FCC 47 CFR PART 15 SUBPART E

CERTIFICATION TEST REPORT

FOR

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

MODEL NUMBER: SM-A7000

FCC ID: A3LSMA7000

REPORT NUMBER: 14I19355-E5 REVISION A

ISSUE DATE: DECEMBER 18, 2014

Prepared for
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Revision History

Rev.	Issue Date	Revisions	Revised By
--	11/14/14	Initial Issue	P. Zhang
A	12/18/14	Updated equipment list	P. Zhang

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS

COMPANY NAME:	SAMSUNG ELECTRONICS CO., LTD.
EUT DESCRIPTION:	GSM/WCDMA/LTE Phone + Bluetooth, DTS/UNII a/b/g/n, & ANT+
MODEL:	SM-A7000
SERIAL NUMBER:	c899c6eb (RADIATED); c89fc6f6 (CONDUCTED)
DATE TESTED:	NOVEMBER 7-14, 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.

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2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 15, and 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.

3. FACILITIES AND ACCREDITATION

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

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

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

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

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

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

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

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

4.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	3.52 dB
Radiated Disturbance, 30 to 40000 MHz	4.94 dB

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

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

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

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
5180 - 5240	802.11a	13.46	22.18
5180 - 5240	802.11n HT20	12.82	19.14
5190 - 5230	802.11n HT40	12.2	16.60
5260 - 5320	802.11a	13.38	21.78
5260 - 5320	802.11n HT20	12.54	17.95
5270 - 5310	802.11n HT40	11.64	14.59
5500 - 5700	802.11a	13.62	23.01
5500 - 5700	802.11n HT20	12.3	16.98
5510 - 5670	802.11n HT40	12.09	16.18
5745 - 5825	802.11a	13.18	20.80
5745 - 5825	802.11n HT20	12.52	17.86
5755 - 5795	802.11n HT40	12.1	16.22

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

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

5.4. WORST-CASE CONFIGURATION AND MODE

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

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

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

802.11a mode: 6 Mbps

802.11n HT20mode: MCS0

802.11n HT40mode: MCS0

5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
AC Adapter	SAMSUNG	EP-TA50CBC	N/A	N/A
Earphone	SAMSUNG	EHS64AVFWE	N/A	N/A

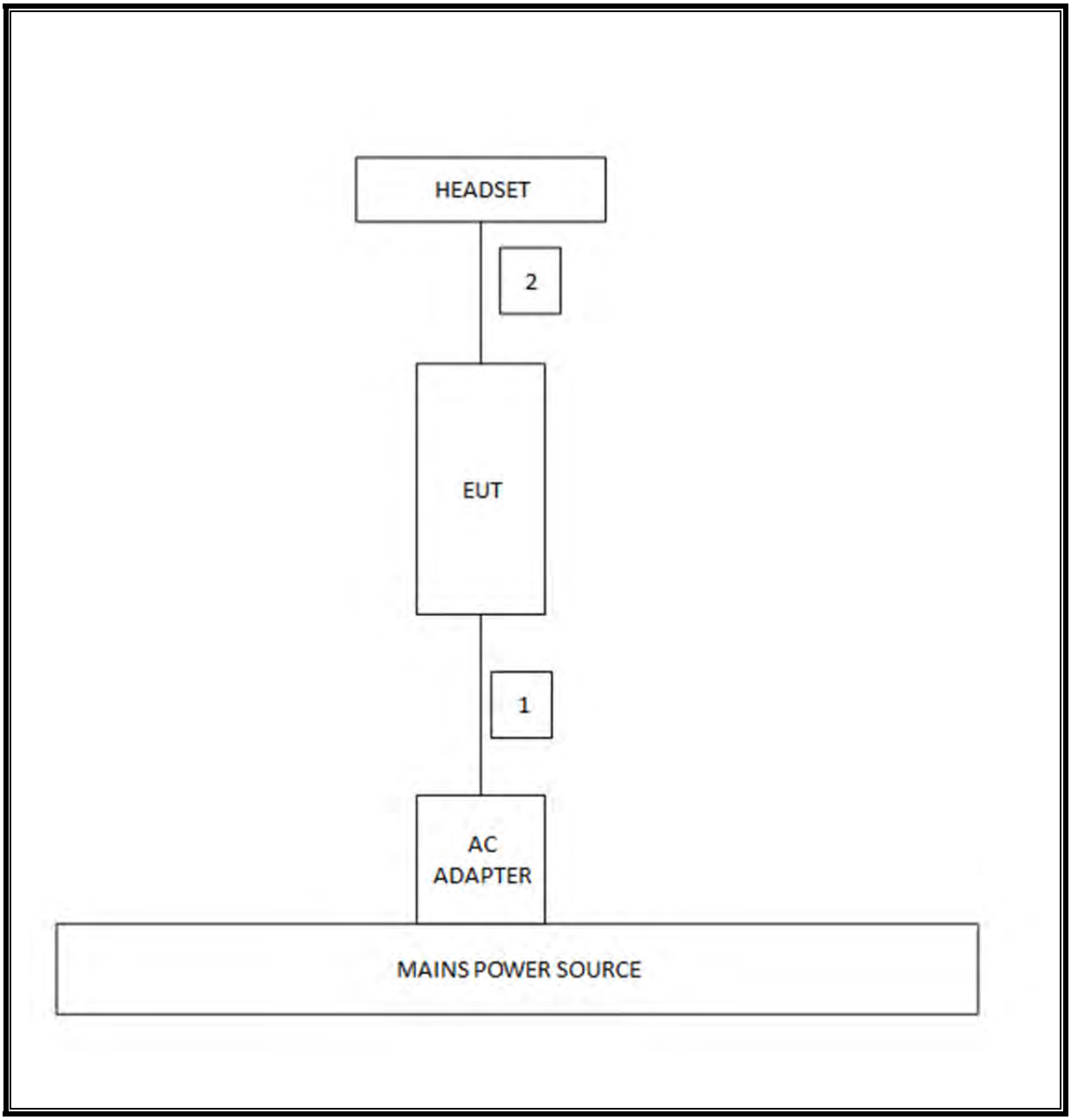
I/O CABLES

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

TEST SETUP

The EUT is setup as a stand-alone device.

SETUP DIAGRAM FOR TESTS



6. TEST AND MEASUREMENT EQUIPMENT

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

Test Equipment List				
Description	**Manufacturer**	**Model**	**Asset**	**Cal Due**
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C00986	4/1/2015
Spectrum Analyzer, 26.5 GHz	Agilent / HP	E4440A	C01179	2/26/2015
EMI Test Receiver, 30 MHz	R & S	ESHS 20	N02396	8/8/2015
Preamplifier, 1300 MHz	Agilent / HP	8447D	C00580	1/28/2015
Preamplifier, 26.5 GHz	Agilent / HP	8449B	C01063	10/22/2015
Preamplifier, 40 GHz	Miteq	NSP4000-SP2	C00990	8/2/2015
Antenna, Bilog, 30MHz-1 GHz	Sunol Sciences	JB1	N/A	3/6/2015
Antenna, Horn, 18 GHz	ETS	3117	C01022	2/21/2015
Antenna, Horn, 26.5 GHz	ARA	MWH-1826/B	C00589	12/17/2014
Peak Power Meter	Agilent / HP	E4416A	C00963	12/13/2014
Peak / Average Power Sensor	Agilent / HP	E9327A	C00964	12/13/2014
LISN, 30 MHz	FCC	50/250-25-2	C00626	01/14/15
Reject Filter, 5.725-5.825 GHz	Micro-Tronics	BRC13192	N02676	CNR
Antenna, Horn, 26-40 GHz	ARA	MWH-2640	C00891	06/28/15

7. SUMMARY TABLE

FCC Part Section	Test Description	Test Limit	Test Condition	Test Result	Worst Case
15.247 (a)	Occupied Band width (26dB)	N/A	Conducted	Pass	63.0MHz
15.407 (a)(1)	TX Cond. Power 5.15-2.25	<17dBm or 4+10Log(OBW)		Pass	13.46dBm
15.407 (a)(2)	TX Cond. Power 5.25-5.35 & 5.47-5.725	<24dBm or 11+10Log(OBW)		Pass	13.62dBm
15.407 (a)(3)	TX Cond. Power 5.725-5.825	< 30dBm or 17+10Log(OBW)		Pass	13.18dBm
15.407 (a)(6)	Peak Excursion Ratio	13dB		Pass	9.02dBm
15.207 (a)	AC Power Line conducted emissions	Section 10	Radiated	Pass	56.92dBuV(PK)
15.407 (b) & 15.209	Radiated Spurious Emission	< 54dBuV/m		Pass	52.06dBuV/m
15.407 (h)(2)	Dynamic Frequency Selection	N/A	Radiated / Condcuted	Pass	N/A

8. ON TIME, DUTY CYCLE AND MEASUREMENT METHODS

LIMITS

None; for reporting purposes only.

PROCEDURE

KDB 789033 Zero-Span Spectrum Analyzer Method.

8.1. ON TIME AND DUTY CYCLE RESULTS

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/T Minimum VBW (kHz)
802.11a	1.39	1	0.934	93.4%	0.30	0.717
802.11n HT20	1.29	1	0.926	92.6%	0.33	0.773
802.11n HT40	0.64	1	0.865	86.5%	0.63	1.571

8.2. DUTY CYCLE PLOTS

DUTY CYCLE 802.11a MODE

DUTY CYCLE 802.11n HT20 MODE

DUTY CYCLE 802.11n HT40 MODE

9. MEASUREMENT METHOD

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

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

10. ANTENNA PORT TEST RESULTS

10.1. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

10.1.1. 802.11a MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5180	25.83
Mid	5200	24.50
High	5240	25.67
Worst		25.83

10.1.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5180	28.08
Mid	5200	24.17
High	5240	26.58
Worst		28.08

10.1.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5190	47.730
Mid	5230	45.200
Worst		47.730

10.1.1. 802.11a MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5260	23.75
Mid	5300	23.92
High	5320	25.17
Worst		25.17

10.1.1. 802.11n HT20 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5260	27.67
Mid	5300	25.25
High	5320	26.50
Worst		27.67

10.1.2. 802.11n HT40 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5270	46.5
High	5310	46.4
Worst		46.5

10.1.3. 802.11a MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5500	22.920
Mid	5580	27.250
High	5700	24.670
Worst		27.250

10.1.4. 802.11n HT20 MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5500	24.420
Mid	5580	24.080
High	5700	25.330
Worst		25.330

10.1.5. 802.11n HT40 MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5510	42.9
Mid	5550	43.2
High	5670	43.7
Worst		43.7

10.1.6. 802.11a MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5745	30.500
Mid	5785	30.420
High	5825	30.420
Worst		30.500

10.1.7. 802.11n HT20 MODE IN THE 5.8 GHz BAND

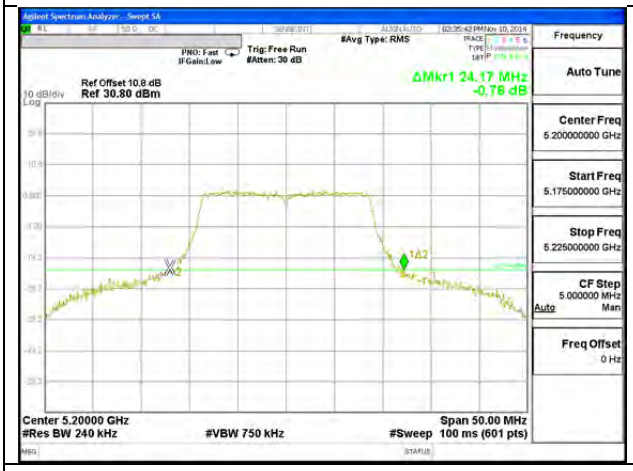
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5745	32.920
Mid	5785	32.420
High	5825	33.830
Worst		33.830

10.1.8. 802.11n HT40 MODE IN THE 5.8 GHz BAND

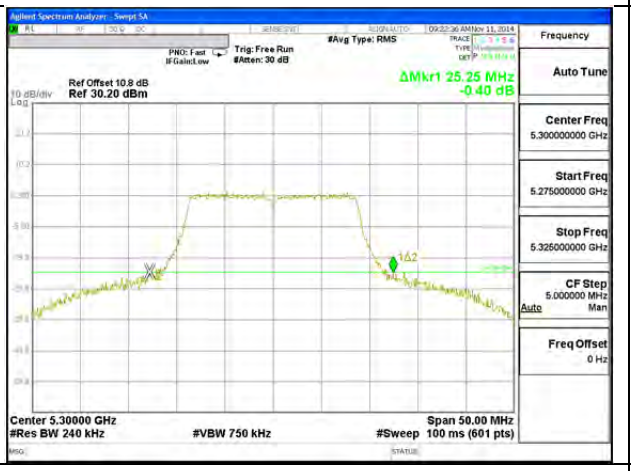
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5755	62.25
High	5795	63.00
Worst		63.00

10.1.9. 26 dB BANDWIDTH PLOTS

11n HT20 5.2 Mid Ch



11n HT20 5.3 Mid Ch



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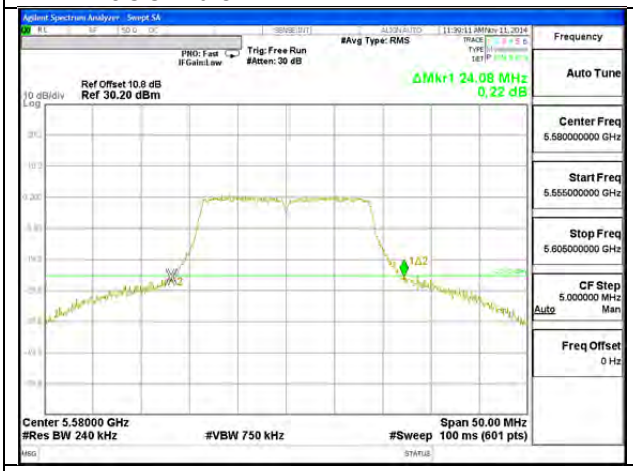
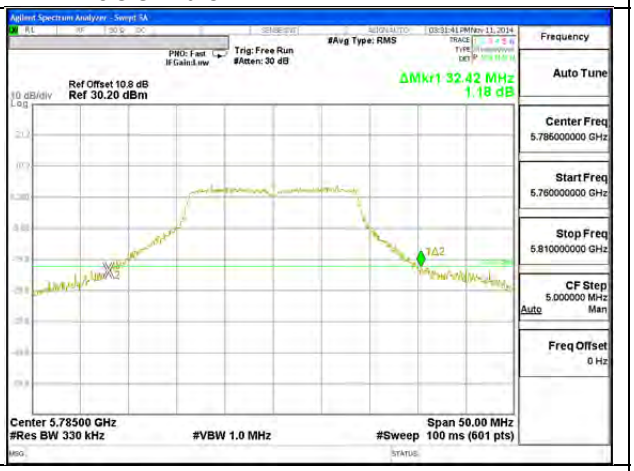
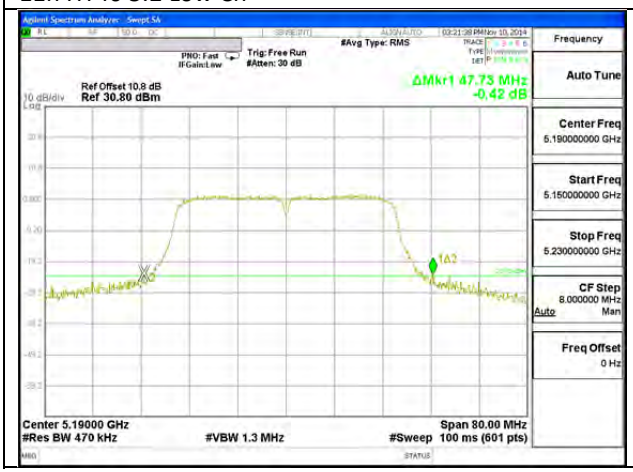


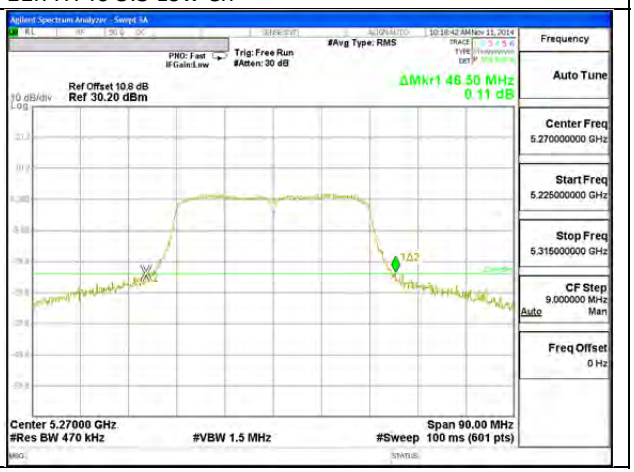
11n HT20 5.8 Mid Ch



11n HT40 5.2 Low Ch



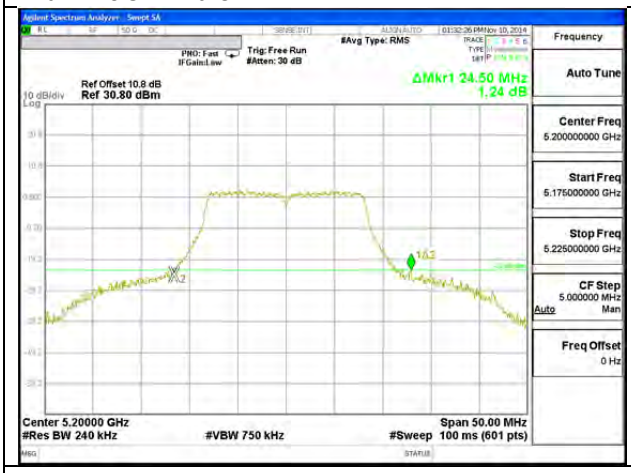
11n HT40 5.3 Low Ch



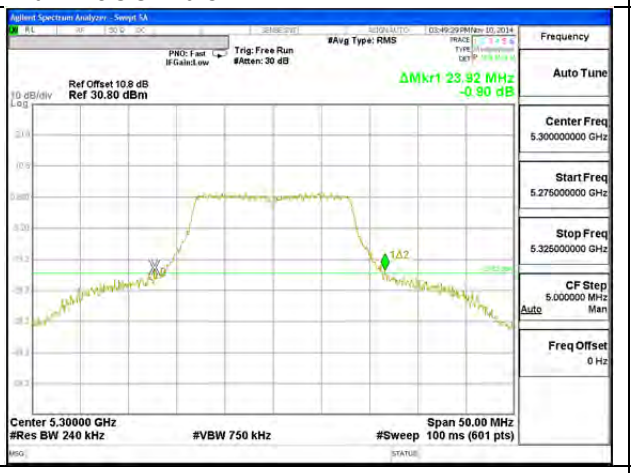
11n HT40 5.5 Mid Ch

11n HT40 5.8 Low Ch

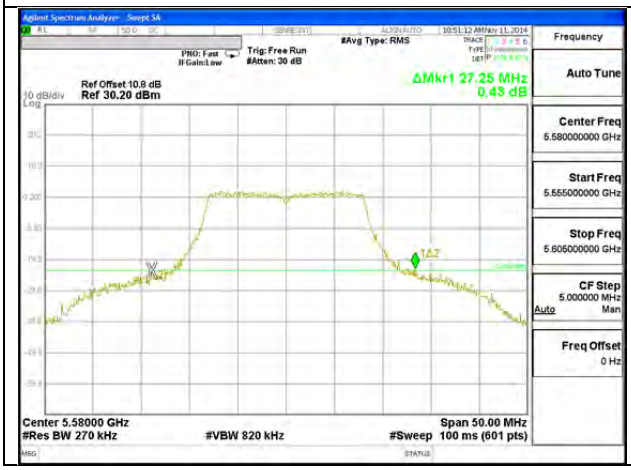
11a HT20 5.2 Mid Ch



11a HT20 5.3 Mid Ch



11a HT20 5.5 Mid Ch



11a HT20 5.8 Mid Ch

10.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

10.2.1. 802.11a MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5180	16.62
Mid	5200	16.46
High	5240	16.62
Worst		16.62

10.2.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5180	17.70
Mid	5200	17.82
High	5240	17.68
Worst		17.82

10.2.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5190	35.934
Mid	5230	35.411
Worst		35.934

10.2.4. 802.11a MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5260	16.94
Mid	5300	17.44
High	5320	17.24
Worst		17.44

10.2.5. 802.11n HT20 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5260	17.72
Mid	5300	17.77
High	5320	17.98
Worst		17.98

10.2.6. 802.11n HT40 MODE IN THE 5.3 GHz BAND

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

10.2.7. 802.11a MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5500	16.513
Mid	5580	16.753
High	5700	16.640
Worst		16.753

10.2.8. 802.11n HT20 MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5500	17.686
Mid	5580	17.775
High	5700	17.818
Worst		17.818

10.2.9. 802.11n HT40 MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5510	36.0
Mid	5550	36.3
High	5670	36.0
Worst		36.3

10.2.10. 802.11a MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5745	18.249
Mid	5785	17.810
High	5825	17.147
Worst		18.249

10.2.11. 802.11n HT20 MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5745	18.410
Mid	5785	18.085
High	5825	17.925
Worst		18.410

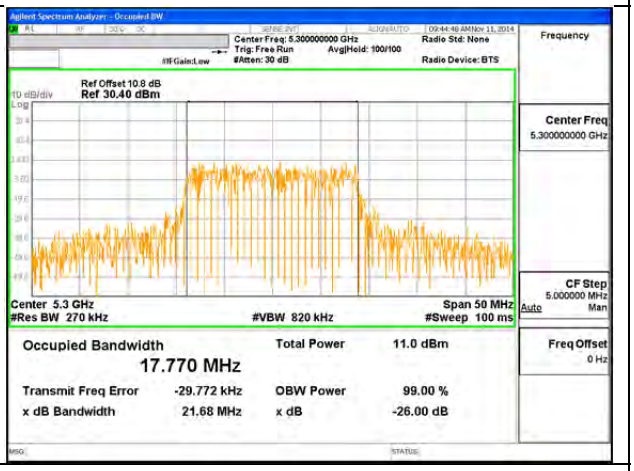
10.2.12. 802.11n HT40 MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5755	36.8
High	5795	36.9
Worst		36.9

10.2.13. 99% BANDWIDTH PLOTS

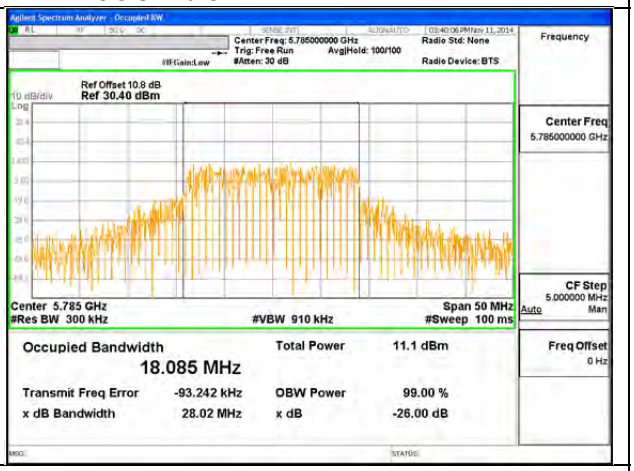
11n HT20 5.2 Mid Ch

11n HT20 5.3 Mid Ch



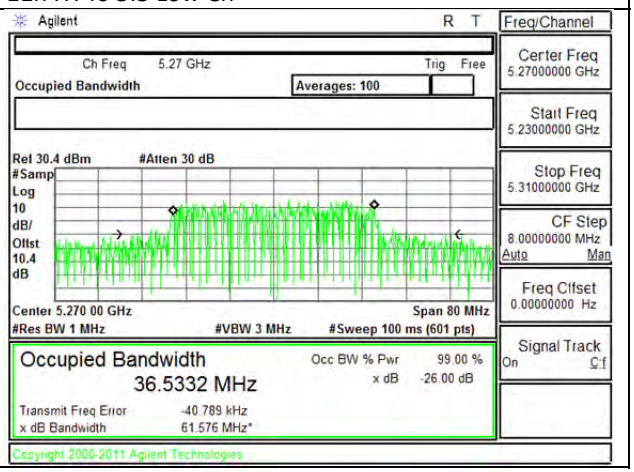
11n HT20 5.5 Mid Ch

11n HT20 5.8 Mid Ch

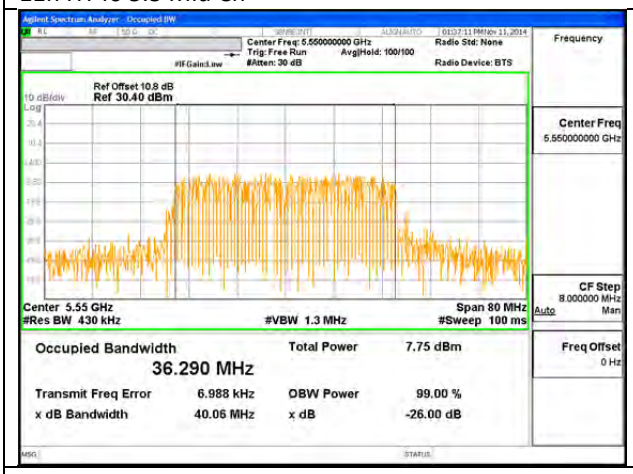


11n HT40 5.2 Low Ch

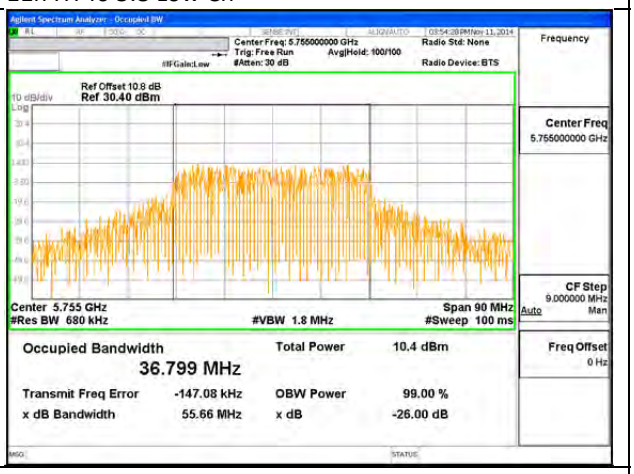
11n HT40 5.3 Low Ch



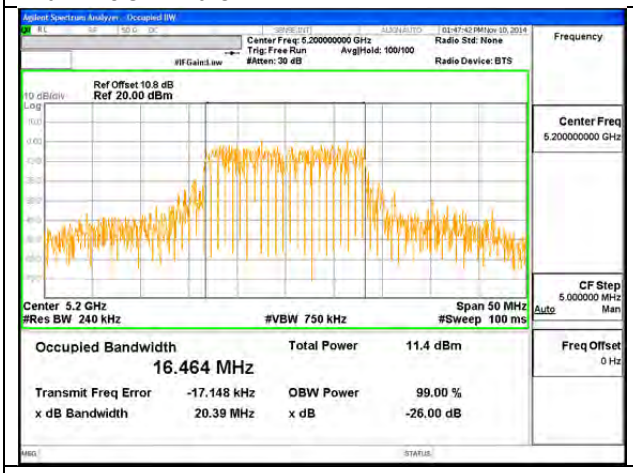
11n HT40 5.5 Mid Ch



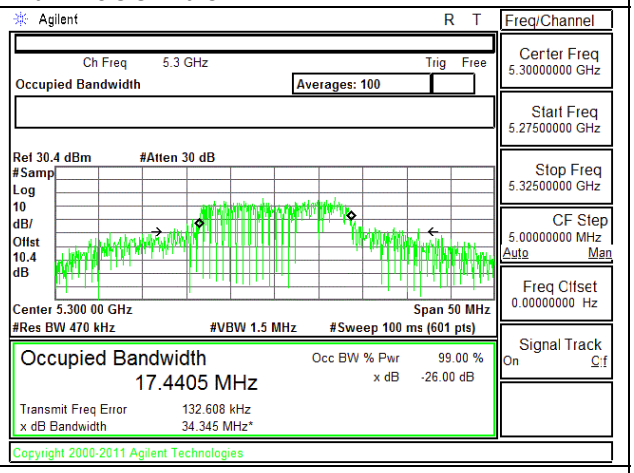
11n HT40 5.8 Low Ch



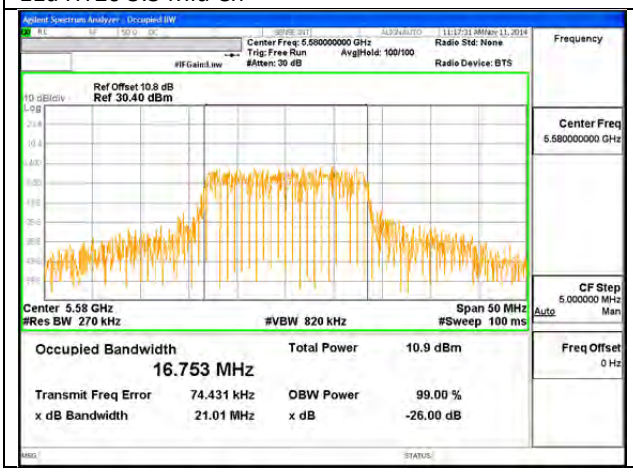
11a HT20 5.2 Mid Ch



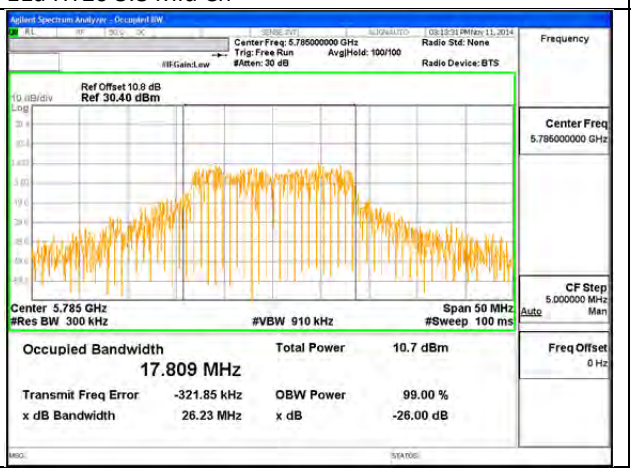
11a HT20 5.3 Mid Ch



11a HT20 5.5 Mid Ch



11a HT20 5.8 Mid Ch



10.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

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

RESULTS

10.3.1. 802.11a MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5180	13.50
Mid	5200	13.50
High	5240	13.50
Worst		13.50

10.3.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5180	12.50
Mid	5200	12.50
High	5240	12.50
Worst		12.50

10.3.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5190	12.50
Mid	5230	12.50
Worst		12.50

10.3.4. 802.11a MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5260	13.50
Mid	5300	13.50
High	5320	13.50
Worst		13.50

10.3.5. 802.11n HT20 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5260	12.50
Mid	5300	12.40
High	5320	12.30
Worst		12.50

10.3.6. 802.11n HT40 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5270	12.30
High	5310	12.30
Worst		12.30

10.3.7. 802.11a MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5500	13.50
Mid	5580	13.50
High	5700	13.00
Worst		13.50

10.3.8. 802.11n HT20 MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5500	12.20
Mid	5580	12.50
High	5700	12.20
Worst		12.50

10.3.9. 802.11n HT40 MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5510	12.20
Mid	5550	12.50
High	5670	12.10
Worst		12.50

10.3.10. 802.11a MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5745	13.500
Mid	5785	13.500
High	5825	13.500
Worst		13.500

10.3.11. 802.11n HT20 MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5745	12.10
Mid	5785	12.30
High	5825	12.30
Worst		12.30

10.3.12. 802.11n HT40 MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5755	12.20
High	5795	12.30
Worst		12.30

10.4. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (1)

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

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

DIRECTIONAL ANTENNA GAIN

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

Test Methodology

RESULTS

10.4.1. 802.11a MODE IN THE 5.2 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5180	25.83	16.62	0.86
Mid	5200	24.50	16.46	0.86
High	5240	25.67	16.62	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	22.21	21.35	17.00	4.00	10.00	4.00
Mid	5200	17.00	22.17	21.31	17.00	4.00	10.00	4.00
High	5240	17.00	22.21	21.35	17.00	4.00	10.00	4.00

Duty Cycle CF (dB)	0.30	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	13.07	13.37	17.00	-3.63
Mid	5200	13.16	13.46	17.00	-3.54
High	5240	12.77	13.07	17.00	-3.93

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5180	1.854	2.15	4.00	-1.85
Mid	5200	1.825	2.13	4.00	-1.88
High	5240	1.694	1.99	4.00	-2.01

10.4.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5180	28.08	17.70	0.86
Mid	5200	24.17	17.82	0.86
High	5240	26.58	17.68	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	22.51	21.65	17.00	4.00	10.00	4.00
High	5240	17.00	22.47	21.61	17.00	4.00	10.00	4.00

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

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5180	12.494	12.82	17.00	-4.18
Mid	5200	12.438	12.77	17.00	-4.23
High	5240	12.023	12.35	17.00	-4.65

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5180	0.978	1.31	4.00	-2.69
Mid	5200	0.990	1.32	4.00	-2.68
High	5240	0.414	0.74	4.00	-3.26

10.4.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5190	47.730	35.934	0.86
Mid	5230	45.200	35.411	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	11.569	12.20	17.00	-4.80
Mid	5230	11.312	11.94	17.00	-5.06

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5190	-2.887	-2.26	4.00	-6.26
Mid	5230	-2.992	-2.36	4.00	-6.36

10.4.4. 802.11a MODE IN THE 5.3 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5260	23.75	16.94	0.86
Mid	5300	23.92	17.44	0.86
High	5320	25.17	17.24	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	23.29	29.29	23.29	11.00	11.00	11.00
Mid	5300	24.00	23.42	29.42	23.42	11.00	11.00	11.00
High	5320	24.00	23.37	29.37	23.37	11.00	11.00	11.00

Duty Cycle CF (dB)	0.30	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	13.078	13.38	23.29	-9.91
Mid	5300	12.903	13.20	23.42	-10.21
High	5320	12.864	13.16	23.37	-10.20

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5260	1.942	2.24	11.00	-8.76
Mid	5300	1.633	1.93	11.00	-9.07
High	5320	1.507	1.81	11.00	-9.19

10.4.5. 802.11n HT20 MODE IN THE 5.3 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5260	27.67	17.72	0.86
Mid	5300	25.25	17.77	0.86
High	5320	26.50	17.98	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	23.50	29.50	23.50	11.00	11.00	11.00
High	5320	24.00	23.55	29.55	23.55	11.00	11.00	11.00

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

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	12.041	12.37	23.49	-11.11
Mid	5300	12.210	12.54	23.50	-10.96
High	5320	12.131	12.46	23.55	-11.09

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5260	0.688	1.02	11.00	-9.98
Mid	5300	0.609	0.94	11.00	-10.06
High	5320	0.554	0.88	11.00	-10.12

10.4.6. 802.11n HT40 MODE IN THE 5.3 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5270	46.5	36.5	0.86
High	5310	46.4	36.5	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	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	11.0	11.64	24.00	-12.37
High	5310	10.8	11.47	24.00	-12.53

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5270	-3.32	-2.69	11.00	-13.69
High	5310	-3.54	-2.91	11.00	-13.91

10.4.7. 802.11a MODE IN THE 5.5 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5500	22.920	16.513	0.86
Mid	5580	27.250	16.753	0.86
High	5700	24.670	16.640	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	23.18	29.18	23.18	11.00	11.00	11.00
Mid	5580	24.00	23.24	29.24	23.24	11.00	11.00	11.00
High	5700	24.00	23.21	29.21	23.21	11.00	11.00	11.00

Duty Cycle CF (dB)	0.30	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	13.323	13.62	23.18	-9.56
Mid	5580	12.635	12.94	23.24	-10.31
High	5700	12.751	13.05	23.21	-10.16

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5500	2.193	2.49	11.00	-8.51
Mid	5580	1.426	1.73	11.00	-9.27
High	5700	1.680	1.98	11.00	-9.02

10.4.8. 802.11n HT20 MODE IN THE 5.5 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5500	24.420	17.686	0.86
Mid	5580	24.080	17.775	0.86
High	5700	25.330	17.818	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	23.48	29.48	23.48	11.00	11.00	11.00
Mid	5580	24.00	23.50	29.50	23.50	11.00	11.00	11.00
High	5700	24.00	23.51	29.51	23.51	11.00	11.00	11.00

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

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	11.969	12.30	23.48	-11.18
Mid	5580	11.913	12.24	23.50	-11.26
High	5700	11.689	12.02	23.51	-11.49

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5500	0.427	0.76	11.00	-10.24
Mid	5580	0.340	0.67	11.00	-10.33
High	5700	0.310	0.64	11.00	-10.36

10.4.9. 802.11n HT40 MODE IN THE 5.5 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5510	42.9	36.0	0.86
Mid	5550	43.2	36.3	0.86
High	5670	43.7	36.0	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	11.194	11.82	24.00	-12.18
Mid	5550	11.022	11.65	24.00	-12.35
High	5670	11.462	12.09	24.00	-11.91

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5510	-2.955	-2.33	11.00	-13.33
Mid	5550	-3.210	-2.58	11.00	-13.58
High	5670	-2.757	-2.13	11.00	-13.13

10.4.10. 802.11a MODE IN THE 5.8 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5745	30.500	18.249	0.86
Mid	5785	30.420	17.809	0.86
High	5825	30.420	17.147	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	29.61	35.61	29.61	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	29.34	35.34	29.34	17.00	17.00	17.00

Duty Cycle CF (dB)	0.30	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	12.59	12.89	29.61	-16.72
Mid	5785	12.64	12.94	29.51	-16.57
High	5825	12.88	13.18	29.34	-16.16

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5745	1.26	1.56	17.00	-15.44
Mid	5785	1.25	1.55	17.00	-15.45
High	5825	1.58	1.88	17.00	-15.12

10.4.11. 802.11n HT20 MODE IN THE 5.8 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5745	32.920	18.410	0.86
Mid	5785	32.420	18.085	0.86
High	5825	33.830	17.925	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	29.65	35.65	29.65	17.00	17.00	17.00
Mid	5785	30.00	29.57	35.57	29.57	17.00	17.00	17.00
High	5825	30.00	29.53	35.53	29.53	17.00	17.00	17.00

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

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	11.88	12.21	29.65	-17.44
Mid	5785	11.97	12.30	29.57	-17.27
High	5825	12.19	12.52	29.53	-17.02

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5745	0.32	0.65	17.00	-16.35
Mid	5785	0.36	0.69	17.00	-16.31
High	5825	0.56	0.89	17.00	-16.11

10.4.12. 802.11n HT40 MODE IN THE 5.8 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5755	62.3	36.8	0.86
High	5795	63.0	36.9	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

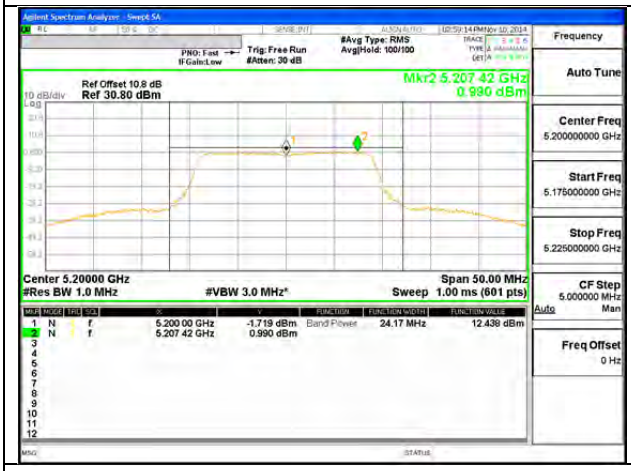
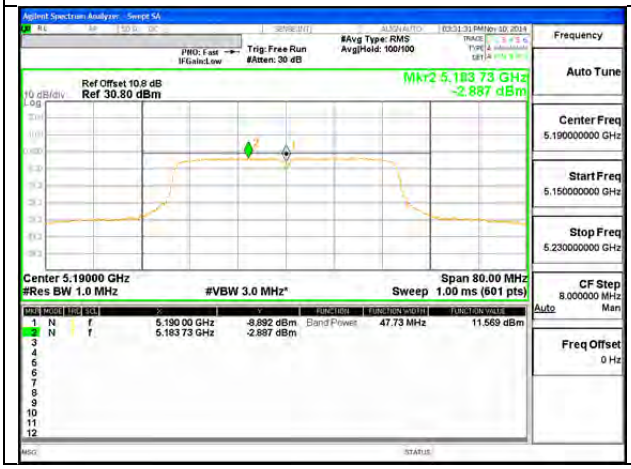
Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5755	11.47	12.10	30.00	-17.90
High	5795	10.49	11.12	30.00	-18.88

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5755	-2.84	-2.21	17.00	-19.21
High	5795	-4.04	-3.41	17.00	-20.41

10.4.13. OUTPUT POWER AND PPSD PLOTS, Chain 0

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

11n HT40 5.5 Mid Ch

11n HT40 5.8 Low Ch

11a HT20 5.2 Mid Ch

11a HT20 5.3 Mid Ch

11a HT20 5.5 Mid Ch

11a HT20 5.8 Mid Ch

10.5. PEAK EXCURSION

LIMITS

FCC §15.407 (a) (6)

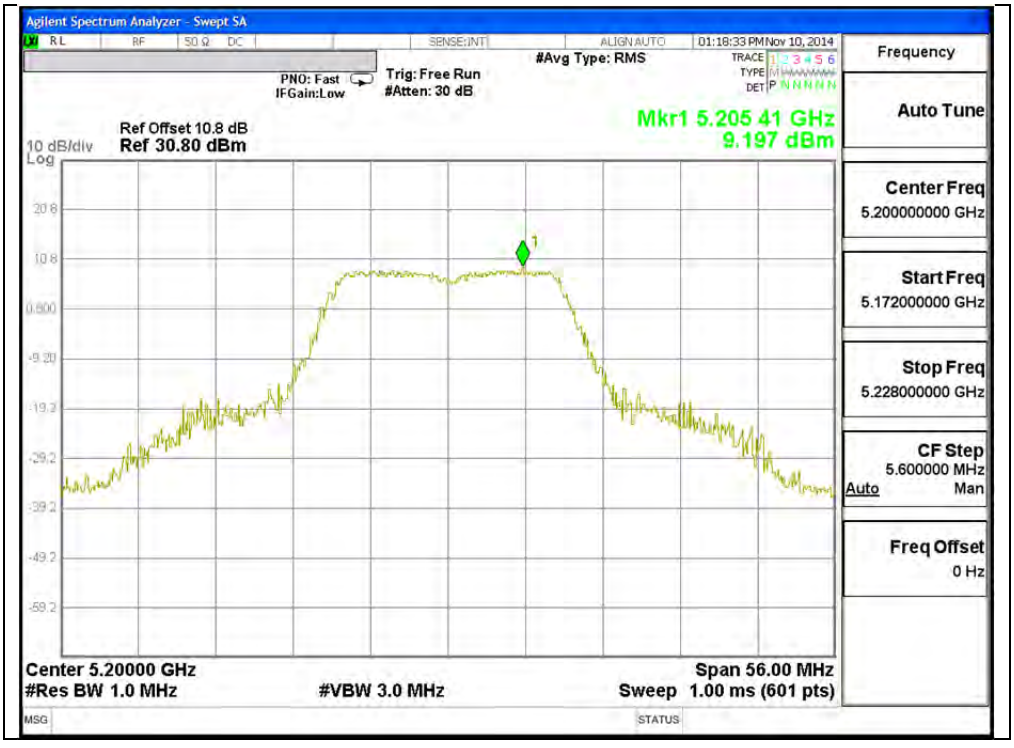
The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the peak transmit power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

RESULTS

10.5.1. 802.11a MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	PK Level (dBm)	PSD (dBm)	DCCF (dB)	Peak Excursion (dB)	Limit (dB)	Margin (dB)
Mid	5200	9.197	1.83	0.30	7.07	13	-5.93

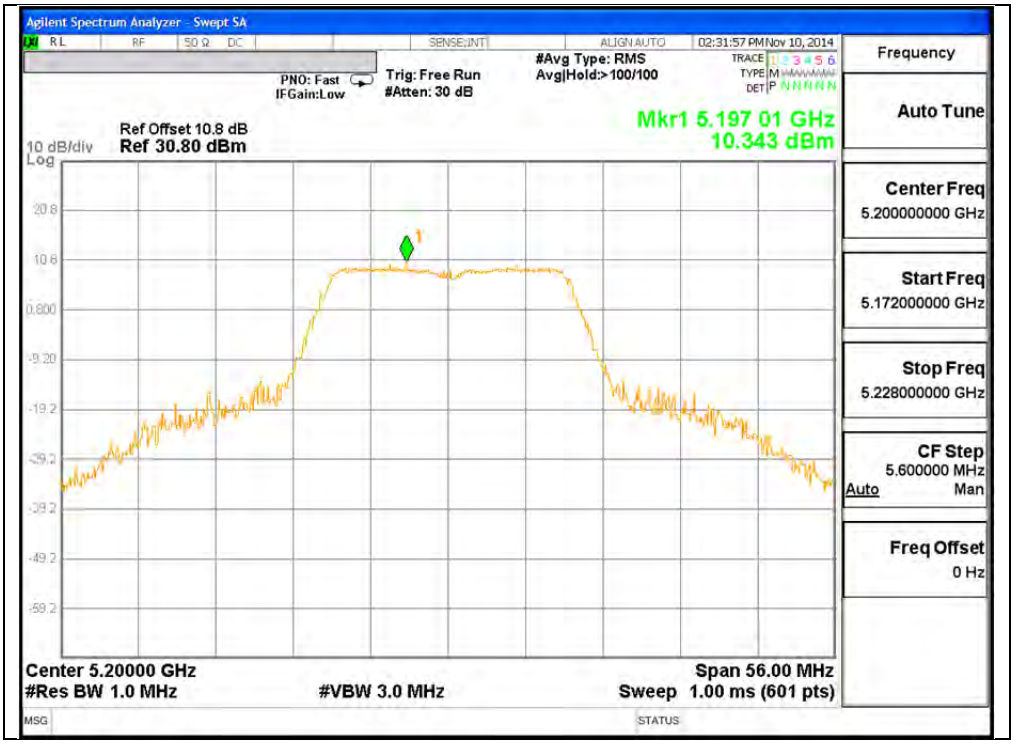
PEAK EXCURSION



10.5.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	PK Level (dBm)	PSD (dBm)	DCCF (dB)	Peak Excursion (dB)	Limit (dB)	Margin (dB)
Mid	5200	10.343	0.99	0.33	9.02	13	-3.98

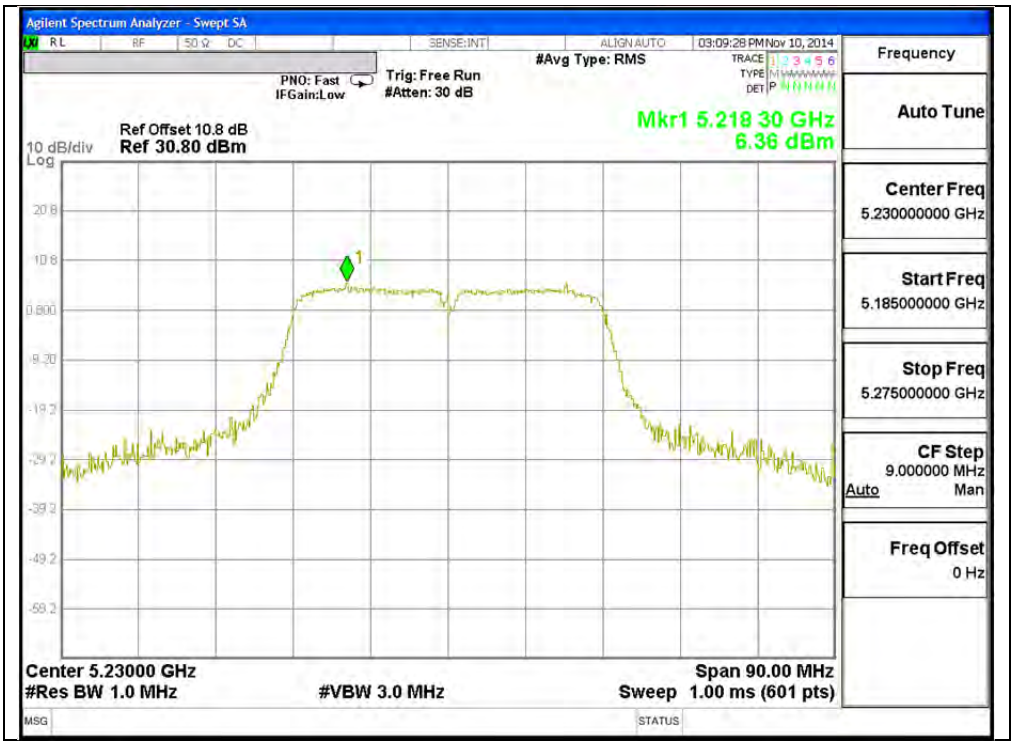
PEAK EXCURSION



10.5.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	PK Level (dBm)	PSD (dBm)	DCCF (dB)	Peak Excursion (dB)	Limit (dB)	Margin (dB)
Mid	5230	6.360	-2.99	0.63	8.72	13	-4.28

PEAK EXCURSION



11. TRANSMITTER ABOVE 1 GHz

LIMITS

FCC §15.205 and §15.209

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

TEST PROCEDURE

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

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

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

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

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

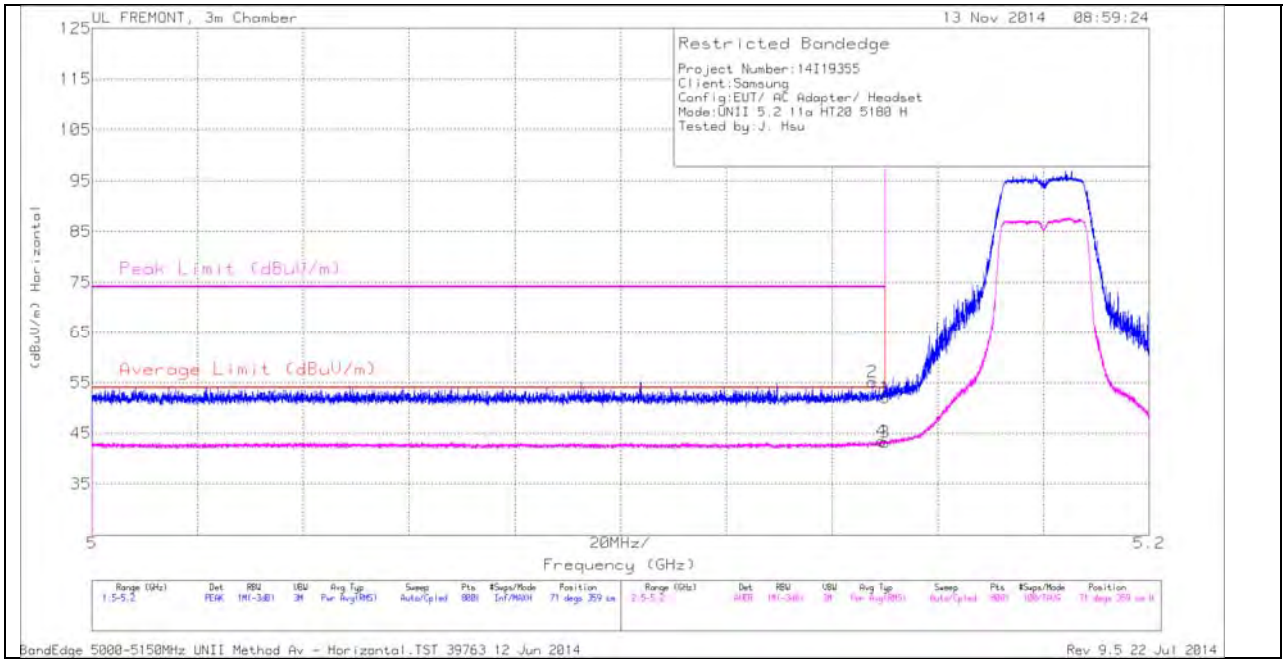
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized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

11.1. 5.2 GHz

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

RESTRICTED BANDEDGE (LOW CHANNEL)

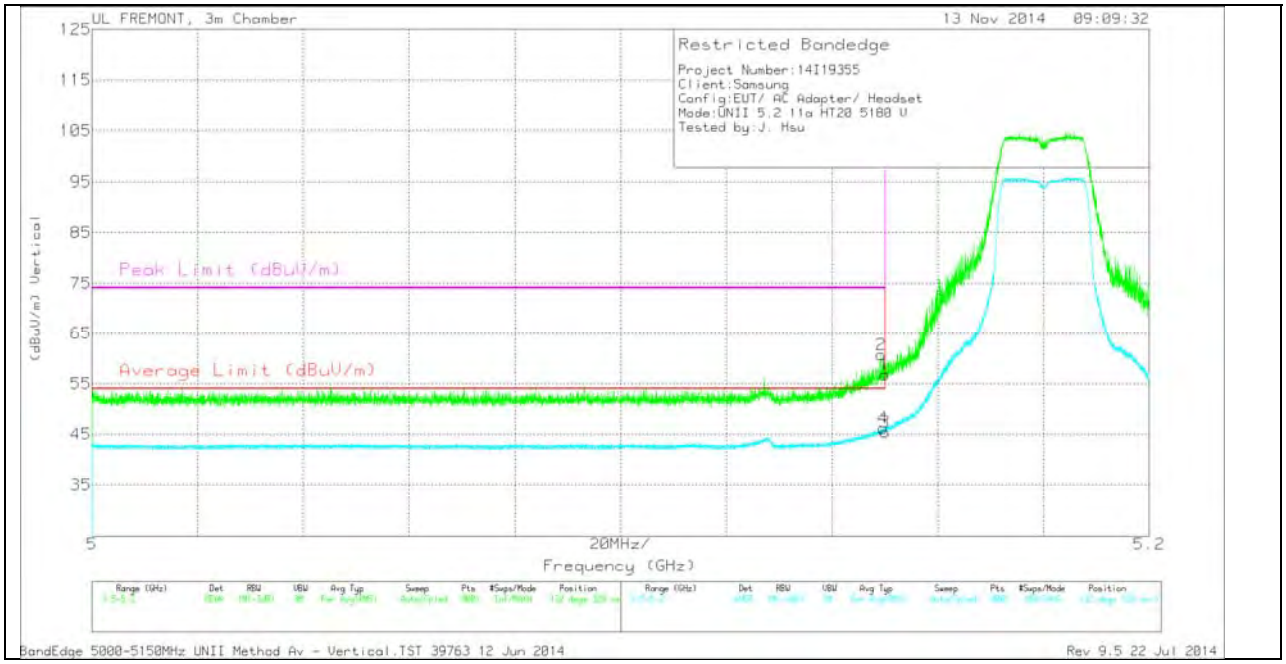
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	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	42.53	PK	34.2	-21.6	0	55.13	-	-	74	-18.87	71	359	H
4	5.149	30.6	RMS	34.2	-21.6	.3	43.5	54	-10.5	-	-	71	359	H
1	5.15	39.48	PK	34.2	-21.6	0	52.08	-	-	74	-21.92	71	359	H
3	5.15	30.3	RMS	34.2	-21.6	.3	43.2	54	-10.8	-	-	71	359	H

VERTICAL PEAK AND AVERAGE PLOT

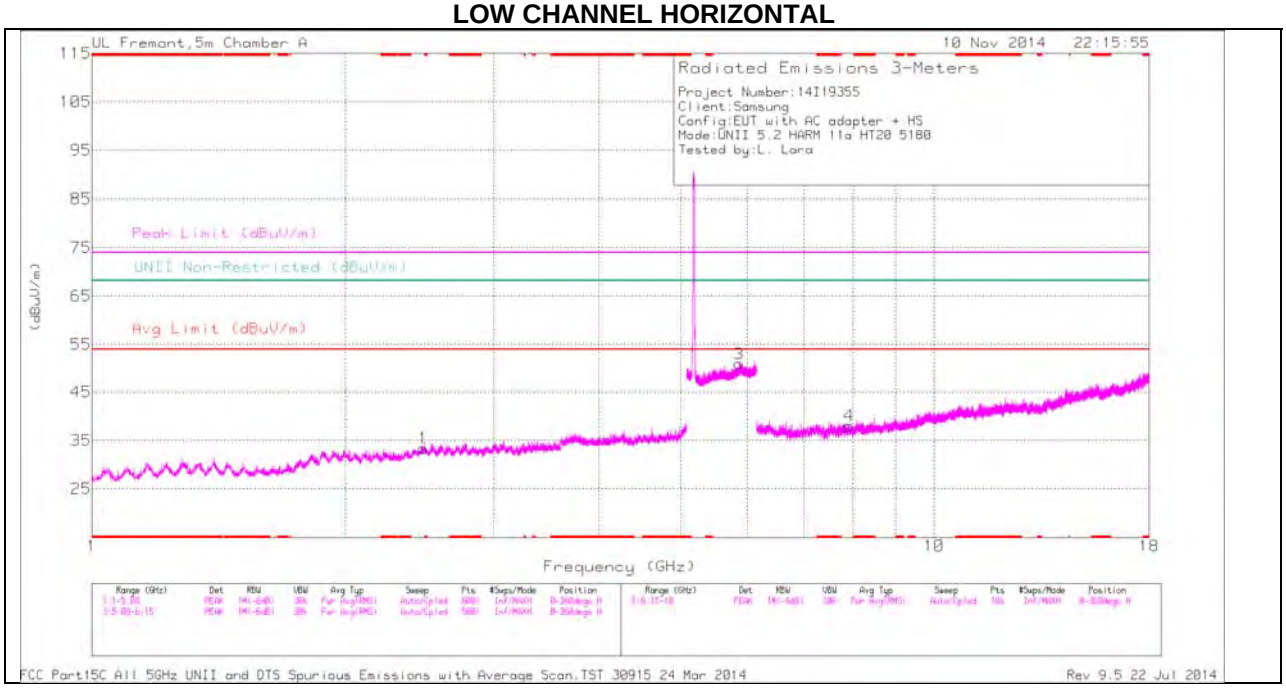


VERTICAL DATA

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	5.149	48.1	PK	34.2	-21.6	0	60.7	-	-	74	-13.3	132	329	V
1	5.15	44.21	PK	34.2	-21.6	0	56.81	-	-	74	-17.19	132	329	V
3	5.15	32.6	RMS	34.2	-21.6	.3	45.5	54	-8.5	-	-	132	329	V
4	5.15	33.32	RMS	34.2	-21.6	.3	46.22	54	-7.78	-	-	132	329	V

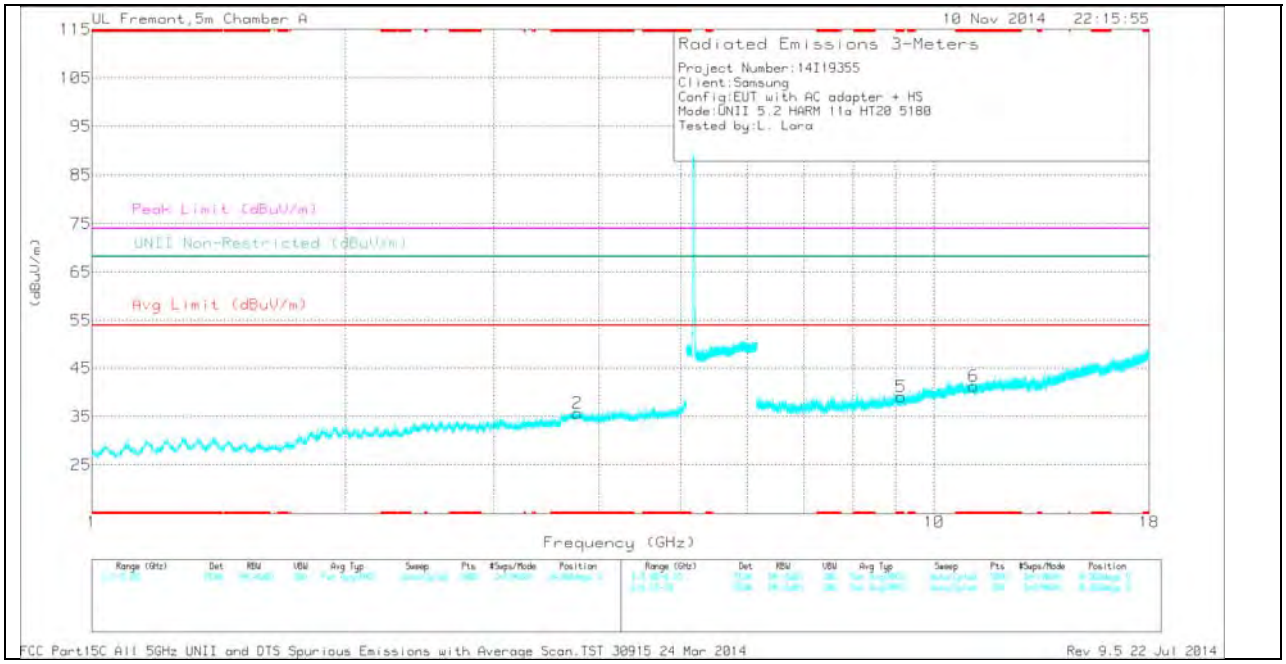
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



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

LOW CHANNEL VERTICAL



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

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 3.772	32.26	PK	33.6	-30.2	0	35.66	-	-	74	-38.34	-	-	0-360	100	V
5	* 9.143	27.72	PK	36.1	-24.8	0	39.02	-	-	74	-34.98	-	-	0-360	100	V
6	* 11.135	25.76	PK	37.7	-22.2	0	41.26	-	-	74	-32.74	-	-	0-360	201	V
1	2.472	33.06	PK	32.7	-32.4	0	33.36	-	-	-	-	68.2	-34.84	0-360	100	H
3	5.866	35.45	PK	34.9	-19.4	0	50.95	-	-	-	-	68.2	-17.25	0-360	100	H
4	7.918	28.45	PK	35.5	-25.9	0	38.05	-	-	-	-	68.2	-30.15	0-360	201	H

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

PK - Peak detector

Radiated Emissions

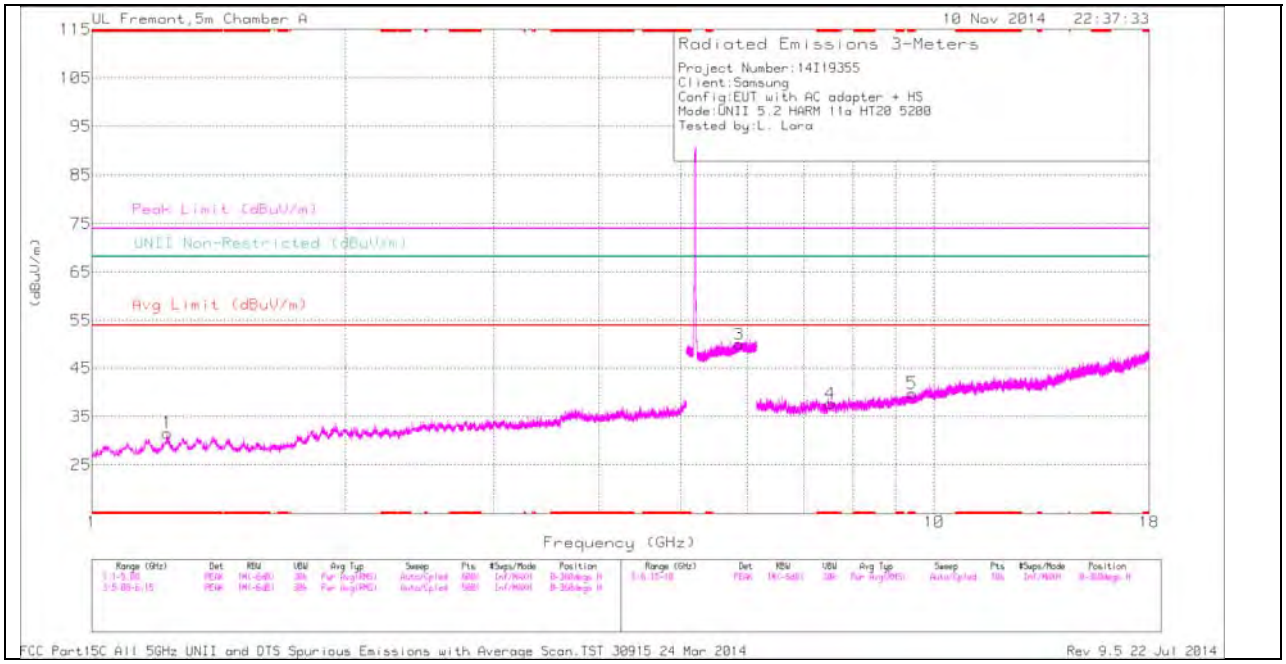
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 9.144	35.61	PK1	36.1	-24.8	0	46.91	-	-	74	-27.09	-	-	1	100	V
* 9.144	24.63	AD1	36.1	-24.8	.3	36.23	54	-17.77	-	-	-	-	1	100	V

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

PK1 - KDB789033 Method: Peak

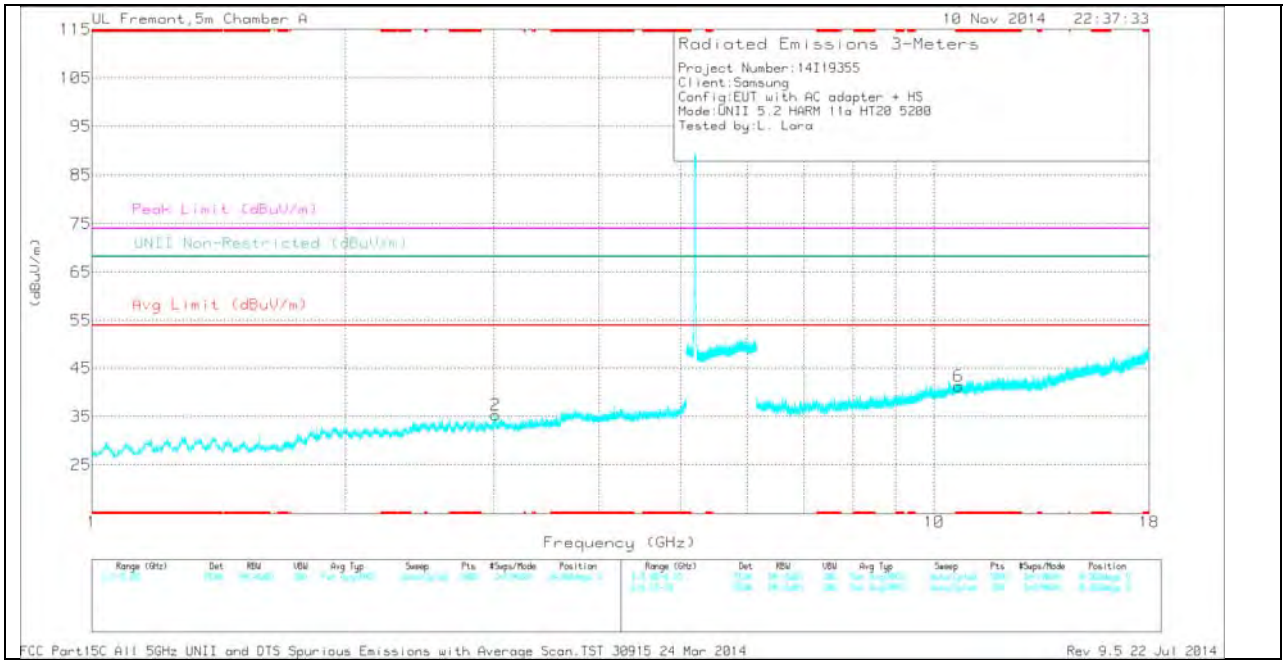
AD1 - KDB789033 Method: AD Primary Power Average

MID CHANNEL HORIZONTAL



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

MID CHANNEL VERTICAL



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

MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.228	36.71	PK	29.6	-34.7	0	31.61	-	-	74	-42.39	-	-	0-360	201	H
4	* 7.522	27.57	PK	35.3	-25.2	0	37.67	-	-	74	-36.33	-	-	0-360	201	H
5	* 9.405	27.69	PK	36.4	-24.3	0	39.79	-	-	74	-34.21	-	-	0-360	100	H
6	* 10.694	25.84	PK	37.9	-22.5	0	41.24	-	-	74	-32.76	-	-	0-360	201	V
2	3.013	33.66	PK	32.8	-31.1	0	35.36	-	-	-	-	68.2	-32.84	0-360	100	V
3	5.866	34.43	PK	34.9	-19.4	0	49.93	-	-	-	-	68.2	-18.27	0-360	201	H

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

PK - Peak detector

Radiated Emissions

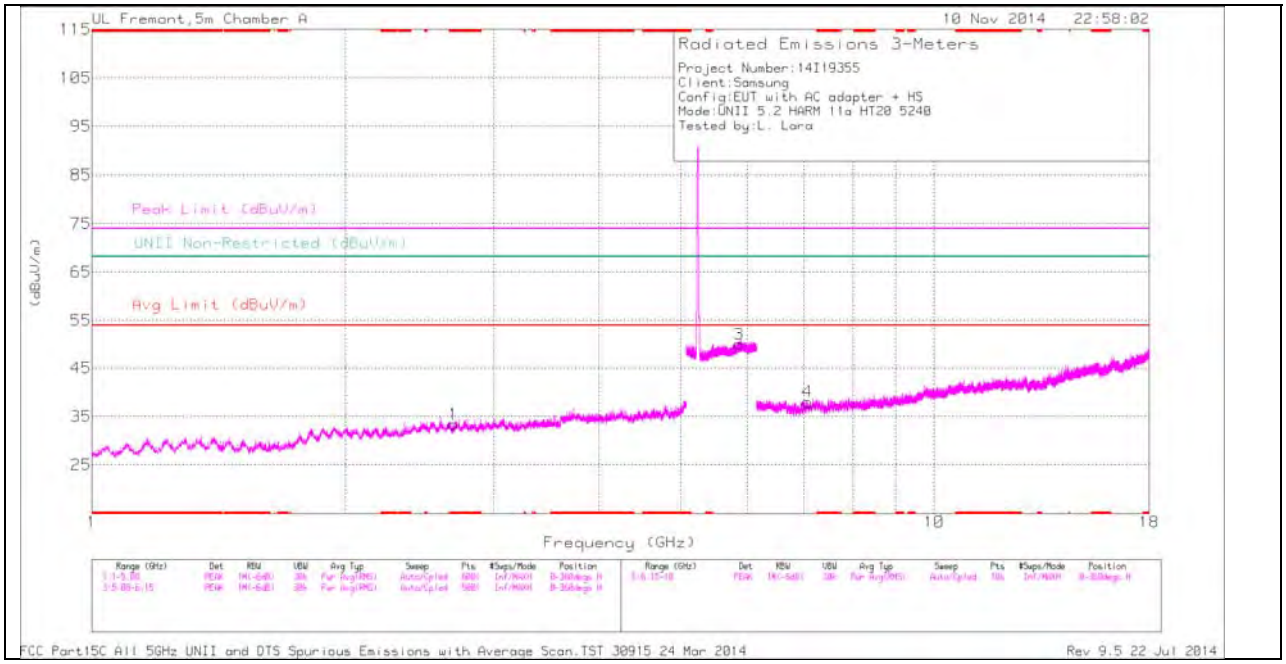
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 10.694	34.07	PK1	37.9	-22.5	0	49.47	-	-	74	-24.53	-	-	1	202	V
* 10.693	22.72	AD1	37.9	-22.5	.3	38.42	54	-15.58	-	-	-	-	1	202	V

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

PK1 - KDB789033 Method: Peak

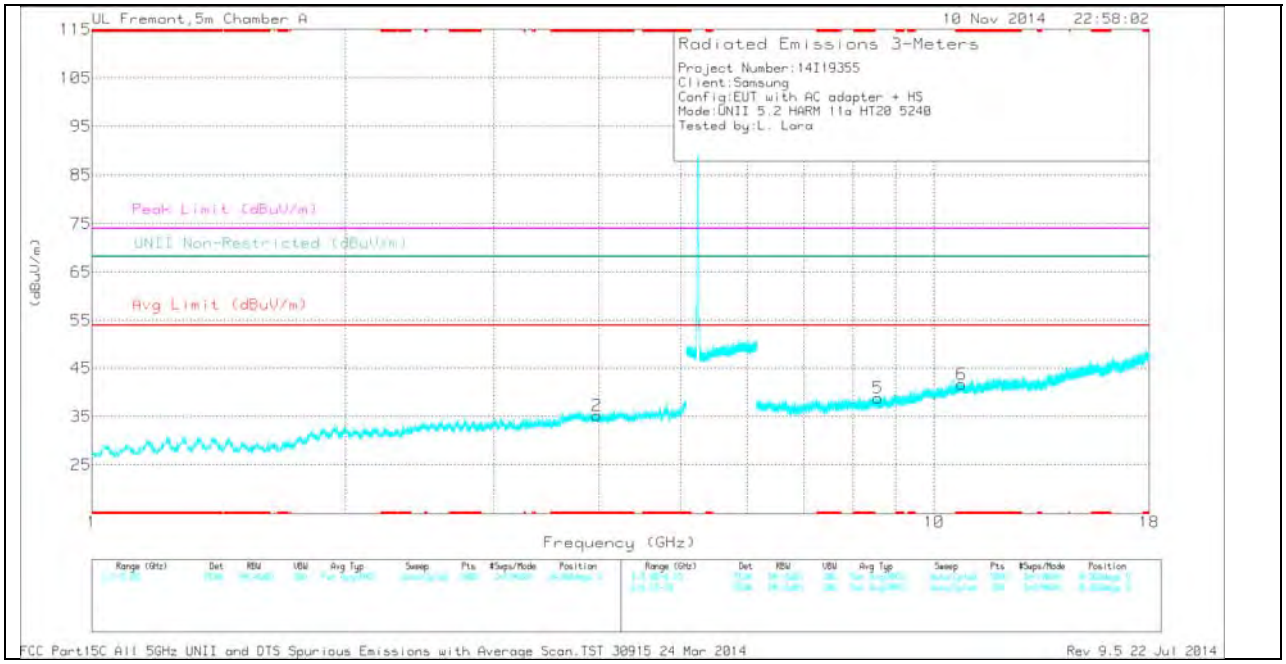
AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL HORIZONTAL



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

HIGH CHANNEL VERTICAL



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

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.686	32.98	PK	32.7	-32.3	0	33.38	-	-	74	-40.62	-	-	0-360	100	H
2	* 3.98	31.81	PK	33.7	-30.3	0	35.21	-	-	74	-38.79	-	-	0-360	100	V
6	* 10.788	26.32	PK	37.9	-22.5	0	41.72	-	-	74	-32.28	-	-	0-360	100	V
3	5.864	34.47	PK	34.9	-19.4	0	49.97	-	-	-	-	68.2	-18.23	0-360	201	H
4	7.071	29.58	PK	35.3	-26.9	0	37.98	-	-	-	-	68.2	-30.22	0-360	100	H
5	8.584	28.54	PK	35.7	-25.4	0	38.84	-	-	-	-	68.2	-29.36	0-360	100	V

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

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/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
* 10.786	34.37	PK1	37.9	-22.5	0	49.77	-	-	74	-24.23	-	-	1	100	V
* 10.787	23.02	AD1	37.9	-22.5	.3	38.72	54	-15.28	-	-	-	-	1	100	V

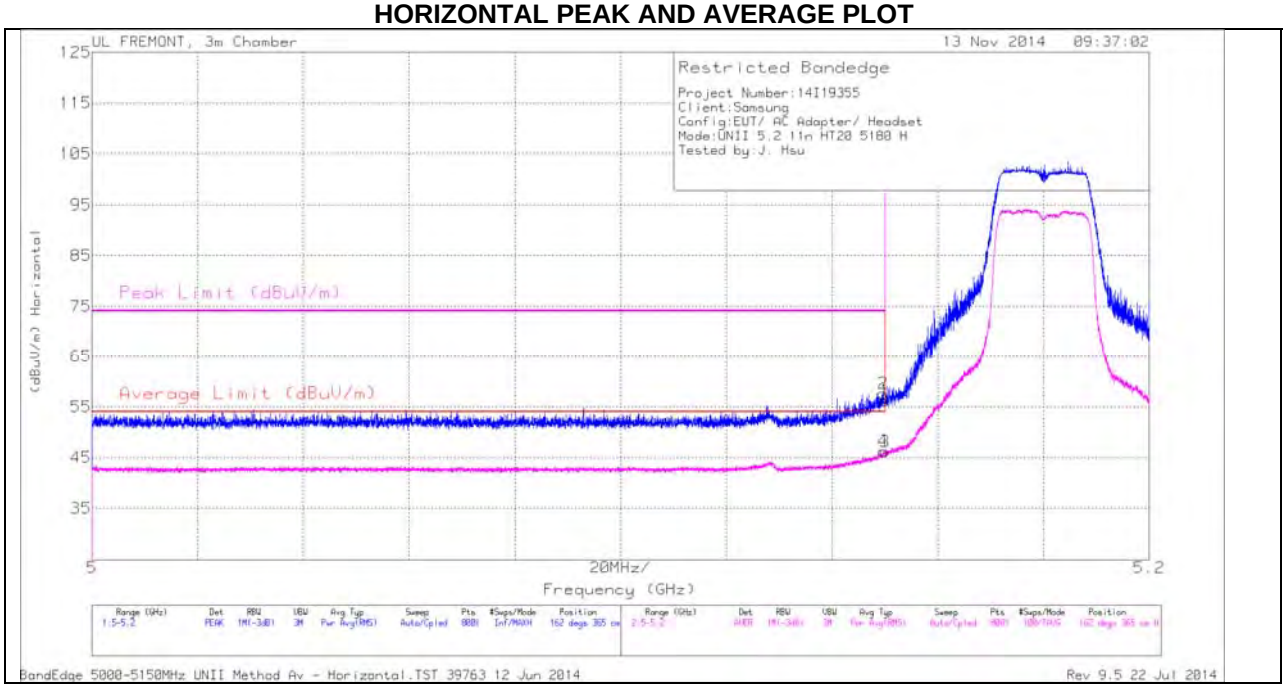
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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

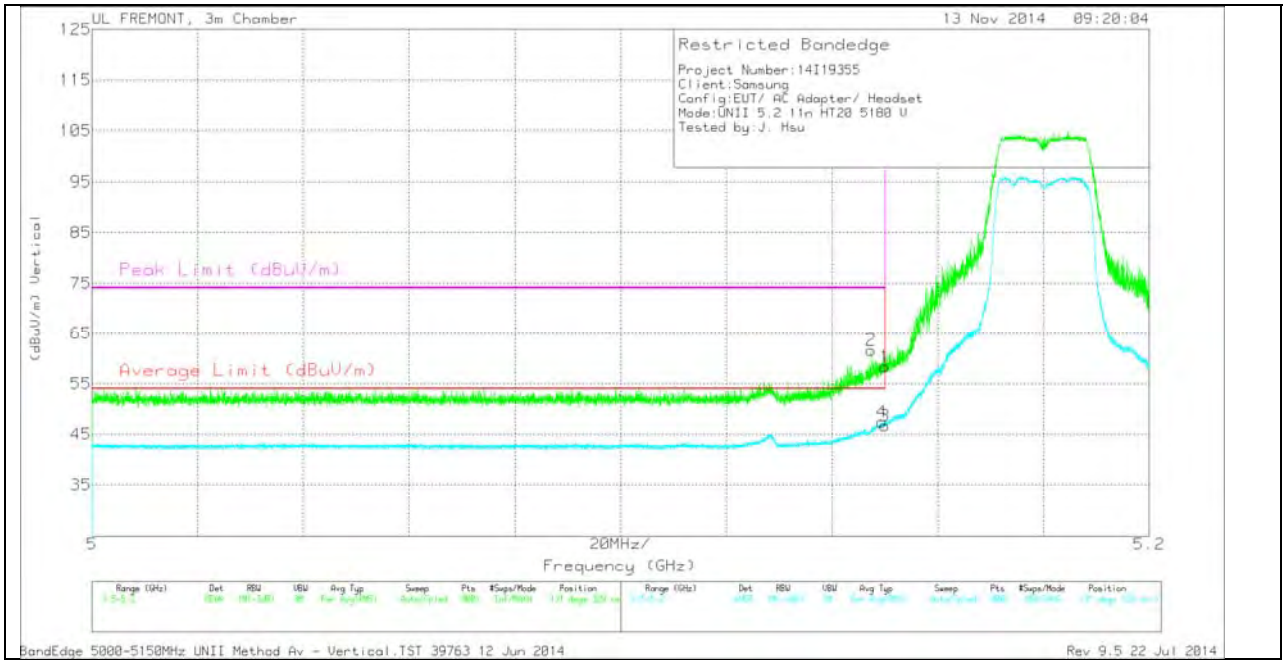
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 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	5.15	43.62	PK	34.2	-21.6	0	56.22	-	-	74	-17.78	162	365	H
2	5.15	45.03	PK	34.2	-21.6	0	57.63	-	-	74	-16.37	162	365	H
3	5.15	33.32	RMS	34.2	-21.6	.33	46.24	54	-7.76	-	-	162	365	H
4	5.15	33.24	RMS	34.2	-21.6	.33	46.16	54	-7.84	-	-	162	365	H

VERTICAL PEAK AND AVERAGE PLOT

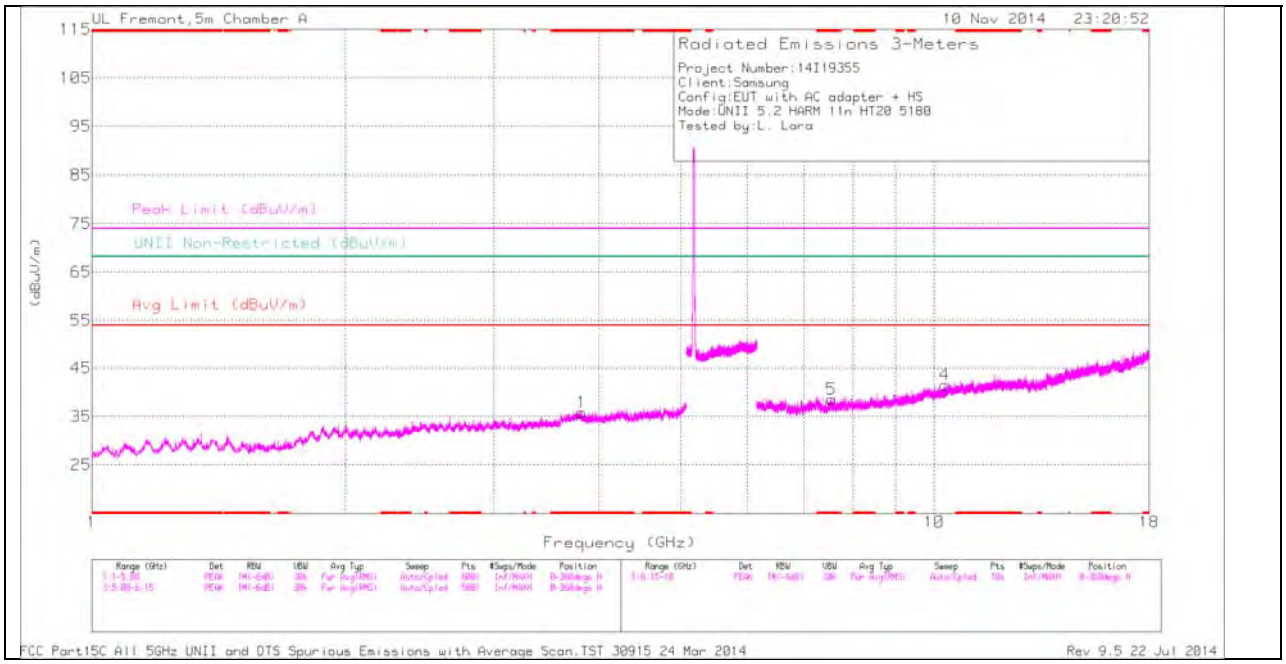


VERTICAL DATA

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	5.147	49.05	PK	34.2	-21.6	0	61.65	-	-	74	-12.35	131	329	V
4	5.149	34.46	RMS	34.2	-21.6	.33	47.38	54	-6.62	-	-	131	329	V
1	5.15	45.76	PK	34.2	-21.6	0	58.36	-	-	74	-15.64	131	329	V
3	5.15	33.74	RMS	34.2	-21.6	.33	46.66	54	-7.34	-	-	131	329	V

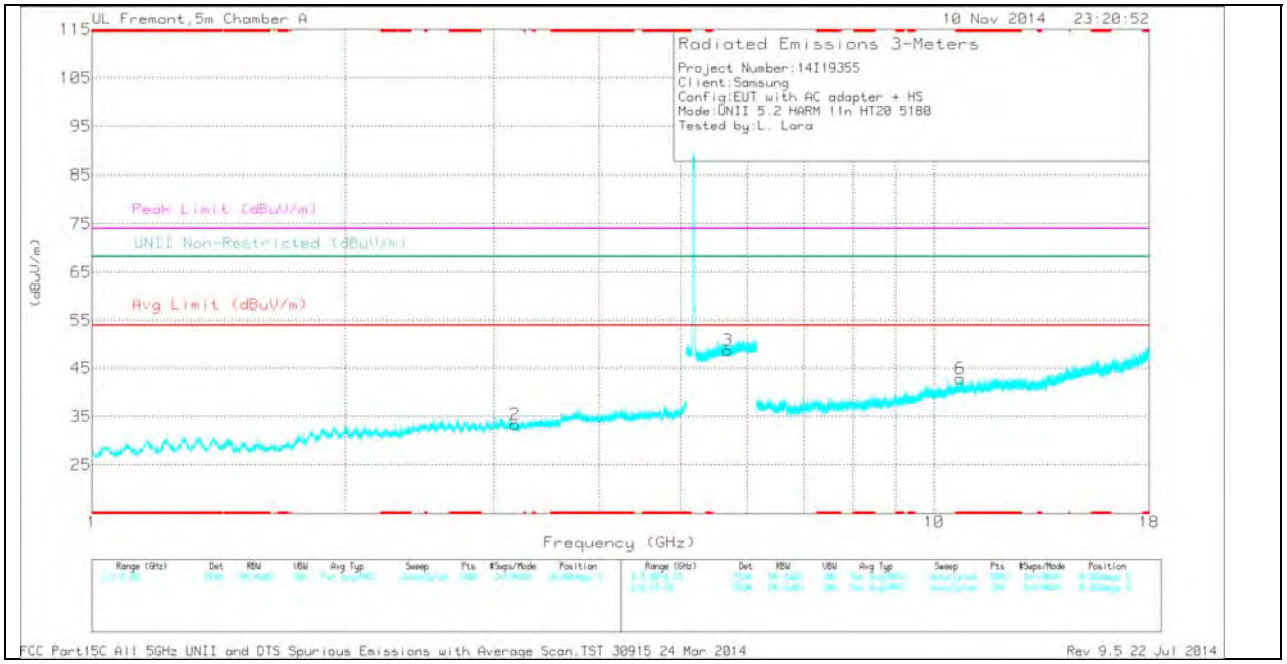
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



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

LOW CHANNEL VERTICAL



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

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.815	32.61	PK	33.7	-30.5	0	35.81	-	-	74	-38.19	-	-	0-360	100	H
5	* 7.555	28.6	PK	35.3	-25.4	0	38.5	-	-	74	-35.5	-	-	0-360	100	H
6	* 10.75	27.29	PK	37.9	-22.3	0	42.89	-	-	74	-31.11	-	-	0-360	201	V
2	3.18	32.72	PK	32.7	-32	0	33.42	-	-	-	-	68.2	-34.78	0-360	100	V
3	5.686	34.43	PK	34.5	-20.2	0	48.73	-	-	-	-	68.2	-19.47	0-360	100	V
4	10.297	27.71	PK	37.2	-23.4	0	41.51	-	-	-	-	68.2	-26.69	0-360	201	H

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

PK - Peak detector

Radiated Emissions

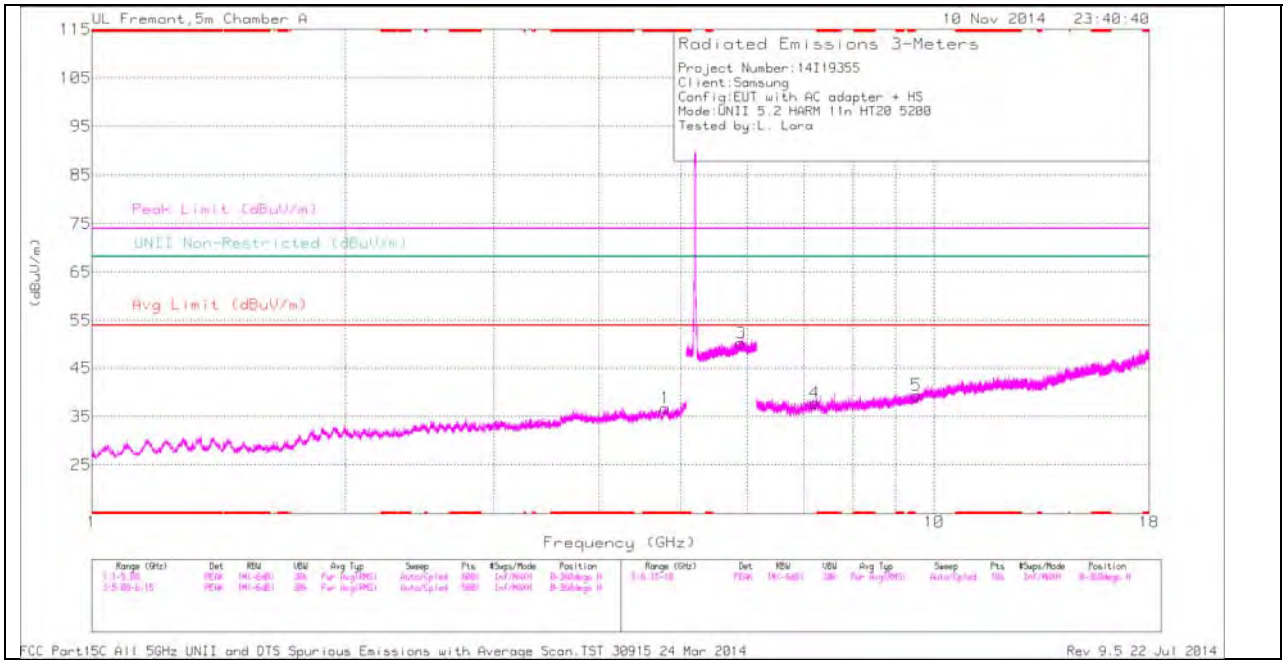
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 10.749	33.1	PK1	37.9	-22.3	0	48.7	-	-	74	-25.3	-	-	1	202	V
* 10.751	22.83	AD1	37.9	-22.3	.33	38.76	54	-15.24	-	-	-	-	1	202	V

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

PK1 - KDB789033 Method: Peak

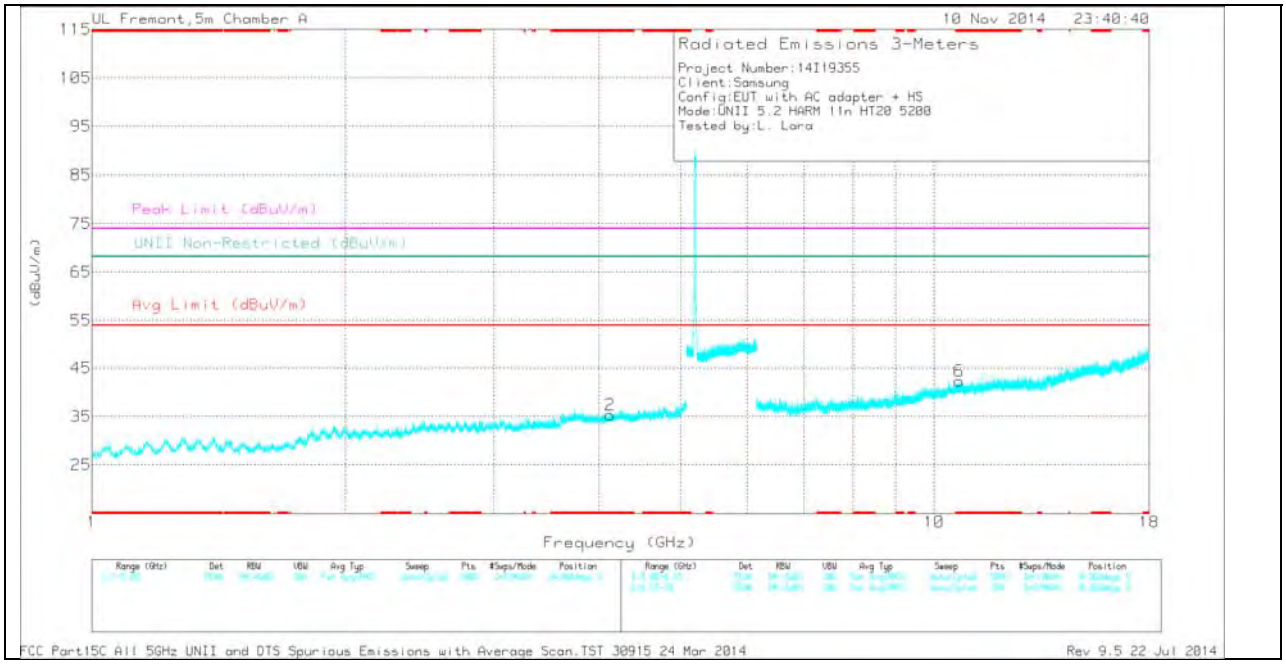
AD1 - KDB789033 Method: AD Primary Power Average

MID CHANNEL HORIZONTAL



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

MID CHANNEL VERTICAL



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

MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.797	31.82	PK	34	-29.1	0	36.72	-	-	74	-37.28	-	-	0-360	201	H
2	* 4.122	32.13	PK	33.9	-30.7	0	35.33	-	-	74	-38.67	-	-	0-360	100	V
6	* 10.703	26.79	PK	37.9	-22.4	0	42.29	-	-	74	-31.71	-	-	0-360	100	V
3	5.896	34.52	PK	35	-19.3	0	50.22	-	-	-	-	68.2	-17.98	0-360	100	H
4	7.207	28.45	PK	35.2	-25.9	0	37.75	-	-	-	-	68.2	-30.45	0-360	100	H
5	9.532	27.1	PK	36.6	-24.3	0	39.4	-	-	-	-	68.2	-28.8	0-360	201	H

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

PK - Peak detector

Radiated Emissions

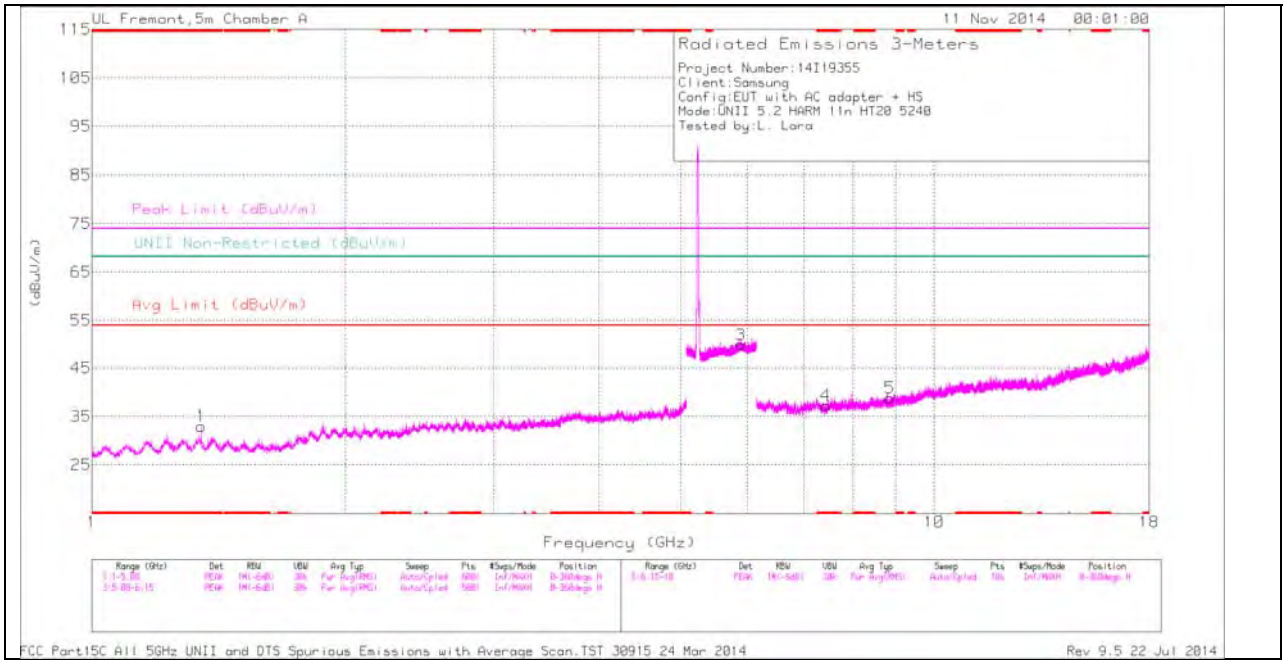
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 10.701	33.6	PK1	37.9	-22.4	0	49.1	-	-	74	-24.9	-	-	1	100	V
* 10.704	22.81	AD1	37.9	-22.4	.33	38.64	54	-15.36	-	-	-	-	1	100	V

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

PK1 - KDB789033 Method: Peak

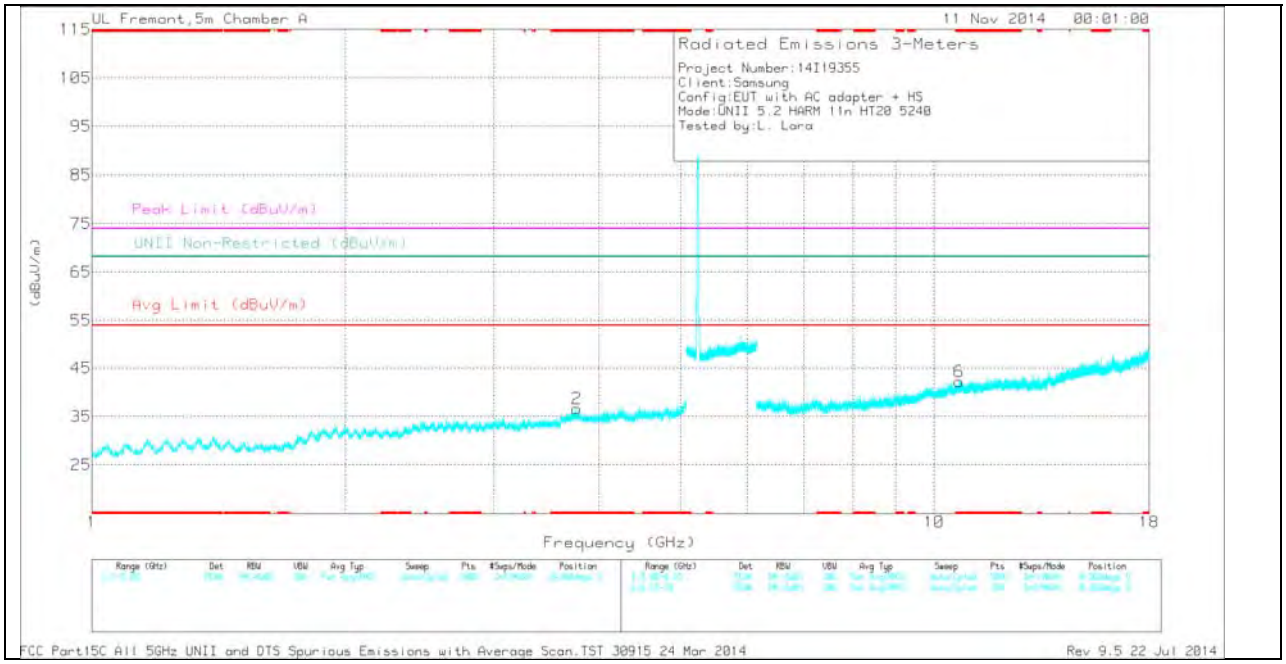
AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL HORIZONTAL



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

HIGH CHANNEL VERTICAL



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

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.348	37.83	PK	30	-34.9	0	32.93	-	-	74	-41.07	-	-	0-360	100	H
2	* 3.764	33.45	PK	33.5	-30.3	0	36.65	-	-	74	-37.35	-	-	0-360	100	V
4	* 7.432	29.02	PK	35.3	-27	0	37.32	-	-	74	-36.68	-	-	0-360	201	H
6	* 10.71	26.76	PK	37.9	-22.5	0	42.16	-	-	74	-31.84	-	-	0-360	100	V
3	5.897	34.3	PK	35	-19.4	0	49.9	-	-	-	-	68.2	-18.3	0-360	100	H
5	8.858	28.53	PK	35.8	-25.5	0	38.83	-	-	-	-	68.2	-29.37	0-360	100	H

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

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/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
* 10.708	33.43	PK1	37.9	-22.5	0	48.83	-	-	74	-25.17	-	-	1	100	V
* 10.71	22.84	AD1	37.9	-22.5	.33	38.57	54	-15.43	-	-	-	-	1	100	V

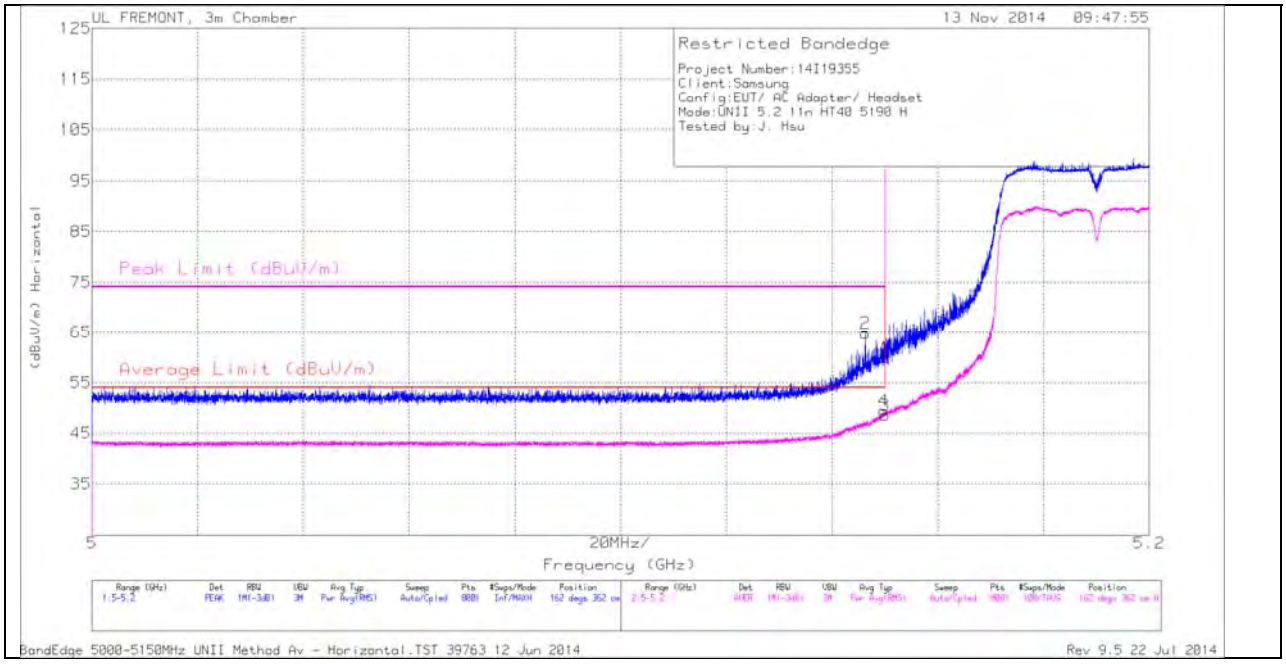
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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

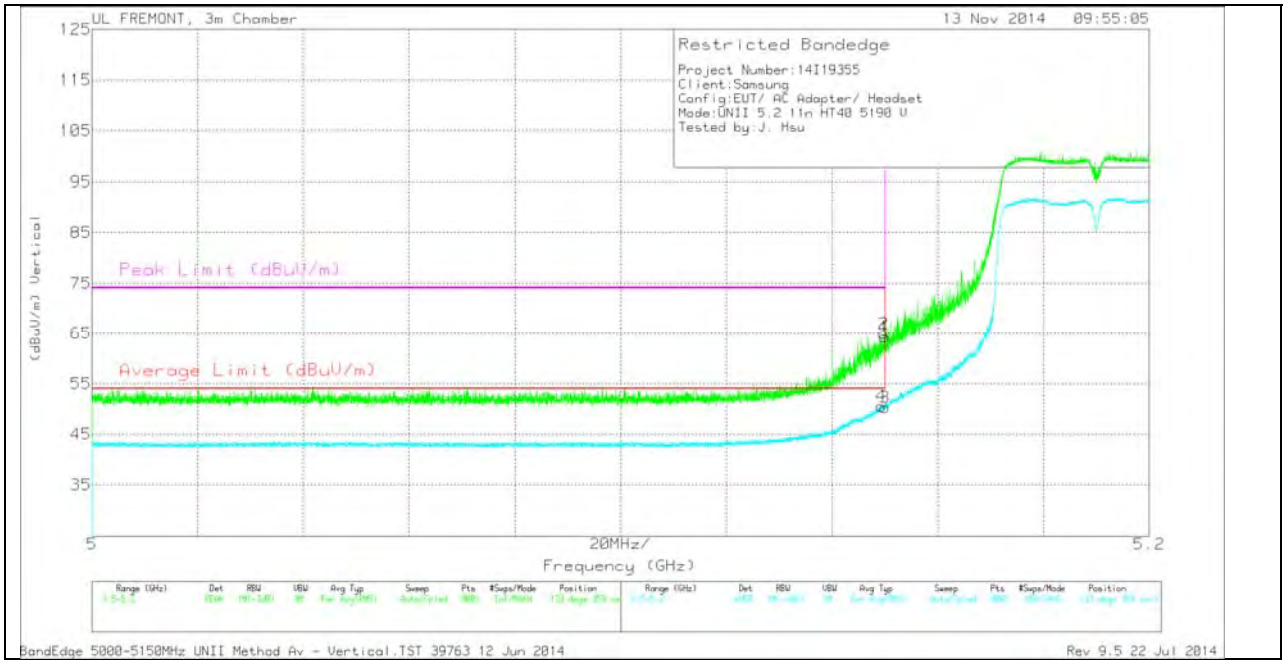
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 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	5.146	52.28	PK	34.2	-21.6	0	64.88	-	-	74	-9.12	162	362	H
1	5.15	47.35	PK	34.2	-21.6	0	59.95	-	-	74	-14.05	162	362	H
3	5.15	35.32	RMS	34.2	-21.6	.63	48.56	54	-5.44	-	-	162	362	H
4	5.15	36.13	RMS	34.2	-21.6	.63	49.37	54	-4.63	-	-	162	362	H

VERTICAL PEAK AND AVERAGE PLOT

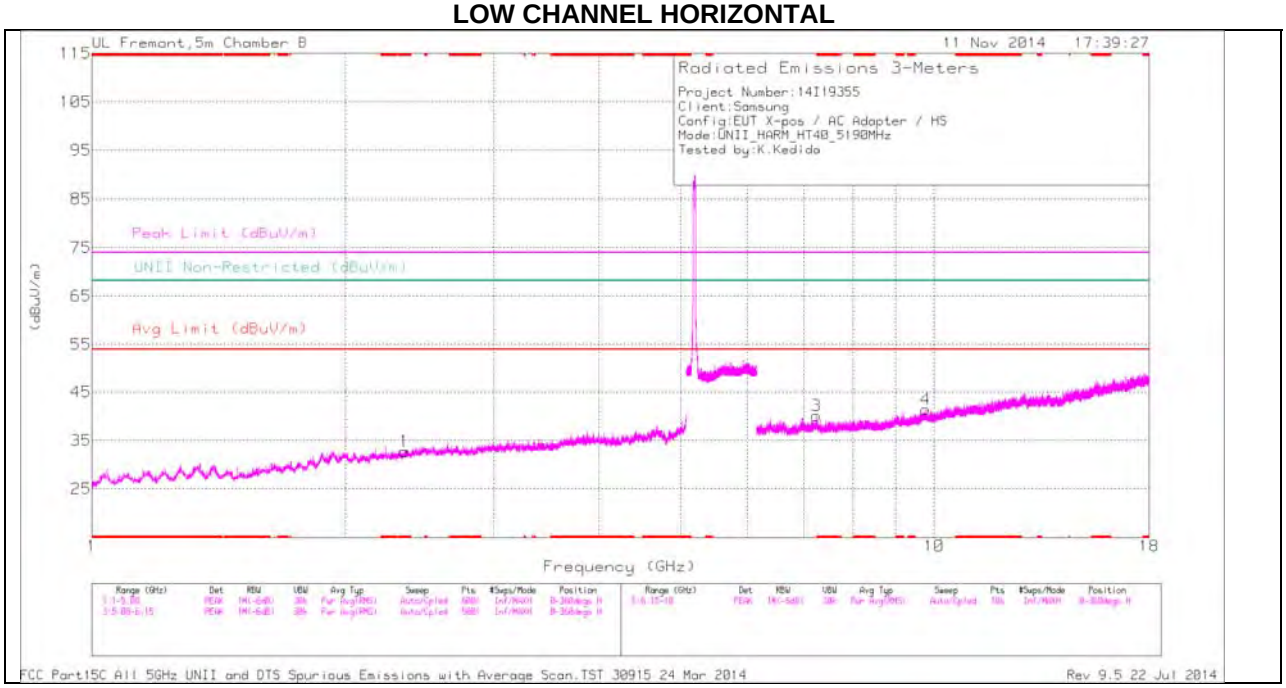


VERTICAL DATA

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
4	5.149	37.31	RMS	34.2	-21.6	.63	50.55	54	-3.45	-	-	133	359	V
1	5.15	51.67	PK	34.2	-21.6	0	64.27	-	-	74	-9.73	133	359	V
2	5.15	52.29	PK	34.2	-21.6	0	64.89	-	-	74	-9.11	133	359	V
3	5.15	37.02	RMS	34.2	-21.6	.63	50.26	54	-3.74	-	-	133	359	V

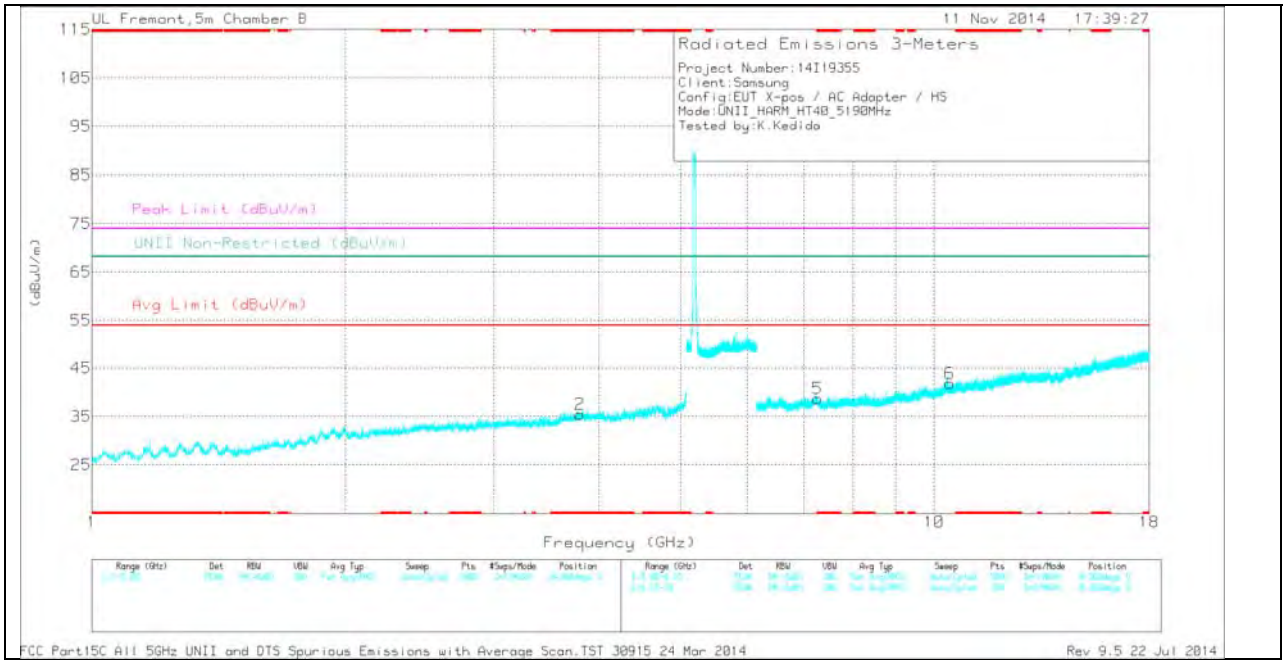
HARMONICS AND SPURIOUS EMISSIONS

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)	Corrected Reading (dBuV/m)	Avg Limit (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	* 2.35	33.97	PK	31.9	-33.1	32.77	-	-	74	-41.23	-	-	0-360	101	H
2	* 3.798	32.87	PK	33.6	-31	35.47	-	-	74	-38.53	-	-	0-360	101	V
5	* 7.273	30.33	PK	35.6	-27.3	38.63	-	-	74	-35.37	-	-	0-360	199	V
3	7.249	31.03	PK	35.6	-26.5	40.13	-	-	-	-	68.2	-28.07	0-360	101	H
4	9.781	28.68	PK	36.9	-24.2	41.38	-	-	-	-	68.2	-26.82	0-360	199	H
6	10.426	28.31	PK	37.3	-23.8	41.81	-	-	-	-	68.2	-26.39	0-360	199	V

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

PK - Peak detector

Radiated Emissions

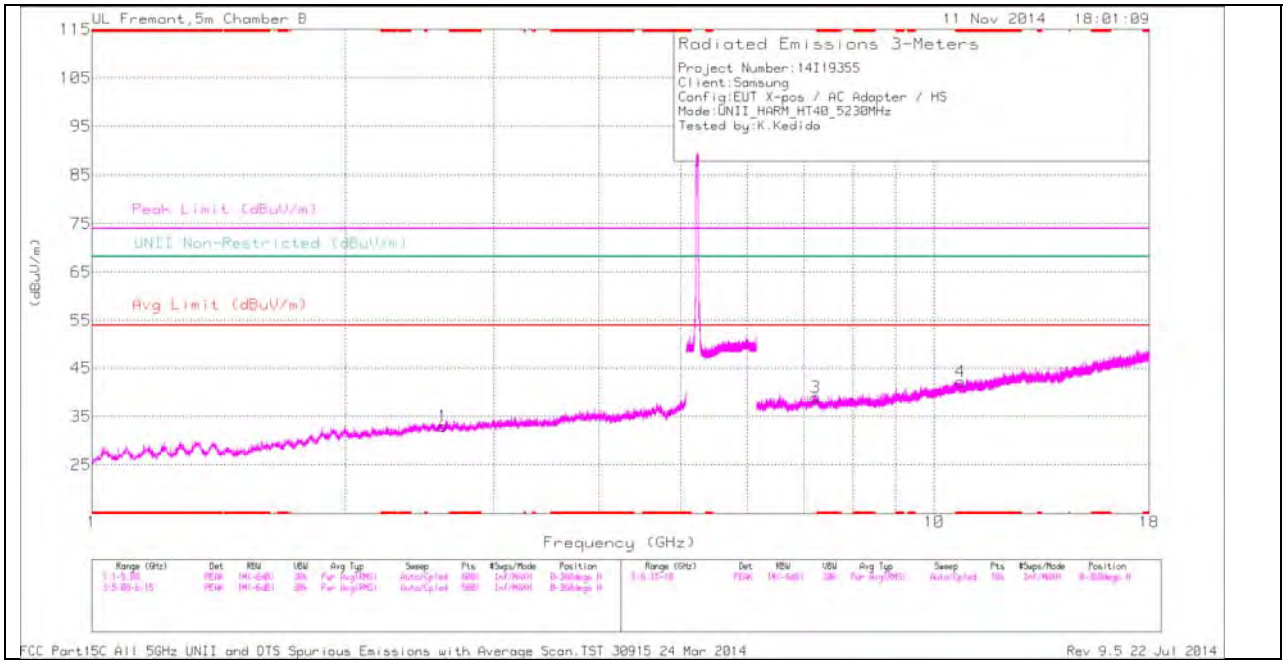
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.799	40.78	PK1	33.6	-31	0	43.38	-	-	74	-30.62	-	-	359	100	V
* 3.798	29.76	AD1	33.6	-31	.63	32.81	54	-21.19	-	-	-	-	359	100	V

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

PK1 - KDB789033 Method: Peak

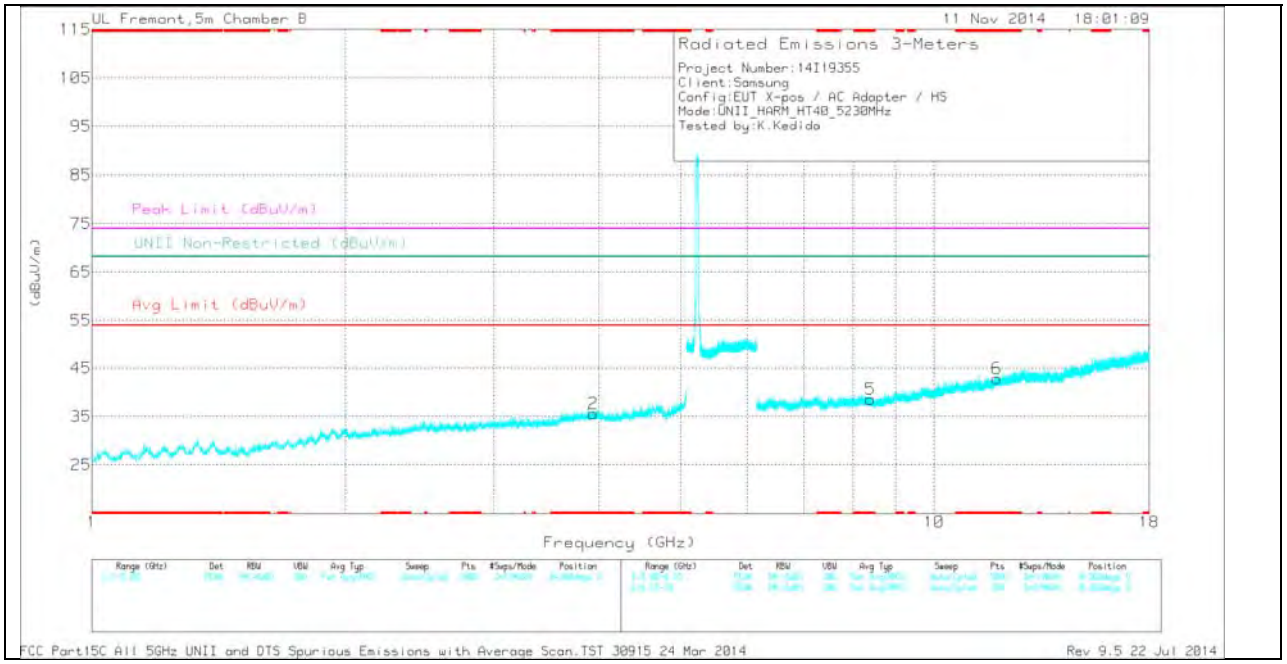
AD1 - KDB789033 Method: AD Primary Power Average

MID CHANNEL HORIZONTAL



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

MID CHANNEL VERTICAL



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

MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr /Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 3.938	32.91	PK	33.7	-31	35.61	-	-	74	-38.39	-	-	0-360	101	V
4	* 10.735	27.85	PK	37.8	-23.5	42.15	-	-	74	-31.85	-	-	0-360	101	H
5	* 8.407	28.91	PK	35.8	-26.1	38.61	-	-	74	-35.39	-	-	0-360	200	V
6	* 11.879	26.87	PK	38.5	-22.5	42.87	-	-	74	-31.13	-	-	0-360	200	V
1	2.611	33.24	PK	32.4	-32.7	32.94	-	-	-	-	68.2	-35.26	0-360	100	H
3	7.235	29.59	PK	35.6	-26.3	38.89	-	-	-	-	68.2	-29.31	0-360	200	H

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

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/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
* 3.936	40.91	PK1	33.7	-31	0	43.61	-	-	74	-30.39	-	-	359	101	V
* 3.938	30.05	AD1	33.7	-31	.63	33.2	54	-20.8	-	-	-	-	359	101	V

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

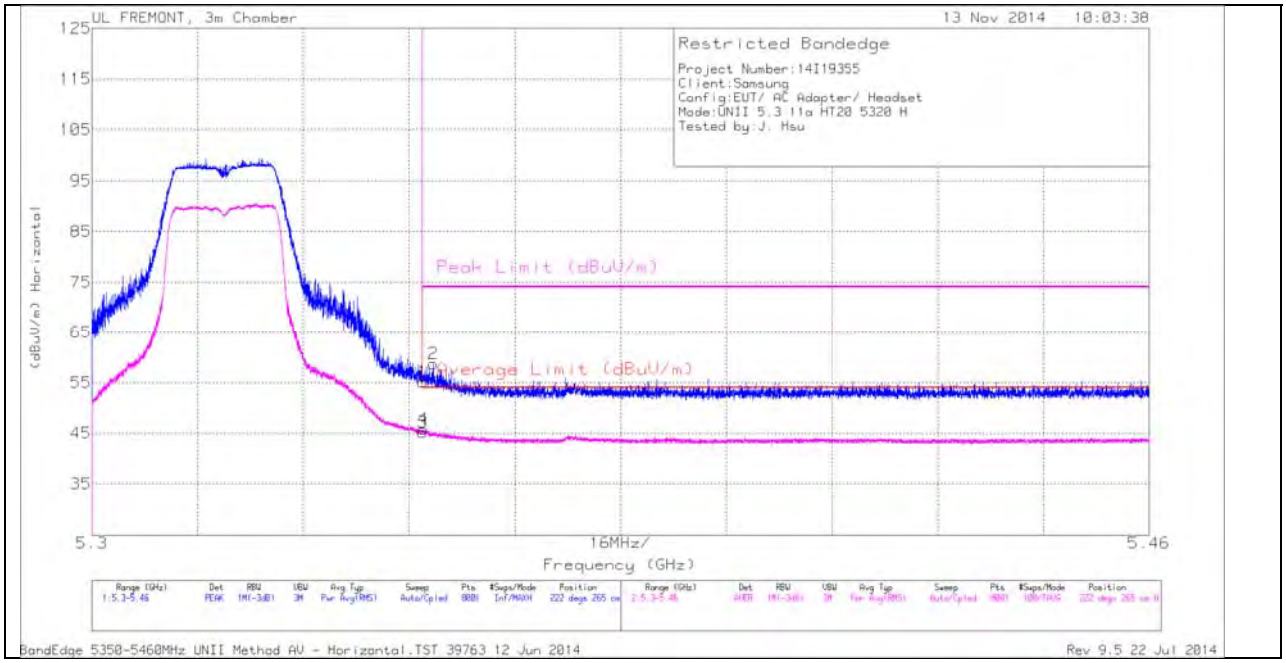
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

11.2. 5.3 GHz

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

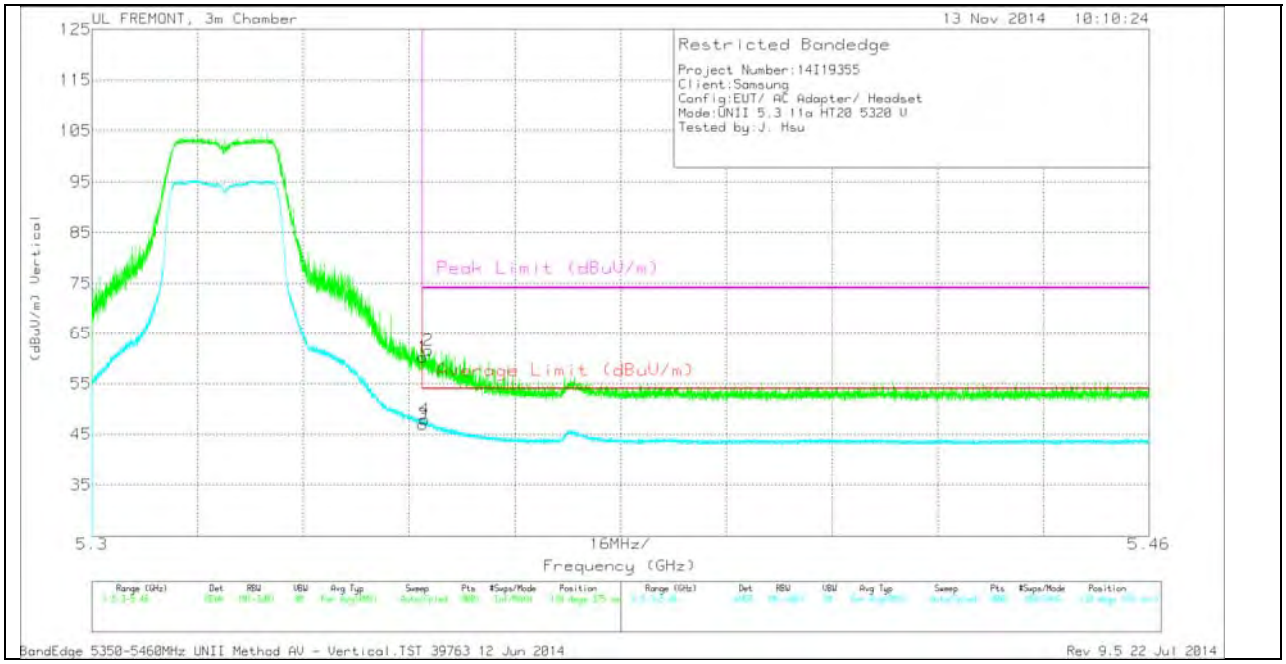
ORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 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	42.01	PK	34.5	-21.4	0	55.11	-	-	74	-18.89	222	265	H
3	5.35	31.8	RMS	34.5	-21.4	.3	45.2	54	-8.8	-	-	222	265	H
4	5.35	32.38	RMS	34.5	-21.4	.3	45.78	54	-8.22	-	-	222	265	H
2	5.352	45.61	PK	34.5	-21.4	0	58.71	-	-	74	-15.29	222	265	H

VERTICAL PEAK AND AVERAGE PLOT

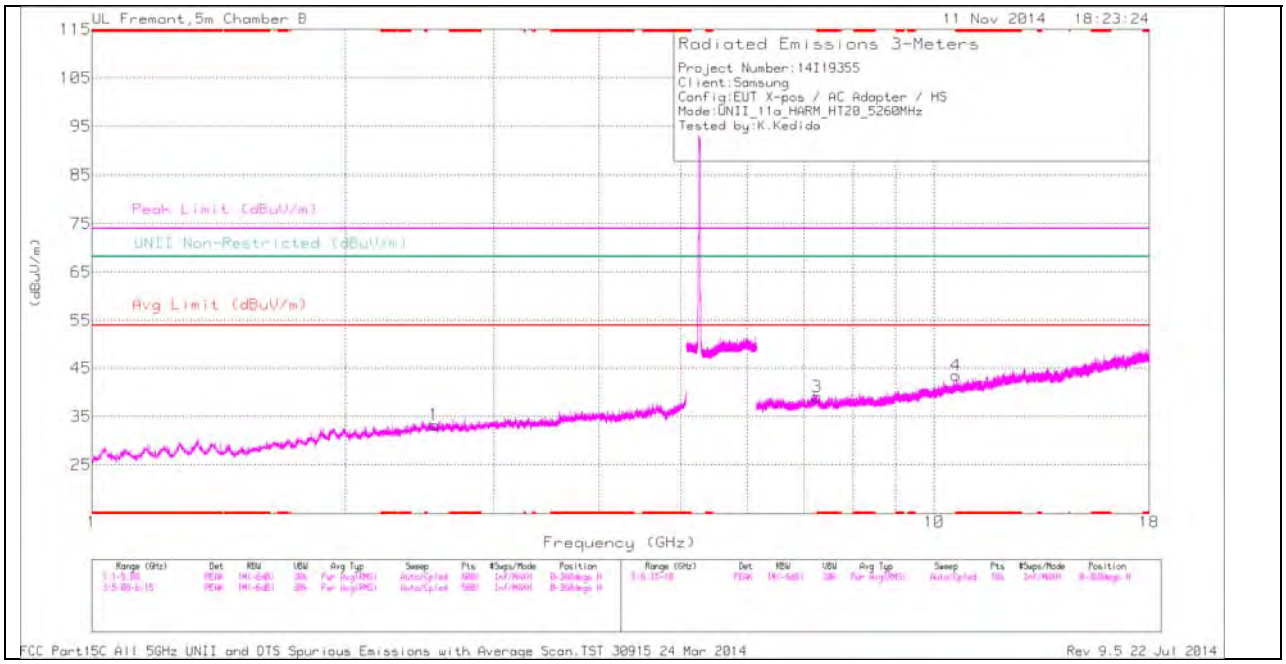


VERTICAL DATA

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	47.09	PK	34.5	-21.4	0	60.19	-	-	74	-13.81	138	375	V
3	5.35	33.52	RMS	34.5	-21.4	.3	46.92	54	-7.08	-	-	138	375	V
4	5.35	34.51	RMS	34.5	-21.4	.3	47.91	54	-6.09	-	-	138	375	V
2	5.351	48.46	PK	34.5	-21.4	0	61.56	-	-	74	-12.44	138	375	V

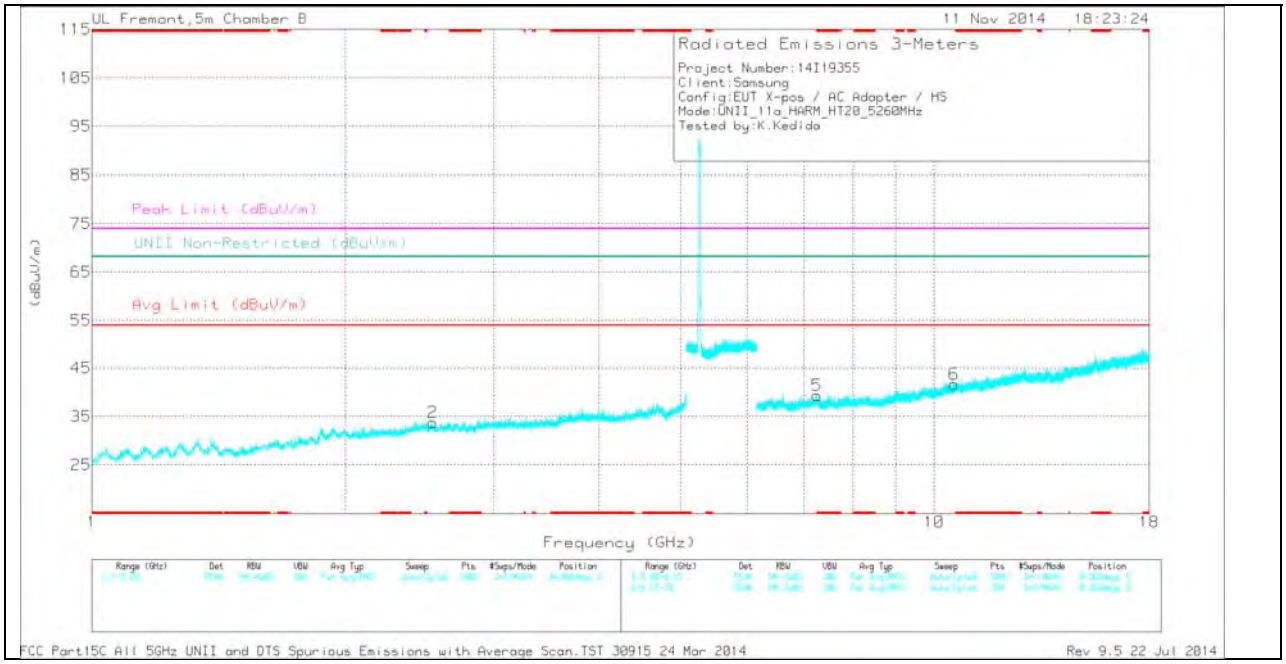
HARMONICS AND SPURIOUS EMISSIONS

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 T345 (dB/m)	Amp/Cbl/Fltr /Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 7.255	30.14	PK	35.6	-26.7	39.04	-	-	74	-34.96	-	-	0-360	101	H
4	* 10.62	28.85	PK	37.7	-23.1	43.45	-	-	74	-30.55	-	-	0-360	200	H
5	* 7.254	30.32	PK	35.6	-26.6	39.32	-	-	74	-34.68	-	-	0-360	101	V
2	2.539	33.91	PK	32.5	-32.7	33.71	-	-	-	-	68.2	-34.49	0-360	101	V
1	2.55	33.58	PK	32.5	-32.8	33.28	-	-	-	-	68.2	-34.92	0-360	101	H
6	10.568	27.73	PK	37.6	-23.7	41.63	-	-	-	-	68.2	-26.57	0-360	200	V

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

PK - Peak detector

Radiated Emissions

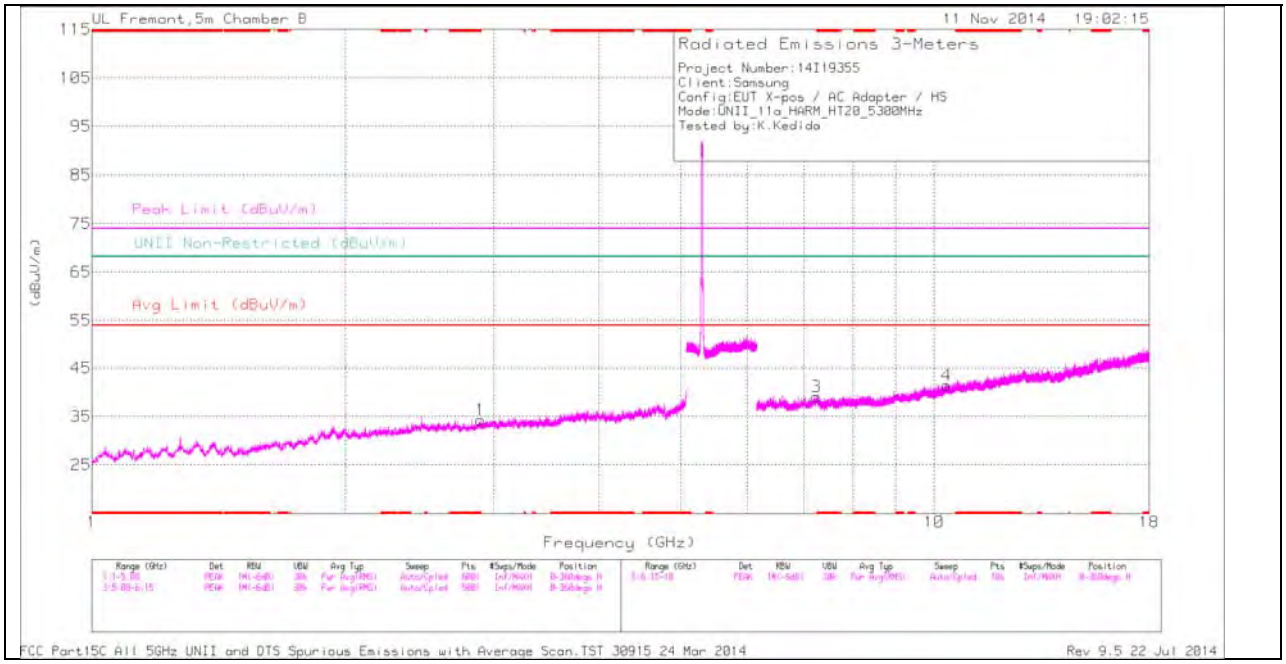
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 7.256	37.77	PK1	35.6	-26.7	0	46.67	-	-	74	-27.33	-	-	360	100	H
* 7.255	27.07	AD1	35.6	-26.7	.3	36.09	54	-17.91	-	-	-	-	360	100	H

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

PK1 - KDB789033 Method: Peak

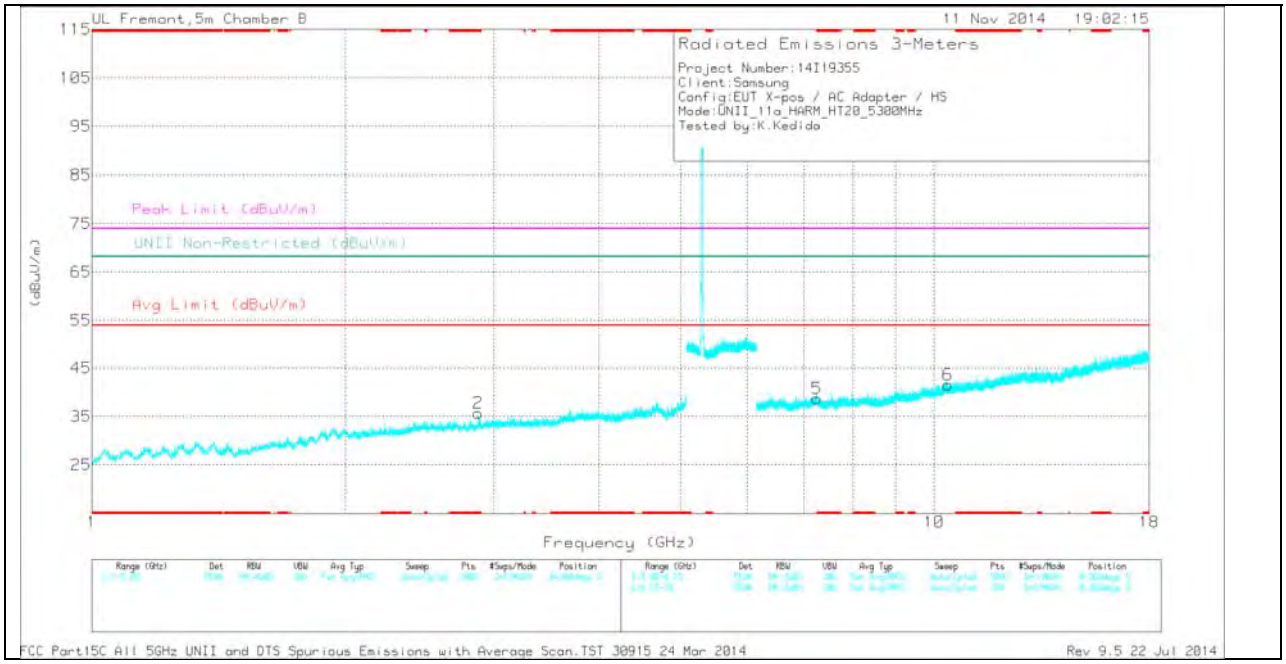
AD1 - KDB789033 Method: AD Primary Power Average

MID CHANNEL HORIZONTAL



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

MID CHANNEL VERTICAL



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

MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr /Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.891	33.86	PK	32.6	-32.2	34.26	-	-	74	-39.74	-	-	0-360	200	H
2	* 2.875	35.31	PK	32.6	-32.2	35.71	-	-	74	-38.29	-	-	0-360	200	V
5	* 7.262	29.93	PK	35.6	-26.9	38.63	-	-	74	-35.37	-	-	0-360	101	V
3	7.249	29.99	PK	35.6	-26.5	39.09	-	-	-	-	68.2	-29.11	0-360	200	H
4	10.351	27.56	PK	37.2	-23.3	41.46	-	-	-	-	68.2	-26.74	0-360	101	H
6	10.376	27.71	PK	37.3	-23.5	41.51	-	-	-	-	68.2	-26.69	0-360	101	V

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

PK - Peak detector

Radiated Emissions

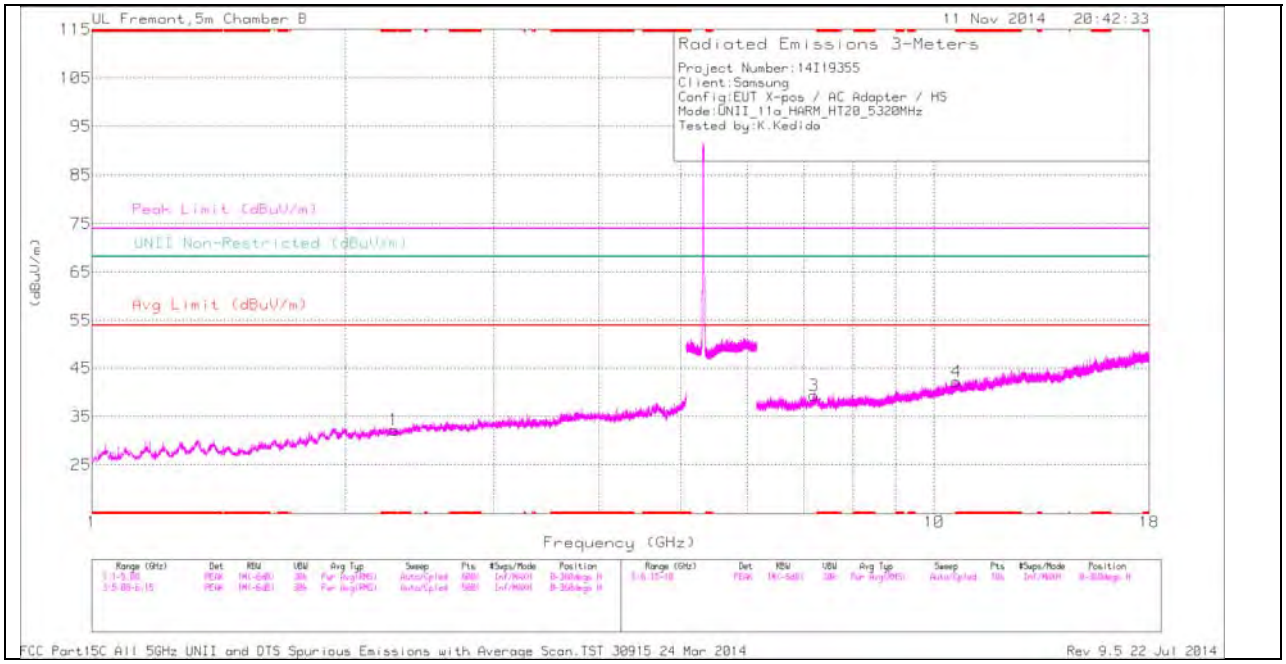
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 7.262	38.37	PK1	35.6	-26.9	0	47.07	-	-	74	-26.93	-	-	360	102	V
* 7.263	27.41	AD1	35.6	-26.9	.3	36.23	54	-17.77	-	-	-	-	360	102	V

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

PK1 - KDB789033 Method: Peak

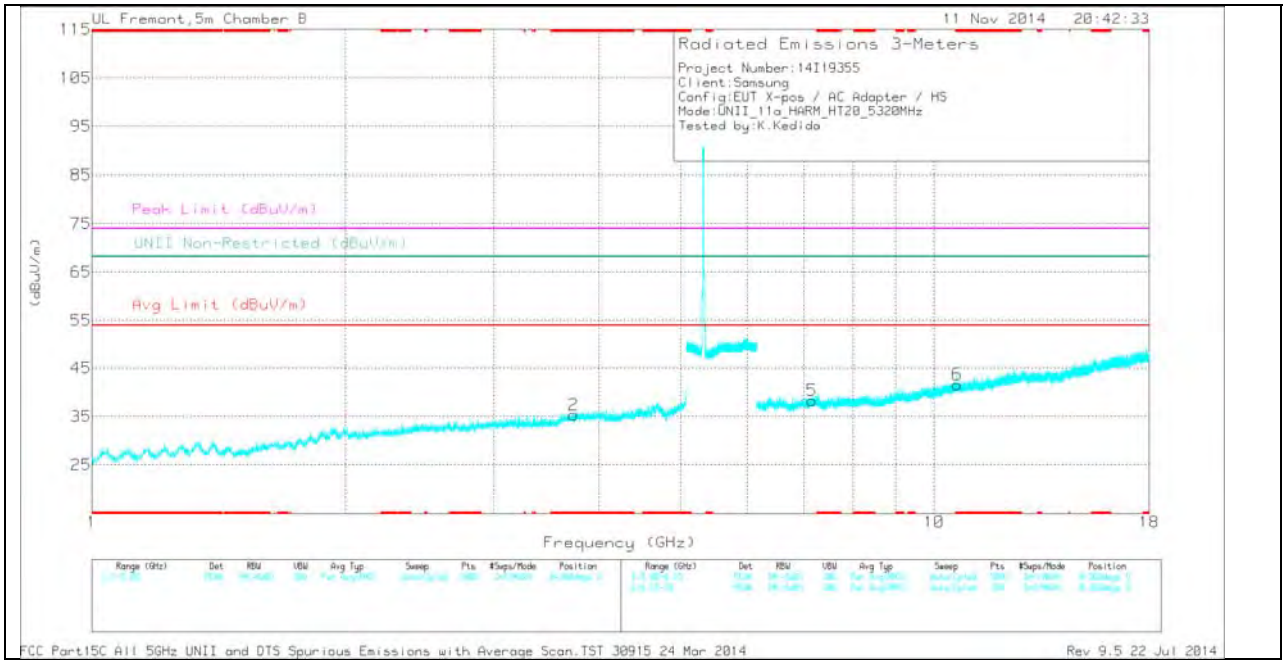
AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL HORIZONTAL



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

HIGH CHANNEL VERTICAL



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

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr /Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.282	33.57	PK	31.6	-33	32.17	-	-	74	-41.83	-	-	0-360	102	H
2	* 3.73	33.21	PK	33.4	-31.3	35.31	-	-	74	-38.69	-	-	0-360	101	V
4	* 10.628	27.59	PK	37.7	-23.1	42.19	-	-	74	-31.81	-	-	0-360	101	H
6	* 10.657	26.81	PK	37.7	-22.9	41.61	-	-	74	-32.39	-	-	0-360	101	V
5	7.156	30.32	PK	35.6	-27.6	38.32	-	-	-	-	68.2	-29.88	0-360	200	V
3	7.192	30.83	PK	35.5	-27	39.33	-	-	-	-	68.2	-28.87	0-360	200	H

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

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/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
* 3.73	40.91	PK1	33.4	-31.3	0	43.01	-	-	74	-30.99	-	-	360	102	V
* 3.729	29.82	AD1	33.4	-31.3	.3	32.04	54	-21.96	-	-	-	-	360	102	V

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

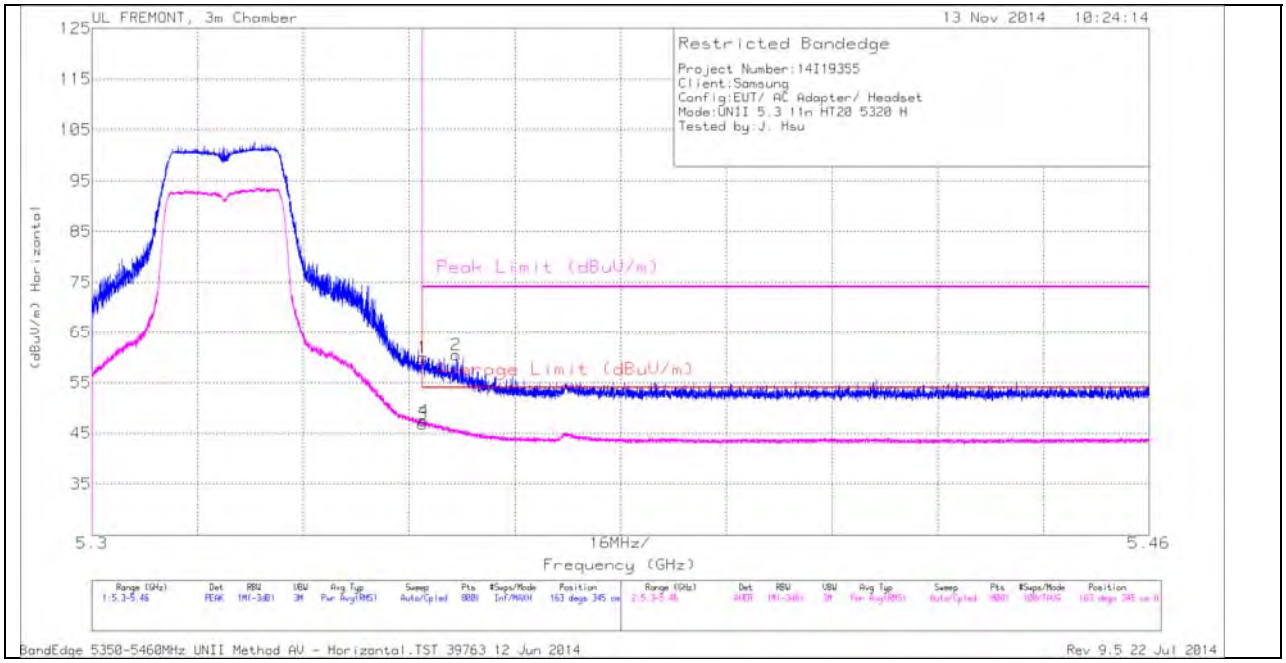
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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

AUTHORIZED BANDEDGE (HIGH CHANNEL)

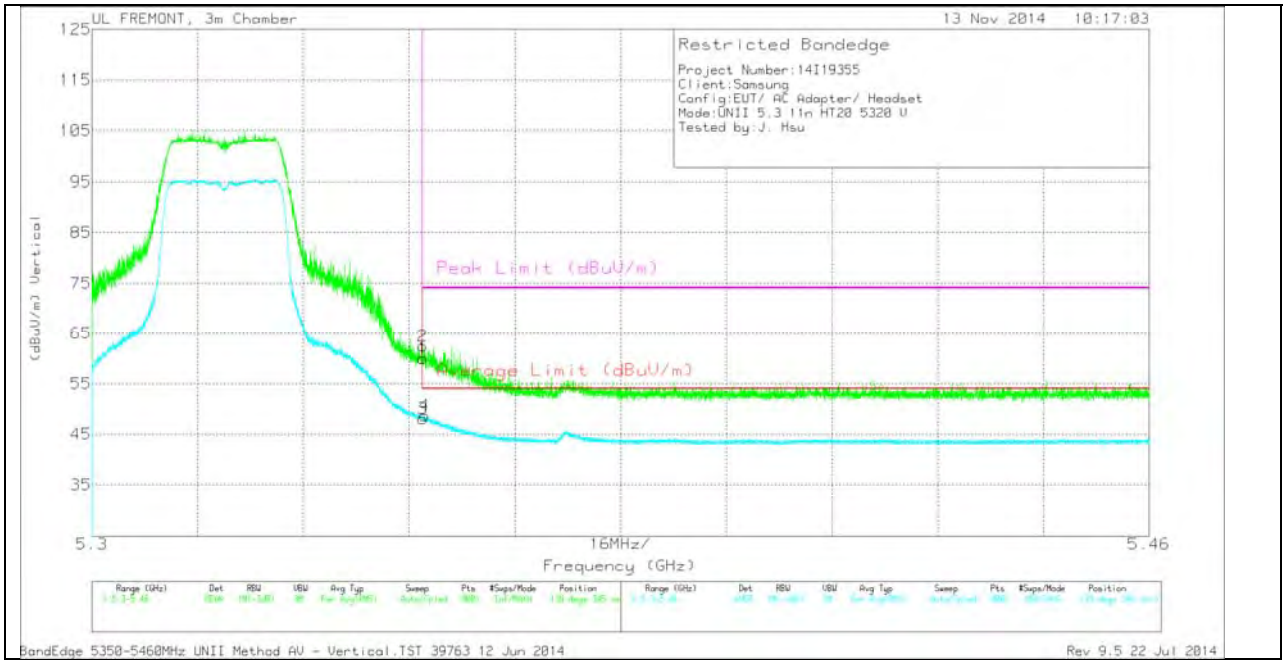
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 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	46.89	PK	34.5	-21.4	0	59.99	-	-	74	-14.01	163	345	H
3	5.35	33.4	RMS	34.5	-21.4	.33	46.82	54	-7.18	-	-	163	345	H
4	5.35	34.04	RMS	34.5	-21.4	.33	47.46	54	-6.54	-	-	163	345	H
2	5.355	47.45	PK	34.5	-21.5	0	60.45	-	-	74	-13.55	163	345	H

VERTICAL PEAK AND AVERAGE PLOT

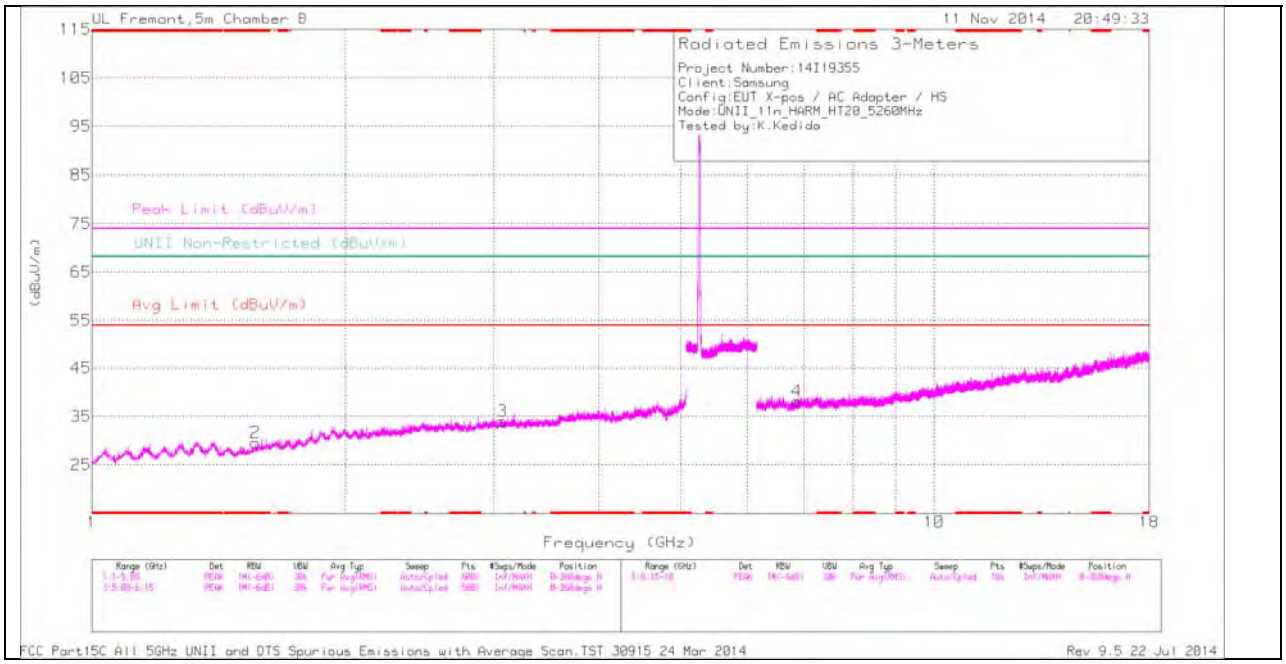


VERTICAL DATA

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	46.87	PK	34.5	-21.4	0	59.97	-	-	74	-14.03	139	345	V
2	5.35	49.41	PK	34.5	-21.4	0	62.51	-	-	74	-11.49	139	345	V
3	5.35	34.64	RMS	34.5	-21.4	.33	48.06	54	-5.94	-	-	139	345	V
4	5.35	35.28	RMS	34.5	-21.4	.33	48.7	54	-5.3	-	-	139	345	V

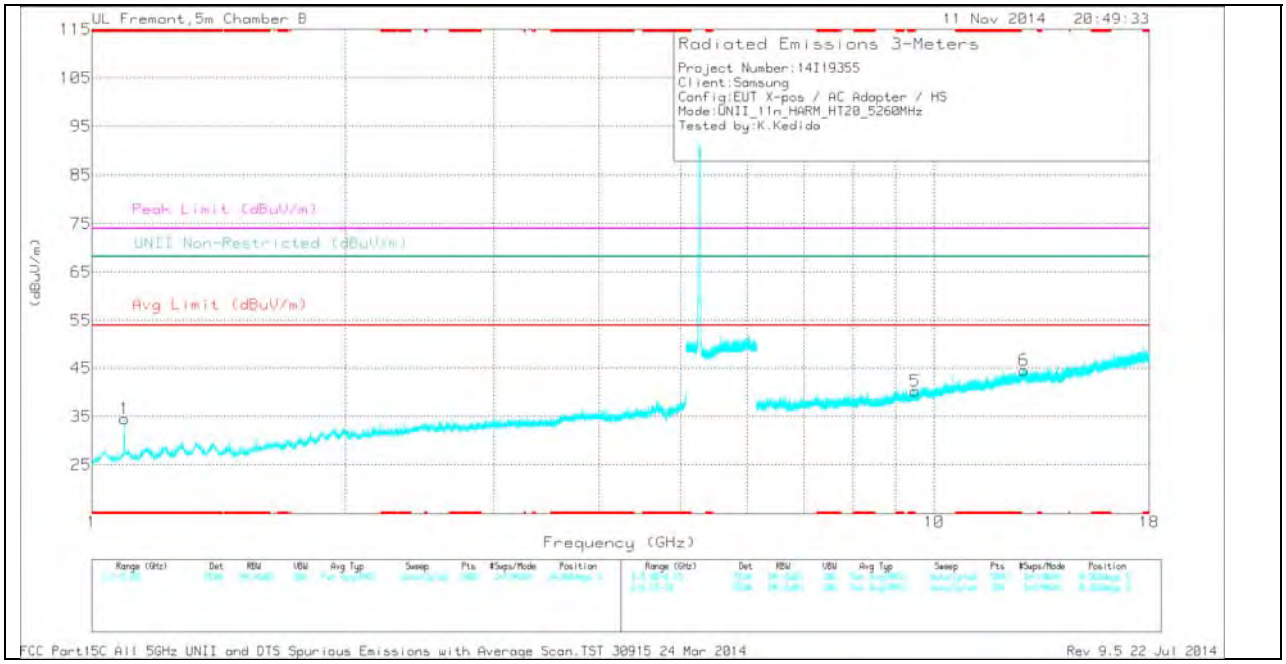
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



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

LOW CHANNEL VERTICAL



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

LOW CHANNEL DATA

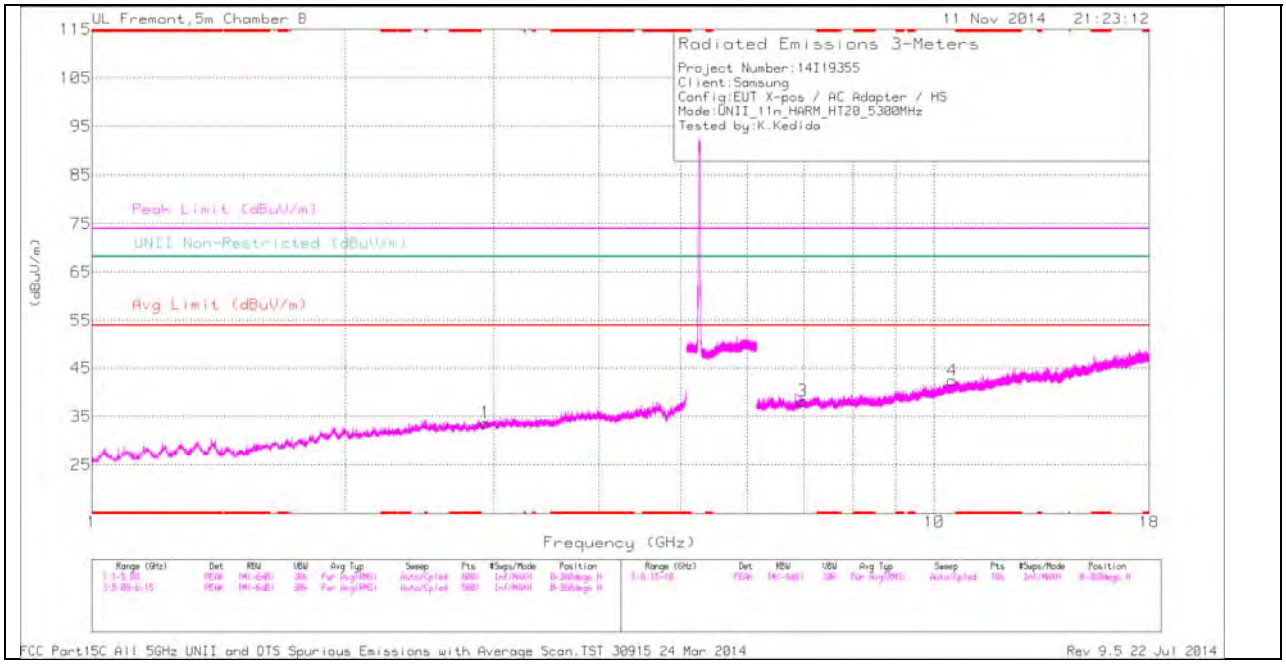
TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr /Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 1.563	34.86	PK	28.3	-33.6	29.56	-	-	74	-44.44	-	-	0-360	199	H
1	* 1.092	41.53	PK	27.3	-34.3	34.53	-	-	74	-39.47	-	-	0-360	199	V
5	* 9.49	28.33	PK	36.6	-24.7	40.23	-	-	74	-33.77	-	-	0-360	101	V
3	3.075	33.36	PK	32.9	-32.3	33.96	-	-	-	-	68.2	-34.24	0-360	102	H
4	6.874	31.13	PK	35.6	-28.6	38.13	-	-	-	-	68.2	-30.07	0-360	200	H
6	12.77	26.96	PK	39.2	-21.6	44.56	-	-	-	-	68.2	-23.64	0-360	200	V

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

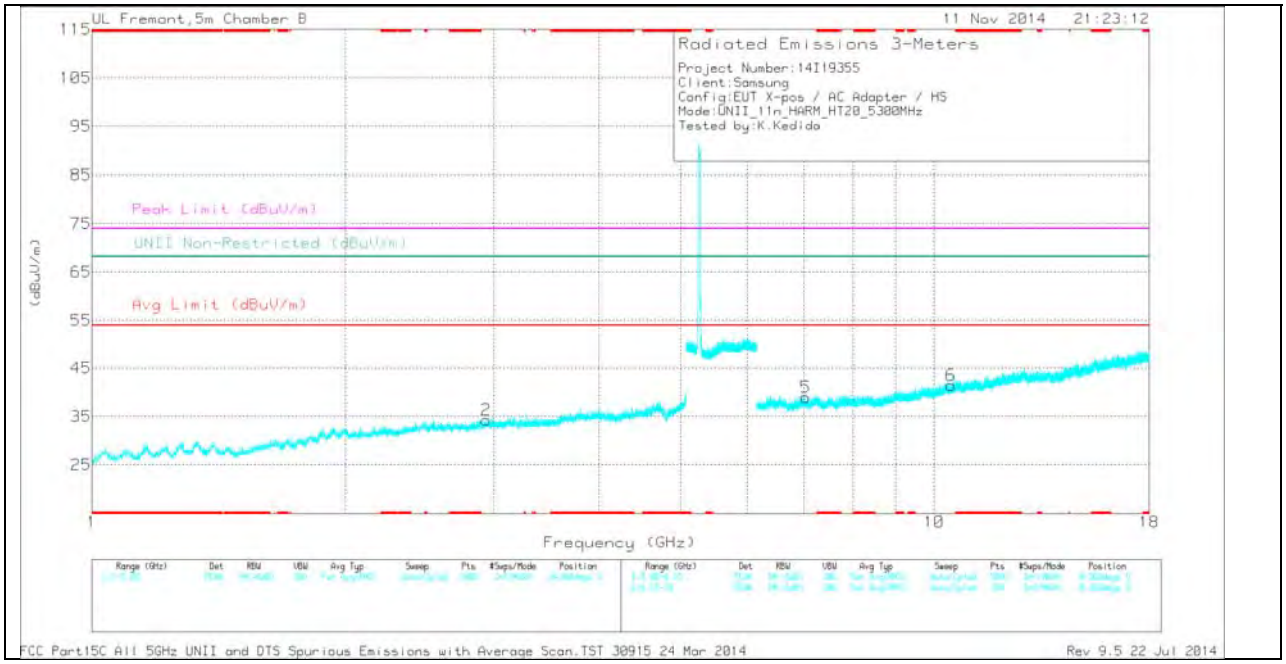
PK - Peak detector

MID CHANNEL HORIZONTAL



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

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	2.932	32.89	PK	32.7	-31.9	0	33.69	-	-	-	-	68.2	-34.51	0-360	199	H
2	2.936	33.52	PK	32.7	-31.9	0	34.32	-	-	-	-	68.2	-33.88	0-360	199	V
3	6.981	30.13	PK	35.6	-27.5	0	38.23	-	-	-	-	68.2	-29.97	0-360	101	H
5	7.036	31.65	PK	35.6	-28.3	0	38.95	-	-	-	-	68.2	-29.25	0-360	101	V
6	10.463	27.91	PK	37.4	-23.9	0	41.41	-	-	-	-	68.2	-26.79	0-360	101	V
4	10.514	28.91	PK	37.5	-23.9	0	42.51	-	-	-	-	68.2	-25.69	0-360	199	H

PK - Peak detector

Radiated Emissions

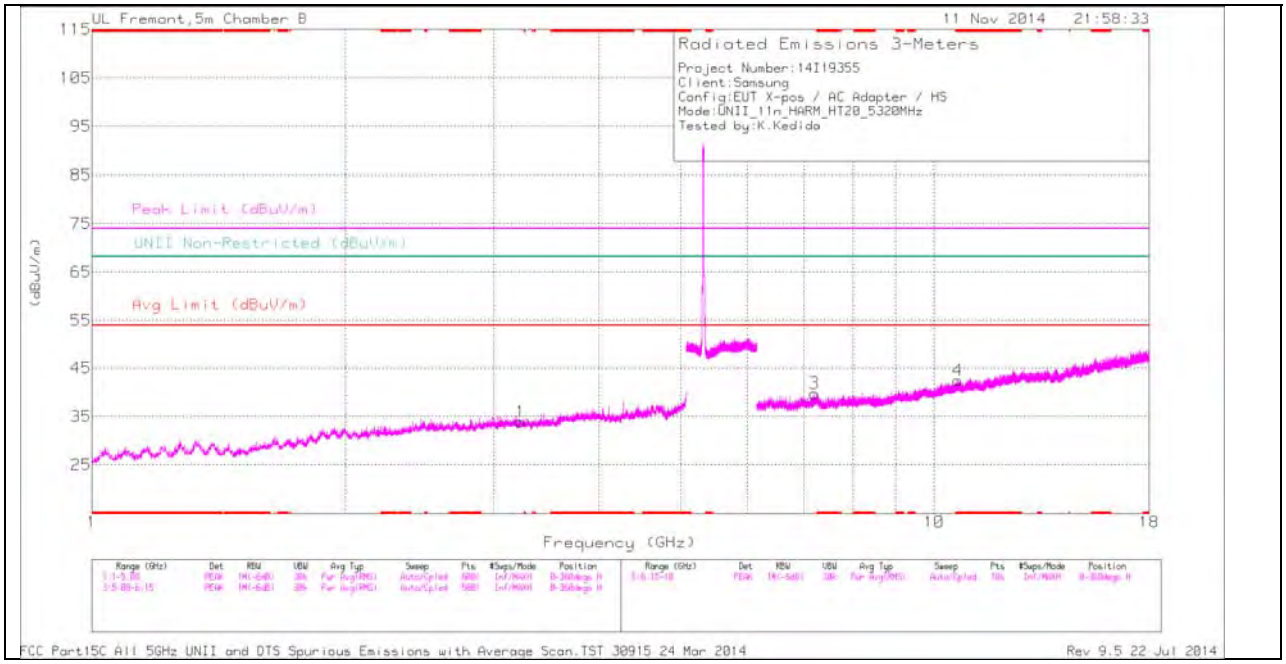
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6.982	38.21	PK1	35.6	-27.5	0	46.31	-	-	-	-	68.2	-21.89	359	101	H
6.982	27.34	AD1	35.6	-27.5	.33	35.77	-	-	-	-	-	-	359	101	H

Avg - Video bandwidth < Resolution bandwidth

PK1 - KDB789033 Method: Peak

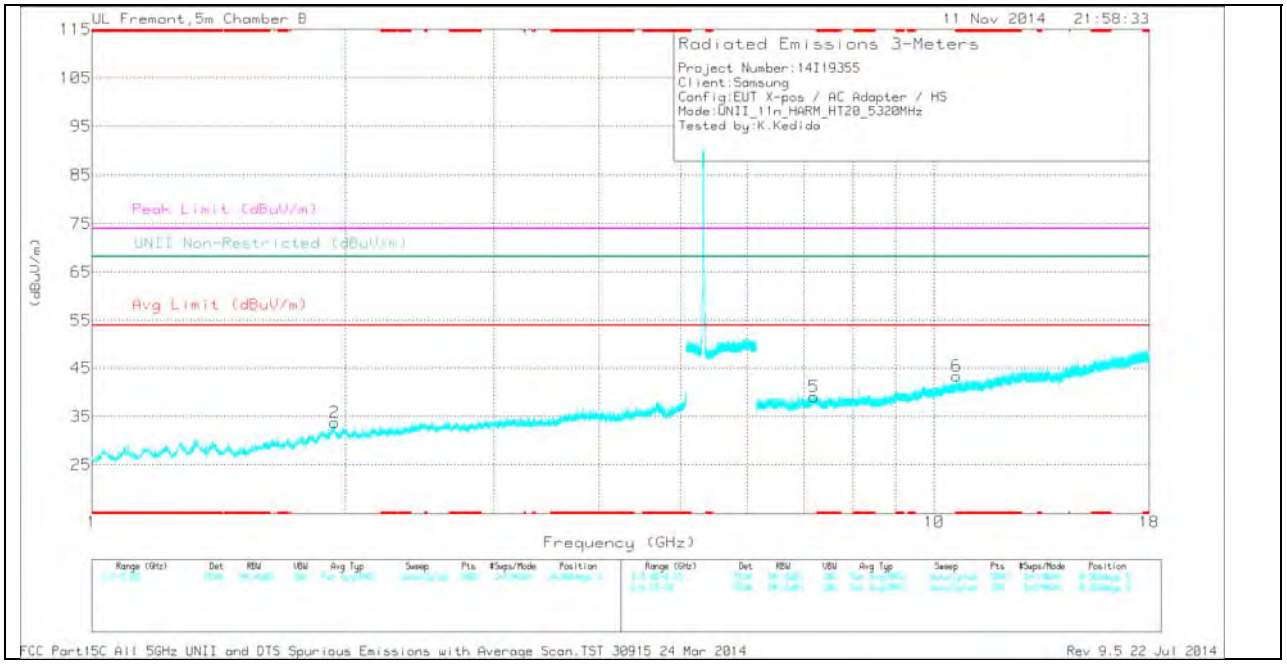
AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL HORIZONTAL



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

HIGH CHANNEL VERTICAL



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

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ 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	* 10.669	27.55	PK	37.7	-22.8	0	42.45	-	-	74	-31.55	-	-	0-360	101	H
6	* 10.64	28.7	PK	37.7	-23	0	43.4	-	-	74	-30.6	-	-	0-360	200	V
2	1.94	35.19	PK	31.2	-32.6	0	33.79	-	-	-	-	68.2	-34.41	0-360	101	V
1	3.231	32.95	PK	32.8	-31.9	0	33.85	-	-	-	-	68.2	-34.35	0-360	200	H
5	7.195	30.42	PK	35.5	-26.9	0	39.02	-	-	-	-	68.2	-29.18	0-360	101	V
3	7.212	30.89	PK	35.5	-26.6	0	39.79	-	-	-	-	68.2	-28.41	0-360	101	H

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

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/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
* 10.667	34.56	PK1	37.7	-22.8	0	49.46	-	-	74	-24.54	-	-	360	102	H
* 10.667	23.77	AD1	37.7	-22.8	.33	39.0	54	-15.0	-	-	-	-	360	102	H

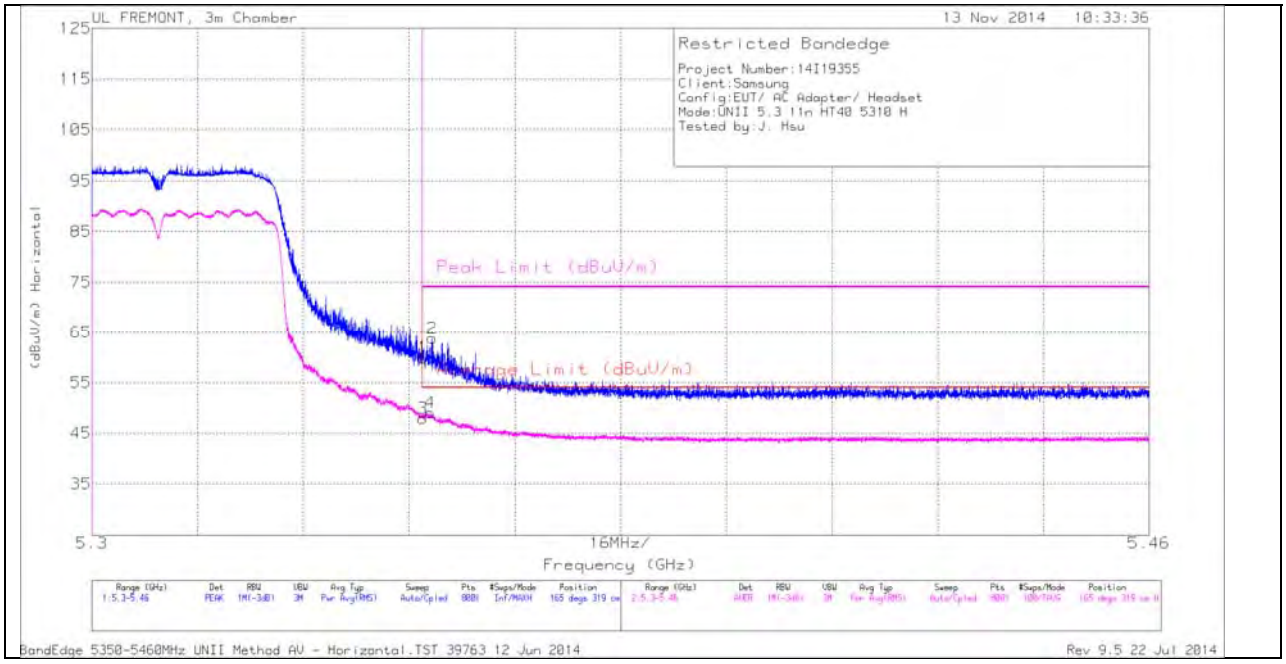
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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

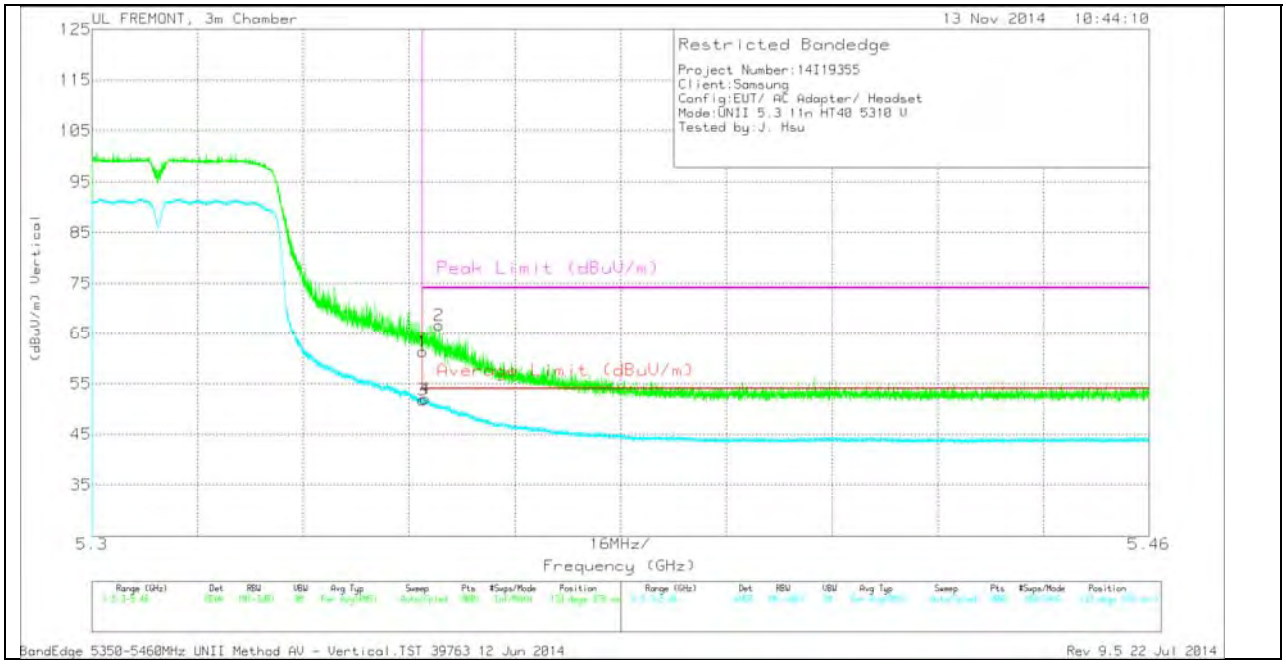
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 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	46.81	PK	34.5	-21.4	0	59.91	-	-	74	-14.09	165	319	H
3	5.35	34.23	RMS	34.5	-21.4	.63	47.97	54	-6.03	-	-	165	319	H
4	5.351	35.36	RMS	34.5	-21.4	.63	49.1	54	-4.9	-	-	165	319	H
2	5.352	50.77	PK	34.5	-21.4	0	63.87	-	-	74	-10.13	165	319	H

VERTICAL PEAK AND AVERAGE PLOT

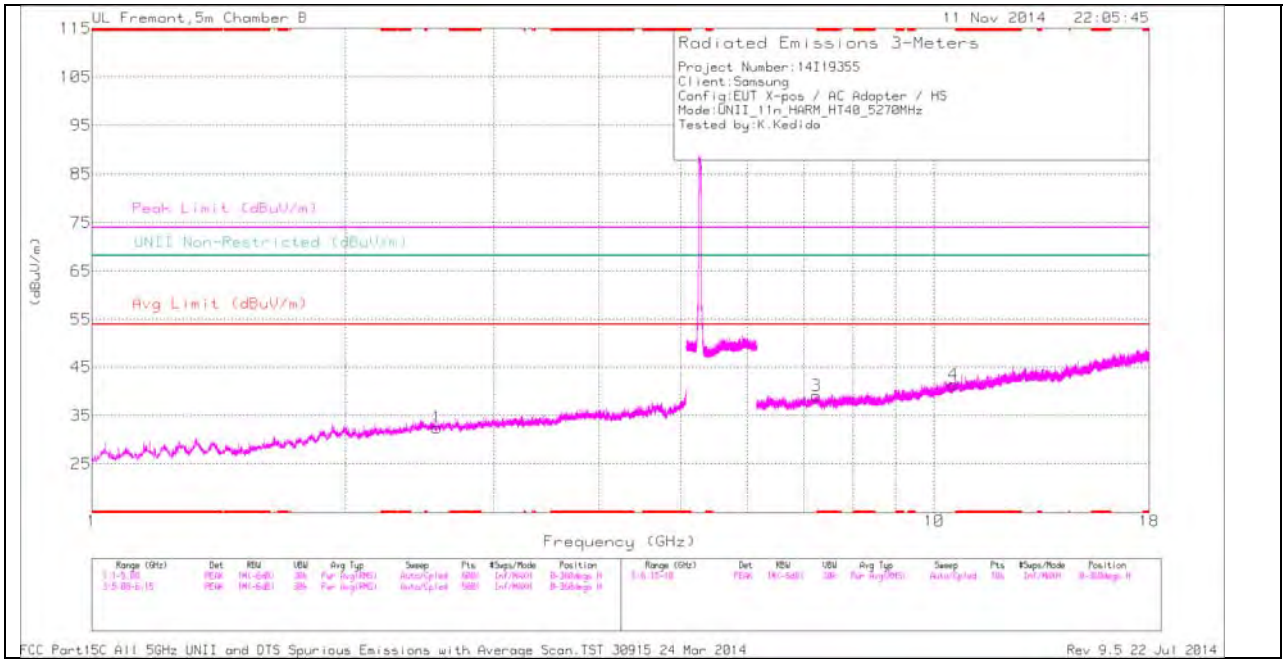


VERTICAL DATA

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	48.29	PK	34.5	-21.4	0	61.39	-	-	74	-12.61	133	378	V
3	5.35	38.07	RMS	34.5	-21.4	.63	51.81	54	-2.19	-	-	133	378	V
4	5.35	38.32	RMS	34.5	-21.4	.63	52.06	54	-1.94	-	-	133	378	V
2	5.353	53.59	PK	34.5	-21.4	0	66.69	-	-	74	-7.31	133	378	V

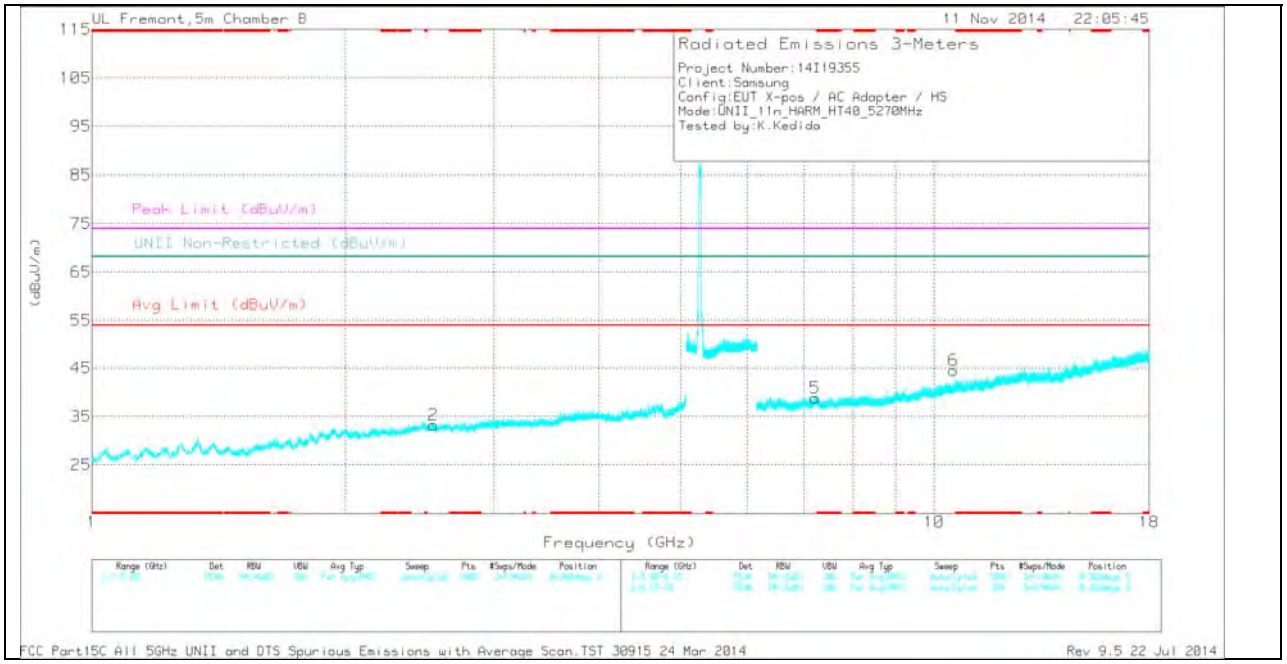
HARMONICS AND SPURIOUS EMISSIONS

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	2.545	33.51	PK	32.5	-32.8	0	33.21	-	-	-	-	68.2	-34.99	0-360	200	V
1	2.567	32.82	PK	32.5	-32.8	0	32.52	-	-	-	-	68.2	-35.68	0-360	102	H
5	7.226	29.51	PK	35.5	-26.2	0	38.81	-	-	-	-	68.2	-29.39	0-360	101	V
3	7.247	29.93	PK	35.6	-26.4	0	39.13	-	-	-	-	68.2	-29.07	0-360	200	H
4	10.537	27.84	PK	37.5	-23.9	0	41.44	-	-	-	-	68.2	-26.76	0-360	101	H
6	10.54	30.92	PK	37.5	-23.9	0	44.52	-	-	-	-	68.2	-23.68	0-360	200	V

PK - Peak detector

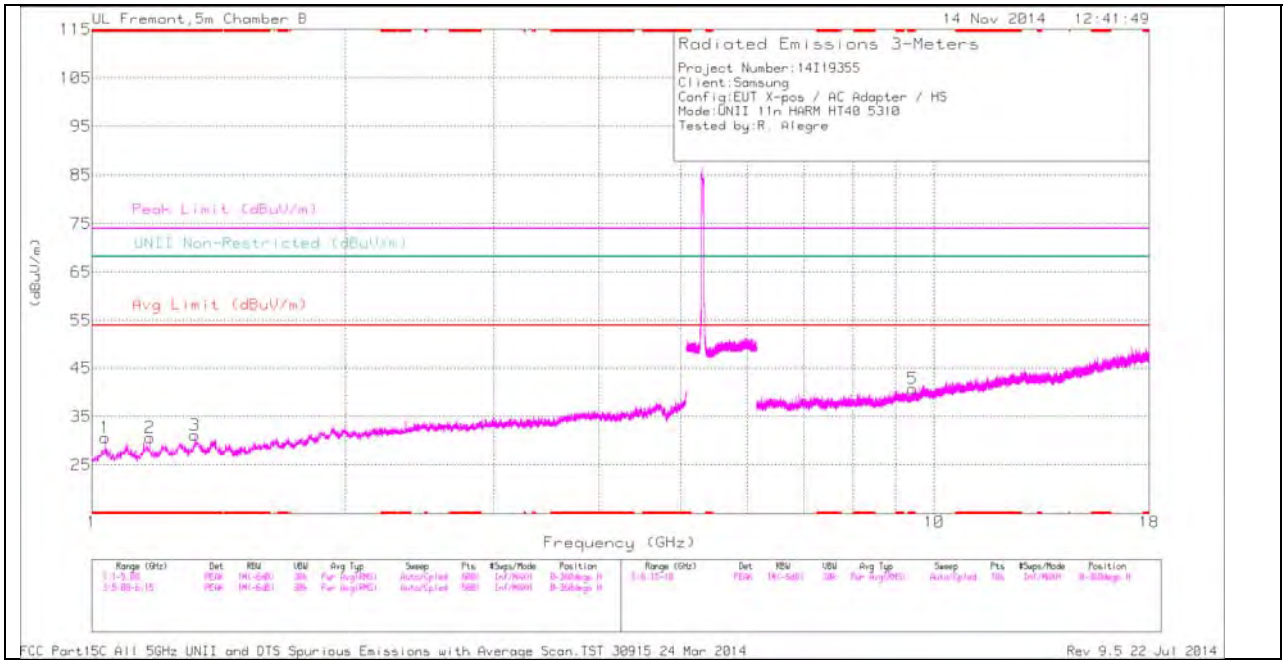
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
10.54	36.33	PK1	37.5	-23.9	0	49.93	-	-	-	-	68.2	-18.27	359	200	V
10.54	27.43	AD1	37.5	-23.9	.63	41.66	-	-	-	-	-	-	359	200	V

PK1 - KDB789033 Method: Peak

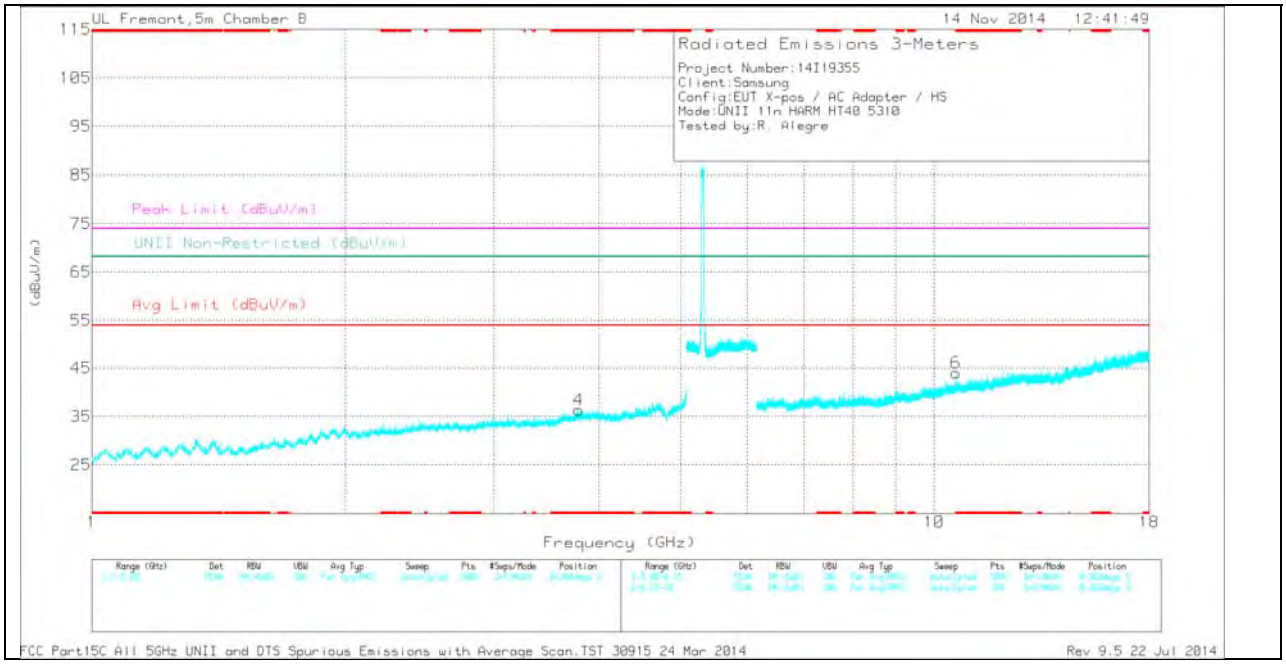
AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL HORIZONTAL



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

HIGH CHANNEL VERTICAL



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

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ 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	* 1.037	37.72	PK	27.2	-34.3	0	30.62	-	-	74	-43.38	-	-	0-360	101	H
2	* 1.171	37.2	PK	28	-34.6	0	30.6	-	-	74	-43.4	-	-	0-360	200	H
3	* 1.324	36.2	PK	28.8	-33.9	0	31.1	-	-	74	-42.9	-	-	0-360	101	H
4	* 3.784	33.71	PK	33.6	-31	0	36.31	-	-	74	-37.69	-	-	0-360	200	V
5	* 9.434	29	PK	36.5	-24.7	0	40.8	-	-	74	-33.2	-	-	0-360	101	H
6	* 10.62	29.4	PK	37.7	-23.1	0	44	-	-	74	-30	-	-	0-360	200	V

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

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/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
* 10.619	35.61	PK1	37.7	-23.1	0	50.21	-	-	74	-23.79	-	-	354	200	V
* 10.62	25.34	AD1	37.7	-23.1	.63	40.57	54	-13.43	-	-	-	-	354	200	V

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

PK1 - KDB789033 Method: Peak

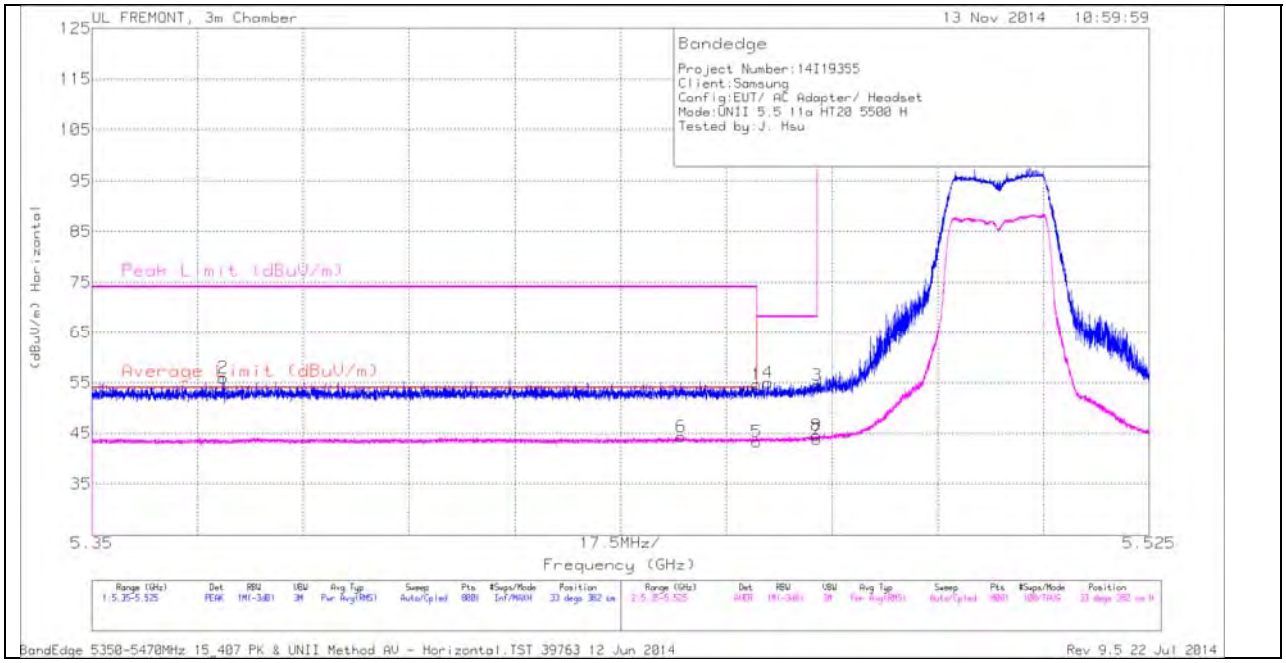
AD1 - KDB789033 Method: AD Primary Power Average

11.3. 5.5-5.6 GHz

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

RESTRICTED BANDEDGE (LOW CHANNEL)

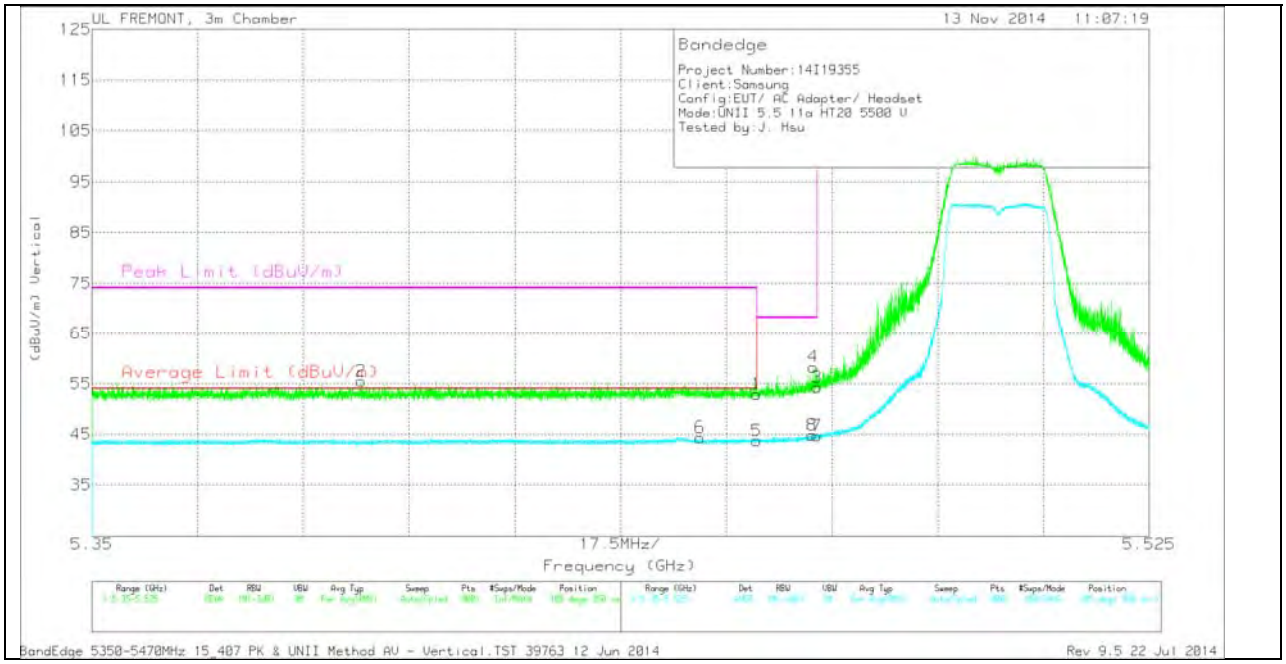
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	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	5.372	42.84	PK	34.6	-21.5	0	55.94	-	-	74	-18.06	33	382	H
6	5.448	30.63	RMS	34.8	-21.4	.3	44.33	54	-9.67	-	-	33	382	H
1	5.46	41.29	PK	34.8	-21.4	0	54.69	-	-	74	-19.31	33	382	H
5	5.46	29.64	RMS	34.8	-21.4	.3	43.34	54	-10.66	-	-	33	382	H
4	5.462	41.64	PK	34.8	-21.4	0	55.04	-	-	68.2	-13.16	33	382	H
3	5.47	40.96	PK	34.8	-21.3	0	54.46	-	-	68.2	-13.74	33	382	H
7	5.47	30	RMS	34.8	-21.3	.3	43.8	-	-	-	-	33	382	H
8	5.47	30.81	RMS	34.8	-21.3	.3	44.61	-	-	-	-	33	382	H

VERTICAL PEAK AND AVERAGE PLOT

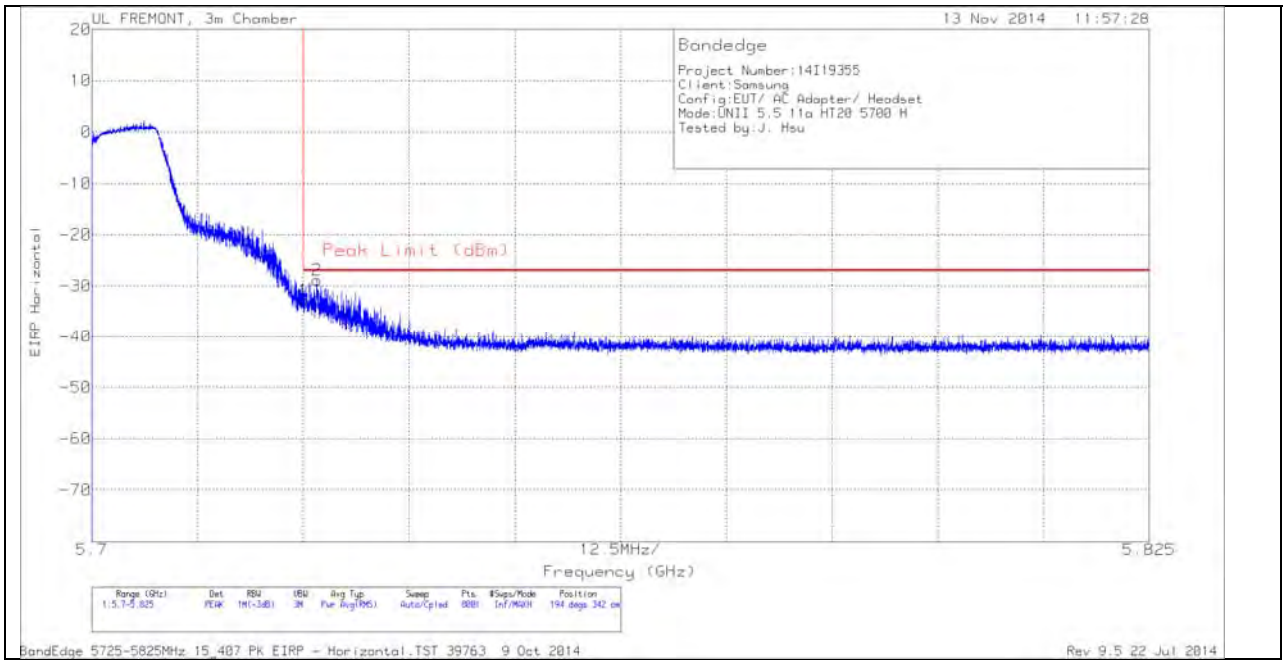


VERTICAL DATA

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	5.395	42.16	PK	34.7	-21.4	0	55.46	-	-	74	-18.54	105	350	V
6	5.451	30.69	RMS	34.8	-21.4	.3	44.39	54	-9.61	-	-	105	350	V
1	5.46	39.48	PK	34.8	-21.4	0	52.88	-	-	74	-21.12	105	350	V
5	5.46	29.96	RMS	34.8	-21.4	.3	43.66	54	-10.34	-	-	105	350	V
4	5.469	44.8	PK	34.8	-21.3	0	58.3	-	-	68.2	-9.9	105	350	V
8	5.469	31.02	RMS	34.8	-21.3	.3	44.82	-	-	-	-	105	350	V
3	5.47	40.82	PK	34.8	-21.3	0	54.32	-	-	68.2	-13.88	105	350	V
7	5.47	30.85	RMS	34.8	-21.3	.3	44.65	-	-	-	-	105	350	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

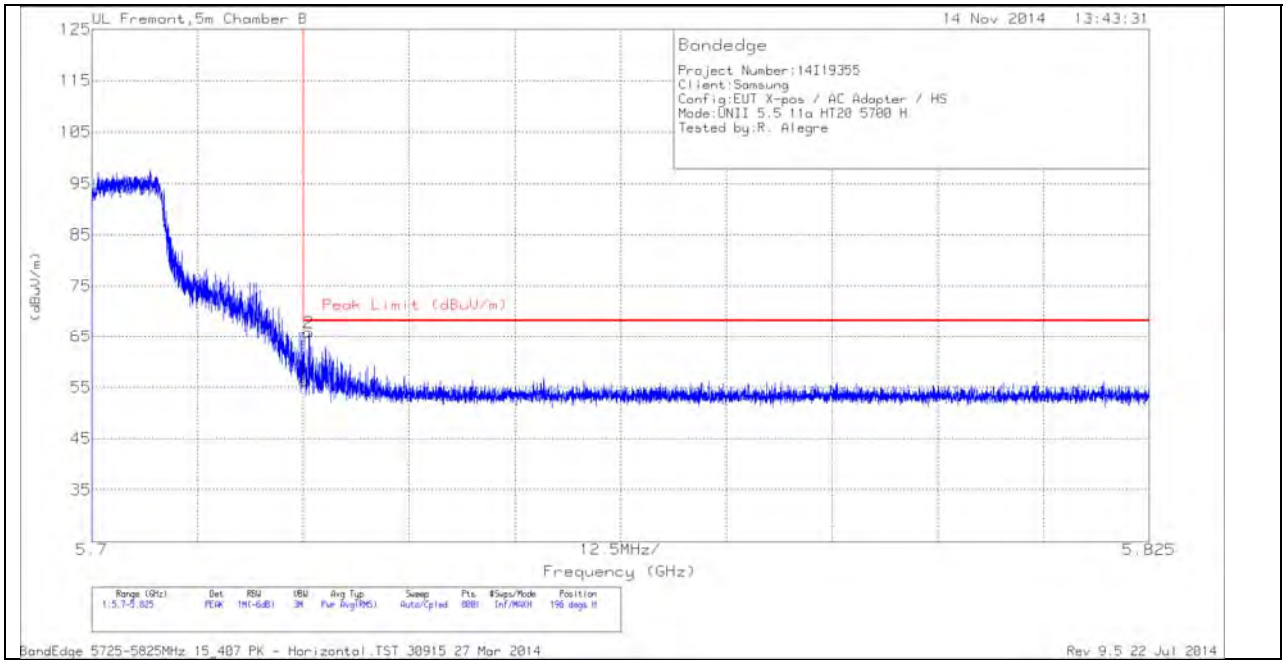
HORIZONTAL PEAK AND AVERAGE PLOT



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	-58.25	PK	34.8	-21.1	11.8	0	-32.75	-27	-5.75	194	342	H
2	5.727	-54.3	PK	34.8	-21.1	11.8	0	-28.8	-27	-1.8	194	342	H

VERTICAL PEAK AND AVERAGE PLOT

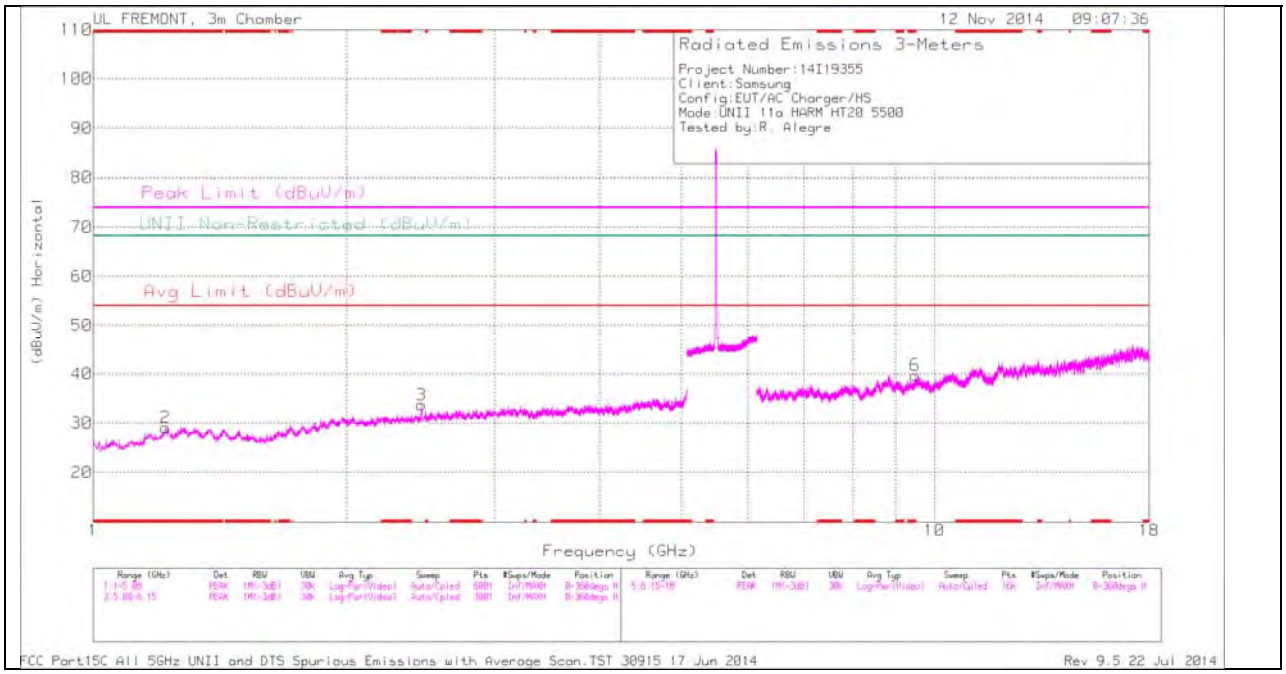


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	41.89	PK	34.6	-20.1	0	56.39	68.2	-11.81	196	244	H
2	5.726	51.39	PK	34.6	-20.1	0	65.89	68.2	-2.31	196	244	H

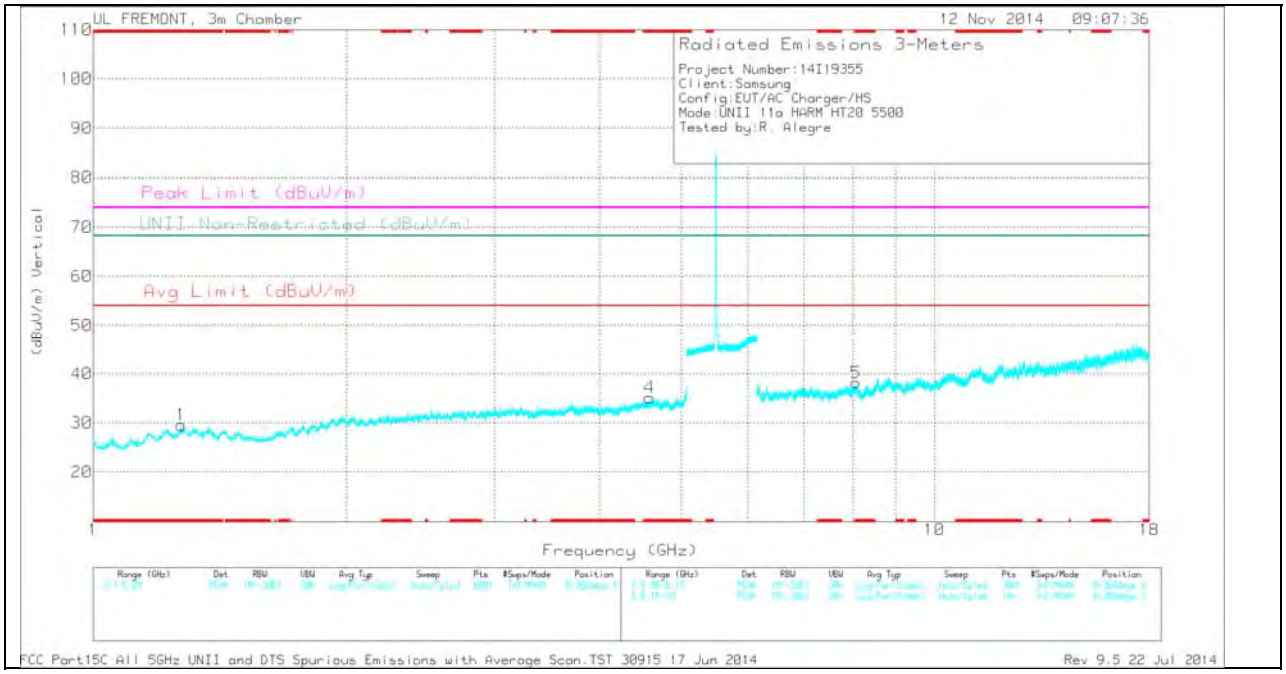
HARMONICS AND SPURIOUS EMISSIONS

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
2	* 1.219	32.89	PK	29.4	-33.2	0	29.09	-	-	74	-44.91	-	-	0-360	200	H
1	* 1.272	33.16	PK	30	-33.6	0	29.56	-	-	74	-44.44	-	-	0-360	200	V
4	* 4.585	31.54	PK	34	-30.4	0	35.14	-	-	74	-38.86	-	-	0-360	100	V
6	* 9.489	28.92	PK	36.6	-25.8	0	39.72	-	-	74	-34.28	-	-	0-360	100	H
5	* 8.065	29.64	PK	35.7	-27.2	0	38.14	-	-	74	-35.86	-	-	0-360	200	V
3	2.456	33.97	PK	32.2	-32.5	0	33.67	-	-	-	-	68.2	-34.53	0-360	200	H

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

PK - Peak detector

Radiated Emissions

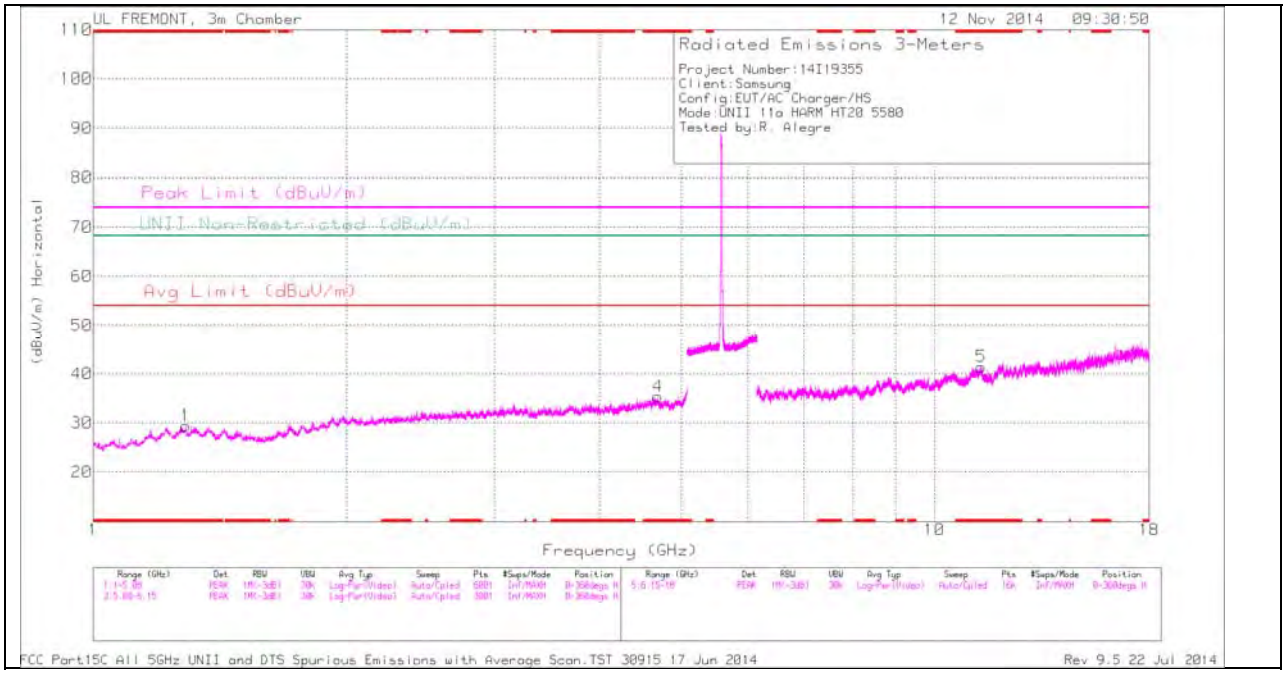
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2.455	30.1	AD1	32.2	-32.5	.3	30.1	54	-23.9	-	-	-	-	360	200	H
2.456	41.58	PK1	32.2	-32.5	0	41.28			74	-32.72	68.2	-26.92	360	200	H

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

PK1 - KDB789033 Method: Peak

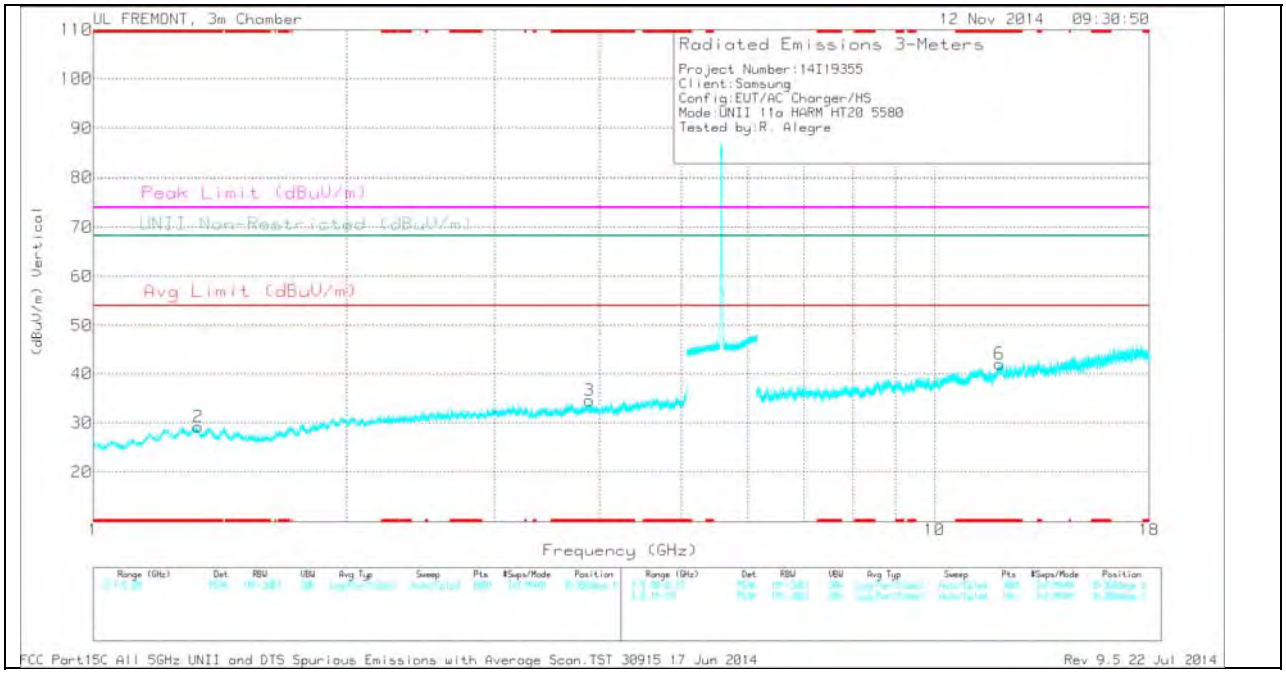
AD1 - KDB789033 Method: AD Primary Power Average

MID CHANNEL HORIZONTAL



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

MID CHANNEL VERTICAL



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

MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 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	* 1.288	32.91	PK	30.1	-33.6	0	29.41	-	-	74	-44.59	-	-	0-360	200	H
4	* 4.692	31.73	PK	34.1	-30.5	0	35.33	-	-	74	-38.67	-	-	0-360	200	H
2	* 1.333	32.82	PK	29.9	-33.5	0	29.22	-	-	74	-44.78	-	-	0-360	200	V
3	* 3.889	32.25	PK	33.2	-30.9	0	34.55	-	-	74	-39.45	-	-	0-360	100	V
5	* 11.358	29.03	PK	38.1	-25.7	0	41.43	-	-	74	-32.57	-	-	0-360	200	H
6	* 11.941	29.33	PK	39	-26.3	0	42.03	-	-	74	-31.97	-	-	0-360	200	V

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

PK - Peak detector

Radiated Emissions

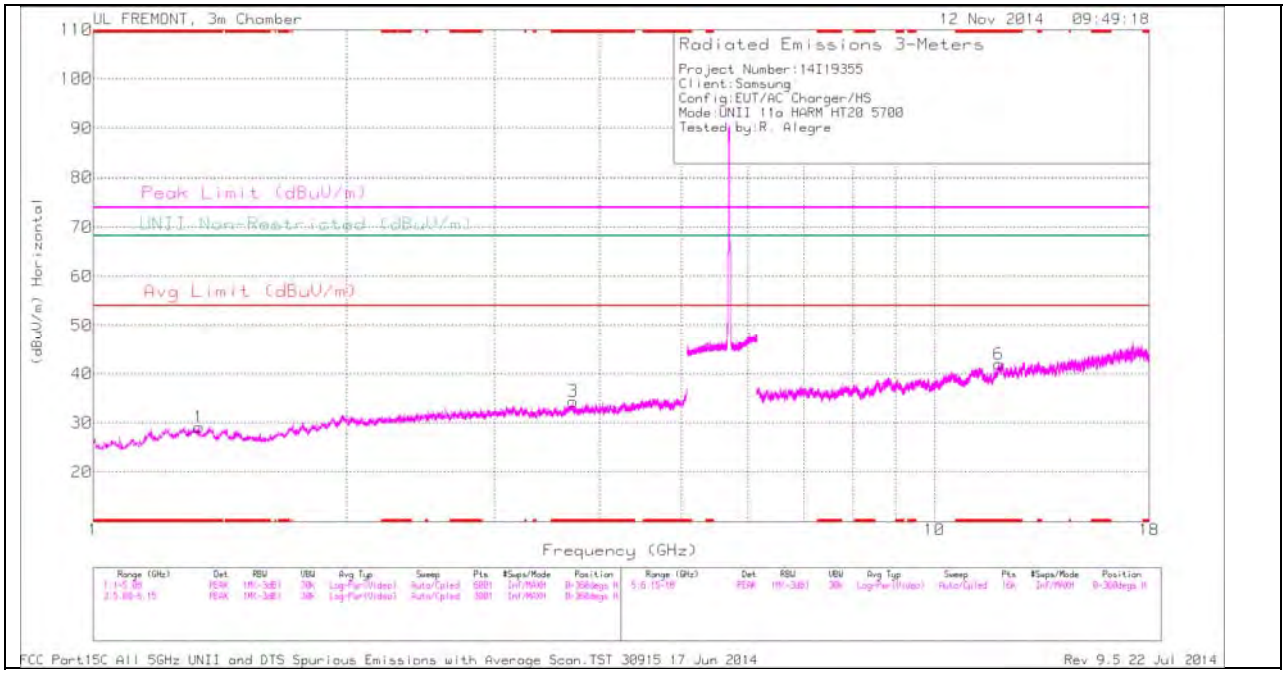
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.89	40.6	PK1	33.2	-31	0	42.8	-	-	74	-31.2	-	-	360	100	V
* 3.889	28.83	AD1	33.2	-31	.3	31.33	54	-22.67	-	-	-	-	360	100	V

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

PK1 - KDB789033 Method: Peak

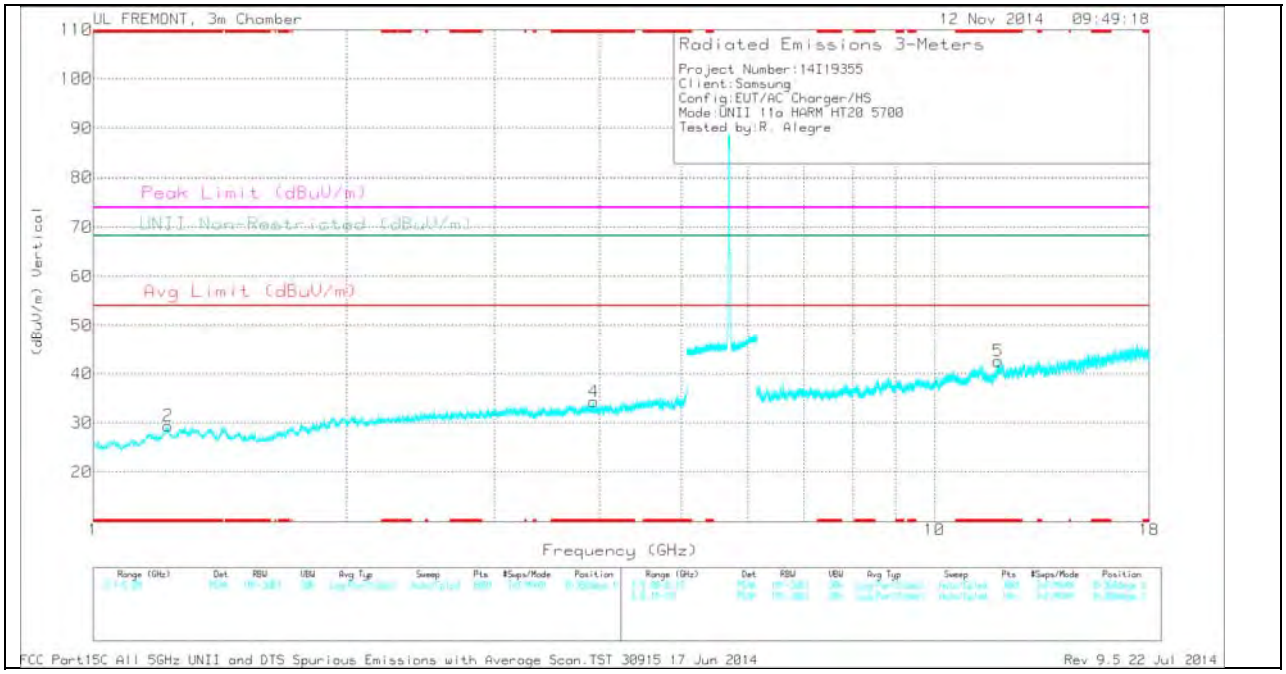
AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL HORIZONTAL



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

HIGH CHANNEL VERTICAL



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

HIGH CHANNEL DATA

TRACE MARKERS

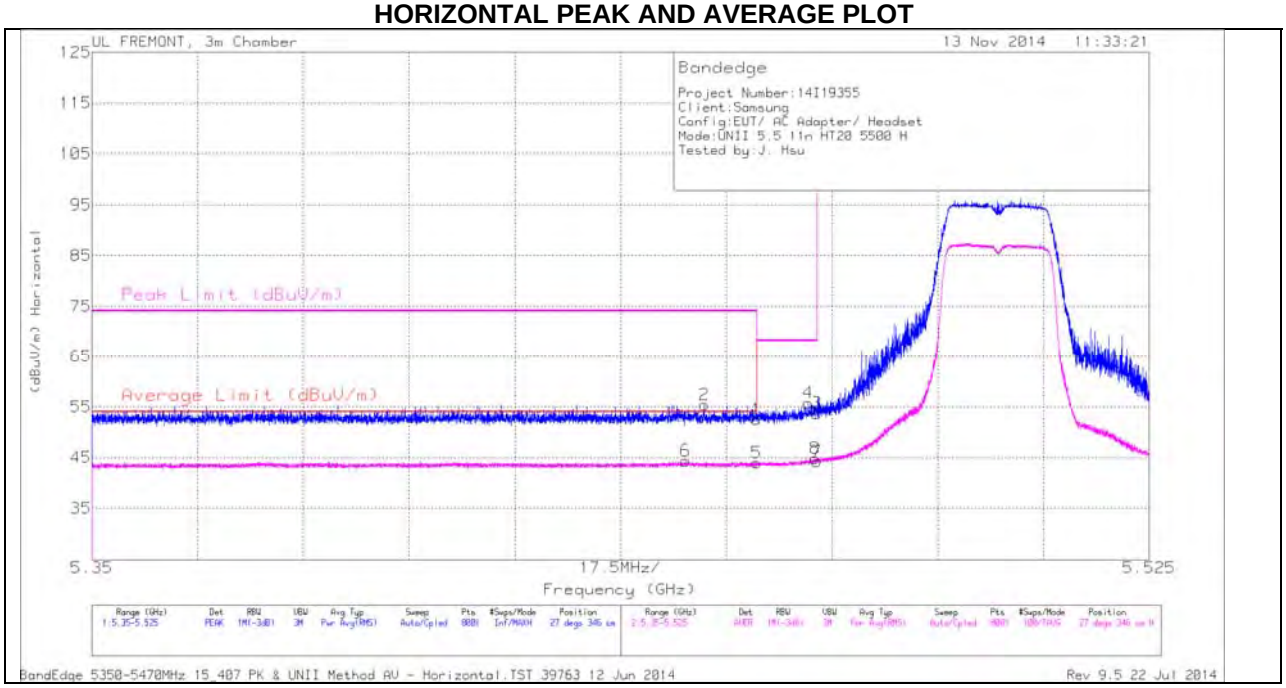
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.337	32.77	PK	29.8	-33.5	0	29.07	-	-	74	-44.93	-	-	0-360	100	H
3	* 3.719	32.28	PK	33.2	-31.1	0	34.38	-	-	74	-39.62	-	-	0-360	100	H
2	* 1.227	33.17	PK	29.5	-33.3	0	29.37	-	-	74	-44.63	-	-	0-360	100	V
4	* 3.936	32.43	PK	33.3	-31.4	0	34.33	-	-	74	-39.67	-	-	0-360	200	V
6	* 11.929	29.19	PK	39	-26.2	0	41.99	-	-	74	-32.01	-	-	0-360	200	H
5	* 11.909	29.89	PK	39	-26.3	0	42.59	-	-	74	-31.41	-	-	0-360	200	V

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

PK - Peak detector

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

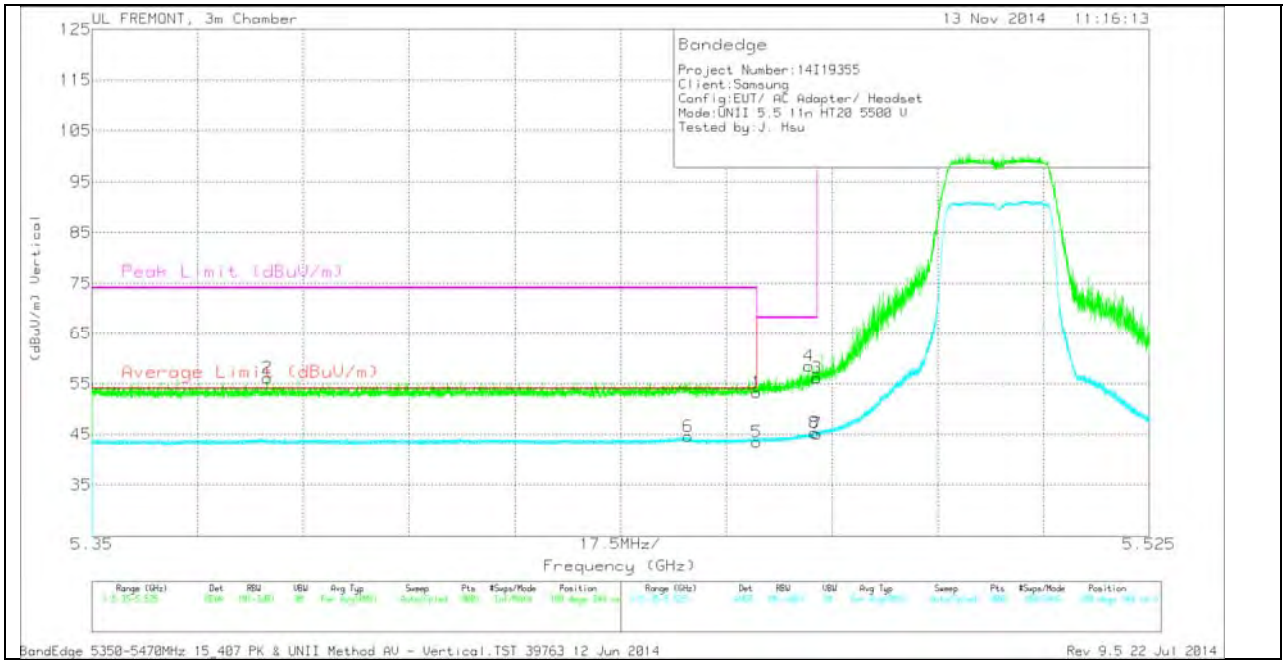
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	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	30.67	RMS	34.8	-21.4	.33	44.39	54	-9.61	-	-	27	346	H
2	5.451	41.99	PK	34.8	-21.4	0	55.39	-	-	74	-18.61	27	346	H
1	5.46	39.07	PK	34.8	-21.4	0	52.47	-	-	74	-21.53	27	346	H
5	5.46	30.21	RMS	34.8	-21.4	.33	43.93	54	-10.07	-	-	27	346	H
4	5.469	42.22	PK	34.8	-21.3	0	55.72	-	-	68.2	-12.48	27	346	H
3	5.47	40.21	PK	34.8	-21.3	0	53.71	-	-	68.2	-14.49	27	346	H
7	5.47	30.42	RMS	34.8	-21.3	.33	44.24	-	-	-	-	27	346	H
8	5.47	31	RMS	34.8	-21.3	.33	44.82	-	-	-	-	27	346	H

VERTICAL PEAK AND AVERAGE PLOT

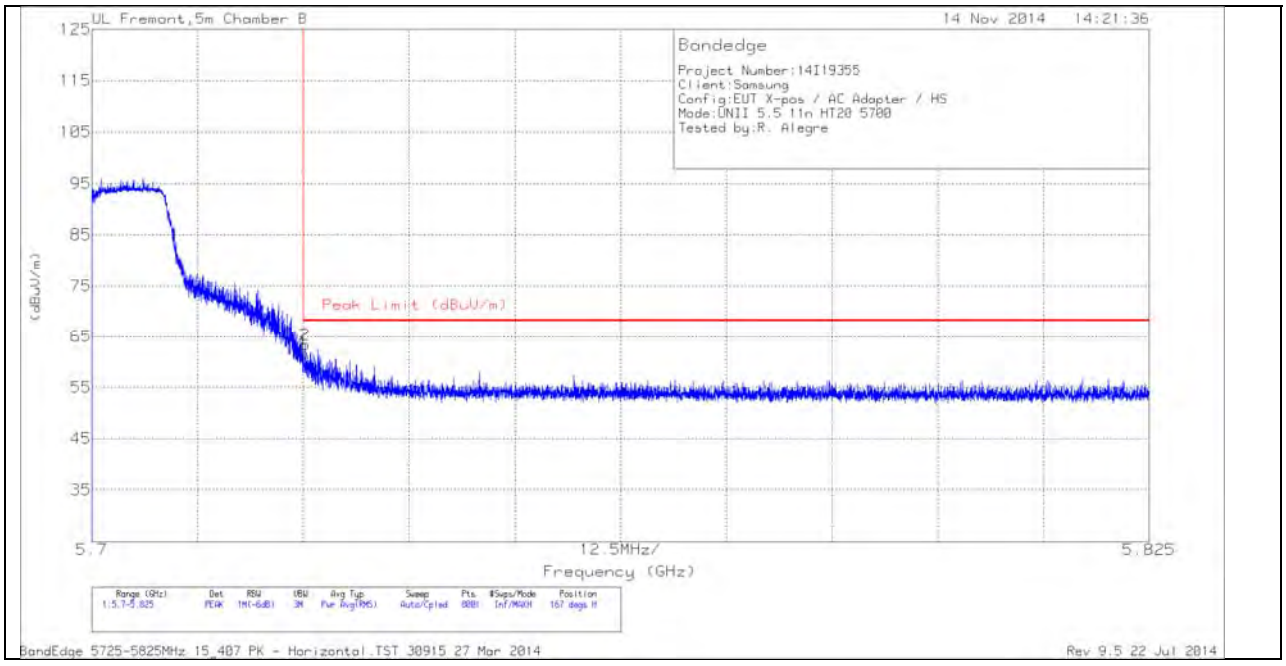


VERTICAL DATA

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	5.379	42.77	PK	34.6	-21.3	0	56.07	-	-	74	-17.93	108	349	V
6	5.449	30.91	RMS	34.8	-21.4	.33	44.61	54	-9.39	-	-	108	349	V
1	5.46	39.91	PK	34.8	-21.4	0	53.31	-	-	74	-20.69	108	349	V
5	5.46	29.72	RMS	34.8	-21.4	.33	43.42	54	-10.58	-	-	108	349	V
4	5.469	45.01	PK	34.8	-21.3	0	58.51	-	-	68.2	-9.69	108	349	V
3	5.47	42.66	PK	34.8	-21.3	0	56.16	-	-	68.2	-12.04	108	349	V
7	5.47	31.25	RMS	34.8	-21.3	.33	45.05	-	-	-	-	108	349	V
8	5.47	31.53	RMS	34.8	-21.3	.33	45.33	-	-	-	-	108	349	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

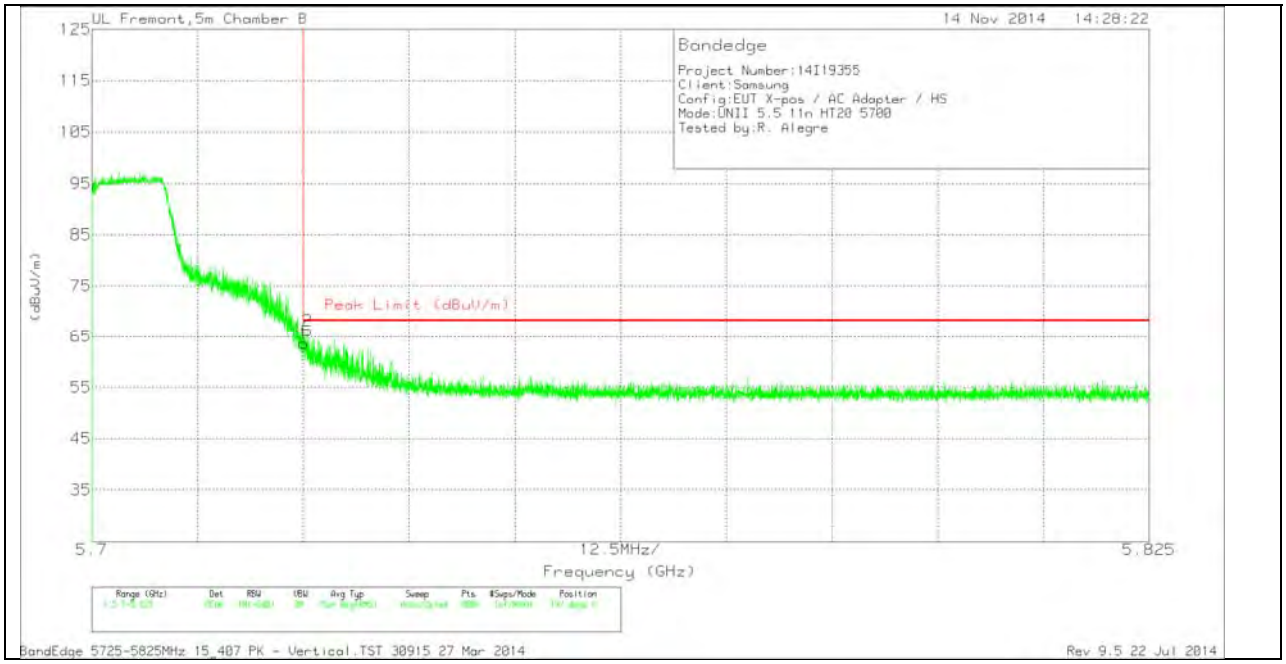
HORIZONTAL PEAK PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	47.23	PK	34.6	-20.1	0	61.73	68.2	-6.47	167	224	H
2	5.725	48.83	PK	34.6	-20.1	0	63.33	68.2	-4.87	167	224	H

VERTICAL PEAK PLOT

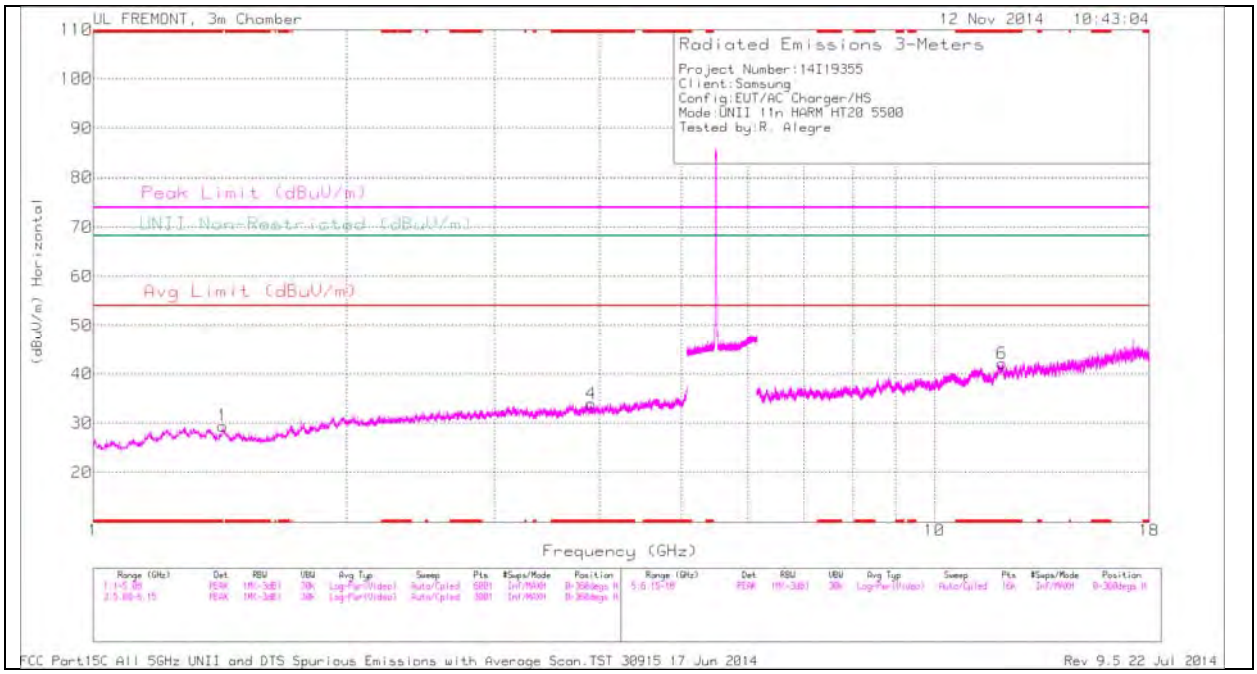


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	49.16	PK	34.6	-20.1	0	63.66	68.2	-4.54	197	243	V
2	5.725	51.65	PK	34.6	-20.1	0	66.15	68.2	-2.05	197	243	V

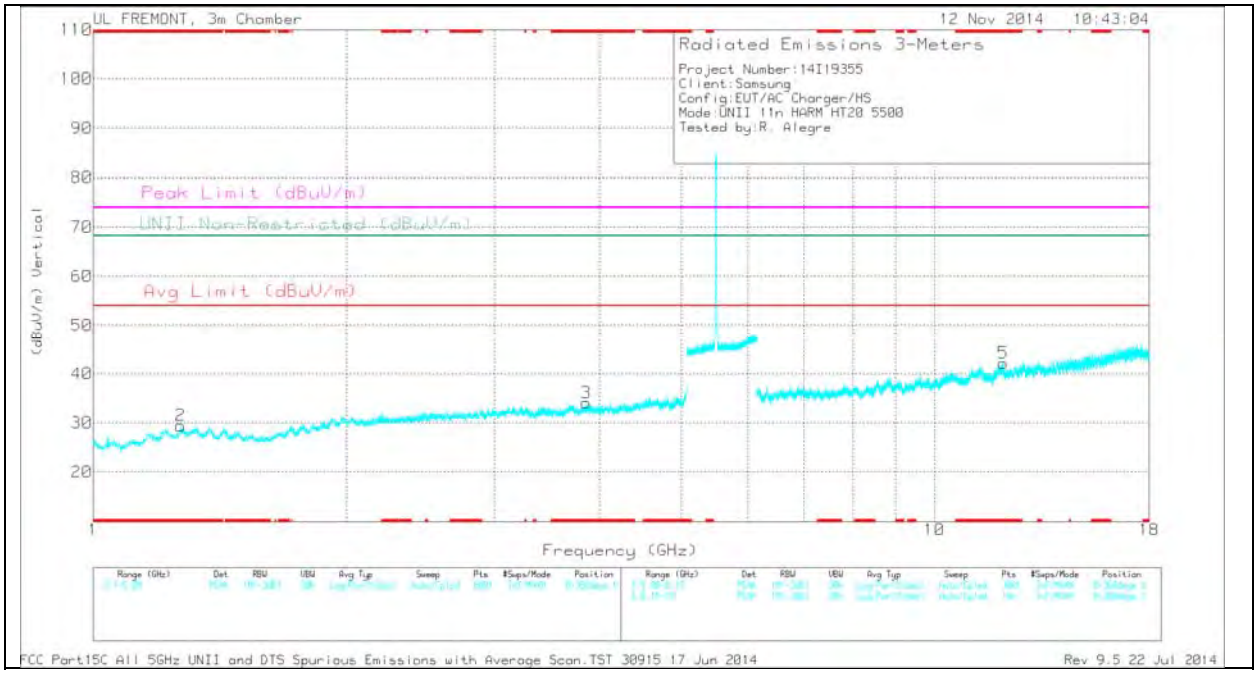
HARMONICS AND SPURIOUS EMISSIONS

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

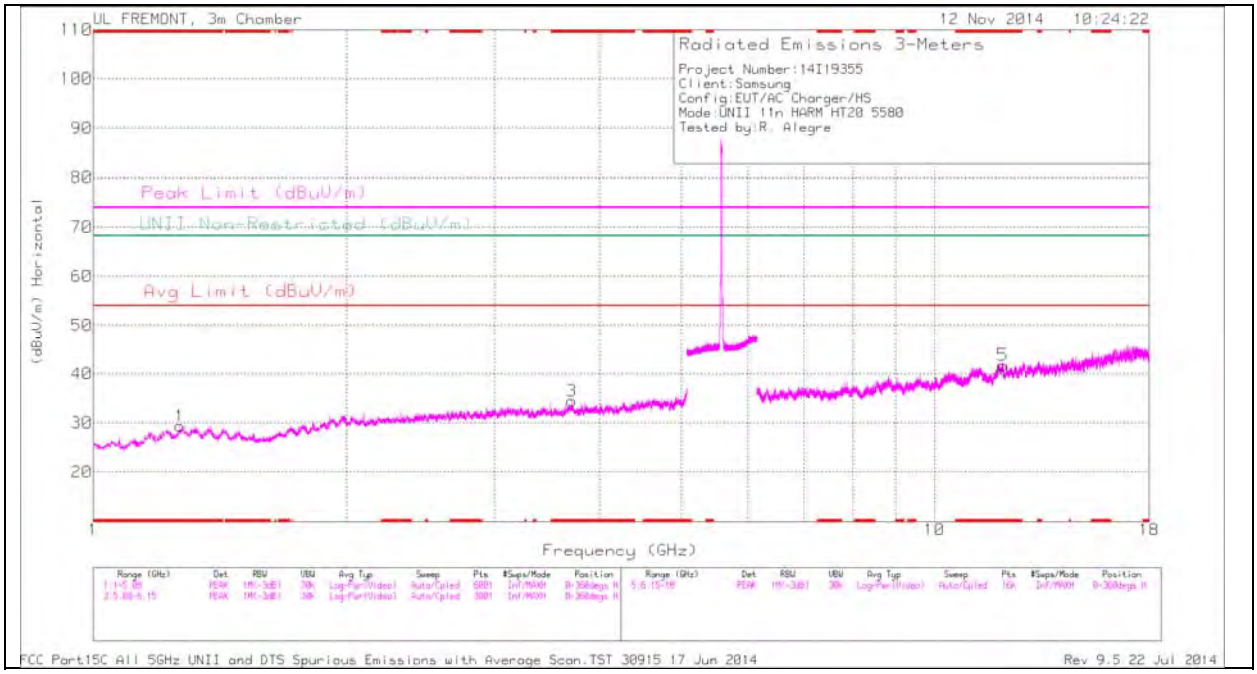
TRACE MARKERS

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	* 1.426	33.22	PK	28.9	-32.7	0	29.42	-	-	74	-44.58	-	-	0-360	200	H
4	* 3.911	31.64	PK	33.3	-31	0	33.94	-	-	74	-40.06	-	-	0-360	200	H
2	* 1.271	33.13	PK	29.9	-33.6	0	29.43	-	-	74	-44.57	-	-	0-360	200	V
3	* 3.859	31.77	PK	33.2	-30.9	0	34.07	-	-	74	-39.93	-	-	0-360	100	V
6	* 12.036	29.22	PK	39.1	-26.2	0	42.12	-	-	74	-31.88	-	-	0-360	100	H
5	* 12.069	29.47	PK	39.1	-26.4	0	42.17	-	-	74	-31.83	-	-	0-360	200	V

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

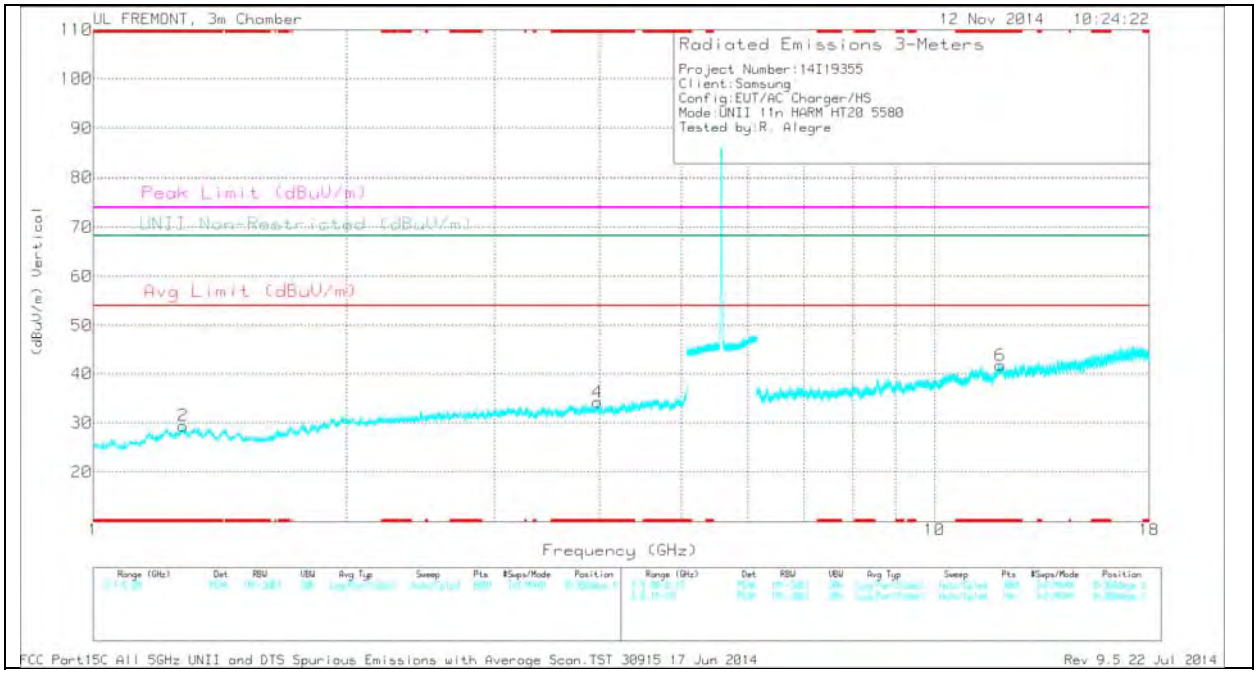
PK - Peak detector

MID CHANNEL HORIZONTAL



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

MID CHANNEL VERTICAL



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

MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.269	32.93	PK	29.9	-33.5	0	29.33	-	-	74	-44.67	-	-	0-360	100	H
3	* 3.708	32.07	PK	33.2	-30.8	0	34.47	-	-	74	-39.53	-	-	0-360	100	H
2	* 1.279	33.02	PK	30	-33.6	0	29.42	-	-	74	-44.58	-	-	0-360	200	V
4	* 3.977	32.58	PK	33.3	-31.7	0	34.18	-	-	74	-39.82	-	-	0-360	200	V
5	* 12.062	29.07	PK	39.1	-26.4	0	41.77	-	-	74	-32.23	-	-	0-360	200	H
6	* 11.98	29.06	PK	39	-26.3	0	41.76	-	-	74	-32.24	-	-	0-360	200	V

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

PK - Peak detector

Radiated Emissions

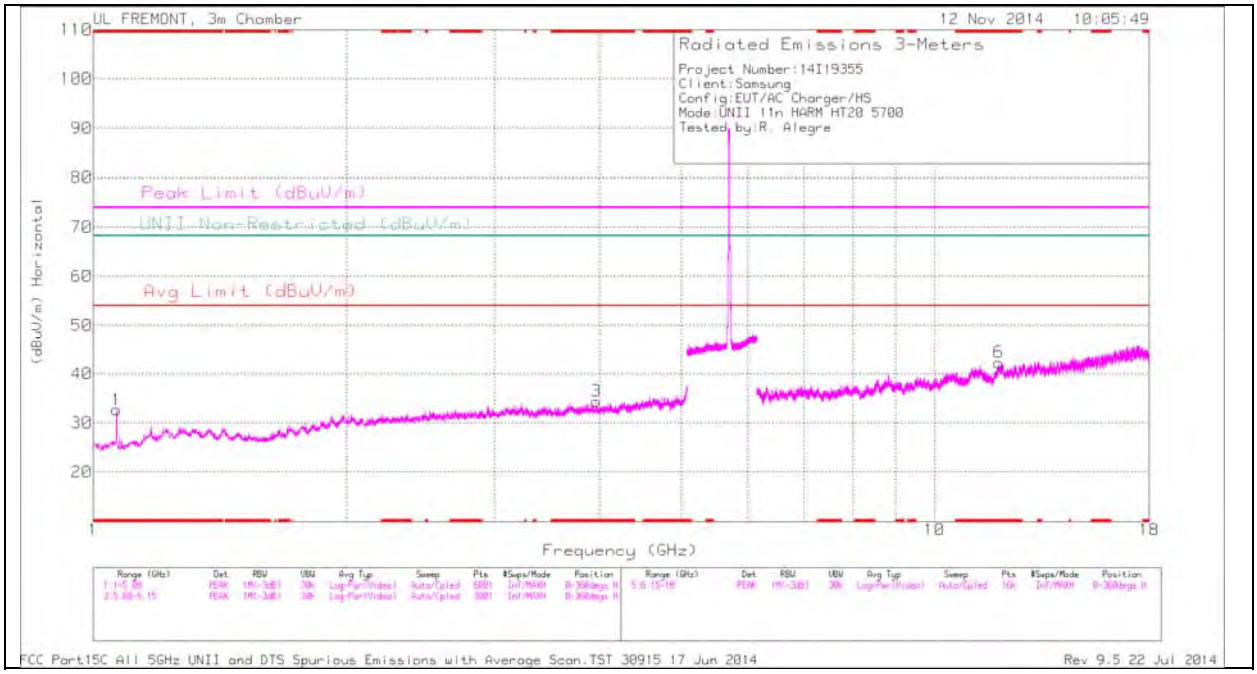
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 12.064	37.85	PK1	39.1	-26.4	0	50.55	-	-	74	-23.45	-	-	287	200	H
* 12.064	26.33	AD1	39.1	-26.4	.33	39.36	54	-14.64	-	-	-	-	287	200	H

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

PK1 - KDB789033 Method: Peak

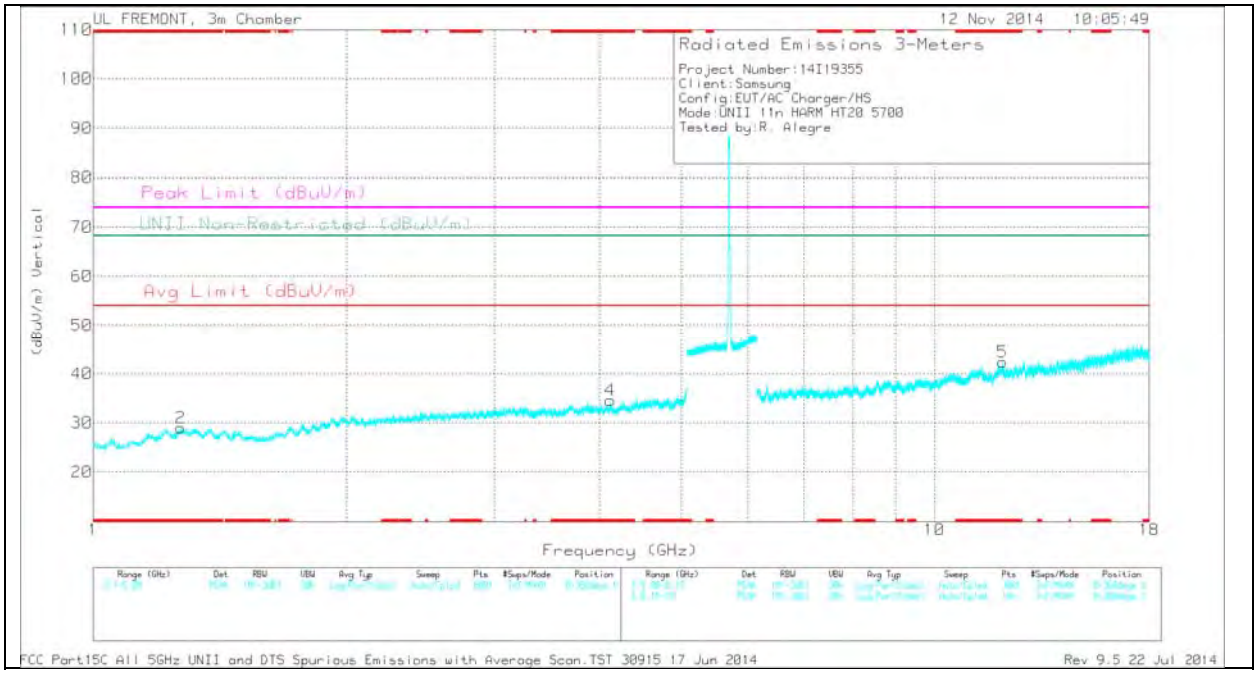
AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL HORIZONTAL



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

HIGH CHANNEL VERTICAL



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

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 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	* 1.067	39.17	PK	27.2	-33.7	0	32.67	-	-	74	-41.33	-	-	0-360	200	H
3	* 3.966	32.5	PK	33.3	-31.4	0	34.4	-	-	74	-39.6	-	-	0-360	100	H
2	* 1.27	32.56	PK	29.9	-33.5	0	28.96	-	-	74	-45.04	-	-	0-360	200	V
4	* 4.12	31.96	PK	33.5	-30.9	0	34.56	-	-	74	-39.44	-	-	0-360	100	V
6	* 11.92	29.52	PK	39	-26.2	0	42.32	-	-	74	-31.68	-	-	0-360	200	H
5	* 12.054	29.57	PK	39.1	-26.3	0	42.37	-	-	74	-31.63	-	-	0-360	200	V

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

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF 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
* 1.065	42.43	PK1	27.2	-33.7	0	35.93	-	-	74	-38.07	-	-	273	200	H
* 1.065	30.57	AD1	27.2	-33.7	.33	24.40	54	-29.60	-	-	-	-	273	200	H

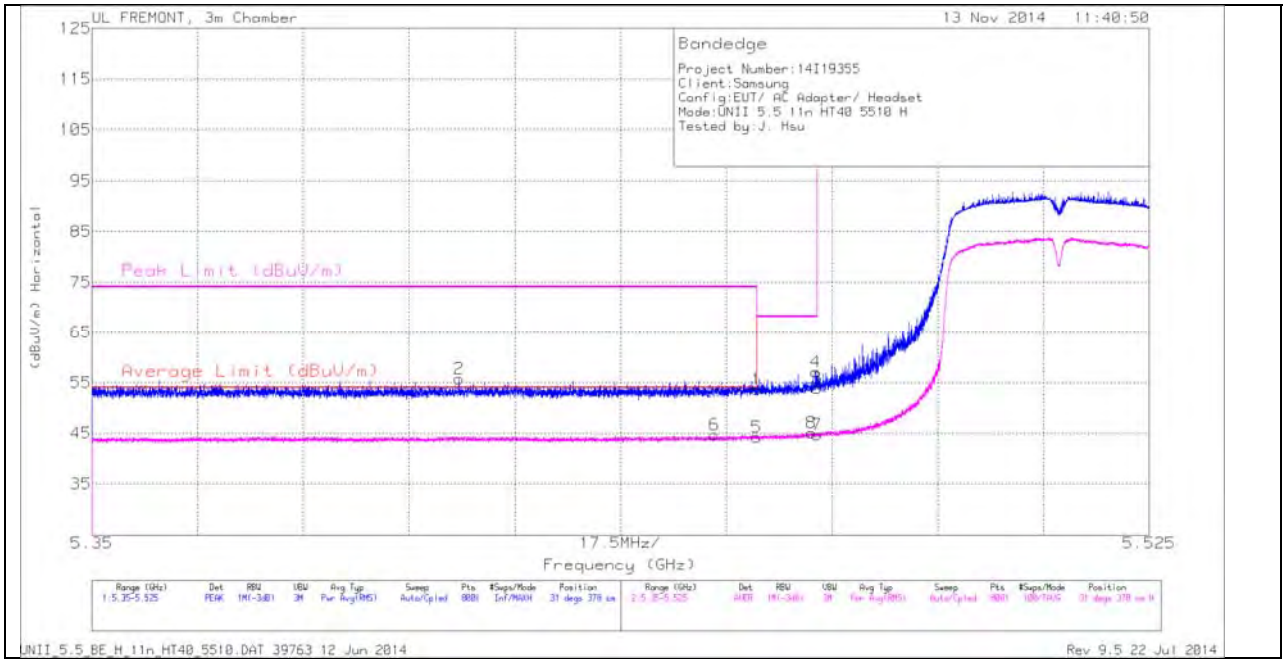
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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

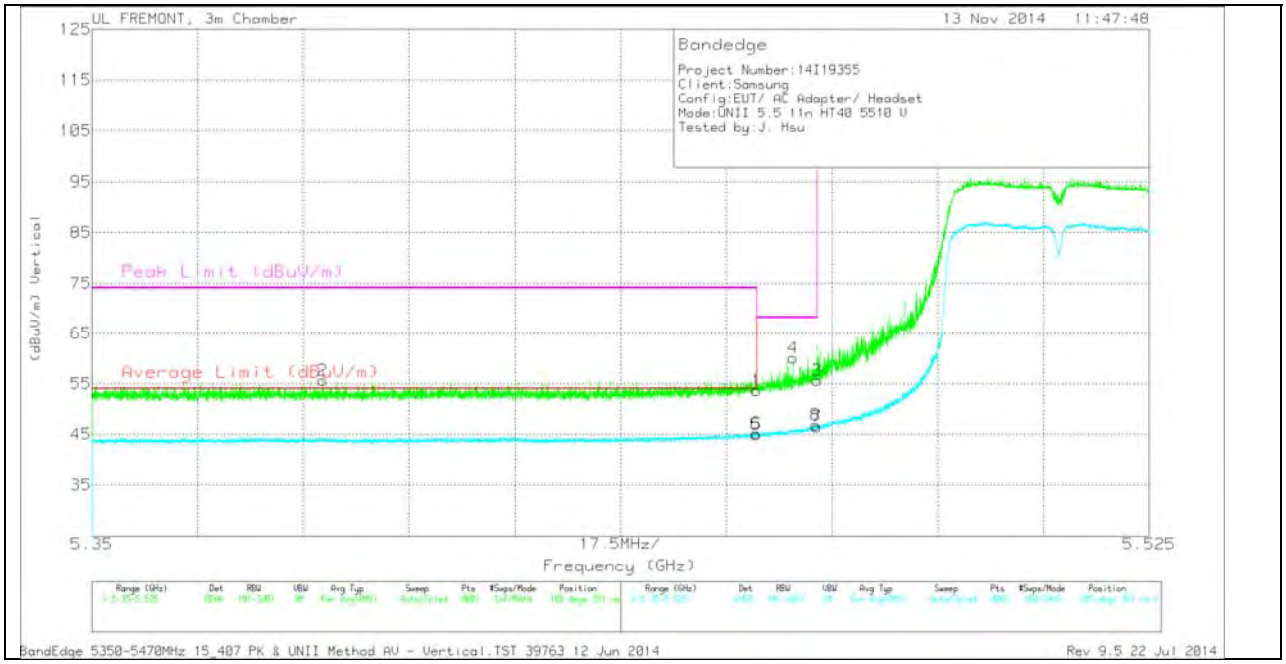
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 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	5.411	42.41	PK	34.7	-21.4	0	55.71	-	-	74	-18.29	31	378	H
6	5.453	30.7	RMS	34.8	-21.4	.63	44.74	54	-9.26	-	-	31	378	H
1	5.46	40.25	PK	34.8	-21.4	0	53.65	-	-	74	-20.35	31	378	H
5	5.46	30.19	RMS	34.8	-21.4	.63	44.23	54	-9.77	-	-	31	378	H
8	5.469	30.93	RMS	34.8	-21.3	.63	45.07	-	-	-	-	31	378	H
3	5.47	40.42	PK	34.8	-21.3	0	53.92	-	-	68.2	-14.28	31	378	H
4	5.47	43.63	PK	34.8	-21.3	0	57.13	-	-	68.2	-11.07	31	378	H
7	5.47	30.6	RMS	34.8	-21.3	.63	44.74	-	-	-	-	31	378	H

VERTICAL PEAK AND AVERAGE PLOT

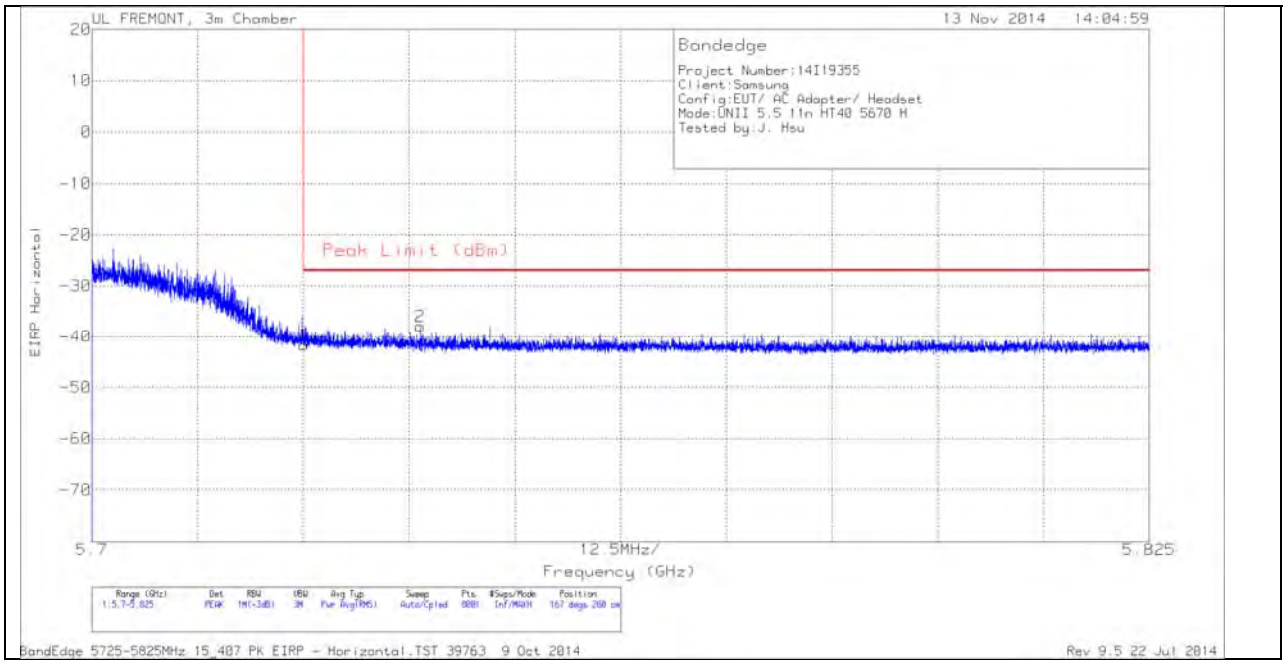


VERTICAL DATA

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	5.388	42.47	PK	34.6	-21.4	0	55.67	-	-	74	-18.33	105	351	V
1	5.46	40.19	PK	34.8	-21.4	0	53.59	-	-	74	-20.41	105	351	V
5	5.46	30.86	RMS	34.8	-21.4	.63	44.9	54	-9.1	-	-	105	351	V
6	5.46	31.17	RMS	34.8	-21.4	.63	45.21	54	-8.79	-	-	105	351	V
4	5.466	46.55	PK	34.8	-21.3	0	60.05	-	-	68.2	-8.15	105	351	V
3	5.47	42.12	PK	34.8	-21.3	0	55.62	-	-	68.2	-12.58	105	351	V
7	5.47	32.31	RMS	34.8	-21.3	.63	46.45	-	-	-	-	105	351	V
8	5.47	32.62	RMS	34.8	-21.3	.63	46.76	-	-	-	-	105	351	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

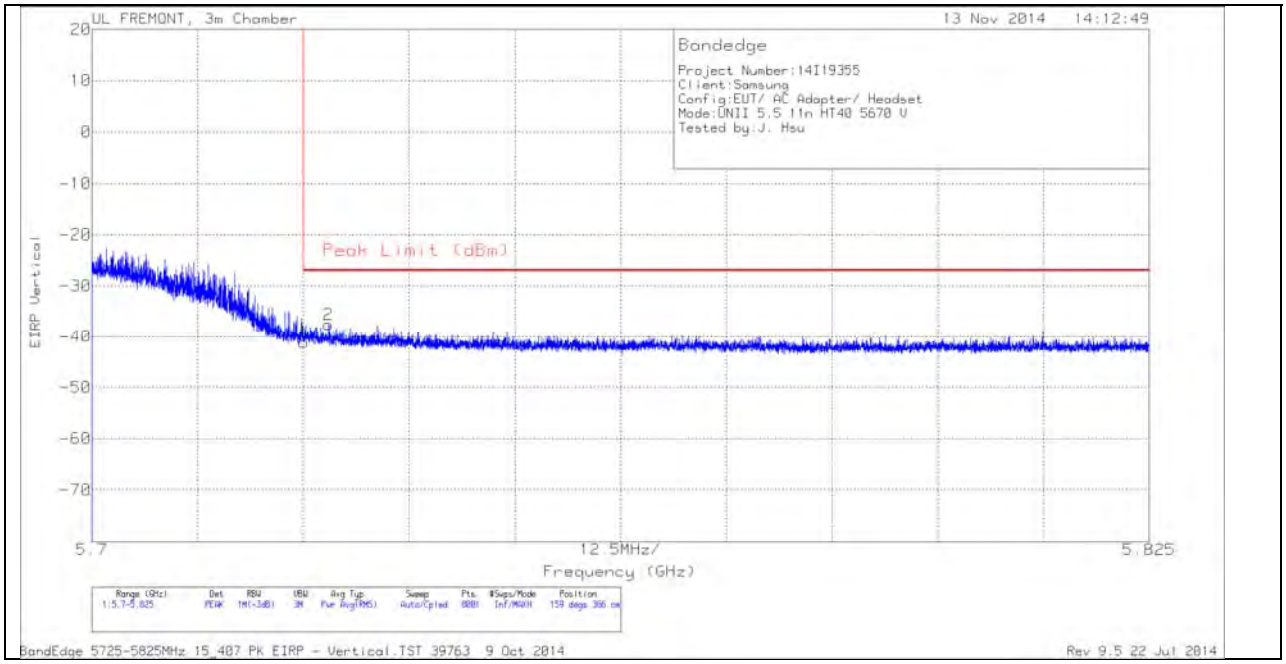
HORIZONTAL PEAK PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-67.1	PK	34.8	-21.1	11.8	-41.6	-27	-14.6	167	260	H
2	5.739	-63.34	PK	34.8	-21.2	11.8	-37.94	-27	-10.94	167	260	H

VERTICAL PEAK PLOT

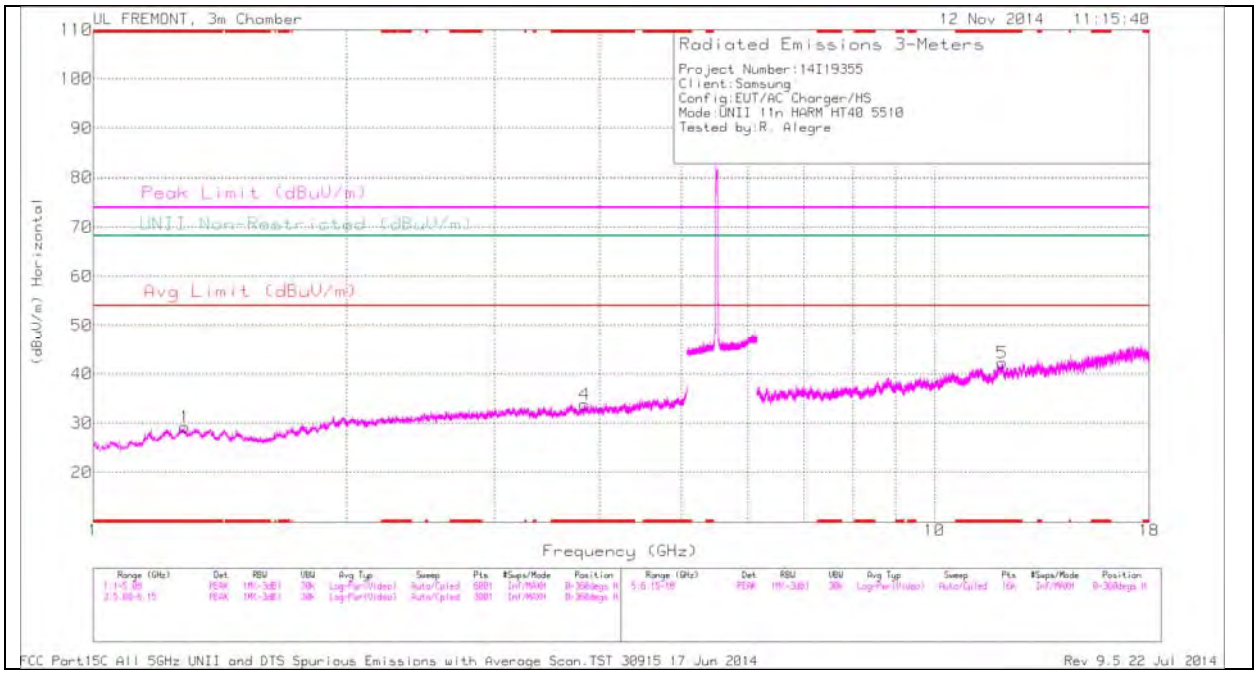


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-66.6	PK	34.8	-21.1	11.8	-41.1	-27	-14.1	159	366	V
2	5.728	-62.99	PK	34.8	-21.2	11.8	-37.59	-27	-10.59	159	366	V

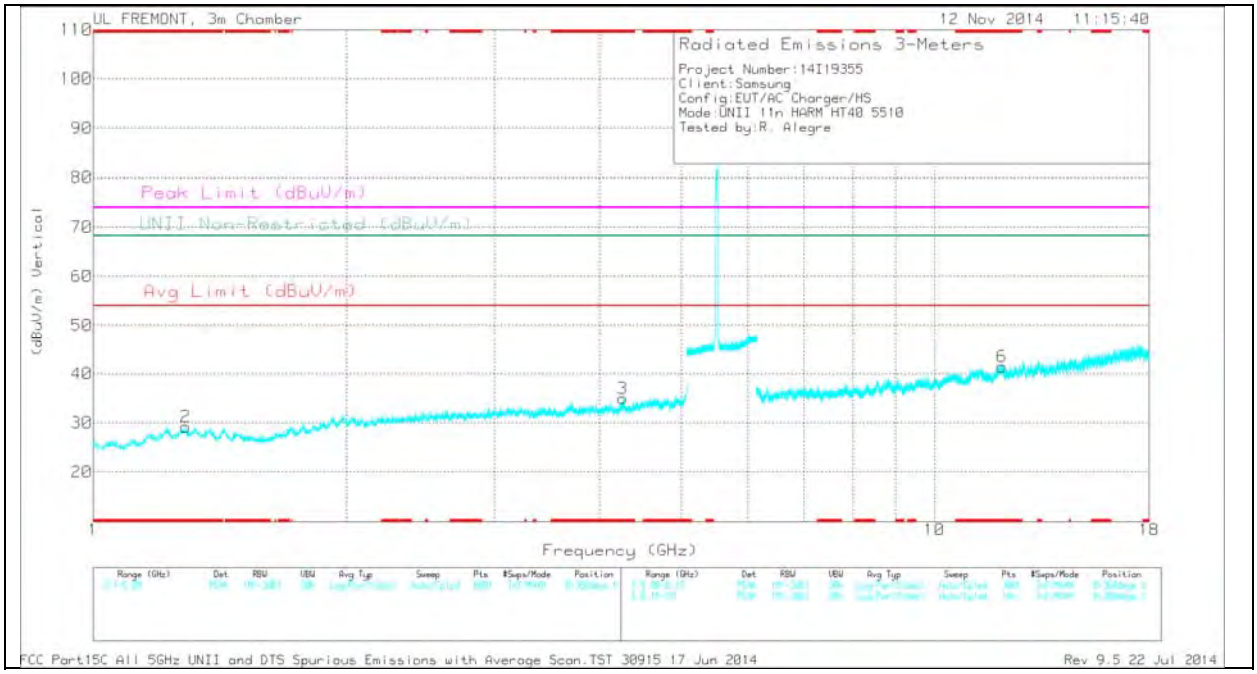
HARMONICS AND SPURIOUS EMISSIONS

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	* 1.286	32.74	PK	30.1	-33.6	0	29.24	-	-	74	-44.76	-	-	0-360	200	H
4	* 3.84	31.53	PK	33.2	-30.9	0	33.83	-	-	74	-40.17	-	-	0-360	200	H
2	* 1.288	32.69	PK	30.1	-33.6	0	29.19	-	-	74	-44.81	-	-	0-360	100	V
3	* 4.261	32.07	PK	33.5	-30.6	0	34.97	-	-	74	-39.03	-	-	0-360	100	V
5	* 12.04	29.36	PK	39.1	-26.2	0	42.26	-	-	74	-31.74	-	-	0-360	200	H
6	* 12.026	28.45	PK	39.1	-26.1	0	41.45	-	-	74	-32.55	-	-	0-360	200	V

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

PK - Peak detector

Radiated Emissions

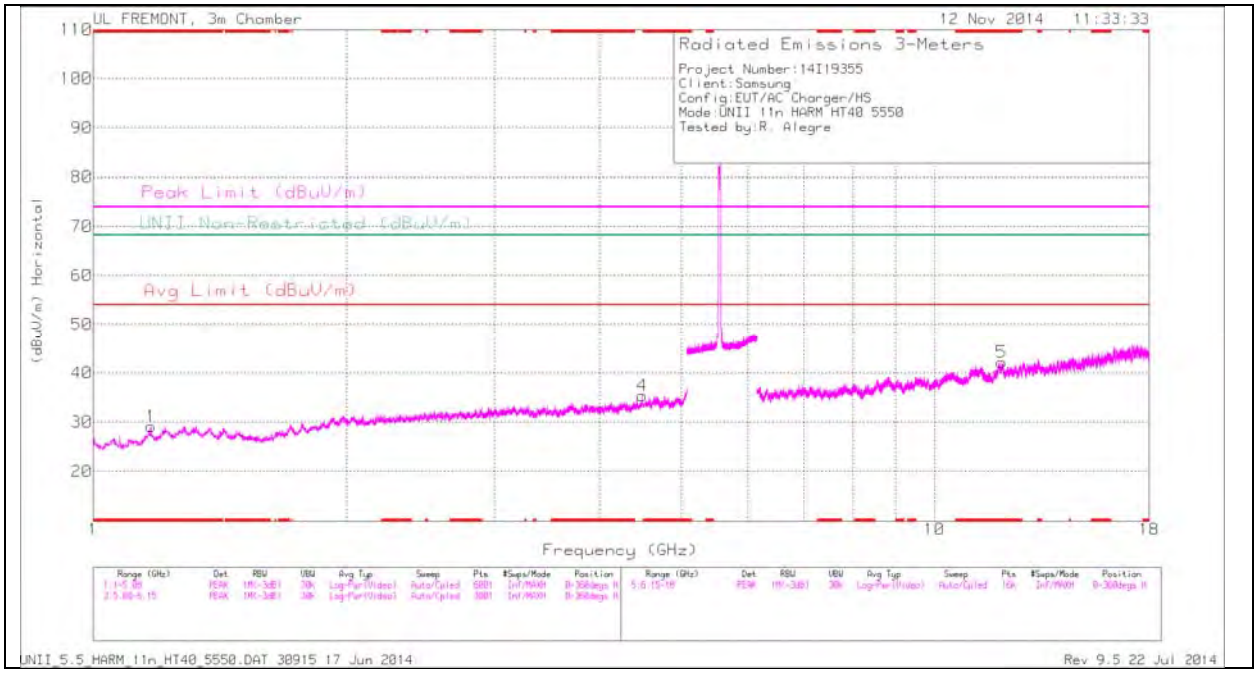
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 12.041	37.74	PK1	39.1	-26.2	0	50.64	-	-	74	-23.36	-	-	360	200	H
* 12.042	26.13	AD1	39.1	-26.2	.3	39.33	54	-14.67	-	-	-	-	360	200	H

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

PK1 - KDB789033 Method: Peak

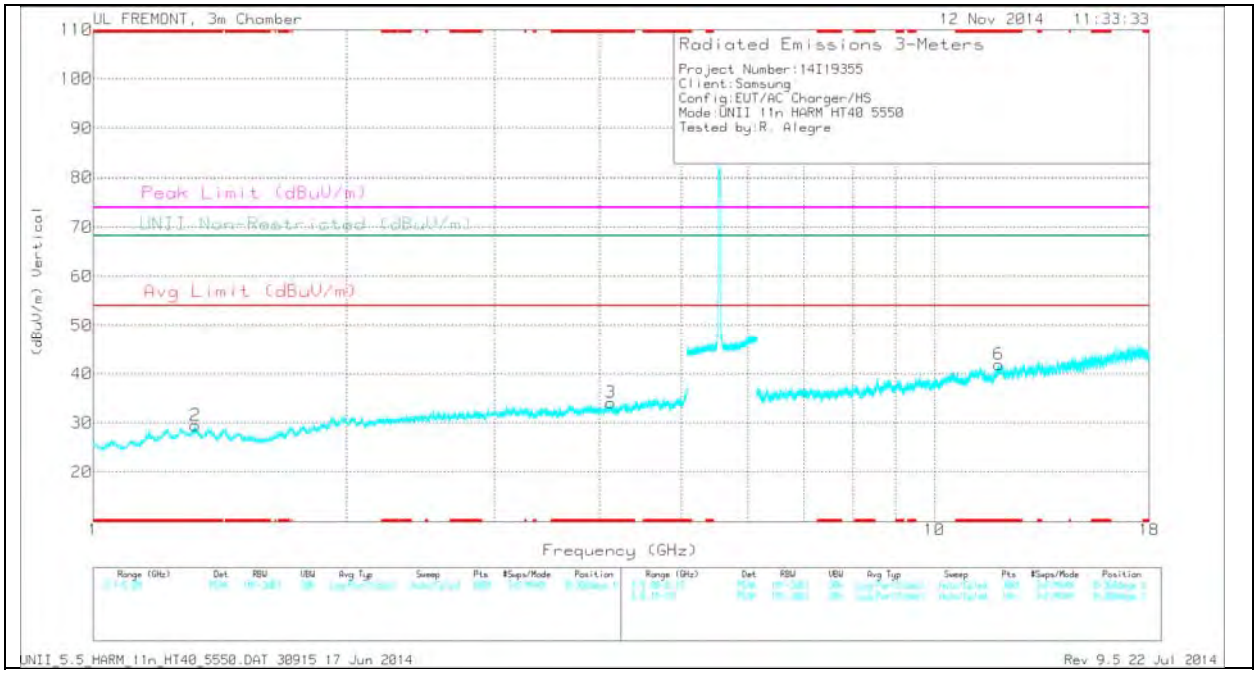
AD1 - KDB789033 Method: AD Primary Power Average

MID CHANNEL HORIZONTAL



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

MID CHANNEL VERTICAL



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

MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 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	* 1.171	33.72	PK	28.7	-33.3	0	29.12	-	-	74	-44.88	-	-	0-360	100	H
2	* 1.323	33.1	PK	30	-33.6	0	29.5	-	-	74	-44.5	-	-	0-360	100	V
3	* 4.123	31.65	PK	33.5	-31	0	34.15	-	-	74	-39.85	-	-	0-360	100	V
5	* 12.018	29.15	PK	39.1	-26.1	0	42.15	-	-	74	-31.85	-	-	0-360	100	H
6	* 11.932	29.24	PK	39	-26.3	0	41.94	-	-	74	-32.06	-	-	0-360	200	V
4	4.497	32.55	PK	33.9	-31.1	0	35.35	-	-	-	-	68.2	-32.85	0-360	200	H

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

PK - Peak detector

Radiated Emissions

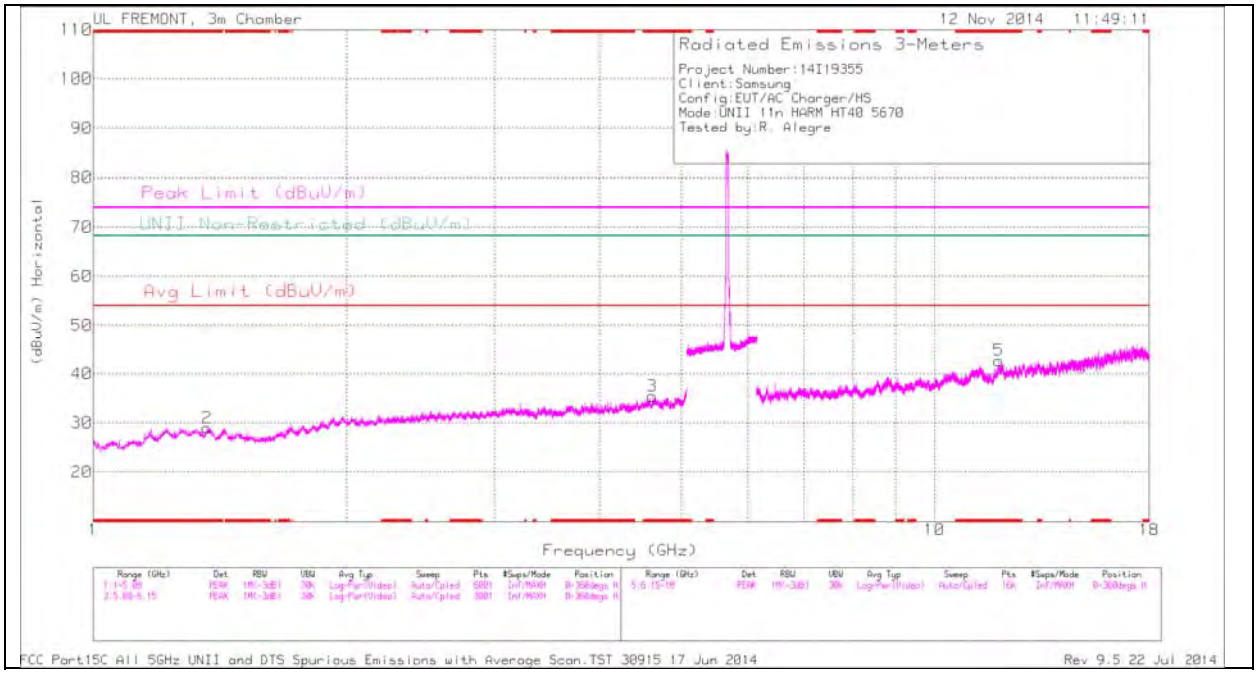
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 12.019	37.24	PK1	39.1	-26.1	0	50.24	-	-	74	-23.76	-	-	291	100	H
* 12.02	25.69	AD1	39.1	-26.1	.63	39.32	54	-14.68	-	-	-	-	291	100	H

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

PK1 - KDB789033 Method: Peak

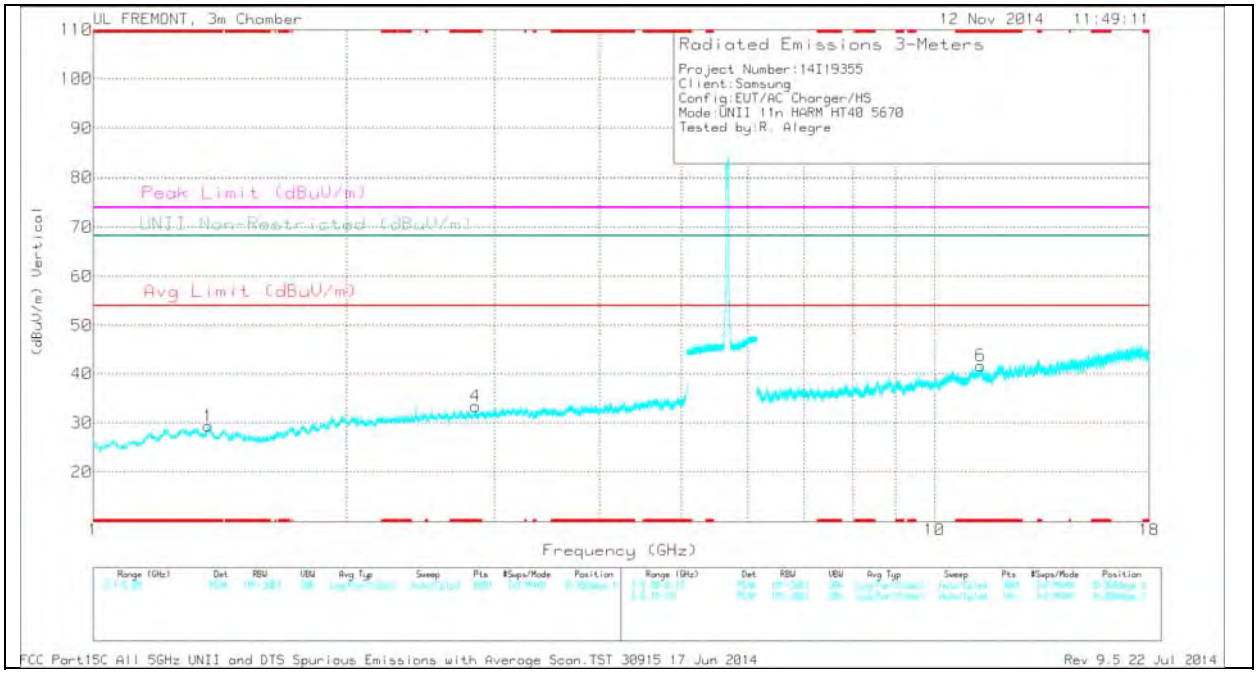
AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL HORIZONTAL



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

HIGH CHANNEL VERTICAL



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

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 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
2	* 1.366	32.68	PK	29.5	-33.2	0	28.98	-	-	74	-45.02	-	-	0-360	200	H
3	* 4.623	31.63	PK	34	-30.2	0	35.43	-	-	74	-38.57	-	-	0-360	100	H
1	* 1.371	33.05	PK	29.4	-33.1	0	29.35	-	-	74	-44.65	-	-	0-360	100	V
4	* 2.85	33.09	PK	32.7	-32.4	0	33.39	-	-	74	-40.61	-	-	0-360	100	V
5	* 11.929	29.9	PK	39	-26.2	0	42.7	-	-	74	-31.3	-	-	0-360	100	H
6	* 11.34	29.16	PK	38	-25.5	0	41.66	-	-	74	-32.34	-	-	0-360	200	V

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

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF 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
* 11.931	38.52	PK1	39	-26.2	0	51.32	-	-	74	-22.68	-	-	360	100	H
* 11.93	26.87	AD1	39	-26.2	.63	40.3	54	-13.7	-	-	-	-	360	100	H

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

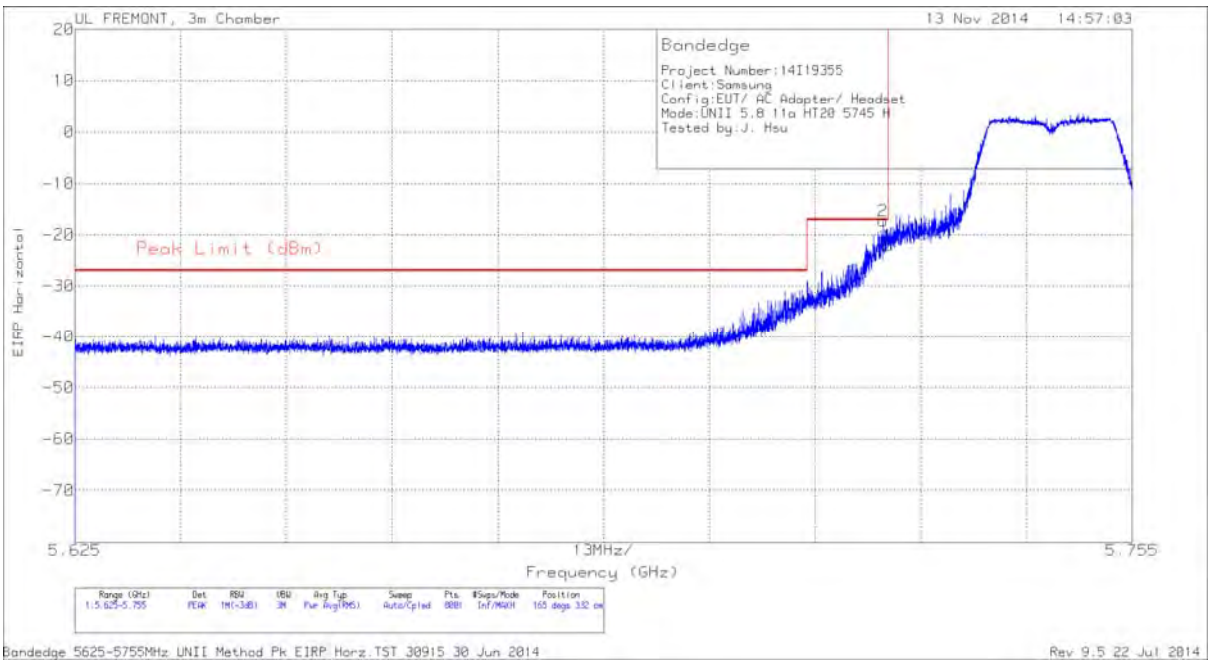
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

11.4. 5.8 GHz

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

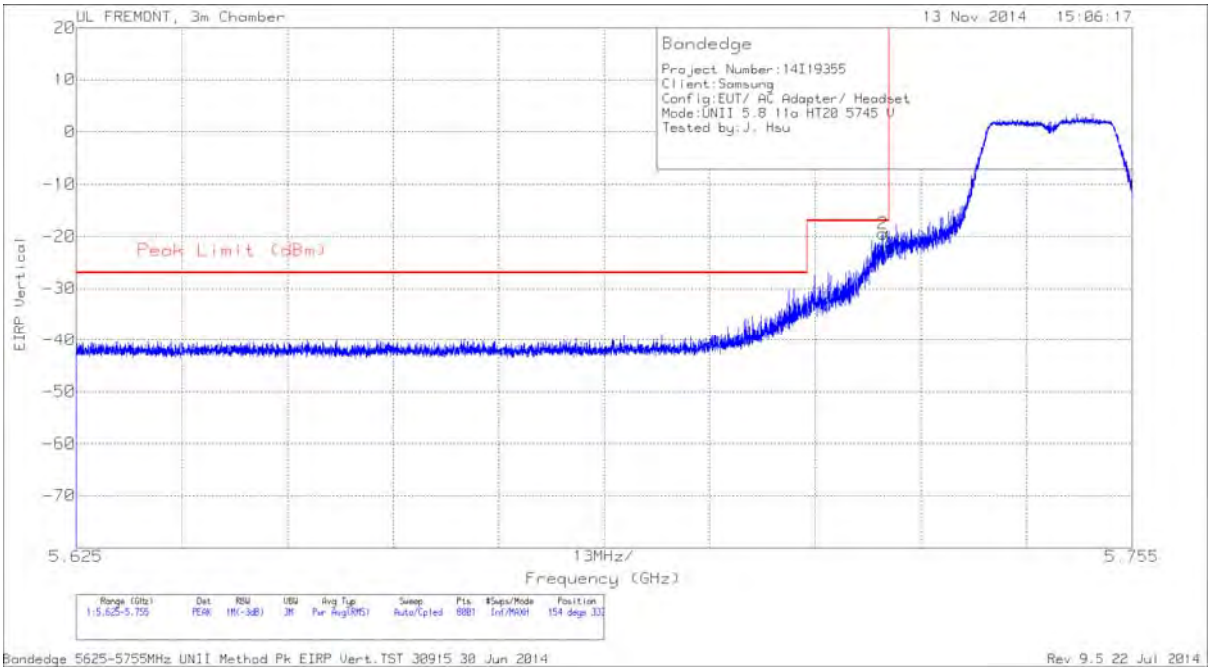
HORIZONTAL PEAK PLOT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.724	-42.89	PK	34.8	-21	11.8	-17.29	-17	-.29	165	332	H
1	5.725	-47.63	PK	34.8	-21.1	11.8	-22.13	-17	-5.13	165	332	H

VERTICAL PEAK PLOT



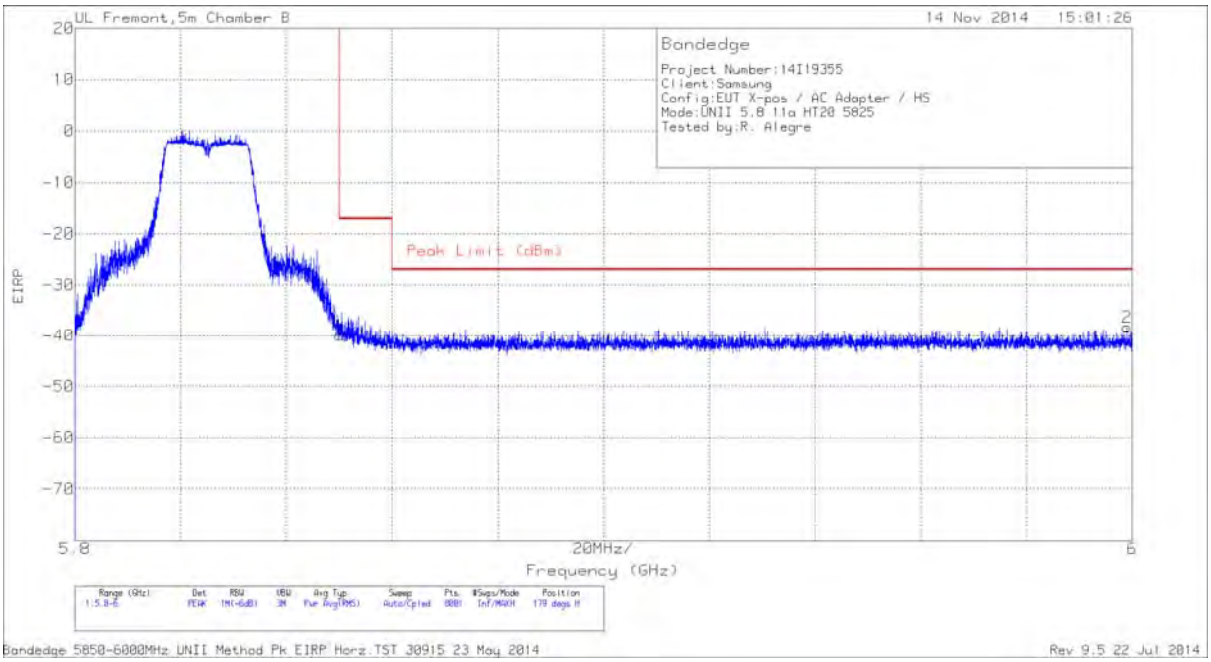
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.724	-45.06	PK	34.8	-21	11.8	-19.46	-17	-2.46	154	332	V
1	5.725	-47.65	PK	34.8	-21.1	11.8	-22.15	-17	-5.15	154	332	V

PK - Peak detector

RESTRICTED BANDEDGE (HIGH CHANNEL)

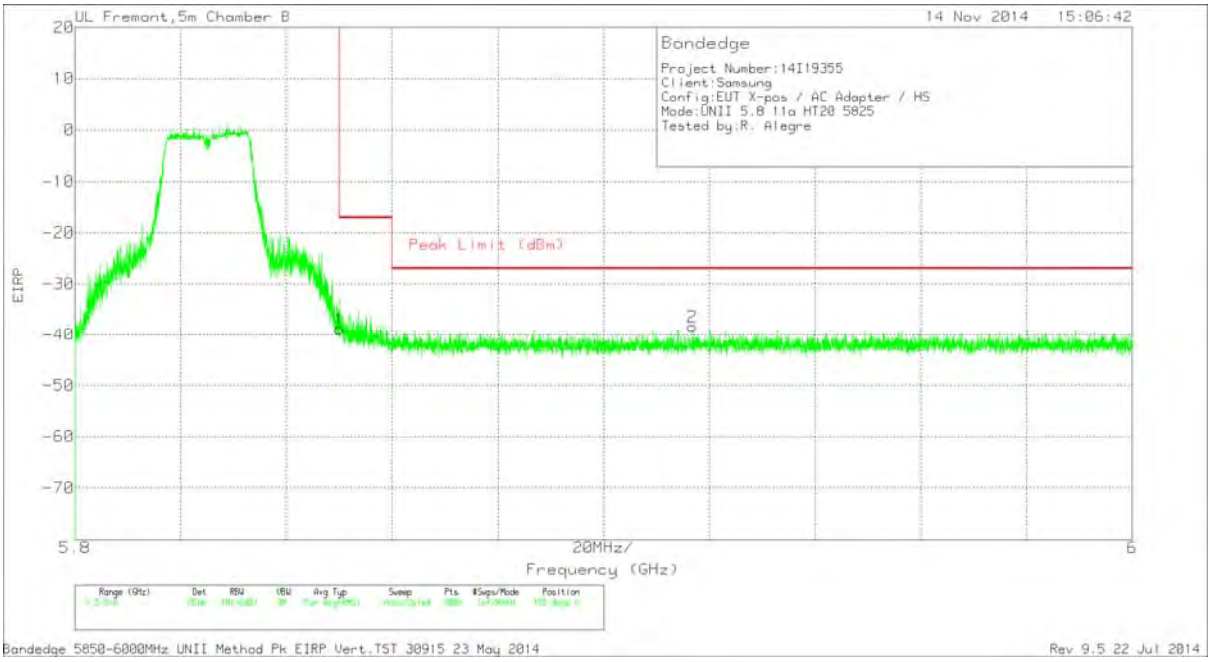
HORIZONTAL PEAK PLOT



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (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	-66.63	PK	34.8	-19.9	11.8	0	-39.93	-27	-12.93	179	261	H
2	5.999	-65.74	PK	35.2	-19.6	11.8	0	-38.34	-27	-11.34	179	261	H

PK - Peak detector

VERTICAL PEAK PLOT

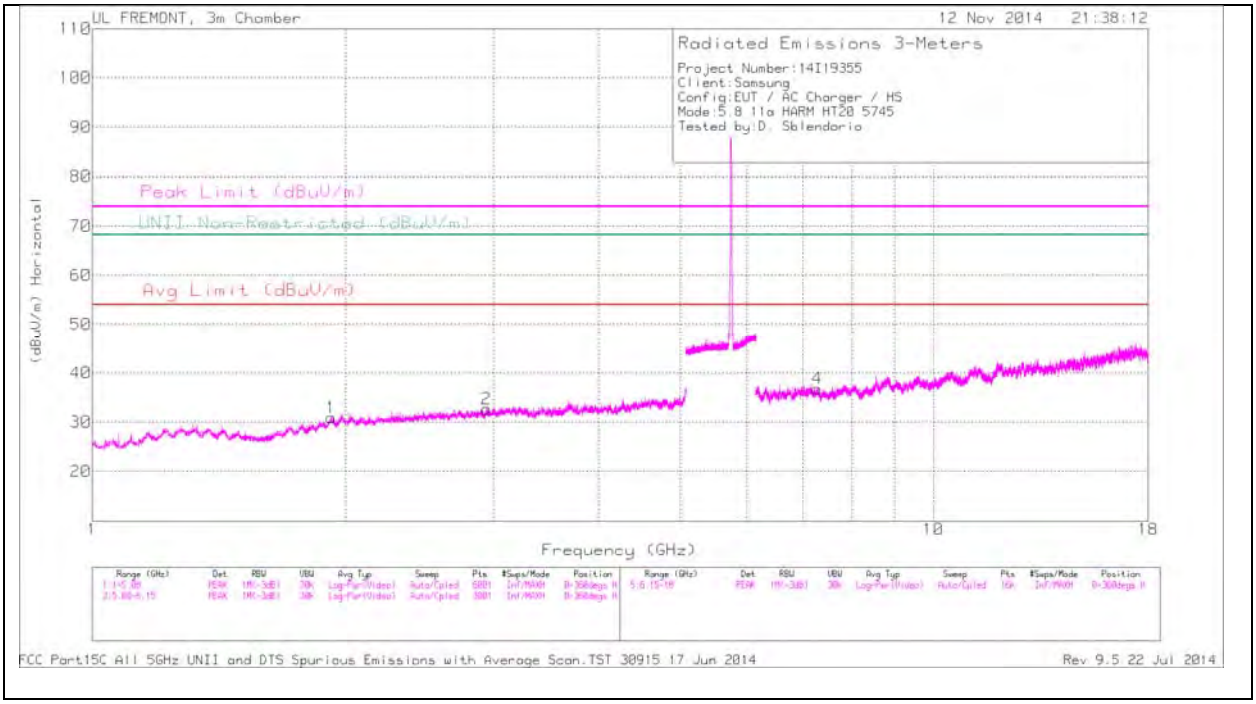


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-65.59	PK	34.8	-19.9	11.8	0	-38.89	-27	-11.89	185	235	V
2	5.917	-65.58	PK	35	-19.6	11.8	0	-38.38	-27	-11.38	185	235	V

PK - Peak detector

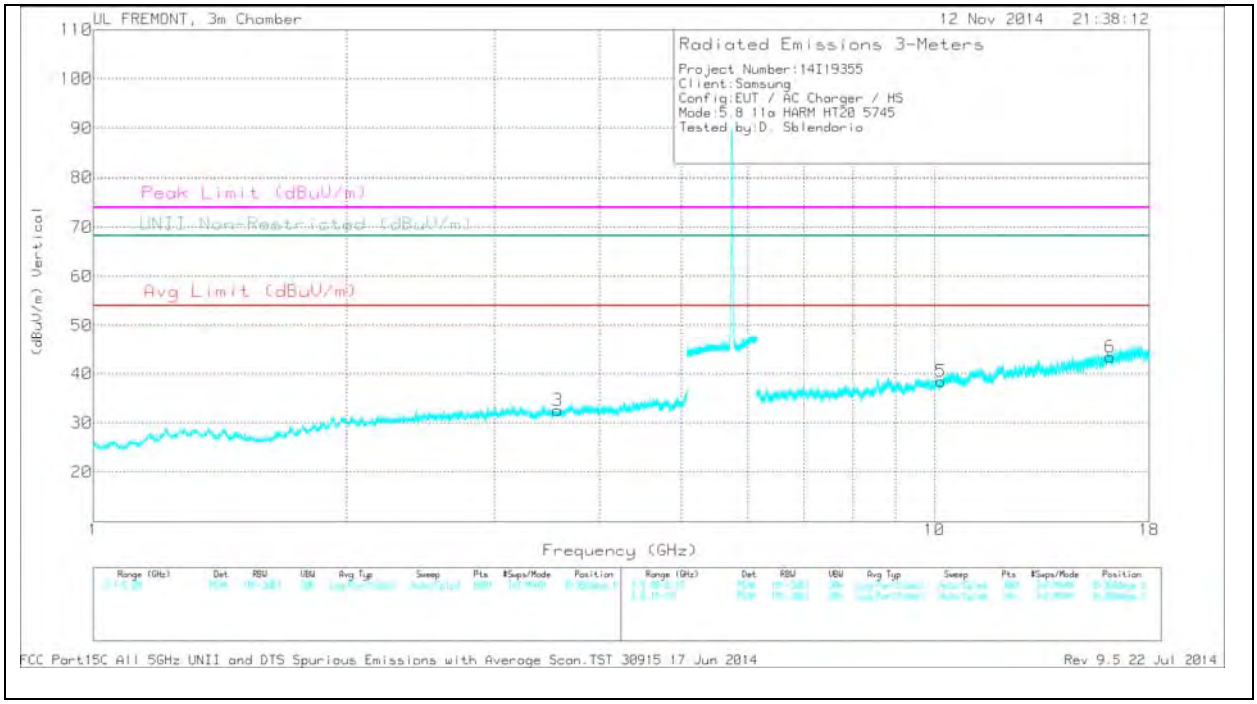
HARMONICS AND SPURIOUS EMISSIONS

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)	Corrected Reading (dBuV/m)	Avg Limit (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	1.923	32.1	PK	31.3	-32.5	30.9	-	-	-	-	68.2	-37.3	0-360	100	H
2	2.942	31.84	PK	32.8	-32	32.64	-	-	-	-	68.2	-35.56	0-360	200	H
3	3.566	31.47	PK	33	-31.9	32.57	-	-	74	-41.43	-	-	0-360	100	V
4	7.279	30.48	PK	35.6	-29.3	36.78	-	-	74	-37.22	-	-	0-360	100	H
5	10.182	27.26	PK	37	-25.8	38.46	-	-	-	-	68.2	-29.74	0-360	200	V
6	16.18	28.36	PK	40.6	-25.5	43.46	-	-	74	-30.54	-	-	0-360	200	V

PK - Peak detector

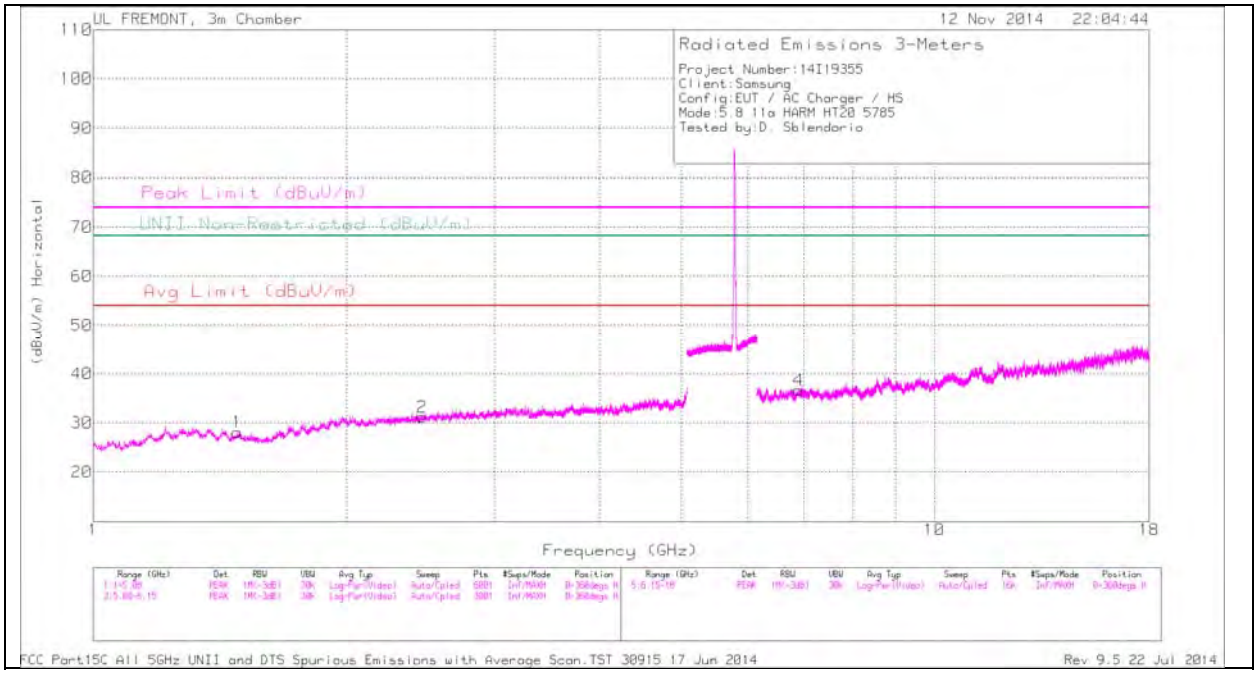
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.923	30.16	AD1	31.3	-32.5	28.96	-	-	-	-	-	-	360	100	H
1.924	41.84	PK1	31.3	-32.5	40.64	-	-	-	-	68.2	-27.56	360	100	H

PK1 - KDB789033 Method: Peak

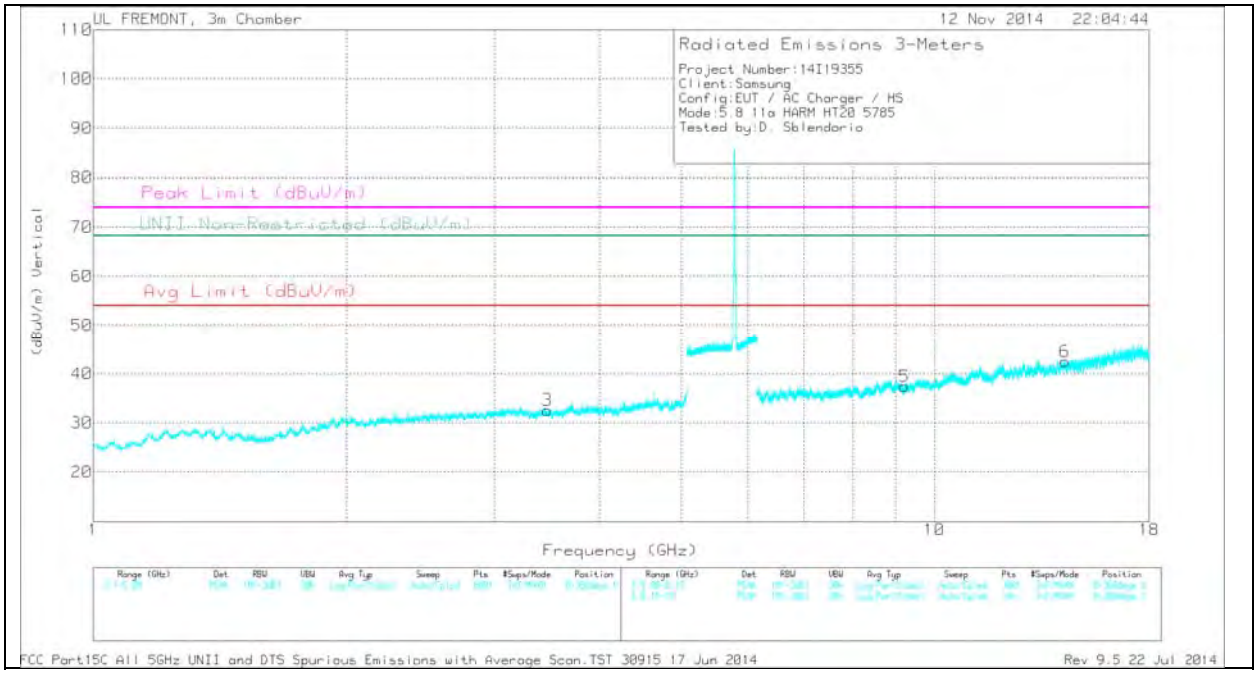
AD1 - KDB789033 Method: AD Primary Power Average

MID CHANNEL HORIZONTAL



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

MID CHANNEL VERTICAL



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

MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 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	1.483	32.25	PK	28.6	-32.8	0	28.05	-	-	74	-45.95	-	-	0-360	200	H
2	2.461	31.44	PK	32.2	-32.5	0	31.14	-	-	-	-	68.2	-37.06	0-360	100	H
3	3.466	30.77	PK	33	-31.2	0	32.57	-	-	-	-	68.2	-35.63	0-360	100	V
4	6.895	30.32	PK	35.6	-29.3	0	36.62	-	-	-	-	68.2	-31.58	0-360	100	H
5	9.212	28.17	PK	36.3	-27.1	0	37.37	-	-	-	-	68.2	-30.83	0-360	100	V
6	14.29	30.39	PK	39.3	-27.2	0	42.49	-	-	-	-	68.2	-25.71	0-360	200	V

PK - Peak detector

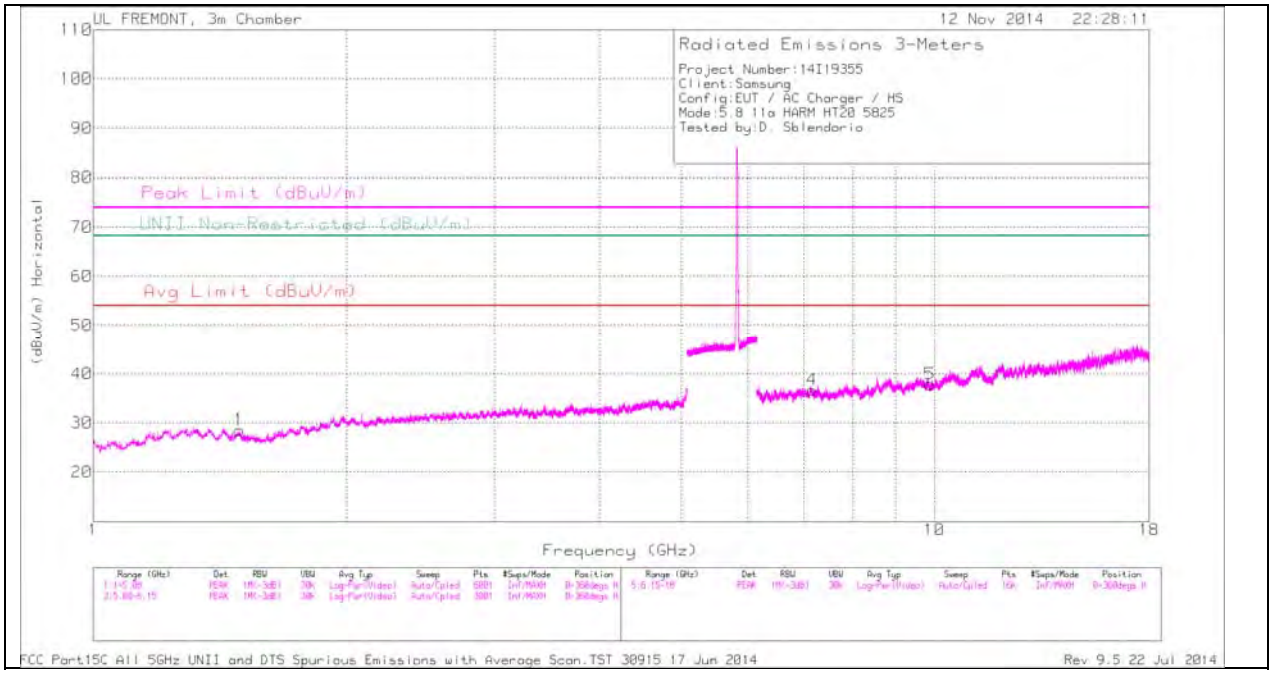
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.483	41.53	PK1	28.6	-32.8	0	37.33	-	-	74	-36.67	-	-	360	200	H
1.483	30.35	AD1	28.6	-32.8	.3	26.45	54	-27.55	-	-	-	-	360	200	H

PK1 - KDB789033 Method: Peak

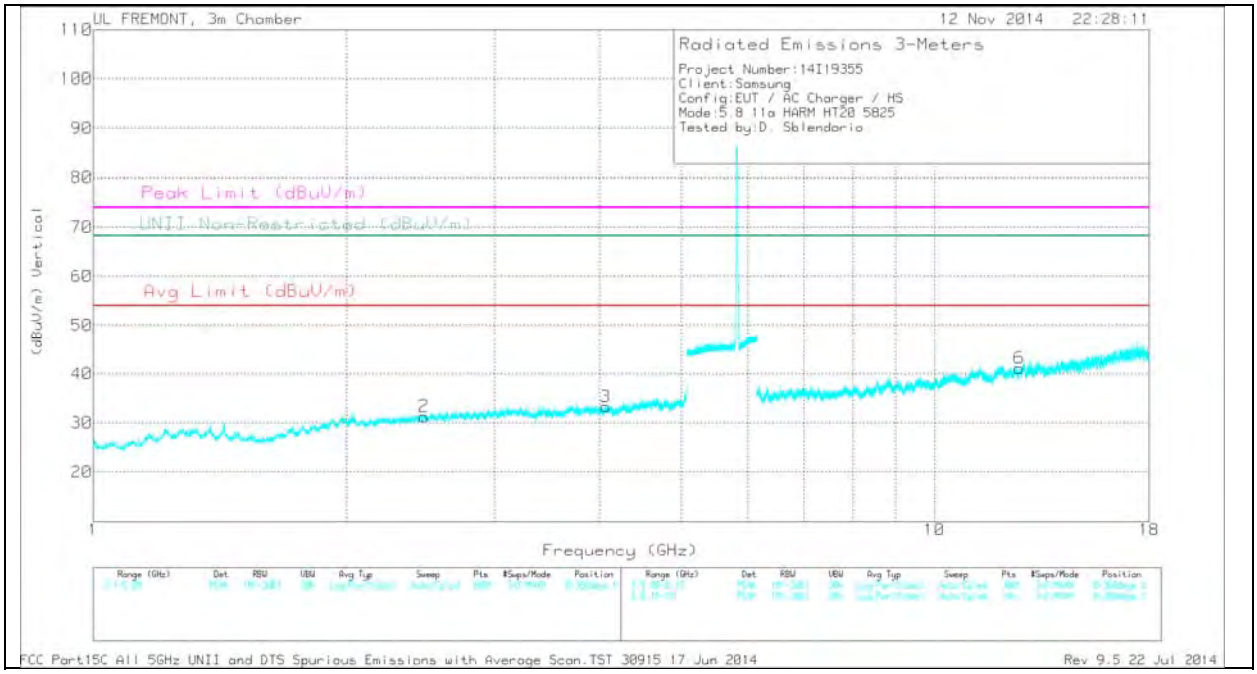
AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL HORIZONTAL



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

HIGH CHANNEL VERTICAL



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

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 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	1.492	32.7	PK	28.6	-32.8	0	28.5	-	-	74	-45.5	-	-	0-360	200	H
2	2.474	31.42	PK	32.3	-32.4	0	31.32	-	-	-	-	68.2	-36.88	0-360	100	V
3	4.067	31.09	PK	33.4	-31.2	0	33.29	-	-	74	-40.71	-	-	0-360	100	V
4	7.157	30.1	PK	35.6	-29	0	36.7	-	-	-	-	68.2	-31.5	0-360	200	H
5	9.877	26.67	PK	36.9	-25.7	0	37.87	-	-	-	-	68.2	-30.33	0-360	100	H
6	12.615	28.87	PK	39.2	-26.9	0	41.17	-	-	74	-32.83	-	-	0-360	200	V

PK - Peak detector

Radiated Emissions

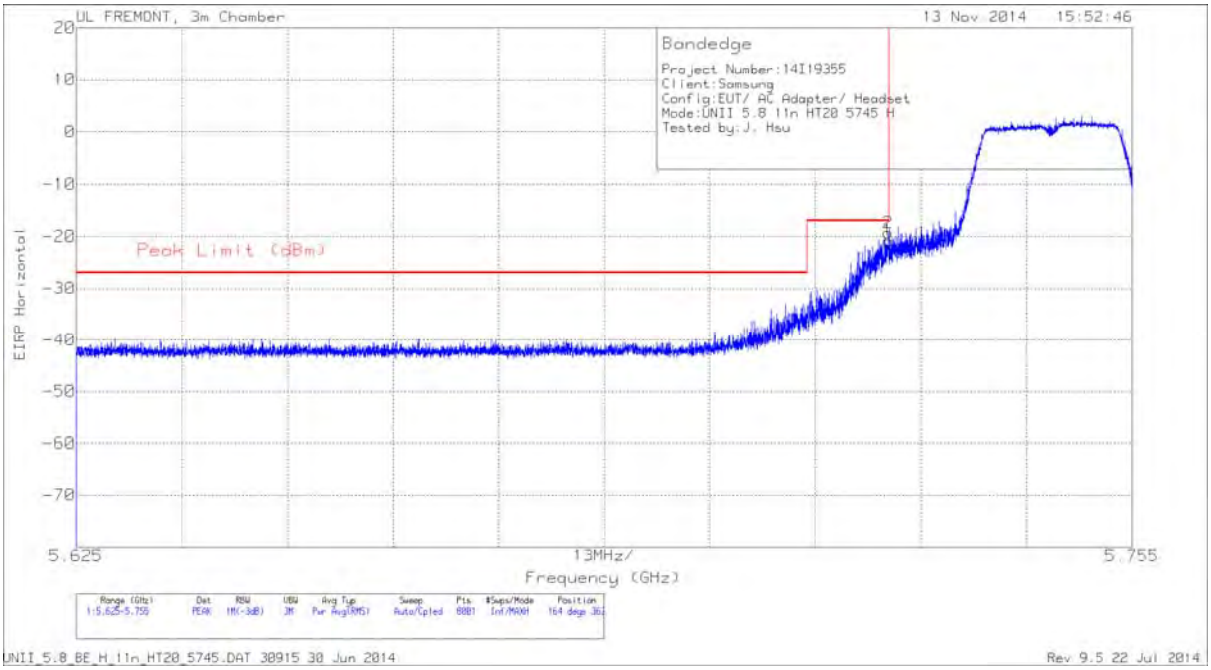
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.492	30.36	AD1	28.6	-32.8	.3	26.46	54	-27.54	-	-	-	-	360	200	H
1.493	42.12	PK1	28.6	-32.8	0	37.92	-	-	74	-36.08	-	-	360	200	H

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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

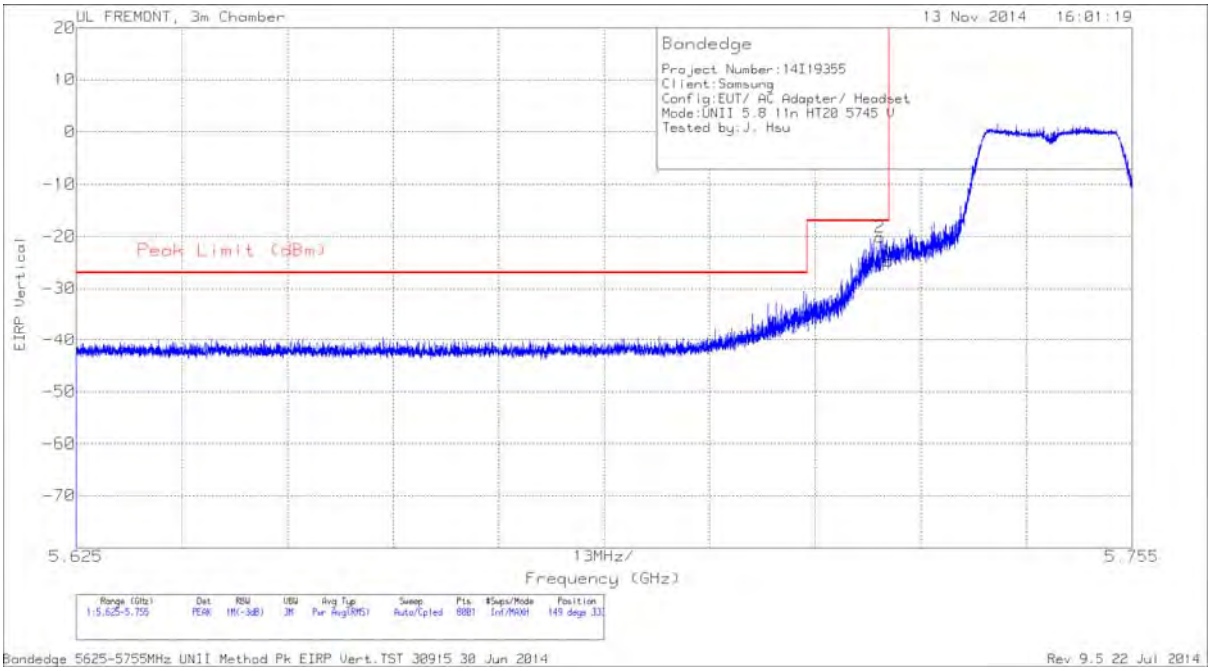
HORIZONTAL PEAK PLOT



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-46.32	PK	34.8	-21.1	11.8	-20.82	-17	-3.82	164	362	H
2	5.725	-44.79	PK	34.8	-21.1	11.8	-19.29	-17	-2.29	164	362	H

PK - Peak detector

VERTICAL PEAK PLOT



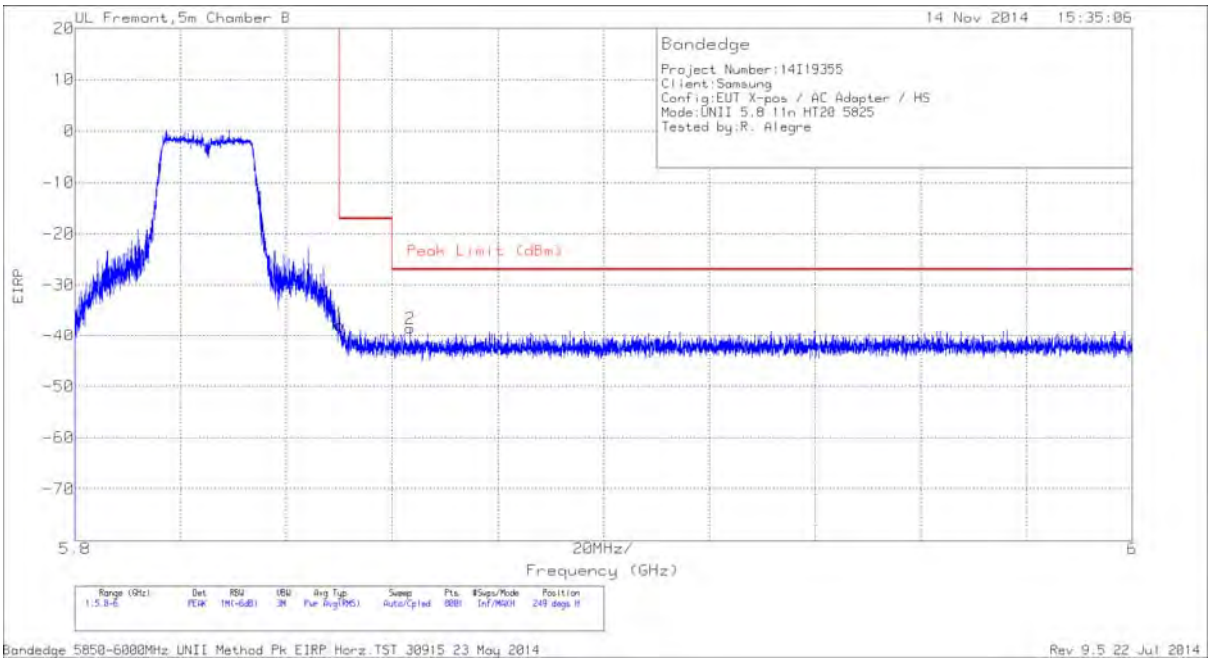
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.724	-45.77	PK	34.8	-21	11.8	-20.17	-17	-3.17	149	333	V
1	5.725	-50.27	PK	34.8	-21.1	11.8	-24.77	-17	-7.77	149	333	V

PK - Peak detector

RESTRICTED BANDEDGE (HIGH CHANNEL)

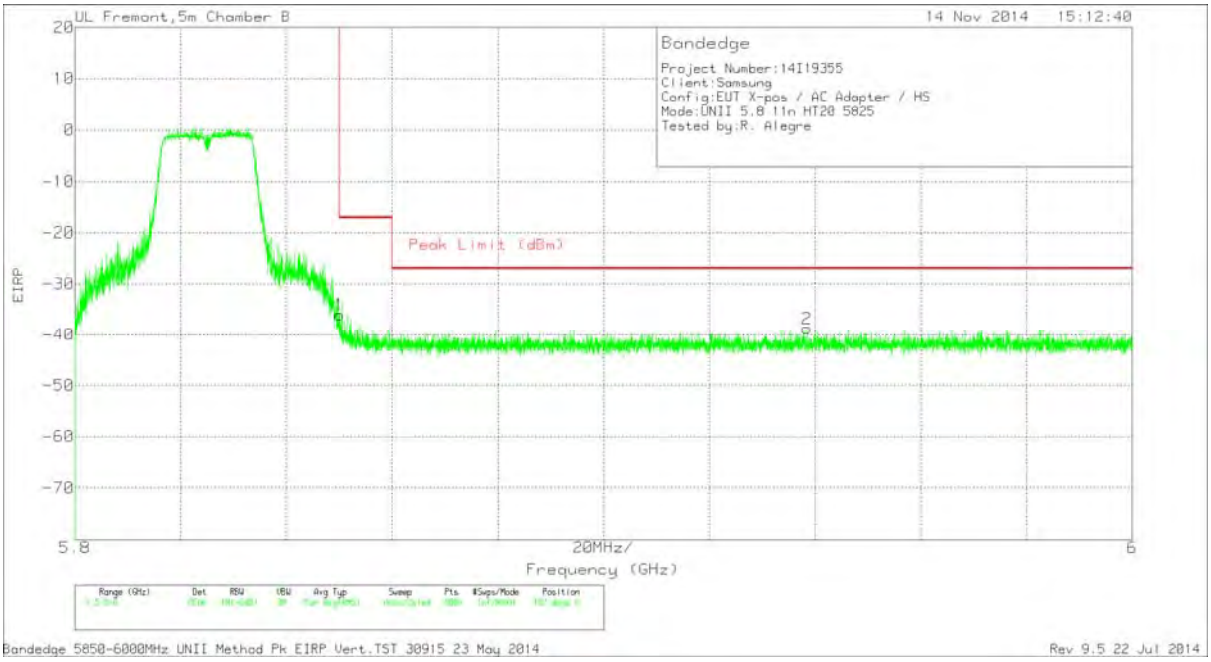
HORIZONTAL PEAK PLOT



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-64.48	PK	34.8	-19.9	11.8	0	-37.78	-27	-10.78	249	247	H
2	5.863	-65.22	PK	34.8	-19.9	11.8	0	-38.52	-27	-11.52	249	247	H

PK - Peak detector

VERTICAL PEAK PLOT

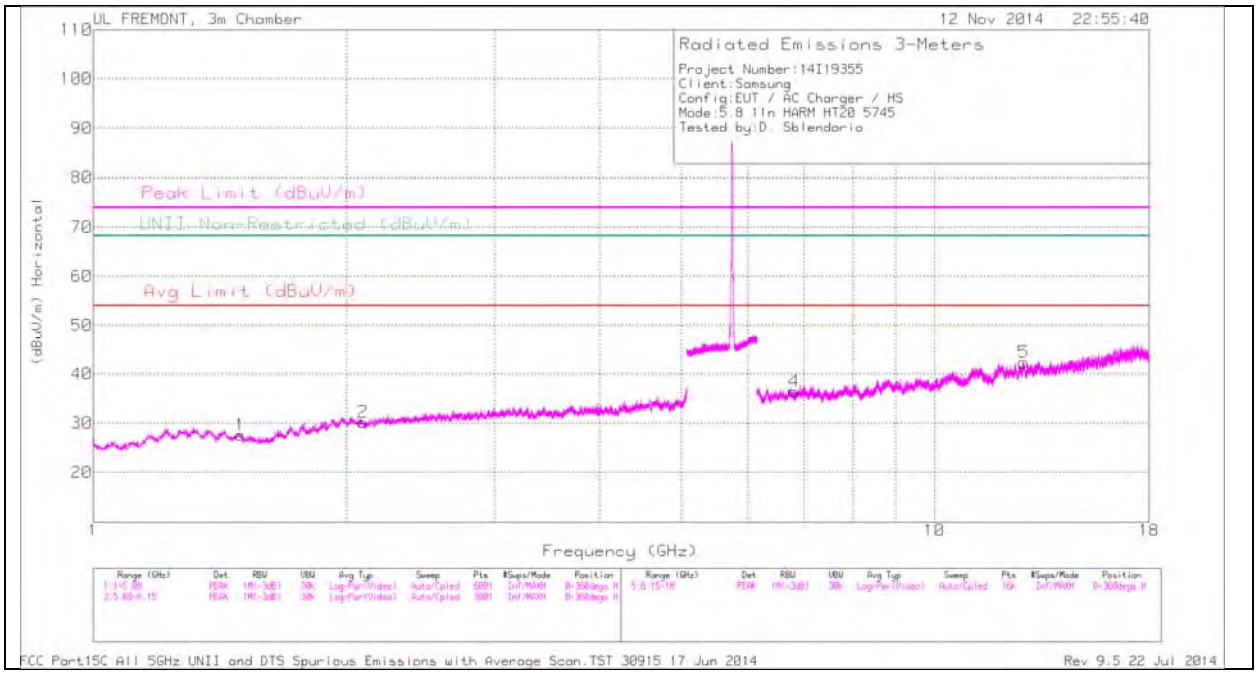


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-62.84	PK	34.8	-19.9	11.8	0	-36.14	-27	-9.14	182	239	V
2	5.938	-66.1	PK	35.1	-19.6	11.8	0	-38.8	-27	-11.8	182	239	V

PK - Peak detector

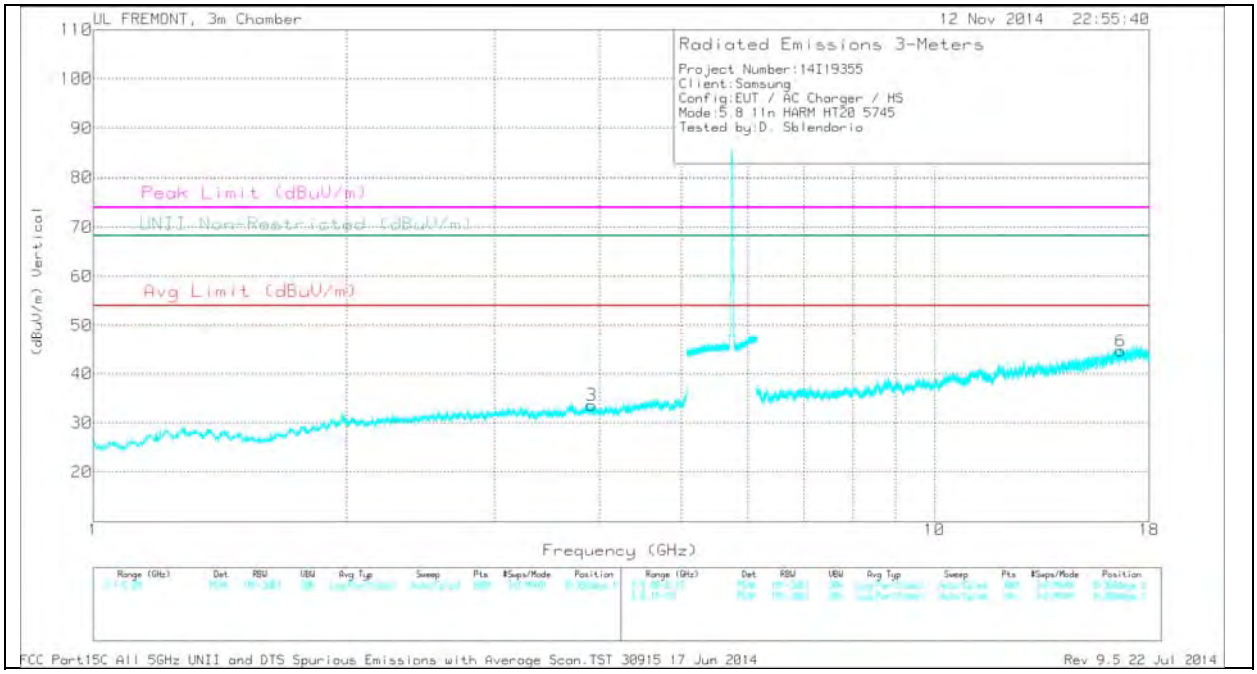
HARMONICS AND SPURIOUS EMISSIONS

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	1.497	31.97	PK	28.5	-32.9	0	27.57	-	-	74	-46.43	-	-	0-360	200	H
2	2.094	31.36	PK	31.5	-32.7	0	30.16	-	-	-	-	68.2	-38.04	0-360	200	H
3	3.912	31.3	PK	33.3	-31	0	33.6	-	-	74	-40.4	-	-	0-360	200	V
4	6.811	30.51	PK	35.6	-29.7	0	36.41	-	-	-	-	68.2	-31.79	0-360	200	H
5	12.767	29.13	PK	39.2	-26	0	42.33	-	-	-	-	68.2	-25.87	0-360	200	H
6	16.665	27.99	PK	41.2	-24.5	0	44.69	-	-	-	-	68.2	-23.51	0-360	100	V

PK - Peak detector

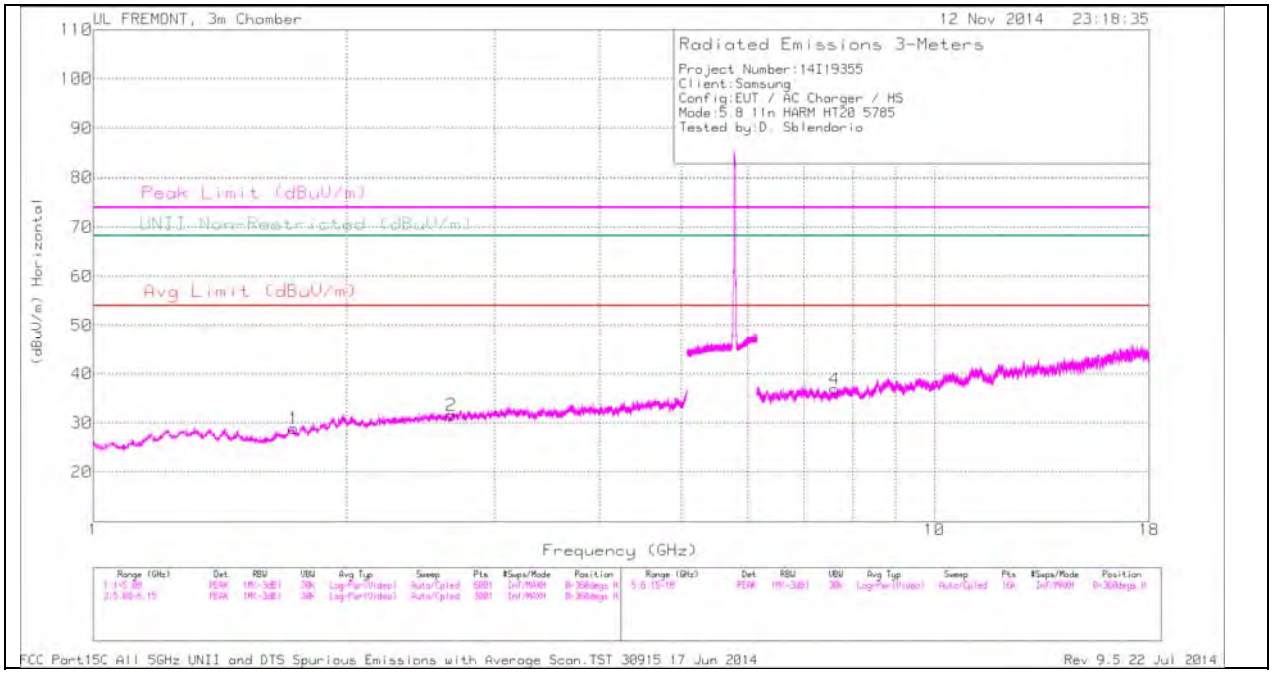
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.496	41.64	PK1	28.6	-32.9	0	37.34	-	-	74	-36.66	-	-	360	200	H
1.497	30.2	AD1	28.5	-32.9	.33	26.13	54	-27.87	-	-	-	-	360	200	H

PK1 - KDB789033 Method: Peak

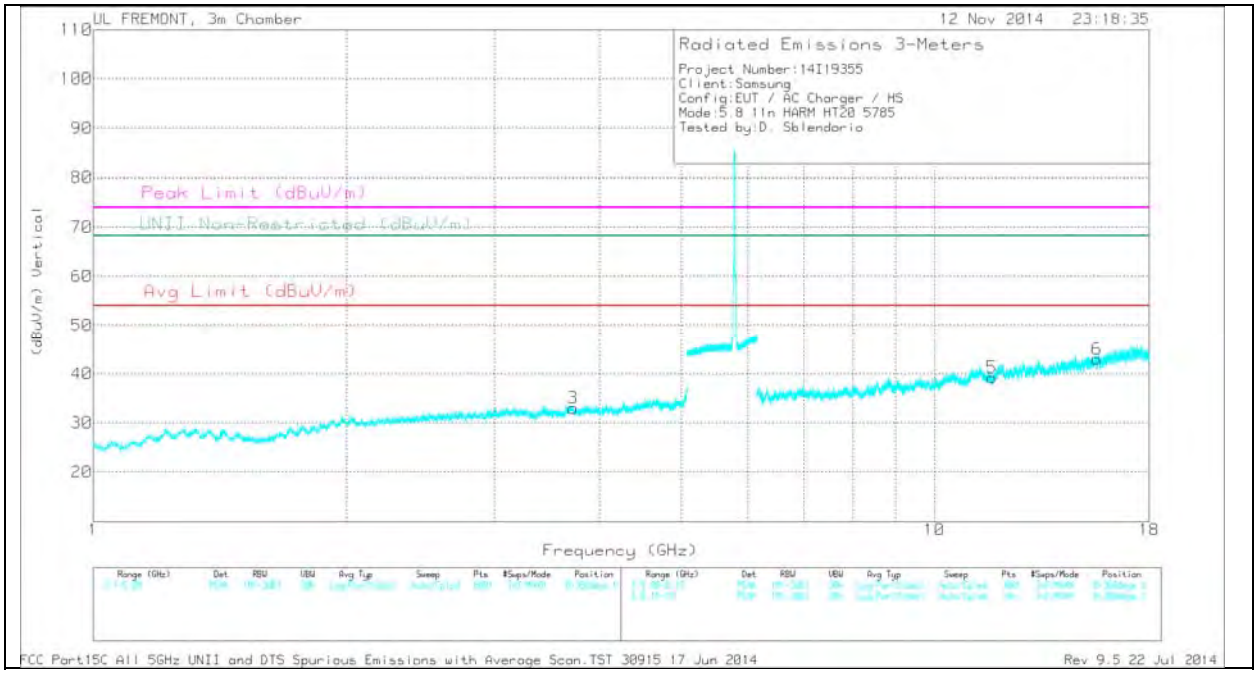
AD1 - KDB789033 Method: AD Primary Power Average

MID CHANNEL HORIZONTAL



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

MID CHANNEL VERTICAL



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

MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 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	1.731	31.66	PK	29.4	-32.2	0	28.86	-	-	-	-	68.2	-39.34	0-360	200	H
2	2.666	31.15	PK	32.6	-32.2	0	31.55	-	-	74	-42.45	-	-	0-360	100	H
3	3.717	30.91	PK	33.2	-31.1	0	33.01	-	-	74	-40.99	-	-	0-360	200	V
4	7.607	29.57	PK	35.7	-28.4	0	36.87	-	-	74	-37.13	-	-	0-360	200	H
5	11.706	26.82	PK	38.7	-26.3	0	39.22	-	-	74	-34.78	-	-	0-360	200	V
6	15.605	29.41	PK	40.4	-26.8	0	43.01	-	-	74	-30.99	-	-	0-360	200	V

PK - Peak detector

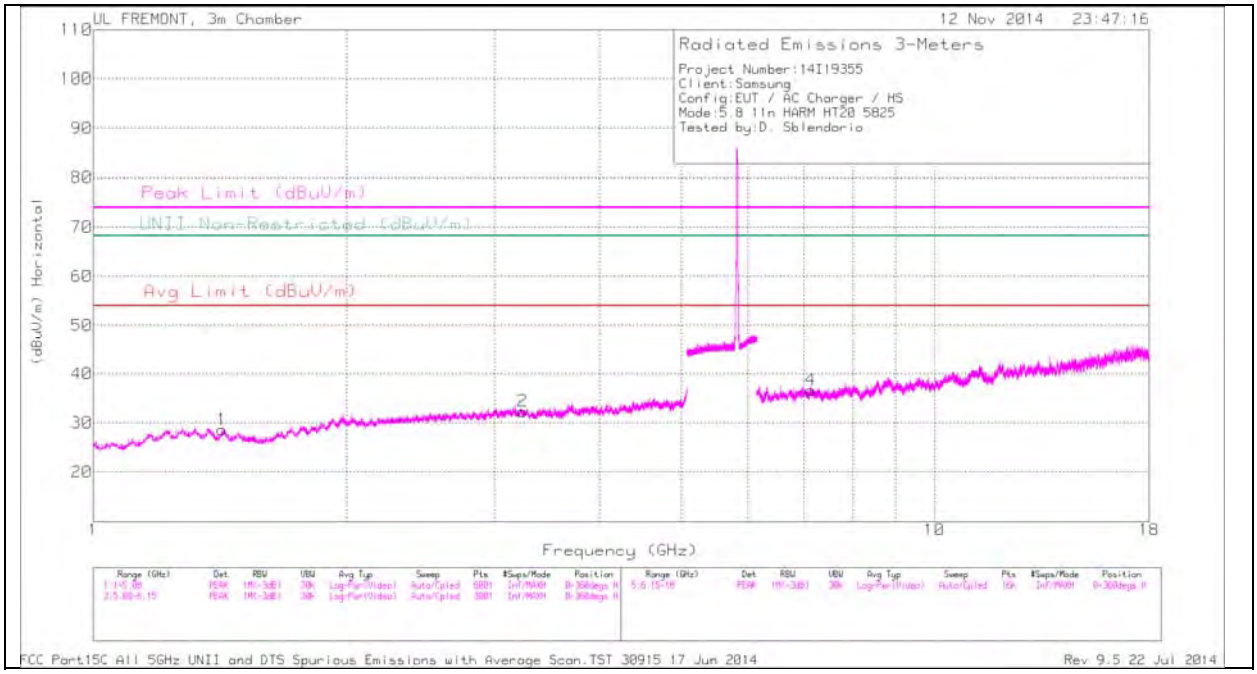
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.729	29.41	AD1	29.4	-32.1	.33	27.04	-	-	-	-	-	-	360	200	H
1.732	41.41	PK1	29.4	-32.2	0	38.61	-	-	-	-	68.2	-29.59	360	200	H

PK1 - KDB789033 Method: Peak

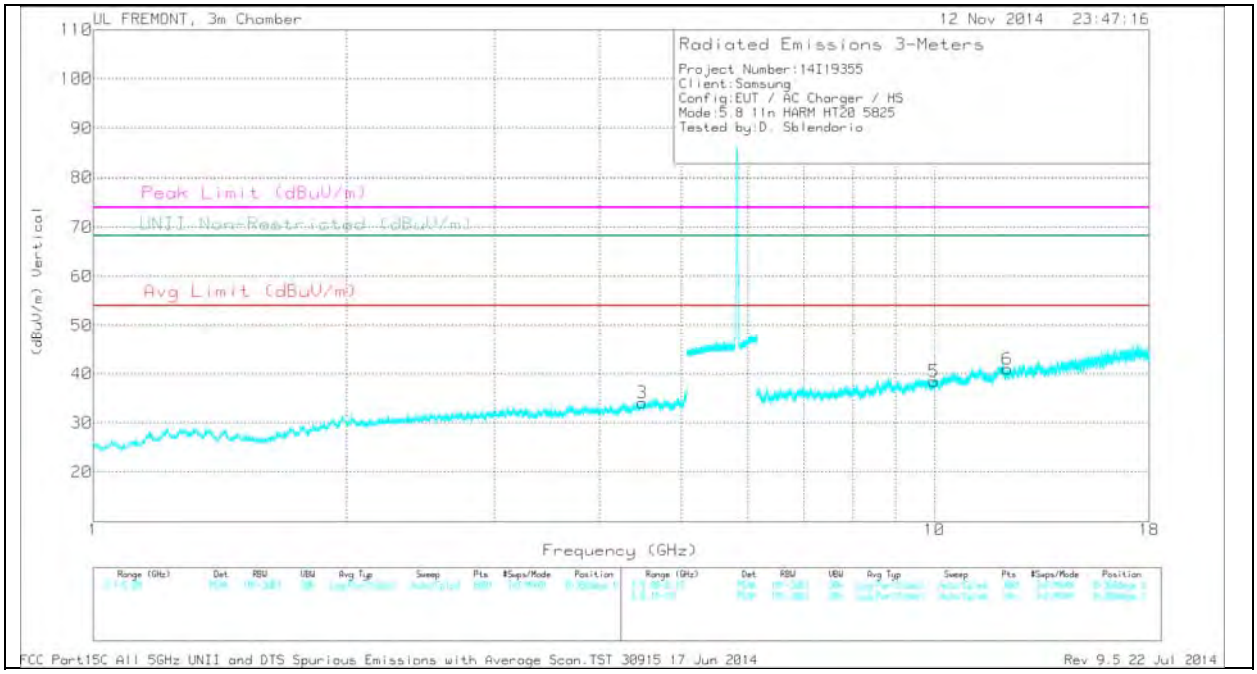
AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL HORIZONTAL



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

HIGH CHANNEL VERTICAL



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

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 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	1.424	32.31	PK	29	-32.7	0	28.61	-	-	74	-45.39	-	-	0-360	100	H
2	3.24	31.05	PK	32.9	-31.6	0	32.35	-	-	-	-	68.2	-35.85	0-360	100	H
3	4.495	31.21	PK	33.9	-31	0	34.11	-	-	-	-	68.2	-34.09	0-360	200	V
4	7.133	29.99	PK	35.6	-28.9	0	36.69	-	-	-	-	68.2	-31.51	0-360	200	H
5	9.991	27.25	PK	37	-25.8	0	38.45	-	-	-	-	68.2	-29.75	0-360	100	V
6	12.209	28.27	PK	39.1	-26.4	0	40.97	-	-	74	-33.03	-	-	0-360	100	V

PK - Peak detector

Radiated Emissions

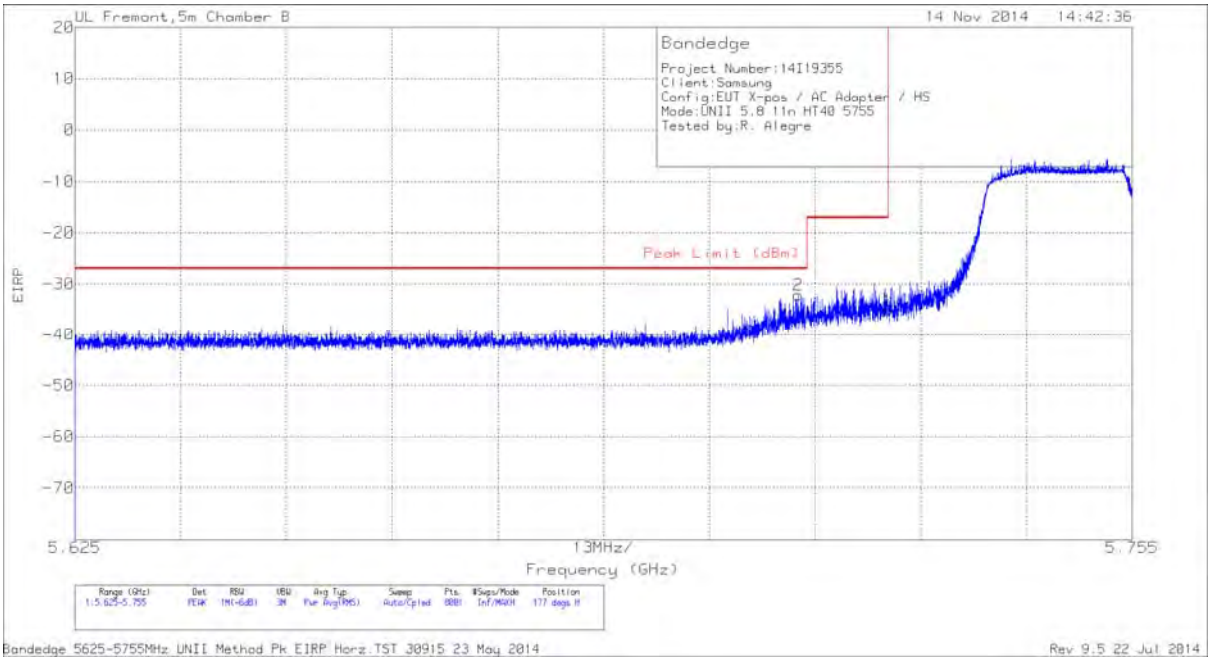
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.423	42.18	PK1	29	-32.7	0	38.48	-	-	74	-35.52	-	-	360	100	H
1.425	30.25	AD1	29	-32.7	.33	26.88	54	-27.12	-	-	-	-	360	100	H

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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

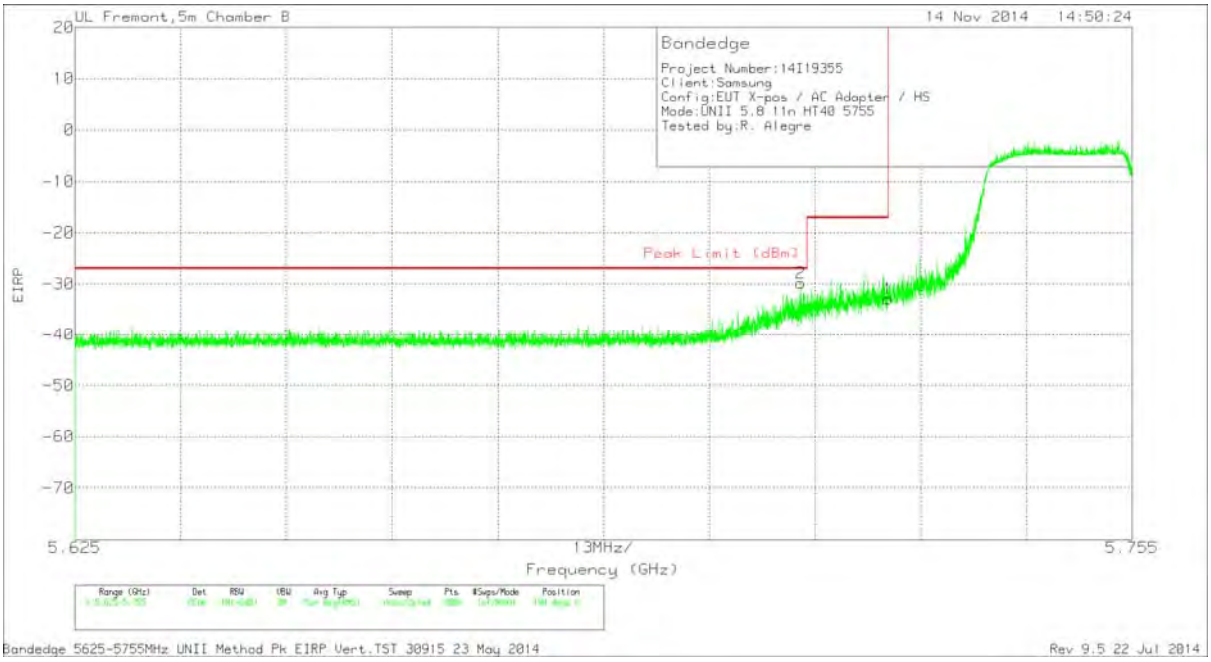
HORIZONTAL PEAK PLOT



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (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	5.714	-58.36	PK	34.5	-20.1	11.8	0	-32.16	-27	-5.16	177	265	H
1	5.725	-61.58	PK	34.6	-20.1	11.8	0	-35.28	-17	-18.28	177	265	H

PK - Peak detector

VERTICAL PEAK PLOT

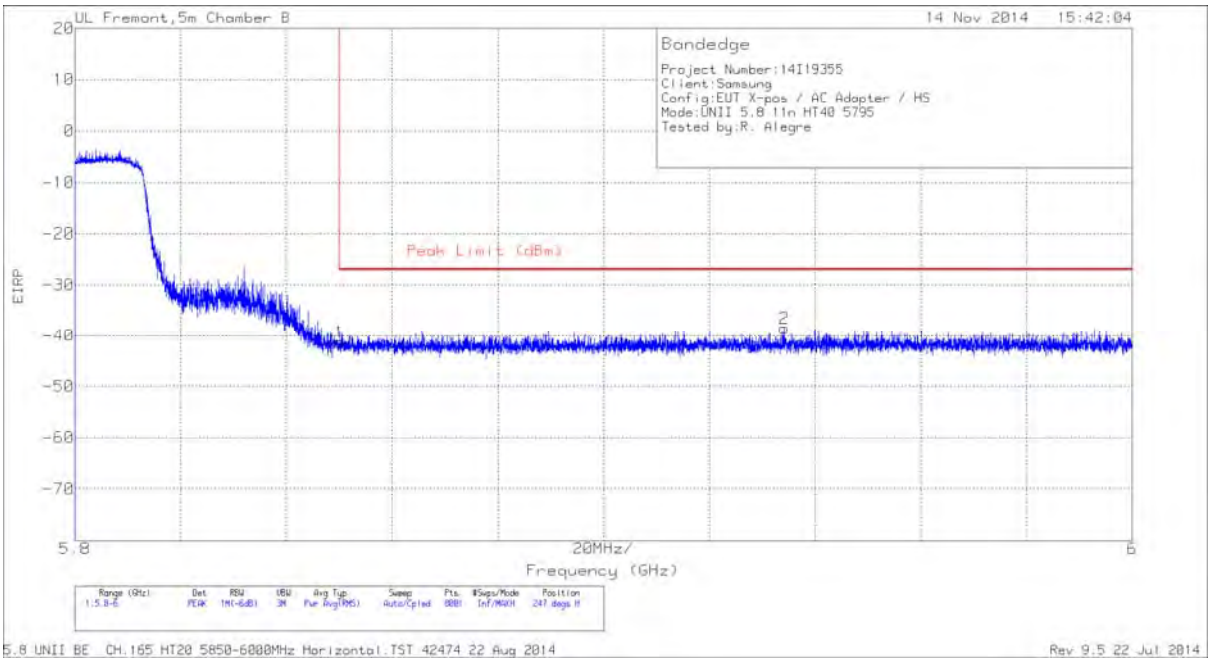


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.714	-56.02	PK	34.5	-20.1	11.8	0	-29.82	-27	-2.82	199	238	V
1	5.725	-59.15	PK	34.6	-20.1	11.8	0	-32.85	-17	-15.85	199	238	V

PK - Peak detector

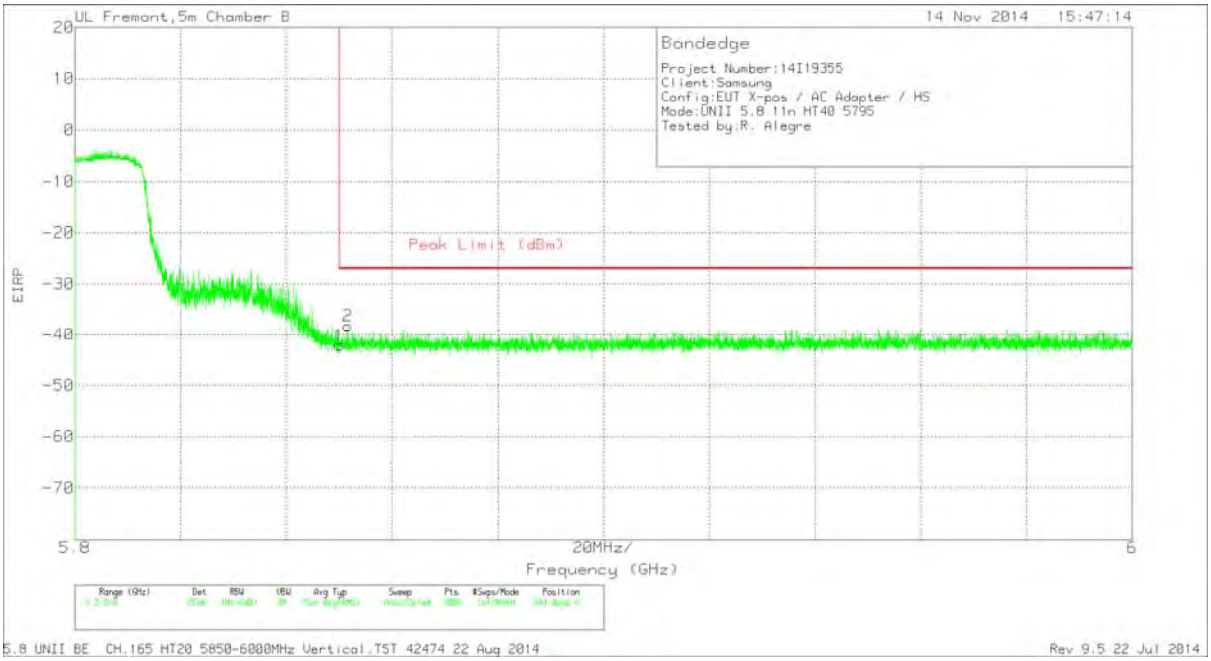
RESTRICTED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK PLOT



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-67.94	PK	34.8	-19.9	11.8	-41.24	-27	-14.24	247	321	H
2	5.934	-65.78	PK	35	-19.6	11.8	-38.58	-27	-11.58	247	321	H

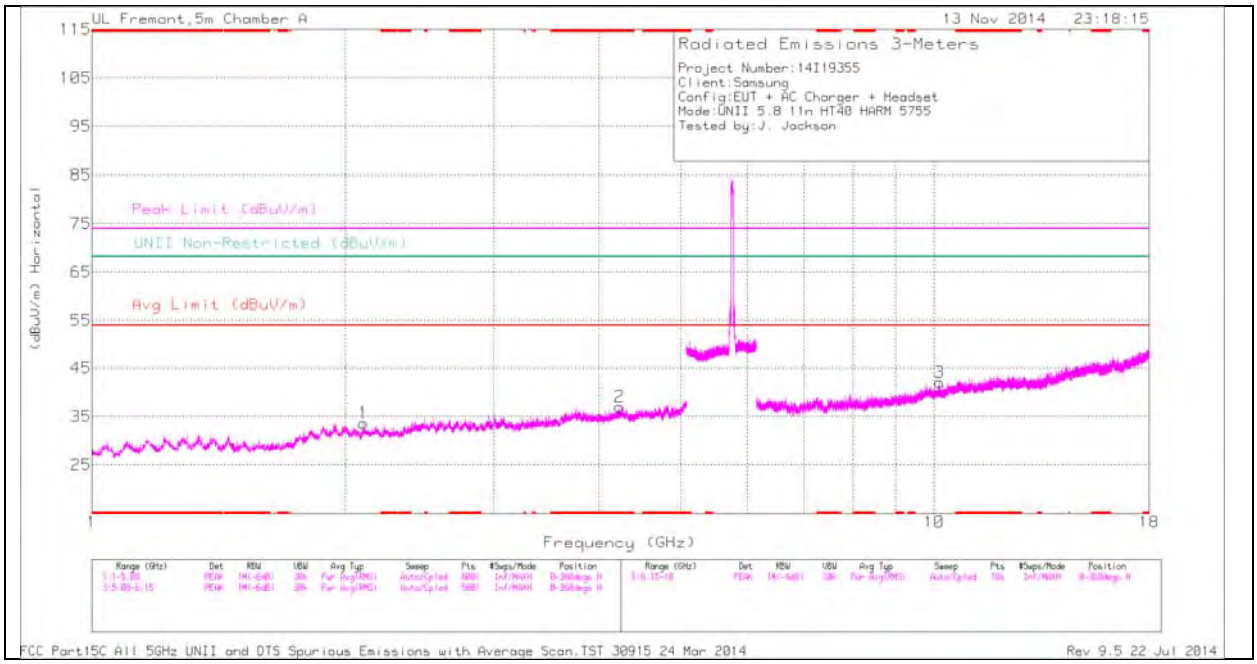
VERTICAL PEAK PLOT



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-68.82	PK	34.8	-19.9	11.8	-42.12	-27	-15.12	243	225	V
2	5.852	-64.84	PK	34.8	-20	11.8	-38.24	-27	-11.24	243	225	V

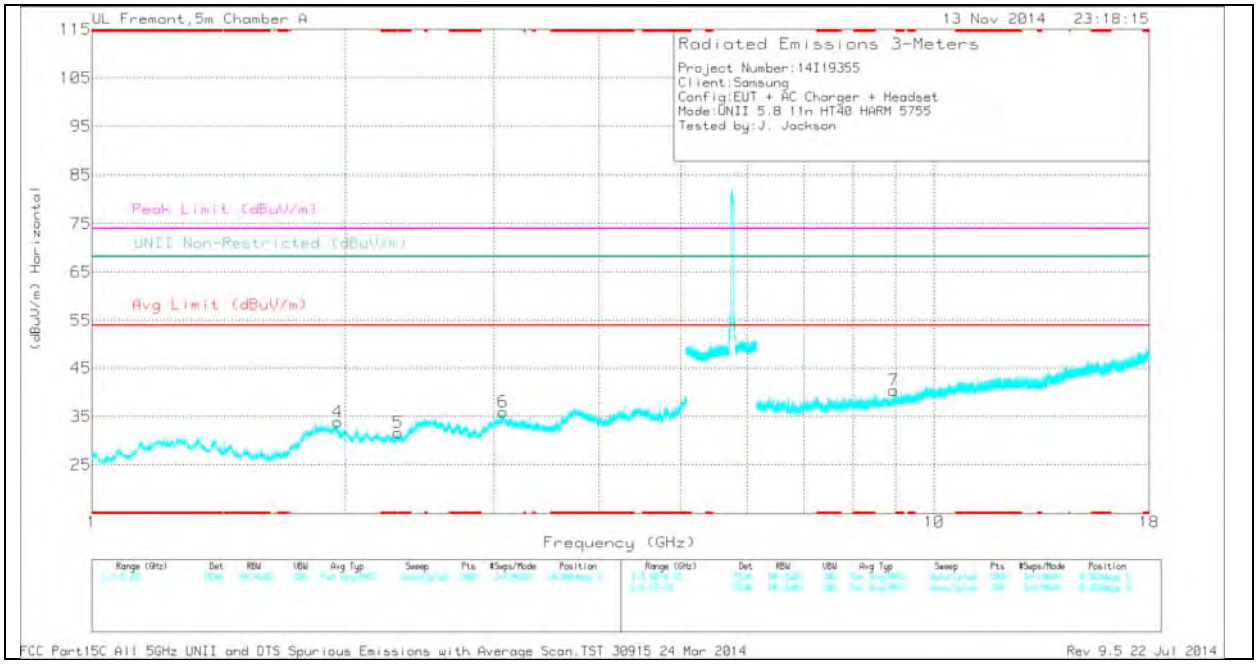
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



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

LOW CHANNEL VERTICAL



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

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 4.228	32.35	PK	33.9	-29.3	0	36.95	-	-	74	-37.05	-	-	0-360	100	H
4	1.959	35.34	PK	31.9	-33.3	0	33.94	-	-	-	-	68.2	-34.26	0-360	100	V
1	2.102	35.24	PK	31.7	-33.3	0	33.64	-	-	-	-	68.2	-34.56	0-360	201	H
5	2.308	33.14	PK	31.5	-33	0	31.64	-	-	-	-	68.2	-36.56	0-360	201	V
6	3.079	34.1	PK	32.8	-30.9	0	36	-	-	-	-	68.2	-32.2	0-360	201	V
7	8.96	29.16	PK	35.9	-24.7	0	40.36	-	-	-	-	68.2	-27.84	0-360	201	V
3	10.144	28.32	PK	37.1	-23.4	0	42.02	-	-	-	-	68.2	-26.18	0-360	100	H

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

PK - Peak detector

Radiated Emissions

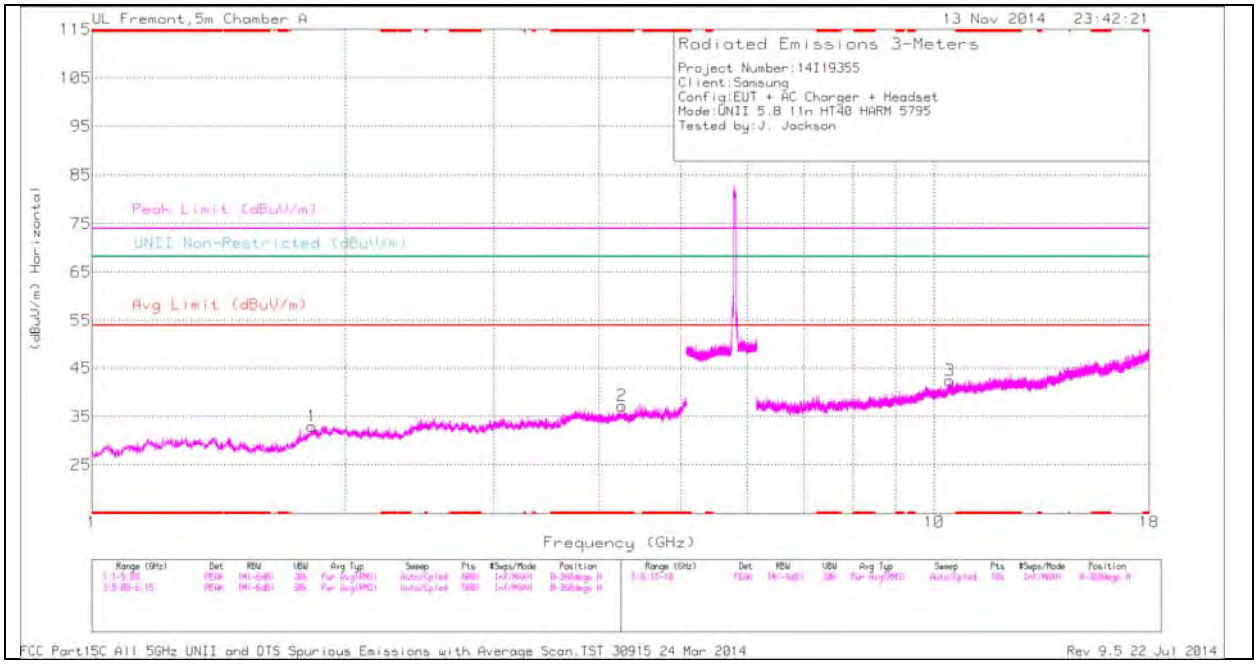
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.228	39.06	PK1	33.9	-29.3	0	43.66	-	-	74	-30.34	-	-	359	100	H
* 4.228	28	AD1	33.9	-29.3	.63	33.23	54	-20.77	-	-	-	-	359	100	H

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

PK1 - KDB789033 Method: Peak

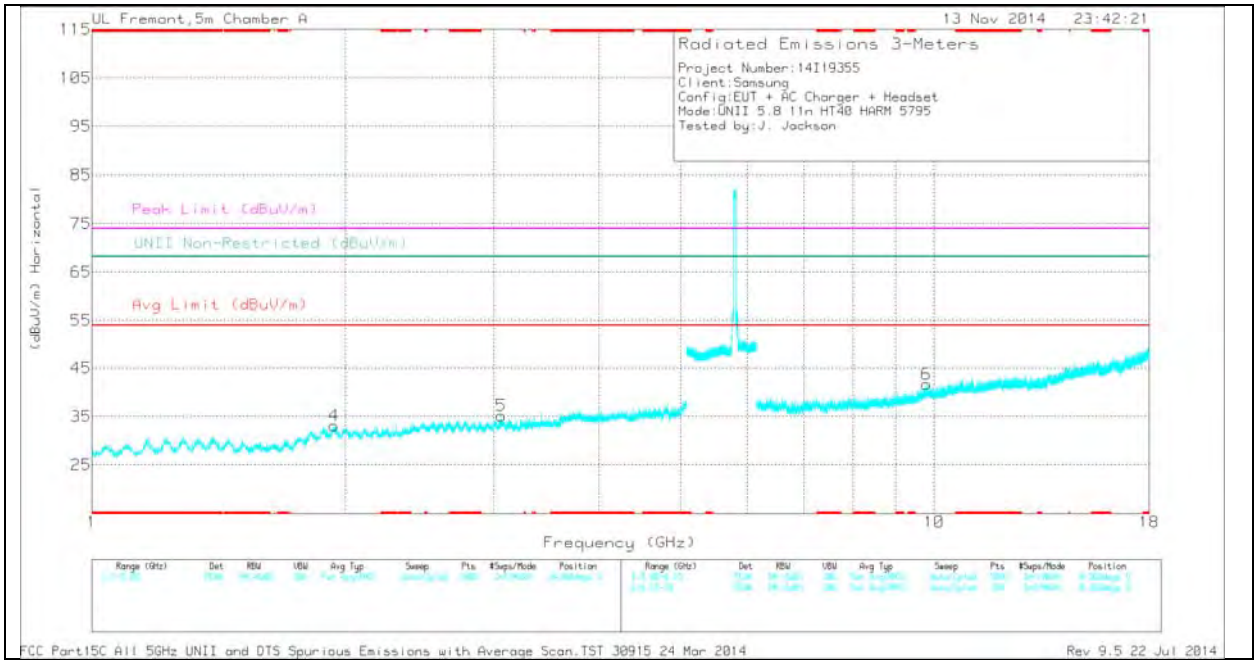
AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL HORIZONTAL



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

HIGH CHANNEL VERTICAL



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

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 4.259	32.2	PK	34	-29	0	37.2	-	-	74	-36.8	-	-	0-360	100	H
1	1.826	35.04	PK	30.8	-32.9	0	32.94	-	-	-	-	68.2	-35.26	0-360	100	H
4	1.94	34.58	PK	31.8	-33.3	0	33.08	-	-	-	-	68.2	-35.12	0-360	100	V
5	3.064	33.26	PK	32.8	-30.9	0	35.16	-	-	-	-	68.2	-33.04	0-360	100	V
6	9.787	28.04	PK	36.9	-23.3	0	41.64	-	-	-	-	68.2	-26.56	0-360	100	V
3	10.432	27.18	PK	37.4	-22.1	0	42.48	-	-	-	-	68.2	-25.72	0-360	201	H

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

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.258	39.18	PK1	34	-29	0	44.18	-	-	74	-29.82	-	-	359	100	H
* 4.26	28.08	AD1	34	-29	.63	33.71	54	-20.29	-	-	-	-	359	100	H

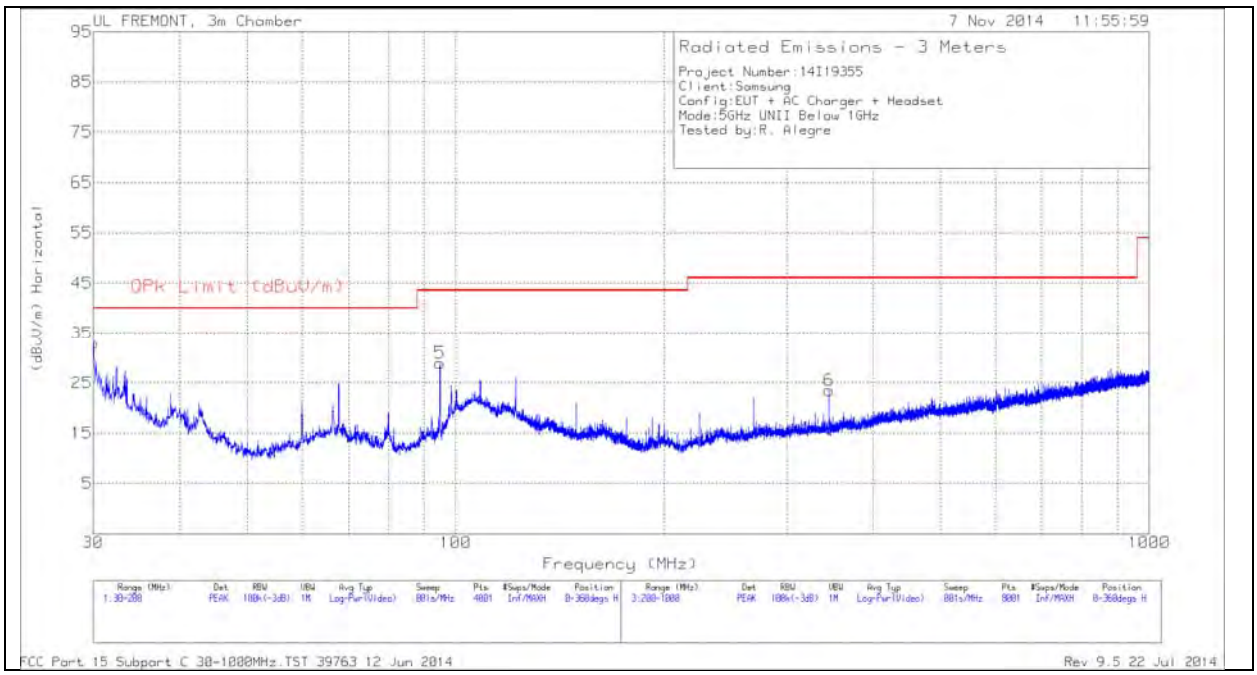
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK1 - KDB789033 Method: Peak

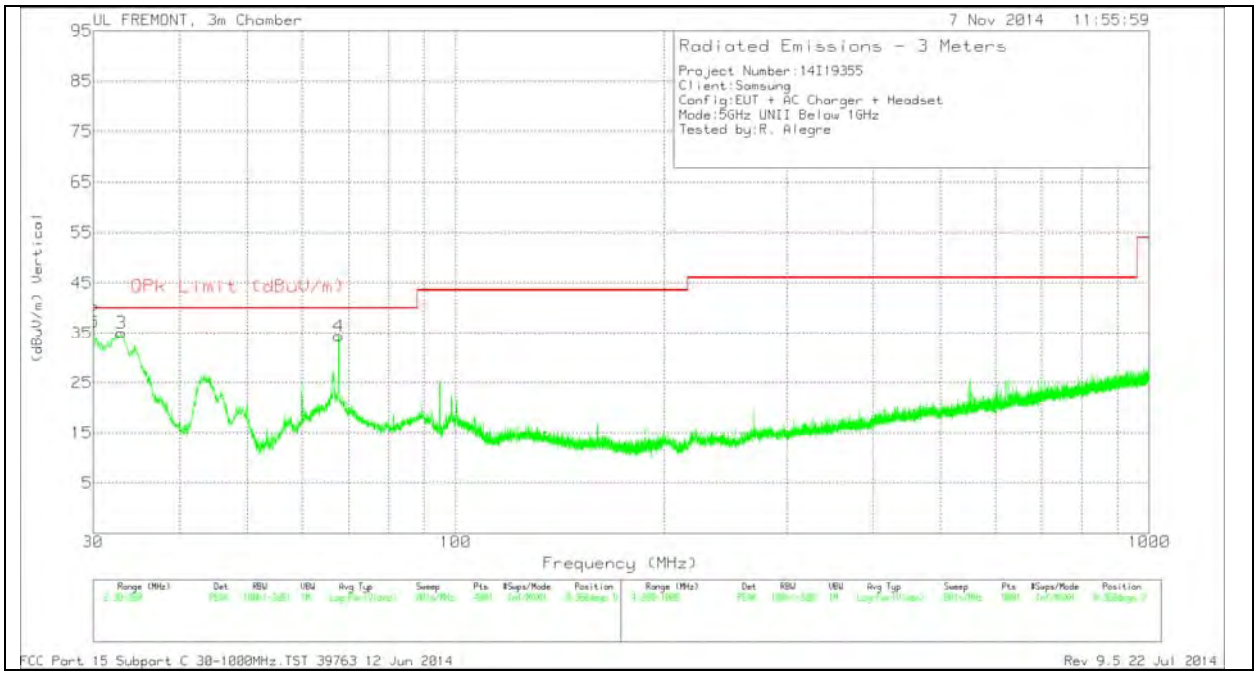
AD1 - KDB789033 Method: AD Primary Power Average

12. WORST-CASE BELOW 1 GHz

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



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



Below 1G Data

TRACE MARKERS

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T185 (dB/m)	Amp/Cbl (dB/m)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	30.0425	39.42	PK	21	-27.5	32.92	40	-7.08	0-360	100	H
2	30.0425	43.84	PK	21	-27.5	37.34	40	-2.66	0-360	100	V
3	32.9325	43.65	PK	18.9	-27.5	35.05	40	-4.95	0-360	100	V
4	67.825	53.57	PK	7.9	-27.1	34.37	40	-5.63	0-360	100	V
5	94.94	47.13	PK	8.6	-26.8	28.93	43.52	-14.59	0-360	400	H
6	345.6	34.68	PK	14.1	-25.3	23.48	46.02	-22.54	0-360	100	H

PK - Peak detector

13. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

RSS-Gen 7.2.2

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

* Decreases with the logarithm of the frequency.

TEST PROCEDURE

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

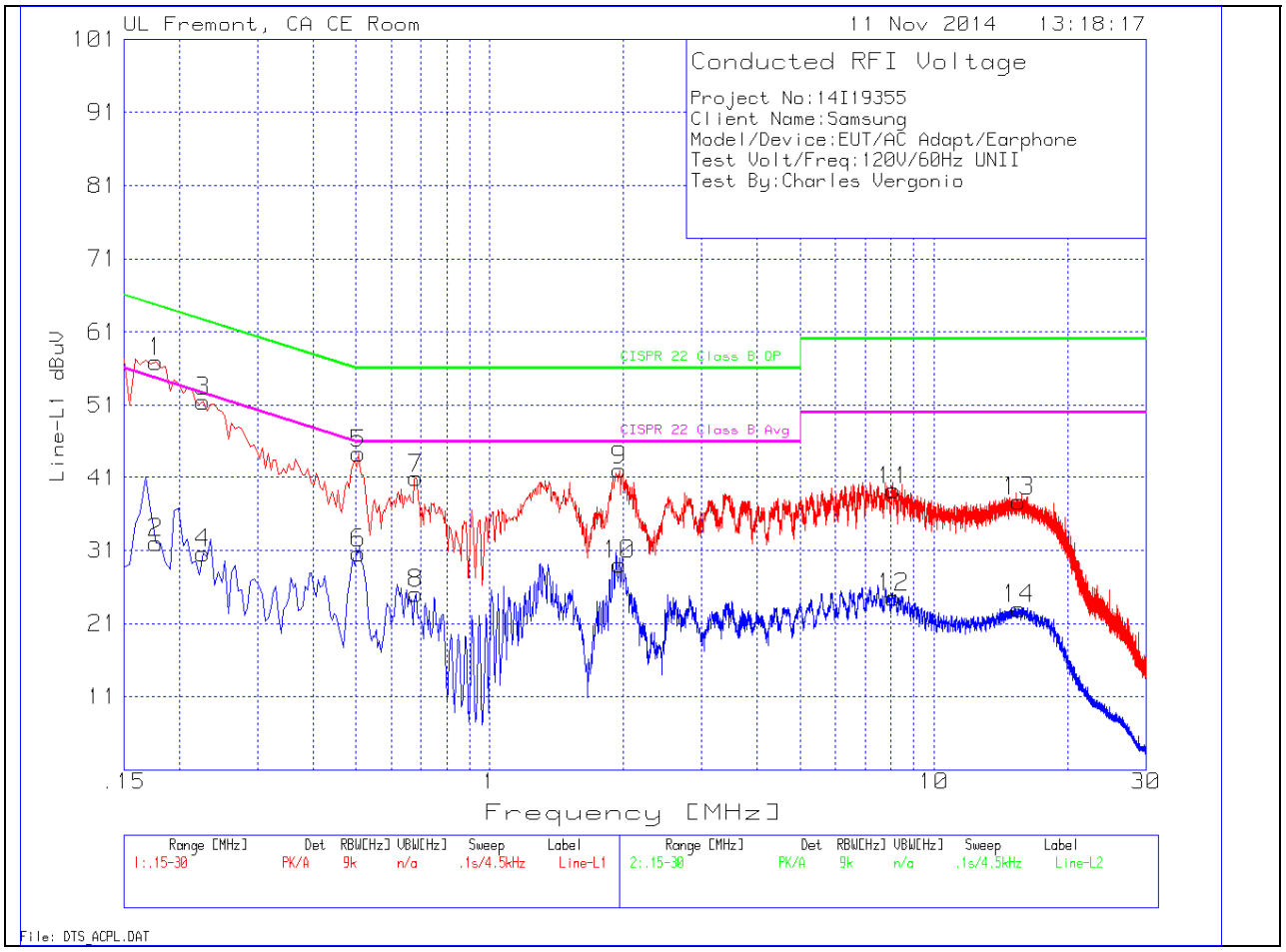
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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

RESULTS

6 WORST EMISSIONS

LINE 1 PLOT

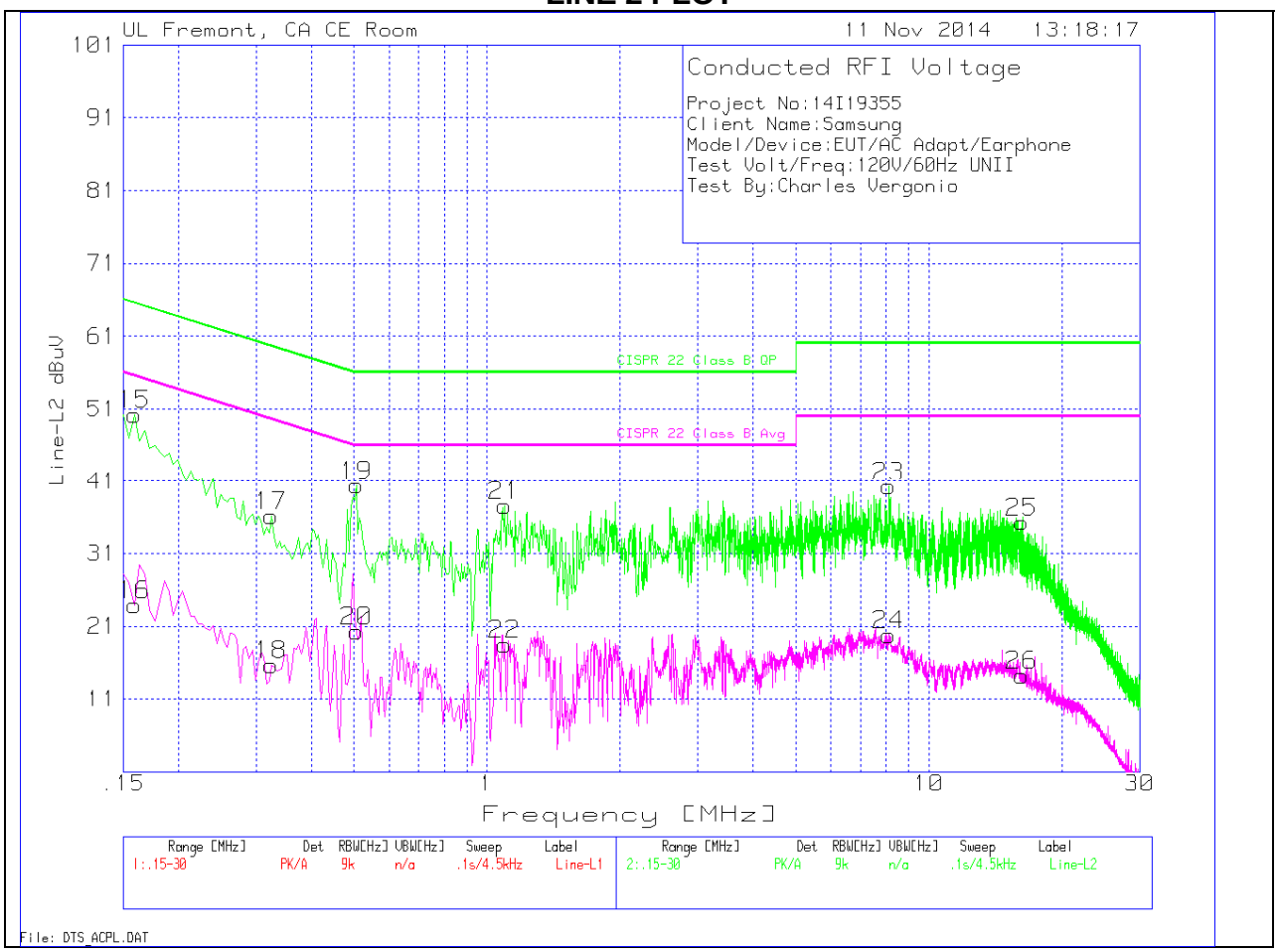


LINE 1 RESULTS

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1 (dB)	LC Cables 1&3 (dB)	Corrected Reading dBuV	CISPR 22 Class B QP	Margin to Limit (dB)	CISPR 22 Class B Avg	Margin to Limit (dB)
1	.177	55.82	PK	1.1	0	56.92	64.6	-7.68	-	-
2	.177	30.95	Av	1.1	0	32.05	-	-	54.6	-22.55
3	.2265	50.71	PK	.8	0	51.51	62.6	-11.09	-	-
4	.2265	29.78	Av	.8	0	30.58	-	-	52.6	-22.02
5	.5055	44.04	PK	.3	0	44.34	56	-11.66	-	-
6	.5055	30.34	Av	.3	0	30.64	-	-	46	-15.36
7	.681	40.65	PK	.3	0	40.95	56	-15.05	-	-
8	.681	24.71	Av	.3	0	25.01	-	-	46	-20.99
9	1.959	41.74	PK	.2	.1	42.04	56	-13.96	-	-
10	1.959	28.73	Av	.2	.1	29.03	-	-	46	-16.97
11	8.0925	38.89	PK	.2	.1	39.19	60	-20.81	-	-
12	8.0925	24.23	Av	.2	.1	24.53	-	-	50	-25.47
13	15.5085	37.24	PK	.3	.2	37.74	60	-22.26	-	-
14	15.5085	22.46	Av	.3	.2	22.96	-	-	50	-27.04

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)
15	.159	48.84	PK	1.4	0	50.24	65.5	-15.26	-	-
16	.159	22.48	Av	1.4	0	23.88	-	-	55.5	-31.62
17	.3255	35.6	PK	.5	0	36.1	59.6	-23.5	-	-
18	.3255	15.11	Av	.5	0	15.61	-	-	49.6	-33.99
19	.5055	40.06	PK	.4	0	40.46	56	-15.54	-	-
20	.5055	19.89	Av	.4	0	20.29	-	-	46	-25.71
21	1.095	37.29	PK	.3	0	37.59	56	-18.41	-	-
22	1.095	18.19	Av	.3	0	18.49	-	-	46	-27.51
23	8.124	39.99	PK	.2	.1	40.29	60	-19.71	-	-
24	8.124	19.44	Av	.2	.1	19.74	-	-	50	-30.26
25	16.1925	34.81	PK	.3	.2	35.31	60	-24.69	-	-
26	16.1925	13.79	Av	.3	.2	14.29	-	-	50	-35.71

14. DYNAMIC FREQUENCY SELECTION

14.1. OVERVIEW

14.1.1. LIMITS

INDUSTRY CANADA

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

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

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

FCC

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

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

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

Table 2: Applicability of DFS requirements during normal operation

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

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

Maximum Transmit Power	Value (see note)
≥ 200 milliwatt	-64 dBm
< 200 milliwatt	-62 dBm
Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna Note 2: Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response.	

Table 4: DFS Response requirement values

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

Table 5 – Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (Microseconds)	PRI (Microseconds)	Pulses	Minimum Percentage of Successful Detection	Minimum Trials
1	1	1428	18	60%	30
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Radar Types 1-4)				80%	120

Table 6 – Long Pulse Radar Test Signal

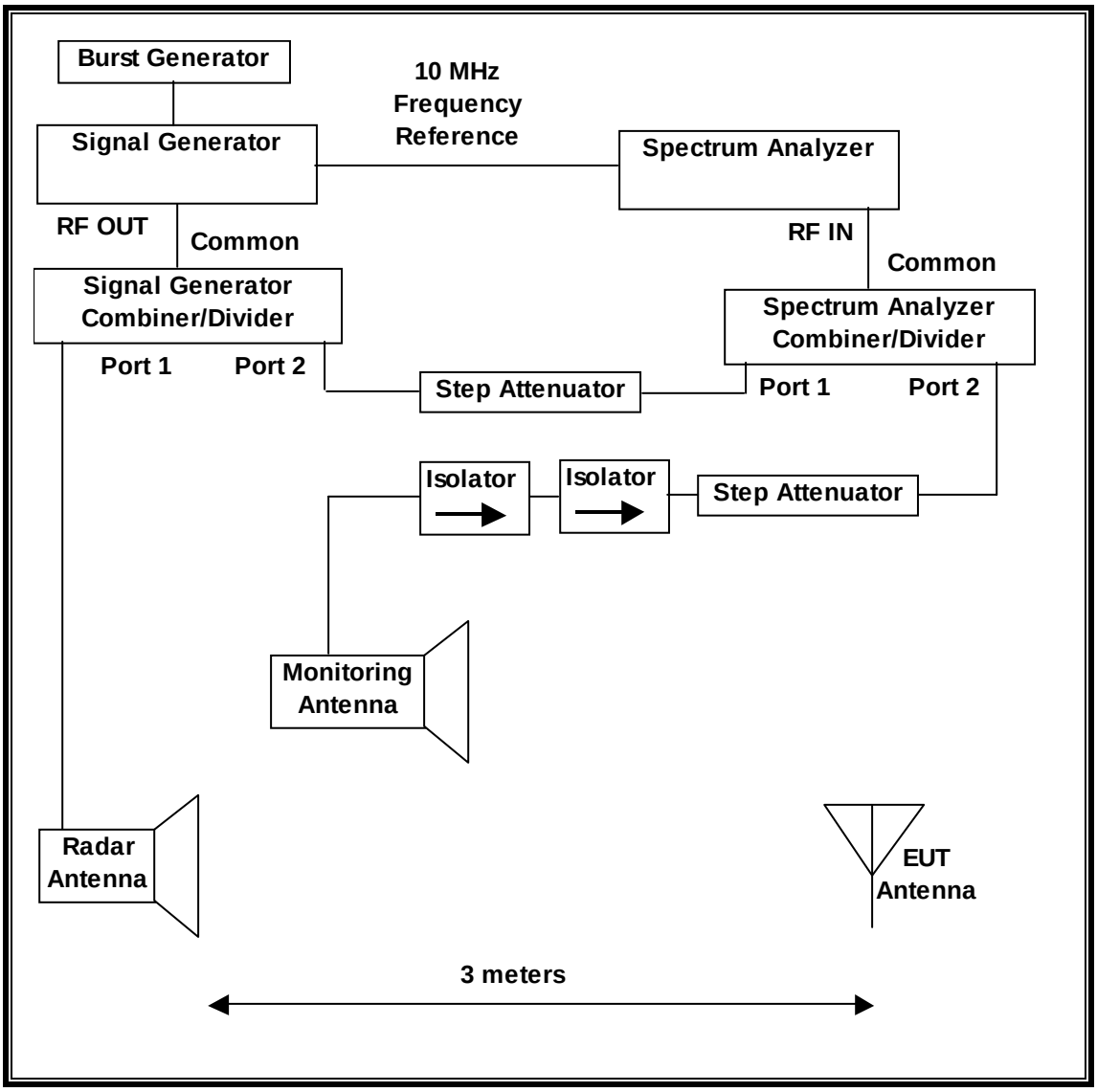
Radar Waveform	Bursts	Pulses per Burst	Pulse Width (µsec)	Chirp Width (MHz)	PRI (µsec)	Minimum Percentage of Successful Detection	Minimum Trials
5	8-20	1-3	50-100	5-20	1000-2000	80%	30

Table 7 – Frequency Hopping Radar Test Signal

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

14.1.2. TEST AND MEASUREMENT SYSTEM

RADIATED METHOD SYSTEM BLOCK DIAGRAM



SYSTEM OVERVIEW

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

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

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

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

SYSTEM CALIBRATION

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

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

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

ADJUSTMENT OF DISPLAYED TRAFFIC LEVEL

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

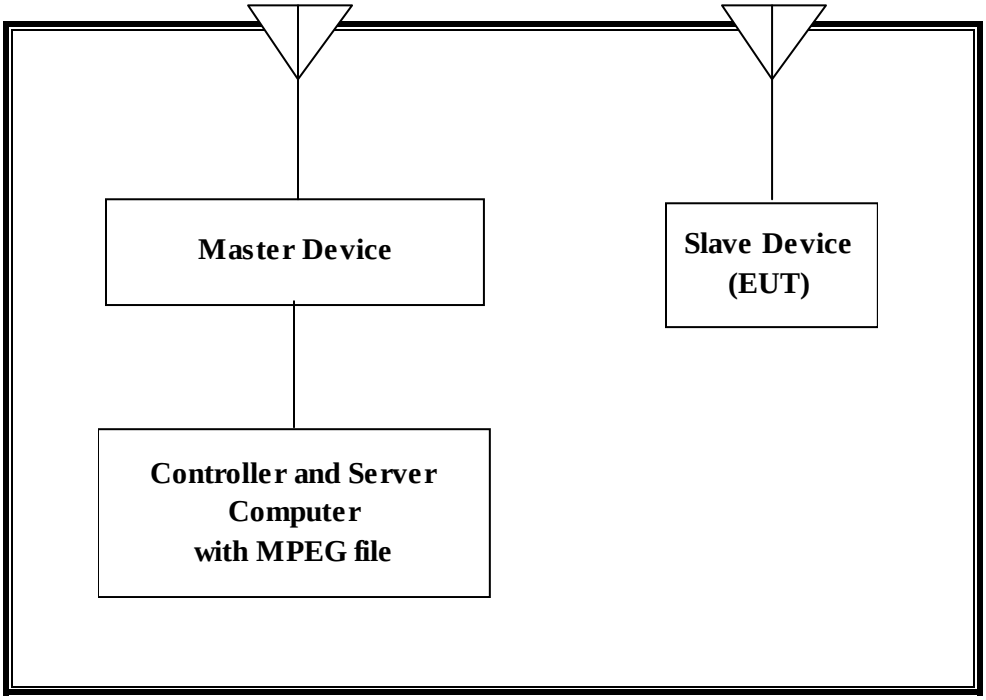
TEST AND MEASUREMENT EQUIPMENT

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

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

14.1.3. SETUP OF EUT

RADIATED METHOD EUT TEST SETUP



SUPPORT EQUIPMENT

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

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
802.11ac Access Point (Master Device 1)	Cisco	AIR-CAP3702E-A-K9	FTX181570A6	LDK102087
P.O.E. Injector (Master 1)	Phihong	POE30U-560(G)	PHI170102N2	DoC
Notebook PC (Controller/Server)	Dell	PP18L	10657517725	DoC
AC Adapter (Controller/Server PC)	Dell	LA65SN0-00	CN-ODF263-71615-6AU-1019	DoC

14.1.4. DESCRIPTION OF EUT

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

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

The EUT is a Slave Device without Radar Detection.

The highest power level within these bands is 13.38 dBm EIRP in the 5250-5350 MHz band and 13.62 dBm EIRP in the 5470-5725 MHz band.

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

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

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

WLAN traffic is generated by streaming the video file TestFile.mp2 “6 ½ Magic Hours” from the Master to the Slave in full motion video mode using the media player with the V2.61 Codec package.

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 is 12.4(25d)JA1.

UNIFORM CHANNEL SPREADING

This requirement is not applicable to Slave radio devices.

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

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

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

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

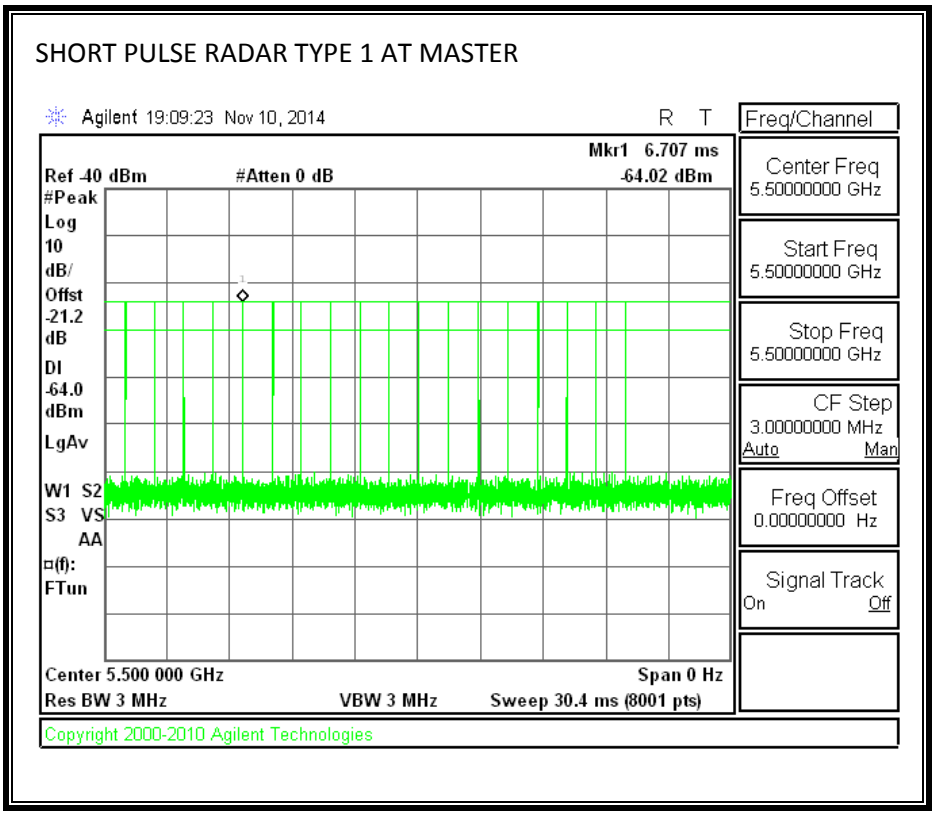
14.2. RESULTS FOR 20 MHz BANDWIDTH

14.2.1. TEST CHANNEL

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

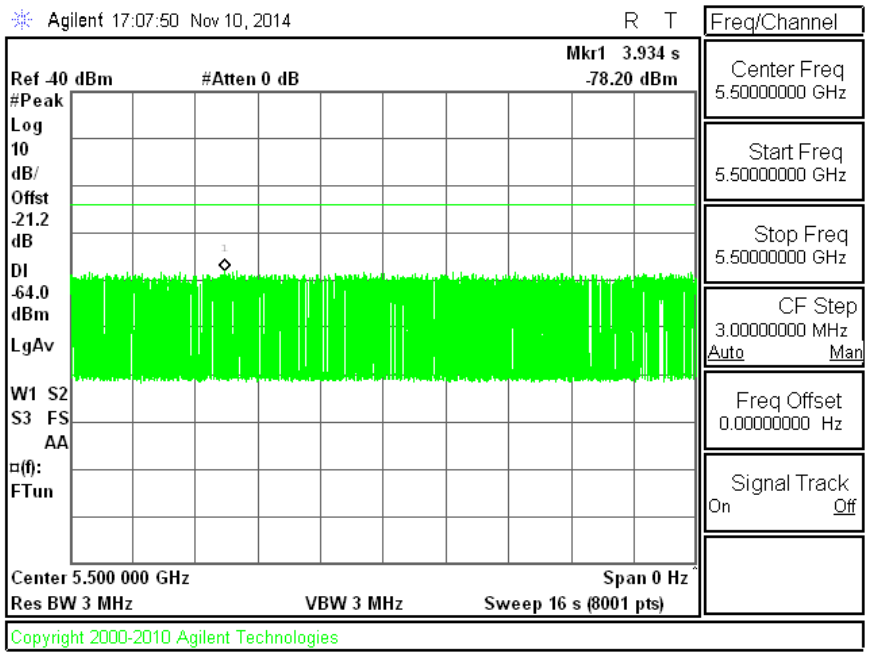
14.2.2. RADAR WAVEFORM AND TRAFFIC

RADAR WAVEFORM



TRAFFIC

SLAVE TRAFFIC



14.2.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

14.2.4. MOVE AND CLOSING TIME

REPORTING NOTES

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

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

The aggregate channel closing transmission time is calculated as follows:

Aggregate Transmission Time =

(Number of analyzer bins showing transmission) * (dwell time per bin)

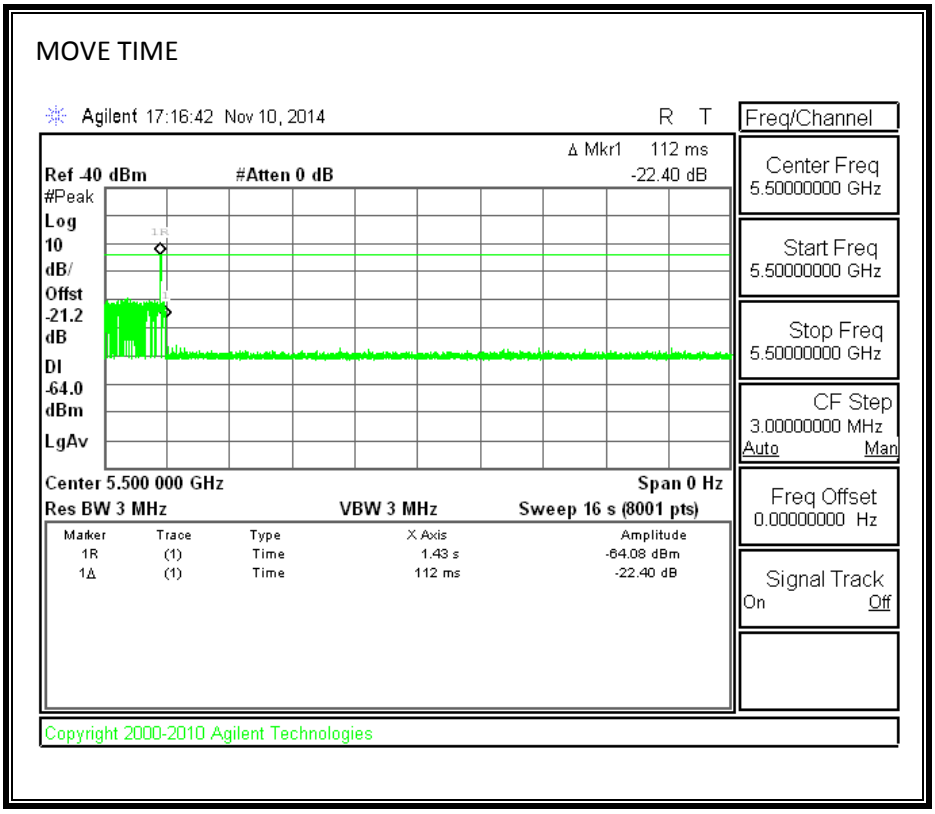
The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

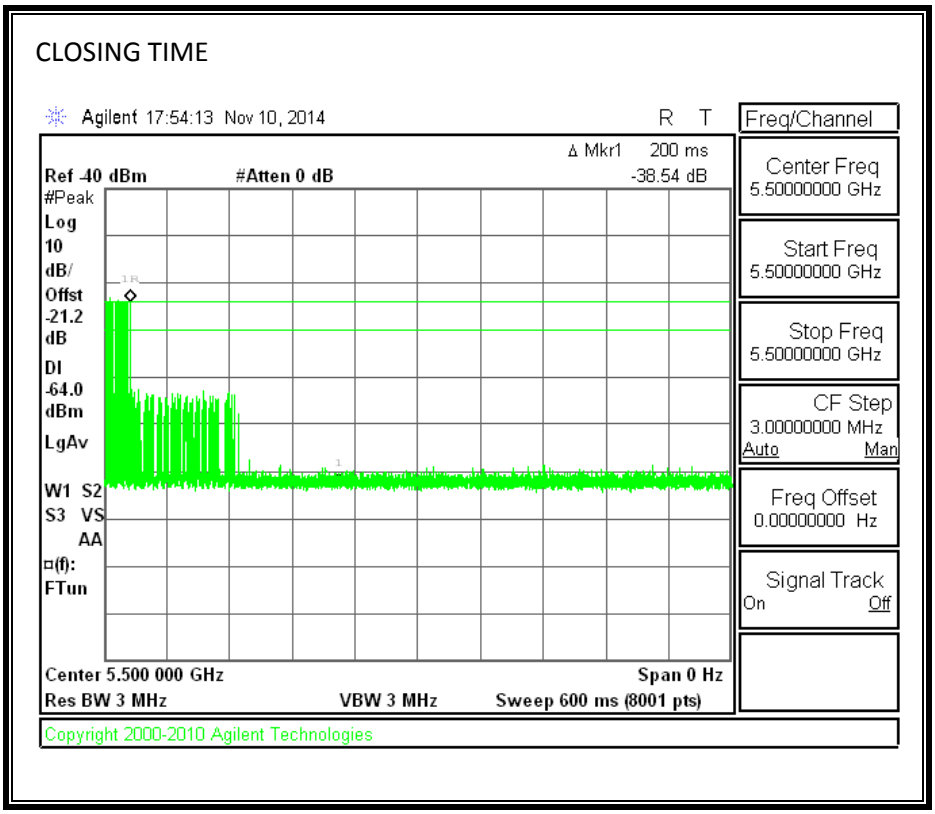
Channel Move Time (sec)	Limit (sec)
0.112	10

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

MOVE TIME



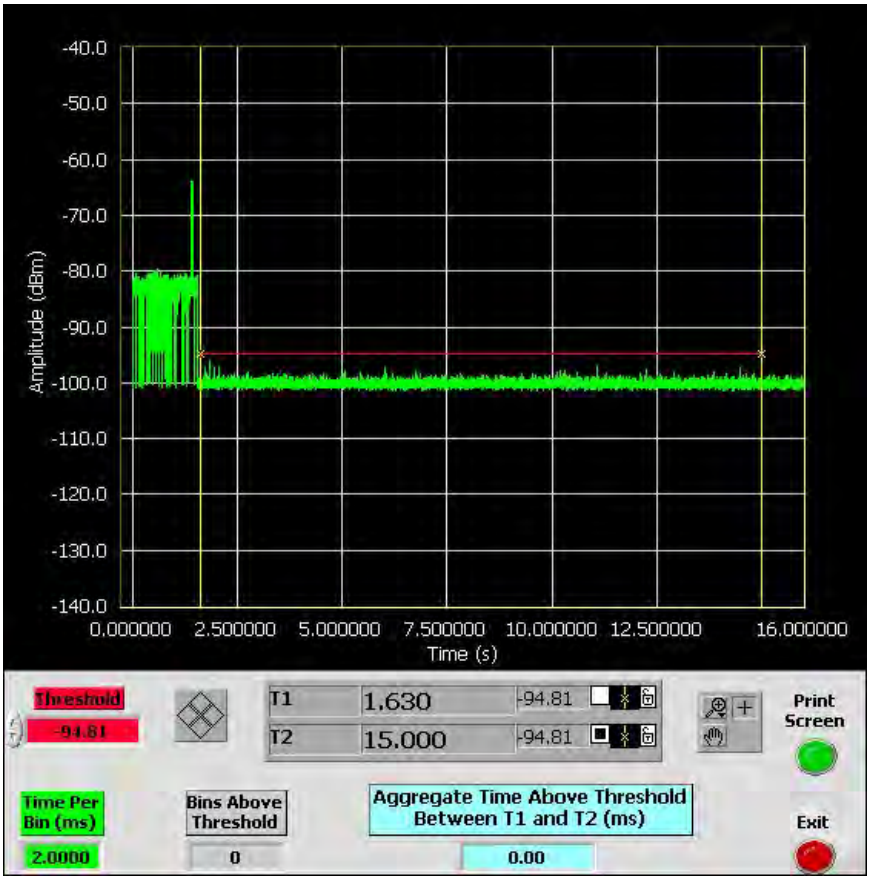
CHANNEL CLOSING TIME



AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

No transmissions are observed during the aggregate monitoring period.

AGGREGATE CLOSING TIME



14.3. RESULTS FOR 40 MHz BANDWIDTH

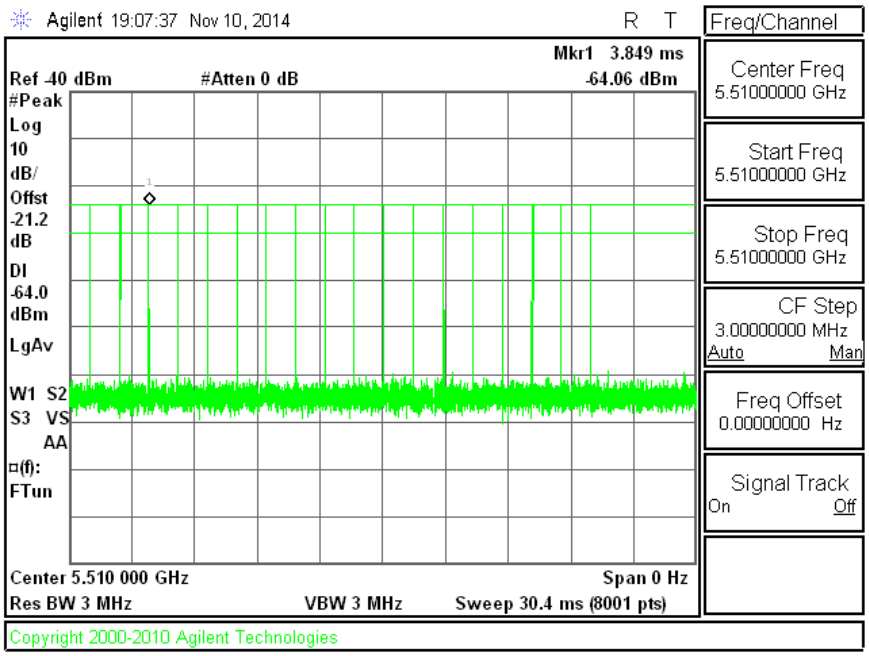
14.3.1. TEST CHANNEL

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

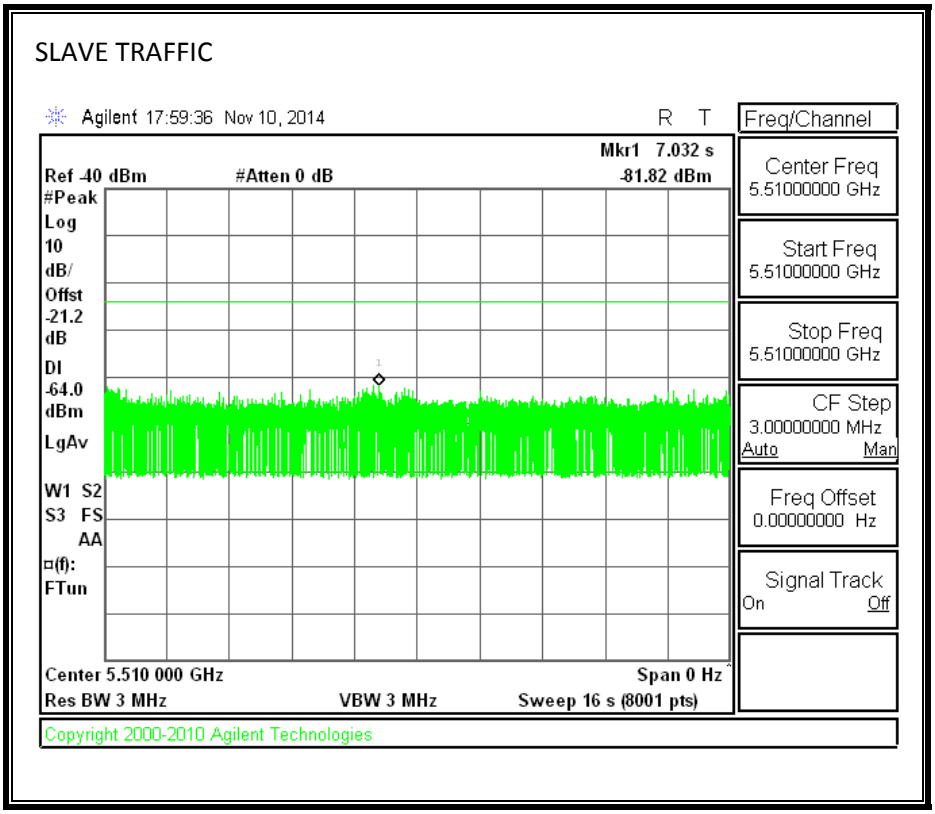
14.3.2. RADAR WAVEFORM AND TRAFFIC

RADAR WAVEFORM

SHORT PULSE RADAR TYPE 1 AT MASTER



TRAFFIC



14.3.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

14.3.4. MOVE AND CLOSING TIME

REPORTING NOTES

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

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

The aggregate channel closing transmission time is calculated as follows:

Aggregate Transmission Time =

(Number of analyzer bins showing transmission) * (dwell time per bin)

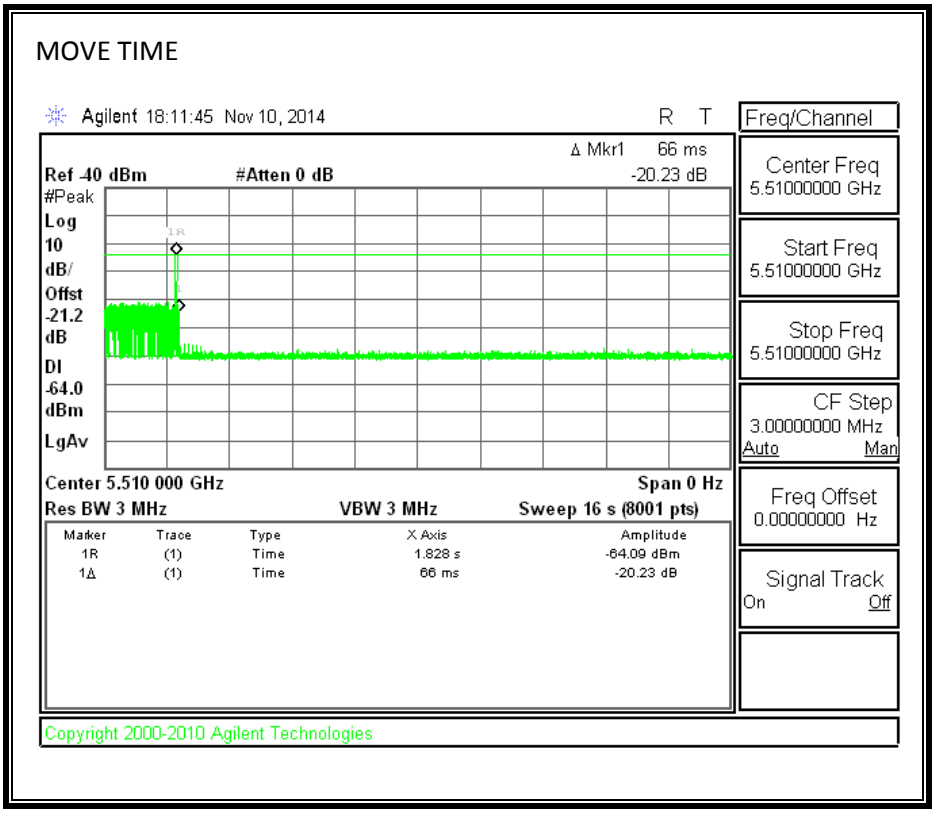
The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

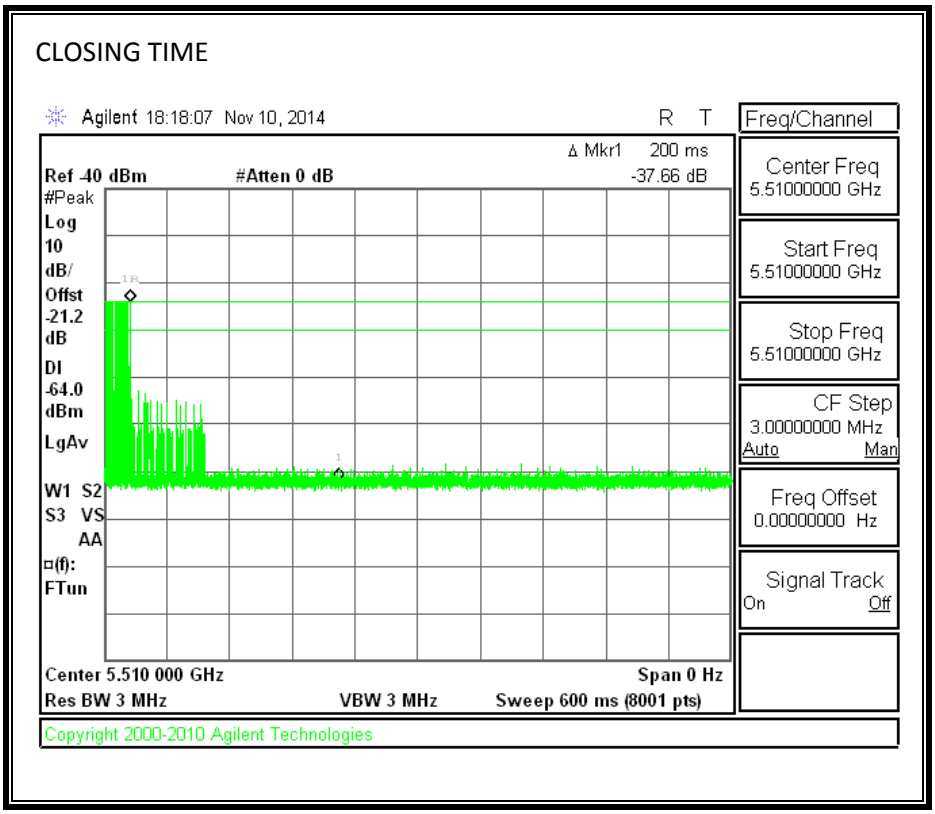
Channel Move Time (sec)	Limit (sec)
0.066	10

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

MOVE TIME



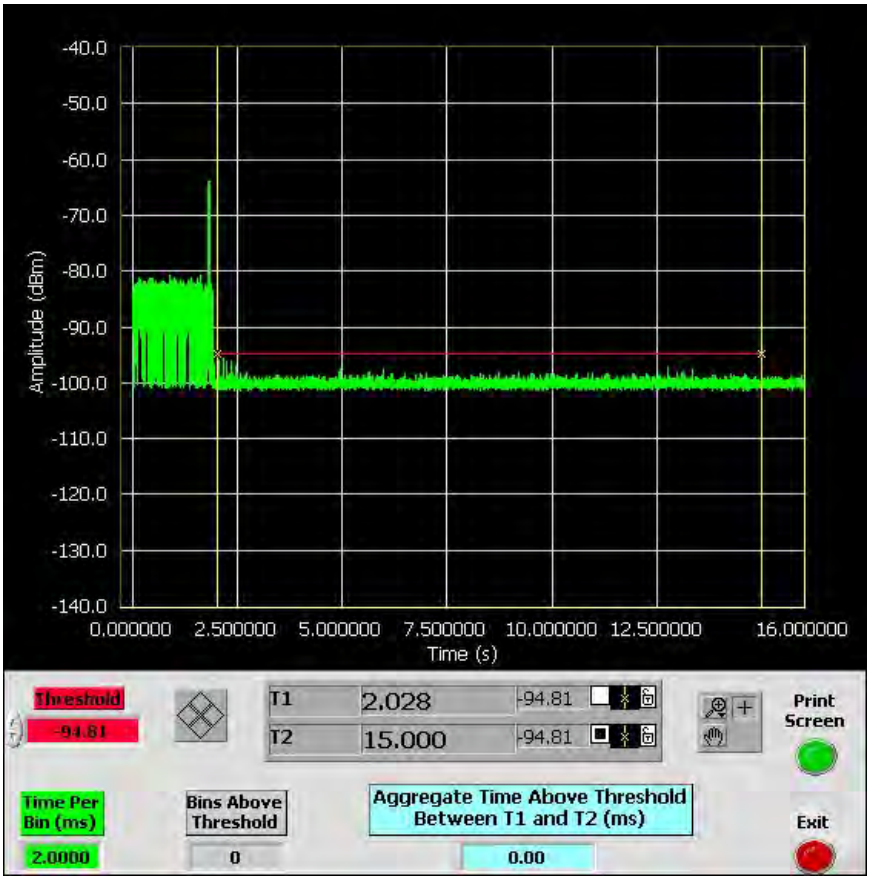
CHANNEL CLOSING TIME



AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

No transmissions are observed during the aggregate monitoring period.

AGGREGATE CLOSING TIME



14.3.5. NON-OCCUPANCY PERIOD

RESULTS

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