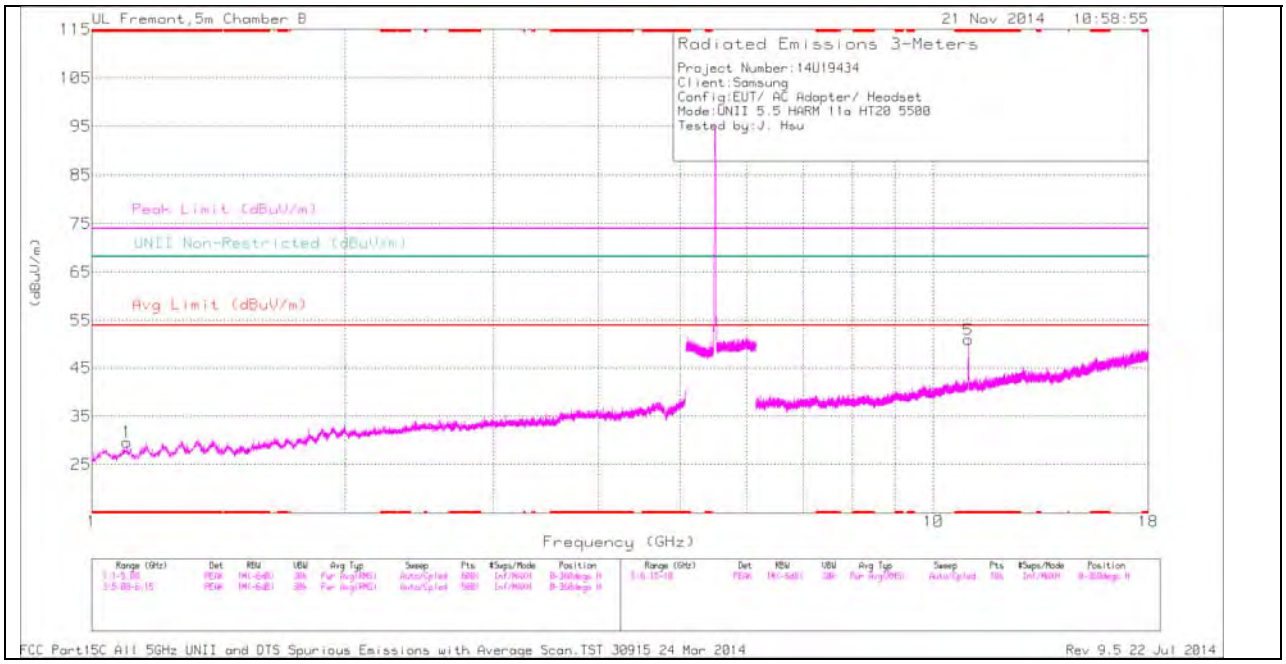


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-67.9	PK	34.8	-21.1	11.8	0	-42.4	-27	-15.4	198	132	V
2	5.767	-64.71	PK	34.8	-21.2	11.8	0	-39.31	-27	-12.31	198	132	V

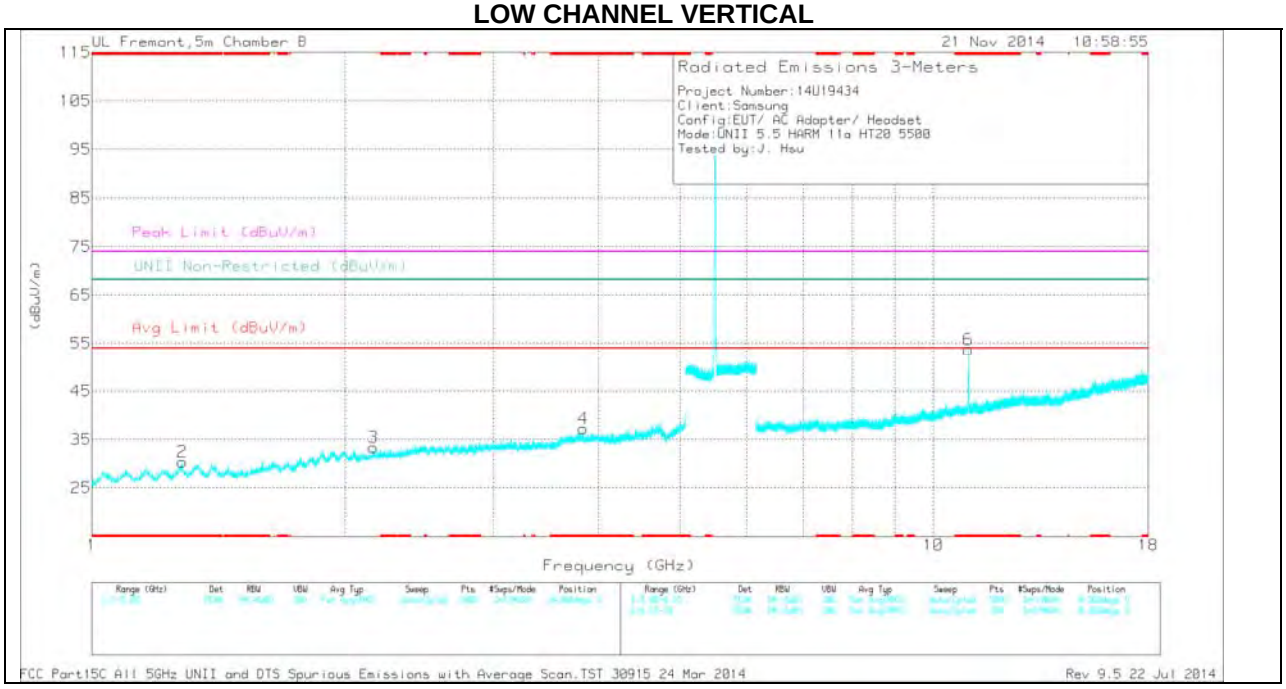
HARMONICS AND SPURIOUS EMISSIONS

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 T345 (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	* 1.101	36.57	PK	27.4	-34.4	0	29.57	-	-	74	-44.43	-	-	0-360	199	H
2	* 1.281	36	PK	28.7	-34.3	0	30.4	-	-	74	-43.6	-	-	0-360	101	V
4	* 3.834	34.85	PK	33.7	-31.3	0	37.25	-	-	74	-36.75	-	-	0-360	199	V
5	* 11	36.04	PK	37.8	-23	0	50.84	-	-	74	-23.16	-	-	0-360	200	H
6	* 11	38.89	PK	37.8	-23	0	53.69	-	-	74	-20.31	-	-	0-360	200	V
3	2.161	34.61	PK	31.3	-32.6	0	33.31	-	-	-	-	68.2	-34.89	0-360	101	V

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (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	44.99	PK1	37.8	-23	0	59.79	-	-	74	-14.21	-	-	61	199	V
* 11	38.88	AD1	37.8	-23	.29	53.98	54	-.02	-	-	-	-	61	199	V

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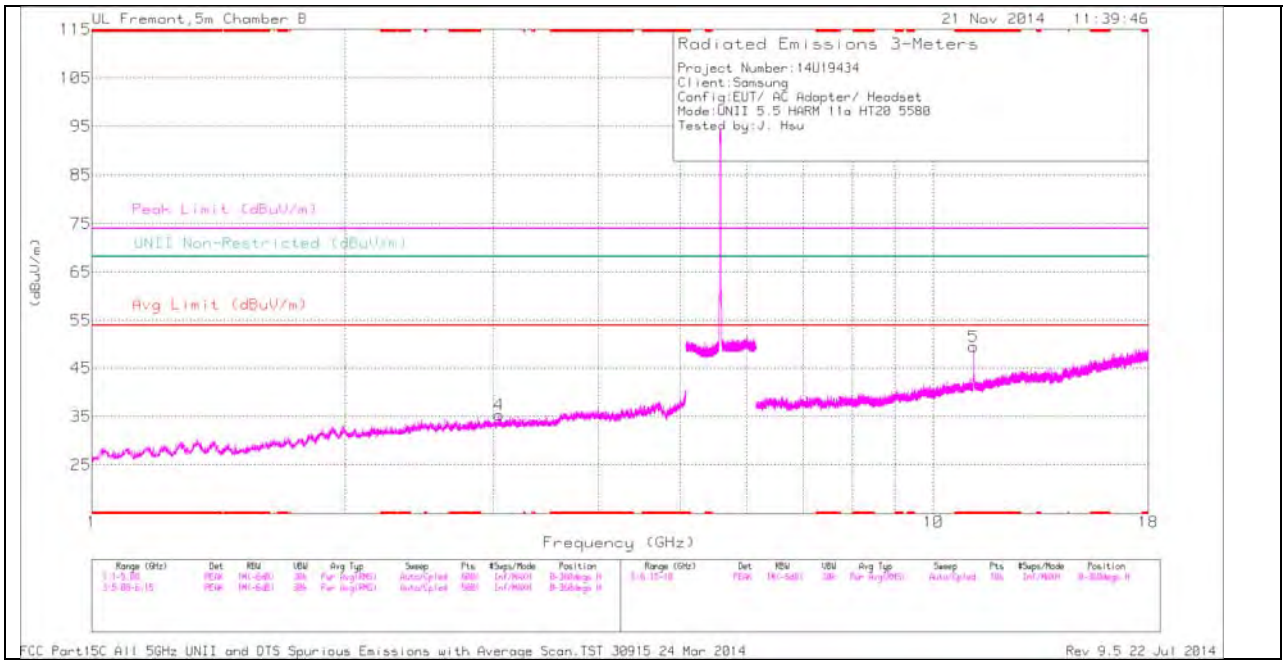
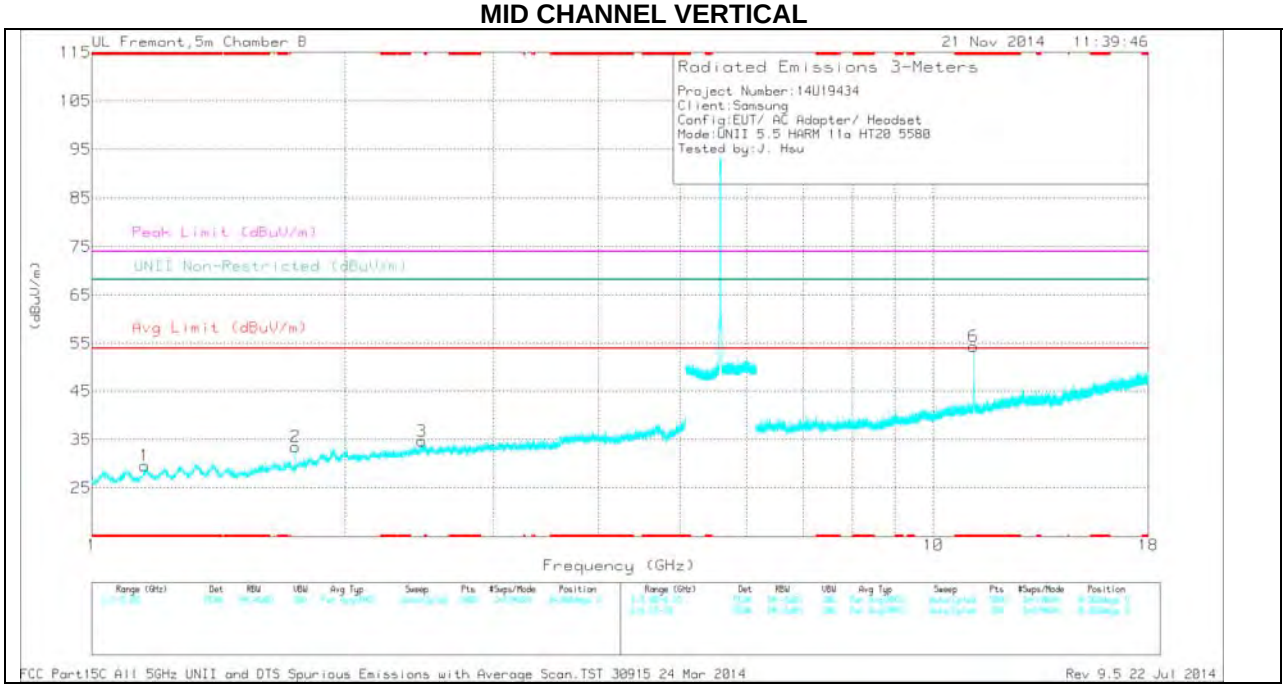
MID CHANNEL HORIZONTAL



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 T345 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.155	36.3	PK	27.8	-34.5	0	29.6	-	-	74	-44.4	-	-	0-360	200	V
5	* 11.16	34.44	PK	37.9	-22.9	0	49.44	-	-	74	-24.56	-	-	0-360	199	H
6	* 11.16	39.35	PK	37.9	-22.9	0	54.35	-	-	74	-19.65	-	-	0-360	199	V
2	1.745	37.64	PK	29.6	-33.8	0	33.44	-	-	-	-	68.2	-34.76	0-360	101	V
3	2.465	34.56	PK	32.3	-32.2	0	34.66	-	-	-	-	68.2	-33.54	0-360	200	V
4	3.048	34.77	PK	32.8	-32.3	0	35.27	-	-	-	-	68.2	-32.93	0-360	200	H

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (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
* 11.158	47.02	PK1	37.8	-22.9	0	61.92	-	-	74	-12.08	-	-	204	228	V
* 11.16	38.59	AD1	37.9	-22.9	.29	53.89	54	-.11	-	-	-	-	204	228	V

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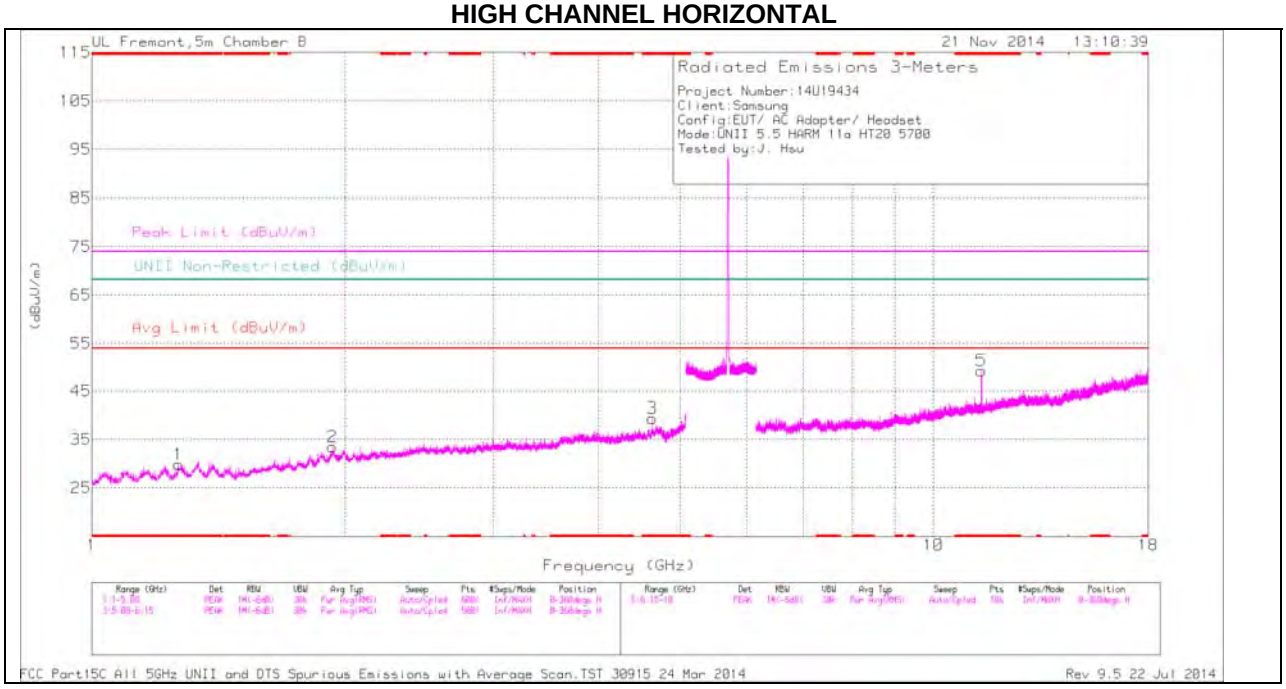
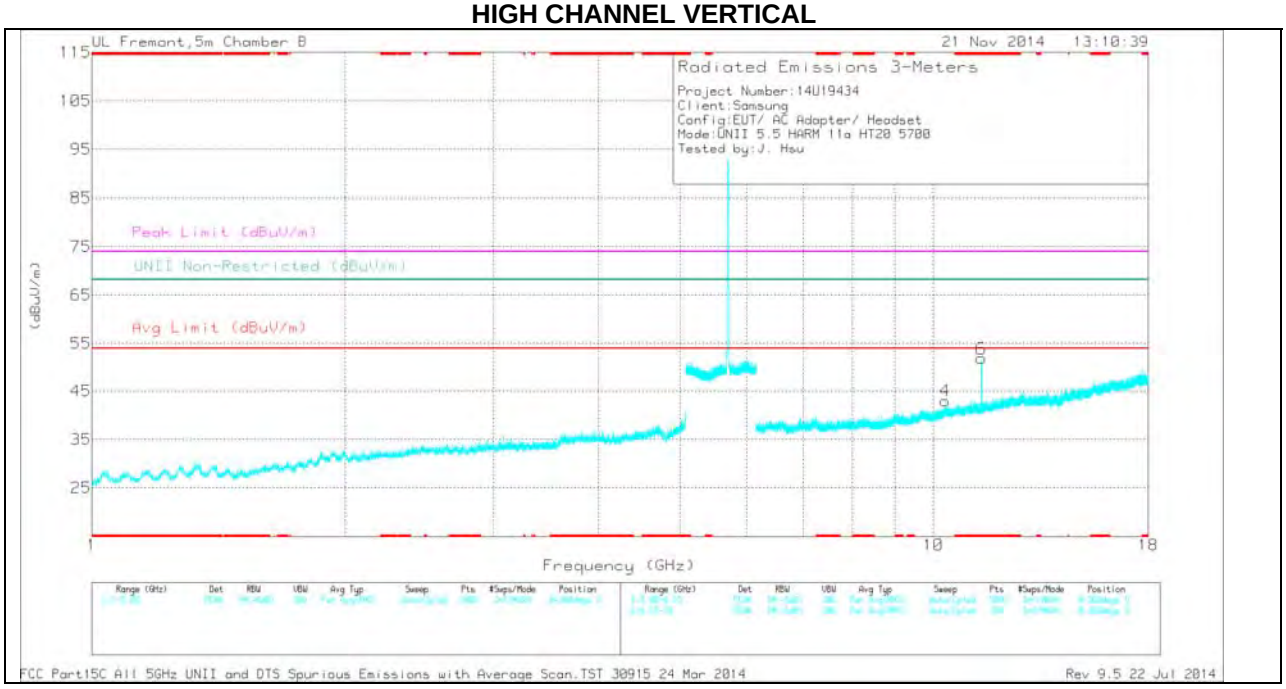
HIGH CHANNEL HORIZONTAL



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 T345 (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	* 1.267	35.71	PK	28.6	-34.4	0	29.91	-	-	74	-44.09	-	-	0-360	199	H
3	* 4.636	34.5	PK	34.2	-29.3	0	39.4	-	-	74	-34.6	-	-	0-360	101	H
5	* 11.4	34.47	PK	38	-23.2	0	49.27	-	-	74	-24.73	-	-	0-360	199	H
6	* 11.4	37	PK	38	-23.2	0	51.8	-	-	74	-22.2	-	-	0-360	199	V
2	1.932	35.05	PK	31.2	-32.7	0	33.55	-	-	-	-	68.2	-34.65	0-360	101	H
4	10.325	28.97	PK	37.2	-23.2	0	42.97	-	-	-	-	68.2	-25.23	0-360	199	V

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (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
* 11.4	43.86	PK1	38	-23.2	0	58.66	-	-	74	-15.34	-	-	306	248	V
* 11.4	37.25	AD1	38	-23.2	.29	52.35	54	-1.65	-	-	-	-	306	248	V

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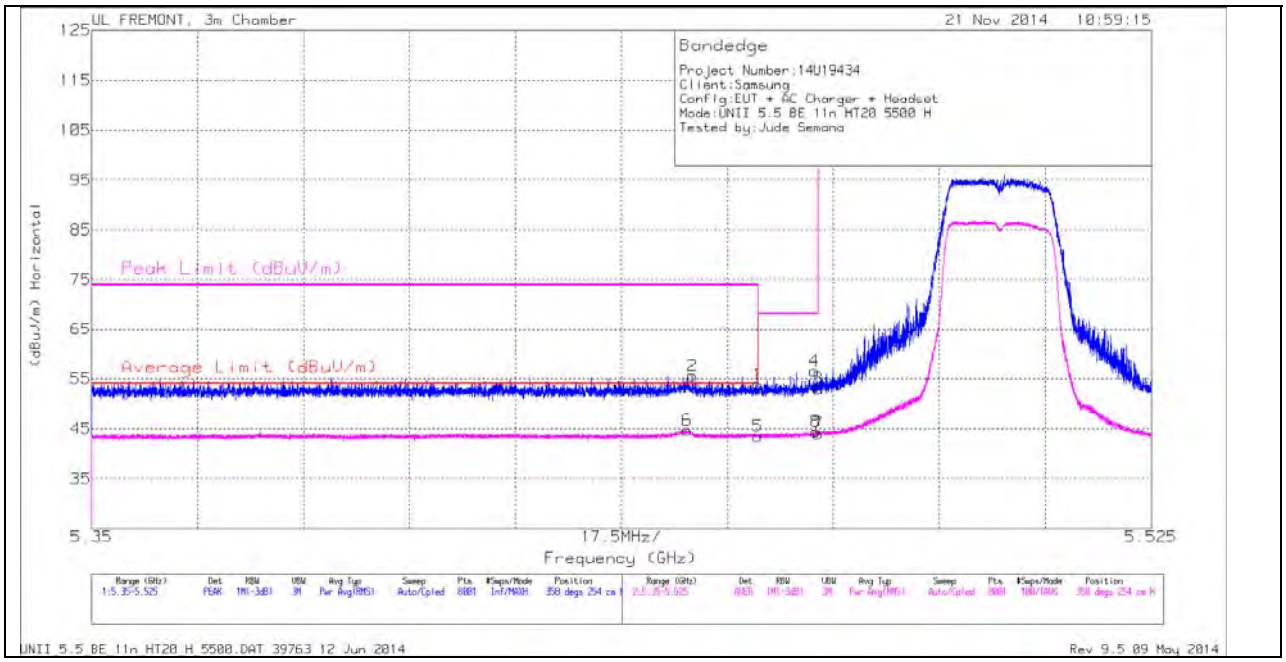
10.3.2. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.5 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

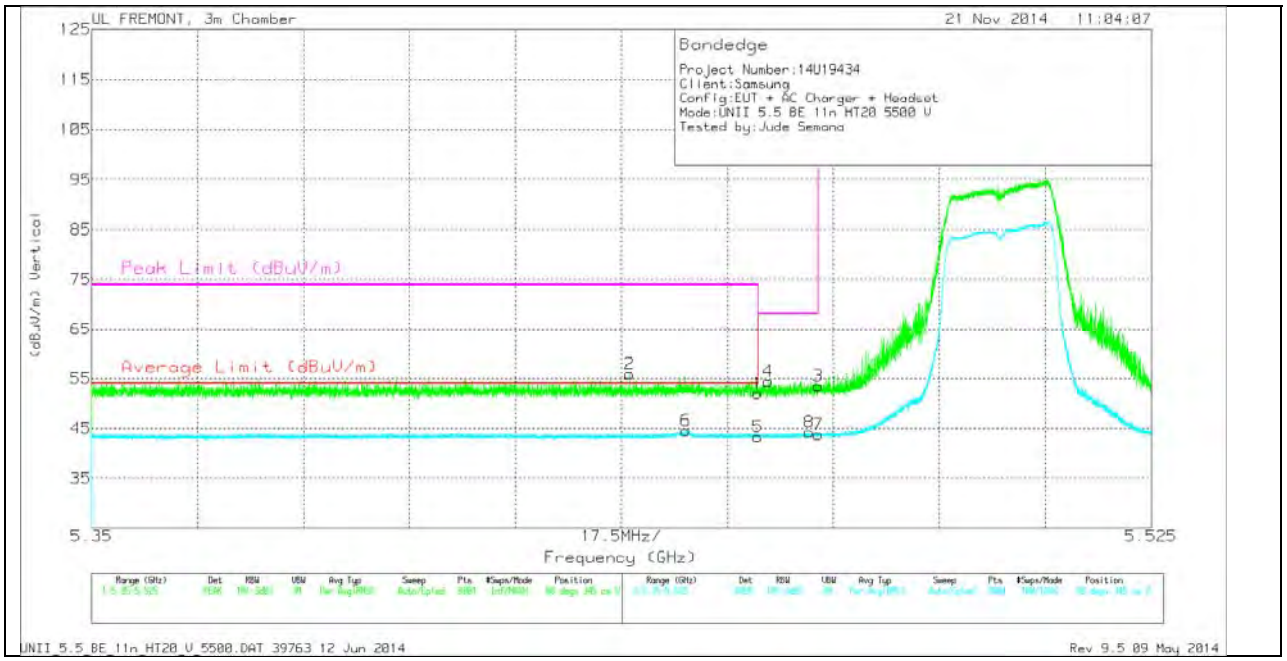
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/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
6	5.448	30.99	RMS	34.8	-21.4	.31	44.69	54	-9.31	-	-	358	254	H
2	5.449	42.15	PK	34.8	-21.4	0	55.55	-	-	74	-18.45	358	254	H
1	5.46	40.43	PK	34.8	-21.4	0	53.83	-	-	74	-20.17	358	254	H
5	5.46	29.81	RMS	34.8	-21.4	.31	43.51	54	-10.49	-	-	358	254	H
4	5.469	43.02	PK	34.8	-21.3	0	56.52	-	-	68.2	-11.68	358	254	H
3	5.47	39.48	PK	34.8	-21.3	0	52.98	-	-	68.2	-15.22	358	254	H
7	5.47	30.24	RMS	34.8	-21.3	.31	44.04	-	-	-	-	358	254	H
8	5.47	30.62	RMS	34.8	-21.3	.31	44.42	-	-	-	-	358	254	H

VERTICAL PEAK AND AVERAGE PLOT

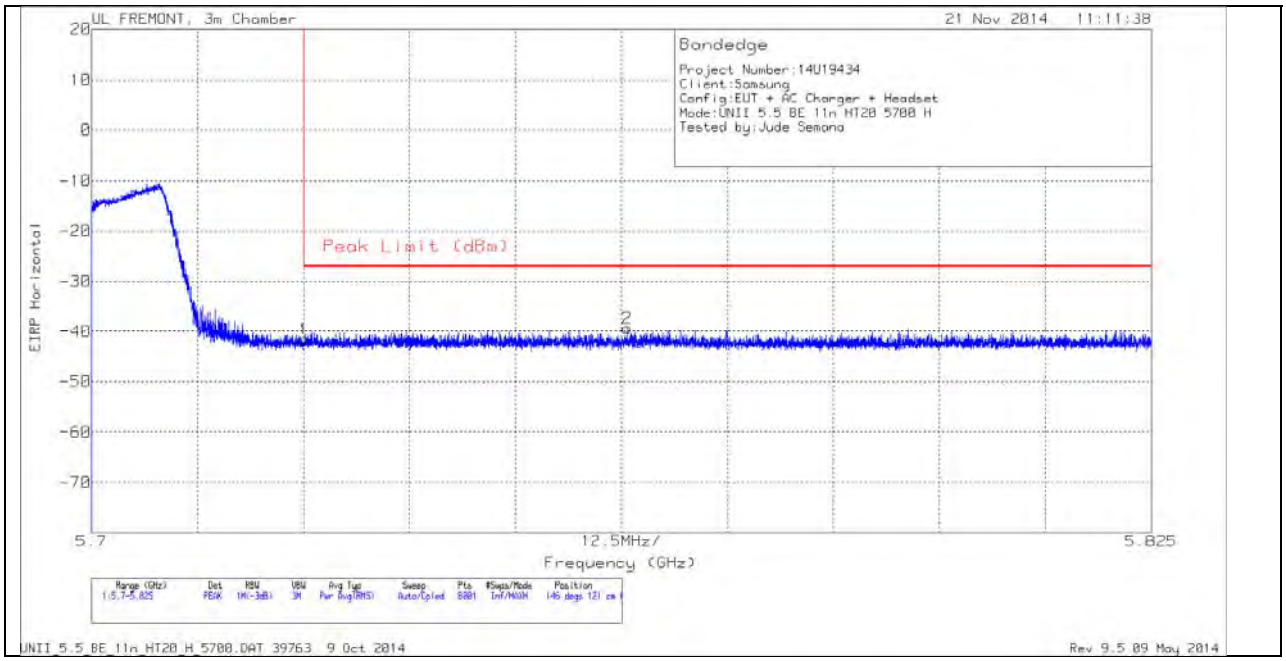


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
2	5.439	42.63	PK	34.7	-21.4	0	55.93	-	-	74	-18.07	88	345	V
6	5.448	30.89	RMS	34.8	-21.4	.31	44.59	54	-9.41	-	-	88	345	V
1	5.46	38.64	PK	34.8	-21.4	0	52.04	-	-	74	-21.96	88	345	V
5	5.46	29.6	RMS	34.8	-21.4	.31	43.3	54	-10.7	-	-	88	345	V
4	5.462	41.07	PK	34.8	-21.4	0	54.47	-	-	68.2	-13.73	88	345	V
8	5.468	30.42	RMS	34.8	-21.3	.31	44.22	-	-	-	-	88	345	V
3	5.47	39.98	PK	34.8	-21.3	0	53.48	-	-	68.2	-14.72	88	345	V
7	5.47	29.99	RMS	34.8	-21.3	.31	43.79	-	-	-	-	88	345	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

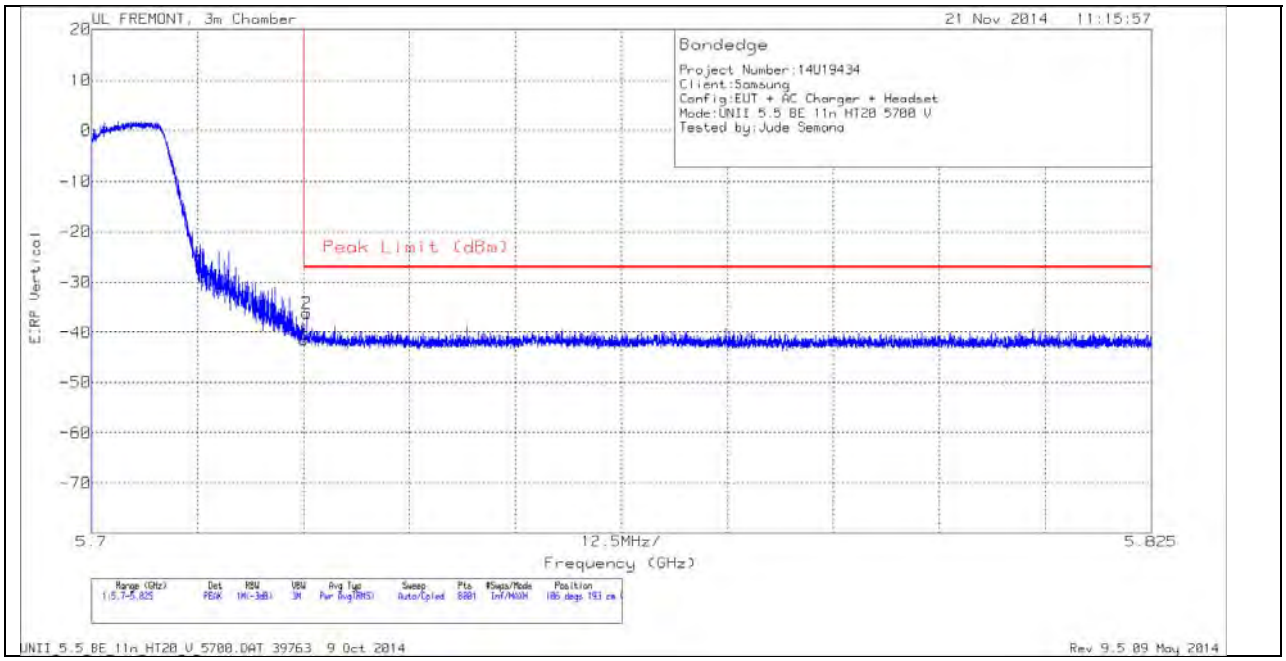
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-67.07	PK	34.8	-21.1	11.8	0	-41.57	-27	-14.57	146	121	H
2	5.763	-64.76	PK	34.8	-21.2	11.8	0	-39.36	-27	-12.36	146	121	H

VERTICAL PEAK AND AVERAGE PLOT

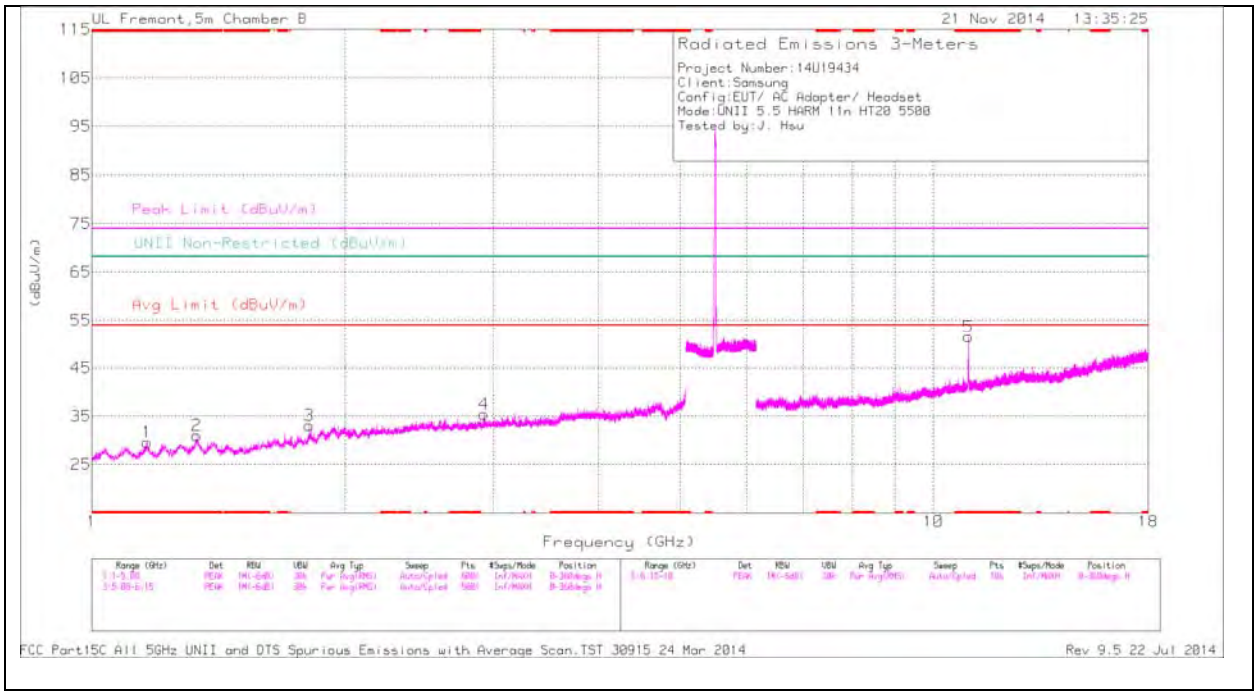


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-67.02	PK	34.8	-21.1	11.8	0	-41.52	-27	-14.52	106	193	V
2	5.725	-61.58	PK	34.8	-21.1	11.8	0	-36.08	-27	-9.08	106	193	V

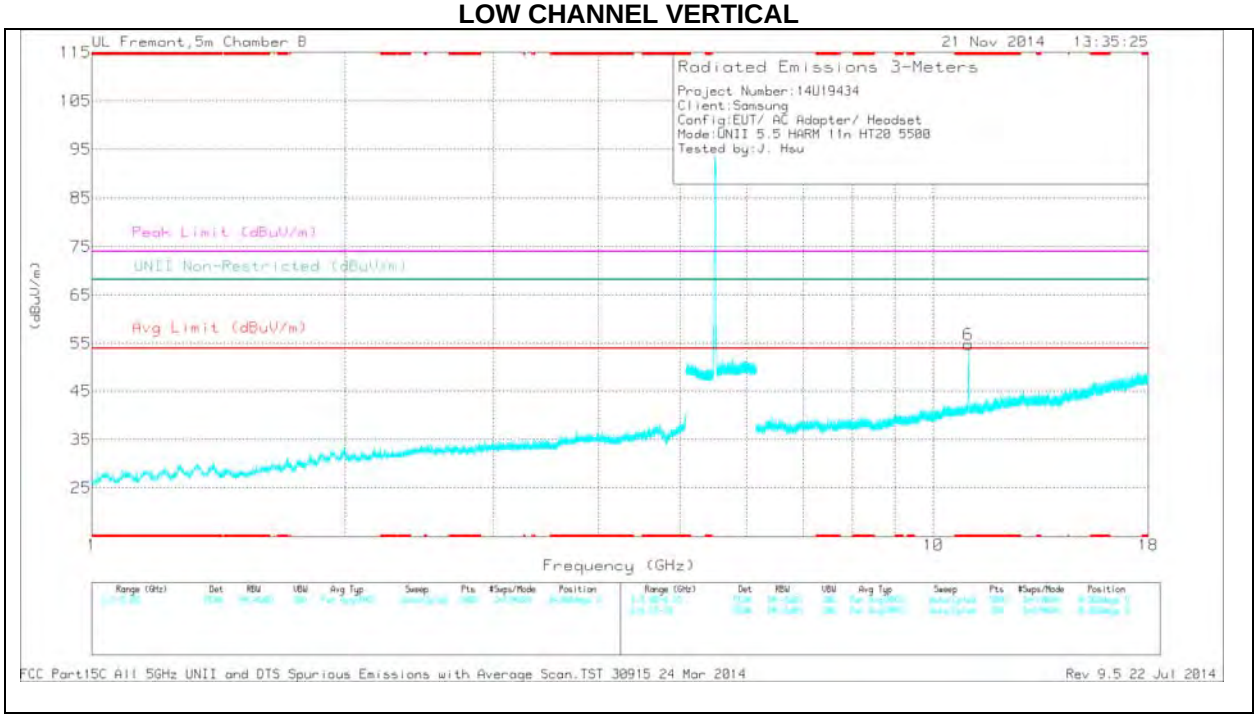
HARMONICS AND SPURIOUS EMISSIONS

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 T345 (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	* 1.163	36.19	PK	27.9	-34.5	0	29.59	-	-	74	-44.41	-	-	0-360	101	H
2	* 1.333	36.09	PK	28.7	-33.8	0	30.99	-	-	74	-43.01	-	-	0-360	200	H
5	* 11	36.8	PK	37.8	-23	0	51.6	-	-	74	-22.4	-	-	0-360	200	H
6	* 11	39.94	PK	37.8	-23	0	54.74	-	-	74	-19.26	-	-	0-360	200	V
3	1.813	36.49	PK	30.3	-33.7	0	33.09	-	-	-	-	68.2	-35.11	0-360	200	H
4	2.925	34.69	PK	32.7	-32	0	35.39	-	-	-	-	68.2	-32.81	0-360	101	H

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (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	45.66	PK1	37.8	-23	0	60.46	-	-	74	-13.54	-	-	193	154	V
* 11	38.5	AD1	37.8	-23	.31	53.61	54	-.39	-	-	-	-	193	154	V

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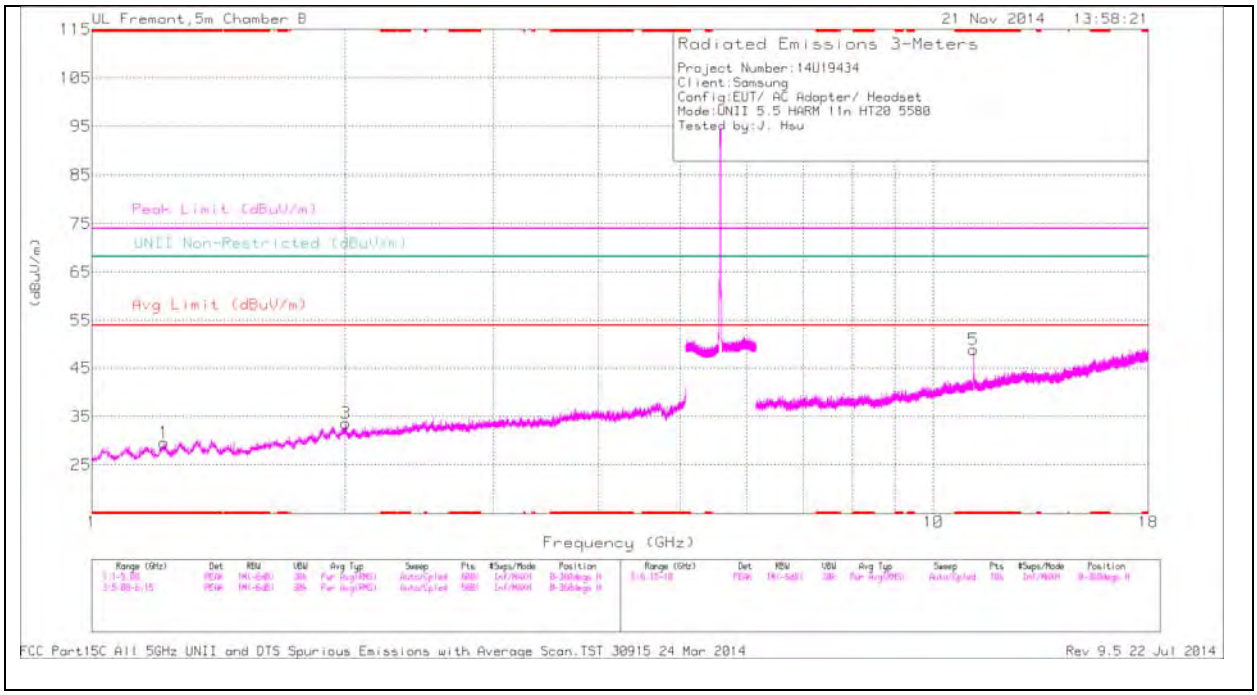
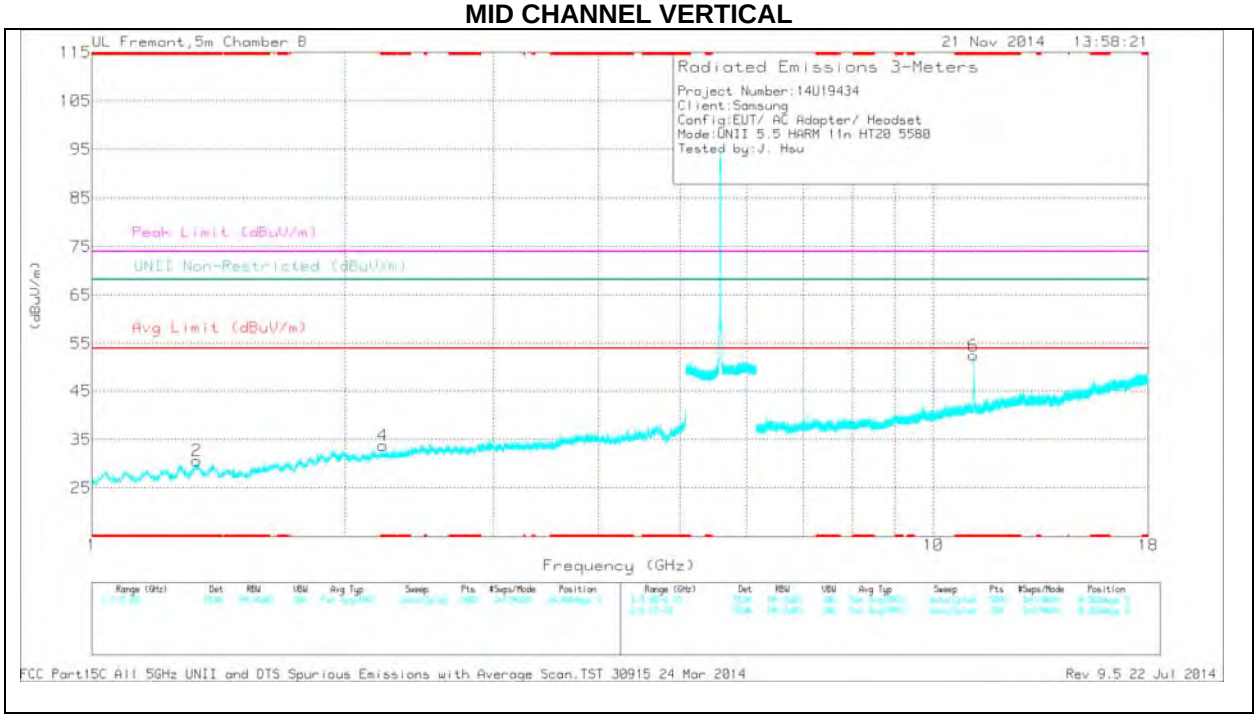
MID CHANNEL HORIZONTAL



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 T345 (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	* 1.218	35.96	PK	28.3	-34.6	0	29.66	-	-	74	-44.34	-	-	0-360	101	H
2	* 1.333	35.75	PK	28.7	-33.8	0	30.65	-	-	74	-43.35	-	-	0-360	101	V
4	* 2.217	34.8	PK	31.4	-32.5	0	33.7	-	-	74	-40.3	-	-	0-360	199	V
5	* 11.16	33.82	PK	37.9	-22.9	0	48.82	-	-	74	-25.18	-	-	0-360	199	H
6	* 11.16	37.47	PK	37.9	-22.9	0	52.47	-	-	74	-21.53	-	-	0-360	199	V
3	2.004	35.39	PK	31.3	-33.1	0	33.59	-	-	-	-	68.2	-34.61	0-360	101	H

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (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
* 11.16	46.85	PK1	37.9	-22.9	0	61.85	-	-	74	-12.15	-	-	193	262	V
* 11.16	38.15	AD1	37.9	-22.9	.31	53.46	54	-.54	-	-	-	-	193	262	V

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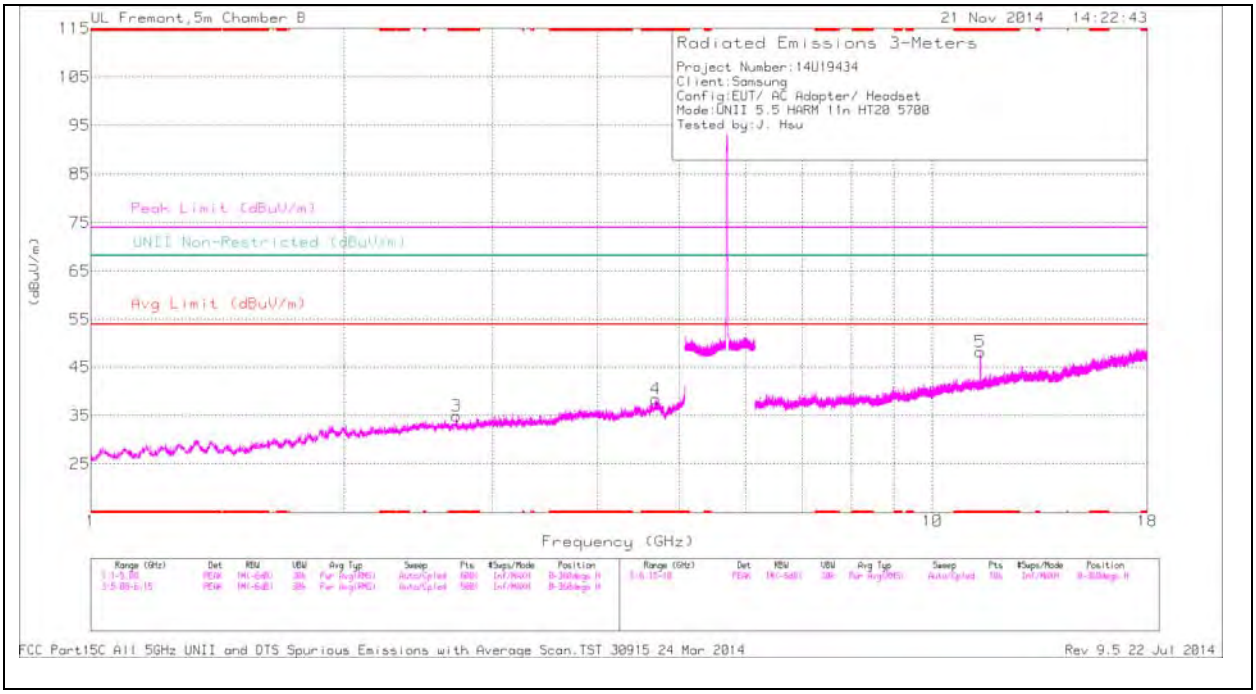
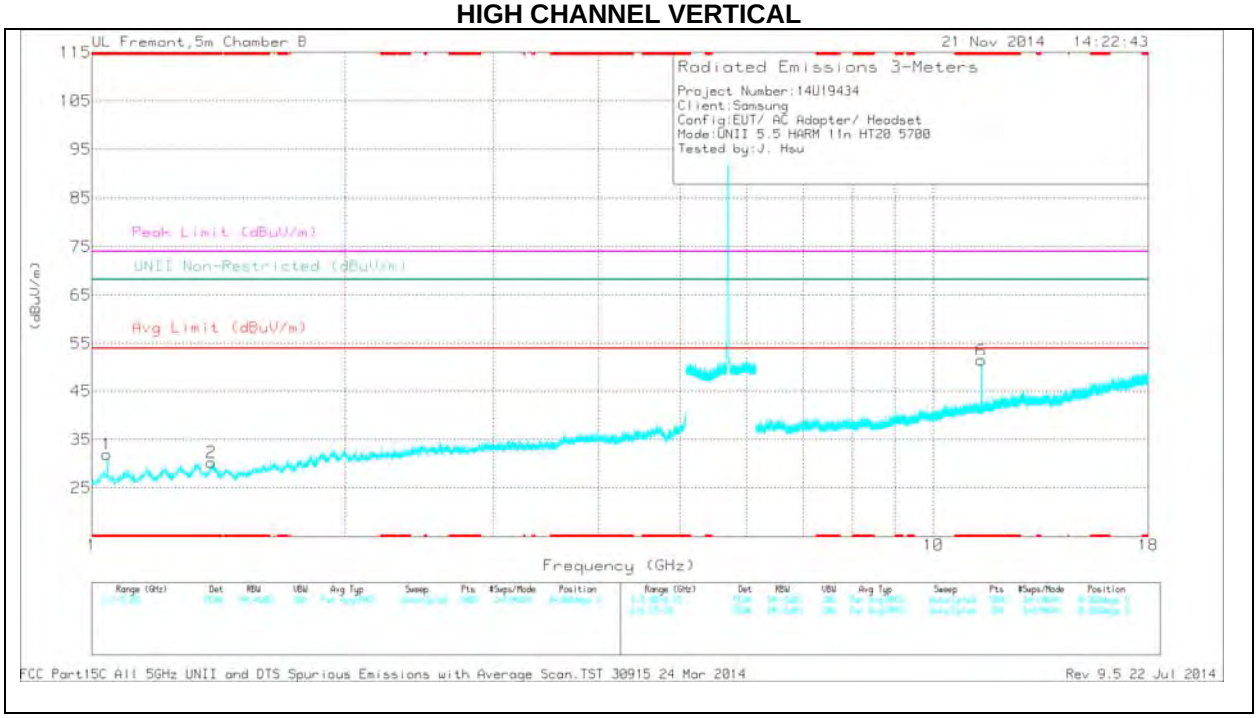
HIGH CHANNEL HORIZONTAL



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 T345 (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	* 2.718	34.74	PK	32.2	-32	0	34.94	-	-	74	-39.06	-	-	0-360	101	H
4	* 4.691	34.26	PK	34.2	-30	0	38.46	-	-	74	-35.54	-	-	0-360	101	H
1	* 1.042	39.16	PK	27.2	-34.4	0	31.96	-	-	74	-42.04	-	-	0-360	199	V
2	* 1.386	35.32	PK	28.6	-33.7	0	30.22	-	-	74	-43.78	-	-	0-360	199	V
5	* 11.4	33.31	PK	38	-23.2	0	48.11	-	-	74	-25.89	-	-	0-360	199	H
6	* 11.4	36.63	PK	38	-23.2	0	51.43	-	-	74	-22.57	-	-	0-360	199	V

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (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
* 11.4	42.25	PK1	38	-23.2	0	57.05	-	-	74	-16.95	-	-	305	236	V
* 11.4	36.7	AD1	38	-23.2	.31	51.81	54	-2.19	-	-	-	-	305	236	V

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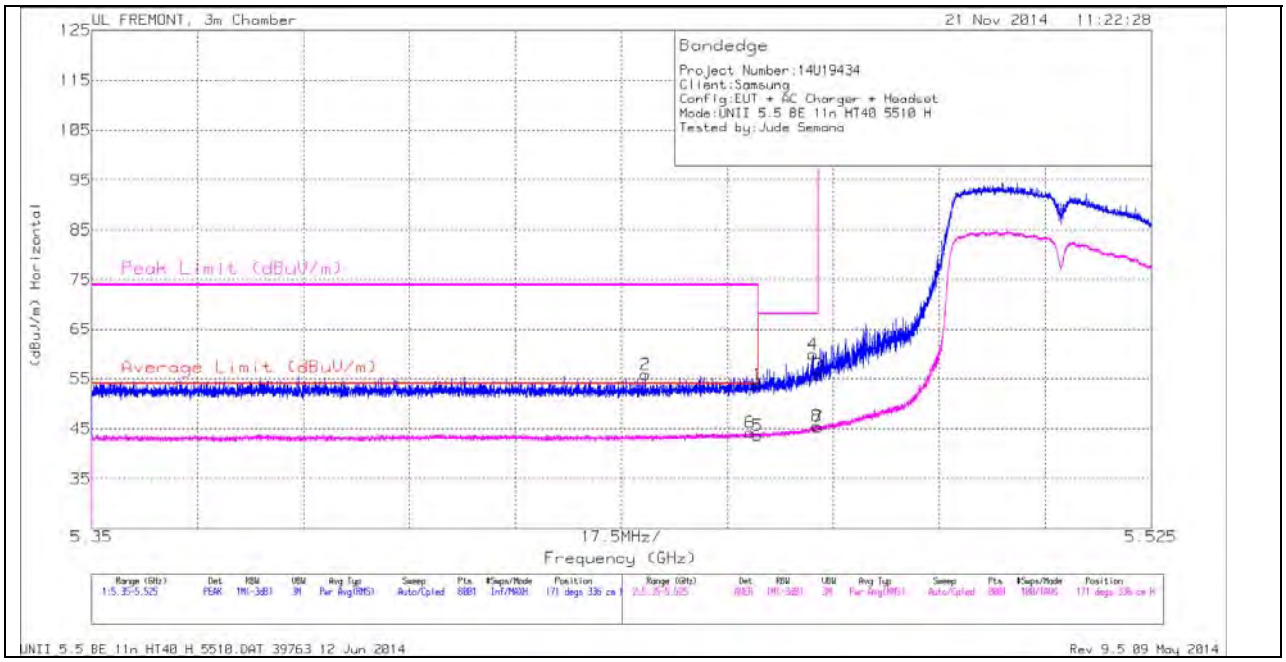
10.3.3. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.5 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

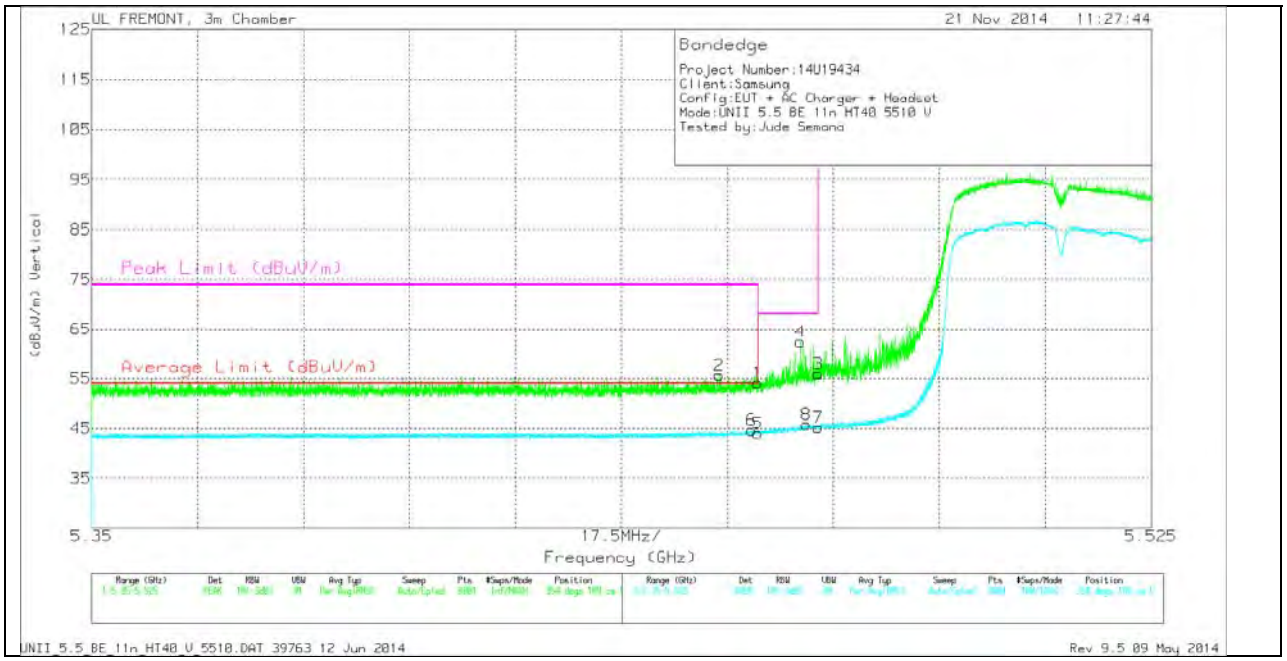
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC factor	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.441	42.63	PK	34.7	-21.5		55.83	-	-	74	-18.17	171	336	H
6	5.459	30.8	RMS	34.8	-21.4	.63	44.2	54	-9.8	-	-	171	336	H
1	5.46	40.46	PK	34.8	-21.4		53.86	-	-	74	-20.14	171	336	H
5	5.46	30.29	RMS	34.8	-21.4	.63	43.69	54	-10.31	-	-	171	336	H
4	5.469	46.35	PK	34.8	-21.3		59.85	-	-	68.2	-8.35	171	336	H
3	5.47	42.31	PK	34.8	-21.3		55.81	-	-	68.2	-12.39	171	336	H
7	5.47	31.81	RMS	34.8	-21.3	.63	45.31	-	-	-	-	171	336	H
8	5.47	32.06	RMS	34.8	-21.3	.63	45.56	-	-	-	-	171	336	H

VERTICAL PEAK AND AVERAGE PLOT

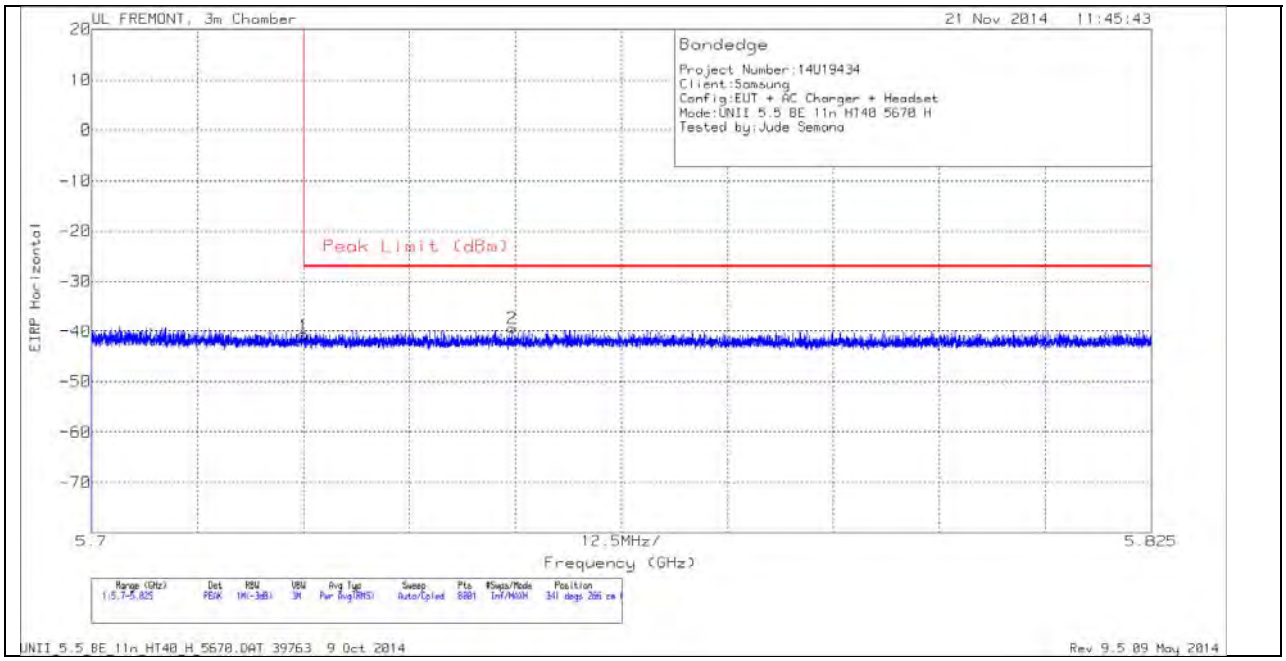


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
2	5.454	42.25	PK	34.8	-21.4	0	55.65	-	-	74	-18.35	354	189	V
6	5.459	30.92	RMS	34.8	-21.4	.63	44.62	54	-9.38	-	-	354	189	V
1	5.46	40.79	PK	34.8	-21.4	0	54.19	-	-	74	-19.81	354	189	V
5	5.46	30.3	RMS	34.8	-21.4	.63	44	54	-10	-	-	354	189	V
4	5.467	48.92	PK	34.8	-21.3	0	62.42	-	-	68.2	-5.78	354	189	V
8	5.468	31.94	RMS	34.8	-21.3	.63	45.74	-	-	-	-	354	189	V
3	5.47	42.43	PK	34.8	-21.3	0	55.93	-	-	68.2	-12.27	354	189	V
7	5.47	31.38	RMS	34.8	-21.3	.63	45.18	-	-	-	-	354	189	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

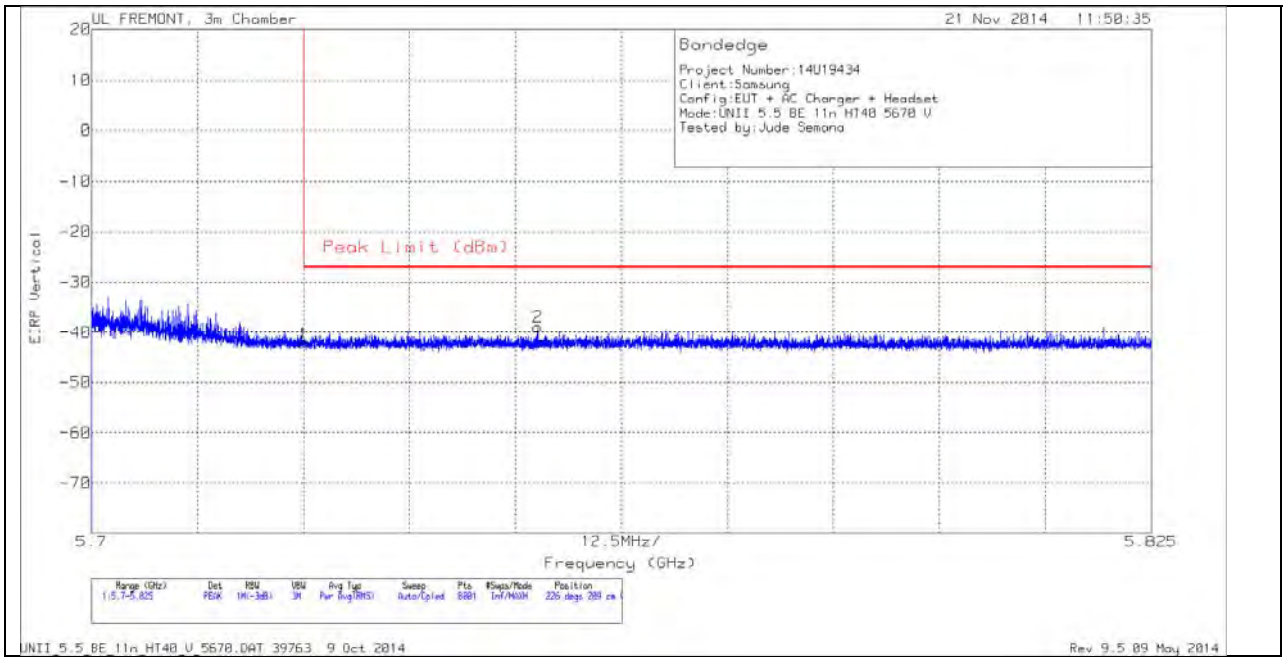
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-66.19	PK	34.8	-21.1	11.8	0	-40.69	-27	-13.69	341	266	H
2	5.75	-64.72	PK	34.8	-21.2	11.8	0	-39.32	-27	-12.32	341	266	H

VERTICAL PEAK AND AVERAGE PLOT

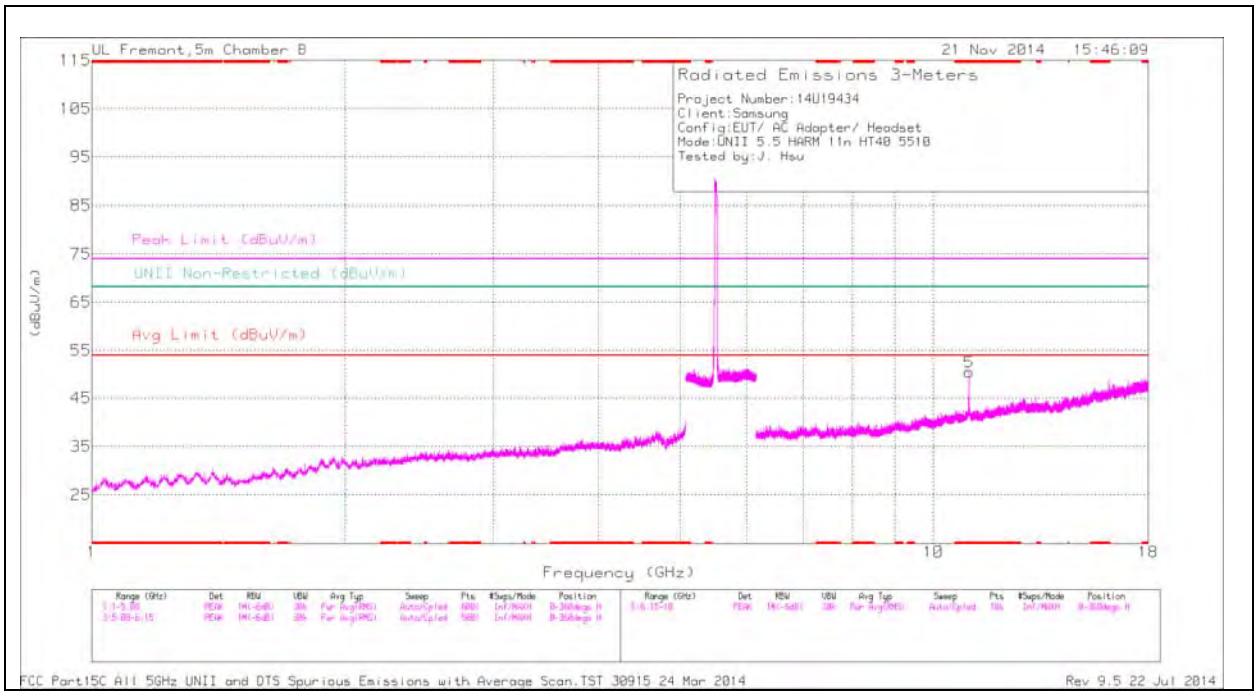


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-67.67	PK	34.8	-21.1	11.8	0	-42.17	-27	-15.17	226	209	V
2	5.753	-64.41	PK	34.8	-21.1	11.8	0	-38.91	-27	-11.91	226	209	V

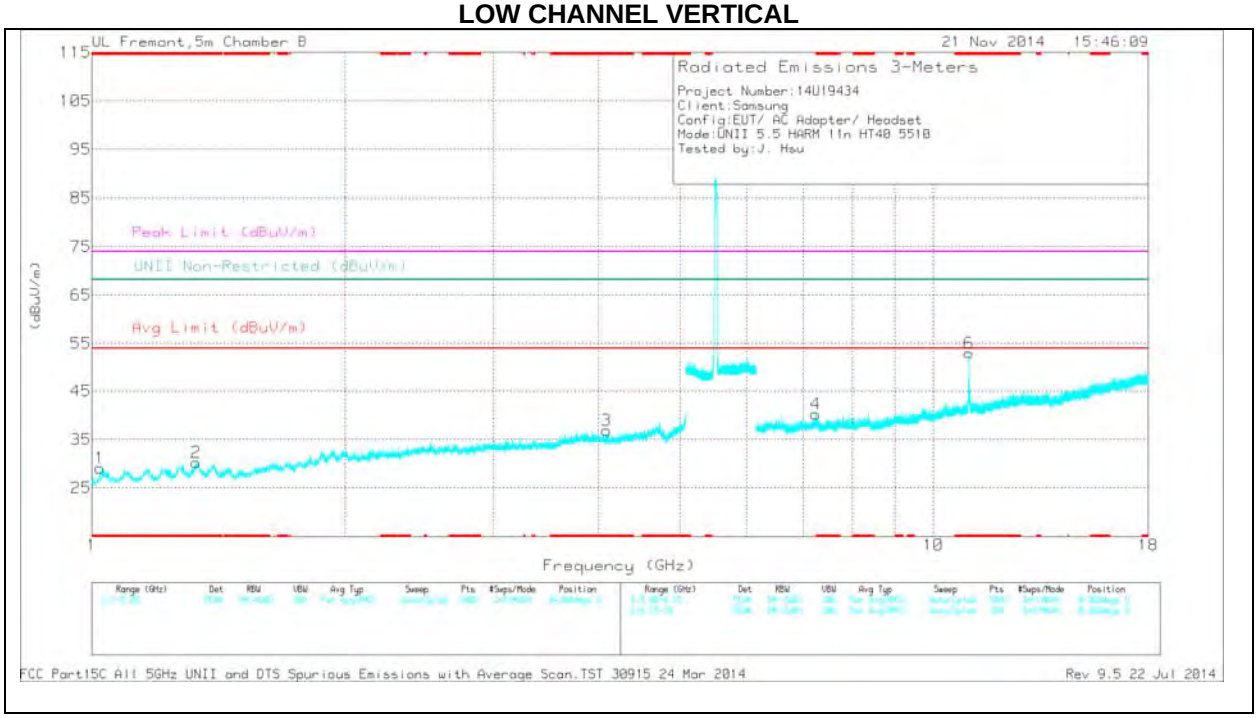
HARMONICS AND SPURIOUS EMISSIONS

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 T345 (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	* 1.022	36.37	PK	27.1	-34.4	0	29.07	-	-	74	-44.93	-	-	0-360	199	V
2	* 1.329	35.34	PK	28.8	-33.9	0	30.24	-	-	74	-43.76	-	-	0-360	101	V
3	* 4.087	33.88	PK	33.6	-30.6	0	36.88	-	-	74	-37.12	-	-	0-360	101	V
5	* 11.019	35.75	PK	37.8	-23.2	0	50.35	-	-	74	-23.65	-	-	0-360	199	H
4	* 7.253	31.23	PK	35.6	-26.6	0	40.23	-	-	74	-33.77	-	-	0-360	101	V
6	* 11.02	38.39	PK	37.8	-23.2	0	52.99	-	-	74	-21.01	-	-	0-360	199	V

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (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
* 11.02	44.7	PK1	37.8	-23.2	0	59.3	-	-	74	-14.7	-	-	61	207	V
* 11.02	38.37	AD1	37.8	-23.2	.63	53.62	54	-.38	-	-	-	-	61	207	V

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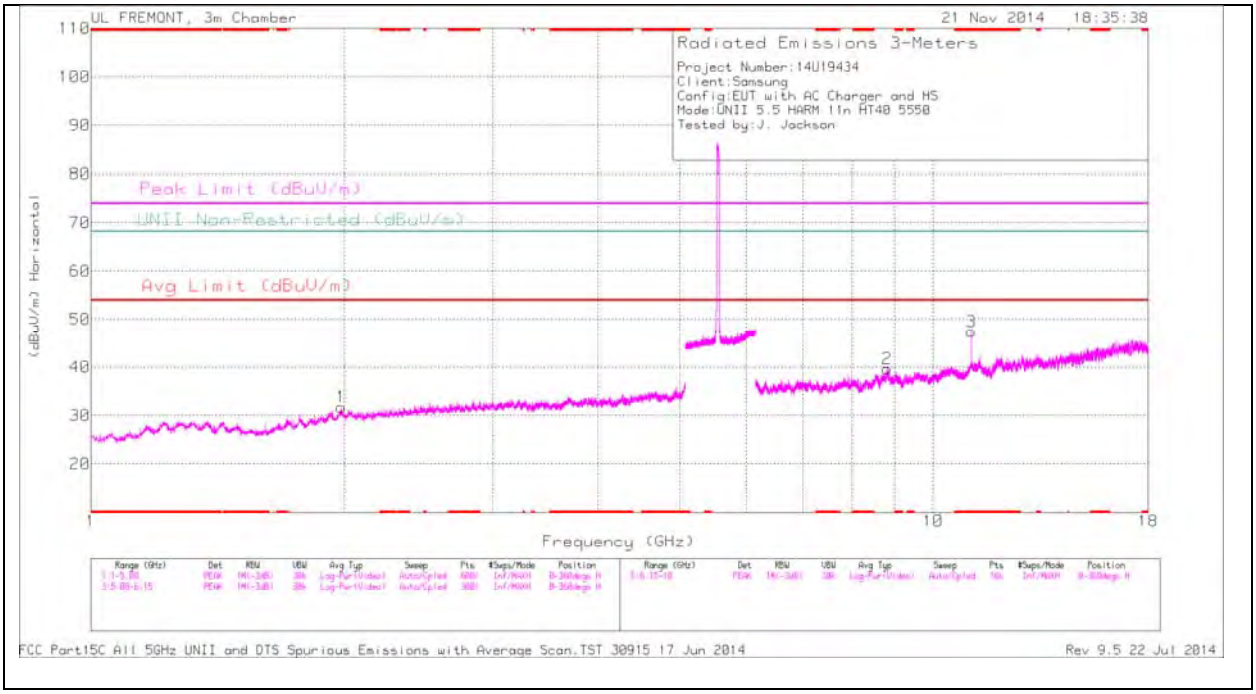
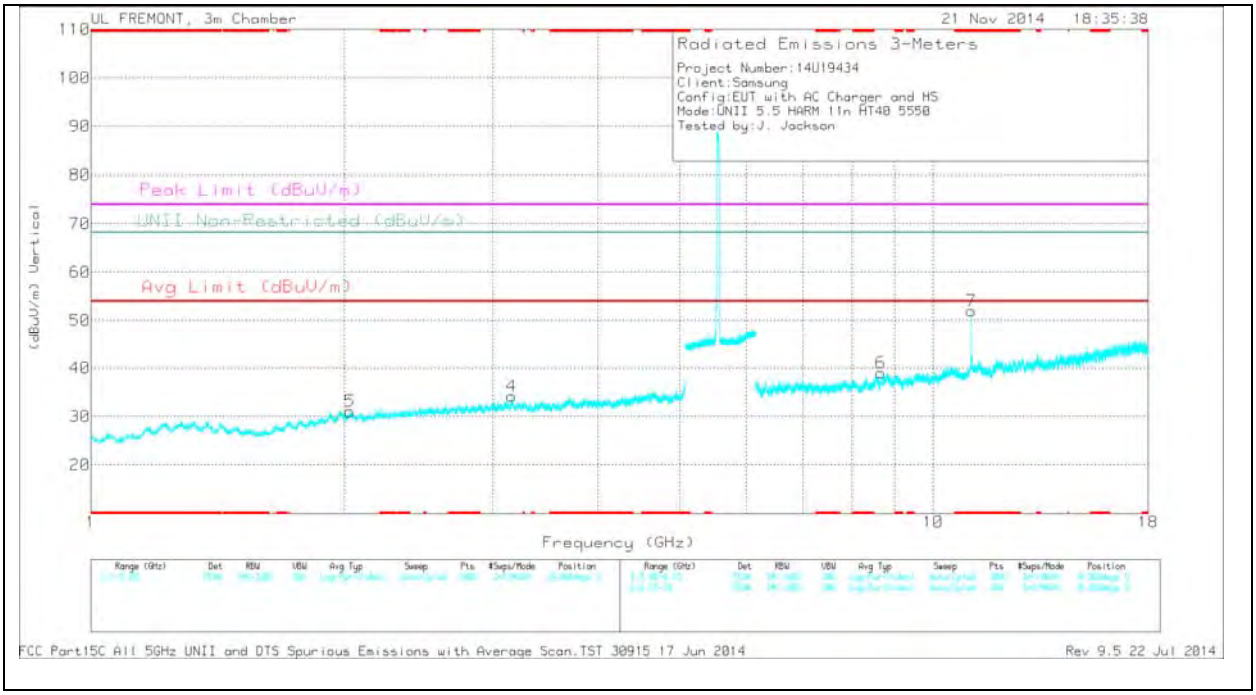
MID CHANNEL HORIZONTAL



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
3	* 11.1	34.89	PK	37.9	-25.3	0	47.49	-	-	74	-26.51	-	-	0-360	200	H
7	* 11.099	39.36	PK	37.9	-25.3	0	51.96	-	-	74	-22.04	-	-	0-360	200	V
1	1.983	32.26	PK	31.5	-32	0	31.76	-	-	-	-	68.2	-36.44	0-360	100	H
5	2.03	31.73	PK	31.6	-32.3	0	31.03	-	-	-	-	68.2	-37.17	0-360	200	V
4	3.161	32.69	PK	33	-31.5	0	34.19	-	-	-	-	68.2	-34.01	0-360	200	V
6	8.669	30.98	PK	35.8	-27.8	0	38.98	-	-	-	-	68.2	-29.22	0-360	100	V
2	8.817	29.24	PK	36	-25.6	0	39.64	-	-	-	-	68.2	-28.56	0-360	200	H

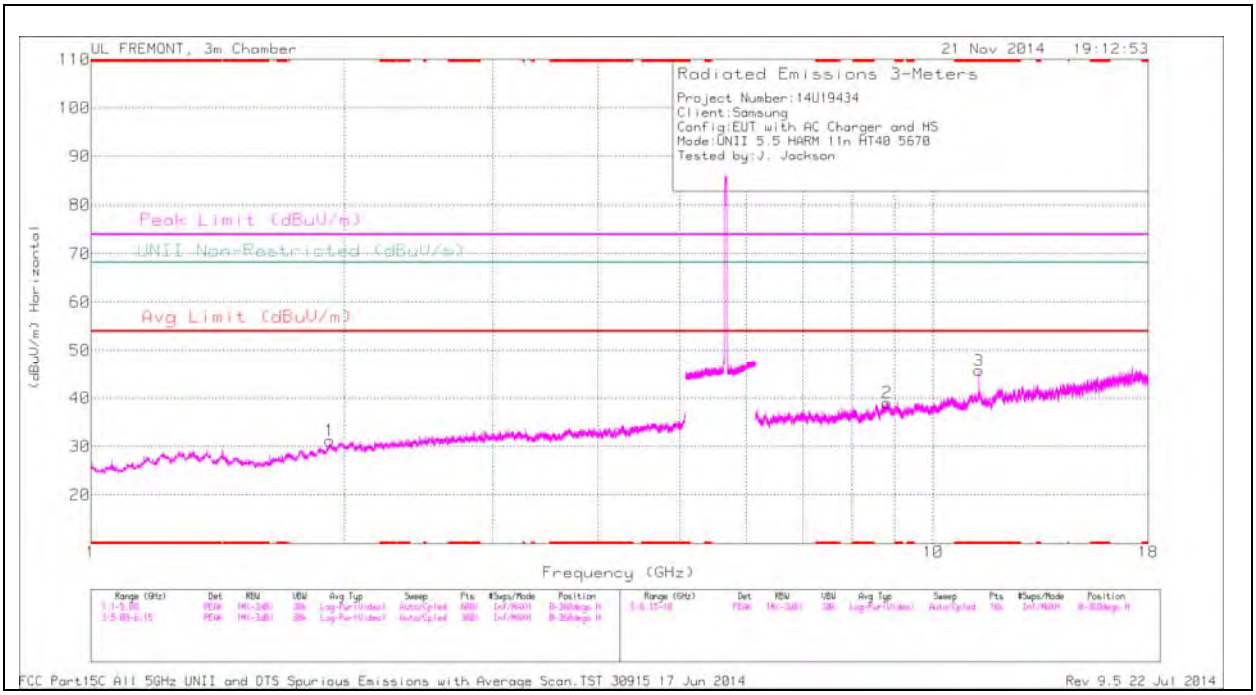
PK - Peak detector

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
* 11.1	42.99	PK1	37.9	-25.3	0	55.59	-	-	74	-18.41	-	-	102	318	H
* 11.1	36.13	AD1	37.9	-25.3	.63	49.38	54	-4.62	-	-	-	-	102	318	H
* 11.1	45.52	PK1	37.9	-25.3	0	58.12	-	-	74	-15.88	-	-	316	142	V
* 11.1	37.71	AD1	37.9	-25.3	.63	50.96	54	-3.04	-	-	-	-	316	142	V

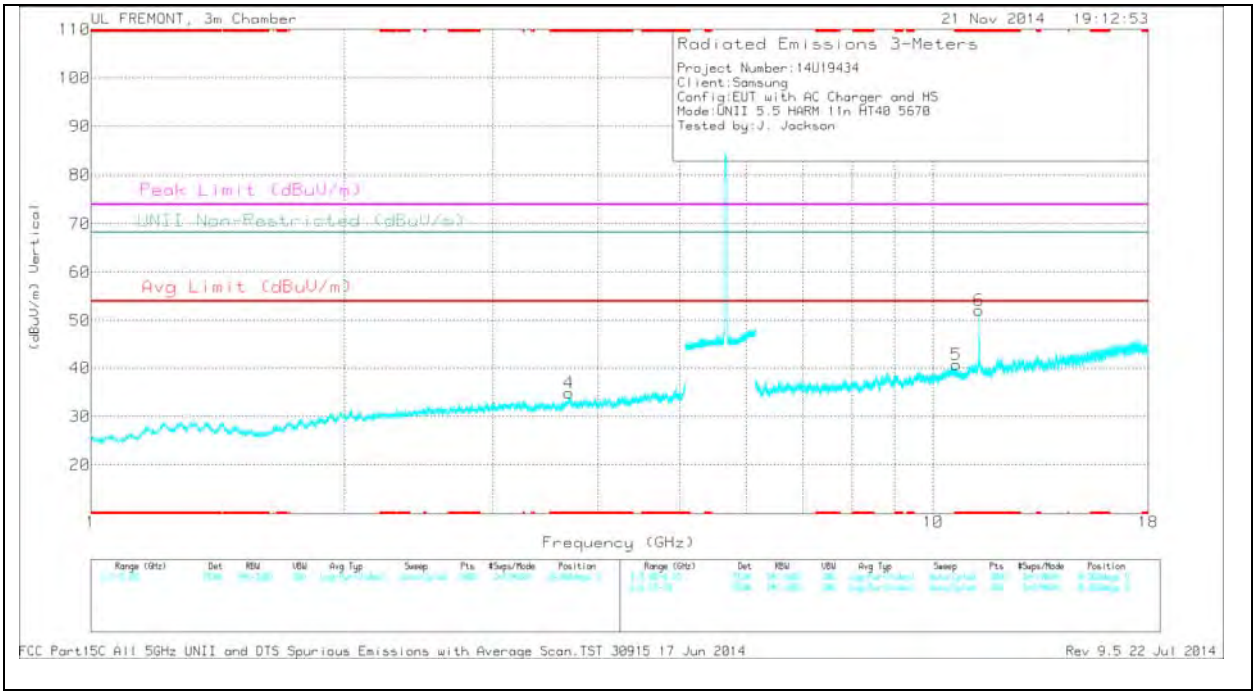
FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

HIGH CHANNEL HORIZONTAL



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

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	* 3.691	32.2	PK	33.2	-30.6	0	34.8	-	-	74	-39.2	-	-	0-360	100	V
3	* 11.34	33.21	PK	38	-25.5	0	45.71	-	-	74	-28.29	-	-	0-360	200	H
5	* 10.655	28.46	PK	37.8	-25.6	0	40.66	-	-	74	-33.34	-	-	0-360	200	V
6	* 11.34	39.57	PK	38	-25.5	0	52.07	-	-	74	-21.93	-	-	0-360	100	V
1	1.922	32.55	PK	31.3	-32.6	0	31.25	-	-	-	-	68.2	-36.95	0-360	100	H
2	8.817	28.58	PK	36	-25.6	0	38.98	-	-	-	-	68.2	-29.22	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
* 11.34	40.4	PK1	38	-25.5	0	52.9	-	-	74	-21.1	-	-	90	202	H
* 11.34	32.7	AD1	38	-25.5	.63	45.85	54	-8.15	-	-	-	-	90	202	H
* 10.658	36.62	PK1	37.8	-25.7	0	48.72	-	-	74	-25.28	-	-	95	200	V
* 10.658	24.84	AD1	37.8	-25.7	.63	37.59	54	-16.41	-	-	-	-	95	200	V

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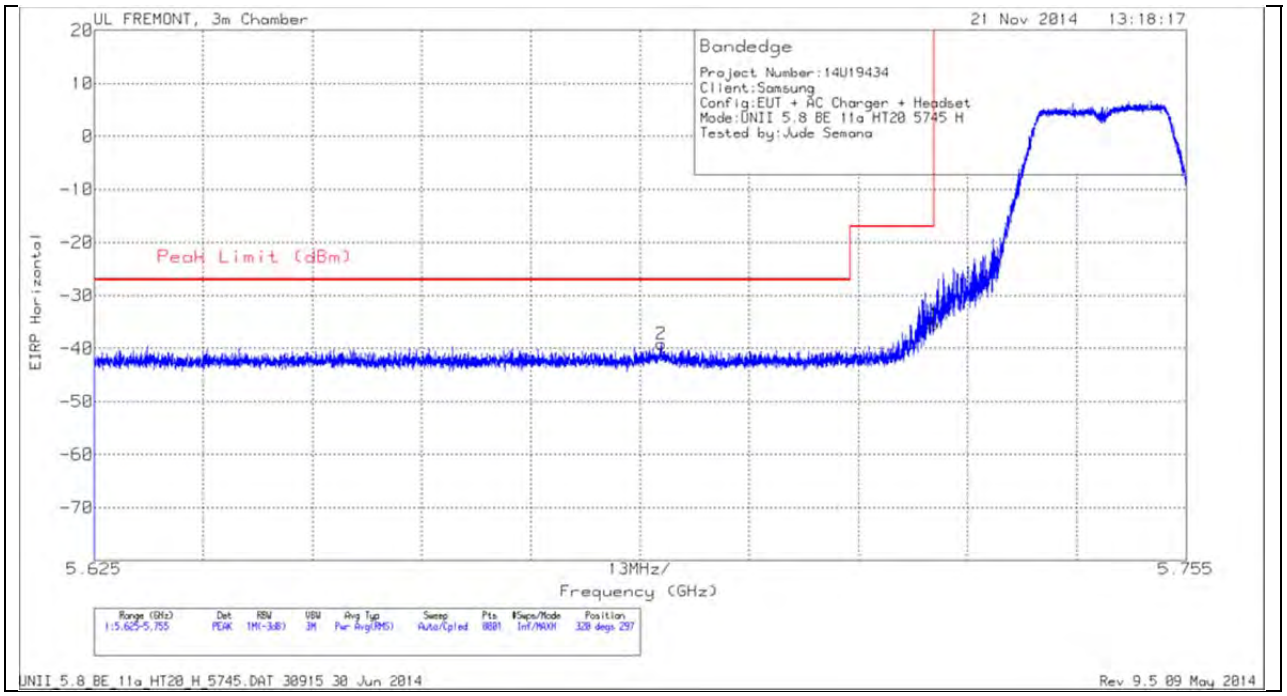
10.4. 5.8 GHz

10.4.1. TX ABOVE 1 GHz 802.11a MODE IN THE 5.8 GHz BAND

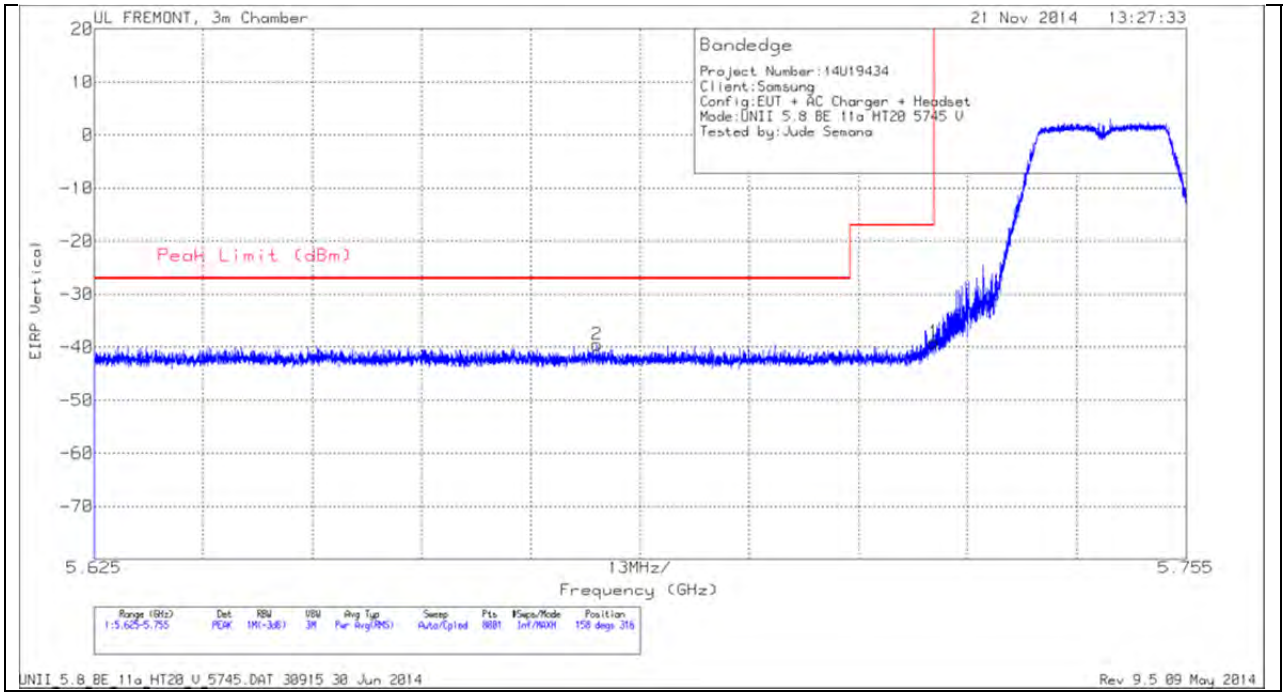
RESTRICTED BANDEDGE (LOW CHANNEL)
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.693	-64.72	PK	34.8	-21	11.8	0	-39.12	-27	-12.12	320	297	H
1	5.725	-60.93	PK	34.8	-21.1	11.8	0	-35.43	-17	-18.43	320	297	H

VERTICAL PEAK AND AVERAGE PLOT



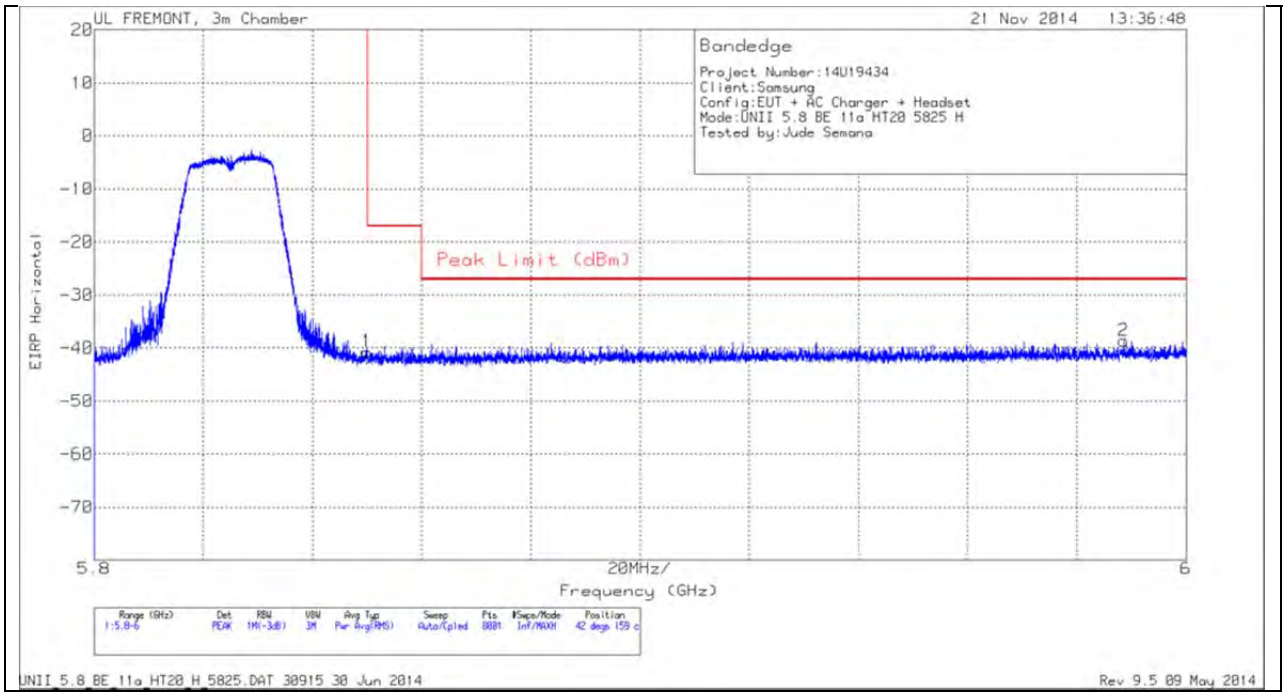
VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.685	-65.1	PK	34.8	-21	11.8	0	-39.5	-27	-12.5	158	316	V
1	5.725	-64.59	PK	34.8	-21.1	11.8	0	-39.09	-17	-22.09	158	316	V

PK - Peak detector

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



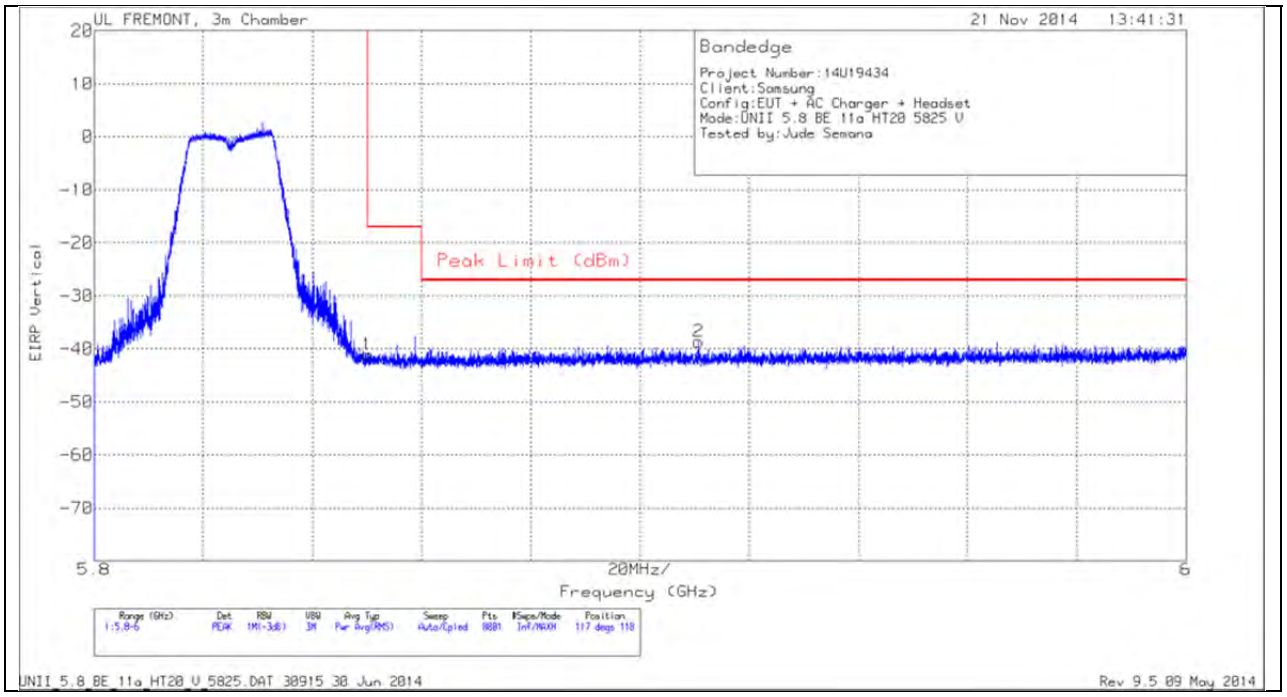
Note: above plot from pre-scan, please refer to data table for final result.

HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-66.24	PK	35	-21.3	11.8	0	-40.74	-27	-13.74	42	159	H
2	5.989	-64.82	PK	35.3	-20.9	11.8	0	-38.62	-27	-11.62	42	159	H

VERTICAL PEAK AND AVERAGE PLOT



Note: above plot from pre-scan, please refer to data table for final result.

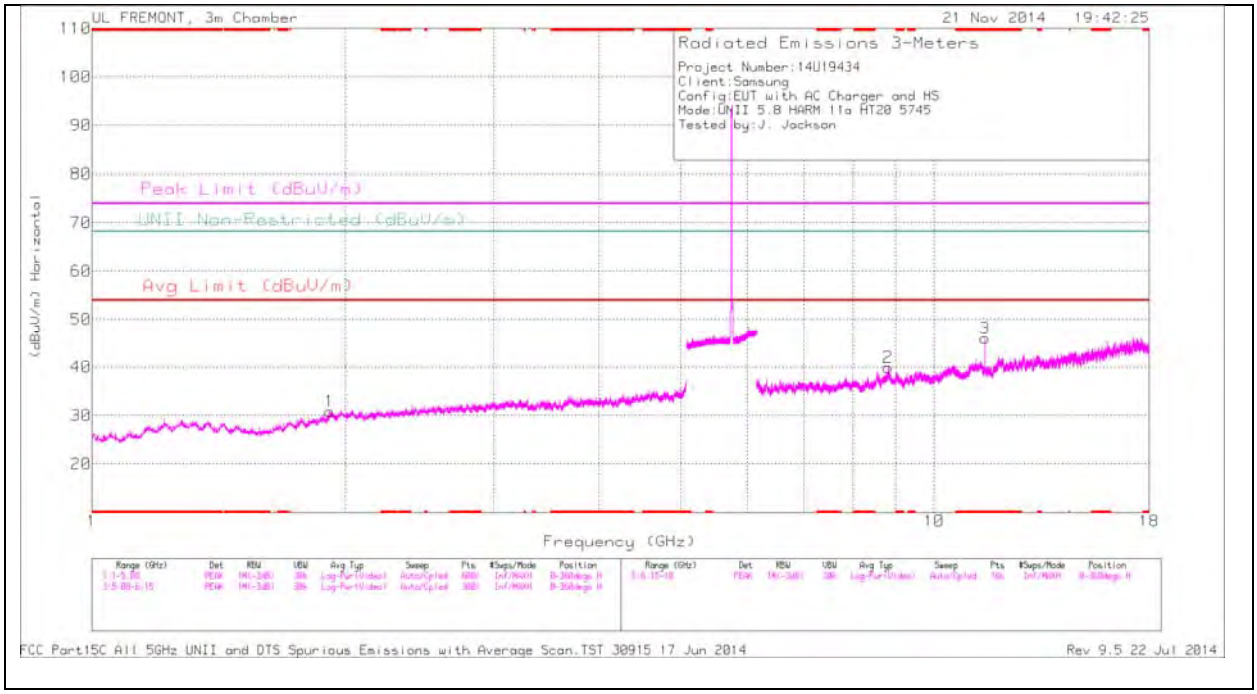
VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-66.56	PK	35	-21.3	11.8	0	-41.06	-27	-14.06	117	118	V
2	5.911	-64.43	PK	35.1	-21.1	11.8	0	-38.63	-27	-11.63	117	118	V

PK - Peak detector

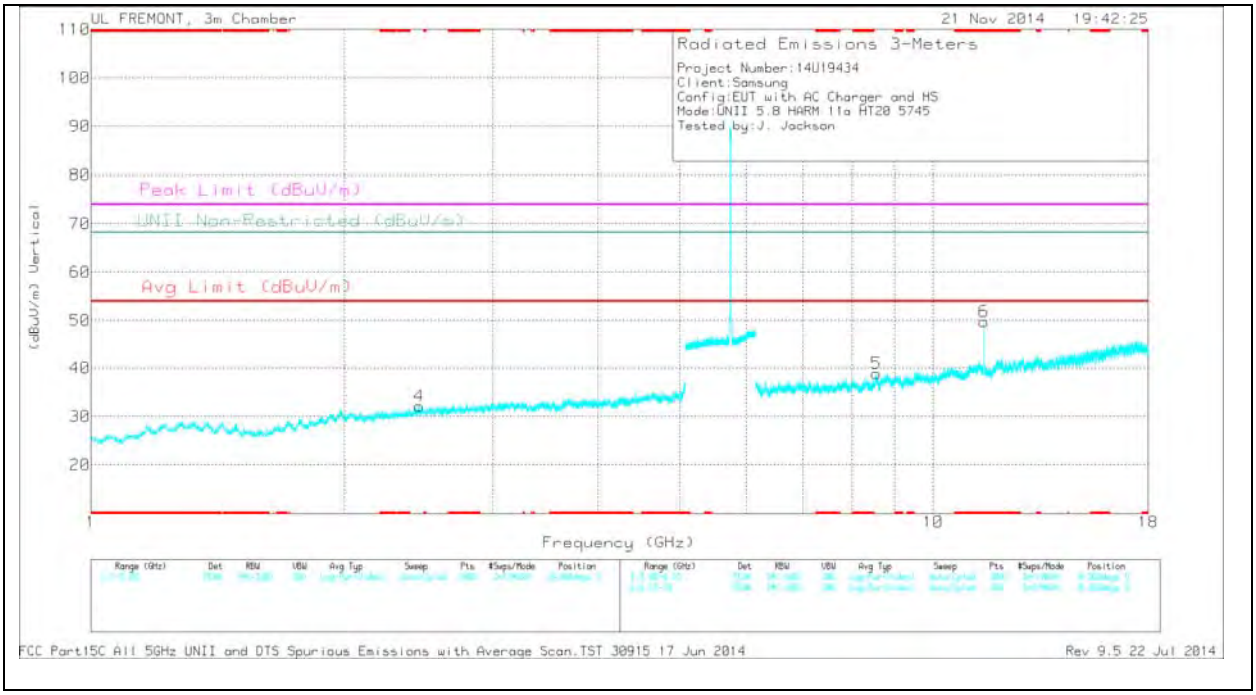
HARMONICS AND SPURIOUS EMISSIONS

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
3	* 11.49	33.87	PK	38.2	-26	0	46.07	-	-	74	-27.93	-	-	0-360	200	H
6	* 11.49	37.56	PK	38.2	-26	0	49.76	-	-	74	-24.24	-	-	0-360	100	V
1	1.916	32.28	PK	31.3	-32.7	0	30.88	-	-	-	-	68.2	-37.32	0-360	100	H
4	2.452	32.38	PK	32.2	-32.5	0	32.08	-	-	-	-	68.2	-36.12	0-360	200	V
5	8.563	29.3	PK	35.8	-26.2	0	38.9	-	-	-	-	68.2	-29.3	0-360	200	V
2	8.815	29.48	PK	36	-25.5	0	39.98	-	-	-	-	68.2	-28.22	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
* 11.49	41.49	PK1	38.2	-26	0	53.69	-	-	74	-20.31	-	-	95	328	H
* 11.49	33.56	AD1	38.2	-26	.29	46.05	54	-7.95	-	-	-	-	95	328	H
* 11.49	44.71	PK1	38.2	-26	0	56.91	-	-	74	-17.09	-	-	56	268	V
* 11.49	38.22	AD1	38.2	-26	.29	50.71	54	-3.29	-	-	-	-	56	268	V

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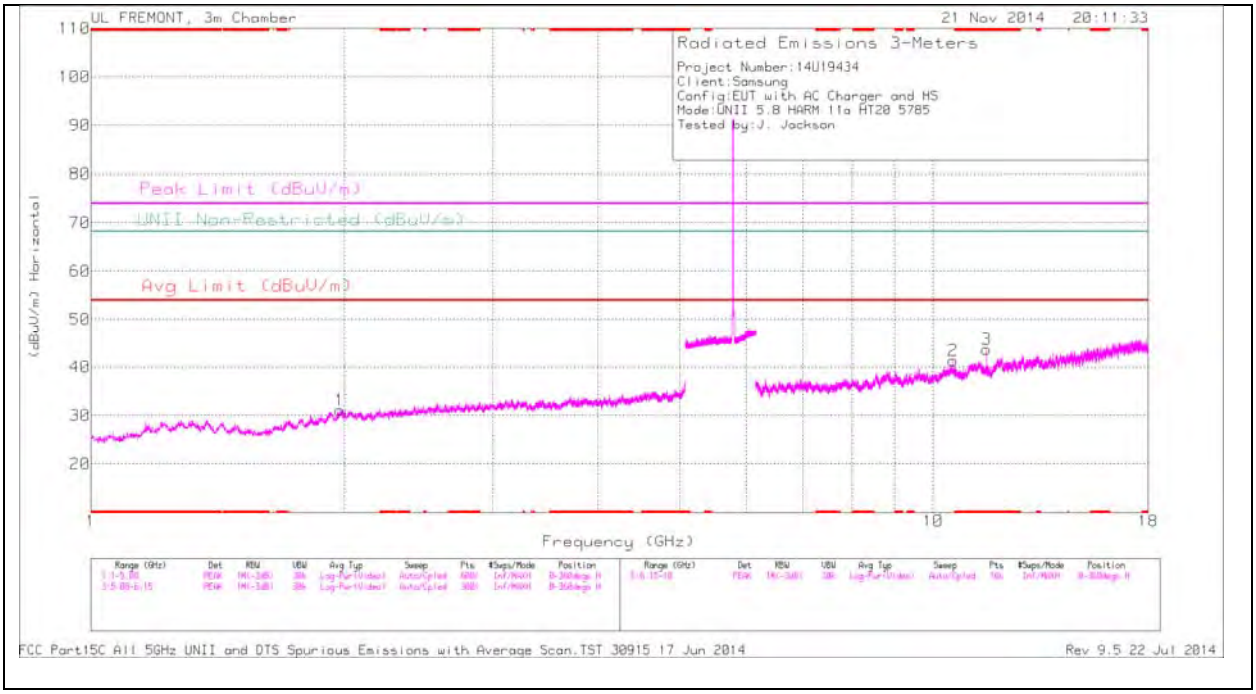
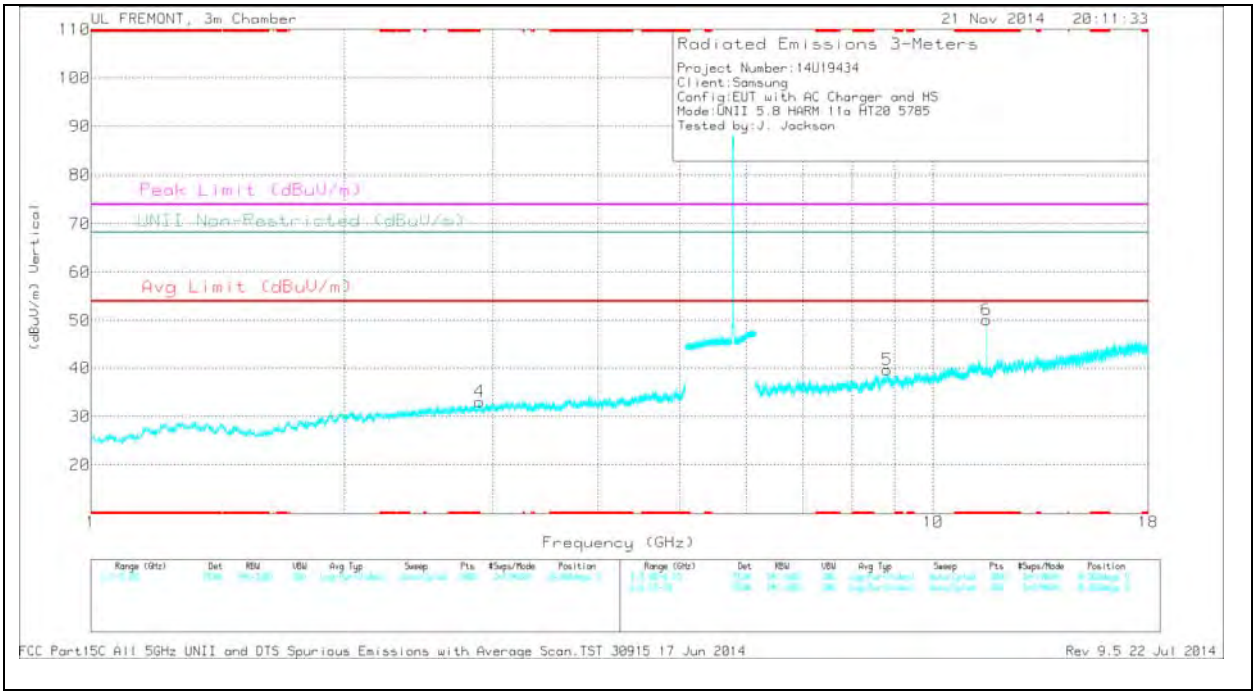
MID CHANNEL HORIZONTAL



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
4	* 2.892	32.7	PK	32.7	-32.3	0	33.1	-	-	74	-40.9	-	-	0-360	200	V
3	* 11.57	31.38	PK	38.4	-26.1	0	43.68	-	-	74	-30.32	-	-	0-360	200	H
6	* 11.57	37.83	PK	38.4	-26.1	0	50.13	-	-	74	-23.87	-	-	0-360	200	V
1	1.976	31.85	PK	31.5	-32.2	0	31.15	-	-	-	-	68.2	-37.05	0-360	100	H
5	8.816	29.13	PK	36	-25.5	0	39.63	-	-	-	-	68.2	-28.57	0-360	200	V
2	10.558	29	PK	37.6	-25.2	0	41.4	-	-	-	-	68.2	-26.8	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	40.14	PK1	38.4	-26.1	0	52.44	-	-	74	-21.56	-	-	234	383	H
* 11.57	30.76	AD1	38.4	-26.1	.29	43.35	54	-10.65	-	-	-	-	234	383	H
* 11.57	42.4	PK1	38.4	-26.1	0	54.7	-	-	74	-19.3	-	-	55	298	V
* 11.57	35.73	AD1	38.4	-26.1	.29	48.32	54	-5.68	-	-	-	-	55	298	V

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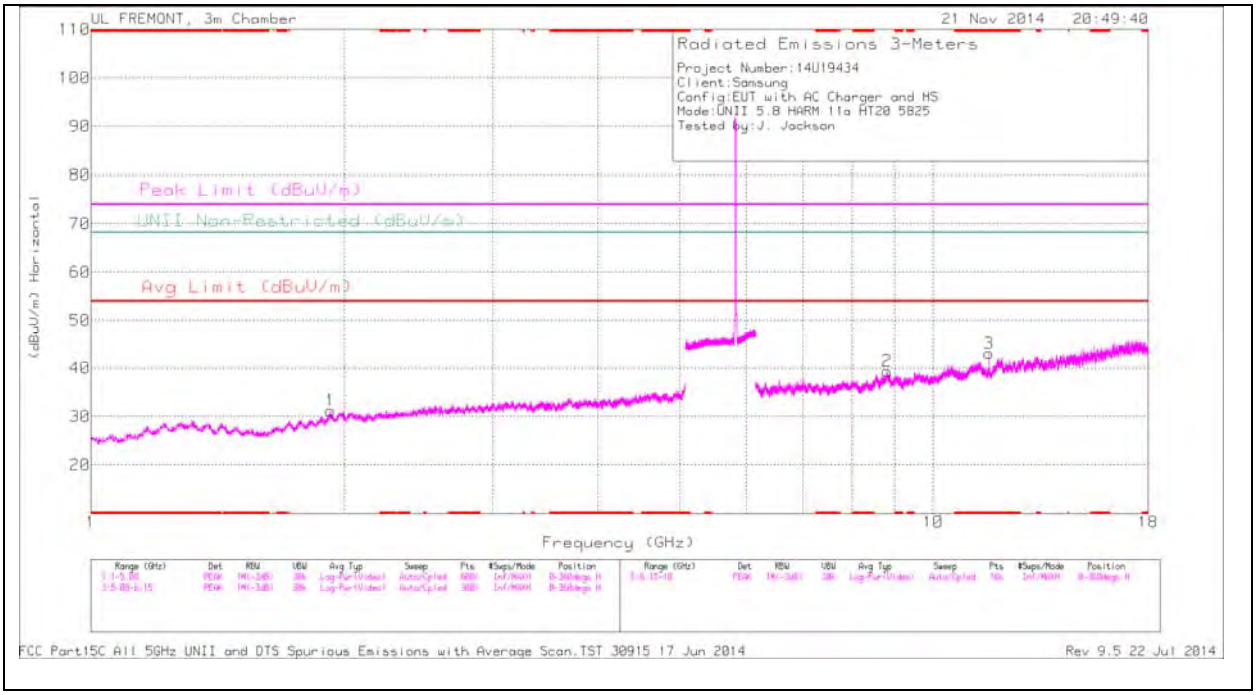
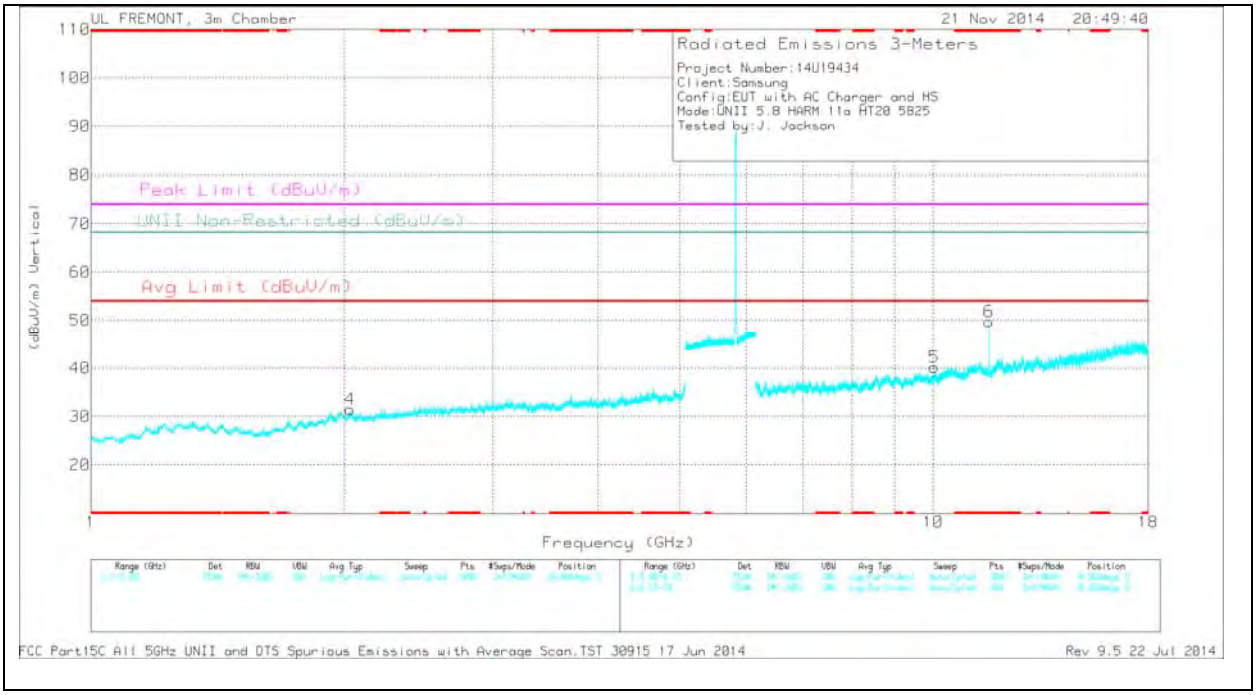
HIGH CHANNEL HORIZONTAL



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	* 11.65	30.58	PK	38.6	-26.2	0	42.98	-	-	74	-31.02	-	-	0-360	200	H
6	* 11.65	37.44	PK	38.6	-26.2	0	49.84	-	-	74	-24.16	-	-	0-360	200	V
1	1.923	32.43	PK	31.3	-32.5	0	31.23	-	-	-	-	68.2	-36.97	0-360	200	H
4	2.032	32.21	PK	31.6	-32.3	0	31.51	-	-	-	-	68.2	-36.69	0-360	100	V
2	8.821	29.07	PK	36	-25.7	0	39.37	-	-	-	-	68.2	-28.83	0-360	100	H
5	10.031	27.96	PK	37	-24.8	0	40.16	-	-	-	-	68.2	-28.04	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
* 11.65	40.54	PK1	38.6	-26.2	0	52.94	-	-	74	-21.06	-	-	93	291	H
* 11.65	31.23	AD1	38.6	-26.2	.29	43.92	54	-10.08	-	-	-	-	93	291	H
* 11.65	43.48	PK1	38.6	-26.2	0	55.88	-	-	74	-18.12	-	-	52	272	V
* 11.65	37.36	AD1	38.6	-26.2	.29	50.05	54	-3.95	-	-	-	-	52	272	V

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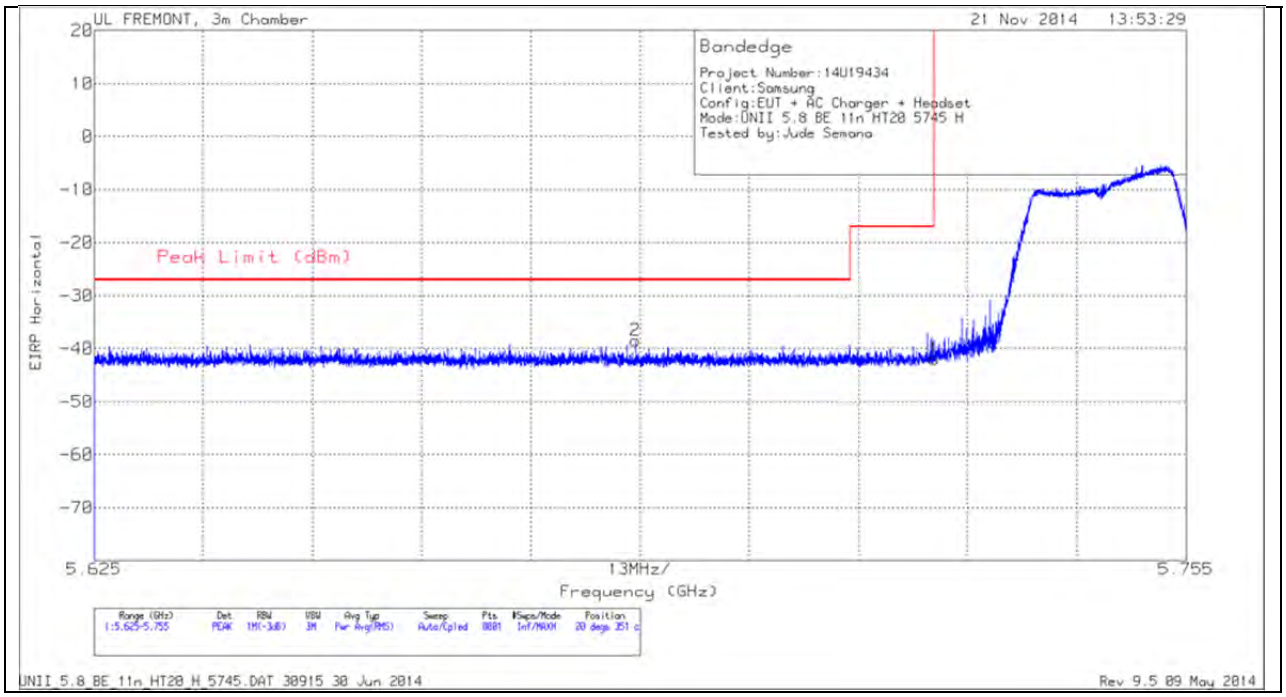
10.4.2. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.8 GHz BAND

HARMONICS AND SPURIOUS EMISSIONS
HORIZONTAL PEAK AND AVERAGE PLOT

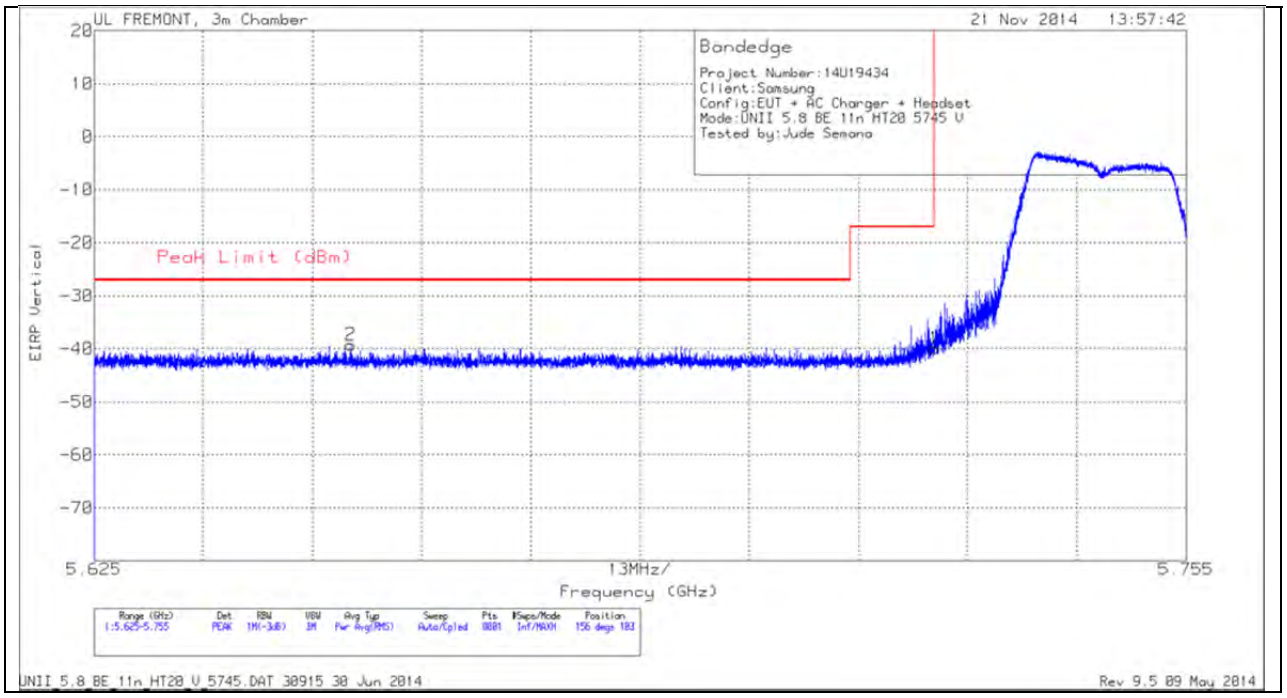


HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.689	-64.09	PK	34.8	-21	11.8	0	-38.49	-27	-11.49	20	351	H
1	5.725	-67.44	PK	34.8	-21.1	11.8	0	-41.94	-17	-24.94	20	351	H

PK - Peak detector

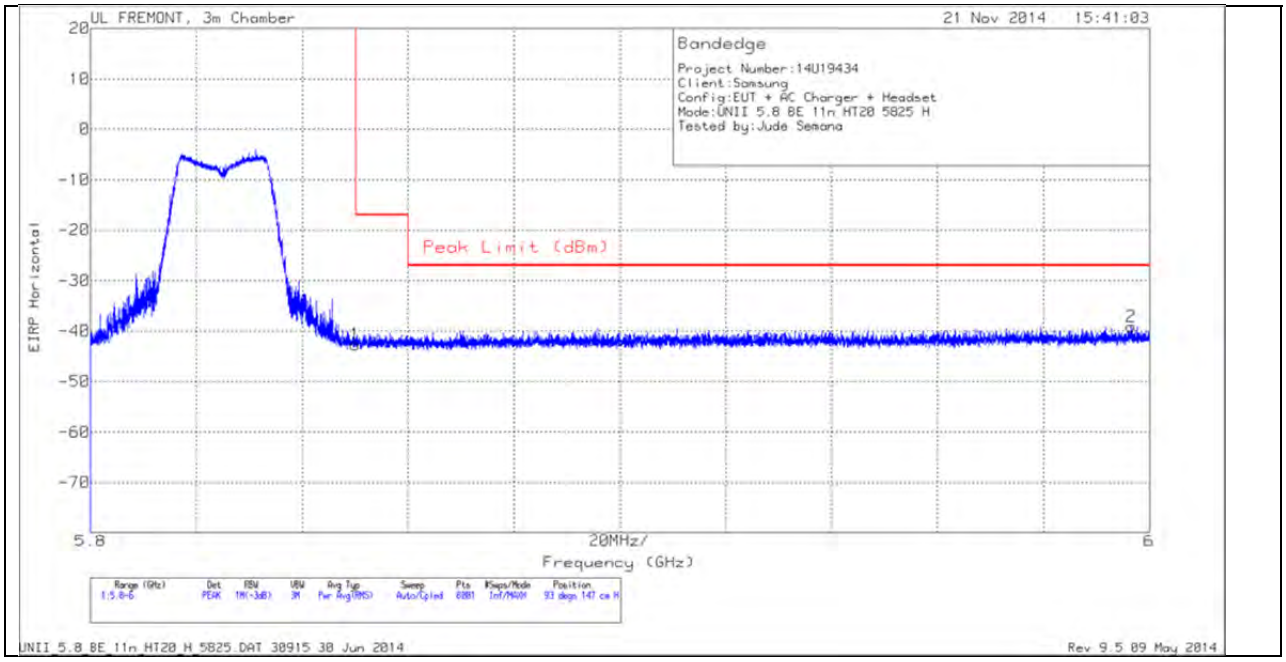
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.656	-64.85	PK	34.8	-21	11.8	0	-39.25	-27	-12.25	156	103	V
1	5.725	-65.39	PK	34.8	-21.1	11.8	0	-39.89	-17	-22.89	156	103	V

HORIZONTAL PEAK AND AVERAGE PLOT



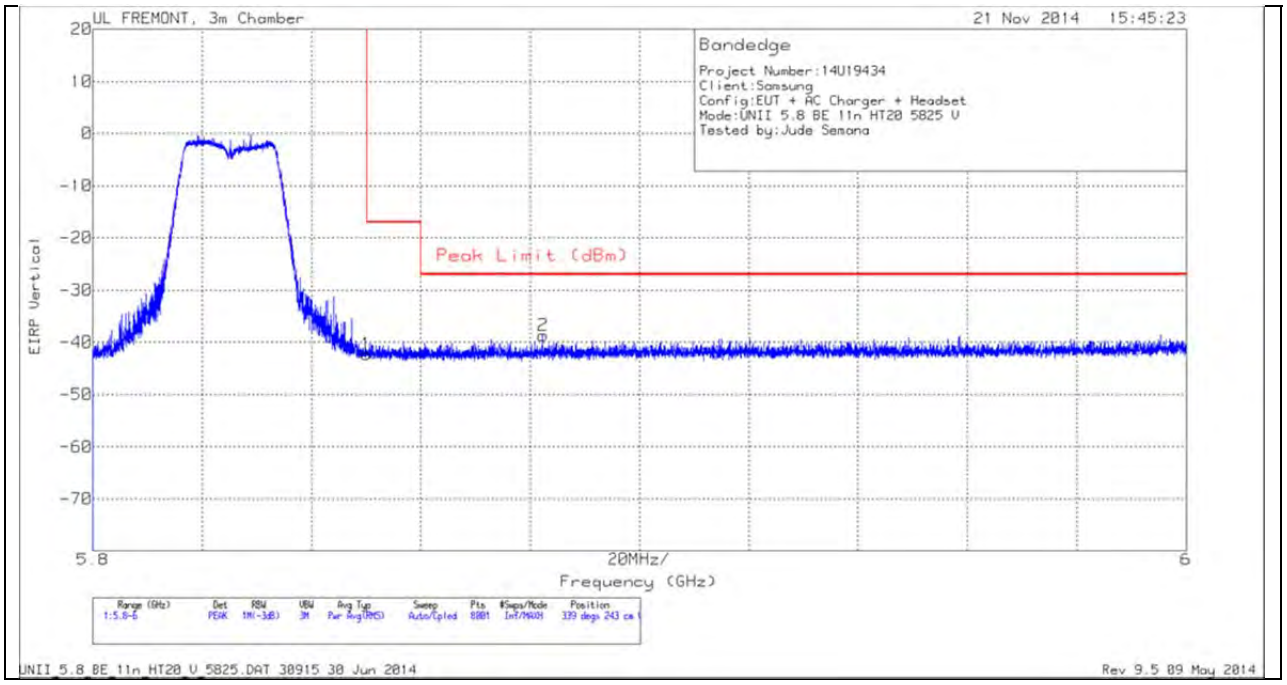
Note: above plot from pre-scan, please refer to data table for final result.

HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-68.15	PK	35	-21.3	11.8	0	-42.65	-27	-15.65	93	147	H
2	5.997	-65.39	PK	35.3	-20.8	11.8	0	-39.09	-27	-12.09	93	147	H

PK - Peak detector

VERTICAL PEAK AND AVERAGE PLOT



Note: above plot from pre-scan, please refer to data table for final result.

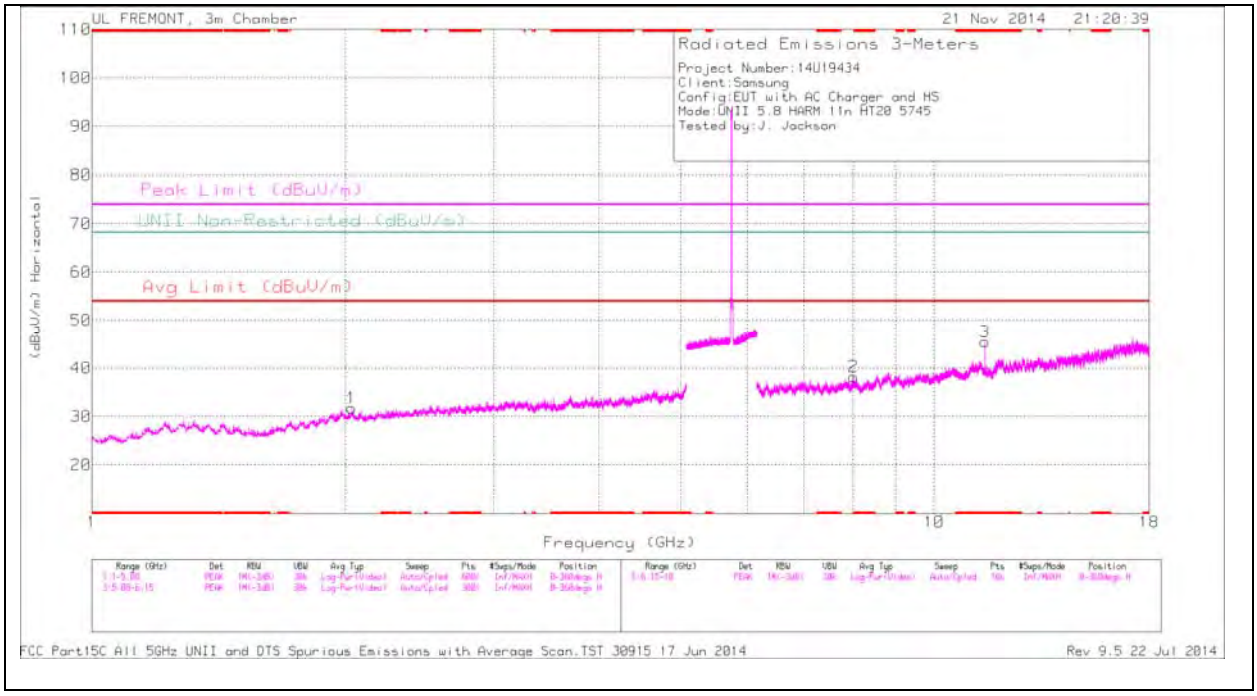
VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-67.8	PK	35	-21.3	11.8	0	-42.3	-27	-15.3	339	243	V
2	5.882	-64.46	PK	35.1	-21.1	11.8	0	-38.66	-27	-11.66	339	243	V

PK - Peak detector

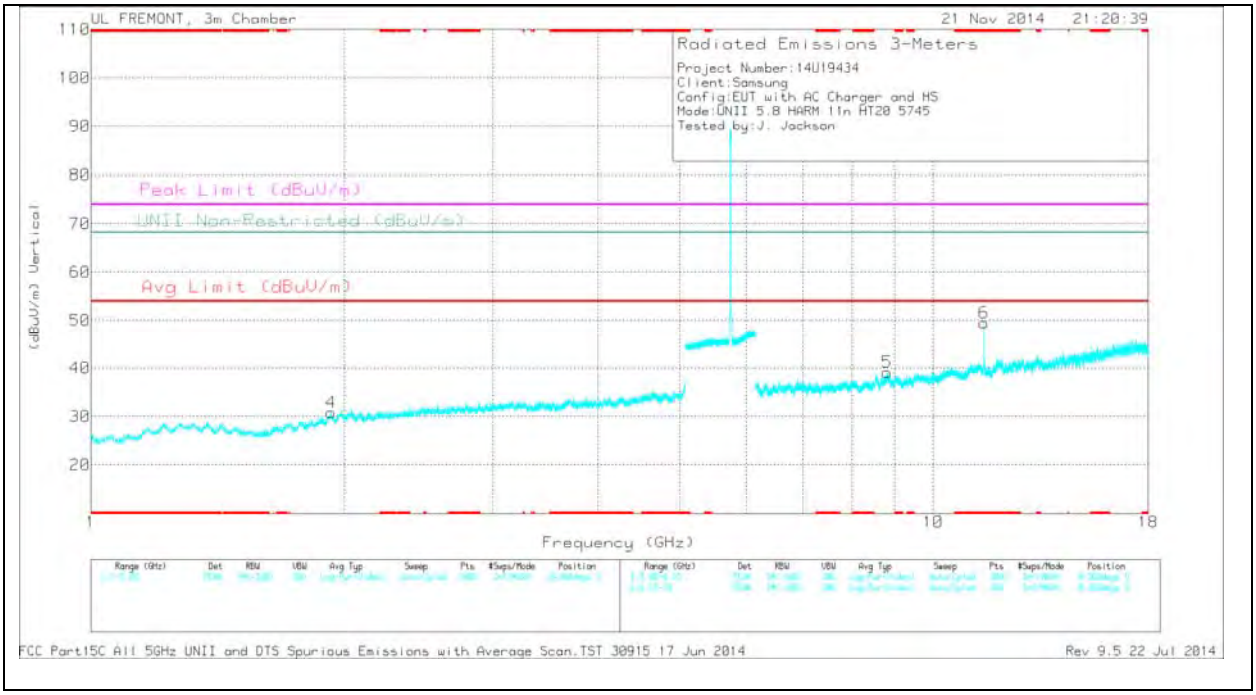
HARMONICS AND SPURIOUS EMISSIONS

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
3	* 11.49	33.27	PK	38.2	-26	0	45.47	-	-	74	-28.53	-	-	0-360	200	H
6	* 11.49	37.28	PK	38.2	-26	0	49.48	-	-	74	-24.52	-	-	0-360	100	V
4	1.928	32.05	PK	31.3	-32.5	0	30.85	-	-	-	-	68.2	-37.35	0-360	200	V
1	2.034	32.51	PK	31.6	-32.4	0	31.71	-	-	-	-	68.2	-36.49	0-360	100	H
2	8.019	30.45	PK	35.7	-27.9	0	38.25	-	-	-	-	68.2	-29.95	0-360	100	H
5	8.818	28.75	PK	36	-25.6	0	39.15	-	-	-	-	68.2	-29.05	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	41.65	PK1	38.2	-26	0	53.85	-	-	74	-20.15	-	-	235	359	H
* 11.49	31.12	AD1	38.2	-26	.31	43.63	54	-10.37	-	-	-	-	235	359	H
* 11.49	44.02	PK1	38.2	-26	0	56.22	-	-	74	-17.78	-	-	53	279	V
* 11.49	38.52	AD1	38.2	-26	.31	51.03	54	-2.97	-	-	-	-	53	279	V

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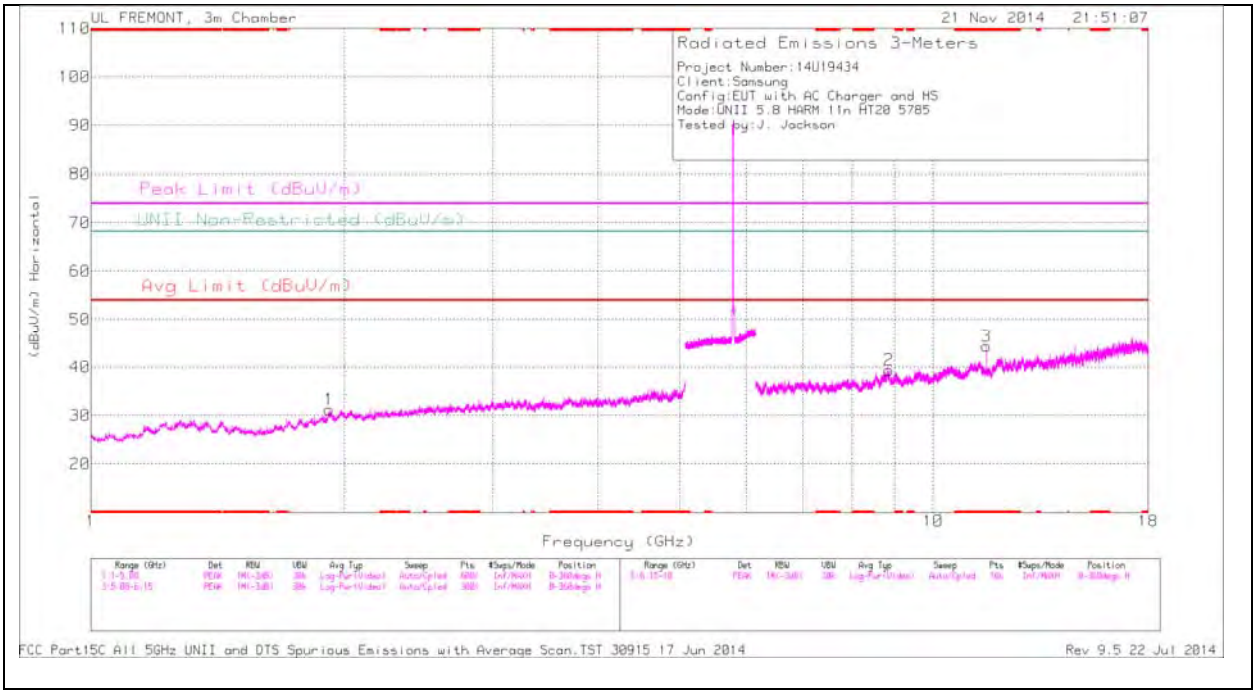
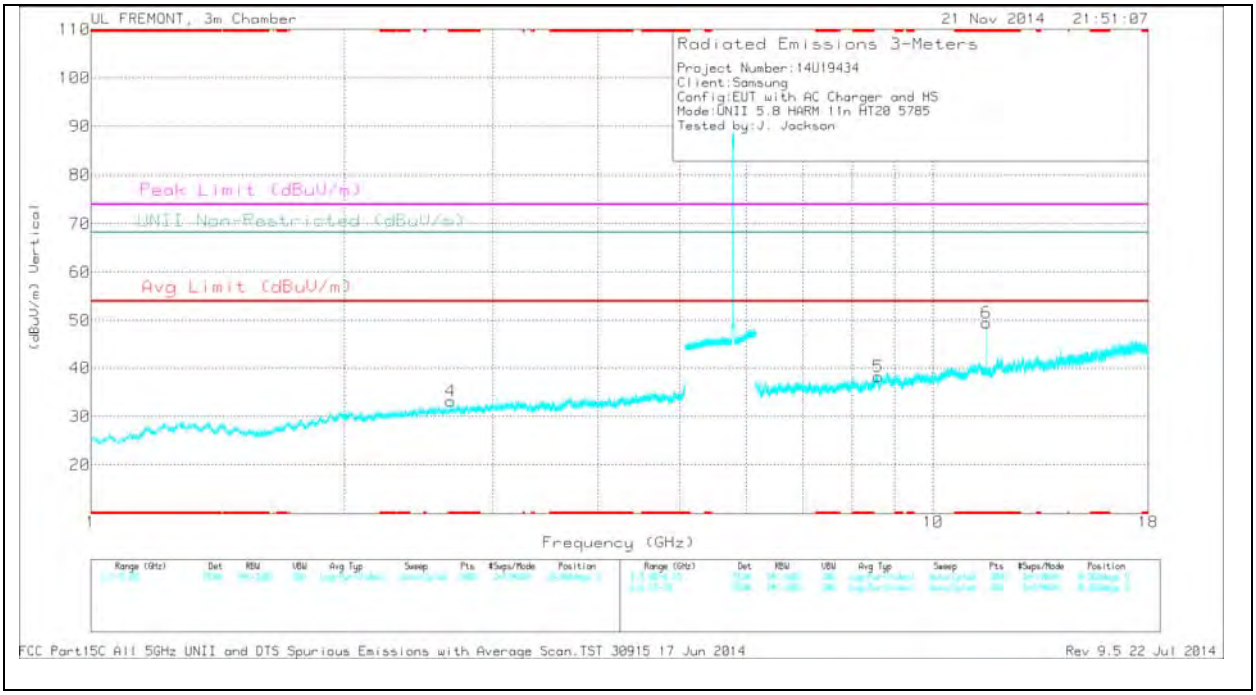
MID CHANNEL HORIZONTAL



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
4	* 2.673	32.84	PK	32.6	-32.3	0	33.14	-	-	74	-40.86	-	-	0-360	100	V
3	* 11.57	32.06	PK	38.4	-26.1	0	44.36	-	-	74	-29.64	-	-	0-360	200	H
6	* 11.57	37.28	PK	38.4	-26.1	0	49.58	-	-	74	-24.42	-	-	0-360	200	V
1	1.919	32.53	PK	31.3	-32.6	0	31.23	-	-	-	-	68.2	-36.97	0-360	200	H
5	8.612	28.88	PK	35.8	-26.4	0	38.28	-	-	-	-	68.2	-29.92	0-360	200	V
2	8.868	29.84	PK	36	-26.5	0	39.34	-	-	-	-	68.2	-28.86	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
* 11.57	39.01	PK1	38.4	-26.1	0	51.31	-	-	74	-22.69	-	-	88	187	H
* 11.57	29.27	AD1	38.4	-26.1	.31	41.88	54	-12.12	-	-	-	-	88	187	H
* 11.57	43.66	PK1	38.4	-26.1	0	55.96	-	-	74	-18.04	-	-	56	211	V
* 11.57	38.23	AD1	38.4	-26.1	.31	50.84	54	-3.16	-	-	-	-	56	211	V

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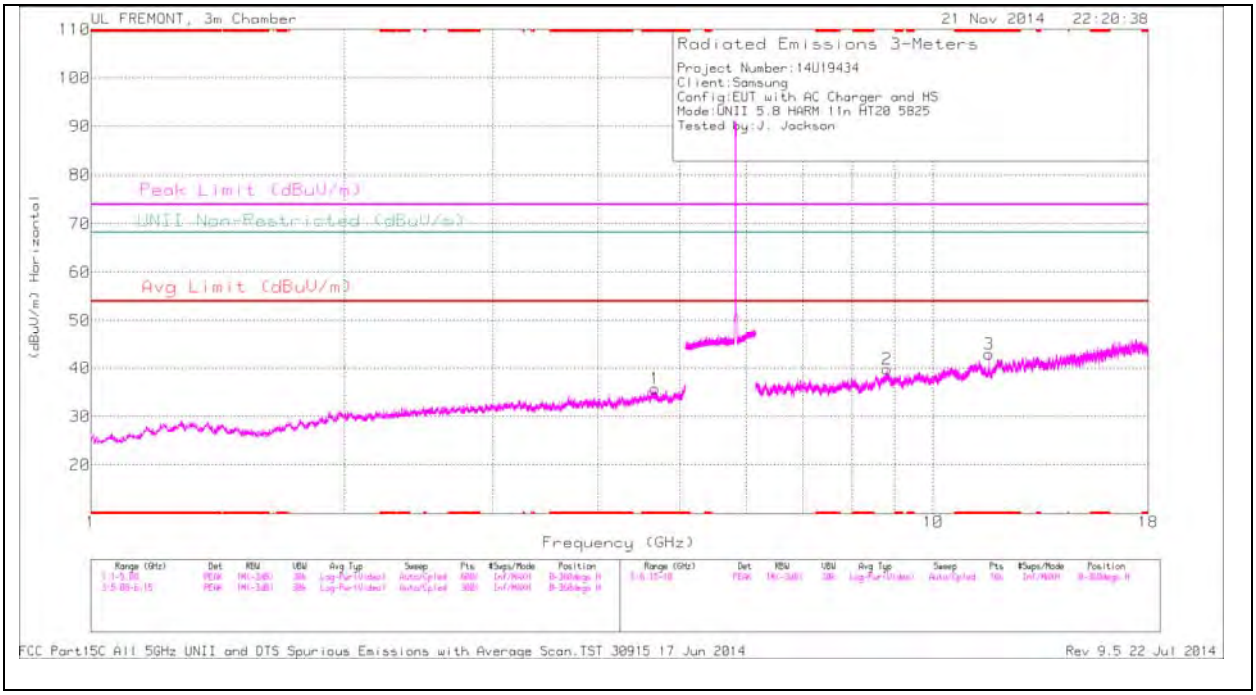
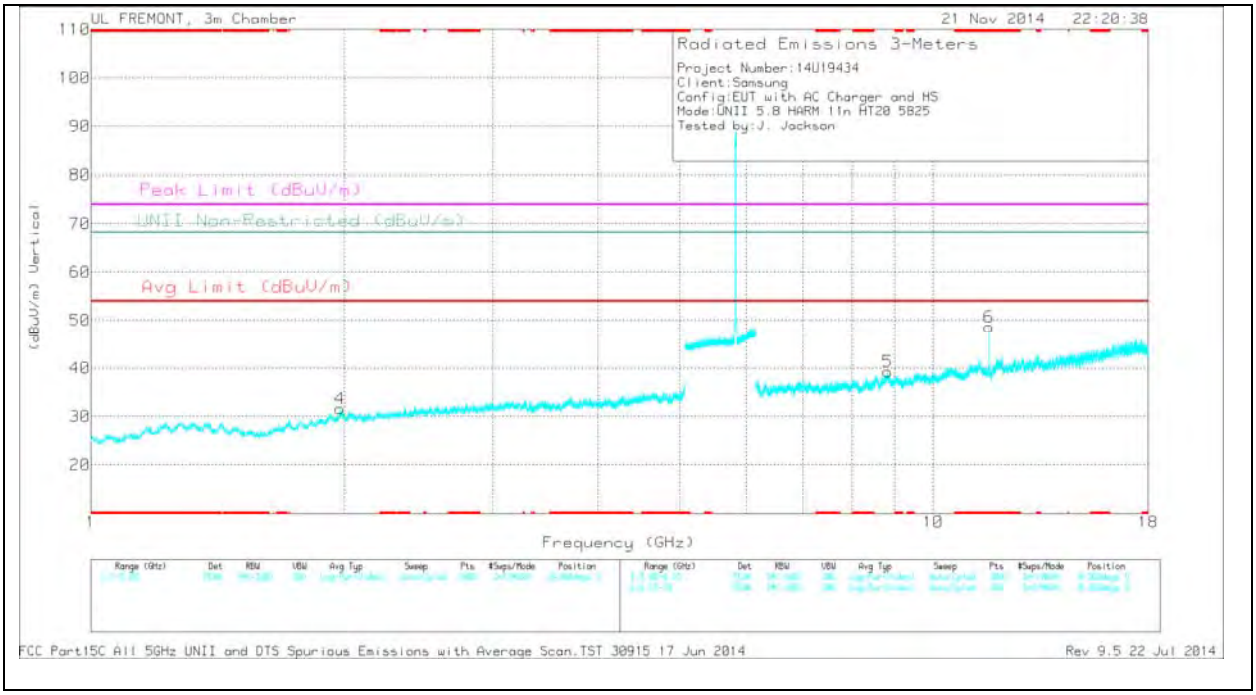
HIGH CHANNEL HORIZONTAL



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	* 4.678	32.01	PK	34.1	-30.3	0	35.81	-	-	74	-38.19	-	-	0-360	200	H
3	* 11.65	30.52	PK	38.6	-26.2	0	42.92	-	-	74	-31.08	-	-	0-360	200	H
6	* 11.65	36.27	PK	38.6	-26.2	0	48.67	-	-	74	-25.33	-	-	0-360	200	V
4	1.976	32.33	PK	31.5	-32.2	0	31.63	-	-	-	-	68.2	-36.57	0-360	200	V
2	8.815	29.28	PK	36	-25.5	0	39.78	-	-	-	-	68.2	-28.42	0-360	200	H
5	8.825	29.09	PK	36	-25.8	0	39.29	-	-	-	-	68.2	-28.91	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
* 11.65	40.52	PK1	38.6	-26.2	0	52.92	-	-	74	-21.08	-	-	231	360	H
* 11.65	30.24	AD1	38.6	-26.2	.31	42.95	54	-11.05	-	-	-	-	231	360	H
* 11.65	43.81	PK1	38.6	-26.2	0	56.21	-	-	74	-17.79	-	-	56	178	V
* 11.65	37.07	AD1	38.6	-26.2	.31	49.78	54	-4.22	-	-	-	-	56	178	V

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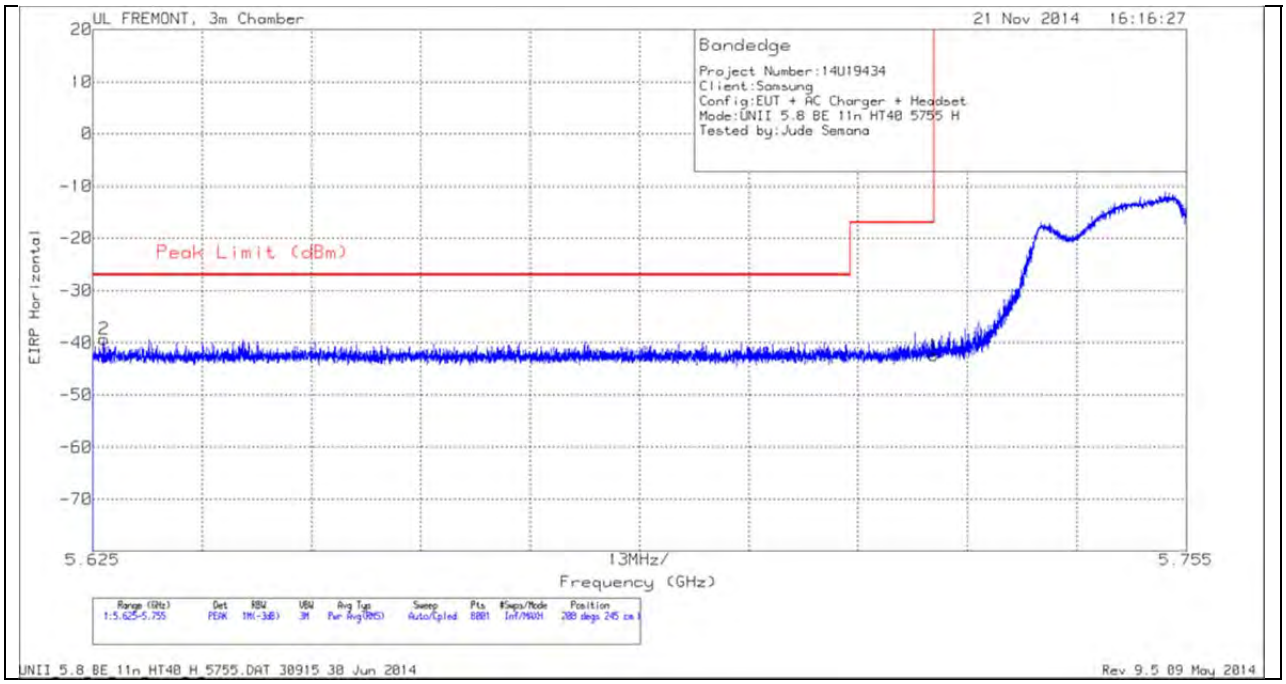
10.4.3. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.8 GHz BAND HARMONICS AND SPURIOUS EMISSIONS

HORIZONTAL PEAK AND AVERAGE PLOT

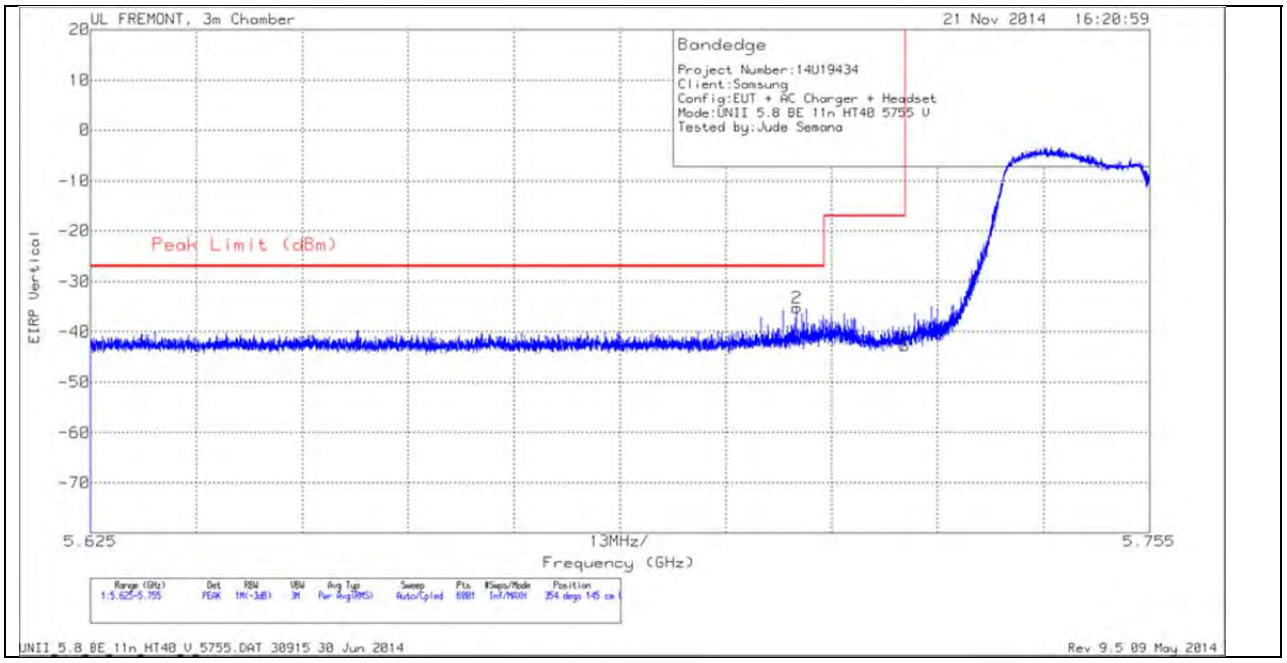


HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.626	-64.89	PK	34.7	-20.9	11.8	0	-39.29	-27	-12.29	208	245	H
1	5.725	-67.94	PK	34.8	-21.1	11.8	0	-42.44	-17	-25.44	208	245	H

PK - Peak detector

VERTICAL PEAK AND AVERAGE PLOT



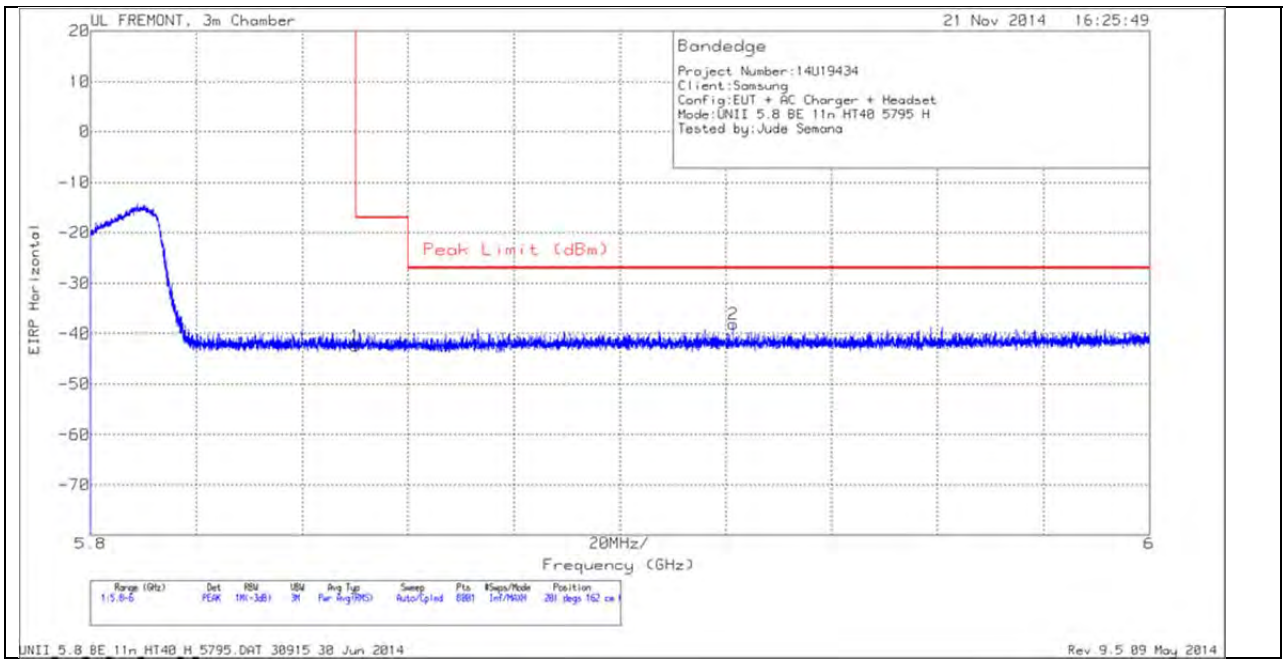
VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.712	-60.81	PK	34.8	-21	11.8	0	-35.21	-27	-8.21	354	145	V
1	5.725	-68.26	PK	34.8	-21.1	11.8	0	-42.76	-17	-25.76	354	145	V

PK - Peak detector

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



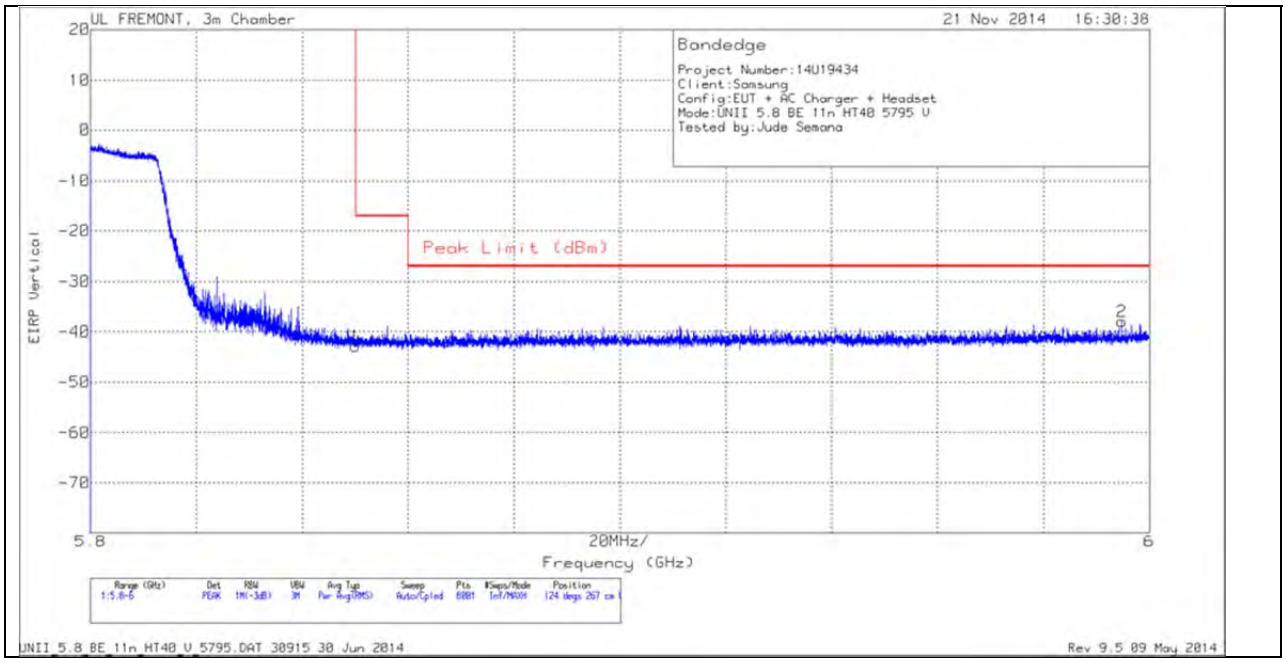
Note: above plot from pre-scan, please refer to data table for final result.

HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-67.91	PK	35	-21.3	11.8	0	-42.41	-27	-15.41	201	162	H
2	5.921	-63.91	PK	35.1	-21.1	11.8	0	-38.11	-27	-11.11	201	162	H

PK - Peak detector

VERTICAL PEAK AND AVERAGE PLOT



Note: above plot from pre-scan, please refer to data table for final result.

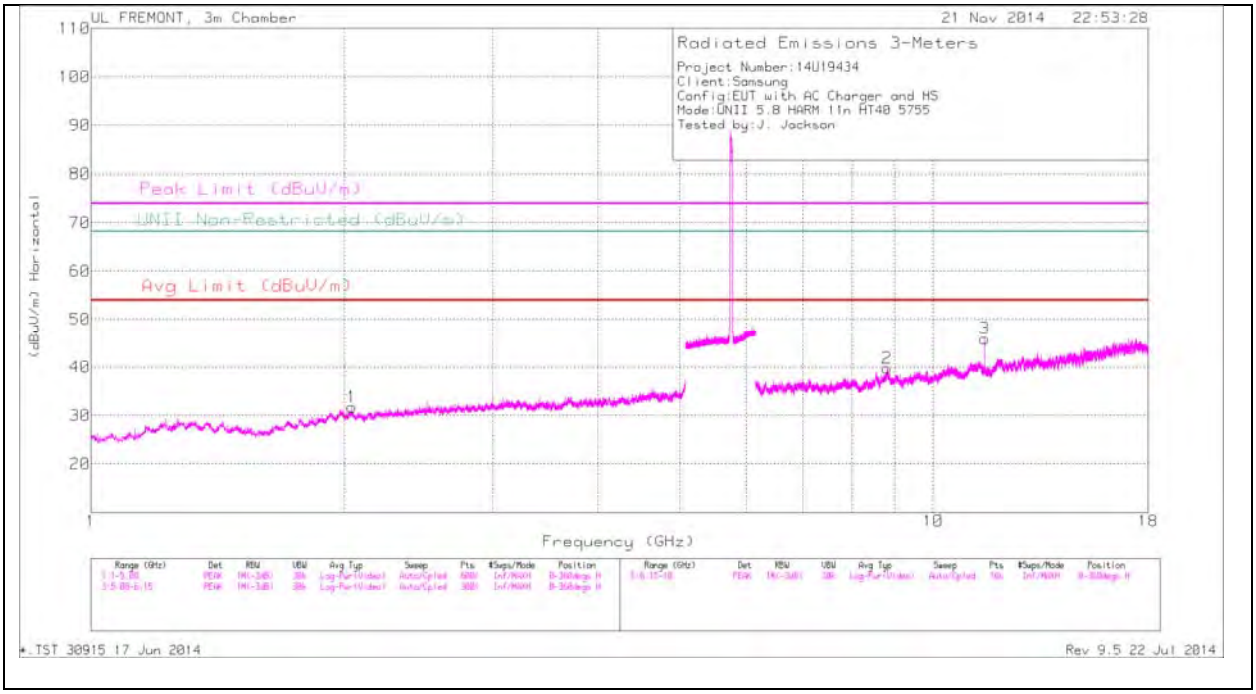
VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-68.33	PK	35	-21.3	11.8	0	-42.83	-27	-15.83	124	267	V
2	5.995	-64.14	PK	35.3	-20.9	11.8	0	-37.94	-27	-10.94	124	267	V

PK - Peak detector

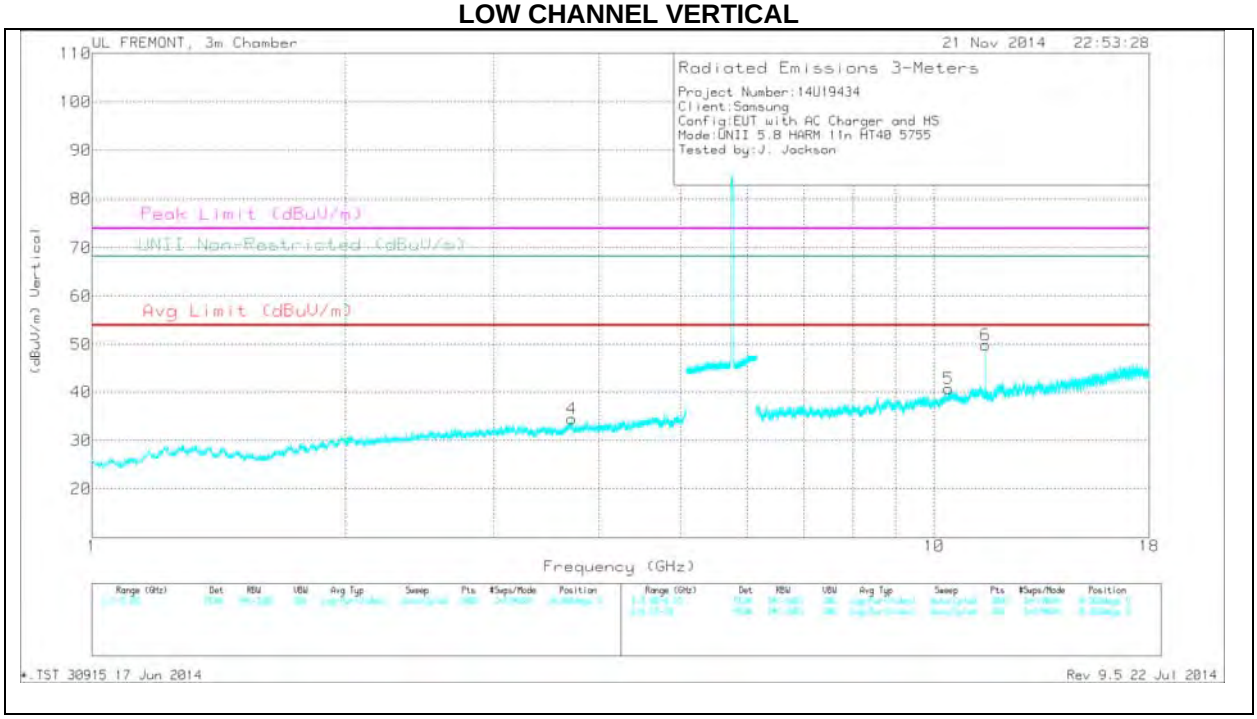
HARMONICS AND SPURIOUS EMISSIONS

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	2.04	32.46	PK	31.6	-32.3	0	31.76	-	-	-	-	68.2	-36.44	0-360	100	H
4	3.71	32.18	PK	33.2	-30.9	0	34.48	-	-	74	-39.52	-	-	0-360	100	V
2	8.815	29.3	PK	36	-25.5	0	39.8	-	-	-	-	68.2	-28.4	0-360	200	H
5	10.402	29.06	PK	37.4	-25.8	0	40.66	-	-	-	-	68.2	-27.54	0-360	200	V
3	11.51	33.86	PK	38.3	-26.2	0	45.96	-	-	74	-28.04	-	-	0-360	200	H
6	11.51	37.78	PK	38.3	-26.2	0	49.88	-	-	74	-24.12	-	-	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
11.51	40.91	PK1	38.3	-26.2	0	53.01	-	-	74	-20.99	-	-	105	314	H
11.51	34.18	AD1	38.3	-26.2	.63	46.93	54	-7.07	-	-	-	-	105	314	H
11.51	43.36	PK1	38.3	-26.2	0	55.46	-	-	74	-18.54	-	-	50	192	V
11.51	38.28	AD1	38.3	-26.2	.63	51.03	54	-2.97	-	-	-	-	50	192	V

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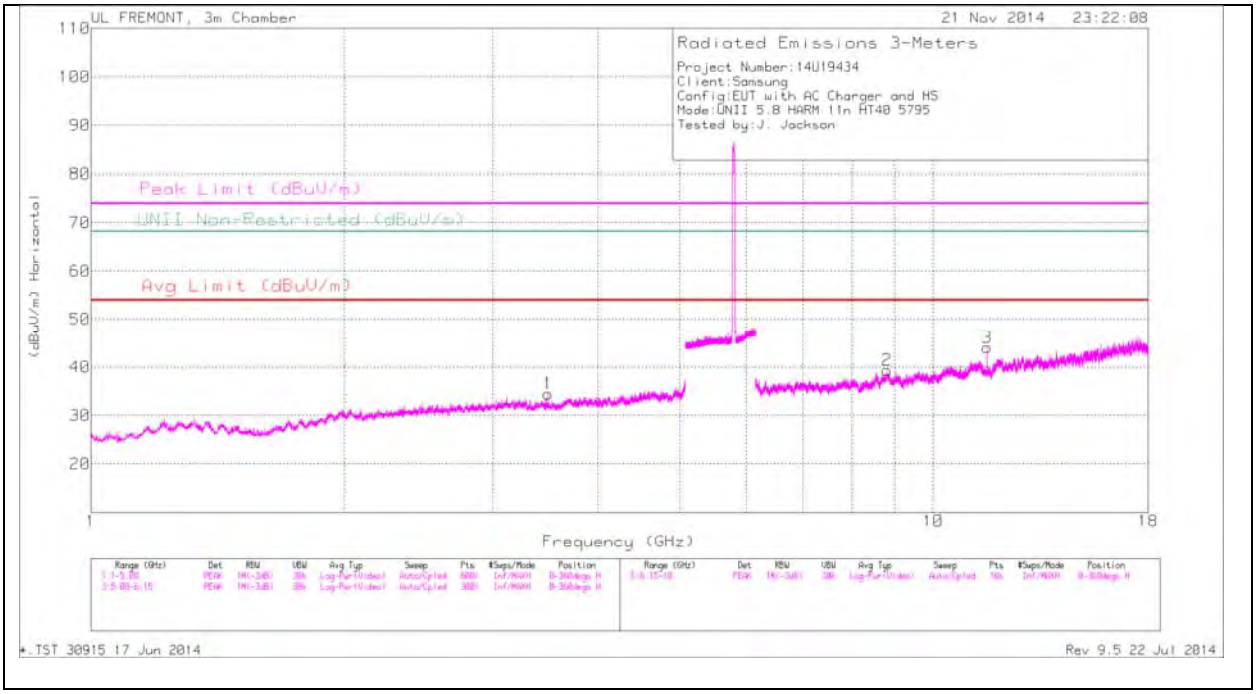
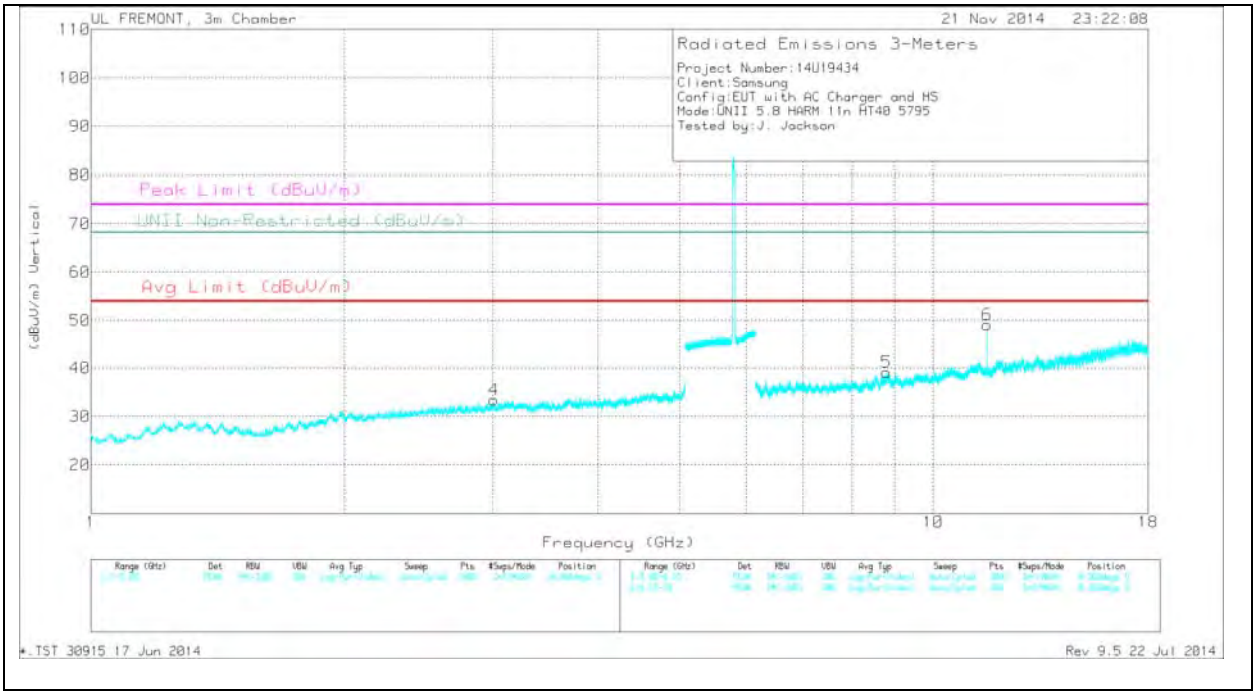
HIGH CHANNEL HORIZONTAL



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
4	3.008	32.28	PK	33	-31.9	0	33.38	-	-	-	-	68.2	-34.82	0-360	200	V
1	3.487	32.99	PK	33	-31.5	0	34.49	-	-	-	-	68.2	-33.71	0-360	100	H
5	8.803	28.75	PK	36	-25.6	0	39.15	-	-	-	-	68.2	-29.05	0-360	200	V
2	8.816	28.95	PK	36	-25.5	0	39.45	-	-	-	-	68.2	-28.75	0-360	200	H
3	11.59	31.59	PK	38.4	-25.9	0	44.09	-	-	74	-29.91	-	-	0-360	200	H
6	11.59	36.65	PK	38.4	-25.9	0	49.15	-	-	74	-24.85	-	-	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
11.59	39.14	PK1	38.4	-25.9	0	51.64	-	-	74	-22.36	-	-	236	269	H
11.59	28.97	AD1	38.4	-25.9	.63	42.12	54	-11.88	-	-	-	-	236	269	H
11.59	41.88	PK1	38.4	-25.9	0	54.38	-	-	74	-19.62	-	-	59	169	V
11.59	35.77	AD1	38.4	-25.9	.63	48.92	54	-5.08	-	-	-	-	59	169	V

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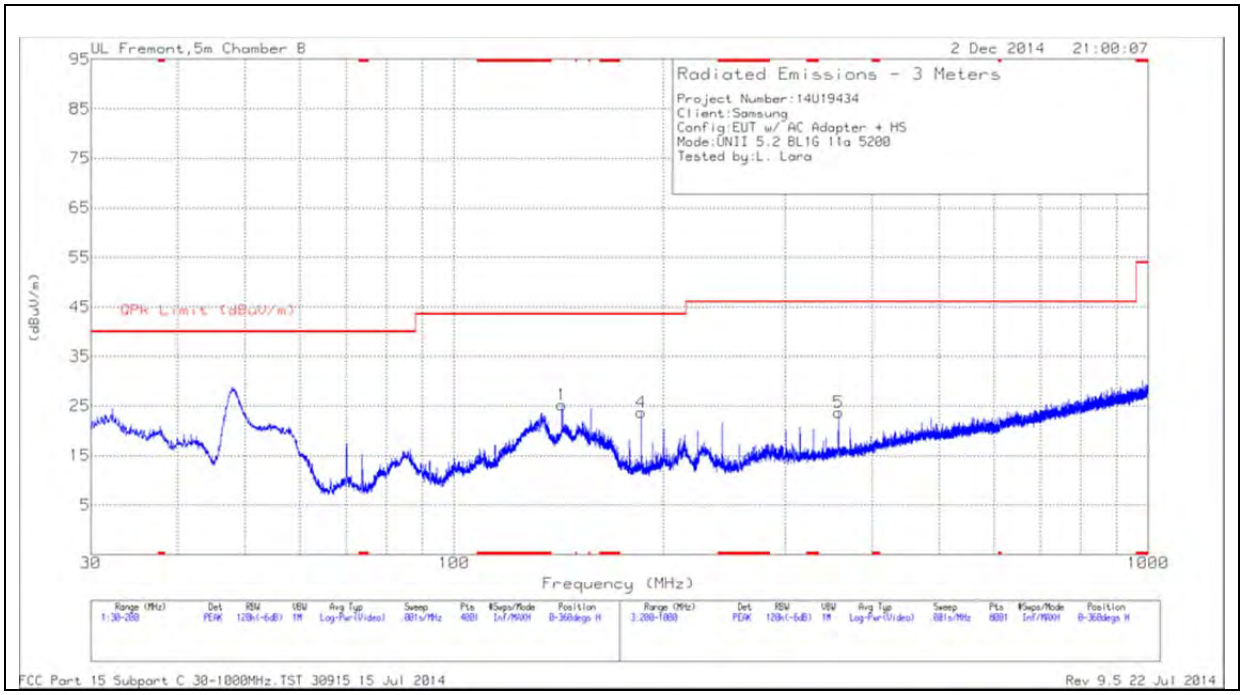
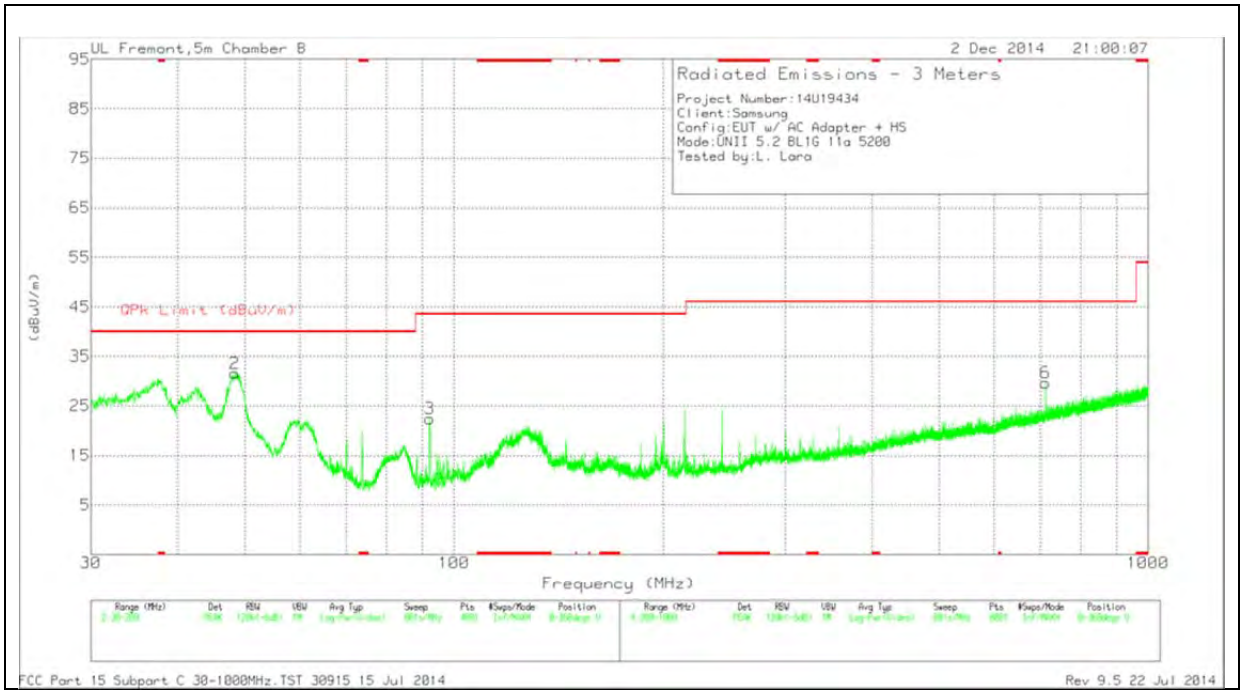
11. WORST-CASE BELOW 1 GHz (in the 5.3 GHz Band)

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



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



Below 1G Data

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T477 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	48.4025	51.7	PK	8.4	-28.5	31.6	40	-8.4	0-360	101	V
3	92.3475	42.27	PK	8.2	-28.1	22.37	43.52	-21.15	0-360	101	V
1	143.1775	39.96	PK	12.8	-27.5	25.26	43.52	-18.26	0-360	200	H
4	186.145	39.47	PK	11.2	-27	23.67	43.52	-19.85	0-360	101	H
5	358	34.77	PK	14.7	-25.8	23.67	46.02	-22.35	0-360	200	H
6	711.3	33.71	PK	20.4	-24.5	29.61	46.02	-16.41	0-360	200	V

PK - Peak detector

12. 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.

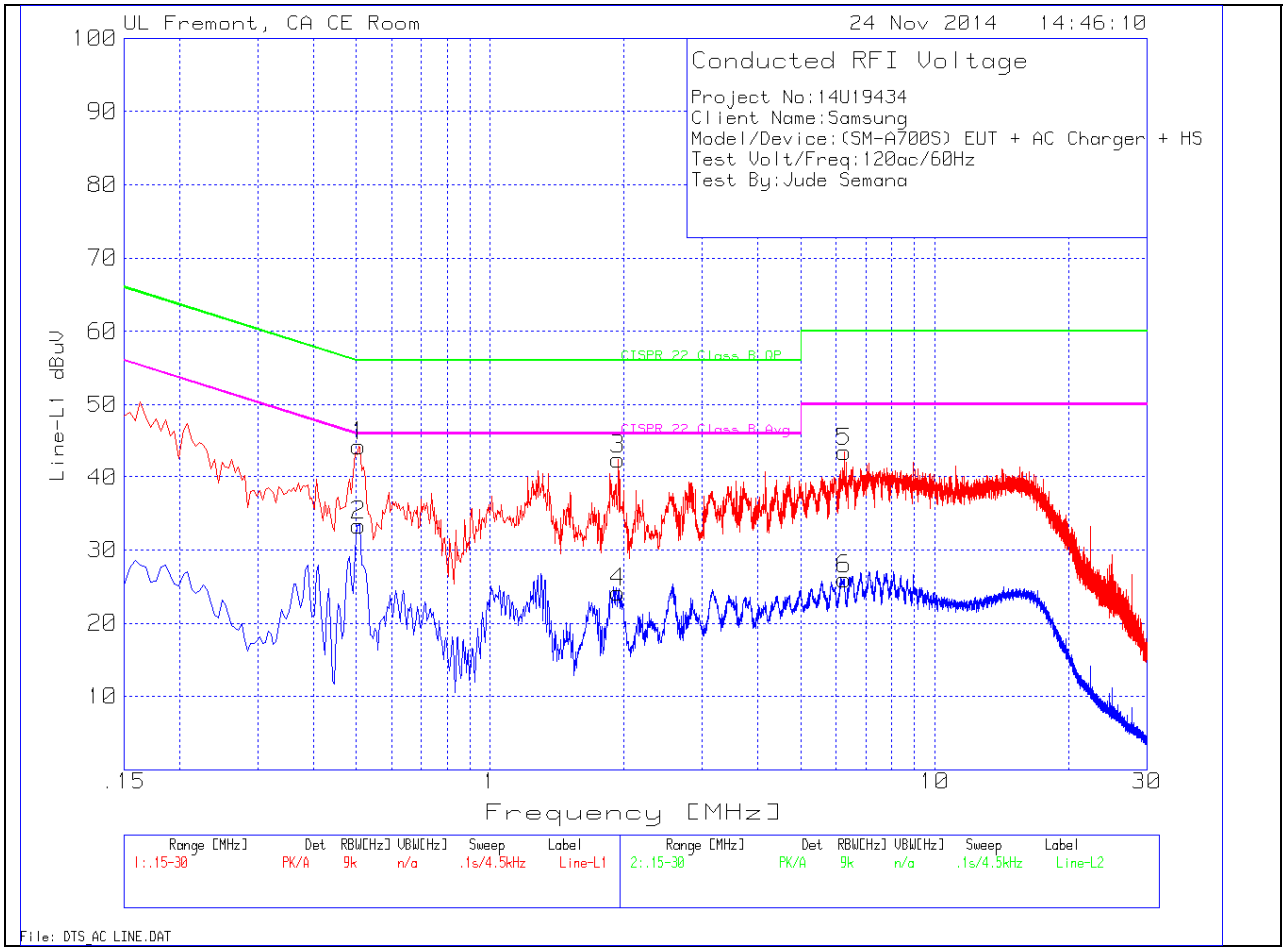
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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

RESULTS

6 WORST EMISSIONS

LINE 1 PLOT

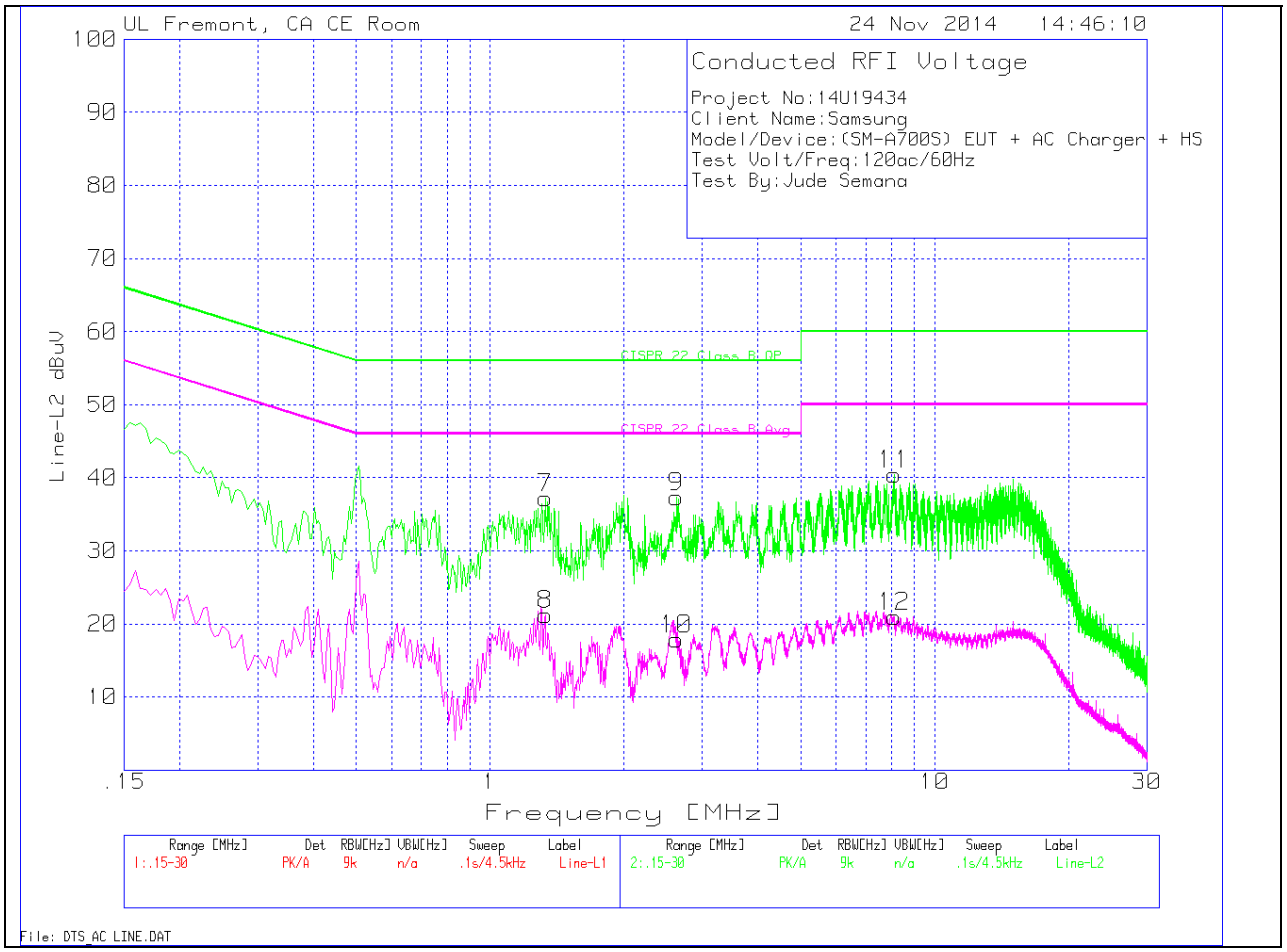


LINE 1 RESULTS

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	.5055	44.05	PK	.3	0	44.35	56	-11.65	-	-
2	.5055	33.03	Av	.3	0	33.33	-	-	46	-12.67
3	1.941	42.18	PK	.2	.1	42.48	56	-13.52	-	-
4	1.941	23.93	Av	.2	.1	24.23	-	-	46	-21.77
5	6.2565	43.17	PK	.2	.1	43.47	60	-16.53	-	-
6	6.2565	25.7	Av	.2	.1	26	-	-	50	-24

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	1.329	36.87	PK	.2	.1	37.17	56	-18.83	-	-
8	1.329	20.93	Av	.2	.1	21.23	-	-	46	-24.77
9	2.625	37.08	PK	.2	.1	37.38	56	-18.62	-	-
10	2.625	17.55	Av	.2	.1	17.85	-	-	46	-28.15
11	8.1015	40.17	PK	.2	.1	40.47	60	-19.53	-	-
12	8.1015	20.68	Av	.2	.1	20.98	-	-	50	-29.02

13. DYNAMIC FREQUENCY SELECTION

13.1. OVERVIEW

13.1.1. 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

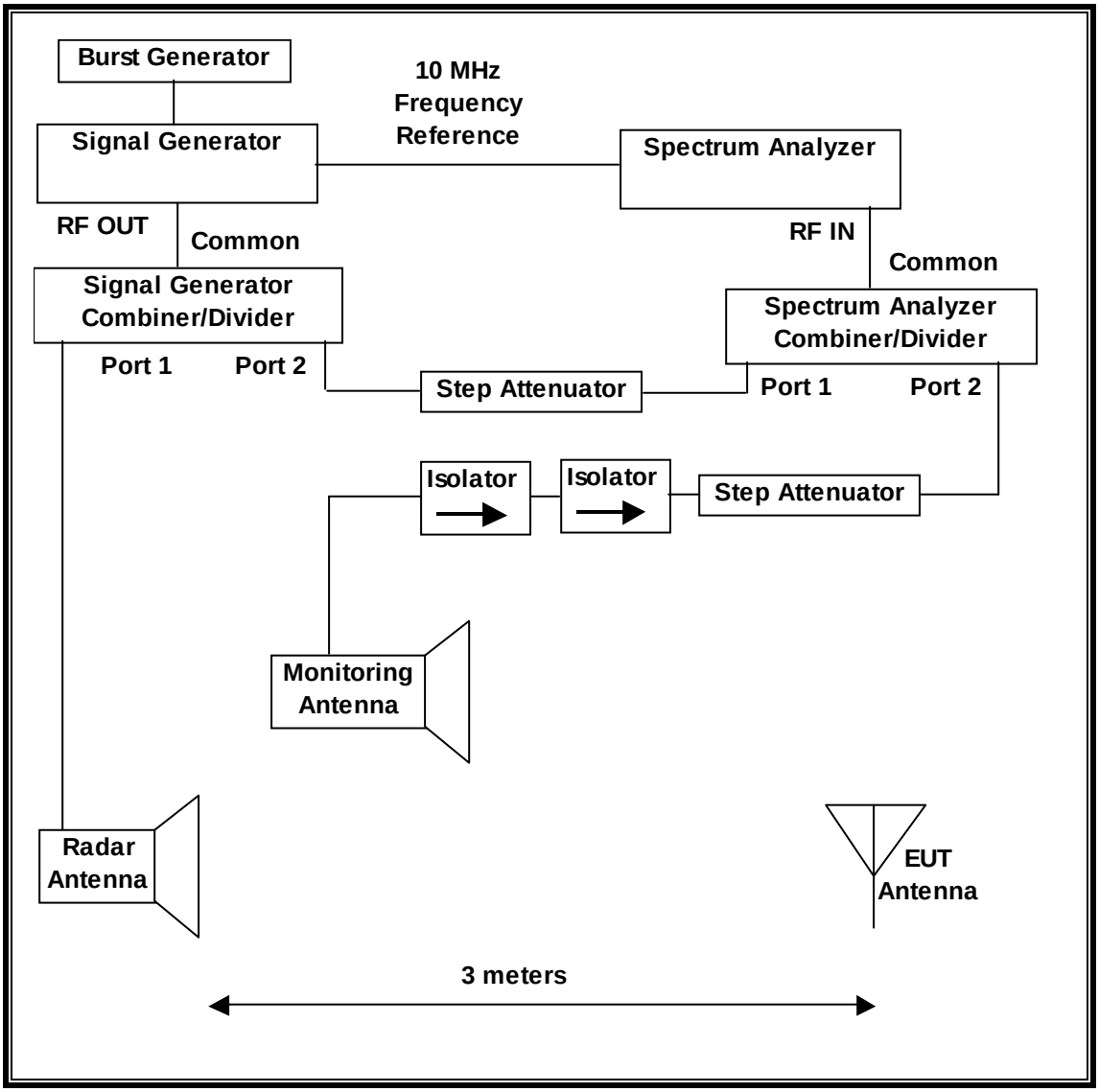
Radar Waveform	Bursts	Pulses per Burst	Pulse Width (µsec)	Chirp Width (MHz)	PRI (µsec)	Minimum Percentage of Successful Detection	Minimum Trials
5	8-20	1-3	50-100	5-20	1000-2000	80%	30

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

13.1.2. 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.

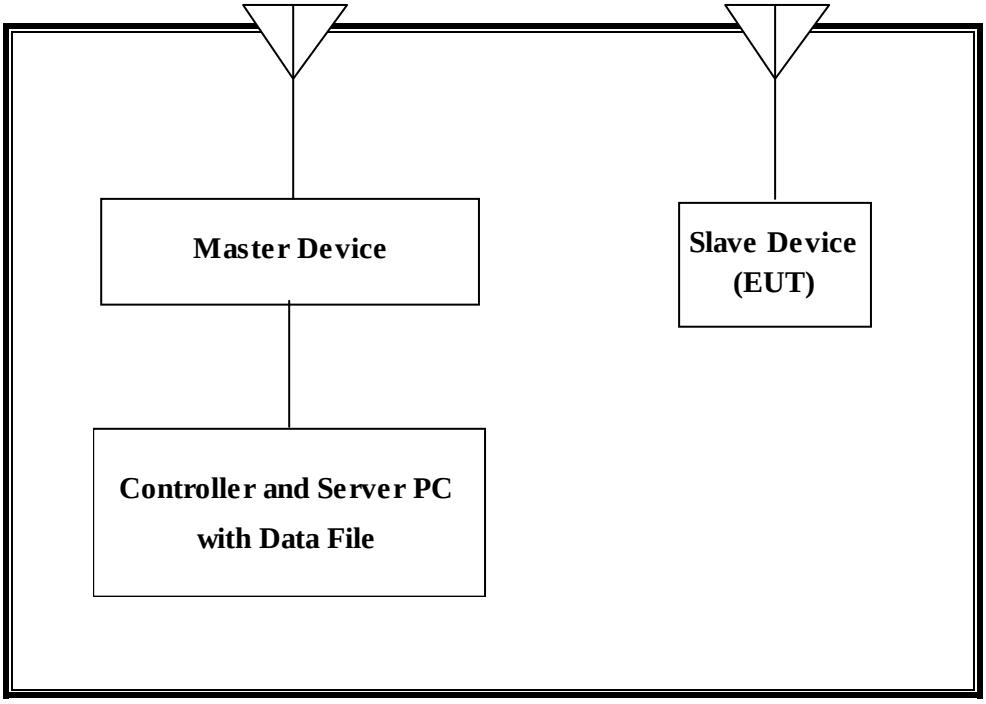
TEST AND MEASUREMENT EQUIPMENT

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

13.1.3. 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**
Wireless Access Point	Cisco	AIR-AP1252AG-A-K9	FTX120690N2	LDK102061
AC Adapter (AP)	Delta Electronics	EADP-45BB B	DTH112490BD	DoC
Notebook PC (Controller/Server)	Dell	PP18L	10657517725	DoC
AC Adapter (Controller/Server PC)	Dell	LA65SN0-00	CN-ODF263-71615 6AU-1019	DoC

13.1.4. DESCRIPTION OF EUT

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

The highest power level within these bands is 13.37 dBm EIRP in the 5250-5350 MHz band and 12.84 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.mp4 “6 ½ Magic Hours” from the Master to the Slave in full motion video mode using version 3.0.2 ESMedia Player.

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 revision 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.

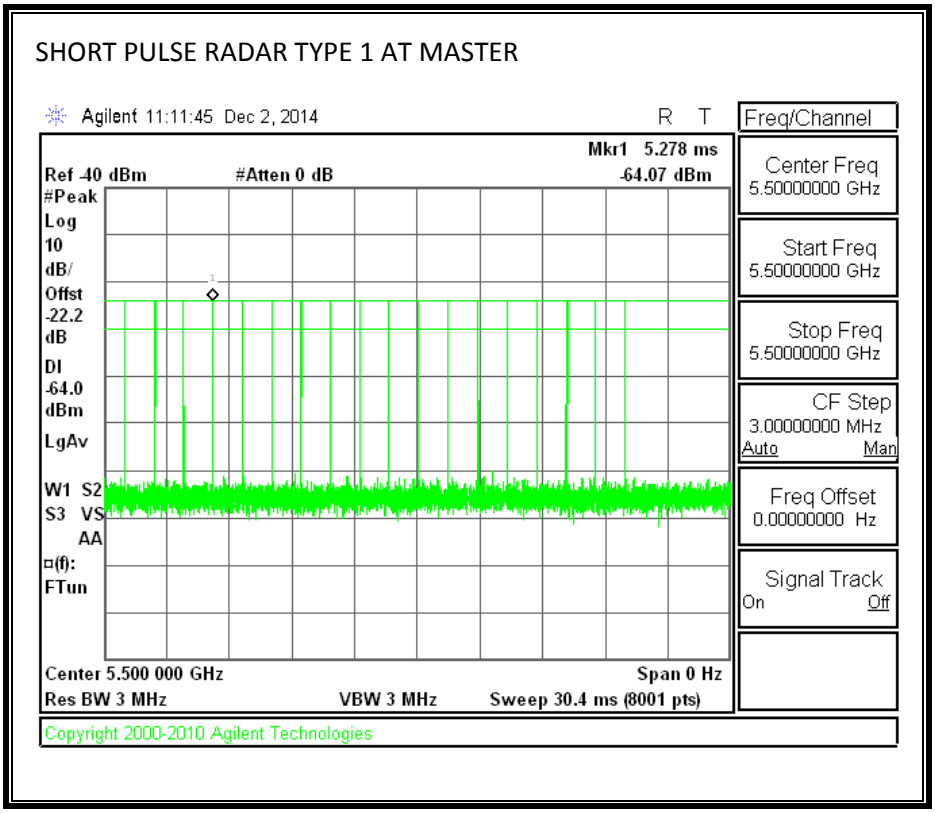
13.2. RESULTS FOR 20 MHz BANDWIDTH

13.2.1. TEST CHANNEL

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

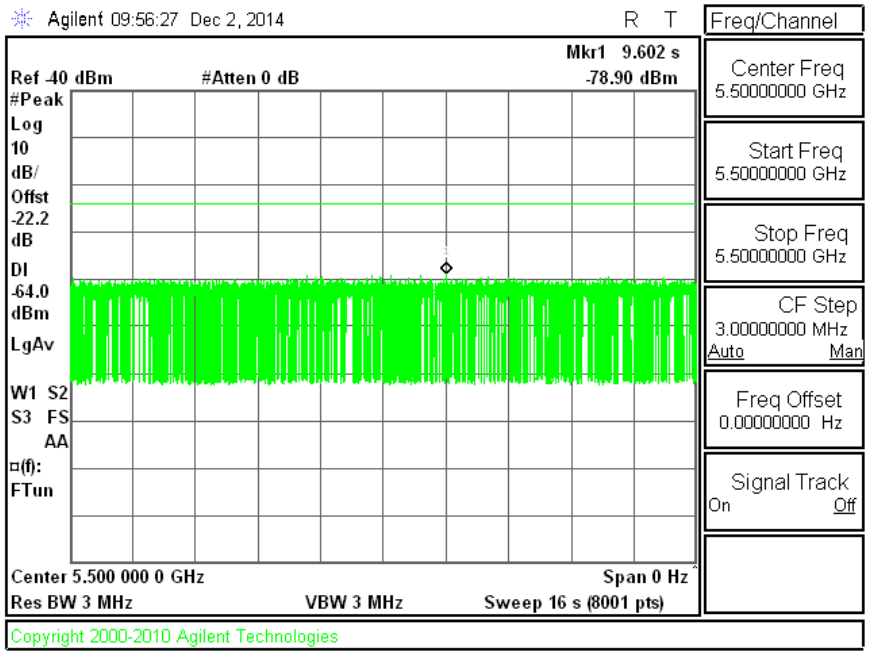
13.2.2. RADAR WAVEFORM AND TRAFFIC

RADAR WAVEFORM



TRAFFIC

SLAVE TRAFFIC



13.2.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

13.2.4. 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)

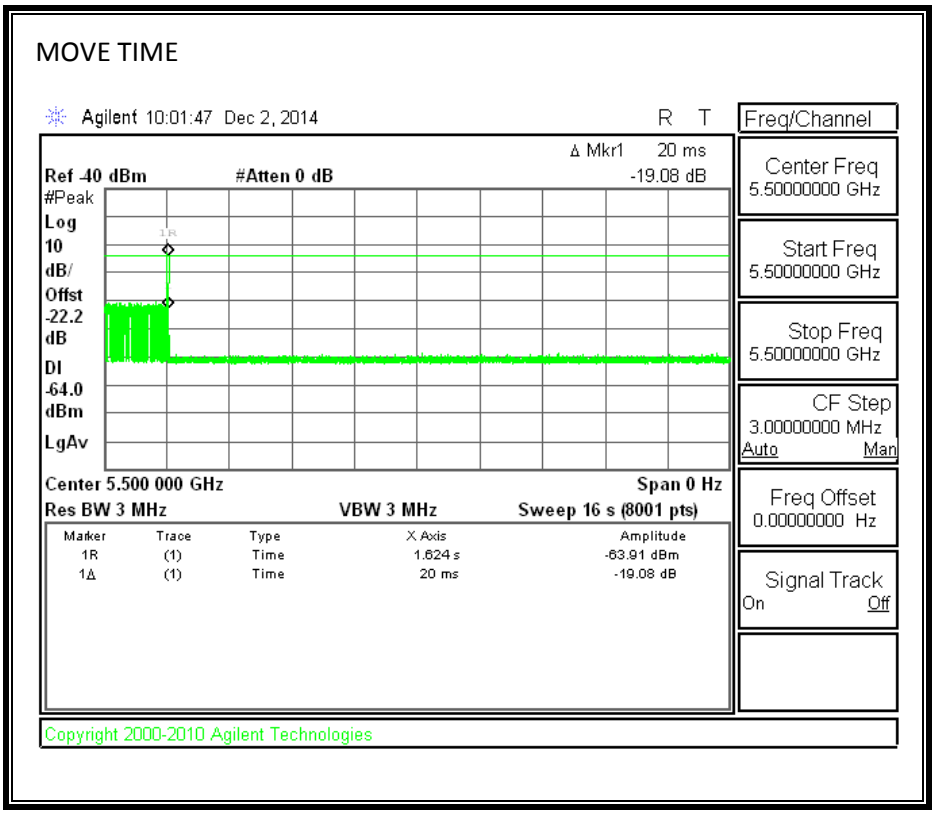
The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

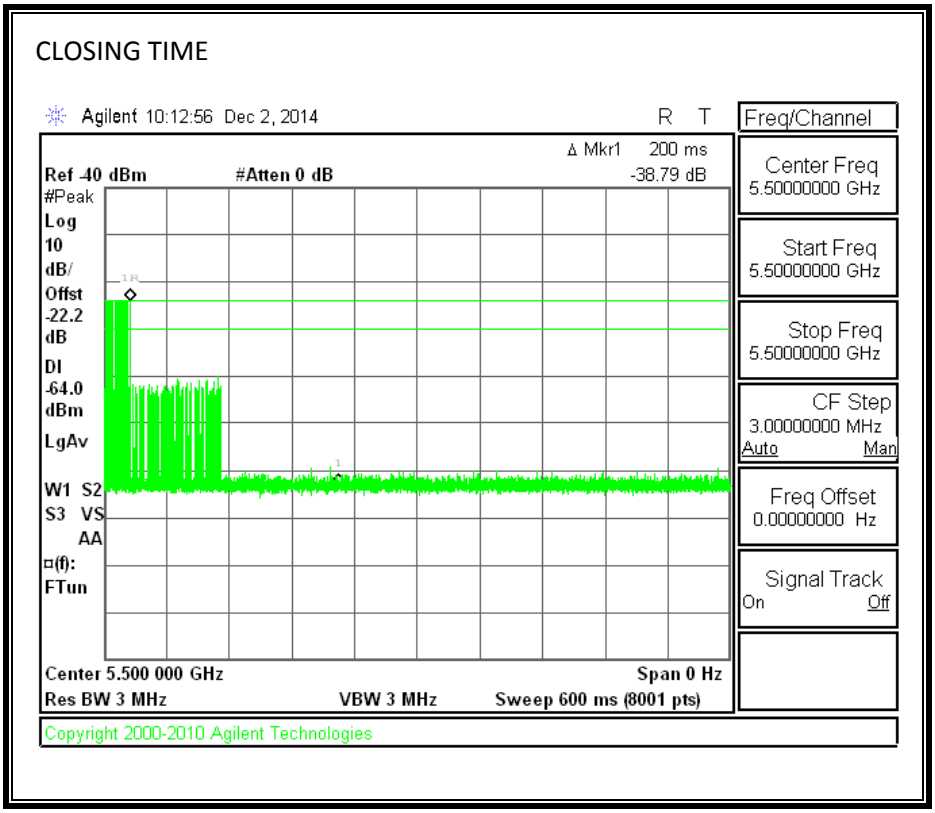
Channel Move Time (sec)	Limit (sec)
0.020	10

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

MOVE TIME



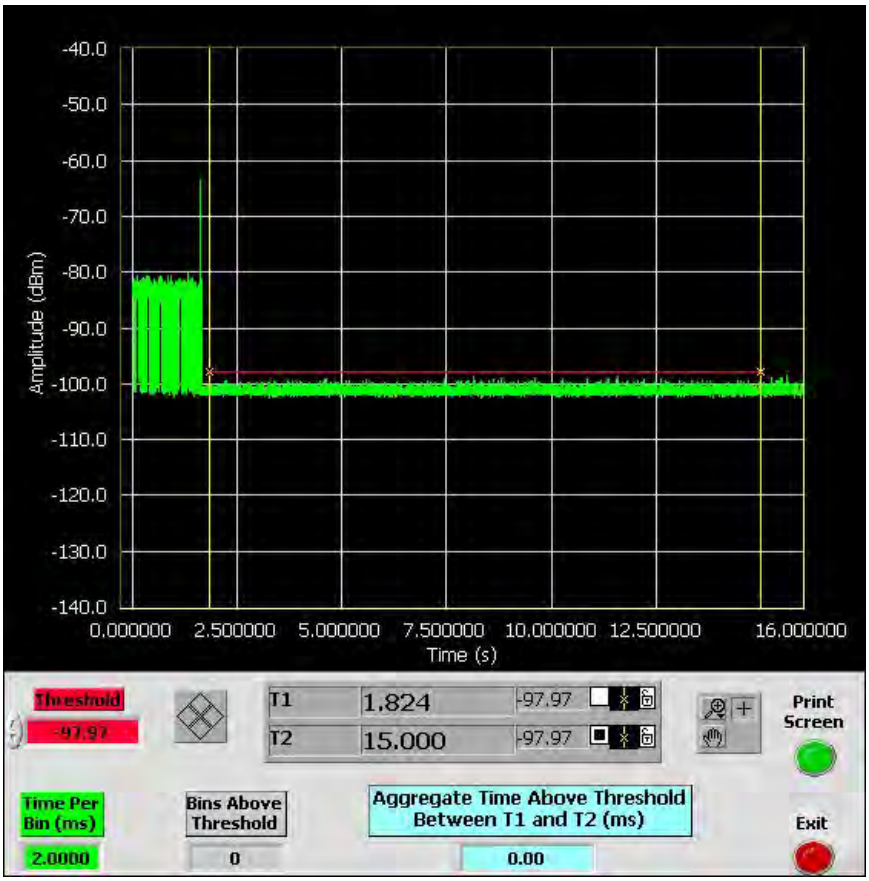
CHANNEL CLOSING TIME



AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

No transmissions are observed during the aggregate monitoring period.

AGGREGATE CLOSING TIME



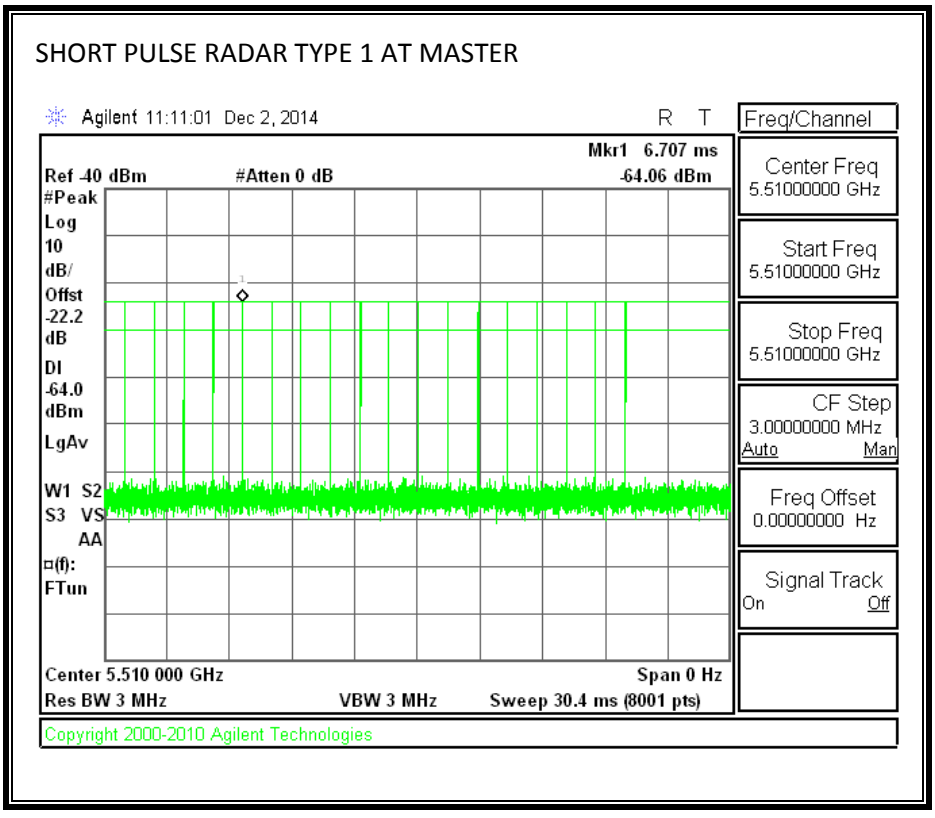
13.3. RESULTS FOR 40 MHz BANDWIDTH

13.3.1. TEST CHANNEL

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

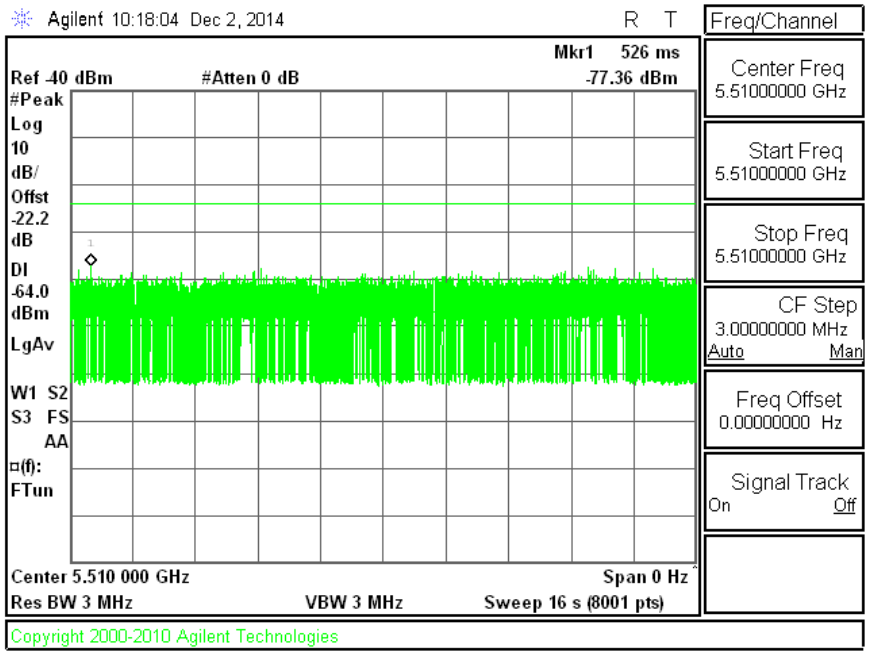
13.3.2. RADAR WAVEFORM AND TRAFFIC

RADAR WAVEFORM



TRAFFIC

SLAVE TRAFFIC



13.3.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

13.3.4. 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)

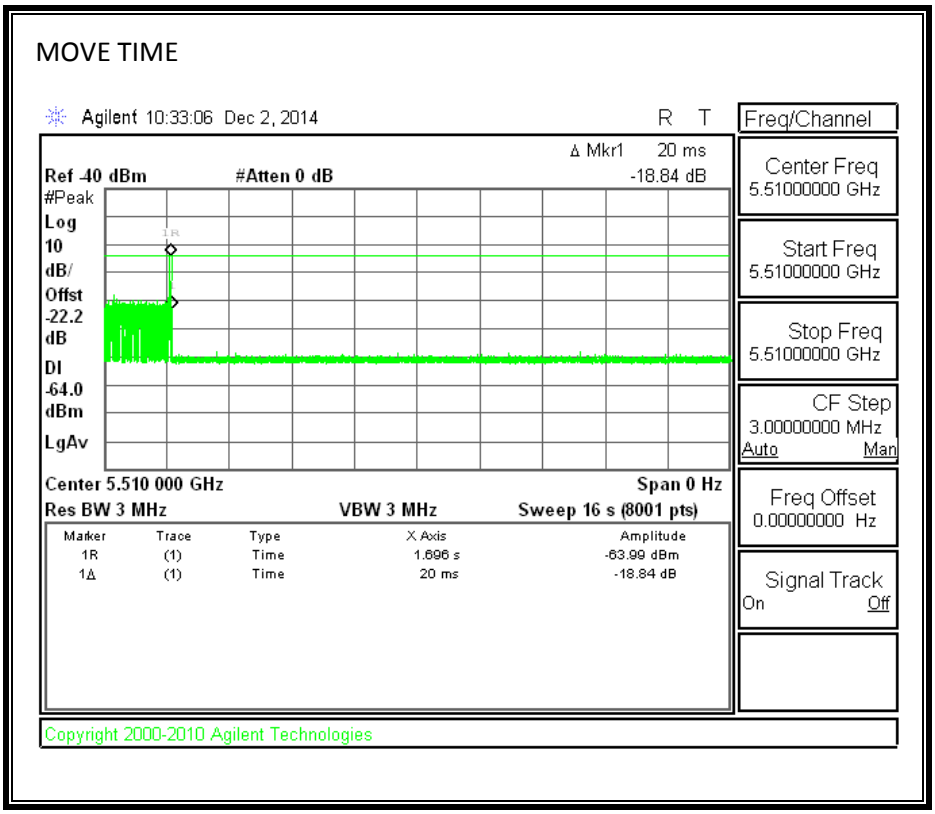
The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

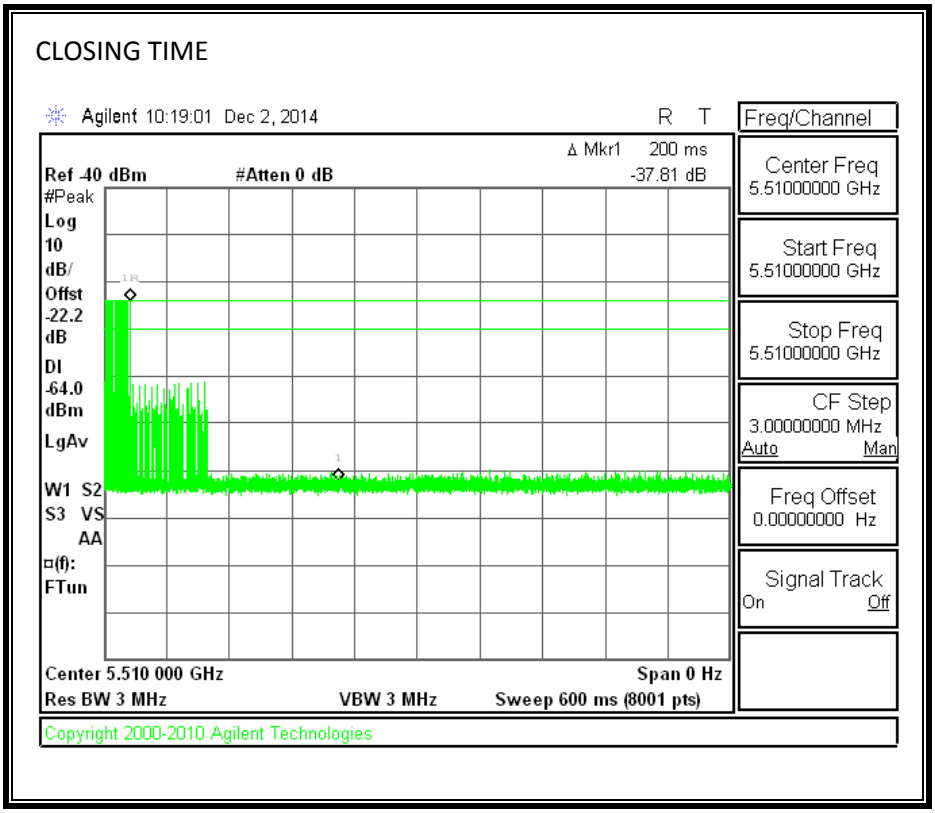
Channel Move Time (sec)	Limit (sec)
1.696	10

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

MOVE TIME



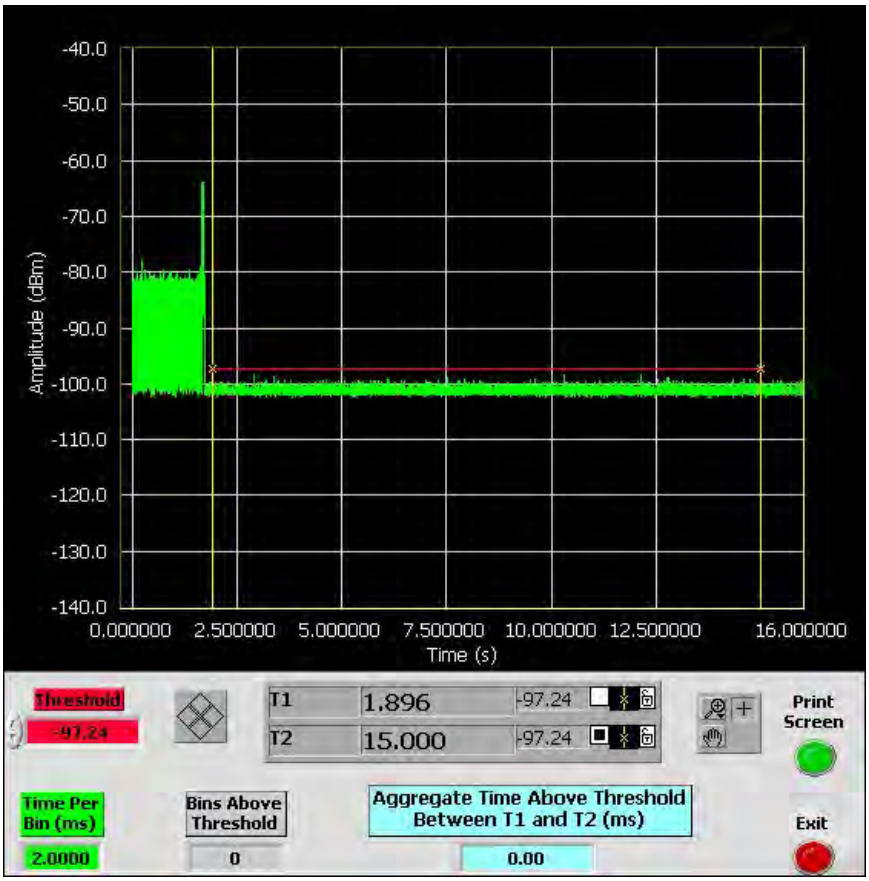
CHANNEL CLOSING TIME



AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

No transmissions are observed during the aggregate monitoring period.

AGGREGATE CLOSING TIME



13.3.5. 10-MINUTE BEACON MONITORING PERIOD

RESULTS

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