FCC 47 CFR PART 15 SUBPART E

CERTIFICATION TEST REPORT

FOR

Tablet with Bluetooth, DTS/UNII a/b/g/n and ANT+

MODEL NUMBER: SM-T550

FCC ID: A3LSMT550

REPORT NUMBER: 15I19879-E4 REVISION A

ISSUE DATE: FEBRUARY 25, 2015

Prepared for

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Prepared by

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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
-	02/3/15	Initial Issue	P. ZHANG
A	2/25/15	Remove IC ID; Update page 48 and 222	P. ZHANG

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1. ATTESTATION OF TEST RESULTS

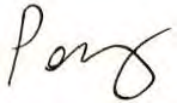
COMPANY NAME:	**SAMSUNG ELECTRONICS CO., LTD.**
EUT DESCRIPTION:	**Tablet with Bluetooth, WLAN DTS/UNII a/b/g/n and ANT+**
MODEL NUMBER:	**SM-T550**
SERIAL NUMBER:	**R32G1032KGK (Conducted), R32G1032KDZ (Radiated)**
DATE TESTED:	**JANUARY 23 - 28, 2015**

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

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

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

Approved & Released For
UL Verification Services Inc. By:



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LAB ENGINEER
UL Verification Services Inc.

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 15, ANSI C63.4-2009. 789033 D02 General UNII Test Procedures New Rules v01
The tests documented in this report were performed in accordance with the DFS portion of FCC CFR 47 Part 2, FCC CFR 47 Part 15, FCC 06-96, FCC KDB 789033, KDB 905462 D02 and D03, ANSI C63.10-2009.

3. FACILITIES AND ACCREDITATION

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

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

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

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

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

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

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

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

4.3. MEASUREMENT UNCERTAINTY

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

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

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

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a Tablet with Bluetooth, DTS/UNII a/b/g/n and ANT+.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

Frequency Range (MHz)	Mode	Total Output Power (dBm)	Total Output Power (mW)
5180 - 5240	802.11a	12.3	16.98
5260 - 5320	802.11a	12.65	18.41
5500 - 5700	802.11a	12.71	18.66
5745 - 5825	802.11a	12.82	19.14
5180 - 5240	802.11n HT20	12.12	16.29
5260 - 5320	802.11n HT20	12.68	18.54
5500 - 5700	802.11n HT20	12.7	18.62
5745 - 5825	802.11n HT20	12.46	17.62
5190 - 5230	802.11n HT40	10.52	11.27
5270 - 5310	802.11n HT40	10.37	10.89
5510 - 5670	802.11n HT40	10.82	12.08
5755 - 5795	802.11n HT40	10.26	10.62

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an FPCB antenna, with a maximum gain of -2.02 dBi.

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-TA12EWE	N/A	N/A
Earphone	SAMSUNG	N/A	N/A	N/A

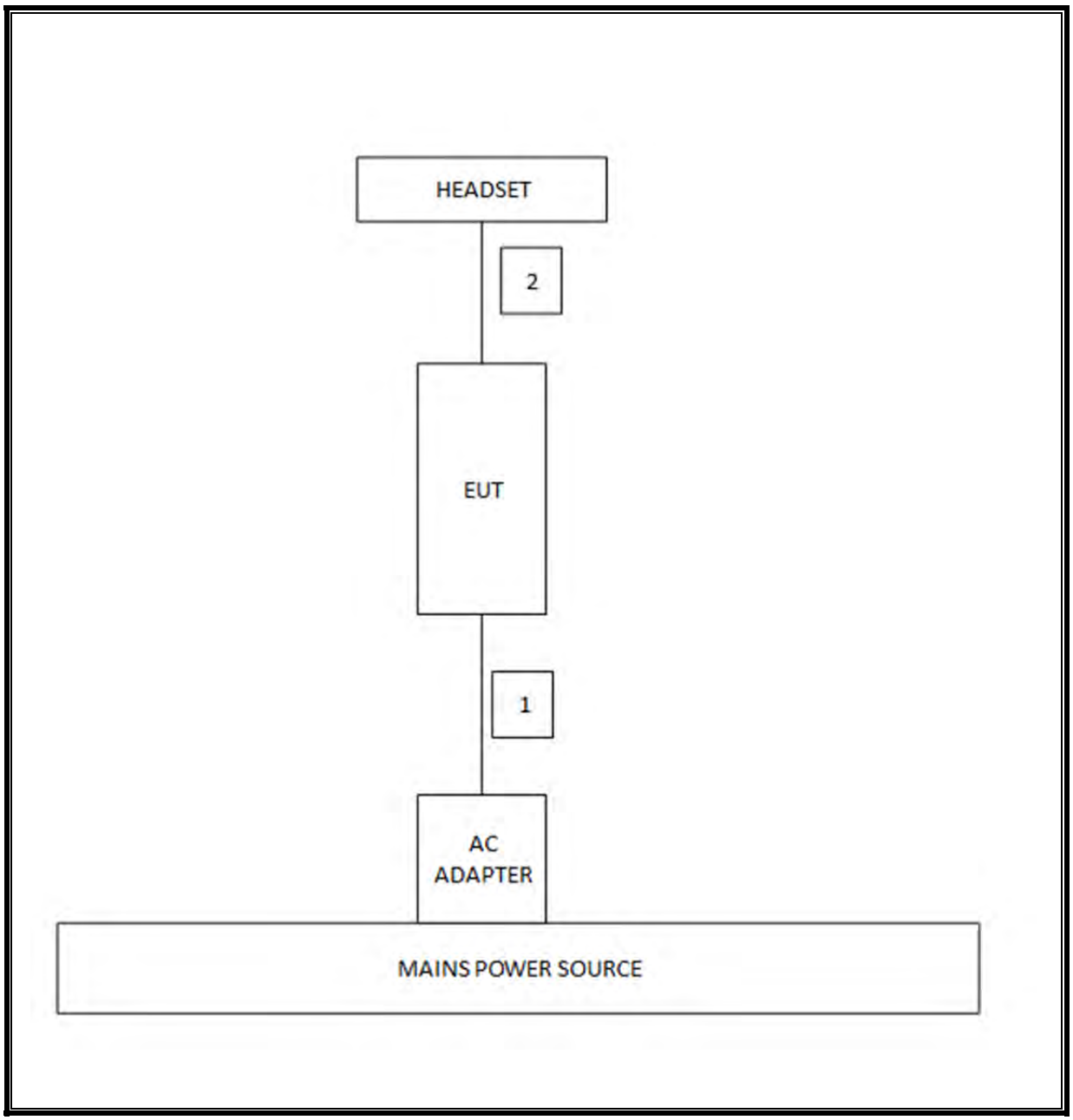
I/O CABLES

I/O Cable List						
Cable No	**Port**	**# of identical ports**	**Connector Type**	**Cable Type**	**Cable Length (m)**	**Remarks**
1	DC Power	1	Mini-USB	Shielded	80cm	N/A
2	Audio	1	Mini-Jack	Unshielded	1.0m	N/A

TEST SETUP

EUT was set in the Hidden menu mode to enable WLAN UNII communications.

SETUP DIAGRAM FOR TESTS



6. TEST AND MEASUREMENT EQUIPMENT

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

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

7. SUMMARY TABLE

FCC Part Section	Test Description	Test Limit	Test Condition	Test Result	Worst Case
15.407 (a)	Occupied Band width (26dB)	N/A	Conducted	Pass	45.78MHz
15.407	6dB Band width (5.8Ghz)	500KHz		Pass	16.41MHz
15.407 (a)(2)	TX Cond. Power5.15-2.25, 5.25-5.35 & 5.47-5.725	<24dBm or 11+10Log(OBW)		Pass	12.71dBm
15.407 (a)(3)	TX Cond. Power 5.725-5.825	< 30dBm or 17+10Log(OBW)		Pass	12.82dBm
15.407 (a)(5)	PSD (5.2,5.3,5.5GHz)	<11dBm		Pass	1.59dBm
15.407 (a)(5)	PSD (5.8GHz)	30dBm per 500kHz		Pass	-1.04dBm
15.207 (a)	AC Power Line conducted emissions	Section 10	Radiated	Pass	45.0dBuV(PK)
15.407 (b) & 15.209	Radiated Spurious Emission	< 54dBuV/m		Pass	50.45dBuV/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

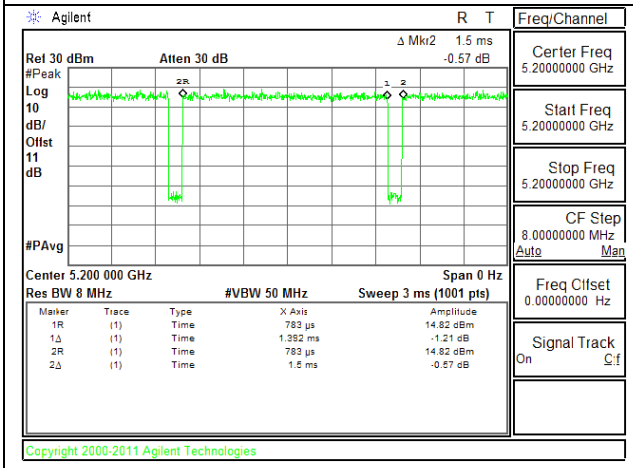
KDB 789033 Zero-Span Spectrum Analyzer Method.

RESULTS

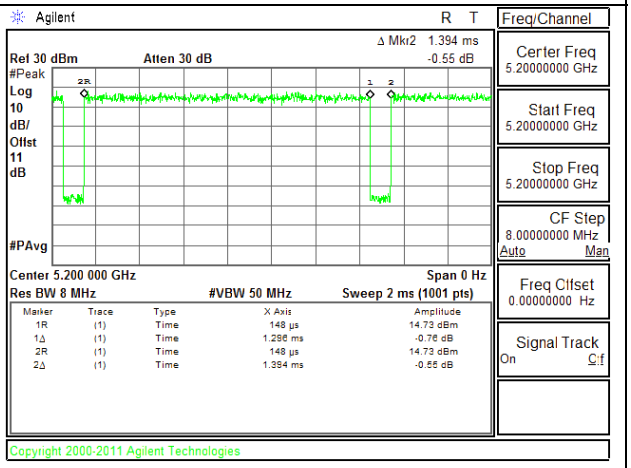
ON TIME AND DUTY CYCLE RESULT AND PLOTS

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	1.50	0.928	92.8%	0.32	0.718
802.11n HT20	1.30	1	0.930	93.0%	0.32	0.772
802.11n HT40	0.64	1	0.864	86.4%	0.64	1.575

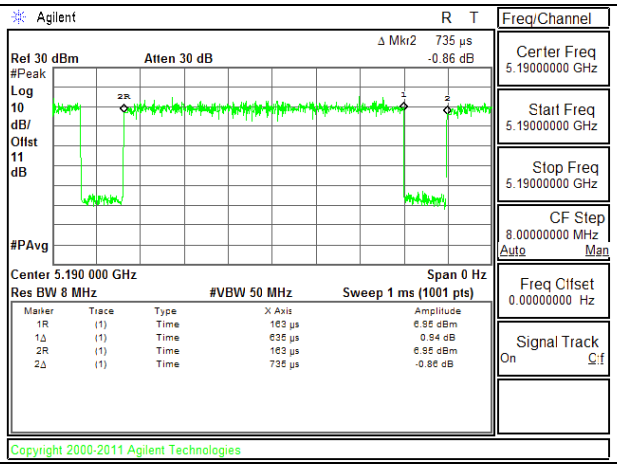
DUTY CYCLE 802.11a MODE



DUTY CYCLE 802.11n HT20 MODE



DUTY CYCLE 802.11n HT40 MODE



NOTE:

9. MEASUREMENT METHOD

789033 D02 General UNII Test Procedures New Rules v01

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

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

10. ANTENNA PORT TEST RESULTS

10.1. 6 dB BANDWIDTH

LIMITS

FCC §15.407

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

TEST PROCEDURE

Reference to 789033 D02 General UNII Test Procedures New Rules v01: The transmitter output is connected to a spectrum analyzer with the RBW set to100KHz, the VBW >= 3 x RBW, peak detector and max hold.

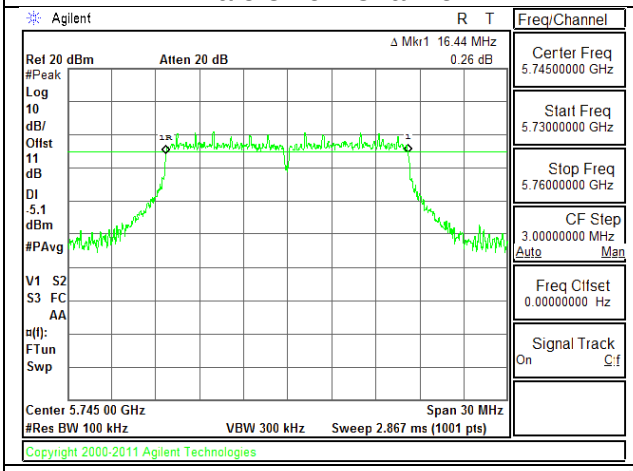
RESULTS

6 dB BANDWIDTH PLOTS AND TABLE

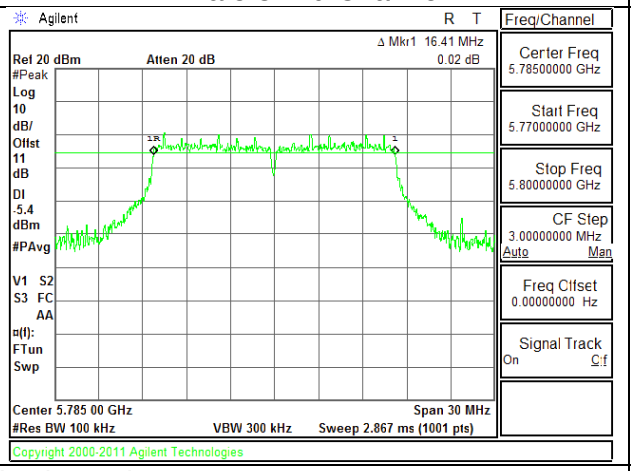
802.11a MODE IN THE 5.8 GHz BAND TEST RESULT TABLE

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5745	16.440	0.5
Mid	5785	16.410	0.5
High	5825	16.410	0.5
Worst		16.440	

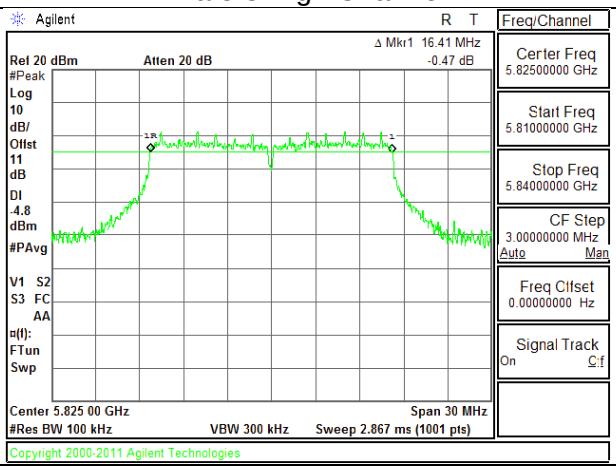
11a 5.8 Low Channel



11a 5.8 Mid Channel



11a 5.8 High Channel

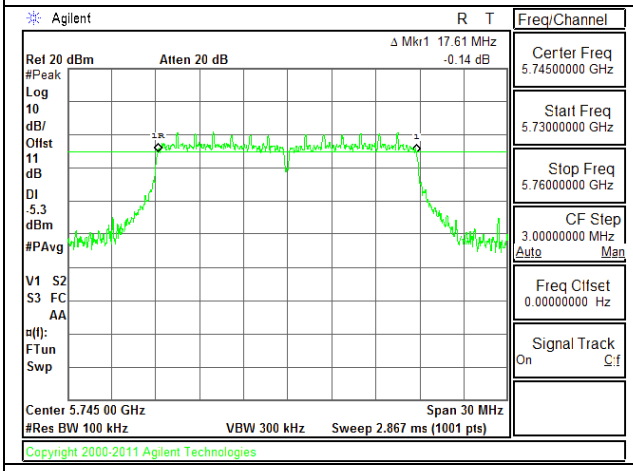


NOTE:

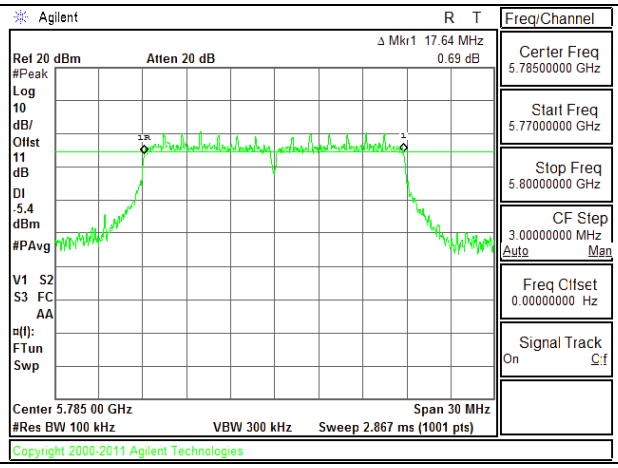
802.11n HT20 MODE IN THE 5.8 GHz BAND TEST RESULT TABLE

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5745	17.610	0.5
Mid	5785	17.640	0.5
High	5825	17.610	0.5
Worst		17.640	

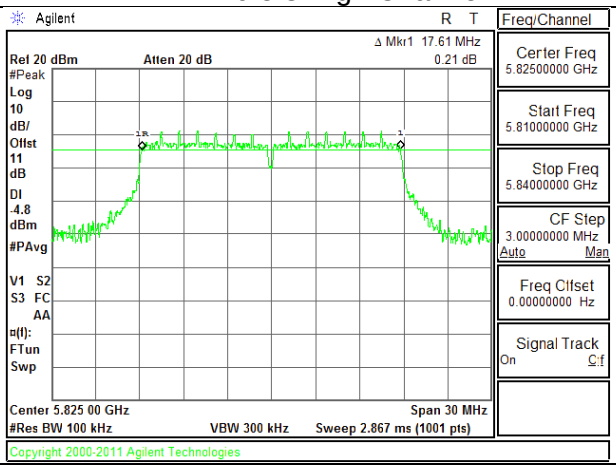
11n HT20 5.8 Low Channel



11n HT20 5.8 Mid Channel



11n HT20 5.8 High Channel

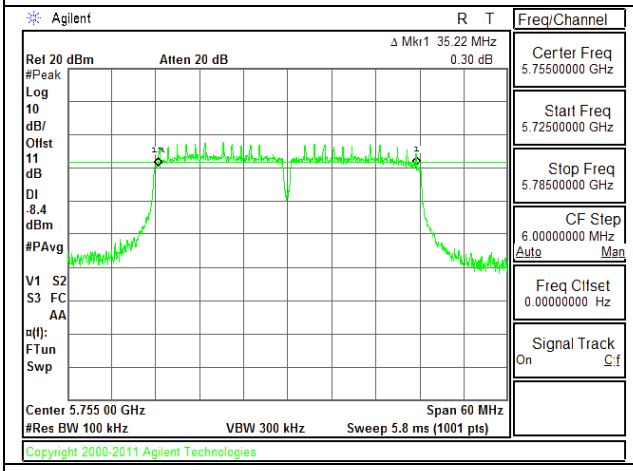


NOTE:

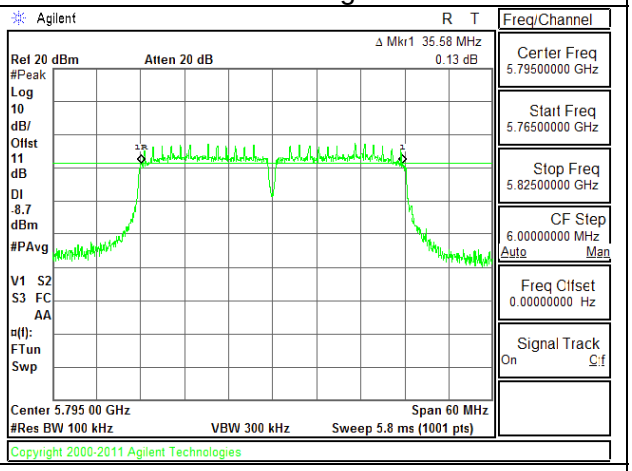
802.11n HT40 MODE IN THE 5.8 GHz BAND TEST RESULT TABLE

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5755	35.220	0.5
High	5795	35.580	0.5
Worst		35.580	

11n HT40 5.8 Low Channel



11n HT40 5.8 High Channel



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NOTE:

10.2. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

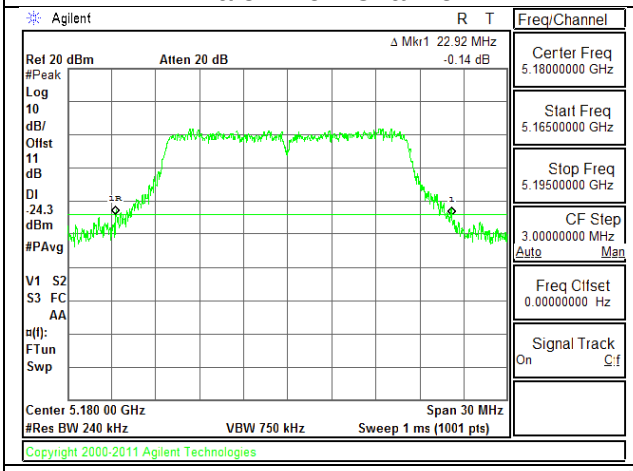
RESULTS

26 dB BANDWIDTH PLOTS AND TABLE

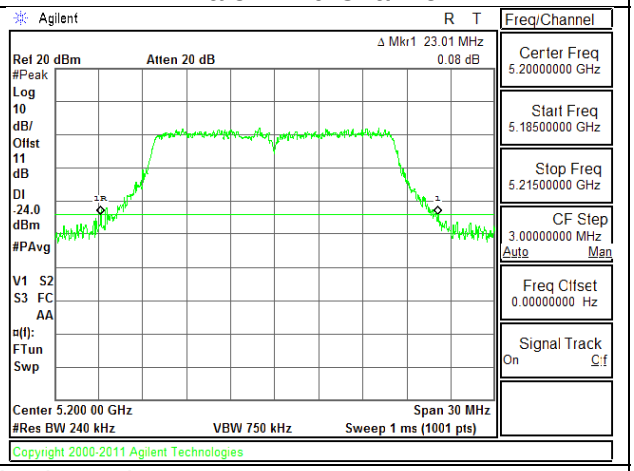
802.11a MODE IN THE 5.2 GHz BAND TEST RESULT TABLE

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5180	22.92
Mid	5200	23.01
High	5240	22.56
Worst		23.01

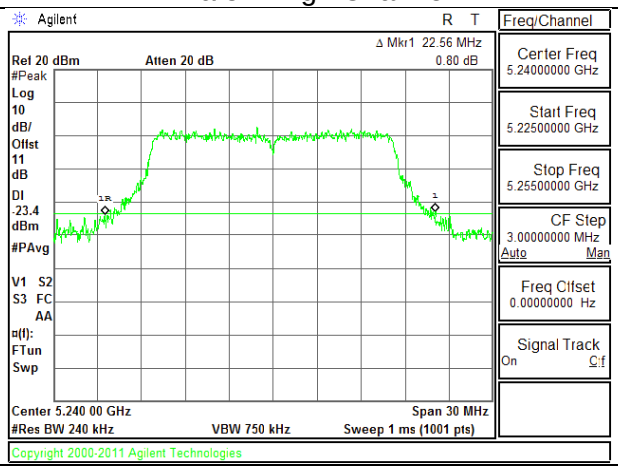
11a 5.2 Low Channel



11a 5.2 Mid Channel



11a 5.2 High Channel

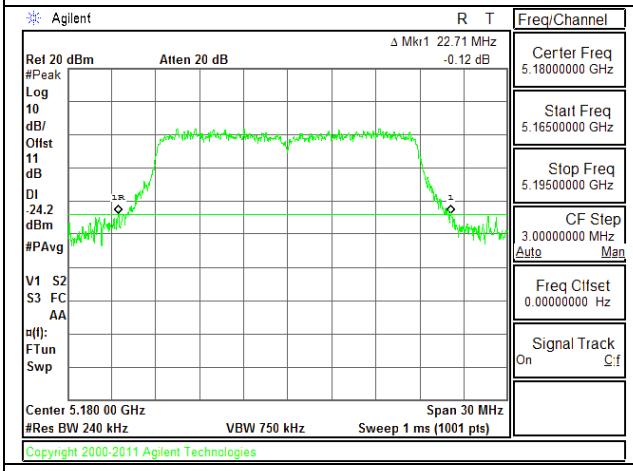


NOTE:

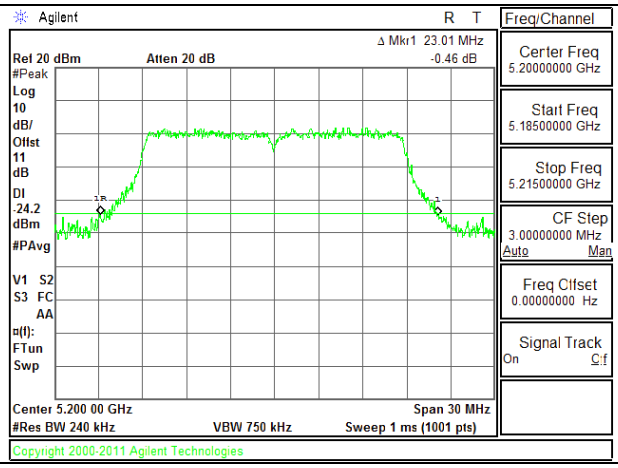
802.11n HT20 MODE IN THE 5.2 GHz BAND TEST RESULT TABLE

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5180	22.71
Mid	5200	23.01
High	5240	22.71
Worst		23.01

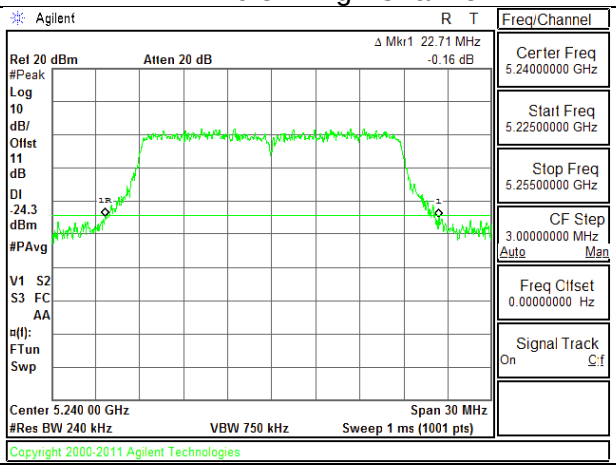
11n HT20 5.2 Low Channel



11n HT20 5.2 Mid Channel



11n HT20 5.2 High Channel

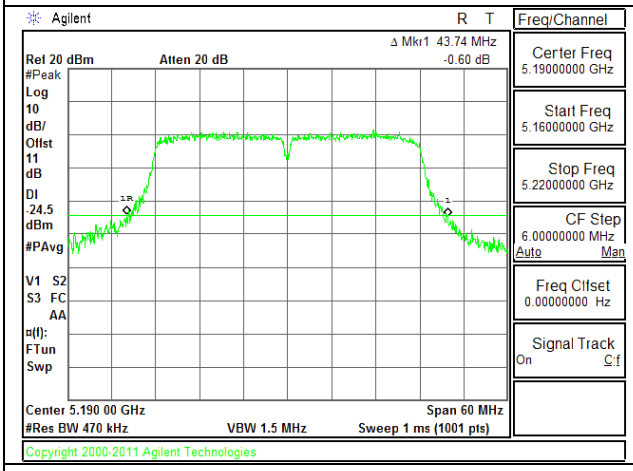


NOTE:

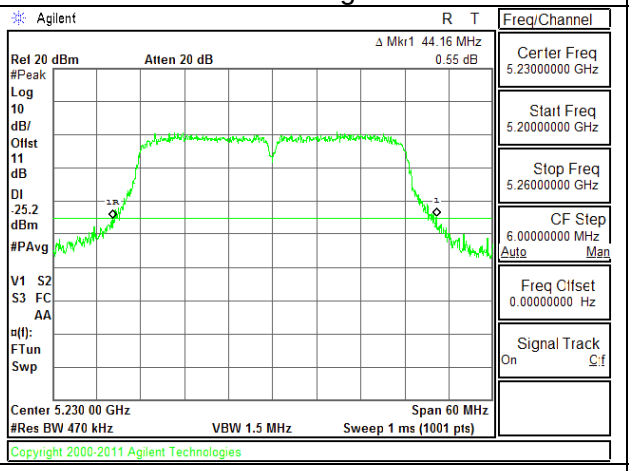
802.11n HT40 MODE IN THE 5.2 GHz BAND TEST RESULT TABLE

Channel	Frequency (MHz)	26dB Bandwidth (MHz)
Low	5190	43.74
Mid	5230	44.16
Worst		44.16

11n HT40 5.2 Low Channel



11n HT40 5.2 High Channel



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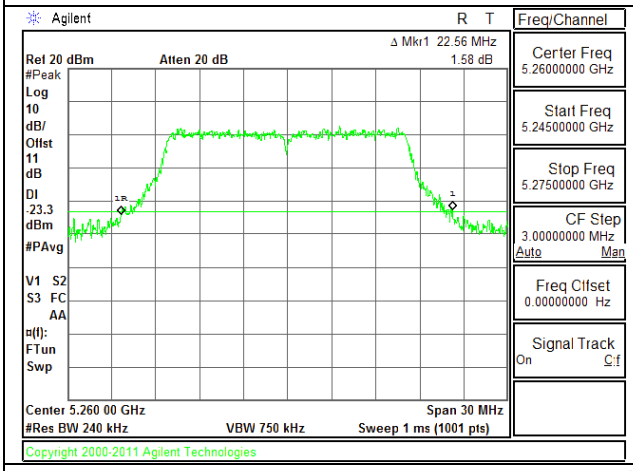
NOTE:

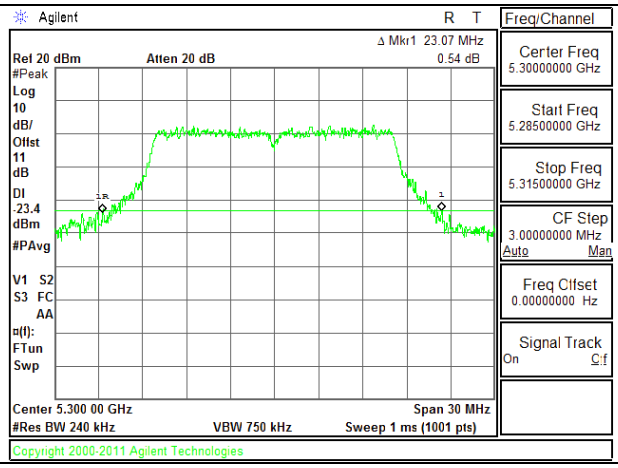
802.11a MODE IN THE 5.3 GHz BAND TEST RESULT TABLE

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5260	22.56
Mid	5300	23.07
High	5320	22.26
Worst		23.07

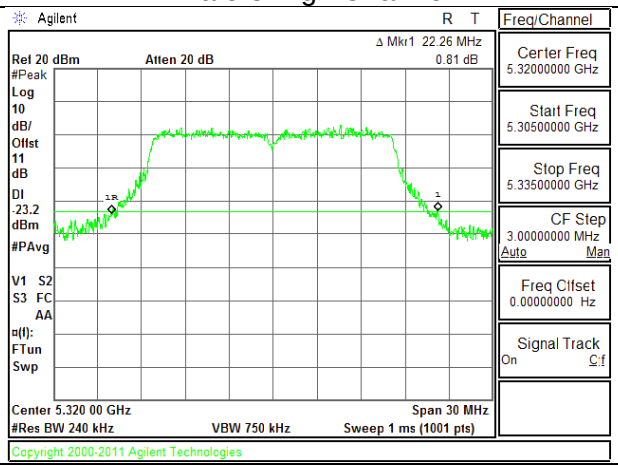
11a 5.3 Low Channel



11a 5.3 Mid Channel



11a 5.3 High Channel

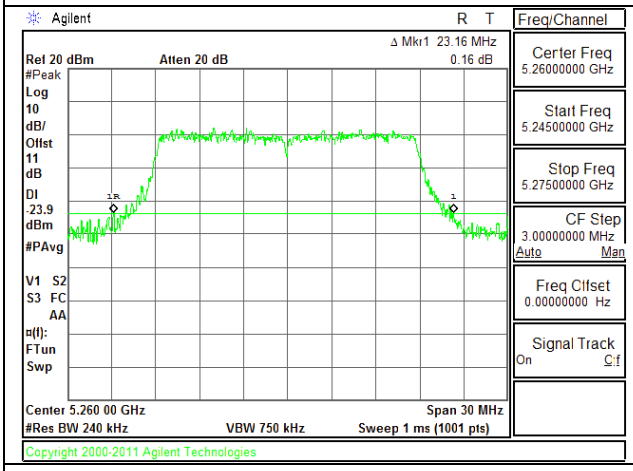


NOTE:

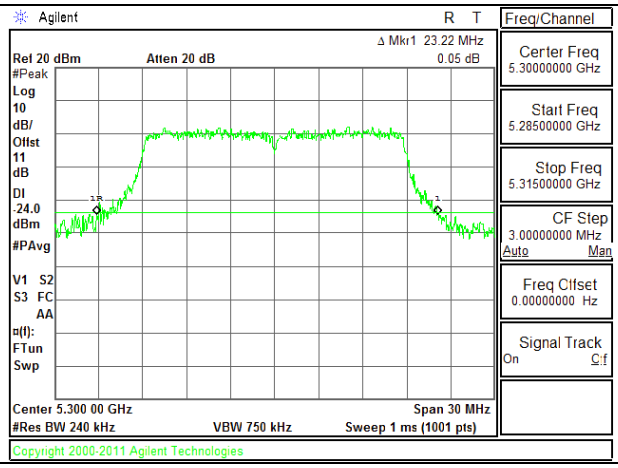
802.11n HT20 MODE IN THE 5.3 GHz BAND TEST RESULT TABLE

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5260	23.16
Mid	5300	23.22
High	5320	23.67
Worst		23.67

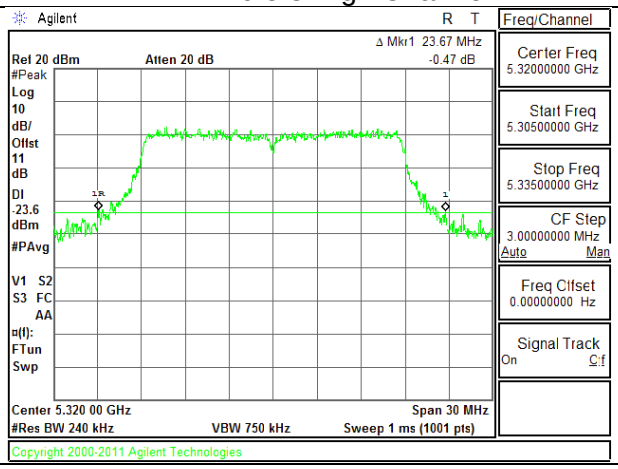
11n HT20 5.3 Low Channel



11n HT20 5.3 Mid Channel



11n HT20 5.3 High Channel

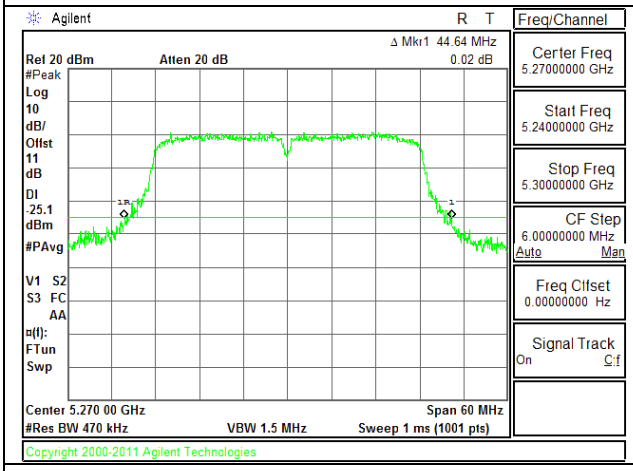


NOTE:

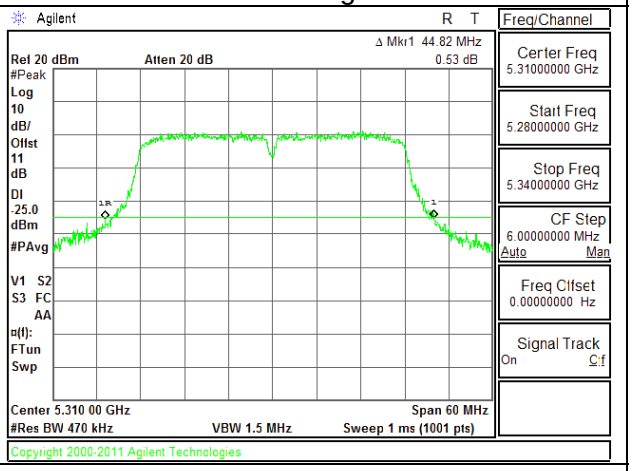
802.11n HT40 MODE IN THE 5.3 GHz BAND TEST RESULT TABLE

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5270	44.64
High	5310	44.82
Worst		44.82

11n HT40 5.3 Low Channel



11n HT20 5.3 High Channel



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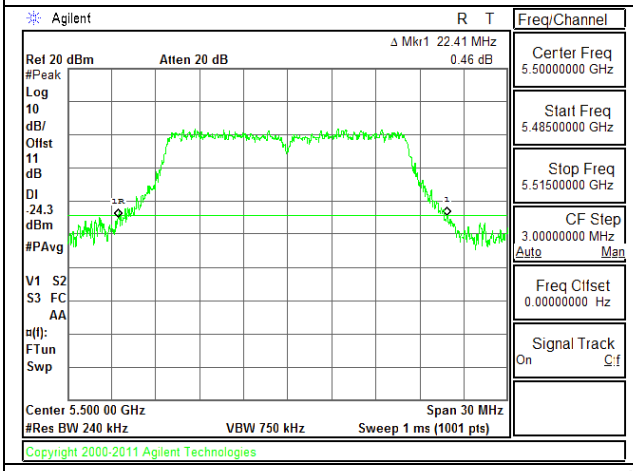
NOTE:

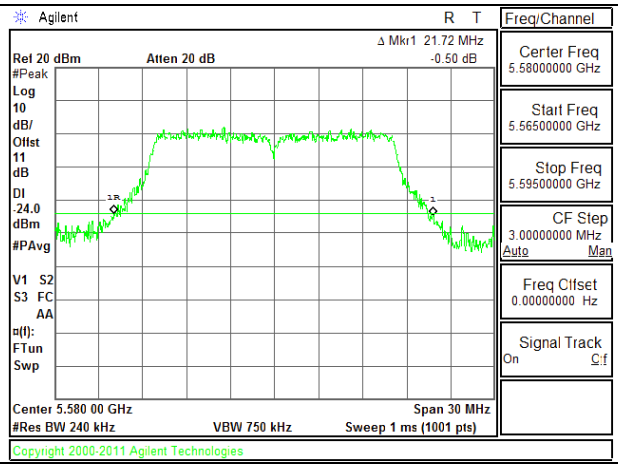
802.11a MODE IN THE 5.5 GHz BAND TEST RESULT TABLE

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5500	22.41
Mid	5580	21.72
High	5700	22.80
Worst		22.80

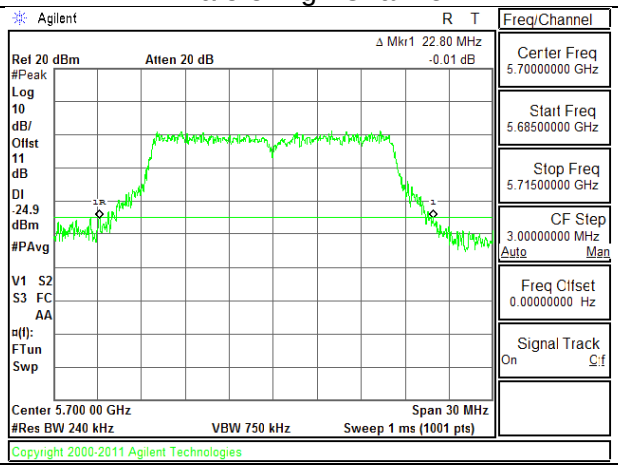
11a 5.5 Low Channel



11a 5.5 Mid Channel



11a 5.5 High Channel

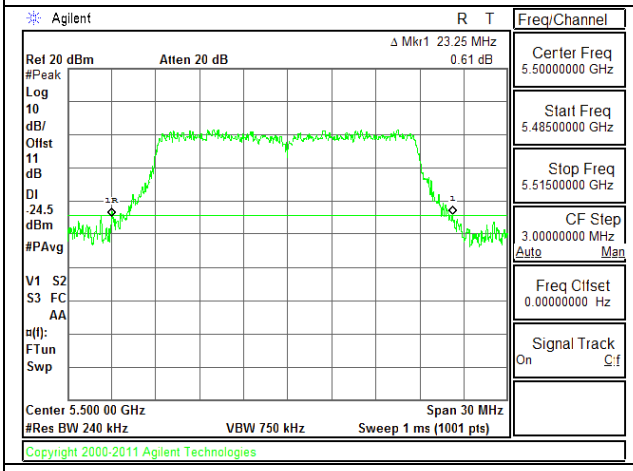


NOTE:

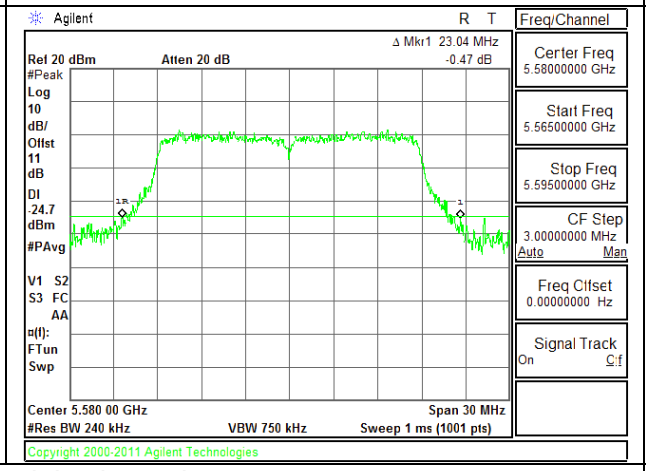
802.11n HT20 MODE IN THE 5.5 GHz BAND TEST RESULT TABLE

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5500	23.25
Mid	5580	23.04
High	5700	22.44
Worst		23.25

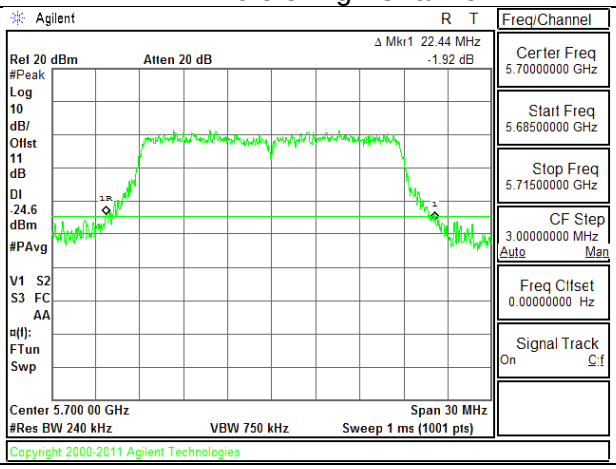
11n HT20 5.5 Low Channel



11n HT20 5.5 Mid Channel



11n HT20 5.5 High Channel

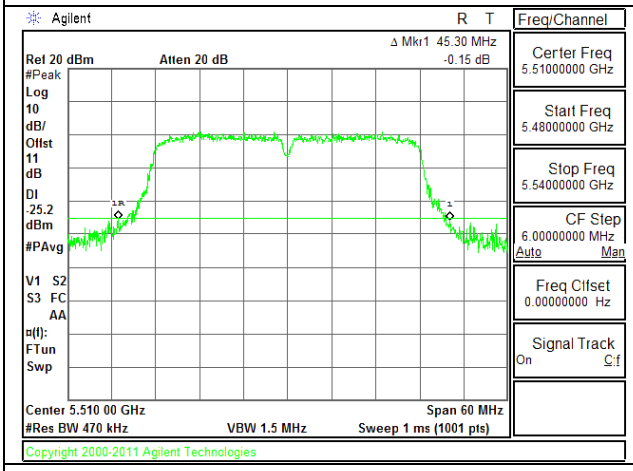


NOTE:

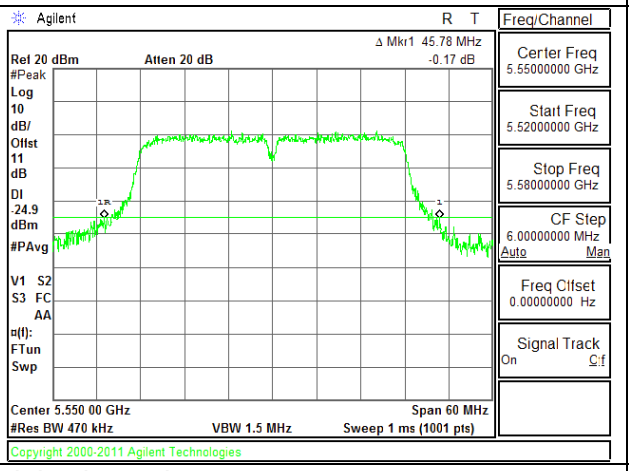
802.11n HT40 MODE IN THE 5.5 GHz BAND TEST RESULT TABLE

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5510	45.30
Mid	5550	45.78
High	5670	44.82
Worst		45.78

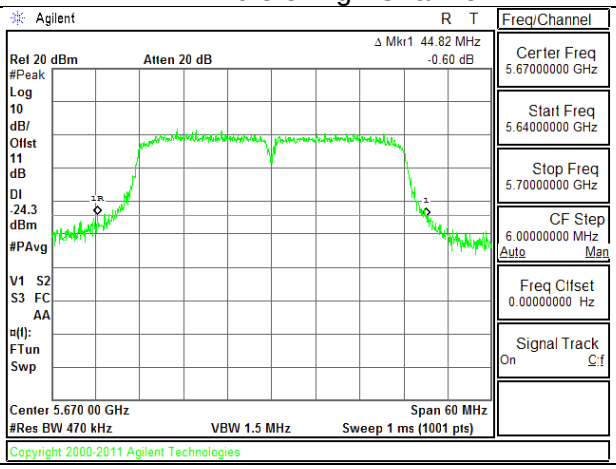
11n HT40 5.5 Low Channel



11n HT40 5.5 Mid Channel



11n HT40 5.5 High Channel

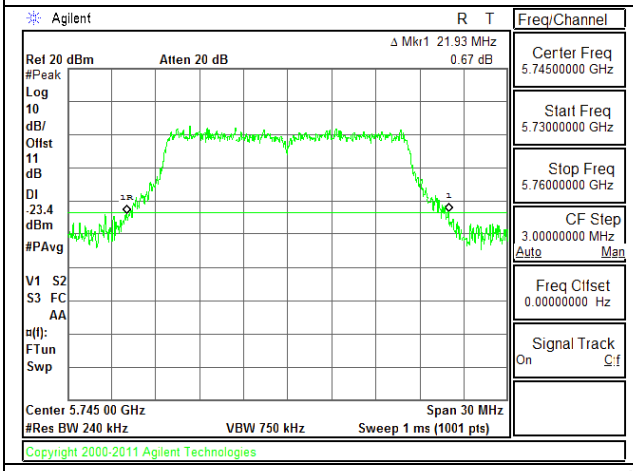


NOTE:

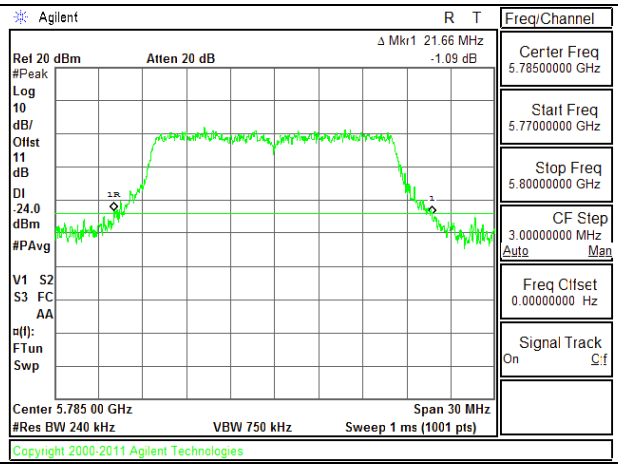
802.11a MODE IN THE 5.8 GHz BAND TEST RESULT TABLE

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5745	21.93
Mid	5785	21.66
High	5825	22.38
Worst		22.38

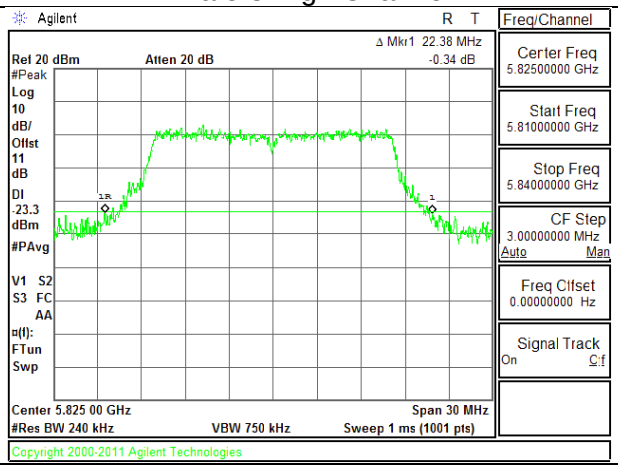
11a 5.8 Low Channel



11a 5.8 Mid Channel



11a 5.8 High Channel

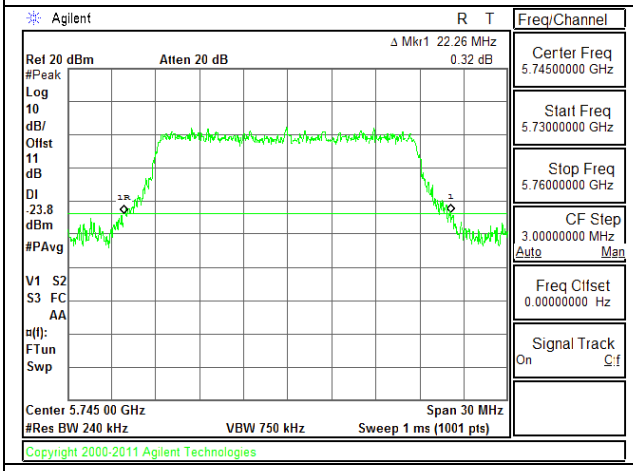


NOTE:

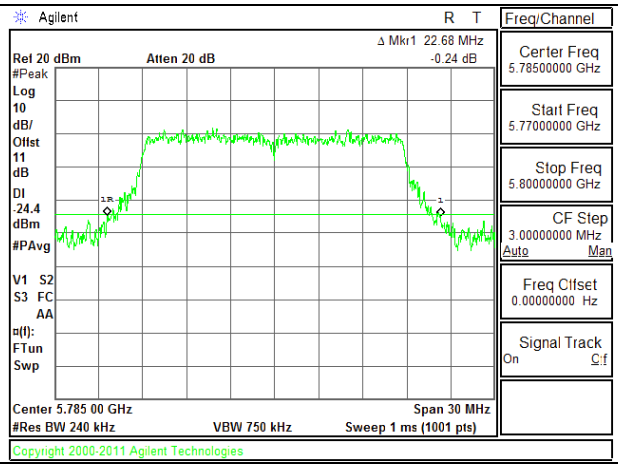
802.11n HT20 MODE IN THE 5.8 GHz BAND TEST RESULT TABLE

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5745	22.26
Mid	5785	22.68
High	5825	23.94
Worst		23.94

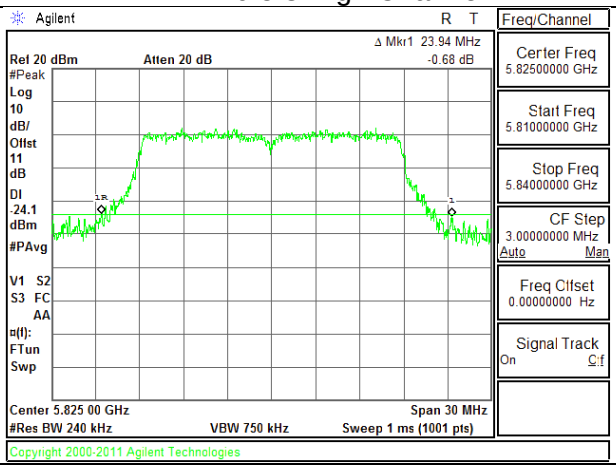
11n HT20 5.8 Low Channel



11n HT20 5.8 Mid Channel



11n HT20 5.8 High Channel

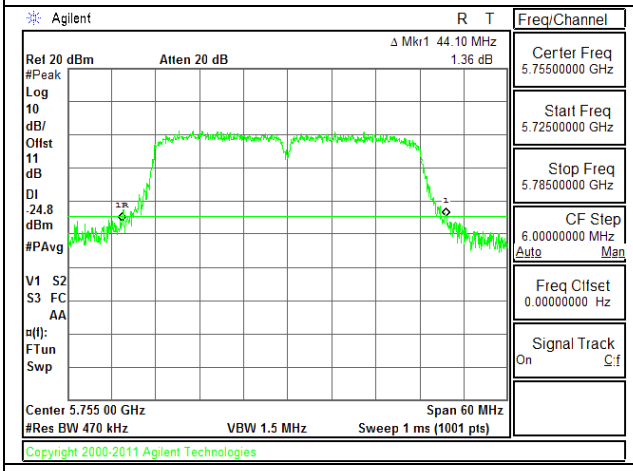


NOTE:

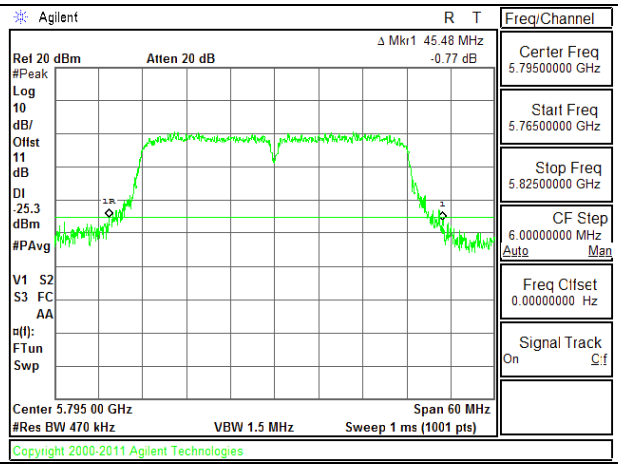
802.11n HT40 MODE IN THE 5.8 GHz BAND TEST RESULT TABLE

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5755	44.10
High	5795	45.48
Worst		45.48

11n HT40 5.8 Low Channel



11n HT40 5.8 Mid Channel



NOTE:

10.3. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

10.3.1. 802.11a MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5180	16.43
Mid	5200	16.50
High	5240	16.55
Worst		16.55

10.3.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5180	17.69
Mid	5200	17.70
High	5240	17.72
Worst		17.72

10.3.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5190	36.02
Mid	5230	36.11
Worst		36.11

10.3.1. 802.11a MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5260	16.45
Mid	5300	16.53
High	5320	16.46
Worst		16.53

10.3.1. 802.11n HT20 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5260	17.68
Mid	5300	17.69
High	5320	17.65
Worst		17.69

10.3.2. 802.11n HT40 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5270	36.27
High	5310	36.02
Worst		36.27

10.3.3. 802.11a MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5500	16.58
Mid	5580	16.50
High	5700	16.57
Worst		16.58

10.3.4. 802.11n HT20 MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5500	17.70
Mid	5580	17.72
High	5700	17.69
Worst		17.72

10.3.5. 802.11n HT40 MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5510	36.07
Mid	5550	36.16
High	5670	36.21
Worst		36.21

10.3.6. 802.11a MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5745	16.51
Mid	5785	16.48
High	5825	16.58
Worst		16.58

10.3.7. 802.11n HT20 MODE IN THE 5.8 GHz BAND

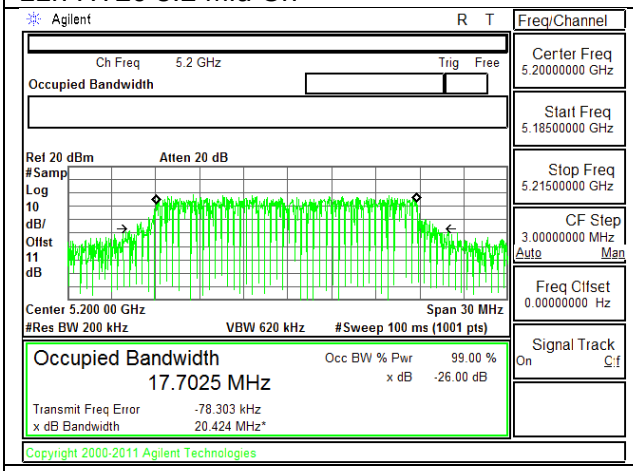
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5745	17.76
Mid	5785	17.66
High	5825	17.67
Worst		17.76

10.3.8. 802.11n HT40 MODE IN THE 5.8 GHz BAND

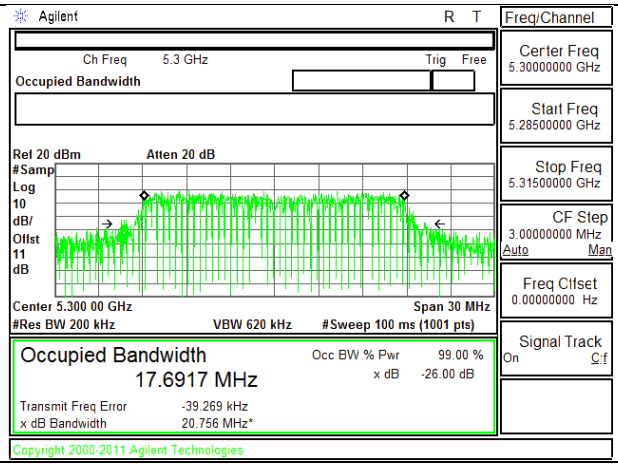
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5755	36.07
High	5795	36.12
Worst		36.12

10.3.1. 99% BANDWIDTH PLOTS

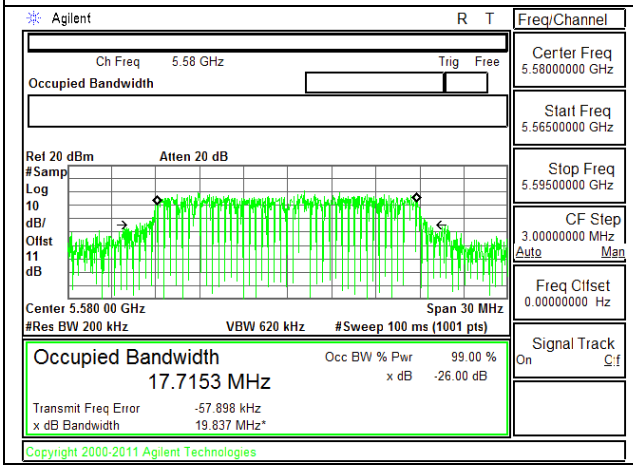
11n HT20 5.2 Mid Ch



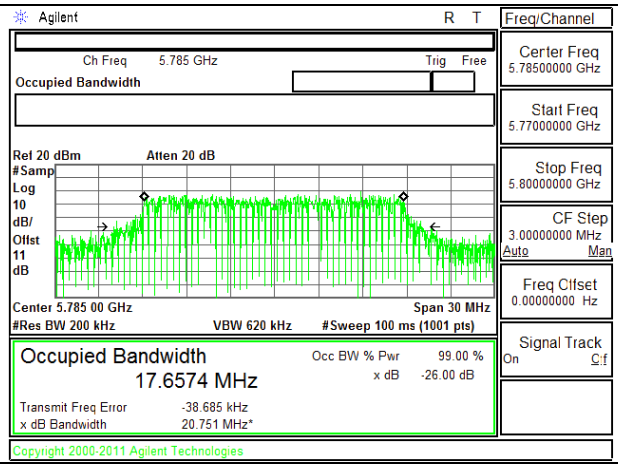
11n HT20 5.3 Mid Ch



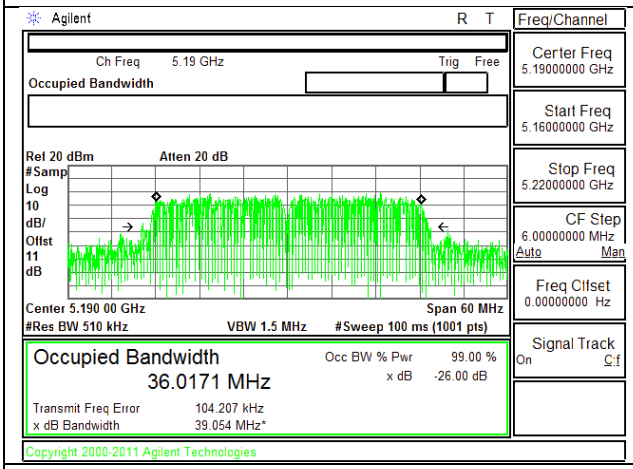
11n HT20 5.5 Mid Ch



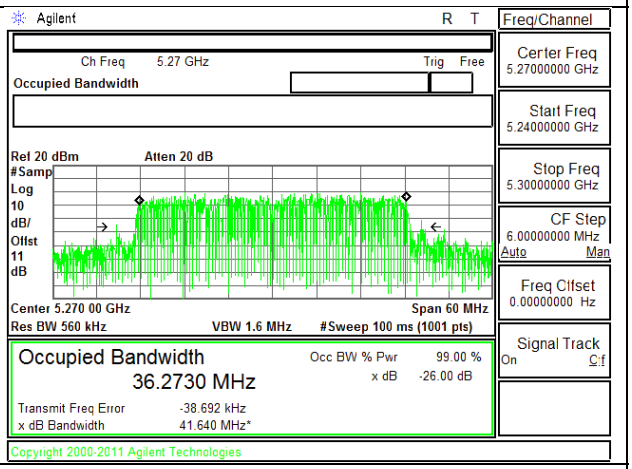
11n HT20 5.8 Mid Ch



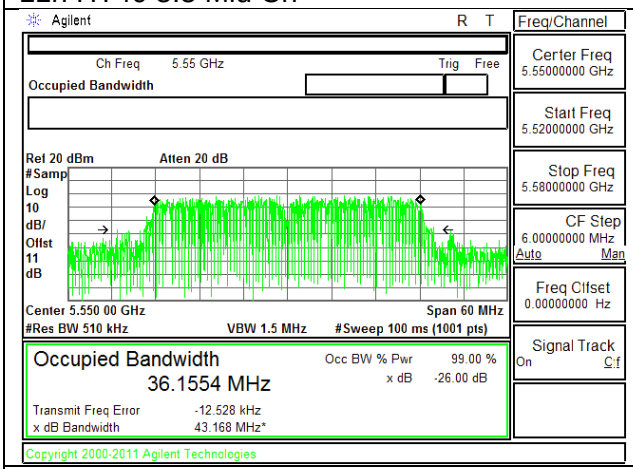
11n HT40 5.2 Low Ch



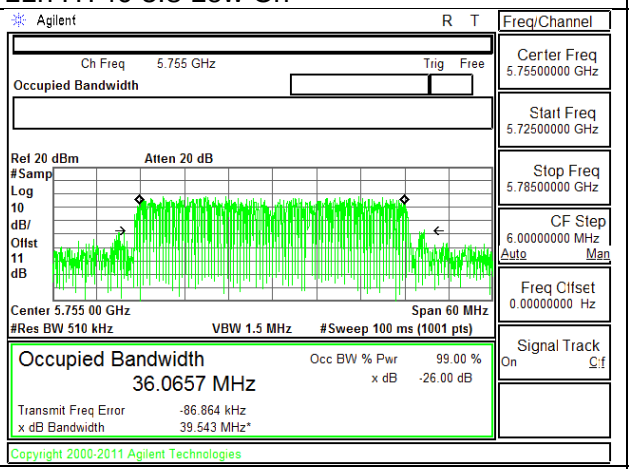
11n HT40 5.3 Low Ch



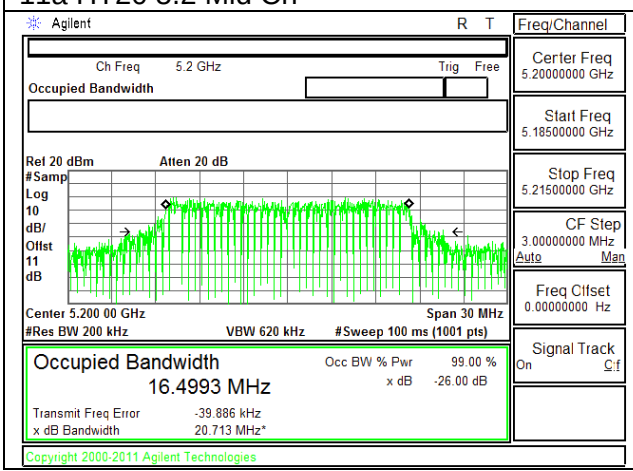
11n HT40 5.5 Mid Ch



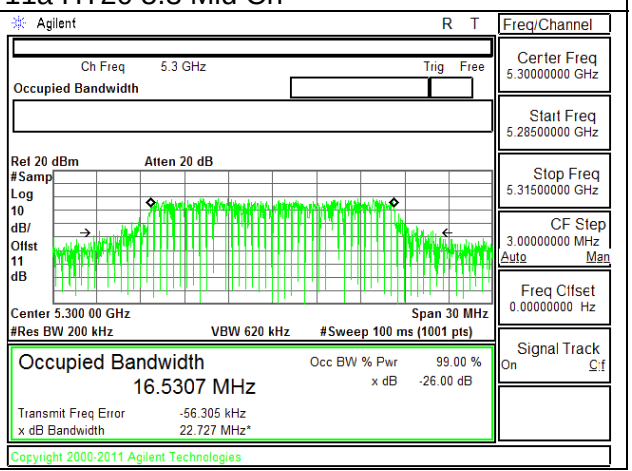
11n HT40 5.8 Low Ch



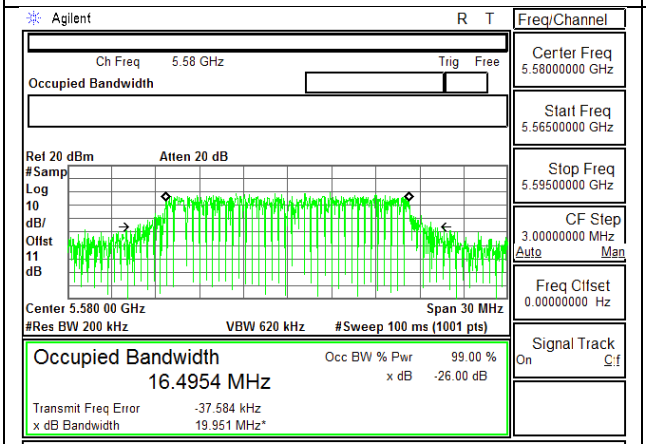
11a HT20 5.2 Mid Ch



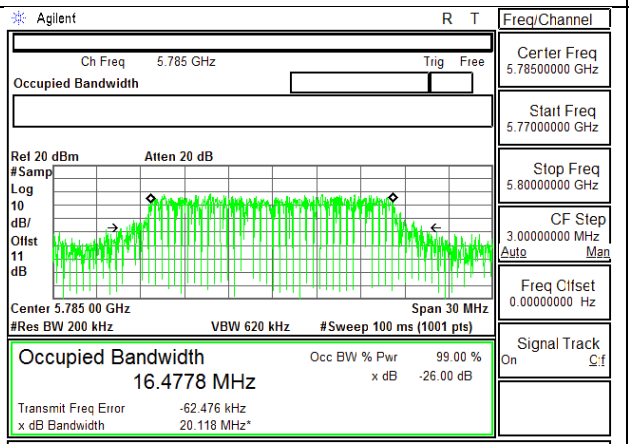
11a HT20 5.3 Mid Ch



11a HT20 5.5 Mid Ch



11a HT20 5.8 Mid Ch



10.4. 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

10.4.1. 802.11a MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5180	12.10
Mid	5200	11.50
High	5240	11.40
Worst		12.10

10.4.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5180	12.40
Mid	5200	11.80
High	5240	11.40
Worst		12.40

10.4.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5190	10.50
Mid	5230	10.30
Worst		10.50

10.4.4. 802.11a MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5260	12.10
Mid	5300	12.50
High	5320	11.70
Worst		12.50

10.4.5. 802.11n HT20 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5260	12.10
Mid	5300	12.50
High	5320	11.70
Worst		12.50

10.4.6. 802.11n HT40 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5270	10.10
High	5310	10.10
Worst		10.10

10.4.7. 802.11a MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5500	12.10
Mid	5580	11.70
High	5700	12.50
Worst		12.50

10.4.8. 802.11n HT20 MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5500	12.10
Mid	5580	11.80
High	5700	12.50
Worst		12.50

10.4.9. 802.11n HT40 MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5510	10.40
Mid	5550	10.30
High	5670	10.50
Worst		10.50

10.4.10. 802.11a MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5745	12.20
Mid	5785	12.40
High	5825	12.00
Worst		12.40

10.4.11. 802.11n HT20 MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5745	12.20
Mid	5785	12.40
High	5825	12.30
Worst		12.40

10.4.12. 802.11n HT40 MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5755	10.50
High	5795	10.50
Worst		10.50

10.5. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (1) (2) (3)

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 250 mW or 11 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.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band.

DIRECTIONAL ANTENNA GAIN

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

Test Methodology

RESULTS

10.5.1. 802.11a MODE IN THE 5.2 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5180	22.92	16.43	-2.02
Mid	5200	23.01	16.50	-2.02
High	5240	22.56	16.55	-2.02

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC EIRP Limit (dBm)	Max IC Power (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC eirp PSD Limit (dBm)	PPSD Limit (dBm)
Low	5180	24.00	22.16	24.18	24.00	11.00	10.00	11.00
Mid	5200	24.00	22.17	24.19	24.00	11.00	10.00	11.00
High	5240	24.00	22.19	24.21	24.00	11.00	10.00	11.00

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

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5180	11.66	11.98	24.00	-12.02
Mid	5200	11.53	11.85	24.00	-12.15
High	5240	11.98	12.30	24.00	-11.70

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5180	0.650	0.97	11.00	-10.03
Mid	5200	0.140	0.46	11.00	-10.54
High	5240	0.820	1.14	11.00	-9.86

10.5.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5180	22.71	17.69	-2.02
Mid	5200	23.01	17.70	-2.02
High	5240	22.71	17.72	-2.02

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC EIRP Limit (dBm)	Max IC Power (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC eirp PSD Limit (dBm)	PPSD Limit (dBm)
Low	5180	24.00	22.48	24.50	24.00	11.00	10.00	11.00
Mid	5200	24.00	22.48	24.50	24.00	11.00	10.00	11.00
High	5240	24.00	22.48	24.50	24.00	11.00	10.00	11.00

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

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5180	11.667	11.99	24.00	-12.01
Mid	5200	11.609	11.93	24.00	-12.07
High	5240	11.796	12.12	24.00	-11.88

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5180	0.240	0.56	11.00	-10.44
Mid	5200	0.060	0.38	11.00	-10.62
High	5240	0.310	0.63	11.00	-10.37

10.5.3. 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	43.740	36.017	-2.02
Mid	5230	44.160	36.110	-2.02

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC EIRP Limit (dBm)	Max IC Power (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC eirp PSD Limit (dBm)	PPSD Limit (dBm)
Low	5190	24.00	23.00	25.02	24.00	11.00	10.00	11.00
Mid	5230	24.00	23.00	25.02	24.00	11.00	10.00	11.00
Duty Cycle CF (dB)		0.64	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	9.880	10.52	24.00	-13.48
Mid	5230	9.859	10.50	24.00	-13.50

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5190	-4.560	-3.92	11.00	-14.92
Mid	5230	-4.340	-3.70	11.00	-14.70

802.11a MODE IN THE 5.3 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5260	22.56	16.45	-2.02
Mid	5300	23.07	16.53	-2.02
High	5320	22.26	16.46	-2.02

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5260	24.00	23.16	29.16	23.16	11.00	11.00	11.00
Mid	5300	24.00	23.18	29.18	23.18	11.00	11.00	11.00
High	5320	24.00	23.16	29.16	23.16	11.00	11.00	11.00

Duty Cycle CF (dB)	0.32	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	11.950	12.27	24.00	-11.73
Mid	5300	12.333	12.65	24.00	-11.35
High	5320	12.121	12.44	24.00	-11.56

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5260	0.850	1.17	11.00	-9.83
Mid	5300	1.200	1.52	11.00	-9.48
High	5320	1.270	1.59	11.00	-9.41

10.5.4. 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	23.16	17.68	-2.02
Mid	5300	23.22	17.69	-2.02
High	5320	23.67	17.65	-2.02

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5260	24.00	23.47	29.47	23.47	11.00	11.00	11.00
Mid	5300	24.00	23.48	29.48	23.48	11.00	11.00	11.00
High	5320	24.00	23.47	29.47	23.47	11.00	11.00	11.00

Duty Cycle CF (dB)	0.32	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	12.016	12.34	24.00	-11.66
Mid	5300	12.361	12.68	24.00	-11.32
High	5320	12.275	12.60	24.00	-11.41

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5260	0.590	0.91	11.00	-10.09
Mid	5300	0.780	1.10	11.00	-9.90
High	5320	0.820	1.14	11.00	-9.86

10.5.5. 802.11n HT40 MODE IN THE 5.3 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5270	44.6	36.3	-2.02
High	5310	44.8	36.0	-2.02

Limits

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

Duty Cycle CF (dB)	0.64	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	9.7	10.37	24.00	-13.63
High	5310	9.6	10.26	24.00	-13.74

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5270	-5.42	-4.78	11.00	-15.78
High	5310	-4.78	-4.14	11.00	-15.14

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	22.410	16.580	-2.02
Mid	5580	21.720	16.500	-2.02
High	5700	22.800	16.570	-2.02

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5500	24.00	24.00	29.20	24.00	11.00	11.00	11.00
Mid	5580	24.00	24.00	29.17	24.00	11.00	11.00	11.00
High	5700	24.00	24.00	29.19	24.00	11.00	11.00	11.00

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

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	12.394	12.71	24.00	-11.29
Mid	5580	12.042	12.36	24.00	-11.64
High	5700	11.683	12.00	24.00	-12.00

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5500	1.270	1.59	11.00	-9.41
Mid	5580	0.700	1.02	11.00	-9.98
High	5700	0.510	0.83	11.00	-10.17

10.5.6. 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	23.250	17.700	-2.02
Mid	5580	23.040	17.720	-2.02
High	5700	22.440	17.690	-2.02

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5500	24.00	24.00	29.48	24.00	11.00	11.00	11.00
Mid	5580	24.00	24.00	29.48	24.00	11.00	11.00	11.00
High	5700	24.00	24.00	29.48	24.00	11.00	11.00	11.00

Duty Cycle CF (dB)	0.32	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	11.605	11.93	24.00	-12.08
Mid	5580	11.995	12.32	24.00	-11.69
High	5700	12.379	12.70	24.00	-11.30

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5500	0.190	0.51	11.00	-10.49
Mid	5580	0.490	0.81	11.00	-10.19
High	5700	0.770	1.09	11.00	-9.91

10.5.7. 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	45.3	36.1	-2.02
Mid	5550	45.8	36.2	-2.02
High	5670	44.8	36.2	-2.02

Limits

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

Duty Cycle CF (dB)	0.64	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	10.152	10.79	24.00	-13.21
Mid	5550	10.169	10.81	24.00	-13.19
High	5670	10.177	10.82	24.00	-13.18

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5510	-4.200	-3.56	11.00	-14.56
Mid	5550	-4.090	-3.45	11.00	-14.45
High	5670	-4.260	-3.62	11.00	-14.62

802.11a MODE IN THE 5.8 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5745	21.930	16.510	-2.02
Mid	5785	21.660	16.480	-2.02
High	5825	22.380	16.580	-2.02

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5745	30.00	30.00	35.18	30.00	17.00	17.00	17.00
Mid	5785	30.00	30.00	35.17	30.00	17.00	17.00	17.00
High	5825	30.00	30.00	35.20	30.00	17.00	17.00	17.00

Duty Cycle CF (dB)	0.32	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	12.50	12.82	30.00	-17.18
Mid	5785	12.00	12.32	30.00	-17.68
High	5825	11.84	12.16	30.00	-17.85

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5745	-1.36	-1.04	17.00	-18.04
Mid	5785	-1.93	-1.61	17.00	-18.61
High	5825	-1.45	-1.13	17.00	-18.13

10.5.8. 802.11n HT20 MODE IN THE 5.8 GHz BAND

Bandwidth and Antenna Gain

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Min 99% BW (MHz)	Directional Gain (dBi)
Low	5745	22.260	17.760	-2.02
Mid	5785	22.680	17.660	-2.02
High	5825	23.940	17.670	-2.02

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5745	30.00	30.00	35.49	30.00	17.00	17.00	17.00
Mid	5785	30.00	30.00	35.47	30.00	17.00	17.00	17.00
High	5825	30.00	30.00	35.47	30.00	17.00	17.00	17.00

Duty Cycle CF (dB)	0.32	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	11.49	11.81	30.00	-18.19
Mid	5785	12.14	12.46	30.00	-17.54
High	5825	12.04	12.36	30.00	-17.64

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5745	-2.44	-2.12	17.00	-19.12
Mid	5785	-1.98	-1.66	17.00	-18.66
High	5825	-2.06	-1.74	17.00	-18.74

10.5.9. 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	44.1	36.1	-2.02
High	5795	45.5	36.1	-2.02

Limits

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

Duty Cycle CF (dB)	0.64	Included in Calculations of Corr'd Power & PPSD

Output Power Results

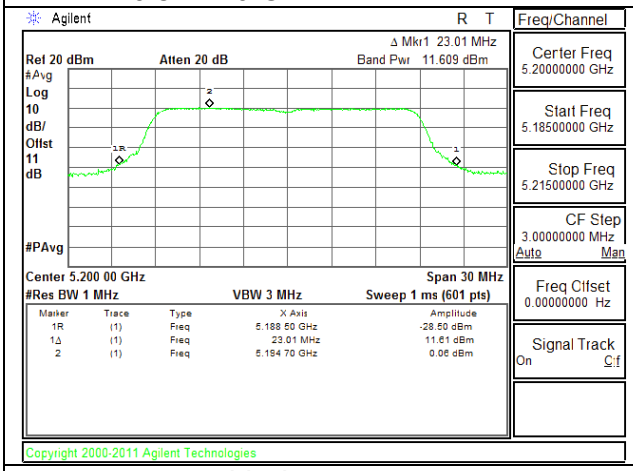
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5755	9.62	10.26	30.00	-19.74
High	5795	9.50	10.14	30.00	-19.86

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5755	-7.02	-6.38	17.00	-23.38
High	5795	-7.52	-6.88	17.00	-23.88

10.5.1. OUTPUT POWER AND PPSD PLOTS, Chain 0

11n HT20 5.2 Mid Ch



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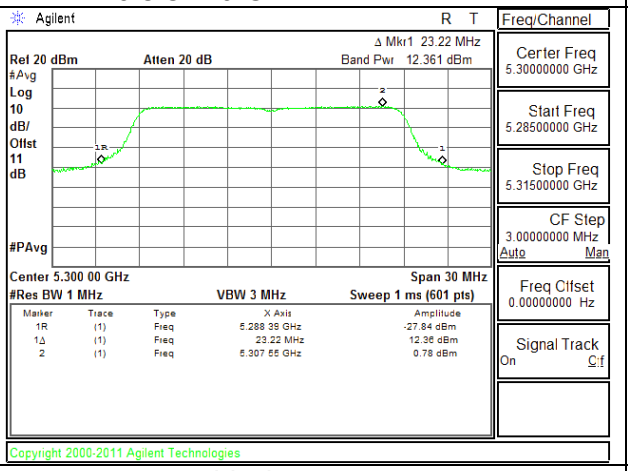
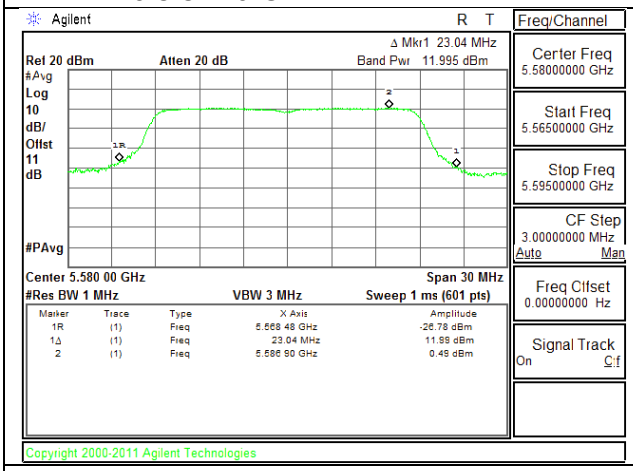
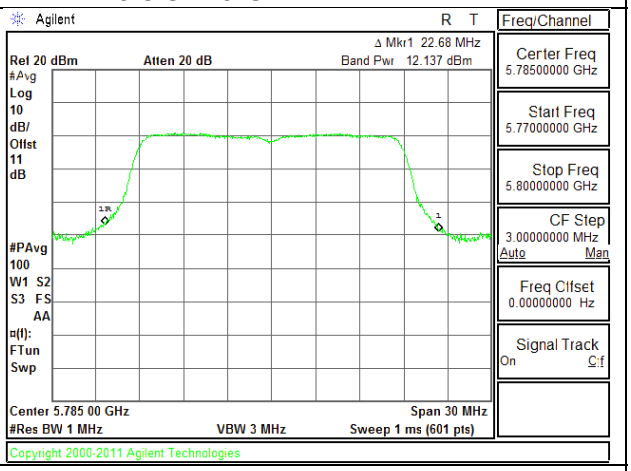


11n HT20 5.5 Mid Ch



11n HT20 5.8 Mid Ch



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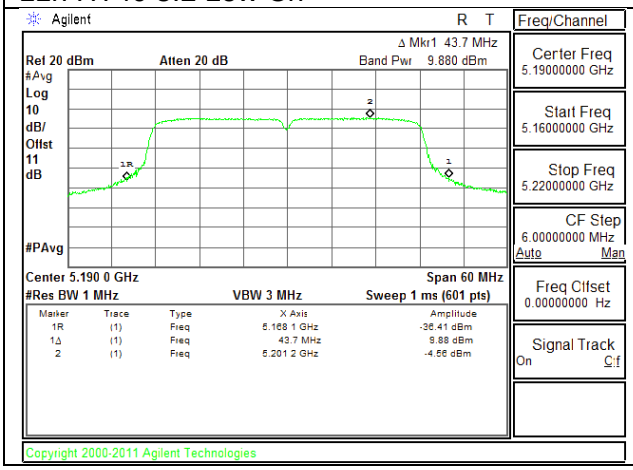

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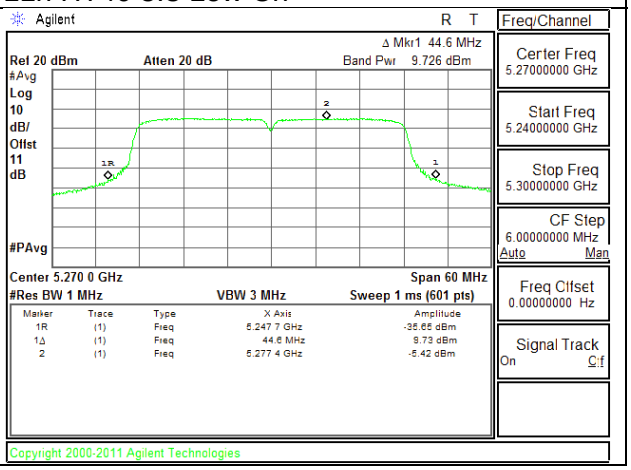

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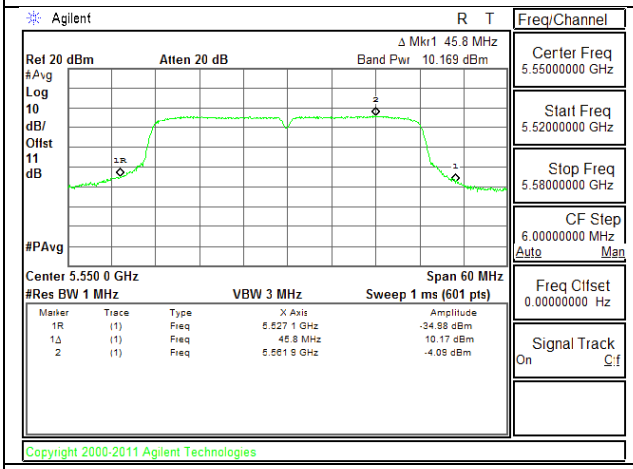

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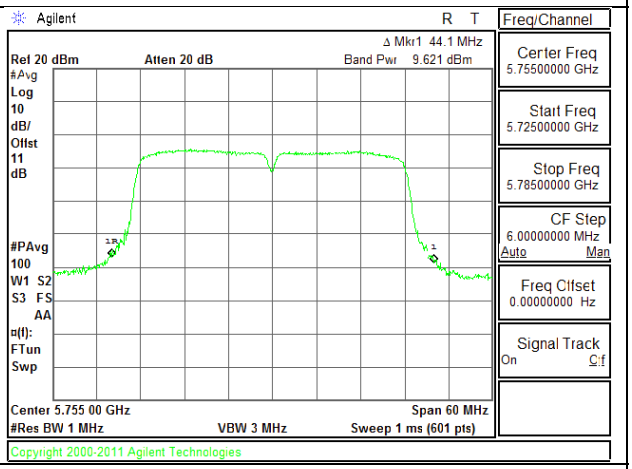

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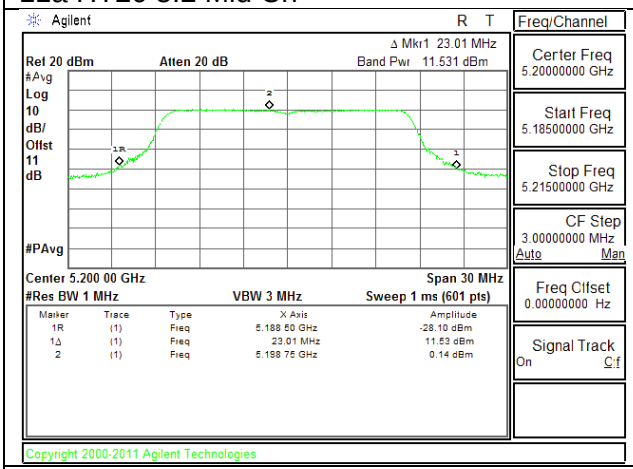

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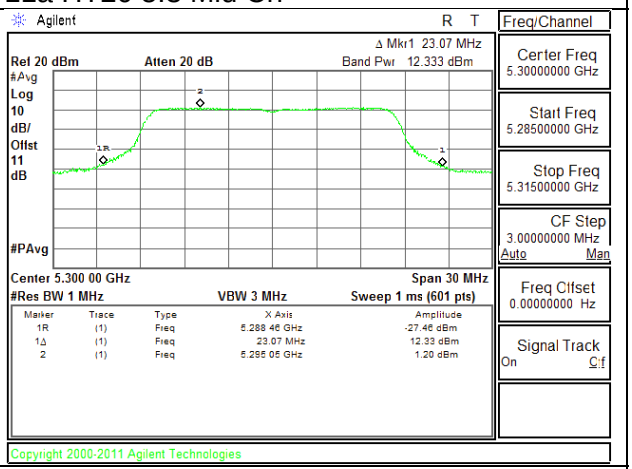

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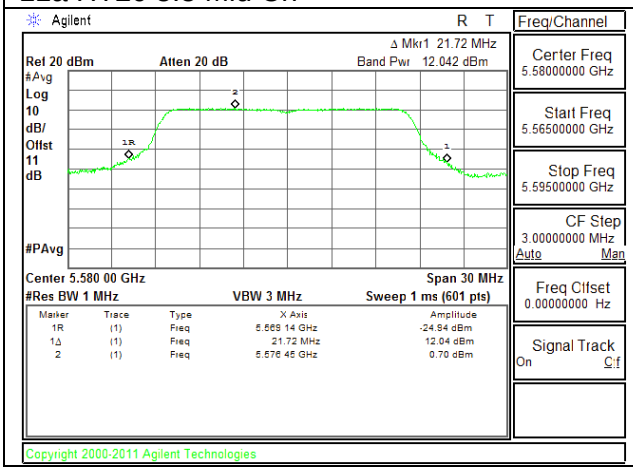

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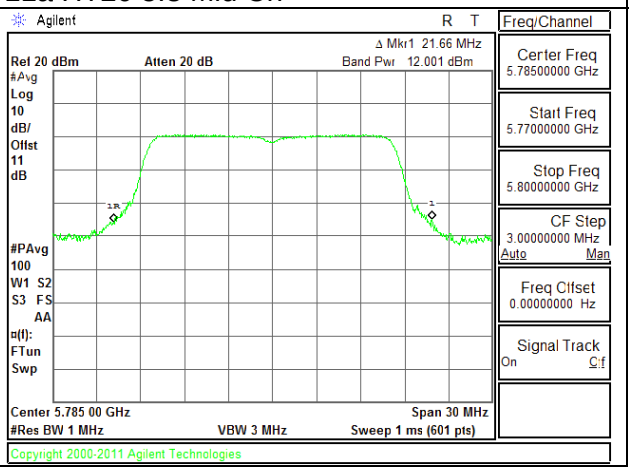

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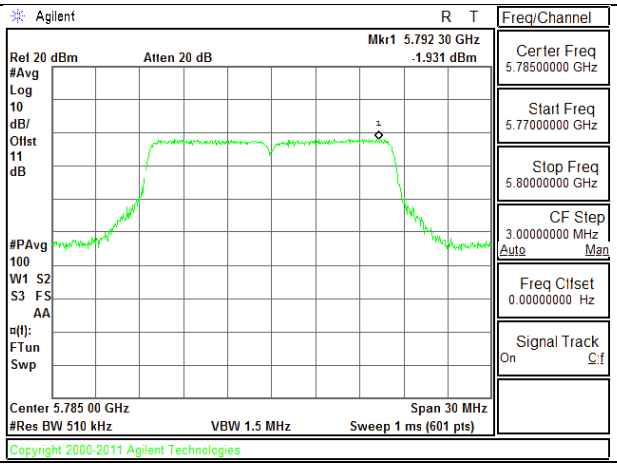

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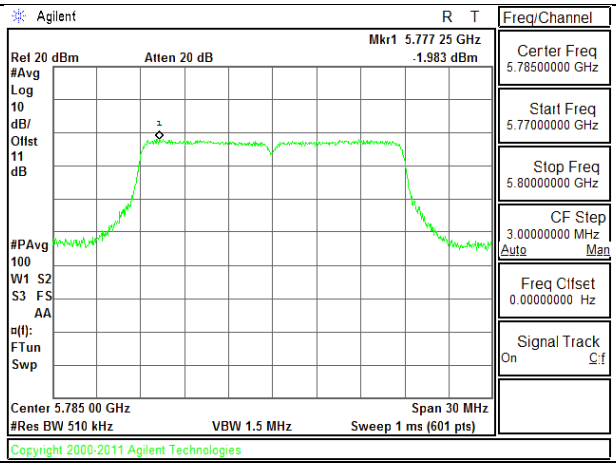
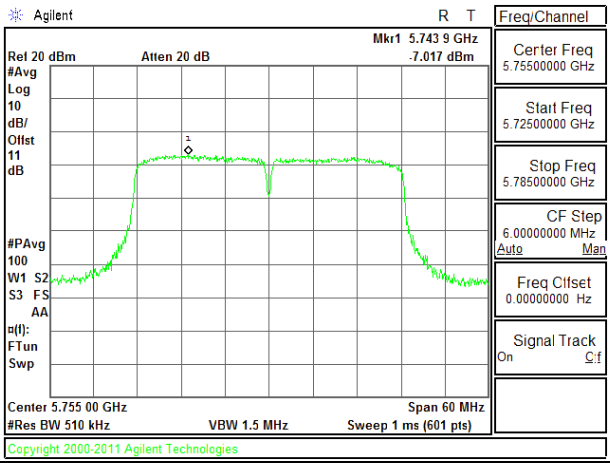


11n HT40 5.8 Low Ch



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 G) 6) c) Method AD:
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.

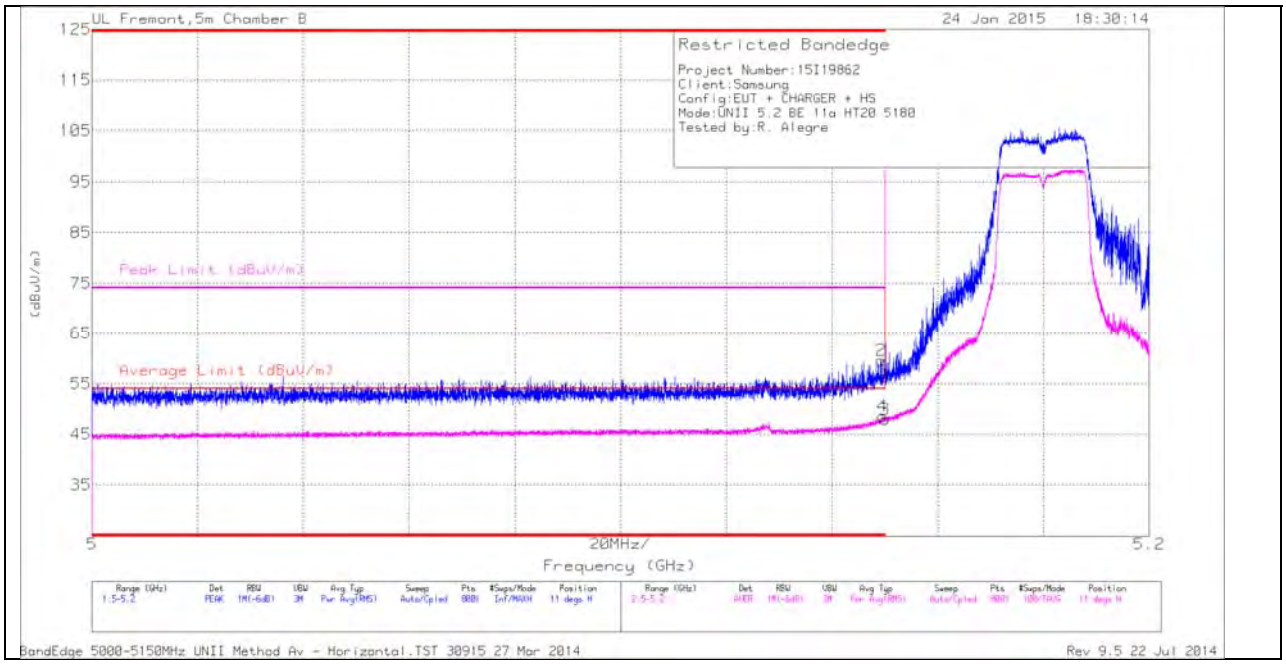
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized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

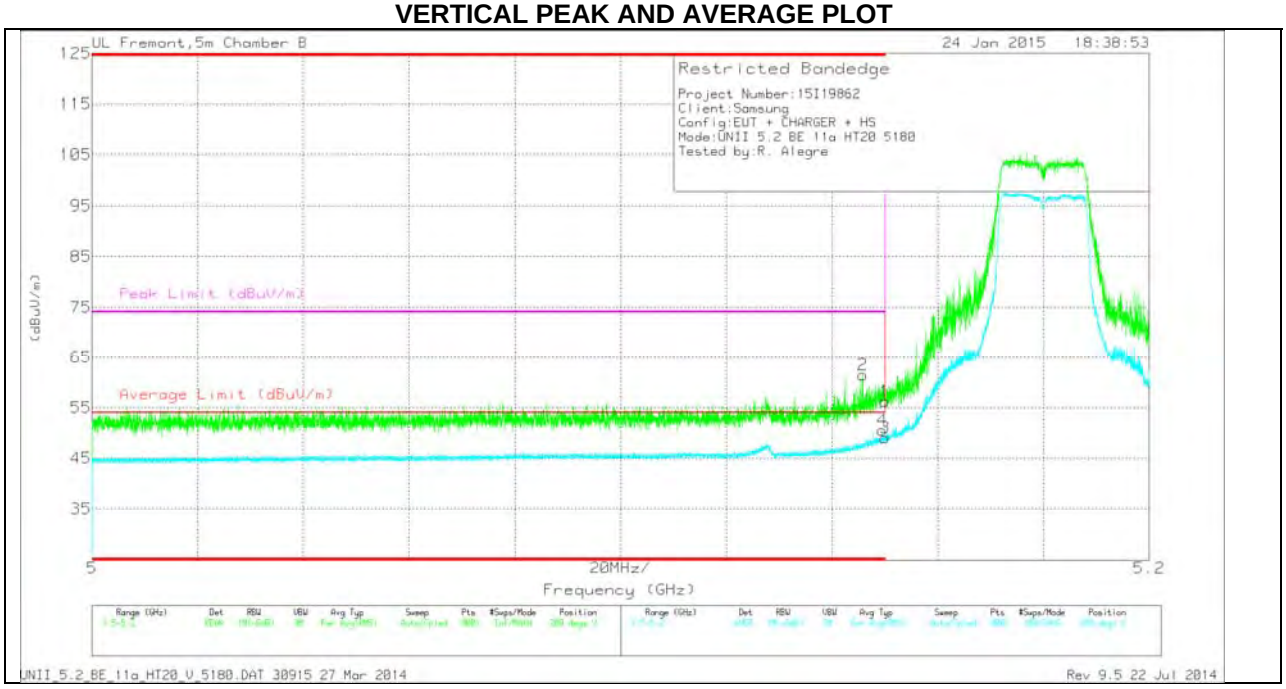
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	42.34	PK	34.3	-20.2	0	56.44	-	-	74	-17.56	11	249	H
2	* 5.149	45.54	PK	34.3	-20.2	0	59.64	-	-	74	-14.36	11	249	H
3	* 5.15	33.53	RMS	34.3	-20.2	.32	47.95	54	-6.05	-	-	11	249	H
4	* 5.15	34.13	RMS	34.3	-20.2	.32	48.55	54	-5.45	-	-	11	249	H

VERTICAL PEAK AND AVERAGE PLOT

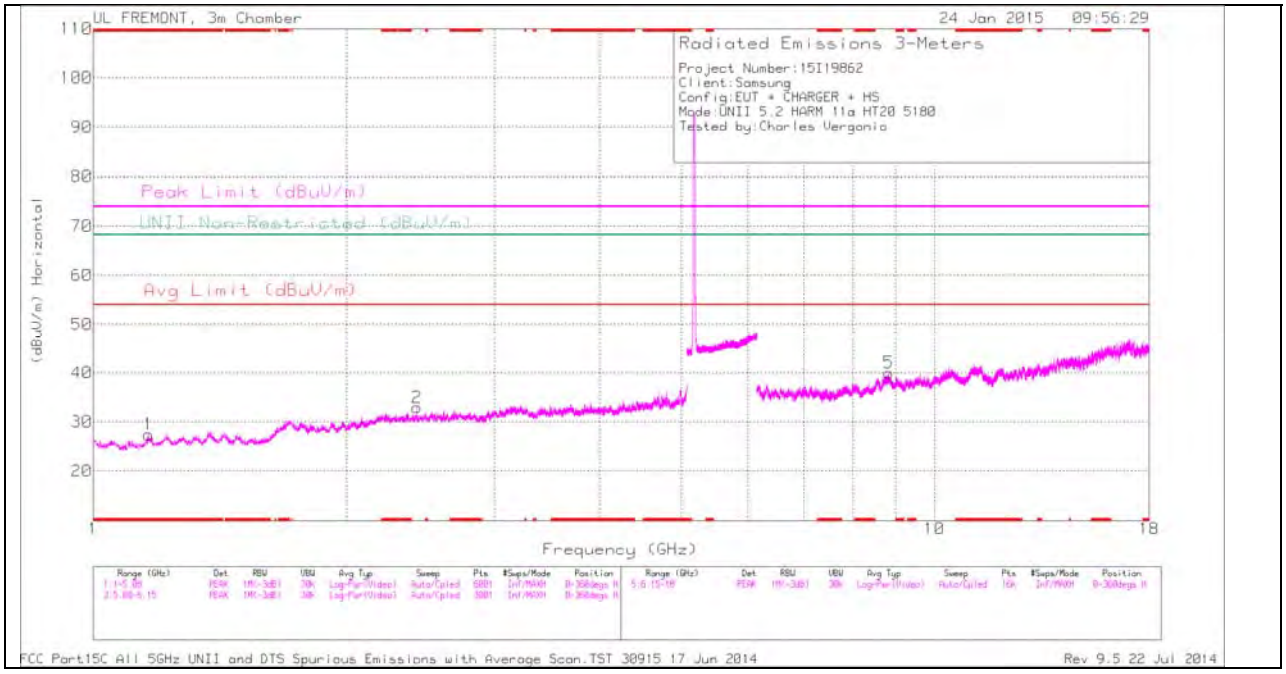


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	42.19	PK	34.3	-20.2	0	56.29	-	-	74	-17.71	289	247	V
2	* 5.146	47.47	PK	34.3	-20.3	0	61.47	-	-	74	-12.53	289	247	V
3	* 5.15	34.6	RMS	34.3	-20.2	.32	49.02	54	-4.98	-	-	289	247	V
4	* 5.15	36.08	RMS	34.3	-20.2	.32	50.5	54	-3.5	-	-	289	247	V

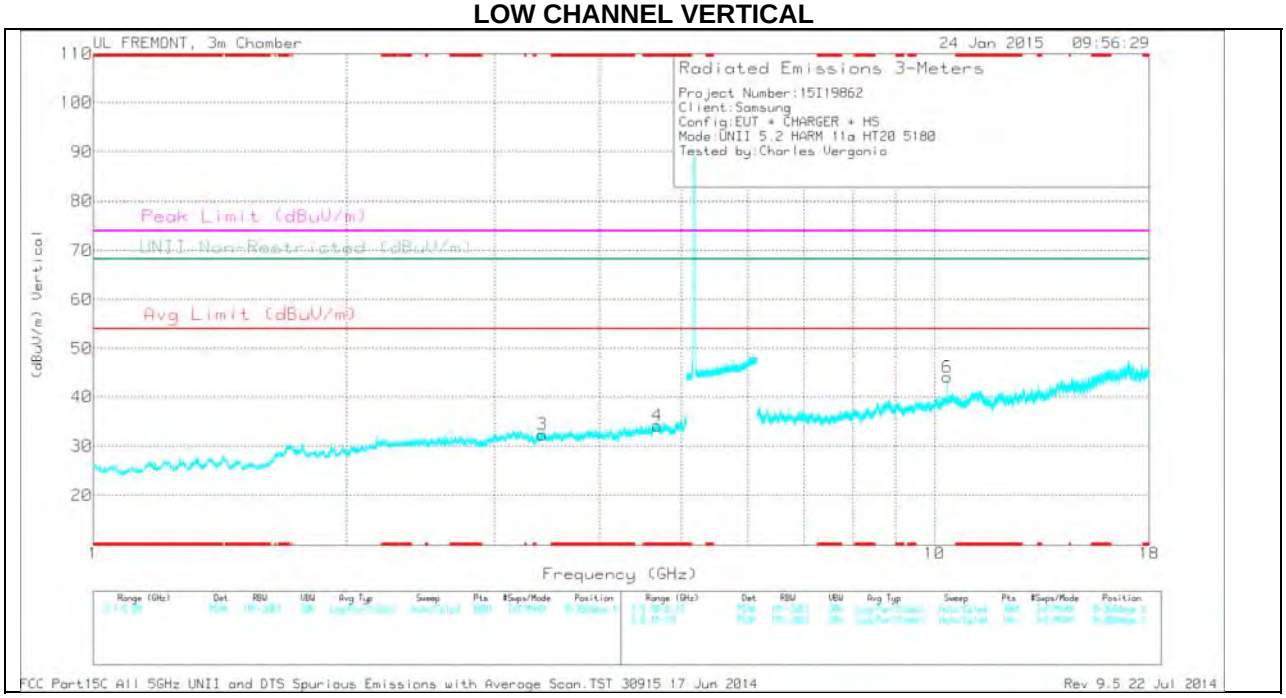
HARMONICS AND SPURIOUS EMISSIONS

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 T711 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.163	32.99	PK	27.6	-33.2	0	27.39	-	-	74	-46.61	-	-	0-360	100	H
4	* 4.686	30.66	PK	33.8	-30.3	0	34.16	-	-	74	-39.84	-	-	0-360	100	V
2	2.427	33.41	PK	32.1	-32.6	0	32.91	-	-	-	-	68.2	-35.29	0-360	100	H
3	3.419	30.96	PK	32.8	-31.4	0	32.36	-	-	-	-	68.2	-35.84	0-360	200	V
5	8.823	29.21	PK	36.6	-25.8	0	40.01	-	-	-	-	68.2	-28.19	0-360	200	H
6	10.359	31.52	PK	37.9	-25.4	0	44.02	-	-	-	-	68.2	-24.18	0-360	100	V

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

PK - Peak detector

Radiated Emissions

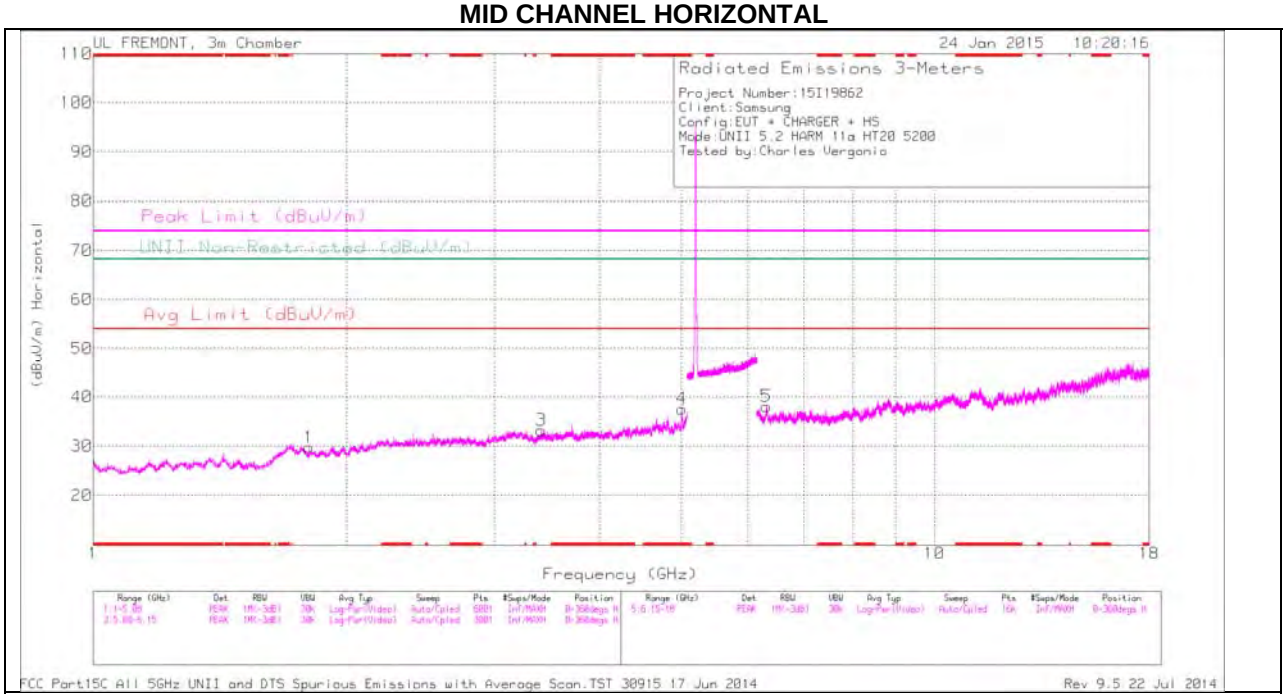
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
10.36	38.22	PK1	37.9	-25.4	0	50.72	-	-	-	-	68.2	-17.48	325	110	V
10.36	29.23	AD1	37.9	-25.4	.32	42.05	-	-	-	-	-	-	325	110	V

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

PK1 - KDB789033 Method: Peak

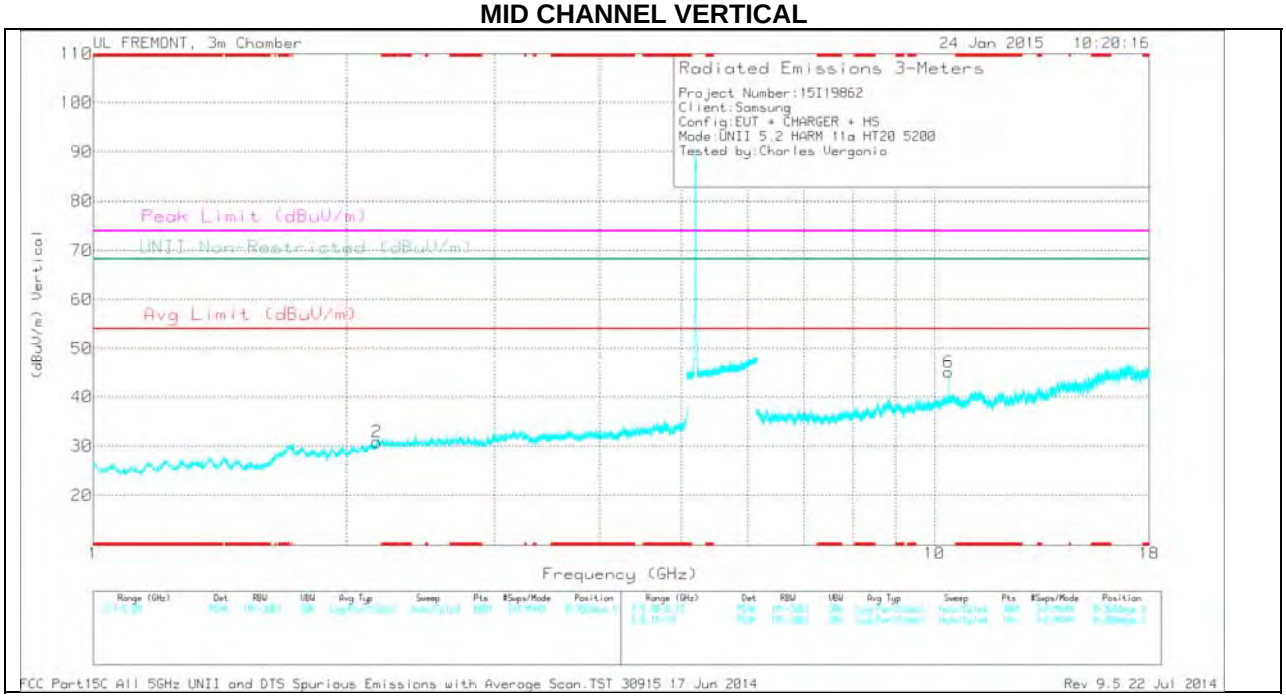
AD1 - KDB789033 Method: AD Primary Power Average

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

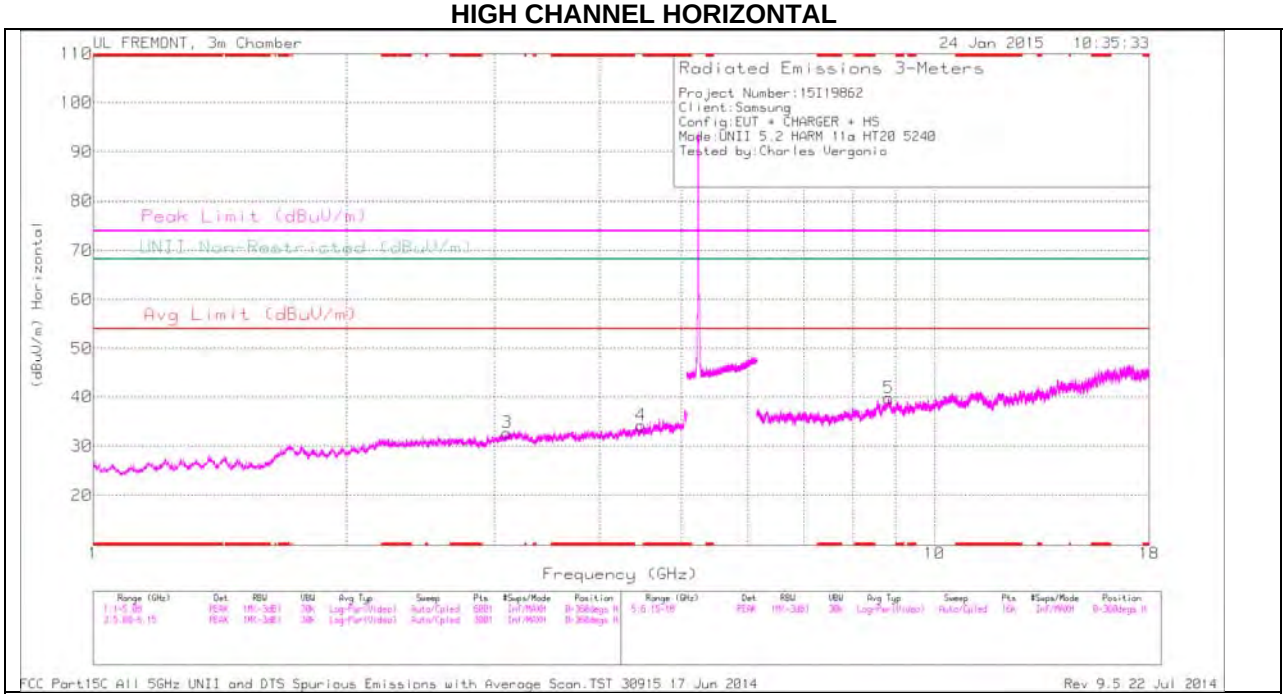
TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (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	* 5.008	33.28	PK	34	-29.7	0	37.58	-	-	74	-36.42	-	-	0-360	100	H
1	1.804	32.41	PK	30.3	-33	0	29.71	-	-	-	-	68.2	-38.49	0-360	200	H
2	2.174	31.73	PK	31.8	-32.7	0	30.83	-	-	-	-	68.2	-37.37	0-360	100	V
3	3.409	32.04	PK	32.8	-31.6	0	33.24	-	-	-	-	68.2	-34.96	0-360	100	H
5	6.314	31.59	PK	36	-29.5	0	38.09	-	-	-	-	68.2	-30.11	0-360	200	H
6	10.399	32.89	PK	38	-25.8	0	45.09	-	-	-	-	68.2	-23.11	0-360	100	V

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

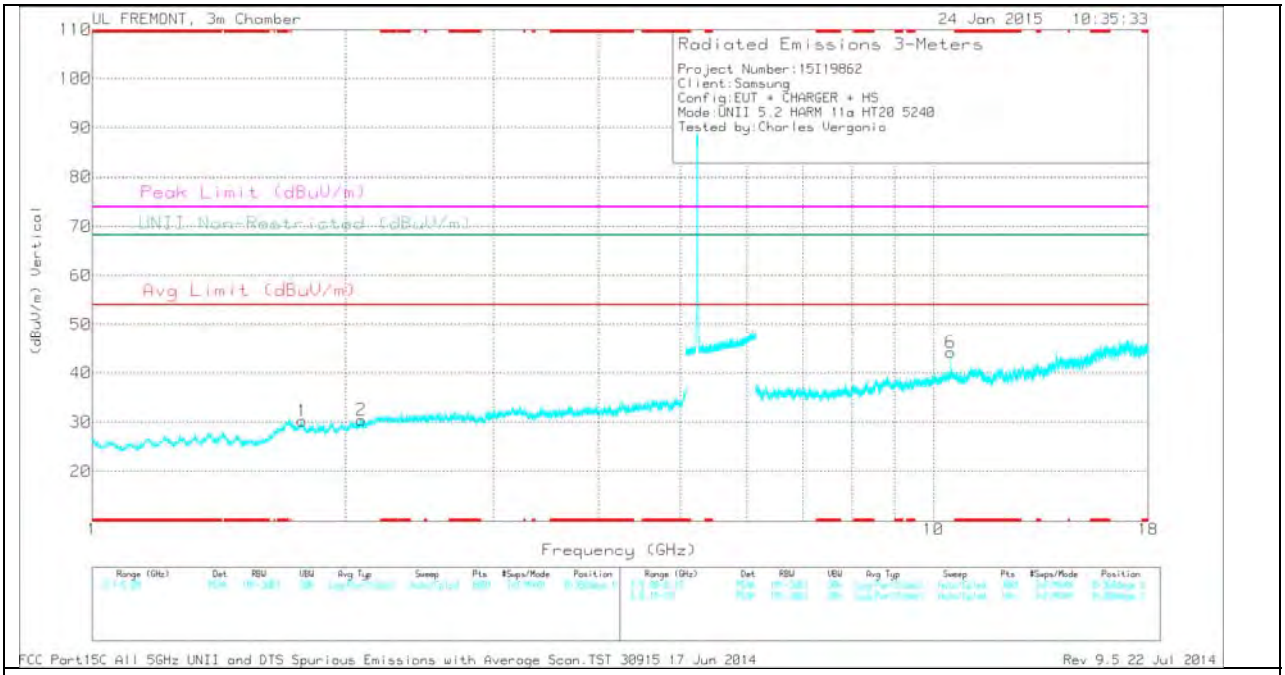
PK - Peak detector

HIGH CHANNEL HORIZONTAL



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

HIGH CHANNEL VERTICAL



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

HIGH CHANNEL DATA

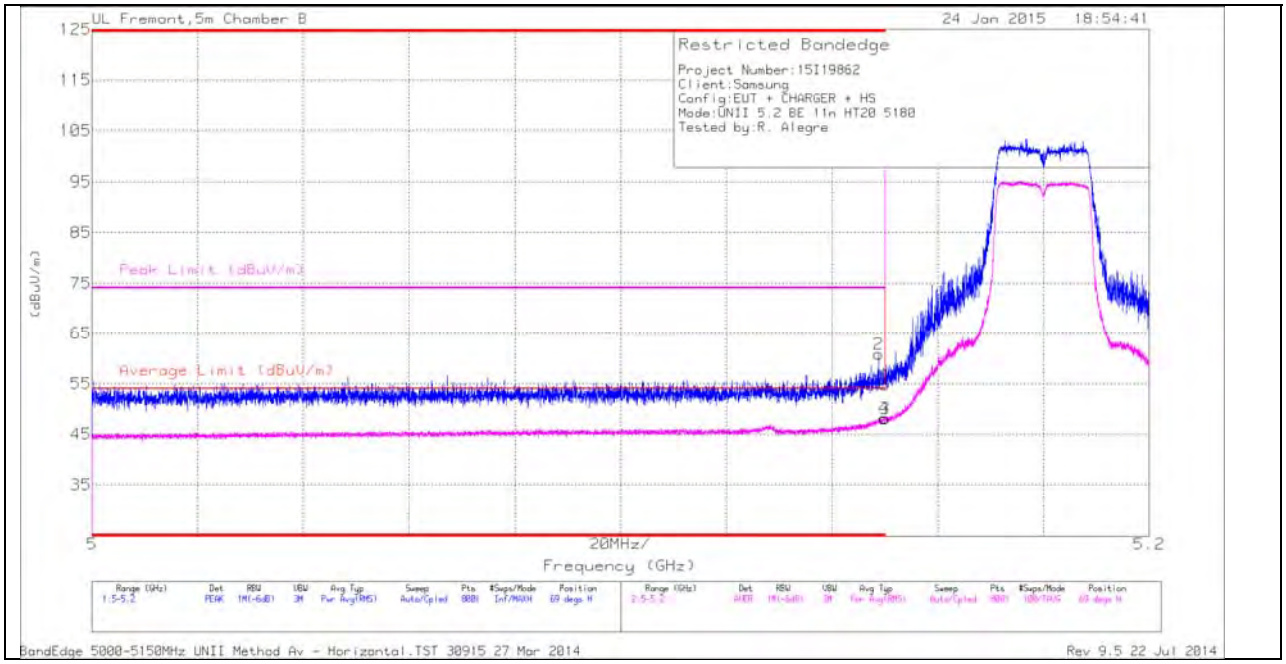
TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (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	1.778	32.46	PK	30.3	-32.5	0	30.26	-	-	-	-	68.2	-37.94	0-360	100	V
2	2.091	32.21	PK	31.1	-32.9	0	30.41	-	-	-	-	68.2	-37.79	0-360	200	V
3	3.105	31.74	PK	33	-32	0	32.74	-	-	-	-	68.2	-35.46	0-360	200	H
4	4.481	31.43	PK	33.6	-30.8	0	34.23	-	-	-	-	68.2	-33.97	0-360	100	H
5	8.829	29.09	PK	36.6	-25.9	0	39.79	-	-	-	-	68.2	-28.41	0-360	100	H
6	10.479	31.8	PK	38.1	-25.7	0	44.2	-	-	-	-	68.2	-24	0-360	100	V

PK - Peak detector

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

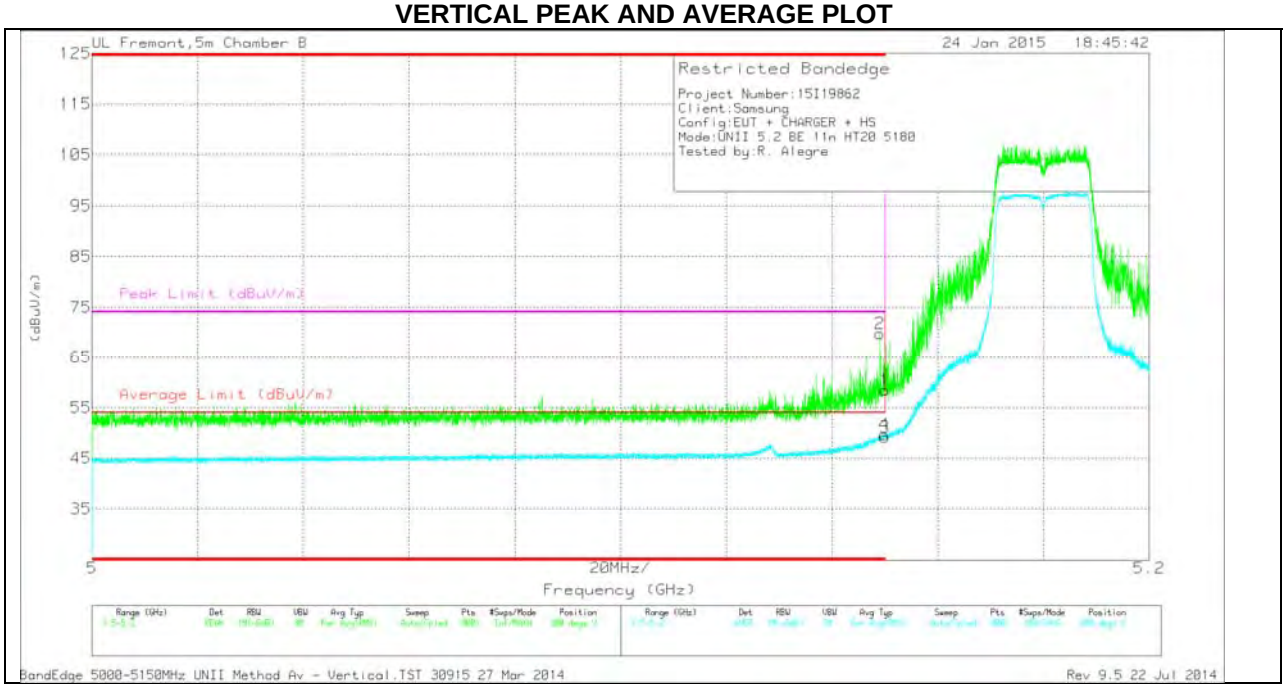
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.149	46.72	PK	34.3	-20.2	0	60.82	-	-	74	-13.18	69	183	H
1	* 5.15	40.63	PK	34.3	-20.2	0	54.73	-	-	74	-19.27	69	183	H
3	* 5.15	33.59	RMS	34.3	-20.2	.32	48.01	54	-5.99	-	-	69	183	H
4	* 5.15	33.71	RMS	34.3	-20.2	.32	48.13	54	-5.87	-	-	69	183	H

VERTICAL PEAK AND AVERAGE PLOT

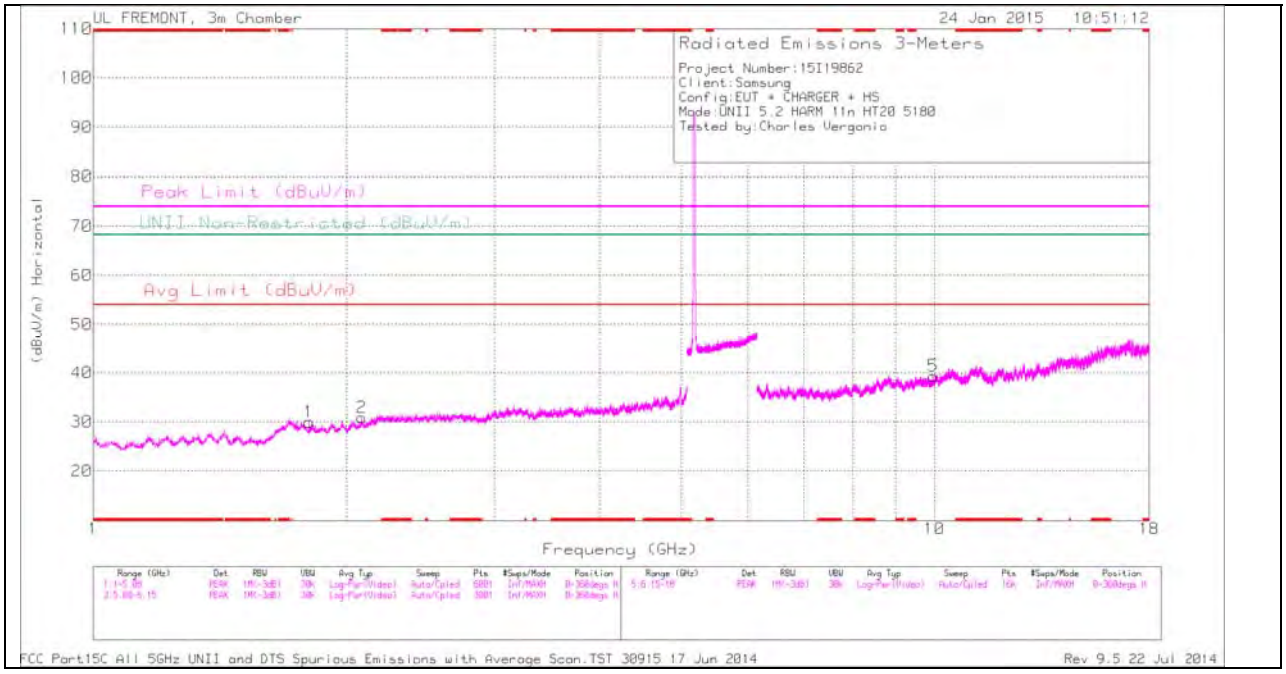


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	44.44	PK	34.3	-20.2	0	58.54	-	-	74	-15.46	300	218	V
2	* 5.149	55.72	PK	34.3	-20.2	0	69.82	-	-	74	-4.18	300	218	V
3	* 5.15	34.7	RMS	34.3	-20.2	.32	49.12	54	-4.88	-	-	300	218	V
4	* 5.15	35.22	RMS	34.3	-20.2	.32	49.64	54	-4.36	-	-	300	218	V

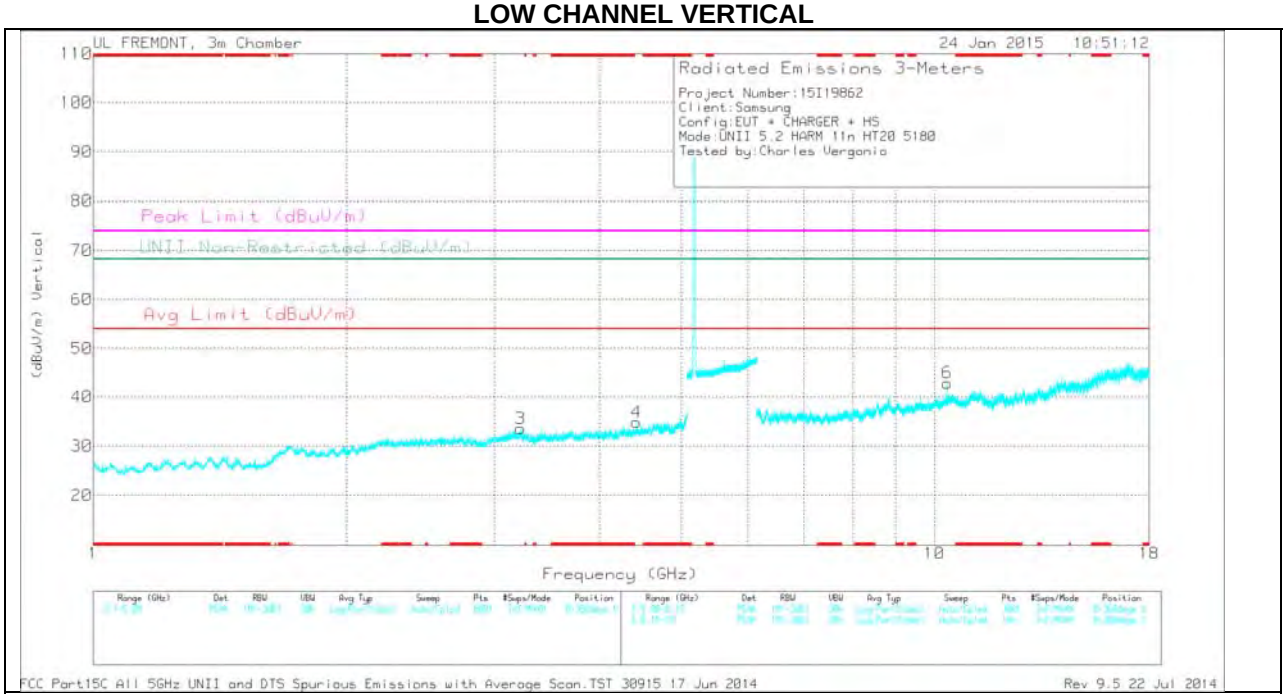
HARMONICS AND SPURIOUS EMISSIONS

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 T711 (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	1.806	32.65	PK	30.3	-33	0	29.95	-	-	-	-	68.2	-38.25	0-360	200	H
2	2.085	32.69	PK	31	-32.8	0	30.89	-	-	-	-	68.2	-37.31	0-360	100	H
3	3.221	31.75	PK	33.1	-31.3	0	33.55	-	-	-	-	68.2	-34.65	0-360	200	V
4	4.427	31.65	PK	33.6	-30.4	0	34.85	-	-	-	-	68.2	-33.35	0-360	200	V
5	9.974	27.54	PK	37.7	-25.9	0	39.34	-	-	-	-	68.2	-28.86	0-360	200	H
6	10.359	30.33	PK	37.9	-25.4	0	42.83	-	-	-	-	68.2	-25.37	0-360	100	V

PK - Peak detector

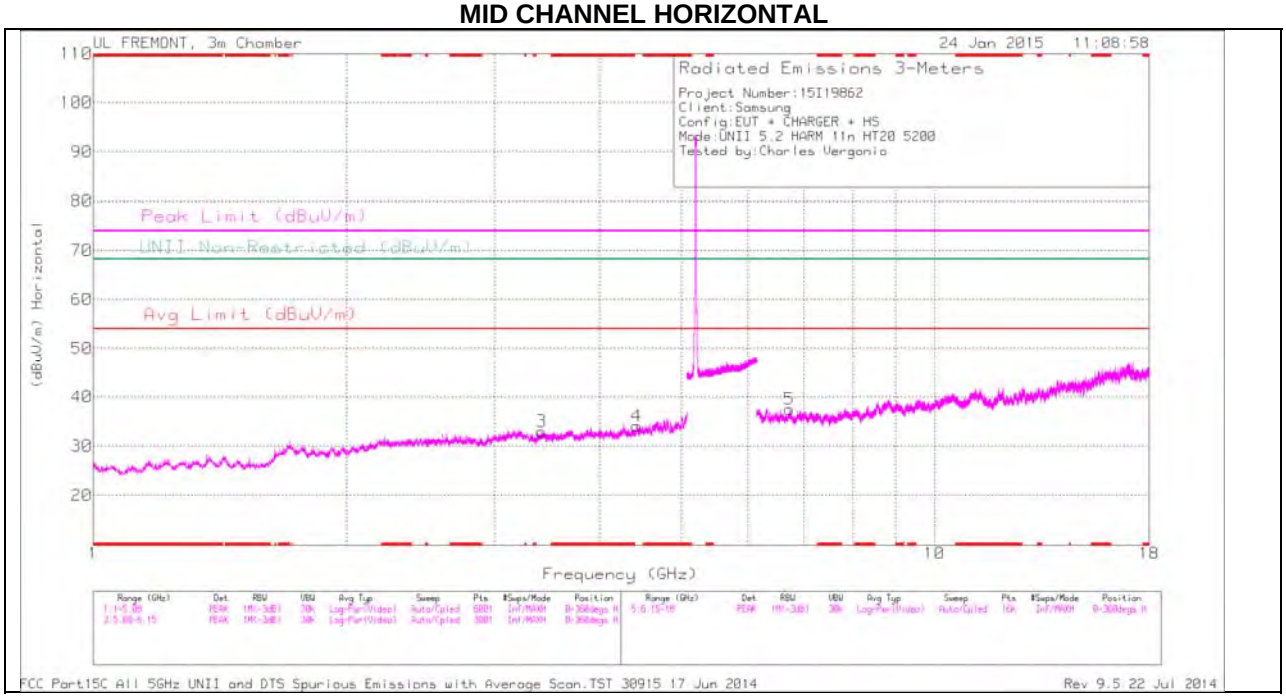
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
10.36	37.85	PK1	38	-25.4	0	50.45	-	-	-	-	68.2	-17.75	323	102	V
10.36	29.77	AD1	37.9	-25.4	.32	42.59	-	-	-	-	-	-	323	102	V

PK1 - KDB789033 Method: Peak

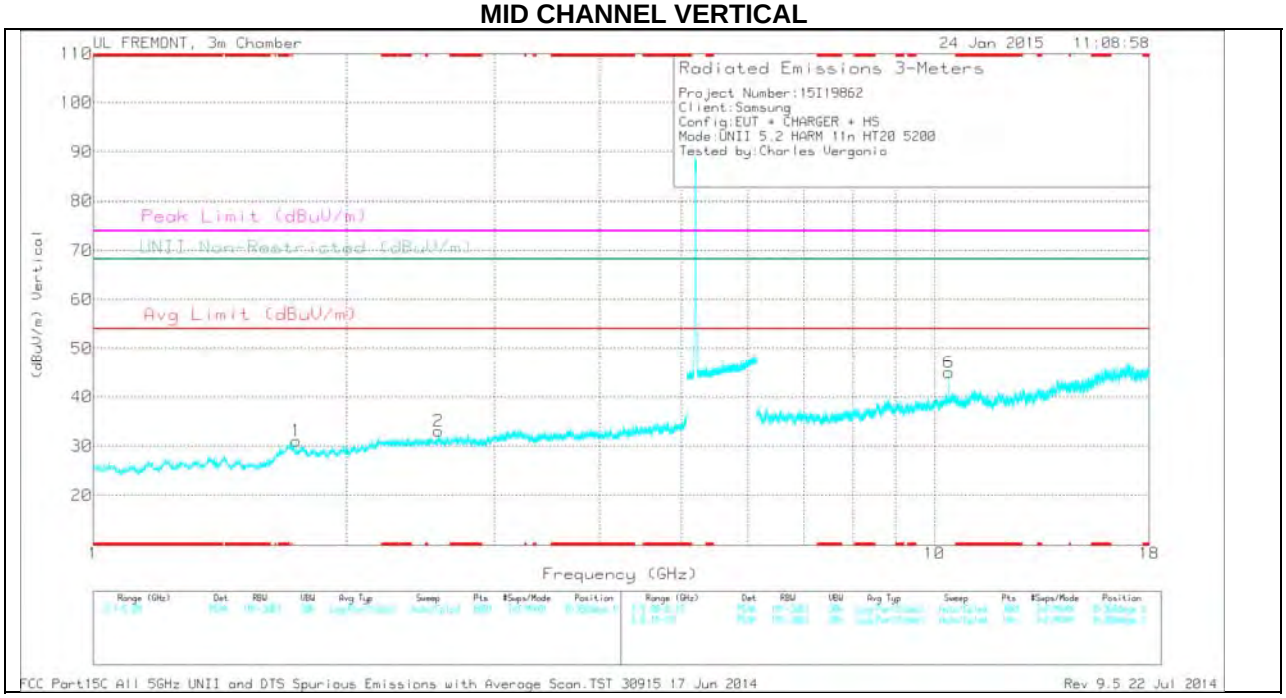
AD1 - KDB789033 Method: AD Primary Power Average

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 T711 (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	1.743	32.86	PK	30.5	-32.3	0	31.06	-	-	-	-	68.2	-37.14	0-360	100	V
2	2.574	33.07	PK	32.3	-32.3	0	33.07	-	-	-	-	68.2	-35.13	0-360	200	V
3	3.415	31.68	PK	32.8	-31.5	0	32.98	-	-	-	-	68.2	-35.22	0-360	200	H
4	4.429	30.87	PK	33.6	-30.4	0	34.07	-	-	-	-	68.2	-34.13	0-360	100	H
5	6.725	30.78	PK	35.8	-29.1	0	37.48	-	-	-	-	68.2	-30.72	0-360	200	H
6	10.4	32.82	PK	38	-25.8	0	45.02	-	-	-	-	68.2	-23.18	0-360	100	V

PK - Peak detector

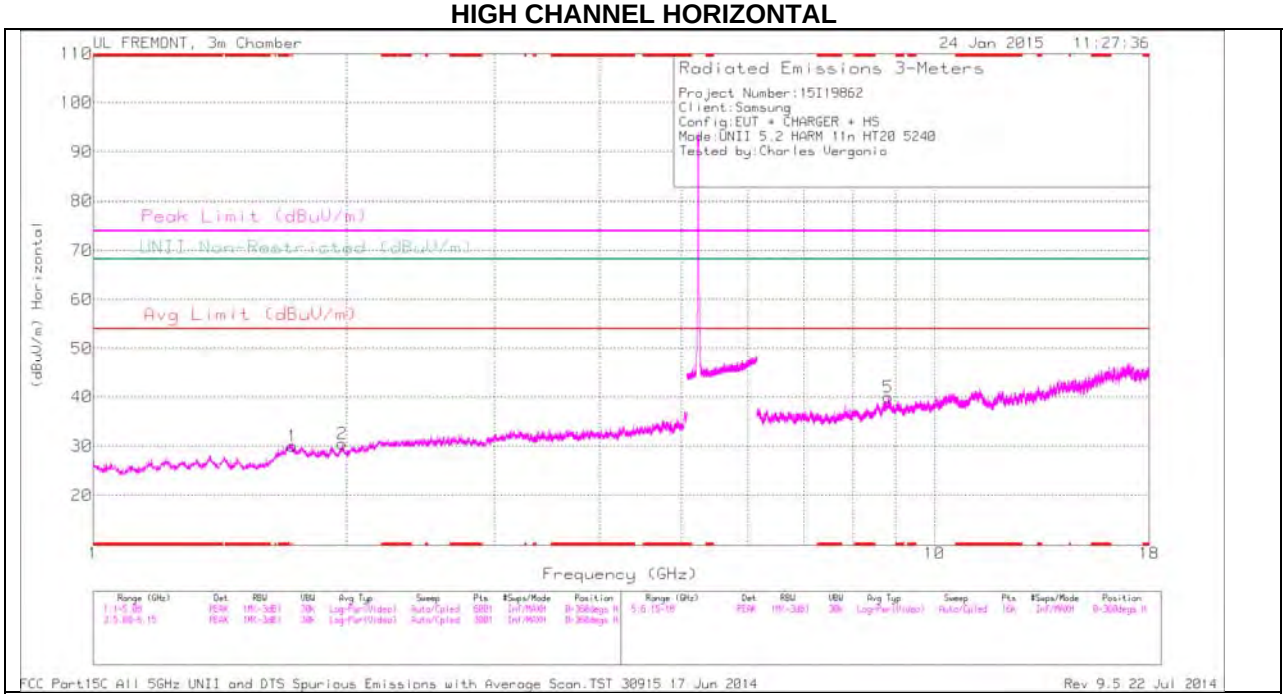
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
10.4	39.59	PK1	38	-25.8	0	51.79	-	-	-	-	68.2	-16.41	327	101	V
10.4	30.87	AD1	38	-25.8	.32	43.39	-	-	-	-	-	-	327	101	V

PK1 - KDB789033 Method: Peak

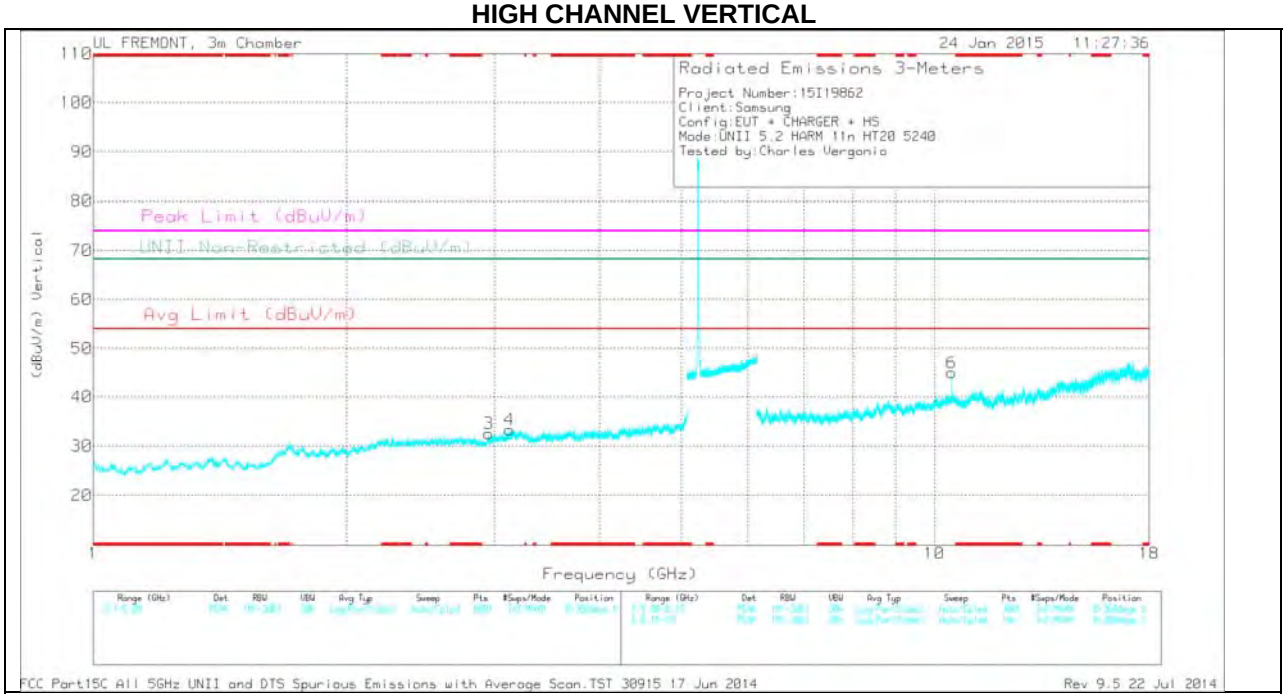
AD1 - KDB789033 Method: AD Primary Power Average

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

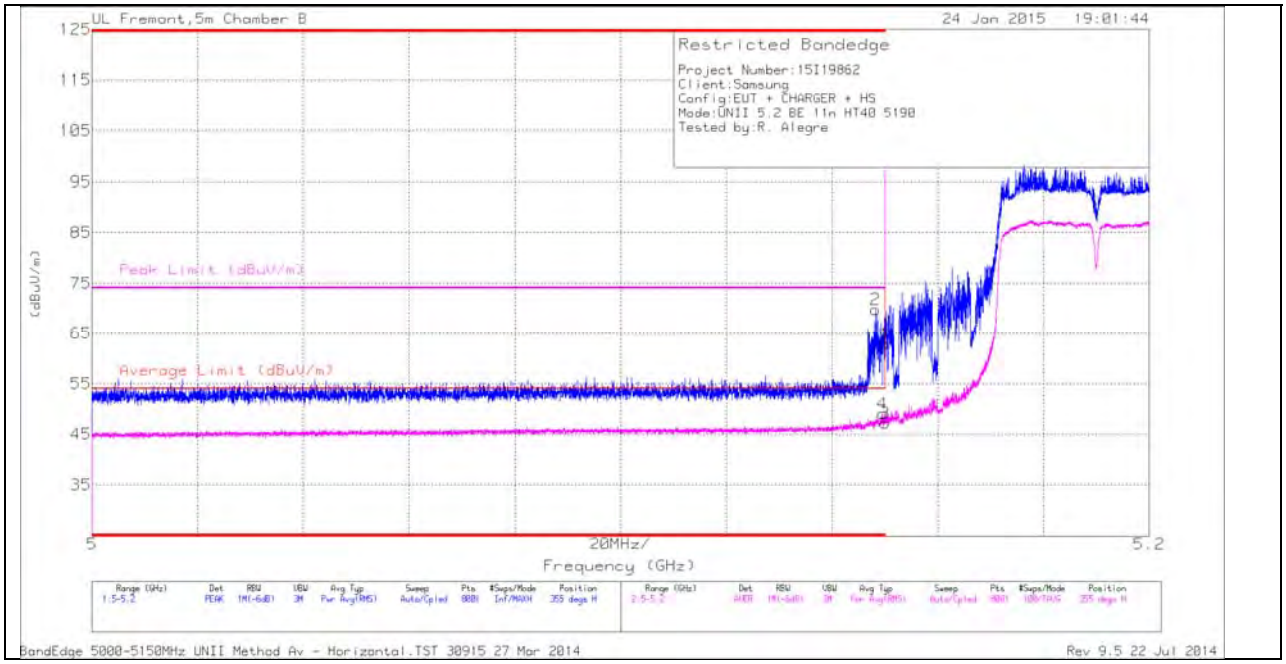
TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (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	1.726	31.46	PK	30.6	-32.1	0	29.96	-	-	-	-	68.2	-38.24	0-360	200	H
2	1.977	32.47	PK	30.2	-32.2	0	30.47	-	-	-	-	68.2	-37.73	0-360	100	H
3	2.954	32.32	PK	32.3	-32.1	0	32.52	-	-	-	-	68.2	-35.68	0-360	200	V
4	3.125	32.32	PK	33	-32	0	33.32	-	-	-	-	68.2	-34.88	0-360	200	V
5	8.813	28.87	PK	36.6	-25.5	0	39.97	-	-	-	-	68.2	-28.23	0-360	100	H
6	10.479	32.54	PK	38.1	-25.7	0	44.94	-	-	-	-	68.2	-23.26	0-360	100	V

PK - Peak detector

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

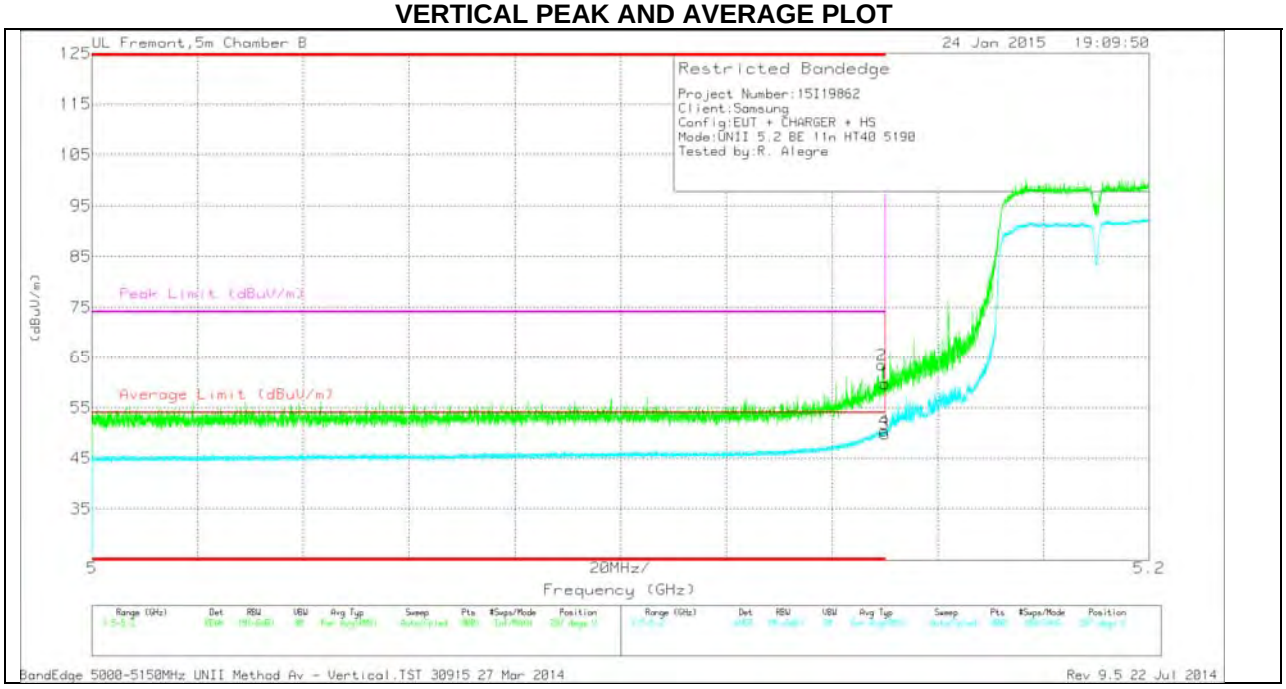
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.148	55.7	PK	34.3	-20.2	0	69.8	-	-	74	-4.2	355	389	H
1	* 5.15	48.91	PK	34.3	-20.2	0	63.01	-	-	74	-10.99	355	389	H
3	* 5.15	32.43	RMS	34.3	-20.2	.64	47.17	54	-6.83	-	-	355	389	H
4	* 5.15	34.35	RMS	34.3	-20.2	.64	49.09	54	-4.91	-	-	355	389	H

VERTICAL PEAK AND AVERAGE PLOT

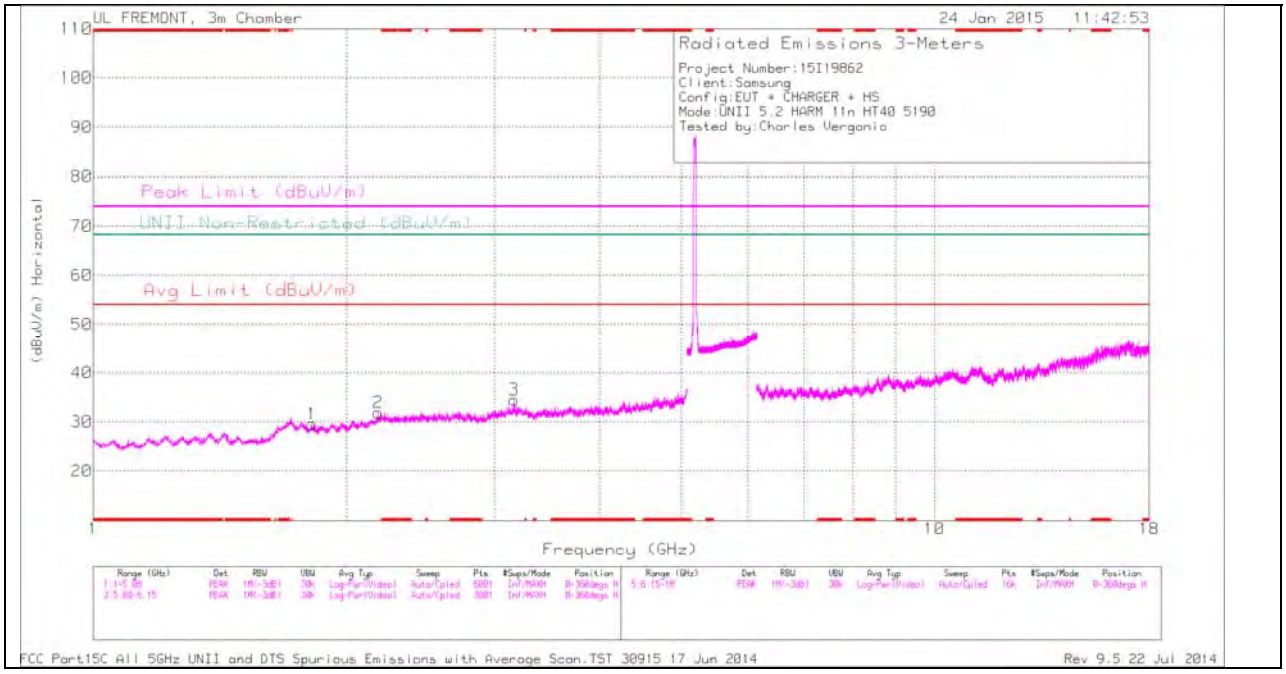


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.149	49.32	PK	34.3	-20.2	0	63.42	-	-	74	-10.58	297	217	V
1	* 5.15	45.6	PK	34.3	-20.2	0	59.7	-	-	74	-14.3	297	217	V
3	* 5.15	35.1	RMS	34.3	-20.2	.64	49.84	54	-4.16	-	-	297	217	V
4	* 5.15	35.71	RMS	34.3	-20.2	.64	50.45	54	-3.55	-	-	297	217	V

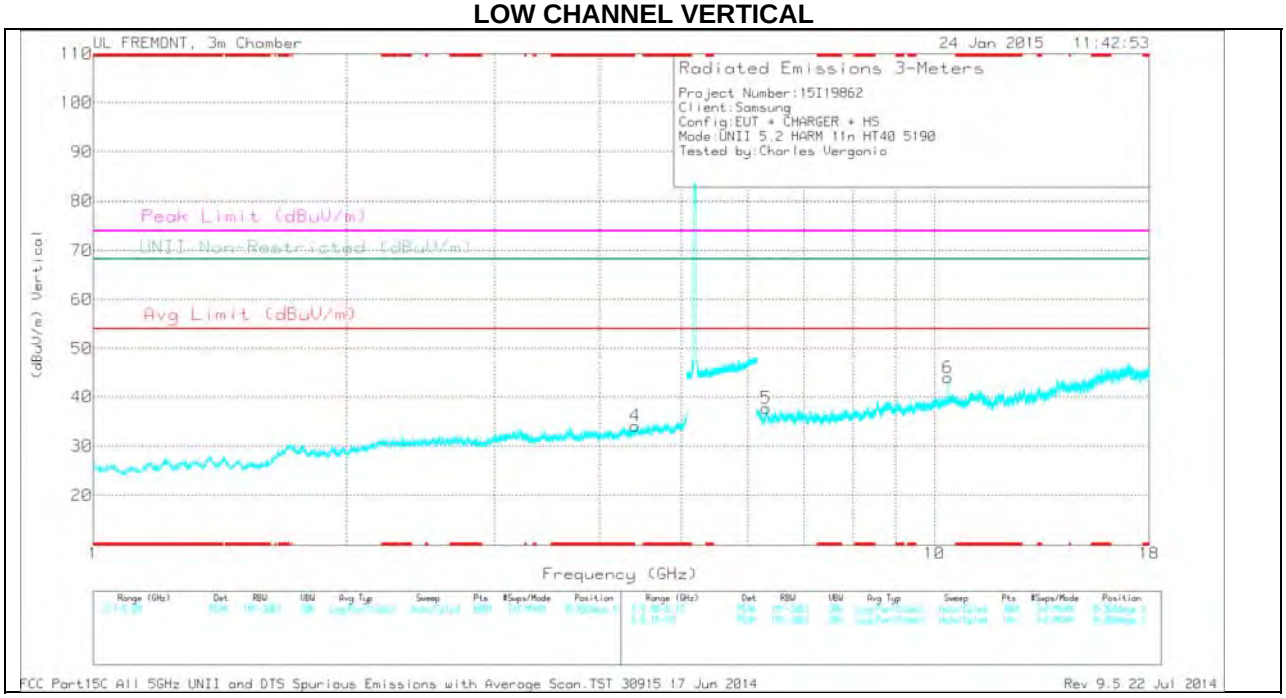
HARMONICS AND SPURIOUS EMISSIONS

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 T711 (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	1.82	32.36	PK	30.3	-33.1	0	29.56	-	-	-	-	68.2	-38.64	0-360	100	H
2	2.181	32.67	PK	31.9	-32.7	0	31.87	-	-	-	-	68.2	-36.33	0-360	200	H
3	3.166	33.01	PK	33.1	-31.6	0	34.51	-	-	-	-	68.2	-33.69	0-360	200	H
4	4.41	31.52	PK	33.5	-30.9	0	34.12	-	-	-	-	68.2	-34.08	0-360	200	V
5	6.312	31.21	PK	36	-29.5	0	37.71	-	-	-	-	68.2	-30.49	0-360	100	V
6	10.379	31.53	PK	38	-25.6	0	43.93	-	-	-	-	68.2	-24.27	0-360	100	V

PK - Peak detector

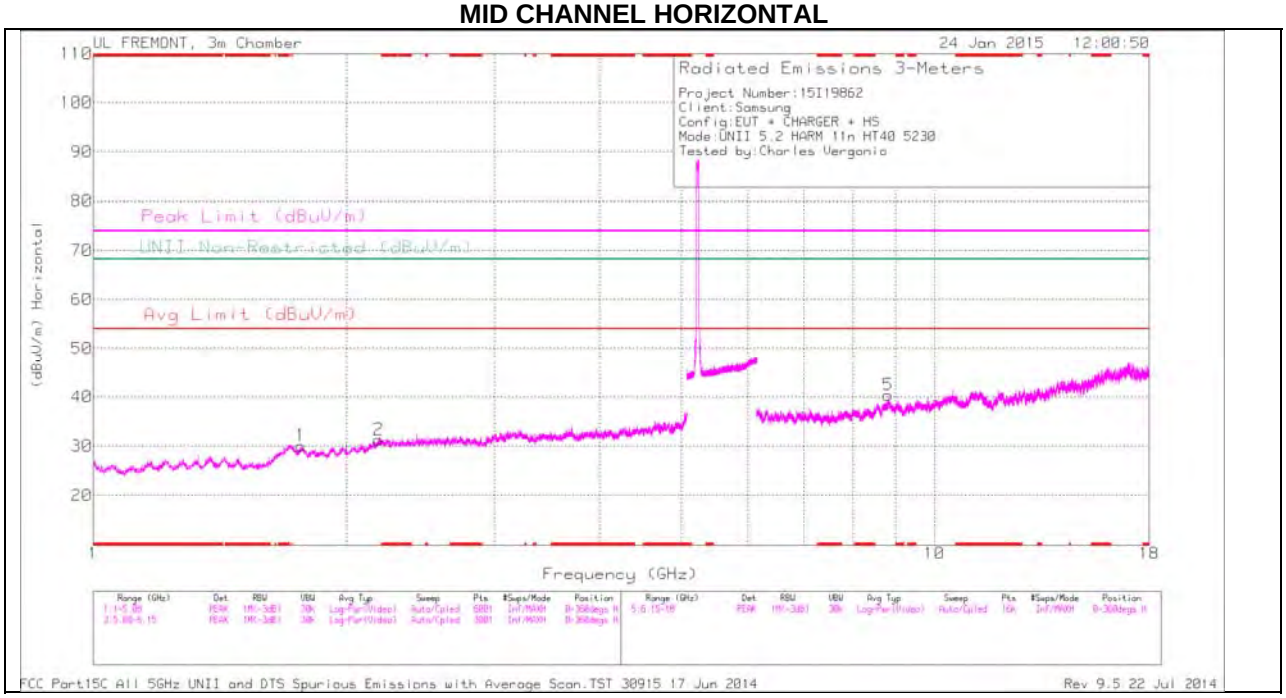
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
10.38	38.88	PK1	38	-25.6	0	51.28	-	-	-	-	68.2	-16.92	326	105	V
10.38	30.46	AD1	38	-25.6	.64	43.5	-	-	-	-	-	-	326	105	V

PK1 - KDB789033 Method: Peak

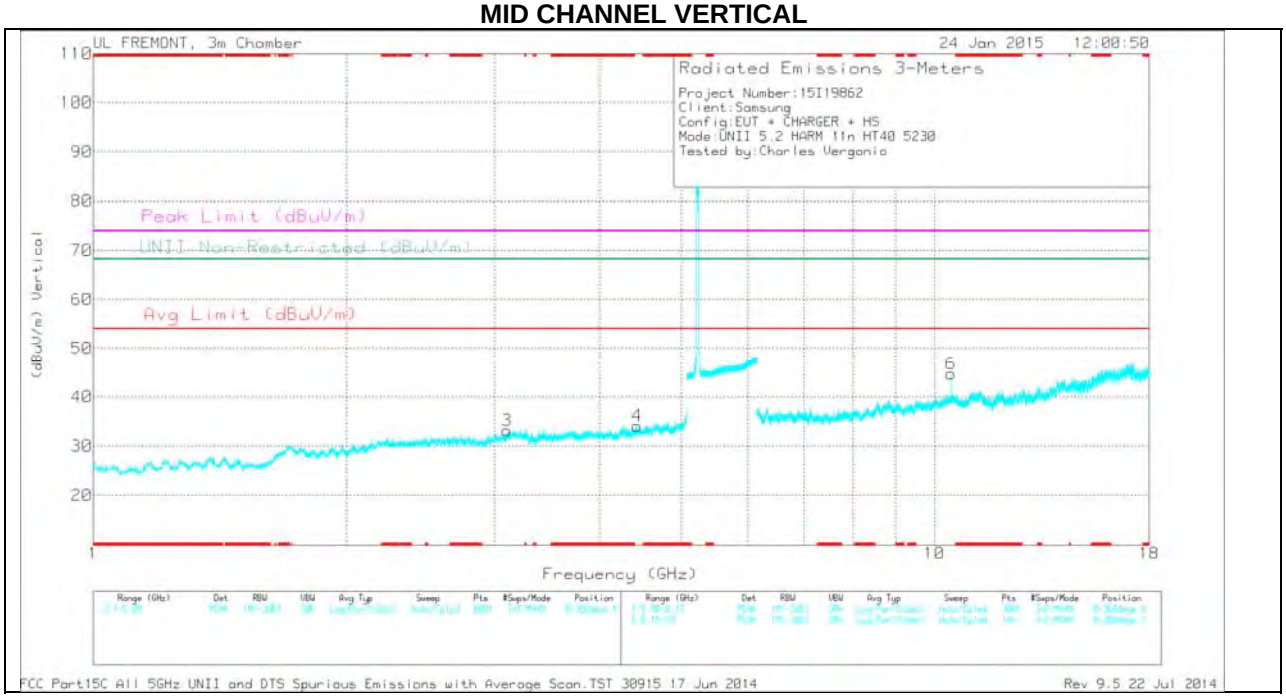
AD1 - KDB789033 Method: AD Primary Power Average

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 T711 (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	1.766	32.04	PK	30.4	-32.4	0	30.04	-	-	-	-	68.2	-38.16	0-360	200	H
2	2.184	32.01	PK	31.9	-32.6	0	31.31	-	-	-	-	68.2	-36.89	0-360	100	H
3	3.106	32.28	PK	33	-32.1	0	33.18	-	-	-	-	68.2	-35.02	0-360	200	V
4	4.433	31.01	PK	33.6	-30.5	0	34.11	-	-	-	-	68.2	-34.09	0-360	200	V
5	8.815	29.3	PK	36.6	-25.5	0	40.4	-	-	-	-	68.2	-27.8	0-360	100	H
6	10.459	32.36	PK	38.1	-25.7	0	44.76	-	-	-	-	68.2	-23.44	0-360	100	V

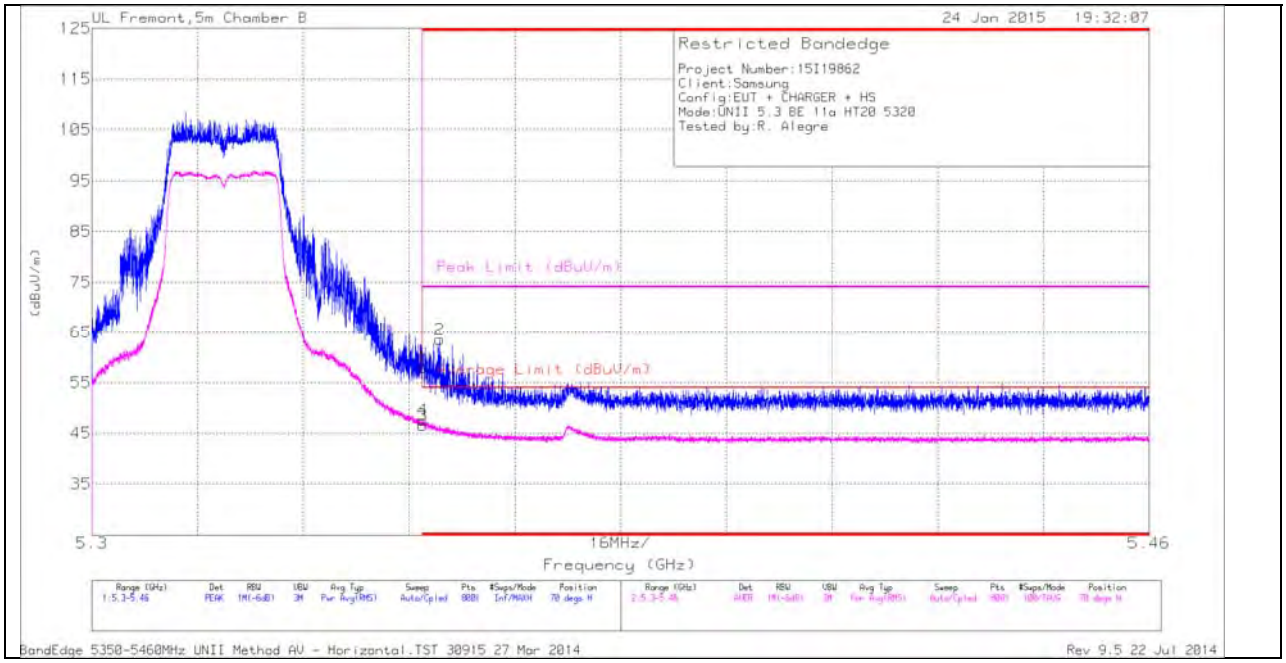
PK - Peak detector

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)

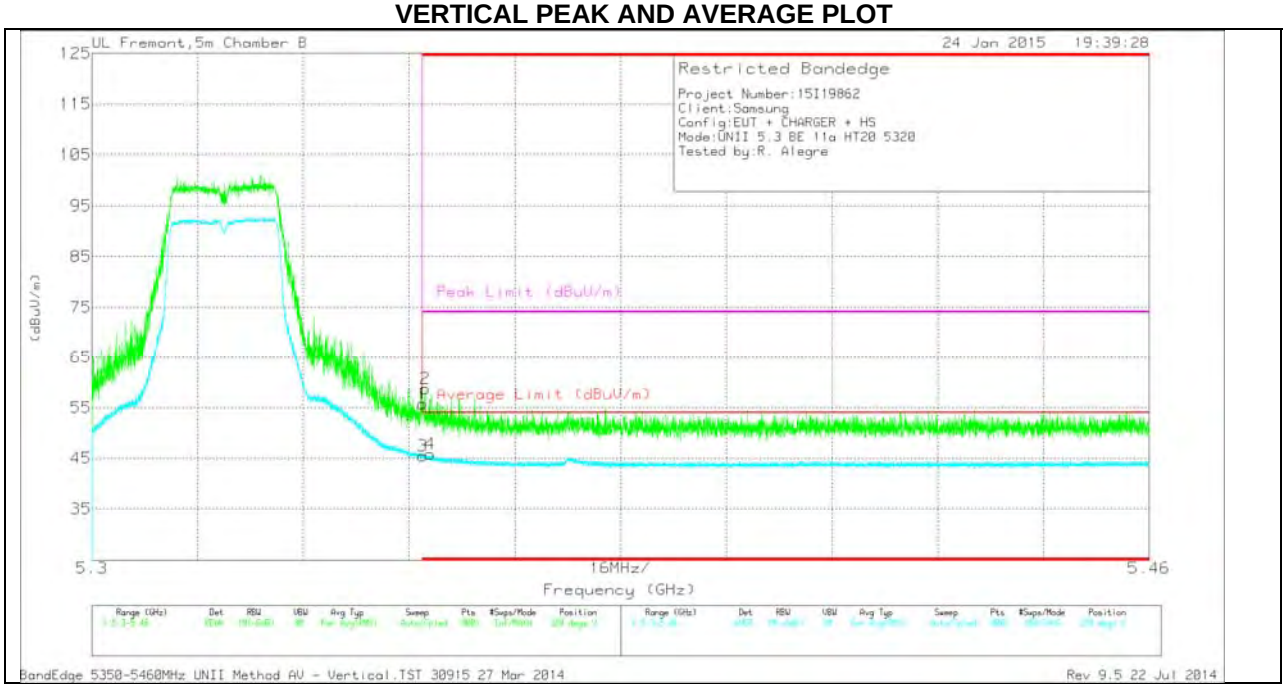
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	43.57	PK	34.5	-20.1	0	57.97	-	-	74	-16.03	70	278	H
3	* 5.35	31.87	RMS	34.5	-20.1	.32	46.59	54	-7.41	-	-	70	278	H
4	* 5.35	32.84	RMS	34.5	-20.1	.32	47.56	54	-6.44	-	-	70	278	H
2	* 5.353	49.11	PK	34.5	-20	0	63.61	-	-	74	-10.39	70	278	H

VERTICAL PEAK AND AVERAGE PLOT

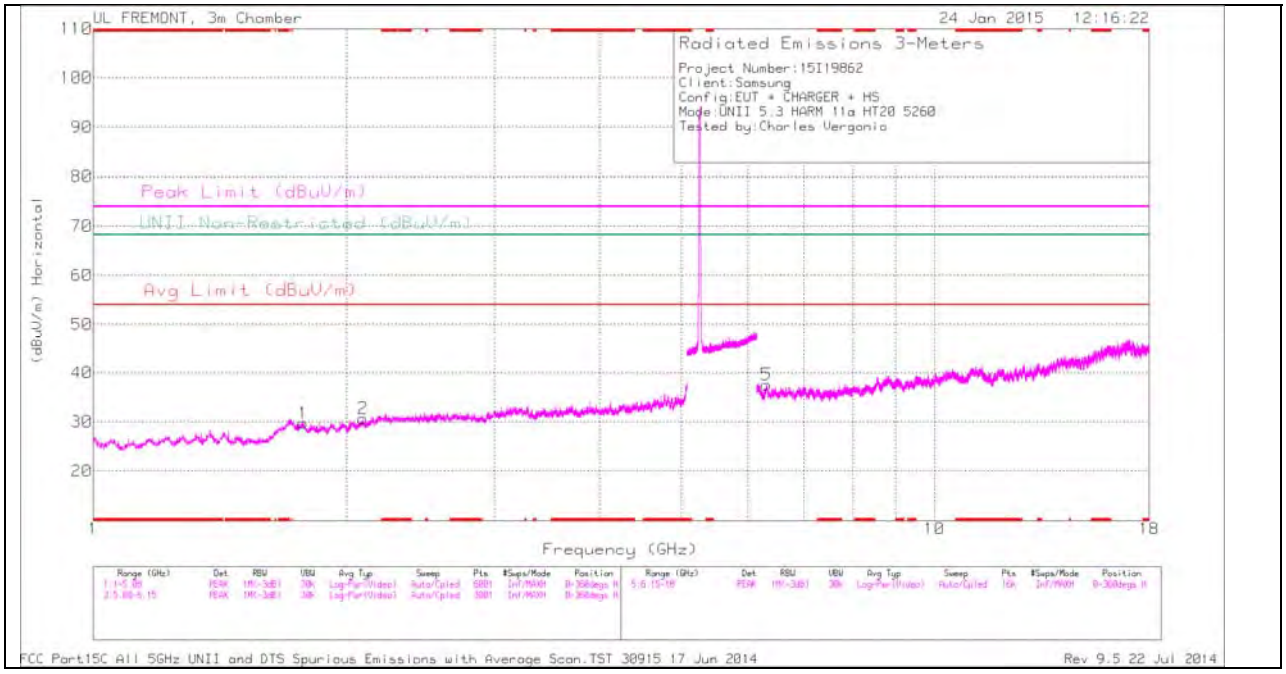


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	41.31	PK	34.5	-20.1	0	55.71	-	-	74	-18.29	329	275	V
2	* 5.35	44.31	PK	34.5	-20.1	0	58.71	-	-	74	-15.29	329	275	V
3	* 5.35	30.74	RMS	34.5	-20.1	.32	45.46	54	-8.54	-	-	329	275	V
4	* 5.351	31.09	RMS	34.5	-20.1	.32	45.81	54	-8.19	-	-	329	275	V

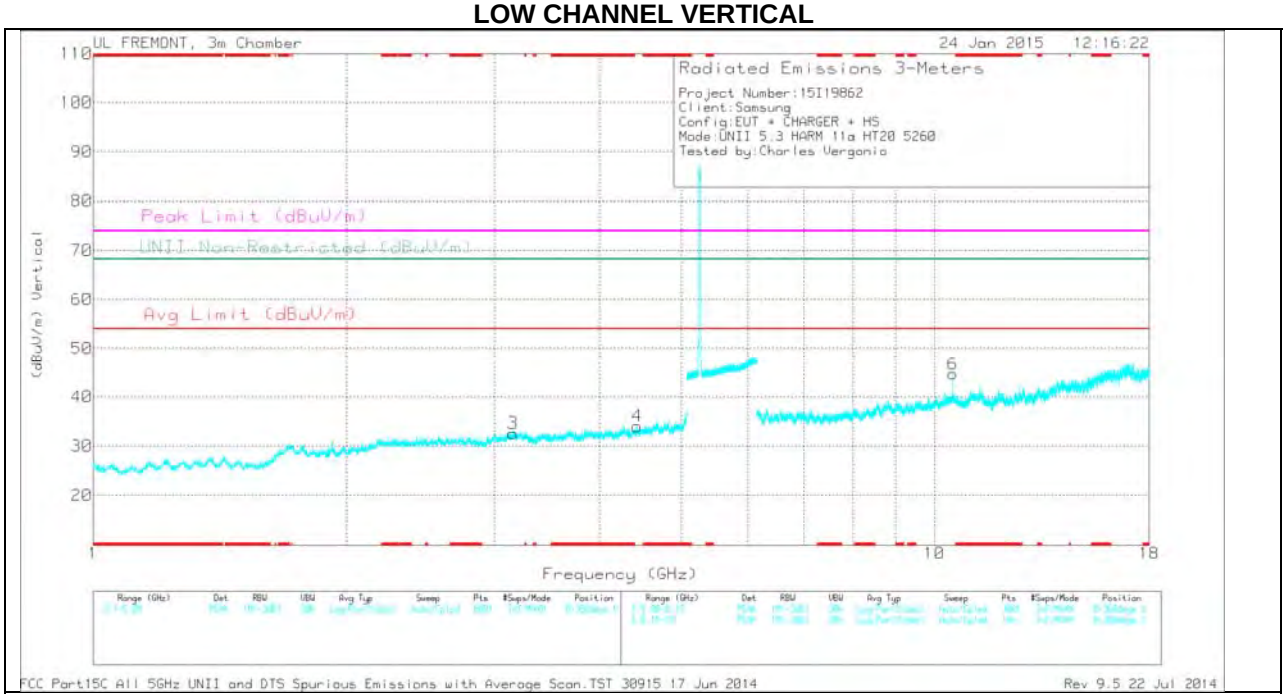
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



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

LOW CHANNEL VERTICAL



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

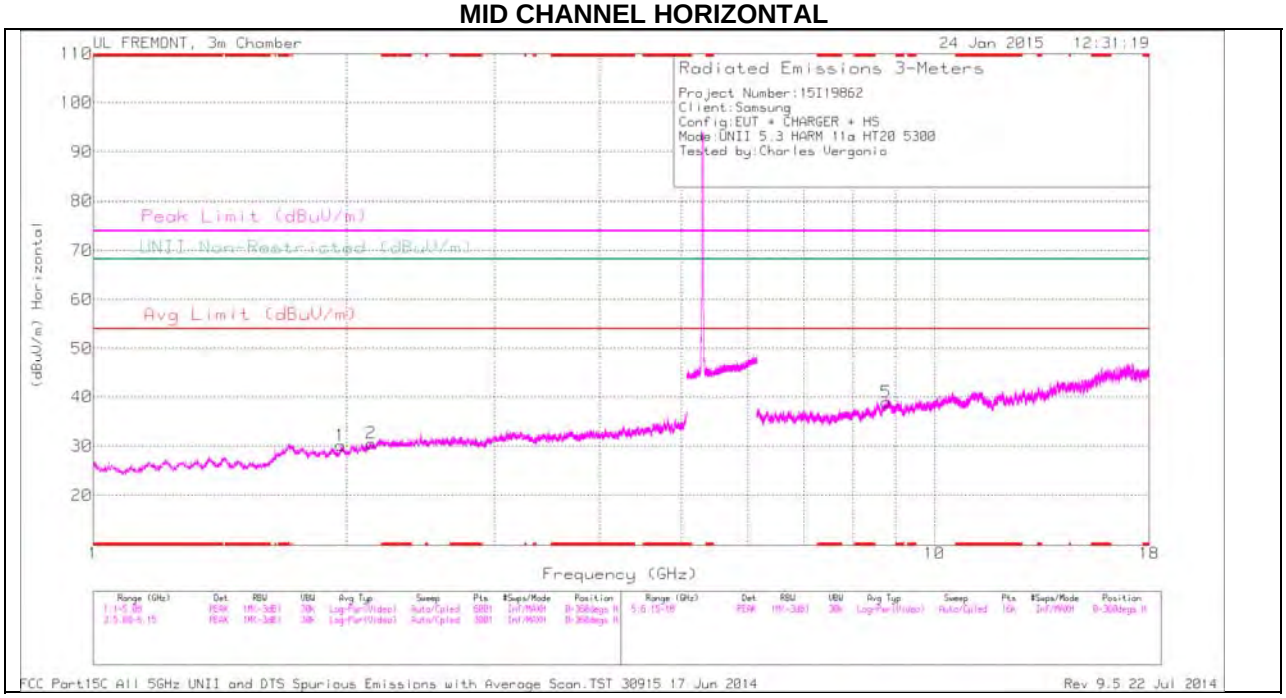
LOW CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (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	1.778	31.95	PK	30.3	-32.5	0	29.75	-	-	-	-	68.2	-38.45	0-360	200	H
2	2.093	32.37	PK	31.1	-32.8	0	30.67	-	-	-	-	68.2	-37.53	0-360	100	H
3	3.156	31.1	PK	33.1	-31.6	0	32.6	-	-	-	-	68.2	-35.6	0-360	200	V
4	4.432	30.84	PK	33.6	-30.4	0	34.04	-	-	-	-	68.2	-34.16	0-360	200	V
5	6.314	31.08	PK	36	-29.5	0	37.58	-	-	-	-	68.2	-30.62	0-360	200	H
6	10.52	31.57	PK	38.1	-25	0	44.67	-	-	-	-	68.2	-23.53	0-360	100	V

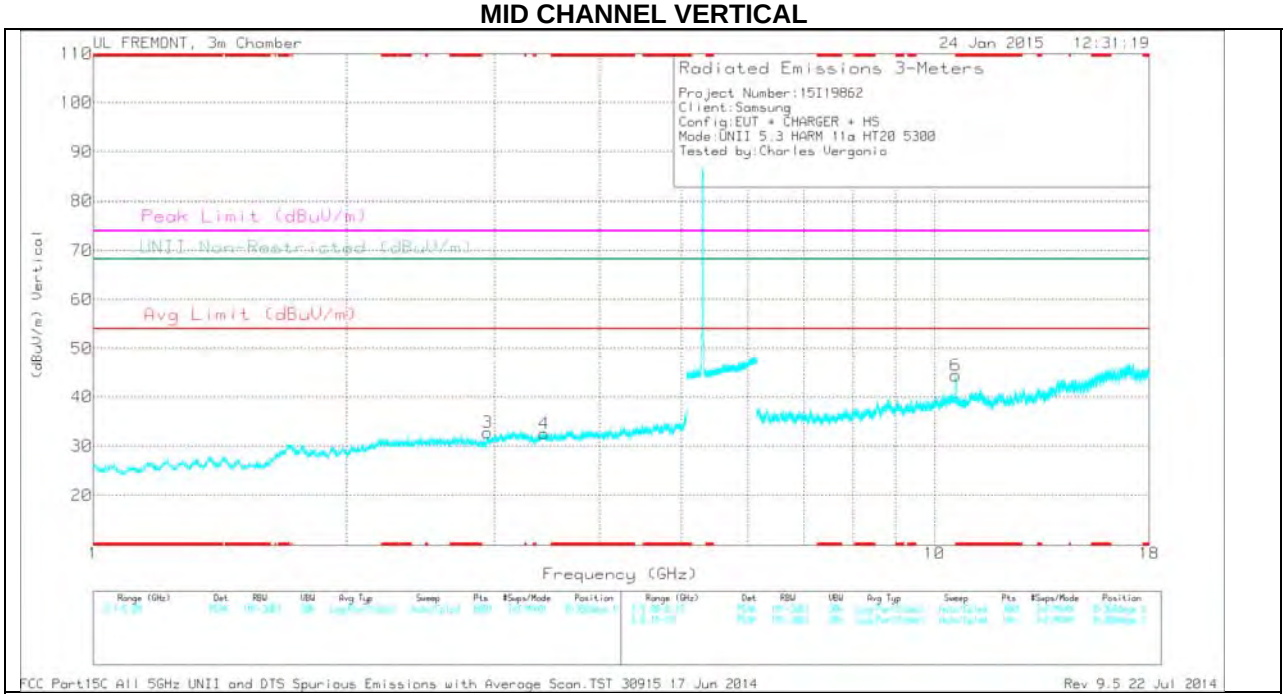
PK - Peak detector

MID CHANNEL HORIZONTAL



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

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.

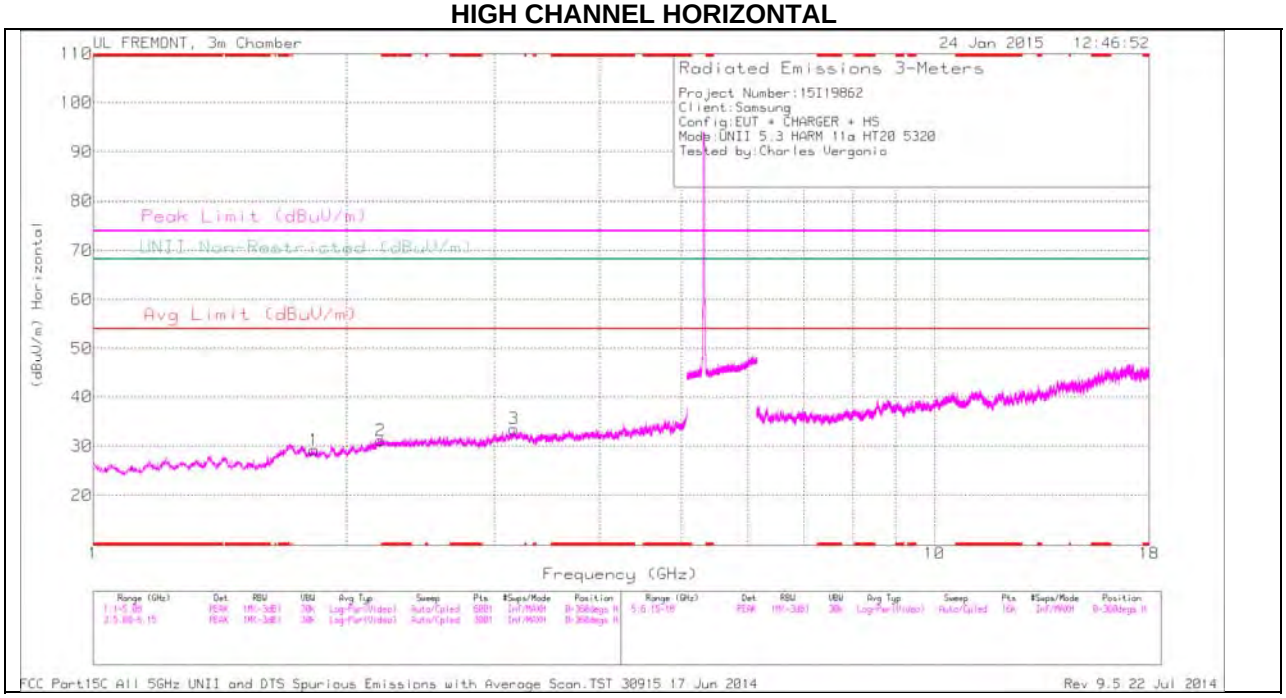
MID CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (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	1.969	32.12	PK	30.2	-32.2	0	30.12	-	-	-	-	68.2	-38.08	0-360	100	H
2	2.14	31.97	PK	31.5	-32.9	0	30.57	-	-	-	-	68.2	-37.63	0-360	200	H
3	2.941	32.55	PK	32.2	-32	0	32.75	-	-	-	-	68.2	-35.45	0-360	200	V
4	3.438	31.24	PK	32.8	-31.5	0	32.54	-	-	-	-	68.2	-35.66	0-360	200	V
5	8.767	28.25	PK	36.6	-25.9	0	38.95	-	-	-	-	68.2	-29.25	0-360	100	H
6	10.599	31.59	PK	38.1	-25.3	0	44.39	-	-	-	-	68.2	-23.81	0-360	100	V

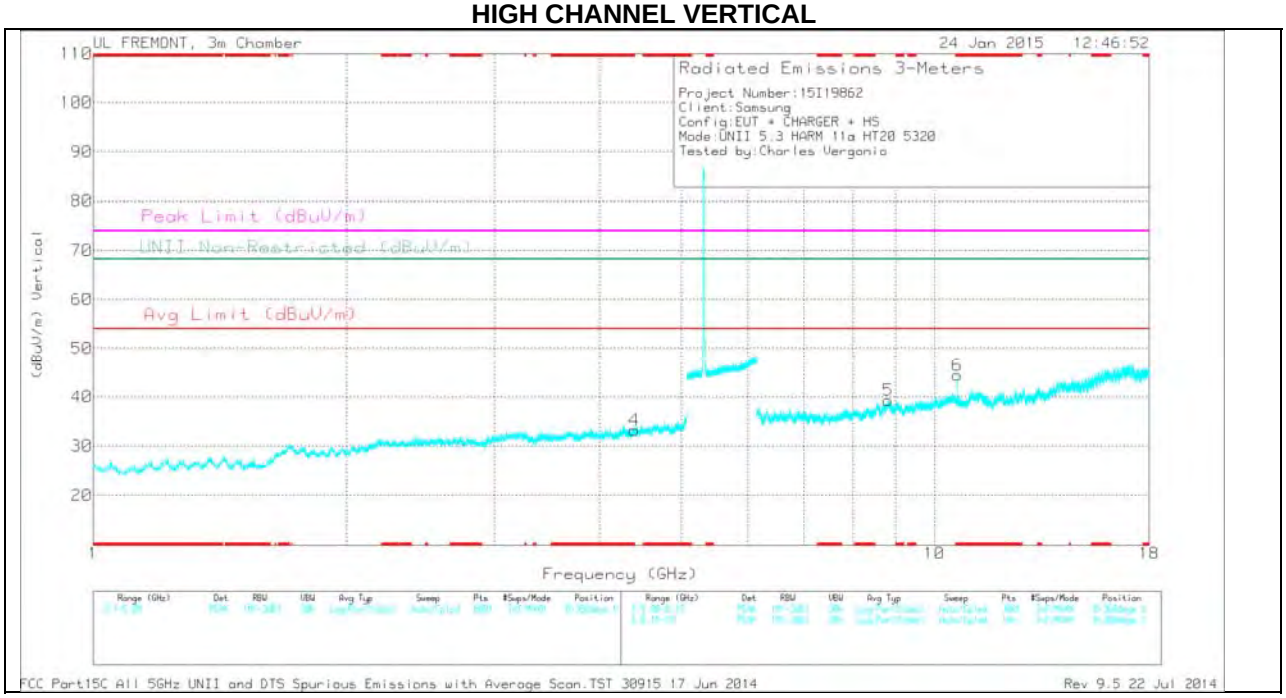
PK - Peak detector

HIGH CHANNEL HORIZONTAL



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

HIGH CHANNEL VERTICAL



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

HIGH CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 4.399	30.51	PK	33.5	-30.8	0	33.21	-	-	74	-40.79	-	-	0-360	100	V
6	* 10.639	31.42	PK	38.1	-25.1	0	44.42	-	-	74	-29.58	-	-	0-360	100	V
1	1.832	32.12	PK	30.3	-33.2	0	29.22	-	-	-	-	68.2	-38.98	0-360	100	H
2	2.197	31.71	PK	32	-32.6	0	31.11	-	-	-	-	68.2	-37.09	0-360	100	H
3	3.166	32	PK	33.1	-31.6	0	33.5	-	-	-	-	68.2	-34.7	0-360	200	H
5	8.814	28.22	PK	36.6	-25.5	0	39.32	-	-	-	-	68.2	-28.88	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 T711 (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
* 10.64	38.43	PK1	38.1	-25.1	0	51.43	-	-	74	-22.57	-	-	322	109	V
* 10.64	30.06	AD1	38.1	-25.1	.32	43.38	54	-10.62	-	-	-	-	322	109	V

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

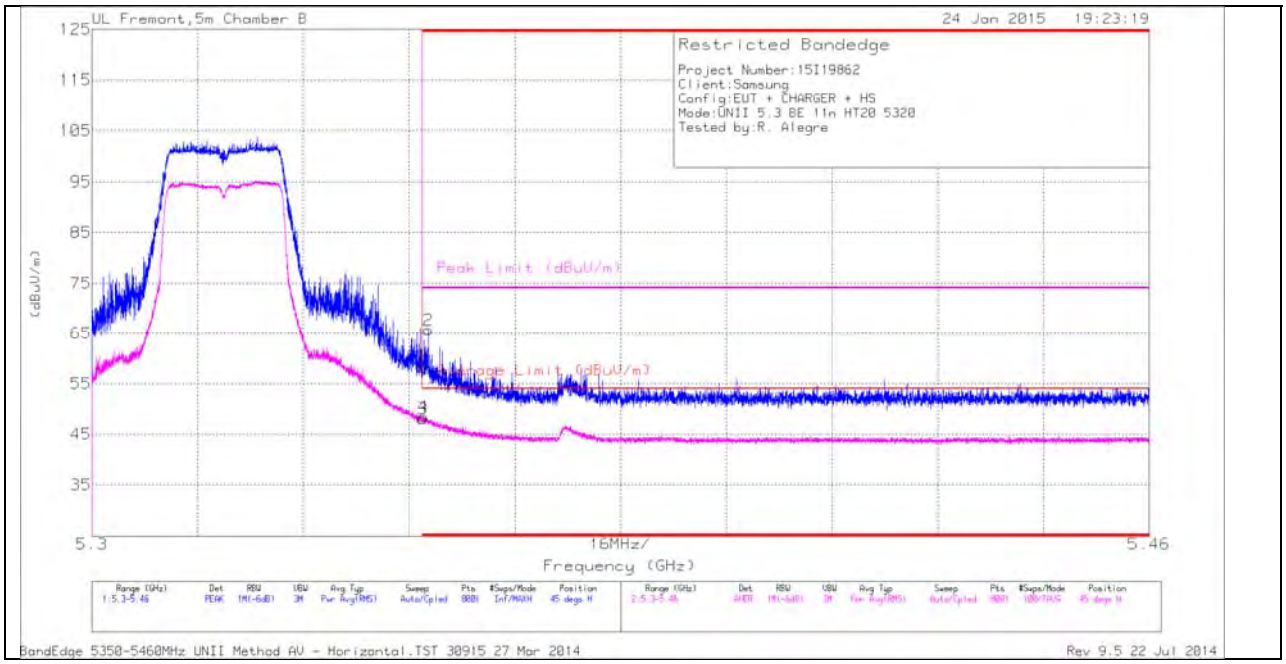
PK1 - KDB789033 Method: Peak

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)

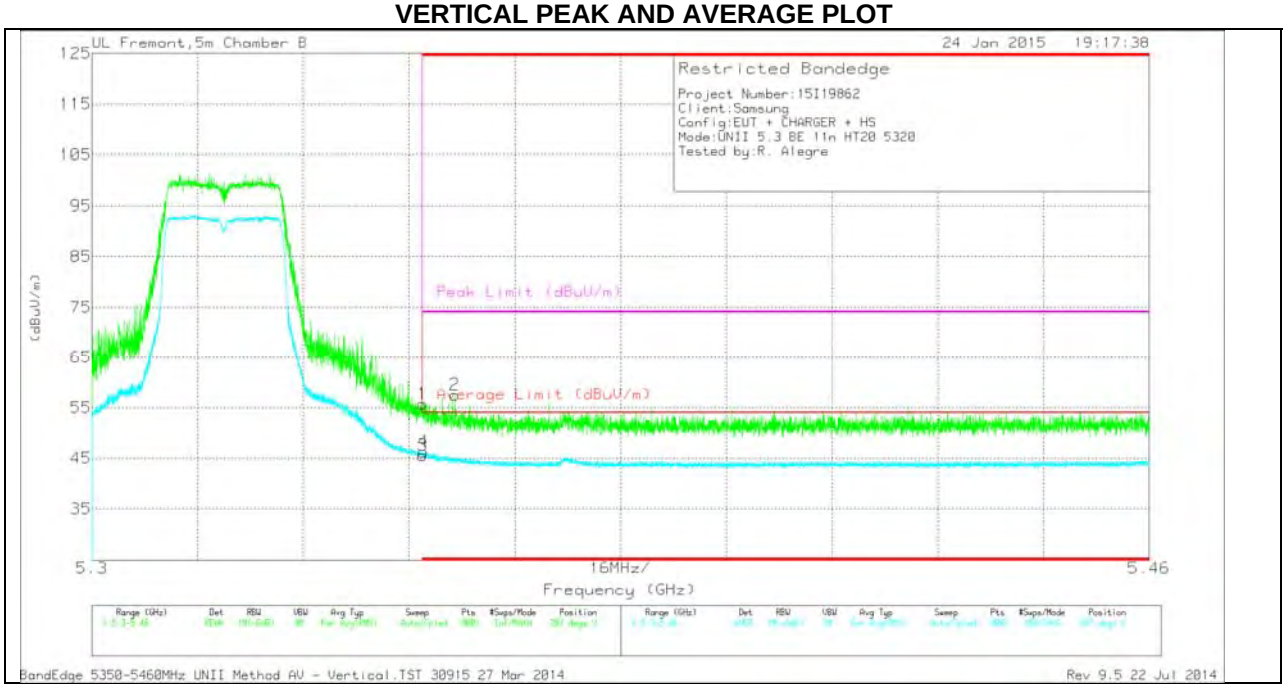
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	43.87	PK	34.5	-20.1	0	58.27	-	-	74	-15.73	45	256	H
3	* 5.35	33.33	RMS	34.5	-20.1	.32	48.05	54	-5.95	-	-	45	256	H
4	* 5.35	33.71	RMS	34.5	-20.1	.32	48.43	54	-5.57	-	-	45	256	H
2	* 5.351	51.25	PK	34.5	-20.1	0	65.65	-	-	74	-8.35	45	256	H

VERTICAL PEAK AND AVERAGE PLOT

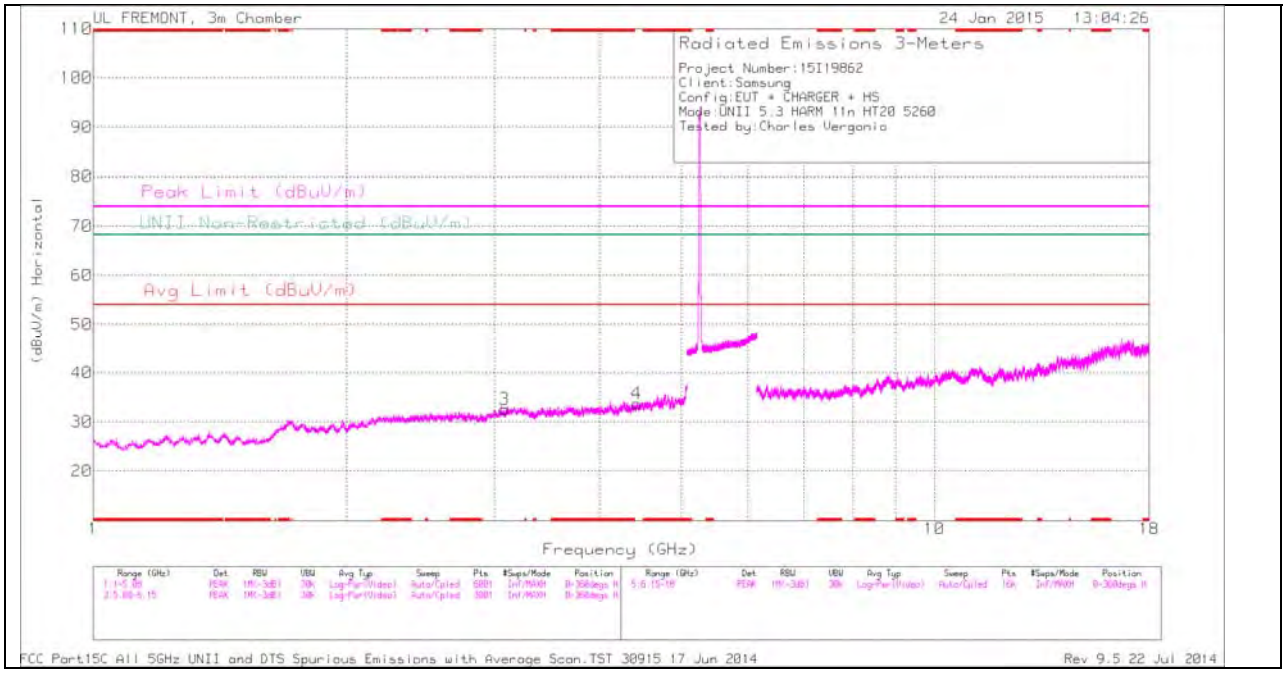


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	41.39	PK	34.5	-20.1	0	55.79	-	-	74	-18.21	287	238	V
3	* 5.35	30.81	RMS	34.5	-20.1	.32	45.53	54	-8.47	-	-	287	238	V
4	* 5.35	31.54	RMS	34.5	-20.1	.32	46.26	54	-7.74	-	-	287	238	V
2	* 5.355	43.05	PK	34.5	-20	0	57.55	-	-	74	-16.45	287	238	V

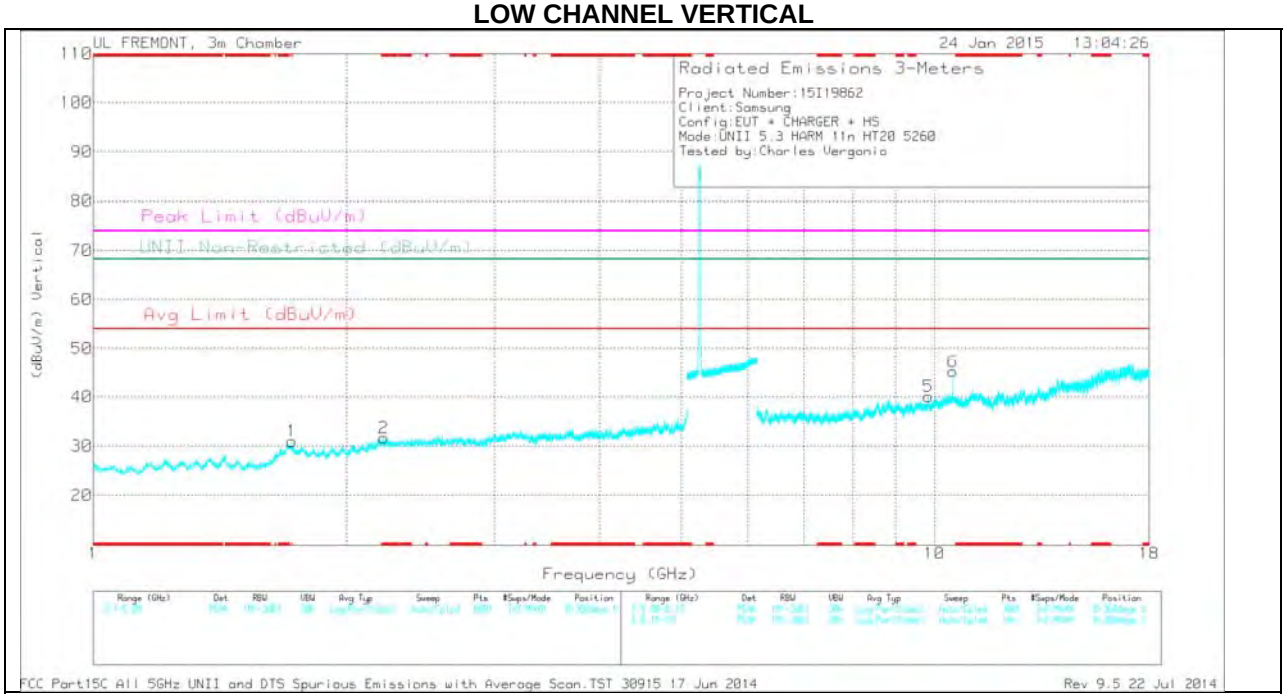
HARMONICS AND SPURIOUS EMISSIONS

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



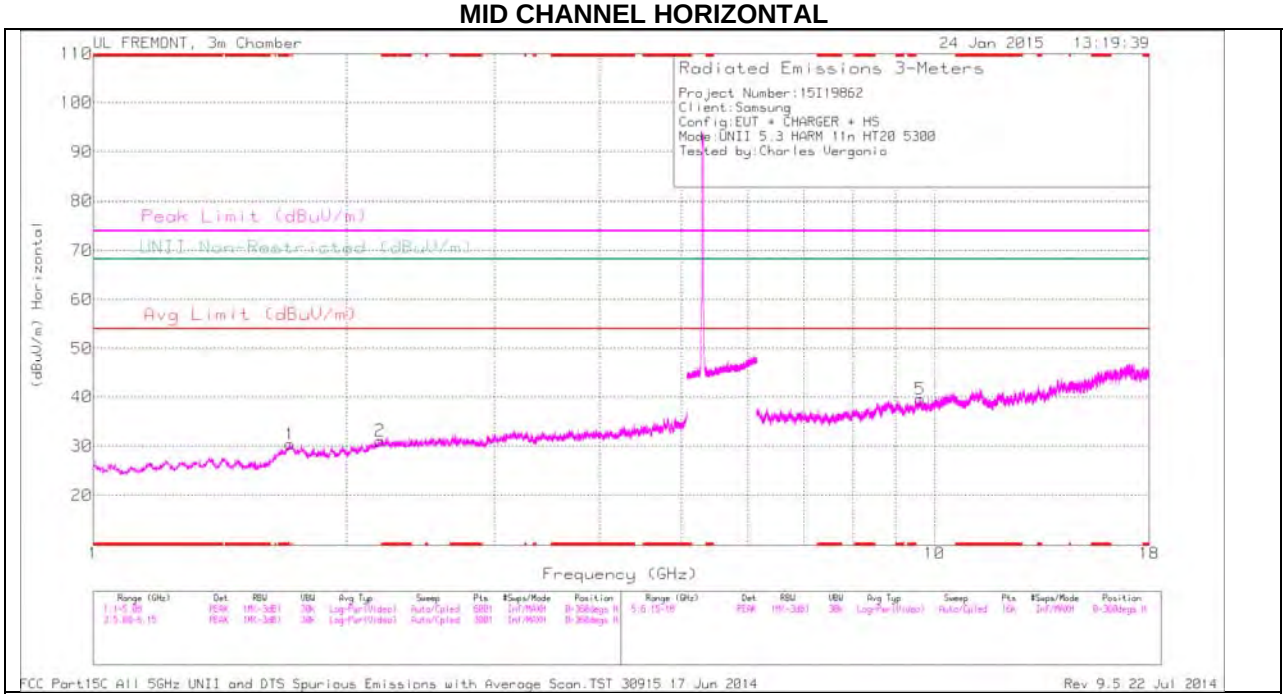
Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

TRACE MARKERS

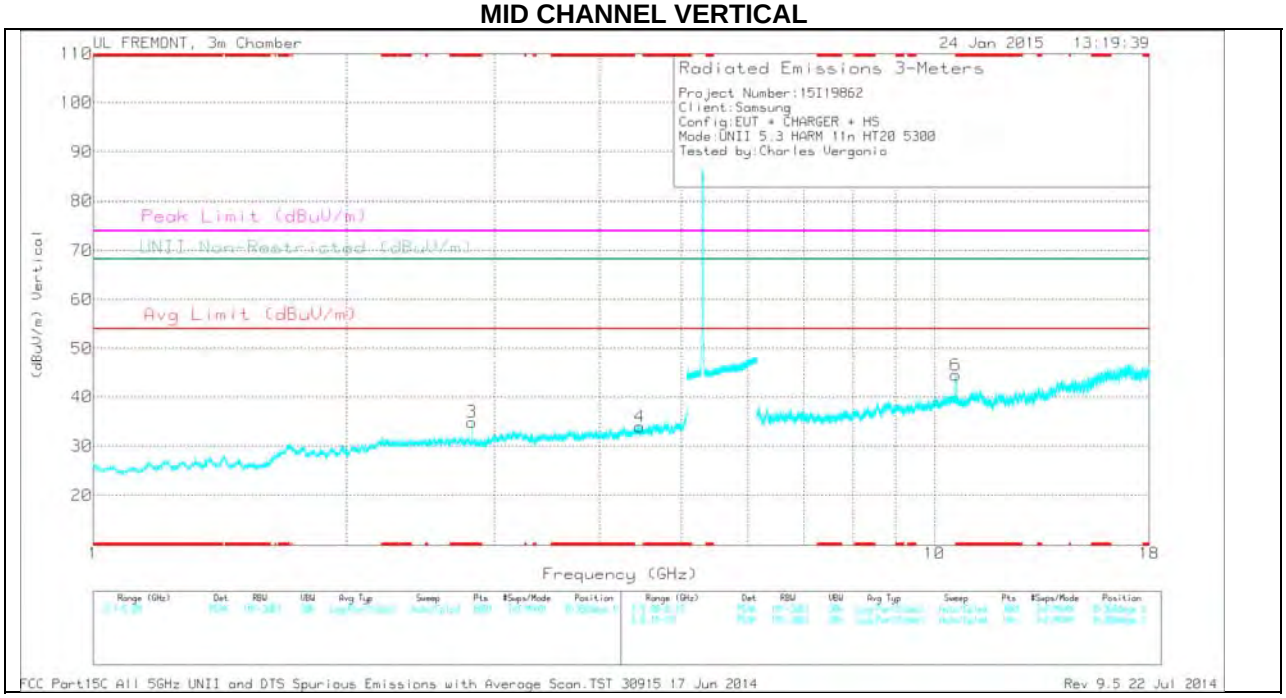
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 2.217	31.93	PK	32	-32.3	0	31.63	-	-	74	-42.37	-	-	0-360	200	V
1	1.724	32.48	PK	30.6	-32.1	0	30.98	-	-	-	-	68.2	-37.22	0-360	100	V
3	3.083	31.88	PK	32.9	-32.2	0	32.58	-	-	-	-	68.2	-35.62	0-360	200	H
4	4.429	30.54	PK	33.6	-30.4	0	33.74	-	-	-	-	68.2	-34.46	0-360	100	H
5	9.831	27.9	PK	37.3	-25.1	0	40.1	-	-	-	-	68.2	-28.1	0-360	200	V
6	10.519	32.1	PK	38.1	-25	0	45.2	-	-	-	-	68.2	-23	0-360	100	V

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 T711 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 2.818	34.99	PK	32.3	-32.4	0	34.89	-	-	74	-39.11	-	-	0-360	200	V
1	1.713	31.87	PK	30.6	-32.1	0	30.37	-	-	-	-	68.2	-37.83	0-360	100	H
2	2.193	31.67	PK	32	-32.6	0	31.07	-	-	-	-	68.2	-37.13	0-360	200	H
4	4.461	31.23	PK	33.6	-30.9	0	33.93	-	-	-	-	68.2	-34.27	0-360	100	V
5	9.623	27.86	PK	37.1	-25.4	0	39.56	-	-	-	-	68.2	-28.64	0-360	100	H
6	10.599	31.67	PK	38.1	-25.3	0	44.47	-	-	-	-	68.2	-23.73	0-360	100	V

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

PK - Peak detector

Radiated Emissions

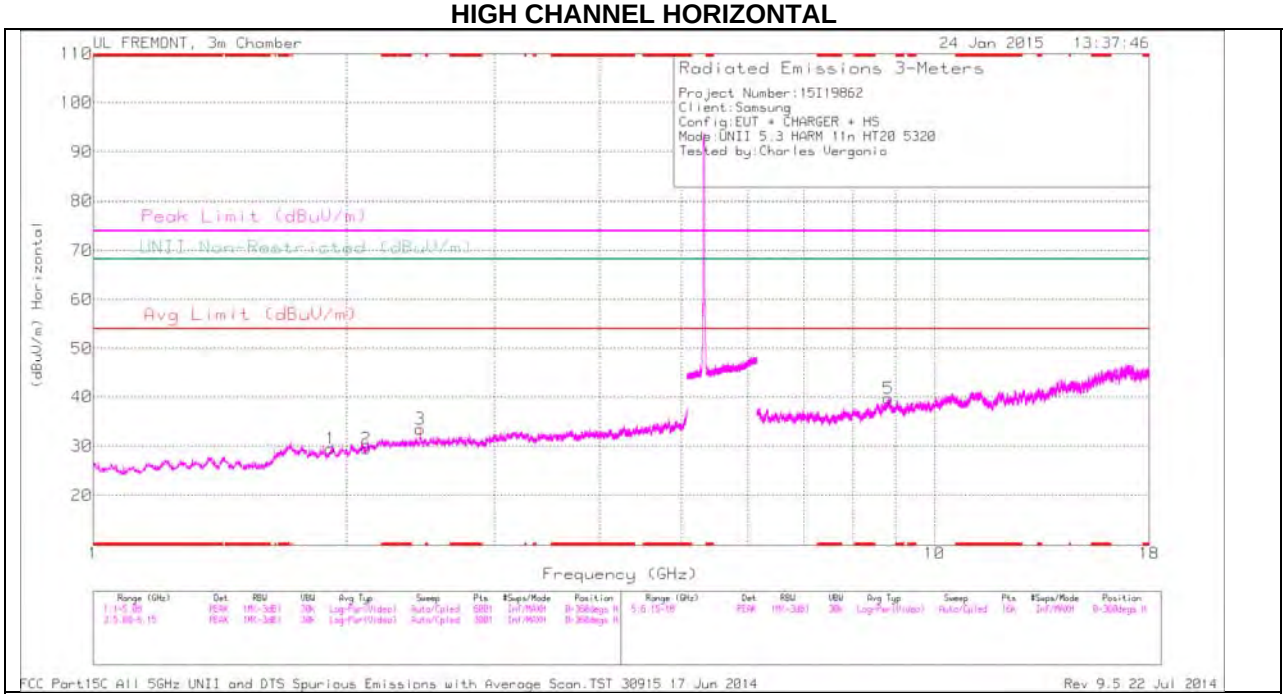
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 2.819	41.35	PK1	32.3	-32.4	0	41.25	-	-	74	-32.75	-	-	188	328	V
* 2.819	29.13	AD1	32.3	-32.4	.32	29.35	54	-24.65	-	-	-	-	188	328	V

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

PK1 - KDB789033 Method: Peak

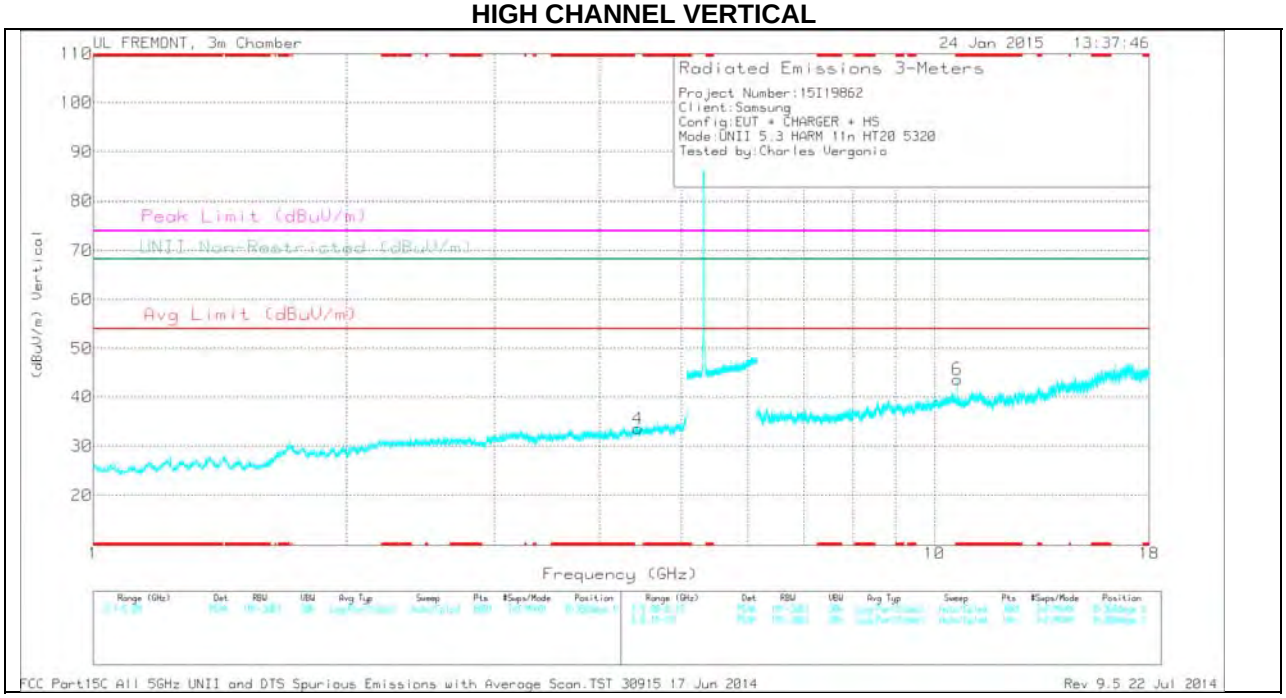
AD1 - KDB789033 Method: AD Primary Power Average

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 T711 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	* 10.639	30.56	PK	38.1	-25.1	0	43.56	-	-	74	-30.44	-	-	0-360	100	V
1	1.916	31.98	PK	30.2	-32.7	0	29.48	-	-	-	-	68.2	-38.72	0-360	100	H
2	2.112	31.07	PK	31.3	-32.9	0	29.47	-	-	-	-	68.2	-38.73	0-360	100	H
3	2.448	33.86	PK	32.1	-32.5	0	33.46	-	-	-	-	68.2	-34.74	0-360	200	H
4	4.439	30.65	PK	33.6	-30.7	0	33.55	-	-	-	-	68.2	-34.65	0-360	200	V
5	8.818	28.71	PK	36.6	-25.6	0	39.71	-	-	-	-	68.2	-28.49	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 T711 (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
* 10.64	38.38	PK1	38.1	-25.1	0	51.38	-	-	74	-22.62	-	-	321	104	V
* 10.64	29.74	AD1	38.1	-25.1	.32	43.06	54	-10.94	-	-	-	-	321	104	V

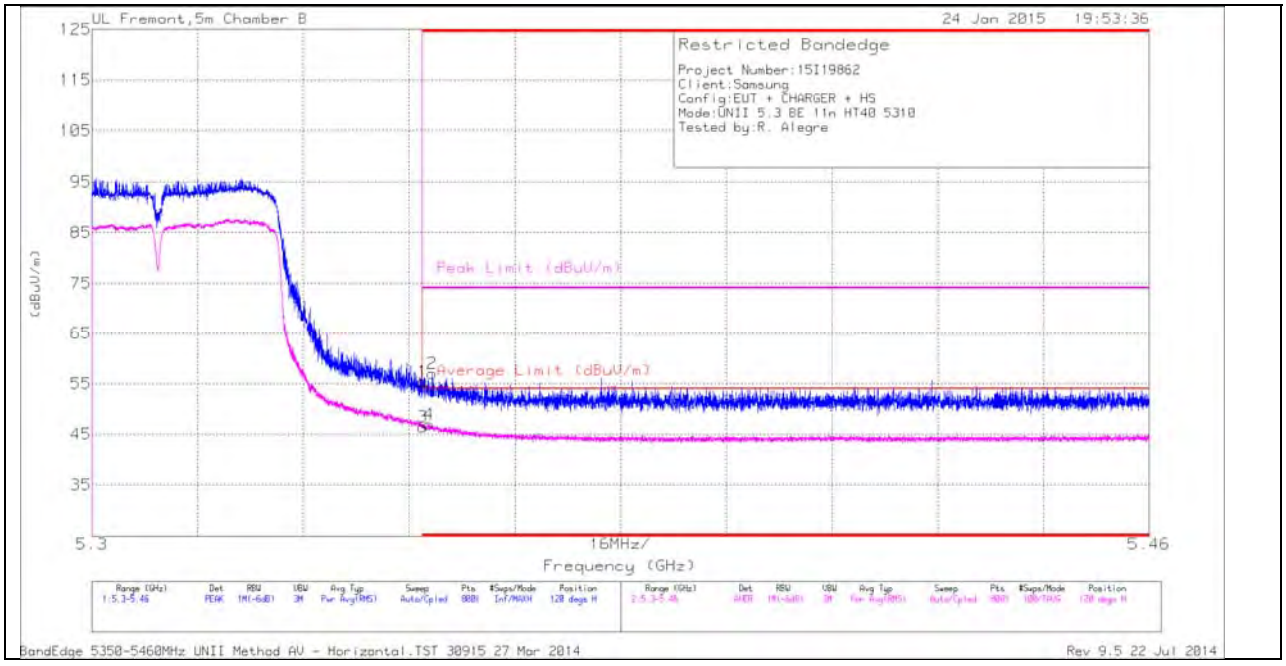
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

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)

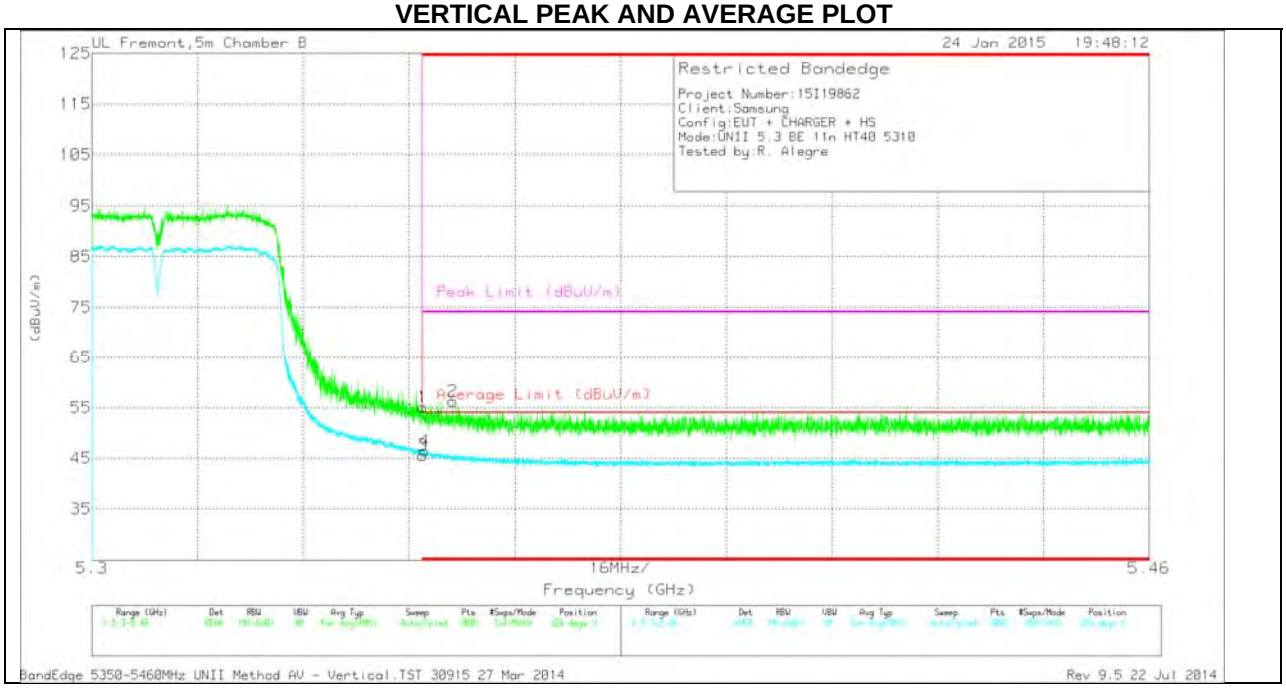
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	40.93	PK	34.5	-20.1	0	55.33	-	-	74	-18.67	120	308	H
3	* 5.35	31.38	RMS	34.5	-20.1	.64	46.42	54	-7.58	-	-	120	308	H
4	* 5.351	31.91	RMS	34.5	-20.1	.64	46.95	54	-7.05	-	-	120	308	H
2	* 5.352	42.62	PK	34.5	-20.1	0	57.02	-	-	74	-16.98	120	308	H

VERTICAL PEAK AND AVERAGE PLOT

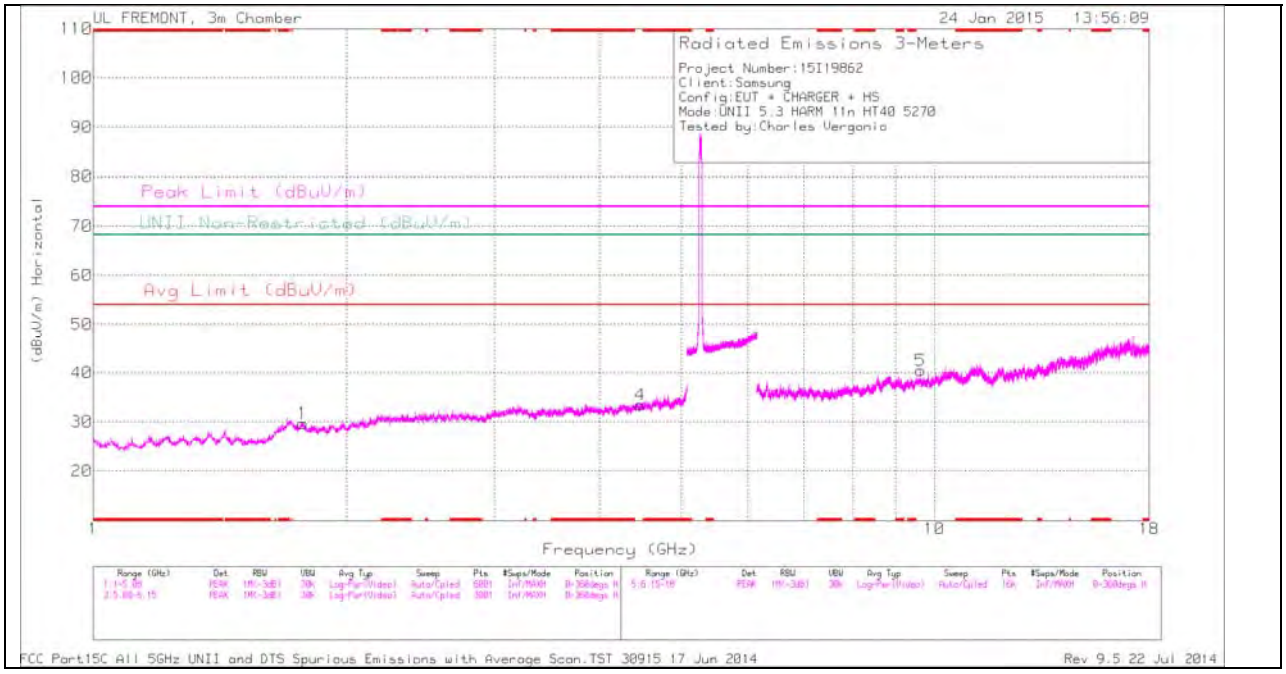


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	40.69	PK	34.5	-20.1	0	55.09	-	-	74	-18.91	326	340	V
3	* 5.35	30.5	RMS	34.5	-20.1	.64	45.54	54	-8.46	-	-	326	340	V
4	* 5.35	31.36	RMS	34.5	-20.1	.64	46.4	54	-7.6	-	-	326	340	V
2	* 5.355	41.8	PK	34.5	-20	0	56.3	-	-	74	-17.7	326	340	V

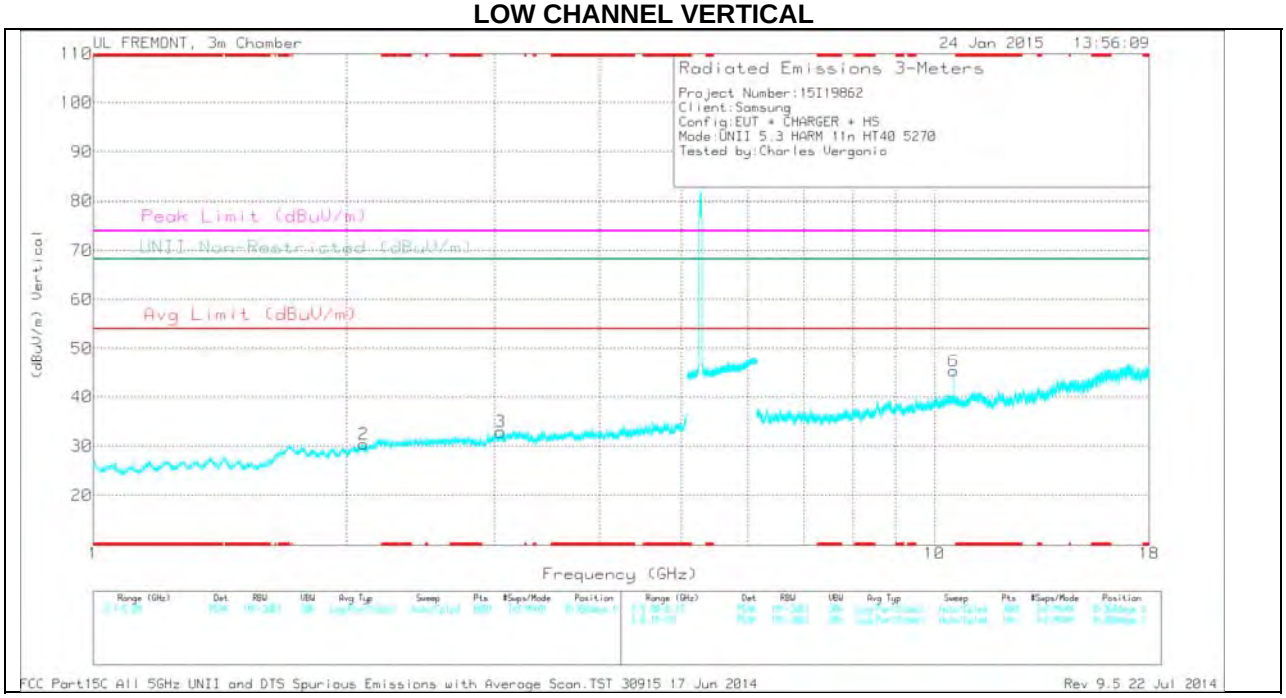
HARMONICS AND SPURIOUS EMISSIONS

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.

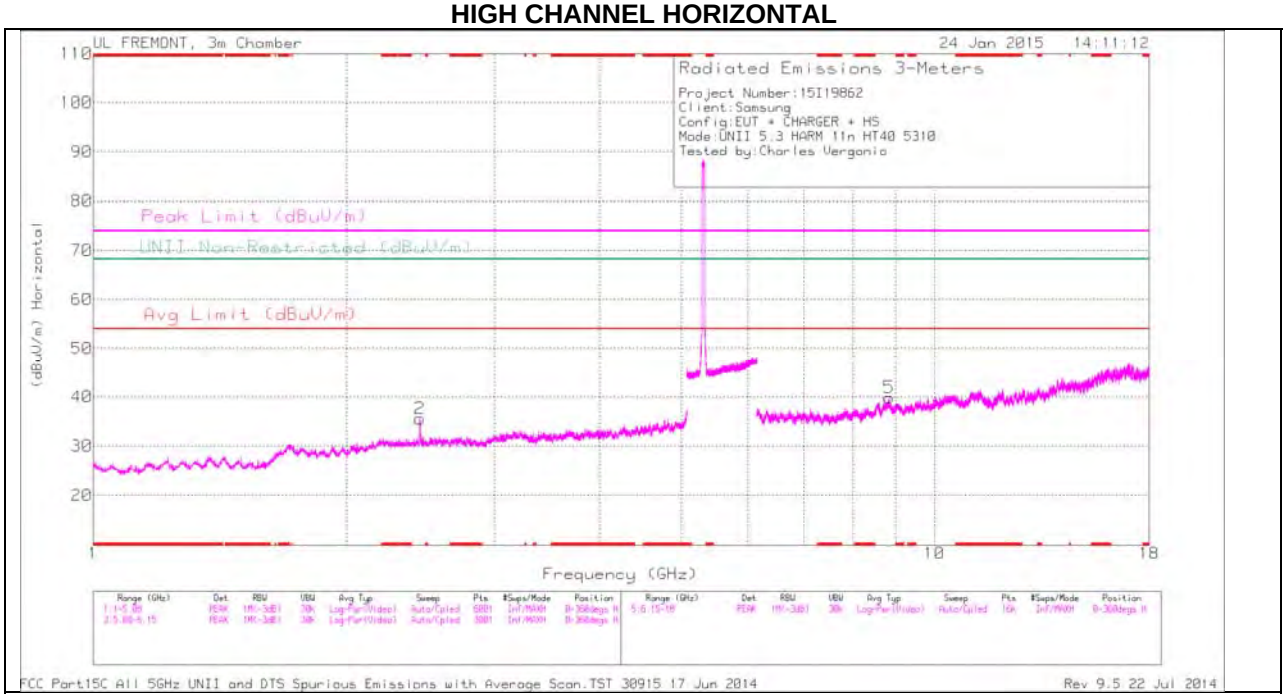
LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (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	1.776	31.64	PK	30.4	-32.4	0	29.64	-	-	-	-	68.2	-38.56	0-360	200	H
2	2.098	31.98	PK	31.2	-32.8	0	30.38	-	-	-	-	68.2	-37.82	0-360	200	V
3	3.053	31.99	PK	32.9	-32	0	32.89	-	-	-	-	68.2	-35.31	0-360	200	V
4	4.469	30.62	PK	33.6	-30.8	0	33.42	-	-	-	-	68.2	-34.78	0-360	100	H
5	9.625	28.87	PK	37.1	-25.5	0	40.47	-	-	-	-	68.2	-27.73	0-360	200	H
6	10.539	32.5	PK	38.1	-25.3	0	45.3	-	-	-	-	68.2	-22.9	0-360	100	V

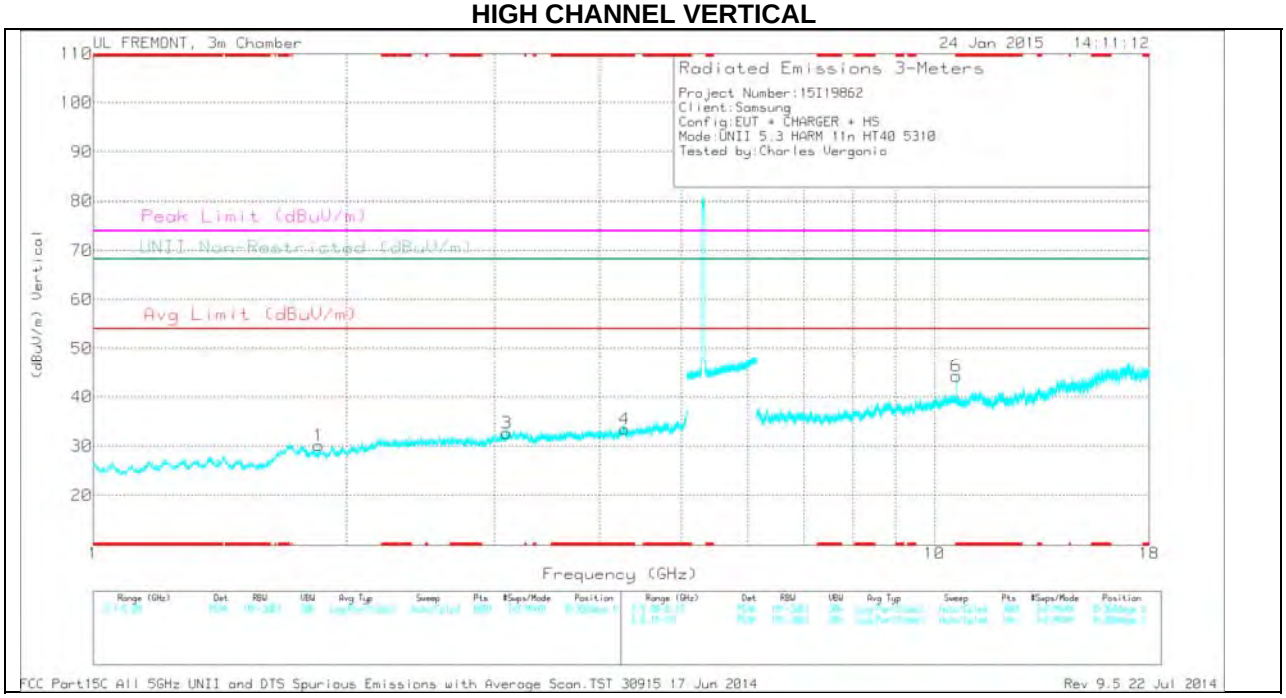
PK - Peak detector

HIGH CHANNEL HORIZONTAL



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

HIGH CHANNEL VERTICAL



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

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 4.286	30.52	PK	33.4	-30.5	0	33.42	-	-	74	-40.58	-	-	0-360	200	V
6	* 10.62	31.15	PK	38.1	-25	0	44.25	-	-	74	-29.75	-	-	0-360	100	V
1	1.854	33.09	PK	30.3	-33.3	0	30.09	-	-	-	-	68.2	-38.11	0-360	200	V
2	2.446	35.97	PK	32.1	-32.5	0	35.57	-	-	-	-	68.2	-32.63	0-360	100	H
3	3.101	31.74	PK	33	-32.1	0	32.64	-	-	-	-	68.2	-35.56	0-360	200	V
5	8.832	29.27	PK	36.6	-26	0	39.87	-	-	-	-	68.2	-28.33	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 T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 10.62	38.88	PK1	38.1	-25	0	51.98	-	-	74	-22.02	-	-	325	102	V
* 10.62	30.02	AD1	38.1	-25	.64	43.76	54	-10.24	-	-	-	-	325	102	V

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

PK1 - KDB789033 Method: Peak

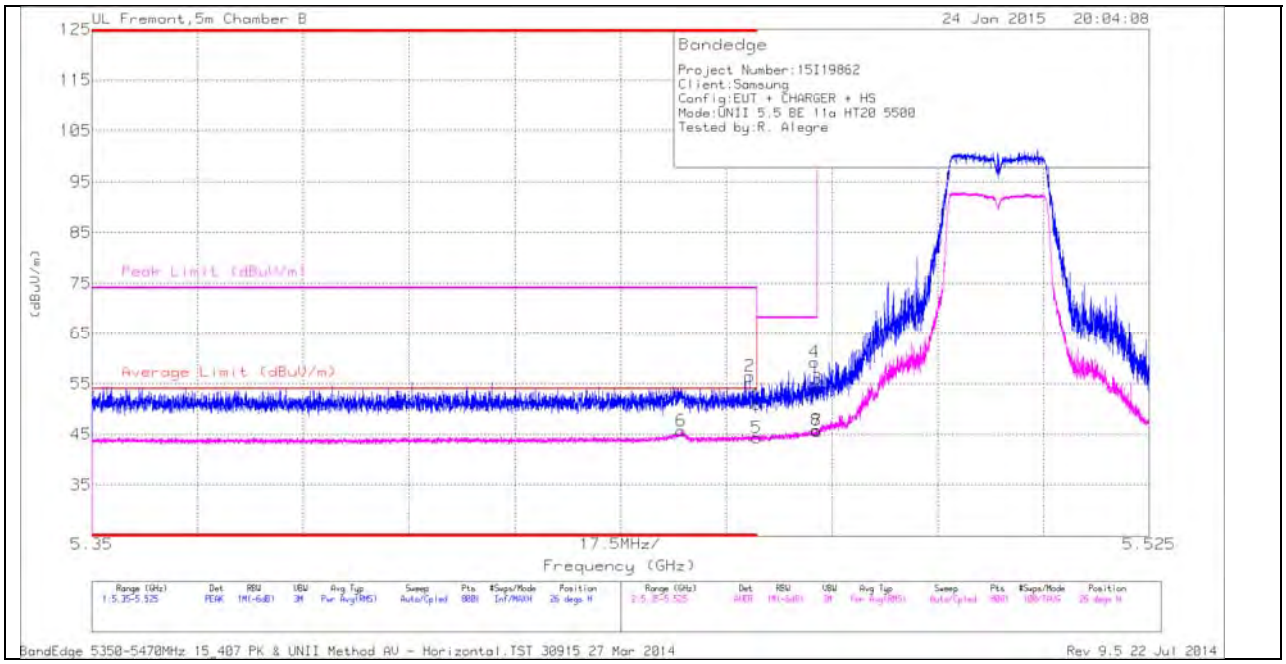
AD1 - KDB789033 Method: AD Primary Power Average

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)

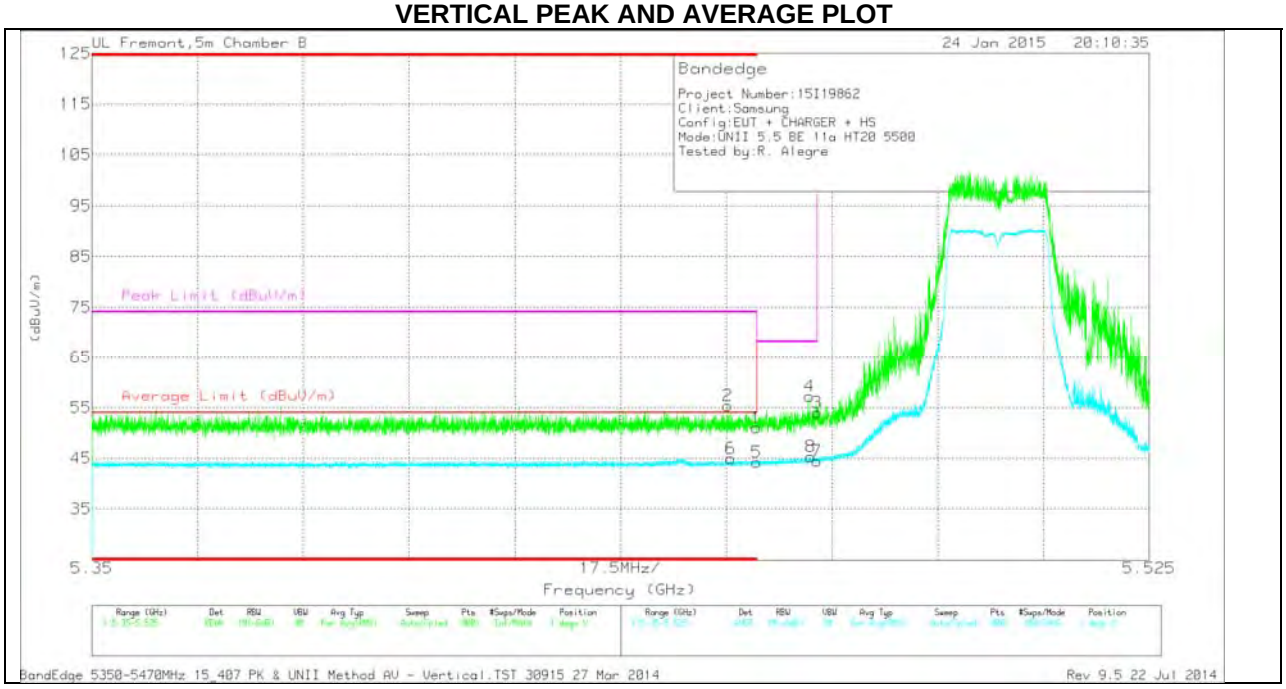
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	* 5.448	31.06	RMS	34.5	-20.2	.32	45.68	54	-8.32	-	-	26	230	H
2	* 5.459	42.14	PK	34.5	-20.2	0	56.44	-	-	74	-17.56	26	230	H
1	* 5.46	36.57	PK	34.5	-20.2	0	50.87	-	-	74	-23.13	26	230	H
5	* 5.46	29.68	RMS	34.5	-20.2	.32	44.3	54	-9.7	-	-	26	230	H
3	5.47	39.77	PK	34.5	-20.2	0	54.07	-	-	68.2	-14.13	26	230	H
4	5.47	44.99	PK	34.5	-20.2	0	59.29	-	-	68.2	-8.91	26	230	H
7	5.47	31.02	RMS	34.5	-20.2	.32	45.64	-	-	-	-	26	230	H
8	5.47	31.23	RMS	34.5	-20.2	.32	45.85	-	-	-	-	26	230	H

VERTICAL PEAK AND AVERAGE PLOT

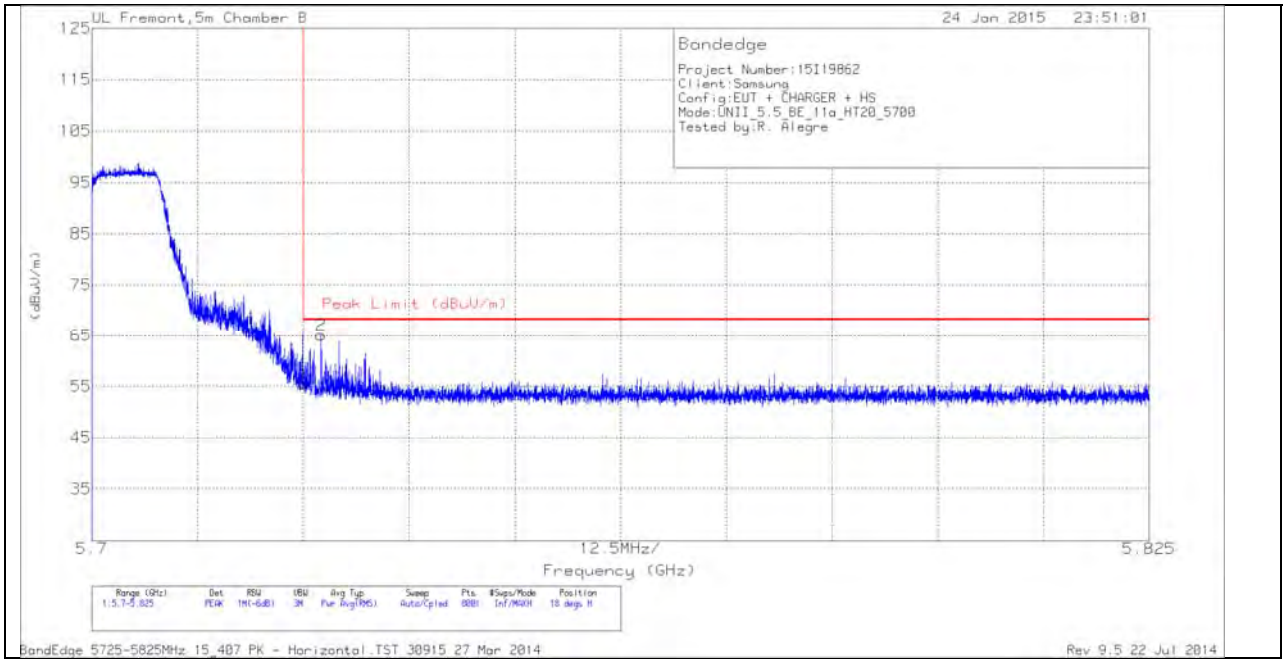


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.455	41.13	PK	34.5	-20.2	0	55.43	-	-	74	-18.57	1	257	V
6	* 5.456	30.33	RMS	34.5	-20.2	.32	44.95	54	-9.05	-	-	1	257	V
1	* 5.46	36.79	PK	34.5	-20.2	0	51.09	-	-	74	-22.91	1	257	V
5	* 5.46	29.6	RMS	34.5	-20.2	.32	44.22	54	-9.78	-	-	1	257	V
4	5.469	42.99	PK	34.5	-20.2	0	57.29	-	-	68.2	-10.91	1	257	V
8	5.469	30.66	RMS	34.5	-20.2	.32	45.28	-	-	-	-	1	257	V
3	5.47	39.72	PK	34.5	-20.2	0	54.02	-	-	68.2	-14.18	1	257	V
7	5.47	29.8	RMS	34.5	-20.2	.32	44.42	-	-	-	-	1	257	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

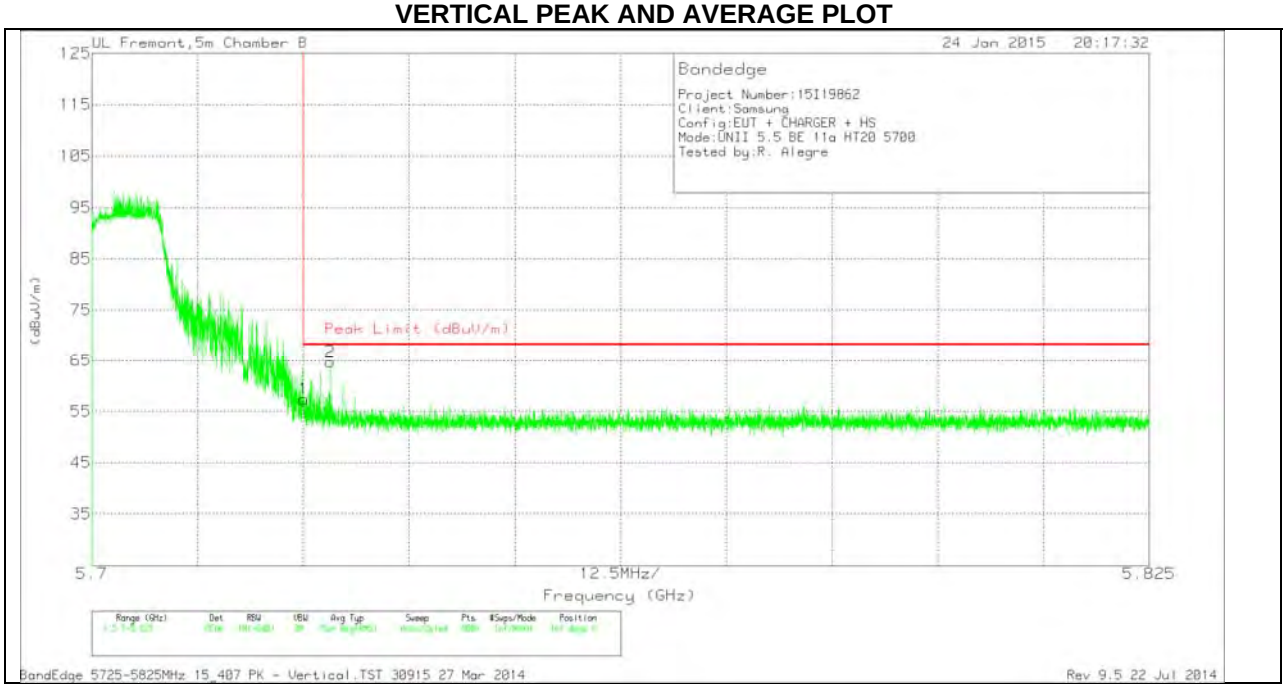
HORIZONTAL PEAK PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	40.86	PK	34.6	-19.9	0	55.56	68.2	-12.64	18	281	H
2	5.727	50.38	PK	34.6	-19.9	0	65.08	68.2	-3.12	18	281	H

VERTICAL PEAK AND AVERAGE PLOT

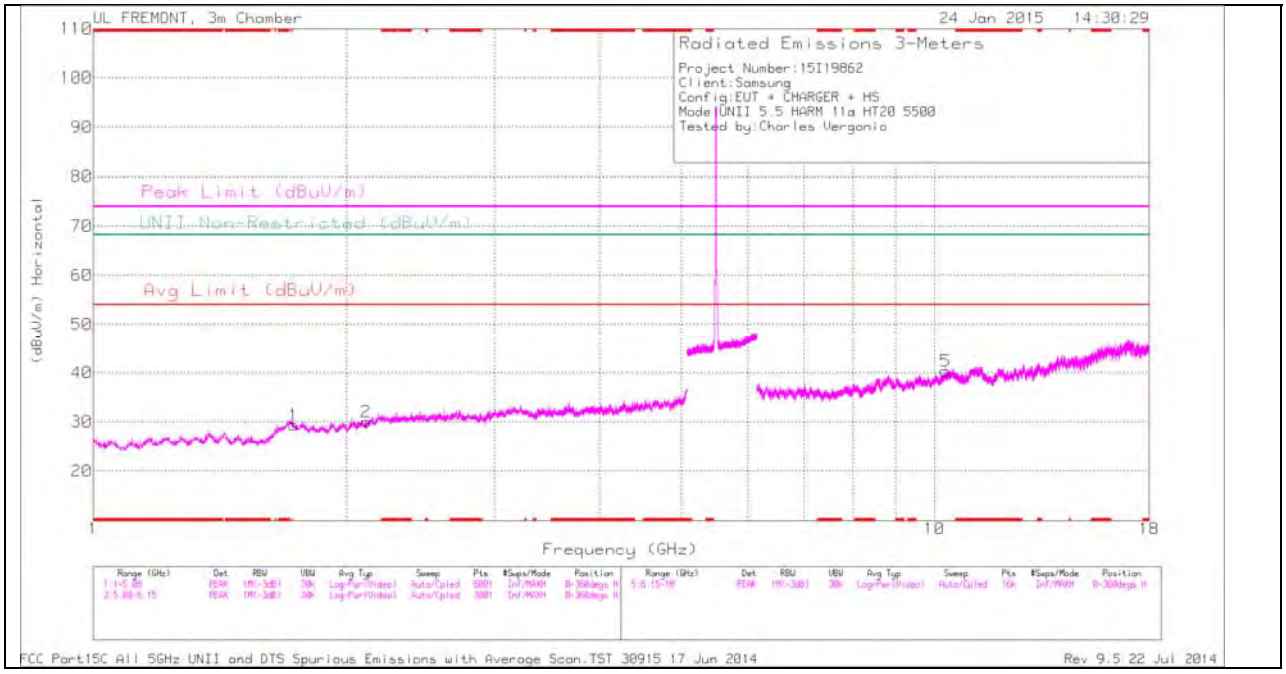


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	42.73	PK	34.6	-19.9	0	57.43	68.2	-10.77	167	387	V
2	5.728	49.99	PK	34.6	-19.8	0	64.79	68.2	-3.41	167	387	V

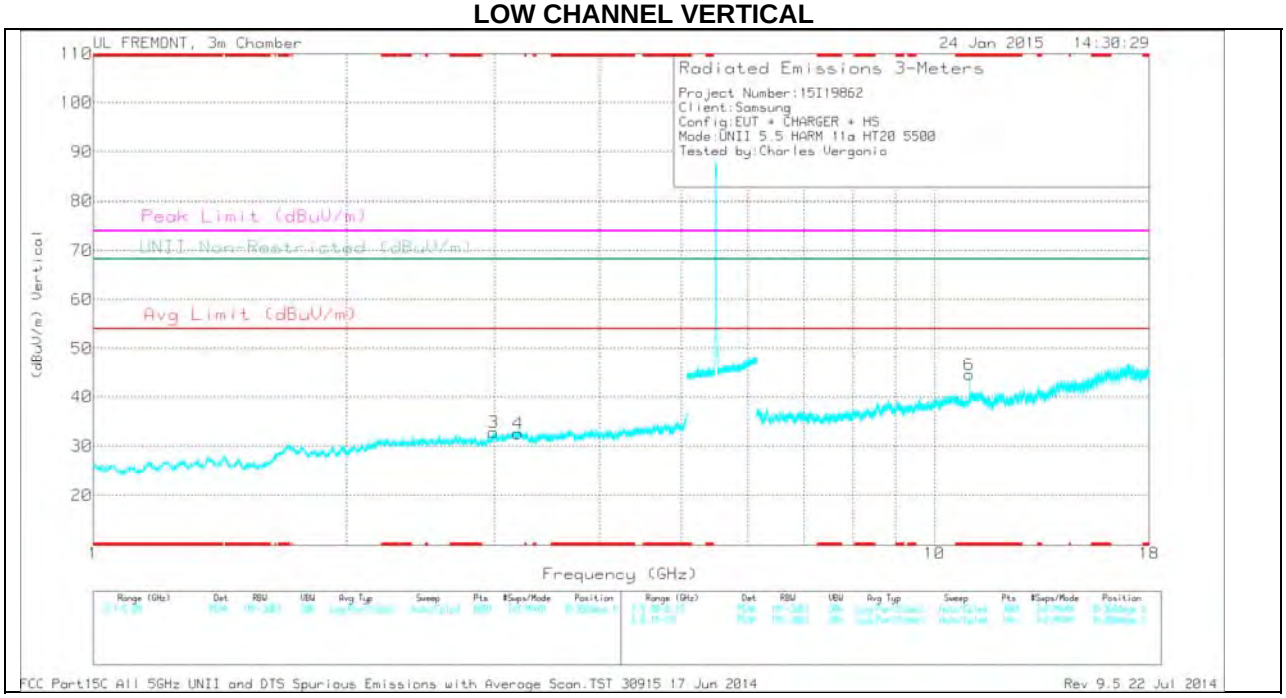
HARMONICS AND SPURIOUS EMISSIONS

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 T711 (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	* 11	31.65	PK	38.3	-25.4	0	44.55	-	-	74	-29.45	-	-	0-360	200	V
1	1.733	30.96	PK	30.6	-32.2	0	29.36	-	-	-	-	68.2	-38.84	0-360	100	H
2	2.112	31.59	PK	31.3	-32.9	0	29.99	-	-	-	-	68.2	-38.21	0-360	100	H
3	2.992	31.9	PK	32.7	-31.8	0	32.8	-	-	-	-	68.2	-35.4	0-360	100	V
4	3.199	30.65	PK	33.2	-31.3	0	32.55	-	-	-	-	68.2	-35.65	0-360	200	V
5	10.312	27.15	PK	37.9	-24.7	0	40.35	-	-	-	-	68.2	-27.85	0-360	100	H

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

PK - Peak detector

Radiated Emissions

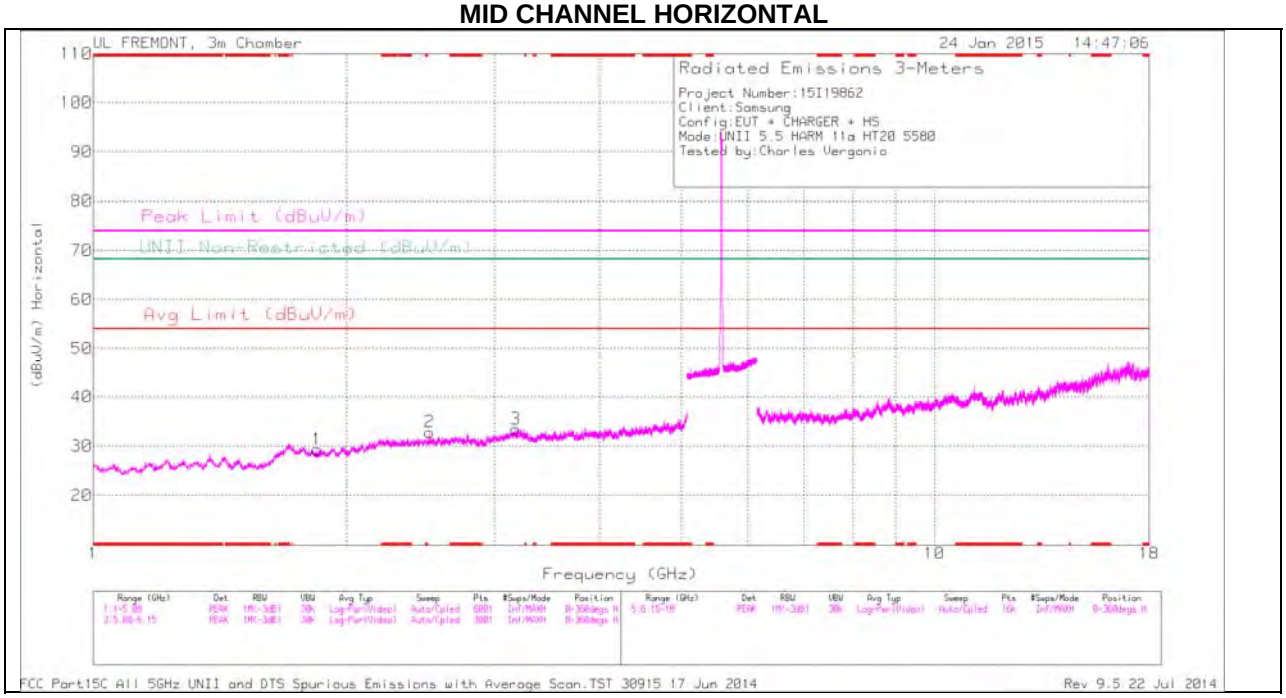
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11	37.68	PK1	38.3	-25.5	0	50.48	-	-	74	-23.52	-	-	360	200	V
* 11	27.19	AD1	38.3	-25.4	.32	40.41	54	-13.59	-	-	-	-	360	200	V

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

PK1 - KDB789033 Method: Peak

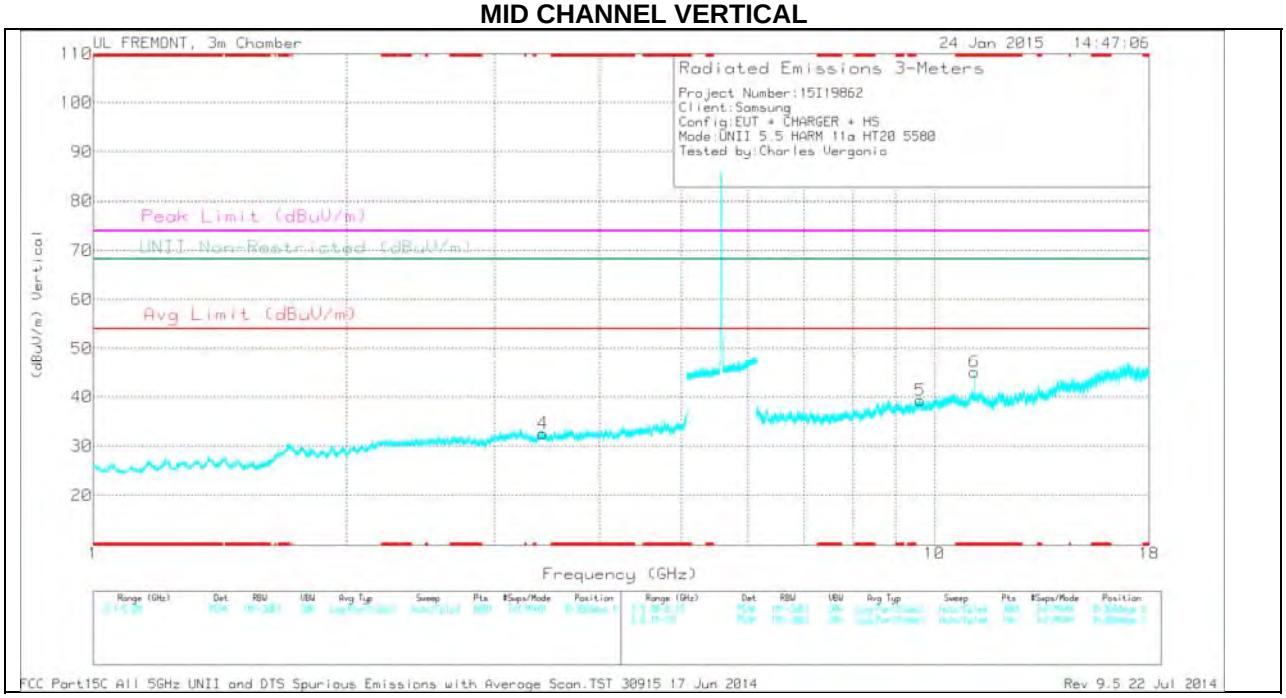
AD1 - KDB789033 Method: AD Primary Power Average

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 T711 (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	* 11.16	32.63	PK	38.3	-25.8	0	45.13	-	-	74	-28.87	-	-	0-360	100	V
1	1.847	32.31	PK	30.3	-33.3	0	29.31	-	-	-	-	68.2	-38.89	0-360	200	H
2	2.514	32.97	PK	32.1	-32.2	0	32.87	-	-	-	-	68.2	-35.33	0-360	100	H
3	3.182	31.67	PK	33.2	-31.4	0	33.47	-	-	-	-	68.2	-34.73	0-360	100	H
4	3.426	31.27	PK	32.8	-31.5	0	32.57	-	-	-	-	68.2	-35.63	0-360	200	V
5	9.623	27.62	PK	37.1	-25.4	0	39.32	-	-	-	-	68.2	-28.88	0-360	100	V

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

PK - Peak detector

Radiated Emissions

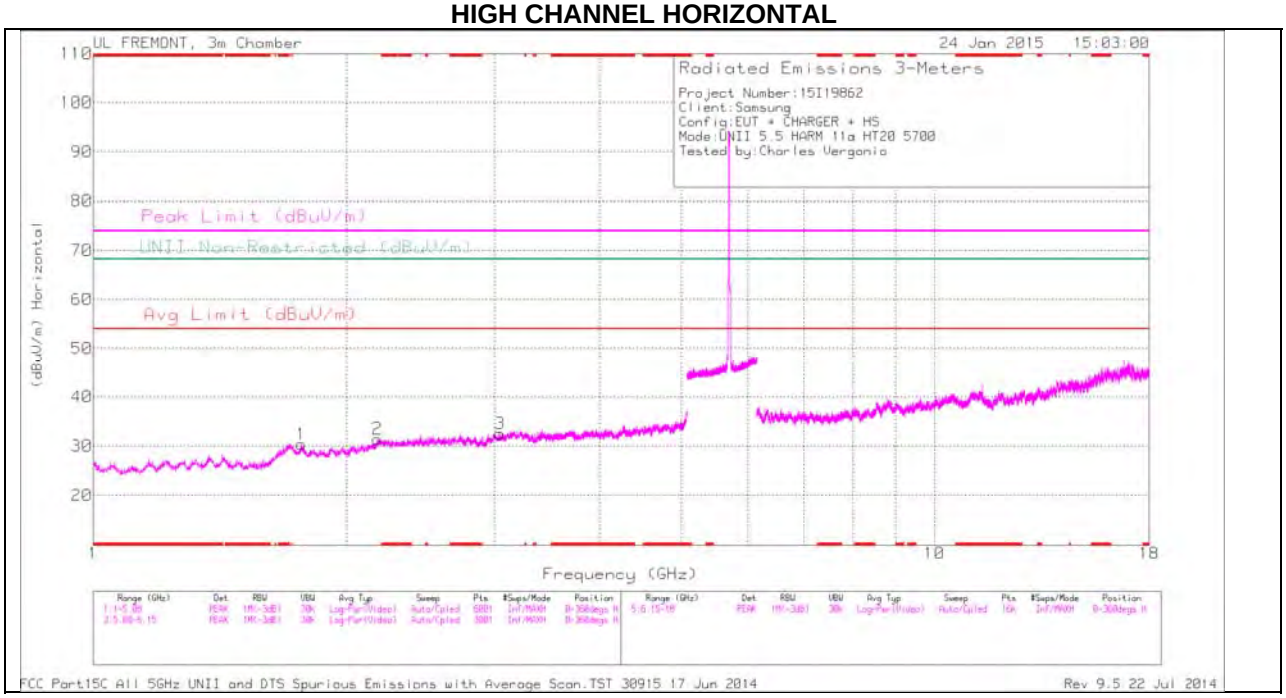
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.16	37.37	PK1	38.3	-25.8	0	49.87	-	-	74	-24.13	-	-	360	100	V
* 11.16	26.82	AD1	38.3	-25.8	.32	39.64	54	-14.36	-	-	-	-	360	100	V

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

PK1 - KDB789033 Method: Peak

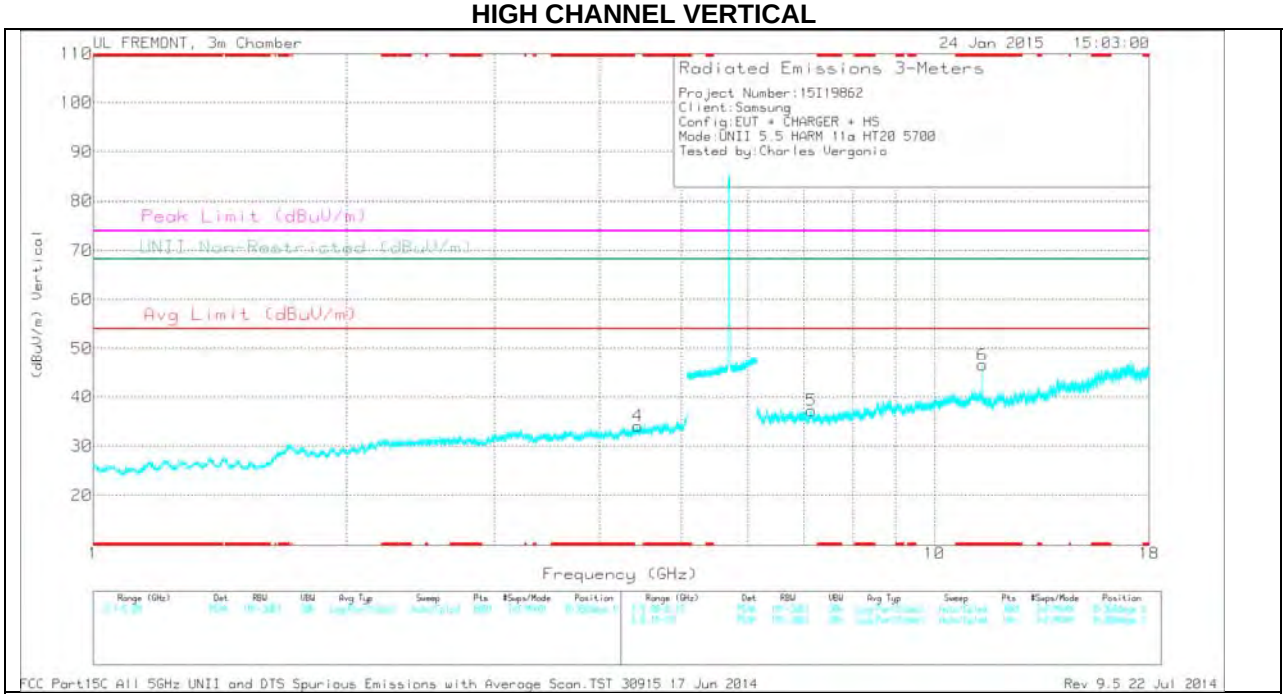
AD1 - KDB789033 Method: AD Primary Power Average

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 T711 (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	* 11.4	34.36	PK	38.2	-26	0	46.56	-	-	74	-27.44	-	-	0-360	100	V
1	1.768	32.36	PK	30.4	-32.4	0	30.36	-	-	-	-	68.2	-37.84	0-360	200	H
2	2.178	32.35	PK	31.8	-32.7	0	31.45	-	-	-	-	68.2	-36.75	0-360	200	H
3	3.044	31.61	PK	32.8	-31.9	0	32.51	-	-	-	-	68.2	-35.69	0-360	200	H
4	4.438	31.17	PK	33.6	-30.7	0	34.07	-	-	-	-	68.2	-34.13	0-360	100	V
5	7.141	30.53	PK	35.6	-28.9	0	37.23	-	-	-	-	68.2	-30.97	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 T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.4	40.26	PK1	38.2	-26	0	52.46	-	-	74	-21.54	-	-	158	159	V
* 11.4	33.99	AD1	38.2	-26	.32	46.51	54	-7.49	-	-	-	-	158	159	V

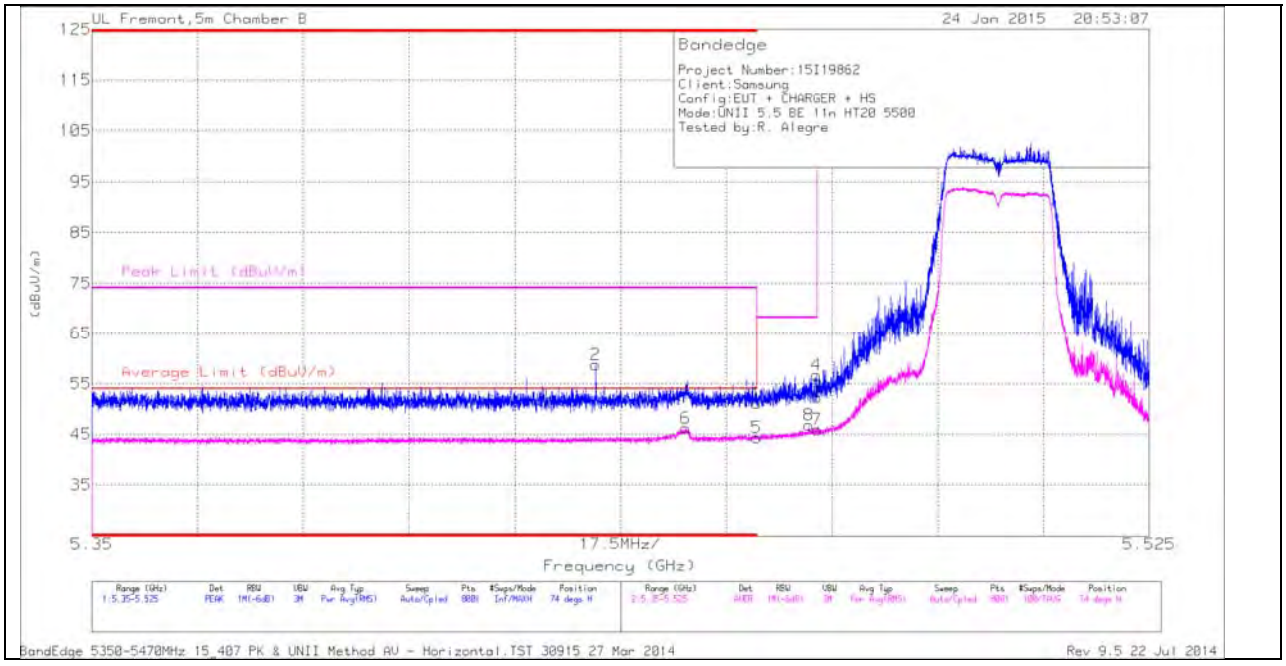
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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

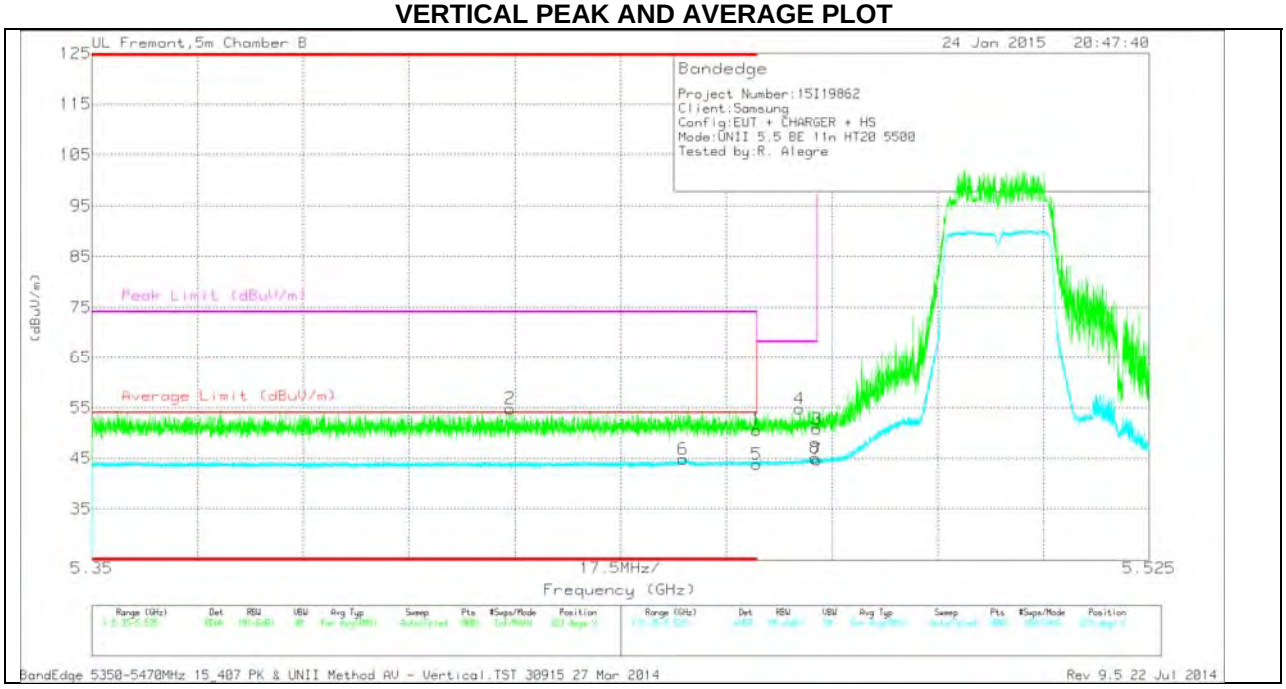
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.433	44.45	PK	34.5	-20.2	0	58.75	-	-	74	-15.25	74	295	H
6	* 5.448	31.56	RMS	34.5	-20.2	.32	46.18	54	-7.82	-	-	74	295	H
1	* 5.46	36.83	PK	34.5	-20.2	0	51.13	-	-	74	-22.87	74	295	H
5	* 5.46	29.67	RMS	34.5	-20.2	.32	44.29	54	-9.71	-	-	74	295	H
8	5.469	32.2	RMS	34.5	-20.2	.32	46.82	-	-	-	-	74	295	H
3	5.47	37.96	PK	34.5	-20.2	0	52.26	-	-	68.2	-15.94	74	295	H
4	5.47	42.41	PK	34.5	-20.2	0	56.71	-	-	68.2	-11.49	74	295	H
7	5.47	31.38	RMS	34.5	-20.2	.32	46	-	-	-	-	74	295	H

VERTICAL PEAK AND AVERAGE PLOT

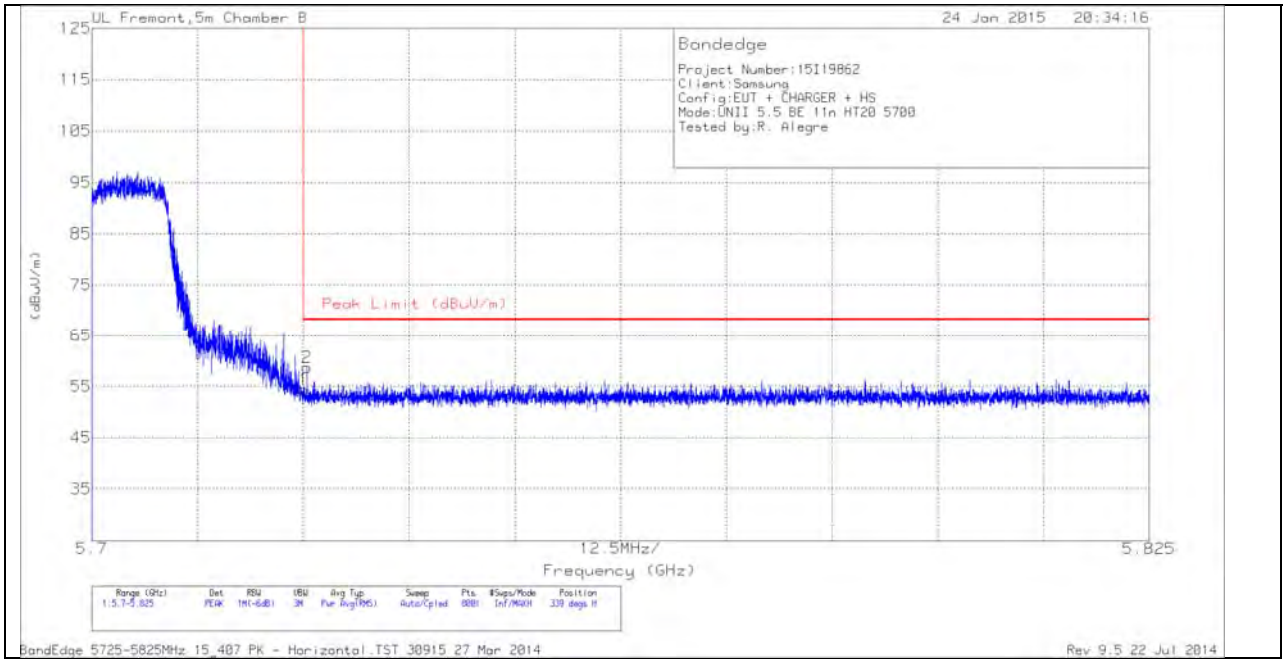


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.419	40.42	PK	34.5	-20.1	0	54.82	-	-	74	-19.18	323	262	V
6	* 5.448	30.18	RMS	34.5	-20.2	.32	44.8	54	-9.2	-	-	323	262	V
1	* 5.46	36.3	PK	34.5	-20.2	0	50.6	-	-	74	-23.4	323	262	V
5	* 5.46	29.24	RMS	34.5	-20.2	.32	43.86	54	-10.14	-	-	323	262	V
4	5.467	40.45	PK	34.5	-20.2	0	54.75	-	-	68.2	-13.45	323	262	V
3	5.47	36.5	PK	34.5	-20.2	0	50.8	-	-	68.2	-17.4	323	262	V
7	5.47	30.05	RMS	34.5	-20.2	.32	44.67	-	-	-	-	323	262	V
8	5.47	30.48	RMS	34.5	-20.2	.32	45.1	-	-	-	-	323	262	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

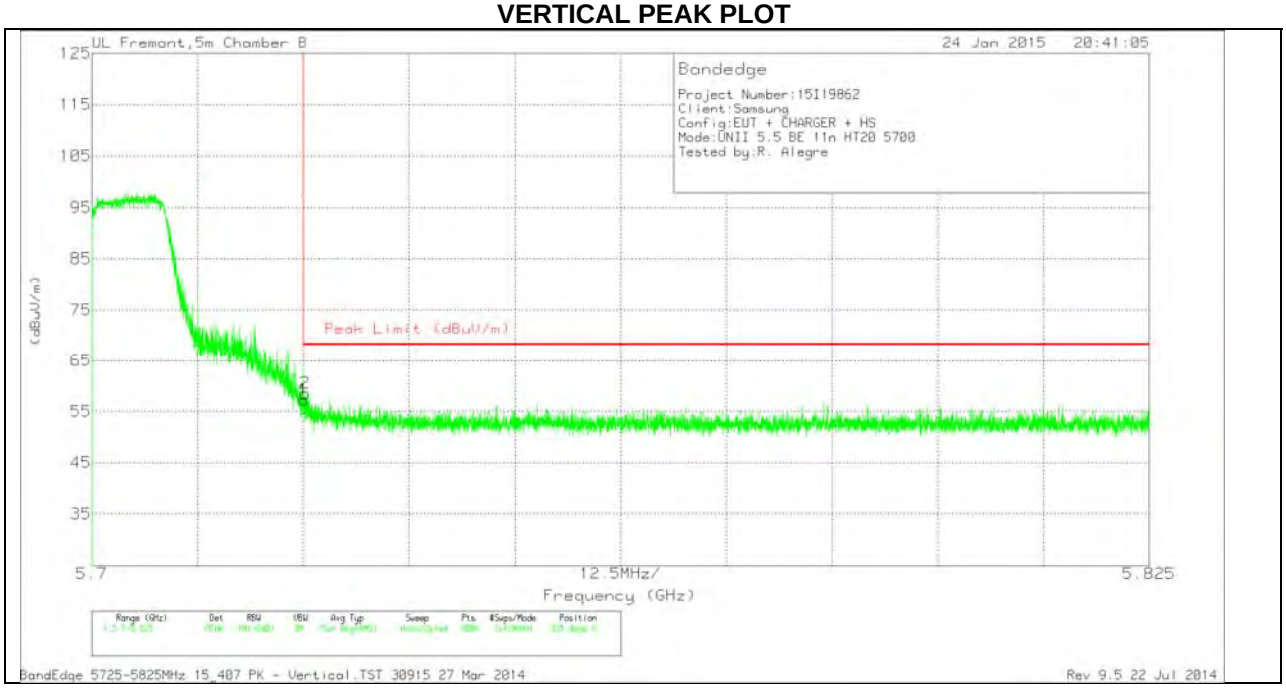
HORIZONTAL PEAK PLOT



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	39.75	PK	34.6	-19.9	0	54.45	68.2	-13.75	339	270	H
2	5.725	44.03	PK	34.6	-19.9	0	58.73	68.2	-9.47	339	270	H

VERTICAL PEAK PLOT

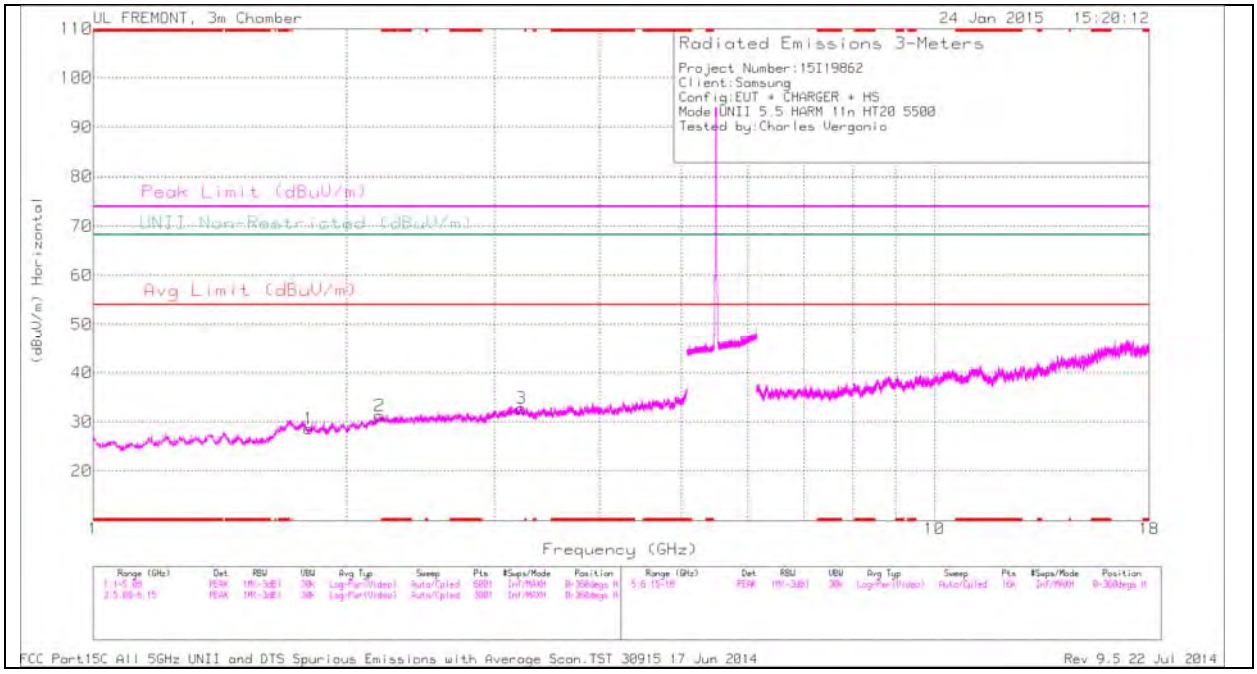


VERTICAL DATA

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	42.59	PK	34.6	-19.9	0	57.29	68.2	-10.91	335	266	V
2	5.725	43.87	PK	34.6	-19.9	0	58.57	68.2	-9.63	335	266	V

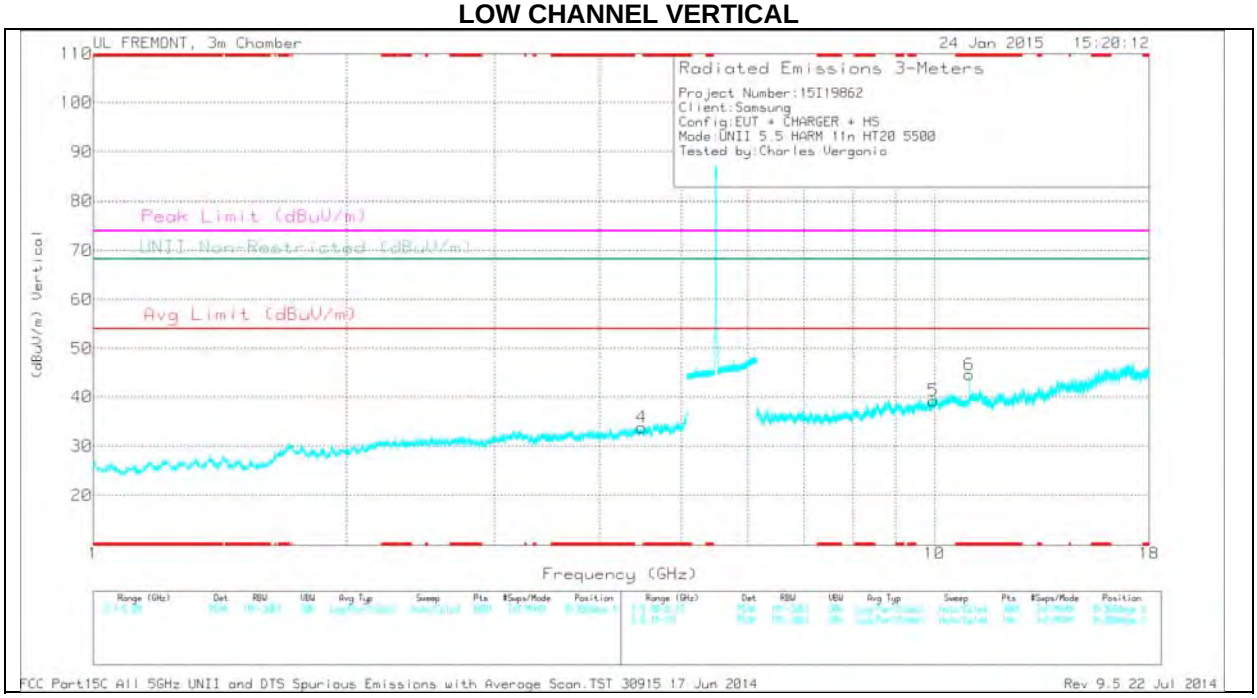
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



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

LOW CHANNEL VERTICAL



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

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	* 10.999	31.78	PK	38.3	-25.5	0	44.58	-	-	74	-29.42	-	-	0-360	200	V
1	1.806	31.26	PK	30.3	-33	0	28.56	-	-	-	-	68.2	-39.64	0-360	100	H
2	2.191	32.08	PK	31.9	-32.7	0	31.28	-	-	-	-	68.2	-36.92	0-360	200	H
3	3.23	31.05	PK	33.1	-31.4	0	32.75	-	-	-	-	68.2	-35.45	0-360	100	H
4	4.49	31.07	PK	33.6	-30.9	0	33.77	-	-	-	-	68.2	-34.43	0-360	200	V
5	9.971	27.44	PK	37.7	-25.9	0	39.24	-	-	-	-	68.2	-28.96	0-360	100	V

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

PK - Peak detector

Radiated Emissions

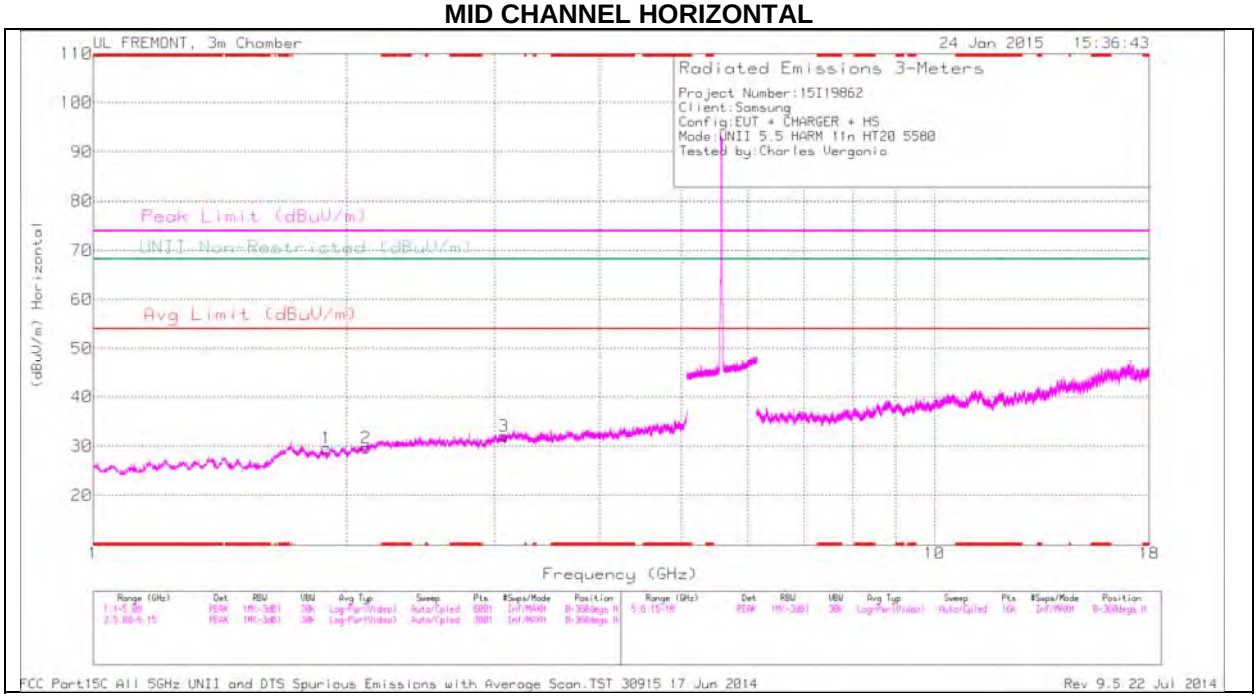
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11	37.55	PK1	38.3	-25.4	0	50.45	-	-	74	-23.55	-	-	0	200	V
* 11	27.14	AD1	38.3	-25.4	.32	40.36	54	-13.64	-	-	-	-	0	200	V

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

PK1 - KDB789033 Method: Peak

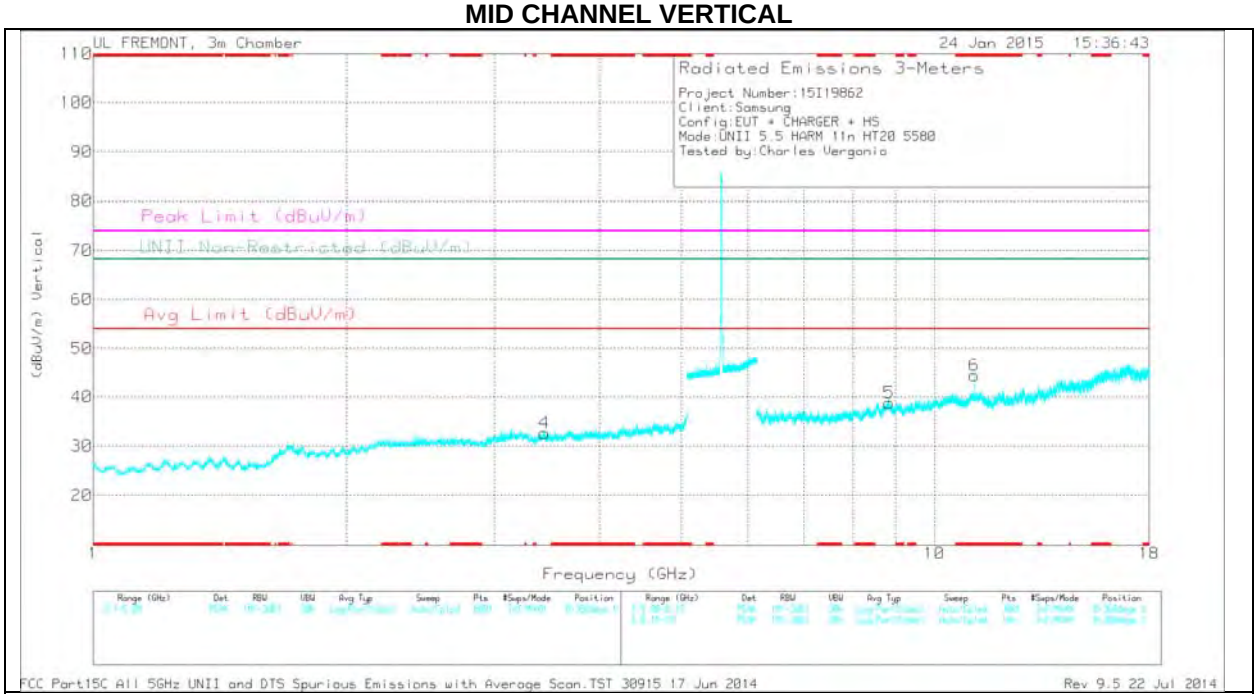
AD1 - KDB789033 Method: AD Primary Power Average

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 T711 (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	* 11.159	31.88	PK	38.3	-25.8	0	44.38	-	-	74	-29.62	-	-	0-360	100	V
1	1.894	32.32	PK	30.3	-33	0	29.62	-	-	-	-	68.2	-38.58	0-360	200	H
2	2.112	31.2	PK	31.3	-32.9	0	29.6	-	-	-	-	68.2	-38.6	0-360	200	H
3	3.077	31.25	PK	32.9	-32.1	0	32.05	-	-	-	-	68.2	-36.15	0-360	200	H
4	3.439	31.33	PK	32.8	-31.5	0	32.63	-	-	-	-	68.2	-35.57	0-360	200	V
5	8.834	28.17	PK	36.6	-26	0	38.77	-	-	-	-	68.2	-29.43	0-360	200	V

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

PK - Peak detector

Radiated Emissions

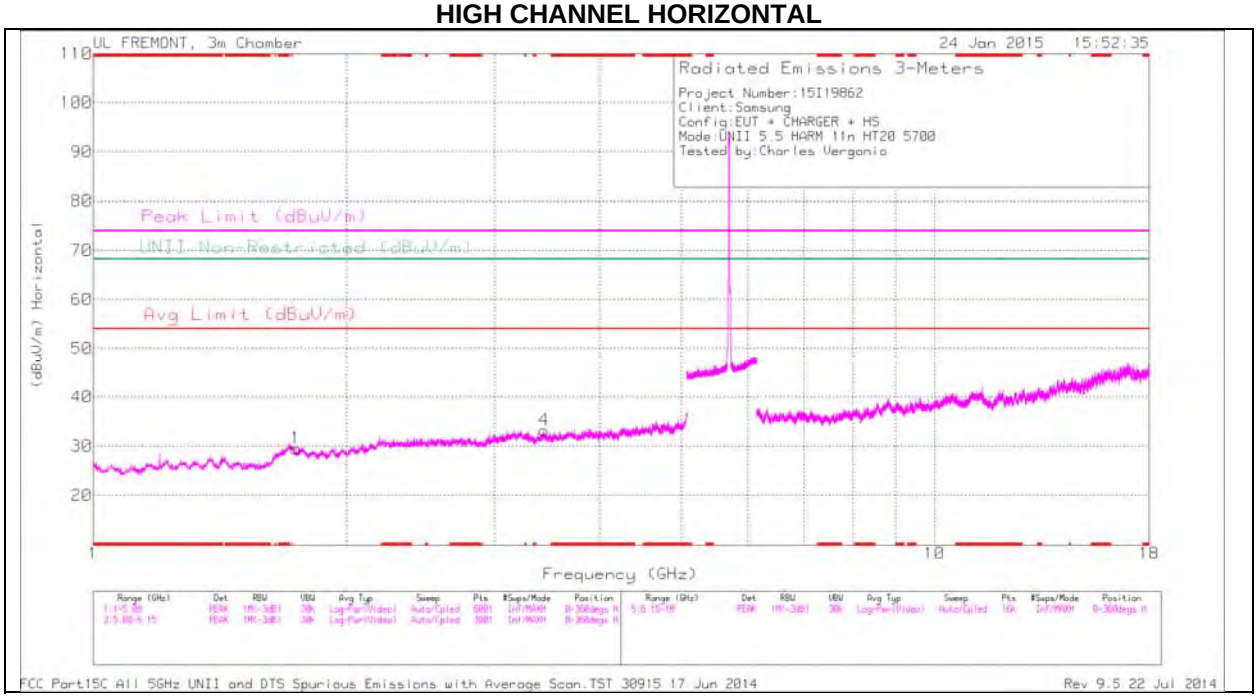
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.16	37.7	PK1	38.3	-25.8	0	50.2	-	-	74	-23.8	-	-	3	100	V
* 11.16	28.65	AD1	38.3	-25.8	.32	41.47	54	-12.53	-	-	-	-	3	100	V

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

PK1 - KDB789033 Method: Peak

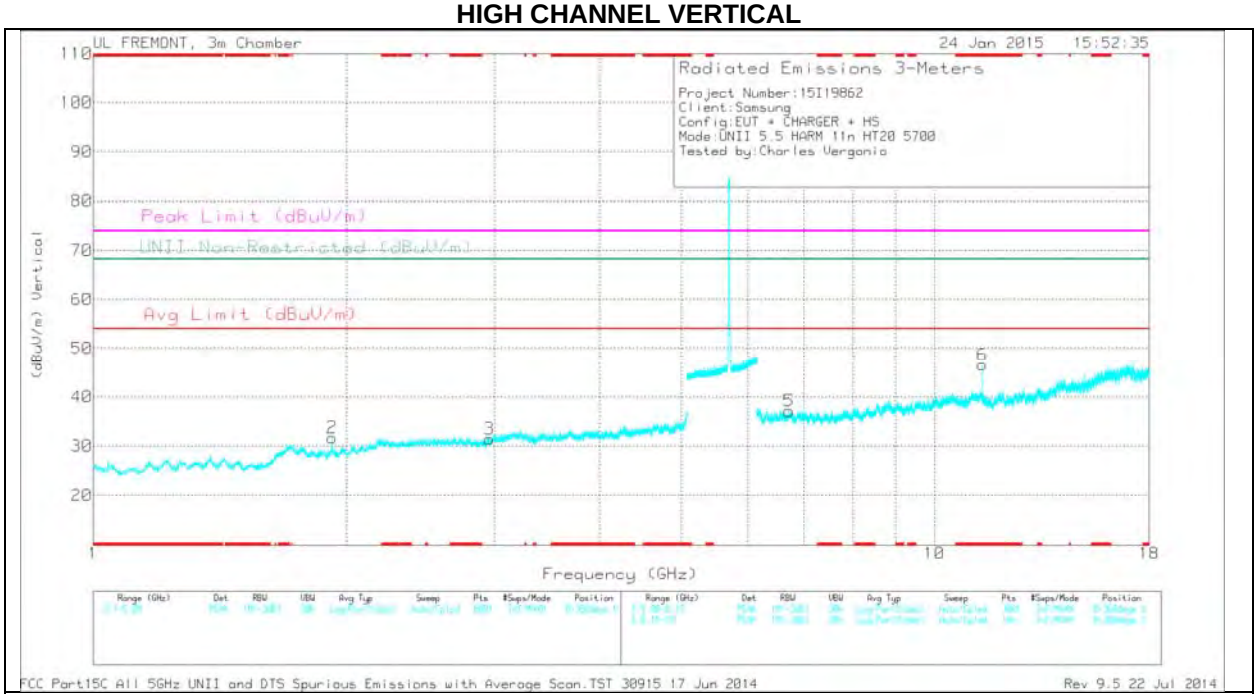
AD1 - KDB789033 Method: AD Primary Power Average

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 T711 (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	* 11.4	34.4	PK	38.2	-26	0	46.6	-	-	74	-27.4	-	-	0-360	100	V
1	1.743	31.33	PK	30.5	-32.3	0	29.53	-	-	-	-	68.2	-38.67	0-360	100	H
2	1.925	34.01	PK	30.2	-32.5	0	31.71	-	-	-	-	68.2	-36.49	0-360	100	V
3	2.958	31.15	PK	32.4	-32.1	0	31.45	-	-	-	-	68.2	-36.75	0-360	200	V
4	3.438	31.93	PK	32.8	-31.5	0	33.23	-	-	-	-	68.2	-34.97	0-360	200	H
5	6.717	30.51	PK	35.8	-29.2	0	37.11	-	-	-	-	68.2	-31.09	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 T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.4	40.61	PK1	38.2	-26	0	52.81	-	-	74	-21.19	-	-	157	171	V
* 11.4	34.29	AD1	38.2	-26	.32	46.81	54	-7.19	-	-	-	-	157	171	V

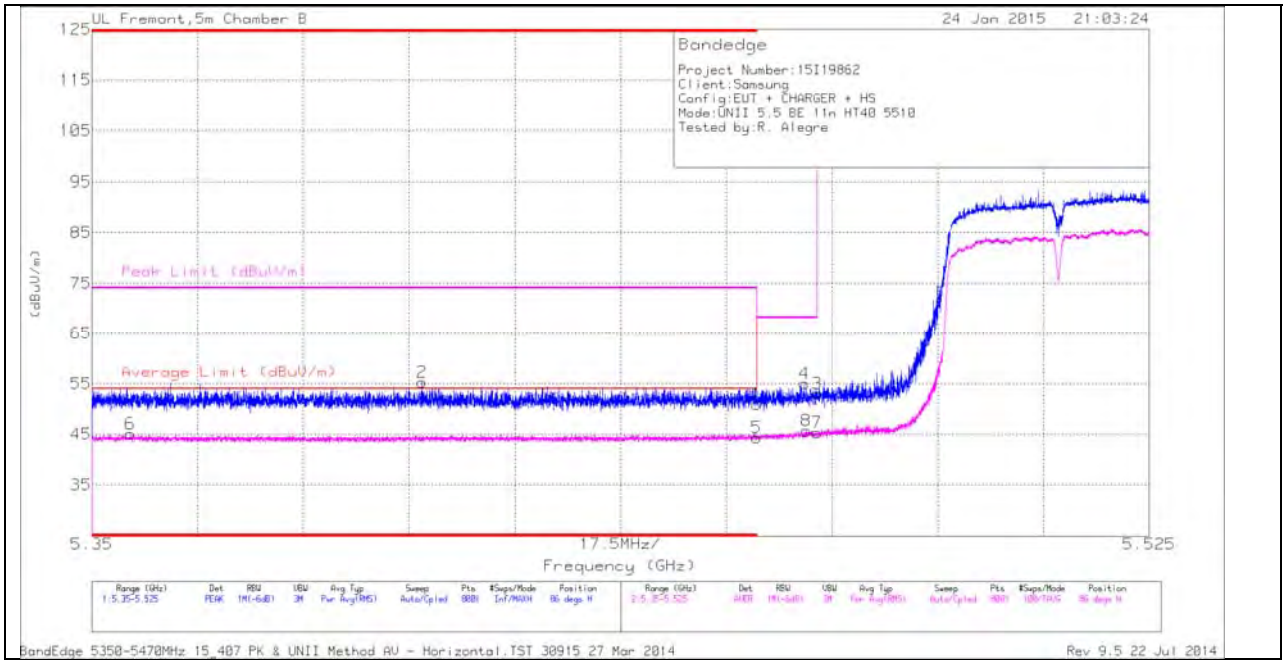
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

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)

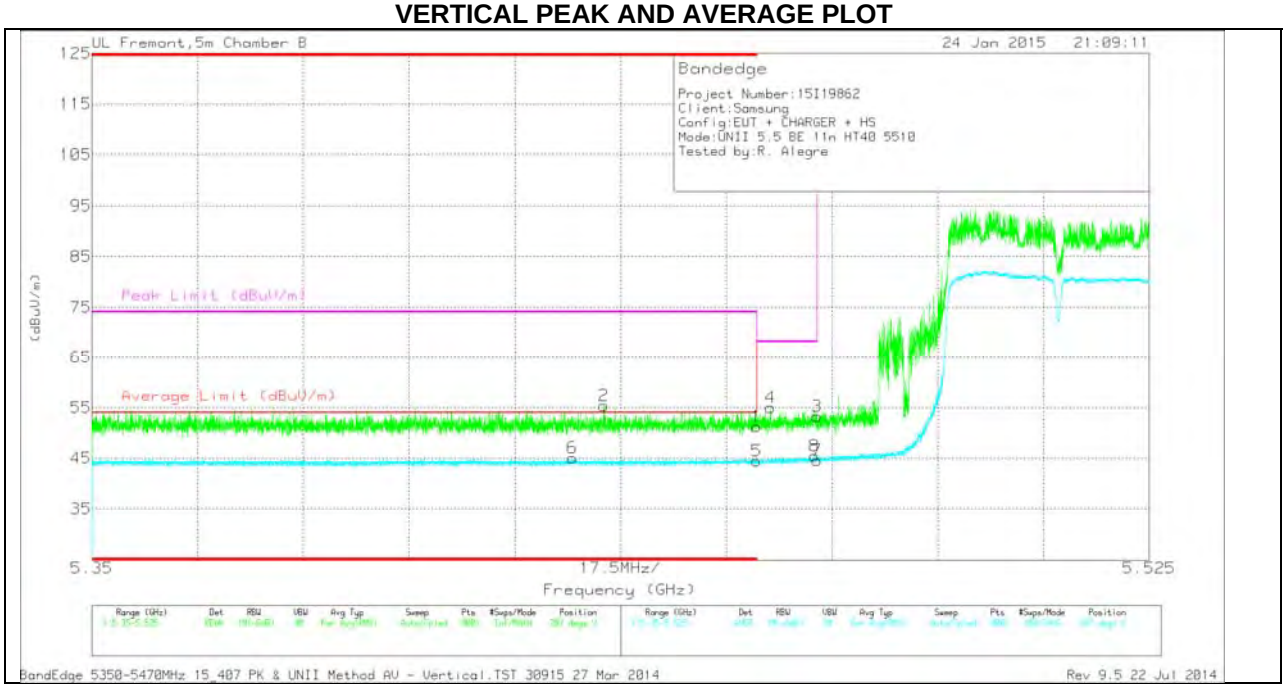
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	* 5.356	29.87	RMS	34.5	-19.9	.64	45.11	54	-8.89	-	-	86	189	H
2	* 5.405	40.82	PK	34.5	-20.1	0	55.22	-	-	74	-18.78	86	189	H
1	* 5.46	36.65	PK	34.5	-20.2	0	50.95	-	-	74	-23.05	86	189	H
5	* 5.46	29.34	RMS	34.5	-20.2	.64	44.28	54	-9.72	-	-	86	189	H
4	5.468	40.7	PK	34.5	-20.2	0	55	-	-	68.2	-13.2	86	189	H
8	5.468	30.7	RMS	34.5	-20.2	.64	45.64	-	-	-	-	86	189	H
3	5.47	38.75	PK	34.5	-20.2	0	53.05	-	-	68.2	-15.15	86	189	H
7	5.47	30.44	RMS	34.5	-20.2	.64	45.38	-	-	-	-	86	189	H

VERTICAL PEAK AND AVERAGE PLOT

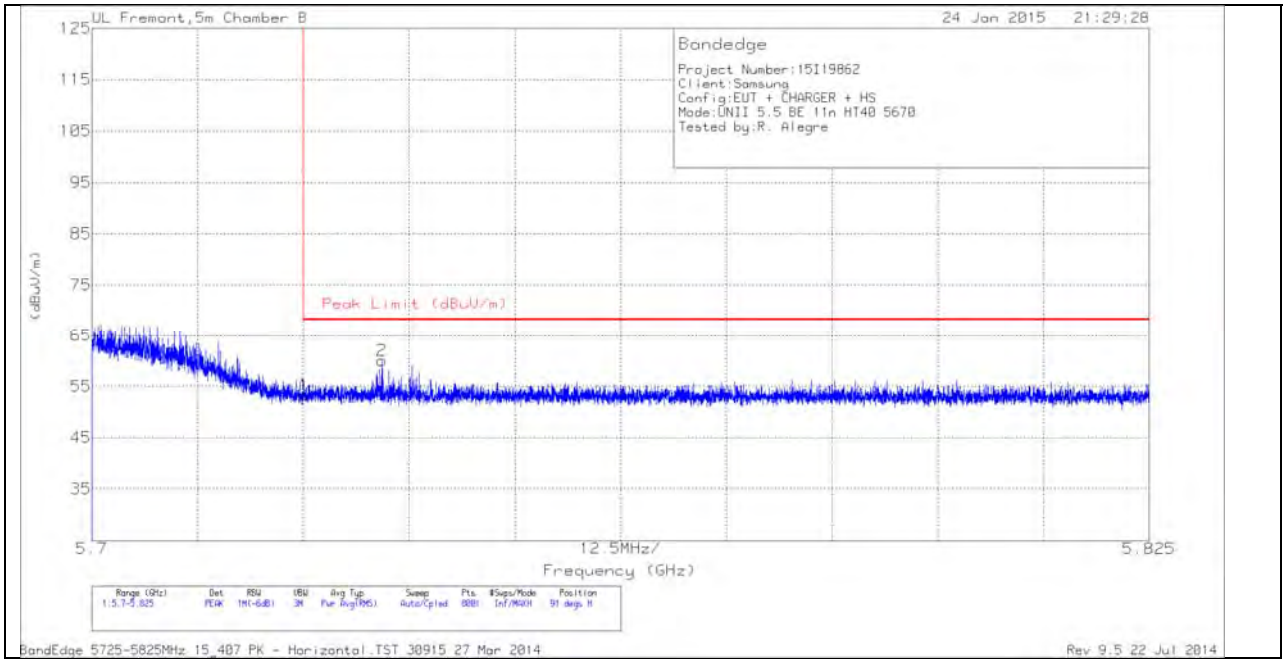


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	* 5.43	29.99	RMS	34.5	-20.1	.64	45.03	54	-8.97	-	-	287	191	V
2	* 5.435	41.13	PK	34.5	-20.2	0	55.43	-	-	74	-18.57	287	191	V
1	* 5.46	37.01	PK	34.5	-20.2	0	51.31	-	-	74	-22.69	287	191	V
5	* 5.46	29.5	RMS	34.5	-20.2	.64	44.44	54	-9.56	-	-	287	191	V
4	5.462	40.67	PK	34.5	-20.2	0	54.97	-	-	68.2	-13.23	287	191	V
3	5.47	38.92	PK	34.5	-20.2	0	53.22	-	-	68.2	-14.98	287	191	V
7	5.47	29.6	RMS	34.5	-20.2	.64	44.54	-	-	-	-	287	191	V
8	5.47	30.51	RMS	34.5	-20.2	.64	45.45	-	-	-	-	287	191	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

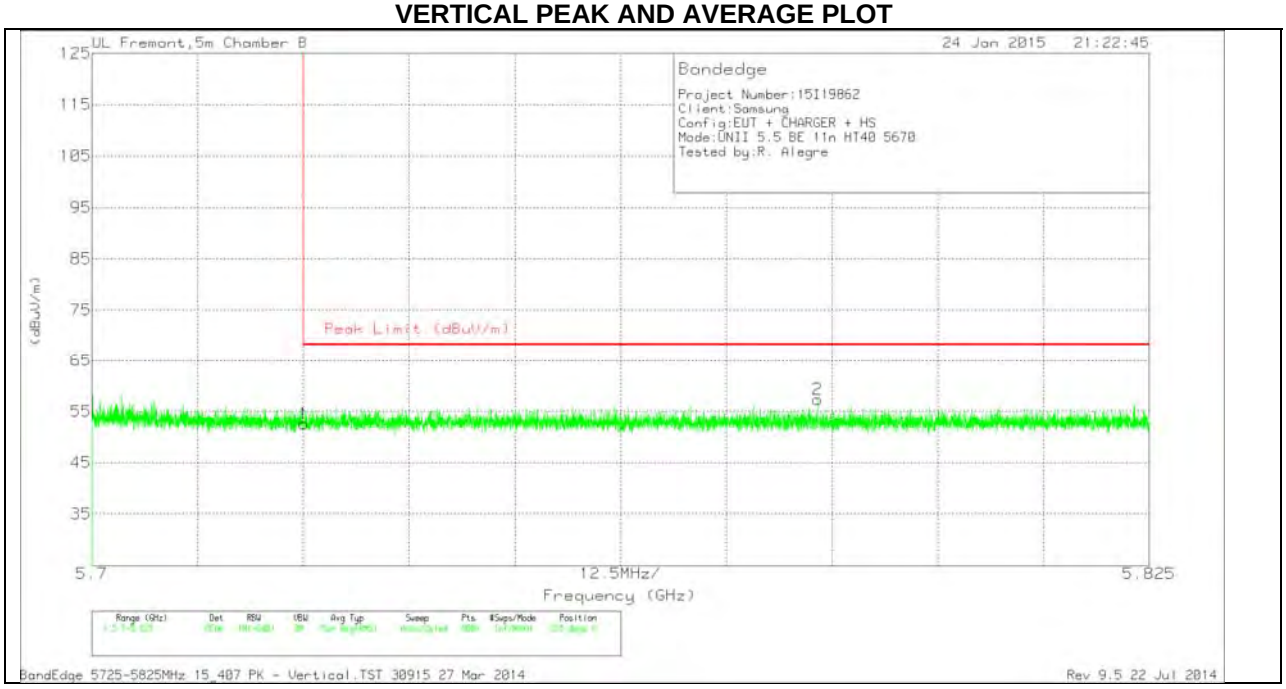
HORIZONTAL PEAK PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	38.59	PK	34.6	-19.9	53.29	68.2	-14.91	91	192	H
2	5.734	45.4	PK	34.6	-19.9	60.1	68.2	-8.1	91	192	H

VERTICAL PEAK AND AVERAGE PLOT

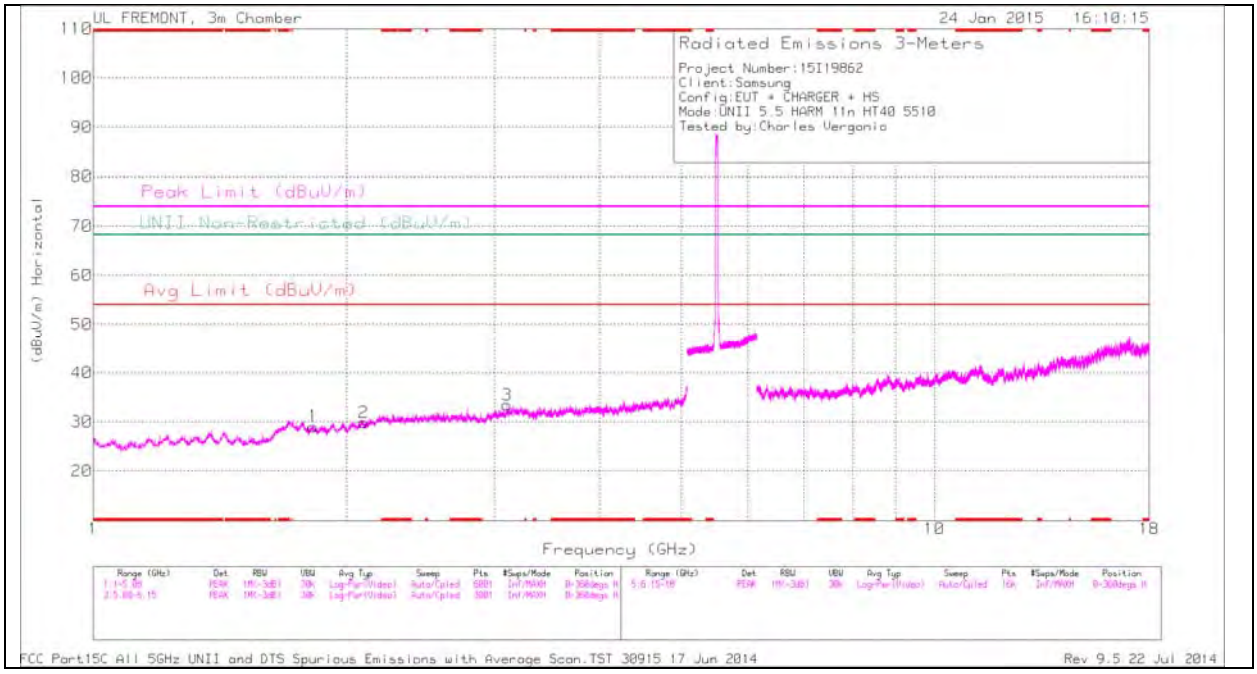


VERTICAL DATA

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	37.9	PK	34.6	-19.9	0	52.6	68.2	-15.6	215	244	V
2	5.786	42.25	PK	34.7	-19.6	0	57.35	68.2	-10.85	215	244	V

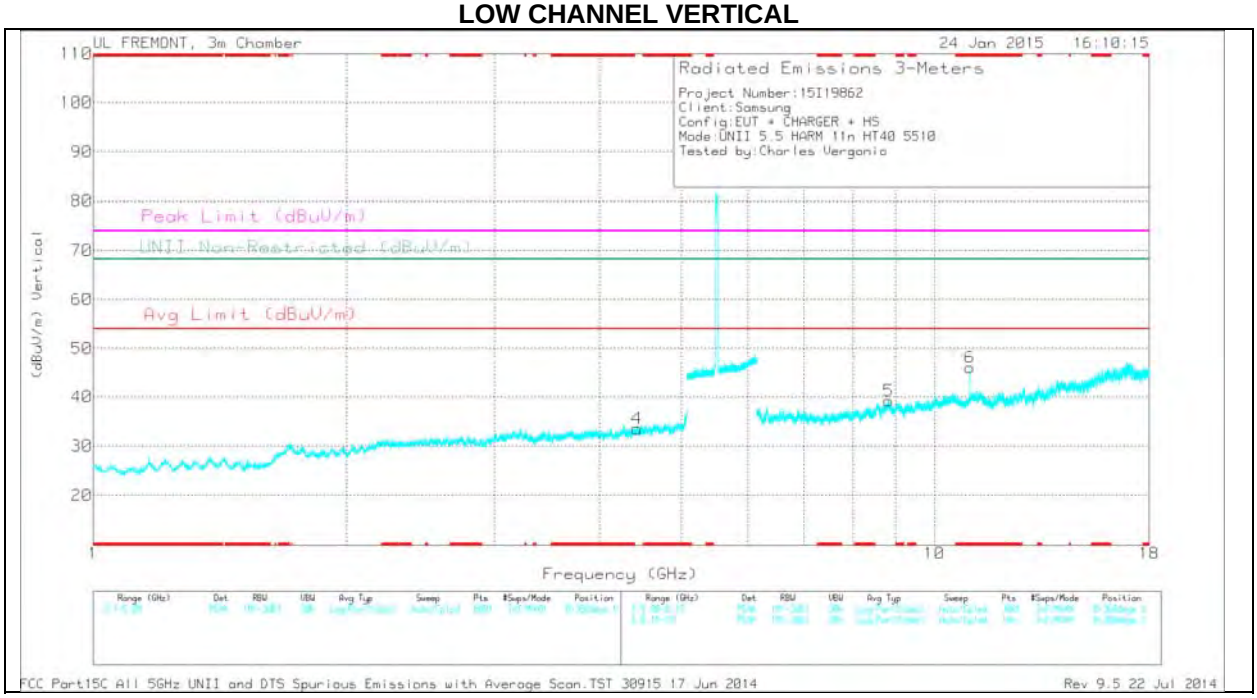
HARMONICS AND SPURIOUS EMISSIONS

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 T711 (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	* 11.019	33.22	PK	38.3	-25.5	0	46.02	-	-	74	-27.98	-	-	0-360	200	V
1	1.828	31.8	PK	30.3	-33.1	0	29	-	-	-	-	68.2	-39.2	0-360	100	H
2	2.095	31.36	PK	31.2	-32.7	0	29.86	-	-	-	-	68.2	-38.34	0-360	200	H
3	3.103	32.43	PK	33	-32	0	33.43	-	-	-	-	68.2	-34.77	0-360	200	H
4	4.429	30.32	PK	33.6	-30.4	0	33.52	-	-	-	-	68.2	-34.68	0-360	200	V
5	8.828	28.49	PK	36.6	-25.9	0	39.19	-	-	-	-	68.2	-29.01	0-360	200	V

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

PK - Peak detector

Radiated Emissions

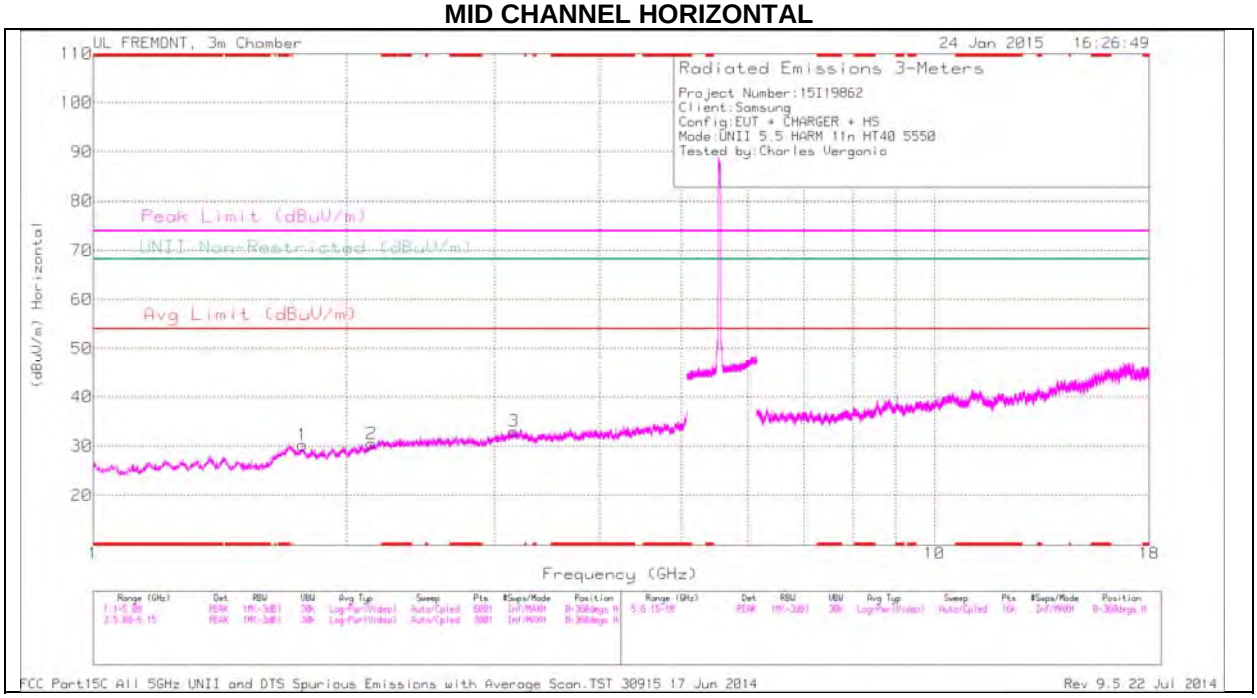
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.02	37.75	PK1	38.3	-25.5	0	50.55	-	-	74	-23.45	-	-	0	200	V
* 11.02	27.74	AD1	38.3	-25.5	.64	41.18	54	-12.82	-	-	-	-	0	200	V

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

PK1 - KDB789033 Method: Peak

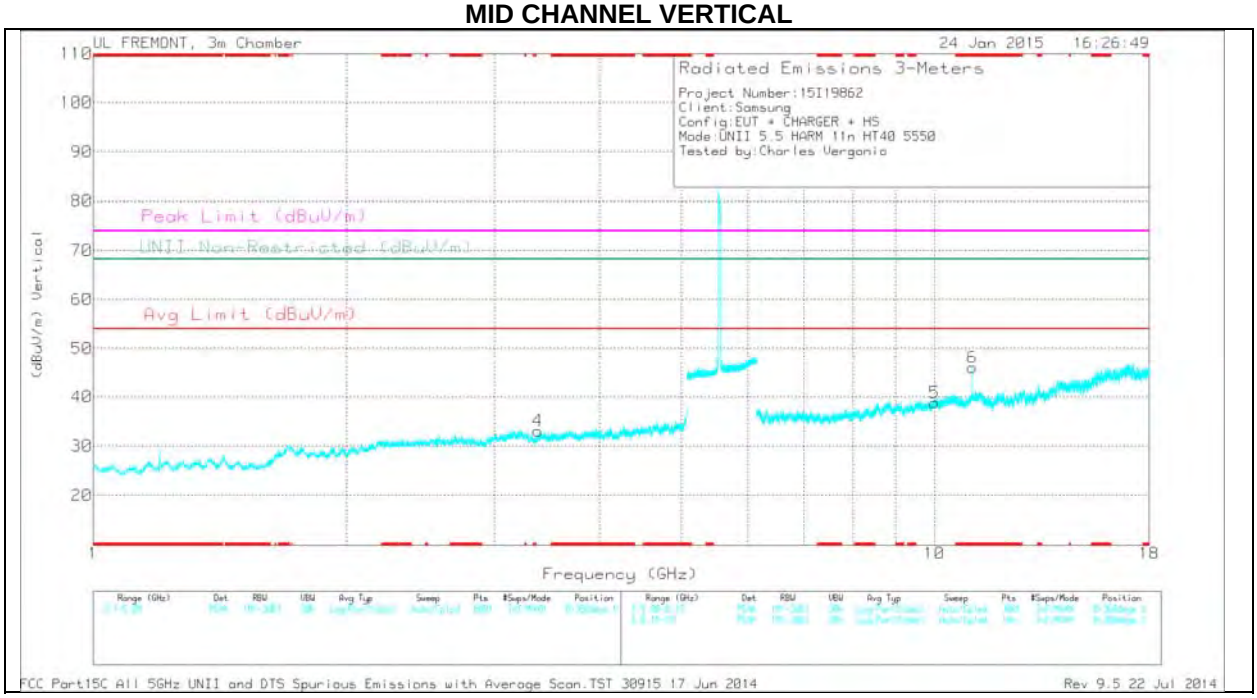
AD1 - KDB789033 Method: AD Primary Power Average

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 T711 (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	* 11.099	32.92	PK	38.4	-25.3	0	46.02	-	-	74	-27.98	-	-	0-360	200	V
1	1.775	32.21	PK	30.4	-32.4	0	30.21	-	-	-	-	68.2	-37.99	0-360	100	H
2	2.142	31.79	PK	31.5	-32.8	0	30.49	-	-	-	-	68.2	-37.71	0-360	200	H
3	3.164	31.39	PK	33.1	-31.5	0	32.99	-	-	-	-	68.2	-35.21	0-360	100	H
4	3.377	32.19	PK	32.8	-31.9	0	33.09	-	-	-	-	68.2	-35.11	0-360	100	V
5	10	27.01	PK	37.7	-25.9	0	38.81	-	-	-	-	68.2	-29.39	0-360	100	V

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

PK - Peak detector

Radiated Emissions

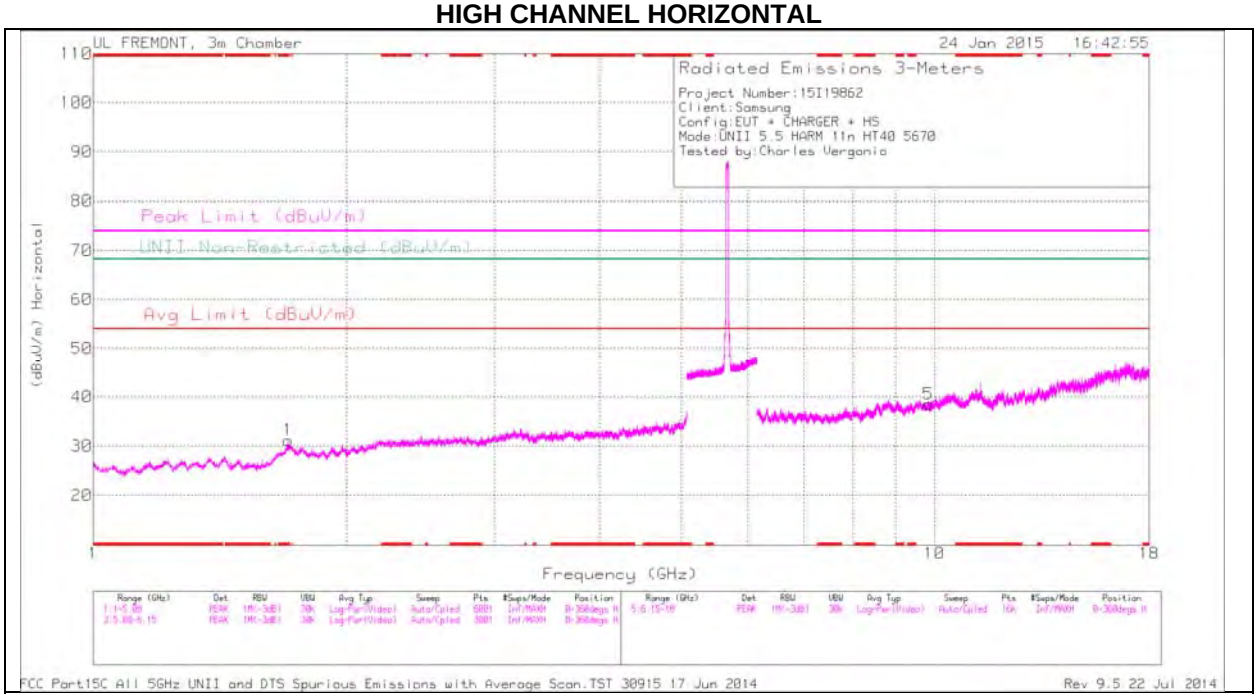
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.1	37.5	PK1	38.4	-25.3	0	50.6	-	-	74	-23.4	-	-	0	200	V
* 11.1	26.95	AD1	38.4	-25.3	.64	40.69	54	-13.31	-	-	-	-	0	200	V

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

PK1 - KDB789033 Method: Peak

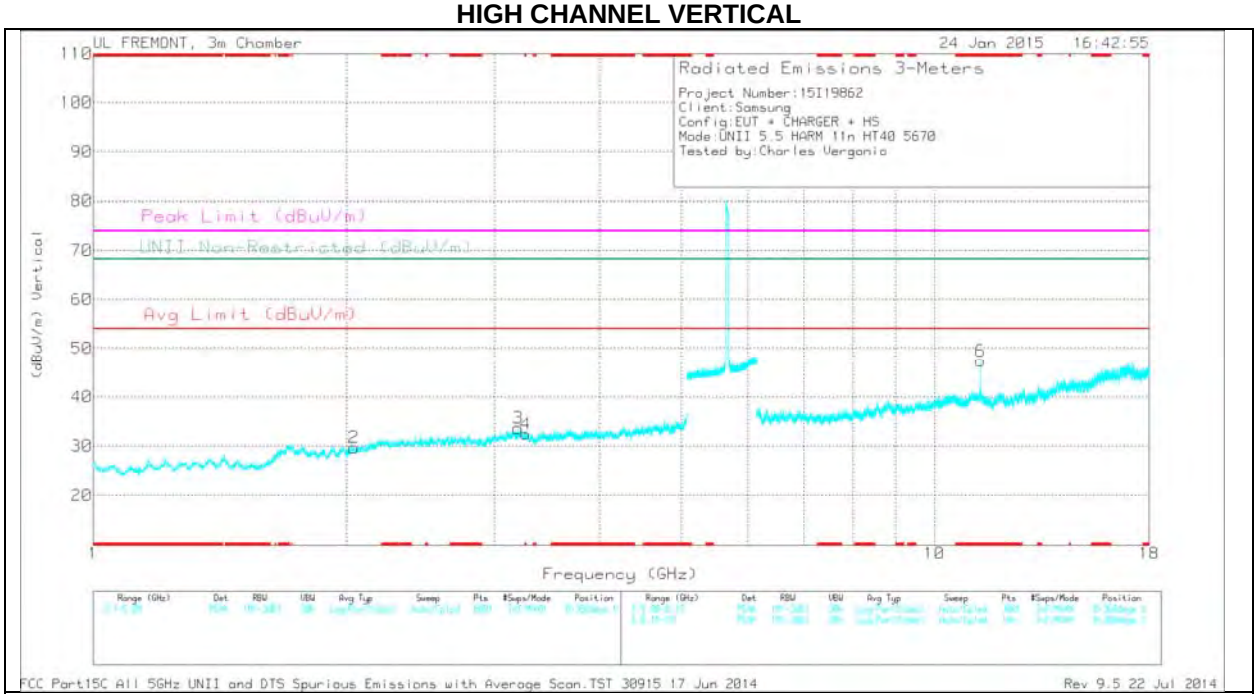
AD1 - KDB789033 Method: AD Primary Power Average

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 T711 (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	* 1.707	32.5	PK	30.7	-32	0	31.2	-	-	74	-42.8	-	-	0-360	200	H
6	* 11.34	34.69	PK	38.2	-25.5	0	47.39	-	-	74	-26.61	-	-	0-360	200	V
2	2.042	31.4	PK	30.6	-32.3	0	29.7	-	-	-	-	68.2	-38.5	0-360	100	V
3	3.199	31.75	PK	33.2	-31.3	0	33.65	-	-	-	-	68.2	-34.55	0-360	200	V
4	3.27	31.39	PK	32.9	-31.9	0	32.39	-	-	-	-	68.2	-35.81	0-360	200	V
5	9.843	26.74	PK	37.3	-25.5	0	38.54	-	-	-	-	68.2	-29.66	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 T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.34	40.36	PK1	38.2	-25.5	0	53.06	-	-	74	-20.94	-	-	157	200	V
* 11.34	33.86	AD1	38.2	-25.5	.64	47.2	54	-6.8	-	-	-	-	157	200	V

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

PK1 - KDB789033 Method: Peak

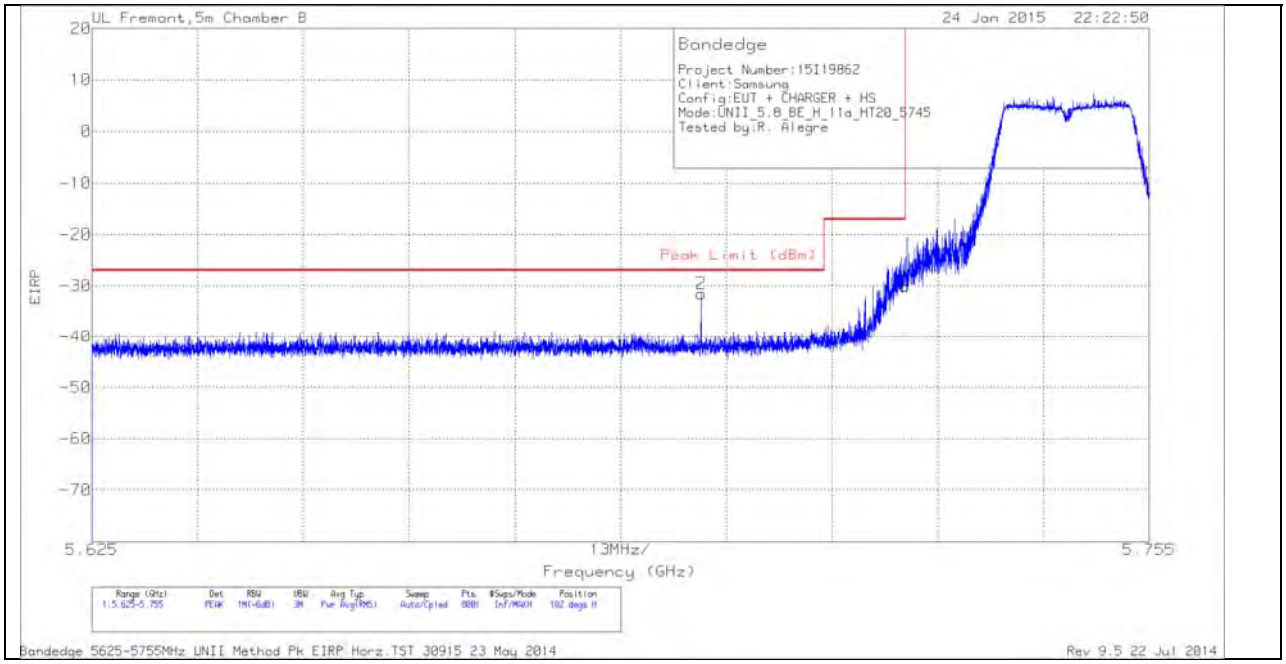
AD1 - KDB789033 Method: AD Primary Power Average

11.4. 5.8 GHz

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

AUTHORIZED BANDEDGE (LOW CHANNEL)

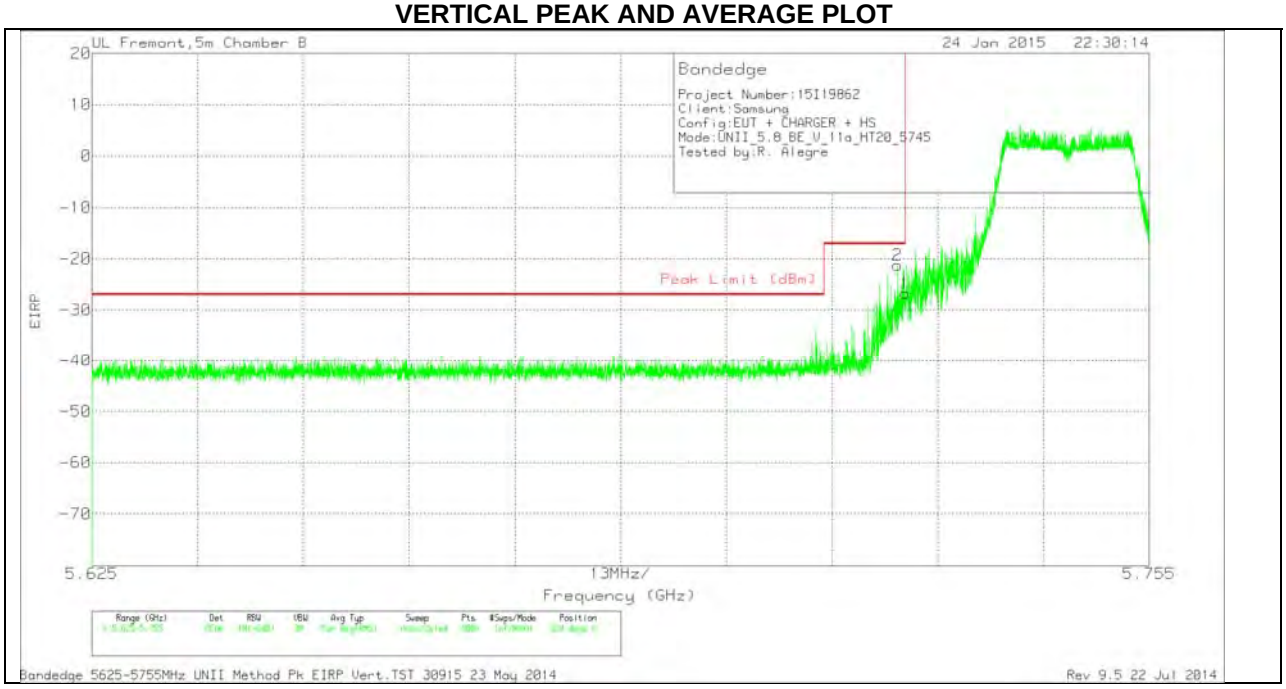
HORIZONTAL PEAK PLOT



HORIZONTAL DATA

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	5.7	-57.89	PK	34.5	-19.9	11.8	0	-31.49	-27	-4.49	102	294	H
1	5.725	-56.61	PK	34.6	-19.9	11.8	0	-30.11	-17	-13.11	102	294	H

VERTICAL PEAK AND AVERAGE PLOT

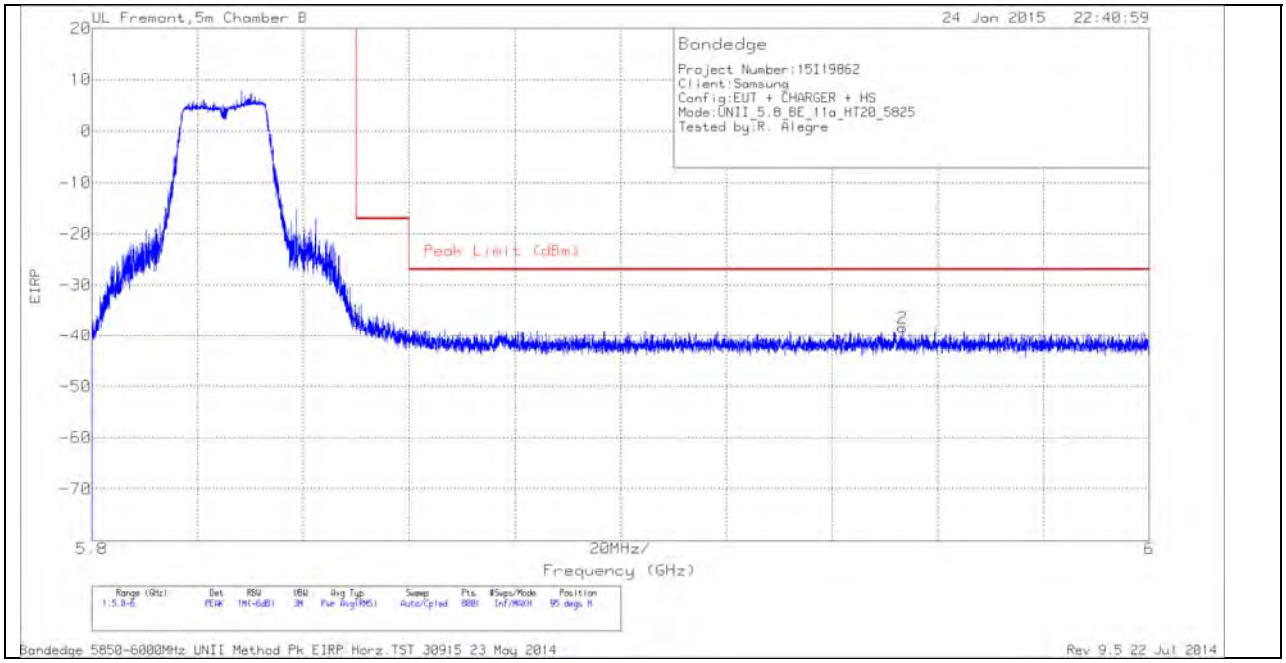


VERTICAL DATA

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	5.724	-47.77	PK	34.6	-19.9	11.8	0	-21.27	-17	-4.27	328	243	V
1	5.725	-53.3	PK	34.6	-19.9	11.8	0	-26.8	-17	-9.8	328	243	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

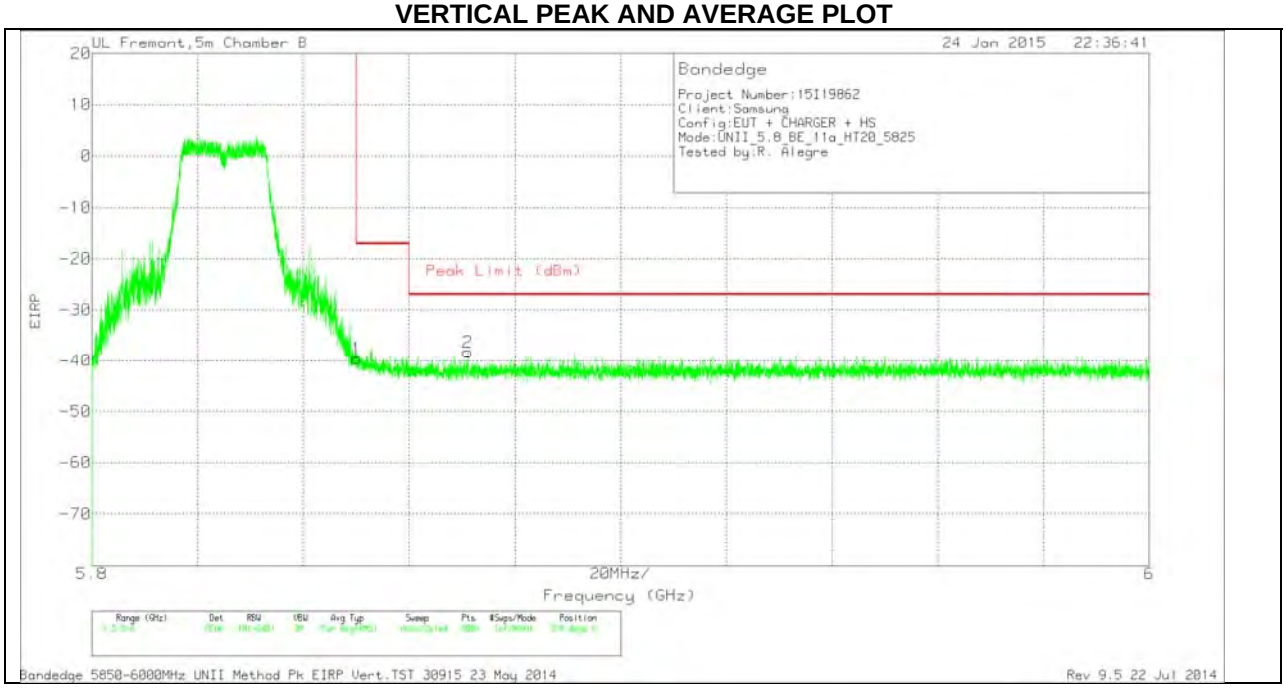
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

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	-64.01	PK	34.8	-19.7	11.8	-37.11	-17	-20.11	95	257	H
2	5.953	-65.63	PK	35.1	-19.7	11.8	-38.43	-27	-11.43	95	257	H

VERTICAL PEAK AND AVERAGE PLOT

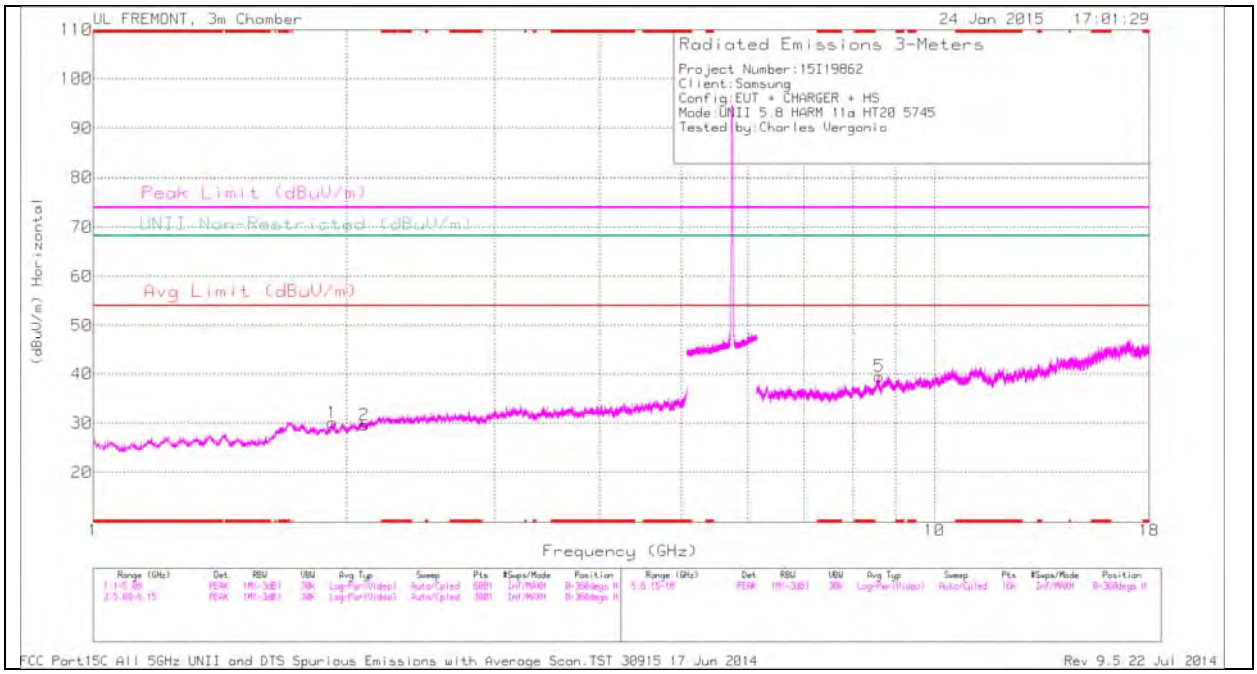


VERTICAL DATA

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	-66.54	PK	34.8	-19.7	11.8	-39.64	-17	-22.64	318	286	V
2	5.871	-65.35	PK	34.9	-19.7	11.8	-38.35	-27	-11.35	318	286	V

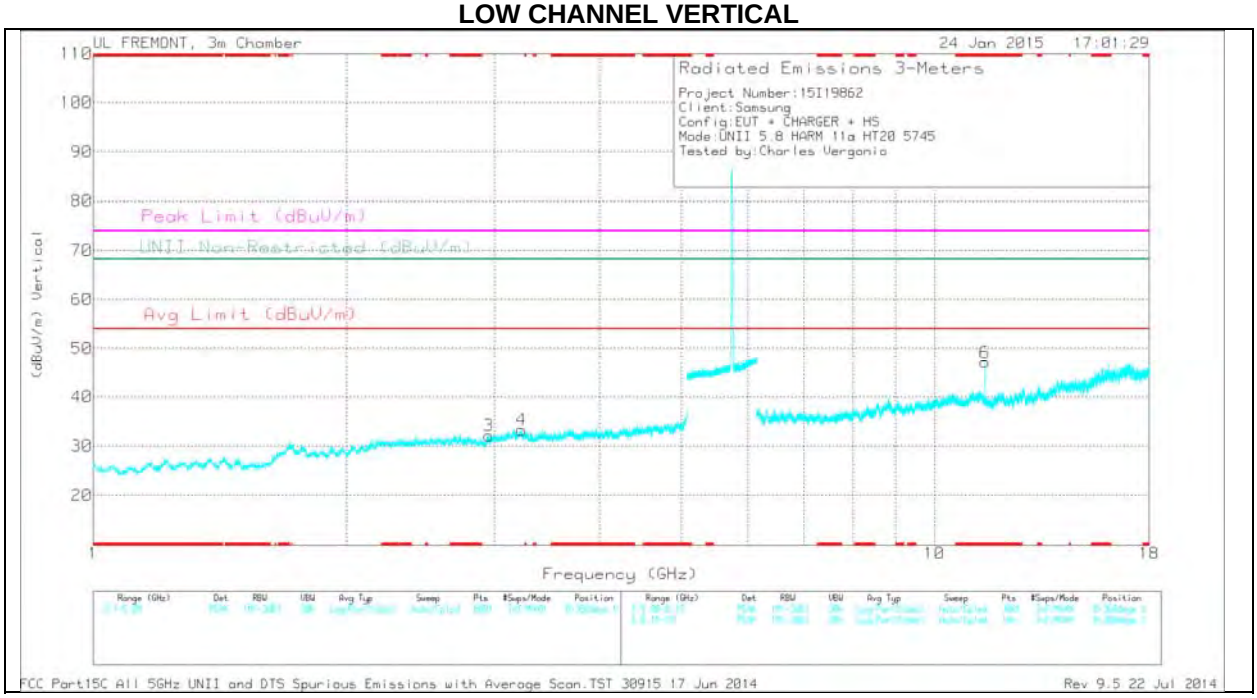
HARMONICS AND SPURIOUS EMISSIONS

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 T711 (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	* 11.49	35.02	PK	38.1	-26	0	47.12	-	-	74	-26.88	-	-	0-360	200	V
1	1.925	32.41	PK	30.2	-32.5	0	30.11	-	-	-	-	68.2	-38.09	0-360	100	H
2	2.101	31.32	PK	31.2	-32.9	0	29.62	-	-	-	-	68.2	-38.58	0-360	200	H
3	2.954	31.93	PK	32.3	-32.1	0	32.13	-	-	-	-	68.2	-36.07	0-360	100	V
4	3.23	31.57	PK	33.1	-31.4	0	33.27	-	-	-	-	68.2	-34.93	0-360	100	V
5	8.602	29.6	PK	36.3	-26.4	0	39.5	-	-	-	-	68.2	-28.7	0-360	100	H

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

PK - Peak detector

Radiated Emissions

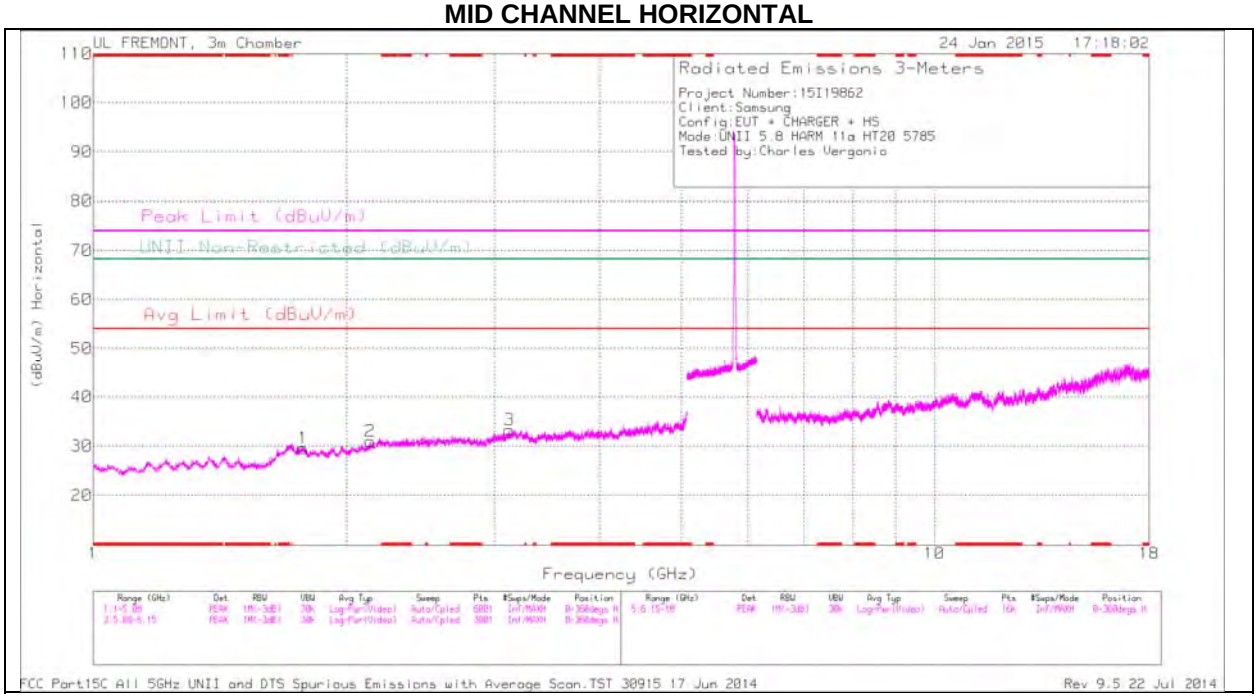
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.49	37.78	PK1	38.1	-26	0	49.88	-	-	74	-24.12	-	-	0	200	V
* 11.49	27.66	AD1	38.1	-26	.32	40.08	54	-13.92	-	-	-	-	0	200	V

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

PK1 - KDB789033 Method: Peak

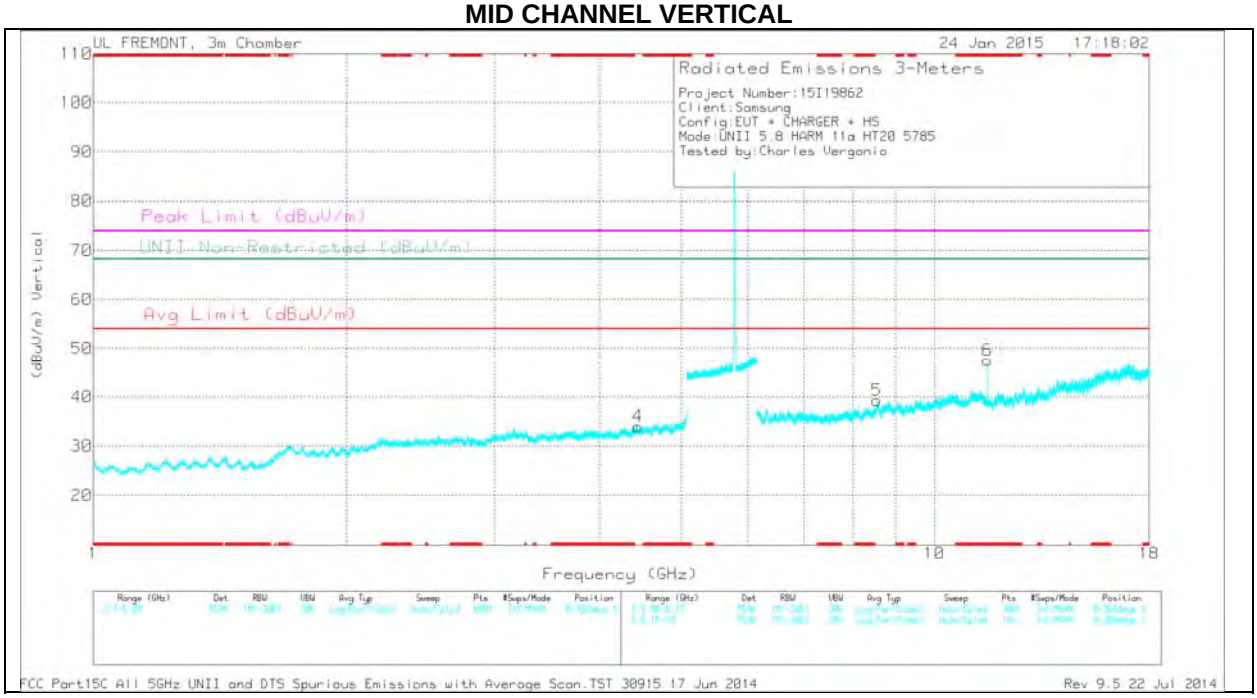
AD1 - KDB789033 Method: AD Primary Power Average

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 T711 (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	* 11.57	35.56	PK	38.1	-26.1	0	47.56	-	-	74	-26.44	-	-	0-360	200	V
1	1.778	31.77	PK	30.3	-32.5	0	29.57	-	-	-	-	68.2	-38.63	0-360	100	H
2	2.135	32.38	PK	31.5	-32.9	0	30.98	-	-	-	-	68.2	-37.22	0-360	200	H
3	3.124	32.31	PK	33	-32	0	33.31	-	-	-	-	68.2	-34.89	0-360	100	H
4	4.44	31.09	PK	33.6	-30.7	0	33.99	-	-	-	-	68.2	-34.21	0-360	200	V
5	8.546	28.98	PK	36.3	-26	0	39.28	-	-	-	-	68.2	-28.92	0-360	100	V

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

PK - Peak detector

Radiated Emissions

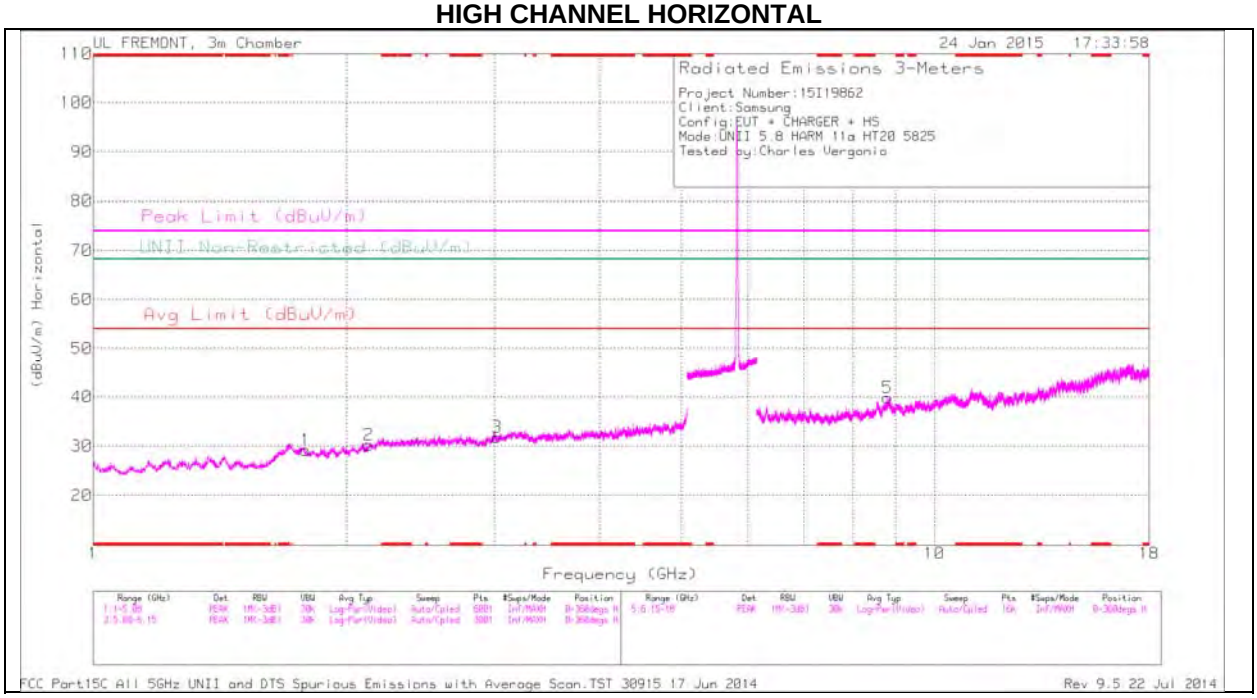
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.57	37.13	PK1	38.1	-26.1	0	49.13	-	-	74	-24.87	-	-	0	200	V
* 11.57	26.5	AD1	38.1	-26.1	.32	38.82	54	-15.18	-	-	-	-	0	200	V

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

PK1 - KDB789033 Method: Peak

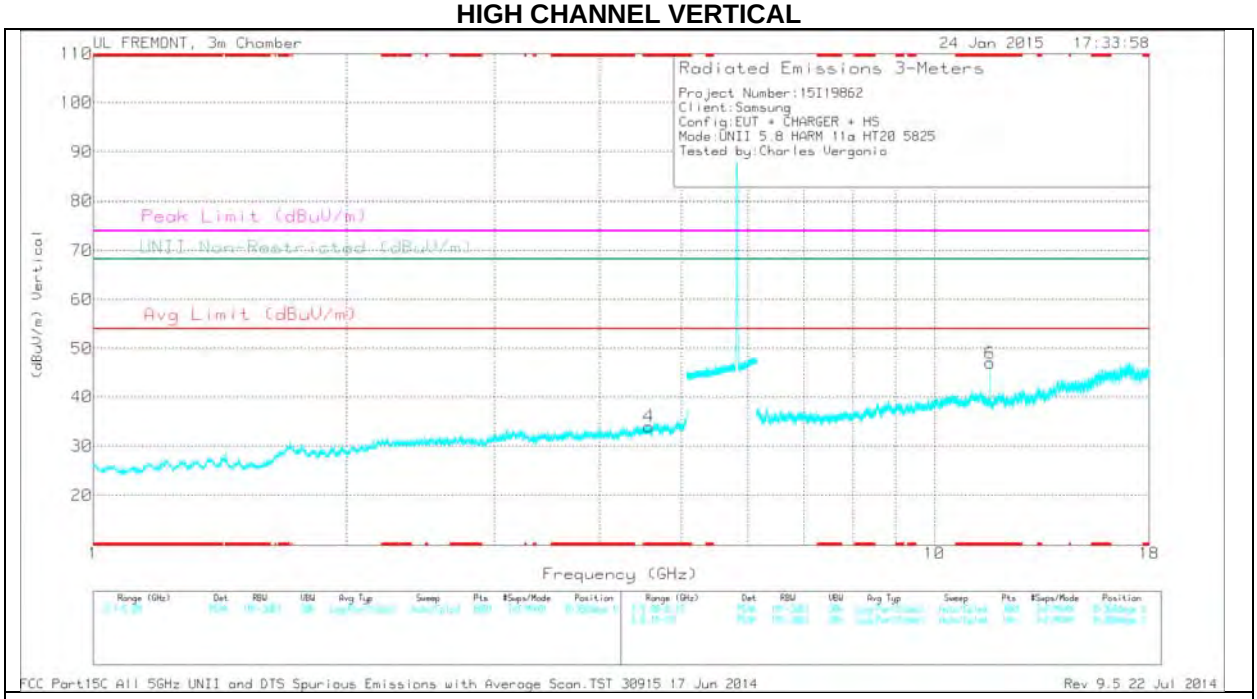
AD1 - KDB789033 Method: AD Primary Power Average

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 T711 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 4.576	31.17	PK	33.5	-30.7	0	33.97	-	-	74	-40.03	-	-	0-360	100	V
6	* 11.65	34.94	PK	38.2	-26.2	0	46.94	-	-	74	-27.06	-	-	0-360	200	V
1	1.791	31.67	PK	30.3	-32.8	0	29.17	-	-	-	-	68.2	-39.03	0-360	100	H
2	2.126	31.6	PK	31.4	-32.8	0	30.2	-	-	-	-	68.2	-38	0-360	100	H
3	3.02	30.91	PK	32.8	-31.9	0	31.81	-	-	-	-	68.2	-36.39	0-360	100	H
5	8.797	29.04	PK	36.6	-25.8	0	39.84	-	-	-	-	68.2	-28.36	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 T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.65	40.11	PK1	38.2	-26.2	0	52.11	-	-	74	-21.89	-	-	0	362	V
* 11.65	32.21	AD1	38.2	-26.2	.32	44.53	54	-9.47	-	-	-	-	0	362	V

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

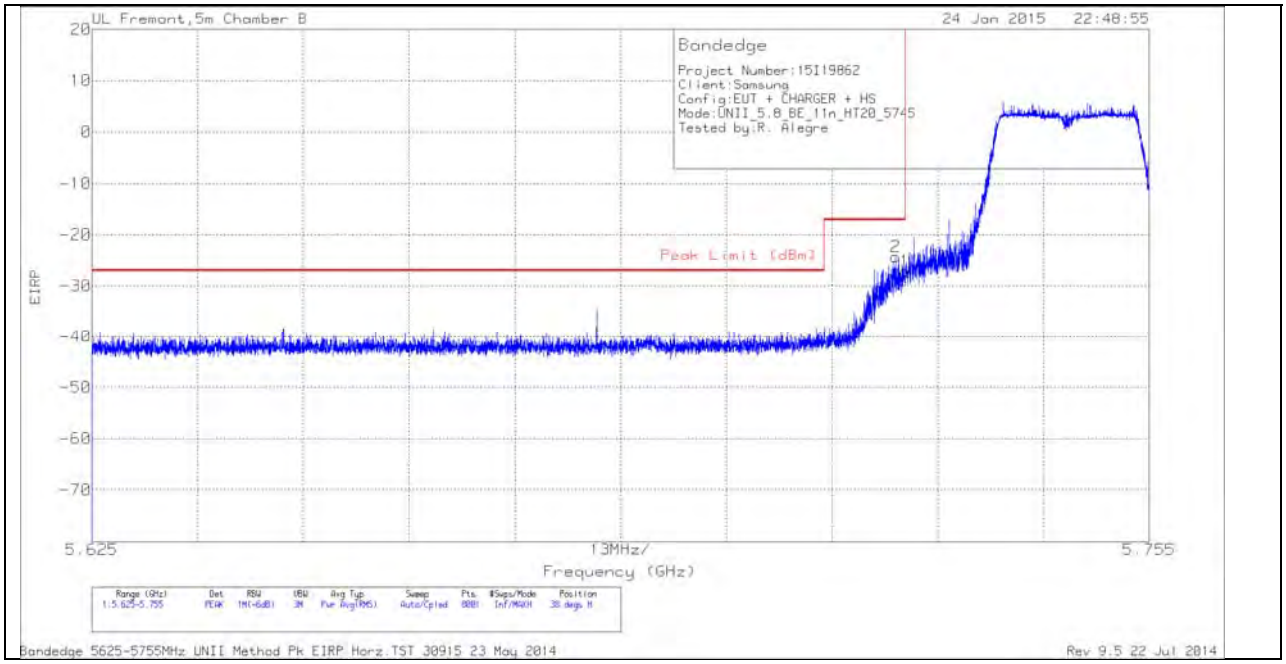
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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

AUTHORIZED BANDEDGE (LOW CHANNEL)

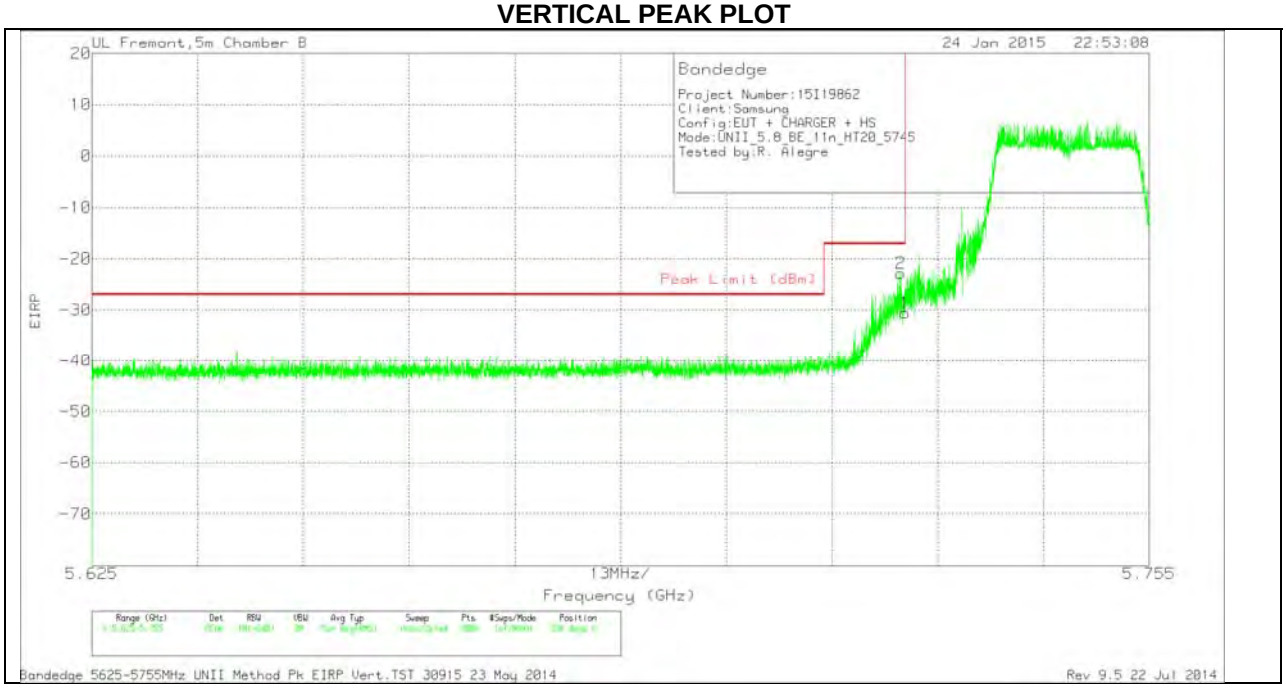
HORIZONTAL PEAK PLOT



HORIZONTAL DATA

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
2	5.724	-50.85	PK	34.6	-19.9	11.8	-24.35	-17	-7.35	38	249	H
1	5.725	-53.67	PK	34.6	-19.9	11.8	-27.17	-17	-10.17	38	249	H

VERTICAL PEAK PLOT

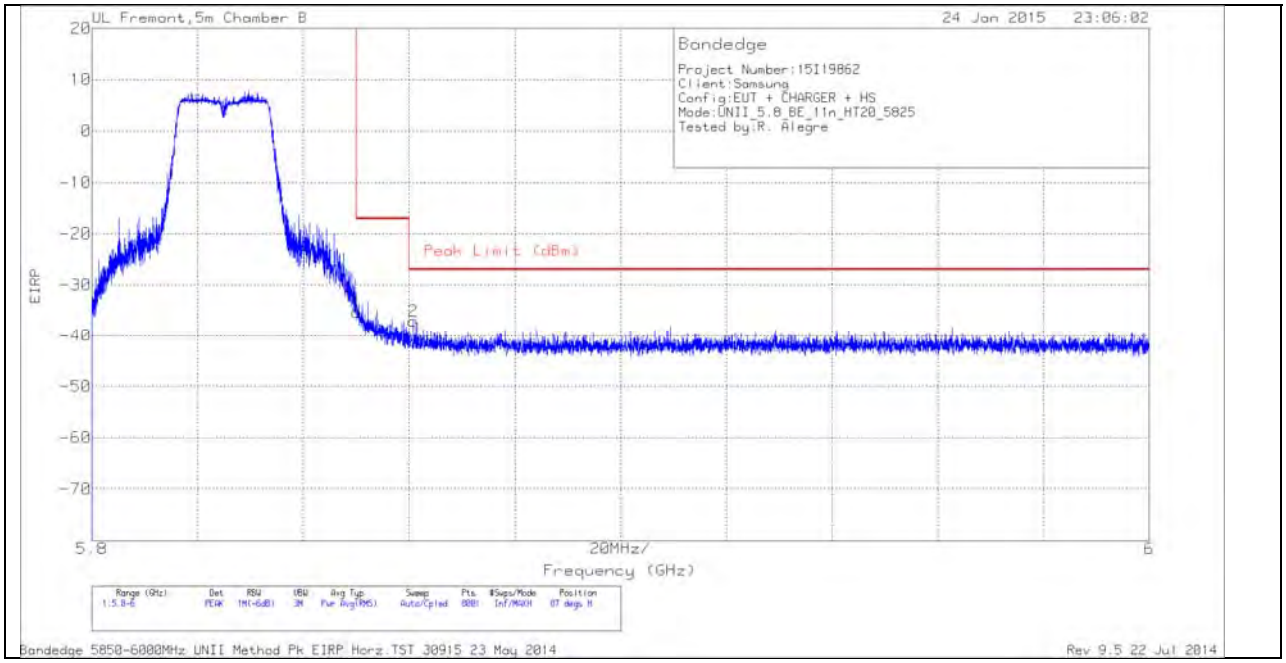


VERTICAL DATA

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
2	5.724	-49.38	PK	34.6	-19.9	11.8	-22.88	-17	-5.88	338	243	V
1	5.725	-57.06	PK	34.6	-19.9	11.8	-30.56	-17	-13.56	338	243	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

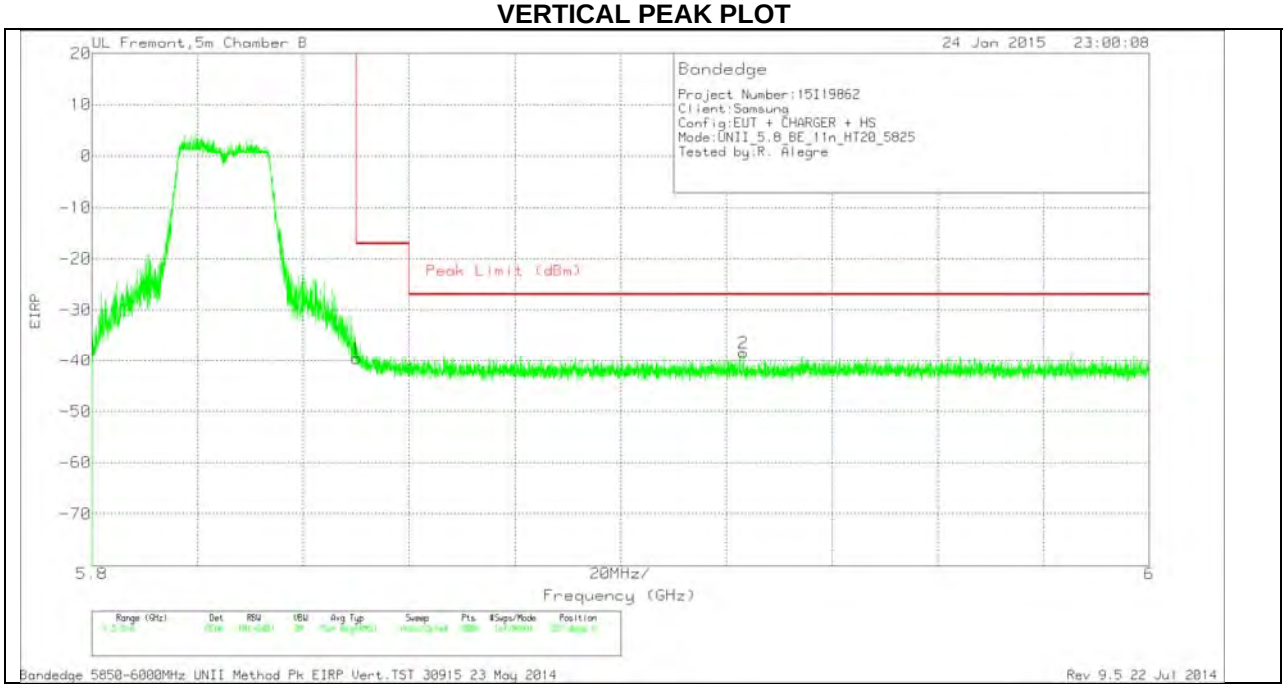
HORIZONTAL PEAK PLOT



HORIZONTAL DATA

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	-62.22	PK	34.8	-19.7	11.8	0	-35.32	-17	-18.32	87	263	H
2	5.861	-63.98	PK	34.8	-19.7	11.8	0	-37.08	-27	-10.08	87	263	H

VERTICAL PEAK PLOT

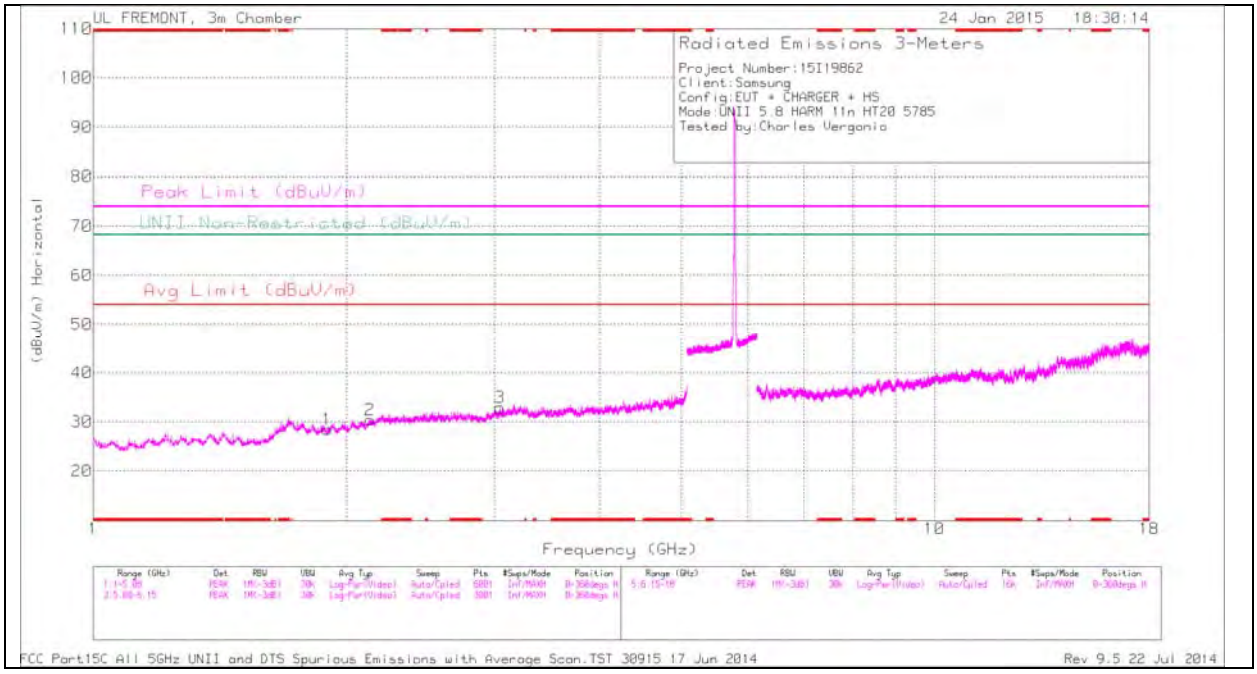


VERTICAL DATA

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	-66.52	PK	34.8	-19.7	11.8	0	-39.62	-17	-22.62	337	218	V
2	5.923	-65.47	PK	35	-19.7	11.8	0	-38.37	-27	-11.37	337	218	V

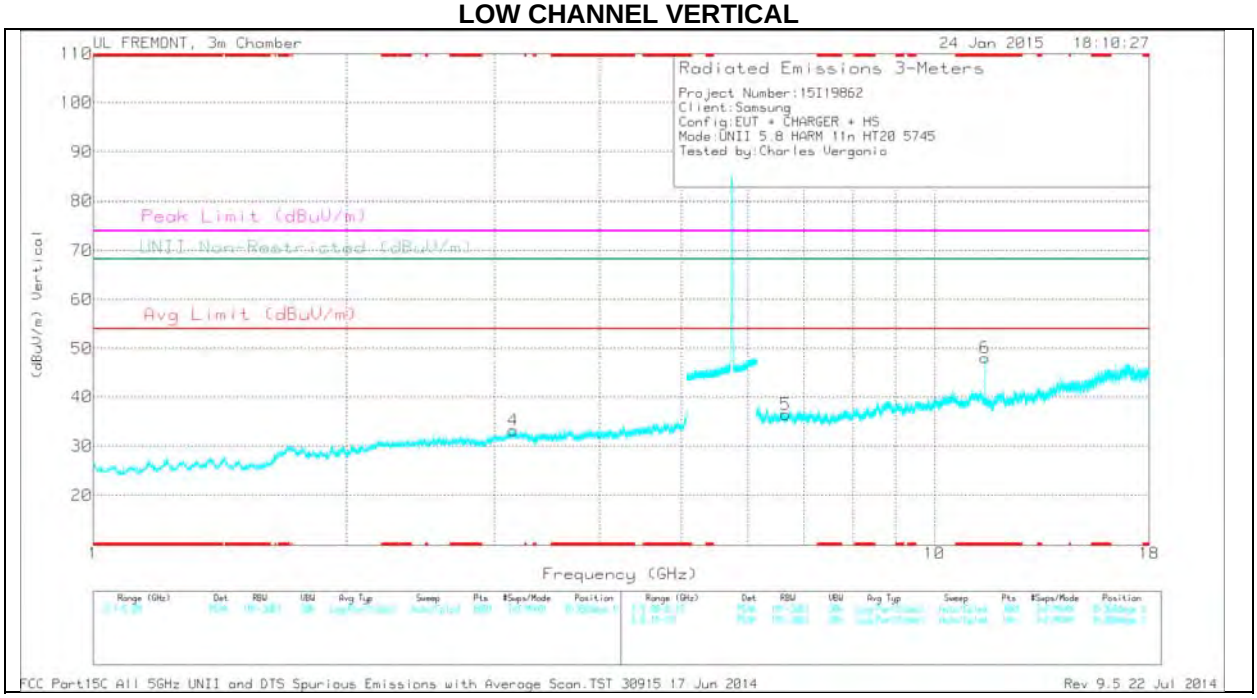
HARMONICS AND SPURIOUS EMISSIONS

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 T711 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 2.239	31.16	PK	32	-32.4	0	30.76	-	-	74	-43.24	-	-	0-360	200	H
6	* 11.49	35.97	PK	38.1	-26	0	48.07	-	-	74	-25.93	-	-	0-360	100	V
1	1.761	31.1	PK	30.4	-32.4	0	29.1	-	-	-	-	68.2	-39.1	0-360	200	H
2	2.1	31.45	PK	31.2	-32.9	0	29.75	-	-	-	-	68.2	-38.45	0-360	100	H
4	3.159	31.69	PK	33.1	-31.6	0	33.19	-	-	-	-	68.2	-35.01	0-360	200	V
5	6.654	30.31	PK	35.8	-29.7	0	36.41	-	-	-	-	68.2	-31.79	0-360	100	V

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

PK - Peak detector

Radiated Emissions

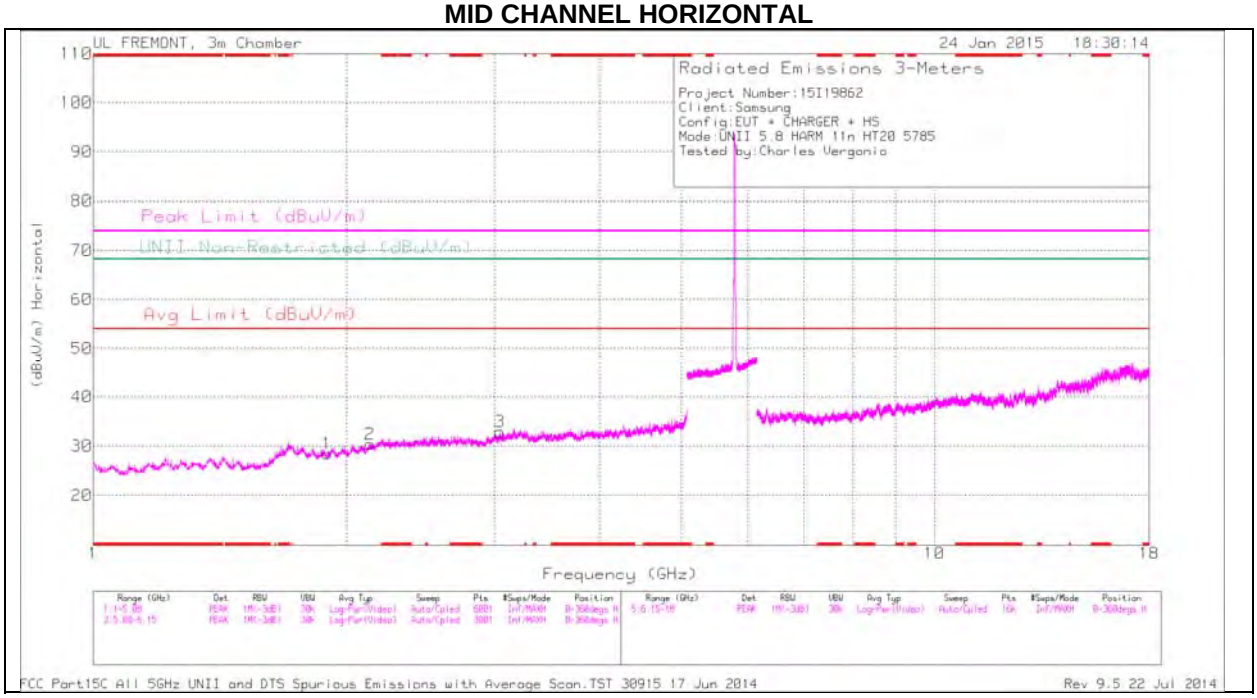
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.49	38.3	PK1	38.1	-26	0	50.4	-	-	74	-23.6	-	-	0	100	V
* 11.49	28.53	AD1	38.1	-26	.32	40.95	54	-13.05	-	-	-	-	0	100	V

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

PK1 - KDB789033 Method: Peak

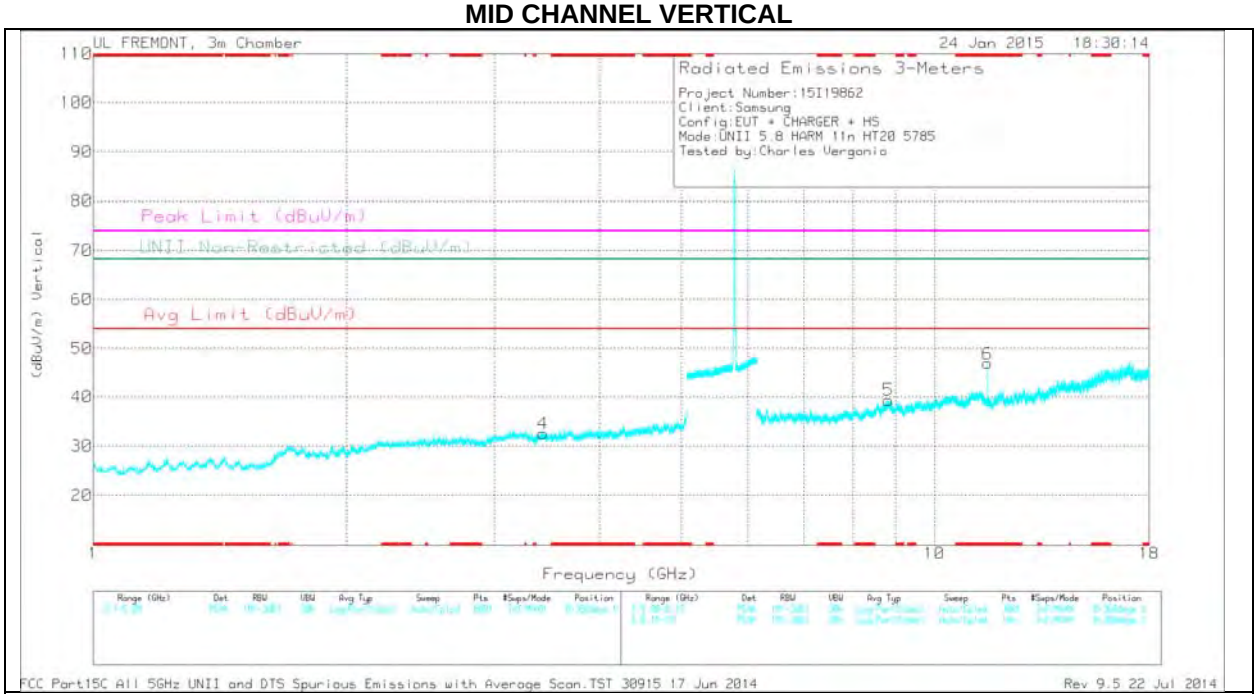
AD1 - KDB789033 Method: AD Primary Power Average

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 T711 (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	* 11.57	34.87	PK	38.1	-26.1	0	46.87	-	-	74	-27.13	-	-	0-360	200	V
1	1.899	31.16	PK	30.3	-33	0	28.46	-	-	-	-	68.2	-39.74	0-360	100	H
2	2.133	31.88	PK	31.5	-33	0	30.38	-	-	-	-	68.2	-37.82	0-360	100	H
3	3.044	31.98	PK	32.8	-31.9	0	32.88	-	-	-	-	68.2	-35.32	0-360	200	H
4	3.427	31.22	PK	32.8	-31.5	0	32.52	-	-	-	-	68.2	-35.68	0-360	200	V
5	8.817	28.34	PK	36.6	-25.6	0	39.34	-	-	-	-	68.2	-28.86	0-360	100	V

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

PK - Peak detector

Radiated Emissions

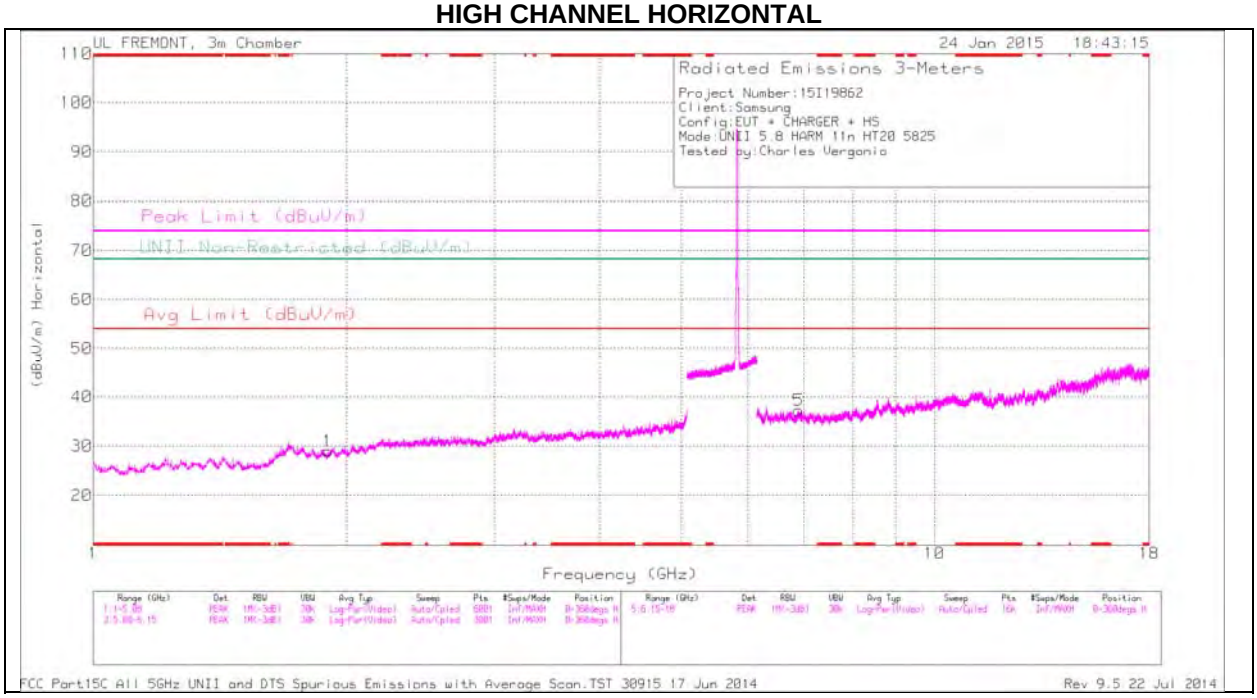
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.57	39.53	PK1	38.1	-26.1	0	51.53	-	-	74	-22.47	-	-	3	200	V
* 11.57	31.46	AD1	38.1	-26.1	.32	43.78	54	-10.22	-	-	-	-	3	200	V

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

PK1 - KDB789033 Method: Peak

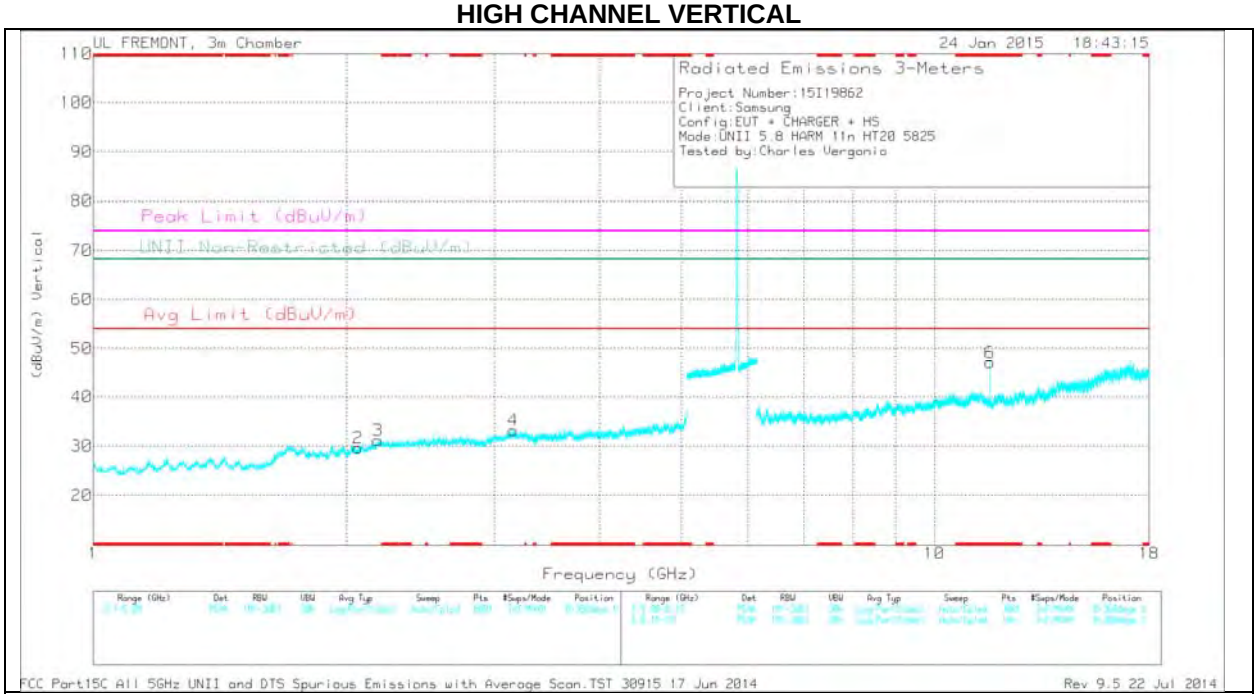
AD1 - KDB789033 Method: AD Primary Power Average

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 T711 (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	* 11.65	35.07	PK	38.2	-26.2	0	47.07	-	-	74	-26.93	-	-	0-360	100	V
1	1.902	31.77	PK	30.2	-33	0	28.97	-	-	-	-	68.2	-39.23	0-360	100	H
2	2.064	31.3	PK	30.8	-32.5	0	29.6	-	-	-	-	68.2	-38.6	0-360	200	V
3	2.18	32.04	PK	31.8	-32.7	0	31.14	-	-	-	-	68.2	-37.06	0-360	100	V
4	3.159	31.69	PK	33.1	-31.6	0	33.19	-	-	-	-	68.2	-35.01	0-360	200	V
5	6.894	30.99	PK	35.6	-29.3	0	37.29	-	-	-	-	68.2	-30.91	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 T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.65	41.34	PK1	38.2	-26.2	0	53.34	-	-	74	-20.66	-	-	78	100	V
* 11.65	35.25	AD1	38.2	-26.2	.32	47.57	54	-6.43	-	-	-	-	78	100	V

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

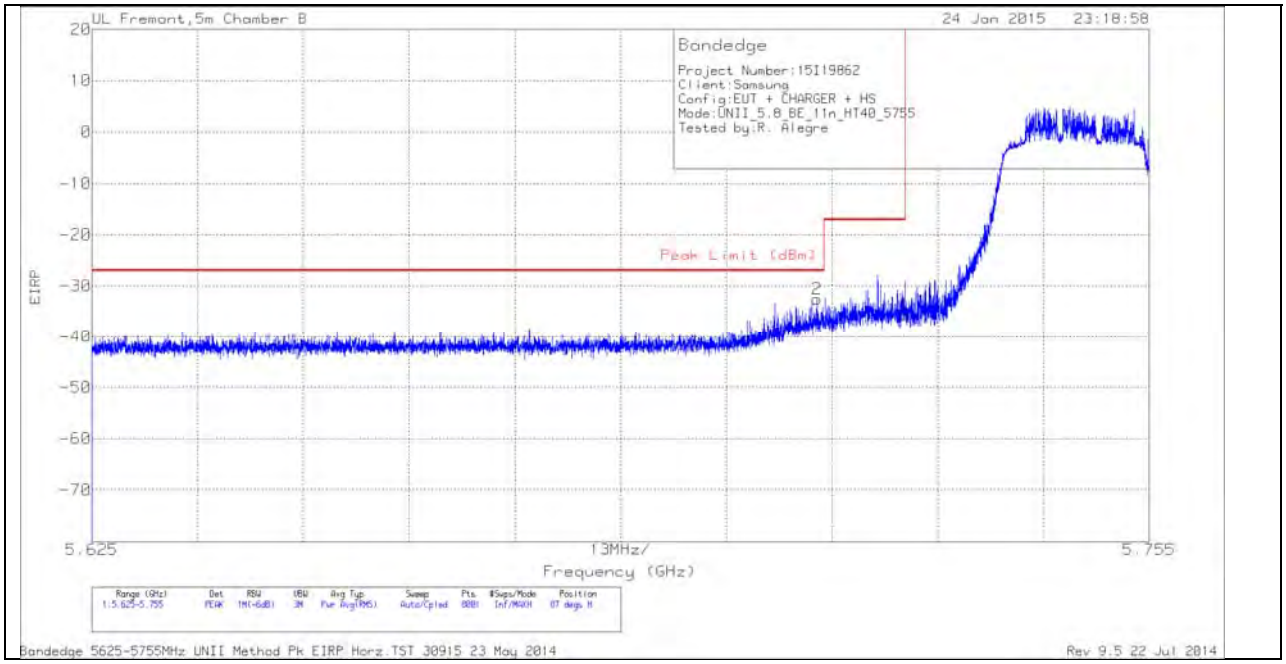
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

11.4.3. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.8 GHz BAND

AUTHORIZED BANDEDGE (LOW CHANNEL)

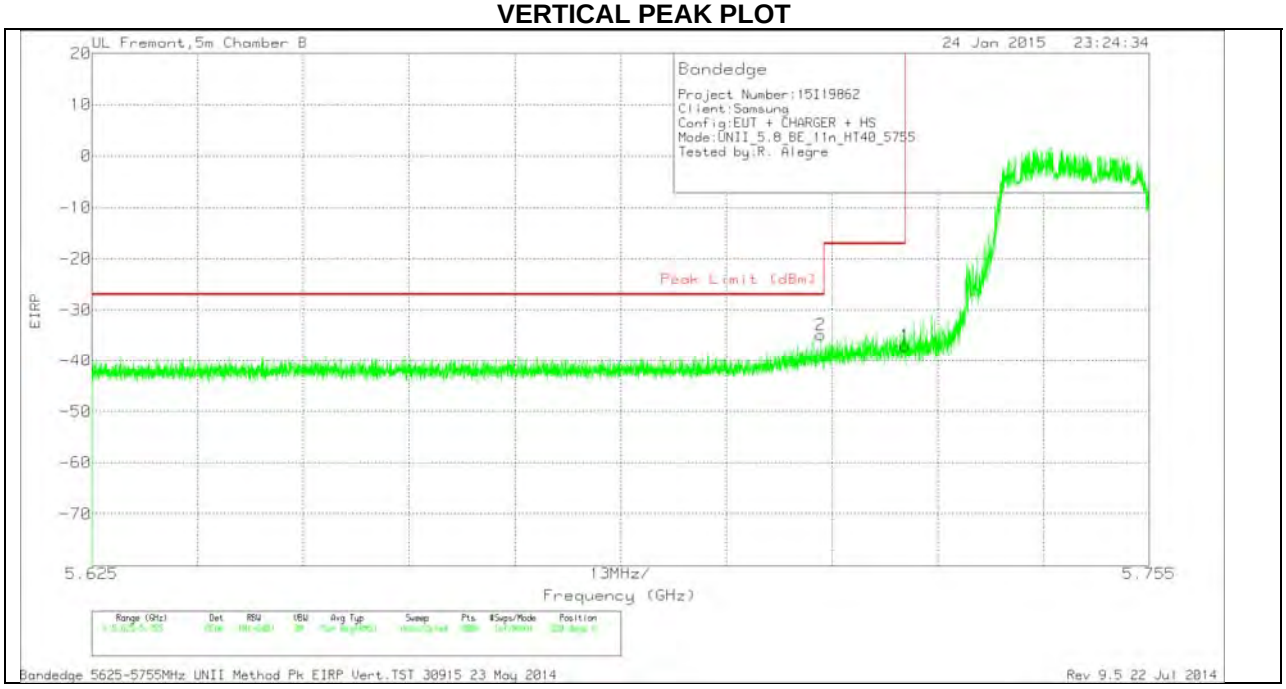
HORIZONTAL PEAK PLOT



HORIZONTAL DATA

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	-58.94	PK	34.5	-19.9	11.8	0	-32.54	-27	-5.54	87	360	H
1	5.725	-62.17	PK	34.6	-19.9	11.8	0	-35.67	-17	-18.67	87	360	H

VERTICAL PEAK PLOT

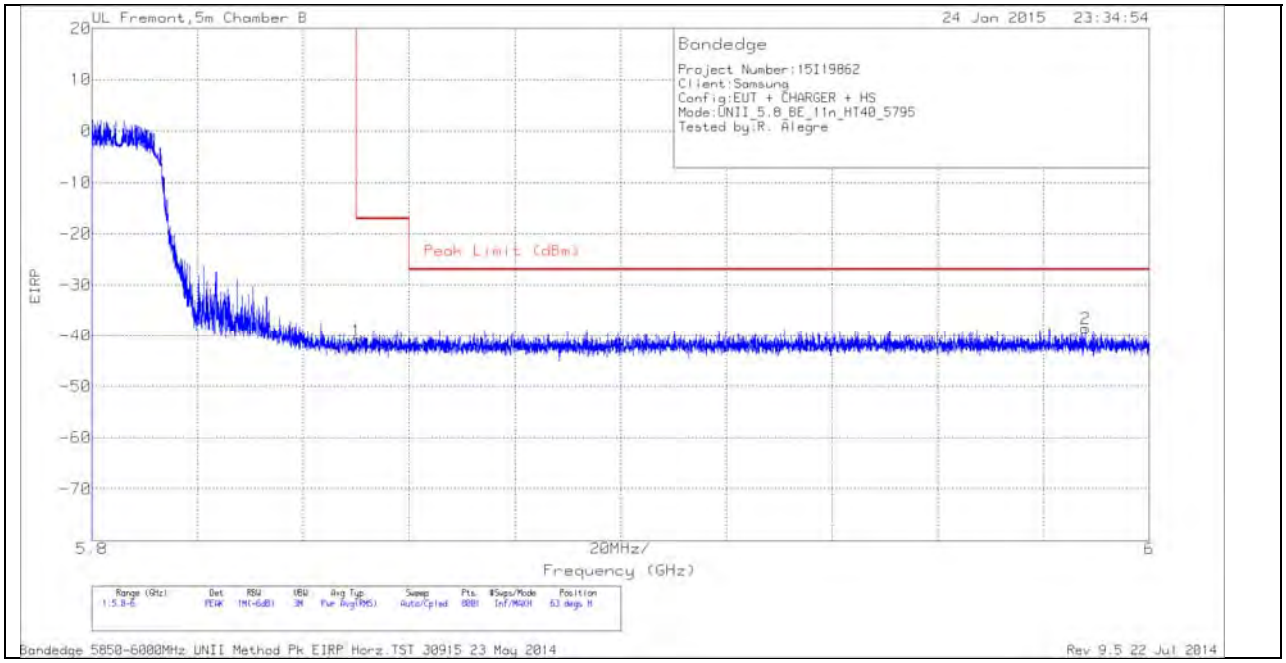


VERTICAL DATA

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	5.715	-61.27	PK	34.5	-19.9	11.8	0	-34.87	-27	-7.87	320	322	V
1	5.725	-63.46	PK	34.6	-19.9	11.8	0	-36.96	-17	-19.96	320	322	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

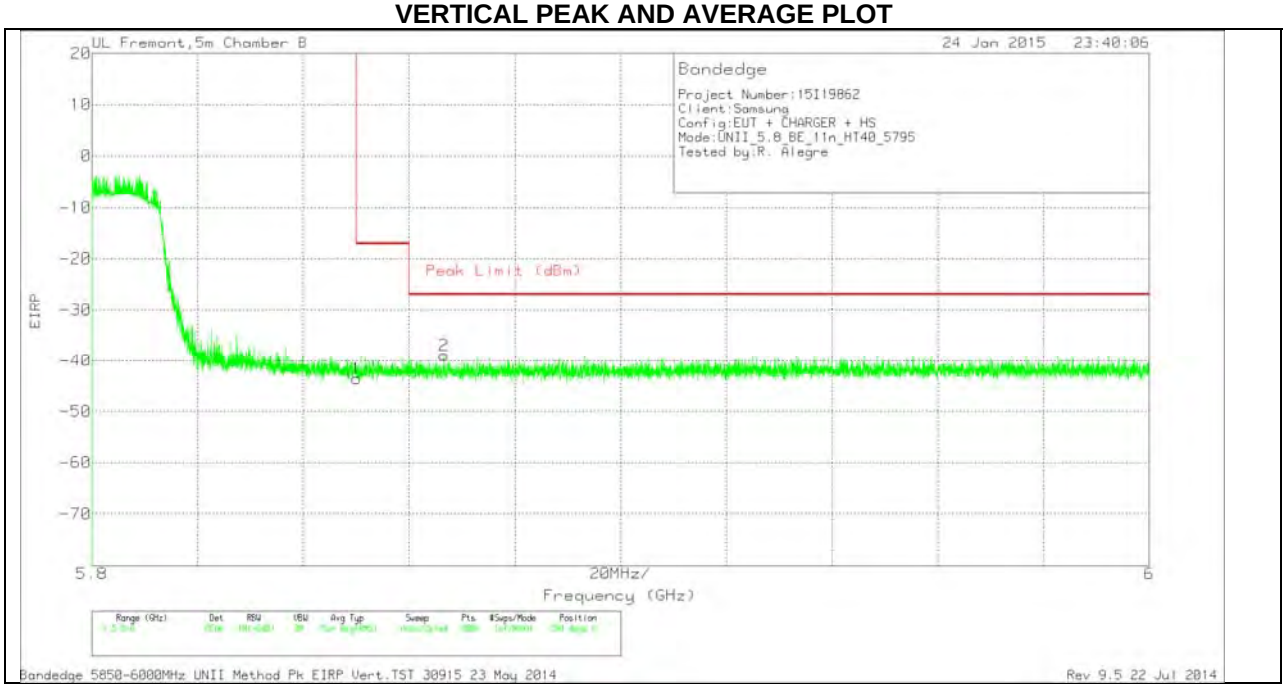
HORIZONTAL PEAK PLOT



HORIZONTAL DATA

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	-67.83	PK	34.8	-19.7	11.8	0	-40.93	-17	-23.93	63	356	H
2	5.988	-65.85	PK	35.2	-19.7	11.8	0	-38.55	-27	-11.55	63	356	H

VERTICAL PEAK AND AVERAGE PLOT

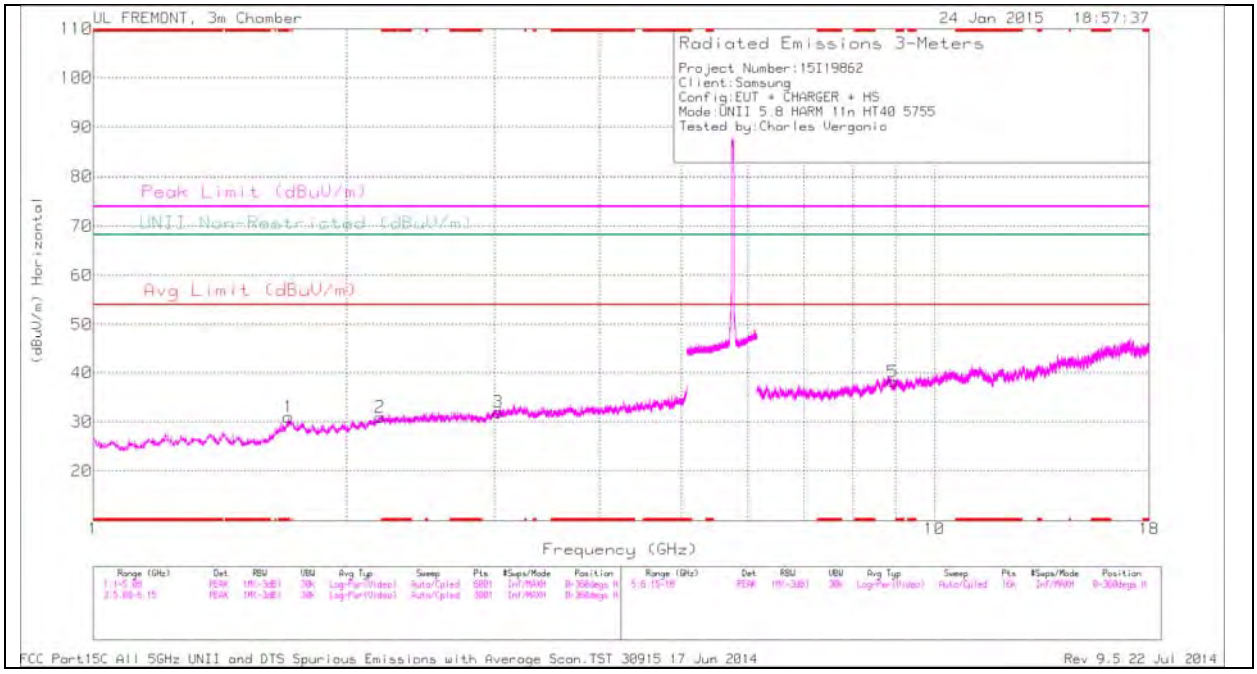


VERTICAL DATA

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	-70.44	PK	34.8	-19.7	11.8	0	-43.54	-17	-26.54	299	384	V
2	5.867	-65.92	PK	34.9	-19.7	11.8	0	-38.92	-27	-11.92	299	384	V

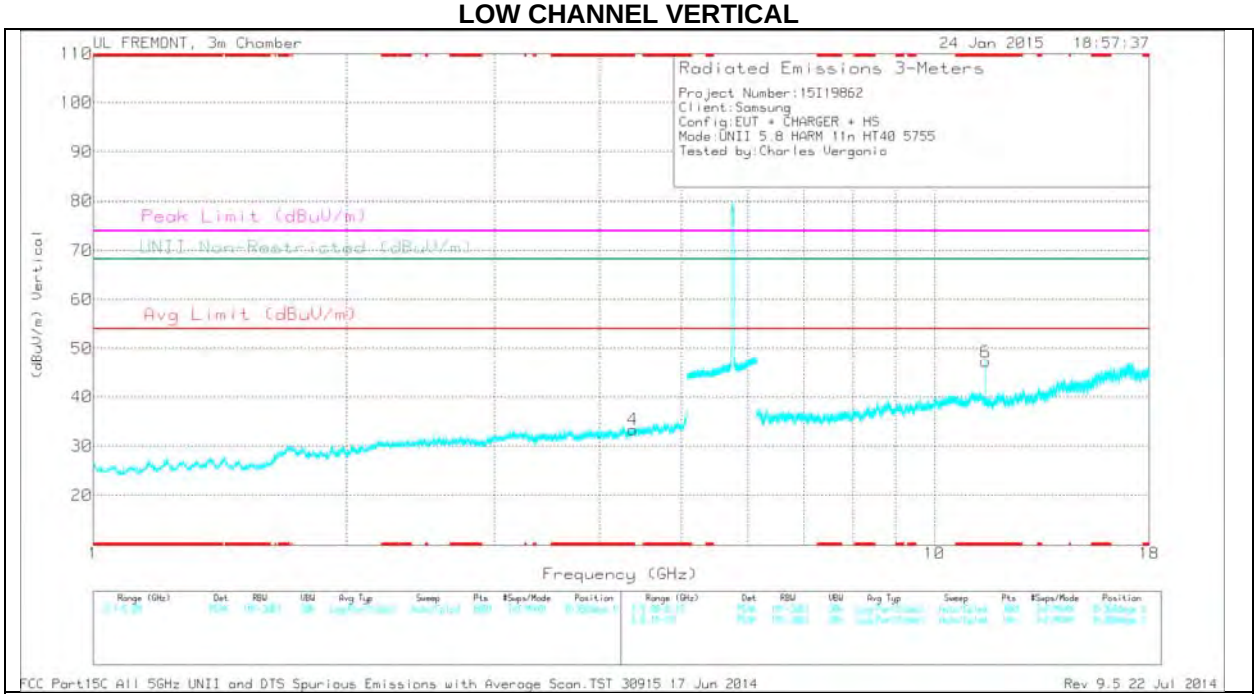
HARMONICS AND SPURIOUS EMISSIONS

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 T711 (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	* 1.707	32.28	PK	30.7	-32	0	30.98	-	-	74	-43.02	-	-	0-360	200	H
4	* 4.38	30.65	PK	33.5	-30.8	0	33.35	-	-	74	-40.65	-	-	0-360	200	V
6	* 11.51	35.32	PK	38.1	-26.2	0	47.22	-	-	74	-26.78	-	-	0-360	100	V
2	2.193	31.52	PK	32	-32.6	0	30.92	-	-	-	-	68.2	-37.28	0-360	200	H
3	3.031	31.08	PK	32.8	-31.9	0	31.98	-	-	-	-	68.2	-36.22	0-360	200	H
5	8.923	29.05	PK	36.6	-27.5	0	38.15	-	-	-	-	68.2	-30.05	0-360	100	H

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

PK - Peak detector

Radiated Emissions

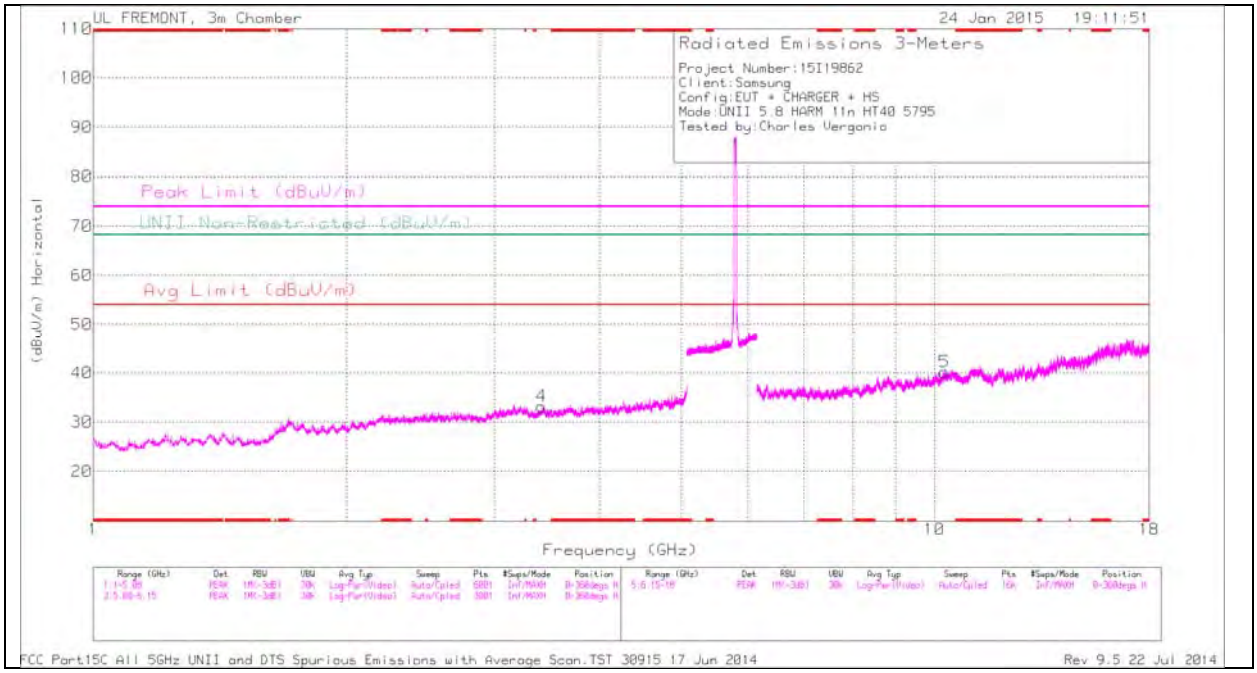
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.51	40.9	PK1	38.1	-26.2	0	52.8	-	-	74	-21.2	-	-	76	100	V
* 11.51	35.01	AD1	38.1	-26.2	.64	47.55	54	-6.45	-	-	-	-	76	100	V

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

PK1 - KDB789033 Method: Peak

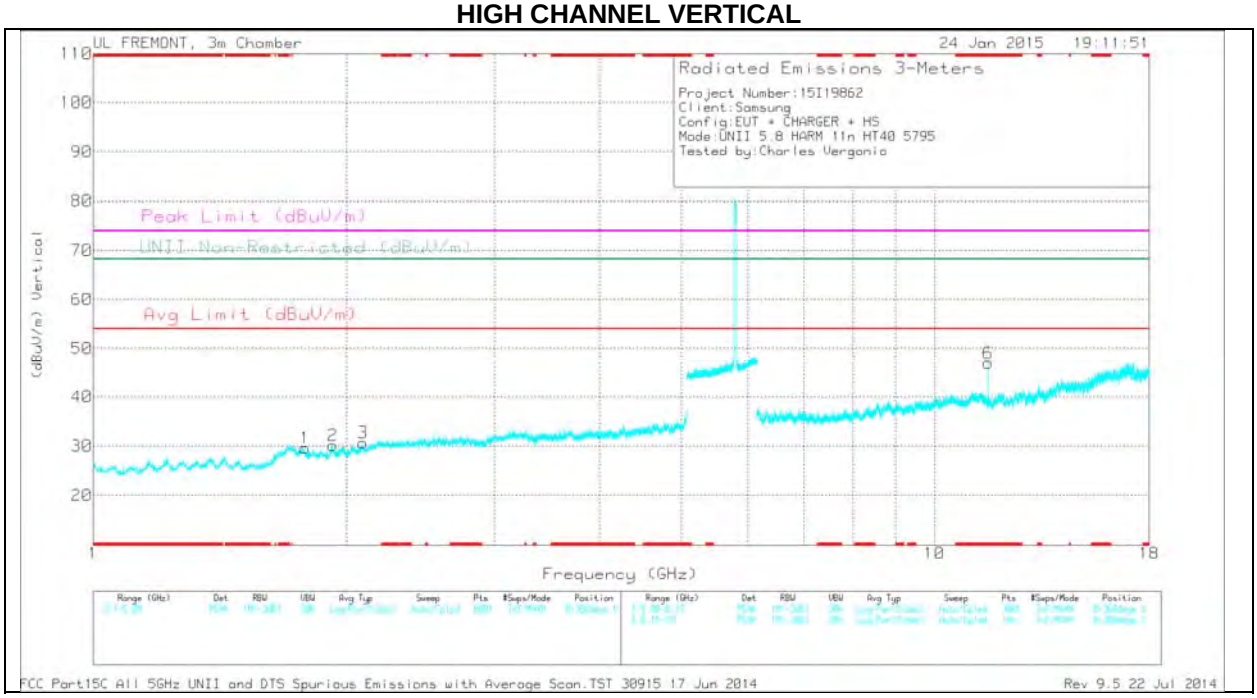
AD1 - KDB789033 Method: AD Primary Power Average

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 T711 (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	* 11.59	34.74	PK	38.1	-25.9	0	46.94	-	-	74	-27.06	-	-	0-360	200	V
1	1.785	31.89	PK	30.3	-32.6	0	29.59	-	-	-	-	68.2	-38.61	0-360	200	V
2	1.926	32.39	PK	30.2	-32.5	0	30.09	-	-	-	-	68.2	-38.11	0-360	200	V
3	2.093	32.35	PK	31.1	-32.8	0	30.65	-	-	-	-	68.2	-37.55	0-360	100	V
4	3.415	31.92	PK	32.8	-31.5	0	33.22	-	-	-	-	68.2	-34.98	0-360	100	H
5	10.276	27.86	PK	37.9	-25.6	0	40.16	-	-	-	-	68.2	-28.04	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 T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.59	40.56	PK1	38.1	-25.9	0	52.76	-	-	74	-21.24	-	-	77	200	V
* 11.59	34.23	AD1	38.1	-25.9	.64	47.07	54	-6.93	-	-	-	-	77	200	V

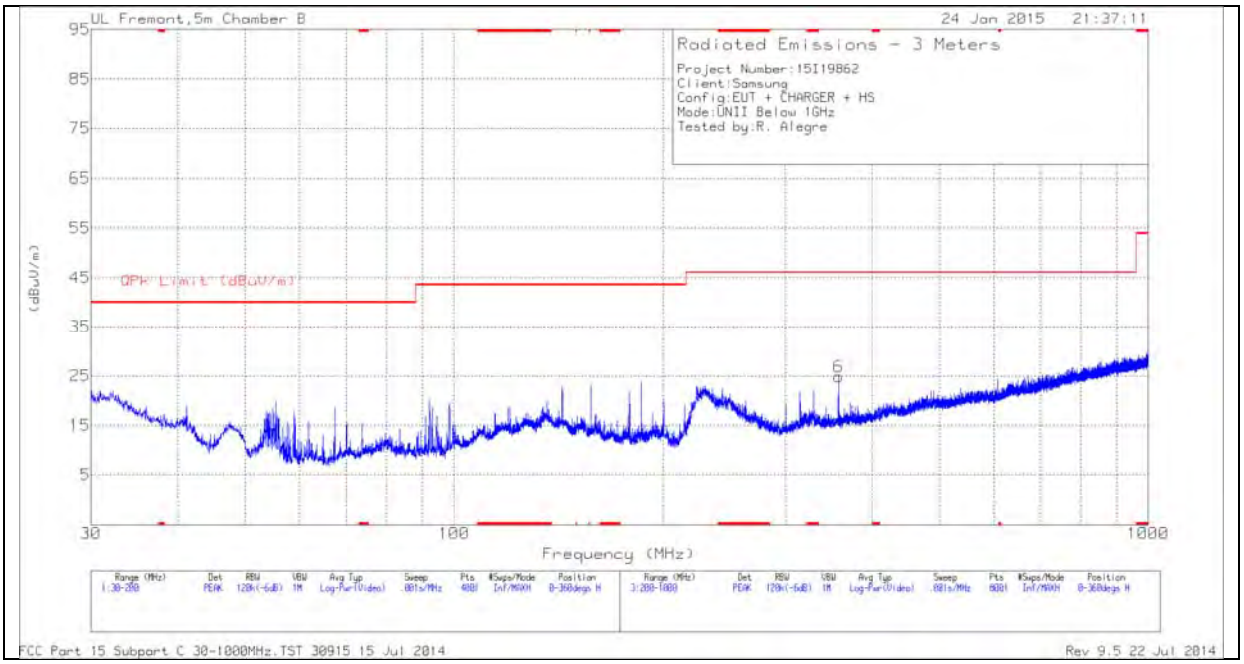
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK1 - KDB789033 Method: Peak

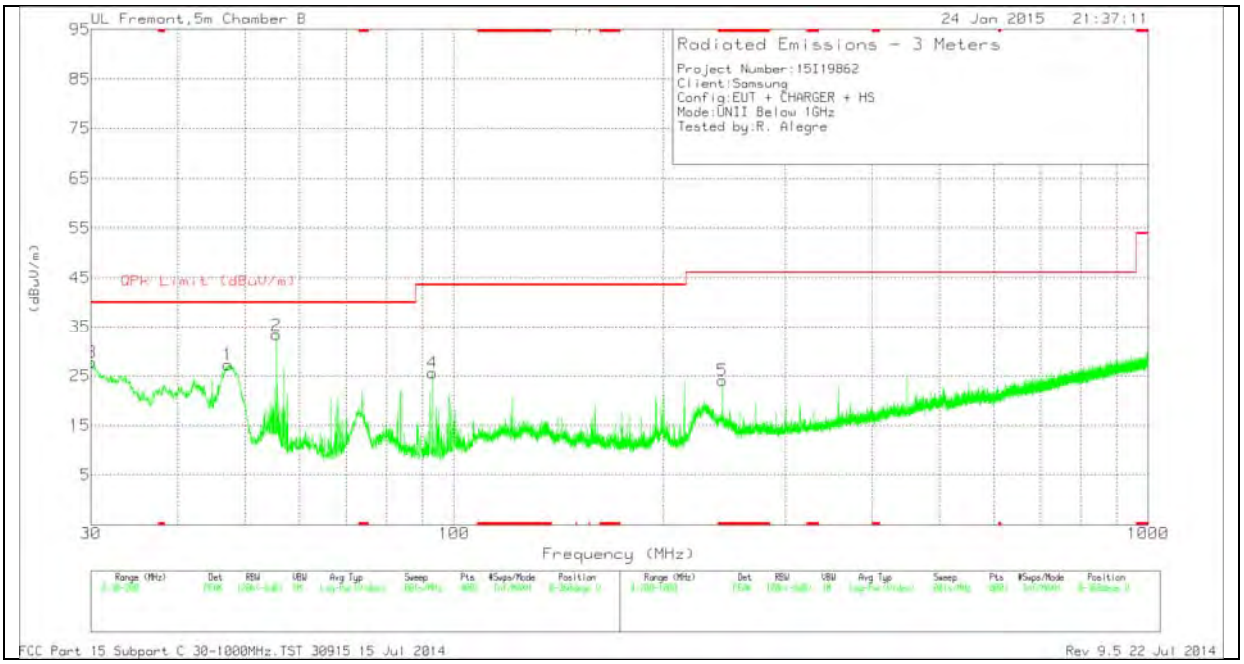
AD1 - KDB789033 Method: AD Primary Power Average

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

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



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



Below 1G Data

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T243 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	* 243.4	38.97	PK	11.6	-26.5	24.07	46.02	-21.95	0-360	101	V
3	30.085	35.99	PK	20.7	-28.9	27.79	40	-12.21	0-360	101	V
1	47.255	46.54	PK	9.4	-28.7	27.24	40	-12.76	0-360	101	V
2	55.5425	54.63	PK	7.3	-28.6	33.33	40	-6.67	0-360	101	V
4	93.07	45.28	PK	8.4	-28.1	25.58	43.52	-17.94	0-360	101	V
6	357.95	35.97	PK	14.8	-25.9	24.87	46.02	-21.15	0-360	300	H

13. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

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.

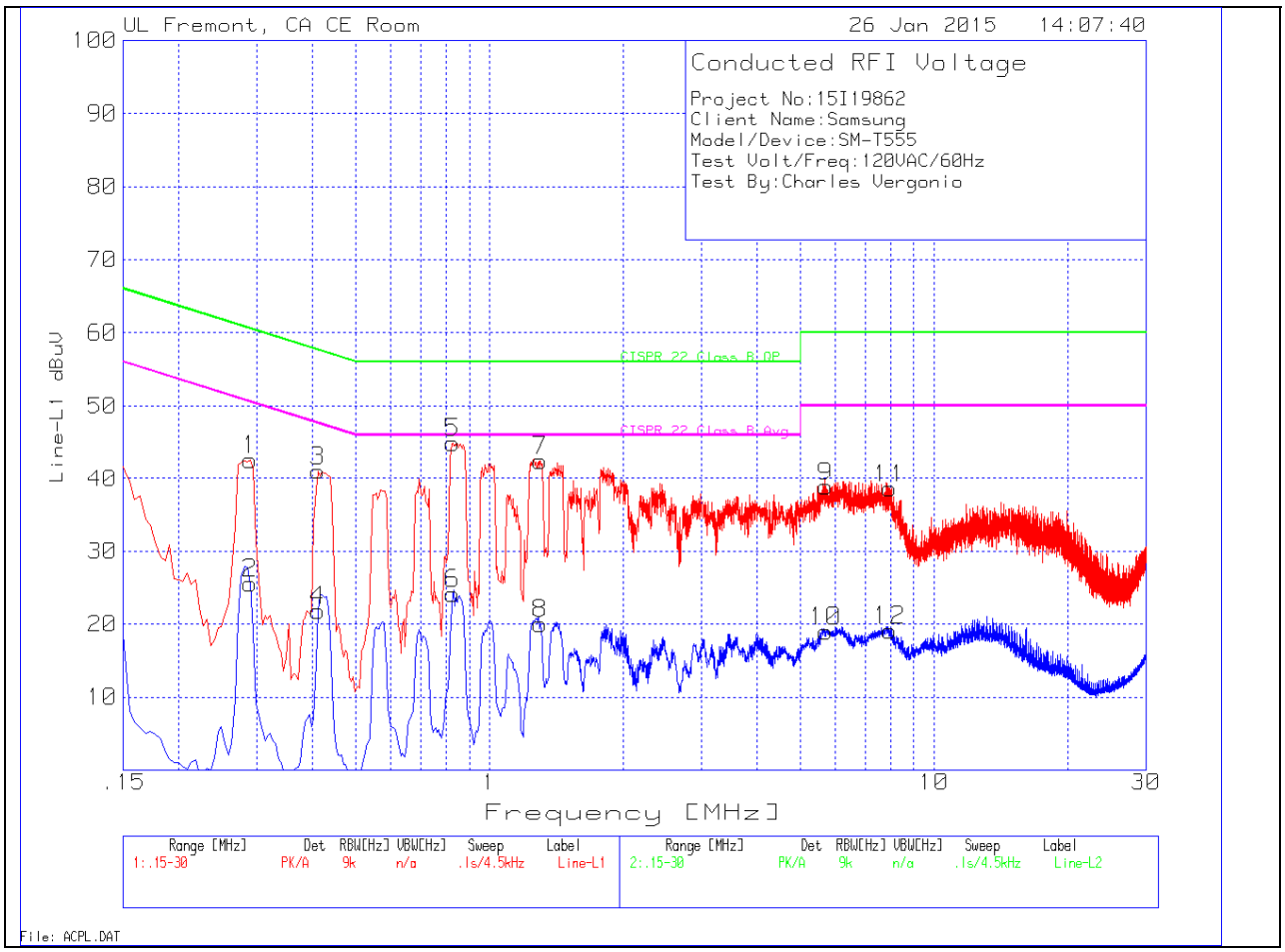
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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

RESULTS

6 WORST EMISSIONS

LINE 1 PLOT

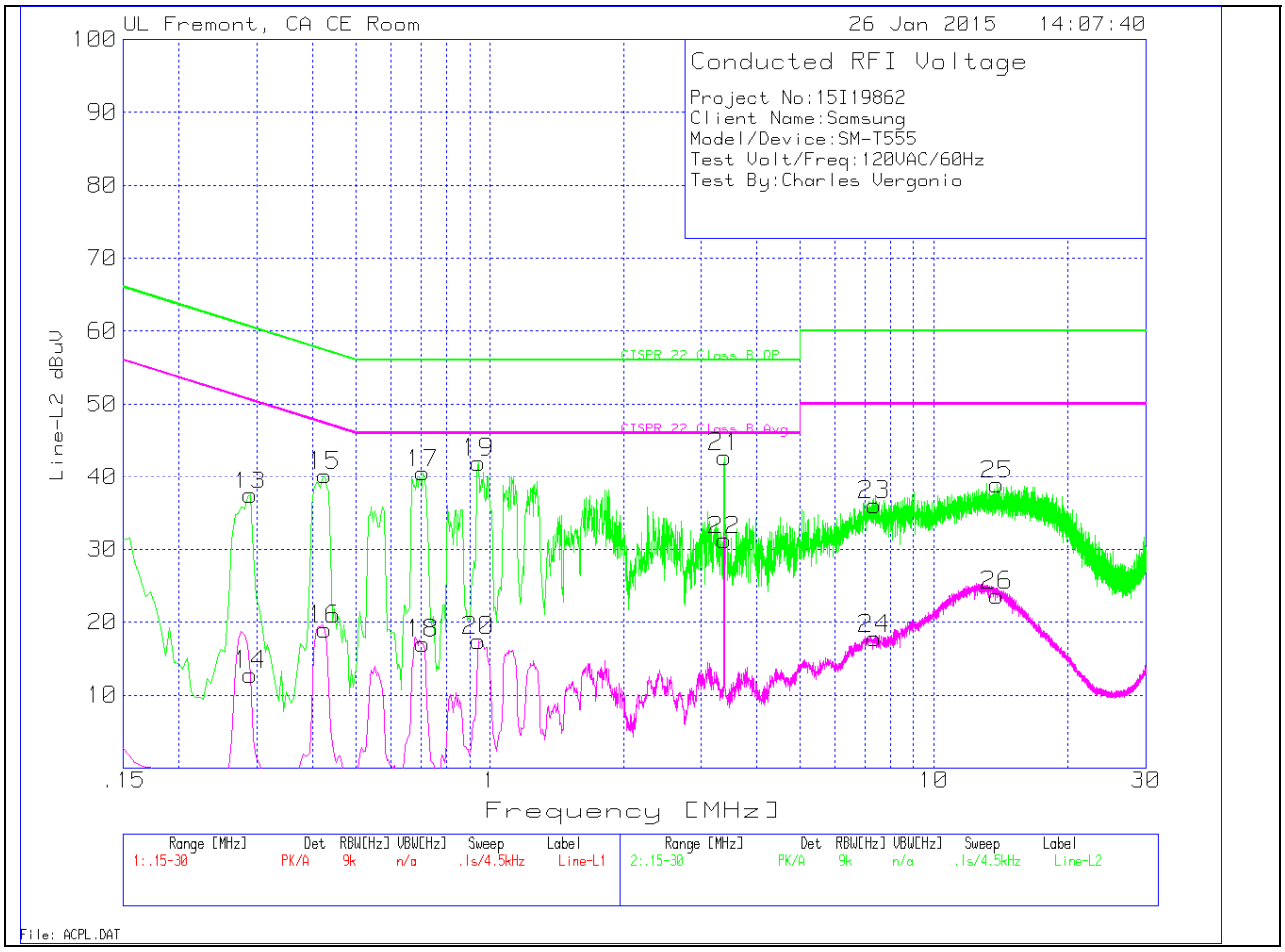


LINE 1 RESULTS

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	.2895	42	PK	.6	0	42.6	60.5	-17.9	-	-
2	.2895	25	Av	.6	0	25.6	-	-	50.5	-24.9
3	.411	40.7	PK	.4	0	41.1	57.6	-16.5	-	-
4	.411	21.42	Av	.4	0	21.82	-	-	47.6	-25.78
5	.825	44.7	PK	.3	0	45	56	-11	-	-
6	.825	23.85	Av	.3	0	24.15	-	-	46	-21.85
7	1.302	42.16	PK	.2	.1	42.46	56	-13.54	-	-
8	1.302	19.68	Av	.2	.1	19.98	-	-	46	-26.02
9	5.7075	38.58	PK	.2	.1	38.88	60	-21.12	-	-
10	5.7075	18.74	Av	.2	.1	19.04	-	-	50	-30.96
11	7.9485	38.36	PK	.2	.1	38.66	60	-21.34	-	-
12	7.9485	18.86	Av	.2	.1	19.16	-	-	50	-30.84

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)
13	.2895	36.8	PK	.6	0	37.4	60.5	-23.1	-	-
14	.2895	12.22	Av	.6	0	12.82	-	-	50.5	-37.68
15	.4245	39.81	PK	.4	0	40.21	57.4	-17.19	-	-
16	.4245	18.59	Av	.4	0	18.99	-	-	47.4	-28.41
17	.708	40.2	PK	.3	0	40.5	56	-15.5	-	-
18	.708	16.76	Av	.3	0	17.06	-	-	46	-28.94
19	.942	41.69	PK	.3	0	41.99	56	-14.01	-	-
20	.942	17.12	Av	.3	0	17.42	-	-	46	-28.58
21	3.381	42.48	PK	.2	.1	42.78	56	-13.22	-	-
22	3.381	30.9	Av	.2	.1	31.2	-	-	46	-14.8
23	7.3545	35.77	PK	.2	.1	36.07	60	-23.93	-	-
24	7.3545	17.46	Av	.2	.1	17.76	-	-	50	-32.24
25	13.8885	38.46	PK	.2	.2	38.86	60	-21.14	-	-
26	13.8885	23.27	Av	.2	.2	23.67	-	-	50	-26.33

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 8 A9.3

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

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

FCC

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

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

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

Table 2: Applicability of DFS requirements during normal operation

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

Additional requirements for devices with multiple bandwidth modes	Master Device or Client with Radar DFS	Client (without DFS)

U-NII Detection Bandwidth and Statistical Performance Check	All BW modes must be tested	Not required
Channel Move Time and Channel Closing Transmission Time	Test using widest BW mode available	Test using the widest BW mode available for the link
All other tests	Any single BW mode	Not required
Note: Frequencies selected for statistical performance check (Section 7.8.4) should include several frequencies within the radar detection bandwidth and frequencies near the edge of the radar detection bandwidth. For 802.11 devices it is suggested to select frequencies in all 20 MHz channel blocks and a null frequencies between the bonded 20 MHz channel blocks.		

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

Maximum Transmit Power	Value (see notes)
E.I.R.P. ≥ 200 milliwatt	-64 dBm
E.I.R.P. < 200 milliwatt and power spectral density < 10 dBm/MHz	-62 dBm
E.I.R.P. < 200 milliwatt that do not meet power spectral density requirement	-64 dBm

Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna

Note 2: Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response.

Note 3: E.I.R.P. is based on the highest antenna gain. For MIMO devices refer to KDB publication 662911 D01.

Table 4: DFS Response requirement values

Parameter	Value
Non-occupancy period	30 minutes
Channel Availability Check Time	60 seconds
Channel Move Time	10 seconds (See Note 1)
Channel Closing Transmission Time	200 milliseconds + approx. 60 milliseconds over remaining 10 second period. (See Notes 1 and 2)

U-NII Detection Bandwidth	Minimum 100% of the U-NII 99% transmission power bandwidth. (See Note 3)

Note 1: *Channel Move Time* and the *Channel Closing Transmission Time* should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.
Note 2: 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 a *Channel* move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.
Note 3: During the *U-NII Detection Bandwidth* detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.

Table 5 – Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (usec)	PRI (usec)	Pulses	Minimum Percentage of Successful Detection	Minimum Trials
0	1	1428	18	See Note 1	See Note 1
1	1	Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in table 5a	Roundup: {(1/360) x (19 x 10^6 PRI_{usec})}	60%	30
		Test B: 15 unique PRI values randomly selected within the range of 518-3066 usec. With a minimum increment of 1 usec, excluding PRI values selected in Test A			
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Radar Types 1-4)				80%	120

Note 1: Short Pulse Radar Type 0 should be used for the *Detection Bandwidth* test, *Channel Move Time*, and *Channel Closing Time* tests.

Table 6 – Long Pulse Radar Test Signal

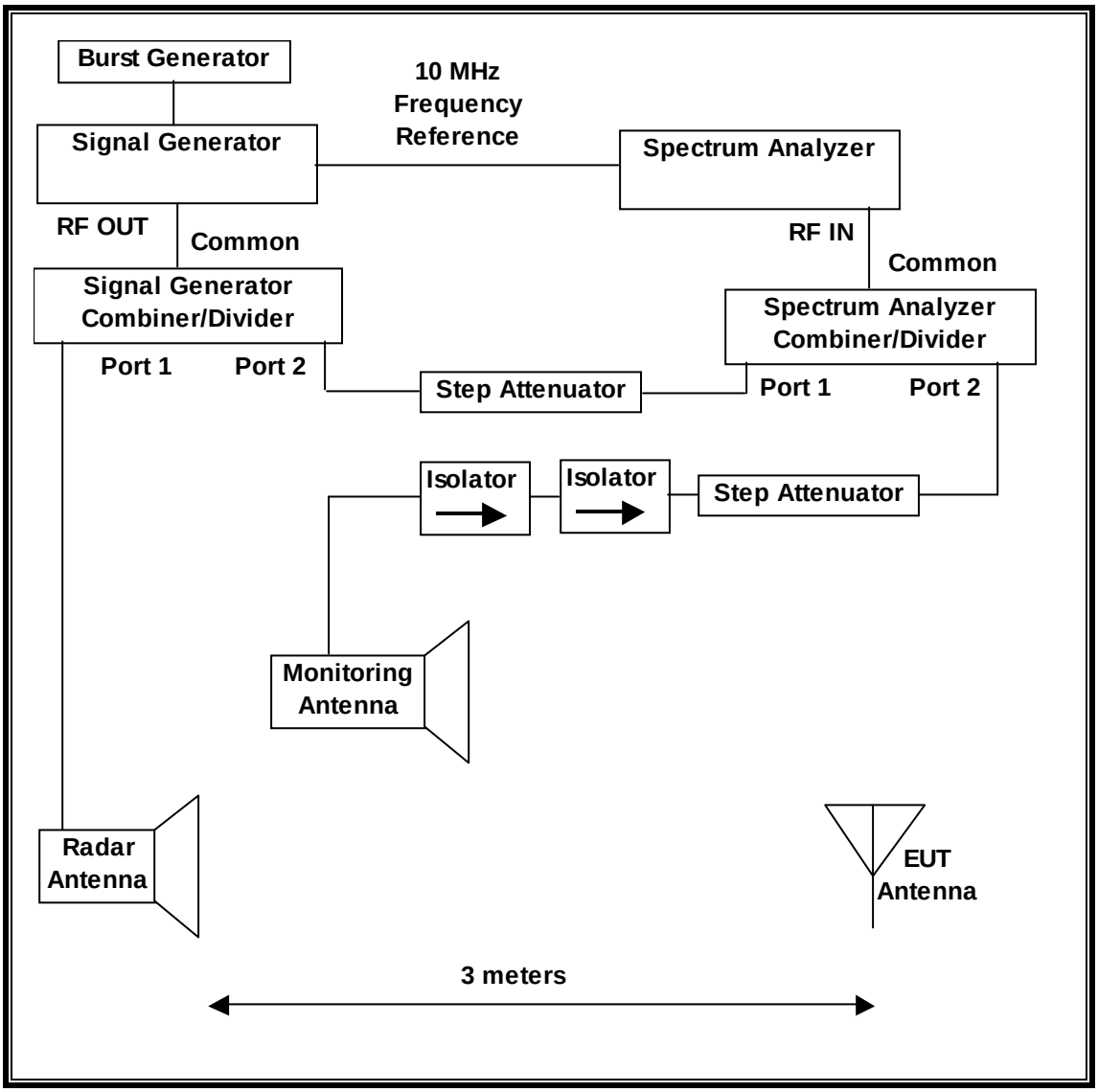
Radar Waveform Type	Pulse Width (µsec)	Chirp Width (MHz)	PRI (µsec)	Pulses per Burst	Number of Bursts	Minimum Percentage of Successful Detection	Minimum Trials
5	50-100	5-20	1000-2000	1-3	8-20	80%	30

Table 7 – Frequency Hopping Radar Test Signal

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

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

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

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

SYSTEM CALIBRATION

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

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

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

ADJUSTMENT OF DISPLAYED TRAFFIC LEVEL

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

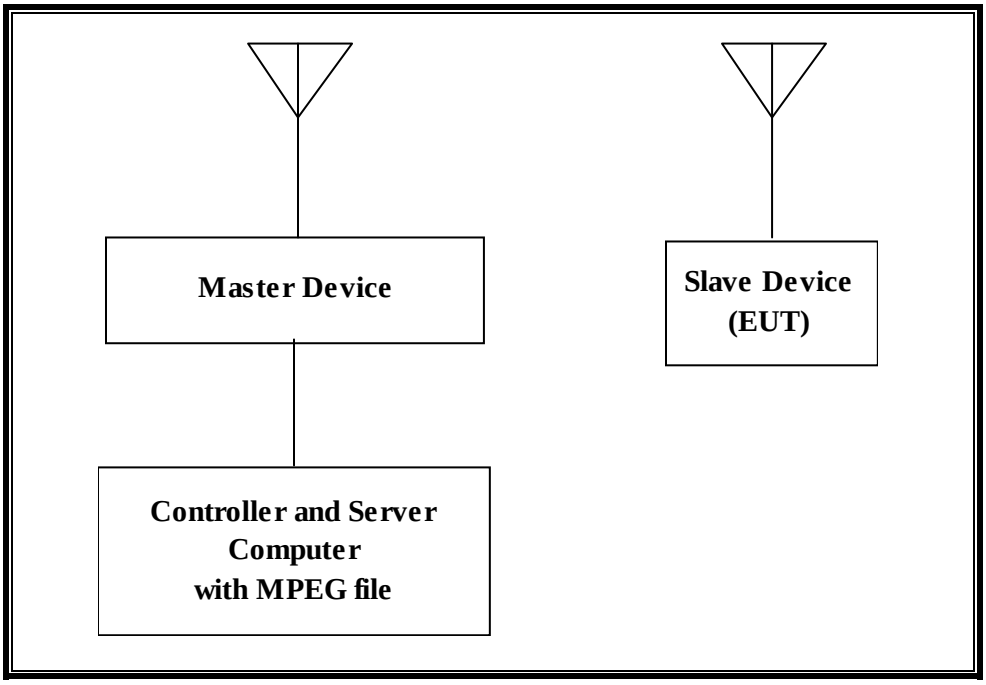
TEST AND MEASUREMENT EQUIPMENT

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

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

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)	Lenovo	Type 20B7-S0A200	PF-02JN9J 14/06	DoC
AC Adapter (Controller/Server PC)	Lenovo	ADLX65NLC2A	11S45N0259Z1ZS97459 4A9	DoC

14.1.4. DESCRIPTION OF EUT

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

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

The EUT is a Slave Device without Radar Detection.

The highest power level within these bands is 12.68 dBm EIRP in the 5250-5350 MHz band and 12.71 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 ES File Explorer media player.

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

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

The software installed in the access point is 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: LDK102087. 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.

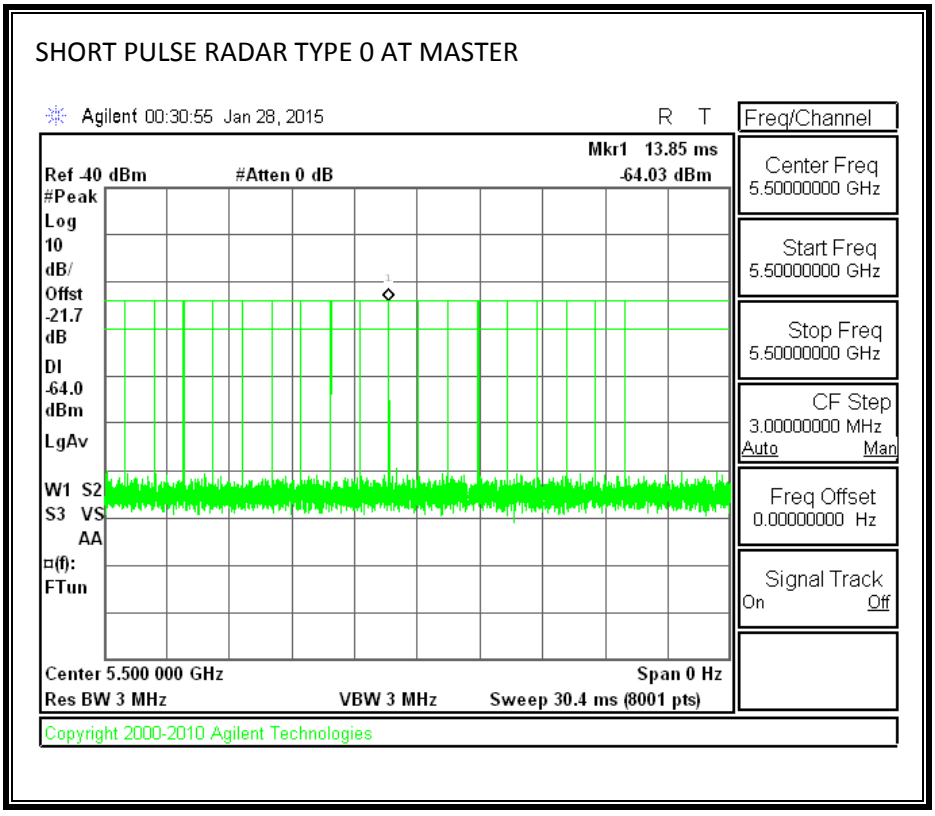
14.2. RESULTS FOR 20 MHz BANDWIDTH

14.2.1. TEST CHANNEL

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

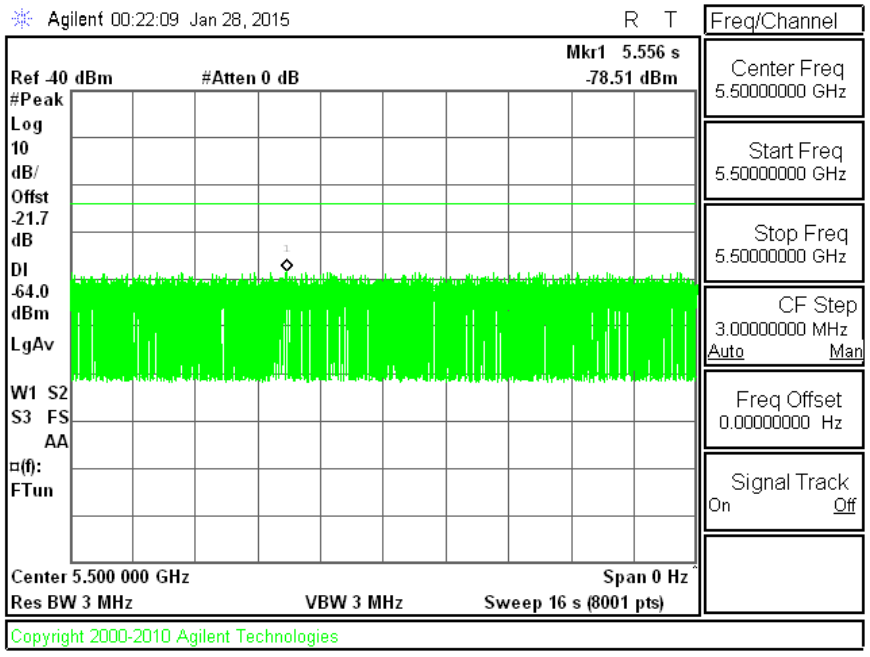
14.2.2. RADAR WAVEFORM AND TRAFFIC

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)

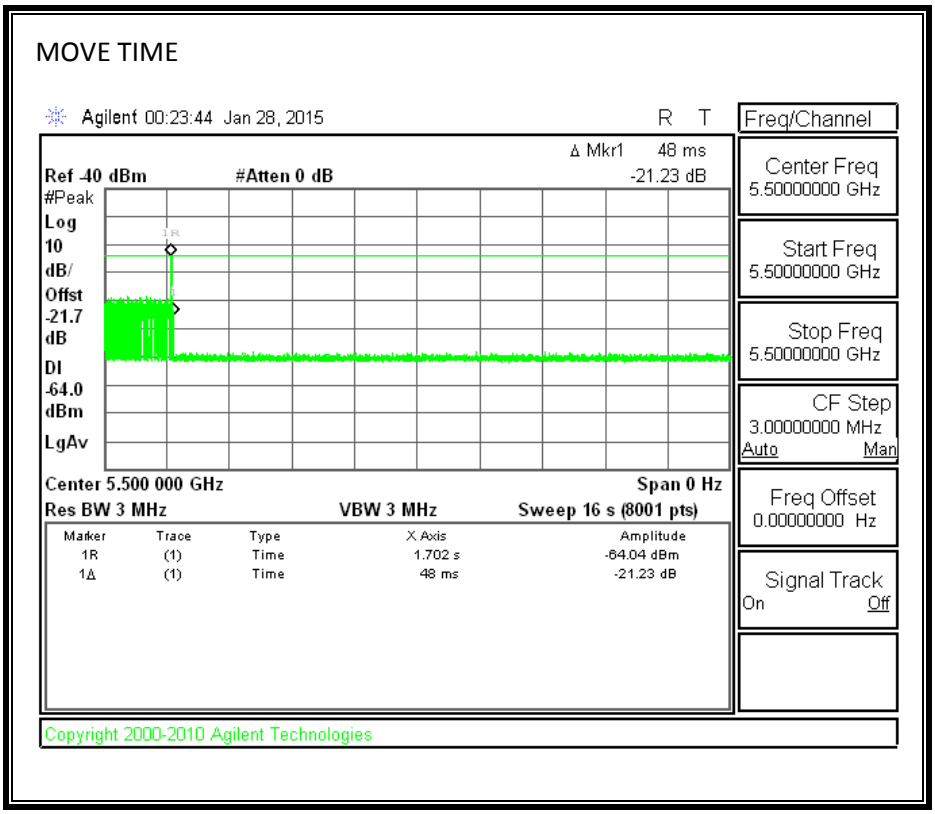
The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

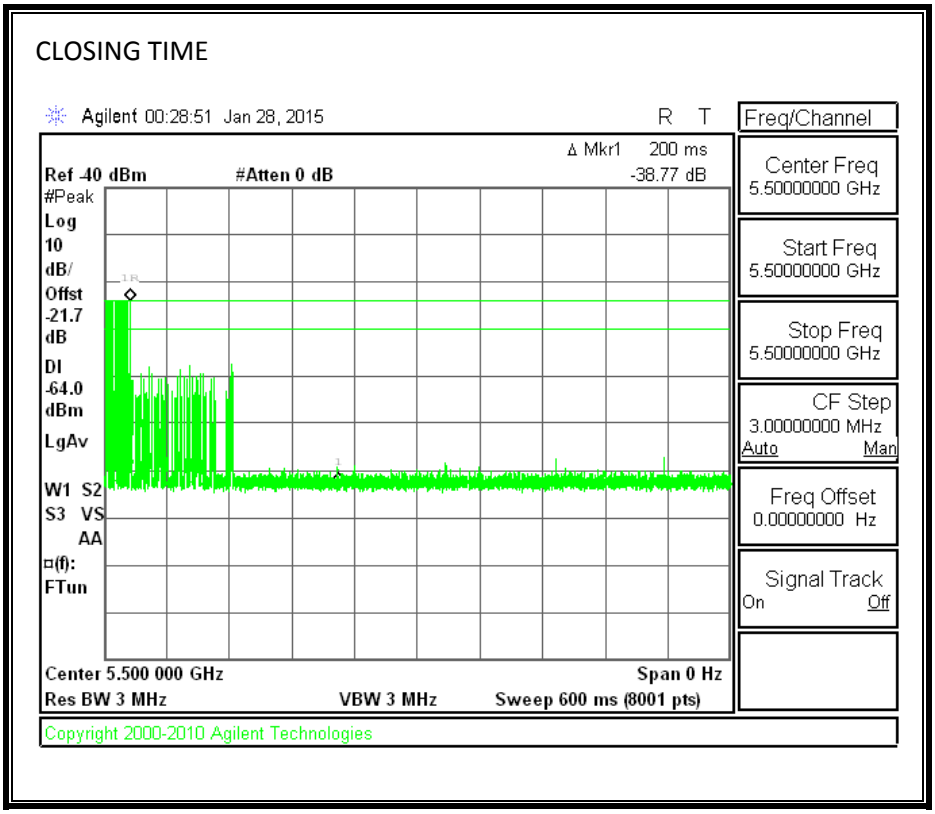
Channel Move Time (sec)	Limit (sec)
0.048	10

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

MOVE TIME



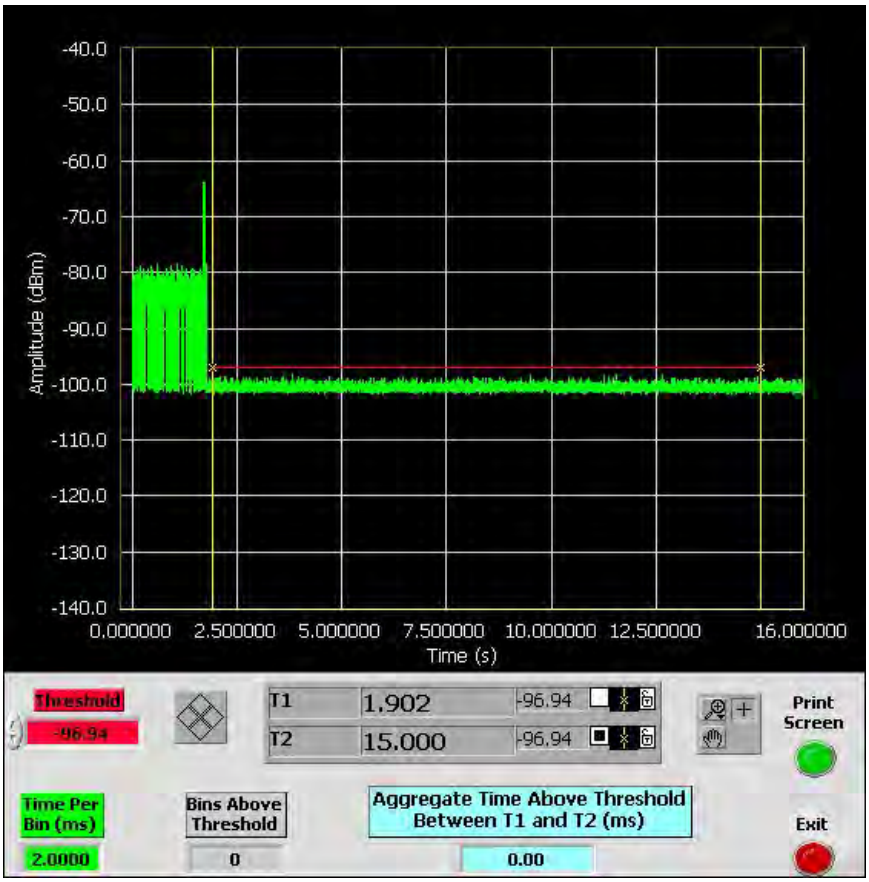
CHANNEL CLOSING TIME



AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

No transmissions are observed during the aggregate monitoring period.

AGGREGATE CLOSING TIME



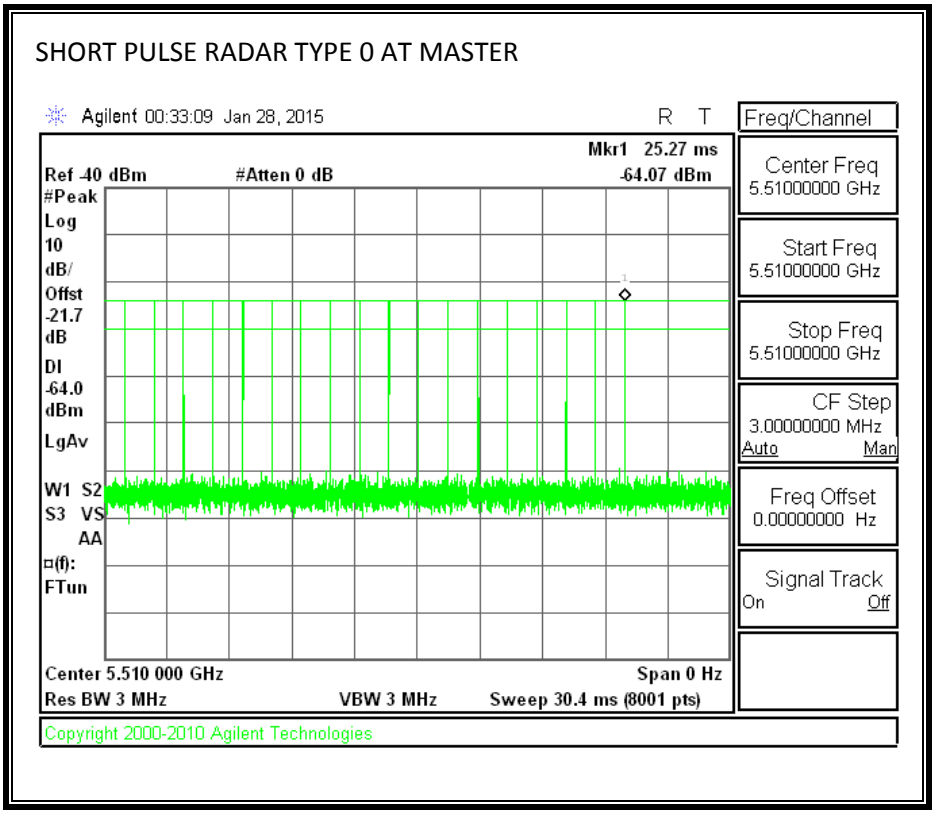
14.3. RESULTS FOR 40 MHz BANDWIDTH

14.3.1. TEST CHANNEL

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

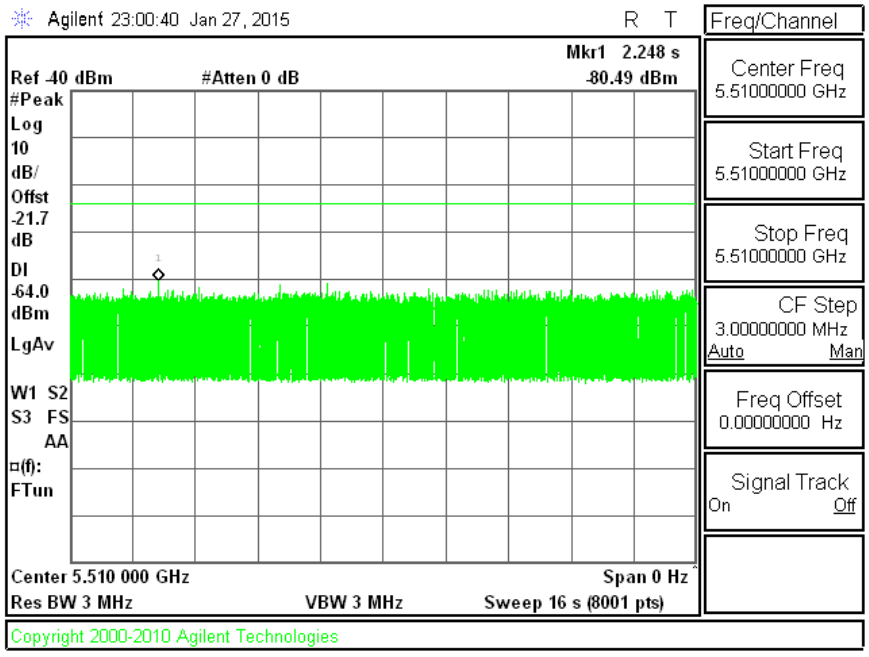
14.3.2. RADAR WAVEFORM AND TRAFFIC

RADAR WAVEFORM



TRAFFIC

SLAVE 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).

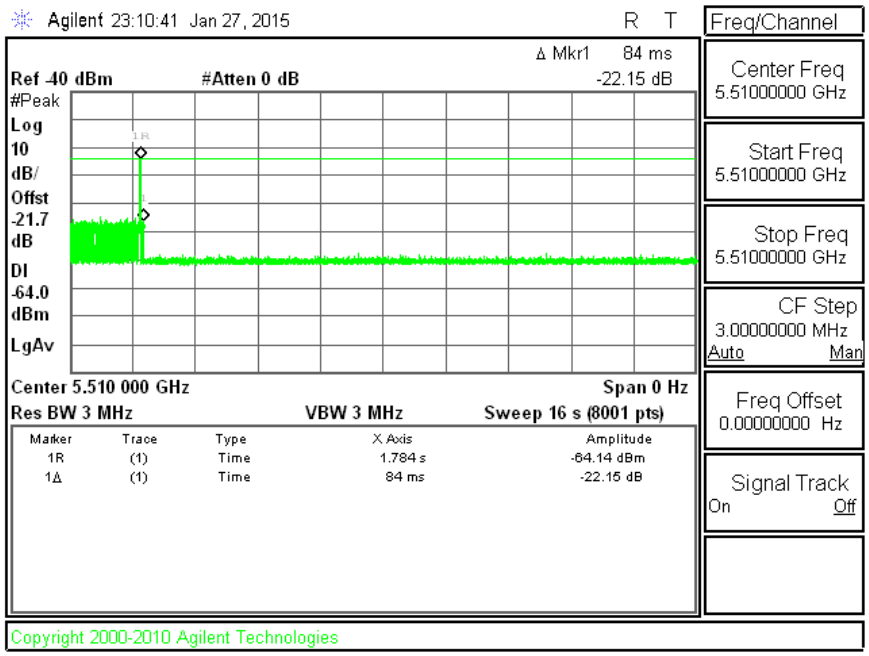
RESULTS

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

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

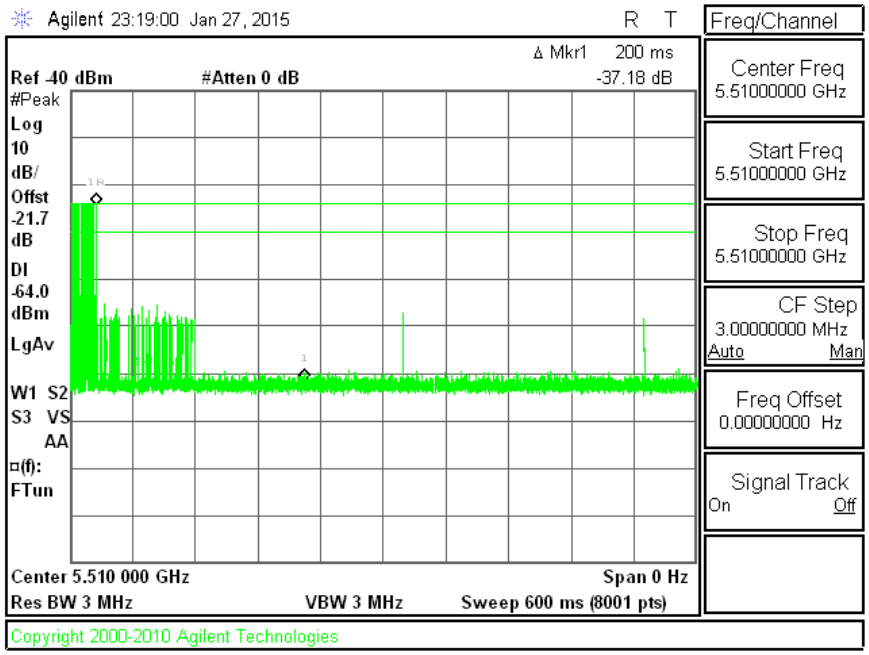
MOVE TIME

MOVE TIME



CHANNEL CLOSING TIME

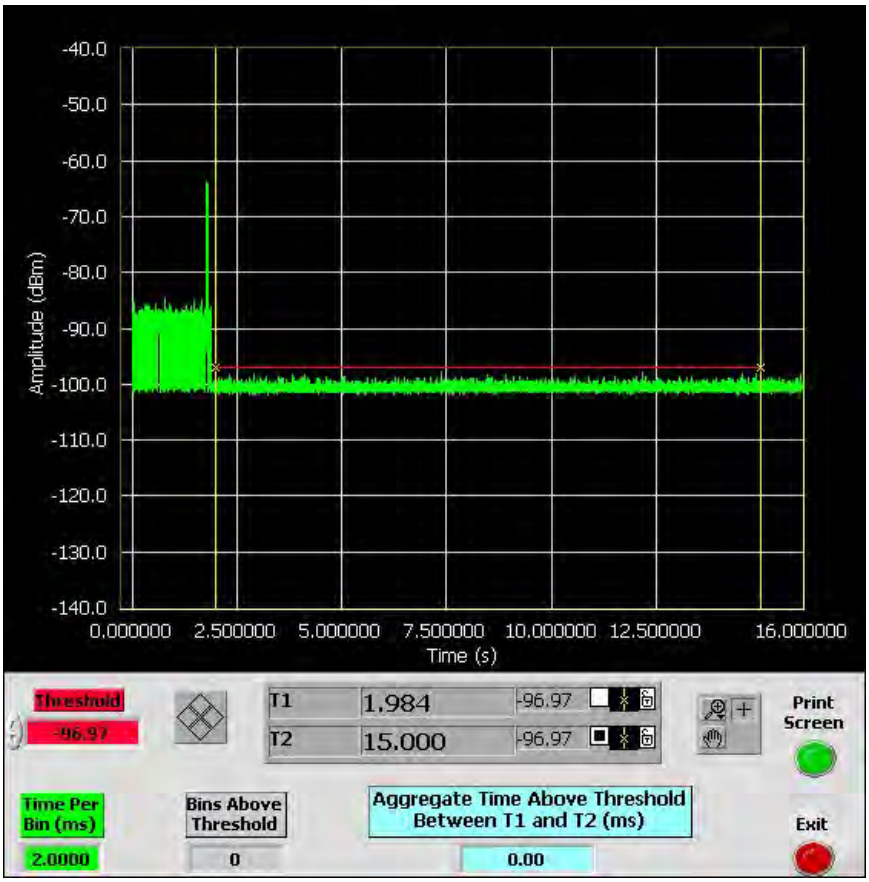
CLOSING TIME



AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

No transmissions are observed during the aggregate monitoring period.

AGGREGATE CLOSING TIME



14.3.5. 10-MINUTE BEACON MONITORING PERIOD

RESULTS

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