FCC 47 CFR PART 15 SUBPART E

CERTIFICATION TEST REPORT

FOR

TABLET + BLUETOOTH, DTS/UNII a/b/g/n & ANT+

MODEL NUMBER: SM-T533

FCC ID: A3LSMT533

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME:	**SAMSUNG ELECTRONICS CO., LTD.**
EUT DESCRIPTION:	**Tablet with Bluetooth, DTS/UNII a/b/g/n, and ANT+**
MODEL NUMBER:	**SM-T533**
SERIAL NUMBER:	**2031457 (Conducted); 2031457 (Radiated)**
DATE TESTED:	**JANUARY 12 - 15, 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.

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2. TEST METHODOLOGY

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

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.

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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%.

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5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a TABLET + BLUETOOTH, DTS/UNII a/b/g/n & ANT+.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

Frequency Range (MHz)	Mode	Total Output Power (dBm)	Total Output Power (mW)
5180 - 5240	802.11a	8.41	6.93
5180 - 5240	802.11n HT20	8.33	6.81
5190 - 5230	802.11n HT40	8.62	7.28
5260 - 5320	802.11a	8.54	7.14
5260 - 5320	802.11n HT20	8.43	6.97
5270 - 5310	802.11n HT40	8.35	6.84
5500 - 5700	802.11a	8.28	6.73
5500 - 5700	802.11n HT20	8.31	6.78
5510 - 5670	802.11n HT40	8.74	7.48
5745 - 5825	802.11a	8.26	6.70
5745 - 5825	802.11n HT20	8.54	7.14
5755 - 5795	802.11n HT40	8.45	7.00

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an FPCB antenna, with a maximum gain of 0.47 dBi.

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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

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5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
AC Adapter	SAMSUNG	EP-TA10EWE	N/A	N/A
Earphone	SAMSUNG	N/A	N/A	N/A

I/O CABLES

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

TEST SETUP

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

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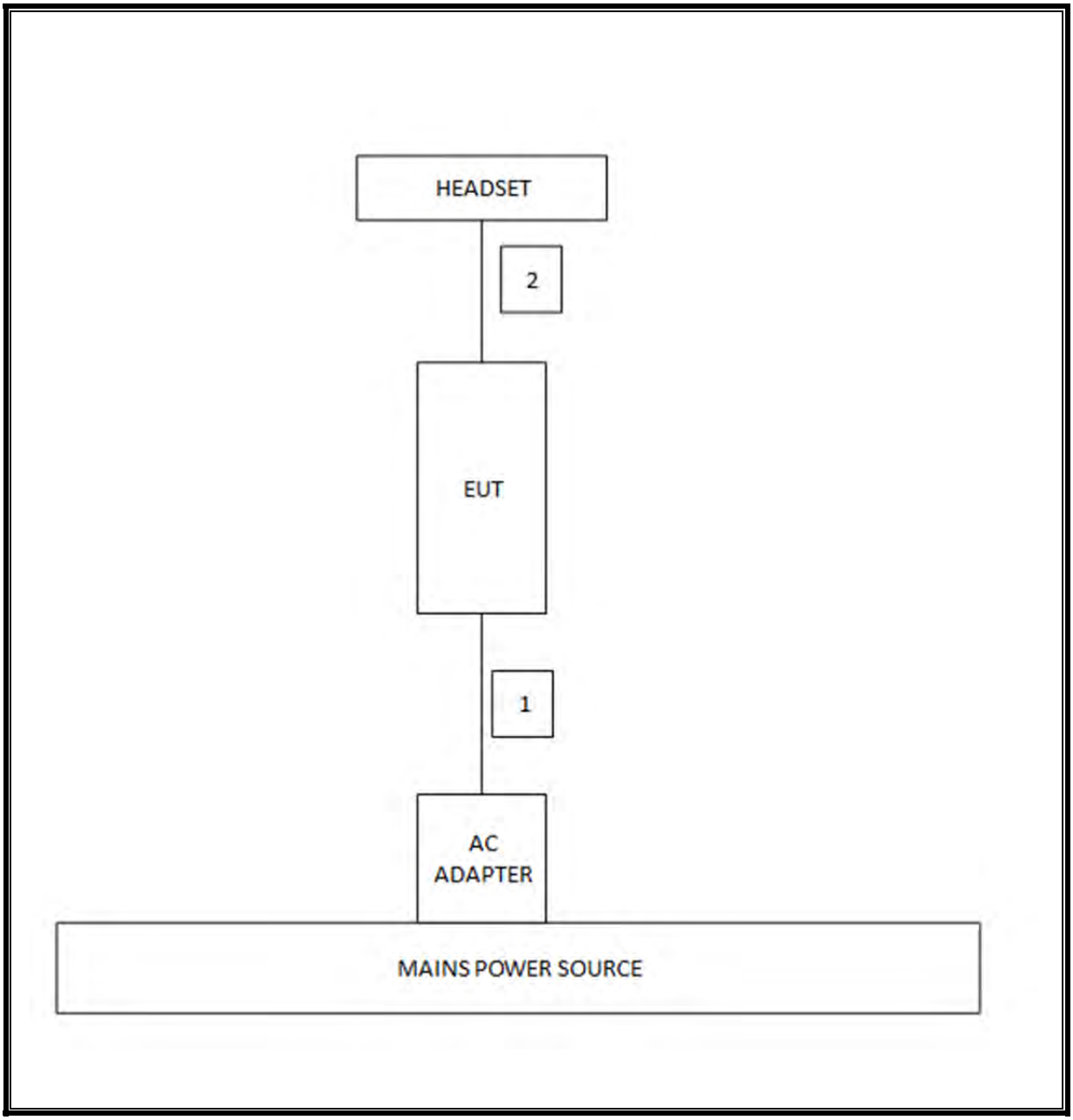
SETUP DIAGRAM FOR TESTS



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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**
Antenna, Biconolog, 30MHz-1 GHz	Sunol Sciences	JB1	C01171	02/13/15
Antenna, Horn, 18GHz	EMCO	3115	C00783	10/25/15
Antenna, Horn, 26.5 GHz	ARA	MWH-1826/B	C00980	11/14/15
Preamplifier, 1300 MHz	Agilent / HP	8447D	C00580	01/28/15
Preamplifier, 26.5 GHz	Agilent / HP	8449B	C01052	10/22/15
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C01069	12/20/15
CBT Bluetooth Tester	R & S	CBT	None	07/12/15
Peak Power Meter	Agilent / HP	E4416A	C00963	12/13/15
Peak / Average Power Sensor	Agilent / HP	E9327A	C00964	12/13/15
LISN, 30 MHz	FCC	50/250-25-2	C00626	01/14/15
Reject Filter, 2.4GHz	Micro-Tronics	BRM50702	N02684	CNR
Peak Power Meter	Agilent / HP	E4416A	C00963	12/13/15
Peak / Average Power Sensor	Agilent / HP	E9327A	C00964	12/13/15

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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	16.384MHz
15.407	6dB Band width (5.8Ghz)	500KHz		Pass	35.22MHz
15.407 (a)(2)	TX Cond. Power5.15-2.25, 5.25-5.35 & 5.47-5.725	<24dBm or 11+10Log(OBW)		Pass	8.74dBm
15.407 (a)(3)	TX Cond. Power 5.725-5.825	< 30dBm or 17+10Log(OBW)		Pass	8.54dBm
15.407 (a)(5)	PSD (5.2,5.3,5.5GHz)	<11dBm		Pass	-2.09dBm
15.407 (a)(5)	PSD (5.8GHz)	30dBm per 500kHz			-5.25dBm
15.207 (a)	AC Power Line conducted emissions	Section 10	Radiated	Pass	60.63dBuV(PK)
15.407 (b) & 15.209	Radiated Spurious Emission	< 54dBuV/m		Pass	50.77dBuV/m
15.407 (h)(2)	Dynamic Frequency Selection	N/A	Radiated / Condcuted	Pass	N/A

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8. ON TIME, DUTY CYCLE AND MEASUREMENT METHODS

LIMITS

None; for reporting purposes only.

PROCEDURE

KDB 789033 Zero-Span Spectrum Analyzer Method.

RESULTS

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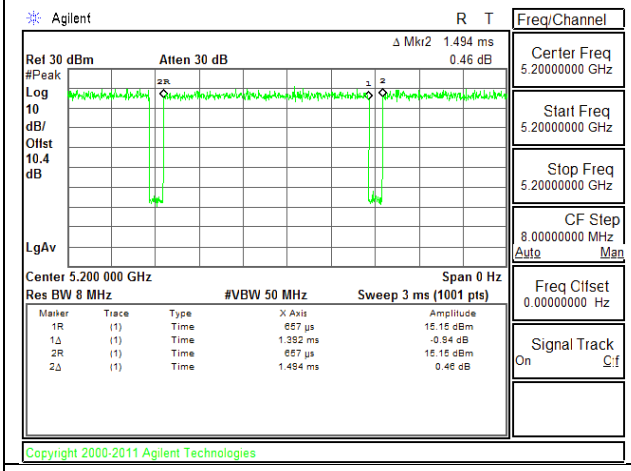
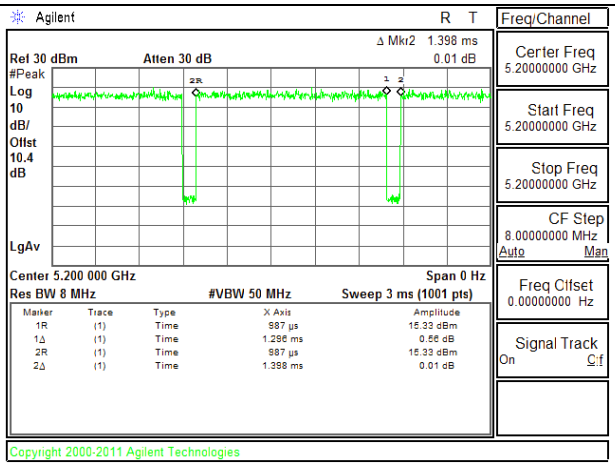
ON TIME AND DUTY CYCLE RESULT AND PLOTS

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	1.49	0.932	93.2%	0.31	0.718
802.11n HT20	1.30	1	0.927	92.7%	0.33	0.772
802.11n HT40	0.63	1	0.855	85.5%	0.68	1.575

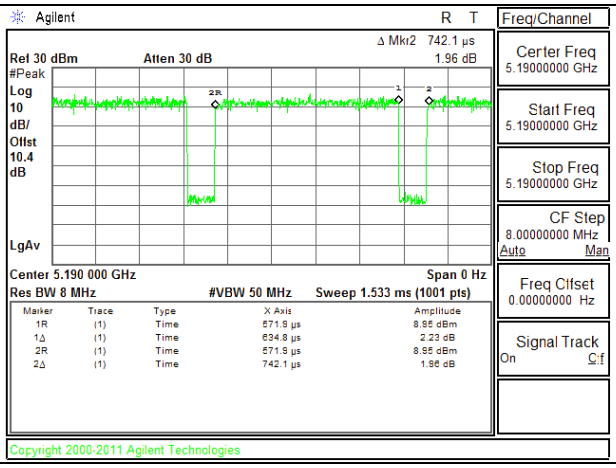
DUTY CYCLE 802.11a MODE



DUTY CYCLE 802.11n HT20 MODE



DUTY CYCLE 802.11n HT40 MODE



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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.

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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

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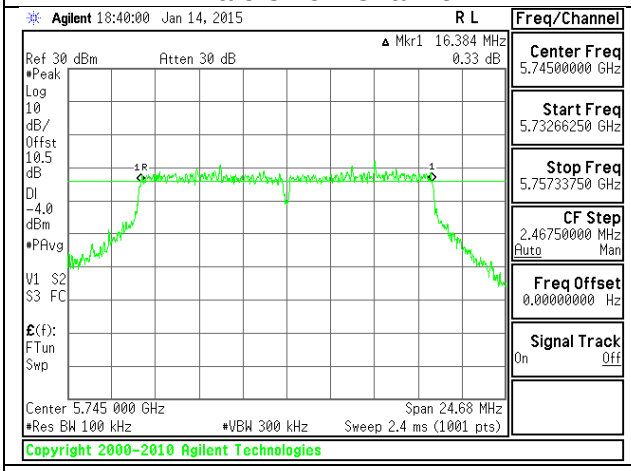
6 dB BANDWIDTH PLOTS AND TABLE

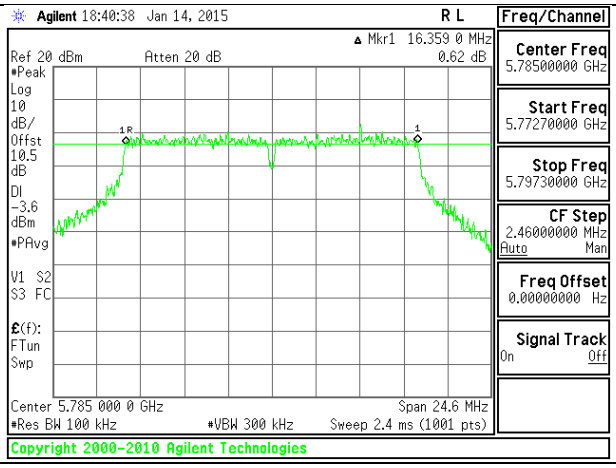
802.11a MODE IN THE 5.8 GHz BAND TEST RESULT TABLE

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5745	16.384	0.5
Mid	5785	16.359	0.5
High	5825	16.383	0.5
Worst		16.384	

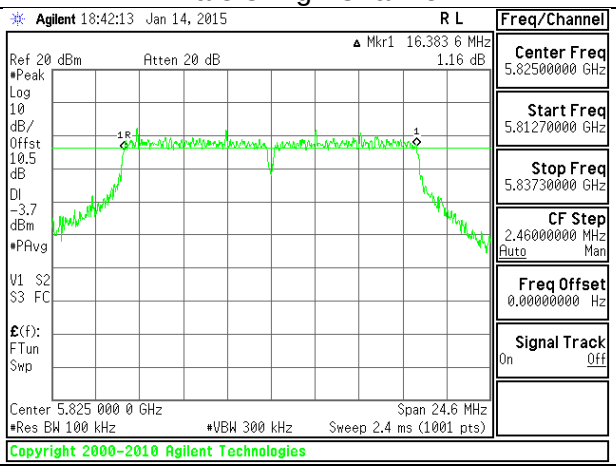
11a 5.8 Low Channel



11a 5.8 Mid Channel



11a 5.8 High Channel



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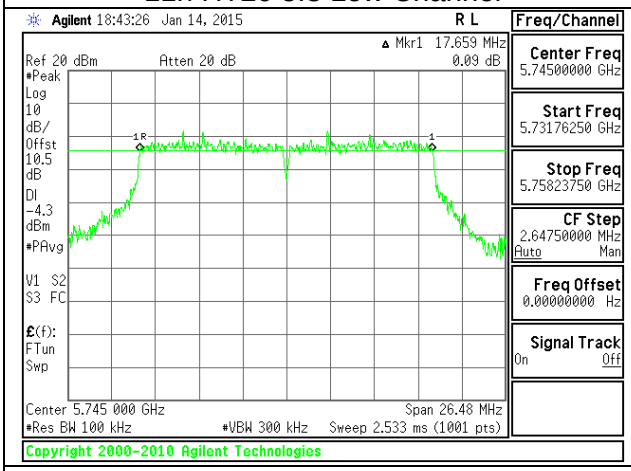
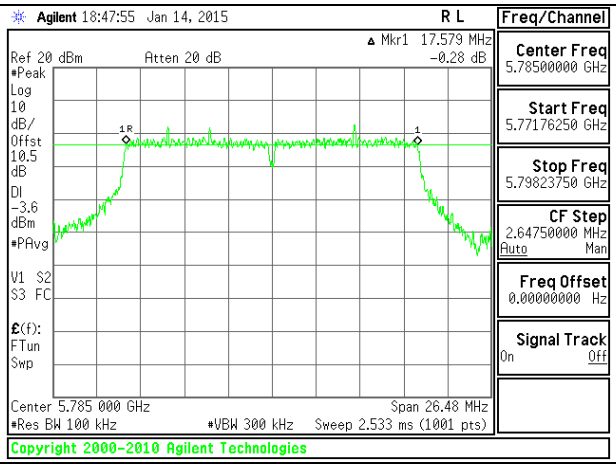
802.11n HT20 MODE IN THE 5.8 GHz BAND TEST RESULT TABLE

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5745	17.659	0.5
Mid	5785	17.579	0.5
High	5825	17.632	0.5
Worst		17.659	

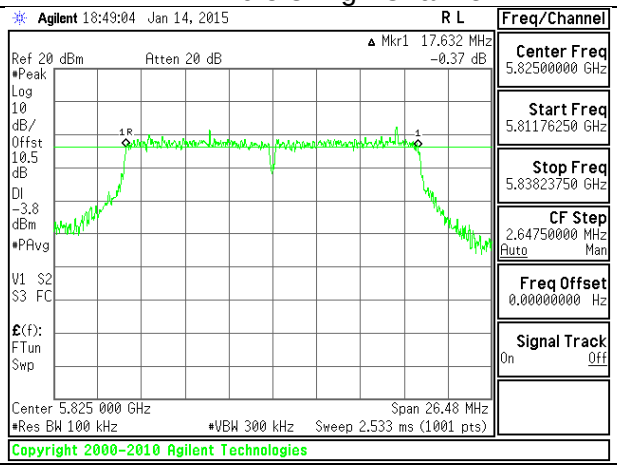
11n HT20 5.8 Low Channel



11n HT20 5.8 Mid Channel



11n HT20 5.8 High Channel



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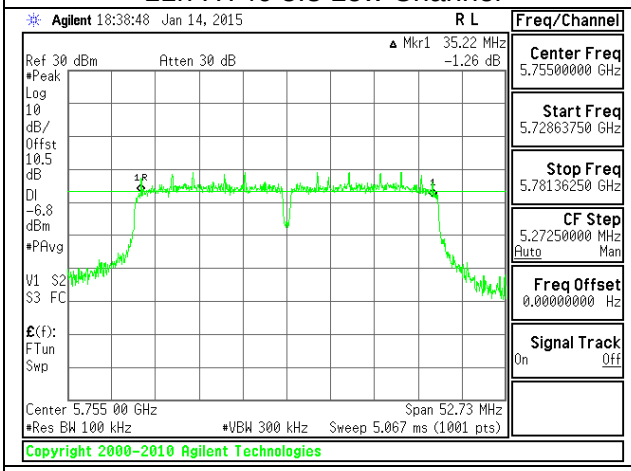
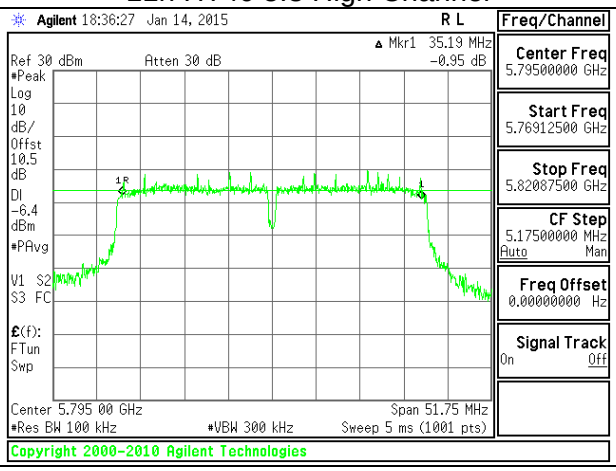
802.11n HT40 MODE IN THE 5.8 GHz BAND TEST RESULT TABLE

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5755	35.220	0.5
High	5795	35.190	0.5
Worst		35.220	

11n HT40 5.8 Low Channel



11n HT40 5.8 High Channel



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NOTE:

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10.2. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

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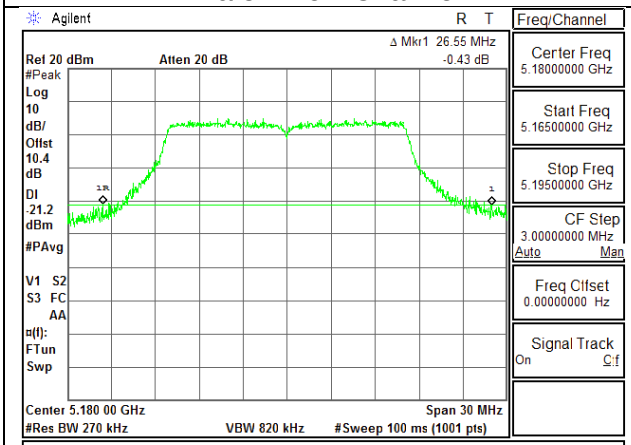
26 dB BANDWIDTH PLOTS AND TABLE

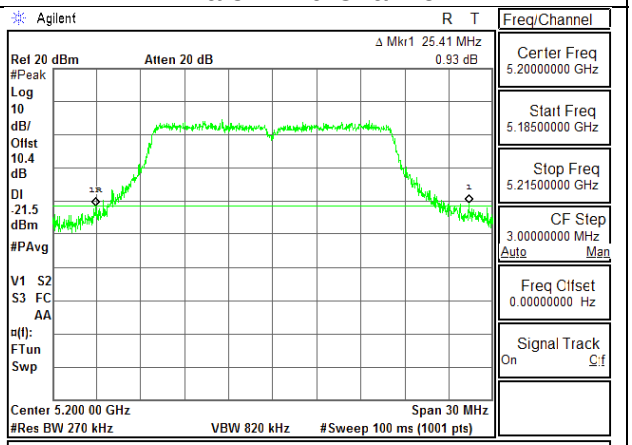
802.11a MODE IN THE 5.2 GHz BAND TEST RESULT TABLE

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5180	26.55
Mid	5200	25.41
High	5240	25.11
Worst		26.55

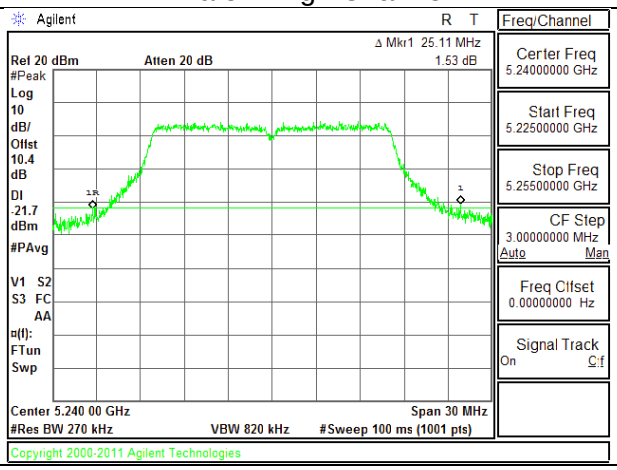
11a 5.2 Low Channel



11a 5.2 Mid Channel



11a 5.2 High Channel



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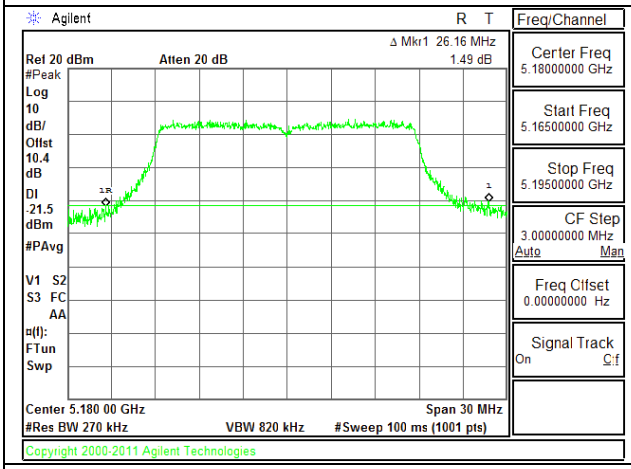
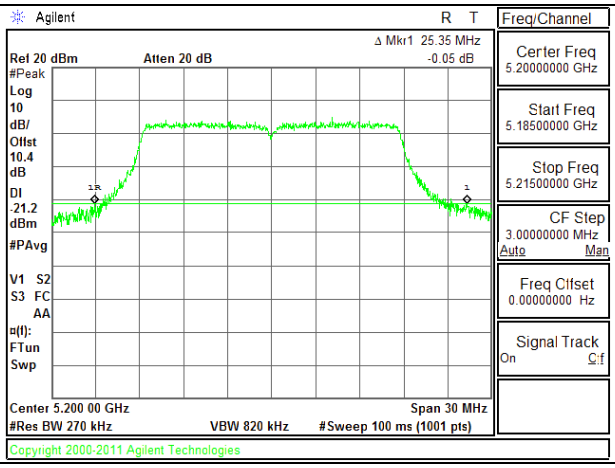
802.11n HT20 MODE IN THE 5.2 GHz BAND TEST RESULT TABLE

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5180	26.16
Mid	5200	26.35
High	5240	26.07
Worst		26.16

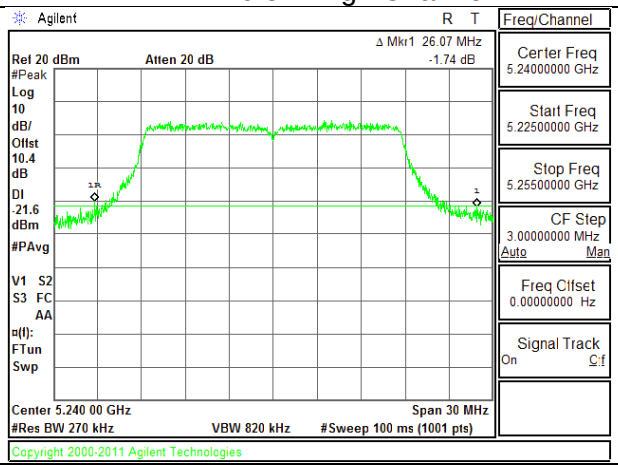
11n HT20 5.2 Low Channel



11n HT20 5.2 Mid Channel



11n HT20 5.2 High Channel



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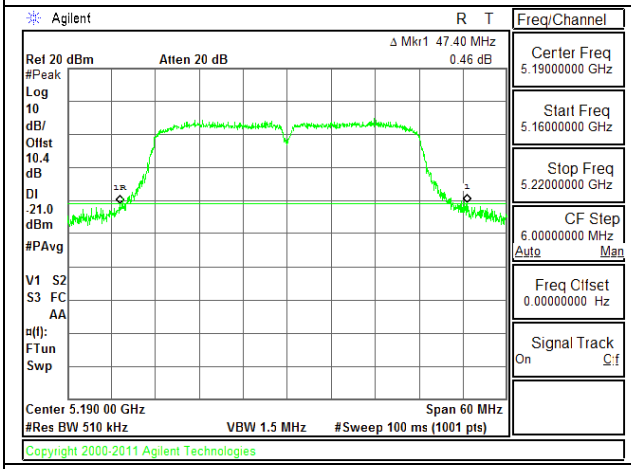
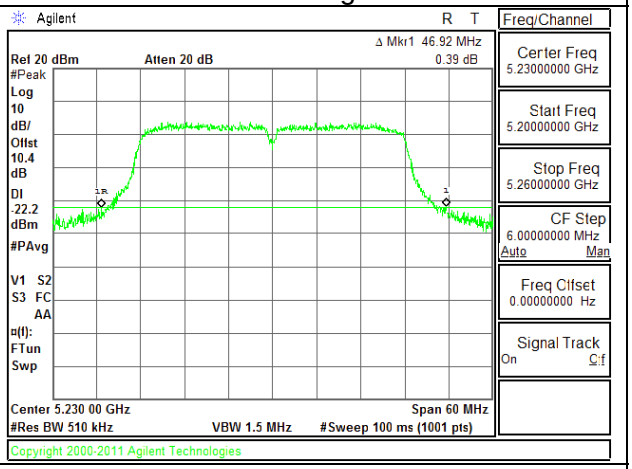
802.11n HT40 MODE IN THE 5.2 GHz BAND TEST RESULT TABLE

Channel	Frequency (MHz)	26dB Bandwidth (MHz)
Low	5190	47.40
Mid	5230	46.92
Worst		47.40

11n HT40 5.2 Low Channel



11n HT40 5.2 High Channel



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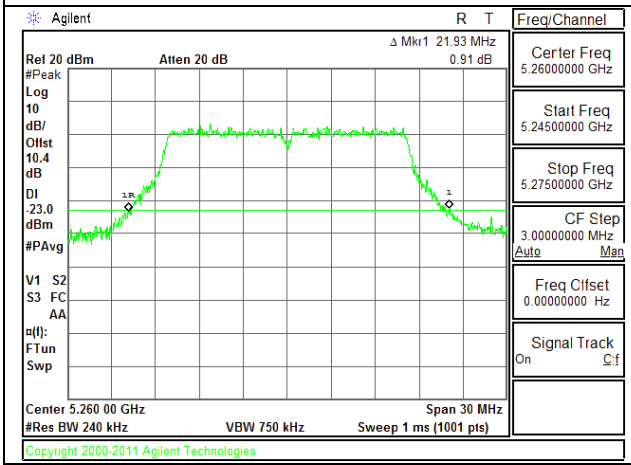
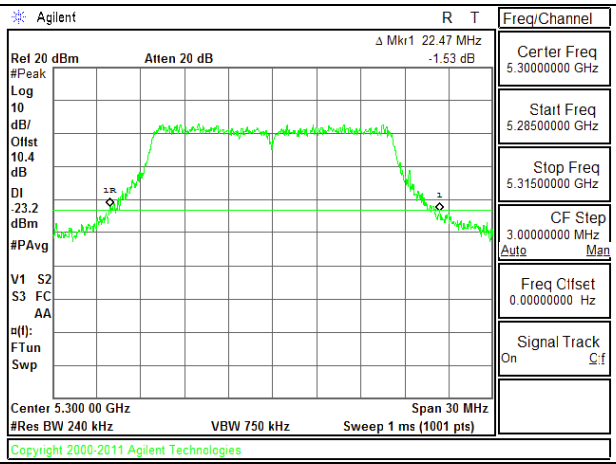
802.11a MODE IN THE 5.3 GHz BAND TEST RESULT TABLE

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5260	21.93
Mid	5300	22.47
High	5320	22.08
Worst		22.47

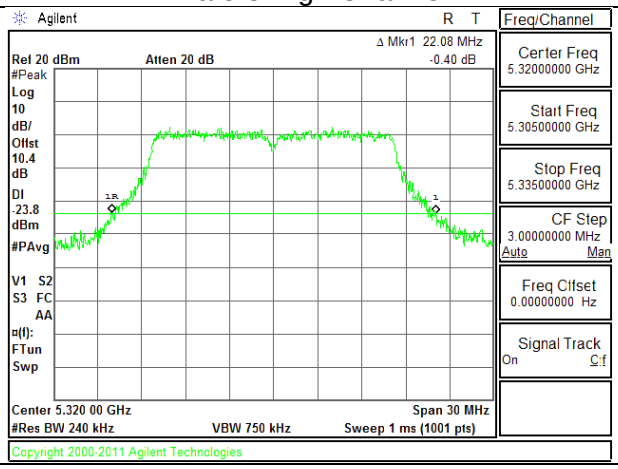
11a 5.3 Low Channel



11a 5.3 Mid Channel



11a 5.3 High Channel



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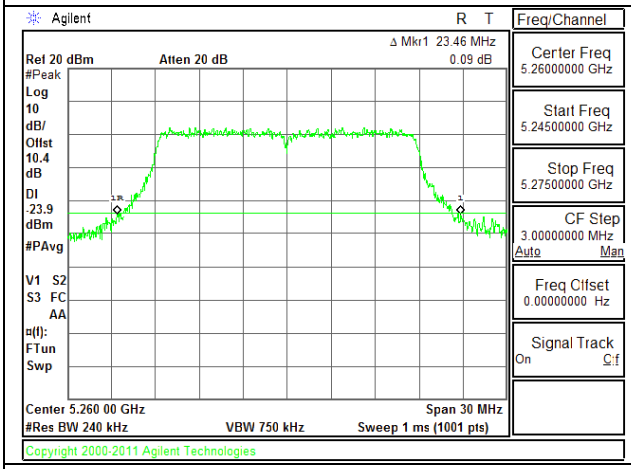
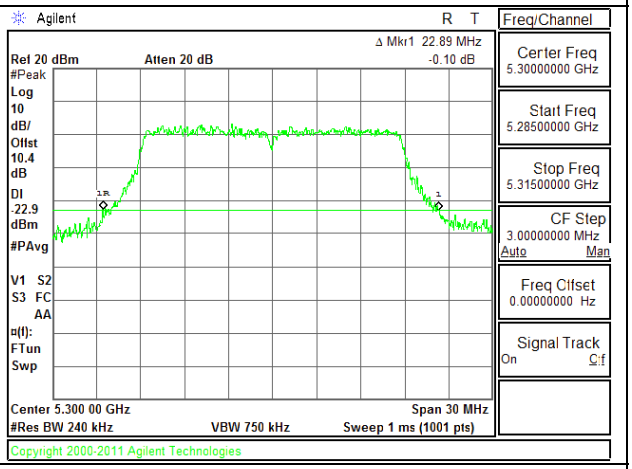
802.11n HT20 MODE IN THE 5.3 GHz BAND TEST RESULT TABLE

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5260	23.46
Mid	5300	22.89
High	5320	22.53
Worst		23.46

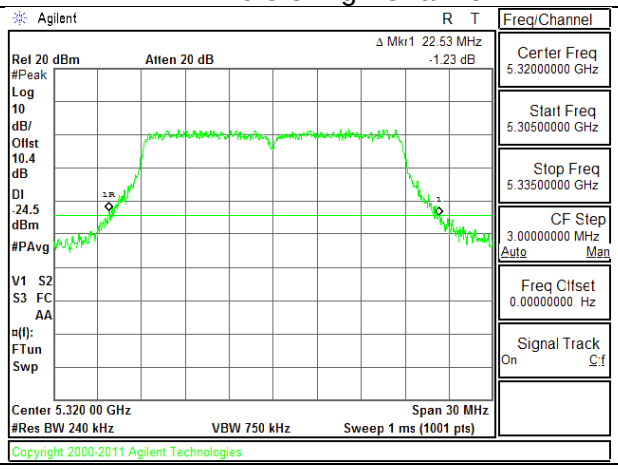
11n HT20 5.3 Low Channel



11n HT20 5.3 Mid Channel



11n HT20 5.3 High Channel



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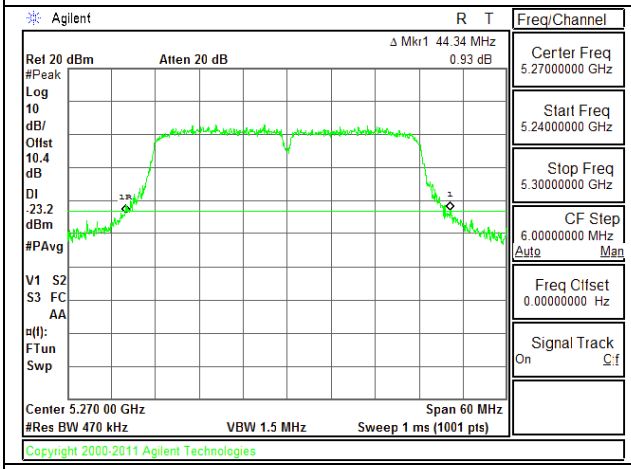
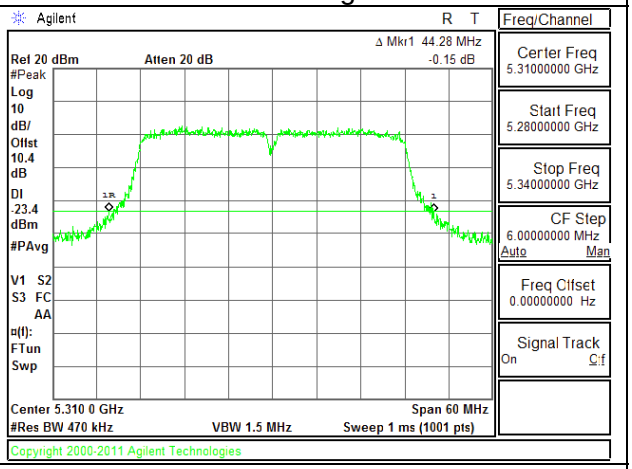
802.11n HT40 MODE IN THE 5.3 GHz BAND TEST RESULT TABLE

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5270	44.34
High	5310	44.28
Worst		44.34

11n HT40 5.3 Low Channel



11n HT20 5.3 High Channel



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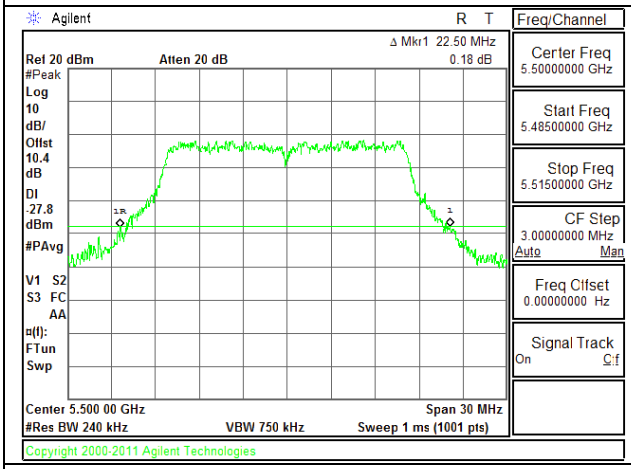
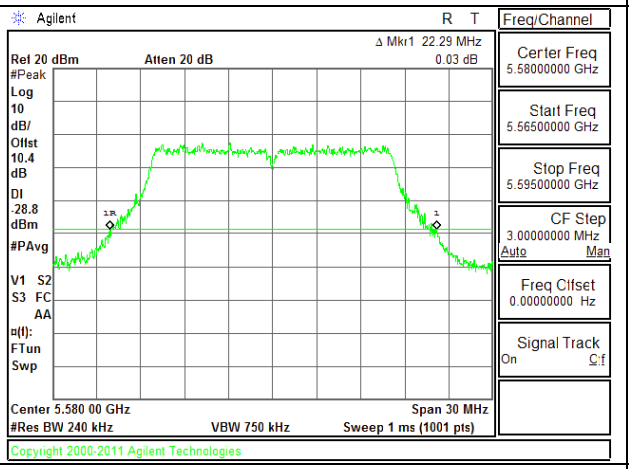
802.11a MODE IN THE 5.5 GHz BAND TEST RESULT TABLE

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5500	22.50
Mid	5580	22.29
High	5700	23.43
Worst		23.43

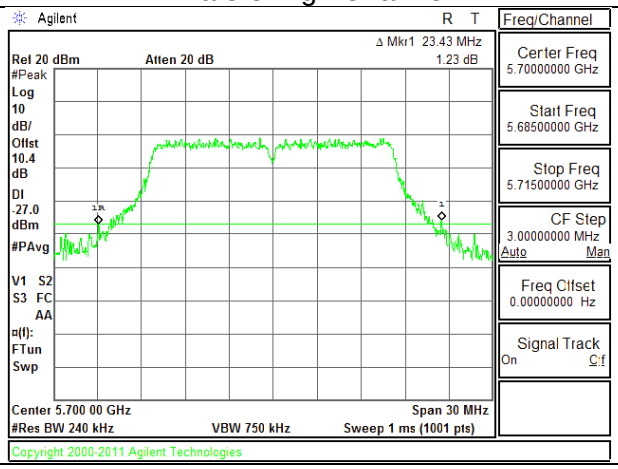
11a 5.5 Low Channel



11a 5.5 Mid Channel



11a 5.5 High Channel



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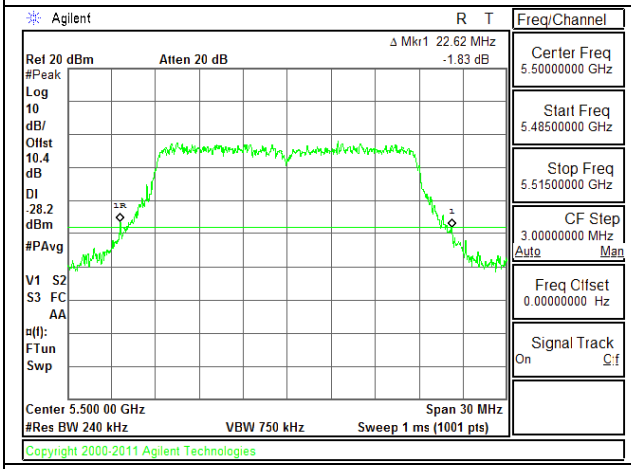
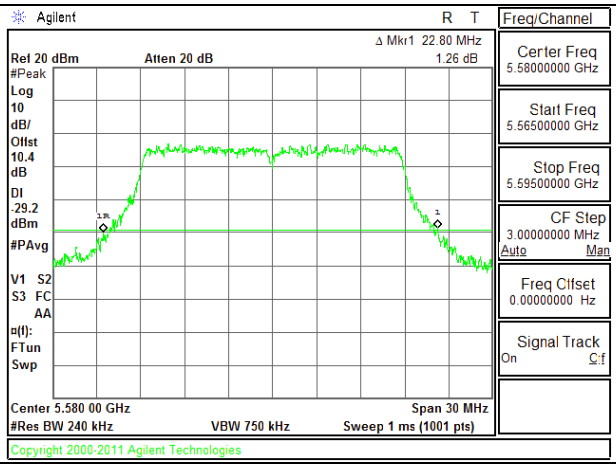
802.11n HT20 MODE IN THE 5.5 GHz BAND TEST RESULT TABLE

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5500	22.62
Mid	5580	22.80
High	5700	23.76
Worst		23.76

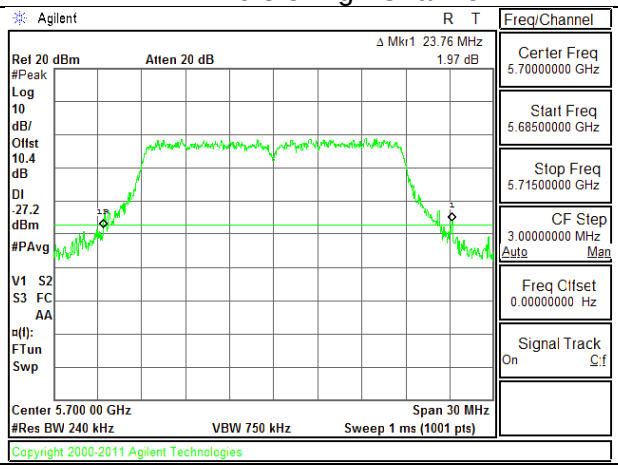
11n HT20 5.5 Low Channel



11n HT20 5.5 Mid Channel



11n HT20 5.5 High Channel



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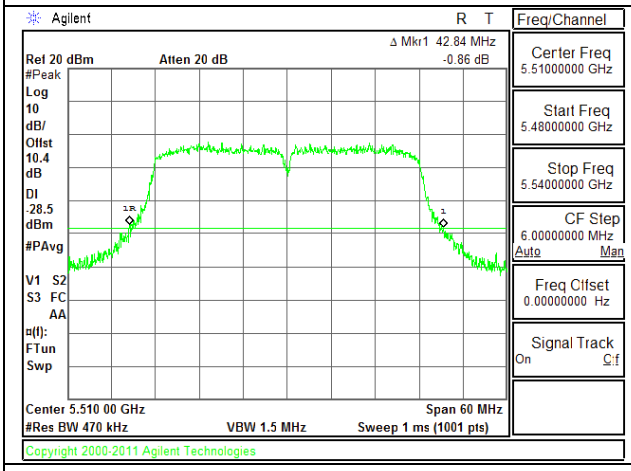
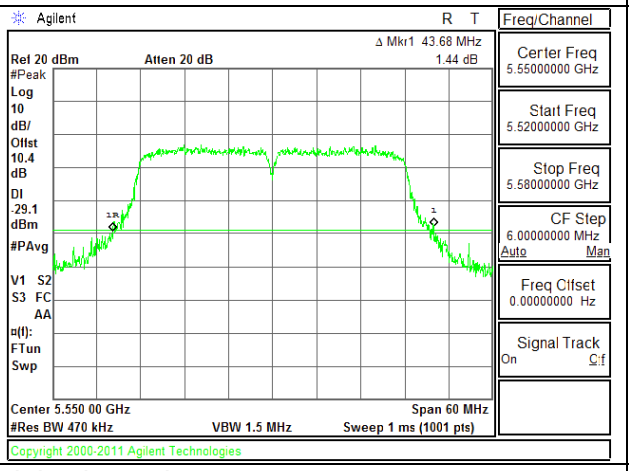
802.11n HT40 MODE IN THE 5.5 GHz BAND TEST RESULT TABLE

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5510	42.84
Mid	5550	43.68
High	5670	43.86
Worst		43.86

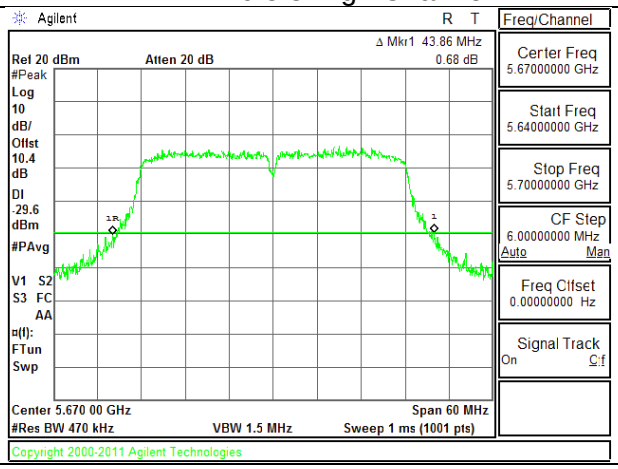
11n HT40 5.5 Low Channel



11n HT40 5.5 Mid Channel



11n HT40 5.5 High Channel



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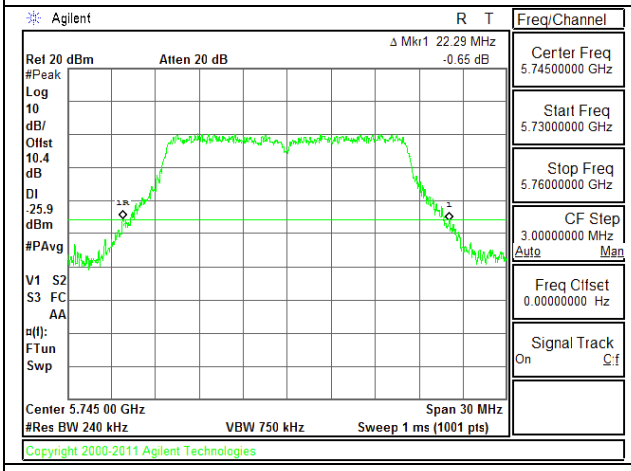
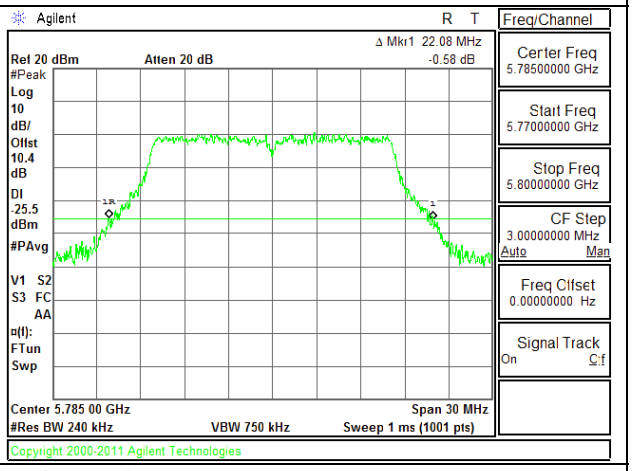
802.11a MODE IN THE 5.8 GHz BAND TEST RESULT TABLE

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5745	22.29
Mid	5785	22.08
High	5825	22.11
Worst		22.29

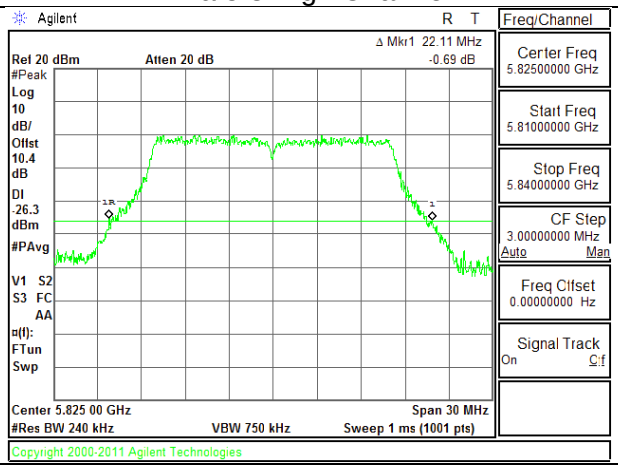
11a 5.8 Low Channel



11a 5.8 Mid Channel



11a 5.8 High Channel



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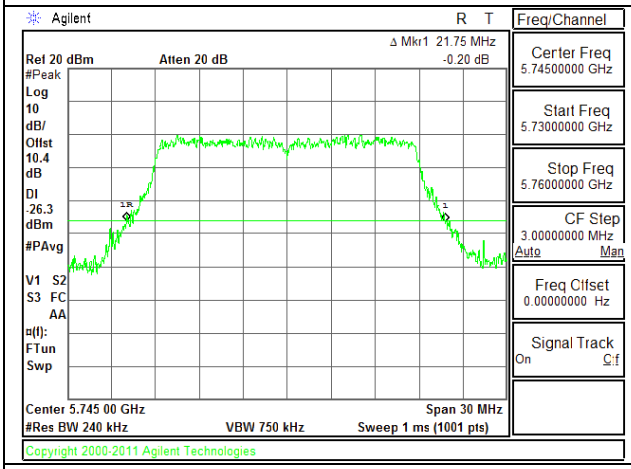
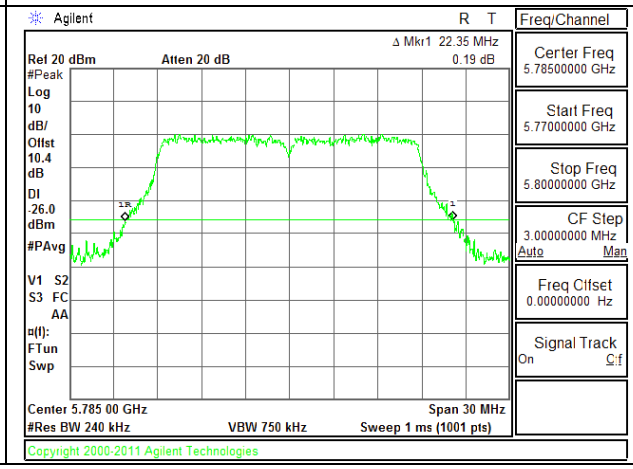
802.11n HT20 MODE IN THE 5.8 GHz BAND TEST RESULT TABLE

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5745	21.75
Mid	5785	22.35
High	5825	22.20
Worst		22.35

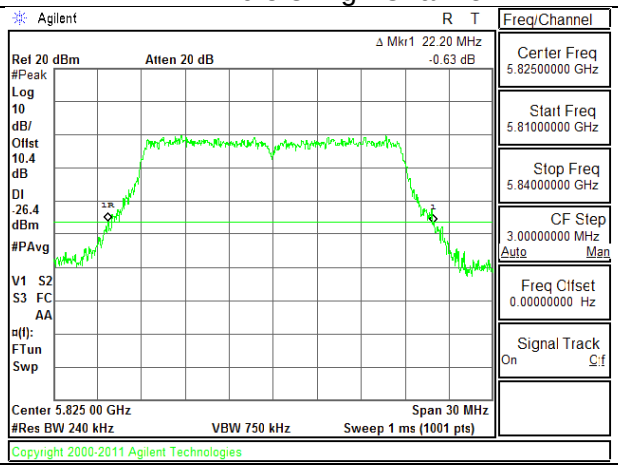
11n HT20 5.8 Low Channel



11n HT20 5.8 Mid Channel



11n HT20 5.8 High Channel



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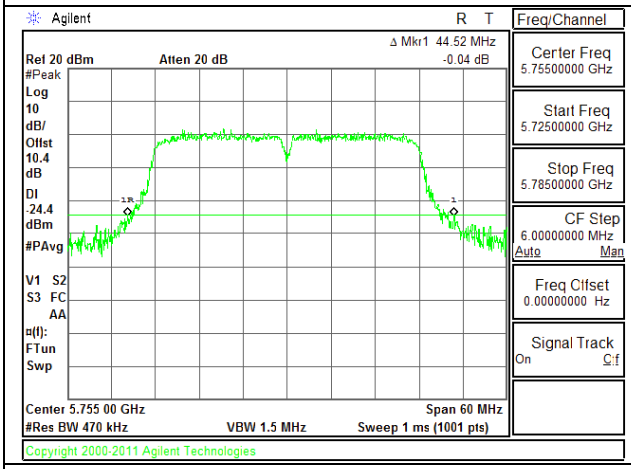
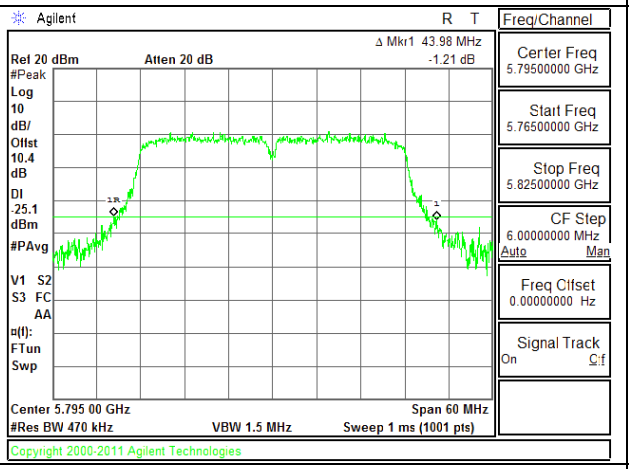
802.11n HT40 MODE IN THE 5.8 GHz BAND TEST RESULT TABLE

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5755	44.52
High	5795	43.98
Worst		44.52

11n HT40 5.8 Low Channel



11n HT40 5.8 Mid Channel



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10.3. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

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10.3.1. 802.11a MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5180	16.53
Mid	5200	16.53
High	5240	16.50
Worst		16.53

10.3.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5180	17.71
Mid	5200	17.74
High	5240	17.65
Worst		17.74

10.3.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5190	36.10
Mid	5230	36.00
Worst		36.10

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10.3.1. 802.11a MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5260	17.72
Mid	5300	17.66
High	5320	16.57
Worst		17.72

10.3.1. 802.11n HT20 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5260	17.71
Mid	5300	17.66
High	5320	17.68
Worst		17.71

10.3.2. 802.11n HT40 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5270	35.70
High	5310	36.04
Worst		36.04

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10.3.3. 802.11a MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5500	16.47
Mid	5580	16.51
High	5700	16.58
Worst		16.58

10.3.4. 802.11n HT20 MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5500	17.71
Mid	5580	17.66
High	5700	17.68
Worst		17.71

10.3.5. 802.11n HT40 MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5510	35.83
Mid	5550	36.16
High	5670	35.94
Worst		36.16

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10.3.6. 802.11a MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5745	16.46
Mid	5785	16.47
High	5825	16.49
Worst		16.49

10.3.7. 802.11n HT20 MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5745	17.68
Mid	5785	17.68
High	5825	17.62
Worst		17.68

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	35.88
Worst		36.07

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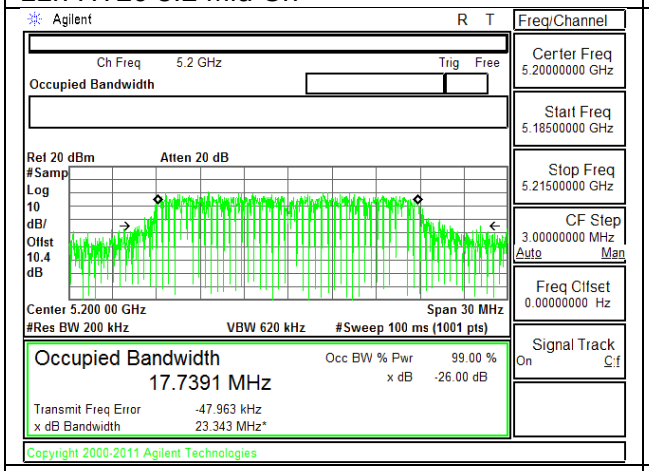
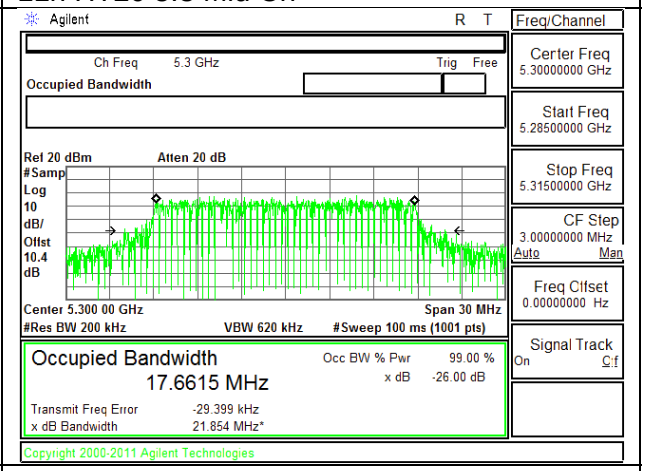
10.3.1. 99% BANDWIDTH PLOTS

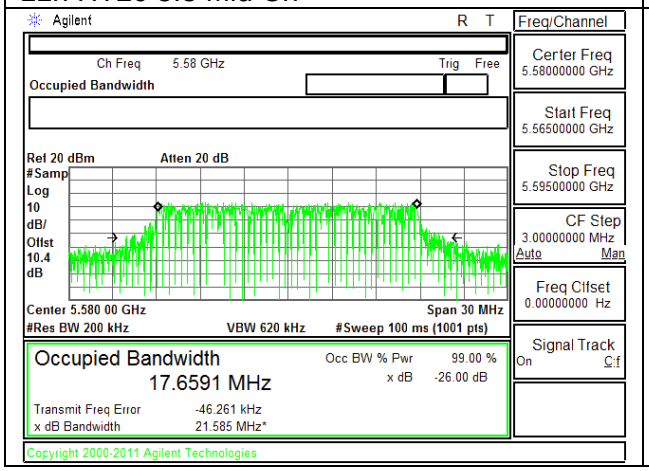
11n HT20 5.2 Mid Ch



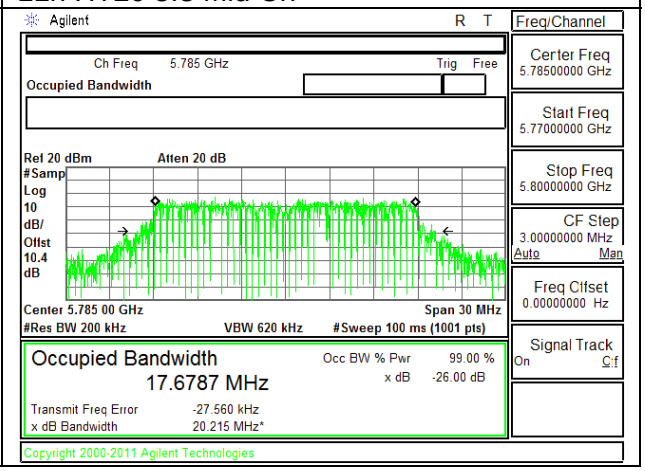
11n HT20 5.3 Mid Ch



11n HT20 5.5 Mid Ch



11n HT20 5.8 Mid Ch



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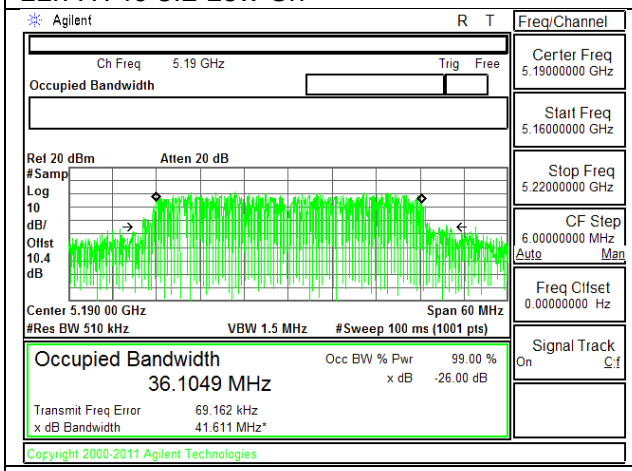
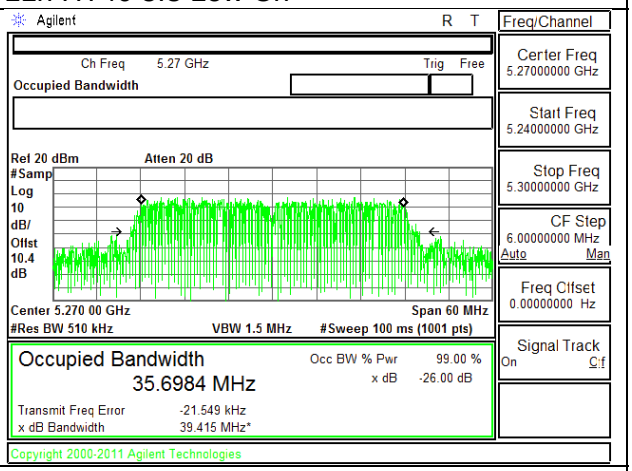
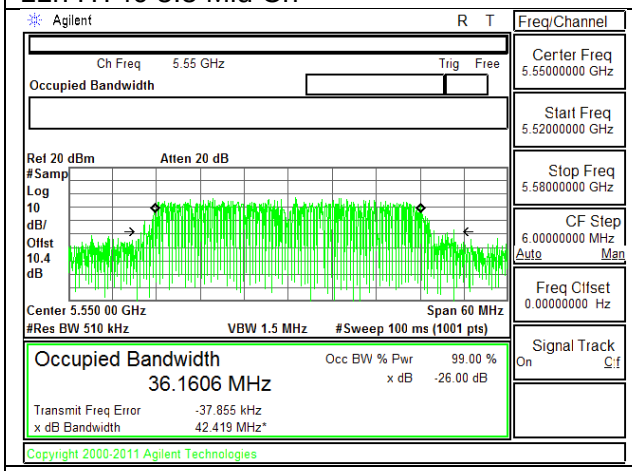
11n HT40 5.2 Low Ch



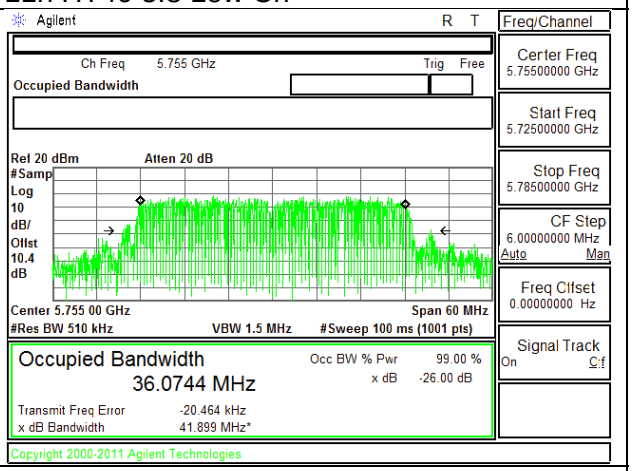
11n HT40 5.3 Low Ch



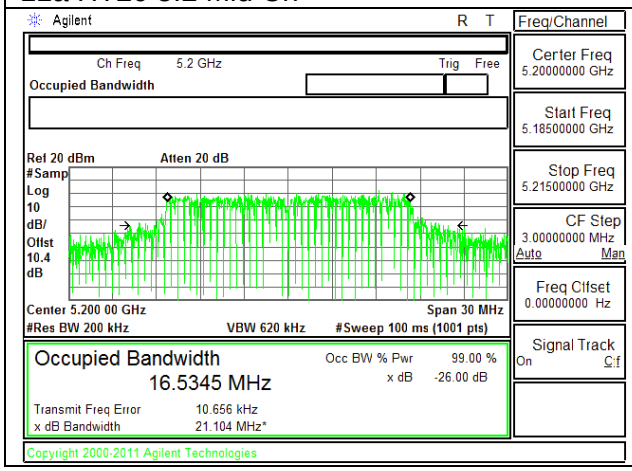
11n HT40 5.5 Mid Ch



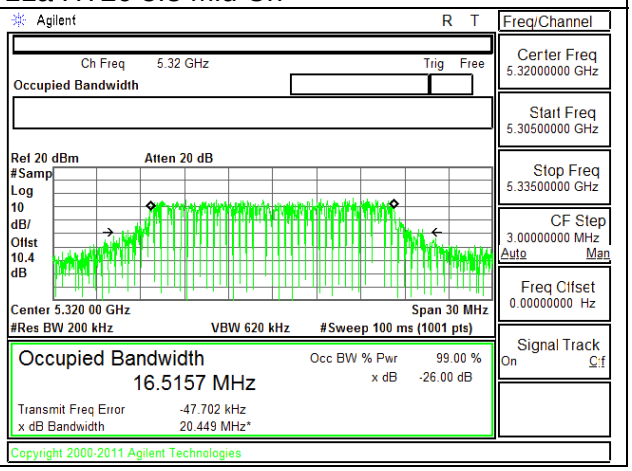
11n HT40 5.8 Low Ch



11a HT20 5.2 Mid Ch



11a HT20 5.3 Mid Ch



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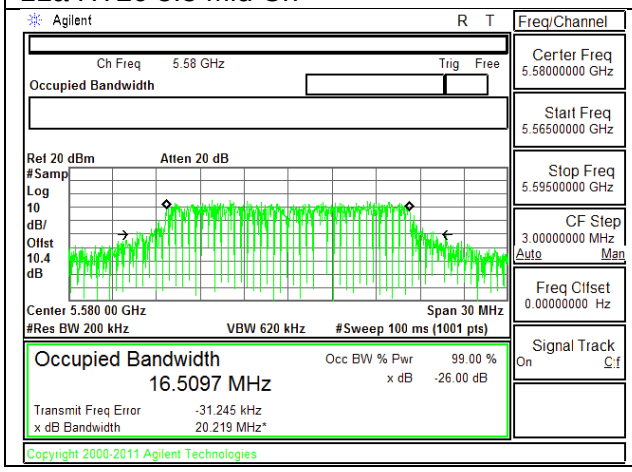
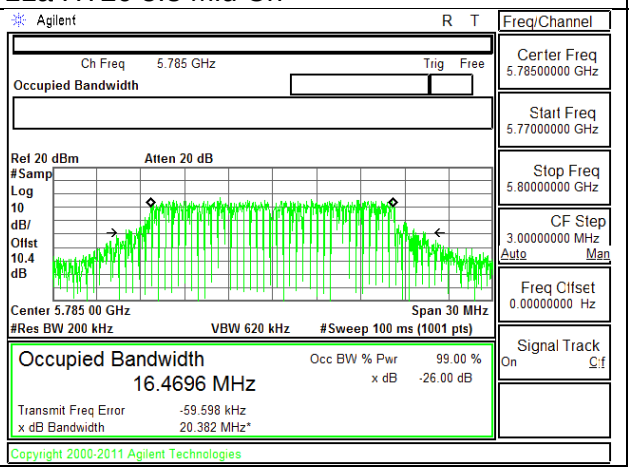
11a HT20 5.5 Mid Ch



11a HT20 5.8 Mid Ch



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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

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10.4.1. 802.11a MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5180	7.80
Mid	5200	7.90
High	5240	7.70
Worst		7.90

10.4.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5180	7.80
Mid	5200	8.00
High	5240	7.70
Worst		8.00

10.4.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5190	8.00
Mid	5230	7.80
Worst		8.00

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10.4.4. 802.11a MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5260	7.70
Mid	5300	7.70
High	5320	8.30
Worst		8.30

10.4.5. 802.11n HT20 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5260	7.80
Mid	5300	7.90
High	5320	8.30
Worst		8.30

10.4.6. 802.11n HT40 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5270	8.10
High	5310	8.00
Worst		8.10

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10.4.7. 802.11a MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5500	8.00
Mid	5580	7.60
High	5700	8.10
Worst		8.10

10.4.8. 802.11n HT20 MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5500	8.10
Mid	5580	7.60
High	5700	8.00
Worst		8.10

10.4.9. 802.11n HT40 MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5510	8.20
Mid	5550	8.20
High	5670	8.30
Worst		8.30

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10.4.10. 802.11a MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5745	7.70
Mid	5785	7.90
High	5825	7.90
Worst		7.90

10.4.11. 802.11n HT20 MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5745	7.80
Mid	5785	7.90
High	5825	7.50
Worst		7.90

10.4.12. 802.11n HT40 MODE IN THE 5.8 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	5755	7.90
High	5795	8.00
Worst		8.00

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10.5. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (1)

For the band 5.15–5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 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.

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

DIRECTIONAL ANTENNA GAIN

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

Test Methodology

RESULTS

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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	26.55	16.53	0.47
Mid	5200	25.41	16.53	0.47
High	5240	25.11	16.50	0.47

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	22.18	21.71	21.71	11.00	10.00	9.53
Mid	5200	24.00	22.18	21.71	21.71	11.00	10.00	9.53
High	5240	24.00	22.17	21.70	21.70	11.00	10.00	9.53

Duty Cycle CF (dB)	0.31	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5180	7.74	8.05	24.00	-15.95
Mid	5200	8.03	8.34	24.00	-15.66
High	5240	8.10	8.41	24.00	-15.59

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5180	-3.500	-3.19	11.00	-14.19
Mid	5200	-2.880	-2.57	11.00	-13.57
High	5240	-3.160	-2.85	11.00	-13.85

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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	26.26	17.71	0.47
Mid	5200	25.35	17.74	0.47
High	5240	26.07	17.65	0.47

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	22.01	22.01	11.00	10.00	9.53
Mid	5200	24.00	22.49	22.02	22.02	11.00	10.00	9.53
High	5240	24.00	22.47	22.00	22.00	11.00	10.00	9.53

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

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5180	7.560	7.89	24.00	-16.11
Mid	5200	7.830	8.16	24.00	-15.84
High	5240	8.000	8.33	24.00	-15.67

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5180	-3.910	-3.58	11.00	-14.58
Mid	5200	-3.730	-3.40	11.00	-14.40
High	5240	-3.490	-3.16	11.00	-14.16

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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	47.400	36.100	0.47
Mid	5230	46.920	36.000	0.47

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	22.53	22.53	11.00	10.00	9.53
Mid	5230	24.00	23.00	22.53	22.53	11.00	10.00	9.53
Duty Cycle CF (dB)		0.68	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	7.940	8.62	24.00	-15.38
Mid	5230	7.570	8.25	24.00	-15.75

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5190	-6.530	-5.85	11.00	-16.85
Mid	5230	-6.530	-5.85	11.00	-16.85

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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	21.93	17.71	0.47
Mid	5300	22.47	17.66	0.47
High	5320	22.08	16.52	0.47

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	23.48	29.48	23.48	11.00	11.00	11.00
Mid	5300	24.00	23.47	29.47	23.47	11.00	11.00	11.00
High	5320	24.00	23.18	29.18	23.18	11.00	11.00	11.00

Duty Cycle CF (dB)	0.31	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	8.230	8.54	24.00	-15.46
Mid	5300	7.850	8.16	24.00	-15.84
High	5320	8.110	8.42	24.00	-15.58

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5260	-2.940	-2.63	11.00	-13.63
Mid	5300	-2.400	-2.09	11.00	-13.09
High	5320	-3.210	-2.90	11.00	-13.90

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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	23.46	17.72	0.47
Mid	5300	22.89	17.66	0.47
High	5320	22.53	17.69	0.47

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	23.48	29.48	23.48	11.00	11.00	11.00
Mid	5300	24.00	23.47	29.47	23.47	11.00	11.00	11.00
High	5320	24.00	23.48	29.48	23.48	11.00	11.00	11.00

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

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	7.740	8.07	24.00	-15.93
Mid	5300	7.590	7.92	24.00	-16.08
High	5320	8.100	8.43	24.00	-15.57

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5260	-3.640	-3.31	11.00	-14.31
Mid	5300	-3.590	-3.26	11.00	-14.26
High	5320	-3.480	-3.15	11.00	-14.15

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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	44.3	35.7	0.47
High	5310	44.3	36.0	0.47

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)	0.68	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	7.3	7.96	24.00	-16.04
High	5310	7.7	8.35	24.00	-15.65

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5270	-7.14	-6.46	11.00	-17.46
High	5310	-6.48	-5.80	11.00	-16.80

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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	22.500	16.470	0.47
Mid	5580	22.290	16.510	0.47
High	5700	23.430	16.580	0.47

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	29.17	24.00	11.00	11.00	11.00
Mid	5580	24.00	24.00	29.18	24.00	11.00	11.00	11.00
High	5700	24.00	24.00	29.20	24.00	11.00	11.00	11.00

Duty Cycle CF (dB)	0.31	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	7.920	8.23	24.00	-15.77
Mid	5580	7.550	7.86	24.00	-16.14
High	5700	7.970	8.28	24.00	-15.72

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5500	-3.300	-2.99	11.00	-13.99
Mid	5580	-3.760	-3.45	11.00	-14.45
High	5700	-3.360	-3.05	11.00	-14.05

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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	22.620	17.710	0.47
Mid	5580	22.800	17.660	0.47
High	5700	23.760	17.680	0.47

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	29.47	24.00	11.00	11.00	11.00
High	5700	24.00	24.00	29.47	24.00	11.00	11.00	11.00

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

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	7.980	8.31	24.00	-15.69
Mid	5580	7.630	7.96	24.00	-16.04
High	5700	7.980	8.31	24.00	-15.69

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5500	-3.520	-3.19	11.00	-14.19
Mid	5580	-3.970	-3.64	11.00	-14.64
High	5700	-3.460	-3.13	11.00	-14.13

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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	42.8	35.8	0.47
Mid	5550	43.7	36.2	0.47
High	5670	43.9	35.9	0.47

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)	0.68	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	7.780	8.46	24.00	-15.54
Mid	5550	8.060	8.74	24.00	-15.26
High	5670	7.680	8.36	24.00	-15.64

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5510	-6.740	-6.06	11.00	-17.06
Mid	5550	-6.260	-5.58	11.00	-16.58
High	5670	-6.710	-6.03	11.00	-17.03

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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	22.290	16.460	0.47
Mid	5785	22.080	16.470	0.47
High	5825	22.110	16.490	0.47

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	35.16	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	35.17	30.00	17.00	17.00	17.00

Duty Cycle CF (dB)	0.31	Included in Calculations of Corr'd Power & PPSD

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	7.50	7.81	30.00	-22.19
Mid	5785	7.70	8.01	30.00	-22.00
High	5825	7.95	8.26	30.00	-21.74

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5745	-6.21	-5.90	17.00	-22.90
Mid	5785	-5.56	-5.25	17.00	-22.25
High	5825	-5.61	-5.30	17.00	-22.30

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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	21.750	17.680	0.47
Mid	5785	22.350	17.680	0.47
High	5825	22.200	17.620	0.47

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	35.47	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	35.46	30.00	17.00	17.00	17.00

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

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	7.49	7.82	30.00	-22.18
Mid	5785	8.21	8.54	30.00	-21.46
High	5825	8.01	8.34	30.00	-21.66

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5745	-6.62	-6.29	17.00	-23.29
Mid	5785	-5.86	-5.53	17.00	-22.53
High	5825	-5.97	-5.64	17.00	-22.64

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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	44.5	36.1	0.47
High	5795	44.0	35.9	0.47

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)	0.68	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	7.77	8.45	30.00	-21.55
High	5795	7.42	8.10	30.00	-21.90

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5755	-9.17	-8.49	17.00	-25.49
High	5795	-9.38	-8.70	17.00	-25.70

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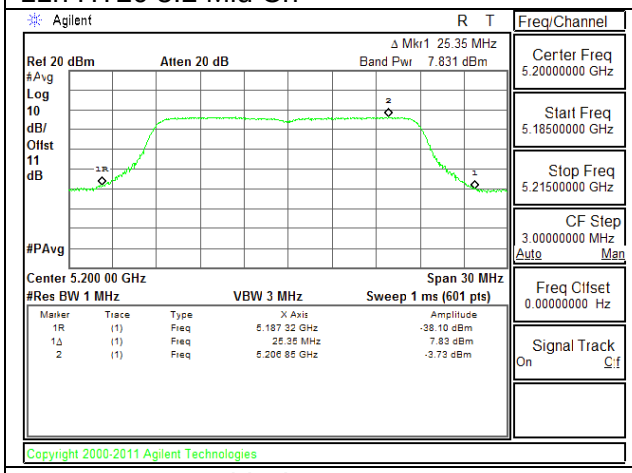
10.5.1. OUTPUT POWER AND PPSD PLOTS, Chain 0

11n HT20 5.2 Mid Ch



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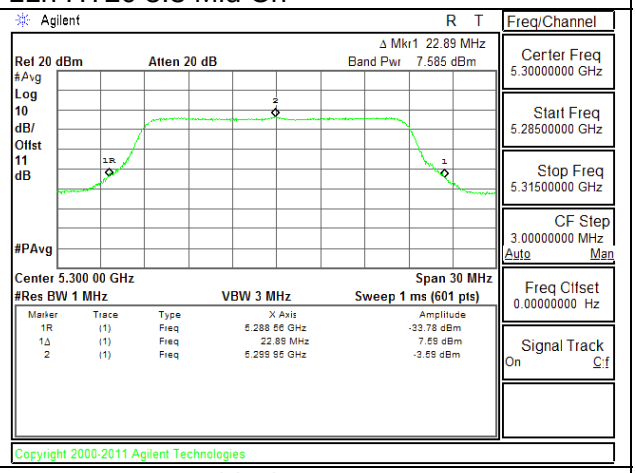
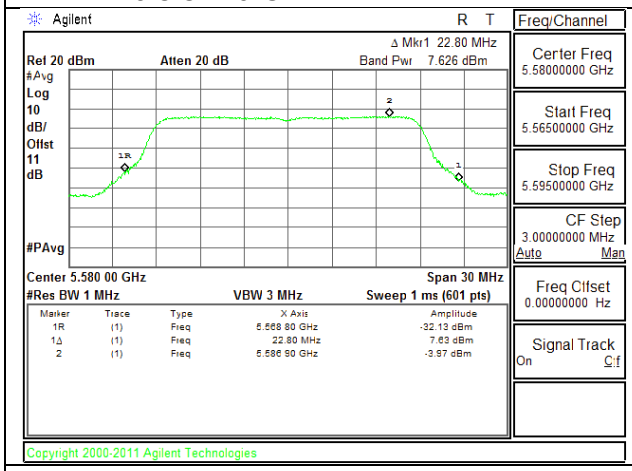
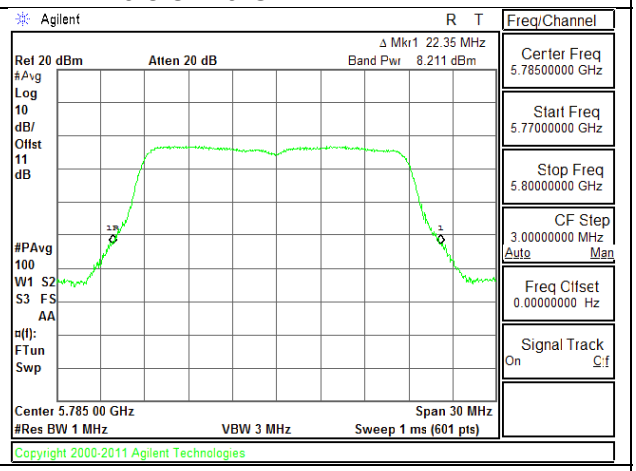


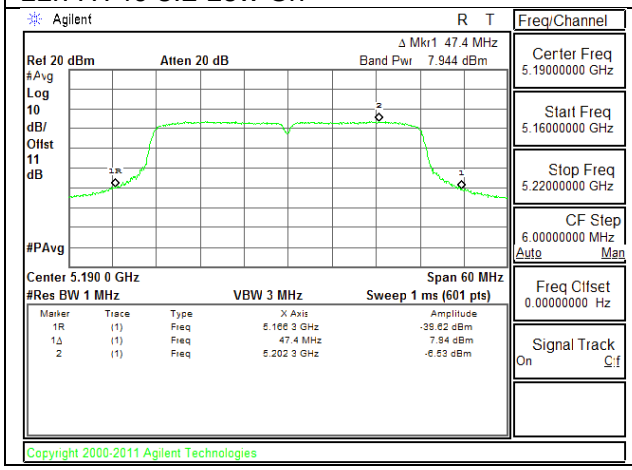
11n HT20 5.5 Mid Ch



11n HT20 5.8 Mid Ch



11n HT40 5.2 Low Ch



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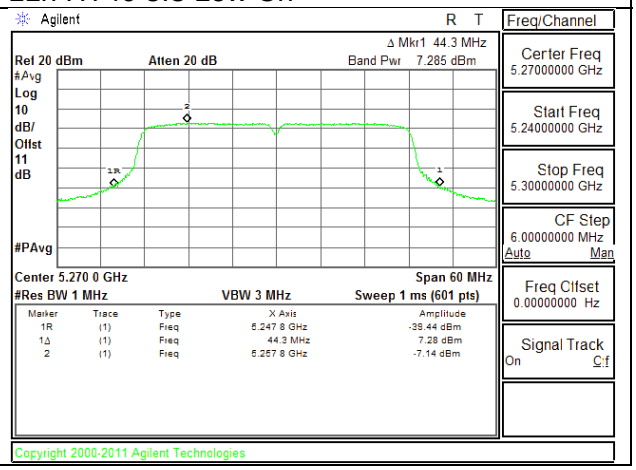

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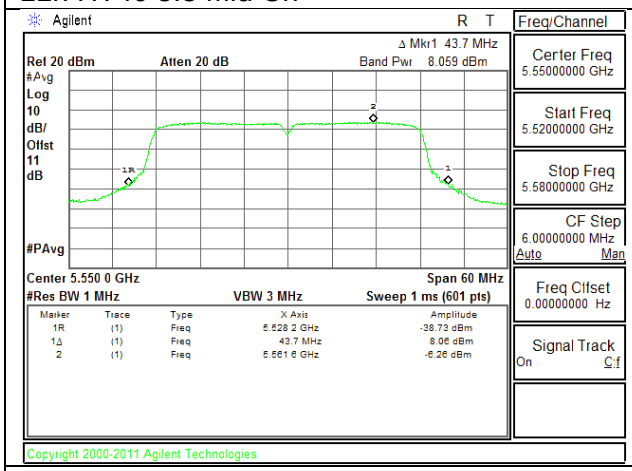
11n HT40 5.5 Mid Ch



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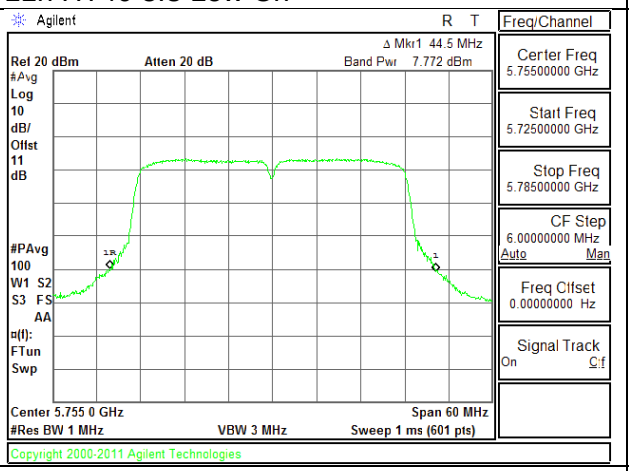
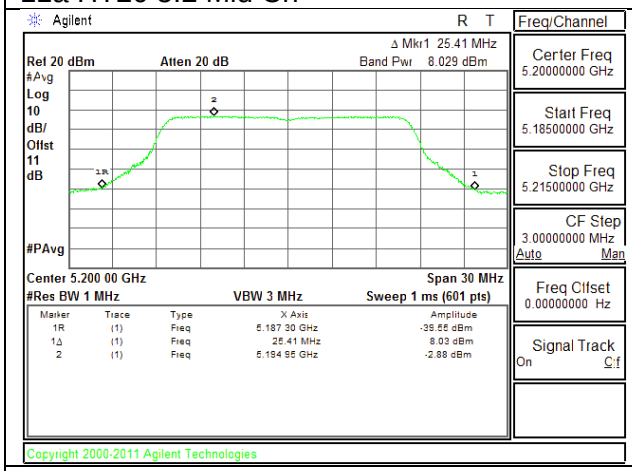


11a HT20 5.2 Mid Ch



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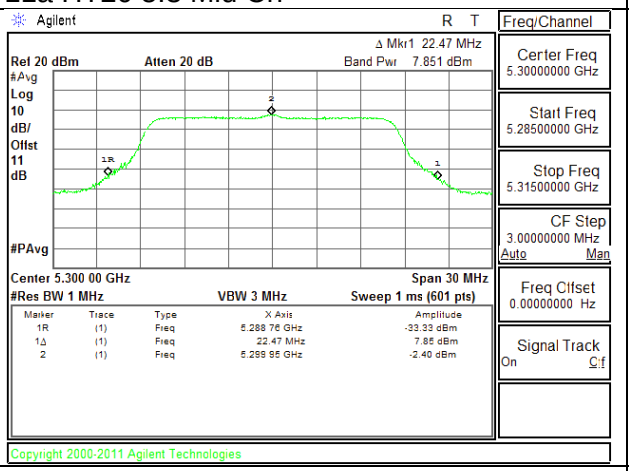

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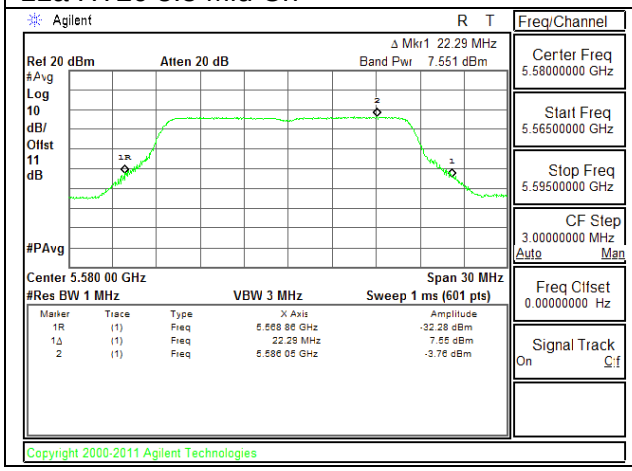

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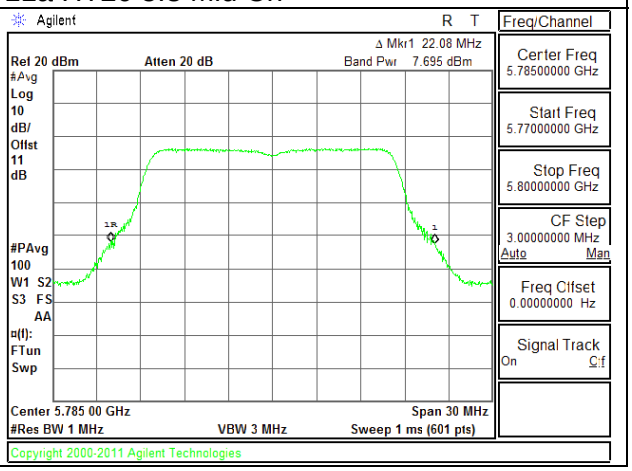

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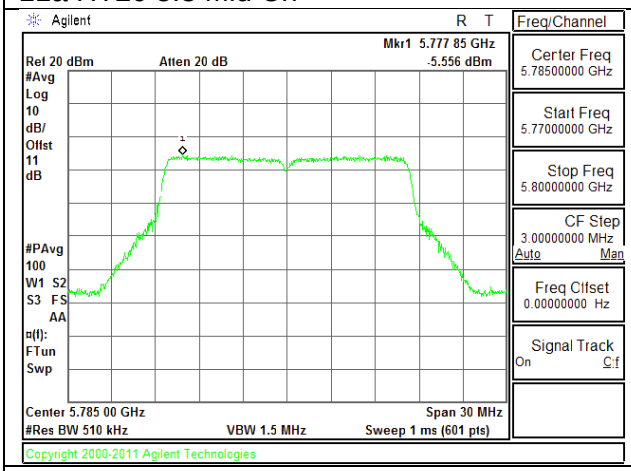
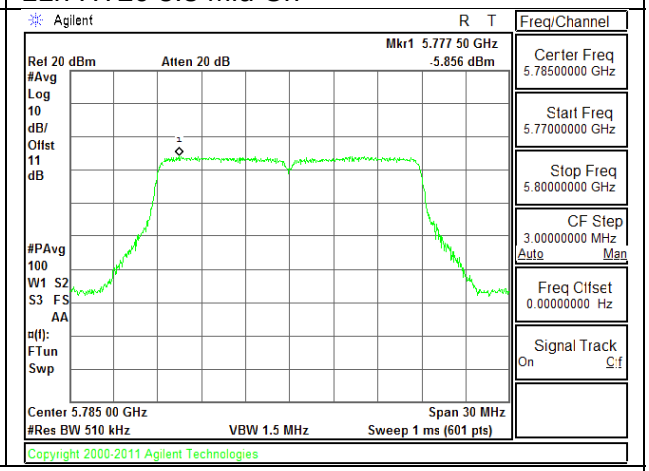
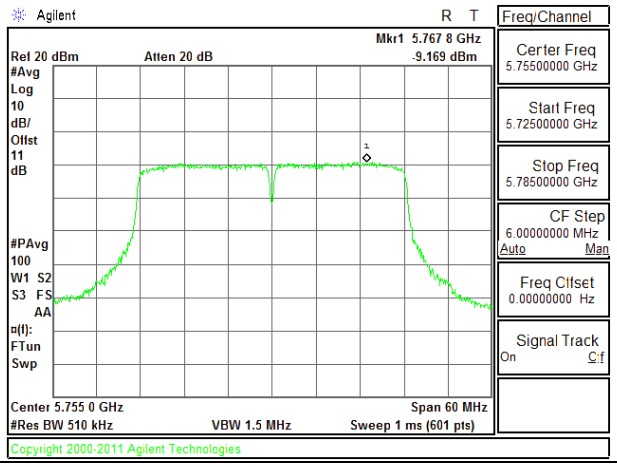
11a HT20 5.8 Mid Ch



11n HT20 5.8 Mid Ch



11n HT40 5.8 Low Ch



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11. TRANSMITTER ABOVE 1 GHz

LIMITS

FCC §15.205 and §15.209

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

TEST PROCEDURE

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

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

Reference to KDB 789033 UNII part H) 6) d) Method VB:
For measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements and add duty cycle factor to the reading offset for average measurements.

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

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

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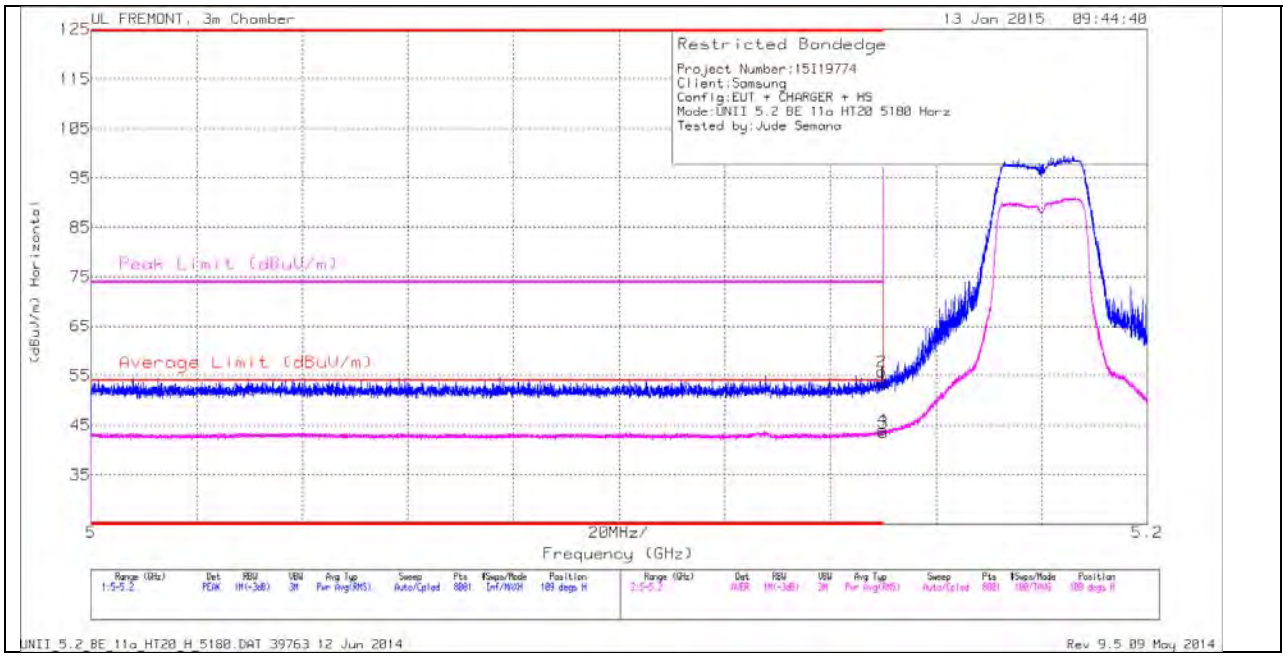
11.1. 5.2 GHz

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

RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	40.78	PK	34.2	-21.6	0	53.38	-	-	74	-20.62	109	327	H
2	* 5.15	43.11	PK	34.2	-21.6	0	55.71	-	-	74	-18.29	109	327	H
3	* 5.15	30.58	RMS	34.2	-21.6	.3	43.48	54	-10.52	-	-	109	327	H
4	* 5.15	31.12	RMS	34.2	-21.6	.3	44.02	54	-9.98	-	-	109	327	H

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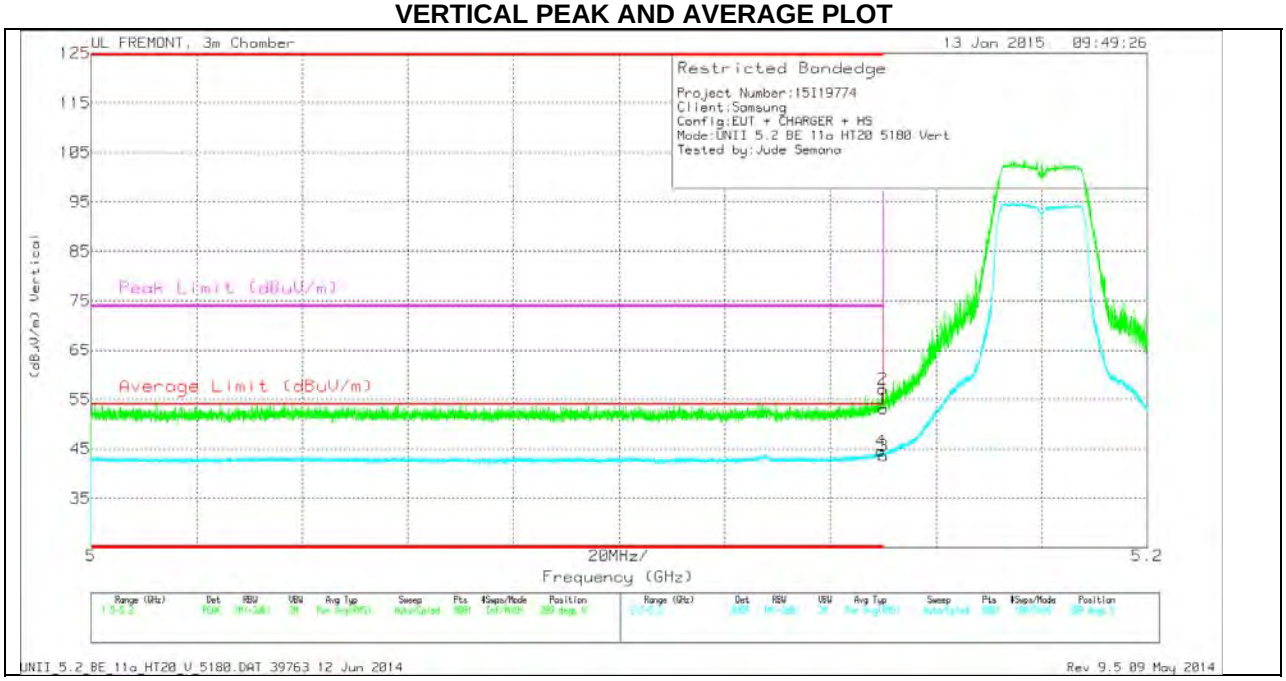
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	40.51	PK	34.2	-21.6	0	53.11	-	-	74	-20.89	209	330	V
2	* 5.15	44.46	PK	34.2	-21.6	0	57.06	-	-	74	-16.94	209	330	V
3	* 5.15	30.72	RMS	34.2	-21.6	.3	43.62	54	-10.38	-	-	209	330	V
4	* 5.15	31.67	RMS	34.2	-21.6	.3	44.57	54	-9.43	-	-	209	330	V

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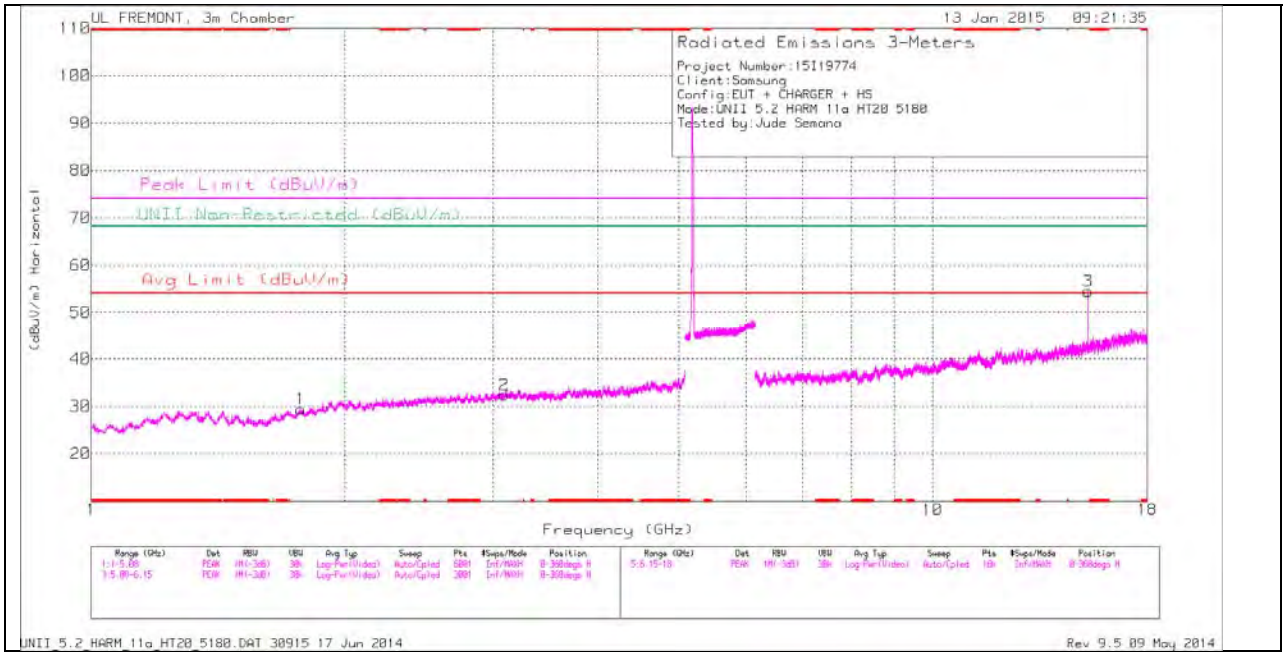
HARMONICS AND SPURIOUS EMISSIONS

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.

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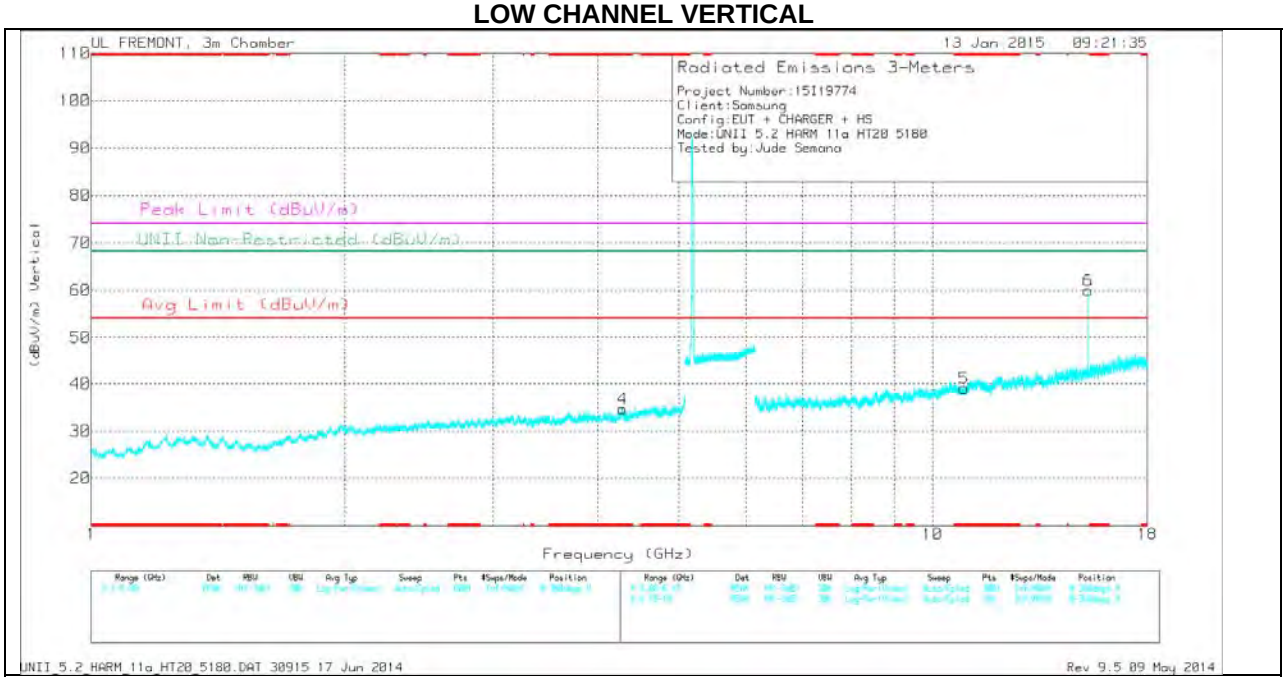
LOW CHANNEL VERTICAL



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

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LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 4.281	31.57	PK	33.6	-30.4	0	34.77	-	-	74	-39.23	-	-	0-360	200	V
5	* 10.899	26.68	PK	37.9	-25.5	0	39.08	-	-	74	-34.92	-	-	0-360	100	V
1	1.774	31.95	PK	29.9	-32.4	0	29.45	-	-	-	-	68.2	-38.75	0-360	100	H
2	3.095	31.41	PK	33.1	-32.1	0	32.41	-	-	-	-	68.2	-35.79	0-360	200	H
6	15.296	47.11	PK	40	-27.2	0	59.91	-	-	-	-	68.2	-8.29	0-360	100	V
3	15.297	41.71	PK	40	-27.2	0	54.51	-	-	-	-	68.2	-13.69	0-360	200	H

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

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
15.296	45.95	PK1	40	-27.2	0	58.75	-	-	-	-	68.2	-9.45	106	233	H
15.296	41.97	AD1	40	-27.2	.3	55.07	-	-	-	-	-	-	106	233	H
15.296	49.71	PK1	40	-27.2	0	62.51	-	-	-	-	68.2	-5.69	223	328	V
15.296	47.29	AD1	40	-27.2	.3	60.39	-	-	-	-	-	-	223	328	V
15.3	27.67	AD1	40	-27.2	.3	40.77	-	-	-	-	-	-	161	399	V
15.301	38.83	PK1	40	-27.2	0	51.63	-	-	-	-	68.2	-16.57	161	399	V

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

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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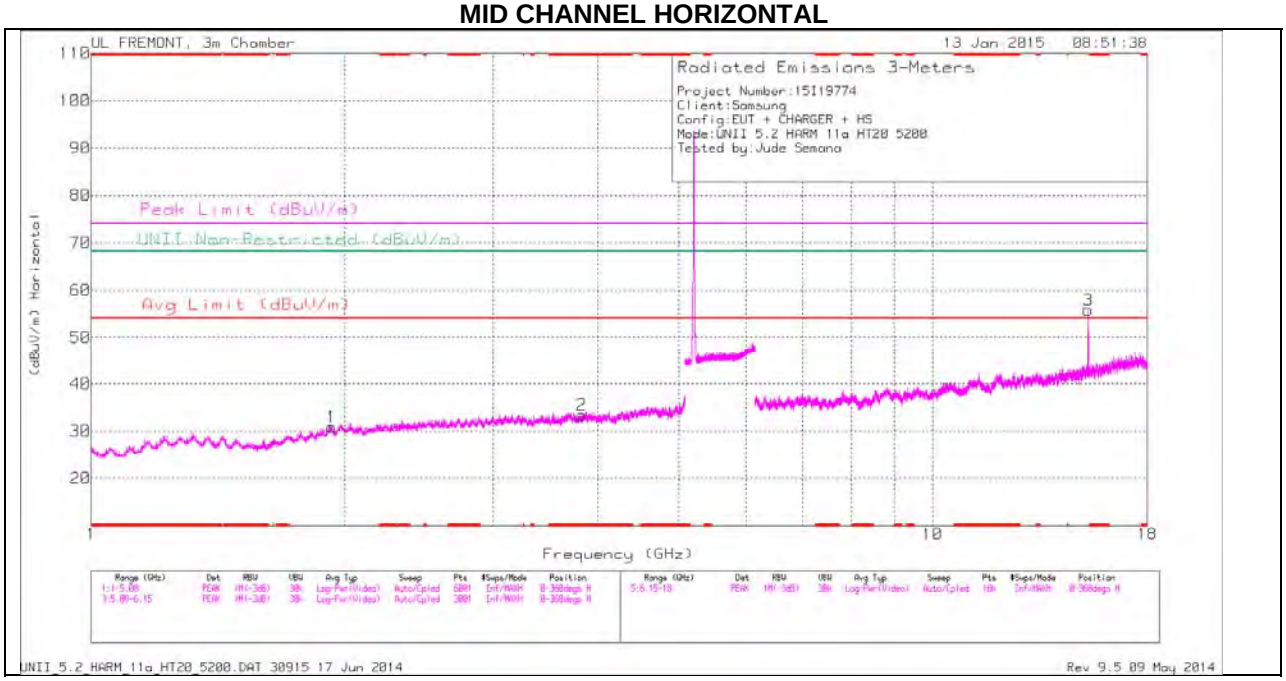
MID CHANNEL HORIZONTAL



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

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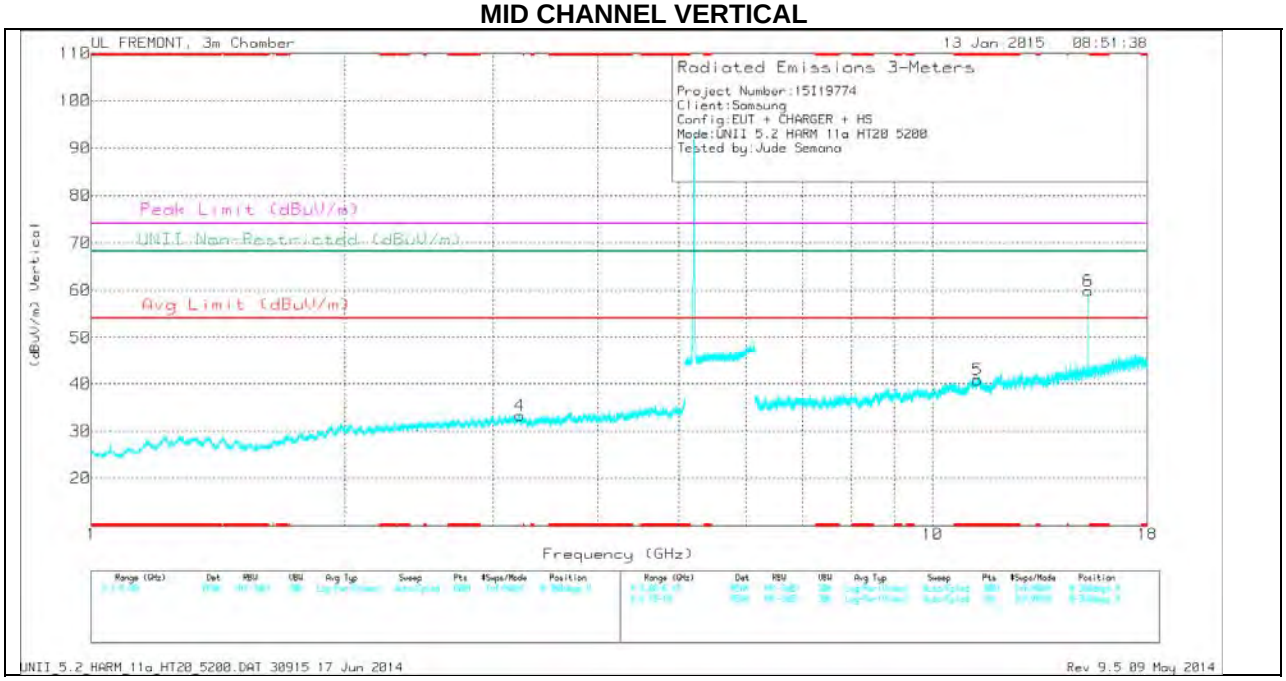
MID CHANNEL VERTICAL



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

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MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 3.83	31.38	PK	33.2	-31.2	0	33.38	-	-	74	-40.62	-	-	0-360	100	H
5	* 11.299	28.56	PK	38	-25.7	0	40.86	-	-	74	-33.14	-	-	0-360	200	V
1	1.93	31.85	PK	31.4	-32.4	0	30.85	-	-	-	-	68.2	-37.35	0-360	100	H
4	3.231	31.82	PK	32.9	-31.4	0	33.32	-	-	-	-	68.2	-34.88	0-360	200	V
6	15.302	46.94	PK	40	-27.1	0	59.84	-	-	-	-	68.2	-8.36	0-360	100	V
3	15.304	42.88	PK	40	-27.1	0	55.78	-	-	-	-	68.2	-12.42	0-360	200	H

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

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fl tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.301	37.26	PK1	38	-25.7	0	49.56	-	-	74	-24.44	-	-	76	304	V
* 11.301	25.14	AD1	38	-25.7	.3	37.74	54	-16.26	-	-	-	-	76	304	V
15.3	27.67	AD1	40	-27.2	.3	40.77	-	-	-	-	-	-	161	399	V
15.301	38.83	PK1	40	-27.2	0	51.63	-	-	-	-	68.2	-16.57	161	399	V
15.303	38.44	PK1	40	-27.1	0	51.34	-	-	-	-	68.2	-16.86	196	358	H
15.305	26.63	AD1	40	-27	.3	39.93	-	-	-	-	-	-	196	358	H

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

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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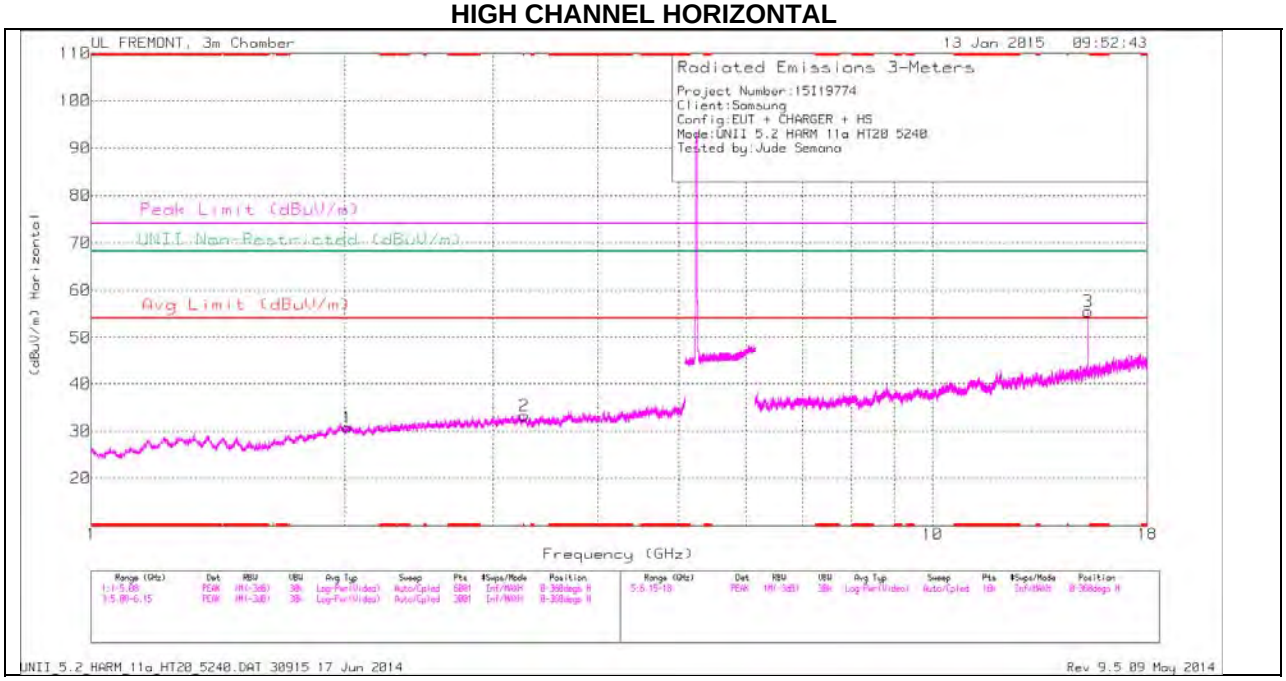
HIGH CHANNEL HORIZONTAL



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

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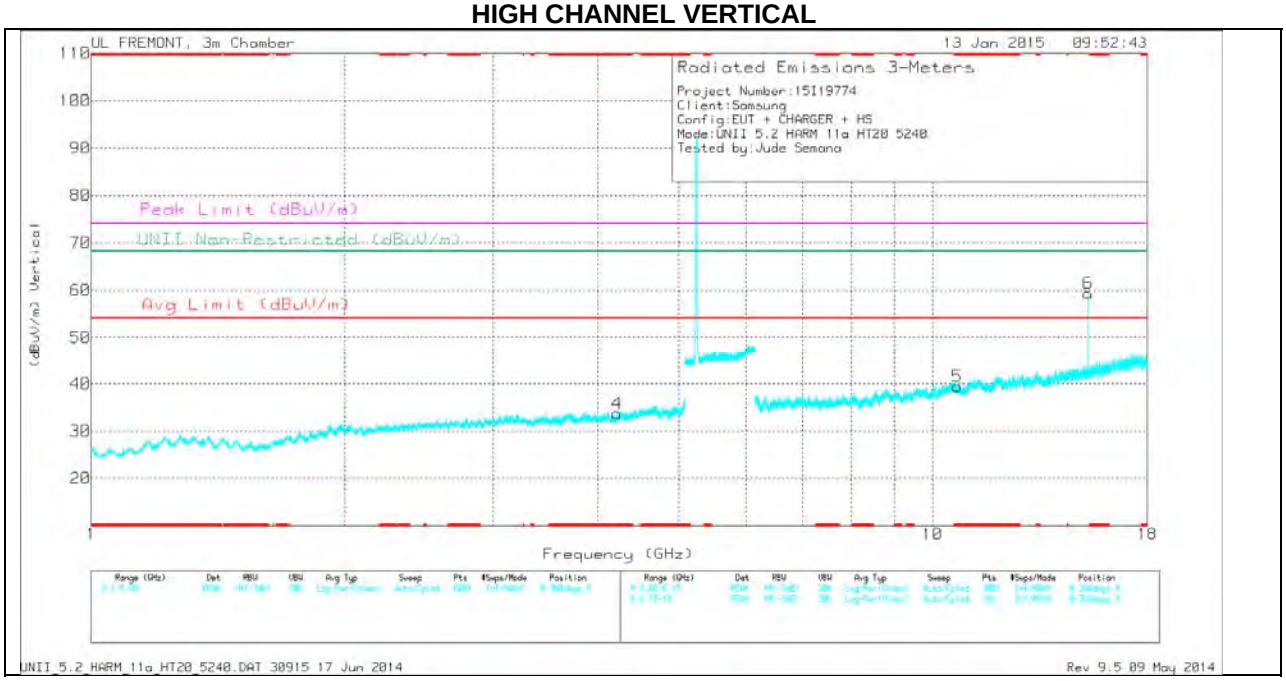
HIGH CHANNEL VERTICAL



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

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HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 4.218	31.66	PK	33.5	-31.4	0	33.76	-	-	74	-40.24	-	-	0-360	200	V
5	* 10.707	27.45	PK	37.9	-25.9	0	39.45	-	-	74	-34.55	-	-	0-360	200	V
1	2.017	31.25	PK	31.6	-32.1	0	30.75	-	-	-	-	68.2	-37.45	0-360	200	H
2	3.27	32.3	PK	32.9	-31.9	0	33.3	-	-	-	-	68.2	-34.9	0-360	100	H
3	15.297	42.69	PK	40	-27.2	0	55.49	-	-	-	-	68.2	-12.71	0-360	200	H
6	15.297	46.54	PK	40	-27.2	0	59.34	-	-	-	-	68.2	-8.86	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 T119 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
15.297	47.77	PK1	40	-27.2	0	60.57	-	-	-	-	68.2	-7.63	105	163	H
15.297	44.3	AD1	40	-27.2	.3	57.4	-	-	-	-	-	-	105	163	H
15.297	49.38	PK1	40	-27.2	0	62.18	-	-	-	-	68.2	-6.02	224	100	V
15.297	46.55	AD1	40	-27.2	.3	59.65	-	-	-	-	-	-	224	100	V
15.3	27.67	AD1	40	-27.2	.3	40.77	-	-	-	-	-	-	161	399	V
15.301	38.83	PK1	40	-27.2	0	51.63	-	-	-	-	68.2	-16.57	161	399	V

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

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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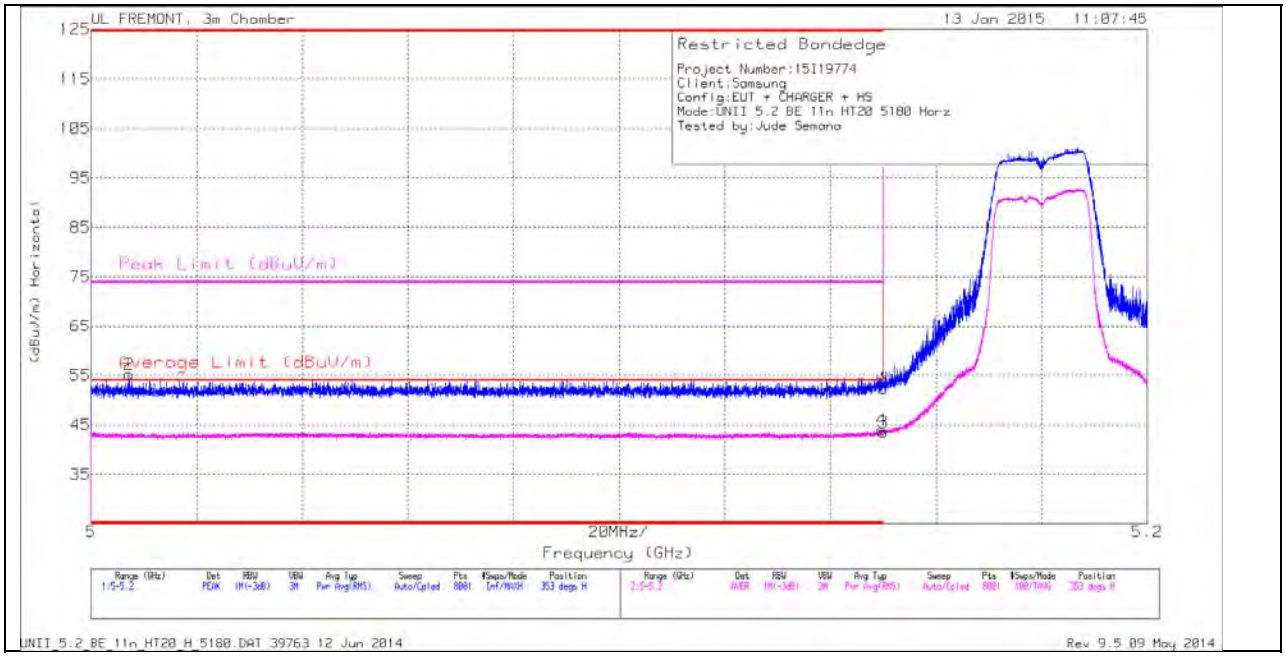
11.1.2. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.2 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	39.76	PK	34.2	-21.6	0	52.36	-	-	74	-21.64	353	333	H
2	* 5.007	42.66	PK	34	-21.5	0	55.16	-	-	74	-18.84	353	333	H
3	* 5.15	30.62	RMS	34.2	-21.6	.3	43.52	54	-10.48	-	-	353	333	H
4	* 5.15	31.04	RMS	34.2	-21.6	.3	43.94	54	-10.06	-	-	353	333	H

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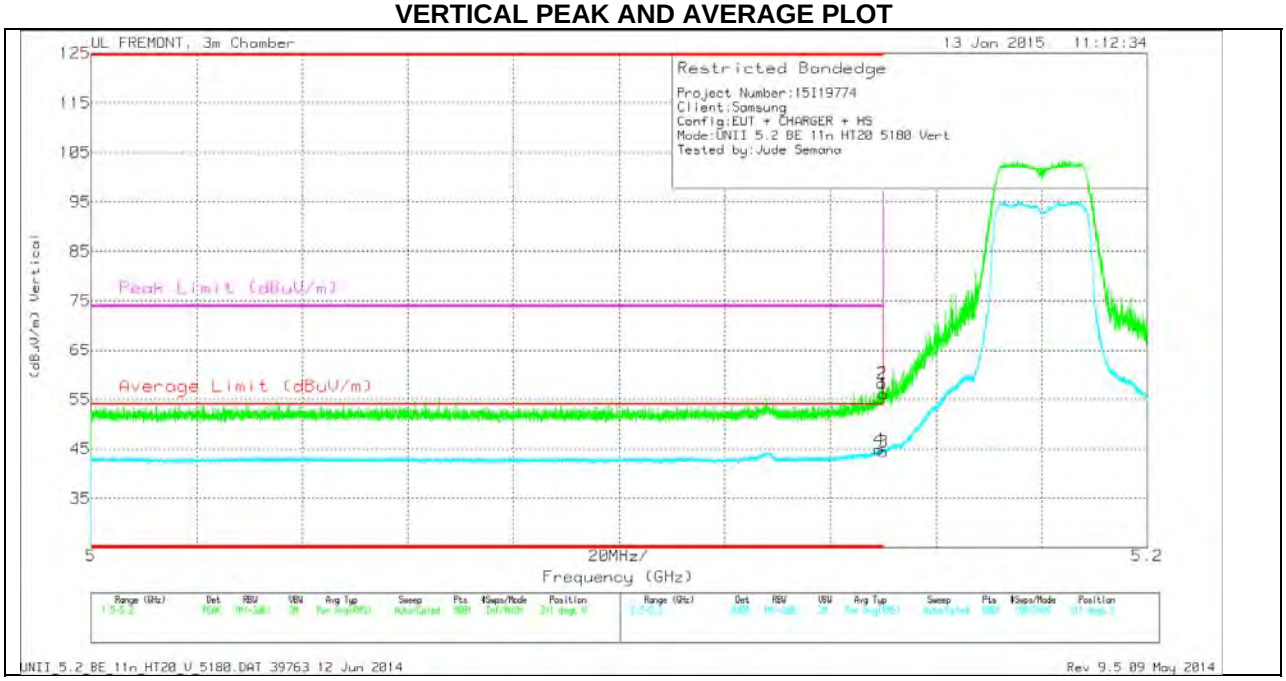
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	43.45	PK	34.2	-21.6	0	56.05	-	-	74	-17.95	211	332	V
2	* 5.15	45.59	PK	34.2	-21.6	0	58.19	-	-	74	-15.81	211	332	V
3	* 5.15	31.5	RMS	34.2	-21.6	.3	44.4	54	-9.6	-	-	211	332	V
4	* 5.149	31.98	RMS	34.2	-21.6	.3	44.88	54	-9.12	-	-	211	332	V

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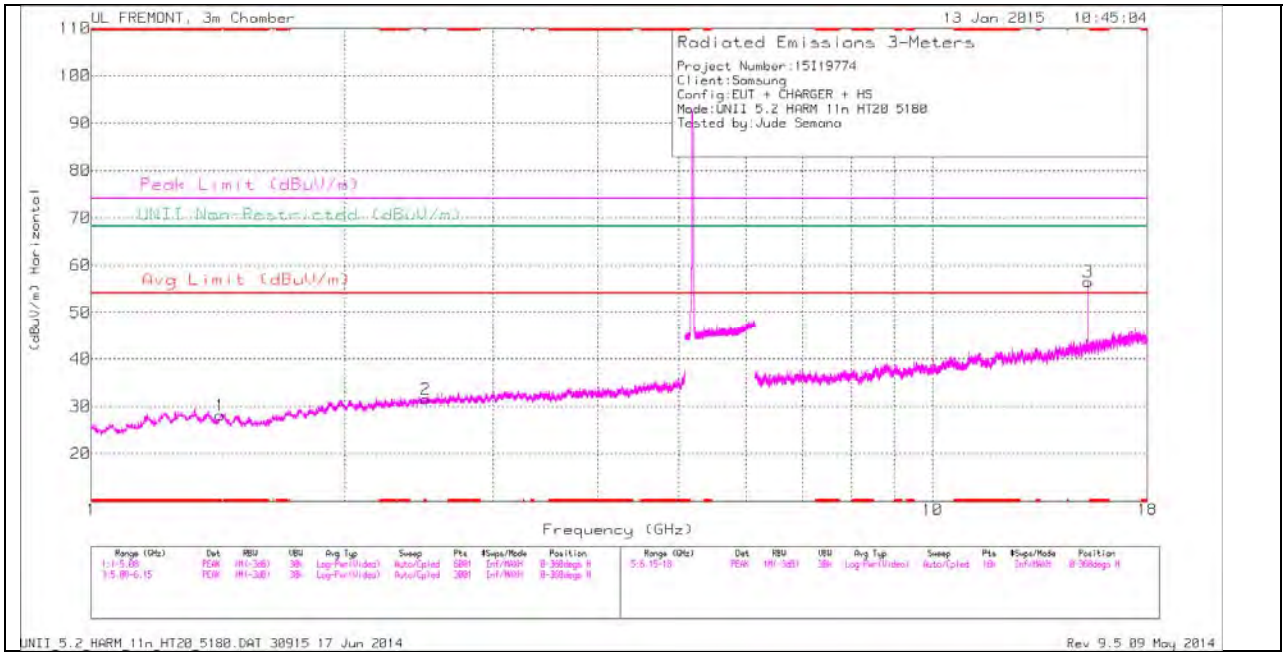
HARMONICS AND SPURIOUS EMISSIONS

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.

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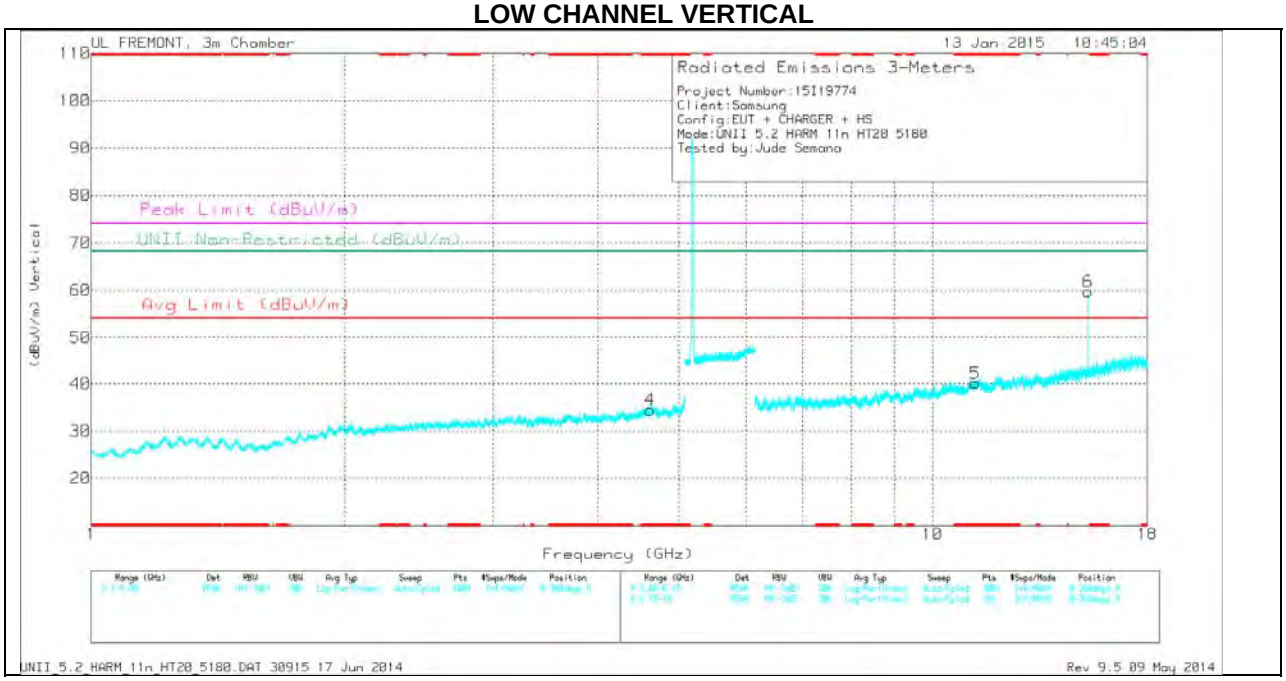
LOW CHANNEL VERTICAL



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

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LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.424	31.86	PK	29	-32.7	0	28.16	-	-	74	-45.84	-	-	0-360	200	H
2	* 2.499	31.14	PK	32.3	-31.9	0	31.54	-	-	74	-42.46	-	-	0-360	200	H
4	* 4.616	30.89	PK	34	-30.4	0	34.49	-	-	74	-39.51	-	-	0-360	200	V
5	* 11.232	27.94	PK	37.9	-25.7	0	40.14	-	-	74	-33.86	-	-	0-360	100	V
3	15.298	43.7	PK	40	-27.2	0	56.5	-	-	-	-	68.2	-11.7	0-360	200	H
6	15.298	46.9	PK	40	-27.2	0	59.7	-	-	-	-	68.2	-8.5	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 T119 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
15.298	47.96	PK1	40	-27.2	0	60.76	-	-	-	-	68.2	-7.44	109	218	H
15.298	45.09	AD1	40	-27.2	.3	58.19	-	-	-	-	-	-	109	218	H
15.298	49.08	PK1	40	-27.2	0	61.88	-	-	-	-	68.2	-6.32	224	306	V
15.298	46.56	AD1	40	-27.2	.3	59.66	-	-	-	-	-	-	224	306	V
15.3	27.67	AD1	40	-27.2	.3	40.77	-	-	-	-	-	-	161	399	V
15.301	38.83	PK1	40	-27.2	0	51.63	-	-	-	-	68.2	-16.57	161	399	V

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

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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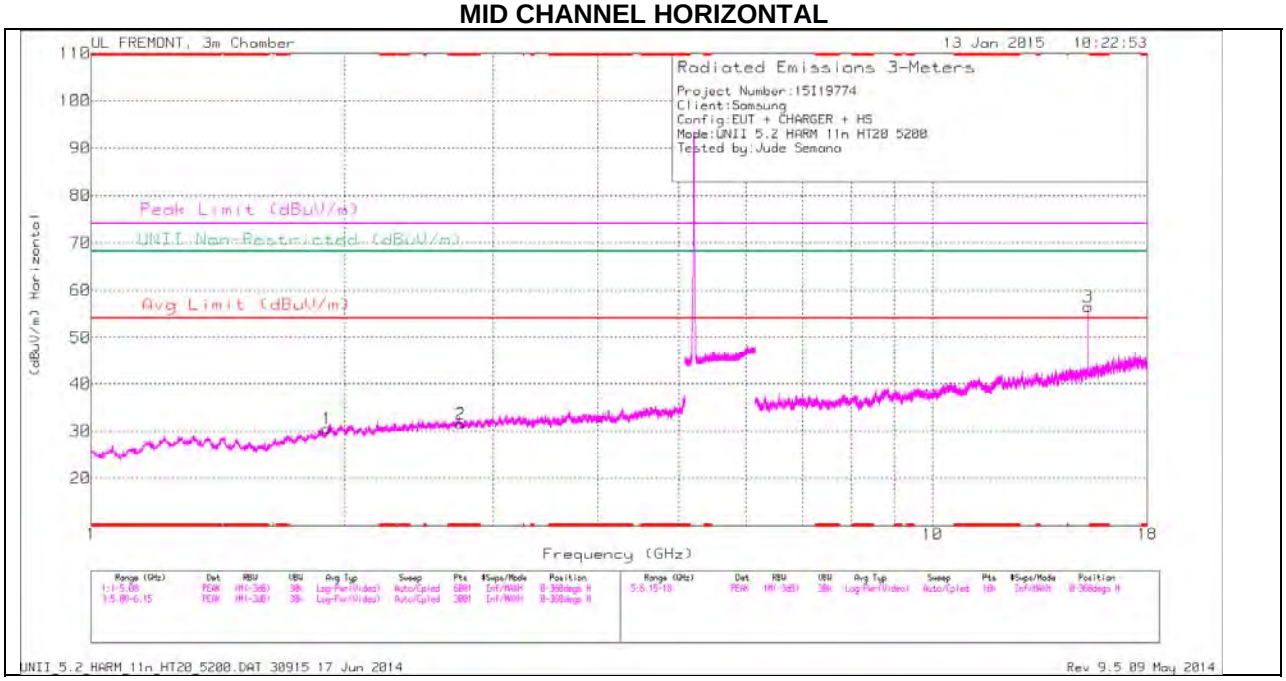
MID CHANNEL HORIZONTAL



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

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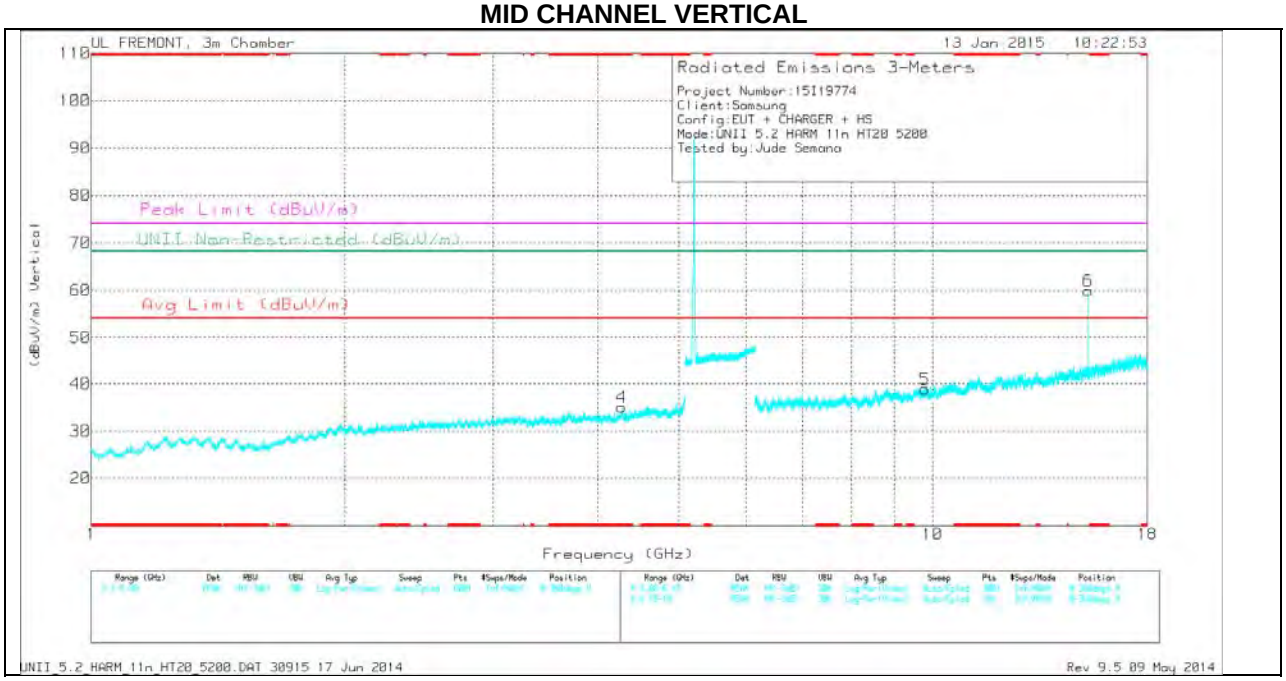
MID CHANNEL VERTICAL



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

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MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 2.749	31.15	PK	32.7	-32.3	0	31.55	-	-	74	-42.45	-	-	0-360	100	H
4	* 4.271	31.78	PK	33.6	-30.3	0	35.08	-	-	74	-38.92	-	-	0-360	100	V
1	1.908	31.97	PK	31.3	-32.7	0	30.57	-	-	-	-	68.2	-37.63	0-360	200	H
5	9.791	27.62	PK	36.9	-25.6	0	38.92	-	-	-	-	68.2	-29.28	0-360	100	V
3	15.298	43.76	PK	40	-27.2	0	56.56	-	-	-	-	68.2	-11.64	0-360	200	H
6	15.298	47.06	PK	40	-27.2	0	59.86	-	-	-	-	68.2	-8.34	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 T119 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
15.297	47.5	PK1	40	-27.2	0	60.3	-	-	-	-	68.2	-7.9	108	225	H
15.297	44.46	AD1	40	-27.2	.3	57.56	-	-	-	-	-	-	108	225	H
15.297	48.99	PK1	40	-27.2	0	61.79	-	-	-	-	68.2	-6.41	226	100	V
15.297	46.25	AD1	40	-27.2	.3	59.35	-	-	-	-	-	-	226	100	V
15.3	27.67	AD1	40	-27.2	.3	40.77	-	-	-	-	-	-	161	399	V
15.301	38.83	PK1	40	-27.2	0	51.63	-	-	-	-	68.2	-16.57	161	399	V

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

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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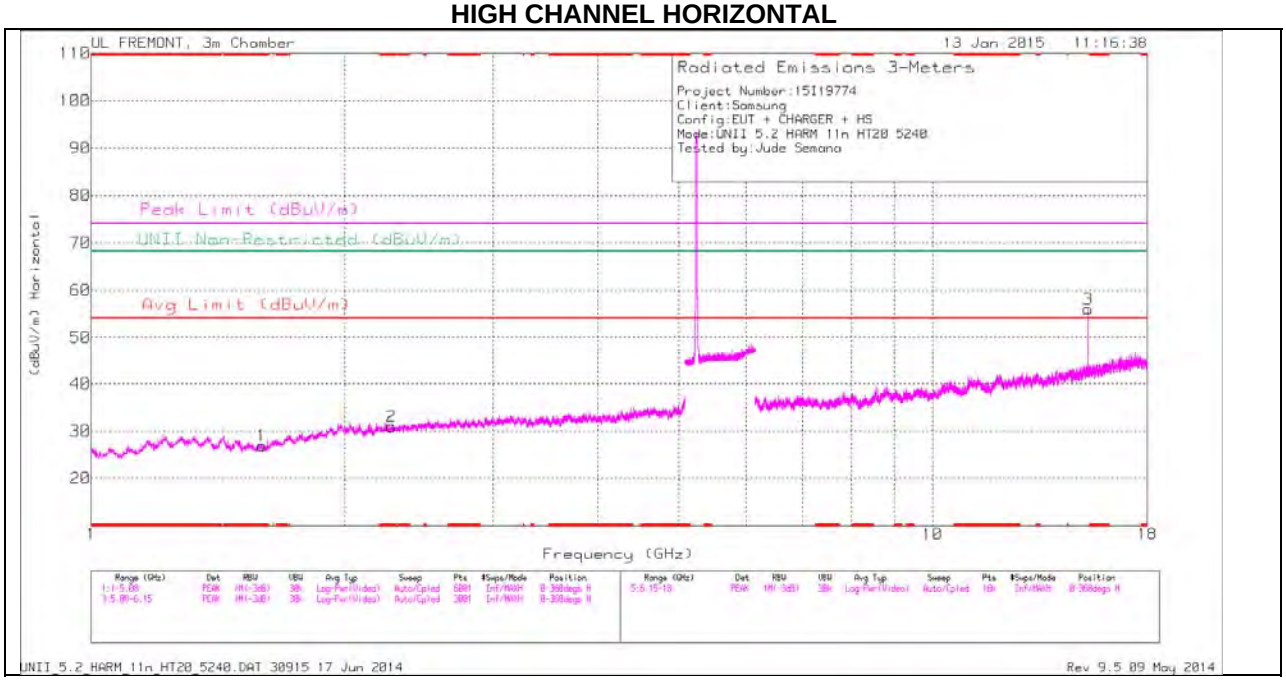
HIGH CHANNEL HORIZONTAL



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

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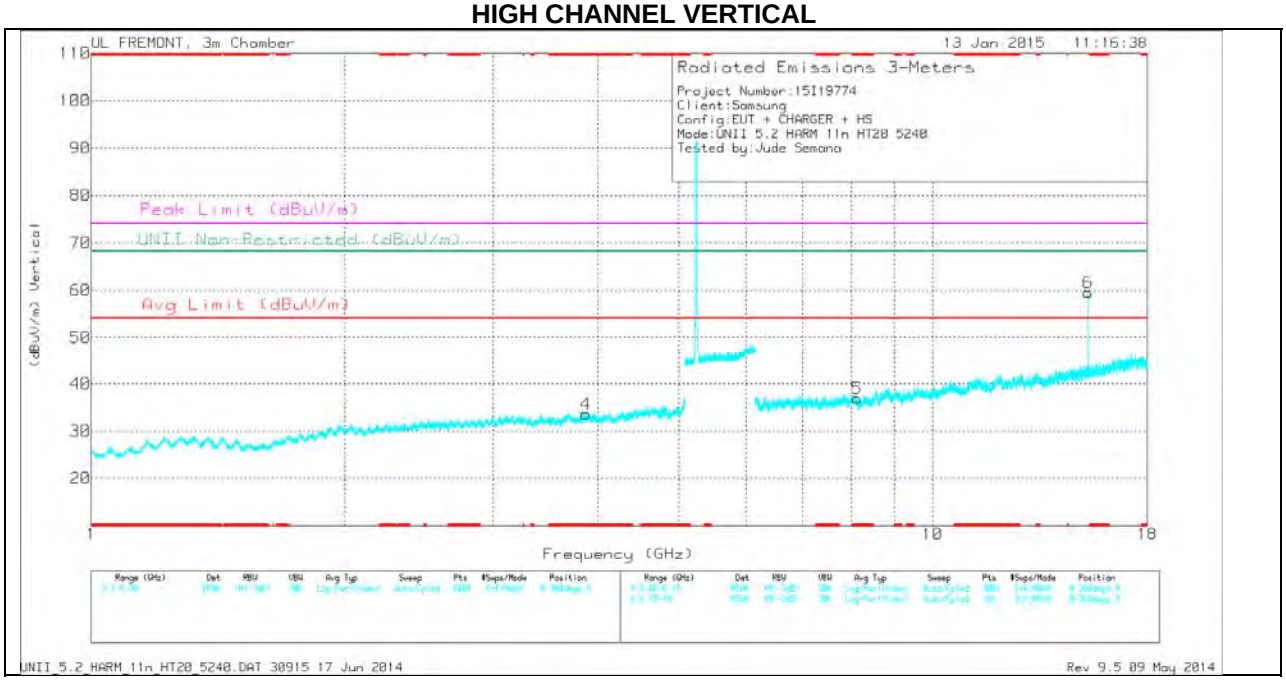
HIGH CHANNEL VERTICAL



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HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.596	32.28	PK	28.1	-33.4	0	26.98	-	-	74	-47.02	-	-	0-360	100	H
2	* 2.274	31.38	PK	31.8	-32.2	0	30.98	-	-	74	-43.02	-	-	0-360	100	H
4	* 3.872	31.53	PK	33.2	-31.1	0	33.63	-	-	74	-40.37	-	-	0-360	100	V
5	* 8.136	29.04	PK	35.7	-27.8	0	36.94	-	-	74	-37.06	-	-	0-360	100	V
3	15.3	43.21	PK	40	-27.2	0	56.01	-	-	-	-	68.2	-12.19	0-360	200	H
6	15.3	46.69	PK	40	-27.2	0	59.49	-	-	-	-	68.2	-8.71	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 T119 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
15.299	47.54	PK1	40	-27.2	0	60.34	-	-	-	-	68.2	-7.86	109	233	H
15.299	44.47	AD1	40	-27.2	.3	57.57	-	-	-	-	-	-	109	233	H
15.299	48.22	PK1	40	-27.2	0	61.02	-	-	-	-	68.2	-7.18	223	315	V
15.299	45.45	AD1	40	-27.2	.3	58.55	-	-	-	-	-	-	223	315	V
15.3	27.67	AD1	40	-27.2	.3	40.77	-	-	-	-	-	-	161	399	V
15.301	38.83	PK1	40	-27.2	0	51.63	-	-	-	-	68.2	-16.57	161	399	V

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

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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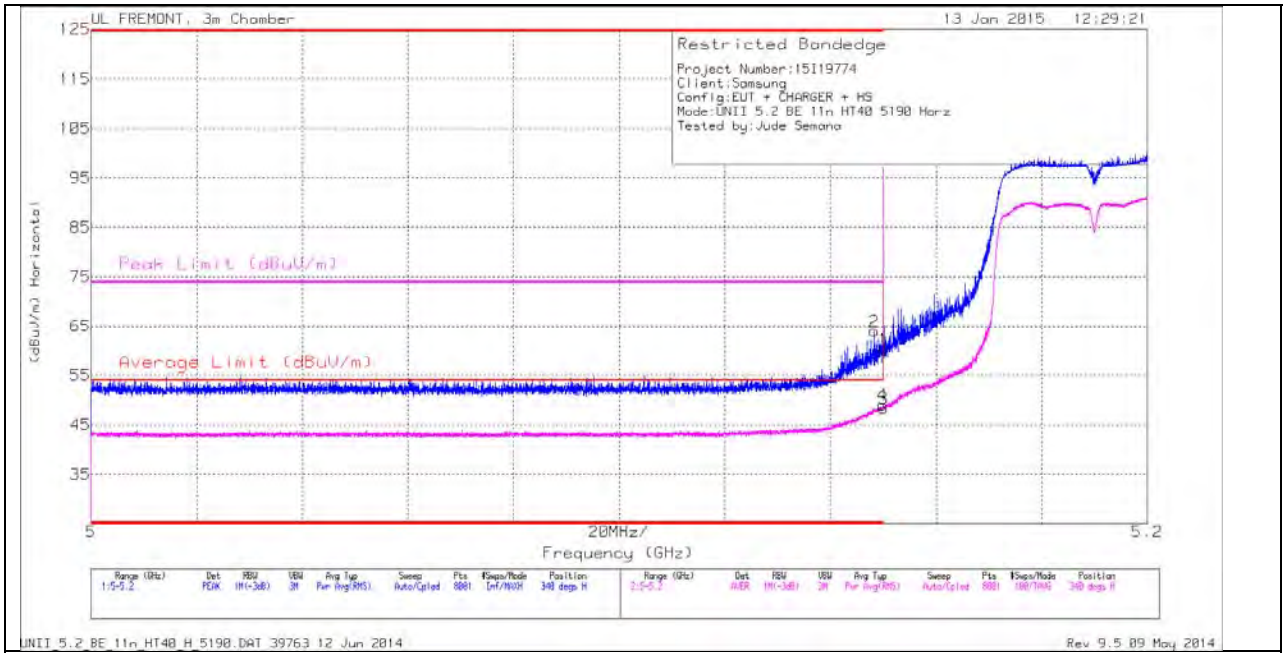
11.1.3. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.2 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	47.6	PK	34.2	-21.6	0	60.2	-	-	74	-13.8	340	280	H
2	* 5.148	51.39	PK	34.2	-21.6	0	63.99	-	-	74	-10.01	340	280	H
3	* 5.15	35.06	RMS	34.2	-21.6	.68	48.26	54	-5.74	-	-	340	280	H
4	* 5.15	35.73	RMS	34.2	-21.6	.68	48.93	54	-5.07	-	-	340	280	H

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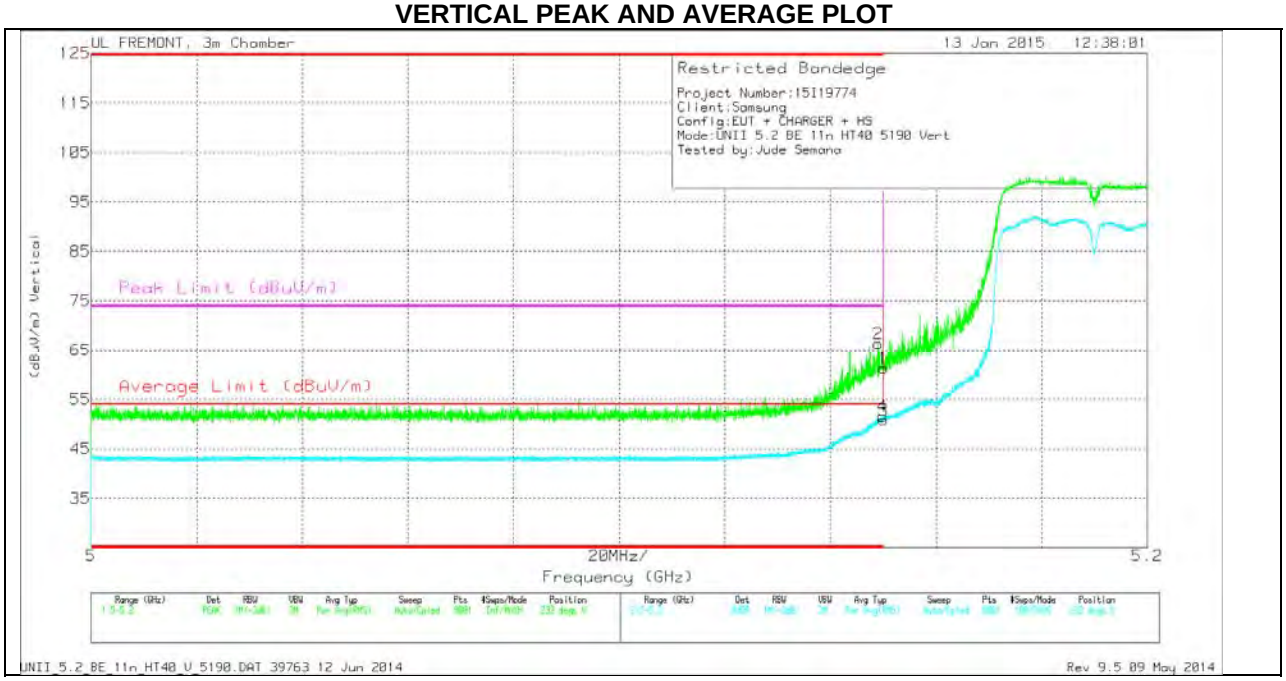
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	48.7	PK	34.2	-21.6	0	61.3	-	-	74	-12.7	232	337	V
2	* 5.149	53.78	PK	34.2	-21.6	0	66.38	-	-	74	-7.62	232	337	V
3	* 5.15	37.57	RMS	34.2	-21.6	.68	50.77	54	-3.23	-	-	232	337	V
4	* 5.15	37.35	RMS	34.2	-21.6	.68	50.55	54	-3.45	-	-	232	337	V

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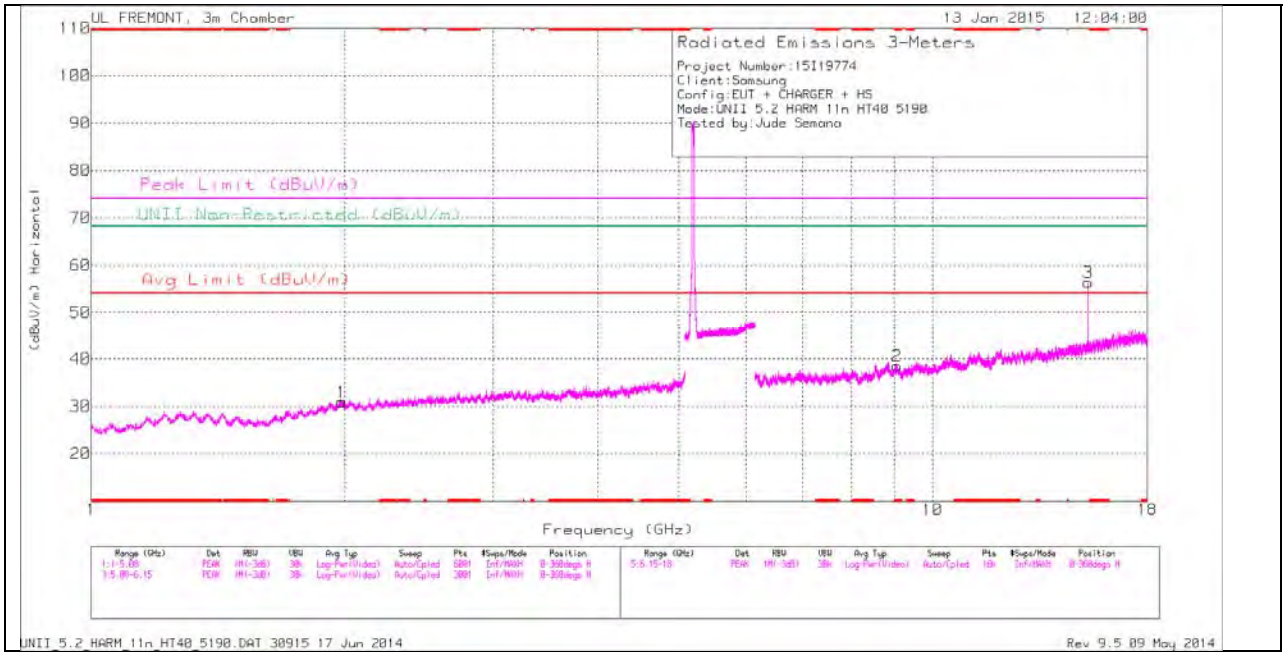
HARMONICS AND SPURIOUS EMISSIONS

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.

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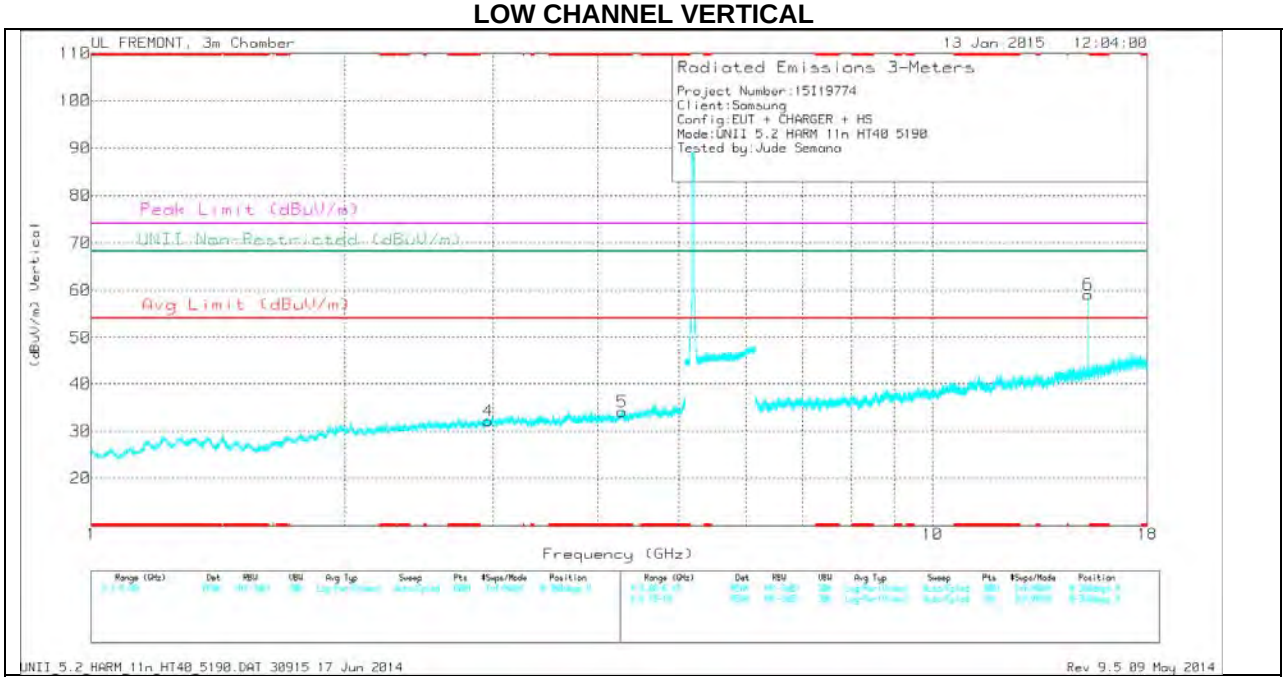
LOW CHANNEL VERTICAL



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

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LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	* 4.278	30.9	PK	33.6	-30.4	0	34.1	-	-	74	-39.9	-	-	0-360	200	V
2	* 9.069	27.9	PK	36.1	-25.5	0	38.5	-	-	74	-35.5	-	-	0-360	100	H
1	1.984	31.46	PK	31.5	-32	0	30.96	-	-	-	-	68.2	-37.24	0-360	200	H
4	2.965	31.33	PK	32.9	-32.1	0	32.13	-	-	-	-	68.2	-36.07	0-360	100	V
3	15.302	43.42	PK	40	-27.1	0	56.32	-	-	-	-	68.2	-11.88	0-360	200	H
6	15.302	46.17	PK	40	-27.1	0	59.07	-	-	-	-	68.2	-9.13	0-360	200	V

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

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
15.302	47.32	PK1	40	-27.1	0	60.22	-	-	-	-	68.2	-7.98	111	259	H
15.302	44.09	AD1	40	-27.1	.68	57.59	-	-	-	-	-	-	111	259	H
15.302	48.3	PK1	40	-27.1	0	61.2	-	-	-	-	68.2	-7	123	225	V
15.302	45.48	AD1	40	-27.2	.68	58.88	-	-	-	-	-	-	123	225	V
15.302	48.85	PK1	40	-27.2	0	61.65	-	-	-	-	68.2	-6.55	223	326	V
15.302	46.13	AD1	40	-27.2	.68	59.53	-	-	-	-	-	-	223	326	V

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

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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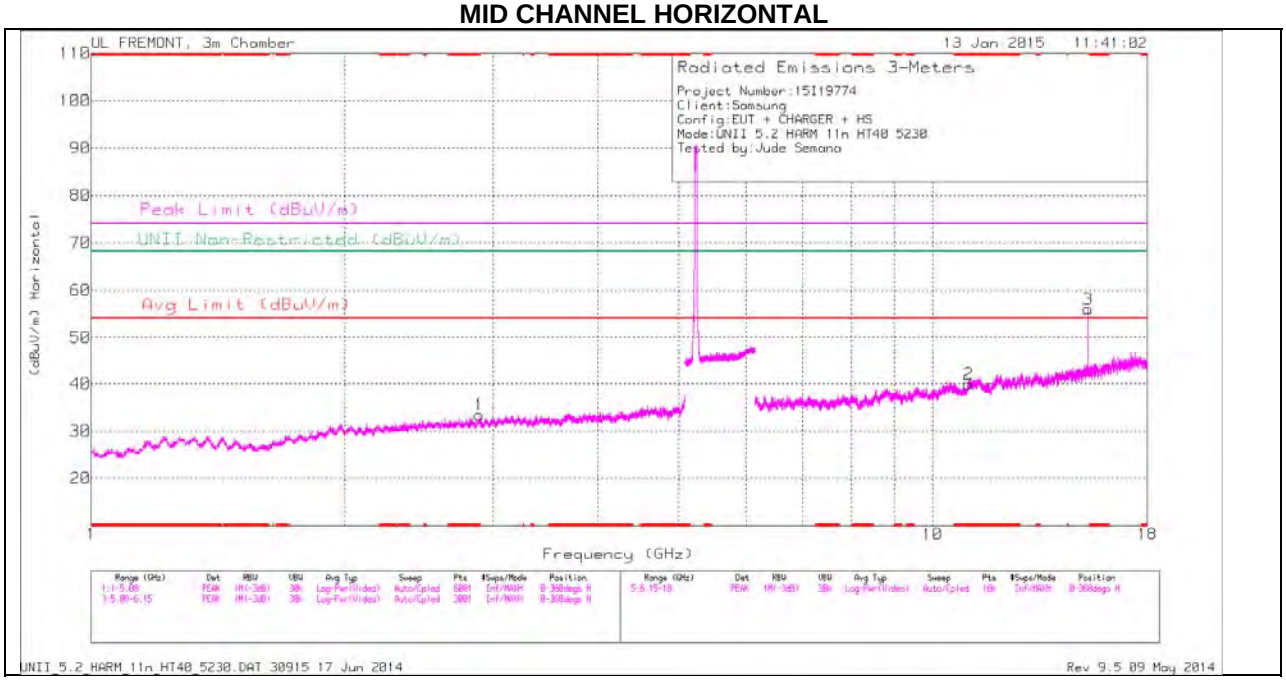
MID CHANNEL HORIZONTAL



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

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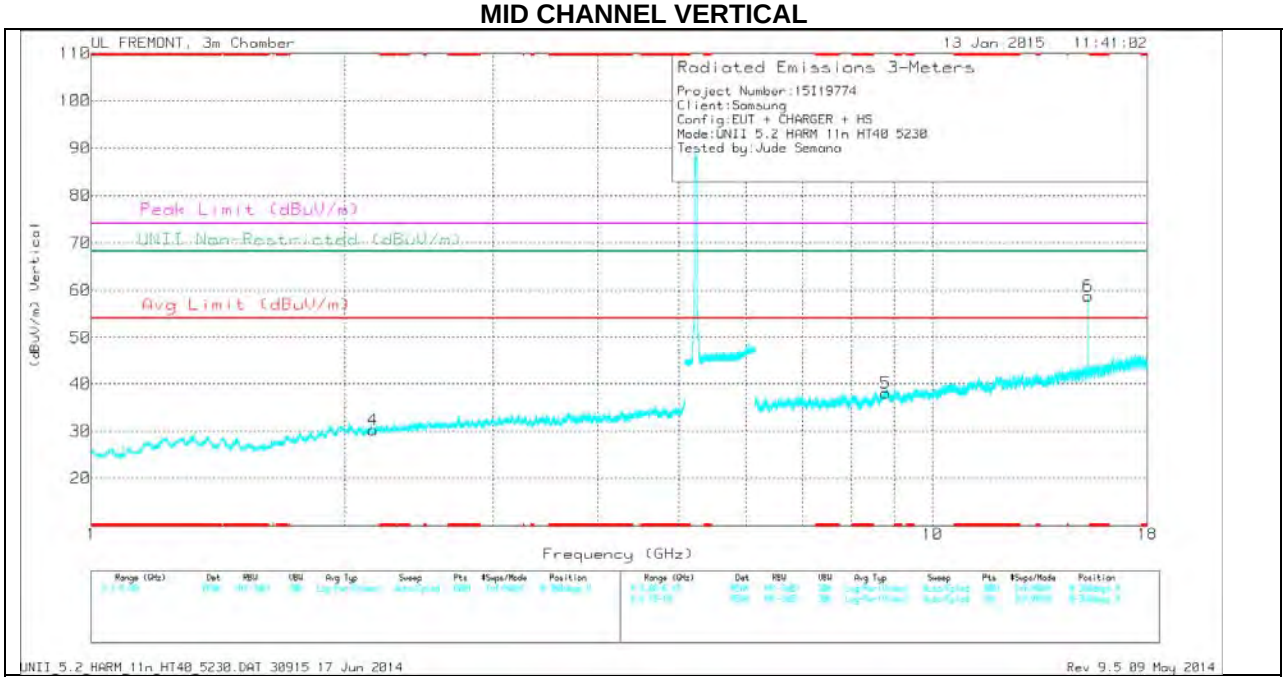
MID CHANNEL VERTICAL



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

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MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.892	33.05	PK	32.7	-32.3	0	33.45	-	-	74	-40.55	-	-	0-360	200	H
2	* 11.025	27.65	PK	37.9	-25.6	0	39.95	-	-	74	-34.05	-	-	0-360	200	H
4	2.163	31.34	PK	31.6	-32.7	0	30.24	-	-	-	-	68.2	-37.96	0-360	100	V
5	8.792	28.07	PK	35.9	-25.9	0	38.07	-	-	-	-	68.2	-30.13	0-360	200	V
3	15.302	43.1	PK	40	-27.1	0	56	-	-	-	-	68.2	-12.2	0-360	200	H
6	15.302	45.85	PK	40	-27.1	0	58.75	-	-	-	-	68.2	-9.45	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 T119 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
15.302	47.65	PK1	40	-27.2	0	60.45	-	-	-	-	68.2	-7.75	109	233	H
15.302	44.49	AD1	40	-27.2	.68	57.89	-	-	-	-	-	-	109	233	H
15.302	48.66	PK1	40	-27.2	0	61.46	-	-	-	-	68.2	-6.74	223	326	V
15.302	46.19	AD1	40	-27.2	.68	59.59	-	-	-	-	-	-	223	326	V
15.302	48.85	PK1	40	-27.2	0	61.65	-	-	-	-	68.2	-6.55	223	326	V
15.302	46.13	AD1	40	-27.2	.68	59.53	-	-	-	-	-	-	223	326	V

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

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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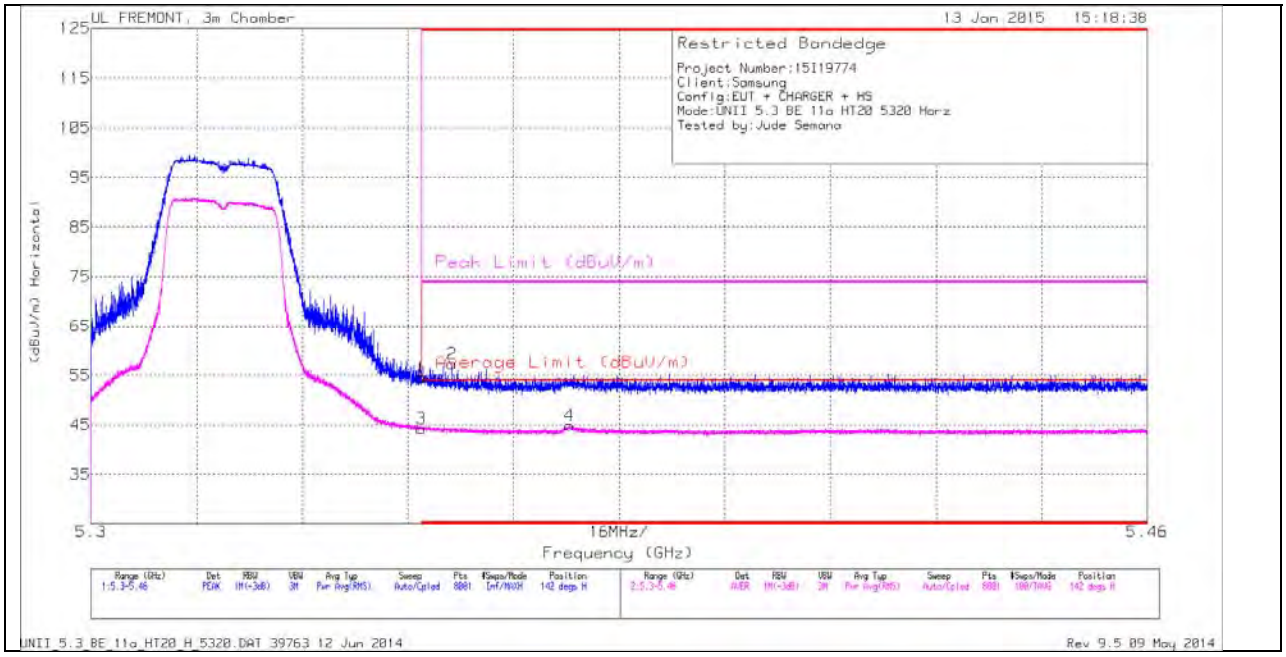
11.2. 5.3 GHz

11.2.1. TX ABOVE 1 GHz 802.11a MODE IN THE 5.3 GHz BAND

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	41.39	PK	34.5	-21.4	0	54.49	-	-	74	-19.51	142	212	H
2	* 5.355	44.27	PK	34.5	-21.5	0	57.27	-	-	74	-16.73	142	212	H
3	* 5.35	30.82	RMS	34.5	-21.4	.3	44.22	54	-9.78	-	-	142	212	H
4	* 5.372	31.46	RMS	34.6	-21.5	.3	44.86	54	-9.14	-	-	142	212	H

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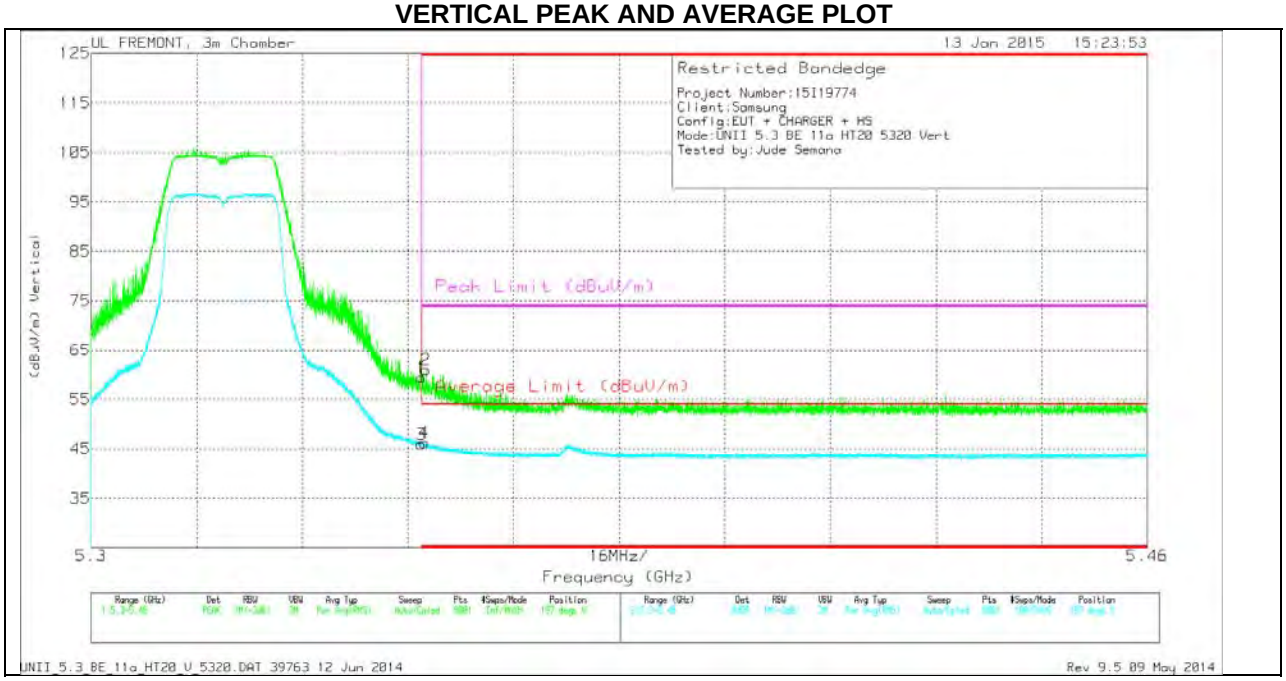
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	46.3	PK	34.5	-21.4	0	59.4	-	-	74	-14.6	197	319	V
2	* 5.351	47.83	PK	34.5	-21.4	0	60.93	-	-	74	-13.07	197	319	V
3	* 5.35	32.56	RMS	34.5	-21.4	.3	45.96	54	-8.04	-	-	197	319	V
4	* 5.35	32.86	RMS	34.5	-21.4	.3	46.26	54	-7.74	-	-	197	319	V

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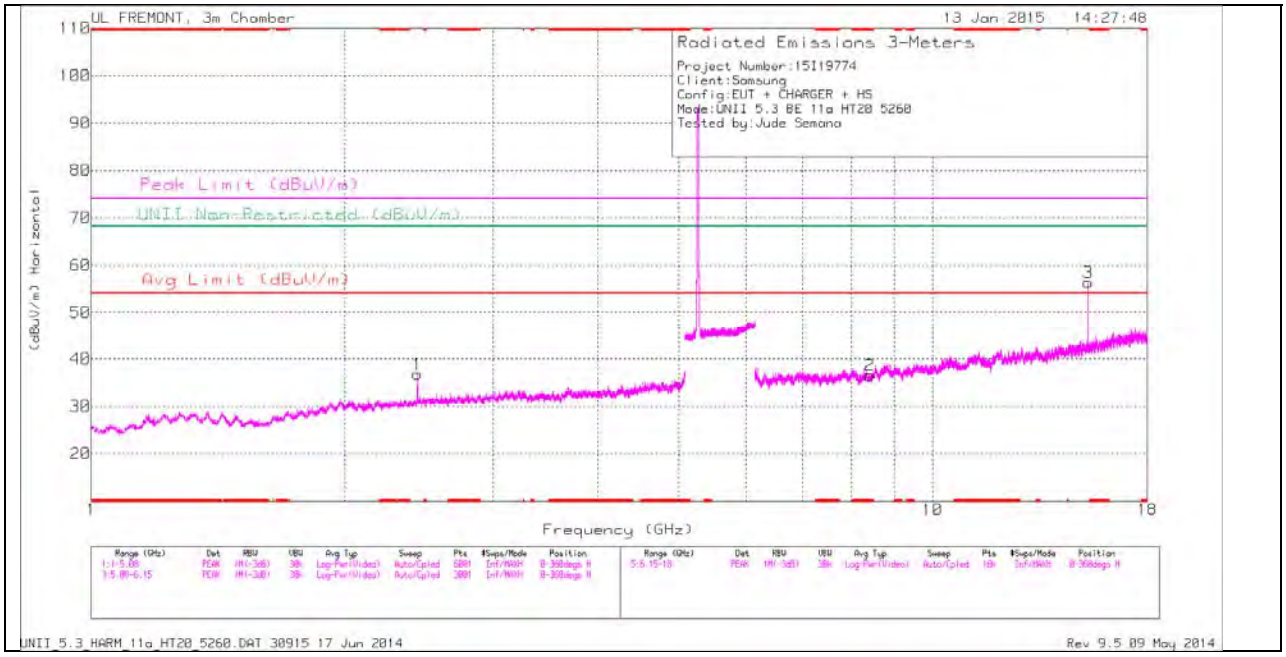
HARMONICS AND SPURIOUS EMISSIONS

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.

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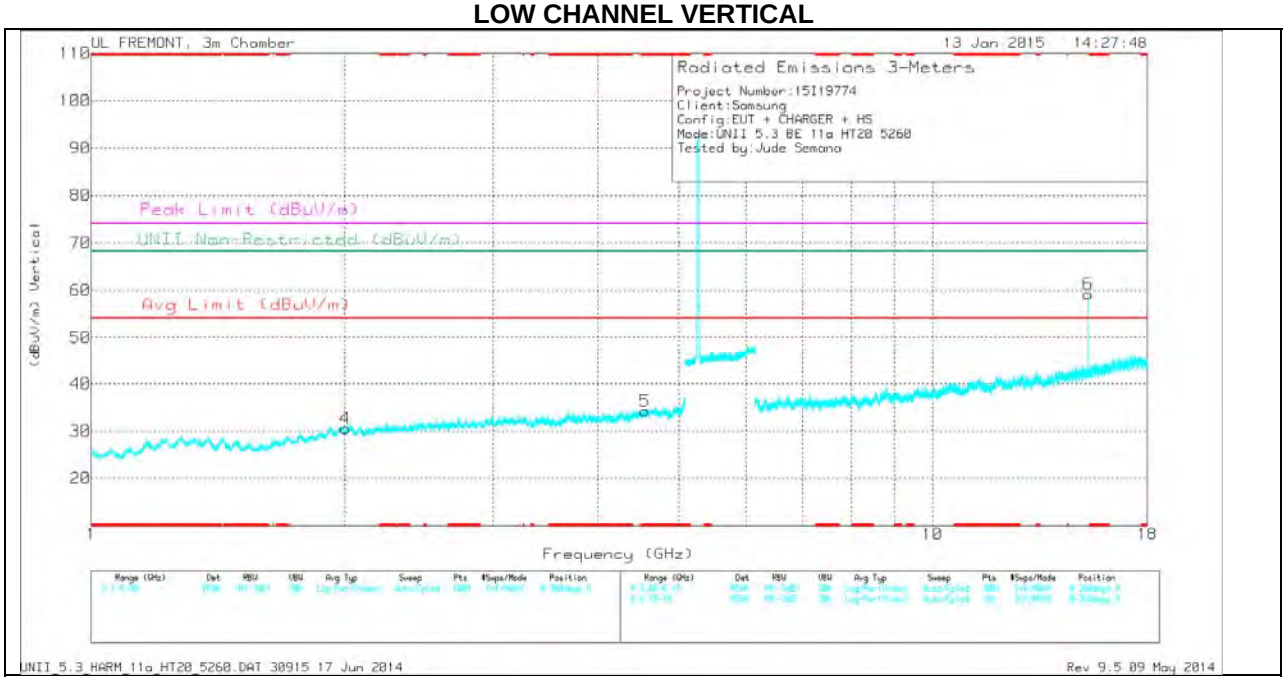
LOW CHANNEL VERTICAL



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

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LOW CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	* 4.552	31.65	PK	34	-31.4	0	34.25	-	-	74	-39.75	-	-	0-360	100	V
2	* 8.415	28.85	PK	35.8	-28.1	0	36.55	-	-	74	-37.45	-	-	0-360	200	H
4	2.005	30.97	PK	31.6	-32	0	30.57	-	-	-	-	68.2	-37.63	0-360	200	V
1	2.442	37.04	PK	32.2	-32.4	0	36.84	-	-	-	-	68.2	-31.36	0-360	200	H
3	15.302	43.41	PK	40	-27.1	0	56.31	-	-	-	-	68.2	-11.89	0-360	200	H
6	15.302	46.29	PK	40	-27.1	0	59.19	-	-	-	-	68.2	-9.01	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 T119 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
15.302	46.67	PK1	40	-27.1	0	59.57	-	-	-	-	68.2	-8.63	106	226	H
15.302	43.06	AD1	40	-27.1	.3	56.26	-	-	-	-	-	-	106	226	H
15.302	48.45	PK1	40	-27.1	0	61.35	-	-	-	-	68.2	-6.85	224	100	V
15.302	45.47	AD1	40	-27.2	.3	58.57	-	-	-	-	-	-	224	100	V
15.302	48.85	PK1	40	-27.2	0	61.65	-	-	-	-	68.2	-6.55	223	326	V
15.302	46.13	AD1	40	-27.2	.3	59.23	-	-	-	-	-	-	223	326	V

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

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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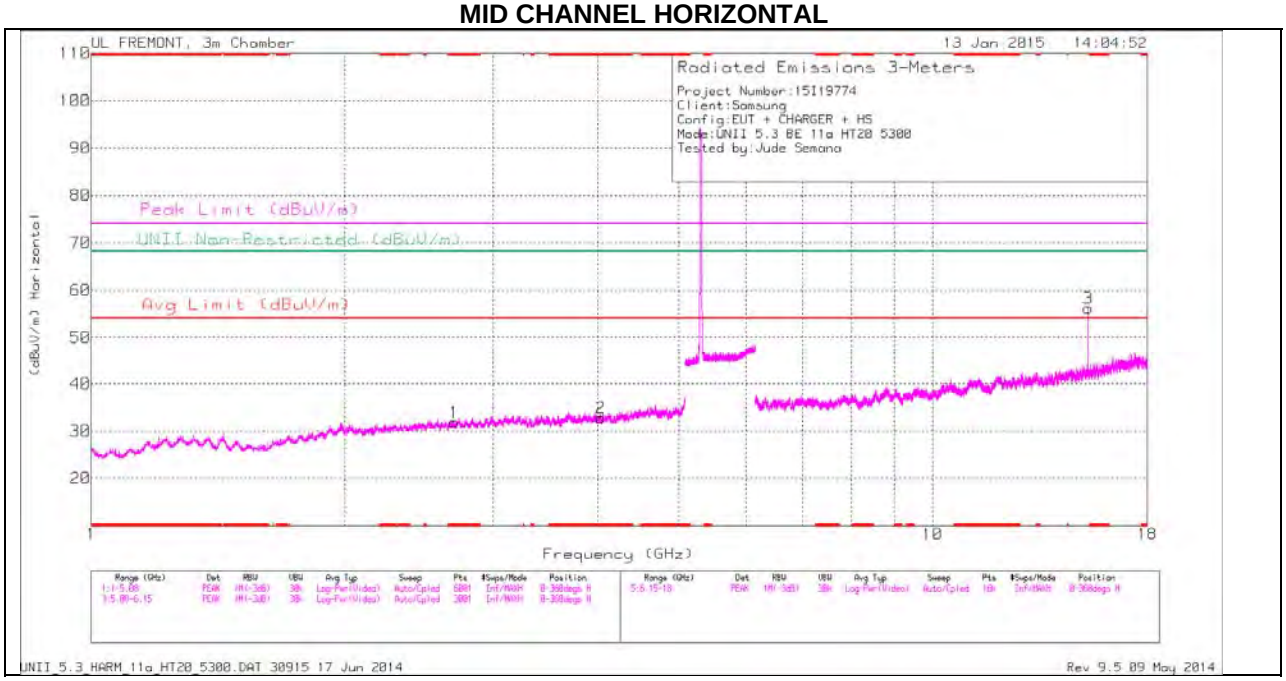
MID CHANNEL HORIZONTAL



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

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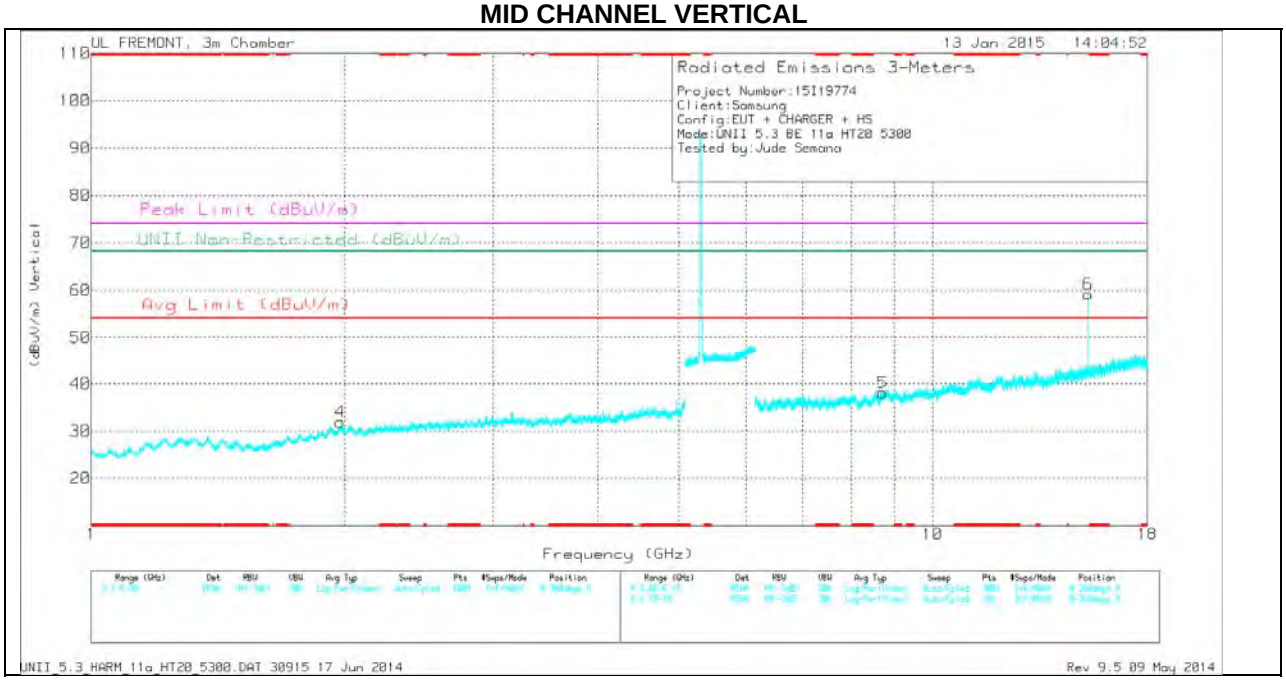
MID CHANNEL VERTICAL



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

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MID CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.699	31.38	PK	32.6	-32.1	0	31.88	-	-	74	-42.12	-	-	0-360	100	H
2	* 4.033	30.87	PK	33.4	-31.5	0	32.77	-	-	74	-41.23	-	-	0-360	200	H
4	1.976	32.66	PK	31.5	-32.2	0	31.96	-	-	-	-	68.2	-36.24	0-360	100	V
5	8.718	29.94	PK	35.9	-27.7	0	38.14	-	-	-	-	68.2	-30.06	0-360	200	V
3	15.302	43.3	PK	40	-27.1	0	56.2	-	-	-	-	68.2	-12	0-360	200	H
6	15.302	46.26	PK	40	-27.1	0	59.16	-	-	-	-	68.2	-9.04	0-360	200	V

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

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
15.302	46.66	PK1	40	-27.2	0	59.46	-	-	-	-	68.2	-8.74	110	258	H
15.302	43.28	AD1	40	-27.2	.3	56.38	-	-	-	-	-	-	110	258	H
15.302	48.05	PK1	40	-27.2	0	60.85	-	-	-	-	68.2	-7.35	121	374	V
15.302	45.25	AD1	40	-27.2	.3	58.35	-	-	-	-	-	-	121	374	V
15.302	48.85	PK1	40	-27.2	0	61.65	-	-	-	-	68.2	-6.55	223	326	V
15.302	46.13	AD1	40	-27.2	.3	59.23	-	-	-	-	-	-	223	326	V

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

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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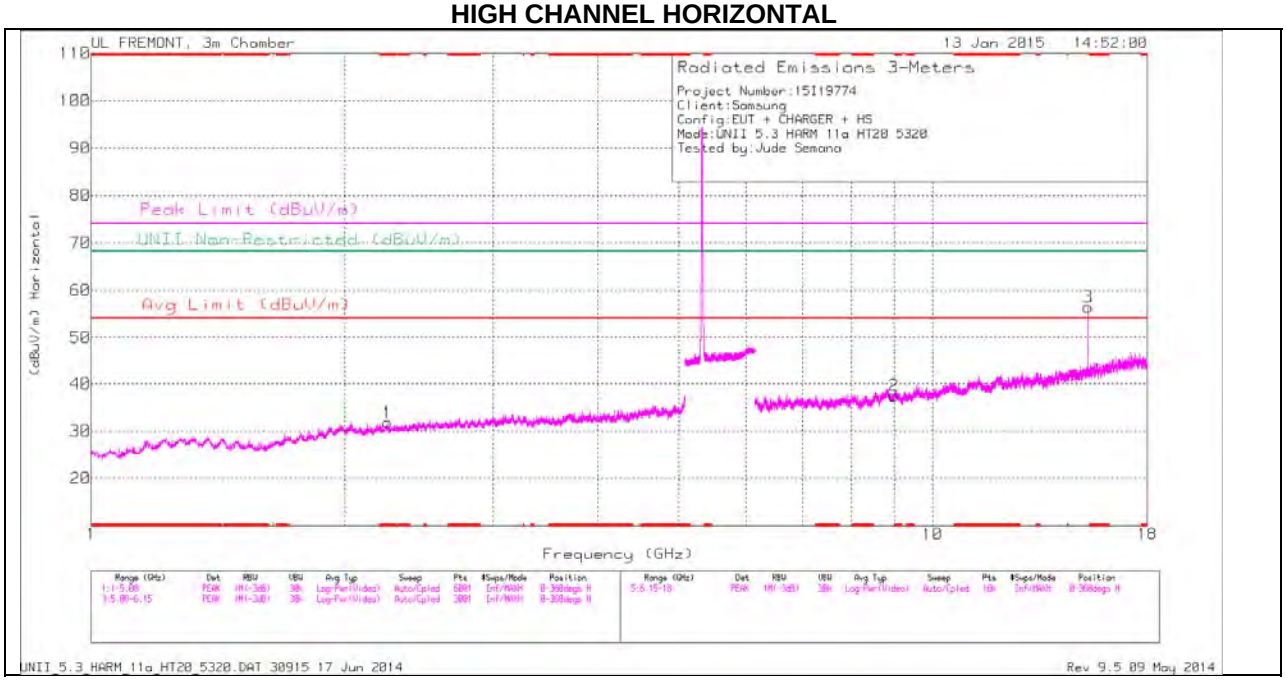
HIGH CHANNEL HORIZONTAL



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

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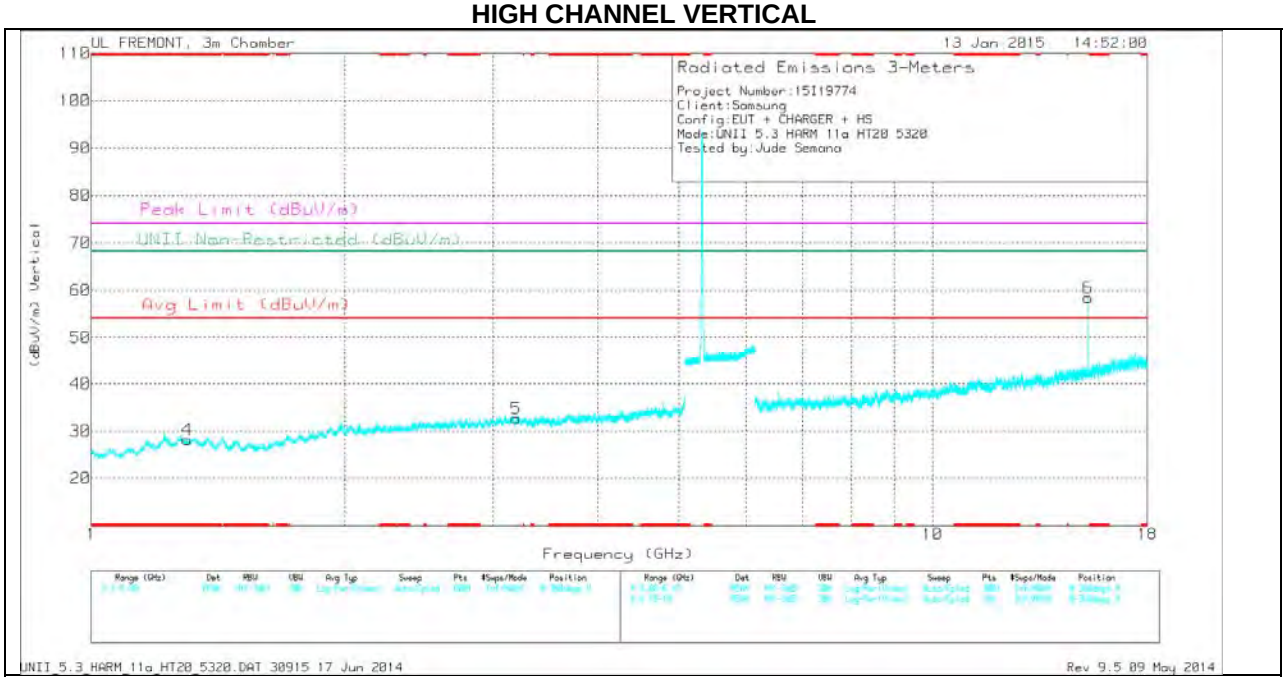
HIGH CHANNEL VERTICAL



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

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HIGH CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.25	32.41	PK	31.8	-32.4	0	31.81	-	-	74	-42.19	-	-	0-360	200	H
4	* 1.301	31.72	PK	30.2	-33.7	0	28.22	-	-	74	-45.78	-	-	0-360	200	V
5	3.2	30.96	PK	32.9	-31.2	0	32.66	-	-	-	-	68.2	-35.54	0-360	100	V
2	8.995	28.01	PK	36.1	-26.6	0	37.51	-	-	-	-	68.2	-30.69	0-360	100	H
3	15.303	43.53	PK	40	-27.1	0	56.43	-	-	-	-	68.2	-11.77	0-360	200	H
6	15.303	45.5	PK	40	-27.1	0	58.4	-	-	-	-	68.2	-9.8	0-360	200	V

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

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
15.302	47.03	PK1	40	-27.1	0	59.93	-	-	-	-	68.2	-8.27	108	243	H
15.302	44.06	AD1	40	-27.1	.3	57.26	-	-	-	-	-	-	108	243	H
15.302	48.45	PK1	40	-27.1	0	61.35	-	-	-	-	68.2	-6.85	224	100	V
15.302	45.47	AD1	40	-27.2	.3	58.57	-	-	-	-	-	-	224	100	V
15.302	48.85	PK1	40	-27.2	0	61.65	-	-	-	-	68.2	-6.55	223	326	V
15.302	46.13	AD1	40	-27.2	.3	59.23	-	-	-	-	-	-	223	326	V

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

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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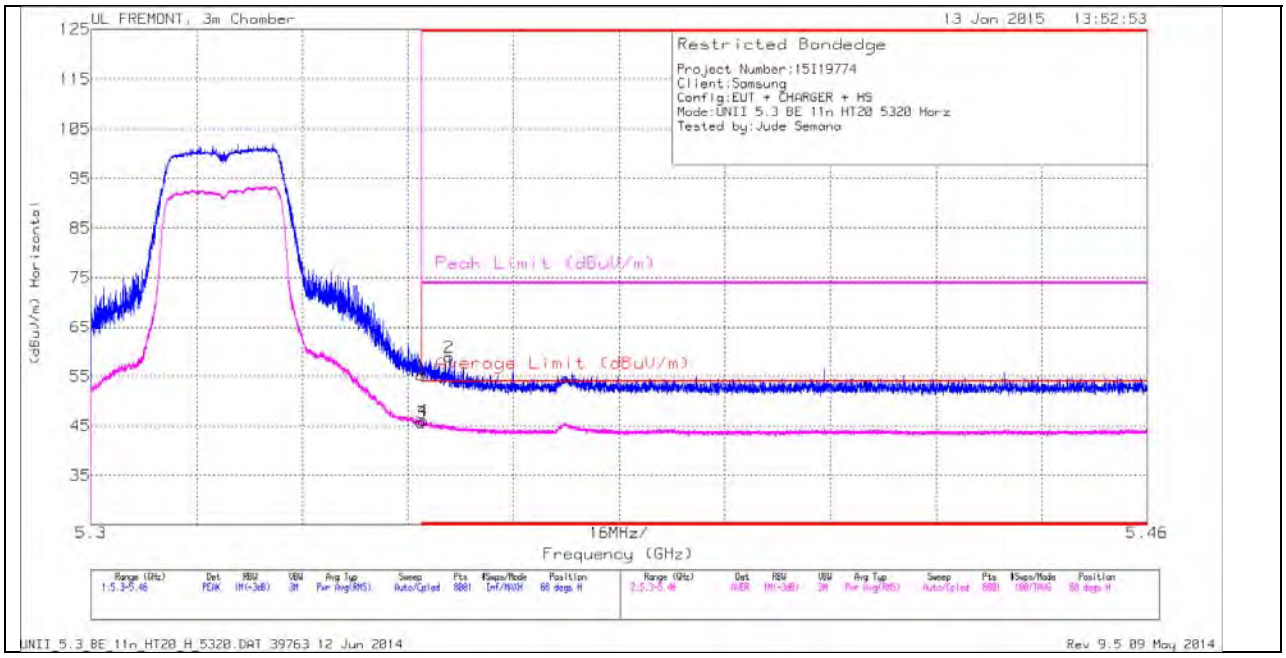
11.2.2. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.3 GHz BAND

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	42.07	PK	34.5	-21.4	0	55.17	-	-	74	-18.83	68	221	H
2	* 5.354	45.85	PK	34.5	-21.5	0	58.85	-	-	74	-15.15	68	221	H
3	* 5.35	32.22	RMS	34.5	-21.4	.3	45.62	54	-8.38	-	-	68	221	H
4	* 5.35	32.59	RMS	34.5	-21.4	.3	45.99	54	-8.01	-	-	68	221	H

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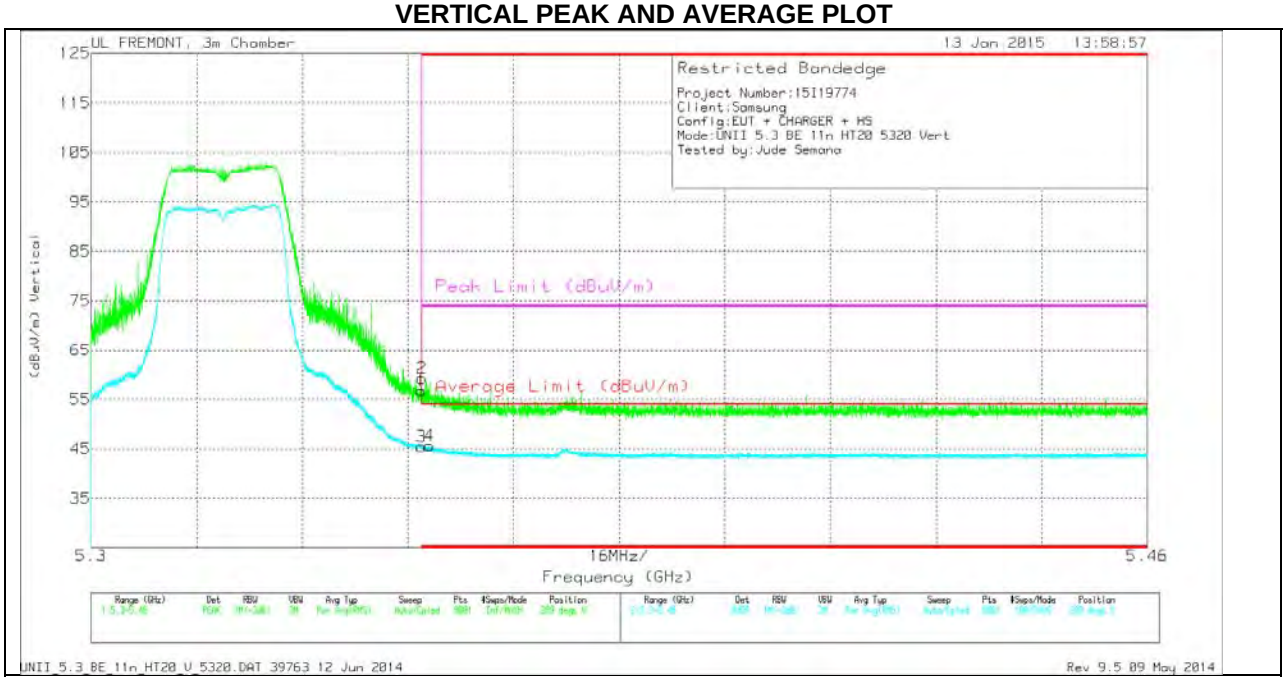
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	43.59	PK	34.5	-21.4	0	56.69	-	-	74	-17.31	289	273	V
2	* 5.35	46.13	PK	34.5	-21.4	0	59.23	-	-	74	-14.77	289	273	V
3	* 5.35	31.97	RMS	34.5	-21.4	.3	45.37	54	-8.63	-	-	289	273	V
4	* 5.351	32.11	RMS	34.5	-21.4	.3	45.51	54	-8.49	-	-	289	273	V

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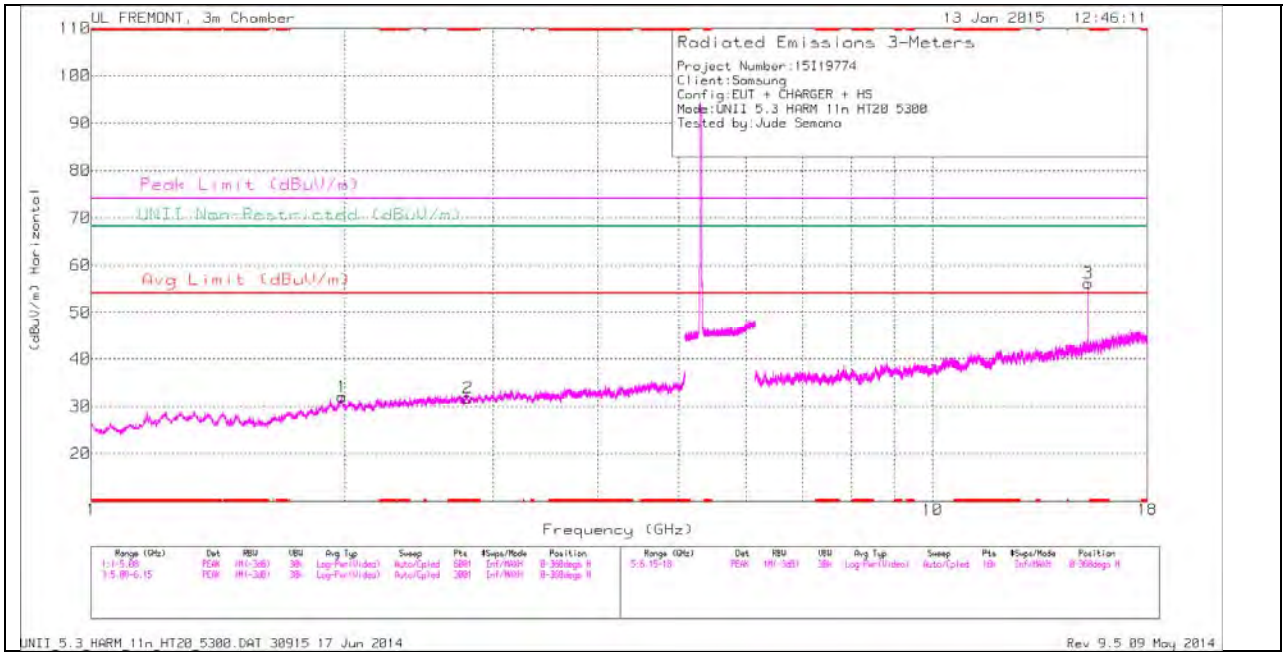
HARMONICS AND SPURIOUS EMISSIONS

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.

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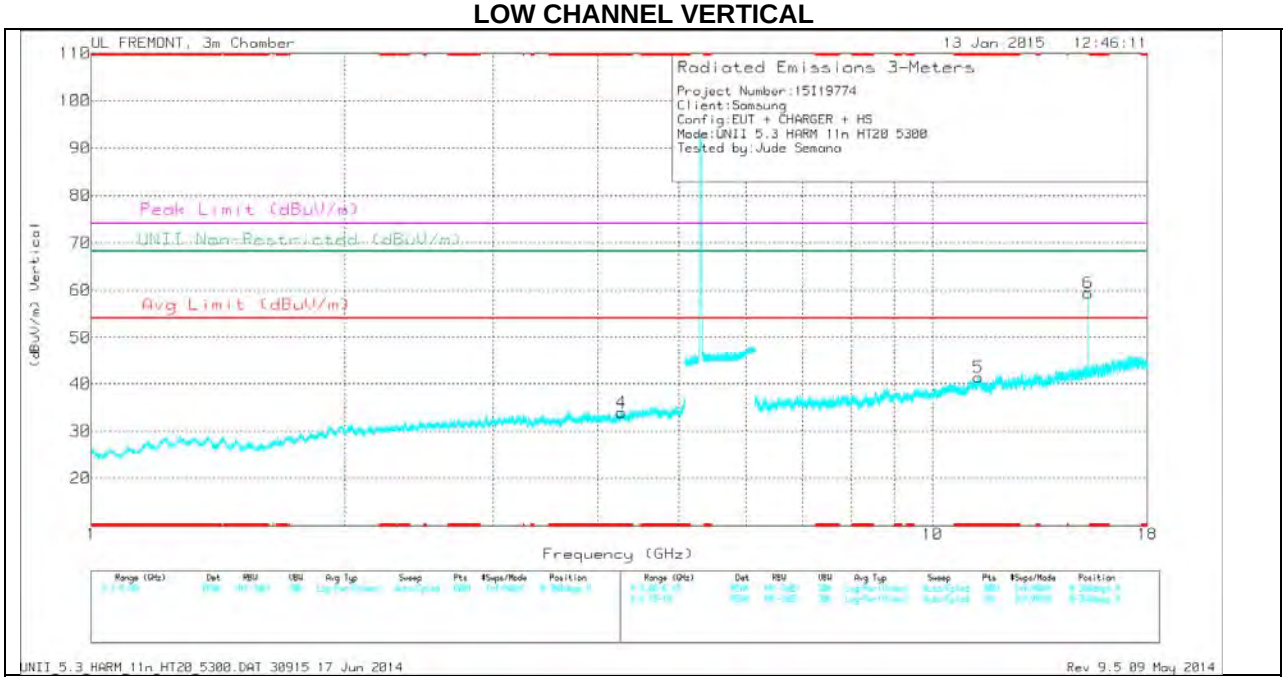
LOW CHANNEL VERTICAL



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

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LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 2.802	31.47	PK	32.7	-32.4	0	31.77	-	-	74	-42.23	-	-	0-360	100	H
4	* 4.264	30.98	PK	33.5	-30.5	0	33.98	-	-	74	-40.02	-	-	0-360	200	V
5	* 11.34	28.85	PK	38	-25.5	0	41.35	-	-	74	-32.65	-	-	0-360	200	V
1	1.985	32.53	PK	31.5	-32	0	32.03	-	-	-	-	68.2	-36.17	0-360	200	H
3	15.301	43.43	PK	40	-27.2	0	56.23	-	-	-	-	68.2	-11.97	0-360	200	H
6	15.301	46.63	PK	40	-27.2	0	59.43	-	-	-	-	68.2	-8.77	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 T119 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
15.301	46.9	PK1	40	-27.2	0	59.7	-	-	-	-	68.2	-8.5	109	241	H
15.301	43.68	AD1	40	-27.2	.3	56.78	-	-	-	-	-	-	109	241	H
15.302	48.3	PK1	40	-27.1	0	61.2	-	-	-	-	68.2	-7	123	225	V
15.302	45.48	AD1	40	-27.2	.3	58.58	-	-	-	-	-	-	123	225	V
15.302	48.85	PK1	40	-27.2	0	61.65	-	-	-	-	68.2	-6.55	223	326	V
15.302	46.13	AD1	40	-27.2	.3	59.23	-	-	-	-	-	-	223	326	V

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

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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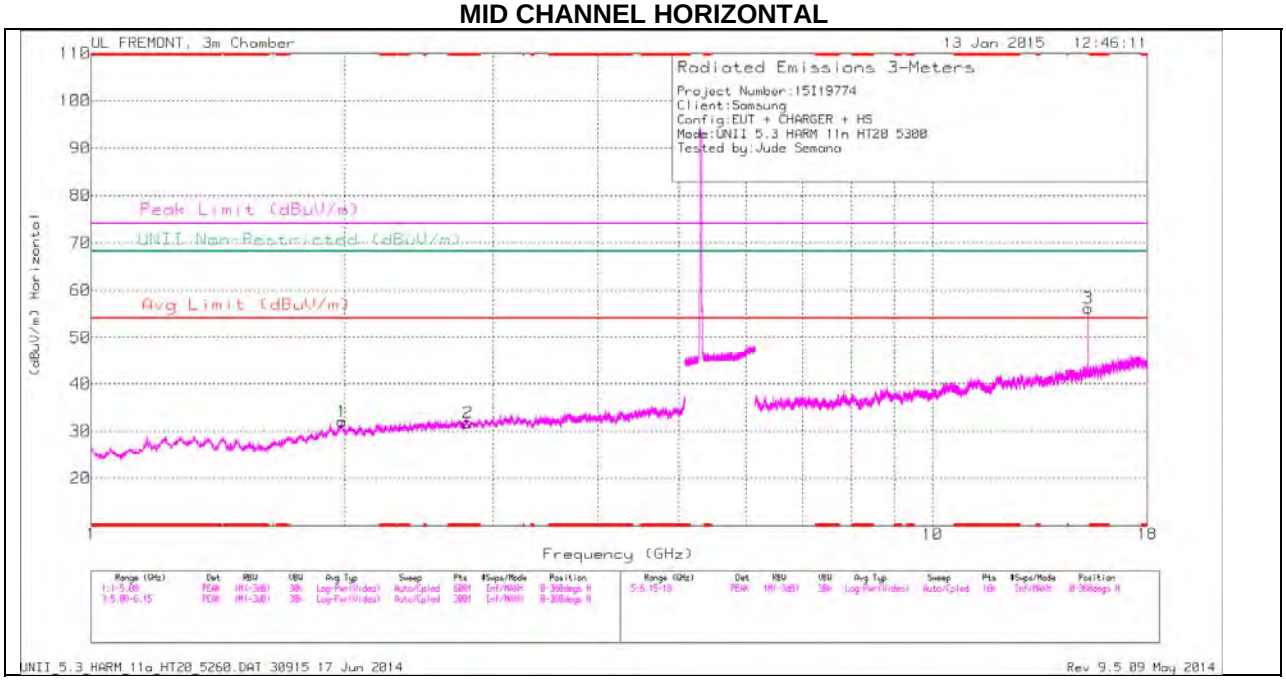
MID CHANNEL HORIZONTAL



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

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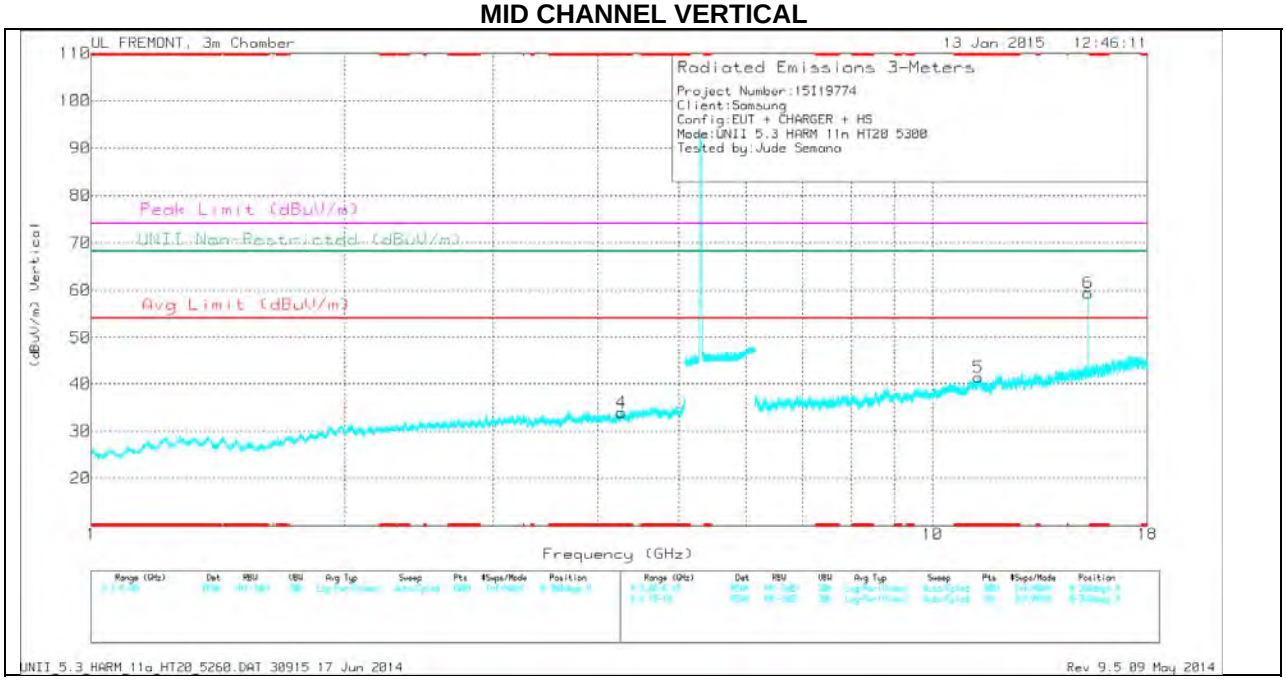
MID CHANNEL VERTICAL



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

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MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 2.802	31.47	PK	32.7	-32.4	0	31.77	-	-	74	-42.23	-	-	0-360	100	H
4	* 4.264	30.98	PK	33.5	-30.5	0	33.98	-	-	74	-40.02	-	-	0-360	200	V
5	* 11.34	28.85	PK	38	-25.5	0	41.35	-	-	74	-32.65	-	-	0-360	200	V
1	1.985	32.53	PK	31.5	-32	0	32.03	-	-	-	-	68.2	-36.17	0-360	200	H
3	15.301	43.43	PK	40	-27.2	0	56.23	-	-	-	-	68.2	-11.97	0-360	200	H
6	15.301	46.63	PK	40	-27.2	0	59.43	-	-	-	-	68.2	-8.77	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 T119 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
15.301	46.9	PK1	40	-27.2	0	59.7	-	-	-	-	68.2	-8.5	109	241	H
15.301	43.68	AD1	40	-27.2	.3	56.78	-	-	-	-	-	-	109	241	H
15.302	48.3	PK1	40	-27.1	0	61.2	-	-	-	-	68.2	-7	123	225	V
15.302	45.48	AD1	40	-27.2	.3	58.58	-	-	-	-	-	-	123	225	V
15.302	48.85	PK1	40	-27.2	0	61.65	-	-	-	-	68.2	-6.55	223	326	V
15.302	46.13	AD1	40	-27.2	.3	59.23	-	-	-	-	-	-	223	326	V

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

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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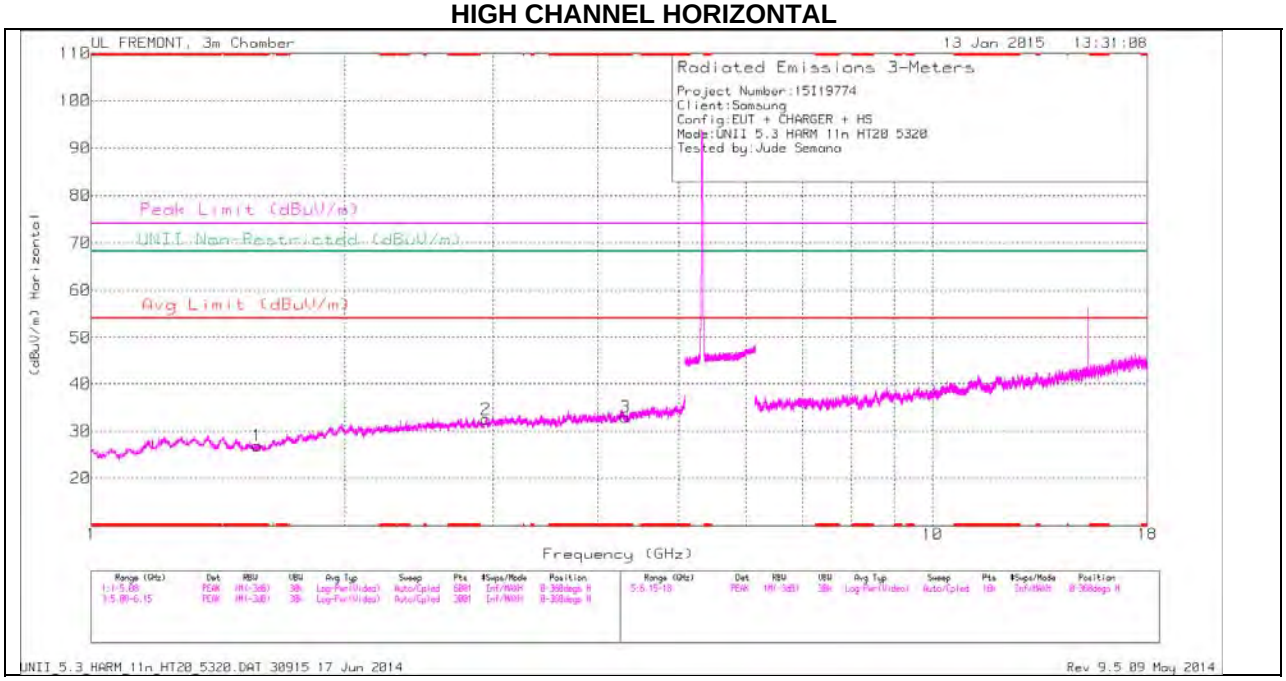
HIGH CHANNEL HORIZONTAL



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

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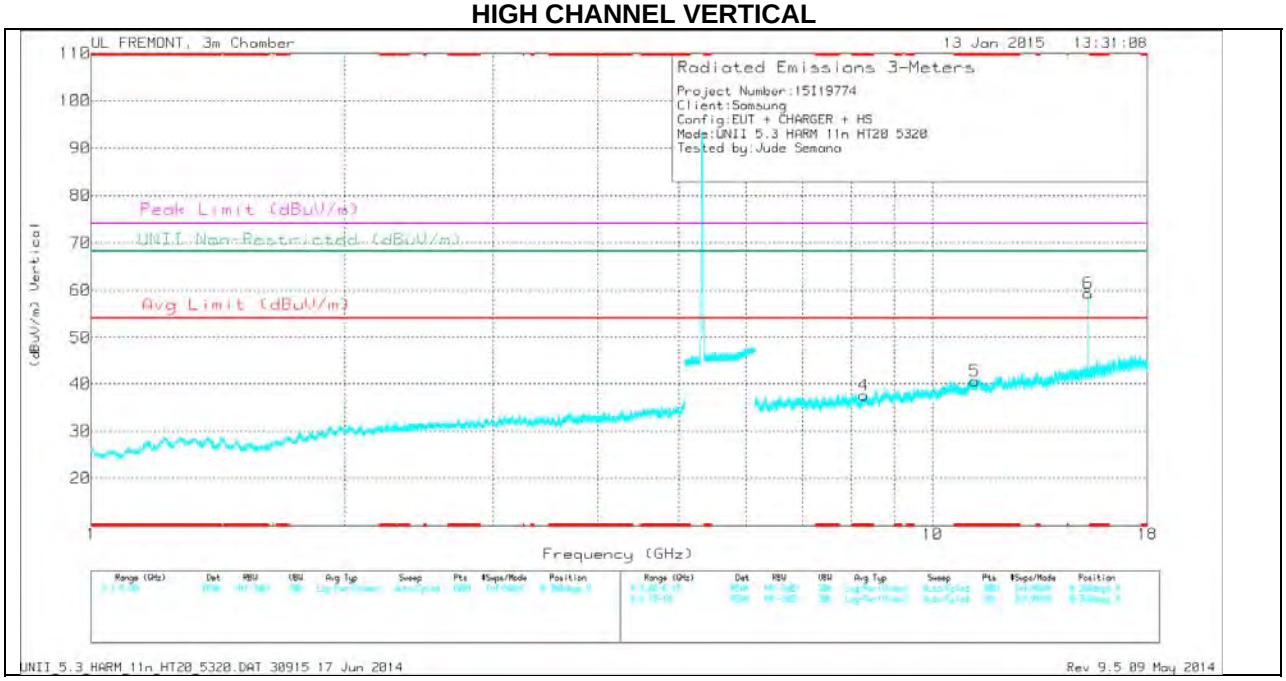
HIGH CHANNEL VERTICAL



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

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HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.575	32.28	PK	28.2	-33.5	0	26.98	-	-	74	-47.02	-	-	0-360	200	H
3	* 4.316	29.82	PK	33.6	-30.4	0	33.02	-	-	74	-40.98	-	-	0-360	200	H
4	* 8.286	28.76	PK	35.8	-27	0	37.56	-	-	74	-36.44	-	-	0-360	100	V
5	* 11.227	28.31	PK	37.9	-25.6	0	40.61	-	-	74	-33.39	-	-	0-360	200	V
2	2.945	31.66	PK	32.8	-31.9	0	32.56	-	-	-	-	68.2	-35.64	0-360	200	H
6	15.302	46.46	PK	40	-27.1	0	59.36	-	-	-	-	68.2	-8.84	0-360	200	V

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

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
15.301	48	PK1	40	-27.2	0	60.8	-	-	-	-	68.2	-7.4	122	217	V
15.301	45.41	AD1	40	-27.2	.3	58.51	-	-	-	-	-	-	122	217	V
15.302	48.3	PK1	40	-27.1	0	61.2	-	-	-	-	68.2	-7	123	225	V
15.302	45.48	AD1	40	-27.2	.3	58.58	-	-	-	-	-	-	123	225	V
15.302	48.85	PK1	40	-27.2	0	61.65	-	-	-	-	68.2	-6.55	223	326	V
15.302	46.13	AD1	40	-27.2	.3	59.23	-	-	-	-	-	-	223	326	V

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

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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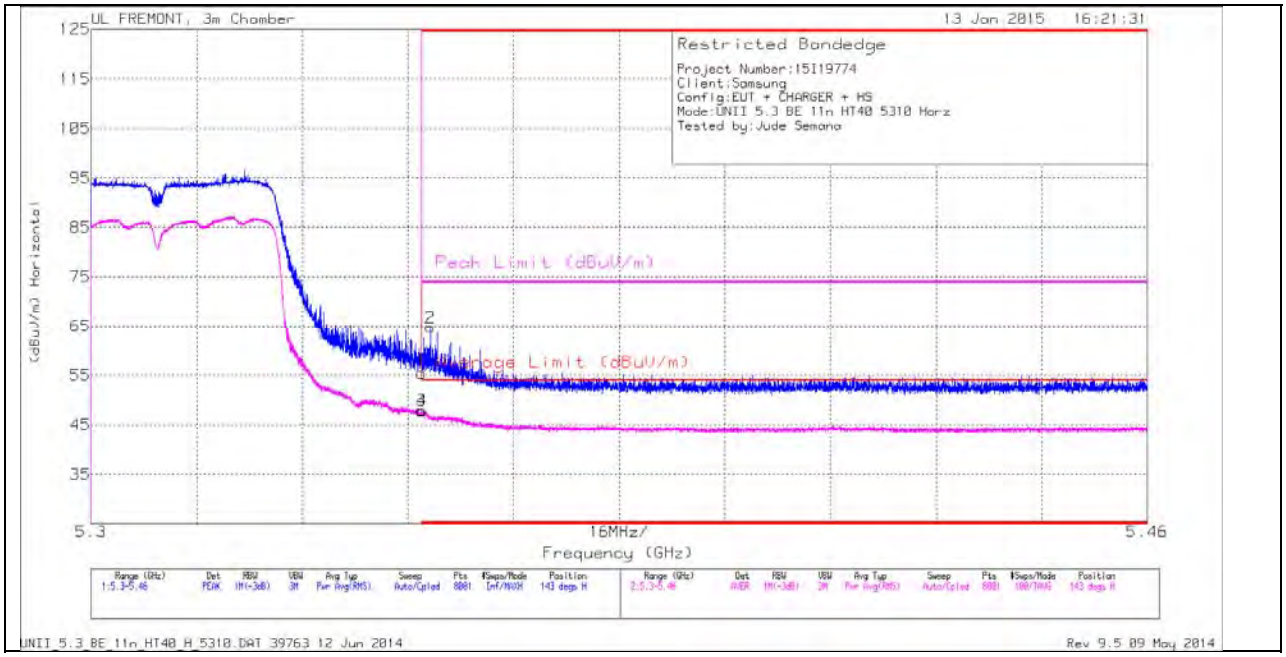
11.2.3. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.3 GHz BAND AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	42.33	PK	34.5	-21.4	0	55.43	-	-	74	-18.57	143	255	H
2	* 5.351	51.7	PK	34.5	-21.4	0	64.8	-	-	74	-9.2	143	255	H
3	* 5.35	34.1	RMS	34.5	-21.4	.68	47.9	54	-6.1	-	-	143	255	H
4	* 5.35	33.98	RMS	34.5	-21.4	.68	47.78	54	-6.22	-	-	143	255	H

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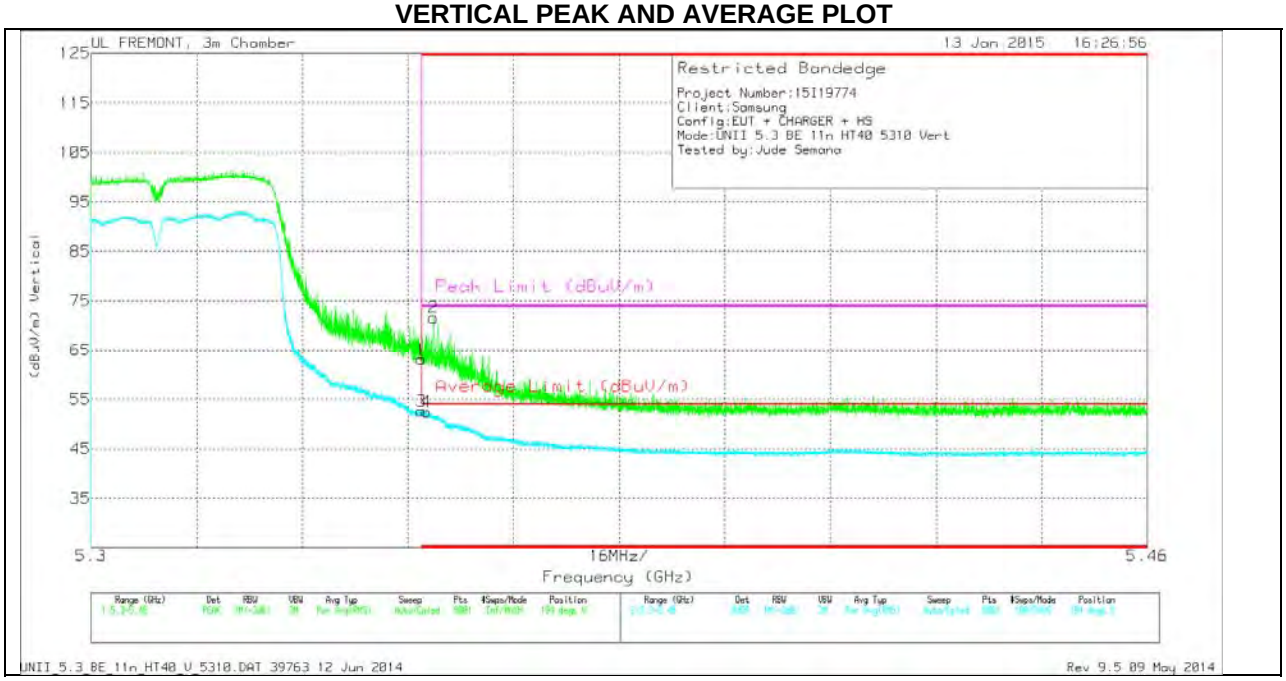
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	50.01	PK	34.5	-21.4	0	63.11	-	-	74	-10.89	194	312	V
2	* 5.352	58.59	PK	34.5	-21.4	0	71.69	-	-	74	-2.31	194	312	V
3	* 5.35	36.79	RMS	34.5	-21.4	.68	50.59	54	-3.41	-	-	194	312	V
4	* 5.351	36.62	RMS	34.5	-21.4	.68	50.42	54	-3.58	-	-	194	312	V

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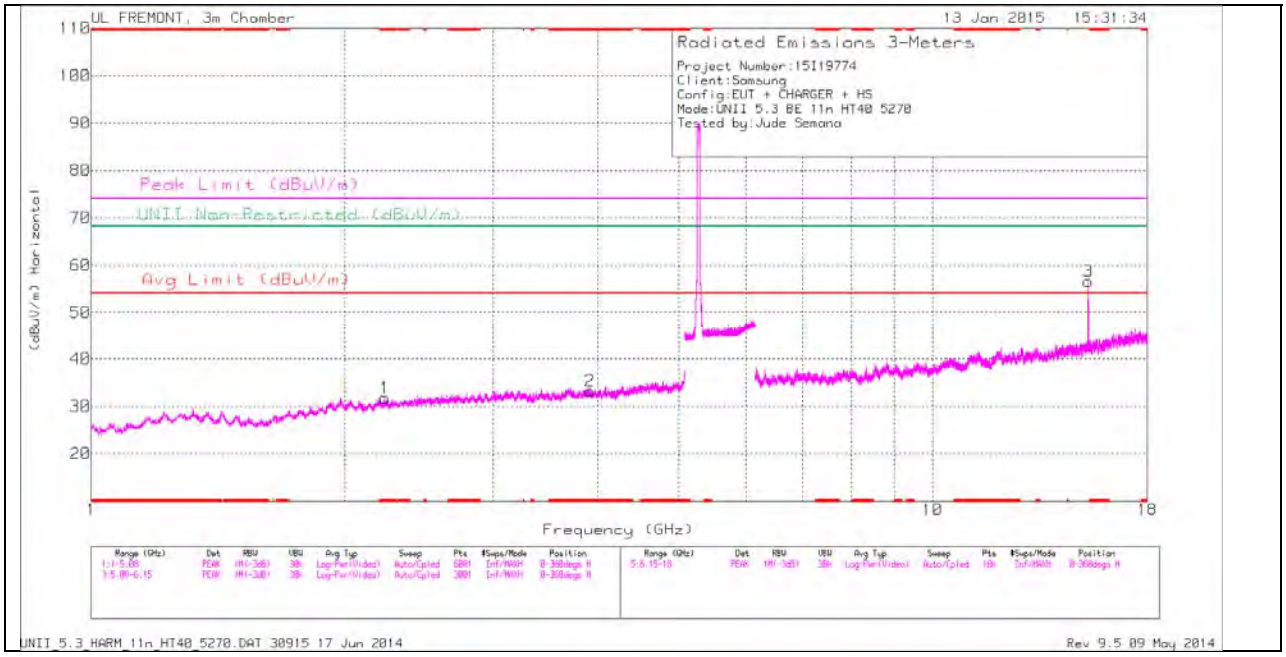
HARMONICS AND SPURIOUS EMISSIONS

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.

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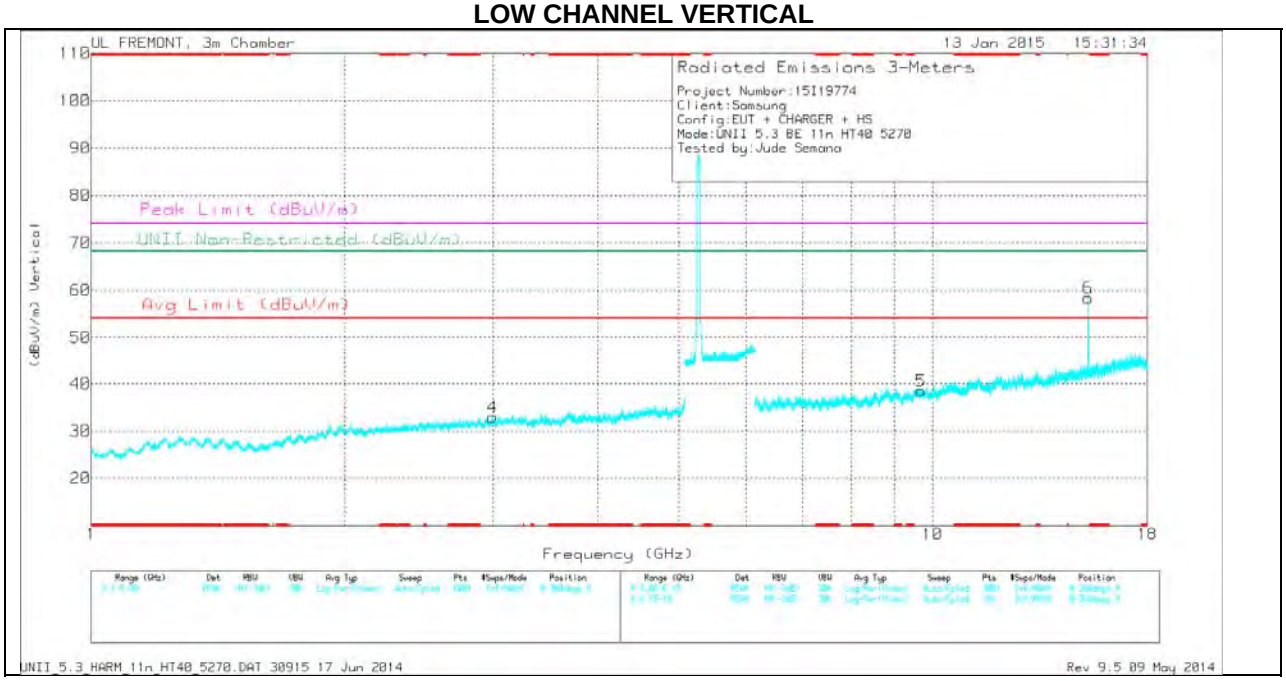
LOW CHANNEL VERTICAL



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

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LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.233	32.49	PK	31.7	-32.4	0	31.79	-	-	74	-42.21	-	-	0-360	100	H
2	* 3.918	31.08	PK	33.3	-31.1	0	33.28	-	-	74	-40.72	-	-	0-360	200	H
4	2.999	31.91	PK	32.9	-31.8	0	33.01	-	-	-	-	68.2	-35.19	0-360	100	V
5	9.681	28.09	PK	36.8	-26.4	0	38.49	-	-	-	-	68.2	-29.71	0-360	100	V
6	15.304	45.43	PK	40	-27.1	0	58.33	-	-	-	-	68.2	-9.87	0-360	200	V
3	15.305	43.57	PK	40	-27	0	56.57	-	-	-	-	68.2	-11.63	0-360	200	H

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

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
15.302	48.85	PK1	40	-27.2	0	61.65	-	-	-	-	68.2	-6.55	223	326	V
15.302	46.13	AD1	40	-27.2	.68	59.63	-	-	-	-	-	-	223	326	V
15.304	46.92	PK1	40	-27.1	0	59.82	-	-	-	-	68.2	-8.38	109	233	H
15.304	43.81	AD1	40	-27.1	.68	57.41	-	-	-	-	-	-	109	233	H
15.304	48.14	PK1	40	-27.1	0	61.04	-	-	-	-	68.2	-7.16	122	217	V
15.304	45.53	AD1	40	-27.1	.68	59.13	-	-	-	-	-	-	122	217	V

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

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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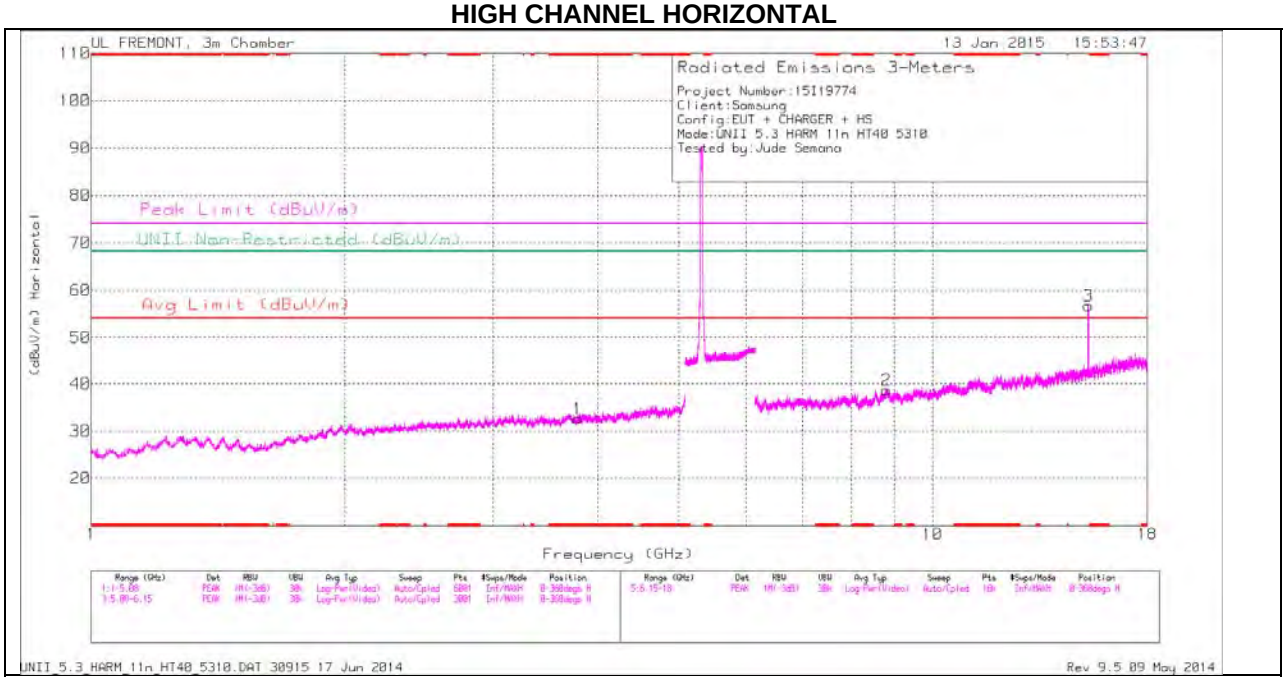
HIGH CHANNEL HORIZONTAL



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

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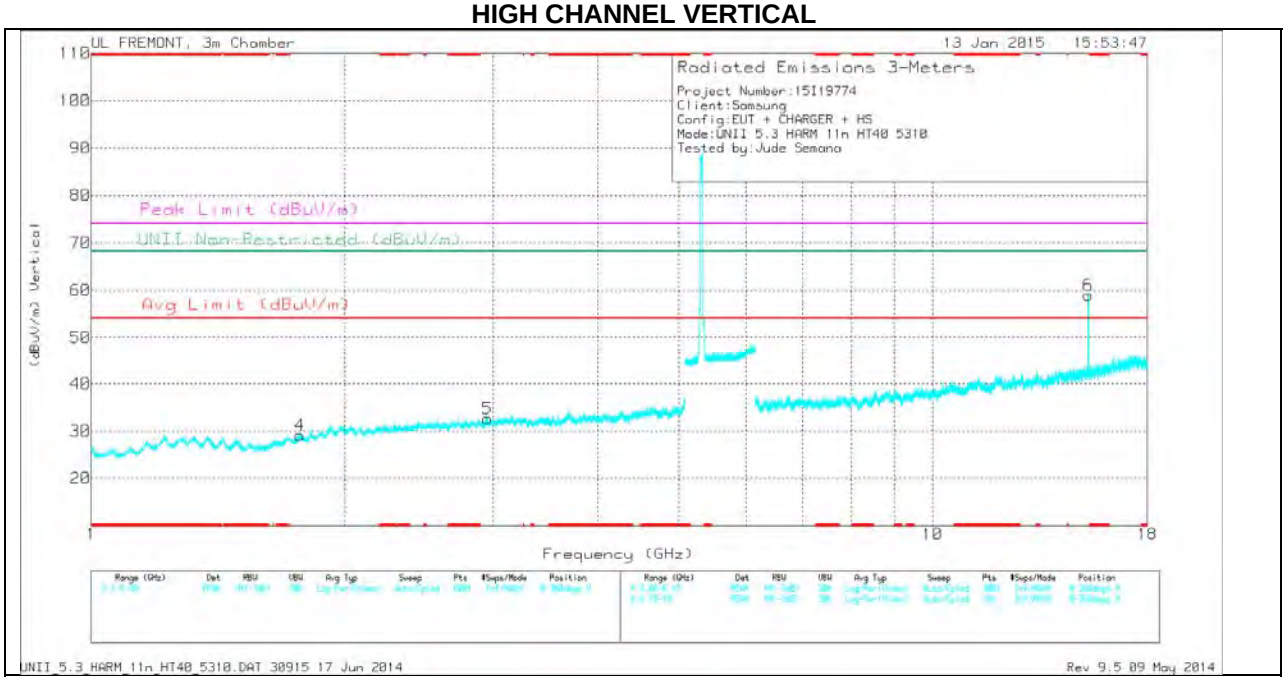
HIGH CHANNEL VERTICAL



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

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HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.787	31.11	PK	33.2	-31.7	0	32.61	-	-	74	-41.39	-	-	0-360	200	H
4	1.77	31.71	PK	29.8	-32.4	0	29.11	-	-	-	-	68.2	-39.09	0-360	200	V
5	2.956	31.88	PK	32.9	-32.1	0	32.68	-	-	-	-	68.2	-35.52	0-360	200	V
2	8.806	28.31	PK	36	-25.6	0	38.71	-	-	-	-	68.2	-29.49	0-360	200	H
3	15.305	43.71	PK	40	-27	0	56.71	-	-	-	-	68.2	-11.49	0-360	200	H
6	15.305	45.91	PK	40	-27	0	58.91	-	-	-	-	68.2	-9.29	0-360	200	V

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

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
15.302	48.85	PK1	40	-27.2	0	61.65	-	-	-	-	68.2	-6.55	223	326	V
15.302	46.13	AD1	40	-27.2	.68	59.63	-	-	-	-	-	-	223	326	V
15.305	46.48	PK1	40	-27	0	59.48	-	-	-	-	68.2	-8.72	108	171	H
15.305	43	AD1	40	-27	.68	56.7	-	-	-	-	-	-	108	171	H
15.305	47.93	PK1	40	-27	0	60.93	-	-	-	-	68.2	-7.27	120	374	V
15.305	44.78	AD1	40	-27	.68	58.48	-	-	-	-	-	-	120	374	V

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

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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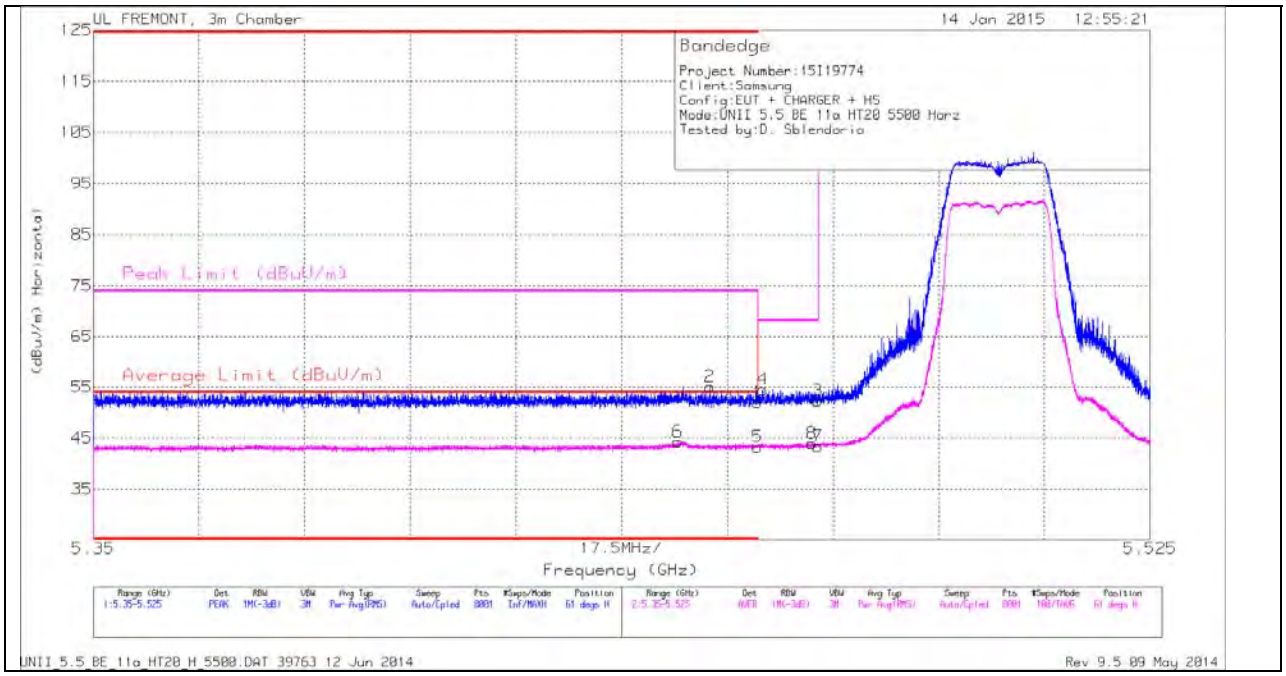
11.3. 5.5-5.6 GHz

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 T711 (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	* 5.46	38.89	PK	34.5	-21.4	0	51.99	-	-	74	-22.01	61	113	H
2	* 5.452	41.98	PK	34.5	-21.4	0	55.08	-	-	74	-18.92	61	113	H
5	* 5.46	29.9	RMS	34.5	-21.4	.3	43.3	54	-10.7	-	-	61	113	H
6	* 5.447	30.86	RMS	34.5	-21.4	.3	44.26	54	-9.74	-	-	61	113	H
4	5.461	41.48	PK	34.5	-21.4	0	54.58	-	-	68.2	-13.62	61	113	H
8	5.469	30.47	RMS	34.5	-21.3	.3	43.97	-	-	-	-	61	113	H
3	5.47	39.13	PK	34.5	-21.3	0	52.33	-	-	68.2	-15.87	61	113	H
7	5.47	29.92	RMS	34.5	-21.3	.3	43.42	-	-	-	-	61	113	H

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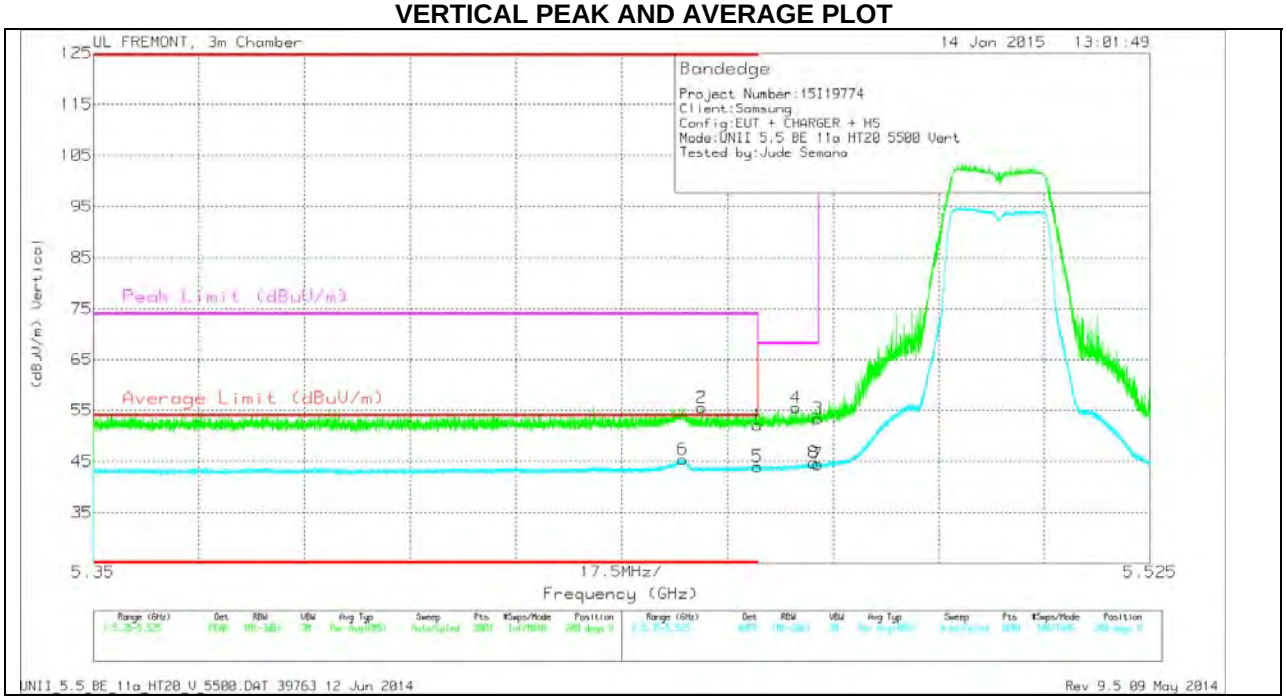
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.46	38.97	PK	34.5	-21.4	0	52.07	-	-	74	-21.93	208	315	V
2	* 5.451	42.39	PK	34.5	-21.4	0	55.49	-	-	74	-18.51	208	315	V
5	* 5.46	30.57	RMS	34.5	-21.4	.3	43.97	54	-10.03	-	-	208	315	V
6	* 5.448	32.01	RMS	34.5	-21.4	.3	45.41	54	-8.59	-	-	208	315	V
4	5.466	42.27	PK	34.5	-21.3	0	55.47	-	-	68.2	-12.73	208	315	V
8	5.469	31.27	RMS	34.5	-21.3	.3	44.77	-	-	-	-	208	315	V
3	5.47	40.14	PK	34.5	-21.3	0	53.34	-	-	68.2	-14.86	208	315	V
7	5.47	30.94	RMS	34.5	-21.3	.3	44.44	-	-	-	-	208	315	V

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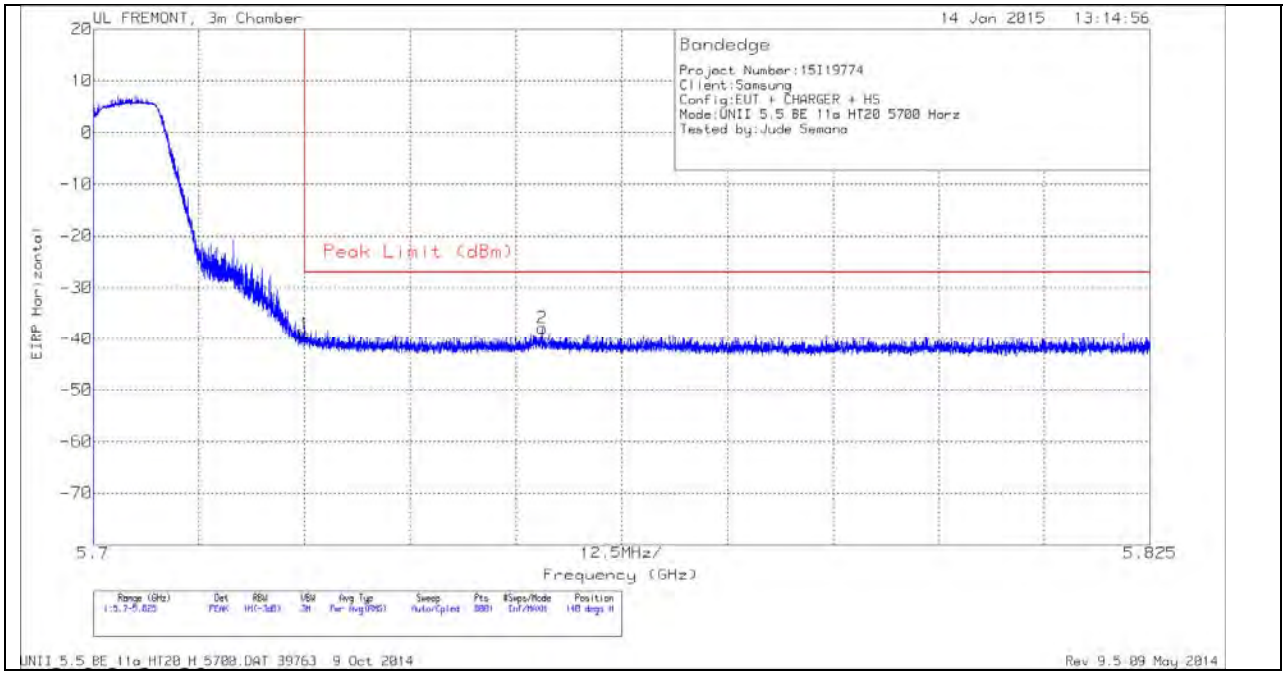
AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T711 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-64.86	PK	35.2	-21.1	11.8	0	-38.96	-27	-11.96	140	313	H
2	5.753	-63.78	PK	35.3	-21.1	11.8	0	-37.78	-27	-10.78	140	313	H

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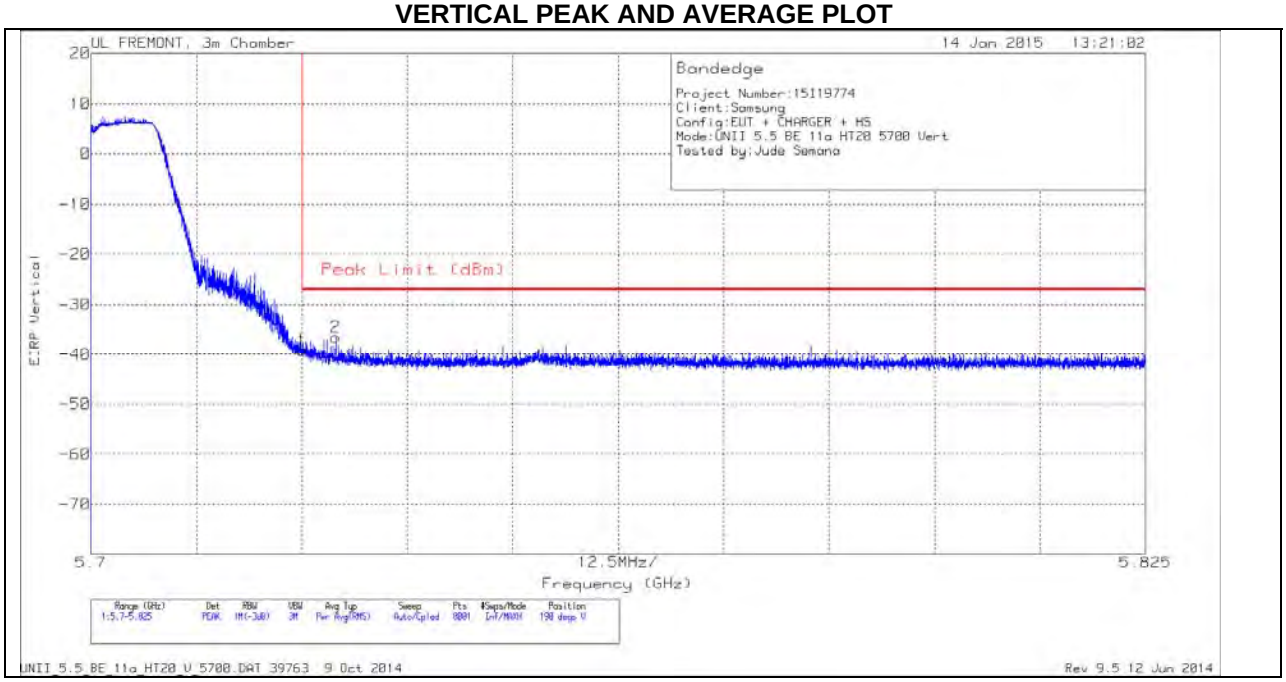
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T711 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-65.09	PK	35.2	-21.1	11.8	0	-39.19	-27	-12.19	190	316	V
2	5.729	-62.3	PK	35.2	-21.2	11.8	0	-36.5	-27	-9.5	190	316	V

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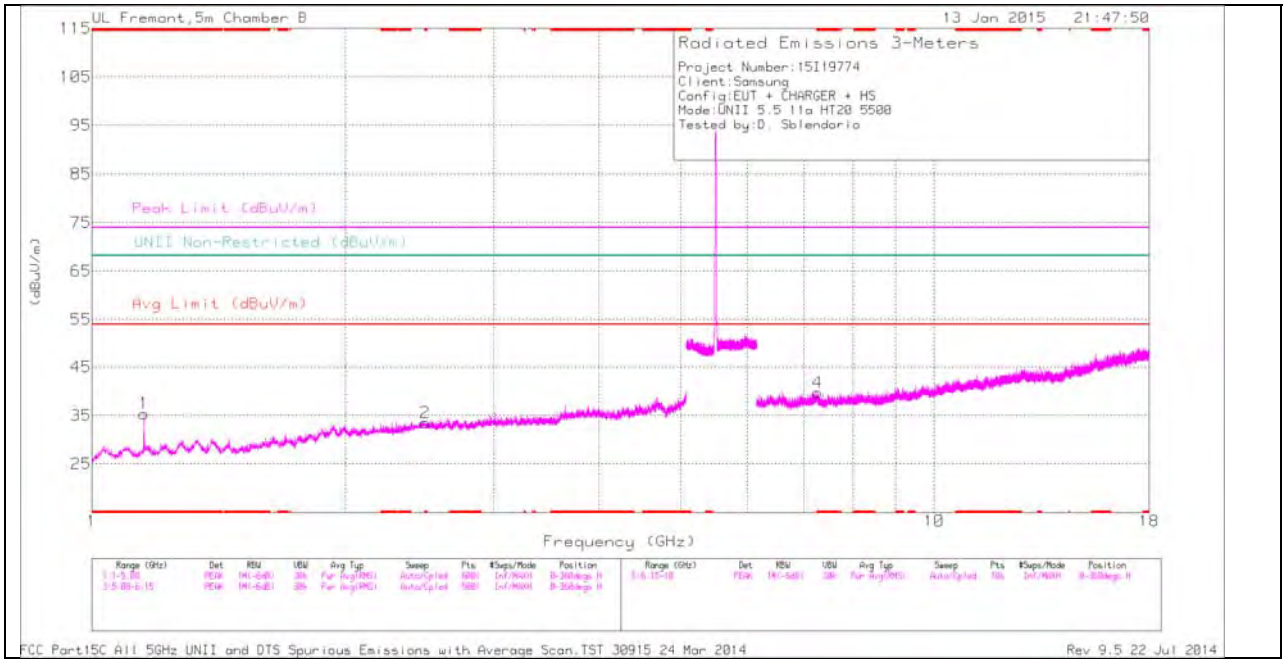
HARMONICS AND SPURIOUS EMISSIONS

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.

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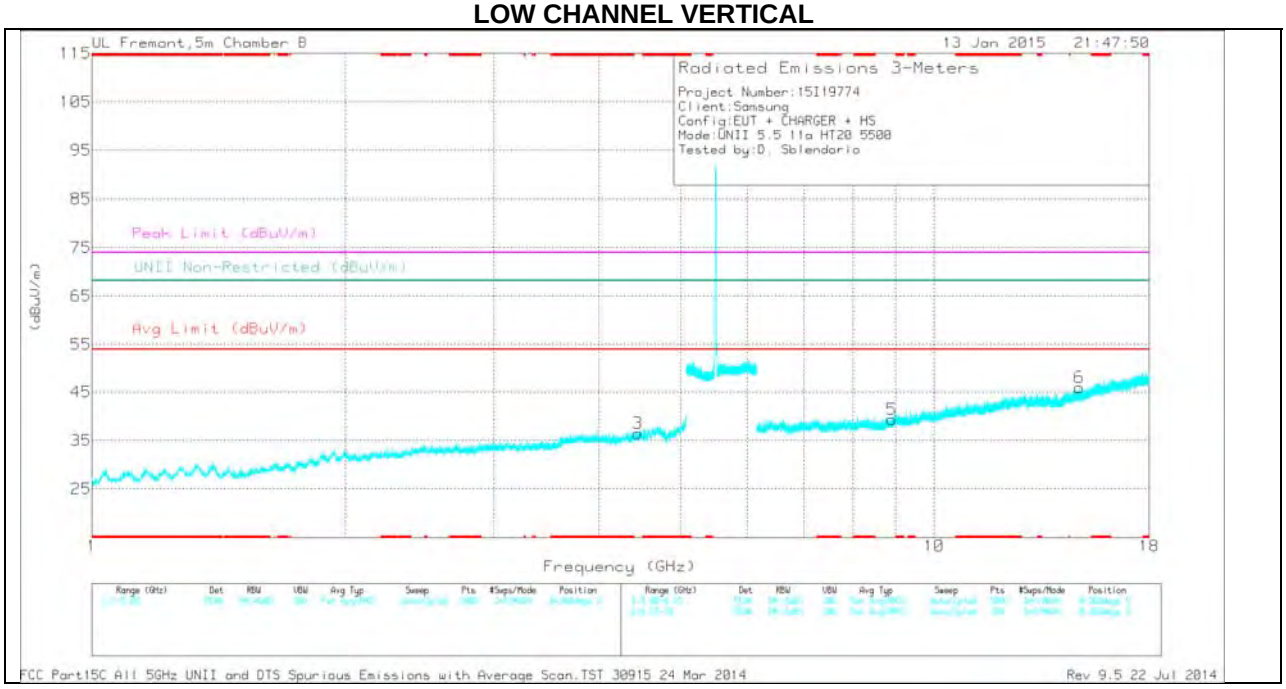
LOW CHANNEL VERTICAL



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

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LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.152	42.08	PK	27.8	-34.5	0	35.38	-	-	74	-38.62	-	-	0-360	199	H
2	* 2.487	33.47	PK	32.4	-32.4	0	33.47	-	-	74	-40.53	-	-	0-360	101	H
4	* 7.268	31.2	PK	35.6	-27.1	0	39.7	-	-	74	-34.3	-	-	0-360	101	H
3	4.446	32.44	PK	33.9	-29.8	0	36.54	-	-	-	-	68.2	-31.66	0-360	101	V
5	8.908	29.26	PK	36.1	-26	0	39.36	-	-	-	-	68.2	-28.84	0-360	101	V
6	14.867	28.06	PK	39.5	-21.6	0	45.96	-	-	-	-	68.2	-22.24	0-360	101	V

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

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.152	43.71	PK1	27.8	-34.5	0	37.01	-	-	74	-36.99	-	-	1	199	H
* 1.154	32.18	AD1	27.8	-34.5	0.3	25.78	54	-28.22	-	-	-	-	1	199	H

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

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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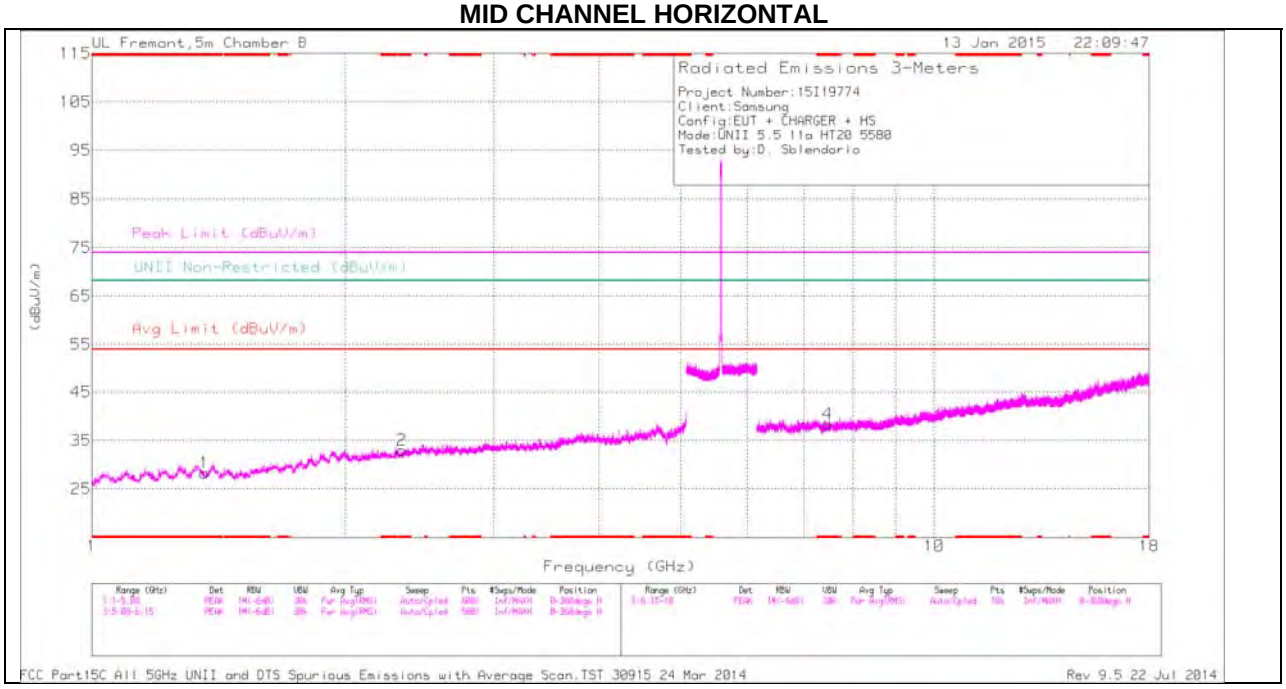
MID CHANNEL HORIZONTAL



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

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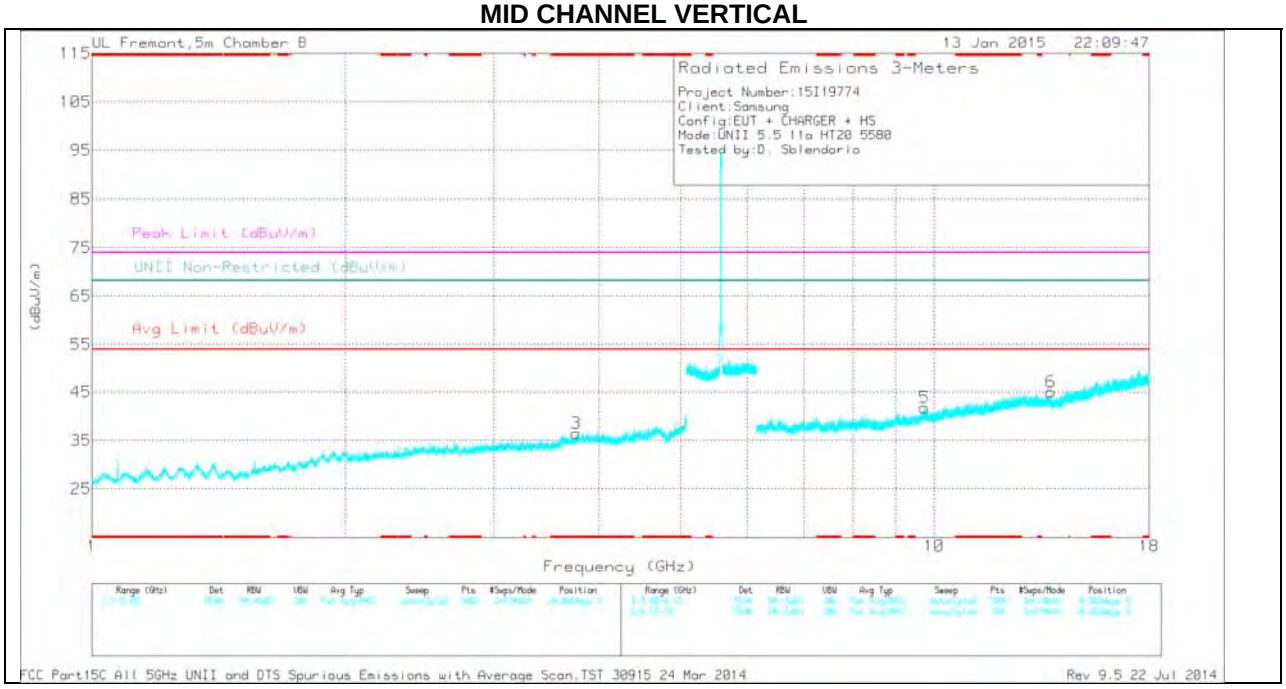
MID CHANNEL VERTICAL



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

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MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.359	33.38	PK	28.7	-33.8	0	28.28	-	-	74	-45.72	-	-	0-360	101	H
2	* 2.336	34.31	PK	31.8	-33.1	0	33.01	-	-	74	-40.99	-	-	0-360	199	H
3	* 3.757	34.17	PK	33.5	-31.2	0	36.47	-	-	74	-37.53	-	-	0-360	101	V
4	* 7.48	29.67	PK	35.6	-26.8	0	38.47	-	-	74	-35.53	-	-	0-360	199	H
5	9.743	29.16	PK	36.9	-24.3	0	41.76	-	-	-	-	68.2	-26.44	0-360	199	V
6	13.753	28.48	PK	38.6	-22	0	45.08	-	-	-	-	68.2	-23.12	0-360	199	V

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

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.358	43.07	PK1	28.7	-33.8	0	37.97	-	-	74	-36.03	-	-	1	101	H
* 1.358	30.49	AD1	28.7	-33.8	0.3	25.69	54	-28.31	-	-	-	-	1	101	H

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

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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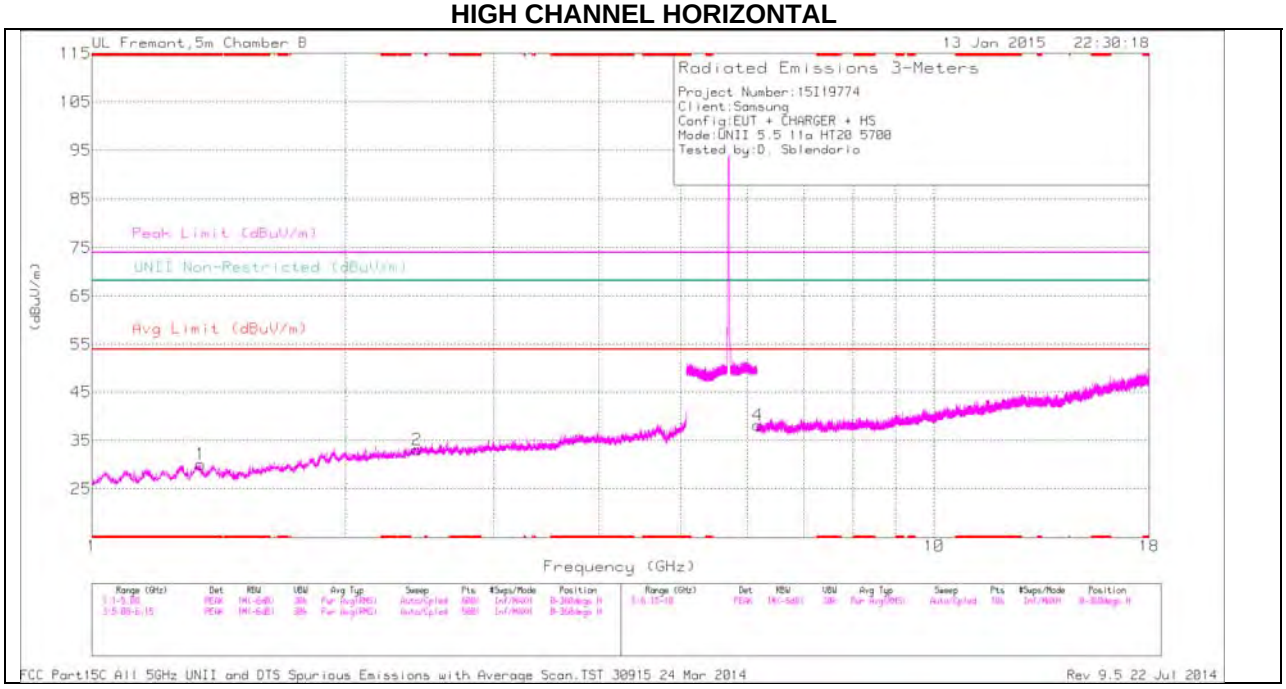
HIGH CHANNEL HORIZONTAL



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

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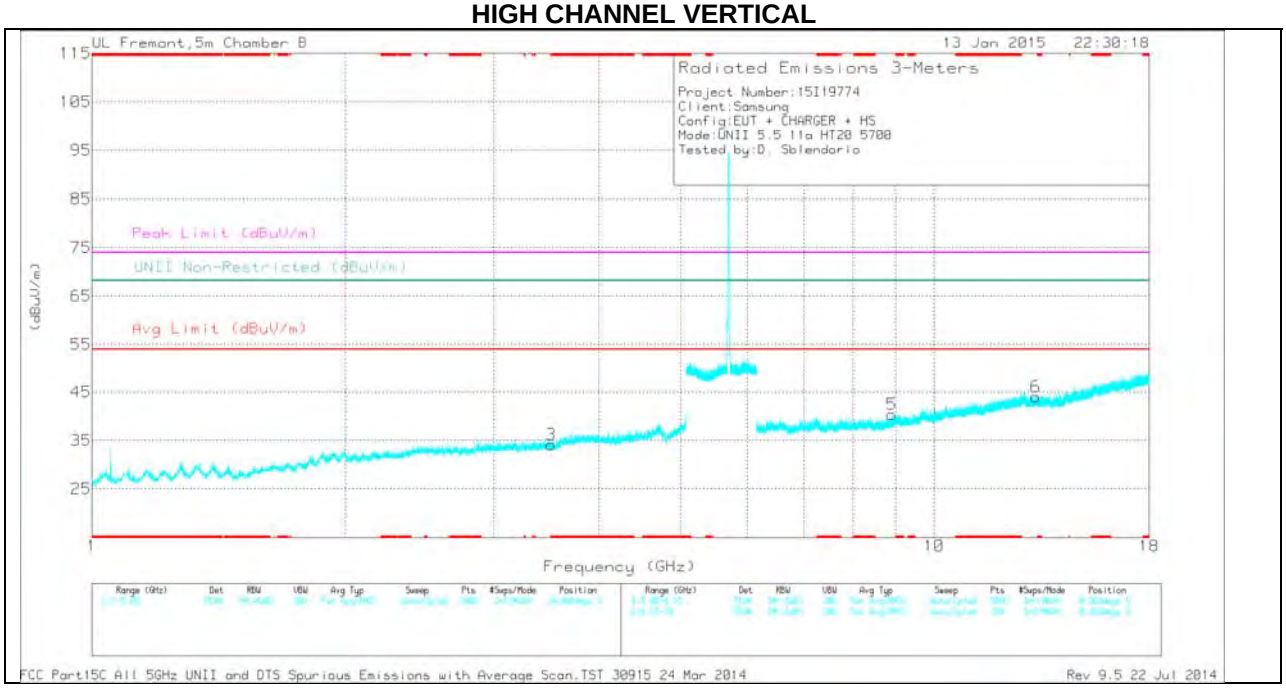
HIGH CHANNEL VERTICAL



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

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HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.346	35.12	PK	28.7	-33.7	0	30.12	-	-	74	-43.88	-	-	0-360	101	H
3	* 3.509	33.12	PK	32.8	-31.8	0	34.12	-	-	74	-39.88	-	-	0-360	199	V
2	2.431	33.34	PK	32.2	-32.4	0	33.14	-	-	-	-	68.2	-35.06	0-360	101	H
4	6.174	31.5	PK	35.4	-28.7	0	38.2	-	-	-	-	68.2	-30	0-360	199	H
5	8.914	30.28	PK	36.1	-26	0	40.38	-	-	-	-	68.2	-27.82	0-360	199	V
6	13.208	27.21	PK	39.2	-22.4	0	44.01	-	-	-	-	68.2	-24.19	0-360	102	V

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

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.346	42.25	PK1	28.7	-33.7	0	37.25	-	-	74	-36.75	-	-	1	100	H
* 1.344	31.26	AD1	28.7	-33.7	0.3	26.56	54	-27.44	-	-	-	-	1	100	H

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

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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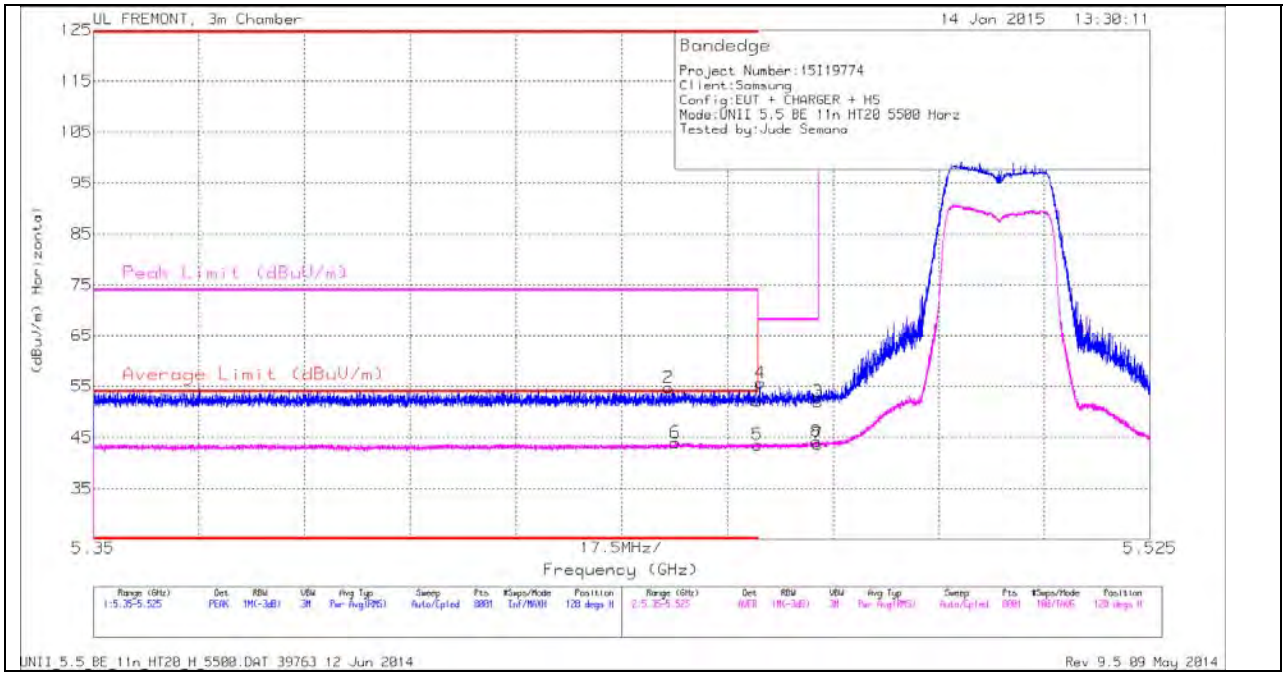
11.3.2. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.5 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.46	38.99	PK	34.5	-21.4	0	52.09	-	-	74	-21.91	128	304	H
2	* 5.445	41.65	PK	34.5	-21.4	0	54.75	-	-	74	-19.25	128	304	H
5	* 5.46	30.16	RMS	34.5	-21.4	.3	43.56	54	-10.44	-	-	128	304	H
6	* 5.446	30.51	RMS	34.5	-21.4	.3	43.91	54	-10.09	-	-	128	304	H
4	5.46	42.56	PK	34.5	-21.4	0	55.66	-	-	68.2	-12.54	128	304	H
3	5.47	38.75	PK	34.5	-21.3	0	51.95	-	-	68.2	-16.25	128	304	H
7	5.47	30.21	RMS	34.5	-21.3	.3	43.71	-	-	-	-	128	304	H
8	5.47	30.65	RMS	34.5	-21.3	.3	44.15	-	-	-	-	128	304	H

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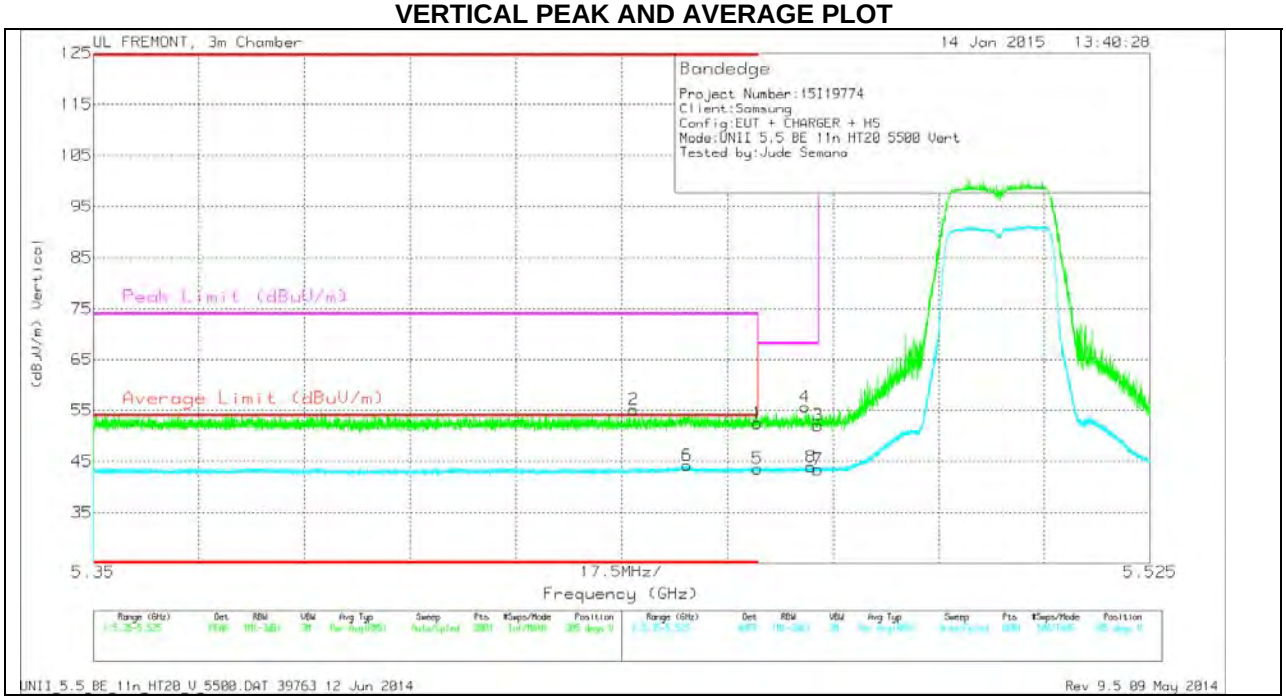
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.46	39.4	PK	34.5	-21.4	0	52.5	-	-	74	-21.5	305	302	V
2	* 5.439	42.1	PK	34.4	-21.4	0	55.1	-	-	74	-18.9	305	302	V
5	* 5.46	30.14	RMS	34.5	-21.4	.3	43.54	54	-10.46	-	-	305	302	V
6	* 5.448	30.78	RMS	34.5	-21.4	.3	44.18	54	-9.82	-	-	305	302	V
4	5.468	42.44	PK	34.5	-21.3	0	55.64	-	-	68.2	-12.56	305	302	V
8	5.469	30.4	RMS	34.5	-21.3	.3	43.9	-	-	-	-	305	302	V
3	5.47	38.85	PK	34.5	-21.3	0	52.05	-	-	68.2	-16.15	305	302	V
7	5.47	29.92	RMS	34.5	-21.3	.3	43.42	-	-	-	-	305	302	V

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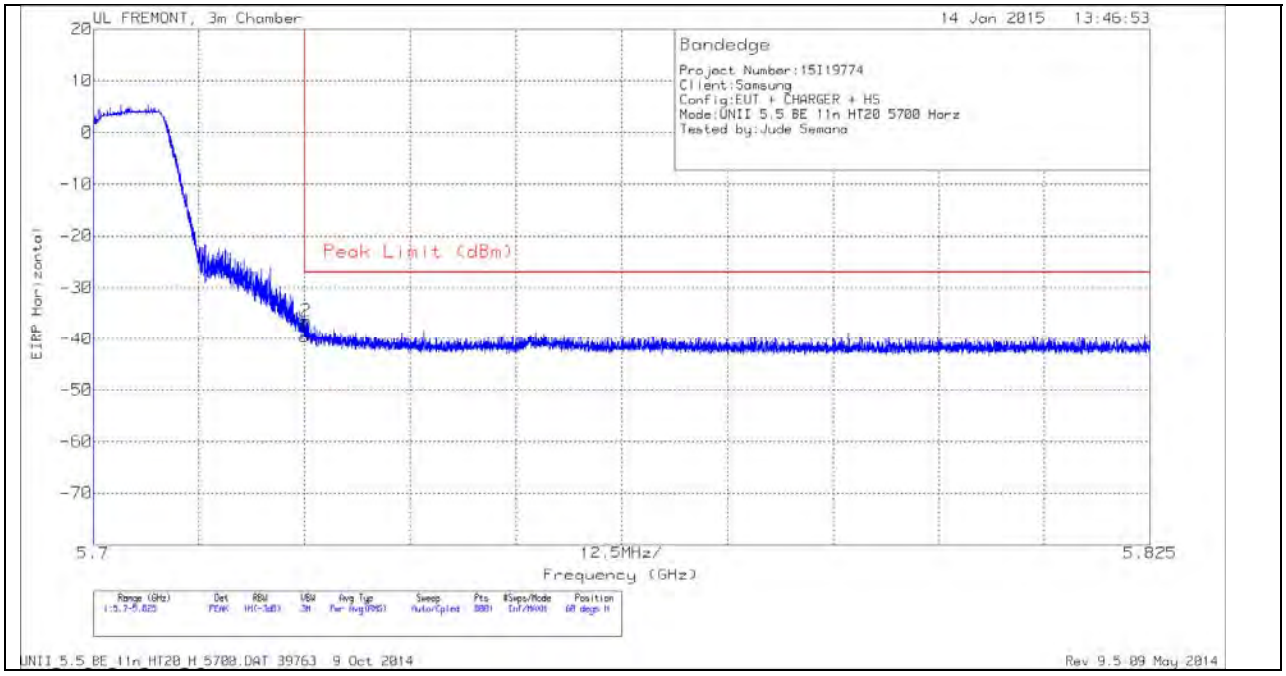
AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T711 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-65.49	PK	35.2	-21.1	11.8	0	-39.59	-27	-12.59	60	331	H
2	5.725	-62.32	PK	35.2	-21.1	11.8	0	-36.42	-27	-9.42	60	331	H

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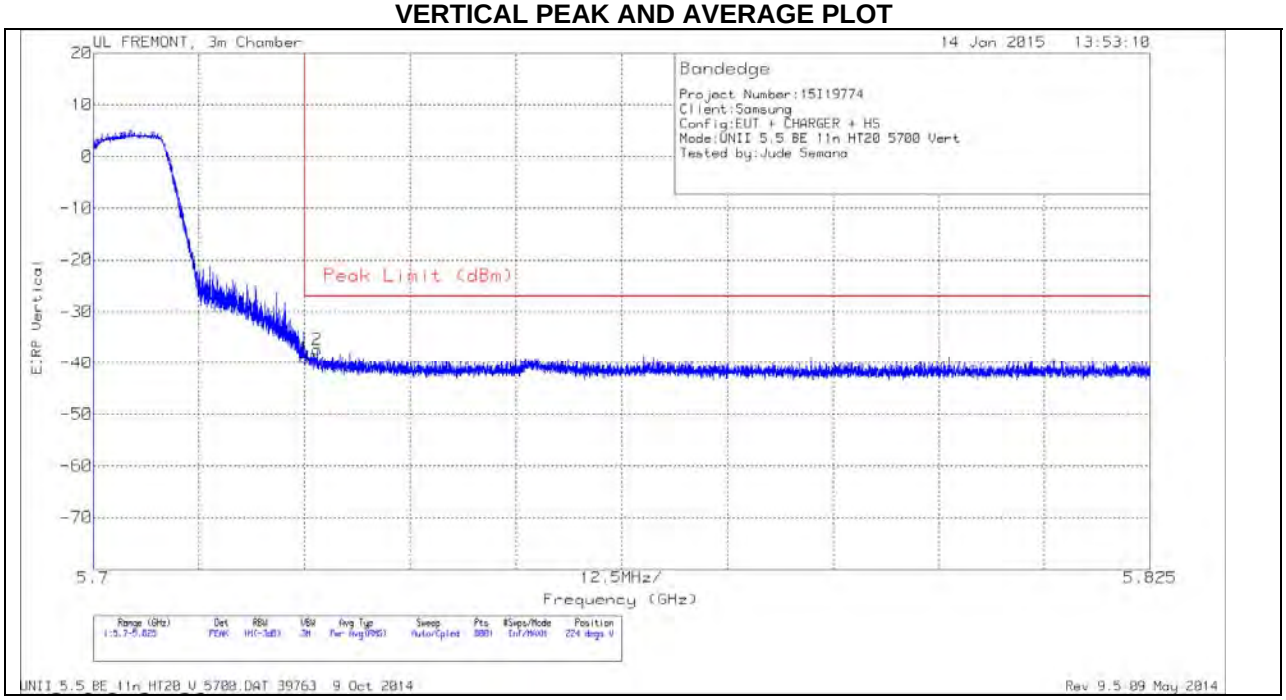
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T711 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-64.85	PK	35.2	-21.1	11.8	0	-38.95	-27	-11.95	224	292	V
2	5.726	-63.22	PK	35.2	-21.1	11.8	0	-37.32	-27	-10.32	224	292	V

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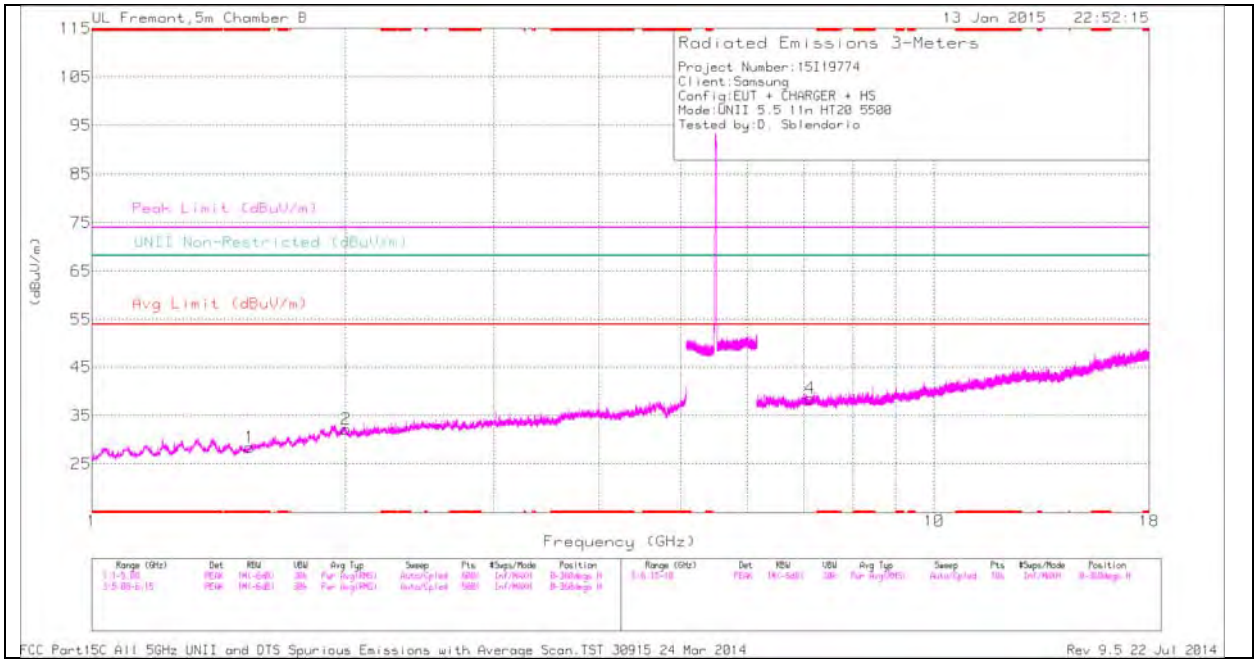
HARMONICS AND SPURIOUS EMISSIONS

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.

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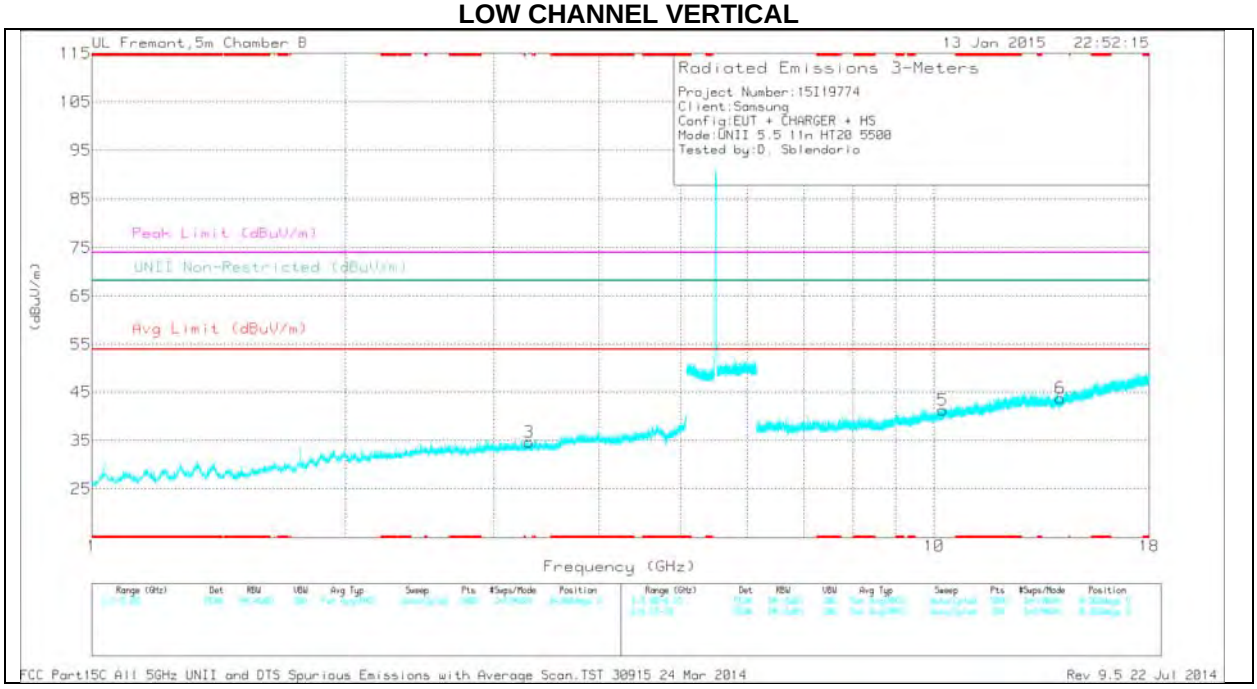
LOW CHANNEL VERTICAL



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LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.539	34.42	PK	28.1	-34.1	0	28.42	-	-	74	-45.58	-	-	0-360	199	H
2	2.002	33.87	PK	31.4	-33.1	0	32.17	-	-	-	-	68.2	-36.03	0-360	100	H
3	3.305	33.6	PK	32.8	-31.7	0	34.7	-	-	-	-	68.2	-33.5	0-360	102	V
4	7.126	31.41	PK	35.6	-28.5	0	38.51	-	-	-	-	68.2	-29.69	0-360	101	H
5	10.23	28.53	PK	37.1	-24.3	0	41.33	-	-	-	-	68.2	-26.87	0-360	199	V
6	14.132	27.12	PK	38.7	-22.1	0	43.72	-	-	-	-	68.2	-24.48	0-360	101	V

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

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.538	43.06	PK1	28.1	-34.1	0	37.06	-	-	74	-36.94	-	-	1	198	H
* 1.541	31.5	AD1	28.2	-34.1	.3	25.9	54	-28.1	-	-	-	-	1	198	H

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

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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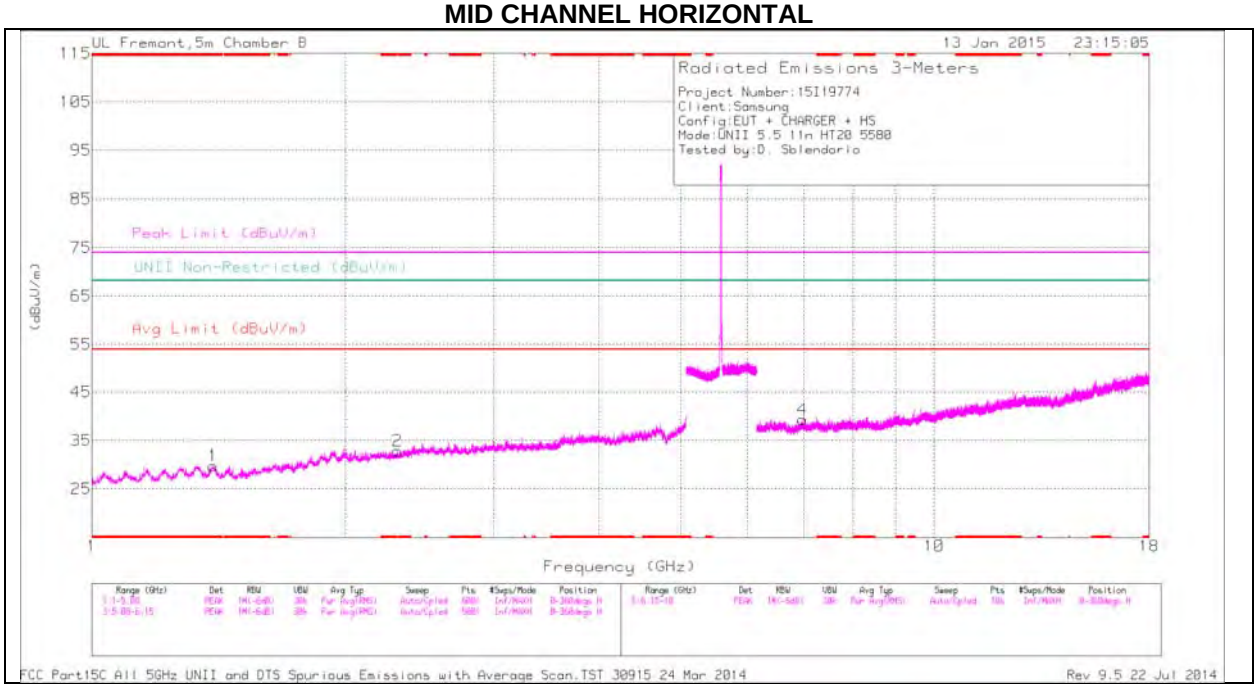
MID CHANNEL HORIZONTAL



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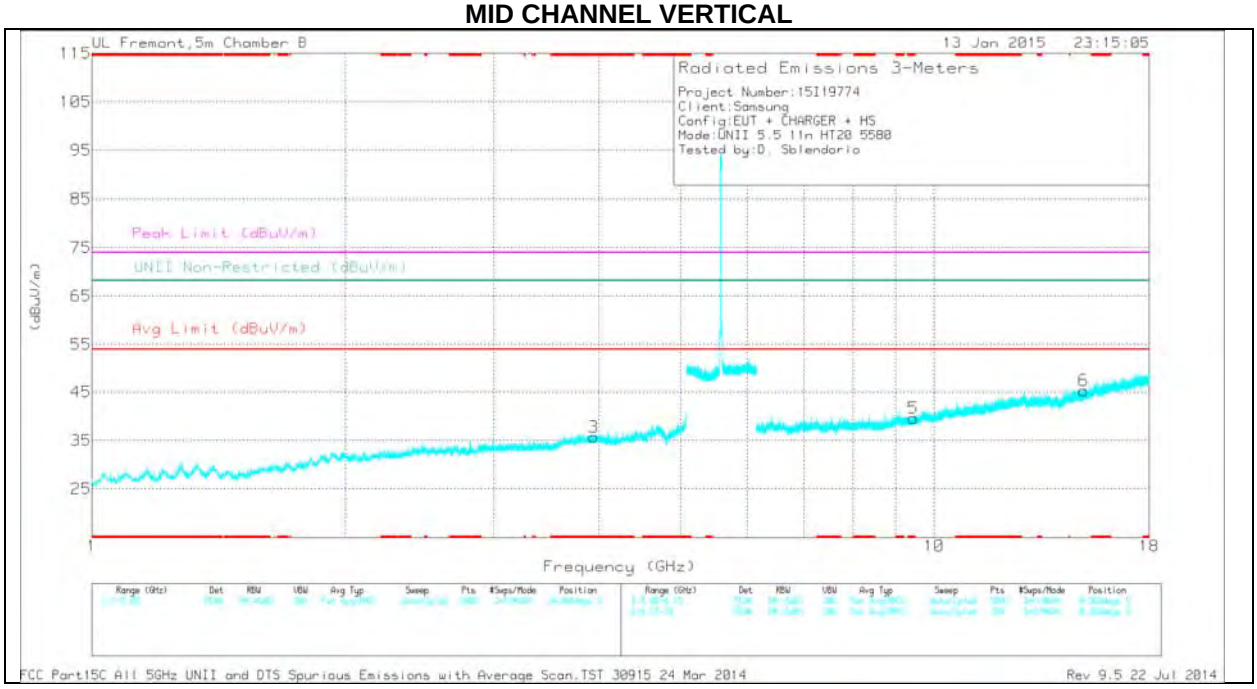
MID CHANNEL VERTICAL



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

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MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.394	34.99	PK	28.5	-33.7	0	29.79	-	-	74	-44.21	-	-	0-360	101	H
3	* 3.94	32.95	PK	33.7	-30.9	0	35.75	-	-	74	-38.25	-	-	0-360	199	V
5	* 9.436	27.84	PK	36.5	-24.7	0	39.64	-	-	74	-34.36	-	-	0-360	199	V
2	2.307	34.21	PK	31.7	-33.1	0	32.81	-	-	-	-	68.2	-35.39	0-360	199	H
4	6.973	31.28	PK	35.6	-27.5	0	39.38	-	-	-	-	68.2	-28.82	0-360	101	H
6	15.053	26.27	PK	39.7	-20.7	0	45.27	-	-	-	-	68.2	-22.93	0-360	199	V

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

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.393	42.86	PK1	28.5	-33.7	0	37.66	-	-	74	-36.34	-	-	0	100	H
* 1.394	31.99	AD1	28.5	-33.7	.3	27.09	54	-26.91	-	-	-	-	0	100	H

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

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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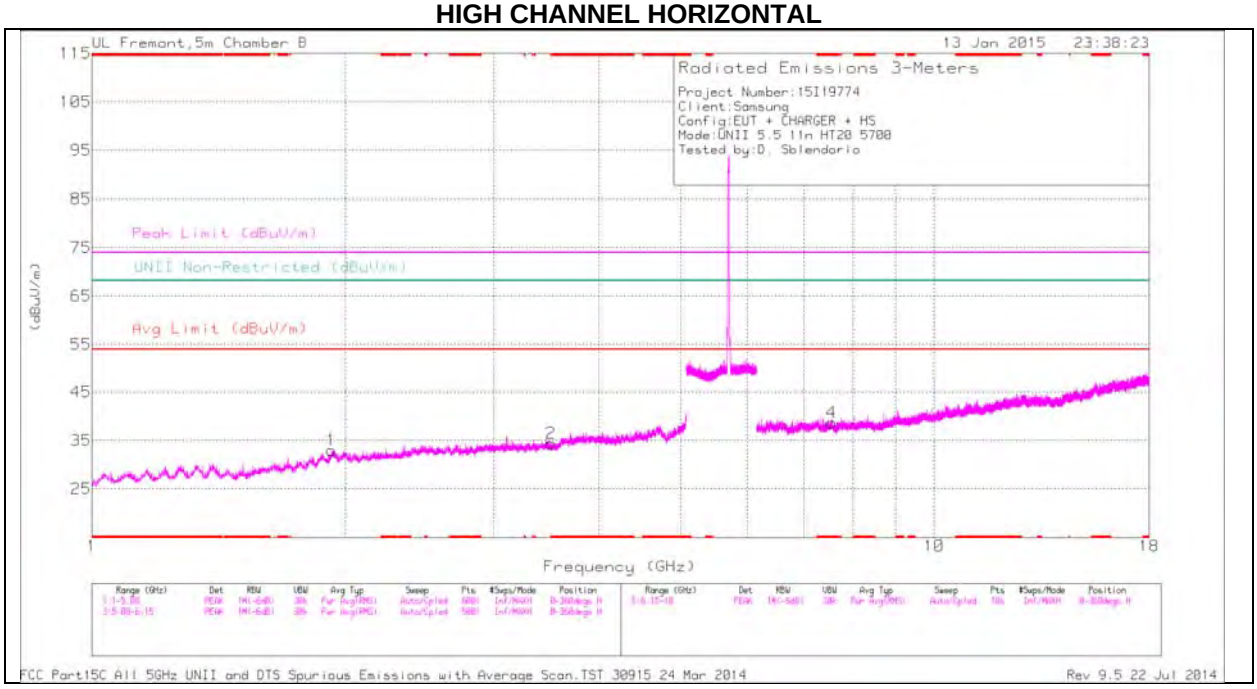
HIGH CHANNEL HORIZONTAL



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

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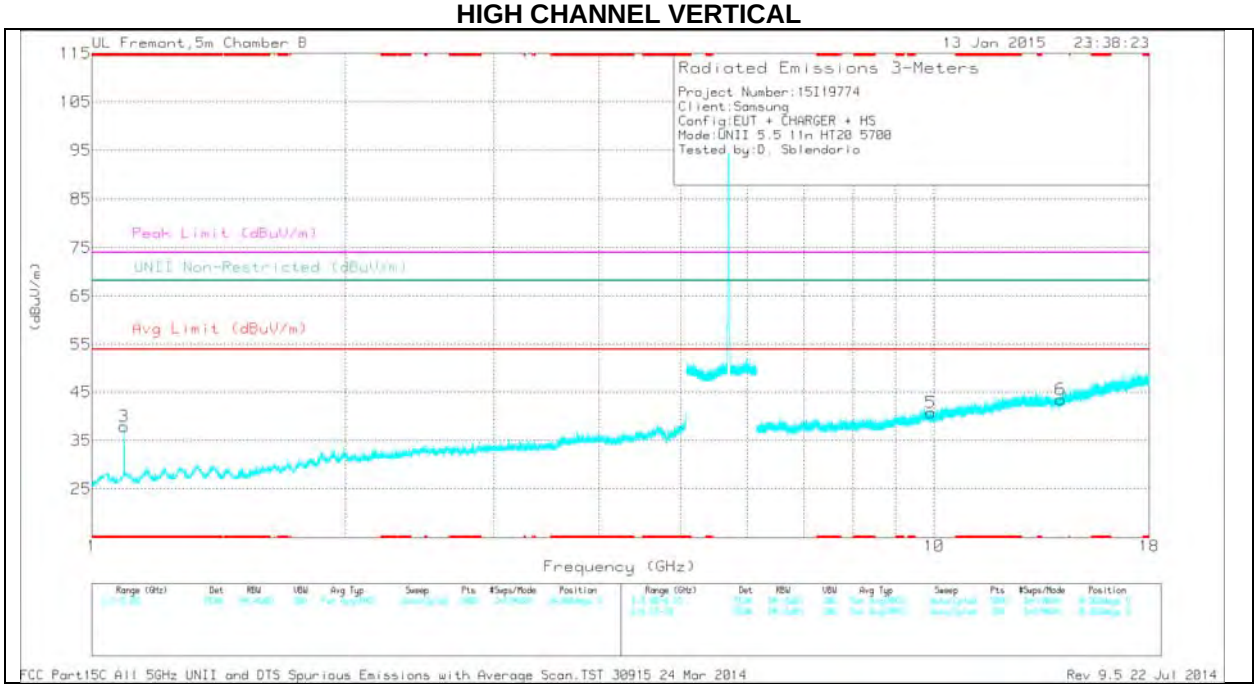
HIGH CHANNEL VERTICAL



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

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HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 3.509	33.38	PK	32.8	-31.8	0	34.38	-	-	74	-39.62	-	-	0-360	100	H
3	* 1.092	44.88	PK	27.3	-34.3	0	37.88	-	-	74	-36.12	-	-	0-360	101	V
4	* 7.552	29.7	PK	35.6	-26.6	0	38.7	-	-	74	-35.3	-	-	0-360	199	H
1	1.926	34.69	PK	31.1	-32.8	0	32.99	-	-	-	-	68.2	-35.21	0-360	200	H
5	9.904	28.42	PK	37	-24.7	0	40.72	-	-	-	-	68.2	-27.48	0-360	199	V
6	14.133	26.87	PK	38.7	-22.1	0	43.47	-	-	-	-	68.2	-24.73	0-360	199	V

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

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.09	43.55	PK1	27.3	-34.3	0	36.55	-	-	74	-37.45	-	-	1	101	V
* 1.093	32.12	AD1	27.4	-34.3	.3	25.52	54	-28.48	-	-	-	-	1	101	V

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

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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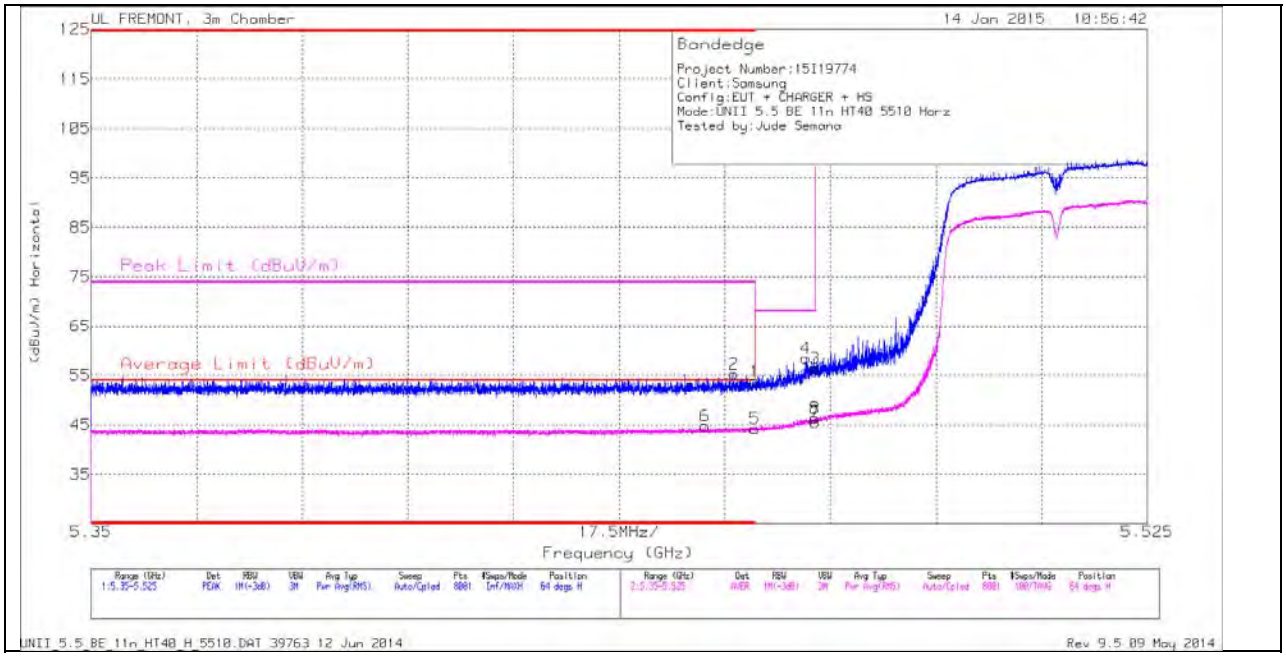
11.3.3. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.5 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (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	* 5.46	40.69	PK	34.5	-21.4	0	53.79	-	-	74	-20.21	64	268	H
2	* 5.457	42.13	PK	34.5	-21.4	0	55.23	-	-	74	-18.77	64	268	H
5	* 5.46	30.43	RMS	34.5	-21.4	.68	44.23	54	-9.77	-	-	64	268	H
6	* 5.452	30.97	RMS	34.5	-21.4	.68	44.77	54	-9.23	-	-	64	268	H
4	5.468	45.21	PK	34.5	-21.3	0	58.41	-	-	68.2	-9.79	64	268	H
3	5.47	43.19	PK	34.5	-21.3	0	56.39	-	-	68.2	-11.81	64	268	H
7	5.47	31.65	RMS	34.5	-21.3	.68	45.55	-	-	-	-	64	268	H
8	5.47	32.42	RMS	34.5	-21.3	.68	46.32	-	-	-	-	64	268	H

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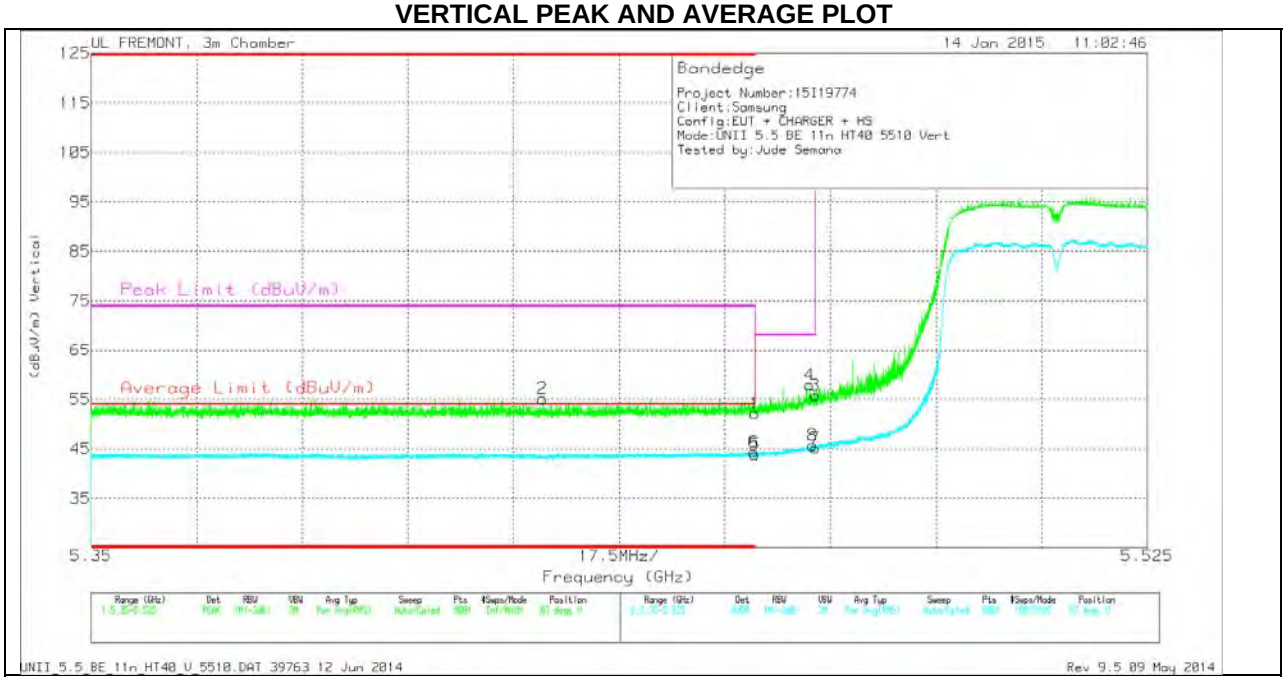
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (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	* 5.46	39.09	PK	34.5	-21.4	0	52.19	-	-	74	-21.81	67	321	V
2	* 5.425	42.11	PK	34.4	-21.4	0	55.11	-	-	74	-18.89	67	321	V
5	* 5.46	30.08	RMS	34.5	-21.4	.68	43.88	54	-10.12	-	-	67	321	V
6	* 5.46	30.62	RMS	34.5	-21.4	.68	44.42	54	-9.58	-	-	67	321	V
4	5.469	44.68	PK	34.5	-21.3	0	57.88	-	-	68.2	-10.32	67	321	V
3	5.47	42.62	PK	34.5	-21.3	0	55.82	-	-	68.2	-12.38	67	321	V
7	5.47	31.3	RMS	34.5	-21.3	.68	45.2	-	-	-	-	67	321	V
8	5.47	31.79	RMS	34.5	-21.3	.68	45.69	-	-	-	-	67	321	V

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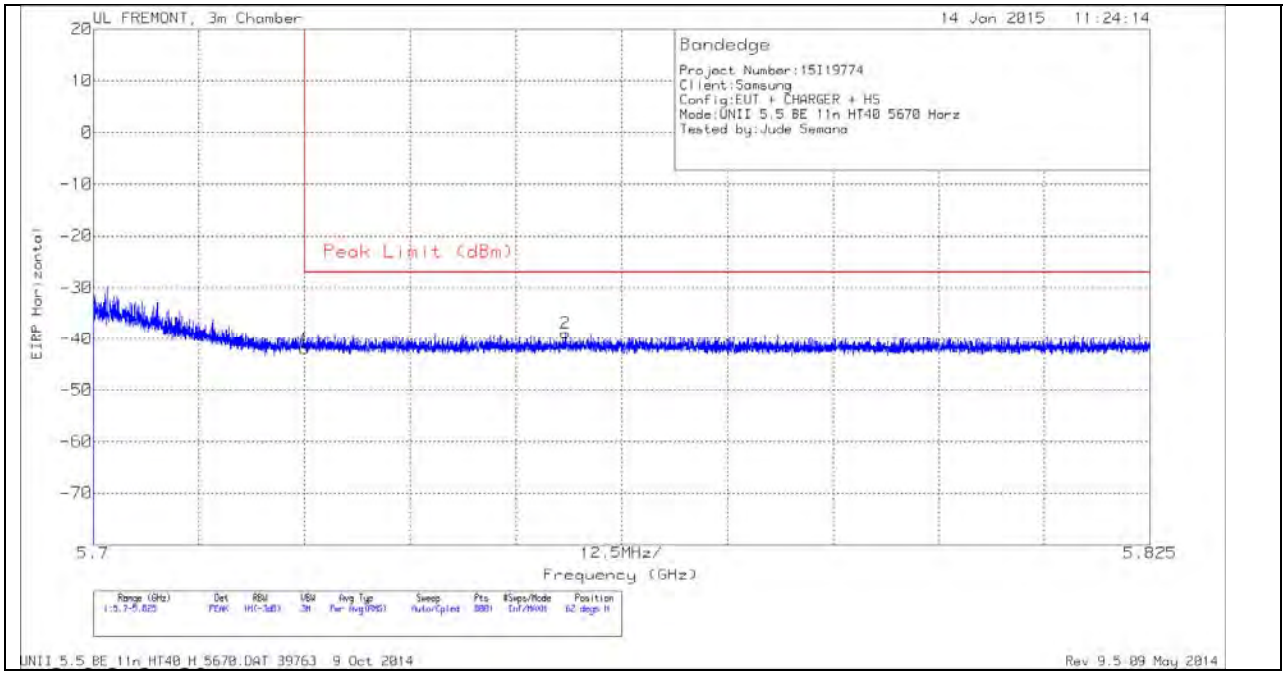
AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T711 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-67.83	PK	35.2	-21.1	11.8	0	-41.93	-27	-14.93	62	396	H
2	5.756	-64.88	PK	35.3	-21.1	11.8	0	-38.88	-27	-11.88	62	396	H

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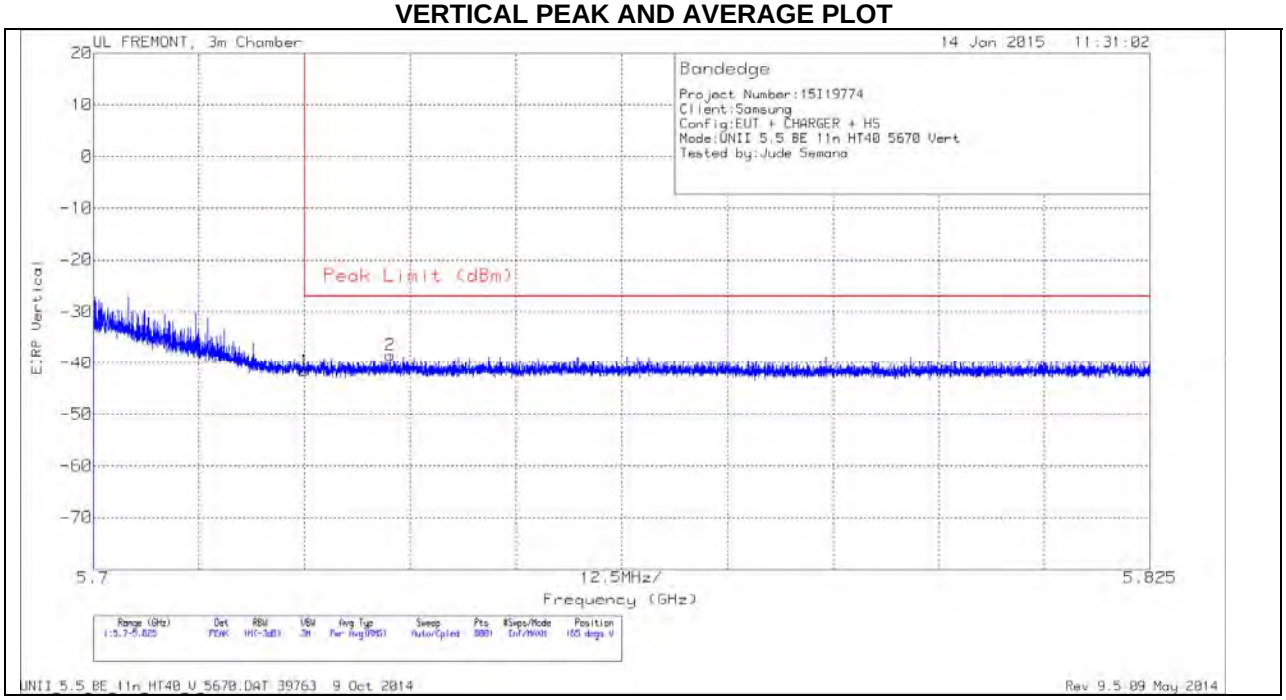
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T711 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-67.4	PK	35.2	-21.1	11.8	0	-41.5	-27	-14.5	165	330	V
2	5.735	-64.33	PK	35.2	-21.1	11.8	0	-38.43	-27	-11.43	165	330	V

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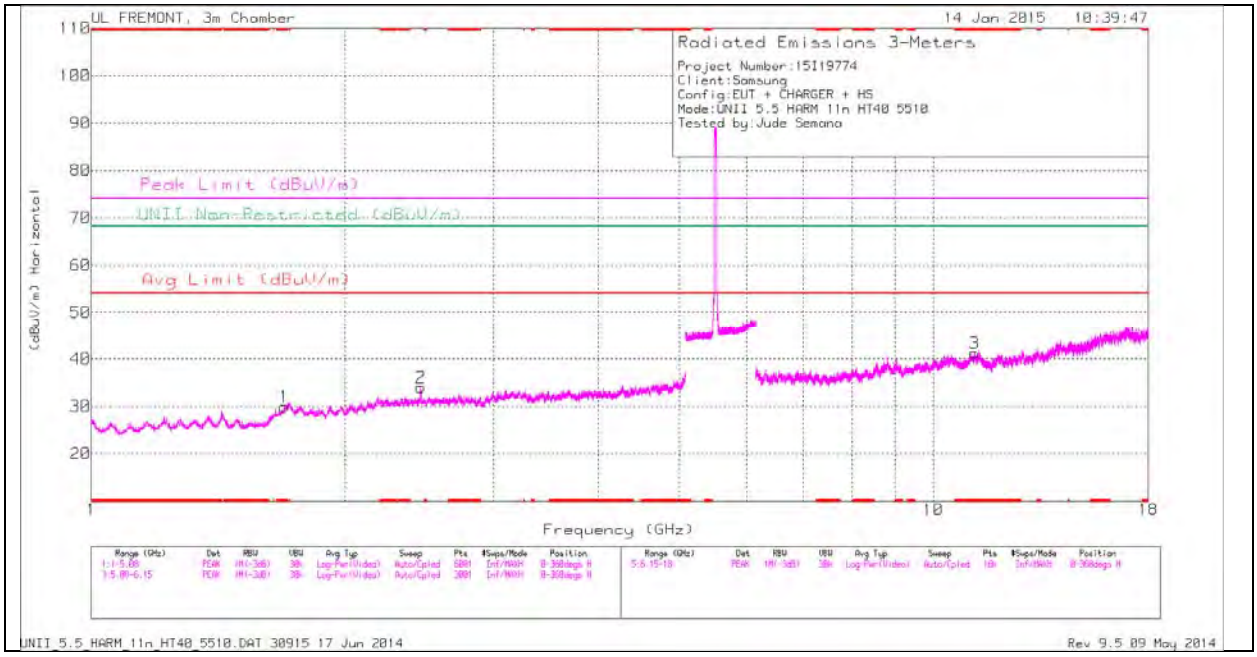
HARMONICS AND SPURIOUS EMISSIONS

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.

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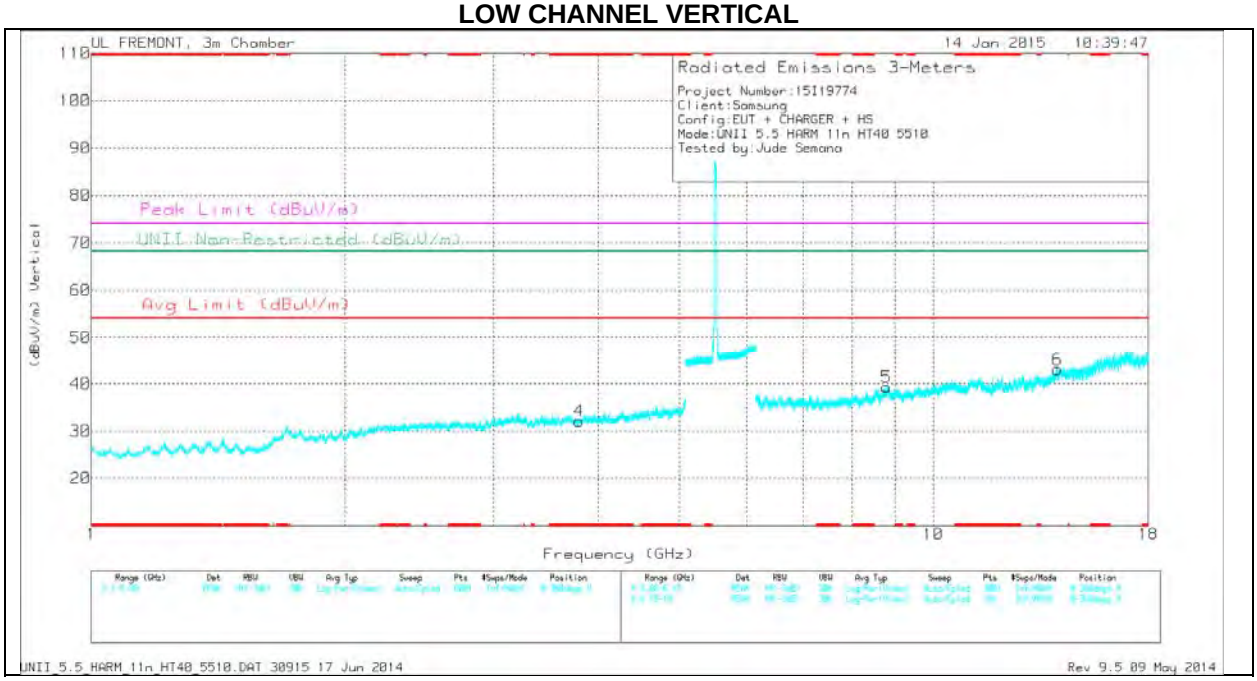
LOW CHANNEL VERTICAL



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

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LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr /Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.694	31.67	PK	30.5	-32.2	29.97	-	-	74	-44.03	-	-	0-360	200	H
4	* 3.794	30.72	PK	32.9	-31.5	32.12	-	-	74	-41.88	-	-	0-360	200	V
3	* 11.187	28.82	PK	38.3	-25.9	41.22	-	-	74	-32.78	-	-	0-360	100	H
2	2.461	34.36	PK	32.1	-32.5	33.96	-	-	-	-	68.2	-34.24	0-360	200	H
5	8.795	28.61	PK	36.6	-25.9	39.31	-	-	-	-	68.2	-28.89	0-360	200	V
6	14.043	30.85	PK	39.6	-27.4	43.05	-	-	-	-	68.2	-25.15	0-360	200	V

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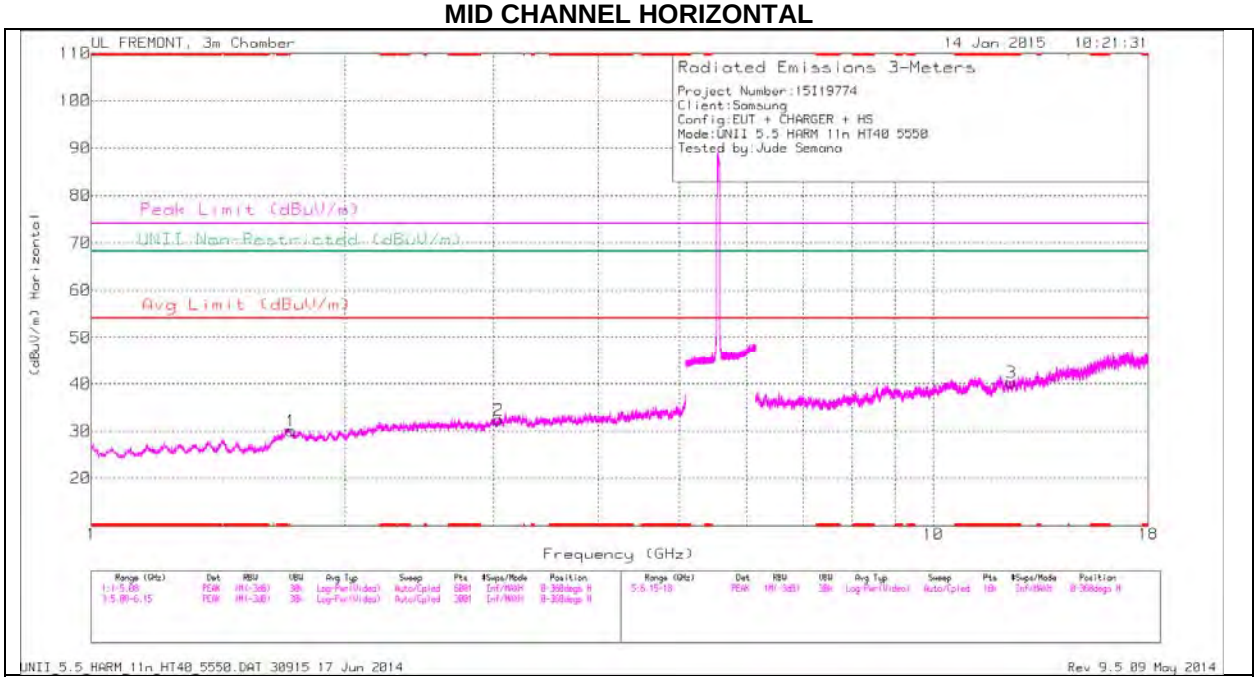
MID CHANNEL HORIZONTAL



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

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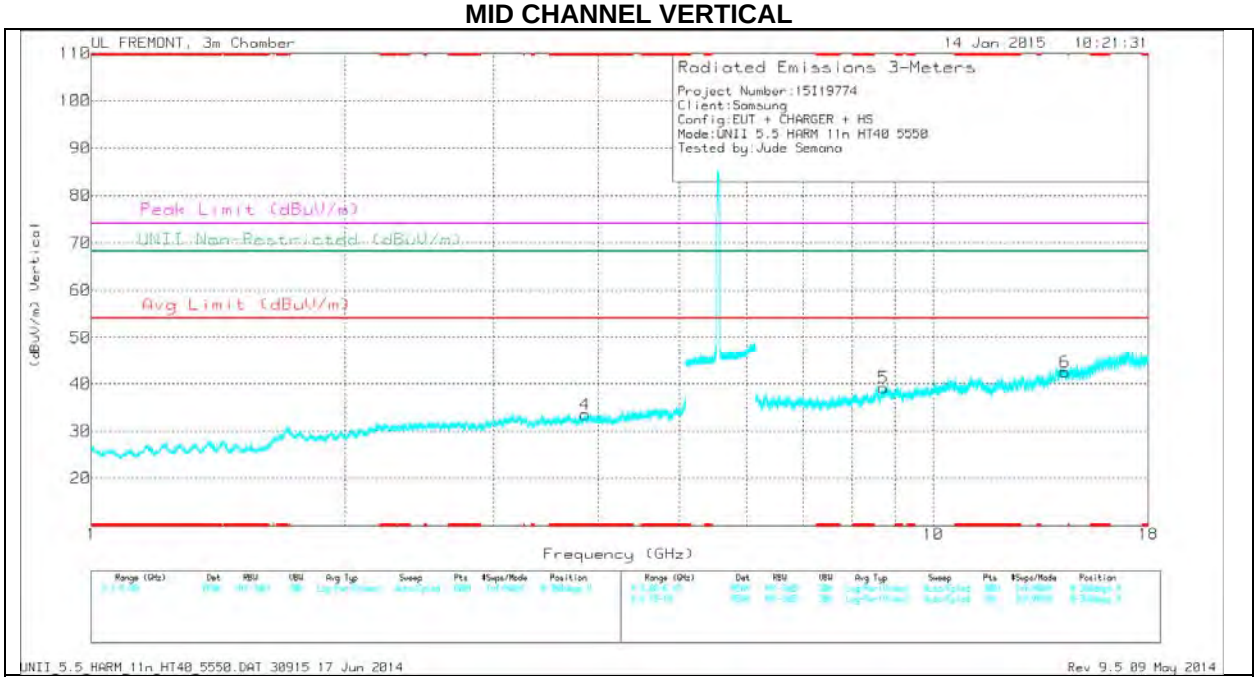
MID CHANNEL VERTICAL



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

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MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr /Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 3.857	31.43	PK	33	-30.9	33.53	-	-	74	-40.47	-	-	0-360	200	V
3	* 12.371	28.46	PK	38.6	-26.8	40.26	-	-	74	-33.74	-	-	0-360	100	H
1	1.728	31.55	PK	30.6	-32.1	30.05	-	-	-	-	68.2	-38.15	0-360	100	H
2	3.045	31.4	PK	32.8	-31.8	32.4	-	-	-	-	68.2	-35.8	0-360	100	H
5	8.719	30.24	PK	36.5	-27.6	39.14	-	-	-	-	68.2	-29.06	0-360	200	V
6	14.323	30.01	PK	40	-27.5	42.51	-	-	-	-	68.2	-25.69	0-360	100	V

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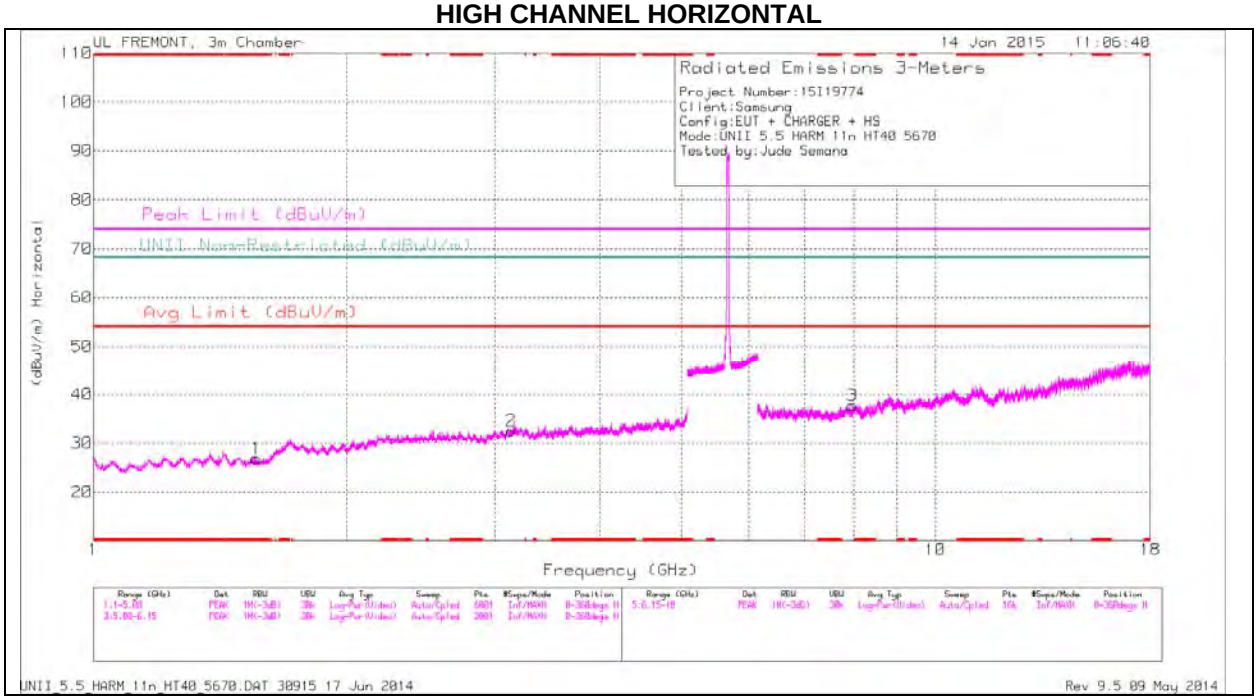
HIGH CHANNEL HORIZONTAL



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

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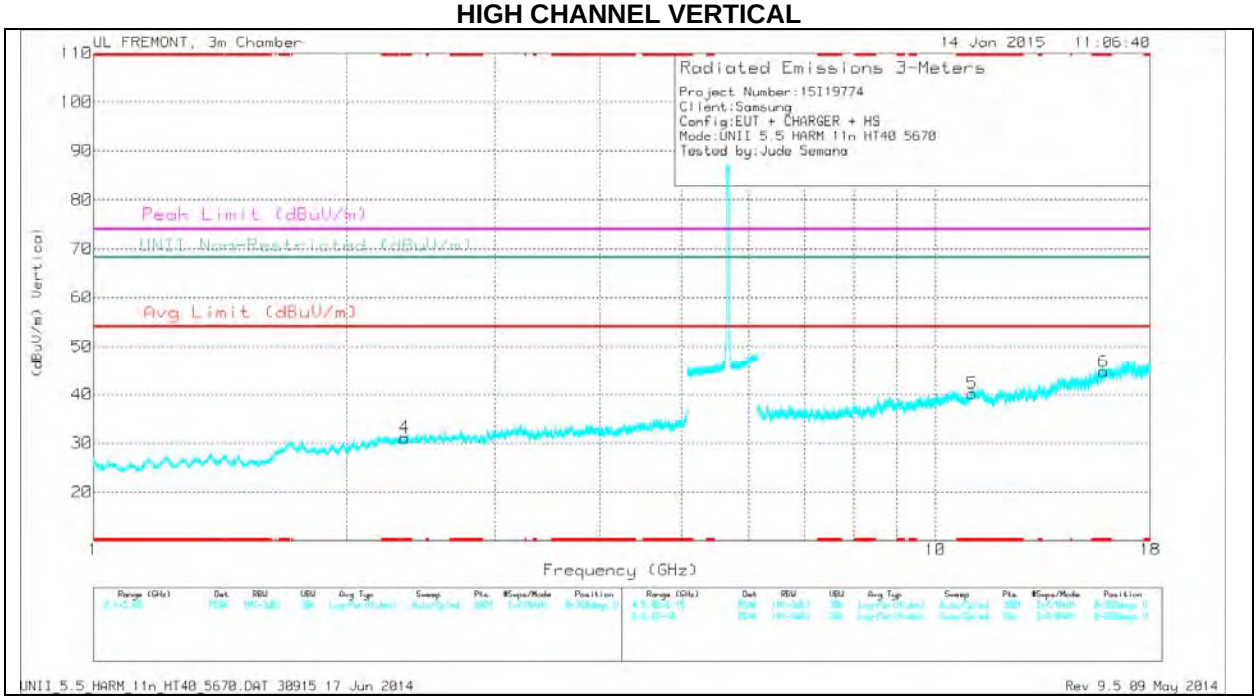
HIGH CHANNEL VERTICAL



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

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HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr /Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.562	32.58	PK	27.7	-33.4	26.88	-	-	74	-47.12	-	-	0-360	200	H
4	* 2.343	31.71	PK	32	-32.6	31.11	-	-	74	-42.89	-	-	0-360	200	V
5	* 11.061	26.97	PK	38.3	-25.1	40.17	-	-	74	-33.83	-	-	0-360	200	V
6	* 15.84	29.4	PK	41.7	-26.4	44.7	-	-	74	-29.3	-	-	0-360	200	V
2	3.136	31.3	PK	33	-31.8	32.5	-	-	-	-	68.2	-35.7	0-360	100	H
3	7.973	30.44	PK	35.9	-28.6	37.74	-	-	-	-	68.2	-30.46	0-360	100	H

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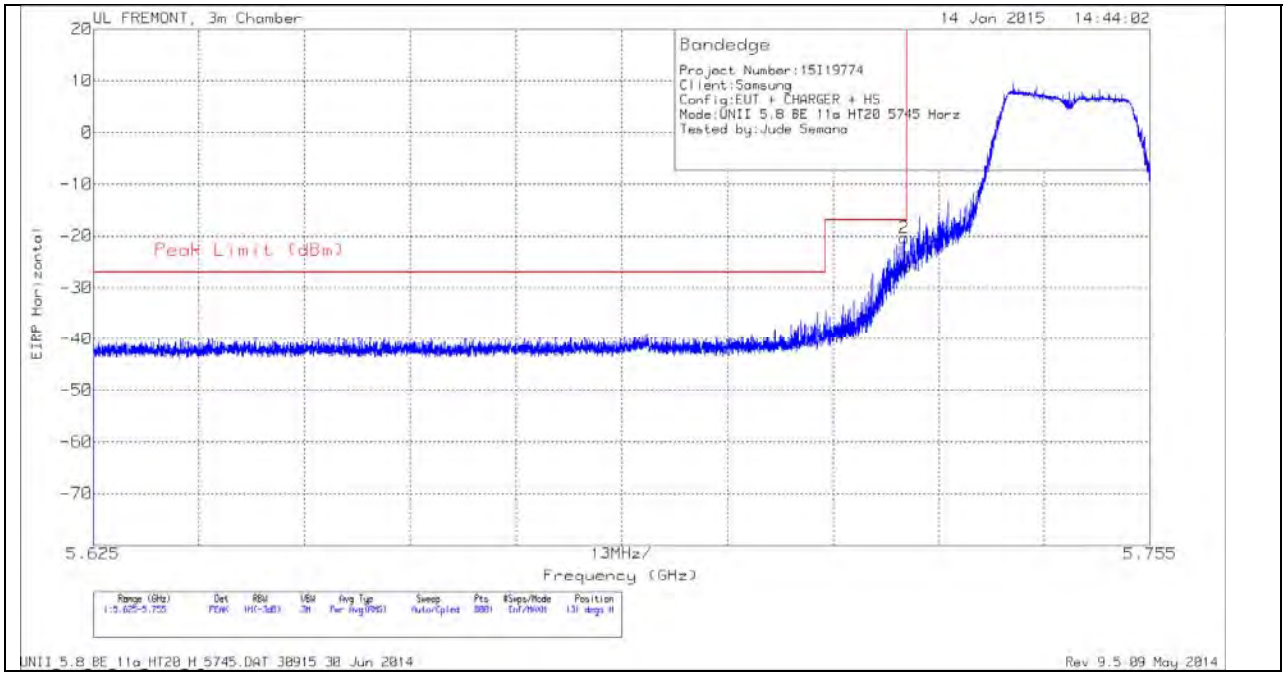
11.4. 5.8 GHz

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

AUTHORIZED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T711 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-51.99	PK	35.2	-21.1	11.8	0	-26.09	-17	-9.09	131	286	H
2	5.725	-46.27	PK	35.2	-21.1	11.8	0	-20.37	-17	-3.37	131	286	H

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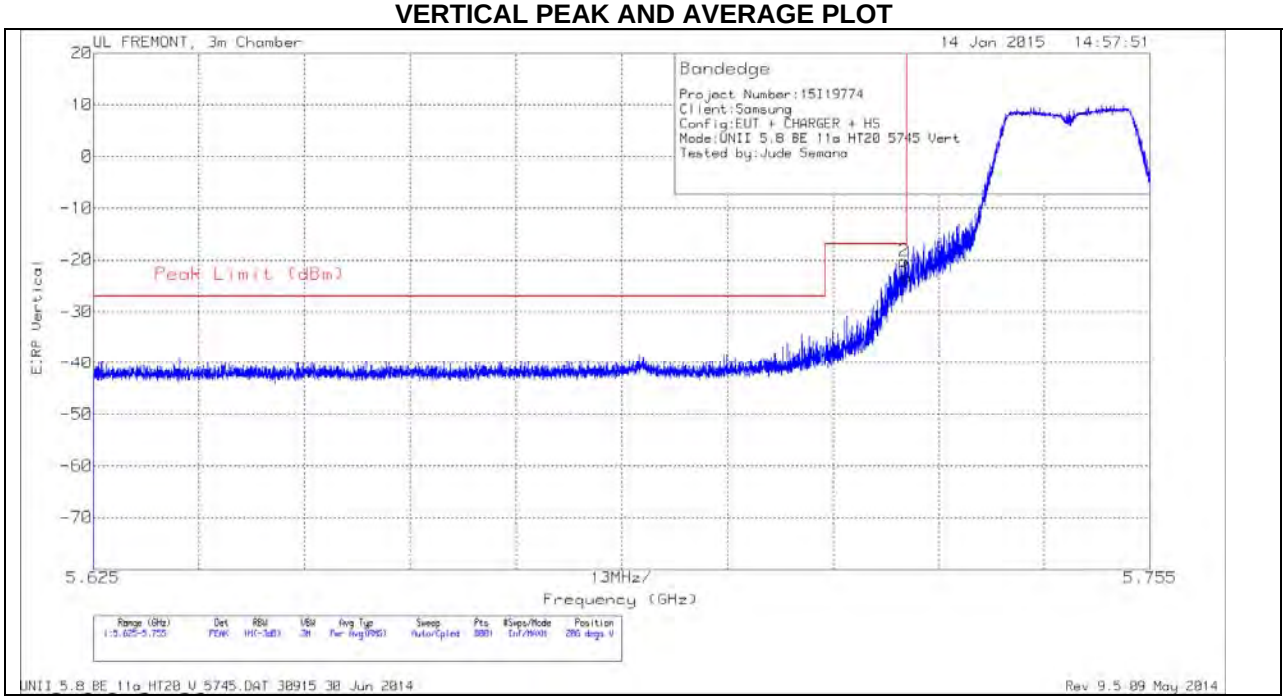
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T711 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	-49.15	PK	35.2	-21.1	11.8	0	-23.25	-17	-6.25	206	288	V
2	5.725	-46.14	PK	35.2	-21.1	11.8	0	-20.24	-17	-3.24	206	288	V

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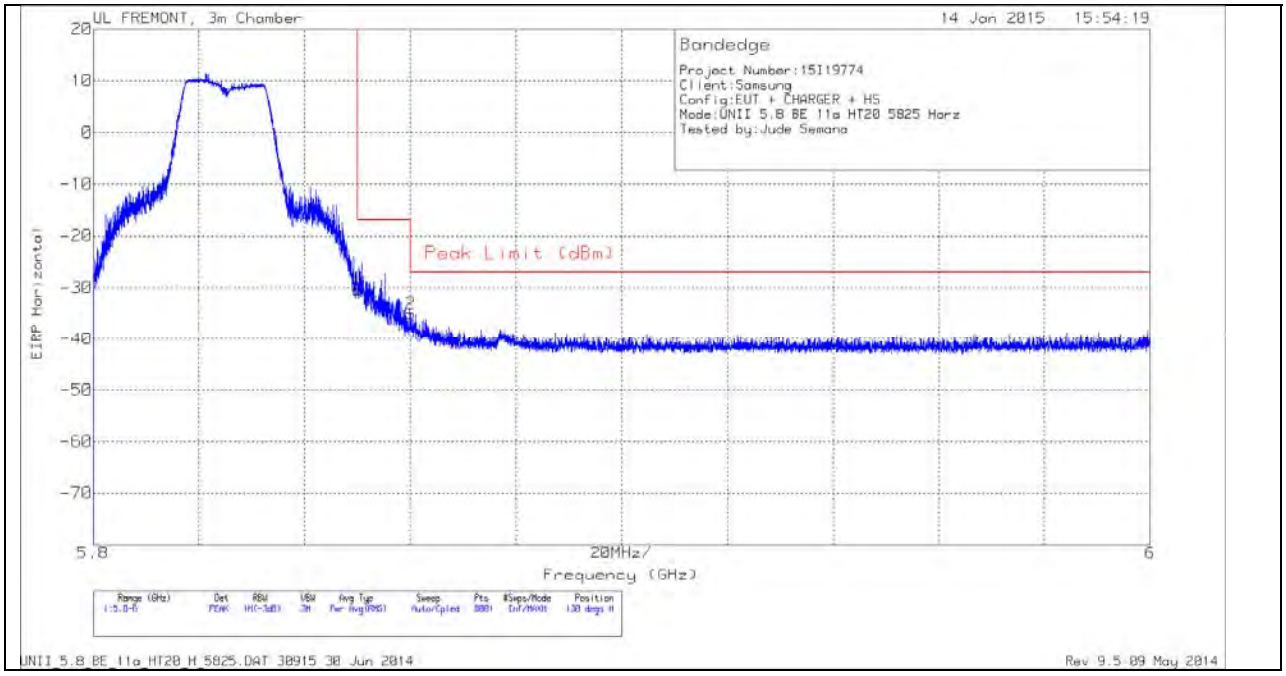
AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T711 (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	-56.3	PK	35.4	-21.3	11.8	0	-30.4	-17	-13.4	130	214	H
2	5.86	-60.96	PK	35.4	-21.3	11.8	0	-35.06	-27	-8.06	130	214	H

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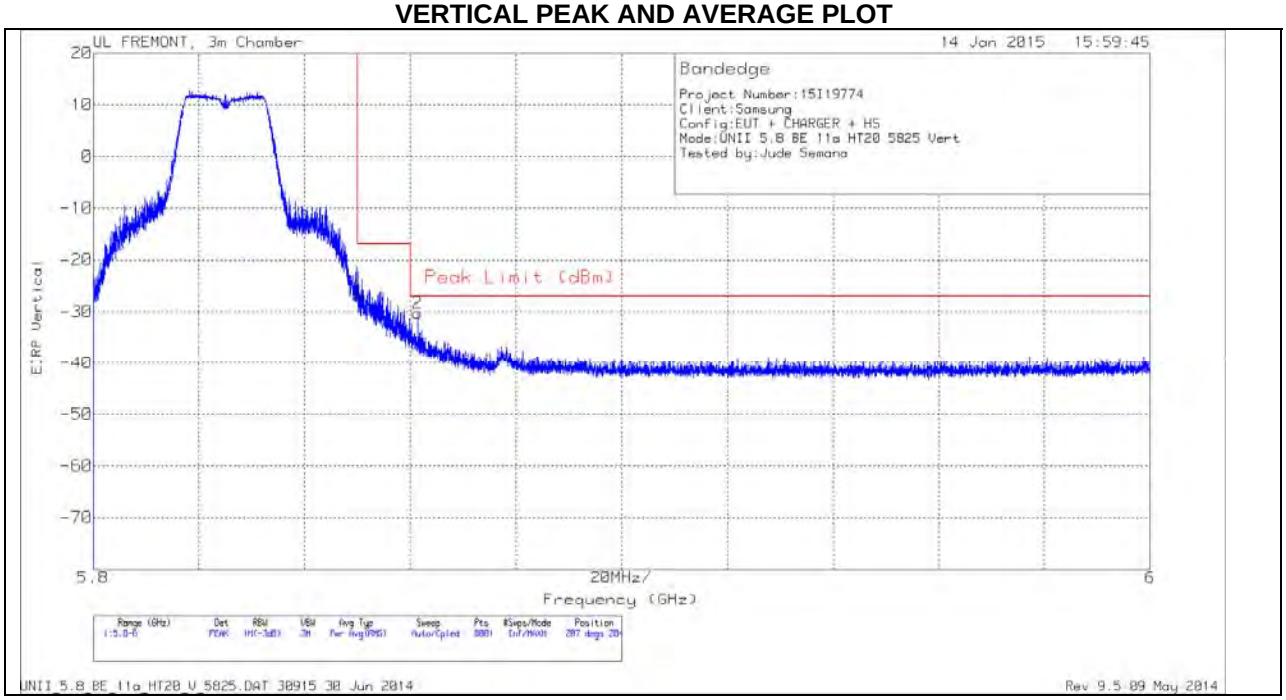
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T711 (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	-52.82	PK	35.4	-21.3	11.8	0	-26.92	-17	-9.92	207	284	V
2	5.861	-56.19	PK	35.4	-21.3	11.8	0	-30.29	-27	-3.29	207	284	V

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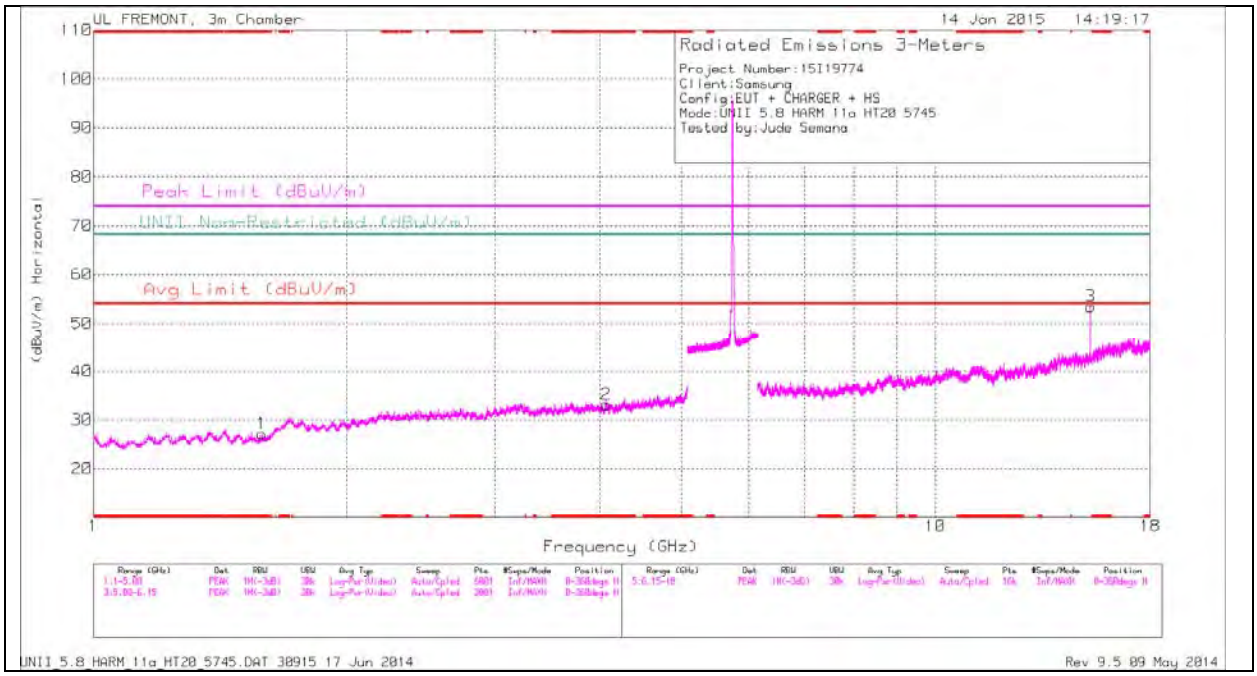
HARMONICS AND SPURIOUS EMISSIONS

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.

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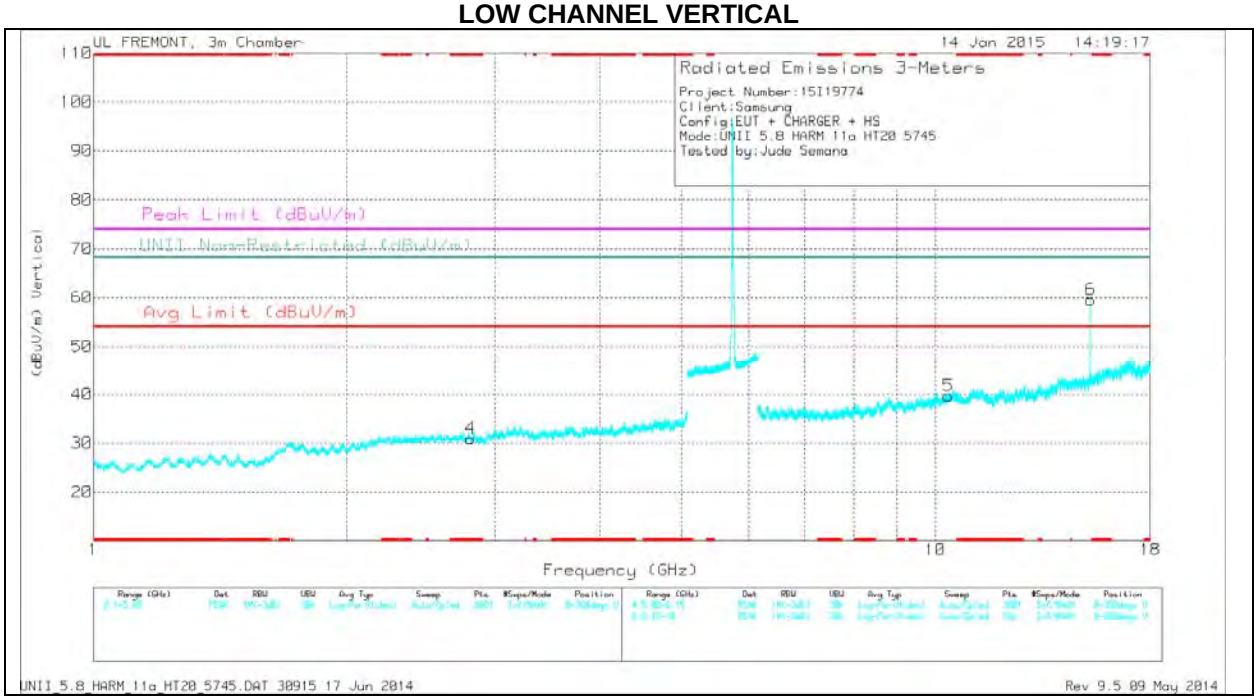
LOW CHANNEL VERTICAL



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

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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	* 1.586	32.89	PK	27.7	-33.4	0	27.19	-	-	74	-46.81	-	-	0-360	200	H
2	* 4.067	31.19	PK	33.2	-31.2	0	33.19	-	-	74	-40.81	-	-	0-360	100	H
4	* 2.806	31.15	PK	32.3	-32.5	0	30.95	-	-	74	-43.05	-	-	0-360	200	V
5	10.365	27.03	PK	38	-25.3	0	39.73	-	-	-	-	68.2	-28.47	0-360	100	V
3	15.292	40.06	PK	40.5	-27.1	0	53.46	-	-	-	-	68.2	-14.74	0-360	200	H
6	15.292	46.17	PK	40.5	-27.1	0	59.57	-	-	-	-	68.2	-8.63	0-360	200	V

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

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
15.292	48.4	PK1	40.5	-27.1	0	61.8	-	-	-	-	68.2	-6.4	116	200	V
15.292	45.3	AD1	40.5	-27.1	.3	59	-	-	-	-	-	-	116	200	V

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

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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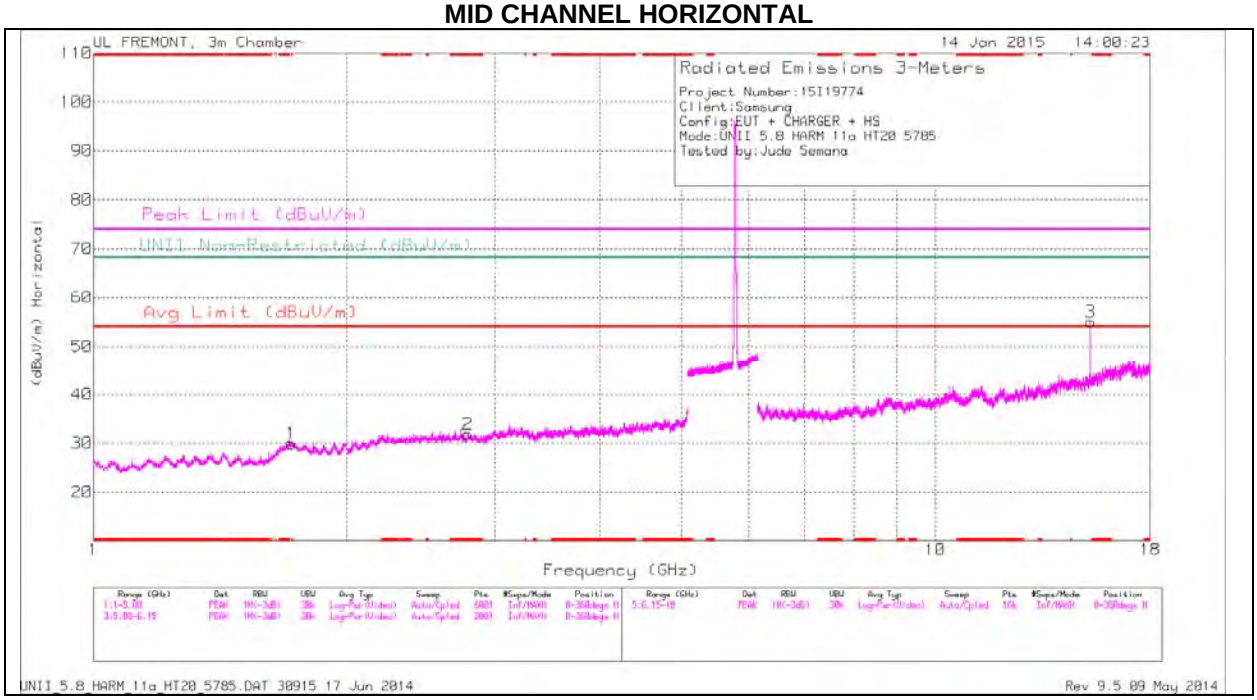
MID CHANNEL HORIZONTAL



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

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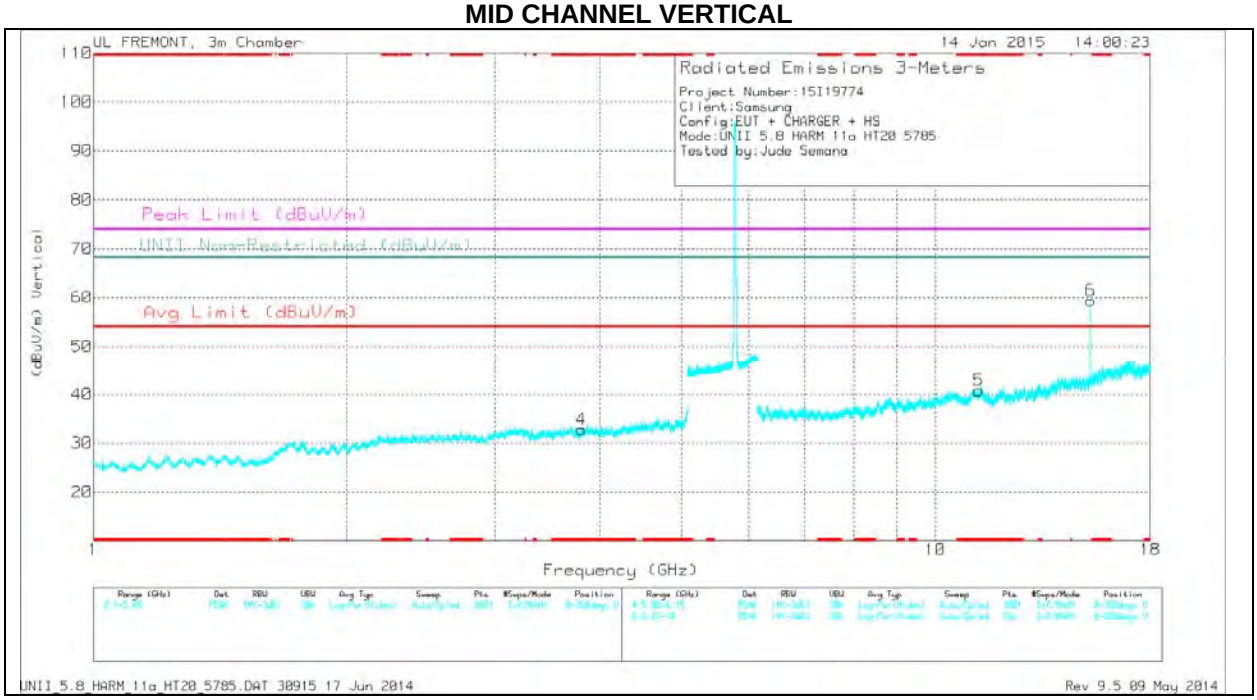
MID CHANNEL VERTICAL



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

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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
2	* 2.785	31.84	PK	32.4	-32.4	0	31.84	-	-	74	-42.16	-	-	0-360	200	H
4	* 3.8	31.51	PK	32.9	-31.6	0	32.81	-	-	74	-41.19	-	-	0-360	100	V
5	* 11.261	28.19	PK	38.3	-25.7	0	40.79	-	-	74	-33.21	-	-	0-360	200	V
1	1.718	31.3	PK	30.6	-32	0	29.9	-	-	-	-	68.2	-38.3	0-360	200	H
3	15.291	41.6	PK	40.5	-27.1	0	55	-	-	-	-	68.2	-13.2	0-360	200	H
6	15.291	45.95	PK	40.5	-27.1	0	59.35	-	-	-	-	68.2	-8.85	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/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
15.291	48.05	PK1	40.5	-27.1	0	61.45	-	-	-	-	68.2	-6.75	117	166	V
15.291	44.95	AD1	40.5	-27.1	.3	58.65	-	-	-	-	-	-	117	166	V

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

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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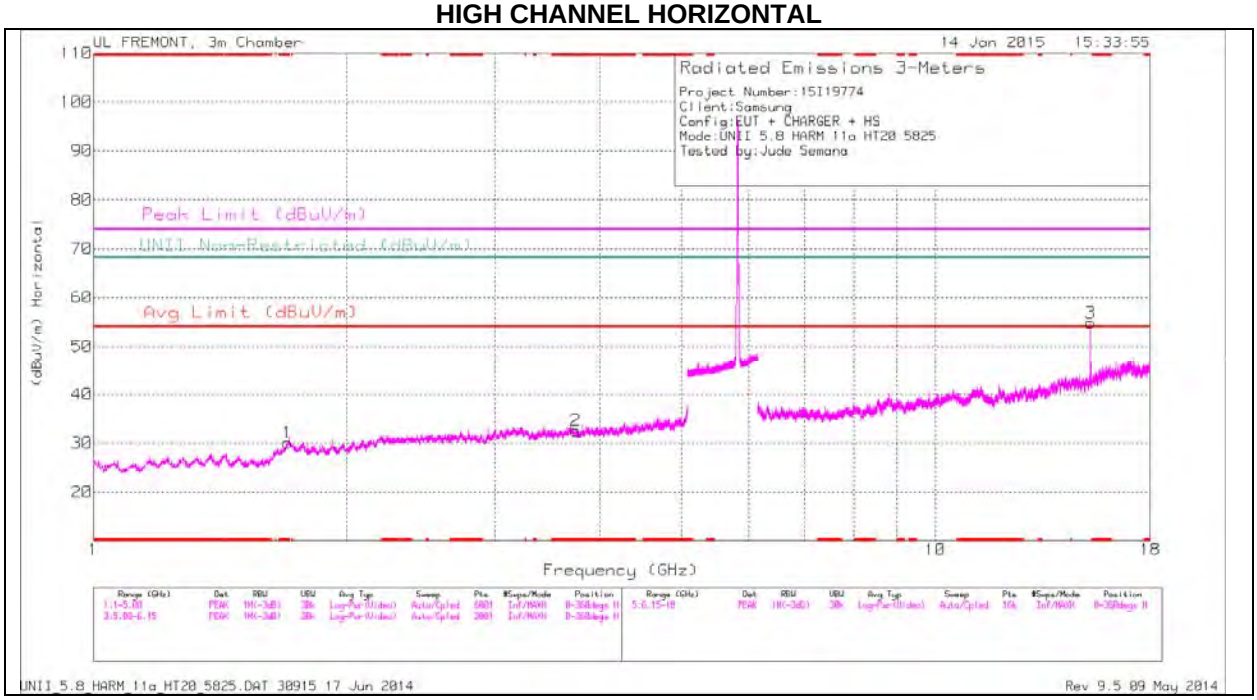
HIGH CHANNEL HORIZONTAL



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

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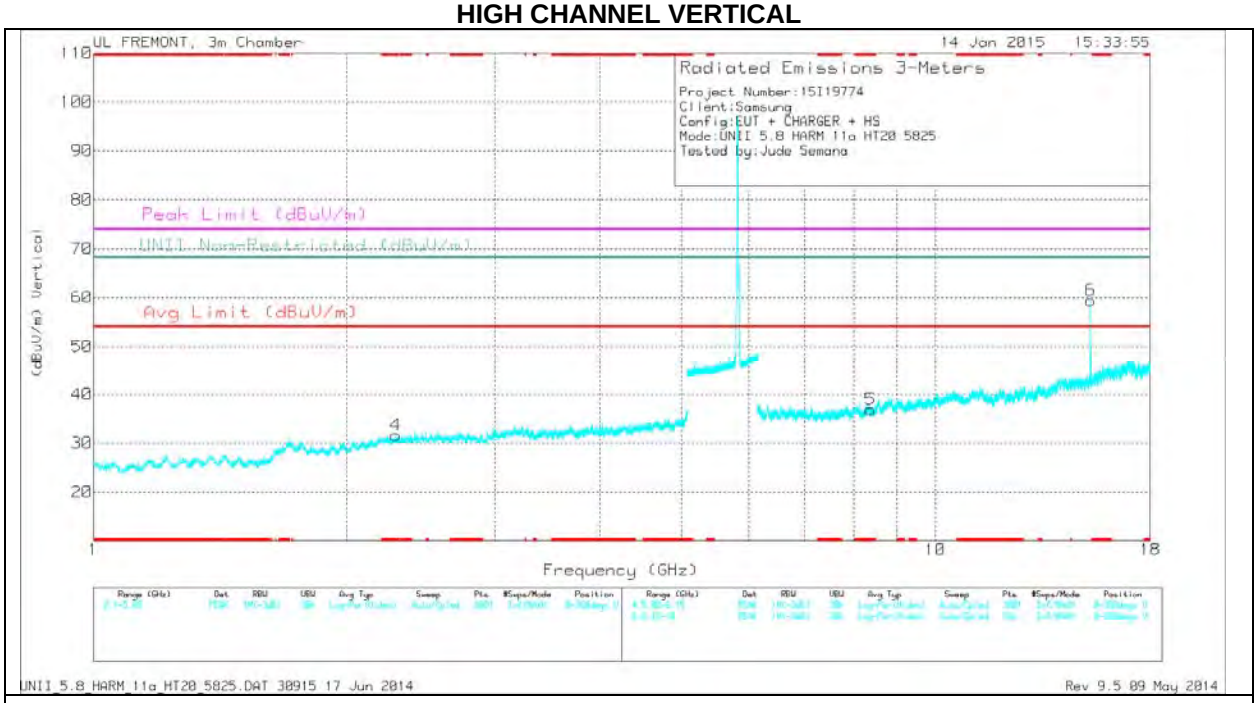
HIGH CHANNEL VERTICAL



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

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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	* 1.701	31.61	PK	30.7	-32.2	0	30.11	-	-	74	-43.89	-	-	0-360	200	H
2	* 3.742	31.05	PK	32.9	-31.4	0	32.55	-	-	74	-41.45	-	-	0-360	200	H
4	* 2.289	32.04	PK	31.9	-32.3	0	31.64	-	-	74	-42.36	-	-	0-360	200	V
5	* 8.377	28.11	PK	36.1	-27.3	0	36.91	-	-	74	-37.09	-	-	0-360	100	V
3	15.294	41.4	PK	40.5	-27.1	0	54.8	-	-	-	-	68.2	-13.4	0-360	200	H
6	15.294	46.01	PK	40.5	-27.1	0	59.41	-	-	-	-	68.2	-8.79	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/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
15.294	48.29	PK1	40.5	-27.1	0	61.69	-	-	-	-	68.2	-6.51	118	199	V
15.294	45.1	AD1	40.5	-27.1	.3	58.8	-	-	-	-	-	-	118	199	V

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

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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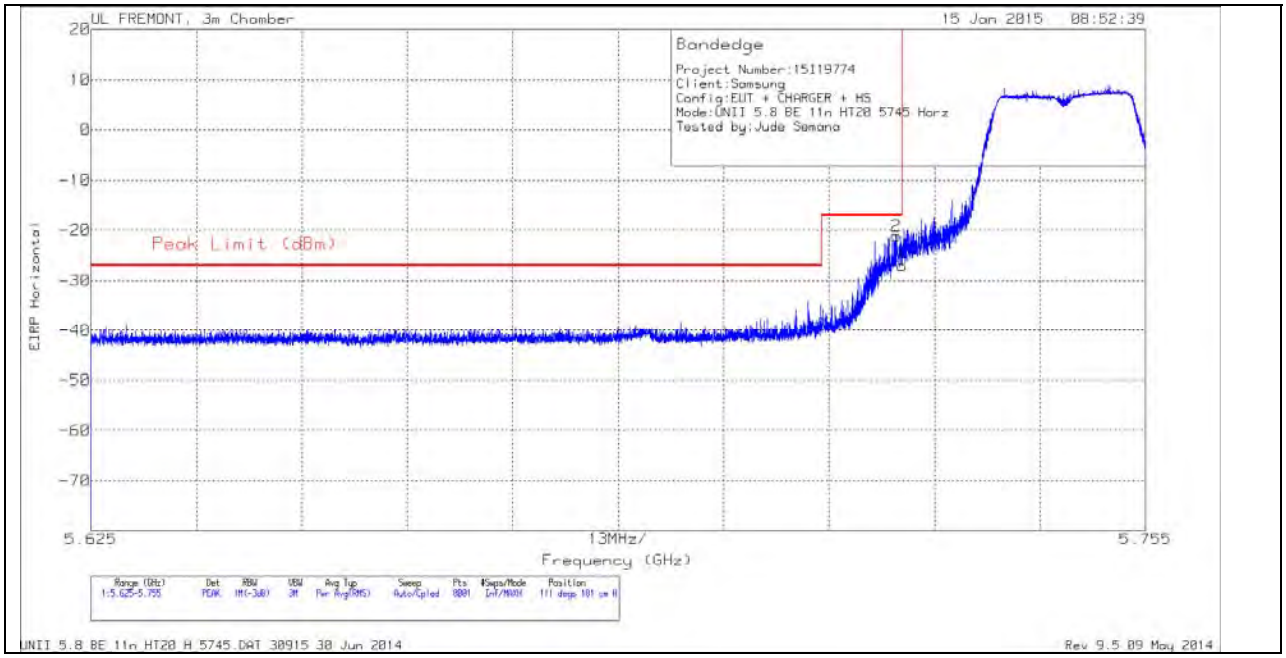
11.4.2. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.8 GHz BAND

AUTHORIZED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T711 (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	-47.08	PK	35.2	-21	11.8	0	-21.08	-17	-4.08	111	181	H
1	5.725	-52.87	PK	35.2	-21.1	11.8	0	-26.97	-17	-9.97	111	181	H

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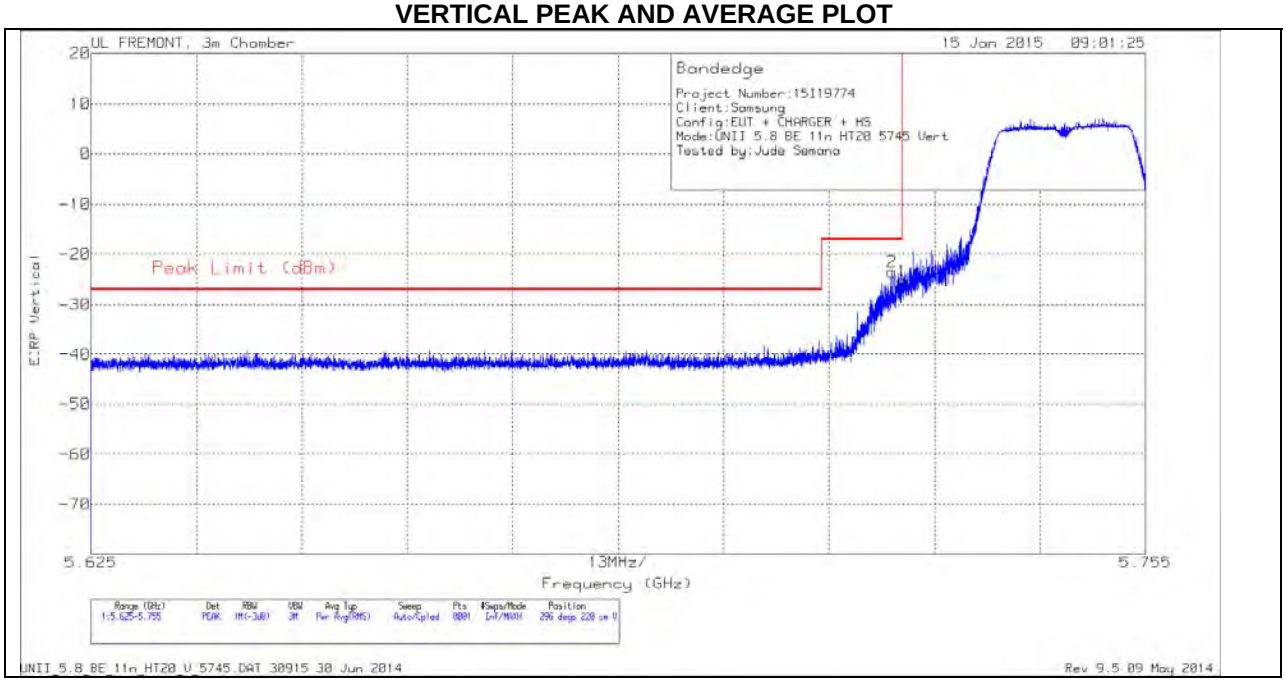
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T711 (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	-49.47	PK	35.2	-21	11.8	0	-23.47	-17	-6.47	296	220	V
1	5.725	-51.24	PK	35.2	-21.1	11.8	0	-25.34	-17	-8.34	296	220	V

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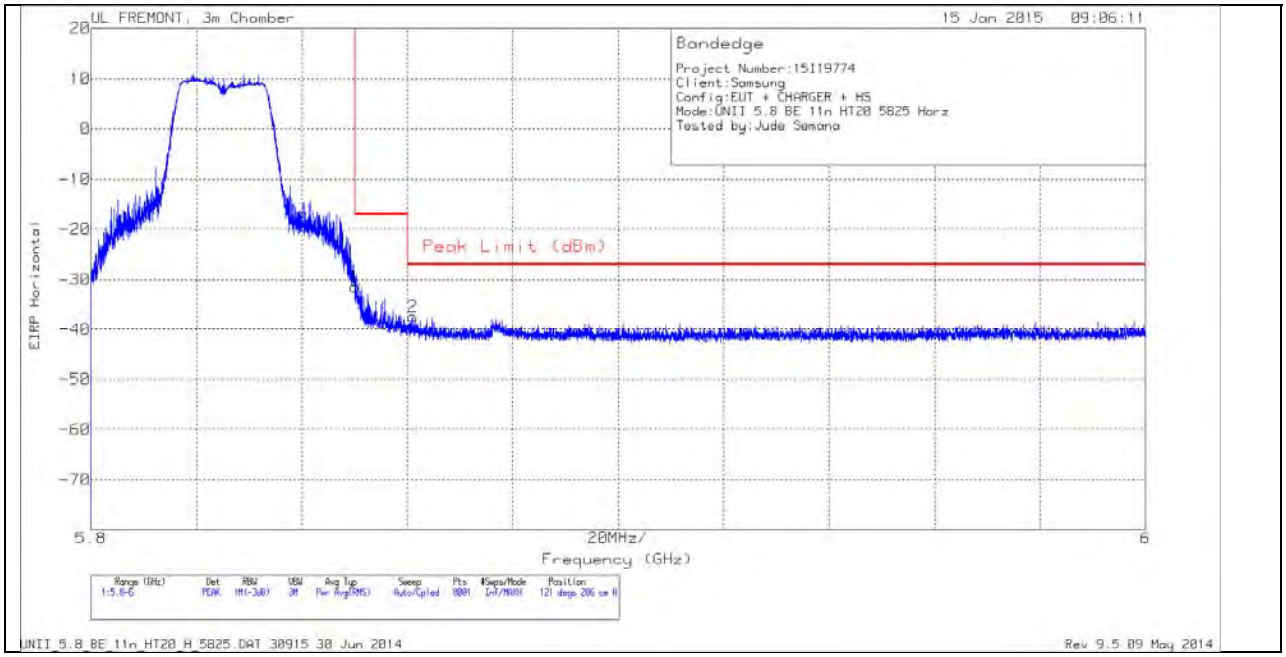
AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T711 (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	-57.36	PK	35.4	-21.3	11.8	0	-31.46	-17	-14.46	121	206	H
2	5.861	-63.26	PK	35.4	-21.3	11.8	0	-37.36	-27	-10.36	121	206	H

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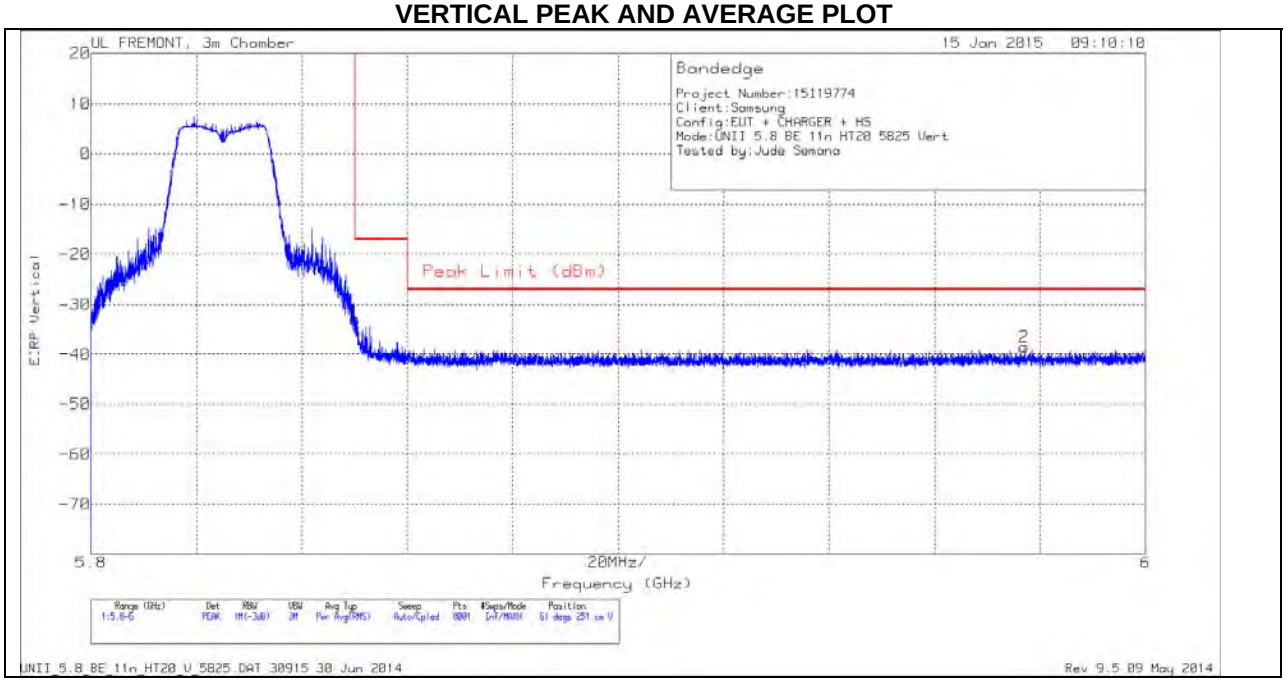
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T711 (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	-58.81	PK	35.4	-21.3	11.8	0	-32.91	-17	-15.91	61	251	V
2	5.977	-64.82	PK	35.5	-20.9	11.8	0	-38.42	-27	-11.42	61	251	V

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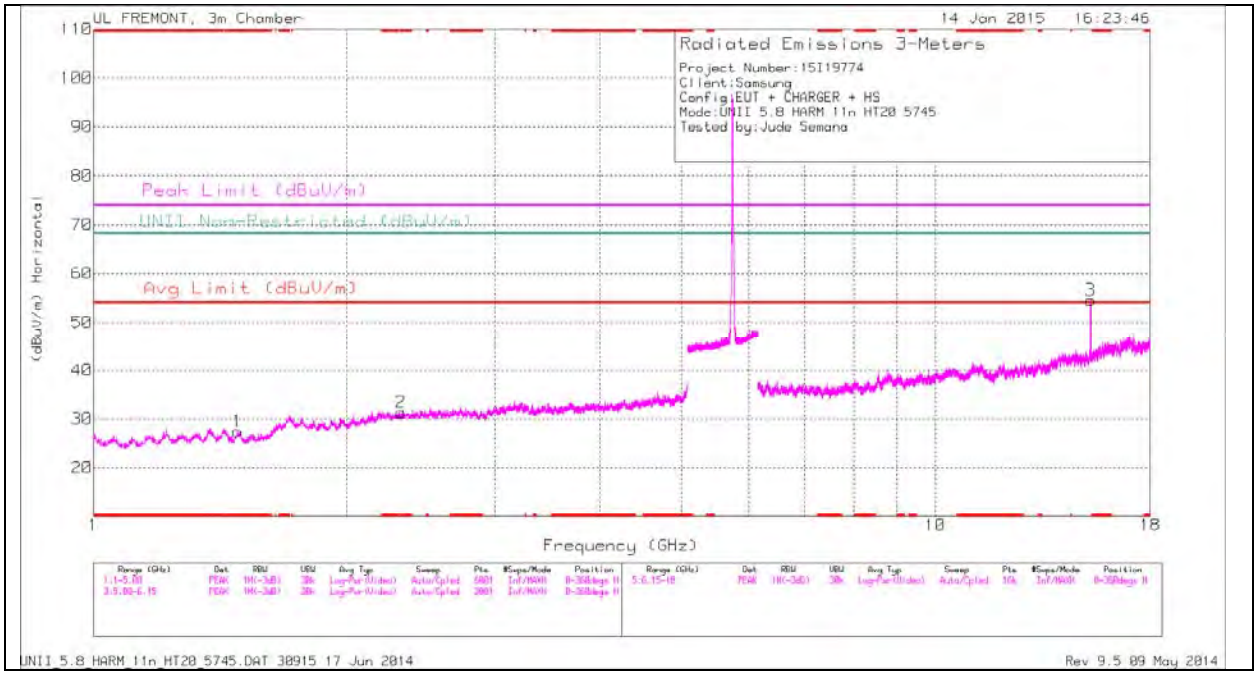
HARMONICS AND SPURIOUS EMISSIONS

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.

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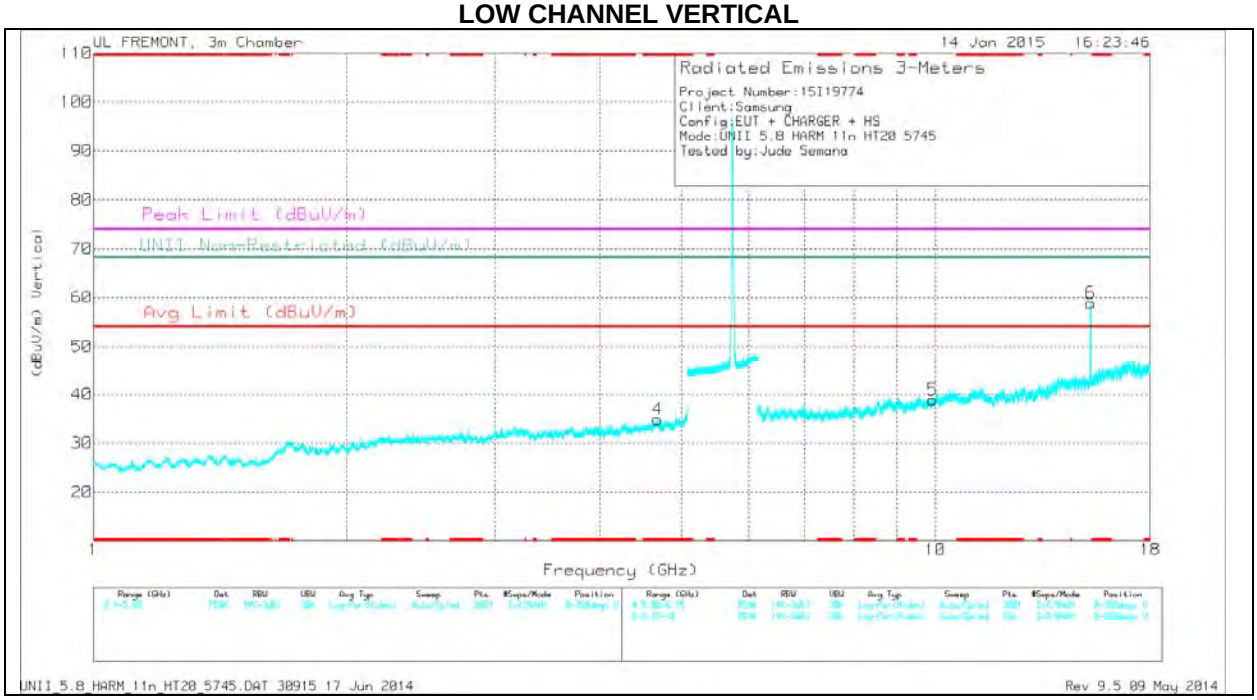
LOW CHANNEL VERTICAL



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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	* 1.483	32.46	PK	27.8	-32.8	0	27.46	-	-	74	-46.54	-	-	0-360	200	H
2	* 2.321	32.06	PK	31.9	-32.6	0	31.36	-	-	74	-42.64	-	-	0-360	100	H
4	* 4.681	31.47	PK	33.8	-30.4	0	34.87	-	-	74	-39.13	-	-	0-360	200	V
5	9.929	27.45	PK	37.5	-26.1	0	38.85	-	-	-	-	68.2	-29.35	0-360	200	V
3	15.295	41.23	PK	40.5	-27.2	0	54.53	-	-	-	-	68.2	-13.67	0-360	200	H
6	15.295	45.56	PK	40.5	-27.2	0	58.86	-	-	-	-	68.2	-9.34	0-360	200	V

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

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
15.295	47.67	PK1	40.5	-27.2	0	60.97	-	-	-	-	68.2	-7.23	119	210	V
15.295	44.47	AD1	40.5	-27.2	.3	58.07	-	-	-	-	-	-	119	210	V

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

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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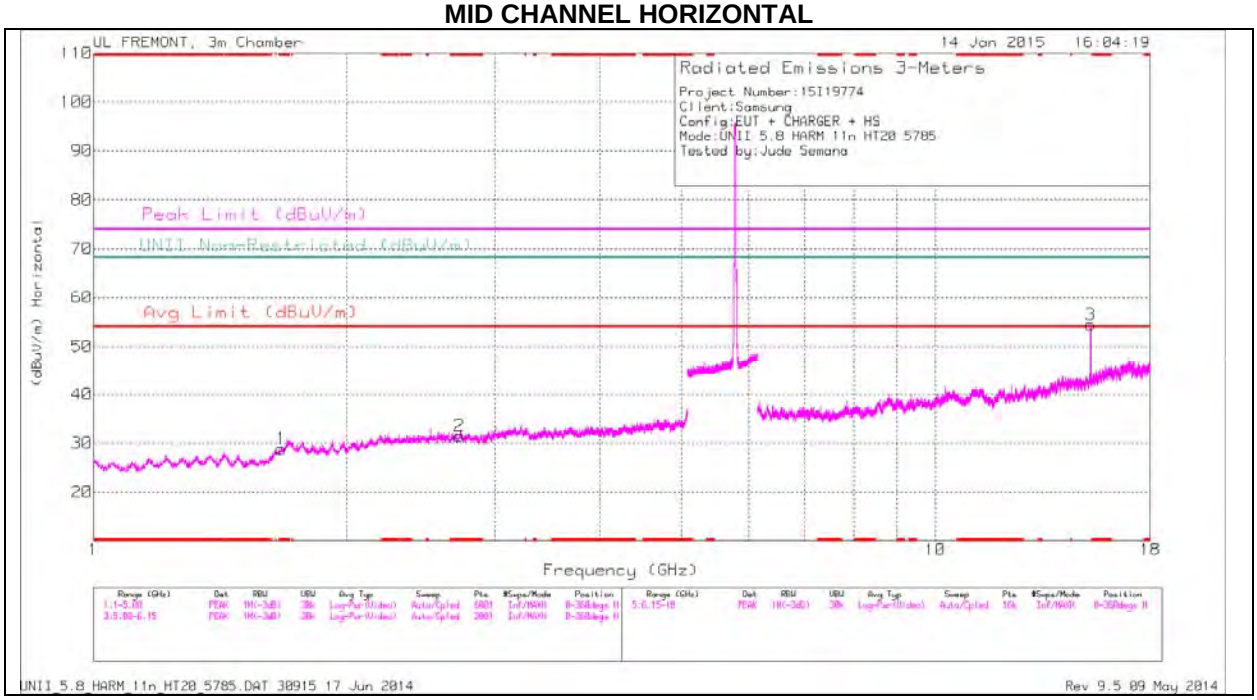
MID CHANNEL HORIZONTAL



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

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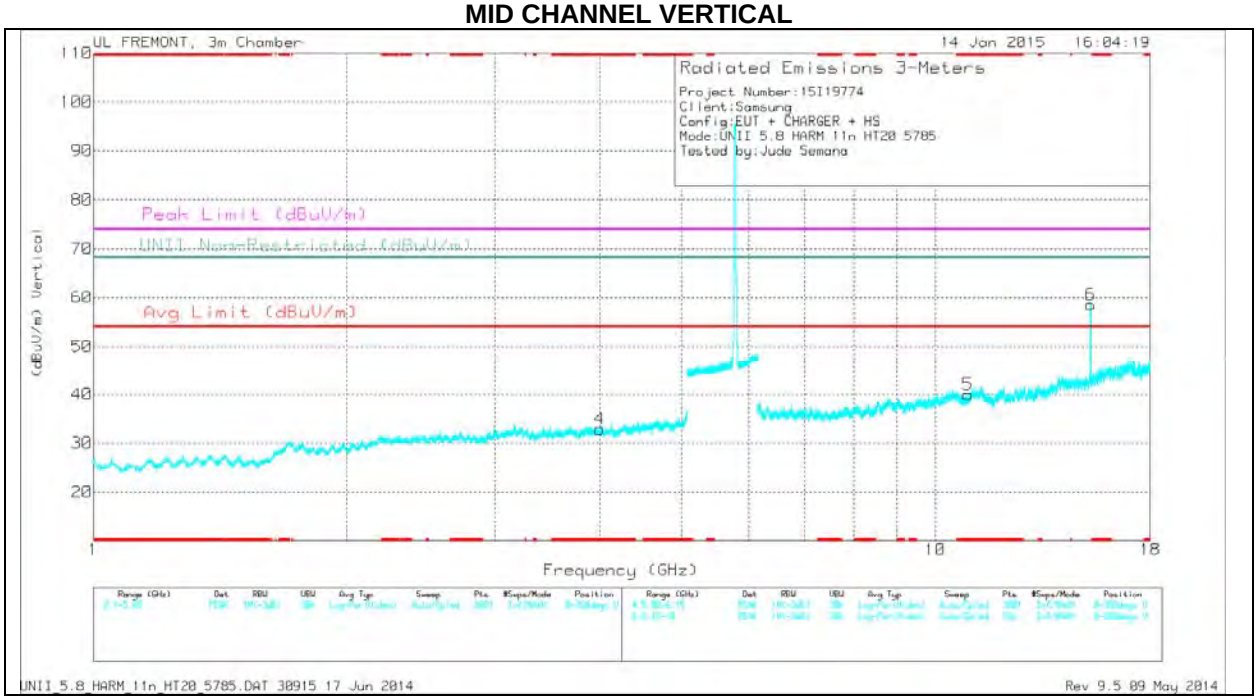
MID CHANNEL VERTICAL



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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	* 1.672	31.42	PK	29.9	-32.5	0	28.82	-	-	74	-45.18	-	-	0-360	200	H
2	* 2.722	31.25	PK	32.4	-32.2	0	31.45	-	-	74	-42.55	-	-	0-360	200	H
4	* 3.996	31.2	PK	33.2	-31.5	0	32.9	-	-	74	-41.1	-	-	0-360	100	V
5	* 10.936	27.63	PK	38.3	-26	0	39.93	-	-	74	-34.07	-	-	0-360	200	V
3	15.295	41.15	PK	40.5	-27.2	0	54.45	-	-	-	-	68.2	-13.75	0-360	200	H
6	15.295	45.22	PK	40.5	-27.2	0	58.52	-	-	-	-	68.2	-9.68	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/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
15.295	48.12	PK1	40.5	-27.2	0	61.42	-	-	-	-	68.2	-6.78	120	199	V
15.295	45.03	AD1	40.5	-27.2	.3	58.63	-	-	-	-	-	-	120	199	V

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

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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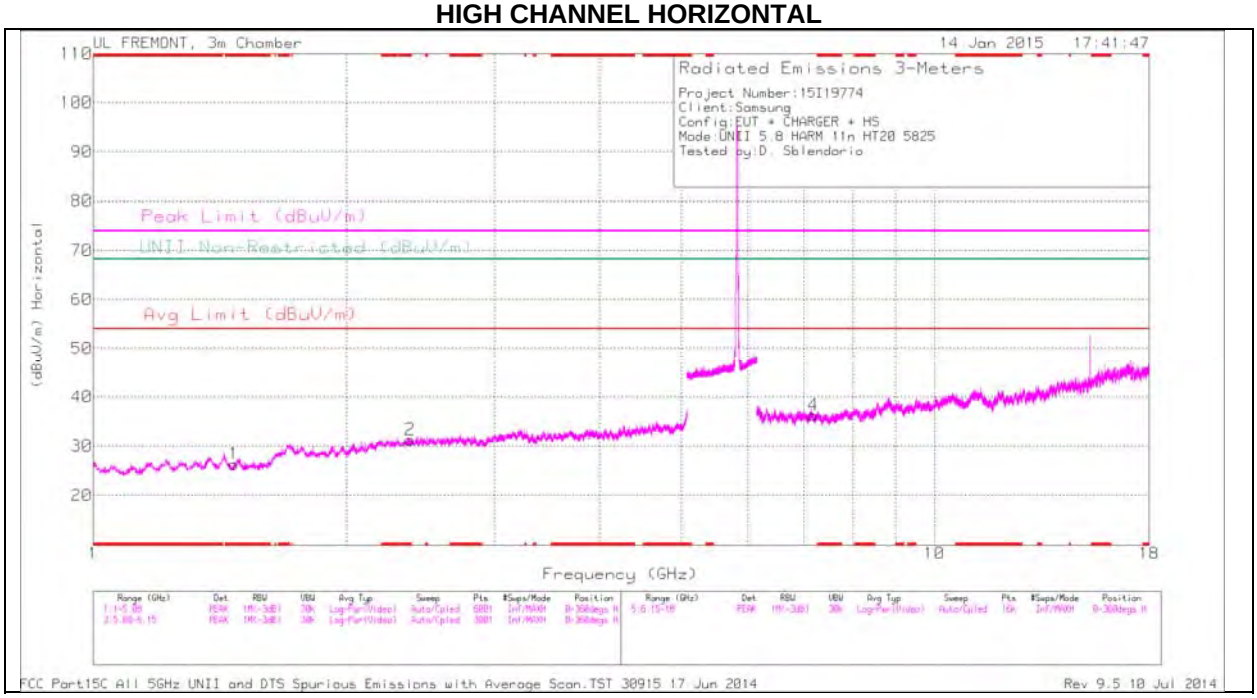
HIGH CHANNEL HORIZONTAL



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

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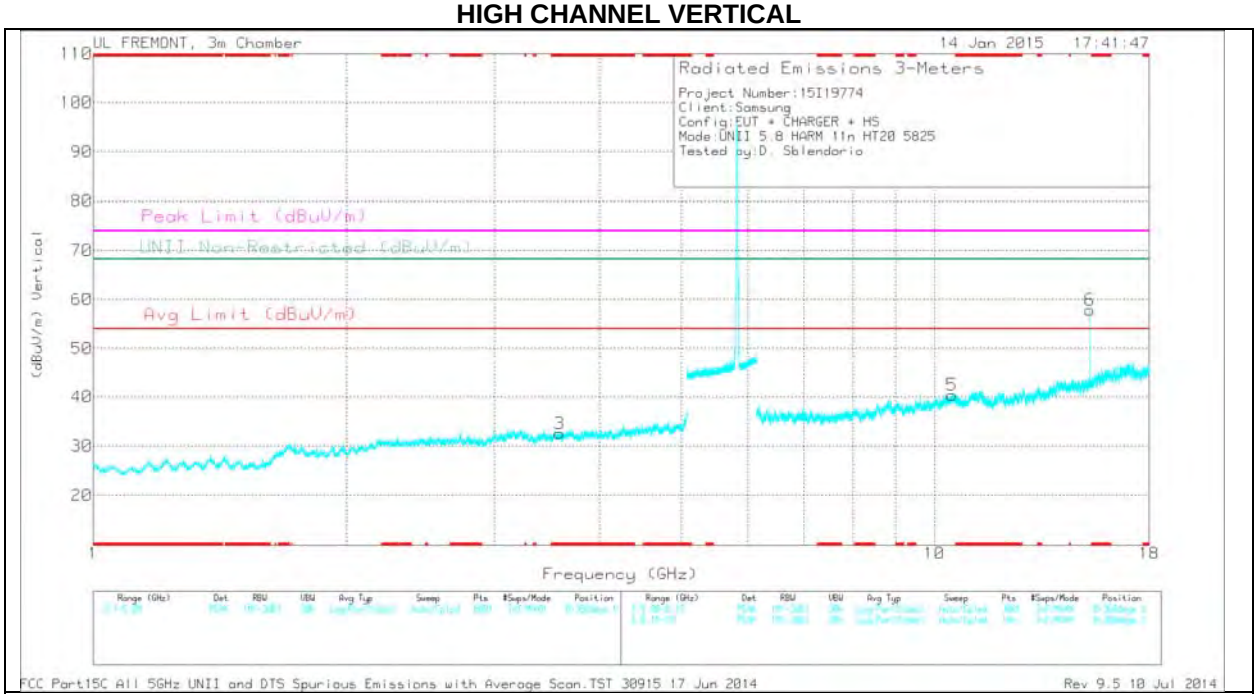
HIGH CHANNEL VERTICAL



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

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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	* 1.471	31.35	PK	27.9	-32.9	0	26.35	-	-	74	-47.65	-	-	0-360	100	H
2	* 2.382	31.8	PK	32.1	-32.6	0	31.3	-	-	74	-42.7	-	-	0-360	100	H
3	* 3.584	31.14	PK	33.2	-31.8	0	32.54	-	-	74	-41.46	-	-	0-360	100	V
4	7.179	29.67	PK	35.6	-29	0	36.27	-	-	-	-	68.2	-31.93	0-360	100	H
5	10.493	27.96	PK	38.1	-25.7	0	40.36	-	-	-	-	68.2	-27.84	0-360	100	V
6	15.307	44.37	PK	40.5	-27	0	57.87	-	-	-	-	68.2	-10.33	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/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
15.305	46.28	PK1	40.5	-27	0	59.78	-	-	-	-	68.2	-8.42	117	200	V
15.305	43.03	AD1	40.5	-27	.3	56.83	-	-	-	-	-	-	117	200	V

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

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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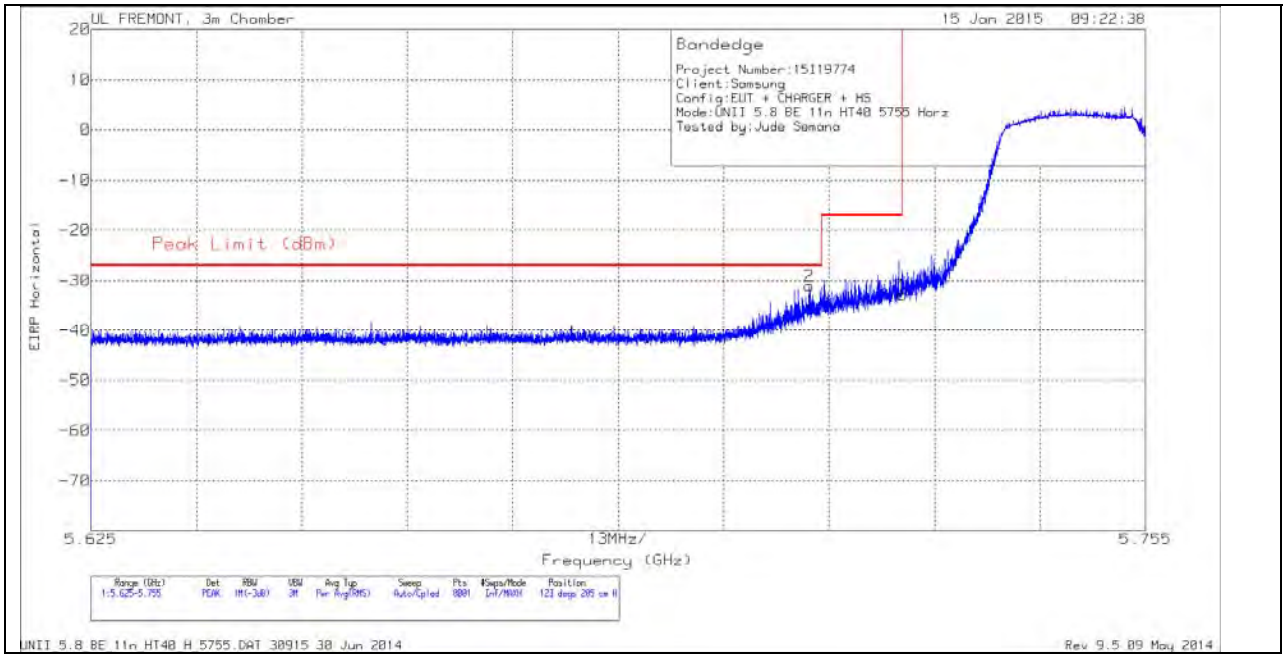
11.4.3. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.8 GHz BAND

AUTHORIZED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T711 (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	-57.02	PK	35.2	-21	11.8	0	-31.02	-27	-4.02	123	205	H
1	5.725	-58.74	PK	35.2	-21.1	11.8	0	-32.84	-17	-15.84	123	205	H

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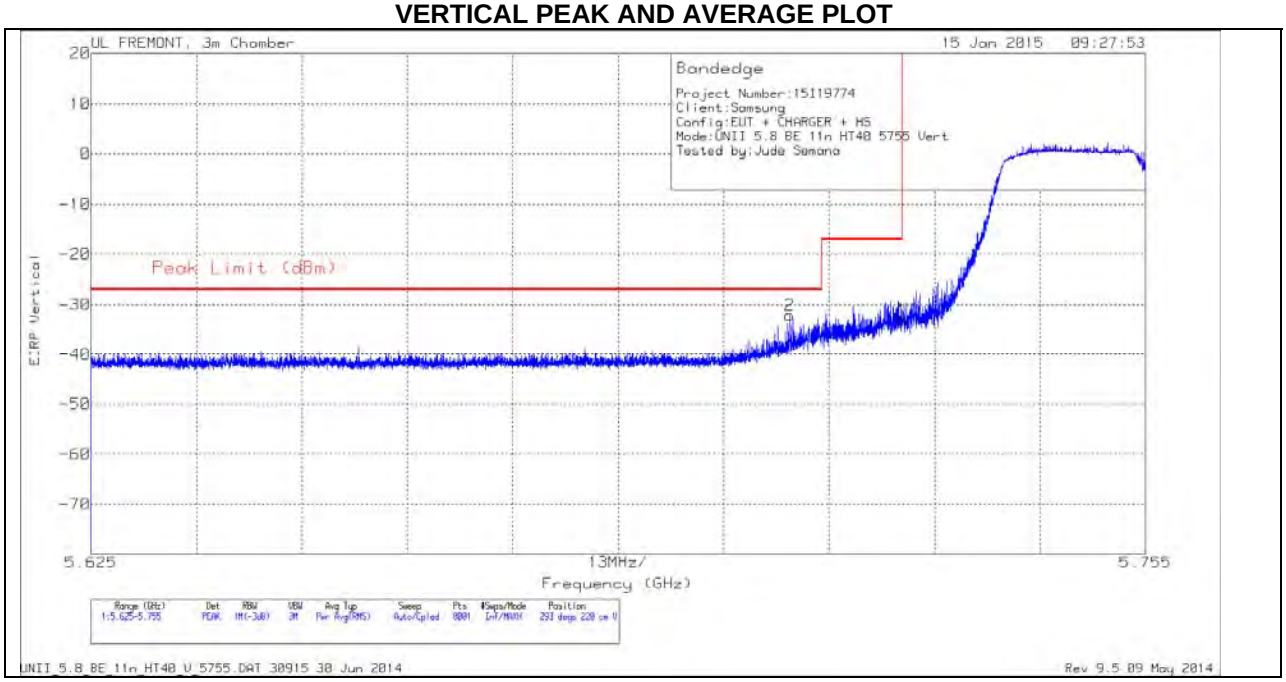
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T711 (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	5.711	-58.11	PK	35.2	-21	11.8	0	-32.11	-27	-5.11	293	220	V
1	5.725	-58.92	PK	35.2	-21.1	11.8	0	-33.02	-17	-16.02	293	220	V

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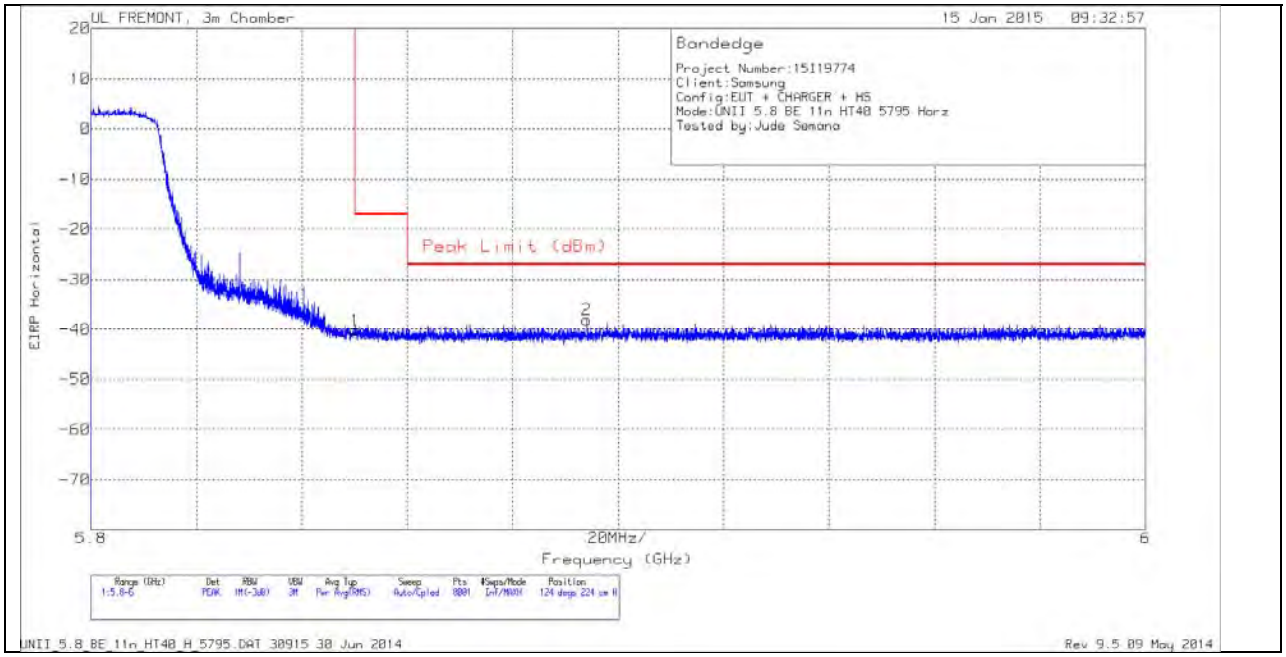
AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T711 (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	-66.04	PK	35.4	-21.3	11.8	0	-40.14	-17	-23.14	124	224	H
2	5.894	-64.09	PK	35.4	-21.1	11.8	0	-37.99	-27	-10.99	124	224	H

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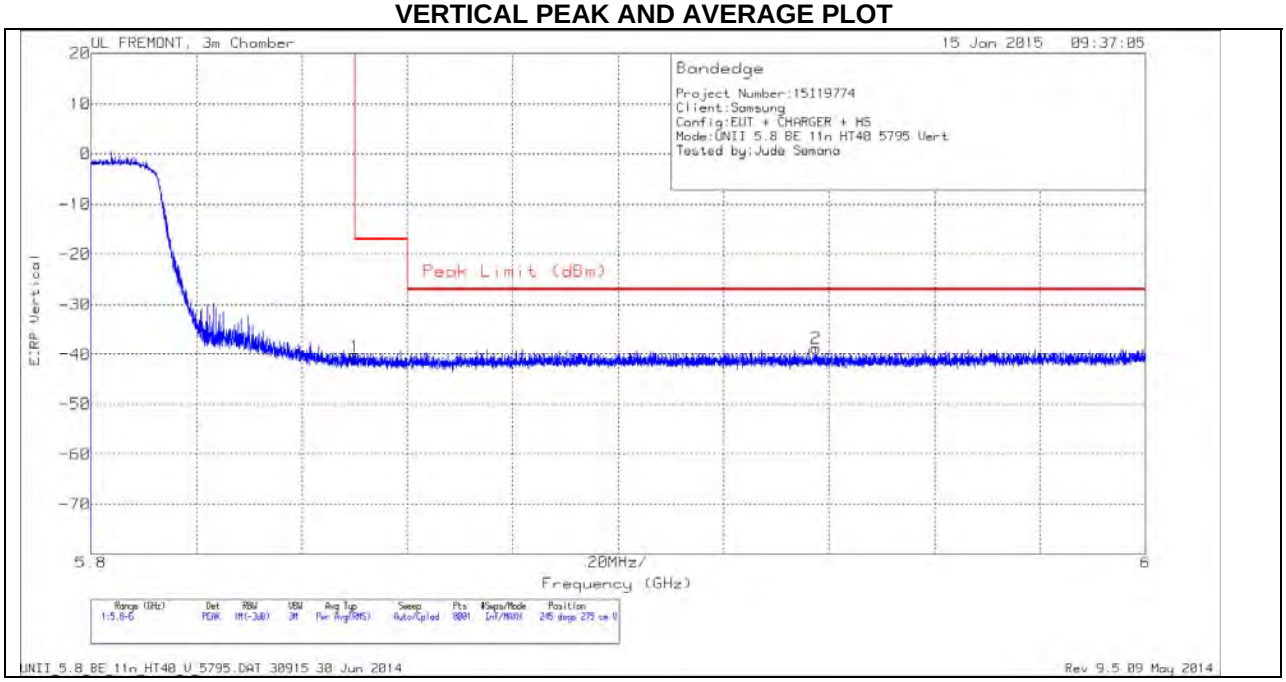
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T711 (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	-66.18	PK	35.4	-21.3	11.8	0	-40.28	-17	-23.28	245	275	V
2	5.937	-64.84	PK	35.4	-21	11.8	0	-38.64	-27	-11.64	245	275	V

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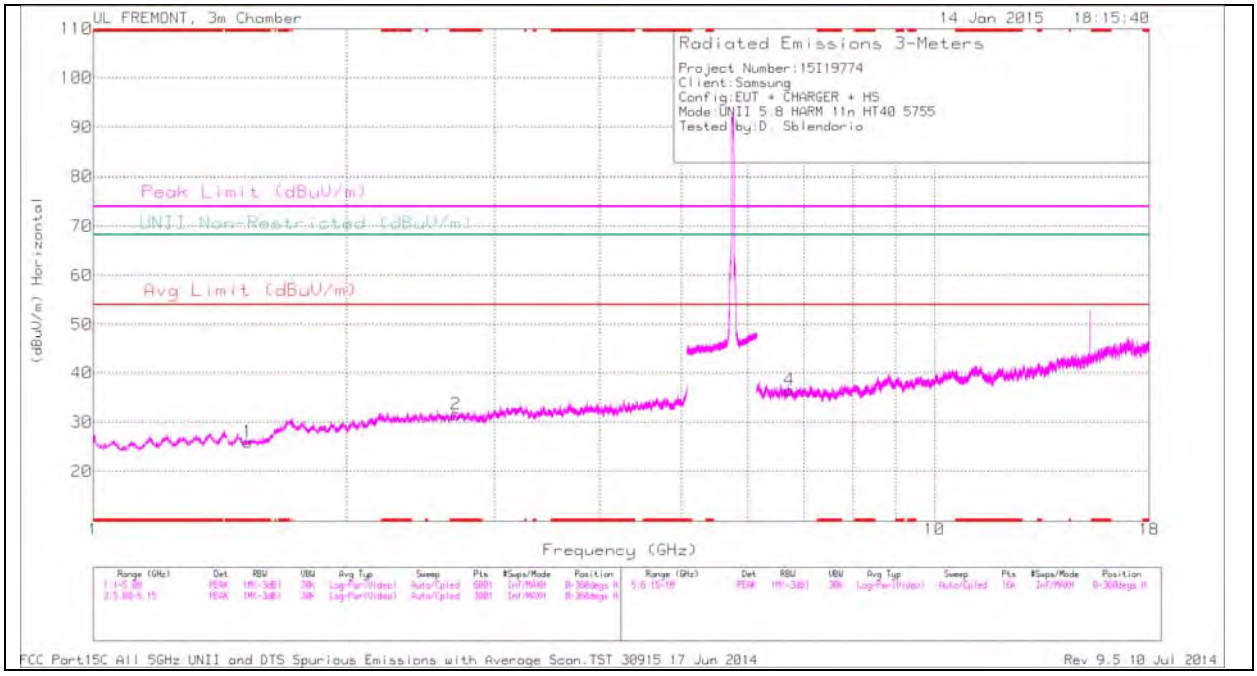
HARMONICS AND SPURIOUS EMISSIONS

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.

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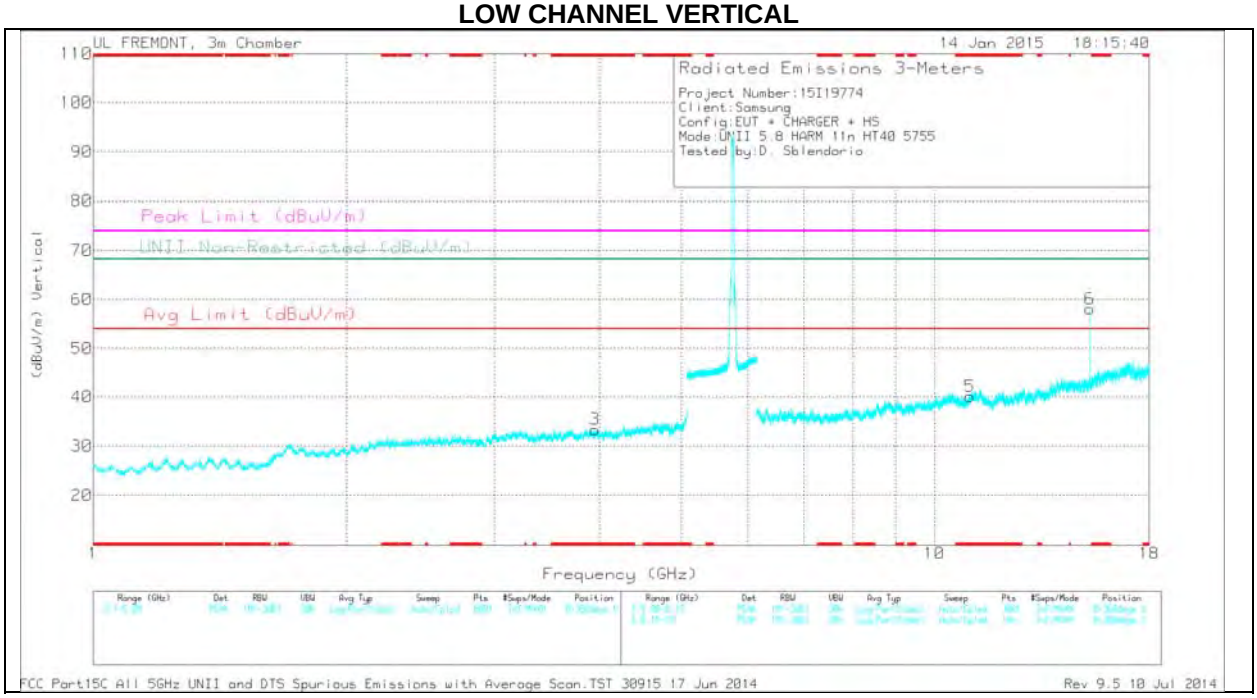
LOW CHANNEL VERTICAL



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

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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	* 1.528	31.45	PK	27.7	-33.2	0	25.95	-	-	74	-48.05	-	-	0-360	100	H
2	* 2.701	31.31	PK	32.4	-32.1	0	31.61	-	-	74	-42.39	-	-	0-360	100	H
3	* 3.952	31.48	PK	33.2	-31.3	0	33.38	-	-	74	-40.62	-	-	0-360	200	V
5	* 11.026	27.37	PK	38.3	-25.6	0	40.07	-	-	74	-33.93	-	-	0-360	200	V
4	6.725	29.84	PK	35.8	-29.1	0	36.54	-	-	-	-	68.2	-31.66	0-360	100	H
6	15.306	44.58	PK	40.5	-27	0	58.08	-	-	-	-	68.2	-10.12	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/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
15.305	46.96	PK1	40.5	-27	0	60.46	-	-	-	-	68.2	-7.74	116	181	V
15.305	43.86	AD1	40.5	-27	.68	58.01	-	-	-	-	-	-	116	181	V

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

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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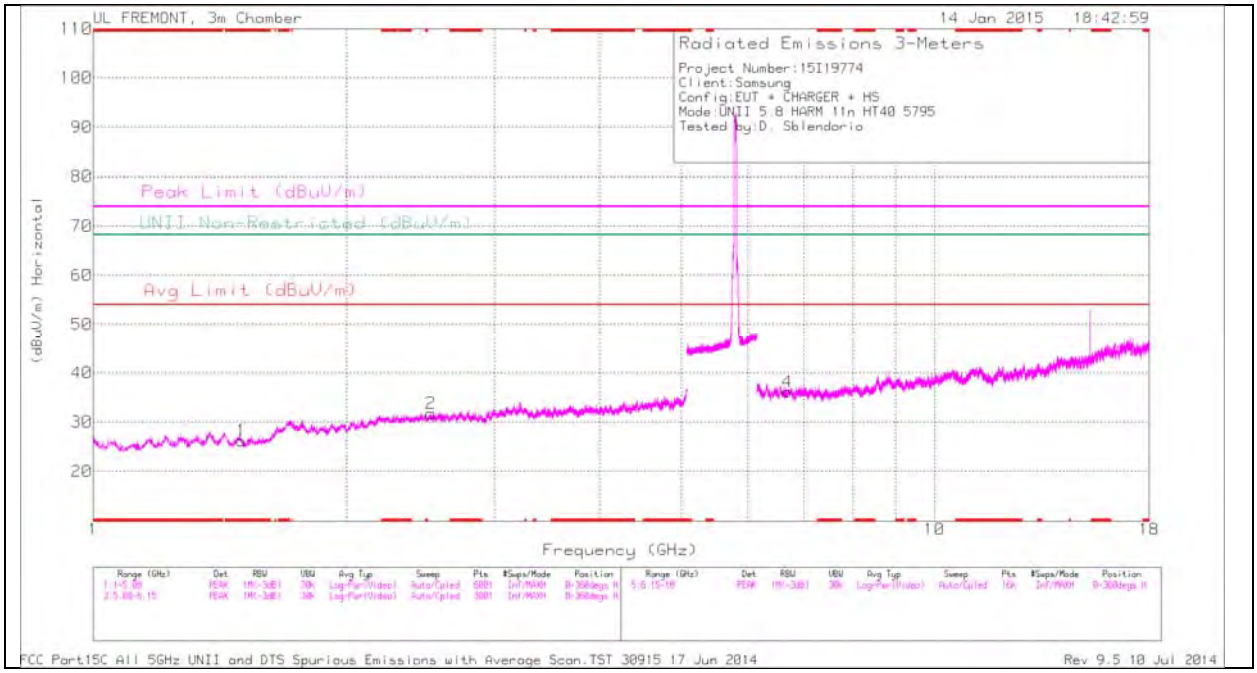
HIGH CHANNEL HORIZONTAL



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

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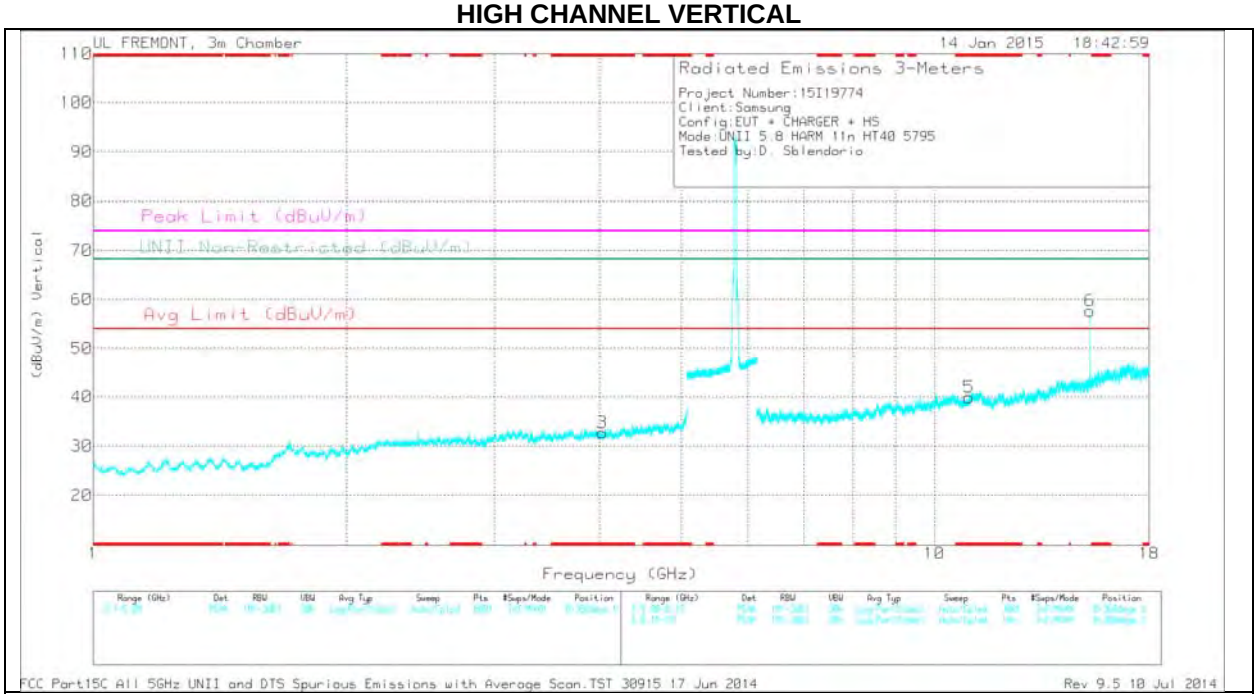
HIGH CHANNEL VERTICAL



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

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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	* 1.503	31.51	PK	27.7	-33	0	26.21	-	-	74	-47.79	-	-	0-360	100	H
3	* 4.029	31.03	PK	33.2	-31.5	0	32.73	-	-	74	-41.27	-	-	0-360	200	V
5	* 10.99	27.31	PK	38.3	-25.7	0	39.91	-	-	74	-34.09	-	-	0-360	200	V
2	2.52	31.83	PK	32.1	-32.2	0	31.73	-	-	-	-	68.2	-36.47	0-360	200	H
4	6.688	29.82	PK	35.8	-29.5	0	36.12	-	-	-	-	68.2	-32.08	0-360	200	H
6	15.306	44.17	PK	40.5	-27	0	57.67	-	-	-	-	68.2	-10.53	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/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
15.305	49.76	PK1	40.5	-27	0	63.26	-	-	-	-	68.2	-4.94	0	331	V
15.305	47.59	AD1	40.5	-27	.68	61.74	-	-	-	-	-	-	0	331	V

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

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

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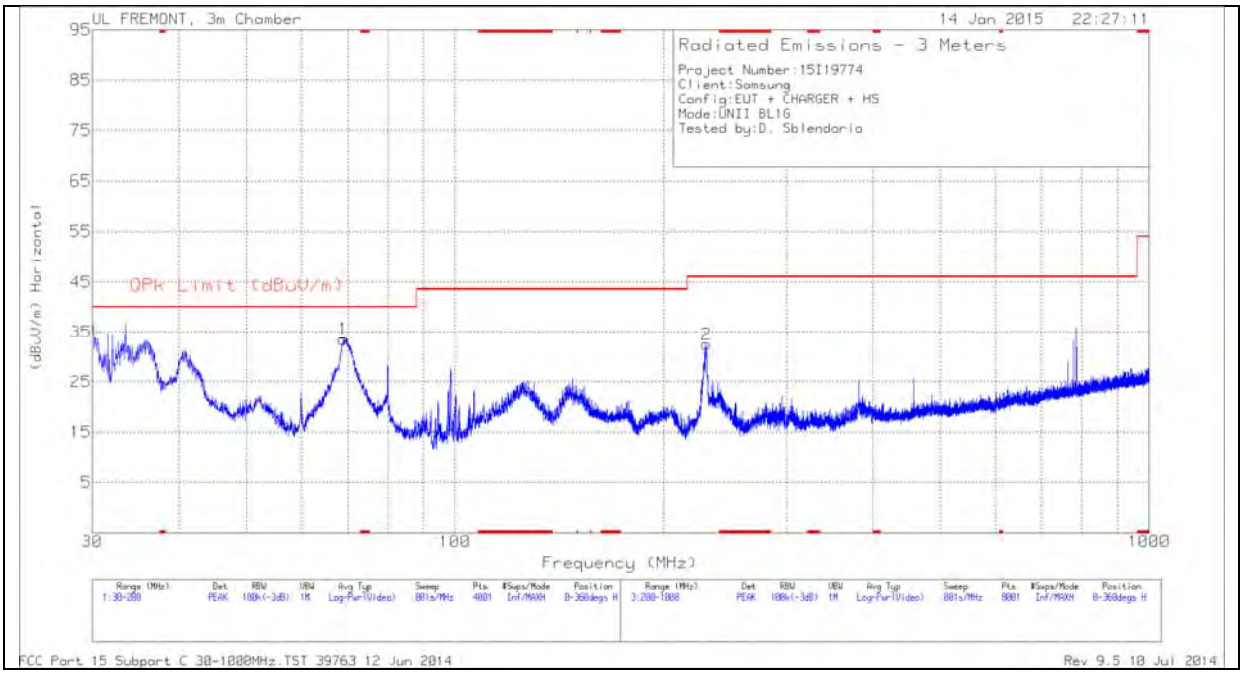
12. WORST-CASE BELOW 1 GHz (in the 5.3 GHz Band)

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



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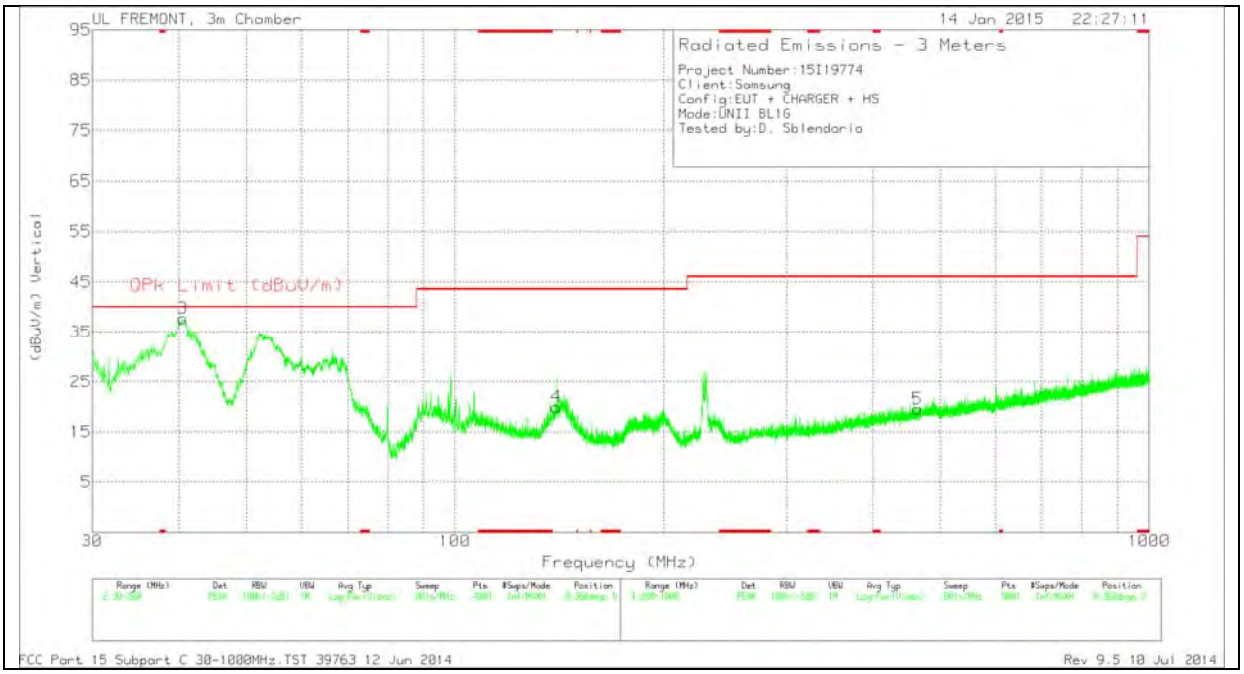
SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, VERTICAL)



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Below 1G Data

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T185 (dB/m)	Amp/Cbl (dB/m)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	40.54	52.01	PK	13.1	-27.4	37.71	40	-2.29	0-360	100	V
1	69.1	52.67	PK	8	-27.1	33.57	40	-6.43	0-360	400	H
4	139.99	33.25	PK	13.1	-26.4	19.95	43.52	-23.57	0-360	100	V
2	230.2	46.93	PK	11.1	-25.5	32.53	46.02	-13.49	0-360	100	H
5	464	28.15	PK	17.2	-25.8	19.55	46.02	-26.47	0-360	200	V

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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

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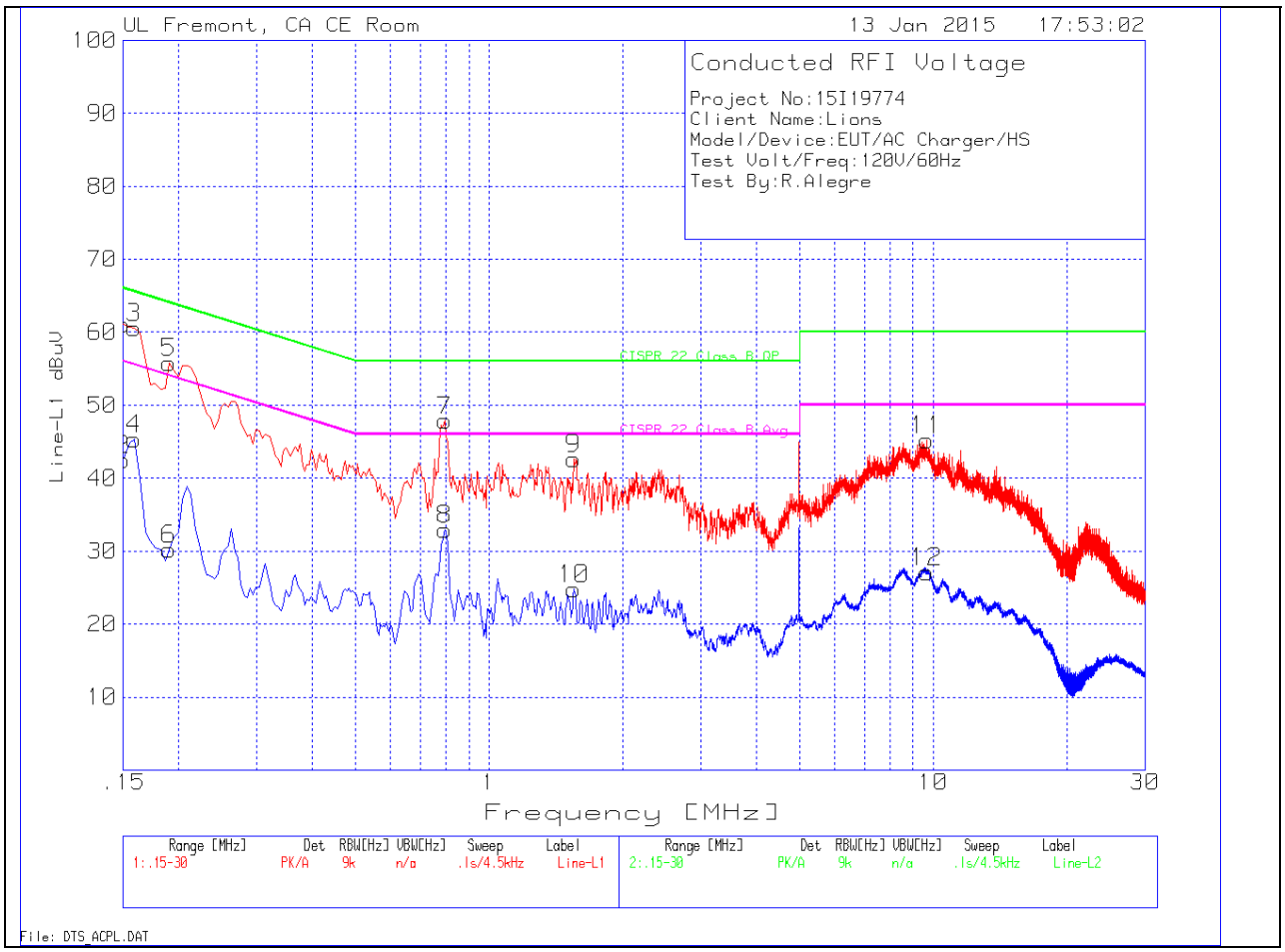
6 WORST EMISSIONS

LINE 1 PLOT



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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	.15	59.7	PK	1.4	0	61.1	66	-4.9	-	-
2	.15	41.14	Av	1.4	0	42.54	-	-	56	-13.46
3	.159	59.33	PK	1.3	0	60.63	65.5	-4.87	-	-
4	.159	44.02	Av	1.3	0	45.32	-	-	55.5	-10.18
5	.1905	54.85	PK	1	0	55.85	64	-8.15	-	-
6	.1905	29.28	Av	1	0	30.28	-	-	54	-23.72
7	.7935	47.57	PK	.3	0	47.87	56	-8.13	-	-
8	.7935	32.64	Av	.3	0	32.94	-	-	46	-13.06
9	1.554	42.36	PK	.2	.1	42.66	56	-13.34	-	-
10	1.554	24.48	Av	.2	.1	24.78	-	-	46	-21.22
11	9.6765	44.81	PK	.2	.2	45.21	60	-14.79	-	-
12	9.6765	26.72	Av	.2	.2	27.12	-	-	50	-22.88

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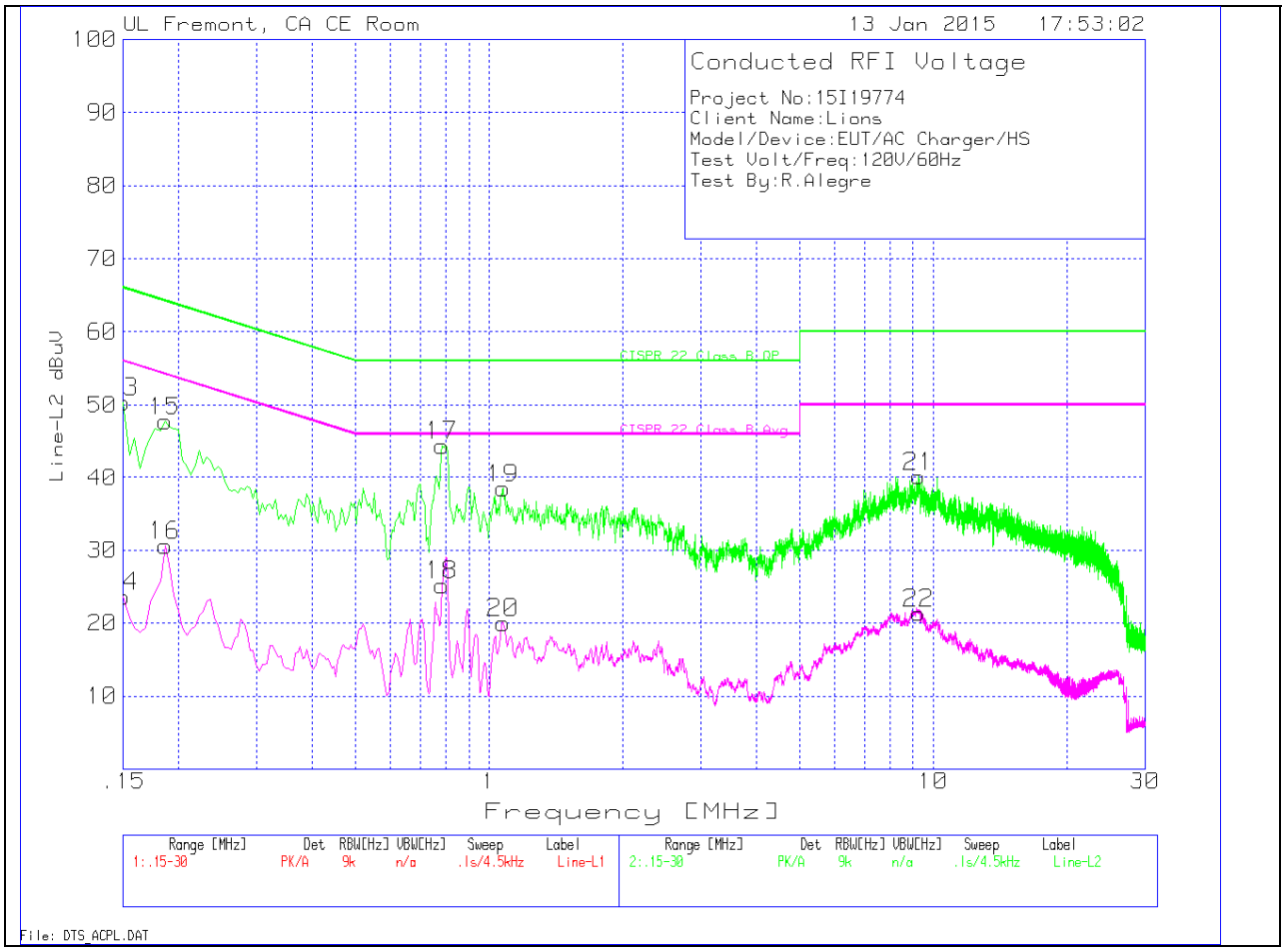
LINE 2 PLOT



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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	.15	48.89	PK	1.5	0	50.39	66	-15.61	-	-
14	.15	22.13	Av	1.5	0	23.63	-	-	56	-32.37
15	.186	46.64	PK	1.1	0	47.74	64.2	-16.46	-	-
16	.186	29.5	Av	1.1	0	30.6	-	-	54.2	-23.6
17	.7845	44.19	PK	.3	0	44.49	56	-11.51	-	-
18	.7845	24.9	Av	.3	0	25.2	-	-	46	-20.8
19	1.077	38.07	PK	.3	.1	38.47	56	-17.53	-	-
20	1.077	19.6	Av	.3	.1	20	-	-	46	-26
21	9.276	39.9	PK	.2	.1	40.2	60	-19.8	-	-
22	9.276	21.07	Av	.2	.1	21.37	-	-	50	-28.63

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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".

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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)

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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 frequency between the bonded 20 MHz channel blocks.		

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

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

Table 4: DFS Response requirement values

Parameter	Value
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)

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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.

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Table 5 – Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (usec)	PRI (usec)	Pulses	Minimum Percentage of Successful Detection	Minimum Trials
0	1	1428	18	See Note 1	See Note 1
1	1	Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in table 5a	Roundup: $\{(1/360) \times (19 \times 10^6\ PRI_{usec})\}$	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.

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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

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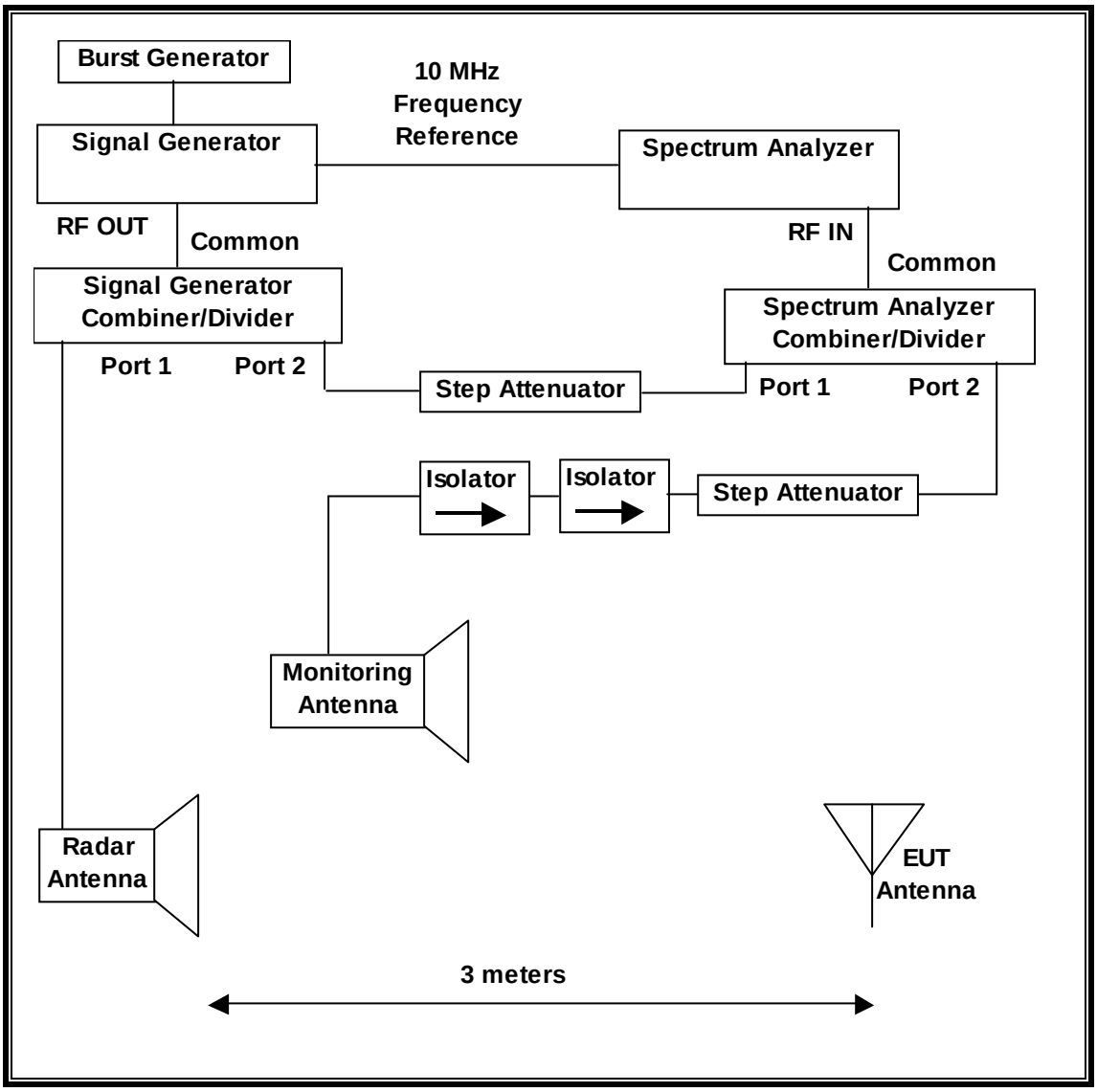
14.1.2. TEST AND MEASUREMENT SYSTEM

RADIATED METHOD SYSTEM BLOCK DIAGRAM



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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.

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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.

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ADJUSTMENT OF DISPLAYED TRAFFIC LEVEL

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

TEST AND MEASUREMENT EQUIPMENT

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

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

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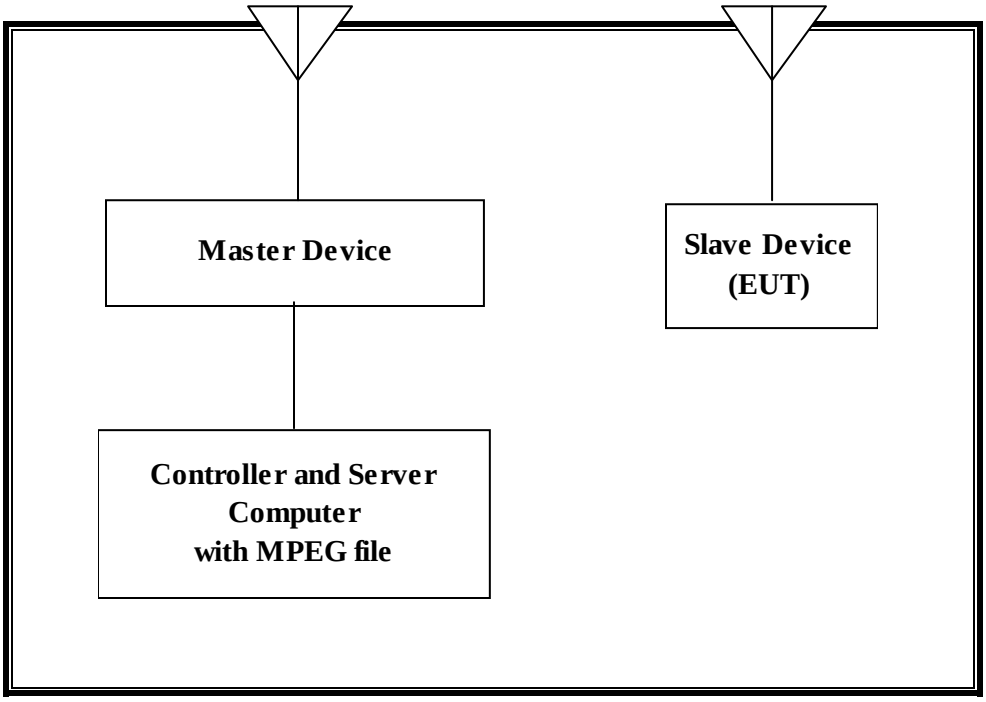
14.1.3. SETUP OF EUT

RADIATED METHOD EUT TEST SETUP



SUPPORT EQUIPMENT

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

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

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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 8.54 dBm EIRP in the 5250-5350 MHz band and 8.74 dBm EIRP in the 5470-5725 MHz band.

The only antenna assembly utilized with the EUT has a gain of 0.47 dBi.

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

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

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

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

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

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

UNIFORM CHANNEL SPREADING

This function is not required per KDB 905462.

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

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

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

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

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14.2. RESULTS FOR 20 MHz BANDWIDTH

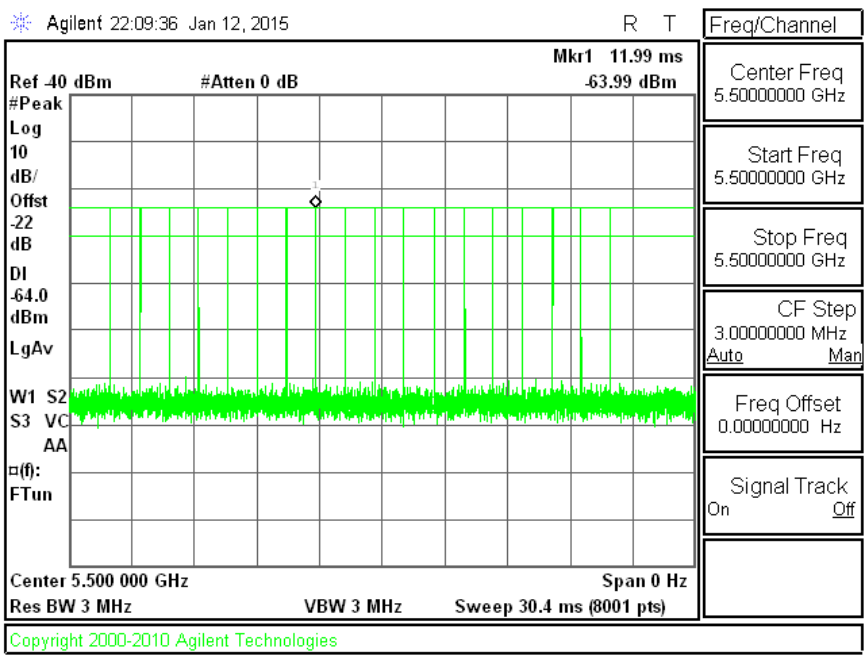
14.2.1. TEST CHANNEL

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

14.2.2. RADAR WAVEFORM AND TRAFFIC

RADAR WAVEFORM

SHORT PULSE RADAR TYPE 0 AT MASTER



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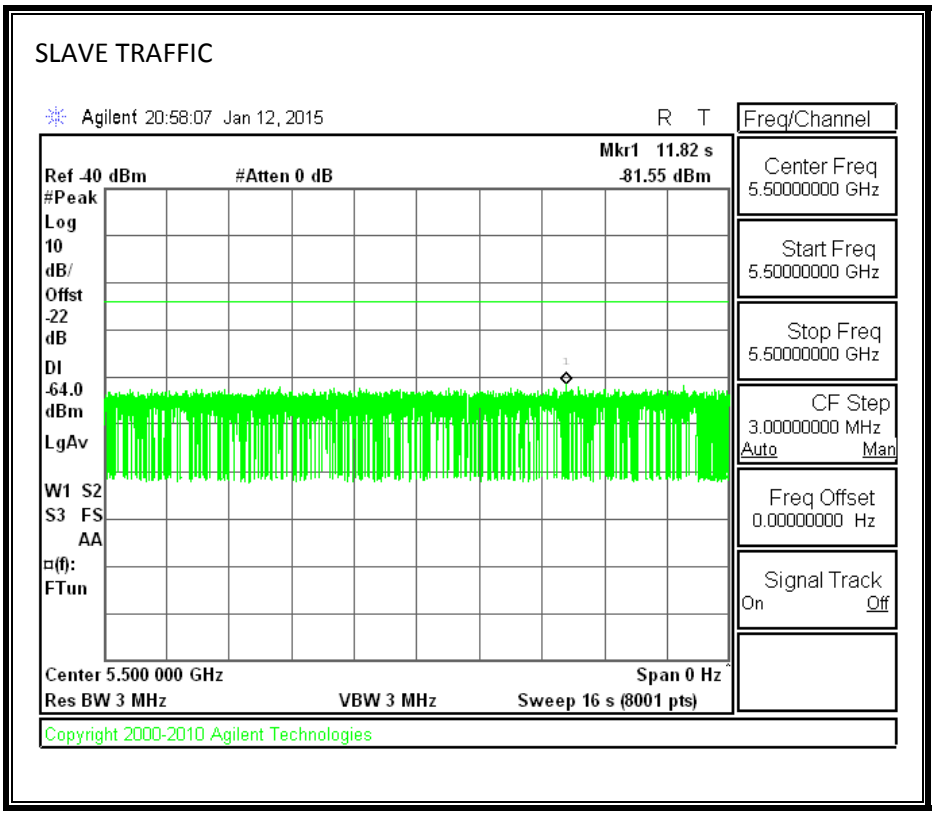
TRAFFIC



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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)
0.676	10

Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
10.0	60

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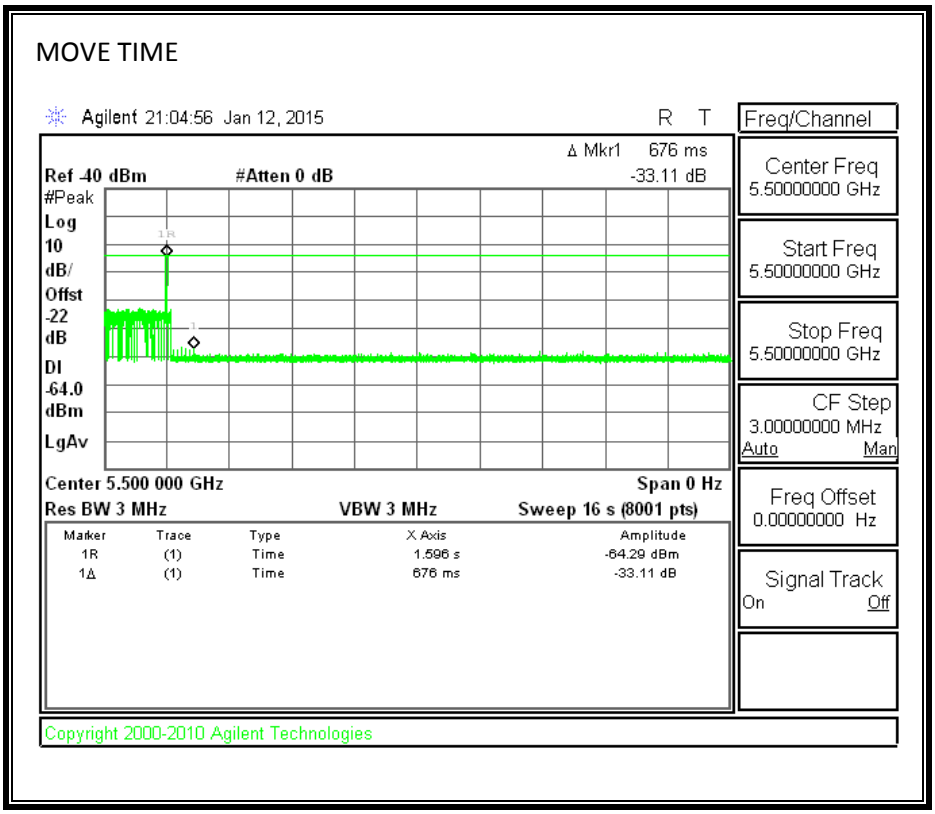
MOVE TIME



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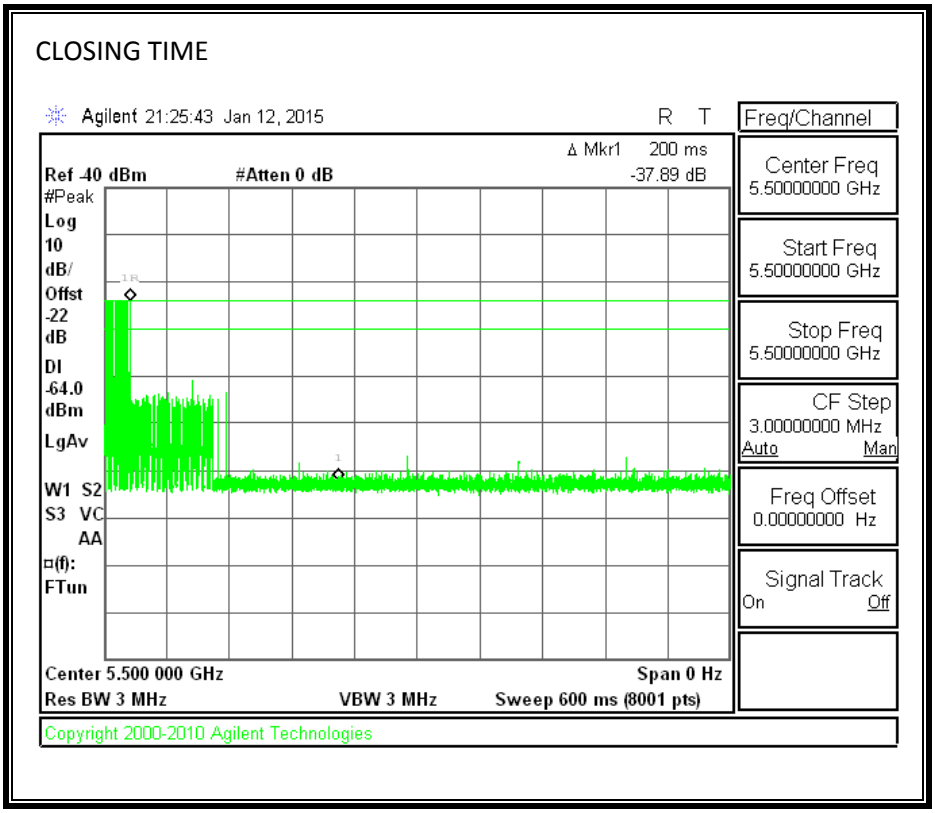
CHANNEL CLOSING TIME



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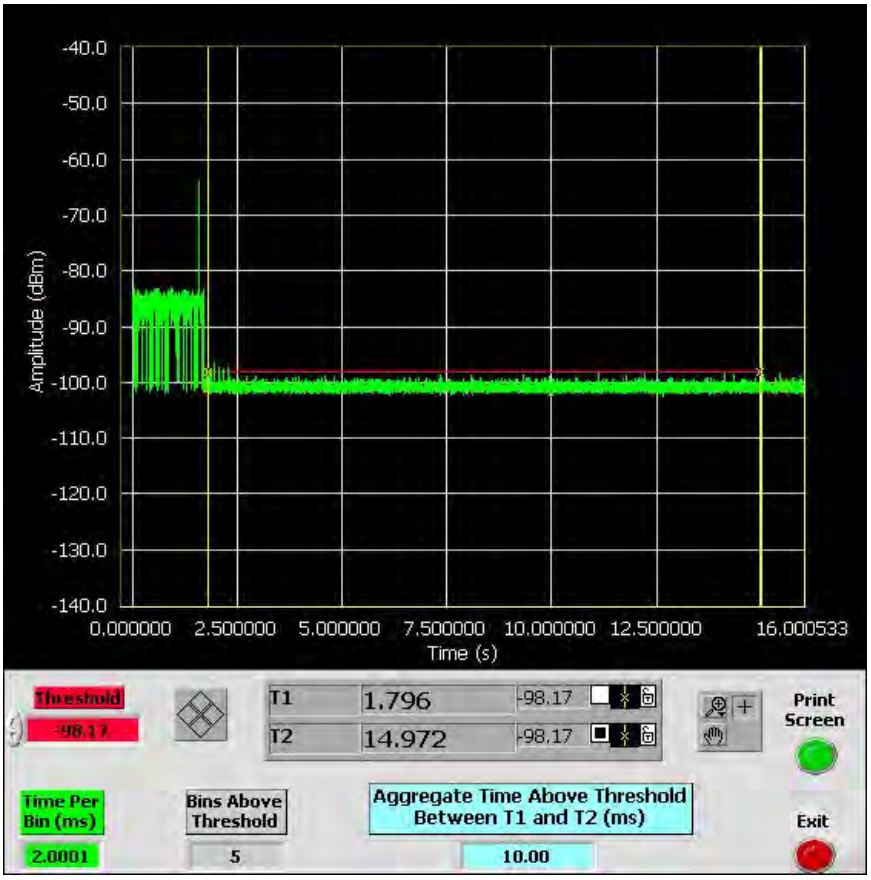
AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

Only intermittent transmissions are observed during the aggregate monitoring period.

AGGREGATE CLOSING TIME



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14.3. RESULTS FOR 40 MHz BANDWIDTH

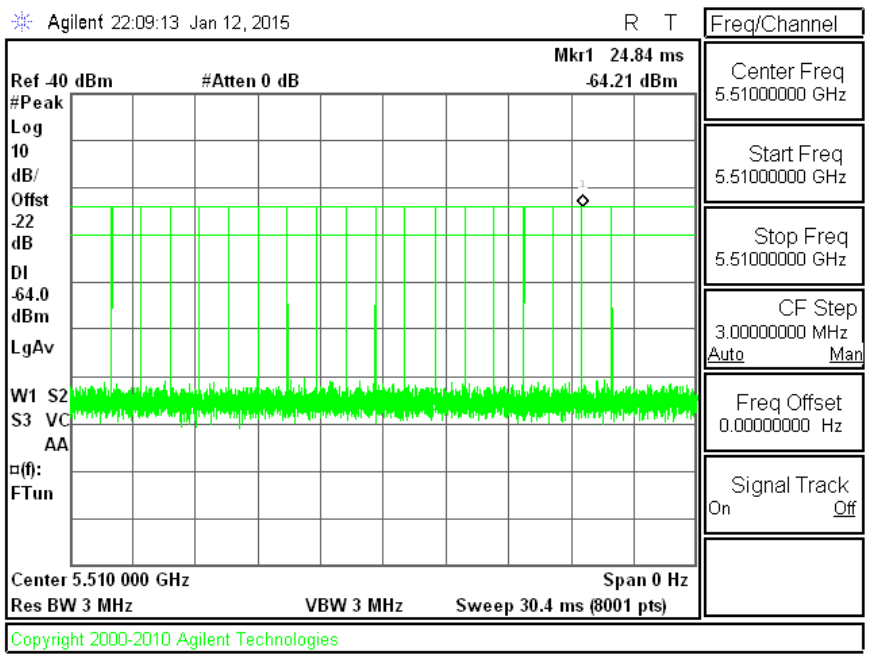
14.3.1. TEST CHANNEL

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

14.3.2. RADAR WAVEFORM AND TRAFFIC

RADAR WAVEFORM

SHORT PULSE RADAR TYPE 0 AT MASTER



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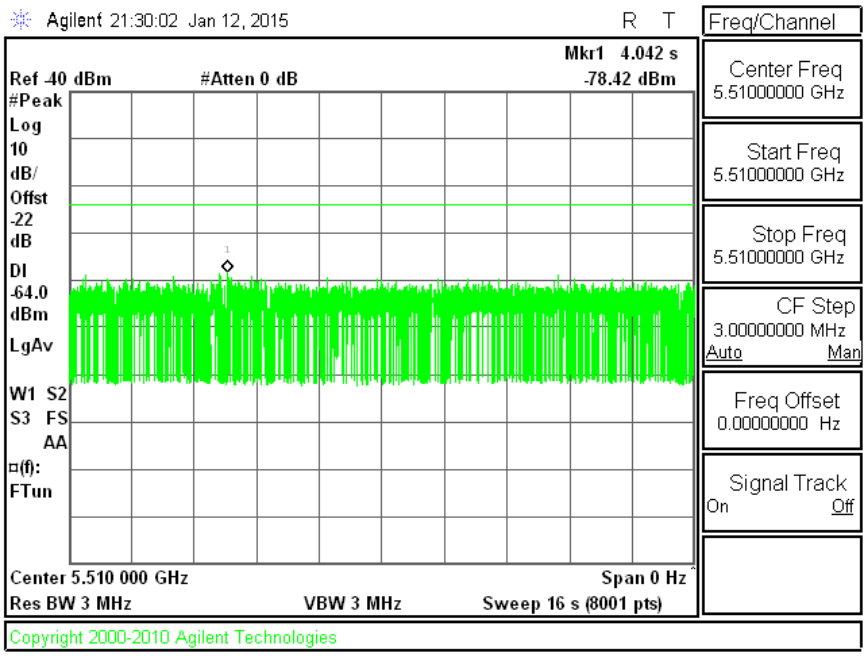
TRAFFIC

SLAVE TRAFFIC



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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)
0.096	10

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

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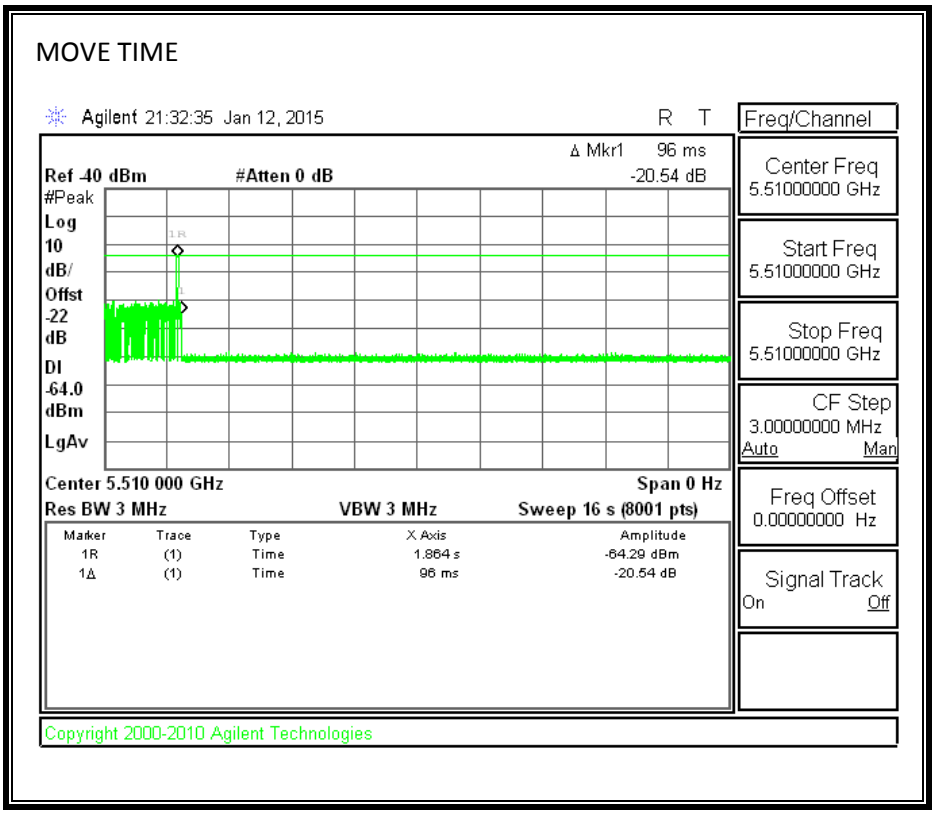
MOVE TIME



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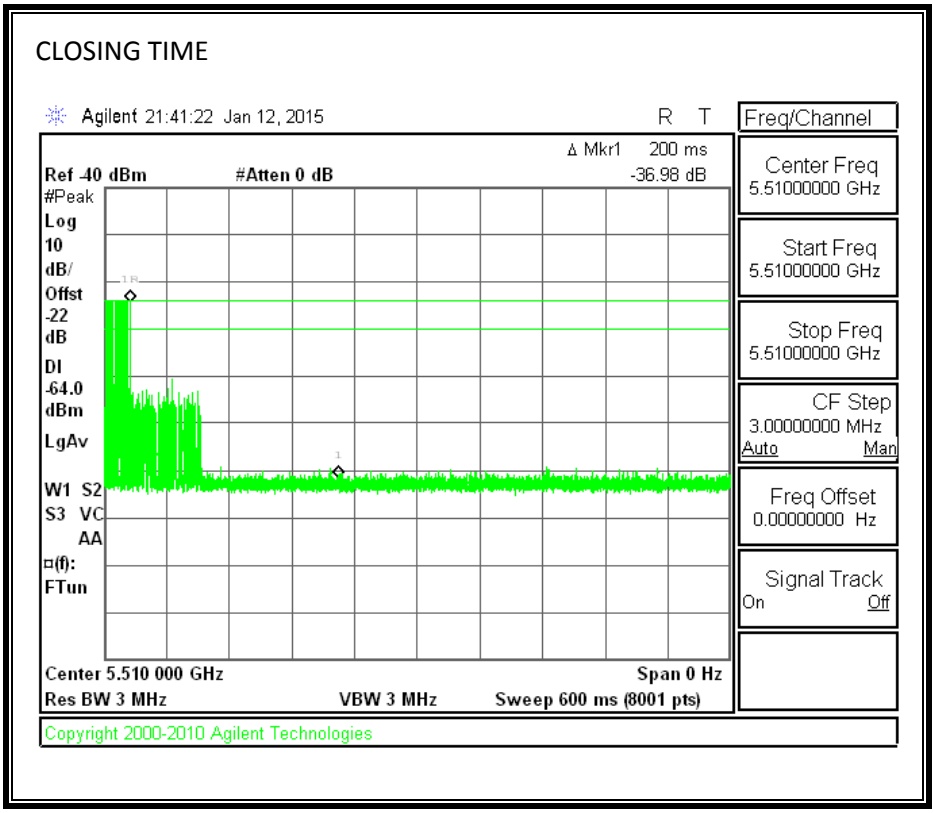
CHANNEL CLOSING TIME



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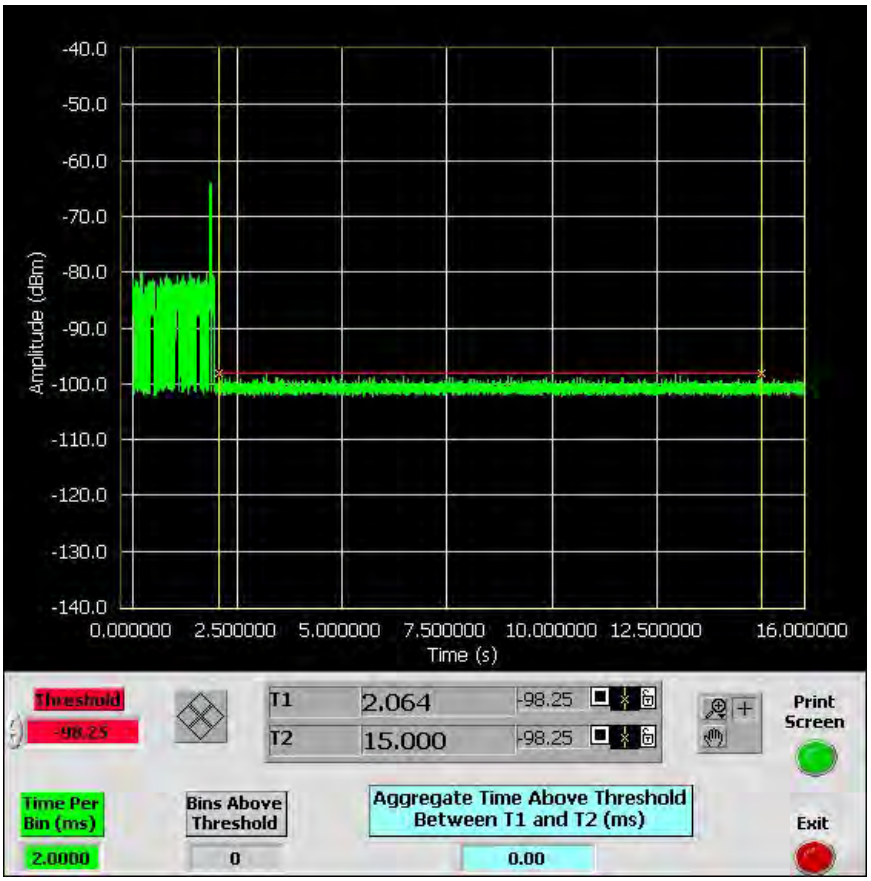
AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

No transmissions are observed during the aggregate monitoring period.

AGGREGATE CLOSING TIME



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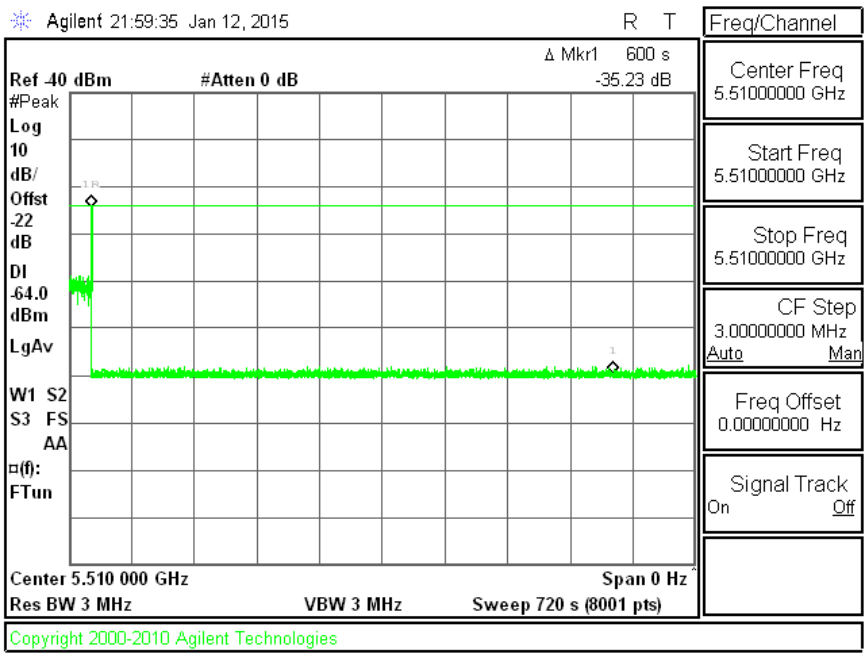
14.3.5. 10-MINUTE BEACON MONITORING PERIOD

RESULTS

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

10-MINUTE BEACON MONITORING PERIOD



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