



FCC 47 CFR PART 15 SUBPART E

**CERTIFICATION TEST REPORT
FOR
GSM/WCDMA/LTE Tablet + Bluetooth, DTS/UNII a/b/g/n/ac and ANT+**

MODEL NUMBER: SM-T805S; SM-T805K; SM-T805L

FCC ID: A3LSMT805KOR

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: SAMSUNG ELECTRONICS CO., LTD.

EUT DESCRIPTION: GSM/WCDMA/LTE Tablet + Bluetooth, DTS/UNII a/b/g/n/ac and ANT+

MODEL: SM-T805S; SM-T805K; SM-T805L

SERIAL NUMBER: Conducted: 1951580 Radiated: 1951579

DATE TESTED: Sep 5 – 18, 2014

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

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

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

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2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 15, ANSI C63.10-2009.

3. FACILITIES AND ACCREDITATION

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

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

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

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

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

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

$$\text{Field Strength (dBuV/m)} = \text{Measured Voltage (dBuV)} + \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} - \text{Preamp Gain (dB)}$$

$$36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} = 28.9 \text{ dBuV/m}$$

4.3. MEASUREMENT UNCERTAINTY

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

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

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

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

GSM/WCDMA/LTE Tablet + Bluetooth, DTS/UNII a/b/g/n/ac and ANT+

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum total conducted output power as follows:

Frequency Range (MHz)	Mode	Total Output Power (dBm)	Total Output Power (mW)
5180 - 5240	802.11a	9.41	8.73
5180 - 5240	802.11n HT20	9.26	8.43
5190 - 5230	802.11n HT40	9.51	8.93
5210 - 5210	802.11ac HT80	9.21	8.34
5260 - 5320	802.11a	9.41	8.73
5260 - 5320	802.11n HT20	9.46	8.83
5270 - 5310	802.11n HT40	9.06	8.05
5290 - 5290	802.11ac HT80	9.31	8.53
5500 - 5700	802.11a	9.46	8.83
5500 - 5700	802.11n HT20	9.46	8.83
5510 - 5670	802.11n HT40	9.06	8.05
5530	802.11ac HT80	9.46	8.83

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

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

WIFI ANT 1: -2.01 dBi

WIFI Ant 2: 1.35 dBi.

List of test reduction and modes covering other modes:

Authorized Frequency Band (Antenna port & Radiated Testing)		
Frequency Range (MHz)	Mode	Covered by
5180 - 5240	802.11a legacy 1TX	802.11a 2TX CDD
5180 - 5240	802.11HT20 1TX	802.11n HT20 2TX CDD
5180 - 5240	802.11HT20 2TX STBC	802.11n HT20 2TX CDD
5180 - 5240	802.11ac VHT20 1TX	802.11n HT20 2TX CDD
5180 - 5240	802.11ac VHT20 2TX STBC	802.11n HT20 2TX CDD
5180 - 5240	802.11ac VHT20 2TX CDD	802.11n HT20 2TX CDD
5190 - 5230	802.11n HT40 1TX	802.11n HT40 2TX CDD
5190 - 5230	802.11n HT40 2TX STBC	802.11n HT40 2TX CDD
5190 - 5230	802.11ac VHT40 1TX	802.11n HT40 2TX CDD
5190 - 5230	802.11ac VHT40 2TX STBC	802.11n HT40 2TX CDD
5190 - 5230	802.11ac VHT40 2TX CDD	802.11n HT40 2TX CDD
5210	802.11ac VHT80 1TX	802.11ac VHT80 2TX CDD
5210	802.11ac VHT80 2TX STBC	802.11ac VHT80 2TX CDD

Authorized Frequency Band (Antenna port & Radiated Testing)		
Frequency Range (MHz)	Mode	Covered by
5260 - 5320	802.11a legacy 1TX	802.11a 2TX CDD
5260 - 5320	802.11HT20 1TX	802.11n HT20 2TX CDD
5260 - 5320	802.11HT20 2TX STBC	802.11n HT20 2TX CDD
5260 - 5320	802.11ac VHT20 1TX	802.11n HT20 2TX CDD
5260 - 5320	802.11ac VHT20 2TX STBC	802.11n HT20 2TX CDD
5260 - 5320	802.11ac VHT20 2TX CDD	802.11n HT20 2TX CDD
5270 - 5310	802.11n HT40 1TX	802.11n HT40 2TX CDD
5270 - 5310	802.11n HT40 2TX STBC	802.11n HT40 2TX CDD
5270 - 5310	802.11ac VHT40 1TX	802.11n HT40 2TX CDD
5270 - 5310	802.11ac VHT40 2TX STBC	802.11n HT40 2TX CDD
5270 - 5310	802.11ac VHT40 2TX CDD	802.11n HT40 2TX CDD
5290	802.11ac VHT80 1TX	802.11ac VHT80 2TX CDD
5290	802.11ac VHT80 2TX STBC	802.11ac VHT80 2TX CDD

Authorized Frequency Band (Antenna port & Radiated Testing)		
Frequency Range (MHz)	Mode	Covered by
5500 - 5700	802.11a legacy 1TX	802.11a 2TX CDD
5500 - 5700	802.11HT20 1TX	802.11n HT20 2TX CDD
5500 - 5700	802.11HT20 2TX STBC	802.11n HT20 2TX CDD
5500 - 5700	802.11ac VHT20 1TX	802.11n HT20 2TX CDD
5500 - 5700	802.11ac VHT20 2TX STBC	802.11n HT20 2TX CDD
5500 - 5700	802.11ac VHT20 2TX CDD	802.11n HT20 2TX CDD
5510 - 5670	802.11n HT40 1TX	802.11n HT40 2TX CDD
5510 - 5670	802.11n HT40 2TX STBC	802.11n HT40 2TX CDD
5510 - 5670	802.11ac VHT40 1TX	802.11n HT40 2TX CDD
5510 - 5670	802.11ac VHT40 2TX STBC	802.11n HT40 2TX CDD
5510 - 5670	802.11ac VHT40 2TX CDD	802.11n HT40 2TX CDD
5530	802.11ac VHT80 1TX	802.11ac VHT80 2TX CDD
5530	802.11ac VHT80 2TX STBC	802.11ac VHT80 2TX CDD

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

802.11ac VHT80mode: MCS0

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

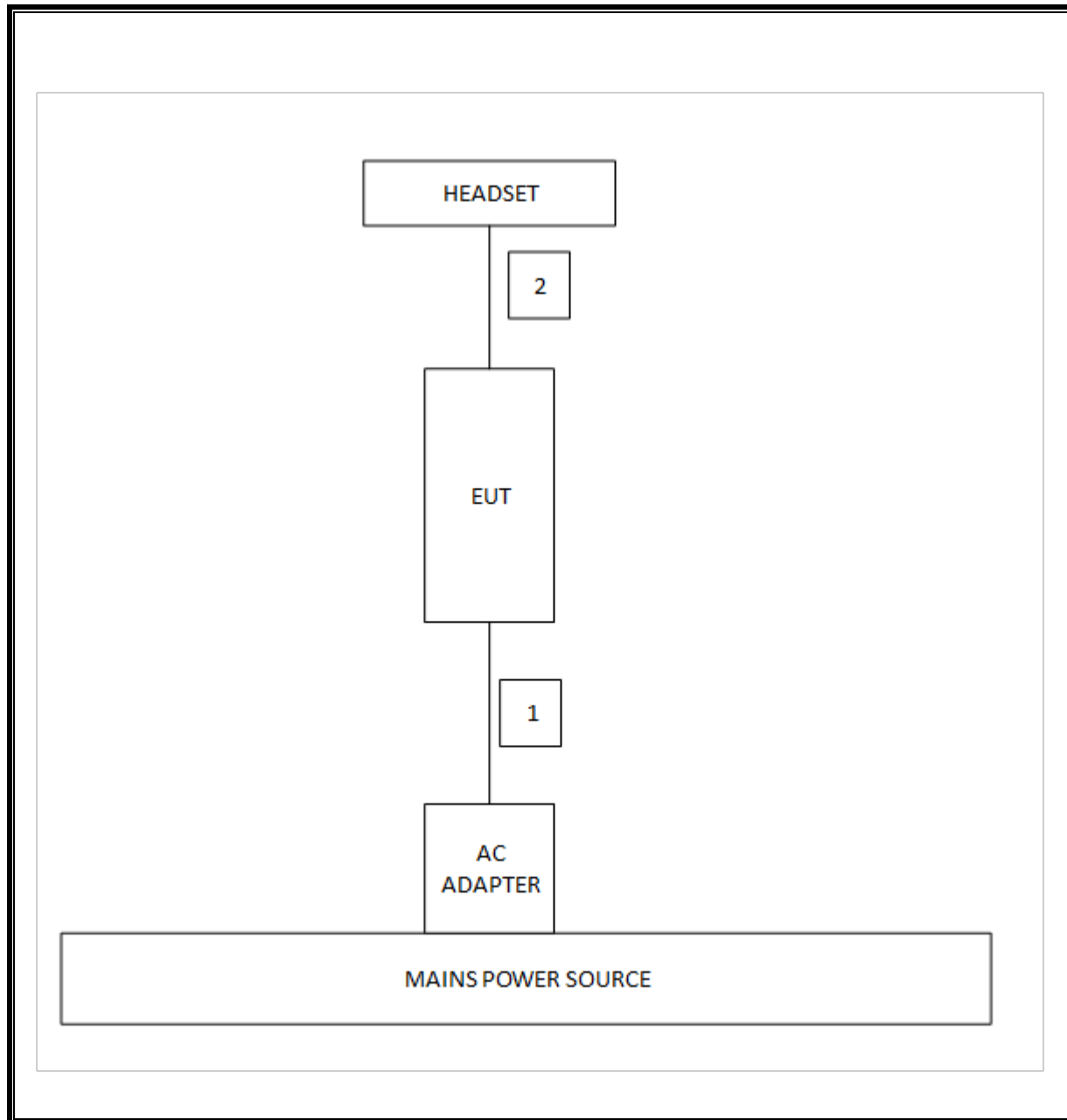
I/O CABLES

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

The EUT is setup as a stand-alone device.

SETUP DIAGRAM FOR TESTS



6. TEST AND MEASUREMENT EQUIPMENT

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

Test Equipment List				
Description	Manufacturer	Model	Asset	Cal Due
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C00986	4/1/2015
Spectrum Analyzer, 26.5 GHz	Agilent / HP	E4440A	C01179	2/26/2015
EMI Test Receiver, 30 MHz	R & S	ESHS 20	N02396	8/8/2015
Preamplifier, 1300 MHz	Agilent / HP	8447D	C00580	1/28/2015
Preamplifier, 26.5 GHz	Agilent / HP	8449B	C01063	10/22/2014
Preamplifier, 40 GHz	Miteq	NSP4000-SP2	C00990	8/2/2015
Antenna, Bilog, 30MHz-1 GHz	Sunol Sciences	JB1	N/A	3/6/2015
Antenna, Horn, 18 GHz	ETS	3117	C01022	2/21/2015
Antenna, Horn, 40 GHz	ARA	MWH-2640/B	C00981	6/28/2015
Antenna, Horn, 26.5 GHz	ARA	MWH-1826/B	C00589	12/17/2014
Peak Power Meter	Agilent / HP	E4416A	C00963	12/13/2014
Peak / Average Power Sensor	Agilent / HP	E9327A	C00964	12/13/2014
LISN, 30 MHz	FCC	50/250-25-2	C00626	1/14/2015
Reject Filter, 5.725-5.825 GHz	Micro-Tronics	BRC13192	N02676	CNR

7. SUMMARY TABLE

FCC Part Section	Test Description	Test Limit	Test Condition	Test Result	Worst Case
15.247 (a)	Occupied Band width (26dB)	N/A	Conducted	Pass	82.4MHz
15.407 (a)(1)	TX Cond. Power 5.15-2.25	<17dBm or 4+10Log(OBW)		Pass	9.51dBm
15.407 (a)(2)	TX Cond. Power 5.25-5.35 & 5.47-5.725	<24dBm or 11+10Log(OBW)		Pass	9.46dBm
15.407 (a)(6)	Peak Excursion Ratio	13dB		Pass	9.86dB
15.207 (a)	AC Power Line conducted emissions	Section 10	Radiated	Pass	48.27dBuV
15.407 (b) & 15.209	Radiated Spurious Emission	< 54dBuV/m		Pass	50.27dBmV/m
15.407 (h)(2)	Dynamic Frequency Selection	N/A	Radiated / Conducted	Pass	N/A

8. ON TIME, DUTY CYCLE AND MEASUREMENT METHODS

LIMITS

None; for reporting purposes only.

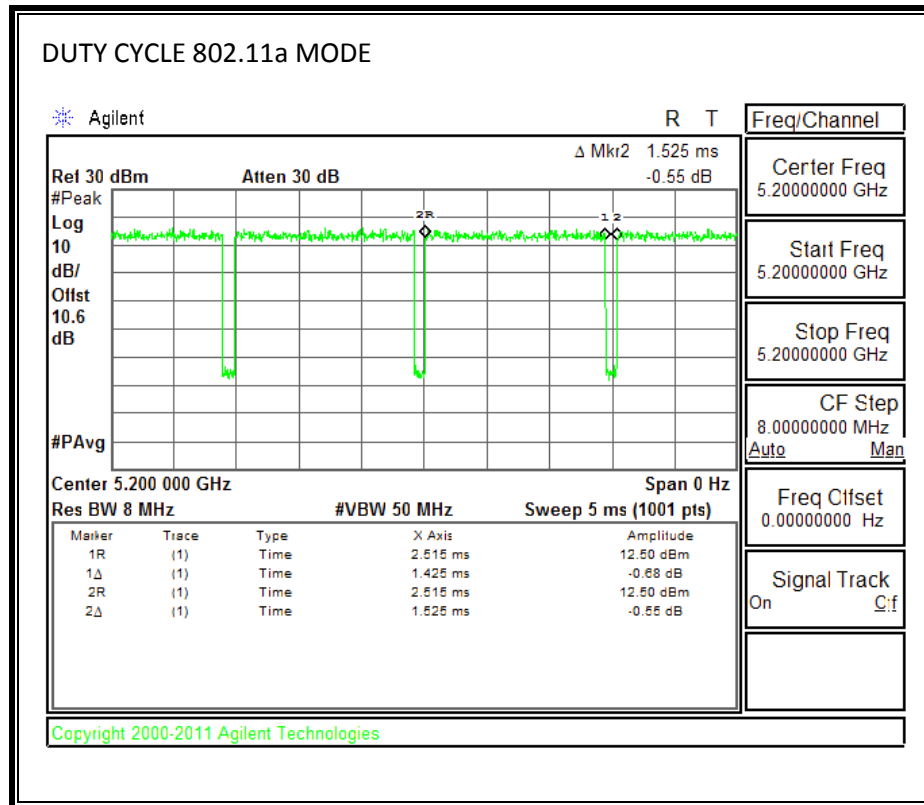
PROCEDURE

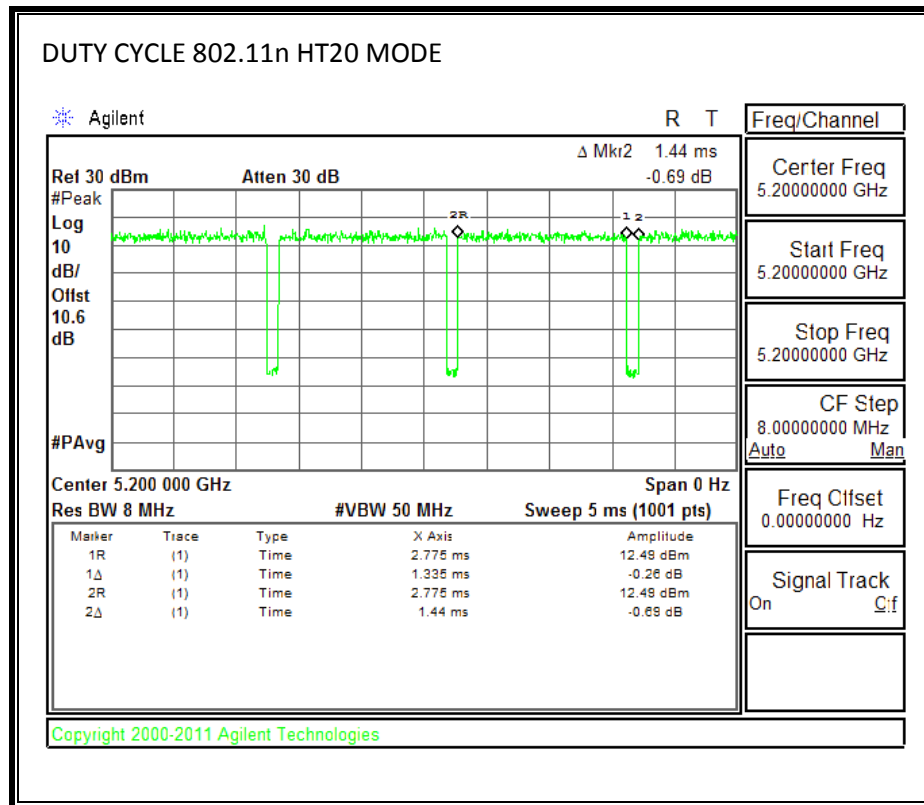
KDB 789033 Zero-Span Spectrum Analyzer Method.

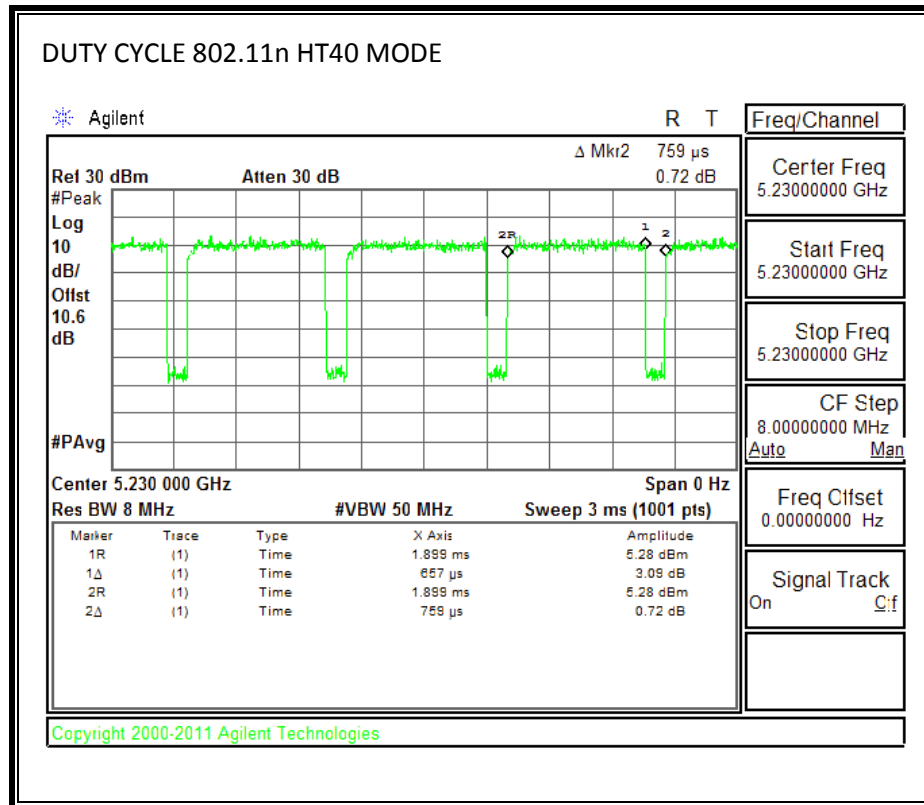
8.1. ON TIME AND DUTY CYCLE RESULTS

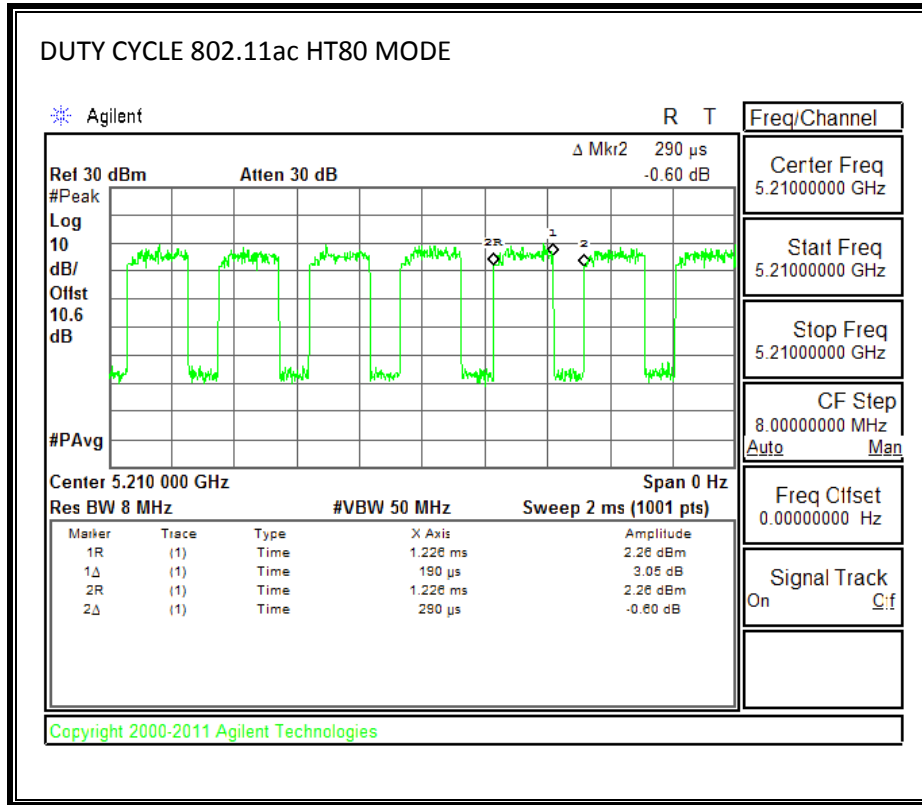
Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/T Minimum VBW (kHz)
802.11a	1.43	1.53	0.934	93.4%	0.29	0.702
802.11ac HT80	0.19	0.28	0.679	67.9%	1.68	5.263
802.11n HT20	1.34	1.44	0.927	92.7%	0.33	0.749
802.11n HT40	0.67	0.76	0.880	88.0%	0.56	1.499

8.2. DUTY CYCLE PLOTS









9. MEASUREMENT METHOD

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

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

10. ANTENNA PORT TEST RESULTS

10.1. 26 dB BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

10.1.1. 802.11a MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	26 dB BW Chain 0 (MHz)	26 dB BW Chain 1 (MHz)
Low	5180	21.80	21.65
Mid	5200	21.70	21.60
High	5240	21.50	21.60

10.1.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	26 dB BW Chain 0 (MHz)	26 dB BW Chain 1 (MHz)
Low	5180	22.00	22.00
Mid	5200	21.95	21.90
High	5240	21.90	21.90

10.1.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	26 dB BW Chain 0 (MHz)	26 dB BW Chain 1 (MHz)
Low	5190	40.3	40.2
High	5230	40.2	40.0

10.1.4. 802.11ac HT80 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	26 dB BW Chain 0 (MHz)	26 dB BW Chain 1 (MHz)
Low	5210	82.0	82.0

10.1.5. 802.11a MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	26 dB BW Chain 0 (MHz)	26 dB BW Chain 1 (MHz)
Low	5260	21.60	21.60
Mid	5300	21.55	21.55
High	5320	21.60	21.55

10.1.6. 802.11n HT20 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	26 dB BW Chain 0 (MHz)	26 dB BW Chain 1 (MHz)
Low	5260	21.90	21.95
Mid	5300	21.95	22.00
High	5320	22.00	21.95

10.1.7. 802.11n HT40 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	26 dB BW Chain 0 (MHz)	26 dB BW Chain 1 (MHz)
Low	5270	40.40	40.00
High	5310	40.30	39.90

10.1.8. 802.11ac HT80 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	26 dB BW Chain 0 (MHz)	26 dB BW Chain 1 (MHz)
Low	5290	82.4	82.2

10.1.9. 802.11a MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	26 dB BW Chain 0 (MHz)	26 dB BW Chain 1 (MHz)
Low	5500	21.66	21.63
Mid	5580	21.72	21.51
High	5700	21.48	21.54

10.1.10. 802.11n HT20 MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	26 dB BW Chain 0 (MHz)	26 dB BW Chain 1 (MHz)
Low	5500	21.51	21.45
Mid	5580	21.66	21.75
High	5700	21.54	21.87

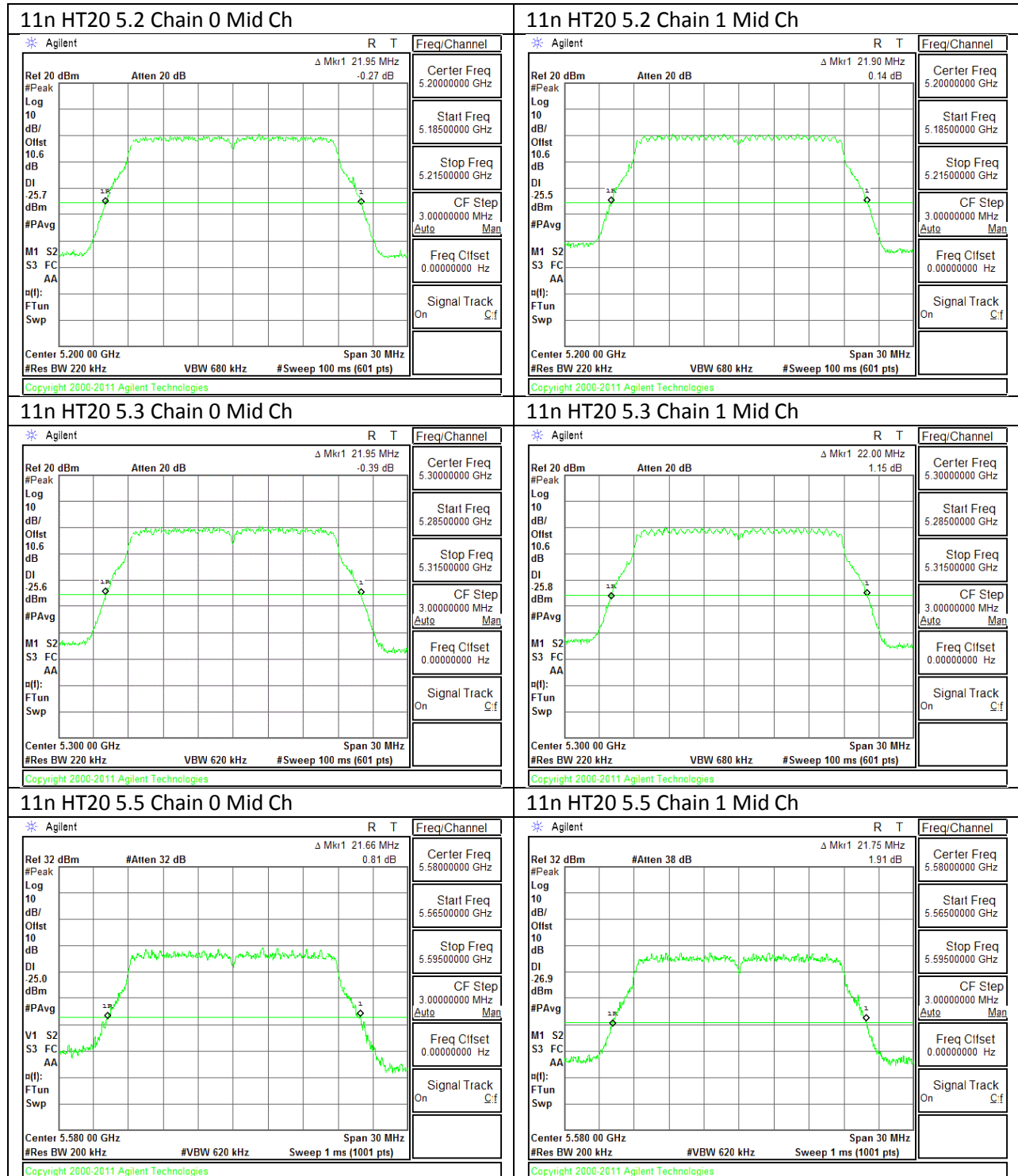
10.1.11. 802.11n HT40 MODE IN THE 5.5 GHz BAND

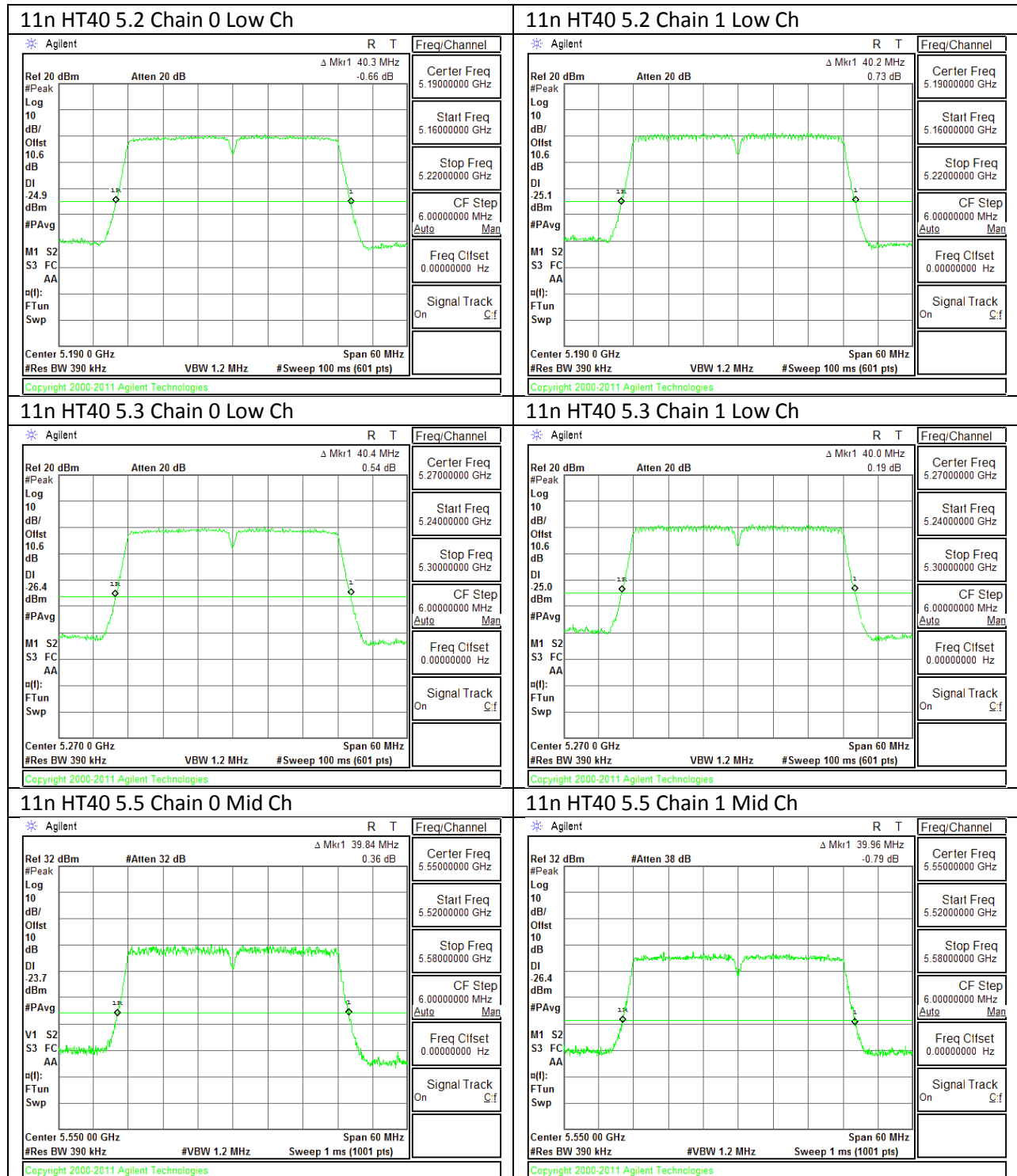
Channel	Frequency (MHz)	26 dB BW Chain 0 (MHz)	26 dB BW Chain 1 (MHz)
Low	5510	39.96	40.02
Mid	5550	39.84	39.96
High	5670	40.32	40.08

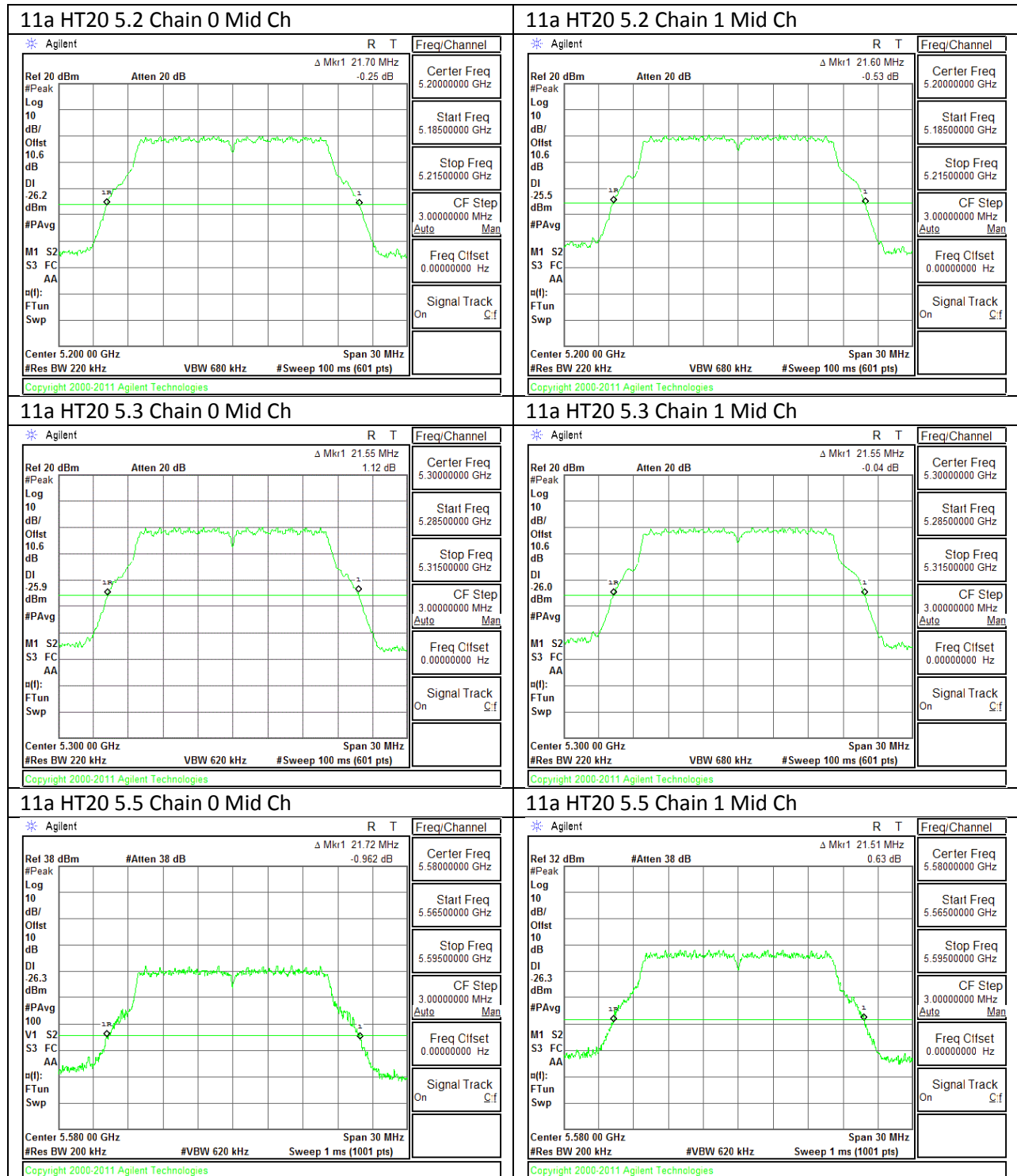
10.1.12. 802.11ac HT80 MODE IN THE 5.5 GHz BAND

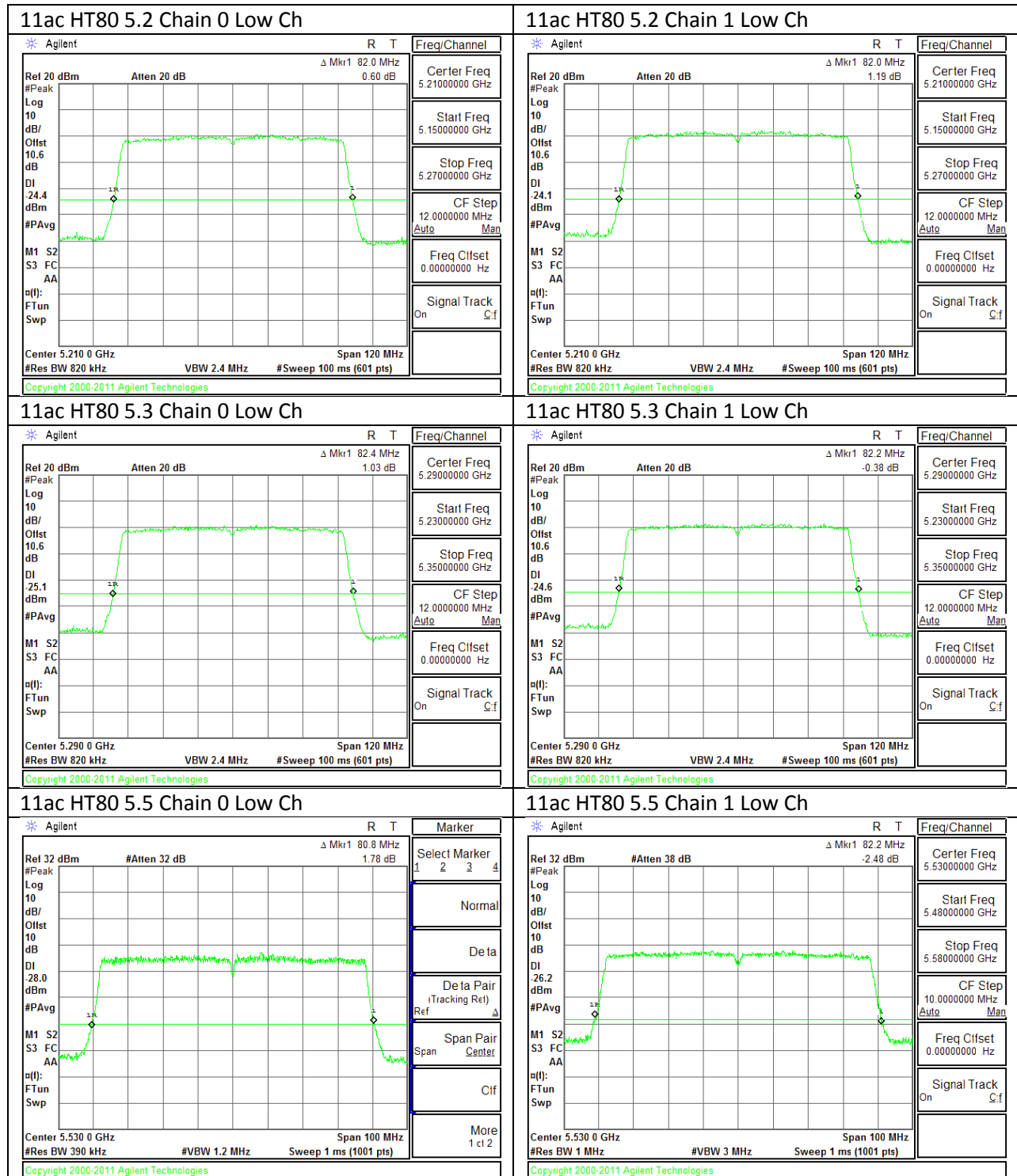
Channel	Frequency (MHz)	26 dB BW Chain 0 (MHz)	26 dB BW Chain 1 (MHz)
Low	5530	80.8	82.2

10.1.1. 26 dB BANDWIDTH PLOTS









10.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

10.2.1. 802.11a MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)
Low	5180	16.49	16.48
Mid	5200	16.49	16.48
High	5240	16.49	16.49

10.2.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)
Low	5180	17.67	17.68
Mid	5200	17.68	17.68
High	5240	17.69	17.67

10.2.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)
Low	5190	36.14	36.15
High	5230	36.15	36.13

10.2.4. 802.11ac HT80 MODE IN THE 5.2 GHz BAND

Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)
Low	5210	75.45	75.37

10.2.5. 802.11a MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)
Low	5260	16.49	16.48
Mid	5300	16.49	16.48
High	5320	16.48	16.49

10.2.6. 802.11n HT20 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)
Low	5260	17.68	17.68
Mid	5300	17.68	17.69
High	5320	17.68	17.67

10.2.7. 802.11n HT40 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)
Low	5270	36.14	36.17
High	5310	36.11	36.12

10.2.8. 802.11ac HT80 MODE IN THE 5.3 GHz BAND

Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)
Low	5290	75.38	75.50

10.2.9. 802.11a MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)
Low	5500	16.46	16.50
Mid	5580	16.44	16.54
High	5700	16.50	16.57

10.2.10. 802.11n HT20 MODE IN THE 5.5 GHz BAND

Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)
Low	5500	17.62	17.73
Mid	5580	17.64	17.69
High	5700	17.66	17.67

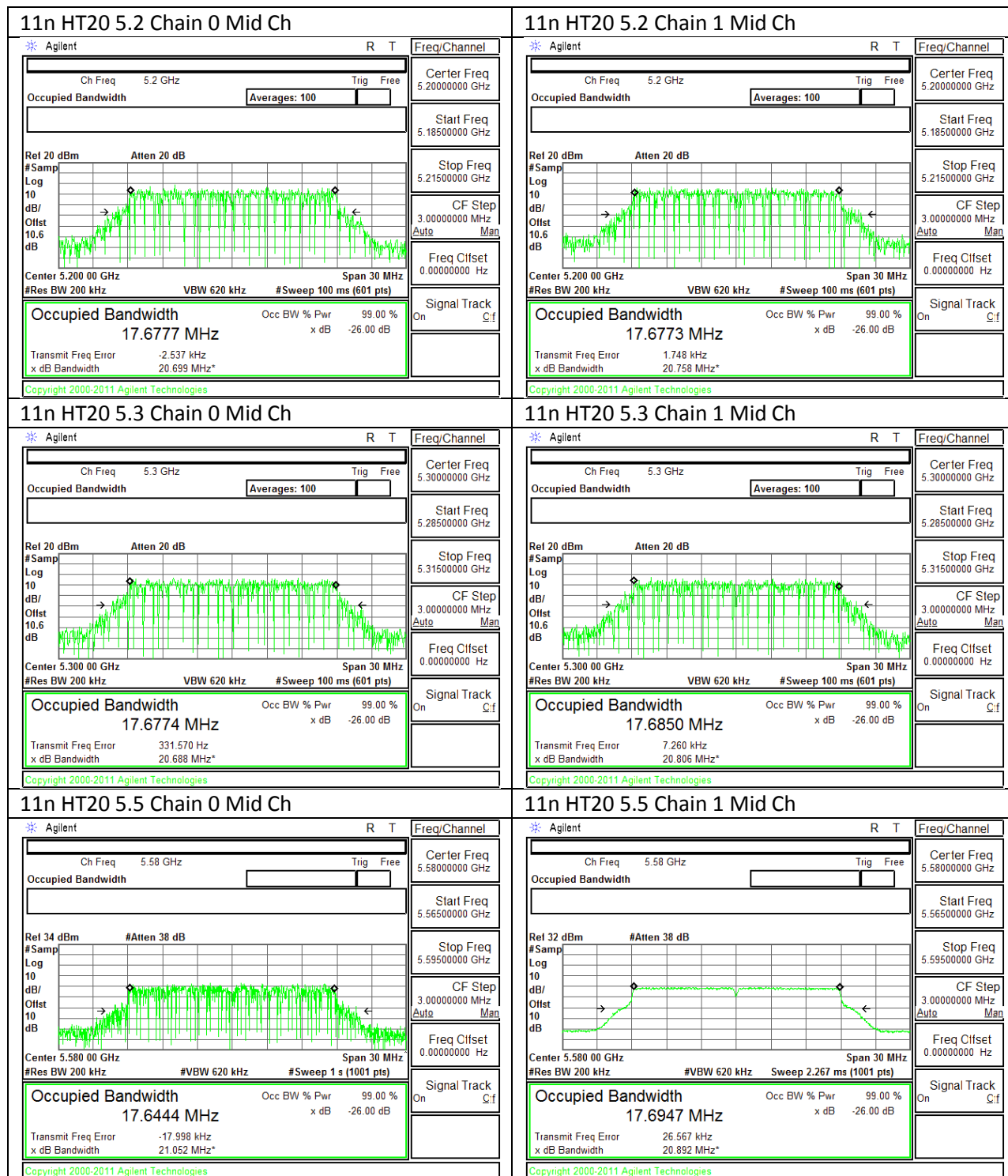
10.2.11. 802.11n HT40 MODE IN THE 5.5 GHz BAND

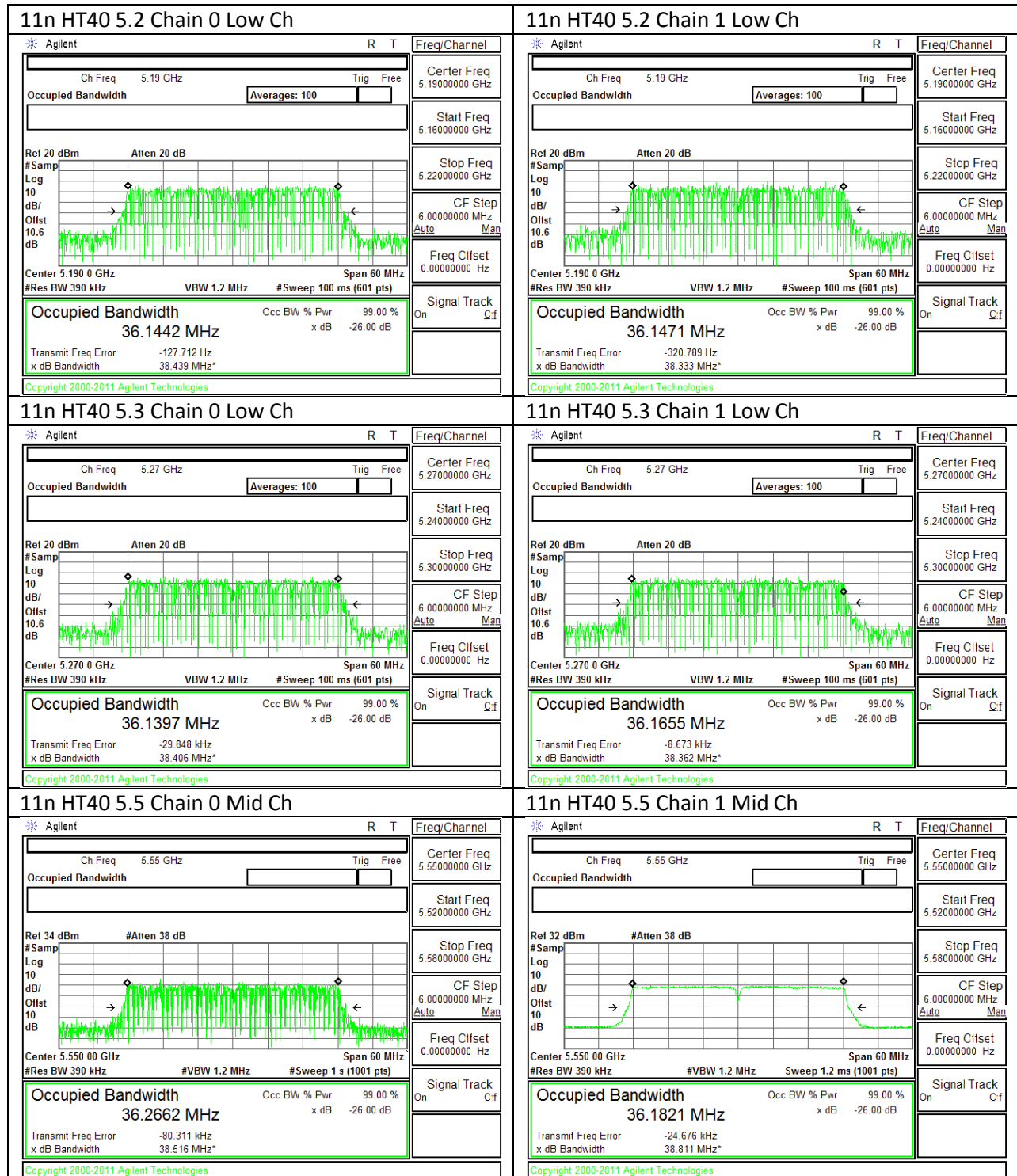
Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)
Low	5510	36.18	36.34
Mid	5550	36.27	36.18
High	5670	36.10	36.35

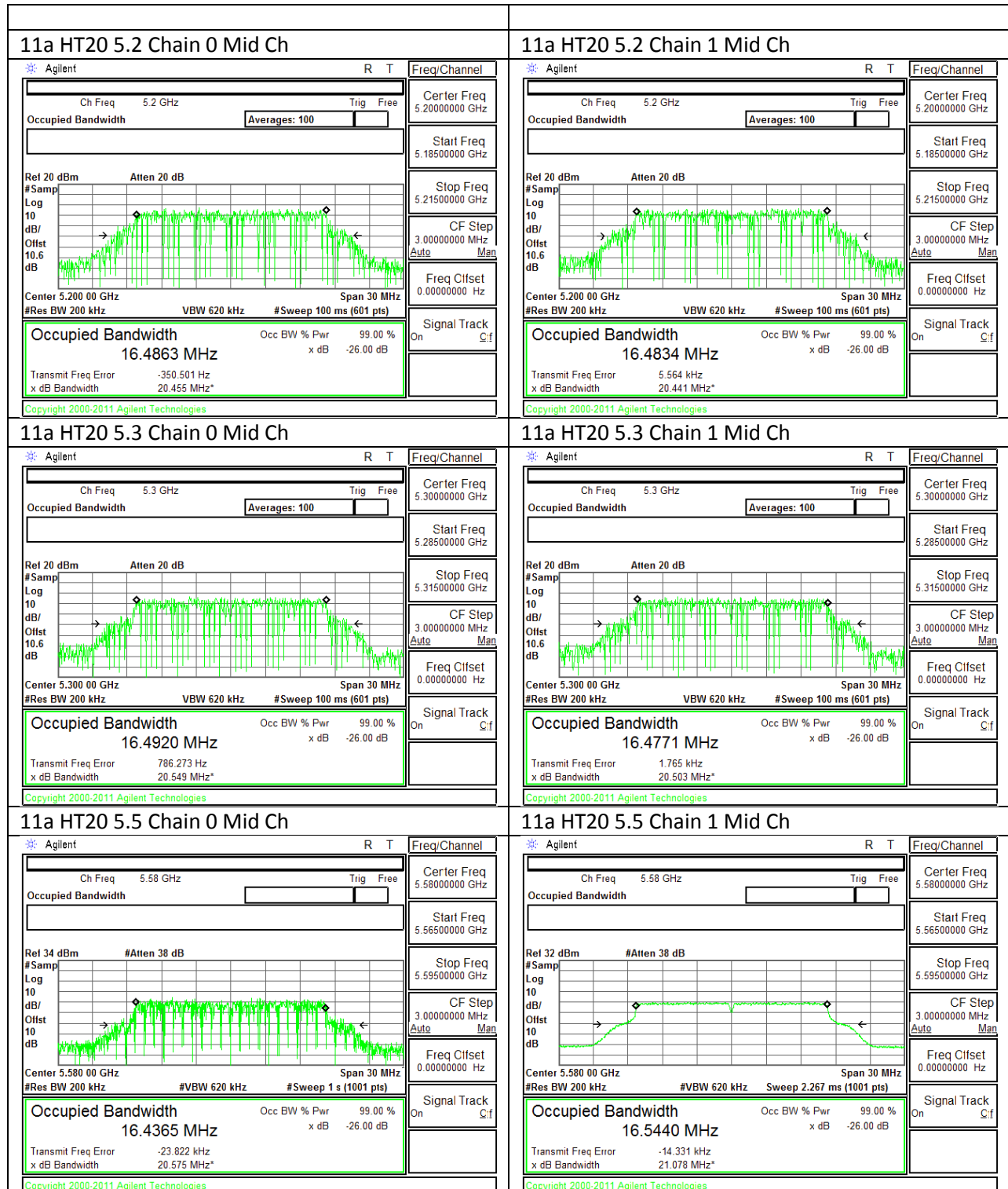
10.2.12. 802.11ac HT80 MODE IN THE 5.5 GHz BAND

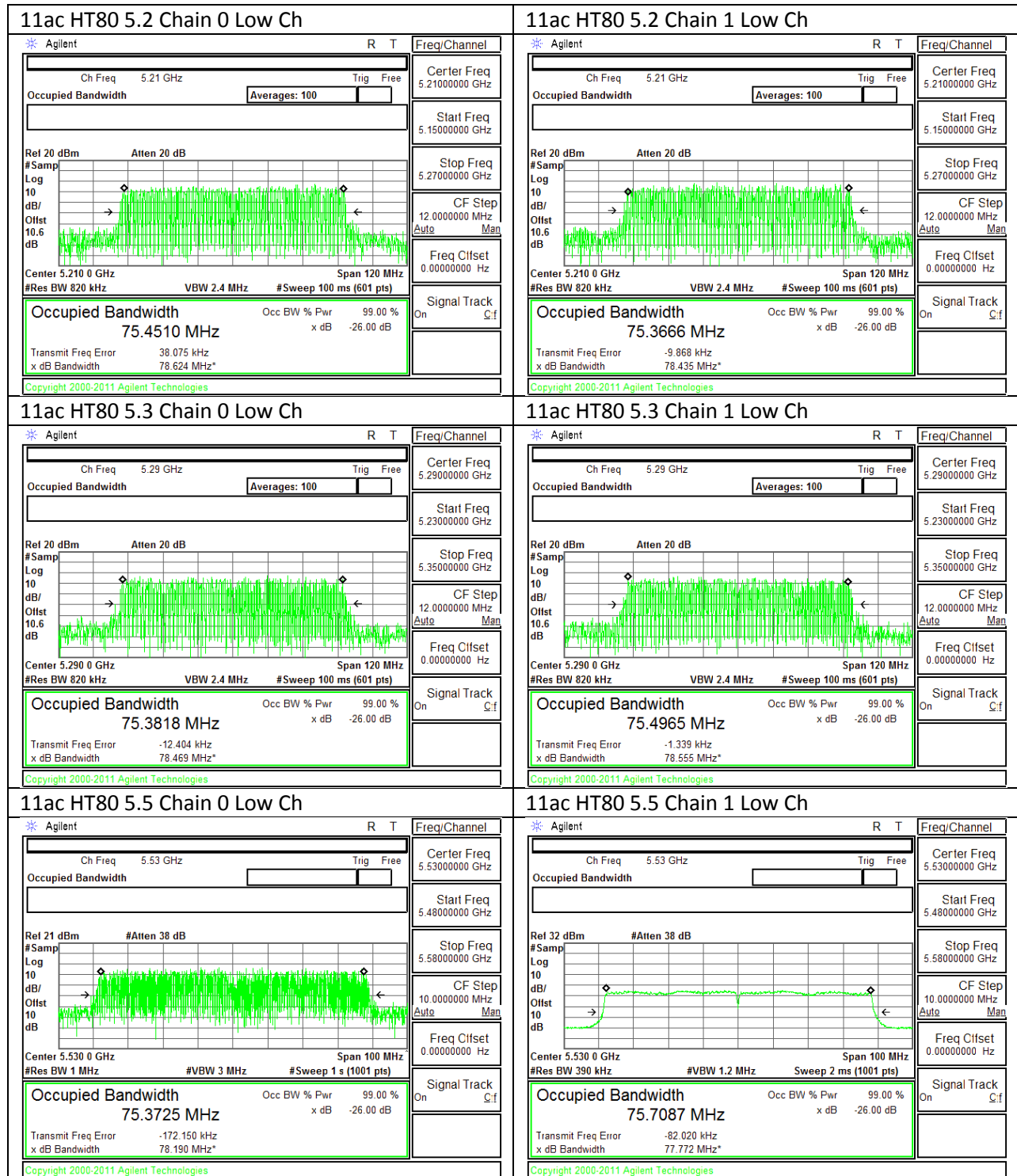
Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)
Low	5530	75.40	75.71

10.2.1. 99% BANDWIDTH PLOTS









10.3. OUTPUT POWER AND PPSD

LIMITS

FCC §15.407 (a) (1)

For the band 5.15–5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 50 mW or $4 \text{ dBm} + 10 \log B$, 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.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 10.2 dB (including 10 dB pad and .2 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

DIRECTIONAL ANTENNA GAIN

For Power: The TX chains are uncorrelated and the antenna gain is unequal among the chains. The directional gain is:

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
-2.01	1.35	-0.01

For PSD: The TX chains are correlated and the antenna gain is unequal among the chains. The directional gain is:

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
-2.01	1.35	2.84

Test Methodology

RESULTS

10.3.1. 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 for Power (dBi)	Directional Gain for PPSD (dBi)
Low	5180	16.48	16.48	-0.01	2.84
Mid	5200	16.48	16.48	-0.01	2.84
High	5240	16.49	16.49	-0.01	2.84

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	16.17	22.17	22.18	16.17	4.00	10.00	4.00
Mid	5200	16.17	22.17	22.18	16.17	4.00	10.00	4.00
High	5240	16.17	22.17	22.18	16.17	4.00	10.00	4.00

Duty Cycle CF (dB)	0.29	Included in Calculations of Corr'd Power & PPSD
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Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5180	6.50	6.30	9.41	16.17	-6.76
Mid	5200	6.50	6.30	9.41	16.17	-6.76
High	5240	6.50	6.30	9.41	16.17	-6.76

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Chain 1 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5180	-1.68	-0.86	2.05	4.00	-1.95
Mid	5200	-1.81	-1.08	1.87	4.00	-2.13
High	5240	-1.59	-1.11	1.96	4.00	-2.04

10.3.2. 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 for Power (dBi)	Directional Gain for PPSP (dBi)
Low	5180	22.00	17.67	-0.01	2.84
Mid	5200	21.90	17.68	-0.01	2.84
High	5240	21.90	17.67	-0.01	2.84

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC EIRP Limit (dBm)	Max IC Power (dBm)	Power Limit (dBm)	FCC PPSP Limit (dBm)	IC eirp PSD Limit (dBm)	PPSP Limit (dBm)
Low	5180	17.00	22.47	22.48	17.00	4.00	10.00	4.00
Mid	5200	17.00	22.47	22.48	17.00	4.00	10.00	4.00
High	5240	17.00	22.47	22.48	17.00	4.00	10.00	4.00

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

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5180	6.30	6.00	9.16	17.00	-7.84
Mid	5200	6.20	6.10	9.16	17.00	-7.84
High	5240	6.40	6.10	9.26	17.00	-7.74

PPSP Results

Channel	Frequency (MHz)	Chain 0 Meas PPSP (dBm)	Chain 1 Meas PPSP (dBm)	Total Corr'd PPSP (dBm)	PPSP Limit (dBm)	PPSP Margin (dB)
Low	5180	-2.54	-1.23	1.50	4.00	-2.50
Mid	5200	-1.95	-1.78	1.48	4.00	-2.52
High	5240	-1.70	-1.42	1.78	4.00	-2.22

10.3.3. 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 for Power (dBi)	Directional Gain for PPSD (dBi)
Low	5190	40.20	36.14	-0.01	2.84
High	5230	40.00	36.13	-0.01	2.84

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC EIRP Limit (dBm)	Max IC Power (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC eirp PSD Limit (dBm)	PPSD Limit (dBm)
Low	5190	17.00	23.00	23.01	17.00	4.00	10.00	4.00
High	5230	17.00	23.00	23.01	17.00	4.00	10.00	4.00

Duty Cycle CF (dB)	0.56	Included in Calculations of Corr'd Power & PPSD
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Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5190	6.30	6.30	9.31	17.00	-7.69
High	5230	6.50	6.50	9.51	17.00	-7.49

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Chain 1 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5190	-4.77	-5.18	-1.40	4.00	-5.40
High	5230	-4.83	-4.49	-1.09	4.00	-5.09

10.3.4. 802.11ac HT80 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 for Power (dBi)	Directional Gain for PPSD (dBi)
Low	5210	82.00	75.37	-0.01	2.84

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	5210	17.00	23.00	23.01	17.00	4.00	10.00	4.00

Duty Cycle CF (dB)	1.68	Included in Calculations of Corr'd Power & PPSD
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Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5210	6.20	6.20	9.21	17.00	-7.79

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Chain 1 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5210	-9.21	-8.59	-4.20	4.00	-8.20

10.3.5. 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 for Power (dBi)	Directional Gain for PPSP (dBi)
Low	5260	21.60	16.48	-0.01	2.84
Mid	5300	21.55	16.48	-0.01	2.84
High	5320	21.55	16.48	-0.01	2.84

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSP Limit (dBm)	IC PSD Limit (dBm)	PPSP Limit (dBm)
Low	5260	24.00	23.17	29.17	23.17	11.00	11.00	11.00
Mid	5300	24.00	23.17	29.17	23.17	11.00	11.00	11.00
High	5320	24.00	23.17	29.17	23.17	11.00	11.00	11.00

Duty Cycle CF (dB)	0.29	Included in Calculations of Corr'd Power & PPSP
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Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	6.50	6.30	9.41	23.17	-13.76
Mid	5300	6.40	6.30	9.36	23.17	-13.81
High	5320	6.50	6.20	9.36	23.17	-13.81

PPSP Results

Channel	Frequency (MHz)	Chain 0 Meas PPSP (dBm)	Chain 1 Meas PPSP (dBm)	Total Corr'd PPSP (dBm)	PPSP Limit (dBm)	PPSP Margin (dB)
Low	5260	-1.26	-1.43	1.96	11.00	-9.04
Mid	5300	-1.08	-1.70	1.92	11.00	-9.08
High	5320	-1.37	-1.54	1.85	11.00	-9.15

10.3.6. 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 for Power (dBi)	Directional Gain for PPSD (dBi)
Low	5260	21.90	17.68	-0.01	2.84
Mid	5300	21.95	17.68	-0.01	2.84
High	5320	21.95	17.67	-0.01	2.84

Limits

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

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

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	6.40	6.50	9.46	23.47	-14.01
Mid	5300	6.30	6.50	9.41	23.47	-14.06
High	5320	6.20	6.50	9.36	23.47	-14.11

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Chain 1 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5260	-1.44	-1.83	1.71	11.00	-9.29
Mid	5300	-1.68	-2.19	1.41	11.00	-9.59
High	5320	-1.73	-1.93	1.51	11.00	-9.49

10.3.7. 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 for Power (dBi)	Directional Gain for PPSD (dBi)
Low	5270	40.00	36.14	-0.01	2.84
High	5310	39.90	36.11	-0.01	2.84

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)	0.56	Included in Calculations of Corr'd Power & PPSD
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Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5270	6.00	6.00	9.01	24.00	-14.99
High	5310	6.00	6.10	9.06	24.00	-14.94

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Chain 1 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5270	-5.15	-5.38	-1.69	11.00	-12.69
High	5310	-5.11	-5.54	-1.75	11.00	-12.75

10.3.8. 802.11ac HT80 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 for Power (dBi)	Directional Gain for PPSD (dBi)
Low	5290	82.20	75.38	-0.01	2.84

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	5290	24.00	24.00	30.00	24.00	11.00	11.00	11.00

Duty Cycle CF (dB)	1.68	Included in Calculations of Corr'd Power & PPSD
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Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5290	6.30	6.30	9.31	24.00	-14.69

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Chain 1 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5290	-8.97	-8.91	-4.25	11.00	-15.25

10.3.9. 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 for Power (dBi)	Directional Gain for PPSP (dBi)
Low	5500	21.63	16.46	-0.01	2.84
Mid	5580	21.51	16.44	-0.01	2.84
High	5700	21.48	16.50	-0.01	2.84

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSP Limit (dBm)	IC PSD Limit (dBm)	PPSP Limit (dBm)
Low	5500	24.00	23.16	29.16	23.16	11.00	11.00	11.00
Mid	5580	24.00	23.16	29.16	23.16	11.00	11.00	11.00
High	5700	24.00	23.17	29.17	23.17	11.00	11.00	11.00

Duty Cycle CF (dB)	0.29	Included in Calculations of Corr'd Power & PPSP
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Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	6.50	6.20	9.36	23.16	-13.80
Mid	5580	6.50	6.40	9.46	23.16	-13.70
High	5700	6.50	6.30	9.41	23.17	-13.76

PPSP Results

Channel	Frequency (MHz)	Chain 0 Meas PPSP (dBm)	Chain 1 Meas PPSP (dBm)	Total Corr'd PPSP (dBm)	PPSP Limit (dBm)	PPSP Margin (dB)
Low	5500	-0.78	-1.07	2.38	11.00	-8.62
Mid	5580	-1.32	-1.81	1.74	11.00	-9.26
High	5700	-0.69	-2.00	2.00	11.00	-9.00

10.3.10. 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 for Power (dBi)	Directional Gain for PPSD (dBi)
Low	5500	21.45	17.62	-0.01	2.84
Mid	5580	21.66	17.64	-0.01	2.84
High	5700	21.54	17.66	-0.01	2.84

Limits

Channel	Frequency (MHz)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Power Limit (dBm)	FCC PPSD Limit (dBm)	IC PSD Limit (dBm)	PPSD Limit (dBm)
Low	5500	24.00	23.46	29.46	23.46	11.00	11.00	11.00
Mid	5580	24.00	23.46	29.46	23.46	11.00	11.00	11.00
High	5700	24.00	23.47	29.47	23.47	11.00	11.00	11.00

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

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	6.40	6.10	9.26	23.46	-14.20
Mid	5580	6.50	6.40	9.46	23.46	-14.00
High	5700	6.40	6.30	9.36	23.47	-14.11

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Chain 1 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5500	-1.21	-1.20	2.14	11.00	-8.86
Mid	5580	-2.00	-1.74	1.47	11.00	-9.53
High	5700	-1.08	-2.00	1.82	11.00	-9.18

10.3.11. 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 for Power (dBi)	Directional Gain for PPSD (dBi)
Low	5510	39.96	36.18	-0.01	2.84
Mid	5550	39.84	36.18	-0.01	2.84
High	5670	40.08	36.10	-0.01	2.84

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)	0.56	Included in Calculations of Corr'd Power & PPSD
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Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5510	6.10	6.00	9.06	24.00	-14.94
Mid	5550	6.10	6.00	9.06	24.00	-14.94
High	5670	6.00	6.00	9.01	24.00	-14.99

PPSD Results

Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Chain 1 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5510	-4.80	-5.10	-1.38	11.00	-12.38
Mid	5550	-4.76	-4.96	-1.29	11.00	-12.29
High	5670	-5.06	-4.60	-1.25	11.00	-12.25

10.3.12. 802.11ac HT80 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 for Power (dBi)	Directional Gain for PPSD (dBi)
Low	5530	80.80	75.40	-0.01	2.84

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	5530	24.00	24.00	30.00	24.00	11.00	11.00	11.00

Duty Cycle CF (dB)	1.68	Included in Calculations of Corr'd Power & PPSD
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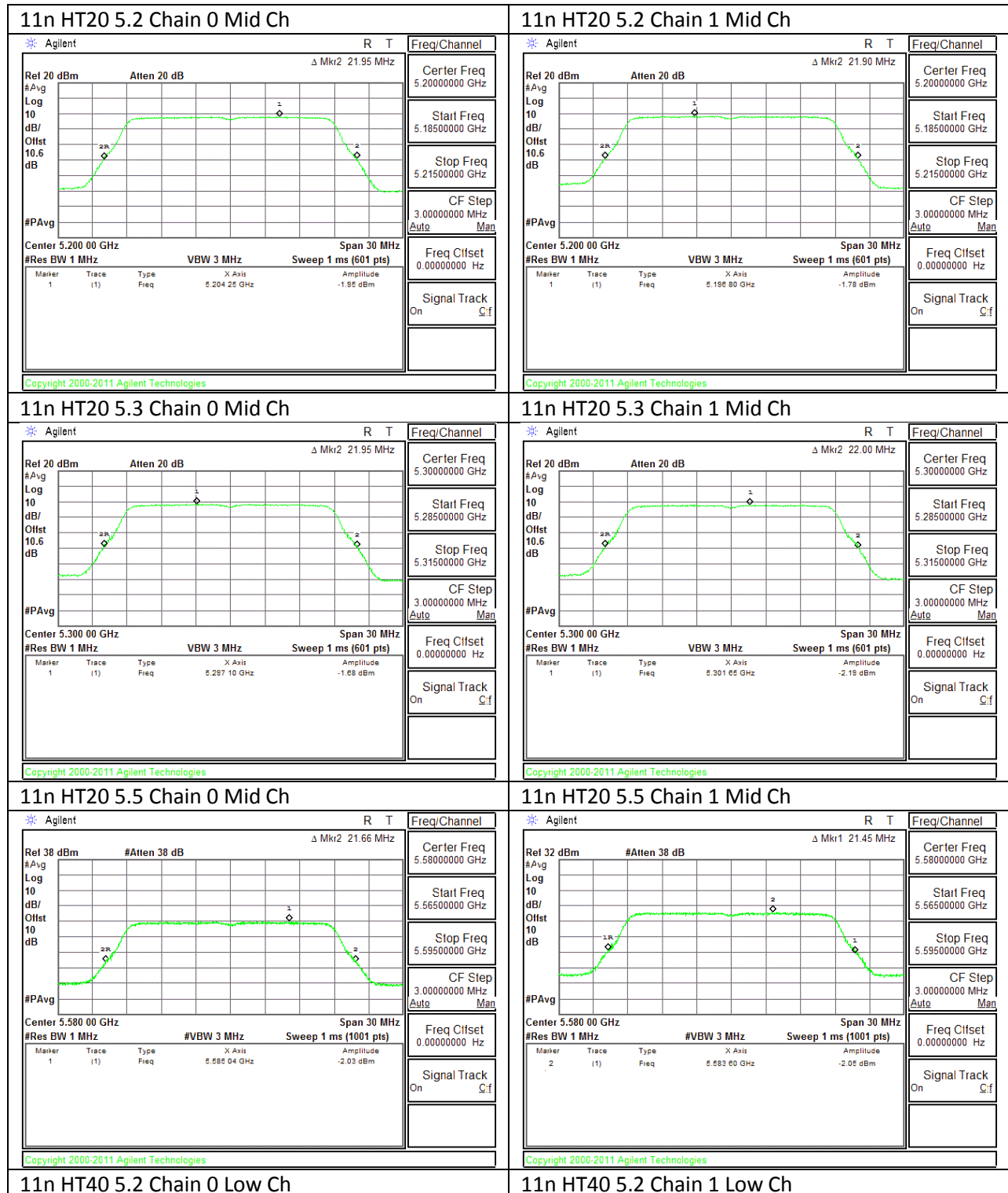
Output Power Results

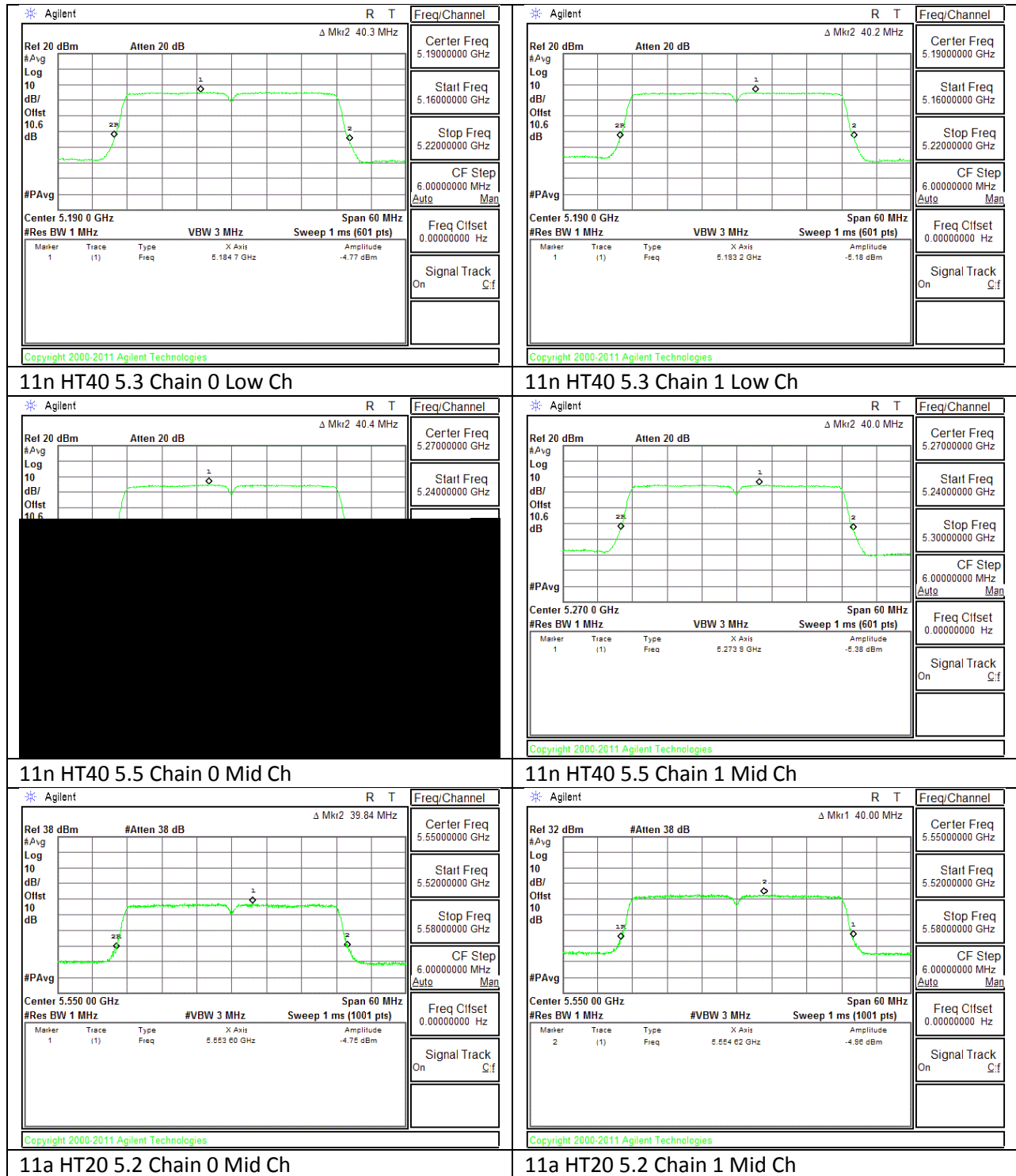
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5530	6.50	6.40	9.46	24.00	-14.54

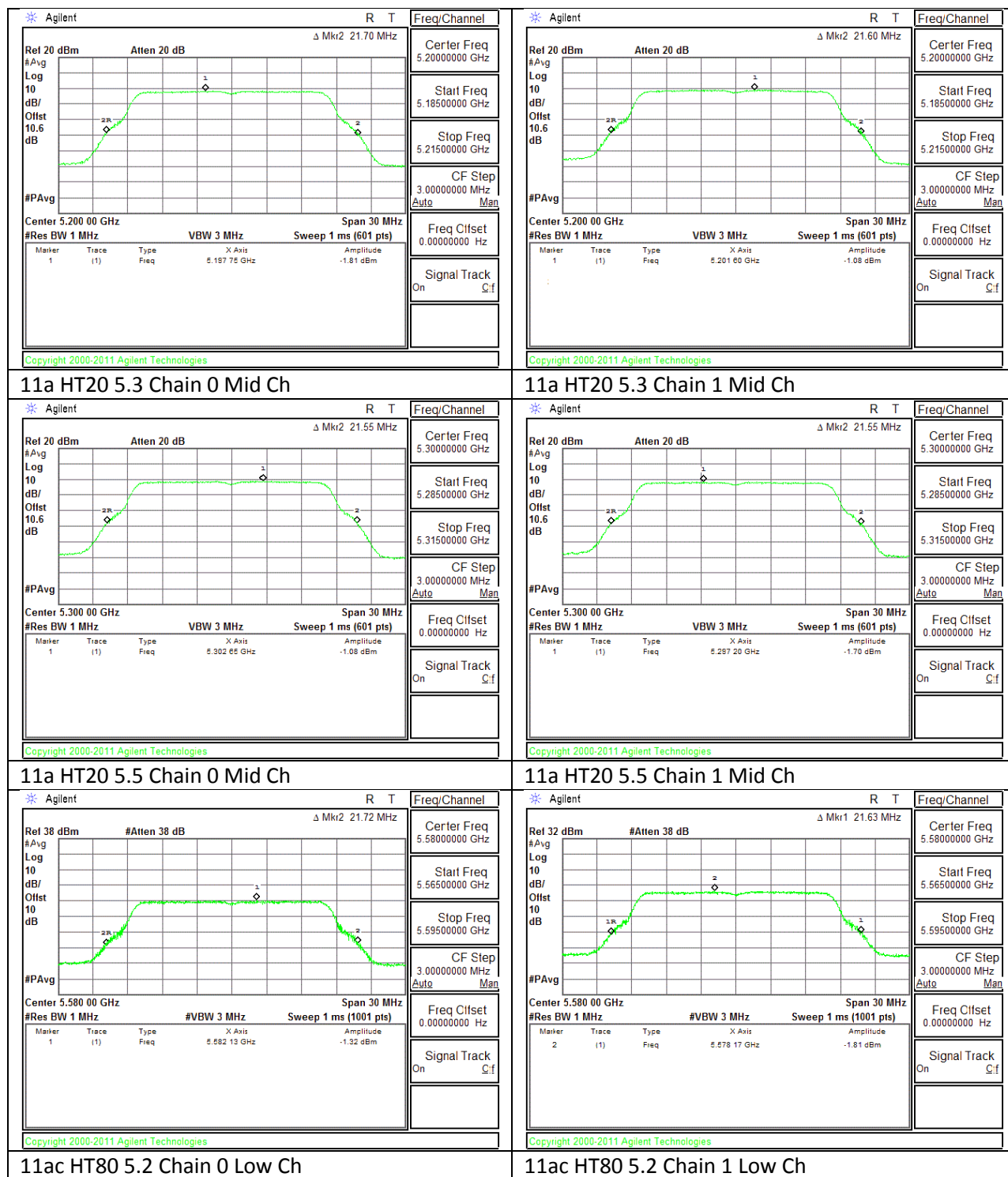
PPSD Results

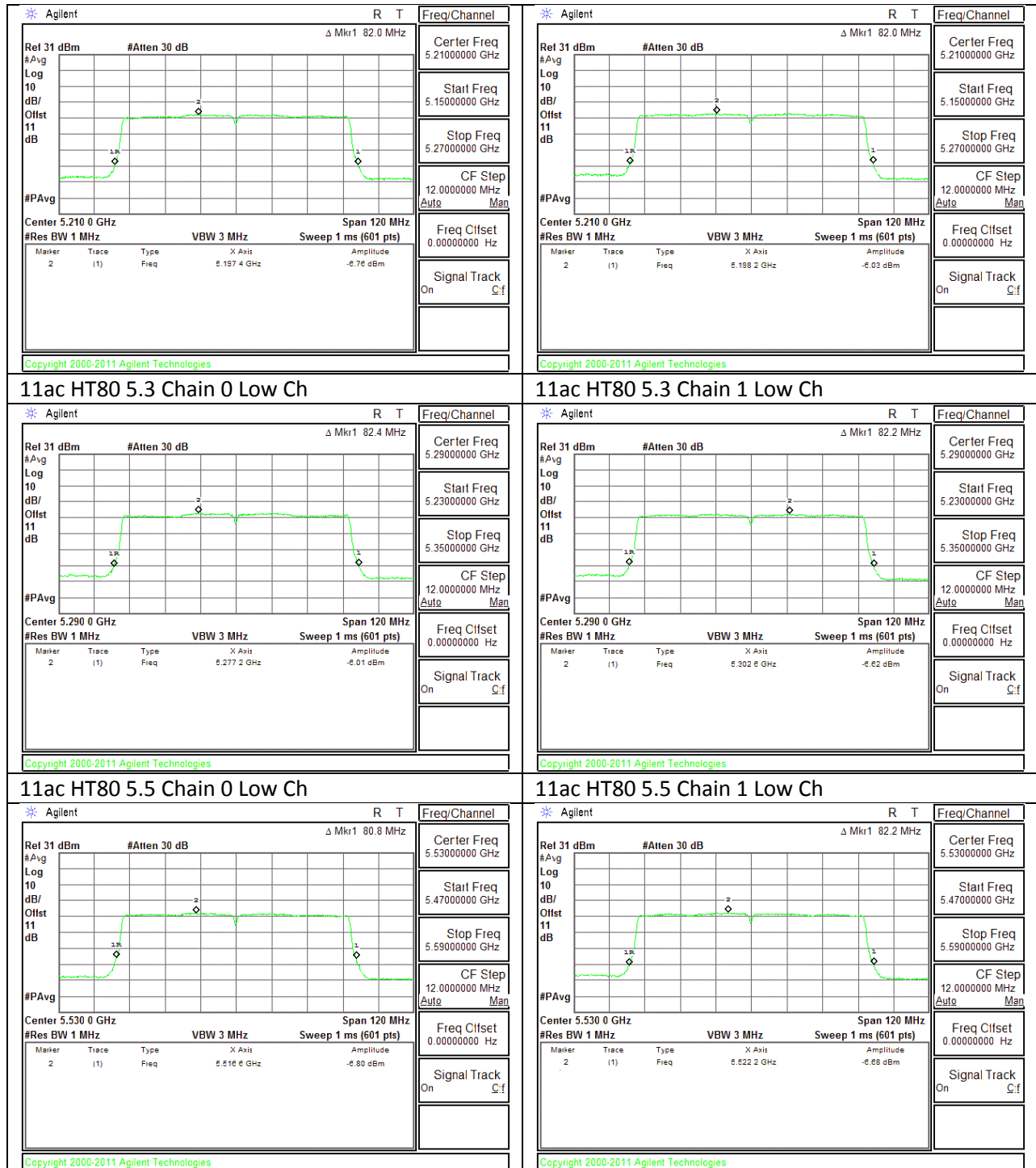
Channel	Frequency (MHz)	Chain 0 Meas PPSD (dBm)	Chain 1 Meas PPSD (dBm)	Total Corr'd PPSD (dBm)	PPSD Limit (dBm)	PPSD Margin (dB)
Low	5530	-9.30	-9.40	-4.66	11.00	-15.66

10.3.13. OUTPUT POWER AND PPSD PLOTS









10.4. PEAK EXCURSION

LIMITS

FCC §15.407 (a) (6)

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

RESULTS

10.4.1. 802.11a MODE IN THE 5.2 GHz BAND

Chain 0

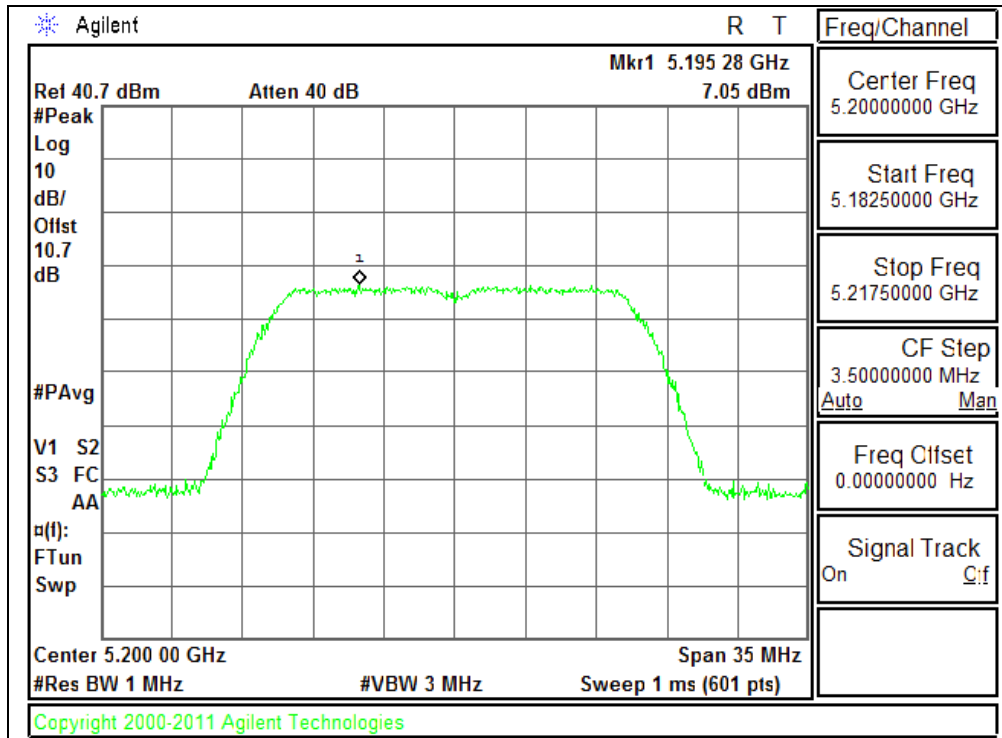
Channel	Frequency (MHz)	PK Level (dBm)	PSD (dBm)	DCCF (dB)	Peak Excursion (dB)	Limit (dB)	Margin (dB)
Mid	5200	7.05	-1.81	0.29	8.57	13	-4.43

Chain 1

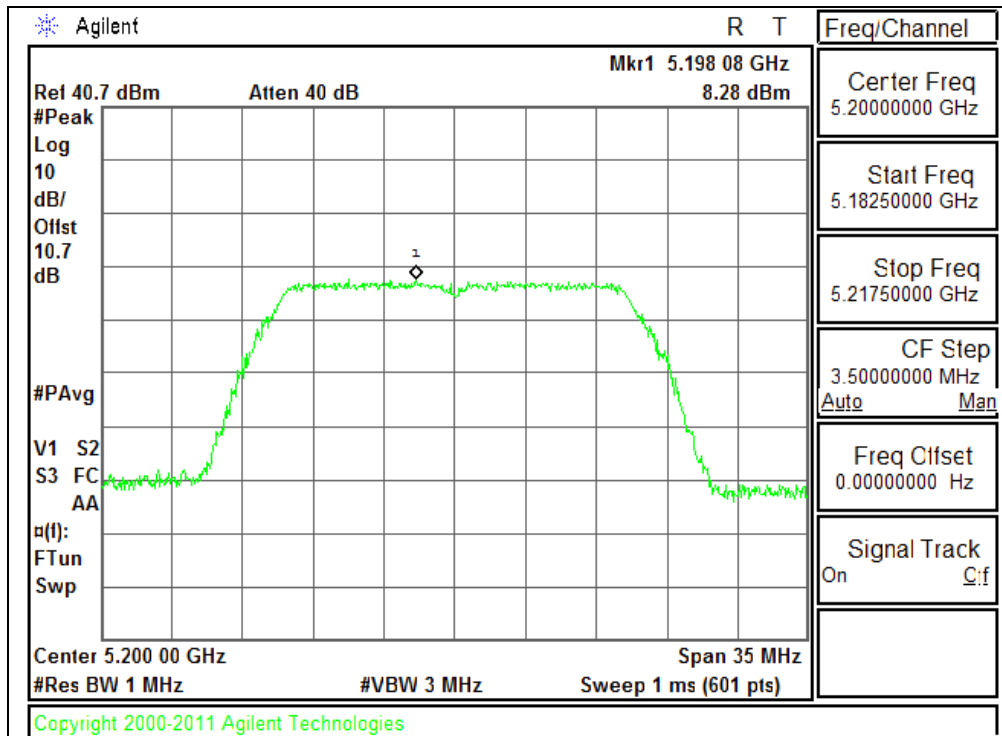
Channel	Frequency (MHz)	PK Level (dBm)	PSD (dBm)	DCCF (dB)	Peak Excursion (dB)	Limit (dB)	Margin (dB)
Mid	5200	8.28	-1.08	0.29	9.07	13	-3.93

PEAK EXCURSION

Chain 0



Chain 1



10.4.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

Chain 0

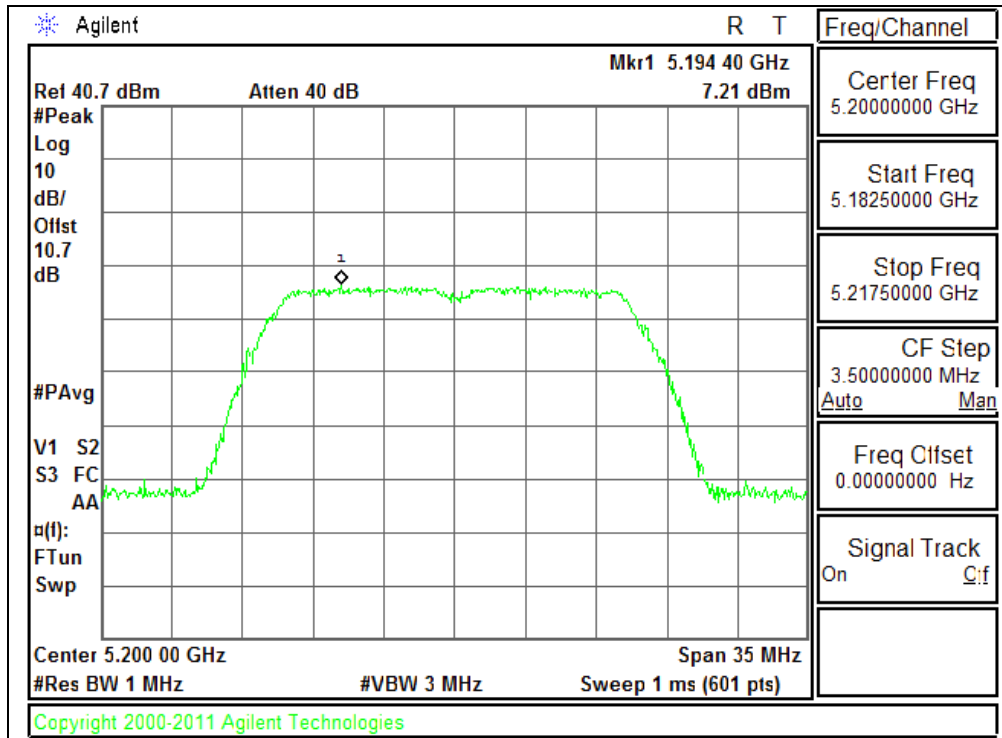
Channel	Frequency (MHz)	PK Level (dBm)	PSD (dBm)	DCCF (dB)	Peak Excursion (dB)	Limit (dB)	Margin (dB)
Mid	5200	7.21	-1.95	0.33	8.83	13	-4.17

Chain 1

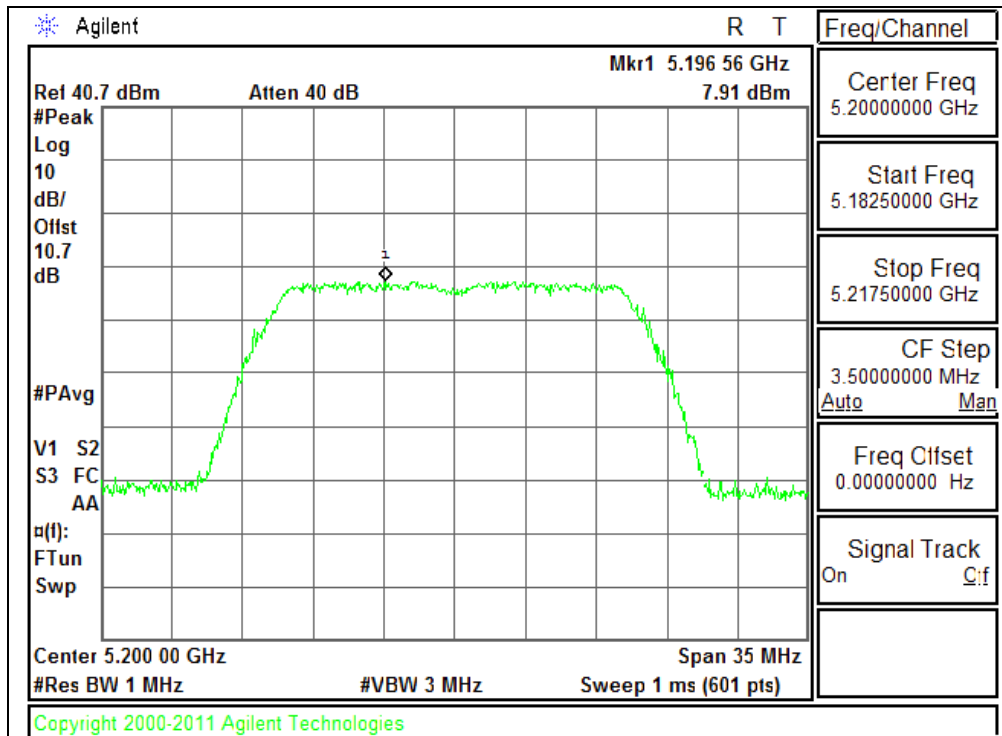
Channel	Frequency (MHz)	PK Level (dBm)	PSD (dBm)	DCCF (dB)	Peak Excursion (dB)	Limit (dB)	Margin (dB)
Mid	5200	7.91	-1.78	0.33	9.36	13	-3.64

PEAK EXCURSION

Chain 0



Chain 1



10.4.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

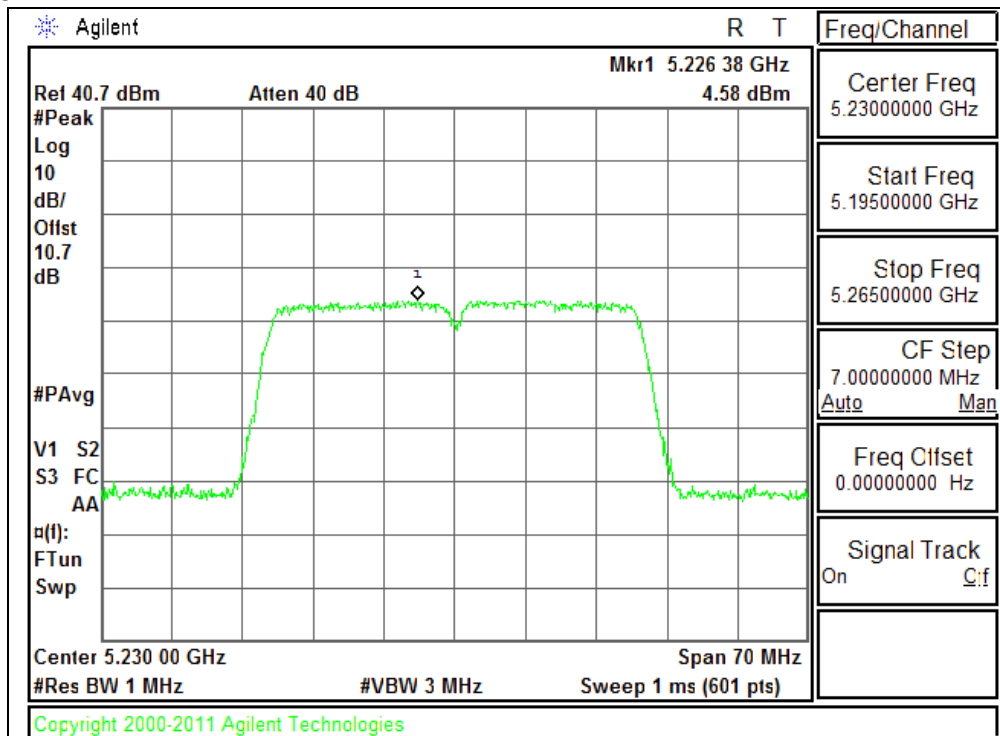
Channel	Frequency (MHz)	PK Level (dBm)	PSD (dBm)	DCCF (dB)	Peak Excursion (dB)	Limit (dB)	Margin (dB)
Mid	5230	4.580	-4.83	0.56	8.85	13	-4.15

Chain 1

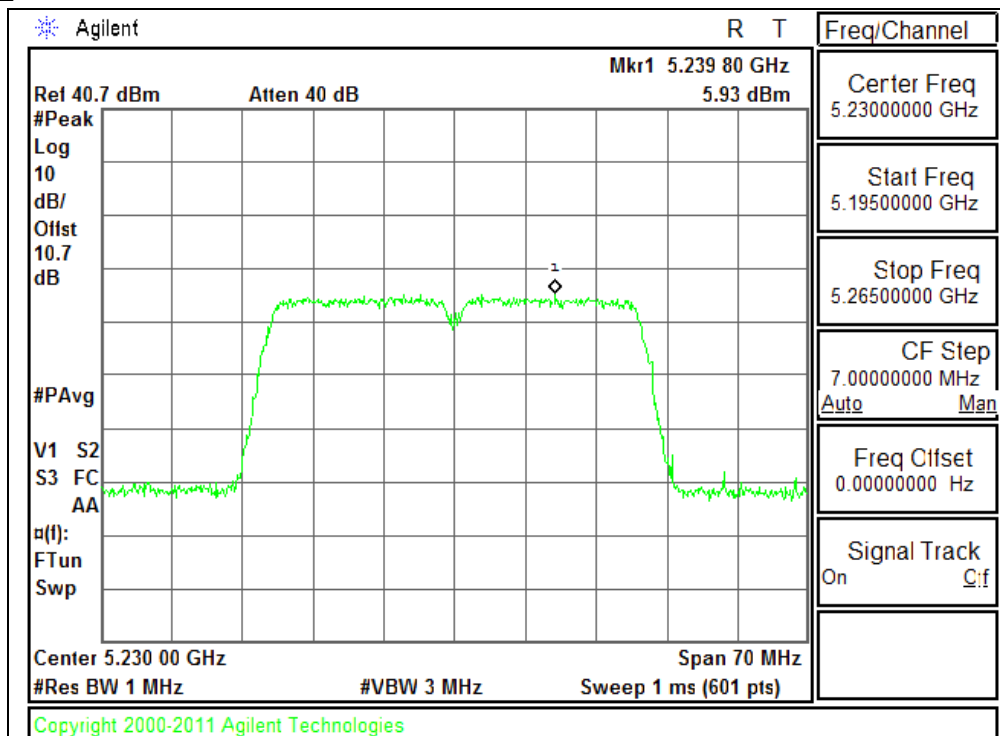
Channel	Frequency (MHz)	PK Level (dBm)	PSD (dBm)	DCCF (dB)	Peak Excursion (dB)	Limit (dB)	Margin (dB)
Mid	5230	5.930	-4.49	0.56	9.86	13	-3.14

PEAK EXCURSION

Chain 0



Chain 1



10.4.4. 802.11ac HT80 MODE IN THE 5.2 GHz BAND

Chain 0

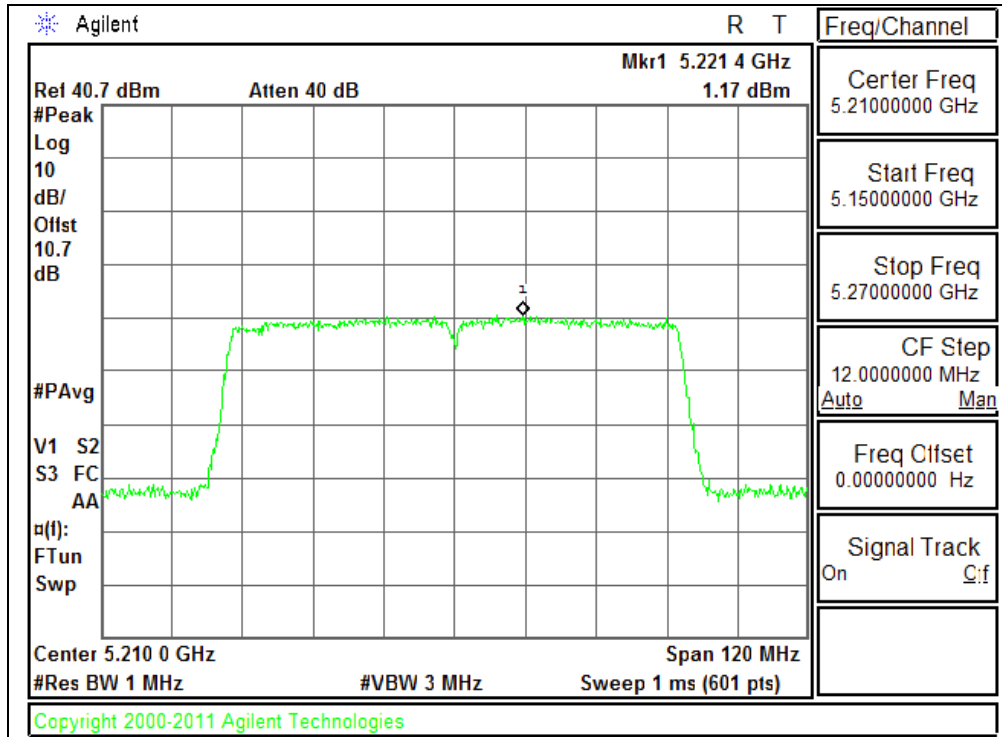
Channel	Frequency (MHz)	PK Level (dBm)	PSD (dBm)	DCCF (dB)	Peak Excursion (dB)	Limit (dB)	Margin (dB)
Mid	5210	1.170	-9.21	1.68	8.70	13	-4.30

Chain 1

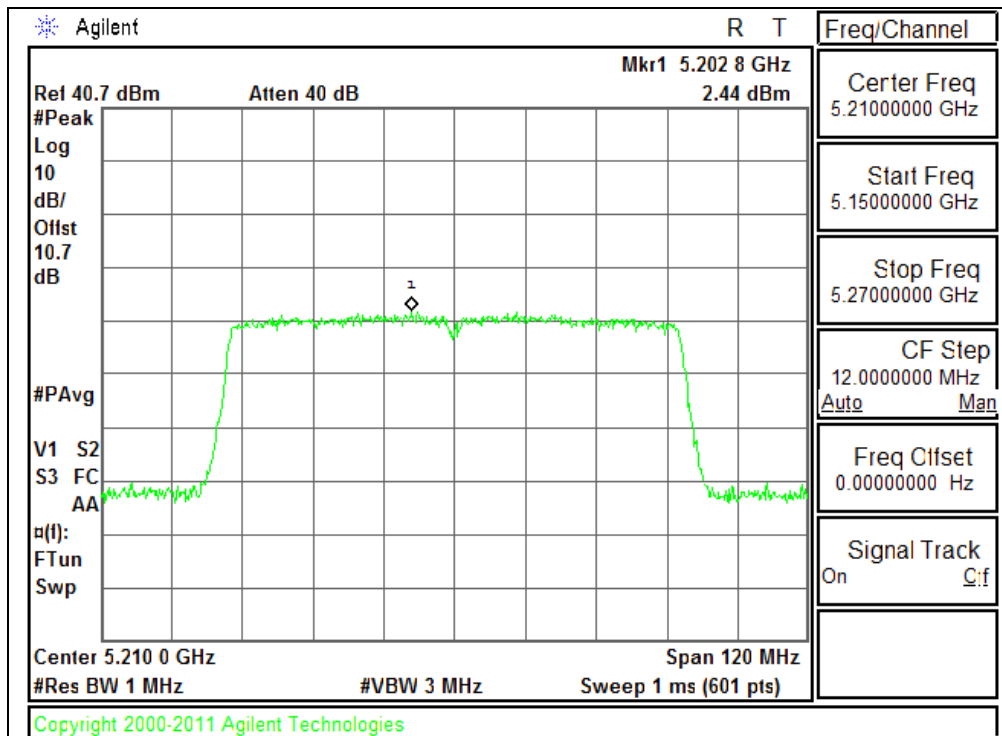
Channel	Frequency (MHz)	PK Level (dBm)	PSD (dBm)	DCCF (dB)	Peak Excursion (dB)	Limit (dB)	Margin (dB)
Mid	5210	2.440	-8.59	1.68	9.35	13	-3.65

PEAK EXCURSION

Chain 0



Chain 1



11. TRANSMITTER ABOVE 1 GHz

LIMITS

FCC §15.205 and §15.209

Frequency Range (MHz)	Field Strength Limit ($\mu\text{V/m}$) at 3 m	Field Strength Limit (dB $\mu\text{V/m}$) 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):

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 30 MHz to 40 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band.

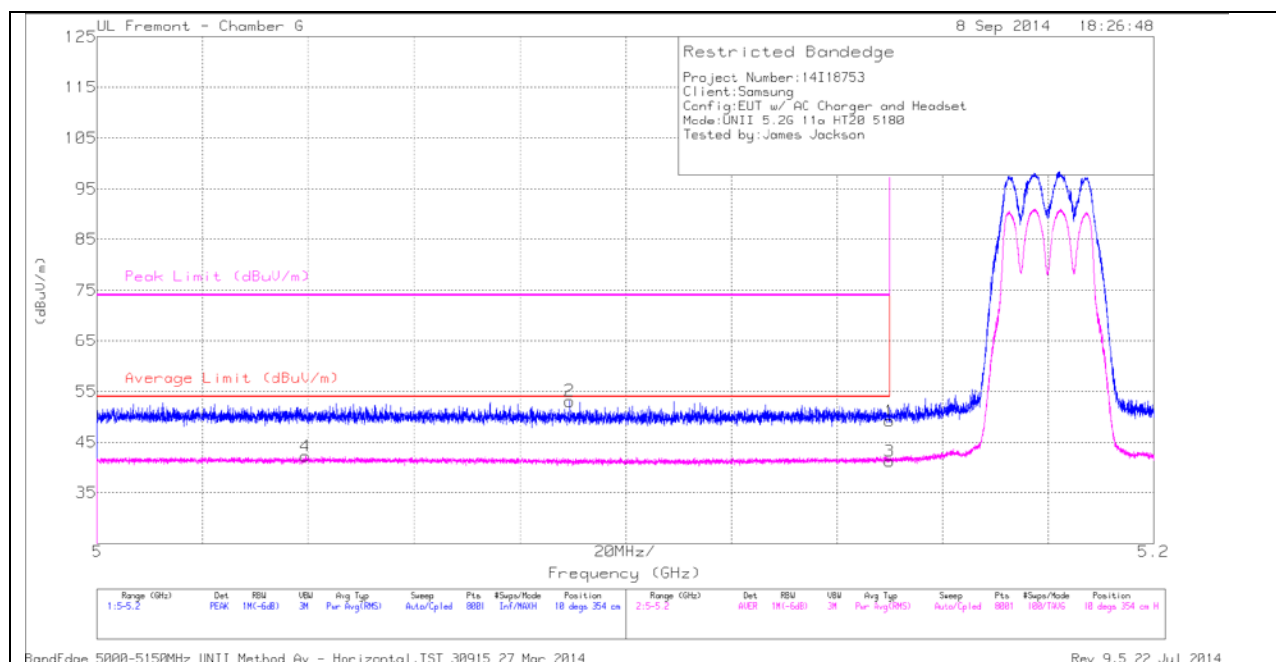
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized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

11.1. 5.2 GHz

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

RESTRICTED BANDEDGE (LOW CHANNEL)

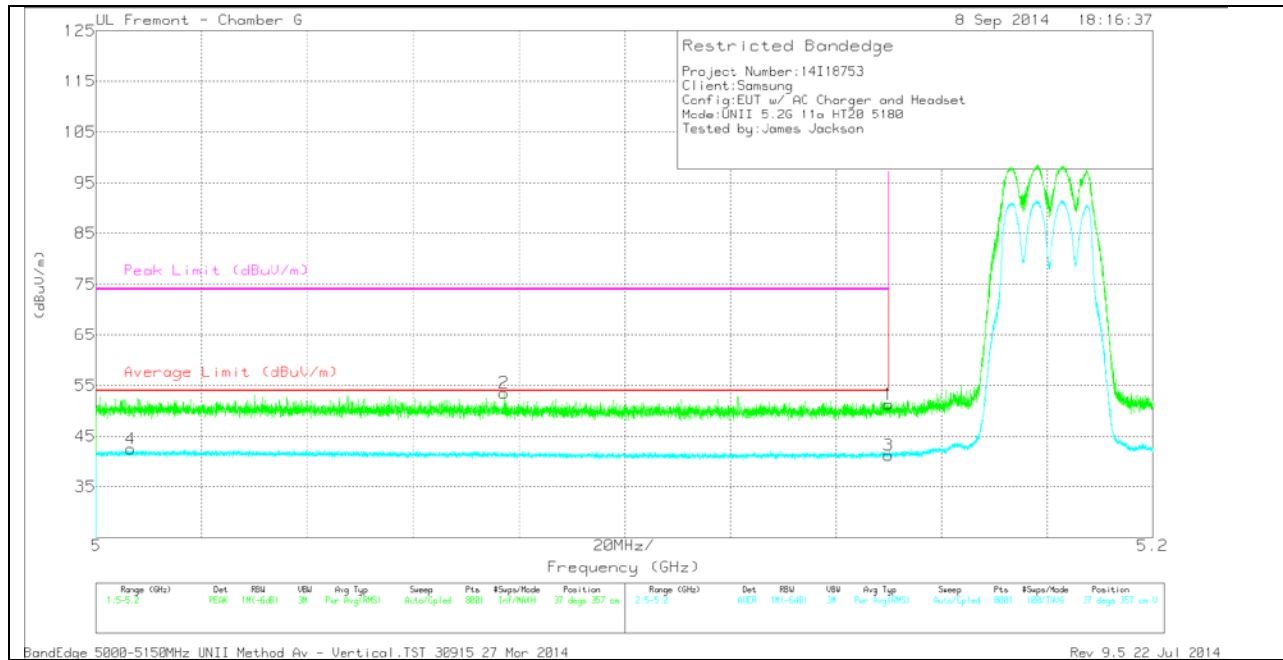
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cb/Filter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 5.039	31.41	RMS	34.2	-23.7	.3	42.21	54	-11.79	-	-	10	354	H
2	* 5.089	42.59	PK	34.2	-23.7	0	53.09	-	-	74	-20.91	10	354	H
1	* 5.15	38.49	PK	34.3	-23.6	0	49.19	-	-	74	-24.81	10	354	H
3	* 5.15	30.21	RMS	34.3	-23.6	.3	41.21	54	-12.79	-	-	10	354	H

VERTICAL PEAK AND AVERAGE PLOT

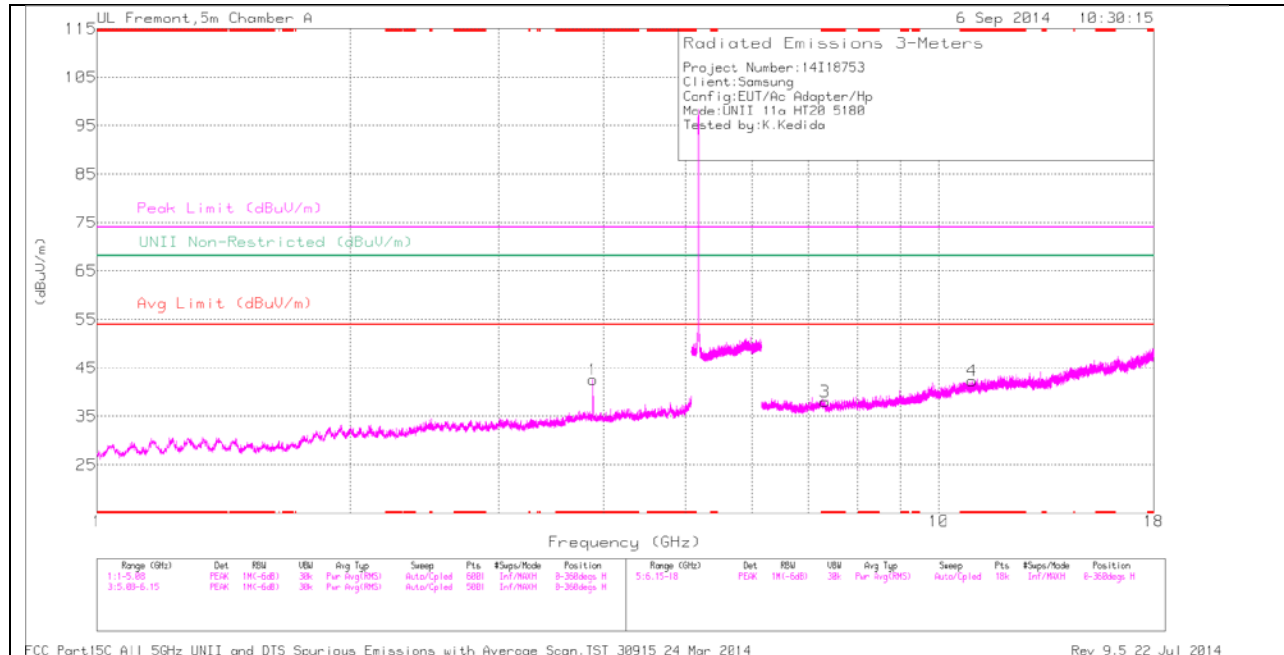


VERTICAL DATA

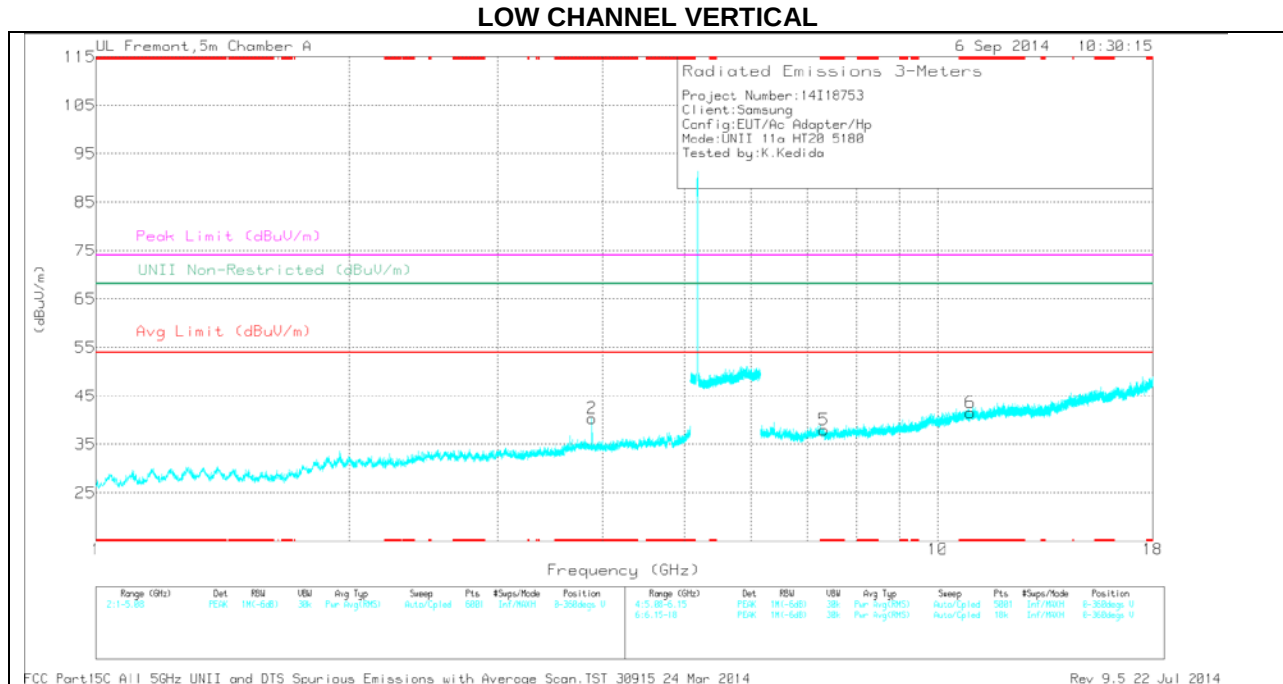
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 5.007	31.78	RMS	34.1	-23.7	.3	42.48	54	-11.52	-	-	37	357	V
2	* 5.077	42.87	PK	34.2	-23.6	0	53.47	-	-	74	-20.53	37	357	V
1	* 5.15	40.59	PK	34.3	-23.6	0	51.29	-	-	74	-22.71	37	357	V
3	* 5.15	30.27	RMS	34.3	-23.6	.3	41.27	54	-12.73	-	-	37	357	V

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



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



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

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Ftr /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	* 3.885	39.83	PK	33.8	-31	42.63	-	-	74	-31.37	-	-	0-360	201	H
2	* 3.885	37.57	PK	33.8	-31	40.37	-	-	74	-33.63	-	-	0-360	201	V
3	* 7.319	29.07	PK	35.2	-26.2	38.07	-	-	74	-35.93	-	-	0-360	100	H
4	* 10.941	26.97	PK	37.8	-22.4	42.37	-	-	74	-31.63	-	-	0-360	201	H
5	* 7.322	29.08	PK	35.2	-26.3	37.98	-	-	74	-36.02	-	-	0-360	201	V
6	* 10.923	26.42	PK	37.8	-22.7	41.52	-	-	74	-32.48	-	-	0-360	201	V

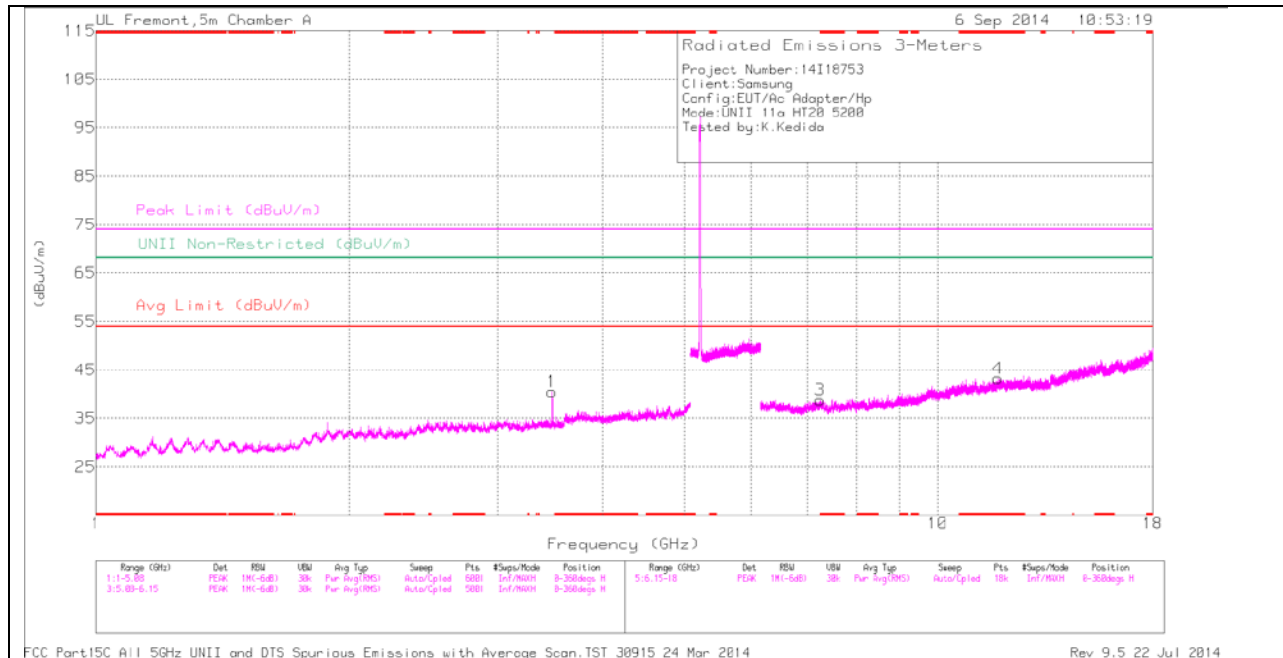
PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Ftr /Pad (dB)	DC factor	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.885	44.99	PK1	33.8	-31	0	47.79	-	-	74	-26.21	-	-	244	202	H
* 3.885	39.22	AD1	33.8	-31	.3	42.02	54	-11.98	-	-	-	-	244	202	H

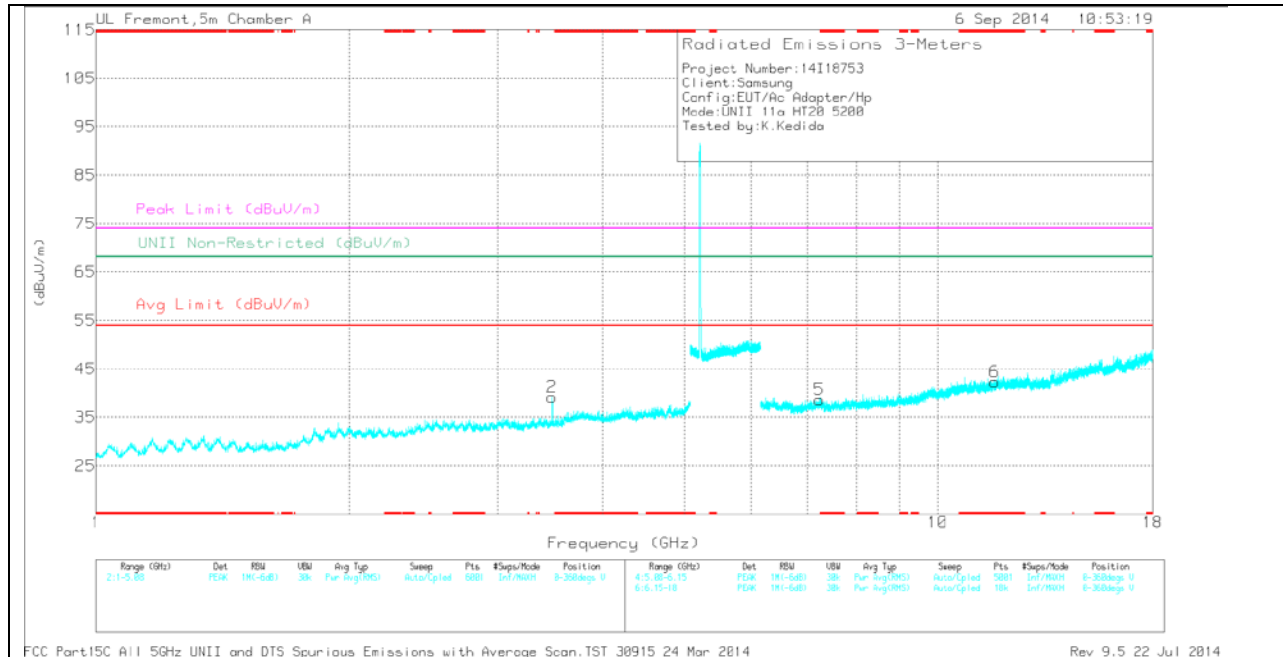
FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

MID CHANNEL HORIZONTAL



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

MID CHANNEL VERTICAL



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

MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (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	* 11.78	26.5	PK	38.7	-22	0	43.2	-	-	74	-30.8	-	-	0-360	201	H
6	* 11.696	26.31	PK	38.6	-22.6	0	42.31	-	-	74	-31.69	-	-	0-360	201	V
1	3.48	38.53	PK	33	-31	0	40.53	-	-	-	-	68.2	-27.67	0-360	100	H
2	3.48	37.22	PK	33	-31	0	39.22	-	-	-	-	68.2	-28.98	0-360	201	V
5	7.23	29.04	PK	35.2	-25.5	0	38.74	-	-	-	-	68.2	-29.46	0-360	201	V
3	7.245	29.01	PK	35.2	-25.4	0	38.81	-	-	-	-	68.2	-29.39	0-360	201	H

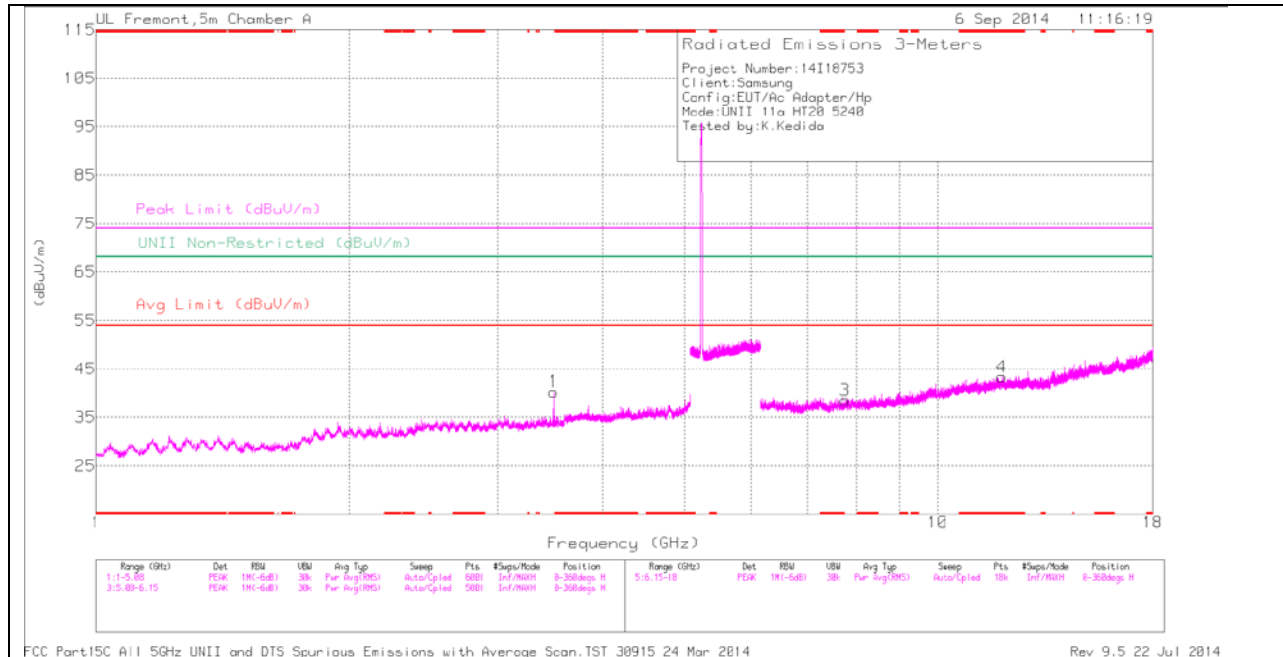
PK - Peak detector

RADIATED EMISSIONS

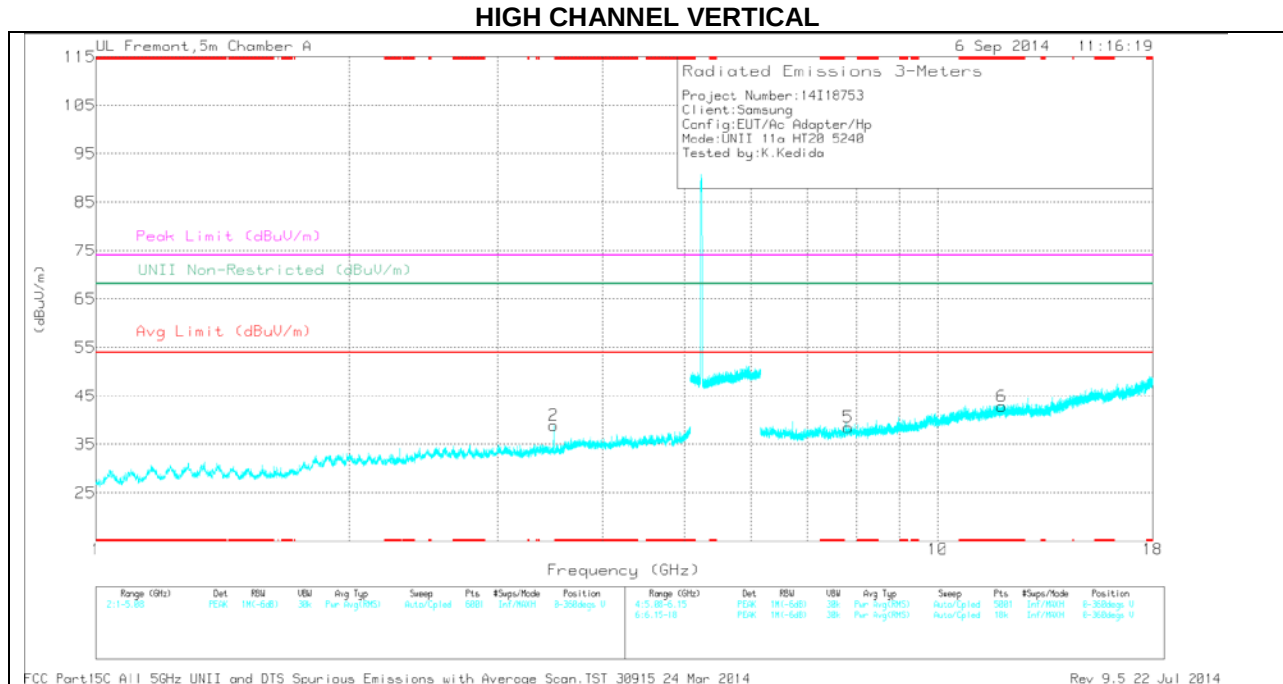
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3.48	44.05	PK1	33	-31	0	46.05	-	-	-	-	68.2	-22.15	358	104	H
3.48	37.44	AD1	33	-31	.3	39.76	-	-	-	-	-	-	358	104	H

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HIGH CHANNEL HORIZONTAL



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



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

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (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	* 11.904	26.65	PK	38.8	-22.1	0	43.35	-	-	74	-30.65	-	-	0-360	100	H
6	* 11.916	26.03	PK	38.8	-22	0	42.83	-	-	74	-31.17	-	-	0-360	201	V
1	3.494	38.31	PK	33	-31	0	40.31	-	-	-	-	68.2	-27.89	0-360	100	H
2	3.494	36.9	PK	33	-31	0	38.9	-	-	-	-	68.2	-29.3	0-360	201	V
3	7.767	29.21	PK	35.4	-26.1	0	38.51	-	-	-	-	68.2	-29.69	0-360	100	H
5	7.825	28.83	PK	35.5	-25.8	0	38.53	-	-	-	-	68.2	-29.67	0-360	201	V

PK - Peak detector

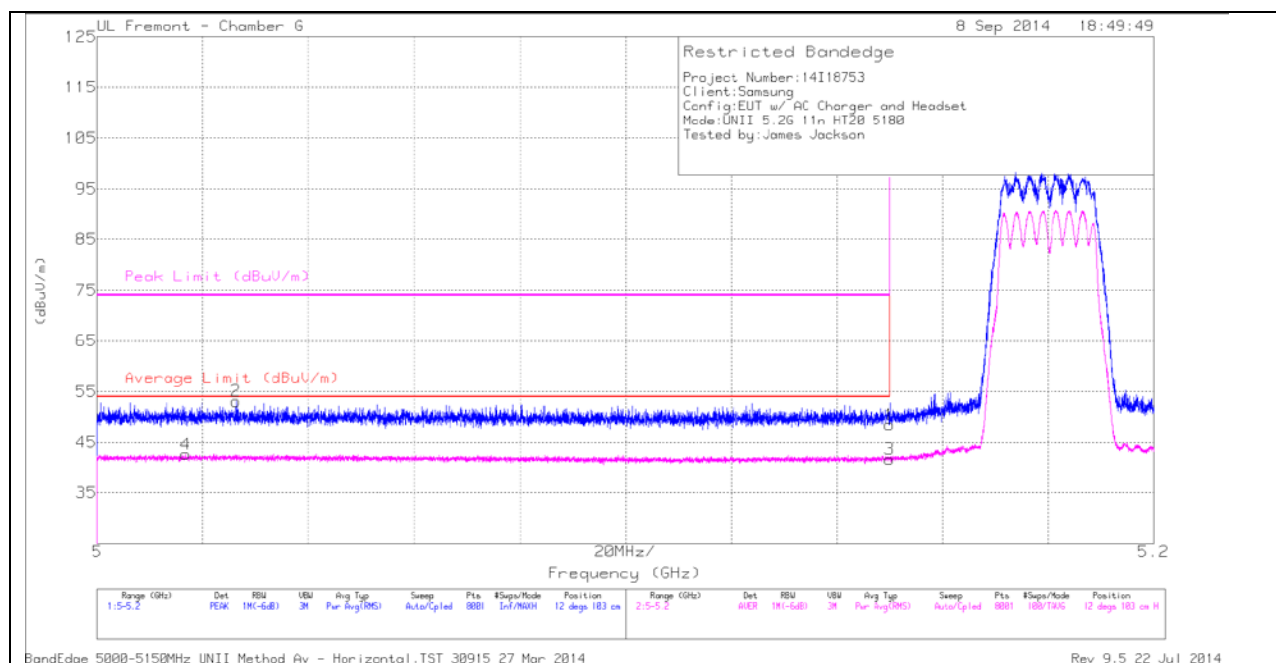
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3.493	43.99	PK1	33	-31	0	45.99	-	-	-	-	68.2	-22.21	358	156	H
3.493	37.58	AD1	33	-31	.3	39.9	-	-	-	-	-	-	358	156	H

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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)

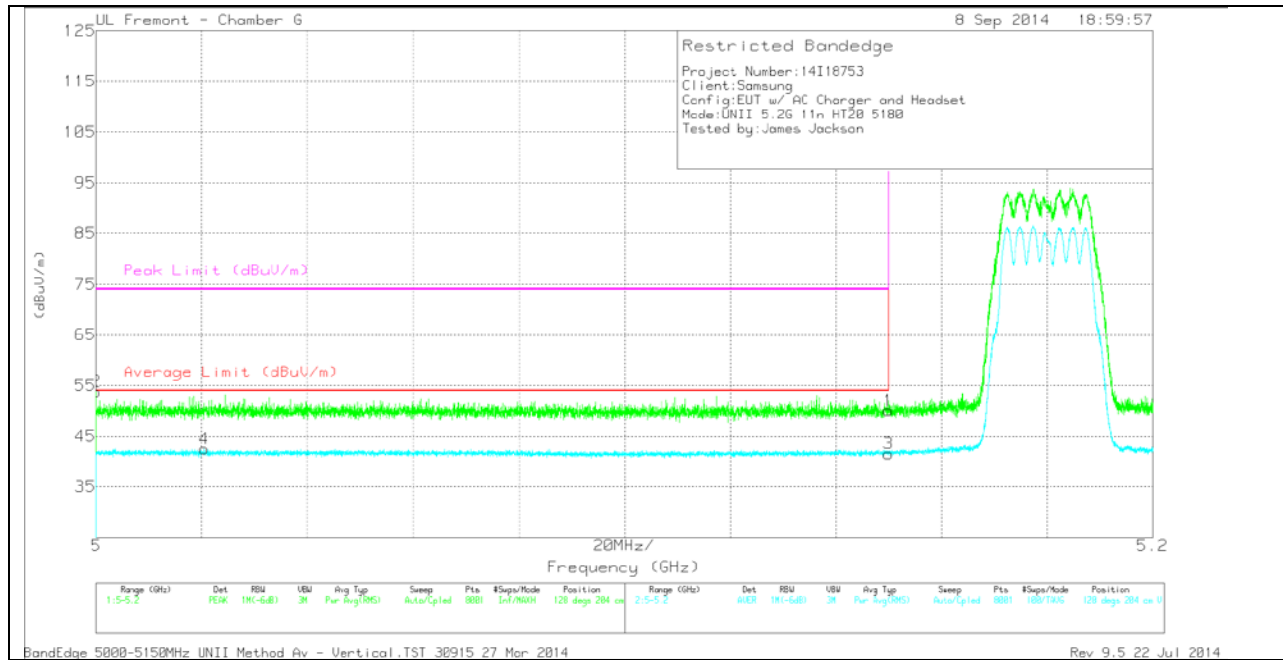
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 5.017	31.66	RMS	34.1	-23.7	.33	42.65	54	-11.35	-	-	12	103	H
2	* 5.026	42.69	PK	34.1	-23.7	0	53.09	-	-	74	-20.91	12	103	H
1	* 5.15	37.73	PK	34.3	-23.6	0	48.43	-	-	74	-25.57	12	103	H
3	* 5.15	30.37	RMS	34.3	-23.6	.33	41.66	54	-12.34	-	-	12	103	H

VERTICAL PEAK AND AVERAGE PLOT

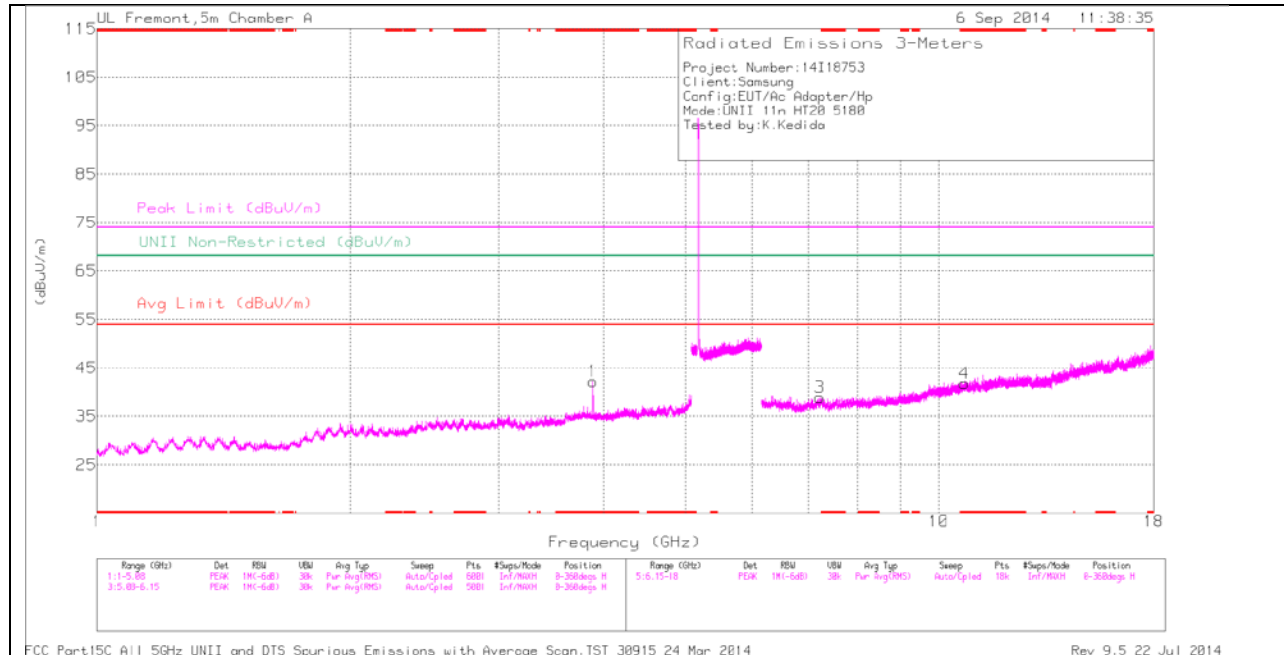


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5	43.32	PK	34.1	-23.7	0	53.72	-	-	74	-20.28	128	204	V
4	* 5.021	31.51	RMS	34.1	-23.7	.33	42.5	54	-11.5	-	-	128	204	V
1	* 5.15	39.33	PK	34.3	-23.6	0	50.03	-	-	74	-23.97	128	204	V
3	* 5.15	30.25	RMS	34.3	-23.6	.33	41.54	54	-12.46	-	-	128	204	V

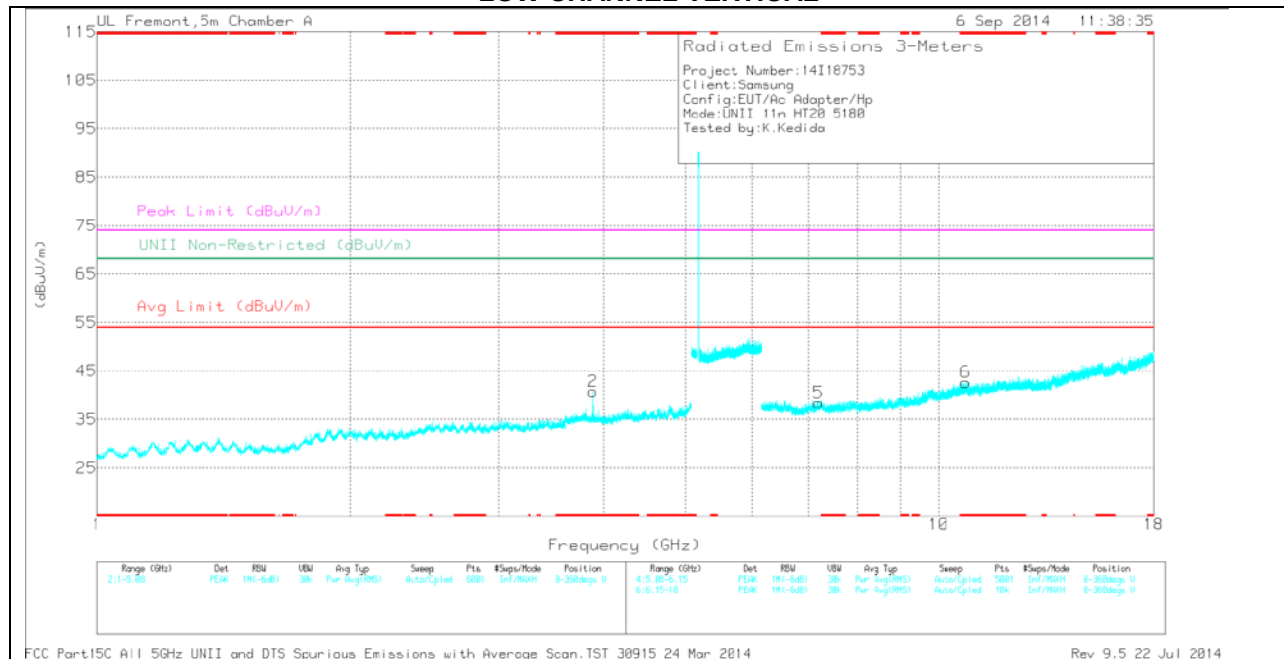
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



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

LOW CHANNEL VERTICAL



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

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fil 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	* 3.885	39.46	PK	33.8	-31	0	42.26	-	-	74	-31.74	-	-	0-360	201	H
2	* 3.885	37.95	PK	33.8	-31	0	40.75	-	-	74	-33.25	-	-	0-360	201	V
4	* 10.725	26.42	PK	37.9	-22.5	0	41.82	-	-	74	-32.18	-	-	0-360	201	H
6	* 10.763	26.95	PK	37.9	-22.2	0	42.65	-	-	74	-31.35	-	-	0-360	100	V
5	7.201	29.16	PK	35.2	-25.9	0	38.46	-	-	-	-	68.2	-29.74	0-360	201	V
3	7.222	29.38	PK	35.2	-25.6	0	38.98	-	-	-	-	68.2	-29.22	0-360	100	H

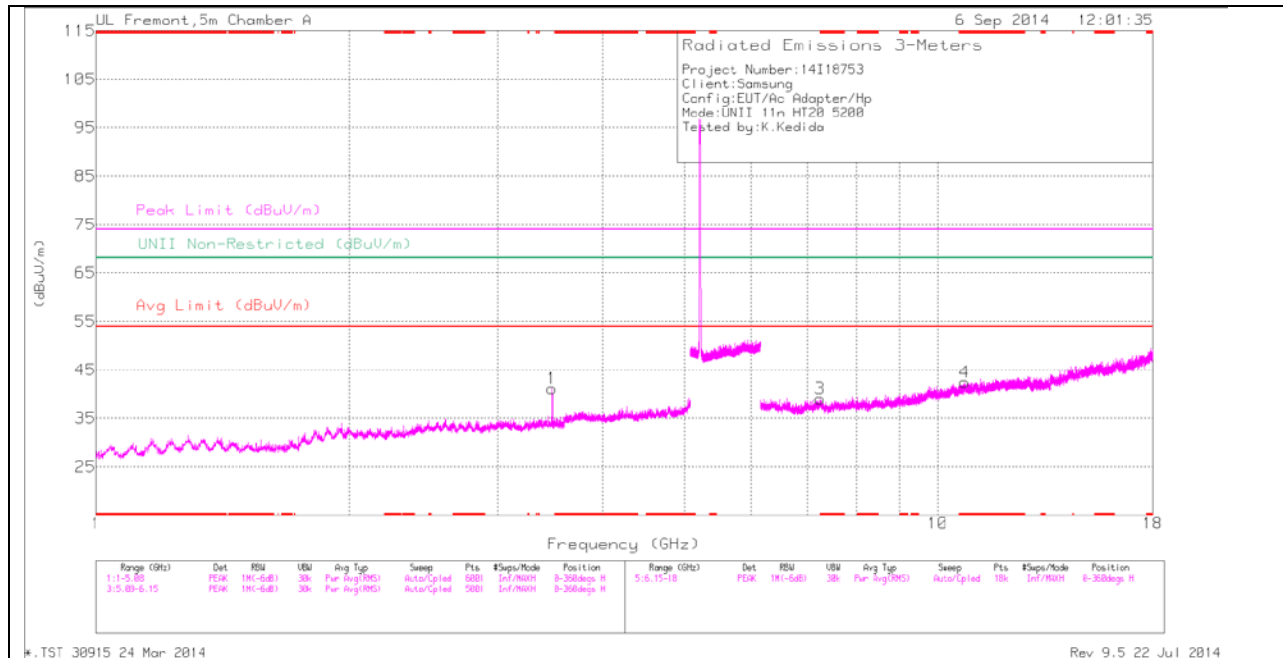
PK - Peak detector

RADIATED EMISSIONS

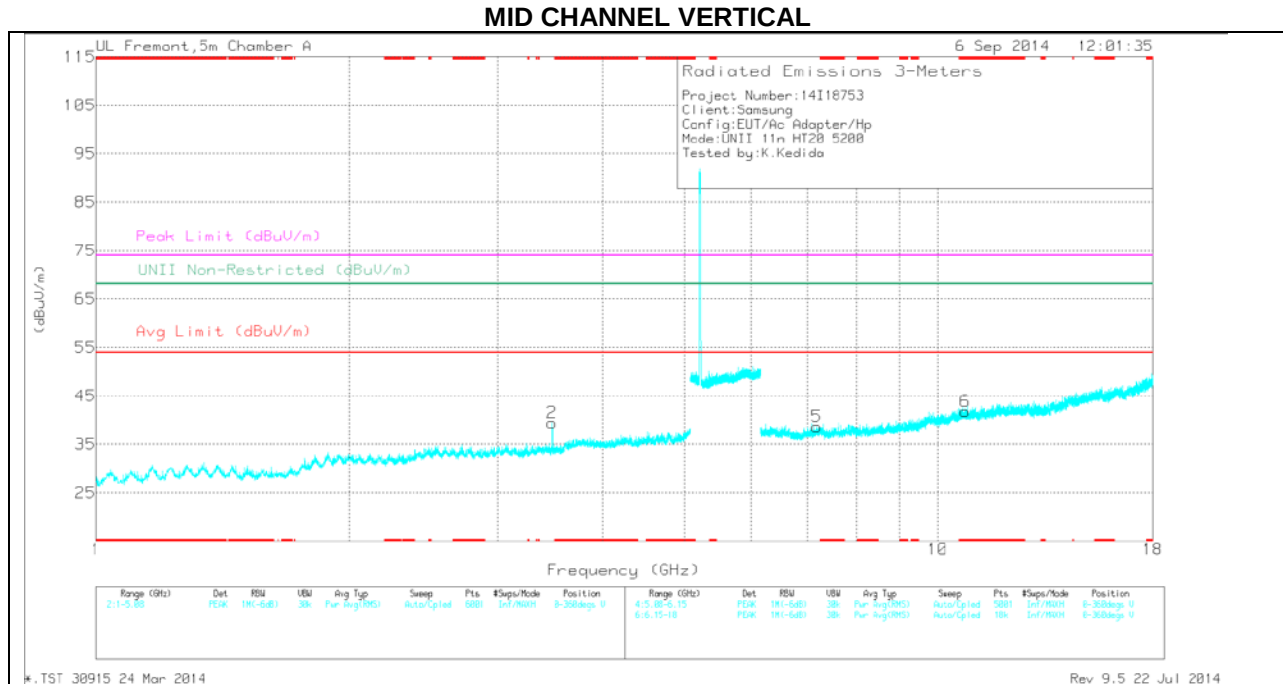
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fil r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.885	45.33	PK1	33.8	-31	0	48.13	-	-	74	-25.87	-	-	242	197	H
* 3.885	38.8	AD1	33.8	-31	.33	41.92	54	-12.08	-	-	-	-	242	197	H

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

MID CHANNEL HORIZONTAL



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



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

MID CHANNEL DATA

TRACE MARKERS

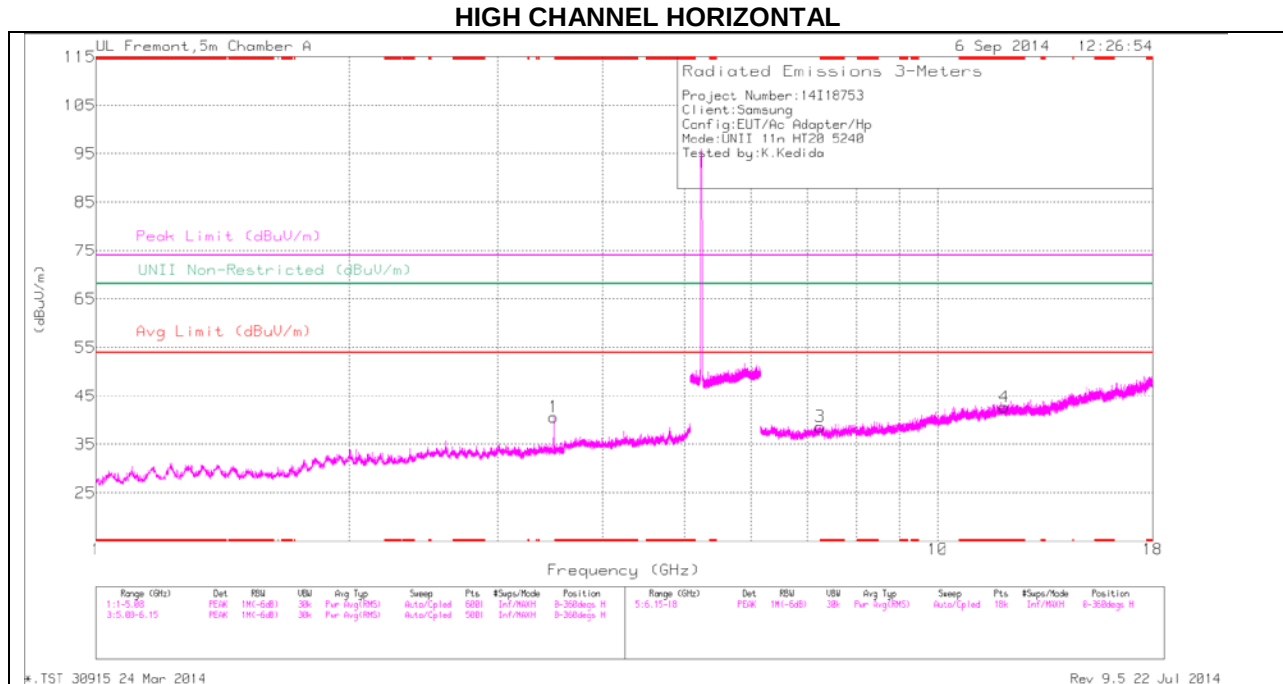
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 10.77	26.8	PK	37.9	-22.2	0	42.5	-	-	74	-31.5	-	-	0-360	100	H
6	* 10.784	26.46	PK	37.9	-22.5	0	41.86	-	-	74	-32.14	-	-	0-360	100	V
1	3.48	39.15	PK	33	-31	0	41.15	-	-	-	-	68.2	-27.05	0-360	100	H
2	3.48	37.47	PK	33	-31	0	39.47	-	-	-	-	68.2	-28.73	0-360	201	V
5	7.185	29.53	PK	35.2	-26.1	0	38.63	-	-	-	-	68.2	-29.57	0-360	100	V
3	7.245	29.22	PK	35.2	-25.4	0	39.02	-	-	-	-	68.2	-29.18	0-360	100	H

PK - Peak detector

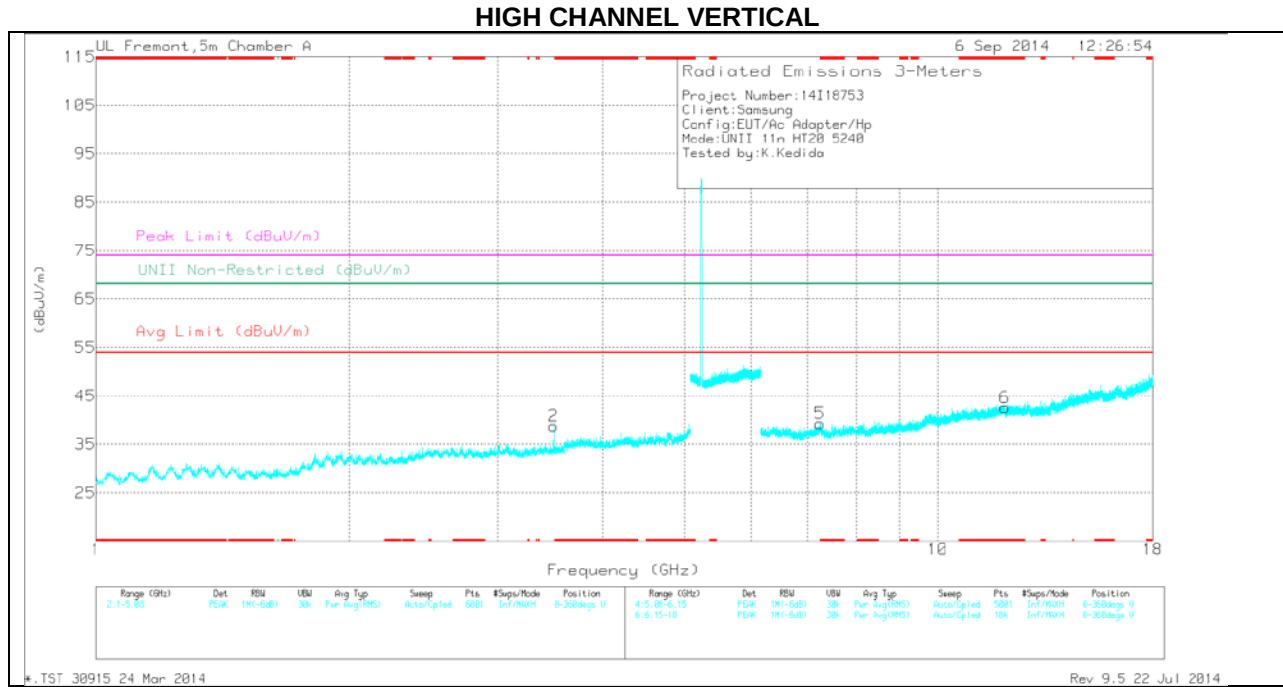
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3.48	43.93	PK1	33	-31	0	45.93	-	-	-	-	68.2	-22.27	360	127	H
3.48	37.52	AD1	33	-31	.33	39.84	-	-	-	-	-	-	360	127	H

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



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



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

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Chl/ Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 7.251	28.94	PK	35.2	-25.4	0	38.74	-	-	74	-35.26	-	-	0-360	100	H
4	* 11.983	25.84	PK	38.9	-22	0	42.74	-	-	74	-31.26	-	-	0-360	201	H
6	* 12.019	26.33	PK	38.9	-22.7	0	42.53	-	-	74	-31.47	-	-	0-360	100	V
1	3.494	38.59	PK	33	-31	0	40.59	-	-	-	-	68.2	-27.61	0-360	100	H
2	3.494	36.8	PK	33	-31	0	38.8	-	-	-	-	68.2	-29.4	0-360	201	V
5	7.243	29.49	PK	35.2	-25.4	0	39.29	-	-	-	-	68.2	-28.91	0-360	201	V

PK - Peak detector

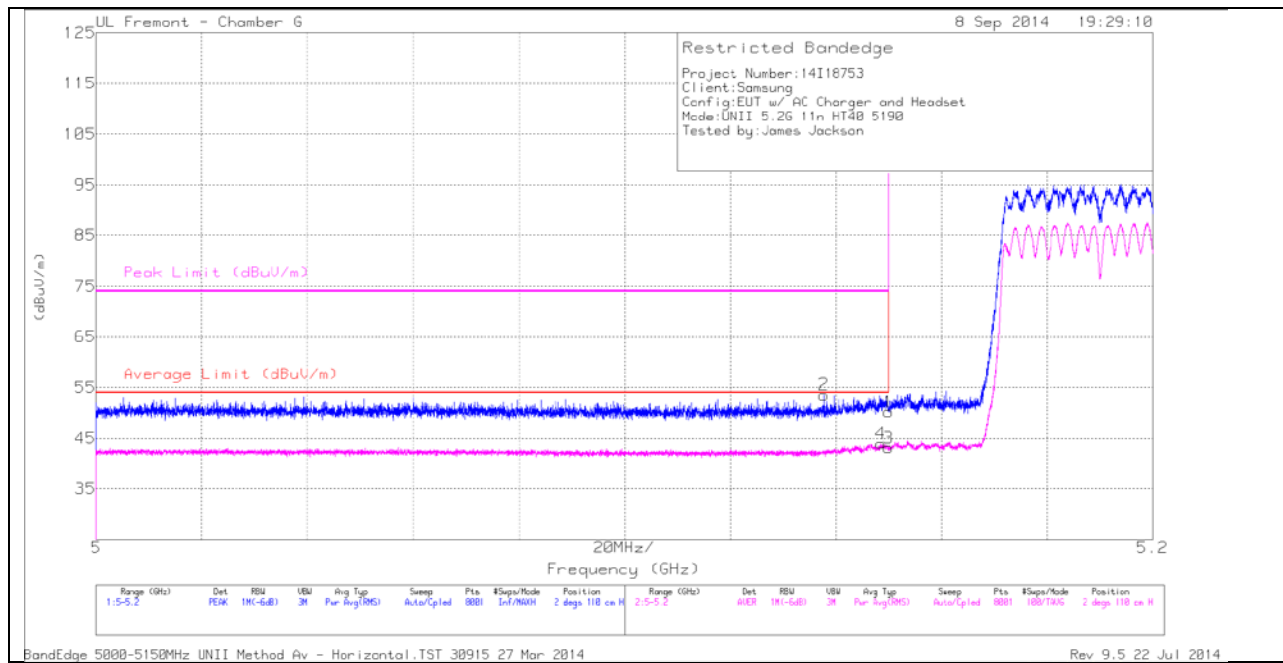
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Chl/ Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3.493	44.15	PK1	33	-31	0	46.15	-	-	-	-	68.2	-22.05	359	154	H
3.493	37.64	AD1	33	-31	.33	39.96	-	-	-	-	-	-	359	154	H

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

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

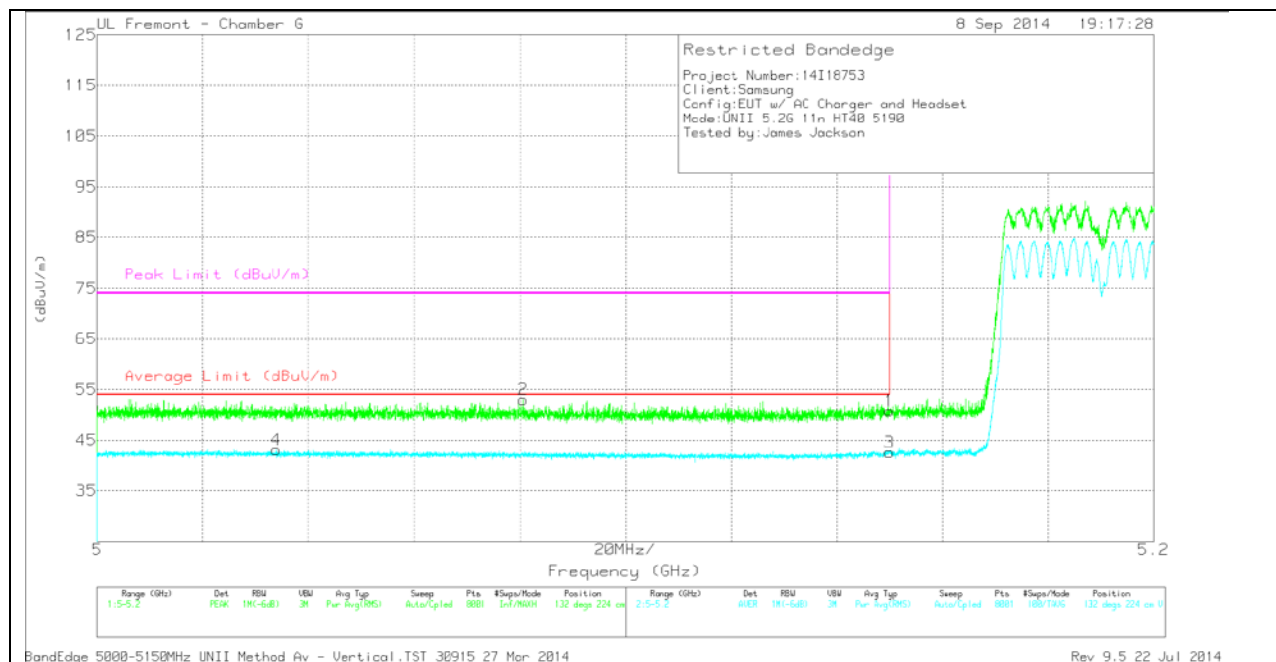
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.138	42.88	PK	34.3	-23.6	0	53.58	-	-	74	-20.42	2	110	H
4	* 5.149	32.17	RMS	34.3	-23.6	.56	43.97	54	-10.03	-	-	2	110	H
1	* 5.15	39.46	PK	34.3	-23.6	0	50.16	-	-	74	-23.84	2	110	H
3	* 5.15	31.3	RMS	34.3	-23.6	.56	43.1	54	-10.9	-	-	2	110	H

VERTICAL PEAK AND AVERAGE PLOT

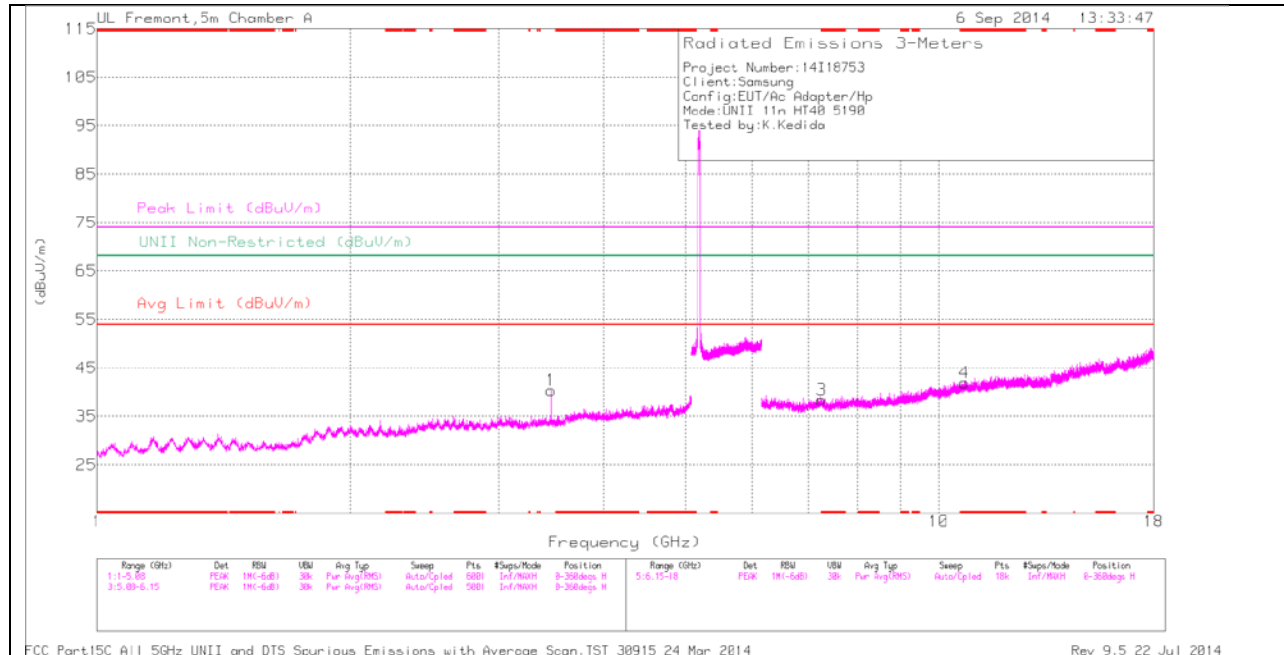


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cb/r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 5.034	31.52	RMS	34.2	-23.7	.56	43.12	54	-10.88	-	-	132	224	V
2	* 5.081	42.57	PK	34.2	-23.7	0	53.07	-	-	74	-20.93	132	224	V
1	* 5.15	40.13	PK	34.3	-23.6	0	50.83	-	-	74	-23.17	132	224	V
3	* 5.15	30.75	RMS	34.3	-23.6	.56	42.55	54	-11.45	-	-	132	224	V

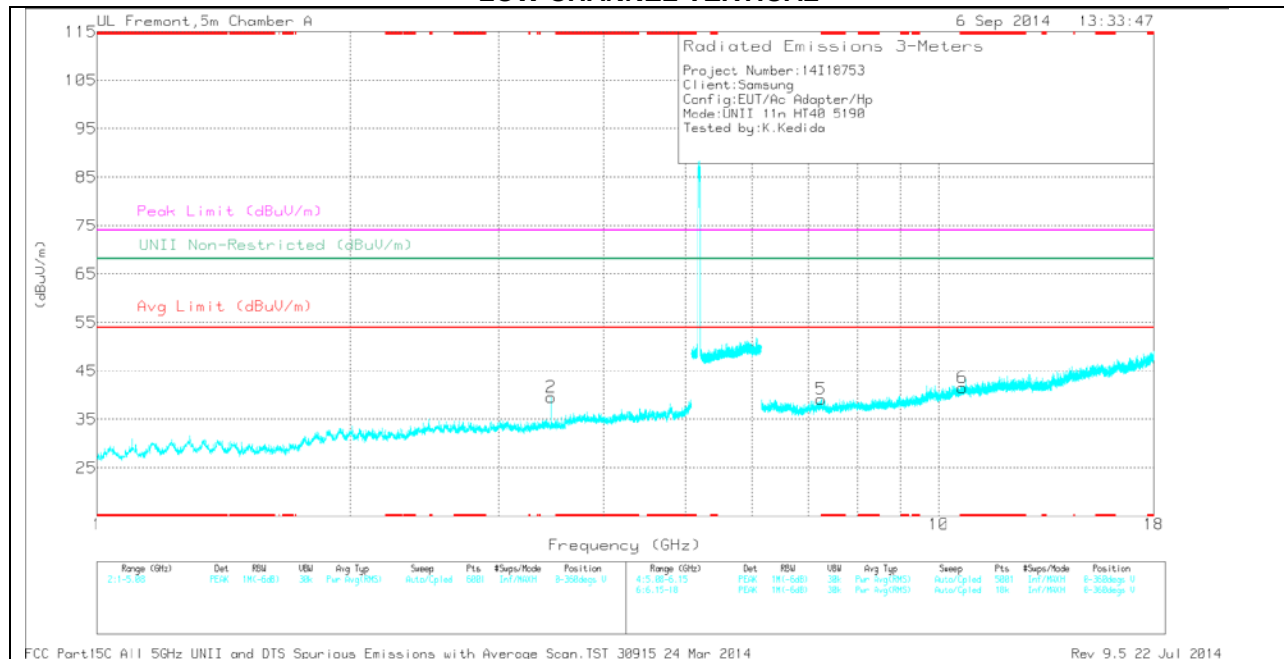
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



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

LOW CHANNEL VERTICAL



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

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fil 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
3	* 7.26	28.61	PK	35.2	-25.4	0	38.41	-	-	74	-35.59	-	-	0-360	100	H
4	* 10.726	26.59	PK	37.9	-22.5	0	41.99	-	-	74	-32.01	-	-	0-360	201	H
6	* 10.677	26.22	PK	37.8	-22.5	0	41.52	-	-	74	-32.48	-	-	0-360	100	V
1	3.46	38.4	PK	33	-31	0	40.4	-	-	-	-	68.2	-27.8	0-360	100	H
2	3.46	37.58	PK	33	-31	0	39.58	-	-	-	-	68.2	-28.62	0-360	201	V
5	7.249	29.42	PK	35.2	-25.4	0	39.22	-	-	-	-	68.2	-28.98	0-360	201	V

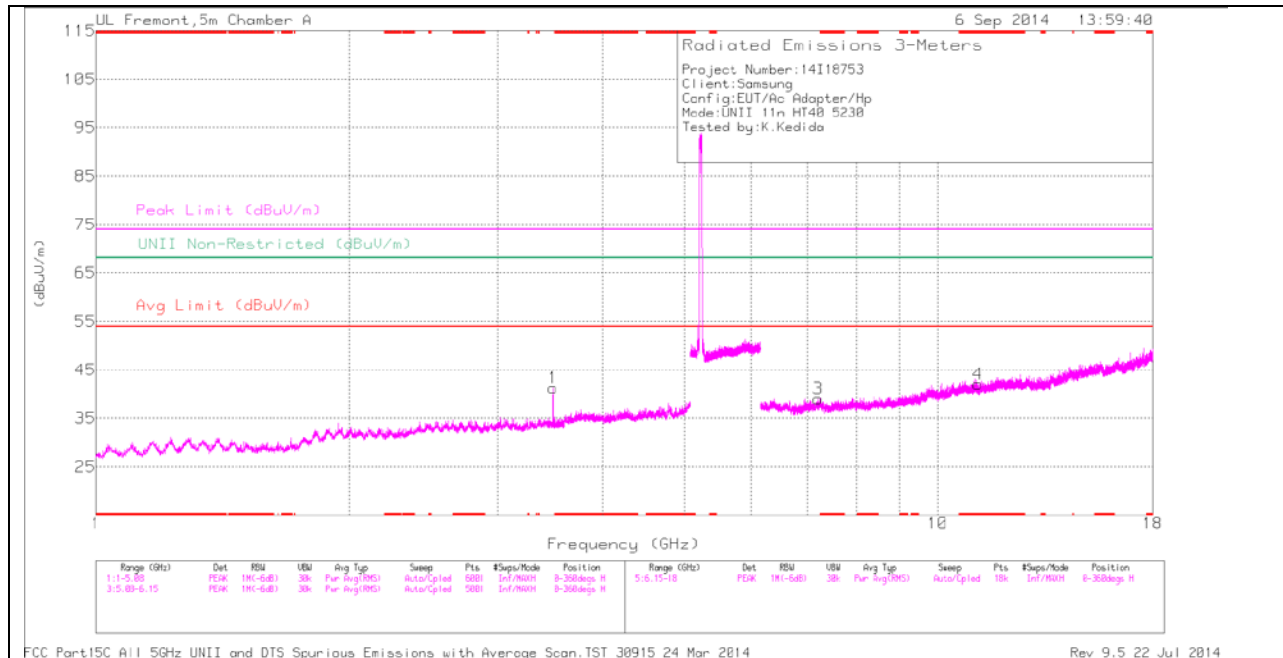
PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fil 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
* 10.728	33.76	PK1	37.9	-22.5	0	49.16	-	-	74	-24.84	-	-	2	201	H
* 10.726	23.15	AD1	37.9	-22.5	.56	38.73	54	-15.27	-	-	-	-	2	201	H
3.46	44.26	PK1	33	-31	0	46.26	-	-	-	-	68.2	-21.94	2	259	H
3.46	37.29	AD1	33	-31	.56	39.47	-	-	-	-	-	-	2	259	H

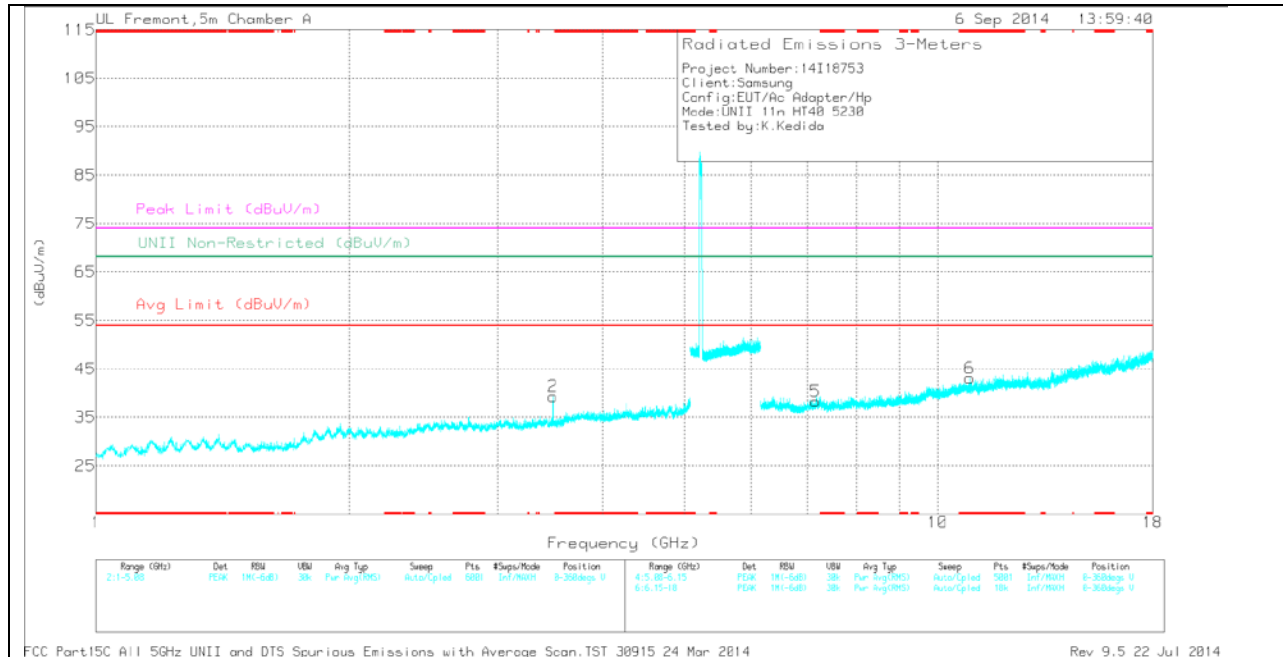
FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

MID CHANNEL HORIZONTAL



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

MID CHANNEL VERTICAL



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

MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fr Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (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	* 11.15	26.82	PK	37.7	-22.4	0	42.12	-	-	74	-31.88	-	-	0-360	100	H
6	* 10.909	28.05	PK	37.8	-22.8	0	43.05	-	-	74	-30.95	-	-	0-360	100	V
1	3.487	39.32	PK	33	-31	0	41.32	-	-	-	-	68.2	-26.88	0-360	100	H
2	3.487	37.32	PK	33	-31	0	39.32	-	-	-	-	68.2	-28.88	0-360	201	V
5	7.156	29.87	PK	35.3	-26.9	0	38.27	-	-	-	-	68.2	-29.93	0-360	201	V
3	7.205	29.83	PK	35.2	-25.9	0	39.13	-	-	-	-	68.2	-29.07	0-360	201	H

PK - Peak detector

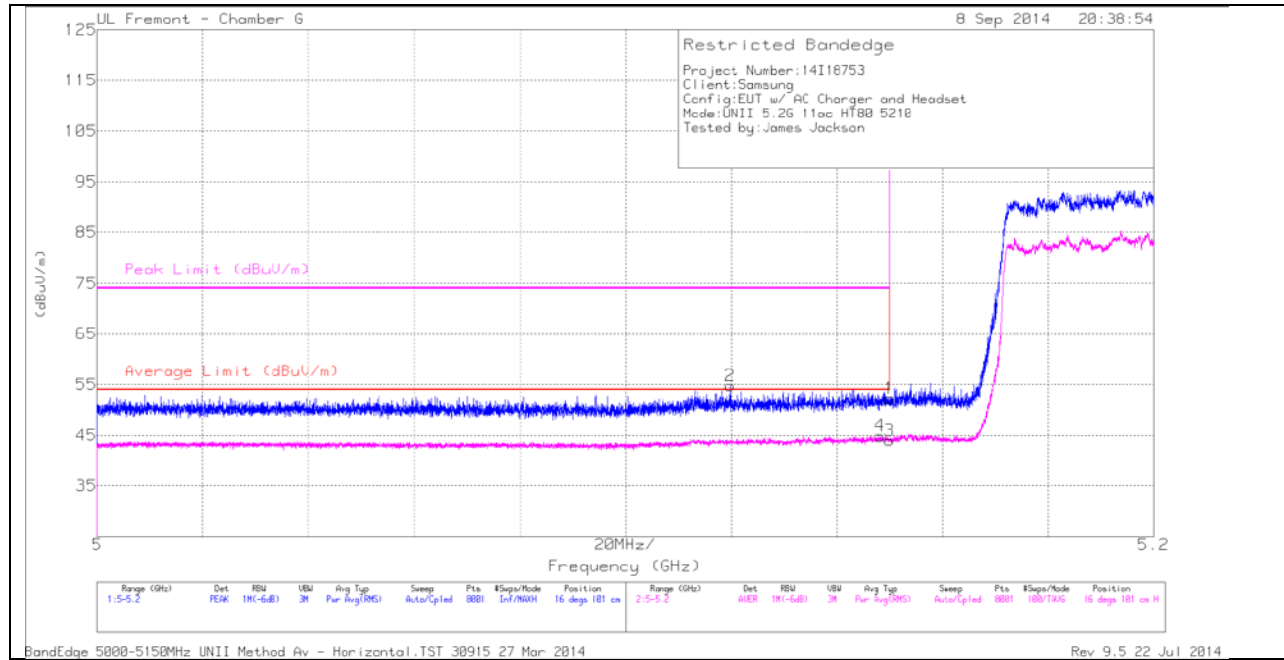
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fr 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
* 11.15	33.84	PK1	37.7	-22.4	0	49.14	-	-	74	-24.86	-	-	360	100	H
* 11.149	23.2	AD1	37.7	-22.3	.56	38.78	54	-15.22	-	-	-	-	360	100	H
3.487	44	PK1	33	-31	0	46	-	-	-	-	68.2	-22.2	360	122	H
3.487	37.09	AD1	33	-31	.56	39.27	-	-	-	-	-	-	360	122	H

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11.1.4. TX ABOVE 1 GHz 802.11ac HT80 MODE IN THE 5.2 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

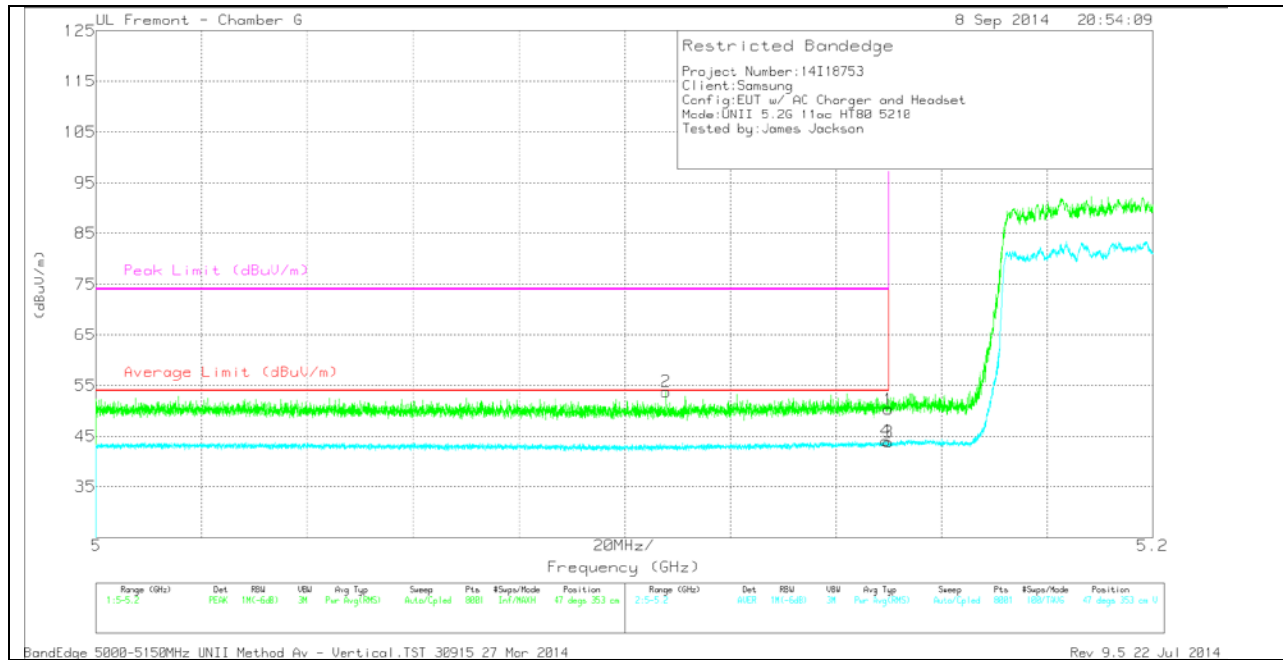
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.12	44.05	PK	34.3	-23.6	0	54.75	-	-	74	-19.25	16	101	H
4	* 5.148	32.36	RMS	34.3	-23.6	1.68	44.89	54	-9.11	-	-	16	101	H
1	* 5.15	41.54	PK	34.3	-23.6	0	52.24	-	-	74	-21.76	16	101	H
3	* 5.15	31.44	RMS	34.3	-23.6	1.68	43.97	54	-10.03	-	-	16	101	H

VERTICAL PEAK AND AVERAGE PLOT

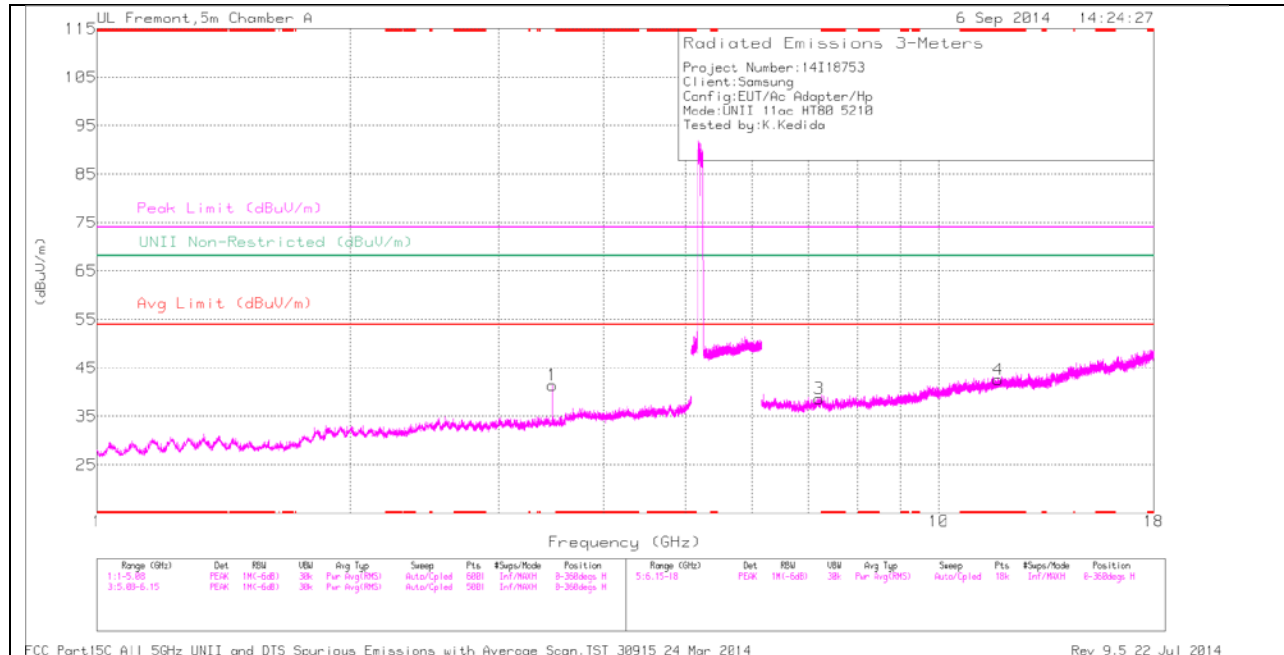


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.108	43.08	PK	34.3	-23.6	0	53.78	-	-	74	-20.22	47	353	V
1	* 5.15	39.63	PK	34.3	-23.6	0	50.33	-	-	74	-23.67	47	353	V
3	* 5.15	31.25	RMS	34.3	-23.6	1.68	43.78	54	-10.22	-	-	47	353	V
4	* 5.15	31.57	RMS	34.3	-23.6	1.68	44.1	54	-9.9	-	-	47	353	V

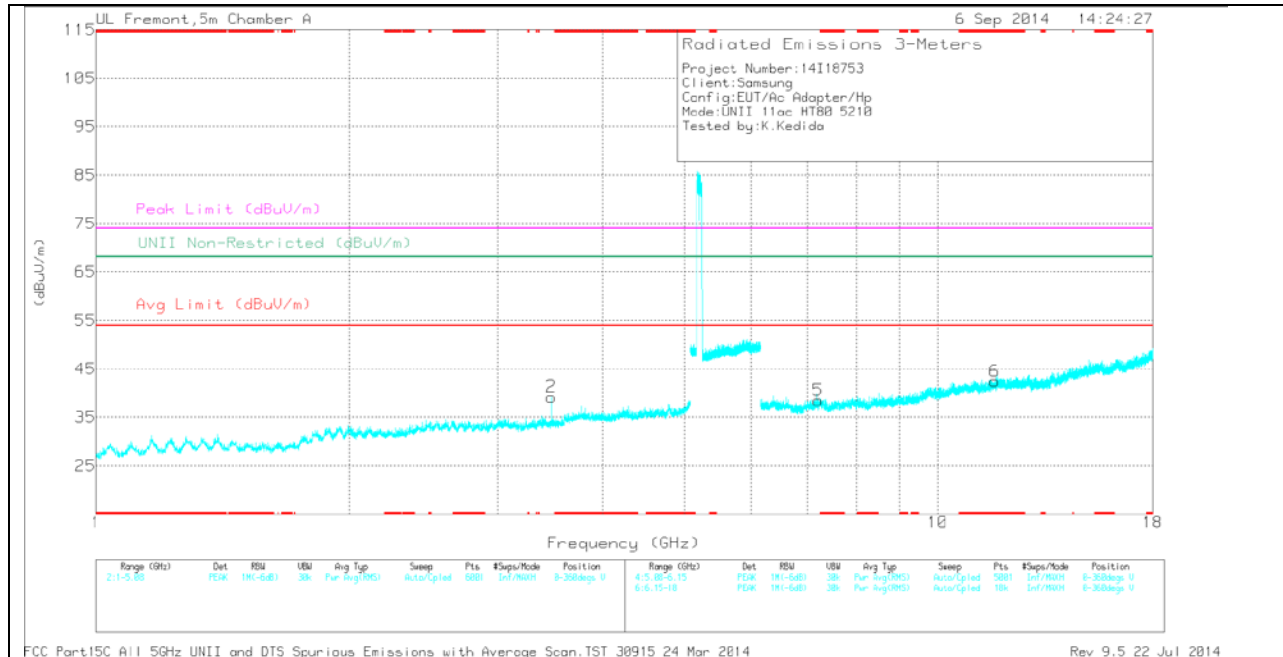
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



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

LOW CHANNEL VERTICAL



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

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fil 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
4	* 11.765	26.09	PK	38.7	-22.2	0	42.59	-	-	74	-31.41	-	-	0-360	100	H
6	* 11.695	26.51	PK	38.6	-22.6	0	42.51	-	-	74	-31.49	-	-	0-360	100	V
1	3.473	39.55	PK	33	-31.1	0	41.45	-	-	-	-	68.2	-26.75	0-360	100	H
2	3.473	37.37	PK	33	-31.1	0	39.27	-	-	-	-	68.2	-28.93	0-360	201	V
3	7.206	29.38	PK	35.2	-25.9	0	38.68	-	-	-	-	68.2	-29.52	0-360	100	H
5	7.215	29.11	PK	35.2	-25.7	0	38.61	-	-	-	-	68.2	-29.59	0-360	201	V

PK - Peak detector

RADIATED EMISSIONS

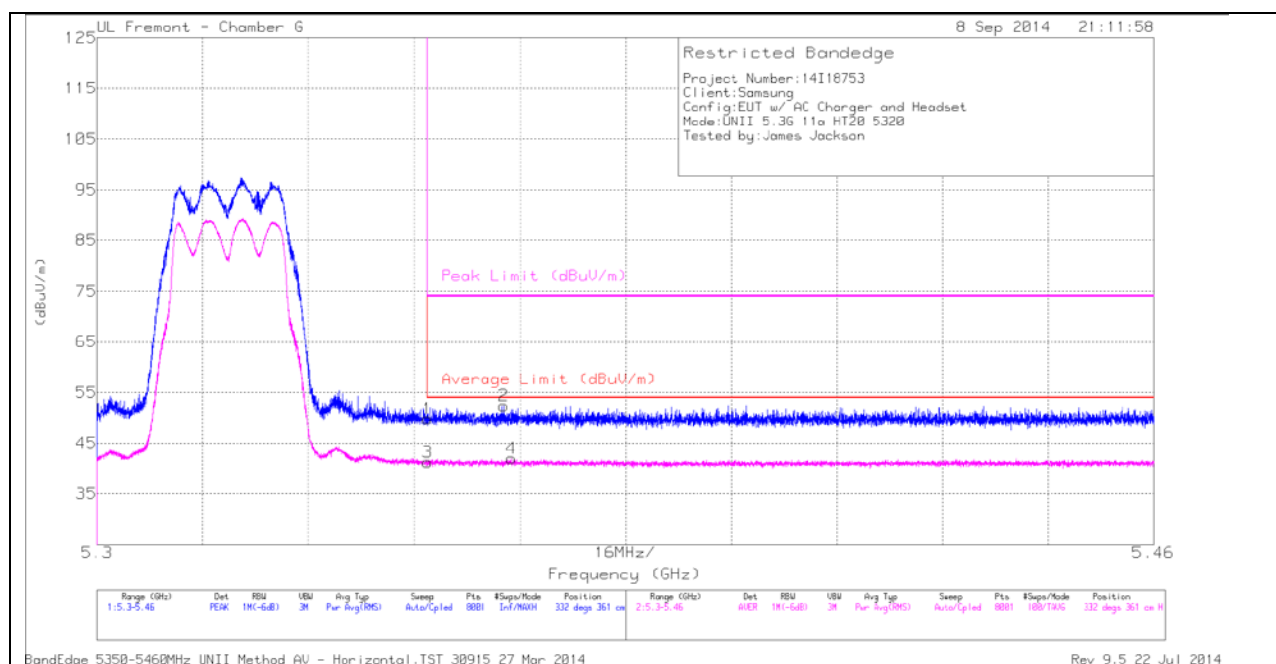
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fil tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.766	34.19	PK1	38.7	-22.2	0	50.69	-	-	74	-23.31	-	-	359	100	H
* 11.764	23.11	AD1	38.7	-22.2	1.68	43.59	54	-10.41	-	-	-	-	359	100	H
3.473	44.14	PK1	33	-31.1	0	46.04	-	-	-	-	68.2	-22.16	359	130	H
3.473	37.7	AD1	33	-31.1	1.68	43.58	-	-	-	-	-	-	359	130	H

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11.1. 5.3 GHz

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

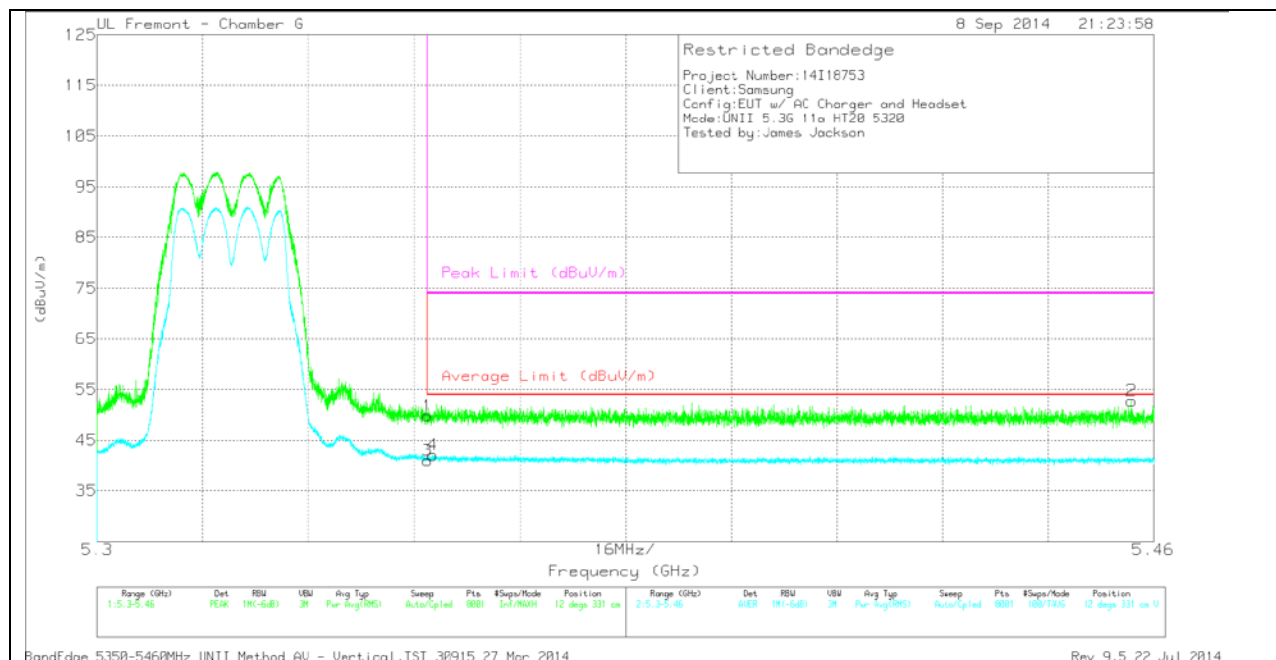
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cb/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	38.88	PK	34.6	-23.7	0	49.78	-	-	74	-24.22	332	361	H
3	* 5.35	30	RMS	34.6	-23.7	.3	41.2	54	-12.8	-	-	332	361	H
2	* 5.362	41.49	PK	34.6	-23.7	0	52.39	-	-	74	-21.61	332	361	H
4	* 5.363	30.79	RMS	34.6	-23.7	.3	41.99	54	-12.01	-	-	332	361	H

VERTICAL PEAK AND AVERAGE PLOT

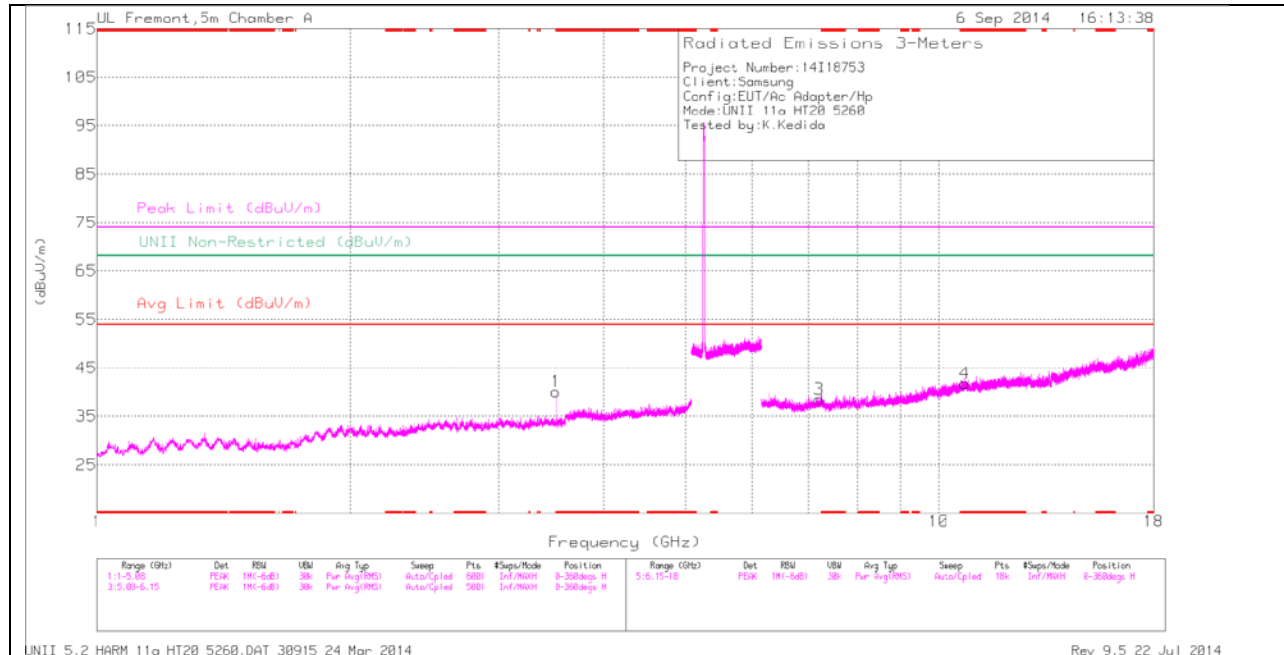


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cb/Filter/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	38.91	PK	34.6	-23.7	0	49.81	-	-	74	-24.19	12	331	V
3	* 5.35	29.81	RMS	34.6	-23.7	.3	41.01	54	-12.99	-	-	12	331	V
4	* 5.351	30.84	RMS	34.6	-23.7	.3	42.04	54	-11.96	-	-	12	331	V
2	* 5.457	41.64	PK	34.7	-23.6	0	52.74	-	-	74	-21.26	12	331	V

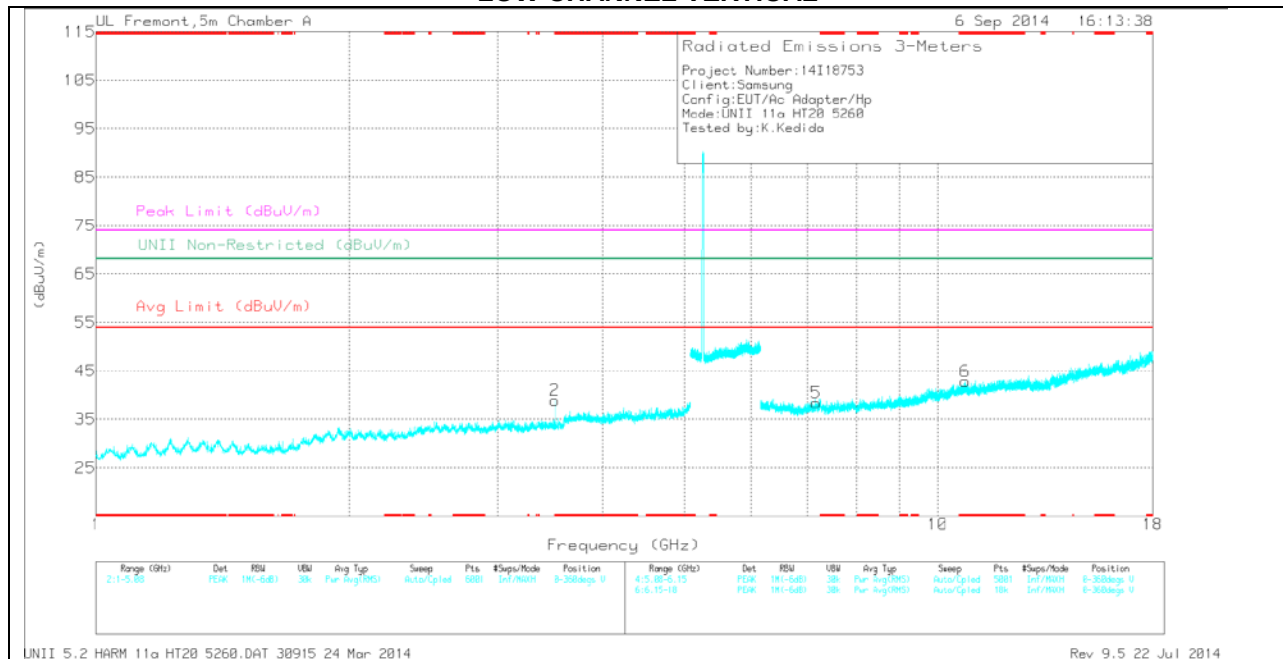
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



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

LOW CHANNEL VERTICAL



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

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (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	* 3.506	38.02	PK	33.1	-31	0	40.12	-	-	74	-33.88	-	-	0-360	100	H
2	* 3.506	36.8	PK	33.1	-31	0	38.9	-	-	74	-35.1	-	-	0-360	201	V
4	* 10.751	26.23	PK	37.9	-22.3	0	41.83	-	-	74	-32.17	-	-	0-360	201	H
6	* 10.788	27.45	PK	37.9	-22.5	0	42.85	-	-	74	-31.15	-	-	0-360	201	V
5	7.177	29.57	PK	35.2	-26.3	0	38.47	-	-	-	-	68.2	-29.73	0-360	100	V
3	7.211	29.15	PK	35.2	-25.8	0	38.55	-	-	-	-	68.2	-29.65	0-360	100	H

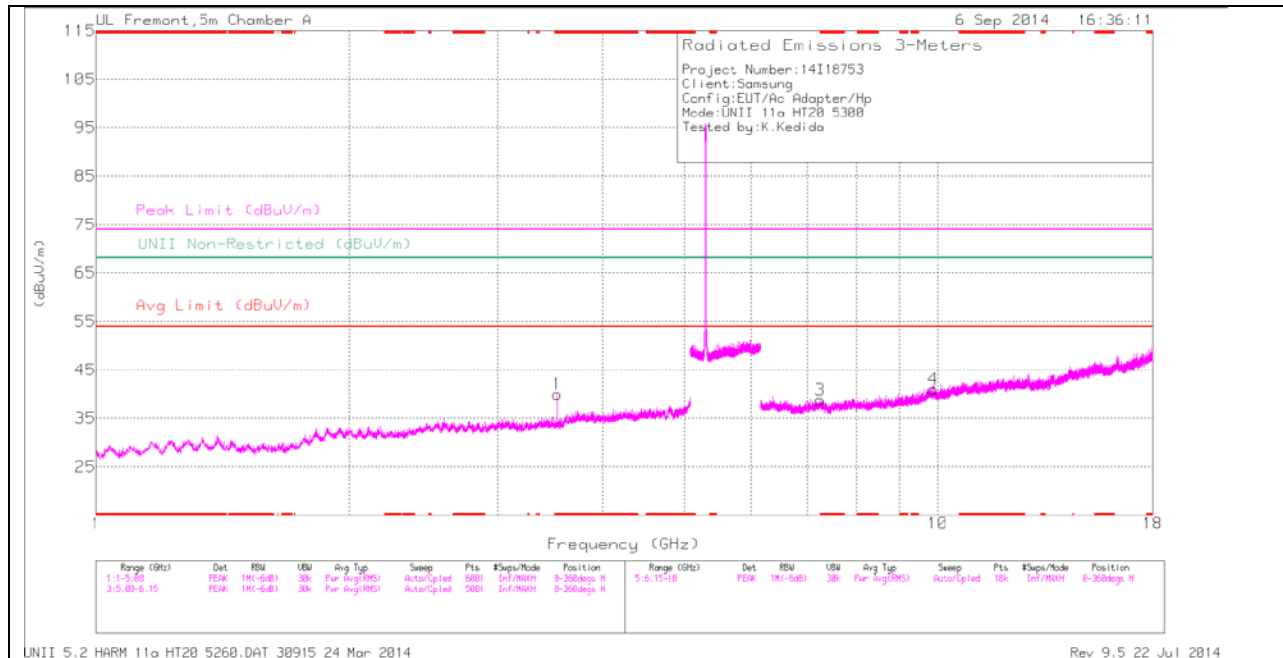
PK - Peak detector

RADIATED EMISSIONS

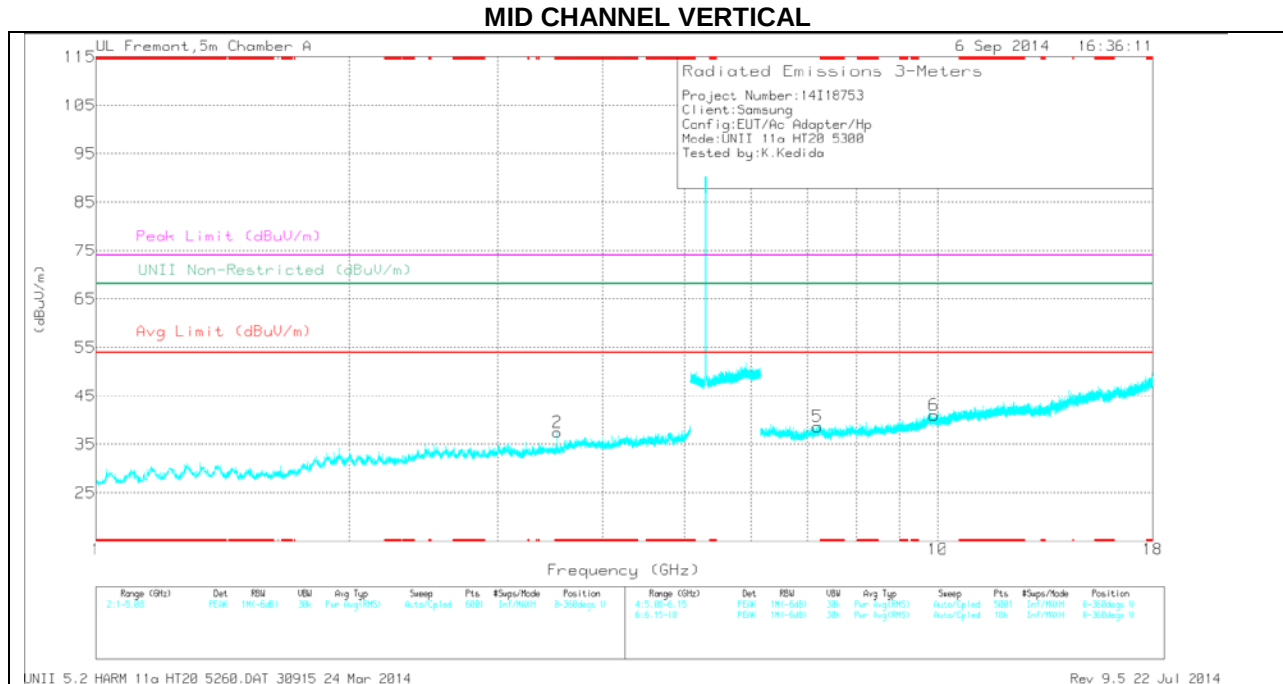
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.507	43.68	PK1	33.1	-31	0	45.78	-	-	74	-28.22	-	-	0	182	H
* 3.507	37.16	AD1	33.1	-31	.3	39.58	-54	-14.42	-	-	-	-	0	182	H

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MID CHANNEL HORIZONTAL



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



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MID CHANNEL DATA

TRACE MARKERS

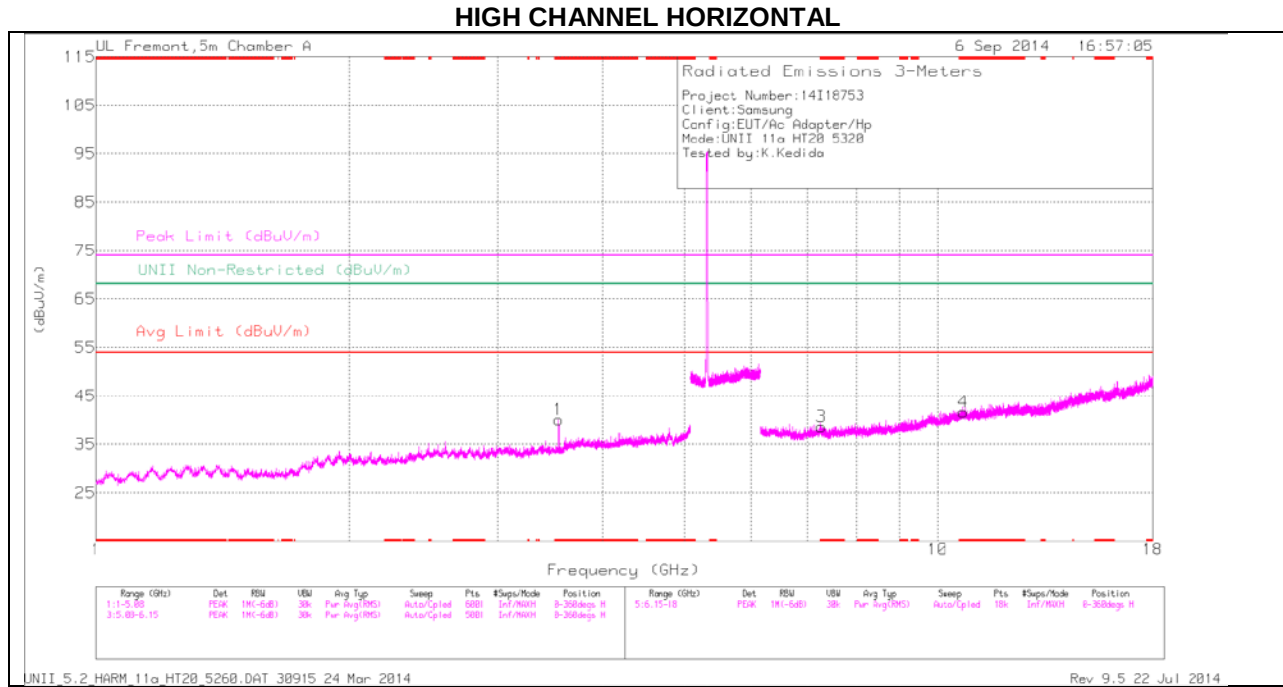
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fil r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.533	38.06	PK	33.1	-31.2	0	39.96	-	-	74	-34.04	-	-	0-360	100	H
2	* 3.533	35.59	PK	33.1	-31.2	0	37.49	-	-	74	-36.51	-	-	0-360	201	V
5	7.195	29.51	PK	35.2	-26	0	38.71	-	-	-	-	68.2	-29.49	0-360	201	V
3	7.247	29.07	PK	35.2	-25.4	0	38.87	-	-	-	-	68.2	-29.33	0-360	100	H
4	9.867	27	PK	37	-23	0	41	-	-	-	-	68.2	-27.2	0-360	100	H
6	9.896	27.4	PK	37	-23.4	0	41	-	-	-	-	68.2	-27.2	0-360	100	V

PK - Peak detector

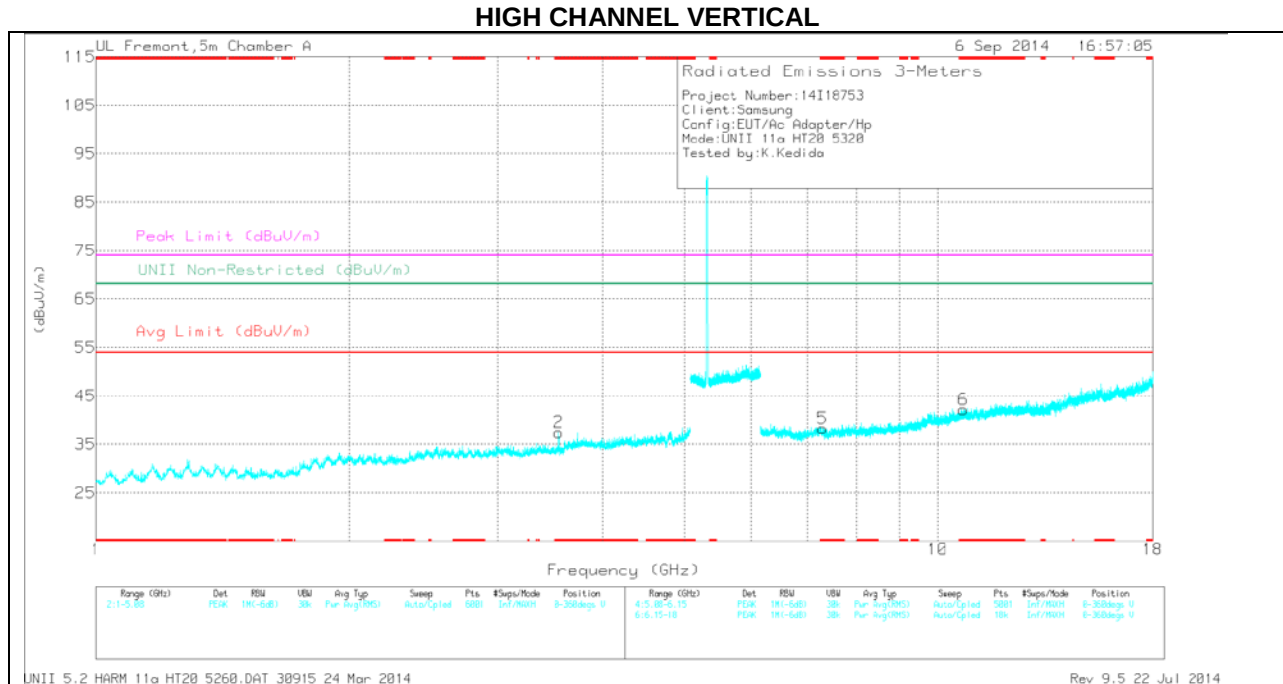
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fil 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
* 3.533	44.44	PK1	33.1	-31.2	0	46.34	-	-	74	-27.66	-	-	357	153	H
* 3.533	36.83	AD1	33.1	-31.2	.3	39.05	54	-14.95	-	-	-	-	357	153	H

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



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

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (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	* 3.547	38.07	PK	33.1	-31.1	0	40.07	-	-	74	-33.93	-	-	0-360	100	H
2	* 3.547	35.46	PK	33.1	-31.1	0	37.46	-	-	74	-36.54	-	-	0-360	201	V
3	* 7.27	29.36	PK	35.2	-25.9	0	38.66	-	-	74	-35.34	-	-	0-360	100	H
4	* 10.731	26.12	PK	37.9	-22.4	0	41.62	-	-	74	-32.38	-	-	0-360	100	H
5	* 7.293	29.25	PK	35.2	-26.1	0	38.35	-	-	74	-35.65	-	-	0-360	201	V
6	* 10.721	26.77	PK	37.9	-22.5	0	42.17	-	-	74	-31.83	-	-	0-360	100	V

PK - Peak detector

RADIATED EMISSIONS

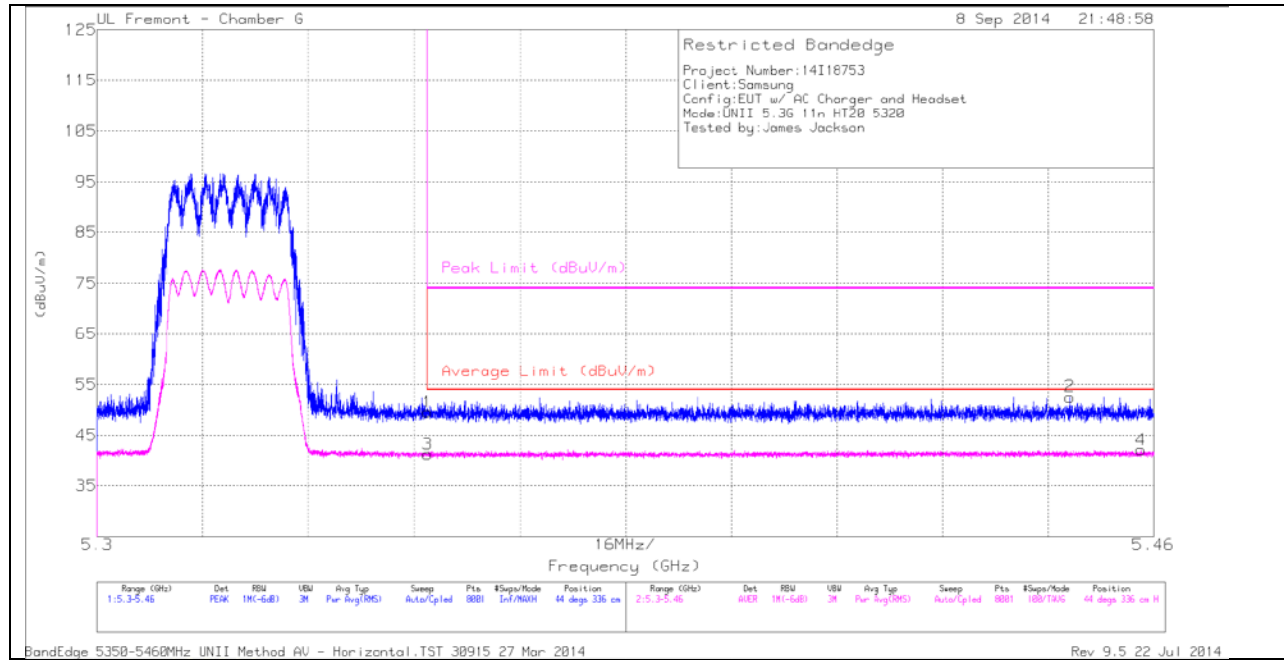
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.547	43.7	PK1	33.1	-31.1	0	45.7	-	-	74	-28.3	-	-	359	177	H
* 3.547	35.87	AD1	33.1	-31.1	.3	38.19	54	-15.81	-	-	-	-	359	177	H

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

AUTHORIZED BANDEDGE (HIGH CHANNEL)

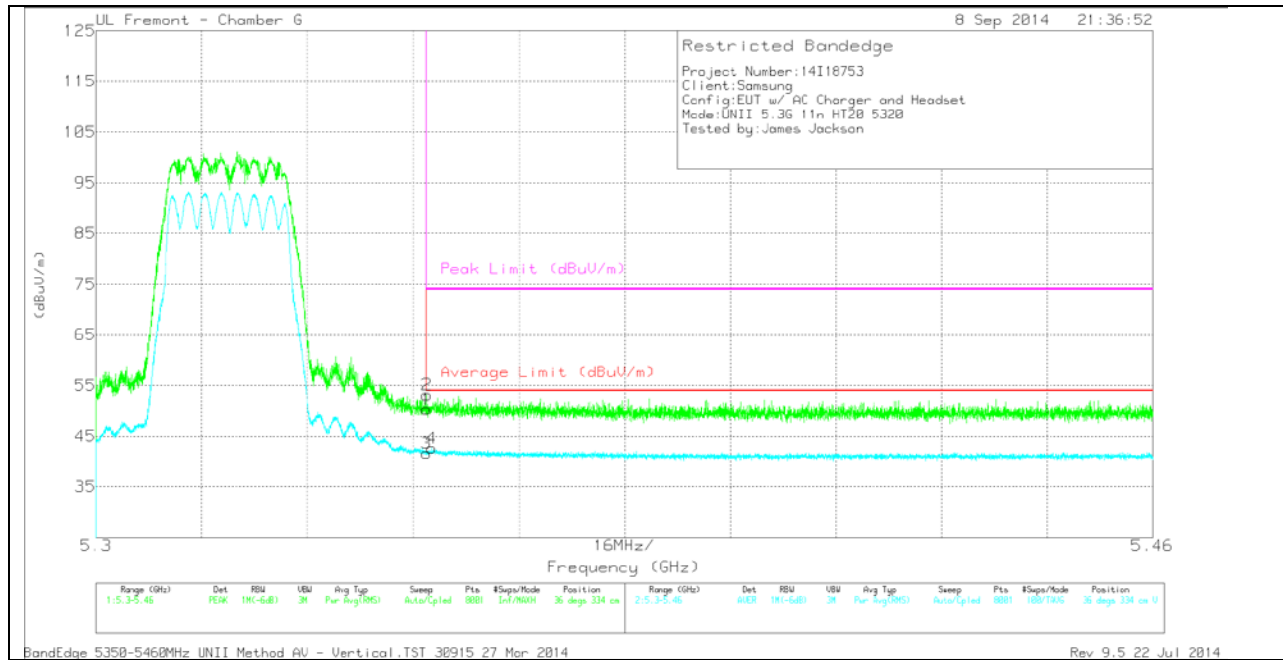
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fit 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	38.59	PK	34.6	-23.7	0	49.49	-	-	74	-24.51	44	336	H
3	* 5.35	29.76	RMS	34.6	-23.7	.33	41.25	54	-12.75	-	-	44	336	H
2	* 5.447	41.49	PK	34.7	-23.6	0	52.59	-	-	74	-21.41	44	336	H
4	* 5.458	30.46	RMS	34.7	-23.6	.33	42.15	54	-11.85	-	-	44	336	H

VERTICAL PEAK AND AVERAGE PLOT

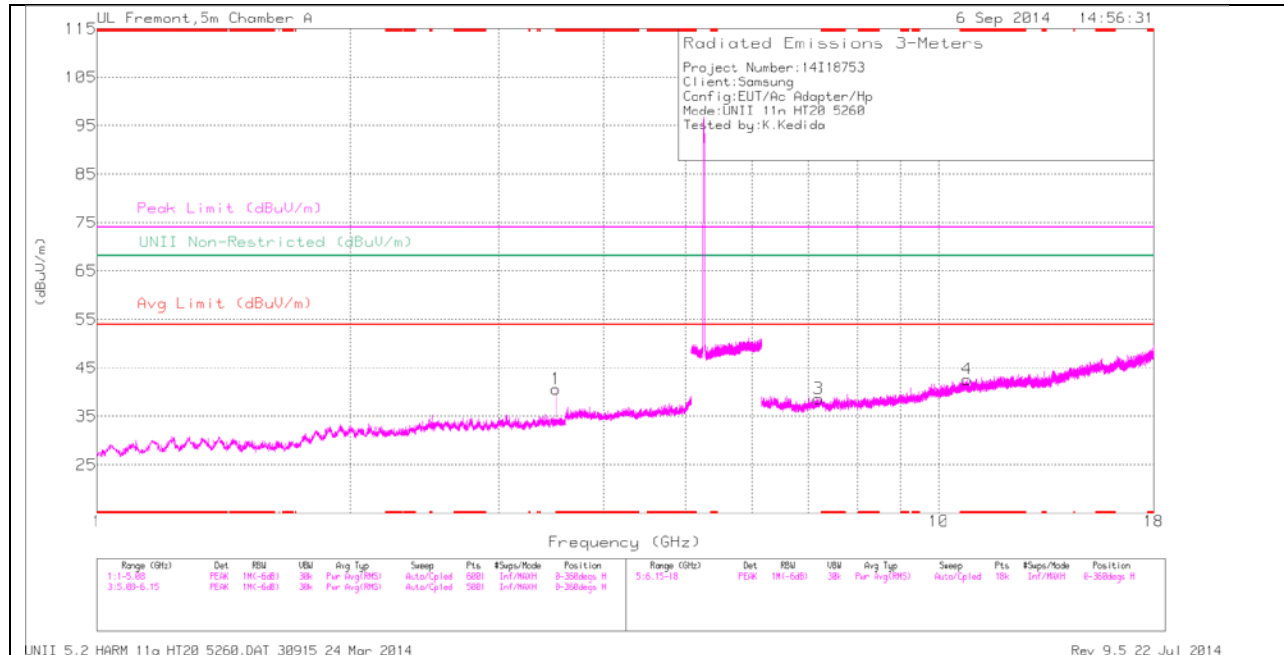


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	39.35	PK	34.6	-23.7	0	50.25	-	-	74	-23.75	36	334	V
2	* 5.35	42.28	PK	34.6	-23.7	0	53.18	-	-	74	-20.82	36	334	V
3	* 5.35	30.43	RMS	34.6	-23.7	.33	41.63	54	-12.37	-	-	36	334	V
4	* 5.351	31.39	RMS	34.6	-23.7	.33	42.59	54	-11.41	-	-	36	334	V

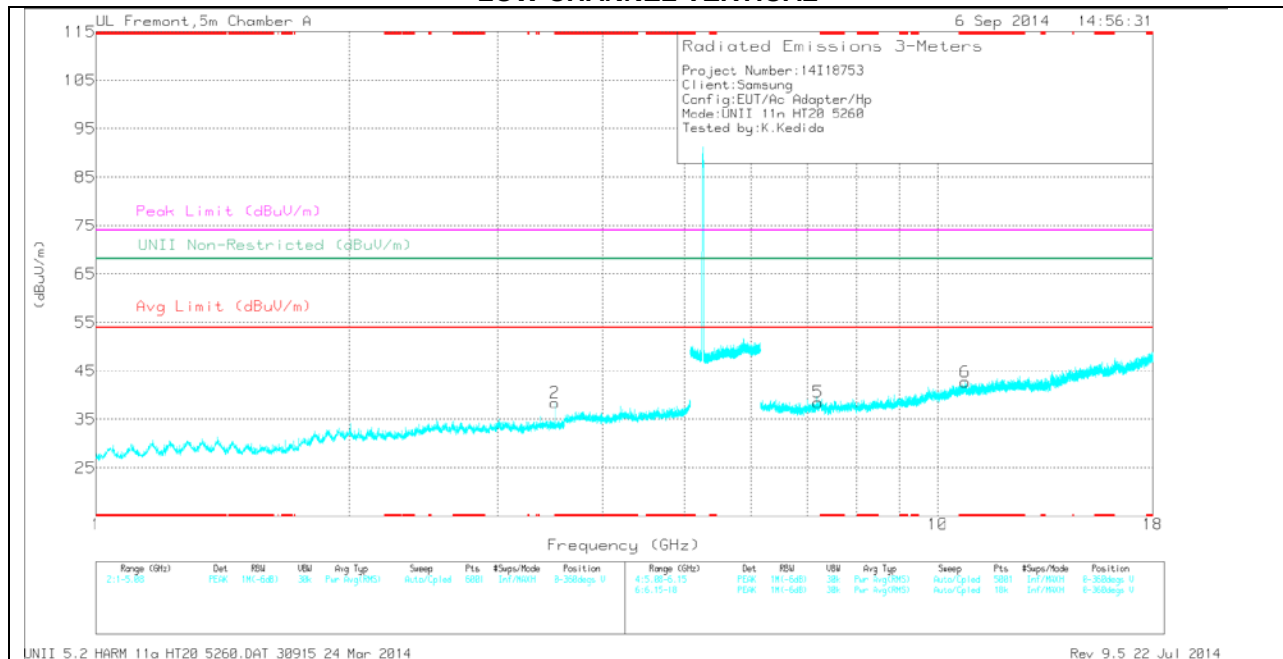
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



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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.

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fr Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (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	* 3.506	38.54	PK	33.1	-31	0	40.64	-	-	74	-33.36	-	-	0-360	100	H
2	* 3.506	36.27	PK	33.1	-31	0	38.37	-	-	74	-35.63	-	-	0-360	201	V
4	* 10.796	27.25	PK	37.9	-22.5	0	42.65	-	-	74	-31.35	-	-	0-360	201	H
6	* 10.789	27.27	PK	37.9	-22.5	0	42.67	-	-	74	-31.33	-	-	0-360	201	V
3	7.199	29.44	PK	35.2	-26	0	38.64	-	-	-	-	68.2	-29.56	0-360	100	H
5	7.205	29.28	PK	35.2	-25.9	0	38.58	-	-	-	-	68.2	-29.62	0-360	201	V

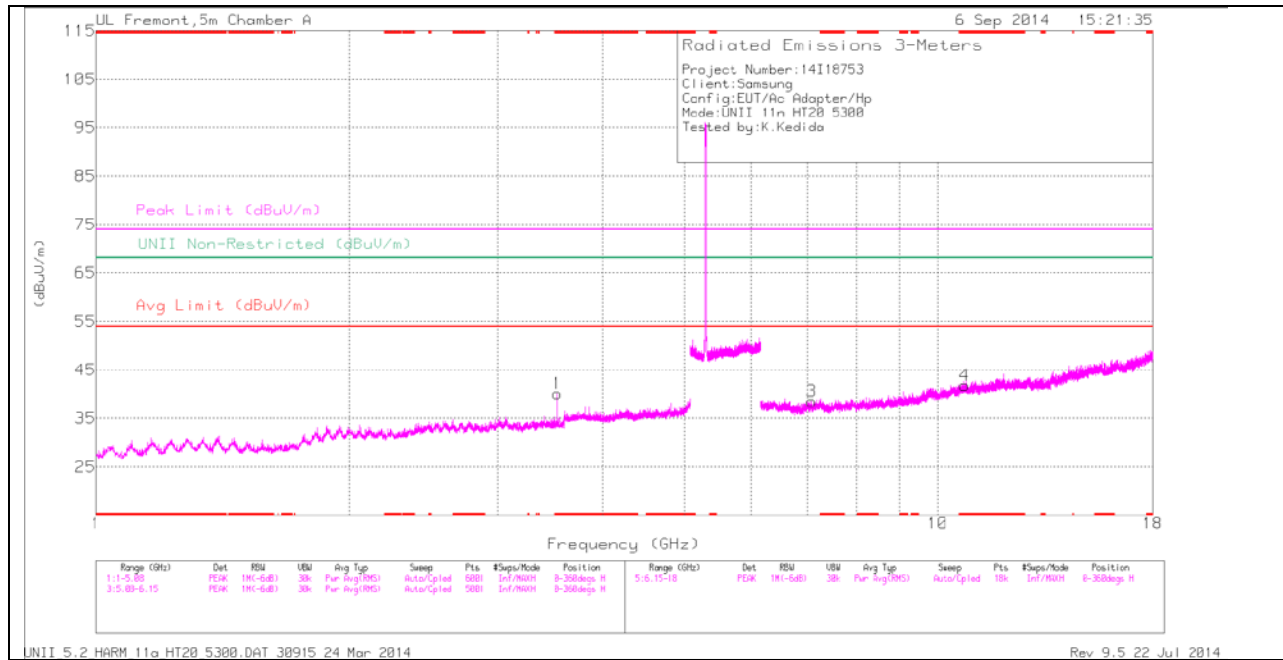
PK - Peak detector

RADIATED EMISSIONS

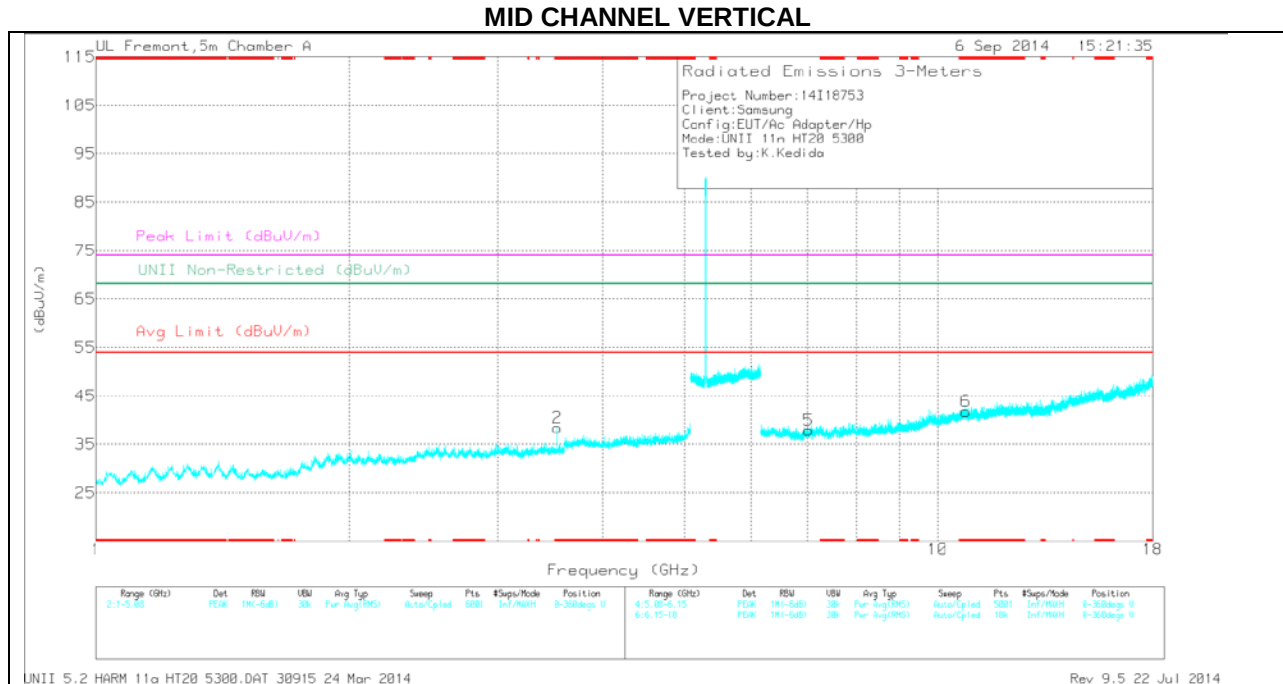
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fr tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.506	43.48	PK1	33.1	-31	0	45.58	-	-	74	-28.42	-	-	359	218	H
* 3.507	36.57	AD1	33.1	-31	.33	38.99	54	-15.01	-	-	-	-	359	218	H
* 10.796	34.27	PK1	37.9	-22.5	0	49.67	-	-	74	-24.33	-	-	359	198	H
* 10.796	23.25	AD1	37.9	-22.5	.33	38.97	54	-15.03	-	-	-	-	359	198	H

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MID CHANNEL HORIZONTAL



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

MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.534	38.22	PK	33.1	-31.2	0	40.12	-	-	74	-33.88	-	-	0-360	100	H
2	* 3.534	36.5	PK	33.1	-31.2	0	38.4	-	-	74	-35.6	-	-	0-360	201	V
4	* 10.753	26.22	PK	37.9	-22.3	0	41.82	-	-	74	-32.18	-	-	0-360	201	H
6	* 10.797	26.39	PK	37.9	-22.5	0	41.79	-	-	74	-32.21	-	-	0-360	201	V
5	7.026	29.34	PK	35.3	-26.7	0	37.94	-	-	-	-	68.2	-30.26	0-360	100	V
3	7.083	30.7	PK	35.3	-27.4	0	38.6	-	-	-	-	68.2	-29.6	0-360	100	H

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.533	44.16	PK1	33.1	-31.2	0	46.06	-	-	74	-27.94	-	-	358	125	H
* 3.533	36.76	AD1	33.1	-31.2	.33	38.98	54	-15.02	-	-	-	-	358	125	H
* 10.752	33.77	PK1	37.9	-22.3	0	49.37	-	-	74	-24.63	-	-	358	202	H
* 10.754	23.03	AD1	37.9	-22.3	.33	38.95	54	-15.05	-	-	-	-	358	202	H

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